I & J WATERWAY RI/FS SUPPLEMENTAL INVESTIGATION MEMORANDUM
I & J WATERWAY RI/FS

Prepared for

Port of Bellingham

1801 Roeder Avenue

Bellingham, Washington 98225

Prepared by

Anchor QEA, LLC

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Seattle, Washington 98101

February 2013

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LIST OF ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
µg/kg	micrograms per kilogram
ARI	Analytical Resources Inc.
ASTM	American Society for Testing and Materials
BT/MT	Bioaccumulation Trigger/Maximum Level
cm	centimeter
CSL	Cleanup Screening Levels
DMMP	Dredged Material Management Program
Ecology	Washington State Department of Ecology
EIM	Environmental Information Management
EPA	U.S. Environmental Protection Agency
LAET	lowest apparent effects threshold
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LDC	Laboratory Data Consultants, Inc.
mg/kg	milligrams per kilogram
MLLW	mean lower low water
MS	matrix spike
MSD	matrix spike duplicate
MTCA	Model Toxics Control Act
NAD	North American Datum
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
Port	Port of Bellingham
PSEP	Puget Sound Estuary Protocols
QA/QC	quality assurance/quality control
RI/FS	Remedial Investigation/Feasibility Study
RPD	relative percent difference
SAPA	Sampling and Analysis Plan Appendix
Site	I&J Waterway Site
SL	Screening Level

SM	standard method
SMARM	Sediment Management Annual Review Meeting
SMS	Sediment Management Standards
SQS	Sediment Quality Standards
SRM	standard reference material
SVOC	semivolatile organic carbon
TEQ	toxicity equivalents
TOC	total organic carbon
USACE	U.S. Army Corps of Engineers

1 INTRODUCTION

This Supplemental Investigation Memorandum describes the findings of testing performed as part of the Sediments Remedial Investigation and Feasibility Study (RI/FS) for the I & J Waterway Site (Site) in Bellingham. The work described herein was conducted pursuant to Agreed Order No. DE1090, which requires completion of an RI/FS for the Site. The Agreed Order was signed in January 2005 by the Washington State Department of Ecology (Ecology) and the Port of Bellingham (Port). The First Amendment to the Agreed Order was signed in October 2005, which incorporated the *Sediments RI/FS Work Plan* (Work Plan; RETEC 2005) into the Agreed Order. Based on discussions between the Port and Ecology, additional work was determined to be necessary to complete the RI/FS. This additional work was conducted under a Second Amendment to the Agreed Order, which provided a revised schedule for completion of the RI/FS and required additional investigation activities to be conducted.

The testing described in this memorandum was performed in accordance with the Ecology-approved *RI/FS Study Work Plan Addendum* (Addendum; Anchor QEA 2012). The Addendum focused on supplemental activities needed to complete the RI/FS and support identification of a preferred remedial alternative for the Site. Historical data has also been referenced in this memorandum, which are available in reports previously conducted under Ecology oversight, including the final Work Plan (RETEC 2005), the *Preliminary Sediment Data Summary* (RETEC 2006), and the Addendum (Anchor QEA 2012).

1.1 Site Background

RI/FS data collection was conducted during 2005 and 2006, consistent with the Ecology approved Work Plan (RETEC 2005). Activities included surface sediment chemical and biological testing and subsurface sediment chemical testing. Results of the 2005/2006 sampling event were summarized in the *Preliminary Sediment Data Summary* (RETEC 2006) that was submitted to Ecology. Subsurface sediment concentrations indicated that levels of dioxin/furans would be unlikely to meet Dredged Material Management Program (DMMP) guidelines for unconfined open-water disposal.

Updates to the DMMP suitability guidelines for dioxin/furans were initiated in 2006. As part of a separate process, advisory committees started development of a Model Toxics Control Act rule revision (the MTCA rule) and MTCA/Sediment Management Standards (SMS) integration. In February 2007, the Port and Ecology agreed that technical, scientific, and policy elements associated with the MTCA rule revision, the MTCA/SMS integration, and changes to the DMMP suitability guidelines had the potential to affect FS evaluation and decisions at the I & J Waterway Site.

In December 2010, the DMMP approved interim guidelines for dioxin/furan compounds. Proposed revisions to SMS were developed by the Sediment Cleanup Advisory Committee in late 2011, with draft rule language for revisions to SMS proposed by Ecology in August 2012.

Following DMMP updates and progress on SMS rule development in 2011, the Port and Ecology agreed to the collection of additional information to finalize the RI/FS for the Site. The Addendum (Anchor QEA 2012) described the supplemental sampling activities to be conducted at the Site to complete the RI/FS and support the identification of a preferred remedial alternative for the Site. The Addendum (Anchor QEA 2012) was prepared consistent with the process defined under MTCA and SMS, as outlined in the Agreed Order and its amendments. The work described in the Addendum (Anchor QEA 2012) was performed by Anchor QEA on behalf of the Port. This memorandum summarizes the supplemental data collection activities and associated results.

2 SUPPLEMENTAL INVESTIGATION OVERVIEW

This section presents an overview of the sampling design for the supplemental RI/FS sampling. Figures 1 and 2 present the supplemental investigation sediment and storm drain solids sampling locations. Details of the sampling methodology are provided in the Work Plan (RETEC 2005) and the Addendum (Anchor QEA 2012). Any deviations from the Work Plan or the Addendum are provided in the applicable methodology section below. Quality control measures implemented during the data collection efforts are summarized in Section 3.

2.1 Site Surveys

Site survey work was performed to support project remedial design activities. The work included updated surveys for bathymetry and condition surveys of structures in the waterway. The specific Site survey tasks performed are described below.

- **Bathymetric survey:** An updated bathymetric survey was conducted within the project area by eTrac Engineering, Inc. on April 5, 2012 using multi-beam survey methods. The bathymetric survey was conducted to assess any elevation changes that have occurred since the 2005 investigation and to fill bathymetry data gaps in the underpier areas.
- **Floating dock, wharf, and bulkhead condition surveys:** Condition surveys of wooden bulkheads, docks, and wharf structures were conducted to support RI/FS cleanup evaluations at the Site. A condition survey of the pile-anchored floating dock was conducted by Ashton Engineering, Inc. on May 16, 2012. A condition survey of Bornstein Seafoods' wharf and associated bulkheads was conducted by Echelon Engineering between May 21 and June 1, 2012. Survey results are included in Appendix A.

2.2 Surface Sediment Sampling

As described in the Addendum (Anchor QEA 2012), surface sediment sampling and testing at the Site was performed to support the following objectives:

- Confirm the lateral boundary of the Site
- Assess impact of solids discharging from stormwater outfalls

- Characterize dioxin/furan concentrations at the Site
- Conduct additional bioassay testing
- Assess sediment quality that is more representative of the general Bellingham Bay condition

Eleven surface sediment samples were collected from on-site areas on April 24 and 25, 2012. Table 1 presents a summary of surface sediment physical observations. Additional discussion of surface sediment sampling and testing results are included in Section 4.

2.3 Subsurface Sediment Sampling

As part of a separate study performed by the U.S. Army Corps of Engineers (USACE) in September 2011, seven sediment cores were collected within the I & J Waterway with selected samples tested for dioxin/furan concentrations. The sediment cores were collected according to a Sampling and Analysis Plan developed by the USACE (USACE 2011) using sampling and analysis methods comparable to those in the Work Plan (RETEC 2005). USACE sediment core sample locations I-1, I-2, and I-3 are in the vicinity of the Site and shown in Figure 1. Locations I-4 through I-7 were located beyond the vicinity of the Site.

As detailed in the Addendum (Anchor QEA 2012), the USACE study included collection and testing or archiving of several samples for approximately -20 to -22 feet mean lower low water (MLLW), representing the Z-layer for a potential maintenance dredge event in the federal navigation channel. These Z-layer samples (z samples) can be useful in assessing the thickness of potential dredging for certain RI/FS remedial alternatives. Archived z samples I-1 and I-2 were tested for SMS constituents and nickel, and sample I-2 was additionally tested for dioxin/furans in accordance with the Addendum (Anchor QEA 2012). Table 2 presents a summary of the USACE I & J Waterway subsurface sediment locations and field collection in the Waterway. Appendix B provides core logs associated with each sediment core. Subsurface testing results are discussed in Section 6.

2.4 Storm Drain Solids Inspection and Sampling

Each of the four storm drains discharging to the I & J Waterway were surveyed as part of this investigation to support the discussion of source control in the RI/FS. On April 20 and May 2, 2012, a storm drain reconnaissance survey was conducted with the City of

Bellingham to identify possible solids sampling locations within the each storm drainage and to verify the presence of solids. Surveyed storm drain locations are included in Figure 2. A summary of storm drain reconnaissance survey observations and chemical results are discussed in Section 7.

3 CHEMICAL, PHYSICAL, AND BIOLOGICAL DATA QUALITY

This section provides a summary of project quality assurance objectives for chemical and physical testing data, and provides the findings of data validation activities.

3.1 Testing Labs and Methods

Chemical and physical testing was performed by Analytical Resources Inc. (ARI), an Ecology-certified laboratory located in Tukwila, Washington.

All analyses conformed to procedures described in the approved Addendum (Anchor QEA 2012). Appendix C provides the supporting quality control information and data validation reports.

Chemical and physical testing adhered to the methods presented in the Addendum (Anchor QEA 2012). In some cases, equivalent methods were used. Total solids and total preserved solids were analyzed by Standard Method (SM) 2540B. Sulfide was analyzed by Environmental Protection Agency (EPA) 376.2. Total organic carbon was analyzed by Plumb (1981). Grain size was analyzed by the Puget Sound Estuary Protocols (PSEP) method.

3.2 Data Quality Objectives

The Addendum (Anchor QEA 2012) was written to ensure that data of sufficiently high quality were generated to support additional work required for completion of the RI/FS. The quality of the laboratory data is assessed by precision, accuracy, representativeness, comparability, and completeness. Each parameter is discussed below.

- **Precision:** Laboratory precision was measured with laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) analyses; matrix spike (MS)/matrix spike duplicate (MSD) analyses; and replicate analyses. Generally, precision goals were met and, in cases where they were not, data were qualified as estimated per EPA's National Functional Guidelines (EPA 1999, 2004). Field precision was evaluated by the collection of blind field duplicates. Precision goals were generally met. Data were not qualified based solely on field precision results.

- **Accuracy and bias:** Accuracy was measured with LCSs, MS samples, and standard reference materials (SRMs). Generally, accuracy goals were met and, in cases where they were not, data were qualified as estimated per EPA's National Functional Guidelines (EPA 1999, 2004). In these instances, the usability of the data was determined by the extent of the exceedance. The validation reports submitted in Appendix C specify the specific outliers and whether the bias was high or low.
- **Representativeness:** The list of analytes has been identified to provide a comprehensive assessment of the known and potential contaminants at the Site.
- **Comparability:** The laboratory used common traceable calibration standards, spiking standards, and reference materials. Specific information can be found in the laboratory data packages included in Appendix D.
- **Completeness:** The completeness goal of 90 percent was met.

3.3 Quality Assurance/Quality Control Findings

The overall data quality assurance/quality control (QA/QC) program for the Addendum (Anchor QEA 2012) followed procedures presented in detail in the Work Plan (RETEC 2005). Measures taken to ensure data quality used current EPA, Ecology, and American Society for Testing and Materials (ASTM) protocols. Specific actions are described below.

3.3.1 Field Quality Assurance/Quality Control

One field equipment wipe blank sample (IJ12-RB-01) was collected on April 25, 2012, and submitted to ARI to be archived. A field duplicate was used to evaluate homogenization accuracy. Relative percent differences (RPDs) were screened against 50 percent. All of the dioxin and several of the polycyclic aromatic hydrocarbon (PAH) RPD values were greater than 50 percent. There were a few grain-size RPD values that exceeded 50 percent. Overall, the field duplicate quality objectives were met for 50 percent of the data, indicating heterogeneity of the sample matrix.

3.3.2 Chain of Custody

Chain-of-custody forms were used to track sample custody and to document the proper handling and integrity of the samples. All containerized samples were shipped to the analytical laboratory after preparation according to appropriate sample handling procedures

(i.e., transported at 4 degrees Celsius [°C]). Samples were transported to ARI by FedEx or hand delivered according to appropriate sample shipping procedures relinquished under signature by both Anchor QEA and laboratory receiving staff. All shipped samples arrived within the temperatures of 1.4 to 5.3 °C. Chain-of-custody documentation is included with the associated laboratory reports in Appendix D.

3.3.3 Laboratory Quality Assurance/Quality Control

The individual analytical methods prescribe specific quality control criteria for initial calibrations, continuing calibration verifications, internal standard area counts, and relative retention times. The laboratories followed the associated method criteria to evaluate their data and narrated any data that was outside of these control limits. These exceedances were also qualified in the validation process.

For sediment tests, PSEP action limits were used to assess the precision and accuracy of method blanks, laboratory control samples, matrix spikes, standard reference materials, and replicate samples. The control limits (data quality objectives) and frequencies of these quality control samples are listed in Table 2. Any quality control results that exceeded these criteria were qualified in the validation process.

For bioassay tests, standard QA/QC procedures were in place to ensure the validity of test results and were evaluated based on SMS and PSEP (1997) performance criteria as described previously in the Work Plan (RETEC 2005). Standard QA/QC procedures included the use of negative controls, reference sediment samples, and replication; measurement of water quality during testing; and reference toxicant tests.

3.3.4 Data Validation

All chemical and physical data submitted in this report were validated by Laboratory Data Consultants, Inc. (LDC) of Carlsbad, California. Data validations were performed at 90 percent level 3 and 10 percent level 4. LDC performed a level 4 data validation by randomly selecting 1 out every 10 sample results within an analytical method. Data validation reports are provided in Appendix C. Samples are listed with their corresponding laboratory data package and validation report number in Appendix D, Table D-1. The data

validation was performed under EPA guidelines, as described in the Addendum (Anchor QEA 2012) and the EPA's National Functional Guidelines (EPA 1999, 2004).

Data validation verified the accuracy and precision of chemical and physical determinations performed during this investigation. Data qualifiers assigned as a result of the data validation and their definitions are shown on each of the respective analytical results tables. Data may have been qualified as biased or estimated for a particular analysis based on method or technical criteria. Data qualified with a "J" indicates that the associated numerical value is the approximate concentration of the analyte. Data qualified with a "UJ" indicates the approximate reporting limit below which the analyte was not detected. Consequently, these data qualifications are not expected to impact the data quality objectives.

All RI/FS data were determined to be useable as reported from the laboratory or as qualified in the RI/FS Data Report for the purposes of completing the RI/FS. None of the data results were rejected during the data validation process.

Biological test conditions and methods were in compliance with PSEP (1995), Ecology's Sampling and Analysis Plan Appendix (SAPA; Ecology 2008), and the various updates presented during the Sediment Management Annual Review Meeting (SMARM). Details of the biological testing methods and results are presented in Section 4.2 and Appendix E.

4 SURFACE SEDIMENT INVESTIGATION

This section summarizes the results of surface sediment chemical, physical, and biological testing performed during the supplemental investigation. Eleven surface sediment samples were collected from on-site areas on April 24 and 25, 2012. Additional sampling was performed from Carr Inlet by NewFields, LLC as reference locations for biological testing on May 17, 2012. Surface sediment samples were collected from the top 12 centimeters (cm) at each location. Table 1 presents a summary of surface sediment physical observations. A summary of sediment sampling and testing is presented in Table 3.

Proposed sample location IJ12-08 could not be sampled due to refusal at the proposed location. Sample location IJ12-08 was intended to assess the impact of potential solids discharging from the stormwater outfall Bornstein 001. Riprap extended down the slope below the outfall and prevented acquisition of a sample on the target location. Six sediment grabs were attempted offshore and adjacent to the riprap slope, which were rejected due to poor recovery and winnowing. An acceptable sediment sample was collected from IJ12-08a southwest of the target location IJ12-08. One field duplicate was collected at location IJ12-08a (sample IJ12-58).

4.1 Surface Sediment Chemical Testing

Table 4 presents results of surface sediment chemical and physical testing. SMS chemical concentrations were compared to SMS criteria. For those samples with total organic carbon (TOC) greater than 3.5 percent (IJ12-01, -08a and -58a), SMS chemicals with organic-carbon normalized standards were compared to the marine lowest apparent effects threshold (LAET) value (PSEP 1988). Nickel concentrations were compared to the former DMMP Screening Level (SL) and Bioaccumulation Trigger/Maximum Level (BT/MT). Exceedances of SMS or DMMP SL (nickel) criteria for 2012 and 2005/2006 sampling locations are shown on Figure 3. Bioassay test results are shown in Figure 4. The 2012 surface sediment chemical data reports are included in Appendix D.

4.1.1.1 Sediment Management Standards Parameters

Site samples were tested for SMS constituents including metals, semivolatile organic compounds (SVOC), and total polychlorinated biphenyls (PCB). SMS chemical

concentrations were below Sediment Quality Standards (SQS) criteria in all samples, except for fluoranthene in sample IJ12-04. Fluoranthene was not measured above SQS in the 2005/2006 co-located sample location.

4.1.1.2 9Nickel

Nickel concentrations were equivalent to or below the former DMMP SL (140 milligrams per kilogram [mg/kg]) in all samples, except for samples IJ12-01 and -02 (337 mg/kg and 148 mg/kg, respectively). Sample IJ12-03 contained a nickel concentration equivalent to the former DMMP SL. The 2012 results generally indicate declining surface sediment nickel concentrations, compared to co-located 2005/2006 sample results (RETEC 2006), as shown in Chart 1. The 2012 and 2005/2006 surface sediment nickel testing results are summarized in Figure 3.

Chart 1
Comparison of Co-located 2005/2006 and 2012 Surface Sediment Nickel Testing Results

2005/2006 (mg/kg)	2012 (mg/kg)
192 (IJW-SS-09)	148 (IJ12-02)
174 (IJW-SS-07)	140 (IJ12-03)
152 (IJW-SS-12)	116 (IJ12-04)

4.1.1.3 Dioxin/Furans

There are currently no SMS numeric criteria for dioxin/furans in sediment, which tend to be present in urban areas in Puget Sound. Dioxin/furan concentrations expressed as toxicity equivalents (TEQ) in surface sediments ranged between 9.5 TEQ (IJ12-11) and 36.5 TEQ (IJ12-04). Samples located within the area exceeding chemical and biological SMS criteria tended to have higher TEQs than sample IJ12-07 (11.7 TEQ), which is located outside the area exceeding SMS criteria, and sample IJ12-11 (9.5 TEQ), which is intended to characterize chemical concentrations generally representative of Bellingham Bay. Results of the duplicate samples collected from station IJ12-08 were 15.2 TEQ and 33.3 TEQ. Chart 2 below summarizes Site sample TEQs. Measured dioxin/furan concentrations in surface sediment, subsurface sediment, and storm drain solids are summarized in Figure 5.

Chart 2
Surface Sediment Dioxin/Furan Testing Results

Station ID	Reported Concentrations (ng/kg as TEQ; ND = 1/2 RL)[1]
I & J Waterway Samples	
IJ12-01	25.96
IJ12-02	20.62
IJ12-03	10.45
IJ12-04	36.46
IJ12-05	20.23
IJ12-06	15.09
IJ12-07	11.67
IJ12-08a	33.32
IJ12-58a[2]	15.23
IJ12-11[3]	9.52

Notes:
1. TEQs were calculated using the 2005 World Health Organization toxicity equivalency factors developed for mammalian receptors.
2. Sample IJ12-58a is a field duplicate of sample IJ12-08a.
3. Sample collected to assess chemical composition at a station representative of Bellingham Bay.

4.2 Surface Sediment Biological Testing

Biological testing was required for samples IJ12-05 and -07 and was selected for the three additional sample stations (IJ12-01, -02 and -03) with nickel concentrations equivalent to or greater than the former DMMP SL. Site biological testing results were compared to the results from an appropriate reference sample for comparison to SMS criteria. The reference samples consisted of Carr Inlet samples CR-12 and CR-023, which contained 4.5 and 97.2 percent fines, respectively. Site samples were compared to reference CR-023[1].

Sediment toxicity was evaluated using three standard PSEP bioassays:

- 10-Day Acute Toxicity Amphipod Test (*Ampelisca abdita*)
- Larval Development Test (*Mytilus galloprovincialis*)
- 20- Day Juvenile Polychaete Chronic Toxicity Test (*Neanthes arenaceodentata*)

[1] While the percentage of fines in sample IJ12-01 was more similar to CR-12 than CR-023, photographs and lab observations indicated that this sample appeared to be composed of a higher percentage of finer sediment based on the presence of woody debris, which seemed to bias the grain-size analysis toward a coarser fraction.

This section provides a summary of bioassay test results. SMS biological effects criteria are presented in Table 5. The results of bioassay testing are presented in Tables 6, 7, and 8. Table 9 provides an assessment of performance criteria for control and reference samples. Table 10 presents the biological endpoint evaluation. Samples IJ12-01, -02, -03, and -05 failed SQS biological criteria for the larval development test, as summarized in Chart 1 and Figure 4. All samples passed the amphipod and juvenile polychaete tests. The complete biological laboratory report, chain of custody, and laboratory data are provided in Appendix E.

Chart 3
Surface Sediment Chemical Criteria Exceedances and Biological Testing Results

Station ID	Criteria Exceedances	SQS/CSL Biological Criteria (Pass/Fail)[1]
I& J Waterway		
IJ12-01	Nickel	SQS Fail (larval)
IJ12-02	Nickel	SQS Fail (larval)
IJ12-03	Nickel	SQS Fail (larval)
IJ12-05	None	SQS Fail (larval)
IJ12-07	None	Pass

Notes:
SQS – Sediment Quality Standards
CSL – Cleanup Screening Levels
LAET – Lowest apparent effects threshold (marine)
1. Bioassays conducted included *E. estuarius*, *M. galloprovincialis*, and *N. arenaceodentata*.

4.2.1 10-Day Acute Toxicity Amphipod Test

Results of the 10-day acute toxicity test using *Ampelisca abdita* (*A. abdita*) are presented in Table 6. Bioassay testing was initiated within designated hold times for test and reference samples on May 29, 2012. Test conditions and methods were in compliance with PSEP (1995), SAPA (Ecology 2008), and the various updates presented during the SMARM in 2009. The test met SMS quality control requirements for the control and reference samples, as shown in Tables 11 and 12. Bioassay endpoint evaluations were determined using statistical testing and SMS criteria. All samples passed SQS and Cleanup Screening Levels (CSL) biological criteria. A detailed summary of results is provided in Tables 2 through 5 of Appendix E.

4.2.2 Larval Development Test

Results of the larval development test using *Mytilus galloprovincialis* (*M. galloprovincialis)* are presented in Table 7. Bioassay testing was initiated within designated hold times for test and reference samples on June 7, 2012. Test conditions and methods were in compliance with PSEP (1995), SAPA (Ecology 2008), and the various updates presented during the SMARM in 2009. The test met SMS quality control requirements for the control and reference samples, as shown in Table 7. Bioassay endpoint evaluations were determined using statistical testing and SMS criteria. As indicated in Table 10, all samples failed SQS criteria, except for sample IJ12-07. A detailed summary of results is provided in Tables 10 through 13 of Appendix E.

4.2.3 20-Day Juvenile Polychaete Chronic Toxicity Test

Results of the 20-day juvenile polychaete chronic toxicity test using *Neanthes arenaceodentata* (*N. arenaceodentata)* are presented in Table 8. Bioassay testing was initiated within designated hold times for test and reference samples on May 23, 2012. Test conditions and methods were in compliance with PSEP (1995), SAPA (Ecology 2008), and the various updates presented during the SMARM in 2009. The test met SMS quality control requirements for the control and reference samples, as shown in Table 10. Bioassay endpoint evaluations were determined using statistical testing and SMS criteria. All samples passed SQS and CSL biological criteria. A detailed summary of results is provided in Tables 6 through 9 of Appendix E.

4.2.4 Comparison to 2005/2006 Bioassay Testing

Figure 4 illustrates areas above SMS criteria for 2012 and 2005/2006 biological testing results. The 2012 biological results generally indicate improved conditions compared to the 2005/2006 results for those sample stations co-located during the two sampling events. The 2005/2006 samples IJW-SS-07, -09 and -13 formerly failed CSL criteria for the larval development test, but each co-located 2012 sample (IJ12-03, -02 and -05, respectively) passed CSL criteria (failing only SQS criteria).

5 SUBSURFACE SEDIMENT TESTING

This section summarizes chemical testing of subsurface samples that were collected as part of the USACE study within the Site. USACE subsurface samples chemical and physical results are summarized in Table 11. The subsurface sample chemical results are included in Appendix D.

As part of the supplemental investigation, archived Z-layer material from station I-1 (I-1-Z) was tested for SMS constituents and nickel, and archived Z-layer material from station I-2 (I-2-A-Z) was tested for SMS constituents, nickel, and dioxin/furan concentrations. These Z-layer samples represent sediment collected from approximately -20 to -22 feet MLLW, representing the potential exposed sediment surface in the event maintenance dredging occurs to the federally authorized depth in the federal navigation channel.

As shown in the core logs (Appendix B), Z-layer material from cores at stations I-1 and I-2 were not collected from the native clay layer, suggesting that z samples were comprised of sediment deposited since the last dredge event (e.g., recent sediment). However, the native clay layer was observed in each sediment core, which provides information on the vertical extent (i.e., elevation) of recently deposited sediment since the deepest historical dredge event. This physical information, along with elevations of the native clay layer from other 2006 cores, will be used in the RI/FS to establish the deepest extent of potential contamination.

Samples I-1-A and I-2-A-Z each contained TOC greater than 3.5 percent. SMS chemicals with organic-carbon normalized standards were compared to the marine LAET value (PSEP 1988). Nickel concentrations were compared to the former DMMP criteria.

5.1.1.1 Sediment Management Standards Parameters

USACE z samples I-1-Z and I-2-A-Z were below SMS or LAET criteria, except for the following:

- Mercury in sample I-2-A-Z (above CSL)
- 2,4-dimethylphenol in samples I-1-Z and I-2-A-Z (above CSL)
- 4-methylphenol in I-1-Z (above CSL)

- Dimethyl phthalate (160 micrograms per kilogram [µg/kg]) in sample I-1-Z (above SQS)
- N-nitrosodiphenylamine in sample I-1-Z (above SQS)
- Total PCBs in I-2-A-Z (above LAET); total PCBs were equal to the LAET in I-1-Z

5.1.1.2 Nickel

Nickel concentrations in I-1-Z and I-2-A-Z were below the DMMP SL.

5.1.1.3 Dioxin/Furans

Samples I-1-Z, I-2-A-Z, and I-3-Z contained dioxin/furan concentrations of 29.4, 41.8, and 5.7 TEQ, respectively. At locations I-1 and I-3, samples were collected for both the Z-layer and the overlying sediments (DM samples). Dioxin/furans in z samples were lower than the upper composite DM sample for both I-1 (I-1-DM was 38.2 TEQ) and I-3 (I-3-DM was 28.6 TEQ). Dioxin/furan testing results are summarized in Figure 5.

6 STORM DRAIN SOLIDS INSPECTION AND SAMPLING

This section summarizes the observation from the stormwater drainage basin reconnaissance survey and the testing results of storm drain CB-002. A reconnaissance survey was conducted to identify the presence of stormwater solids within each of four stormwater drainage basins for the Site. Stormwater outfalls at the Site included Bornstein Outfall 001, Port of Bellingham Outfall 002, City of Bellingham Outfall – Roeder, and City of Bellingham Outfall – Bellwether, as shown on Figure 2.

Table 12 describes reconnaissance survey observations. Information collected during the survey included the total depth below ground surface, depth to the base of the outflow pipe, depth to water, time measurement (to determine tidal influence), presence of and orientations of connection pipes, and approximated thickness of storm drains solids, if present.

Two Port of Bellingham catch basins were identified within Port of Bellingham Outfall 002 that contained sufficient solids material to sample (≥2.5 inches of material). These catch basins are part of the Port of Bellingham storm drain basin that discharges northeast of, and adjacent to, the Bornstein Seafoods building. Port of Bellingham Catch Basin-2 (CB-002) was selected for solids sampling due to its location nearest to the outfall. A grab sample was collected from the CB-002 storm drain maintenance hole using methods described in the Addendum (Anchor QEA 2012) on June 22, 2012.

Storm drain solid sample CB-002 was tested for SMS constituents, nickel, and dioxin/furan compounds. SMS chemical concentrations were compared to SMS criteria (SQS and CSL), and nickel concentrations were compared to the former DMMP criteria. The storm drain solid sample chemical results are summarized in Table 13 and are included Appendix D.

6.1.1 Sediment Management Standards Parameters

All metals, PCBs, and SVOCs were below SMS criteria, except for butylbenzylphthalate, which was above SQS.

6.1.2 Nickel

The sample nickel concentration (826 mg/kg) exceeded both the former DMMP SL (140 mg/kg) and former BT/ML (370 mg/kg).

6.1.3 Dioxin/Furans

Sample CB-002 contained a dioxin/furan concentration of 13.2 TEQ.

7 NEXT STEPS

Chemical, physical, and biological testing data has been uploaded to Ecology's Environmental Information Management (EIM) system. This memorandum and the associated attachments complete the transmittal of the testing data from the I & J Waterway RI/FS Supplemental Investigation testing program. Following receipt of Ecology's comments on this memorandum, the Port anticipates meeting with Ecology to discuss the comments and discuss the components of the FS. The Draft RI/FS will be submitted within 150 calendar days of receipt of Ecology comments.

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TABLES

Table 1
Surface Sediment Collection Physical Observations Summary

Station ID	Actual Coordinates[1]		Mudline Elevation (feet)[2] MLLW	Sample Date	Sample Method	Sampling Interval (cm)	Field Observations of Sample				
								Sediment Type			
	Easting	Northing					Color	Major Constituent	Minor Constituents	Other Minor Constituents	Comments
IJ12-01	1240215	644774	1.3	4/25/2012	Hand Trowel	0 to 12 cm	Light Brown to Grey	Sand	Fine to medium gravelly, slightly clayey and silty	Moderate wood fragments (sticks and plants), biota (small worms), and shell fragments	Soft, gravels rounded to subrounded, beach grab from edge of small channel below an outfall
IJ12-02	1240157	644616	-13.2	4/24/2012	Van Veen Grab		Light Brown to Dark Grey	Silt	Clayey, slightly sandy, trace gravel	Trace woody debris (rootlets) and biota (worms)	Very soft, sample location adjacent to Coast Guard Dock; sample collected from composited grab attempts 3 and 4
IJ12-03	1240021	644592	-11.6	4/24/2012	Van Veen Grab		Brown to Dark Grey		Clayey, slightly sandy	Trace wood debris, shell fragments, and biota (pink worms)	Very soft, sample location on northwest side of Coast Guard Dock; sample collected from composited grab attempts 3 and 4
IJ12-04	1240117	644446	-0.8	4/24/2012	Hand Trowel		Light Brown to Dark Grey	Gravel	Sandy, slightly silty and clayey	Substantial shell hash, occasional biota (worms), and synthetic debris (wire, plastic, brick fragments)	Soft, gravels rounded to subangular, sample collected along edge of shoreline, approximately 12 to 15 feet downslope of a partially buried (by large angular riprap) outfall
IJ12-05	1239982	644487	-13.7	4/24/2012	Van Veen Grab		Brown to Grey	Silt	Very clayey, slightly sandy	Trace shell fragments and biota (worms)	Very soft; sample collected from composited grab attempts 2 and 3
IJ12-06	1239873	644419	-13.6	4/24/2012	Van Veen Grab		Dark Grey		Very clayey, trace sand	Trace biota	Very soft (top 2 cm) to medium stiff (2 to 12 cm); sample collected from composited grab attempts 2 and 4
IJ12-07	1239818	644235	-15.8	4/24/2012	Van Veen Grab		Light Brown to Dark Grey		Very clayey, slightly sandy, trace gravel	Trace shell fragment, woody debris (small rootlets), and biota (pink worms)	Soft to medium stiff; sample collected from composited grab attempts 1, 2, and 3
IJ12-08a	1239783	644127	-9.4	4/24/2012	Van Veen Grab		Brown to Grey			Moderate seaweed, shell fragments, and woody and synthetic debris	Very soft, trace metallic sheen; location IJ12-08a sampled as an alternative to proposed location IJ12-08 due to the presence of armor rock on slope that prevented acquisition of a sample at location IJ12-08; sample was collected from composited grab attempts 2 and 3
IJ12-09	1239701	644145	-14.9	4/24/2012	Van Veen Grab		Brown to Grey		Slightly clayey	Trace shell fragments, woody debris (rootlets), and biota (worms)	Soft; sample collected from composited grab attempts 1 and 2

Table 1
Surface Sediment Collection Physical Observations Summary

Station ID	Actual Coordinates[1]		Mudline Elevation (feet)[2] MLLW	Sample Date	Sample Method	Sampling Interval (cm)	Field Observations of Sample				
								Sediment Type			
	Easting	Northing					Color	Major Constituent	Minor Constituents	Other Minor Constituents	Comments
IJ12-10	1239723	644174	-15.1	4/24/2012	Van Veen Grab	0 to 12 cm (cont.)	Dark Grey	Silt (cont.)	Very clayey	Moderate shell fragments, trace woody debris (sticks), and biota (worms)	Soft to medium stiff; sample collected from composited grab attempts 1 and 2
IJ12-11	1239241	643797	-15.7	4/24/2012	Van Veen Grab		Light Brown to Dark Grey		Very clayey, sandy	Moderate shell hash and trace biota (worms)	Soft (0 to 2 cm) to medium stiff (2 to 12 cm); sample collected from composited grab attempts 1 and 2

Notes:

1. Horizontal datum is Washington State Plane North, NAD 83
2. Mudlines were estimated from sample location coordinates and April 5, 2012 bathymetry

NA - Not applicable

Model percentage of minor constituents

trace = 0-5 %
slightly = 5-15 %
clayey, silty, sandy, gravelly = 15-30 %
very = 30-50 %

Model percentage of other (non-sediment constituents)

trace = 0-5 %
occasional = 5-10 %
moderate = 10-30 %
substantial 30-50 %

Table 2
USACE Subsurface Sampling Field Collection Summary Table for I&J Waterway

Station ID	Actual Coordinates[1,2]		Date	Water Depth[3] (feet)	Tide Height[4] (feet)	Penetration (feet)	Core Recovery (%)	Collection and Drive Notes
	Easting	Northing						
I-1	1240052	644516	9/8/2011	15.6	0.5	9.0	93.0	2 of 2 attempts. Easy coring 0 to 5 feet, very hard coring 5 to 9 feet. Core driven to refusal.
I-2	1239675	644165	9/8/2011	17.6	1.3	9.0	93.0	2 of 2 attempts. Easy coring 0 to 7 feet, very hard coring 7 to 9 feet.
I-3	1239248	643767	9/8/2011	19.8	2.6	8.0	80.0	1 of 1 attempts. Easy coring 0 to 3 feet, very hard coring 3 to 8 feet, refusal at 8 feet.
I-4	1238882	643410	9/8/2011	25.1	7.4	9.5	82.0	3 of 3 attempts. Easy coring 0 to 2 feet, hard coring 2 to 9.5 feet.
I-5	1238607	643124	9/8/2011	21.2	4.6	10	98.0	1 of 1 attempts. Smooth, easy coring 0 to 10 feet.
I-6	1238319	642844	9/8/2011	22.2	6.0	10	84.0	1 of 1 attempts. Smooth, easy coring 0 to 10 feet; 0.5-foot of sediment fell off core bottom during retrieval.
I-7	1237949	642487	9/7/2011	24.2	7.9	10	83.0	1 of 1 attempts. Smooth, easy coring 0 to 10 feet.

Notes:
1. Subsurface sediment samples were collected by vibratory core sampler. Actual coordinates are presented for accepted cores only.
2. Horizontal datum is Washington State Plane North, NAD 83.
3. Water depth presented is at the time of sample collection. Water levels in Bellingham Bay are tidally influenced. Water depth was determined by lead line.
4. Tides heights are predicted. Source: Tides and Currents Pro.

Table 3
Sediment Sampling and Analysis Summary Table

Station ID	Subsurface Sediment Sample ID	Sample Interval[1] (feet)	Sediment Testing[2]	USACE Archived Sample Analyses[2,4]	I&J Waterway Supplemental Investigation Archived Sample Analyses[2,5]
Surface Sediment Samples (Anchor QEA 2012)					
IJ12-01	IJ12-01	0 - 0.39	Bioassay[3], D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-02	IJ12-02	0 - 0.39	Bioassay[3], D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-03	IJ12-03	0 - 0.39	Bioassay[3], D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-04	IJ12-04	0 - 0.39	D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-05	IJ12-05	0 - 0.39	Bioassay[3], D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-06	IJ12-06	0 - 0.39	D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-07	IJ12-07	0 - 0.39	Bioassay[3], D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-08a	IJ12-08a	0 - 0.39	D/F, GS, NH_3, Ni, S_2, SMS, TPC, TS, TOC	--	--
IJ12-09	IJ12-09	0 - 0.39	Archived	--	--
IJ12-10	IJ12-10	0 - 0.39	Archived	--	--
IJ12-11	IJ12-11	0 - 0.39	D/F, GS, NH_3, Ni, SMS, TPC, TS, TOC	--	--
Subsurface Sediment Samples (USACE 2011)					
I-1	I-1-DM	0 - 4.6	D/F, GS, TS, TVS, TOC, NH_3, S_2, Archive	--	--
	I-1-Z	4.6 - 6.4	Archived	D/F	GS_f, NH_3, Ni, SMS, TS, TOC
I-2	I-2-A-DM	0 - 3.3	Archived	--	--
	I-2-A-Z	3.3 - 5.1	Archived	--	D/F, GS_f, NH_3, Ni, SMS, TS, TOC
I-3	I-3-DM	0 - 2.2	D/F, GS, TS, TVS, TOC, NH_3, S_2, Archive	--	--
	I-3-Z	2.2 - 3.8	Archive	D/F	--
I-4	I-4-A-DM	0 - 1.9	Archive	--	--
	I-4-A-Z	1.9 - 3.5	Archive	--	--
I-5	I-5-A-DM	0 - 3.3	D/F, GS, TS, TVS, TOC, NH_3, S_2, Archive	--	--
	I-5-A-Z	3.3 - 5.3	Archived	D/F	--
I-6	I-6-A-DM	0 - 3.2	Archived	--	--
	I-6-A-Z	3.2 - 4.9	Archived	--	--
I-7	I-7-A-DM	0 - 3.1	D/F, GS, TS, TVS, TOC, NH_3, S_2, Archive	--	--
	I-7-A-Z	3.1 - 4.7	Archived	--	--

Notes:
1. Core depths represent in situ values. Cores were compaction-corrected and samples were taken based on these values. Surface sediment samles were collected from the 0-12 cm interval.
2. D/F: Dioxin/Furans; GS: Grain Size (not frozen); GS_f: Grain Size (Frozen/Archived Sample); TPS, Total Preserved Solids, TS: Total Solids; TVS: Total Volatile Solids; TOC: Total Organic Carbon; NH_3: Ammonia; Ni: Nickel; SMS: SMS chemicals; S_2: Total Sulfides.
3. Bioassays conducted included *A. abdita* , *M. alloprovincialis,* and *N. arenaceodentata* .
4. Additional core samples were analyzed in a second round of testing, as selected by USACE.
5. Archived samples were made available by USACE to the Port of Bellingham for chemical analysis in support of the RI/FS.

Table 4
Surface Sediment Chemical and Physical Testing Results

Analytes	SMS SQS	SMS CSL	PS LAET[a]	Reference	Reference	IJ12-01	IJ12-02	IJ12-03	IJ12-04	IJ12-05	IJ12-06	IJ12-07	IJ12-08a	IJ12-08a	IJ12-11
Location ID				Reference	Reference	IJ12-01	IJ12-02	IJ12-03	IJ12-04	IJ12-05	IJ12-06	IJ12-07	IJ12-08a	IJ12-08a	IJ12-11
Sample ID				CR-12	CR-023	IJ12-01	IJ12-02	IJ12-03	IJ12-04	IJ12-05	IJ12-06	IJ12-07	IJ12-08A	IJ12-58A	IJ12-11
Sample Date				5/30/2012	5/30/2012	4/25/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012
Depth				0-10 cm	0-10 cm	0-12 cm	0-12 cm	0-12 cm	0-12 cm	0-12 cm	0-12 cm	0-12 cm	0-12 cm	0-12 cm	0-12 cm
Conventional Parameters (mg/kg)															
Ammonia	--	--	--	--	--	11.6	15.8	17.3	30.4	19.2	20.1	19.3	18	23.4	10.8
Sulfide	--	--	--	--	--	905	997	2610	1210	2130	614	389	2090	2630	275
Conventional Parameters (pct)															
Total Organic Carbon	--	--	--	0.351	3.45	4.98	2.45	2.9	2.1	3.11	2.55	2.6	3.76	4.31	2.02
Total Solids	--	--	--	75.4	32.8	56.6	40.1	37.4	63.8	38.3	43	41.3	39.4	38	52.8
Total Solids (preserved)	--	--	--			39.2	38.2	34.7	60.1	35.3	38	40.1	32.4	33.8	44.2
Grain Size (pct)															
Gravel	--	--	--	0.2	0.1 U	16.4	0.3	0.1 U	48.8	0.1 U	0.1 U	0.3	1.2	0.2	0.1 U
Sand, Very Coarse	--	--	--	0.5	0.1 U	7.4	1	2.3	9.2	0.7	0.8	1.2	1.7	1.4	0.3
Sand, Coarse	--	--	--	3.9	0.2	7.4	1.4	2.1	6.9	1.6	1	1.4	1.8	1.5	0.9
Sand, Medium	--	--	--	20.9	0.8	13.5	0.9	1.6	6.8	1.5	0.6	0.9	1.8	1.6	3.8
Sand, Fine	--	--	--	46.3	0.6	35.8	1.9	1.5	5.4	1.1	0.6	1	1.9	1.8	15.9
Sand, Very Fine	--	--	--	23.7	1.3	7.2	1.9	1.8	1.7	1	0.9	1.3	2.9	2.8	7.1
Silt, Coarse	--	--	--	1.5	9.9	1.6	2.6	3.3	2.7	1.6	2.2	2.7	10.3	3.6	5.4
Silt, Medium	--	--	--	0.3	19.1	1.7	9.6	14.1	1.3	10.3	9.2	7.2	20.5	14.5	6.6
Silt, Fine	--	--	--	0.3	14.8	1.5	26.9	27.7	0.5	24.8	18.1	19.5	21	25.6	13.6
Silt, Very Fine	--	--	--	0.3	13.1	1.7	15.5	12.5	5.2	14.1	19.7	19.3	8.8	11	12.7
Fines (silt + clay)	--	--	--	4.4	97.1	12.3	92.7	90.8	21.1	94.2	96	93.9	88.8	90.6	72
Clay, Coarse	--	--	--	0.4	11.1	1.7	11.2	8.5	2.9	11.5	14.1	13.4	6	8.2	9.7
Clay, Medium	--	--	--	0.4	8.9	1.5	9.6	9.1	3.4	11.5	12.2	11.7	7.5	9.7	8.1
Clay, Fine	--	--	--	1.3	20.3	2.7	17.2	15.6	5.1	20.5	20.5	20.2	14.6	18.1	16
Total Gravel	--	--	--	0.2	0.1 U	16.4	0.3	0.1 U	48.8	0.1 U	0.1 U	0.3	1.2	0.2	0.1 U
Total Sand	--	--	--	95.3	2.9	71.3	7.1	9.3	30	5.9	3.9	5.8	10.1	9.1	28
Total Silt	--	--	--	2.4	56.9	6.5	54.6	57.6	9.7	50.8	49.2	48.7	60.6	54.7	38.3
Total Fines (silt + clay)	--	--	--	4.5	97.2	12.4	92.6	90.8	21.1	94.3	96	94	88.7	90.7	72.1
Total Clay	--	--	--	2.1	40.3	5.9	38	33.2	11.4	43.5	46.8	45.3	28.1	36	33.8
Total Grain Size	--	--	--	100	100.1	100.1	100	100.1	99.9	100.2	99.9	100.1	100	100	100.1
Metals (mg/kg)															
Arsenic	57	93	--	--	--	9 U	10 U	10 U	20 U	10 U	10 U	10	10 U	10 U	9 U
Cadmium	5.1	6.7	--	--	--	0.4	1.1	1.2	0.8 U	1.1	1	0.9	1	1.2	0.5
Chromium	260	270	--	--	--	40	82	79	33	90	86	85	80	85	66.9
Copper	390	390	--	--	--	37.2	71.3	71	35.4	77.6	72.4	75.9	87	86	51.9
Lead	450	530	--	--	--	18	17	17	25	17	15	14	15	16	11
Mercury	0.41	0.59	--	--	--	0.05	0.27	0.25	0.12	0.29	0.29	0.27	0.26	0.29	0.27
Nickel[b]	--	--	--	--	--	337	148	140	116	137	126	123	113	120	90
Silver	6.1	6.1	--	--	--	0.5 U	0.7 U	0.8 U	1 U	0.8 U	0.7 U	0.6 U	0.8 U	0.7 U	0.6 U
Zinc	410	960	--	--	--	83	135	141	110	147	132	131	146	152	94

Table 4
Surface Sediment Chemical and Physical Testing Results

Analytes	SMS SQS	SMS CSL	PS LAET[a]	Reference CR-12 5/30/2012 0-10 cm	Reference CR-023 5/30/2012 0-10 cm	IJ12-01 IJ12-01 4/25/2012 0-12 cm	IJ12-02 IJ12-02 4/24/2012 0-12 cm	IJ12-03 IJ12-03 4/24/2012 0-12 cm	IJ12-04 IJ12-04 4/24/2012 0-12 cm	IJ12-05 IJ12-05 4/24/2012 0-12 cm	IJ12-06 IJ12-06 4/24/2012 0-12 cm	IJ12-07 IJ12-07 4/24/2012 0-12 cm	IJ12-08a IJ12-08A 4/24/2012 0-12 cm	IJ12-08a IJ12-58A 4/24/2012 0-12 cm	IJ12-11 IJ12-11 4/24/2012 0-12 cm
Semivolatile Organics (µg/kg)															
2,4-Dimethylphenol	29	29	--	--	--	**16 J**	19 UJ	**15 J**	19 UJ	20 UJ	20 UJ	**15 J**	**12 J**	**26 J**	**15 J**
2-Methylphenol (o-Cresol)	63	63	--	--	--	**8.1 J**	**3.3 J**	**6.4 J**	4.8 UJ	**3.3 J**	**3.9 J**	**6 J**	**38**	**13 J**	**6.3 J**
4-Methylphenol (p-Cresol)	670	670	--	--	--	**60**	**44**	**54**	**18 J**	**35 J**	**44**	**50**	**45**	**94**	**50**
Benzoic acid	650	650	--	--	--	**210 J**	390 U	**100 J**	390 UJ	390 U	390 U	400 U	380 U	**120 J**	390 U
Benzyl alcohol	57	73	--	--	--	**31**	**19**	**32**	**13 J**	**16 J**	**20**	**34**	**14 J**	**46**	**33**
Bis(2-ethylhexyl)phthalate	--	--	1300	--	--	**320**	100 U	100 U	**320 J**	**500**	71 U	51 U	100 U	160 U	37 U
Butylbenzyl phthalate	--	--	63	--	--	4.7 U	**11 J**	**15 J**	**9.6**	**12 J**	**6.7**	**4.8 J**	**6.1**	**12**	**4 J**
Dibenzofuran	--	--	540	--	--	**66**	**14 J**	**22**	**79 J**	**13 J**	**15 J**	**23**	**19**	**130**	**20**
Diethyl phthalate	--	--	48	--	--	7.3 U	6.6 U	14 U	4.8 U	17 U	9.1 U	19 U	8 U	6.8 U	7 U
Dimethyl phthalate	--	--	71	--	--	**40**	**8.2**	4.9 U	**11 J**	**6.9**	**6**	**7.4**	**54**	**16**	**6.8**
Di-n-butyl phthalate	--	--	1400	--	--	**23**	19 U	20 U	**37**	20 U	20 U	20 U	19 U	20 U	20 U
Di-n-octyl phthalate	--	--	420	--	--	**21**	**21**	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
Hexachlorobenzene	--	--	22	--	--	4.7 U	4.8 U	4.9 U	4.8 U	4.9 U	4.9 U	5 U	4.8 U	4.9 U	4.9 U
N-Nitrosodiphenylamine	--	--	28	--	--	19 U	19 U	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
Pentachlorophenol	360	690	--	--	--	**25 J**	48 U	49 U	**33 J**	49 U	49 U	50 U	48 U	**34 J**	49 U
Phenol	420	1200	--	--	--	**56**	**18 J**	**34**	**140**	**17 J**	**22**	**35**	**27**	**39**	**52**
Semivolatile Organics (mg/kg-OC)															
Bis(2-ethylhexyl)phthalate	47	78	--	--	--	**6.426**	4.082 U	3.448 U	**15.238 J**	**16.077**	2.784 U	1.962 U	2.66 U	3.712 U	1.832 U
Butylbenzyl phthalate	4.9	64	--	--	--	0.094 U	**0.449 J**	**0.517 J**	**0.457**	**0.386 J**	**0.263**	**0.185 J**	**0.162**	**0.278**	**0.198 J**
Dibenzofuran	15	58	--	--	--	**1.325**	**0.571 J**	**0.759**	**3.762 J**	**0.418 J**	**0.588 J**	**0.885**	**0.505**	**3.016**	**0.99**
Diethyl phthalate	61	110	--	--	--	0.147 U	0.269 U	0.483 U	0.229 U	0.547 U	0.357 U	0.731 U	0.213 U	0.158 U	0.347 U
Dimethyl phthalate	53	53	--	--	--	**0.803**	**0.335**	0.169 U	**0.524 J**	**0.222**	**0.235**	**0.285**	**1.436**	**0.371**	**0.337**
Di-n-butyl phthalate	220	1700	--	--	--	**0.462**	0.776 U	0.69 U	**1.762**	0.643 U	0.784 U	0.769 U	0.505 U	0.464 U	0.99 U
Di-n-octyl phthalate	58	4500	--	--	--	**0.422**	**0.857**	0.69 U	0.905 U	0.643 U	0.784 U	0.769 U	0.505 U	0.464 U	0.99 U
Hexachlorobenzene	0.38	2.3	--	--	--	0.094 U	0.196 U	0.169 U	0.229 U	0.158 U	0.192 U	0.192 U	0.128 U	0.114 U	0.243 U
N-Nitrosodiphenylamine	11	11	--	--	--	0.382 U	0.776 U	0.69 U	0.905 U	0.643 U	0.784 U	0.769 U	0.505 U	0.464 U	0.99 U
Polycyclic Aromatic Hydrocarbons (µg/kg)															
1,2,4-Trichlorobenzene	--	--	31	--	--	4.7 U	4.8 U	4.9 U	4.8 UJ	4.9 U	4.9 U	5 U	4.8 U	4.9 U	4.9 U
1,2-Dichlorobenzene	--	--	35	--	--	4.7 U	4.8 U	4.9 U	4.8 UJ	4.9 U	4.9 U	5 U	4.8 U	4.9 U	4.9 U
1,4-Dichlorobenzene	--	--	110	--	--	4.7 U	4.8 U	4.9 U	4.8 UJ	4.9 U	4.9 U	5 U	4.8 U	4.9 U	4.9 U
2-Methylnaphthalene	--	--	670	--	--	**76**	**15 J**	**27**	**28 J**	**14 J**	**16 J**	**24**	**19**	**68**	**29**
Acenaphthene	--	--	500	--	--	**47**	19 U	**9.7 J**	**68 J**	20 U	20 U	**11 J**	19 U	**57**	20 U
Acenaphthylene	--	--	560	--	--	**32**	19 U	**12 J**	**77**	20 U	20 U	**11 J**	**11 J**	**35**	20 U
Anthracene	--	--	960	--	--	**100**	**23**	**30**	**160**	**22**	**22**	**29**	**38**	**110**	**27**
Benzo(a)anthracene	--	--	1300	--	--	**360**	**59**	**80**	**560**	**57**	**49**	**59**	**76**	**170**	**24**
Benzo(a)pyrene	--	--	1600	--	--	**380**	**60**	**76**	**400**	**46**	**38**	**42**	**60**	**110**	**19 J**

Table 4
Surface Sediment Chemical and Physical Testing Results

Analytes	SMS SQS	SMS CSL	PS LAET[a]	Reference CR-12 5/30/2012 0-10 cm	Reference CR-023 5/30/2012 0-10 cm	IJ12-01 IJ12-01 4/25/2012 0-12 cm	IJ12-02 IJ12-02 4/24/2012 0-12 cm	IJ12-03 IJ12-03 4/24/2012 0-12 cm	IJ12-04 IJ12-04 4/24/2012 0-12 cm	IJ12-05 IJ12-05 4/24/2012 0-12 cm	IJ12-06 IJ12-06 4/24/2012 0-12 cm	IJ12-07 IJ12-07 4/24/2012 0-12 cm	IJ12-08a IJ12-08A 4/24/2012 0-12 cm	IJ12-08a IJ12-58A 4/24/2012 0-12 cm	IJ12-11 IJ12-11 4/24/2012 0-12 cm
Benzo(b,j,k)fluoranthenes	--	--	--	--	--	850	160	200	2000 J	140	97	140	190	400	55
Benzo(g,h,i)perylene	--	--	670	--	--	180	47	59	210 J	31	28	22	25	46	11 J
Chrysene	--	--	1400	--	--	700	150	170	2000	150	84	130	170	430	49
Dibenzo(a,h)anthracene	--	--	230	--	--	74	14	18	70	12 J	8.6	8.3	11 J	21	3.1 J
Fluoranthene	--	--	1700	--	--	1400	170	220	6500	190	130	210	210	1100	91
Fluorene	--	--	540	--	--	72 J	14 J	21 J	140 J	13 J	16 J	21 J	19 J	110 J	18 J
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	--	--	11	--	--	4.7 U	4.8 U	4.9 U	4.8 UJ	4.9 U	4.9 U	5 U	4.8 U	4.9 U	4.9 U
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	180	40	51	220	27	22	22	24	46	20 U
Naphthalene	--	--	2100	--	--	130	23	47	28 J	20	23	38	28	76	51
Phenanthrene	--	--	1500	--	--	650	76	99	1900	48	60	72	95	1300	55
Pyrene	--	--	2600	--	--	1100	160	200	3900	160	110	170	230	800	78
Total HPAH (SMS) (U = 0)	--	--	12000	--	--	5224	860	1074	15860 J	813 J	566.6	803.3	996 J	3123	330.1 J
Total LPAH (SMS) (U = 0)	--	--	5200	--	--	1031 J	136 J	218.7 J	2373 J	103 J	121 J	182 J	191 J	1688 J	151 J
Total PAH (SMS) (U = 0)	--	--	--	--	--	6255 J	996 J	1292.7 J	18233 J	916 J	687.6 J	985.3 J	1187 J	4811 J	481.1 J
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)															
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	0.094 U	0.196 U	0.169 U	0.229 UJ	0.158 U	0.192 U	0.192 U	0.128 U	0.114 U	0.243 U
1,2-Dichlorobenzene	2.3	2.3	--	--	--	0.094 U	0.196 U	0.169 U	0.229 UJ	0.158 U	0.192 U	0.192 U	0.128 U	0.114 U	0.243 U
1,4-Dichlorobenzene	3.1	9	--	--	--	0.094 U	0.196 U	0.169 U	0.229 UJ	0.158 U	0.192 U	0.192 U	0.128 U	0.114 U	0.243 U
2-Methylnaphthalene	38	64	--	--	--	1.526	0.612 J	0.931	1.333 J	0.45 J	0.627 J	0.923	0.505	1.578	1.436
Acenaphthene	16	57	--	--	--	0.944	0.776 U	0.334 J	3.238 J	0.643 U	0.784 U	0.423 J	0.505 U	1.323	0.99 U
Acenaphthylene	66	66	--	--	--	0.643	0.776 U	0.414 J	3.667	0.643 U	0.784 U	0.423 J	0.293 J	0.812	0.99 U
Anthracene	220	1200	--	--	--	2.008	0.939	1.034	7.619	0.707	0.863	1.115	1.011	2.552	1.337
Benzo(a)anthracene	110	270	--	--	--	7.229	2.408	2.759	26.667	1.833	1.922	2.269	2.021	3.944	1.188
Benzo(a)pyrene	99	210	--	--	--	7.631	2.449	2.621	19.048	1.479	1.49	1.615	1.596	2.552	0.941 J
Benzo(b,j,k)fluoranthenes	230	450	--	--	--	17.068	6.531	6.897	95.238 J	4.502	3.804	5.385	5.053	9.281	2.723
Benzo(g,h,i)perylene	31	78	--	--	--	3.614	1.918	2.034	10 J	0.997	1.098	0.846	0.665	1.067	0.545 J
Chrysene	110	460	--	--	--	14.056	6.122	5.862	95.238	4.823	3.294	5	4.521	9.977	2.426
Dibenzo(a,h)anthracene	12	33	--	--	--	1.486	0.571	0.621	3.333	0.386 J	0.337	0.319	0.293 J	0.487	0.153 J
Fluoranthene	160	1200	--	--	--	28.112	6.939	7.586	309.524	6.109	5.098	8.077	5.585	25.522	4.505
Fluorene	23	79	--	--	--	1.446 J	0.571 J	0.724 J	6.667 J	0.418 J	0.627 J	0.808 J	0.505 J	2.552 J	0.891 J
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	3.9	6.2	--	--	--	0.094 U	0.196 U	0.169 U	0.229 UJ	0.158 U	0.192 U	0.192 U	0.128 U	0.114 U	0.243 U
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	3.614	1.633	1.759	10.476	0.868	0.863	0.846	0.638	1.067	0.99 U
Naphthalene	99	170	--	--	--	2.61	0.939	1.621	1.333 J	0.643	0.902	1.462	0.745	1.763	2.525
Phenanthrene	100	480	--	--	--	13.052	3.102	3.414	90.476	1.543	2.353	2.769	2.527	30.162	2.723
Pyrene	1000	1400	--	--	--	22.088	6.531	6.897	185.714	5.145	4.314	6.538	6.117	18.561	3.861
Total HPAH (SMS) (U = 0)	960	5300	--	--	--	104.9	35.102	37.034	755.238 J	26.141 J	22.22	30.896	26.489 J	72.459	16.342 J
Total LPAH (SMS) (U = 0)	370	780	--	--	--	20.703 J	5.551 J	7.541 J	113 J	3.312 J	4.745 J	7 J	5.08 J	39.165 J	7.475 J
Total PAH (SMS) (U = 0)	--	--	--	--	--	125.602 J	40.653 J	44.576 J	868.238 J	29.453 J	26.965 J	37.896 J	31.569 J	111.624 J	23.817 J

Table 4
Surface Sediment Chemical and Physical Testing Results

Analytes	SMS SQS	SMS CSL	PS LAET[a]	Reference CR-12 5/30/2012 0-10 cm	Reference CR-023 5/30/2012 0-10 cm	IJ12-01 IJ12-01 4/25/2012 0-12 cm	IJ12-02 IJ12-02 4/24/2012 0-12 cm	IJ12-03 IJ12-03 4/24/2012 0-12 cm	IJ12-04 IJ12-04 4/24/2012 0-12 cm	IJ12-05 IJ12-05 4/24/2012 0-12 cm	IJ12-06 IJ12-06 4/24/2012 0-12 cm	IJ12-07 IJ12-07 4/24/2012 0-12 cm	IJ12-08a IJ12-08A 4/24/2012 0-12 cm	IJ12-08a IJ12-58A 4/24/2012 0-12 cm	IJ12-11 IJ12-11 4/24/2012 0-12 cm
Dioxin Furans (ng/kg)															
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	--	--	--	--	--	**235**	**301**	**173**	**255**	**304**	**195**	**150**	**362**	**197**	**113**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	--	**9860**	**5630**	**2930**	**15200**	**5800**	**3800**	**3160**	**11000**	**5240**	**2080**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	**89.9**	**84.6**	**43.3**	**106**	**79.6**	**58.8**	**44.6**	**118**	**55.8**	**34.7**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	**891**	**629**	**334**	**1510**	**640**	**443**	**356**	**1200**	**575**	**251**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	**4.82**	**5.38**	**2.83**	**5.41**	**5.04**	**3.79**	**2.73**	**7.71**	**3.25**	**2.24**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	**6.66**	**5.35**	**2.67**	**10.1**	**5.33**	**4.29**	**3.37**	**9.26**	**5.04**	**2.89**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**7.12**	**8.05**	**3.86**	**9.16**	**7.53**	**5.85**	**4.3**	**10.2**	**4.34**	**4.13**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	**3.7**	**2.88**	**1.67 J**	**4.63**	**2.78**	**2.28**	**1.53 J**	**4.1**	**2.38**	**1.41 J**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**36.9**	**23.5**	**11.9**	**44.1**	**23**	**18.5**	**14.3**	**41.1**	**19.3**	**11.8**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	**2.61**	**1.9 J**	**1.18 J**	**3.84**	**1.52 J**	**1.19 J**	**1.11 J**	**2.93**	**1.59 J**	**1.09 J**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**15.3**	**15.2**	**6.72**	**18.3**	**13.7**	**10.4**	**7.31**	**18.7 J**	**9.17**	**6.39**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	**2.13**	**1.35 J**	**0.738 J**	**2.77**	**1.38 J**	**1.21 J**	**0.972 J**	**2.15 J**	**0.89 J**	**0.992 J**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	**3.94**	**3.97**	**2**	**4.21**	**3.8**	**2.93**	**2.25 J**	**5.34**	**2.03 J**	**1.92**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	**5.93**	**5.03**	**1.35 J**	**6.81**	**4.96**	**3.65**	**1.56 J**	**7.03**	**1.49 J**	**2.22**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	**2.28**	**1.66**	**0.903 J**	**3.09**	**1.59**	**1.21**	**1**	**2.55**	**1.25**	**1.05**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	**1.34**	**4.52**	**2.28**	**2.11**	**4.55**	**4.37**	**3.59**	**5.26**	**2.28**	**4.29**
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	**0.429 J**	**0.5 J**	**0.264 J**	**0.487 J**	**0.496 J**	**0.457 J**	**0.374 J**	**0.629 J**	**0.266 J**	**0.3 J**
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	**278**	**288 J**	**156**	**342 J**	**285**	**211 J**	**162 J**	**423**	**195**	**131**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	**2270**	**1650**	**869**	**4940**	**1590**	**1140**	**963**	**3630**	**1520**	**613**
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	**202 J**	**138 J**	**70.9 J**	**261 J**	**141 J**	**108 J**	**83.8 J**	**219 J**	**93.1 J**	**65.4 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**226**	**308 J**	**139**	**463**	**320**	**277**	**193 J**	**504 J**	**190**	**226**
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	**81.9 J**	**49.4 J**	**28.7 J**	**73.6 J**	**46.3 J**	**35.7 J**	**27.5 J**	**62.2 J**	**25.2 J**	**24.1 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	**25.9**	**128 J**	**56.5 J**	**40.8 J**	**140 J**	**134**	**92.7 J**	**162 J**	**52.2 J**	**131 J**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	**22.5 J**	**28.2 J**	**16.4 J**	**18.9 J**	**26.9 J**	**25.1 J**	**19.5 J**	**31.2 J**	**15.4 J**	**22.8 J**
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	**14.7 J**	**109 J**	**51.5 J**	**19.8 J**	**119 J**	**121 J**	**82.5 J**	**130 J**	**45.1 J**	**119 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0)	--	--	--	--	--	**26.0 J**	**20.6 J**	**10.5 J**	**36.5 J**	**20.2 J**	**15.1 J**	**11.7 J**	**33.3 J**	**15.2 J**	**9.5 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 1/2)	--	--	--	--	--	**26.0 J**	**20.6 J**	**10.5 J**	**36.5 J**	**20.2 J**	**15.1 J**	**11.7 J**	**33.3 J**	**15.2 J**	**9.5 J**
PCB Aroclors (µg/kg)															
Aroclor 1016	--	--	--	--	--	19 U	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U
Aroclor 1221	--	--	--	--	--	19 U	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U
Aroclor 1232	--	--	--	--	--	19 U	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U
Aroclor 1242	--	--	--	--	--	19 UJ	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U
Aroclor 1248	--	--	--	--	--	19 UJ	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U
Aroclor 1254	--	--	--	--	--	19 UJ	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U
Aroclor 1260	--	--	--	--	--	19 UJ	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U
Total PCB Aroclors (U = 0)	--	--	130	--	--	19 UJ	19 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	20 U

Table 4
Surface Sediment Chemical and Physical Testing Results

Analytes	SMS SQS	SMS CSL	PS LAET[a]	Reference CR-12 5/30/2012 0-10 cm	Reference CR-023 5/30/2012 0-10 cm	IJ12-01 IJ12-01 4/25/2012 0-12 cm	IJ12-02 IJ12-02 4/24/2012 0-12 cm	IJ12-03 IJ12-03 4/24/2012 0-12 cm	IJ12-04 IJ12-04 4/24/2012 0-12 cm	IJ12-05 IJ12-05 4/24/2012 0-12 cm	IJ12-06 IJ12-06 4/24/2012 0-12 cm	IJ12-07 IJ12-07 4/24/2012 0-12 cm	IJ12-08a IJ12-08A 4/24/2012 0-12 cm	IJ12-08a IJ12-58A 4/24/2012 0-12 cm	IJ12-11 IJ12-11 4/24/2012 0-12 cm
PCB Aroclors (mg/kg-OC)															
Aroclor 1016	--	--	--	--	--	0.382 U	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U
Aroclor 1221	--	--	--	--	--	0.382 U	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U
Aroclor 1232	--	--	--	--	--	0.382 U	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U
Aroclor 1242	--	--	--	--	--	0.382 UJ	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U
Aroclor 1248	--	--	--	--	--	0.382 UJ	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U
Aroclor 1254	--	--	--	--	--	0.382 UJ	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U
Aroclor 1260	--	--	--	--	--	0.382 UJ	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U
Total PCB Aroclors (U = 0)	12	65	--	--	--	0.382 UJ	0.776 U	0.69 U	0.905 U	0.643 U	0.745 U	0.731 U	0.505 U	0.441 U	0.99 U

Notes:

Detected concentration is greater than Sediment Management Standards (SMS) Sediment Quality Standards (SQS)
Detected concentration is greater than SMS Cleanup Screening Level (CSL)
Detected concentration is greater than Puget Sound Estuary Program lowest apparent effects threshold (LAET) screening level (SL)
Non-detected concentration is above one or more identified SLs
Detected concentration is greater than the former Dredged Material Management Program (DMMP) SL[b]
Concentration not compared to indicated criteria value

Bold = Detected result

J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
-- Results or values not reported or not applicable

a. Only samples with TOC > 3.5% were screened against the PS LAET SL.
b. The former DMMP SL and Bioaccumulation Trigger/Maximum Level (BT/ML) for nickel is 140 mg/kg dry wt and 370 mg/kg dry wt, respectively.

mg/kg = milligrams per kilogram
mg/kg-OC = milligrams per kilogram organic carbon normalized
ng/kg = nanograms per kilogram
PAH = polycyclic aromatic hydrocarbons
PCB = polychlorinated biphenyls
pct = percent
µg/kg = micrograms per kilogram

U.S. Environmental Protection Agency (USEPA) Stage 2B data validation was completed by Laboratory Data Consultants (LDC).
Results are reported in dry weight basis and as OC-normalized basis.

Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs.
Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.
Total PAH are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene. 2-Methylnapthalene is not included.
Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes.
Dioxin TEQ values were calculated with 2005 World Health Organization (WHO) TEF values for mammals.

Table 5
SMS Biological Effects Criteria

Biological Test	SQS Biological Criteria	CSL Biological Criteria
Amphipod	The test sediment has a significantly higher (t-test, p = 0.05) mean mortality than the reference sediment, and the test sediment mean mortality is more than 25 percent (M_T>25%), on an absolute basis, than the reference sediment	The test sediment has a significantly higher (t-test, p = 0.05) mean mortality than the reference sediment, and the test sediment mean mortality is more than 30 percent greater (M_T-M_C>30%), on an absolute basis, than the reference sediment mean mortality
Larval	The test sediment has a mean survivorship of normal larvae that is significantly less (t-test, p = 0.05) than the mean normal survivorship in the reference sediment, and the mean normal survivorship in the test sediment is less than 85 percent of the mean normal survivorship in reference sediment (N_T/N_R<0.85)	The test sediment has a mean survivorship of normal larvae that is significantly less (t-test, p = 0.05) than the mean normal survivorship in the reference sediment, and the mean normal survivorship in the test sediment is less than 70 percent of the mean normal survivorship in the reference sediment (N_T/N_R<0.70)
Juvenile Polychaete	The mean individual growth rate of the polychaetes in the test sediment is less than 70 percent of the mean individual growth rate in the reference sediment (MIG_T/MIG_R<0.70), and the test sediment mean individual growth rate is statistically different (t-test, p = 0.05) from the reference sediment mean individual growth rate	The mean individual growth rate of polychaetes in the test sediment is less than 50 percent of the mean individual growth rate in the reference sediment (MIG_T/MIG_R<0.50), and the test sediment mean individual growth rate is statistically different (t-test, p = 0.05) from the reference sediment mean individual growth rate

Notes:
C = negative control
CSL = Cleanup Screening Level
M = mortality
MIG = mean individual growth rate
N = normal counts
R = reference sediment
SQS = Sediment Quality Standard
T = test sediment

Table 6
Biological Test Results for the 10-day Acute Toxicity Test - *A. abdita*

Treatment	Mean Percentage Survival	SD
Control	90	5
CR-12	78	11
CR-023	91	7
IJ12-01	95	9
IJ12-02	85	7
IJ12-03	82	8
IJ12-05	86	14
IJ12-07	92	4

Table 7
Biological Test Results for the Larval Development Test - *M. galloprovincialis*

Treatment	Mean Combined Normal Survivorship (%)	SD
Control	75.1	3
CR-12	90.6	5.2
CR-023	74.4	5.3
IJ12-01	54.9	5.2
IJ12-02	62.1	7.5
IJ12-03	58.9	10.8
IJ12-05	61.2	6.5
IJ12-07	65.1	6.4

Table 8
Biological Test Results for the 20-day Chronic Toxicity Test - *N. arenaceodentata*

Treatment	Survival	Mean Individual Growth Rate (mg/ind/day as Dry Weight)
Control	100	1.192
CR-12	96	1.106
CR-023	96	0.97
IJ12-01	100	0.902
IJ12-02	100	0.895
IJ12-03	100	1.053
IJ12-05	100	0.928
IJ12-07	88	0.892

Table 9
Reference and Control Bioassay Performance Standards

Biological Test	Control Criteria	Control Criteria Pass/Fail	Reference Criteria	Reference Criteria Pass/Fail
Amphipod *(A. abdita)*	$M_c \leq 10\%$	*Pass (M_c =10%)*	$M_R < 25\%$	*CR-12 - Pass (M_R = 22%)* *CR-023 - Pass (M_R = 9%)*
Larval *(M. galloprovincialis)*	$N_c/I \geq 0.70\%$	*Pass (N_c =75.1%)*	$N_R/N_C \geq 65\%$	*CR-12 - Pass (M_R = 90.6%)* *CR-023 Pass (M_R = 74.4%)*
Juvenile Polychaete *(N. arenaceodentata)*	$M_c \leq 10\%$ and $MIG_C \geq 0.38$ mg/ind/day (as Dry Weight)*	*Pass (M_c =0%)* *Pass (MIG_C = 1.192 mg/ind/day as Dry Weight)*	$M_R \leq 20\%$ $MIG_R/MIG_C \geq 80\%$ (as Dry Weight)	*CR-12 - Pass (M_R =4%)* *CR-023 - Pass (M_R =4%)* *CR-12 - Pass (MIG_R/MIG_C =93%)* *CR-023 - Pass (MIG_R/MIG_C =81%)*

Notes:
* Recommended: ≥0.72 mg/ind/day as Dry Weight; Minimum: ≥0.38 mg/ind/day
C = negative control
I = initial count
M = mortality
MIG = mean individual growth rate
N = normal counts
R = reference sediment
T = test sediment

Table 10
Biological Testing Endpoint Evaluation

Station	Statistically Different	Exceeds SQS Effect Criteria (Yes/No)	Exceeds CSL Effect Criteria (Yes/No)	SQS/CSL Biological Criteria (Pass/Fail)[1]
	CR-023	CR-023	CR-023	
Amphipod		M_T-M_R>25%	M_T-M_R>30%	
IJ12-01	No	No	No	Pass
IJ12-02	No	No	No	Pass
IJ12-03	Yes	No	No	Pass
IJ12-05	No	No	No	Pass
IJ12-07	No	No	No	Pass
Larval		N_T/N_R<0.85	N_T/N_R<0.70	
IJ12-01	Yes	Yes	No	Fail: SQS
IJ12-02	Yes	Yes	No	Fail: SQS
IJ12-03	Yes	Yes	No	Fail: SQS
IJ12-05	Yes	Yes	No	Fail: SQS
IJ12-07	Yes	No	No	Pass
Juvenile Polychaete		MIG_T/MIG_R<0.70	MIG_T/MIG_R<0.50	
IJ12-01	No	No	No	Pass
IJ12-02	No	No	No	Pass
IJ12-03	No	No	No	Pass
IJ12-05	No	No	No	Pass
IJ12-07	No	No	No	Pass

Notes:

1. Sediment Quality Standard (SQS) and Cleanup Screening Level (CSL) Biological Criteria for each bioassay are included in Table 7.

C = negative control

M = mortality

MIG = mean individual growth rate

N = Normal counts

NA = Not Applicable

R = reference sediment

T = test sediment

Table 11
Subsurface Sediment Chemical Testing Results - USACE Samples for I&J Waterway

			Location ID	I-1	I-1	I-2	I-3	I-3	I-5	I-5	I-7
			Sample ID	I-1-DM	I-1-Z	I-2-A-Z	I-3-DM	I-3-Z	I-5-DM	I-5-Z	I-7-DM
			Sample Date	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/7/2011
			Depth	0 - 4.6 ft	4.6 - 6.4 ft	3.3 - 5.1 ft	0 - 2.2 ft	2.2 - 3.8 ft	0 - 3.3 ft	3.3 - 5.3 ft	0 - 3.1 ft
Analytes	**SMS SQS**	**SMS CSL**	**PS LAET[a]**								
Conventional Parameters (mg/kg)											
Ammonia	--	--	--	**113**	**91.7 J**	**72.3 J**	**10.6**	--	**87.9**	--	**28.6**
Sulfide	--	--	--	**2650**	--	--	**1830**	--	**2320**	--	**1970**
Conventional Parameters (pct)											
Total organic carbon	--	--	--	**4.14**	**10.5 J**	**4.15 J**	**3.34**	--	**4.23**	--	**2.07**
Total solids	--	--	--	**48.3**	**59.6 J**	**51.3 J**	**57.6**	--	**46.7**	--	**49.7**
Total solids (preserved)	--	--	--	**45.4**	--	--	**53.9**	--	**46.3**	--	**48.5**
Total volatile solids	--	--	--	**9.06**	--	--	**6.52**	--	**11.15**	--	**6.84**
Grain Size (pct)											
Gravel	--	--	--	**0.2**	**0.7**	**0.4**	**2.9**	--	0.1 U	--	0.1 U
Sand, Very Coarse	--	--	--	**3.5**	**0.6**	**1**	**2.5**	--	**6.4**	--	**1.5**
Sand, Coarse	--	--	--	**2.3**	**1**	**1**	**4**	--	**3.2**	--	**1.2**
Sand, Medium	--	--	--	**2**	**4.4**	**2.2**	**7**	--	**2.4**	--	**0.7**
Sand, Fine	--	--	--	**2.7**	**17.7**	**8.6**	**13.4**	--	**2.3**	--	**0.6**
Sand, Very Fine	--	--	--	**2.8**	**14.8**	**6.1**	**7.5**	--	**2.8**	--	**0.8**
Silt, Coarse	--	--	--	**3.2**	**11.4**	**4.9**	**3.4**	--	**2.8**	--	**3.4**
Silt, Medium	--	--	--	**8.1**	**8.8**	**7.8**	**7.1**	--	**11.2**	--	**12.4**
Silt, Fine	--	--	--	**19.8**	**9.1**	**15.8**	**12.6**	--	**18.4**	--	**24.6**
Silt, Very Fine	--	--	--	**15.5**	**8.7**	**16.1**	**11.3**	--	**15.7**	--	**16.2**
Fines (silt + clay)	--	--	--	**86.5**	**60.8**	**80.9**	**62.6**	--	**82.8**	--	**95.2**
Clay, Coarse	--	--	--	**11.1**	**6**	**11.1**	**8.6**	--	**10.4**	--	**11.2**
Clay, Medium	--	--	--	**9.8**	**5.2**	**8.5**	**6.6**	--	**8.5**	--	**9.3**
Clay, Fine	--	--	--	**19.1**	**11.6**	**16.7**	**13**	--	**15.8**	--	**18.1**
Total Gravel	--	--	--	**0.2**	**0.7**	**0.4**	**2.9**	--	0.1 U	--	0.1 U
Total Sand	--	--	--	**13.3**	**38.5**	**18.9**	**34.4**	--	**17.1**	--	**4.8**
Total Silt	--	--	--	**46.6**	**38**	**44.6**	**34.4**	--	**48.1**	--	**56.6**
Total Fines (silt + clay)	--	--	--	**86.6**	**60.8**	**80.9**	**62.6**	--	**82.8**	--	**95.2**
Total Clay	--	--	--	**40**	**22.8**	**36.3**	**28.2**	--	**34.7**	--	**38.6**
Total Grain Size	--	--	--	**100.1**	**100**	**100.2**	**99.9**	--	**99.9**	--	**100**
Metals (mg/kg)											
Arsenic	57	93	--	--	8 U	9 U	--	--	--	--	--
Cadmium	5.1	6.7	--	--	**0.9**	**1.6**	--	--	--	--	--
Chromium	260	270	--	--	**48.1**	**88.1**	--	--	--	--	--
Copper	390	390	--	--	**54**	**64.3**	--	--	--	--	--
Lead	450	530	--	--	**30**	**40**	--	--	--	--	--
Mercury	0.41	0.59	--	--	**0.4 J**	**4.39 J**	--	--	--	--	--
Nickel[b]	--	--	--	--	**71**	**95**	--	--	--	--	--

Table 11
Subsurface Sediment Chemical Testing Results - USACE Samples for I&J Waterway

			Location ID	I-1	I-1	I-2	I-3	I-3	I-5	I-5	I-7
			Sample ID	I-1-DM	I-1-Z	I-2-A-Z	I-3-DM	I-3-Z	I-5-DM	I-5-Z	I-7-DM
			Sample Date	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/7/2011
			Depth	0 - 4.6 ft	4.6 - 6.4 ft	3.3 - 5.1 ft	0 - 2.2 ft	2.2 - 3.8 ft	0 - 3.3 ft	3.3 - 5.3 ft	0 - 3.1 ft
Analytes	**SMS SQS**	**SMS CSL**	**PS LAET[a]**								
Silver	6.1	6.1	--	--	0.5 U	0.6 U	--	--	--	--	--
Zinc	410	960	--	--	**96**	**125**	--	--	--	--	--
Semivolatile Organics (µg/kg)											
2,4-Dimethylphenol	29	29	--	--	**250 J**	**110 J**	--	--	--	--	--
2-Methylphenol (o-Cresol)	63	63	--	--	**120 J**	**42 J**	--	--	--	--	--
4-Methylphenol (p-Cresol)	670	670	--	--	**420**	**230**	--	--	--	--	--
Benzoic acid	650	650	--	--	390 U	380 U	--	--	--	--	--
Benzyl alcohol	57	73	--	--	20 U	19 U	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	--	--	1300	--	74 U	79 U	--	--	--	--	--
Butylbenzyl phthalate	--	--	63	--	**48**	**13**	--	--	--	--	--
Dibenzofuran	--	--	540	--	**190**	**84**	--	--	--	--	--
Diethyl phthalate	--	--	48	--	12 U	4.8 U	--	--	--	--	--
Dimethyl phthalate	--	--	71	--	**160**	**10**	--	--	--	--	--
Di-n-butyl phthalate	--	--	1400	--	20 U	19 U	--	--	--	--	--
Di-n-octyl phthalate	--	--	420	--	20 U	19 U	--	--	--	--	--
Hexachlorobenzene	--	--	22	--	4.9 U	**6.3**	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	28	--	**36**	**12 J**	--	--	--	--	--
Pentachlorophenol	360	690	--	--	49 U	48 U	--	--	--	--	--
Phenol	420	1200	--	--	**120**	**59**	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
1,2,4-Trichlorobenzene	--	--	31	--	4.9 U	**3.1 J**	--	--	--	--	--
1,2-Dichlorobenzene	--	--	35	--	4.9 U	**3.1 J**	--	--	--	--	--
1,4-Dichlorobenzene	--	--	110	--	**2.7 J**	**5.2**	--	--	--	--	--
2-Methylnaphthalene	--	--	670	--	**300**	**130**	--	--	--	--	--
Acenaphthene	--	--	500	--	**64**	**27**	--	--	--	--	--
Acenaphthylene	--	--	560	--	**33**	**12 J**	--	--	--	--	--
Anthracene	--	--	960	--	**100**	**55**	--	--	--	--	--
Benzo(a)anthracene	--	--	1300	--	**130**	**63**	--	--	--	--	--
Benzo(a)pyrene	--	--	1600	--	**78**	**41**	--	--	--	--	--
Benzo(b,j,k)fluoranthenes	--	--	--	--	**170**	**86**	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	670	--	**30**	**19**	--	--	--	--	--
Chrysene	--	--	1400	--	**180**	**69**	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	230	--	**9.8 J**	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	230	--	--	**6**	--	--	--	--	--
Fluoranthene	--	--	1700	--	**430**	**230**	--	--	--	--	--
Fluorene	--	--	540	--	**140 J**	**59 J**	--	--	--	--	--
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	--	--	11	--	4.9 U	4.8 U	--	--	--	--	--

Table 11
Subsurface Sediment Chemical Testing Results - USACE Samples for I&J Waterway

			Location ID	I-1	I-1	I-2	I-3	I-3	I-5	I-5	I-7
			Sample ID	I-1-DM	I-1-Z	I-2-A-Z	I-3-DM	I-3-Z	I-5-DM	I-5-Z	I-7-DM
			Sample Date	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/7/2011
			Depth	0 - 4.6 ft	4.6 - 6.4 ft	3.3 - 5.1 ft	0 - 2.2 ft	2.2 - 3.8 ft	0 - 3.3 ft	3.3 - 5.3 ft	0 - 3.1 ft
Analytes	**SMS SQS**	**SMS CSL**	**PS LAET[a]**								
Indeno(1,2,3-c,d)pyrene	--	--	600	--	**27**	**15 J**	--	--	--	--	--
Naphthalene	--	--	2100	--	**300**	**160**	--	--	--	--	--
Phenanthrene	--	--	1500	--	**340**	**120**	--	--	--	--	--
Pyrene	--	--	2600	--	**390**	**180**	--	--	--	--	--
Total HPAH (SMS) (U = 0)	--	--	12000	--	**1444.8 J**	**709 J**	--	--	--	--	--
Total LPAH (SMS) (U = 0)	--	--	5200	--	**977 J**	**433 J**	--	--	--	--	--
Total PAH (SMS) (U = 0)	--	--	--	--	**2421.8 J**	**1142 J**	--	--	--	--	--
Dioxin Furans (ng/kg)											
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**1.73**	**1.6**	**0.928 J**	**1.07**	**0.199 J**	**2.71**	**0.664 J**	**1.15**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**7.22 J**	**6.49 J**	**4.43**	**4.09 J**	**0.904 J**	**5.82 J**	**3.42 J**	**4.67 J**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**14.5**	**7.68**	**5.48**	**7.68**	**1.09 J**	**9.95**	**3.73**	**11.5**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**49 J**	**34.2 J**	**50.6**	**37.9 J**	**7.29 J**	**51.9 J**	**32.3 J**	**30.4 J**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**24.4 J**	**15.7 J**	**13.8**	**13.9 J**	**2.24 J**	**19.6 J**	**9.31 J**	**15.5 J**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**971 J**	**677**	**1410**	**815 J**	**153**	**1200 J**	**767**	**493 J**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	**7750 J**	**5790**	**15600**	**7250 J**	**1370**	**11100 J**	**7070**	**3830 J**
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**339**	**157**	**41.4 J**	**180**	**12.4 J**	**227 J**	**40.2 J**	**457**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**394 J**	**172**	**65.1 J**	**211 J**	**15.1 J**	**260 J**	**53.5**	**485 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**705**	**378**	**340**	**415**	**53.6**	**548 J**	**236**	**692**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**2300 J**	**1550**	**2920**	**1620 J**	**325**	**2360 J**	**1490**	**983 J**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	**16.8**	**9.02**	**7.74**	**10.6**	**0.918 J**	**21.7 J**	**5.42**	**13.8**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**4.45 J**	**3.11**	**6.17**	**4.29 J**	**0.637 J**	**7.12**	**4.51**	**2.8 J**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**4.73**	**4**	**5.98**	**4.01**	**0.828 J**	**5.88**	**3.92**	**2.73**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**13.9 J**	**11.1**	**24.9**	**14.8 J**	**3.06**	**23.3**	**15.4**	**7.27 J**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**6.58**	**5.99**	**7.53**	**5.23**	**1.28 J**	**7.54**	**5.45**	**3.08**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	**4.57 J**	**3.62**	**6.81**	**4.22 J**	**0.926 J**	**7.36**	**5.02**	**2.26 J**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**9.76 J**	**10 J**	**10.9**	**7.24 J**	**2.15 J**	**10.5 J**	**7.71 J**	**4.64 J**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	**145**	**153**	**248**	**137**	**46.7**	**213**	**160**	**77.9**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	**9.94**	**10.4 J**	**14.5**	**9.78**	**2.92 J**	**14.7**	**11.2 J**	**5.33**
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	--	--	--	**381**	**445 J**	**873**	**395**	**140 J**	**615**	**486 J**	**251**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	**91.9 J**	**111 J**	**62 J**	**55 J**	**14.2 J**	**97 J**	**53.7 J**	**64.4 J**
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	**113 J**	**170 J**	**133 J**	**83.2 J**	**28 J**	**125 J**	**101 J**	**54.5 J**
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	**266**	**263 J**	**402**	**228 J**	**65.7 J**	**335**	**242 J**	**132**
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	**505 J**	**575**	**985 J**	**510 J**	**160**	**825 J**	**611 J**	**307 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0)	--	--	--	**38.2 J**	**29.4 J**	**41.8 J**	**28.6 J**	**5.7 J**	**43.5 J**	**25.5 J**	**22.6 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 1/2)	--	--	--	**38.2 J**	**29.4 J**	**41.8 J**	**28.6 J**	**5.7 J**	**43.5 J**	**25.5 J**	**22.6 J**
PCB Aroclors (µg/kg)											
Aroclor 1016	--	--	--	--	19 U	20 U	--	--	--	--	--

Table 11
Subsurface Sediment Chemical Testing Results - USACE Samples for I&J Waterway

Analytes	SMS SQS	SMS CSL	PS LAET[a]	I-1	I-1	I-2	I-3	I-3	I-5	I-5	I-7
Location ID				I-1	I-1	I-2	I-3	I-3	I-5	I-5	I-7
Sample ID				I-1-DM	I-1-Z	I-2-A-Z	I-3-DM	I-3-Z	I-5-DM	I-5-Z	I-7-DM
Sample Date				9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/8/2011	9/7/2011
Depth				0 - 4.6 ft	4.6 - 6.4 ft	3.3 - 5.1 ft	0 - 2.2 ft	2.2 - 3.8 ft	0 - 3.3 ft	3.3 - 5.3 ft	0 - 3.1 ft
Aroclor 1221	--	--	--	--	19 U	20 U	--	--	--	--	--
Aroclor 1232	--	--	--	--	19 U	20 U	--	--	--	--	--
Aroclor 1242	--	--	--	--	19 U	20 U	--	--	--	--	--
Aroclor 1248	--	--	--	--	**60**	**61**	--	--	--	--	--
Aroclor 1254	--	--	--	--	**48**	**65**	--	--	--	--	--
Aroclor 1260	--	--	--	--	**22**	**36**	--	--	--	--	--
Total PCB Aroclors (U = 0)	--	--	130	--	**130**	**162**	--	--	--	--	--

Notes:

Detected concentration is greater than Sediment Management Standards (SMS) Sediment Quality Standards (SQS)

Detected concentration is greater than SMS Cleanup Screening Level (CSL)

Detected concentration is greater than Puget Sound Estuary Program lowest apparent effects threshold (LAET) screening level (SL)

Non-detected concentration is above one or more identified screening levels

Detected concentration is greater than the former Dredged Material Management Program (DMMP) SL[b]

Bold = Detected result

J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
-- Results or values not reported or not applicable

mg/kg = milligrams per kilogram
mg/kg-OC = milligrams per kilogram organic carbon normalized
ng/kg = nanograms per kilogram
PAH = polycyclic aromatic hydrocarbons
PCB = polychlorinated biphenyls
pct = percent
µg/kg = micrograms per kilogram

U.S. Environmental Protection Agency (USEPA) Stage 2B data validation was completed by Laboratory Data Consultants (LDC).
Results are reported in dry weight basis and as OC-normalized basis.

Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest method detection limit value is reported as the sum.
Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs.
Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.
Total PAH are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene. 2-Methylnapthalene is not included.
Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes.
Dioxin TEQ values were calculated with 2005 World Health Organization (WHO) TEF values for mammals.

a. Only samples with TOC > 3.5% were screened against the PS LAET SL.
b. The former DMMP SL and Bioaccumulation Trigger/Maximum Level (BT/ML) for nickel is 140 mg/kg dry wt and 370 mg/kg dry wt, respectively.

Table 12
Summary of Storm Drain Reconnaissance Survey

Catchment ID	Catchment Type	Total Depth (ft bgs)	DT base of outlet pipe (ft bgs)	DTW (ft bgs)	Time	Date	Water flowing? (Y/N)	Solids present?	Thickness of solids (in)	Notes
City of Bellingham Bellwether Catch Basin-1	Catch basin	9.25	6.75	6.7	1027	4/20/2012	Y	Minimal	< 0.5	Closest catchment to outfall west of Coast Guard facility on Bellwether Way (south side of road). Minimal solids present, scraped bottom of basin - minor solids in corners. Had to remove drain "sock" prior to measurement - sock had minor runoff sediment. One inflow pipe, one outflow pipe.
City of Bellingham Bellwether Catch Basin-2	Catch basin	8.2	6.65	6.6	1040	4/20/2012	Y	Minimal	< 0.5	Across the street from Bellwether Catch Basin-1 on Bellwether Way (north side of road). Minimal solids present, scraped bottom of basin - minor solids in corners. Had to remove drain "sock" prior to measurement - sock had minor runoff sediment. One inflow pipe, one outflow pipe.
City of Bellingham Bellwether Catch Basin-3	Catch basin	3.95	2.55	2.55	1048	4/20/2012	N	Minimal	~ 0.5	West of Bellwether Catch Basin-1 and Catch Basin-2 along Bellwether Way (north side of road). Minimal solids present, slightly more than at Bellwether Catch Basin-1 or Catch Basin-2. Would be easier to sample than Bellwether Catch Basin-1 or Catch Basin-2. No sock. No inflow pipe, one outflow pipe.
City of Bellingham Roeder Catch Basin-1	Catch basin	3.55	1.45	1.45	1110	4/20/2012	--	Minimal	~ 0.5	Closest catch basin to outfall at head of I&J. In center of Redden Marine's parking lot. Minimal solids present, typically accumulated in corners of basin. One inflow and one outflow pipe.
City of Bellingham Roeder Storm Drain-1	Storm drain	11.1	10.2	9.75	1125	4/20/2012	Y	None	--	In Redden Marine's parking lot, adjacent to Roeder Catch Basin-1. Closest storm drain to outfall at head of I&J. Large volume of water flowing quickly through line. Large inflow and outflow pipes (one of each).
City of Bellingham Roeder Storm Drain-2	Storm drain	11.0	--	7.6	1145	4/20/2012	Y	None	--	On the east side of Roeder Avenue, across from Redden Marine and up-line from Roeder Catch Basin-1. Hard to tell which way/how water is flowing out. Three inlet pipes - two parallel to Roeder Avenue, one from the east (from the rail-side).
Port of Bellingham (002) Catch Basin-1	Catch basin	3.55	2.15	2.1	940	5/2/2012	N	Yes	~ 3.5	On the south side of Hilton Ave., across (SE) from Bornstein Seafoods. Removed sock and drain plug (floating) prior to measurements. Stagnant water had moderate rainbow sheen. Solids are sandy with some silt and minor gravel. Two inflow pipes, one outflow pipe. Accumulated sand and gravel solids on small shelf.
Port of Bellingham (002) Catch Basin-2 (CB-002)	Catch basin	5.5	3.6	3.72	955	5/2/2012	N	Yes	~ 2.5	On the north side of Hilton Ave., adjacent (SE) to Bornstein Seafoods building. Closest catchment to outfall NE of Bornstein. Stagnant water is cloudy with moderate rainbow florets and minor foam. No sock. Solids are gritty - mostly sand with some gravel and finer material (e.g., silt).

Table 12
Summary of Storm Drain Reconnaissance Survey

Catchment ID	Catchment Type	Total Depth (ft bgs)	DT base of outlet pipe (ft bgs)	DTW (ft bgs)	Time	Date	Water flowing? (Y/N)	Solids present?	Thickness of solids (in)	Notes
Bornstein (001) Catch Basin-1	Catch basin	3.55	--	1.4	1015	5/2/2012	Unclear	Solids (silt) present in screen basket but not in basin	0.5	In storage/parking lot area west of Bornstein Seafoods property. Closest catchment to outfall west of Bornstein. Blue plastic screen basket structure in catchment - screen basket has tiny holes and appears to collect fines. Fabric around the outside of the screen basket. Small "peek-through" hole in plastic fitting next to the screen basket provides minimal access to catch basin. Solids present in the screen basket, but not in the catch basin below. This basin is up-line from an oil-water separator system (OWS), which may also collect solids. Cannot access enough of basin to see inflow/outflow pipes.

Notes:
ft = feet
bgs = below ground surface
in = inches
All depths measured from top of grate (street/ground level)
Total depth measured from base of catchment structure to the top of the grate (street/ground level)

Table 13
Storm Drain Solid Chemical and Physical Testing Results

		Location ID	**CB-002**
		Sample ID	**CB-002-06222012**
		Sample Date	**6/22/2012**
		Depth	**0-10 cm**
	SMS SQS	**SMS CSL**	
Conventional Parameters (mg/kg)			
Ammonia	--	--	**2.15**
Sulfide	--	--	**1.7**
Conventional Parameters (pct)			
Total organic carbon	--	--	**0.833**
Total solids	--	--	**85.7**
Total solids (preserved)	--	--	**87.5**
Grain Size (pct)			
Gravel	--	--	**59.2**
Total Gravel	--	--	**59.2**
Total Sand	--	--	**32.9**
Sand, Very Coarse	--	--	**9.4**
Sand, Coarse	--	--	**7**
Sand, Medium	--	--	**7.4**
Sand, Fine	--	--	**6.2**
Sand, Very Fine	--	--	**2.9**
Total Silt	--	--	**6.5**
Silt, Coarse	--	--	**3.5**
Silt, Medium	--	--	**1.3**
Silt, Fine	--	--	**1**
Silt, Very Fine	--	--	**0.7**
Fines (silt + clay)	--	--	**7.9**
Total Fines (silt + clay)	--	--	**7.9**
Total Clay	--	--	**1.4**
Clay, Coarse	--	--	**0.6**
Clay, Medium	--	--	**0.4**
Clay, Fine	--	--	**0.4**
Metals (mg/kg)			
Arsenic	57	93	10 U
Cadmium	5.1	6.7	0.6 U
Chromium	260	270	**38 J**
Copper	390	390	**34.4 J**
Lead	450	530	**18**
Mercury	0.41	0.59	**0.04 J**
Nickel[a]	--	--	**826**
Silver	6.1	6.1	0.8 U
Zinc	410	960	**98**
Semivolatile Organics (µg/kg)			
2,4-Dimethylphenol	29	29	18 UJ
2-Methylphenol (o-Cresol)	63	63	4.6 U
4-Methylphenol (p-Cresol)	670	670	37 U
Benzoic acid	650	650	370 U
Benzyl alcohol	57	73	18 U
Bis(2-ethylhexyl)phthalate	--	--	51 U
Butylbenzyl phthalate	--	--	**150**
Dibenzofuran	--	--	18 U
Diethyl phthalate	--	--	14 U
Dimethyl phthalate	--	--	**15**
Di-n-butyl phthalate	--	--	18 U
Di-n-octyl phthalate	--	--	18 U
Hexachlorobenzene	--	--	4.6 U
N-Nitrosodiphenylamine	--	--	**3.6 J**
Pentachlorophenol	360	690	46 U
Phenol	420	1200	18 U
Semivolatile Organics (mg/kg-OC)			
Bis(2-ethylhexyl)phthalate	47	78	6.122 U
Butylbenzyl phthalate	4.9	64	**18.007**
Dibenzofuran	15	58	2.161 U
Diethyl phthalate	61	110	1.681 U
Dimethyl phthalate	53	53	**1.801**
Di-n-butyl phthalate	220	1700	2.161 U
Di-n-octyl phthalate	58	4500	2.161 U
Hexachlorobenzene	0.38	2.3	0.144 U[b]
N-Nitrosodiphenylamine	11	11	**0.432 J**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)			
1,2,4-Trichlorobenzene	0.81	1.8	0.552 U
1,2-Dichlorobenzene	2.3	2.3	0.552 U
1,4-Dichlorobenzene	3.1	9	0.552 U
2-Methylnaphthalene	38	64	**3.481**
Acenaphthene	16	57	2.161 U
Acenaphthylene	66	66	2.161 U
Anthracene	220	1200	2.161 U

Table 13
Storm Drain Solid Chemical and Physical Testing Results

			Location ID Sample ID Sample Date Depth	CB-002 CB-002-06222012 6/22/2012 0-10 cm
	SMS SQS	SMS CSL		
Benzo(a)anthracene	110	270		**1.116 J**
Benzo(a)pyrene	99	210		**1.321 J**
Benzo(b,j,k)fluoranthenes	230	450		**3.001**
Benzo(g,h,i)perylene	31	78		**2.521**
Chrysene	110	460		**2.641**
Dibenzo(a,h)anthracene	12	33		**0.612**
Fluoranthene	160	1200		**3.481**
Fluorene	23	79		2.161 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	3.9	6.2		0.552 U
Indeno(1,2,3-c,d)pyrene	34	88		2.161 U
Naphthalene	99	170		**3.361**
Phenanthrene	100	480		**3.962**
Pyrene	1000	1400		**3.721**
Total Benzofluoranthenes (b,j,k) (U = 0)	230	450		**3.001**
Total HPAH (SMS) (U = 0)	960	5300		**18.415 J**
Total LPAH (SMS) (U = 0)	370	780		**7.323**
Total PAH (SMS) (U = 0)	--	--		**25.738 J**
Dioxin Furans (ng/kg)				
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		**0.744 J**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		**4.36**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**3.29**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**8.57**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**5.92**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		**95.9**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--		**611**
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		**42.2 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		**55.7**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**85 J**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		**174**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--		**3.75**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		**4.78**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		**5.82**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		**9.55**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		**6.71**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--		**2.05**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		**6.61**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--		**35.5**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--		**4.15**
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	--	--		**50.8**
Total Tetrachlorodibenzofuran (TCDF)	--	--		**67.7 J**
Total Pentachlorodibenzofuran (PeCDF)	--	--		**85.1 J**
Total Hexachlorodibenzofuran (HxCDF)	--	--		**80.7 J**
Total Heptachlorodibenzofuran (HpCDF)	--	--		**77.5**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0)	--	--		**13.2 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 1/2)	--	--		**13.2 J**
PCB Aroclors (mg/kg-OC)				
Aroclor 1016	--	--		2.281 U
Aroclor 1221	--	--		2.281 U
Aroclor 1232	--	--		2.281 U
Aroclor 1242	--	--		2.281 U
Aroclor 1248	--	--		2.281 U
Aroclor 1254	--	--		2.281 U
Aroclor 1260	--	--		2.281 U
Total PCB Aroclors (U = 0)	12	65		2.281 U

Notes:
Detected concentration is greater than Sediment Management Standards (SMS) Sediment Quality Standards (SQS)
Detected concentration is greater than SMS Cleanup Screening Level (CSL)
Non-detected concentration is above one or more identified screening levels (SLs)
Detected concentration is greater than the former Dredged Material Management Program (DMMP) SLa
Bold = Detected result

a The former DMMP SL and Bioaccumulation Trigger/Maximum Level (BT/ML) for nickel is 140 mg/kg dry wt and 370 mg/kg dry wt,
b Hexachlorobenzene was reported to the method detection limit (MDL).

J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
-- Results or values not reported or not applicable

mg/kg = milligrams per kilogram
mg/kg-OC = milligrams per kilogram organic carbon normalized
ng/kg = nanograms per kilogram

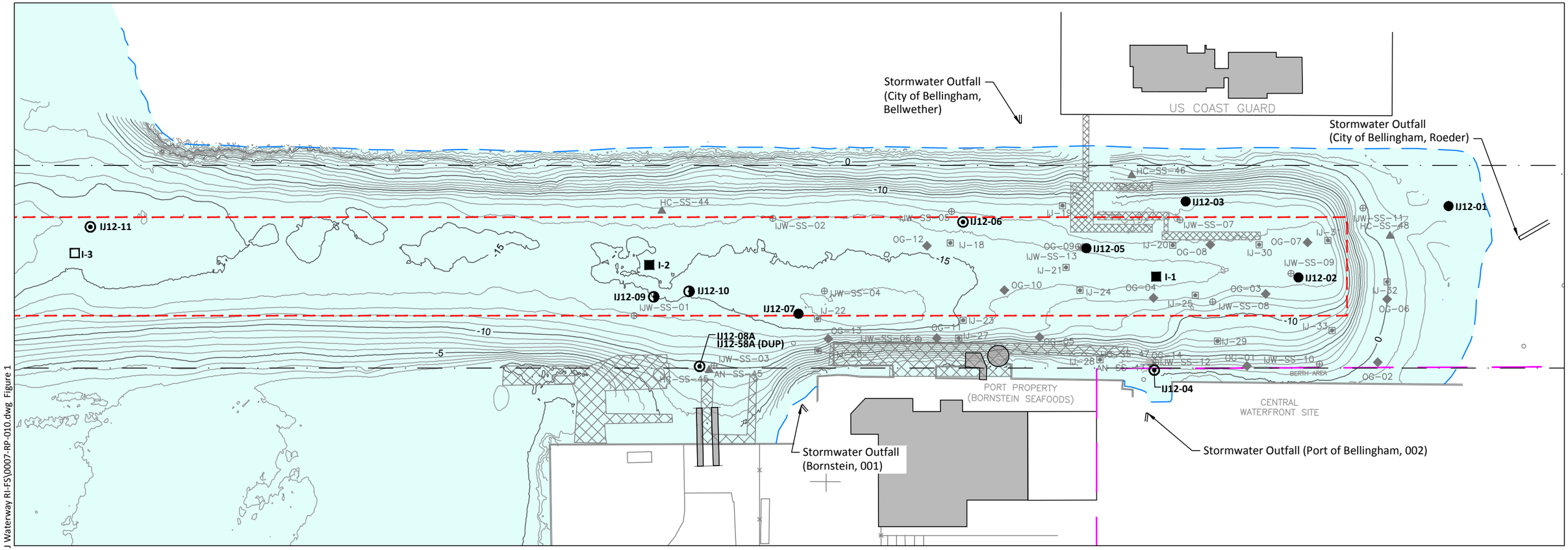
Table 13
Storm Drain Solid Chemical and Physical Testing Results

PAH = polycyclic aromatic hydrocarbons
PCB = polychlorinated biphenyls
pct = percent
µg/kg = micrograms per kilogram

USEPA Stage 2B data validation was completed by Laboratory Data Consultants (LDC).
Results are reported in dry weight basis and as OC-normalized basis.

reported as the sum.
Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-
Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene,
Total PAH are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene,
Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes.
Dioxin TEQ values were calculated with 2005 World Health Organization (WHO) TEF values for mammals.

FIGURES



LEGEND:

- Docks or Piers
- Existing Structures
- Federal Channel Boundary
- Existing Shoreline
- Central Waterfront Site Boundary
- I & J Waterway Boundary
- -10 Bathymetric Contour (1 foot interval)

2011 and 2012 RI/FS Sediment Sampling Station

- Subsurface Sediment Sample Location (USACE 2011) Dioxin/Furan
- Subsurface Sediment Sample Location (USACE 2011) Dioxin/Furan, SMS, and Nickel
- Surface Sediment Sample Location (Anchor QEA 2012) Dioxin/Furan, SMS, and Nickel
- Surface Sediment Sample Location (Anchor QEA 2012) Dioxin/Furan, SMS, Nickel, and Bioassays
- Archive Surface Sediment Sample Location (Anchor QEA 2012)

Historic Sampling Station

- HC-SS-47 ▲ Whatcom Waterway Sediment Grab Sample Location (Hart Crowser 1997)
- AN-SS-47 ▲ Bioassay Sample Location (Anchor Environmental 2000)
- OG-10 ◆ Surface Sediment Grab Sample Location (ThermoRetec 2001)
- IJ-28 Subsurface DMMP Composite Sample Location (RETEC 2006)
- IJW-SS-02 ⊕ RI/FS Surface Sample Location (RETEC 2006)

0 100
Scale in Feet

HORIZONTAL DATUM: Washington State Plane North, NAD83.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

NOTE:

1. Bathymetric survey from eTrac dated April 5, 2012.

T:\CAD\Projects\0007-Port of Bellingham\I & J Waterway RI-FS\0007-RP-010.dwg Figure 1
Feb 07, 2013 2:11pm dholmer

ANCHOR QEA

Figure 1
RI/FS Sediment Sampling Locations
I & J Waterway RI/FS Supplementary Investigation Memorandum
I & J Waterway RI/FS
Port of Bellingham

Storm Drain Features

- Sampled Catch Basin
- Surveyed Storm Drain
- Surveyed Catch Basin
- Other Catch Basin
- Outfall
- Main
- Estimated Stormwater Pipe Location

NOTES:
1. Storm Drain features from City of Bellingham GIS.
2. Aerial Imagery 2009.

Feet
0 60 120 180 240

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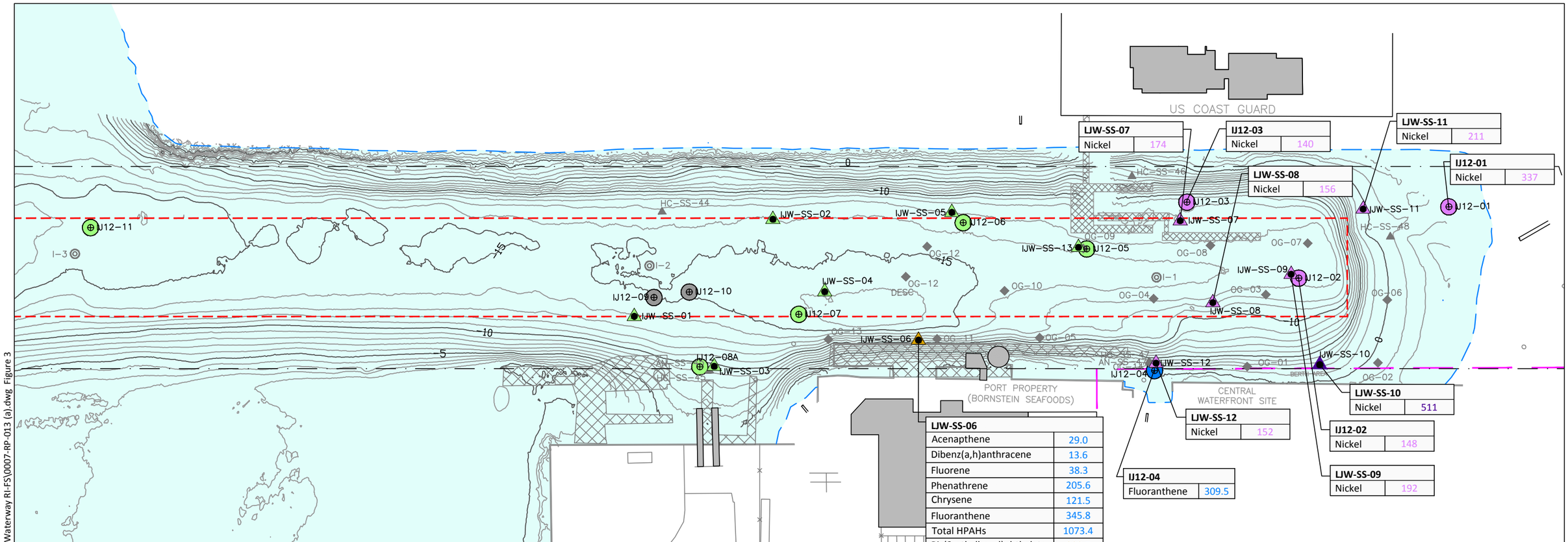
ANCHOR QEA

Figure 2
Storm Drain Reconnaissance Survey Locations
I & J Waterway RI/FS Supplemental Investigation Memorandum
I & J Waterway RI/FS
Port of Bellingham



LEGEND:

- Docks or Piers
- Existing Structures
- Existing Shoreline
- -10 Bathymetric Contour (1 foot interval)
- Central Waterfront Site Boundary
- I & J Waterway Boundary
- Federal Channel Boundary

2012 RI/FS and Historic Sediment Sampling Station

- HC–SS–47 ▲ Whatcom Waterway Sediment Grab Sample Location (Hart Crowser 1997)
- AN–SS–47 ▲ Bioassay Sample Location (Anchor 2000)
- OG–10 ◆ Surface Sediment Grab Sample Location (ThermoRetec 2001)
- IJ–28 ▣ Subsurface DMMP Composite Sample Location (RETEC 2006)
- IJW–SS–02 ● RI/FS Surface Sample Location (RETEC 2006)
- I–2 ◎ USACE Subsurface Sample Location (USACE 2011)
- IJ12–10 ⊕ RI/FS Work Plan Addendum Sample Location (Anchor QEA 2012)

Sediment Chemical Criteria

2006	2012	
▲	●	No Exceedances
▲	●	SQS Exceedances
▲	●	CSL Exceedances
▲	●	Nickel > 140 mg/kg (Former DMMP Screening Level)
▲	●	Nickel > 370 mg/kg (Former DMMP Bioaccumulation Trigger)
▲	●	Archived

0 100
Scale in Feet

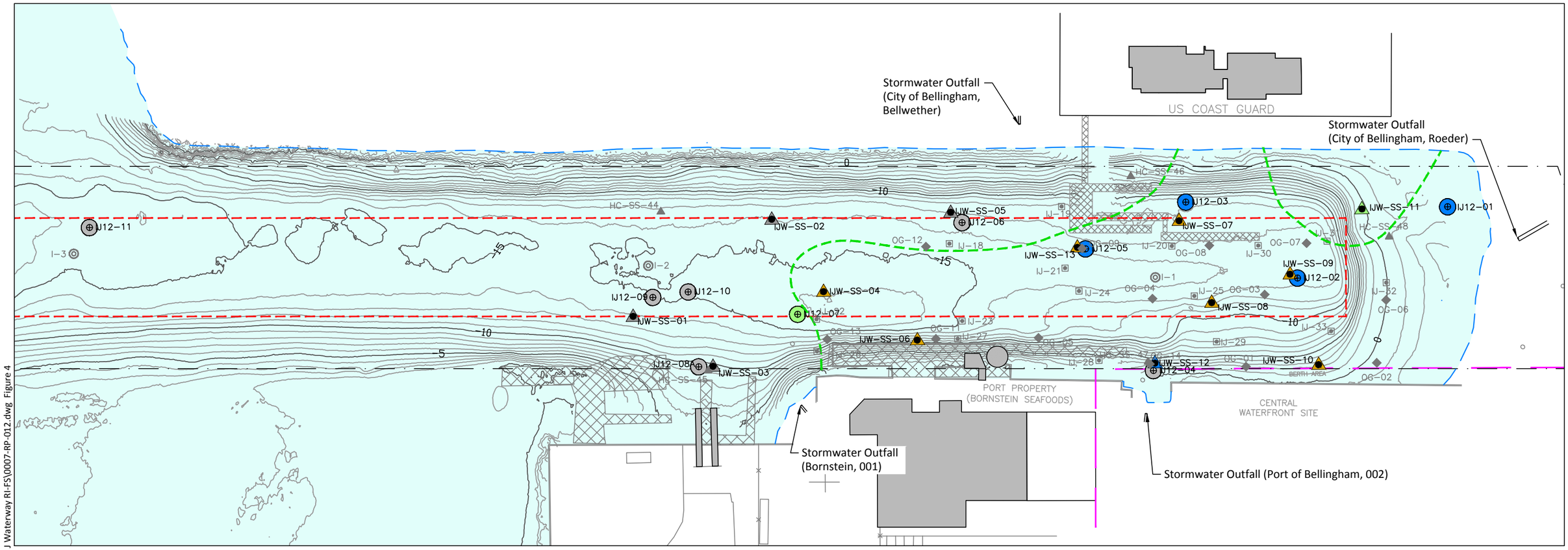
HORIZONTAL DATUM: Washington State Plane North, NAD83.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

NOTES:
1. CSL = Cleanup Screening Level Failure
2. SQS = Sediment Quality Standards Failure
3. PAH results reported in ppm TOC.
4. Nickel reported in mg/kg.
5. IJ12-08A is IJ12-08 alternative sample location.
6. Bathymetric survey from eTrac dated April 5, 2012.

Feb 07, 2013 2:11pm dholmer T:\CAD\Projects\0007-Port of Bellingham\I & J Waterway RI-FS\0007-RP-013 (a).dwg Figure 3

ANCHOR QEA

Figure 3
Summary of 2005/2006 and 2012 Surface Sediment Chemical Results
I & J Waterway RI/FS Supplementary Investigation Memorandum
I & J Waterway RI/FS
Port of Bellingham



LEGEND:

- Docks or Piers
- Existing Structures
- Existing Shoreline
- -10 Bathymetric Contour (1 foot interval)
- Central Waterfront Site Boundary
- I & J Waterway Boundary
- Federal Channel Boundary
- Area Above SMS Criteria

2012 RI/FS and Historic Sediment Sampling Station

- HC–SS–47 ▲ Whatcom Waterway Sediment Grab Sample Location (Hart Crowser 1997)
- AN–SS–47 ▲ Bioassay Sample Location (Anchor 2000)
- OG–10 ◆ Surface Sediment Grab Sample Location (ThermoRetec 2001)
- IJ–28 ▣ Subsurface DMMP Composite Sample Location (RETEC 2006)
- IJW–SS–02 ● RI/FS Surface Sample Location (RETEC 2006)
- I–2 ◎ USACE Subsurface Sample Location (USACE 2011)
- IJ12–10 ⊕ RI/FS Work Plan Addendum Sample Location (Anchor QEA 2012)

Sediment Chemical Criteria

2006	2012	
▲	●	No Exceedances
▲	●	SQS Exceedances
▲	●	CSL Exceedances
▲	●	Not Tested

0 100
Scale in Feet

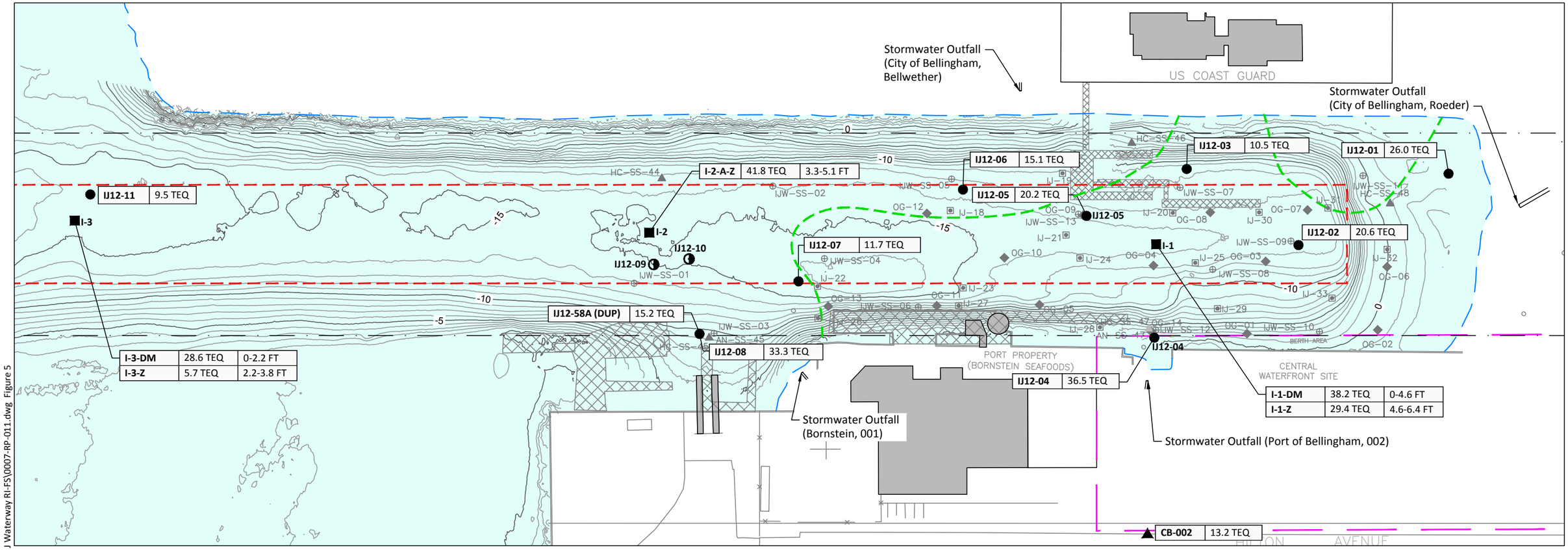
HORIZONTAL DATUM: Washington State Plane North, NAD83.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

NOTES:
1. CSL = Cleanup Screening Level Failure
2. SQS = Sediment Quality Standards Failure
3. Samples were compared to Carr Inlet reference CR-023.
4. IJ12-08A is IJ12-08 alternative sample location.
5. Bathymetric survey from eTrac dated April 5, 2012.

T:\CAD\Projects\0007-Port of Bellingham\I & J Waterway RI-FS\0007-RP-012.dwg Figure 4
Feb 07, 2013 2:12pm dholmer

ANCHOR QEA

Figure 4
Summary of 2006 and 2012 Surface Sediment Bioassay Test Results
I & J Waterway RI/FS Supplementary Investigation Memorandum
I & J Waterway RI/FS
Port of Bellingham



LEGEND:

- Docks or Piers
- Existing Structures
- Federal Channel Boundary
- Existing Shoreline
- Central Waterfront Site Boundary
- I & J Waterway Boundary
- -10 Bathymetric Contour (1 foot interval)
- Area Above SMS Criteria

2012 RI/FS Sampling Station with Dioxin/Furan TEQ

- Subsurface Sediment Sample Location (USACE 2011)
- Surface Sediment Sample Location (Anchor QEA 2012)
- Archive Surface Sediment Sample Location (Anchor QEA 2012)
- Storm Drain Solid Sample Location (Anchor QEA 2012)

Historic Sampling Station

- HC-SS-47 ▲ Whatcom Waterway Sediment Grab Sample Location (Hart Crowser 1997)
- AN-SS-47 ▲ Bioassay Sample Location (Anchor Environmental 2000)
- OG-10 ◆ Surface Sediment Grab Sample Location (ThermoRetec 2001)
- IJ-28 ▣ Subsurface DMMP Composite Sample Location (RETEC 2006)
- IJW-SS-02 ⊕ RI/FS Surface Sample Location (RETEC 2006)

0 100
Scale in Feet

HORIZONTAL DATUM: Washington State Plane North, NAD83.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

NOTE:

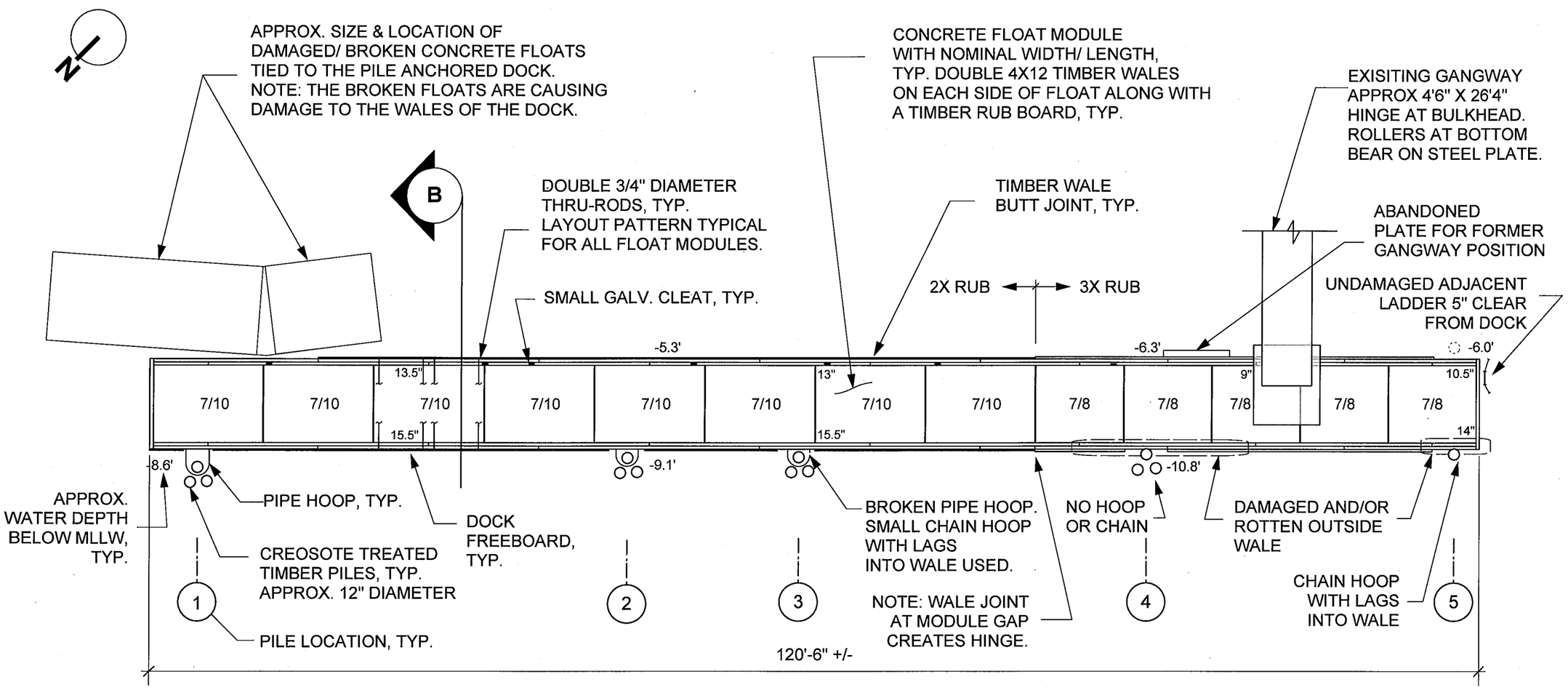
1. Bathymetric survey from eTrac dated April 5, 2012.
2. Dioxin/Furan concentrations shown as ng/kg toxic equivalency (TEQ).

T:\CAD\Projects\0007-Port of Bellingham\I & J Waterway RI-FS\0007-RP-011.dwg Figure 5
Feb 07, 2013 2:12pm dholmer

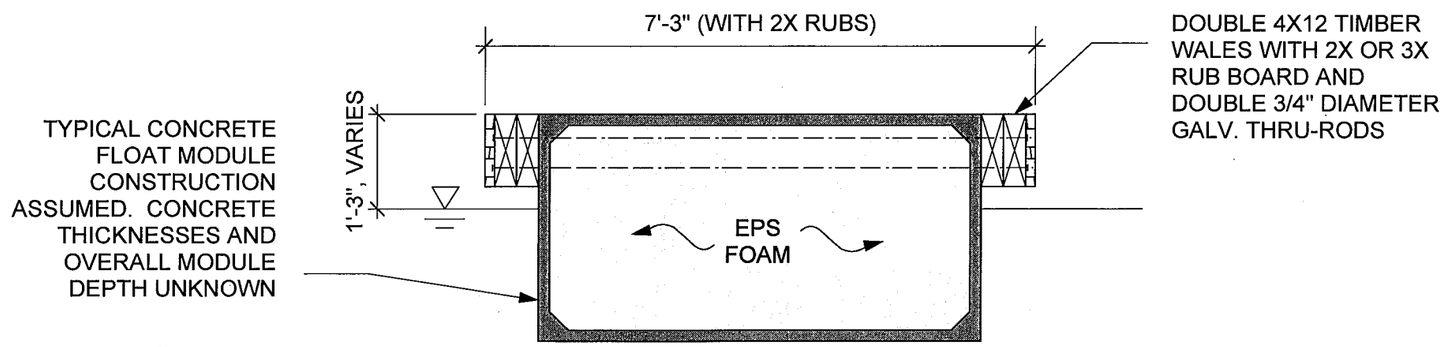
ANCHOR QEA

Figure 5
Sediment and Storm Drain Solid Dioxin/Furan TEQ Concentrations
I & J Waterway RI/FS Supplementary Investigation Memorandum
I & J Waterway RI/FS
Port of Bellingham

APPENDIX A
CONDITION SURVEY REPORTS



A Dock Plan
Scale: 1" = 10 ft



B Section
Scale: 1/2" = 1'-0"

ASHTON Engineering, Inc.
Coastal & Structural Design
5867 Crystal Springs Ln
Bellingham, WA 98226
360.354.8179

Project Name: I & J Waterway Floating Dock
Project Location: Bornstein Seafoods Inc 1001 Hilton Ave, Bellingham, WA
Drawing Title: Dock Plan & Section

No.	Issue/ Revsion	Date
		5.18.12

WILLIAM ASHTON HAYES
STATE OF WASHINGTON
32151
REGISTERED PROFESSIONAL ENGINEER
18 MAY '12

Job No: 21210.02
Sheet: 1 of 1

ASHTON Engineering, Inc.
COASTAL & STRUCTURAL DESIGN

Memo:

To:	Dan Berlin Anchor QEA, LLC 720 Olive Way, Suite 1900 Seattle, WA 98101	Date: Project: Project Number: File Topics:	5.18.12 I & J Waterway Floating Dock 21210.02 Dock Observation 5.16.12
From:	Bill Haynes, P.E.		

In accordance with our agreement, Ashton Engineering Inc. (AEI) visited the Bornstein Seafood facility on Hilton Avenue to observe the existing pile anchored floating dock in the I & J Waterway, Bellingham, WA.

Above water observations were made by William Haynes on 16 May, 2012 between approximately 2:30 and 3:30 p.m. Mr. Rich Griffith at the Bornstein plant was informed of our arrival and departure. Weather conditions during the visit were as follows: light and variable wind, sunny, and temperature in the high 60's. According to Tides & Currents software, the tide for Bellingham at 3:15 p.m. was about +5.9 feet above mean lower low water datum (MLLW = 0.0') and rising to a high of +6.4' at about 4:15 p.m.

The existing floating dock consists of concrete float modules held together with structural timber wales that are in turn through bolted to the concrete modules. The dock is held in place by creosote treated timber piles driven into the underlying soils at five locations along the dock's length. All but the southern single pile are three-pile dolphins. Access to the dock is via a steel gangway hinged at its upper end near the top of the existing timber bulkhead. The lower end of the gangway is supported by steel wheels that bear upon steel plate that has been secured to the dock. The attached drawing provides a plan and section view of the dock. A damaged float segment roughly 30 feet long is moored alongside the northeastern end of the longer dock.

Photo 1, Floating Dock looking north

Gangway

Observations of the floating structure's freeboard, measured from the deck to the still water surface, indicate the dock has rolled. The roll is likely due to moment resulting from the offset weight of the steel gangway and bearing plate on the bulkhead side of the dock.

The gangway bearing plate extends outboard of the dock most likely to prevent the gangway from rolling off the float edge at low tides. Given the piles remain in their positions, possible remedies include using a slightly longer gangway constructed out of aluminum in order to reduce its weight and/or the addition of an adjacent alongside float. Lengthen the gangway would unfortunately reduce the run off room at its lower end. An adjacent float would provide additional buoyancy to counter roll forces and provide support for the gangway wheels. In addition, removal of the abandoned plate north of the gangway will reduce the roll moment somewhat.

Existing water depths in the vicinity of the gangway landing are about -6.0' and maybe too shallow for an adjacent float during extreme low tide events. In fact, a depth of -5.3' was measured opposite pile location 2. With an extreme low tide of -3.5' (observed 12.30.1974) and a float draft of about 20", the float bottom at that location will just clear the -5.3' mudline given still water conditions.

Pile Guides

Pile hoops consisting of approximately 3" diameter bent galvanized pipe are utilized at locations 1, 2 and 3, see photographs below. The hoops in turn plug into steel weldments that are thru-bolted to the floats. At pile location1, the hoop's vertical plate next to the wale has been bent suggesting a downward load was applied to the outboard end of the hoop. Such a load may have occurred during a high tide when the hoop possibly came into contact with adjacent piles in the three pile dolphin arrangement.

At location 2, the south side plug-in connection is heavily rusted. At the south side connection of location 3, the hoop has broken. In its place a relatively light chain hoop has been installed as the pile attachment. The ends of the chain are attached to the inside timber wale with vertical lag screws. One of the piles in the dolphin at location 3 has evidence of repeated contact with the pipe guide. Any replacement of the pile hoops should consider the potential limited space between piles in a dolphin group, especially at high tides.

Pile locations 4 and 5 do not have pipe hoops. Both places have piles that have worn into the outside wale. Location 4 has no pile connection at all. Location 5 has a chain hoop similar to that at 3.

An existing timber pile is also located on the opposite side of the dock from pile 5. It has been cut off at an approximate elevation of +7.0' (mllw) and has no attachment to the float.

Given that the piles at 4 & 5 are in contact with the wale and pile 1 is at least a foot off the wale, it may be possible to rotate the overall dock length about location 3 to reduce the gap at north end (1) and increase the gaps at 4 & 5. In this way, new pile hoops may be installed at the locations 4 & 5. The remaining damaged pipe hoops should be replaced after verifying any new dimensional requirements.

During our observations, the south end of the floating dock was located only 5 inches away from a fixed ladder attached to the nearby timber pier structure. Based on the condition of the pile guides, it is somewhat surprising that there is no evidence that the dock has come into contact with the ladder. Any pile guide replacement should also consider the close proximity of the pier structure and ladder.

Concrete Modules

In general, the concrete modules appeared to be in good condition. As discussed below, the 7/8 size floats may be older than the larger module units.

Limited cracking was observed in a few of the 7/8 sized modules only. One such location is along the top southern edge of the southernmost module. Such cracking commonly results from corrosion of the underlying concrete rebar. Placing a concrete sealant into the crack to coat the corroding rebar might reduce the corrosion rate and the resulting cracking. No de-icing salts should be used on the dock.

A worn surface depression about ½ to ¾" deep is located in the module located immediate north of the gangway landing module. The curved nature of the depression suggests it was created by a steel gangway wheel when the gangway was previously positioned there. There does not appear to be any damage otherwise or cracking as a result of the worn depression.

Timber Wales

The wales consist of double 4x12 sawn lumbers on each side of the float. The wales are presumably pressure treated. Double ¾" diameter thru-rods connect the wales to the concrete float modules. At each end of the thru-rods there is a plate washer that bears on the outside wale and a hex nut. A timber rub board is nailed to the outside wale in order to cover the otherwise exposed bolt ends and prevent damage to vessels that moor alongside the floating dock. The typical layout of the rods is shown on the plan and section drawing.

Wale splices are created by staggering the wale joints at the middle of a float module. This is typical for all of the joints except for one at the transition between the 7/10 and 7/8 sized modules. As noted on the plan, the north side of the dock has as outside wale joint at the gap between two modules. This in effect means that rather than having four wales acting as the structural spine, there are only three at this location. Immediately adjacent to this location, the outside wale has rotted, split, or otherwise been damaged by contact with the pile. Replacement of the outside wale should include the proper lengths to achieve the correct staggered wale joint locations.

The heavily damaged dock segment tied to the northeast side of the dock is also a concrete module and timber wale system. The condition of the floats was such that it was deemed unsafe to board and take any measurements of. While about one to three of the individual float modules might by on some value and reuse, in general the float was considered by AEI to be debris.

There is no fendering currently installed between the pile anchored dock and the broken float segments. As a result, abrasion has destroyed the 2x12 rub board and is currently removing wood material from the outside wale. The dock segment should be removed or fendering installed to prevent further damage. The 2x12 rub should then be replaced. Replacement of the outside wale may also be necessary.

The timber rub board size varies from 2x12's along the 7/10 modules to 3x12's along the 7/8 modules. The hex nuts of the some thru-rods at the 7/8 modules appear to be severely corroded and are likely in need of replacement. In doing so, the entire associated thru-rod may need replacement as a result. Thru-rods at the 7/10 modules were not observed to have the same degree of rusting as those at the 7/8 modules. This along with the different rub board size and improper wale joint location, suggests the 7/8 module portion of the float may be older or least was not originally constructed with the 7/10 portion of the floating dock.

A small length of outside wale is in need of replacement next to pile location 5. The wale has pile abrasion damage and appears to have broken at a nearby knot.

We trust this memorandum meets your needs. If you have any questions or comments, please contact me.

Best Regards,

William (Bill) A. Haynes, PE
Ashton Engineering, Inc.

Attachment

I & J Waterway Floating Dock Observation Photographs

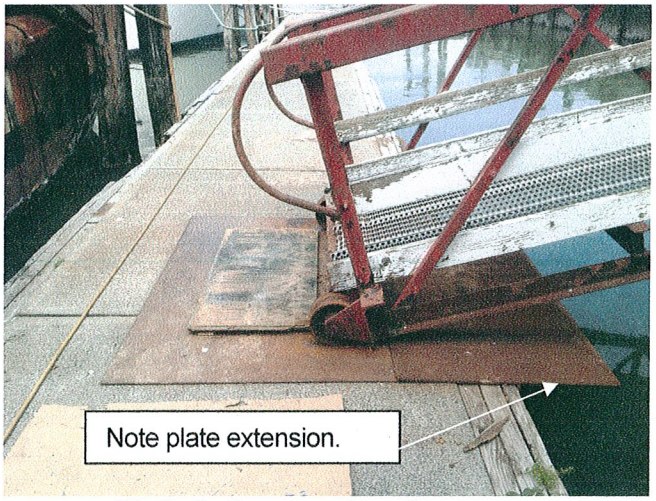


Photo 2, Gangway Landing

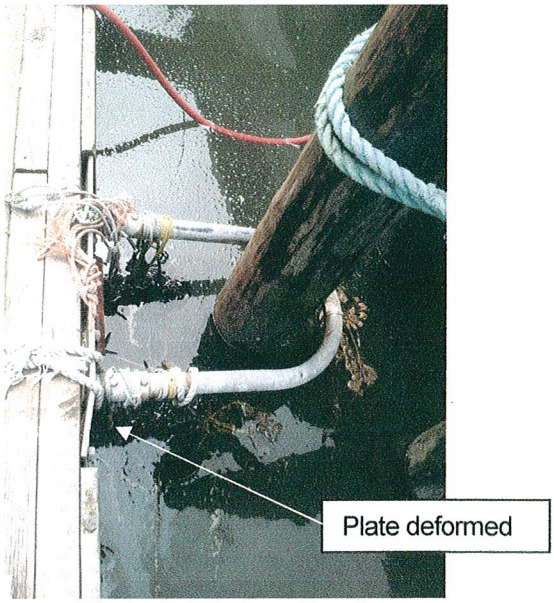


Photo 3, Pile Location 1

I & J Waterway Floating Dock Observation Photographs

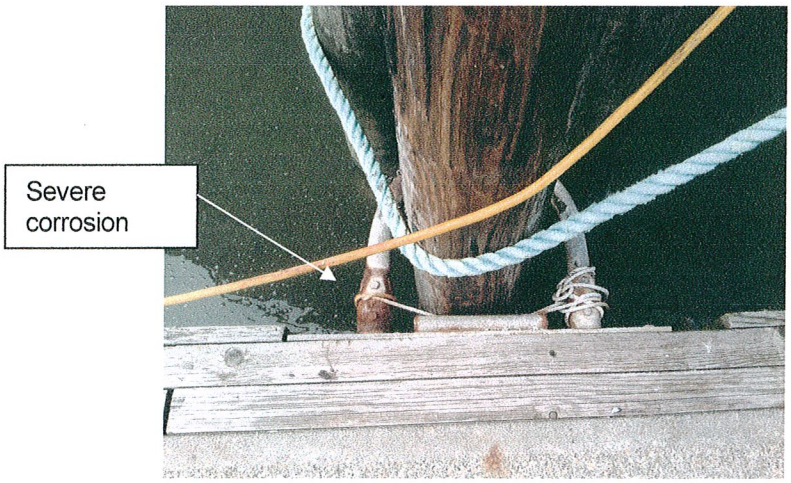


Photo 4, Pile Location 2

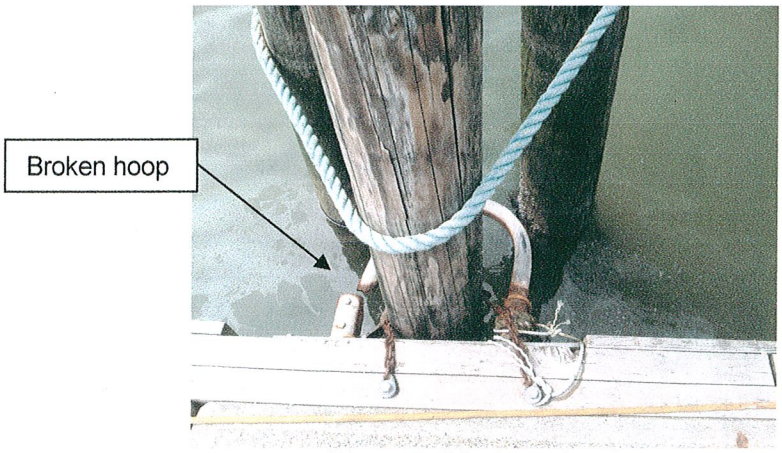


Photo 5, Pile Location 3

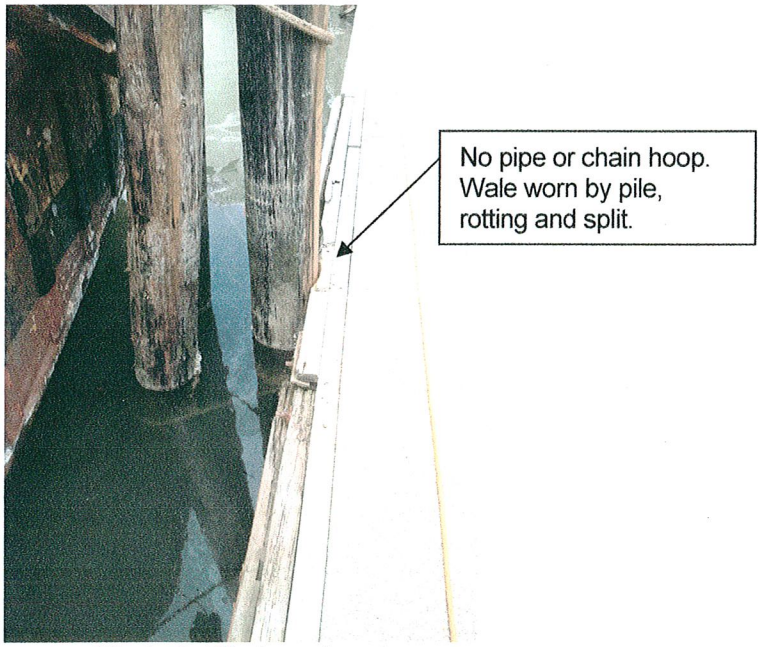


Photo 6, Pile Location 4

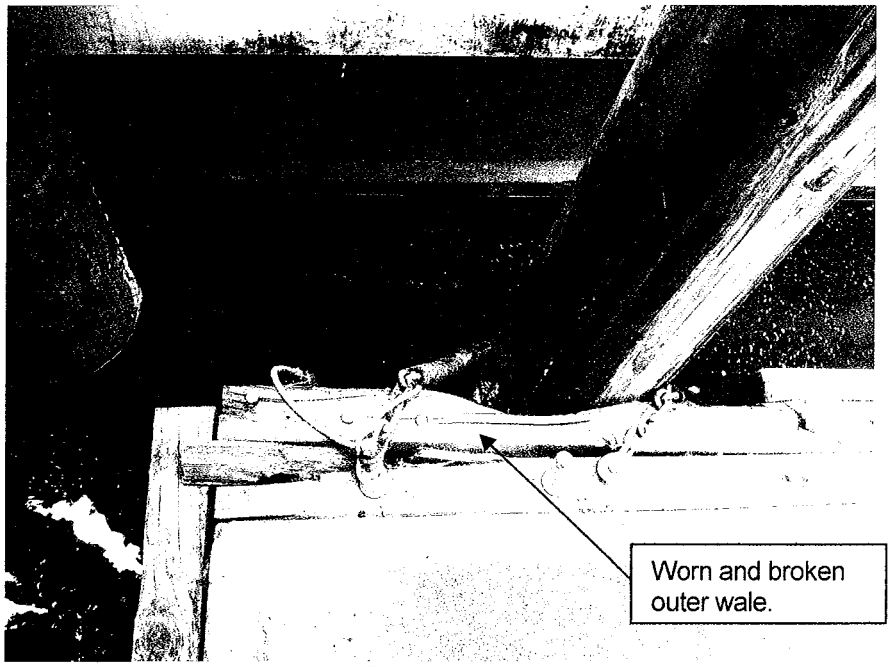


Photo 7, Pile Location 5

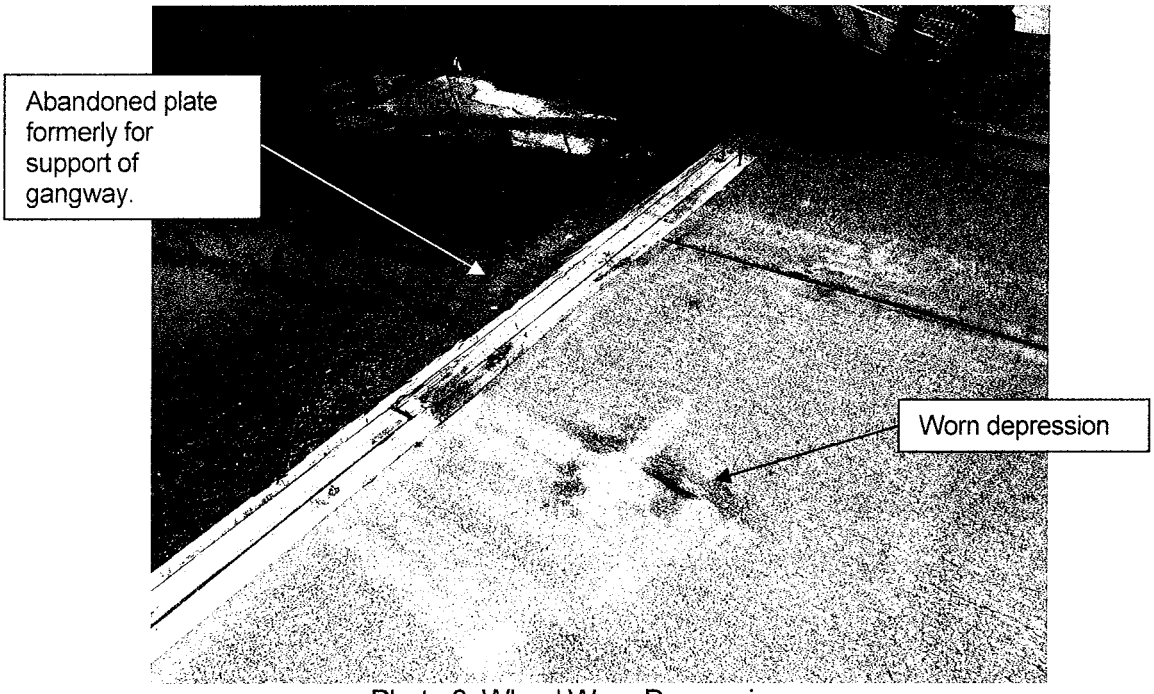


Photo 8, Wheel Worn Depression

Photo 9, Damaged dock segment moored alongside

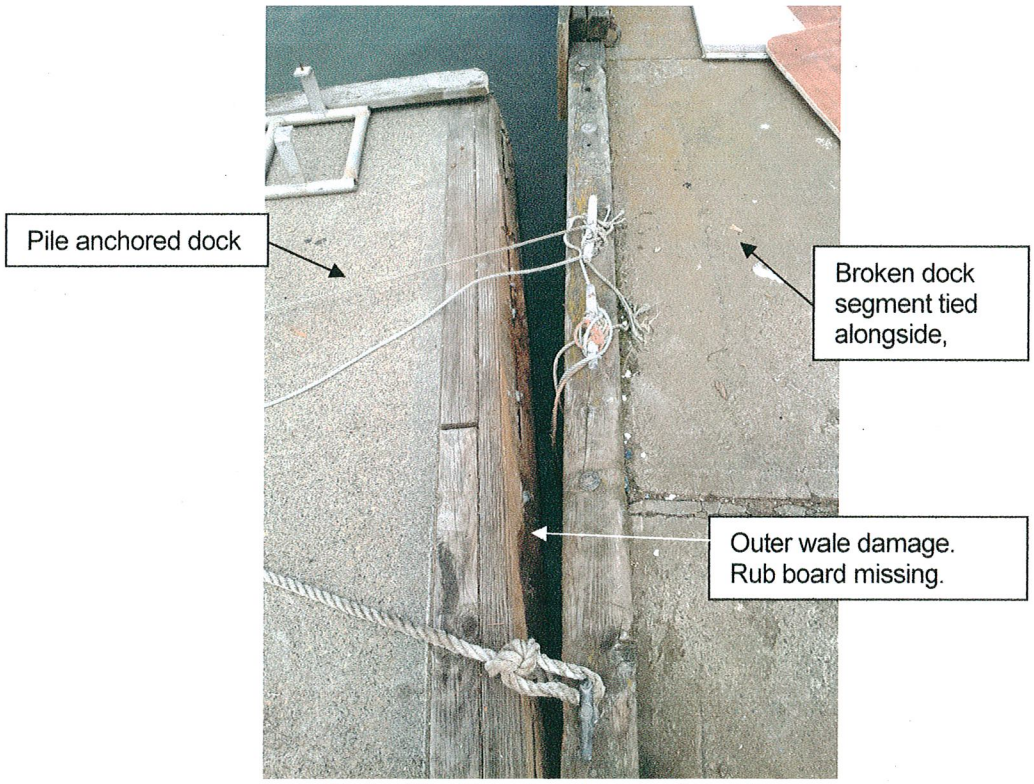


Photo 10, Abrasion damage to wale

I & J Waterway Floating Dock Observation Photographs

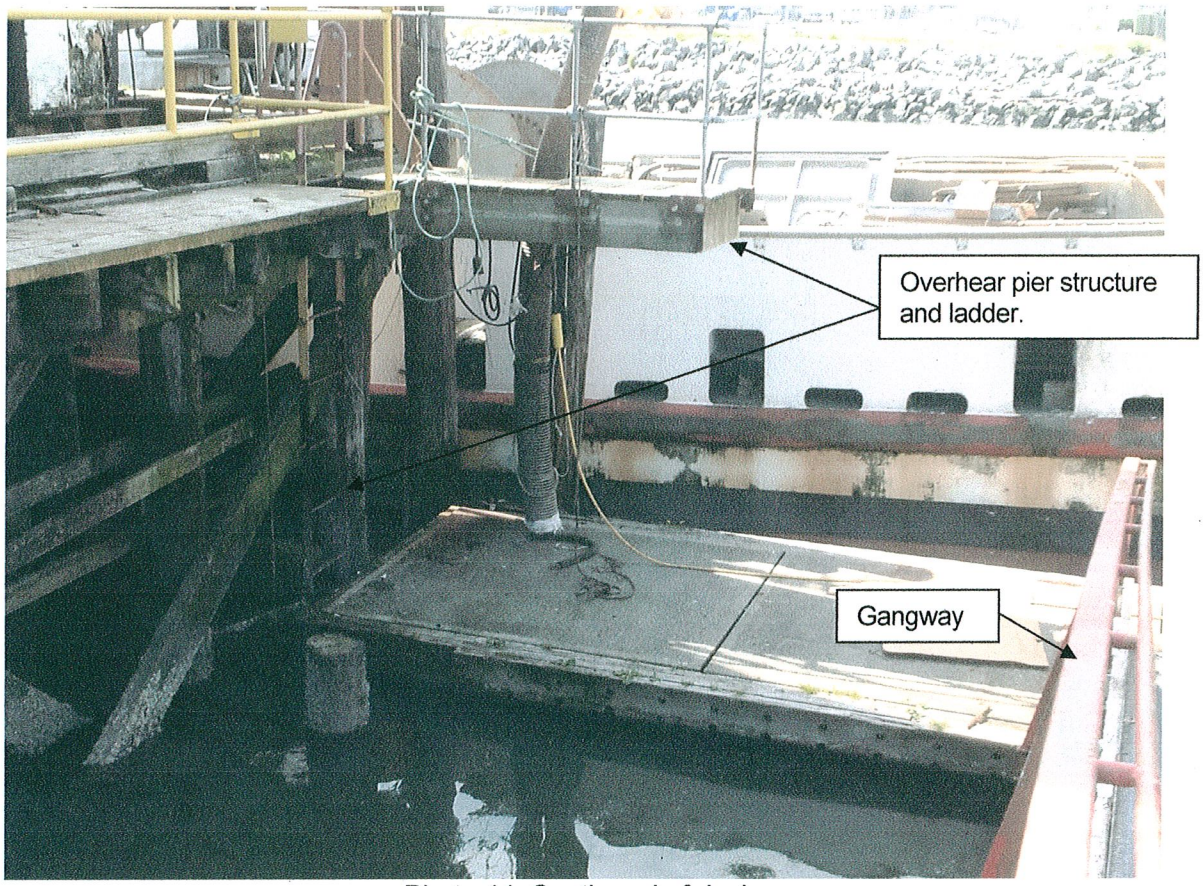


Photo 11, South end of dock

ECHELON ENGINEERING, INC.

Civil/Marine Consulting Engineers

Inspection and Assessment of Bornstein Wharf and Bulkhead Bellingham, WA

Prepared For:

Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101

ATTN: Mr. Dan Berlin
Project Manager
Tel: 206 / 287.9130

Prepared By:

Echelon Engineering, Inc.
21027 61st Avenue West
Lynnwood, WA 98036

ATTN: Ms. Shelley Sommerfeld, PE
President
Tel: 425 / 672.8924

July 2012
12-2412

Echelon
Engineering

Civil / Marine
Consulting Engineers

July 16, 2012

Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

ATTN: Mr. Dan Berlin
Project Manager

RE: Inspection and Assessment of Bornstein Wharf and Bulkhead Bellingham, Washington

Dear Mr. Berlin:

This report documents the findings of our recent inspection of the Bornstein Seafood Wharf and associated bulkheads on the I & J Waterway in Bellingham, Washington. The structures are owned the Port of Bellingham and operated by Bornstein Seafood Company. The inspection was carried out to obtain quantitative data on the existing condition of the structural components in the wharf and bulkhead prior to planned dredging of the waterway, as well as to support any structural condition assessment of the facility. Additionally, it can be utilized as a basis for the development of restorative or preventative maintenance options to the ensure the structural adequacy and longevity of the facility.

The scope of Echelon's component of the project included underwater and topside investigation of the piles, intertidal zone brace timbers and the associated superstructure members which support the Bornstein Seafood Wharf. Additionally the investigation included the timber piles that secure the mooring float located at the eastern end of the wharf, as well as the timber piles and horizontal lagging in the adjacent soldier pile bulkhead. The work was conducted under an Agreement for Subconsultant Services with Anchor QEA, LLC dated May 8, 2012.

INTRODUCTION

The I & J Waterway is located to the south of the Port of Bellingham's Squalicum Harbor Marina. The Bornstein Seafood Wharf is located on the south shore of the waterway, across from the US Coast Guard Station. The structure is currently used as a transfer platform for the offloading of fish. The structure also supports an ice plant that is located at its eastern

21027 61st Avenue West
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end. This section of the structure is used to produce and deliver ice to fishing vessels and for use in the plant.

The structure is a rectangular wharf connected to the shore by two access ramps. The berth face of the wharf is protected by a fender pile system. The wharf members are identified in a standard bent/row grid system. Bents within the main wharf are identified numerically 1 – 16 from the west, with the pile rows identified alphabetically A - D from the north edge. In the two approach ramps the bents are oriented perpendicular to the main wharf bents and are designated numerically 17 – 20 with the rows are identified alphabetically A – D from the west. The piles in Bents 19 and 20 serve a dual function, acting as structural piles for the wharf and also functioning as soldier piles for the adjacent soldier pile bulkhead. Fender piles along the berth face are numbered consecutively 1 – 21 beginning at Bent 1 in the northwest corner of the Wharf.

The wharf is braced by a network of transverse diagonal 4x12 brace timbers that span the width of the structure. These members are identified relative to the piles to which they are secured; for example the 2A – 2D, West Diagonal, is a diagonal brace member located on the west side of Bent 2. It is secured to the top of the Bent 2 Row A pile and extends downwards to the intertidal zone of the Bent 2, Row D pile.

The superstructure is comprised of 12x12 timber caps, 4x12 interior stringers, 8x14 perimeter stringers and 3x4 timber decking on edge with an asphalt and concrete overlay. All of the timber superstructure members are creosote treated with the exception of the cap on Bent 1, which is a Chemonite treated timber.

The ice making machinery covers much of the deck area between Bents 14 and 16. The structure also has a lower elevation deck area that supports a large vacuum fish transfer system. This support platform is located between the wharf and the shore. It is supported by the wharf Row D piles in Bents 4 – 6 and on a timber ledger attached to piles 15 – 18 of the bulkhead. The support piles are spanned by 4x12 stringers and the area is decked with 4x12 timber planks. All of these timbers are creosote treated.

A mooring float is located to the east of the wharf and provides approximately 130 feet in length by 8 feet wide. Access to the float is via a tidally adjustable ramp that is hinged off the adjacent bulkhead. The float is secured by a total of 13 dolphin piles.

A soldier pile bulkhead provides shore protection and bank stabilization along the southern shore of the I & J Waterway. The inspected portion of the bulkhead begins at the western end of the Bornstein Seafood Wharf and extends east to the beach at the end of the waterway. The bulkhead is separated into two distinct portions by an outfall which enters the

waterway between the two sections of bulkhead. The western bulkhead section is approximately 330 feet in length, the outfall section is approximately 50 feet wide and the eastern bulkhead section is approximately 300 feet in length. The height of the bulkhead was found to range from 6 to 15.5 feet.

Both sections of the bulkhead are constructed using creosote treated piles and 4x12 horizontal timber lagging. The piles in the western bulkhead are numbered 1 – 53. The numbering of the piles in both sections is consecutive with the piles in the eastern section numbered 54 – 99. The western bulkhead has an apparent tie back system composed of diagonal timber members. Although drawings were not available at the time of the inspection it is assumed that these diagonal timbers are a tie-back system consisting of timber 3x10's connected to a timber deadman located in the backfill. Investigation noted that these tie-backs extend out through notches in the horizontal bulkhead lagging, approximately 3 – 4 feet below the top of the bulkhead, where they are attached with bolts to the timber piles. Additionally, several of the western bulkhead soldier piles were also noted to have a steel tie rod, also assumed to be a tie-back system, drilled through the center of the pile, approximately 5 to 6 feet below the top of the wall at ~El. +10 feet (MLLW). The eastern bulkhead section was found to have a steel rod tie back system at each pile, with no evidence of any timber diagonals. The steel tie rods are approximately 1 inch in diameter.

For a detailed layout of the facility refer to the Appendix B, Pile Plan.

The scope of the project included the inspection and assessment of 86 structural piling and 21 fender piles in the wharf; 13 float anchor piles that secure the mooring float located off the east end of the wharf; and 99 bulkhead piles. Additionally, all intertidal zone braces and associated superstructure caps, stringers and deck members in the wharf and the horizontal lagging timbers in the bulkheads were inspected. Inspection of the mooring float was not included in the project.

The results of the investigation are discussed in the Observed Inspected Conditions section of this report. Photographs illustrating typical conditions and items of note are presented in Appendix A. Appendix B provides a pile plan showing the location, identification and condition of the inspected piles. Details on the condition and damage for the inspected members are presented in tabular format in Appendix C.

QUALIFICATIONS OF INSPECTORS

The project was conducted by a crew composed of professional and technical personnel capable and experienced in both the underwater and topside inspection and assessment of

structural members. The personnel utilized on this project included the following Echelon Engineering staff:

S.D. Sommerfeld, P.E.	Project Manager/Engineer - Diver Licensed Professional Engineer, WA, Guam 29 Years Experience in Marine Structures Inspection and Design
E.B. Vegsund, B.Sc.	Marine Specialist/Biologist - Diver B.Sc. in Marine Biology - Emphasis on Marine Biological Studies 39 Years Experience in Marine Structures Inspection
S. A. Vegsund	Inspection Technician 13 Years Experience in Marine Structures Inspection
T.R. Seigal	Inspection Technician - Diver 1 Year Experience in Marine Structures Inspection

INSPECTION METHODOLOGY AND RATING SYSTEM

The inspection was carried out under the three-tiered inspection protocol developed by the US Navy and endorsed by the American Society of Civil Engineers (ASCE). The scope of work included investigation of all accessible structural, fender and float anchor piling, the timber brace members, and the associated superstructure in Bornstein Seafood Wharf, as well as the timber bulkhead piles and the timber lagging in the bulkheads. All members received Level I visual examination for their accessible length. Level II examination, including spot cleaning and close visual examination, was also conducted at representative and suspect areas along the length of the inspected members. Level III inspection including hammer sounding, probing and coring/drilling of suspect timber members was also carried out to assess the extent of internal damage. Areas of damage were recorded, including the location and quantification of specific deterioration encountered.

Throughout the discussion the overall condition of the facility and of the members is described as good, fair or poor in accordance with the following definitions:

- A member in **good condition** has no damage or only minor damage.
- A member in **fair condition** has sustained minor to moderate damage, but has no evidence of overstressing.
- A member in **poor condition** has sustained major to severe damage that affects the member's load capacity. This damage may be evident as advanced deterioration, overstressing or breakage.

Piling

Structural Piles

The condition of the piles is based on the overall damage noted along the length of the member using visual inspection and as augmented by the various testing techniques. The pile condition has been expressed as a percentage of the remaining cross-sectional area of the member. A breakdown of the rating classifications is as follows:

- **100%** Remaining Cross-sectional Area / Rating Classification
  (No damage or deterioration)
- **90%** Remaining Cross-sectional Area / Rating Classification
  (Minor damage or deterioration; 90-99% remaining area)
- **75%** Remaining Cross-sectional Area / Rating Classification
  (Moderate damage or deterioration; 75-89% remaining area)
- **50%** Remaining Cross-sectional Area / Rating Classification
  (Moderate-Major damage or deterioration; 50-74% remaining area)
- **25%** Remaining Cross-sectional Area / Rating Classification
  (Major damage or deterioration; 25-49% remaining area)
- **0%** Remaining Cross-sectional Area / Rating Classification
  (Destroyed; 0-24% remaining area)

Fender Piles

The condition of the fender piling that protect the structures have been rated depending on the severity of the defects found. A breakdown of the rating classifications is as follows:

Undamaged	No significant damage or deterioration (0-5% loss of section)
Functional	Minor damage that does not significantly impact serviceability (6-25% loss of section and no significant damage to connection may include significant localized damage in the top foot of the pile)
Damaged	Moderate to major damage that significantly impacts serviceability (>25% loss of section and/or damage to connection)

Timber Bracing

The condition of the brace timbers has been determined and the individual members rated depending on the severity of the defects found. A breakdown of the rating classifications is as follows:

Undamaged (UD)	No significant damage or deterioration (0% loss of section)
Functional (F)	Minor damage that does not significantly impact serviceability (1-25% loss of section and no significant damage to connection)
Damaged (D)	Moderate to major damage that significantly impacts serviceability (>25% loss of section and/or damage to connection)

Timber Superstructure and Bulkhead Lagging

All accessible timber superstructure caps, stringers and decking in the wharf as well as the timber lagging members in the West and East Bulkheads were inspected. The condition of these members has been determined and the member rated dependent upon the severity of the defects found. Specifically with respect to the bulkhead lagging, the timbers are continuous over 2-3 pile spans. Level I data for these members has been presented for the length of the lagging, (i.e. if lagging spans from pile 6-8, data has been presented for the members within the area from pile 6-8 and from the top of the wall to the mudline). A breakdown of the superstructure rating classifications is as follows:

Undamaged	No significant damage or deterioration (0 – 4% loss of cross section)
Light Damage	Minor defects, No significant loss of capacity, No observed overstressing (5 – 24% loss of cross section)
Moderate Damage	Moderate defects, Moderate loss of capacity, No observed overstressing (25 - 49% loss of cross section)
Heavy Damage	Advanced deterioration, Significant loss of capacity, Possible areas of overstressing observed (50 – 100% loss of cross section)

Concrete / Asphalt Deck Overlay

All accessible portions of the concrete and asphalt overlay on the wharf were visually inspected. The overall condition of the decking is described as good, fair or poor in accordance with the definitions presented above.

OBSERVED INSPECTED CONDITIONS

The field investigation was conducted during the interval of May 21 to June 1, 2012. Weather conditions varied with periods of rain showers and times of partial clearing. The tide fluctuated between a low of –1.9 feet (MLLW) and a high of +6.2 feet (MLLW) during the inspection. No significant currents were noted during the investigation. Underwater visibility was poor and estimated at approximately one foot or less. Water depth along the north face of the wharf was approximately -15 feet (MLLW). The composition of the mudline was noted to be primarily soft silt and sand with shell and small rock.

Wharf

Structural Piles

Inspection of the structural piling showed them to be in generally good condition. Specific results of the inspection are as follows:

1. The piles are creosote treated D. Fir piles. A treatment manufacturing date stamp was noted on several of the piles that indicate that they date back to 1962. The mudline to cap length was found to range from approximately 15 to 30 feet and the pile diameters were found to be approximately 12-14 inches.
2. The majority of the piles have a treated cover or cap which is assumed to have been installed during the original construction. The piles in Bents 1, 14.5, and 15.5 were noted to not have caps at their tops. In the case of Bent 1, this is most likely a result of maintenance, as this cap is a newer Chemonite treated timber, likely installed to repair fungal damage in the original creosote timber. In the instances of Bents 14.5 and 15.5, the bents appear to have been added at some time following the original wharf construction, likely when the ice machine equipment was installed on the wharf.
3. Of the 86 structural piles inspected, 80 (93.0%) were found to be undamaged and have been rated at 100% of their original cross-sectional area. Refer to Appendix A, Photos No. 3 and 4.
4. Four piles (4.7%) were found to have sustained minor mechanical or marine borer damage and have been rated in the 90% remaining area category.
5. Two piles (2.3%) piles have been rated in the 0% remaining area category. One of these piles located in Bent 1, Row C, was found to have sustained 90% loss of cross section due to a combination of mechanical and fungal damage at its top. Refer to Photo No. 6 in Appendix A. The second pile located at Bent 7, Row A, was found to have sustained a 90% marine borer cavity in the submerged zone. Refer to Appendix A, Photo No. 5.

Fender Piles

Inspection of the fender piles found them to be in generally poor condition. Specific results of the inspection are as follows:

1. Inspection found the fender piles to be D. Fir piles, approximately 12 – 14 inches in diameter. They are secured to the north face of the wharf at the elevation of the perimeter stringer and have a timber chock, or spacer, between each pile.
2. A total of 21 fender piles were inspected.
3. One pile (4.8%) was found to be undamaged.
4. Eight piles (38.1%) were found to have sustained minor mechanical impact or abrasion damage in the intertidal zone and/or fungal damage at their tops. As these piles are still able to perform their intended function they have been rated in the functional category.
5. Twelve piles (57.1%) have rated in the damaged category. These piles were found to have sustained heavy mechanical impact, fungal or marine borer damage or are missing. Refer to Appendix A, Photos No. 17 and 18.

Intertidal Zone Bracing

Inspection of the intertidal zone bracing found them to be in fair to poor condition. Specific results of the inspection are as follows:

1. The intertidal zone braces are 4x12 diagonal timbers that span from the Row A to D piles.
2. Of the 36 intertidal zone braces inspected, 15 braces (41.7%) are undamaged.
3. Four braces (11.1%) have been rated in the functional category. These braces have sustained from up to 20% section loss due to marine borer infestation but are still serviceable at this time. The damage to these members will most probably continue leading to greater damage as time goes on.
4. Seventeen braces (47.2%) are rated in the damaged category. These braces have sustained heavy mechanical or marine borer damage or are no longer connected to the piles due to corroded and failed connectors. In several instances the braces were found to be missing. Refer to Appendix A, Photos No. 3 and 4.

Superstructure

Caps

Inspection of the caps found them to be in fair to good condition. Specific results of the inspection are as follows:

1. The cap timbers within the wharf are 12x12 timbers. The majority of the caps were found to be a creosote treated. One cap, located at Bent 1, is a newer replacement timber treated with Chemonite. The bents are spaced at ~12 foot on center.
2. Of the 22 individual caps inspected, 16 (72.8%) were found to be undamaged. Refer to Appendix A, Photos No. 7 and 8.
3. Three caps (13.6%) were found to have sustained minor mechanical and/or fungal damage and have been rated in the Light damage classification. The damage on these members is limited to the northern end of the cap, at the berth face that has been caused primarily by mechanical impact. One cap, located at Bent 14, was found to have sustained Light fungal damage most likely due to the very moist environment caused by the presence of the ice machine that is located above Bent 14 - 16.
4. Three caps (13.6%) were found to have sustained heavy damage. These caps are all located at the east end of the structure under the north edge of the ice machine. The caps in Bents 14.5, 15, and 15.5 have sustained significant fungal damage with loss of internal cross section ranging from 50% to 90% . This damage also appears to be related to the excessive moisture leaking onto the timbers from the ice machine. Refer to Photos No. 11 – 13 in Appendix A.

<u>Stringers</u>

The overall condition of the stringers is generally good. Specific results of the inspection are as follows:

1. The majority of the interior stringers are 4x12, creosote treated timbers set at ~18 inches on center. Refer to Appendix A, Photos No. 7 and 8. The perimeter stringers were noted to be larger 8x14 timbers which have been notched at the bearing point over the caps in order to retain the same deck elevation.
2. With the exception of the western most span from Bent 1 – 2 and the eastern most span from Bent 15 – 16, the interior 4x12 stringers were found to be in generally good condition with no evidence of significant fungal damage or other deterioration encountered. In the two end spans (i.e. Bents 1 – 2 and Bent 15 – 16), evidence of significant on-going fungal decay and subsequent localized maintenance was found.

   Many of the original stringers in these two areas were noted to have sustained heavy fungal damage from their ends in past the bearing point over the cap timbers. Investigation of these areas found that newer replacement stringers have been installed adjacent to the damaged interior members (i.e. sistered alongside the damaged member). These newer stringers were found to be in good condition. Refer to Photos No. 9 and 10 of Appendix A.

3. Larger 8x14 stringers are located around the perimeter of the structure. These perimeter stringers are notched over the caps to allow for a constant deck elevation. With two exceptions these members were noted to be in good condition. Investigation of the north perimeter stringer between Bents 12 and 13 found that it has sustained heavy fungal damage with the loss of 50%-90% of its cross section. Refer to Appendix A, Photo No. 15.

   Additionally, the stringer located on the south perimeter of the wharf spanning Bents 15 and 16 beneath the east approach was also noted to have sustained heavy fungal decay. Inspection identified ~90% loss of the cross-section in this member at the eastern end and extending in over the Bent 16 cap. Due to the proximity of the piles and superstructure members in this area there is very limited access and it was not possible to determine how far in the damage extended. Refer to Photo No. 14 of Appendix A.

Deck

The overall condition of the deck was found to be fair to good. Specific results of the inspection are as follows:

1. The deck is composed of 3x4 creosote treated boards on edge with a dual overlay of 2 inches of asphalt and an additional 6 inches of concrete.
2. Inspection found evidence of minor mechanical damage and/or light fungal decay in several individual boards along the north edge of the structure. Similar minor damage was found to the deck boards along the majority of the south edge of the wharf. One area of significant damage to the deck boards was found between Bents 10 – 11. In this span approximately 50% of the boards have sustained heavy fungal damage that extends from the south end of the boards in approximately one foot.
3. Inspection found the structure to have two layers of wear surface above the timber deck boards. The original wear surface was an approximate two inch asphalt overlay. A second newer wear surface has been installed over the asphalt. This lift is an approximate six inch concrete deck slab. The concrete deck was found to extend from Bents 1 – 14 and also over both of the two approach trestles. The concrete wear surface was found to be in good condition with no significant deterioration or damage found. Refer to Appendix A, Photo No. 16.

Miscellaneous Observations

1. Inspection noted a lower elevation platform located off the south side of the wharf between Bents 4 and 6. This platform supports a vacuum fish transporter and was found to be in fair to poor condition. The platform is secured to the row D piles in these three bents and to a ledger connected to bulkhead piles No. 15 – 18. Both the framing

members and the decking for the platform are 4x12 creosote treated timbers. These members were noted to be in good condition with no evidence of any significant deterioration or damage found. However the bulkhead piles to which the south edge of the platform is secured, have all sustained significant fungal damage that extends from the tops of the piles down to the vicinity of the attachment bolts which secure the ledger. Refer to Appendix A, Photo No. 25.

Float Anchor Piles

The overall condition of the float anchor piles or dolphin piles that secure the mooring float is fair to good. Specific results of the inspection are as follows:

1. The piles were found to be creosote treated D. Fir piles with diameters ranging from 12-14 inches. Refer to Photo No. 17 in Appendix A.
2. Of the 13 piles inspected, 4 (30.8%) were found to be undamaged and have been rated at 100% of their original cross-sectional area.
3. Five piles (38.4%) were found to have sustained minor damage and have been rated in the 90% remaining area category. All five of these piles were found to have sustained minor mechanical abrasion in the intertidal zone from moored vessels. No evidence of marine borer damage was found in any of these piles.
4. Two piles (15.4%) have been rated in the 75% remaining area category. One of these piles was found to have sustained 5% abrasion and 20% marine borer section loss in the intertidal zone. The second pile has sustained 20% abrasive section loss from the intertidal zone to the mudline with no marine borer damage evident at this time.
5. Two piles (15.4%) have been rated in the 0% remaining area category. Both of these piles have sustained heavy marine borer damage in the submerged zone and one of these piles has broken at the elevation of the marine borer section loss.

Bulkheads

The timber bulkhead that runs along the southern shore of the I & J Waterway consists of two separate sections, identified as the East and West Bulkheads. The findings of the inspection are as follows:

<u>West Bulkhead</u>

1. The overall condition of the West Bulkhead is poor. Significant damage was found to the piles, the horizontal lagging timbers and to the timber tie-back system.
2. A total of 53 timber soldier piles provide support for the West Bulkhead. Eight of these piling provide a dual purpose of supporting the bulkhead, as well as functioning as a

structural pile for the wharf approaches. The condition of these eight piles has been presented under the section above that discusses the wharf piling.

3. Of the remaining 45 piles inspected in the West Bulkhead, 12 piles (26.7%) were found to be undamaged and have been rated in the 100% remaining cross-sectional area category.
4. One pile (2.2%) has been rated in the 90% remaining area category. This pile has sustained minor mechanical damage at its top that has resulted in the loss of approximately 2% of its cross section.
5. Three piles (6.7%) have been rated in the 50% category. These piles have sustained moderate to heavy fungal damage at their tops.
6. Two piles (4.4%) piles are rated in the 25% category and 27 (60.0%) piles are rated in the 0% category. The piles in these two classifications have sustained heavy fungal decay ranging from 75-90% section loss that typically extends from the top of the piles down approximately 4 feet. Evidence of past maintenance in an attempt to prevent the progress of fungal damage down the piles was observed. This maintenance included the filling of the decay pocket at the top of the piles with a concrete grout and then covering the pile with a metallic top cover to prevent moisture accumulation. Refer to Appendix A, Photo No. 21. The grout plugs are typically 6 – 18 inches in height and in the majority of instances has not been able to halt the progression of fungal decay down the piles.
7. Investigation of the timber tie-back system for this portion of the bulkhead found the visible portion of the timber 3x10's to be in poor condition. Many of these members have split or broken at the pile connection. Refer to Photos No. 22 and 24 in Appendix A.
8. Several of the piles in the northwest corner of the bulkhead were noted to have a second tie-back system consisting of steel rods that extend through the piles and are secured with a steel bearing plate and nut. The exposed ends of these rods appears to be in fair to good condition with minor surface corrosion observed.
9. The overall condition of the horizontal timber lagging is also poor. There are a total of 47 spans in this section of the bulkhead. The timbers typically span three soldier piles, and at some locations the piles are in close proximity.
10. Inspection of the timber lagging identified only three spans (6.4%) that are in good condition and rated in the undamaged category. No evidence of significant deterioration or damage was found to the boards in these spans.
11. Two spans (4.2%) have been rated in the light damage category as a result of two individual boards identified to have sustained ~ 5% marine borer section loss.

12. Two spans (4.2%) have been rated in the moderate damage category. Inspection of these boards identified three mid-level boards to have sustained marine borer damage with the loss of ~25% of their cross sectional area.
13. The remaining 40 spans (85.2%) were found to have sustained significant damage and have been rated in the heavy damage category. As shown by Appendix A, Photos No. 23 and 27, the damage to the lagging timbers was found to range from near the top of the bulkhead to the mudline. The majority of the damage has occurred as a result of fungal decay near the top of the bulkhead. However, several locations of significant marine borer damage were also found near the base of the bulkhead.
14. In the majority of the spans, the damage to the lagging is located approximately 3 – 4 feet below the top of the bulkhead, at the elevation of the timber tie-backs. In order to install the timber tie-backs, the lagging boards were cut or notched to facilitate the passage of the tie-back timbers through the wall. This notching has breached the preservative treatment shell of the lag timbers at this elevation, allowing fungal organisms access to the untreated core of these members. With time significant fungal section loss has developed and the majority of these lagging timbers have sustained 75% - 90% section loss. In some instances the decay is so severe that the members have deformed/compressed. Refer to Appendix A, Photo No. 26.
15. Evidence of significant marine borer damage was also found in a number of the lagging timbers. As shown in Photo No. 27 of Appendix A, the lower elevation lagging members in the spans from Pile 22 to 24 have sustained severe marine borer damage such that they are nearly perforated.
16. In the span from Pile 7 to 11, the lower half of the wall has a concrete face wall that appears to be a maintenance repair at a location that previously sustained heavy marine borer damage to the members. Refer to Appendix A, Photo No. 24. It should be noted that approximately 3 feet above the concrete repair, the two notched lagging boards have been destroyed by internal fungal damage such that this section of lagging has been rated in the major damage category.
17. The onshore or southern end of the condenser unit of the ice machine is supported by two poured in place concrete footings. These footings bear directly on the top of the bulkhead between Piles 30 – 31. As shown in Photos No. 29 and 30 of Appendix A, the two uppermost lagging members in this panel have sustained heavy fungal damage and are visibly compressed by the load imposed by the condenser.
18. The access ramp to the mooring float is also supported on top of the bulkhead. The ramp is secured to the top of the bulkhead between Piles 36 – 37. The top two lagging members in this span have sustained heavy fungal damage with the loss of

approximately 75 - 90 % of their cross section. Refer to Photos No. 31 and 32 in Appendix A.

East Bulkhead

1. Overall, the East Bulkhead is in generally fair condition. A significant number of piling were found to have sustained extensive damage, however, the damage in most cases is confined to the upper foot of the pile that is located above the top of the wall. The remaining piles, the majority of the timber lagging and the steel rod tie-back system were found to be in generally good condition.
2. The majority of the piles have no protective cap or cover and subsequently these members have sustained significant fungal damage that that was found to be confined to the top foot of the pile.
3. A total of 46 piles were examined in the East Bulkhead. Fifteen of these piles (32.6%) were found to be undamaged and have been rated in the 100% remaining cross sectional area category.
4. One pile (2.2%) has been rated in the 90% remaining area category. This pile has sustained minor mechanical damage at its top with the loss of ~1% of its cross section.
5. Six piles (13.0%) have been rated in the 75% rating category. These piles have sustained moderate fungal damage at their tops with the loss of ~25% of their cross section.
6. Fourteen piles (30.4%) have been rated in the 50% rating category and 10 (21.8%) piles have been rated in the 25% remaining area category. These piles have sustained heavy fungal decay but at this time the damage remains confined to the top foot of the member.
7. Inspection of the piles noted them to have a steel rod tie back system located approximately six feet below the top of the bulkhead. The tie-backs are ~one inch diameter rods which have been placed through the center of the piles and secured with a steel bearing plate and nut. As shown in Appendix A, Photo 36, the exposed ends of these tie rods appear to be in good condition with only minor surface corrosion. Excavation of the site was beyond the scope of this investigation so no information on the condition of the buried portion of the rods or the deadman is known.
8. The overall condition of the horizontal timber lagging is good. There are a total of 44 spans in this section of bulkhead. The timbers typically span three soldier piles.
9. Inspection of the timber lagging noted 35 of the 44 spans (79.5%) to be in good condition with no deterioration or damage noted. These spans have been rated in the undamaged category.

10. Four spans (9.1%) were noted to have minor damage and have been rated in the light damage category. One individual board in each of these spans was found to have sustained minor marine borer damage with the loss of 5% or less of their cross section.
11. Four additional spans (9.1%) have been rated in the moderate damage category. One or more boards in each of these spans has sustained significant fungal and/or marine borer damage with the loss of approximately 20% of their cross section.
12. The lagging in one span (2.3%) was found to have sustained significant damage and has been rated in the heavy damage category. In this span, which is located at the NW corner of the bulkhead between Piles 54 – 55.5, the lower elevation timber is split and there is a gap of approximately one foot below the bottom board. Examination of the fill material visible through the void showed the remaining fill to be approximately one foot diameter rock. As shown in Photo No. 35 of Appendix A, the fill appears to be stable. Although it is apparent that the fines have been washed out by wave action, there is no evidence of sloughing of the lager fill through the void or of a depression in the ground level above the area. A similar but lesser void was also noted in the adjacent span between piles 55.5 – 58.
13. The bulkhead between piles 83 – 88 was noted to have a slight bow to the north resulting in the top of the bulkhead listing out towards the waterway. Examination of the piles in this area found them to be undamaged. Based on the prevalence of fungal decay found in the tops of the majority of the piles in this section of bulkhead, it appears that these piles may be of a newer vintage. Given the slight northwards list of the wall in this span, it may be that some form of localized failure of the wall or some specific construction or maintenance item impacted the bulkhead in this area. The piles, lagging, and tie rods in this area all appear to be in good condition at this time.

CONCLUSIONS AND RECOMMENDATIONS

This inspection has shown that the overall condition of the Bornstein Seafood Wharf is fair to good. The majority of the structural piles were found to be in good condition with only two piles found to have sustained significant damage. We recommend that these two piles be evaluated for maintenance. The fender system was found to be in poor condition with slightly over half of the piles noted to have been heavily damaged or destroyed. The intertidal zone braces were also found to be in poor condition. Approximately half of the timbers are heavily damaged or missing. Inspection of the superstructure caps, stringers, and decking found them to be in overall fair to good condition with localized areas of significant damage found in the cap timbers supporting the north edge of the ice machine and several of the perimeter stringers. These defective members should be evaluated for maintenance.

The Float Anchor or Dolphin piles that secure the Mooring Float are in fair to good condition. Two piles were found to have sustained heavy marine borer damage and several additional piles were noted to have sustained minor to moderate deterioration primarily due to abrasion damage. We recommend that the two heavily damaged piles be evaluated for maintenance. The piles that have sustained minor to moderate damage will likely provide several more years of service without any maintenance at this time. We recommend that these piling be monitored in future inspections.

The condition of the two sections of soldier pile bulkhead varied. The West Bulkhead was found to be in poor condition with significant damage to the majority of the piles, the lagging timbers, and to the timber tie-backs. Inspection of the steel rod tie-back system found it to be in generally good condition. Given the overall severity and extent of the damage encountered throughout this section of bulkhead, we recommend that the defective members be evaluated for maintenance or replacement on a priority basis.

Inspection of the East Bulkhead found it to be in overall fair condition. Many of the piles were found to have sustained significant fungal damage, but at this time the damage is localized to the top foot of the piles which extends above the upper most lagging timber and ground elevation. Given that the damage is located above the ground, restorative maintenance does not appear to be necessary at this time due to structural considerations. However, some form of preventative maintenance such as a fungicide treatment and installing caps or covers on the tops of the piles to prevent further exposure to moisture may help to extend the service life of these piles. Inspection of the horizontal timber lagging and the steel tie-backs found them to be in generally good condition with the majority of the members found to be undamaged. One localized area at the NW corner of the bulkhead (i.e. Pile No's 54 – 58) was noted to have sustained damage that has resulted in two voids beneath the lowest elevation lagging timber. Although there has been an apparent loss of fines from the backfill due to wave action, no evidence of sloughing or movement of the larger 1 foot diameter fill materials behind the wall was noted. Although maintenance may not be warranted at this time, the area will most likely continue to deteriorate. We recommend that consideration be given to the placement of rip rap along the bottom of the bulkhead in this localized area to prevent further loss of fines and possible sink holes in the area behind the bulkhead.

We understand that our findings will be combined with the results of other types of field investigations and that this collective information will be utilized in the analysis and planning for the structures. We recommend that this planning include consideration for conducting periodic inspections of the structures as part of the Port of Bellingham's preventative maintenance program for the structures. Based on the material type(s), ages and exposure

conditions, we recommend periodic repeat inspections be conducted on a three to six year cycle as recommended by the American Society of Civil Engineers. Such inspections will help monitor the condition of the facility and will, as in the case of the current inspection, identify specific members that may require maintenance. Such an approach will help to ensure the structural integrity and longevity of the structures, as well as the personal safety of those using the facility.

It has been a pleasure to have assisted you with this project. Should you have any questions concerning this report, or if we can assist you further in your evaluation of the facility, please do not hesitate to contact our office.

Yours Truly,
Echelon Engineering, Inc.

Ms. Shelley D. Sommerfeld, P.E.
President

SDS:jds
Enclosures

PHOTO No. 1: Bornstein Seafood Wharf and West Bulkhead, Looking East – Note the wharf is constructed primarily with creosote treated timber piles, braces and superstructure members. The bulkhead is also constructed with creosote treated soldier piles and timber lagging.

PHOTO No. 2: Bornstein Wharf and Bulkhead, Looking West – Note the east end of the West Bulkhead at left of photo and the Mooring Float with timber pile dolphins along it's north edge. Also note the ice machine located at the east end of the wharf.

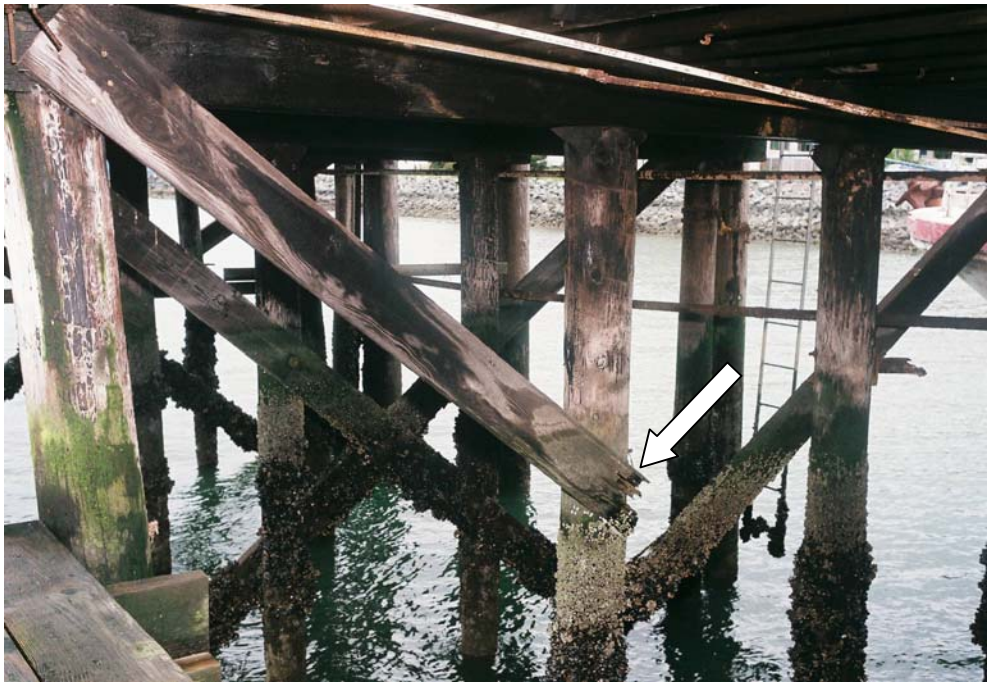


PHOTO No. 3: Bent 4, Looking Northwest – Note the good condition of the creosote treated piles from the top to the intertidal zone. Also note the damaged diagonal braces on Bent 4 in the foreground. The diagonal braces were typically found to be in poor condition throughout the wharf.

PHOTO No. 4: Bent 15.5, Looking North – Note the good condition of the piles in the intertidal zone. Also note the diagonal brace on the east side of the piles is destroyed.

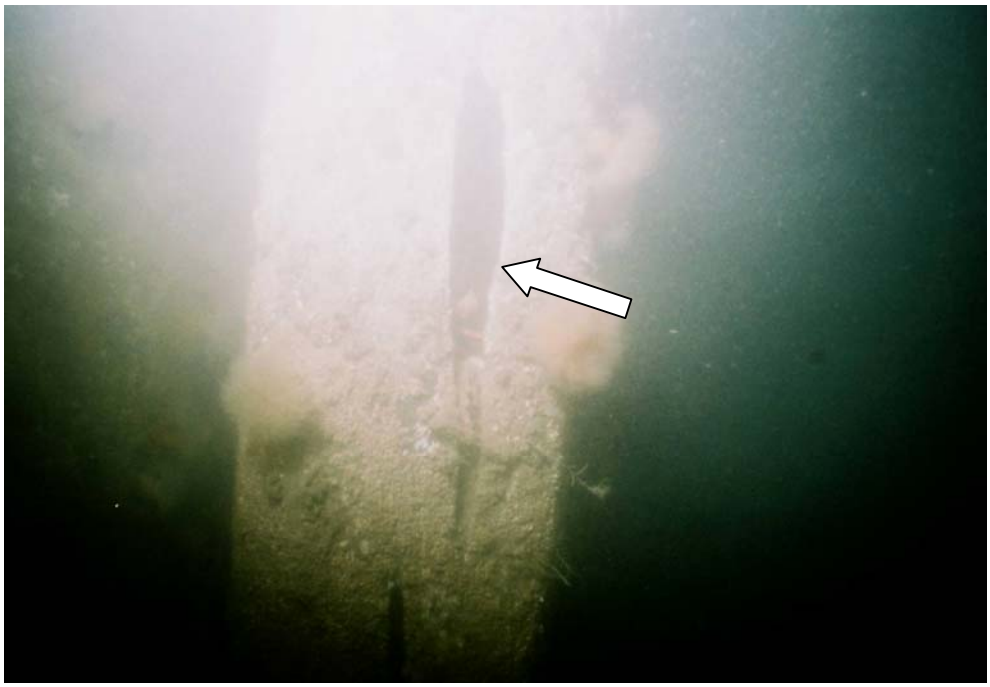


PHOTO No. 5: Bent 7, Row A Pile – Note the entrance to a marine borer cavity that was estimated to be 90% of the cross sectional area of the pile. The damage was found at El. –5' (MLLW) on this pile.

PHOTO No. 6: Bent 1, Row C Pile – Note the pile is split at the top. Level III drilling found 90% loss of the internal cross section due to mechanical and fungal damage.

PHOTO No. 7: Bents 11-12, Row B Superstructure – Note the good condition of the caps and stringers in this area. The majority of the caps and stringers throughout the structure were found to be in good condition. Also note the bituminous covers which have been placed on the piles as a preventative measure against fungal decay.

PHOTO No. 8: Bent 12, Row B Superstructure – Note the good condition of the 12x12 caps, 4x12 stringers and 3x4 deck planks. This is typical of the condition of these members throughout the wharf structure. All members exhibit good preservative retention.

PHOTO No. 9: Bent 1, Rows C-D, Superstructure – Note the Bent 1 cap is a newer, Chemonite treated member. Also note many of the original creosote treated stringers have sustained heavy fungal damage at their west end at Bent 1. Supplemental stringers have been installed adjacent to the damaged ones.

PHOTO No. 10: Bent 1-2, Supplemental Stringers – Note the light brown preservative treated supplemental stringers that have been sistered along side the damaged original members shown in Photo No. 9. A similar damage and repair method was also noted at Bent 15-16 at the east end of the wharf.

PHOTO No. 11: East End of Wharf, Looking West – The ice machine / tower is located between Bents 14 and 16. Two supplemental bents have been added at Bent 14.5 and 15.5 to increase structural capacity for the machinery and ice load.

PHOTO No. 12: Bent 15.5, North End – Note this cap, which is under the ice machine tower has sustained heavy fungal decay resulting in loss of 90% of its cross sectional area. The damage is located from the north end of the cap in past the first bearing pile at Row A.5.

PHOTO No. 13: Bent 15, North End – Note the drill used for Level III testing. Testing of this cap found it to have sustained a loss of ~90% of its cross sectional area at this location above the Row A pile.

PHOTO No. 14: Bent 16, Row C - D – Note the original stringers spanning from Bent 15 (background) to Bent 16 are hollow at their east ends. Supplemental stringers have been sistered alongside. Also note the heavy damage to the perimeter stringer south of Row D (left arrow) which does not have a newer stringer sistered alongside.

PHOTO No. 15: Bent 12 - 13, North Perimeter Stringer – Note the screwdriver and drill inserted into an area of heavy fungal damage in this perimeter stringer. Also note the typical good condition of the ends of the timber decking above.

PHOTO No. 16: Bent 10 - 11, Composite Deck – Note the good condition of the 6" thick concrete deck surface that covers the majority of the wharf. A two inch lift of asphalt was found beneath the concrete. The lowest tier of deck members is comprised of 3x4" treated timber boards on edge.

PHOTO No. 17: Bent 10 - 16, Fender System – Note Fender Pile No. 17 (right arrow) is missing. The left arrow indicates Fender Pile No. 21 which was found to have sustained heavy mechanical and fungal damage to its top. Also note the multi-pile dolphins that secure the Mooring Float in the background.

PHOTO No. 18: Fender Pile No. 6 – Inspection found the pile to be broken ~4 feet below the top, at the location where the pile has been notched to accommodate the fender chock. Also note the good condition of the ends of the timber deck boards and the cap timber at this location.

PHOTO No. 19: West Bulkhead, West End – Note the typical construction with timber soldier piles, horizontal timber lagging. This section of wall was also noted to have what appears to be diagonal timber tie backs located ~4 feet below the top of the wall. Also note the poured concrete repair at the base of the wall between Piles No. 7-11.

PHOTO No. 20: West Bulkhead, East End – This section of bulkhead that runs through the Bornstein facility terminates in the area of a buried outfall.

PHOTO No. 21: West Bulkhead, Pile No. 47 – Note the concrete plug and the newer metal cap which has been installed in past maintenance. Despite the repair, fungal decay has continued and the top ~4 feet of the pile has sustained 90% fungal section loss. Similar damage was found throughout the piles in the West Bulkhead.

PHOTO No. 22: West Bulkhead, Piles 44 to 48 – The technician is inspecting Pile No. 47, which was found to have 90% loss of cross section from the top down ~4 feet. Also note what appears to be diagonal timber tie backs at the piles. Inspection found a number of these members to be split through their connections (Refer to arrows).

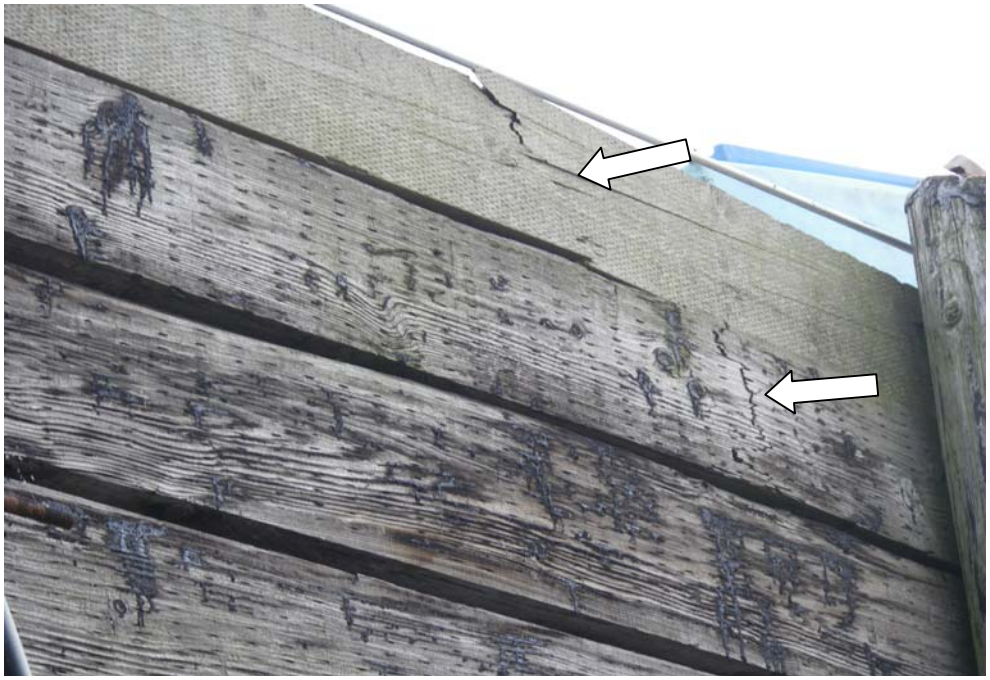


PHOTO No. 23: West Bulkhead, Piles No. 6 - 7 Lagging Timbers – Note the top two lagging timbers have failed and are broken.

PHOTO No. 24: West Bulkhead, Piles No. 7 to 11 – Note the poured in-place concrete repair to the bottom ~5 feet of the bulkhead at this location. Also note the split diagonal tie back timbers. Additionally, many of the horizontal lagging timbers at the elevation of the tie backs were found to have heavy fungal damage.

PHOTO No. 25: West Bulkhead, Piles No. 15-18 – Note the stringers (upper right) that are supported by a ledger bolted to the side of the bulkhead piles. These stringers support a lower deck service platform. All of these piles have sustained heavy fungal damage from the top down to near the elevation of the support ledger.

PHOTO No. 26: West Bulkhead, Piles No. 24 - 28, Lagging – Note the deformation of the two lagging timbers at the elevation of the diagonal tie back timbers. These members have been notched to accommodate the diagonals and thus been suceptible to accelerated fungal decay. Similar heavy internal fungal damage was found in the lagging boards at this elevation throughout the West Bulkhead.

PHOTO No. 27: West Bulkhead, Piles No. 22 - 25 – Note the screwdriver inserted into an area of heavy marine borer damage near the bottom of the bulkhead. Also note the marine borer damage evident as surface etching in the lower 3 - 4 boards.

PHOTO No. 28: West Bulkhead, Piles No. 22-23, Lagging – This is a close up of the marine borer damage shown in Photo No. 27 above. Note the small diameter rock which makes up the fill material behind the wall.

PHOTO No. 29: East Edge of Ice Machine / Tower Support – Note the two concrete footings that support the condensing tower for the ice making system. These footings are located between Piles No. 30 and 31 of the West Bulkhead. Inspection found Pile No. 30 to have sustained ~75% fungal damage in the top two feet.

PHOTO No. 30: West Bulkhead Lagging Timbers, Between Piles 30 and 31 – Note the concrete tower footing that bears directly on top of the bulkhead at this location. Inspection found he upper 3 lagging boards to have sustained heavy fungal damage with ~90% loss of section. The drill is inserted in the top board, which has failed and is visibly compressed.

PHOTO No. 31: West Bulkhead, Piles 35 - 38 – The mooring float access ramp is hinged off the top of the bulkhead between Piles 36 and 37. Inspection found the top two lagging timbers used to secure the ramp have sustained heavy fungal damage, with ~90% loss of cross section.

PHOTO No. 32: West Bulkhead, Piles No. 36-37, Ramp Connection – The access ramp attachment bracket is secured to the upper lagging timbers between Piles No. 36 and 37. The technician is hammer sounding the upper two lagging timbers. Level II and Level III testing found these timbers to be heavily damaged.

PHOTO No. 33: East Bulkhead, Looking East – Note the top of the soldier piles visible at the top of the bulkhead. Also note the uplands area behind the bulkhead is undeveloped.

PHOTO No. 34: East Bulkhead, Looking East from Outfall Area – Note the piles in this section of wall typically extend 1 foot above the uppermost lagging timbers. Measurements found the maximum bulkhead height for this section to be at Pile No. 75 and was measured at 15.5 feet from the top of the lagging to the mudline.

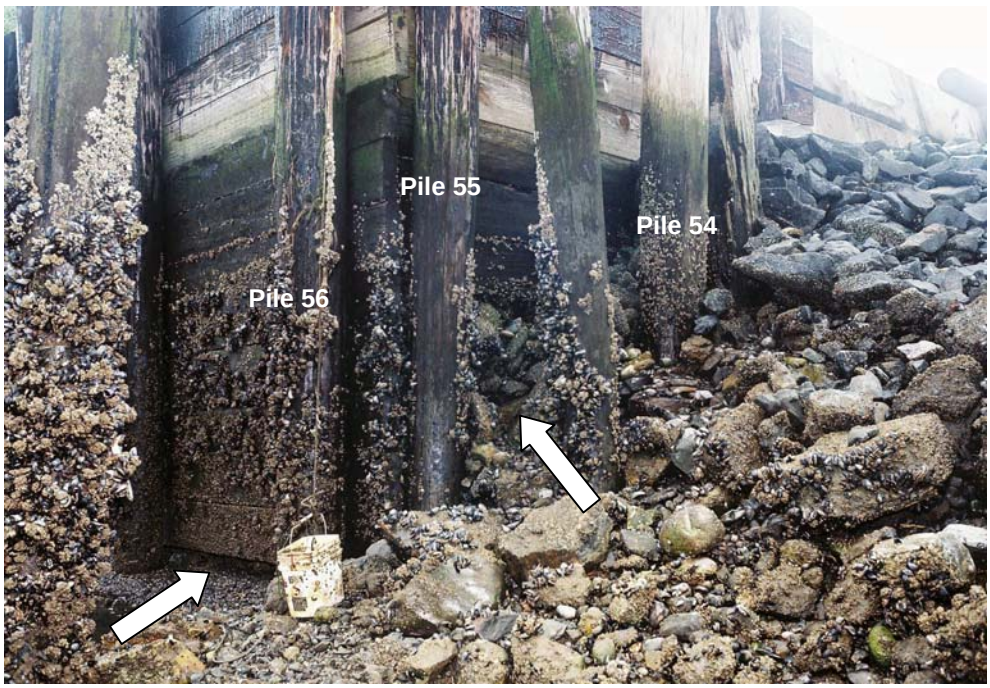


PHOTO No. 35: East Bulkhead, Northwest Corner at Outfall – Note the arrows indicating two locations where voids were identified beneath the timber lagging. These voids are in the spans between Pile No. 54 to 55 and from Pile No. 55 to 58. No evidence of active migration of fill material from behind the bulkhead was found.

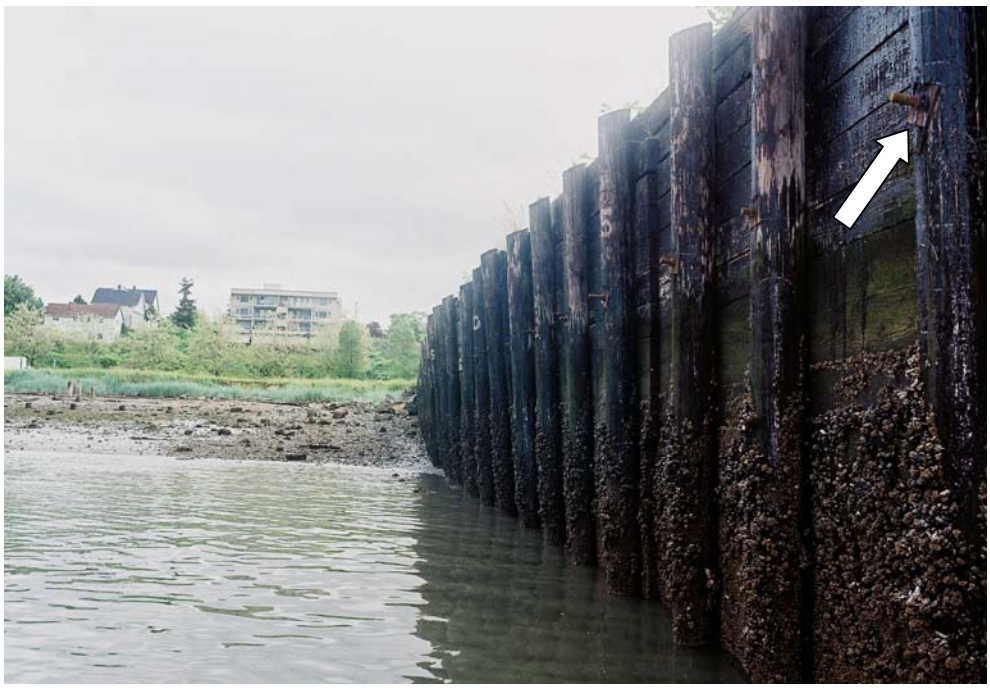
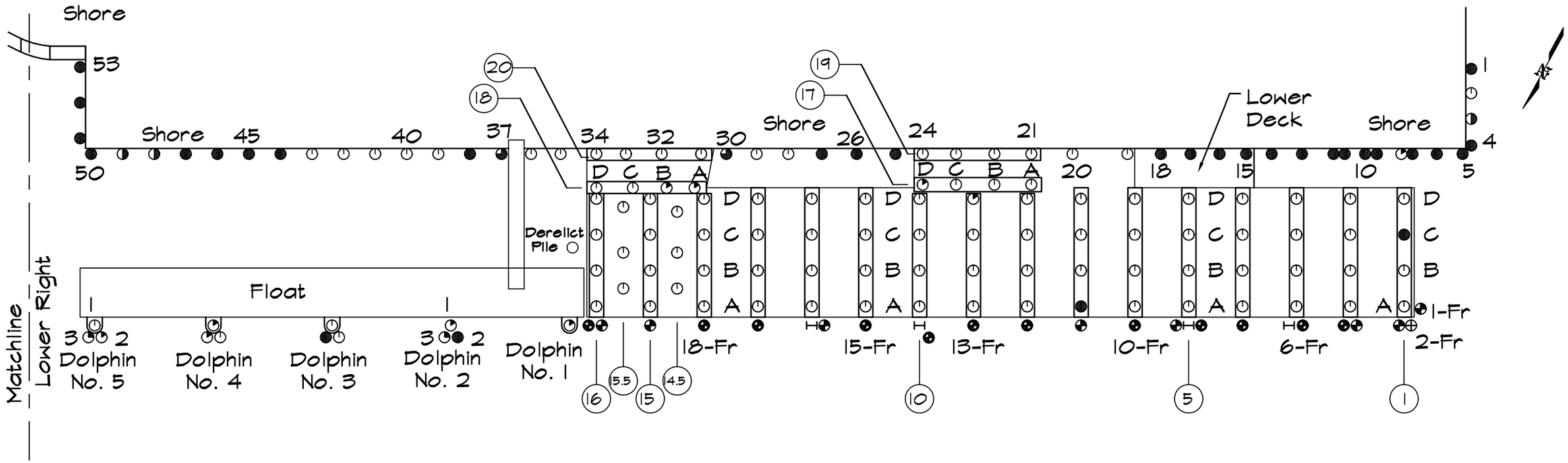
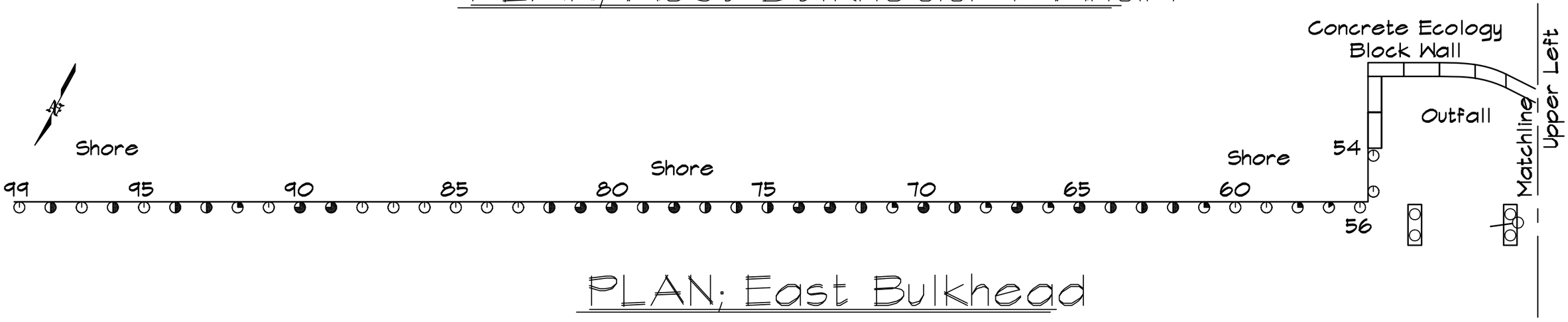


PHOTO No. 36: East Bulkhead, Looking East from Pile No. 72 – Note the steel tie backs located at each pile ~5-6 feet below the top of the wall. Level I visual inspection found these all to be in generally good condition. Also note the good condition of the timber piles and lagging.



PLAN; West Bulkhead & Wharf



PLAN; East Bulkhead

LEGEND

- 100% Rating Category
- 90% Rating Category
- 75% Rating Category
- 50% Rating Category
- 25% Rating Category
- 0% Rating Category
- Fender Pile - Undamaged
- Fender Pile - Functional
- Fender Pile - Damaged
- Timber Pile - Not In Contract
- Pile Cap

Not To Scale

ANCHOR QEA

Inspection Results

Bornstein Seafood Wharf
Pile Plan

DATE:	July 2012
PROJECT:	12-2412
SHEET:	1 of 1
DRAWN:	SDS/JDS

ECHELON ENGINEERING INC.
Civil/Marine Consulting Engineers
Lynnwood, Washington 425/672.8924

SDS, Echelon Engineering, Inc. 5/30/2012 11:03 AM 2341-Sht-1.dwg

LEGEND TO TABLES

Abr	Abrasion
Att	Attack
B	Bankia
Br	Batter Pile
CJD	Cold Joint Deterioration
Ck	Check
CMP	Corrugated Metal Pipe
Corr	Corrosion
Cr	Crack
Creo	Creosote
D	Damaged
Dbl	Double
Dest	Destroyed
Dia	Diameter
Diag	Diagonal
Dn	Down
E	East
F	Functional
Fg	Fungal
Fr	Fender Pile
ft	Feet
FV	Form Void
Hvy	Heavy
ITZ	Intertidal Zone
L	Limnoria
LA	Limited Access
L/D	Longitudinal Diagonal Brace
L/W	Longitudinal Wale
Lg	Large
lt	Light
MBC	Marine Borer Cavity
MBD	Marine Borer Damage
MBL	Marine Borer Loss
MC	Main Cap
mD	Minor Damage
MD	Major Damage
MDL	Mudline
Mech	Mechanical
Miss	Missing
MLLW	Mean Lower Low Water
Mod	Moderate
N	North
N/A	Not Accessible
OBH	Open Bolt Hole
Per.	Perimeter
Ph/k	Pinholes in Knots
POP	Pushed off Drift Pin
RCP	Reinforced Conc. Pipe
S	South
SC	Sub-cap
Sk	Shake
Sm	Small
SP	Spall
Sp	Split
SPL	Splash Zone
Stl	Steel
SUB	Submerged Zone
T/D	Transverse Diagonal Brace
T/W	Transverse Wale
Tp	Top
Tunn	Tunnels
Typ	Typical
UD	Undamaged
W	West
WS	Water Staining

TABLE 1
WHARF TIMBER PILE DATA

PILE LOCATION		MEMBER RATING	CONDITION / DAMAGE	
Bent	Row	(%)	Elevation (Chart Datum)	Details / Remarks
Wharf				
1	A	100	Tp	No Protective Cover
	B	100	Tp	No Protective Cover
	C	0	Tp	No Protective Cover
			Tp Dn 4'	90% Mechanical/Fungal
	D	100	Tp	No Protective Cover
2	A	100		
	B	100		
	C	100		
	D	100		
3	A	100		
	B	100		
	C	100		
	D	100		
4	A	100		
	B	100		
	C	100		
	D	100		
5	A	100		
	B	100		
	C	100		
	D	100		
6	A	100		
	B	100		
	C	100		
	D	100		
7	A	0	-5'	90% MBC
	B	100		
	C	100		
	D	100		

TABLE 1
WHARF TIMBER PILE DATA

PILE LOCATION		MEMBER RATING	CONDITION / DAMAGE	
Bent	Row	(%)	Elevation (Chart Datum)	Details / Remarks
8	A	100		
	B	100		
	C	100		
	D	100		
9	A	100		
	B	100		
	C	100		
	D	90	SPL	5% Abrasion
10	A	100		
	B	100		
	C	100		
	D	100		
11	A	100		
	B	100		
	C	100		
	D	100		
12	A	100		
	B	100		
	C	100		
	D	100		
13	A	100		
	B	100		
	C	100		
	D	100		
14	A	100		
	B	100		
	C	100		
	D	100		
14.5	A.5	100	Tp	No Protective Cover
	B.5	100	Tp	No Protective Cover
	C.9	100	Tp	No Protective Cover

TABLE 1
WHARF TIMBER PILE DATA

PILE LOCATION		MEMBER RATING	CONDITION / DAMAGE	
Bent	Row	(%)	Elevation (Chart Datum)	Details / Remarks
15	A	100		
	B	100	Tp	No Protective Cover
	C	100		
	D	100		
15.5	A.5	100	Tp	No Protective Cover
	B.5	100	Tp	No Protective Cover
	C.9	100	Tp	No Protective Cover
16	A	100		
	B	100		
	C	100		
	D	100		
17	A	100		
	B	100		
	C	100		
	D	90	MDL	2% Mechanical
18	A	90	ITZ	2% Mechanical/Limnoria
	B	90	ITZ	5% Abrasion
	C	100		
	D	100		
19	A	100		Also Functions as Bulkhead Pile
	B	100		Also Functions as Bulkhead Pile
	C	100		Also Functions as Bulkhead Pile
	D	100		Also Functions as Bulkhead Pile
20	A	100		Also Functions as Bulkhead Pile
	B	100		Also Functions as Bulkhead Pile
	C	100		Also Functions as Bulkhead Pile
	D	100		Also Functions as Bulkhead Pile

TABLE 1
WHARF TIMBER PILE DATA

PILE LOCATION		MEMBER RATING	CONDITION / DAMAGE	
Bent	Row	(%)	Elevation (Chart Datum)	Details / Remarks
Float Anchor Piles				
1	1	90	Tp Dn 2'	2% Shake
			ITZ	5% Abrasion
Dolphin	1	90	ITZ	5% Abrasion
2	2	0	-5'/MDL	90% MBC - Broken
	3	75	ITZ/MDL	2% Abrasion; 20% MBC
Dolphin	1	100		
3	2	100		
	3	0	0'	90% MBC
Dolphin	1	90	ITZ	2% Abrasion
4	2	100		
	3	90	ITZ/MDL	5% Abrasion
Dolphin	1	100		
5	2	90	ITZ	5% Abrasion
	3	75	ITZ/MDL	20% Abrasion

TABLE 2
WHARF FENDER PILE DATA

PILE LOCATION (No.)	MEMBER RATING	CONDITION / DAMAGE	
		Elevation (Chart Datum)	Details / Remarks
1 - Fr	F	SPL	1% Mechanical
2 - Fr	UD	Tp	No Protective Cover
3 - Fr	F	SPL MDL	1% Mechanical 5% Mechanical
4 - Fr	F	Tp	5% Shake; No Protective Cover
5 - Fr	D	Tp	Not Attached; No Protective Cover
6 - Fr	D	4' From Tp	Broken
7 - Fr	D	ITZ	Broken
8 - Fr	D	Tp Tp Dn 2' ITZ	No Protective Cover 30% Fungal 5% Abrasion
9 - Fr	F	Tp Dn 1' ITZ	10% Fungal 5% Abrasion
10 - Fr	D	ITZ	Broken
11 - Fr	F	Tp ITZ	2% Shake; No Protective Cover 2% Mechanical
12 - Fr	D	Tp Dn 4' ITZ	Missing 10% Abrasion
13 - Fr	D	Tp Dn 5' ITZ	50% Mechanical/Fungal - Not Attached 10% Abrasion
14 - Fr	D	ITZ	Broken
15 - Fr	D	Tp ITZ -5'/MDL	No Protective Cover; 50% Fungal 2% Shake; 10% Abrasion 2% Shake
16 - Fr	F	Tp Tp Dn 1' ITZ	No Protective Cover 25% Mechanical/Fungal 2% Abrasion
17 - Fr	D		Missing
18 - Fr	D	Tp/ITZ	5% Abrasion; Loose at Attachment
19 - Fr	F	Tp ITZ	2% Mechanical; No Protective Cover 5% Abrasion
20 - Fr	F	Tp Tp Dn 2' ITZ	Protective Cover Torn 25% Mechanical/Fungal 10% Abrasion
21 - Fr	D	Tp Dn 4' ITZ	90% Mechanical/Fungal; Not Attached 10% Abrasion

TABLE 3
WHARF TIMBER BRACE DATA

MEMBER LOCATION			MEMBER RATING	CONDITION / DAMAGE
Upper End (Bent-Row)	Lower End (Bent-Row)	Type & Orientation		Details / Remarks
1-A	1-D	W Diag.	UD	
1-D	1-A	E Diag.	UD	
2-A	2-D	W Diag.	D	Missing
2-D	2-A	E Diag.	D	Broken @ Row C
3-A	3-D	W Diag.	UD	
3-D	3-A	E Diag.	UD	
4-A	4-D	W Diag.	D	Broken @ Row B.7
4-D	4-A	E Diag.	D	Broken @ Row C
5-A	5-D	W Diag.	UD	
5-D	5-A	E Diag.	UD	
6-A	6-D	W Diag.	D	Destroyed @ Row D
6-D	6-A	E Diag.	D	Missing from Row C-A
7-A	7-D	W Diag.	F	20% MBL @ Row C-D
7-D	7-A	E Diag.	F	10% MBL @ Row B-A
8-A	8-D	W Diag.	D	Broken @ Row B
8-D	8-A	E Diag.	D	Broken @ Row C
9-A	9-D	W Diag.	UD	
9-D	9-A	E Diag.	UD	
10-A	10-D	W Diag.	D	Not Attached @ Row C & D
10-D	10-A	E Diag.	D	Not Attached @ Row B & A
11-A	11-D	W Diag.	F	1% MBL @ Row D End
11-D	11-A	E Diag.	UD	
12-A	12-D	W Diag.	D	Broken @ Row B
12-D	12-A	E Diag.	D	Destroyed @ Row B-A
13-A	13-D	W Diag.	UD	
13-D	13-A	E Diag.	UD	
14-A	14-D	W Diag.	D	Not Attached @ Row C & D
14-D	14-A	E Diag.	D	Broken @ Row C.5
14.5-A.5	14.5-C.9	E Diag.	D	Destroyed @ Row B.5
14.5-C.9	14.5-A.5	W Diag.	F	20% MBL @ Row B.5-A.5
15-A	15-D	W Diag.	UD	
15-D	15-A	E Diag.	UD	
15.5-A.5	15.5-C.9	E Diag.	D	Destroyed @ Row B.8
15.5-C.9	15.5-A.5	W Diag.	D	Destroyed @ Row A.5
16-A	16-D	E Diag.	UD	
16-D	16-A	W Diag.	UD	

TABLE 4
WHARF TIMBER CAP DATA

MEMBER LOCATION (Bent)	MEMBER RATING	CONDITION / DAMAGE	
		Damage Location (Row - Row)	Details / Remarks
1	UD		Chemonite Treated
2	UD	N End	1% Fungal - UD at Row A Pile
3	UD		
4	UD		
5	UD		
6	UD		
7	Light	N End	5% Shake
8	Light	N End	5% Mechanical/Impact
9	UD		
10	UD	N End	2% Mechanical
11	UD		
12	UD		
13	UD		
14	Light	N End	5% Fungal
14.5	Heavy	N End - B.5	Split w/ 50% Fungal; Limited Access
15	Heavy	N End - A	90% Fungal
15.5	Heavy	N End - A.5	90% Fungal
16	UD		
17	UD		
18	UD		
19	UD		
20	UD		

TABLE 5
TIMBER BULKHEAD PILE DATA

PILE LOCATION (No.)	MEMBER RATING	CONDITION / DAMAGE	
		Elevation (Chart Datum)	Details / Remarks
West Bulkhead			
1	0	Tp/MDL	Untreated Pile; 90% Fungal / Insect Damage
2	100		
3	50	Tp Dn 4'	50% Fungal
4	0	Tp Dn 4'	90% Fungal
5	0	Tp Dn 4'	90% Fungal
6	0	Tp Dn 4'	90% Fungal
7	0	Tp Dn 4'	90% Fungal
8	90	Tp Tp Dn 2'	No Protective Cover 2% Shake
9	0	Tp Dn 4'	90% Fungal
10	0	Tp Tp Dn 3'	No Protective Cover 90% Fungal
11	0	Tp Dn 4'	90% Fungal
12	0	Tp Tp Dn 4'	No Protective Cover 90% Fungal
13	0	Tp Dn 4'	90% Fungal
14	0	Tp Dn 4'	90% Fungal
15	0	Tp Dn 4'	90% Fungal
16	0	Tp Dn 4'	90% Fungal
17	0	Tp Dn 4'	90% Fungal
18	0	Tp Dn 4'	90% Fungal
19	100		
20	100		
21	--		Wharf Structural Pile - Refer to Table 1, Bent 19/Pile A
22	--		Wharf Structural Pile - Refer to Table 1, Bent 19/Pile B
23	--		Wharf Structural Pile - Refer to Table 1, Bent 19/Pile C
24	--		Wharf Structural Pile - Refer to Table 1, Bent 19/Pile D
25	0	Tp Dn 4'	90% Fungal
26	0	Tp Dn 2'	90% Fungal
27	0	Tp Dn 2'	90% Fungal
28	100		
29	100		
30	25	Tp Dn 2'	75% Fungal
31	--		Wharf Structural Pile - Refer to Table 1, Bent 20/Pile A
32	--		Wharf Structural Pile - Refer to Table 1, Bent 20/Pile B
33	--		Wharf Structural Pile - Refer to Table 1, Bent 20/Pile C
34	--		Wharf Structural Pile - Refer to Table 1, Bent 20/Pile D

TABLE 5
TIMBER BULKHEAD PILE DATA

PILE LOCATION (No.)	MEMBER RATING	CONDITION / DAMAGE	
		Elevation (Chart Datum)	Details / Remarks
35	100		
36	100		
37	25	Tp Dn 4'	75% Fungal
38	0	Tp Tp Dn 4'	No Protective Cover 90% Fungal
39	100		
40	100		
41	100		
42	100		
43	100		
44	0	Tp Dn 4'	90% Fungal
45	0	Tp Dn 4'	90% Fungal
46	0	Tp Dn 4'	90% Fungal
47	0	Tp Dn 5'	90% Fungal
48	50	Tp Dn 4'	50% Fungal
49	50	Tp Dn 2'	50% Fungal
50	0	Tp Dn 4'	90% Fungal
51	0	Tp Dn 5'	90% Fungal
52	0	Tp Dn 3'	90% Fungal
53	0	Tp/MDL	90% Fungal
Outfall Area			
53 - 54	UD		Concrete Ecology Blocks and Outfall Discharge Transition Between West and East Bulkhead Sections
East Bulkhead			
54	100	Tp	No Protective Cover
55	100		No Protective Cover
56	100		No Protective Cover
57	90	Tp	No Protective Cover; 1% Shake
58	75	Tp Tp Dn 1'	No Protective Cover 25% Fungal
59	100	Tp	No Protective Cover
60	100	Tp	No Protective Cover
61	75	Tp Tp Dn 1'	No Protective Cover 25% Fungal
62	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
63	50	Tp Tp 1'	No Protective Cover 50% Fungal

TABLE 5
TIMBER BULKHEAD PILE DATA

PILE LOCATION (No.)	MEMBER RATING	CONDITION / DAMAGE	
		Elevation (Chart Datum)	Details / Remarks
64	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
65	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
66	75	Tp Tp Dn 1'	No Protective Cover 25% Fungal
67	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
68	75	Tp Tp Dn 1'	No Protective Cover 25% Fungal
69	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
70	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
71	75	Tp Tp Dn 1'	No Protective Cover 25% Fungal
72	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
73	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
74	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
75	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
76	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
77	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
78	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
79	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
80	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
81	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
82	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
83	100	Tp	No Protective Cover

TABLE 5
TIMBER BULKHEAD PILE DATA

PILE LOCATION (No.)	MEMBER RATING	CONDITION / DAMAGE	
		Elevation (Chart Datum)	Details / Remarks
84	100	Tp	No Protective Cover
85	100	Tp	No Protective Cover
86	100	Tp	No Protective Cover
87	100	Tp	No Protective Cover
88	100	Tp	No Protective Cover
89	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
90	25	Tp Tp Dn 1'	No Protective Cover 75% Fungal
91	100	Tp	No Protective Cover
92	75	Tp Tp Dn 1'	No Protective Cover 25% Fungal
93	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
94	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
95	100	Tp	No Protective Cover
96	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
97	100	Tp	No Protective Cover
98	50	Tp Tp Dn 1'	No Protective Cover 50% Fungal
99	100	Tp	No Protective Cover

TABLE 6
TIMBER BULKHEAD LAGGING DATA

LAGGING PANEL (Pile - Pile)	MEMBER RATING	CONDITION / DAMAGE Elevation (Chart Datum)	Details / Remarks
West Bulkhead			
1 - 2	UD		
2 - 4.5	Light	MDL	2 Boards w/ 5% MBD
4.5 - 7	Heavy	Tp	2 Boards Broken
		+10'	2 Boards w/ 50% Fungal
		MDL	1 Board w/ 25% MBD
7 - 11	Heavy	+10'	2 Boards w/ 90% Fungal
		MDL Up 5'	Repaired w/ Timber and Concrete Sleeve
11 - 14	Heavy	+10'	2 Boards w/ 90% Fungal
		MDL	3 Boards w/ <50% MBD
14 - 16	Heavy	+10'	2 Boards w/ 90% Fungal
		MDL	2 Boards w/ 20% MBD
16 - 18	Heavy	MDL	1 Board w/ 50% MBD
18 - 20	Heavy	Tp	3 Boards w/ 90% Fungal
		MDL	3 Boards w/ 20% MBD
20 - 22	Heavy	Tp	3 Boards w/ 90% Fungal
		+6'	1 Board w/ 20% MBD
22 - 24	Heavy	Tp	3 Boards w/ 90% Fungal
		MDL	4 Boards w/ 50% MBD
24 - 26	Heavy	+10'	2 Boards w/ 90% Fungal and Compression
		MDL	1 Board w/ 50% MBD
26 - 28	Heavy	Tp	3 Boards w/ 90% Fungal
		MDL	2 Boards w/ <5% MBD
28 - 30	Heavy	+10'	2 Boards w/ 90% Fungal
		MDL	3 Boards w/ <5% MBD
30 - 32	Heavy	Tp	3 Boards w/ 90% Fungal
		MDL	3 Boards w/ <5% MBD
32 - 34	Heavy	Tp	3 Boards w/ 90% Fungal
		MDL	2 Boards w/ <5% MBD
34 - 36	Heavy	+10'	2 Boards w/ 90% Fungal
		+6'	1 Board w/ 25% MBD
36 - 38	Heavy	+10'	2 Boards w/ 90% Fungal

TABLE 6
TIMBER BULKHEAD LAGGING DATA

LAGGING PANEL (Pile - Pile)	MEMBER RATING	CONDITION / DAMAGE Elevation (Chart Datum)	Details / Remarks
38 - 40	Moderate	+6'	3 Boards w/ 25% MBD
40 - 42	Heavy	+10' +6'	1 Board w/ 90% Fungal 2 Boards w/ 5% MBD
42 - 44	Heavy	+10'	2 Boards w/ 50% Fungal
44 - 46	Heavy	+10' +6'	1 Board w/ 90% Fungal 1 Board w/ 50% MBD
46 - 48	Heavy	+10' MDL	2 Boards w/ 90% Fungal 3 Boards w/ 5% MBD
48 - 50.5	Heavy	+10'	2 Boards w/ 50% Fungal
50.5 - 53	UD		
Outfall Area			
53 - 54	UD		Concrete Ecology Blocks and Outfall Discharge Transition Between West and East Bulkhead Sections
East Bulkhead			
54 - 55.5	Heavy	MDL	1 Board Split; Undermined ~1' - Void w/ 1' dia Rock
55.5 - 58	UD	MDL	Undermined ~8" - Void w/ 1' dia Rock
58 - 59	UD		
59 - 61	UD		
61 - 63	UD		
63 - 65	UD		
65 - 67	UD		
67 - 69	Moderate	+6' MDL	1 Board w/ 25% Fungal 3 Boards w/ 2% MBD
69 - 71	UD		
71 - 73	UD		
73 - 75	Light	MDL	1 Board w/ 5% MBD
75 - 77	UD		
77 - 79	UD		
79 - 81	UD		
81 - 83	Moderate	Tp MDL	6" Gap Between 2 Boards 2 Boards w/ 25% MBD
83 - 85	UD		

TABLE 6
TIMBER BULKHEAD LAGGING DATA

LAGGING PANEL (Pile - Pile)	MEMBER RATING	CONDITION / DAMAGE	
		Elevation (Chart Datum)	Details / Remarks
85 - 87	UD		
87 - 89	UD		
89 - 91	UD		
91 - 93	Light	MDL	1 Board w/ 5% MBD
93 - 95	UD		
95 - 97	UD		
97 - 99	UD		

APPENDIX B
SEDIMENT CORE LOGS

Sediment Core Processing Log

ANCHOR QEA

Job: USACE: Squalicum and I&J Waterways Station ID: I-1 (S17)

Job No. 080202-01	Date/Time: 9-8-2011
No. of Sections: 1	Core Logged By: JTL
Drive Length: 9'	Attempt #: 2 of 2
Recovery: 8.4'	Type of Core ☐ Mudmole ☒ Vibracore ☐ Diver Core
% Recovery: 93%	Diameter of Core (inches) 3.5" Lexan - core extruded
Notes:	Core Quality ☒ Good ☐ Fair ☐ Poor ☐ Disturbed

Recovered Length (ft)	Size % Gravel	Size % Sand	Size % Fines	Classification and Remarks (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, with Additional Constituents, Sheen, Odor)	~~Recovered Length (ft)~~	~~PID~~	Sample	Summary Sketch	time
				In-situ elevation	-15.1				
		10	90	Soft, wet, black, slightly f-sandy SILT. Occasional shell and wood fragments. Slight H_2S-like odor			I-1-DM		950
		20	80	@4.5' Grades to medium stiff, moist, f-m sandy. Moderate wood fragments (decomposed sticks). Moderate H_2S-like odor. @5' piece of rope (6" long)					
		70	30	~~@5.5' Grades to very f-m sandy.~~ Medium dense, damp, dark gray, ~~slightly~~ silty f-m SAND. Substantial wood debris (decomposed sticks and fibers). Moderate shell hash. Moderate H_2S-like odor.			I-1-Z		955
	10		90	Very stiff, damp to dry, light gray, slightly f-gravelly CLAY. Clay rolls easily. ~~Occasional~~ Moderate shell hash. Strong H_2S-like odor.					
				End of Core @8.4'					

Page 1 of 1

Sediment Core Processing Log

ANCHOR QEA

Job: USACE: Squalicum and I&J Waterways Station ID: I-2

Job No. 080202-01	Date/Time: 9/8/2011
No. of Sections: 1	Core Logged By: JL
Drive Length: 9'	Attempt #: 2 of 2
Recovery: 8.4	Type of Core ☐ Mudmole ☒ Vibracore ☐ Diver Core
% Recovery: 93%	Diameter of Core (inches) 3.5" Lexan - Core Extruded
Notes:	Core Quality ☒ Good ☐ Fair ☐ Poor ☐ Disturbed

Recovered Length (ft)	Size % Gravel	Size % Sand	Size % Fines	Classification and Remarks (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, with Additional Constituents, Sheen, Odor) In-situ Elevation	~~Recovered Length (ft)~~	~~PID~~	Sample	Summary Sketch	time
		10	90	Soft, wet, black, slightly ~~[illegible]~~ vf-f-sandy SILT. Trace biota (pink worms). Occasional wood fragments (sticks). Occasional shell fragments. Slight H_2S-like odor.	-16.3'		I-2-A-DM ~~I-2-DM~~		1110
		70	30	Medium dense, moist, dark gray, silty f-c SAND. Moderate wood and shell fragments. Moderate H_2S-like odor.			I-2-A-Z ~~I-2-Z~~		1115
	10		90	Stiff, damp, light gray, slightly f-gravelly CLAY. Clay rolls easily. Moderate shell hash. Strong H_2S-like odor.					
				End of core @ 7'					
				Note: clay in shoe. 1.4' of clay lost from base of core during retrieval.					

Compaction correction does not include the 2.8' clay unit. Compaction was adjusted to 90% for silt and sand.

Sediment Core Processing Log

ANCHOR QEA

Job: USACE: Squalicum and I&J Waterways Station ID: I-3 (519)

Job No. 080202-01	Date/Time: 9-8-2011
No. of Sections: 1	Core Logged By: JL
Drive Length: 8'	Attempt #: 1 of 1
Recovery: 6.4'	Type of Core ☐ Mudmole ☒ Vibracore ☐ Diver Core
% Recovery: 80%	Diameter of Core (inches) 3.5" Lexan - core extruded
Notes:	Core Quality ☒ Good ☐ Fair ☐ Poor ☐ Disturbed

Recovered Length (ft)	Size % Gravel	Size % Sand	Size % Fines	Classification and Remarks (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, with Additional Constituents, Sheen, Odor) in-situ elevation	~~Recovered Length (ft)~~	~~PID~~	Sample	Summary Sketch	time
		10	90	Soft, wet black, slightly f-sandy SILT. Trace biota (worms). Occasional shell fragments. Slight H_2S-like odor.			I-3-DM		1200
	5	80	15	Medium dense, moist to damp, slightly silty f-m SAND. Moderate shell fragments. Trace gravel. Moderate H_2S-like odor			I-3-Z		1205
				@4': Grades to dense, damp.					
	80	20		Medium dense to dense, damp, c-sandy GRAVEL. Moderate shell fragments. Moderate H_2S-like odor.					
				End of core at 6.4'					

Sediment Core Processing Log

ANCHOR QEA

Job: USACE: Squalicum and I&J Waterways Station ID: I-4 (S20)

Job No. 080202-01

No. of Sections: 1

Drive Length: 9.5'

Recovery: 7.8'

% Recovery: 82%

Notes:

Date/Time: 9-8-2011

Core Logged By: JL

Attempt #: 3 of 3

Type of Core ☐ Mudmole ☒ Vibracore ☐ Diver Core

Diameter of Core (inches) 3.5" Lexan - Core extruded

Core Quality ☒ Good ☐ Fair ☐ Poor ☐ Disturbed

Recovered Length (ft)	Size % Gravel	Size % Sand	Size % Fines	Classification and Remarks (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, with Additional Constituents, Sheen, Odor)	In-situ Elevation (Recovered Length (ft))	~~PID~~	Sample	Summary Sketch	time
0–1		90	10	Loose, ~~damp~~ moist, dark gray, slightly silty f-c SAND. Occasional pockets of silt. Moderate shell fragments. Moderate H_2S-like odor	-17.7		I-4-A-DM		1515
1–2		8	92	Medium stiff, moist, dark olive gray, slightly f-sandy, SILT. Occasional shell fragments. Moderate H_2S-like odor.					
2–3							I-4-A-Z		1520
3–4		2	98	@3' Grades to trace sand.					
4–5									
5–6		10	90	@5.5' Grades to slightly f-m sandy. Moderate shell fragments. Trace pockets of f-m sand.					
6–7		100		Dense, damp, dark gray f-m SAND. Moderate shell fragments. Moderate H_2S-like odor.					
7–8				End of core @ 7.8'					
8–10									

Sediment Core Processing Log

ANCHOR QEA

Job: USACE: Squalicum and I&J Waterways Station ID: I-5 (S21)

Job No. 080202-01	Date/Time: 9-8-2011
No. of Sections: 1	Core Logged By: JL
Drive Length: 10'	Attempt #: 1 of 1
Recovery: 9.8'	Type of Core ☐ Mudmole ☒ Vibracore ☐ Diver Core
% Recovery: 98%	Diameter of Core (inches) 3.5" Lexan – core extruded
Notes:	Core Quality ☒ Good ☐ Fair ☐ Poor ☐ Disturbed

Recovered Length (ft)	Size % Gravel	Size % Sand	Size % Fines	Classification and Remarks (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, with Additional Constituents, Sheen, Odor)	~~Recovered Length (ft)~~	~~PID~~	Sample	Summary Sketch	time
				insitu elevation	-16.6				
			100	Soft, wet, black SILT. Moderate ~~shell~~ wood fragments (sticks). Occasional shell fragments. Moderate H_2S-like odor.			I-5-DM		1330
				@2.5': Grades to medium stiff, moist.					
				@4': Grades to trace wood fragments.			I-5-Z		1335
		5	95	@5': Grades to ~~slight~~ trace vf-f sand. Strong H_2S-like odor.					
				@6': silt is gummy.					
				@8.5': Grades to moderate shell fragments.					

~~Grade~~ End of core @9.8'

Sediment Core Processing Log

ANCHOR QEA

Job: USACE: Squalicum and I&J Waterways Station ID: I-6 (S22)

Job No. 080202-01	Date/Time: 9-8-2011
No. of Sections: 1	Core Logged By: JL
Drive Length: 10'	Attempt #: 1 of 1
Recovery: 8.4'	Type of Core ☐ Mudmole ☒ Vibracore ☐ Diver Core
% Recovery: 84%	Diameter of Core (inches) 3.5" Lexan. Core extruded
Notes:	Core Quality ☒ Good ☐ Fair ☐ Poor ☐ Disturbed

Recovered Length (ft)	Size % Gravel	Size % Sand	Size % Fines	Classification and Remarks (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, with Additional Constituents, Sheen, Odor)	~~Recovered Length (ft)~~	~~PID~~	Sample	Summary Sketch	time
				in-situ elevation	-16.2				
		2	98	Soft, wet, black SILT. Trace f-sand. Occasional shell and wood fragments. Trace biota (worms). Moderate H_2S-like odor.			I-6-A-DM		1410
				@2': Grades to medium dense, moist.					
				@4': Grades to moderate shell fragments, strong H_2S-like odor.			I-6-A-Z		1415
				@6': Grades to slightly clayey.					
				End of Core @7.9'					

Sediment Core Processing Log

ANCHOR QEA

Job: USACE: Squalicum and I&J Waterways Station ID: I-7

Job No. 080202-01	Date/Time: 9-7-2011
No. of Sections: 1	Core Logged By: JL
Drive Length: 10'	Attempt #: 1 of 1
Recovery: 8.4	Type of Core ☐ Mudmole ☒ Vibracore ☐ Diver Core
% Recovery: 84%	Diameter of Core (inches) 3.5" Lexan - core extruded
Notes:	Core Quality ☒ Good ☐ Fair ☐ Poor ☐ Disturbed

Recovered Length (ft)	Size % Gravel	Size % Sand	Size % Fines	Classification and Remarks (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, with Additional Constituents, Sheen, Odor)	~~Recovered Length (ft)~~	~~PID~~	Sample	Summary Sketch	time
				In-situ Elevation					
	–	–	100	Soft, wet, dark gray SILT. Occasional shell fragments. Slight H_2S-like odor.	-16.3				
1							I-7-DM		
2				@2': Grades to medium stiff, moist.					1640
3									
4				@4': Grades to moderate shell fragments.			I-7-Z		1645
5	–	–	–	@5': Grades to ~~slight~~ light olive gray, slightly clayey. Moderate H_2S-like odor.					
6									
7				@7': Strong H_2S-like odor.					
8				End of core @ 7.3'					
9									
10									

APPENDIX C
DATA QUALITY CONTROL AND VALIDATION

TABLE OF CONTENTS

C.1 CHEMICAL AND PHYSICAL DATA VALIDATION RESULTS.....C-2

C1.1 Surface Sediment Data C-2

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C1.3 Storm Drain Solid Data C-3

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C.1 CHEMICAL AND PHYSICAL DATA VALIDATION RESULTS

All data submitted in this report were validated by Laboratory Data Consultants, Inc. (LDC) of Carlsbad, California. Data validation reports are provided on DVD as part of Appendix D. Samples are listed with their corresponding laboratory data package validation report number in Appendix D, Table D-1. The data validation was performed under EPA guidelines, as described in the QAPP and the National Functional Guidelines for Data Review (EPA, 1999; EPA, 2004).

Data validation verified the accuracy and precision of chemical and geotechnical determinations performed during this investigation. Data qualifiers assigned as a result of the data validation and their definitions are shown on each of the respective analytical results tables. Data may have been qualified as biased or estimated for a particular analysis based on method or technical criteria. Data qualified with a "J" indicates that the associated numerical value is the approximate concentration of the analyte. Data qualified with a "UJ" indicates the approximate reporting limit below which the analyte was not detected. Consequently, these data qualifications are not expected to impact the data quality objectives and all data were determined to be useable as reported from the laboratory or as qualified in this Data Report, for the purposes of forthcoming remedial design with some minor exceptions.

C1.1 Surface Sediment Data

No results were qualified for ammonia, sulfide, total organic carbon, grain size, total solids, and metals. Twenty-three dioxin results were qualified as estimated possible maximum concentrations. Two dioxin results were qualified as estimated due to matrix interference. Four PCB results in one sample were reported at an estimated RL due to low MS %R values, and high MS/MSD RPD values. Results from the full scan semivolatiles (SVOC) analysis of fluorene were qualified as estimated due to a high continuing calibration verification (CCV) percent difference (%D) value. The reporting limits for bis(2-ethylhexyl) phthalate and diethyl phthalate were elevated due to method blank contamination. Results for 1,4-dichlorobenzene, benzo(g,h,i)perylene, benzoic acid and bis(2-ethylhexyl) phthalate were qualified as estimated in one sample due to low MS/MSD %R values. Results for 2-methylnaphthalene, acenaphthene, benzo(b,j,k)fluoranthenes, dibenzofuran, fluorene, and

naphthalene were qualified as estimated in one sample due to a high MS and/or MSD %R value, or a high MS/MSD RPD value. All sample results were qualified as estimated for 2,4-dimethylphenol and 2-methylphenol due to low LCS/LCSD %R values.

C1.2 Subsurface Sediment Data

These samples were collected on September 9, 2011 and stored frozen until analysis in April, 2012. No data were qualified for grain size or PCBs. Results for total solids, ammonia, and mercury were qualified as estimated due to a hold time exceedance. Five dioxin results were qualified as estimated possible maximum concentrations. The 2,4-dimethylphenol results from the SVOC and selective ion monitoring (SIM) SVOC analysis were qualified as estimated due to low LCS/LCSD %R values. Results from the full scan analyses of fluorene were qualified as estimated due to a high continuing calibration verification (CCV) percent difference (%D) value. The reporting limits for bis(2-ethylhexyl) phthalate and diethyl phthalate were elevated due to method blank contamination. The 2-methylphenol results in the SIM SVOC analyses were estimated due to low LCS/LCSD %R values.

C1.3 Storm Drain Solid Data

No data were qualified for ammonia, sulfide, total organic carbon, grain size, total solids, or PCBs. Copper and chromium were qualified due to low MS recoveries. Mercury was qualified as estimated due to a high duplicate RPD value. The reporting limits for bis(2-ethylhexyl)phthalate and diethyl phthalate were elevated due to method blank contamination. The result for 2,4-dimethylphenol was qualified due to a low LCS %R. Five dioxin results were qualified as estimated maximum possible concentrations.

REFERENCES

USEPA, 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. USEPA 540/R-99/008. October.

USEPA, 2004. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation (OSRTI). EPA 540-R-04-004. October.

Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Anchor Environmental, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101
ATTN: Ms. Cindy Fields

June 20, 2012

SUBJECT: I & J Waterway, Data Validation

Dear Ms. Fields,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on May 31, 2012. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 27745:

SDG #	**Fraction**
UR81/US18 UL83	Semivolatiles, Dioxins/Dibenzofurans, Polychlorinated Biphenyls, Metals, Wet Chemistry

The data validation was performed under Stage 2B/4 guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

Please feel free to contact us if you have any questions.

Sincerely,

Ming-Hwa Hwang
Project Manager/Senior Chemist

L:\Anchor\I&J Waterway\27745COV.wpd

Attachment 1

EDD Client Select Level IV

LDC #27745 (Anchor Environmental-Seattle WA / I & J Waterway)

LDC	SDG#	DATE REC'D	(3) DATE DUE	SVOA (8270D)		SVOA (8270D-SIM)		Dioxins (1613B)		PCB (8082)		Metals (SW846)		NH_3-N (350.1M)		Total Solids (2540B)		Total Pres. Solids		=S (376.2)		TOC (Plumb)		Grain Size													
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	UR81/US18	05/31/12	06/21/12	0	13	0	12	0	11	0	12	0	12	0	12	0	12	0	10	0	10	0	10	0	10												
B	UL83	05/31/12	06/21/12	-	-	-	-	-	-	-	-	-	-	-	-	0	2	-	-	-	-	0	2	-	-												
Total	A/MH			0	13	0	12	0	11	0	12	0	12	0	12	0	14	0	10	0	10	0	12	0	10	0	0	0	0	0	0	0	0	0	0	0	128

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS, MSD, or DUP's.

27745ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	September 8, 2011 through May 24, 2012
LDC Report Date:	June 15, 2012
Matrix:	Sediment
Parameters:	Semivolatiles
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UR81/US18

Sample Identification

IJ12-03
IJ12-05
IJ12-06
IJ12-02
IJ12-04
IJ12-04DL
IJ12-07
IJ12-01
IJ12-58A
IJ12-11
IJ12-08A
I-1-Z
I-2-A-Z
IJ12-04MS
IJ12-04MSD

Introduction

This data review covers 15 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270D for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/9/12	Pentachlorophenol	20.7	IJ12-04DL	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/7/12	Fluorene	44.36	All samples in SDG UR81/US18	J (all detects) UJ (all non-detects)	A

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-050212	5/2/12	Bis(2-ethylhexyl)phthalate	28 ug/Kg	All samples in SDG UR81/US18

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
IJ12-03	Bis(2-ethylhexyl)phthalate	100 ug/Kg	100U ug/Kg
IJ12-06	Bis(2-ethylhexyl)phthalate	71 ug/Kg	71U ug/Kg
IJ12-02	Bis(2-ethylhexyl)phthalate	100 ug/Kg	100U ug/Kg
IJ12-04DL (5X)	Bis(2-ethylhexyl)phthalate	320 ug/Kg	320U ug/Kg
IJ12-07	Bis(2-ethylhexyl)phthalate	51 ug/Kg	51U ug/Kg
IJ12-58A	Bis(2-ethylhexyl)phthalate	160 ug/Kg	160U ug/Kg
IJ12-11	Bis(2-ethylhexyl)phthalate	37 ug/Kg	37U ug/Kg
IJ12-08A	Bis(2-ethylhexyl)phthalate	100 ug/Kg	100U ug/Kg
I-1-Z	Bis(2-ethylhexyl)phthalate	74 ug/Kg	74U ug/Kg
I-2-A-Z	Bis(2-ethylhexyl)phthalate	79 ug/Kg	79U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
IJ12-04MS/MSD (IJ12-04)	1,4-Dichlorobenzene	49.4 (50-150)	-	-	J (all detects)	A
	Benzoic acid	41.7 (50-150)	47.4 (50-150)	-	UJ (all non-detects)	
	Bis(2-ethylhexyl)phthalate	44.2 (50-150)	-	-		
	Benzo(g,h,i)perylene	-	46.3 (50-150)	-		
IJ12-04MS/MSD (IJ12-04)	Naphthalene	-	162 (50-150)	89.3 (≤35)	J (all detects)	A
	2-Methylnaphthalene	-	-	70.7 (≤35)	J (all detects)	
	Acenaphthene	-	-	41.8 (≤35)	J (all detects)	
	Dibenzofuran	-	159 (50-150)	81.6 (≤35)	J (all detects)	
	Fluorene	-	-	55.4 (≤35)	J (all detects)	
	Total Benzofluoranthene	250 (50-150)	161 (50-150)	-	J (all detects)	

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
LCS/D-050212 (All samples in SDG UR81/US18)	2,4-Dimethylphenol	42.7 (50-150)	37.7 (50-150)	-	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
IJ12-04	Phenanthrene Fluoranthene Pyrene Chrysene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects) J (all detects) J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

The analysis was conducted within all specifications of the method.

In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
IJ12-04	Phenanthrene Fluoranthene Pyrene Chrysene	R R R R	A
IJ12-04DL	All TCL compounds except Phenanthrene Fluoranthene Pyrene Chrysene	R	A

Due to calibration %D, MS/MSD %R and RPD, and LCS/LCSD %R problems, data were qualified as estimated in twelve samples.

Due to method blank contamination problems, data were qualified as not detected in nine samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples IJ12-58A and IJ12-08A were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	IJ12-58A	IJ12-08A	
Phenol	39	27	36
Benzyl alcohol	46	14	107
2-Methylphenol	13	38	98
4-Methylphenol	94	45	71
2,4-Dimethylphenol	26	12	74
Benzoic acid	120	380U	200
Naphthalene	76	28	92
2-Methylnaphthalene	68	19	113
Dimethylphthalate	9.8	54	139
Acenaphthylene	35	11	104
Acenaphthene	57	19U	200
Dibenzofuran	130	19	149
Fluorene	110	19	141
Phenanthrene	1300	95	173
Anthracene	110	38	97
Fluoranthene	1100	210	136

Compound	Concentration (ug/Kg)		RPD
	IJ12-58A	IJ12-08A	
Pyrene	800	230	111
Benzo(a)anthracene	170	76	76
Bis(2-ethylhexyl)phthalate	160	100	46
Chrysene	430	170	87
Benzo(a)pyrene	110	60	59
Indeno(1,2,3-cd)pyrene	46	24	63
Dibenzo(a,h)anthracene	21	11	63
Benzo(g,h,i)perylene	46	25	59
Total Benzofluoranthene	400	190	71

XVII. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Semivolatiles - Data Qualification Summary - SDG UR81/US18

SDG	Sample	Compound	Flag	A or P	Reason
UR81/US18	IJ12-04DL	Pentachlorophenol	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
UR81/US18	IJ12-03 IJ12-05 IJ12-06 IJ12-02 IJ12-04 IJ12-04DL IJ12-07 IJ12-01 IJ12-58A IJ12-11 IJ12-08A I-1-Z I-2-A-Z	Fluorene	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D)
UR81/US18	IJ12-04	1,4-Dichlorobenzene Benzoic acid Bis(2-ethylhexyl)phthalate Benzo(g,h,i)perylene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)
UR81/US18	IJ12-04	Naphthalene Dibenzofuran	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD)
UR81/US18	IJ12-04	2-Methylnaphthalene Acenaphthene Fluorene	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD)
UR81/US18	IJ12-04	Total Benzofluoranthene	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
UR81/US18	IJ12-03 IJ12-05 IJ12-06 IJ12-02 IJ12-04 IJ12-04DL IJ12-07 IJ12-01 IJ12-58A IJ12-11 IJ12-08A I-1-Z I-2-A-Z	2,4-Dimethylphenol	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R)
UR81/US18	IJ12-04	Phenanthrene Fluoranthene Pyrene Chrysene	J (all detects) J (all detects) J (all detects) J (all detects)	A	Compound quantitation and RLs (exceeded range)
UR81/US18	IJ12-04	Phenanthrene Fluoranthene Pyrene Chrysene	R R R R	A	Overall assessment of data

SDG	Sample	Compound	Flag	A or P	Reason
UR81/US18	IJ12-04DL	All TCL compounds except Phenanthrene Fluoranthene Pyrene Chrysene	R	A	Overall assessment of data

I & J Waterway
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG UR81/US18

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
UR81/US18	IJ12-03	Bis(2-ethylhexyl)phthalate	100U ug/Kg	A
UR81/US18	IJ12-06	Bis(2-ethylhexyl)phthalate	71U ug/Kg	A
UR81/US18	IJ12-02	Bis(2-ethylhexyl)phthalate	100U ug/Kg	A
UR81/US18	IJ12-04DL (5X)	Bis(2-ethylhexyl)phthalate	320U ug/Kg	A
UR81/US18	IJ12-07	Bis(2-ethylhexyl)phthalate	51U ug/Kg	A
UR81/US18	IJ12-58A	Bis(2-ethylhexyl)phthalate	160U ug/Kg	A
UR81/US18	IJ12-11	Bis(2-ethylhexyl)phthalate	37U ug/Kg	A
UR81/US18	IJ12-08A	Bis(2-ethylhexyl)phthalate	100U ug/Kg	A
UR81/US18	I-1-Z	Bis(2-ethylhexyl)phthalate	74U ug/Kg	A
UR81/US18	I-2-A-Z	Bis(2-ethylhexyl)phthalate	79U ug/Kg	A

LDC #: 27745A2a

SDG #: UR81/US18

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~Level III~~ Stage 2B

Date: 6/13/12

Page: 1 of 1

Reviewer: EJ

2nd Reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/8/11 - 5/24/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	SW	ICV ≤ 30 CCV ≤ 20
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	SW	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 9 & 11
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	IJ12-03	11	IJ12-08A	21	MB-050212	31	
2	IJ12-05	12	I-1-Z	22		32	
3	IJ12-06	13	I-2-A-Z	23		33	
4	IJ12-02	14	IJ12-04MS	24		34	
5	IJ12-04	15	IJ12-04MSD	25		35	
6	IJ12-04DL	16		26		36	
7	IJ12-07	17		27		37	
8	IJ12-01	18		28		38	
9	IJ12-58A	19		29		39	
10	IJ12-11	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1- Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU Total Benzofluorathenes
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 27745A2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤20 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: <20.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	5/9/12 1609	CCV	TT	20.7		6	J/UJ/A
	5/7/12	ICV	NN	44.36		All	J/UJ/A

CONCAL.2S

LDC #: 27745A29

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 5/2/12 **Blank analysis date:** 5/8/12
Conc. units: ug/Kg Associated Samples: All

Compound	Blank ID	10x	Sample Identification							
	MB-0502	12	1	3	4	6 (5x)	7	9	10	11
EEE	28	280	100/u	71/u	100/u	320/u	51/u	160/u	37/u	100/u
			12	13						
↓	↓		74/u	79/u						

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 27745A2e

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		14 & 15	E	49.4 (50-150)	( )	( )		J/UJ/A
			PPP	41.7 ( )	47.4 (50-150)	( )		↓
			S	( )	162 ( )	89.3 (35)		J/A dil
			W	( )	( )	70.7 ( )		↓
			GG	( )	( )	41.8 ( )		↓
			JJ	( )	159 ( )	81.6 ( )		↓
			NN	( )	( )	55.4 ( )		↓
			EEE	44.2 ( )	( )	( )		J/UJ/A
			LLL	( )	46.3 ( )	( )		↓
			UUU	250 ( )	161 ( )	( )		J/A dil
			UU, YY, ZZ, PPP	( )	%R outside	limit ( )		no qual parent > 4x spike Amt
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 27745A2a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		LCS/D-050212	8	42.7 (50-150)	37.7 (50-150)	( )	All	J/UJ/P
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol					G.	Acenaphthene				
B.	2-Chlorophenol					H.	4-Nitrophenol				
C.	1,4-Dichlorobenzene					I.	2,4-Dinitrotoluene				
D.	N-Nitroso-di-n-propylamine					J.	Pentachlorophenol				
E.	1,2,4-Trichlorobenzene					K.	Pyrene				
F.	4-Chloro-3-methylphenol										

LDC #: 27745A2a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported RLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		UU, YY, ZZ, DDD	x'd cal Range	5	J / Adit

Comments: See sample calculation verification worksheet for recalculations

COMQUA.2S

LDC #: 27745Am

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Compound	Finding	Associated Samples	Qualifications
		UU, YY, ZZ, DDD	x'd cal Range	5	R/A
		all except above	diluted	6	R/A

Comments:

LDC#: 27745A2a **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS SVOA (EPA SW 846 Method 8270D)
Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	
	9	11		
A	39	27	36	
QQQ	46	14	107	
G	13	38	98	
I	94	45	71	
O	26	12	74	
PPP	120	380U	~~NC~~ 200	
S	76	28	92	
W	68	19	113	
CC	9.8	54	139	
DD	35	11	104	
GG	57	19U	~~NC~~ 200	
JJ	130	19	149	
NN	110	19	141	
UU	1300	95	173	
VV	110	38	97	
YY	1100	210	136	
ZZ	800	230	111	
CCC	170	76	76	
EEE	160	100	46	
DDD	430	170	87	
III	110	60	59	
JJJ	46	24	63	
KKK	21	11	63	
LLL	46	25	59	
UUU	400	190	71	

V:\FIELD DUPLICATES\templates\27745A2a.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	September 8, 2011 through May 24, 2012
LDC Report Date:	June 15, 2012
Matrix:	Sediment
Parameters:	Semivolatiles
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UR81/US18

Sample Identification

IJ12-03
IJ12-05
IJ12-06
IJ12-02
IJ12-04
IJ12-07
IJ12-01
IJ12-58A
IJ12-11
IJ12-08A
I-1-Z
I-2-A-Z
IJ12-04MS
IJ12-04MSD

Introduction

This data review covers 14 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270D using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-050212	5/2/12	Diethylphthalate	3.4 ug/Kg	All samples in SDG UR81/US18

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
IJ12-03	Diethylphthalate	14 ug/Kg	14U ug/Kg
IJ12-05	Diethylphthalate	17 ug/Kg	17U ug/Kg
IJ12-06	Diethylphthalate	9.1 ug/Kg	9.1U ug/Kg
IJ12-02	Diethylphthalate	6.6 ug/Kg	6.6U ug/Kg
IJ12-07	Diethylphthalate	19 ug/Kg	19U ug/Kg
IJ12-01	Diethylphthalate	7.3 ug/Kg	7.3U ug/Kg
IJ12-58A	Diethylphthalate	6.8 ug/Kg	6.8U ug/Kg
IJ12-11	Diethylphthalate	7.0 ug/Kg	7.0U ug/Kg
IJ12-08A	Diethylphthalate	8.0 ug/Kg	8.0U ug/Kg
I-1-Z	Diethylphthalate	12 ug/Kg	12U ug/Kg
I-2-A-Z	Diethylphthalate	4.2 ug/Kg	4.8U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
IJ12-04MS/MSD (IJ12-04)	1,4-Dichlorobenzene 1,2,4-Trichlorobenzene Hexachlorobutadiene 2-Methylphenol 1,2-Dichlorobenzene	46.9 (50-150) 49.4 (50-150) 49.6 (50-150) 49.8 (50-150) 48.3 (50-150)	- - - - -	- - - - -	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
LCS/D-050212 (All samples in SDG UR81/US18)	2-Methylphenol	-	49.8 (50-150)	-	J (all detects) UJ (all non-detects)	P
	2,4-Dimethylphenol	41.5 (50-150)	36.9 (50-150)	-	J (all detects) UJ (all non-detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and RLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS/MSD and LCS/LCSD %R problems, data were qualified as estimated in twelve samples.

Due to method blank contamination problems, data were qualified as not detected in eleven samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples IJ12-58A and IJ12-08A were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	IJ12-58A	IJ12-08A	
Dibenzo(a,h)anthracene	18	9.6	61
Dimethylphthalate	16	52	106
Diethylphthalate	6.8	8.0	16
Butylbenzylphthalate	12	6.1	65
2-Methylphenol	11	5.2	72
2,4-Dimethylphenol	25	12	70
Pentachlorophenol	34	48U	200

XVII. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Semivolatiles - Data Qualification Summary - SDG UR81/US18

SDG	Sample	Compound	Flag	A or P	Reason
UR81/US18	IJ12-04	1,4-Dichlorobenzene 1,2,4-Trichlorobenzene Hexachlorobutadiene 2-Methylphenol 1,2-Dichlorobenzene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)
UR81/US18	IJ12-03 IJ12-05 IJ12-06 IJ12-02 IJ12-04 IJ12-07 IJ12-01 IJ12-58A IJ12-11 IJ12-08A I-1-Z I-2-A-Z	2-Methylphenol 2,4-Dimethylphenol	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R)

I & J Waterway
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG UR81/US18

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
UR81/US18	IJ12-03	Diethylphthalate	14U ug/Kg	A
UR81/US18	IJ12-05	Diethylphthalate	17U ug/Kg	A
UR81/US18	IJ12-06	Diethylphthalate	9.1U ug/Kg	A
UR81/US18	IJ12-02	Diethylphthalate	6.6U ug/Kg	A
UR81/US18	IJ12-07	Diethylphthalate	19U ug/Kg	A
UR81/US18	IJ12-01	Diethylphthalate	7.3U ug/Kg	A
UR81/US18	IJ12-58A	Diethylphthalate	6.8U ug/Kg	A
UR81/US18	IJ12-11	Diethylphthalate	7.0U ug/Kg	A
UR81/US18	IJ12-08A	Diethylphthalate	8.0U ug/Kg	A
UR81/US18	I-1-Z	Diethylphthalate	12U ug/Kg	A
UR81/US18	I-2-A-Z	Diethylphthalate	4.8U ug/Kg	A

LDC #: 27745A2b

SDG #: UR81/US18

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~Level III~~ Stage 2B

Date: 6/14/12

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/8/11 - 5/24/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration ~~ICV~~	A	CCV ≤ 20
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 8, 10
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: sediments

1	IJ12-03	11	I-1-Z	21	MB-050212	31	
2	IJ12-05	12	I-2-A-Z	22		32	
3	IJ12-06	13	IJ12-04MS	23		33	
4	IJ12-02	14	IJ12-04MSD	24		34	
5	IJ12-04	15		25		35	
6	IJ12-07	16		26		36	
7	IJ12-01	17		27		37	
8	IJ12-58A	18		28		38	
9	IJ12-11	19		29		39	
10	IJ12-08A	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 27745A2b

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: ✓

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 5/2/12 **Blank analysis date:** 5/8/12
Conc. units: ug/kg Associated Samples: All

Compound	Blank ID	10 X	Sample Identification							
	MB-050212		1	2	3	4	6	7	8	9
LL	3.4	34	14/U	17/U	9.1/U	6.6/U	19/U	7.3/U	6.8/U	7.0/U
			10	11	12					
↓	↓		8.0/U	12/U	4.2/4.8/U					

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 27245A2h

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer: i

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		13 ↓ 14	E	46.9 (50-150)	( )	( )	5	J/UJ/Δ
			R	49.4 ( )	( )	( )		
			U	49.6 ( )	( )	( )		
			G	49.8 ( )	( )	( )		
			F	48.3 ( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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LDC #: 27745A2b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		LCS/D-050212	G	( )	49.8 (50-150)	( )	All	J/UJ/P
			θ	41.5 (50-150)	36.9 (↓)	( )	↓	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol					G.	Acenaphthene				
B.	2-Chlorophenol					H.	4-Nitrophenol				
C.	1,4-Dichlorobenzene					I.	2,4-Dinitrotoluene				
D.	N-Nitroso-di-n-propylamine					J.	Pentachlorophenol				
E.	1,2,4-Trichlorobenzene					K.	Pyrene				
F.	4-Chloro-3-methylphenol										

LDC#: 27745A2b

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS SVOA (EPA SW 846 Method 8270D-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	
	8	10		
KKK	18	9.6	61	
CC	16	52	106	
LL	6.8	8.0	16	
AAA	12	6.1	65	
G	11	5.2	72	
O	25	12	70	
TT	34	48U	20 ~~NC~~	

V:\FIELD DUPLICATES\templates\27745A2b.wpd

LDC #:_____ **EDD POPULATION COMPLETENESS WORKSHEET**

Date:
Page: 1 of 1
2nd Reviewer:

The LDC job number listed above was entered by _____.

	EDD Process		Comments/Action
I.	EDD Completeness	-	
Ia.	- All methods present?		
Ib.	- All samples present?		
Ic.	- All reported analytes present?		
Id.	- Full verification required/completed?	/	
II.	EDD Preparation/Entry	-	
IIa.	- Carryover J?		
IIb.	- Carryover U?		
IIc.	- Reason Codes used? If so, note which codes.		
III.	Reasonableness Checks	-	
IIIa.	- Do all qualified ND results have ND qualifier (e.g. UJ)?		
IIIb.	- Do all qualified detect results have detect qualifier (e.g. J)?		
IIIc.	- If reason codes are used, do all qualified results have reason code field populated, and vice versa?		
IIId.	- Do blank concentrations in report match EDD where data was qualified due to blank?		
IIIe.	- Were any results reported above calibration range? If so, were results qualified appropriately?	/	

Notes: *see discrepancy sheet

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	September 8, 2011 through April 24, 2012
LDC Report Date:	June 15, 2012
Matrix:	Sediment
Parameters:	Polychlorinated Biphenyls
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UR81/US18

Sample Identification

IJ12-03
IJ12-05
IJ12-06
IJ12-02
IJ12-04
IJ12-07
IJ12-01
IJ12-58A
IJ12-11
IJ12-08A
I-1-Z
I-2-A-Z
IJ12-01MS
IJ12-01MSD

Introduction

This data review covers 14 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Affected Compound	Flag	A or P
IJ12-01MS/MSD (IJ12-01)	Aroclor-1260	48.9 (50-150)	-	39.8 (≤35)	Aroclor-1260 Aroclor-1254 Aroclor-1242 Aroclor-1248	J (all detects) UJ (all non-detects)	A
IJ12-01MS/MSD (IJ12-01)	Aroclor-1016	-	-	36.9 (≤35)	Aroclor-1016 Aroclor-1221 Aroclor-1232	J (all detects) J (all detects) J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

Raw data were not reviewed for this SDG.

XIII. Compound Quantitation and Reported RLs

Raw data were not reviewed for this SDG.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS/MSD %R and RPD problems, data were qualified as estimated in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples IJ12-58A and IJ12-08A were identified as field duplicates. No polychlorinated biphenyls were detected in any of the samples.

XVI. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Polychlorinated Biphenyls - Data Qualification Summary - SDG UR81/US18

SDG	Sample	Compound	Flag	A or P	Reason
UR81/US18	IJ12-01	Aroclor-1260 Aroclor-1254 Aroclor-1242 Aroclor-1248	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD)
UR81/US18	IJ12-01	Aroclor-1016 Aroclor-1221 Aroclor-1232	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD)

I & J Waterway
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG UR81/US18

No Sample Data Qualified in this SDG

LDC #: 27745A3b

SDG #: UR81/US18

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~Level III~~ stage 2B

Date: 6/14/12

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/8/11 - 4/24/12
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	N	
XIII.	Compound quantitation/RL/LOQ/LODs	N	
XIV.	Overall assessment of data	A	Acceptable IS
XV.	Field duplicates	ND	D = 8, 10
XVI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

Sediments

1	IJ12-03	11	I-1-Z	21	MB-050212	31	
2	IJ12-05	12	I-2-A-Z	22	MB-050312	32	
3	IJ12-06	13	IJ12-01MS	23		33	
4	IJ12-02	14	IJ12-01MSD	24		34	
5	IJ12-04	15		25		35	
6	IJ12-07	16		26		36	
7	IJ12-01	17		27		37	
8	IJ12-58A D	18		28		38	
9	IJ12-11	19		29		39	
10	IJ12-08A D	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE.	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 27745A3b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	13 & 14	BB	48.9 (50-150)	( )	39.8 (35)	7 (Other BB, AA, Y, Z)	J/UJ/A
		✓	( )	( )	36.9 (↓)	↓ (Other Y, W, X)	J/A dot
			( )	( )	( )		
			( )	( )	( )		
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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	September 8, 2011 through April 24, 2012
LDC Report Date:	June 5, 2012
Matrix:	Sediment
Parameters:	Metals
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UR81/US18

Sample Identification

IJ12-03
IJ12-05
IJ12-06
IJ12-02
IJ12-04
IJ12-07
IJ12-01
IJ12-58A
IJ12-11
IJ12-08A
I-1-Z
I-2-A-Z
IJ12-03MS
IJ12-03DUP
I-2-A-ZMS
I-2-A-ZDUP

Introduction

This data review covers 16 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010C and 7471A for Metals. The metals analyzed were Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Silver, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Days From Sample Collection Until Analysis	Required Holding Time (in Days) From Sample Collection Until Analysis	Flag	A or P
I-1-Z I-2-A-Z I-2-A-ZMS I-2-A-ZDUP	Mercury	238	28	J (all detects) R (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metals contaminants were found in the initial, continuing and preparation blanks.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data were not reviewed for this SDG.

XIII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to holding time problems, data were qualified as estimated in two samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples IJ12-58A and IJ12-08A were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD
	IJ12-58A	IJ12-08A	
Cadmium	1.2	1.0	18
Chromium	85	80	6

Analyte	Concentration (mg/Kg)		RPD
	IJ12-58A	IJ12-08A	
Copper	86.0	87.0	1
Lead	16	15	6
Mercury	0.29	0.26	11
Nickel	120	113	6
Zinc	152	146	4

XV. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Metals - Data Qualification Summary - SDG UR81/US18

SDG	Sample	Analyte	Flag	A or P	Reason
UR81/US18	I-1-Z I-2-A-Z	Mercury	J (all detects) R (all non-detects)	P	Technical holding times

I & J Waterway
Metals - Laboratory Blank Data Qualification Summary - SDG UR81/US18

No Sample Data Qualified in this SDG

LDC #: 27745A4

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 6-5-12

SDG #: UR81, US18

Page: 1 of 1

Laboratory: Analytical Resources Inc.

Reviewer: CR

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010~~B/7000~~) C 7471A

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 4/24/12, 9/8/11
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	A	~~MS/MSD~~ MS (Hg 74x)
VII.	Duplicate Sample Analysis	A	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	Not utilized
X.	Furnace Atomic Absorption QC	N	J
XI.	ICP Serial Dilution	N	Not performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(8,10)
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Sediment

1	IJ12-03	11	I-1-Z	21		31	
2	IJ12-05	12	I-2-A-Z	22		32	
3	IJ12-06	13	IJ12-03MS	23		33	
4	IJ12-02	14	IJ12-03~~MSD~~ DUP	24		34	
5	IJ12-04	15	I-2-A-ZMS	25		35	
6	IJ12-07	16	I-2-A-Z~~MSD~~ DUP	26		36	
7	IJ12-01	17		27		37	
8	IJ12-58A	18		28		38	
9	IJ12-11	19		29		39	
10	IJ12-08A	20		30		40	

Notes:

Sample Specific Element Reference

Reviewer: CR
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-12		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
QC:13-16		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___

Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___

Comments: Mercury by CVAA if performed

LDC #: 27MSA4
SDG #: —

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Page: 1 of 1
Reviewer: CR
2nd reviewer: ✓

(Y) N N/A Were samples preserved?
(Y) N N/A Were all cooler temperatures within validation criteria?
All circled dates have exceeded the technical holding time.

METHOD: EPA SW 646 Method 6010/7000		(CVAA) Hg	(ICP) Al, Sb, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, K, Ag, Na, V, Zn	(GFAA) —	(GFAA) —	(GFAA) —	(GFAA) —	
Sample ID:	Sampling Date	Analysis Date	Analysis Date	Analysis Date	Analysis Date	Analysis Date	Analysis Date	Qualifier
11, 12, 15, 16	9/8/11	5/3/12	(238 days)					J/R/P

Technical Holding Time Criteria
Mercury: (28 days) preserved pH <2 Cyanide: 14 days preserved pH >12
All other metals 6 months preserved pH <2
Organic lead Extracted within 14 days for soils and 7 days for waters, analyzed within 40 days of extraction. (no preservation)

HT.4S2

LDC#: 27745A4

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Page: 1 of 1
Reviewer: [signature]
2nd Reviewer: [signature]

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD	
	8	10		
Cadmium	1.2	1.0	18	
Chromium	85	80	6	
Copper	86.0	87.0	1	
Lead	16	15	6	
Mercury	0.29	0.26	11	
Nickel	120	113	6	
Zinc	152	146	4	

V:\FIELD DUPLICATES\FD_inorganic\27745A4.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	September 8, 2011 through April 24, 2012
LDC Report Date:	June 5, 2012
Matrix:	Sediment
Parameters:	Wet Chemistry
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UR81/US18

Sample Identification

IJ12-03
IJ12-05
IJ12-06
IJ12-02
IJ12-04
IJ12-07
IJ12-01
IJ12-58A
IJ12-11
IJ12-08A
I-1-Z
I-2-A-Z
IJ12-03MS
IJ12-03DUP
IJ12-03TRP
IJ12-05DUP
IJ12-05TRP
I-1-ZMS
I-1-ZDUP

Introduction

This data review covers 19 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 350.1M for Ammonia as Nitrogen, Standard Method 2540B for Total Solids and Preserved Total Solids, EPA Method 376.2 for Sulfide, Plumb Method, 1981 for Total Organic Carbon, and PSEP Method for Grain Size.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
I-1-Z I-2-A-Z I-1-ZDUP	Total solids	235 days	6 months	J (all detects) UJ (all non-detects)	P
I-1-Z I-2-A-Z I-1-ZMS I-1-ZDUP	Ammonia as N	335 days	7 days	J (all detects) R (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicates/Triplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

Triplicate (TRP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Sample Result Verification

Raw data were not reviewed for this SDG.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to holding time problems, data were qualified as estimated in two samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

Samples IJ12-58A and IJ12-08A were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration		RPD
	IJ12-58A	IJ12-08A	
Total solid	38.00 %	39.40 %	4
Preserved total solids	33.80 %	32.40 %	4
Ammonia as N	23.4 mg/Kg	18.0 mg/Kg	26
Sulfide	2630 mg/Kg	2090 mg/Kg	23
Total organic carbon	4.31 %	3.76 %	14

Analyte	Percent Finer		RPD
	IJ12-58A	IJ12-08A	
Gravel (4750 microns)	100	99.1	1
Gravel (2000 microns)	99.8	98.8	1
Very coarse sand (1000 microns)	98.3	97.1	1
Coarse sand (500 microns)	96.8	95.3	2
Medium sand (250 microns)	95.2	93.6	2
Fine sand (125 microns)	93.4	91.7	2
Very fine sand (63 microns)	90.6	88.8	2
Silt (31.00 microns)	87.0	78.4	10
Silt (15.60 microns)	72.5	58.0	22
Silt (7.80 microns)	46.9	36.9	24
Silt (3.90 microns)	35.9	28.1	24
Clay (2.00 microns)	27.7	22.1	22
Clay (1.00 microns)	18.1	14..6	26

XI. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Wet Chemistry - Data Qualification Summary - SDG UR81/US18

SDG	Sample	Analyte	Flag	A or P	Reason
UR81/US18	I-1-Z I-2-A-Z	Total solids	J (all detects) UJ (all non-detects)	P	Technical holding times
UR81/US18	I-1-Z I-2-A-Z	Ammonia as N	J (all detects) R (all non-detects)	P	Technical holding times

I & J Waterway
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG UR81/US18

No Sample Data Qualified in this SDG

LDC #: 27745A6

SDG #: UR81, US18

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 6/5/12

Page: 1 of 1

Reviewer: CR

2nd Reviewer: [illegible]

METHOD: (Analyte) ~~N~~ Ammonia-N (EPA Method 350.1M), Total Solids, Preserved Total Solids (SM2540B), Sulfide (EPA Method 376.2), Total Organic Carbon (Plumb, 1981) Grain Size (PSEP)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 4/24/12, 9/8/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	A	MS
VI.	Duplicates / Triplicates	A	Dup, Trp
VII.	Laboratory control samples	A	LCS
VIII.	Sample result verification	N	
IX.	Overall assessment of data	A	
X.	Field duplicates	SW	(8, 10)
XI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: sediment

1	IJ12-03	11	I-1-Z	21		31	
2	IJ12-05	12	I-2-A-Z	22		32	
3	IJ12-06	13	IJ12-03MS	23		33	
4	IJ12-02	14	IJ12-03~~MSD~~ DUP	24		34	
5	IJ12-04	15	IJ12-03~~DUP~~ TRP	25		35	
6	IJ12-07	16	IJ12-05~~MS~~ DUP	26		36	
7	IJ12-01	17	IJ12-05~~MSD~~ TRP	27		37	
8	IJ12-58A	18	I-1-ZMS	28		38	
9	IJ12-11	~~19~~	~~I-1-ZMSD~~	29		39	
10	IJ12-08A	20	I-1-ZDUP	30		40	

Notes:

LDC #: 27745A6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter
1-10	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS PTS Sa GrainSize
11,12	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
QC.13	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Sa
14	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS PTS Sa
15	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS Sa
16	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 GrainSize
17	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 GrainSize
18	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
20	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 27745A6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

All circled dates have exceeded the technical holding time.
Y N N/A Were all samples preserved as applicable to each method ?
Y N N/A Were all cooler temperatures within validation criteria?

Method:	SM2540B		350.1M			
Parameters:	Total Solids		NH_3-N			
Technical holding time:	6mon. (frozen		7days			

Sample ID	Sampling date	Analysis date	Analysis date	Analysis date	Analysis date	Analysis date	Qualifier
11,12,20	9/8/11	4/30/12	(235days)				J/UJ/P
11,12,8,20	9/8/11			5/8/12	(335days)		J/R/P

LDC# 27745A6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

Inorganics: Method See Cover

Analyte	Concentration (mg/Kg)		RPD	
	8	10		
Total Solida (%)	38.00	39.40	4	
Preserved Total Solids (%)	33.80	32.40	4	
Ammonia as N	23.4	18.0	26	
Sulfide	2630	2090	23	
TOC (%)	4.31	3.76	14	

Analyte	Percent Finer		RPD	
	8	10		
Gravel (4750 microns)	100	99.1	1	
Gravel (2000 microns)	99.8	98.8	1	
Very Coarse Sand (1000 microns)	98.3	97.1	1	
Coarse Sand (500 microns)	96.8	95.3	2	
Medium Sand (250 microns)	95.2	93.6	2	
Fine Sand (125 microns)	93.4	91.7	2	
Very Fine Sand (63 microns)	90.6	88.8	2	
Silt (31.00 microns)	87.0	78.4	10	
Silt (15.60 microns)	72.5	58.0	22	
Silt (7.80 microns)	46.9	36.9	24	
Silt (3.90 microns)	35.9	28.1	24	
Clay (2.00 microns)	27.7	22.1	22	
Clay (1.00 microns)	18.1	14..6	26	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	September 8, 2011 through April 24, 2012
LDC Report Date:	June 15, 2012
Matrix:	Sediment
Parameters:	Dioxins/Dibenzofurans
Validation Level:	Stage 4
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UR81/US18

Sample Identification

IJ12-03
IJ12-05
IJ12-06
IJ12-02
IJ12-04
IJ12-07
IJ12-01
IJ12-58A
IJ12-11
IJ12-08A
I-2-A-Z

Introduction

This data review covers 11 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1613B for Polychlorinated Dioxins/Dibenzofurans.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

PFK and static resolving power data were not provided, therefore not reviewed.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and less than or equal to 35.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

IV. Routine Calibration (Continuing)

Routine calibration was performed at the required frequencies.

All of the routine calibration results were within the QC limits for unlabeled compounds and labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated dioxin/dibenzofuran contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
MB-050212	5/2/12	2,3,7,8-TCDD 1,2,3,7,8-PeCDD OCDD Total HxCDD Total HpCDF Total HpCDD	0.0374 pg/g 0.101 pg/g 0.389 pg/g 0.0502 pg/g 0.101 pg/g 0.118 pg/g	All samples in SDG UR81/US18

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Ongoing Precision & Recovery Samples (OPR)

Ongoing precision and recovery (OPR) control samples were reviewed for each matrix as applicable. The percent recoveries (%R) were within the QC limits.

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries were within QC limits.

X. Target Compound Identifications

All target compound identifications were within validation criteria.

XI. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Flag	A or P
All samples in SDG UR81/US18	The Polychlorinated Diphenyl Ether (PCDPE) interferences were above the S/N ratio of 2.5. (All compounds flagged "X" by the laboratory)	J (all detects) UJ (all non-detects)	A

Sample	Compound	Flag	A or P
All samples in SDG UR81/US18	All compounds reported as estimated maximum possible concentration (EMPC)	J (all detects)	A

XII. System Performance

The system performance was acceptable.

XIII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to compound quantitation problems, data were qualified as estimated in eleven samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 4 data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples IJ12-58A and IJ12-08A were identified as field duplicates. No polychlorinated dioxins/dibenzofurans were detected in any of the samples with the following exceptions:

Compound	Concentration (pg/g)		RPD
	IJ12-58A	IJ12-08A	
2,3,7,8-TCDF	2.28	5.26	79
2,3,7,8-TCDD	0.266	0.629	81
1,2,3,7,8-PeCDF	0.890	2.15	83
2,3,4,7,8-PeCDF	1.25	2.55	68
1,2,3,7,8-PeCDD	2.03	5.34	90
1,2,3,4,7,8-HxCDF	5.04	9.26	59
1,2,3,6,7,8-HxCDF	2.38	4.10	53

Compound	Concentration (pg/g)		RPD
	IJ12-58A	IJ12-08A	
2,3,4,6,7,8-HxCDF	1.49	7.03	130
1,2,3,7,8,9-HxCDF	1.59	2.93	59
1,2,3,4,7,8-HxCDD	4.34	10.2	81
1,2,3,6,7,8-HxCDD	19.3	41.1	72
1,2,3,7,8,9-HxCDD	9.17	18.7	68
1,2,3,4,6,7,8-HpCDF	55.8	118	72
1,2,3,4,7,8,9-HpCDF	3.25	7.71	81
1,2,3,4,6,7,8-HpCDD	575	1200	70
OCDF	197	362	59
OCDD	5240	11000	71
Total TCDF	15.4	31.2	68
Total TCDD	45.1	130	97
Total PeCDF	25.2	62.2	85
Total PeCDD	52.2	162	103
Total HxCDF	93.1	219	81
Total HxCDD	190	504	90
Total HpCDF	195	423	74
Total HpCDD	1520	3630	82

XV. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Dioxins/Dibenzofurans - Data Qualification Summary - SDG UR81/US18

SDG	Sample	Compound	Flag	A or P	Reason
UR81/US18	IJ12-03 IJ12-05 IJ12-06 IJ12-02 IJ12-04 IJ12-07 IJ12-01 IJ12-58A IJ12-11 IJ12-08A I-2-A-Z	The Polychlorinated Diphenyl Ether (PCDPE) interferences were above the S/N ratio of 2.5. (All compounds flagged "X" by the laboratory)	J (all detects) UJ (all non-detects)	A	Compound quantitation and RLs
UR81/US18	IJ12-03 IJ12-05 IJ12-06 IJ12-02 IJ12-04 IJ12-07 IJ12-01 IJ12-58A IJ12-11 IJ12-08A I-2-A-Z	All compounds reported as estimated maximum possible concentration (EMPC)	J (all detects)	A	Compound quantitation and RLs

I & J Waterway
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG UR81/US18

No Sample Data Qualified in this SDG

I & J Waterway
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG UR81/US18

No Sample Data Qualified in this SDG

LDC #: 27745A21

SDG #: UR81/US18

Laboratory: Analytical Resources Inc.

VALIDATION COMPLETENESS WORKSHEET

~~Level IV~~ Stage 4

Date: 6/19/12

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/8/11 – 9/24/12
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 20/35
IV.	Routine calibration/ICV	A	ICV/CCV = QC limits
V.	Blanks	SW	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	OPR
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	A	QC limits
X.	Target compound identifications	A	
XI.	Compound quantitation/RL/LOQ/LODs	SW	
XII.	System performance	A	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D = 8, 10
XV.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Sediments

1	IJ12-03	11	I-2-A-Z	21	~~UR81MB~~	31	
2	IJ12-05	12		22	MB-050212	32	
3	IJ12-06	13		23		33	
4	IJ12-02	14		24		34	
5	IJ12-04	15		25		35	
6	IJ12-07	16		26		36	
7	IJ12-01	17		27		37	
8	IJ12-58A	18		28		38	
9	IJ12-11	19		29		39	
10	IJ12-08A	20		30		40	

Notes:

LDC #: 27745A21

VALIDATION FINDINGS CHECKLIST

Page: 1 of
Reviewer: FT
2nd Reviewer: VC

Method: Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 380.9760 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomers ≤ 25% ?	✓			
Is the static resolving power at least 10,000 (10% valley definition)?	✓			
Was the mass resolution adequately check with PFK?	✓			
Was the presence of 1,2,8,9-TCDD and 1,3,4,6,8-PeCDF verified?	✓			
III. Initial calibration				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% for unlabeled compounds and ≤ 35% for labeled compounds ?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound ≥ 2.5 and for each recovery and internal standard > 10?	✓			
IV. Continuing calibration				
Was a routine calibration performed at the beginning and end of each 12 hour period?	✓			
Were all the concentrations for the unlabeled compounds and labeled compounds within the QC limits (Method 1613B, Table 6)?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VII. Laboratory control samples				
Was an LCS analyzed for this SDG? OPR	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 27745 A2 1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: ✓

Validation Area	Yes	No	NA	Findings/Comments
VIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
IX. Internal standards				
Were internal standard recoveries within the ~~25-150~~ QC criteria % criteria?	✓			
Was the minimum S/N ratio of all internal standard peaks ≥ 10?	✓			
X. Target compound identification				
For 2,3,7,8 substituted congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For 2,3,7,8 substituted congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For non-2,3,7,8 substituted congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
For PCDF identification, was any signal (S/N ≥ 2.5, at ± seconds RT) detected in the corresponding PCDPE channel?	✓	NA		
Was an acceptable lock mass recorded and monitored?	✓			
XI. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

Notes:

LDC #: 27745A2 /

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: ✓

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank? * empC
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated?

Blank extraction date: 05/02/12 **Blank analysis date:** 05/10/12 **Associated samples:** All 75X
Conc. units: pg/g

Compound	Blank ID	Sample Identification								
	MB-050212	5X								
A	0.0374 *	0.187								
B	0.101	0.505								
G	0.389	1.945								
T	0.0502	0.251								
Y	0.101	0.505								
U	0.118	0.59								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 27745A2 1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported RLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Dioxins/Dibenzofurans (Method 1613B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ions and relative response factors (RRF) used to quantitate the compound?
Y N N/A Compound quantitation and RLs were adjusted to reflect all sample dilutions and dry weight factors (if necessary).

#	Date	Compound	Finding	Associated Samples	Qualifications
			All compounds flagged "X" by the laboratory, The Polychlorinated Diphenyl Ether (PCDPE) interferences were above the S/N ratio of 2.5	All	J/UJ/A
			All compounds flagged "empc"	All	J/A det

Comments: See sample calculation verification worksheet for recalculations

LDC#: 27745A21

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N NA Were field duplicate pairs identified in this SDG?

Y N NA Were target analytes detected in the field duplicate pairs? *EMPC

Compound	Concentration (pg/g)		RPD	
	8	10		
H	2.28	5.26	79	
A	0.266*	0.629*	81	
I	0.890	2.15	83	
J	1.25	2.55	68	
B	2.03*	5.34	90	
K	5.04	9.26	59	
L	2.38	4.10	53	
M	1.49	7.03	130	
N	1.59	2.93	59	
C	4.34	10.2	81	
D	19.3	41.1	72	
E	9.17	18.7*	68	
O	55.8	118	72	
P	3.25	7.71	81	
F	575	1200	70	
Q	197	362	59	
G	5240	11000	71	
V	15.4	31.2	68	
R	45.1	130	97	
W	25.2	62.2	85	
S	52.2	162	103	
X	93.1	219	81	
T	190	504	90	
Y	195	423	74	
U	1520	3630	82	

LDC #: 27745A01

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of compound, A_{is} = Area of associated internal standard
average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, C_{is} = Concentration of internal standard
%RSD = 100 * (S/X) — S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	ICAL	3/3/12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	0.87	0.87	0.85	0.84916	3.9	3.9
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.05	1.05	1.00	0.99985	7.0	7.6
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.88	0.88	0.87	0.87168	3.3	3.3
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	0.97	0.97	0.96	0.96443	3.3	3.3
			OCDF (^{13}C-OCDF)	1.11	1.11	1.08	1.0769	7.3	7.3
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27745 A21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: L

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 10:15	5/10/12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	0.87	0.85	0.85	2.2	2.2
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.05	1.03	1.03	1.7	1.7
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.88	0.90	0.90	2.1	2.1
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	0.97	1.00	1.00	2.6	2.6
			OCDF (^{13}C-OCDF)	1.11	1.16	1.16	5.3	5.6
2	CCV 16:33	5/10/12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		0.86	0.86	0.9	0.9
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		1.03	1.03	1.9	1.9
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		0.87	0.87	1.0	1.0
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		0.97	0.97	0.6	0.6
			OCDF (^{13}C-OCDF)		1.12	1.12	1.4	1.4
3	CCV 00:33	5/11/12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		0.87	0.87	0.1	0.1
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		1.02	1.02	2.7	2.7
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		0.93	0.93	5.8	5.8
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		1.01	1.01	4.1	4.1
			OCDF (^{13}C-OCDF)		1.11	1.11	0.6	0.6

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27245 MD 1

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
✓1	CCV 10:17	5/11/12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	0.87	0.85	0.85	1.9	1.9
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.05	1.04	1.04	0.9	0.9
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.88	0.92	0.92	5.0	5.0
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	0.97	0.96	0.96	1.6	1.6
			OCDF (^{13}C-OCDD)	1.11	1.14	1.14	3.1	3.1
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)					
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)					
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)					
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)					
			OCDF (^{13}C-OCDD)					
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)					
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)					
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)					
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)					
			OCDF (^{13}C-OCDD)					

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27745A21

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: OPR-050212

Compound	Spike Added (pg/g)		Spiked Sample Concentration (pg/g)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
2,3,7,8-TCDD	20	NA	20.2	NA	101					
1,2,3,7,8-PeCDD	100		106		106					
1,2,3,4,7,8-HxCDD			106		106					
1,2,3,4,7,8,9-HpCDF			103		103					
OCDF	200		205		110					

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27745A2

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: ✓

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
RRF	=	Relative Response Factor (average) from the initial calibration
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. #1, 2,3,7,8 TCDF

Conc. = $\frac{(39500)(100)(20)}{(3980164)(0.866)(10.1)(\quad)}$

= 2.27 pg/g

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

SDG: UR81

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	36.9		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	3.94		Yes	Y				0.971		pg/g
IJ12-01	12-7398-UR81G	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	14.7		Yes	Y	EMPC	J	23	0.971		pg/g
IJ12-01	12-7398-UR81G	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	1.34		Yes	Y				0.971		pg/g
IJ12-01	12-7398-UR81G	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	4.82		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	202		Yes	Y	EMPC	J	23	1.94		pg/g
IJ12-01	12-7398-UR81G	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	2.28		Yes	Y				0.971		pg/g
IJ12-01	12-7398-UR81G	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	7.12		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	3.7		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	6.66		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	5.93		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	89.9		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.61		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	2.13		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	22.5		Yes	Y	EMPC	J	23	0.971		pg/g
IJ12-01	12-7398-UR81G	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	235		Yes	Y				4.85		pg/g
IJ12-01	12-7398-UR81G	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	15.3		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	81.9		Yes	Y	EMPC	J	23	1.94		pg/g
IJ12-01	12-7398-UR81G	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	226		Yes	Y				1.94		pg/g

SDG: UR81

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	891		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	25.9		Yes	Y				0.971		pg/g
IJ12-01	12-7398-UR81G	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	2270		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	278		Yes	Y				1.94		pg/g
IJ12-01	12-7398-UR81G	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.429		Yes	Y	JEMPC	J	23	0.971		pg/g
IJ12-01	12-7398-UR81GD	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/11/2012	9860		Yes	Y				24.3		pg/g
IJ12-02	12-7395-UR81D	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	28.2		Yes	Y	EMPC	J	23	1.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	301		Yes	Y				5.00		pg/g
IJ12-02	12-7395-UR81D	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	4.52		Yes	Y				1.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	3.97		Yes	Y				1.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	8.05		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	288		Yes	Y	EMPC	J	23	2.00		pg/g
IJ12-02	12-7395-UR81D	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	1650		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	128		Yes	Y	EMPC	J	23	1.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	629		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	49.4		Yes	Y	EMPC	J	23	2.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	5.38		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	308		Yes	Y	EMPC	J	23	2.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.9		Yes	Y	J			2.00		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-02	12-7395-UR81D	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	109		Yes	Y	EMPC	J	23	1.00		pg/g
IJ12-02	12-7395-UR81D	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	138		Yes	Y	EMPC	J	23	2.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	5.35		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	15.2		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.5		Yes	Y	JEMPC	J	23	1.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	84.6		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	5.03		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	23.5		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.88		Yes	Y				2.00		pg/g
IJ12-02	12-7395-UR81D	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.35		Yes	Y	J			2.00		pg/g
IJ12-02	12-7395-UR81D	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.66		Yes	Y				1.00		pg/g
IJ12-02	12-7395-UR81DD	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/11/2012	5630		Yes	Y				25.0		pg/g
IJ12-03	12-7392-UR81A	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	869		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	2		Yes	Y				0.994		pg/g
IJ12-03	12-7392-UR81A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	3.86		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	173		Yes	Y				4.97		pg/g
IJ12-03	12-7392-UR81A	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	156		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	51.5		Yes	Y	EMPC	J	23	0.994		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-03	12-7392-UR81A	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	56.5		Yes	Y	EMPC	J	23	0.994		pg/g
IJ12-03	12-7392-UR81A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	334		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/10/2012	2930		Yes	Y				4.97		pg/g
IJ12-03	12-7392-UR81A	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	16.4		Yes	Y	EMPC	J	23	0.994		pg/g
IJ12-03	12-7392-UR81A	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.264		Yes	Y	BJEMPC	J	23	0.994		pg/g
IJ12-03	12-7392-UR81A	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	139		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	2.28		Yes	Y				0.994		pg/g
IJ12-03	12-7392-UR81A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	6.72		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	43.3		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	2.83		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.67		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.35		Yes	Y	J			1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	11.9		Yes	Y				1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.67		Yes	Y	J			1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	0.738		Yes	Y	J			1.99		pg/g
IJ12-03	12-7392-UR81A	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	0.903		Yes	Y	J			0.994		pg/g
IJ12-03	12-7392-UR81A	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	70.9		Yes	Y	EMPC	J	23	1.99		pg/g
IJ12-03	12-7392-UR81A	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	28.7		Yes	Y	EMPC	J	23	1.99		pg/g
IJ12-03	12-7392-UR81A	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.18		Yes	Y	J			1.99		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-04	12-7396-UR81E	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	2.77		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	5.41		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	106		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	6.81		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	4.63		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	3.09		Yes	Y				0.962		pg/g
IJ12-04	12-7396-UR81E	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	261		Yes	Y	EMPC	J	23	1.92		pg/g
IJ12-04	12-7396-UR81E	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	18.9		Yes	Y	EMPC	J	23	0.962		pg/g
IJ12-04	12-7396-UR81E	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	10.1		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	3.84		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	44.1		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	18.3		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	2.11		Yes	Y				0.962		pg/g
IJ12-04	12-7396-UR81E	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	73.6		Yes	Y	EMPC	J	23	1.92		pg/g
IJ12-04	12-7396-UR81E	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	463		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	1510		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	4.21		Yes	Y				0.962		pg/g
IJ12-04	12-7396-UR81E	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	4940		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	342		Yes	Y	EMPC	J	23	1.92		pg/g

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-04	12-7396-UR81E	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	255		Yes	Y				4.81		pg/g
IJ12-04	12-7396-UR81E	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	9.16		Yes	Y				1.92		pg/g
IJ12-04	12-7396-UR81E	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	19.8		Yes	Y	EMPC	J	23	0.962		pg/g
IJ12-04	12-7396-UR81E	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	40.8		Yes	Y	EMPC	J	23	0.962		pg/g
IJ12-04	12-7396-UR81E	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.487		Yes	Y	JEMPC	J	23	0.962		pg/g
IJ12-04	12-7396-UR81ED	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/11/2012	15200		Yes	Y				24.0		pg/g
IJ12-05	12-7393-UR81B	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	140		Yes	Y	EMPC	J	23	0.987		pg/g
IJ12-05	12-7393-UR81B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	640		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	320		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	46.3		Yes	Y	EMPC	J	23	1.97		pg/g
IJ12-05	12-7393-UR81B	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	26.9		Yes	Y	EMPC	J	23	0.987		pg/g
IJ12-05	12-7393-UR81B	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.496		Yes	Y	JEMPC	J	23	0.987		pg/g
IJ12-05	12-7393-UR81B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	304		Yes	Y				4.94		pg/g
IJ12-05	12-7393-UR81B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	13.7		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.59		Yes	Y				0.987		pg/g
IJ12-05	12-7393-UR81B	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	1590		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	119		Yes	Y	EMPC	J	23	0.987		pg/g
IJ12-05	12-7393-UR81B	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	4.55		Yes	Y				0.987		pg/g
IJ12-05	12-7393-UR81B	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	285		Yes	Y				1.97		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-05	12-7393-UR81B	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	141		Yes	Y	EMPC	J	23	1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	3.8		Yes	Y				0.987		pg/g
IJ12-05	12-7393-UR81B	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.38		Yes	Y	J			1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.78		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	23		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	4.96		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	79.6		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	5.33		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.52		Yes	Y	J			1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	7.53		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	5.04		Yes	Y				1.97		pg/g
IJ12-05	12-7393-UR81BD	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/11/2012	5800		Yes	Y				24.7		pg/g
IJ12-06	12-7394-UR81C	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.457		Yes	Y	JEMPC	J	23	0.988		pg/g
IJ12-06	12-7394-UR81C	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	10.4		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	25.1		Yes	Y	EMPC	J	23	0.988		pg/g
IJ12-06	12-7394-UR81C	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	35.7		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-06	12-7394-UR81C	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	277		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	3.79		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	58.8		Yes	Y				1.98		pg/g

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-06	12-7394-UR81C	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	3.65		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	18.5		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.28		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.21		Yes	Y	J			1.98		pg/g
IJ12-06	12-7394-UR81C	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.21		Yes	Y				0.988		pg/g
IJ12-06	12-7394-UR81C	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/10/2012	3800		Yes	Y				4.94		pg/g
IJ12-06	12-7394-UR81C	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	4.29		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	443		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	108		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-06	12-7394-UR81C	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	4.37		Yes	Y				0.988		pg/g
IJ12-06	12-7394-UR81C	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	121		Yes	Y	EMPC	J	23	0.988		pg/g
IJ12-06	12-7394-UR81C	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	2.93		Yes	Y				0.988		pg/g
IJ12-06	12-7394-UR81C	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	5.85		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	195		Yes	Y				4.94		pg/g
IJ12-06	12-7394-UR81C	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	211		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-06	12-7394-UR81C	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	1140		Yes	Y				1.98		pg/g
IJ12-06	12-7394-UR81C	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	134		Yes	Y				0.988		pg/g
IJ12-06	12-7394-UR81C	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.19		Yes	Y	JEMPC	J	23	1.98		pg/g
IJ12-07	12-7397-UR81F	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.11		Yes	Y	J			2.00		pg/g

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-07	12-7397-UR81F	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.56		Yes	Y	J			2.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	2.73		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	44.6		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	14.3		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.53		Yes	Y	J			2.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	0.972		Yes	Y	J			2.00		pg/g
IJ12-07	12-7397-UR81F	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1		Yes	Y				1.00		pg/g
IJ12-07	12-7397-UR81F	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	83.8		Yes	Y	EMPC	J	23	2.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	3.37		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/10/2012	3160		Yes	Y				5.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	7.31		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	19.5		Yes	Y	EMPC	J	23	1.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	150		Yes	Y				5.00		pg/g
IJ12-07	12-7397-UR81F	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	3.59		Yes	Y				1.00		pg/g
IJ12-07	12-7397-UR81F	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	193		Yes	Y	EMPC	J	23	2.00		pg/g
IJ12-07	12-7397-UR81F	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	82.5		Yes	Y	EMPC	J	23	1.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	2.25		Yes	Y	EMPC	J	23	1.00		pg/g
IJ12-07	12-7397-UR81F	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	4.3		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	27.5		Yes	Y	EMPC	J	23	2.00		pg/g

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-07	12-7397-UR81F	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	356		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.374		Yes	Y	BJEMPC	J	23	1.00		pg/g
IJ12-07	12-7397-UR81F	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	162		Yes	Y	EMPC	J	23	2.00		pg/g
IJ12-07	12-7397-UR81F	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	963		Yes	Y				2.00		pg/g
IJ12-07	12-7397-UR81F	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	92.7		Yes	Y	EMPC	J	23	1.00		pg/g
IJ12-08A	12-7401-UR81J	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	130		Yes	Y	EMPC	J	23	0.989		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	7.71		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	5.34		Yes	Y				0.989		pg/g
IJ12-08A	12-7401-UR81J	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	31.2		Yes	Y	EMPC	J	23	0.989		pg/g
IJ12-08A	12-7401-UR81J	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	5.26		Yes	Y				0.989		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	10.2		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	362		Yes	Y				4.95		pg/g
IJ12-08A	12-7401-UR81J	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	423		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	3630		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	162		Yes	Y	EMPC	J	23	0.989		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	1200		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	219		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-08A	12-7401-UR81J	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	62.2		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	41.1		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	18.7		Yes	Y	EMPC	J	23	1.98		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-08A	12-7401-UR81J	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.629		Yes	Y	JEMPC	J	23	0.989		pg/g
IJ12-08A	12-7401-UR81J	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	504		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.93		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	4.1		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	2.15		Yes	Y	X	J	24	1.98		pg/g
IJ12-08A	12-7401-UR81J	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	7.03		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	118		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	9.26		Yes	Y				1.98		pg/g
IJ12-08A	12-7401-UR81J	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	2.55		Yes	Y				0.989		pg/g
IJ12-08A	12-7401-UR81JDL	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/11/2012	11000		Yes	Y				24.7		pg/g
IJ12-11	12-7400-UR81I	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.3		Yes	Y	BJEMPC	J	23	0.992		pg/g
IJ12-11	12-7400-UR81I	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	2.24		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	6.39		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	4.13		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	251		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	131		Yes	Y	EMPC	J	23	0.992		pg/g
IJ12-11	12-7400-UR81I	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	613		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	131		Yes	Y				1.98		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-11	12-7400-UR81I	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	22.8		Yes	Y	EMPC	J	23	0.992		pg/g
IJ12-11	12-7400-UR81I	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	113		Yes	Y				4.96		pg/g
IJ12-11	12-7400-UR81I	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	24.1		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-11	12-7400-UR81I	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	226		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	1.92		Yes	Y				0.992		pg/g
IJ12-11	12-7400-UR81I	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	4.29		Yes	Y				0.992		pg/g
IJ12-11	12-7400-UR81I	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	65.4		Yes	Y	EMPC	J	23	1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/10/2012	2080		Yes	Y				4.96		pg/g
IJ12-11	12-7400-UR81I	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.05		Yes	Y				0.992		pg/g
IJ12-11	12-7400-UR81I	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	0.992		Yes	Y	J			1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.41		Yes	Y	J			1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	11.8		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.22		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	34.7		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.89		Yes	Y				1.98		pg/g
IJ12-11	12-7400-UR81I	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.09		Yes	Y	J			1.98		pg/g
IJ12-11	12-7400-UR81I	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	119		Yes	Y	EMPC	J	23	0.992		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	575		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	2.03		Yes	Y	EMPC	J	23	0.993		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-58A	12-7399-UR81H	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.59		Yes	Y	J			1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	5.04		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	55.8		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	1.49		Yes	Y	J			1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	19.3		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	2.38		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	0.89		Yes	Y	JX	J	24	1.99		pg/g
IJ12-58A	12-7399-UR81H	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	1.25		Yes	Y				0.993		pg/g
IJ12-58A	12-7399-UR81H	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	93.1		Yes	Y	EMPC	J	23	1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	3.25		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	25.2		Yes	Y	EMPC	J	23	1.99		pg/g
IJ12-58A	12-7399-UR81H	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	45.1		Yes	Y	EMPC	J	23	0.993		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	4.34		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	197		Yes	Y				4.97		pg/g
IJ12-58A	12-7399-UR81H	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	1520		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	52.2		Yes	Y	EMPC	J	23	0.993		pg/g
IJ12-58A	12-7399-UR81H	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	190		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	15.4		Yes	Y	EMPC	J	23	0.993		pg/g
IJ12-58A	12-7399-UR81H	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	195		Yes	Y				1.99		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-58A	12-7399-UR81H	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	2.28		Yes	Y				0.993		pg/g
IJ12-58A	12-7399-UR81H	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	9.17		Yes	Y				1.99		pg/g
IJ12-58A	12-7399-UR81H	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.266		Yes	Y	BJEMPC	J	23	0.993		pg/g
IJ12-58A	12-7399-UR81HD	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/11/2012	5240		Yes	Y				24.8		pg/g

Analytical Method E350.1M

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Ammonia	4/30/2012	11.6		Yes	Y				0.16	0.03000	mg/kg
IJ12-02	12-7395-UR81D	Ammonia	4/30/2012	15.8		Yes	Y				0.24	0.03000	mg/kg
IJ12-03	12-7392-UR81A	Ammonia	4/30/2012	17.3		Yes	Y				0.20	0.03000	mg/kg
IJ12-04	12-7396-UR81E	Ammonia	4/30/2012	30.4		Yes	Y				0.75	0.15000	mg/kg
IJ12-05	12-7393-UR81B	Ammonia	4/30/2012	19.2		Yes	Y				0.27	0.03000	mg/kg
IJ12-06	12-7394-UR81C	Ammonia	4/30/2012	20.1		Yes	Y				0.25	0.03000	mg/kg
IJ12-07	12-7397-UR81F	Ammonia	4/30/2012	19.3		Yes	Y				0.25	0.03000	mg/kg
IJ12-08A	12-7401-UR81J	Ammonia	4/30/2012	18		Yes	Y				0.26	0.03000	mg/kg
IJ12-11	12-7400-UR81I	Ammonia	4/30/2012	10.8		Yes	Y				0.19	0.03000	mg/kg
IJ12-58A	12-7399-UR81H	Ammonia	4/30/2012	23.4		Yes	Y				0.24	0.03000	mg/kg

Analytical Method E376.2

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Sulfide	4/30/2012	905		Yes	Y				50.7	0.15000	mg/kg
IJ12-02	12-7395-UR81D	Sulfide	4/30/2012	997		Yes	Y				51.1	0.15000	mg/kg
IJ12-03	12-7392-UR81A	Sulfide	4/30/2012	2610		Yes	Y				141	0.37500	mg/kg
IJ12-04	12-7396-UR81E	Sulfide	4/30/2012	1210		Yes	Y				81.6	0.37500	mg/kg
IJ12-05	12-7393-UR81B	Sulfide	4/30/2012	2130		Yes	Y				134	0.37500	mg/kg
IJ12-06	12-7394-UR81C	Sulfide	4/30/2012	614		Yes	Y				51.8	0.15000	mg/kg

Analytical Method E376.2

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-07	12-7397-UR81F	Sulfide	4/30/2012	389		Yes	Y				24.6	0.07500	mg/kg
IJ12-08A	12-7401-UR81J	Sulfide	4/30/2012	2090		Yes	Y				151	0.37500	mg/kg
IJ12-11	12-7400-UR81I	Sulfide	4/30/2012	275		Yes	Y				21.5	0.07500	mg/kg
IJ12-58A	12-7399-UR81H	Sulfide	4/30/2012	2630		Yes	Y				283	0.75000	mg/kg

Analytical Method Plumb 1981

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Total organic carbon	5/2/2012	4.98		Yes	Y				0.020	0.00290	pct
IJ12-02	12-7395-UR81D	Total organic carbon	5/2/2012	2.45		Yes	Y				0.020	0.00290	pct
IJ12-03	12-7392-UR81A	Total organic carbon	5/2/2012	2.9		Yes	Y				0.020	0.00290	pct
IJ12-04	12-7396-UR81E	Total organic carbon	5/2/2012	2.1		Yes	Y				0.020	0.00290	pct
IJ12-05	12-7393-UR81B	Total organic carbon	5/2/2012	3.11		Yes	Y				0.020	0.00290	pct
IJ12-06	12-7394-UR81C	Total organic carbon	5/2/2012	2.55		Yes	Y				0.020	0.00290	pct
IJ12-07	12-7397-UR81F	Total organic carbon	5/2/2012	2.6		Yes	Y				0.020	0.00290	pct
IJ12-08A	12-7401-UR81J	Total organic carbon	5/2/2012	3.76		Yes	Y				0.020	0.00290	pct
IJ12-11	12-7400-UR81I	Total organic carbon	5/2/2012	2.02		Yes	Y				0.020	0.00290	pct
IJ12-58A	12-7399-UR81H	Total organic carbon	5/2/2012	4.31		Yes	Y				0.020	0.00290	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Clay, Medium	5/7/2012	1.5		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Clay, Coarse	5/7/2012	1.7		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Silt, Coarse	5/7/2012	1.6		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Clay, Fine	5/7/2012	2.7		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Silt, Very Fine	5/7/2012	1.7		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Fines (silt + clay)	5/7/2012	12.3		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Gravel	5/7/2012	16.4		Yes	Y				0.1	0.1	pct

SDG: UR81

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Sand, Coarse	5/7/2012	7.4		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Sand, Fine	5/7/2012	35.8		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Silt, Fine	5/7/2012	1.5		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Sand, Medium	5/7/2012	13.5		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Sand, Very Coarse	5/7/2012	7.4		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Sand, Very Fine	5/7/2012	7.2		Yes	Y				0.1	0.1	pct
IJ12-01	12-7398-UR81G	Silt, Medium	5/7/2012	1.7		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Sand, Very Coarse	5/7/2012	1		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Sand, Fine	5/7/2012	1.9		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Silt, Very Fine	5/7/2012	15.5		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Silt, Medium	5/7/2012	9.6		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Silt, Fine	5/7/2012	26.9		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Sand, Very Fine	5/7/2012	1.9		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Sand, Medium	5/7/2012	0.9		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Gravel	5/7/2012	0.3		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Fines (silt + clay)	5/7/2012	92.7		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Clay, Medium	5/7/2012	9.6		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Clay, Fine	5/7/2012	17.2		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Clay, Coarse	5/7/2012	11.2		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Silt, Coarse	5/7/2012	2.6		Yes	Y				0.1	0.1	pct
IJ12-02	12-7395-UR81D	Sand, Coarse	5/7/2012	1.4		Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Sand, Very Fine	5/7/2012	1.8		Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Sand, Fine	5/7/2012	1.5		Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Sand, Coarse	5/7/2012	2.1		Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Gravel	5/7/2012	0.1		Yes	N	U			0.1	0.1	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-03	12-7392-UR81A	Fines (silt + clay)	5/7/2012	90.8	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Clay, Medium	5/7/2012	9.1	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Sand, Medium	5/7/2012	1.6	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Silt, Medium	5/7/2012	14.1	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Sand, Very Coarse	5/7/2012	2.3	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Clay, Fine	5/7/2012	15.6	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Silt, Coarse	5/7/2012	3.3	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Silt, Very Fine	5/7/2012	12.5	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Silt, Fine	5/7/2012	27.7	Yes	Y				0.1	0.1	pct
IJ12-03	12-7392-UR81A	Clay, Coarse	5/7/2012	8.5	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Gravel	5/7/2012	48.8	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Fines (silt + clay)	5/7/2012	21.1	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Clay, Medium	5/7/2012	3.4	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Clay, Fine	5/7/2012	5.1	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Clay, Coarse	5/7/2012	2.9	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Sand, Coarse	5/7/2012	6.9	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Sand, Medium	5/7/2012	6.8	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Silt, Very Fine	5/7/2012	5.2	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Sand, Very Coarse	5/7/2012	9.2	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Silt, Medium	5/7/2012	1.3	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Silt, Fine	5/7/2012	0.5	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Silt, Coarse	5/7/2012	2.7	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Sand, Very Fine	5/7/2012	1.7	Yes	Y				0.1	0.1	pct
IJ12-04	12-7396-UR81E	Sand, Fine	5/7/2012	5.4	Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Sand, Fine	5/7/2012	1.1	Yes	Y				0.1	0.1	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-05	12-7393-UR81B	Clay, Coarse	5/7/2012	11.5		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Clay, Fine	5/7/2012	20.5		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Clay, Medium	5/7/2012	11.5		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Fines (silt + clay)	5/7/2012	94.2		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Sand, Coarse	5/7/2012	1.6		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Silt, Very Fine	5/7/2012	14.1		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Sand, Medium	5/7/2012	1.5		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Sand, Very Coarse	5/7/2012	0.7		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Sand, Very Fine	5/7/2012	1		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Silt, Coarse	5/7/2012	1.6		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Silt, Fine	5/7/2012	24.8		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Silt, Medium	5/7/2012	10.3		Yes	Y				0.1	0.1	pct
IJ12-05	12-7393-UR81B	Gravel	5/7/2012	0.1		Yes	N	U			0.1	0.1	pct
IJ12-06	12-7394-UR81C	Gravel	5/7/2012	0.1		Yes	N	U			0.1	0.1	pct
IJ12-06	12-7394-UR81C	Silt, Medium	5/7/2012	9.2		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Silt, Fine	5/7/2012	18.1		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Silt, Coarse	5/7/2012	2.2		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Sand, Very Fine	5/7/2012	0.9		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Sand, Very Coarse	5/7/2012	0.8		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Sand, Medium	5/7/2012	0.6		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Sand, Coarse	5/7/2012	1		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Fines (silt + clay)	5/7/2012	96		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Clay, Medium	5/7/2012	12.2		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Clay, Fine	5/7/2012	20.5		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Clay, Coarse	5/7/2012	14.1		Yes	Y				0.1	0.1	pct

SDG: UR81

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-06	12-7394-UR81C	Silt, Very Fine	5/7/2012	19.7		Yes	Y				0.1	0.1	pct
IJ12-06	12-7394-UR81C	Sand, Fine	5/7/2012	0.6		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Fines (silt + clay)	5/7/2012	93.9		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Silt, Medium	5/7/2012	7.2		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Silt, Fine	5/7/2012	19.5		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Silt, Coarse	5/7/2012	2.7		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Sand, Very Fine	5/7/2012	1.3		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Sand, Very Coarse	5/7/2012	1.2		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Sand, Medium	5/7/2012	0.9		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Sand, Fine	5/7/2012	1		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Silt, Very Fine	5/7/2012	19.3		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Gravel	5/7/2012	0.3		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Clay, Medium	5/7/2012	11.7		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Clay, Fine	5/7/2012	20.2		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Clay, Coarse	5/7/2012	13.4		Yes	Y				0.1	0.1	pct
IJ12-07	12-7397-UR81F	Sand, Coarse	5/7/2012	1.4		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Sand, Very Fine	5/7/2012	2.9		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Silt, Coarse	5/7/2012	10.3		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Silt, Fine	5/7/2012	21		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Silt, Medium	5/7/2012	20.5		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Silt, Very Fine	5/7/2012	8.8		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Clay, Fine	5/7/2012	14.6		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Clay, Medium	5/7/2012	7.5		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Fines (silt + clay)	5/7/2012	88.8		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Sand, Very Coarse	5/7/2012	1.7		Yes	Y				0.1	0.1	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-08A	12-7401-UR81J	Sand, Medium	5/7/2012	1.8		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Sand, Fine	5/7/2012	1.9		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Sand, Coarse	5/7/2012	1.8		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Gravel	5/7/2012	1.2		Yes	Y				0.1	0.1	pct
IJ12-08A	12-7401-UR81J	Clay, Coarse	5/7/2012	6		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Clay, Medium	5/7/2012	8.1		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Clay, Fine	5/7/2012	16		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Sand, Medium	5/7/2012	3.8		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Fines (silt + clay)	5/7/2012	72		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Gravel	5/7/2012	0.1		Yes	N	U			0.1	0.1	pct
IJ12-11	12-7400-UR81I	Sand, Coarse	5/7/2012	0.9		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Sand, Fine	5/7/2012	15.9		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Sand, Very Coarse	5/7/2012	0.3		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Silt, Coarse	5/7/2012	5.4		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Silt, Fine	5/7/2012	13.6		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Silt, Medium	5/7/2012	6.6		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Silt, Very Fine	5/7/2012	12.7		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Clay, Coarse	5/7/2012	9.7		Yes	Y				0.1	0.1	pct
IJ12-11	12-7400-UR81I	Sand, Very Fine	5/7/2012	7.1		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Silt, Fine	5/7/2012	25.6		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Clay, Medium	5/7/2012	9.7		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Fines (silt + clay)	5/7/2012	90.6		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Gravel	5/7/2012	0.2		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Sand, Coarse	5/7/2012	1.5		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Silt, Very Fine	5/7/2012	11		Yes	Y				0.1	0.1	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-58A	12-7399-UR81H	Silt, Medium	5/7/2012	14.5		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Clay, Fine	5/7/2012	18.1		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Clay, Coarse	5/7/2012	8.2		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Sand, Medium	5/7/2012	1.6		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Sand, Fine	5/7/2012	1.8		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Sand, Very Coarse	5/7/2012	1.4		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Sand, Very Fine	5/7/2012	2.8		Yes	Y				0.1	0.1	pct
IJ12-58A	12-7399-UR81H	Silt, Coarse	5/7/2012	3.6		Yes	Y				0.1	0.1	pct

Analytical Method SM2540B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Total solids (preserved)	4/26/2012	39.2		Yes	Y				0.01		pct
IJ12-01	12-7398-UR81G	Total solids	4/26/2012	56.6		Yes	Y				0.01		pct
IJ12-02	12-7395-UR81D	Total solids (preserved)	4/26/2012	38.2		Yes	Y				0.01		pct
IJ12-02	12-7395-UR81D	Total solids	4/26/2012	40.1		Yes	Y				0.01		pct
IJ12-03	12-7392-UR81A	Total solids	4/26/2012	37.4		Yes	Y				0.01		pct
IJ12-03	12-7392-UR81A	Total solids (preserved)	4/26/2012	34.7		Yes	Y				0.01		pct
IJ12-04	12-7396-UR81E	Total solids (preserved)	4/26/2012	60.1		Yes	Y				0.01		pct
IJ12-04	12-7396-UR81E	Total solids	4/26/2012	63.8		Yes	Y				0.01		pct
IJ12-05	12-7393-UR81B	Total solids	4/26/2012	38.3		Yes	Y				0.01		pct
IJ12-05	12-7393-UR81B	Total solids (preserved)	4/26/2012	35.3		Yes	Y				0.01		pct
IJ12-06	12-7394-UR81C	Total solids (preserved)	4/26/2012	38		Yes	Y				0.01		pct
IJ12-06	12-7394-UR81C	Total solids	4/26/2012	43		Yes	Y				0.01		pct
IJ12-07	12-7397-UR81F	Total solids	4/26/2012	41.3		Yes	Y				0.01		pct
IJ12-07	12-7397-UR81F	Total solids (preserved)	4/26/2012	40.1		Yes	Y				0.01		pct
IJ12-08A	12-7401-UR81J	Total solids (preserved)	4/26/2012	32.4		Yes	Y				0.01		pct

Analytical Method SM2540B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-08A	12-7401-UR81J	Total solids	4/26/2012	39.4		Yes	Y				0.01		pct
IJ12-11	12-7400-UR81I	Total solids	4/26/2012	52.8		Yes	Y				0.01		pct
IJ12-11	12-7400-UR81I	Total solids (preserved)	4/26/2012	44.2		Yes	Y				0.01		pct
IJ12-58A	12-7399-UR81H	Total solids	4/26/2012	38		Yes	Y				0.01		pct
IJ12-58A	12-7399-UR81H	Total solids (preserved)	4/26/2012	33.8		Yes	Y				0.01		pct

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Silver	5/1/2012	0.5		Yes	N	U			0.5	0.053	mg/kg
IJ12-01	12-7398-UR81G	Zinc	5/1/2012	83		Yes	Y				2	0.21	mg/kg
IJ12-01	12-7398-UR81G	Arsenic	5/1/2012	9		Yes	N	U			9	0.82	mg/kg
IJ12-01	12-7398-UR81G	Copper	5/1/2012	37.2		Yes	Y				0.4	0.089	mg/kg
IJ12-01	12-7398-UR81G	Chromium	5/1/2012	40		Yes	Y				0.9	0.48	mg/kg
IJ12-01	12-7398-UR81G	Cadmium	5/1/2012	0.4		Yes	Y				0.4	0.20	mg/kg
IJ12-01	12-7398-UR81G	Lead	5/1/2012	18		Yes	Y				4	0.23	mg/kg
IJ12-01	12-7398-UR81G	Nickel	5/1/2012	337		Yes	Y				2	0.53	mg/kg
IJ12-02	12-7395-UR81D	Lead	5/1/2012	17		Yes	Y				5	0.32	mg/kg
IJ12-02	12-7395-UR81D	Nickel	5/1/2012	148		Yes	Y				2	0.73	mg/kg
IJ12-02	12-7395-UR81D	Silver	5/1/2012	0.7		Yes	N	U			0.7	0.073	mg/kg
IJ12-02	12-7395-UR81D	Arsenic	5/1/2012	10		Yes	N	U			10	1.1	mg/kg
IJ12-02	12-7395-UR81D	Cadmium	5/1/2012	1.1		Yes	Y				0.5	0.27	mg/kg
IJ12-02	12-7395-UR81D	Chromium	5/1/2012	82		Yes	Y				1	0.66	mg/kg
IJ12-02	12-7395-UR81D	Copper	5/1/2012	71.3		Yes	Y				0.5	0.12	mg/kg
IJ12-02	12-7395-UR81D	Zinc	5/1/2012	135		Yes	Y				2	0.29	mg/kg
IJ12-03	12-7392-UR81A	Cadmium	5/1/2012	1.2		Yes	Y				0.5	0.28	mg/kg
IJ12-03	12-7392-UR81A	Zinc	5/1/2012	141		Yes	Y				3	0.30	mg/kg

SDG: UR81

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-03	12-7392-UR81A	Chromium	5/1/2012	79		Yes	Y				1	0.68	mg/kg
IJ12-03	12-7392-UR81A	Arsenic	5/1/2012	10		Yes	N	U			10	1.2	mg/kg
IJ12-03	12-7392-UR81A	Silver	5/1/2012	0.8		Yes	N	U			0.8	0.075	mg/kg
IJ12-03	12-7392-UR81A	Nickel	5/1/2012	140		Yes	Y				3	0.75	mg/kg
IJ12-03	12-7392-UR81A	Copper	5/1/2012	71		Yes	Y				0.5	0.13	mg/kg
IJ12-03	12-7392-UR81A	Lead	5/1/2012	17		Yes	Y				5	0.33	mg/kg
IJ12-04	12-7396-UR81E	Lead	5/1/2012	25		Yes	Y				8	0.53	mg/kg
IJ12-04	12-7396-UR81E	Arsenic	5/1/2012	20		Yes	N	U			20	1.9	mg/kg
IJ12-04	12-7396-UR81E	Nickel	5/1/2012	116		Yes	Y				4	1.2	mg/kg
IJ12-04	12-7396-UR81E	Cadmium	5/1/2012	0.8		Yes	N	U			0.8	0.45	mg/kg
IJ12-04	12-7396-UR81E	Copper	5/1/2012	35.4		Yes	Y				0.8	0.20	mg/kg
IJ12-04	12-7396-UR81E	Silver	5/1/2012	1		Yes	N	U			1	0.12	mg/kg
IJ12-04	12-7396-UR81E	Chromium	5/1/2012	33		Yes	Y				2	1.1	mg/kg
IJ12-04	12-7396-UR81E	Zinc	5/1/2012	110		Yes	Y				4	0.49	mg/kg
IJ12-05	12-7393-UR81B	Chromium	5/1/2012	90		Yes	Y				1	0.74	mg/kg
IJ12-05	12-7393-UR81B	Silver	5/1/2012	0.8		Yes	N	U			0.8	0.083	mg/kg
IJ12-05	12-7393-UR81B	Nickel	5/1/2012	137		Yes	Y				3	0.83	mg/kg
IJ12-05	12-7393-UR81B	Lead	5/1/2012	17		Yes	Y				6	0.36	mg/kg
IJ12-05	12-7393-UR81B	Cadmium	5/1/2012	1.1		Yes	Y				0.6	0.30	mg/kg
IJ12-05	12-7393-UR81B	Copper	5/1/2012	77.6		Yes	Y				0.6	0.14	mg/kg
IJ12-05	12-7393-UR81B	Zinc	5/1/2012	147		Yes	Y				3	0.33	mg/kg
IJ12-05	12-7393-UR81B	Arsenic	5/1/2012	10		Yes	N	U			10	1.3	mg/kg
IJ12-06	12-7394-UR81C	Zinc	5/1/2012	132		Yes	Y				2	0.27	mg/kg
IJ12-06	12-7394-UR81C	Nickel	5/1/2012	126		Yes	Y				2	0.67	mg/kg
IJ12-06	12-7394-UR81C	Silver	5/1/2012	0.7		Yes	N	U			0.7	0.067	mg/kg

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-06	12-7394-UR81C	Arsenic	5/1/2012	10		Yes	N	U			10	1.0	mg/kg
IJ12-06	12-7394-UR81C	Cadmium	5/1/2012	1		Yes	Y				0.4	0.24	mg/kg
IJ12-06	12-7394-UR81C	Chromium	5/1/2012	86		Yes	Y				1	0.60	mg/kg
IJ12-06	12-7394-UR81C	Copper	5/1/2012	72.4		Yes	Y				0.4	0.11	mg/kg
IJ12-06	12-7394-UR81C	Lead	5/1/2012	15		Yes	Y				4	0.29	mg/kg
IJ12-07	12-7397-UR81F	Nickel	5/1/2012	123		Yes	Y				2	0.63	mg/kg
IJ12-07	12-7397-UR81F	Silver	5/1/2012	0.6		Yes	N	U			0.6	0.063	mg/kg
IJ12-07	12-7397-UR81F	Arsenic	5/1/2012	10		Yes	Y				10	0.96	mg/kg
IJ12-07	12-7397-UR81F	Cadmium	5/1/2012	0.9		Yes	Y				0.4	0.23	mg/kg
IJ12-07	12-7397-UR81F	Chromium	5/1/2012	85		Yes	Y				1	0.56	mg/kg
IJ12-07	12-7397-UR81F	Copper	5/1/2012	75.9		Yes	Y				0.4	0.10	mg/kg
IJ12-07	12-7397-UR81F	Zinc	5/1/2012	131		Yes	Y				2	0.25	mg/kg
IJ12-07	12-7397-UR81F	Lead	5/1/2012	14		Yes	Y				4	0.27	mg/kg
IJ12-08A	12-7401-UR81J	Arsenic	5/1/2012	10		Yes	N	U			10	1.2	mg/kg
IJ12-08A	12-7401-UR81J	Cadmium	5/1/2012	1		Yes	Y				0.5	0.28	mg/kg
IJ12-08A	12-7401-UR81J	Lead	5/1/2012	15		Yes	Y				5	0.33	mg/kg
IJ12-08A	12-7401-UR81J	Nickel	5/1/2012	113		Yes	Y				3	0.76	mg/kg
IJ12-08A	12-7401-UR81J	Silver	5/1/2012	0.8		Yes	N	U			0.8	0.076	mg/kg
IJ12-08A	12-7401-UR81J	Zinc	5/1/2012	146		Yes	Y				3	0.30	mg/kg
IJ12-08A	12-7401-UR81J	Copper	5/1/2012	87		Yes	Y				0.5	0.13	mg/kg
IJ12-08A	12-7401-UR81J	Chromium	5/1/2012	80		Yes	Y				1	0.68	mg/kg
IJ12-11	12-7400-UR81I	Arsenic	5/1/2012	9		Yes	N	U			9	0.84	mg/kg
IJ12-11	12-7400-UR81I	Lead	5/1/2012	11		Yes	Y				4	0.24	mg/kg
IJ12-11	12-7400-UR81I	Silver	5/1/2012	0.6		Yes	N	U			0.6	0.055	mg/kg
IJ12-11	12-7400-UR81I	Cadmium	5/1/2012	0.5		Yes	Y				0.4	0.20	mg/kg

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-11	12-7400-UR81I	Chromium	5/1/2012	66.9		Yes	Y				0.9	0.50	mg/kg
IJ12-11	12-7400-UR81I	Zinc	5/1/2012	94		Yes	Y				2	0.22	mg/kg
IJ12-11	12-7400-UR81I	Copper	5/1/2012	51.9		Yes	Y				0.4	0.092	mg/kg
IJ12-11	12-7400-UR81I	Nickel	5/1/2012	90		Yes	Y				2	0.55	mg/kg
IJ12-58A	12-7399-UR81H	Arsenic	5/1/2012	10		Yes	N	U			10	1.1	mg/kg
IJ12-58A	12-7399-UR81H	Zinc	5/1/2012	152		Yes	Y				2	0.30	mg/kg
IJ12-58A	12-7399-UR81H	Silver	5/1/2012	0.7		Yes	N	U			0.7	0.075	mg/kg
IJ12-58A	12-7399-UR81H	Cadmium	5/1/2012	1.2		Yes	Y				0.5	0.27	mg/kg
IJ12-58A	12-7399-UR81H	Chromium	5/1/2012	85		Yes	Y				1	0.67	mg/kg
IJ12-58A	12-7399-UR81H	Lead	5/1/2012	16		Yes	Y				5	0.32	mg/kg
IJ12-58A	12-7399-UR81H	Nickel	5/1/2012	120		Yes	Y				2	0.75	mg/kg
IJ12-58A	12-7399-UR81H	Copper	5/1/2012	86		Yes	Y				0.5	0.12	mg/kg

Analytical Method SW7471A

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Mercury	5/3/2012	0.05		Yes	Y				0.04	0.0020	mg/kg
IJ12-02	12-7395-UR81D	Mercury	5/3/2012	0.27		Yes	Y				0.06	0.0033	mg/kg
IJ12-03	12-7392-UR81A	Mercury	5/3/2012	0.25		Yes	Y				0.05	0.0028	mg/kg
IJ12-04	12-7396-UR81E	Mercury	5/3/2012	0.12		Yes	Y				0.04	0.0022	mg/kg
IJ12-05	12-7393-UR81B	Mercury	5/3/2012	0.29		Yes	Y				0.07	0.0035	mg/kg
IJ12-06	12-7394-UR81C	Mercury	5/3/2012	0.29		Yes	Y				0.05	0.0026	mg/kg
IJ12-07	12-7397-UR81F	Mercury	5/3/2012	0.27		Yes	Y				0.04	0.0021	mg/kg
IJ12-08A	12-7401-UR81J	Mercury	5/3/2012	0.26		Yes	Y				0.05	0.0025	mg/kg
IJ12-11	12-7400-UR81I	Mercury	5/3/2012	0.27		Yes	Y				0.05	0.0024	mg/kg
IJ12-58A	12-7399-UR81H	Mercury	5/3/2012	0.29		Yes	Y				0.05	0.0027	mg/kg

Analytical Method SW8082

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Aroclor 1242	5/8/2012	19		Yes	N	U	UJ	8,9	19	1.3	ug/kg
IJ12-01	12-7398-UR81G	Aroclor 1260	5/8/2012	19		Yes	N	U	UJ	8,9	19	1.3	ug/kg
IJ12-01	12-7398-UR81G	Aroclor 1248	5/8/2012	19		Yes	N	U	UJ	8,9	19	1.3	ug/kg
IJ12-01	12-7398-UR81G	Aroclor 1254	5/8/2012	19		Yes	N	U	UJ	8,9	19	1.3	ug/kg
IJ12-01	12-7398-UR81G	Aroclor 1016	5/8/2012	19		Yes	N	U			19	0.98	ug/kg
IJ12-01	12-7398-UR81G	Aroclor 1221	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-01	12-7398-UR81G	Aroclor 1232	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Aroclor 1260	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Aroclor 1221	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Aroclor 1232	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Aroclor 1016	5/8/2012	19		Yes	N	U			19	0.99	ug/kg
IJ12-02	12-7395-UR81D	Aroclor 1242	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Aroclor 1254	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Aroclor 1248	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-03	12-7392-UR81A	Aroclor 1232	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-03	12-7392-UR81A	Aroclor 1221	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-03	12-7392-UR81A	Aroclor 1242	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-03	12-7392-UR81A	Aroclor 1016	5/8/2012	20		Yes	N	U			20	1.0	ug/kg
IJ12-03	12-7392-UR81A	Aroclor 1248	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-03	12-7392-UR81A	Aroclor 1260	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-03	12-7392-UR81A	Aroclor 1254	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-04	12-7396-UR81E	Aroclor 1254	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-04	12-7396-UR81E	Aroclor 1242	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-04	12-7396-UR81E	Aroclor 1016	5/8/2012	19		Yes	N	U			19	0.96	ug/kg
IJ12-04	12-7396-UR81E	Aroclor 1232	5/8/2012	19		Yes	N	U			19	1.3	ug/kg

Analytical Method SW8082

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-04	12-7396-UR81E	Aroclor 1221	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-04	12-7396-UR81E	Aroclor 1260	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-04	12-7396-UR81E	Aroclor 1248	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-05	12-7393-UR81B	Aroclor 1232	5/8/2012	20		Yes	N	U			20	1.4	ug/kg
IJ12-05	12-7393-UR81B	Aroclor 1248	5/8/2012	20		Yes	N	U			20	1.4	ug/kg
IJ12-05	12-7393-UR81B	Aroclor 1260	5/8/2012	20		Yes	N	U			20	1.4	ug/kg
IJ12-05	12-7393-UR81B	Aroclor 1254	5/8/2012	20		Yes	N	U			20	1.4	ug/kg
IJ12-05	12-7393-UR81B	Aroclor 1221	5/8/2012	20		Yes	N	U			20	1.4	ug/kg
IJ12-05	12-7393-UR81B	Aroclor 1242	5/8/2012	20		Yes	N	U			20	1.4	ug/kg
IJ12-05	12-7393-UR81B	Aroclor 1016	5/8/2012	20		Yes	N	U			20	1.0	ug/kg
IJ12-06	12-7394-UR81C	Aroclor 1242	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-06	12-7394-UR81C	Aroclor 1016	5/8/2012	19		Yes	N	U			19	0.98	ug/kg
IJ12-06	12-7394-UR81C	Aroclor 1260	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-06	12-7394-UR81C	Aroclor 1254	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-06	12-7394-UR81C	Aroclor 1221	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-06	12-7394-UR81C	Aroclor 1232	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-06	12-7394-UR81C	Aroclor 1248	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-07	12-7397-UR81F	Aroclor 1254	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-07	12-7397-UR81F	Aroclor 1242	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-07	12-7397-UR81F	Aroclor 1016	5/8/2012	19		Yes	N	U			19	0.98	ug/kg
IJ12-07	12-7397-UR81F	Aroclor 1248	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-07	12-7397-UR81F	Aroclor 1221	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-07	12-7397-UR81F	Aroclor 1232	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-07	12-7397-UR81F	Aroclor 1260	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-08A	12-7401-UR81J	Aroclor 1242	5/8/2012	19		Yes	N	U			19	1.3	ug/kg

Analytical Method SW8082

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-08A	12-7401-UR81J	Aroclor 1232	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-08A	12-7401-UR81J	Aroclor 1016	5/8/2012	19		Yes	N	U			19	0.98	ug/kg
IJ12-08A	12-7401-UR81J	Aroclor 1221	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-08A	12-7401-UR81J	Aroclor 1260	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-08A	12-7401-UR81J	Aroclor 1254	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-08A	12-7401-UR81J	Aroclor 1248	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-11	12-7400-UR81I	Aroclor 1221	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-11	12-7400-UR81I	Aroclor 1242	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-11	12-7400-UR81I	Aroclor 1232	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-11	12-7400-UR81I	Aroclor 1016	5/8/2012	20		Yes	N	U			20	1.0	ug/kg
IJ12-11	12-7400-UR81I	Aroclor 1260	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-11	12-7400-UR81I	Aroclor 1254	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-11	12-7400-UR81I	Aroclor 1248	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-58A	12-7399-UR81H	Aroclor 1260	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-58A	12-7399-UR81H	Aroclor 1254	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-58A	12-7399-UR81H	Aroclor 1221	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-58A	12-7399-UR81H	Aroclor 1232	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-58A	12-7399-UR81H	Aroclor 1248	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-58A	12-7399-UR81H	Aroclor 1242	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-58A	12-7399-UR81H	Aroclor 1016	5/8/2012	19		Yes	N	U			19	0.97	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Benzo(b,j,k)fluoranthenes	5/8/2012	850		Yes	Y				19	2.6	ug/kg
IJ12-01	12-7398-UR81G	Benzo(a)pyrene	5/8/2012	380		Yes	Y				19	5.1	ug/kg
IJ12-01	12-7398-UR81G	Acenaphthylene	5/8/2012	32		Yes	Y				19	5.4	ug/kg

SDG: UR81

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	1,2-Dichlorobenzene	5/8/2012	19		Yes	N	U			19	2.4	ug/kg
IJ12-01	12-7398-UR81G	Fluoranthene	5/8/2012	1400		Yes	Y				19	2.7	ug/kg
IJ12-01	12-7398-UR81G	Chrysene	5/8/2012	700		Yes	Y				19	3.5	ug/kg
IJ12-01	12-7398-UR81G	4-Methylphenol (p-Cresol)	5/8/2012	60		Yes	Y				38	6.2	ug/kg
IJ12-01	12-7398-UR81G	Indeno(1,2,3-c,d)pyrene	5/8/2012	180		Yes	Y				19	4.4	ug/kg
IJ12-01	12-7398-UR81G	Acenaphthene	5/8/2012	47		Yes	Y				19	3.1	ug/kg
IJ12-01	12-7398-UR81G	Benzoic acid	5/8/2012	210		Yes	Y	J			380	95	ug/kg
IJ12-01	12-7398-UR81G	Benzo(a)anthracene	5/8/2012	360		Yes	Y				19	3.1	ug/kg
IJ12-01	12-7398-UR81G	Dibenzo(a,h)anthracene	5/8/2012	74		Yes	Y				19	4.1	ug/kg
IJ12-01	12-7398-UR81G	Benzyl alcohol	5/8/2012	31		Yes	Y				19	5.7	ug/kg
IJ12-01	12-7398-UR81G	2,4-Dimethylphenol	5/8/2012	16		Yes	Y	J	J	10	38	3.3	ug/kg
IJ12-01	12-7398-UR81G	Diethyl phthalate	5/8/2012	47		Yes	N	U			47	34	ug/kg
IJ12-01	12-7398-UR81G	Di-n-butyl phthalate	5/8/2012	23		Yes	Y				19	7.7	ug/kg
IJ12-01	12-7398-UR81G	Phenanthrene	5/8/2012	650		Yes	Y				19	3.4	ug/kg
IJ12-01	12-7398-UR81G	N-Nitrosodiphenylamine	5/8/2012	19		Yes	N	U			19	5.1	ug/kg
IJ12-01	12-7398-UR81G	Fluorene	5/8/2012	72		Yes	Y		J	5	19	4.1	ug/kg
IJ12-01	12-7398-UR81G	Butylbenzyl phthalate	5/8/2012	19		Yes	N	U			19	5.8	ug/kg
IJ12-01	12-7398-UR81G	Pentachlorophenol	5/8/2012	190		Yes	N	U			190	46	ug/kg
IJ12-01	12-7398-UR81G	1,2,4-Trichlorobenzene	5/8/2012	19		Yes	N	U			19	3.3	ug/kg
IJ12-01	12-7398-UR81G	2-Methylnaphthalene	5/8/2012	76		Yes	Y				19	2.9	ug/kg
IJ12-01	12-7398-UR81G	Naphthalene	5/8/2012	130		Yes	Y				19	2.6	ug/kg
IJ12-01	12-7398-UR81G	Benzo(g,h,i)perylene	5/8/2012	180		Yes	Y				19	4.1	ug/kg
IJ12-01	12-7398-UR81G	Dibenzofuran	5/8/2012	66		Yes	Y				19	3.9	ug/kg
IJ12-01	12-7398-UR81G	Hexachlorobutadiene	5/8/2012	94		Yes	N	U			94	4.3	ug/kg
IJ12-01	12-7398-UR81G	Pyrene	5/8/2012	1100		Yes	Y				19	1.8	ug/kg

SDG: UR81

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	2-Methylphenol (o-Cresol)	5/8/2012	19		Yes	N	U			19	4.9	ug/kg
IJ12-01	12-7398-UR81G	Anthracene	5/8/2012	100		Yes	Y				19	4.2	ug/kg
IJ12-01	12-7398-UR81G	Hexachlorobenzene	5/8/2012	19		Yes	N	U			19	4.0	ug/kg
IJ12-01	12-7398-UR81G	Di-n-octyl phthalate	5/8/2012	21		Yes	Y				19	5.5	ug/kg
IJ12-01	12-7398-UR81G	Bis(2-ethylhexyl) phthalate	5/8/2012	320		Yes	Y	B			24	14	ug/kg
IJ12-01	12-7398-UR81G	Phenol	5/8/2012	56		Yes	Y				19	8.1	ug/kg
IJ12-01	12-7398-UR81G	1,4-Dichlorobenzene	5/8/2012	19		Yes	N	U			19	2.7	ug/kg
IJ12-01	12-7398-UR81G	Dimethyl phthalate	5/8/2012	40		Yes	Y	M			19	2.7	ug/kg
IJ12-02	12-7395-UR81D	Hexachlorobutadiene	5/8/2012	96		Yes	N	U			96	4.4	ug/kg
IJ12-02	12-7395-UR81D	Acenaphthylene	5/8/2012	19		Yes	N	U			19	5.5	ug/kg
IJ12-02	12-7395-UR81D	2,4-Dimethylphenol	5/8/2012	39		Yes	N	U	UJ	10	39	3.3	ug/kg
IJ12-02	12-7395-UR81D	1,4-Dichlorobenzene	5/8/2012	19		Yes	N	U			19	2.8	ug/kg
IJ12-02	12-7395-UR81D	Phenol	5/8/2012	18		Yes	Y	J			19	8.3	ug/kg
IJ12-02	12-7395-UR81D	Bis(2-ethylhexyl) phthalate	5/8/2012	100		Yes	N	B	U	7	24	14	ug/kg
IJ12-02	12-7395-UR81D	Di-n-octyl phthalate	5/8/2012	21		Yes	Y				19	5.6	ug/kg
IJ12-02	12-7395-UR81D	Hexachlorobenzene	5/8/2012	19		Yes	N	U			19	4.1	ug/kg
IJ12-02	12-7395-UR81D	Benzo(a)anthracene	5/8/2012	59		Yes	Y				19	3.2	ug/kg
IJ12-02	12-7395-UR81D	Dibenzo(a,h)anthracene	5/8/2012	12		Yes	Y	J			19	4.2	ug/kg
IJ12-02	12-7395-UR81D	Benzoic acid	5/8/2012	390		Yes	N	U			390	97	ug/kg
IJ12-02	12-7395-UR81D	Chrysene	5/8/2012	150		Yes	Y				19	3.6	ug/kg
IJ12-02	12-7395-UR81D	Benzyl alcohol	5/8/2012	19		Yes	Y				19	5.9	ug/kg
IJ12-02	12-7395-UR81D	Anthracene	5/8/2012	23		Yes	Y				19	4.3	ug/kg
IJ12-02	12-7395-UR81D	1,2,4-Trichlorobenzene	5/8/2012	19		Yes	N	U			19	3.4	ug/kg
IJ12-02	12-7395-UR81D	Pyrene	5/8/2012	160		Yes	Y				19	1.9	ug/kg
IJ12-02	12-7395-UR81D	Dimethyl phthalate	5/8/2012	19		Yes	N	U			19	2.8	ug/kg

SDG: UR81

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-02	12-7395-UR81D	Dibenzofuran	5/8/2012	14		Yes	Y	J			19	4.0	ug/kg
IJ12-02	12-7395-UR81D	Benzo(g,h,i)perylene	5/8/2012	47		Yes	Y				19	4.2	ug/kg
IJ12-02	12-7395-UR81D	Indeno(1,2,3-c,d)pyrene	5/8/2012	40		Yes	Y				19	4.5	ug/kg
IJ12-02	12-7395-UR81D	Fluoranthene	5/8/2012	170		Yes	Y				19	2.8	ug/kg
IJ12-02	12-7395-UR81D	Naphthalene	5/8/2012	23		Yes	Y				19	2.7	ug/kg
IJ12-02	12-7395-UR81D	Benzo(a)pyrene	5/8/2012	60		Yes	Y				19	5.3	ug/kg
IJ12-02	12-7395-UR81D	N-Nitrosodiphenylamine	5/8/2012	19		Yes	N	U			19	5.2	ug/kg
IJ12-02	12-7395-UR81D	4-Methylphenol (p-Cresol)	5/8/2012	44		Yes	Y				39	6.4	ug/kg
IJ12-02	12-7395-UR81D	Acenaphthene	5/8/2012	19		Yes	N	U			19	3.2	ug/kg
IJ12-02	12-7395-UR81D	1,2-Dichlorobenzene	5/8/2012	19		Yes	N	U			19	2.4	ug/kg
IJ12-02	12-7395-UR81D	2-Methylphenol (o-Cresol)	5/8/2012	19		Yes	N	U			19	5.1	ug/kg
IJ12-02	12-7395-UR81D	2-Methylnaphthalene	5/8/2012	15		Yes	Y	J			19	3.0	ug/kg
IJ12-02	12-7395-UR81D	Fluorene	5/8/2012	14		Yes	Y	J	J	5	19	4.2	ug/kg
IJ12-02	12-7395-UR81D	Benzo(b,j,k)fluoranthenes	5/8/2012	160		Yes	Y				19	2.7	ug/kg
IJ12-02	12-7395-UR81D	Butylbenzyl phthalate	5/8/2012	11		Yes	Y	J			19	5.9	ug/kg
IJ12-02	12-7395-UR81D	Phenanthrene	5/8/2012	76		Yes	Y				19	3.5	ug/kg
IJ12-02	12-7395-UR81D	Di-n-butyl phthalate	5/8/2012	19		Yes	N	U			19	7.9	ug/kg
IJ12-02	12-7395-UR81D	Diethyl phthalate	5/8/2012	48		Yes	N	U			48	35	ug/kg
IJ12-02	12-7395-UR81D	Pentachlorophenol	5/8/2012	190		Yes	N	U			190	47	ug/kg
IJ12-03	12-7392-UR81A	Benzo(a)pyrene	5/8/2012	76		Yes	Y				20	5.3	ug/kg
IJ12-03	12-7392-UR81A	Chrysene	5/8/2012	170		Yes	Y				20	3.6	ug/kg
IJ12-03	12-7392-UR81A	2-Methylnaphthalene	5/8/2012	27		Yes	Y				20	3.0	ug/kg
IJ12-03	12-7392-UR81A	Acenaphthylene	5/8/2012	12		Yes	Y	J			20	5.6	ug/kg
IJ12-03	12-7392-UR81A	1,2-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.4	ug/kg
IJ12-03	12-7392-UR81A	Fluoranthene	5/8/2012	220		Yes	Y				20	2.8	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-03	12-7392-UR81A	Indeno(1,2,3-c,d)pyrene	5/8/2012	51		Yes	Y				20	4.6	ug/kg
IJ12-03	12-7392-UR81A	Dibenzo(a,h)anthracene	5/8/2012	18		Yes	Y	J			20	4.2	ug/kg
IJ12-03	12-7392-UR81A	Benzo(a)anthracene	5/8/2012	80		Yes	Y				20	3.2	ug/kg
IJ12-03	12-7392-UR81A	Benzoic acid	5/8/2012	100		Yes	Y	J			390	98	ug/kg
IJ12-03	12-7392-UR81A	2-Methylphenol (o-Cresol)	5/8/2012	20		Yes	N	U			20	5.1	ug/kg
IJ12-03	12-7392-UR81A	Naphthalene	5/8/2012	47		Yes	Y				20	2.7	ug/kg
IJ12-03	12-7392-UR81A	Pentachlorophenol	5/8/2012	200		Yes	N	U			200	47	ug/kg
IJ12-03	12-7392-UR81A	Hexachlorobutadiene	5/8/2012	97		Yes	N	U			97	4.4	ug/kg
IJ12-03	12-7392-UR81A	Fluorene	5/8/2012	21		Yes	Y		J	5	20	4.2	ug/kg
IJ12-03	12-7392-UR81A	N-Nitrosodiphenylamine	5/8/2012	20		Yes	N	U			20	5.2	ug/kg
IJ12-03	12-7392-UR81A	Phenanthrene	5/8/2012	99		Yes	Y				20	3.5	ug/kg
IJ12-03	12-7392-UR81A	Benzo(g,h,i)perylene	5/8/2012	59		Yes	Y				20	4.3	ug/kg
IJ12-03	12-7392-UR81A	Di-n-octyl phthalate	5/8/2012	20		Yes	N	U			20	5.7	ug/kg
IJ12-03	12-7392-UR81A	Benzo(b,j,k)fluoranthenes	5/8/2012	200		Yes	Y				20	2.7	ug/kg
IJ12-03	12-7392-UR81A	Acenaphthene	5/8/2012	9.7		Yes	Y	J			20	3.2	ug/kg
IJ12-03	12-7392-UR81A	Diethyl phthalate	5/8/2012	49		Yes	N	U			49	36	ug/kg
IJ12-03	12-7392-UR81A	Di-n-butyl phthalate	5/8/2012	20		Yes	N	U			20	7.9	ug/kg
IJ12-03	12-7392-UR81A	Butylbenzyl phthalate	5/8/2012	15		Yes	Y	J			20	6.0	ug/kg
IJ12-03	12-7392-UR81A	1,4-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-03	12-7392-UR81A	Anthracene	5/8/2012	30		Yes	Y				20	4.4	ug/kg
IJ12-03	12-7392-UR81A	Dibenzofuran	5/8/2012	22		Yes	Y				20	4.0	ug/kg
IJ12-03	12-7392-UR81A	Benzyl alcohol	5/8/2012	32		Yes	Y				20	5.9	ug/kg
IJ12-03	12-7392-UR81A	4-Methylphenol (p-Cresol)	5/8/2012	54		Yes	Y				39	6.4	ug/kg
IJ12-03	12-7392-UR81A	Phenol	5/8/2012	34		Yes	Y				20	8.4	ug/kg
IJ12-03	12-7392-UR81A	1,2,4-Trichlorobenzene	5/8/2012	20		Yes	N	U			20	3.4	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-03	12-7392-UR81A	Dimethyl phthalate	5/8/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-03	12-7392-UR81A	Pyrene	5/8/2012	200		Yes	Y				20	1.9	ug/kg
IJ12-03	12-7392-UR81A	Hexachlorobenzene	5/8/2012	20		Yes	N	U			20	4.2	ug/kg
IJ12-03	12-7392-UR81A	Bis(2-ethylhexyl) phthalate	5/8/2012	100		Yes	N	B	U	7	24	14	ug/kg
IJ12-03	12-7392-UR81A	2,4-Dimethylphenol	5/8/2012	15		Yes	Y	J	J	10	39	3.4	ug/kg
IJ12-04	12-7396-UR81E	N-Nitrosodiphenylamine	5/8/2012	19		Yes	N	U			19	5.2	ug/kg
IJ12-04	12-7396-UR81E	Fluorene	5/8/2012	140		Yes	Y		J	5,9	19	4.2	ug/kg
IJ12-04	12-7396-UR81E	Hexachlorobutadiene	5/8/2012	97		Yes	N	U			97	4.4	ug/kg
IJ12-04	12-7396-UR81E	Benzo(g,h,i)perylene	5/8/2012	210		Yes	Y		J	8	19	4.3	ug/kg
IJ12-04	12-7396-UR81E	Dibenzofuran	5/8/2012	79		Yes	Y		J	8,9	19	4.0	ug/kg
IJ12-04	12-7396-UR81E	Dimethyl phthalate	5/8/2012	11		Yes	Y	J			19	2.8	ug/kg
IJ12-04	12-7396-UR81E	Pyrene	5/8/2012	3900		No	Y	E	R	22	19	1.9	ug/kg
IJ12-04	12-7396-UR81E	Anthracene	5/8/2012	160		Yes	Y				19	4.4	ug/kg
IJ12-04	12-7396-UR81E	Butylbenzyl phthalate	5/8/2012	19		Yes	N	U			19	5.9	ug/kg
IJ12-04	12-7396-UR81E	Chrysene	5/8/2012	2000		No	Y	E	R	22	19	3.6	ug/kg
IJ12-04	12-7396-UR81E	Hexachlorobenzene	5/8/2012	19		Yes	N	U			19	4.2	ug/kg
IJ12-04	12-7396-UR81E	Di-n-octyl phthalate	5/8/2012	19		Yes	N	U			19	5.7	ug/kg
IJ12-04	12-7396-UR81E	Bis(2-ethylhexyl) phthalate	5/8/2012	320		Yes	Y	B	J	8	24	14	ug/kg
IJ12-04	12-7396-UR81E	Phenol	5/8/2012	140		Yes	Y				19	8.4	ug/kg
IJ12-04	12-7396-UR81E	1,4-Dichlorobenzene	5/8/2012	19		Yes	N	U	UJ	8	19	2.8	ug/kg
IJ12-04	12-7396-UR81E	4-Methylphenol (p-Cresol)	5/8/2012	18		Yes	Y	J			39	6.4	ug/kg
IJ12-04	12-7396-UR81E	2,4-Dimethylphenol	5/8/2012	39		Yes	N	U	UJ	10	39	3.3	ug/kg
IJ12-04	12-7396-UR81E	1,2,4-Trichlorobenzene	5/8/2012	19		Yes	N	U			19	3.4	ug/kg
IJ12-04	12-7396-UR81E	Benzo(a)anthracene	5/8/2012	560		Yes	Y				19	3.2	ug/kg
IJ12-04	12-7396-UR81E	Benzyl alcohol	5/8/2012	13		Yes	Y	J			19	5.9	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-04	12-7396-UR81E	Pentachlorophenol	5/8/2012	190		Yes	N	U			190	47	ug/kg
IJ12-04	12-7396-UR81E	Naphthalene	5/8/2012	28		Yes	Y		J	8,9	19	2.7	ug/kg
IJ12-04	12-7396-UR81E	2-Methylnaphthalene	5/8/2012	28		Yes	Y		J	9	19	3.0	ug/kg
IJ12-04	12-7396-UR81E	2-Methylphenol (o-Cresol)	5/8/2012	19		Yes	N	U			19	5.1	ug/kg
IJ12-04	12-7396-UR81E	1,2-Dichlorobenzene	5/8/2012	19		Yes	N	U			19	2.4	ug/kg
IJ12-04	12-7396-UR81E	Benzo(b,j,k)fluoranthenes	5/8/2012	2000		Yes	Y		J	8	19	2.7	ug/kg
IJ12-04	12-7396-UR81E	Fluoranthene	5/8/2012	6400		No	Y	E	R	22	19	2.8	ug/kg
IJ12-04	12-7396-UR81E	Benzoic acid	5/8/2012	390		Yes	N	U	UJ	8	390	98	ug/kg
IJ12-04	12-7396-UR81E	Dibenzo(a,h)anthracene	5/8/2012	68		Yes	Y				19	4.2	ug/kg
IJ12-04	12-7396-UR81E	Benzo(a)pyrene	5/8/2012	400		Yes	Y				19	5.3	ug/kg
IJ12-04	12-7396-UR81E	Acenaphthylene	5/8/2012	77		Yes	Y				19	5.5	ug/kg
IJ12-04	12-7396-UR81E	Diethyl phthalate	5/8/2012	48		Yes	N	U			48	35	ug/kg
IJ12-04	12-7396-UR81E	Di-n-butyl phthalate	5/8/2012	37		Yes	Y				19	7.9	ug/kg
IJ12-04	12-7396-UR81E	Indeno(1,2,3-c,d)pyrene	5/8/2012	220		Yes	Y				19	4.5	ug/kg
IJ12-04	12-7396-UR81E	Phenanthrene	5/8/2012	2000		No	Y	E	R	22	19	3.5	ug/kg
IJ12-04	12-7396-UR81E	Acenaphthene	5/8/2012	68		Yes	Y		J	9	19	3.2	ug/kg
IJ12-04	12-7396-UR81ED	Fluorene	5/9/2012	130		No	Y		R	22	97	21	ug/kg
IJ12-04	12-7396-UR81ED	1,2,4-Trichlorobenzene	5/9/2012	97		No	N	U	R	22	97	17	ug/kg
IJ12-04	12-7396-UR81ED	4-Methylphenol (p-Cresol)	5/9/2012	190		No	N	U	R	22	190	32	ug/kg
IJ12-04	12-7396-UR81ED	Fluoranthene	5/9/2012	6500		Yes	Y				97	14	ug/kg
IJ12-04	12-7396-UR81ED	Indeno(1,2,3-c,d)pyrene	5/9/2012	240		No	Y		R	22	97	23	ug/kg
IJ12-04	12-7396-UR81ED	Benzo(g,h,i)perylene	5/9/2012	250		No	Y		R	22	97	21	ug/kg
IJ12-04	12-7396-UR81ED	Dibenzofuran	5/9/2012	77		No	Y	J	R	22	97	20	ug/kg
IJ12-04	12-7396-UR81ED	Chrysene	5/9/2012	2000		Yes	Y				97	18	ug/kg
IJ12-04	12-7396-UR81ED	Pyrene	5/9/2012	3900		Yes	Y				97	9.4	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-04	12-7396-UR81ED	Benzo(a)pyrene	5/9/2012	390		No	Y		R	22	97	26	ug/kg
IJ12-04	12-7396-UR81ED	Anthracene	5/9/2012	140		No	Y		R	22	97	22	ug/kg
IJ12-04	12-7396-UR81ED	Hexachlorobenzene	5/9/2012	97		No	N	U	R	22	97	21	ug/kg
IJ12-04	12-7396-UR81ED	Di-n-octyl phthalate	5/9/2012	97		No	N	U	R	22	97	28	ug/kg
IJ12-04	12-7396-UR81ED	Bis(2-ethylhexyl) phthalate	5/9/2012	320		No	Y	B	R	22	120	71	ug/kg
IJ12-04	12-7396-UR81ED	Phenol	5/9/2012	120		No	Y		R	22	97	42	ug/kg
IJ12-04	12-7396-UR81ED	1,4-Dichlorobenzene	5/9/2012	97		No	N	U	R	22	97	14	ug/kg
IJ12-04	12-7396-UR81ED	Dimethyl phthalate	5/9/2012	97		No	N	U	R	22	97	14	ug/kg
IJ12-04	12-7396-UR81ED	N-Nitrosodiphenylamine	5/9/2012	97		No	N	U	R	22	97	26	ug/kg
IJ12-04	12-7396-UR81ED	Benzo(b,j,k)fluoranthenes	5/9/2012	1900		No	Y		R	22	97	13	ug/kg
IJ12-04	12-7396-UR81ED	1,2-Dichlorobenzene	5/9/2012	97		No	N	U	R	22	97	12	ug/kg
IJ12-04	12-7396-UR81ED	2-Methylphenol (o-Cresol)	5/9/2012	97		No	N	U	R	22	97	25	ug/kg
IJ12-04	12-7396-UR81ED	2-Methylnaphthalene	5/9/2012	97		No	N	U	R	22	97	15	ug/kg
IJ12-04	12-7396-UR81ED	Naphthalene	5/9/2012	97		No	N	U	R	22	97	13	ug/kg
IJ12-04	12-7396-UR81ED	Acenaphthylene	5/9/2012	73		No	Y	J	R	22	97	28	ug/kg
IJ12-04	12-7396-UR81ED	Hexachlorobutadiene	5/9/2012	480		No	N	U	R	22	480	22	ug/kg
IJ12-04	12-7396-UR81ED	Di-n-butyl phthalate	5/9/2012	97		No	N	U	R	22	97	39	ug/kg
IJ12-04	12-7396-UR81ED	Phenanthrene	5/9/2012	1900		Yes	Y				97	18	ug/kg
IJ12-04	12-7396-UR81ED	Diethyl phthalate	5/9/2012	240		No	N	U	R	22	240	180	ug/kg
IJ12-04	12-7396-UR81ED	Acenaphthene	5/9/2012	68		No	Y	J	R	22	97	16	ug/kg
IJ12-04	12-7396-UR81ED	Benzoic acid	5/9/2012	1900		No	N	U	R	22	1900	490	ug/kg
IJ12-04	12-7396-UR81ED	Benzo(a)anthracene	5/9/2012	530		No	Y		R	22	97	16	ug/kg
IJ12-04	12-7396-UR81ED	Dibenzo(a,h)anthracene	5/9/2012	73		No	Y	J	R	22	97	21	ug/kg
IJ12-04	12-7396-UR81ED	Pentachlorophenol	5/9/2012	970		No	N	U	R	22	970	230	ug/kg
IJ12-04	12-7396-UR81ED	Benzyl alcohol	5/9/2012	97		No	N	U	R	22	97	29	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-04	12-7396-UR81ED	Butylbenzyl phthalate	5/9/2012	97		No	N	U	R	22	97	30	ug/kg
IJ12-04	12-7396-UR81ED	2,4-Dimethylphenol	5/9/2012	190		No	N	U	R	22	190	17	ug/kg
IJ12-05	12-7393-UR81B	N-Nitrosodiphenylamine	5/8/2012	20		Yes	N	U			20	5.3	ug/kg
IJ12-05	12-7393-UR81B	Benzo(a)anthracene	5/8/2012	57		Yes	Y				20	3.2	ug/kg
IJ12-05	12-7393-UR81B	Dibenzo(a,h)anthracene	5/8/2012	12		Yes	Y	J			20	4.2	ug/kg
IJ12-05	12-7393-UR81B	Benzo(a)pyrene	5/8/2012	46		Yes	Y				20	5.3	ug/kg
IJ12-05	12-7393-UR81B	Acenaphthene	5/8/2012	20		Yes	N	U			20	3.2	ug/kg
IJ12-05	12-7393-UR81B	Benzoic acid	5/8/2012	390		Yes	N	U			390	99	ug/kg
IJ12-05	12-7393-UR81B	Diethyl phthalate	5/8/2012	49		Yes	N	U			49	36	ug/kg
IJ12-05	12-7393-UR81B	Di-n-butyl phthalate	5/8/2012	20		Yes	N	U			20	8.0	ug/kg
IJ12-05	12-7393-UR81B	Butylbenzyl phthalate	5/8/2012	12		Yes	Y	J			20	6.0	ug/kg
IJ12-05	12-7393-UR81B	Benzyl alcohol	5/8/2012	16		Yes	Y	J			20	6.0	ug/kg
IJ12-05	12-7393-UR81B	Fluorene	5/8/2012	13		Yes	Y	J	J	5	20	4.3	ug/kg
IJ12-05	12-7393-UR81B	2-Methylphenol (o-Cresol)	5/8/2012	20		Yes	N	U			20	5.1	ug/kg
IJ12-05	12-7393-UR81B	2-Methylnaphthalene	5/8/2012	14		Yes	Y	J			20	3.0	ug/kg
IJ12-05	12-7393-UR81B	Naphthalene	5/8/2012	20		Yes	Y				20	2.7	ug/kg
IJ12-05	12-7393-UR81B	Pentachlorophenol	5/8/2012	200		Yes	N	U			200	47	ug/kg
IJ12-05	12-7393-UR81B	Hexachlorobutadiene	5/8/2012	98		Yes	N	U			98	4.5	ug/kg
IJ12-05	12-7393-UR81B	Phenanthrene	5/8/2012	48		Yes	Y				20	3.6	ug/kg
IJ12-05	12-7393-UR81B	Anthracene	5/8/2012	22		Yes	Y				20	4.4	ug/kg
IJ12-05	12-7393-UR81B	Chrysene	5/8/2012	150		Yes	Y				20	3.7	ug/kg
IJ12-05	12-7393-UR81B	Acenaphthylene	5/8/2012	20		Yes	N	U			20	5.6	ug/kg
IJ12-05	12-7393-UR81B	Fluoranthene	5/8/2012	190		Yes	Y				20	2.8	ug/kg
IJ12-05	12-7393-UR81B	Indeno(1,2,3-c,d)pyrene	5/8/2012	27		Yes	Y				20	4.6	ug/kg
IJ12-05	12-7393-UR81B	Benzo(g,h,i)perylene	5/8/2012	31		Yes	Y				20	4.3	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-05	12-7393-UR81B	Dibenzofuran	5/8/2012	13		Yes	Y	J			20	4.0	ug/kg
IJ12-05	12-7393-UR81B	Dimethyl phthalate	5/8/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-05	12-7393-UR81B	1,2-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.4	ug/kg
IJ12-05	12-7393-UR81B	1,2,4-Trichlorobenzene	5/8/2012	20		Yes	N	U			20	3.4	ug/kg
IJ12-05	12-7393-UR81B	Benzo(b,j,k)fluoranthenes	5/8/2012	140		Yes	Y				20	2.7	ug/kg
IJ12-05	12-7393-UR81B	Hexachlorobenzene	5/8/2012	20		Yes	N	U			20	4.2	ug/kg
IJ12-05	12-7393-UR81B	Di-n-octyl phthalate	5/8/2012	20		Yes	N	U			20	5.7	ug/kg
IJ12-05	12-7393-UR81B	Bis(2-ethylhexyl) phthalate	5/8/2012	500		Yes	Y	B			24	14	ug/kg
IJ12-05	12-7393-UR81B	Phenol	5/8/2012	17		Yes	Y	J			20	8.5	ug/kg
IJ12-05	12-7393-UR81B	1,4-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-05	12-7393-UR81B	4-Methylphenol (p-Cresol)	5/8/2012	35		Yes	Y	J			39	6.5	ug/kg
IJ12-05	12-7393-UR81B	2,4-Dimethylphenol	5/8/2012	39		Yes	N	U	UJ	10	39	3.4	ug/kg
IJ12-05	12-7393-UR81B	Pyrene	5/8/2012	160		Yes	Y				20	1.9	ug/kg
IJ12-06	12-7394-UR81C	2-Methylphenol (o-Cresol)	5/8/2012	20		Yes	N	U			20	5.1	ug/kg
IJ12-06	12-7394-UR81C	Di-n-octyl phthalate	5/8/2012	20		Yes	N	U			20	5.7	ug/kg
IJ12-06	12-7394-UR81C	Bis(2-ethylhexyl) phthalate	5/8/2012	71		Yes	N	B	U	7	24	14	ug/kg
IJ12-06	12-7394-UR81C	Phenol	5/8/2012	22		Yes	Y				20	8.4	ug/kg
IJ12-06	12-7394-UR81C	1,4-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-06	12-7394-UR81C	4-Methylphenol (p-Cresol)	5/8/2012	44		Yes	Y				39	6.5	ug/kg
IJ12-06	12-7394-UR81C	2,4-Dimethylphenol	5/8/2012	39		Yes	N	U	UJ	10	39	3.4	ug/kg
IJ12-06	12-7394-UR81C	Dibenzo(a,h)anthracene	5/8/2012	20		Yes	N	U			20	4.2	ug/kg
IJ12-06	12-7394-UR81C	Benzo(g,h,i)perylene	5/8/2012	28		Yes	Y				20	4.3	ug/kg
IJ12-06	12-7394-UR81C	1,2-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.4	ug/kg
IJ12-06	12-7394-UR81C	Benzo(b,j,k)fluoranthenes	5/8/2012	97		Yes	Y				20	2.7	ug/kg
IJ12-06	12-7394-UR81C	Benzyl alcohol	5/8/2012	20		Yes	Y				20	5.9	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-06	12-7394-UR81C	Pentachlorophenol	5/8/2012	200	Yes	N	U			200	47	ug/kg
IJ12-06	12-7394-UR81C	Acenaphthene	5/8/2012	20	Yes	N	U			20	3.2	ug/kg
IJ12-06	12-7394-UR81C	Diethyl phthalate	5/8/2012	49	Yes	N	U			49	36	ug/kg
IJ12-06	12-7394-UR81C	Di-n-butyl phthalate	5/8/2012	20	Yes	N	U			20	8.0	ug/kg
IJ12-06	12-7394-UR81C	Phenanthrene	5/8/2012	60	Yes	Y				20	3.6	ug/kg
IJ12-06	12-7394-UR81C	Butylbenzyl phthalate	5/8/2012	20	Yes	N	U			20	6.0	ug/kg
IJ12-06	12-7394-UR81C	N-Nitrosodiphenylamine	5/8/2012	20	Yes	N	U			20	5.3	ug/kg
IJ12-06	12-7394-UR81C	Dibenzofuran	5/8/2012	15	Yes	Y	J			20	4.0	ug/kg
IJ12-06	12-7394-UR81C	Hexachlorobutadiene	5/8/2012	98	Yes	N	U			98	4.5	ug/kg
IJ12-06	12-7394-UR81C	Hexachlorobenzene	5/8/2012	20	Yes	N	U			20	4.2	ug/kg
IJ12-06	12-7394-UR81C	Naphthalene	5/8/2012	23	Yes	Y				20	2.7	ug/kg
IJ12-06	12-7394-UR81C	2-Methylnaphthalene	5/8/2012	16	Yes	Y	J			20	3.0	ug/kg
IJ12-06	12-7394-UR81C	Dimethyl phthalate	5/8/2012	20	Yes	N	U			20	2.8	ug/kg
IJ12-06	12-7394-UR81C	Anthracene	5/8/2012	22	Yes	Y				20	4.4	ug/kg
IJ12-06	12-7394-UR81C	1,2,4-Trichlorobenzene	5/8/2012	20	Yes	N	U			20	3.4	ug/kg
IJ12-06	12-7394-UR81C	Fluorene	5/8/2012	16	Yes	Y	J	J	5	20	4.2	ug/kg
IJ12-06	12-7394-UR81C	Pyrene	5/8/2012	110	Yes	Y				20	1.9	ug/kg
IJ12-06	12-7394-UR81C	Benzo(a)anthracene	5/8/2012	49	Yes	Y				20	3.2	ug/kg
IJ12-06	12-7394-UR81C	Benzoic acid	5/8/2012	390	Yes	N	U			390	99	ug/kg
IJ12-06	12-7394-UR81C	Benzo(a)pyrene	5/8/2012	38	Yes	Y				20	5.3	ug/kg
IJ12-06	12-7394-UR81C	Indeno(1,2,3-c,d)pyrene	5/8/2012	22	Yes	Y				20	4.6	ug/kg
IJ12-06	12-7394-UR81C	Fluoranthene	5/8/2012	130	Yes	Y				20	2.8	ug/kg
IJ12-06	12-7394-UR81C	Acenaphthylene	5/8/2012	20	Yes	N	U			20	5.6	ug/kg
IJ12-06	12-7394-UR81C	Chrysene	5/8/2012	84	Yes	Y				20	3.7	ug/kg
IJ12-07	12-7397-UR81F	Phenol	5/8/2012	35	Yes	Y				20	8.6	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-07	12-7397-UR81F	Benzyl alcohol	5/8/2012	34		Yes	Y				20	6.0	ug/kg
IJ12-07	12-7397-UR81F	2,4-Dimethylphenol	5/8/2012	15		Yes	Y	J	J	10	40	3.4	ug/kg
IJ12-07	12-7397-UR81F	4-Methylphenol (p-Cresol)	5/8/2012	50		Yes	Y				40	6.6	ug/kg
IJ12-07	12-7397-UR81F	1,4-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-07	12-7397-UR81F	2-Methylnaphthalene	5/8/2012	24		Yes	Y				20	3.0	ug/kg
IJ12-07	12-7397-UR81F	Dibenzo(a,h)anthracene	5/8/2012	20		Yes	N	U			20	4.3	ug/kg
IJ12-07	12-7397-UR81F	Benzo(b,j,k)fluoranthenes	5/8/2012	140		Yes	Y				20	2.7	ug/kg
IJ12-07	12-7397-UR81F	1,2-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.5	ug/kg
IJ12-07	12-7397-UR81F	2-Methylphenol (o-Cresol)	5/8/2012	20		Yes	N	U			20	5.2	ug/kg
IJ12-07	12-7397-UR81F	Benzo(a)pyrene	5/8/2012	42		Yes	Y				20	5.4	ug/kg
IJ12-07	12-7397-UR81F	Naphthalene	5/8/2012	38		Yes	Y				20	2.7	ug/kg
IJ12-07	12-7397-UR81F	Hexachlorobutadiene	5/8/2012	99		Yes	N	U			99	4.5	ug/kg
IJ12-07	12-7397-UR81F	Fluorene	5/8/2012	21		Yes	Y		J	5	20	4.3	ug/kg
IJ12-07	12-7397-UR81F	N-Nitrosodiphenylamine	5/8/2012	20		Yes	N	U			20	5.3	ug/kg
IJ12-07	12-7397-UR81F	Butylbenzyl phthalate	5/8/2012	20		Yes	N	U			20	6.1	ug/kg
IJ12-07	12-7397-UR81F	Phenanthrene	5/8/2012	72		Yes	Y				20	3.6	ug/kg
IJ12-07	12-7397-UR81F	Di-n-butyl phthalate	5/8/2012	20		Yes	N	U			20	8.1	ug/kg
IJ12-07	12-7397-UR81F	Diethyl phthalate	5/8/2012	50		Yes	N	U			50	36	ug/kg
IJ12-07	12-7397-UR81F	Pentachlorophenol	5/8/2012	200		Yes	N	U			200	48	ug/kg
IJ12-07	12-7397-UR81F	Benzoic acid	5/8/2012	400		Yes	N	U			400	100	ug/kg
IJ12-07	12-7397-UR81F	Bis(2-ethylhexyl) phthalate	5/8/2012	51		Yes	N	B	U	7	25	14	ug/kg
IJ12-07	12-7397-UR81F	Chrysene	5/8/2012	130		Yes	Y				20	3.7	ug/kg
IJ12-07	12-7397-UR81F	Acenaphthylene	5/8/2012	11		Yes	Y	J			20	5.6	ug/kg
IJ12-07	12-7397-UR81F	Fluoranthene	5/8/2012	210		Yes	Y				20	2.9	ug/kg
IJ12-07	12-7397-UR81F	Indeno(1,2,3-c,d)pyrene	5/8/2012	22		Yes	Y				20	4.6	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-07	12-7397-UR81F	Benzo(g,h,i)perylene	5/8/2012	22		Yes	Y				20	4.4	ug/kg
IJ12-07	12-7397-UR81F	Dibenzofuran	5/8/2012	23		Yes	Y				20	4.1	ug/kg
IJ12-07	12-7397-UR81F	Dimethyl phthalate	5/8/2012	20		Yes	N	U			20	2.9	ug/kg
IJ12-07	12-7397-UR81F	Pyrene	5/8/2012	170		Yes	Y				20	1.9	ug/kg
IJ12-07	12-7397-UR81F	1,2,4-Trichlorobenzene	5/8/2012	20		Yes	N	U			20	3.4	ug/kg
IJ12-07	12-7397-UR81F	Anthracene	5/8/2012	29		Yes	Y				20	4.5	ug/kg
IJ12-07	12-7397-UR81F	Hexachlorobenzene	5/8/2012	20		Yes	N	U			20	4.2	ug/kg
IJ12-07	12-7397-UR81F	Di-n-octyl phthalate	5/8/2012	20		Yes	N	U			20	5.8	ug/kg
IJ12-07	12-7397-UR81F	Acenaphthene	5/8/2012	11		Yes	Y	J			20	3.2	ug/kg
IJ12-07	12-7397-UR81F	Benzo(a)anthracene	5/8/2012	59		Yes	Y				20	3.3	ug/kg
IJ12-08A	12-7401-UR81J	Anthracene	5/9/2012	38		Yes	Y				19	4.3	ug/kg
IJ12-08A	12-7401-UR81J	Benzyl alcohol	5/9/2012	14		Yes	Y	J			19	5.9	ug/kg
IJ12-08A	12-7401-UR81J	Fluoranthene	5/9/2012	210		Yes	Y				19	2.8	ug/kg
IJ12-08A	12-7401-UR81J	Benzo(g,h,i)perylene	5/9/2012	25		Yes	Y				19	4.2	ug/kg
IJ12-08A	12-7401-UR81J	Dibenzofuran	5/9/2012	19		Yes	Y				19	3.9	ug/kg
IJ12-08A	12-7401-UR81J	Dimethyl phthalate	5/9/2012	54		Yes	Y				19	2.8	ug/kg
IJ12-08A	12-7401-UR81J	Benzo(a)pyrene	5/9/2012	60		Yes	Y				19	5.3	ug/kg
IJ12-08A	12-7401-UR81J	1,2,4-Trichlorobenzene	5/9/2012	19		Yes	N	U			19	3.4	ug/kg
IJ12-08A	12-7401-UR81J	Dibenzo(a,h)anthracene	5/9/2012	11		Yes	Y	J			19	4.2	ug/kg
IJ12-08A	12-7401-UR81J	Hexachlorobenzene	5/9/2012	19		Yes	N	U			19	4.1	ug/kg
IJ12-08A	12-7401-UR81J	Di-n-octyl phthalate	5/9/2012	19		Yes	N	U			19	5.6	ug/kg
IJ12-08A	12-7401-UR81J	Bis(2-ethylhexyl) phthalate	5/9/2012	100		Yes	N	B	U	7	24	14	ug/kg
IJ12-08A	12-7401-UR81J	Phenol	5/9/2012	27		Yes	Y				19	8.3	ug/kg
IJ12-08A	12-7401-UR81J	1,4-Dichlorobenzene	5/9/2012	19		Yes	N	U			19	2.8	ug/kg
IJ12-08A	12-7401-UR81J	4-Methylphenol (p-Cresol)	5/9/2012	45		Yes	Y				38	6.4	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-08A	12-7401-UR81J	2,4-Dimethylphenol	5/9/2012	12		Yes	Y	J	J	10	38	3.3	ug/kg
IJ12-08A	12-7401-UR81J	Pyrene	5/9/2012	230		Yes	Y				19	1.9	ug/kg
IJ12-08A	12-7401-UR81J	N-Nitrosodiphenylamine	5/9/2012	19		Yes	N	U			19	5.2	ug/kg
IJ12-08A	12-7401-UR81J	Benzo(b,j,k)fluoranthenes	5/9/2012	190		Yes	Y				19	2.6	ug/kg
IJ12-08A	12-7401-UR81J	1,2-Dichlorobenzene	5/9/2012	19		Yes	N	U			19	2.4	ug/kg
IJ12-08A	12-7401-UR81J	2-Methylphenol (o-Cresol)	5/9/2012	38		Yes	Y				19	5.1	ug/kg
IJ12-08A	12-7401-UR81J	2-Methylnaphthalene	5/9/2012	19		Yes	Y				19	2.9	ug/kg
IJ12-08A	12-7401-UR81J	Naphthalene	5/9/2012	28		Yes	Y				19	2.7	ug/kg
IJ12-08A	12-7401-UR81J	Pentachlorophenol	5/9/2012	190		Yes	N	U			190	47	ug/kg
IJ12-08A	12-7401-UR81J	Chrysene	5/9/2012	170		Yes	Y				19	3.6	ug/kg
IJ12-08A	12-7401-UR81J	Fluorene	5/9/2012	19		Yes	Y		J	5	19	4.2	ug/kg
IJ12-08A	12-7401-UR81J	Indeno(1,2,3-c,d)pyrene	5/9/2012	24		Yes	Y				19	4.5	ug/kg
IJ12-08A	12-7401-UR81J	Butylbenzyl phthalate	5/9/2012	19		Yes	N	U			19	5.9	ug/kg
IJ12-08A	12-7401-UR81J	Phenanthrene	5/9/2012	95		Yes	Y				19	3.5	ug/kg
IJ12-08A	12-7401-UR81J	Di-n-butyl phthalate	5/9/2012	19		Yes	N	U			19	7.9	ug/kg
IJ12-08A	12-7401-UR81J	Diethyl phthalate	5/9/2012	48		Yes	N	U			48	35	ug/kg
IJ12-08A	12-7401-UR81J	Acenaphthene	5/9/2012	19		Yes	N	U			19	3.2	ug/kg
IJ12-08A	12-7401-UR81J	Benzoic acid	5/9/2012	380		Yes	N	U			380	97	ug/kg
IJ12-08A	12-7401-UR81J	Benzo(a)anthracene	5/9/2012	76		Yes	Y				19	3.2	ug/kg
IJ12-08A	12-7401-UR81J	Hexachlorobutadiene	5/9/2012	96		Yes	N	U			96	4.4	ug/kg
IJ12-08A	12-7401-UR81J	Acenaphthylene	5/9/2012	11		Yes	Y	J			19	5.5	ug/kg
IJ12-11	12-7400-UR81I	Benzo(a)anthracene	5/9/2012	24		Yes	Y				20	3.2	ug/kg
IJ12-11	12-7400-UR81I	Dibenzofuran	5/9/2012	20		Yes	Y				20	4.0	ug/kg
IJ12-11	12-7400-UR81I	N-Nitrosodiphenylamine	5/9/2012	20		Yes	N	U			20	5.3	ug/kg
IJ12-11	12-7400-UR81I	Phenanthrene	5/9/2012	55		Yes	Y				20	3.6	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-11	12-7400-UR81I	Di-n-butyl phthalate	5/9/2012	20		Yes	N	U			20	8.0	ug/kg
IJ12-11	12-7400-UR81I	Diethyl phthalate	5/9/2012	49		Yes	N	U			49	36	ug/kg
IJ12-11	12-7400-UR81I	Pentachlorophenol	5/9/2012	200		Yes	N	U			200	47	ug/kg
IJ12-11	12-7400-UR81I	Benzoic acid	5/9/2012	390		Yes	N	U			390	99	ug/kg
IJ12-11	12-7400-UR81I	Naphthalene	5/9/2012	51		Yes	Y				20	2.7	ug/kg
IJ12-11	12-7400-UR81I	Dibenzo(a,h)anthracene	5/9/2012	20		Yes	N	U			20	4.2	ug/kg
IJ12-11	12-7400-UR81I	Benzo(a)pyrene	5/9/2012	19		Yes	Y	J			20	5.3	ug/kg
IJ12-11	12-7400-UR81I	Chrysene	5/9/2012	49		Yes	Y				20	3.7	ug/kg
IJ12-11	12-7400-UR81I	Acenaphthylene	5/9/2012	20		Yes	N	U			20	5.6	ug/kg
IJ12-11	12-7400-UR81I	Fluoranthene	5/9/2012	91		Yes	Y				20	2.8	ug/kg
IJ12-11	12-7400-UR81I	Indeno(1,2,3-c,d)pyrene	5/9/2012	20		Yes	N	U			20	4.6	ug/kg
IJ12-11	12-7400-UR81I	Benzo(g,h,i)perylene	5/9/2012	11		Yes	Y	J			20	4.3	ug/kg
IJ12-11	12-7400-UR81I	Acenaphthene	5/9/2012	20		Yes	N	U			20	3.2	ug/kg
IJ12-11	12-7400-UR81I	1,4-Dichlorobenzene	5/9/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-11	12-7400-UR81I	Dimethyl phthalate	5/9/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-11	12-7400-UR81I	Pyrene	5/9/2012	78		Yes	Y				20	1.9	ug/kg
IJ12-11	12-7400-UR81I	1,2,4-Trichlorobenzene	5/9/2012	20		Yes	N	U			20	3.4	ug/kg
IJ12-11	12-7400-UR81I	Anthracene	5/9/2012	27		Yes	Y				20	4.4	ug/kg
IJ12-11	12-7400-UR81I	Hexachlorobenzene	5/9/2012	20		Yes	N	U			20	4.2	ug/kg
IJ12-11	12-7400-UR81I	Di-n-octyl phthalate	5/9/2012	20		Yes	N	U			20	5.7	ug/kg
IJ12-11	12-7400-UR81I	Hexachlorobutadiene	5/9/2012	98		Yes	N	U			98	4.5	ug/kg
IJ12-11	12-7400-UR81I	Phenol	5/9/2012	52		Yes	Y				20	8.5	ug/kg
IJ12-11	12-7400-UR81I	Butylbenzyl phthalate	5/9/2012	20		Yes	N	U			20	6.0	ug/kg
IJ12-11	12-7400-UR81I	4-Methylphenol (p-Cresol)	5/9/2012	50		Yes	Y				39	6.5	ug/kg
IJ12-11	12-7400-UR81I	2,4-Dimethylphenol	5/9/2012	15		Yes	Y	J	J	10	39	3.4	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-11	12-7400-UR81I	Benzyl alcohol	5/9/2012	33		Yes	Y				20	6.0	ug/kg
IJ12-11	12-7400-UR81I	Benzo(b,j,k)fluoranthenes	5/9/2012	55		Yes	Y				20	2.7	ug/kg
IJ12-11	12-7400-UR81I	1,2-Dichlorobenzene	5/9/2012	20		Yes	N	U			20	2.4	ug/kg
IJ12-11	12-7400-UR81I	2-Methylphenol (o-Cresol)	5/9/2012	20		Yes	N	U			20	5.1	ug/kg
IJ12-11	12-7400-UR81I	2-Methylnaphthalene	5/9/2012	29		Yes	Y				20	3.0	ug/kg
IJ12-11	12-7400-UR81I	Bis(2-ethylhexyl) phthalate	5/9/2012	37		Yes	N	B	U	7	24	14	ug/kg
IJ12-11	12-7400-UR81I	Fluorene	5/9/2012	18		Yes	Y	J	J	5	20	4.3	ug/kg
IJ12-58A	12-7399-UR81H	1,2-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.5	ug/kg
IJ12-58A	12-7399-UR81H	1,4-Dichlorobenzene	5/8/2012	20		Yes	N	U			20	2.8	ug/kg
IJ12-58A	12-7399-UR81H	4-Methylphenol (p-Cresol)	5/8/2012	94		Yes	Y				39	6.5	ug/kg
IJ12-58A	12-7399-UR81H	2,4-Dimethylphenol	5/8/2012	26		Yes	Y	J	J	10	39	3.4	ug/kg
IJ12-58A	12-7399-UR81H	Benzyl alcohol	5/8/2012	46		Yes	Y				20	6.0	ug/kg
IJ12-58A	12-7399-UR81H	Diethyl phthalate	5/8/2012	49		Yes	N	U			49	36	ug/kg
IJ12-58A	12-7399-UR81H	Bis(2-ethylhexyl) phthalate	5/8/2012	160		Yes	N	B	U	7	25	14	ug/kg
IJ12-58A	12-7399-UR81H	Phenanthrene	5/8/2012	1300		Yes	Y				20	3.6	ug/kg
IJ12-58A	12-7399-UR81H	Di-n-octyl phthalate	5/8/2012	20		Yes	N	U			20	5.7	ug/kg
IJ12-58A	12-7399-UR81H	Butylbenzyl phthalate	5/8/2012	20		Yes	N	U			20	6.0	ug/kg
IJ12-58A	12-7399-UR81H	Fluorene	5/8/2012	110		Yes	Y		J	5	20	4.3	ug/kg
IJ12-58A	12-7399-UR81H	Hexachlorobutadiene	5/8/2012	98		Yes	N	U			98	4.5	ug/kg
IJ12-58A	12-7399-UR81H	Pentachlorophenol	5/8/2012	200		Yes	N	U			200	48	ug/kg
IJ12-58A	12-7399-UR81H	Naphthalene	5/8/2012	76		Yes	Y				20	2.7	ug/kg
IJ12-58A	12-7399-UR81H	2-Methylnaphthalene	5/8/2012	68		Yes	Y				20	3.0	ug/kg
IJ12-58A	12-7399-UR81H	2-Methylphenol (o-Cresol)	5/8/2012	13		Yes	Y	J			20	5.2	ug/kg
IJ12-58A	12-7399-UR81H	Di-n-butyl phthalate	5/8/2012	20		Yes	N	U			20	8.0	ug/kg
IJ12-58A	12-7399-UR81H	Indeno(1,2,3-c,d)pyrene	5/8/2012	46		Yes	Y				20	4.6	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-58A	12-7399-UR81H	Acenaphthene	5/8/2012	57	Yes	Y				20	3.2	ug/kg
IJ12-58A	12-7399-UR81H	Benzoic acid	5/8/2012	120	Yes	Y	J			390	99	ug/kg
IJ12-58A	12-7399-UR81H	Benzo(a)anthracene	5/8/2012	170	Yes	Y				20	3.2	ug/kg
IJ12-58A	12-7399-UR81H	Dibenzo(a,h)anthracene	5/8/2012	21	Yes	Y				20	4.2	ug/kg
IJ12-58A	12-7399-UR81H	Benzo(a)pyrene	5/8/2012	110	Yes	Y				20	5.4	ug/kg
IJ12-58A	12-7399-UR81H	Chrysene	5/8/2012	430	Yes	Y				20	3.7	ug/kg
IJ12-58A	12-7399-UR81H	Phenol	5/8/2012	39	Yes	Y				20	8.5	ug/kg
IJ12-58A	12-7399-UR81H	Fluoranthene	5/8/2012	1100	Yes	Y				20	2.9	ug/kg
IJ12-58A	12-7399-UR81H	N-Nitrosodiphenylamine	5/8/2012	20	Yes	N	U			20	5.3	ug/kg
IJ12-58A	12-7399-UR81H	Benzo(g,h,i)perylene	5/8/2012	46	Yes	Y				20	4.3	ug/kg
IJ12-58A	12-7399-UR81H	Dibenzofuran	5/8/2012	130	Yes	Y				20	4.0	ug/kg
IJ12-58A	12-7399-UR81H	Dimethyl phthalate	5/8/2012	9.8	Yes	Y	J			20	2.8	ug/kg
IJ12-58A	12-7399-UR81H	Pyrene	5/8/2012	800	Yes	Y				20	1.9	ug/kg
IJ12-58A	12-7399-UR81H	1,2,4-Trichlorobenzene	5/8/2012	20	Yes	N	U			20	3.4	ug/kg
IJ12-58A	12-7399-UR81H	Anthracene	5/8/2012	110	Yes	Y				20	4.4	ug/kg
IJ12-58A	12-7399-UR81H	Hexachlorobenzene	5/8/2012	20	Yes	N	U			20	4.2	ug/kg
IJ12-58A	12-7399-UR81H	Acenaphthylene	5/8/2012	35	Yes	Y				20	5.6	ug/kg
IJ12-58A	12-7399-UR81H	Benzo(b,j,k)fluoranthenes	5/8/2012	400	Yes	Y				20	2.7	ug/kg

Analytical Method SW8270DSIM

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	1,4-Dichlorobenzene	5/8/2012	4.7	Yes	N	U			4.7	1.1	ug/kg
IJ12-01	12-7398-UR81G	2,4-Dimethylphenol	5/8/2012	15	Yes	Y	J	J	10	19	2.7	ug/kg
IJ12-01	12-7398-UR81G	Hexachlorobenzene	5/8/2012	4.7	Yes	N	U			4.7	1.2	ug/kg
IJ12-01	12-7398-UR81G	1,2-Dichlorobenzene	5/8/2012	4.7	Yes	N	U			4.7	1.0	ug/kg
IJ12-01	12-7398-UR81G	2-Methylphenol (o-Cresol)	5/8/2012	8.1	Yes	Y		J	10	4.7	1.7	ug/kg

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Analytical Method SW8270DSIM

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-01	12-7398-UR81G	Pentachlorophenol	5/8/2012	25		Yes	Y	J			47	13	ug/kg
IJ12-01	12-7398-UR81G	Hexachlorobutadiene	5/8/2012	4.7		Yes	N	U			4.7	0.90	ug/kg
IJ12-01	12-7398-UR81G	Butylbenzyl phthalate	5/8/2012	4.7		Yes	N	U			4.7	2.7	ug/kg
IJ12-01	12-7398-UR81G	Diethyl phthalate	5/8/2012	7.3		Yes	N	B	U	7	4.7	3.1	ug/kg
IJ12-01	12-7398-UR81G	Dibenzo(a,h)anthracene	5/8/2012	74		Yes	Y				4.7	1.9	ug/kg
IJ12-01	12-7398-UR81G	Dimethyl phthalate	5/8/2012	28		Yes	Y				4.7	1.3	ug/kg
IJ12-01	12-7398-UR81G	1,2,4-Trichlorobenzene	5/8/2012	4.7		Yes	N	U			4.7	1.7	ug/kg
IJ12-01	12-7398-UR81G	N-Nitrosodiphenylamine	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Pentachlorophenol	5/8/2012	48		Yes	N	U			48	14	ug/kg
IJ12-02	12-7395-UR81D	1,4-Dichlorobenzene	5/8/2012	4.8		Yes	N	U			4.8	1.1	ug/kg
IJ12-02	12-7395-UR81D	Hexachlorobenzene	5/8/2012	4.8		Yes	N	U			4.8	1.2	ug/kg
IJ12-02	12-7395-UR81D	1,2,4-Trichlorobenzene	5/8/2012	4.8		Yes	N	U			4.8	1.8	ug/kg
IJ12-02	12-7395-UR81D	Dimethyl phthalate	5/8/2012	8.2		Yes	Y				4.8	1.3	ug/kg
IJ12-02	12-7395-UR81D	N-Nitrosodiphenylamine	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-02	12-7395-UR81D	Butylbenzyl phthalate	5/8/2012	10		Yes	Y				4.8	2.8	ug/kg
IJ12-02	12-7395-UR81D	2-Methylphenol (o-Cresol)	5/8/2012	3.3		Yes	Y	J	J	10	4.8	1.7	ug/kg
IJ12-02	12-7395-UR81D	Dibenzo(a,h)anthracene	5/8/2012	14		Yes	Y				4.8	1.9	ug/kg
IJ12-02	12-7395-UR81D	1,2-Dichlorobenzene	5/8/2012	4.8		Yes	N	U			4.8	1.1	ug/kg
IJ12-02	12-7395-UR81D	2,4-Dimethylphenol	5/8/2012	19		Yes	N	U	UJ	10	19	2.8	ug/kg
IJ12-02	12-7395-UR81D	Diethyl phthalate	5/8/2012	6.6		Yes	N	B	U	7	4.8	3.1	ug/kg
IJ12-02	12-7395-UR81D	Hexachlorobutadiene	5/8/2012	4.8		Yes	N	U			4.8	0.93	ug/kg
IJ12-03	12-7392-UR81A	1,2,4-Trichlorobenzene	5/8/2012	4.9		Yes	N	U			4.9	1.8	ug/kg
IJ12-03	12-7392-UR81A	1,4-Dichlorobenzene	5/8/2012	4.9		Yes	N	U			4.9	1.2	ug/kg
IJ12-03	12-7392-UR81A	1,2-Dichlorobenzene	5/8/2012	4.9		Yes	N	U			4.9	1.1	ug/kg
IJ12-03	12-7392-UR81A	2-Methylphenol (o-Cresol)	5/8/2012	6.4		Yes	Y		J	10	4.9	1.8	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-03	12-7392-UR81A	Pentachlorophenol	5/8/2012	49		Yes	N	U			49	14	ug/kg
IJ12-03	12-7392-UR81A	2,4-Dimethylphenol	5/8/2012	14		Yes	Y	J	J	10	20	2.8	ug/kg
IJ12-03	12-7392-UR81A	Hexachlorobenzene	5/8/2012	4.9		Yes	N	U			4.9	1.2	ug/kg
IJ12-03	12-7392-UR81A	Dimethyl phthalate	5/8/2012	4.9		Yes	N	U			4.9	1.3	ug/kg
IJ12-03	12-7392-UR81A	Dibenzo(a,h)anthracene	5/8/2012	18		Yes	Y				4.9	2.0	ug/kg
IJ12-03	12-7392-UR81A	Diethyl phthalate	5/8/2012	14		Yes	N	B	U	7	4.9	3.2	ug/kg
IJ12-03	12-7392-UR81A	Butylbenzyl phthalate	5/8/2012	14		Yes	Y				4.9	2.8	ug/kg
IJ12-03	12-7392-UR81A	Hexachlorobutadiene	5/8/2012	4.9		Yes	N	U			4.9	0.93	ug/kg
IJ12-03	12-7392-UR81A	N-Nitrosodiphenylamine	5/8/2012	20		Yes	N	U			20	1.3	ug/kg
IJ12-04	12-7396-UR81E	N-Nitrosodiphenylamine	5/8/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-04	12-7396-UR81E	1,2-Dichlorobenzene	5/8/2012	4.8		Yes	N	U	UJ	8	4.8	1.1	ug/kg
IJ12-04	12-7396-UR81E	2-Methylphenol (o-Cresol)	5/8/2012	4.8		Yes	N	U	UJ	8,10	4.8	1.8	ug/kg
IJ12-04	12-7396-UR81E	Pentachlorophenol	5/8/2012	33		Yes	Y	J			48	14	ug/kg
IJ12-04	12-7396-UR81E	Dimethyl phthalate	5/8/2012	10		Yes	Y				4.8	1.3	ug/kg
IJ12-04	12-7396-UR81E	2,4-Dimethylphenol	5/8/2012	19		Yes	N	U	UJ	10	19	2.8	ug/kg
IJ12-04	12-7396-UR81E	Dibenzo(a,h)anthracene	5/8/2012	70		Yes	Y				4.8	2.0	ug/kg
IJ12-04	12-7396-UR81E	1,2,4-Trichlorobenzene	5/8/2012	4.8		Yes	N	U	UJ	8	4.8	1.8	ug/kg
IJ12-04	12-7396-UR81E	Hexachlorobenzene	5/8/2012	4.8		Yes	N	U			4.8	1.2	ug/kg
IJ12-04	12-7396-UR81E	1,4-Dichlorobenzene	5/8/2012	4.8		Yes	N	U	UJ	8	4.8	1.2	ug/kg
IJ12-04	12-7396-UR81E	Butylbenzyl phthalate	5/8/2012	9.6		Yes	Y				4.8	2.8	ug/kg
IJ12-04	12-7396-UR81E	Diethyl phthalate	5/8/2012	4.8		Yes	N	U			4.8	3.2	ug/kg
IJ12-04	12-7396-UR81E	Hexachlorobutadiene	5/8/2012	4.8		Yes	N	U	UJ	8	4.8	0.93	ug/kg
IJ12-05	12-7393-UR81B	2-Methylphenol (o-Cresol)	5/8/2012	3.3		Yes	Y	J	J	10	4.9	1.8	ug/kg
IJ12-05	12-7393-UR81B	Diethyl phthalate	5/8/2012	17		Yes	N	B	U	7	4.9	3.2	ug/kg
IJ12-05	12-7393-UR81B	Pentachlorophenol	5/8/2012	49		Yes	N	U			49	14	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-05	12-7393-UR81B	1,2-Dichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.1	ug/kg
IJ12-05	12-7393-UR81B	1,2,4-Trichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.8	ug/kg
IJ12-05	12-7393-UR81B	Hexachlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
IJ12-05	12-7393-UR81B	1,4-Dichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
IJ12-05	12-7393-UR81B	2,4-Dimethylphenol	5/8/2012	20	Yes	N	U	UJ	10	20	2.8	ug/kg
IJ12-05	12-7393-UR81B	Hexachlorobutadiene	5/8/2012	4.9	Yes	N	U			4.9	0.94	ug/kg
IJ12-05	12-7393-UR81B	Dimethyl phthalate	5/8/2012	6.9	Yes	Y				4.9	1.3	ug/kg
IJ12-05	12-7393-UR81B	N-Nitrosodiphenylamine	5/8/2012	20	Yes	N	U			20	1.3	ug/kg
IJ12-05	12-7393-UR81B	Butylbenzyl phthalate	5/8/2012	11	Yes	Y				4.9	2.8	ug/kg
IJ12-05	12-7393-UR81B	Dibenzo(a,h)anthracene	5/8/2012	9.6	Yes	Y				4.9	2.0	ug/kg
IJ12-06	12-7394-UR81C	Butylbenzyl phthalate	5/8/2012	6.7	Yes	Y				4.9	2.8	ug/kg
IJ12-06	12-7394-UR81C	1,2-Dichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.1	ug/kg
IJ12-06	12-7394-UR81C	2-Methylphenol (o-Cresol)	5/8/2012	3.9	Yes	Y	J	J	10	4.9	1.8	ug/kg
IJ12-06	12-7394-UR81C	Pentachlorophenol	5/8/2012	49	Yes	N	U			49	14	ug/kg
IJ12-06	12-7394-UR81C	Hexachlorobutadiene	5/8/2012	4.9	Yes	N	U			4.9	0.94	ug/kg
IJ12-06	12-7394-UR81C	2,4-Dimethylphenol	5/8/2012	20	Yes	N	U	UJ	10	20	2.8	ug/kg
IJ12-06	12-7394-UR81C	N-Nitrosodiphenylamine	5/8/2012	20	Yes	N	U			20	1.3	ug/kg
IJ12-06	12-7394-UR81C	Diethyl phthalate	5/8/2012	9.1	Yes	N	B	U	7	4.9	3.2	ug/kg
IJ12-06	12-7394-UR81C	Dibenzo(a,h)anthracene	5/8/2012	8.6	Yes	Y				4.9	2.0	ug/kg
IJ12-06	12-7394-UR81C	Dimethyl phthalate	5/8/2012	6	Yes	Y				4.9	1.3	ug/kg
IJ12-06	12-7394-UR81C	1,2,4-Trichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.8	ug/kg
IJ12-06	12-7394-UR81C	Hexachlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
IJ12-06	12-7394-UR81C	1,4-Dichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
IJ12-07	12-7397-UR81F	2,4-Dimethylphenol	5/8/2012	13	Yes	Y	J	J	10	20	2.9	ug/kg
IJ12-07	12-7397-UR81F	N-Nitrosodiphenylamine	5/8/2012	20	Yes	N	U			20	1.4	ug/kg

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Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-07	12-7397-UR81F	Butylbenzyl phthalate	5/8/2012	4.8		Yes	Y	J			5.0	2.9	ug/kg
IJ12-07	12-7397-UR81F	Hexachlorobutadiene	5/8/2012	5		Yes	N	U			5.0	0.95	ug/kg
IJ12-07	12-7397-UR81F	Pentachlorophenol	5/8/2012	50		Yes	N	U			50	14	ug/kg
IJ12-07	12-7397-UR81F	2-Methylphenol (o-Cresol)	5/8/2012	6		Yes	Y		J	10	5.0	1.8	ug/kg
IJ12-07	12-7397-UR81F	1,2-Dichlorobenzene	5/8/2012	5		Yes	N	U			5.0	1.1	ug/kg
IJ12-07	12-7397-UR81F	Diethyl phthalate	5/8/2012	19		Yes	N	B	U	7	5.0	3.2	ug/kg
IJ12-07	12-7397-UR81F	Dibenzo(a,h)anthracene	5/8/2012	8.3		Yes	Y				5.0	2.0	ug/kg
IJ12-07	12-7397-UR81F	Dimethyl phthalate	5/8/2012	7.4		Yes	Y				5.0	1.3	ug/kg
IJ12-07	12-7397-UR81F	1,2,4-Trichlorobenzene	5/8/2012	5		Yes	N	U			5.0	1.8	ug/kg
IJ12-07	12-7397-UR81F	Hexachlorobenzene	5/8/2012	5		Yes	N	U			5.0	1.2	ug/kg
IJ12-07	12-7397-UR81F	1,4-Dichlorobenzene	5/8/2012	5		Yes	N	U			5.0	1.2	ug/kg
IJ12-08A	12-7401-UR81J	2,4-Dimethylphenol	5/9/2012	12		Yes	Y	J	J	10	19	2.8	ug/kg
IJ12-08A	12-7401-UR81J	2-Methylphenol (o-Cresol)	5/9/2012	5.2		Yes	Y		J	10	4.8	1.7	ug/kg
IJ12-08A	12-7401-UR81J	1,2-Dichlorobenzene	5/9/2012	4.8		Yes	N	U			4.8	1.1	ug/kg
IJ12-08A	12-7401-UR81J	N-Nitrosodiphenylamine	5/9/2012	19		Yes	N	U			19	1.3	ug/kg
IJ12-08A	12-7401-UR81J	Butylbenzyl phthalate	5/9/2012	6.1		Yes	Y				4.8	2.8	ug/kg
IJ12-08A	12-7401-UR81J	Diethyl phthalate	5/9/2012	8		Yes	N	B	U	7	4.8	3.1	ug/kg
IJ12-08A	12-7401-UR81J	Hexachlorobutadiene	5/9/2012	4.8		Yes	N	U			4.8	0.92	ug/kg
IJ12-08A	12-7401-UR81J	Dibenzo(a,h)anthracene	5/9/2012	9.6		Yes	Y				4.8	1.9	ug/kg
IJ12-08A	12-7401-UR81J	Dimethyl phthalate	5/9/2012	52		Yes	Y				4.8	1.3	ug/kg
IJ12-08A	12-7401-UR81J	1,2,4-Trichlorobenzene	5/9/2012	4.8		Yes	N	U			4.8	1.8	ug/kg
IJ12-08A	12-7401-UR81J	Hexachlorobenzene	5/9/2012	4.8		Yes	N	U			4.8	1.2	ug/kg
IJ12-08A	12-7401-UR81J	1,4-Dichlorobenzene	5/9/2012	4.8		Yes	N	U			4.8	1.1	ug/kg
IJ12-08A	12-7401-UR81J	Pentachlorophenol	5/9/2012	48		Yes	N	U			48	14	ug/kg
IJ12-11	12-7400-UR81I	Butylbenzyl phthalate	5/9/2012	4		Yes	Y	J			4.9	2.8	ug/kg

SDG: UR81

Analytical Method SW8270DSIM

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
IJ12-11	12-7400-UR81I	Hexachlorobenzene	5/9/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
IJ12-11	12-7400-UR81I	1,2-Dichlorobenzene	5/9/2012	4.9	Yes	N	U			4.9	1.1	ug/kg
IJ12-11	12-7400-UR81I	Hexachlorobutadiene	5/9/2012	4.9	Yes	N	U			4.9	0.94	ug/kg
IJ12-11	12-7400-UR81I	1,4-Dichlorobenzene	5/9/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
IJ12-11	12-7400-UR81I	1,2,4-Trichlorobenzene	5/9/2012	4.9	Yes	N	U			4.9	1.8	ug/kg
IJ12-11	12-7400-UR81I	Dimethyl phthalate	5/9/2012	6.8	Yes	Y				4.9	1.3	ug/kg
IJ12-11	12-7400-UR81I	Dibenzo(a,h)anthracene	5/9/2012	3.1	Yes	Y	J			4.9	2.0	ug/kg
IJ12-11	12-7400-UR81I	Diethyl phthalate	5/9/2012	7	Yes	N	B	U	7	4.9	3.2	ug/kg
IJ12-11	12-7400-UR81I	N-Nitrosodiphenylamine	5/9/2012	20	Yes	N	U			20	1.4	ug/kg
IJ12-11	12-7400-UR81I	Pentachlorophenol	5/9/2012	49	Yes	N	U			49	14	ug/kg
IJ12-11	12-7400-UR81I	2-Methylphenol (o-Cresol)	5/9/2012	6.3	Yes	Y		J	10	4.9	1.8	ug/kg
IJ12-11	12-7400-UR81I	2,4-Dimethylphenol	5/9/2012	13	Yes	Y	J	J	10	20	2.8	ug/kg
IJ12-58A	12-7399-UR81H	2,4-Dimethylphenol	5/8/2012	25	Yes	Y		J	10	20	2.8	ug/kg
IJ12-58A	12-7399-UR81H	Butylbenzyl phthalate	5/8/2012	12	Yes	Y				4.9	2.8	ug/kg
IJ12-58A	12-7399-UR81H	2-Methylphenol (o-Cresol)	5/8/2012	11	Yes	Y		J	10	4.9	1.8	ug/kg
IJ12-58A	12-7399-UR81H	Pentachlorophenol	5/8/2012	34	Yes	Y	J			49	14	ug/kg
IJ12-58A	12-7399-UR81H	Hexachlorobutadiene	5/8/2012	4.9	Yes	N	U			4.9	0.94	ug/kg
IJ12-58A	12-7399-UR81H	N-Nitrosodiphenylamine	5/8/2012	20	Yes	N	U			20	1.4	ug/kg
IJ12-58A	12-7399-UR81H	Diethyl phthalate	5/8/2012	6.8	Yes	N	B	U	7	4.9	3.2	ug/kg
IJ12-58A	12-7399-UR81H	Dibenzo(a,h)anthracene	5/8/2012	18	Yes	Y				4.9	2.0	ug/kg
IJ12-58A	12-7399-UR81H	Dimethyl phthalate	5/8/2012	16	Yes	Y				4.9	1.3	ug/kg
IJ12-58A	12-7399-UR81H	1,2,4-Trichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.8	ug/kg
IJ12-58A	12-7399-UR81H	1,4-Dichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
IJ12-58A	12-7399-UR81H	1,2-Dichlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.1	ug/kg
IJ12-58A	12-7399-UR81H	Hexachlorobenzene	5/8/2012	4.9	Yes	N	U			4.9	1.2	ug/kg

Analytical Method E160.3

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Total solids	4/30/2012	59.6		Yes	Y		J	1	0.01		pct
I-2-A-Z	12-7644-US18B	Total solids	4/30/2012	51.3		Yes	Y		J	1	0.01		pct

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-2-A-Z	12-7644-US18B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	4.43		Yes	Y				0.998		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	24.9		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	5/10/2012	6.81		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5/10/2012	248		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	10.9		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	50.6		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5/10/2012	7.53		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	6.17		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5/10/2012	5.98		Yes	Y				0.998		pg/g
I-2-A-Z	12-7644-US18B	Total Hexachlorodibenzofuran (HxCDF)	5/10/2012	402		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5/10/2012	14.5		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	0.928		Yes	Y	J			0.998		pg/g
I-2-A-Z	12-7644-US18B	Total Tetrachlorodibenzo-p-dioxin (TCDD)	5/10/2012	41.4		Yes	Y	EMPC	J	23	0.998		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	5.48		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	5/10/2012	873		Yes	Y				4.99		pg/g
I-2-A-Z	12-7644-US18B	Total Heptachlorodibenzofuran (HpCDF)	5/10/2012	985		Yes	Y	EMPC	J	23	2.00		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-2-A-Z	12-7644-US18B	Total Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	2920		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	Total Pentachlorodibenzo-p-dioxin (PeCDD)	5/10/2012	65.1		Yes	Y	EMPC	J	23	0.998		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5/10/2012	1410		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	Total Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	340		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	Total Pentachlorodibenzofuran (PeCDF)	5/10/2012	133		Yes	Y	EMPC	J	23	2.00		pg/g
I-2-A-Z	12-7644-US18B	Total Tetrachlorodibenzofuran (TCDF)	5/10/2012	62		Yes	Y	EMPC	J	23	0.998		pg/g
I-2-A-Z	12-7644-US18B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5/10/2012	13.8		Yes	Y				2.00		pg/g
I-2-A-Z	12-7644-US18B	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5/10/2012	7.74		Yes	Y				0.998		pg/g
I-2-A-Z	12-7644-US18BDL	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5/11/2012	15600		Yes	Y				25.0		pg/g

Analytical Method E350.1M

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Ammonia	5/8/2012	91.7		Yes	Y		J	1	1.66	0.30000	mg/kg
I-2-A-Z	12-7644-US18B	Ammonia	5/8/2012	72.3		Yes	Y		J	1	0.97	0.15000	mg/kg

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Sand, Medium	5/7/2012	4.4		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Clay, Coarse	5/7/2012	6		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Clay, Fine	5/7/2012	11.6		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Clay, Medium	5/7/2012	5.2		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Fines (silt + clay)	5/7/2012	60.8		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Gravel	5/7/2012	0.7		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Sand, Fine	5/7/2012	17.7		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Silt, Coarse	5/7/2012	11.4		Yes	Y				0.1	0.1	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Sand, Very Coarse	5/7/2012	0.6		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Sand, Very Fine	5/7/2012	14.8		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Silt, Fine	5/7/2012	9.1		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Silt, Medium	5/7/2012	8.8		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Silt, Very Fine	5/7/2012	8.7		Yes	Y				0.1	0.1	pct
I-1-Z	12-7643-US18A	Sand, Coarse	5/7/2012	1		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Silt, Very Fine	5/7/2012	16.1		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Clay, Coarse	5/7/2012	11.1		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Clay, Fine	5/7/2012	16.7		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Clay, Medium	5/7/2012	8.5		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Fines (silt + clay)	5/7/2012	80.9		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Gravel	5/7/2012	0.4		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Sand, Coarse	5/7/2012	1		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Sand, Fine	5/7/2012	8.6		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Sand, Medium	5/7/2012	2.2		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Sand, Very Coarse	5/7/2012	1		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Sand, Very Fine	5/7/2012	6.1		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Silt, Coarse	5/7/2012	4.9		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Silt, Fine	5/7/2012	15.8		Yes	Y				0.1	0.1	pct
I-2-A-Z	12-7644-US18B	Silt, Medium	5/7/2012	7.8		Yes	Y				0.1	0.1	pct

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Silver	5/3/2012	0.5		Yes	N	U			0.5	0.048	mg/kg
I-1-Z	12-7643-US18A	Lead	5/3/2012	30		Yes	Y				3	0.21	mg/kg
I-1-Z	12-7643-US18A	Nickel	5/3/2012	71		Yes	Y				2	0.48	mg/kg

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Copper	5/3/2012	54	Yes	Y				0.3	0.079	mg/kg
I-1-Z	12-7643-US18A	Chromium	5/3/2012	48.1	Yes	Y				0.8	0.43	mg/kg
I-1-Z	12-7643-US18A	Cadmium	5/3/2012	0.9	Yes	Y				0.3	0.17	mg/kg
I-1-Z	12-7643-US18A	Arsenic	5/3/2012	8	Yes	N	U			8	0.73	mg/kg
I-1-Z	12-7643-US18A	Zinc	5/3/2012	96	Yes	Y				2	0.19	mg/kg
I-2-A-Z	12-7644-US18B	Lead	5/3/2012	40	Yes	Y				4	0.24	mg/kg
I-2-A-Z	12-7644-US18B	Copper	5/3/2012	64.3	Yes	Y				0.4	0.093	mg/kg
I-2-A-Z	12-7644-US18B	Nickel	5/3/2012	95	Yes	Y				2	0.56	mg/kg
I-2-A-Z	12-7644-US18B	Silver	5/3/2012	0.6	Yes	N	U			0.6	0.056	mg/kg
I-2-A-Z	12-7644-US18B	Arsenic	5/3/2012	9	Yes	N	U			9	0.86	mg/kg
I-2-A-Z	12-7644-US18B	Cadmium	5/3/2012	1.6	Yes	Y				0.4	0.21	mg/kg
I-2-A-Z	12-7644-US18B	Chromium	5/3/2012	88.1	Yes	Y				0.9	0.50	mg/kg
I-2-A-Z	12-7644-US18B	Zinc	5/3/2012	125	Yes	Y				2	0.22	mg/kg

Analytical Method SW7471A

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Mercury	5/3/2012	0.4	Yes	Y		J	1	0.04	0.0019	mg/kg
I-2-A-Z	12-7644-US18B	Mercury	5/3/2012	4.39	Yes	Y		J	1	0.08	0.0042	mg/kg

Analytical Method SW8082

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Aroclor 1242	5/9/2012	19	Yes	N	U			19	1.3	ug/kg
I-1-Z	12-7643-US18A	Aroclor 1016	5/9/2012	19	Yes	N	U			19	0.96	ug/kg
I-1-Z	12-7643-US18A	Aroclor 1248	5/9/2012	60	Yes	Y				19	1.3	ug/kg
I-1-Z	12-7643-US18A	Aroclor 1232	5/9/2012	19	Yes	N	U			19	1.3	ug/kg
I-1-Z	12-7643-US18A	Aroclor 1221	5/9/2012	19	Yes	N	U			19	1.3	ug/kg
I-1-Z	12-7643-US18A	Aroclor 1254	5/9/2012	48	Yes	Y				19	1.3	ug/kg

Analytical Method SW8082

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Aroclor 1260	5/9/2012	22	Yes	Y				19	1.3	ug/kg
I-2-A-Z	12-7644-US18B	Aroclor 1232	5/9/2012	20	Yes	N	U			20	1.3	ug/kg
I-2-A-Z	12-7644-US18B	Aroclor 1254	5/9/2012	65	Yes	Y				20	1.3	ug/kg
I-2-A-Z	12-7644-US18B	Aroclor 1260	5/9/2012	36	Yes	Y				20	1.3	ug/kg
I-2-A-Z	12-7644-US18B	Aroclor 1242	5/9/2012	20	Yes	N	U			20	1.3	ug/kg
I-2-A-Z	12-7644-US18B	Aroclor 1221	5/9/2012	20	Yes	N	U			20	1.3	ug/kg
I-2-A-Z	12-7644-US18B	Aroclor 1016	5/9/2012	20	Yes	N	U			20	0.99	ug/kg
I-2-A-Z	12-7644-US18B	Aroclor 1248	5/9/2012	61	Yes	Y				20	1.3	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Di-n-butyl phthalate	5/9/2012	20	Yes	N	U			20	8.0	ug/kg
I-1-Z	12-7643-US18A	Chrysene	5/9/2012	180	Yes	Y				20	3.7	ug/kg
I-1-Z	12-7643-US18A	Benzo(a)pyrene	5/9/2012	78	Yes	Y				20	5.3	ug/kg
I-1-Z	12-7643-US18A	Dibenzo(a,h)anthracene	5/9/2012	9.8	Yes	Y	J			20	4.2	ug/kg
I-1-Z	12-7643-US18A	Benzo(a)anthracene	5/9/2012	130	Yes	Y				20	3.2	ug/kg
I-1-Z	12-7643-US18A	Benzoic acid	5/9/2012	390	Yes	N	U			390	99	ug/kg
I-1-Z	12-7643-US18A	2-Methylnaphthalene	5/9/2012	300	Yes	Y				20	3.0	ug/kg
I-1-Z	12-7643-US18A	Diethyl phthalate	5/9/2012	49	Yes	N	U			49	36	ug/kg
I-1-Z	12-7643-US18A	Indeno(1,2,3-c,d)pyrene	5/9/2012	27	Yes	Y				20	4.6	ug/kg
I-1-Z	12-7643-US18A	Phenanthrene	5/9/2012	340	Yes	Y				20	3.6	ug/kg
I-1-Z	12-7643-US18A	Butylbenzyl phthalate	5/9/2012	20	Yes	N	U			20	6.0	ug/kg
I-1-Z	12-7643-US18A	N-Nitrosodiphenylamine	5/9/2012	36	Yes	Y	M			20	5.3	ug/kg
I-1-Z	12-7643-US18A	Fluorene	5/9/2012	140	Yes	Y		J	5	20	4.3	ug/kg
I-1-Z	12-7643-US18A	Pentachlorophenol	5/9/2012	200	Yes	N	U			200	47	ug/kg
I-1-Z	12-7643-US18A	Acenaphthene	5/9/2012	64	Yes	Y				20	3.2	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	Anthracene	5/9/2012	100		Yes	Y				20	4.4	ug/kg
I-1-Z	12-7643-US18A	Benzyl alcohol	5/9/2012	20		Yes	N	U			20	6.0	ug/kg
I-1-Z	12-7643-US18A	2,4-Dimethylphenol	5/9/2012	250		Yes	Y		J	10	39	3.4	ug/kg
I-1-Z	12-7643-US18A	4-Methylphenol (p-Cresol)	5/9/2012	420		Yes	Y				39	6.5	ug/kg
I-1-Z	12-7643-US18A	1,4-Dichlorobenzene	5/9/2012	20		Yes	N	U			20	2.8	ug/kg
I-1-Z	12-7643-US18A	Phenol	5/9/2012	120		Yes	Y				20	8.5	ug/kg
I-1-Z	12-7643-US18A	Bis(2-ethylhexyl) phthalate	5/9/2012	74		Yes	N	B	U	7	24	14	ug/kg
I-1-Z	12-7643-US18A	Acenaphthylene	5/9/2012	33		Yes	Y				20	5.6	ug/kg
I-1-Z	12-7643-US18A	Hexachlorobenzene	5/9/2012	20		Yes	N	U			20	4.2	ug/kg
I-1-Z	12-7643-US18A	Fluoranthene	5/9/2012	430		Yes	Y				20	2.8	ug/kg
I-1-Z	12-7643-US18A	1,2,4-Trichlorobenzene	5/9/2012	20		Yes	N	U			20	3.4	ug/kg
I-1-Z	12-7643-US18A	Pyrene	5/9/2012	390		Yes	Y				20	1.9	ug/kg
I-1-Z	12-7643-US18A	Dimethyl phthalate	5/9/2012	130		Yes	Y				20	2.8	ug/kg
I-1-Z	12-7643-US18A	Dibenzofuran	5/9/2012	190		Yes	Y				20	4.0	ug/kg
I-1-Z	12-7643-US18A	Benzo(g,h,i)perylene	5/9/2012	30		Yes	Y				20	4.3	ug/kg
I-1-Z	12-7643-US18A	Naphthalene	5/9/2012	300		Yes	Y				20	2.7	ug/kg
I-1-Z	12-7643-US18A	Di-n-octyl phthalate	5/9/2012	20		Yes	N	U			20	5.7	ug/kg
I-1-Z	12-7643-US18A	1,2-Dichlorobenzene	5/9/2012	20		Yes	N	U			20	2.4	ug/kg
I-1-Z	12-7643-US18A	Benzo(b,j,k)fluoranthenes	5/9/2012	170		Yes	Y				20	2.7	ug/kg
I-1-Z	12-7643-US18A	2-Methylphenol (o-Cresol)	5/9/2012	120		Yes	Y				20	5.1	ug/kg
I-1-Z	12-7643-US18A	Hexachlorobutadiene	5/9/2012	98		Yes	N	U			98	4.5	ug/kg
I-2-A-Z	12-7644-US18B	Hexachlorobutadiene	5/9/2012	96		Yes	N	U			96	4.4	ug/kg
I-2-A-Z	12-7644-US18B	Benzo(b,j,k)fluoranthenes	5/9/2012	86		Yes	Y				19	2.6	ug/kg
I-2-A-Z	12-7644-US18B	Dibenzo(a,h)anthracene	5/9/2012	19		Yes	N	U			19	4.1	ug/kg
I-2-A-Z	12-7644-US18B	Benzo(a)anthracene	5/9/2012	63		Yes	Y				19	3.2	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-2-A-Z	12-7644-US18B	Benzoic acid	5/9/2012	380		Yes	N	U			380	97	ug/kg
I-2-A-Z	12-7644-US18B	Acenaphthene	5/9/2012	27		Yes	Y				19	3.2	ug/kg
I-2-A-Z	12-7644-US18B	Diethyl phthalate	5/9/2012	48		Yes	N	U			48	35	ug/kg
I-2-A-Z	12-7644-US18B	Di-n-butyl phthalate	5/9/2012	19		Yes	N	U			19	7.8	ug/kg
I-2-A-Z	12-7644-US18B	Phenanthrene	5/9/2012	120		Yes	Y				19	3.5	ug/kg
I-2-A-Z	12-7644-US18B	Benzyl alcohol	5/9/2012	19		Yes	N	U			19	5.9	ug/kg
I-2-A-Z	12-7644-US18B	Fluorene	5/9/2012	59		Yes	Y		J	5	19	4.2	ug/kg
I-2-A-Z	12-7644-US18B	N-Nitrosodiphenylamine	5/9/2012	12		Yes	Y	J			19	5.2	ug/kg
I-2-A-Z	12-7644-US18B	Dibenzofuran	5/9/2012	84		Yes	Y				19	3.9	ug/kg
I-2-A-Z	12-7644-US18B	Benzo(g,h,i)perylene	5/9/2012	19		Yes	Y				19	4.2	ug/kg
I-2-A-Z	12-7644-US18B	Indeno(1,2,3-c,d)pyrene	5/9/2012	15		Yes	Y	J			19	4.5	ug/kg
I-2-A-Z	12-7644-US18B	Fluoranthene	5/9/2012	230		Yes	Y				19	2.8	ug/kg
I-2-A-Z	12-7644-US18B	Acenaphthylene	5/9/2012	12		Yes	Y	J			19	5.5	ug/kg
I-2-A-Z	12-7644-US18B	Pentachlorophenol	5/9/2012	190		Yes	N	U			190	47	ug/kg
I-2-A-Z	12-7644-US18B	Phenol	5/9/2012	59		Yes	Y				19	8.3	ug/kg
I-2-A-Z	12-7644-US18B	Butylbenzyl phthalate	5/9/2012	19		Yes	N	U			19	5.9	ug/kg
I-2-A-Z	12-7644-US18B	Dimethyl phthalate	5/9/2012	19		Yes	N	U			19	2.8	ug/kg
I-2-A-Z	12-7644-US18B	Pyrene	5/9/2012	180		Yes	Y				19	1.9	ug/kg
I-2-A-Z	12-7644-US18B	1,2,4-Trichlorobenzene	5/9/2012	19		Yes	N	U			19	3.3	ug/kg
I-2-A-Z	12-7644-US18B	Anthracene	5/9/2012	55		Yes	Y				19	4.3	ug/kg
I-2-A-Z	12-7644-US18B	Hexachlorobenzene	5/9/2012	19		Yes	N	U			19	4.1	ug/kg
I-2-A-Z	12-7644-US18B	Chrysene	5/9/2012	69		Yes	Y				19	3.6	ug/kg
I-2-A-Z	12-7644-US18B	Bis(2-ethylhexyl) phthalate	5/9/2012	79		Yes	N	B	U	7	24	14	ug/kg
I-2-A-Z	12-7644-US18B	Benzo(a)pyrene	5/9/2012	41		Yes	Y				19	5.2	ug/kg
I-2-A-Z	12-7644-US18B	1,4-Dichlorobenzene	5/9/2012	19		Yes	N	U			19	2.7	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-2-A-Z	12-7644-US18B	4-Methylphenol (p-Cresol)	5/9/2012	230	Yes	Y				38	6.4	ug/kg
I-2-A-Z	12-7644-US18B	2-Methylphenol (o-Cresol)	5/9/2012	42	Yes	Y				19	5.0	ug/kg
I-2-A-Z	12-7644-US18B	2-Methylnaphthalene	5/9/2012	130	Yes	Y				19	2.9	ug/kg
I-2-A-Z	12-7644-US18B	Naphthalene	5/9/2012	160	Yes	Y				19	2.7	ug/kg
I-2-A-Z	12-7644-US18B	1,2-Dichlorobenzene	5/9/2012	19	Yes	N	U			19	2.4	ug/kg
I-2-A-Z	12-7644-US18B	2,4-Dimethylphenol	5/9/2012	110	Yes	Y		J	10	38	3.3	ug/kg
I-2-A-Z	12-7644-US18B	Di-n-octyl phthalate	5/9/2012	19	Yes	N	U			19	5.6	ug/kg

Analytical Method SW8270DSIM

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-7643-US18A	N-Nitrosodiphenylamine	5/9/2012	36	Yes	Y				20	1.4	ug/kg
I-1-Z	12-7643-US18A	2-Methylphenol (o-Cresol)	5/9/2012	120	Yes	Y		J	10	4.9	1.8	ug/kg
I-1-Z	12-7643-US18A	2,4-Dimethylphenol	5/9/2012	250	Yes	Y		J	10	20	2.8	ug/kg
I-1-Z	12-7643-US18A	1,2-Dichlorobenzene	5/9/2012	4.9	Yes	N	U			4.9	1.1	ug/kg
I-1-Z	12-7643-US18A	Hexachlorobutadiene	5/9/2012	4.9	Yes	N	U			4.9	0.94	ug/kg
I-1-Z	12-7643-US18A	Butylbenzyl phthalate	5/9/2012	48	Yes	Y				4.9	2.8	ug/kg
I-1-Z	12-7643-US18A	Diethyl phthalate	5/9/2012	12	Yes	N	B	U	7	4.9	3.2	ug/kg
I-1-Z	12-7643-US18A	Dibenzo(a,h)anthracene	5/9/2012	9.1	Yes	Y				4.9	2.0	ug/kg
I-1-Z	12-7643-US18A	Dimethyl phthalate	5/9/2012	160	Yes	Y				4.9	1.3	ug/kg
I-1-Z	12-7643-US18A	1,2,4-Trichlorobenzene	5/9/2012	4.9	Yes	N	U			4.9	1.8	ug/kg
I-1-Z	12-7643-US18A	Hexachlorobenzene	5/9/2012	4.9	Yes	N	U			4.9	1.2	ug/kg
I-1-Z	12-7643-US18A	1,4-Dichlorobenzene	5/9/2012	2.7	Yes	Y	J			4.9	1.2	ug/kg
I-1-Z	12-7643-US18A	Pentachlorophenol	5/9/2012	49	Yes	N	U			49	14	ug/kg
I-2-A-Z	12-7644-US18B	1,2-Dichlorobenzene	5/9/2012	3.1	Yes	Y	J			4.8	1.1	ug/kg
I-2-A-Z	12-7644-US18B	Dimethyl phthalate	5/9/2012	10	Yes	Y				4.8	1.3	ug/kg
I-2-A-Z	12-7644-US18B	2,4-Dimethylphenol	5/9/2012	110	Yes	Y		J	10	19	2.8	ug/kg

SDG: US18

Analytical Method SW8270DSIM

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-2-A-Z	12-7644-US18B	1,4-Dichlorobenzene	5/9/2012	5.2		Yes	Y				4.8	1.1	ug/kg
I-2-A-Z	12-7644-US18B	Hexachlorobenzene	5/9/2012	6.3		Yes	Y				4.8	1.2	ug/kg
I-2-A-Z	12-7644-US18B	1,2,4-Trichlorobenzene	5/9/2012	3.1		Yes	Y	J			4.8	1.8	ug/kg
I-2-A-Z	12-7644-US18B	Dibenzo(a,h)anthracene	5/9/2012	6		Yes	Y				4.8	1.9	ug/kg
I-2-A-Z	12-7644-US18B	Diethyl phthalate	5/9/2012	4.2	4.8	Yes	N	J	U	7	4.8	3.1	ug/kg
I-2-A-Z	12-7644-US18B	Butylbenzyl phthalate	5/9/2012	13		Yes	Y				4.8	2.8	ug/kg
I-2-A-Z	12-7644-US18B	N-Nitrosodiphenylamine	5/9/2012	9.6		Yes	Y	J			19	1.3	ug/kg
I-2-A-Z	12-7644-US18B	Hexachlorobutadiene	5/9/2012	4.8		Yes	N	U			4.8	0.92	ug/kg
I-2-A-Z	12-7644-US18B	2-Methylphenol (o-Cresol)	5/9/2012	42		Yes	Y		J	10	4.8	1.7	ug/kg
I-2-A-Z	12-7644-US18B	Pentachlorophenol	5/9/2012	48		Yes	N	U			48	14	ug/kg

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	September 8, 2011
LDC Report Date:	June 5, 2012
Matrix:	Sediment
Parameters:	Wet Chemistry
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UL83

Sample Identification

I-1-Z
I-2-A-Z
I-1-ZMS
I-1-ZDUP
I-1-ZTRP

Introduction

This data review covers 5 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA 160.3 for Total Solids and Plumb Method, 1981 for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
I-1-Z I-2-A-Z I-1-ZDUP I-1-ZTRP	Total solids	186 days	6 months	J (all detects) UJ (all non-detects)	P
All samples in SDG UL83	Total organic carbon	193 days	6 months	J (all detects) UJ (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicates/Triplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

Triplicate (TRP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Sample Result Verification

Raw data were not reviewed for this SDG.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to holding time problems, data were qualified as estimated in two samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Wet Chemistry - Data Qualification Summary - SDG UL83

SDG	Sample	Analyte	Flag	A or P	Reason
UL83	I-1-Z I-2-A-Z	Total solids Total organic carbon	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Technical holding times

I & J Waterway
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG UL83

No Sample Data Qualified in this SDG

LDC #: 27745B6

SDG #: UL83

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 6-5-12

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: (Analyte) Total Solids (~~SM2540B~~ EPA 160.3), Total Organic Carbon (Plumb, 1981)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 9/6/11 & 9/8/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	A	MS
VI.	Duplicates /Triplicates	A	Dup, Trp
VII.	Laboratory control samples	A	LCS
VIII.	Sample result verification	N	
IX.	Overall assessment of data	A	
X.	Field duplicates	N	
XI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: sediment

1	I-1-Z	11		21		31	
2	I-2-A-Z	12		22		32	
3	I-1-ZMS	13		23		33	
4	I-1-Z~~MSD~~ Dup	14		24		34	
5	I-1-Z~~DUP~~ TRP	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 27745B6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter
1,2	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN (TOC) Cr6+ ClO_4 (TS)
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
QC-3	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN (TOC) Cr6+ ClO_4
4,5	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN (TOC) Cr6+ ClO_4 TS
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 27485B6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: [illegible]
2nd reviewer: [illegible]

All circled dates have exceeded the technical holding time.
Y N N/A Were all samples preserved as applicable to each method ?
Y N N/A Were all cooler temperatures within validation criteria?

Method:		160.3		Plumb			
Parameters:		Total Solids		TOC			
Technical holding time:		6mon. (frozen)		6mon. (frozen)			
Sample ID	**Sampling date**	**Analysis date**	**Analysis date**	**Analysis date**	**Analysis date**	**Analysis date**	**Qualifier**
1,2,4,5	9/8/11	3/12/12	(186 days)				J/UJ/P
All	9/8/11			3/19/12	(193 days)		

I J Waterway - LDC 27745

SDG: UL83

Analytical Method E160.3

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-4224-UL83A	Total solids	3/12/2012	59.6		Yes	Y		J	1	0.01		pct
I-2-A-Z	12-4225-UL83B	Total solids	3/12/2012	50.8		Yes	Y		J	1	0.01		pct

Analytical Method Plumb 1981

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
I-1-Z	12-4224-UL83A	Total organic carbon	3/19/2012	10.5		Yes	Y		J	1	0.200	0.02900	pct
I-2-A-Z	12-4225-UL83B	Total organic carbon	3/19/2012	4.15		Yes	Y		J	1	0.020	0.00290	pct

Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Anchor Environmental, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101
ATTN: Ms. Cindy Fields

August 13, 2012

SUBJECT: I & J Waterway, Data Validation

Dear Ms. Fields,

Enclosed is the final validation report for the fractions listed below. This SDG was received on July 27, 2012. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 28089:

SDG #	Fraction
UZ99	Semivolatiles, Dioxins/Dibenzofurans, Polychlorinated Biphenyls, Metals, Wet Chemistry

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010
- USEPA Contract Laboratory Program National Functional Guidelines for Polychlorinated Dioxins/Dibenzofurans Data Review, Septemeber 2005
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

Please feel free to contact us if you have any questions.

Sincerely,

Ming-Hwa Hwang
Project Manager/Senior Chemist

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Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Anchor Environmental, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101
ATTN: Ms. Cindy Fields

August 22, 2012

SUBJECT: Revised I & J Waterway, Data Validation

Dear Ms. Fields,

Enclosed is the revised data validation report for the fraction listed below. Please replace the previously submitted report with the enclosed revised report.

LDC Project # 28089:

SDG #	Fraction
UZ99	Semivolatiles

Please feel free to contact us if you have any questions.

Sincerely,

Ming-Hwa Hwang
Project Manager/Senior Chemist

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Attachment 1

EDD Client Select Level IV

LDC #28089 (Anchor Environmental-Seattle WA / I & J Waterway)

LDC	SDG#	DATE REC'D	(3) DATE DUE	SVOA (8270D)		SVOA (8270D-SIM)		Dioxins (1613B)		PCB (8082)		Metals (SW846)		NH_3-N (350.1M)		Total Solids (2540B)		Total Pres. Solids		=S (376.2)		TOC (Plumb)		Grain Size													
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	UZ99	07/27/12	08/17/12	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1												
Total	A/MH			0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	11

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS, MSD, or DUP's.

LDC Report# 28089A2a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	June 22, 2012
LDC Report Date:	August 13, 2012
Matrix:	Sediment
Parameters:	Semivolatiles
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UZ99

Sample Identification

CB-002-06222012

Introduction

This data review covers one sediment sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270D for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/26/12	Benzyl alcohol	31.12	All samples in SDG UZ99	J (all detects)	A

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-062812	6/28/12	Bis(2-ethylhexyl)phthalate	23 ug/Kg	All samples in SDG UZ99

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
CB-002-06222012	Bis(2-ethylhexyl)phthalate	51 ug/Kg	51U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and RLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

No data was qualified due to high calibration %D, the associated result was non-detected.

Due to method blank contamination problems, data were qualified as not detected in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Semivolatiles - Data Qualification Summary - SDG UZ99

SDG	Sample	Compound	Flag	A or P	Reason
UZ99	CB-002-06222012	Benzyl alcohol	J (all detects)	A	Continuing calibration (ICV %D)

I & J Waterway
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG UZ99

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
UZ99	CB-002-06222012	Bis(2-ethylhexyl)phthalate	51U ug/Kg	A

LDC #: 28089A2a

SDG #: UZ99

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 8/10/12

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 20, r^2
IV.	Continuing calibration/ICV	SW	ICV ≤ 30 CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	CB-002-06222012	11	MB-062812	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 28089A29

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤20 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤20.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	5/26/12	ICV	QQQ	31.12		All	~~J/UJ/A~~ J/A

CONCAL.2S

LDC #: 28089 A2a

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 6/28/12 **Blank analysis date:** 7/3/12
Conc. units: ug/kg Associated Samples: All

Compound	Blank ID	Sample Identification								
	MB-062812	1								
EEE	23	51/4								

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC Report# 28089A2b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	June 22, 2012
LDC Report Date:	August 22, 2012
Matrix:	Sediment
Parameters:	Semivolatiles
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UZ99

Sample Identification

CB-002-06222012

Introduction

This data review covers one sediment sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270D using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-062812	6/28/12	Diethylphthalate	17 ug/Kg	All samples in SDG UZ99

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
CB-002-06222012	Diethylphthalate	14 ug/Kg	14U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
062812LCS/D (All samples in SDG UZ99)	2,4-Dimethylphenol	49.6 (50-150)	-	-	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and RLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to calibration LCS/LCSD %R problems, data were qualified as estimated in one sample.

Due to method blank contamination problems, data were qualified as not detected in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Semivolatiles - Data Qualification Summary - SDG UZ99

SDG	Sample	Compound	Flag	A or P	Reason
UZ99	CB-002-06222012	2,4-Dimethylphenol	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R)

I & J Waterway
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG UZ99

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
UZ99	CB-002-06222012	Diethylphthalate	14U ug/Kg	A

LDC #: 28089A2b

SDG #: UZ99

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 8/10/12

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/~~ICV~~	A	RRV ≤ 20
V.	Blanks	SW/A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	SW/A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ~~SOTE~~ Solid

1	CB-002-06222012	11	MB-062812	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 28089A2b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		062812 LCS/D	θ	49.6 (50-152)	( )	( )	All	J/UJ/P
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol					G.	Acenaphthene				
B.	2-Chlorophenol					H.	4-Nitrophenol				
C.	1,4-Dichlorobenzene					I.	2,4-Dinitrotoluene				
D.	N-Nitroso-di-n-propylamine					J.	Pentachlorophenol				
E.	1,2,4-Trichlorobenzene					K.	Pyrene				
F.	4-Chloro-3-methylphenol										

I and J Waterway - LDC 28089

SDG: UZ99

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	7/11/2012	4.36		Yes	Y				0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	7/11/2012	2.05		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	7/11/2012	9.55		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	7/11/2012	35.5		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	7/11/2012	6.61		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	8.57		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7/11/2012	6.71		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	7/11/2012	4.78		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	7/11/2012	5.82		Yes	Y				0.984		pg/g
CB-002-06222012	12-11979-UZ99A	Total Hexachlorodibenzofuran (HxCDF)	7/11/2012	80.7		Yes	Y	EMPC	J	23	1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	7/11/2012	4.15		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	7/11/2012	0.744		Yes	Y	J			0.984		pg/g
CB-002-06222012	12-11979-UZ99A	Total Tetrachlorodibenzo-p-dioxin (TCDD)	7/11/2012	42.2		Yes	Y	EMPC	J	23	0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	3.29		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	7/11/2012	50.8		Yes	Y				4.92		pg/g
CB-002-06222012	12-11979-UZ99A	Total Heptachlorodibenzofuran (HpCDF)	7/11/2012	77.5		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	Total Heptachlorodibenzo-p-dioxin (HpCDD)	7/11/2012	174		Yes	Y				1.97		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Total Pentachlorodibenzo-p-dioxin (PeCDD)	7/11/2012	55.7		Yes	Y				0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	7/11/2012	95.9		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	Total Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	85		Yes	Y	EMPC	J	23	1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	7/11/2012	611		Yes	Y				4.92		pg/g
CB-002-06222012	12-11979-UZ99A	Total Pentachlorodibenzofuran (PeCDF)	7/11/2012	85.1		Yes	Y	EMPC	J	23	1.97		pg/g
CB-002-06222012	12-11979-UZ99A	Total Tetrachlorodibenzofuran (TCDF)	7/11/2012	67.7		Yes	Y	EMPC	J	23	0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	5.92		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	7/11/2012	3.75		Yes	Y				0.984		pg/g

Analytical Method E350.1M

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Ammonia	6/27/2012	2.15		Yes	Y				0.11	0.03000	mg/kg

Analytical Method E376.2

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Sulfide	6/26/2012	1.7		Yes	Y				1.05	0.00750	mg/kg

Analytical Method Plumb 1981

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Total organic carbon	7/13/2012	0.833		Yes	Y				0.020	0.00290	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Silt, Fine	7/18/2012	1		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Clay, Coarse	7/18/2012	0.6		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Silt, Medium	7/18/2012	1.3		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Silt, Coarse	7/18/2012	3.5		Yes	Y				0.1	0.1	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Sand, Very Fine	7/18/2012	2.9		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Very Coarse	7/18/2012	9.4		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Medium	7/18/2012	7.4		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Coarse	7/18/2012	7		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Gravel	7/18/2012	59.2		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Fines (silt + clay)	7/18/2012	7.9		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Clay, Medium	7/18/2012	0.4		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Clay, Fine	7/18/2012	0.4		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Fine	7/18/2012	6.2		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Silt, Very Fine	7/18/2012	0.7		Yes	Y				0.1	0.1	pct

Analytical Method SM2540B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Total solids	6/25/2012	85.7		Yes	Y				0.01		pct

Analytical Method SM2540B-PRES

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Total solids (preserved)	6/26/2012	87.5		Yes	Y				0.01		pct

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Zinc	7/2/2012	98		Yes	Y				3	0.33	mg/kg
CB-002-06222012	12-11979-UZ99A	Copper	7/2/2012	34.4		Yes	Y		J	8	0.6	0.14	mg/kg
CB-002-06222012	12-11979-UZ99A	Chromium	7/2/2012	38		Yes	Y		J	8	1	0.75	mg/kg
CB-002-06222012	12-11979-UZ99A	Cadmium	7/2/2012	0.6		Yes	N	U			0.6	0.31	mg/kg
CB-002-06222012	12-11979-UZ99A	Arsenic	7/2/2012	10		Yes	N	U			10	1.3	mg/kg
CB-002-06222012	12-11979-UZ99A	Silver	7/2/2012	0.8		Yes	N	U			0.8	0.084	mg/kg
CB-002-06222012	12-11979-UZ99A	Lead	7/2/2012	18		Yes	Y				6	0.36	mg/kg

Analytical Method SW6010C

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Nickel	7/2/2012	826	Yes	Y				3	0.84	mg/kg

Analytical Method SW7471A

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Mercury	6/27/2012	0.04	Yes	Y		J	9	0.03	0.0014	mg/kg

Analytical Method SW8082

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Aroclor 1221	7/2/2012	19	Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1232	7/2/2012	19	Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1248	7/2/2012	19	Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1016	7/2/2012	19	Yes	N	U			19	4.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1242	7/2/2012	19	Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1254	7/2/2012	19	Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1260	7/2/2012	19	Yes	N	U			19	6.3	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Pentachlorophenol	7/3/2012	180	Yes	N	U			180	45	ug/kg
CB-002-06222012	12-11979-UZ99A	Dibenzo(a,h)anthracene	7/3/2012	18	Yes	N	U			18	4.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzoic acid	7/3/2012	370	Yes	N	U			370	94	ug/kg
CB-002-06222012	12-11979-UZ99A	Diethyl phthalate	7/3/2012	46	Yes	N	U			46	34	ug/kg
CB-002-06222012	12-11979-UZ99A	Di-n-butyl phthalate	7/3/2012	18	Yes	N	U			18	7.6	ug/kg
CB-002-06222012	12-11979-UZ99A	Phenanthrene	7/3/2012	33	Yes	Y				18	3.4	ug/kg
CB-002-06222012	12-11979-UZ99A	Butylbenzyl phthalate	7/3/2012	160	Yes	Y				18	5.7	ug/kg
CB-002-06222012	12-11979-UZ99A	N-Nitrosodiphenylamine	7/3/2012	18	Yes	N	U			18	5.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzo(a)pyrene	7/3/2012	11	Yes	Y	J			18	5.1	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobutadiene (Hexachloro-1,3-butadiene)	7/3/2012	93	Yes	N	U			93	4.2	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Benzo(a)anthracene	7/3/2012	9.3		Yes	Y	J			18	3.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Naphthalene	7/3/2012	28		Yes	Y				18	2.6	ug/kg
CB-002-06222012	12-11979-UZ99A	2-Methylnaphthalene	7/3/2012	29		Yes	Y				18	2.8	ug/kg
CB-002-06222012	12-11979-UZ99A	2-Methylphenol (o-Cresol)	7/3/2012	18		Yes	N	U			18	4.9	ug/kg
CB-002-06222012	12-11979-UZ99A	1,2-Dichlorobenzene	7/3/2012	18		Yes	N	U			18	2.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzo(b,j,k)fluoranthenes	7/3/2012	25		Yes	Y				18	2.5	ug/kg
CB-002-06222012	12-11979-UZ99A	Fluorene	7/3/2012	18		Yes	N	U			18	4.0	ug/kg
CB-002-06222012	12-11979-UZ99A	4-Methylphenol (p-Cresol)	7/3/2012	37		Yes	N	U			37	6.1	ug/kg
CB-002-06222012	12-11979-UZ99A	Acenaphthene	7/3/2012	18		Yes	N	U			18	3.0	ug/kg
CB-002-06222012	12-11979-UZ99A	2,4-Dimethylphenol	7/3/2012	37		Yes	N	U			37	3.2	ug/kg
CB-002-06222012	12-11979-UZ99A	Chrysene	7/3/2012	22		Yes	Y				18	3.5	ug/kg
CB-002-06222012	12-11979-UZ99A	1,4-Dichlorobenzene	7/3/2012	18		Yes	N	U			18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Phenol	7/3/2012	18		Yes	N	U			18	8.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Bis(2-ethylhexyl)phthalate	7/3/2012	51		Yes	N	B	U	7	23	14	ug/kg
CB-002-06222012	12-11979-UZ99A	Di-n-octyl phthalate	7/3/2012	18		Yes	N	U			18	5.4	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobenzene	7/3/2012	18		Yes	N	U			18	4.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Fluoranthene	7/3/2012	29		Yes	Y				18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzyl alcohol	7/3/2012	18		Yes	N	U			18	5.6	ug/kg
CB-002-06222012	12-11979-UZ99A	Anthracene	7/3/2012	18		Yes	N	U			18	4.2	ug/kg
CB-002-06222012	12-11979-UZ99A	Acenaphthylene	7/3/2012	18		Yes	N	U			18	5.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Indeno(1,2,3-c,d)pyrene	7/3/2012	18		Yes	N	U			18	4.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzo(g,h,i)perylene	7/3/2012	21		Yes	Y				18	4.1	ug/kg
CB-002-06222012	12-11979-UZ99A	Dibenzofuran	7/3/2012	18		Yes	N	U			18	3.8	ug/kg
CB-002-06222012	12-11979-UZ99A	Dimethyl phthalate	7/3/2012	15		Yes	Y	J			18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Pyrene	7/3/2012	31		Yes	Y				18	1.8	ug/kg

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	1,2,4-Trichlorobenzene	7/3/2012	18		Yes	N	U			18	3.2	ug/kg

Analytical Method SW8270DSIM

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	2,4-Dimethylphenol	7/3/2012	18		Yes	N	U	UJ	10	18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Butylbenzyl phthalate	7/3/2012	150		Yes	Y				4.6	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Pentachlorophenol	7/3/2012	46		Yes	N	U			46	13	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobutadiene (Hexachloro-1,3-butadiene)	7/3/2012	4.6		Yes	N	U			4.6	0.89	ug/kg
CB-002-06222012	12-11979-UZ99A	N-Nitrosodiphenylamine	7/3/2012	3.6		Yes	Y	J			18	1.3	ug/kg
CB-002-06222012	12-11979-UZ99A	2-Methylphenol (o-Cresol)	7/3/2012	4.6		Yes	N	U			4.6	1.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Diethyl phthalate	7/3/2012	14		Yes	N	B	U	7	4.6	3.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Dibenzo(a,h)anthracene	7/3/2012	5.1		Yes	Y				4.6	1.9	ug/kg
CB-002-06222012	12-11979-UZ99A	Dimethyl phthalate	7/3/2012	15		Yes	Y				4.6	1.2	ug/kg
CB-002-06222012	12-11979-UZ99A	1,2,4-Trichlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.7	ug/kg
CB-002-06222012	12-11979-UZ99A	1,4-Dichlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.1	ug/kg
CB-002-06222012	12-11979-UZ99A	1,2-Dichlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.2	ug/kg

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	June 22, 2012
LDC Report Date:	August 13, 2012
Matrix:	Sediment
Parameters:	Polychlorinated Biphenyls
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UZ99

Sample Identification

CB-002-06222012

Introduction

This data review covers one sediment sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

Raw data were not reviewed for this SDG.

XIII. Compound Quantitation and Reported RLs

Raw data were not reviewed for this SDG.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the Stage 2B data validation all results are considered valid and usable for all purposes.

XV. Field Duplicates

No field duplicates were identified in this SDG.

XVI. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Polychlorinated Biphenyls - Data Qualification Summary - SDG UZ99

No Sample Data Qualified in this SDG

I & J Waterway
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG UZ99

No Sample Data Qualified in this SDG

LDC #: 28089A3b

SDG #: UZ99

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 8/10/12

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22/12
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/	A	CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	N	
XIII.	Compound quantitation/RL/LOQ/LODs	N	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ~~SOIL~~ aqueous

1	CB-002-06222012	11	MB-062712	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	June 22, 2012
LDC Report Date:	August 2, 2012
Matrix:	Sediment
Parameters:	Metals
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UZ99

Sample Identification

CB-002-06222012
CB-002-06222012MS
CB-002-06222012DUP

Introduction

This data review covers 3 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010C and 7471A for Metals. The metals analyzed were Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Silver, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metals contaminants were found in the initial, continuing and preparation blanks.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
CB-002-06222012MS (All samples in SDG UZ99)	Chromium	52.2 (75-125)	J (all detects) UJ (all non-detects)	A
	Copper	73.0 (75-125)	J (all detects) UJ (all non-detects)	

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Difference (Limits)	Flag	A or P
CB-002-06222012DUP (All samples in SDG UZ99)	Mercury	-	0.07 mg/Kg (≤0.06)	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data were not reviewed for this SDG.

XIII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS %R and Duplicate difference problems, data were qualified as estimated in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

XV. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Metals - Data Qualification Summary - SDG UZ99

SDG	Sample	Analyte	Flag	A or P	Reason
UZ99	CB-002-06222012	Chromium Copper	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike (%R)
UZ99	CB-002-06222012	Mercury	J (all detects) UJ (all non-detects)	A	Duplicate sample analysis (difference)

I & J Waterway
Metals - Laboratory Blank Data Qualification Summary - SDG UZ99

No Sample Data Qualified in this SDG

LDC #: 28089A4

SDG #: UZ99

Laboratory: Analytical Resources Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 8-2-12

Page: 1 of 1

Reviewer: CL

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010C/7471A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22/12
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	SW	MS
VII.	Duplicate Sample Analysis	SW	DP
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	Not utilized
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	Not performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Sediment

1	CB-002-06222012	11		21		31	
2	CB-002-06222012MS	12		22		32	
3	CB-002-06222012DUP	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 28089A4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: QR
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
QC: 2, 3		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
GFAA		~~Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti,~~

Comments: Mercury by CVAA if performed

LDC #: 28089A4

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Was a post digestion spike analyzed for ICP elements that did not meet the required criteria for matrix spike recovery?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Matrix Spike ID	Matrix	Analyte	%R	Associated Samples	Qualifications
		2	S	Cr	52.2	All	J/UJ/A
				Cu	73.0	J	J

Comments: Ni → 4x

MS.4C4

LDC #: 28089A4

VALIDATION FINDINGS WORKSHEET
Duplicate Analysis

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a duplicate sample analyzed for each matrix in this SDG?

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤ 35% for soil samples? If no, see qualifications below. A control limit of ±R.L. (±2X R.L. for soil) was used for sample values that were <5X the R.L., including the case when only one of the duplicate sample values was <5X R.L.. If field blanks were used for laboratory duplicates, note in the Overall Assessment.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Duplicate ID	Matrix	Analyte	RPD (Limits)	Difference (Limits) mg/kg	Associated Samples	Qualifications
		3	S	Hg		0.07 (≤0.06)	All	J/UJ/A

Comments:

LDC Report# 28089A6

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	June 22, 2012
LDC Report Date:	August 2, 2012
Matrix:	Sediment
Parameters:	Wet Chemistry
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UZ99

Sample Identification

CB-002-06222012
CB-002-06222012MS
CB-002-06222012DUP
CB-002-06222012TRP

Introduction

This data review covers 4 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 350.1M for Ammonia as Nitrogen, Standard Method 2540B for Total Solids and Preserved Total Solids, EPA Method 376.2 for Sulfide, Plumb Method for Total Organic Carbon, and PSEP Method for Grain Size.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of the presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicates/Triplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

Triplicate (TRP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Sample Result Verification

Raw data were not reviewed for this SDG.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the Stage 2B data validation all results are considered valid and usable for all purposes.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Wet Chemistry - Data Qualification Summary - SDG UZ99

No Sample Data Qualified in this SDG

I & J Waterway
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG UZ99

No Sample Data Qualified in this SDG

LDC #: 28089A6

SDG #: UZ99

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 8-2-12

Page: 1 of 1

Reviewer: CL

2nd Reviewer: W

METHOD: (Analyte) N-Ammonia (EPA Method 350.1M), Total Solids, Preserved Total Solids (SM2540B), Sulfide (EPA Method 376.2), Total Organic Carbon (Plumb, ~~1981~~ W) Grain Size (PSEP)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22/12
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	A	MS
VI.	Duplicates (Triplicates)	A	DUP, TRP
VII.	Laboratory control samples	A	LCS
VIII.	Sample result verification	N	
IX.	Overall assessment of data	A	
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Sediment

1	CB-002-06222012	11		21		31	
2	CB-002-06222012MS	12		22		32	
3	CB-002-06222012~~MSD~~ DUP	13		23		33	
4	CB-002-06222012~~DUP~~ TRP	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 28069A6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: CR
2nd reviewer: ✓

All circled methods are applicable to each sample.

Sample ID	Parameter
1	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS PTS Sa Grain Size
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
QC 2	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Sa TOC
3	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS PTS Sa
4	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	I & J Waterway
Collection Date:	June 22, 2012
LDC Report Date:	August 13, 2012
Matrix:	Sediment
Parameters:	Dioxins/Dibenzofurans
Validation Level:	Stage 2B
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	UZ99

Sample Identification

CB-002-06222012

Introduction

This data review covers one sediment sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1613B for Polychlorinated Dioxins/Dibenzofurans.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and less than or equal to 35.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

IV. Routine Calibration (Continuing)

Routine calibration was performed at the required frequencies.

All of the routine calibration results were within the QC limits for unlabeled compounds and labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated dioxin/dibenzofuran contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
MB-070912	7/9/12	2,3,7,8-TCDF 2,3,7,8-TCDD 1,2,3,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD OCDD	0.0214 pg/g 0.0440 pg/g 0.0266 pg/g 0.0290 pg/g 0.0290 pg/g 0.0218 pg/g 0.0440 pg/g 0.0748 pg/g 1.54 pg/g	All samples in SDG UZ99

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Ongoing Precision & Recovery Samples (OPR)

Ongoing precision and recovery (OPR) control samples were reviewed for each matrix as applicable. The percent recoveries (%R) were within the QC limits.

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries were within QC limits.

X. Target Compound Identifications

Raw data were not reviewed for this SDG.

XI. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

Sample	Compound	Flag	A or P
All samples in SDG UZ99	All compounds reported as estimated maximum possible concentration (EMPC)	J (all detects)	A

Raw data were not reviewed for this SDG.

XII. System Performance

Raw data were not reviewed for this SDG.

XIII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to compound quantitation problems, data were qualified as estimated in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B data validation all other results are considered valid and usable for all purposes.

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

XV. Field Blanks

No field blanks were identified in this SDG.

I & J Waterway
Dioxins/Dibenzofurans - Data Qualification Summary - SDG UZ99

SDG	Sample	Compound	Flag	A or P	Reason
UZ99	CB-002-06222012	All compounds reported as estimated maximum possible concentration (EMPC)	J (all detects)	A	Compound quantitation and RLs

I & J Waterway
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG UZ99

No Sample Data Qualified in this SDG

I & J Waterway
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG UZ99

No Sample Data Qualified in this SDG

LDC #: 28089A21

SDG #: UZ99

Laboratory: Analytical Resources Inc.

VALIDATION COMPLETENESS WORKSHEET

Level ~~IV~~ III

Date: 8/10/12

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22/12
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 20/35
IV.	Routine calibration/~~ICV~~	A	QC limit
V.	Blanks	SW	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	OPR
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	A	QC limit
X.	Target compound identifications	A	
XI.	Compound quantitation/RL/LOQ/LODs	SW	
XII.	System performance	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ~~soil~~ solid

1	CB-002-06222012	11	MB-070912	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

VALIDATION FINDINGS WORKSHEET

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA SW 846 Method 8290)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

LDC #: 28089A21

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated?

Blank extraction date: 07/09/12 **Blank analysis date:** 07/11/12 **Associated samples:** All >5X

Conc. units: pg/g * EMPC

Compound	Blank ID	Sample Identification								
	MB-070912	5X								
H	0.0214*	0.107								
A	0.0440*	0.22								
I	0.0266*	0.133								
L	0.0290*	0.145								
M	0.0290*	0.145								
N	0.0218*	0.109								
O	0.0440*	0.22								
F	0.0748*	0.374								
G	1.54*	7.7								

LDC #: 28089A2 /

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA SW 846 Method 8290)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ions and relative response factors (RRF) used to quantitate the compound?
Y N N/A Compound quantitation and CRQLs were adjusted to reflect all sample dilutions and dry weight factors (if necessary).

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		All	All compounds		J/Adet
			reported by the lab		
			as estimated		
			maximum possible		
			concentration (EMPC)		

Comments: See sample calculation verification worksheet for recalculations

I and J Waterway - LDC 28089

SDG: UZ99

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	7/11/2012	4.36	Yes	Y				0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	7/11/2012	2.05	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	7/11/2012	9.55	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	7/11/2012	35.5	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	7/11/2012	6.61	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	8.57	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7/11/2012	6.71	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	7/11/2012	4.78	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	7/11/2012	5.82	Yes	Y				0.984		pg/g
CB-002-06222012	12-11979-UZ99A	Total Hexachlorodibenzofuran (HxCDF)	7/11/2012	80.7	Yes	Y	EMPC	J	23	1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	7/11/2012	4.15	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	7/11/2012	0.744	Yes	Y	J			0.984		pg/g
CB-002-06222012	12-11979-UZ99A	Total Tetrachlorodibenzo-p-dioxin (TCDD)	7/11/2012	42.2	Yes	Y	EMPC	J	23	0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	3.29	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	7/11/2012	50.8	Yes	Y				4.92		pg/g
CB-002-06222012	12-11979-UZ99A	Total Heptachlorodibenzofuran (HpCDF)	7/11/2012	77.5	Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	Total Heptachlorodibenzo-p-dioxin (HpCDD)	7/11/2012	174	Yes	Y				1.97		pg/g

Analytical Method E1613B

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Total Pentachlorodibenzo-p-dioxin (PeCDD)	7/11/2012	55.7		Yes	Y				0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	7/11/2012	95.9		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	Total Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	85		Yes	Y	EMPC	J	23	1.97		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	7/11/2012	611		Yes	Y				4.92		pg/g
CB-002-06222012	12-11979-UZ99A	Total Pentachlorodibenzofuran (PeCDF)	7/11/2012	85.1		Yes	Y	EMPC	J	23	1.97		pg/g
CB-002-06222012	12-11979-UZ99A	Total Tetrachlorodibenzofuran (TCDF)	7/11/2012	67.7		Yes	Y	EMPC	J	23	0.984		pg/g
CB-002-06222012	12-11979-UZ99A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	7/11/2012	5.92		Yes	Y				1.97		pg/g
CB-002-06222012	12-11979-UZ99A	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	7/11/2012	3.75		Yes	Y				0.984		pg/g

Analytical Method E350.1M

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Ammonia	6/27/2012	2.15		Yes	Y				0.11	0.03000	mg/kg

Analytical Method E376.2

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Sulfide	6/26/2012	1.7		Yes	Y				1.05	0.00750	mg/kg

Analytical Method Plumb 1981

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Total organic carbon	7/13/2012	0.833		Yes	Y				0.020	0.00290	pct

Analytical Method PSEP

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Silt, Fine	7/18/2012	1		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Clay, Coarse	7/18/2012	0.6		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Silt, Medium	7/18/2012	1.3		Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Silt, Coarse	7/18/2012	3.5		Yes	Y				0.1	0.1	pct

SDG: UZ99

Analytical Method	PSEP											
Sample ID	**Lab Sample ID**	**Chemical Name**	**Anal Date**	**Result**	**Mod Res Report**	**Detect**	**Lab Qual**	**Val Qual**	**Reason**	**RL**	**MDL**	**Units**
CB-002-06222012	12-11979-UZ99A	Sand, Very Fine	7/18/2012	2.9	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Very Coarse	7/18/2012	9.4	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Medium	7/18/2012	7.4	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Coarse	7/18/2012	7	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Gravel	7/18/2012	59.2	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Fines (silt + clay)	7/18/2012	7.9	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Clay, Medium	7/18/2012	0.4	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Clay, Fine	7/18/2012	0.4	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Sand, Fine	7/18/2012	6.2	Yes	Y				0.1	0.1	pct
CB-002-06222012	12-11979-UZ99A	Silt, Very Fine	7/18/2012	0.7	Yes	Y				0.1	0.1	pct

Analytical Method	SM2540B											
Sample ID	**Lab Sample ID**	**Chemical Name**	**Anal Date**	**Result**	**Mod Res Report**	**Detect**	**Lab Qual**	**Val Qual**	**Reason**	**RL**	**MDL**	**Units**
CB-002-06222012	12-11979-UZ99A	Total solids	6/25/2012	85.7	Yes	Y				0.01		pct

Analytical Method	SM2540B-PRES											
Sample ID	**Lab Sample ID**	**Chemical Name**	**Anal Date**	**Result**	**Mod Res Report**	**Detect**	**Lab Qual**	**Val Qual**	**Reason**	**RL**	**MDL**	**Units**
CB-002-06222012	12-11979-UZ99A	Total solids (preserved)	6/26/2012	87.5	Yes	Y				0.01		pct

Analytical Method	SW6010C											
Sample ID	**Lab Sample ID**	**Chemical Name**	**Anal Date**	**Result**	**Mod Res Report**	**Detect**	**Lab Qual**	**Val Qual**	**Reason**	**RL**	**MDL**	**Units**
CB-002-06222012	12-11979-UZ99A	Zinc	7/2/2012	98	Yes	Y				3	0.33	mg/kg
CB-002-06222012	12-11979-UZ99A	Copper	7/2/2012	34.4	Yes	Y		J	8	0.6	0.14	mg/kg
CB-002-06222012	12-11979-UZ99A	Chromium	7/2/2012	38	Yes	Y		J	8	1	0.75	mg/kg
CB-002-06222012	12-11979-UZ99A	Cadmium	7/2/2012	0.6	Yes	N	U			0.6	0.31	mg/kg
CB-002-06222012	12-11979-UZ99A	Arsenic	7/2/2012	10	Yes	N	U			10	1.3	mg/kg
CB-002-06222012	12-11979-UZ99A	Silver	7/2/2012	0.8	Yes	N	U			0.8	0.084	mg/kg
CB-002-06222012	12-11979-UZ99A	Lead	7/2/2012	18	Yes	Y				6	0.36	mg/kg

SDG: UZ99

Analytical Method	SW6010C												
Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Nickel	7/2/2012	826		Yes	Y				3	0.84	mg/kg

Analytical Method	SW7471A												
Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Mercury	6/27/2012	0.04		Yes	Y		J	9	0.03	0.0014	mg/kg

Analytical Method	SW8082												
Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Aroclor 1221	7/2/2012	19		Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1232	7/2/2012	19		Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1248	7/2/2012	19		Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1016	7/2/2012	19		Yes	N	U			19	4.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1242	7/2/2012	19		Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1254	7/2/2012	19		Yes	N	U			19	6.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Aroclor 1260	7/2/2012	19		Yes	N	U			19	6.3	ug/kg

Analytical Method	SW8270D												
Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Pentachlorophenol	7/3/2012	180		Yes	N	U			180	45	ug/kg
CB-002-06222012	12-11979-UZ99A	Dibenzo(a,h)anthracene	7/3/2012	18		Yes	N	U			18	4.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzoic acid	7/3/2012	370		Yes	N	U			370	94	ug/kg
CB-002-06222012	12-11979-UZ99A	Diethyl phthalate	7/3/2012	46		Yes	N	U			46	34	ug/kg
CB-002-06222012	12-11979-UZ99A	Di-n-butyl phthalate	7/3/2012	18		Yes	N	U			18	7.6	ug/kg
CB-002-06222012	12-11979-UZ99A	Phenanthrene	7/3/2012	33		Yes	Y				18	3.4	ug/kg
CB-002-06222012	12-11979-UZ99A	Butylbenzyl phthalate	7/3/2012	160		Yes	Y				18	5.7	ug/kg
CB-002-06222012	12-11979-UZ99A	N-Nitrosodiphenylamine	7/3/2012	18		Yes	N	U			18	5.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzo(a)pyrene	7/3/2012	11		Yes	Y	J			18	5.1	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobutadiene (Hexachloro-1,3-butadiene)	7/3/2012	93		Yes	N	U			93	4.2	ug/kg

SDG: UZ99

Analytical Method SW8270D

Sample ID	Lab Sample ID	Chemical Name	Anal Date	Result	Mod Res	Report	Detect	Lab Qual	Val Qual	Reason	RL	MDL	Units
CB-002-06222012	12-11979-UZ99A	Benzo(a)anthracene	7/3/2012	9.3		Yes	Y	J			18	3.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Naphthalene	7/3/2012	28		Yes	Y				18	2.6	ug/kg
CB-002-06222012	12-11979-UZ99A	2-Methylnaphthalene	7/3/2012	29		Yes	Y				18	2.8	ug/kg
CB-002-06222012	12-11979-UZ99A	2-Methylphenol (o-Cresol)	7/3/2012	18		Yes	N	U			18	4.9	ug/kg
CB-002-06222012	12-11979-UZ99A	1,2-Dichlorobenzene	7/3/2012	18		Yes	N	U			18	2.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzo(b,j,k)fluoranthenes	7/3/2012	25		Yes	Y				18	2.5	ug/kg
CB-002-06222012	12-11979-UZ99A	Fluorene	7/3/2012	18		Yes	N	U			18	4.0	ug/kg
CB-002-06222012	12-11979-UZ99A	4-Methylphenol (p-Cresol)	7/3/2012	37		Yes	N	U			37	6.1	ug/kg
CB-002-06222012	12-11979-UZ99A	Acenaphthene	7/3/2012	18		Yes	N	U			18	3.0	ug/kg
CB-002-06222012	12-11979-UZ99A	2,4-Dimethylphenol	7/3/2012	37		Yes	N	U			37	3.2	ug/kg
CB-002-06222012	12-11979-UZ99A	Chrysene	7/3/2012	22		Yes	Y				18	3.5	ug/kg
CB-002-06222012	12-11979-UZ99A	1,4-Dichlorobenzene	7/3/2012	18		Yes	N	U			18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Phenol	7/3/2012	18		Yes	N	U			18	8.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Bis(2-ethylhexyl)phthalate	7/3/2012	51		Yes	N	B	U	7	23	14	ug/kg
CB-002-06222012	12-11979-UZ99A	Di-n-octyl phthalate	7/3/2012	18		Yes	N	U			18	5.4	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobenzene	7/3/2012	18		Yes	N	U			18	4.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Fluoranthene	7/3/2012	29		Yes	Y				18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzyl alcohol	7/3/2012	18		Yes	N	U			18	5.6	ug/kg
CB-002-06222012	12-11979-UZ99A	Anthracene	7/3/2012	18		Yes	N	U			18	4.2	ug/kg
CB-002-06222012	12-11979-UZ99A	Acenaphthylene	7/3/2012	18		Yes	N	U			18	5.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Indeno(1,2,3-c,d)pyrene	7/3/2012	18		Yes	N	U			18	4.3	ug/kg
CB-002-06222012	12-11979-UZ99A	Benzo(g,h,i)perylene	7/3/2012	21		Yes	Y				18	4.1	ug/kg
CB-002-06222012	12-11979-UZ99A	Dibenzofuran	7/3/2012	18		Yes	N	U			18	3.8	ug/kg
CB-002-06222012	12-11979-UZ99A	Dimethyl phthalate	7/3/2012	15		Yes	Y	J			18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Pyrene	7/3/2012	31		Yes	Y				18	1.8	ug/kg

SDG: UZ99

Analytical Method	SW8270D											
Sample ID	**Lab Sample ID**	**Chemical Name**	**Anal Date**	**Result**	**Mod Res**	**Report**	**Detect**	**Lab Qual**	**Val Qual**	**Reason**	**RL**	**MDL**	**Units**
CB-002-06222012	12-11979-UZ99A	1,2,4-Trichlorobenzene	7/3/2012	18		Yes	N	U			18	3.2	ug/kg

Analytical Method	SW8270DSIM											
Sample ID	**Lab Sample ID**	**Chemical Name**	**Anal Date**	**Result**	**Mod Res**	**Report**	**Detect**	**Lab Qual**	**Val Qual**	**Reason**	**RL**	**MDL**	**Units**
CB-002-06222012	12-11979-UZ99A	2,4-Dimethylphenol	7/3/2012	18		Yes	N	U			18	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Butylbenzyl phthalate	7/3/2012	150		Yes	Y				4.6	2.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Pentachlorophenol	7/3/2012	46		Yes	N	U			46	13	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobutadiene (Hexachloro-1,3-butadiene)	7/3/2012	4.6		Yes	N	U			4.6	0.89	ug/kg
CB-002-06222012	12-11979-UZ99A	N-Nitrosodiphenylamine	7/3/2012	3.6		Yes	Y	J			18	1.3	ug/kg
CB-002-06222012	12-11979-UZ99A	2-Methylphenol (o-Cresol)	7/3/2012	4.6		Yes	N	U			4.6	1.7	ug/kg
CB-002-06222012	12-11979-UZ99A	Diethyl phthalate	7/3/2012	14		Yes	N	B	U	7	4.6	3.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Dibenzo(a,h)anthracene	7/3/2012	5.1		Yes	Y				4.6	1.9	ug/kg
CB-002-06222012	12-11979-UZ99A	Dimethyl phthalate	7/3/2012	15		Yes	Y				4.6	1.2	ug/kg
CB-002-06222012	12-11979-UZ99A	1,2,4-Trichlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.7	ug/kg
CB-002-06222012	12-11979-UZ99A	1,4-Dichlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.1	ug/kg
CB-002-06222012	12-11979-UZ99A	1,2-Dichlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.0	ug/kg
CB-002-06222012	12-11979-UZ99A	Hexachlorobenzene	7/3/2012	4.6		Yes	N	U			4.6	1.2	ug/kg

APPENDIX D
CHEMICAL AND PHYSICAL TESTING LABORATORY DATA REPORTS

Table D-1

I&J Waterway RI/FS Supplemental Investigation Sample Identification and Corresponding Laboratory and Validation Data Report

Site and Sample Medium	Sample ID	Laboratory Data Package No.	Validation Report No.	RI/FS Supplemental Investigation Testing Parameters[1]
Reference - Carr Inlet				
Surface	CR-12	UW82	--	GS, TOC, TS
	CR-023	UW82	--	GS, TOC, TS
I&J Waterway Site Sediment				
Surface	IJ121-01	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-02	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-03	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-04	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-05	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-06	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-07	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-08a	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
	IJ12-11	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
Subsurface[2]				
	I-1-Z	UL83, US18	27745	GS_f, NH3, Ni, SMS, TS, TOC,
	I-2-A-Z	UL83, US18	27745	D/F, GS_f, NH3, Ni, SMS, TS, TOC,
Storm Drain Solid				
	CT-002-06222012	UZ99	28089	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,
Field Duplicates				
	IJ12-58a	UR81	27745	D/F, GS, NH3, Ni, S2, SMS, TOC, TPS, TS,

Notes:

1. D/F: Dioxin/Furans; GS: Grain Size (not frozen); GS_f: Grain Size (Frozen/Archived Sample); TPS, Total Preserved Solids, TS: Total Solids; TVS: Total Volatile NH3: Ammonia; Ni: Nickel; SMS: SMS chemicals; S2: Total Sulfides
2. The Laboratory Data Package and Validation Report are shown for only those USACE subsurface sediment samples that were tested for the I&J Waterway RI/FS Supplemental Investigation. The Laboratory Data Packages and Validation Reports for the other USACE samples are included in the Data Summary Memo - Dioxin Testing of Bellingham Bay Federal Project Squalicum and I&J Street Waterways (Anchor QEA 2011).

Table of Contents: ARI Job UL83

Client: Anchor QEA

Project: 080202-01 USACE Federal Channels

	Page From:	Page To:
Inventory Sheet		
Cover Letter	1	1
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General Chemistry Analysis		
Report and Summary QC Forms	12	19
General Chemistry Raw Data		
Analyst Notes and Raw Data	20	35

Signature

March-21-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 23, 2012

Leslie McKee
Anchor QEA
1605 Cornwall Avenue
Bellingham, WA 98225

RE: USACE Federal Channels, 080202-01
ARI Job: UL83

Dear Leslie:

Please find enclosed the Chain-of-Custody (COC) records, sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
-For-
Susan D. Dunnihoo
Director, Client Services
sue@arilabs.com
206-695-6207

Enclosures

cc: eFile UL83

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: UL83

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** Leslie McKee **Page** 1 **of** 6 TL70

Lab Contact: Sue Dunihoo	Project: **USACE Federal Channels: Squalicum and I&J**
Lab: **ARI** ~~Laboratory~~	
Address:	Proj. No.: **080202-01**
City, etc: :	Sampler: Amy Corp
Phone:	Shipping Method: Drop off
Fax:	AirBill #:

Analyses Requested

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxins/Furan	GS	TS/TOC/NH3	~~[illegible]~~	Archive						Notes/ Comments:
S-8-DM	9/6/11	1052	SE	1	→										discard sample
S-8-Z	↓	1055	↓	4 3					X						
S-7-DM		1345		4	X	X	X		X						
S-7-Z		1341		1					X						
S-6-DM		1425		4	X	X	X		X						
S-6-Z		1430		1					X						
S-5-DM		1515		4	X	X	X		X						
S-5-Z		1511		1					X						
S-4-DM		1601		4	X	X	X		X						
S-4-Z		1603		1					X						
S-2-DM		1647		4	X	X	X		X						
S-2-Z		1652		1					X						
S-1-DM		1747		4	X	X	X		X						
S-1-Z	↓	1749	↓	1					X						

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Joy Dunay	Printed Name:	Printed Name:	Analyze SRM for dioxin/furans one per project.
Company: Anchor QEA	Company:	Company:	
Date/Time: 9/9/11 836	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name: A. Volgardsen	Printed Name:	Printed Name:	
Company: ARI	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time: 9/9/11 836	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

~~TT20:00003~~ WS 3/23/18

UL83:00003

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** Leslie McKee **Page** 3 of 6 TL 70

Lab Contact: Sue Dunihoo	Project: **USACE Federal Channels: Squalicum and I&J**
Lab: **ARI**	
Address:	Proj. No.: **080202-01**
City, etc: :	Sampler: Amy Corp
Phone:	Shipping Method: Drop-off
Fax:	AirBill #.

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxins/Furans	TS, TOC, NH3	Grainsize	Archive							Notes/ Comments:
S-3-DM	9/7/2011	950	SE	4	X	X	X	X							
S-3-DMB		955		2		X	X								
S-3-DMC		1000		2		X	X								
S-3-Z		1005		1				X							
S-9-Z		1040		4	X	X	X	X							
S-10-A-Z		1115		1				X							
S-11-Z		1140		4	X	X	X	X							
S-12-A-Z		1230		1				X							
S-13-Z		1320		4	X	X	X	X							
S-14-A-Z		1400		1				X							
S-15-Z		1450		4	X	X	X	X							
S-16-A-Z		1540		1				X							
I-7-DM		1640		4	X	X	X	X							
I-7-Z		1645		1				X							

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Joy Dunay	Printed Name:	Printed Name:		
Company: AQ	Company:	Company:		
Date/Time: 9/9/11 0836	Date/Time:	Date/Time:		
Received By:	Received By:	Received By.		
Printed Name: A. Volgardsen	Printed Name:	Printed Name:		
Company: ARI	Company:	Company:	# of Coolers:	Cooler Temp(s)
Date/Time: 9/9/11 836	Date/Time:	Date/Time:	COC Seals Intact?	Bottles Intact?

~~TT20 : 00004~~ 00373317

UL83 : 00004

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Anchor

COC No(s) _____ (NA)

Assigned ARI Job No TL70

Project Name USACE Federal Channels Squalicum

Delivered by Fed-Ex UPS Courier Hand Delivered Other _____

Tracking No. _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.9 4.4 3.9 2.5 3.9

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID# 90941619

Cooler Accepted by: AV Date 9/9/11 Time 836

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI (NA) YES Date/Time _____ Equipment _____ Split by _____

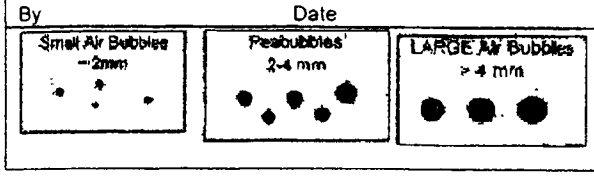
Samples Logged by: TS Date 9-9-11 Time 1418

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By Date



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Subject: FW: I & J Waterway RI/FS Work Plan Addendum
From: Delaney Peterson <dpeterson@anchorqea.com>
Date: 3/12/2012 12:21 PM
To: "sue@arilabs.com" <sue@arilabs.com>

Hi Sue,
We need to trigger the analyses of a couple of samples from the I & J Waterway work from last September.
The TS and TOC expired on Friday so we need these to be done as soon as possible.
The samples are I-1-Z and I-2-A-Z. They were originally logged in under TL65.

Will you please trigger these ASAP?

Thanks!
Delaney

From: Dan Berlin
Sent: Monday, March 12, 2012 11:44 AM
To: Delaney Peterson; Joy Dunay
Cc: Leslie McKee
Subject: FW: I & J Waterway RI/FS Work Plan Addendum

Delaney and Joy,
Did either of you work on the I&J waterway sampling project? We collected cores from the Corps in September 2011. We are also working for the Port of Bellingham, and need to trigger a few samples that are just at their hold time limits. Specifically, I-1-Z and I-2-A-Z. Please see Table 1 in the attached file. We need to trigger total solids and TOC from these samples (see Table 2 for hold time expiration dates). Are there any other tests that we could also trigger to be most efficient with volumes? We will be a bit tight on volumes, so don't want to waste any sediment, and we'll do all of the sediment tests in Table 1/3 anyway.
If you are familiar with this, can you coordinate with the lab (ARI I think) to trigger these samples? We have received approval from the Corps to test them, but they have to be billed under the Port of Bellingham (090007-01.02 task 2).
Give me a call on my cell phone to discuss if you can. Leslie's out today, and I'd like to get this rolling since we probably should have triggered them before Friday J.
Thanks
Dan

Dan Berlin

ANCHOR QEA, LLC
dberlin@anchorqea.com

From: Dan Berlin
Sent: Friday, March 09, 2012 1:48 PM
To: 'McInerney, Lucy (ECY)'
Cc: Stoner, Mike (MikeS@portofbellingham.com)
Subject: RE: I & J Waterway RI/FS Work Plan Addendum

Lucy,
Attached is the revised I&J Work Plan Addendum. A complete pdf is included, along with a redline version with brief responses to each of your comments. This version incorporates the edits summarized in my email on February 24, which was based on our previous discussion. Since then, per your request, we modified the background text, and we added a sample to be archived at IJW-SS-02 (IJ12-10), which would be tested if sample IJ12-07 failed.

UL83 : 00008/2012 12:39 PM

We also modified the reporting requirements such that the Supplemental Investigation Memorandum will include the results of this sampling, but also the historical data. This Memo would be akin to an RI, and would support discussions between the Port and Ecology to assess the results and confirm the path forward. This terminology and approach is consistent with the draft AO amendment that Frank and Phyllis have worked on, which requires the RI/FS report be submitted 150 days after receipt of final Ecology comments on the Memo.
Thanks
Dan

Dan Berlin

ANCHOR QEA, LLC
dberlin@anchorqea.com

From: McInerney, Lucy (ECY) [mailto:LPEB461@ECY.WA.GOV]
Sent: Thursday, January 26, 2012 3:44 PM
To: Mike Stoner
Cc: Dan Berlin; Mark Larsen
Subject: I & J Waterway RI/FS Work Plan Addendum

Mike:

Ecology has reviewed the memorandum from Anchor QEA regarding the I & J Waterway RI/FS Work Plan Addendum, dated December 21, 2011. Our comments are in the attached document.

In addition, I am working with the new Ecology AAG assigned to the site, Phyllis Barney, to determine if the memorandum format is appropriate. The outcome of my discussions with her, plus coordination with you and your attorney, may result in additional required changes to the document.

Sincerely,

Lucy

Lucille T. McInerney, P.E.
Department of Ecology
Northwest Regional Office
Toxics Cleanup Program
3190 160th Avenue S.E.
Bellevue, WA 98008-5452
425.649.7272

Attachments

IJ WPA_3-09-12.pdf 2.9 MB

UL83 : 00001 1/2/2012 12:39 PM

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: UL83

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: USACE Federal Channels, 080202-01
ARI Job No.: UL83

Sample receipt

Two sediment samples were removed from frozen archive on March 12, 2012 and logged under ARI job UL83. The samples were analyzed for TOC and Total Solids as requested. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Conventional Parameters

The samples and associated laboratory QC were prepared and analyzed outside the method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recovery was within limits.

The SRM percent recovery was within limits.

The matrix spike percent recovery and replicate RSDs were within control limits.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UL83
Client: Anchor QEA
Project Event: 080202-01
Project Name: USACE Federal Channels

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	I-1-Z	UL83A	12-4224	Sediment	09/08/11 09:55	09/09/11 08:36
2.	I-2-A-Z	UL83B	12-4225	Sediment	09/08/11 11:15	09/09/11 08:36

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

UL83:00011

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: UL83

SAMPLE RESULTS-CONVENTIONALS
UL83-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/21/12

Project: USACE Federal Channels
Event: 080202-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Client ID: I-1-Z
ARI ID: 12-4224 UL83A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/12/12 031212#1	EPA 160.3	Percent	0.01	59.60
Total Organic Carbon	03/19/12 031912#1	Plumb,1981	Percent	0.200	10.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
UL83-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/21/12

Project: USACE Federal Channels
Event: 080202-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Client ID: I-2-A-Z
ARI ID: 12-4225 UL83B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/12/12 031212#1	EPA 160.3	Percent	0.01	50.80
Total Organic Carbon	03/19/12 031912#1	Plumb,1981	Percent	0.020	4.15

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
UL83-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/21/12

Project: USACE Federal Channels
Event: 080202-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: UL83A Client ID: I-1-Z						
Total Organic Carbon	03/19/12	Percent	10.5	24.5	14.7	95.5%

REPLICATE RESULTS-CONVENTIONALS
UL83-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/21/12

Project: USACE Federal Channels
Event: 080202-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UL83A Client ID: I-1-Z					
Total Solids	03/12/12	Percent	59.60	59.80 59.40	0.3%
Total Organic Carbon	03/19/12	Percent	10.5	9.98 7.62	16.4%

LAB CONTROL RESULTS-CONVENTIONALS
UL83-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/21/12

Project: USACE Federal Channels
Event: 080202-01
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb,1981	ICVL	03/19/12	Percent	0.095	0.100	95.0%

METHOD BLANK RESULTS-CONVENTIONALS
UL83-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/21/12

Project: USACE Federal Channels
Event: 080202-01
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	03/12/12	Percent	< 0.01 U
Total Organic Carbon	03/19/12	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
UL83-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/21/12

Project: USACE Federal Channels
Event: 080202-01
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	03/19/12	Percent	2.79	2.99	93.3%

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: UL83

W

3-16-12

TOC Solids Prep Log

acid purging to remove IC and drying at 70ºC for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE:	3/12/2012
ANALYST:	CDE / KE 19:41

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70ºC dry wt	Solids	*(homogeneity and exclusions)*
Blank			12.9853		12.9854	0.1 mg	
UL83 A1		-	13.0142	18.3565	16.3738	62.89%	
UL83 A1 dup		-	13.2395	18.8706	16.7832	62.93%	RPD = 0.07%
UL83 A1 trip		-	13.0402	18.6423	16.5661	62.94%	RSD = 0.04%
UL83 B1		-	12.9967	18.2312	15.8417	54.35%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst CDL / (W) Date 3-12-12 19:41

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			12.9853	Ø	12.9854		
UL83 A'		–	13.0142	18.3565	16.3738		organic Sed.
A' dp		–	13.2395	18.8706	16.7832		
A' TP		–	13.0402	18.6423	16.5661		
B'		–	12.9967	18.2312	15.8417		

3-12-12 (W)

W
3-20-12

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 3/12/2012
ANALYST: CDE / KE 19:41

Instrumentation

Drying Ovens: 12
Muffle Furnace: N / A
Analytical Balance: 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

3/12/2012 19:41	date/time in oven	CDE
3/13/2012 10:15	date/time out	SM
elapsed hrs =	14.6	

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	3/12/12 16:40 CDE	3/12/12 16:17 CDE	3/13/12 SM									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg) (%)
Blank			1.0779	1.0777			0.00						
UL83 A1		6.3235	1.1090	4.2187			3.11	59.6%					
UL83 A1 dup		6.9266	1.0885	4.5805			3.49	59.8%					
							RPD =	0.30%				RPD =	NA
UL83 A1 trp		6.4420	1.0846	4.2695			3.18	59.4%					
							RSD =	0.31%				RSD =	NA
UL83 B1		6.2748	1.1067	3.7342			2.63	50.8%					

UL83 00023

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analyst: [illegible]	Date: 3-12-12	Oven ID: 92		Balance ID:	1123230597
Time in Oven: 19:41		Time Out of Oven: 10:15 3.13.12 SM		Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02 11:30	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	3-12-12 16:40	3-12-12 16:37	3.13.12 SM						
Cal Weight (10.0000):	10.0000 [illegible]	10.0000 [illegible]	10.0000						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	Dry Weight 104°C 2	Dry Weight 104°C 3	Dry Weight grams	Ash Weight 550°C 1	Ash Weight 550°C 2	Ash Weight 550°C 3
BLANK	1	Ø	1.0779	1.0777						
UL83 A'	2	6.3235	1.1090	4.2187						
A' dp	3	6.9266	1.0885	4.5805						
A' -P	4	6.4420	1.0846	4.2695						
B'	5	6.2748	1.1067	3.7342						

3-12-12 [illegible]

UL83 : 00024

7-2012

TOC, Solids Data Analysis

DATE: 3/19/2012
ANALYST: KE 10:14

Instrument: Apollo 2
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*

Calibration Data

Cal Curve ID: **2/16/2012** *Conc:* 5,000 *ppm*
Calibration Curve Standard: **00123 - 4** *Curve Date:* **02/01/12**
CalFact: **2.753E+05** *intercept:* **-81509** *r2 :* **0.99873**
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): **8** *to* **100** *40 µL injections of designated standard*

Verification Standard

Source: ***ERA# 0513 - 10 - 06*** *Conc:* **5,000** *ppm*
dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material

Source: ***NIST 8704*** *Conc:* **33,510** *ppm*
Source: ***NIST 1941B*** *Conc:* **29,900** *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
15.9	26.0	15.9	24.4			18.7	26.4%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
~~ICV~~			-	~~1.00~~		~~40.0~~	~~904~~	~~904~~	~~90.40%~~
~~Blank~~			-	~~1.00~~		~~40.0~~	~~12.11~~	~~12~~	~~Blank OK~~
~~NIST 1941B~~			-	~~1.00~~		~~1.8~~	~~29754~~	~~29,754~~	~~99.51%~~
~~UL83 - A1~~			-	~~1.00~~		~~1.3~~	~~77327~~	~~77,327~~	~~Offscale, dilute~~
~~Silica Blanks 1~~			-	~~1.00~~		~~38.6~~	~~54.83~~	~~55~~	~~Low Scale~~
~~Silica Blanks 2~~			-	~~1.00~~		~~37.2~~	~~116.0~~	~~116~~	~~Low Scale~~
~~Silica Blanks 3~~			-	~~1.00~~		~~30.5~~	~~42.95~~	~~43~~	~~Low Scale~~
~~Silica Blanks 4~~			-	~~1.00~~		~~30.5~~	~~48.33~~	~~48~~	~~Low Scale~~
~~UL29 - A2~~			-	~~1.00~~		~~1.4~~	~~13184~~	~~13,184~~	~~Range OK!~~
~~UL29 - B2~~			-	~~1.00~~		~~1.2~~	~~21554~~	~~21,554~~	~~Range OK!~~
~~UL29 - C2~~			-	~~1.00~~		~~1.2~~	~~14835~~	~~14,835~~	~~Range OK!~~
~~UL29 - D2~~			-	~~1.00~~		~~1.2~~	~~21093~~	~~21,093~~	~~Range OK!~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~819~~	~~819~~	~~81.90%~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~798~~	~~798~~	~~79.80%~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~769~~	~~769~~	~~76.90%~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~1033~~	~~1,033~~	~~103.30%~~

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
CCV				1.00		40.0	954	954	*95.40%*
~~Blank~~			-	~~1.00~~		~~40.0~~	~~163~~	~~163~~	~~*Check Blank*~~
Blank				1.00		40.0	22.48	22	*Blank OK*
NIST 1941B				1.00		2.3	27858	27,858	*93.17%*
Silica Blanks 1				1.00		48.1	15.86	16	*Low Scale*
Silica Blanks 2				1.00		48.5	26.04	26	*Low Scale*
Silica Blanks 3				1.00		45.4	15.85	16	*Low Scale*
Silica Blanks 4				1.00		40.9	24.40	24	*Low Scale*
UL83 A1	10.2	101.9	89.99%	9.99		1.8	9975	99,484	*Range OK!*
UL83 A1 dup	10.7	107.2	90.02%	10.02		1.6	9455	94,558	*RPD=5.1%*
UL83 A1 trp	10.7	107.3	90.03%	10.03		1.7	7218	72,214	*RSD=16.4%*
UL83 A1 ms	10.2	101.9	89.99%	9.99	10	1.8	23258	232,184	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*138,753*	*ppm*		*96%*	
UL83 B1				1.00		1.0	38793	38,793	*Range OK!*
ICV				1.00		40.0	927	927	*92.70%*
Blank				1.00		40.0	17.23	17	*Blank OK*
UL29 A2				1.00		1.4	10774	10,774	*Range OK!*
UL29 B2				1.00		1.4	21695	21,695	*Range OK!*
UL29 C2				1.00		1.5	15493	15,493	*Range OK!*
UL29 D2				1.00		1.3	16689	16,689	*Range OK!*
UK64 C1				1.00		1.5	12301	12,301	*Range OK!*
UK81 B1	12.5	123.7	89.89%	9.90		1.3	20960	207,254	*Range OK!*
UK81 C1	13.6	137.9	90.14%	10.14		0.9	23228	235,354	*Range OK!*
~~NIST 1941B~~			-	~~1.00~~		~~1.9~~	~~21547~~	~~21,547~~	~~*72.06%*~~
NIST 1941B				1.00		2.3	28601	28,601	*95.66%*
CCV				1.00		40.0	932	932	*93.20%*
Blank				1.00		40.0	9.59	10	*Blank OK*

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(1) 3-19-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 2

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler
Standards:	Source	Conc (ppm)	
Calibration:	ARI - 00123-4	5000	10:14
Verification:	ERA - 1513-10-06	5000 to 1000 for CVS	
SRM:	NBS - 1941B or 8704	29900	

Sample Sequence:

Sample ID	Dilution Data (mg) Sample	Dilution Data (mg) + Silica Gel	Burn Wt mg	Matrix Spike Data mg/L	Matrix Spike Data µL added	Comments
ICW			40			
ICB			40			
NBS 1941B			1.8			
UL83 A1			1.3			Off Scale Reject
A1		3-19-12 (W)	1.4			
SB 1			38.6			
2			37.2			
3			(1) 73.2	30.5	3-19-12	
4			(1) 30.4	30.5	(W)	
UL29 A2			1.4			
B2			1.2			
C2			1.2			
D2			1.2 * / New Run			
CCW			40/40/40/40/40			*Remove ICW due Bird in inlet Machine O-ring, Port O-Ring
CCB / NBS 1941B			40/40/2.3			
~~UL83 A1~~	~~10.2~~	~~101.9~~				(*Rerun Set)
~~A1~~						(Kinkal Nerse)
~~A1~~		~~3-19-10 (W)~~				(Tema Dmer)
~~A1~~						
SB 1			48.1			
2			48.5			
3			45.4			
4			40.9			
UL83 A1	10.2	101.9	1.8			
DA1	10.7	107.2	1.6			
~~DA1~~	10.7	107.3	1.7			
MSA1	10.2	101.9	1.8	2500	10	
B1			1.0			
CCW			40			
CCB			40			
UL29 A2			1.4			
B2			1.4			

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① 3-19-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 2 of 2

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler
Standards:	Source	Conc (ppm)	
Calibration:	ARI – 00123-4	5000	
Verification:	ERA – 1513-10-06	5000 to 1000 for CVS	
SRM:	NBS ~~1941b~~ or 8704	29900	

(1) 10:14

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
UL29 C2			1.5			
↓ D2			1.3			
1K104 C1			1.5			
1K81 B1	12.5	123.7	1.3			
↓ C1	13.6	137.9	0.9			
NBS1941 B			1.9/2.3			
CCV			40			
CCB			40			

3-19-12 (W)

3-19-12 (19)

Detailed Analysis Report Print Date/Time: 2012/03/19 18:15:11

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03190953
Timestamp: 2012/03/19 09:57
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	903.5364	36.1415	9867203	37.429	38.420	182

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191008
Timestamp: 2012/03/19 10:11
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.1066	0.4843	51796	37.563	37.652	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191014
Timestamp: 2012/03/19 10:24
Sample Type: Cal. Verification

3-19-12 (20)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29754.3750	53.5579	14661446	37.693	38.691	243

Sample ID: UL83 A1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191045
Timestamp: 2012/03/19 10:54
Sample Type: Sample

Rerun

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	77326.9062	100.5250	27671660	38.082	39.079	260

Last Message: Over-range

Sample ID: SB 1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191116
Timestamp: 2012/03/19 11:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	54.8289	2.1164	582583	38.395	39.388	75

Sample ID: SB 2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191140
Timestamp: 2012/03/19 11:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	115.8900	4.3111	1186725	38.275	39.268	78

Sample ID: SB 2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191238
Timestamp: 2012/03/19 12:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	42.9495	1.3100	360595	37.841	38.840	67

Sample ID: SB 3
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191243
Timestamp: 2012/03/19 12:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	48.3269	1.4740	405742	37.903	38.900	72

Sample ID: UL29 A2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191313
Timestamp: 2012/03/19 13:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13184.4385	18.4582	5081020	37.613	38.609	168

Sample ID: UL29 B2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191323
Timestamp: 2012/03/19 13:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21553.6367	25.8644	7119721	37.650	38.649	174

Sample ID: UL29 C2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191329
Timestamp: 2012/03/19 13:32
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14835.3018	17.8024	4900482	38.058	39.057	131

Sample ID: UL29 C2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191337
Timestamp: 2012/03/19 13:41
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21092.7949	25.3114	6967494	37.449	38.448	176

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191343
Timestamp: 2012/03/19 13:48
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	819.4271	32.7771	8941087	37.897	38.892	161

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191352
Timestamp: 2012/03/19 13:55
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	797.7656	31.9106	8702576	37.734	38.731	176

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191444
Timestamp: 2012/03/19 14:47
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	769.3316	30.7733	8389493	39.164	40.161	169

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191456
Timestamp: 2012/03/19 15:00
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1032.6388	41.3056	11288731	40.237	41.235	185

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191503
Timestamp: 2012/03/19 15:06
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	953.9251	38.1570	10422025	40.706	41.704	170

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191508
Timestamp: 2012/03/19 15:10
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	162.6968	6.5079	1709923	40.624	41.618	78

Last Message: Out of Calibration

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191512
Timestamp: 2012/03/19 15:14
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22.4763	0.8991	165975	40.449	41.445	53

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191517
Timestamp: 2012/03/19 15:22
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27857.9004	64.0732	17556008	40.325	41.322	248

Sample ID: Silica Blank 1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191527
Timestamp: 2012/03/19 15:29
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15.8578	0.7628	209966	40.561	41.560	59

Sample ID: Silica Blank 2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191533
Timestamp: 2012/03/19 15:36
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26.0445	1.2632	347712	40.759	41.756	67

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191541
Timestamp: 2012/03/19 15:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15.8467	0.7194	198041	41.450	42.449	61

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191553
Timestamp: 2012/03/19 15:55
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24.4001	0.9980	274711	43.457	44.451	55

Sample ID: UL83 A1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191616
Timestamp: 2012/03/19 16:19
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9975.1553	17.9553	4942576	43.656	44.655	153

Sample ID: UL83 A1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191625
Timestamp: 2012/03/19 16:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9454.7471	15.1276	4164195	43.710	44.708	123

Sample ID: UL83 A1 TRIP
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191630
Timestamp: 2012/03/19 16:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7217.9414	12.2705	3377719	43.262	44.261	116

Sample ID: UL83 A1 MS
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191636
Timestamp: 2012/03/19 16:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23258.0469	41.8645	11524098	42.821	43.815	172

Sample ID: UL83 B1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191643
Timestamp: 2012/03/19 16:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	38793.2734	38.7933	10678682	42.093	43.088	180

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191649
Timestamp: 2012/03/19 16:53
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	926.9624	37.0785	10125143	41.695	42.695	164

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191656
Timestamp: 2012/03/19 16:58
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17.2335	0.6893	108247	41.024	42.023	49

Sample ID: UL28 A2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191700
Timestamp: 2012/03/19 17:04
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10774.3691	15.0841	4152227	40.942	41.941	131

Sample ID: UL28 B2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191706
Timestamp: 2012/03/19 17:10
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21695.3887	30.3735	8360970	40.461	41.460	162

Sample ID: UL28 C2
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA
Mode: TOC
Filename: 03191714
Timestamp: 2012/03/19 17:19
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15493.3643	23.2400	6397322	39.980	40.977	160

Sample ID: UL28 D2
Mode: TOC

Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Filename: 03191722
Timestamp: 2012/03/19 17:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16688.7344	21.6954	5972112	39.860	40.858	157

UK64 DC1 3-19-12

Sample ID: ~~UL64~~ ~~B1~~
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191729
Timestamp: 2012/03/19 17:32
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12301.0557	18.4516	5079195	39.752	40.751	155

Sample ID: UK81 B1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191734
Timestamp: 2012/03/19 17:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20960.4004	27.2485	7500740	39.969	40.969	173

Sample ID: UK81 C1
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191741
Timestamp: 2012/03/19 17:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23228.1387	20.9053	5754640	40.448	41.448	149

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191747
Timestamp: 2012/03/19 17:52
Sample Type: Cal. Verification

low 3-19-12

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21547.1562	40.9396	11187994	40.427	41.426	224

Last Message: Out of Calibration

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191756
Timestamp: 2012/03/19 18:03
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28601.0410	65.7824	18026508	40.511	41.505	251

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191804
Timestamp: 2012/03/19 18:08
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	932.1434	37.2857	10182190	40.909	41.908	160

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 031612BOATCAL
Operator ID: TRINA

Mode: TOC
Filename: 03191810
Timestamp: 2012/03/19 18:13
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.5881	0.3835	24064	40.471	40.141	120

Last Message: Low Sample Detected

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Client: Anchor QEA

Project: 090007-01 I&J Waterway RI/FS

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BC
Signature

May-15-2012
Date

Table of Contents: ARI Job UR81, US18

Client: Anchor QEA

Project: 090007-01 I&J Waterway RI/FS

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Geotechnical Raw Data		
Analyst Notes and Raw Data	2329	2345

BC
Signature

May-15-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 16, 2012

Cindy Fields
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: I & J Waterway RI/FS, 090007-01
ARI Job Nos.: UR81 & US18

Dear Cindy:

Please find enclosed the Chain of Custody (COC) records, sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: UR81_US18

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: UR81, US18

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page** 1 **of** 1

Lab Contact: Sue Dunihoo	Project: **I&J Waterway RI/FS**
Lab: **ARI**	
Address: **4611 South 134th Place, Ste 100**	Proj. No.: **090007-01**
City, etc: **Tukwila, WA 98168**	Sampler: **JL, AB**
Phone: 206-695-6200	Shipping Method: **FedEx**
Fax: **206-695-6201**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Archive	Dioxin/Furans	Grainsize	Metals	SVOC, PCB	Total Sulfide	TS, TOC, NH4				Notes/ Comments:
IJ12-03	4-24-2012	1040	SED	7	X	X	X	X	X	X	X				
IJ12-05	4-24-2012	1210	SED	7	X	X	X	X	X	X	X				
IJ12-06	4-24-2012	1245	SED	7	X	X	X	X	X	X	X				

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Ariel Blanc	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 4-25-2012 1600	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name: Jenni for Millsap	Printed Name:	Printed Name:	
Company: ARI	Company:	Company:	# of Coolers: 4 / Cooler Temp(s): 5.3
Date/Time: 4/26/12 700	Date/Time:	Date/Time:	COC Seals Intact? N/A / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page 1 of 1**

Lab Contact: Sue Dunihoo	Project: **I&J Waterway RI/FS**
Lab: **ARI**	
Address: **4611 South 134th Place, Ste 100**	Proj. No.: **090007-01**
City, etc: **Tukwila, WA 98168**	Sampler: **JL, AB**
Phone: 206-695-6200	Shipping Method: **FedEx**
Fax: **206-695-6201**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Archive	Dioxin/Furans	Grainsize	Metals	SVOC, PCB	Total Sulfide	TS, TOC, NH4				Notes/ Comments:
IJ12-10	4-24-2012	1700	SED	7	X	X	X	X	X	X	X				*Archive
IJ12-02	4-24-2012	1015	SED	7	X	X	X	X	X	X	X				
IJ12-04	4-24-2012	1340	SED	7	X	X	X	X	X	X	X				

* Hold Sample IJ12-10 until verification from Anchor QEA

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Ariel Blanc	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 4-25-2012 16:00	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name: Jennifer Millsap	Printed Name:	Printed Name:	
Company: ARI	Company:	Company:	# of Coolers: 4 / Cooler Temp(s): 2.1
Date/Time: 4/26/12 700	Date/Time:	Date/Time:	COC Seals Intact? n/a / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page 1 of 1**

Lab Contact: Sue Dunihoo	Project: **I&J Waterway RI/FS**
Lab: **ARI**	
Address: **4611 South 134th Place, Ste 100**	Proj. No.: **090007-01**
City, etc: **Tukwila, WA 98168**	Sampler: **JL, AB**
Phone: 206-695-6200	Shipping Method: **FedEx**
Fax: **206-695-6201**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Analyses Requested: Archive	Dioxin/Furans	Grainsize	Metals	SVOC, PCB	Total Sulfide	TS, TOC, NH4				Notes/ Comments:
IJ12-09	4-24-2012	1637	SED	7	X	X	X	X	X	X	X				Archive*
IJ12-07	4-24-2012	1455	SED	7	X	X	X	X	X	X	X				
IJ12-01	4-25-2012	1430	SED	7	X	X	X	X	X	X	X				

* Hold Sample IJ12-09 until verification from Anchor QEA

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Ariel Blanc	Printed Name:	Printed Name:		
Company: Anchor QEA	Company:	Company:		
Date/Time: 4-25-2012 16:00	Date/Time:	Date/Time:		
Received By:	Received By:	Received By:		
Printed Name: Jennifer Milsap	Printed Name:	Printed Name:		
Company: ARI	Company:	Company:	# of Coolers: 4	Cooler Temp(s): 5.2
Date/Time: 4/26/12 700	Date/Time:	Date/Time:	COC Seals Intact? N/A	Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page 1 of 1**

Lab Contact: Sue Dunihoo	Project: **I&J Waterway RI/FS**
Lab: **ARI**	
Address: **4611 South 134th Place, Ste 100**	Proj. No.: **090007-01**
City, etc: **Tukwila, WA 98168**	Sampler: **JL, AB**
Phone: 206-695-6200	Shipping Method: **FedEx**
Fax: **206-695-6201**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Archive	Dioxin/Furans	Grainsize	Metals	SVOC, PCB	Total Sulfide	TS, TOC, NH4				Notes/ Comments:
IJ12-58A	4-24-2012	1600	SED	7	X	X	X	X	X	X	X				
IJ12-11	4-24-2012	1743	SED	7	X	X	X	X	X	X	X				
IJ12-08A	4-24-2012	1555	SED	7	X	X	X	X	X	X	X				
IJ12-RB-01	4-25-2012	1600	RB	1	X										

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Ariel Blanc	Printed Name:	Printed Name:		
Company: Anchor QEA	Company:	Company:		
Date/Time: 4-25-2012 1600	Date/Time:	Date/Time:		
Received By:	Received By:	Received By:		
Printed Name: Jennifer Millsap	Printed Name:	Printed Name:		
Company: ARI	Company:	Company:	# of Coolers: 4	Cooler Temp(s): 1.4
Date/Time: 4/27/12 700	Date/Time:	Date/Time:	COC Seals Intact? N/A	Bottles Intact?

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor QEA

COC No(s): _____ (NA)

Assigned ARI Job No: UR81

Project Name: HJ Waterway RI/FS

Delivered by: (Fed-Ex) UPS Courier Hand Delivered Other: _____

Tracking No. 7983 2700 0003/7983 2699 9945 NA
7983 2700 0069/7983 2700 0183

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2 0-6.0 °C for chemistry) 3.3 2.1 1.4 5.2

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90946619

Cooler Accepted by: JM Date 4/26/12 Time 700

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? (Bubble Wrap) (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI (NA) _____

Was Sample Split by ARI (NA) YES Date/Time _____ Equipment: _____ Split by: _____

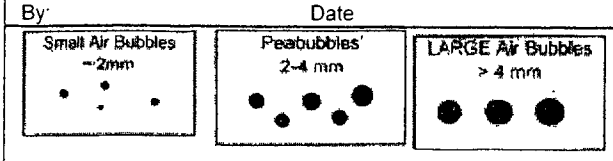
Samples Logged by JM Date: 4/26/12 Time: 914

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

UR81 : 00007

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** Leslie McKee **Page** 1 **of** 6 TL70

Lab Contact: Sue Dunihoo	Project: USACE Federal Channels: Squalicum and I&J
Lab: ARI ~~Laboratory~~	
Address:	Proj. No.: 080202-01
City, etc: :	Sampler: Amy Corp
Phone:	Shipping Method: Drop off
Fax:	AirBill #:

Analyses Requested

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxins/Furan	GS	TS/TOC/NH3	~~[illegible]~~	Archive						Notes/ Comments:
S-8-DM	9/6/11	1052	SE	1	→										discard sample
S-8-Z	↓	1055	↓	4 3					X						
S-7-DM		1345		4	X	X	X		X						
S-7-Z		1341		1					X						
S-6-DM		1425		4	X	X	X		X						
S-6-Z		1430		1					X						
S-5-DM		1515		4	X	X	X		X						
S-5-Z		1511		1					X						
S-4-DM		1601		4	X	X	X		X						
S-4-Z		1603		1					X						
S-2-DM		1647		4	X	X	X		X						
S-2-Z		1652		1					X						
S-1-DM		1747		4	X	X	X		X						
S-1-Z	↓	1749	↓	1					X						

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Joy Dunay	Printed Name:	Printed Name:	Analyze SRM for dioxin/furans one per project.
Company: Anchor QEA	Company:	Company:	
Date/Time: 9/9/11 836	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name: A. Volgardsen	Printed Name:	Printed Name:	
Company: ARI	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time: 9/9/11 836	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

wslislr

~~TT20 00003~~

UR81 : 00008

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** Leslie McKee **Page** 3 of 6 TL 70

Lab Contact: Sue Dunihoo	Project: **USACE Federal Channels: Squalicum and I&J**
Lab: **ARI**	
Address:	Proj. No.: **080202-01**
City, etc: :	Sampler: Amy Corp
Phone:	Shipping Method: Drop-off
Fax:	AirBill #.

Analyses Requested

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxins/Furans	TS, TOC, NH_3	Grainsize	Archive							Notes/ Comments:
S-3-DM	9/7/2011	950	SE	4	X	X	X	X							
S-3-DMB		955		2		X	X								
S-3-DMC		1000		2		X	X								
S-3-Z		1005		1				X							
S-9-Z		1040		4	X	X	X	X							
S-10-A-Z		1115		1				X							
S-11-Z		1140		4	X	X	X	X							
S-12-A-Z		1230		1				X							
S-13-Z		1320		4	X	X	X	X							
S-14-A-Z		1400		1				X							
S-15-Z		1450		4	X	X	X	X							
S-16-A-Z		1540		1				X							
I-7-DM		1640		4	X	X	X	X							
I-7-Z		1645		1				X							

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Joy Dunay	Printed Name:	Printed Name:		
Company: AQ	Company:	Company:		
Date/Time: 9/9/11 0836	Date/Time:	Date/Time:		
Received By:	Received By:	Received By.		
Printed Name: A. Volgardsen	Printed Name:	Printed Name:		
Company: ARI	Company:	Company:	# of Coolers:	Cooler Temp(s)
Date/Time: 9/9/11 836	Date/Time:	Date/Time:	COC Seals Intact?	Bottles Intact?

a 5/15/11

~~TT20 : 00004~~

UR81 : 00009

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** Leslie McKee **Page** ~~3~~ 5 **of** ~~3~~ 6 AC AC TLTO

Lab Contact: Sue Dunihoo	Project: **USACE Federal Channels: Squalicum and I&J**
Lab: **ARI**	
Address:	Proj. No.: **080202-01**
City, etc: :	Sampler: Amy Corp
Phone:	Shipping Method: Drop-off
Fax:	AirBill #:

Analyses Requested

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxins/Furans	TS, TOC, N#3	Grainsize	Archive							Notes/ Comments:
I-1-DM	9/8/2011	950	SE	4	X	X	X	X							
I-1-Z		955		1				X							
I-2-A-DM		1110		1				X							
I-2-A-Z		1115		1				X							
I-3-DM		1200		4	X	X	X	X							
~~I-4~~ 4															
I-3-Z		1205		1				X							
I-5-DM		1330		4	X	X	X	X							
I-5-Z		1335		1				X							
I-6-A-DM		1410		1				X							
I-6-A-Z		1415		1				X							
I-4-A-DM		1515		1				X							
I-4-A-Z		1520		1				X							
AC															

Relinquished: (Signature) Joy Duray	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Joy Duray	Printed Name:	Printed Name:	
Company: ~~9/9~~ AQ	Company:	Company:	
Date/Time: 9/9/11 0836	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name: A. Volgardsen	Printed Name:	Printed Name:	
Company: ARI	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time: 9/9/11 836	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

AU 5/15/11

~~T120 : 00005~~

URB1 : 00010

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Anchor

COC No(s) _____ (NA)

Assigned ARI Job No TL70

Project Name USACE Federal Channels Squalicum

Delivered by Fed-Ex UPS Courier Hand Delivered Other _____

Tracking No. _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.9 4.4 3.9 2.5 3.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90941619

Cooler Accepted by: AV Date 9/9/11 Time 8:36

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

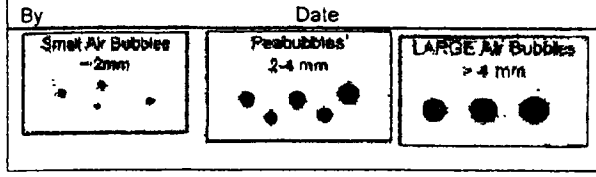
Samples Logged by: TS Date 9-9-11 Time 1418

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By Date



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

U518

Relog samples under Project: I & J Waterway RI/FS
Project #: 090007-01

per WO# CF-040512

Subject: RE. I&J Sediment Samples
From: Dan Berlin <dberlin@anchorqea com>
Date: 8 14 AM
To: Cheronne Oreiro <cheronneo@arilabs com>, Leslie McKee <lmckee@anchorqea com>
CC: Julia Labadie <jlabadie@anchorqea com>

Cheronne,
Please perform the analyses with the priority listed below. Dioxins, SVOC, and metals (including nickel) are highest priority.

2 SVOC/SIM SVOC
1 Dioxins (I-2-Z only)
4 PCB
3 Metals (including nickel)
5 Ammonia/TS - we'll redo the TS since it can change if samples are frozen for too long...
6 Grain Size - we typically need a full 16oz jar for this analysis.
Sulfide? - The samples are expired already for sulfide and we do not have any preserved volume. Do you still want to do this analysis?

Let's cancel the sulfide analyses since they're outside of hold time and not preserved.
Thanks
Dan

Dan Berlin
ANCHOR QEA, LLC
dberlin@anchorqea.com

-----Original Message-----
From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Thursday, April 26, 2012 3:10 PM
To: Leslie McKee
Cc: Julia Labadie; Dan Berlin
Subject: Re: I&J Sediment Samples

Thanks Leslie. Can you send me a priority list for samples I-1-Z and I-2-Z. These samples only have one container (16oz jar) so we may not have enough volume to do everything.

Here is a list of the analyses....

SVOC/SIM SVOC
Dioxins,
PCB
Metals
Ammonia/TS - we'll redo the TS since it can change if samples are frozen for too long...
Grain Size - we typically need a full 16oz jar for this analysis.
Sulfide? - The samples are expired already for sulfide and we do not have any preserved volume. Do you still want to do this analysis?

Thanks,
-Cheronne

On 4/26/2012 2:39 PM, Leslie McKee wrote:
Cheronne-

Thanks for checking in. The answers to your questions include:

1. Use the Plumb method for Grain Size analysis.
2. The SRM is not needed for this project, please remove analysis of this.
3. Log samples I-1-Z, I-2-A-Z, and I-3-Z for the following analyses:
   I-1-Z: SMS parameters (except TOC and TS) and Nickel
   I-2-Z: SMS parameters (except TOC and TS), Nickel, and Dioxin/Furans
   I-3-Z: archive only

Best,

Leslie

ANCHOR QEA, LLC
lmckee@anchorqea.com
D 360-715-2716
T 360-733-4311 ext 261
C 360-483-8848

-----Original Message-----
From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Thursday, April 26, 2012 2:13 PM
To: Leslie McKee
Subject: I&J Sediment Samples

Hi Leslie,

We received the I&J sediment samples this morning and I just have a couple of quick questions for you since Cindy is out of the office.

- Everything in the tables and quote indicates samples should follow Plumb or SMS however, the ASTM method for Grain Size is listed. Should this be changed to the Plumb required method (PSEP - sieve/pipette)?

- Please confirm that an SRM is needed for Dioxin/Furans only
- I noticed in the sub-agreement that samples I-1-Z, I-2-A-Z, and I-3-Z (which were under ARI job TL70) should be re-logged under this project, but re-logged for what analysis? Or should they just stay in archive?
Please advise.

Thanks,
-Cheronne

--
Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

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If you have received this correspondence in error, please notify sender immediately. Thank you.

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: UR81, US18

Case Narrative

Client: Anchor QEA
Project: I & J Waterway RI/FS, 090007-01
ARI Job Nos.: UR81 & US18

Sample receipt

Twelve sediment samples and one wipe sample were received on April 26, 2012 under ARI job UR81. Select samples were archived upon receipt. The cooler temperatures measured by IR thermometer following ARI SOP were between 1.4 and 5.3°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Per Workorder CF-040512, three sediment samples were removed from frozen archive and logged under ARI job US18. One sample was re-archived after login. Two samples were analyzed as per email instructions from Anchor QEA on April 27, 2012. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Semivolatiles by SW8270

The samples and associated laboratory QC for ARI job UR81 were extracted and analyzed within the method recommended holding times. The samples for ARI job US18 were extracted and analyzed within the method recommended holding times for samples stored frozen.

Initial calibrations were within method requirements.

The continuing calibration on 5/9/12 fell outside the 20% control limit low for Pentachlorophenol. Associated sample results were undetected for this compound. No corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Bis(2-Ethylhexyl)phthalate was present in **MB-050212** at a level that was greater than the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **IJ12-04**. No corrective action is required for matrix QC.

SIM Semivolatiles by SW8270

The samples and associated laboratory QC for ARI job UR81 were extracted and analyzed within the method recommended holding times. The samples for ARI job US18 were extracted and analyzed within the method recommended holding times for samples stored frozen.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Diethylphthalate was present in **MB-050212** at a level that was greater than ½ the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

Dioxins/Furans by 1613B

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique isomer separation for the 2378-TCDF, eliminating the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

Both extraction and cleanup surrogates had recoveries within control limits.

The method blank contained reportable responses below the reporting limit for TCDD and OCDD. "B" qualifiers were applied to associated results that were less than ten times the levels found in the method blank. No qualifiers were applied to associated sample results that were greater than ten times the levels found in the method blank. No further corrective action was taken.

The OPR (Ongoing Precision and Accuracy or LCS) percent recoveries were within control limits.

Specific results have been "EMPC"-flagged indicating a response not meeting requirements of positive identification. The EMPC values are treated as undetects under some programs and as hits under programs with more conservative protocols.

Select results have has been flagged with an "X" on the Form I's due to indication of a co-eluting PDBE.

The TEQ is presented with WHO2005 with ND=0 for undetects and ND=1/2 for undetects, with EMPCs included as hits.

Aroclor PCBs by SW8082

The samples and associated laboratory QC for ARI job UR81 were extracted and analyzed within the method recommended holding times. The samples for ARI job US18 were extracted and analyzed within the method recommended holding times for samples stored frozen.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

Metals and Mercury by SW6010C/7471A

The samples and associated laboratory QC for ARI jobs UR81 were digested and analyzed within recommended holding times. The samples and associated laboratory QC for ARI job US18 were digested and analyzed for metals within the recommended holding times and were analyzed for mercury outside recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recovery was within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

General Chemistry Parameters

The samples and associated laboratory QC for ARI job UR81 were prepared and analyzed within the method recommended holding times. The samples for ARI job US18 were prepared and analyzed outside the method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The SRM percent recoveries were within limits.

The matrix spike percent recoveries and replicate RPD/RSDs were within control limits.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Anchor QEA, LLC	**ARI Job No.:** UR81
Client Project: I&J Waterway RI/FS	**Client Project No.:** 090007-01

Case Narrative

1. Ten samples were submitted for grain size analysis according to Puget Sound Estuary Protocol (PSEP) methodology on April 26, 2012.
2. The samples were run in a single batch and one sample from this job was chosen for triplicate analysis. The triplicate data is reported on the QA summary.
3. Some samples contained some shell fragments.
4. The data is provided in summary tables and plots.
5. There were no other noted anomalies in this project.

Released by: _____ Date: May 14, 2012
Technician

Reviewed by: _____ Date: May 14, 2012
Technician

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Anchor QEA, LLC	**ARI Job No.:** US18
Client Project: I&J Waterway RI/FS	**Client Project No.:** 090007-01

Case Narrative

1. Two samples were submitted for grain size analysis according to Puget Sound Estuary Protocol (PSEP) methodology on April 30, 2012.
2. The samples were run in a single batch and one sample from another job was chosen for triplicate analysis. The triplicate data is reported on the QA summary.
3. The samples were frozen prior to testing.
4. The samples contained woody or other organic matter, which may have broken down during the sieving process, affecting grain size analysis.
5. The data is provided in summary tables and plots.
6. There were no other noted anomalies in this project.

Released by: Elizabeth Noble — Date: May 14, 2012
Technician

Reviewed by: [signature] — Date: May 14, 2012
Technician

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UR81
Client: Anchor QEA, LLC
Project Event: 090007-01
Project Name: I&J Waterway RI/FS

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	IJ12-03	UR81A	12-7392	Sediment	04/24/12 10:40	04/26/12 07:00
2.	IJ12-05	UR81B	12-7393	Sediment	04/24/12 12:10	04/26/12 07:00
3.	IJ12-06	UR81C	12-7394	Sediment	04/24/12 12:45	04/26/12 07:00
4.	IJ12-02	UR81D	12-7395	Sediment	04/24/12 10:15	04/26/12 07:00
5.	IJ12-04	UR81E	12-7396	Sediment	04/24/12 13:40	04/26/12 07:00
6.	IJ12-07	UR81F	12-7397	Sediment	04/24/12 14:55	04/26/12 07:00
7.	IJ12-01	UR81G	12-7398	Sediment	04/25/12 14:30	04/26/12 07:00
8.	IJ12-58A	UR81H	12-7399	Sediment	04/24/12 16:00	04/26/12 07:00
9.	IJ12-11	UR81I	12-7400	Sediment	04/24/12 17:43	04/26/12 07:00
10.	IJ12-08A	UR81J	12-7401	Sediment	04/24/12 15:55	04/26/12 07:00
11.	IJ12-10	UR81K	12-7402	Sediment	04/24/12 17:00	04/26/12 07:00
12.	IJ12-09	UR81L	12-7403	Sediment	04/24/12 16:37	04/26/12 07:00
13.	IJ12-RB-01	UR81M	12-7404	Wipe	04/25/12 16:00	04/26/12 07:00

UR81 : 000021

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: US18
Client: Anchor QEA
Project Event: 090007-01
Project Name: I&J Waterway RI/FS

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	I-1-Z	US18A	12-7643	Sediment	09/08/11 09:55	09/09/11 08:36
2.	I-2-A-Z	US18B	12-7644	Sediment	09/08/11 11:15	09/09/11 08:36
3.	I-3-Z	US18C	12-7645	Sediment	09/08/11 12:05	09/09/11 08:36

UR91 : 000022

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

URS1 : 000023

S	Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
NA	The flagged analyte was not analyzed for
NR	Spiked compound recovery is not reported due to chromatographic interference
NS	The flagged analyte was not spiked into the sample
M	Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
M2	The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
Y	The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
EMPC	Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
C	The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
P	The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference
X	Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
Z	Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

UR01 : 00024

Geotechnical Data

A — The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F — Samples were frozen prior to particle size determination

SM — Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS — Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W — Weight of sample in some pipette aliquots was below the level required for accurate weighting

UR01 : 00025

SURR SOLUTIONS

LABEL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
A	1953-4	ABN	100/150	MEOH	07/05/12
B	1917-2	SIM PNA	15/75	ACETONE	05/30/12
C	NA	SIM ABN	25/37.5	MEOH	NA
D	1925-5	LOW PCB	0.2	ACETONE	05/28/12
E	1900-2	HERB	62.5	MEOH	10/06/12
F	1919-5	PCP	12.5	ACETONE	12/09/12
G	1906-3	d8-DIOXANE	100	MEOH	04/30/12
H	1847-2	OP-PEST	25	ACETONE	03/23/12
I	1896-3	LOW S. PNA	1.5	ACETONE	09/22/12
J	1915-4	TBT-PORE	0.125	MECL2	11/23/12
K	1925-4	MED PCB	20	ACETONE	05/28/12
L	1915-3	TBT	2.5	MECL2	11/23/12
M	1888-4	EPH	1500	MECL2	04/04/12
N	1914-2	PCB	2	ACETONE	05/28/12
O	1947-2	TPH	450	MECL2	09/28/12
P	1948-3	HCID	2250	MECL2	09/28/12
Q	NA	EDB	1	MEOH	NA
R	NA	RESIN ACID	250	ACETONE	NA
S	1864-1	PBDE	.5	MEOH	05/21/12
T	1884-2	ALKYL PNA	10	MEOH	07/15/12
U	NA	CONGENER	2.5	ACETONE	NA
V	1925-2	LOW PCP	1.25	ACETONE	12/09/12

UR81 : 00026

LCS SOLUTIONS

LABL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
1	1907-1	PCB 1660	20	ACETONE	11/01/12
2#		BCOC PEST	10	ACETONE	NA
3	1922-2	PEST	01/02/10	ACETONE	12/13/12
4	1922-3	LOW PEST	.1/.2/1	ACETONE	12/13/12
5	1902-4	EPH	1500	MECL2	10/04/12
6	1919-2	PCP	12.5/125	ACETONE	10/15/12
7	1926-2	ABN	100	MEOH	05/31/12
8	1916-2	TBT	2.5	MECL2	11/23/12
9	1918-2	PORE TBT	.125/.25	MECL2	11/23/12
10					
11	1860-4	TPHD	15000	ACETONE	05/12/12
12					
13	1948-1	LOW PCB	2	ACETONE	11/01/12
14					
15	1929-1	SIM PNA	15/75	MEOH	06/21/12
16	1906-4	1,4-DIOXANE	100	MEOH	04/30/12
17	1869-4	1248 PCB	10	ACETONE	06/14/12
18	1927-2	LOW SIM PNA	1.5	ACETONE	06/20/12
19	1931-1	AK103	7500	ACETONE	05/17/12
20	1930-1	PNA	100	ACETONE	06/23/12
21	1943-2	SKY/BHT	100	MEOH	07/27/12
22	1957-1	HERB	04 to 5000	MEOH	04/22/12
23	1887-2	EXTRA PNA	15	ACETONE	08/25/12
24					
25#		DIPHENYL	100	MEOH	NA
26	1951-2	OP-PEST	25	MEOH	03/31/12
27		STEROLS	200	MEOH	NA
28#		ADD. PEST	2	ACETONE	NA
29#		DECANES	100	MEOH	NA

UR81 : 086627

LCS SOLUTIONS

30		EDB/DBCP	0.2	MEOH	NA
31	1944-1	TERPINEOL	100	MEOH	07/27/12
32	NA	GUAIACOL	50-200	ACETONE	NA
33		RETENE	100	MEOH	NA
34	NA	CONGENERS	0.5	ACETONE	NA
35	1875-3	ALKYL PNA A	10	MEOH	07/18/12
36		ALKYL PNA B	10	MEOH	NA
37		CAR/PERY	100	ACETONE	NA
38	1926-3	ABN ACID	200-450	MEOH	06/19/12
39	1853-4	BENZIDINE	500	MEOH	04/30/12
40	1851-3	PBDE	0.5	MEOH	04/22/12
50	1900-1	FULL RESIN	250	ACETONE	08/12/12
51		DDTS	0.01	ACETONE	NA
52		1232 PCB	20	ACETONE	NA
53	1919-1	DALAPON	50	MEOH	08/22/12
54		T-CHLORDANE	10	ACETONE	NA
55		TOXAPHENE	50	ACETONE	NA
56	1952-3	ABN BASE	50-200	MEOH	08/14/12
#=PROJECT SPECIFIC SOLUTION					

URS1 : 00029

Analytical Resources,Incorporated
Analytical Chemists and Consultants

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS,MS Control Limits	RPD[2]
	DL	LOD	LOQ	DL	LOD	LOQ		
Phenol	8.65	10	**20**	2.56	5	**5**	30 – 160	≤ 40
bis-(2-Chloroethyl)ether	3.35	10	**20**	--	--	--	30 – 160	≤ 40
2-Chlorophenol	2.39	10	**20**	--	--	--	30 – 160	≤ 40
1,3-Dichlorobenzene	2.63	10	**20**	1.31	2.5	**5**	30 – 160	≤ 40
1,4-Dichlorobenzene	2.86	10	**20**	1.19	2.5	**5**	30 – 160	≤ 40
1,2-Dichlorobenzene	2.50	10	**20**	1.10	2.5	**5**	30 – 160	≤ 40
Benzyl alcohol	6.09	10	**20**	7.04	10	**20[3]**	30 – 160	≤ 40
2,2'-oxy-*bis*-(1-Chloropropane)	3.76	10	**20**	--	--	--	30 – 160	≤ 40
2-Methylphenol	5.25	10	**20**	1.81	2.5	**5**	30 – 160	≤ 40
Hexachloroethane	2.94	10	**20**	--	--	--	30 – 160	≤ 40
N-Nitroso-di-n-propylamine	3.36	10	**20**	9.48	10	**12[3]**	30 – 160	≤ 40
4-Methylphenol[6]	6.63	20	**40**	2.52	5	**10**	30 – 160	≤ 40
Nitrobenzene	4.06	10	**20**	--	--	--	30 – 160	≤ 40
Isophorone	2.86	10	**20**	--	--	--	30 – 160	≤ 40
2-Nitrophenol	38.7	50	**100**	--	--	--	30 – 160	≤ 40
2,4-Dimethylphenol	3.46	20	**40**	2.89	10	**20**	30 – 160	≤ 40
bis-(2-Chloroethoxy)methane	2.00	10	**20**	--	--	--	30 – 160	≤ 40
2,4-Dichlorophenol	21.5	100	**200**	--	--	--	30 – 160	≤ 40
1,2,4-Trichlorobenzene	3.48	10	**20**	1.86	2.5	**5**	30 – 160	≤ 40
Naphthalene	2.76	10	**20**	--	--	--	30 – 160	≤ 40
Benzoic acid	101	200	**400[5]**	--	--	--	30 – 160	≤ 40
4-Chloroaniline	22.3	135	**270[4]**	--	--	--	30 – 160	≤ 40
Hexachlorobutadiene	4.57	50	**100**	0.96	2.5	**5**	30 – 160	≤ 40
4-Chloro-3-methylphenol	15.1	50	**100**	--	--	--	30 – 160	≤ 40
2-Methylnaphthalene	3.06	10	**20**	--	--	--	30 – 160	≤ 40
Hexachlorocyclopentadiene	66.4	200	**400[4]**	--	--	--	30 – 160	≤ 40
2,4,6-Trichlorophenol	22.4	50	**100**	--	--	--	30 – 160	≤ 40
2,4,5-Trichlorophenol	21.4	50	**100**	--	--	--	30 – 160	≤ 40
2-Chloronaphthalene	2.64	10	**20**	--	--	--	30 – 160	≤ 40
2-Nitroaniline	18.4	50	**100**	--	--	--	30 – 160	≤ 40
Acenaphthylene	5.71	10	**20**	--	--	--	30 – 160	≤ 40
Dimethylphthalate	2.90	10	**20**	1.34	2.5	**5**	30 – 160	≤ 40
2,6-Dinitrotoluene	30.6	50	**100**	--	--	--	30 – 160	≤ 40
Acenaphthene	3.28	10	**20**	--	--	--	30 – 160	≤ 40
3-Nitroaniline	22.5	50	**100**	--	--	--	30 – 160	≤ 40
2,4-Dinitrophenol	111	425	**850[4]**	--	--	--	30 – 160	≤ 40

UR01 : 000029

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS,MS Control Limits	RPD[2]
	DL	LOD	LOQ	DL	LOD	LOQ		
Dibenzofuran	4.10	10	**20**	--	--	--	30 – 160	≤ 40
4-Nitrophenol	34.7	50	**100**	--	--	--	30 – 160	≤ 40
2,4-Dinitrotoluene	19.5	50	**100**	--	--	--	30 – 160	≤ 40
Fluorene	4.35	10	**20**	--	--	--	30 – 160	≤ 40
4-Chlorophenyl-phenylether	5.29	10	**20**	--	--	--	30 – 160	≤ 40
Diethylphthalate	36.6	50	**50[3]**	3.26	5.0	**5.0**	30 – 160	≤ 40
4-Nitroaniline	37.9	50	**100**	--	--	--	30 – 160	≤ 40
4,6-Dinitro-2-methylphenol	21.2	100	**200**	--	--	--	30 – 160	≤ 40
N-Nitrosodiphenylamine	5.39	10	**20**	1.38	10	**20**	30 – 160	≤ 40
4-Bromophenyl-phenylether	5.03	10	**20**	--	--	--	30 – 160	≤ 40
Hexachlorobenzene	4.29	10	**20**	1.26	2.5	**5**	30 – 160	≤ 40
Pentachlorophenol	48.5	100	**200[4]**	14.3	25	**50**	30 – 160	≤ 40
Phenanthrene	3.64	10	**20**	--	--	--	30 – 160	≤ 40
Anthracene	4.50	10	**20**	--	--	--	30 – 160	≤ 40
Carbazole	2.69	10	**20**	--	--	--	30 – 160	≤ 40
Di-n-butylphthalate	8.16	10	**20**	--	--	--	30 – 160	≤ 40
Fluoranthene	2.91	10	**20**	--	--	--	30 – 160	≤ 40
Pyrene	1.94	10	**20**	--	--	--	30 – 160	≤ 40
Butylbenzylphthalate	6.14	10	**20**	2.89	5.0	**5**	30 – 160	≤ 40
Benzo(a)anthracene	3.29	10	**20**	--	--	--	30 – 160	≤ 40
3,3'-Dichlorobenzidine	17.8	75	**150[4]**	--	--	--	30 – 160	≤ 40
Chrysene	3.75	10	**20**	--	--	--	30 – 160	≤ 40
bis-(2-Ethylhexyl)phthalate	14.6	20	**25[3]**	--	--	--	30 – 160	≤ 40
Di-n-octylphthalate	5.84	10	**20**	--	--	--	30 – 160	≤ 40
Benzo(b)fluoranthene[7]	3.47	10	**20**	--	--	--	30 – 160	≤ 40
Benzo(k)fluoranthene[7]	4.18	10	**20**	--	--	--	30 – 160	≤ 40
Benzofluoranthene-Total[8]	6.67	20	**40**	--	--	--	30 – 160	≤ 40
Benzo(a)pyrene	5.45	10	**20**	--	--	--	30 – 160	≤ 40
Indeno(1,2,3-cd)pyrene	4.68	10	**20**	--	--	--	30 – 160	≤ 40
Dibenzo(a,h)anthracene	4.31	10	**20**	2.02	2.5	**5**	30 – 160	≤ 40
Benzo(g,h,i)perylene	4.40	10	**20**	--	--	--	30 – 160	≤ 40
N-Nitrosodimethylamine	14.1	50	**100**	3.15	13	**25**	30 – 160	≤ 40
Aniline	40.0	270	**540[4]**	--	--	--	30 – 160	≤ 40
Pyridine	32.7	75	**150[4]**	--	--	--	30 – 160	≤ 40
1-Methylnaphthalene	2.68	10	**20**	--	--	--	30 – 160	≤ 40
Azobenzene (1,2-DP-Hydrazine)	2.98	10	**20**	--	--	--	30 – 160	≤ 40

URS1 : 000336

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS,MS Control Limits	RPD[2]
	DL	LOD	LOQ	DL	LOD	LOQ		
Surrogate Standards						**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol						30 – 160	30 – 160	≤ 40
Phenol-d_5						30 – 160	30 – 160	≤ 40
2-Chlorophenol-d_4						30 – 160	30 – 160	≤ 40
1,2-Dichlorobenzene-d_4						30 – 160	30 – 160	≤ 40
Nitrobenzene-d_5						30 – 160	30 – 160	≤ 40
2-Fluorobiphenyl						30 – 160	30 – 160	≤ 40
2,4,6-Tribromophenol						30 – 160	30 – 160	≤ 40
p-Terphenyl-d_{14}						30 – 160	30 – 160	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(3) Spiked at 5 ppb
(4) Spiked at 100 ppb
(5) Spiked at 200 ppb
(6) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphennol (calibrated)
(7) Benzo(b)fluoranthene and Benzo(k)fluoranthene are reported as separate analytes only when the height of the valley between the isomer peaks is less than than 50% of the average of the two peak heights, otherwise total Benzofluoranthenes are reported.
(8) Benzo(b)fluoranthene + Benzo(j)fluoranthene + Benzo(k)fluoranthene (only the b & k isomers are calibrated)

UR81 : 00031

Analytical Resources,Incorporated
Analytical Chemists and Consultants

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Soil Samples for Dioxins & Furans
EPA Method 1613B

Soxhlet (EPA Method 3540C) Extraction using 10 g sample with extract concentrated to 0.02 mL final volume. ARI Bench Sheet 3083F

LOD Spike level = LOQ = 0.1 ppt (ng/kg) = 1 pg/g

Analyte	DL[1] pg/g	LOD[1] pg/g	LOQ[1] pg/g	OPR Control Limit [2,3]	Sample Replicate RPD [3,4]
2,3,7,8-TCDF	0.230	**0.5**	**1**	75 – 158	≤ 25
2,3,7,8-TCDD	0.274	**0.5**	**1**	67 – 158	≤ 25
1,2,3,7,8-PeCDF	0.832	**2.5**	**5**	80 – 134	≤ 25
2,3,4,7,8-PeCDF	1.076	**2.5**	**5**	68 – 160	≤ 25
1,2,3,7,8-PeCDD	0.647	**2.5**	**5**	70 – 141	≤ 25
1,2,3,4,7,8-HxCDF	0.991	**2.5**	**5**	72 – 134	≤ 25
1,2,3,6,7,8-HxCDF	0.769	**2.5**	**5**	84 – 130	≤ 25
2,3,4,6,7,8-HxCDF	0.904	**2.5**	**5**	70 – 156	≤ 25
1,2,3,7,8,9-HxCDF	0.857	**2.5**	**5**	78 – 130	≤ 25
1,2,3,4,7,8-HxCDD	0.481	**2.5**	**5**	70 – 164	≤ 25
1,2,3,6,7,8-HxCDD	0.561	**2.5**	**5**	76 – 134	≤ 25
1,2,3,7,8,9-HxCDD	0.886	**2.5**	**5**	64 – 162	≤ 25
1,2,3,4,6,7,8-HpCDF	1.165	**2.5**	**5**	82 – 122	≤ 25
1,2,3,4,7,8,9-HpCDF	0.688	**2.5**	**5**	78 – 138	≤ 25
1,2,3,4,6,7,8-HpCDD	0.828	**2.5**	**5**	70 – 140	≤ 25
OCDF	2.176	**5.0**	**10**	63 – 170	≤ 25
OCDD	7.452	**5.0**	**10**	78 – 144	≤ 25

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Ongoing precision and recovery (OPR) analyzes as specified in the referenced method.
(3) Method specified control limits.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

UR81 : 00032

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Criteria for Analysis of Solid Matrix Samples for Aroclors (Polychlorinated Biphenyls – PCB) EPA Method 8082B

Analysis Code	Extraction	DL[1] (ppb)	LOD[1] (ppb)	LOQ[1] (ppb)	Analyte	Spike Recovery Control Limits (%)[2,3,8]			RPD[4]
						LCS	MB/LCS Surrogate	Sample Surrogate	
Soil / Sediment Samples (Microwave Extraction – EPA Method 3546)									
PCBSMI 15-3067F	12g to 4 mL	9.83	17	33	Aroclor 1016	55 – 109	--	--	≤ 40
		7.06	17	33	Aroclor 1260	50 – 125	--	--	
PCBSCI 08-3025F		--	--	--	TCMX	--	53 – 108	39 – 122	
		--	--	--	DCBP	--	49 – 126	31 – 140	
PCBDMP20 05-3017F	12.5 g to 2.5 mL[6]	9.33	10	20[6]	Aroclor 1016	46 – 110	--	--	≤ 40
		10.82	15	20[6]	Aroclor 1260	47 – 124	--	--	
PCBDCP20 06-3026F		--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
PCBDMP10 05-3017F	12.5 g to 2.5 mL[6]	0.759	5	10[6]	Aroclor 1016	46 – 110	--	--	≤ 40
		1.066	5	10[6]	Aroclor 1260	47 – 124	--	--	
PCBDCP10 06-3026F		--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
PCBDMP4 05-3017F	12.5 g to 2.5 mL[6]	0.577	2	4[6]	Aroclor 1016	46 – 110	--	--	≤ 40
		0.610	2	4[6]	Aroclor 1260	47 – 124	--	--	
PCBDCP4 06-3026F		--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
Soil / Sediment Samples Medium Level (Vortex Extraction – EPA Method 3546)									
PCBSVX 12-3019F	5 g to 40 mL	109[7]	400	800	Aroclor 1016	30 – 160	--	--	≤ 40
		192[7]	400	800	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	

(1) Detection Limit (DL), Limit of Detection (LOD) & Limit of Quantitation (LOQ) are defined in ARI SOP 1018S.
(2) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(3) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) LOQ determined by lowest concentration used to calibrate the GC-ECD instrument.
(7) MDL Study PC66 6/24/09
(8) Control Limits calculated using all data generated between 1/1/11 and 11/30/11

UR81 : 00033

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Parameters for Metals Analysis using ICP-OES

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	**DL[1] µg/L**	**LOD[1] µg/L**	**LOQ[1] µg/L**	**Matrix Spike**	**LCS**		**LOQ mg/kg**	**LOQ mg/kg**
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) ARI does not analyze for Silicon in solids or tissue samples

Quality Control Parameters for Mercury Analysis using CVAA

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[3]	75 – 125	80 – 120	≤ 20
	Soil / Sediment / Tissue[4] Samples			**Spike Recovery**		**RPD[5]**
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	**0.025**[3,4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry Effective 5/1/09		
Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip		
	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

UR81 : 000035

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: UR81, US18

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-03
SAMPLE

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 17:52
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**34**
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	**Benzyl Alcohol**	**20**	**32**
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
106-44-5	**4-Methylphenol**	**39**	**54**
105-67-9	**2,4-Dimethylphenol**	**39**	**15 J**
65-85-0	**Benzoic Acid**	**390**	**100 J**
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**47**
87-68-3	Hexachlorobutadiene	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**20**	**27**
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**12 J**
83-32-9	**Acenaphthene**	**20**	**9.7 J**
132-64-9	**Dibenzofuran**	**20**	**22**
84-66-2	Diethylphthalate	49	< 49 U
86-73-7	**Fluorene**	**20**	**21**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	**Phenanthrene**	**20**	**99**
120-12-7	**Anthracene**	**20**	**30**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**220**
129-00-0	**Pyrene**	**20**	**200**
85-68-7	**Butylbenzylphthalate**	**20**	**15 J**
56-55-3	**Benzo(a)anthracene**	**20**	**80**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**100 B**
218-01-9	**Chrysene**	**20**	**170**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**76**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**51**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**18 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**59**
TOTBFA	**Total Benzofluoranthenes**	**20**	**200**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.0%	2-Fluorobiphenyl	62.6%
d14-p-Terphenyl	65.8%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	59.3%	2-Fluorophenol	57.1%
2,4,6-Tribromophenol	67.9%	d4-2-Chlorophenol	60.7%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-05
SAMPLE

Lab Sample ID: UR81B
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 18:29
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.5%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**17 J**
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	**Benzyl Alcohol**	**20**	**16 J**
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
106-44-5	**4-Methylphenol**	**39**	**35 J**
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**20**
87-68-3	Hexachlorobutadiene	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**14 J**
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
83-32-9	Acenaphthene	20	< 20 U
132-64-9	**Dibenzofuran**	**20**	**13 J**
84-66-2	Diethylphthalate	49	< 49 U
86-73-7	**Fluorene**	**20**	**13 J**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	**Phenanthrene**	**20**	**48**
120-12-7	**Anthracene**	**20**	**22**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**190**
129-00-0	**Pyrene**	**20**	**160**
85-68-7	**Butylbenzylphthalate**	**20**	**12 J**
56-55-3	**Benzo(a)anthracene**	**20**	**57**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**500 B**
218-01-9	**Chrysene**	**20**	**150**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**46**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**27**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**12 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**31**
TOTBFA	**Total Benzofluoranthenes**	**20**	**140**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.4%	2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	59.2%	2-Fluorophenol	57.1%
2,4,6-Tribromophenol	68.3%	d4-2-Chlorophenol	61.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-06
SAMPLE

Lab Sample ID: UR81C
LIMS ID: 12-7394
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 19:06
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 55.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**22**
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	**Benzyl Alcohol**	**20**	**20**
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
106-44-5	**4-Methylphenol**	**39**	**44**
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**23**
87-68-3	Hexachlorobutadiene	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**16 J**
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
83-32-9	Acenaphthene	20	< 20 U
132-64-9	**Dibenzofuran**	**20**	**15 J**
84-66-2	Diethylphthalate	49	< 49 U
86-73-7	**Fluorene**	**20**	**16 J**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	**Phenanthrene**	**20**	**60**
120-12-7	**Anthracene**	**20**	**22**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**130**
129-00-0	**Pyrene**	**20**	**110**
85-68-7	Butylbenzylphthalate	20	< 20 U
56-55-3	**Benzo(a)anthracene**	**20**	**49**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**71 B**
218-01-9	**Chrysene**	**20**	**84**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**38**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**22**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**28**
TOTBFA	**Total Benzofluoranthenes**	**20**	**97**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.0%	2-Fluorobiphenyl	57.8%
d14-p-Terphenyl	61.4%	d4-1,2-Dichlorobenzene	52.6%
d5-Phenol	56.4%	2-Fluorophenol	55.1%
2,4,6-Tribromophenol	63.2%	d4-2-Chlorophenol	57.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-02
SAMPLE

Lab Sample ID: UR81D
LIMS ID: 12-7395
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 19:43
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 57.2%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**18 J**
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	**Benzyl Alcohol**	**19**	**19**
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
106-44-5	**4-Methylphenol**	**39**	**44**
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**23**
87-68-3	Hexachlorobutadiene	96	< 96 U
91-57-6	**2-Methylnaphthalene**	**19**	**15 J**
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
83-32-9	Acenaphthene	19	< 19 U
132-64-9	**Dibenzofuran**	**19**	**14 J**
84-66-2	Diethylphthalate	48	< 48 U
86-73-7	**Fluorene**	**19**	**14 J**
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	**Phenanthrene**	**19**	**76**
120-12-7	**Anthracene**	**19**	**23**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**170**
129-00-0	**Pyrene**	**19**	**160**
85-68-7	**Butylbenzylphthalate**	**19**	**11 J**
56-55-3	**Benzo(a)anthracene**	**19**	**59**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**100 B**
218-01-9	**Chrysene**	**19**	**150**
117-84-0	**Di-n-Octyl phthalate**	**19**	**21**
50-32-8	**Benzo(a)pyrene**	**19**	**60**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**40**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**12 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**47**
TOTBFA	**Total Benzofluoranthenes**	**19**	**160**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	59.0%
d14-p-Terphenyl	65.4%	d4-1,2-Dichlorobenzene	54.6%
d5-Phenol	59.1%	2-Fluorophenol	57.7%
2,4,6-Tribromophenol	67.2%	d4-2-Chlorophenol	60.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-04
SAMPLE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 20:19
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**140**
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	**Benzyl Alcohol**	**19**	**13 J**
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
106-44-5	**4-Methylphenol**	**39**	**18 J**
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**28**
87-68-3	Hexachlorobutadiene	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**28**
131-11-3	**Dimethylphthalate**	**19**	**11 J**
208-96-8	**Acenaphthylene**	**19**	**77**
83-32-9	**Acenaphthene**	**19**	**68**
132-64-9	**Dibenzofuran**	**19**	**79**
84-66-2	Diethylphthalate	48	< 48 U
86-73-7	**Fluorene**	**19**	**140**
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	**Phenanthrene**	**19**	**2,000 E**
120-12-7	**Anthracene**	**19**	**160**
84-74-2	**Di-n-Butylphthalate**	**19**	**37**
206-44-0	**Fluoranthene**	**19**	**6,400 E**
129-00-0	**Pyrene**	**19**	**3,900 E**
85-68-7	Butylbenzylphthalate	19	< 19 U
56-55-3	**Benzo(a)anthracene**	**19**	**560**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**320 B**
218-01-9	**Chrysene**	**19**	**2,000 E**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	**Benzo(a)pyrene**	**19**	**400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**220**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**68**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**210**
TOTBFA	**Total Benzofluoranthenes**	**19**	**2,000**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.8%	2-Fluorobiphenyl	61.4%
d14-p-Terphenyl	64.8%	d4-1,2-Dichlorobenzene	50.6%
d5-Phenol	58.4%	2-Fluorophenol	55.1%
2,4,6-Tribromophenol	68.0%	d4-2-Chlorophenol	58.3%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-04
DILUTION

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 16:46
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**97**	**120**
106-46-7	1,4-Dichlorobenzene	97	< 97 U
100-51-6	Benzyl Alcohol	97	< 97 U
95-50-1	1,2-Dichlorobenzene	97	< 97 U
95-48-7	2-Methylphenol	97	< 97 U
106-44-5	4-Methylphenol	190	< 190 U
105-67-9	2,4-Dimethylphenol	190	< 190 U
65-85-0	Benzoic Acid	1,900	< 1,900 U
120-82-1	1,2,4-Trichlorobenzene	97	< 97 U
91-20-3	Naphthalene	97	< 97 U
87-68-3	Hexachlorobutadiene	480	< 480 U
91-57-6	2-Methylnaphthalene	97	< 97 U
131-11-3	Dimethylphthalate	97	< 97 U
208-96-8	**Acenaphthylene**	**97**	**73 J**
83-32-9	**Acenaphthene**	**97**	**68 J**
132-64-9	**Dibenzofuran**	**97**	**77 J**
84-66-2	Diethylphthalate	240	< 240 U
86-73-7	**Fluorene**	**97**	**130**
86-30-6	N-Nitrosodiphenylamine	97	< 97 U
118-74-1	Hexachlorobenzene	97	< 97 U
87-86-5	Pentachlorophenol	970	< 970 U
85-01-8	**Phenanthrene**	**97**	**1,900**
120-12-7	**Anthracene**	**97**	**140**
84-74-2	Di-n-Butylphthalate	97	< 97 U
206-44-0	**Fluoranthene**	**97**	**6,500**
129-00-0	**Pyrene**	**97**	**3,900**
85-68-7	Butylbenzylphthalate	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**97**	**530**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**120**	**320 B**
218-01-9	**Chrysene**	**97**	**2,000**
117-84-0	Di-n-Octyl phthalate	97	< 97 U
50-32-8	**Benzo(a)pyrene**	**97**	**390**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**97**	**240**
53-70-3	**Dibenz(a,h)anthracene**	**97**	**73 J**
191-24-2	**Benzo(g,h,i)perylene**	**97**	**250**
TOTBFA	**Total Benzofluoranthenes**	**97**	**1,900**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.0%	2-Fluorobiphenyl	57.0%
d14-p-Terphenyl	68.0%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	44.0%	2-Fluorophenol	52.0%
2,4,6-Tribromophenol	57.3%	d4-2-Chlorophenol	50.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-07
SAMPLE

Lab Sample ID: UR81F
LIMS ID: 12-7397
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 22:10
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 56.1%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**35**
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	**Benzyl Alcohol**	**20**	**34**
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
106-44-5	**4-Methylphenol**	**40**	**50**
105-67-9	**2,4-Dimethylphenol**	**40**	**15 J**
65-85-0	Benzoic Acid	400	< 400 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**38**
87-68-3	Hexachlorobutadiene	99	< 99 U
91-57-6	**2-Methylnaphthalene**	**20**	**24**
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**11 J**
83-32-9	**Acenaphthene**	**20**	**11 J**
132-64-9	**Dibenzofuran**	**20**	**23**
84-66-2	Diethylphthalate	50	< 50 U
86-73-7	**Fluorene**	**20**	**21**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	**Phenanthrene**	**20**	**72**
120-12-7	**Anthracene**	**20**	**29**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**210**
129-00-0	**Pyrene**	**20**	**170**
85-68-7	Butylbenzylphthalate	20	< 20 U
56-55-3	**Benzo(a)anthracene**	**20**	**59**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**25**	**51 B**
218-01-9	**Chrysene**	**20**	**130**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**42**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**22**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**22**
TOTBFA	**Total Benzofluoranthenes**	**20**	**140**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.8%	2-Fluorobiphenyl	62.2%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	59.3%	2-Fluorophenol	58.4%
2,4,6-Tribromophenol	70.0%	d4-2-Chlorophenol	60.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-01
SAMPLE

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 22:47
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**56**
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	**Benzyl Alcohol**	**19**	**31**
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
106-44-5	**4-Methylphenol**	**38**	**60**
105-67-9	**2,4-Dimethylphenol**	**38**	**16 J**
65-85-0	**Benzoic Acid**	**380**	**210 J**
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**130**
87-68-3	Hexachlorobutadiene	94	< 94 U
91-57-6	**2-Methylnaphthalene**	**19**	**76**
131-11-3	**Dimethylphthalate**	**19**	**40 M**
208-96-8	**Acenaphthylene**	**19**	**32**
83-32-9	**Acenaphthene**	**19**	**47**
132-64-9	**Dibenzofuran**	**19**	**66**
84-66-2	Diethylphthalate	47	< 47 U
86-73-7	**Fluorene**	**19**	**72**
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	**Phenanthrene**	**19**	**650**
120-12-7	**Anthracene**	**19**	**100**
84-74-2	**Di-n-Butylphthalate**	**19**	**23**
206-44-0	**Fluoranthene**	**19**	**1,400**
129-00-0	**Pyrene**	**19**	**1,100**
85-68-7	Butylbenzylphthalate	19	< 19 U
56-55-3	**Benzo(a)anthracene**	**19**	**360**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**320 B**
218-01-9	**Chrysene**	**19**	**700**
117-84-0	**Di-n-Octyl phthalate**	**19**	**21**
50-32-8	**Benzo(a)pyrene**	**19**	**380**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**180**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**74**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**180**
TOTBFA	**Total Benzofluoranthenes**	**19**	**850**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.8%	2-Fluorobiphenyl	62.6%
d14-p-Terphenyl	67.8%	d4-1,2-Dichlorobenzene	53.0%
d5-Phenol	59.7%	2-Fluorophenol	56.1%
2,4,6-Tribromophenol	72.7%	d4-2-Chlorophenol	60.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-58A
SAMPLE

Lab Sample ID: UR81H
LIMS ID: 12-7399
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 23:24
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**39**
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	**Benzyl Alcohol**	**20**	**46**
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	**2-Methylphenol**	**20**	**13 J**
106-44-5	**4-Methylphenol**	**39**	**94**
105-67-9	**2,4-Dimethylphenol**	**39**	**26 J**
65-85-0	**Benzoic Acid**	**390**	**120 J**
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**76**
87-68-3	Hexachlorobutadiene	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**68**
131-11-3	**Dimethylphthalate**	**20**	**9.8 J**
208-96-8	**Acenaphthylene**	**20**	**35**
83-32-9	**Acenaphthene**	**20**	**57**
132-64-9	**Dibenzofuran**	**20**	**130**
84-66-2	Diethylphthalate	49	< 49 U
86-73-7	**Fluorene**	**20**	**110**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	**Phenanthrene**	**20**	**1,300**
120-12-7	**Anthracene**	**20**	**110**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**1,100**
129-00-0	**Pyrene**	**20**	**800**
85-68-7	Butylbenzylphthalate	20	< 20 U
56-55-3	**Benzo(a)anthracene**	**20**	**170**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**25**	**160 B**
218-01-9	**Chrysene**	**20**	**430**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**110**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**46**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**21**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**46**
TOTBFA	**Total Benzofluoranthenes**	**20**	**400**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	60.2%
d14-p-Terphenyl	63.6%	d4-1,2-Dichlorobenzene	53.2%
d5-Phenol	57.2%	2-Fluorophenol	55.2%
2,4,6-Tribromophenol	65.5%	d4-2-Chlorophenol	58.3%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-11
SAMPLE

Lab Sample ID: UR81I
LIMS ID: 12-7400
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 00:01
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.9%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**52**
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	**Benzyl Alcohol**	**20**	**33**
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
106-44-5	**4-Methylphenol**	**39**	**50**
105-67-9	**2,4-Dimethylphenol**	**39**	**15 J**
65-85-0	Benzoic Acid	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**51**
87-68-3	Hexachlorobutadiene	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**29**
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
83-32-9	Acenaphthene	20	< 20 U
132-64-9	**Dibenzofuran**	**20**	**20**
84-66-2	Diethylphthalate	49	< 49 U
86-73-7	**Fluorene**	**20**	**18 J**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	**Phenanthrene**	**20**	**55**
120-12-7	**Anthracene**	**20**	**27**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**91**
129-00-0	**Pyrene**	**20**	**78**
85-68-7	Butylbenzylphthalate	20	< 20 U
56-55-3	**Benzo(a)anthracene**	**20**	**24**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**37 B**
218-01-9	**Chrysene**	**20**	**49**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**19 J**
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**11 J**
TOTBFA	**Total Benzofluoranthenes**	**20**	**55**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.6%	2-Fluorobiphenyl	59.6%
d14-p-Terphenyl	63.4%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	58.5%	2-Fluorophenol	57.1%
2,4,6-Tribromophenol	66.7%	d4-2-Chlorophenol	60.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-08A
SAMPLE

Lab Sample ID: UR81J
LIMS ID: 12-7401
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 00:38
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 58.5%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**27**
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	**Benzyl Alcohol**	**19**	**14 J**
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	**2-Methylphenol**	**19**	**38**
106-44-5	**4-Methylphenol**	**38**	**45**
105-67-9	**2,4-Dimethylphenol**	**38**	**12 J**
65-85-0	Benzoic Acid	380	< 380 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**28**
87-68-3	Hexachlorobutadiene	96	< 96 U
91-57-6	**2-Methylnaphthalene**	**19**	**19**
131-11-3	**Dimethylphthalate**	**19**	**54**
208-96-8	**Acenaphthylene**	**19**	**11 J**
83-32-9	Acenaphthene	19	< 19 U
132-64-9	**Dibenzofuran**	**19**	**19**
84-66-2	Diethylphthalate	48	< 48 U
86-73-7	**Fluorene**	**19**	**19**
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	**Phenanthrene**	**19**	**95**
120-12-7	**Anthracene**	**19**	**38**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**210**
129-00-0	**Pyrene**	**19**	**230**
85-68-7	Butylbenzylphthalate	19	< 19 U
56-55-3	**Benzo(a)anthracene**	**19**	**76**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**100 B**
218-01-9	**Chrysene**	**19**	**170**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	**Benzo(a)pyrene**	**19**	**60**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**24**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**11 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**25**
TOTBFA	**Total Benzofluoranthenes**	**19**	**190**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.2%	2-Fluorobiphenyl	55.0%
d14-p-Terphenyl	61.6%	d4-1,2-Dichlorobenzene	49.6%
d5-Phenol	51.3%	2-Fluorophenol	51.5%
2,4,6-Tribromophenol	61.5%	d4-2-Chlorophenol	53.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
IJ12-03	61.0%	62.6%	65.8%	54.8%	59.3%	57.1%	67.9%	60.7%	0
IJ12-05	61.4%	61.2%	66.0%	55.2%	59.2%	57.1%	68.3%	61.1%	0
IJ12-06	58.0%	57.8%	61.4%	52.6%	56.4%	55.1%	63.2%	57.6%	0
IJ12-02	60.8%	59.0%	65.4%	54.6%	59.1%	57.7%	67.2%	60.0%	0
MB-050212	79.8%	72.6%	90.6%	72.8%	69.7%	71.3%	70.3%	75.3%	0
LCS-050212	65.4%	63.8%	73.2%	59.6%	65.5%	63.3%	71.5%	63.7%	0
LCSD-050212	63.6%	61.6%	71.8%	58.0%	63.1%	61.9%	68.1%	62.7%	0
IJ12-04	57.8%	61.4%	64.8%	50.6%	58.4%	55.1%	68.0%	58.3%	0
IJ12-04 DL	52.0%	57.0%	68.0%	50.0%	44.0%	52.0%	57.3%	50.0%	0
IJ12-04 MS	56.2%	58.4%	61.4%	49.8%	58.8%	54.4%	61.2%	56.4%	0
IJ12-04 MSD	67.0%	67.2%	68.6%	58.8%	68.8%	64.8%	70.9%	67.2%	0
IJ12-07	61.8%	62.2%	67.2%	57.2%	59.3%	58.4%	70.0%	60.5%	0
IJ12-01	58.8%	62.6%	67.8%	53.0%	59.7%	56.1%	72.7%	60.0%	0
IJ12-58A	58.4%	60.2%	63.6%	53.2%	57.2%	55.2%	65.5%	58.3%	0
IJ12-11	61.6%	59.6%	63.4%	55.6%	58.5%	57.1%	66.7%	60.1%	0
IJ12-08A	54.2%	55.0%	61.6%	49.6%	51.3%	51.5%	61.5%	53.6%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(30-160)	(30-160)
(FBP) = 2-Fluorobiphenyl	(30-160)	(30-160)
(TPH) = d14-p-Terphenyl	(30-160)	(30-160)
(DCB) = d4-1,2-Dichlorobenzene	(30-160)	(30-160)
(PHL) = d5-Phenol	(30-160)	(30-160)
(2FP) = 2-Fluorophenol	(30-160)	(30-160)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)
(2CP) = d4-2-Chlorophenol	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 12-7392 to 12-7401

FORM-II SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: I-1-Z
SAMPLE

Lab Sample ID: US18A
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 01:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.5%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**120**
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	**2-Methylphenol**	**20**	**120**
106-44-5	**4-Methylphenol**	**39**	**420**
105-67-9	**2,4-Dimethylphenol**	**39**	**250**
65-85-0	Benzoic Acid	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**300**
87-68-3	Hexachlorobutadiene	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**300**
131-11-3	**Dimethylphthalate**	**20**	**130**
208-96-8	**Acenaphthylene**	**20**	**33**
83-32-9	**Acenaphthene**	**20**	**64**
132-64-9	**Dibenzofuran**	**20**	**190**
84-66-2	Diethylphthalate	49	< 49 U
86-73-7	**Fluorene**	**20**	**140**
86-30-6	**N-Nitrosodiphenylamine**	**20**	**36 M**
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	**Phenanthrene**	**20**	**340**
120-12-7	**Anthracene**	**20**	**100**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**430**
129-00-0	**Pyrene**	**20**	**390**
85-68-7	Butylbenzylphthalate	20	< 20 U
56-55-3	**Benzo(a)anthracene**	**20**	**130**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**74 B**
218-01-9	**Chrysene**	**20**	**180**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**78**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**27**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**9.8 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**30**
TOTBFA	**Total Benzofluoranthenes**	**20**	**170**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.0%	2-Fluorobiphenyl	64.8%
d14-p-Terphenyl	70.2%	d4-1,2-Dichlorobenzene	59.0%
d5-Phenol	60.8%	2-Fluorophenol	60.4%
2,4,6-Tribromophenol	68.7%	d4-2-Chlorophenol	63.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: I-2-A-Z
SAMPLE

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 01:51
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 48.8%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**59**
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	**2-Methylphenol**	**19**	**42**
106-44-5	**4-Methylphenol**	**38**	**230**
105-67-9	**2,4-Dimethylphenol**	**38**	**110**
65-85-0	Benzoic Acid	380	< 380 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**160**
87-68-3	Hexachlorobutadiene	96	< 96 U
91-57-6	**2-Methylnaphthalene**	**19**	**130**
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**12 J**
83-32-9	**Acenaphthene**	**19**	**27**
132-64-9	**Dibenzofuran**	**19**	**84**
84-66-2	Diethylphthalate	48	< 48 U
86-73-7	**Fluorene**	**19**	**59**
86-30-6	**N-Nitrosodiphenylamine**	**19**	**12 J**
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	**Phenanthrene**	**19**	**120**
120-12-7	**Anthracene**	**19**	**55**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**230**
129-00-0	**Pyrene**	**19**	**180**
85-68-7	Butylbenzylphthalate	19	< 19 U
56-55-3	**Benzo(a)anthracene**	**19**	**63**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**24**	**79 B**
218-01-9	**Chrysene**	**19**	**69**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	**Benzo(a)pyrene**	**19**	**41**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**15 J**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**19**
TOTBFA	**Total Benzofluoranthenes**	**19**	**86**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.6%	2-Fluorobiphenyl	61.0%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	55.8%
d5-Phenol	58.9%	2-Fluorophenol	57.9%
2,4,6-Tribromophenol	66.8%	d4-2-Chlorophenol	61.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-050212	79.8%	72.6%	90.6%	72.8%	69.7%	71.3%	70.3%	75.3%	0
LCS-050212	65.4%	63.8%	73.2%	59.6%	65.5%	63.3%	71.5%	63.7%	0
LCSD-050212	63.6%	61.6%	71.8%	58.0%	63.1%	61.9%	68.1%	62.7%	0
I-1-Z	63.0%	64.8%	70.2%	59.0%	60.8%	60.4%	68.7%	63.5%	0
I-2-A-Z	60.6%	61.0%	67.2%	55.8%	58.9%	57.9%	66.8%	61.2%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(30-160)	(30-160)
(FBP) = 2-Fluorobiphenyl	(30-160)	(30-160)
(TPH) = d14-p-Terphenyl	(30-160)	(30-160)
(DCB) = d4-1,2-Dichlorobenzene	(30-160)	(30-160)
(PHL) = d5-Phenol	(30-160)	(30-160)
(2FP) = 2-Fluorophenol	(30-160)	(30-160)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)
(2CP) = d4-2-Chlorophenol	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 12-7643 to 12-7644

FORM-II SW8270

UR01 : 00052

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: IJ12-04
MS/MSD

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted MS/MSD: 05/02/12

Date Analyzed MS: 05/08/12 20:57
MSD: 05/08/12 21:33
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount MS: 10.3 g-dry-wt
MSD: 10.3 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 35.7 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	139	421	484	58.3%	488	484	72.1%	14.7%
1,4-Dichlorobenzene	< 19.4 U	239	484	49.4%	285	484	58.9%	17.6%
Benzyl Alcohol	12.6 J	312	484	61.9%	373	484	74.5%	17.8%
1,2-Dichlorobenzene	< 19.4 U	247	484	51.0%	293	484	60.5%	17.0%
2-Methylphenol	< 19.4 U	245	484	50.6%	291	484	60.1%	17.2%
4-Methylphenol	18.4 J	516	968	51.4%	616	969	61.7%	17.7%
2,4-Dimethylphenol	< 38.7 U	831	1450	57.3%	991	1450	68.3%	17.6%
Benzoic Acid	< 387 U	1110	2660	41.7%	1260	2660	47.4%	12.7%
1,2,4-Trichlorobenzene	< 19.4 U	249	484	51.4%	300	484	62.0%	18.6%
Naphthalene	28.1	311	484	58.5%	813	484	162%	89.3%
Hexachlorobutadiene	< 96.8 U	248	484	51.2%	304	484	62.8%	20.3%
2-Methylnaphthalene	28.1	311	484	58.5%	651	484	129%	70.7%
Dimethylphthalate	10.6 J	340	484	68.1%	381	484	76.5%	11.4%
Acenaphthylene	77.4	445	484	76.0%	484	484	84.0%	8.4%
Acenaphthene	67.8	380	484	64.5%	581	484	106%	41.8%
Dibenzofuran	79.4	358	484	57.6%	851	484	159%	81.6%
Diethylphthalate	< 48.4 U	341	484	70.5%	388	484	80.2%	12.9%
Fluorene	135	440	484	63.0%	777	484	133%	55.4%
N-Nitrosodiphenylamine	< 19.4 U	290	484	59.9%	343	484	70.9%	16.7%
Hexachlorobenzene	< 19.4 U	293	484	60.5%	339	484	70.0%	14.6%
Pentachlorophenol	< 194 U	959	1450	66.1%	1090	1450	75.2%	12.8%
Phenanthrene	1950 E	1290	484	NA	3980 E	484	NA	102%
Anthracene	157	500	484	70.9%	589	484	89.3%	16.3%
Di-n-Butylphthalate	36.8	397	484	74.4%	505	484	96.7%	23.9%
Fluoranthene	6450 E	11900 ES	484	NA	9110 ES	484	NA	26.6%
Pyrene	3870 E	6790 ES	484	NA	4950 E	484	NA	31.3%
Butylbenzylphthalate	< 19.4 U	366	484	75.6%	416	484	86.0%	12.8%
Benzo(a)anthracene	555	1050	484	102%	1090	484	111%	3.7%
bis(2-Ethylhexyl)phthalate	319 B	533 B	484	44.2%	592 B	484	56.4%	10.5%
Chrysene	2010 E	3190 E	484	NA	2830 E	484	NA	12.0%
Di-n-Octyl phthalate	< 19.4 U	356	484	73.6%	402	484	83.1%	12.1%
Benzo(a)pyrene	402	928	484	109%	844	484	91.3%	9.5%
Indeno(1,2,3-cd)pyrene	220	605	484	79.5%	501	484	58.1%	18.8%
Dibenz(a,h)anthracene	67.8	416	484	71.9%	396	484	67.8%	4.9%
Benzo(g,h,i)perylene	210	540	484	68.2%	434	484	46.3%	21.8%
Total Benzofluoranthenes	1980	4400 E	968	250%	3540	969	161%	21.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-04
MATRIX SPIKE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 20:57
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	---
106-46-7	1,4-Dichlorobenzene	19	---
100-51-6	Benzyl Alcohol	19	---
95-50-1	1,2-Dichlorobenzene	19	---
95-48-7	2-Methylphenol	19	---
106-44-5	4-Methylphenol	39	---
105-67-9	2,4-Dimethylphenol	39	---
65-85-0	Benzoic Acid	390	---
120-82-1	1,2,4-Trichlorobenzene	19	---
91-20-3	Naphthalene	19	---
87-68-3	Hexachlorobutadiene	97	---
91-57-6	2-Methylnaphthalene	19	---
131-11-3	Dimethylphthalate	19	---
208-96-8	Acenaphthylene	19	---
83-32-9	Acenaphthene	19	---
132-64-9	Dibenzofuran	19	---
84-66-2	Diethylphthalate	48	---
86-73-7	Fluorene	19	---
86-30-6	N-Nitrosodiphenylamine	19	---
118-74-1	Hexachlorobenzene	19	---
87-86-5	Pentachlorophenol	190	---
85-01-8	Phenanthrene	19	---
120-12-7	Anthracene	19	---
84-74-2	Di-n-Butylphthalate	19	---
206-44-0	Fluoranthene	19	---
129-00-0	Pyrene	19	---
85-68-7	Butylbenzylphthalate	19	---
56-55-3	Benzo(a)anthracene	19	---
117-81-7	bis(2-Ethylhexyl)phthalate	24	---
218-01-9	Chrysene	19	---
117-84-0	Di-n-Octyl phthalate	19	---
50-32-8	Benzo(a)pyrene	19	---
193-39-5	Indeno(1,2,3-cd)pyrene	19	---
53-70-3	Dibenz(a,h)anthracene	19	---
191-24-2	Benzo(g,h,i)perylene	19	---
TOTBFA	Total Benzofluoranthenes	19	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.2%	2-Fluorobiphenyl	58.4%
d14-p-Terphenyl	61.4%	d4-1,2-Dichlorobenzene	49.8%
d5-Phenol	58.8%	2-Fluorophenol	54.4%
2,4,6-Tribromophenol	61.2%	d4-2-Chlorophenol	56.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: IJ12-04
MATRIX SPIKE DUPLICATE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 21:33
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	---
106-46-7	1,4-Dichlorobenzene	19	---
100-51-6	Benzyl Alcohol	19	---
95-50-1	1,2-Dichlorobenzene	19	---
95-48-7	2-Methylphenol	19	---
106-44-5	4-Methylphenol	39	---
105-67-9	2,4-Dimethylphenol	39	---
65-85-0	Benzoic Acid	390	---
120-82-1	1,2,4-Trichlorobenzene	19	---
91-20-3	Naphthalene	19	---
87-68-3	Hexachlorobutadiene	97	---
91-57-6	2-Methylnaphthalene	19	---
131-11-3	Dimethylphthalate	19	---
208-96-8	Acenaphthylene	19	---
83-32-9	Acenaphthene	19	---
132-64-9	Dibenzofuran	19	---
84-66-2	Diethylphthalate	48	---
86-73-7	Fluorene	19	---
86-30-6	N-Nitrosodiphenylamine	19	---
118-74-1	Hexachlorobenzene	19	---
87-86-5	Pentachlorophenol	190	---
85-01-8	Phenanthrene	19	---
120-12-7	Anthracene	19	---
84-74-2	Di-n-Butylphthalate	19	---
206-44-0	Fluoranthene	19	---
129-00-0	Pyrene	19	---
85-68-7	Butylbenzylphthalate	19	---
56-55-3	Benzo(a)anthracene	19	---
117-81-7	bis(2-Ethylhexyl)phthalate	24	---
218-01-9	Chrysene	19	---
117-84-0	Di-n-Octyl phthalate	19	---
50-32-8	Benzo(a)pyrene	19	---
193-39-5	Indeno(1,2,3-cd)pyrene	19	---
53-70-3	Dibenz(a,h)anthracene	19	---
191-24-2	Benzo(g,h,i)perylene	19	---
TOTBFA	Total Benzofluoranthenes	19	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.0%	2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	68.6%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	68.8%	2-Fluorophenol	64.8%
2,4,6-Tribromophenol	70.9%	d4-2-Chlorophenol	67.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-050212
LCS/LCSD

Lab Sample ID: LCS-050212
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted LCS/LCSD: 05/02/12

Date Analyzed LCS: 05/08/12 16:38
LCSD: 05/08/12 17:15
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount LCS: 10.0 g
LCSD: 10.0 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	302	500	60.4%	299	500	59.8%	1.0%
1,4-Dichlorobenzene	288	500	57.6%	291	500	58.2%	1.0%
Benzyl Alcohol	328	500	65.6%	315	500	63.0%	4.0%
1,2-Dichlorobenzene	289	500	57.8%	297	500	59.4%	2.7%
2-Methylphenol	252	500	50.4%	253	500	50.6%	0.4%
4-Methylphenol	523	1000	52.3%	515	1000	51.5%	1.5%
2,4-Dimethylphenol	640	1500	42.7%	565	1500	37.7%	12.4%
Benzoic Acid	1740	2750	63.3%	1670	2750	60.7%	4.1%
1,2,4-Trichlorobenzene	294	500	58.8%	293	500	58.6%	0.3%
Naphthalene	322	500	64.4%	325	500	65.0%	0.9%
Hexachlorobutadiene	293	500	58.6%	295	500	59.0%	0.7%
2-Methylnaphthalene	322	500	64.4%	318	500	63.6%	1.2%
Dimethylphthalate	376	500	75.2%	375	500	75.0%	0.3%
Acenaphthylene	338	500	67.6%	336	500	67.2%	0.6%
Acenaphthene	355	500	71.0%	349	500	69.8%	1.7%
Dibenzofuran	338	500	67.6%	328	500	65.6%	3.0%
Diethylphthalate	395	500	79.0%	400	500	80.0%	1.3%
Fluorene	421	500	84.2%	402	500	80.4%	4.6%
N-Nitrosodiphenylamine	364	500	72.8%	353	500	70.6%	3.1%
Hexachlorobenzene	335	500	67.0%	324	500	64.8%	3.3%
Pentachlorophenol	1020	1500	68.0%	1040	1500	69.3%	1.9%
Phenanthrene	396	500	79.2%	387	500	77.4%	2.3%
Anthracene	365	500	73.0%	359	500	71.8%	1.7%
Di-n-Butylphthalate	420	500	84.0%	425	500	85.0%	1.2%
Fluoranthene	414	500	82.8%	412	500	82.4%	0.5%
Pyrene	378	500	75.6%	385	500	77.0%	1.8%
Butylbenzylphthalate	409	500	81.8%	415	500	83.0%	1.5%
Benzo(a)anthracene	368	500	73.6%	374	500	74.8%	1.6%
bis(2-Ethylhexyl)phthalate	419 B	500	83.8%	404 B	500	80.8%	3.6%
Chrysene	385	500	77.0%	381	500	76.2%	1.0%
Di-n-Octyl phthalate	394	500	78.8%	391	500	78.2%	0.8%
Benzo(a)pyrene	362	500	72.4%	362	500	72.4%	0.0%
Indeno(1,2,3-cd)pyrene	370	500	74.0%	377	500	75.4%	1.9%
Dibenz(a,h)anthracene	379	500	75.8%	382	500	76.4%	0.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCSD-050212
LCS/LCSD

Lab Sample ID: LCS-050212
LIMS ID: 12-7396
Matrix: Sediment
Date Analyzed LCS: 05/08/12 16:38
LCSD: 05/08/12 17:15

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(g,h,i)perylene	372	500	74.4%	376	500	75.2%	1.1%
Total Benzofluoranthenes	792	1000	79.2%	805	1000	80.5%	1.6%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	65.4%	63.6%
2-Fluorobiphenyl	63.8%	61.6%
d14-p-Terphenyl	73.2%	71.8%
d4-1,2-Dichlorobenzene	59.6%	58.0%
d5-Phenol	65.5%	63.1%
2-Fluorophenol	63.3%	61.9%
2,4,6-Tribromophenol	71.5%	68.1%
d4-2-Chlorophenol	63.7%	62.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

UR81MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: US18

Project: I&J WATERWAY RI/FS

Lab File ID: UR81MB

Date Extracted: 05/02/12

Instrument ID: NT10

Date Analyzed: 05/08/12

Matrix: SOLID

Time Analyzed: 1601

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	UR81LCSS1	UR81LCSS1	UR81SB	05/08/12
02	UR81LCSDS1	UR81LCSDS1	UR81SBD	05/08/12
03	IJ12-03	UR81A	UR81A	05/08/12
04	IJ12-05	UR81B	UR81B	05/08/12
05	IJ12-06	UR81C	UR81C	05/08/12
06	IJ12-02	UR81D	UR81D	05/08/12
07	IJ12-04	UR81E	UR81E	05/08/12
08	IJ12-04 MS	UR81EMS	UR81EMS	05/08/12
09	IJ12-04 MSD	UR81EMSD	UR81EMSD	05/08/12
10	IJ12-07	UR81F	UR81F	05/08/12
11	IJ12-01	UR81G	UR81G	05/08/12
12	IJ12-58A	UR81H	UR81H	05/08/12
13	IJ12-11	UR81I	UR81I	05/09/12
14	IJ12-08A	UR81J	UR81J	05/09/12
15	I-1-Z	US18A	US18A	05/09/12
16	I-2-A-Z	US18B	US18B	05/09/12
17	IJ12-04	UR81E	UR81E5	05/09/12
18				
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-050212
METHOD BLANK

Lab Sample ID: MB-050212
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 16:01
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
106-44-5	4-Methylphenol	40	< 40 U
105-67-9	2,4-Dimethylphenol	40	< 40 U
65-85-0	Benzoic Acid	400	< 400 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
87-68-3	Hexachlorobutadiene	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
83-32-9	Acenaphthene	20	< 20 U
132-64-9	Dibenzofuran	20	< 20 U
84-66-2	Diethylphthalate	50	< 50 U
86-73-7	Fluorene	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**25**	**28**
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	79.8%	2-Fluorobiphenyl	72.6%
d14-p-Terphenyl	90.6%	d4-1,2-Dichlorobenzene	72.8%
d5-Phenol	69.7%	2-Fluorophenol	71.3%
2,4,6-Tribromophenol	70.3%	d4-2-Chlorophenol	75.3%

FORM I

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 05/08/12 DFTPP Injection Time: 1355

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10.0 - 80.0% of mass 198	27.6	
68	Less than 2.0% of mass 69	0.6	(1.4)1
69	Mass 69 relative abundance	44.3	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	10.0 - 80.0% of mass 198	51.3	
197	Less than 2.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 60.0% of mass 198	24.7	
365	Greater than 1.0% of mass 198	3.29	
441	0.0 - 24.0% of mass 442	11.7	(15.6)2
442	50.0 - 200.0% of mass 198	74.6	
443	15.0 - 24.0% of mass 442	14.9	(19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0508	CC0508	05/08/12	1410
02	UR81MBS1	UR81MBS1	UR81MB	05/08/12	1601
03	UR81LCSS1	UR81LCSS1	UR81SB	05/08/12	1638
04	UR81LCSDS1	UR81LCSDS1	UR81SBD	05/08/12	1715
05	IJ12-03	UR81A	UR81A	05/08/12	1752
06	IJ12-05	UR81B	UR81B	05/08/12	1829
07	IJ12-06	UR81C	UR81C	05/08/12	1906
08	IJ12-02	UR81D	UR81D	05/08/12	1943
09	IJ12-04	UR81E	UR81E	05/08/12	2019
10	IJ12-04 MS	UR81EMS	UR81EMS	05/08/12	2057
11	IJ12-04 MSD	UR81EMSD	UR81EMSD	05/08/12	2133
12	IJ12-07	UR81F	UR81F	05/08/12	2210
13	IJ12-01	UR81G	UR81G	05/08/12	2247
14	IJ12-58A	UR81H	UR81H	05/08/12	2324
15	IJ12-11	UR81I	UR81I	05/09/12	0001
16	IJ12-08A	UR81J	UR81J	05/09/12	0038
17	I-1-Z	US18A	US18A	05/09/12	0114
18	I-2-A-Z	US18B	US18B	05/09/12	0151
19					
20					
21					
22					

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 05/09/12 DFTPP Injection Time: 1554

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10.0 - 80.0% of mass 198	27.5	
68	Less than 2.0% of mass 69	0.6	(1.4)1
69	Mass 69 relative abundance	44.4	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	10.0 - 80.0% of mass 198	51.7	
197	Less than 2.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0 - 60.0% of mass 198	24.4	
365	Greater than 1.0% of mass 198	3.10	
441	0.0 - 24.0% of mass 442	11.2	(15.4)2
442	50.0 - 200.0% of mass 198	72.4	
443	15.0 - 24.0% of mass 442	14.1	(19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0509	CC0509	05/09/12	1609
02	IJ12-04	UR81E	UR81E5	05/09/12	1646
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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22					

FORM V SV

UR81 : 0001

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Calibration Date: 05/07/12

LAB FILE ID: RRF0.2=IC0507C RRF0.5=IC0507I RRF1 =IC0507D
RRF2.5=IC0507E RRF5 =IC0507A RRF10 =IC0507G
RRF20 =IC0507B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
Phenol	1.935	1.954	1.980	1.891	1.807	1.751	1.734	1.864	5.4
1,3-Dichlorobenzene	1.779	1.736	1.756	1.645	1.597	1.507	1.488	1.644	7.2
1,4-Dichlorobenzene	1.705	1.644	1.723	1.586	1.569	1.464	1.481	1.596	6.4
1,2-Dichlorobenzene	1.621	1.677	1.607	1.566	1.525	1.424	1.426	1.549	6.3
Benzyl alcohol	0.878	0.871	0.920	0.873	0.868	0.838	0.836	0.869	3.2
2-Methylphenol	1.498	1.519	1.530	1.483	1.439	1.413	1.391	1.468	3.7
Hexachloroethane	0.620	0.656	0.653	0.627	0.607	0.591	0.604	0.622	4.0
4-Methylphenol	1.580	1.546	1.633	1.554	1.512	1.457	1.431	1.530	4.6
2,4-Dimethylphenol	0.378	0.376	0.384	0.355	0.340	0.330	0.323	0.355	7.0
1,2,4-Trichlorobenzene	0.346	0.349	0.346	0.320	0.314	0.299	0.298	0.324	7.0
Naphthalene	1.070	1.028	1.044	0.996	0.959	0.950	0.945	0.999	5.0
Benzoic acid	0.192	0.228	0.279	0.297	0.300	0.311	0.322	0.276	17.3
Hexachlorobutadiene	0.192	0.180	0.190	0.175	0.174	0.168	0.166	0.178	5.7
2-Methylnaphthalene	0.708	0.690	0.705	0.682	0.673	0.668	0.669	0.685	2.4
Acenaphthylene	1.933	1.799	1.908	1.732	1.704	1.677	1.656	1.773	6.3
Dimethylphthalate	1.369	1.250	1.336	1.212	1.166	1.114	1.096	1.220	8.6
Acenaphthene	1.120	1.087	1.119	1.038	1.015	1.011	1.016	1.058	4.7
Dibenzofuran	1.663	1.616	1.675	1.541	1.519	1.511	1.499	1.575	4.7
Fluorene	1.279	1.233	1.287	1.194	1.152	1.142	1.124	1.202	5.5
Diethylphthalate	1.250	1.217	1.262	1.155	1.134	1.089	1.071	1.168	6.5
N-Nitrosodiphenylamine (1)	0.548	0.536	0.570	0.514	0.494	0.475	0.467	0.515	7.5
Hexachlorobenzene	0.265	0.255	0.254	0.241	0.236	0.227	0.225	0.243	6.2
Pentachlorophenol	0.149	0.153	0.181	0.175	0.177	0.172	0.176	0.169	7.4
Phenanthrene	1.034	1.002	1.054	0.961	0.951	0.956	0.966	0.989	4.2
Anthracene	1.094	1.028	1.073	1.052	1.018	1.015	1.029	1.044	2.9
Di-n-butylphthalate	1.273	1.184	1.308	1.263	1.292	1.327	1.342	1.284	4.1
Fluoranthene	1.137	1.060	1.180	1.117	1.121	1.121	1.144	1.126	3.2
Pyrene	1.271	1.213	1.276	1.196	1.160	1.172	1.173	1.209	3.9
Butylbenzylphthalate	0.557	0.494	0.547	0.508	0.501	0.500	0.493	0.514	5.1
Benzo(a)anthracene	1.196	1.104	1.136	1.072	1.030	1.022	1.032	1.084	6.0
Chrysene	1.045	0.978	1.003	0.959	0.924	0.938	0.931	0.968	4.5
bis(2-Ethylhexyl)phthalate	0.552	0.538	0.547	0.512	0.489	0.507	0.495	0.520	4.9
Di-n-octylphthalate	1.073	1.003	0.999	0.931	0.883	0.896	0.879	0.952	7.8
Benzo(a)pyrene	0.990	0.955	0.999	0.953	0.951	0.971	0.983	0.972	2.0
Indeno(1,2,3-cd)pyrene	1.115	1.022	1.130	1.102	1.097	1.123	1.150	1.106	3.7
Dibenzo(a,h)anthracene	0.829	0.790	0.875	0.845	0.844	0.868	0.897	0.850	4.1
Benzo(g,h,i)perylene	0.965	0.889	1.000	0.939	0.937	0.970	0.992	0.956	4.0

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Calibration Date: 05/07/12

LAB FILE ID: RRF0.2=IC0507C RRF0.5=IC0507I RRF1 =IC0507D
RRF2.5=IC0507E RRF5 =IC0507A RRF10 =IC0507G
RRF20 =IC0507B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
1-methylnaphthalene	0.714	0.700	0.722	0.699	0.693	0.681	0.682	0.699	2.2
Total Benzofluoranthenes	1.153	1.098	1.140	1.072	1.045	1.057	1.052	1.088	4.0
2-Fluorophenol	1.436	1.407	1.447	1.381	1.344	1.290	1.273	1.368	5.0
Phenol-d5	1.717	1.732	1.732	1.699	1.696	1.661	1.673	1.701	1.6
2-Chlorophenol-d4	1.531	1.494	1.525	1.486	1.461	1.404	1.407	1.472	3.5
1,2-Dichlorobenzene-d4	1.083	1.035	1.042	0.998	0.967	0.924	0.934	0.998	5.9
Nitrobenzene-d5	0.356	0.348	0.362	0.342	0.326	0.334	0.325	0.342	4.2
2-Fluorobiphenyl	1.486	1.395	1.459	1.341	1.308	1.288	1.274	1.364	6.2
2,4,6-Tribromophenol	0.174	0.179	0.196	0.180	0.187	0.181	0.186	0.183	3.8
Terphenyl-d14	0.852	0.788	0.818	0.749	0.712	0.696	0.690	0.758	8.3

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-2

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Cont. Calib. Date: 05/08/12

Init. Calib. Date: 05/07/12 — Cont. Calib. Time: 1410

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	1.864	1.803	0.800	AVRG	-3.3
1,3-Dichlorobenzene	1.644	1.622	0.010	AVRG	-1.3
1,4-Dichlorobenzene	1.596	1.554	0.010	AVRG	-2.6
1,2-Dichlorobenzene	1.549	1.506	0.010	AVRG	-2.8
Benzyl alcohol	0.869	0.826	0.010	AVRG	-4.9
2-Methylphenol	1.468	1.436	0.700	AVRG	-2.2
Hexachloroethane	0.622	0.626	0.300	AVRG	0.6
4-Methylphenol	1.530	1.472	0.600	AVRG	-3.8
2,4-Dimethylphenol	0.355	0.339	0.200	AVRG	-4.5
1,2,4-Trichlorobenzene	0.324	0.302	0.010	AVRG	-6.8
Naphthalene	0.999	0.965	0.700	AVRG	-3.4
Benzoic acid	0.276	0.292	0.010	AVRG	5.8
Hexachlorobutadiene	0.178	0.166	0.010	AVRG	-6.7
2-Methylnaphthalene	0.685	0.663	0.400	AVRG	-3.2
Acenaphthylene	1.773	1.674	0.900	AVRG	-5.6
Dimethylphthalate	1.220	1.156	0.010	AVRG	-5.2
Acenaphthene	1.058	1.019	0.900	AVRG	-3.7
Dibenzofuran	1.575	1.473	0.800	AVRG	-6.5
Fluorene	1.202	1.300	0.900	AVRG	8.2
Diethylphthalate	1.168	1.130	0.010	AVRG	-3.2
N-Nitrosodiphenylamine(1)	0.515	0.487	0.010	AVRG	-5.4
Hexachlorobenzene	0.243	0.221	0.100	AVRG	-9.0
Pentachlorophenol	0.169	0.156	0.050	AVRG	-7.7
Phenanthrene	0.989	0.946	0.700	AVRG	-4.3
Anthracene	1.044	1.023	0.700	AVRG	-2.0
Di-n-butylphthalate	1.284	1.340	0.010	AVRG	4.4
Fluoranthene	1.126	1.101	0.600	AVRG	-2.2
Pyrene	1.209	1.101	0.600	AVRG	-8.9
Butylbenzylphthalate	0.514	0.504	0.010	AVRG	-1.9
Benzo(a)anthracene	1.084	0.994	0.800	AVRG	-8.3
Chrysene	0.968	0.902	0.700	AVRG	-6.8
bis(2-Ethylhexyl)phthalate	0.520	0.487	0.010	AVRG	-6.3
Di-n-octylphthalate	0.952	0.876	0.010	AVRG	-8.0
Benzo(a)pyrene	0.972	0.954	0.700	AVRG	-1.8
Indeno(1,2,3-cd)pyrene	1.106	1.054	0.500	AVRG	-4.7
Dibenzo(a,h)anthracene	0.850	0.818	0.400	AVRG	-3.8
Benzo(g,h,i)perylene	0.956	0.869	0.500	AVRG	-9.1

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Cont. Calib. Date: 05/08/12

Init. Calib. Date: 05/07/12 — Cont. Calib. Time: 1410

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1-methylnaphthalene	0.699	0.683	0.010	AVRG	-2.3
Total Benzofluoranthenes	1.088	1.054	0.010	AVRG	-3.1
2-Fluorophenol	1.368	1.363	0.010	AVRG	-0.4
Phenol-d5	1.701	1.699	0.010	AVRG	-0.1
2-Chlorophenol-d4	1.472	1.439	0.010	AVRG	-2.2
1,2-Dichlorobenzene-d4	0.998	0.963	0.010	AVRG	-3.5
Nitrobenzene-d5	0.342	0.338	0.010	AVRG	-1.2
2-Fluorobiphenyl	1.364	1.263	0.010	AVRG	-7.4
2,4,6-Tribromophenol	0.183	0.164	0.010	AVRG	-10.4
Terphenyl-d14	0.758	0.665	0.010	AVRG	-12.3

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-2

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Cont. Calib. Date: 05/09/12

Init. Calib. Date: 05/07/12 — Cont. Calib. Time: 1609

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.864	1.760	0.800	AVRG	-5.6	
1,3-Dichlorobenzene	1.644	1.590	0.010	AVRG	-3.3	
1,4-Dichlorobenzene	1.596	1.539	0.010	AVRG	-3.6	
1,2-Dichlorobenzene	1.549	1.485	0.010	AVRG	-4.1	
Benzyl alcohol	0.869	0.797	0.010	AVRG	-8.3	
2-Methylphenol	1.468	1.388	0.700	AVRG	-5.4	
Hexachloroethane	0.622	0.623	0.300	AVRG	0.2	
4-Methylphenol	1.530	1.406	0.600	AVRG	-8.1	
2,4-Dimethylphenol	0.355	0.337	0.200	AVRG	-5.1	
1,2,4-Trichlorobenzene	0.324	0.300	0.010	AVRG	-7.4	
Naphthalene	0.999	0.964	0.700	AVRG	-3.5	
Benzoic acid	0.276	0.255	0.010	AVRG	-7.6	
Hexachlorobutadiene	0.178	0.168	0.010	AVRG	-5.6	
2-Methylnaphthalene	0.685	0.679	0.400	AVRG	-0.9	
Acenaphthylene	1.773	1.856	0.900	AVRG	4.7	
Dimethylphthalate	1.220	1.144	0.010	AVRG	-6.2	
Acenaphthene	1.058	1.016	0.900	AVRG	-4.0	
Dibenzofuran	1.575	1.492	0.800	AVRG	-5.3	
Fluorene	1.202	1.259	0.900	AVRG	4.7	
Diethylphthalate	1.168	1.129	0.010	AVRG	-3.3	
N-Nitrosodiphenylamine(1)	0.515	0.490	0.010	AVRG	-4.8	
Hexachlorobenzene	0.243	0.214	0.100	AVRG	-11.9	
Pentachlorophenol	0.169	0.134	0.050	AVRG	-20.7	<-
Phenanthrene	0.989	0.960	0.700	AVRG	-2.9	
Anthracene	1.044	1.049	0.700	AVRG	0.5	
Di-n-butylphthalate	1.284	1.346	0.010	AVRG	4.8	
Fluoranthene	1.126	1.111	0.600	AVRG	-1.3	
Pyrene	1.209	1.152	0.600	AVRG	-4.7	
Butylbenzylphthalate	0.514	0.532	0.010	AVRG	3.5	
Benzo(a)anthracene	1.084	1.022	0.800	AVRG	-5.7	
Chrysene	0.968	0.914	0.700	AVRG	-5.6	
bis(2-Ethylhexyl)phthalate	0.520	0.490	0.010	AVRG	-5.8	
Di-n-octylphthalate	0.952	0.865	0.010	AVRG	-9.1	
Benzo(a)pyrene	0.972	0.939	0.700	AVRG	-3.4	
Indeno(1,2,3-cd)pyrene	1.106	1.088	0.500	AVRG	-1.6	
Dibenzo(a,h)anthracene	0.850	0.879	0.400	AVRG	3.4	
Benzo(g,h,i)perylene	0.956	0.912	0.500	AVRG	-4.6	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Cont. Calib. Date: 05/09/12

Init. Calib. Date: 05/07/12 — Cont. Calib. Time: 1609

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1-methylnaphthalene	0.699	0.685	0.010	AVRG	-2.0
Total Benzofluoranthenes	1.088	1.014	0.010	AVRG	-6.8
2-Fluorophenol	1.368	1.329	0.010	AVRG	-2.8
Phenol-d5	1.701	1.610	0.010	AVRG	-5.3
2-Chlorophenol-d4	1.472	1.426	0.010	AVRG	-3.1
1,2-Dichlorobenzene-d4	0.998	0.951	0.010	AVRG	-4.7
Nitrobenzene-d5	0.342	0.331	0.010	AVRG	-3.2
2-Fluorobiphenyl	1.364	1.278	0.010	AVRG	-6.3
2,4,6-Tribromophenol	0.183	0.163	0.010	AVRG	-10.9
Terphenyl-d14	0.758	0.687	0.010	AVRG	-9.4

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-2

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507A — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/08/12

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	271872	9.02	1080694	11.70	623821	15.60
	UPPER LIMIT	543744		2161388		1247642	
	LOWER LIMIT	135936		540347		311910	
	CCAL	243625	9.04	973085	11.72	554482	15.63
	UPPER LIMIT		9.54		12.22		16.13
	LOWER LIMIT		8.54		11.22		15.13
01	UR81MBS1	208573	9.04	802059	11.72	404465	15.63
02	UR81LCSS1	250215	9.05	978227	11.72	543800	15.63
03	UR81LCSDS1	253232	9.05	997518	11.72	547562	15.63
04	IJ12-03	254860	9.05	1009881	11.72	542385	15.63
05	IJ12-05	258946	9.05	1042474	11.72	560986	15.63
06	IJ12-06	263175	9.05	1044105	11.72	567493	15.63
07	IJ12-02	233615	9.05	928538	11.73	518378	15.63
08	IJ12-04	252385	9.05	1013257	11.73	546718	15.64
09	IJ12-04 MS	239370	9.06	955354	11.73	531894	15.64
10	IJ12-04 MSD	224413	9.05	890782	11.73	512372	15.64
11	IJ12-07	224001	9.06	883880	11.73	486626	15.64
12	IJ12-01	226774	9.06	913992	11.73	496790	15.64
13	IJ12-58A	237389	9.05	933694	11.73	513110	15.65
14	IJ12-11	241030	9.05	938759	11.73	527809	15.64
15	IJ12-08A	237877	9.05	936718	11.73	517875	15.64
16	I-1-Z	203754	9.05	800954	11.73	459989	15.64
17	I-2-A-Z	216035	9.06	847853	11.73	479101	15.64
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507A — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/08/12

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	999143	18.87	1001009	23.93	988348	26.40
	UPPER LIMIT	1998286		2002018		1976696	
	LOWER LIMIT	499572		500504		494174	
	CCAL	869014	18.90	920625	23.96	864193	26.44
	UPPER LIMIT		19.40		24.46		26.94
	LOWER LIMIT		18.40		23.46		25.94
01	UR81MBS1	684812	18.90	697262	23.96	630044	26.44
02	UR81LCSS1	847253	18.91	862498	23.96	810230	26.44
03	UR81LCSDS1	863927	18.91	873849	23.96	828679	26.44
04	IJ12-03	838667	18.91	847000	23.97	837045	26.45
05	IJ12-05	881936	18.91	869711	23.97	864778	26.45
06	IJ12-06	878921	18.91	882989	23.97	861311	26.45
07	IJ12-02	802209	18.91	800248	23.97	790471	26.45
08	IJ12-04	858110	18.92	907309	23.99	880330	26.46
09	IJ12-04 MS	849107	18.93	903256	23.99	860597	26.47
10	IJ12-04 MSD	813777	18.93	883372	23.99	823667	26.47
11	IJ12-07	763786	18.92	803757	23.98	759449	26.46
12	IJ12-01	796154	18.93	825097	24.00	765903	26.49
13	IJ12-58A	799838	18.93	850235	23.99	784622	26.47
14	IJ12-11	819159	18.92	849529	23.98	779696	26.46
15	IJ12-08A	814744	18.92	824257	23.99	753667	26.46
16	I-1-Z	708942	18.93	737067	24.00	673672	26.49
17	I-2-A-Z	732365	18.93	780884	23.99	720487	26.48
18							
19							
20							
21							
22							
23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

UR81:00059

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507A — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/08/12

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1489422	25.02				
	UPPER LIMIT	2978844					
	LOWER LIMIT	744711					
	CCAL	1405067	25.06				
	UPPER LIMIT		25.56				
	LOWER LIMIT		24.56				
01	UR81MBS1	1072975	25.06				
02	UR81LCSS1	1316139	25.06				
03	UR81LCSDS1	1351337	25.06				
04	IJ12-03	1341032	25.06				
05	IJ12-05	1398052	25.06				
06	IJ12-06	1395471	25.06				
07	IJ12-02	1274835	25.06				
08	IJ12-04	1424098	25.07				
09	IJ12-04 MS	1426112	25.08				
10	IJ12-04 MSD	1355160	25.08				
11	IJ12-07	1248364	25.07				
12	IJ12-01	1294596	25.09				
13	IJ12-58A	1312482	25.07				
14	IJ12-11	1321968	25.07				
15	IJ12-08A	1312357	25.07				
16	I-1-Z	1169084	25.08				
17	I-2-A-Z	1239412	25.08				
18							
19							
20							
21							
22							
23							
24							
25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507A — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/09/12

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	271872	9.02	1080694	11.70	623821	15.60
	UPPER LIMIT	543744		2161388		1247642	
	LOWER LIMIT	135936		540347		311910	
	CCAL	222322	9.06	876995	11.73	509936	15.64
	UPPER LIMIT		9.56		12.23		16.14
	LOWER LIMIT		8.56		11.23		15.14
01	IJ12-04	238587	9.06	907775	11.73	515185	15.64
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

URS1:00071

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507A — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/09/12

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
ICAL MIDPT	999143	18.87	1001009	23.93	988348	26.40
UPPER LIMIT	1998286		2002018		1976696	
LOWER LIMIT	499572		500504		494174	
CCAL	809564	18.93	814222	23.98	803430	26.46
UPPER LIMIT		19.43		24.48		26.96
LOWER LIMIT		18.43		23.48		25.96
01 IJ12-04	822308	18.92	844958	23.98	833691	26.46
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

URS1 : 00672

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507A — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/09/12

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1489422	25.02				
	UPPER LIMIT	2978844					
	LOWER LIMIT	744711					
	CCAL	1302247	25.07				
	UPPER LIMIT		25.57				
	LOWER LIMIT		24.57				
01	IJ12-04	1319452	25.07				
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

UR81 : 00073

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: UR81, US18

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-03**
 SAMPLE

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 17:52
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.28 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.9**	**18**
106-46-7	1,4-Dichlorobenzene	4.9	< 4.9 U
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
131-11-3	Dimethylphthalate	4.9	< 4.9 U
84-66-2	**Diethylphthalate**	**4.9**	**14 B**
85-68-7	**Butylbenzylphthalate**	**4.9**	**14**
95-48-7	**2-Methylphenol**	**4.9**	**6.4**
105-67-9	**2,4-Dimethylphenol**	**20**	**14 J**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	Pentachlorophenol	49	< 49 U
95-50-1	1,2-Dichlorobenzene	4.9	< 4.9 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	55.2%
d14-p-Terphenyl	62.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-05**
 SAMPLE

Lab Sample ID: UR81B
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 18:29
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.23 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.5%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.9**	**9.6**
106-46-7	1,4-Dichlorobenzene	4.9	< 4.9 U
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
131-11-3	**Dimethylphthalate**	**4.9**	**6.9**
84-66-2	**Diethylphthalate**	**4.9**	**17 B**
85-68-7	**Butylbenzylphthalate**	**4.9**	**11**
95-48-7	**2-Methylphenol**	**4.9**	**3.3 J**
105-67-9	2,4-Dimethylphenol	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	Pentachlorophenol	49	< 49 U
95-50-1	1,2-Dichlorobenzene	4.9	< 4.9 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	55.3%
d14-p-Terphenyl	60.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-06**
 SAMPLE

Lab Sample ID: UR81C
LIMS ID: 12-7394
Matrix: Sediment
Data Release Authorized: WD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 19:06
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.25 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 55.6%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.9**	**8.6**
106-46-7	1,4-Dichlorobenzene	4.9	< 4.9 U
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
131-11-3	**Dimethylphthalate**	**4.9**	**6.0**
84-66-2	**Diethylphthalate**	**4.9**	**9.1 B**
85-68-7	**Butylbenzylphthalate**	**4.9**	**6.7**
95-48-7	**2-Methylphenol**	**4.9**	**3.9 J**
105-67-9	2,4-Dimethylphenol	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	Pentachlorophenol	49	< 49 U
95-50-1	1,2-Dichlorobenzene	4.9	< 4.9 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	52.9%
d14-p-Terphenyl	60.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-02**
 SAMPLE

Lab Sample ID: UR81D
LIMS ID: 12-7395
Matrix: Sediment
Data Release Authorized: VB
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 19:43
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.37 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 57.2%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.8**	**14**
106-46-7	1,4-Dichlorobenzene	4.8	< 4.8 U
120-82-1	1,2,4-Trichlorobenzene	4.8	< 4.8 U
118-74-1	Hexachlorobenzene	4.8	< 4.8 U
87-68-3	Hexachlorobutadiene	4.8	< 4.8 U
131-11-3	**Dimethylphthalate**	**4.8**	**8.2**
84-66-2	**Diethylphthalate**	**4.8**	**6.6 B**
85-68-7	**Butylbenzylphthalate**	**4.8**	**10**
95-48-7	**2-Methylphenol**	**4.8**	**3.3 J**
105-67-9	2,4-Dimethylphenol	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
87-86-5	Pentachlorophenol	48	< 48 U
95-50-1	1,2-Dichlorobenzene	4.8	< 4.8 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	54.9%
d14-p-Terphenyl	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-04**
 SAMPLE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 20:19
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.33 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.8**	**70**
106-46-7	1,4-Dichlorobenzene	4.8	< 4.8 U
120-82-1	1,2,4-Trichlorobenzene	4.8	< 4.8 U
118-74-1	Hexachlorobenzene	4.8	< 4.8 U
87-68-3	Hexachlorobutadiene	4.8	< 4.8 U
131-11-3	**Dimethylphthalate**	**4.8**	**10**
84-66-2	Diethylphthalate	4.8	< 4.8 U
85-68-7	**Butylbenzylphthalate**	**4.8**	**9.6**
95-48-7	2-Methylphenol	4.8	< 4.8 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
87-86-5	**Pentachlorophenol**	**48**	**33 J**
95-50-1	1,2-Dichlorobenzene	4.8	< 4.8 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	52.7%
d14-p-Terphenyl	62.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-07**
 SAMPLE

Lab Sample ID: UR81F
LIMS ID: 12-7397
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 22:10
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.11 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 56.1%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**5.0**	**8.3**
106-46-7	1,4-Dichlorobenzene	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
131-11-3	**Dimethylphthalate**	**5.0**	**7.4**
84-66-2	**Diethylphthalate**	**5.0**	**19 B**
85-68-7	**Butylbenzylphthalate**	**5.0**	**4.8 J**
95-48-7	**2-Methylphenol**	**5.0**	**6.0**
105-67-9	**2,4-Dimethylphenol**	**20**	**13 J**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	Pentachlorophenol	50	< 50 U
95-50-1	1,2-Dichlorobenzene	5.0	< 5.0 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	57.3%
d14-p-Terphenyl	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-01**
 SAMPLE

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: VT
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 22:47
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.63 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.7**	**74**
106-46-7	1,4-Dichlorobenzene	4.7	< 4.7 U
120-82-1	1,2,4-Trichlorobenzene	4.7	< 4.7 U
118-74-1	Hexachlorobenzene	4.7	< 4.7 U
87-68-3	Hexachlorobutadiene	4.7	< 4.7 U
131-11-3	**Dimethylphthalate**	**4.7**	**28**
84-66-2	**Diethylphthalate**	**4.7**	**7.3 B**
85-68-7	Butylbenzylphthalate	4.7	< 4.7 U
95-48-7	**2-Methylphenol**	**4.7**	**8.1**
105-67-9	**2,4-Dimethylphenol**	**19**	**15 J**
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
87-86-5	**Pentachlorophenol**	**47**	**25 J**
95-50-1	1,2-Dichlorobenzene	4.7	< 4.7 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	53.5%
d14-p-Terphenyl	65.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-58A**
 SAMPLE

Lab Sample ID: UR81H
LIMS ID: 12-7399
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 23:24
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.18 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.7%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.9**	**18**
106-46-7	1,4-Dichlorobenzene	4.9	< 4.9 U
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
131-11-3	**Dimethylphthalate**	**4.9**	**16**
84-66-2	**Diethylphthalate**	**4.9**	**6.8 B**
85-68-7	**Butylbenzylphthalate**	**4.9**	**12**
95-48-7	**2-Methylphenol**	**4.9**	**11**
105-67-9	**2,4-Dimethylphenol**	**20**	**25**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	**Pentachlorophenol**	**49**	**34 J**
95-50-1	1,2-Dichlorobenzene	4.9	< 4.9 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	53.2%
d14-p-Terphenyl	60.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-11**
 SAMPLE

Lab Sample ID: UR81I
LIMS ID: 12-7400
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 00:01
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.22 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.9%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.9**	**3.1 J**
106-46-7	1,4-Dichlorobenzene	4.9	< 4.9 U
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
131-11-3	**Dimethylphthalate**	**4.9**	**6.8**
84-66-2	**Diethylphthalate**	**4.9**	**7.0 B**
85-68-7	**Butylbenzylphthalate**	**4.9**	**4.0 J**
95-48-7	**2-Methylphenol**	**4.9**	**6.3**
105-67-9	**2,4-Dimethylphenol**	**20**	**13 J**
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	Pentachlorophenol	49	< 49 U
95-50-1	1,2-Dichlorobenzene	4.9	< 4.9 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	55.7%
d14-p-Terphenyl	60.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-08A**
 SAMPLE

Lab Sample ID: UR81J
LIMS ID: 12-7401
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 00:38
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.38 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 58.5%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.8**	**9.6**
106-46-7	1,4-Dichlorobenzene	4.8	< 4.8 U
120-82-1	1,2,4-Trichlorobenzene	4.8	< 4.8 U
118-74-1	Hexachlorobenzene	4.8	< 4.8 U
87-68-3	Hexachlorobutadiene	4.8	< 4.8 U
131-11-3	**Dimethylphthalate**	**4.8**	**52**
84-66-2	**Diethylphthalate**	**4.8**	**8.0 B**
85-68-7	**Butylbenzylphthalate**	**4.8**	**6.1**
95-48-7	**2-Methylphenol**	**4.8**	**5.2**
105-67-9	**2,4-Dimethylphenol**	**19**	**12 J**
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
87-86-5	Pentachlorophenol	48	< 48 U
95-50-1	1,2-Dichlorobenzene	4.8	< 4.8 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	50.4%
d14-p-Terphenyl	59.4%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Client ID	FPH	TER	TOT OUT
IJ12-03	55.2%	62.4%	0
IJ12-05	55.3%	60.6%	0
IJ12-06	52.9%	60.0%	0
IJ12-02	54.9%	61.6%	0
MB-050212	68.3%	87.0%	0
LCS-050212	60.5%	70.0%	0
LCSD-050212	59.3%	67.4%	0
IJ12-04	52.7%	62.8%	0
IJ12-04 MS	53.1%	59.6%	0
IJ12-04 MSD	62.4%	66.4%	0
IJ12-07	57.3%	66.4%	0
IJ12-01	53.5%	65.6%	0
IJ12-58A	53.2%	60.4%	0
IJ12-11	55.7%	60.8%	0
IJ12-08A	50.4%	59.4%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(30-160)	(30-160)
(TER) = d14-p-Terphenyl	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 12-7392 to 12-7401

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: I-1-Z**
 SAMPLE

Lab Sample ID: US18A
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 01:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.22 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.5%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.9**	**9.1**
106-46-7	**1,4-Dichlorobenzene**	**4.9**	**2.7 J**
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
131-11-3	**Dimethylphthalate**	**4.9**	**160**
84-66-2	**Diethylphthalate**	**4.9**	**12 B**
85-68-7	**Butylbenzylphthalate**	**4.9**	**48**
95-48-7	**2-Methylphenol**	**4.9**	**120**
105-67-9	**2,4-Dimethylphenol**	**20**	**250**
86-30-6	**N-Nitrosodiphenylamine**	**20**	**36**
87-86-5	Pentachlorophenol	49	< 49 U
95-50-1	1,2-Dichlorobenzene	4.9	< 4.9 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	58.7%
d14-p-Terphenyl	67.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: I-2-A-Z**
 SAMPLE

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/02/12
Date Analyzed: 05/09/12 01:51
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.41 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 48.8%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.8**	**6.0**
106-46-7	**1,4-Dichlorobenzene**	**4.8**	**5.2**
120-82-1	**1,2,4-Trichlorobenzene**	**4.8**	**3.1 J**
118-74-1	**Hexachlorobenzene**	**4.8**	**6.3**
87-68-3	Hexachlorobutadiene	4.8	< 4.8 U
131-11-3	**Dimethylphthalate**	**4.8**	**10**
84-66-2	**Diethylphthalate**	**4.8**	**4.2 J**
85-68-7	**Butylbenzylphthalate**	**4.8**	**13**
95-48-7	**2-Methylphenol**	**4.8**	**42**
105-67-9	**2,4-Dimethylphenol**	**19**	**110**
86-30-6	**N-Nitrosodiphenylamine**	**19**	**9.6 J**
87-86-5	Pentachlorophenol	48	< 48 U
95-50-1	**1,2-Dichlorobenzene**	**4.8**	**3.1 J**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery	
2-Fluorophenol	55.3%
d14-p-Terphenyl	62.0%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01

Client ID	FPH	TER	TOT OUT
MB-050212	68.3%	87.0%	0
LCS-050212	60.5%	70.0%	0
LCSD-050212	59.3%	67.4%	0
I-1-Z	58.7%	67.0%	0
I-2-A-Z	55.3%	62.0%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(30-160)	(30-160)
(TER) = d14-p-Terphenyl	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 12-7643 to 12-7644

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-04**

MATRIX SPIKE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized: VJB
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted MS/MSD: 05/02/12

Date Analyzed MS: 05/08/12 20:57
MSD: 05/08/12 21:33
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ

Sample Amount MS: 10.3 g-dry-wt
MSD: 10.3 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibenz(a,h)anthracene	70.0	433	484	75.0%	417	484	71.7%	3.8%
1,4-Dichlorobenzene	< 4.8 U	227	484	46.9%	271	484	56.0%	17.7%
1,2,4-Trichlorobenzene	< 4.8 U	239	484	49.4%	279	484	57.6%	15.4%
Hexachlorobenzene	< 4.8 U	281	484	58.1%	320	484	66.1%	13.0%
Hexachlorobutadiene	< 4.8 U	240	484	49.6%	281	484	58.1%	15.7%
Dimethylphthalate	10.0	319	484	63.8%	358	484	71.9%	11.5%
Diethylphthalate	< 4.8 U	326 B	484	67.4%	380 B	484	78.5%	15.3%
Butylbenzylphthalate	9.6	364	484	73.2%	410	484	82.7%	11.9%
2-Methylphenol	< 4.8 U	241	484	49.8%	286	484	59.1%	17.1%
2,4-Dimethylphenol	< 19.4 U	793	1450	54.7%	932	1450	64.3%	16.1%
N-Nitrosodiphenylamine	< 19.4 U	277	484	57.2%	327	484	67.6%	16.6%
Pentachlorophenol	33.3 J	971	1450	64.7%	1100	1450	73.6%	12.5%
1,2-Dichlorobenzene	< 4.8 U	234	484	48.3%	278	484	57.4%	17.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-04**
 MATRIX SPIKE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 20:57
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.33 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	4.8	---
106-46-7	1,4-Dichlorobenzene	4.8	---
120-82-1	1,2,4-Trichlorobenzene	4.8	---
118-74-1	Hexachlorobenzene	4.8	---
87-68-3	Hexachlorobutadiene	4.8	---
131-11-3	Dimethylphthalate	4.8	---
84-66-2	Diethylphthalate	4.8	---
85-68-7	Butylbenzylphthalate	4.8	---
95-48-7	2-Methylphenol	4.8	---
105-67-9	2,4-Dimethylphenol	19	---
86-30-6	N-Nitrosodiphenylamine	19	---
87-86-5	Pentachlorophenol	48	---
95-50-1	1,2-Dichlorobenzene	4.8	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	53.1%
d14-p-Terphenyl	59.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IJ12-04**

MATRIX SPIKE DUPLICATE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized: VB
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 21:33
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.32 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	4.8	---
106-46-7	1,4-Dichlorobenzene	4.8	---
120-82-1	1,2,4-Trichlorobenzene	4.8	---
118-74-1	Hexachlorobenzene	4.8	---
87-68-3	Hexachlorobutadiene	4.8	---
131-11-3	Dimethylphthalate	4.8	---
84-66-2	Diethylphthalate	4.8	---
85-68-7	Butylbenzylphthalate	4.8	---
95-48-7	2-Methylphenol	4.8	---
105-67-9	2,4-Dimethylphenol	19	---
86-30-6	N-Nitrosodiphenylamine	19	---
87-86-5	Pentachlorophenol	48	---
95-50-1	1,2-Dichlorobenzene	4.8	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.4%
d14-p-Terphenyl	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-050212**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050212
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized: VB
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12

Date Analyzed LCS: 05/08/12 16:38
LCSD: 05/08/12 17:15
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ

Sample Amount LCS: 10.0 g-dry-wt
LCSD: 10.0 g-dry-wt
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dibenz(a,h)anthracene	387	500	77.4%	388	500	77.6%	0.3%
1,4-Dichlorobenzene	270	500	54.0%	274	500	54.8%	1.5%
1,2,4-Trichlorobenzene	273	500	54.6%	278	500	55.6%	1.8%
Hexachlorobenzene	317	500	63.4%	315	500	63.0%	0.6%
Hexachlorobutadiene	279	500	55.8%	286	500	57.2%	2.5%
Dimethylphthalate	351	500	70.2%	348	500	69.6%	0.9%
Diethylphthalate	376 B	500	75.2%	374 B	500	74.8%	0.5%
Butylbenzylphthalate	415	500	83.0%	412	500	82.4%	0.7%
2-Methylphenol	251	500	50.2%	249	500	49.8%	0.8%
2,4-Dimethylphenol	623	1500	41.5%	553	1500	36.9%	11.9%
N-Nitrosodiphenylamine	346	500	69.2%	339	500	67.8%	2.0%
Pentachlorophenol	1100	1500	73.3%	1090	1500	72.7%	0.9%
1,2-Dichlorobenzene	278	500	55.6%	282	500	56.4%	1.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
2-Fluorophenol	60.5%	59.3%
d14-p-Terphenyl	70.0%	67.4%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

UR81MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: US18

Project: I&J WATERWAY RI/FS

Lab File ID: UR81MB

Date Extracted: 05/02/12

Instrument ID: NT10

Date Analyzed: 05/08/12

Matrix: SOLID

Time Analyzed: 1601

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	UR81LCSS1	UR81LCSS1	UR81SB	05/08/12
02	UR81LCSDS1	UR81LCSDS1	UR81SBD	05/08/12
03	IJ12-03	UR81A	UR81A	05/08/12
04	IJ12-05	UR81B	UR81B	05/08/12
05	IJ12-06	UR81C	UR81C	05/08/12
06	IJ12-02	UR81D	UR81D	05/08/12
07	IJ12-04	UR81E	UR81E	05/08/12
08	IJ12-04 MS	UR81EMS	UR81EMS	05/08/12
09	IJ12-04 MSD	UR81EMSD	UR81EMSD	05/08/12
10	IJ12-07	UR81F	UR81F	05/08/12
11	IJ12-01	UR81G	UR81G	05/08/12
12	IJ12-58A	UR81H	UR81H	05/08/12
13	IJ12-11	UR81I	UR81I	05/09/12
14	IJ12-08A	UR81J	UR81J	05/09/12
15	I-1-Z	US18A	US18A	05/09/12
16	I-2-A-Z	US18B	US18B	05/09/12
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-050212**
 METHOD BLANK

Lab Sample ID: MB-050212
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 16:01
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.00 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
131-11-3	Dimethylphthalate	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**5.0**	**3.4 J**
85-68-7	Butylbenzylphthalate	5.0	< 5.0 U
95-48-7	2-Methylphenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	Pentachlorophenol	50	< 50 U
95-50-1	1,2-Dichlorobenzene	5.0	< 5.0 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	68.3%
d14-p-Terphenyl	87.0%

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 05/07/12 DFTPP Injection Time: 1408

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.5
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Mass 69 relative abundance	39.2
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	47.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	26.3
365	Greater than 1.0% of mass 198	3.43
441	0.0 - 24.0% of mass 442	13.1 (15.5)2
442	50.0 - 200.0% of mass 198	84.2
443	15.0 - 24.0% of mass 442	17.0 (20.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC05075	IC0507A	05/07/12	1423
02		IC05070.2	IC0507C	05/07/12	1537
03		IC05071	IC0507D	05/07/12	1614
04		IC05072.5	IC0507E	05/07/12	1651
05		IC0507.05	IC0507F	05/07/12	1728
06		IC05070.1	IC0507H	05/07/12	1842
07		IC05070.5	IC0507I	05/07/12	1919
08					
09					
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FORM V SV

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 05/08/12 DFTPP Injection Time: 1355

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	27.6
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Mass 69 relative abundance	44.3
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	51.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	24.7
365	Greater than 1.0% of mass 198	3.29
441	0.0 - 24.0% of mass 442	11.7 (15.6)2
442	50.0 - 200.0% of mass 198	74.6
443	15.0 - 24.0% of mass 442	14.9 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0508A	CC0508A	05/08/12	1447
02	UR81MBS1	UR81MBS1	UR81MB	05/08/12	1601
03	UR81LCSS1	UR81LCSS1	UR81SB	05/08/12	1638
04	UR81LCSDS1	UR81LCSDS1	UR81SBD	05/08/12	1715
05	IJ12-03	UR81A	UR81A	05/08/12	1752
06	IJ12-05	UR81B	UR81B	05/08/12	1829
07	IJ12-06	UR81C	UR81C	05/08/12	1906
08	IJ12-02	UR81D	UR81D	05/08/12	1943
09	IJ12-04	UR81E	UR81E	05/08/12	2019
10	IJ12-04 MS	UR81EMS	UR81EMS	05/08/12	2057
11	IJ12-04 MSD	UR81EMSD	UR81EMSD	05/08/12	2133
12	IJ12-07	UR81F	UR81F	05/08/12	2210
13	IJ12-01	UR81G	UR81G	05/08/12	2247
14	IJ12-58A	UR81H	UR81H	05/08/12	2324
15	IJ12-11	UR81I	UR81I	05/09/12	0001
16	IJ12-08A	UR81J	UR81J	05/09/12	0038
17	I-1-Z	US18A	US18A	05/09/12	0114
18	I-2-A-Z	US18B	US18B	05/09/12	0151
19					
20					
21					
22					

FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Calibration Date: 05/07/12

LAB FILE ID: RRF0.05=IC0507F RRF0.1=IC0508H RRF0.2=IC0507C
RRF0.5=IC0507I RRF1 =IC0507D RRF2.5=IC0507E
RRF5 =IC0507A

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	___ RRF	%RSD /R^2
Phenol	1.871	1.876	1.845	1.860	1.859	1.752	1.659	1.817	4.5
1,3-Dichlorobenzene	1.859	1.850	1.769	1.740	1.719	1.605	1.552	1.728	6.7
1,4-Dichlorobenzene	1.807	1.779	1.682	1.674	1.643	1.555	1.508	1.664	6.5
1,2-Dichlorobenzene	1.717	1.712	1.658	1.639	1.626	1.517	1.462	1.619	5.9
Benzyl alcohol	0.917	0.952	0.928	0.947	0.946	0.925	0.899	0.930	2.1
2-Methylphenol	1.486	1.488	1.472	1.465	1.502	1.418	1.388	1.460	2.8
N-Nitroso-di-n-propylamine	0.858	0.887	0.858	0.856	0.834	0.799	0.765	0.837	5.0
4-Methylphenol	1.530	1.548	1.549	1.550	1.572	1.510	1.464	1.532	2.3
2,4-Dimethylphenol	0.380	0.371	0.380	0.372	0.379	0.351	0.332	0.366	5.0
1,2,4-Trichlorobenzene	0.381	0.373	0.368	0.351	0.358	0.331	0.324	0.355	6.0
Hexachlorobutadiene	0.206	0.202	0.199	0.192	0.198	0.185	0.185	0.195	4.3
Dimethylphthalate	1.324	1.247	1.278	1.205	1.260	1.172	1.076	1.223	6.6
Diethylphthalate	1.414	1.360	1.396	1.308	1.395	1.302	1.197	1.339	5.7
N-Nitrosodiphenylamine (1)	0.542	0.564	0.562	0.545	0.561	0.511	0.477	0.537	6.0
Hexachlorobenzene	0.302	0.305	0.298	0.276	0.287	0.263	0.251	0.283	7.3
Pentachlorophenol	0.144	0.145	0.163	0.166	0.188	0.186	0.184	0.168	11.2
Butylbenzylphthalate	0.460	0.474	0.506	0.474	0.514	0.478	0.467	0.482	4.2
Dibenzo(a,h)anthracene	0.835	0.832	0.876	0.834	0.912	0.856	0.850	0.856	3.4
N-Nitrosodimethylamine	0.867	0.872	0.827	0.859	0.835	0.795	0.757	0.830	5.1
2-Fluorophenol	1.419	1.422	1.386	1.385	1.387	1.323	1.290	1.373	3.6
Terphenyl-d14	0.667	0.681	0.665	0.631	0.650	0.594	0.569	0.637	6.5

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: US18 Project: I&J WATERWAY RI/FS

Instrument ID: NT10 Cont. Calib. Date: 05/08/12

Init. Calib. Date: 05/07/12 Cont. Calib. Time: 1447

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	1.817	1.708	0.800	AVRG	-6.0
1,3-Dichlorobenzene	1.728	1.725	0.010	AVRG	-0.2
1,4-Dichlorobenzene	1.664	1.660	0.010	AVRG	-0.2
1,2-Dichlorobenzene	1.619	1.630	0.010	AVRG	0.7
Benzyl alcohol	0.930	0.810	0.010	AVRG	-12.9
2-Methylphenol	1.460	1.387	0.700	AVRG	-5.0
N-Nitroso-di-n-propylamine	0.837	0.826	0.500	AVRG	-1.3
4-Methylphenol	1.532	1.411	0.600	AVRG	-7.9
2,4-Dimethylphenol	0.366	0.366	0.200	AVRG	0.0
1,2,4-Trichlorobenzene	0.355	0.348	0.010	AVRG	-2.0
Hexachlorobutadiene	0.195	0.192	0.010	AVRG	-1.5
Dimethylphthalate	1.223	1.215	0.010	AVRG	-0.6
Diethylphthalate	1.339	1.378	0.010	AVRG	2.9
N-Nitrosodiphenylamine(1)	0.537	0.557	0.010	AVRG	3.7
Hexachlorobenzene	0.283	0.276	0.100	AVRG	-2.5
Pentachlorophenol	0.168	0.164	0.050	AVRG	-2.4
Butylbenzylphthalate	0.482	0.531	0.010	AVRG	10.2
Dibenzo(a,h)anthracene	0.856	0.865	0.400	AVRG	1.0
N-Nitrosodimethylamine	0.830	0.893	0.010	AVRG	7.6
2-Fluorophenol	1.373	1.388	0.010	AVRG	1.1
Terphenyl-d14	0.637	0.624	0.010	AVRG	-2.0

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

UR81 : 00098

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507D — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/08/12

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	311248	9.03	1166872	11.70	603218	15.60
	UPPER LIMIT	622496		2333744		1206436	
	LOWER LIMIT	155624		583436		301609	
	CCAL	281871	9.05	1063862	11.72	545608	15.63
	UPPER LIMIT		9.55		12.22		16.13
	LOWER LIMIT		8.55		11.22		15.13
01	UR81MBS1	244052	9.05	907452	11.72	452562	15.63
02	UR81LCSS1	290476	9.05	1115894	11.72	576350	15.63
03	UR81LCSDS1	293315	9.05	1121221	11.72	582349	15.63
04	IJ12-03	294823	9.05	1141852	11.72	567855	15.64
05	IJ12-05	302232	9.05	1172866	11.72	598862	15.63
06	IJ12-06	306858	9.05	1195248	11.72	600305	15.63
07	IJ12-02	272772	9.05	1073367	11.72	546433	15.64
08	IJ12-04	293188	9.05	1152151	11.73	580230	15.64
09	IJ12-04 MS	276545	9.05	1071007	11.73	555543	15.65
10	IJ12-04 MSD	261118	9.05	1022446	11.73	532931	15.65
11	IJ12-07	255686	9.05	1005774	11.73	518049	15.65
12	IJ12-01	267099	9.05	1018218	11.73	525343	15.65
13	IJ12-58A	275915	9.05	1068919	11.73	538307	15.65
14	IJ12-11	280442	9.05	1085710	11.73	548469	15.65
15	IJ12-08A	274453	9.05	1058308	11.73	539391	15.64
16	I-1-Z	236940	9.05	906203	11.73	471204	15.65
17	I-2-A-Z	253680	9.05	973593	11.73	498345	15.65
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: US18 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0507D — Ical Date: 05/07/12

Instrument ID: NT10 — Cont. Cal Date: 05/08/12

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1096026	18.88	1131082	23.94	1082499	26.41
	UPPER LIMIT	2192052		2262164		2164998	
	LOWER LIMIT	548013		565541		541250	
	CCAL	960002	18.91	1032849	23.97	1001433	26.45
	UPPER LIMIT		19.41		24.47		26.95
	LOWER LIMIT		18.41		23.47		25.95
01	UR81MBS1	837942	18.91	870173	23.97	814714	26.45
02	UR81LCSS1	997180	18.91	1057846	23.97	1025862	26.44
03	UR81LCSDS1	1005744	18.91	1079452	23.97	1055126	26.44
04	IJ12-03	993737	18.91	1045665	23.98	1050280	26.45
05	IJ12-05	1037978	18.92	1096556	23.98	1088470	26.45
06	IJ12-06	1044431	18.91	1071028	23.97	1091355	26.45
07	IJ12-02	951777	18.92	989287	23.97	998041	26.45
08	IJ12-04	1008426	18.92	1109027	23.98	1100110	26.47
09	IJ12-04 MS	985434	18.92	1102819	24.00	1083146	26.48
10	IJ12-04 MSD	961807	18.93	1071245	24.00	1007487	26.48
11	IJ12-07	906909	18.92	959129	23.98	962015	26.46
12	IJ12-01	932581	18.92	1010605	24.00	995116	26.49
13	IJ12-58A	952406	18.93	1037522	23.99	1000508	26.47
14	IJ12-11	969866	18.92	1039166	23.98	982768	26.47
15	IJ12-08A	943487	18.92	1019736	23.98	953840	26.47
16	I-1-Z	829505	18.92	907068	24.00	889039	26.49
17	I-2-A-Z	877752	18.93	966194	23.99	927301	26.48
18							
19							
20							
21							
22							
23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: UR81, US18

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-03

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 13:58
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.79	0.65-0.89		0.994	2.28	
2,3,7,8-TCDD	0.39	0.65-0.89		0.994	0.264	BJEMPC
1,2,3,7,8-PeCDF	1.63	1.32-1.78		1.99	0.738	J
2,3,4,7,8-PeCDF	1.56	1.32-1.78		0.994	0.903	J
1,2,3,7,8-PeCDD	1.77	1.32-1.78		0.994	2.00	
1,2,3,4,7,8-HxCDF	1.33	1.05-1.43		1.99	2.67	
1,2,3,6,7,8-HxCDF	1.40	1.05-1.43		1.99	1.67	J
2,3,4,6,7,8-HxCDF	1.06	1.05-1.43		1.99	1.35	J
1,2,3,7,8,9-HxCDF	1.28	1.05-1.43		1.99	1.18	J
1,2,3,4,7,8-HxCDD	1.31	1.05-1.43		1.99	3.86	
1,2,3,6,7,8-HxCDD	1.16	1.05-1.43		1.99	11.9	
1,2,3,7,8,9-HxCDD	1.36	1.05-1.43		1.99	6.72	
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		1.99	43.3	
1,2,3,4,7,8,9-HpCDF	1.13	0.88-1.20		1.99	2.83	
1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20		1.99	334	
OCDF	0.85	0.76-1.02		4.97	173	
OCDD	0.88	0.76-1.02		4.97	2,930	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.994	12.5	16.4
Total TCDD		0.994	50.6	51.5
Total PeCDF		1.99	28.2	28.7
Total PeCDD		0.994	53.1	56.5
Total HxCDF		1.99	70.6	70.9
Total HxCDD		1.99	139	
Total HpCDF		1.99	156	
Total HpCDD		1.99	869	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 10.5

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 10.5

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-03

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 13:58
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	57.0	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	55.3	25-164	
13C-1,2,3,7,8-PeCDF	1.53	1.32-1.78	54.8	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	54.0	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	50.4	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	61.5	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	67.5	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	61.6	28-136	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	68.5	29-147	
13C-1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	57.6	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	68.6	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	47.8	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	42.9	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	47.5	23-140	
13C-OCDD	0.85	0.76-1.02	26.0	17-157	
37Cl4-2,3,7,8-TCDD			81.6	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-05

Lab Sample ID: UR81B
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 14:48
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.76	0.65-0.89		0.987	4.55	
2,3,7,8-TCDD	0.62	0.65-0.89		0.987	0.496	JEMPC
1,2,3,7,8-PeCDF	1.57	1.32-1.78		1.97	1.38	J
2,3,4,7,8-PeCDF	1.52	1.32-1.78		0.987	1.59	
1,2,3,7,8-PeCDD	1.52	1.32-1.78		0.987	3.80	
1,2,3,4,7,8-HxCDF	1.16	1.05-1.43		1.97	5.33	
1,2,3,6,7,8-HxCDF	1.12	1.05-1.43		1.97	2.78	
2,3,4,6,7,8-HxCDF	1.26	1.05-1.43		1.97	4.96	
1,2,3,7,8,9-HxCDF	1.20	1.05-1.43		1.97	1.52	J
1,2,3,4,7,8-HxCDD	1.18	1.05-1.43		1.97	7.53	
1,2,3,6,7,8-HxCDD	1.21	1.05-1.43		1.97	23.0	
1,2,3,7,8,9-HxCDD	1.26	1.05-1.43		1.97	13.7	
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		1.97	79.6	
1,2,3,4,7,8,9-HpCDF	1.02	0.88-1.20		1.97	5.04	
1,2,3,4,6,7,8-HpCDD	1.08	0.88-1.20		1.97	640	
OCDF	0.88	0.76-1.02		4.94	304	
OCDD	0.86	0.76-1.02		24.7	5,800	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.987	24.9	26.9
Total TCDD		0.987	118	119
Total PeCDF		1.97	43.4	46.3
Total PeCDD		0.987	138	140
Total HxCDF		1.97	140	141
Total HxCDD		1.97	320	
Total HpCDF		1.97	285	
Total HpCDD		1.97	1,590	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 20.2

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 20.2

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-05

Lab Sample ID: UR81B
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 14:48
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	77.0	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	77.2	25-164	
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	77.6	24-185	
13C-2,3,4,7,8-PeCDF	1.55	1.32-1.78	78.8	21-178	
13C-1,2,3,7,8-PeCDD	1.65	1.32-1.78	77.2	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	86.0	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	84.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	77.3	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	66.8	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	83.1	32-141	
13C-1,2,3,6,7,8-HxCDD	1.27	1.05-1.43	84.5	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	65.9	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.46	0.37-0.51	63.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.08	0.88-1.20	70.5	23-140	
13C-OCDD	0.84	0.76-1.02	44.8	17-157	
37Cl4-2,3,7,8-TCDD			82.4	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-05
DILUTION

Lab Sample ID: UR81B
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/11/12 12:08
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.93	0.76-1.02	53.9	17-157	
37Cl4-2,3,7,8-TCDD			72.6	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-06

Lab Sample ID: UR81C
LIMS ID: 12-7394
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 15:41
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.76	0.65-0.89		0.988	4.37	
2,3,7,8-TCDD	0.62	0.65-0.89		0.988	0.457	JEMPC
1,2,3,7,8-PeCDF	1.43	1.32-1.78		1.98	1.21	J
2,3,4,7,8-PeCDF	1.36	1.32-1.78		0.988	1.21	
1,2,3,7,8-PeCDD	1.59	1.32-1.78		0.988	2.93	
1,2,3,4,7,8-HxCDF	1.15	1.05-1.43		1.98	4.29	
1,2,3,6,7,8-HxCDF	1.25	1.05-1.43		1.98	2.28	
2,3,4,6,7,8-HxCDF	1.21	1.05-1.43		1.98	3.65	
1,2,3,7,8,9-HxCDF	1.63	1.05-1.43		1.98	1.19	JEMPC
1,2,3,4,7,8-HxCDD	1.21	1.05-1.43		1.98	5.85	
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43		1.98	18.5	
1,2,3,7,8,9-HxCDD	1.22	1.05-1.43		1.98	10.4	
1,2,3,4,6,7,8-HpCDF	0.98	0.88-1.20		1.98	58.8	
1,2,3,4,7,8,9-HpCDF	1.06	0.88-1.20		1.98	3.79	
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20		1.98	443	
OCDF	0.88	0.76-1.02		4.94	195	
OCDD	0.88	0.76-1.02		4.94	3,800	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.988	23.6	25.1
Total TCDD		0.988	120	121
Total PeCDF		1.98	34.1	35.7
Total PeCDD		0.988	134	
Total HxCDF		1.98	106	108
Total HxCDD		1.98	277	
Total HpCDF		1.98	210	211
Total HpCDD		1.98	1,140	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 15.1

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 15.1

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-06

Lab Sample ID: UR81C
LIMS ID: 12-7394
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 15:41
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	81.2	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	79.6	25-164	
13C-1,2,3,7,8-PeCDF	1.52	1.32-1.78	81.2	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	80.2	21-178	
13C-1,2,3,7,8-PeCDD	1.60	1.32-1.78	79.8	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	85.7	26-152	
13C-1,2,3,6,7,8-HxCDF	0.49	0.43-0.59	84.8	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	78.6	28-136	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	75.5	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	83.7	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	81.4	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.46	0.37-0.51	64.3	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	59.6	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	66.0	23-140	
13C-OCDD	0.91	0.76-1.02	40.9	17-157	
37Cl4-2,3,7,8-TCDD			87.4	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-02

Lab Sample ID: UR81D
LIMS ID: 12-7395
Matrix: Sediment
Data Release Authorized: m
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 17:33
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.77	0.65-0.89		1.00	4.52	
2,3,7,8-TCDD	0.62	0.65-0.89		1.00	0.500	JEMPC
1,2,3,7,8-PeCDF	1.74	1.32-1.78		2.00	1.35	J
2,3,4,7,8-PeCDF	1.62	1.32-1.78		1.00	1.66	
1,2,3,7,8-PeCDD	1.70	1.32-1.78		1.00	3.97	
1,2,3,4,7,8-HxCDF	1.18	1.05-1.43		2.00	5.35	
1,2,3,6,7,8-HxCDF	1.26	1.05-1.43		2.00	2.88	
2,3,4,6,7,8-HxCDF	1.30	1.05-1.43		2.00	5.03	
1,2,3,7,8,9-HxCDF	1.22	1.05-1.43		2.00	1.90	J
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43		2.00	8.05	
1,2,3,6,7,8-HxCDD	1.22	1.05-1.43		2.00	23.5	
1,2,3,7,8,9-HxCDD	1.16	1.05-1.43		2.00	15.2	
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		2.00	84.6	
1,2,3,4,7,8,9-HpCDF	1.03	0.88-1.20		2.00	5.38	
1,2,3,4,6,7,8-HpCDD	0.99	0.88-1.20		2.00	629	
OCDF	0.89	0.76-1.02		5.00	301	
OCDD	0.89	0.76-1.02		25.0	5,630	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	25.8	28.2
Total TCDD		1.00	108	109
Total PeCDF		2.00	47.3	49.4
Total PeCDD		1.00	125	128
Total HxCDF		2.00	137	138
Total HxCDD		2.00	305	308
Total HpCDF		2.00	287	288
Total HpCDD		2.00	1,650	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 20.6

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 20.6

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-02

Lab Sample ID: UR81D
LIMS ID: 12-7395
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 17:33
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	78.0	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	77.5	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	77.8	24-185	
13C-2,3,4,7,8-PeCDF	1.55	1.32-1.78	78.0	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	75.8	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	84.4	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	88.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	80.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	82.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	79.6	32-141	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	90.1	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	66.2	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	61.6	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.02	0.88-1.20	68.0	23-140	
13C-OCDD	0.89	0.76-1.02	46.6	17-157	
37Cl4-2,3,7,8-TCDD			82.3	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-02
DILUTION

Lab Sample ID: UR81D
LIMS ID: 12-7395
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/11/12 12:59
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.87	0.76-1.02	65.0	17-157	
37Cl4-2,3,7,8-TCDD			82.1	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-04

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 18:29
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.78	0.65-0.89		0.962	2.11	
2,3,7,8-TCDD	0.58	0.65-0.89		0.962	0.487	JEMPC
1,2,3,7,8-PeCDF	1.58	1.32-1.78		1.92	2.77	
2,3,4,7,8-PeCDF	1.59	1.32-1.78		0.962	3.09	
1,2,3,7,8-PeCDD	1.46	1.32-1.78		0.962	4.21	
1,2,3,4,7,8-HxCDF	1.28	1.05-1.43		1.92	10.1	
1,2,3,6,7,8-HxCDF	1.31	1.05-1.43		1.92	4.63	
2,3,4,6,7,8-HxCDF	1.22	1.05-1.43		1.92	6.81	
1,2,3,7,8,9-HxCDF	1.25	1.05-1.43		1.92	3.84	
1,2,3,4,7,8-HxCDD	1.28	1.05-1.43		1.92	9.16	
1,2,3,6,7,8-HxCDD	1.22	1.05-1.43		1.92	44.1	
1,2,3,7,8,9-HxCDD	1.16	1.05-1.43		1.92	18.3	
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		1.92	106	
1,2,3,4,7,8,9-HpCDF	1.02	0.88-1.20		1.92	5.41	
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20		1.92	1,510	
OCDF	0.86	0.76-1.02		4.81	255	
OCDD	0.88	0.76-1.02		24.0	15,200	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.962	18.5	18.9
Total TCDD		0.962	19.1	19.8
Total PeCDF		1.92	72.6	73.6
Total PeCDD		0.962	40.4	40.8
Total HxCDF		1.92	259	261
Total HxCDD		1.92	463	
Total HpCDF		1.92	340	342
Total HpCDD		1.92	4,940	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 36.5

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 36.5

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-04

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 18:29
Instrument/Analyst: AS1/PK

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	68.1	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	73.7	25-164	
13C-1,2,3,7,8-PeCDF	1.60	1.32-1.78	79.2	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	79.6	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	77.7	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	89.9	26-152	
13C-1,2,3,6,7,8-HxCDF	0.50	0.43-0.59	88.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	80.3	28-136	
13C-1,2,3,7,8,9-HxCDF	0.54	0.43-0.59	38.8	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	83.7	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	86.7	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.46	0.37-0.51	64.5	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	65.4	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	72.4	23-140	
13C-OCDD	0.89	0.76-1.02	45.4	17-157	
37Cl4-2,3,7,8-TCDD			78.2	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-04
DILUTION

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/11/12 13:51
Instrument/Analyst: AS1/PK

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.88	0.76-1.02	57.2	17-157	
37Cl4-2,3,7,8-TCDD			71.5	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-07

Lab Sample ID: UR81F
LIMS ID: 12-7397
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 19:20
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.78	0.65-0.89		1.00	3.59	
2,3,7,8-TCDD	0.58	0.65-0.89		1.00	0.374	BJEMPC
1,2,3,7,8-PeCDF	1.62	1.32-1.78		2.00	0.972	J
2,3,4,7,8-PeCDF	1.51	1.32-1.78		1.00	1.00	
1,2,3,7,8-PeCDD	1.29	1.32-1.78		1.00	2.25	EMPC
1,2,3,4,7,8-HxCDF	1.14	1.05-1.43		2.00	3.37	
1,2,3,6,7,8-HxCDF	1.15	1.05-1.43		2.00	1.53	J
2,3,4,6,7,8-HxCDF	1.35	1.05-1.43		2.00	1.56	J
1,2,3,7,8,9-HxCDF	1.26	1.05-1.43		2.00	1.11	J
1,2,3,4,7,8-HxCDD	1.15	1.05-1.43		2.00	4.30	
1,2,3,6,7,8-HxCDD	1.20	1.05-1.43		2.00	14.3	
1,2,3,7,8,9-HxCDD	1.24	1.05-1.43		2.00	7.31	
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		2.00	44.6	
1,2,3,4,7,8,9-HpCDF	1.01	0.88-1.20		2.00	2.73	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		2.00	356	
OCDF	0.88	0.76-1.02		5.00	150	
OCDD	0.89	0.76-1.02		5.00	3,160	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	18.2	19.5
Total TCDD		1.00	81.5	82.5
Total PeCDF		2.00	26.6	27.5
Total PeCDD		1.00	90.4	92.7
Total HxCDF		2.00	83.7	83.8
Total HxCDD		2.00	190	193
Total HpCDF		2.00	161	162
Total HpCDD		2.00	963	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 11.7

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 11.7

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-07

Lab Sample ID: UR81F
LIMS ID: 12-7397
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 19:20
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	82.6	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	80.0	25-164	
13C-1,2,3,7,8-PeCDF	1.52	1.32-1.78	79.7	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	79.4	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	77.7	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	83.8	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	85.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	76.4	28-136	
13C-1,2,3,7,8,9-HxCDF	0.50	0.43-0.59	74.1	29-147	
13C-1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	81.6	32-141	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	79.8	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	64.4	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	62.7	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.00	0.88-1.20	66.4	23-140	
13C-OCDD	0.89	0.76-1.02	41.1	17-157	
37Cl4-2,3,7,8-TCDD			87.2	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-01

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 20:12
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.84	0.65-0.89		0.971	1.34	
2,3,7,8-TCDD	0.57	0.65-0.89		0.971	0.429	JEMPC
1,2,3,7,8-PeCDF	1.52	1.32-1.78		1.94	2.13	
2,3,4,7,8-PeCDF	1.58	1.32-1.78		0.971	2.28	
1,2,3,7,8-PeCDD	1.55	1.32-1.78		0.971	3.94	
1,2,3,4,7,8-HxCDF	1.26	1.05-1.43		1.94	6.66	
1,2,3,6,7,8-HxCDF	1.36	1.05-1.43		1.94	3.70	
2,3,4,6,7,8-HxCDF	1.22	1.05-1.43		1.94	5.93	
1,2,3,7,8,9-HxCDF	1.19	1.05-1.43		1.94	2.61	
1,2,3,4,7,8-HxCDD	1.26	1.05-1.43		1.94	7.12	
1,2,3,6,7,8-HxCDD	1.26	1.05-1.43		1.94	36.9	
1,2,3,7,8,9-HxCDD	1.38	1.05-1.43		1.94	15.3	
1,2,3,4,6,7,8-HpCDF	1.01	0.88-1.20		1.94	89.9	
1,2,3,4,7,8,9-HpCDF	1.04	0.88-1.20		1.94	4.82	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		1.94	891	
OCDF	0.88	0.76-1.02		4.85	235	
OCDD	0.89	0.76-1.02		24.3	9,860	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.971	21.8	22.5
Total TCDD		0.971	13.5	14.7
Total PeCDF		1.94	80.7	81.9
Total PeCDD		0.971	25.9	
Total HxCDF		1.94	201	202
Total HxCDD		1.94	226	
Total HpCDF		1.94	278	
Total HpCDD		1.94	2,270	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 26.0

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 26.0

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-01

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 20:12
Instrument/Analyst: AS1/PK

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	84.9	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	83.9	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	91.4	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	90.8	21-178	
13C-1,2,3,7,8-PeCDD	1.62	1.32-1.78	89.9	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	87.9	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	87.2	26-123	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	81.6	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	86.0	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	84.5	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	85.0	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	68.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	65.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	69.3	23-140	
13C-OCDD	0.91	0.76-1.02	45.4	17-157	
37Cl4-2,3,7,8-TCDD			87.5	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-01
DILUTION

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/11/12 14:59
Instrument/Analyst: AS1/PK

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.86	0.76-1.02	55.3	17-157	
37Cl4-2,3,7,8-TCDD			83.4	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-58A

Lab Sample ID: UR81H
LIMS ID: 12-7399
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 21:04
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.82	0.65-0.89		0.993	2.28	
2,3,7,8-TCDD	0.35	0.65-0.89		0.993	0.266	BJEMPC
1,2,3,7,8-PeCDF	1.66	1.32-1.78		1.99	0.890	JX
2,3,4,7,8-PeCDF	1.45	1.32-1.78		0.993	1.25	
1,2,3,7,8-PeCDD	1.84	1.32-1.78		0.993	2.03	EMPC
1,2,3,4,7,8-HxCDF	1.21	1.05-1.43		1.99	5.04	
1,2,3,6,7,8-HxCDF	1.19	1.05-1.43		1.99	2.38	
2,3,4,6,7,8-HxCDF	1.35	1.05-1.43		1.99	1.49	J
1,2,3,7,8,9-HxCDF	1.09	1.05-1.43		1.99	1.59	J
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43		1.99	4.34	
1,2,3,6,7,8-HxCDD	1.21	1.05-1.43		1.99	19.3	
1,2,3,7,8,9-HxCDD	1.21	1.05-1.43		1.99	9.17	
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20		1.99	55.8	
1,2,3,4,7,8,9-HpCDF	1.09	0.88-1.20		1.99	3.25	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		1.99	575	
OCDF	0.86	0.76-1.02		4.97	197	
OCDD	0.87	0.76-1.02		24.8	5,240	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.993	11.6	15.4
Total TCDD		0.993	43.1	45.1
Total PeCDF		1.99	22.3	25.2
Total PeCDD		0.993	49.8	52.2
Total HxCDF		1.99	92.4	93.1
Total HxCDD		1.99	190	
Total HpCDF		1.99	195	
Total HpCDD		1.99	1,520	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 15.2

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 15.2

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-58A

Lab Sample ID: UR81H
LIMS ID: 12-7399
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 21:04
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	69.7	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	74.3	25-164	
13C-1,2,3,7,8-PeCDF	1.53	1.32-1.78	74.1	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	74.9	21-178	
13C-1,2,3,7,8-PeCDD	1.61	1.32-1.78	76.4	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	76.9	26-152	
13C-1,2,3,6,7,8-HxCDF	0.49	0.43-0.59	74.3	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	58.9	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	68.4	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	70.5	32-141	
13C-1,2,3,6,7,8-HxCDD	1.27	1.05-1.43	75.2	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	63.8	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	71.6	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	71.1	23-140	
13C-OCDD	0.88	0.76-1.02	56.5	17-157	
37Cl4-2,3,7,8-TCDD			90.6	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-58A
DILUTION

Lab Sample ID: UR81H
LIMS ID: 12-7399
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/11/12 15:49
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.93	0.76-1.02	42.0	17-157	
37Cl4-2,3,7,8-TCDD			86.6	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-11

Lab Sample ID: UR81I
LIMS ID: 12-7400
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 21:56
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.81	0.65-0.89		0.992	4.29	
2,3,7,8-TCDD	0.43	0.65-0.89		0.992	0.300	BJEMPC
1,2,3,7,8-PeCDF	1.43	1.32-1.78		1.98	0.992	J
2,3,4,7,8-PeCDF	1.52	1.32-1.78		0.992	1.05	
1,2,3,7,8-PeCDD	1.64	1.32-1.78		0.992	1.92	
1,2,3,4,7,8-HxCDF	1.21	1.05-1.43		1.98	2.89	
1,2,3,6,7,8-HxCDF	1.28	1.05-1.43		1.98	1.41	J
2,3,4,6,7,8-HxCDF	1.28	1.05-1.43		1.98	2.22	
1,2,3,7,8,9-HxCDF	1.26	1.05-1.43		1.98	1.09	J
1,2,3,4,7,8-HxCDD	1.22	1.05-1.43		1.98	4.13	
1,2,3,6,7,8-HxCDD	1.25	1.05-1.43		1.98	11.8	
1,2,3,7,8,9-HxCDD	1.25	1.05-1.43		1.98	6.39	
1,2,3,4,6,7,8-HpCDF	1.03	0.88-1.20		1.98	34.7	
1,2,3,4,7,8,9-HpCDF	1.10	0.88-1.20		1.98	2.24	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		1.98	251	
OCDF	0.88	0.76-1.02		4.96	113	
OCDD	0.88	0.76-1.02		4.96	2,080	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.992	21.4	22.8
Total TCDD		0.992	118	119
Total PeCDF		1.98	23.0	24.1
Total PeCDD		0.992	129	131
Total HxCDF		1.98	65.3	65.4
Total HxCDD		1.98	226	
Total HpCDF		1.98	131	
Total HpCDD		1.98	613	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 9.52

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 9.52

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-11

Lab Sample ID: UR81I
LIMS ID: 12-7400
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 21:56
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	85.5	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	86.3	25-164	
13C-1,2,3,7,8-PeCDF	1.53	1.32-1.78	93.5	24-185	
13C-2,3,4,7,8-PeCDF	1.55	1.32-1.78	93.0	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	92.5	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	86.2	26-152	
13C-1,2,3,6,7,8-HxCDF	0.54	0.43-0.59	84.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	78.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	85.7	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	80.9	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	83.8	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	66.9	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	63.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	68.5	23-140	
13C-OCDD	0.88	0.76-1.02	43.8	17-157	
37Cl4-2,3,7,8-TCDD			91.6	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-08A

Lab Sample ID: UR81J
LIMS ID: 12-7401
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 22:48
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.80	0.65-0.89		0.989	5.26	
2,3,7,8-TCDD	0.58	0.65-0.89		0.989	0.629	JEMPC
1,2,3,7,8-PeCDF	1.69	1.32-1.78		1.98	2.15	X
2,3,4,7,8-PeCDF	1.45	1.32-1.78		0.989	2.55	
1,2,3,7,8-PeCDD	1.61	1.32-1.78		0.989	5.34	
1,2,3,4,7,8-HxCDF	1.21	1.05-1.43		1.98	9.26	
1,2,3,6,7,8-HxCDF	1.30	1.05-1.43		1.98	4.10	
2,3,4,6,7,8-HxCDF	1.25	1.05-1.43		1.98	7.03	
1,2,3,7,8,9-HxCDF	1.24	1.05-1.43		1.98	2.93	
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43		1.98	10.2	
1,2,3,6,7,8-HxCDD	1.20	1.05-1.43		1.98	41.1	
1,2,3,7,8,9-HxCDD	1.05	1.05-1.43		1.98	18.7	EMPC
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		1.98	118	
1,2,3,4,7,8,9-HpCDF	1.02	0.88-1.20		1.98	7.71	
1,2,3,4,6,7,8-HpCDD	1.08	0.88-1.20		1.98	1,200	
OCDF	0.86	0.76-1.02		4.95	362	
OCDD	0.86	0.76-1.02		24.7	11,000	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.989	29.3	31.2
Total TCDD		0.989	128	130
Total PeCDF		1.98	59.8	62.2
Total PeCDD		0.989	159	162
Total HxCDF		1.98	212	219
Total HxCDD		1.98	480	504
Total HpCDF		1.98	423	
Total HpCDD		1.98	3,630	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 33.3

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 33.3

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-08A

Lab Sample ID: UR81J
LIMS ID: 12-7401
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 22:48
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	88.8	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	85.9	25-164	
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	90.0	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	89.9	21-178	
13C-1,2,3,7,8-PeCDD	1.61	1.32-1.78	89.8	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	87.6	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	89.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	80.7	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	78.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	84.3	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	85.7	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	68.3	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	65.5	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	72.1	23-140	
13C-OCDD	0.90	0.76-1.02	47.6	17-157	
37Cl4-2,3,7,8-TCDD			91.5	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: IJ12-08A
DILUTION

Lab Sample ID: UR81J
LIMS ID: 12-7401
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/11/12 16:41
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.91	0.76-1.02	48.6	17-157	
37Cl4-2,3,7,8-TCDD			87.8	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: I-2-A-Z

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 23:41
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.77	0.65-0.89		0.998	7.74	
2,3,7,8-TCDD	0.73	0.65-0.89		0.998	0.928	J
1,2,3,7,8-PeCDF	1.61	1.32-1.78		2.00	6.17	
2,3,4,7,8-PeCDF	1.58	1.32-1.78		0.998	5.98	
1,2,3,7,8-PeCDD	1.62	1.32-1.78		0.998	4.43	
1,2,3,4,7,8-HxCDF	1.24	1.05-1.43		2.00	24.9	
1,2,3,6,7,8-HxCDF	1.28	1.05-1.43		2.00	7.53	
2,3,4,6,7,8-HxCDF	1.24	1.05-1.43		2.00	10.9	
1,2,3,7,8,9-HxCDF	1.23	1.05-1.43		2.00	6.81	
1,2,3,4,7,8-HxCDD	1.17	1.05-1.43		2.00	5.48	
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43		2.00	50.6	
1,2,3,7,8,9-HxCDD	1.28	1.05-1.43		2.00	13.8	
1,2,3,4,6,7,8-HpCDF	1.04	0.88-1.20		2.00	248	
1,2,3,4,7,8,9-HpCDF	1.01	0.88-1.20		2.00	14.5	
1,2,3,4,6,7,8-HpCDD	1.01	0.88-1.20		2.00	1,410	
OCDF	0.89	0.76-1.02		4.99	873	
OCDD	0.87	0.76-1.02		25.0	15,600	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.998	59.7	62.0
Total TCDD		0.998	41.0	41.4
Total PeCDF		2.00	131	133
Total PeCDD		0.998	64.8	65.1
Total HxCDF		2.00	402	
Total HxCDD		2.00	340	
Total HpCDF		2.00	982	985
Total HpCDD		2.00	2,920	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 41.8

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 41.8

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: I-2-A-Z

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 23:41
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	77.7	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	81.0	25-164	
13C-1,2,3,7,8-PeCDF	1.53	1.32-1.78	83.9	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	83.8	21-178	
13C-1,2,3,7,8-PeCDD	1.61	1.32-1.78	86.9	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	82.6	26-152	
13C-1,2,3,6,7,8-HxCDF	0.49	0.43-0.59	82.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	74.7	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	71.7	29-147	
13C-1,2,3,4,7,8-HxCDD	1.30	1.05-1.43	78.5	32-141	
13C-1,2,3,6,7,8-HxCDD	1.21	1.05-1.43	81.1	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.46	0.37-0.51	59.9	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.46	0.37-0.51	55.7	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	61.1	23-140	
13C-OCDD	0.93	0.76-1.02	40.2	17-157	
37Cl4-2,3,7,8-TCDD			93.3	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: I-2-A-Z
DILUTION

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/02/12
Date Analyzed: 05/11/12 17:34
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.92	0.76-1.02	51.7	17-157	
37Cl4-2,3,7,8-TCDD			86.7	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: OPR-050212

Lab Sample ID: OPR-050212
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 13:00
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.78	0.65-0.89	1.00	21.5
2,3,7,8-TCDD	0.81	0.65-0.89	1.00	20.2
1,2,3,7,8-PeCDF	1.55	1.32-1.78	2.00	102
2,3,4,7,8-PeCDF	1.53	1.32-1.78	1.00	106
1,2,3,7,8-PeCDD	1.56	1.32-1.78	1.00	106
1,2,3,4,7,8-HxCDF	1.18	1.05-1.43	2.00	103
1,2,3,6,7,8-HxCDF	1.27	1.05-1.43	2.00	108
2,3,4,6,7,8-HxCDF	1.22	1.05-1.43	2.00	111
1,2,3,7,8,9-HxCDF	1.18	1.05-1.43	2.00	103
1,2,3,4,7,8-HxCDD	1.29	1.05-1.43	2.00	106
1,2,3,6,7,8-HxCDD	1.19	1.05-1.43	2.00	108
1,2,3,7,8,9-HxCDD	1.17	1.05-1.43	2.00	107
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20	2.00	114
1,2,3,4,7,8,9-HpCDF	1.02	0.88-1.20	2.00	103
1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	2.00	110
OCDF	0.86	0.76-1.02	5.00	205
OCDD	0.87	0.76-1.02	5.00	220

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	22.4	
Total TCDD		1.00	20.8	
Total PeCDF		2.00	216	217
Total PeCDD		1.00	107	
Total HxCDF		2.00	427	
Total HxCDD		2.00	321	
Total HpCDF		2.00	217	
Total HpCDD		2.00	111	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: OPR-050212

Lab Sample ID: OPR-050212
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 13:00
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	85.1	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	78.4	25-164	
13C-1,2,3,7,8-PeCDF	1.60	1.32-1.78	78.9	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	75.1	21-178	
13C-1,2,3,7,8-PeCDD	1.65	1.32-1.78	71.5	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	83.4	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	103	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	81.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	77.7	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	79.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	91.9	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	68.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.42	0.37-0.51	59.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	61.5	23-140	
13C-OCDD	0.87	0.76-1.02	40.2	17-157	
37Cl4-2,3,7,8-TCDD			82.9	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: OPR-050212

Lab Sample ID: OPR-050212
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
. 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 13:00
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	21.5	20.0	108	30-160
2,3,7,8-TCDD	20.2	20.0	101	30-160
1,2,3,7,8-PeCDF	102	100	102	30-160
2,3,4,7,8-PeCDF	106	100	106	30-160
1,2,3,7,8-PeCDD	106	100	106	30-160
1,2,3,4,7,8-HxCDF	103	100	103	30-160
1,2,3,6,7,8-HxCDF	108	100	108	30-160
2,3,4,6,7,8-HxCDF	111	100	111	30-160
1,2,3,7,8,9-HxCDF	103	100	103	30-160
1,2,3,4,7,8-HxCDD	106	100	106	30-160
1,2,3,6,7,8-HxCDD	108	100	108	30-160
1,2,3,7,8,9-HxCDD	107	100	107	30-160
1,2,3,4,6,7,8-HpCDF	114	100	114	30-160
1,2,3,4,7,8,9-HpCDF	103	100	103	30-160
1,2,3,4,6,7,8-HpCDD	110	100	110	30-160
OCDF	205	200	102	30-160
OCDD	220	200	110	30-160

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
UR81MB

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: UR81
Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL
Sample wt/vol: 10 (g/ml) g
Water Sample Prep: (sep/spe)
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Instrument ID: AUTOSPEC1

Contract: ANCHOR
Project: I&J WATERWAY
Lab Sample ID: UR81MB
Lab File ID: 12051004
Date Received: 26-APR-12
Date Extracted: 02-MAY-12
Date Analyzed: 10-MAY-12

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
UR81OPR	UR81OPR	12051005	05/10/12
IJ12-03	UR81A	12051006	05/10/12
IJ12-05	UR81B	12051007	05/10/12
IJ12-06	UR81C	12051008	05/10/12
IJ12-02	UR81D	12051010	05/10/12
IJ12-04	UR81E	12051011	05/10/12
IJ12-07	UR81F	12051012	05/10/12
IJ12-01	UR81G	12051013	05/10/12
IJ12-58A	UR81H	12051014	05/10/12
IJ12-11	UR81I	12051015	05/10/12
IJ12-08A	UR81J	12051016	05/10/12
I-2-A-Z	US18B	12051017	05/10/12
IJ12-05	UR81B 5X	12051104	05/11/12
IJ12-02	UR81D 5X	12051105	05/11/12
IJ12-04	UR81E 5X	12051106	05/11/12
IJ12-01	UR81G 5X	12051107	05/11/12
IJ12-58A	UR81H 5X	12051108	05/11/12
IJ12-08A	UR81J 5X	12051109	05/11/12
I-2-A-Z	US18B 5X	12051110	05/11/12

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: MB-050212

Lab Sample ID: MB-050212
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 12:10
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.0136	1.00	< 0.0136	U
2,3,7,8-TCDD	0.14	0.65-0.89		1.00	0.0374	JEMPC
1,2,3,7,8-PeCDF		1.32-1.78	0.0213	2.00	< 0.0213	U
2,3,4,7,8-PeCDF		1.32-1.78	0.0210	1.00	< 0.0210	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0235	1.00	< 0.0235	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0224	2.00	< 0.0224	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0188	2.00	< 0.0188	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0233	2.00	< 0.0233	U
1,2,3,7,8,9-HxCDF		1.05-1.43	0.0317	2.00	< 0.0317	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0333	2.00	< 0.0333	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0357	2.00	< 0.0357	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0371	2.00	< 0.0371	U
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		2.00	0.101	J
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0533	2.00	< 0.0533	U
1,2,3,4,6,7,8-HpCDD		0.88-1.20	0.0667	2.00	< 0.0667	U
OCDF		0.76-1.02	0.118	5.00	< 0.118	U
OCDD	0.72	0.76-1.02		5.00	0.389	JEMPC

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC	
Total TCDF	0.0136	1.00	< 0.0136		U
Total TCDD		1.00	< 0.0374	0.0374	U
Total PeCDF	0.0213	2.00	< 0.0213		U
Total PeCDD	0.0235	1.00	< 0.0235		U
Total HxCDF	0.0317	2.00	< 0.0317		U
Total HxCDD	0.0371	2.00	0.0502		
Total HpCDF		2.00	0.101		
Total HpCDD	0.0667	2.00	0.118		

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: MB-050212

Lab Sample ID: MB-050212
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/14/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/10/12 12:10
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.76	0.65-0.89	84.3	24-169	
13C-2,3,7,8-TCDD	0.76	0.65-0.89	78.8	25-164	
13C-1,2,3,7,8-PeCDF	1.60	1.32-1.78	78.2	24-185	
13C-2,3,4,7,8-PeCDF	1.55	1.32-1.78	76.9	21-178	
13C-1,2,3,7,8-PeCDD	1.66	1.32-1.78	70.7	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	89.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	115	26-123	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	89.1	28-136	
13C-1,2,3,7,8,9-HxCDF	0.49	0.43-0.59	83.0	29-147	
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	88.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	98.2	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	70.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	63.8	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.01	0.88-1.20	65.4	23-140	
13C-OCDD	0.83	0.76-1.02	44.6	17-157	
37Cl4-2,3,7,8-TCDD			82.0	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC.
Contract: ANCHOR
Lab Code: UR81
Project: I&J WATERWAY
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Lab File ID: 12051002
Instrument ID: AUTOSPEC1
Date Analyzed: 10-MAY-12
Time Analyzed: 1015

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	24.15	27.60
TCDF	22.88	27.86
PeCDD	29.39	32.50
PeCDF	27.72	32.88
HxCDD	34.58	37.29
HxCDF	33.79	37.72
HpCDD	40.34	41.62
HpCDF	39.79	42.52

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.

TETRA ISC

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: UR81
GC Column: RTX-DIOXIN2 ID: .25 mm
Instrument ID:
AUTOSPEC1

Contract: ANCHOR
Project: I&J WATERWAY
Lab File ID: 12051003

Date Analyzed: 10-MAY-12
Time Analyzed: 1106

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 20.5

Quality Control (QC) Limits:

Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 16.3

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: ANCHOR

Lab Code: UR81 Project: I&J WATERWAY

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 03-MAY-12

Init: Calib. Times: 12:27 to 18:54

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
I7214	CS3	12051002	05/10/12	1015
1929-2	TETRA ISC	12051003	05/10/12	1106
UP99MB	UP99MB	12051004	05/10/12	1210
UR81OPR	UR81OPR	12051005	05/10/12	1300
IJ12-03	UR81A	12051006	05/10/12	1358
IJ12-05	UR81B	12051007	05/10/12	1448
IJ12-06	UR81C	12051008	05/10/12	1541
1929-2	TETRA ISC	12051009	05/10/12	1633
IJ12-02	UR81D	12051010	05/10/12	1733
IJ12-04	UR81E	12051011	05/10/12	1829
IJ12-07	UR81F	12051012	05/10/12	1920
IJ12-01	UR81G	12051013	05/10/12	2012
IJ12-58A	UR81H	12051014	05/10/12	2104
IJ12-11	UR81I	12051015	05/10/12	2156
IJ12-08A	UR81J	12051016	05/10/12	2248
I-2-A-Z	US18B	12051017	05/10/12	2341
1929-2	TETRA ISC	12051018	05/11/12	0033

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: ANCHOR

Lab Code: UR81 Project: I&J WATERWAY

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 03-MAY-12

Init: Calib. Times: 12:27 to 18:54

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
I7214	CS3	12051102	05/11/12	1017
1929-2	TETRA ISC	12051103	05/11/12	1107
IJ12-05	UR81B 5X	12051104	05/11/12	1208
IJ12-02	UR81D 5X	12051105	05/11/12	1259
IJ12-04	UR81E 5X	12051106	05/11/12	1351
IJ12-01	UR81G 5X	12051107	05/11/12	1459
IJ12-58A	UR81H 5X	12051108	05/11/12	1549
IJ12-08A	UR81J 5X	12051109	05/11/12	1641
I-2-A-Z	US18B 5X	12051110	05/11/12	1734
1929-2	TETRA ISC	12051111	05/11/12	1826

USEPA
6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name	ANALYTICAL RESOURCES, INC.	Contract:	ANCHOR
Lab Code.	UR81	Case No.:	I&J WATERWAY
TO No..		SDG No.:	
GC Column.	RTX-DIOXIN2	ID (mm).	.25
Instrument ID.	AUTOSPEC1		
Init Calib Date CSL.	03-May-12	Init.Calib.Time CSL.	12.27:37
Init Calib.Date CS1.	03-May-12	Init.Calib.Time CS1:	15.26:24
Init.Calib Date CS2:	03-May-12	Init.Calib Time CS2.	16:19.31
Init.Calib Date CS3.	03-May-12	Init Calib Time CS3	17:09.55
Init.Calib.Date CS4.	03-May-12	Init Calib.Time CS4:	18.02:13
Init.Calib.Date CS5:	03-May-12	Init Calib.Time CS5:	18:54.20

Target Analytes	RRF						Mean RRF	% RSD	QC Limits
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	1.19	1.03	1.00	1 00	1.02	1 04	1 05	7 0	20.0
2378-TCDF	0.93	0.84	0 85	0.85	0.85	0 88	0.87	3 9	20.0
12378-PeCDF	0.89	0.89	0.89	0 91	0.93	0 93	0.91	2 1	20.0
12378-PeCDD	1.00	0.96	0.95	0.97	0 97	0 99	0.97	1.6	20.0
23478-PeCDF	0.92	0.94	0.92	0.93	0 94	0 96	0.94	1 8	20.0
123478-HxCDF	1.06	1 04	1.08	1.09	1.08	1.14	1.08	2 9	20.0
123678-HxCDF	1.01	1.01	1.05	1 04	1 08	1.09	1.05	3.3	20 0
123478-HxCDD	0.90	0.95	0.92	0 94	0 95	0.95	0.94	2.2	20 0
123678-HxCDD	0.83	0.87	0.90	0 87	0.89	0.91	0.88	3.3	20 0
123789-HxCDD[2]	0.80	0.80	0.85	0.84	0.87	0.87	0.84	3.8	20 0
234678-HxCDF	1.05	1.07	1.04	1.05	1 09	1.10	1.07	2 3	20.0
123789-HxCDF	1.05	1.01	0.99	1.00	1.01	1.05	1.02	2 8	20.0
1234678-HpCDF	1.14	1.22	1.22	1.22	1.22	1.27	1.21	3 2	20.0
1234678-HpCDD	0.94	0.94	0 98	0 96	1 00	1.02	0.97	3 3	20 0
1234789-HpCDF	1.34	1.23	1.24	1 21	1.23	1.27	1 25	3.6	20 0
OCDD	0.92	0.91	0.94	0.94	1.00	0 99	0.95	3.8	20.0
OCDF[1]	1 10	1 02	1.04	1 08	1.16	1.24	1 11	7.3	20 0

(1) The RRF is calculated based on the labeled analog of OCDD
(2) The relative response factor (RRF) is calculated based on the labeled analogs of the other two HxCDDs

Labeled Compounds	RRF						Mean RRF	% RSD	QC Limits
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.93	0.92	0.92	0 93	0.96	1.06	0.96	5 7	20.0
13C-12378-PeCDD	0 61	0 58	0 60	0 63	0 69	0.87	0.66	16.0	20.0
13C-123478-HxCDD	1.03	1.02	1.01	1.01	1 03	1 05	1.02	1 4	20.0
13C-123678-HxCDD	1.10	1.14	1 10	1 11	1 12	1.10	1 11	1.5	20.0
13C-1234678-HpCDD	0 83	0.82	0 82	0.82	0 81	0 79	0.82	1.5	20.0
13C-OCDD	0.70	0.69	0.72	0 70	0 71	0.77	0 72	4 1	20.0
13C-2378-TCDF	1 46	1.44	1.46	1 46	1.49	1 59	1 48	3.7	20 0
13C-12378-PeCDF	0.97	0 94	0.96	1.02	1.07	1 34	1 05	14 2	20 0
13C-23478-PeCDF	0.93	0 89	0.92	0.96	1.04	1 28	1.00	14.6	20.0
13C-123478-HxCDF	1.19	1 22	1.17	1.19	1 20	1.15	1.19	2 2	20.0
13C-123678-HxCDF	1.29	1 35	1 31	1.34	1.31	1.28	1.32	2.1	20.0
13C-234678-HxCDF	1.23	1 25	1 22	1.23	1.22	1.19	1.22	1 6	20.0
13C-123789-HxCDF	1.06	1 04	1.06	1.05	1 07	1 06	1 06	0.9	20 0
13C-1234678-HpCDF	1.01	1.01	1.02	1 01	1 03	0 99	1.01	1.2	20 0
13C-1234789-HpCDF	0.75	0 73	0 74	0 75	0.75	0 74	0.74	1 2	20.0

UR81 : 05140

USEPA
6DFB - Form VI-HR CDD-2
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name	ANALYTICAL RESOURCES, INC	Contract	ANCHOR
Lab Code	UR81	Case No	I&J WATERWAY
TO No		SDG No..	
GC Column	RTX-DIOXIN2	ID (mm)	25
Instrument ID	AUTOSPEC1		
Init Calib Date CSL	03-May-12	Init Calib Time CSL	12 27 37
Init Calib Date CS1	03-May-12	Init Calib Time CS1	15 26 24
Init Calib Date CS2	03-May-12	Init Calib Time CS2	16 19 31
Init Calib Date CS3	03-May-12	Init Calib Time CS3	17 09 55
Init Calib Date CS4	03-May-12	Init Calib Time CS4	18 02 13
Init Calib Date CS5	03-May-12	Init Calib Time CS5	18 54 20

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0 72	0 73	0 80	0 79	0 77	0 77		0 65 - 0 89
2378-TCDF	304/306	0 73	0 77	0 77	0 73	0 77	0 78		0 65 - 0.89
12378-PeCDF	340/342	1 73	1 58	1 51	1 56	1 54	1 56		1 32 - 1 78
12378-PeCDD	356/358	1 60	1 57	1 50	1 57	1 53	1 52		1 32 - 1 78
23478-PeCDF	340/342	1 62	1 56	1 53	1 55	1 55	1 56		1 32 - 1 78
123478-HxCDF	374/376	1 23	1 14	1 21	1 23	1 23	1 23		1 05 - 1 43
123678-HxCDF	374/376	1 21	1 15	1 28	1 24	1 22	1 23		1 05 - 1 43
123478-HxCDD	390/392	1 11	1 17	1 25	1 23	1 27	1 23		1 05 - 1 43
123678-HxCDD	390/392	1 15	1 25	1 24	1 24	1 19	1 23		1 05 - 1 43
123789-HxCDD	390/392	1 41	1.33	1 24	1 24	1 21	1 23		1 05 - 1 43
234678-HxCDF	374/376	1 24	1.20	1.21	1 25	1 23	1 24		1 05 - 1 43
123789-HxCDF	374/376	1 24	1 23	1 19	1 22	1 24	1 24		1 05 - 1 43
1234678-HpCDF	408/410	0 92	1 06	1 05	1 01	1 01	1 02		0 89 - 1 21
1234678-HpCDD	424/426	0 99	1 07	1 08	1 05	1 07	1 04		0 89 - 1 21
1234789-HpCDF	408/410	1 19	0 93	0 97	1 02	1 02	1 03		0 89 - 1 21
OCDD	458/460	0 89	0 89	0 86	0 87	0 89	0 88		0 76 - 1 02
OCDF	442/444	0 81	0 90	0 87	0 89	0 90	0 89		0 76 - 1 02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0 77	0 77	0 77	0 77	0 77	0 77		0 65 - 0 89
13C-12378-PeCDD	368/370	1 61	1 57	1 58	1 56	1 59	1 56		1 32 - 1 78
13C-123478-HxCDD	402/404	1 26	1 27	1 25	1 25	1 26	1 27		1 05 - 1 43
13C-123678-HxCDD	402/404	1 26	1 25	1 25	1 25	1 25	1 26		1 05 - 1 43
13C-1234678-HpCDD	436/438	1 04	1 04	1 07	1 04	1 06	1 04		0 89 - 1 21
13C-OCDD	470/472	0 90	0 88	0.89	0 89	0 91	0 89		0 76 - 1 02
13C-2378-TCDF	316/318	0 77	0 78	0 77	0 77	0 78	0 77		0 65 - 0 89
13C-12378-PeCDF	352/354	1 55	1 56	1 55	1 55	1 55	1 54		1 32 - 1 78
13C-23478-PeCDF	352/354	1 56	1 55	1 55	1 56	1 55	1 54		1 32 - 1 78
13C-123478-HxCDF	384/386	0 52	0 51	0 52	0 52	0 51	0 52		0 43 - 0 59
13C-123678-HxCDF	384/386	0 52	0 50	0 52	0 50	0 52	0 52		0 43 - 0 59
13C-234678-HxCDF	384/386	0 53	0 53	0 52	0 52	0.52	0.52		0 43 - 0 59
13C-123789-HxCDF	384/386	0 53	0 52	0 53	0 52	0 52	0 52		0 43 - 0 59
13C-1234678-HpCDF	418/420	0 45	0 46	0 46	0 46	0 45	0 45		0 37 - 0 51
13C-1234789-HpCDF	418/420	0 45	0 46	0 45	0 45	0 45	0 46		0 37 - 0 51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0 77	0 78	0 78	0 78	0 78	0 78		0 65 - 0 89
13C-123789-HxCDD	402/404	1 23	1 25	1 27	1 22	1 24	1 25		1 05 - 1 43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	UR81	Case No.:	I&J WATERWAY
TO No :		SDG No..	
GC Column:	RTX-DIOXIN2	ID (mm).	25
Instrument ID.	AUTOSPEC1	Lab File ID:	12051002
Date Analysed	10-May-12	Time Analysed	10:15:31
Init Calib.Date:	03-MAY-12	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1 03	1.05	-1.7		0.74		0.65 - 0.89
2378-TCDF	304/306	0 85	0.87	-2.2		0.79		0.65 - 0 89
12378-PeCDF	340/342	0.89	0 91	-1 4		1 54		1 32 - 1.78
12378-PeCDD	356/358	0.94	0.97	-2 9		1 54		1 32 - 1.78
23478-PeCDF	340/342	0 94	0.94	0.9		1.53		1 32 - 1 78
123478-HxCDF	374/376	1 09	1.08	0.8		1.21		1 05 - 1 43
123678-HxCDF	374/376	1 02	1 05	-2.4		1.20		1.05 - 1.43
123478-HxCDD	390/392	0 96	0.94	2.2		1.24		1.05 - 1.43
123678-HxCDD	390/392	0.90	0.88	2 1		1.20		1.05 - 1.43
123789-HxCDD	390/392	0.81	0 84	-3 4		1.15		1 05 - 1.43
234678-HxCDF	374/376	1 06	1.07	-0 7		1.23		1.05 - 1 43
123789-HxCDF	374/376	1 03	1.02	0 6		1 27		1.05 - 1.43
1234678-HpCDF	408/410	1.21	1 21	0.0		0 99		0.89 - 1.21
1234678-HpCDD	424/426	1.00	0 97	2.6		0.99		0.89 - 1.21
1234789-HpCDF	408/410	1.25	1 25	-0.3		1.04		0.89 - 1 21
OCDD	458/460	0.97	0.95	2 6		0.89		0.76 - 1.02
OCDF	442/444	1 16	1.11	5 3		0.91		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.86	0.96	-9.7		0 78		0 65 - 0 89
13C-12378-PeCDD	368/370	0.58	0.66	-12 1		1 63		1 32 - 1 78
13C-123478-HxCDD	402/404	1.01	1.02	-1.5		1.24		1.05 - 1.43
13C-123678-HxCDD	402/404	1.33	1 11	19 5		1.23		1.05 - 1.43
13C-1234678-HpCDD	436/438	0 92	0.82	12 8		1 03		0 89 - 1.21
13C-OCDD	470/472	0 82	0.72	14 6		0 90		0 76 - 1 02
13C-2378-TCDF	316/318	1.43	1.48	-3 7		0 76		0 65 - 0 89
13C-12378-PeCDF	352/354	0 99	1.05	-5 5		1.57		1 32 - 1 78
13C-23478-PeCDF	352/354	0 92	1.00	-8 1		1 56		1 32 - 1 78
13C-123478-HxCDF	384/386	1 31	1 19	10.4		0.52		0.43 - 0 59
13C-123678-HxCDF	384/386	1 72	1.32	31 2		0.52		0 43 - 0 59
13C-234678-HxCDF	384/386	1.40	1.22	14.7		0.54		0.43 - 0.59
13C-123789-HxCDF	384/386	1.12	1 06	5.7		0.50		0.43 - 0 59
13C-1234678-HpCDF	418/420	1 21	1 01	19.9		0.43		0 37 - 0 51
13C-1234789-HpCDF	418/420	0 85	0 74	14.4		0.46		0 37 - 0 51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0 79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1 18		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name.	ARI	Contract:	ANCHOR
Lab Code:	UR81	Case No :	I&J WATERWAY
TO No..		SDG No :	
GC Column.	RTX-DIOXIN2	ID (mm):	25
Instrument ID:	AUTOSPEC1	Lab File ID.	12051002
Date Analysed	10-May-12	Time Analysed	10.15:31
Init Calib.Date	03-MAY-12	Init.Calib.Time	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.02
2378-TCDF	1.00	26.38
12378-PeCDF	1.00	30.52
12378-PeCDD	1.00	32.11
23478-PeCDF	1.00	31 85
123478-HxCDF	1.00	35 52
123678-HxCDF	1.00	35 66
123478-HxCDD	1.00	36 73
123678-HxCDD	1.00	36 86
123789-HxCDD	1.01	37.29
234678-HxCDF	1 00	36 60
123789-HxCDF	1.00	37.72
1234678-HpCDF	1.00	39.79
1234678-HpCDD	1.00	41.62
1234789-HpCDF	1 00	42.53
OCDD	1.00	47.60
OCDF	1.01	47.89

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.99
13C-12378-PeCDD	1 23	32 08
13C-123478-HxCDD	0 99	36.72
13C-123678-HxCDD	0.99	36.84
13C-1234678-HpCDD	1 12	41.60
13C-OCDD	1.28	47.58
13C-2378-TCDF	1.01	26.36
13C-12378-PeCDF	1 16	30.49
13C-23478-PeCDF	1 22	31.83
13C-123478-HxCDF	0.95	35.49
13C-123678-HxCDF	0 96	35.65
13C-234678-HxCDF	0.98	36.58
13C-123789-HxCDF	1.01	37.71
13C-1234678-HpCDF	1.07	39 77
13C-1234789-HpCDF	1.14	42 51

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.18
13C-123789-HxCDD	0.00	37.27

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name.	ARI	Contract.	ANCHOR
Lab Code.	UR81	Case No	I&J WATERWAY
TO No..		SDG No.·	
GC Column·	RTX-DIOXIN2	ID (mm).	25
Instrument ID	AUTOSPEC1	Lab File ID.	12051009
Date Analysed	10-May-12	Time Analysed	16·33:15
Init Calib Date·	03-MAY012	Init Calib.Time.	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.03	1.05	-1.9		0 77		0.65 - 0.89
2378-TCDF	304/306	0.86	0.87	-0.9		0.78		0.65 - 0.89
12378-PeCDF	340/342	0 90	0.91	-0.7		1.55		1 32 - 1.78
12378-PeCDD	356/358	0 98	0.97	1.2		1.53		1.32 - 1.78
23478-PeCDF	340/342	0.93	0.94	-0.8		1.54		1.32 - 1.78
123478-HxCDF	374/376	1 08	1.08	-0.2		1.26		1 05 - 1.43
123678-HxCDF	374/376	1 08	1.05	2.8		1 20		1.05 - 1.43
123478-HxCDD	390/392	0.97	0.94	3.6		1.25		1.05 - 1.43
123678-HxCDD	390/392	0.87	0.88	-1 0		1.23		1.05 - 1 43
123789-HxCDD	390/392	0.88	0.84	4.5		1.24		1.05 - 1.43
234678-HxCDF	374/376	1 07	1.07	-0.4		1 22		1.05 - 1.43
123789-HxCDF	374/376	1 01	1.02	-0.7		1 22		1.05 - 1.43
1234678-HpCDF	408/410	1.23	1.21	1.5		1 03		0.89 - 1.21
1234678-HpCDD	424/426	0 97	0 97	-0 6		1.04		0.89 - 1.21
1234789-HpCDF	408/410	1.19	1.25	-4.8		0.98		0.89 - 1.21
OCDD	458/460	0.99	0.95	4.3		0 89		0.76 - 1.02
OCDF	442/444	1.12	1.11	1.4		0 86		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.91	0.96	-4.7		0 78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.70	0.66	5.4		1 60		1.32 - 1.78
13C-123478-HxCDD	402/404	0.99	1.02	-2 9		1 26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.13	1.11	1.6		1 27		1 05 - 1.43
13C-1234678-HpCDD	436/438	0.81	0 82	-0.4		1.07		0.89 - 1 21
13C-OCDD	470/472	0 65	0 72	-9.7		0.93		0.76 - 1 02
13C-2378-TCDF	316/318	1 43	1 48	-3.9		0.77		0 65 - 0 89
13C-12378-PeCDF	352/354	1.11	1.05	6 2		1.59		1.32 - 1 78
13C-23478-PeCDF	352/354	1 06	1 00	6 0		1.55		1.32 - 1 78
13C-123478-HxCDF	384/386	1.28	1.19	7.8		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1 38	1.32	5 2		0.52		0 43 - 0 59
13C-234678-HxCDF	384/386	1.27	1.22	3.8		0 52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.06	1.06	0.1		0 53		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.01	1.01	-0 3		0 45		0 37 - 0.51
13C-1234789-HpCDF	418/420	0.74	0.74	0.2		0 43		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.77		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.24		1 05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	UR81	Case No..	I&J WATERWAY
TO No.:		SDG No :	
GC Column:	RTX-DIOXIN2	ID (mm).	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12051009
Date Analysed	10-May-12	Time Analysed	16.33.15
Init.Calib Date:	03-MAY012	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27 02
2378-TCDF	1 00	26 38
12378-PeCDF	1.00	30.52
12378-PeCDD	1.00	32.12
23478-PeCDF	1.00	31 85
123478-HxCDF	1.00	35 53
123678-HxCDF	1.00	35 67
123478-HxCDD	1.00	36 74
123678-HxCDD	1.00	36 87
123789-HxCDD	1.01	37.30
234678-HxCDF	1.00	36 61
123789-HxCDF	1.00	37 73
1234678-HpCDF	1.00	39.80
1234678-HpCDD	1.00	41.63
1234789-HpCDF	1.00	42.54
OCDD	1.00	47 63
OCDF	1 01	47 91

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.00
13C-12378-PeCDD	1.23	32.09
13C-123478-HxCDD	0.99	36.72
13C-123678-HxCDD	0.99	36.85
13C-1234678-HpCDD	1 12	41.61
13C-OCDD	1 28	47.61
13C-2378-TCDF	1.01	26 36
13C-12378-PeCDF	1 17	30.51
13C-23478-PeCDF	1.22	31.84
13C-123478-HxCDF	0 95	35 50
13C-123678-HxCDF	0.96	35.66
13C-234678-HxCDF	0.98	36 59
13C-123789-HxCDF	1.01	37.72
13C-1234678-HpCDF	1.07	39.78
13C-1234789-HpCDF	1.14	42 52

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.18
13C-123789-HxCDD	0.00	37.28

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name	ARI	Contract:	ANCHOR
Lab Code	UR81	Case No :	I&J WATERWAY
TO No.		SDG No :	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID	12051018
Date Analysed	11-May-12	Time Analysed	00:33:45
Init.Calib.Date:	03-MAY-12	Init.Calib Time	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.02	1.05	-2.7		0.78		0.65 - 0 89
2378-TCDF	304/306	0.87	0.87	0.1		0.77		0.65 - 0 89
12378-PeCDF	340/342	0.89	0 91	-1.6		1.56		1 32 - 1.78
12378-PeCDD	356/358	0.98	0.97	0.5		1.54		1 32 - 1.78
23478-PeCDF	340/342	0.93	0.94	-0 1		1.55		1 32 - 1.78
123478-HxCDF	374/376	1.07	1.08	-0 9		1.24		1 05 - 1.43
123678-HxCDF	374/376	1.04	1.05	-0 4		1.23		1.05 - 1 43
123478-HxCDD	390/392	0.95	0.94	1.8		1.25		1.05 - 1 43
123678-HxCDD	390/392	0.93	0.88	5.8		1.23		1.05 - 1 43
123789-HxCDD	390/392	0.88	0.84	4.8		1.24		1.05 - 1.43
234678-HxCDF	374/376	1 07	1.07	-0.1		1 22		1.05 - 1.43
123789-HxCDF	374/376	0 98	1.02	-3 9		1.21		1.05 - 1.43
1234678-HpCDF	408/410	1.26	1.21	4 0		1.04		0.89 - 1 21
1234678-HpCDD	424/426	1.01	0.97	4 1		1.03		0.89 - 1 21
1234789-HpCDF	408/410	1.22	1 25	-2.8		1 00		0.89 - 1.21
OCDD	458/460	0 97	0 95	2.3		0 91		0.76 - 1.02
OCDF	442/444	1.11	1.11	0.6		0.89		0 76 - 1 02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	1 01	0.96	5 9		0.78		0.65 - 0 89
13C-12378-PeCDD	368/370	0 80	0.66	21.3		1 60		1.32 - 1 78
13C-123478-HxCDD	402/404	1 00	1.02	-2.2		1 27		1 05 - 1 43
13C-123678-HxCDD	402/404	1.13	1.11	1 9		1 27		1.05 - 1.43
13C-1234678-HpCDD	436/438	0 77	0 82	-5.1		1 04		0.89 - 1 21
13C-OCDD	470/472	0.63	0.72	-12.0		0 88		0 76 - 1 02
13C-2378-TCDF	316/318	1.49	1 48	0 2		0.78		0 65 - 0 89
13C-12378-PeCDF	352/354	1.20	1.05	14.4		1 59		1.32 - 1.78
13C-23478-PeCDF	352/354	1.14	1.00	13.5		1 57		1.32 - 1.78
13C-123478-HxCDF	384/386	1 39	1 19	17.1		0.52		0 43 - 0.59
13C-123678-HxCDF	384/386	1 57	1 32	19.3		0.51		0 43 - 0.59
13C-234678-HxCDF	384/386	1.30	1.22	6.6		0.52		0.43 - 0 59
13C-123789-HxCDF	384/386	1.09	1.06	2.9		0.50		0 43 - 0 59
13C-1234678-HpCDF	418/420	0.97	1.01	-4.0		0.44		0 37 - 0.51
13C-1234789-HpCDF	418/420	0.71	0.74	-4.6		0.46		0 37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0 65 - 0 89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.25		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name.	ARI	Contract:	ANCHOR
Lab Code:	UR81	Case No..	I&J WATERWAY
TO No.:		SDG No.:	
GC Column	RTX-DIOXIN2	ID (mm):	.25
Instrument ID·	AUTOSPEC1	Lab File ID.	12051018
Date Analysed	11-May-12	Time Analysed	00 33.45
Init.Calib.Date·	03-MAY-12	Init Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.02
2378-TCDF	1 00	26 38
12378-PeCDF	1 00	30.52
12378-PeCDD	1 00	32.11
23478-PeCDF	1.00	31.85
123478-HxCDF	1.00	35.51
123678-HxCDF	1.00	35 67
123478-HxCDD	1.00	36 73
123678-HxCDD	1.00	36.86
123789-HxCDD	1.01	37 29
234678-HxCDF	1.00	36.61
123789-HxCDF	1.00	37 73
1234678-HpCDF	1.00	39 80
1234678-HpCDD	1 00	41.63
1234789-HpCDF	1 00	42 54
OCDD	1.00	47 63
OCDF	1 01	47 90

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.00
13C-12378-PeCDD	1.23	32.08
13C-123478-HxCDD	0.99	36.72
13C-123678-HxCDD	0.99	36.85
13C-1234678-HpCDD	1 12	41 61
13C-OCDD	1 28	47 60
13C-2378-TCDF	1 01	26.36
13C-12378-PeCDF	1 16	30.49
13C-23478-PeCDF	1.22	31.84
13C-123478-HxCDF	0.95	35.50
13C-123678-HxCDF	0.96	35.65
13C-234678-HxCDF	0.98	36 59
13C-123789-HxCDF	1.01	37 72
13C-1234678-HpCDF	1.07	39.78
13C-1234789-HpCDF	1.14	42 52

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0 00	26 18
13C-123789-HxCDD	0.00	37.28

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract.	ANCHOR
Lab Code:	UR81	Case No..	I&J WATERWAY
TO No :		SDG No ·	
GC Column.	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID.	12051102
Date Analysed	11-May-12	Time Analysed	10·17:14
Init Calib.Date	03-MAY-12	Init.Calib Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.04	1.05	-0 9		0 71		0 65 - 0 89
2378-TCDF	304/306	0.85	0.87	-1.9		0 79		0 65 - 0.89
12378-PeCDF	340/342	0.90	0.91	-0 4		1.52		1 32 - 1 78
12378-PeCDD	356/358	0.96	0.97	-1 5		1.55		1 32 - 1.78
23478-PeCDF	340/342	0 95	0 94	2 0		1.52		1.32 - 1.78
123478-HxCDF	374/376	1.07	1.08	-0.9		1.23		1.05 - 1.43
123678-HxCDF	374/376	1.09	1.05	3.8		1.22		1.05 - 1.43
123478-HxCDD	390/392	0.92	0.94	-1.7		1.23		1.05 - 1.43
123678-HxCDD	390/392	0 92	0.88	5.0		1.18		1.05 - 1.43
123789-HxCDD	390/392	0 83	0 84	-1.1		1.17		1 05 - 1.43
234678-HxCDF	374/376	1.05	1.07	-1.8		1 20		1 05 - 1 43
123789-HxCDF	374/376	0 99	1.02	-2.6		1 20		1.05 - 1.43
1234678-HpCDF	408/410	1 24	1 21	2.0		1.03		0.89 - 1.21
1234678-HpCDD	424/426	0.96	0.97	-1 6		1.10		0.89 - 1 21
1234789-HpCDF	408/410	1.21	1 25	-3.7		1.01		0.89 - 1 21
OCDD	458/460	0.97	0 95	2.6		0.86		0.76 - 1 02
OCDF	442/444	1.14	1 11	3.1		0.89		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.91	0 96	-5.0		0 78		0 65 - 0.89
13C-12378-PeCDD	368/370	0.61	0 66	-8.1		1.55		1.32 - 1.78
13C-123478-HxCDD	402/404	0 99	1 02	-3.3		1.25		1.05 - 1.43
13C-123678-HxCDD	402/404	1.21	1 11	8.6		1 21		1.05 - 1 43
13C-1234678-HpCDD	436/438	0 89	0.82	9 2		1.04		0 89 - 1.21
13C-OCDD	470/472	0 71	0.72	-0 4		0.90		0 76 - 1.02
13C-2378-TCDF	316/318	1 45	1.48	-2.5		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	0 99	1.05	-5.4		1 55		1 32 - 1 78
13C-23478-PeCDF	352/354	0 95	1 00	-5 3		1 56		1 32 - 1 78
13C-123478-HxCDF	384/386	1 26	1.19	6 3		0 51		0 43 - 0 59
13C-123678-HxCDF	384/386	1.42	1.32	8.3		0 54		0.43 - 0.59
13C-234678-HxCDF	384/386	1.30	1 22	6 3		0 52		0 43 - 0.59
13C-123789-HxCDF	384/386	1 06	1 06	0 3		0.51		0 43 - 0 59
13C-1234678-HpCDF	418/420	1 06	1.01	4 9		0.45		0.37 - 0 51
13C-1234789-HpCDF	418/420	0 79	0.74	6.9		0.42		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0 79		0 65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.27		1 05 - 1 43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an astersk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code.	UR81	Case No :	I&J WATERWAY
TO No		SDG No.:	
GC Column	RTX-DIOXIN2	ID (mm):	25
Instrument ID:	AUTOSPEC1	Lab File ID:	12051102
Date Analysed	11-May-12	Time Analysed	10:17:14
Init Calib Date:	03-MAY-12	Init Calib Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.03
2378-TCDF	1.00	26 39
12378-PeCDF	1 00	30 53
12378-PeCDD	1.00	32 12
23478-PeCDF	1 00	31 86
123478-HxCDF	1 00	35.53
123678-HxCDF	1 00	35.67
123478-HxCDD	1 00	36.74
123678-HxCDD	1 00	36.86
123789-HxCDD	1 01	37.29
234678-HxCDF	1.00	36.61
123789-HxCDF	1.00	37 73
1234678-HpCDF	1.00	39 79
1234678-HpCDD	1.00	41.62
1234789-HpCDF	1 00	42 53
OCDD	1 00	47 60
OCDF	1 01	47 89

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.00
13C-12378-PeCDD	1 23	32.10
13C-123478-HxCDD	0.99	36 72
13C-123678-HxCDD	0 99	36.85
13C-1234678-HpCDD	1.12	41.61
13C-OCDD	1.28	47.58
13C-2378-TCDF	1 01	26 38
13C-12378-PeCDF	1.16	30.51
13C-23478-PeCDF	1.22	31 84
13C-123478-HxCDF	0.95	35.50
13C-123678-HxCDF	0 96	35.65
13C-234678-HxCDF	0.98	36.59
13C-123789-HxCDF	1 01	37.71
13C-1234678-HpCDF	1 07	39.78
13C-1234789-HpCDF	1 14	42.51

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.20
13C-123789-HxCDD	0.00	37 28

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract.	ANCHOR
Lab Code:	UR81	Case No.:	I&J WATERWAY
TO No :		SDG No..	
GC Column.	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12051111
Date Analysed	11-May-12	Time Analysed	18.26:18
Init Calib.Date:	03-MAY-12	Init.Calib Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1 02	1.05	-2.1		0.77		0.65 - 0.89
2378-TCDF	304/306	0 84	0.87	-2.5		0.77		0.65 - 0.89
12378-PeCDF	340/342	0 89	0.91	-1.9		1.54		1.32 - 1.78
12378-PeCDD	356/358	0.98	0.97	0 6		1.55		1.32 - 1.78
23478-PeCDF	340/342	0.93	0.94	-0.4		1 51		1.32 - 1 78
123478-HxCDF	374/376	1.08	1.08	-0 1		1.20		1 05 - 1 43
123678-HxCDF	374/376	1.08	1 05	2.9		1.19		1.05 - 1.43
123478-HxCDD	390/392	0.93	0 94	-1.0		1.25		1.05 - 1.43
123678-HxCDD	390/392	0.90	0.88	2.6		1 24		1 05 - 1.43
123789-HxCDD	390/392	0 83	0 84	-1.1		1 23		1 05 - 1 43
234678-HxCDF	374/376	1 08	1 07	0.6		1 20		1.05 - 1 43
123789-HxCDF	374/376	1.01	1 02	-0.8		1.24		1.05 - 1 43
1234678-HpCDF	408/410	1.22	1.21	0.4		0.99		0.89 - 1 21
1234678-HpCDD	424/426	0 98	0 97	0.8		1.02		0.89 - 1 21
1234789-HpCDF	408/410	1 25	1 25	-0 4		1.00		0.89 - 1.21
OCDD	458/460	0.97	0.95	1 6		0.90		0.76 - 1.02
OCDF	442/444	1 14	1.11	3.1		0.89		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0 94	0.96	-1 3		0 77		0 65 - 0.89
13C-12378-PeCDD	368/370	0.72	0 66	8 9		1.54		1 32 - 1.78
13C-123478-HxCDD	402/404	1 03	1.02	0.7		1 26		1.05 - 1 43
13C-123678-HxCDD	402/404	1 18	1.11	6 0		1 25		1 05 - 1.43
13C-1234678-HpCDD	436/438	0.79	0.82	-3.4		1 07		0 89 - 1.21
13C-OCDD	470/472	0.60	0 72	-16.3		0.94		0.76 - 1 02
13C-2378-TCDF	316/318	1.47	1.48	-0.8		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.10	1 05	5 2		1.56		1 32 - 1.78
13C-23478-PeCDF	352/354	1 03	1.00	2 7		1.57		1 32 - 1.78
13C-123478-HxCDF	384/386	1.34	1 19	13.2		0.53		0 43 - 0.59
13C-123678-HxCDF	384/386	1 52	1.32	15 6		0 50		0.43 - 0.59
13C-234678-HxCDF	384/386	1.31	1 22	6.9		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.06	1 06	0 2		0.53		0.43 - 0 59
13C-1234678-HpCDF	418/420	1 00	1 01	-1.0		0 43		0.37 - 0 51
13C-1234789-HpCDF	418/420	0 69	0 74	-6 5		0.45		0 37 - 0 51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.26		1.05 - 1 43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code	UR81	Case No.:	I&J WATERWAY
TO No		SDG No :	
GC Column.	RTX-DIOXIN2	ID (mm).	.25
Instrument ID:	AUTOSPEC1	Lab File ID.	12051111
Date Analysed	11-May-12	Time Analysed	18.26:18
Init Calib.Date.	03-MAY-12	Init.Calib.Time.	

Target Analytes	RRT#	RT
2378-TCDD	1 00	27.03
2378-TCDF	1 00	26.39
12378-PeCDF	1.00	30 53
12378-PeCDD	1.00	32.12
23478-PeCDF	1 00	31.86
123478-HxCDF	1.00	35.53
123678-HxCDF	1 00	35.68
123478-HxCDD	1.00	36.74
123678-HxCDD	1.00	36.87
123789-HxCDD	1.01	37 30
234678-HxCDF	1 00	36.61
123789-HxCDF	1.00	37.74
1234678-HpCDF	1.00	39 80
1234678-HpCDD	1.00	41.63
1234789-HpCDF	1 00	42.54
OCDD	1.00	47.62
OCDF	1.01	47.91

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.00
13C-12378-PeCDD	1.23	32.11
13C-123478-HxCDD	0 99	36 73
13C-123678-HxCDD	0.99	36 85
13C-1234678-HpCDD	1.12	41.62
13C-OCDD	1.28	47.60
13C-2378-TCDF	1.01	26.38
13C-12378-PeCDF	1 16	30.52
13C-23478-PeCDF	1 22	31.85
13C-123478-HxCDF	0.95	35 51
13C-123678-HxCDF	0.96	35 66
13C-234678-HxCDF	0.98	36.60
13C-123789-HxCDF	1.01	37 72
13C-1234678-HpCDF	1.07	39 79
13C-1234789-HpCDF	1.14	42 52

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26 20
13C-123789-HxCDD	0 00	37.28

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

PCB Analysis
Report and Summary QC Forms

ARI Job ID: UR81, US18

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-03
SAMPLE

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 09:35
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 59.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	68.0%
Tetrachlorometaxylene	75.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-05
SAMPLE

Lab Sample ID: UR81B
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 09:56
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 59.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	88.8%
Tetrachlorometaxylene	90.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-06
SAMPLE

Lab Sample ID: UR81C
LIMS ID: 12-7394
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 10:17
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 55.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	79.0%
Tetrachlorometaxylene	90.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-02
SAMPLE

Lab Sample ID: UR81D
LIMS ID: 12-7395
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 10:37
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.9 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 57.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.0%
Tetrachlorometaxylene	97.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-04
SAMPLE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 11:56
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 35.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	69.5%
Tetrachlorometaxylene	68.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-07
SAMPLE

Lab Sample ID: UR81F
LIMS ID: 12-7397
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 12:17
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 56.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	63.2%
Tetrachlorometaxylene	74.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-01
SAMPLE

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 13:20
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.0%
Tetrachlorometaxylene	75.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-58A
SAMPLE

Lab Sample ID: UR81H
LIMS ID: 12-7399
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 14:23
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 59.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	104%
Tetrachlorometaxylene	82.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-11
SAMPLE

Lab Sample ID: UR81I
LIMS ID: 12-7400
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 14:44
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 46.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	82.0%
Tetrachlorometaxylene	91.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-08A
SAMPLE

Lab Sample ID: UR81J
LIMS ID: 12-7401
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 15:05
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.9 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 58.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.5%
Tetrachlorometaxylene	86.0%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
IJ12-03	68.0%	24-127	75.5%	34-109	0
IJ12-05	88.8%	24-127	90.8%	34-109	0
IJ12-06	79.0%	24-127	90.0%	34-109	0
IJ12-02	92.0%	24-127	97.0%	34-109	0
IJ12-04	69.5%	24-127	68.5%	34-109	0
IJ12-07	63.2%	24-127	74.8%	34-109	0
MB-050212	98.2%	48-123	91.2%	43-107	0
LCS-050212	101%	48-123	101%	43-107	0
LCSD-050212	NS	48-123	NS	43-107	0
IJ12-01	85.0%	24-127	75.2%	34-109	0
IJ12-01 MS	60.8%	24-127	68.0%	34-109	0
IJ12-01 MSD	95.0%	24-127	87.8%	34-109	0
IJ12-58A	104%	24-127	82.2%	34-109	0
IJ12-11	82.0%	24-127	91.0%	34-109	0
IJ12-08A	99.5%	24-127	86.0%	34-109	0

Microwave (MARS) Control Limits PCBSMP
Prep Method: SW3546
Log Number Range: 12-7392 to 12-7401

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: I-1-Z
SAMPLE

Lab Sample ID: US18A
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/03/12
Date Analyzed: 05/09/12 17:11
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 40.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	**Aroclor 1248**	**19**	**60**
11097-69-1	**Aroclor 1254**	**19**	**48**
11096-82-5	**Aroclor 1260**	**19**	**22**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	72.5%
Tetrachlorometaxylene	69.8%

UR81 00165

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: I-2-A-Z
SAMPLE

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS 090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Date Extracted: 05/03/12
Date Analyzed: 05/09/12 17:32
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 48.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	**Aroclor 1248**	**20**	**61**
11097-69-1	**Aroclor 1254**	**20**	**65**
11096-82-5	**Aroclor 1260**	**20**	**36**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	86.0%
Tetrachlorometaxylene	71.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-050312	92.0%	48-123	82.5%	43-107	0
LCS-050312	95.2%	48-123	80.8%	43-107	0
LCSD-050312	88.8%	48-123	81.8%	43-107	0
I-1-Z	72.5%	24-127	69.8%	34-109	0
I-2-A-Z	86.0%	24-127	71.0%	34-109	0

Microwave (MARS) Control Limits PCBSMP
Prep Method: SW3546
Log Number Range: 12-7643 to 12-7644

FORM-II SW8082

UR01 : 00167

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-01
MS/MSD

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: MV
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted MS/MSD: 05/02/12

Date Analyzed MS: 05/08/12 13:41
MSD: 05/08/12 14:02
Instrument/Analyst MS: ECD7/JGR
MSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 13.1 g-dry-wt
MSD: 13.0 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: No

Percent Moisture: 38.6%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 19.2 U	48.0	96.0	50.0%	69.7	96.9	71.9%	36.9%
Aroclor 1260	< 19.2 U	46.9	96.0	48.9%	70.2	96.9	72.4%	39.8%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-01
MATRIX SPIKE

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 13:41
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	---
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	---
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.8%
Tetrachlorometaxylene	68.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: IJ12-01
MATRIX SPIKE DUP

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 14:02
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	---
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	---
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	95.0%
Tetrachlorometaxylene	87.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-050212
LCS/LCSD

Lab Sample ID: LCS-050212
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 05/02/12

Date Analyzed LCS: 05/08/12 08:53
LCSD: 05/08/12 09:14
Instrument/Analyst LCS: ECD7/JGR
LCSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt
Final Extract Volume LCS: 2.50 mL
LCSD: 2.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: No

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	88.9	101	88.0%	88.9	101	88.0%	0.0%
Aroclor 1260	83.0	101	82.2%	81.8	101	81.0%	1.5%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	101%	NA%
Tetrachlorometaxylene	101%	NA%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-050312
LCS/LCSD

Lab Sample ID: LCS-050312
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 05/03/12

Date Analyzed LCS: 05/09/12 16:29
LCSD: 05/09/12 16:50
Instrument/Analyst LCS: ECD7/JGR
LCSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt
Final Extract Volume LCS: 2.50 mL
LCSD: 2.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: No

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	80.4	101	79.6%	77.7	101	76.9%	3.4%
Aroclor 1260	78.2	101	77.4%	75.2	101	74.5%	3.9%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	95.2%	88.8%
Tetrachlorometaxylene	80.8%	81.8%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

FORM III

PCB METHOD BLANK SUMMARY

BLANK NO.

UR81MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No.: UR81

Project: I&J WATERWAY RI/FS

Lab Sample ID: UR81MBS1

Lab File ID: 0508A004

Date Extracted: 05/02/12

Matrix: SOLID

Date Analyzed: 05/08/12

Instrument ID: ECD7

Time Analyzed: 0832

GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	UR81LCSS1	UR81LCSS1	05/08/12
02	UR81LCSDS1	UR81LCSDS1	05/08/12
03	IJ12-03	UR81A	05/08/12
04	IJ12-05	UR81B	05/08/12
05	IJ12-06	UR81C	05/08/12
06	IJ12-02	UR81D	05/08/12
07	IJ12-04	UR81E	05/08/12
08	IJ12-04	UR81E	05/08/12
09	IJ12-07	UR81F	05/08/12
10	IJ12-01	UR81G	05/08/12
11	IJ12-01 MS	UR81GMS	05/08/12
12	IJ12-01 MSD	UR81GMSD	05/08/12
13	IJ12-58A	UR81H	05/08/12
14	IJ12-11	UR81I	05/08/12
15	IJ12-08A	UR81J	05/08/12

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

UR81 : 00173

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: MB-050212
METHOD BLANK

Lab Sample ID: MB-050212
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized: MV
Reported: 05/09/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/12
Date Analyzed: 05/08/12 08:32
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	98.2%
Tetrachlorometaxylene	91.2%

FORM I

PCB METHOD BLANK SUMMARY

BLANK NO.

US18MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: US18

Project: I&J WATERWAY RI/FS

Lab Sample ID: US18MBS1

Lab File ID: 0509A020

Date Extracted: 05/03/12

Matrix: SOLID

Date Analyzed: 05/09/12

Instrument ID: ECD7

Time Analyzed: 1608

GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	US18LCSS1	US18LCSS1	05/09/12
02	US18LCSDS1	US18LCSDS1	05/09/12
03	I-1-Z	US18A	05/09/12
04	I-2-A-Z	US18B	05/09/12

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

UR01:00175

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: MB-050312
METHOD BLANK

Lab Sample ID: MB-050312
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 05/03/12
Date Analyzed: 05/09/12 16:08
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.0%
Tetrachlorometaxylene	82.5%

FORM I

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UR81

Project: I&J WATERWAY

GC Column: ZB5

Instrument ID: ECD7

Calibration Date: 05/05/12

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 6.18- 6.38	0.8551	0.8827	0.9844	0.9780	0.9930	0.9785	0.9453	6.4
DCB 14.77-14.97	0.9768	0.9833	1.0322	0.9634	0.9476	0.9324	0.9726	3.6

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	8.19- 8.39	0.0245	0.0234	0.0248	0.0231	0.0227	0.0217	0.0234	4.9
2	8.68- 8.88	0.0826	0.0799	0.0852	0.0798	0.0787	0.0752	0.0802	4.2
3	8.85- 9.05	0.0329	0.0317	0.0334	0.0309	0.0302	0.0288	0.0313	5.5
4	8.98- 9.18	0.0227	0.0227	0.0228	0.0213	0.0208	0.0201	0.0217	5.3

AROCLOR AVERAGE %RSD = 5.0

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	11.73-11.93	0.0766	0.0714	0.0740	0.0684	0.0661	0.0637	0.0700	7.0
2	12.34-12.54	0.0498	0.0467	0.0486	0.0441	0.0432	0.0412	0.0456	7.2
3	12.65-12.85	0.0486	0.0461	0.0483	0.0441	0.0436	0.0418	0.0454	5.9
4	13.39-13.59	0.0601	0.0573	0.0602	0.0557	0.0548	0.0533	0.0569	5.0
5	13.49-13.69	0.0245	0.0237	0.0246	0.0222	0.0213	0.0203	0.0228	7.7

AROCLOR AVERAGE %RSD = 6.6

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No.: UR81 — Project: I&J WATERWAY

GC Column: ZB35 — Instrument ID: ECD7

Calibration Date: 05/05/12

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	6.31- 6.51	1.0436	0.9760	1.0443	0.9813	0.9808	0.9733	0.9999	3.4
DCB	15.09-15.29	1.0035	0.9248	0.9607	0.8830	0.8740	0.8578	0.9173	6.2

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	8.44- 8.64	0.0488	0.0436	0.0436	0.0376	0.0358	0.0335	0.0405	14.3
2	9.17- 9.37	0.0967	0.0850	0.0871	0.0766	0.0750	0.0724	0.0821	11.2
3	9.60- 9.80	0.0251	0.0227	0.0230	0.0198	0.0190	0.0180	0.0213	12.9
4	9.71- 9.91	0.0308	0.0272	0.0269	0.0225	0.0211	0.0197	0.0247	17.2

AROCLOR AVERAGE %RSD = 13.9

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	12.63-12.83	0.0878	0.0764	0.0754	0.0664	0.0635	0.0610	0.0718	14.0
2	13.41-13.61	0.1277	0.1131	0.1149	0.1043	0.1021	0.1009	0.1105	9.3
3	13.90-14.10	0.0871	0.0768	0.0772	0.0686	0.0662	0.0643	0.0734	11.7
4	14.46-14.66	0.0317	0.0277	0.0283	0.0261	0.0244	0.0229	0.0269	11.6

AROCLOR AVERAGE %RSD = 11.6

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 05/05/12

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	6.743	6.64- 6.84	0.00925
2	6.954	6.85- 7.05	0.00692
3	7.077	6.98- 7.18	0.02309

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	8.298	8.20- 8.40	0.00924
2	8.784	8.68- 8.88	0.03144
3	8.959	8.86- 9.06	0.01240
4	10.328	10.23-10.43	0.01402

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	8.295	8.20- 8.40	0.01773
2	8.783	8.68- 8.88	0.06072
3	8.956	8.86- 9.06	0.02366
4	10.572	10.47-10.67	0.02161

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	9.350	9.25- 9.45	0.02432
2	9.681	9.58- 9.78	0.02973
3	10.323	10.22-10.42	0.04424
4	10.570	10.47-10.67	0.03425

UR81:00179

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 05/05/12

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.331	10.23-10.43	0.03773
2	10.652	10.55-10.75	0.05204
3	11.036	10.94-11.14	0.03280
4	11.175	11.07-11.27	0.06214
5	11.892	11.79-11.99	0.04145

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.443	12.34-12.54	0.07165
2	12.758	12.66-12.86	0.05175
3	13.121	13.02-13.22	0.13578
4	13.591	13.49-13.69	0.04564
5	13.655	13.55-13.75	0.04827

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.590	13.49-13.69	0.14082
2	13.652	13.55-13.75	0.12785
3	13.975	13.87-14.07	0.10801
4	14.577	14.48-14.68	0.33215

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 05/05/12

Aroclor-1221

Peak	RT	RT WIN	Cal Factor
1	7.241	7.14- 7.34	0.01150
2	7.542	7.44- 7.64	0.00709
3	7.680	7.58- 7.78	0.02115
4	7.767	7.67- 7.87	0.00403

Aroclor-1232

Peak	RT	RT WIN	Cal Factor
1	8.548	8.45- 8.65	0.01741
2	9.278	9.18- 9.38	0.03242
3	9.704	9.60- 9.80	0.00873
4	10.257	10.16-10.36	0.01310

Aroclor-1242

Peak	RT	RT WIN	Cal Factor
1	8.543	8.44- 8.64	0.02970
2	9.274	9.17- 9.37	0.06071
3	9.700	9.60- 9.80	0.01605
4	11.162	11.06-11.26	0.02494

Aroclor-1248

Peak	RT	RT WIN	Cal Factor
1	9.806	9.71- 9.91	0.02817
2	10.251	10.15-10.35	0.03101
3	10.799	10.70-10.90	0.03150
4	11.160	11.06-11.26	0.04057

UR81:00191

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 05/05/12

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.867	10.77-10.97	0.02995
2	11.037	10.94-11.14	0.03823
3	11.573	11.47-11.67	0.03044
4	11.725	11.63-11.83	0.06468
5	12.510	12.41-12.61	0.03899

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.831	12.73-12.93	0.06891
2	13.274	13.17-13.37	0.05805
3	13.513	13.41-13.61	0.13025
4	13.957	13.86-14.06	0.04951
5	14.008	13.91-14.11	0.07946

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.955	13.85-14.05	0.13235
2	14.010	13.91-14.11	0.12424
3	14.322	14.22-14.42	0.09837
4	14.912	14.81-15.01	0.30876

UR81 : 081192

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UR81

Project: I&J WATERWAY

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1254

Time Analyzed :0643

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.32	10.23	10.43	244.5	250.0	-2.2
Aroclor-1254-2	10.64	10.55	10.75	247.4	250.0	-1.0
Aroclor-1254-3	11.03	10.94	11.14	249.4	250.0	-0.2
Aroclor-1254-4	11.17	11.07	11.27	249.1	250.0	-0.4
Aroclor-1254-5	11.88	11.79	11.99	250.8	250.0	0.3

AVERAGE %D = 0.8

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UR81

Project: I&J WATERWAY

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1254

Time Analyzed :0643

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.85	10.77	10.97	241.6	250.0	-3.4
Aroclor-1254-2	11.02	10.94	11.14	244.7	250.0	-2.1
Aroclor-1254-3	11.56	11.47	11.67	242.9	250.0	-2.8
Aroclor-1254-4	11.71	11.63	11.83	244.3	250.0	-2.3
Aroclor-1254-5	12.50	12.41	12.61	244.8	250.0	-2.1

AVERAGE %D = 2.5

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :0704

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.28	8.19	8.39	244.9	250.0	-2.0
Aroclor-1016-2	8.77	8.68	8.88	245.6	250.0	-1.8
Aroclor-1016-3	8.94	8.85	9.05	243.4	250.0	-2.6
Aroclor-1016-4	9.07	8.98	9.18	240.8	250.0	-3.7

AVERAGE %D = 2.5

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :0704

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.83	11.73	11.93	221.5	250.0	-11.4
Aroclor-1260-2	12.43	12.34	12.54	223.1	250.0	-10.8
Aroclor-1260-3	12.75	12.65	12.85	227.6	250.0	-9.0
Aroclor-1260-4	13.48	13.39	13.59	232.5	250.0	-7.0
Aroclor-1260-5	13.58	13.49	13.69	230.2	250.0	-7.9

AVERAGE %D = 9.2

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :0704

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.53	8.44	8.64	231.7	250.0	-7.3
Aroclor-1016-2	9.26	9.17	9.37	234.5	250.0	-6.2
Aroclor-1016-3	9.69	9.60	9.80	234.2	250.0	-6.3
Aroclor-1016-4	9.79	9.71	9.91	226.1	250.0	-9.6

AVERAGE %D = 7.3

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :0704

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.73	12.63	12.83	211.3	250.0	-15.5
Aroclor-1260-2	13.50	13.41	13.61	219.4	250.0	-12.2
Aroclor-1260-3	14.00	13.90	14.10	222.0	250.0	-11.2
Aroclor-1260-4	14.56	14.46	14.66	226.6	250.0	-9.4

AVERAGE %D = 12.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1248 Time Analyzed :1238

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	9.35	9.25	9.45	236.6	250.0	-5.4
Aroclor-1248-2	9.68	9.58	9.78	236.0	250.0	-5.6
Aroclor-1248-3	10.32	10.22	10.42	233.2	250.0	-6.7
Aroclor-1248-4	10.57	10.47	10.67	236.6	250.0	-5.3

AVERAGE %D = 5.8

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UR81

Project: I&J WATERWAY

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1248

Time Analyzed :1238

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	9.81	9.71	9.91	233.3	250.0	-6.7
Aroclor-1248-2	10.25	10.15	10.35	231.5	250.0	-7.4
Aroclor-1248-3	10.80	10.70	10.90	232.0	250.0	-7.2
Aroclor-1248-4	11.16	11.06	11.26	226.6	250.0	-9.4

AVERAGE %D = 7.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA

ARI Job No.: UR81
Project: I&J WATERWAY

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1660
Time Analyzed :1259

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.29	8.19	8.39	242.0	250.0	-3.2
Aroclor-1016-2	8.78	8.68	8.88	243.8	250.0	-2.5
Aroclor-1016-3	8.95	8.85	9.05	240.2	250.0	-3.9
Aroclor-1016-4	9.08	8.98	9.18	238.1	250.0	-4.8

AVERAGE %D = 3.6

Date Analyzed :05/08/12

Lab Standard ID: AR1660
Time Analyzed :1259

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.83	11.73	11.93	224.7	250.0	-10.1
Aroclor-1260-2	12.44	12.34	12.54	222.2	250.0	-11.1
Aroclor-1260-3	12.75	12.65	12.85	225.0	250.0	-10.0
Aroclor-1260-4	13.49	13.39	13.59	227.1	250.0	-9.1
Aroclor-1260-5	13.59	13.49	13.69	219.6	250.0	-12.1

AVERAGE %D = 10.5

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :1259

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.54	8.44	8.64	230.3	250.0	-7.9
Aroclor-1016-2	9.27	9.17	9.37	233.2	250.0	-6.7
Aroclor-1016-3	9.70	9.60	9.80	227.5	250.0	-9.0
Aroclor-1016-4	9.81	9.71	9.91	219.8	250.0	-12.1

AVERAGE %D = 8.9

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :1259

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.73	12.63	12.83	209.0	250.0	-16.4
Aroclor-1260-2	13.51	13.41	13.61	218.1	250.0	-12.7
Aroclor-1260-3	14.00	13.90	14.10	211.5	250.0	-15.4
Aroclor-1260-4	14.56	14.46	14.66	218.5	250.0	-12.6

AVERAGE %D = 14.3

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UR81

Project: I&J WATERWAY

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1242

Time Analyzed :1547

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	8.30	8.20	8.40	246.1	250.0	-1.6
Aroclor-1242-2	8.78	8.68	8.88	246.2	250.0	-1.5
Aroclor-1242-3	8.96	8.86	9.06	244.6	250.0	-2.2
Aroclor-1242-4	10.57	10.47	10.67	248.0	250.0	-0.8

AVERAGE %D = 1.5

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UR81

Project: I&J WATERWAY

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1242

Time Analyzed :1547

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	8.54	8.44	8.64	241.8	250.0	-3.3
Aroclor-1242-2	9.27	9.17	9.37	242.7	250.0	-2.9
Aroclor-1242-3	9.70	9.60	9.80	238.5	250.0	-4.6
Aroclor-1242-4	11.16	11.06	11.26	234.9	250.0	-6.0

AVERAGE %D = 4.2

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :1608

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.30	8.19	8.39	243.6	250.0	-2.6
Aroclor-1016-2	8.78	8.68	8.88	245.7	250.0	-1.7
Aroclor-1016-3	8.96	8.85	9.05	242.4	250.0	-3.0
Aroclor-1016-4	9.08	8.98	9.18	240.6	250.0	-3.8

AVERAGE %D = 2.8

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :1608

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.84	11.73	11.93	226.6	250.0	-9.4
Aroclor-1260-2	12.44	12.34	12.54	224.7	250.0	-10.1
Aroclor-1260-3	12.75	12.65	12.85	228.1	250.0	-8.8
Aroclor-1260-4	13.49	13.39	13.59	232.4	250.0	-7.0
Aroclor-1260-5	13.59	13.49	13.69	224.9	250.0	-10.0

AVERAGE %D = 9.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :1608

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.54	8.44	8.64	228.8	250.0	-8.5
Aroclor-1016-2	9.27	9.17	9.37	233.4	250.0	-6.6
Aroclor-1016-3	9.70	9.60	9.80	229.8	250.0	-8.1
Aroclor-1016-4	9.81	9.71	9.91	221.4	250.0	-11.4

AVERAGE %D = 8.7

Date Analyzed :05/08/12

Lab Standard ID: AR1660 Time Analyzed :1608

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.74	12.63	12.83	213.3	250.0	-14.7
Aroclor-1260-2	13.51	13.41	13.61	221.9	250.0	-11.2
Aroclor-1260-3	14.00	13.90	14.10	217.1	250.0	-13.1
Aroclor-1260-4	14.56	14.46	14.66	221.9	250.0	-11.2

AVERAGE %D = 12.6

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR

ARI Job No.: US18

Project: I&J WATERWAY

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1254

Time Analyzed :1342

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.32	10.22	10.42	248.6	250.0	-0.5
Aroclor-1254-2	10.64	10.54	10.74	249.7	250.0	-0.1
Aroclor-1254-3	11.02	10.92	11.12	250.3	250.0	0.1
Aroclor-1254-4	11.16	11.06	11.26	251.5	250.0	0.6
Aroclor-1254-5	11.88	11.78	11.98	252.2	250.0	0.9

AVERAGE %D = 0.4

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR

ARI Job No.: US18

Project: I&J WATERWAY

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1254

Time Analyzed :1342

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.85	10.75	10.95	252.3	250.0	0.9
Aroclor-1254-2	11.02	10.92	11.12	254.2	250.0	1.7
Aroclor-1254-3	11.56	11.46	11.66	251.1	250.0	0.4
Aroclor-1254-4	11.71	11.61	11.81	254.3	250.0	1.7
Aroclor-1254-5	12.50	12.40	12.60	255.7	250.0	2.3

AVERAGE %D = 1.4

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

ARI Job No.: US18 Project: I&J WATERWAY

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1403

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.28	8.19	8.39	246.8	250.0	-1.3
Aroclor-1016-2	8.77	8.68	8.88	246.9	250.0	-1.2
Aroclor-1016-3	8.94	8.85	9.05	245.7	250.0	-1.7
Aroclor-1016-4	9.07	8.98	9.18	242.7	250.0	-2.9

AVERAGE %D = 1.8

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1403

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.83	11.73	11.93	226.5	250.0	-9.4
Aroclor-1260-2	12.43	12.34	12.54	227.5	250.0	-9.0
Aroclor-1260-3	12.75	12.65	12.85	231.9	250.0	-7.2
Aroclor-1260-4	13.48	13.39	13.59	236.7	250.0	-5.3
Aroclor-1260-5	13.58	13.49	13.69	234.7	250.0	-6.1

AVERAGE %D = 7.4

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

ARI Job No.: US18 Project: I&J WATERWAY

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1403

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.53	8.44	8.64	237.0	250.0	-5.2
Aroclor-1016-2	9.26	9.17	9.37	242.6	250.0	-3.0
Aroclor-1016-3	9.69	9.60	9.80	243.8	250.0	-2.5
Aroclor-1016-4	9.80	9.71	9.91	237.2	250.0	-5.1

AVERAGE %D = 3.9

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1403

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.73	12.64	12.84	220.2	250.0	-11.9
Aroclor-1260-2	13.51	13.41	13.61	227.0	250.0	-9.2
Aroclor-1260-3	14.00	13.90	14.10	230.4	250.0	-7.8
Aroclor-1260-4	14.56	14.46	14.66	233.7	250.0	-6.5

AVERAGE %D = 8.9

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR

ARI Job No.: US18

Project: I&J WATERWAY

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1248

Time Analyzed :1753

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	9.35	9.25	9.45	241.9	250.0	-3.2
Aroclor-1248-2	9.68	9.58	9.78	239.5	250.0	-4.2
Aroclor-1248-3	10.32	10.22	10.42	236.4	250.0	-5.4
Aroclor-1248-4	10.57	10.47	10.67	235.6	250.0	-5.8

AVERAGE %D = 4.7

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR

ARI Job No.: US18

Project: I&J WATERWAY

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1248

Time Analyzed :1753

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	9.81	9.71	9.91	242.4	250.0	-3.0
Aroclor-1248-2	10.25	10.15	10.35	232.1	250.0	-7.2
Aroclor-1248-3	10.80	10.70	10.90	238.7	250.0	-4.5
Aroclor-1248-4	11.16	11.06	11.26	232.5	250.0	-7.0

AVERAGE %D = 5.4

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

ARI Job No.: US18 Project: I&J WATERWAY

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1814

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.29	8.19	8.39	246.5	250.0	-1.4
Aroclor-1016-2	8.78	8.68	8.88	247.3	250.0	-1.1
Aroclor-1016-3	8.95	8.85	9.05	245.3	250.0	-1.9
Aroclor-1016-4	9.08	8.98	9.18	242.0	250.0	-3.2

AVERAGE %D = 1.9

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1814

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.83	11.73	11.93	231.9	250.0	-7.2
Aroclor-1260-2	12.44	12.34	12.54	231.3	250.0	-7.5
Aroclor-1260-3	12.75	12.65	12.85	233.5	250.0	-6.6
Aroclor-1260-4	13.49	13.39	13.59	235.1	250.0	-5.9
Aroclor-1260-5	13.59	13.49	13.69	231.8	250.0	-7.3

AVERAGE %D = 6.9

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

ARI Job No.: US18 Project: I&J WATERWAY

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 05/05/12

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1814

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.54	8.44	8.64	238.0	250.0	-4.8
Aroclor-1016-2	9.27	9.17	9.37	241.8	250.0	-3.3
Aroclor-1016-3	9.70	9.60	9.80	241.8	250.0	-3.3
Aroclor-1016-4	9.81	9.71	9.91	235.7	250.0	-5.7

AVERAGE %D = 4.3

Date Analyzed :05/09/12

Lab Standard ID: AR1660 Time Analyzed :1814

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.73	12.64	12.84	220.9	250.0	-11.6
Aroclor-1260-2	13.51	13.41	13.61	226.7	250.0	-9.3
Aroclor-1260-3	14.00	13.90	14.10	227.3	250.0	-9.1
Aroclor-1260-4	14.56	14.46	14.66	225.7	250.0	-9.7

AVERAGE %D = 9.9

FORM VII PCB

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 05/05/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	5841740	3.323	4847662	15.125
UPPER LIMIT	11683480	3.423	9695324	15.225
LOWER LIMIT	2920870	3.223	2423831	15.025

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/05/12	1422	5670267	3.321	4775962	15.124
02		0.25 PPM AR1	05/05/12	1443	5841740	3.323	4847662	15.125
03		0.02 PPM AR1	05/05/12	1504	5821073	3.323	4777383	15.125
04		0.05 PPM AR1	05/05/12	1525	5746462	3.319	4750609	15.125
05		1 PPM AR1660	05/05/12	1546	5789041	3.325	4842531	15.125
06		0.1 PPM AR16	05/05/12	1607	5827040	3.324	4857527	15.125
07		0.5 PPM AR16	05/05/12	1628	5722910	3.322	4807520	15.124
08		AR1242	05/05/12	1649	5675100	3.321	4740399	15.125
09		AR1248	05/05/12	1709	5828769	3.320	4895491	15.124
10		AR1254	05/05/12	1730	5816856	3.320	4905256	15.124
11		AR2162	05/05/12	1751	5876832	3.320	4941004	15.124
12		AR3268	05/05/12	1812	5840399	3.320	4930920	15.123
13	ZZZZZ	ZZZZZ	05/05/12	1833	5792855	3.317	4886943	15.125
14	ZZZZZ	ZZZZZ	05/05/12	1854	5881762	3.319	4969703	15.124
15	ZZZZZ	ZZZZZ	05/05/12	1915	5801335	3.318	4888022	15.124
16	ZZZZZ	ZZZZZ	05/05/12	1936	5892179	3.322	4967896	15.125
17	ZZZZZ	ZZZZZ	05/05/12	1957	5836839	3.319	4954937	15.125
18	ZZZZZ	ZZZZZ	05/05/12	2018	5864354	3.320	4993833	15.124
19		AR1254	05/08/12	0643	6741418	3.284	6166951	15.121
20		AR1660	05/08/12	0704	7181119	3.298	6549817	15.120
21	UR81MBS1	UR81MBS1	05/08/12	0832	5950350	3.278	5183786	15.120
22	UR81LCSS1	UR81LCSS1	05/08/12	0853	5563844	3.298	5233260	15.119
23	UR81LCSDS1	UR81LCSDS1	05/08/12	0914	5510927	3.309	5189819	15.120
24	IJ12-03	UR81A	05/08/12	0935	5396036	3.310	4993852	15.120
25	IJ12-05	UR81B	05/08/12	0956	5457370	3.311	4882791	15.120
26	IJ12-06	UR81C	05/08/12	1017	5571603	3.312	5020700	15.120
27	IJ12-02	UR81D	05/08/12	1037	5561210	3.313	5048708	15.121
28	ZZZZZ	ZZZZZ	05/08/12	1058	7786453	3.317	2744787	15.119
29	ZZZZZ	ZZZZZ	05/08/12	1119	5526402	3.314		
30	ZZZZZ	ZZZZZ	05/08/12	1136	5285761	3.304	6339962	15.122
31	IJ12-04	UR81E	05/08/12	1156	5489654	3.312	7002019	15.121
32	IJ12-07	UR81F	05/08/12	1217	5519673	3.313	4848817	15.120

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 05/05/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	5841740	3.323	4847662	15.125
UPPER LIMIT	11683480	3.423	9695324	15.225
LOWER LIMIT	2920870	3.223	2423831	15.025

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33		AR1248	05/08/12	1238	6793692	3.314	5723179	15.121
34		AR1660	05/08/12	1259	7212237	3.315	6255609	15.122
35	IJ12-01	UR81G	05/08/12	1320	5313088	3.314	5068671	15.121
36	IJ12-01 MS	UR81GMS	05/08/12	1341	5208451	3.313	4755922	15.122
37	IJ12-01 MSD	UR81GMSD	05/08/12	1402	5244578	3.317	5039026	15.122
38	IJ12-58A	UR81H	05/08/12	1423	5441652	3.316	4964522	15.122
39	IJ12-11	UR81I	05/08/12	1444	5560237	3.317	4805744	15.122
40	IJ12-08A	UR81J	05/08/12	1505	5590180	3.318	5084638	15.122
41	ZZZZZ	ZZZZZ	05/08/12	1526	6012120	3.317	4872425	15.122
42		AR1242	05/08/12	1547	6624392	3.315	5757562	15.122
43		AR1660	05/08/12	1608	7432505	3.316	6501865	15.122

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 05/05/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	9156558	4.174	6845779	15.782
UPPER LIMIT	18313116	4.274	13691558	15.882
LOWER LIMIT	4578279	4.074	3422890	15.682

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/05/12	1422	8788529	4.174	6633649	15.783
02		0.25 PPM AR1	05/05/12	1443	9156558	4.174	6845779	15.782
03		0.02 PPM AR1	05/05/12	1504	9090803	4.174	6809435	15.782
04		0.05 PPM AR1	05/05/12	1525	9058816	4.173	6784358	15.783
05		1 PPM AR1660	05/05/12	1546	8875438	4.175	6866104	15.782
06		0.1 PPM AR16	05/05/12	1607	9078945	4.174	6921355	15.782
07		0.5 PPM AR16	05/05/12	1628	8943986	4.175	6823780	15.783
08		AR1242	05/05/12	1649	8736979	4.173	6696727	15.783
09		AR1248	05/05/12	1709	9041877	4.173	6930163	15.781
10		AR1254	05/05/12	1730	8969858	4.173	6933460	15.782
11		AR2162	05/05/12	1751	8970246	4.172	7017153	15.781
12		AR3268	05/05/12	1812	9076587	4.173	6967699	15.780
13	ZZZZZ	ZZZZZ	05/05/12	1833	9038755	4.169	6967518	15.782
14	ZZZZZ	ZZZZZ	05/05/12	1854	9156078	4.170	7050442	15.782
15	ZZZZZ	ZZZZZ	05/05/12	1915	8986504	4.171	6937342	15.781
16	ZZZZZ	ZZZZZ	05/05/12	1936	9187197	4.173	7034723	15.782
17	ZZZZZ	ZZZZZ	05/05/12	1957	9050043	4.172	7038220	15.782
18	ZZZZZ	ZZZZZ	05/05/12	2018	9155686	4.173	7046106	15.781
19		AR1254	05/08/12	0643	10736352	4.117	8707784	15.776
20		AR1660	05/08/12	0704	11420507	4.146	9405729	15.777
21	UR81MBS1	UR81MBS1	05/08/12	0832	8836328	4.112	7188784	15.774
22	UR81LCSS1	UR81LCSS1	05/08/12	0853	9475758	4.147	7352973	15.775
23	UR81LCSDS1	UR81LCSDS1	05/08/12	0914	8872103	4.158	7359788	15.777
24	IJ12-03	UR81A	05/08/12	0935	8523498	4.160	7431040	15.776
25	IJ12-05	UR81B	05/08/12	0956	8382585	4.163	7374006	15.776
26	IJ12-06	UR81C	05/08/12	1017	8634140	4.163	7771871	15.777
27	IJ12-02	UR81D	05/08/12	1037	8556218	4.164	7633042	15.777
28	ZZZZZ	ZZZZZ	05/08/12	1058	9333034	4.168	4055132	15.776
29	IJ12-04	UR81EMISINJ	05/08/12	1119	8543799	4.164		
30	ZZZZZ	ZZZZZ	05/08/12	1136	8092008	4.144	8282041	15.778
31	IJ12-04	UR81E	05/08/12	1156	8424588	4.162	8272704	15.777
32	IJ12-07	UR81F	05/08/12	1217	8450635	4.164	7385400	15.778

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UR81 Project: I&J WATERWAY

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 05/05/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	9156558	4.174	6845779	15.782
UPPER LIMIT	18313116	4.274	13691558	15.882
LOWER LIMIT	4578279	4.074	3422890	15.682

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33		AR1248	05/08/12	1238	10662034	4.164	8443597	15.778
34		AR1660	05/08/12	1259	11351273	4.166	9105253	15.778
35	IJ12-01	UR81G	05/08/12	1320	8399942	4.165	7369509	15.779
36	IJ12-01 MS	UR81GMS	05/08/12	1341	8153233	4.164	7118587	15.779
37	IJ12-01 MSD	UR81GMSD	05/08/12	1402	8280823	4.167	7268817	15.778
38	IJ12-58A	UR81H	05/08/12	1423	8211901	4.167	7494427	15.779
39	IJ12-11	UR81I	05/08/12	1444	8623339	4.167	7289225	15.778
40	IJ12-08A	UR81J	05/08/12	1505	8538858	4.168	7737978	15.779
41	ZZZZZ	ZZZZZ	05/08/12	1526	8949411	4.166	7417254	15.778
42		AR1242	05/08/12	1547	10586963	4.165	8400574	15.780
43		AR1660	05/08/12	1608	11918745	4.167	9499577	15.779

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

ARI Job No.: US18 Project: I&J WATERWAY

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 05/05/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	5841740	3.323	4847662	15.125
UPPER LIMIT	11683480	3.423	9695324	15.225
LOWER LIMIT	2920870	3.223	2423831	15.025

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/05/12	1422	5670267	3.321	4775962	15.124
02		0.25 PPM AR1	05/05/12	1443	5841740	3.323	4847662	15.125
03		0.02 PPM AR1	05/05/12	1504	5821073	3.323	4777383	15.125
04		0.05 PPM AR1	05/05/12	1525	5746462	3.319	4750609	15.125
05		1 PPM AR1660	05/05/12	1546	5789041	3.325	4842531	15.125
06		0.1 PPM AR16	05/05/12	1607	5827040	3.324	4857527	15.125
07		0.5 PPM AR16	05/05/12	1628	5722910	3.322	4807520	15.124
08		AR1242	05/05/12	1649	5675100	3.321	4740399	15.125
09		AR1248	05/05/12	1709	5828769	3.320	4895491	15.124
10		AR1254	05/05/12	1730	5816856	3.320	4905256	15.124
11		AR2162	05/05/12	1751	5876832	3.320	4941004	15.124
12		AR3268	05/05/12	1812	5840399	3.320	4930920	15.123
13	ZZZZZ	ZZZZZ	05/05/12	1833	5792855	3.317	4886943	15.125
14	ZZZZZ	ZZZZZ	05/05/12	1854	5881762	3.319	4969703	15.124
15	ZZZZZ	ZZZZZ	05/05/12	1915	5801335	3.318	4888022	15.124
16	ZZZZZ	ZZZZZ	05/05/12	1936	5892179	3.322	4967896	15.125
17	ZZZZZ	ZZZZZ	05/05/12	1957	5836839	3.319	4954937	15.125
18	ZZZZZ	ZZZZZ	05/05/12	2018	5864354	3.320	4993833	15.124
19		AR1254	05/09/12	1342	5596240	3.281	5121663	15.119
20		AR1660	05/09/12	1403	5900438	3.298	5382025	15.121
21	US18MBS1	US18MBS1	05/09/12	1608	5509547	3.314	4802579	15.121
22	US18LCSS1	US18LCSS1	05/09/12	1629	5613841	3.313	4986086	15.121
23	US18LCSDS1	US18LCSDS1	05/09/12	1650	5722639	3.315	5135469	15.120
24	I-1-Z	US18A	05/09/12	1711	5132236	3.314	4462081	15.122
25	I-2-A-Z	US18B	05/09/12	1732	8138042	3.308	5004670	15.121
26		AR1248	05/09/12	1753	5729762	3.312	4887590	15.120
27		AR1660	05/09/12	1814	5950392	3.316	5137168	15.121

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

ARI Job No.: US18 Project: I&J WATERWAY

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 05/05/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	9156558	4.174	6845779	15.782
UPPER LIMIT	18313116	4.274	13691558	15.882
LOWER LIMIT	4578279	4.074	3422890	15.682

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/05/12	1422	8788529	4.174	6633649	15.783
02		0.25 PPM AR1	05/05/12	1443	9156558	4.174	6845779	15.782
03		0.02 PPM AR1	05/05/12	1504	9090803	4.174	6809435	15.782
04		0.05 PPM AR1	05/05/12	1525	9058816	4.173	6784358	15.783
05		1 PPM AR1660	05/05/12	1546	8875438	4.175	6866104	15.782
06		0.1 PPM AR16	05/05/12	1607	9078945	4.174	6921355	15.782
07		0.5 PPM AR16	05/05/12	1628	8943986	4.175	6823780	15.783
08		AR1242	05/05/12	1649	8736979	4.173	6696727	15.783
09		AR1248	05/05/12	1709	9041877	4.173	6930163	15.781
10		AR1254	05/05/12	1730	8969858	4.173	6933460	15.782
11		AR2162	05/05/12	1751	8970246	4.172	7017153	15.781
12		AR3268	05/05/12	1812	9076587	4.173	6967699	15.780
13	ZZZZZ	ZZZZZ	05/05/12	1833	9038755	4.169	6967518	15.782
14	ZZZZZ	ZZZZZ	05/05/12	1854	9156078	4.170	7050442	15.782
15	ZZZZZ	ZZZZZ	05/05/12	1915	8986504	4.171	6937342	15.781
16	ZZZZZ	ZZZZZ	05/05/12	1936	9187197	4.173	7034723	15.782
17	ZZZZZ	ZZZZZ	05/05/12	1957	9050043	4.172	7038220	15.782
18	ZZZZZ	ZZZZZ	05/05/12	2018	9155686	4.173	7046106	15.781
19		AR1254	05/09/12	1342	8995898	4.113	7352610	15.775
20		AR1660	05/09/12	1403	9548361	4.147	7924428	15.778
21	US18MBS1	US18MBS1	05/09/12	1608	8996718	4.164	7174912	15.778
22	US18LCSS1	US18LCSS1	05/09/12	1629	9116188	4.163	7486356	15.779
23	US18LCSDS1	US18LCSDS1	05/09/12	1650	9205360	4.165	7578974	15.777
24	I-1-Z	US18A	05/09/12	1711	7784293	4.165	7101073	15.780
25	I-2-A-Z	US18B	05/09/12	1732	8373294	4.162	7320727	15.777
26		AR1248	05/09/12	1753	9163747	4.163	7218592	15.777
27		AR1660	05/09/12	1814	9523746	4.165	7554278	15.778

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

Metals Analysis
Report and Summary QC Forms

ARI Job ID: UR81, US18

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
IJ12-03	UR81A	12-7392	
IJ12-03D	UR81ADUP	12-7392	
IJ12-03S	UR81ASPK	12-7392	
IJ12-05	UR81B	12-7393	
PBS	UR81MB1	12-7393	
LCSS	UR81MB1SPK	12-7393	
IJ12-06	UR81C	12-7394	
IJ12-02	UR81D	12-7395	
IJ12-04	UR81E	12-7396	
IJ12-07	UR81F	12-7397	
IJ12-01	UR81G	12-7398	
IJ12-58A	UR81H	12-7399	
IJ12-11	UR81I	12-7400	
IJ12-08A	UR81J	12-7401	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 5/4/12 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-03
SAMPLE

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 38.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	10	10	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.5	**1.2**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	1	**79**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.5	**71.0**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	5	**17**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.05	**0.25**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	3	**140**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.8	0.8	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	3	**141**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-05
SAMPLE

Lab Sample ID: UR81B
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 35.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	10	10	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.6	**1.1**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	1	**90**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.6	**77.6**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	6	**17**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.07	**0.29**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	3	**137**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.8	0.8	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	3	**147**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-06
SAMPLE

Lab Sample ID: UR81C
LIMS ID: 12-7394
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 43.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	10	10	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.4	**1.0**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	1	**86**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.4	**72.4**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	4	**15**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.05	**0.29**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	2	**126**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.7	0.7	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	2	**132**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-02
SAMPLE

Lab Sample ID: UR81D
LIMS ID: 12-7395
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 39.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	10	10	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.5	**1.1**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	1	**82**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.5	**71.3**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	5	**17**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.06	**0.27**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	2	**148**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.7	0.7	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	2	**135**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-04
SAMPLE

Lab Sample ID: UR81E
LIMS ID: 12-7396
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 56.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	20	20	U
3050B	04/30/12	6010C	05/01/12	7440-43-9	Cadmium	0.8	0.8	U
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	2	**33**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.8	**35.4**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	8	**25**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.04	**0.12**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	4	**116**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	1	1	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	4	**110**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-07
SAMPLE

Lab Sample ID: UR81F
LIMS ID: 12-7397
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 45.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	**7440-38-2**	**Arsenic**	10	**10**	
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.4	**0.9**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	1	**85**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.4	**75.9**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	4	**14**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.04	**0.27**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	2	**123**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.6	0.6	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	2	**131**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-01
SAMPLE

Lab Sample ID: UR81G
LIMS ID: 12-7398
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Percent Total Solids: 52.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	9	9	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.4	**0.4**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	0.9	**40.0**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.4	**37.2**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	4	**18**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.04	**0.05**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	2	**337**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.5	0.5	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	2	**83**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-58A
SAMPLE

Lab Sample ID: UR81H
LIMS ID: 12-7399
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 37.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	10	10	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.5	**1.2**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	1	**85**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.5	**86.0**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	5	**16**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.05	**0.29**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	2	**120**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.7	0.7	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	2	**152**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-11
SAMPLE

Lab Sample ID: UR81I
LIMS ID: 12-7400
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 53.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	9	9	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.4	**0.5**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	0.9	**66.9**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.4	**51.9**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	4	**11**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.05	**0.27**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	2	**90**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.6	0.6	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	2	**94**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-08A
SAMPLE

Lab Sample ID: UR81J
LIMS ID: 12-7401
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Percent Total Solids: 38.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	10	10	U
3050B	04/30/12	6010C	05/01/12	**7440-43-9**	**Cadmium**	0.5	**1.0**	
3050B	04/30/12	6010C	05/01/12	**7440-47-3**	**Chromium**	1	**80**	
3050B	04/30/12	6010C	05/01/12	**7440-50-8**	**Copper**	0.5	**87.0**	
3050B	04/30/12	6010C	05/01/12	**7439-92-1**	**Lead**	5	**15**	
CLP	04/30/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.05	**0.26**	
3050B	04/30/12	6010C	05/01/12	**7440-02-0**	**Nickel**	3	**113**	
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.8	0.8	U
3050B	04/30/12	6010C	05/01/12	**7440-66-6**	**Zinc**	3	**146**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-03
MATRIX SPIKE

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample		Spike	Spike Added	% Recovery	Q
Arsenic	6010C	10	U	510	501	102%	
Cadmium	6010C	1.2		133	125	105%	
Chromium	6010C	79		208	125	103%	
Copper	6010C	71.0		200	125	103%	
Lead	6010C	17		505	501	97.4%	
Mercury	7471A	0.25		0.83	0.541	107%	
Nickel	6010C	140		258	125	94.4%	
Silver	6010C	0.8	U	128	125	102%	
Zinc	6010C	141		263	125	97.6%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IJ12-03
DUPLICATE

Lab Sample ID: UR81A
LIMS ID: 12-7392
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	10 U	10 U	0.0%	+/- 10	L
Cadmium	6010C	1.2	1.2	0.0%	+/- 0.5	L
Chromium	6010C	79	82	3.7%	+/- 20%	
Copper	6010C	71.0	72.5	2.1%	+/- 20%	
Lead	6010C	17	17	0.0%	+/- 5	L
Mercury	7471A	0.25	0.27	7.7%	+/- 0.05	L
Nickel	6010C	140	143	2.1%	+/- 20%	
Silver	6010C	0.8 U	0.8 U	0.0%	+/- 0.8	L
Zinc	6010C	141	144	2.1%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: UR81LCS
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	205	200	102%	
Cadmium	6010C	52.3	50.0	105%	
Chromium	6010C	52.9	50.0	106%	
Copper	6010C	51.2	50.0	102%	
Lead	6010C	205	200	102%	
Mercury	7471A	0.51	0.50	102%	
Nickel	6010C	49	50	98.0%	
Silver	6010C	52.7	50.0	105%	
Zinc	6010C	50	50	100%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: UR81MB
LIMS ID: 12-7393
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: UR81-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/30/12	6010C	05/01/12	7440-38-2	Arsenic	5	5	U
3050B	04/30/12	6010C	05/01/12	7440-43-9	Cadmium	0.2	0.2	U
3050B	04/30/12	6010C	05/01/12	7440-47-3	Chromium	0.5	0.5	U
3050B	04/30/12	6010C	05/01/12	7440-50-8	Copper	0.2	0.2	U
3050B	04/30/12	6010C	05/01/12	7439-92-1	Lead	2	2	U
CLP	04/30/12	7471A	05/03/12	7439-97-6	Mercury	0.02	0.02	U
3050B	04/30/12	6010C	05/01/12	7440-02-0	Nickel	1	1	U
3050B	04/30/12	6010C	05/01/12	7440-22-4	Silver	0.3	0.3	U
3050B	04/30/12	6010C	05/01/12	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	ICP	IP050171	2000.0	2015.40	**100.8**	2000.0	1989.87	**99.5**	1998.71	**99.9**	1999.45	**100.0**	1979.05	**99.0**	2060.13	**103.0**
Cadmium	CD	ICP	IP050171	1000.0	1019.96	**102.0**	1000.0	1024.59	**102.5**	1030.55	**103.1**	1040.98	**104.1**	1035.48	**103.5**	1061.36	**106.1**
Chromium	CR	ICP	IP050171	1000.0	1026.72	**102.7**	1000.0	1023.16	**102.3**	1035.86	**103.6**	1025.62	**102.6**	1026.58	**102.7**	1031.23	**103.1**
Copper	CU	ICP	IP050171	1000.0	1010.86	**101.1**	1000.0	1011.35	**101.1**	1008.75	**100.9**	1012.95	**101.3**	1012.08	**101.2**	1037.38	**103.7**
Lead	PB	ICP	IP050171	2000.0	1996.56	**99.8**	2000.0	2035.19	**101.8**	2045.38	**102.3**	2044.96	**102.2**	2025.20	**101.3**	2044.00	**102.2**
Mercury	HG	CVA	HG050301	8.0	7.90	**98.8**	4.0	4.12	**103.0**	4.11	**102.8**	4.06	**101.5**	4.06	**101.5**	4.09	**102.3**
Nickel	NI	ICP	IP050171	1000.0	989.30	**98.9**	1000.0	981.81	**98.2**	996.15	**99.6**	983.77	**98.4**	983.89	**98.4**	985.02	**98.5**
Silver	AG	ICP	IP050171	1000.0	1034.26	**103.4**	1000.0	1017.49	**101.7**	1018.31	**101.8**	1009.78	**101.0**	1014.72	**101.5**	1049.44	**104.9**
Zinc	ZN	ICP	IP050171	1000.0	1018.67	**101.9**	1000.0	1013.47	**101.3**	1035.28	**103.5**	1028.07	**102.8**	1031.33	**103.1**	1032.47	**103.2**

Control Limits: Mercury 80-120; Other Metals 90-110

UR81 : 00225

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	ICP	IP050171	2000.0												
Cadmium	CD	ICP	IP050171	1000.0												
Chromium	CR	ICP	IP050171	1000.0												
Copper	CU	ICP	IP050171	1000.0												
Lead	PB	ICP	IP050171	2000.0												
Mercury	HG	CVA	HG050301	4.0	4.08	**102.0**										
Nickel	NI	ICP	IP050171	1000.0												
Silver	AG	ICP	IP050171	1000.0												
Zinc	ZN	ICP	IP050171	1000.0												

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

UNITS:ug/L

SDG: UR81

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	ICP	IP050171	50.0	49.31	**98.6**										
Cadmium	CD	ICP	IP050171	2.0	2.26	**113.0**										
Chromium	CR	ICP	IP050171	5.0	5.48	**109.6**										
Copper	CU	ICP	IP050171	2.0	1.97	**98.5**										
Lead	PB	ICP	IP050171	20.0	19.83	**99.2**										
Mercury	HG	CVA	HG050301	0.1	0.12	**120.0**										
Nickel	NI	ICP	IP050171	10.0	9.68	**96.8**										
Silver	AG	ICP	IP050171	3.0	2.95	**98.3**										
Zinc	ZN	ICP	IP050171	10.0	9.62	**96.2**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	ICP	IP050171	10.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cadmium	CD	ICP	IP050171	5.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chromium	CR	ICP	IP050171	10.0	5.0	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Copper	CU	ICP	IP050171	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Lead	PB	ICP	IP050171	3.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
Mercury	HG	CVA	HG050301	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	ICP	IP050171	40.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	AG	ICP	IP050171	10.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Zinc	ZN	ICP	IP050171	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

UR81 : 00228

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	ICP	IP050171	10.0	50.0												
Cadmium	CD	ICP	IP050171	5.0	2.0												
Chromium	CR	ICP	IP050171	10.0	5.0												
Copper	CU	ICP	IP050171	25.0	2.0												
Lead	PB	ICP	IP050171	3.0	20.0												
Mercury	HG	CVA	HG050301	0.2	0.1	0.1	U										
Nickel	NI	ICP	IP050171	40.0	10.0												
Silver	AG	ICP	IP050171	10.0	3.0												
Zinc	ZN	ICP	IP050171	20.0	10.0												

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

ICS SOURCE: I.V.

RUNID: IP050171

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	202549.4	202753.0	**101.4**						
Antimony		1000	18.6	981.8	**98.2**						
Arsenic		1000	-15.3	1013.8	**101.4**						
Barium		1000	2.7	1003.3	**100.3**						
Beryllium		1000	0.0	987.7	**98.8**						
Boron			6.0	4.6							
Cadmium		1000	0.7	1044.6	**104.5**						
Calcium	100000	100000	99882.0	100734.2	**100.7**						
Chromium		1000	0.1	1018.3	**101.8**						
Cobalt		1000	2.8	960.9	**96.1**						
Copper		1000	-2.0	1026.0	**102.6**						
Iron	200000	200000	199828.4	200680.0	**100.3**						
Lead		1000	-6.0	1004.7	**100.5**						
Magnesium	100000	100000	98324.1	98814.0	**98.8**						
Manganese		1000	0.1	954.4	**95.4**						
Molybdenum			4.4	4.6							
Nickel		1000	-1.4	941.9	**94.2**						
Potassium			26.6	4.4							
Selenium		1000	7.9	1035.1	**103.5**						
Silicon			-19.5	-20.6							
Silver		1000	-1.4	1039.0	**103.9**						
Sodium			21.6	13.5							
Strontium			9.9	10.0							
Thallium		1000	9.0	969.4	**96.9**						
Tin			-11.3	-11.1							
Titanium			0.0	-0.1							
Vanadium		1000	7.5	1011.3	**101.1**						
Zinc		1000	-4.6	935.8	**93.6**						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	ICP	OPTIMA ICP 2	197.20		10	50.0	4/1/2011	30000.0	8/3/2011
Cadmium	CD	ICP	OPTIMA ICP 2	228.80		5	2.0	4/1/2011	20000.0	8/3/2011
Chromium	CR	ICP	OPTIMA ICP 2	267.72		10	5.0	4/1/2011	100000.0	8/3/2011
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2011	40000.0	8/3/2011
Lead	PB	ICP	OPTIMA ICP 2	220.35		3	20.0	4/1/2011	300000.0	8/3/2011
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2011		
Nickel	NI	ICP	OPTIMA ICP 2	231.60		40	10.0	4/1/2011	100000.0	8/3/2011
Silver	AG	ICP	OPTIMA ICP 2	328.07		10	3.0	4/1/2011	5000.0	8/3/2011
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2011	100000.0	8/3/2011

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

IEC DATE: 3/19/2012

SDG: UR81

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.3219720	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	10.2020000	0.0000000	0.1202730
Arsenic	188.98	0.0676681	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.9907570	1.0929900	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1617070	0.0000000	0.0000000	0.0509863
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	3.4090200	0.0000000	0.0000000	0.0000000	0.0000000	0.1642300	0.0000000	0.0000000	0.0094737
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0229989	0.0000000	-0.0409619	0.0000000	0.0000000	-0.0447283
Cobalt	228.62	0.0000000	0.0000000	0.2151410	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2203550	-0.0248240	0.0000000	-0.0717630
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.7214060	0.0000000	0.0000000
Lead	220.35	-0.1395300	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-2.0199800	1.2549900	0.0665058
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.7927700	-1.2197100	0.0000000	0.5858900
Manganese	257.61	0.0071452	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0059831
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0169987	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1147630
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7375200	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0067168	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	6.5303700	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	2.5520300	0.3828500	0.0000000	-0.1317480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0292008	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0348510	0.0000000	0.0000000	0.2207060	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2513600	0.0000000	0.1207740
Zinc	206.20	-0.0433063	0.0000000	0.0000000	0.0000000	0.0131448	0.0000000	0.0000000	-0.4942180	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

IEC DATE: 3/19/2012

SDG: UR81

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	8.7251100	0.0000000	0.0000000	0.0000000	1.2350800	0.0000000	19.6337000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.6262000	0.0000000	-2.0479800	0.0000000
Arsenic	188.98	0.0231456	0.0000000	1.4466600	0.0000000	0.0000000	0.0000000	-6.9568100	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0777109	0.0000000	0.0000000	0.0000000	0.0000000	0.4101220	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0114175	0.0000000	0.6735850	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0576937	-0.6515750	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0373272	0.0000000	0.1461890	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.2854520	0.0267072
Cobalt	228.62	0.0000000	0.0000000	-0.2518640	0.1618730	0.0000000	0.0000000	1.6854600	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0046107	0.0000000	0.1890580	0.0000000	0.0000000	0.0000000	0.2839350	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.2682800	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.3516970	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-3.2487800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0062324	0.0000000	0.0000000	0.0000000	-0.3367650	0.0000000	0.0000000	0.0000000	-0.0331334	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.9494270	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.9119740	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.2105810	0.1262930	0.0000000	0.0000000	0.0000000	-0.0406459	0.0000000	-0.2398130	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	271.7310000	0.0000000	0.0000000	373.0000000
Thallium	190.80	0.0000000	0.0000000	-3.8706100	0.0000000	0.0917790	0.0000000	0.5514110	0.0000000	1.6549500	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0344764	-0.7123520	-0.4958940	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	1.3260700	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1562030	-0.7955440	0.0000000	0.0000000	0.0000000	0.6246810	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2669400	0.0000000	-0.1628880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 4/30/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IJ12-03	UR81A	1.041	0.0	50.0
IJ12-03D	UR81ADUP	1.039	0.0	50.0
IJ12-03S	UR81ASPK	1.046	0.0	50.0
IJ12-05	UR81B	1.013	0.0	50.0
IJ12-06	UR81C	1.024	0.0	50.0
IJ12-02	UR81D	1.044	0.0	50.0
IJ12-04	UR81E	1.095	0.0	50.0
IJ12-07	UR81F	1.062	0.0	50.0
IJ12-01	UR81G	1.079	0.0	50.0
IJ12-58A	UR81H	1.081	0.0	50.0
IJ12-11	UR81I	1.026	0.0	50.0
IJ12-08A	UR81J	1.037	0.0	50.0
PBS	UR81MB1	1.000	0.0	50.0
LCSS	UR81MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UR81

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 4/30/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IJ12-03	UR81A	0.244	0.0	50.0
IJ12-03D	UR81ADUP	0.242	0.0	50.0
IJ12-03S	UR81ASPK	0.242	0.0	50.0
IJ12-05	UR81B	0.209	0.0	50.0
IJ12-06	UR81C	0.230	0.0	50.0
IJ12-02	UR81D	0.201	0.0	50.0
IJ12-04	UR81E	0.213	0.0	50.0
IJ12-07	UR81F	0.276	0.0	50.0
IJ12-01	UR81G	0.245	0.0	50.0
IJ12-58A	UR81H	0.262	0.0	50.0
IJ12-11	UR81I	0.203	0.0	50.0
IJ12-08A	UR81J	0.271	0.0	50.0
PBS	UR81MB1	0.200	0.0	50.0
LCSW	UR81MB1SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 5/1/2012

SDG: UR81 | RUNID: IP050171 METHOD: ICP | END DATE: 5/1/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10460		X		X					X		X	X								X	X									X
S2	S2	1.00	10501									X		X	X																		
S3	S3	1.00	10515		X		X																X	X									X
S4	S4	1.00	10541																														
S5	S5	1.00	10562																														
ICV	ICV	1.00	11025		X		X					X		X	X								X	X									X
ICB	ICB	1.00	11065		X		X					X		X	X								X	X									X
CRI	CRII	1.00	11110		X		X					X		X	X								X	X									X
ICSA	ICSAI	1.00	11151		X		X					X		X	X								X	X									X
ICSAB	ICSABI	1.00	11193		X		X					X		X	X								X	X									X
CCV	CCV1	1.00	11231		X		X					X		X	X								X	X									X
CCB	CCB1	1.00	11271		X		X					X		X	X								X	X									X
PBS	UR81MB1	2.00	11312		X		X					X		X	X								X	X									X
IJ12-05	UR81B	2.00	11354		X		X					X		X	X								X	X									X
IJ12-06	UR81C	2.00	11394		X		X					X		X	X								X	X									X
IJ12-02	UR81D	2.00	11432		X		X					X		X	X								X	X									X
IJ12-04	UR81E	2.00	11472																														
IJ12-03D	UR81ADUP	2.00	11511		X		X					X		X	X								X	X									X
IJ12-03	UR81A	2.00	11551		X		X					X		X	X								X	X									X
IJ12-03S	UR81ASPK	2.00	11591		X		X					X		X	X								X	X									X
ZZZZZZ	ZZZZZZ	2.00	12022																														
LCSS	UR81MB1SPK	2.00	12062		X		X					X		X	X								X	X									X
CCV	CCV2	1.00	12102		X		X					X		X	X								X	X									X
CCB	CCB2	1.00	12142		X		X					X		X	X								X	X									X
ZZZZZZ	UR61MB1	2.00	12183																														
IJ12-07	UR81F	2.00	12225		X		X					X		X	X								X	X									X
IJ12-01	UR81G	2.00	12265		X		X					X		X	X								X	X									X
IJ12-58A	UR81H	2.00	12305		X		X					X		X	X								X	X									X
IJ12-11	UR81I	2.00	12345		X		X					X		X	X								X	X									X
IJ12-08A	UR81J	2.00	12385		X		X					X		X	X								X	X									X
ZZZZZZ	UR61ADUP	2.00	12425																														
ZZZZZZ	UR61A	2.00	12464																														
ZZZZZZ	UR61ASPK	2.00	12504																														
ZZZZZZ	UR61MB1SPK	2.00	12544																														
CCV	CCV3	1.00	12583		X		X					X		X	X								X	X									X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 5/1/2012

SDG: UR81 | RUNID: IP050171 METHOD: ICP | END DATE: 5/1/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB3	1.00	13023		X		X					X		X	X								X	X									X
ZZZZZZ	UR83B	1.00	13065																														
ZZZZZZ	UR83C	1.00	13112																														
ZZZZZZ	UR83D	1.00	13153																														
ZZZZZZ	UR83E	1.00	13201																														
ZZZZZZ	UR61B	2.00	13244																														
ZZZZZZ	UR61C	2.00	13284																														
ZZZZZZ	UR61D	2.00	13324																														
ZZZZZZ	UR61E	2.00	13363																														
ZZZZZZ	UR61F	2.00	13403																														
ZZZZZZ	UR61G	2.00	13443																														
CCV	CCV4	1.00	13482		X		X					X		X	X								X	X									X
CCB	CCB4	1.00	13523		X		X					X		X	X								X	X									X
ZZZZZZ	UR83MB1	1.00	13564																														
ZZZZZZ	UR83F	1.00	14005																														
ZZZZZZ	UR83G	1.00	14053																														
ZZZZZZ	UR83H	1.00	14101																														
ZZZZZZ	UR83I	1.00	14142																														
ZZZZZZ	UR83ADUP	1.00	14184																														
ZZZZZZ	UR83A	1.00	14231																														
ZZZZZZ	UR83ASPK	1.00	14273																														
IJ12-04	UR81E	5.00	14315		X		X					X		X	X								X	X									X
ZZZZZZ	UR83MB1SPK	1.00	14355																														
CCV	CCV5	1.00	14395		X		X					X		X	X								X	X									X
CCB	CCB5	1.00	14435		X		X					X		X	X								X	X									X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/3/2012

SDG: UR81 | RUNID: HG050301 METHOD: CVA | END DATE: 5/3/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09170														X																
S0.1	S0.1	1.00	09183														X																
S0.5	S0.5	1.00	09201														X																
S1	S1	1.00	09215														X																
S2	S2	1.00	09232														X																
S5	S5	1.00	09250														X																
S10	S10	1.00	09264														X																
ICV	AICV	1.00	09293														X																
ICB	ICB	1.00	09310														X																
CCV	ACCV1	1.00	09324														X																
CCB	CCB1	1.00	09342														X																
CRA	CRA	1.00	09360														X																
ZZZZZZ	UR61MB1	1.00	09373																														
ZZZZZZ	UR61MB1SPK	1.00	09391																														
ZZZZZZ	UR61A	1.00	09405																														
ZZZZZZ	UR61ADUP	1.00	09422																														
ZZZZZZ	UR61ASPK	1.00	09440																														
ZZZZZZ	UR61B	1.00	09454																														
ZZZZZZ	UR61C	1.00	09471																														
ZZZZZZ	UR61D	1.00	09485																														
ZZZZZZ	UR61E	1.00	09503																														
CCV	ACCV2	1.00	09521														X																
CCB	CCB2	1.00	09535														X																
ZZZZZZ	UR61F	1.00	09553																														
ZZZZZZ	UR61G	1.00	09570																														
ZZZZZZ	US24MB1	1.00	09584																														
ZZZZZZ	US24MB1SPK	1.00	10001																														
ZZZZZZ	US24MB1SPD	1.00	10015																														
ZZZZZZ	US24A	1.00	10032																														
ZZZZZZ	US24ADUP	1.00	10050																														
ZZZZZZ	US24ASPK	1.00	10064																														
ZZZZZZ	US18MB1	1.00	10082																														
ZZZZZZ	US18MB1SPK	1.00	10095																														
CCV	ACCV3	1.00	10113														X																
CCB	CCB3	1.00	10131														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/3/2012

SDG: UR81 | RUNID: HG050301 METHOD: CVA | END DATE: 5/3/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	US18A	1.00	10145																														
ZZZZZZ	US18B	1.00	10163																														
ZZZZZZ	US18BDUP	1.00	10181																														
ZZZZZZ	US18BSPK	1.00	10194																														
ZZZZZZ	UR87MB1	1.00	10212																														
ZZZZZZ	UR87MB1SPK	1.00	10230																														
ZZZZZZ	UR87REF1	5.00	10243																														
ZZZZZZ	UR87A	1.00	10261																														
ZZZZZZ	UR87ADUP	1.00	10275																														
ZZZZZZ	UR87ASPK	1.00	10292																														
CCV	ACCV4	1.00	10310														X																
CCB	CCB4	1.00	10324														X																
ZZZZZZ	UR87B	1.00	10342																														
ZZZZZZ	UR87C	1.00	10360																														
PBW	UR81MB1	1.00	10374														X																
LCSW	UR81MB1SPK	1.00	10392														X																
IJ12-03	UR81A	1.00	10405														X																
IJ12-03D	UR81ADUP	1.00	10423														X																
IJ12-03S	UR81ASPK	1.00	10441														X																
IJ12-05	UR81B	1.00	10454														X																
IJ12-06	UR81C	1.00	10472														X																
IJ12-02	UR81D	1.00	10490														X																
CCV	ACCV5	1.00	10504														X																
CCB	CCB5	1.00	10522														X																
IJ12-04	UR81E	1.00	10540														X																
IJ12-07	UR81F	1.00	10553														X																
IJ12-01	UR81G	1.00	10571														X																
IJ12-58A	UR81H	1.00	10585														X																
IJ12-11	UR81I	1.00	11003														X																
IJ12-08A	UR81J	1.00	11021														X																
CCV	ACCV6	1.00	11035														X																
CCB	CCB6	1.00	11053														X																

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
I-1-Z	US18A	12-7643	
PBS	US18MB1	12-7643	
LCSS	US18MB1SPK	12-7643	
I-2-A-Z	US18B	12-7644	
I-2-A-ZD	US18BDUP	12-7644	
I-2-A-ZS	US18BSPK	12-7644	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 5/4/12 Title: Inorganics Director

UR01 : 00248

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: I-1-Z
SAMPLE

Lab Sample ID: US18A
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Percent Total Solids: 59.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	05/02/12	6010C	05/03/12	7440-38-2	Arsenic	8	8	U
3050B	05/02/12	6010C	05/03/12	**7440-43-9**	**Cadmium**	0.3	**0.9**	
3050B	05/02/12	6010C	05/03/12	**7440-47-3**	**Chromium**	0.8	**48.1**	
3050B	05/02/12	6010C	05/03/12	**7440-50-8**	**Copper**	0.3	**54.0**	
3050B	05/02/12	6010C	05/03/12	**7439-92-1**	**Lead**	3	**30**	
CLP	05/02/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.04	**0.40**	
3050B	05/02/12	6010C	05/03/12	**7440-02-0**	**Nickel**	2	**71**	
3050B	05/02/12	6010C	05/03/12	7440-22-4	Silver	0.5	0.5	U
3050B	05/02/12	6010C	05/03/12	**7440-66-6**	**Zinc**	2	**96**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: I-2-A-Z
SAMPLE

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Percent Total Solids: 51.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	05/02/12	6010C	05/03/12	7440-38-2	Arsenic	9	9	U
3050B	05/02/12	6010C	05/03/12	**7440-43-9**	**Cadmium**	0.4	**1.6**	
3050B	05/02/12	6010C	05/03/12	**7440-47-3**	**Chromium**	0.9	**88.1**	
3050B	05/02/12	6010C	05/03/12	**7440-50-8**	**Copper**	0.4	**64.3**	
3050B	05/02/12	6010C	05/03/12	**7439-92-1**	**Lead**	4	**40**	
CLP	05/02/12	7471A	05/03/12	**7439-97-6**	**Mercury**	0.08	**4.39**	
3050B	05/02/12	6010C	05/03/12	**7440-02-0**	**Nickel**	2	**95**	
3050B	05/02/12	6010C	05/03/12	7440-22-4	Silver	0.6	0.6	U
3050B	05/02/12	6010C	05/03/12	**7440-66-6**	**Zinc**	2	**125**	

U-Analyte undetected at given RL
RL-Reporting Limit

UR01 / 08242

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: I-2-A-Z
MATRIX SPIKE

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	9 U	356	373	95.4%	
Cadmium	6010C	1.6	96.1	93.4	101%	
Chromium	6010C	88.1	175	93.4	93.0%	
Copper	6010C	64.3	155	93.4	97.1%	
Lead	6010C	40	383	373	92.0%	
Mercury	7471A	4.39	5.02	0.408	154%	H
Nickel	6010C	95	175	93.4	85.7%	
Silver	6010C	0.6 U	89.6	93.4	95.9%	
Zinc	6010C	125	208	93.4	88.9%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: I-2-A-Z
DUPLICATE

Lab Sample ID: US18B
LIMS ID: 12-7644
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	9 U	9 U	0.0%	+/- 9	L
Cadmium	6010C	1.6	1.6	0.0%	+/- 0.4	L
Chromium	6010C	88.1	88.4	0.3%	+/- 20%	
Copper	6010C	64.3	64.5	0.3%	+/- 20%	
Lead	6010C	40	41	2.5%	+/- 20%	
Mercury	7471A	4.39	4.53	3.1%	+/- 20%	
Nickel	6010C	95	95	0.0%	+/- 20%	
Silver	6010C	0.6 U	0.6 U	0.0%	+/- 0.6	L
Zinc	6010C	125	125	0.0%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

URS1 : 06244

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: US18LCS
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	201	200	100%	
Cadmium	6010C	51.7	50.0	103%	
Chromium	6010C	51.1	50.0	102%	
Copper	6010C	51.4	50.0	103%	
Lead	6010C	199	200	99.5%	
Mercury	7471A	0.52	0.50	104%	
Nickel	6010C	47	50	94.0%	
Silver	6010C	51.2	50.0	102%	
Zinc	6010C	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: US18MB
LIMS ID: 12-7643
Matrix: Sediment
Data Release Authorized:
Reported: 05/04/12

QC Report No: US18-Anchor QEA
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	05/02/12	6010C	05/03/12	7440-38-2	Arsenic	5	5	U
3050B	05/02/12	6010C	05/03/12	7440-43-9	Cadmium	0.2	0.2	U
3050B	05/02/12	6010C	05/03/12	7440-47-3	Chromium	0.5	0.5	U
3050B	05/02/12	6010C	05/03/12	7440-50-8	Copper	0.2	0.2	U
3050B	05/02/12	6010C	05/03/12	7439-92-1	Lead	2	2	U
CLP	05/02/12	7471A	05/03/12	7439-97-6	Mercury	0.02	0.02	U
3050B	05/02/12	6010C	05/03/12	7440-02-0	Nickel	1	1	U
3050B	05/02/12	6010C	05/03/12	7440-22-4	Silver	0.3	0.3	U
3050B	05/02/12	6010C	05/03/12	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	ICP	IP050371	2000.0	1920.46	**96.0**	2000.0	1938.78	**96.9**	1958.20	**97.9**						
Cadmium	CD	ICP	IP050371	1000.0	1013.80	**101.4**	1000.0	1012.13	**101.2**	1016.68	**101.7**						
Chromium	CR	ICP	IP050371	1000.0	990.08	**99.0**	1000.0	992.43	**99.2**	1001.85	**100.2**						
Copper	CU	ICP	IP050371	1000.0	1008.53	**100.9**	1000.0	983.27	**98.3**	1013.46	**101.3**						
Lead	PB	ICP	IP050371	2000.0	1955.51	**97.8**	2000.0	1976.52	**98.8**	1986.53	**99.3**						
Mercury	HG	CVA	HG050301	8.0	7.90	**98.8**	4.0	4.12	**103.0**	4.11	**102.8**	4.06	**101.5**	4.06	**101.5**	4.09	**102.3**
Nickel	NI	ICP	IP050371	1000.0	948.16	**94.8**	1000.0	950.35	**95.0**	951.36	**95.1**						
Silver	AG	ICP	IP050371	1000.0	987.04	**98.7**	1000.0	959.26	**95.9**	991.44	**99.1**						
Zinc	ZN	ICP	IP050371	1000.0	985.67	**98.6**	1000.0	995.64	**99.6**	999.87	**100.0**						

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

1 1 2 0 0 . 1 3 3 1

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

UNITS: ug/L

SDG: US18

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	ICP	IP050371	2000.0												
Cadmium	CD	ICP	IP050371	1000.0												
Chromium	CR	ICP	IP050371	1000.0												
Copper	CU	ICP	IP050371	1000.0												
Lead	PB	ICP	IP050371	2000.0												
Mercury	HG	CVA	HG050301	4.0	4.08	**102.0**	4.04	**101.0**								
Nickel	NI	ICP	IP050371	1000.0												
Silver	AG	ICP	IP050371	1000.0												
Zinc	ZN	ICP	IP050371	1000.0												

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

UNITS:ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	ICP	IP050371	50.0	46.58	**93.2**										
Cadmium	CD	ICP	IP050371	2.0	2.00	**100.0**										
Chromium	CR	ICP	IP050371	5.0	4.88	**97.6**										
Copper	CU	ICP	IP050371	2.0	2.09	**104.5**										
Lead	PB	ICP	IP050371	20.0	18.73	**93.7**										
Mercury	HG	CVA	HG050301	0.1	0.12	**120.0**										
Nickel	NI	ICP	IP050371	10.0	9.73	**97.3**										
Silver	AG	ICP	IP050371	3.0	2.81	**93.7**										
Zinc	ZN	ICP	IP050371	10.0	10.09	**100.9**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	ICP	IP050371	10.0	50.0	50.0	U	50.0	U	50.0	U						
Cadmium	CD	ICP	IP050371	5.0	2.0	2.0	U	2.0	U	2.0	U						
Chromium	CR	ICP	IP050371	10.0	5.0	5.0	U	5.0	U	5.0	U						
Copper	CU	ICP	IP050371	25.0	2.0	2.0	U	2.0	U	2.0	U						
Lead	PB	ICP	IP050371	3.0	20.0	20.0	U	20.0	U	20.0	U						
Mercury	HG	CVA	HG050301	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	ICP	IP050371	40.0	10.0	10.0	U	10.0	U	10.0	U						
Silver	AG	ICP	IP050371	10.0	3.0	3.0	U	3.0	U	3.0	U						
Zinc	ZN	ICP	IP050371	20.0	10.0	10.0	U	10.0	U	10.0	U						

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	ICP	IP050371	10.0	50.0												
Cadmium	CD	ICP	IP050371	5.0	2.0												
Chromium	CR	ICP	IP050371	10.0	5.0												
Copper	CU	ICP	IP050371	25.0	2.0												
Lead	PB	ICP	IP050371	3.0	20.0												
Mercury	HG	CVA	HG050301	0.2	0.1	0.1	U	0.1	U								
Nickel	NI	ICP	IP050371	40.0	10.0												
Silver	AG	ICP	IP050371	10.0	3.0												
Zinc	ZN	ICP	IP050371	20.0	10.0												

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

ICS SOURCE: I.V.

RUNID: IP050371

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	199095.4	200023.8	**100.0**						
Antimony		1000	14.0	969.8	**97.0**						
Arsenic		1000	-14.9	973.1	**97.3**						
Barium		1000	1.6	980.3	**98.0**						
Beryllium		1000	0.0	962.6	**96.3**						
Boron			4.7	2.9							
Cadmium		1000	0.4	1035.9	**103.6**						
Calcium	100000	100000	101205.7	101501.2	**101.5**						
Chromium		1000	-0.2	1006.0	**100.6**						
Cobalt		1000	2.5	947.6	**94.8**						
Copper		1000	-1.9	1050.4	**105.0**						
Iron	200000	200000	196465.1	198715.2	**99.4**						
Lead		1000	-6.5	959.6	**96.0**						
Magnesium	100000	100000	98400.2	98509.3	**98.5**						
Manganese		1000	0.0	931.2	**93.1**						
Molybdenum			4.3	4.4							
Nickel		1000	-0.3	929.6	**93.0**						
Potassium			35.5	10.3							
Selenium		1000	6.7	1004.2	**100.4**						
Silicon			-18.0	-18.1							
Silver		1000	-1.4	1034.4	**103.4**						
Sodium			24.3	16.0							
Strontium			9.9	9.8							
Thallium		1000	9.3	926.1	**92.6**						
Tin			-10.7	-11.7							
Titanium			-0.1	-0.3							
Vanadium		1000	5.8	991.3	**99.1**						
Zinc		1000	-4.1	926.5	**92.7**						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	ICP	OPTIMA ICP 2	197.20		10	50.0	4/1/2011	30000.0	8/3/2011
Cadmium	CD	ICP	OPTIMA ICP 2	228.80		5	2.0	4/1/2011	20000.0	8/3/2011
Chromium	CR	ICP	OPTIMA ICP 2	267.72		10	5.0	4/1/2011	100000.0	8/3/2011
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2011	40000.0	8/3/2011
Lead	PB	ICP	OPTIMA ICP 2	220.35		3	20.0	4/1/2011	300000.0	8/3/2011
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2011		
Nickel	NI	ICP	OPTIMA ICP 2	231.60		40	10.0	4/1/2011	100000.0	8/3/2011
Silver	AG	ICP	OPTIMA ICP 2	328.07		10	3.0	4/1/2011	5000.0	8/3/2011
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2011	100000.0	8/3/2011

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

IEC DATE: 3/19/2012

SDG: US18

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.3219720	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	10.2020000	0.0000000	0.1202730
Arsenic	188.98	0.0676681	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.9907570	1.0929900	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1617070	0.0000000	0.0000000	0.0509863
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	3.4090200	0.0000000	0.0000000	0.0000000	0.0000000	0.1642300	0.0000000	0.0000000	0.0094737
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0229989	0.0000000	-0.0409619	0.0000000	0.0000000	-0.0447283
Cobalt	228.62	0.0000000	0.0000000	0.2151410	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2203550	-0.0248240	0.0000000	-0.0717630
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.7214060	0.0000000	0.0000000
Lead	220.35	-0.1395300	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-2.0199800	1.2549900	0.0665058
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.7927700	-1.2197100	0.0000000	0.5858900
Manganese	257.61	0.0071452	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0059831
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0169987	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1147630
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7375200	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0067168	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	6.5303700	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	2.5520300	0.3828500	0.0000000	-0.1317480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0292008	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0348510	0.0000000	0.0000000	0.2207060	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2513600	0.0000000	0.1207740
Zinc	206.20	-0.0433063	0.0000000	0.0000000	0.0000000	0.0131448	0.0000000	0.0000000	-0.4942180	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

IEC DATE: 3/19/2012

SDG: US18

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	8.7251100	0.0000000	0.0000000	0.0000000	1.2350800	0.0000000	19.6337000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.6262000	0.0000000	-2.0479800	0.0000000
Arsenic	188.98	0.0231456	0.0000000	1.4466600	0.0000000	0.0000000	0.0000000	-6.9568100	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0777109	0.0000000	0.0000000	0.0000000	0.0000000	0.4101220	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0114175	0.0000000	0.6735850	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0576937	-0.6515750	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0373272	0.0000000	0.1461890	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.2854520	0.0267072
Cobalt	228.62	0.0000000	0.0000000	-0.2518640	0.1618730	0.0000000	0.0000000	1.6854600	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0046107	0.0000000	0.1890580	0.0000000	0.0000000	0.0000000	0.2839350	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.2682800	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.3516970	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-3.2487800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0062324	0.0000000	0.0000000	0.0000000	-0.3367650	0.0000000	0.0000000	0.0000000	-0.0331334	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.9494270	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.9119740	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.2105810	0.1262930	0.0000000	0.0000000	0.0000000	-0.0406459	0.0000000	-0.2398130	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	271.7310000	0.0000000	0.0000000	373.0000000
Thallium	190.80	0.0000000	0.0000000	-3.8706100	0.0000000	0.0917790	0.0000000	0.5514110	0.0000000	1.6549500	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0344764	-0.7123520	-0.4958940	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	1.3260700	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1562030	-0.7955440	0.0000000	0.0000000	0.0000000	0.6246810	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2669400	0.0000000	-0.1628880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 5/2/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
I-1-Z	US18A	1.059	0.0	50.0
I-2-A-Z	US18B	1.046	0.0	50.0
I-2-A-ZD	US18BDUP	1.043	0.0	50.0
I-2-A-ZS	US18BSPK	1.045	0.0	50.0
PBS	US18MB1	1.000	0.0	50.0
LCSS	US18MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS

SDG: US18

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 5/2/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
I-1-Z	US18A	0.233	0.0	50.0
I-2-A-Z	US18B	0.242	0.0	50.0
I-2-A-ZD	US18BDUP	0.244	0.0	50.0
I-2-A-ZS	US18BSPK	0.239	0.0	50.0
PBS	US18MB1	0.200	0.0	50.0
LCSW	US18MB1SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 5/3/2012

SDG: US18 | RUNID: IP050371 METHOD: ICP | END DATE: 5/3/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10275		X		X					X		X	X								X	X									X
S2	S2	1.00	10320									X		X	X																		
S3	S3	1.00	10335		X		X																X	X									X
S4	S4	1.00	10360																														
S5	S5	1.00	10381																														
ICV	ICV	1.00	11035		X		X					X		X	X								X	X									X
ICB	ICB	1.00	11075		X		X					X		X	X								X	X									X
CRI	CRII	1.00	11120		X		X					X		X	X								X	X									X
ICSA	ICSAI	1.00	11162		X		X					X		X	X								X	X									X
ICSAB	ICSABI	1.00	11201		X		X					X		X	X								X	X									X
CCV	CCV1	1.00	11241		X		X					X		X	X								X	X									X
CCB	CCB1	1.00	11280		X		X					X		X	X								X	X									X
PBS	US18MB1	2.00	11321		X		X					X		X	X								X	X									X
ZZZZZZ	UR96MB	1.00	11363																														
ZZZZZZ	UR96K	1.00	11404																														
ZZZZZZ	UR96R	1.00	11445																														
I-1-Z	US18A	2.00	11491		X		X					X		X	X								X	X									X
I-2-A-ZD	US18BDUP	2.00	11531		X		X					X		X	X								X	X									X
I-2-A-Z	US18B	2.00	11565		X		X					X		X	X								X	X									X
I-2-A-ZS	US18BSPK	2.00	12004		X		X					X		X	X								X	X									X
ZZZZZZ	ZZZZZZ	2.00	12025																														
LCSS	US18MB1SPK	2.00	12051		X		X					X		X	X								X	X									X
CCV	CCV2	1.00	12091		X		X					X		X	X								X	X									X
CCB	CCB2	1.00	12131		X		X					X		X	X								X	X									X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/3/2012

SDG: US18 | RUNID: HG050301 METHOD: CVA | END DATE: 5/3/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09170														X																
S0.1	S0.1	1.00	09183														X																
S0.5	S0.5	1.00	09201														X																
S1	S1	1.00	09215														X																
S2	S2	1.00	09232														X																
S5	S5	1.00	09250														X																
S10	S10	1.00	09264														X																
ICV	AICV	1.00	09293														X																
ICB	ICB	1.00	09310														X																
CCV	ACCV1	1.00	09324														X																
CCB	CCB1	1.00	09342														X																
CRA	CRA	1.00	09360														X																
ZZZZZZ	UR61MB1	1.00	09373																														
ZZZZZZ	UR61MB1SPK	1.00	09391																														
ZZZZZZ	UR61A	1.00	09405																														
ZZZZZZ	UR61ADUP	1.00	09422																														
ZZZZZZ	UR61ASPK	1.00	09440																														
ZZZZZZ	UR61B	1.00	09454																														
ZZZZZZ	UR61C	1.00	09471																														
ZZZZZZ	UR61D	1.00	09485																														
ZZZZZZ	UR61E	1.00	09503																														
CCV	ACCV2	1.00	09521														X																
CCB	CCB2	1.00	09535														X																
ZZZZZZ	UR61F	1.00	09553																														
ZZZZZZ	UR61G	1.00	09570																														
ZZZZZZ	US24MB1	1.00	09584																														
ZZZZZZ	US24MB1SPK	1.00	10001																														
ZZZZZZ	US24MB1SPD	1.00	10015																														
ZZZZZZ	US24A	1.00	10032																														
ZZZZZZ	US24ADUP	1.00	10050																														
ZZZZZZ	US24ASPK	1.00	10064																														
PBW	US18MB1	1.00	10082														X																
LCSW	US18MB1SPK	1.00	10095														X																
CCV	ACCV3	1.00	10113														X																
CCB	CCB3	1.00	10131														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/3/2012

SDG: US18 | RUNID: HG050301 METHOD: CVA | END DATE: 5/3/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
I-1-Z	US18A	1.00	10145														X																
I-2-A-Z	US18B	1.00	10163																														
I-2-A-ZD	US18BDUP	1.00	10181																														
I-2-A-ZS	US18BSPK	1.00	10194																														
ZZZZZZ	UR87MB1	1.00	10212																														
ZZZZZZ	UR87MB1SPK	1.00	10230																														
ZZZZZZ	UR87REF1	5.00	10243																														
ZZZZZZ	UR87A	1.00	10261																														
ZZZZZZ	UR87ADUP	1.00	10275																														
ZZZZZZ	UR87ASPK	1.00	10292																														
CCV	ACCV4	1.00	10310														X																
CCB	CCB4	1.00	10324														X																
ZZZZZZ	UR87B	1.00	10342																														
ZZZZZZ	UR87C	1.00	10360																														
ZZZZZZ	UR81MB1	1.00	10374																														
ZZZZZZ	UR81MB1SPK	1.00	10392																														
ZZZZZZ	UR81A	1.00	10405																														
ZZZZZZ	UR81ADUP	1.00	10423																														
ZZZZZZ	UR81ASPK	1.00	10441																														
ZZZZZZ	UR81B	1.00	10454																														
ZZZZZZ	UR81C	1.00	10472																														
ZZZZZZ	UR81D	1.00	10490																														
CCV	ACCV5	1.00	10504														X																
CCB	CCB5	1.00	10522														X																
ZZZZZZ	UR81E	1.00	10540																														
ZZZZZZ	UR81F	1.00	10553																														
ZZZZZZ	UR81G	1.00	10571																														
ZZZZZZ	UR81H	1.00	10585																														
ZZZZZZ	UR81I	1.00	11003																														
ZZZZZZ	UR81J	1.00	11021																														
CCV	ACCV6	1.00	11035														X																
CCB	CCB6	1.00	11053														X																
I-2-A-Z	US18B	2.00	11073														X																
I-2-A-ZD	US18BDUP	2.00	11090														X																
I-2-A-ZS	US18BSPK	2.00	11104														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/3/2012

SDG: US18 | RUNID: HG050301 | METHOD: CVA | END DATE: 5/3/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV7	1.00	11121														X																
CCB	CCB7	1.00	11135														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: UR81, US18

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-03
ARI ID: 12-7392 UR81A

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	37.40
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	34.70
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.20	17.3
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	141	2,610
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	2.90

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR81 : 00259

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-05
ARI ID: 12-7393 UR81B

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	38.30
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	35.30
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.27	19.2
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	134	2,130
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	3.11

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR81 : 88254

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-06
ARI ID: 12-7394 UR81C

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	43.00
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	38.00
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.25	20.1
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	51.8	614
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	2.55

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR81 : 00255

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-02
ARI ID: 12-7395 UR81D

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	40.10
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	38.20
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.24	15.8
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	51.1	997
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	2.45

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-04
ARI ID: 12-7396 UR81E

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	63.80
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	60.10
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.75	30.4
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	81.6	1,210
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	2.10

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR01 : 00257

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-07
ARI ID: 12-7397 UR81F

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	41.30
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	40.10
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.25	19.3
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	24.6	389
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	2.60

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR81 : 00268

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/25/12
Date Received: 04/26/12

Client ID: IJ12-01
ARI ID: 12-7398 UR81G

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	56.60
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	39.20
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.16	11.6
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	50.7	905
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	4.98

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR81 : 08269

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-58A
ARI ID: 12-7399 UR81H

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	38.00
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	33.80
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.24	23.4
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	283	2,630
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	4.31

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR01 : 002 70

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-11
ARI ID: 12-7400 UR81I

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	52.80
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	44.20
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.19	10.8
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	21.5	275
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	2.02

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR81 : 00271

SAMPLE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Client ID: IJ12-08A
ARI ID: 12-7401 UR81J

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	39.40
Preserved Total Solids	04/26/12 042612#1	SM2540B	Percent	0.01	32.40
N-Ammonia	04/30/12 043012#1	EPA 350.1M	mg-N/kg	0.26	18.0
Sulfide	04/30/12 043012#1	EPA 376.2	mg/kg	151	2,090
Total Organic Carbon	05/02/12 050212#1	Plumb,1981	Percent	0.020	3.76

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR81 : 00272

MS/MSD RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: UR81A Client ID: IJ12-03						
N-Ammonia	04/30/12	mg-N/kg	17.3	271	265	95.6%
Sulfide	04/30/12	mg/kg	2,610	3,270	647	102.0%
Sulfide	04/30/12	mg/kg	2,610	3,090	635	75.6%
Total Organic Carbon	05/02/12	Percent	2.90	7.12	3.91	108.0%

REPLICATE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 04/24/12
Date Received: 04/26/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UR81A Client ID: IJ12-03					
Total Solids	04/26/12	Percent	37.40	37.70 37.70	0.5%
Preserved Total Solids	04/26/12	Percent	34.70	34.80	0.3%
N-Ammonia	04/30/12	mg-N/kg	17.3	18.1	4.5%
Sulfide	04/30/12	mg/kg	2,610	2,800 2,830	4.3%
Total Organic Carbon	05/02/12	Percent	2.90	2.72 2.66	4.5%

UR81 : 00274

LAB CONTROL RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Sulfide EPA 376.2	PREP	04/30/12	mg/kg	6.48	5.71	113.5%
Total Organic Carbon Plumb,1981	ICVL	05/02/12	Percent	0.102	0.100	102.0%

UR81 / 08275

METHOD BLANK RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	04/26/12	Percent	< 0.01 U
Preserved Total Solids	04/26/12	Percent	< 0.01 U
N-Ammonia	04/30/12	mg-N/kg	< 0.10 U
Sulfide	04/30/12	mg/kg	< 1.00 U
Total Organic Carbon	05/02/12	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
UR81-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/15/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
N-Ammonia ERA 160510	04/30/12	mg-N/kg	103	100	103.0%
Total Organic Carbon NIST 1941B	05/02/12	Percent	2.79	2.99	93.3%

SAMPLE RESULTS-CONVENTIONALS
US18-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Client ID: I-1-Z
ARI ID: 12-7643 US18A

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/30/12 043012#1	SM2540B	Percent	0.01	59.60
N-Ammonia	05/08/12 050812#1	EPA 350.1M	mg-N/kg	1.66	91.7

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR91 : 00278

SAMPLE RESULTS-CONVENTIONALS
US18-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Client ID: I-2-A-Z
ARI ID: 12-7644 US18B

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/30/12 043012#1	SM2540B	Percent	0.01	51.30
N-Ammonia	05/08/12 050812#1	EPA 350.1M	mg-N/kg	0.97	72.3

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

UR91:00279

MS/MSD RESULTS-CONVENTIONALS
US18-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: US18A Client ID: I-1-Z						
N-Ammonia	05/08/12	mg-N/kg	91.7	256	163	100.6%

URS1 : 00288

REPLICATE RESULTS-CONVENTIONALS
US18-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 09/08/11
Date Received: 09/09/11

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: US18A Client ID: I-1-Z					
Total Solids	04/30/12	Percent	59.60	59.50	0.2%
N-Ammonia	05/08/12	mg-N/kg	91.7	92.2	0.5%

UR01:00291

METHOD BLANK RESULTS-CONVENTIONALS
US18-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	04/30/12	Percent	< 0.01 U
N-Ammonia	05/08/12	mg-N/kg	< 0.10 U

URS1 : 00282

STANDARD REFERENCE RESULTS-CONVENTIONALS
US18-Anchor QEA

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/09/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
N-Ammonia ERA 160510	05/08/12	mg-N/kg	101	100	101.0%

UR81:00203

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: UR81, US18

Anchor QEA, LLC
I&J Waterway RI/FS
090007-01

Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2.00	1.00
IJ12-05	100.0	100.0	100.0	99.3	97.7	96.3	95.2	94.2	92.6	82.3	57.5	43.4	31.9	20.5
	100.0	100.0	99.9	97 3	95.5	94.7	93.9	93.1	91.4	82.3	56.9	42.5	31.3	20.1
	100.0	100.0	100.0	98.3	96.8	96.0	95.4	94.6	91.3	81.9	60.0	43.5	32.0	19.8
IJ12-03	100.0	100.0	100.0	97.7	95.7	94.1	92.7	90.8	87.5	73.4	45.8	33.3	24.8	15.6
IJ12-06	100.0	100.0	100.0	99.2	98.1	97.5	96.9	96.0	93.8	84.6	66.5	46.8	32.7	20.5
IJ12-02	100.0	100.0	99.7	98.7	97.3	96.5	94.6	92.7	90.0	80.4	53.5	38.0	26.8	17.2
IJ12-04	100.0	68.8	51.2	41.9	35.0	28.3	22.8	21.1	18.4	17.1	16.6	11.3	8.5	5.1
IJ12-07	100.0	100.0	99.7	98.5	97.1	96.3	95.2	93.9	91.3	84.0	64.5	45.3	31.9	20.2
IJ12-01	100.0	92.0	83.6	76.2	68.8	55.3	19.5	12.3	10.7	9.0	7.6	5.9	4.2	2.7
IJ12-58A	100.0	100.0	99.8	98.3	96.8	95.2	93.4	90.6	87.0	72.5	46.9	35.9	27.7	18.1
IJ12-11	100.0	100.0	100.0	99.7	98.8	95.0	79.1	72.0	66.5	59.9	46.4	33.7	24.0	16.0
IJ12-08A	100.0	99.1	98.8	97.1	95.3	93.6	91.7	88.8	78.4	58.0	36.9	28.1	22.1	14.6

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

UR81

Anchor QEA, LLC
I&J Waterway RI/FS
090007-01

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15 6	15 6-7.8	7 8-3.9	3 9-2.0	2.0-1 0	<1.0	<230 (<62)
IJ12-05	0.0	0.7	1.6	1.5	1.1	1.0	1.6	10.3	24.8	14.1	11.5	11.5	20.5	94.2
	0.1	2.6	1.8	0.8	0.7	0.8	1.8	9.0	25.4	14.4	11.2	11.2	20.1	93.1
	0.0	1.7	1.5	0.8	0.6	0.8	3.3	9.4	21.9	16.5	11.5	12.1	19.8	94.6
IJ12-03	0.0	2.3	2.1	1.6	1.5	1.8	3.3	14.1	27.7	12.5	8.5	9.1	15.6	90.8
IJ12-06	0.0	0.8	1.0	0.6	0.6	0.9	2.2	9.2	18.1	19.7	14.1	12.2	20.5	96.0
IJ12-02	0.3	1.0	1.4	0.9	1.9	1.9	2.6	9.6	26.9	15.5	11.2	9.6	17.2	92.7
IJ12-04	48.8	9.2	6.9	6.8	5.4	1.7	2.7	1.3	0.5	5.2	2.9	3.4	5.1	21.1
IJ12-07	0.3	1.2	1.4	0.9	1.0	1.3	2.7	7.2	19.5	19.3	13.4	11.7	20.2	93.9
IJ12-01	16.4	7.4	7 4	13.5	35.8	7.2	1.6	1.7	1.5	1.7	1.7	1.5	2.7	12.3
IJ12-58A	0.2	1.4	1.5	1.6	1.8	2.8	3.6	14.5	25.6	11.0	8.2	9.7	18.1	90.6
IJ12-11	0.0	0.3	0.9	3.8	15.9	7.1	5.4	6.6	13.6	12.7	9.7	8.1	16.0	72.0
IJ12-08A	1.2	1.7	1.8	1.8	1.9	2.9	10.3	20.5	21.0	8.8	6.0	7.5	14.6	88.8

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

QA SUMMARY

Client.	Anchor QEA, LLC	Client Project No.	I&J Waterway RI/FS
		Client Project:	090007-01
ARI Trip. Sample ID:	UR81 B	Batch No :	UR81-1
Client Trip. Sample ID:	IJ12-05	Page:	1 of 1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
IJ12-05	100.0	100 0	100.0	99 3	97.7	96.3	95 2	94.2	92.6	82.3	57.5	43 4	31.9	20.5
	100.0	100.0	99.9	97.3	95.5	94 7	93 9	93.1	91.4	82.3	56 9	42.5	31.3	20.1
	100 0	100.0	100.0	98.3	96.8	96.0	95 4	94.6	91.3	81.9	60.0	43.5	32.0	19.8
AVE	NA	100.00	99 96	98.29	96 66	95.63	94.84	93.98	91.74	82.20	58.14	43.13	31 75	20.15
STDEV	NA	0.00	0.08	0.99	1.11	0 85	0.78	0.77	0.71	0.22	1.64	0.52	0.35	0.31
%RSD	NA	0.00	0.08	1.01	1.15	0.89	0.82	0.82	0 78	0.27	2.83	1.21	1.11	1.54

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	QA Ratio (95-105)	Data Qualifiers	Pipette Portion (5.0-25.0g)
IJ12-05	4/24/2012	5/9/2012	5/14/2012	95.8		12.4
	4/24/2012	5/9/2012	5/14/2012	97.6		13.1
	4/24/2012	5/9/2012	5/14/2012	95.7		12.4
IJ12-03	4/24/2012	5/2/2012	5/8/2012	97.2		13.1
IJ12-06	4/24/2012	5/2/2012	5/8/2012	97.0		13.7
IJ12-02	4/24/2012	5/2/2012	5/8/2012	97 5		12.8
IJ12-04	4/24/2012	5/2/2012	5/8/2012	102.6		12.9
IJ12-07	4/24/2012	5/2/2012	5/8/2012	97 4		14.0
IJ12-01	4/24/2012	5/2/2012	5/8/2012	99 1		6.3
IJ12-58A	4/24/2012	5/2/2012	5/8/2012	99 1		14.5
IJ12-11	4/24/2012	5/2/2012	5/8/2012	99 2		11.8
IJ12-08A	4/24/2012	5/2/2012	5/8/2012	96.9		16.8

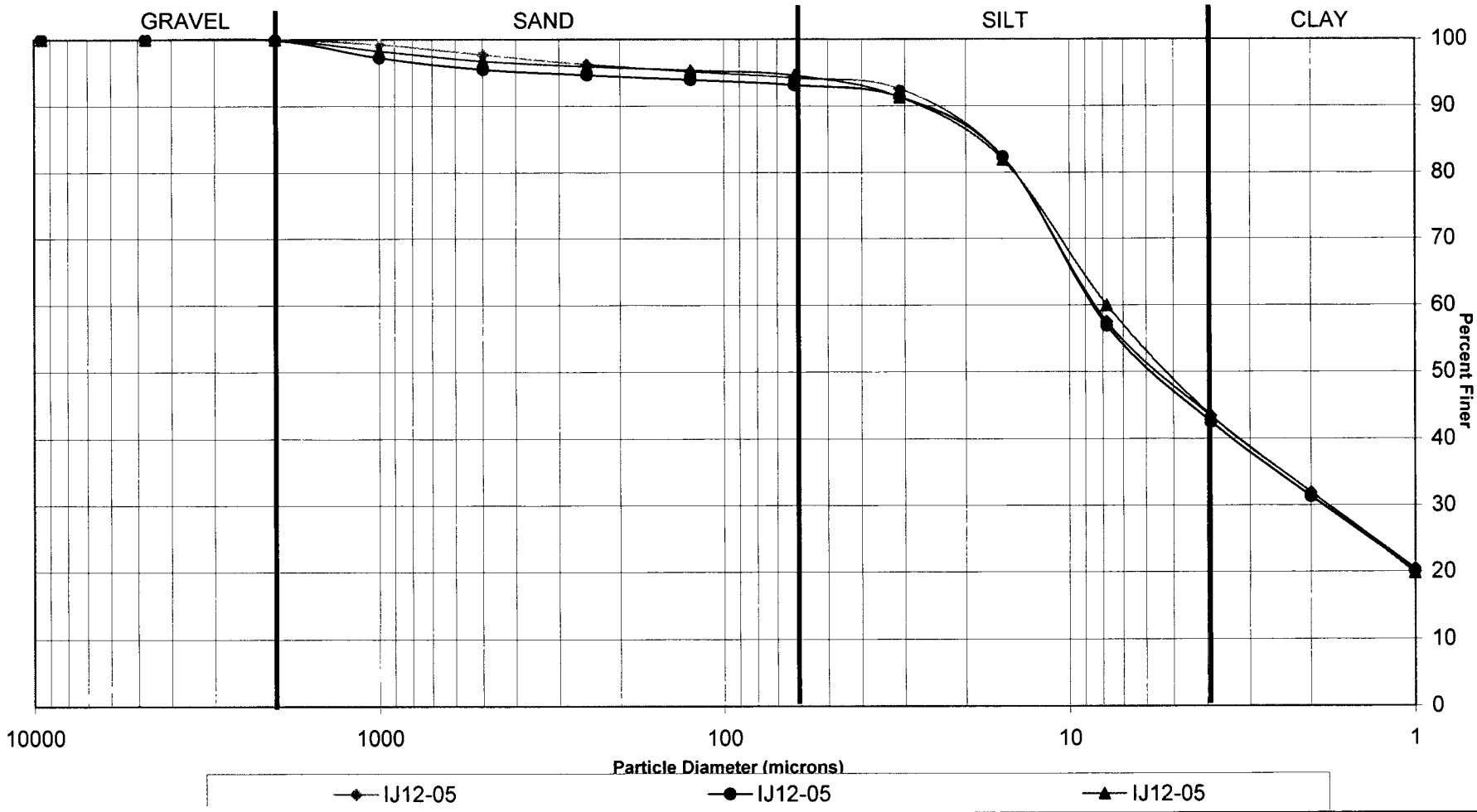
* ARI Internal QA limits = 95-105%

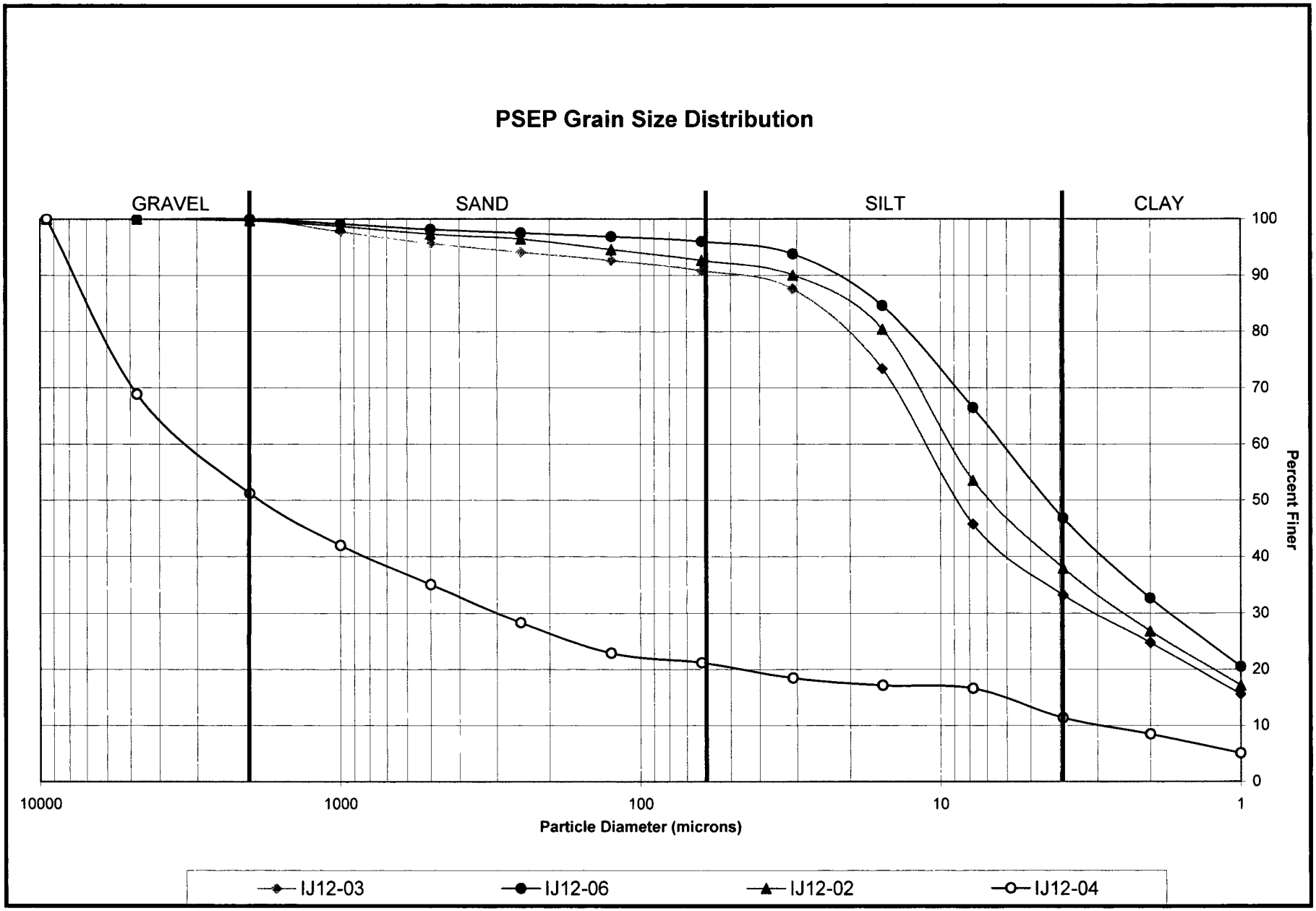
Notes to the Testing:

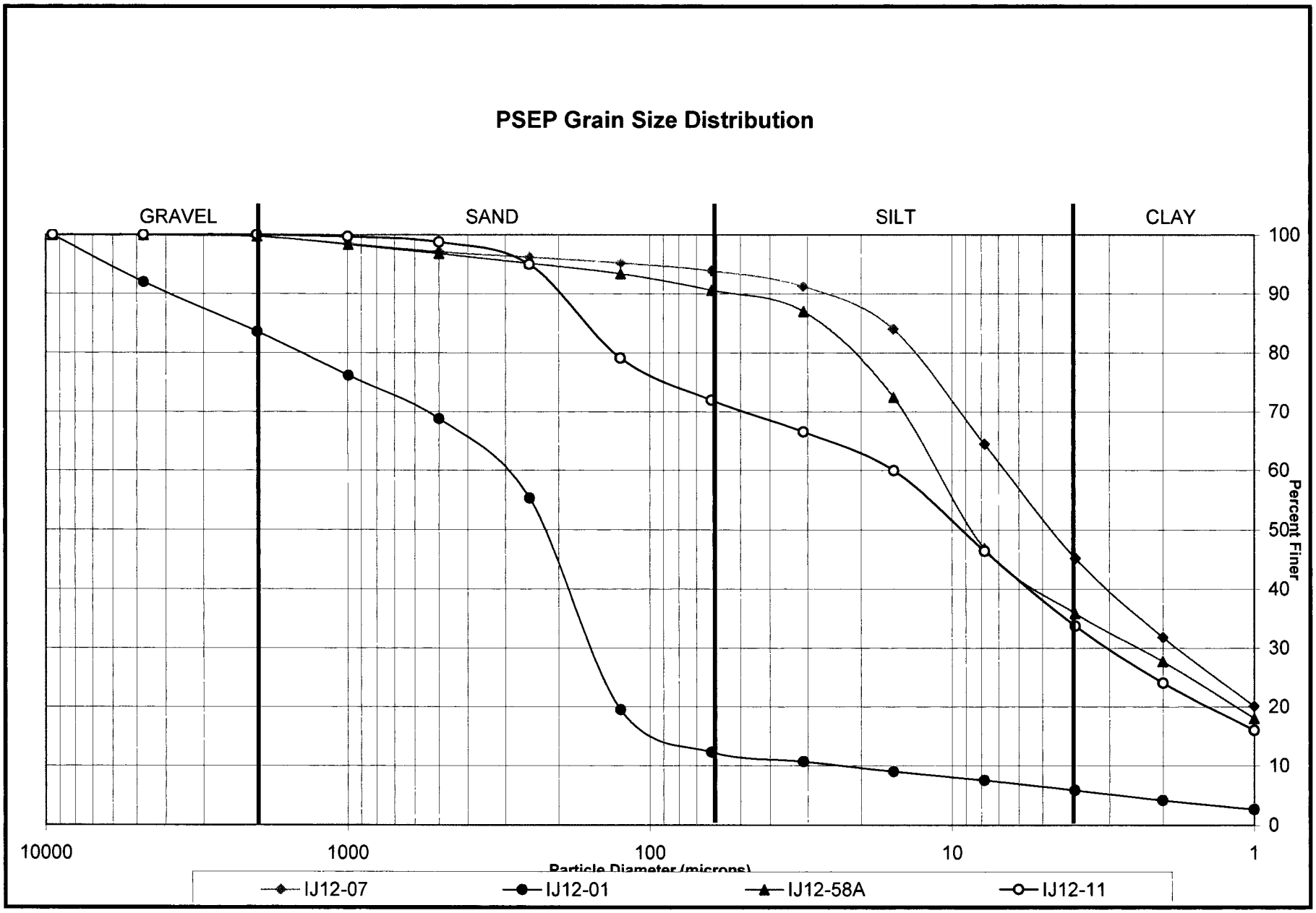
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution See narrative for discussion of the testing.

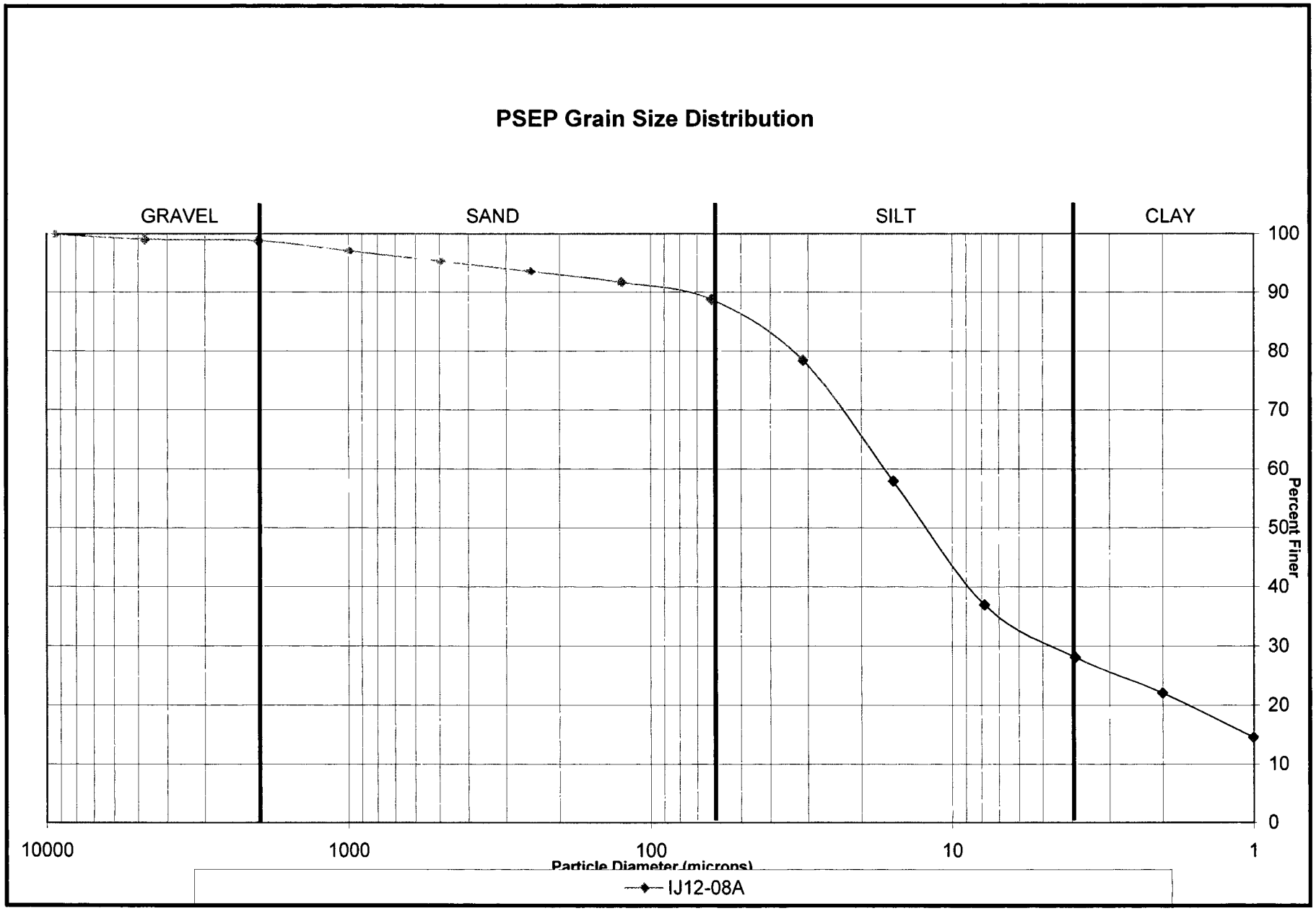
PSEP Grain Size Distribution

Triplicate Sample Plot




PSEP Grain Size Distribution
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
IJ12-03
IJ12-06
IJ12-02
IJ12-04


PSEP Grain Size Distribution
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
IJ12-07
IJ12-01
IJ12-58A
IJ12-11


PSEP Grain Size Distribution
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
IJ12-08A

Anchor QEA, LLC
I&J Waterway RI/FS
090007-01

Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2 00	1.00
IJ12-05	100.0	100.0	100.0	99.3	97.7	96.3	95.2	94.2	92.6	82.3	57.5	43.4	31.9	20.5
	100.0	100.0	99.9	97.3	95.5	94.7	93.9	93.1	91.4	82.3	56.9	42.5	31.3	20.1
	100.0	100.0	100.0	98.3	96.8	96.0	95.4	94.6	91.3	81.9	60.0	43.5	32.0	19.8
I-1-Z	100.0	99.7	99.3	98.7	97.7	93.3	75.6	60.8	49.4	40.6	31.5	22.8	16.8	11.6
I-2-A-Z	100.0	100.0	99.6	98.6	97.6	95.5	86.9	80.9	76.0	68.1	52.4	36.3	25.2	16.7

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

Anchor QEA, LLC
I&J Waterway RI/FS
090007-01

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31 0	31 0-15 6	15.6-7.8	7 8-3 9	3 9-2.0	2 0-1 0	<1 0	<230 (<62)
IJ12-05	0.0	0.7	1.6	1.5	1.1	1.0	1.6	10.3	24.8	14.1	11.5	11.5	20.5	94.2
	0.1	2.6	1.8	0.8	0.7	0.8	1.8	9.0	25.4	14.4	11.2	11.2	20.1	93.1
	0.0	1.7	1.5	0.8	0.6	0.8	3.3	9.4	21.9	16.5	11.5	12.1	19.8	94.6
I-1-Z	0 7	0.6	1.0	4.4	17.7	14.8	11.4	8.8	9.1	8.7	6.0	5.2	11.6	60.8
I-2-A-Z	0.4	1.0	1.0	2.2	8.6	6.1	4.9	7.8	15.8	16.1	11.1	8.5	16.7	80.9

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

QA SUMMARY

Client	Anchor QEA, LLC	Client Project No :	I&J Waterway RI/FS
		Client Project:	090007-01
ARI Trip Sample ID.	UR81 B	Batch No.:	US18-1
Client Trip. Sample ID:	IJ12-05	Page.	1 of 1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
IJ12-05	100.0	100 0	100.0	99.3	97 7	96.3	95.2	94 2	92.6	82 3	57.5	43.4	31.9	20.5
	100.0	100 0	99.9	97.3	95 5	94 7	93 9	93.1	91 4	82.3	56.9	42 5	31.3	20.1
	100.0	100.0	100 0	98.3	96.8	96.0	95.4	94.6	91.3	81.9	60.0	43.5	32.0	19.8
AVE	NA	100.00	99.96	98.29	96.66	95.63	94.84	93.98	91.74	82.20	58.14	43.13	31 75	20.15
STDEV	NA	0.00	0 08	0.99	1.11	0.85	0 78	0.77	0 71	0.22	1.64	0.52	0.35	0.31
%RSD	NA	0.00	0.08	1.01	1.15	0.89	0.82	0 82	0.78	0 27	2.83	1.21	1 11	1.54

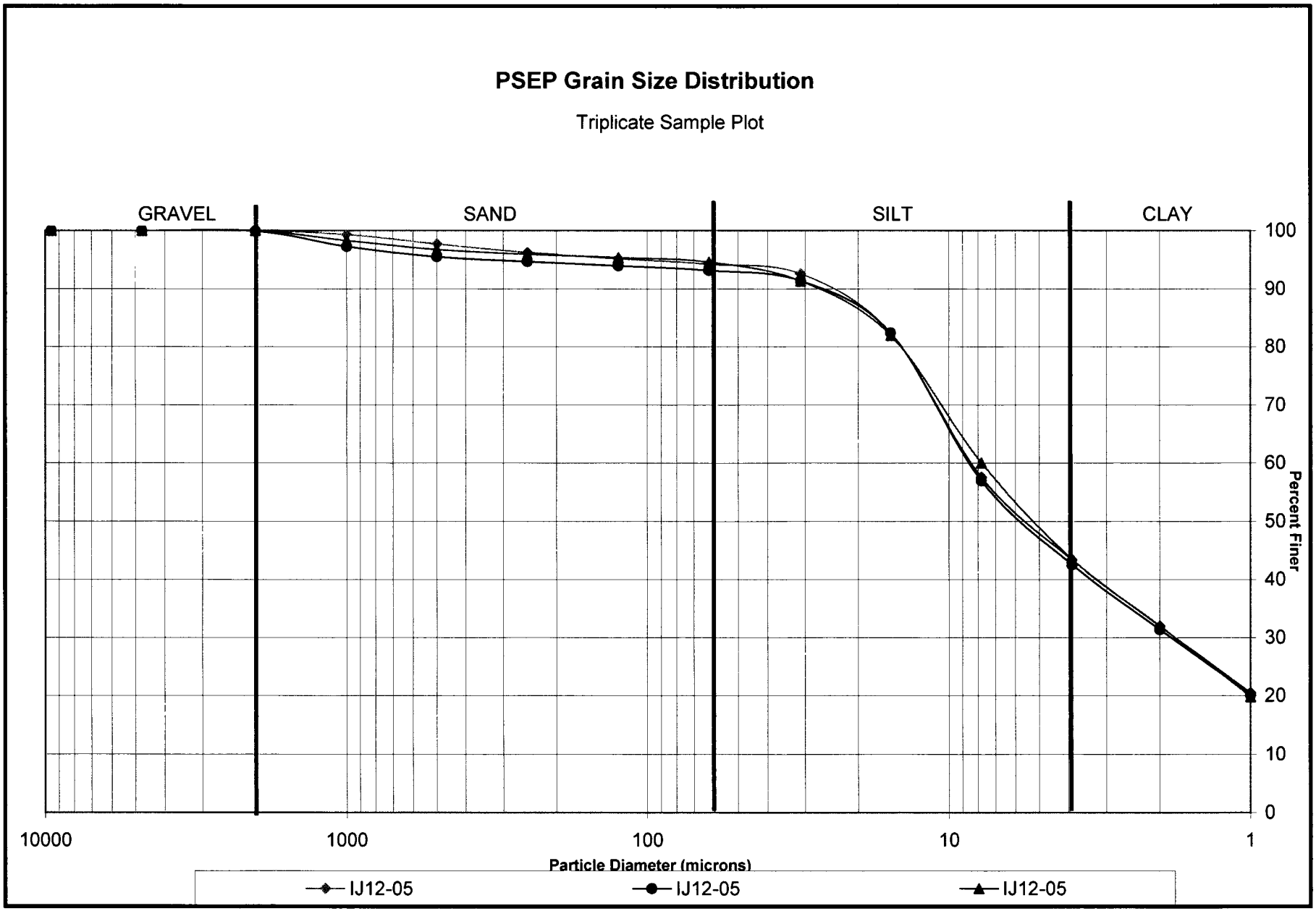
The Triplicate Applies To The Following Samples

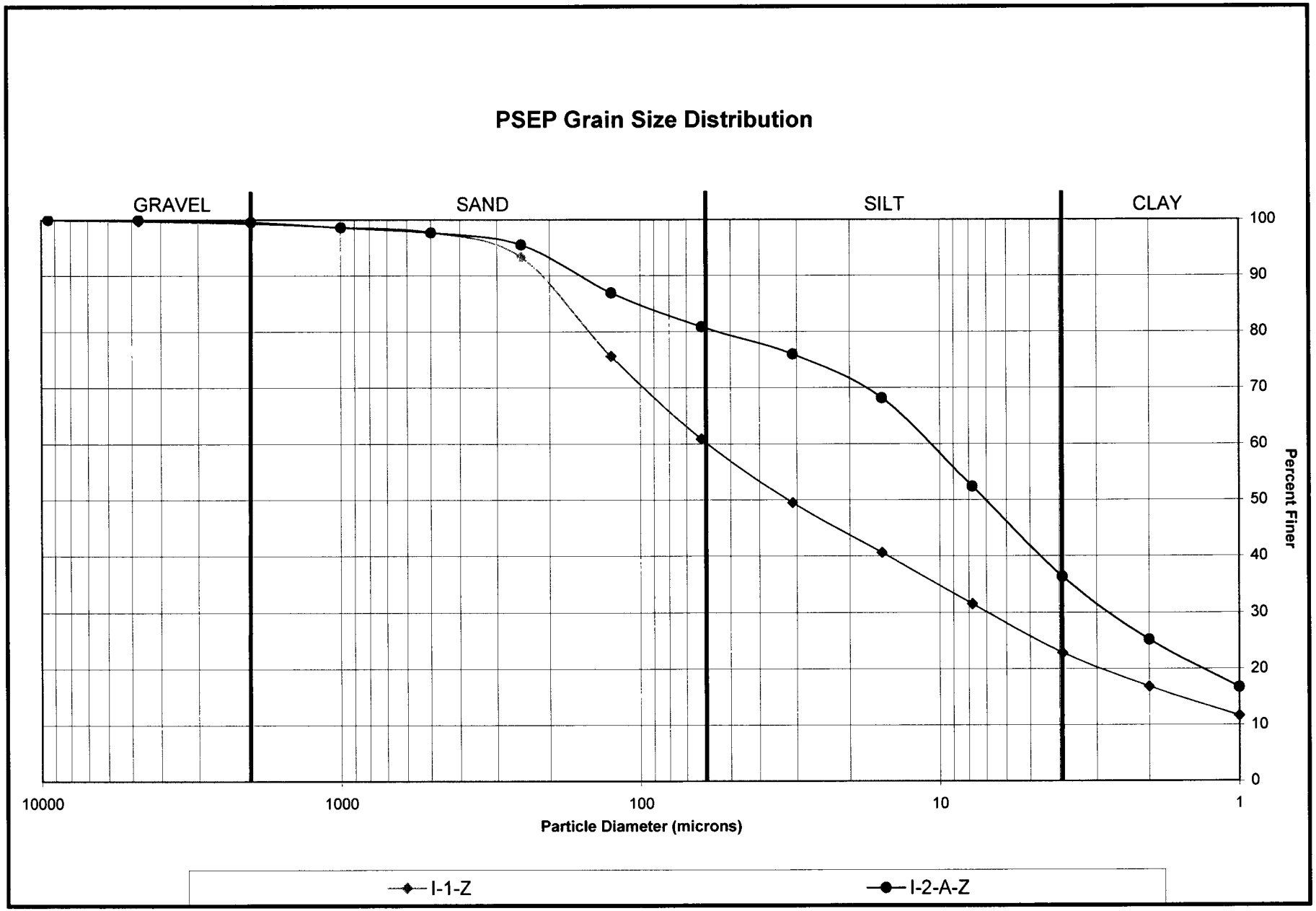
Client ID	Date Sampled	Date Extracted	Date Complete	QA Ratio (95-105)	Data Qualifiers	Pipette Portion (5.0-25.0g)
IJ12-05	4/24/2012	5/9/2012	5/14/2012	95.8		12.4
	4/24/2012	5/9/2012	5/14/2012	97.6		13 1
	4/24/2012	5/9/2012	5/14/2012	95.7		12.4
I-1-Z	9/8/2012	5/3/2012	5/8/2012	99.0	F	21 1
I-2-A-Z	9/8/2012	5/3/2012	5/8/2012	98.6	F	17.3

* ARI Internal QA limits = 95-105%

Notes to the Testing:

1 Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.


PSEP Grain Size Distribution
Triplicate Sample Plot
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
IJ12-05
IJ12-05
IJ12-05


PSEP Grain Size Distribution
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
I-1-Z
I-2-A-Z

Total Solids

ARI Job ID: UR81, US18

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 4/27/12

Worklist: 6086
Analyst: JBH
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	UR81A	10.00	40.7	24.57
2.	UR81B	10.00	40.5	24.69
3.	UR81C	10.00	44.4	22.52
4.	UR81D	10.00	42.8	23.36
5.	UR81E	10.00	64.3	15.55
6.	UR81F	10.00	43.9	22.78
7.	UR81G	10.00	61.4	16.29
8.	UR81H	10.00	40.3	24.81
9.	UR81I	10.00	53.1	18.83
10.	UR81J	10.00	41.5	24.10

UR81.00290

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 5/ 2/12

Worklist: 6872
Analyst: JBH
Comments:

ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1. US18B	10.00	51.2	19.53

UR01 00159

Extractions Total Solids-extts
Data By: Susan Rodriguez
Created: 4/26/12

Worklist: 5638
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UR81A 12-7392 IJ12-03	1.12	13.15	6.02	40.7	NR
2.	UR81B 12-7393 IJ12-05	1.15	11.77	5.45	40.5	NR
3.	UR81C 12-7394 IJ12-06	1.14	11.85	5.90	44.4	NR
4.	UR81D 12-7395 IJ12-02	1.13	11.36	5.51	42.8	NR
5.	UR81E 12-7396 IJ12-04	1.14	11.55	7.83	64.3	NR
6.	UR81F 12-7397 IJ12-07	1.14	12.12	5.96	43.9	NR
7.	UR81G 12-7398 IJ12-01	1.13	12.53	8.13	61.4	NR
8.	UR81H 12-7399 IJ12-58A	1.11	11.91	5.46	40.3	NR
9.	UR81I 12-7400 IJ12-11	1.13	12.10	6.95	53.1	NR
10.	UR81J 12-7401 IJ12-08A	1.15	11.79	5.57	41.5	NR

UR81 : 000308

Extractions Total Solids-extts
Data By: Susan Rodriguez
Created: 4/26/12

Worklist: 5638
Analyst: SR
Comments:

Oven ID: Ø15

Balance ID: B139298ØØ2

Samples In: Date: 4/26/12 Time: 2Ø:3Ø Temp: 1Ø3 Analyst: SR

Samples Out: Date: 4/27/12 Time: 08:55 Temp: 96° Analyst: RR

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UR81A 12-7392 IJ12-03	1.12	13.15	6.Ø2		NR
2.	UR81B 12-7393 IJ12-05	1.15	11.77	5.45		NR
3.	UR81C 12-7394 IJ12-06	1.14	11.85	5.9Ø		NR
4.	UR81D 12-7395 IJ12-02	1.13	11.36	5.51		NR
5.	UR81E 12-7396 IJ12-04	1.14	11.55	7.83		NR
6.	UR81F 12-7397 IJ12-07	1.14	12.12	5.96		NR
7.	UR81G 12-7398 IJ12-01	1.13	12.53	8.13		NR
8.	UR81H 12-7399 IJ12-58A	1.11	11.91	5.46		NR
9.	UR81I 12-7400 IJ12-11	1.13	12.1Ø	6.95		NR
10.	UR81J 12-7401 IJ12-08A	1.15	11.79	5.57		NR

UR81 : 00301

Solids Data Entry Report Checked by: KM Date: 5/01/12
Date: 05/01/12 Data Analyst: DM

Solids Determination performed on 04/30/12 by DM

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
UR81	A	IJ12-03	1.000	10.826	4.753	38.19
UR81	B	IJ12-03	0.990	10.041	4.235	35.85
UR81	C	IJ12-03	0.991	10.021	4.951	43.85
UR81	D	IJ12-03	0.987	10.405	4.678	39.19
UR81	E	IJ12-03	0.999	10.875	6.555	56.26
UR81	F	IJ12-03	1.003	10.524	5.289	45.02
UR81	G	IJ12-03	0.974	10.048	5.715	52.25
UR81	H	IJ12-03	0.990	10.779	4.622	37.10
UR81	I	IJ12-03	1.011	10.664	6.137	53.10
UR81	J	IJ12-03	0.984	10.326	4.559	38.27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 Balance ID: 068755

Samples in Oven: Date: 4-30-12 Time: 0940 Temp: 104°c Analyst: DM

Removed from Oven: Date: 5-01-12 Time: 0655 Temp: 105°c Analyst: DM

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
UR87 A	1.013	10.198	7.811	–	✓
UR87 B	1.010	10.211	6.688	–	✓
UR87 C	0.984	10.264	8.333	–	✓
UR81 A	1.000	10.826	4.753	–	✓
UR81 B	0.990	10.041	4.235	–	✓
UR81 C	0.991	10.021	4.951	–	✓
UR81 D	0.987	10.405	4.678	–	✓
UR81 E	0.999	10.875	6.555	–	✓
UR81 F	1.003	10.524	5.289	–	✓
UR81 G	0.974	10.048	5.715	–	✓
UR81 H	0.990	10.779	4.622	–	✓
UR81 I	1.011	10.664	6.137	–	✓
UR81 J	0.984	10.326	4.559	–	✓
		4-30-12 DM			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

UR81 : 00303

Solids Data Entry Report
Date: 05/03/12

Checked by: KM Date: 5/04/12
Data Analyst: DM

Solids Determination performed on 04/30/12 by KE

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
US18	A	I-1-Z	1.126	7.451	4.893	59.56
US18	B	I-1-Z	1.104	7.075	4.164	51.25

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 4/30/2012

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE / CDE 17:14

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: 62790918520

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
4/30/2012 17:14	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
5/1/2012 11:00	date/time out	CDE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	17.8			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	4/30/12 16:24	4/30/12 15:54	5/1/12 11:19					5/1/12 12:26	5/1/12 13:33			
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000					10.0000	10.0000			
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*					*Cal OK!*	*Cal OK!*			

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank		0.0000	1.1077	1.1076			0.00		1.1075	1.1075	OK	0.00		
UR87 A4		6.5713	1.0906	4.9150			3.82	**69.8%**	4.8231	4.8156	OK	3.73	**25,991**	2.60%
UR87 A4 dup		6.9652	1.0966	5.2582			4.16	**70.9%**	5.1502	5.1429	OK	4.05	**27,706**	2.77%
							RPD =	1.61%				RPD =	6.39%	
UR87 A4 trp		6.3645	1.1220	5.0385			3.92	**74.7%**	4.9576	4.9511	OK	3.83	**22,316**	2.23%
							RSD =	3.59%				RSD =	10.87%	
UR87 B4		6.7483	1.0941	4.4668			3.37	**59.6%**	4.2866	4.2801	OK	3.19	**55,356**	5.54%
UR87 C4		7.7135	1.0816	6.7318			5.65	**85.2%**	6.6563	6.6501	OK	5.57	**14,460**	1.45%
US18 A1		7.4516	1.1260	4.8939			3.77	**59.6%**						
US18 A1 dup		7.0929	1.1090	4.6715			3.56	**59.5%**						
							RPD =	0.05%				RPD =	NA	
US18 B1		7.0752	1.1041	4.1643			3.06	**51.3%**						
US24 A1		7.4854	1.0775	4.7983			3.72	**58.1%**						
US24 A1 dup		7.1359	1.0668	4.4103			3.34	**55.1%**						
							RPD =	5.26%				RPD =	NA	
US24 A1 trp		7.6849	1.0993	4.8024			3.70	**56.2%**						
							RSD =	2.66%				RSD =	NA	

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8270 BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (6.7-20ppb)

ARI Job No(s) UR81, US18 Page 1 of 2 Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID NL 5/2/12 Analyst/Date
	UR81 MBS	10.00g	(1:1) Y/N WW 5/4/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave NL 5/2/12 Analyst/Date
	SBS	10.00g	(1:1) Y/N SP 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	SBS Dup.	10.00g	(1:1) Y/N SP 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C YL 05/03/12 Analyst/Date
	QLS	10.00g	(1:1) Y/N SP 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	QLS (SIM)	10.00g	(1:1) Y/N SP 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3 SP 5/4/12 Analyst/Date
4	A	25.26	(1:1) Y/N WW 5/4/12	1mL	1mL		
4	B	25.26	(1:1) Y/N	1mL	1mL		GPC Prep Filter (1:1) SP 5/4/12 Analyst/Date
4	C	23.08	(1:1) Y/N	1mL	1mL		
4	D	24.24	(1:1) Y/N	1mL	1mL		
4	E	16.06	(1:1) Y/N	1mL	1mL		Post GPC KD 80-85°C YL 5/7/12 Analyst/Date
4	Ems	16.07	(1:1) Y/N SP 5/7/12	1mL	1mL		
4	Emso	16.05	(1:1) Y/N SP 5/7/12	1mL	1mL		
4	F	23.04	(1:1) Y/N WW 5/4/12	1mL	1mL		TurboVap 1 2 3 CJZ 5/8/12 Analyst/Date
4	G	17.32	(1:1) Y/N	1mL	1mL		
Analyst/Date	NL 5/2/12						

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (1953-4)	100/150µg/mL	50µL	7/5/12	NL	SP
Full List Spike (Freezer)	7 (1926-2)	100µg/mL	50µL	5/31/12	NL	SP
Base Spike	56 (1952-3)	200µg/mL	50µL	8/14/12	NL	SP
Acid Spike	38 (1926-3)	100/150µg/mL	50µL	6/19/12	NL	SP
QLS Spike (14 in Freezer)	14 (1901-1)	100/200µg/mL	20µL	6/21/12	NL	SP
SIM QLS Spike (Freezer)	25 (1901-1)	1µg/mL	50µL	6/21/12	NL	SP

Extraction Time: 1620 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD ~~(small~~ or large drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8270 BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (6.7-20ppb)

ARI Job No(s) UR81, US18 Page 2 of 2 Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID NL 5/2/12 Analyst/Date
	~~MBS~~	10.00g	(1:1) ~~Y / N~~	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	Microwave NL 5/2/12 Analyst/Date
	~~SBS~~	10.00g	(1:1) ~~Y / N~~	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~SBS Dup.~~	~~10.00g~~	(1:1) Y / N	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C YL 05/03/12 Analyst/Date
	~~QLS~~	~~10.00g~~	(1:1) Y / N	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1)~~ Y / N	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 2 3 SP 5/4/12 Analyst/Date
4	UR81 H	25.26	(1:1) Y / N 5/4/12	1mL	1mL		
4	I	19.25	(1:1) Y / N	1mL	1mL		GPC Prep Filter (1:1) SP 5/4/12 Analyst/Date
4	J	25.02	(1:1) Y / N	1mL	1mL		
1	US18 A	17.17	(1:1) Y / N	1mL	1mL		
1	B	20.34	(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C YL 5/7/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 CJZ 5/8/12
			(1:1) Y / N	1mL	1mL		
Analyst/Date		NL 5/2/12	5/4/12				CJZ 5/12/ Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (1953-4)	100/150µg/mL	50µL	7/5/12 SP 5/4/12	NL	SP
~~Full List Spike (Freezer)~~	~~7 ( )~~	~~100µg/mL~~	~~50µL~~			
~~Base Spike~~	~~56( )~~	~~200µg/mL~~	~~50µL~~			
~~Acid Spike~~	~~38( )~~	~~100/150µg/mL~~	~~50µL~~			
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			

Extraction Time: 1020 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small or large drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: UR81

Client ID: Anchor QEA, LLC

Parameter: 8AN / Sim SVOA

Client Project: I + J waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B, C, D, F, G, H, I, J	SR 4/26/12
☒ Standing Water Decanted (Not shared)= A, B, C, D, F, H, I, J	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? (E = 90% wet sed + 10% 1/2" rocks)	
☒ Organics (Leaves/sticks/grass)= (G = 2:1 Stick)	
☒ Oily, obvious fuel/sulfur odors= J	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: US18

Client ID: Anchor QEA

Parameter: BAN/SIM SVOA

Client Project: I+J WATERWAY RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B. YL 5/4/12	YL 05/01/12
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= A	YL 05/01/12
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

Semivolatile Raw Data
Initial Calibration

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Initial Calibration Notes GC/MS SVOA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 5/7/12 Internal Standard ID 1875-1 Expiration 7/5/12

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal acceptable?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	1949-2	12/19/12	Ultra	1941-1	7/27/12
	1950-1	10/31/12		1940-1	7/27/12
	1891-2	6/1/12		1932-2	7/6/12
	1892-2	7/5/12			

Detail problems, corrective actions and/or other pertinent information below:

2.4 Dinitrophenol > quadratic fit.
Benzidine

low point dropped: 2.4 Dinitrophenol
3.3 Dichlorobenzidine.

ICV. Fluorene, Aniline, Benzidine, 3.3 Dichlorobenzidine above 30%.

Analyst: YZ **Date:** 5/8/12

Reviewer: VB **Date:** 5/8/12

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/7/12 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN2 Column No: 227 815 Column Type: ZB 5ms 1

Instrument Tune (.U or .CT.): 112164 EM Voltage: 1800

Calibration File: DF0507 Curve Date: 05/07/12 Injection Vol.: 1ul

IS/SS	Ical/Ccal		LCS/ICV
1875-1	1949-2	1991-2	1941-1
	1950-1	1992-1	1940-1
			1932-2

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120507.b

	Time	Filename	LabID	ClientId	DF																
1	1408	df0507 d	DFTPP	DFTPP	1	NO ISTDS FOUND															
2	1423	ic0507a d	IC05075		1	9 02	271872	11 70	1080694	15 60	623821	18 87	999143	23 93	1001009	26 40	988348	25 02	1489422		
3	1500	ic0507b d	IC050720		1	9 03	261601	11 70	1031384	15 60	592596	18 88	932792	23 95	938299	26 42	924741	25 04	1449615		
4	1537	ic0507c.d	IC05070.2		1	9 02	290963	11 70	1116412	15 60	616538	18 87	1004135	23 93	961783	26 40	907090	25 03	1368840		
5	1614	ic0507d d	IC05071		1	9 02	267494	11 70	1039639	15 60	578567	18.87	941083	23 93	920261	26 40	869327	25 03	1290725		
6	1651	ic0507e d	IC05072.5		1	9 03	260163	11 70	1019393	15 60	587432	18.88	938980	23 94	928173	26 40	888753	25 03	1328197		
7	1805	ic0507g d	IC050710		1	9 03	262977	11 70	1024870	15 61	584705	18 89	922785	23.95	922357	26 42	891396	25 04	1365026		
8	1919	ic0507i d	IC05070 5		1	9 03	262594	11 71	1026680	15 61	571733	18 89	928522	23.95	884937	26 42	831396	25 05	1210585		
9	1956	icv0507 d	ICV0507		1	9.03	302517	11 71	1183775	15 62	659708	18 89	1065389	23 96	1051898	26 43	1010350	25 05	1531587		
10	2033	ur87mb d	UR87MBS1	UR87MBS1	1	9 03	245767	11 71	977153	15 62	536304	18 89	893503	23 96	832829	26 43	722796	25 05	1151183		
11	2111	ur87sb d	UR87LCSS1	UR87LCSS1	1	9 04	251864	11 71	991986	15 63	549746	18 89	882921	23 96	886036	26 43	796234	25 06	1245614		
12	0129	ur87qls d	UR87QLS		1	9 04	247096	11 71	969230	15 63	534211	18 90	855455	23 96	842259	25 06	1289220	26.43	789555		
13	2147	ur87srm d	UR87SRM1	SQ-1	1	9 04	265295	11 71	1060224	15 62	586343	18 89	917363	23 96	885956	26 43	810979	25 05	1321955		
14	2224	ur87a d	UR87A	MD1_0-4	1	9 04	262804	11 71	1027448	15 63	553549	18 90	878247	23 96	870433	26 43	857419	25 06	1313114		
15	2301	ur87ams.d	UR87AMS	MD1_0-4 MS	1	9 04	249398	11 72	973903	15 63	539268	18 90	860308	23.97	858878	26 44	846973	25.06	1305308		
16	2338	ur87amsd.d	UR87AMSD	MD1_0-4 MSD	1	9 04	213765	11 72	844196	15 63	469983	18.90	724739	23 96	745506	26 44	733209	25 06	1120192		
17	0015	ur87b d	UR87B	MD2_0-4	1	9 04	263986	11 72	1045594	15 63	564557	18 90	901838	23 96	893377	26 44	850360	25 06	1373816		
18	0052	ur87c.d	UR87C	MD3_0-4	1	9 04	262725	11 72	1029734	15 63	569641	18 90	918215	23 96	881818	26 44	880119	25 06	1324143		

YZ 5/9/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20120507.b

ARI Job No.: IC05 Method: ABN.m Instrument: nt10.i Date: 07-MAY-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1423	ic0507a.d	IC05075		1	2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene,
1500	ic0507b.d	IC050720		1	Benzoic acid, 2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene,
1537	ic0507c.d	IC05070.2		1	Benzoic acid, 2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, Total Benzofluoranthenes,
1614	ic0507d.d	IC05071		1	2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene,
1651	ic0507e.d	IC05072.5		1	2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene,
1805	ic0507g.d	IC050710		1	2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene,
1919	ic0507i.d	IC05070.5		1	2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene,

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/ABN.m
Batch File: /chem1/nt10.i/20120507.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0507a	ic0507b	ic0507c	ic0507d	ic0507e	ic0507g	ic0507i
INJ.DATE:	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012
INJ.TIME:	14:23	15:00	15:37	16:14	16:51	18:05	19:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.652	6.659	6.659	6.660	6.659	6.659	6.667	6.652	3.652-9.652	6.659	0.004
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.620	15.620-21.620	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.672	5.673-11.672	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.599	14.599-20.599	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.120	18.120-24.120	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.015	16.015-22.015	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.090	17.090-23.090	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.317	16.317-22.317	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.482	20.482-26.482	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.348	16.348-22.348	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.090	17.090-23.090	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.967	16.967-22.967	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.790	4.790-10.790	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.914	12.914-18.914	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 YZ Date: 5/8/12
Reviewer 2 VD Date: 5/8/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/ABN.m
Batch File: /chem1/nt10.i/20120507.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.767	12.767-18.767	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	25.025	25.040	25.032	25.032	25.032	25.040	25.048	25.025	22.025-28.025	25.036	0.008
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.397	12.397-18.397	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.799	8.799-14.799	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/ABN.m
Batch File: /chem1/nt10.i/20120507.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.308	7.308-13.308	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.541	10.541-16.541	+++++	+++++
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.644	15.644-21.644	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.283	18.283-24.283	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.750	13.750-19.750	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.520	15.520-21.520	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.732	13.732-19.732	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.438	11.438-17.438	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	11.368-17.368	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.164	17.180	17.164	17.165	17.164	17.172	17.172	17.164	14.164-20.164	17.169	0.006
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.564	13.564-19.564	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.525	11.525-17.525	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.680	11.680-17.680	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.829	12.829-18.829	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.599	9.599-15.599	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.574	10.574-16.574	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.605	10.605-16.605	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.261	8.261-14.261	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/ABN.m
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Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.231	6.231-12.231	+++++	+++++
105 1-methylnaphthalene	13.491	13.498	13.491	13.491	13.491	13.499	13.506	13.491	10.491-16.491	13.495	0.006
151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.466	24.466-30.466	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.712	22.712-28.712	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.505	24.505-30.505	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.783	23.783-29.783	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.451	24.451-30.451	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.952	21.952-27.952	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.480	22.480-28.480	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.346	17.346-23.346	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	8.375	8.390	8.375	8.375	8.375	8.390	8.383	8.375	5.375-11.375	8.380	0.007
3 Phenol	8.398	8.413	8.398	8.398	8.398	8.414	8.406	8.398	5.398-11.398	8.404	0.007
4 Bis(2-Chloroethyl)ethe	8.560	8.576	8.568	8.560	8.568	8.576	8.568	8.560	5.560-11.560	8.568	0.006
$ 5 2-Chlorophenol-d4	8.638	8.645	8.637	8.638	8.637	8.645	8.645	8.638	5.638-11.638	8.641	0.004

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/ABN.m
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Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.668	8.676	8.668	8.669	8.668	8.676	8.676	8.668	5.668-11.668	8.672	0.004
	7 1,3-Dichlorobenzene	8.955	8.962	8.955	8.955	8.955	8.963	8.962	8.955	5.955-11.955	8.958	0.004
*	8 1,4-Dichlorobenzene-d4	9.025	9.032	9.025	9.025	9.032	9.032	9.032	9.025	6.025-12.025	9.029	0.004
	9 1,4-Dichlorobenzene	9.056	9.063	9.056	9.056	9.063	9.063	9.071	9.056	6.056-12.056	9.061	0.006
$	10 1,2-Dichlorobenzene-d4	9.413	9.420	9.413	9.413	9.413	9.420	9.420	9.413	6.413-12.413	9.416	0.004
	11 Benzyl alcohol	9.335	9.343	9.335	9.335	9.335	9.343	9.343	9.335	6.335-12.335	9.338	0.004
	12 1,2-Dichlorobenzene	9.436	9.444	9.436	9.436	9.444	9.444	9.451	9.436	6.436-12.436	9.441	0.006
	13 2-Methylphenol	9.591	9.607	9.599	9.591	9.599	9.607	9.607	9.591	6.591-12.591	9.600	0.007
	14 2,2'-oxybis(1-Chloropr	9.669	9.677	9.669	9.669	9.669	9.677	9.677	9.669	6.669-12.669	9.672	0.004
	15 4-Methylphenol	9.886	9.909	9.886	9.886	9.894	9.902	9.902	9.886	6.886-12.886	9.895	0.009
	16 N-Nitroso-di-n-propyla	9.941	9.964	9.940	9.941	9.948	9.956	9.948	9.941	6.941-12.941	9.948	0.009
	17 Hexachloroethane	10.073	10.072	10.072	10.073	10.072	10.080	10.088	10.073	7.073-13.073	10.076	0.006
$	18 Nitrobenzene-d5	10.204	10.220	10.204	10.204	10.212	10.212	10.220	10.204	7.204-13.204	10.211	0.007
	19 Nitrobenzene	10.243	10.259	10.243	10.243	10.251	10.251	10.259	10.243	7.243-13.243	10.250	0.007
	20 Isophorone	10.732	10.755	10.732	10.732	10.732	10.748	10.740	10.732	7.732-13.732	10.739	0.009
	21 2-Nitrophenol	10.925	10.933	10.925	10.925	10.925	10.933	10.933	10.925	7.925-13.925	10.929	0.004
	22 2,4-Dimethylphenol	11.018	11.025	11.018	11.018	11.018	11.026	11.025	11.018	8.018-14.018	11.021	0.004
	23 Bis(2-Chloroethoxy)met	11.226	11.233	11.226	11.226	11.226	11.234	11.233	11.226	8.226-14.226	11.229	0.004
	24 Benzoic acid	11.272	11.441	11.118	11.164	11.218	11.357	11.149	11.272	8.272-14.272	11.246	0.119
	25 2,4-Dichlorophenol	11.418	11.426	11.418	11.419	11.418	11.426	11.426	11.418	8.418-14.418	11.422	0.004
	26 1,2,4-Trichlorobenzene	11.611	11.619	11.611	11.611	11.619	11.619	11.619	11.611	8.611-14.611	11.616	0.004
*	27 Naphthalene-d8	11.696	11.704	11.696	11.696	11.704	11.704	11.712	11.696	8.696-14.696	11.702	0.006
	28 Naphthalene	11.743	11.750	11.742	11.743	11.742	11.750	11.750	11.743	8.743-14.743	11.746	0.004
	29 4-Chloroaniline	11.905	11.920	11.905	11.905	11.905	11.912	11.912	11.905	8.905-14.905	11.909	0.006

Analytical Resources, Inc.
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Method File: /chem1/nt10.i/20120507.b/ABN.m
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Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
30 Hexachlorobutadiene	12.152	12.160	12.152	12.152	12.160	12.160	12.167	12.152	9.152-15.152	12.158	0.006
31 4-Chloro-3-methylpheno	12.965	12.980	12.964	12.965	12.972	12.980	12.980	12.965	9.965-15.965	12.972	0.008
32 2-Methylnaphthalene	13.251	13.259	13.251	13.251	13.259	13.259	13.266	13.251	10.251-16.251	13.256	0.006
33 Hexachlorocyclopentadi	13.770	13.769	13.769	13.770	13.769	13.777	13.785	13.770	10.770-16.770	13.773	0.006
34 2,4,6-Trichlorophenol	13.940	13.947	13.940	13.940	13.940	13.948	13.947	13.940	10.940-16.940	13.943	0.004
35 2,4,5-Trichlorophenol	14.009	14.025	14.009	14.009	14.017	14.025	14.025	14.009	11.009-17.009	14.017	0.008
$ 36 2-Fluorobiphenyl	14.118	14.125	14.118	14.118	14.118	14.126	14.133	14.118	11.118-17.118	14.122	0.006
37 2-Chloronaphthalene	14.319	14.334	14.319	14.319	14.327	14.334	14.334	14.319	11.319-17.319	14.327	0.008
38 2-Nitroaniline	14.621	14.636	14.621	14.621	14.621	14.636	14.628	14.621	11.621-17.621	14.626	0.007
39 Dimethylphthalate	15.116	15.131	15.116	15.116	15.116	15.132	15.124	15.116	12.116-18.116	15.122	0.007
40 Acenaphthylene	15.255	15.263	15.255	15.256	15.255	15.263	15.271	15.255	12.255-18.255	15.260	0.006
41 2,6-Dinitrotoluene	15.248	15.271	15.248	15.248	15.255	15.263	15.263	15.248	12.248-18.248	15.257	0.009
* 42 Acenaphthene-d10	15.604	15.603	15.603	15.604	15.603	15.611	15.611	15.604	12.604-18.604	15.606	0.004
43 3-Nitroaniline	15.549	15.572	15.542	15.542	15.549	15.565	15.557	15.549	12.549-18.549	15.554	0.012
44 Acenaphthene	15.673	15.681	15.673	15.673	15.673	15.681	15.681	15.673	12.673-18.673	15.676	0.004
45 2,4-Dinitrophenol	15.774	15.804	15.766	15.774	15.774	15.797	15.781	15.774	12.774-18.774	15.781	0.014
46 Dibenzofuran	16.029	16.044	16.029	16.029	16.029	16.036	16.044	16.029	13.029-19.029	16.034	0.007
47 4-Nitrophenol	15.921	15.951	15.920	15.921	15.920	15.944	15.936	15.921	12.921-18.921	15.930	0.013
48 2,4-Dinitrotoluene	16.121	16.145	16.114	16.114	16.121	16.137	16.129	16.121	13.121-19.121	16.126	0.012
49 Fluorene	16.794	16.809	16.794	16.802	16.802	16.810	16.809	16.794	13.794-19.794	16.803	0.007
50 Diethylphthalate	16.701	16.732	16.701	16.701	16.701	16.725	16.717	16.701	13.701-19.701	16.711	0.013
51 4-Chlorophenyl-phenyle	16.817	16.825	16.817	16.817	16.817	16.825	16.833	16.817	13.817-19.817	16.822	0.006
52 4-Nitroaniline	16.918	16.964	16.910	16.910	16.918	16.949	16.925	16.918	13.918-19.918	16.928	0.021
53 4,6-Dinitro-2-methylph	17.026	17.056	17.018	17.018	17.026	17.049	17.033	17.026	14.026-20.026	17.032	0.015

Analytical Resources, Inc.
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Method File: /chem1/nt10.i/20120507.b/ABN.m
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Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
54 N-Nitrosodiphenylamine	17.087	17.110	17.087	17.087	17.087	17.103	17.103	17.087	14.087-20.087	17.095	0.010
$ 55 2,4,6-Tribromophenol	17.373	17.388	17.380	17.373	17.380	17.388	17.396	17.373	14.373-20.373	17.383	0.009
56 4-Bromophenyl-phenylet	17.897	17.905	17.905	17.897	17.905	17.905	17.912	17.897	14.897-20.897	17.904	0.005
57 Hexachlorobenzene	18.214	18.229	18.221	18.214	18.221	18.229	18.229	18.214	15.214-21.214	18.222	0.007
58 Pentachlorophenol	18.609	18.624	18.609	18.609	18.609	18.624	18.624	18.609	15.609-21.609	18.615	0.008
* 59 Phenanthrene-d10	18.872	18.879	18.872	18.872	18.879	18.887	18.887	18.872	15.872-21.872	18.878	0.007
60 Phenanthrene	18.918	18.933	18.926	18.926	18.926	18.934	18.933	18.918	15.918-21.918	18.928	0.006
61 Anthracene	19.019	19.034	19.019	19.019	19.019	19.026	19.034	19.019	16.019-22.019	19.024	0.007
62 Carbazole	19.375	19.382	19.374	19.375	19.375	19.382	19.390	19.375	16.375-22.375	19.379	0.006
63 Di-n-butylphthalate	20.233	20.249	20.241	20.241	20.241	20.249	20.256	20.233	17.233-23.233	20.244	0.008
64 Fluoranthene	21.332	21.340	21.332	21.332	21.332	21.340	21.347	21.332	18.332-24.332	21.336	0.006
65 Pyrene	21.742	21.757	21.750	21.750	21.750	21.758	21.765	21.742	18.742-24.742	21.753	0.008
$ 66 Terphenyl-d14	22.067	22.075	22.067	22.067	22.075	22.075	22.082	22.067	19.067-25.067	22.073	0.006
67 Butylbenzylphthalate	23.012	23.019	23.011	23.012	23.019	23.019	23.027	23.012	20.012-26.012	23.017	0.006
68 Benzo(a)anthracene	23.902	23.917	23.910	23.910	23.910	23.918	23.925	23.902	20.902-26.902	23.913	0.008
* 69 Chrysene-d12	23.933	23.948	23.933	23.933	23.941	23.949	23.948	23.933	20.933-26.933	23.941	0.008
70 3,3'-Dichlorobenzidine	23.887	23.902	23.887	23.887	23.887	23.894	23.902	23.887	20.887-26.887	23.892	0.007
71 Chrysene	23.980	23.995	23.979	23.980	23.979	23.987	23.995	23.980	20.980-26.980	23.985	0.007
72 bis(2-Ethylhexyl)phtha	24.049	24.057	24.057	24.057	24.057	24.065	24.072	24.049	21.049-27.049	24.059	0.007
73 Di-n-octylphthalate	25.040	25.048	25.040	25.040	25.040	25.048	25.055	25.040	22.040-28.040	25.045	0.006
74 Benzo(b)fluoranthene	25.714	25.729	25.706	25.706	25.714	25.721	25.729	25.714	22.714-28.714	25.717	0.010
75 Benzo(k)fluoranthene	25.745	25.768	25.752	25.752	25.752	25.760	25.768	25.745	22.745-28.745	25.757	0.009
187 Total Benzofluoranthen	25.745	25.768	25.706	25.706	25.752	25.760	25.768	25.745	22.745-28.745	25.743	0.027
76 Benzo(a)pyrene	26.294	26.317	26.294	26.294	26.302	26.310	26.310	26.294	23.294-29.294	26.303	0.009

Analytical Resources, Inc.
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Method File: /chem1/nt10.i/20120507.b/ABN.m
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Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.403	26.418	26.403	26.403	26.403	26.418	26.418	26.403	23.403-29.403	26.409	0.008
	78 Indeno(1,2,3-cd)pyrene	28.773	28.820	28.773	28.781	28.781	28.804	28.804	28.773	25.773-31.773	28.791	0.018
	79 Dibenzo(a,h)anthracene	28.804	28.835	28.804	28.804	28.812	28.828	28.827	28.804	25.804-31.804	28.816	0.013
	80 Benzo(g,h,i)perylene	29.465	29.511	29.464	29.465	29.472	29.503	29.495	29.465	26.465-32.465	29.482	0.020
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.358	4.381	4.366	4.358	4.358	4.374	4.358	4.358	1.358-7.358	4.365	0.009
	91 Aniline	8.444	8.468	8.452	8.452	8.452	8.460	8.460	8.444	5.444-11.444	8.455	0.007
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.587	21.603	21.595	21.587	21.595	21.603	21.603	21.587	18.587-24.587	21.596	0.007
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.036	17.036-23.036	+++++	+++++
	99 Perylene	26.449	26.472	26.449	26.449	26.457	26.465	26.472	26.449	23.449-29.449	26.459	0.011
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.805	22.805-28.805	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.967	22.967-28.967	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.366	4.374	4.389	4.374	4.374	4.366	4.381	4.366	1.366-7.366	4.375	0.008

Analytical Resources, Inc.

Average

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Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 10:38 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20120507.b/ic0507c.d
Level 2: /chem1/nt10.i/20120507.b/ic0507i.d
Level 3: /chem1/nt10.i/20120507.b/ic0507d.d
Level 4: /chem1/nt10.i/20120507.b/ic0507e.d
Level 5: /chem1/nt10.i/20120507.b/ic0507a.d
Level 6: /chem1/nt10.i/20120507.b/ic0507g.d
Level 7: /chem1/nt10.i/20120507.b/ic0507b.d

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
116 Dibutyl Phenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.28427 / 1.09482	1.26223	1.26664	1.17761	1.09973	1.14827	AVRG		1.19051		6.77884	
110 Tetrachloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.71373	0.69976	0.72177	0.69896	0.69264	0.68133						
	0.68164						AVRG		0.69855		2.17788	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
163 1,2,3,5,8-Pentachloronaphthal	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
3 Phenol	1.93530 1.73428	1.95429	1.98041	1.89133	1.80737	1.75145	AVRG		1.86492		5.37240
4 Bis(2-Chloroethyl)ether	1.39901 1.23767	1.43927	1.44317	1.34227	1.28792	1.27011	AVRG		1.34563		6.20523

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
6 2-Chlorophenol	1.69472	1.71172	1.70384	1.62867	1.58538	1.55808	1.53916	AVRG		1.63165		4.45599
7 1,3-Dichlorobenzene	1.77906	1.73585	1.75569	1.64464	1.59742	1.50709	1.48795	AVRG		1.64396		7.21526
9 1,4-Dichlorobenzene	1.70475	1.64439	1.72340	1.58621	1.56916	1.46398	1.48076	AVRG		1.59609		6.36509
11 Benzyl alcohol	0.87784	0.87128	0.91954	0.87313	0.86819	0.83788	0.83569	AVRG		0.86908		3.23195
12 1,2-Dichlorobenzene	1.62103	1.67727	1.60691	1.56590	1.52541	1.42411	1.42552	AVRG		1.54945		6.27282
13 2-Methylphenol	1.49833	1.51906	1.53020	1.48305	1.43933	1.41337	1.39075	AVRG		1.46773		3.66864
14 2,2'-oxybis(1-Chloropropane)	0.52708	0.53202	0.53248	0.49131	0.47998	0.47172	0.46890	AVRG		0.50050		5.79924

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.57951	1.54599	1.63265	1.55448	1.51234	1.45672					
	1.43094						AVRG		1.53038		4.56913
16 N-Nitroso-di-n-propylamine	0.93201	0.90125	0.89868	0.85906	0.80828	0.80058					
	0.77606						AVRG		0.85370		6.98891
17 Hexachloroethane	0.62035	0.65561	0.65343	0.62705	0.60696	0.59121					
	0.60395						AVRG		0.62265		3.95723
19 Nitrobenzene	0.34172	0.35889	0.36207	0.34334	0.32725	0.33039					
	0.31876						AVRG		0.34035		4.74244
20 Isophorone	0.66681	0.62693	0.65931	0.72457	0.69564	0.71302					
	0.68952						AVRG		0.68226		4.93238
21 2-Nitrophenol	0.22030	0.20730	0.22908	0.22734	0.22607	0.22509					
	0.22665						AVRG		0.22312		3.35687
22 2,4-Dimethylphenol	0.37821	0.37597	0.38360	0.35504	0.34032	0.33041					
	0.32274						AVRG		0.35518		6.95144

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.41014	0.40652	0.40223	0.37777	0.36284	0.36940					
	0.36120						AVRG		0.38430		5.56205
24 Benzoic acid	0.19206	0.22801	0.27889	0.29684	0.29964	0.31124					
	0.32165						AVRG		0.27548		17.33006
25 2,4-Dichlorophenol	0.32880	0.32211	0.33769	0.35687	0.35112	0.30663					
	0.29364						AVRG		0.32812		6.96554
26 1,2,4-Trichlorobenzene	0.34589	0.34900	0.34652	0.32021	0.31376	0.29869					
	0.29758						AVRG		0.32452		6.96716
28 Naphthalene	1.06962	1.02839	1.04427	0.99636	0.95870	0.95006					
	0.94516						AVRG		0.99894		4.97607
29 4-Chloroaniline	0.43164	0.42705	0.44999	0.47780	0.47491	0.43387					
	0.43121						AVRG		0.44664		4.82862
30 Hexachlorobutadiene	0.19226	0.18034	0.18982	0.17518	0.17405	0.16786					
	0.16644						AVRG		0.17799		5.65706

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
31 4-Chloro-3-methylphenol	0.29522	0.29836	0.31548	0.31096	0.30370	0.31753					
	0.31596						AVRG		0.30817		2.94236
32 2-Methylnaphthalene	0.70802	0.68994	0.70526	0.68221	0.67294	0.66812					
	0.66901						AVRG		0.68507		2.42699
33 Hexachlorocyclopentadiene	+++++	0.34797	0.38843	0.38116	0.39293	0.38882					
	0.40443						AVRG		0.38396		5.00499
34 2,4,6-Trichlorophenol	0.42648	0.40876	0.44234	0.41858	0.41365	0.41351					
	0.41825						AVRG		0.42022		2.66827
35 2,4,5-Trichlorophenol	0.46528	0.46124	0.49563	0.46074	0.47012	0.44963					
	0.45916						AVRG		0.46597		3.11045
37 2-Chloronaphthalene	1.26763	1.20973	1.24226	1.15199	1.14462	1.12824					
	1.14312						AVRG		1.18394		4.67798
38 2-Nitroaniline	0.27773	0.27813	0.28761	0.27805	0.26614	0.27747					
	0.27285						AVRG		0.27685		2.33469

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
39 Dimethylphthalate	1.36949	1.25015	1.33617	1.21189	1.16640	1.11419					
	1.09637						AVRG		1.22066		8.60295
40 Acenaphthylene	1.93312	1.79902	1.90820	1.73260	1.70376	1.67720					
	1.65562						AVRG		1.77279		6.26333
41 2,6-Dinitrotoluene	0.37957	0.37240	0.41869	0.39493	0.39445	0.38991					
	0.39231						AVRG		0.39175		3.71325
43 3-Nitroaniline	0.33159	0.32937	0.36061	0.30917	0.30702	0.32688					
	0.32962						AVRG		0.32775		5.39536
44 Acenaphthene	1.12003	1.08735	1.11915	1.03791	1.01490	1.01120					
	1.01637						AVRG		1.05813		4.66710
45 2,4-Dinitrophenol	+++++	0.14060	0.20442	0.22551	0.24726	0.25407					
	0.26156						AVRG		0.22224		20.30137 <-
46 Dibenzofuran	1.66261	1.61586	1.67534	1.54074	1.51861	1.51149					
	1.49908						AVRG		1.57482		4.74920

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47 4-Nitrophenol	0.12131	0.13876	0.15754	0.15313	0.14905	0.15628					
	0.15212						AVRG		0.14688		8.75826
48 2,4-Dinitrotoluene	0.60107	0.57977	0.61036	0.55492	0.53622	0.53405					
	0.52440						AVRG		0.56297		6.10380
49 Fluorene	1.27866	1.23301	1.28676	1.19409	1.15187	1.14191					
	1.12368						AVRG		1.20142		5.51486
50 Diethylphthalate	1.24972	1.21662	1.26170	1.15540	1.13377	1.08936					
	1.07085						AVRG		1.16820		6.51673
51 4-Chlorophenyl-phenylether	0.64937	0.74064	0.64243	0.67922	0.57091	0.66686					
	0.63768						AVRG		0.65530		7.78645
52 4-Nitroaniline	0.36139	0.31195	0.33245	0.31390	0.31157	0.33484					
	0.35979						AVRG		0.33227		6.49067
53 4,6-Dinitro-2-methylphenol	0.13952	0.15204	0.18255	0.18131	0.18475	0.18660					
	0.19069						AVRG		0.17392		11.38019

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	20 Level 7										
54 N-Nitrosodiphenylamine	0.54797	0.53645	0.56997	0.51394	0.49406	0.47470					
	0.46731						AVRG		0.51491		7.48286
56 4-Bromophenyl-phenylether	0.20545	0.20604	0.22326	0.20870	0.21053	0.20636					
	0.21320						AVRG		0.21051		2.97902
57 Hexachlorobenzene	0.26490	0.25485	0.25352	0.24134	0.23606	0.22707					
	0.22474						AVRG		0.24321		6.20969
58 Pentachlorophenol	0.14925	0.15324	0.18107	0.17497	0.17700	0.17186					
	0.17573						AVRG		0.16902		7.39414
60 Phenanthrene	1.03396	1.00195	1.05396	0.96110	0.95119	0.95650					
	0.96556						AVRG		0.98917		4.17284
61 Anthracene	1.09430	1.02782	1.07267	1.05246	1.01754	1.01520					
	1.02890						AVRG		1.04413		2.88451
62 Carbazole	1.05518	1.00138	1.03798	0.83718	0.73162	0.83770					
	0.94933						AVRG		0.92148		13.20051

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.27341	1.18426	1.30822	1.26270	1.29178	1.32749					
	1.34250						AVRG		1.28434		4.07997
64 Fluoranthene	1.13698	1.05989	1.18010	1.11747	1.12116	1.12131					
	1.14442						AVRG		1.12590		3.21795
65 Pyrene	1.27149	1.21303	1.27591	1.19631	1.15955	1.17211					
	1.17311						AVRG		1.20879		3.94636
67 Butylbenzylphthalate	0.55740	0.49454	0.54687	0.50852	0.50061	0.50043					
	0.49345						AVRG		0.51455		5.11498
68 Benzo(a)anthracene	1.19628	1.10406	1.13626	1.07258	1.03009	1.02214					
	1.03188						AVRG		1.08475		5.98806
70 3,3'-Dichlorobenzidine	+++++	0.51844	0.47987	0.36520	0.33994	0.34929					
	0.44390						AVRG		0.41611		18.03769
71 Chrysene	1.04531	0.97800	1.00302	0.95871	0.92437	0.93814					
	0.93075						AVRG		0.96833		4.53528

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 10:38 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
72 bis(2-Ethylhexyl)phthalate	0.55201	0.53842	0.54662	0.51224	0.48883	0.50749					
	0.49512						AVRG		0.52011		4.88951
73 Di-n-octylphthalate	1.07330	1.00312	0.99889	0.93081	0.88310	0.89635					
	0.87863						AVRG		0.95203		7.81370
74 Benzo(b)fluoranthene	1.18663	1.08389	1.15775	1.03973	1.12163	1.13217					
	1.08523						AVRG		1.11529		4.45540
75 Benzo(k)fluoranthene	1.21099	1.16848	1.24092	1.22575	1.08701	1.10544					
	1.13512						AVRG		1.16767		5.19228
187 Total Benzofluoranthenes	1.15318	1.09800	1.14055	1.07185	1.04487	1.05749					
	1.05200						AVRG		1.08828		4.01542
76 Benzo(a)pyrene	0.99051	0.95490	0.99863	0.95299	0.95079	0.97126					
	0.98289						AVRG		0.97171		2.00354
78 Indeno(1,2,3-cd)pyrene	1.11515	1.02181	1.13049	1.10167	1.09674	1.12338					
	1.15052						AVRG		1.10568		3.72156

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Cal Date : 08-May-2012 10:38 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.82925 0.89736	0.79005	0.87490	0.84471	0.84399	0.86796	AVRG		0.84975		4.09740
80 Benzo(g,h,i)perylene	0.96531 0.99199	0.88880	1.00046	0.93863	0.93675	0.96976	AVRG		0.95596		3.99161
90 N-Nitrosodimethylamine	0.84908 0.73389	0.89135	0.86867	0.82847	0.79479	0.77037	AVRG		0.81952		6.84653
91 Aniline	4.14073 3.52891	4.19330	4.15353	3.83064	3.73304	3.62761	AVRG		3.88682		7.05862
92 1,2-Diphenylhydrazine	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
93 Benzidine	0.47369 0.56524	0.40045	0.38230	0.26656	0.23002	0.37059	AVRG		0.38412		29.84373 <-
96 p-Cymene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
99 Perylene	1.03547	0.99304	1.04188	0.98630	0.95133	0.97449						
	0.98371						AVRG		0.99517		3.27395	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.71724	0.75123	0.73776	0.71027	0.66739	0.66675						
	0.65710						AVRG		0.70110		5.35395	

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Cal Date : 08-May-2012 10:38 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 1 2-Fluorophenol	1.43613	1.40695	1.44706	1.38132	1.34375	1.29047					
	1.27262						AVRG		1.36833		5.01750
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00 <-
$ 2 Phenol-d5	1.71713	1.73183	1.73255	1.69926	1.69554	1.66069					
	1.67308						AVRG		1.70144		1.63484
$ 5 2-Chlorophenol-d4	1.53085	1.49405	1.52543	1.48569	1.46106	1.40370					
	1.40688						AVRG		1.47252		3.50846
$ 10 1,2-Dichlorobenzene-d4	1.08337	1.03481	1.04258	0.99840	0.96728	0.92425					
	0.93388						AVRG		0.99780		5.94673
18 Nitrobenzene-d5	0.35594	0.34825	0.36216	0.34251	0.32649	0.33357					
	0.32506						AVRG		0.34200		4.20158
$ 36 2-Fluorobiphenyl	1.48627	1.39483	1.45898	1.34079	1.30843	1.28850					
	1.27352						AVRG		1.36447		6.16345

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Cal Date : 08-May-2012 10:38 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 55 2,4,6-Tribromophenol	0.17443	0.17908	0.19607	0.18010	0.18720	0.18139					
	0.18632						AVRG		0.18351		3.83776
$ 66 Terphenyl-d14	0.85200	0.78761	0.81852	0.74899	0.71186	0.69644					
	0.69048						AVRG		0.75799		8.33233
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

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Method file : /chem1/nt10.i/20120507.b/ABN.m
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Quadratic

Calibration File Names:
Level 1: /chem1/nt10.i/20120507.b/ic0507c.d
Level 2: /chem1/nt10.i/20120507.b/ic0507i.d
Level 3: /chem1/nt10.i/20120507.b/ic0507d.d
Level 4: /chem1/nt10.i/20120507.b/ic0507e.d
Level 5: /chem1/nt10.i/20120507.b/ic0507a.d
Level 6: /chem1/nt10.i/20120507.b/ic0507g.d
Level 7: /chem1/nt10.i/20120507.b/ic0507b.d

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
116 Dibutyl Phenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.28427 / 1.09482	1.26223	1.26664	1.17761	1.09973	1.14827	AVRG		1.19051		6.77884	
110 Tetrachloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++ +++++	+++++	+++++	+++++	+++++	+++++						
105 1-methylnaphthalene	0.71373 0.68164	0.69976	0.72177	0.69896	0.69264	0.68133	AVRG		0.000e+00		0.000e+00	<-
151 1,2,4,5-Tetrachlorobenzene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.69855		2.17788	
152 Benzo(e)pyrene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
153 Chlorpyrifos	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
							AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++					
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
3 Phenol	1.93530	1.95429	1.98041	1.89133	1.80737	1.75145	1.73428	AVRG		0.000e+00		0.000e+00
4 Bis(2-Chloroethyl)ether	1.39901	1.43927	1.44317	1.34227	1.28792	1.27011	1.23767	AVRG		1.86492		5.37240
								AVRG		1.34563		6.20523

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.69472	1.71172	1.70384	1.62867	1.58538	1.55808					
	1.53916						AVRG		1.63165		4.45599
7 1,3-Dichlorobenzene	1.77906	1.73585	1.75569	1.64464	1.59742	1.50709					
	1.48795						AVRG		1.64396		7.21526
9 1,4-Dichlorobenzene	1.70475	1.64439	1.72340	1.58621	1.56916	1.46398					
	1.48076						AVRG		1.59609		6.36509
11 Benzyl alcohol	0.87784	0.87128	0.91954	0.87313	0.86819	0.83788					
	0.83569						AVRG		0.86908		3.23195
12 1,2-Dichlorobenzene	1.62103	1.67727	1.60691	1.56590	1.52541	1.42411					
	1.42552						AVRG		1.54945		6.27282
13 2-Methylphenol	1.49833	1.51906	1.53020	1.48305	1.43933	1.41337					
	1.39075						AVRG		1.46773		3.66864
14 2,2'-oxybis(1-Chloropropane)	0.52708	0.53202	0.53248	0.49131	0.47998	0.47172					
	0.46890						AVRG		0.50050		5.79924

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.57951	1.54599	1.63265	1.55448	1.51234	1.45672					
	1.43094						AVRG		1.53038		4.56913
16 N-Nitroso-di-n-propylamine	0.93201	0.90125	0.89868	0.85906	0.80828	0.80058					
	0.77606						AVRG		0.85370		6.98891
17 Hexachloroethane	0.62035	0.65561	0.65343	0.62705	0.60696	0.59121					
	0.60395						AVRG		0.62265		3.95723
19 Nitrobenzene	0.34172	0.35889	0.36207	0.34334	0.32725	0.33039					
	0.31876						AVRG		0.34035		4.74244
20 Isophorone	0.66681	0.62693	0.65931	0.72457	0.69564	0.71302					
	0.68952						AVRG		0.68226		4.93238
21 2-Nitrophenol	0.22030	0.20730	0.22908	0.22734	0.22607	0.22509					
	0.22665						AVRG		0.22312		3.35687
22 2,4-Dimethylphenol	0.37821	0.37597	0.38360	0.35504	0.34032	0.33041					
	0.32274						AVRG		0.35518		6.95144

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
23 Bis(2-Chloroethoxy)methane	0.41014	0.40652	0.40223	0.37777	0.36284	0.36940					
	0.36120						AVRG		0.38430		5.56205
24 Benzoic acid	0.19206	0.22801	0.27889	0.29684	0.29964	0.31124					
	0.32165						AVRG		0.27548		17.33006
25 2,4-Dichlorophenol	0.32880	0.32211	0.33769	0.35687	0.35112	0.30663					
	0.29364						AVRG		0.32812		6.96554
26 1,2,4-Trichlorobenzene	0.34589	0.34900	0.34652	0.32021	0.31376	0.29869					
	0.29758						AVRG		0.32452		6.96716
28 Naphthalene	1.06962	1.02839	1.04427	0.99636	0.95870	0.95006					
	0.94516						AVRG		0.99894		4.97607
29 4-Chloroaniline	0.43164	0.42705	0.44999	0.47780	0.47491	0.43387					
	0.43121						AVRG		0.44664		4.82862
30 Hexachlorobutadiene	0.19226	0.18034	0.18982	0.17518	0.17405	0.16786					
	0.16644						AVRG		0.17799		5.65706

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
31 4-Chloro-3-methylphenol	0.29522	0.29836	0.31548	0.31096	0.30370	0.31753					
	0.31596						AVRG		0.30817		2.94236
32 2-Methylnaphthalene	0.70802	0.68994	0.70526	0.68221	0.67294	0.66812					
	0.66901						AVRG		0.68507		2.42699
33 Hexachlorocyclopentadiene	+++++	0.34797	0.38843	0.38116	0.39293	0.38882					
	0.40443						AVRG		0.38396		5.00499
34 2,4,6-Trichlorophenol	0.42648	0.40876	0.44234	0.41858	0.41365	0.41351					
	0.41825						AVRG		0.42022		2.66827
35 2,4,5-Trichlorophenol	0.46528	0.46124	0.49563	0.46074	0.47012	0.44963					
	0.45916						AVRG		0.46597		3.11045
37 2-Chloronaphthalene	1.26763	1.20973	1.24226	1.15199	1.14462	1.12824					
	1.14312						AVRG		1.18394		4.67798
38 2-Nitroaniline	0.27773	0.27813	0.28761	0.27805	0.26614	0.27747					
	0.27285						AVRG		0.27685		2.33469

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
39 Dimethylphthalate	1.36949	1.25015	1.33617	1.21189	1.16640	1.11419					
	1.09637						AVRG		1.22066		8.60295
40 Acenaphthylene	1.93312	1.79902	1.90820	1.73260	1.70376	1.67720					
	1.65562						AVRG		1.77279		6.26333
41 2,6-Dinitrotoluene	0.31171	0.28175	0.31957	0.29726	0.29714	0.29044					
	0.29743						AVRG		0.29933		4.23399
43 3-Nitroaniline	0.33159	0.32937	0.36061	0.30917	0.30702	0.32688					
	0.32962						AVRG		0.32775		5.39536
44 Acenaphthene	1.12003	1.08735	1.11915	1.03791	1.01490	1.01120					
	1.01637						AVRG		1.05813		4.66710
45 2,4-Dinitrophenol	+++++	40194	118272	331176	771239	1485574					
	3099954						QUAD	0.000e+00	4.12454	-0.05841	0.99983
46 Dibenzofuran	1.66261	1.61586	1.67534	1.54074	1.51861	1.51149					
	1.49908						AVRG		1.57482		4.74920

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
47 4-Nitrophenol	0.12131	0.13876	0.15754	0.15313	0.14905	0.15628	0.15212	AVRG		0.14688		8.75826
48 2,4-Dinitrotoluene	0.38838	0.38149	0.42967	0.40552	0.40235	0.39220	0.40522	AVRG		0.40069		3.91794
49 Fluorene	1.27866	1.23301	1.28676	1.19409	1.15187	1.14191	1.12368	AVRG		1.20142		5.51486
50 Diethylphthalate	1.24972	1.21662	1.26170	1.15540	1.13377	1.08936	1.07085	AVRG		1.16820		6.51673
51 4-Chlorophenyl-phenylether	0.64937	0.74064	0.64243	0.67922	0.57091	0.66686	0.63768	AVRG		0.65530		7.78645
52 4-Nitroaniline	0.36139	0.31195	0.33245	0.31390	0.31157	0.33484	0.35979	AVRG		0.33227		6.49067
53 4,6-Dinitro-2-methylphenol	0.13952	0.15204	0.18255	0.18131	0.18475	0.18660	0.19069	AVRG		0.17392		11.38019

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.54797	0.53645	0.56997	0.51394	0.49406	0.47470					
	0.46731						AVRG		0.51491		7.48286
56 4-Bromophenyl-phenylether	0.20545	0.20604	0.22326	0.20870	0.21053	0.20636					
	0.21320						AVRG		0.21051		2.97902
57 Hexachlorobenzene	0.26490	0.25485	0.25352	0.24134	0.23606	0.22707					
	0.22474						AVRG		0.24321		6.20969
58 Pentachlorophenol	0.14925	0.15324	0.18107	0.17497	0.17700	0.17186					
	0.17573						AVRG		0.16902		7.39414
60 Phenanthrene	1.03396	1.00195	1.05396	0.96110	0.95119	0.95650					
	0.96556						AVRG		0.98917		4.17284
61 Anthracene	1.09430	1.02782	1.07267	1.05246	1.01754	1.01520					
	1.02890						AVRG		1.04413		2.88451
62 Carbazole	1.05518	1.00138	1.03798	0.83718	0.73162	0.83770					
	0.94933						AVRG		0.92148		13.20051

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
63 Di-n-butylphthalate	1.27341	1.18426	1.30822	1.26270	1.29178	1.32749					
	1.34250						AVRG		1.28434		4.07997
64 Fluoranthene	1.13698	1.05989	1.18010	1.11747	1.12116	1.12131					
	1.14442						AVRG		1.12590		3.21795
65 Pyrene	1.27149	1.21303	1.27591	1.19631	1.15955	1.17211					
	1.17311						AVRG		1.20879		3.94636
67 Butylbenzylphthalate	0.55740	0.49454	0.54687	0.50852	0.50061	0.50043					
	0.49345						AVRG		0.51455		5.11498
68 Benzo(a)anthracene	1.19628	1.10406	1.13626	1.07258	1.03009	1.02214					
	1.03188						AVRG		1.08475		5.98806
70 3,3'-Dichlorobenzidine	+++++	0.51844	0.47987	0.36520	0.33994	0.34929					
	0.44390						AVRG		0.41611		18.03769
71 Chrysene	1.04531	0.97800	1.00302	0.95871	0.92437	0.93814					
	0.93075						AVRG		0.96833		4.53528

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.55201	0.53842	0.54662	0.51224	0.48883	0.50749					
	0.49512						AVRG		0.52011		4.88951
73 Di-n-octylphthalate	1.07330	1.00312	0.99889	0.93081	0.88310	0.89635					
	0.87863						AVRG		0.95203		7.81370
74 Benzo(b)fluoranthene	1.18663	1.08389	1.15775	1.03973	1.12163	1.13217					
	1.08523						AVRG		1.11529		4.45540
75 Benzo(k)fluoranthene	1.21099	1.16848	1.24092	1.22575	1.08701	1.10544					
	1.13512						AVRG		1.16767		5.19228
187 Total Benzofluoranthenes	1.15318	1.09800	1.14055	1.07185	1.04487	1.05749					
	1.05200						AVRG		1.08828		4.01542
76 Benzo(a)pyrene	0.99051	0.95490	0.99863	0.95299	0.95079	0.97126					
	0.98289						AVRG		0.97171		2.00354
78 Indeno(1,2,3-cd)pyrene	1.11515	1.02181	1.13049	1.10167	1.09674	1.12338					
	1.15052						AVRG		1.10568		3.72156

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
79 Dibenzo(a,h)anthracene	0.82925 0.89736	0.79005	0.87490	0.84471	0.84399	0.86796	AVRG		0.84975		4.09740
80 Benzo(g,h,i)perylene	0.96531 0.99199	0.88880	1.00046	0.93863	0.93675	0.96976	AVRG		0.95596		3.99161
90 N-Nitrosodimethylamine	0.84908 0.73389	0.89135	0.86867	0.82847	0.79479	0.77037	AVRG		0.81952		6.84653
91 Aniline	4.14073 3.52891	4.19330	4.15353	3.83064	3.73304	3.62761	AVRG		3.88682		7.05862
92 1,2-Diphenylhydrazine	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
93 Benzidine	45559 5303605	88594	175908	309266	575618	1709079	QUAD	0.000e+00	3.37869	-0.28547	0.99310
96 p-Cymene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
99 Perylene	1.03547	0.99304	1.04188	0.98630	0.95133	0.97449						
	0.98371						AVRG		0.99517		3.27395	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.71724	0.75123	0.73776	0.71027	0.66739	0.66675						
	0.65710						AVRG		0.70110		5.35395	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 1 2-Fluorophenol	1.43613	1.40695	1.44706	1.38132	1.34375	1.29047					
	1.27262						AVRG		1.36833		5.01750
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00 <-
$ 2 Phenol-d5	1.71713	1.73183	1.73255	1.69926	1.69554	1.66069					
	1.67308						AVRG		1.70144		1.63484
$ 5 2-Chlorophenol-d4	1.53085	1.49405	1.52543	1.48569	1.46106	1.40370					
	1.40688						AVRG		1.47252		3.50846
$ 10 1,2-Dichlorobenzene-d4	1.08337	1.03481	1.04258	0.99840	0.96728	0.92425					
	0.93388						AVRG		0.99780		5.94673
18 Nitrobenzene-d5	0.35594	0.34825	0.36216	0.34251	0.32649	0.33357					
	0.32506						AVRG		0.34200		4.20158
$. 36 2-Fluorobiphenyl	1.48627	1.39483	1.45898	1.34079	1.30843	1.28850					
	1.27352						AVRG		1.36447		6.16345

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 55 2,4,6-Tribromophenol	0.17443	0.17908	0.19607	0.18010	0.18720	0.18139					
	0.18632						AVRG		0.18351		3.83776
$ 66 Terphenyl-d14	0.85200	0.78761	0.81852	0.74899	0.71186	0.69644					
	0.69048						AVRG		0.75799		8.33233
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/ABN.m
Cal Date : 08-May-2012 11:46 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 6/8/12

Data file : /chem1/nt10.i/20120507.b/ic0507a.d
Lab Smp Id: IC05075
Inj Date : 07-MAY-2012 14:23
Operator : VTS/YZ
Smp Info : IC05075
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 11:53 yev
Cal Date : 07-MAY-2012 14:23
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0507a.d
Calibration Sample, Level: 5

Compound Sublist: PSDDAICAL.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.652	6.667	(0.737)	456661	5.00000	4.910
$ 2 Phenol-d5	99	8.375	8.383	(0.928)	576211	5.00000	4.983
3 Phenol	94	8.398	8.406	(0.931)	614216	5.00000	4.846
$ 5 2-Chlorophenol-d4	132	8.638	8.645	(0.957)	496527	5.00000	4.961
4 Bis(2-Chloroethyl)ether	93	8.560	8.568	(0.949)	437686	5.00000	4.786
6 2-Chlorophenol	128	8.668	8.676	(0.961)	538777	5.00000	4.858
7 1,3-Dichlorobenzene	146	8.955	8.962	(0.992)	542867	5.00000	4.858
* 8 1,4-Dichlorobenzene-d4	152	9.025	9.032	(1.000)	271872	4.00000	
9 1,4-Dichlorobenzene	146	9.056	9.071	(1.003)	533262	5.00000	4.916
$ 10 1,2-Dichlorobenzene-d4	152	9.413	9.420	(1.043)	328720	5.00000	4.847
12 1,2-Dichlorobenzene	146	9.436	9.451	(1.046)	518397	5.00000	4.922
11 Benzyl alcohol	108	9.335	9.343	(1.034)	295044	5.00000	4.995
14 2,2'-oxybis(1-Chloropropane)	121	9.669	9.677	(1.071)	163115	5.00000	4.795
13 2-Methylphenol	108	9.591	9.607	(1.063)	489143	5.00000	4.903
17 Hexachloroethane	117	10.073	10.088	(1.116)	206269	5.00000	4.874
16 N-Nitroso-di-n-propylamine	70	9.941	9.948	(1.101)	274686	5.00000	4.734
15 4-Methylphenol	108	9.886	9.902	(1.095)	513954	5.00000	4.941
$ 18 Nitrobenzene-d5	82	10.204	10.220	(0.872)	441045	5.00000	4.773
19 Nitrobenzene	77	10.243	10.259	(0.876)	442070	5.00000	4.808
20 Isophorone	82	10.732	10.740	(0.918)	939717	5.00000	5.098
21 2-Nitrophenol	139	10.925	10.933	(0.934)	305394	5.00000	5.066
22 2,4-Dimethylphenol	107	11.018	11.025	(0.942)	919441	10.0000	9.581
23 Bis(2-Chloroethoxy)methane	93	11.226	11.233	(0.960)	490145	5.00000	4.721
24 Benzoic acid	105	11.272	11.149	(0.964)	1619117	20.0000	21.75
25 2,4-Dichlorophenol	162	11.418	11.426	(0.976)	948620	10.0000	10.70
26 1,2,4-Trichlorobenzene	180	11.611	11.619	(0.993)	423847	5.00000	4.834
* 27 Naphthalene-d8	136	11.696	11.712	(1.000)	1080694	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.743	11.750	(1.004)	1295076	5.00000	4.799
	29 4-Chloroaniline	127	11.905	11.912	(1.018)	1283069	10.0000	10.63
	30 Hexachlorobutadiene	225	12.152	12.167	(1.039)	235124	5.00000	4.889
	31 4-Chloro-3-methylphenol	107	12.965	12.980	(1.108)	820517	10.0000	9.855
	32 2-Methylnaphthalene	142	13.251	13.266	(1.133)	909056	5.00000	4.911
	33 Hexachlorocyclopentadiene	237	13.770	13.785	(0.882)	612802	10.0000	10.23
	34 2,4,6-Trichlorophenol	196	13.940	13.947	(0.893)	645112	10.0000	9.844
	35 2,4,5-Trichlorophenol	196	14.009	14.025	(0.898)	733178	10.0000	10.09
$	36 2-Fluorobiphenyl	172	14.118	14.133	(0.905)	1020279	5.00000	4.795
	37 2-Chloronaphthalene	162	14.319	14.334	(0.918)	892551	5.00000	4.834
	38 2-Nitroaniline	65	14.621	14.628	(0.937)	415056	10.0000	9.613 (M)
	39 Dimethylphthalate	163	15.116	15.124	(0.969)	909528	5.00000	4.778
	40 Acenaphthylene	152	15.255	15.271	(0.978)	1328552	5.00000	4.805
	41 2,6-Dinitrotoluene	165	15.248	15.263	(0.977)	463403	10.0000	9.927 (M)
*	42 Acenaphthene-d10	164	15.604	15.611	(1.000)	623821	4.00000	
	43 3-Nitroaniline	138	15.549	15.557	(0.997)	478818	10.0000	9.367
	44 Acenaphthene	153	15.673	15.681	(1.004)	791398	5.00000	4.796
	45 2,4-Dinitrophenol	184	15.774	15.781	(1.011)	771239	20.0000	20.04
	46 Dibenzofuran	168	16.029	16.044	(1.027)	1184176	5.00000	4.822
	47 4-Nitrophenol	109	15.921	15.936	(1.020)	232450	10.0000	10.15
	48 2,4-Dinitrotoluene	165	16.121	16.129	(1.033)	627488	10.0000	10.04 (M)
	50 Diethylphthalate	149	16.701	16.717	(1.070)	884090	5.00000	4.853
	49 Fluorene	166	16.794	16.809	(1.076)	898199	5.00000	4.794
	51 4-Chlorophenyl-phenylether	204	16.817	16.833	(1.078)	445185	5.00000	4.356
	52 4-Nitroaniline	138	16.918	16.925	(1.084)	485913	10.0000	9.377
	53 4,6-Dinitro-2-methylphenol	198	17.026	17.033	(0.902)	922964	20.0000	21.25
	54 N-Nitrosodiphenylamine	169	17.087	17.103	(0.905)	617048	5.00000	4.798
$	55 2,4,6-Tribromophenol	330	17.373	17.396	(1.113)	145971	5.00000	5.100
	56 4-Bromophenyl-phenylether	248	17.897	17.912	(0.948)	262932	5.00000	5.000
	57 Hexachlorobenzene	284	18.214	18.229	(0.965)	294818	5.00000	4.853
	58 Pentachlorophenol	266	18.609	18.624	(0.986)	442131	10.0000	10.47
*	59 Phenanthrene-d10	188	18.872	18.887	(1.000)	999143	4.00000	
	60 Phenanthrene	178	18.918	18.933	(1.002)	1187964	5.00000	4.808
	61 Anthracene	178	19.019	19.034	(1.008)	1270837	5.00000	4.873
	62 Carbazole	167	19.375	19.390	(1.027)	913745	5.00000	3.970
	63 Di-n-butylphthalate	149	20.233	20.256	(1.072)	1613344	5.00000	5.029
	64 Fluoranthene	202	21.332	21.347	(1.130)	1400254	5.00000	4.979
	65 Pyrene	202	21.742	21.765	(0.908)	1450899	5.00000	4.796
$	66 Terphenyl-d14	244	22.067	22.082	(0.922)	890729	5.00000	4.696
	67 Butylbenzylphthalate	149	23.012	23.027	(0.961)	626393	5.00000	4.865
	68 Benzo(a)anthracene	228	23.902	23.925	(0.999)	1288916	5.00000	4.748
*	69 Chrysene-d12	240	23.933	23.948	(1.000)	1001009	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.887	23.902	(0.998)	850698	10.0000	8.169
	71 Chrysene	228	23.980	23.995	(1.002)	1156628	5.00000	4.773
	72 bis(2-Ethylhexyl)phthalate	149	24.049	24.072	(0.961)	910087	5.00000	4.699
*	134 Di-n-octylphthalate-d4	153	25.025	25.048	(1.000)	1489422	4.00000	
	73 Di-n-octylphthalate	149	25.040	25.055	(1.001)	1644135	5.00000	4.638

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.714	25.729	(0.974)	1385704	5.00000	5.028
75 Benzo(k)fluoranthene	252	25.745	25.768	(0.975)	1342928	5.00000	4.655
76 Benzo(a)pyrene	252	26.294	26.310	(0.996)	1174639	5.00000	4.892
* 77 Perylene-d12	264	26.403	26.418	(1.000)	988348	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.773	28.804	(1.090)	1354945	5.00000	4.960
79 Dibenzo(a,h)anthracene	278	28.804	28.827	(1.091)	1042695	5.00000	4.966
80 Benzo(g,h,i)perylene	276	29.465	29.495	(1.116)	1157297	5.00000	4.900
90 N-Nitrosodimethylamine	74	4.358	4.358	(0.483)	540203	10.0000	9.698
91 Aniline	93	8.444	8.460	(0.936)	1268638	5.00000	4.802
93 Benzidine	184	21.587	21.603	(0.902)	575618	10.0000	7.394
103 Pyridine	79	4.366	4.381	(0.484)	453611	10.0000	9.519
105 1-methylnaphthalene	142	13.491	13.506	(1.153)	935666	5.00000	4.958
111 Azobenzene (1,2-DP-Hydrazine)	77	17.164	17.172	(1.100)	857543	5.00000	4.619
187 Total Benzofluoranthenes	252	25.745	25.768	(0.975)	2581739	10.0000	9.601
99 Perylene	252	26.449	26.472	(1.002)	1175306	5.00000	4.780

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507a.d
Lab Smp Id: IC05075
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	271872	0.00
27 Naphthalene-d8	1080694	540347	2161388	1080694	0.00
42 Acenaphthene-d10	623821	311910	1247642	623821	0.00
59 Phenanthrene-d10	999143	499572	1998286	999143	0.00
69 Chrysene-d12	1001009	500504	2002018	1001009	0.00
134 Di-n-octylphthala	1489422	744711	2978844	1489422	0.00
77 Perylene-d12	988348	494174	1976696	988348	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.02	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.87	18.37	19.37	18.87	0.00
69 Chrysene-d12	23.93	23.43	24.43	23.93	0.00
134 Di-n-octylphthala	25.02	24.52	25.52	25.02	0.00
77 Perylene-d12	26.40	25.90	26.90	26.40	0.00

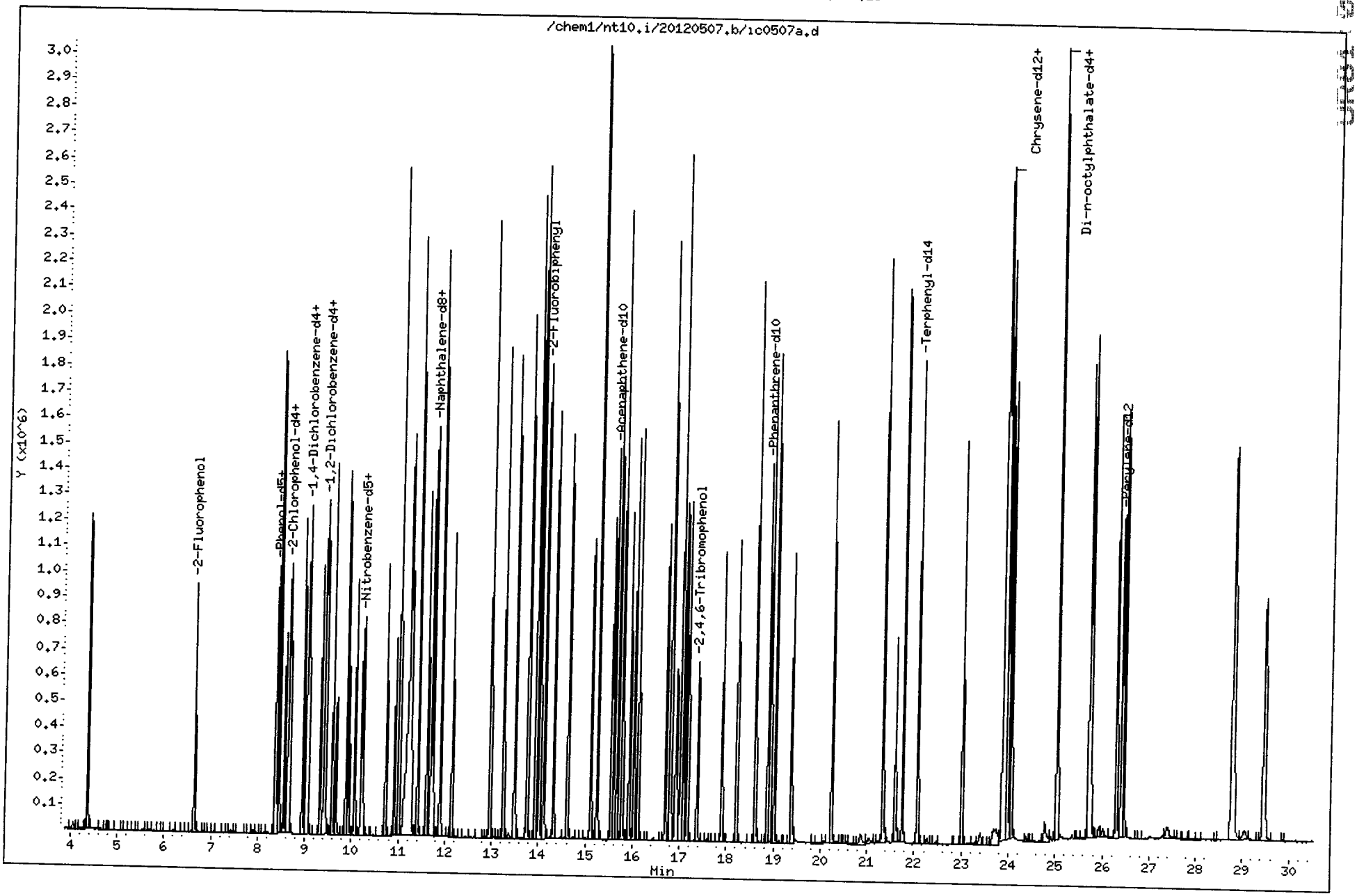
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/ic0507a.d
Date : 07-MAY-2012 14:23
Client ID:
Sample Info: IC05075

Column phase: ZB-5msi

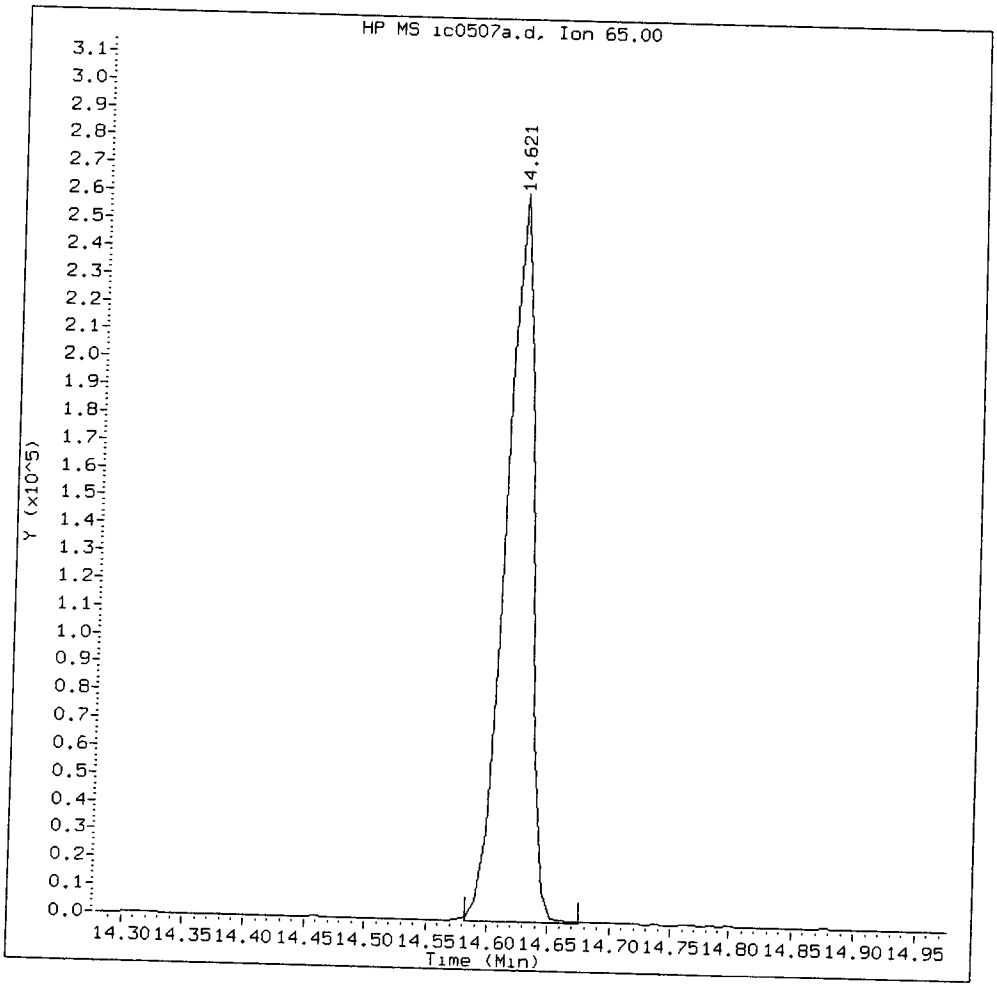
Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



IC05075, /chem1/nt10.i/20120507.b/ic0507a.d

2-Nitroaniline Amount: 9.61 Area: 415056



MANUAL INTEGRATION for 2-Nitroaniline

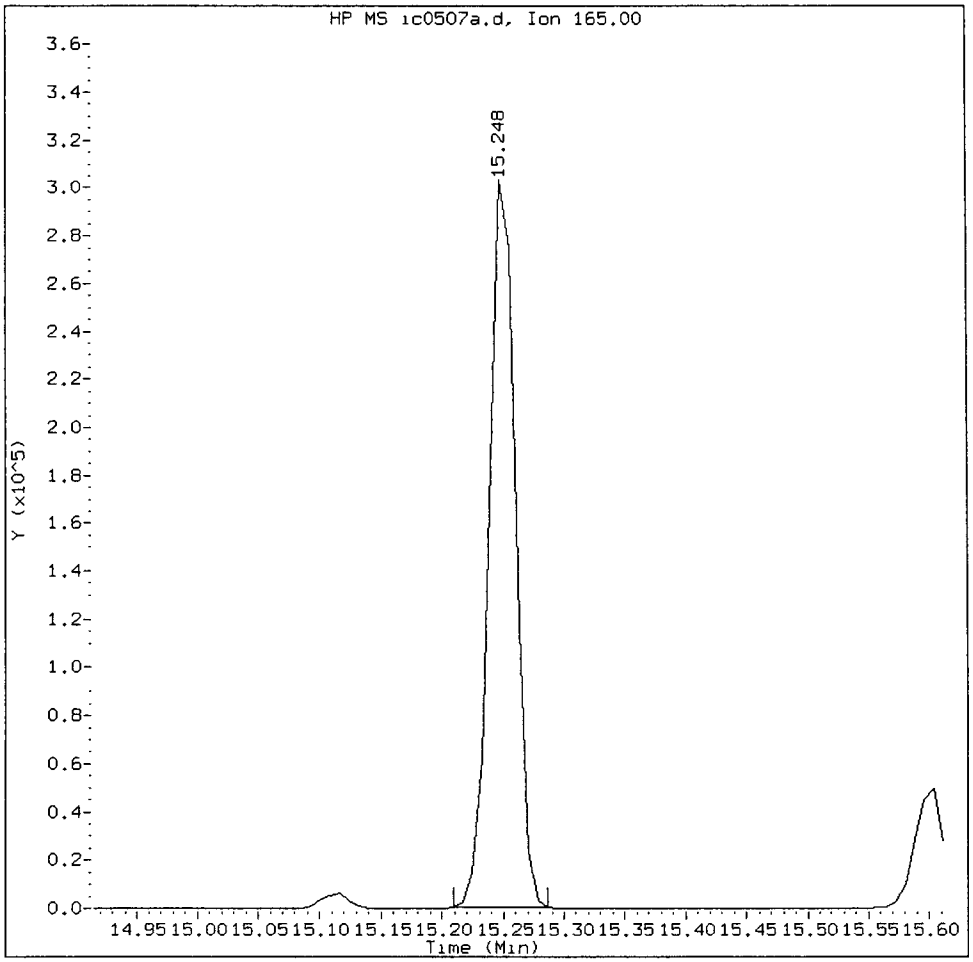
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YR Date: 5/8/12

IC05075, /chem1/nt10.i/20120507.b/ic0507a.d

2,6-Dinitrotoluene Amount: 9.93 Area: 463403



MANUAL INTEGRATION for 2,6-Dinitrotoluene

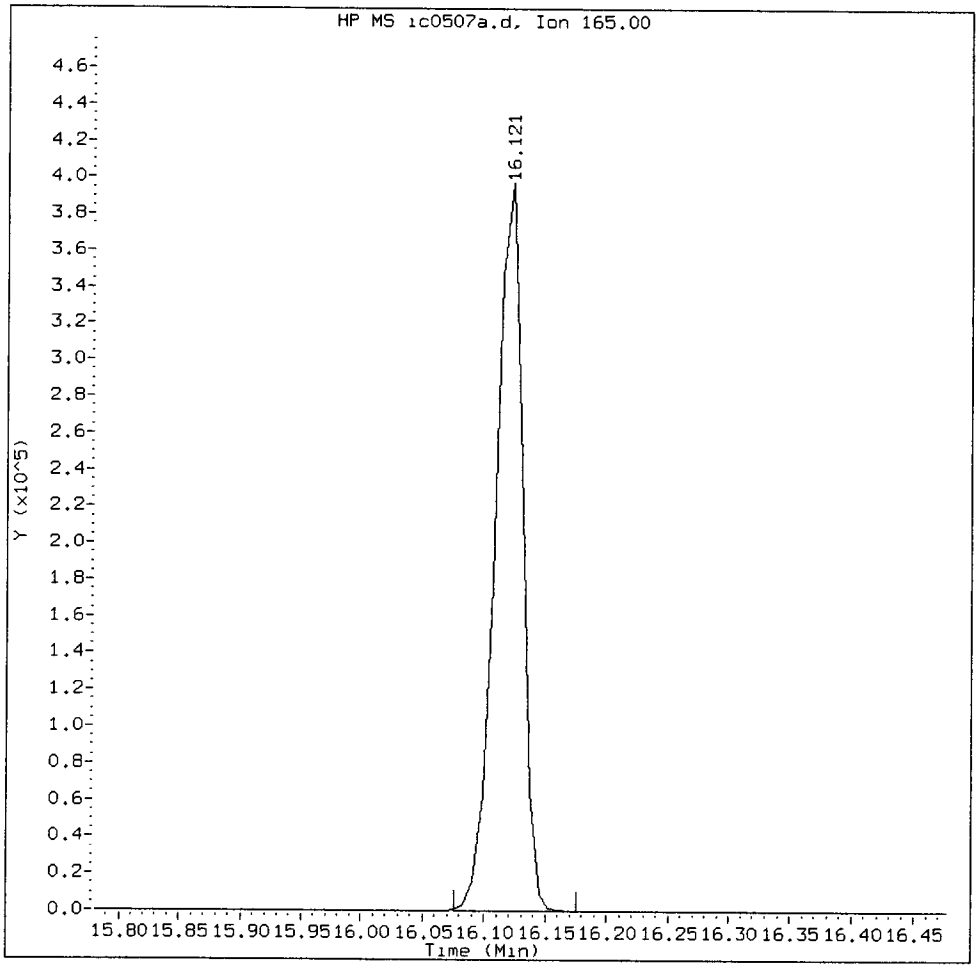
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/12

IC05075, /chem1/nt10.i/20120507.b/ic0507a.d

2,4-Dinitrotoluene Amount: 10.04 Area: 627488



MANUAL INTEGRATION for 2,4-Dinitrotoluene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/12

CO-ELUTION SUMMARY FOR FILE - ic0507a.d

Lab ID: IC05075, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/12

Data file : /chem1/nt10.i/20120507.b/ic0507b.d
Lab Smp Id: IC050720
Inj Date : 07-MAY-2012 15:00
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC050720
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 11:53 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 15:00 Cal File: ic0507b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.659	6.667	(0.737)	1664587	20.0000	18.60
$ 2 Phenol-d5	99	8.390	8.383	(0.929)	2188393	20.0000	19.67
3 Phenol	94	8.413	8.406	(0.931)	2268444	20.0000	18.60
$ 5 2-Chlorophenol-d4	132	8.645	8.645	(0.957)	1840209	20.0000	19.11
4 Bis(2-Chloroethyl)ether	93	8.576	8.568	(0.949)	1618879	20.0000	18.40
6 2-Chlorophenol	128	8.676	8.676	(0.961)	2013226	20.0000	18.87
7 1,3-Dichlorobenzene	146	8.962	8.962	(0.992)	1946241	20.0000	18.10
* 8 1,4-Dichlorobenzene-d4	152	9.032	9.032	(1.000)	261601	4.00000	
9 1,4-Dichlorobenzene	146	9.063	9.071	(1.003)	1936845	20.0000	18.55
$ 10 1,2-Dichlorobenzene-d4	152	9.420	9.420	(1.043)	1221523	20.0000	18.72
12 1,2-Dichlorobenzene	146	9.444	9.451	(1.046)	1864584	20.0000	18.40
11 Benzyl alcohol	108	9.343	9.343	(1.034)	1093087	20.0000	19.23
14 2,2'-oxybis(1-Chloropropane)	121	9.677	9.677	(1.071)	613327	20.0000	18.74
13 2-Methylphenol	108	9.607	9.607	(1.064)	1819106	20.0000	18.95
17 Hexachloroethane	117	10.072	10.088	(1.115)	789969	20.0000	19.40
16 N-Nitroso-di-n-propylamine	70	9.964	9.948	(1.103)	1015086	20.0000	18.18
15 4-Methylphenol	108	9.909	9.902	(1.097)	1871679	20.0000	18.70
$ 18 Nitrobenzene-d5	82	10.220	10.220	(0.873)	1676312	20.0000	19.01
19 Nitrobenzene	77	10.259	10.259	(0.877)	1643837	20.0000	18.73
20 Isophorone	82	10.755	10.740	(0.919)	3555818	20.0000	20.21
21 2-Nitrophenol	139	10.933	10.933	(0.934)	1168831	20.0000	20.32
22 2,4-Dimethylphenol	107	11.025	11.025	(0.942)	3328684	40.0000	36.35
23 Bis(2-Chloroethoxy)methane	93	11.233	11.233	(0.960)	1862687	20.0000	18.80
24 Benzoic acid.	105	11.441	11.149	(0.978)	6634895	80.0000	93.41(M)
25 2,4-Dichlorophenol	162	11.426	11.426	(0.976)	3028540	40.0000	35.80
26 1,2,4-Trichlorobenzene	180	11.619	11.619	(0.993)	1534620	20.0000	18.34
* 27 Naphthalene-d8	136	11.704	11.712	(1.000)	1031384	4.00000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	11.750	11.750	(1.004)	4874126	20.0000	18.92
29 4-Chloroaniline	127	11.920	11.912	(1.018)	4447419	40.0000	38.62
30 Hexachlorobutadiene	225	12.160	12.167	(1.039)	858331	20.0000	18.70
31 4-Chloro-3-methylphenol	107	12.980	12.980	(1.109)	3258805	40.0000	41.01
32 2-Methylnaphthalene	142	13.259	13.266	(1.133)	3450042	20.0000	19.53
33 Hexachlorocyclopentadiene	237	13.769	13.785	(0.882)	2396634	40.0000	42.13
34 2,4,6-Trichlorophenol	196	13.947	13.947	(0.894)	2478546	40.0000	39.81
35 2,4,5-Trichlorophenol	196	14.025	14.025	(0.899)	2720941	40.0000	39.42
$ 36 2-Fluorobiphenyl	172	14.125	14.133	(0.905)	3773402	20.0000	18.67
37 2-Chloronaphthalene	162	14.334	14.334	(0.919)	3387029	20.0000	19.31
38 2-Nitroaniline	65	14.636	14.628	(0.938)	1616922	40.0000	39.42 (M)
39 Dimethylphthalate	163	15.131	15.124	(0.970)	3248523	20.0000	17.96
40 Acenaphthylene	152	15.263	15.271	(0.978)	4905573	20.0000	18.68
41 2,6-Dinitrotoluene	165	15.271	15.263	(0.979)	1762577	40.0000	39.75 (M)
* 42 Acenaphthene-d10	164	15.603	15.611	(1.000)	592596	4.00000	
43 3-Nitroaniline	138	15.572	15.557	(0.998)	1953295	40.0000	40.23
44 Acenaphthene	153	15.681	15.681	(1.005)	3011491	20.0000	19.21
45 2,4-Dinitrophenol	184	15.804	15.781	(1.013)	3099954	80.0000	79.91
46 Dibenzofuran	168	16.044	16.044	(1.028)	4441745	20.0000	19.04
47 4-Nitrophenol	109	15.951	15.936	(1.022)	901442	40.0000	41.43
48 2,4-Dinitrotoluene	165	16.145	16.129	(1.035)	2401330	40.0000	40.45 (M)
50 Diethylphthalate	149	16.732	16.717	(1.072)	3172915	20.0000	18.33
49 Fluorene	166	16.809	16.809	(1.077)	3329447	20.0000	18.71
51 4-Chlorophenyl-phenylether	204	16.825	16.833	(1.078)	1889432	20.0000	19.46
52 4-Nitroaniline	138	16.964	16.925	(1.087)	2132081	40.0000	43.31
53 4,6-Dinitro-2-methylphenol	198	17.056	17.033	(0.903)	3557564	80.0000	87.71
54 N-Nitrosodiphenylamine	169	17.110	17.103	(0.906)	2179517	20.0000	18.15
$ 55 2,4,6-Tribromophenol	330	17.388	17.396	(1.114)	552059	20.0000	20.31
56 4-Bromophenyl-phenylether	248	17.905	17.912	(0.948)	994378	20.0000	20.26
57 Hexachlorobenzene	284	18.229	18.229	(0.966)	1048187	20.0000	18.48
58 Pentachlorophenol	266	18.624	18.624	(0.986)	1639177	40.0000	41.59
* 59 Phenanthrene-d10	188	18.879	18.887	(1.000)	932792	4.00000	
60 Phenanthrene	178	18.933	18.933	(1.003)	4503326	20.0000	19.52
61 Anthracene	178	19.034	19.034	(1.008)	4798735	20.0000	19.71
62 Carbazole	167	19.382	19.390	(1.027)	4427616	20.0000	20.60
63 Di-n-butylphthalate	149	20.249	20.256	(1.073)	6261366	20.0000	20.91
64 Fluoranthene	202	21.340	21.347	(1.130)	5337519	20.0000	20.33
65 Pyrene	202	21.757	21.765	(0.908)	5503647	20.0000	19.41
$ 66 Terphenyl-d14	244	22.075	22.082	(0.922)	3239390	20.0000	18.22
67 Butylbenzylphthalate	149	23.019	23.027	(0.961)	2315016	20.0000	19.18
68 Benzo(a)anthracene	228	23.917	23.925	(0.999)	4841057	20.0000	19.03
* 69 Chrysene-d12	240	23.948	23.948	(1.000)	938299	4.00000	
70 3,3'-Dichlorobenzidine	252	23.902	23.902	(0.998)	4165112	40.0000	42.67
71 Chrysene	228	23.995	23.995	(1.002)	4366589	20.0000	19.22
72 bis(2-Ethylhexyl)phthalate	149	24.057	24.072	(0.961)	3588689	20.0000	19.04
* 134 Di-n-octylphthalate-d4	153	25.040	25.048	(1.000)	1449615	4.00000	
73 Di-n-octylphthalate	149	25.048	25.055	(1.000)	6368378	20.0000	18.46

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.729	25.729	(0.974)	5017805	20.0000	19.46
75 Benzo(k)fluoranthene	252	25.768	25.768	(0.975)	5248482	20.0000	19.44
76 Benzo(a)pyrene	252	26.317	26.310	(0.996)	4544612	20.0000	20.23
* 77 Perylene-d12	264	26.418	26.418	(1.000)	924741	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.820	28.804	(1.091)	5319662	20.0000	20.81
79 Dibenzo(a,h)anthracene	278	28.835	28.827	(1.091)	4149132	20.0000	21.12
80 Benzo(g,h,i)perylene	276	29.511	29.495	(1.117)	4586686	20.0000	20.75
90 N-Nitrosodimethylamine	74	4.381	4.358	(0.485)	1919874	40.0000	35.82
91 Aniline	93	8.468	8.460	(0.937)	4615831	20.0000	18.16
93 Benzidine	184	21.603	21.603	(0.902)	5303605	40.0000	39.91
103 Pyridine	79	4.374	4.381	(0.484)	1718973	40.0000	37.49
105 1-methylnaphthalene	142	13.498	13.506	(1.153)	3515163	20.0000	19.52
111 Azobenzene (1,2-DP-Hydrazine)	77	17.180	17.172	(1.101)	3243931	20.0000	18.39
187 Total Benzofluoranthenes	252	25.768	25.768	(0.975)	9728292	40.0000	38.67
99 Perylene	252	26.472	26.472	(1.002)	4548370	20.0000	19.77

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507b.d
Lab Smp Id: IC050720
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	261601	-3.78
27 Naphthalene-d8	1080694	540347	2161388	1031384	-4.56
42 Acenaphthene-d10	623821	311910	1247642	592596	-5.01
59 Phenanthrene-d10	999143	499572	1998286	932792	-6.64
69 Chrysene-d12	1001009	500504	2002018	938299	-6.26
134 Di-n-octylphthala	1489422	744711	2978844	1449615	-2.67
77 Perylene-d12	988348	494174	1976696	924741	-6.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.03	0.08
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.06
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.87	18.37	19.37	18.88	0.04
69 Chrysene-d12	23.93	23.43	24.43	23.95	0.06
134 Di-n-octylphthala	25.02	24.52	25.52	25.04	0.06
77 Perylene-d12	26.40	25.90	26.90	26.42	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/ic0507b.d

Date : 07-MAY-2012 15:00

Client ID:

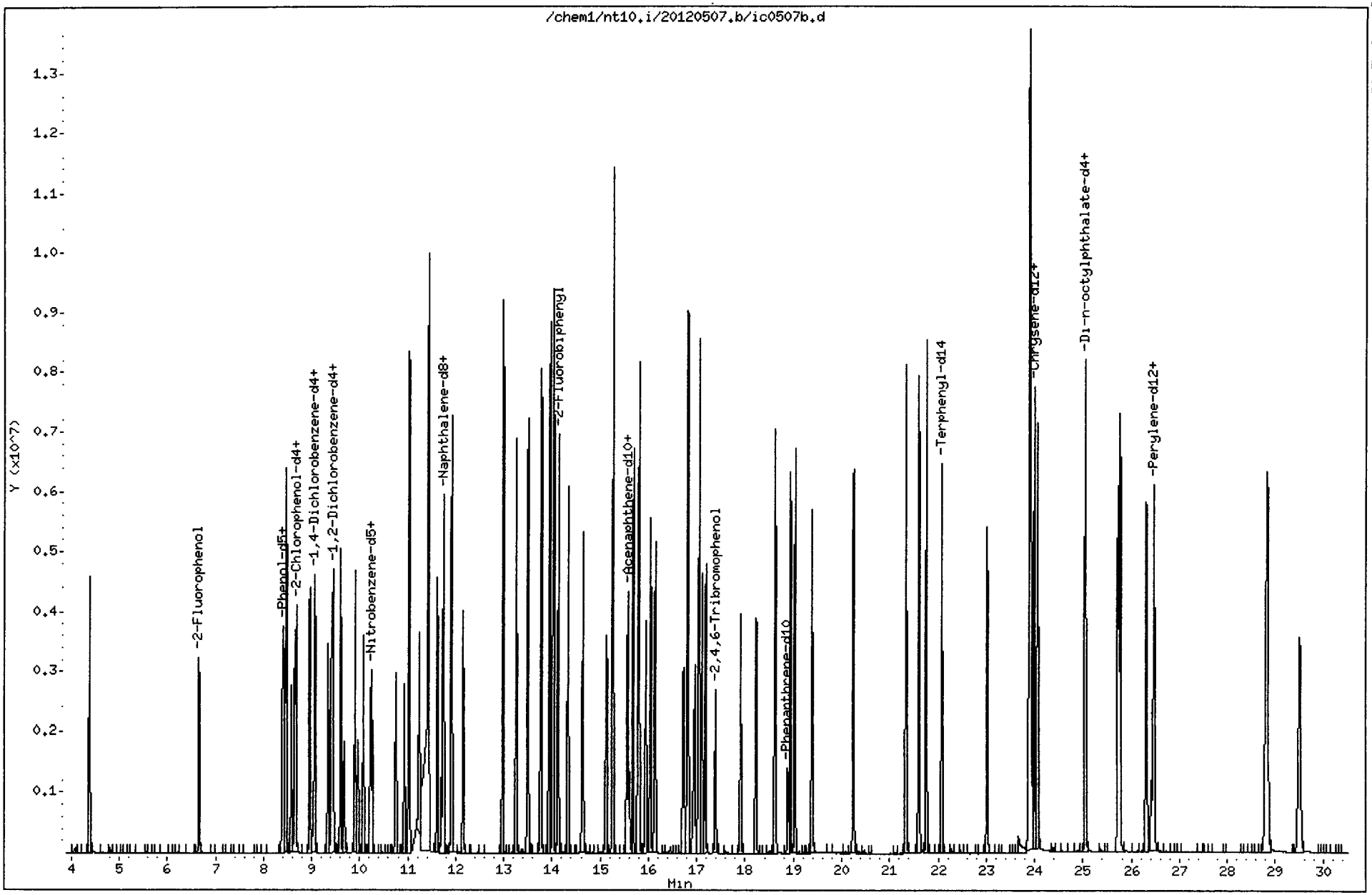
Sample Info: IC050720

Column phase: ZB-5msi

Instrument: nt10.i

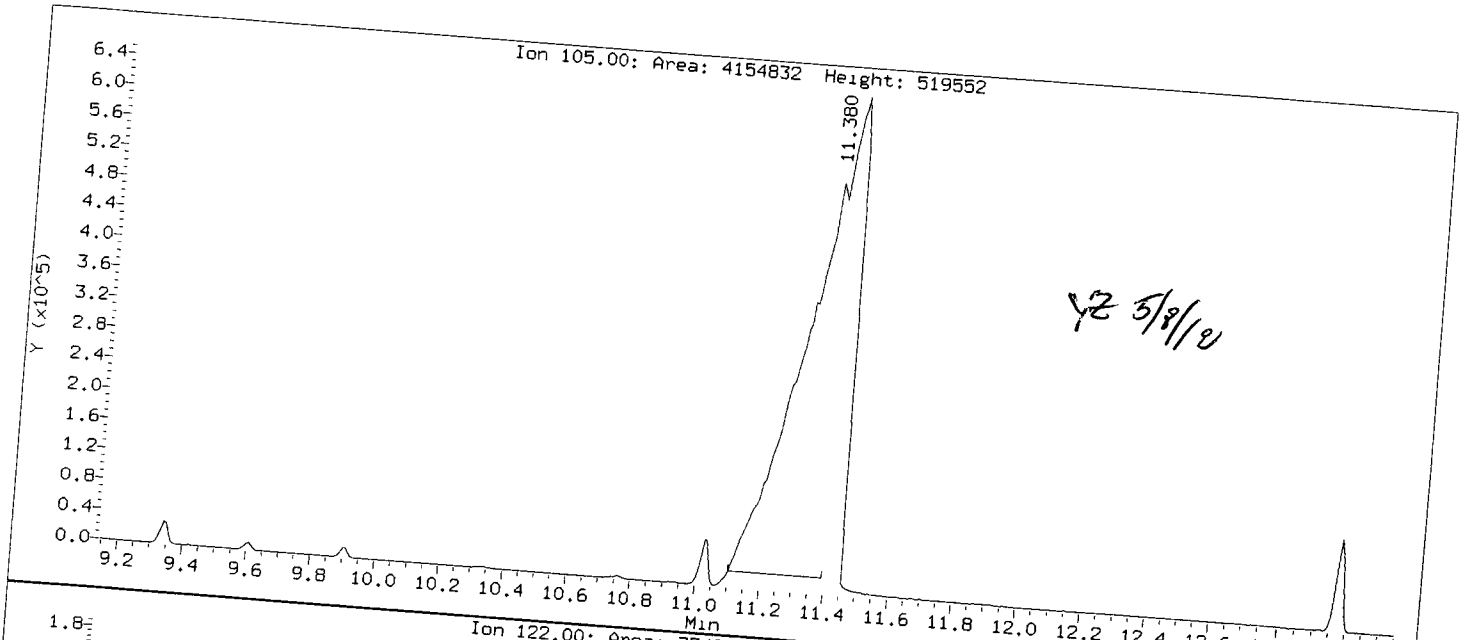
Operator: VTS/YZ

Column diameter: 0.25

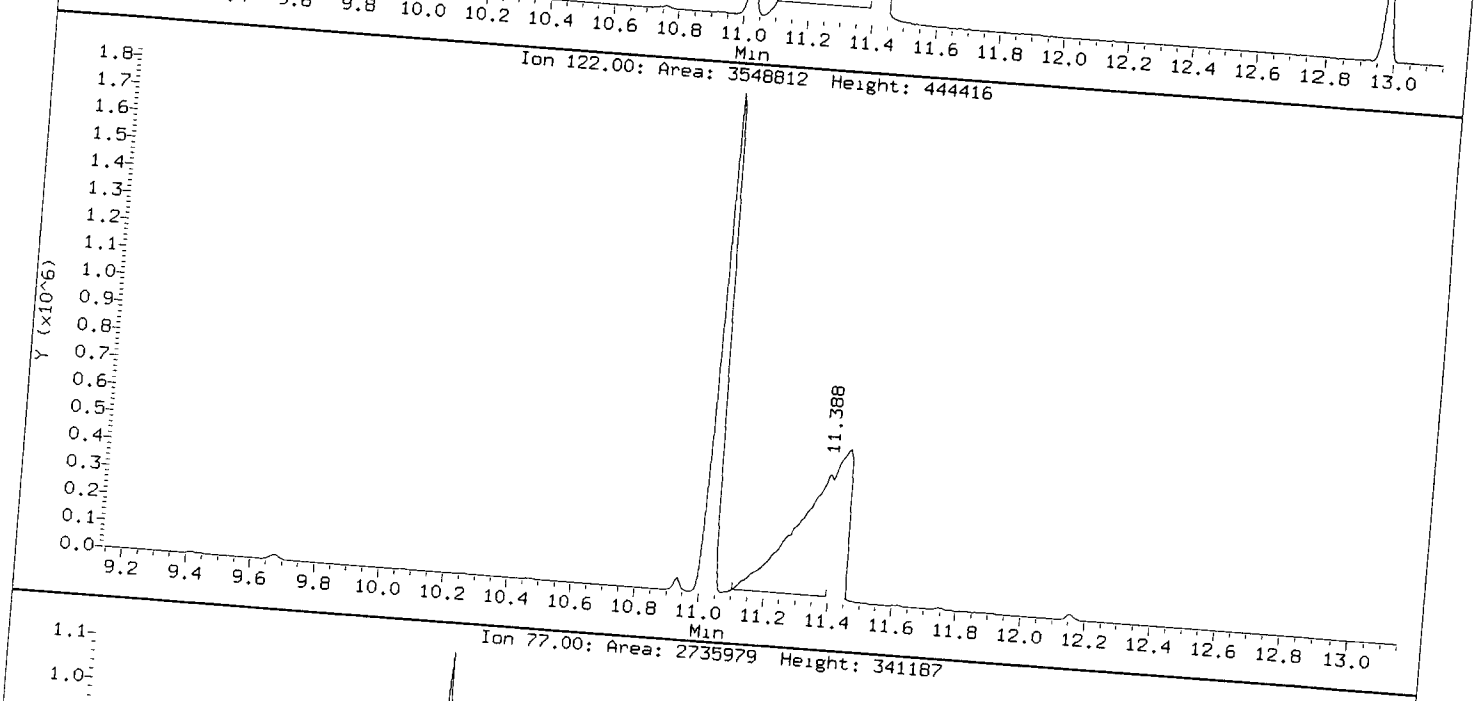


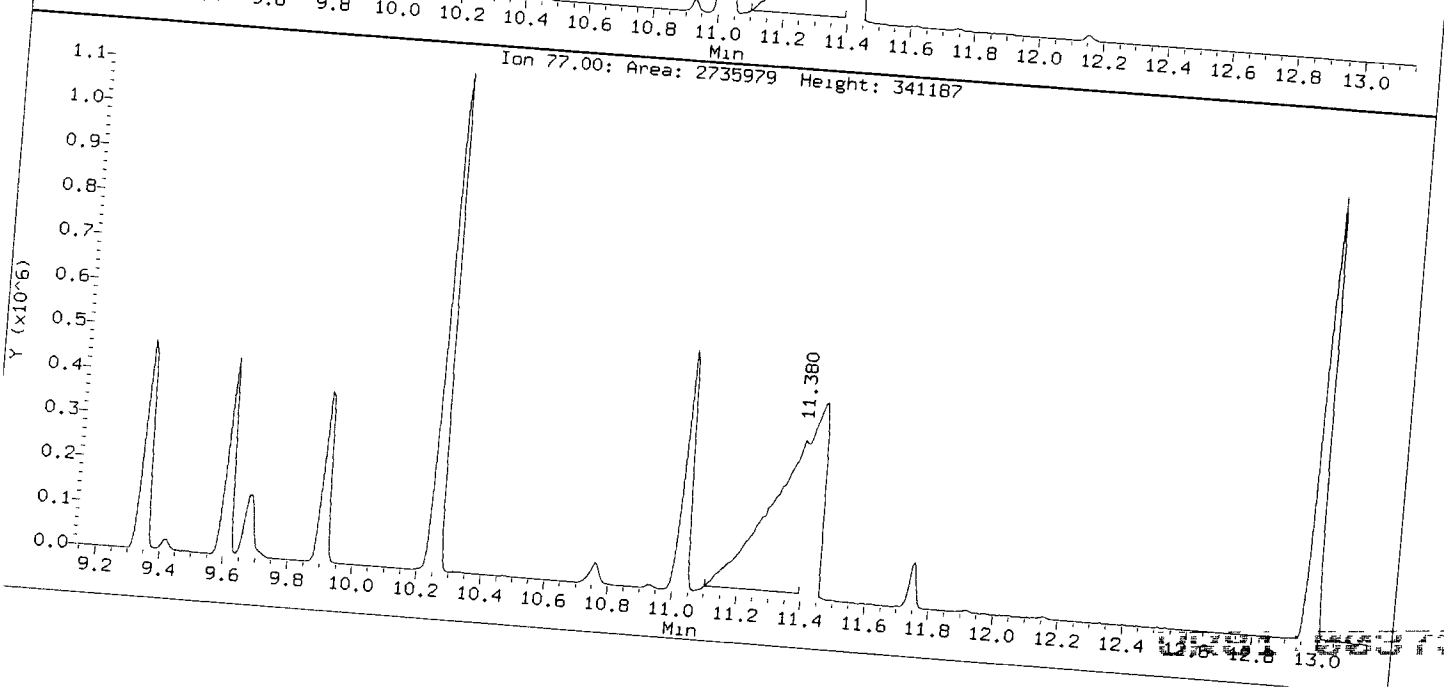
Data File: /chem1/nt10.i/20120507.b/ic0507b.d
Injection Date: 07-MAY-2012 15:00
Instrument: nt10.i
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0



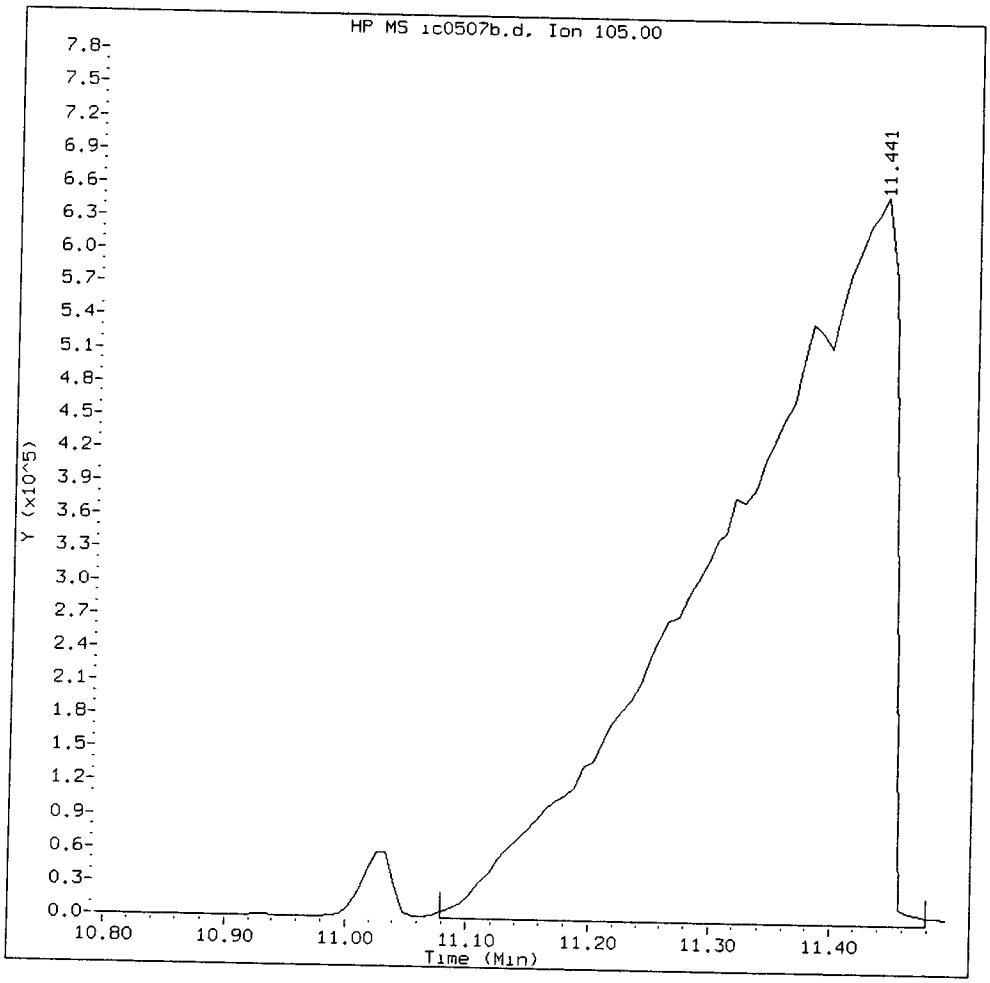
YZ 5/8/12





IC050720, /chem1/nt10.i/20120507.b/ic0507b.d

Benzoic acid Amount: 93.41 Area: 6634895



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

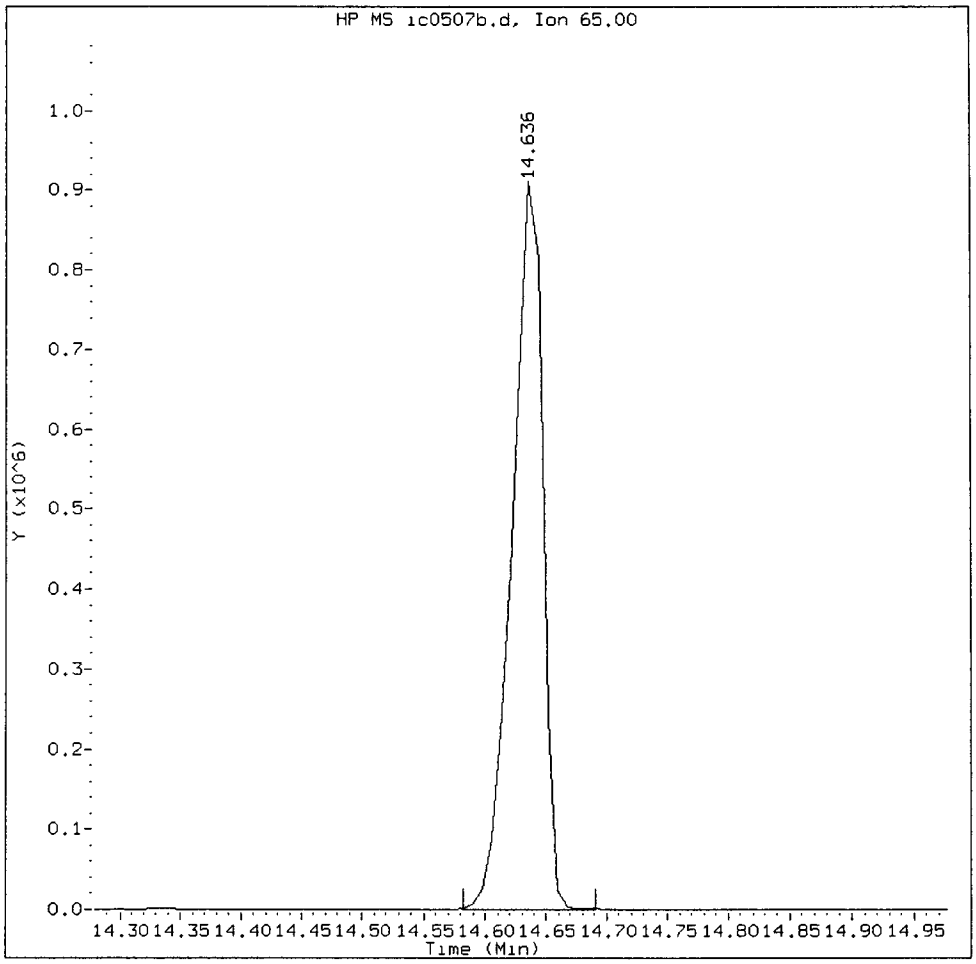
5. Other _____

Analyst: YZ Date: 5/9/12

UA01 : 88374

IC050720, /chem1/nt10.i/20120507.b/ic0507b.d

2-Nitroaniline Amount: 39.42 Area: 1616922



MANUAL INTEGRATION for 2-Nitroaniline

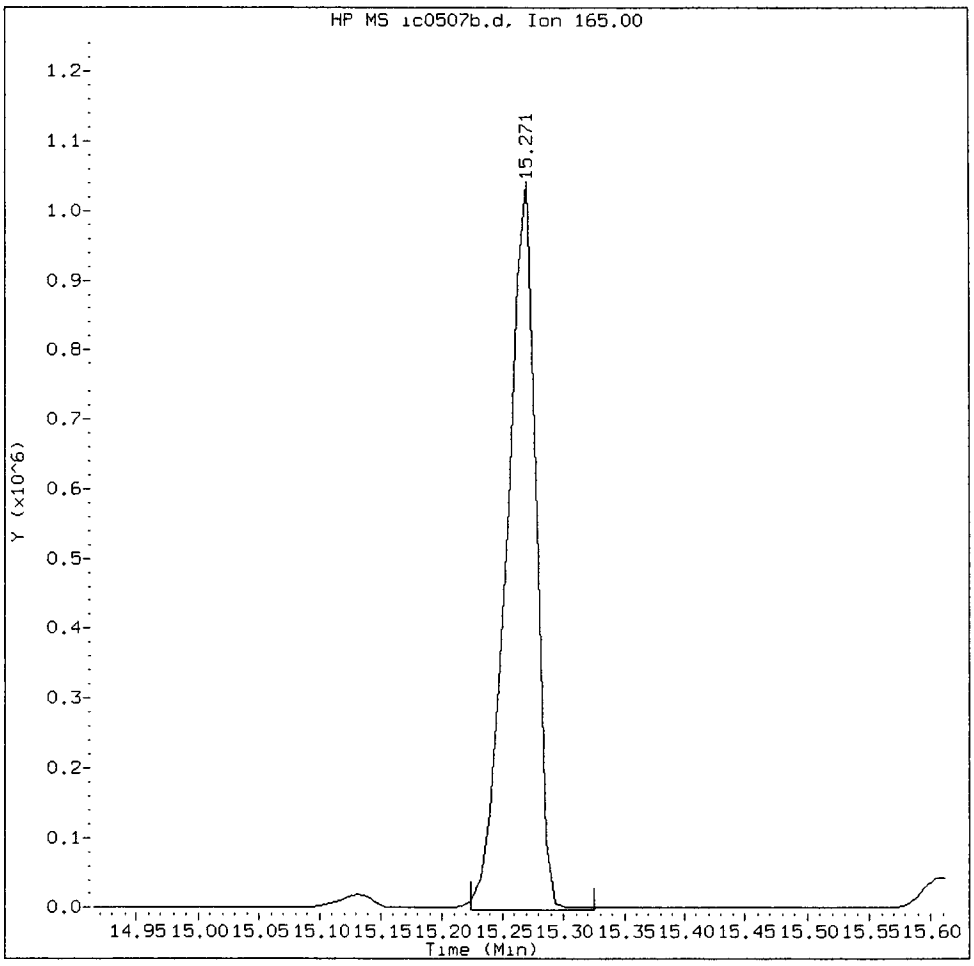
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/12

IC050720, /chem1/nt10.i/20120507.b/ic0507b.d

2,6-Dinitrotoluene Amount: 39.75 Area: 1762577



MANUAL INTEGRATION for 2,6-Dinitrotoluene

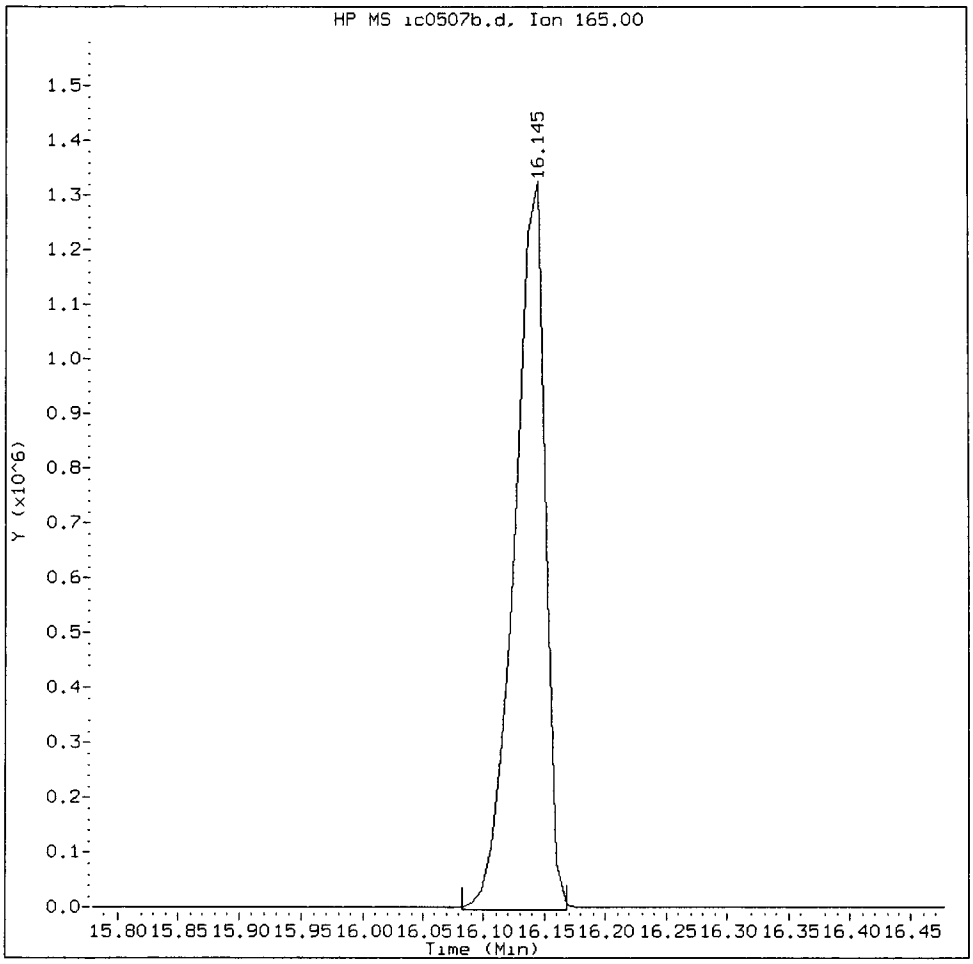
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/8/12

IC050720, /chem1/nt10.i/20120507.b/ic0507b.d

2,4-Dinitrotoluene Amount: 40.45 Area: 2401330



MANUAL INTEGRATION for 2,4-Dinitrotoluene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/12

CO-ELUTION SUMMARY FOR FILE - ic0507b.d

Lab ID: IC050720, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120507.b/ic0507c.d
Lab Smp Id: IC05070.2
Inj Date : 07-MAY-2012 15:37
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC05070.2
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 11:53 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 15:37 Cal File: ic0507c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.659	6.667	(0.738)	20893	0.20000	0.2099
$	2 Phenol-d5	99	8.375	8.383	(0.928)	24981	0.20000	0.2018
	3 Phenol	94	8.398	8.406	(0.931)	28155	0.20000	0.2075
$	5 2-Chlorophenol-d4	132	8.637	8.645	(0.957)	22271	0.20000	0.2079
	4 Bis(2-Chloroethyl)ether	93	8.568	8.568	(0.949)	20353	0.20000	0.2079
	6 2-Chlorophenol	128	8.668	8.676	(0.961)	24655	0.20000	0.2077
	7 1,3-Dichlorobenzene	146	8.955	8.962	(0.992)	25882	0.20000	0.2164
*	8 1,4-Dichlorobenzene-d4	152	9.025	9.032	(1.000)	290963	4.00000	
	9 1,4-Dichlorobenzene	146	9.056	9.071	(1.003)	24801	0.20000	0.2136
$	10 1,2-Dichlorobenzene-d4	152	9.413	9.420	(1.043)	15761	0.20000	0.2172
	12 1,2-Dichlorobenzene	146	9.436	9.451	(1.046)	23583	0.20000	0.2092
	11 Benzyl alcohol	108	9.335	9.343	(1.034)	12771	0.20000	0.2020
	14 2,2'-oxybis(1-Chloropropane)	121	9.669	9.677	(1.071)	7668	0.20000	0.2106
	13 2-Methylphenol	108	9.599	9.607	(1.064)	21798	0.20000	0.2042
	17 Hexachloroethane	117	10.072	10.088	(1.116)	9025	0.20000	0.1993
	16 N-Nitroso-di-n-propylamine	70	9.940	9.948	(1.101)	13559	0.20000	0.2183
	15 4-Methylphenol	108	9.886	9.902	(1.095)	22979	0.20000	0.2064
$	18 Nitrobenzene-d5	82	10.204	10.220	(0.872)	19869	0.20000	0.2082
	19 Nitrobenzene	77	10.243	10.259	(0.876)	19075	0.20000	0.2008
	20 Isophorone	82	10.732	10.740	(0.918)	37222	0.20000	0.1955
	21 2-Nitrophenol	139	10.925	10.933	(0.934)	12297	0.20000	0.1975
	22 2,4-Dimethylphenol	107	11.018	11.025	(0.942)	42224	0.40000	0.4259
	23 Bis(2-Chloroethoxy)methane	93	11.226	11.233	(0.960)	22894	0.20000	0.2134
	24 Benzoic acid	105	11.118	11.149	(0.951)	42884	0.80000	0.5578(M)
	25 2,4-Dichlorophenol	162	11.418	11.426	(0.976)	36708	0.40000	0.4008
	26 1,2,4-Trichlorobenzene	180	11.611	11.619	(0.993)	19308	0.20000	0.2132
*	27 Naphthalene-d8	136	11.696	11.712	(1.000)	1116412	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.742	11.750	(1.004)	59707	0.20000	0.2142
	29 4-Chloroaniline	127	11.905	11.912	(1.018)	48189	0.40000	0.3866
	30 Hexachlorobutadiene	225	12.152	12.167	(1.039)	10732	0.20000	0.2160
	31 4-Chloro-3-methylphenol	107	12.964	12.980	(1.108)	32959	0.40000	0.3832
	32 2-Methylnaphthalene	142	13.251	13.266	(1.133)	39522	0.20000	0.2067
	33 Hexachlorocyclopentadiene	237	13.769	13.785	(0.882)	22794	0.40000	0.3852
	34 2,4,6-Trichlorophenol	196	13.940	13.947	(0.893)	26294	0.40000	0.4060
	35 2,4,5-Trichlorophenol	196	14.009	14.025	(0.898)	28686	0.40000	0.3994
$	36 2-Fluorobiphenyl	172	14.118	14.133	(0.905)	45817	0.20000	0.2179
	37 2-Chloronaphthalene	162	14.319	14.334	(0.918)	39077	0.20000	0.2141
	38 2-Nitroaniline	65	14.621	14.628	(0.937)	17123	0.40000	0.4013 (M)
	39 Dimethylphthalate	163	15.116	15.124	(0.969)	42217	0.20000	0.2244
	40 Acenaphthylene	152	15.255	15.271	(0.978)	59592	0.20000	0.2181
	41 2,6-Dinitrotoluene	165	15.248	15.263	(0.977)	19218	0.40000	0.4165 (M)
*	42 Acenaphthene-d10	164	15.603	15.611	(1.000)	616538	4.00000	
	43 3-Nitroaniline	138	15.542	15.557	(0.996)	20444	0.40000	0.4047
	44 Acenaphthene	153	15.673	15.681	(1.004)	34527	0.20000	0.2117
	45 2,4-Dinitrophenol	184	15.766	15.781	(1.010)	14545	0.80000	0.3891
	46 Dibenzofuran	168	16.029	16.044	(1.027)	51253	0.20000	0.2111
	47 4-Nitrophenol	109	15.920	15.936	(1.020)	7479	0.40000	0.3303
	48 2,4-Dinitrotoluene	165	16.114	16.129	(1.033)	23945	0.40000	0.3877 (M)
	50 Diethylphthalate	149	16.701	16.717	(1.070)	38525	0.20000	0.2140
	49 Fluorene	166	16.794	16.809	(1.076)	39417	0.20000	0.2129
	51 4-Chlorophenyl-phenylether	204	16.817	16.833	(1.078)	20018	0.20000	0.1982
	52 4-Nitroaniline	138	16.910	16.925	(1.084)	22281	0.40000	0.4351
	53 4,6-Dinitro-2-methylphenol	198	17.018	17.033	(0.902)	28020	0.80000	0.6418
	54 N-Nitrosodiphenylamine	169	17.087	17.103	(0.905)	27512	0.20000	0.2128
$	55 2,4,6-Tribromophenol	330	17.380	17.396	(1.114)	5377	0.20000	0.1901
	56 4-Bromophenyl-phenylether	248	17.905	17.912	(0.949)	10315	0.20000	0.1952
	57 Hexachlorobenzene	284	18.221	18.229	(0.966)	13300	0.20000	0.2178
	58 Pentachlorophenol	266	18.609	18.624	(0.986)	14987	0.40000	0.3532
*	59 Phenanthrene-d10	188	18.872	18.887	(1.000)	1004135	4.00000	
	60 Phenanthrene	178	18.926	18.933	(1.003)	51912	0.20000	0.2091
	61 Anthracene	178	19.019	19.034	(1.008)	54941	0.20000	0.2096
	62 Carbazole	167	19.374	19.390	(1.027)	52977	0.20000	0.2290
	63 Di-n-butylphthalate	149	20.241	20.256	(1.073)	63934	0.20000	0.1983
	64 Fluoranthene	202	21.332	21.347	(1.130)	57084	0.20000	0.2020
	65 Pyrene	202	21.750	21.765	(0.909)	61145	0.20000	0.2104
$	66 Terphenyl-d14	244	22.067	22.082	(0.922)	40972	0.20000	0.2248
	67 Butylbenzylphthalate	149	23.011	23.027	(0.961)	26805	0.20000	0.2167
	68 Benzo(a)anthracene	228	23.910	23.925	(0.999)	57528	0.20000	0.2206
*	69 Chrysene-d12	240	23.933	23.948	(1.000)	961783	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.887	23.902	(0.998)	57302	0.40000	0.5727
	71 Chrysene	228	23.979	23.995	(1.002)	50268	0.20000	0.2159
	72 bis(2-Ethylhexyl)phthalate	149	24.057	24.072	(0.961)	37781	0.20000	0.2123
*	134 Di-n-octylphthalate-d4	153	25.032	25.048	(1.000)	1368840	4.00000	
	73 Di-n-octylphthalate	149	25.040	25.055	(1.000)	73459	0.20000	0.2255

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.706	25.729	(0.974)	53819	0.20000	0.2128
75 Benzo(k)fluoranthene	252	25.752	25.768	(0.975)	54924	0.20000	0.2074
76 Benzo(a)pyrene	252	26.294	26.310	(0.996)	44924	0.20000	0.2039
* 77 Perylene-d12	264	26.403	26.418	(1.000)	907090	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.773	28.804	(1.090)	50577	0.20000	0.2017
79 Dibenzo(a,h)anthracene	278	28.804	28.827	(1.091)	37610	0.20000	0.1952
80 Benzo(g,h,i)perylene	276	29.464	29.495	(1.116)	43781	0.20000	0.2020
90 N-Nitrosodimethylamine	74	4.366	4.358	(0.484)	24705	0.40000	0.4144
91 Aniline	93	8.452	8.460	(0.937)	60240	0.20000	0.2131
93 Benzidine	184	21.595	21.603	(0.902)	45559	0.40000	0.6376
103 Pyridine	79	4.389	4.381	(0.486)	20869	0.40000	0.4092
105 1-methylnaphthalene	142	13.491	13.506	(1.153)	39841	0.20000	0.2043
111 Azobenzene (1,2-DP-Hydrazine)	77	17.164	17.172	(1.100)	39590	0.20000	0.2158
187 Total Benzofluoranthenes	252	25.706	25.768	(0.974)	104604	0.40000	0.4239 (M)
99 Perylene	252	26.449	26.472	(1.002)	46963	0.20000	0.2081

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem1/nt10.i/20120507.b/ic0507c.d
Report Date: 08-May-2012 11:53

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507c.d
Lab Smp Id: IC05070.2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	290963	7.02
27 Naphthalene-d8	1080694	540347	2161388	1116412	3.31
42 Acenaphthene-d10	623821	311910	1247642	616538	-1.17
59 Phenanthrene-d10	999143	499572	1998286	1004135	0.50
69 Chrysene-d12	1001009	500504	2002018	961783	-3.92
134 Di-n-octylphthala	1489422	744711	2978844	1368840	-8.10
77 Perylene-d12	988348	494174	1976696	907090	-8.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.02	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.87	18.37	19.37	18.87	0.00
69 Chrysene-d12	23.93	23.43	24.43	23.93	0.00
134 Di-n-octylphthala	25.02	24.52	25.52	25.03	0.03
77 Perylene-d12	26.40	25.90	26.90	26.40	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/ic0507c.d

Date : 07-MAY-2012 15:37

Client ID:

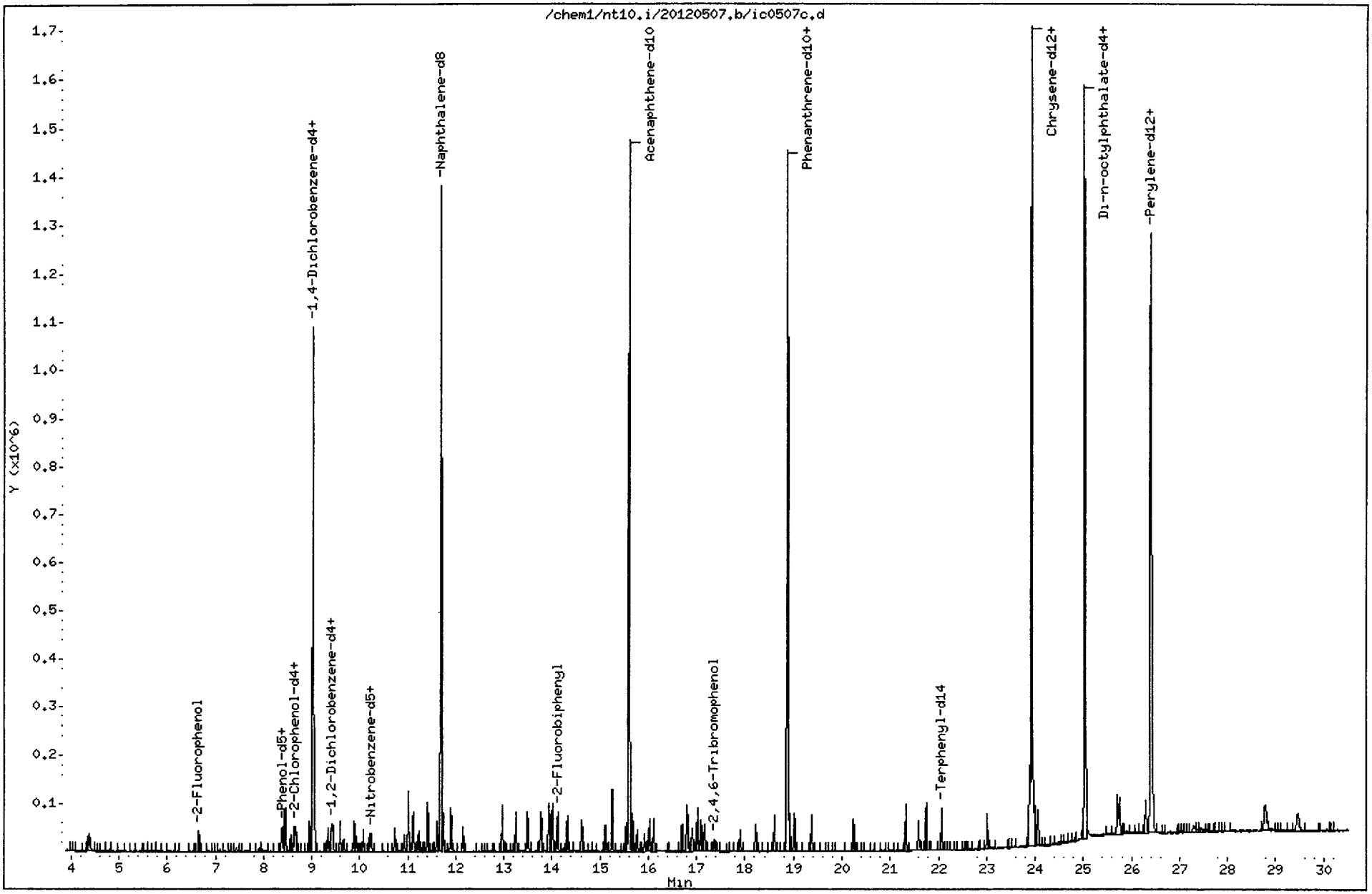
Sample Info: IC05070.2

Column phase: ZB-5msi

Instrument: nt10.i

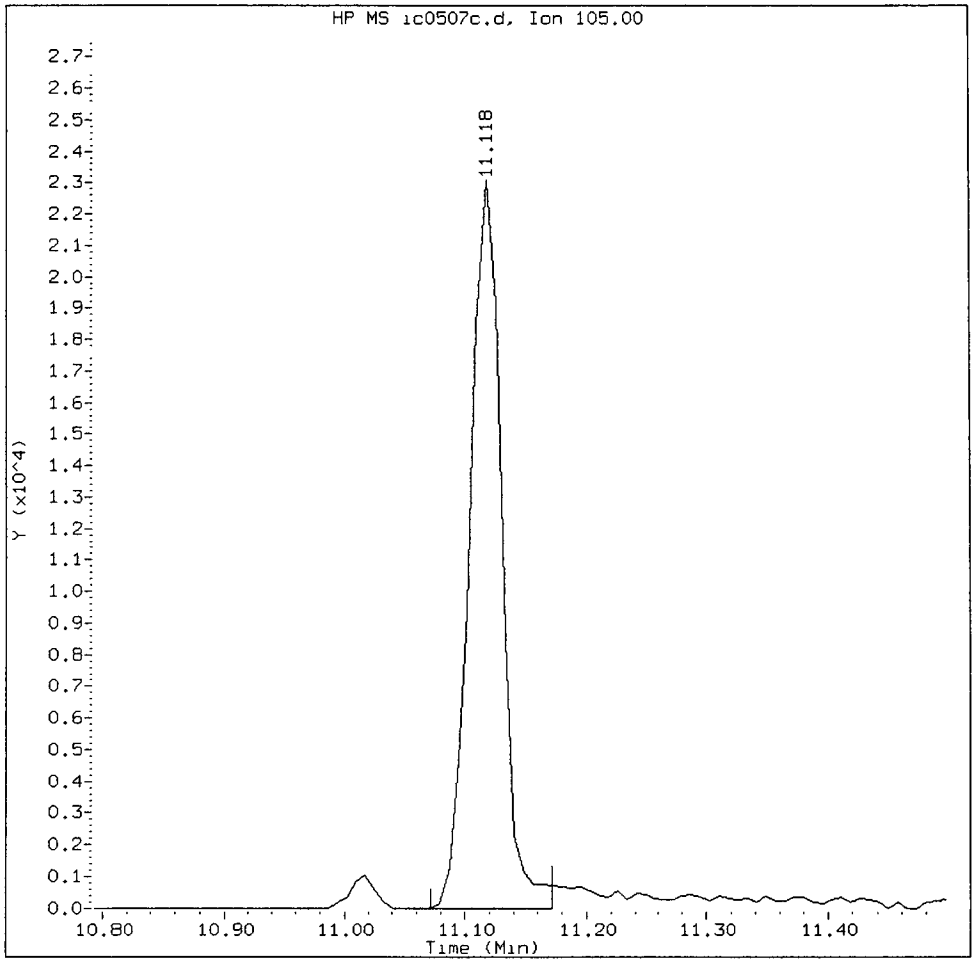
Operator: VTS/YZ

Column diameter: 0.25



IC05070.2, /chem1/nt10.i/20120507.b/ic0507c.d

Benzoic acid Amount: 0.56 Area: 42884



MANUAL INTEGRATION for Benzoic acid

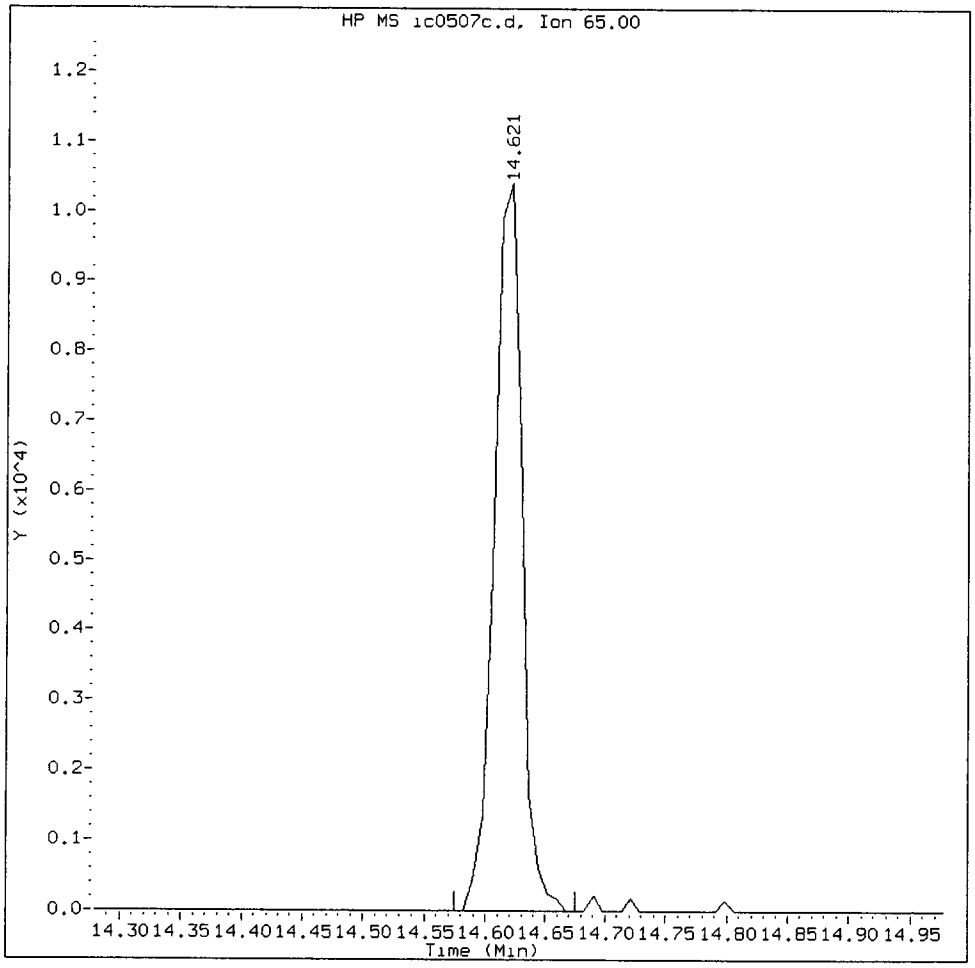
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/12

IC05070.2, /chem1/nt10.i/20120507.b/ic0507c.d

2-Nitroaniline Amount: 0.40 Area: 17123



MANUAL INTEGRATION for 2-Nitroaniline

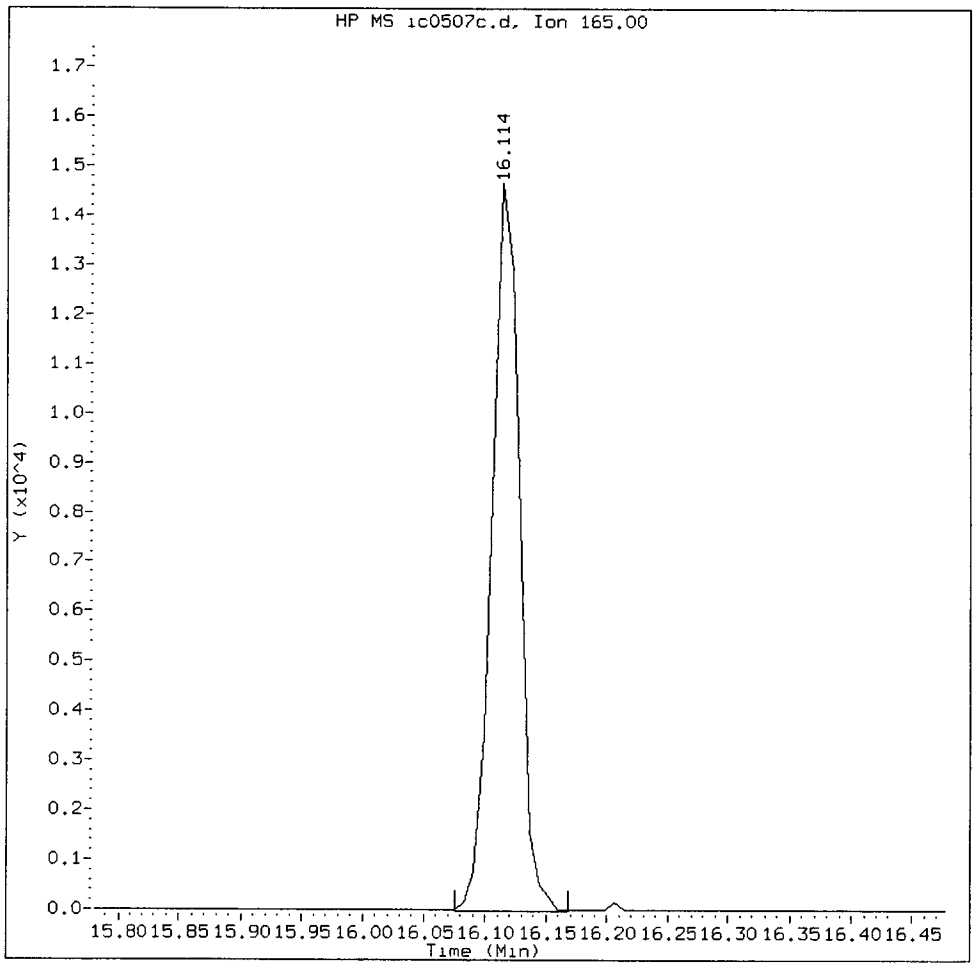
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 5/8/12

IC05070.2, /chem1/nt10.i/20120507.b/ic0507c.d

2,4-Dinitrotoluene Amount: 0.39 Area: 23945



MANUAL INTEGRATION for 2,4-Dinitrotoluene

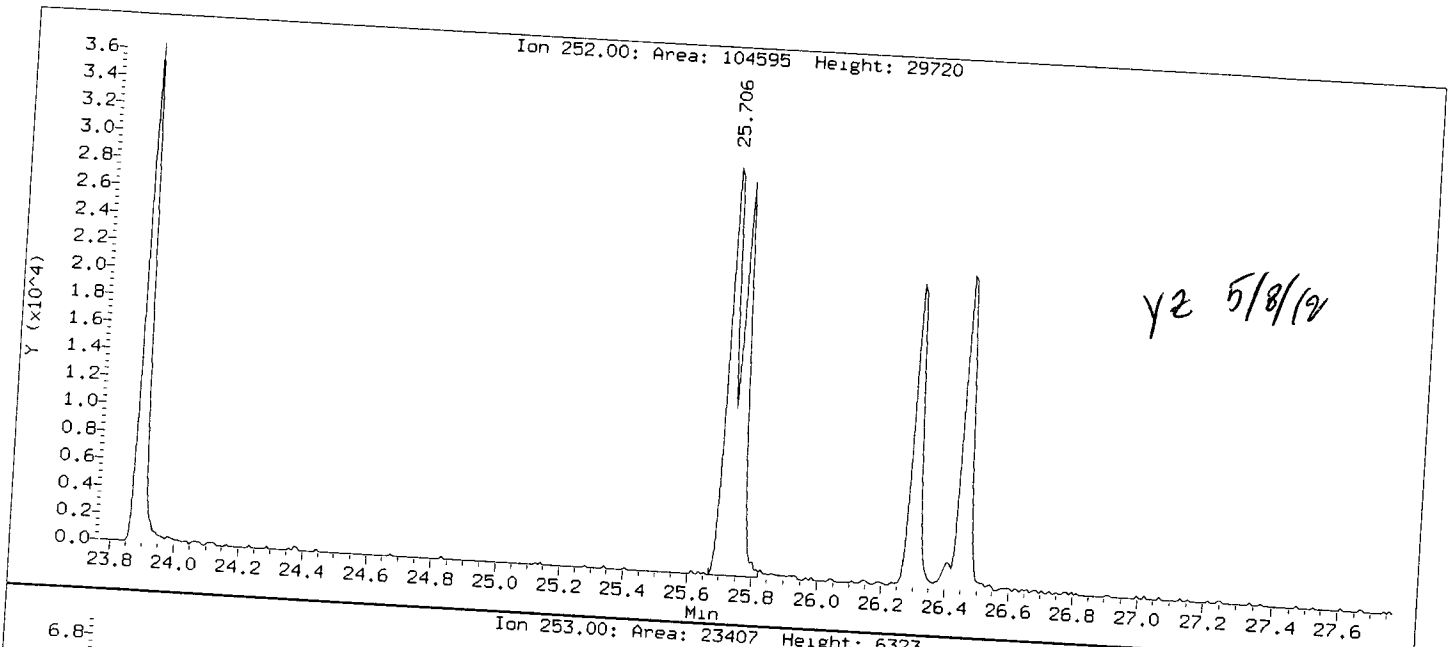
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

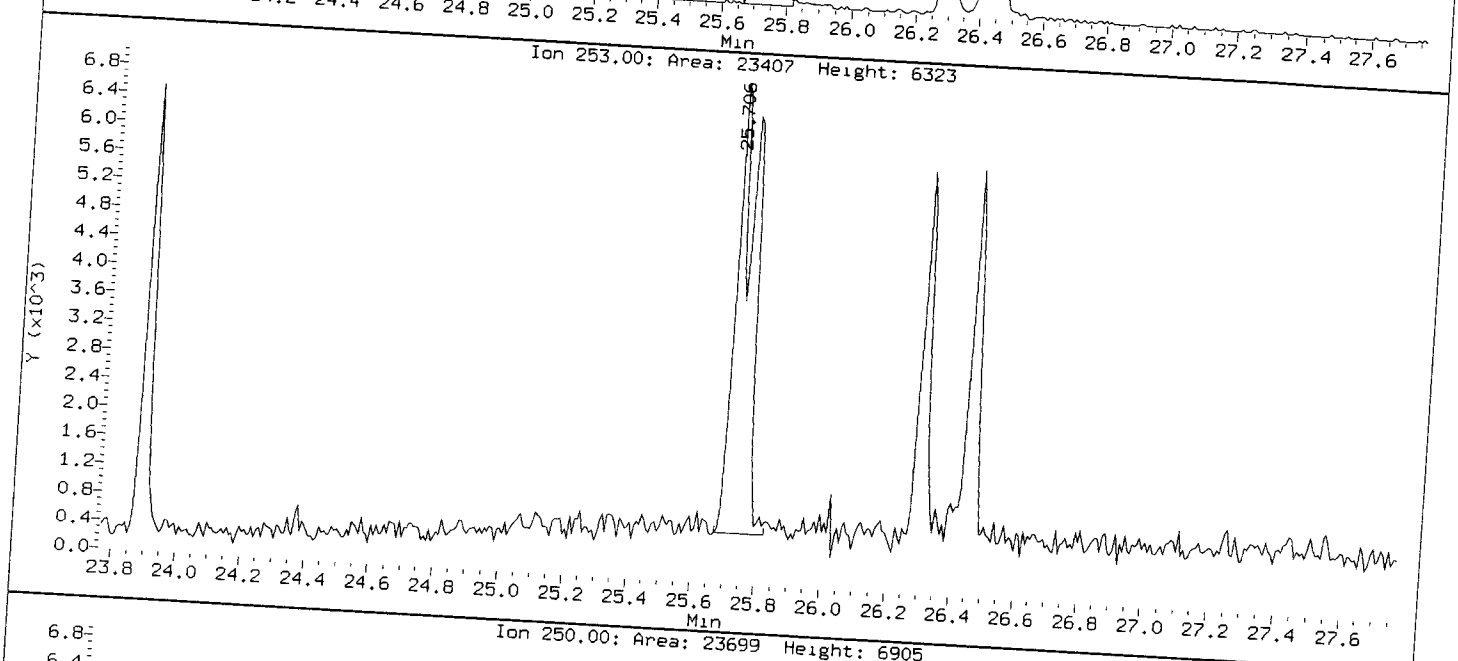
Analyst: VB Date: 5/18/02

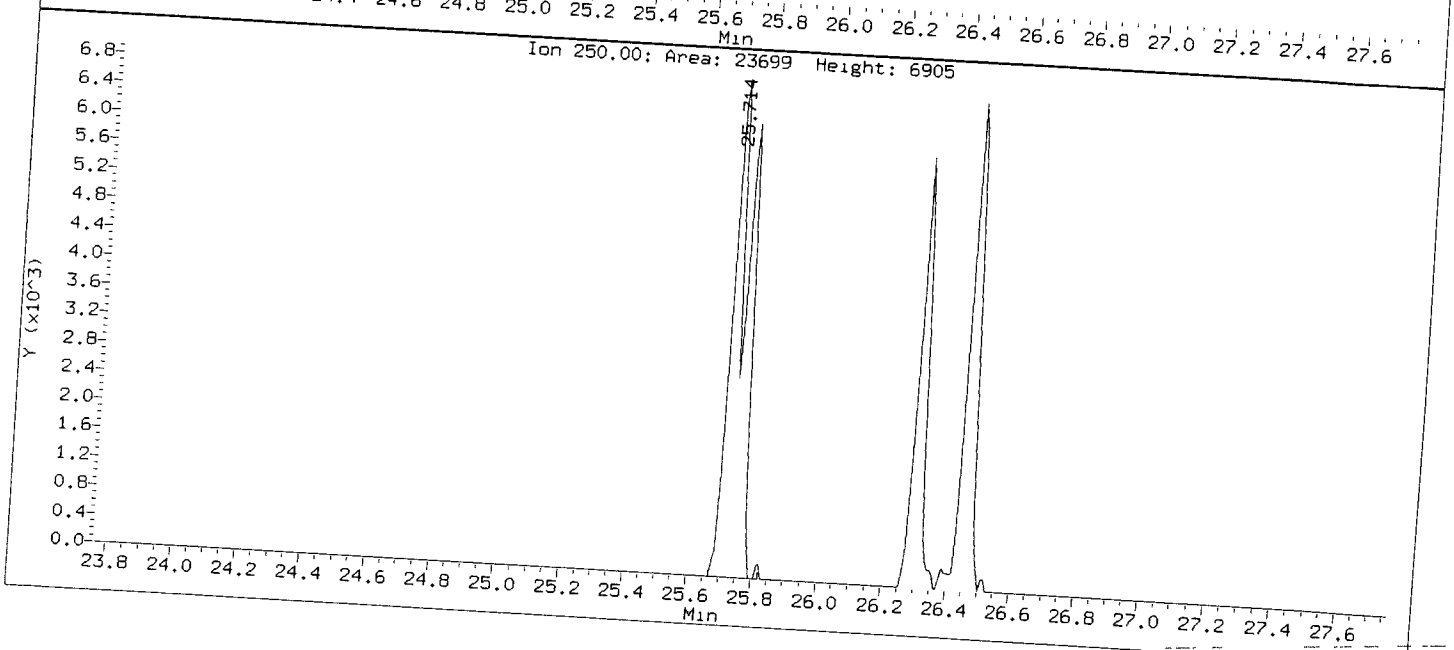
Data File: /chem1/nt10.i/20120507.b/ic0507c.d
Injection Date: 07-MAY-2012 15:37
Instrument: nt10.i
Client Sample ID:

Compound: Total Benzofluoranthenes
CAS Number:



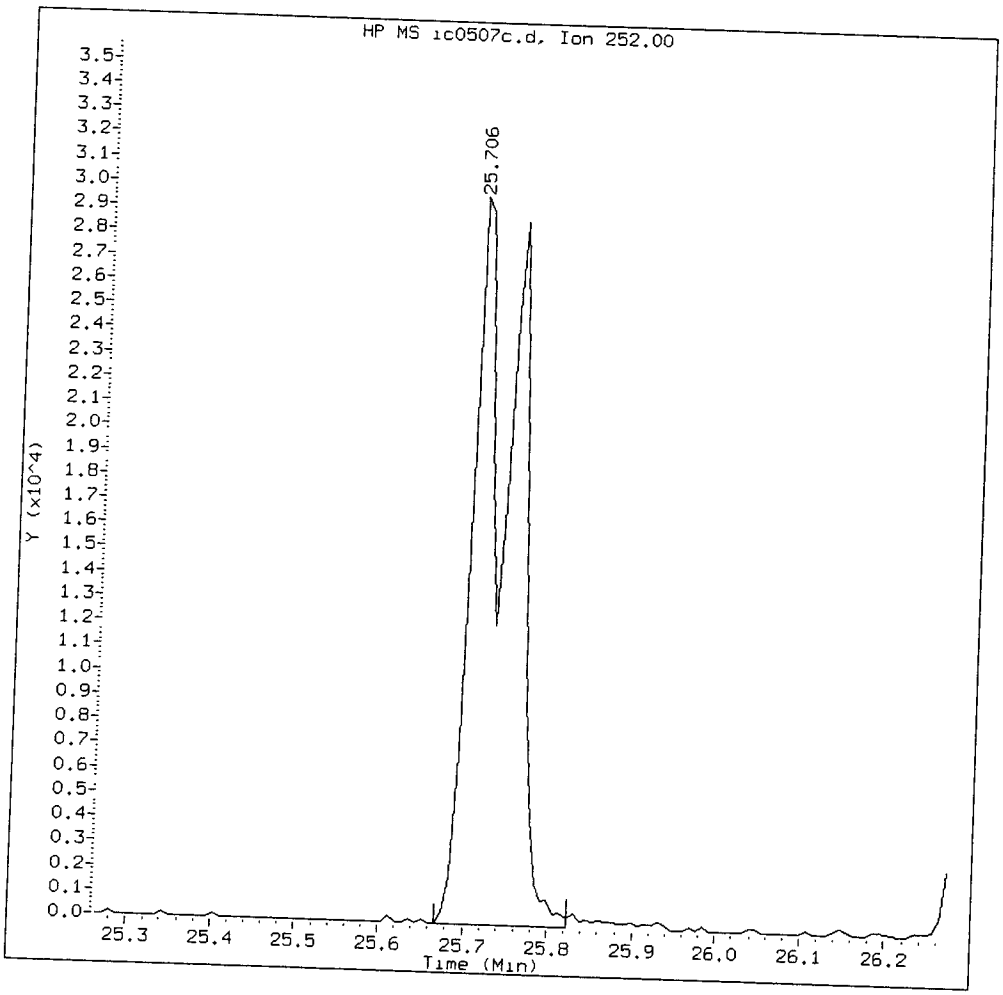
YZ 5/8/12





IC05070.2, /chem1/nt10.i/20120507.b/ic0507c.d

Total Benzofluoranthenes Amount: 0.42 Area: 104604



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/12

CO-ELUTION SUMMARY FOR FILE - ic0507c.d

Lab ID: IC05070.2, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/12

Data file : /chem1/nt10.i/20120507.b/ic0507d.d
Lab Smp Id: IC05071
Inj Date : 07-MAY-2012 16:14
Operator : VTS/YZ
Smp Info : IC05071
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 11:53 yev
Cal Date : 07-MAY-2012 16:14
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0507d.d
Calibration Sample, Level: 3

Compound Sublist: PSDDAICAL.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.660	6.667	(0.738)	96770	1.00000	1.058
$ 2 Phenol-d5	99	8.375	8.383	(0.928)	115862	1.00000	1.018
3 Phenol	94	8.398	8.406	(0.931)	132437	1.00000	1.062
$ 5 2-Chlorophenol-d4	132	8.638	8.645	(0.957)	102011	1.00000	1.036
4 Bis(2-Chloroethyl)ether	93	8.560	8.568	(0.949)	96510	1.00000	1.072
6 2-Chlorophenol	128	8.669	8.676	(0.961)	113942	1.00000	1.044
7 1,3-Dichlorobenzene	146	8.955	8.962	(0.992)	117409	1.00000	1.068
* 8 1,4-Dichlorobenzene-d4	152	9.025	9.032	(1.000)	267494	4.00000	
9 1,4-Dichlorobenzene	146	9.056	9.071	(1.003)	115250	1.00000	1.080
$ 10 1,2-Dichlorobenzene-d4	152	9.413	9.420	(1.043)	69721	1.00000	1.045
12 1,2-Dichlorobenzene	146	9.436	9.451	(1.046)	107460	1.00000	1.037
11 Benzyl alcohol	108	9.335	9.343	(1.034)	61493	1.00000	1.058
14 2,2'-oxybis(1-Chloropropane)	121	9.669	9.677	(1.071)	35609	1.00000	1.064
13 2-Methylphenol	108	9.591	9.607	(1.063)	102330	1.00000	1.043
17 Hexachloroethane	117	10.073	10.088	(1.116)	43697	1.00000	1.049
16 N-Nitroso-di-n-propylamine	70	9.941	9.948	(1.101)	60098	1.00000	1.053
15 4-Methylphenol	108	9.886	9.902	(1.095)	109181	1.00000	1.067
$ 18 Nitrobenzene-d5	82	10.204	10.220	(0.872)	94130	1.00000	1.059
19 Nitrobenzene	77	10.243	10.259	(0.876)	94106	1.00000	1.064
20 Isophorone	82	10.732	10.740	(0.918)	171362	1.00000	0.9664
21 2-Nitrophenol	139	10.925	10.933	(0.934)	59540	1.00000	1.027
22 2,4-Dimethylphenol	107	11.018	11.025	(0.942)	199403	2.00000	2.160
23 Bis(2-Chloroethoxy)methane	93	11.226	11.233	(0.960)	104543	1.00000	1.047
24 Benzoic acid	105	11.164	11.149	(0.954)	289941	4.00000	4.050
25 2,4-Dichlorophenol	162	11.419	11.426	(0.976)	175537	2.00000	2.058
26 1,2,4-Trichlorobenzene	180	11.611	11.619	(0.993)	90065	1.00000	1.068
* 27 Naphthalene-d8	136	11.696	11.712	(1.000)	1039639	4.00000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	11.743	11.750	(1.004)	271416	1.00000	1.045
29 4-Chloroaniline	127	11.905	11.912	(1.018)	233911	2.00000	2.015
30 Hexachlorobutadiene	225	12.152	12.167	(1.039)	49335	1.00000	1.066
31 4-Chloro-3-methylphenol	107	12.965	12.980	(1.108)	163991	2.00000	2.047
32 2-Methylnaphthalene	142	13.251	13.266	(1.133)	183305	1.00000	1.029
33 Hexachlorocyclopentadiene	237	13.770	13.785	(0.882)	112366	2.00000	2.023
34 2,4,6-Trichlorophenol	196	13.940	13.947	(0.893)	127961	2.00000	2.105
35 2,4,5-Trichlorophenol	196	14.009	14.025	(0.898)	143377	2.00000	2.127
$ 36 2-Fluorobiphenyl	172	14.118	14.133	(0.905)	211030	1.00000	1.069
37 2-Chloronaphthalene	162	14.319	14.334	(0.918)	179682	1.00000	1.049
38 2-Nitroaniline	65	14.621	14.628	(0.937)	83200	2.00000	2.078 (M)
39 Dimethylphthalate	163	15.116	15.124	(0.969)	193266	1.00000	1.095
40 Acenaphthylene	152	15.256	15.271	(0.978)	276005	1.00000	1.076
41 2,6-Dinitrotoluene	165	15.248	15.263	(0.977)	92446	2.00000	2.135 (M)
* 42 Acenaphthene-d10	164	15.604	15.611	(1.000)	578567	4.00000	
43 3-Nitroaniline	138	15.542	15.557	(0.996)	104319	2.00000	2.201
44 Acenaphthene	153	15.673	15.681	(1.004)	161876	1.00000	1.058
45 2,4-Dinitrophenol	184	15.774	15.781	(1.011)	118272	4.00000	3.363
46 Dibenzofuran	168	16.029	16.044	(1.027)	242324	1.00000	1.064
47 4-Nitrophenol	109	15.921	15.936	(1.020)	45573	2.00000	2.145
48 2,4-Dinitrotoluene	165	16.114	16.129	(1.033)	124295	2.00000	2.145 (M)
50 Diethylphthalate	149	16.701	16.717	(1.070)	182494	1.00000	1.080
49 Fluorene	166	16.802	16.809	(1.077)	186119	1.00000	1.071
51 4-Chlorophenyl-phenylether	204	16.817	16.833	(1.078)	92922	1.00000	0.9804
52 4-Nitroaniline	138	16.910	16.925	(1.084)	96171	2.00000	2.001
53 4,6-Dinitro-2-methylphenol	198	17.018	17.033	(0.902)	171799	4.00000	4.198
54 N-Nitrosodiphenylamine	169	17.087	17.103	(0.905)	134098	1.00000	1.107
$ 55 2,4,6-Tribromophenol	330	17.373	17.396	(1.113)	28360	1.00000	1.068
56 4-Bromophenyl-phenylether	248	17.897	17.912	(0.948)	52527	1.00000	1.061
57 Hexachlorobenzene	284	18.214	18.229	(0.965)	59646	1.00000	1.042
58 Pentachlorophenol	266	18.609	18.624	(0.986)	85200	2.00000	2.143
* 59 Phenanthrene-d10	188	18.872	18.887	(1.000)	941083	4.00000	
60 Phenanthrene	178	18.926	18.933	(1.003)	247965	1.00000	1.065
61 Anthracene	178	19.019	19.034	(1.008)	252369	1.00000	1.027
62 Carbazole	167	19.375	19.390	(1.027)	244206	1.00000	1.126
63 Di-n-butylphthalate	149	20.241	20.256	(1.073)	307786	1.00000	1.019
64 Fluoranthene	202	21.332	21.347	(1.130)	277644	1.00000	1.048
65 Pyrene	202	21.750	21.765	(0.909)	293542	1.00000	1.056
$ 66 Terphenyl-d14	244	22.067	22.082	(0.922)	188314	1.00000	1.080
67 Butylbenzylphthalate	149	23.012	23.027	(0.961)	125815	1.00000	1.063
68 Benzo(a)anthracene	228	23.910	23.925	(0.999)	261413	1.00000	1.047
* 69 Chrysene-d12	240	23.933	23.948	(1.000)	920261	4.00000	
70 3,3'-Dichlorobenzidine	252	23.887	23.902	(0.998)	220804	2.00000	2.306
71 Chrysene	228	23.980	23.995	(1.002)	230760	1.00000	1.036
72 bis(2-Ethylhexyl)phthalate	149	24.057	24.072	(0.961)	176384	1.00000	1.051
* 134 Di-n-octylphthalate-d4	153	25.032	25.048	(1.000)	1290725	4.00000	
73 Di-n-octylphthalate	149	25.040	25.055	(1.000)	322324	1.00000	1.049

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.706	25.729	(0.974)	251615	1.00000	1.038
75 Benzo(k)fluoranthene	252	25.752	25.768	(0.975)	269692	1.00000	1.063
76 Benzo(a)pyrene	252	26.294	26.310	(0.996)	217035	1.00000	1.028
* 77 Perylene-d12	264	26.403	26.418	(1.000)	869327	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.781	28.804	(1.090)	245691	1.00000	1.022
79 Dibenzo(a,h)anthracene	278	28.804	28.827	(1.091)	190143	1.00000	1.030
80 Benzo(g,h,i)perylene	276	29.465	29.495	(1.116)	217431	1.00000	1.047
90 N-Nitrosodimethylamine	74	4.358	4.358	(0.483)	116182	2.00000	2.120
91 Aniline	93	8.452	8.460	(0.937)	277761	1.00000	1.069
93 Benzidine	184	21.587	21.603	(0.902)	175908	2.00000	2.542
103 Pyridine	79	4.374	4.381	(0.485)	98673	2.00000	2.105
105 1-methylnaphthalene	142	13.491	13.506	(1.153)	187595	1.00000	1.033
111 Azobenzene (1,2-DP-Hydrazine)	77	17.165	17.172	(1.100)	183209	1.00000	1.064
187 Total Benzofluoranthenes	252	25.706	25.768	(0.974)	495757	2.00000	2.096
99 Perylene	252	26.449	26.472	(1.002)	226433	1.00000	1.047

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507d.d
Lab Smp Id: IC05071
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	267494	-1.61
27 Naphthalene-d8	1080694	540347	2161388	1039639	-3.80
42 Acenaphthene-d10	623821	311910	1247642	578567	-7.25
59 Phenanthrene-d10	999143	499572	1998286	941083	-5.81
69 Chrysene-d12	1001009	500504	2002018	920261	-8.07
134 Di-n-octylphthala	1489422	744711	2978844	1290725	-13.34
77 Perylene-d12	988348	494174	1976696	869327	-12.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.02	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.87	18.37	19.37	18.87	0.00
69 Chrysene-d12	23.93	23.43	24.43	23.93	0.00
134 Di-n-octylphthala	25.02	24.52	25.52	25.03	0.03
77 Perylene-d12	26.40	25.90	26.90	26.40	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/ic0507d.d

Date : 07-MAY-2012 16:14

Client ID:

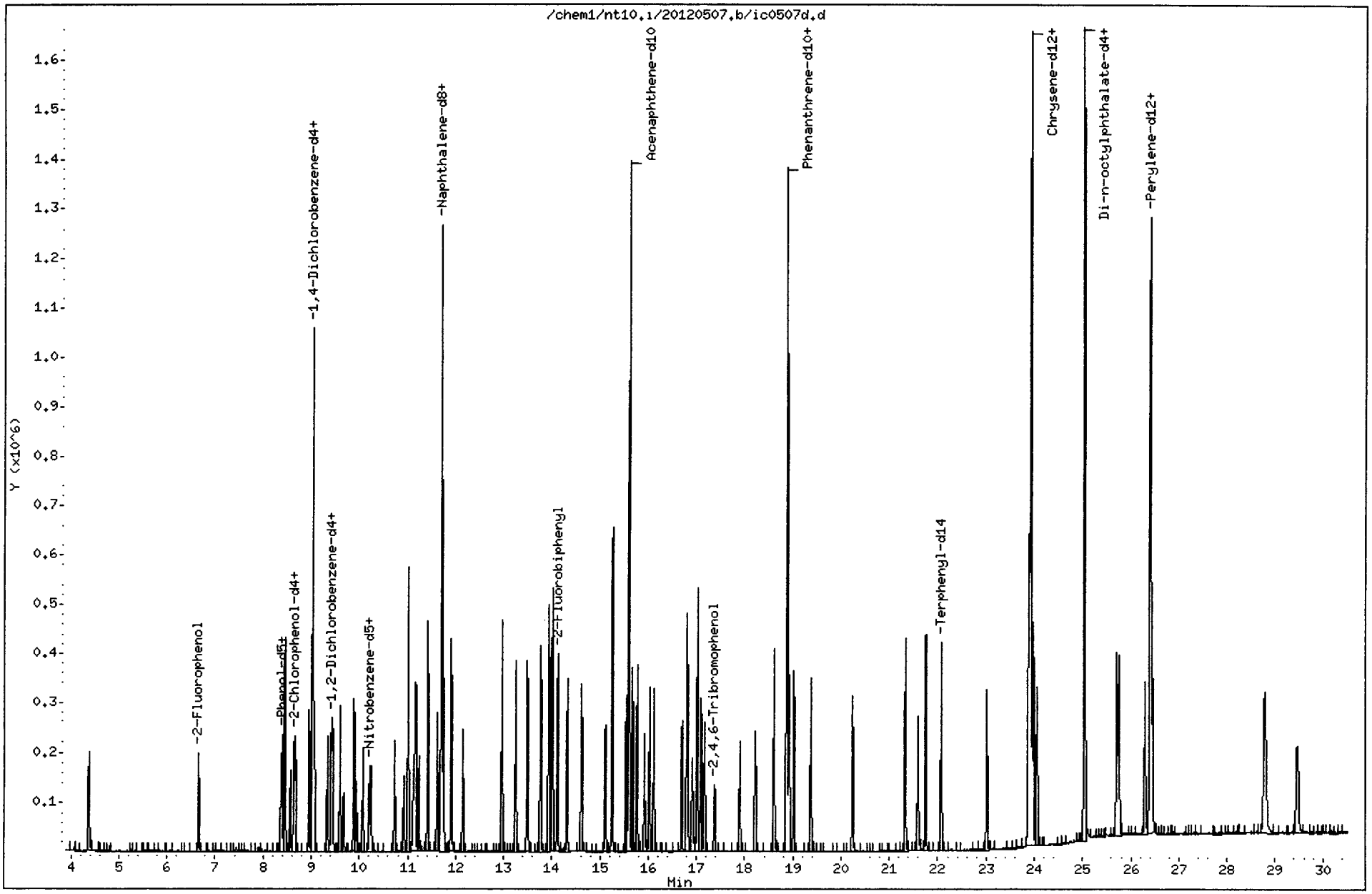
Sample Info: IC05071

Column phase: ZB-5msi

Instrument: nt10.i

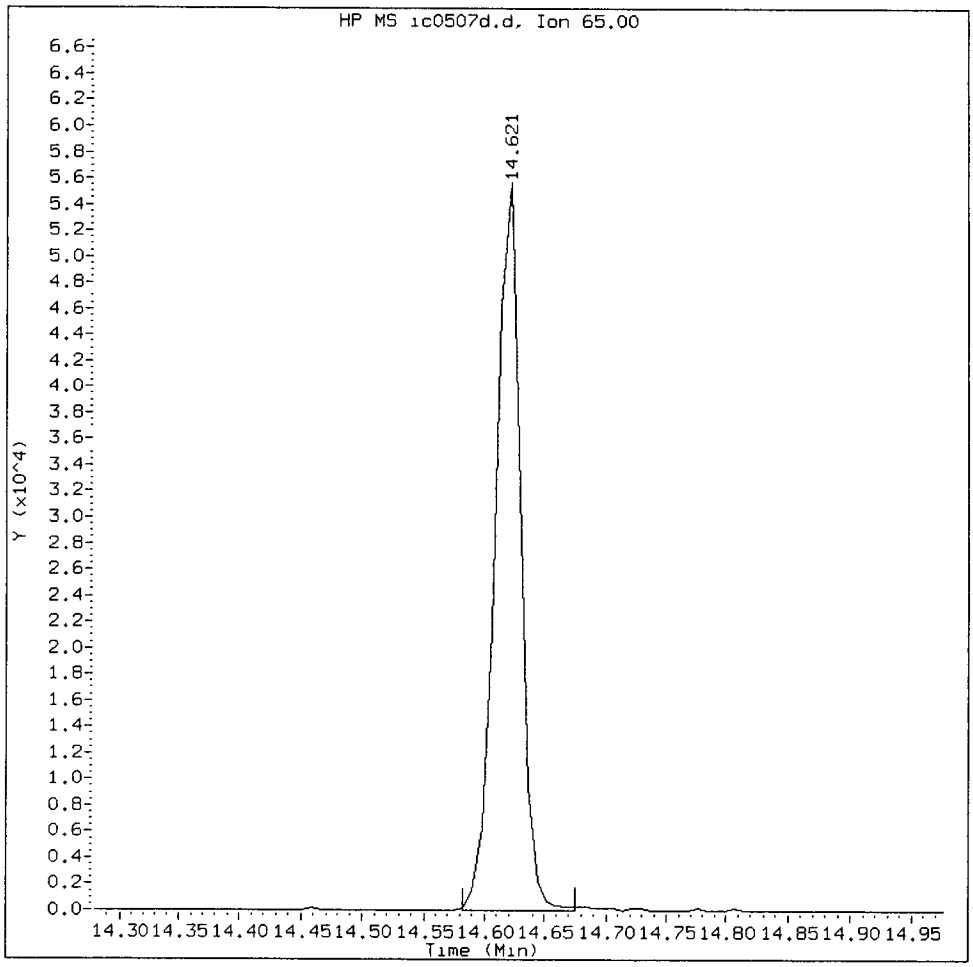
Operator: VTS/YZ

Column diameter: 0.25



IC05071, /chem1/nt10.i/20120507.b/ic0507d.d

2-Nitroaniline Amount: 2.08 Area: 83200



MANUAL INTEGRATION for 2-Nitroaniline

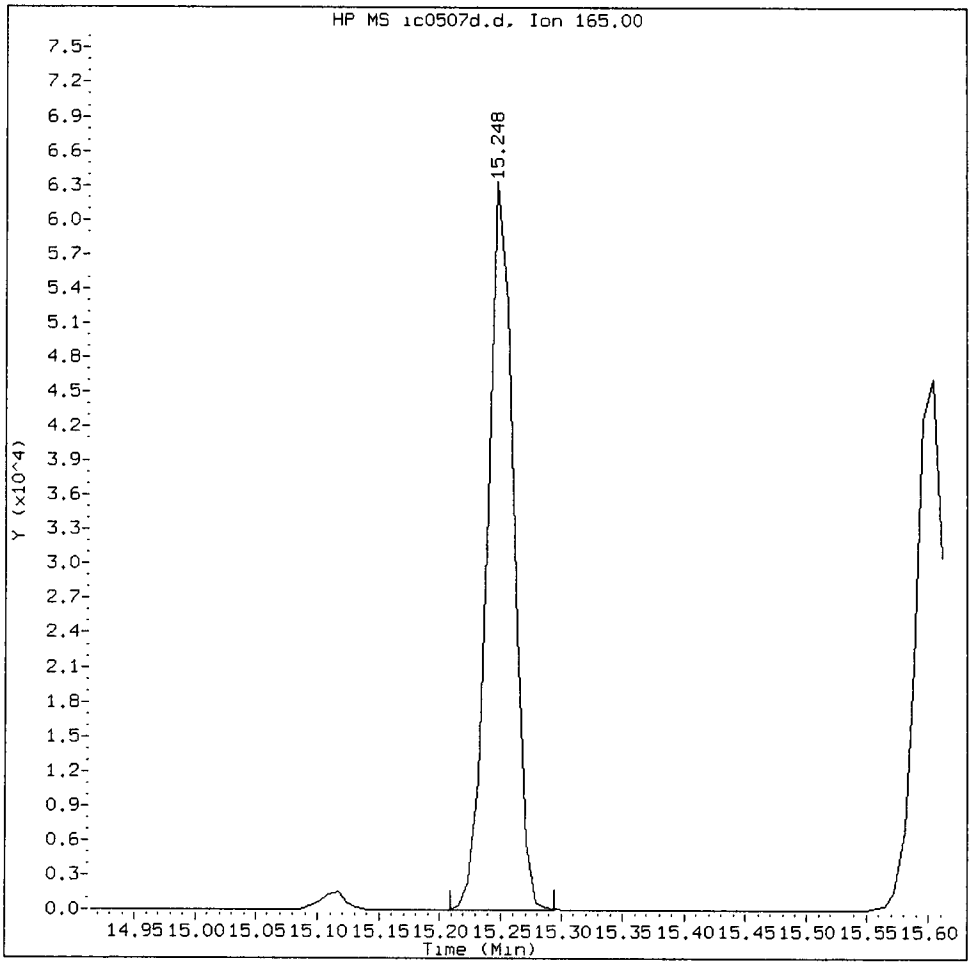
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/9/12

IC05071, /chem1/nt10.i/20120507.b/ic0507d.d

2,6-Dinitrotoluene Amount: 2.14 Area: 92446



MANUAL INTEGRATION for 2,6-Dinitrotoluene

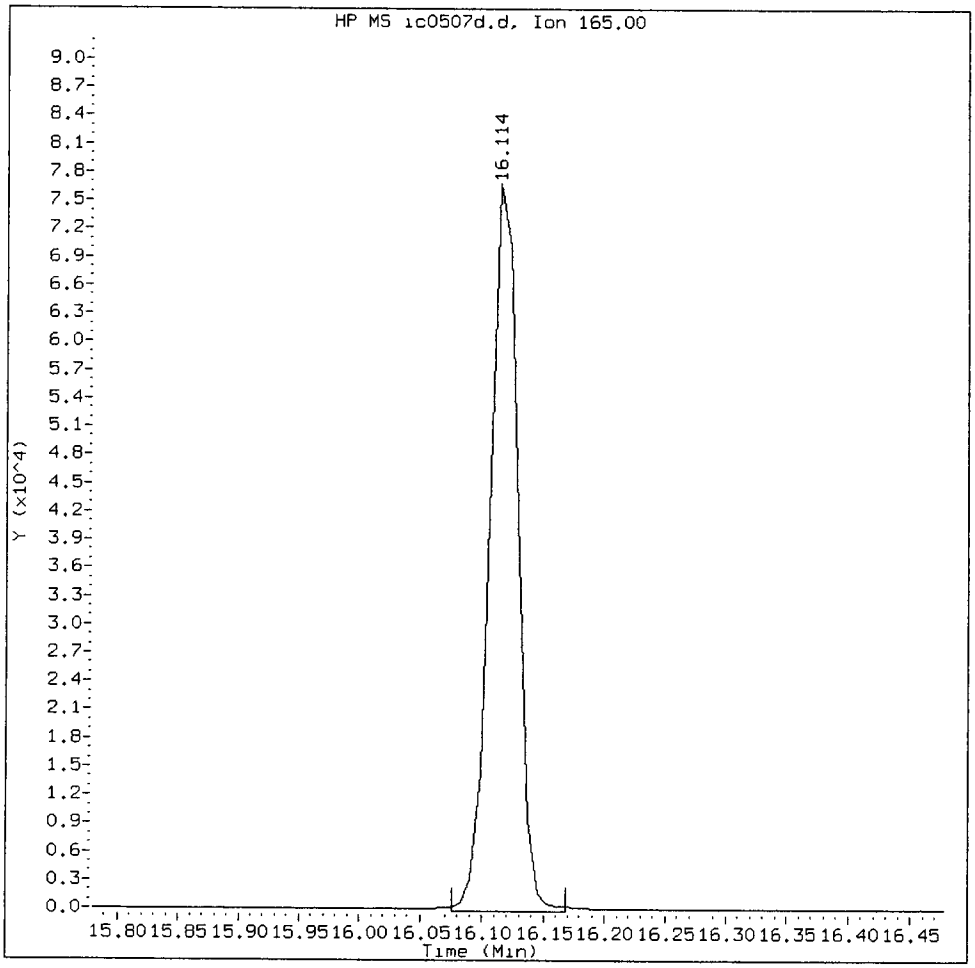
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/7/12

IC05071, /chem1/nt10.i/20120507.b/ic0507d.d

2,4-Dinitrotoluene Amount: 2.14 Area: 124295



MANUAL INTEGRATION for 2,4-Dinitrotoluene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/8/12

CO-ELUTION SUMMARY FOR FILE - ic0507d.d

Lab ID: IC05071, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120507.b/ic0507e.d
Lab Smp Id: IC05072.5
Inj Date : 07-MAY-2012 16:51
Operator : VTS/YZ
Smp Info : IC05072.5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 11:53 yev
Cal Date : 07-MAY-2012 16:51
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0507e.d
Calibration Sample, Level: 4

Compound Sublist: PSDDAICAL.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.659	6.667	(0.737)	224605	2.50000	2.524
$	2 Phenol-d5	99	8.375	8.383	(0.927)	276303	2.50000	2.497
	3 Phenol	94	8.398	8.406	(0.930)	307534	2.50000	2.535
$	5 2-Chlorophenol-d4	132	8.637	8.645	(0.956)	241576	2.50000	2.522
	4 Bis(2-Chloroethyl)ether	93	8.568	8.568	(0.949)	218255	2.50000	2.494
	6 2-Chlorophenol	128	8.668	8.676	(0.960)	264825	2.50000	2.495
	7 1,3-Dichlorobenzene	146	8.955	8.962	(0.991)	267422	2.50000	2.501
*	8 1,4-Dichlorobenzene-d4	152	9.032	9.032	(1.000)	260163	4.00000	
	9 1,4-Dichlorobenzene	146	9.063	9.071	(1.003)	257921	2.50000	2.485
$	10 1,2-Dichlorobenzene-d4	152	9.413	9.420	(1.042)	162341	2.50000	2.502
	12 1,2-Dichlorobenzene	146	9.444	9.451	(1.046)	254618	2.50000	2.527
	11 Benzyl alcohol	108	9.335	9.343	(1.034)	141973	2.50000	2.512
	14 2,2'-oxybis(1-Chloropropane)	121	9.669	9.677	(1.070)	79888	2.50000	2.454
	13 2-Methylphenol	108	9.599	9.607	(1.063)	241147	2.50000	2.526
	17 Hexachloroethane	117	10.072	10.088	(1.115)	101960	2.50000	2.518
	16 N-Nitroso-di-n-propylamine	70	9.948	9.948	(1.101)	139685	2.50000	2.516
	15 4-Methylphenol	108	9.894	9.902	(1.095)	252762	2.50000	2.539
$	18 Nitrobenzene-d5	82	10.212	10.220	(0.873)	218218	2.50000	2.504
	19 Nitrobenzene	77	10.251	10.259	(0.876)	218749	2.50000	2.522
	20 Isophorone	82	10.732	10.740	(0.917)	461640	2.50000	2.655
	21 2-Nitrophenol	139	10.925	10.933	(0.933)	144841	2.50000	2.547
	22 2,4-Dimethylphenol	107	11.018	11.025	(0.941)	452410	5.00000	4.998
	23 Bis(2-Chloroethoxy)methane	93	11.226	11.233	(0.959)	240688	2.50000	2.458
	24 Benzoic acid	105	11.218	11.149	(0.958)	756491	10.0000	10.78
	25 2,4-Dichlorophenol	162	11.418	11.426	(0.976)	454739	5.00000	5.438
	26 1,2,4-Trichlorobenzene	180	11.619	11.619	(0.993)	204014	2.50000	2.467
*	27 Naphthalene-d8	136	11.704	11.712	(1.000)	1019393	4.00000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	11.742	11.750	(1.003)	634800	2.50000	2.494
29 4-Chloroaniline	127	11.905	11.912	(1.017)	608827	5.00000	5.349
30 Hexachlorobutadiene	225	12.160	12.167	(1.039)	111613	2.50000	2.461
31 4-Chloro-3-methylphenol	107	12.972	12.980	(1.108)	396241	5.00000	5.045
32 2-Methylnaphthalene	142	13.259	13.266	(1.133)	434649	2.50000	2.490
33 Hexachlorocyclopentadiene	237	13.769	13.785	(0.882)	279882	5.00000	4.964
34 2,4,6-Trichlorophenol	196	13.940	13.947	(0.893)	307359	5.00000	4.980
35 2,4,5-Trichlorophenol	196	14.017	14.025	(0.898)	338319	5.00000	4.944
$ 36 2-Fluorobiphenyl	172	14.118	14.133	(0.905)	492264	2.50000	2.457
37 2-Chloronaphthalene	162	14.327	14.334	(0.918)	422947	2.50000	2.433
38 2-Nitroaniline	65	14.621	14.628	(0.937)	204171	5.00000	5.022 (M)
39 Dimethylphthalate	163	15.116	15.124	(0.969)	444939	2.50000	2.482
40 Acenaphthylene	152	15.255	15.271	(0.978)	636115	2.50000	2.443
41 2,6-Dinitrotoluene	165	15.255	15.263	(0.978)	218277	5.00000	4.965 (M)
* 42 Acenaphthene-d10	164	15.603	15.611	(1.000)	587432	4.00000	
43 3-Nitroaniline	138	15.549	15.557	(0.997)	227023	5.00000	4.717
44 Acenaphthene	153	15.673	15.681	(1.004)	381062	2.50000	2.452
45 2,4-Dinitrophenol	184	15.774	15.781	(1.011)	331176	10.0000	9.227
46 Dibenzofuran	168	16.029	16.044	(1.027)	565676	2.50000	2.446
47 4-Nitrophenol	109	15.920	15.936	(1.020)	112439	5.00000	5.213
48 2,4-Dinitrotoluene	165	16.121	16.129	(1.033)	297770	5.00000	5.060 (M)
50 Diethylphthalate	149	16.701	16.717	(1.070)	424198	2.50000	2.473
49 Fluorene	166	16.802	16.809	(1.077)	438405	2.50000	2.485
51 4-Chlorophenyl-phenylether	204	16.817	16.833	(1.078)	249373	2.50000	2.591
52 4-Nitroaniline	138	16.918	16.925	(1.084)	230490	5.00000	4.724
53 4,6-Dinitro-2-methylphenol	198	17.026	17.033	(0.902)	425618	10.0000	10.42
54 N-Nitrosodiphenylamine	169	17.087	17.103	(0.905)	301611	2.50000	2.495
$ 55 2,4,6-Tribromophenol	330	17.380	17.396	(1.114)	66121	2.50000	2.453
56 4-Bromophenyl-phenylether	248	17.905	17.912	(0.948)	122477	2.50000	2.479
57 Hexachlorobenzene	284	18.221	18.229	(0.965)	141633	2.50000	2.481
58 Pentachlorophenol	266	18.609	18.624	(0.986)	205370	5.00000	5.176
* 59 Phenanthrene-d10	188	18.879	18.887	(1.000)	938980	4.00000	
60 Phenanthrene	178	18.926	18.933	(1.002)	564031	2.50000	2.429
61 Anthracene	178	19.019	19.034	(1.007)	617652	2.50000	2.520
62 Carbazole	167	19.375	19.390	(1.026)	491309	2.50000	2.271
63 Di-n-butylphthalate	149	20.241	20.256	(1.072)	741030	2.50000	2.458
64 Fluoranthene	202	21.332	21.347	(1.130)	655800	2.50000	2.481
65 Pyrene	202	21.750	21.765	(0.908)	693988	2.50000	2.474
$ 66 Terphenyl-d14	244	22.075	22.082	(0.922)	434493	2.50000	2.470
67 Butylbenzylphthalate	149	23.019	23.027	(0.962)	294998	2.50000	2.471
68 Benzo(a)anthracene	228	23.910	23.925	(0.999)	622210	2.50000	2.472
* 69 Chrysene-d12	240	23.941	23.948	(1.000)	928173	4.00000	
70 3,3'-Dichlorobenzidine	252	23.887	23.902	(0.998)	423716	5.00000	4.388
71 Chrysene	228	23.979	23.995	(1.002)	556155	2.50000	2.475
72 bis(2-Ethylhexyl)phthalate	149	24.057	24.072	(0.961)	425220	2.50000	2.462
* 134 Di-n-octylphthalate-d4	153	25.032	25.048	(1.000)	1328197	4.00000	
73 Di-n-octylphthalate	149	25.040	25.055	(1.000)	772691	2.50000	2.444

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.714	25.729	(0.974)	577541	2.50000	2.331
75 Benzo(k)fluoranthene	252	25.752	25.768	(0.975)	680869	2.50000	2.624
76 Benzo(a)pyrene	252	26.302	26.310	(0.996)	529357	2.50000	2.452
* 77 Perylene-d12	264	26.403	26.418	(1.000)	888753	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.781	28.804	(1.090)	611947	2.50000	2.491
79 Dibenzo(a,h)anthracene	278	28.812	28.827	(1.091)	469211	2.50000	2.485
80 Benzo(g,h,i)perylene	276	29.472	29.495	(1.116)	521380	2.50000	2.455
90 N-Nitrosodimethylamine	74	4.358	4.358	(0.482)	269421	5.00000	5.055
91 Aniline	93	8.452	8.460	(0.936)	622870	2.50000	2.464
93 Benzidine	184	21.595	21.603	(0.902)	309266	5.00000	4.376
103 Pyridine	79	4.374	4.381	(0.484)	230982	5.00000	5.065
105 1-methylnaphthalene	142	13.491	13.506	(1.153)	445323	2.50000	2.501
111 Azobenzene (1,2-DP-Hydrazine)	77	17.164	17.172	(1.100)	432353	2.50000	2.473
187 Total Benzofluoranthenes	252	25.752	25.768	(0.975)	1190760	5.00000	4.925
99 Perylene	252	26.457	26.472	(1.002)	547861	2.50000	2.478

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507e.d
Lab Smp Id: IC05072.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	260163	-4.31
27 Naphthalene-d8	1080694	540347	2161388	1019393	-5.67
42 Acenaphthene-d10	623821	311910	1247642	587432	-5.83
59 Phenanthrene-d10	999143	499572	1998286	938980	-6.02
69 Chrysene-d12	1001009	500504	2002018	928173	-7.28
134 Di-n-octylphthala	1489422	744711	2978844	1328197	-10.82
77 Perylene-d12	988348	494174	1976696	888753	-10.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.03	0.09
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.07
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.87	18.37	19.37	18.88	0.04
69 Chrysene-d12	23.93	23.43	24.43	23.94	0.03
134 Di-n-octylphthala	25.02	24.52	25.52	25.03	0.03
77 Perylene-d12	26.40	25.90	26.90	26.40	0.00

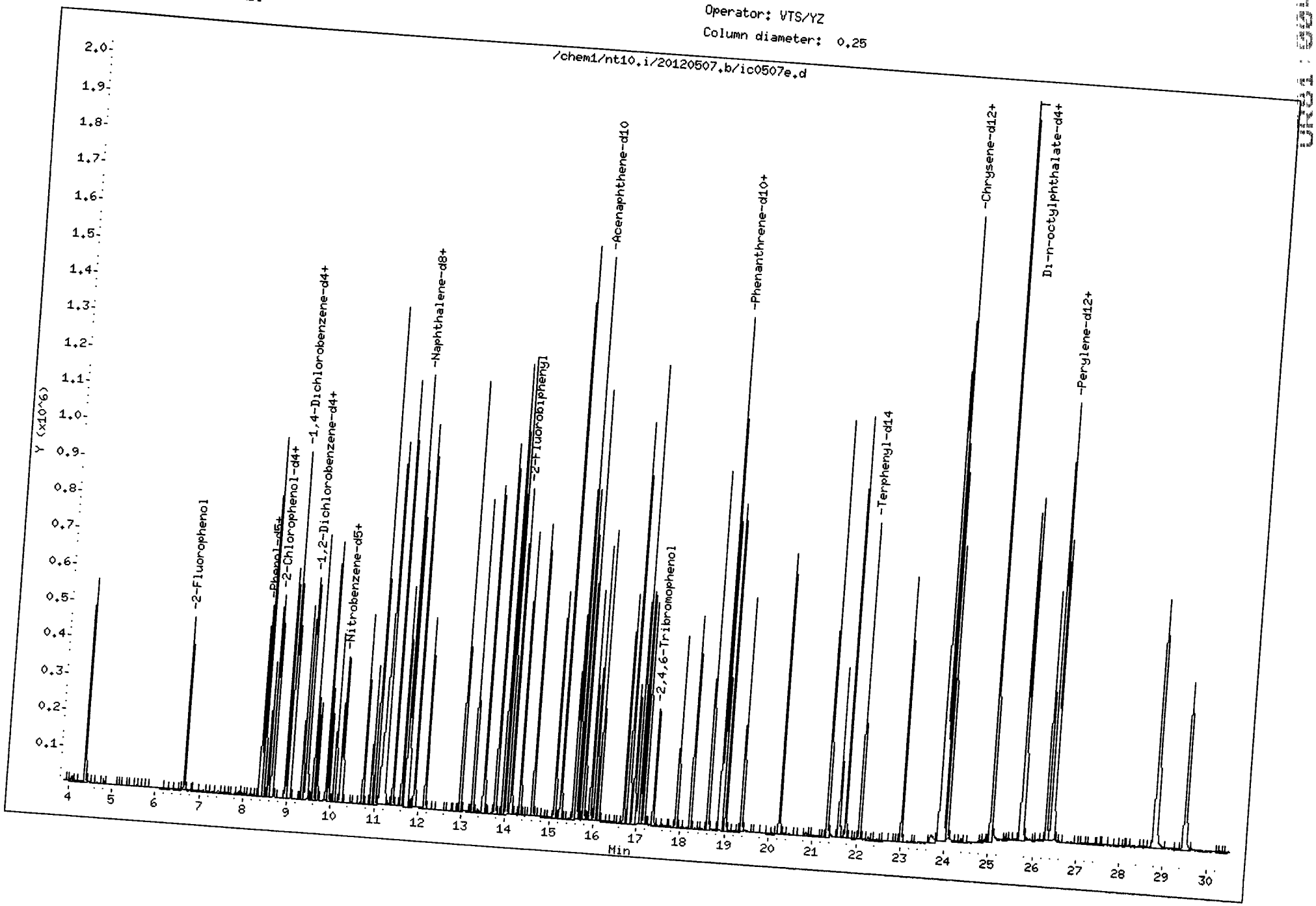
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/ic0507e.d
Date : 07-MAY-2012 16:51
Client ID:
Sample Info: IC05072.5

Column phase: ZB-5msi

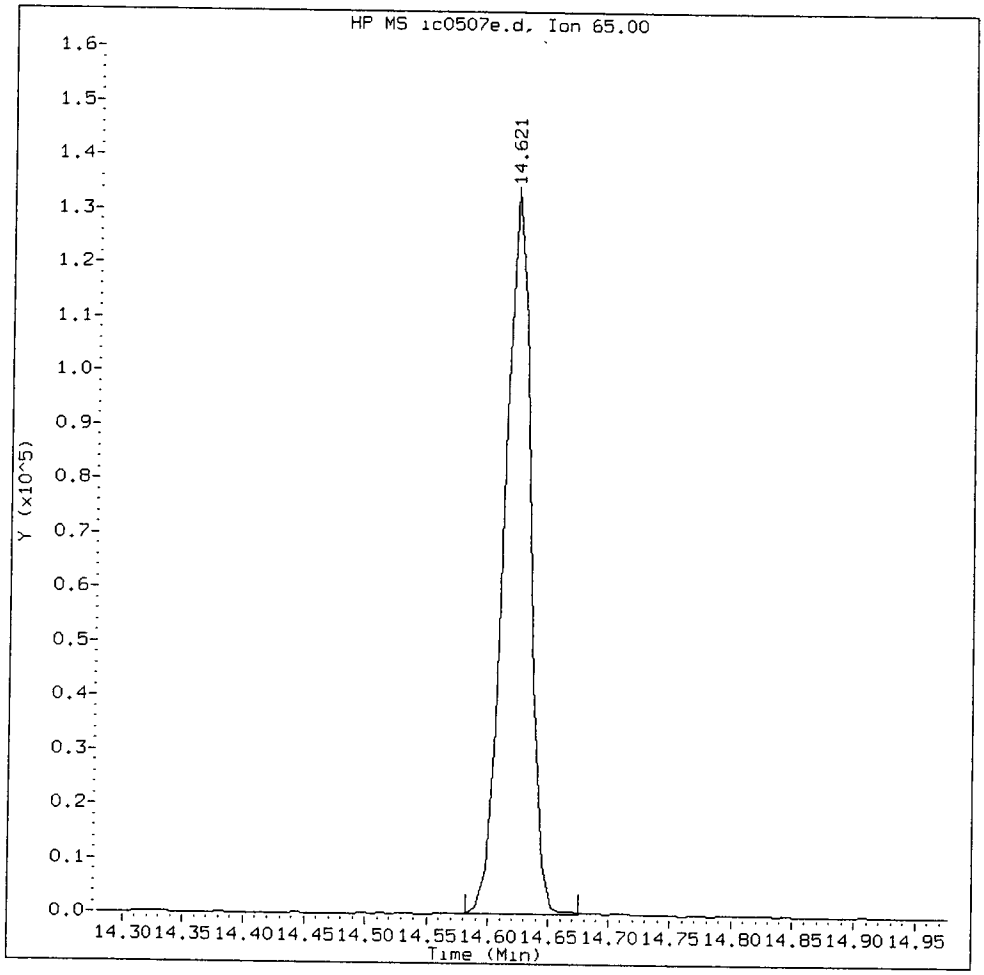
Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



IC05072.5, /chem1/nt10.i/20120507.b/ic0507e.d

2-Nitroaniline Amount: 5.02 Area: 204171



MANUAL INTEGRATION for 2-Nitroaniline

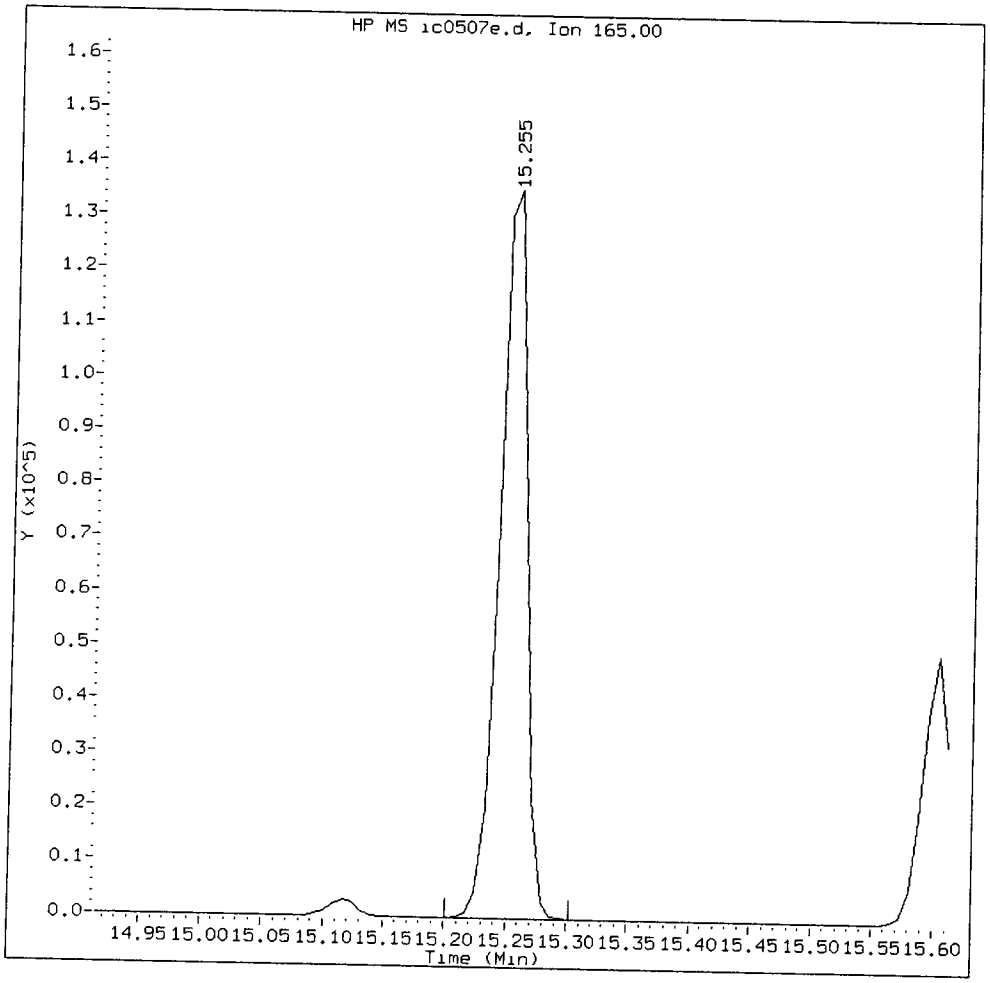
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YE Date: 5/8/12

IC05072.5, /chem1/nt10.i/20120507.b/ic0507e.d

2,6-Dinitrotoluene Amount: 4.97 Area: 218277



MANUAL INTEGRATION for 2,6-Dinitrotoluene

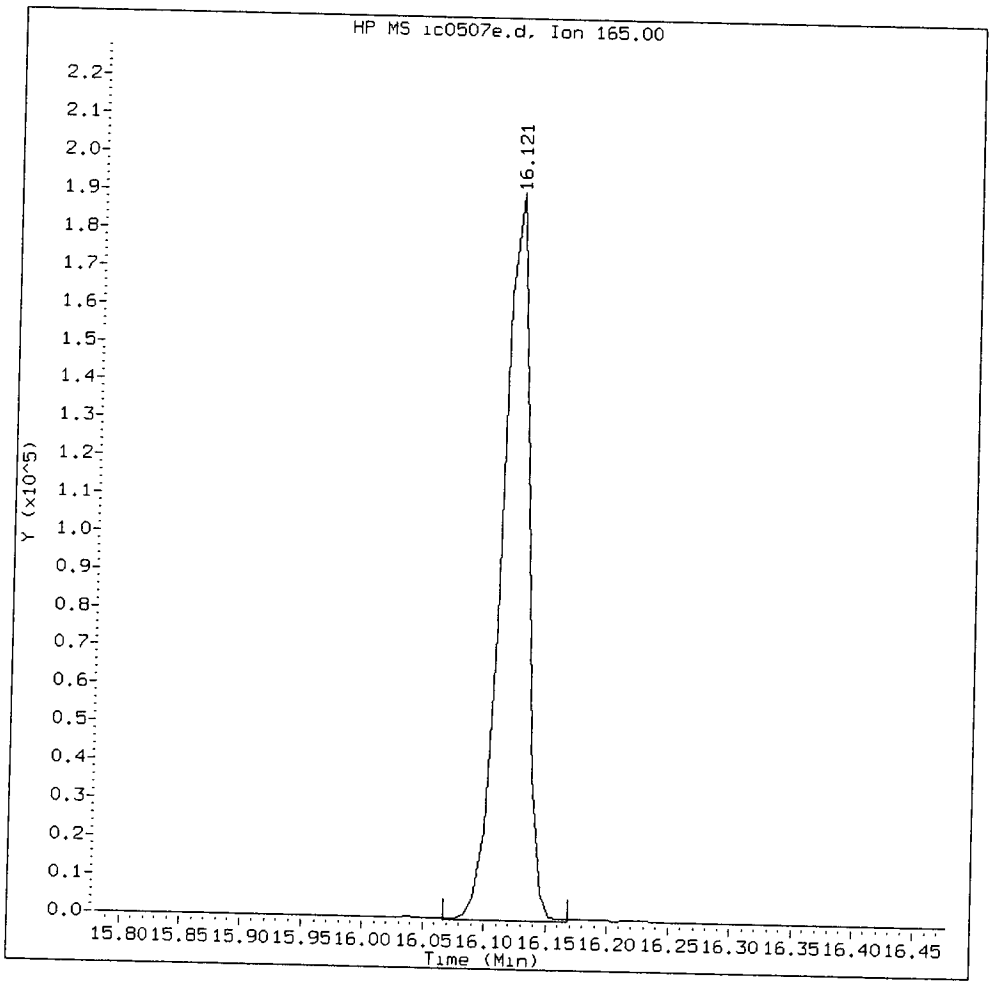
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/18

IC05072.5, /chem1/nt10.i/20120507.b/ic0507e.d

2,4-Dinitrotoluene Amount: 5.06 Area: 297770



MANUAL INTEGRATION for 2,4-Dinitrotoluene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/12

CO-ELUTION SUMMARY FOR FILE - ic0507e.d

Lab ID: IC05072.5, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
15.255	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/9/12

Data file : /chem1/nt10.i/20120507.b/ic0507g.d
Lab Smp Id: IC050710
Inj Date : 07-MAY-2012 18:05
Operator : VTS/YZ
Smp Info : IC050710
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 11:53 yev
Cal Date : 07-MAY-2012 18:05
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0507g.d
Calibration Sample, Level: 6

Compound Sublist: PSDDAICAL.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.659	6.667	(0.737)	848413	10.0000	9.431
$	2 Phenol-d5	99	8.390	8.383	(0.929)	1091808	10.0000	9.761
	3 Phenol	94	8.414	8.406	(0.931)	1151480	10.0000	9.392
$	5 2-Chlorophenol-d4	132	8.645	8.645	(0.957)	922853	10.0000	9.533
	4 Bis(2-Chloroethyl)ether	93	8.576	8.568	(0.949)	835025	10.0000	9.439
	6 2-Chlorophenol	128	8.676	8.676	(0.961)	1024350	10.0000	9.549
	7 1,3-Dichlorobenzene	146	8.963	8.962	(0.992)	990826	10.0000	9.167
*	8 1,4-Dichlorobenzene-d4	152	9.032	9.032	(1.000)	262977	4.00000	
	9 1,4-Dichlorobenzene	146	9.063	9.071	(1.003)	962481	10.0000	9.172
$	10 1,2-Dichlorobenzene-d4	152	9.420	9.420	(1.043)	607639	10.0000	9.263
	12 1,2-Dichlorobenzene	146	9.444	9.451	(1.046)	936271	10.0000	9.191
	11 Benzyl alcohol	108	9.343	9.343	(1.034)	550857	10.0000	9.641
	14 2,2'-oxybis(1-Chloropropane)	121	9.677	9.677	(1.071)	310130	10.0000	9.425
	13 2-Methylphenol	108	9.607	9.607	(1.064)	929212	10.0000	9.630
	17 Hexachloroethane	117	10.080	10.088	(1.116)	388688	10.0000	9.495
	16 N-Nitroso-di-n-propylamine	70	9.956	9.948	(1.102)	526334	10.0000	9.378
	15 4-Methylphenol	108	9.902	9.902	(1.096)	957710	10.0000	9.519
$	18 Nitrobenzene-d5	82	10.212	10.220	(0.873)	854675	10.0000	9.754
	19 Nitrobenzene	77	10.251	10.259	(0.876)	846521	10.0000	9.708
	20 Isophorone	82	10.748	10.740	(0.918)	1826870	10.0000	10.45
	21 2-Nitrophenol	139	10.933	10.933	(0.934)	576713	10.0000	10.09
	22 2,4-Dimethylphenol	107	11.026	11.025	(0.942)	1693111	20.0000	18.60
	23 Bis(2-Chloroethoxy)methane	93	11.234	11.233	(0.960)	946480	10.0000	9.612
	24 Benzoic acid	105	11.357	11.149	(0.970)	3189837	40.0000	45.19
	25 2,4-Dichlorophenol	162	11.426	11.426	(0.976)	1571292	20.0000	18.69
	26 1,2,4-Trichlorobenzene	180	11.619	11.619	(0.993)	765300	10.0000	9.204
*	27 Naphthalene-d8	136	11.704	11.712	(1.000)	1024870	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.750	11.750	(1.004)	2434223	10.0000	9.511
	29 4-Chloroaniline	127	11.912	11.912	(1.018)	2223281	20.0000	19.43
	30 Hexachlorobutadiene	225	12.160	12.167	(1.039)	430083	10.0000	9.431
	31 4-Chloro-3-methylphenol	107	12.980	12.980	(1.109)	1627135	20.0000	20.61
	32 2-Methylnaphthalene	142	13.259	13.266	(1.133)	1711835	10.0000	9.753
	33 Hexachlorocyclopentadiene	237	13.777	13.785	(0.883)	1136712	20.0000	20.25
	34 2,4,6-Trichlorophenol	196	13.948	13.947	(0.893)	1208900	20.0000	19.68
	35 2,4,5-Trichlorophenol	196	14.025	14.025	(0.898)	1314502	20.0000	19.30
$	36 2-Fluorobiphenyl	172	14.126	14.133	(0.905)	1883478	10.0000	9.443
	37 2-Chloronaphthalene	162	14.334	14.334	(0.918)	1649220	10.0000	9.530
	38 2-Nitroaniline	65	14.636	14.628	(0.938)	811202	20.0000	20.04 (M)
	39 Dimethylphthalate	163	15.132	15.124	(0.969)	1628682	10.0000	9.128
	40 Acenaphthylene	152	15.263	15.271	(0.978)	2451674	10.0000	9.461
	41 2,6-Dinitrotoluene	165	15.263	15.263	(0.978)	849108	20.0000	19.41 (M)
*	42 Acenaphthene-d10	164	15.611	15.611	(1.000)	584705	4.00000	
	43 3-Nitroaniline	138	15.565	15.557	(0.997)	955651	20.0000	19.95
	44 Acenaphthene	153	15.681	15.681	(1.004)	1478128	10.0000	9.556
	45 2,4-Dinitrophenol	184	15.797	15.781	(1.012)	1485574	40.0000	40.41
	46 Dibenzofuran	168	16.036	16.044	(1.027)	2209443	10.0000	9.598
	47 4-Nitrophenol	109	15.944	15.936	(1.021)	456886	20.0000	21.28
	48 2,4-Dinitrotoluene	165	16.137	16.129	(1.034)	1146597	20.0000	19.58 (M)
	50 Diethylphthalate	149	16.725	16.717	(1.071)	1592385	10.0000	9.325
	49 Fluorene	166	16.810	16.809	(1.077)	1669199	10.0000	9.505
	51 4-Chlorophenyl-phenylether	204	16.825	16.833	(1.078)	974795	10.0000	10.18
	52 4-Nitroaniline	138	16.949	16.925	(1.086)	978914	20.0000	20.15
	53 4,6-Dinitro-2-methylphenol	198	17.049	17.033	(0.903)	1721877	40.0000	42.91
	54 N-Nitrosodiphenylamine	169	17.103	17.103	(0.906)	1095107	10.0000	9.219
$	55 2,4,6-Tribromophenol	330	17.388	17.396	(1.114)	265145	10.0000	9.884
	56 4-Bromophenyl-phenylether	248	17.905	17.912	(0.948)	476068	10.0000	9.803
	57 Hexachlorobenzene	284	18.229	18.229	(0.965)	523849	10.0000	9.336
	58 Pentachlorophenol	266	18.624	18.624	(0.986)	792961	20.0000	20.34
*	59 Phenanthrene-d10	188	18.887	18.887	(1.000)	922785	4.00000	
	60 Phenanthrene	178	18.934	18.933	(1.002)	2206616	10.0000	9.670
	61 Anthracene	178	19.026	19.034	(1.007)	2342038	10.0000	9.723
	62 Carbazole	167	19.382	19.390	(1.026)	1932532	10.0000	9.091
	63 Di-n-butylphthalate	149	20.249	20.256	(1.072)	3062477	10.0000	10.34
	64 Fluoranthene	202	21.340	21.347	(1.130)	2586812	10.0000	9.959
	65 Pyrene	202	21.758	21.765	(0.908)	2702750	10.0000	9.697
$	66 Terphenyl-d14	244	22.075	22.082	(0.922)	1605926	10.0000	9.188
	67 Butylbenzylphthalate	149	23.019	23.027	(0.961)	1153944	10.0000	9.726
	68 Benzo(a)anthracene	228	23.918	23.925	(0.999)	2356938	10.0000	9.423
*	69 Chrysene-d12	240	23.949	23.948	(1.000)	922357	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.894	23.902	(0.998)	1610864	20.0000	16.79
	71 Chrysene	228	23.987	23.995	(1.002)	2163245	10.0000	9.688
	72 bis(2-Ethylhexyl)phthalate	149	24.065	24.072	(0.961)	1731846	10.0000	9.757
*	134 Di-n-octylphthalate-d4	153	25.040	25.048	(1.000)	1365026	4.00000	
	73 Di-n-octylphthalate	149	25.048	25.055	(1.000)	3058864	10.0000	9.415

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.721	25.729	(0.974)	2523024	10.0000	10.15
75 Benzo(k)fluoranthene	252	25.760	25.768	(0.975)	2463461	10.0000	9.467
76 Benzo(a)pyrene	252	26.310	26.310	(0.996)	2164449	10.0000	9.995
* 77 Perylene-d12	264	26.418	26.418	(1.000)	891396	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.804	28.804	(1.090)	2503431	10.0000	10.16
79 Dibenzo(a,h)anthracene	278	28.828	28.827	(1.091)	1934248	10.0000	10.21
80 Benzo(g,h,i)perylene	276	29.503	29.495	(1.117)	2161110	10.0000	10.14
90 N-Nitrosodimethylamine	74	4.374	4.358	(0.484)	1012942	20.0000	18.80
91 Aniline	93	8.460	8.460	(0.937)	2384946	10.0000	9.333
93 Benzidine	184	21.603	21.603	(0.902)	1709079	20.0000	21.12
103 Pyridine	79	4.366	4.381	(0.483)	876695	20.0000	19.02
105 1-methylnaphthalene	142	13.499	13.506	(1.153)	1745687	10.0000	9.754
111 Azobenzene (1,2-DP-Hydrazine)	77	17.172	17.172	(1.100)	1678500	10.0000	9.645
187 Total Benzofluoranthenes	252	25.760	25.768	(0.975)	4713227	20.0000	19.43
99 Perylene	252	26.465	26.472	(1.002)	2171651	10.0000	9.792

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507g.d
Lab Smp Id: IC050710
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	262977	-3.27
27 Naphthalene-d8	1080694	540347	2161388	1024870	-5.17
42 Acenaphthene-d10	623821	311910	1247642	584705	-6.27
59 Phenanthrene-d10	999143	499572	1998286	922785	-7.64
69 Chrysene-d12	1001009	500504	2002018	922357	-7.86
134 Di-n-octylphthala	1489422	744711	2978844	1365026	-8.35
77 Perylene-d12	988348	494174	1976696	891396	-9.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.03	0.09
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.07
42 Acenaphthene-d10	15.60	15.10	16.10	15.61	0.05
59 Phenanthrene-d10	18.87	18.37	19.37	18.89	0.08
69 Chrysene-d12	23.93	23.43	24.43	23.95	0.06
134 Di-n-octylphthala	25.02	24.52	25.52	25.04	0.06
77 Perylene-d12	26.40	25.90	26.90	26.42	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/ic0507g.d

Date : 07-MAY-2012 18:05

Client ID:

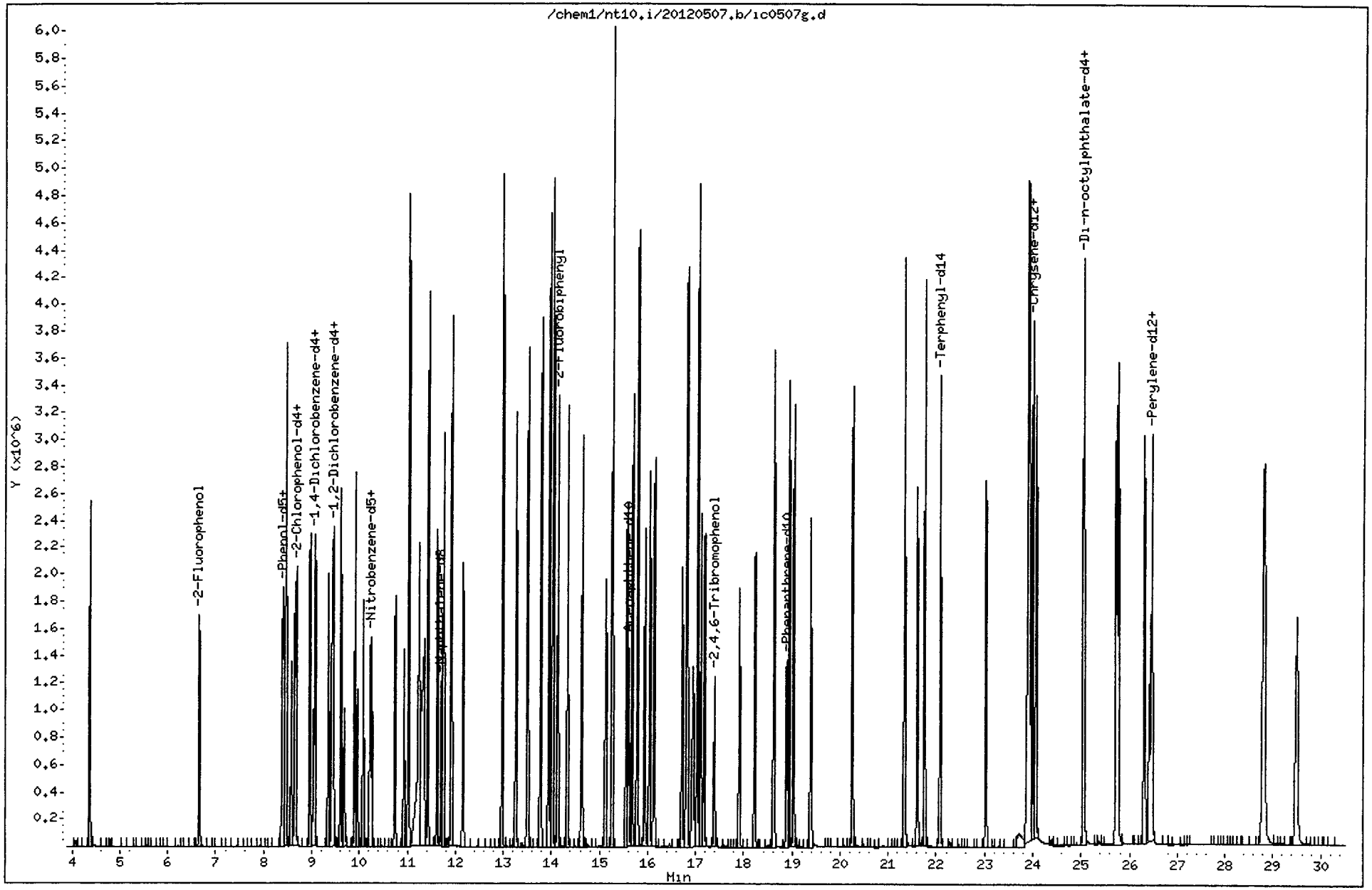
Sample Info: IC050710

Column phase: ZB-5msi

Instrument: nt10.i

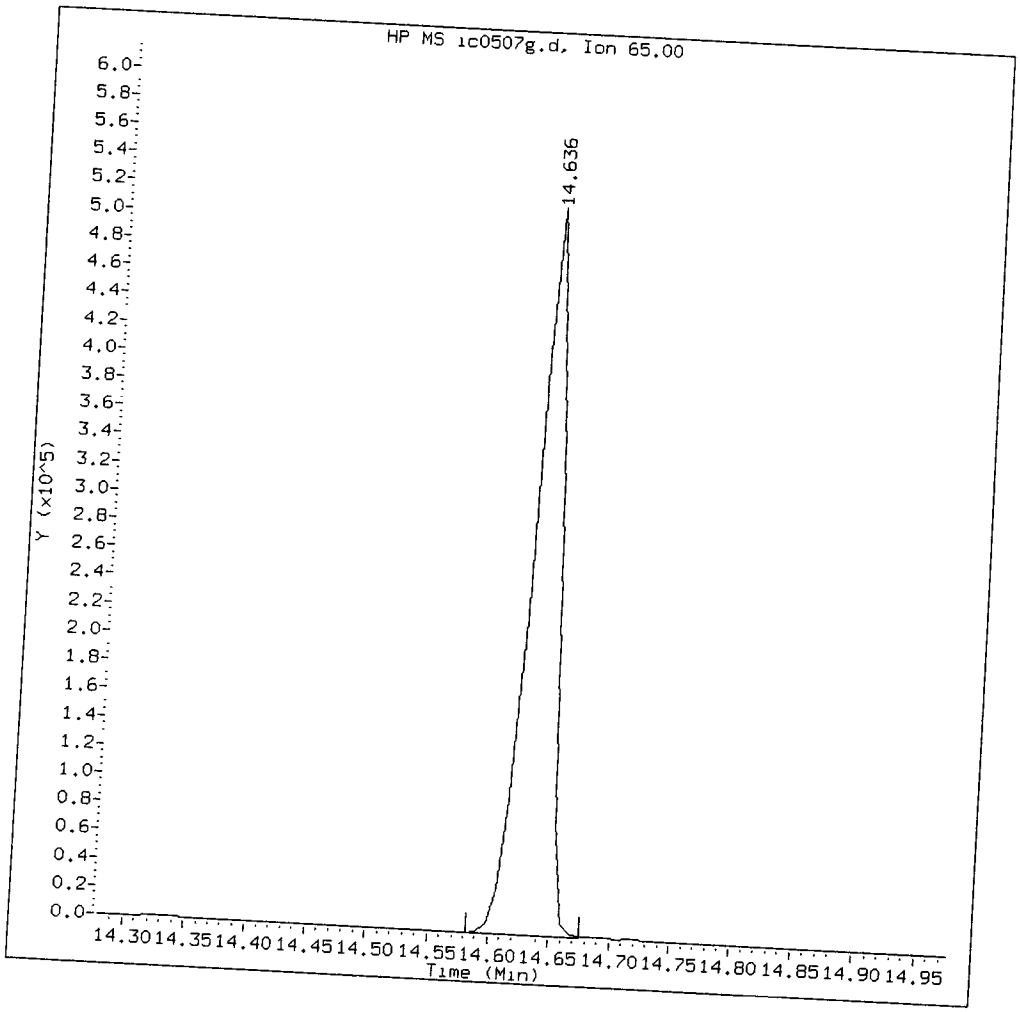
Operator: VTS/YZ

Column diameter: 0.25



IC050710, /chem1/nt10.i/20120507.b/ic0507g.d

2-Nitroaniline Amount: 20.04 Area: 811202



MANUAL INTEGRATION for 2-Nitroaniline

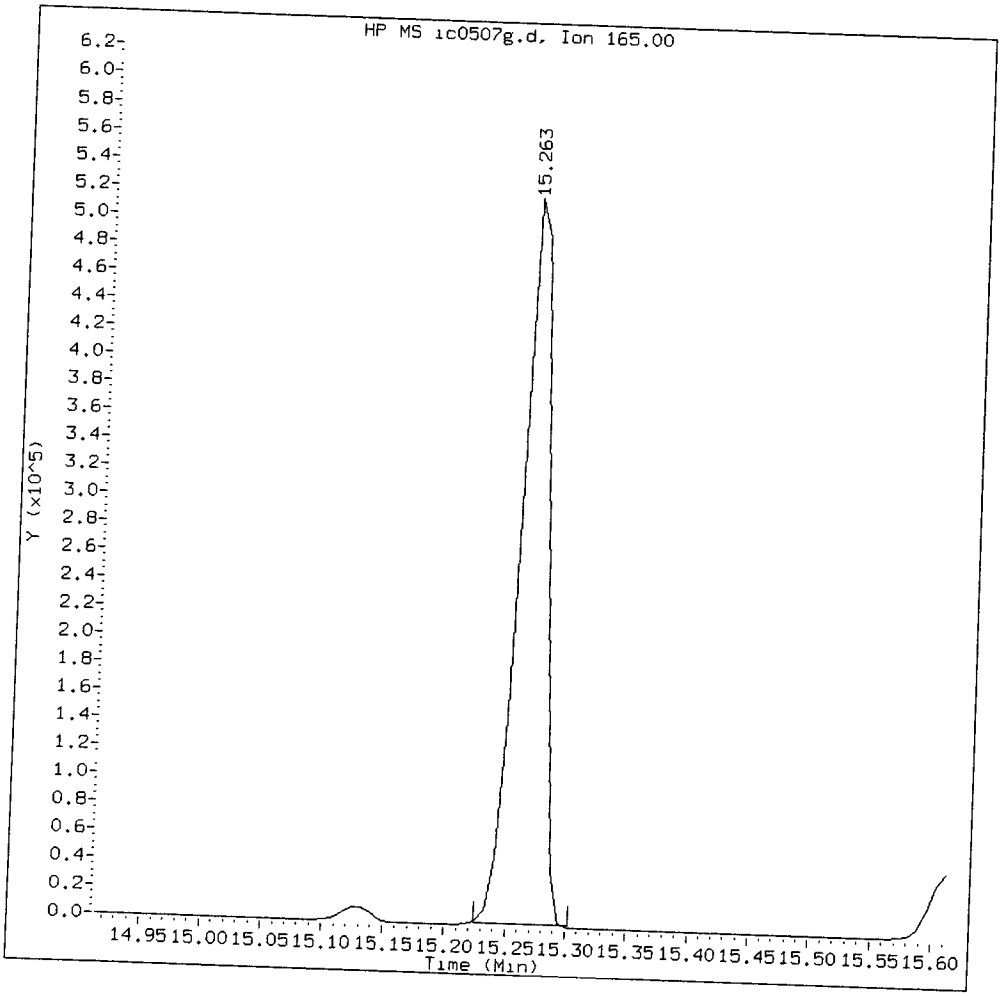
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 5/8/12

IC050710, /chem1/nt10.i/20120507.b/ic0507g.d

2,6-Dinitrotoluene Amount: 19.41 Area: 849108



MANUAL INTEGRATION for 2,6-Dinitrotoluene

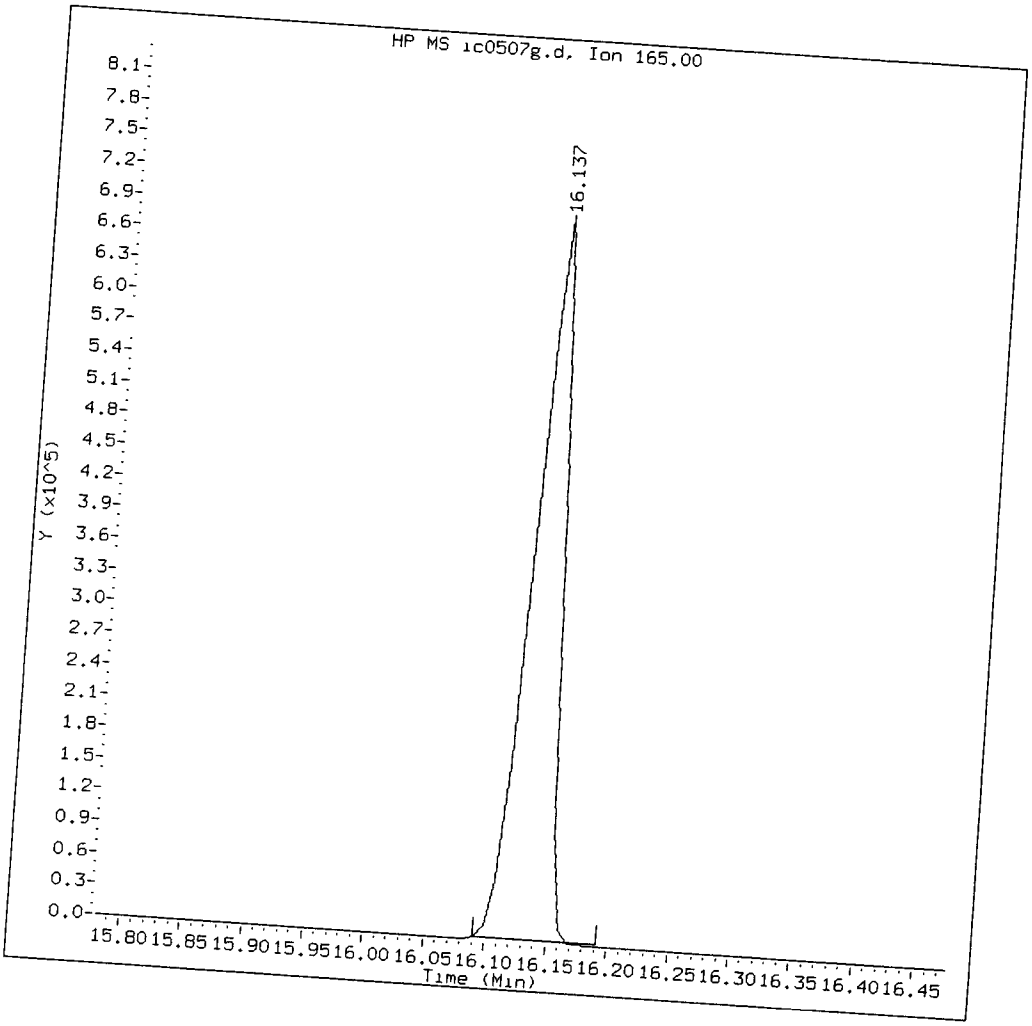
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/12

IC050710, /chem1/nt10.i/20120507.b/ic0507g.d

2,4-Dinitrotoluene Amount: 19.58 Area: 1146597



MANUAL INTEGRATION for 2,4-Dinitrotoluene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation ✓
5. Other _____

Analyst: YZ Date: 5/8/12

CO-ELUTION SUMMARY FOR FILE - ic0507g.d

Lab ID: IC050710, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
15.263	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120507.b/ic0507i.d
Lab Smp Id: IC05070.5
Inj Date : 07-MAY-2012 19:19
Operator : VTS/YZ
Smp Info : IC05070.5 Inst ID: nt10.i
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 11:53 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.667	6.667	(0.738)	46182	0.50000	0.5141
$ 2 Phenol-d5	99	8.383	8.383	(0.928)	56846	0.50000	0.5089
3 Phenol	94	8.406	8.406	(0.931)	64148	0.50000	0.5240
$ 5 2-Chlorophenol-d4	132	8.645	8.645	(0.957)	49041	0.50000	0.5073
4 Bis(2-Chloroethyl)ether	93	8.568	8.568	(0.949)	47243	0.50000	0.5348
6 2-Chlorophenol	128	8.676	8.676	(0.961)	56186	0.50000	0.5245
7 1,3-Dichlorobenzene	146	8.962	8.962	(0.992)	56978	0.50000	0.5279
* 8 1,4-Dichlorobenzene-d4	152	9.032	9.032	(1.000)	262594	4.00000	
9 1,4-Dichlorobenzene	146	9.071	9.071	(1.004)	53976	0.50000	0.5151
$ 10 1,2-Dichlorobenzene-d4	152	9.420	9.420	(1.043)	33967	0.50000	0.5186
12 1,2-Dichlorobenzene	146	9.451	9.451	(1.046)	55055	0.50000	0.5412
11 Benzyl alcohol	108	9.343	9.343	(1.034)	28599	0.50000	0.5013
14 2,2'-oxybis(1-Chloropropane)	121	9.677	9.677	(1.071)	17463	0.50000	0.5315
13 2-Methylphenol	108	9.607	9.607	(1.064)	49862	0.50000	0.5175
17 Hexachloroethane	117	10.088	10.088	(1.117)	21520	0.50000	0.5265
16 N-Nitroso-di-n-propylamine	70	9.948	9.948	(1.101)	29583	0.50000	0.5279
15 4-Methylphenol	108	9.902	9.902	(1.096)	50746	0.50000	0.5051
$ 18 Nitrobenzene-d5	82	10.220	10.220	(0.873)	44693	0.50000	0.5091
19 Nitrobenzene	77	10.259	10.259	(0.876)	46058	0.50000	0.5272
20 Isophorone	82	10.740	10.740	(0.917)	80457	0.50000	0.4595
21 2-Nitrophenol	139	10.933	10.933	(0.934)	26604	0.50000	0.4646
22 2,4-Dimethylphenol	107	11.025	11.025	(0.941)	96501	1.00000	1.059
23 Bis(2-Chloroethoxy)methane	93	11.233	11.233	(0.959)	52171	0.50000	0.5289
24 Benzoic acid	105	11.149	11.149	(0.952)	117045	2.00000	1.655
25 2,4-Dichlorophenol	162	11.426	11.426	(0.976)	82675	1.00000	0.9817
26 1,2,4-Trichlorobenzene	180	11.619	11.619	(0.992)	44789	0.50000	0.5377
* 27 Naphthalene-d8	136	11.712	11.712	(1.000)	1026680	4.00000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	11.750	11.750	(1.003)	131978	0.50000	0.5147
29 4-Chloroaniline	127	11.912	11.912	(1.017)	109612	1.00000	0.9562
30 Hexachlorobutadiene	225	12.167	12.167	(1.039)	23144	0.50000	0.5066
31 4-Chloro-3-methylphenol	107	12.980	12.980	(1.108)	76581	1.00000	0.9682
32 2-Methylnaphthalene	142	13.266	13.266	(1.133)	88544	0.50000	0.5036
33 Hexachlorocyclopentadiene	237	13.785	13.785	(0.883)	49736	1.00000	0.9063
34 2,4,6-Trichlorophenol	196	13.947	13.947	(0.893)	58426	1.00000	0.9727
35 2,4,5-Trichlorophenol	196	14.025	14.025	(0.898)	65927	1.00000	0.9899
$ 36 2-Fluorobiphenyl	172	14.133	14.133	(0.905)	99684	0.50000	0.5111
37 2-Chloronaphthalene	162	14.334	14.334	(0.918)	86455	0.50000	0.5109
38 2-Nitroaniline	65	14.628	14.628	(0.937)	39754	1.00000	1.005(M)
39 Dimethylphthalate	163	15.124	15.124	(0.969)	89344	0.50000	0.5121
40 Acenaphthylene	152	15.271	15.271	(0.978)	128570	0.50000	0.5074
41 2,6-Dinitrotoluene	165	15.263	15.263	(0.978)	40271	1.00000	0.9413(M)
* 42 Acenaphthene-d10	164	15.611	15.611	(1.000)	571733	4.00000	
43 3-Nitroaniline	138	15.557	15.557	(0.997)	47078	1.00000	1.005
44 Acenaphthene	153	15.681	15.681	(1.004)	77709	0.50000	0.5138
45 2,4-Dinitrophenol	184	15.781	15.781	(1.011)	40194	2.00000	1.159
46 Dibenzofuran	168	16.044	16.044	(1.028)	115480	0.50000	0.5130
47 4-Nitrophenol	109	15.936	15.936	(1.021)	19834	1.00000	0.9447
48 2,4-Dinitrotoluene	165	16.129	16.129	(1.033)	54527	1.00000	0.9521(M)
50 Diethylphthalate	149	16.717	16.717	(1.071)	86948	0.50000	0.5207
49 Fluorene	166	16.809	16.809	(1.077)	88119	0.50000	0.5131
51 4-Chlorophenyl-phenylether	204	16.833	16.833	(1.078)	52931	0.50000	0.5651
52 4-Nitroaniline	138	16.925	16.925	(1.084)	44588	1.00000	0.9388
53 4,6-Dinitro-2-methylphenol	198	17.033	17.033	(0.902)	70585	2.00000	1.748
54 N-Nitrosodiphenylamine	169	17.103	17.103	(0.906)	62263	0.50000	0.5209
$ 55 2,4,6-Tribromophenol	330	17.396	17.396	(1.114)	12798	0.50000	0.4879
56 4-Bromophenyl-phenylether	248	17.912	17.912	(0.948)	23914	0.50000	0.4894
57 Hexachlorobenzene	284	18.229	18.229	(0.965)	29579	0.50000	0.5239
58 Pentachlorophenol	266	18.624	18.624	(0.986)	35572	1.00000	0.9067
* 59 Phenanthrene-d10	188	18.887	18.887	(1.000)	928522	4.00000	
60 Phenanthrene	178	18.933	18.933	(1.002)	116291	0.50000	0.5065
61 Anthracene	178	19.034	19.034	(1.008)	119294	0.50000	0.4922
62 Carbazole	167	19.390	19.390	(1.027)	116225	0.50000	0.5434
63 Di-n-butylphthalate	149	20.256	20.256	(1.073)	137451	0.50000	0.4610
64 Fluoranthene	202	21.347	21.347	(1.130)	123016	0.50000	0.4707
65 Pyrene	202	21.765	21.765	(0.909)	134182	0.50000	0.5018
$ 66 Terphenyl-d14	244	22.082	22.082	(0.922)	87123	0.50000	0.5195
67 Butylbenzylphthalate	149	23.027	23.027	(0.962)	54705	0.50000	0.4806
68 Benzo(a)anthracene	228	23.925	23.925	(0.999)	122128	0.50000	0.5089
* 69 Chrysene-d12	240	23.948	23.948	(1.000)	884937	4.00000	
70 3,3'-Dichlorobenzidine	252	23.902	23.902	(0.998)	114696	1.00000	1.246
71 Chrysene	228	23.995	23.995	(1.002)	108184	0.50000	0.5050
72 bis(2-Ethylhexyl)phthalate	149	24.072	24.072	(0.961)	81476	0.50000	0.5176
* 134 Di-n-octylphthalate-d4	153	25.048	25.048	(1.000)	1210585	4.00000	
73 Di-n-octylphthalate	149	25.055	25.055	(1.000)	151795	0.50000	0.5268

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.729	25.729	(0.974)	112643	0.50000	0.4859
75 Benzo(k)fluoranthene	252	25.768	25.768	(0.975)	121434	0.50000	0.5003
76 Benzo(a)pyrene	252	26.310	26.310	(0.996)	99238	0.50000	0.4914
* 77 Perylene-d12	264	26.418	26.418	(1.000)	831396	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.804	28.804	(1.090)	106191	0.50000	0.4621
79 Dibenzo(a,h)anthracene	278	28.827	28.827	(1.091)	82106	0.50000	0.4649
80 Benzo(g,h,i)perylene	276	29.495	29.495	(1.116)	92368	0.50000	0.4649
90 N-Nitrosodimethylamine	74	4.358	4.358	(0.482)	58516	1.00000	1.088
91 Aniline	93	8.460	8.460	(0.937)	137642	0.50000	0.5394
93 Benzidine	184	21.603	21.603	(0.902)	88594	1.00000	1.342
103 Pyridine	79	4.381	4.381	(0.485)	49317	1.00000	1.071
105 1-methylnaphthalene	142	13.506	13.506	(1.153)	89804	0.50000	0.5009
111 Azobenzene (1,2-DP-Hydrazine)	77	17.172	17.172	(1.100)	90207	0.50000	0.5301
187 Total Benzofluoranthenes	252	25.768	25.768	(0.975)	228218	1.00000	1.009
99 Perylene	252	26.472	26.472	(1.002)	103201	0.50000	0.4989

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507i.d
Lab Smp Id: IC05070.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	262594	-3.41
27 Naphthalene-d8	1080694	540347	2161388	1026680	-5.00
42 Acenaphthene-d10	623821	311910	1247642	571733	-8.35
59 Phenanthrene-d10	999143	499572	1998286	928522	-7.07
69 Chrysene-d12	1001009	500504	2002018	884937	-11.60
134 Di-n-octylphthala	1489422	744711	2978844	1210585	-18.72
77 Perylene-d12	988348	494174	1976696	831396	-15.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.03	0.08
27 Naphthalene-d8	11.70	11.20	12.20	11.71	0.13
42 Acenaphthene-d10	15.60	15.10	16.10	15.61	0.05
59 Phenanthrene-d10	18.87	18.37	19.37	18.89	0.08
69 Chrysene-d12	23.93	23.43	24.43	23.95	0.06
134 Di-n-octylphthala	25.02	24.52	25.52	25.05	0.09
77 Perylene-d12	26.40	25.90	26.90	26.42	0.06

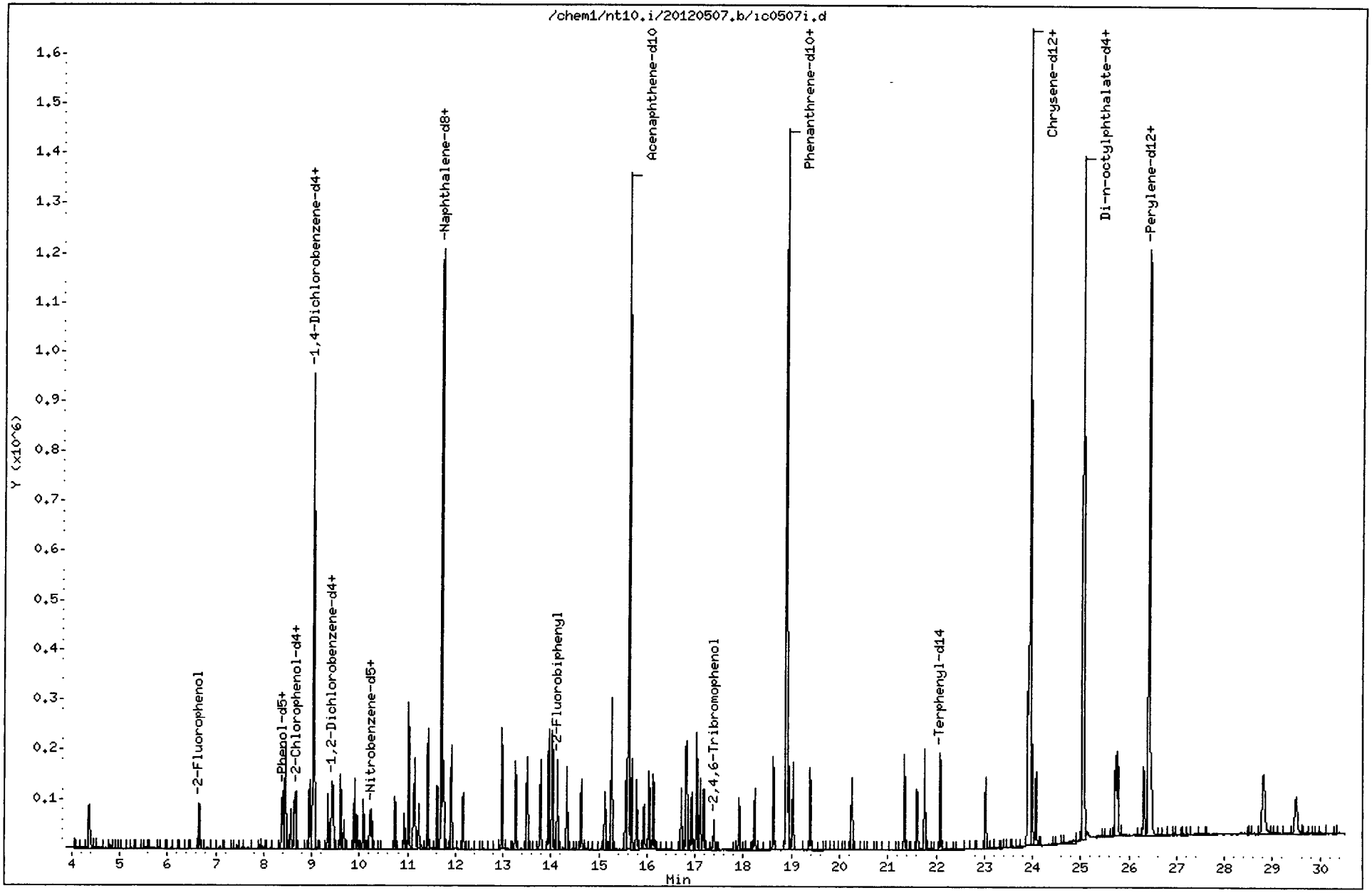
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/ic0507i.d
Date : 07-MAY-2012 19:19
Client ID:
Sample Info: IC05070.5

Column phase: ZB-5msi

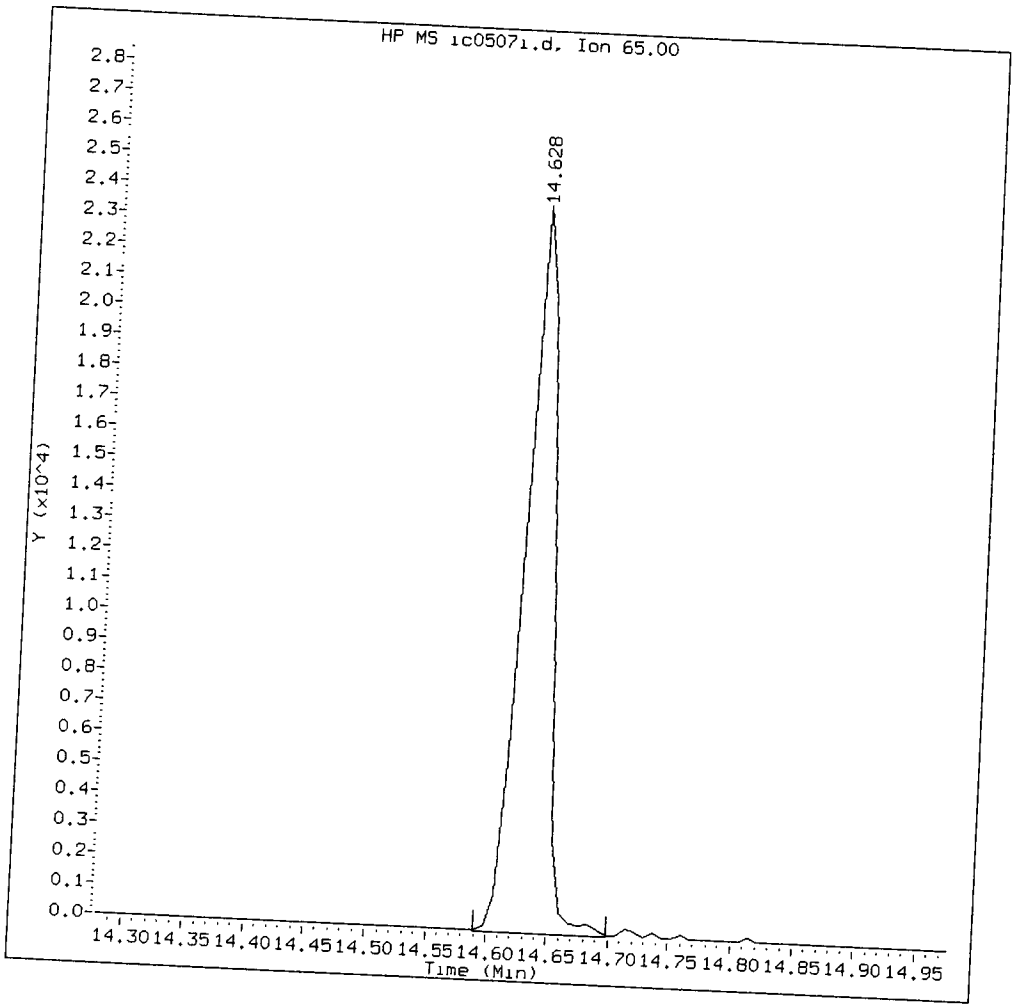
Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



IC05070.5, /chem1/nt10.i/20120507.b/ic0507i.d

2-Nitroaniline Amount: 1.00 Area: 39754



MANUAL INTEGRATION for 2-Nitroaniline

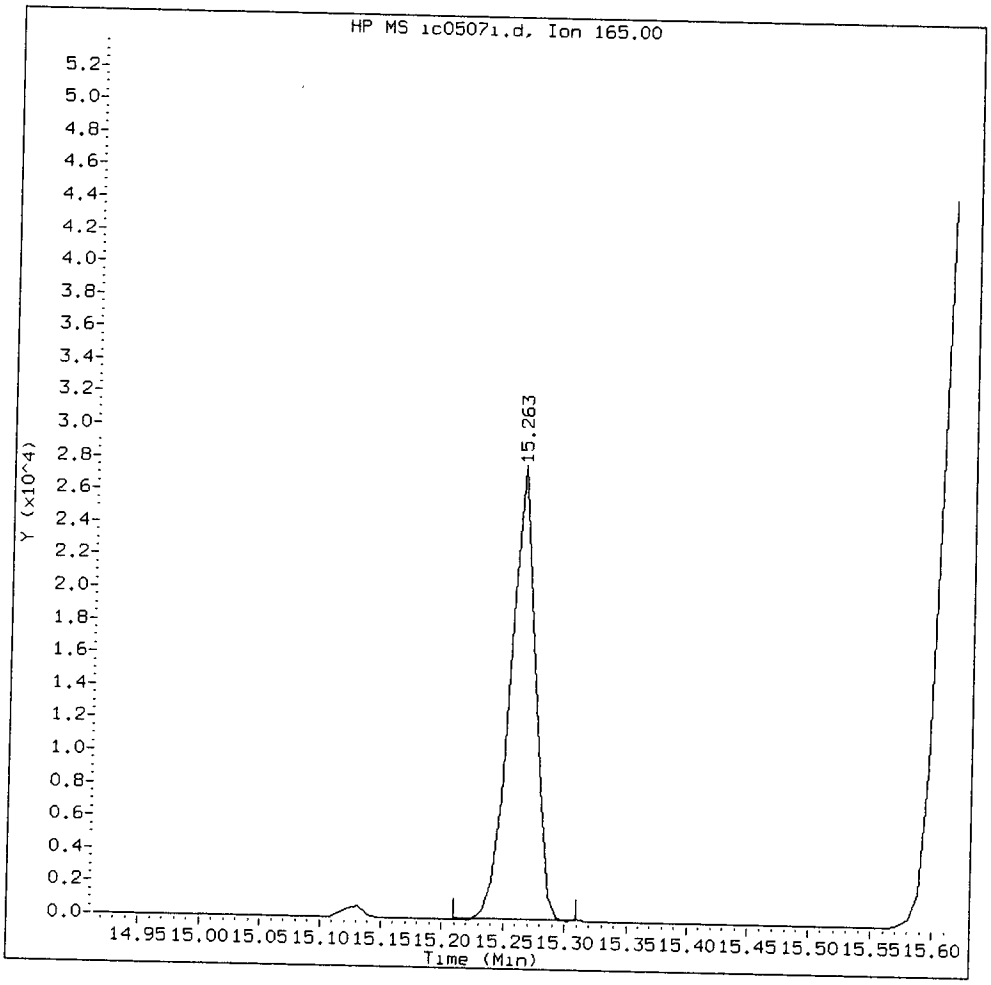
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/8/12

IC05070.5, /chem1/nt10.i/20120507.b/ic0507i.d

2,6-Dinitrotoluene Amount: 0.94 Area: 40271



MANUAL INTEGRATION for 2,6-Dinitrotoluene

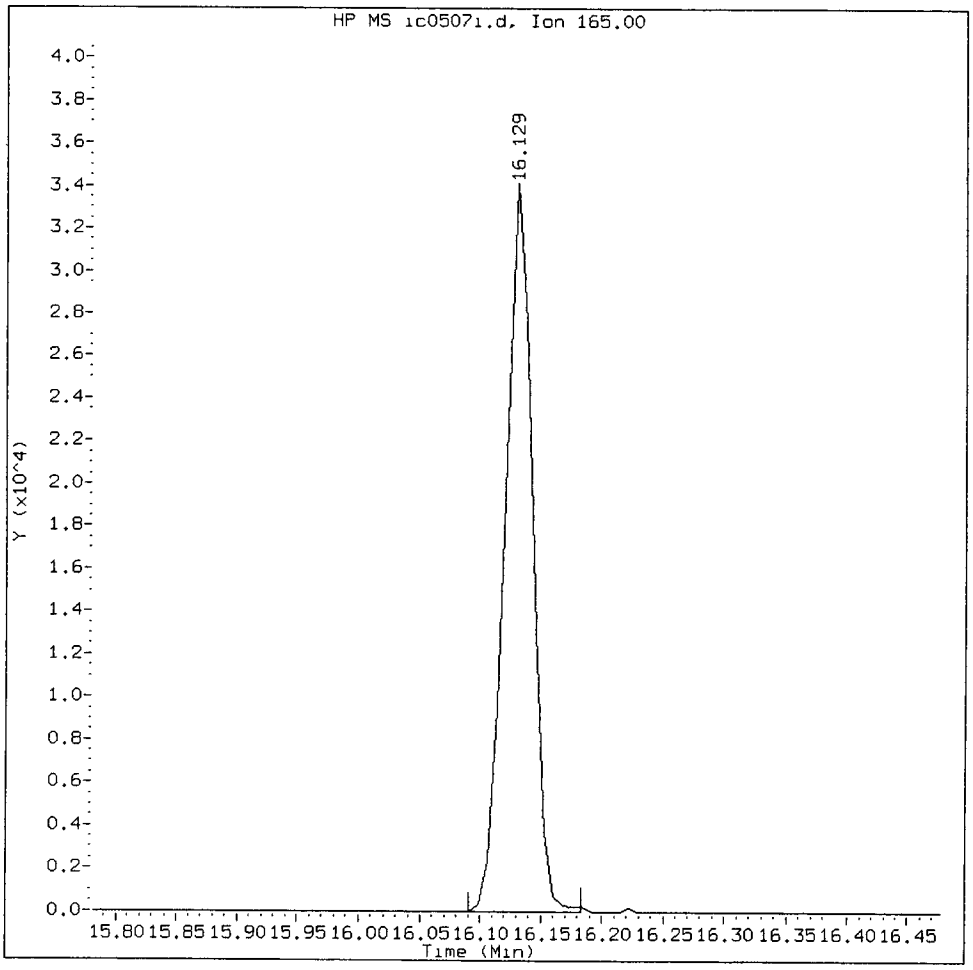
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/8/12

IC05070.5, /chem1/nt10.i/20120507.b/ic0507i.d

2,4-Dinitrotoluene Amount: 0.95 Area: 54527



MANUAL INTEGRATION for 2,4-Dinitrotoluene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/8/12

CO-ELUTION SUMMARY FOR FILE - ic0507i.d

Lab ID: IC05070.5, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Data File: /chem1/nt10.i/20120507.b/icv0507.d
Report Date: 08-May-2012 13:56

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/12

Data file : /chem1/nt10.i/20120507.b/icv0507.d
Lab Smp Id: ICV0507
Inj Date : 07-MAY-2012 19:56
Operator : VTS/YZ
Smp Info : ICV0507
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120507.b/ABN.m
Meth Date : 08-May-2012 12:27 yev
Cal Date : 07-MAY-2012 19:19
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0507i.d
QC Sample: LCS

Compound Sublist: PSDDAICAL.sub

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable

Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/Kg)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	8.676	8.383	(0.961)	29615	0.23015	23.01(R)
	3 Phenol	94	8.406	8.406	(0.931)	729445	5.17182	517.2
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.568	8.568	(0.949)	533539	5.24264	524.3
	6 2-Chlorophenol	128	8.676	8.676	(0.961)	640455	5.19004	519.0
	7 1,3-Dichlorobenzene	146	8.963	8.962	(0.992)	632766	5.08936	508.9
*	8 1,4-Dichlorobenzene-d4	152	9.032	9.032	(1.000)	302517	4.00000	
	9 1,4-Dichlorobenzene	146	9.071	9.071	(1.004)	602513	4.99135	499.1
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.451	9.451	(1.046)	593551	5.06513	506.5
	11 Benzyl alcohol	108	9.343	9.343	(1.034)	424477	6.45811	645.8
	14 2,2'-oxybis(1-Chloropropane)	121	9.677	9.677	(1.071)	192392	5.08270	508.3
	13 2-Methylphenol	108	9.607	9.607	(1.064)	546067	4.91938	491.9
	17 Hexachloroethane	117	10.080	10.088	(1.116)	242517	5.14999	515.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kg)
16 N-Nitroso-di-n-propylamine	70	9.956	9.948	(1.102)	344075	5.32913	532.9
15 4-Methylphenol	108	9.902	9.902	(1.096)	580711	5.01732	501.7
$ 18 Nitrobenzene-d5	82	Compound Not Detected.					
19 Nitrobenzene	77	10.259	10.259	(0.876)	543213	5.39312	539.3
20 Isophorone	82	10.748	10.740	(0.918)	989406	4.90023	490.0
21 2-Nitrophenol	139	10.941	10.933	(0.934)	357932	5.42072	542.1
22 2,4-Dimethylphenol	107	11.025	11.025	(0.941)	546302	5.19721	519.7
23 Bis(2-Chloroethoxy)methane	93	11.241	11.233	(0.960)	624232	5.48865	548.9
24 Benzoic acid	105	11.249	11.149	(0.960)	869004	10.6593	1066
25 2,4-Dichlorophenol	162	11.434	11.426	(0.976)	510299	5.25509	525.5
26 1,2,4-Trichlorobenzene	180	11.627	11.619	(0.993)	488217	5.08343	508.3
* 27 Naphthalene-d8	136	11.712	11.712	(1.000)	1183775	4.00000	
28 Naphthalene	128	11.758	11.750	(1.004)	1766909	5.97677	597.7
29 4-Chloroaniline	127	11.920	11.912	(1.018)	808790	6.11888	611.9
30 Hexachlorobutadiene	225	12.168	12.167	(1.039)	271287	5.15010	515.0
31 4-Chloro-3-methylphenol	107	12.988	12.980	(1.109)	500214	5.48467	548.5
32 2-Methylnaphthalene	142	13.266	13.266	(1.133)	1271223	6.27012	627.0
33 Hexachlorocyclopentadiene	237	13.785	13.785	(0.883)	345452	5.45525	545.5
34 2,4,6-Trichlorophenol	196	13.955	13.947	(0.893)	364579	5.26040	526.0
35 2,4,5-Trichlorophenol	196	14.025	14.025	(0.898)	403098	5.24518	524.5
$ 36 2-Fluorobiphenyl	172	14.025	14.133	(0.898)	763	0.00339	0.3391(R)
37 2-Chloronaphthalene	162	14.334	14.334	(0.918)	1054088	5.39828	539.8
38 2-Nitroaniline	65	14.636	14.628	(0.937)	296498	6.49349	649.3
39 Dimethylphthalate	163	15.132	15.124	(0.969)	1056624	5.24847	524.8
40 Acenaphthylene	152	15.271	15.271	(0.978)	1801397	6.16113	616.1
41 2,6-Dinitrotoluene	165	15.271	15.263	(0.978)	265074	5.36942	536.9
* 42 Acenaphthene-d10	164	15.619	15.611	(1.000)	659708	4.00000	
43 3-Nitroaniline	138	15.565	15.557	(0.997)	334706	6.19191	619.2
44 Acenaphthene	153	15.689	15.681	(1.004)	1095331	6.27646	627.6
45 2,4-Dinitrophenol	184	15.789	15.781	(1.011)	378112	9.37920	937.9
46 Dibenzofuran	168	16.044	16.044	(1.027)	1610554	6.20088	620.1
47 4-Nitrophenol	109	15.944	15.936	(1.021)	142231	5.87126	587.1
48 2,4-Dinitrotoluene	165	16.137	16.129	(1.033)	351883	5.32475	532.5
50 Diethylphthalate	149	16.717	16.717	(1.070)	1010343	5.24395	524.4
49 Fluorene	166	16.817	16.809	(1.077)	1430224	7.21798	721.8(R)
51 4-Chlorophenyl-phenylether	204	16.833	16.833	(1.078)	619763	5.73446	573.4
52 4-Nitroaniline	138	16.933	16.925	(1.084)	300540	5.48430	548.4
53 4,6-Dinitro-2-methylphenol	198	17.041	17.033	(0.902)	485371	10.4777	1048
54 N-Nitrosodiphenylamine	169	17.110	17.103	(0.906)	738777	5.38679	538.7
$ 55 2,4,6-Tribromophenol	330	Compound Not Detected.					
56 4-Bromophenyl-phenylether	248	17.920	17.912	(0.948)	309344	5.51733	551.7
57 Hexachlorobenzene	284	18.237	18.229	(0.965)	325871	5.03051	503.1
58 Pentachlorophenol	266	18.632	18.624	(0.986)	245659	5.45695	545.7
* 59 Phenanthrene-d10	188	18.895	18.887	(1.000)	1065389	4.00000	
60 Phenanthrene	178	18.941	18.933	(1.002)	1626596	6.17390	617.4
61 Anthracene	178	19.034	19.034	(1.007)	1735192	6.23944	623.9
62 Carbazole	167	19.390	19.390	(1.026)	1241154	5.05699	505.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/Kg)
63 Di-n-butylphthalate	149	20.257	20.256	(1.072)	1926779	5.63254	563.3
64 Fluoranthene	202	21.348	21.347	(1.130)	1888031	6.29593	629.6
65 Pyrene	202	21.765	21.765	(0.909)	1942353	6.11033	611.0
$ 66 Terphenyl-d14	244	Compound Not Detected.					
67 Butylbenzylphthalate	149	23.035	23.027	(0.962)	763212	5.64036	564.0
68 Benzo(a)anthracene	228	23.925	23.925	(0.999)	1729405	6.06250	606.2
* 69 Chrysene-d12	240	23.956	23.948	(1.000)	1051898	4.00000	
70 3,3'-Dichlorobenzidine	252	23.902	23.902	(0.998)	304491	2.78263	278.3(R)
71 Chrysene	228	23.995	23.995	(1.002)	1564906	6.14543	614.5
72 bis(2-Ethylhexyl)phthalate	149	24.072	24.072	(0.961)	1076169	5.40390	540.4
* 134 Di-n-octylphthalate-d4	153	25.048	25.048	(1.000)	1531587	4.00000	
73 Di-n-octylphthalate	149	25.056	25.055	(1.000)	2025555	5.55663	555.7
74 Benzo(b)fluoranthene	252	25.729	25.729	(0.974)	1809078	6.42181	642.2
75 Benzo(k)fluoranthene	252	25.776	25.768	(0.975)	1793155	6.07973	608.0
76 Benzo(a)pyrene	252	26.318	26.310	(0.996)	1512515	6.16241	616.2
* 77 Perylene-d12	264	26.426	26.418	(1.000)	1010350	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.812	28.804	(1.090)	1754874	6.28355	628.4
79 Dibenzo(a,h)anthracene	278	28.835	28.827	(1.091)	1354835	6.31227	631.2
80 Benzo(g,h,i)perylene	276	29.511	29.495	(1.117)	1552792	6.43077	643.1
90 N-Nitrosodimethylamine	74	4.366	4.358	(0.483)	330674	5.33522	533.5
91 Aniline	93	8.460	8.460	(0.937)	822681	2.79864	279.9(R)
93 Benzidine	184	21.611	21.603	(0.902)	143596	1.82364	182.4(R)
103 Pyridine	79	4.374	4.381	(0.484)	534103	10.0729	1007
105 1-methylnaphthalene	142	13.506	13.506	(1.153)	906528	4.38506	438.5
111 Azobenzene (1,2-DP-Hydrazine)	77	17.180	17.172	(1.100)	1059366	5.39537	539.5
187 Total Benzofluoranthenes	252	25.776	25.768	(0.975)	3418625	12.4365	1244
99 Perylene	252	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: icv0507.d
Lab Smp Id: ICV0507
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 14:23

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	302517	11.27
27 Naphthalene-d8	1080694	540347	2161388	1183775	9.54
42 Acenaphthene-d10	623821	311910	1247642	659708	5.75
59 Phenanthrene-d10	999143	499572	1998286	1065389	6.63
69 Chrysene-d12	1001009	500504	2002018	1051898	5.08
134 Di-n-octylphthala	1489422	744711	2978844	1531587	2.83
77 Perylene-d12	988348	494174	1976696	1010350	2.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.02	8.52	9.52	9.03	0.09
27 Naphthalene-d8	11.70	11.20	12.20	11.71	0.13
42 Acenaphthene-d10	15.60	15.10	16.10	15.62	0.10
59 Phenanthrene-d10	18.87	18.37	19.37	18.89	0.12
69 Chrysene-d12	23.93	23.43	24.43	23.96	0.10
134 Di-n-octylphthala	25.02	24.52	25.52	25.05	0.09
77 Perylene-d12	26.40	25.90	26.90	26.43	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/icv0507.d
Report Date: 08-May-2012 13:56

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: ICV0507
Level: LOW
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20120507.b/ABN.m
Misc Info:

Client SDG:
Fraction: SV

Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

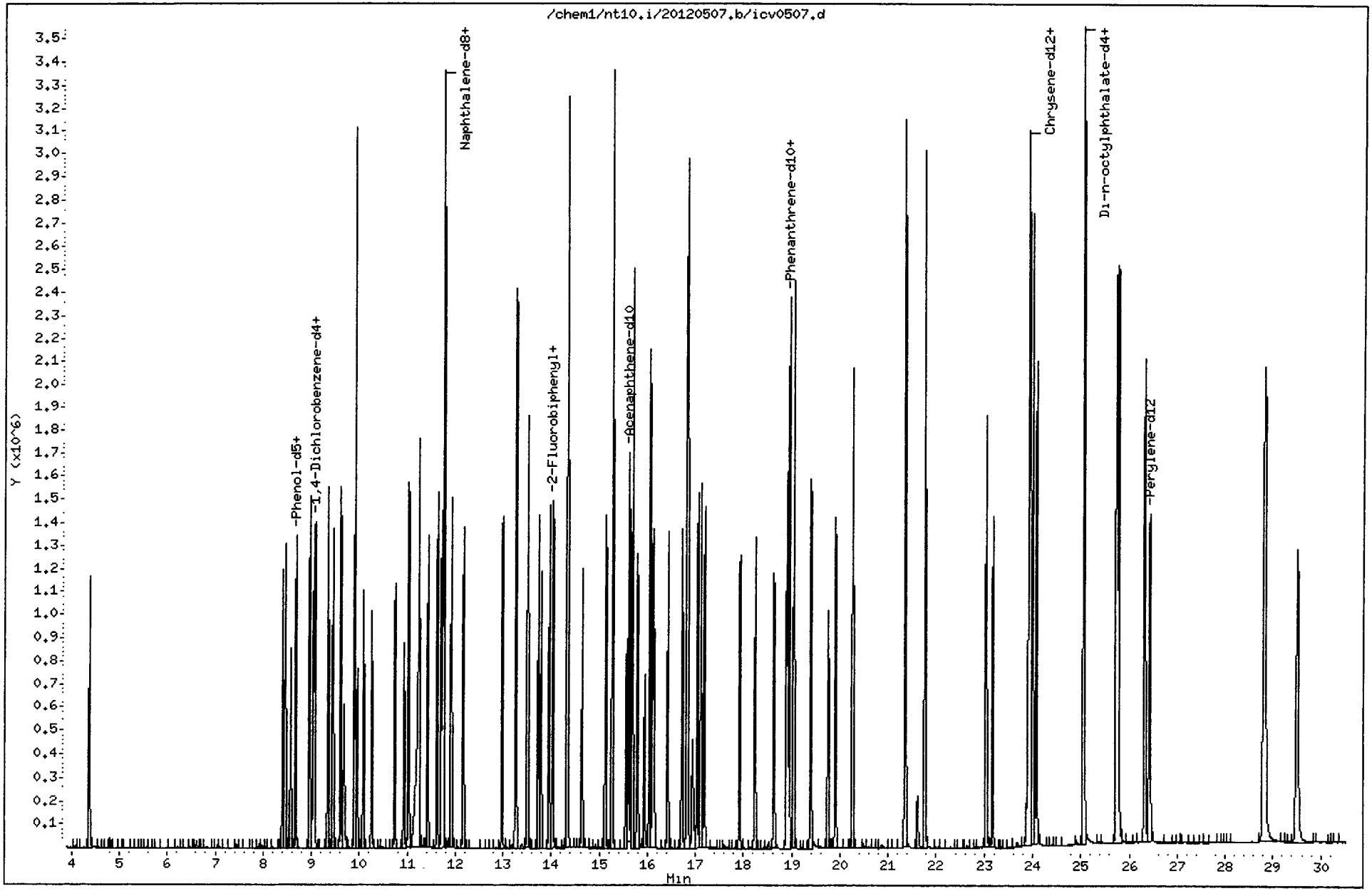
SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
3 Phenol	500.0	517.2	103.44	70-130
4 Bis(2-Chloroethyl)	500.0	524.3	104.85	70-130
6 2-Chlorophenol	500.0	519.0	103.80	70-130
7 1,3-Dichlorobenzen	500.0	508.9	101.79	70-130
9 1,4-Dichlorobenzen	500.0	499.1	99.83	70-130
11 Benzyl alcohol	500.0	645.8	129.16	70-130
12 1,2-Dichlorobenzen	500.0	506.5	101.30	70-130
13 2-Methylphenol	500.0	491.9	98.39	70-130
14 2,2'-oxybis(1-Chlo	500.0	508.3	101.65	70-130
15 4-Methylphenol	500.0	501.7	100.35	70-130
16 N-Nitroso-di-n-pro	500.0	532.9	106.58	70-130
17 Hexachloroethane	500.0	515.0	103.00	70-130
19 Nitrobenzene	500.0	539.3	107.86	70-130
20 Isophorone	500.0	490.0	98.00	70-130
21 2-Nitrophenol	500.0	542.1	108.41	70-130
22 2,4-Dimethylphenol	500.0	519.7	103.94	70-130
23 Bis(2-Chloroethoxy	500.0	548.9	109.77	70-130
24 Benzoic acid	1000	1066	106.59	70-130
25 2,4-Dichlorophenol	500.0	525.5	105.10	70-130
26 1,2,4-Trichloroben	500.0	508.3	101.67	70-130
28 Naphthalene	500.0	597.7	119.54	70-130
29 4-Chloroaniline	500.0	611.9	122.38	70-130
30 Hexachlorobutadien	500.0	515.0	103.00	70-130
31 4-Chloro-3-methylp	500.0	548.5	109.69	70-130
32 2-Methylnaphthalen	500.0	627.0	125.40	70-130
33 Hexachlorocyclopen	500.0	545.5	109.11	70-130
34 2,4,6-Trichlorophe	500.0	526.0	105.21	70-130
35 2,4,5-Trichlorophe	500.0	524.5	104.90	70-130
37 2-Chloronaphthalen	500.0	539.8	107.97	70-130
38 2-Nitroaniline	500.0	649.3	129.87	70-130
39 Dimethylphthalate	500.0	524.8	104.97	70-130
40 Acenaphthylene	500.0	616.1	123.22	70-130
41 2,6-Dinitrotoluene	500.0	536.9	107.39	70-130

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
43 3-Nitroaniline	500.0	619.2	123.84	70-130
44 Acenaphthene	500.0	627.6	125.53	70-130
45 2,4-Dinitrophenol	1000	937.9	93.79	70-130
46 Dibenzofuran	500.0	620.1	124.02	70-130
47 4-Nitrophenol	500.0	587.1	117.43	70-130
48 2,4-Dinitrotoluene	500.0	532.5	106.50	70-130
49 Fluorene	500.0	721.8	144.36*	70-130
50 Diethylphthalate	500.0	524.4	104.88	70-130
51 4-Chlorophenyl-phe	500.0	573.4	114.69	70-130
52 4-Nitroaniline	500.0	548.4	109.69	70-130
53 4,6-Dinitro-2-meth	1000	1048	104.78	70-130
54 N-Nitrosodiphenyla	500.0	538.7	107.74	70-130
56 4-Bromophenyl-phen	500.0	551.7	110.35	70-130
57 Hexachlorobenzene	500.0	503.1	100.61	70-130
58 Pentachlorophenol	500.0	545.7	109.14	70-130
60 Phenanthrene	500.0	617.4	123.48	70-130
61 Anthracene	500.0	623.9	124.79	70-130
63 Di-n-butylphthalat	500.0	563.3	112.65	70-130
64 Fluoranthene	500.0	629.6	125.92	70-130
65 Pyrene	500.0	611.0	122.21	70-130
67 Butylbenzylphthala	500.0	564.0	112.81	70-130
68 Benzo(a)anthracene	500.0	606.2	121.25	70-130
70 3,3'-Dichlorobenzi	500.0	278.3	55.65*	70-130
71 Chrysene	500.0	614.5	122.91	70-130
72 bis(2-Ethylhexyl)p	500.0	540.4	108.08	70-130
73 Di-n-octylphthalat	500.0	555.7	111.13	70-130
74 Benzo(b)fluoranthe	500.0	642.2	128.44	70-130
75 Benzo(k)fluoranthe	500.0	608.0	121.59	70-130
76 Benzo(a)pyrene	500.0	616.2	123.25	70-130
78 Indeno(1,2,3-cd)py	500.0	628.4	125.67	70-130
79 Dibenzo(a,h)anthra	500.0	631.2	126.25	70-130
80 Benzo(g,h,i)peryle	500.0	643.1	128.62	70-130
90 N-Nitrosodimethyla	500.0	533.5	106.70	70-130
91 Aniline	500.0	279.9	55.97*	70-130
93 Benzidine	500.0	182.4	36.47*	70-130
105 1-methylnaphthalen	500.0	438.5	87.70	70-130
120 2,3,4,6-Tetrachlo	500.0	0.000	*	70-130
151 1,2,4,5-Tetrachlo	500.0	0.000	*	70-130
110 Tetrachloroguaiac	1000	0.000	*	70-130
109 3,4,5-Trichlorogu	500.0	0.000	*	70-130
181 3,4,6-Trichlorogu	500.0	0.000	*	70-130
108 4,5,6-Trichlorogu	500.0	0.000	*	70-130
184 3,4-Dichloroguaia	500.0	0.000	*	70-130
107 4,5-Dichloroguaia	1000	0.000	*	70-130
182 4,6-Dichloroguaia	1000	0.000	*	70-130
185 4-Chloroguaiacol	250.0	0.000	*	70-130
106 Guaiacol	500.0	0.000	*	70-130

Data File: /chem1/nt10.i/20120507.b/icv0507.d
Date : 07-MAY-2012 19:56
Client ID:
Sample Info: ICV0507
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - icv0507.d

Lab ID: ICV0507, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
15.271	Acenaphthylene and 2,6-Dinitrotoluene

Data File: /chem1/nt10.i/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

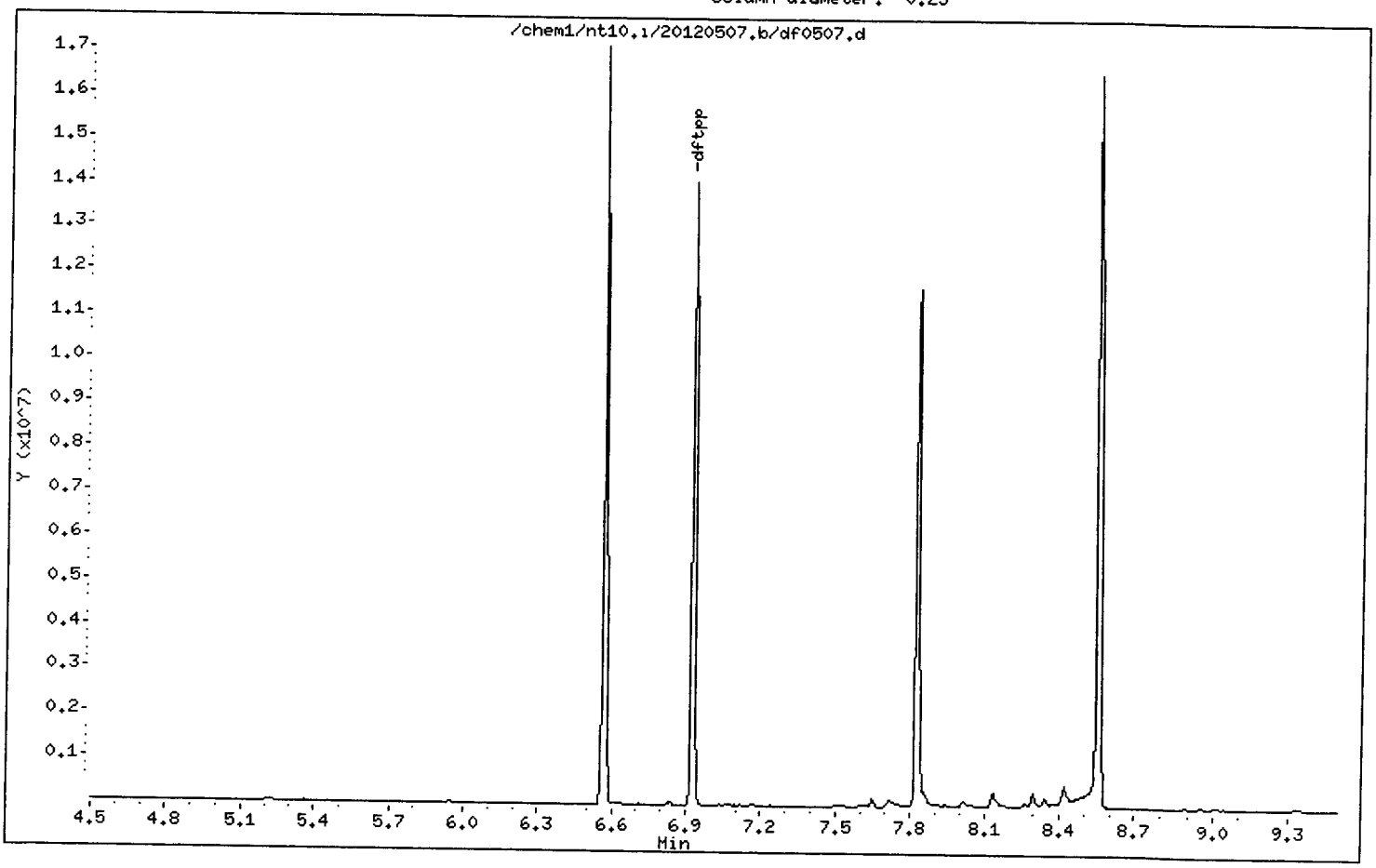
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Instrument: nt10.i

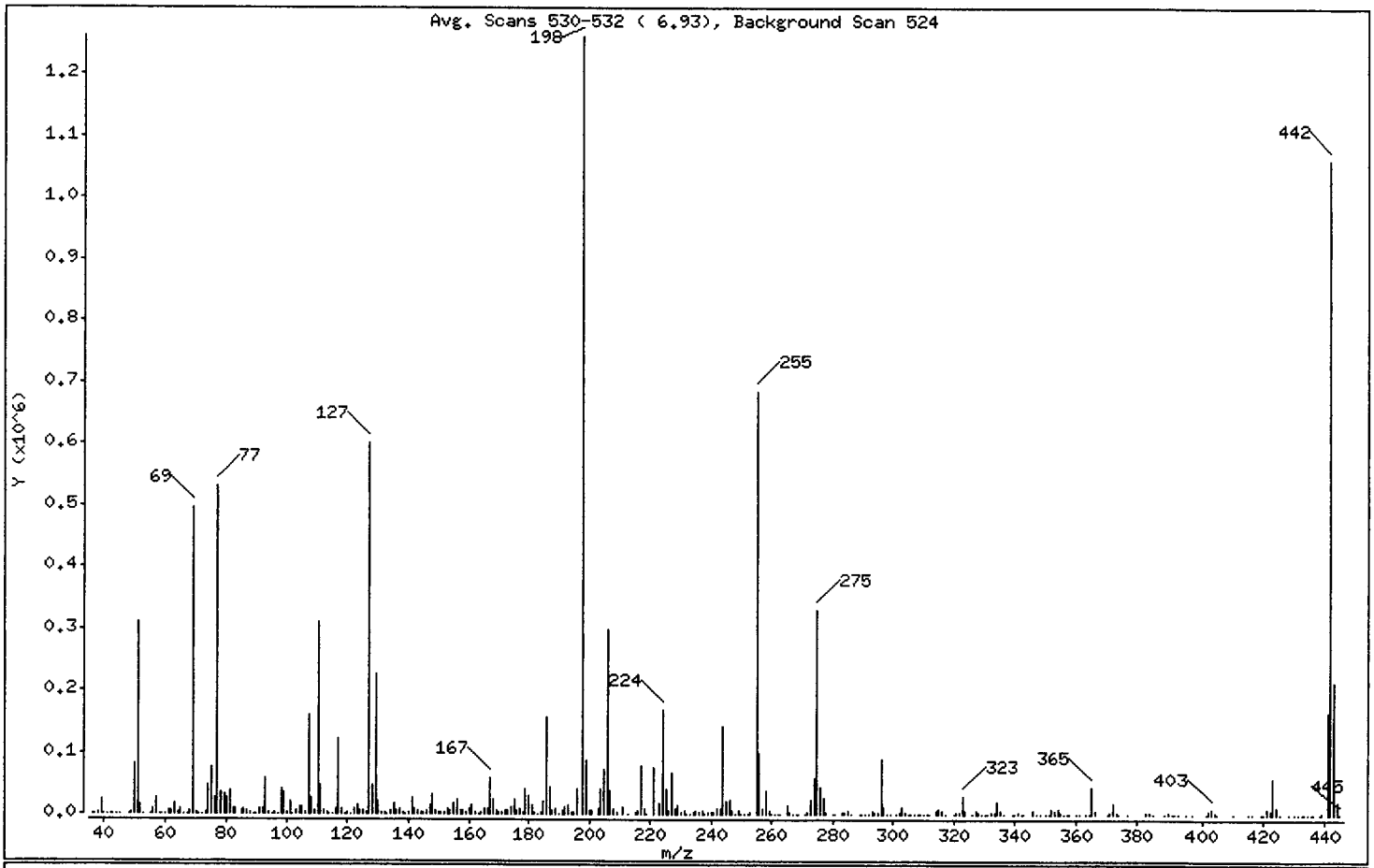
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	24.51
68	Less than 2.00% of mass 69	0.57 (1.44)
69	Mass 69 relative abundance	39.24
70	Less than 2.00% of mass 69	0.17 (0.44)
127	10.00 - 80.00% of mass 198	47.64
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.83
275	10.00 - 60.00% of mass 198	26.26
365	Greater than 1.00% of mass 198	3.43
441	0.01 - 24.00% of mass 442	13.08 (15.54)
442	50.00 - 200.00% of mass 198	84.18
443	15.00 - 24.00% of mass 442	16.97 (20.16)

Data File: /chem1/nt10.1/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d
Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524
Location of Maximum: 198.00
Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	318	129.00	227328	226.00	4446	321.00	3164
37.00	1396	130.00	19184	227.00	67160	322.00	1680
38.00	4278	131.00	3433	228.00	9322	323.00	29344
39.00	23920	132.00	1792	229.00	14027	324.00	5630
40.00	1054	133.00	732	230.00	2116	325.00	607
41.00	653	134.00	5849	231.00	6493	326.00	577
42.00	210	135.00	17584	232.00	945	327.00	5732
43.00	45	136.00	7251	233.00	1179	328.00	2723
44.00	410	137.00	8583	234.00	4205	329.00	604
45.00	524	138.00	1981	235.00	4731	330.00	144
48.00	149	139.00	1060	236.00	3421	331.00	240
49.00	2074	140.00	2634	237.00	5207	332.00	2241
50.00	82424	141.00	27264	238.00	973	333.00	2981
51.00	309312	142.00	9410	239.00	2559	334.00	19024
52.00	15855	143.00	6279	240.00	2169	335.00	4951
53.00	702	144.00	1772	241.00	3895	336.00	452
54.00	74	145.00	1785	242.00	9756	339.00	456
55.00	1440	146.00	4681	243.00	10133	340.00	494
56.00	10077	147.00	13587	244.00	142912	341.00	3509
57.00	24776	148.00	30472	245.00	19040	342.00	966
58.00	1235	149.00	6364	246.00	24296	343.00	57
59.00	221	150.00	1603	247.00	5286	346.00	6116
60.00	422	151.00	3821	248.00	1257	347.00	1323
61.00	4648	152.00	1805	249.00	4809	348.00	66
62.00	5819	153.00	8658	250.00	1076	350.00	357
63.00	16272	154.00	6689	251.00	1282	351.00	463
64.00	2253	155.00	16372	252.00	1408	352.00	9213
65.00	8135	156.00	22432	253.00	3310	353.00	6377
66.00	526	157.00	4749	255.00	685888	354.00	9003
67.00	354	158.00	5014	256.00	99696	355.00	1694
68.00	7152	159.00	3889	257.00	7807	356.00	136
69.00	495296	160.00	8225	258.00	37888	357.00	152
70.00	2157	161.00	13422	259.00	6194	358.00	129
71.00	197	162.00	3754	260.00	1033	359.00	743
72.00	293	163.00	1187	261.00	1260	360.00	154

Data File: /chem1/nt10.i/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524

Location of Maximum: 198.00

Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	3129	164.00	1664	262.00	198	361.00	157
74.00	45664	165.00	10098	263.00	387	363.00	60
75.00	75280	166.00	8576	264.00	1014	364.00	174
76.00	24824	167.00	56848	265.00	15502	365.00	43264
77.00	531776	168.00	23584	266.00	2135	366.00	5966
78.00	36128	169.00	4666	267.00	310	367.00	440
79.00	32744	170.00	1935	268.00	159	370.00	1113
80.00	26328	171.00	2238	269.00	236	371.00	2611
81.00	37240	172.00	4846	270.00	923	372.00	16181
82.00	9129	173.00	6455	271.00	1444	373.00	3800
83.00	8767	174.00	11500	272.00	2001	374.00	498
84.00	716	175.00	22144	273.00	21976	377.00	366
85.00	5883	176.00	7120	274.00	56744	383.00	4241
86.00	9795	177.00	8919	275.00	331456	384.00	1502
87.00	4694	178.00	3435	276.00	43520	385.00	381
88.00	1808	179.00	41824	277.00	25648	389.00	291
89.00	1007	180.00	28368	278.00	4333	390.00	2152
90.00	263	181.00	14025	279.00	939	391.00	1342
91.00	7961	182.00	2163	280.00	124	392.00	1063
92.00	8890	183.00	1442	281.00	271	393.00	156
93.00	57168	184.00	3201	282.00	723	395.00	166
94.00	4168	185.00	20152	283.00	3115	397.00	159
95.00	871	186.00	157952	284.00	1881	401.00	1109
96.00	2471	187.00	44096	285.00	4787	402.00	5942
97.00	913	188.00	4434	286.00	895	403.00	8451
98.00	41896	189.00	8949	288.00	358	404.00	3039
99.00	33664	190.00	1436	289.00	1205	405.00	524
100.00	3018	191.00	4457	290.00	914	410.00	319
101.00	21184	192.00	13048	291.00	713	415.00	531
102.00	1239	193.00	14685	292.00	1287	416.00	161
103.00	6653	194.00	3025	293.00	5920	419.00	117
104.00	12777	195.00	2442	294.00	1620	420.00	150
105.00	11760	196.00	39840	295.00	1655	421.00	7691
106.00	4059	198.00	1262080	296.00	90072	422.00	7063
107.00	160000	199.00	86160	297.00	12450	423.00	56848

Data File: /chem1/nt10.i/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Sample Info: DFTPP

Instrument: nt10.i

Column phase: ZB-5msi

Operator: YZ

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524

Location of Maximum: 198.00

Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	25224	200.00	6235	298.00	848	424.00	11528
109.00	4419	201.00	6506	299.00	278	425.00	999
110.00	311424	203.00	7684	301.00	1135	428.00	53
111.00	45456	204.00	41272	302.00	1719	430.00	51
112.00	5317	205.00	71792	303.00	10475	431.00	55
113.00	1735	206.00	297472	304.00	2897	432.00	137
114.00	418	207.00	38440	305.00	362	433.00	142
115.00	661	208.00	9516	306.00	75	434.00	318
116.00	8583	209.00	2713	307.00	158	435.00	301
117.00	121760	211.00	11963	308.00	1440	436.00	493
118.00	8665	213.00	857	309.00	929	437.00	806
119.00	1347	214.00	309	310.00	1056	438.00	415
120.00	2052	215.00	3015	311.00	305	439.00	1467
121.00	562	216.00	6356	312.00	309	441.00	165056
122.00	10033	217.00	78984	313.00	965	442.00	1062400
123.00	15627	218.00	9688	314.00	4393	443.00	214144
124.00	6856	219.00	935	315.00	10043	444.00	19560
125.00	6859	221.00	76176	316.00	5753	445.00	1283
126.00	1668	223.00	18328	317.00	1006		
127.00	601216	224.00	166848	319.00	175		
128.00	45280	225.00	41704	320.00	419		

UR01 : 00408

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120507.b/ddt.b/df0507.d
Method: /chem1/nt10.i/20120507.b/ddt.b/sw846ddt.m
Analysis Date: 07-MAY-2012 14:08

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.569	1814388
Benzidine	7.831	4884099
4,4'-DDE	8.013	10324
4,4'-DDD	8.296	59489
4,4'-DDT	8.558	3106815

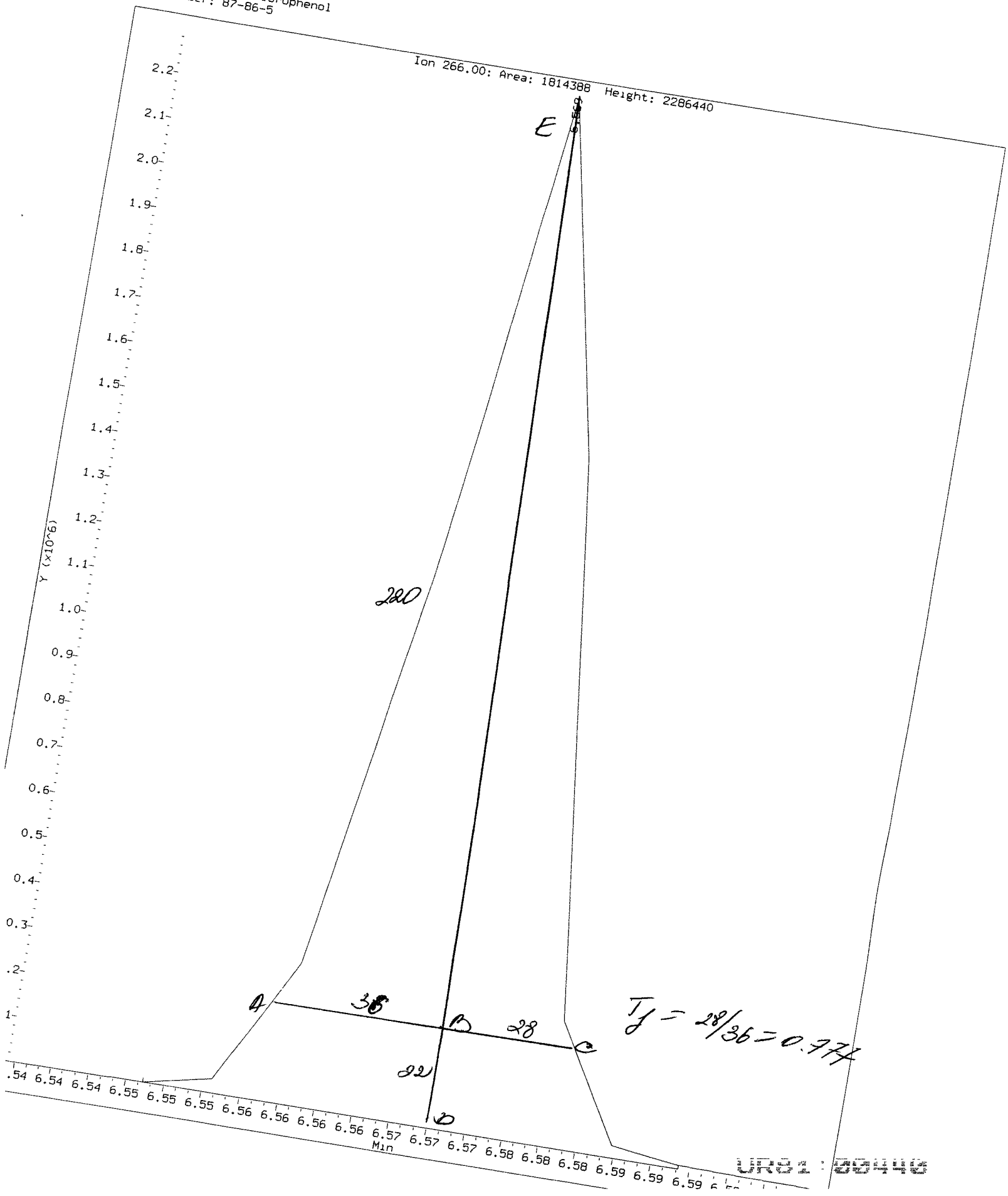
$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(10324 + 59489) * 100}{(10324 + 59489 + 3106815)}$$

DDT Percent Breakdown = 2.2 %

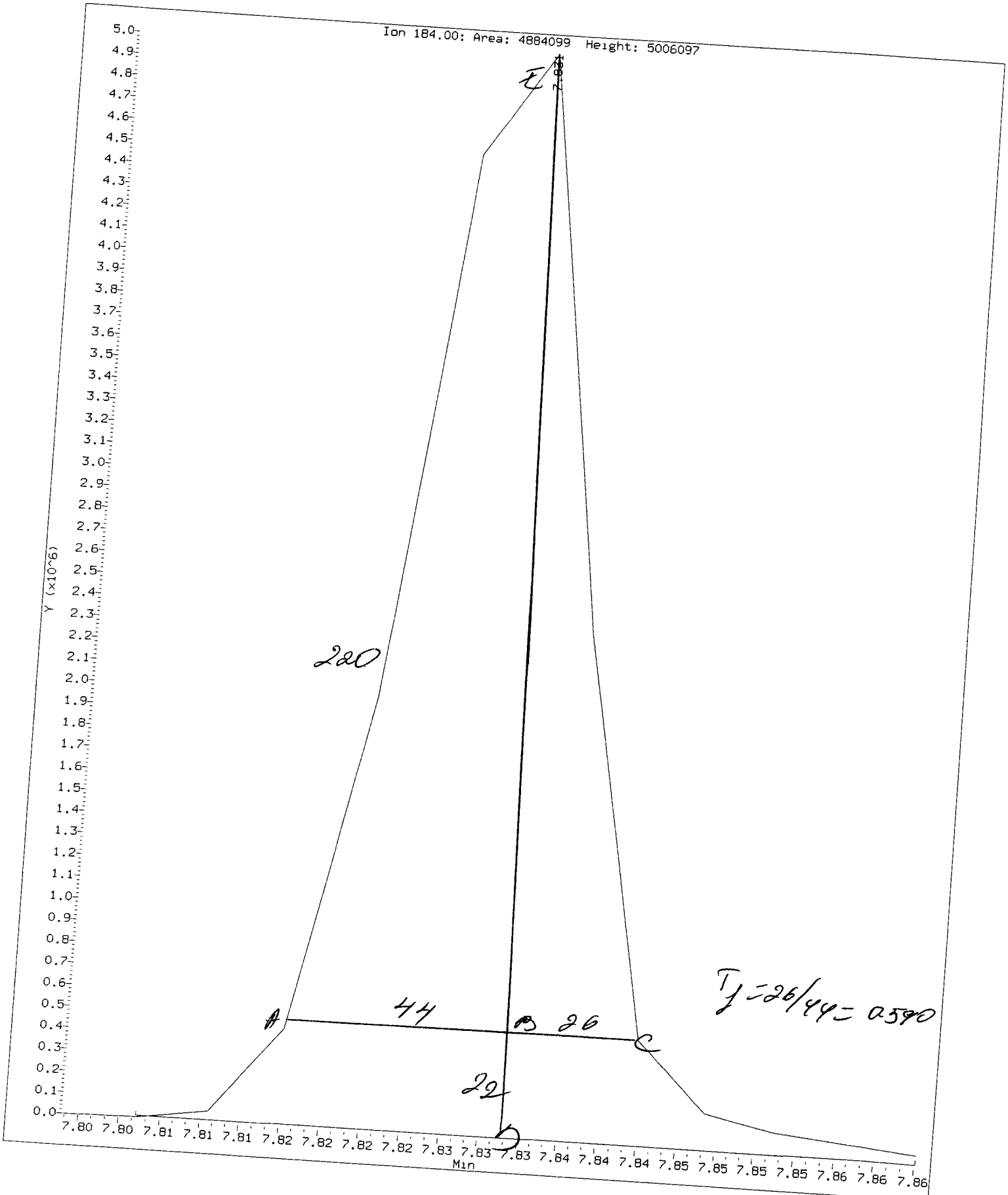
Data File: /chem1/nt10.1/20120507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2012 14:08
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20120507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2012 14:08
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: UR 81 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): SVOA Pedda

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 5/7/12 Analysis Start Date: 5/8/12

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO
Peak Tailing Factor ≤2?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO	Q flag applied?	YES / NO
Surrogate Recovery in Control?	YES / NO	Special Analysis Criteria Met?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Sample E was re-run @ 5x dilution on 05/09/12.

Additional Details on Reverse: Yes / No

Analyst: YZ **Date:** 5/10/12

Reviewer: [signature] **Date:** 5/10/12

Form 7015F Version 014 6/18/10

UR81 : 00443

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: US18 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): SVOA Pedda

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 5/7/12 Analysis Start Date: 5/8/12

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO
Peak Tailing Factor ≤2?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO	Q flag applied?	YES / NO
Surrogate Recovery in Control?	YES / NO	Special Analysis Criteria Met?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: YZ **Date:** 5/10/12

Reviewer: [signature] **Date:** 5/10/12

URS1 : 00444

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/8/12 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN2 Column No: 227815 Column Type: 20 5 MS

Instrument Tune (.U or .CT.): 11/12/164 EM Voltage: 1800

Calibration File: DF0508 Curve Date: 05/07/12 Injection Vol.: 1 ul

IS/SS	Ical/Ccal		LCS/ICV
1875-1	1949-2	1891-2	
	1950-1	1892-1	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120508.b

	Time	Filename	LabID	ClientId	DF																
1	1355	df0508 d	DFTPP	DFTPP	1	NO ISTDS FOUND															
2	1410	cc0508 d	CC0508		1	9 04	243625	11.72	973085	15 63	554482	18 90	869014	23 96	920625	25 06	1405067	26 44	864193		
3	1524	ur87a2.d	UR87A	MD1_0-4	2	9 05	266338	11 72	1033852	15 63	566338	18 90	910376	23 96	914319	26 44	873014	25 06	1404742		
4	1601	ur81mb.d	UR81MBS1	UR81MBS1	1	9 04	208573	11 72	802059	15 63	404465	18 90	684812	23 96	697262	25 06	1072975	26 44	630044		
5	1638	ur81sb d	UR81LCSS1	UR81LCSS1	1	9 05	250215	11.72	978227	15.63	543800	18 91	847253	23 96	862498	25.06	1316139	26 44	810230		
6	1715	ur81sbd d	UR81LCSDS1	UR81LCSDS1	1	9 05	253232	11 72	997518	15 63	547562	18 91	863927	23.96	873849	25 06	1351337	26 44	828679		
7	1752	ur81a d	UR81A	IJ12-03	1	9 05	254860	11 72	1009881	15.63	542385	18 91	838667	23 97	847000	25 06	1341032	26 45	837045		
8	1829	ur81b.d	UR81B	IJ12-05	1	9 05	258946	11 72	1042474	15 63	560986	18 91	881936	23 97	869711	25.06	1398052	26 45	864778		
9	1906	ur81c d	UR81C	IJ12-06	1	9 05	263175	11 72	1044105	15 63	567493	18 91	878921	23 97	882989	25 06	1395471	26.45	861311		
10	1943	ur81d d	UR81D	IJ12-02	1	9 05	233615	11 73	928538	15 63	518378	18 91	802209	23 97	800248	25.06	1274835	26 45	790471		
11	2019	ur81e.d	UR81E	IJ12-04	1	9.05	252385	11 73	1013257	15 64	546718	18 92	858110	23.99	907309	25 07	1424098	26 46	880330		
12	2057	ur81ems d	UR81EMS	IJ12-04 MS	1	9.06	239370	11 73	955354	15 64	531894	18 93	849107	23 99	903256	25 08	1426112	26 47	860597		
13	2133	ur81emsd d	UR81EMSD	IJ12-04 MSD	1	9 05	224413	11 73	890782	15 64	512372	18.93	813777	23 99	883372	25 08	1355160	26 47	823667		
14	2210	ur81f d	UR81F	IJ12-07	1	9.06	224001	11 73	883880	15.64	486626	18 92	763786	23 98	803757	25 07	1248364	26.46	759449		
15	2247	ur81g d	UR81G	IJ12-01	1	9 06	226774	11 73	913992	15 64	496790	18.93	796154	24 00	825097	25.09	1294596	26.49	765903		
16	2324	ur81h d	UR81H	IJ12-58A	1	9 05	237389	11.73	933694	15.65	513110	18.93	799838	23 99	850235	25 07	1312482	26.47	784622		
17	0001	ur81i d	UR81I	IJ12-11	1	9 05	241030	11.73	938759	15 64	527809	18 92	819159	23 98	849529	25 07	1321968	26 46	779696		
18	0038	ur81j d	UR81J	IJ12-08A	1	9.05	237877	11 73	936718	15 64	517875	18 92	814744	23.99	824257	25 07	1312357	26 46	753667		
19	0114	us18a.d	US18A	I-1-Z	1	9.05	203754	11.73	800954	15.64	459989	18 93	708942	24 00	737067	25.08	1169084	26.49	673672		
20	0151	us18b d	US18B	I-2-A-Z	1	9 06	216035	11.73	847853	15.64	479101	18.93	732365	23 99	780884	25 08	1239412	26 48	720487		

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

YZ 5/10/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20120508.b

ARI Job No.: UR81 Method: ABN.m Instrument: nt10.i Date: 08-MAY-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1601	ur81mb.d	UR81MBS1	UR81MBS1	1	NO MANUAL INTEGRATION
1638	ur81sb.d	UR81LCSS1	UR81LCSS1	1	NO MANUAL INTEGRATION
1715	ur81sbd.d	UR81LCSDS1	UR81LCSDS1	1	NO MANUAL INTEGRATION
1752	ur81a.d	UR81A	IJ12-03	1	NO MANUAL INTEGRATION
1829	ur81b.d	UR81B	IJ12-05	1	Dibenzo(a,h)anthracene,
1906	ur81c.d	UR81C	IJ12-06	1	NO MANUAL INTEGRATION
1943	ur81d.d	UR81D	IJ12-02	1	NO MANUAL INTEGRATION
2019	ur81e.d	UR81E	IJ12-04	1	NO MANUAL INTEGRATION
2057	ur81ems.d	UR81EMS	IJ12-04 MS	1	Fluoranthene,
2133	ur81emsd.d	UR81EMSD	IJ12-04 MS	1	NO MANUAL INTEGRATION
2210	ur81f.d	UR81F	IJ12-07	1	NO MANUAL INTEGRATION
2247	ur81g.d	UR81G	IJ12-01	1	Di-n-octylphthalate,
2324	ur81h.d	UR81H	IJ12-58A	1	NO MANUAL INTEGRATION
0001	ur81i.d	UR81I	IJ12-11	1	NO MANUAL INTEGRATION
0038	ur81j.d	UR81J	IJ12-08A	1	Dibenzo(a,h)anthracene,
0114	us18a.d	US18A	I-1-Z	1	Dibenzo(a,h)anthracene,
0151	us18b.d	US18B	I-2-A-Z	1	NO MANUAL INTEGRATION
1646	ur81e5.d	UR81E	IJ12-04	5	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20120508.b

Instrument: nt10.i Date: 08-MAY-2012 Method: ABN.m

INITIAL CAL: 07-MAY-2012

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 08-MAY-2012

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

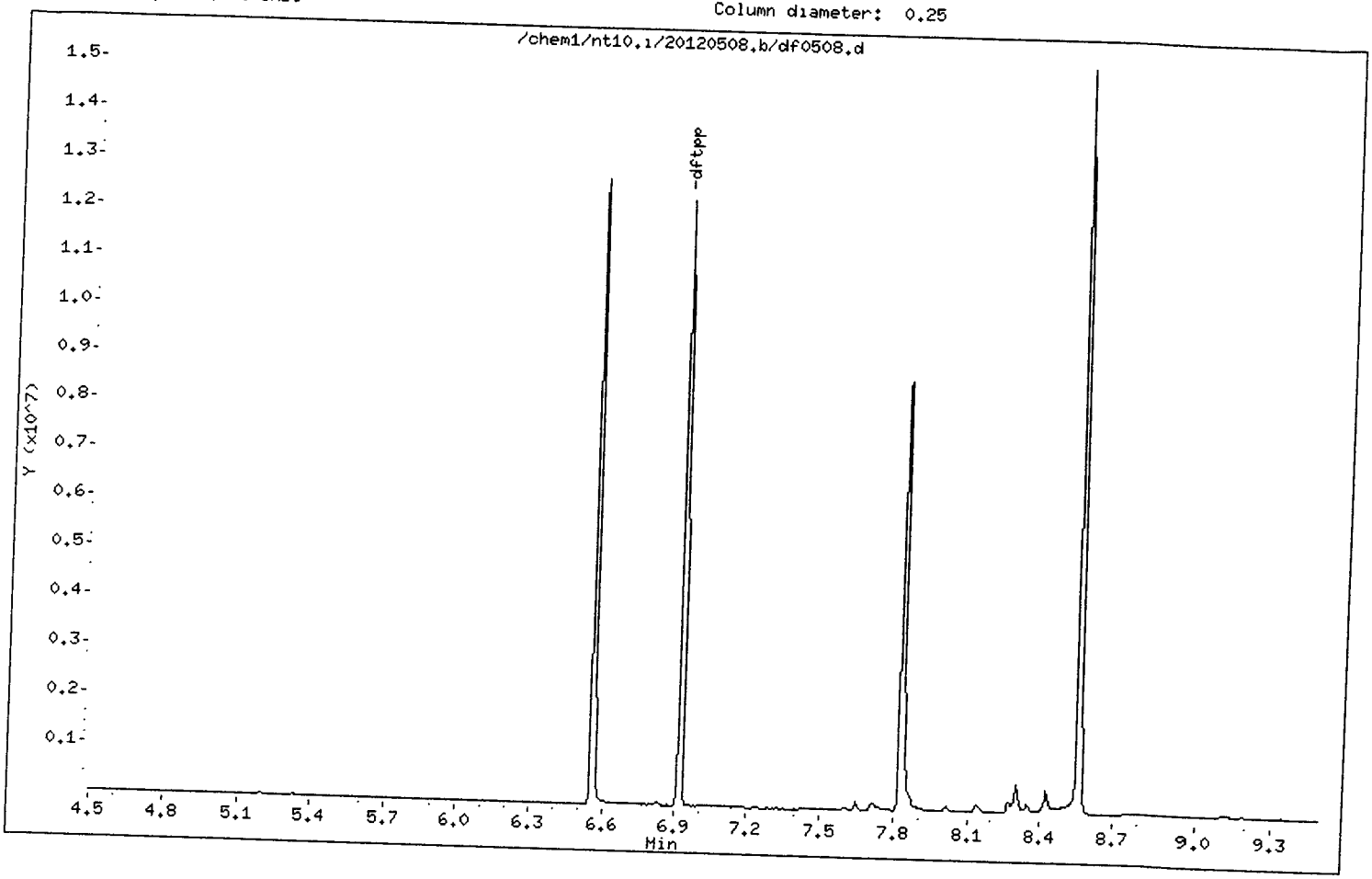
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.1/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Sample Info: DFTPP

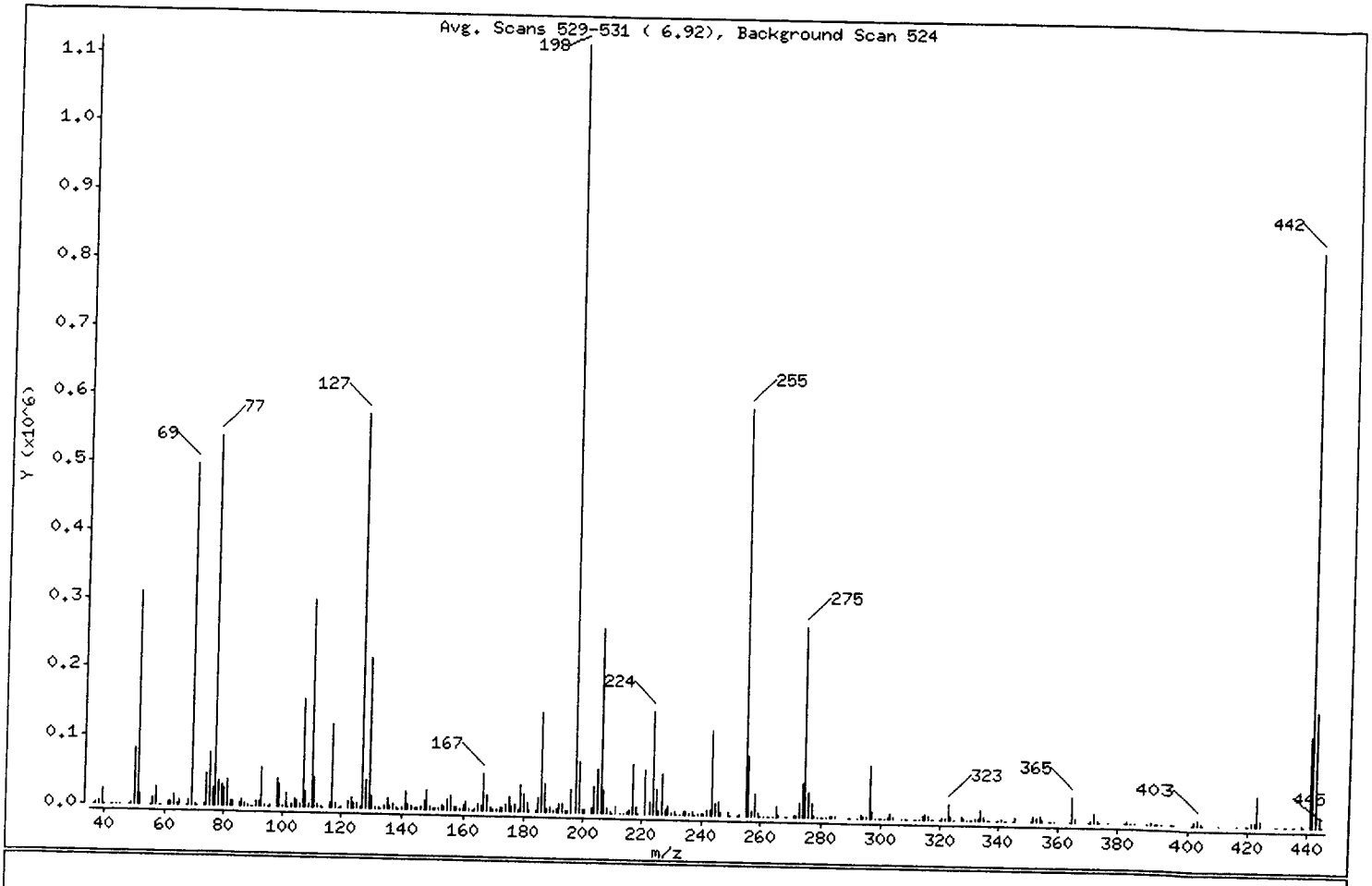
Instrument: nt10.1

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	27.62
68	Less than 2.00% of mass 69	0.64 (1.45)
69	Mass 69 relative abundance	44.26
70	Less than 2.00% of mass 69	0.19 (0.44)
127	10.00 - 80.00% of mass 198	51.34
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 60.00% of mass 198	24.67
365	Greater than 1.00% of mass 198	3.29
441	0.01 - 24.00% of mass 442	11.68 (15.65)
442	50.00 - 200.00% of mass 198	74.65
443	15.00 - 24.00% of mass 442	14.87 (19.93)

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Sample Info: DFTPP

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 529-531 (6.92), Background Scan 524

Location of Maximum: 198.00

Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	182	129.00	220032	226.00	3869	321.00	2608
37.00	1346	130.00	18120	227.00	60224	322.00	1363
38.00	4076	131.00	3710	228.00	8754	323.00	24488
39.00	24072	132.00	1774	229.00	12414	324.00	4579
40.00	1073	133.00	711	230.00	1883	325.00	495
41.00	437	134.00	5873	231.00	5495	326.00	573
42.00	199	135.00	16142	232.00	1065	327.00	5150
43.00	124	136.00	6401	233.00	981	328.00	2362
44.00	804	137.00	7623	234.00	4193	329.00	497
45.00	730	138.00	1939	235.00	4447	330.00	50
47.00	61	139.00	1040	236.00	3116	331.00	73
48.00	124	140.00	2602	237.00	4724	332.00	2024
49.00	1875	141.00	25168	238.00	778	333.00	2503
50.00	81856	142.00	8248	239.00	2343	334.00	15981
51.00	309824	143.00	6159	240.00	1993	335.00	3877
52.00	16400	144.00	1734	241.00	3646	336.00	493
53.00	571	145.00	1549	242.00	8622	337.00	109
54.00	66	146.00	4414	243.00	8913	339.00	469
55.00	1243	147.00	13620	244.00	124448	340.00	323
56.00	9963	148.00	29352	245.00	16784	341.00	2981
57.00	24744	149.00	5995	246.00	21456	342.00	739
58.00	1012	150.00	1637	247.00	4514	343.00	74
59.00	410	151.00	3475	248.00	1146	345.00	129
60.00	293	152.00	2253	249.00	3948	346.00	5450
61.00	4487	153.00	7776	250.00	953	347.00	1021
62.00	5669	154.00	6334	251.00	1065	348.00	55
63.00	15994	155.00	15080	252.00	1198	350.00	249
64.00	2280	156.00	21664	253.00	3142	351.00	543
65.00	8854	157.00	4819	255.00	594112	352.00	7339
66.00	465	158.00	4887	256.00	87728	353.00	5238
67.00	338	159.00	3538	257.00	6785	354.00	7162
68.00	7182	160.00	8237	258.00	34288	355.00	1553
69.00	496512	161.00	12541	259.00	5199	356.00	247
70.00	2165	162.00	3567	260.00	822	357.00	150
71.00	114	163.00	935	261.00	1065	358.00	144

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 529-531 (6.92), Background Scan 524

Location of Maximum: 198.00

Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	237	164.00	1505	262.00	190	359.00	564
73.00	3145	165.00	9090	263.00	419	361.00	124
74.00	45968	166.00	8256	264.00	863	363.00	152
75.00	76136	167.00	53200	265.00	14184	364.00	262
76.00	24832	168.00	22560	266.00	1918	365.00	36928
77.00	540096	169.00	4009	267.00	378	366.00	4933
78.00	36096	170.00	1616	268.00	117	367.00	272
79.00	31736	171.00	2054	269.00	235	370.00	809
80.00	25248	172.00	4341	270.00	867	371.00	1924
81.00	37488	173.00	6289	271.00	1457	372.00	12777
82.00	8936	174.00	10771	272.00	1980	373.00	3173
83.00	8560	175.00	20040	273.00	20096	374.00	341
84.00	618	176.00	6497	274.00	48216	377.00	370
85.00	5908	177.00	9337	275.00	276800	382.00	53
86.00	9286	178.00	3232	276.00	37232	383.00	3627
87.00	4830	179.00	38936	277.00	21816	384.00	844
88.00	1699	180.00	26600	278.00	3542	385.00	338
89.00	905	181.00	12783	279.00	793	389.00	63
90.00	147	182.00	2190	280.00	54	390.00	1873
91.00	7850	183.00	1199	281.00	332	391.00	1162
92.00	8575	184.00	2931	282.00	600	392.00	800
93.00	56144	185.00	19448	283.00	2694	393.00	143
94.00	3857	186.00	144128	284.00	1772	395.00	62
95.00	912	187.00	40096	285.00	3761	396.00	52
96.00	2554	188.00	4017	286.00	834	397.00	54
97.00	903	189.00	8293	288.00	264	401.00	768
98.00	42176	190.00	1464	289.00	913	402.00	4855
99.00	32528	191.00	4288	290.00	795	403.00	6664
100.00	2968	192.00	11874	291.00	645	404.00	2700
101.00	21016	193.00	13525	292.00	1140	405.00	339
102.00	1037	194.00	2708	293.00	5027	410.00	208
103.00	6415	195.00	1583	294.00	1382	415.00	312
104.00	12335	196.00	34280	295.00	2192	416.00	102
105.00	11578	198.00	1121792	296.00	78360	419.00	52
106.00	3909	199.00	76024	297.00	10909	420.00	104

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 529-531 (6.92), Background Scan 524

Location of Maximum: 198.00

Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
107.00	157440	200.00	5706	298.00	817	421.00	6272
108.00	24224	201.00	6058	299.00	139	422.00	6094
109.00	4230	203.00	7222	300.00	61	423.00	44376
110.00	302784	204.00	38088	301.00	1109	424.00	8613
111.00	44312	205.00	65008	302.00	1546	425.00	822
112.00	5443	206.00	268096	303.00	8594	429.00	106
113.00	1602	207.00	34648	304.00	2449	430.00	50
114.00	466	208.00	8639	305.00	287	432.00	133
115.00	676	209.00	2862	307.00	84	433.00	139
116.00	8594	210.00	1089	308.00	1065	434.00	210
117.00	120176	211.00	11061	309.00	852	435.00	568
118.00	8707	213.00	807	310.00	1112	436.00	323
119.00	977	214.00	325	311.00	231	437.00	700
120.00	2078	215.00	2867	312.00	262	438.00	1311
121.00	798	216.00	5951	313.00	871	439.00	812
122.00	9720	217.00	72408	314.00	3994	441.00	131032
123.00	15444	218.00	9111	315.00	8677	442.00	837376
124.00	6694	219.00	871	316.00	4640	443.00	166848
125.00	6800	221.00	64560	317.00	803	444.00	15581
126.00	1697	223.00	16824	318.00	109	445.00	934
127.00	575936	224.00	150784	319.00	138		
128.00	42296	225.00	37256	320.00	431		

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120508.b/ddt.b/df0508.d
Method: /chem1/nt10.i/20120508.b/ddt.b/sw846ddt.m
Analysis Date: 08-MAY-2012 13:55

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.563	1410959
Benzidine	7.831	3865821
4,4'-DDE	8.013	12210
4,4'-DDD	8.301	111425
4,4'-DDT	8.558	2651331

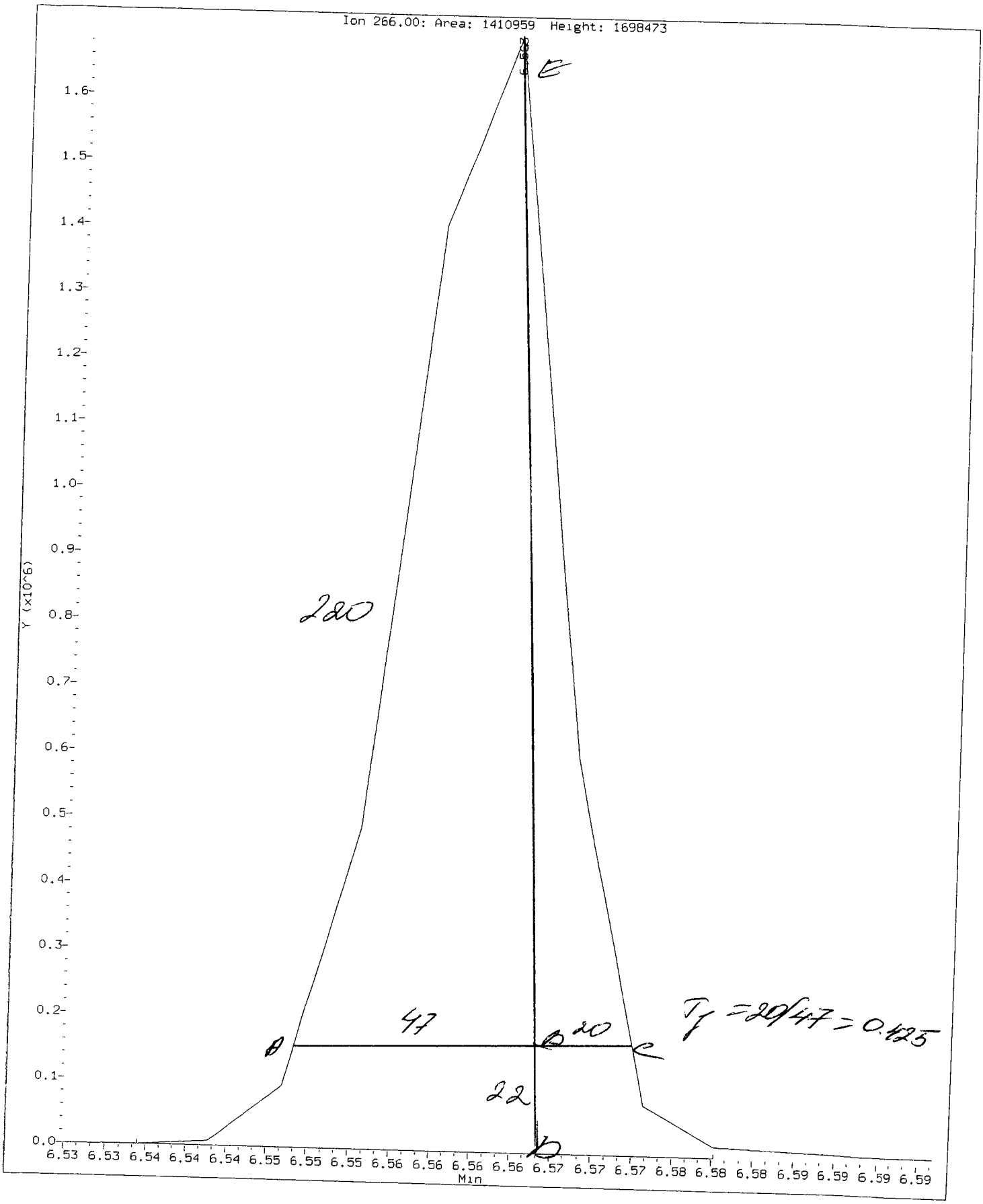
$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(12210 + 111425) * 100}{(12210 + 111425 + 2651331)}$$

DDT Percent Breakdown = 4.5 %

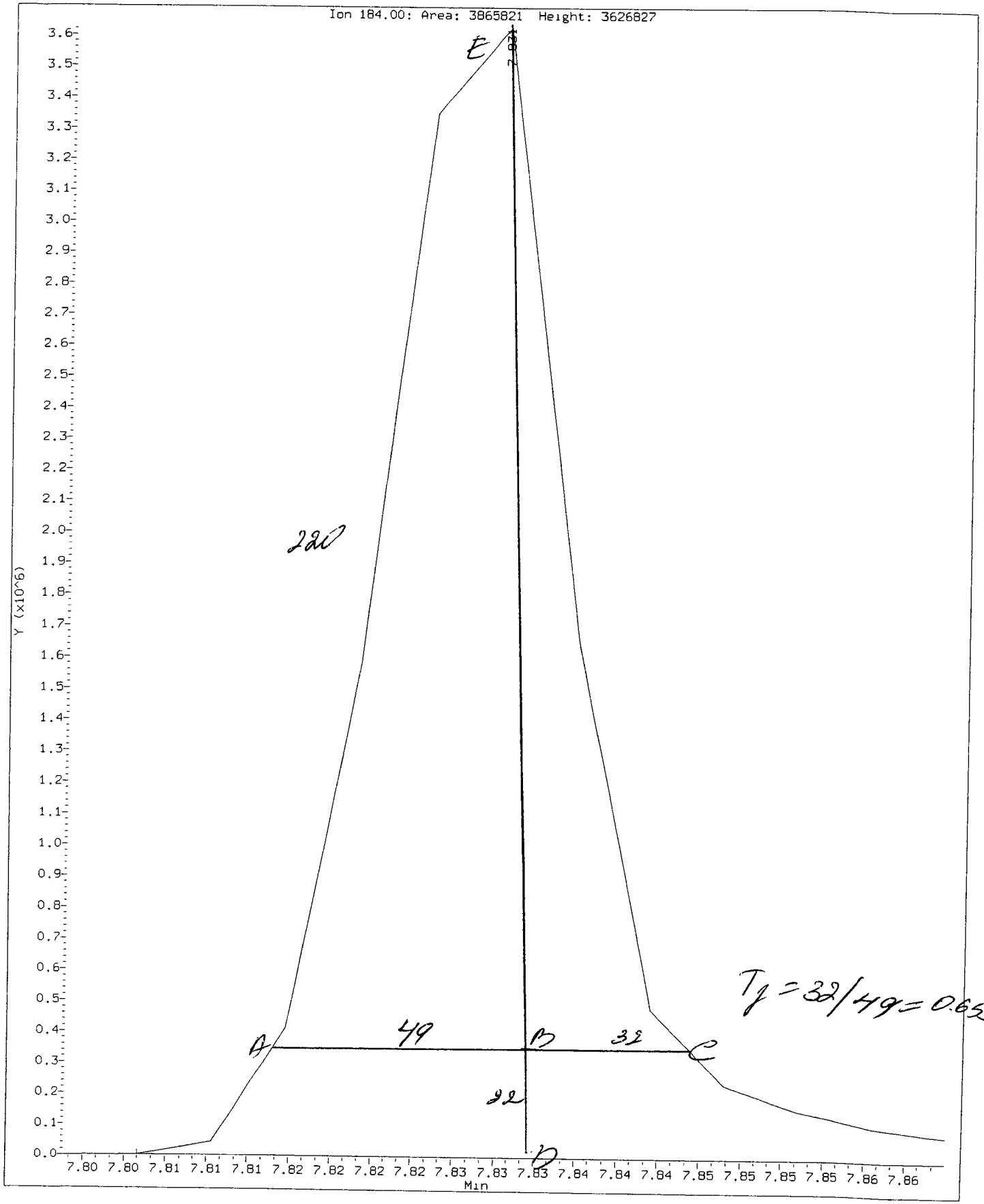
Data File: /chem1/nt10.i/20120508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2012 13:55
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20120508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2012 13:55
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0508.d
Analysis Type:
Lab Sample ID: CC0508
Method: /chem1/nt10.i/20120508.b/ABN.m

Injection Date: 08-MAY-2012 14:10
Init. Cal. Date(s): 07-MAY-2012 07-MAY-2012
Init. Cal. Times: 14:23 19:19
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.36833	1.36345	1.36345	0.010	-0.35664	20.00000	Averaged
$ 2 Phenol-d5	1.70144	1.69900	1.69900	0.010	-0.14307	20.00000	Averaged
3 Phenol	1.86492	1.80313	1.80313	0.100	-3.31309	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.47252	1.43884	1.43884	0.010	-2.28739	20.00000	Averaged
7 1,3-Dichlorobenzene	1.64396	1.62152	1.62152	0.010	-1.36481	20.00000	Averaged
9 1,4-Dichlorobenzene	1.59609	1.55378	1.55378	0.010	-2.65080	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	0.99780	0.96323	0.96323	0.010	-3.46462	20.00000	Averaged
12 1,2-Dichlorobenzene	1.54945	1.50551	1.50551	0.010	-2.83560	20.00000	Averaged
11 Benzyl alcohol	0.86908	0.82604	0.82604	0.010	-4.95196	20.00000	Averaged
13 2-Methylphenol	1.46773	1.43561	1.43561	0.700	-2.18851	20.00000	Averaged
17 Hexachloroethane	0.62265	0.62574	0.62574	0.300	0.49532	20.00000	Averaged
15 4-Methylphenol	1.53038	1.47223	1.47223	0.600	-3.79956	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.34200	0.33782	0.33782	0.010	-1.22233	20.00000	Averaged
22 2,4-Dimethylphenol	0.35518	0.33936	0.33936	0.200	-4.45472	20.00000	Averaged
24 Benzoic acid	0.27548	0.29249	0.29249	0.010	6.17702	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.32452	0.30225	0.30225	0.010	-6.86404	20.00000	Averaged
28 Naphthalene	0.99894	0.96546	0.96546	0.100	-3.35170	20.00000	Averaged
30 Hexachlorobutadiene	0.17799	0.16659	0.16659	0.010	-6.40692	20.00000	Averaged
32 2-Methylnaphthalene	0.68507	0.66312	0.66312	0.300	-3.20492	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.36447	1.26279	1.26279	0.010	-7.45199	20.00000	Averaged
39 Dimethylphthalate	1.22066	1.15591	1.15591	0.010	-5.30464	20.00000	Averaged
40 Acenaphthylene	1.77279	1.67446	1.67446	0.900	-5.54679	20.00000	Averaged
44 Acenaphthene	1.05813	1.01871	1.01871	0.100	-3.72575	20.00000	Averaged
46 Dibenzofuran	1.57482	1.47317	1.47317	0.800	-6.45432	20.00000	Averaged
50 Diethylphthalate	1.16820	1.13038	1.13038	0.010	-3.23772	20.00000	Averaged
49 Fluorene	1.20142	1.29955	1.29955	0.100	8.16772	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.51491	0.48704	0.48704	0.010	-5.41312	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.18351	0.16451	0.16451	0.010	-10.35383	20.00000	Averaged
57 Hexachlorobenzene	0.24321	0.22129	0.22129	0.100	-9.01162	20.00000	Averaged
58 Pentachlorophenol	0.16902	0.15642	0.15642	0.010	-7.45338	20.00000	Averaged
60 Phenanthrene	0.98917	0.94602	0.94602	0.700	-4.36289	20.00000	Averaged
61 Anthracene	1.04413	1.02263	1.02263	0.700	-2.05853	20.00000	Averaged
63 Di-n-butylphthalate	1.28434	1.34052	1.34052	0.010	4.37455	20.00000	Averaged
64 Fluoranthene	1.12590	1.10090	1.10090	0.600	-2.22091	20.00000	Averaged
65 Pyrene	1.20879	1.10097	1.10097	0.600	-8.91964	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0508.d
Analysis Type:
Lab Sample ID: CC0508
Method: /chem1/nt10.i/20120508.b/ABN.m

Injection Date: 08-MAY-2012 14:10
Init. Cal. Date(s): 07-MAY-2012 07-MAY-2012
Init. Cal. Times: 14:23 19:19
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 66 Terphenyl-d14	0.75799	0.66506	0.66506	0.010	-12.25944	20.00000	Averaged
67 Butylbenzylphthalate	0.51455	0.50450	0.50450	0.010	-1.95174	20.00000	Averaged
68 Benzo(a)anthracene	1.08475	0.99362	0.99362	0.700	-8.40092	20.00000	Averaged
71 Chrysene	0.96833	0.90215	0.90215	0.700	-6.83460	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.52011	0.48677	0.48677	0.010	-6.40908	20.00000	Averaged
73 Di-n-octylphthalate	0.95203	0.87597	0.87597	0.010	-7.98920	20.00000	Averaged
76 Benzo(a)pyrene	0.97171	0.95369	0.95369	0.700	-1.85466	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.10568	1.05372	1.05372	0.500	-4.69966	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.84975	0.81769	0.81769	0.400	-3.77210	20.00000	Averaged
80 Benzo(g,h,i)perylene	0.95596	0.86929	0.86929	0.500	-9.06652	20.00000	Averaged
105 1-methylnaphthalene	0.69855	0.68265	0.68265	0.010	-2.27642	20.00000	Averaged
187 Total Benzofluoranthenes	1.08828	1.05351	1.05351	0.010	-3.19483	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

VZ 5/9/12

Data file : /chem1/nt10.i/20120508.b/cc0508.d
Lab Smp Id: CC0508
Inj Date : 08-MAY-2012 14:10
Operator : VTS/YZ
Smp Info : CC0508
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev
Cal Date : 07-MAY-2012 19:19
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0507i.d
Continuing Calibration Sample

Compound Sublist: SHORTPSDDA.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.667	6.667	(0.738)	415213	5.00000	4.982
$ 2 Phenol-d5	99	8.398	8.398	(0.929)	517400	5.00000	4.993
3 Phenol	94	8.421	8.421	(0.932)	549110	5.00000	4.834
$ 5 2-Chlorophenol-d4	132	8.653	8.653	(0.957)	438172	5.00000	4.886
7 1,3-Dichlorobenzene	146	8.970	8.970	(0.992)	493803	5.00000	4.932
* 8 1,4-Dichlorobenzene-d4	152	9.040	9.040	(1.000)	243625	4.00000	
9 1,4-Dichlorobenzene	146	9.079	9.079	(1.004)	473176	5.00000	4.867
$ 10 1,2-Dichlorobenzene-d4	152	9.428	9.428	(1.043)	293332	5.00000	4.827
12 1,2-Dichlorobenzene	146	9.459	9.459	(1.046)	458476	5.00000	4.858
11 Benzyl alcohol	108	9.350	9.350	(1.034)	251555	5.00000	4.752
13 2-Methylphenol	108	9.614	9.614	(1.064)	437187	5.00000	4.891
17 Hexachloroethane	117	10.088	10.088	(1.116)	190556	5.00000	5.025
15 4-Methylphenol	108	9.909	9.909	(1.096)	448340	5.00000	4.810
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.873)	410907	5.00000	4.939
22 2,4-Dimethylphenol	107	11.041	11.041	(0.942)	825569	10.0000	9.555
24 Benzoic acid	105	11.303	11.303	(0.964)	1423099	20.0000	21.24
26 1,2,4-Trichlorobenzene	180	11.634	11.634	(0.993)	367641	5.00000	4.657
* 27 Naphthalene-d8	136	11.719	11.719	(1.000)	973085	4.00000	
28 Naphthalene	128	11.766	11.766	(1.004)	1174338	5.00000	4.832
30 Hexachlorobutadiene	225	12.175	12.175	(1.039)	202632	5.00000	4.680
32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	806586	5.00000	4.840
$ 36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	875245	5.00000	4.627
39 Dimethylphthalate	163	15.147	15.147	(0.969)	801166	5.00000	4.735
40 Acenaphthylene	152	15.286	15.286	(0.978)	1160570	5.00000	4.723
* 42 Acenaphthene-d10	164	15.627	15.627	(1.000)	554482	4.00000	
44 Acenaphthene	153	15.696	15.696	(1.004)	706068	5.00000	4.814
46 Dibenzofuran	168	16.060	16.060	(1.028)	1021062	5.00000	4.677

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	50 Diethylphthalate	149	16.732	16.732	(1.071)	783470	5.00000	4.838
	49 Fluorene	166	16.833	16.833	(1.077)	900724	5.00000	5.408
	54 N-Nitrosodiphenylamine	169	17.118	17.118	(0.906)	529057	5.00000	4.729
$	55 2,4,6-Tribromophenol	330	17.411	17.411	(1.114)	114022	5.00000	4.482
	57 Hexachlorobenzene	284	18.252	18.252	(0.966)	240385	5.00000	4.549
	58 Pentachlorophenol	266	18.640	18.640	(0.986)	339830	10.0000	9.255
*	59 Phenanthrene-d10	188	18.903	18.903	(1.000)	869014	4.00000	
	60 Phenanthrene	178	18.957	18.957	(1.003)	1027626	5.00000	4.782
	61 Anthracene	178	19.050	19.050	(1.008)	1110854	5.00000	4.897
	63 Di-n-butylphthalate	149	20.272	20.272	(1.072)	1456165	5.00000	5.219
	64 Fluoranthene	202	21.363	21.363	(1.130)	1195870	5.00000	4.889
	65 Pyrene	202	21.781	21.781	(0.909)	1266973	5.00000	4.554
$	66 Terphenyl-d14	244	22.098	22.098	(0.922)	765341	5.00000	4.387
	67 Butylbenzylphthalate	149	23.042	23.042	(0.962)	580574	5.00000	4.902
	68 Benzo(a)anthracene	228	23.941	23.941	(0.999)	1143445	5.00000	4.580
*	69 Chrysene-d12	240	23.964	23.964	(1.000)	920625	4.00000	
	71 Chrysene	228	24.010	24.010	(1.002)	1038173	5.00000	4.658
	72 bis(2-Ethylhexyl)phthalate	149	24.080	24.080	(0.961)	854933	5.00000	4.680
*	134 Di-n-octylphthalate-d4	153	25.056	25.056	(1.000)	1405067	4.00000	
	73 Di-n-octylphthalate	149	25.071	25.071	(1.001)	1538497	5.00000	4.601
	76 Benzo(a)pyrene	252	26.333	26.333	(0.996)	1030216	5.00000	4.907
*	77 Perylene-d12	264	26.441	26.441	(1.000)	864193	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.828	28.828	(1.090)	1138267	5.00000	4.765
	79 Dibenzo(a,h)anthracene	278	28.859	28.859	(1.091)	883306	5.00000	4.811
	80 Benzo(g,h,i)perylene	276	29.527	29.527	(1.117)	939038	5.00000	4.547
	105 1-methylnaphthalene	142	13.514	13.514	(1.153)	830341	5.00000	4.886
	187 Total Benzofluoranthenes	252	25.783	25.783	(0.975)	2276091	10.0000	9.681

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0508.d
Lab Smp Id: CC0508
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info:

Calibration Date: 08-MAY-2012
Calibration Time: 14:10

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	243625	-10.39
27 Naphthalene-d8	1080694	540347	2161388	973085	-9.96
42 Acenaphthene-d10	623821	311910	1247642	554482	-11.12
59 Phenanthrene-d10	999143	499572	1998286	869014	-13.02
69 Chrysene-d12	1001009	500504	2002018	920625	-8.03
134 Di-n-octylphthala	1489422	744711	2978844	1405067	-5.66
77 Perylene-d12	988348	494174	1976696	864193	-12.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.04	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.00
59 Phenanthrene-d10	18.90	18.40	19.40	18.90	0.00
69 Chrysene-d12	23.96	23.46	24.46	23.96	0.00
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.00
77 Perylene-d12	26.44	25.94	26.94	26.44	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120508.b/cc0508.d

Date : 08-MAY-2012 14:10

Client ID:

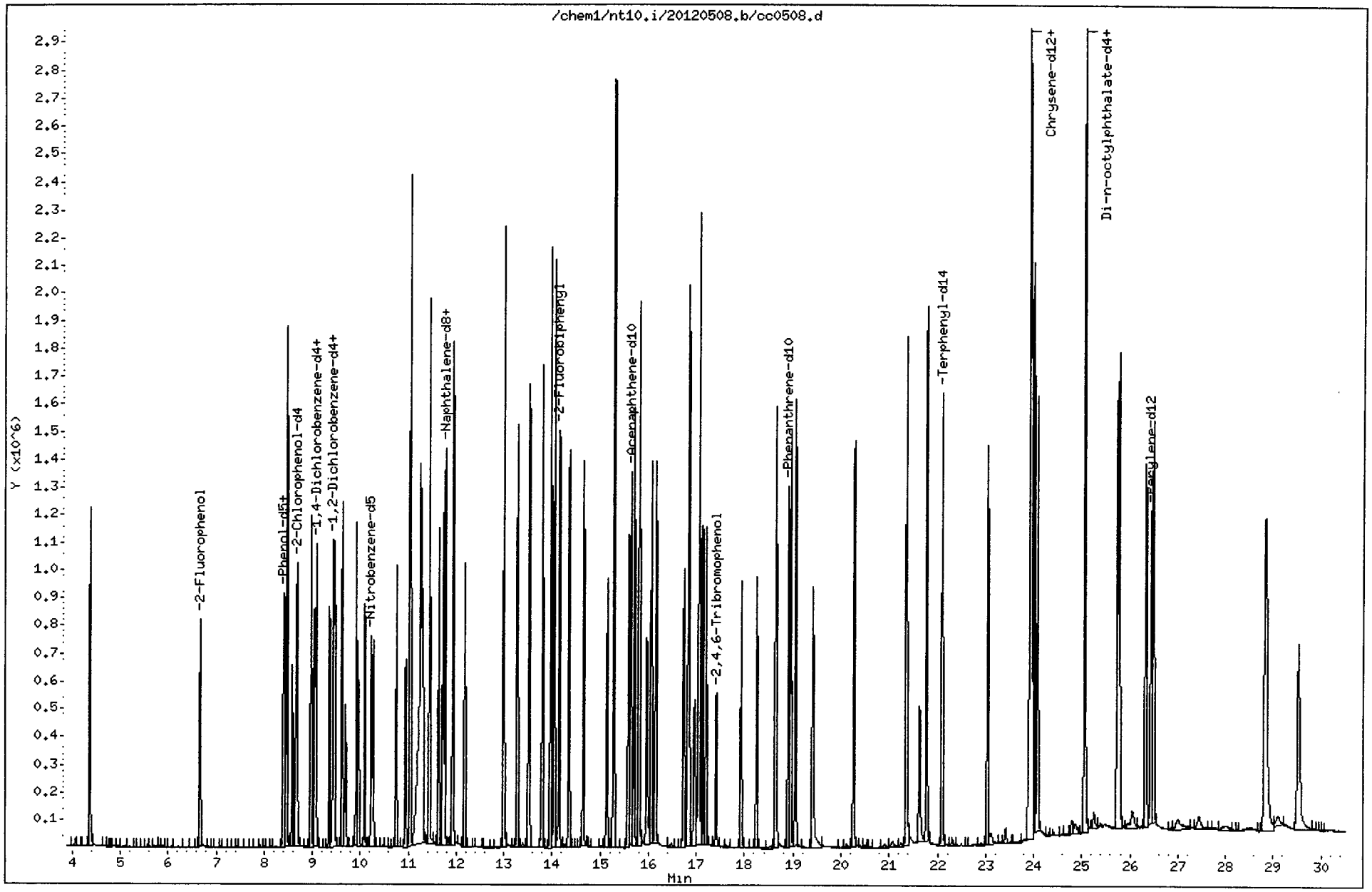
Sample Info: CC0508

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - cc0508.d

Lab ID: CC0508, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ 05/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81mb.d
Lab Smp Id: UR81MBS1 Client Smp ID: UR81MBS1
Inj Date : 08-MAY-2012 16:01
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81MBS1
Misc Info : 12-7396
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.683	6.667	(0.739)	381817	5.35139	535.1
$ 2 Phenol-d5	99	8.398	8.398	(0.929)	463794	5.22770	522.8
3 Phenol	94	Compound Not Detected.					
$ 5 2-Chlorophenol-d4	132	8.653	8.653	(0.957)	433707	5.64854	564.9
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.040	9.040	(1.000)	208573	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.428	9.428	(1.043)	189613	3.64442	364.4
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	Compound Not Detected.					
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.873)	273705	3.99128	399.1
22 2,4-Dimethylphenol	107	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.719	11.719	(1.000)	802059	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	500423	3.62703	362.7
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.634	15.627	(1.000)	404465	4.00000	
	44 Acenaphthene	153	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.411	17.411	(1.114)	97788	5.26993	527.0
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.903	18.903	(1.000)	684812	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	22.098	22.098	(0.922)	598858	4.53238	453.2
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	23.964	23.964	(1.000)	697262	4.00000	
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	24.088	24.080	(0.961)	39276	0.28152	28.15(R)
*	134 Di-n-octylphthalate-d4	153	25.063	25.056	(1.000)	1072975	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	26.441	26.441	(1.000)	630044	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	105 1-methylnaphthalene	142	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81mb.d
Lab Smp Id: UR81MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: UR81MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	208573	-23.28
27 Naphthalene-d8	1080694	540347	2161388	802059	-25.78
42 Acenaphthene-d10	623821	311910	1247642	404465	-35.16
59 Phenanthrene-d10	999143	499572	1998286	684812	-31.46
69 Chrysene-d12	1001009	500504	2002018	697262	-30.34
134 Di-n-octylphthala	1489422	744711	2978844	1072975	-27.96
77 Perylene-d12	988348	494174	1976696	630044	-36.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.04	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.05
59 Phenanthrene-d10	18.90	18.40	19.40	18.90	0.00
69 Chrysene-d12	23.96	23.46	24.46	23.96	0.00
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.03
77 Perylene-d12	26.44	25.94	26.94	26.44	0.00

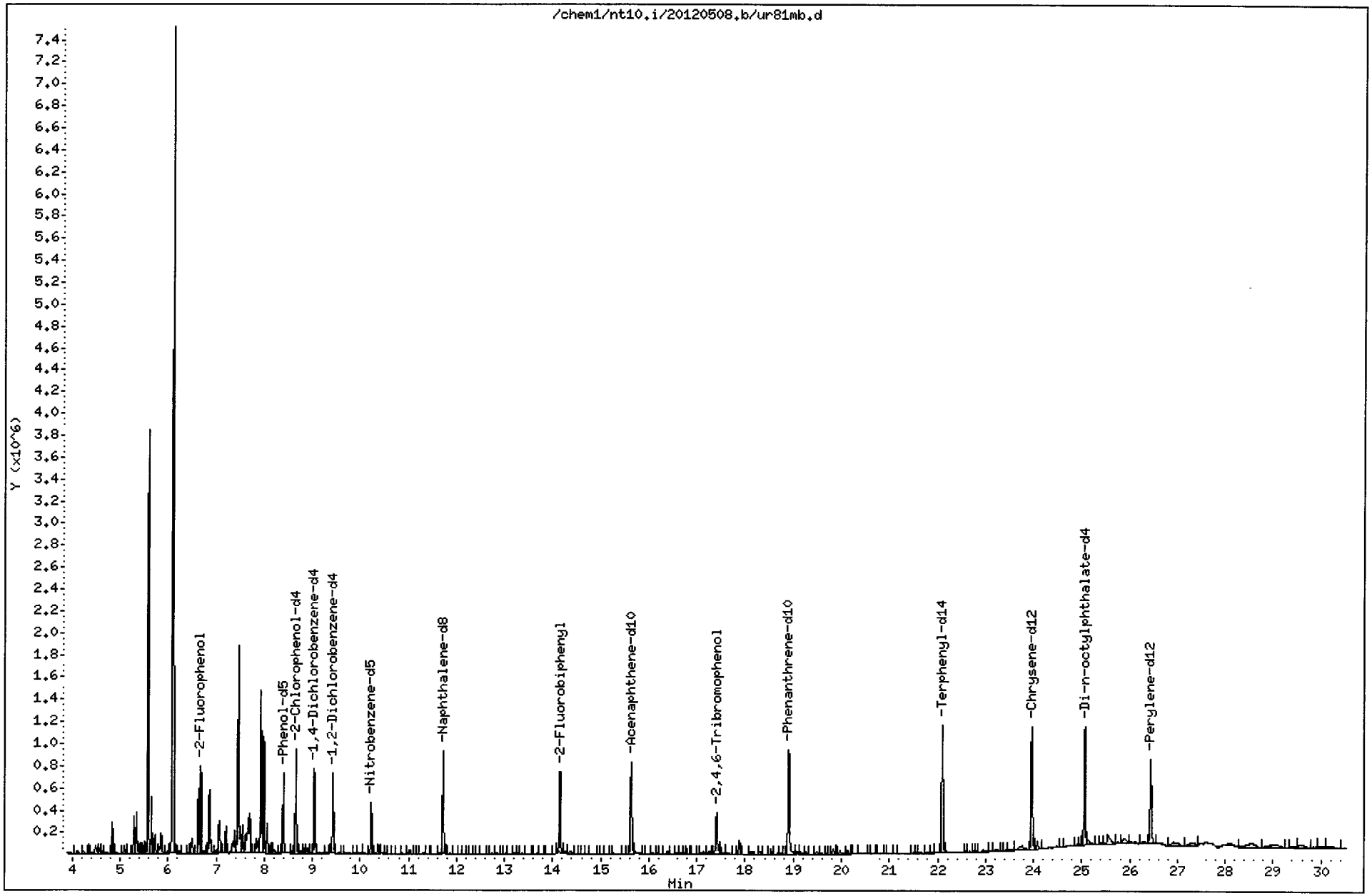
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	0.000	*	30-160
78 Indeno(1,2,3-cd)p	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
80 Benzo(g,h,i)peryl	500.0	0.000	*	30-160
105 1-methylnaphthale	500.0	0.000	*	30-160
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	535.1	71.35	30-160
$ 2 Phenol-d5	750.0	522.8	69.70	30-160
$ 5 2-Chlorophenol-d4	750.0	564.9	75.31	30-160
$ 10 1,2-Dichlorobenzen	500.0	364.4	72.89	30-160
$ 18 Nitrobenzene-d5	500.0	399.1	79.83	30-160
$ 36 2-Fluorobiphenyl	500.0	362.7	72.54	30-160
$ 55 2,4,6-Tribromophen	750.0	527.0	70.27	30-160
$ 66 Terphenyl-d14	500.0	453.2	90.65	30-160

Data File: /chem1/nt10.i/20120508.b/ur81mb.d
Date : 08-MAY-2012 16:01
Client ID: UR81MBS1
Sample Info: UR81MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81mb.d

Date : 08-MAY-2012 16:01

Client ID: UR81MBS1

Instrument: nt10.i

Sample Info: UR81MBS1

Volume Injected (uL): 1.0

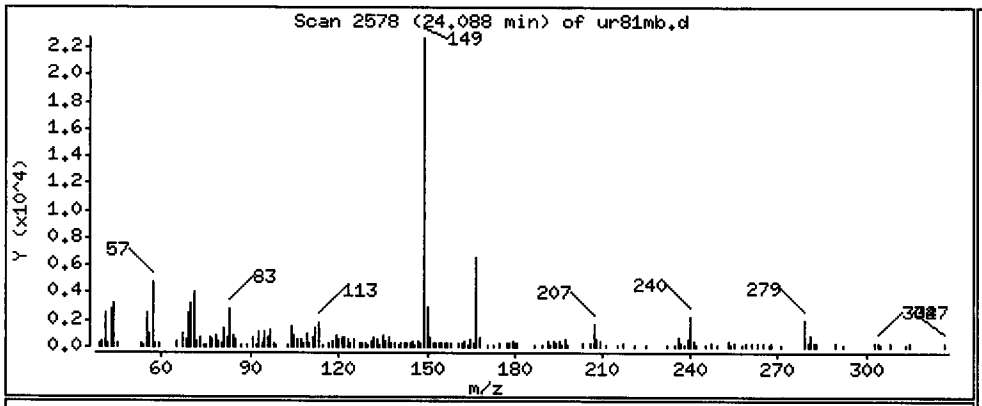
Operator: VTS/YZ

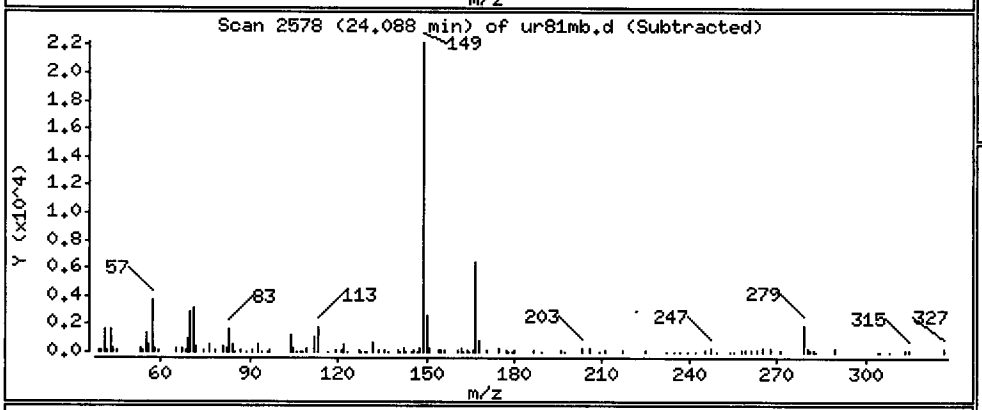
Column phase: ZB-5msi

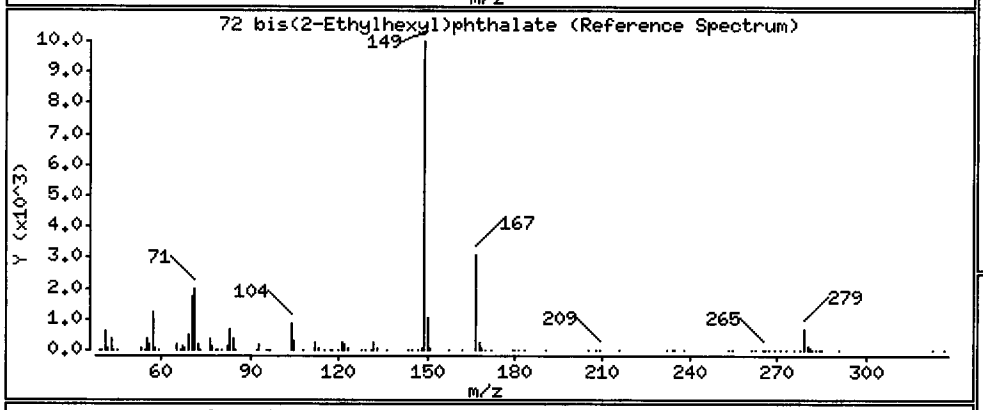
Column diameter: 0.25

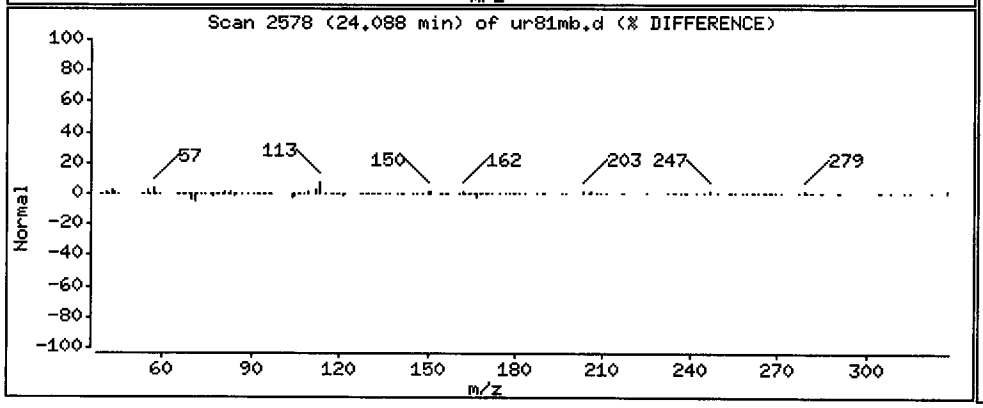
72 bis(2-Ethylhexyl)phthalate

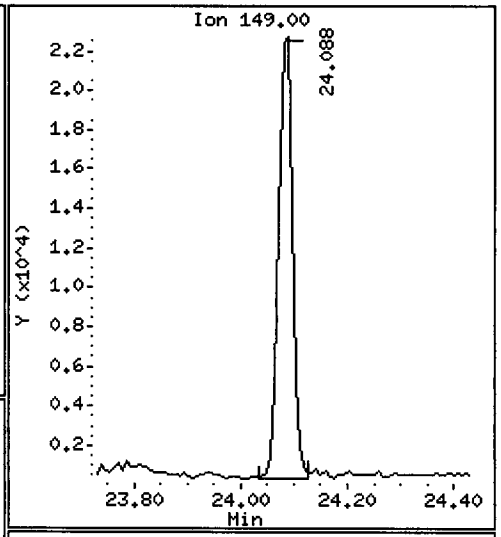
Concentration: 28.15 ug/kg

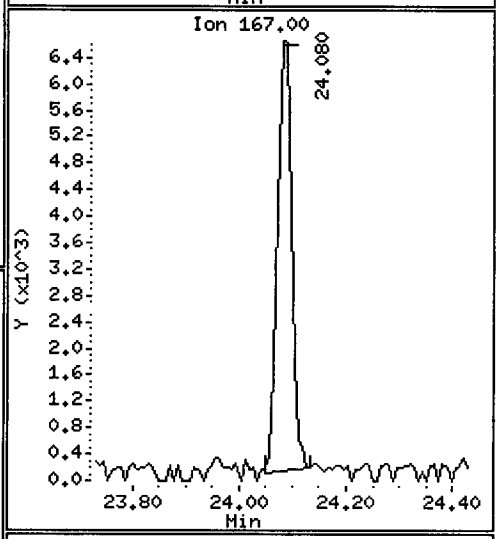


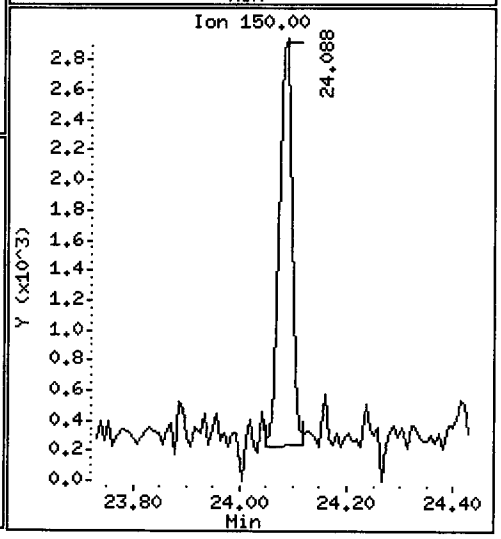












CO-ELUTION SUMMARY FOR FILE - ur81mb.d

Lab ID: UR81MBS1, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

YZ 05/10/12

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81sb.d
Lab Smp Id: UR81LCSS1 Client Smp ID: UR81LCSS1
Inj Date : 08-MAY-2012 16:38
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81LCSS1
Misc Info : 12-7396
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 10-May-2012 10:46 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.690	6.667	(0.739)	406395	4.74793	474.8
$ 2 Phenol-d5	99	8.398	8.398	(0.928)	522862	4.91267	491.3
3 Phenol	94	8.421	8.421	(0.931)	352202	3.01911	301.9
$ 5 2-Chlorophenol-d4	132	8.653	8.653	(0.956)	440018	4.77700	477.7
7 1,3-Dichlorobenzene	146	8.970	8.970	(0.991)	292318	2.84257	284.3
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	250215	4.00000	
9 1,4-Dichlorobenzene	146	9.079	9.079	(1.003)	288004	2.88461	288.5
$ 10 1,2-Dichlorobenzene-d4	152	9.428	9.428	(1.042)	185807	2.97692	297.7
12 1,2-Dichlorobenzene	146	9.459	9.459	(1.045)	280228	2.89122	289.1
11 Benzyl alcohol	108	9.358	9.350	(1.034)	178401	3.28160	328.2
13 2-Methylphenol	108	9.622	9.614	(1.063)	231619	2.52275	252.3
17 Hexachloroethane	117	10.088	10.088	(1.115)	113328	2.90963	291.0
15 4-Methylphenol	108	9.917	9.909	(1.096)	500521	5.22842	522.8
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.873)	273696	3.27238	327.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.041	11.041	(0.942)	556027	6.40122	640.1
	24 Benzoic acid	105	11.288	11.303	(0.963)	1170613	17.3760	1738
	26 1,2,4-Trichlorobenzene	180	11.635	11.634	(0.993)	233567	2.94297	294.3
*	27 Naphthalene-d8	136	11.719	11.719	(1.000)	978227	4.00000	
	28 Naphthalene	128	11.766	11.766	(1.004)	787397	3.22312	322.3
	30 Hexachlorobutadiene	225	12.175	12.175	(1.039)	127550	2.93020	293.0
	32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	538969	3.21697	321.7
$	36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	591305	3.18763	318.8
	39 Dimethylphthalate	163	15.147	15.147	(0.969)	623699	3.75837	375.8
	40 Acenaphthylene	152	15.287	15.286	(0.978)	815281	3.38276	338.3
*	42 Acenaphthene-d10	164	15.635	15.627	(1.000)	543800	4.00000	
	44 Acenaphthene	153	15.696	15.696	(1.004)	510519	3.54890	354.9
	46 Dibenzofuran	168	16.060	16.060	(1.027)	724615	3.38452	338.5
	50 Diethylphthalate	149	16.732	16.732	(1.070)	628067	3.95465	395.5
	49 Fluorene	166	16.833	16.833	(1.077)	686946	4.20578	420.6
	54 N-Nitrosodiphenylamine	169	17.118	17.118	(0.905)	396649	3.63679	363.7
$	55 2,4,6-Tribromophenol	330	17.411	17.411	(1.114)	133601	5.35514	535.5
	57 Hexachlorobenzene	284	18.252	18.252	(0.965)	172781	3.35396	335.4
	58 Pentachlorophenol	266	18.647	18.640	(0.986)	366152	10.2276	1023
*	59 Phenanthrene-d10	188	18.910	18.903	(1.000)	847253	4.00000	
	60 Phenanthrene	178	18.957	18.957	(1.002)	829264	3.95793	395.8
	61 Anthracene	178	19.050	19.050	(1.007)	807841	3.65274	365.3
	63 Di-n-butylphthalate	149	20.272	20.272	(1.072)	1142637	4.20026	420.0
	64 Fluoranthene	202	21.363	21.363	(1.130)	986344	4.13594	413.6
	65 Pyrene	202	21.781	21.781	(0.909)	986354	3.78430	378.4
$	66 Terphenyl-d14	244	22.098	22.098	(0.922)	598678	3.66297	366.3
	67 Butylbenzylphthalate	149	23.043	23.042	(0.962)	454118	4.09304	409.3
	68 Benzo(a)anthracene	228	23.941	23.941	(0.999)	859593	3.67505	367.5
*	69 Chrysene-d12	240	23.964	23.964	(1.000)	862498	4.00000	
	71 Chrysene	228	24.011	24.010	(1.002)	804355	3.85236	385.2
	72 bis(2-Ethylhexyl)phthalate	149	24.080	24.080	(0.961)	716543	4.18706	418.7
*	134 Di-n-octylphthalate-d4	153	25.063	25.056	(1.000)	1316139	4.00000	
	73 Di-n-octylphthalate	149	25.071	25.071	(1.000)	1233138	3.93658	393.7
	76 Benzo(a)pyrene	252	26.333	26.333	(0.996)	713009	3.62251	362.3
*	77 Perylene-d12	264	26.442	26.441	(1.000)	810230	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.828	28.828	(1.090)	828488	3.69921	369.9
	79 Dibenzo(a,h)anthracene	278	28.859	28.859	(1.091)	653147	3.79467	379.5
	80 Benzo(g,h,i)perylene	276	29.527	29.527	(1.117)	721077	3.72387	372.4
	105 1-methylnaphthalene	142	13.514	13.514	(1.153)	539736	3.15941	315.9
	187 Total Benzofluoranthenes	252	25.745	25.783	(0.974)	1745191	7.91689	791.7

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81sb.d
Lab Smp Id: UR81LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: UR81LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	250215	-7.97
27 Naphthalene-d8	1080694	540347	2161388	978227	-9.48
42 Acenaphthene-d10	623821	311910	1247642	543800	-12.83
59 Phenanthrene-d10	999143	499572	1998286	847253	-15.20
69 Chrysene-d12	1001009	500504	2002018	862498	-13.84
134 Di-n-octylphthala	1489422	744711	2978844	1316139	-11.63
77 Perylene-d12	988348	494174	1976696	810230	-18.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.05
59 Phenanthrene-d10	18.90	18.40	19.40	18.91	0.04
69 Chrysene-d12	23.96	23.46	24.46	23.96	0.00
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.03
77 Perylene-d12	26.44	25.94	26.94	26.44	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: UR81LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

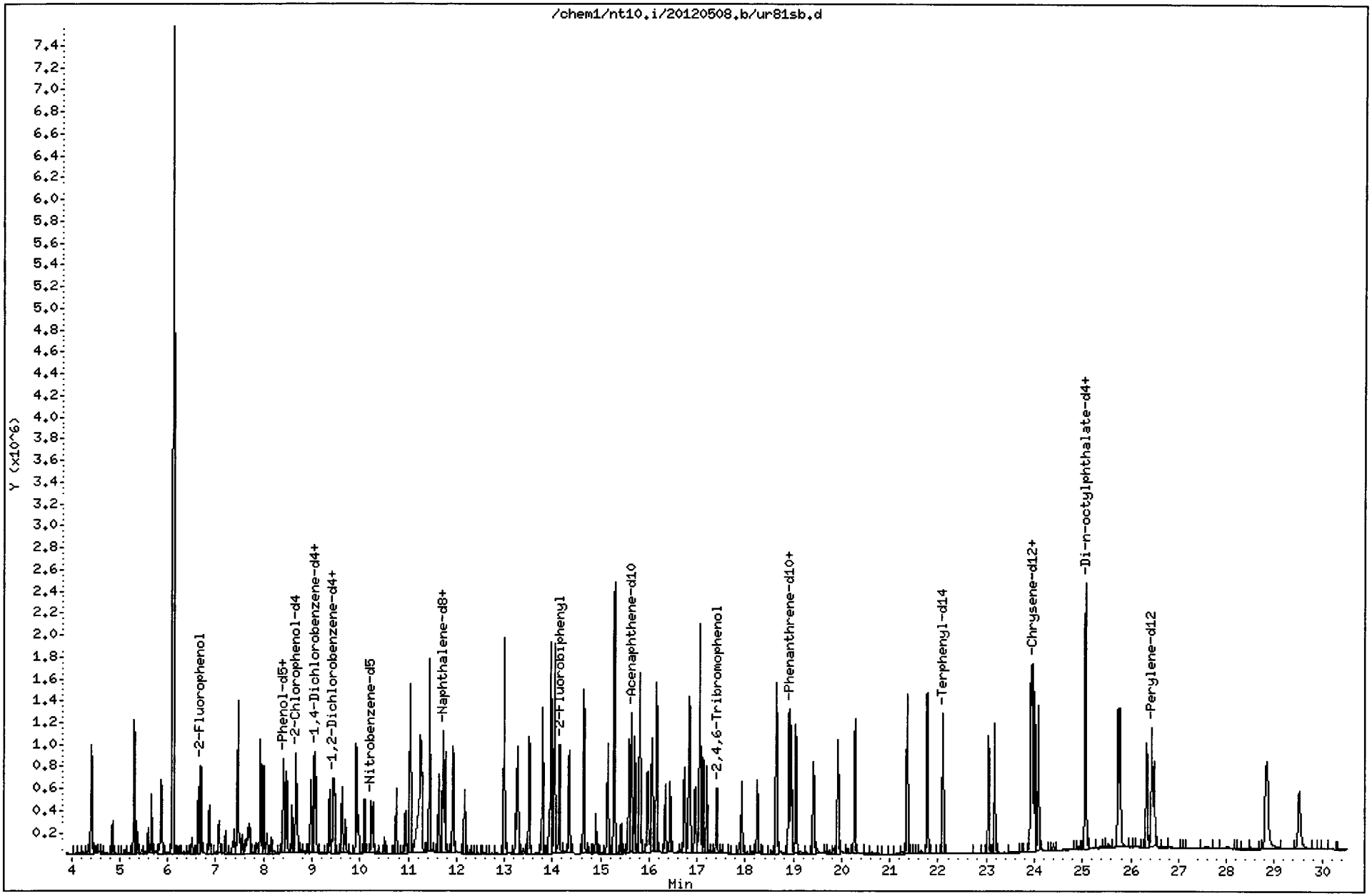
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	301.9	60.38	30-160
7 1,3-Dichlorobenzen	500.0	284.3	56.85	30-160
9 1,4-Dichlorobenzen	500.0	288.5	57.69	30-160
11 Benzyl alcohol	500.0	328.2	65.63	30-160
12 1,2-Dichlorobenzen	500.0	289.1	57.82	30-160
13 2-Methylphenol	500.0	252.3	50.46	30-160
15 4-Methylphenol	1000	522.8	52.28	30-160
17 Hexachloroethane	500.0	291.0	58.19	30-160
22 2,4-Dimethylphenol	1500	640.1	42.67	30-160
24 Benzoic acid	2750	1738	63.19	30-160
26 1,2,4-Trichloroben	500.0	294.3	58.86	30-160
28 Naphthalene	500.0	322.3	64.46	30-160
30 Hexachlorobutadien	500.0	293.0	58.60	30-160
32 2-Methylnaphthalen	500.0	321.7	64.34	30-160
39 Dimethylphthalate	500.0	375.8	75.17	30-160
40 Acenaphthylene	500.0	338.3	67.66	30-160
44 Acenaphthene	500.0	354.9	70.98	30-160
46 Dibenzofuran	500.0	338.5	67.69	30-160
49 Fluorene	500.0	420.6	84.12	30-160
50 Diethylphthalate	500.0	395.5	79.09	30-160
54 N-Nitrosodiphenyla	500.0	363.7	72.74	30-160
57 Hexachlorobenzene	500.0	335.4	67.08	30-160
58 Pentachlorophenol	1500	1023	68.18	30-160
60 Phenanthrene	500.0	395.8	79.16	30-160
61 Anthracene	500.0	365.3	73.05	30-160
63 Di-n-butylphthalat	500.0	420.0	84.01	30-160
64 Fluoranthene	500.0	413.6	82.72	30-160
65 Pyrene	500.0	378.4	75.69	30-160
67 Butylbenzylphthala	500.0	409.3	81.86	30-160
68 Benzo(a)anthracene	500.0	367.5	73.50	30-160
71 Chrysene	500.0	385.2	77.05	30-160
72 bis(2-Ethylhexyl)p	500.0	418.7	83.74	30-160
73 Di-n-octylphthalat	500.0	393.7	78.73	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	362.3	72.45	30-160
78 Indeno(1,2,3-cd)py	500.0	369.9	73.98	30-160
79 Dibenzo(a,h)anthra	500.0	379.5	75.89	30-160
80 Benzo(g,h,i)peryle	500.0	372.4	74.48	30-160
105 1-methylnaphthalen	500.0	315.9	63.19	30-160
187 Total Benzofluoran	1000	791.7	79.17	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	474.8	63.31	30-160
$ 2 Phenol-d5	750.0	491.3	65.50	30-160
$ 5 2-Chlorophenol-d4	750.0	477.7	63.69	30-160
$ 10 1,2-Dichlorobenzen	500.0	297.7	59.54	30-160
$ 18 Nitrobenzene-d5	500.0	327.2	65.45	30-160
$ 36 2-Fluorobiphenyl	500.0	318.8	63.75	30-160
$ 55 2,4,6-Tribromophen	750.0	535.5	71.40	30-160
$ 66 Terphenyl-d14	500.0	366.3	73.26	30-160

Data File: /chem1/nt10.i/20120508.b/ur81sb.d
Date : 08-MAY-2012 16:38
Client ID: UR81LCSS1
Sample Info: UR81LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ur81sb.d

Lab ID: UR81LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc. YZ 05/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81sbd.d
Lab Smp Id: UR81LCSDS1 Client Smp ID: UR81LCSDS1
Inj Date : 08-MAY-2012 17:15
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81LCSDS1
Misc Info : 12-7396
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 10-May-2012 10:46 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 8 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.683	6.667	(0.739)	401856	4.63897	463.9
$ 2 Phenol-d5	99	8.398	8.398	(0.928)	509001	4.72546	472.5
3 Phenol	94	8.421	8.421	(0.931)	352937	2.98936	298.9
$ 5 2-Chlorophenol-d4	132	8.661	8.653	(0.957)	437896	4.69732	469.7
7 1,3-Dichlorobenzene	146	8.978	8.970	(0.992)	301754	2.89937	289.9
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	253232	4.00000	
9 1,4-Dichlorobenzene	146	9.079	9.079	(1.003)	293788	2.90748	290.7
$ 10 1,2-Dichlorobenzene-d4	152	9.428	9.428	(1.042)	182893	2.89532	289.5
12 1,2-Dichlorobenzene	146	9.459	9.459	(1.045)	291011	2.96670	296.7
11 Benzyl alcohol	108	9.366	9.350	(1.035)	173481	3.15308	315.3
13 2-Methylphenol	108	9.622	9.614	(1.063)	234888	2.52788	252.8
17 Hexachloroethane	117	10.096	10.088	(1.116)	117361	2.97728	297.7
15 4-Methylphenol	108	9.925	9.909	(1.097)	498517	5.14544	514.5
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.873)	270884	3.17613	317.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.041	11.041	(0.942)	500396	5.64937	564.9
	24 Benzoic acid	105	11.287	11.303	(0.963)	1146174	16.6842	1668
	26 1,2,4-Trichlorobenzene	180	11.634	11.634	(0.993)	236922	2.92751	292.8
*	27 Naphthalene-d8	136	11.719	11.719	(1.000)	997518	4.00000	
	28 Naphthalene	128	11.766	11.766	(1.004)	809930	3.25124	325.1
	30 Hexachlorobutadiene	225	12.183	12.175	(1.040)	131000	2.95125	295.1
	32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	542642	3.17626	317.6
$	36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	575430	3.08073	308.1
	39 Dimethylphthalate	163	15.147	15.147	(0.969)	626551	3.74962	375.0
	40 Acenaphthylene	152	15.286	15.286	(0.978)	814366	3.35575	335.6
*	42 Acenaphthene-d10	164	15.634	15.627	(1.000)	547562	4.00000	
	44 Acenaphthene	153	15.704	15.696	(1.004)	505648	3.49089	349.1
	46 Dibenzofuran	168	16.060	16.060	(1.027)	706604	3.27772	327.8
	50 Diethylphthalate	149	16.740	16.732	(1.071)	640356	4.00433	400.4
	49 Fluorene	166	16.833	16.833	(1.077)	660820	4.01803	401.8
	54 N-Nitrosodiphenylamine	169	17.126	17.118	(0.906)	392413	3.52851	352.9
$	55 2,4,6-Tribromophenol	330	17.411	17.411	(1.114)	128417	5.11198	511.2
	57 Hexachlorobenzene	284	18.252	18.252	(0.965)	170000	3.23629	323.6
	58 Pentachlorophenol	266	18.647	18.640	(0.986)	379237	10.3887	1039
*	59 Phenanthrene-d10	188	18.910	18.903	(1.000)	863927	4.00000	
	60 Phenanthrene	178	18.957	18.957	(1.002)	826454	3.86838	386.8
	61 Anthracene	178	19.050	19.050	(1.007)	809135	3.58798	358.8
	63 Di-n-butylphthalate	149	20.272	20.272	(1.072)	1179989	4.25384	425.4
	64 Fluoranthene	202	21.363	21.363	(1.130)	1002366	4.12200	412.2
	65 Pyrene	202	21.781	21.781	(0.909)	1016817	3.85050	385.0
$	66 Terphenyl-d14	244	22.098	22.098	(0.922)	594601	3.59077	359.1
	67 Butylbenzylphthalate	149	23.043	23.042	(0.962)	466267	4.14795	414.8
	68 Benzo(a)anthracene	228	23.933	23.941	(0.999)	885395	3.73619	373.6
*	69 Chrysene-d12	240	23.964	23.964	(1.000)	873849	4.00000	
	71 Chrysene	228	24.011	24.010	(1.002)	805426	3.80739	380.7
	72 bis(2-Ethylhexyl)phthalate	149	24.080	24.080	(0.961)	709266	4.03659	403.7
*	134 Di-n-octylphthalate-d4	153	25.056	25.056	(1.000)	1351337	4.00000	
	73 Di-n-octylphthalate	149	25.063	25.071	(1.000)	1258220	3.91203	391.2
	76 Benzo(a)pyrene	252	26.325	26.333	(0.996)	728590	3.61926	361.9
*	77 Perylene-d12	264	26.441	26.441	(1.000)	828679	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.828	28.828	(1.090)	864181	3.77268	377.3
	79 Dibenzo(a,h)anthracene	278	28.843	28.859	(1.091)	671755	3.81589	381.6
	80 Benzo(g,h,i)perylene	276	29.511	29.527	(1.116)	744687	3.76018	376.0
	105 1-methylnaphthalene	142	13.522	13.514	(1.154)	539914	3.09933	309.9
	187 Total Benzofluoranthenes	252	25.783	25.783	(0.975)	1814925	8.04993	805.0

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81sbd.d
Lab Smp Id: UR81LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: UR81LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	253232	-6.86
27 Naphthalene-d8	1080694	540347	2161388	997518	-7.70
42 Acenaphthene-d10	623821	311910	1247642	547562	-12.22
59 Phenanthrene-d10	999143	499572	1998286	863927	-13.53
69 Chrysene-d12	1001009	500504	2002018	873849	-12.70
134 Di-n-octylphthala	1489422	744711	2978844	1351337	-9.27
77 Perylene-d12	988348	494174	1976696	828679	-16.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.05
59 Phenanthrene-d10	18.90	18.40	19.40	18.91	0.04
69 Chrysene-d12	23.96	23.46	24.46	23.96	0.00
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.00
77 Perylene-d12	26.44	25.94	26.94	26.44	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: UR81LCSDS1
Operator: VTS/YZ
SampleType: LCSD
Quant Type: ISTD

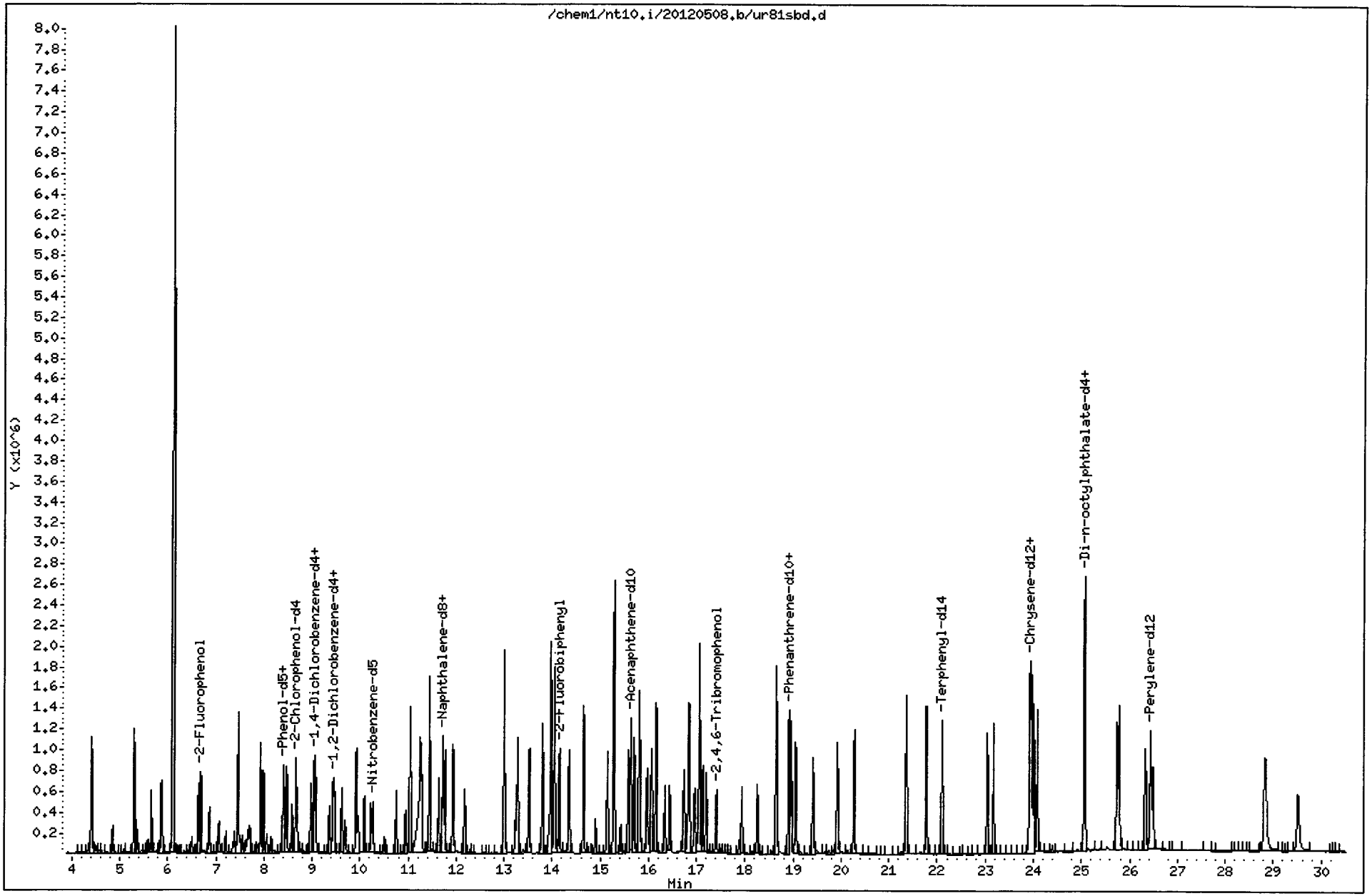
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	298.9	59.79	30-160
7 1,3-Dichlorobenzen	500.0	289.9	57.99	30-160
9 1,4-Dichlorobenzen	500.0	290.7	58.15	30-160
11 Benzyl alcohol	500.0	315.3	63.06	30-160
12 1,2-Dichlorobenzen	500.0	296.7	59.33	30-160
13 2-Methylphenol	500.0	252.8	50.56	30-160
15 4-Methylphenol	1000	514.5	51.45	30-160
17 Hexachloroethane	500.0	297.7	59.55	30-160
22 2,4-Dimethylphenol	1500	564.9	37.66	30-160
24 Benzoic acid	2750	1668	60.67	30-160
26 1,2,4-Trichloroben	500.0	292.8	58.55	30-160
28 Naphthalene	500.0	325.1	65.02	30-160
30 Hexachlorobutadien	500.0	295.1	59.03	30-160
32 2-Methylnaphthalen	500.0	317.6	63.53	30-160
39 Dimethylphthalate	500.0	375.0	74.99	30-160
40 Acenaphthylene	500.0	335.6	67.11	30-160
44 Acenaphthene	500.0	349.1	69.82	30-160
46 Dibenzofuran	500.0	327.8	65.55	30-160
49 Fluorene	500.0	401.8	80.36	30-160
50 Diethylphthalate	500.0	400.4	80.09	30-160
54 N-Nitrosodiphenyla	500.0	352.9	70.57	30-160
57 Hexachlorobenzene	500.0	323.6	64.73	30-160
58 Pentachlorophenol	1500	1039	69.26	30-160
60 Phenanthrene	500.0	386.8	77.37	30-160
61 Anthracene	500.0	358.8	71.76	30-160
63 Di-n-butylphthalat	500.0	425.4	85.08	30-160
64 Fluoranthene	500.0	412.2	82.44	30-160
65 Pyrene	500.0	385.0	77.01	30-160
67 Butylbenzylphthala	500.0	414.8	82.96	30-160
68 Benzo(a)anthracene	500.0	373.6	74.72	30-160
71 Chrysene	500.0	380.7	76.15	30-160
72 bis(2-Ethylhexyl)p	500.0	403.7	80.73	30-160
73 Di-n-octylphthalat	500.0	391.2	78.24	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	361.9	72.39	30-160
78 Indeno(1,2,3-cd)py	500.0	377.3	75.45	30-160
79 Dibenzo(a,h)anthra	500.0	381.6	76.32	30-160
80 Benzo(g,h,i)peryle	500.0	376.0	75.20	30-160
105 1-methylnaphthalen	500.0	309.9	61.99	30-160
187 Total Benzofluoran	1000	805.0	80.50	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	463.9	61.85	30-160
$ 2 Phenol-d5	750.0	472.5	63.01	30-160
$ 5 2-Chlorophenol-d4	750.0	469.7	62.63	30-160
$ 10 1,2-Dichlorobenzen	500.0	289.5	57.91	30-160
$ 18 Nitrobenzene-d5	500.0	317.6	63.52	30-160
$ 36 2-Fluorobiphenyl	500.0	308.1	61.61	30-160
$ 55 2,4,6-Tribromophen	750.0	511.2	68.16	30-160
$ 66 Terphenyl-d14	500.0	359.1	71.82	30-160

Data File: /chem1/nt10.i/20120508.b/ur81sbd.d
Date : 08-MAY-2012 17:15
Client ID: UR81LCSDS1
Sample Info: UR81LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ur81sbd.d

Lab ID: UR81LCSDS1, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ 5/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81a.d
Lab Smp Id: UR81A Client Smp ID: IJ12-03
Inj Date : 08-MAY-2012 17:52
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81A
Misc Info : 12-7392
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.30000	Weight of sample extracted (g)
M	59.30000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.690	6.667	(0.739)	373509	4.28419	416.1
$ 2 Phenol-d5	99	8.406	8.398	(0.929)	482090	4.44703	431.9
3 Phenol	94	8.429	8.421	(0.932)	41721	0.35112	34.10
$ 5 2-Chlorophenol-d4	132	8.661	8.653	(0.957)	426441	4.54522	441.4
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	254860	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.428	9.428	(1.042)	174351	2.74247	266.3
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.358	9.350	(1.034)	18537	0.33476	32.51
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.917	9.909	(1.096)	54177	0.55562	53.96
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.873)	263474	3.05143	296.3

UR81 : 00484

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.041	11.041	(0.942)	13531	0.15089 J	14.65
	24 Benzoic acid	105	11.187	11.303	(0.955)	74811	1.07565 J	104.5
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.719	11.719	(1.000)	1009881	4.00000	
	28 Naphthalene	128	11.765	11.766	(1.004)	120626	0.47829	46.45
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	48002	0.27753	26.95
$	36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	579722	3.13334	304.3
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	15.294	15.286	(0.978)	28013	0.11653 J	11.32
*	42 Acenaphthene-d10	164	15.634	15.627	(1.000)	542385	4.00000	
	44 Acenaphthene	153	15.704	15.696	(1.004)	14655	0.10214 J	9.919
	46 Dibenzofuran	168	16.059	16.060	(1.027)	50074	0.23450	22.77
	50 Diethylphthalate	149	16.740	16.732	(1.071)	26029	0.16432 J	15.96
	49 Fluorene	166	16.833	16.833	(1.077)	35828	0.21993	21.36
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.419	17.411	(1.114)	126632	5.08904	494.2
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.910	18.903	(1.000)	838667	4.00000	
	60 Phenanthrene	178	18.957	18.957	(1.002)	210614	1.01551	98.62
	61 Anthracene	178	19.057	19.050	(1.008)	67909	0.31020	30.13
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.386	21.363	(1.131)	521793	2.21038	214.7
	65 Pyrene	202	21.796	21.781	(0.909)	540455	2.11148	205.1
$	66 Terphenyl-d14	244	22.106	22.098	(0.922)	528833	3.29483	320.0
	67 Butylbenzylphthalate	149	23.042	23.042	(0.961)	16037	0.14719 J	14.29
	68 Benzo(a)anthracene	228	23.948	23.941	(0.999)	188341	0.81996	79.63
*	69 Chrysene-d12	240	23.972	23.964	(1.000)	847000	4.00000	
	71 Chrysene	228	24.018	24.010	(1.002)	355225	1.73244	168.2
	72 bis(2-Ethylhexyl)phthalate	149	24.088	24.080	(0.961)	184782	1.05972	102.9
*	134 Di-n-octylphthalate-d4	153	25.063	25.056	(1.000)	1341032	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.341	26.333	(0.996)	159326	0.78354	76.09
*	77 Perylene-d12	264	26.449	26.441	(1.000)	837045	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.843	28.828	(1.091)	120486	0.52074	50.57
	79 Dibenzo(a,h)anthracene	278	28.866	28.859	(1.091)	34331	0.19307 J	18.75
	80 Benzo(g,h,i)perylene	276	29.534	29.527	(1.117)	122245	0.61109	59.35
	105 1-methylnaphthalene	142	13.522	13.514	(1.154)	33839	0.19187 J	18.63
	187 Total Benzofluoranthenes	252	25.744	25.783	(0.973)	467886	2.05452	199.5

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81a.d
Lab Smp Id: UR81A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7392

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-03
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	254860	-6.26
27 Naphthalene-d8	1080694	540347	2161388	1009881	-6.55
42 Acenaphthene-d10	623821	311910	1247642	542385	-13.05
59 Phenanthrene-d10	999143	499572	1998286	838667	-16.06
69 Chrysene-d12	1001009	500504	2002018	847000	-15.39
134 Di-n-octylphthala	1489422	744711	2978844	1341032	-9.96
77 Perylene-d12	988348	494174	1976696	837045	-15.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.05
59 Phenanthrene-d10	18.90	18.40	19.40	18.91	0.04
69 Chrysene-d12	23.96	23.46	24.46	23.97	0.03
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.03
77 Perylene-d12	26.44	25.94	26.94	26.45	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

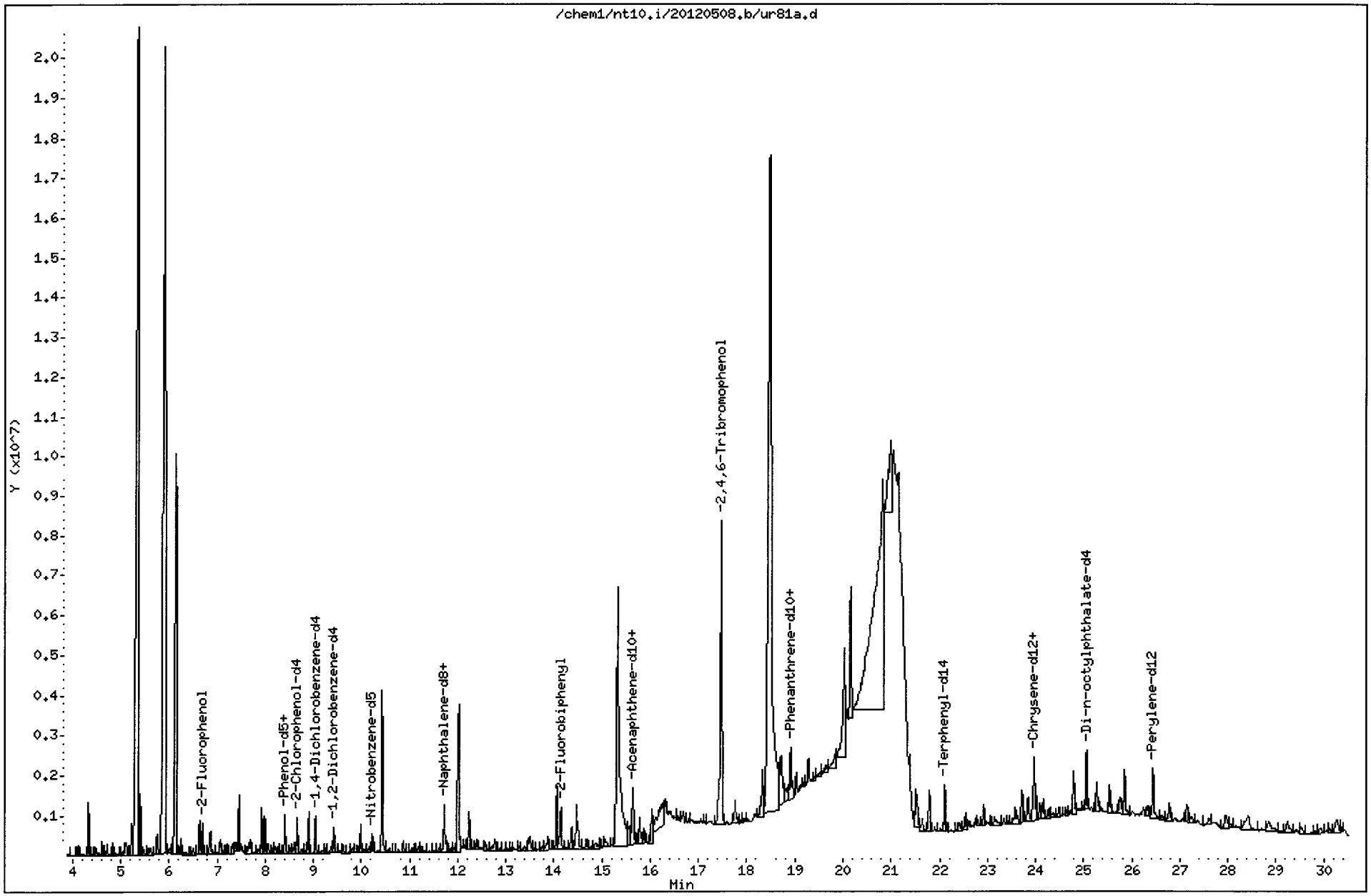
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81A
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7392

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-03
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	728.4	416.1	57.12	30-160
$ 2 Phenol-d5	728.4	431.9	59.29	30-160
$ 5 2-Chlorophenol-d4	728.4	441.4	60.60	30-160
$ 10 1,2-Dichlorobenzen	485.6	266.3	54.85	30-160
$ 18 Nitrobenzene-d5	485.6	296.3	61.03	30-160
$ 36 2-Fluorobiphenyl	485.6	304.3	62.67	30-160
$ 55 2,4,6-Tribromophen	728.4	494.2	67.85	30-160
$ 66 Terphenyl-d14	485.6	320.0	65.90	30-160

Data File: /chem1/nt10.i/20120508.b/ur81a.d
Date : 08-MAY-2012 17:52
Client ID: IJ12-03
Sample Info: UR81A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

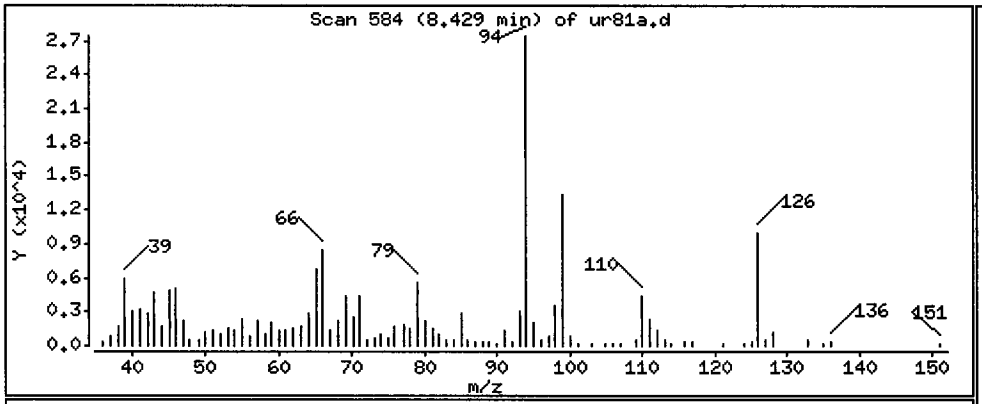
Client ID: IJ12-03 | Instrument: nt10.i

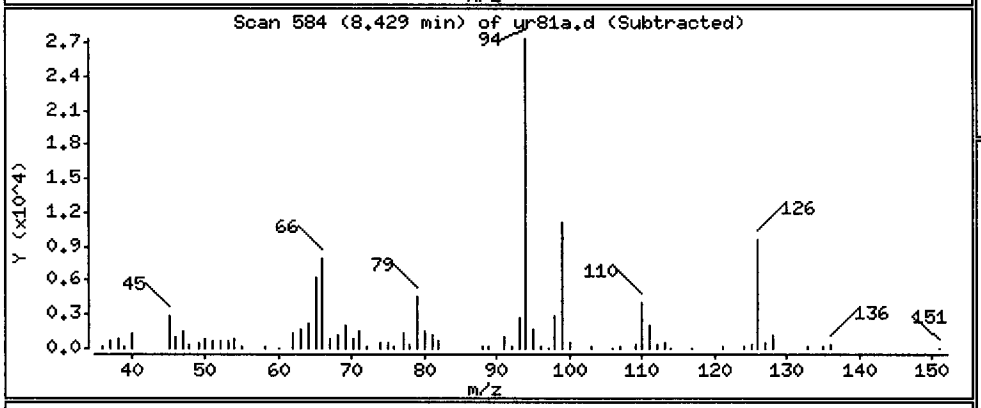
Sample Info: UR81A

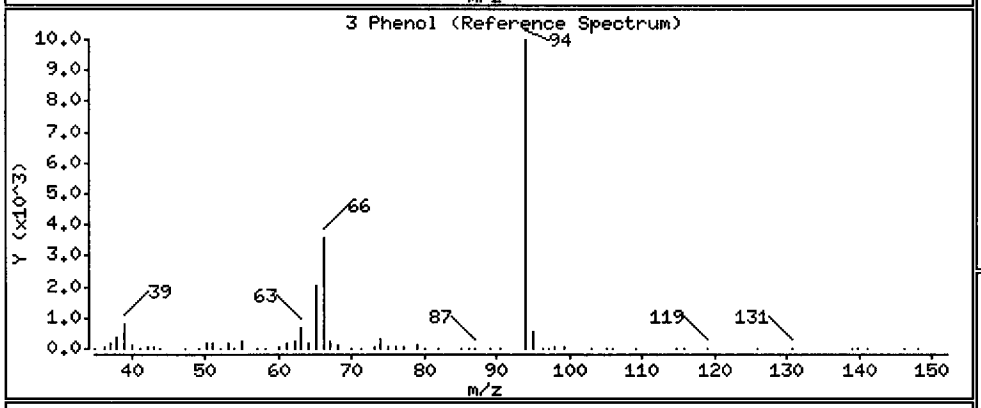
Volume Injected (uL): 1.0 | Operator: VTS/YZ

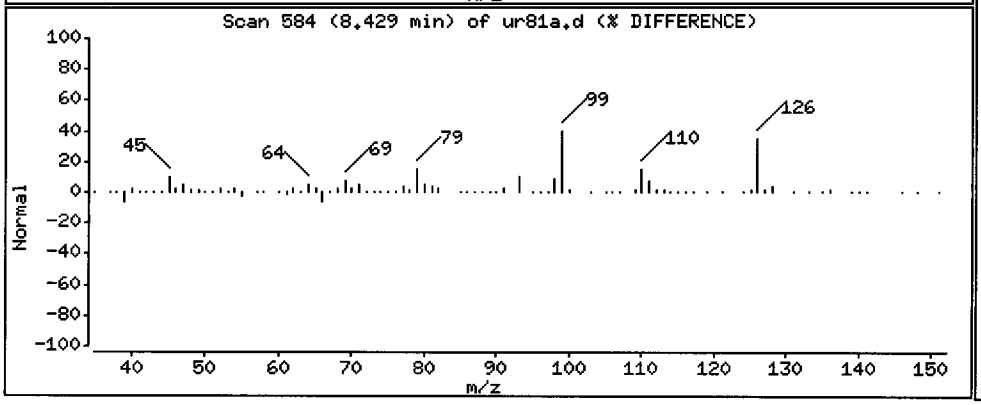
Column phase: ZB-5msi | Column diameter: 0.25

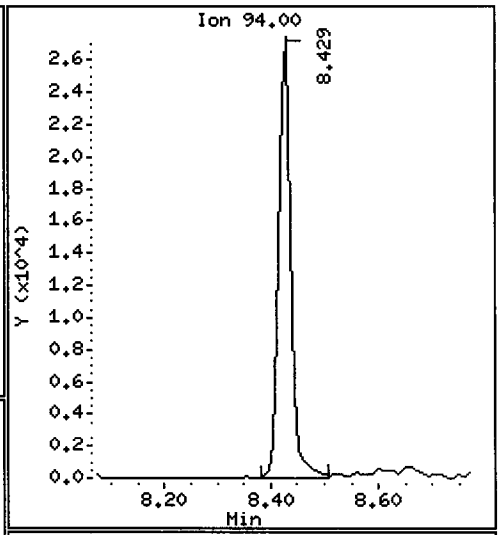
3 Phenol | Concentration: 34.10 ug/kg

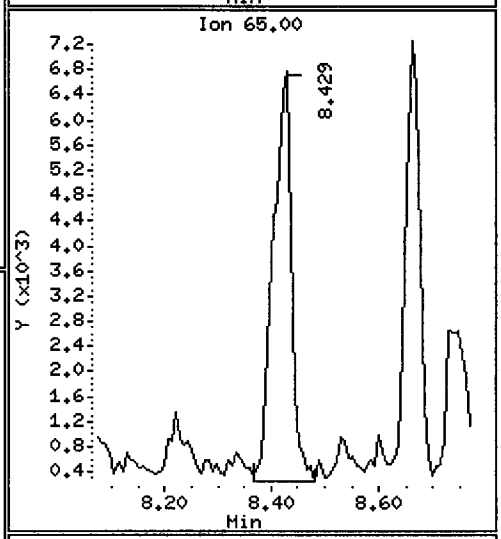


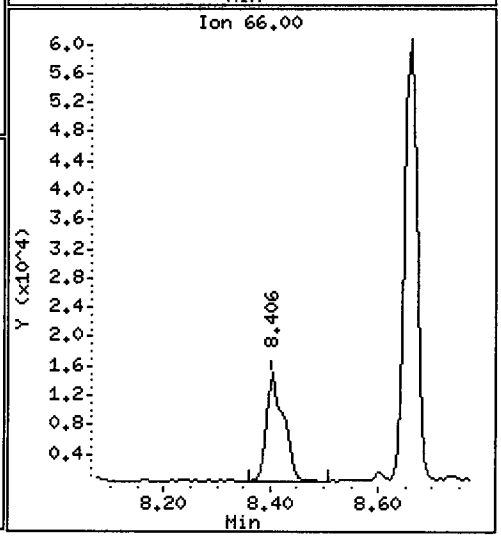












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

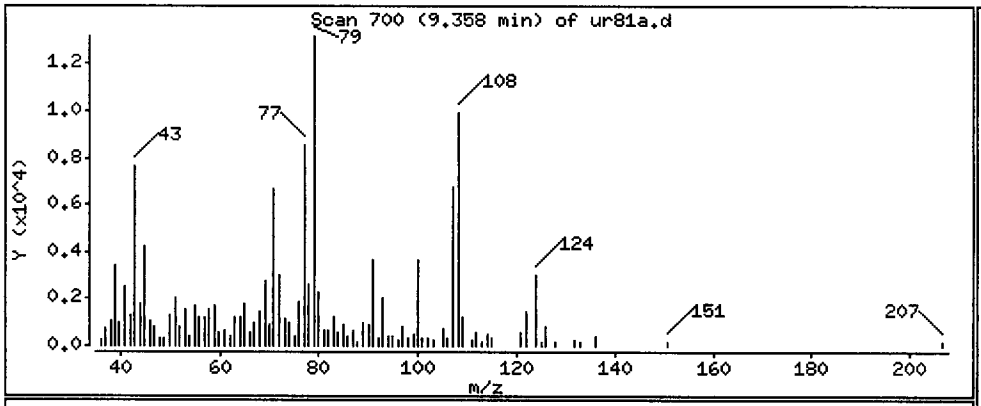
Operator: VTS/YZ

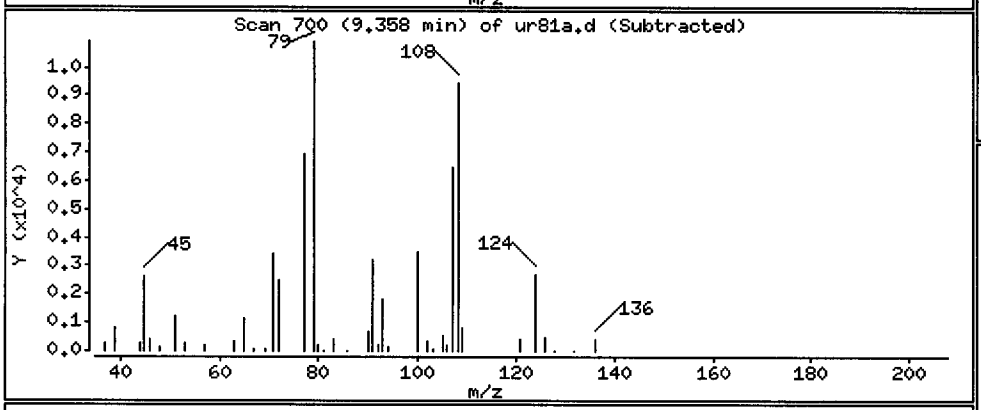
Column phase: ZB-5msi

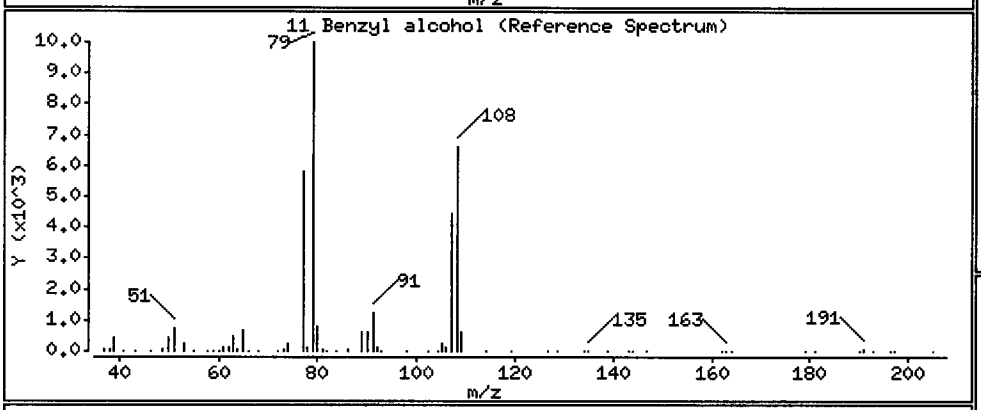
Column diameter: 0.25

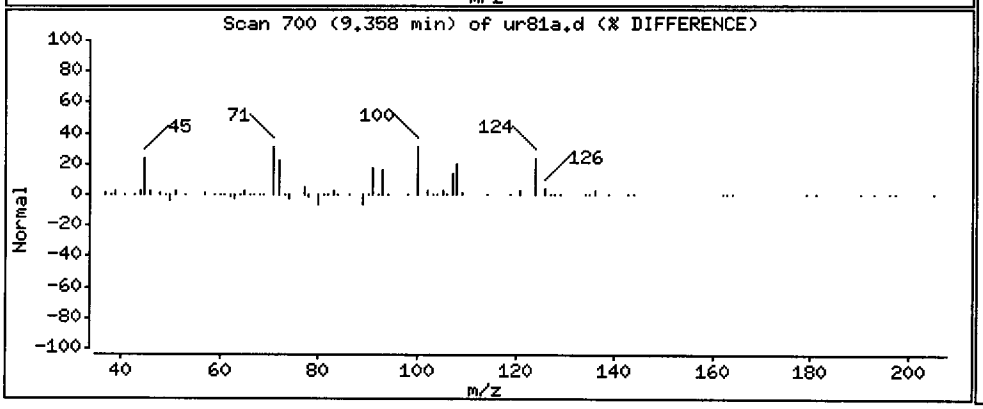
11 Benzyl alcohol

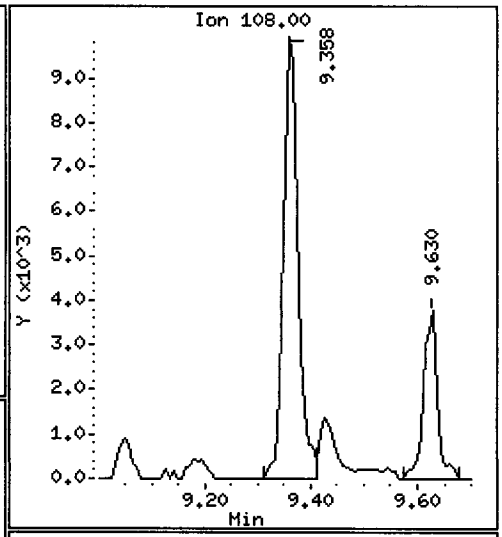
Concentration: 32.51 ug/kg

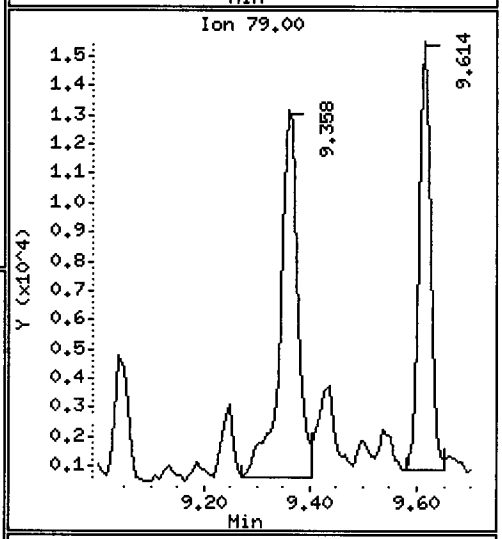


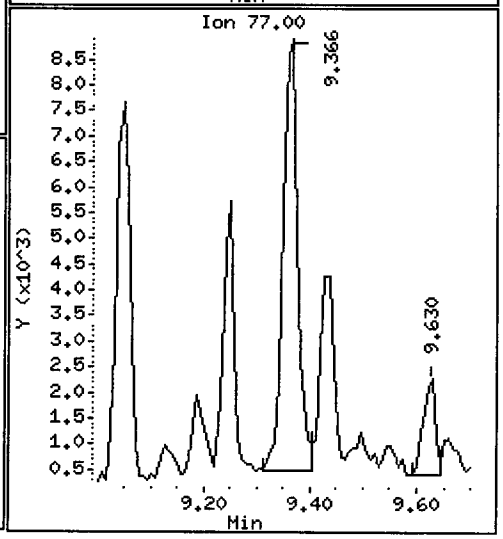












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

Operator: VTS/YZ

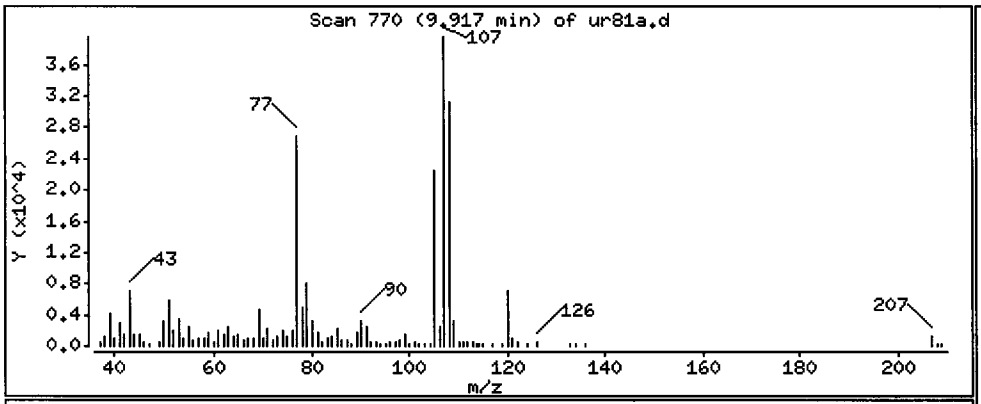
Column phase: ZB-5msi

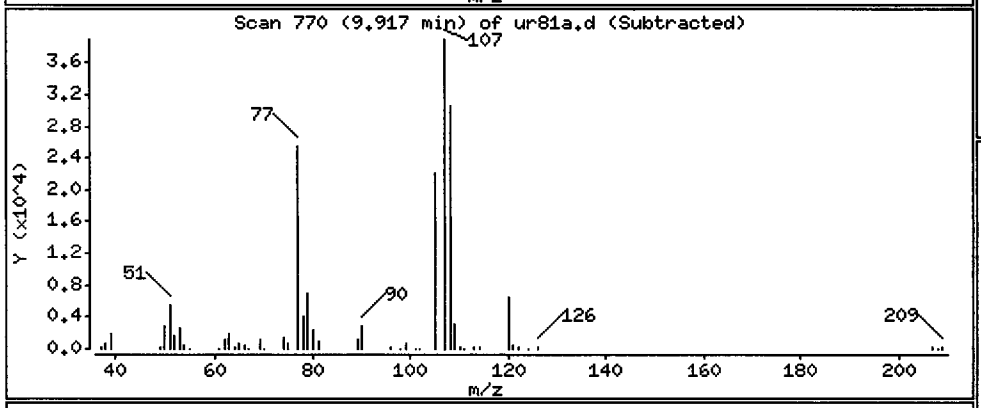
Column diameter: 0.25

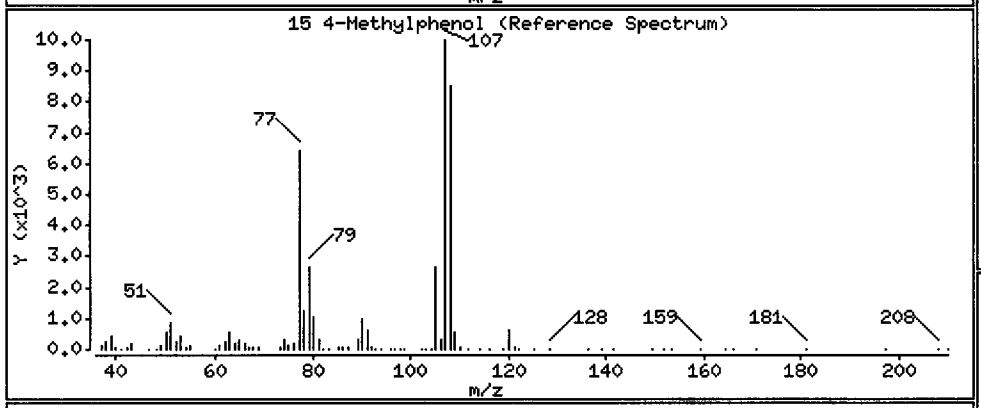
OK

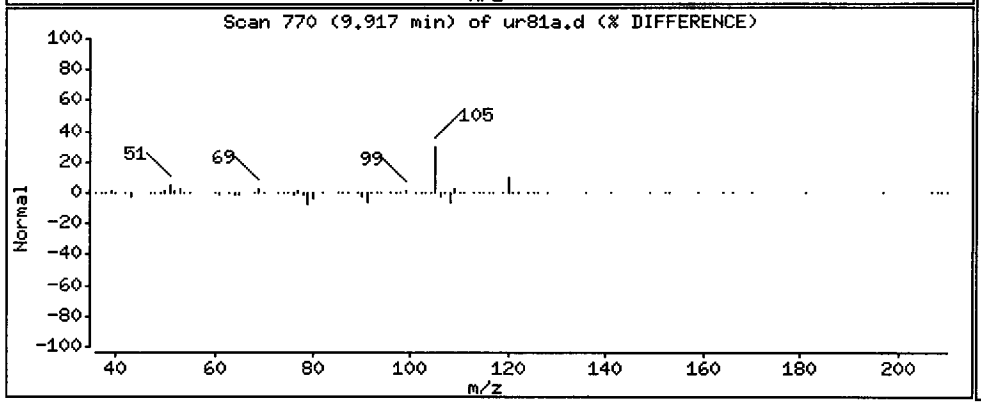
15 4-Methylphenol

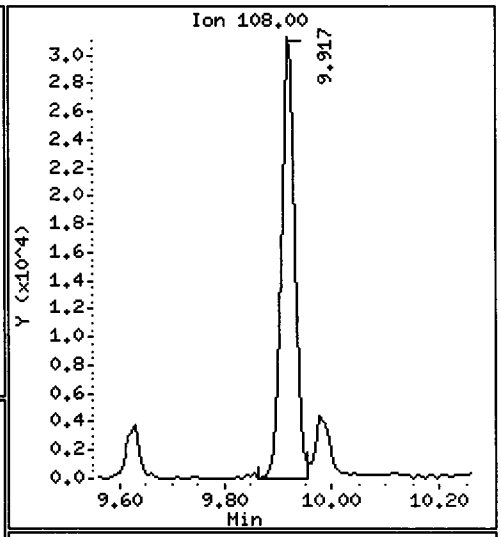
Concentration: 53.96 ug/kg

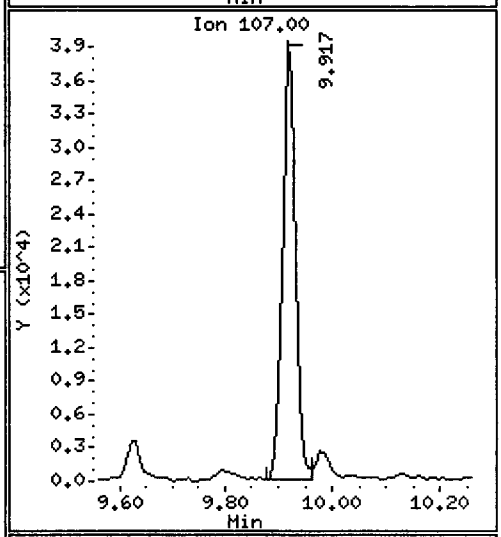


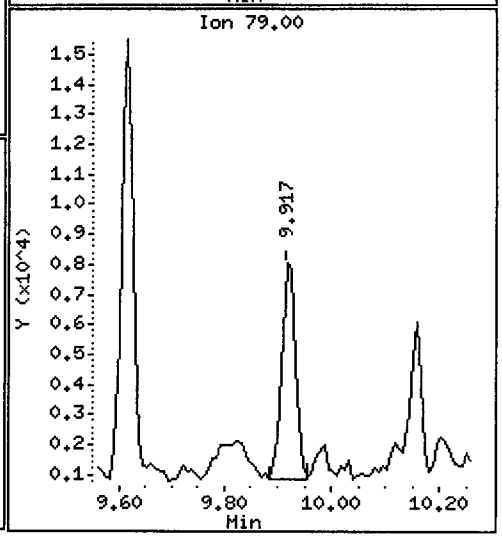












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

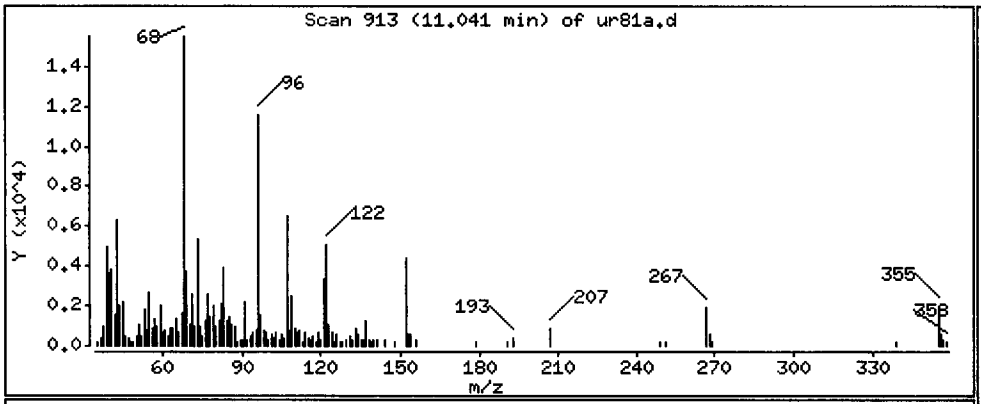
Operator: VTS/YZ

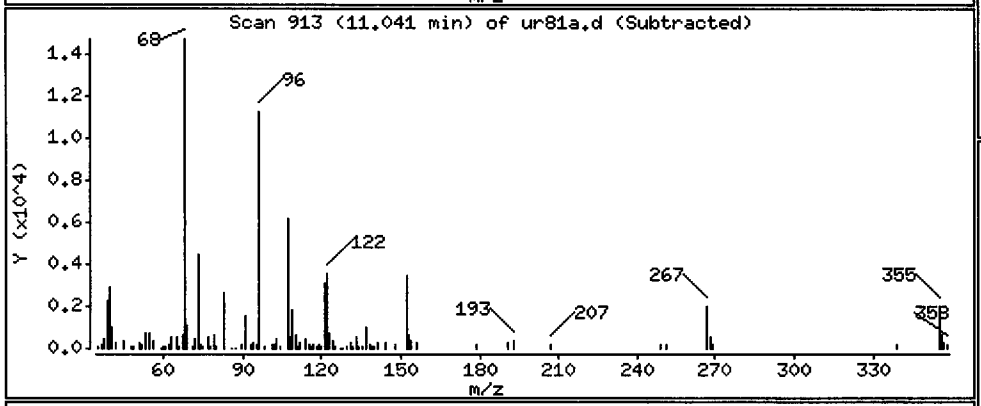
Column phase: ZB-5msi

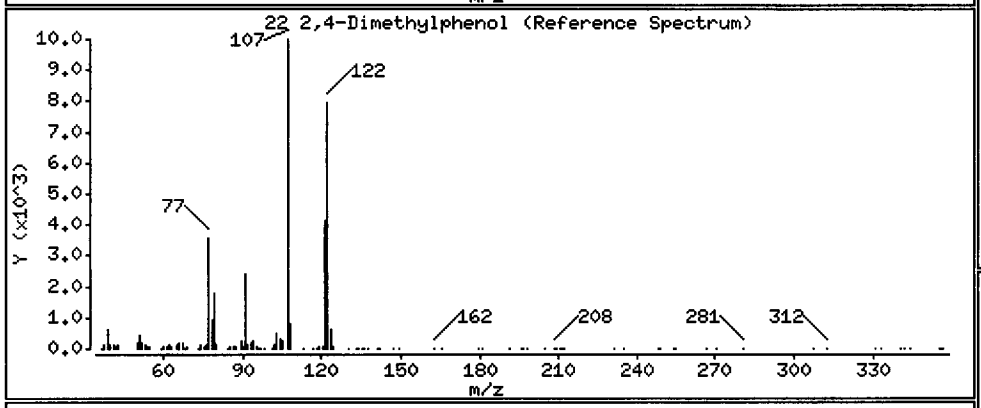
Column diameter: 0.25

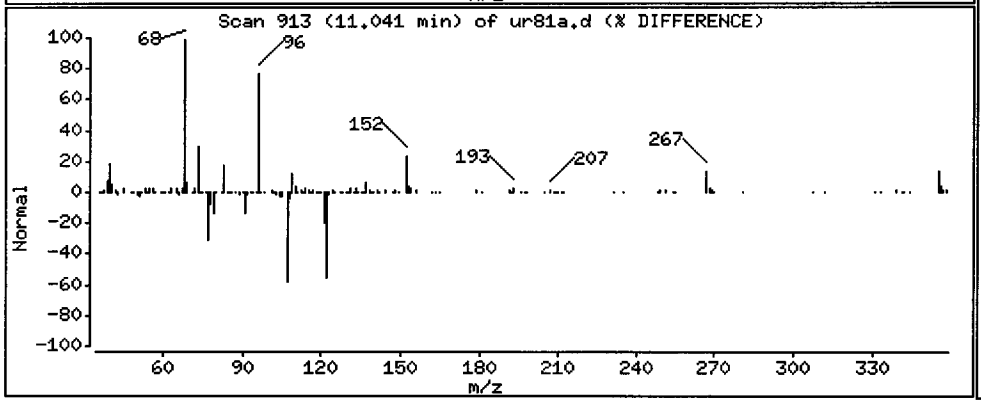
22 2,4-Dimethylphenol

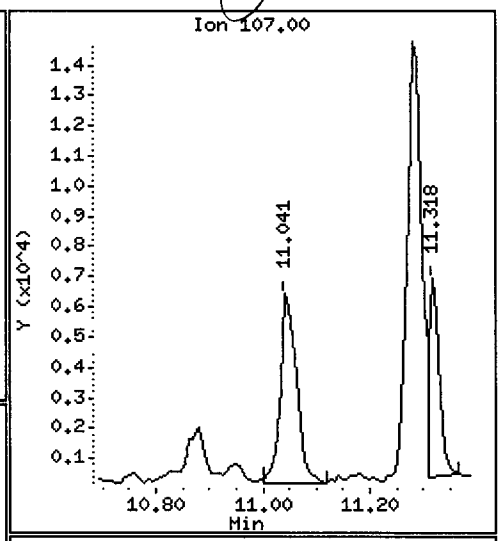
Concentration: 14.65 ug/kg

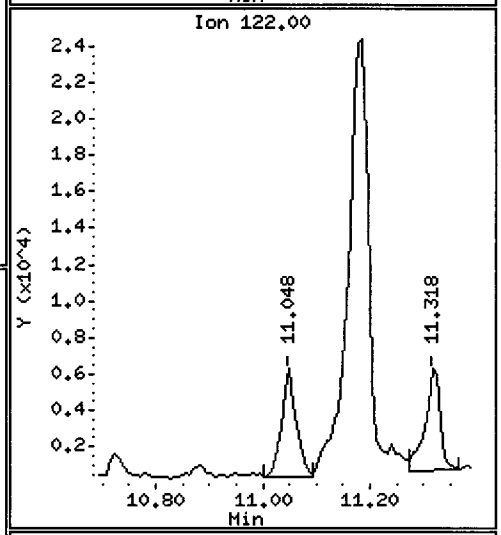


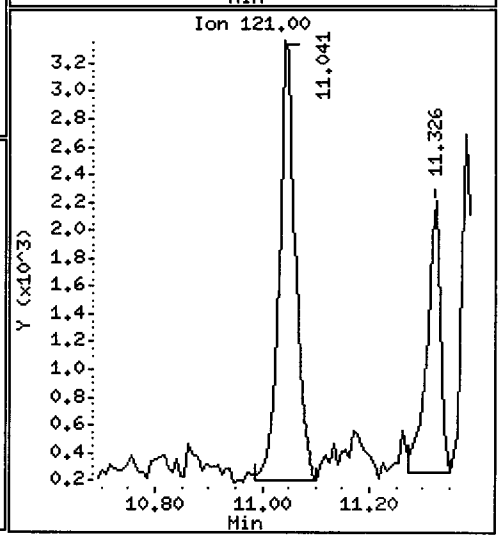












UR81 : 00492

Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

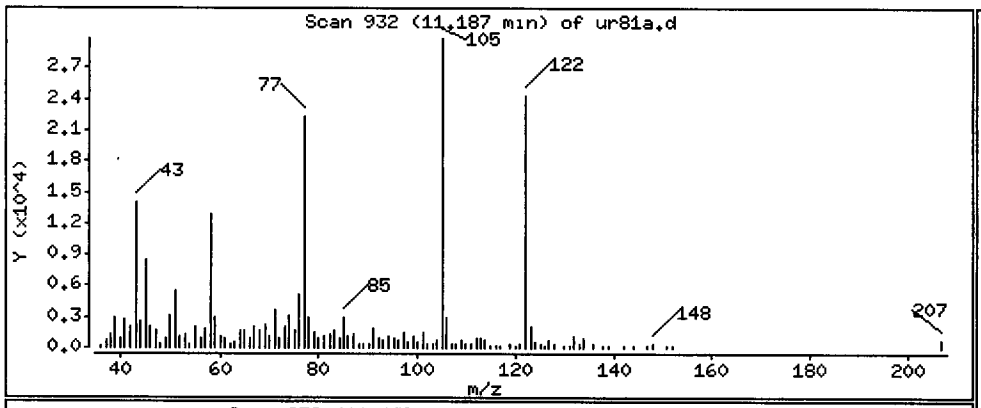
Operator: VTS/YZ

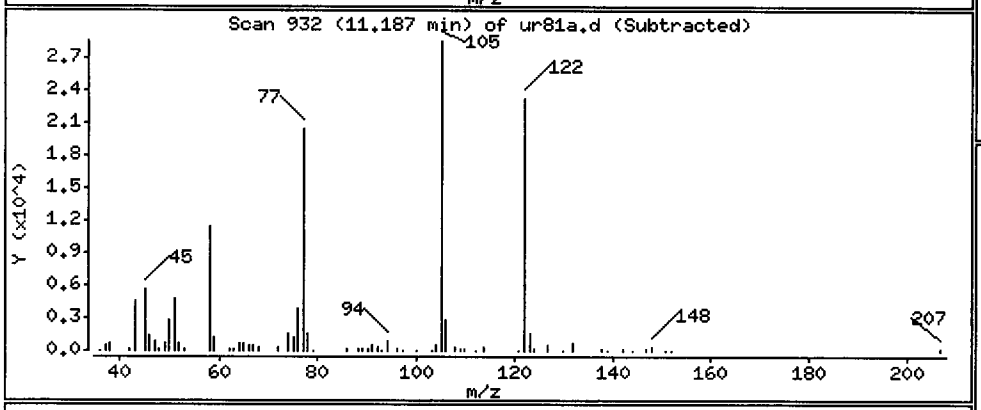
Column phase: ZB-5msi

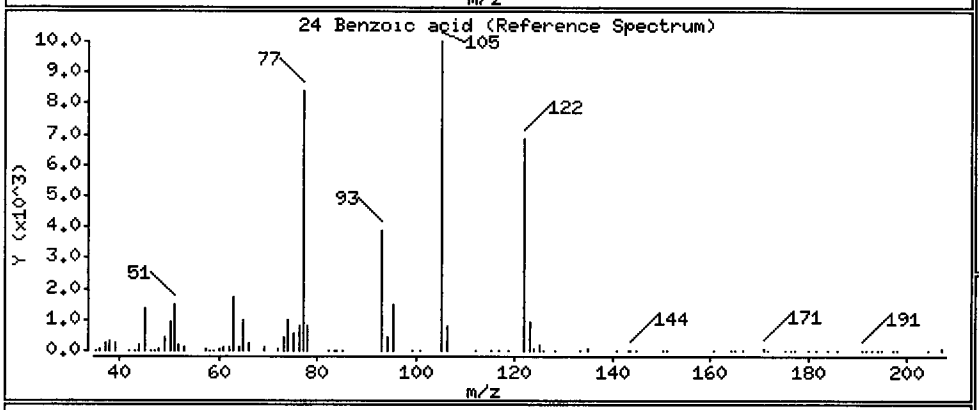
Column diameter: 0.25

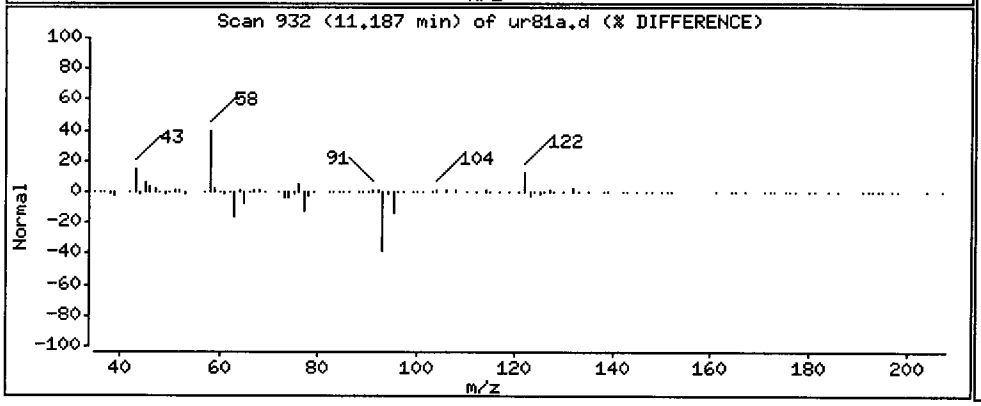
24 Benzoic acid

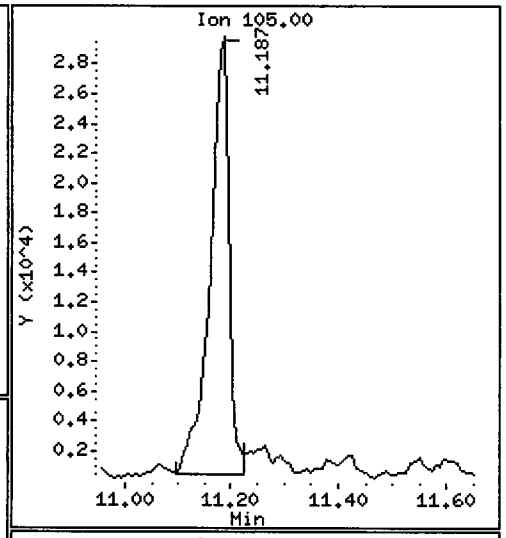
Concentration: 104.5 ug/kg

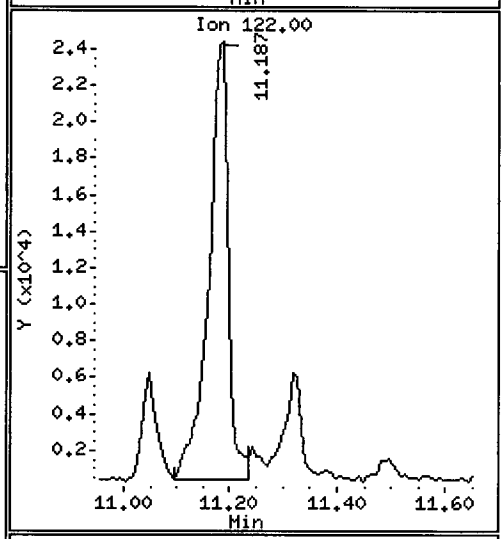


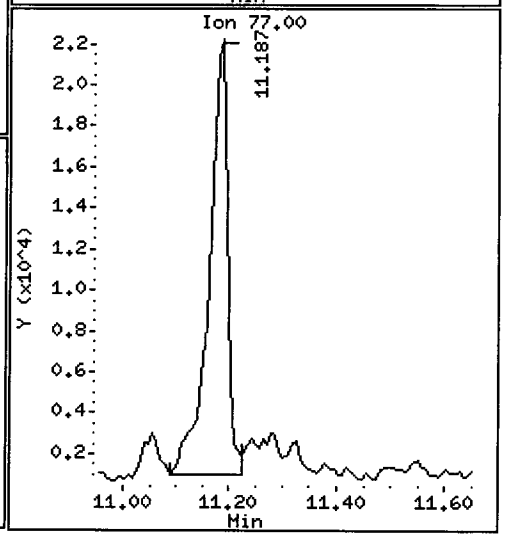












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

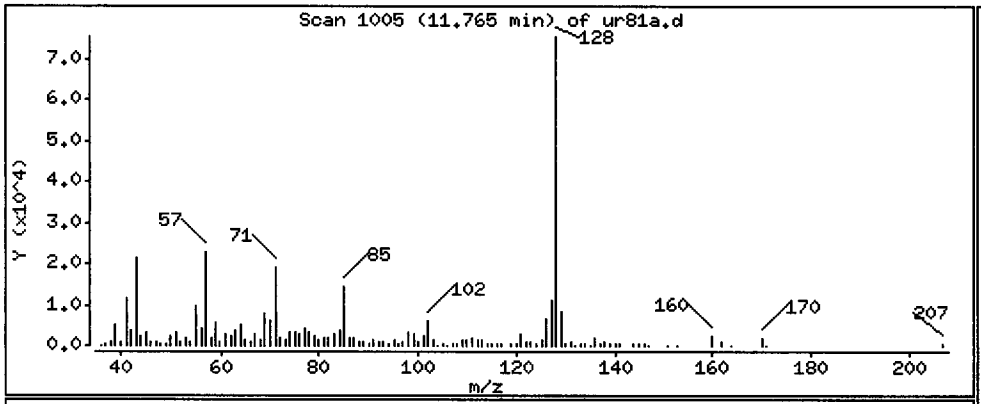
Operator: VTS/YZ

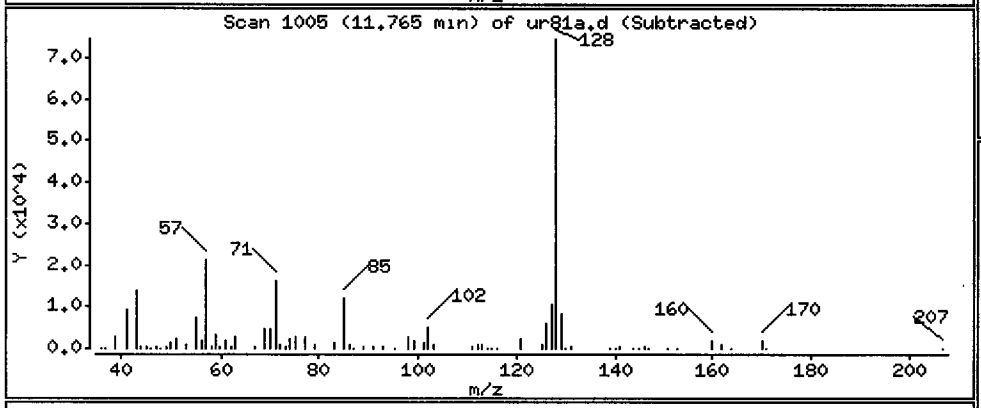
Column phase: ZB-5msi

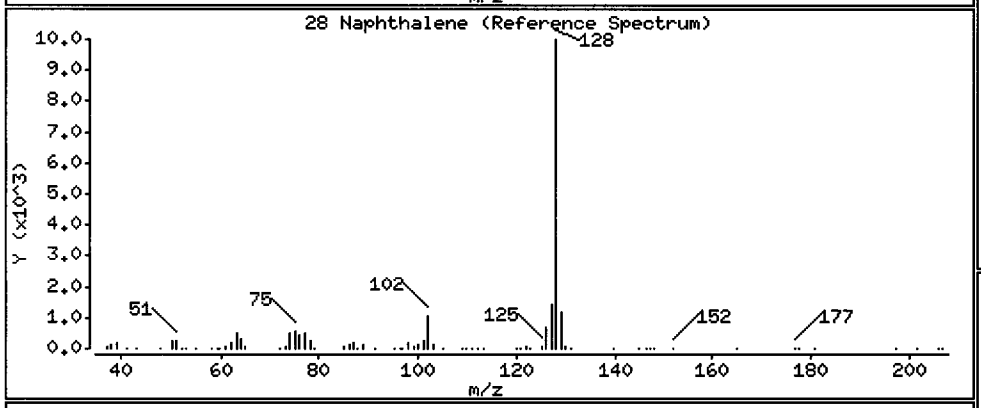
Column diameter: 0.25

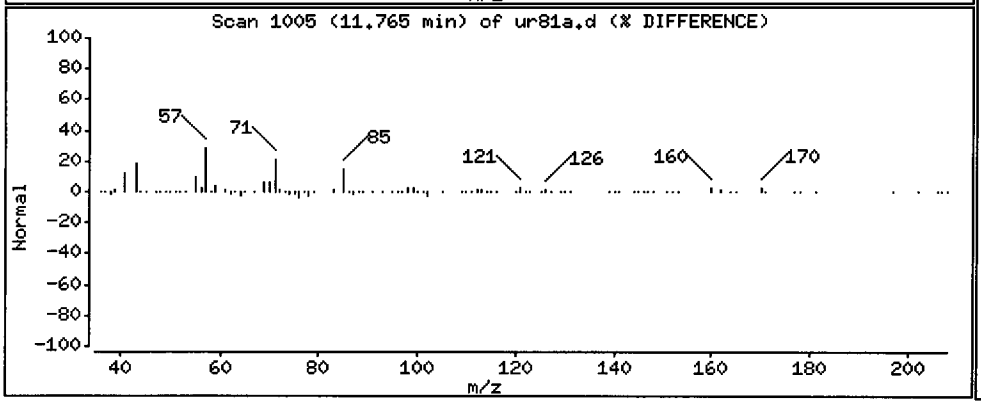
28 Naphthalene

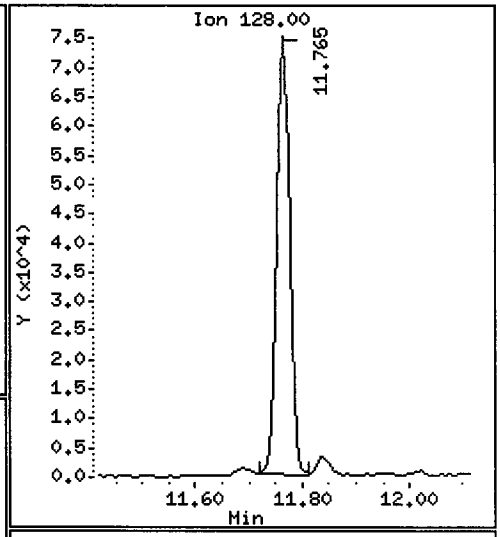
Concentration: 46.45 ug/kg

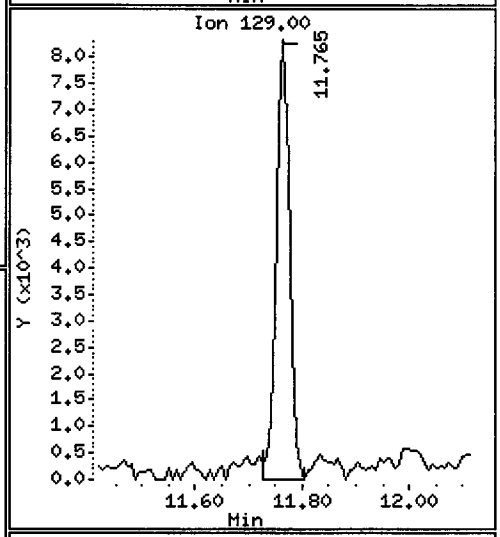


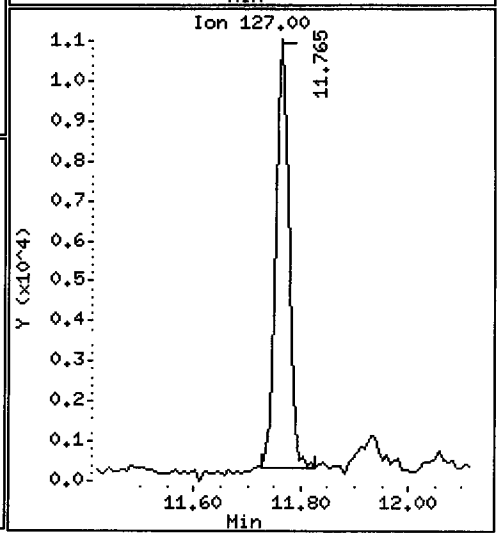












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

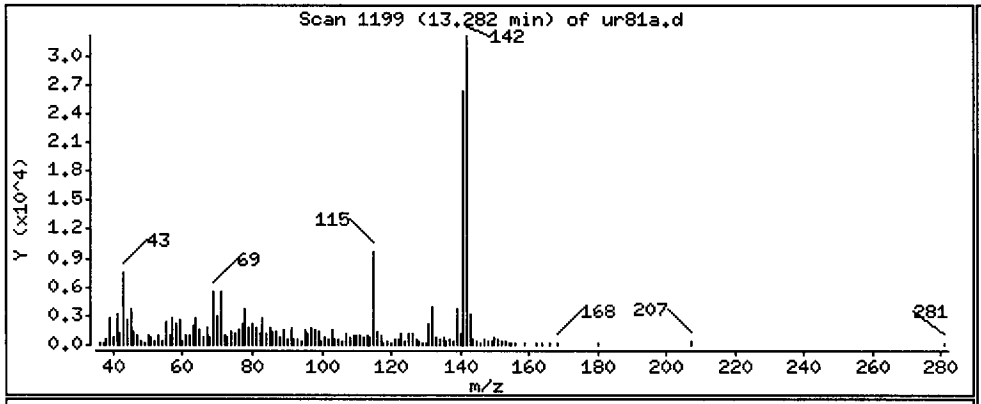
Client ID: IJ12-03 Instrument: nt10.i

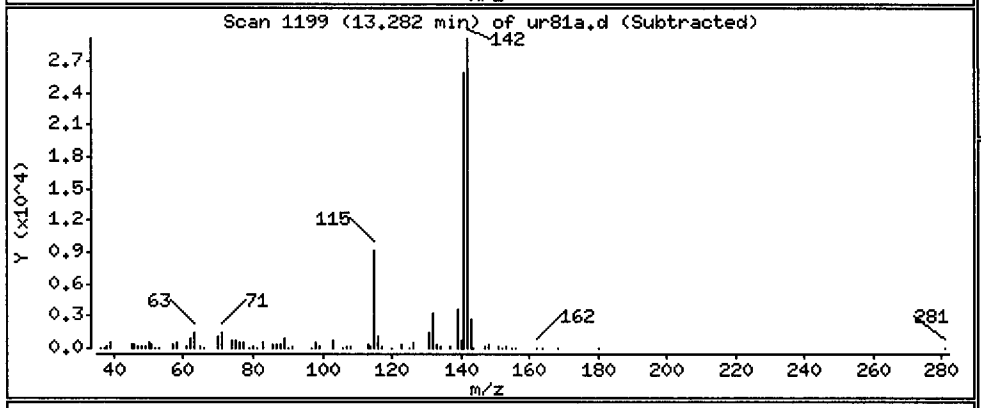
Sample Info: UR81A

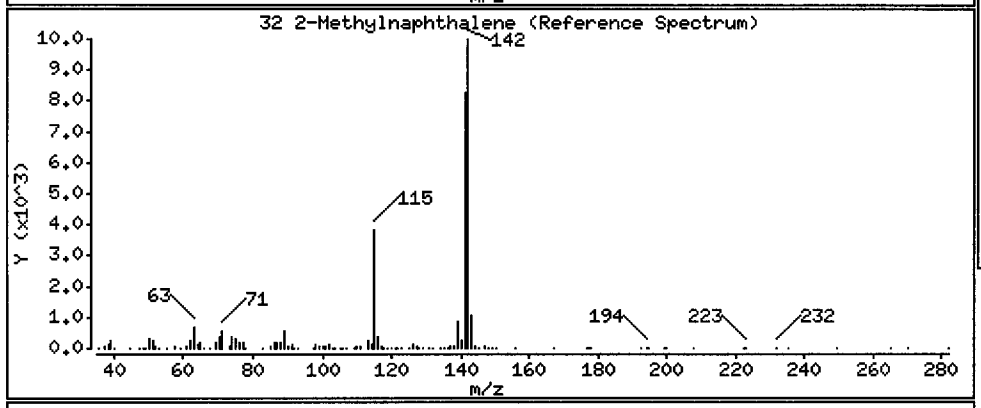
Volume Injected (uL): 1.0 Operator: VTS/YZ

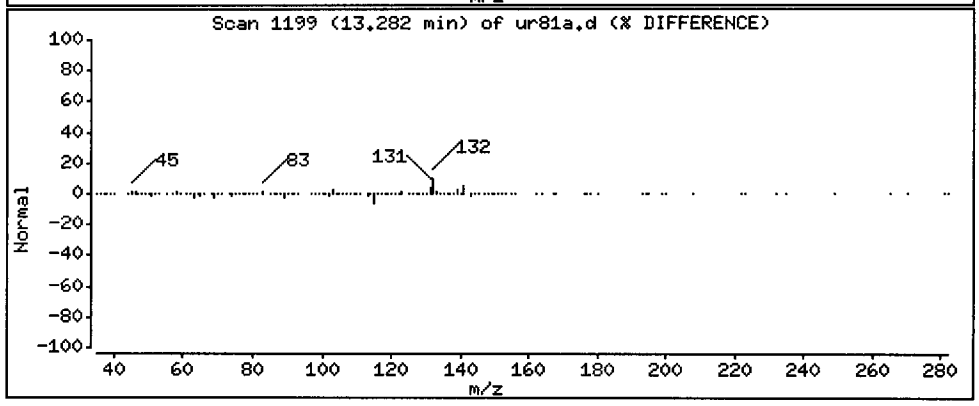
Column phase: ZB-5msi Column diameter: 0.25

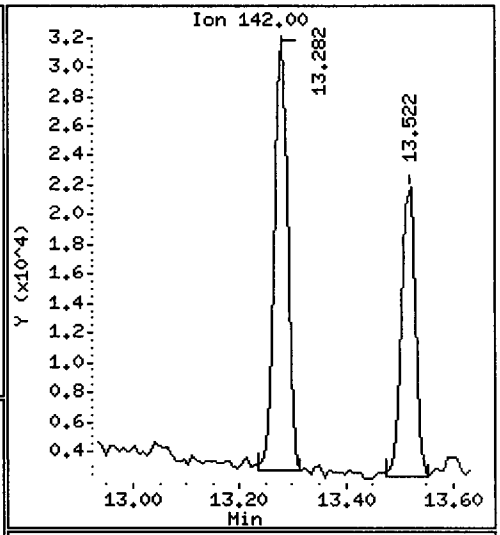
32 2-Methylnaphthalene Concentration: 26.95 ug/kg

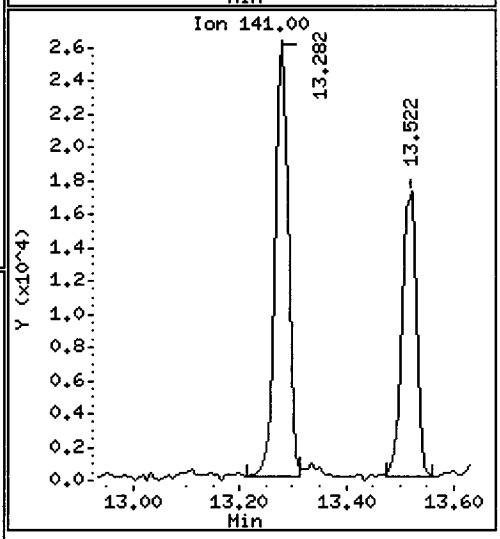












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

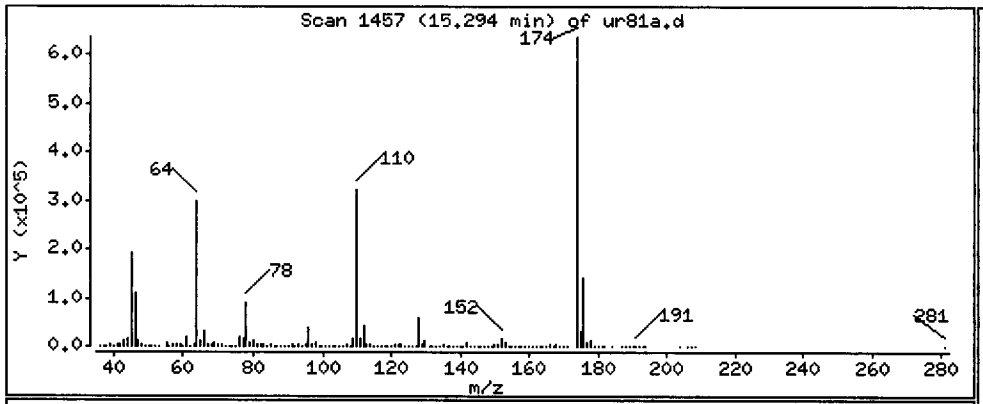
Operator: VTS/YZ

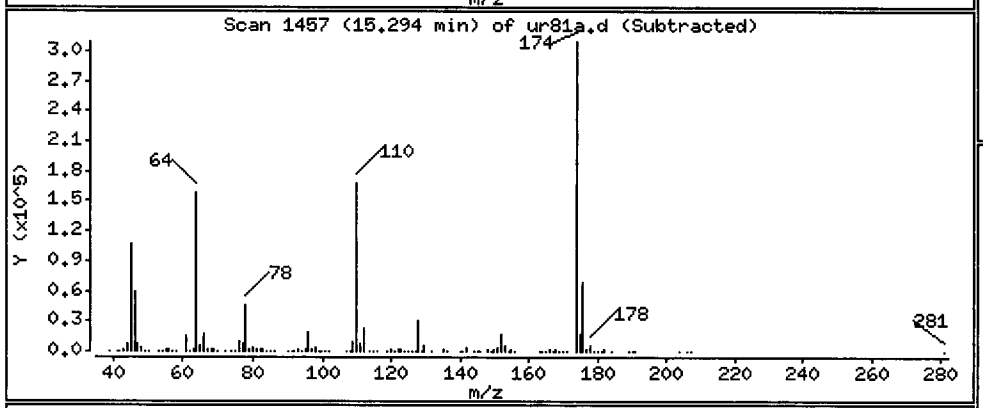
Column phase: ZB-5msi

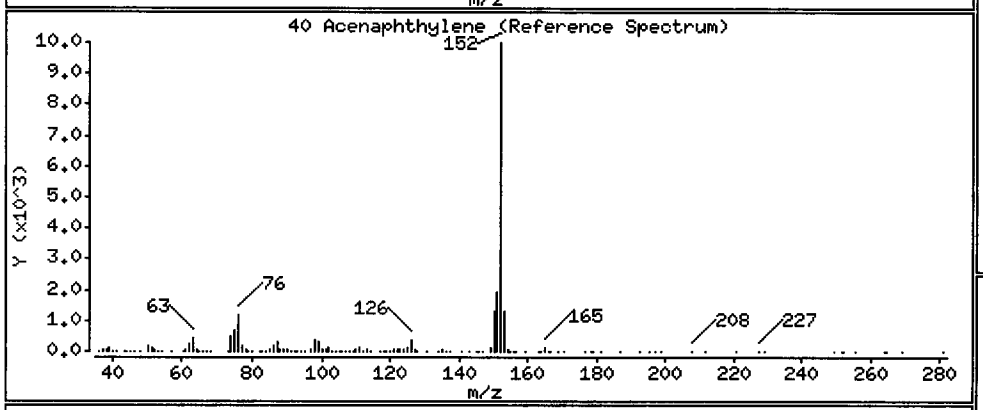
Column diameter: 0.25

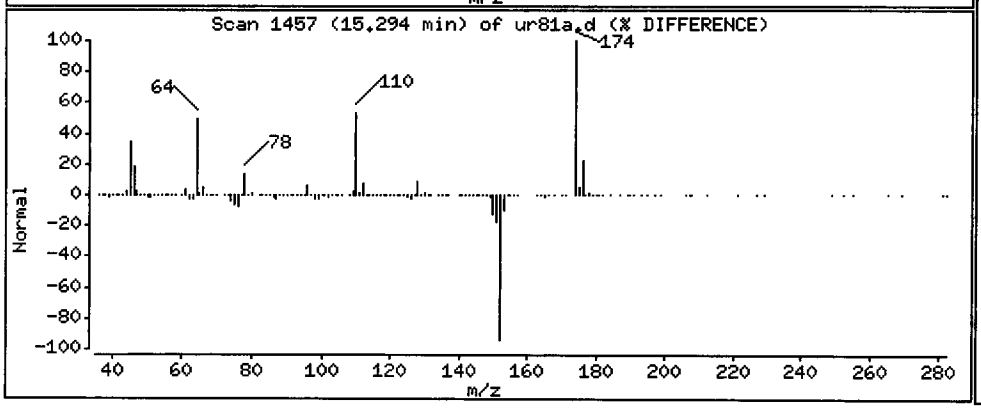
40 Acenaphthylene

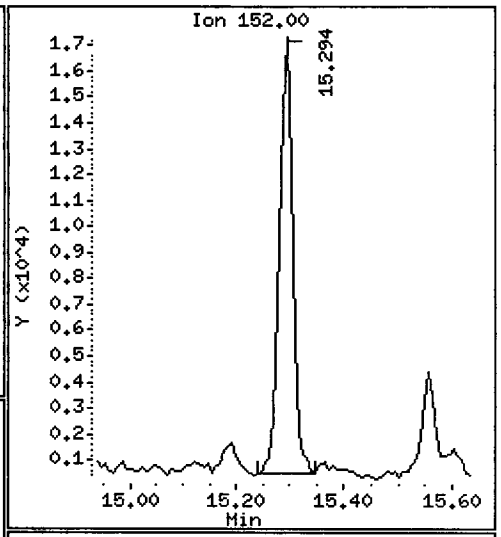
Concentration: 11.32 ug/kg

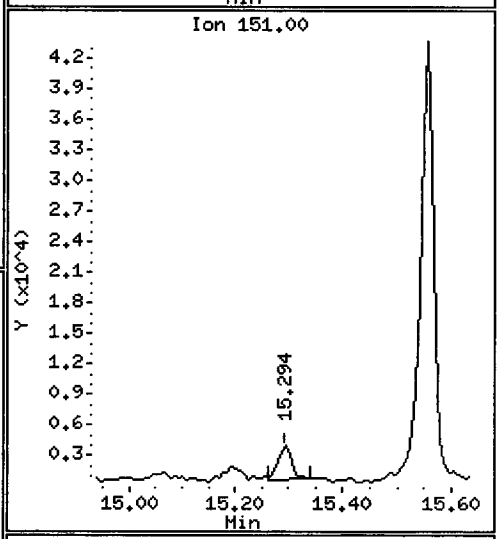


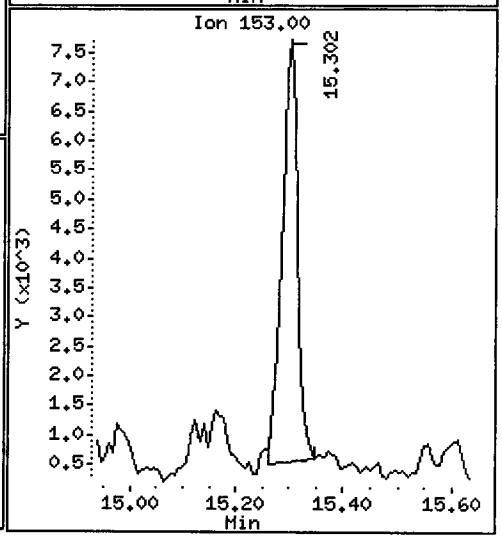












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

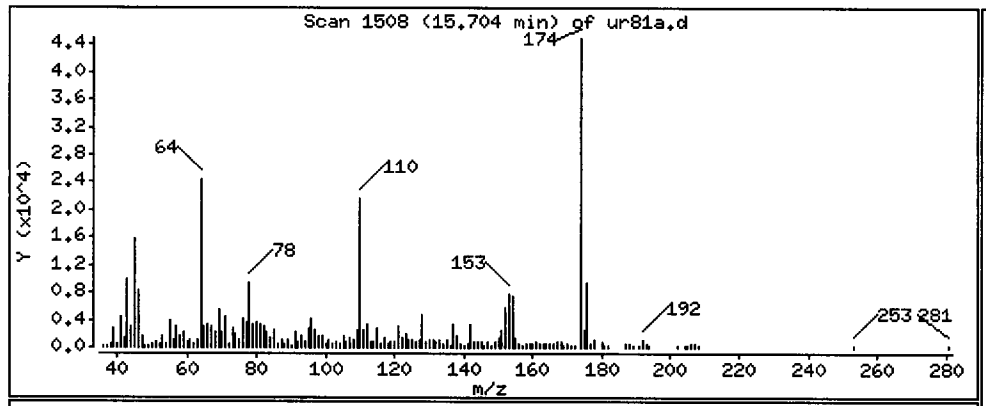
Operator: VTS/YZ

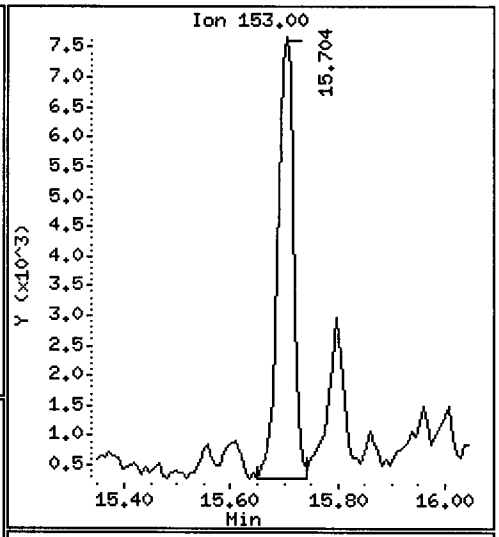
Column phase: ZB-5msi

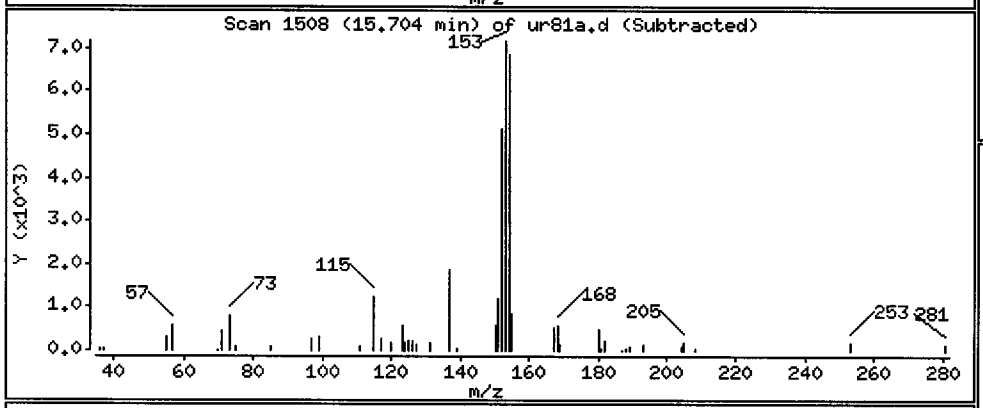
Column diameter: 0.25

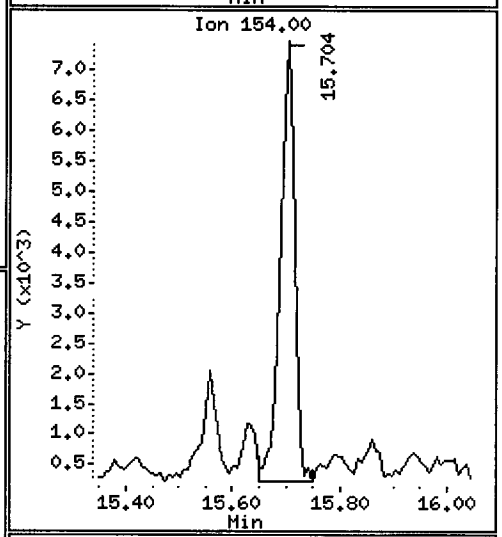
44 Acenaphthene

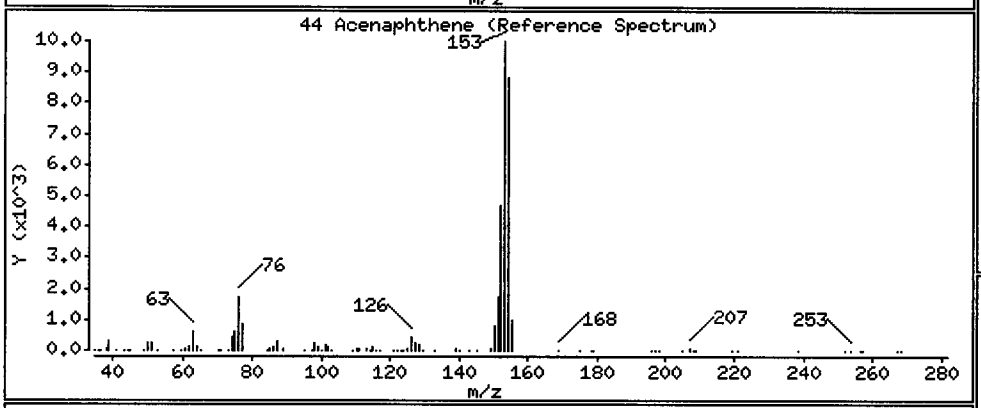
Concentration: 9.919 ug/kg

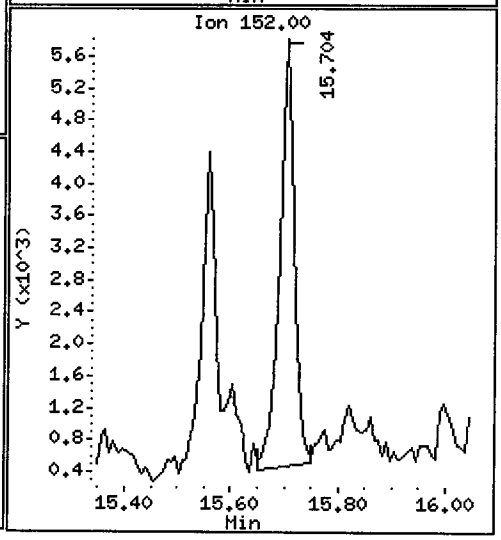


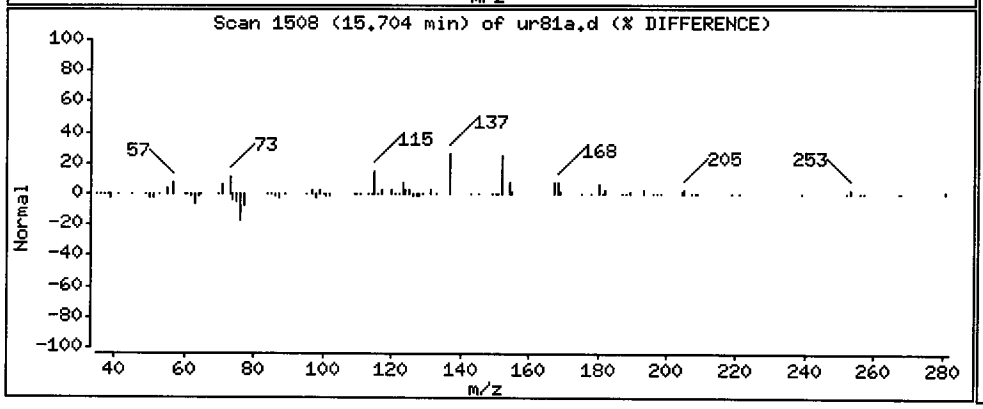












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

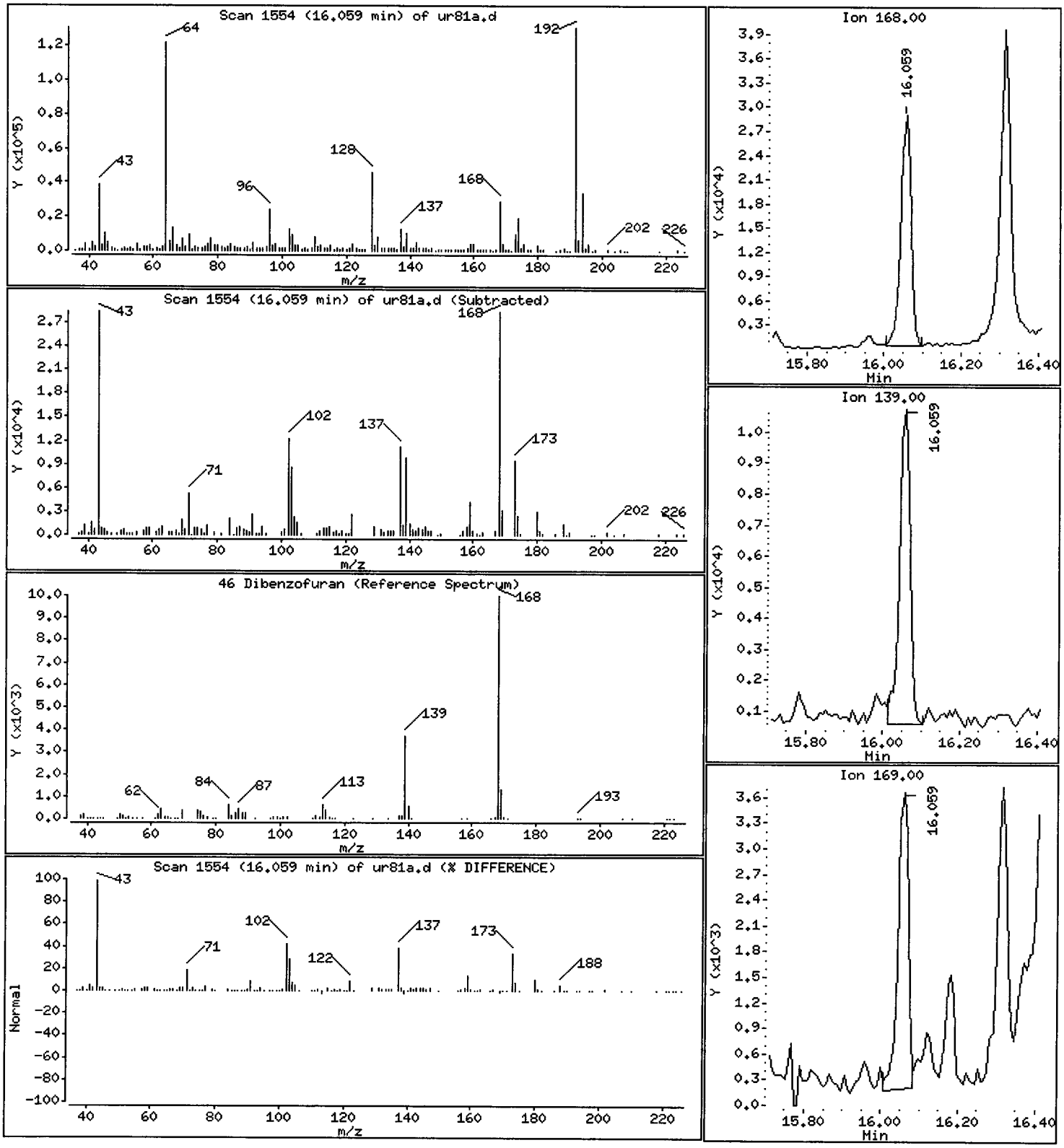
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 22.77 ug/kg



UR81 : 00498

Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

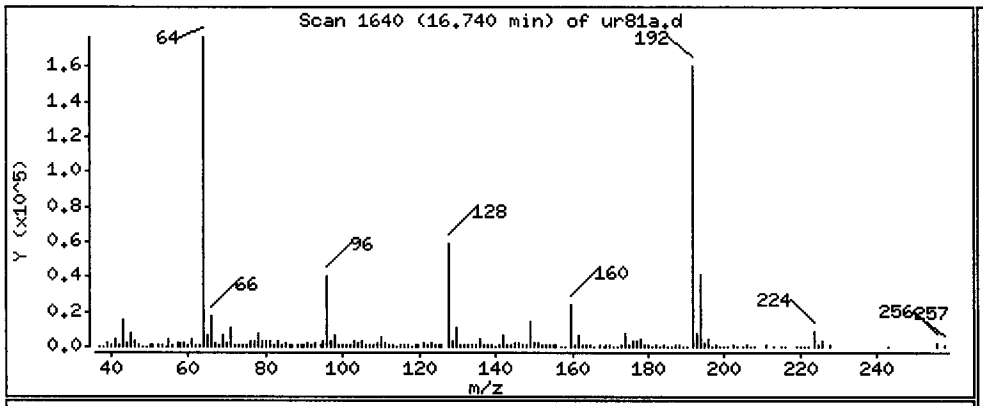
Operator: VTS/YZ

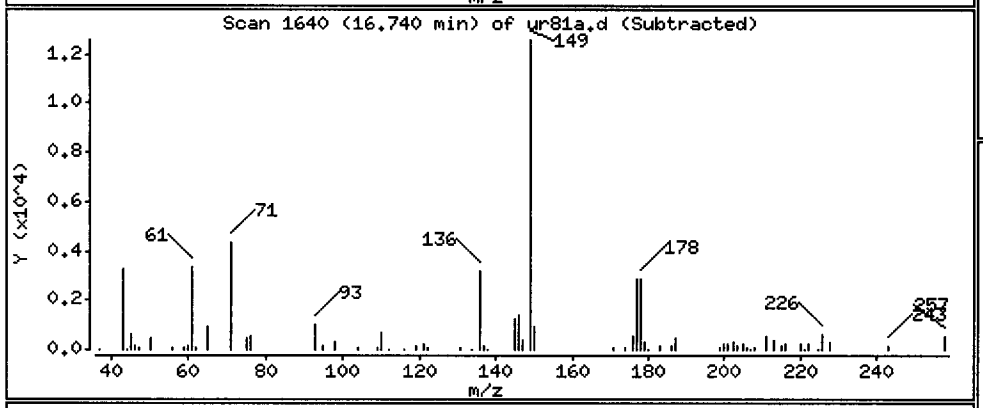
Column phase: ZB-5msi

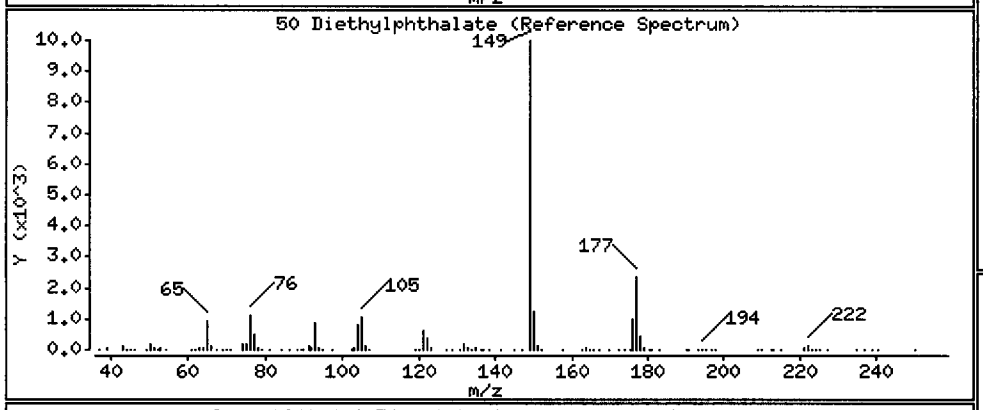
Column diameter: 0.25

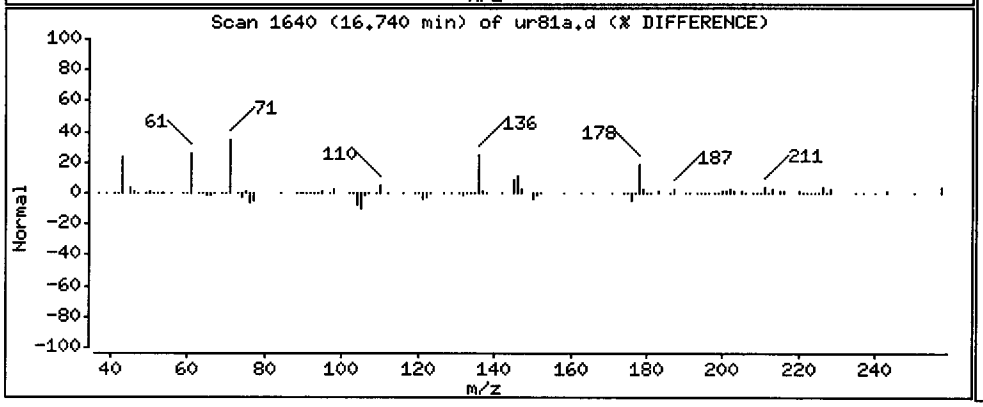
50 Diethylphthalate

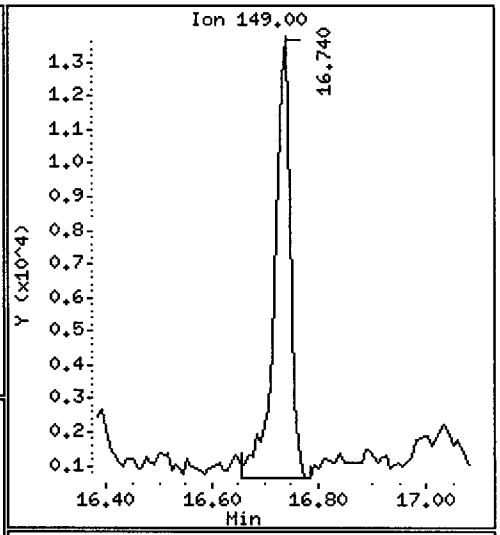
Concentration: 15.96 ug/kg

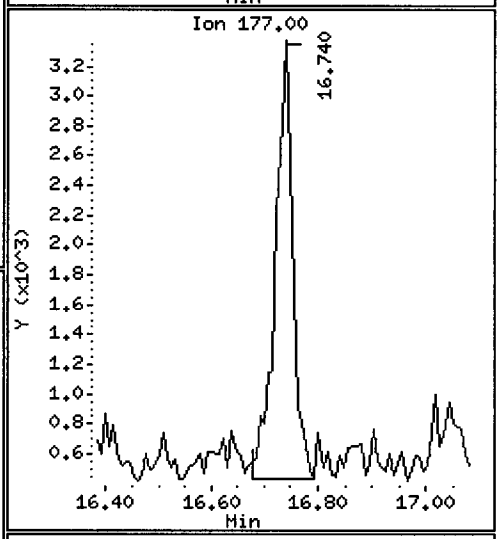


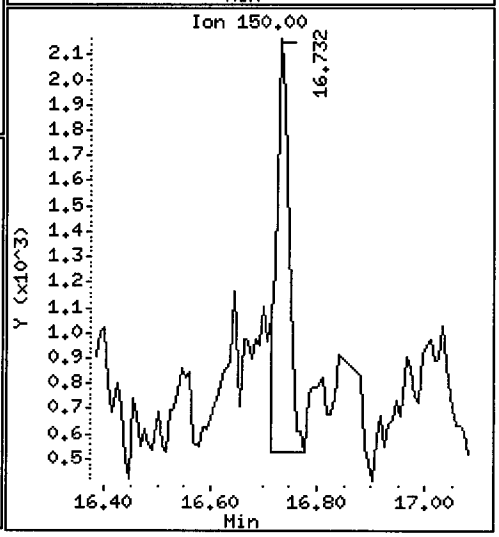












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

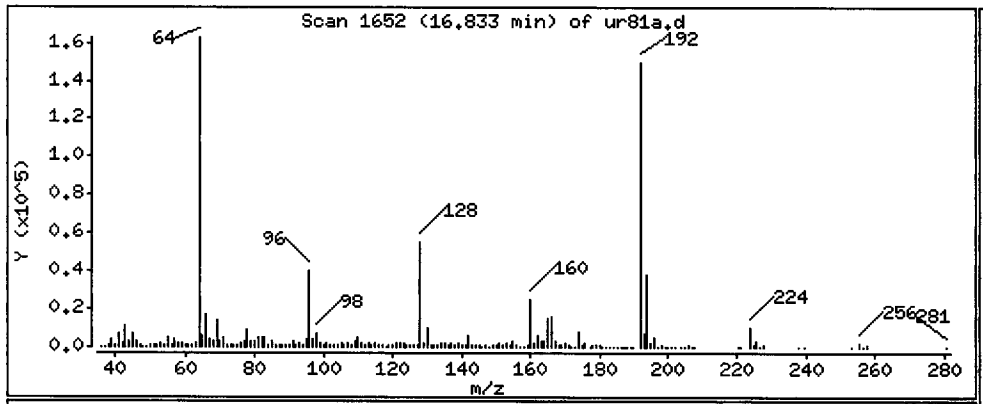
Client ID: IJ12-03 | Instrument: nt10.i

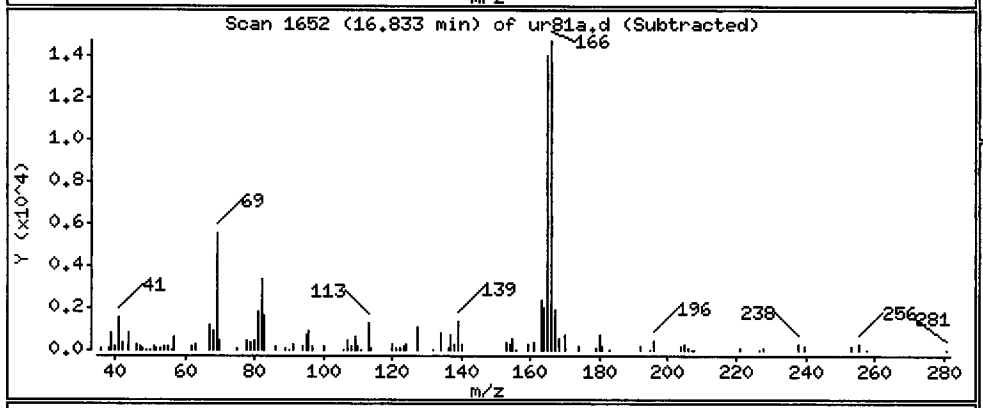
Sample Info: UR81A

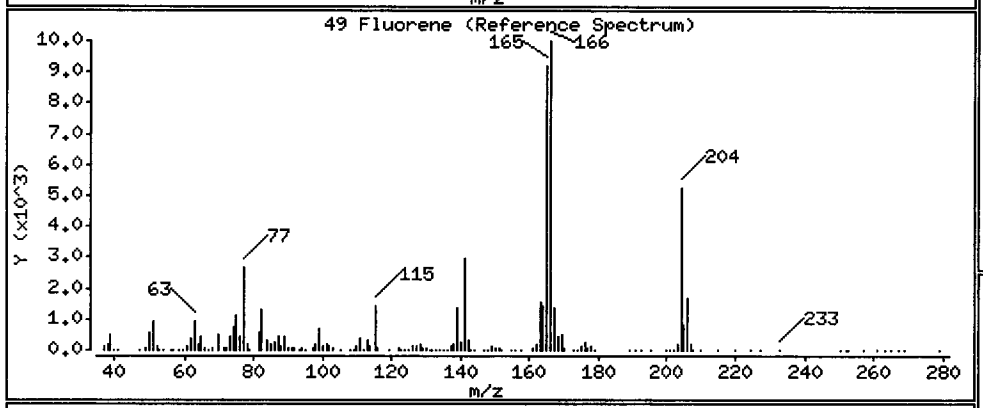
Volume Injected (uL): 1.0 | Operator: VTS/YZ

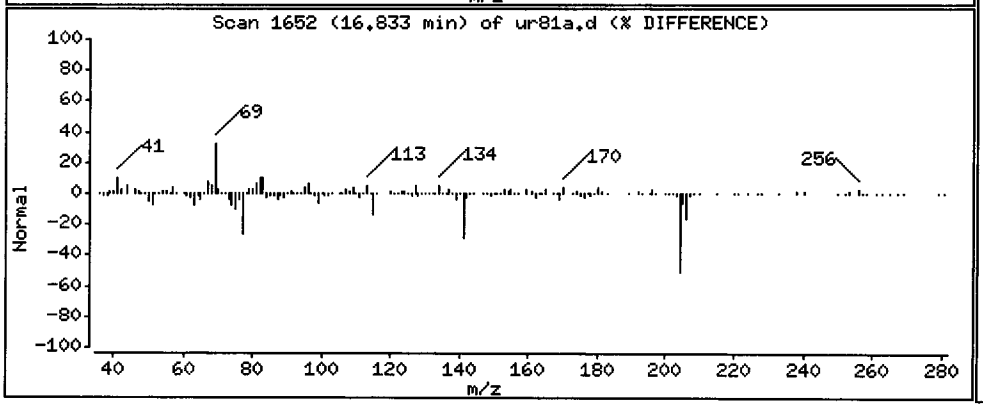
Column phase: ZB-5msi | Column diameter: 0.25

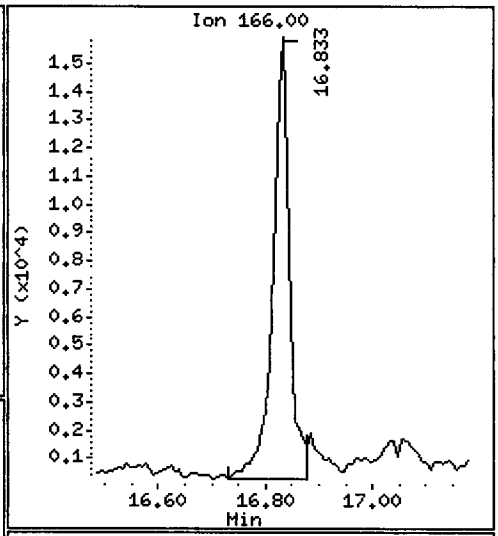
49 Fluorene | Concentration: 21.36 ug/kg

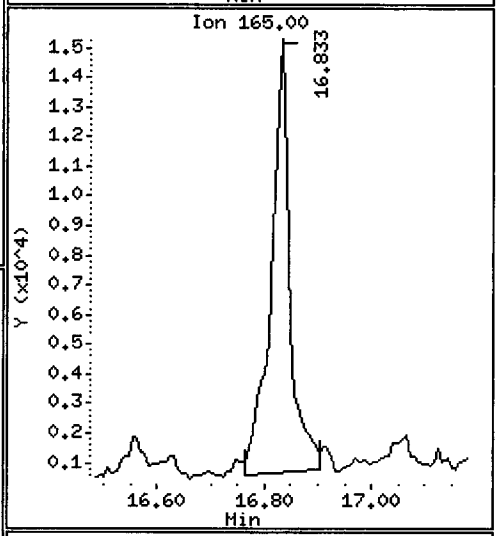


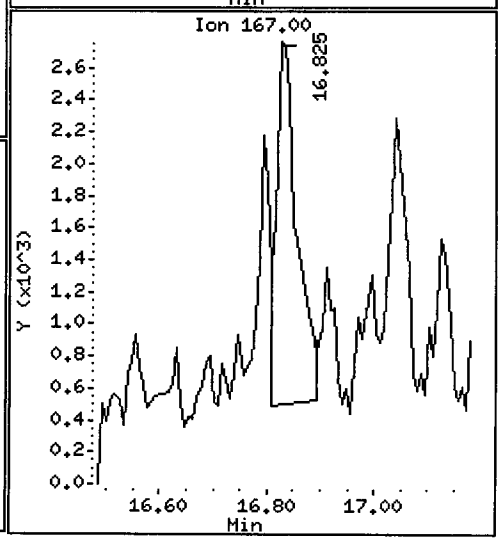












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

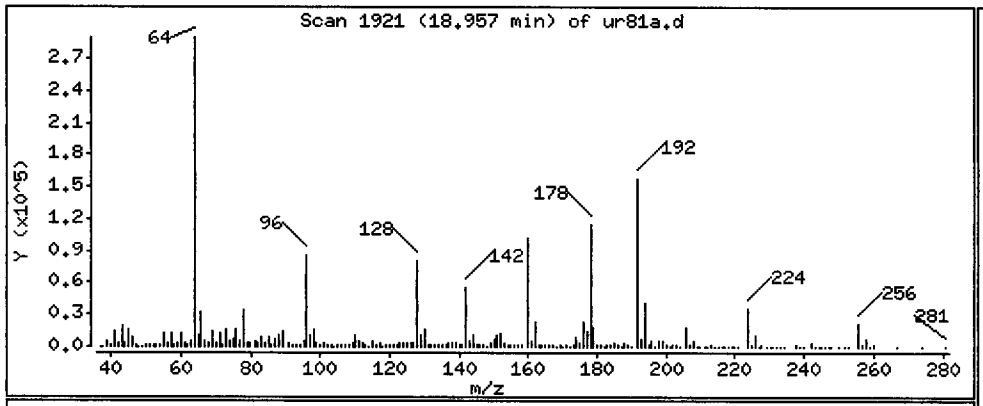
Operator: VTS/YZ

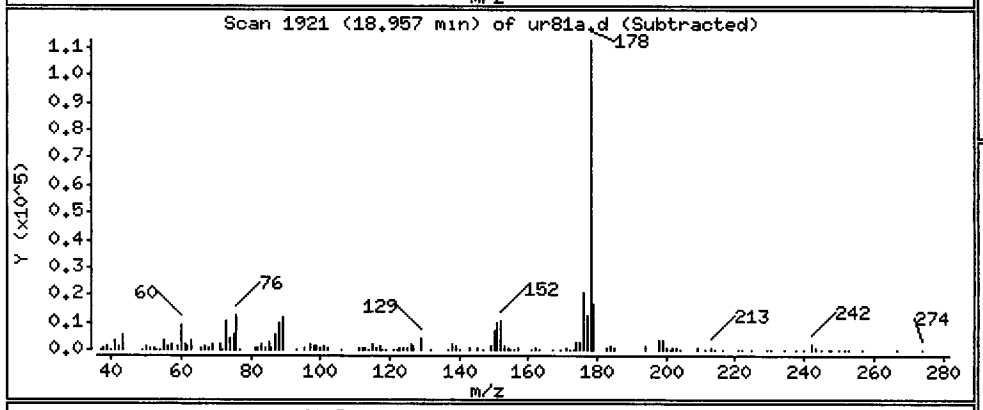
Column phase: ZB-5msi

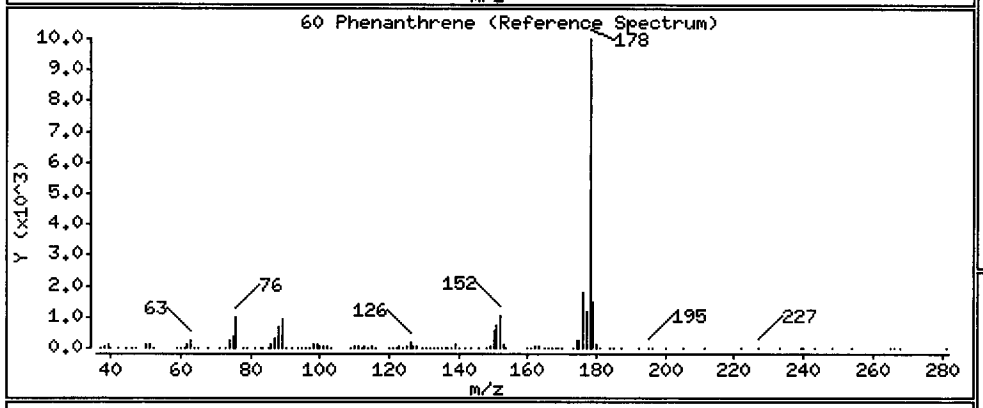
Column diameter: 0.25

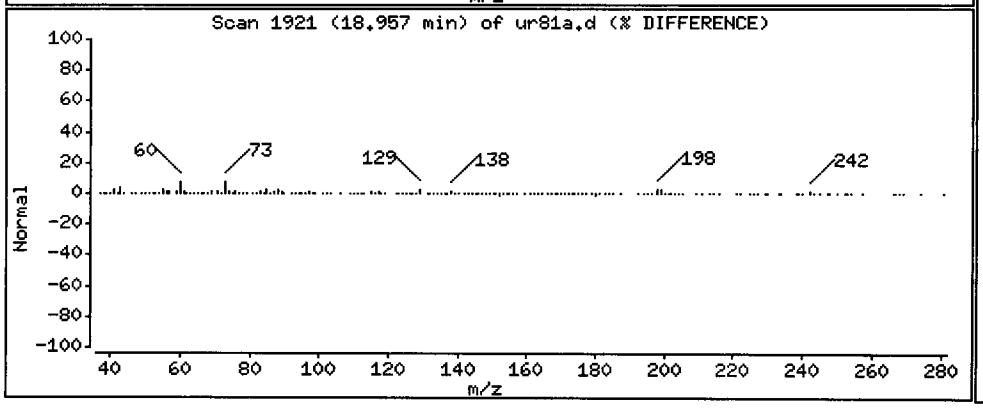
60 Phenanthrene

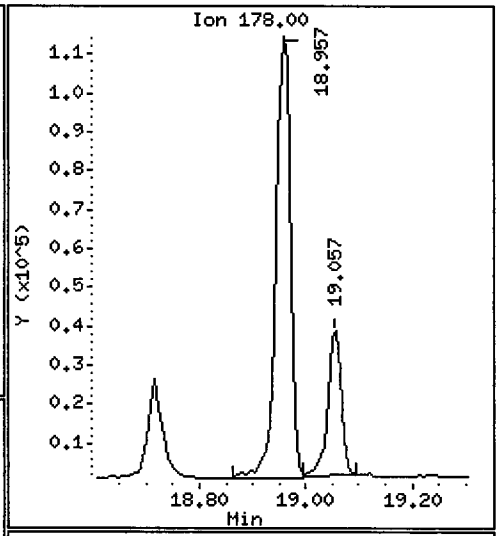
Concentration: 98.62 ug/kg

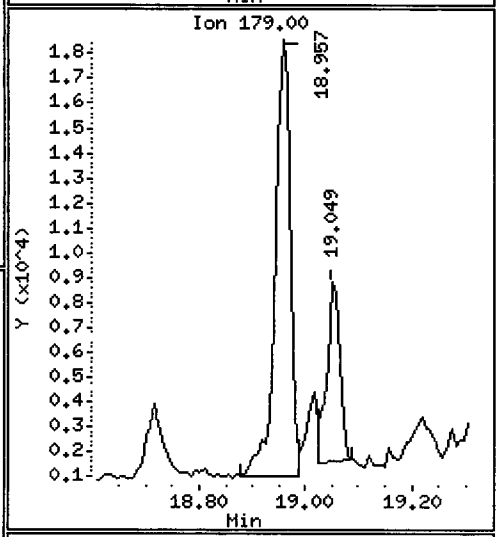


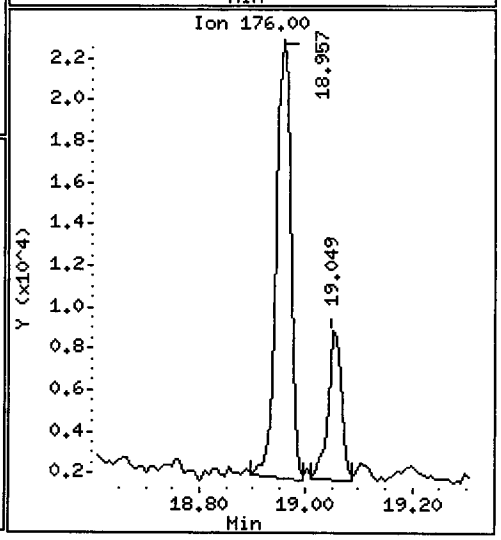












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

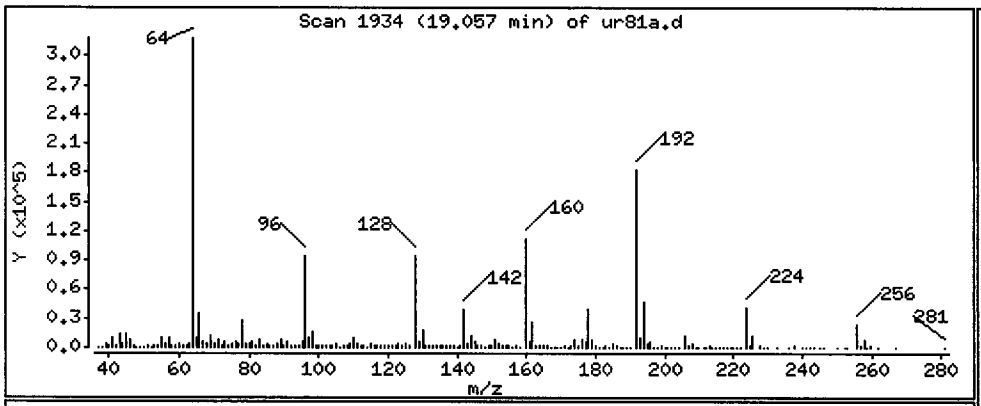
Operator: VTS/YZ

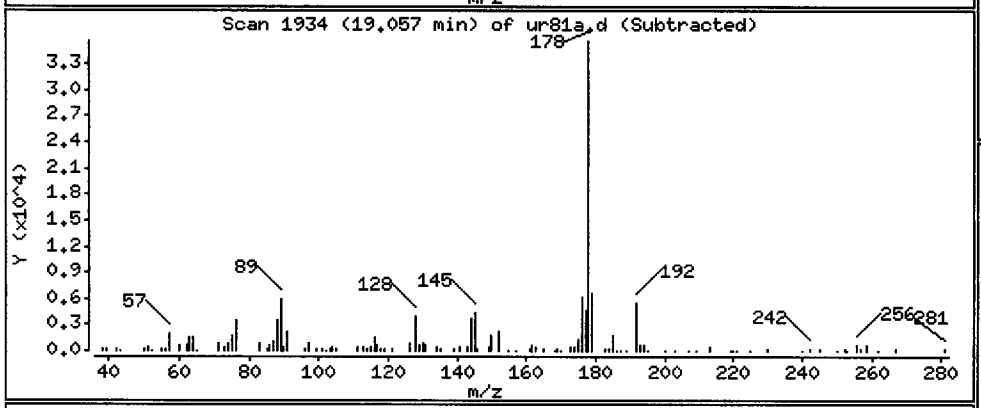
Column phase: ZB-5msi

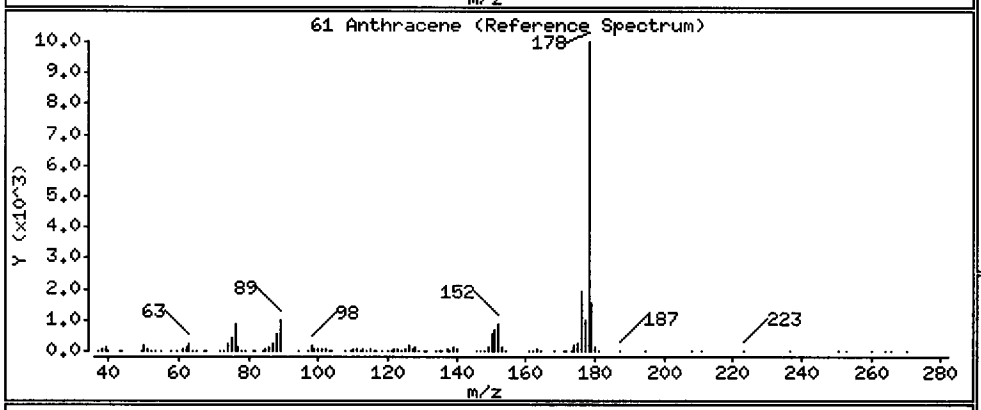
Column diameter: 0.25

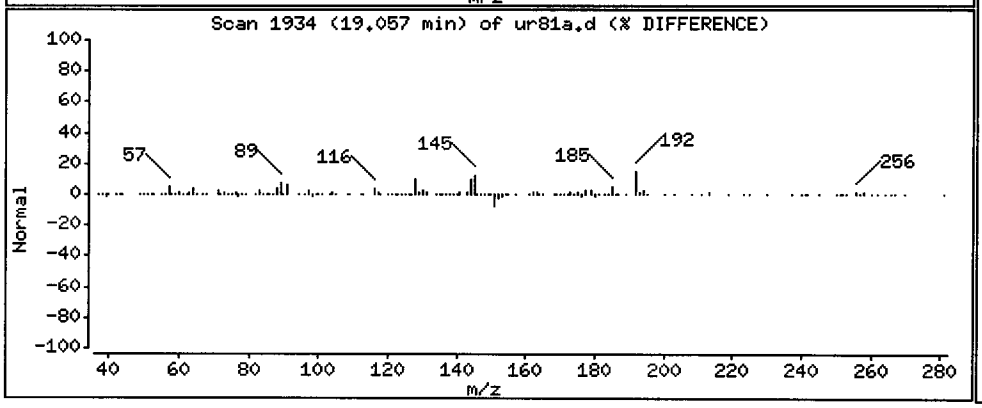
61 Anthracene

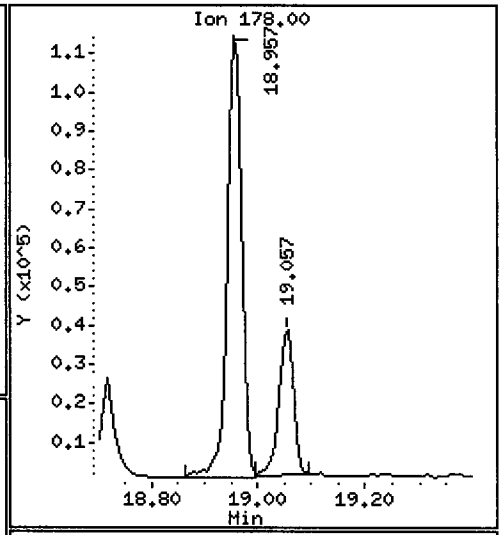
Concentration: 30.13 ug/kg

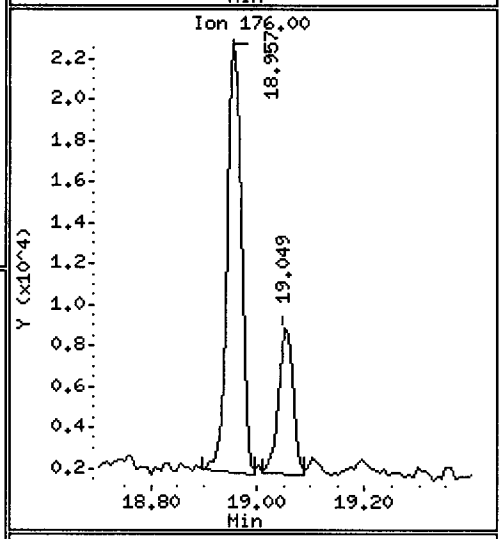


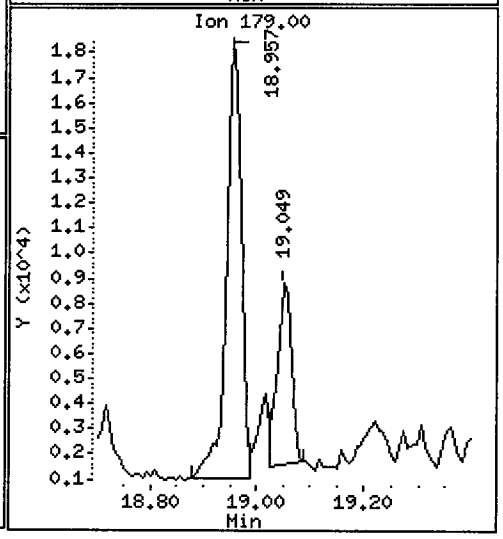












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

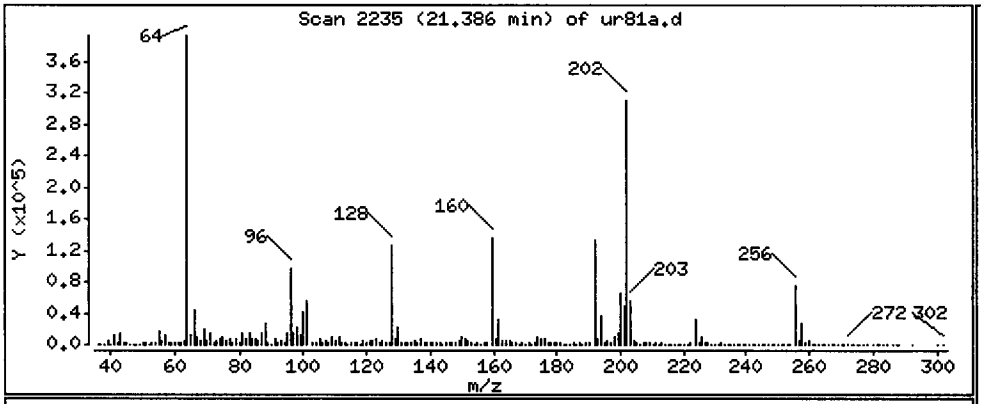
Client ID: IJ12-03 Instrument: nt10.i

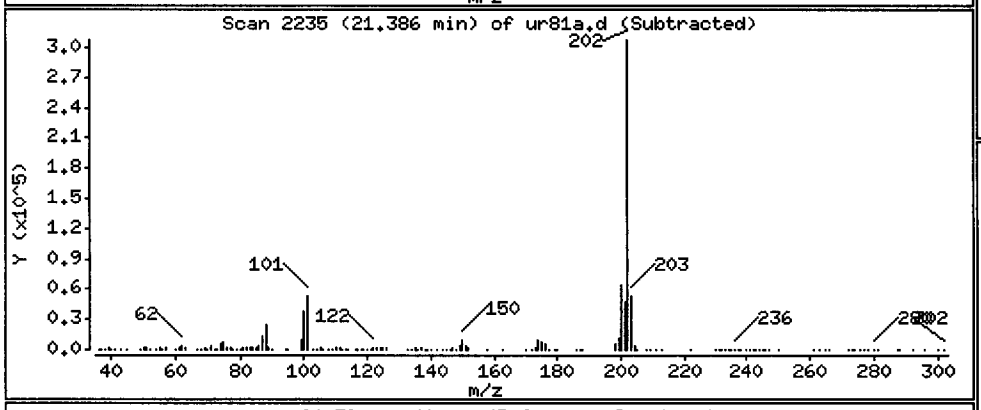
Sample Info: UR81A

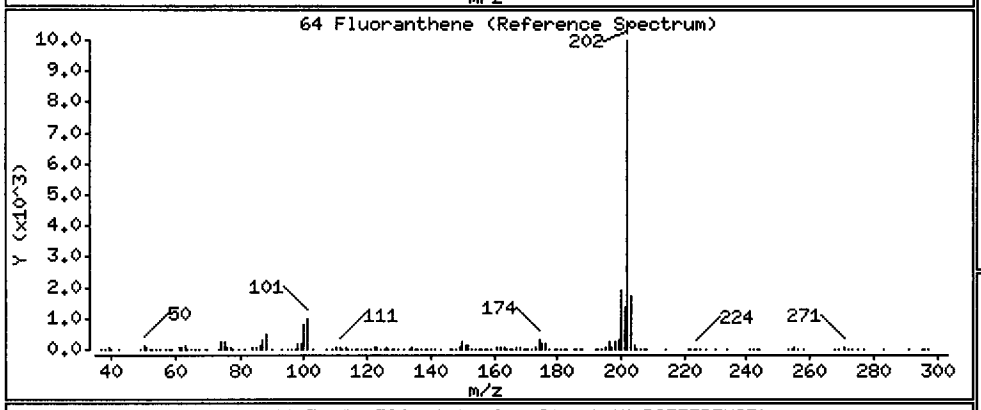
Volume Injected (uL): 1.0 Operator: VTS/YZ

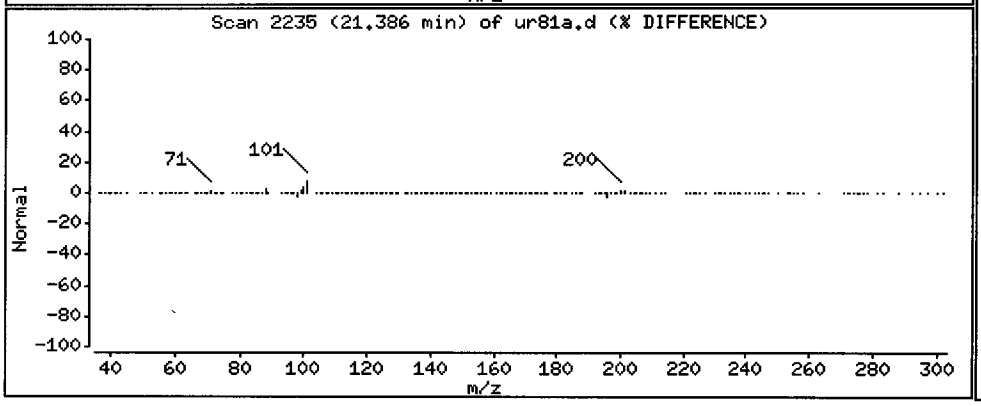
Column phase: ZB-5msi Column diameter: 0.25

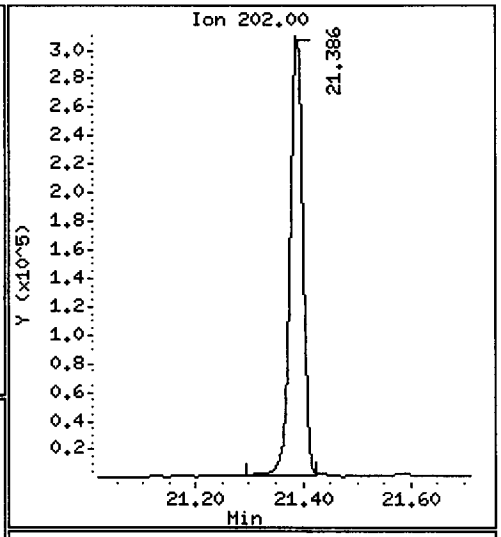
64 Fluoranthene Concentration: 214.7 ug/kg

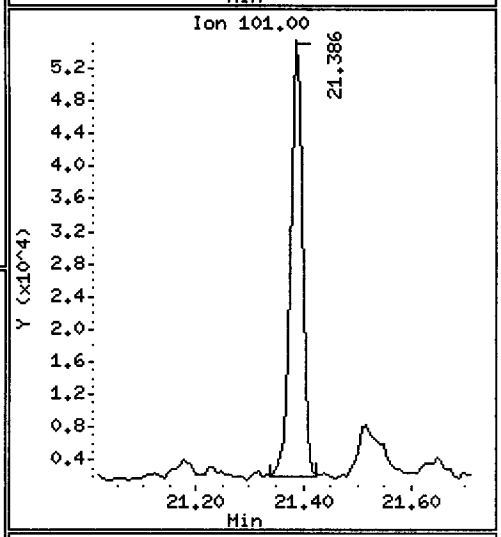


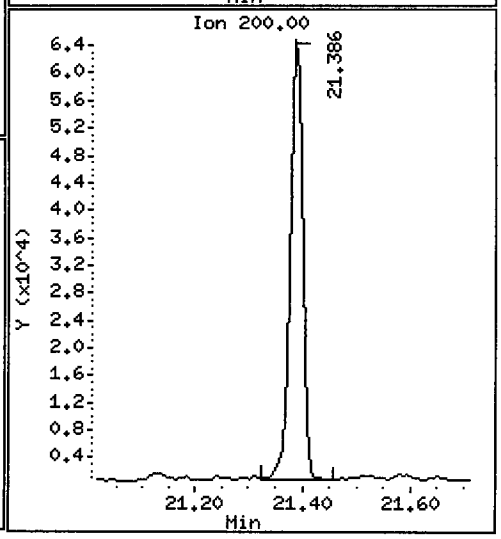












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

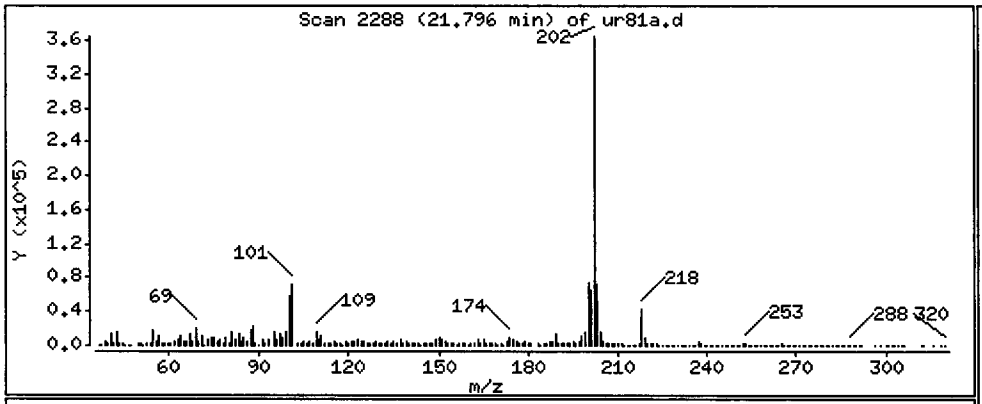
Client ID: IJ12-03 | Instrument: nt10.i

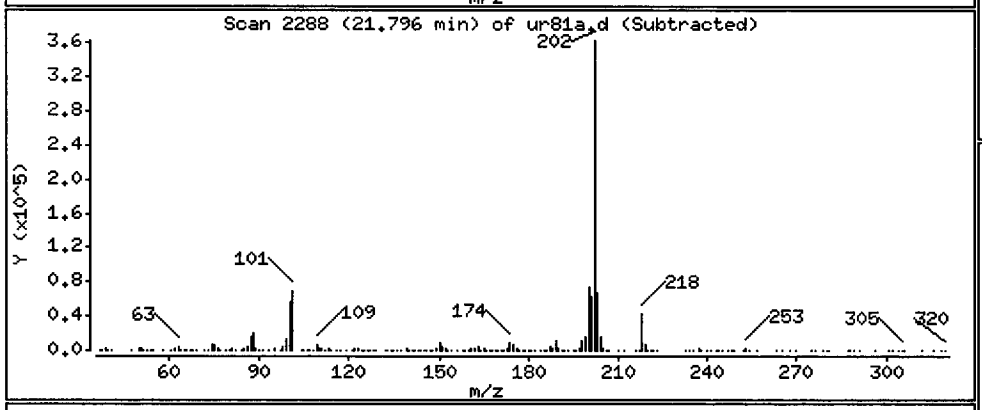
Sample Info: UR81A

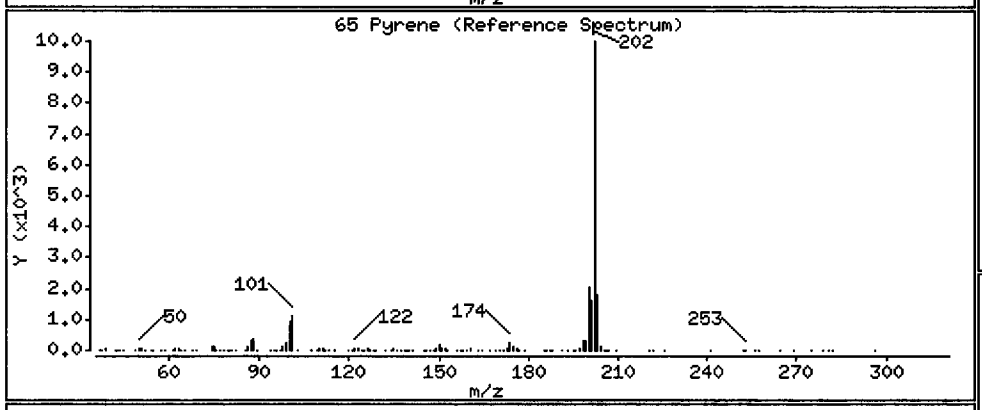
Volume Injected (uL): 1.0 | Operator: VTS/YZ

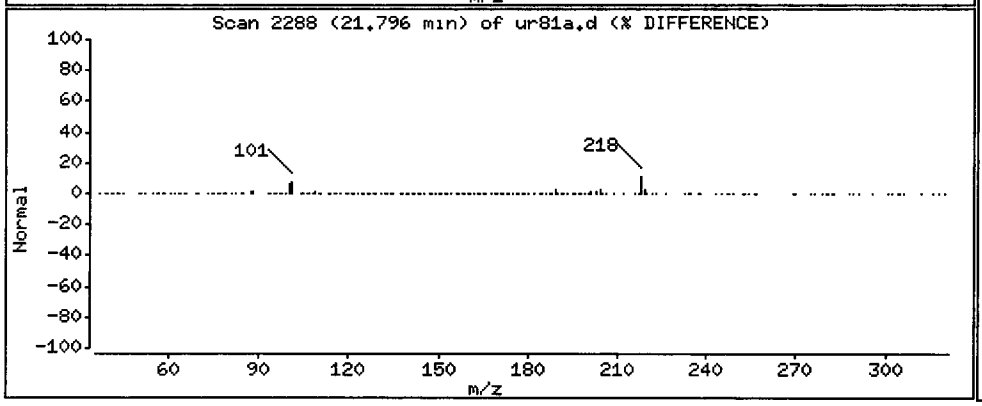
Column phase: ZB-5msi | Column diameter: 0.25

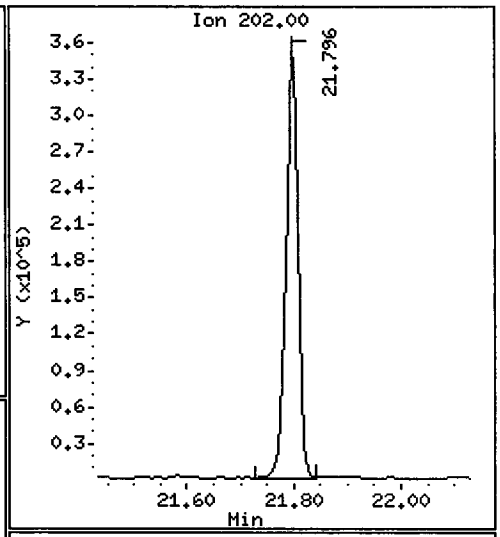
65 Pyrene | Concentration: 205.1 ug/kg

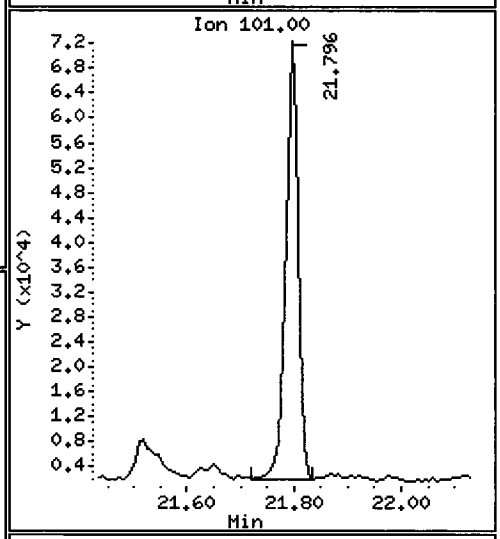


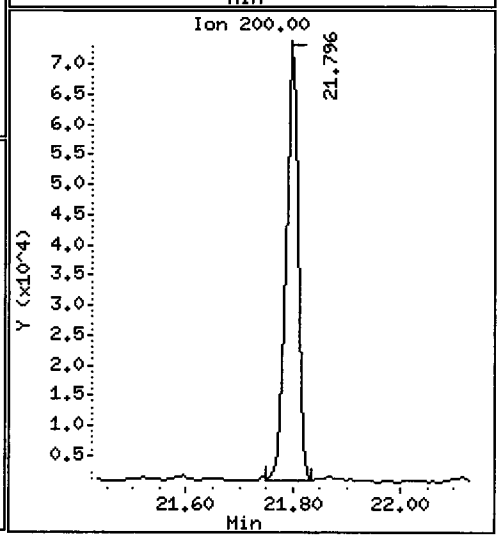












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

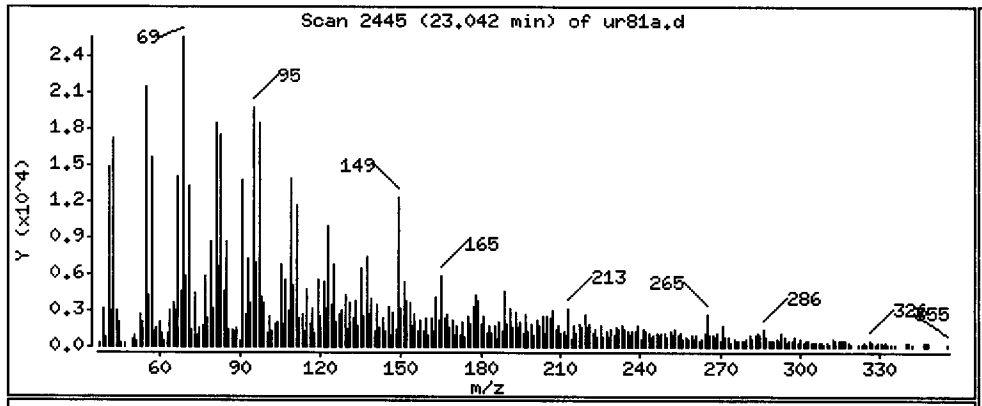
Operator: VTS/YZ

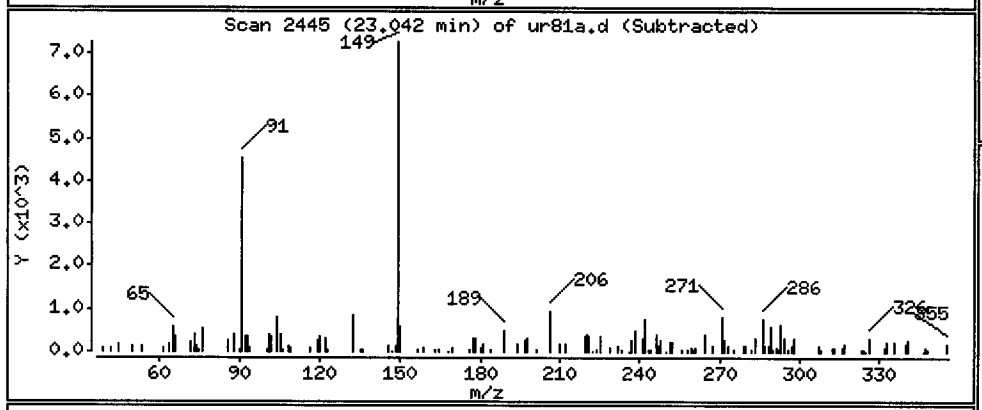
Column phase: ZB-5msi

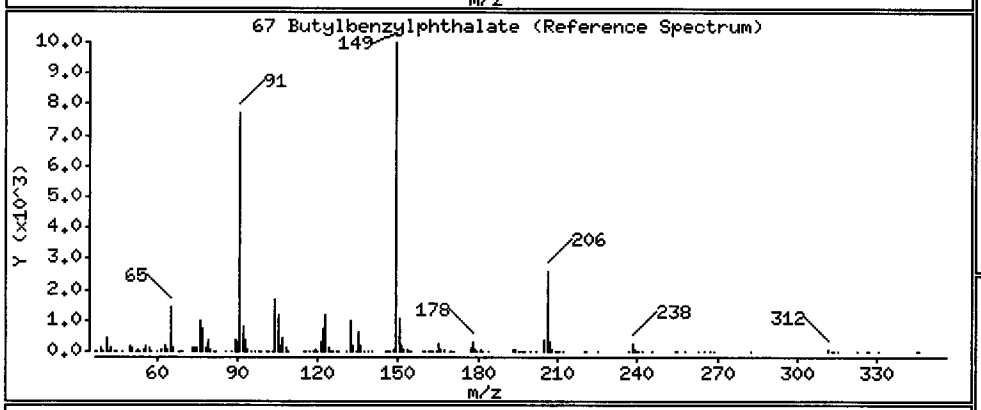
Column diameter: 0.25

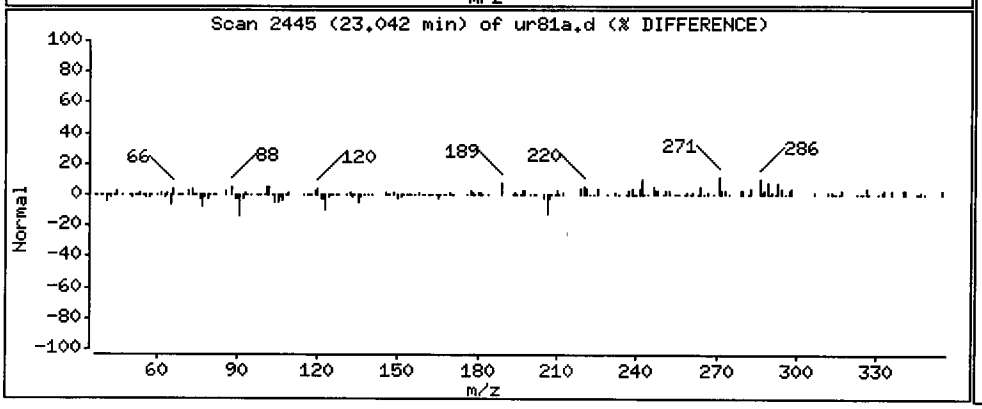
67 Butylbenzylphthalate

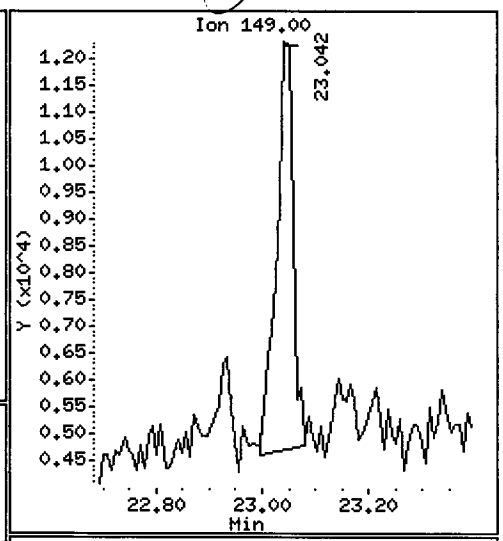
Concentration: 14.29 ug/kg

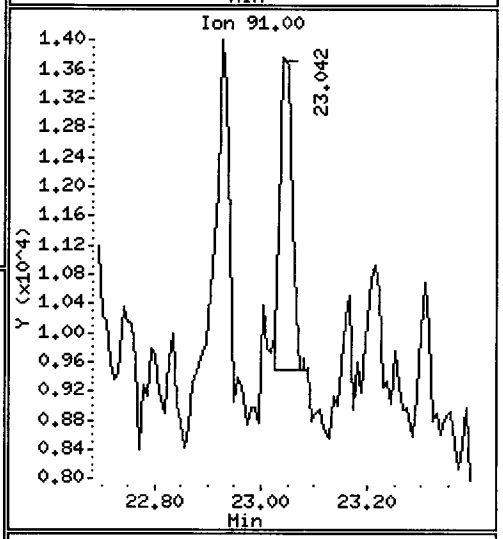


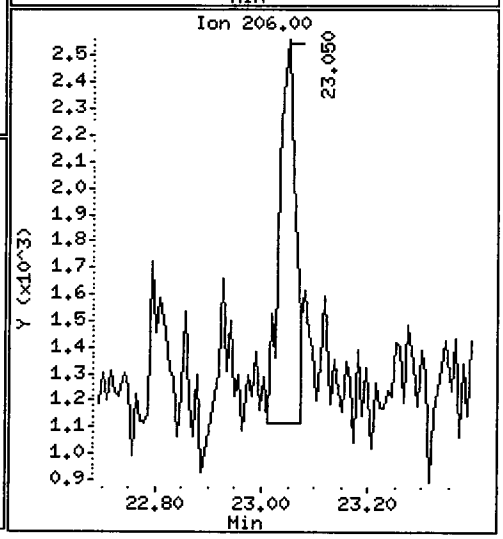












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

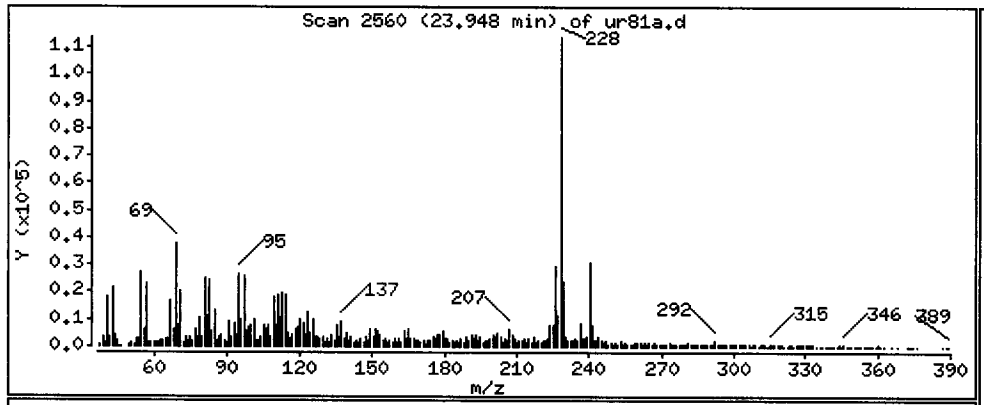
Operator: VTS/YZ

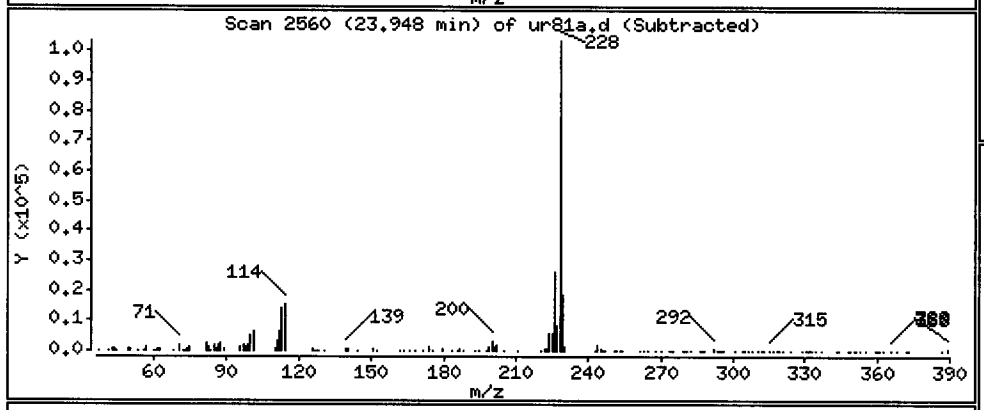
Column phase: ZB-5msi

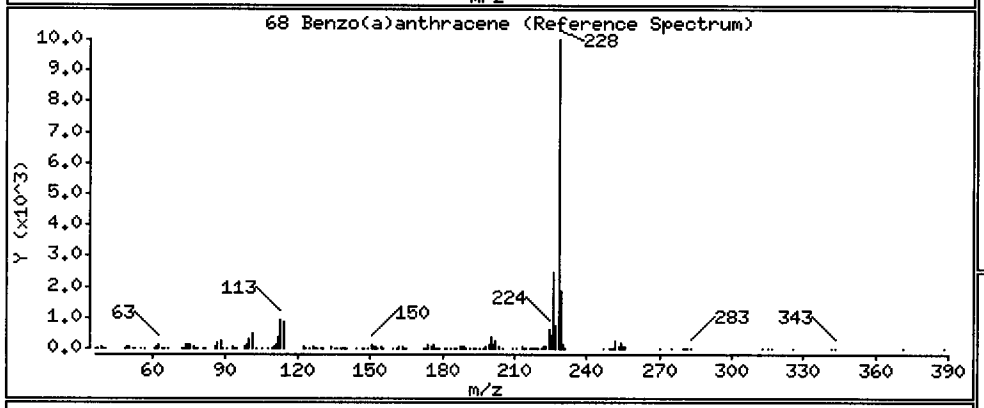
Column diameter: 0.25

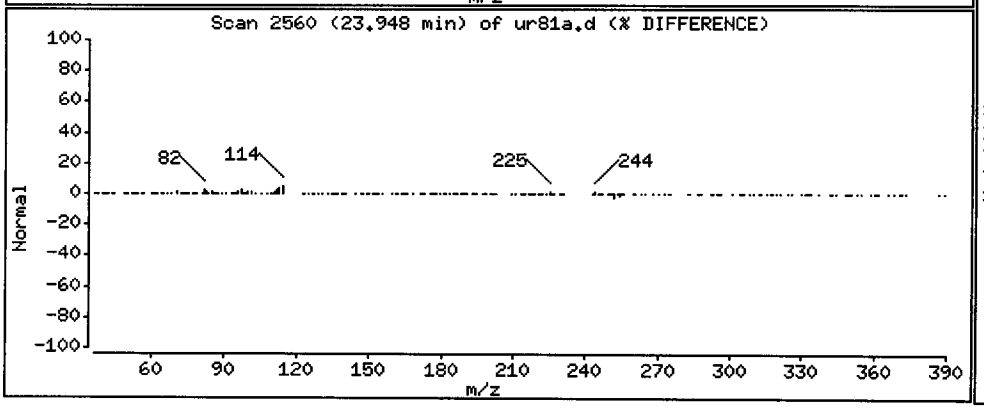
68 Benzo(a)anthracene

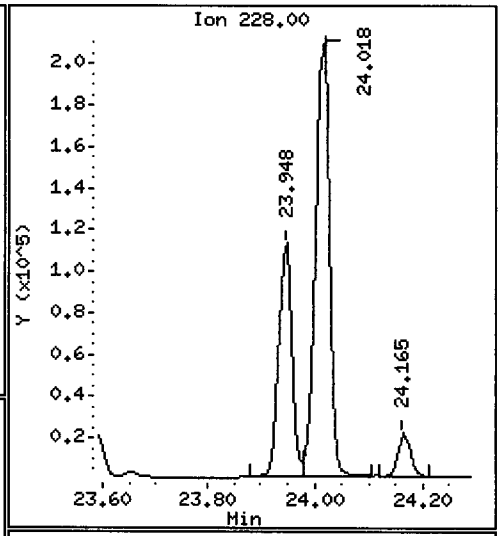
Concentration: 79.63 ug/kg

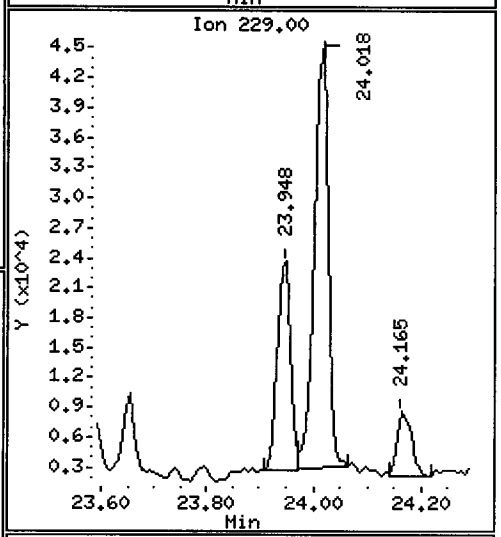


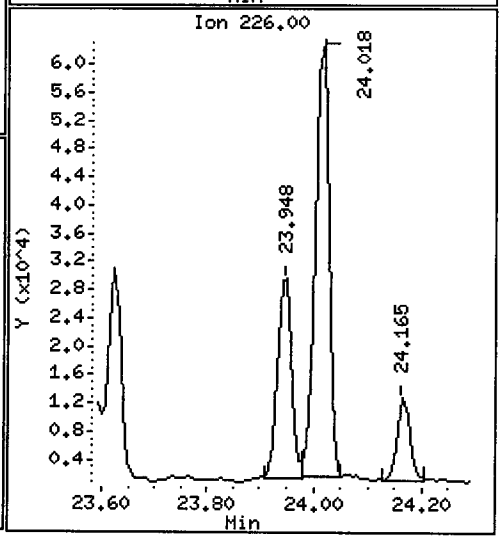












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

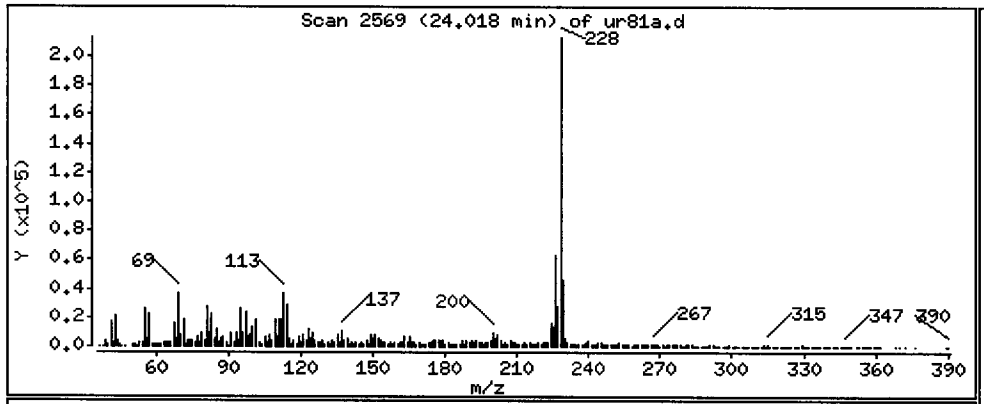
Operator: VTS/YZ

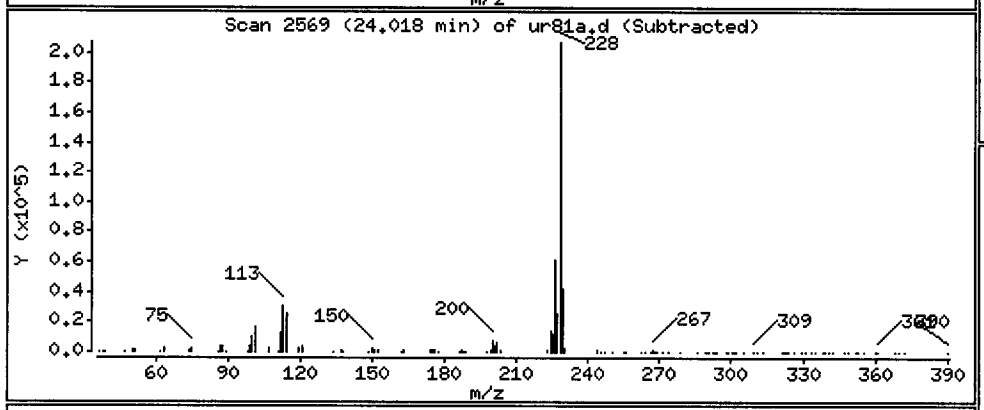
Column phase: ZB-5msi

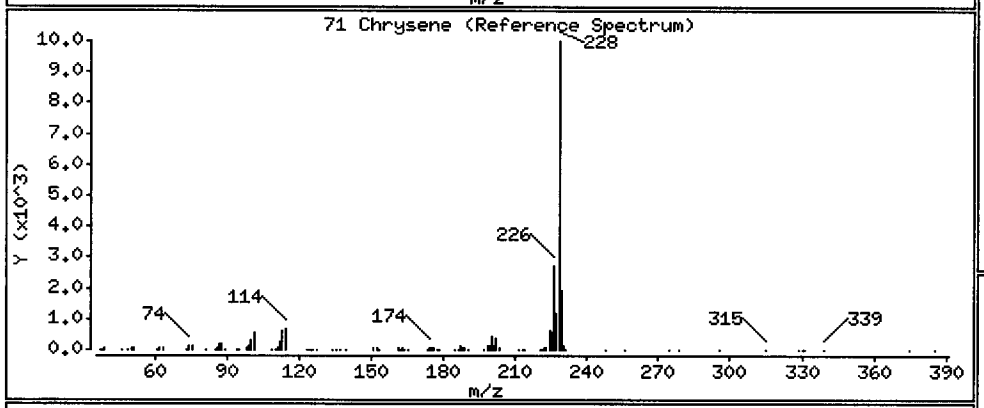
Column diameter: 0.25

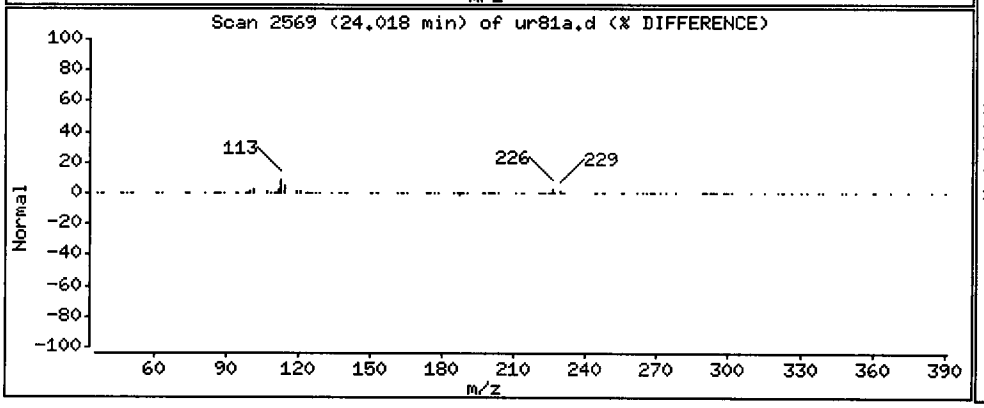
71 Chrysene

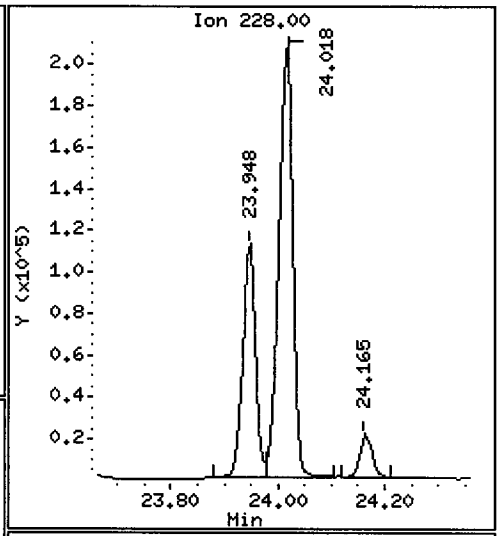
Concentration: 168.2 ug/kg

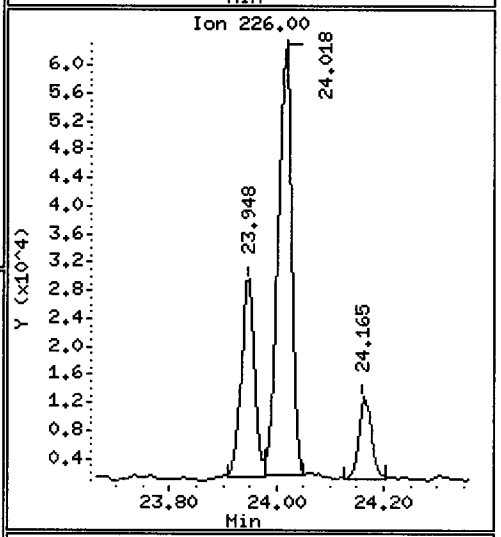


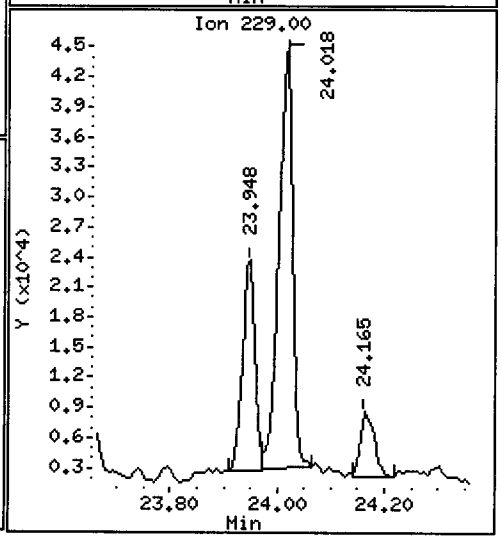












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03 Instrument: nt10.i

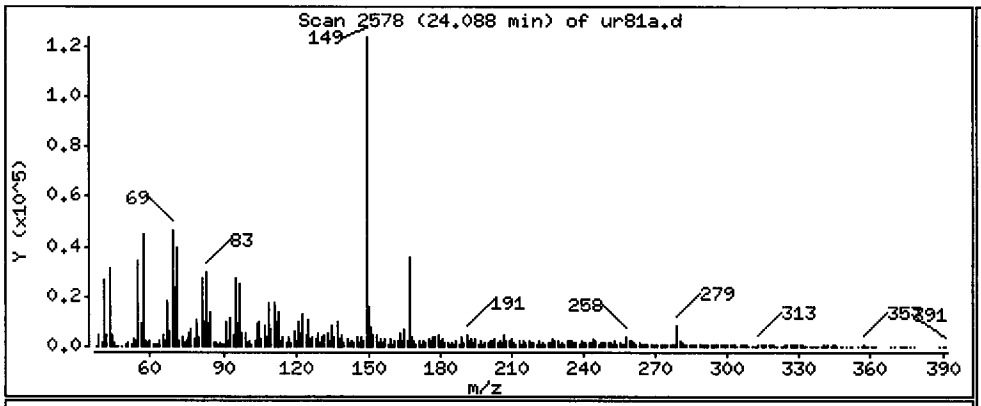
Sample Info: UR81A

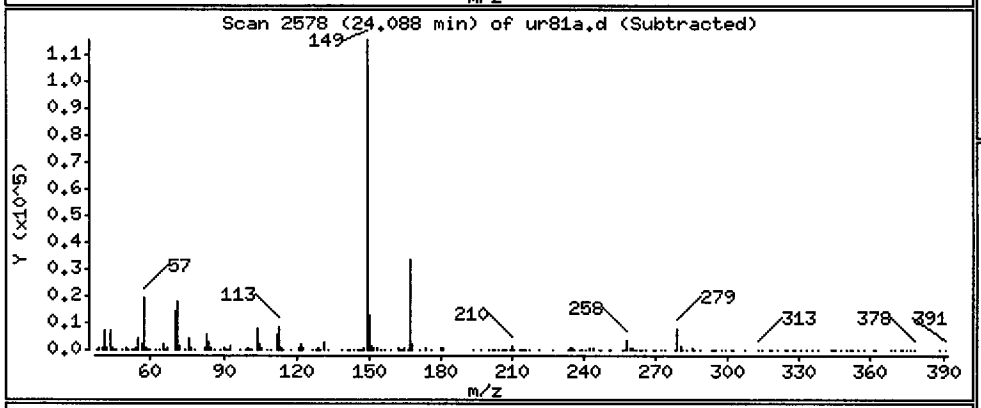
Volume Injected (uL): 1.0 Operator: VTS/YZ

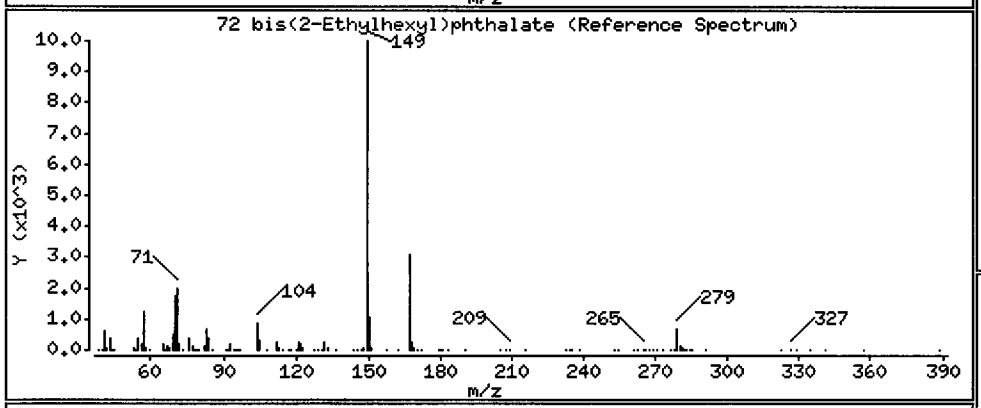
Column phase: ZB-5msi Column diameter: 0.25

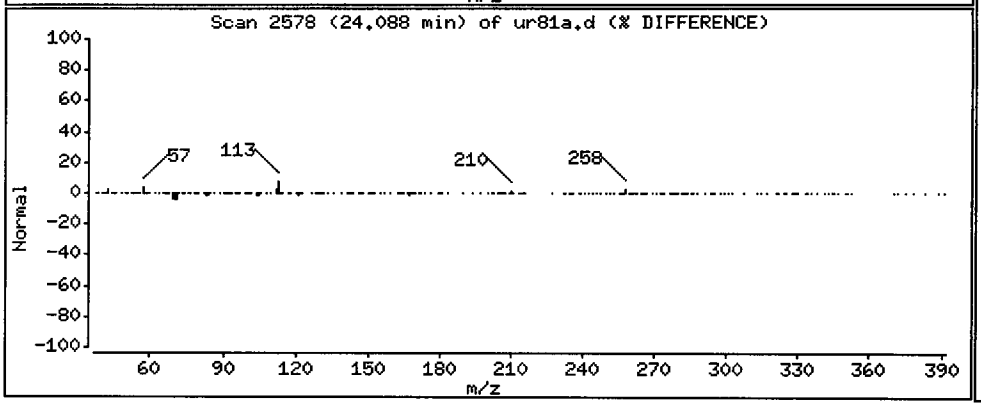
72 bis(2-Ethylhexyl)phthalate Concentration: 102.9 ug/kg

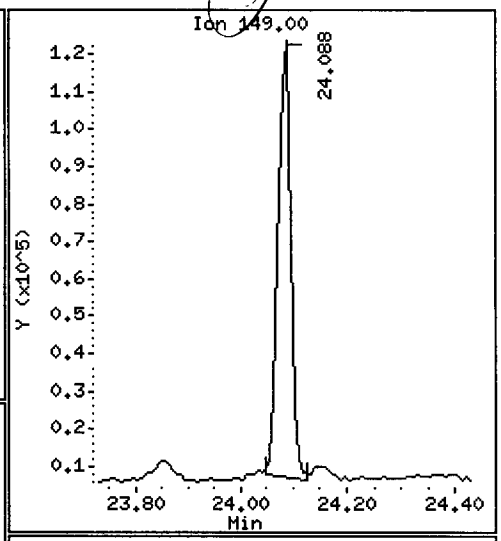
(B)

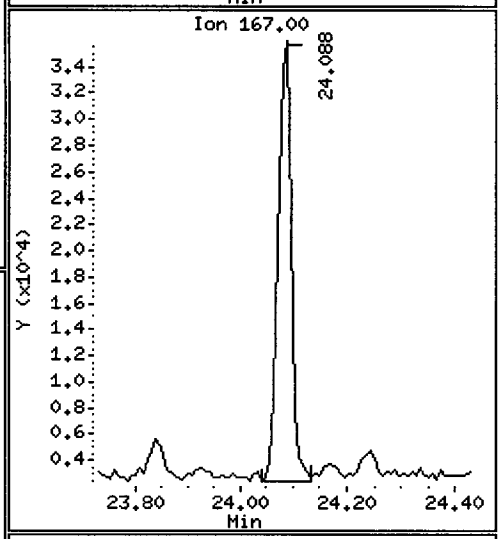


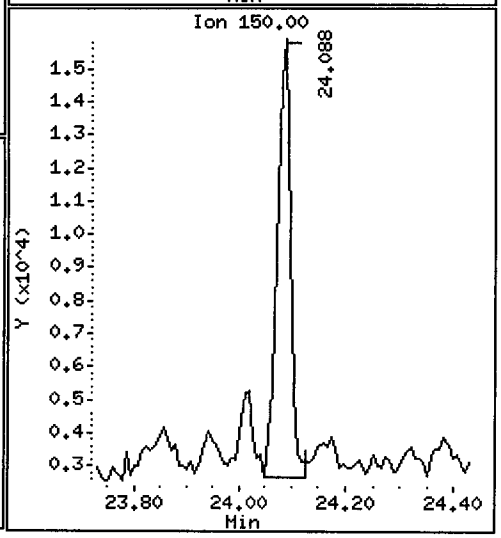












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

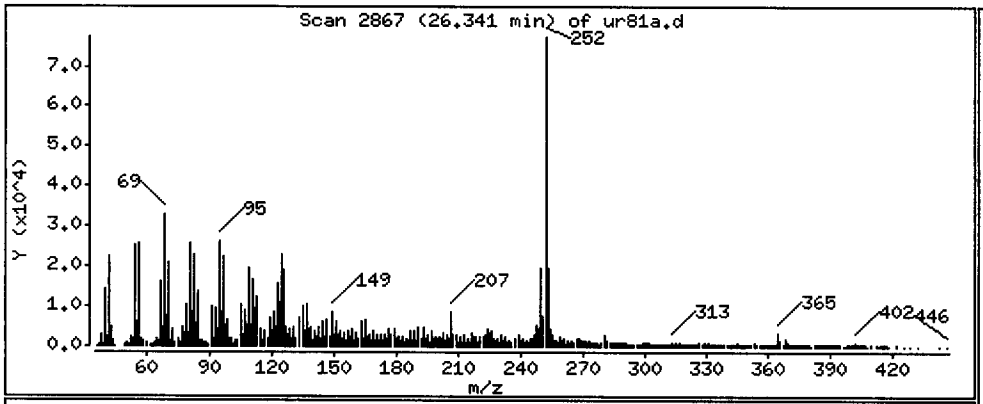
Operator: VTS/YZ

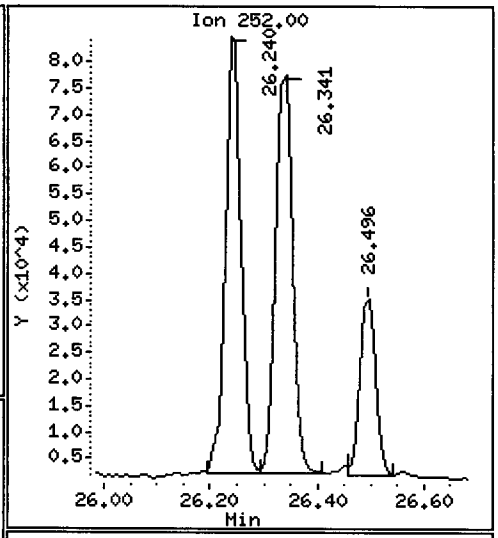
Column phase: ZB-5msi

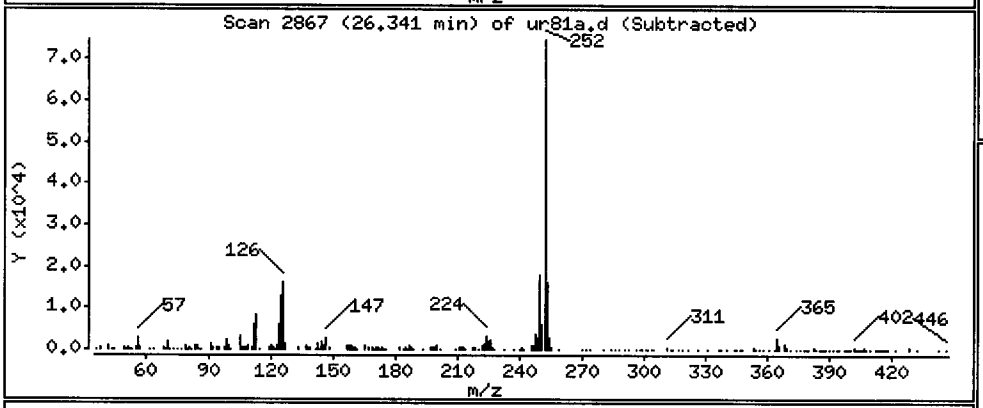
Column diameter: 0.25

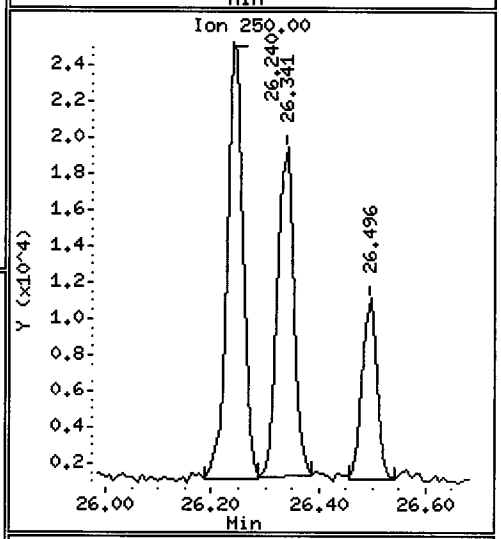
76 Benzo(a)pyrene

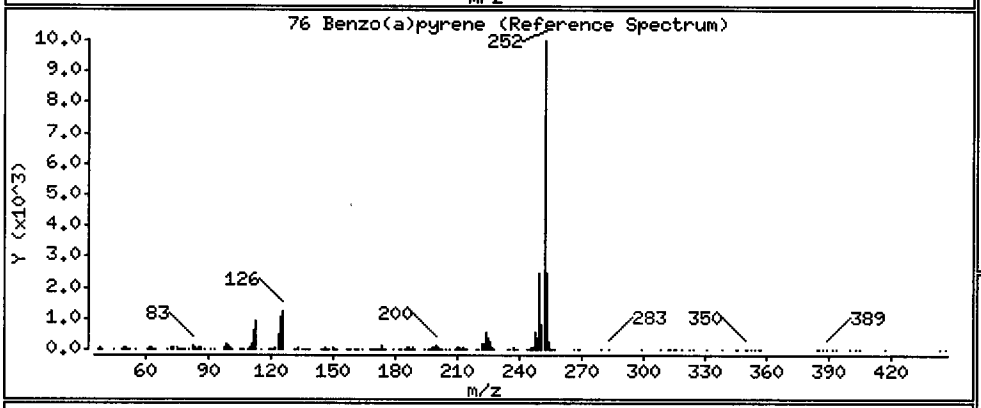
Concentration: 76.09 ug/kg

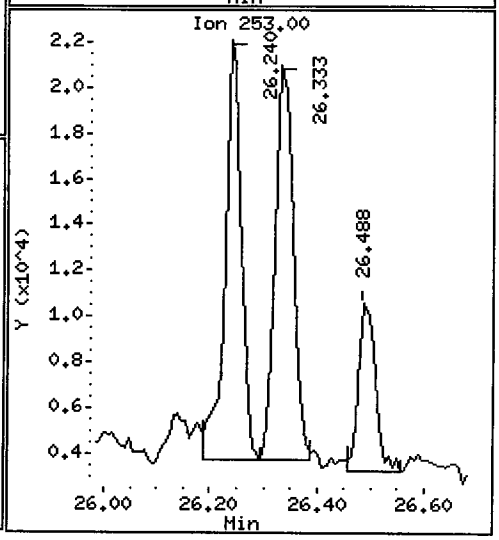


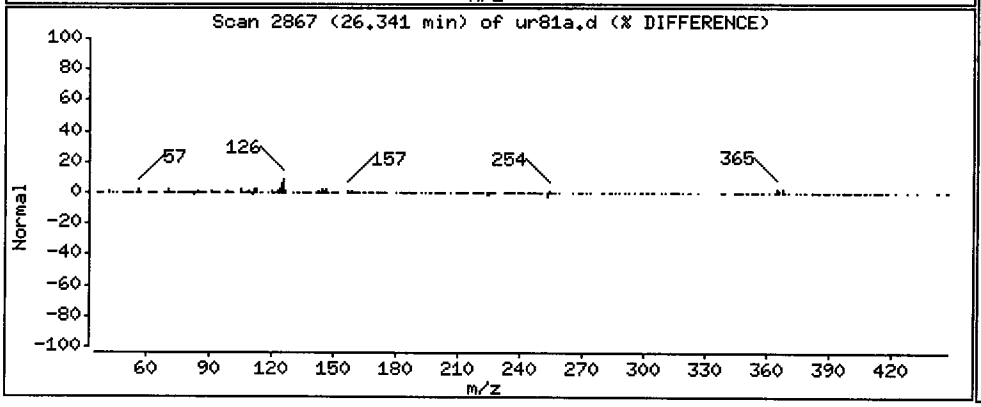












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

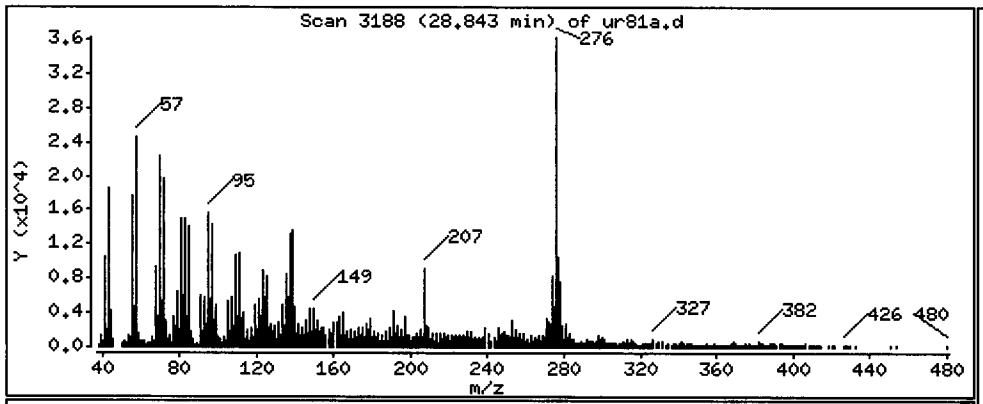
Client ID: IJ12-03 Instrument: nt10.i

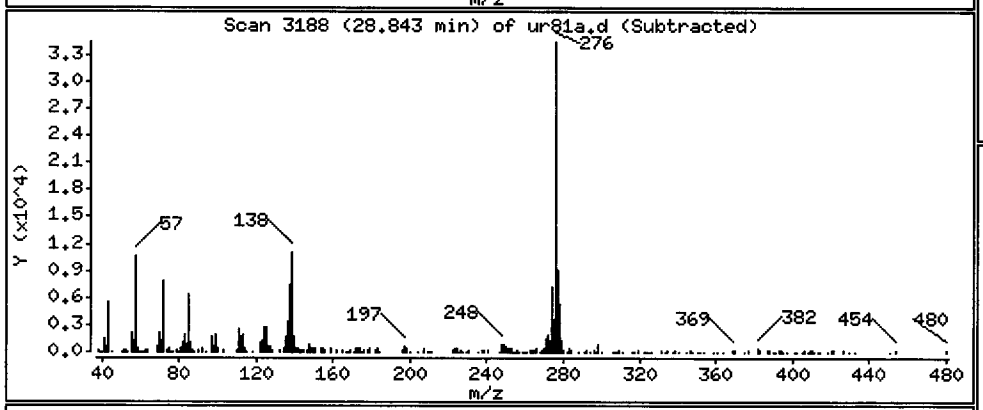
Sample Info: UR81A

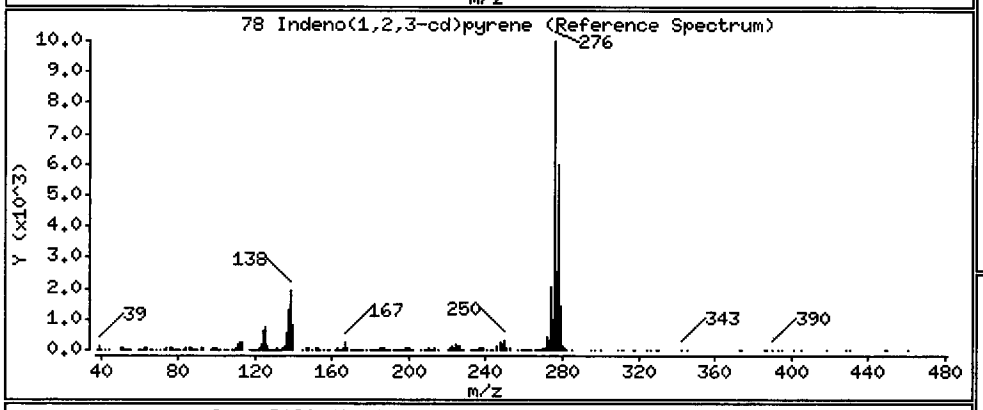
Volume Injected (uL): 1.0 Operator: VTS/YZ

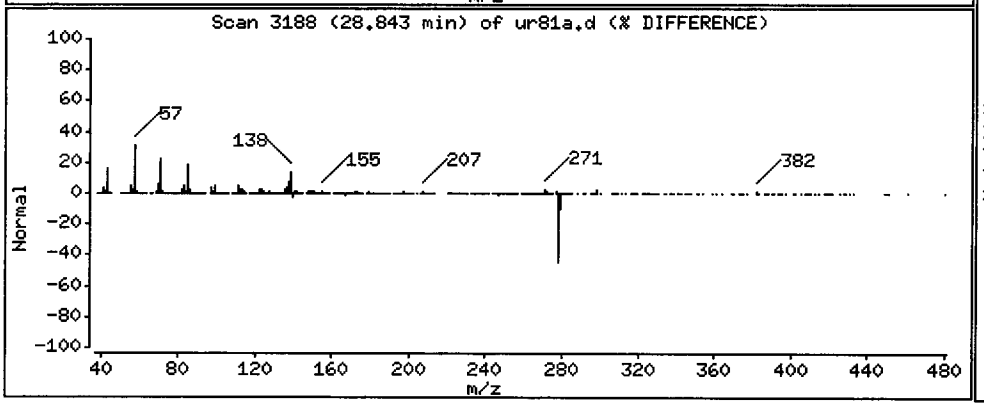
Column phase: ZB-5msi Column diameter: 0.25

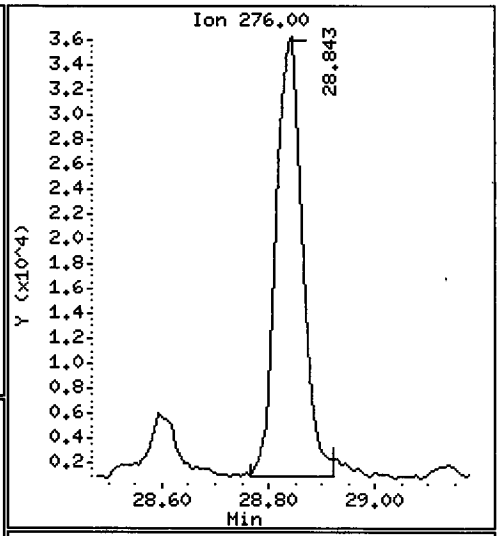
78 Indeno(1,2,3-cd)pyrene Concentration: 50.57 ug/kg

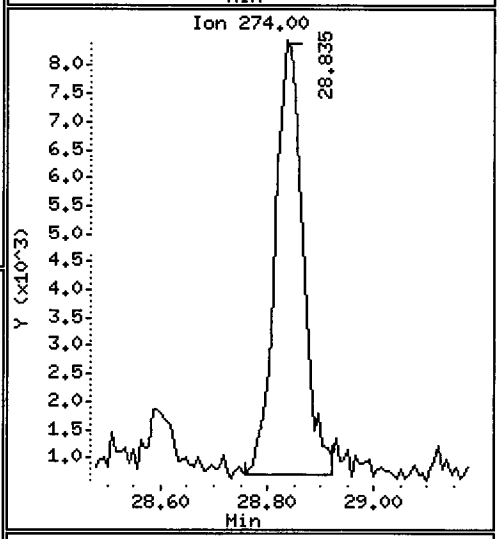


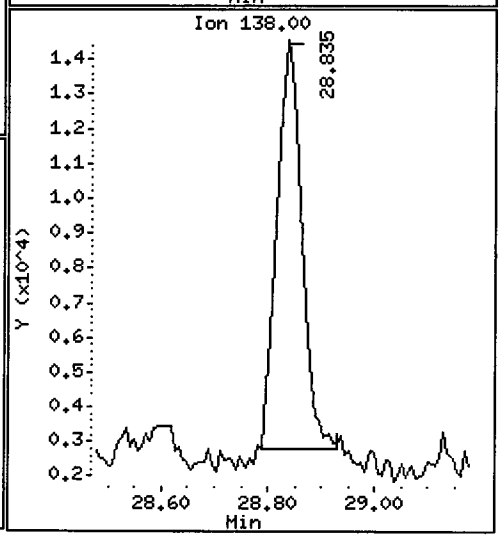












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

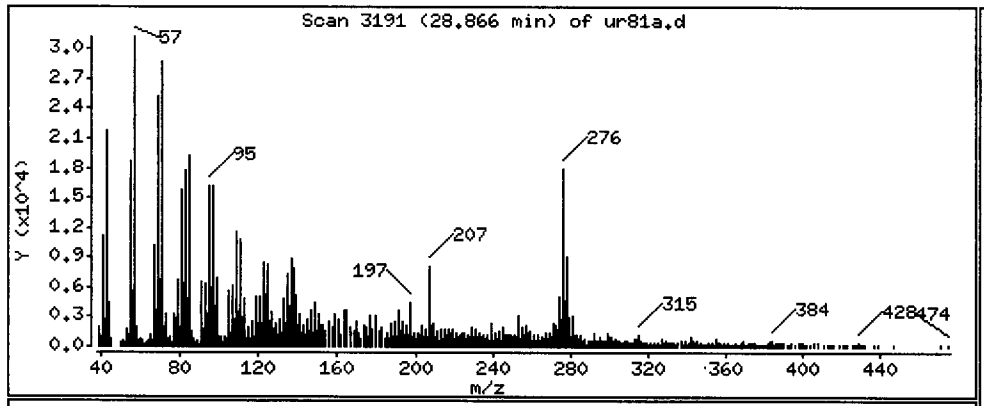
Operator: VTS/YZ

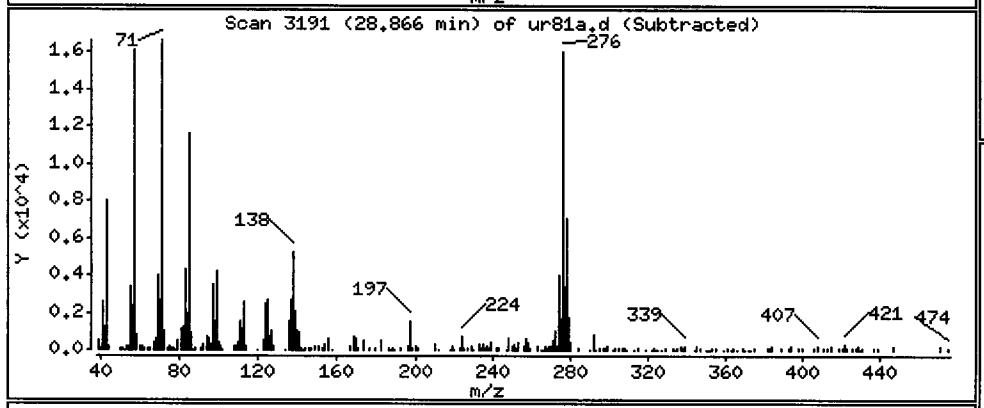
Column phase: ZB-5msi

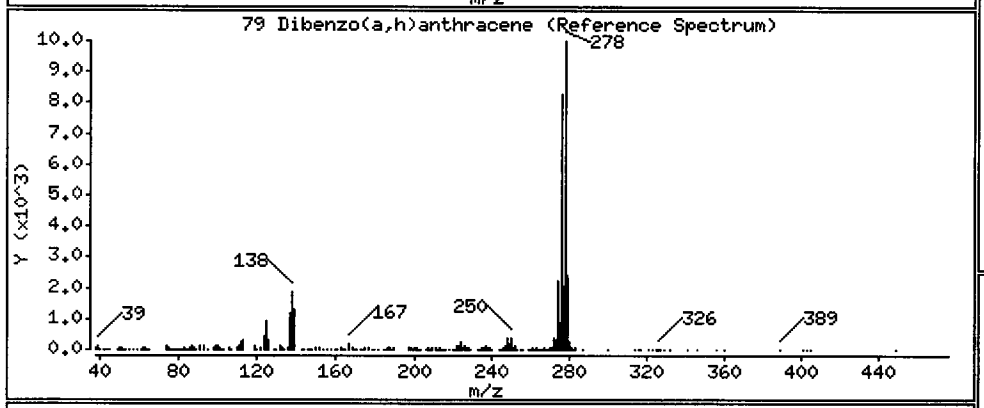
Column diameter: 0.25

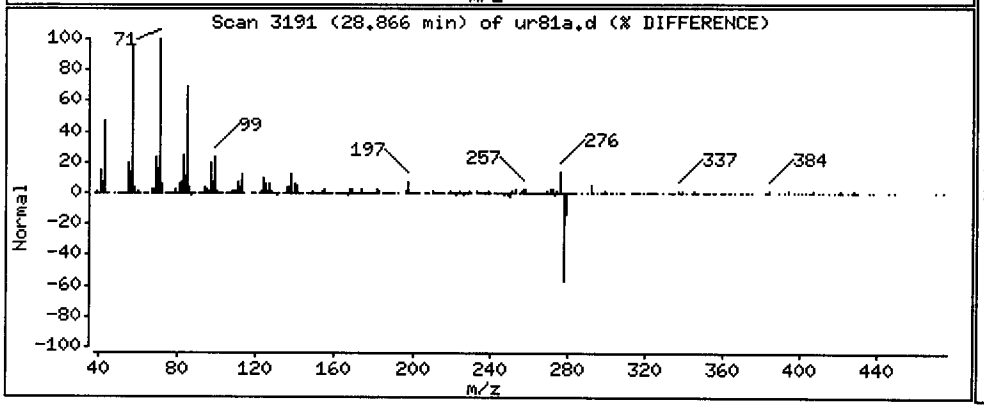
79 Dibenzo(a,h)anthracene

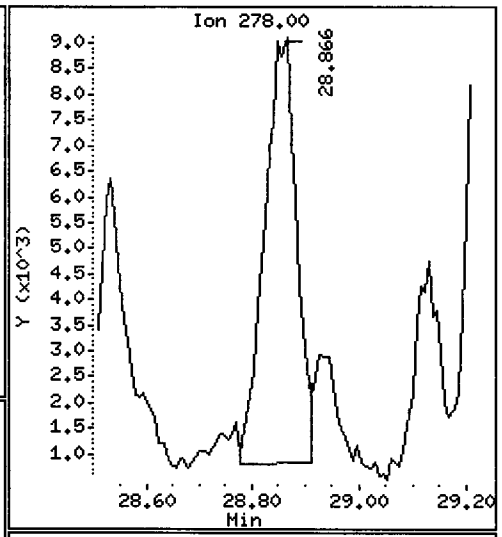
Concentration: 18.75 ug/kg

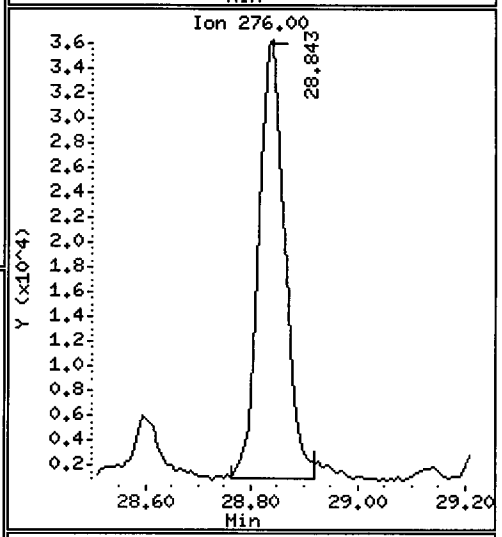


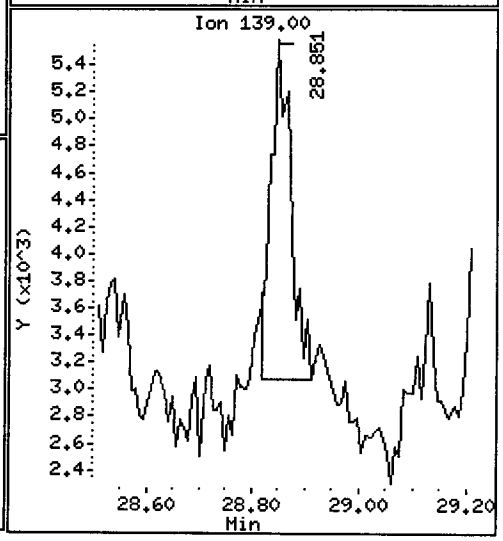












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

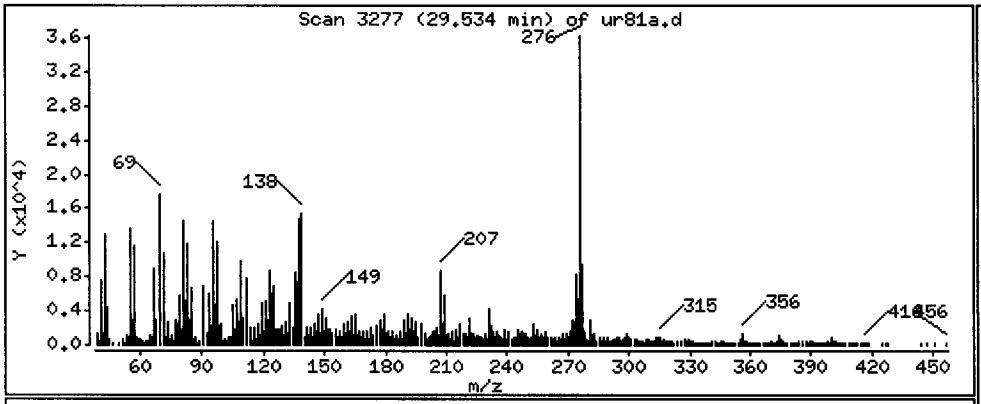
Client ID: IJ12-03 Instrument: nt10.i

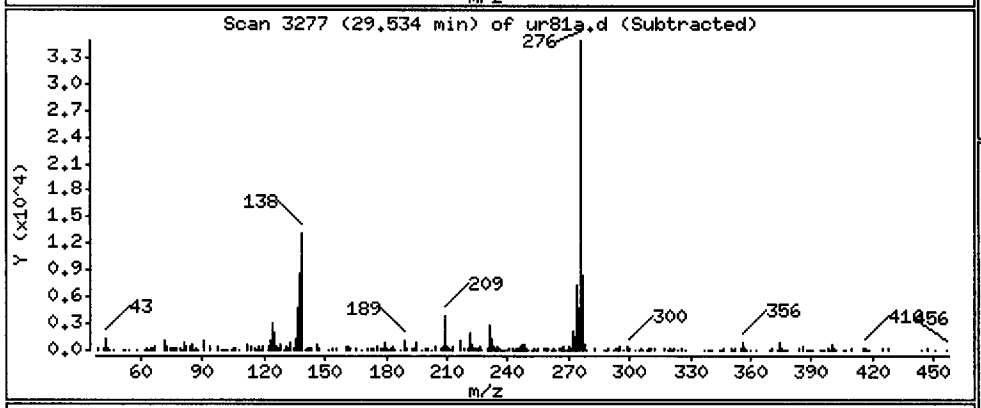
Sample Info: UR81A

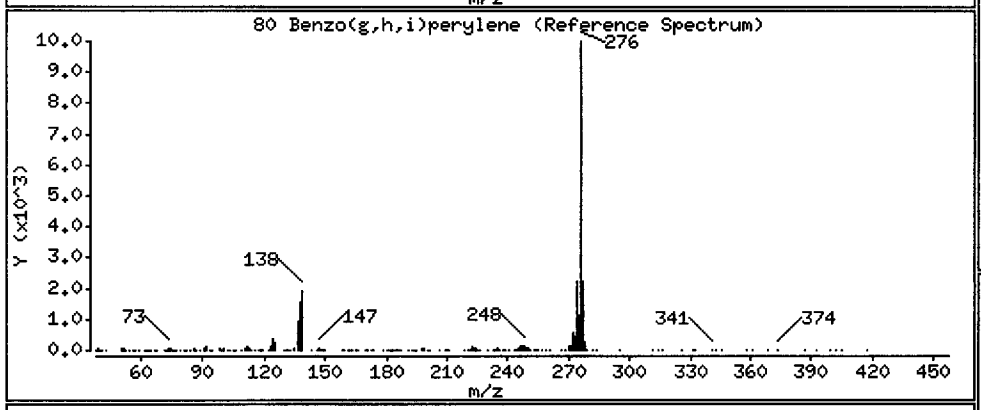
Volume Injected (uL): 1.0 Operator: VTS/YZ

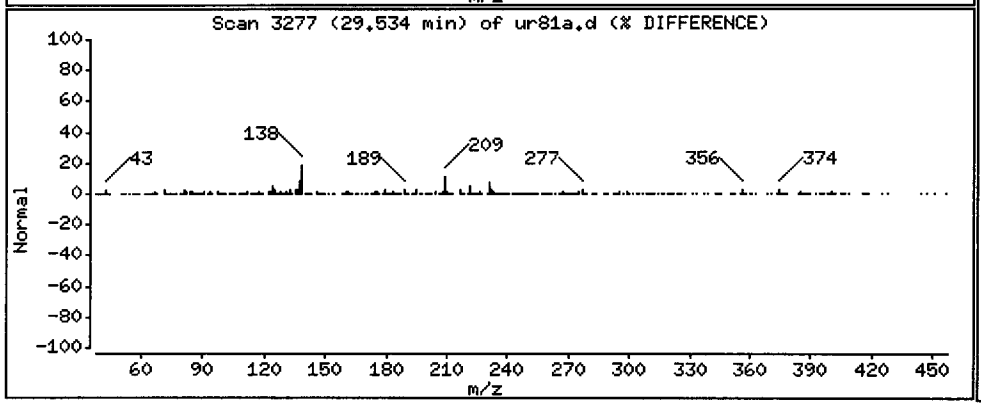
Column phase: ZB-5msi Column diameter: 0.25

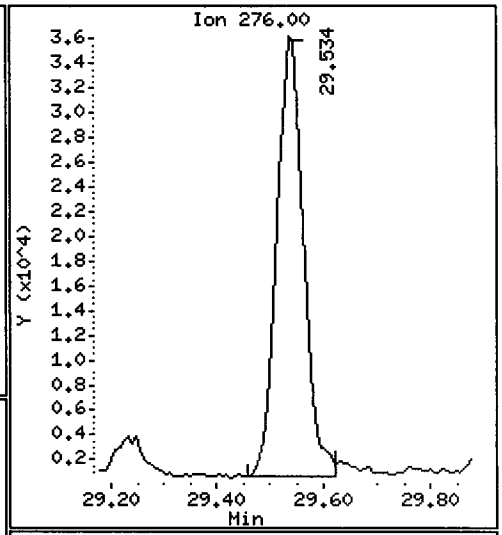
80 Benzo(g,h,i)perylene Concentration: 59.35 ug/kg

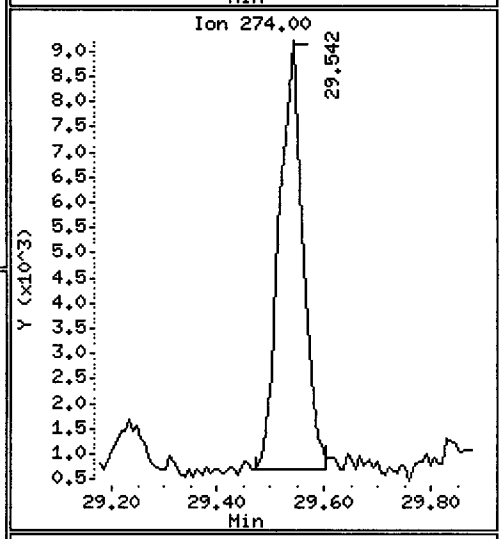


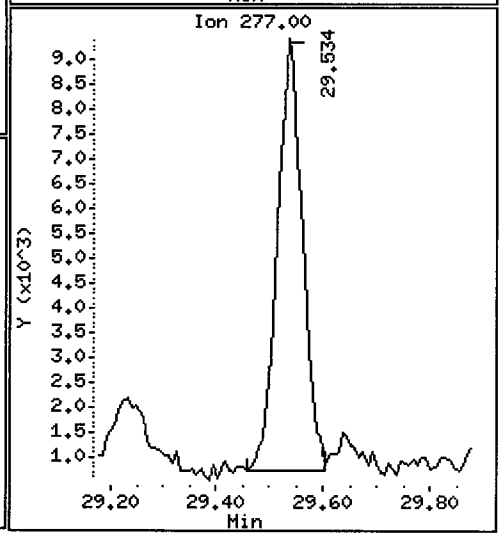












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

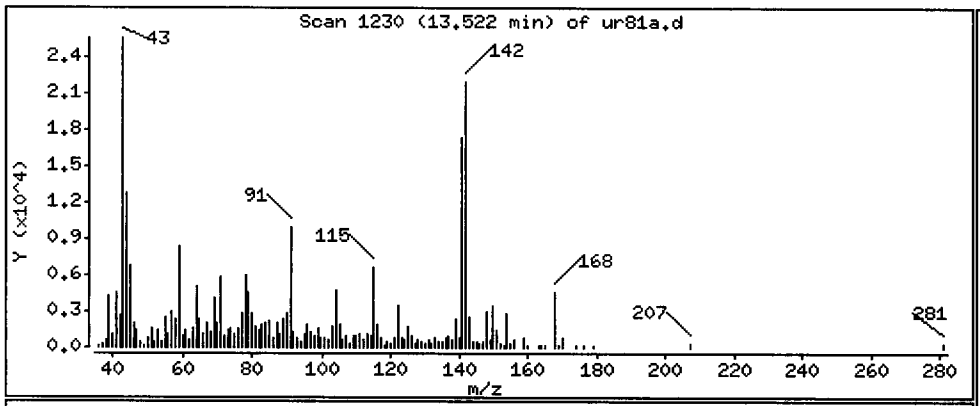
Client ID: IJ12-03 Instrument: nt10.i

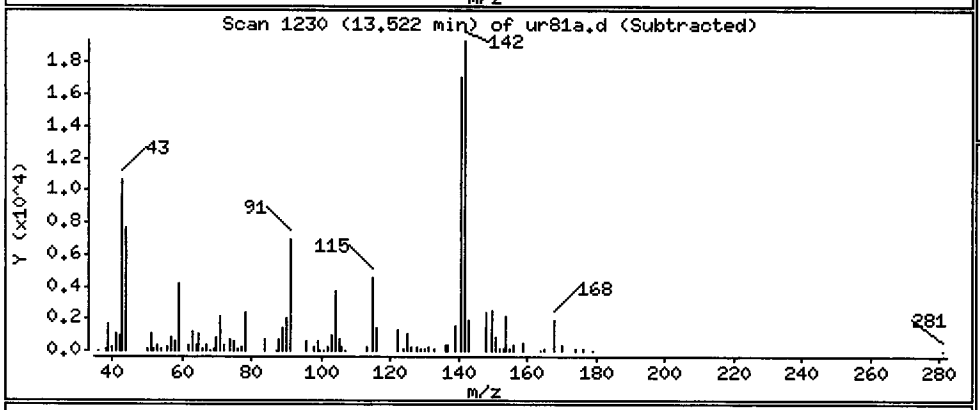
Sample Info: UR81A

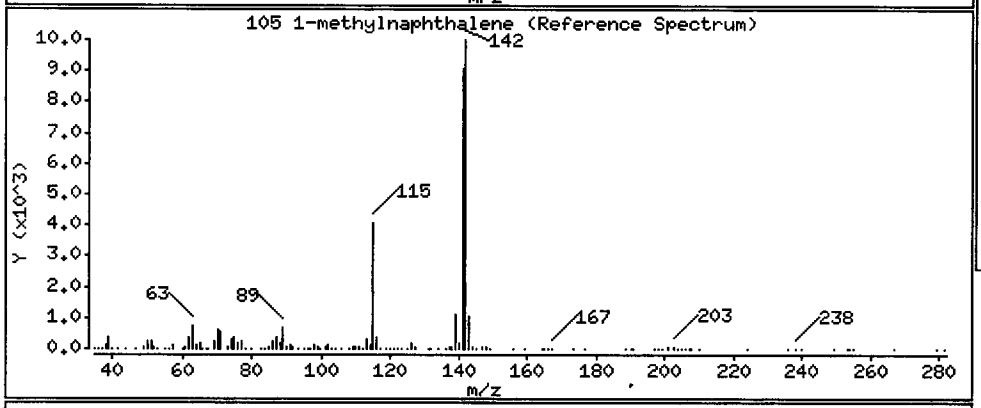
Volume Injected (uL): 1.0 Operator: VTS/YZ

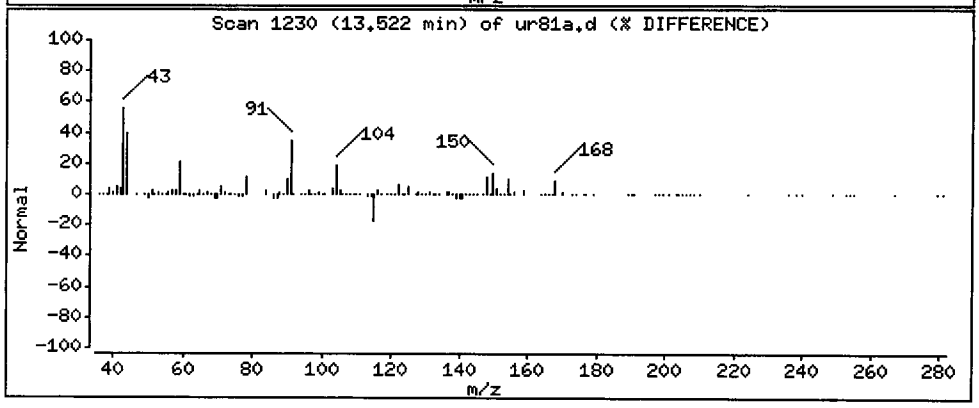
Column phase: ZB-5msi Column diameter: 0.25

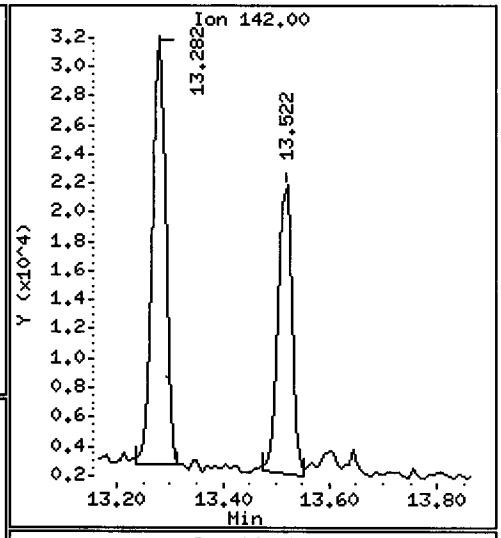
105 1-methylnaphthalene Concentration: 18.63 ug/kg

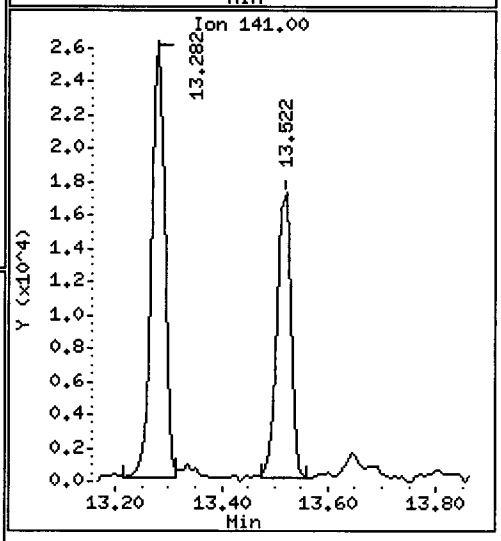












Data File: /chem1/nt10.i/20120508.b/ur81a.d

Date : 08-MAY-2012 17:52

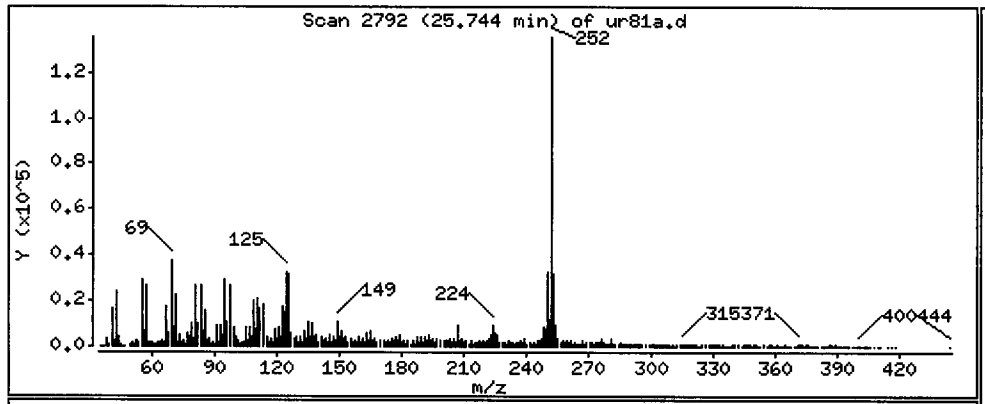
Client ID: IJ12-03 Instrument: nt10.i

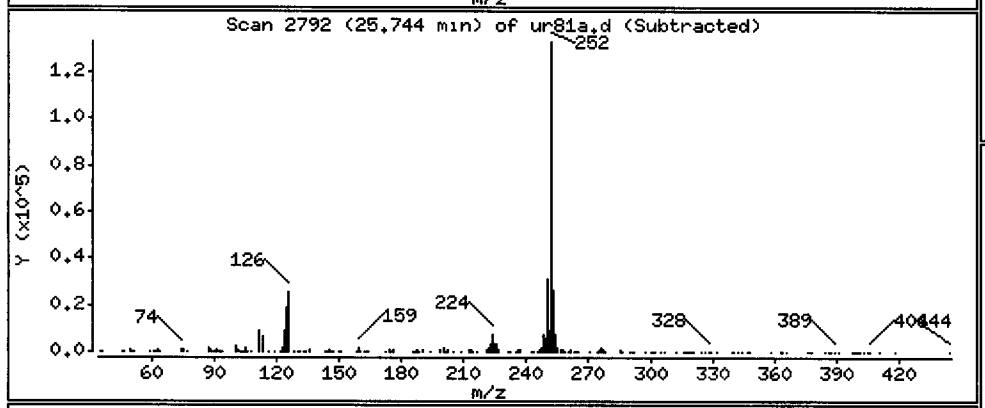
Sample Info: UR81A

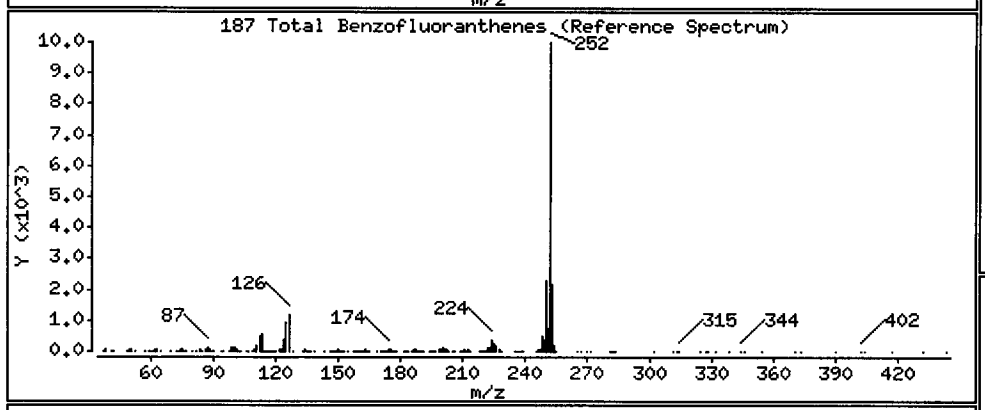
Volume Injected (uL): 1.0 Operator: VTS/YZ

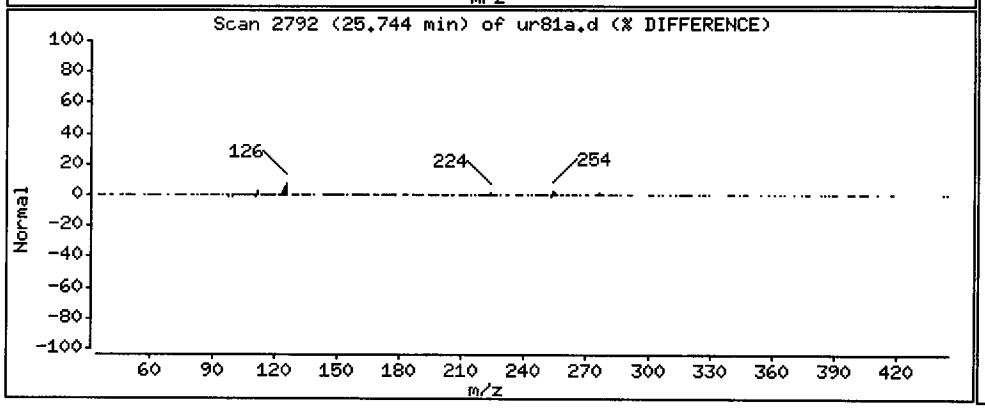
Column phase: ZB-5msi Column diameter: 0.25

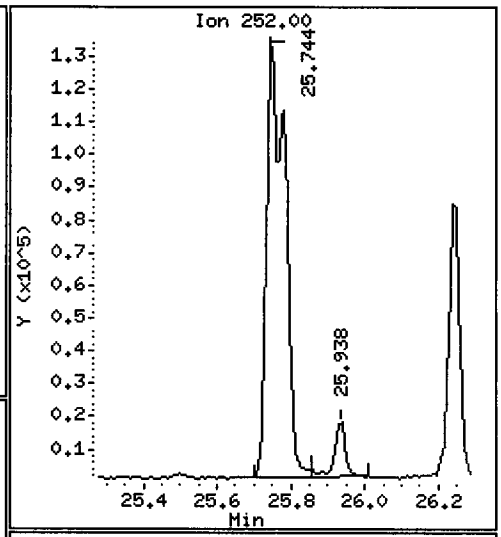
187 Total Benzofluoranthenes Concentration: 199.5 ug/kg

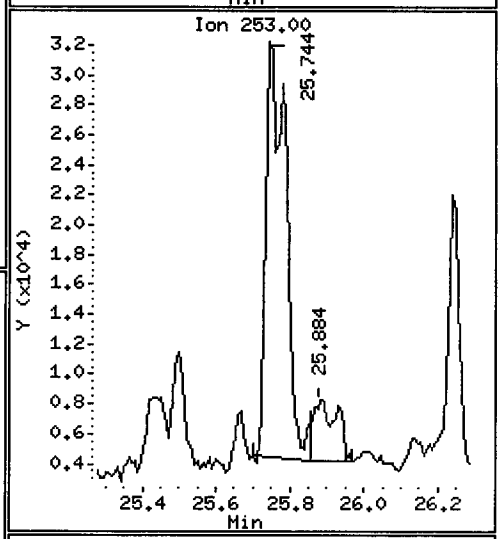


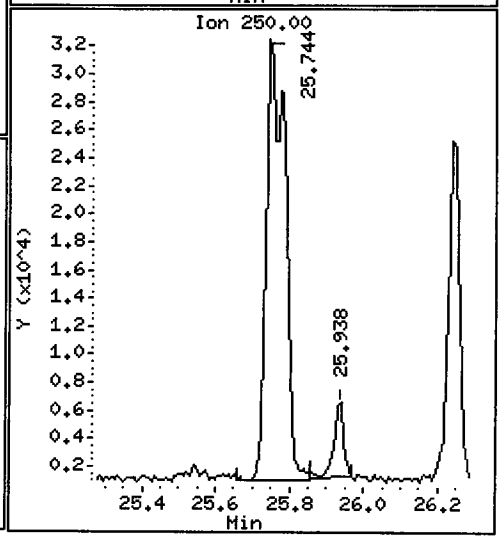












CO-ELUTION SUMMARY FOR FILE - ur81a.d

Lab ID: UR81A, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81b.d
Lab Smp Id: UR81B Client Smp ID: IJ12-05
Inj Date : 08-MAY-2012 18:29
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81B
Misc Info : 12-7393
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.30000	Weight of sample extracted (g)
M	59.50000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.690	6.667	(0.739)	379432	4.28346	418.0
$ 2 Phenol-d5	99	8.406	8.398	(0.929)	488867	4.43839	433.2
3 Phenol	94	8.429	8.421	(0.932)	20152	0.16692	16.29
$ 5 2-Chlorophenol-d4	132	8.661	8.653	(0.957)	436190	4.57577	446.6
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	258946	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.428	9.428	(1.042)	178557	2.76431	269.8
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.358	9.350	(1.034)	9014	0.16022	15.64
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.917	9.909	(1.096)	35583	0.35917	35.05
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.873)	273281	3.06605	299.2
22 2,4-Dimethylphenol	107	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.719	11.719	(1.000)	1042474	4.00000	
	28 Naphthalene	128	11.766	11.766	(1.004)	52077	0.20003	19.52
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	25222	0.14127	13.79
$	36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	585397	3.05910	298.6
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.635	15.627	(1.000)	560986	4.00000	
	44 Acenaphthene	153	Compound Not Detected.					
	46 Dibenzofuran	168	16.060	16.060	(1.027)	29289	0.13261	12.94
	50 Diethylphthalate	149	16.732	16.732	(1.070)	31785	0.19400	18.93
	49 Fluorene	166	16.833	16.833	(1.077)	22298	0.13234	12.92
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.411	17.411	(1.114)	131712	5.11769	499.5
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.910	18.903	(1.000)	881936	4.00000	
	60 Phenanthrene	178	18.957	18.957	(1.002)	107767	0.49412	48.22
	61 Anthracene	178	19.057	19.050	(1.008)	50037	0.21735	21.21
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.394	21.363	(1.131)	485269	1.95481	190.8
	65 Pyrene	202	21.796	21.781	(0.909)	442323	1.68296	164.2
$	66 Terphenyl-d14	244	22.106	22.098	(0.922)	543913	3.30029	322.1
	67 Butylbenzylphthalate	149	23.043	23.042	(0.961)	13272	0.11863	11.58
	68 Benzo(a)anthracene	228	23.941	23.941	(0.999)	136777	0.57992	56.60
*	69 Chrysene-d12	240	23.972	23.964	(1.000)	869711	4.00000	
	71 Chrysene	228	24.018	24.010	(1.002)	319704	1.51849	148.2
	72 bis(2-Ethylhexyl)phthalate	149	24.088	24.080	(0.961)	923262	5.07891	495.7
*	134 Di-n-octylphthalate-d4	153	25.063	25.056	(1.000)	1398052	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.341	26.333	(0.996)	97867	0.46586	45.47
*	77 Perylene-d12	264	26.449	26.441	(1.000)	864778	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.843	28.828	(1.091)	67262	0.28138	27.46
	79 Dibenzo(a,h)anthracene	278	28.866	28.859	(1.091)	22124	0.12043	11.75(M)
	80 Benzo(g,h,i)perylene	276	29.535	29.527	(1.117)	66227	0.32044	31.27
	105 1-methylnaphthalene	142	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	25.752	25.783	(0.974)	331222	1.40778	137.4

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81b.d
Lab Smp Id: UR81B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7393

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-05
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	258946	-4.75
27 Naphthalene-d8	1080694	540347	2161388	1042474	-3.54
42 Acenaphthene-d10	623821	311910	1247642	560986	-10.07
59 Phenanthrene-d10	999143	499572	1998286	881936	-11.73
69 Chrysene-d12	1001009	500504	2002018	869711	-13.12
134 Di-n-octylphthala	1489422	744711	2978844	1398052	-6.13
77 Perylene-d12	988348	494174	1976696	864778	-12.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.05
59 Phenanthrene-d10	18.90	18.40	19.40	18.91	0.04
69 Chrysene-d12	23.96	23.46	24.46	23.97	0.03
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.03
77 Perylene-d12	26.44	25.94	26.94	26.45	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

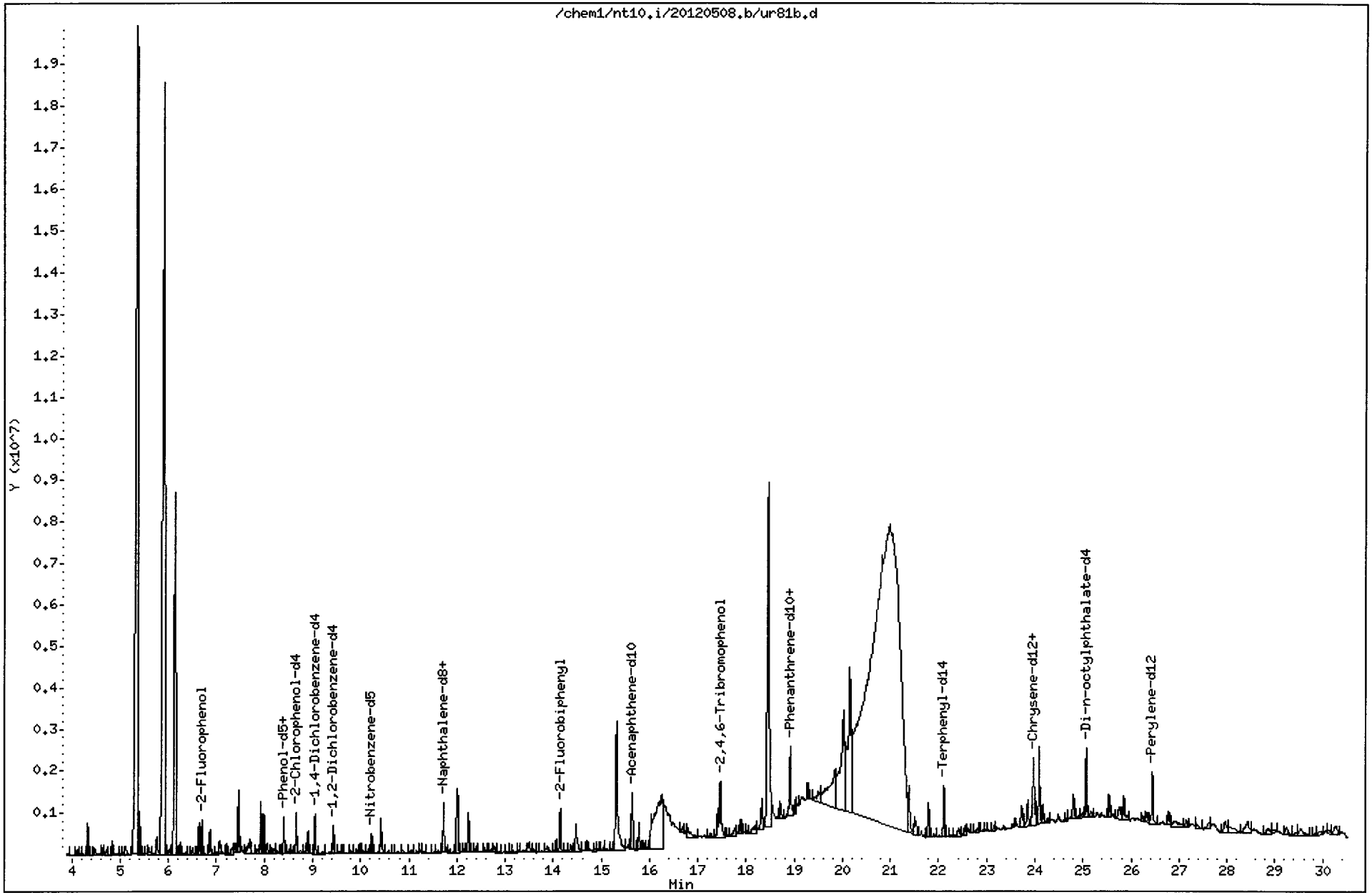
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81B
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7393

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-05
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	732.0	418.0	57.11	30-160
$ 2 Phenol-d5	732.0	433.2	59.18	30-160
$ 5 2-Chlorophenol-d4	732.0	446.6	61.01	30-160
$ 10 1,2-Dichlorobenzen	488.0	269.8	55.29	30-160
$ 18 Nitrobenzene-d5	488.0	299.2	61.32	30-160
$ 36 2-Fluorobiphenyl	488.0	298.6	61.18	30-160
$ 55 2,4,6-Tribromophen	732.0	499.5	68.24	30-160
$ 66 Terphenyl-d14	488.0	322.1	66.01	30-160

Data File: /chem1/nt10.i/20120508.b/ur81b.d
Date : 08-MAY-2012 18:29
Client ID: IJ12-05
Sample Info: UR81B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

Operator: VTS/YZ

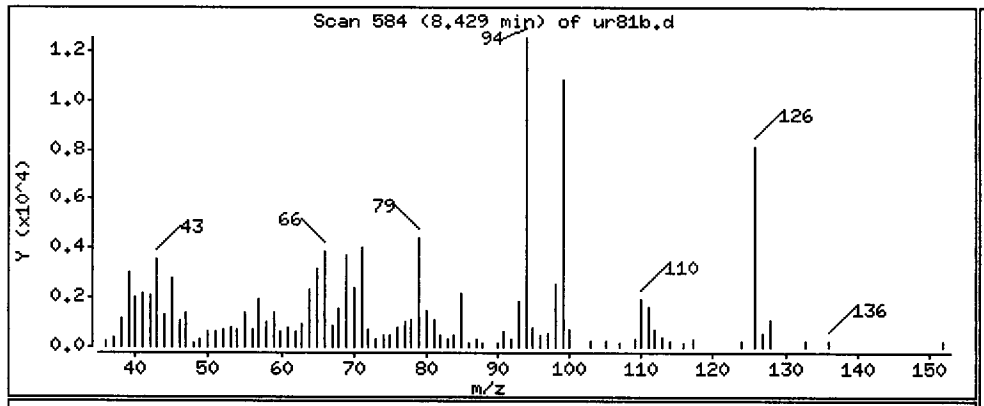
Column phase: ZB-5msi

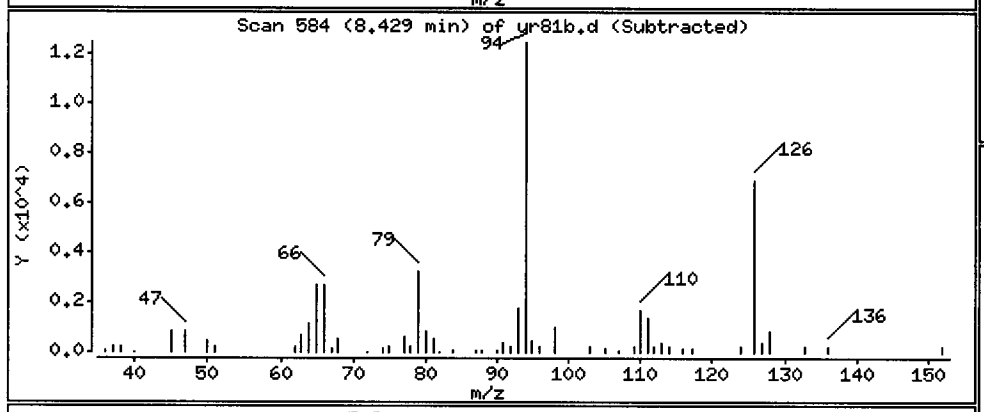
Column diameter: 0.25

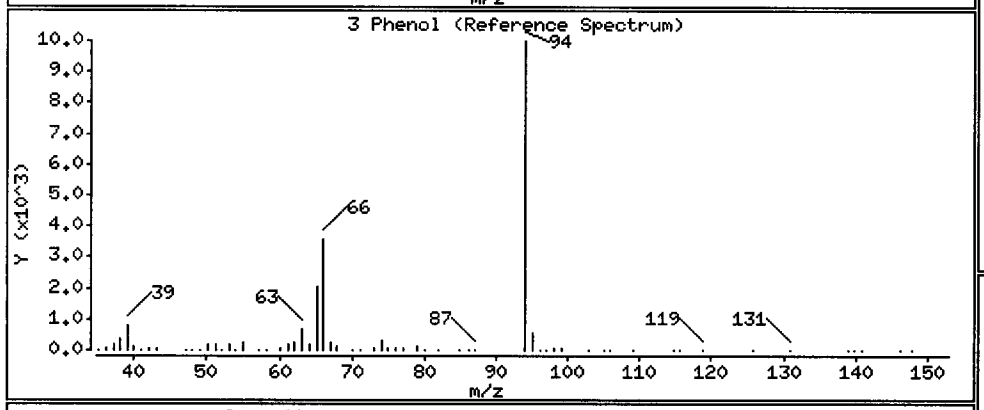
3 Phenol

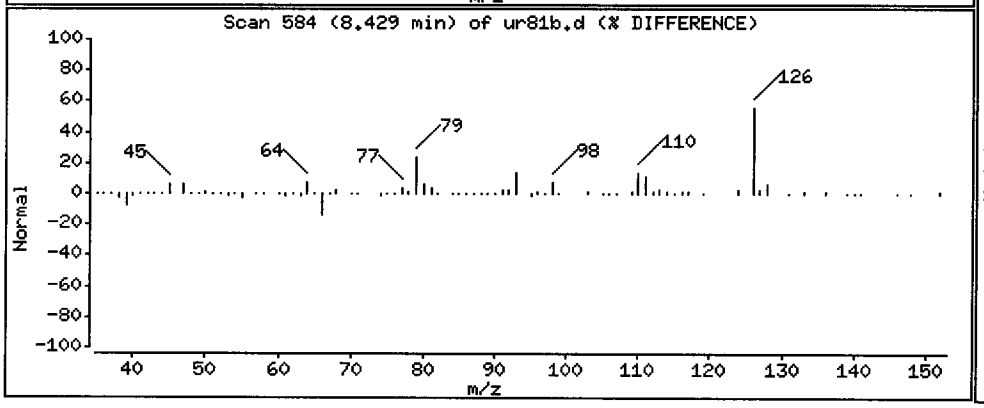
Concentration: 16.29 ug/kg

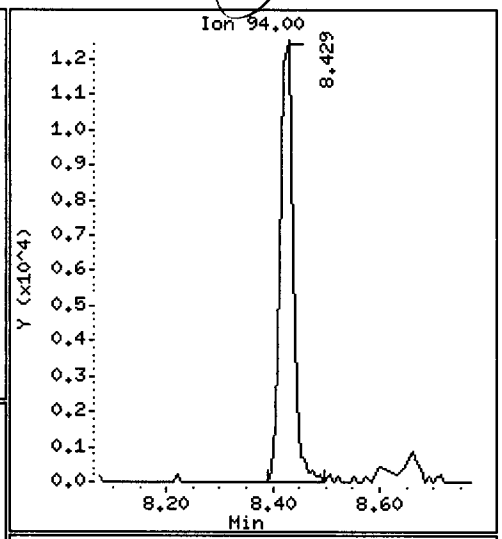
JLR

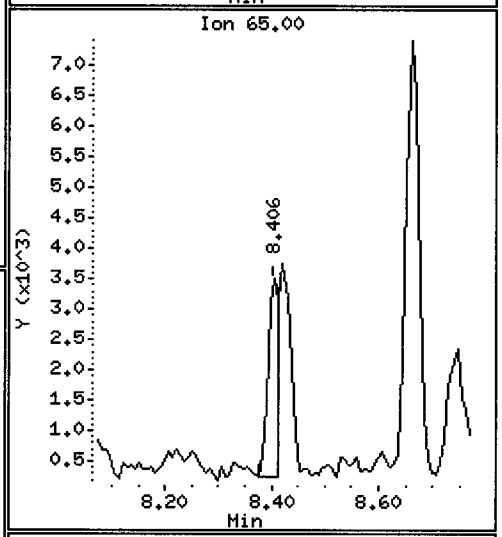


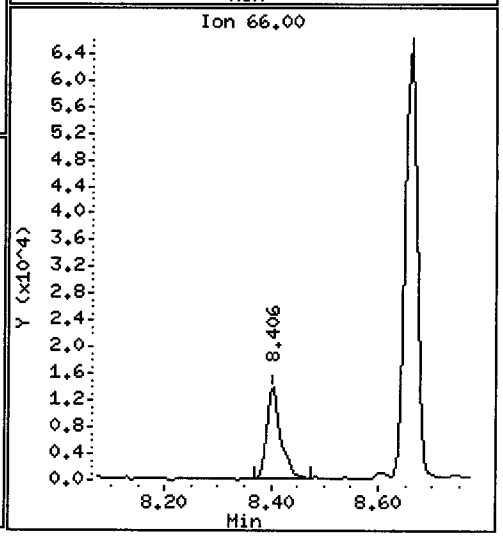












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

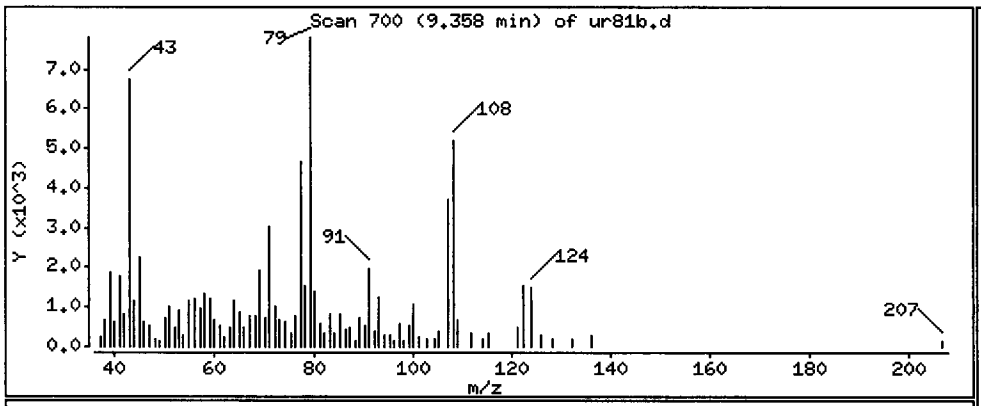
Client ID: IJ12-05 | Instrument: nt10.i

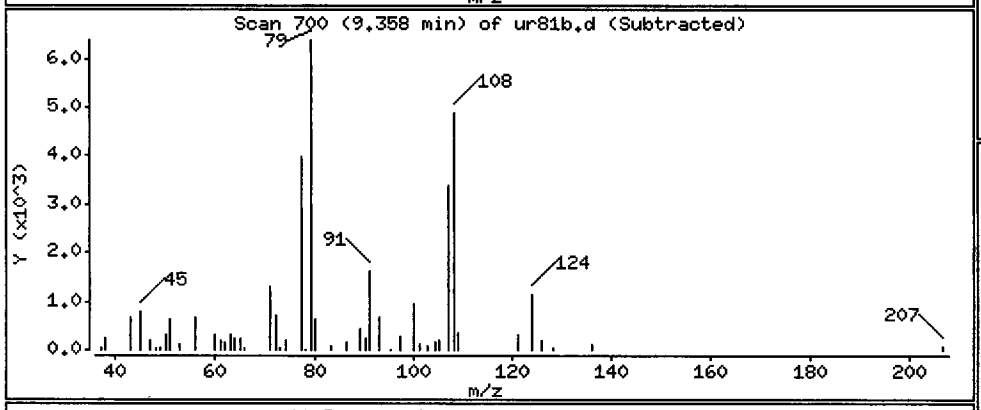
Sample Info: UR81B

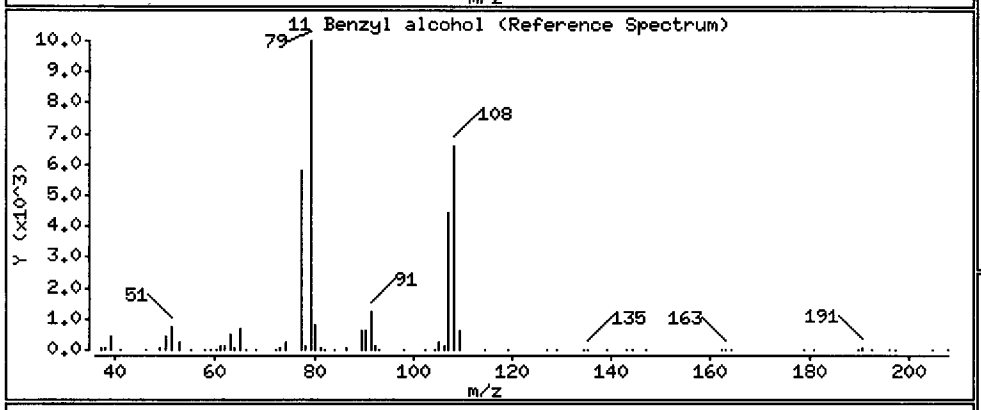
Volume Injected (uL): 1.0 | Operator: VTS/YZ

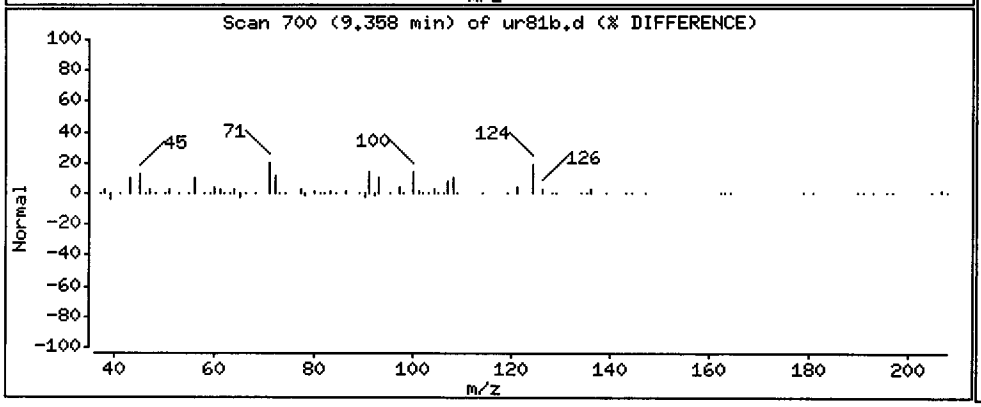
Column phase: ZB-5msi | Column diameter: 0.25

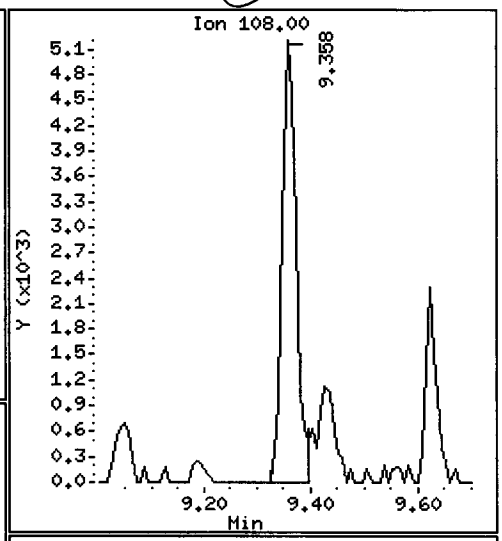
11 Benzyl alcohol | Concentration: 15.64 ug/kg

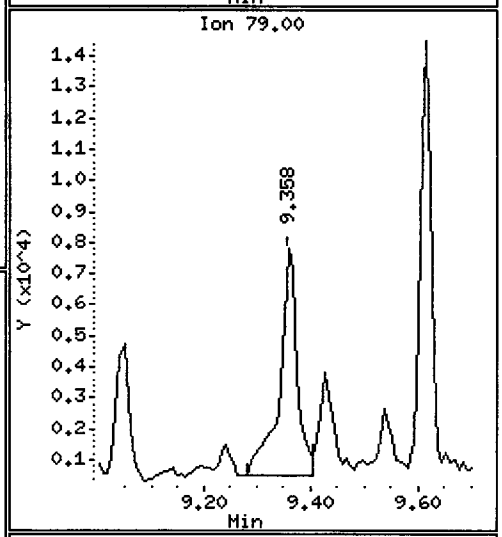


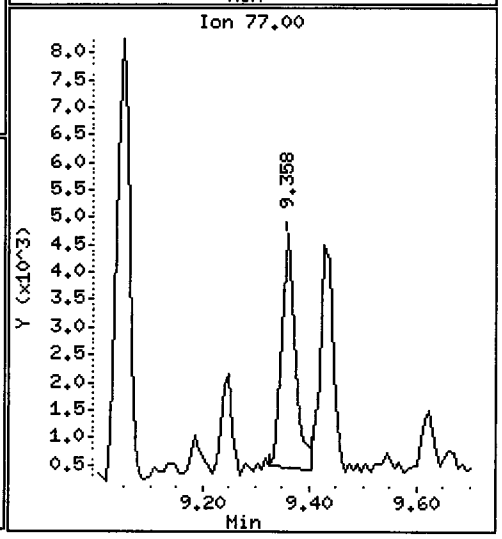












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05 | Instrument: nt10.i

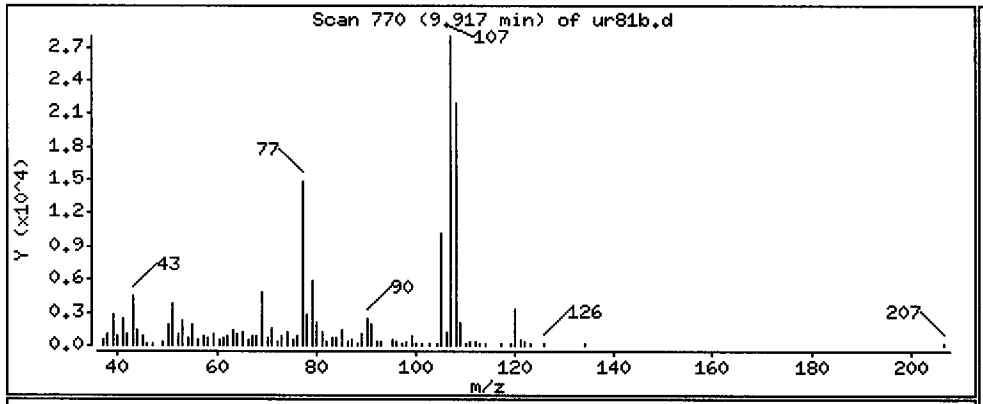
Sample Info: UR81B

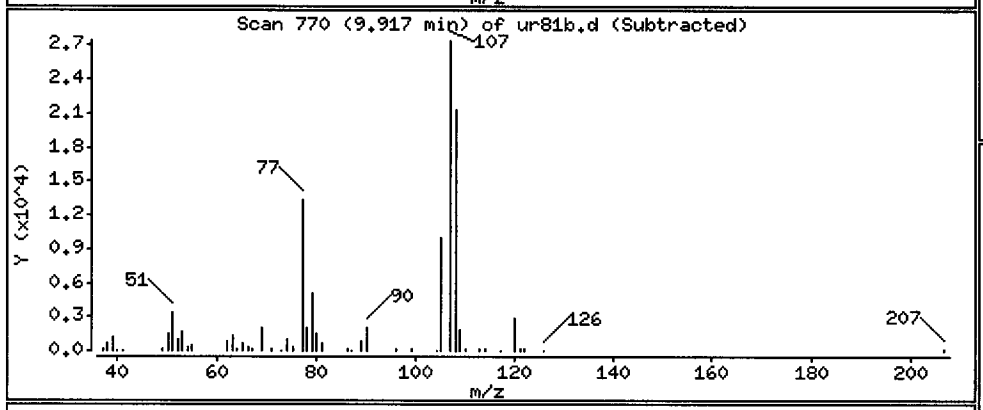
Volume Injected (uL): 1.0 | Operator: VTS/YZ

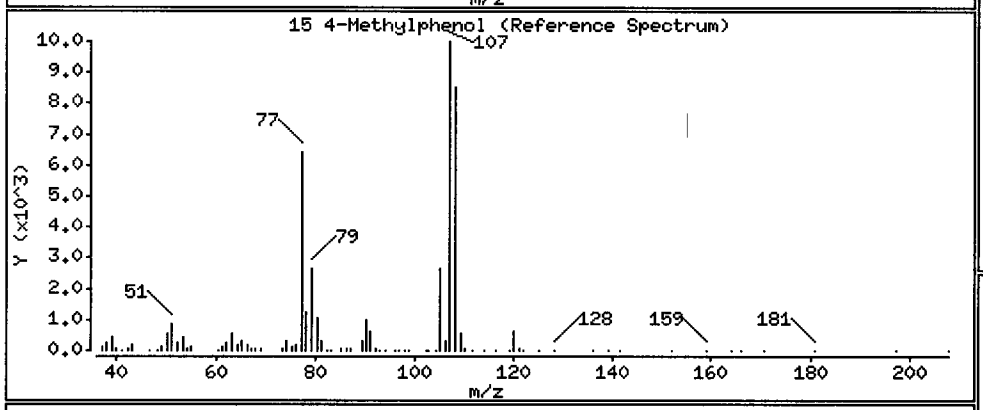
Column phase: ZB-5msi | Column diameter: 0.25

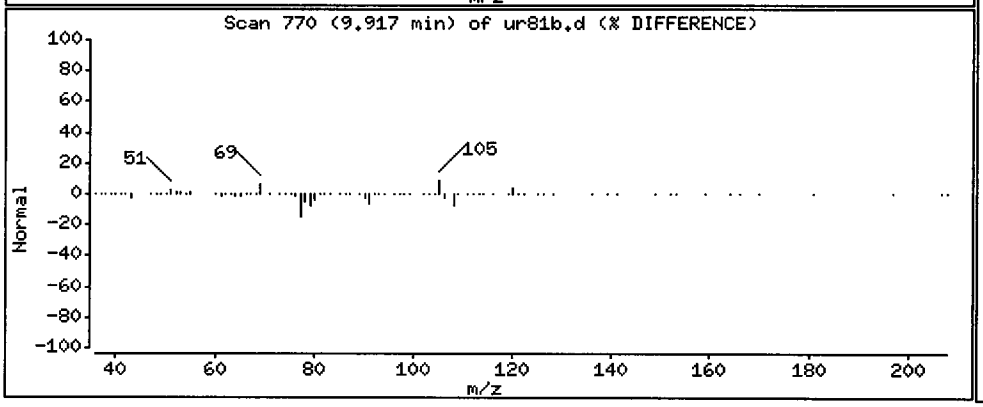
15 4-Methylphenol | Concentration: 35.05 ug/kg

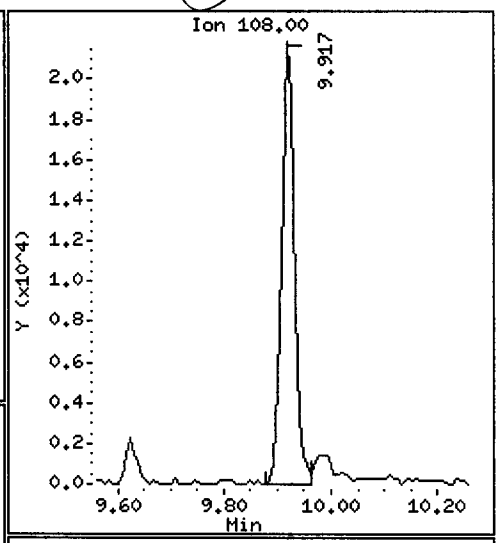
Gum

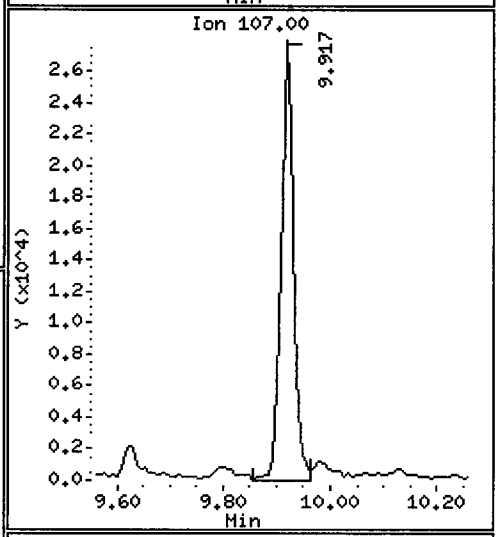


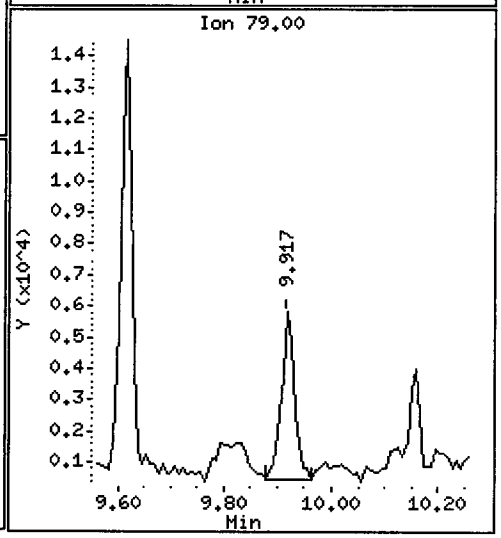












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

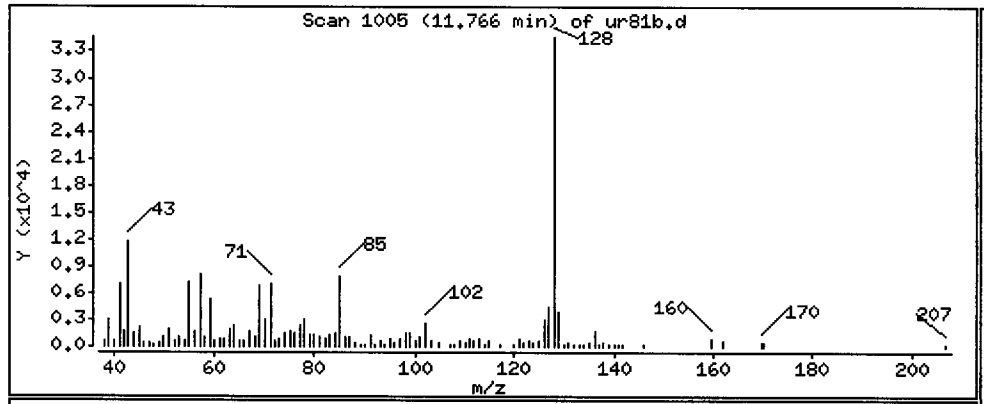
Operator: VTS/YZ

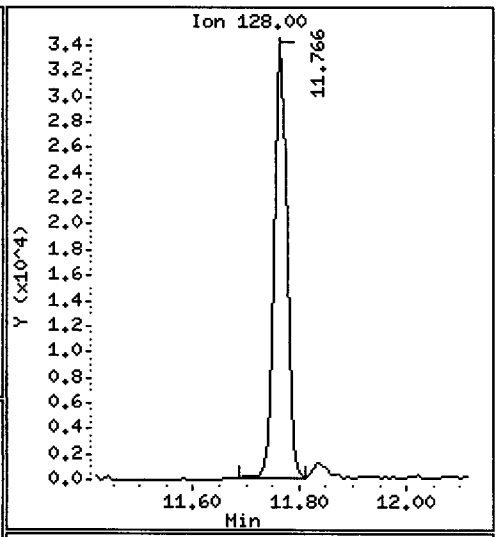
Column phase: ZB-5msi

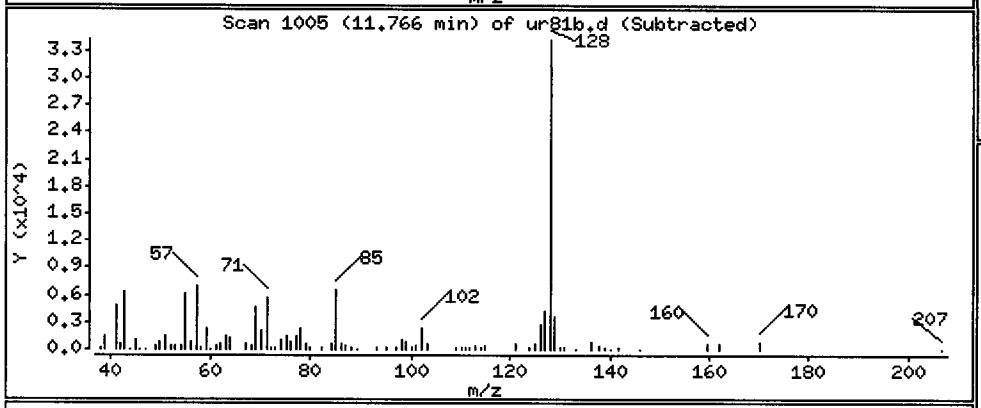
Column diameter: 0.25

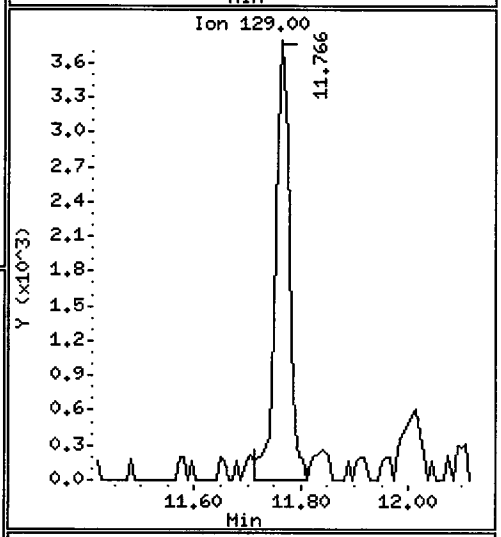
28 Naphthalene

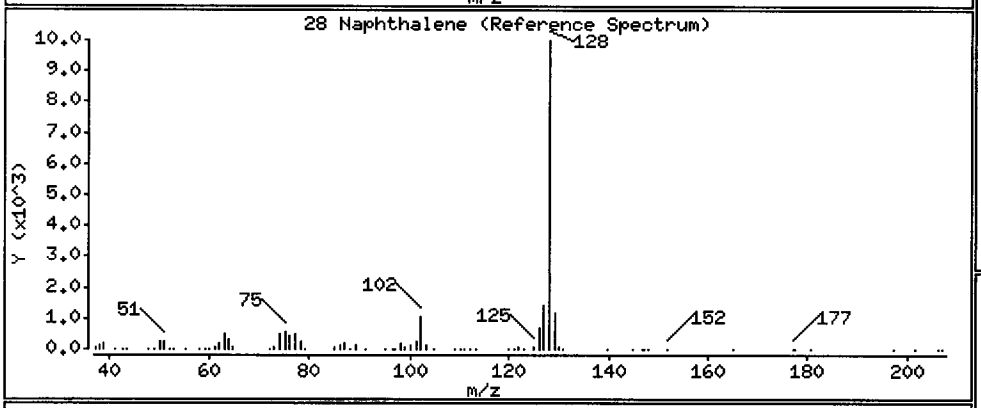
Concentration: 19.52 ug/kg

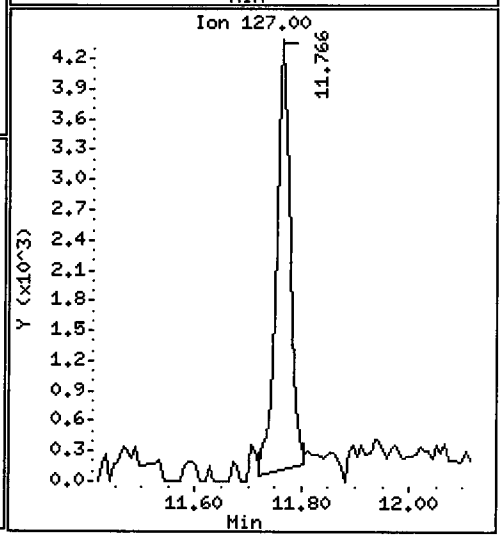


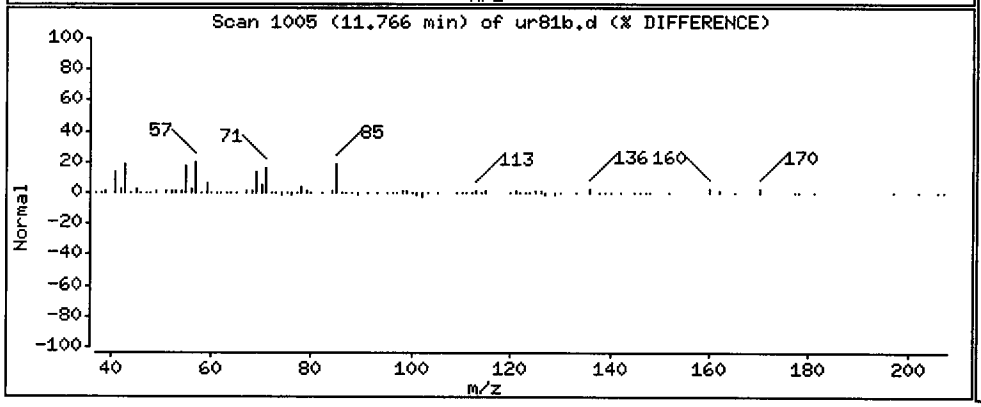












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

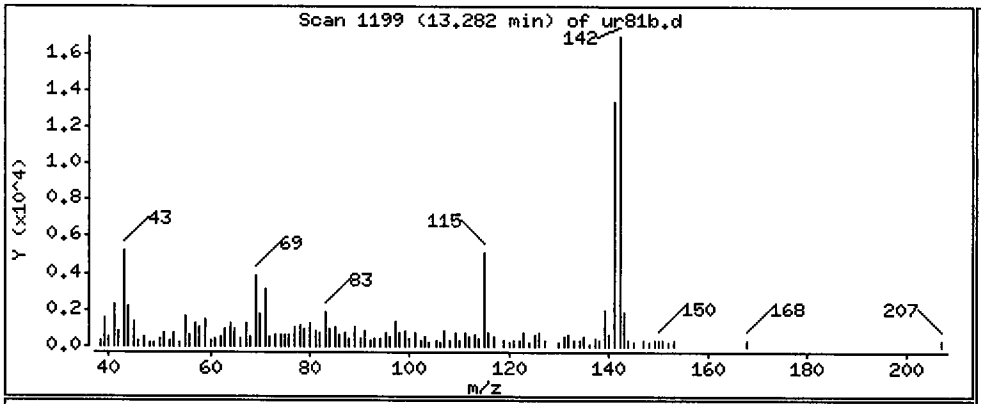
Operator: VTS/YZ

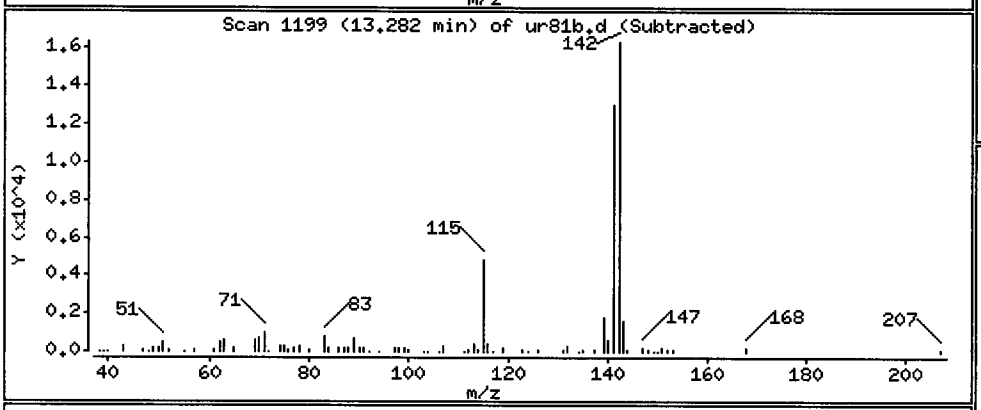
Column phase: ZB-5msi

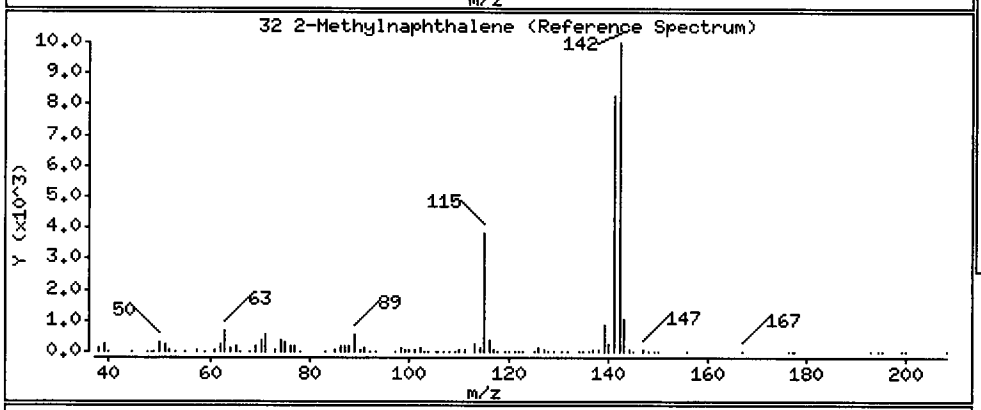
Column diameter: 0.25

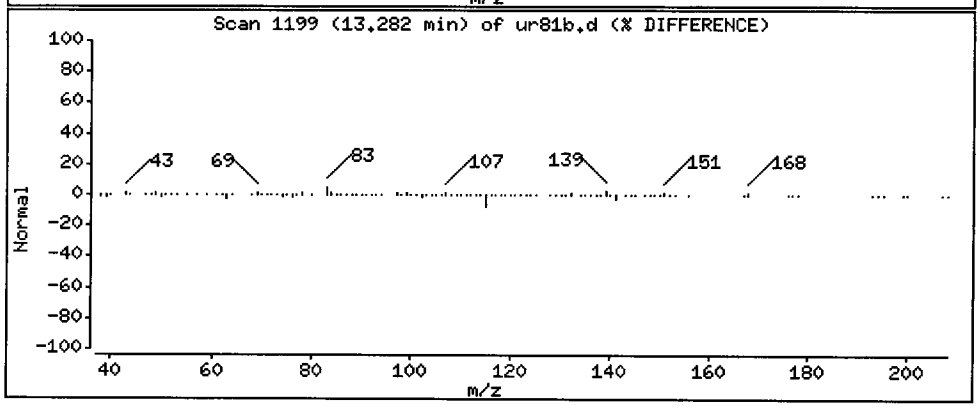
32 2-Methylnaphthalene

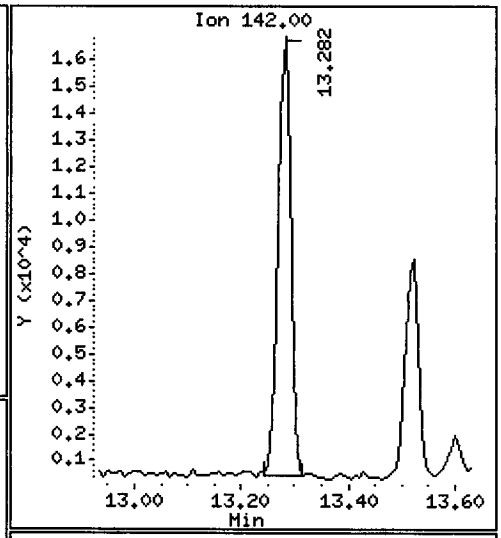
Concentration: 13.79 ug/kg

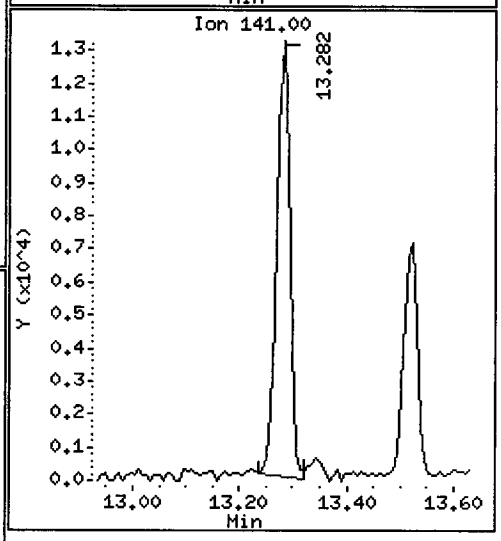












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

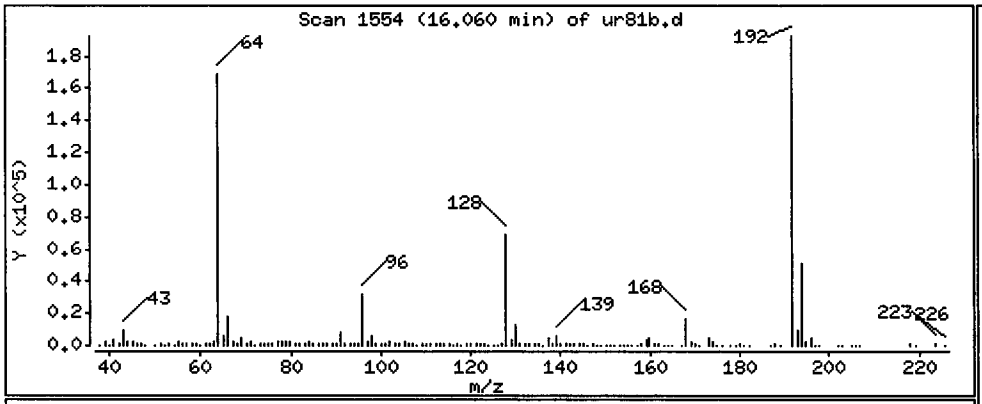
Client ID: IJ12-05 | Instrument: nt10.i

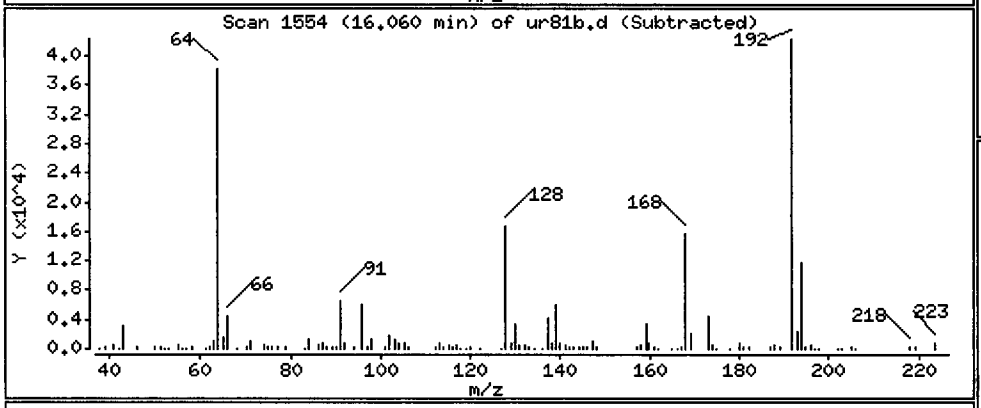
Sample Info: UR81B

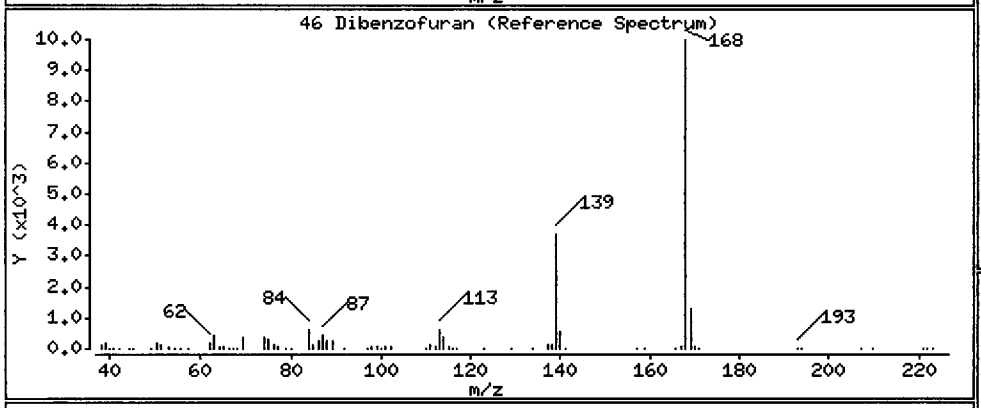
Volume Injected (uL): 1.0 | Operator: VTS/YZ

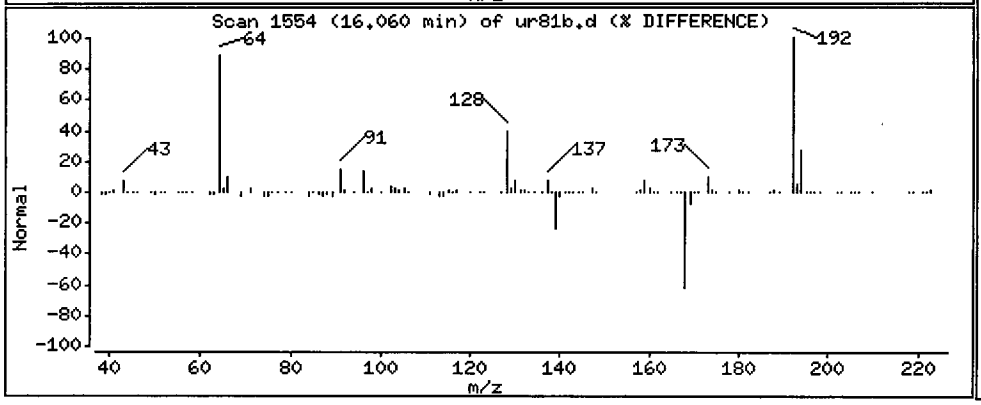
Column phase: ZB-5msi | Column diameter: 0.25

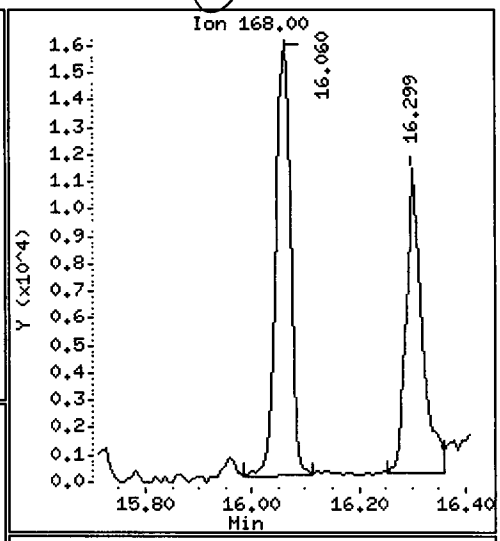
46 Dibenzofuran | Concentration: 12.94 ug/kg

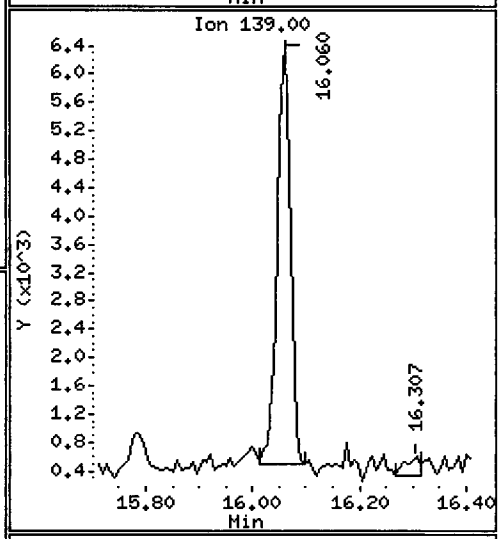


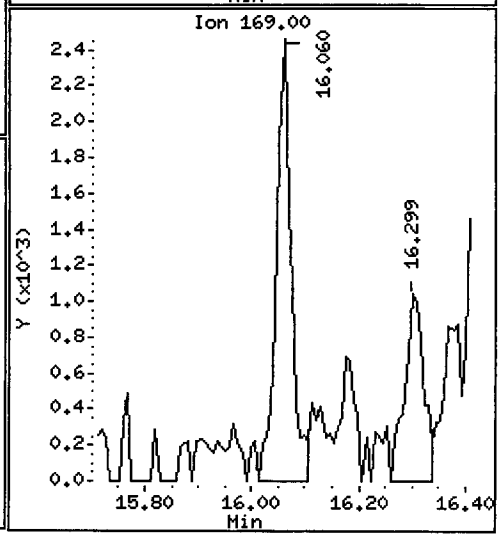












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05 | Instrument: nt10.i

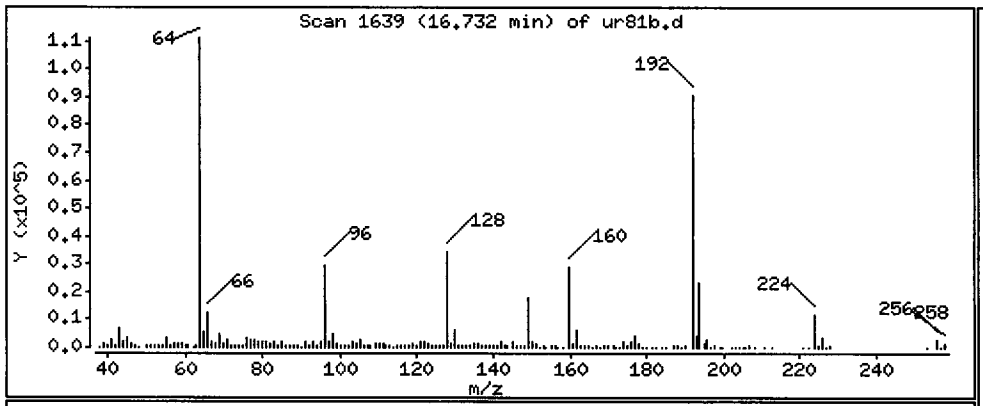
Sample Info: UR81B

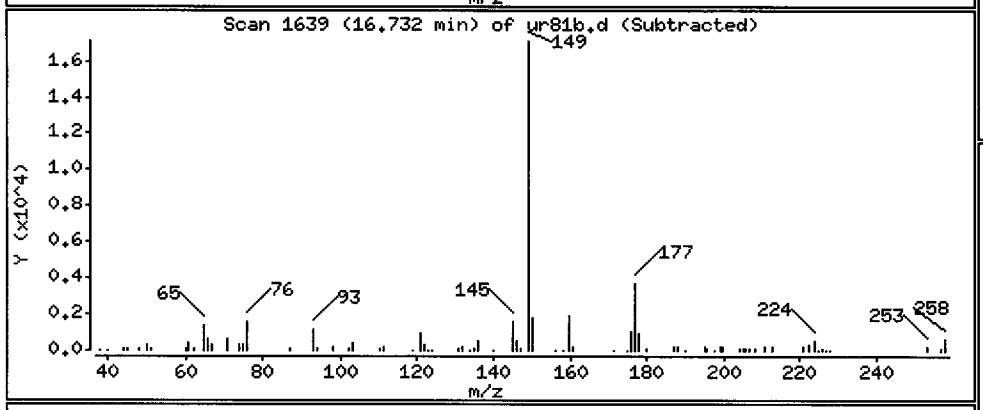
Volume Injected (uL): 1.0 | Operator: VTS/YZ

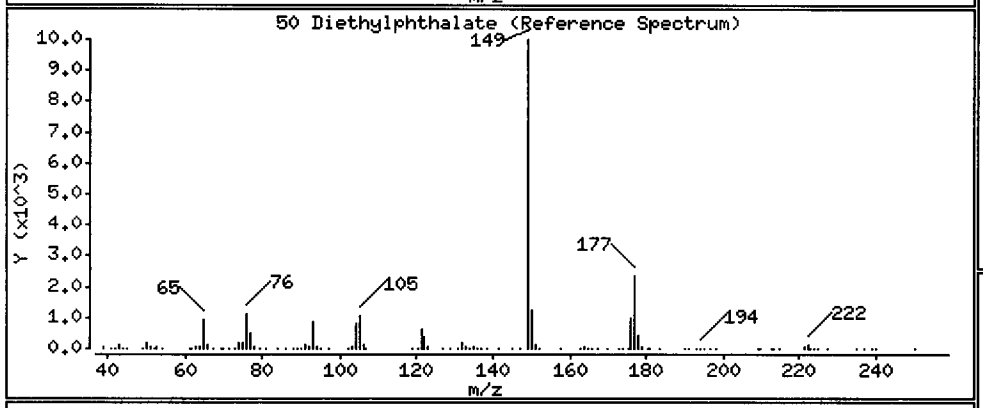
Column phase: ZB-5msi | Column diameter: 0.25

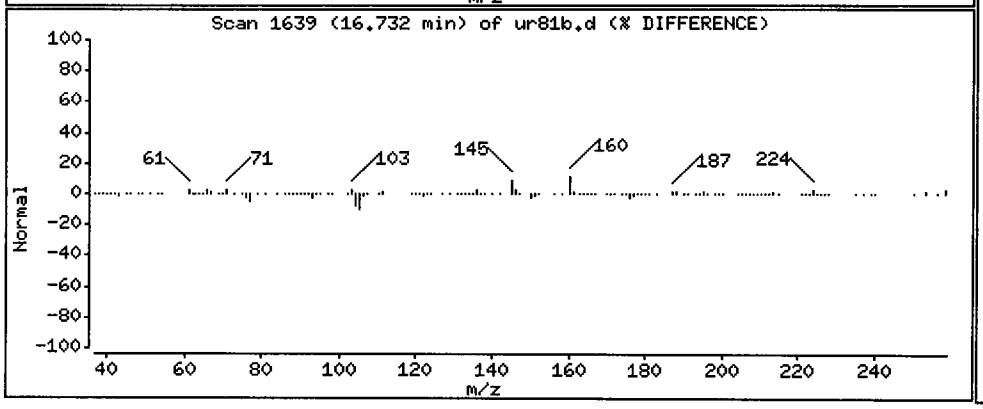
CMDL

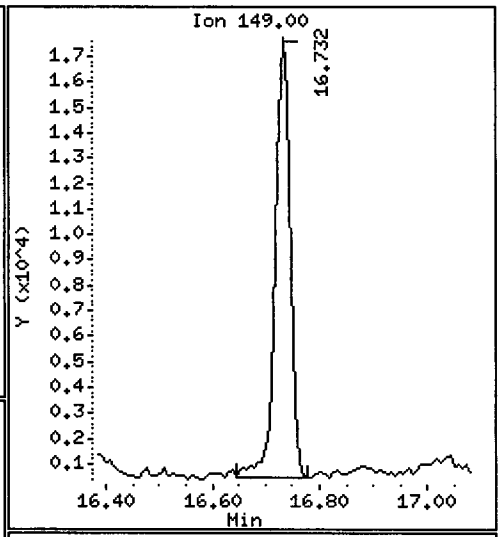
50 Diethylphthalate | Concentration: 18.93 ug/kg

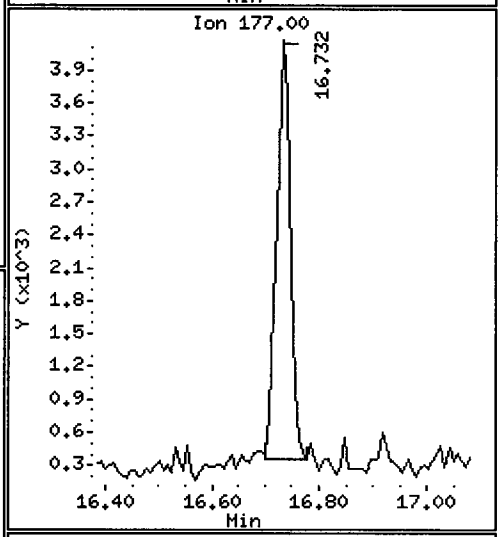


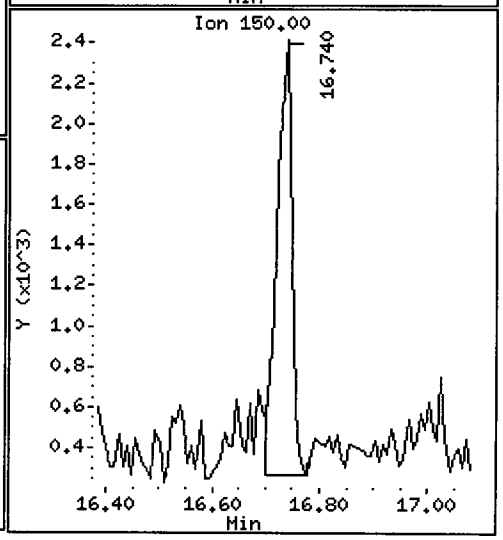












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

Operator: VTS/YZ

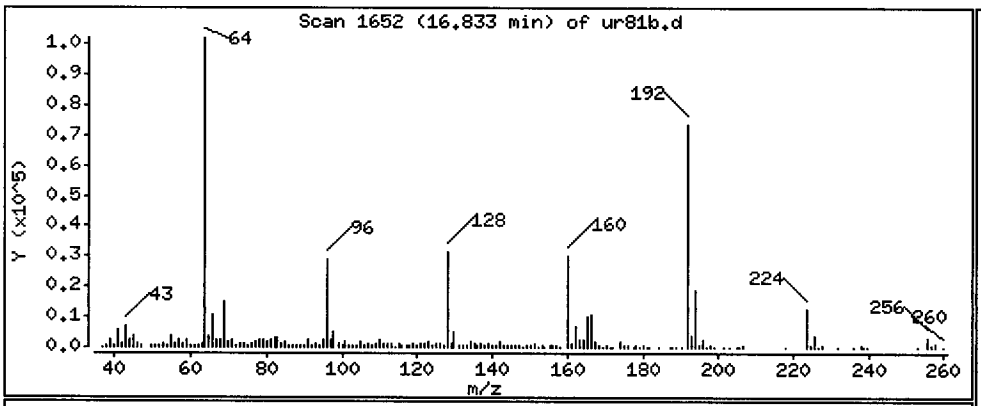
Column phase: ZB-5msi

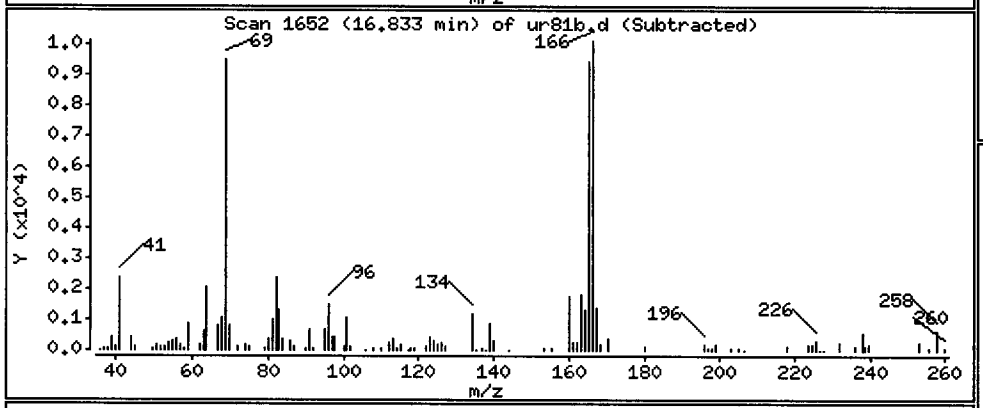
Column diameter: 0.25

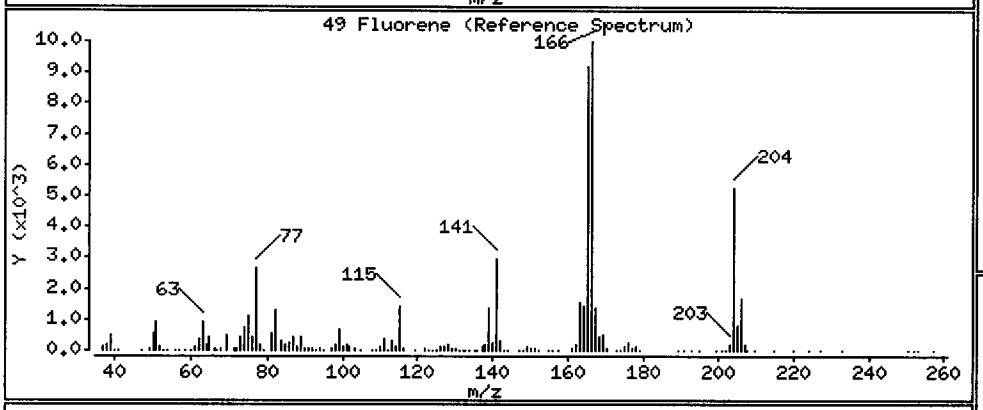
49 Fluorene

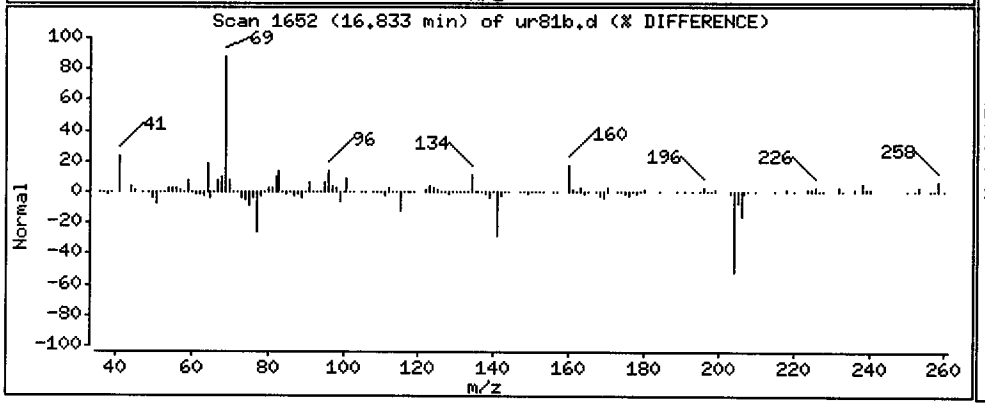
Concentration: 12.92 ug/kg

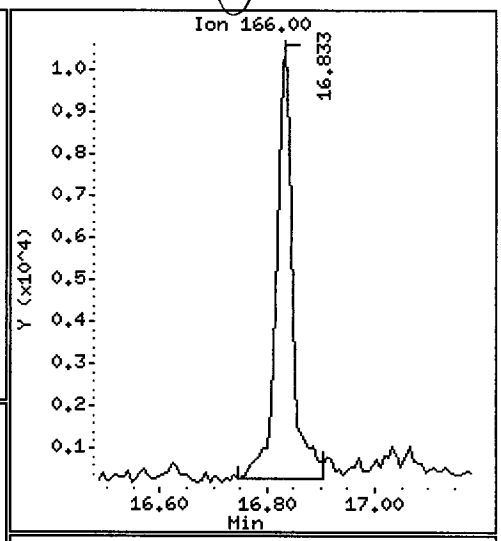
Qual

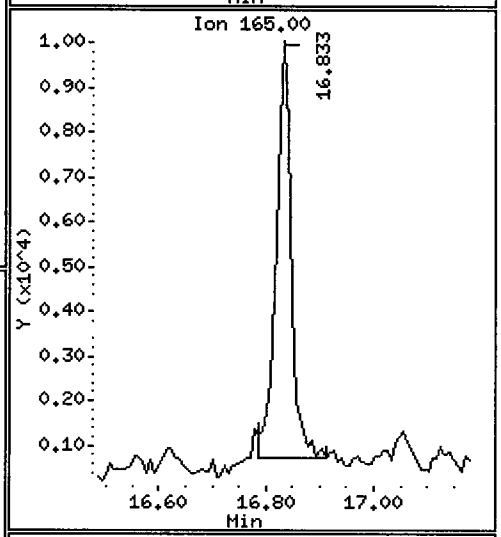


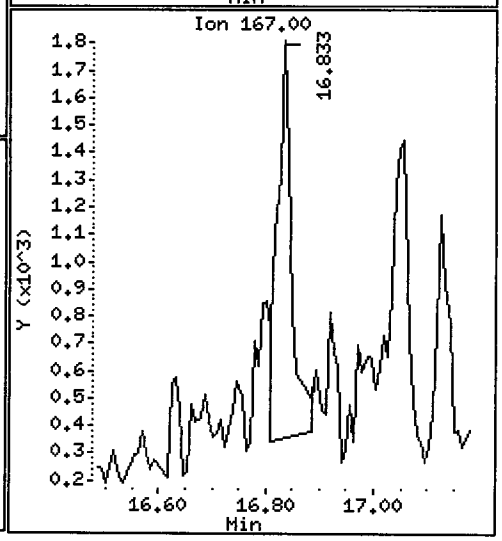












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

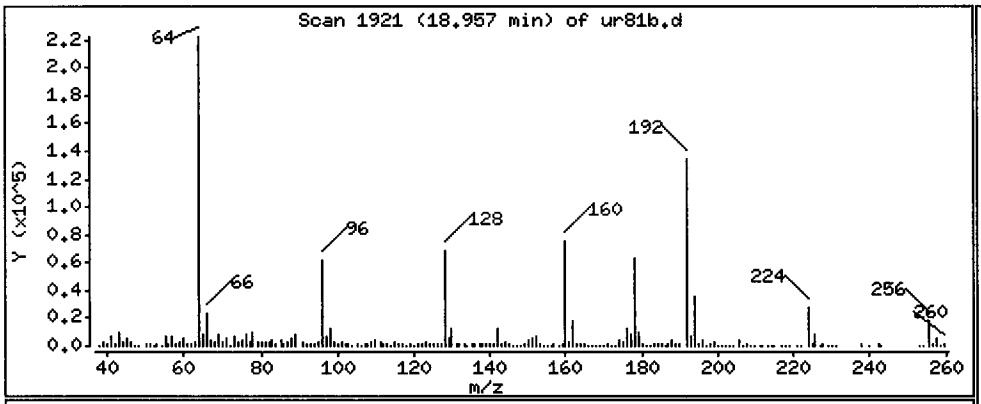
Client ID: IJ12-05 | Instrument: nt10.i

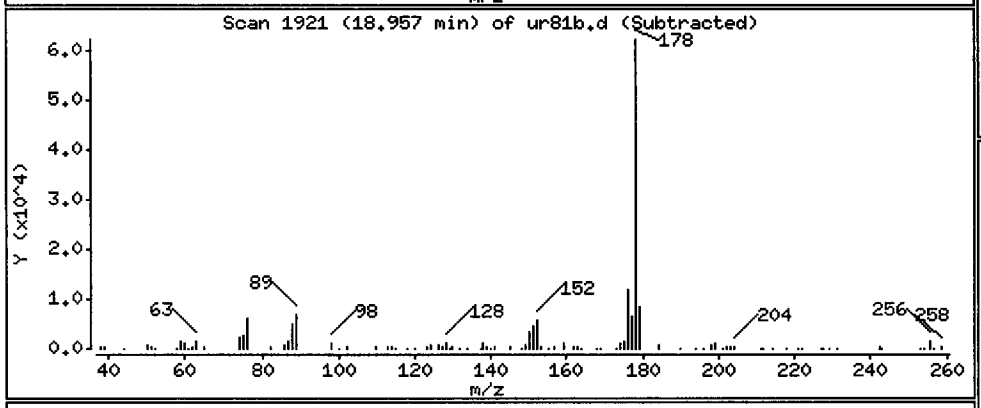
Sample Info: UR81B

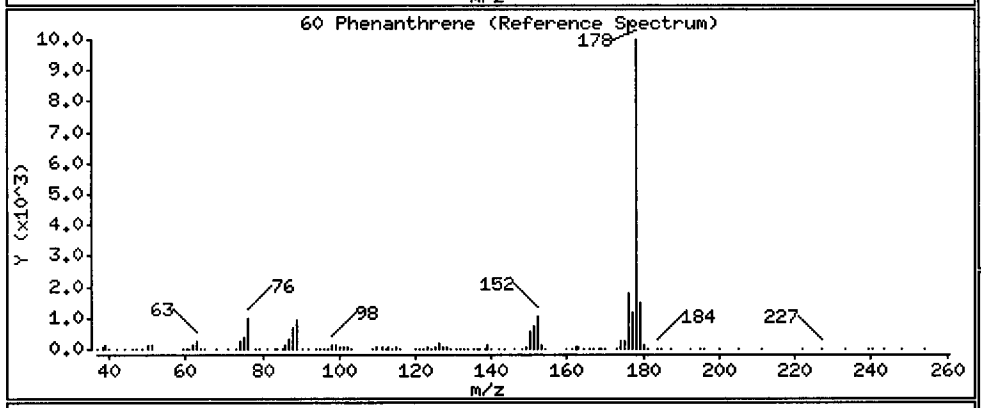
Volume Injected (uL): 1.0 | Operator: VTS/YZ

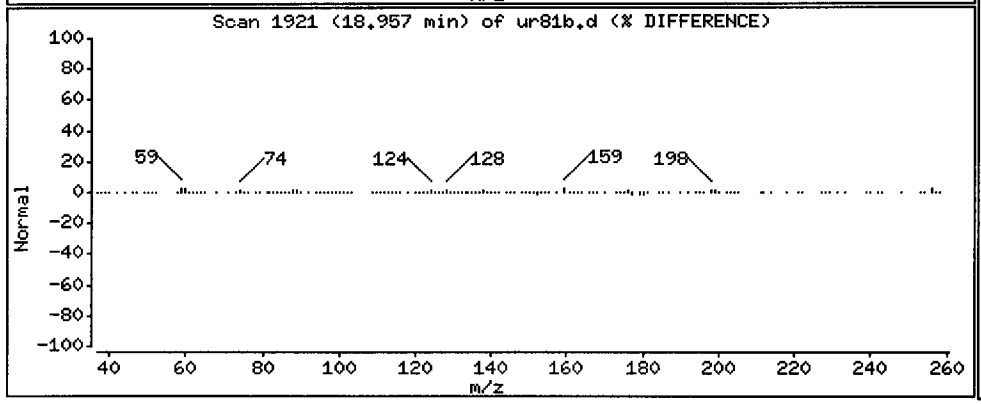
Column phase: ZB-5msi | Column diameter: 0.25

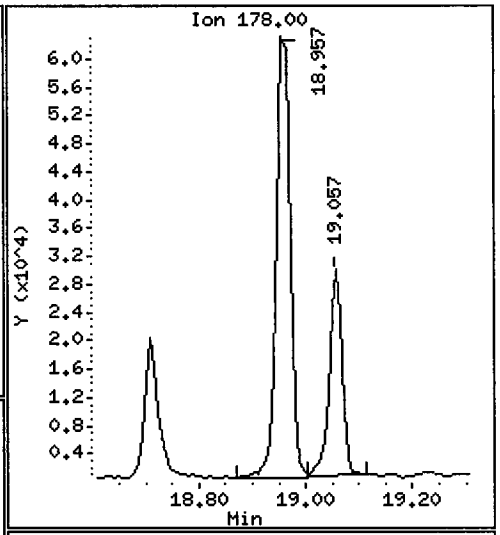
60 Phenanthrene | Concentration: 48.22 ug/kg

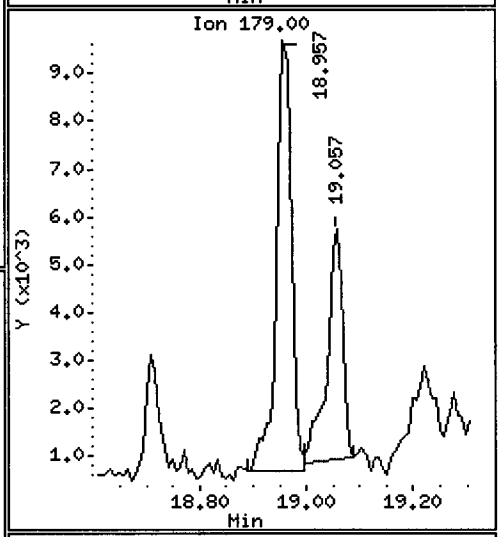


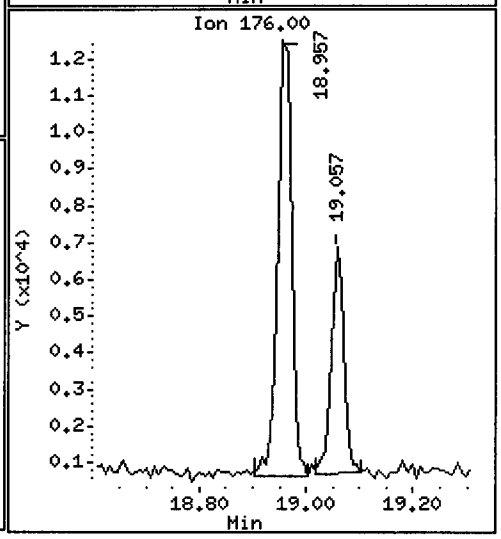












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

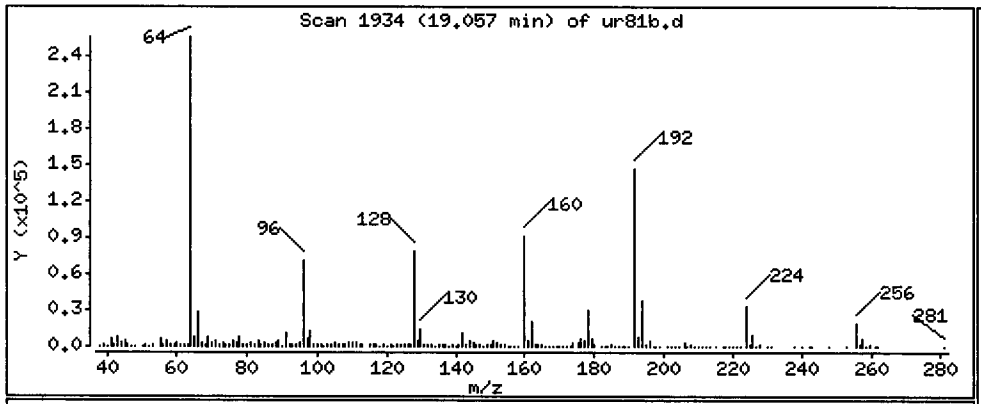
Client ID: IJ12-05 Instrument: nt10.i

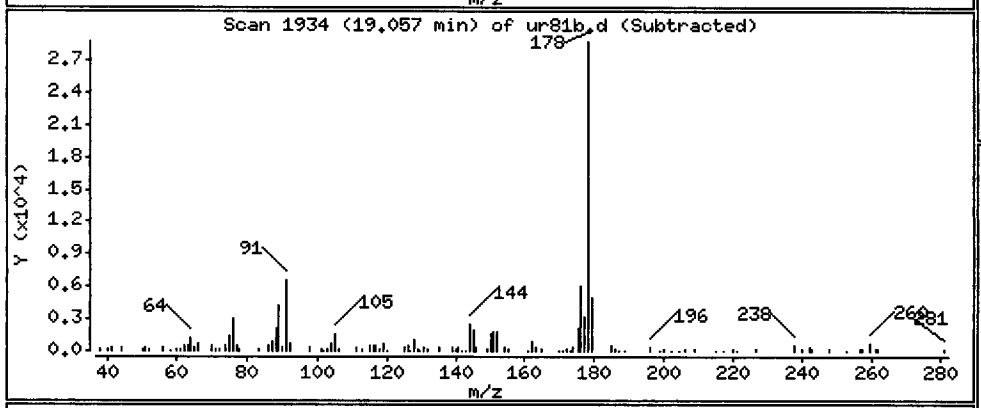
Sample Info: UR81B

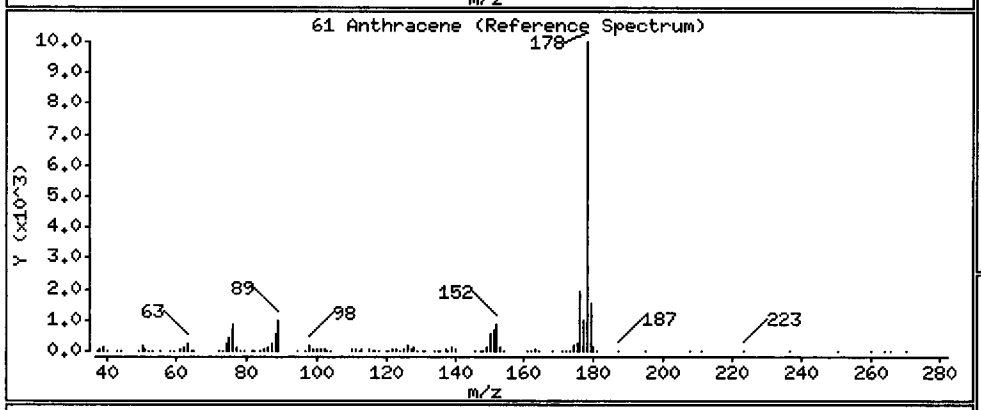
Volume Injected (uL): 1.0 Operator: VTS/YZ

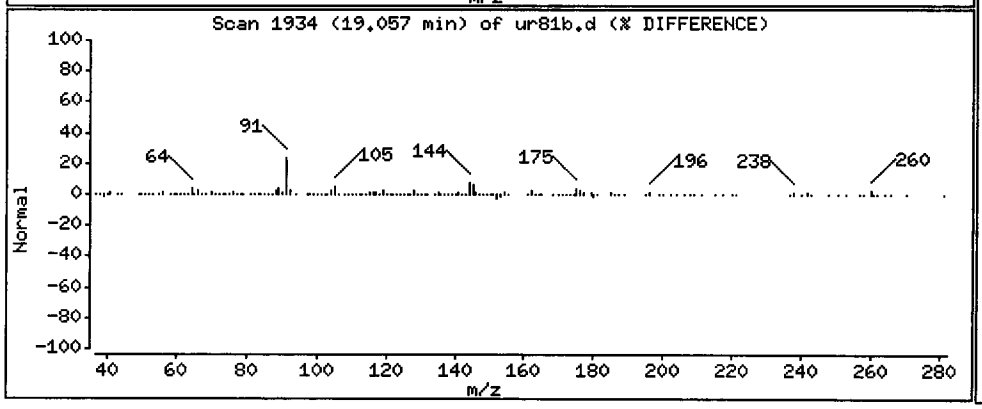
Column phase: ZB-5msi Column diameter: 0.25

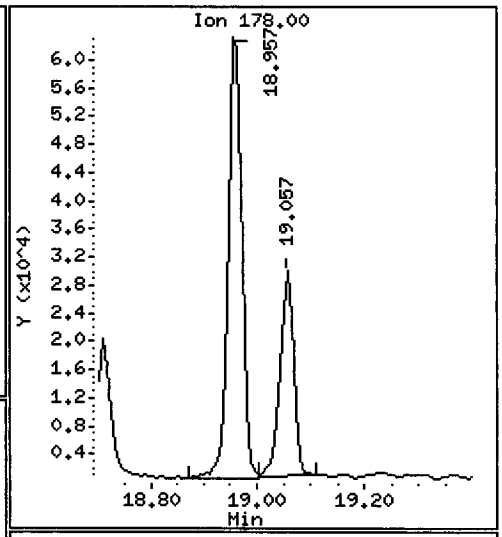
61 Anthracene Concentration: 21.21 ug/kg

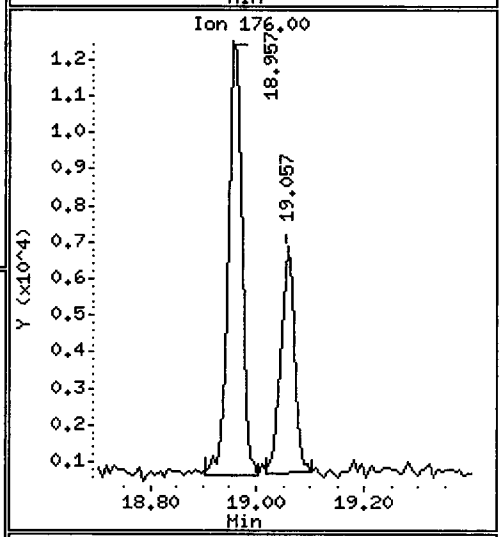


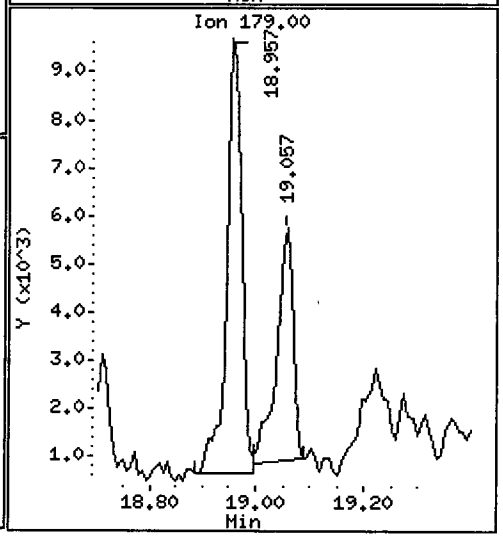












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

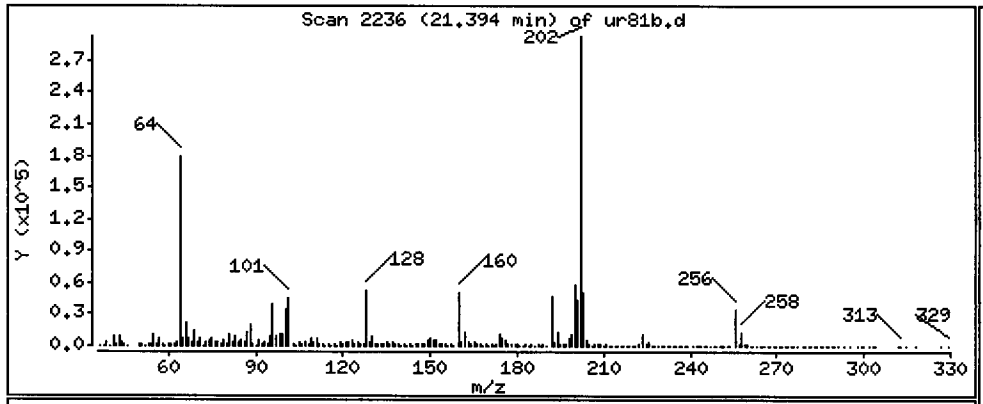
Operator: VTS/YZ

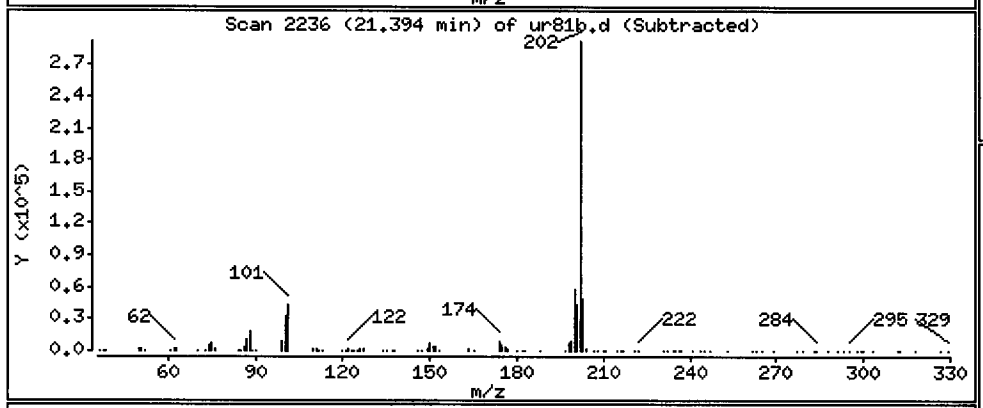
Column phase: ZB-5msi

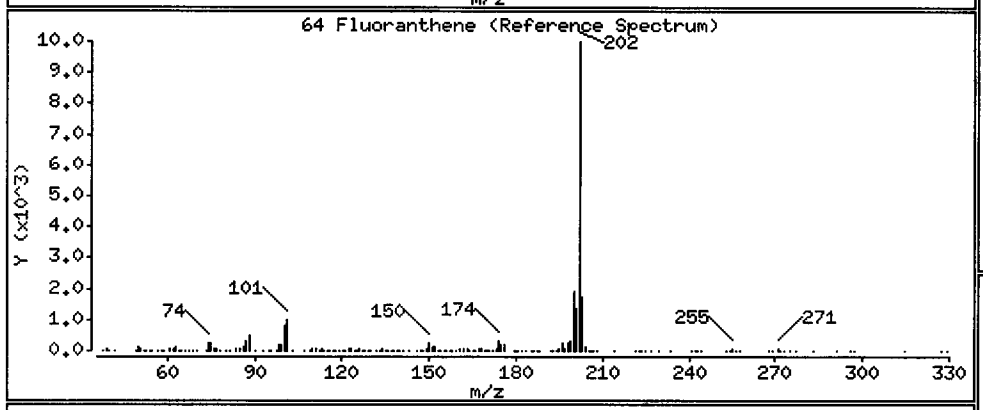
Column diameter: 0.25

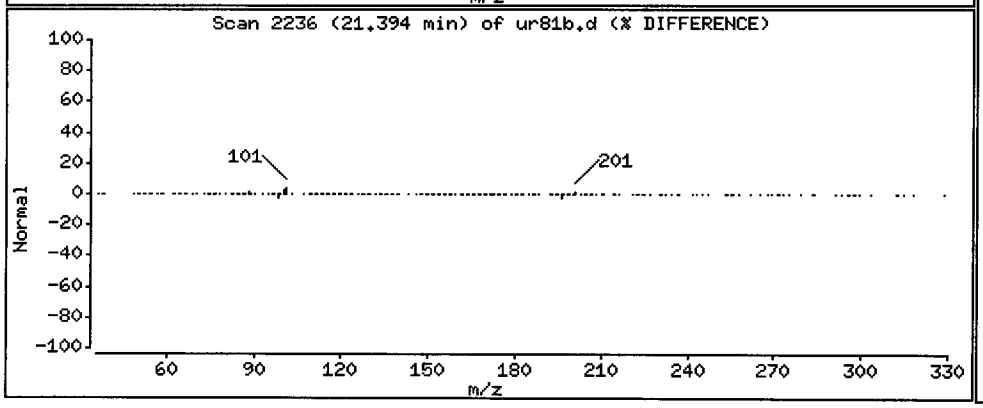
64 Fluoranthene

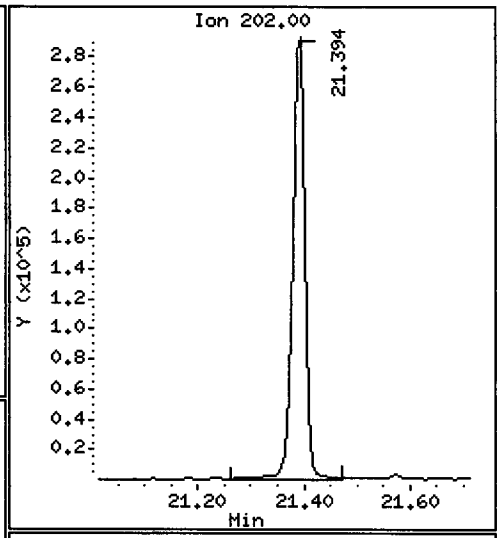
Concentration: 190.8 ug/kg

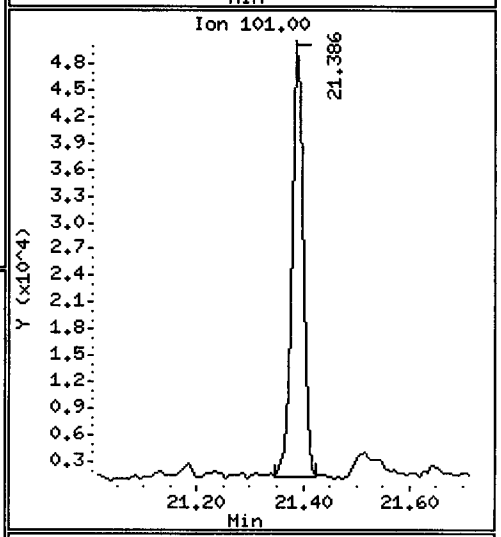


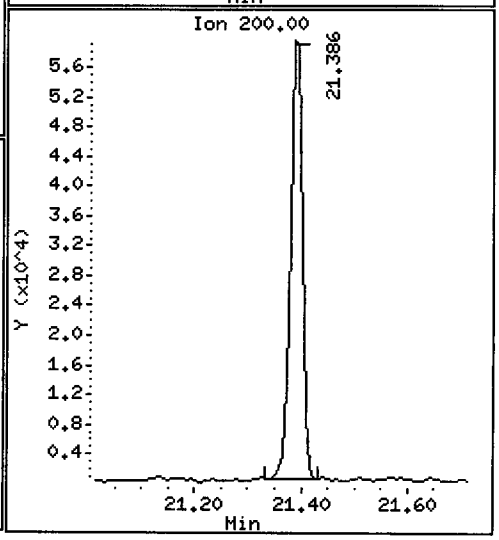












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

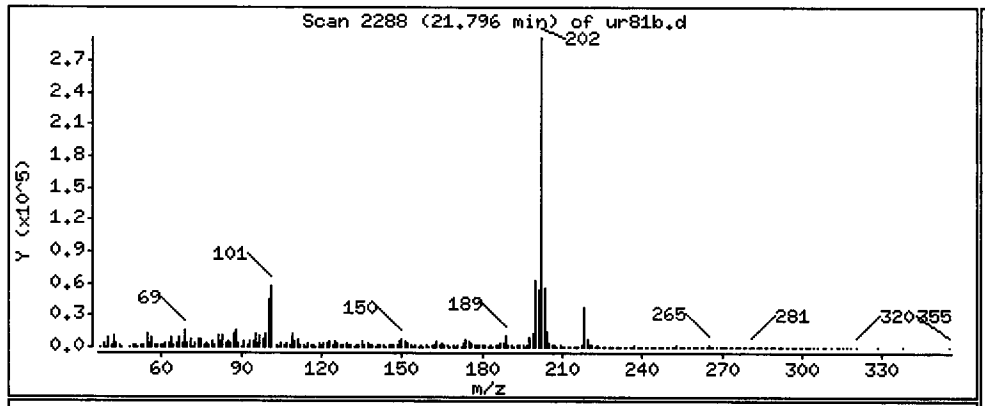
Operator: VTS/YZ

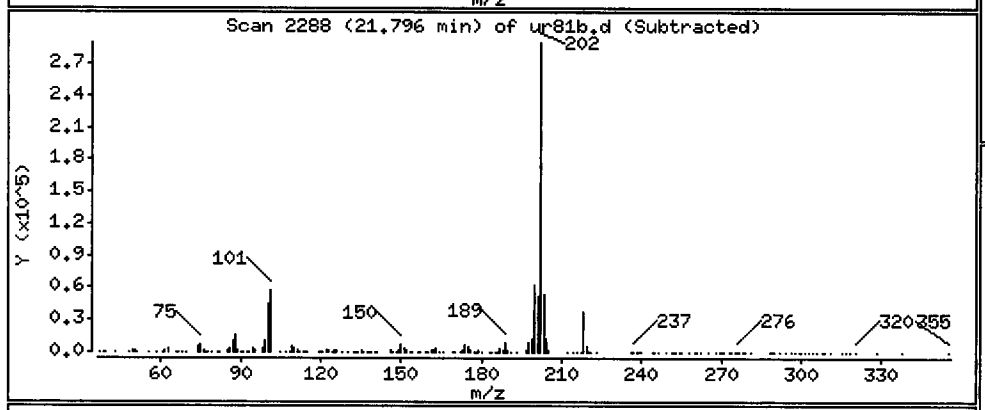
Column phase: ZB-5msi

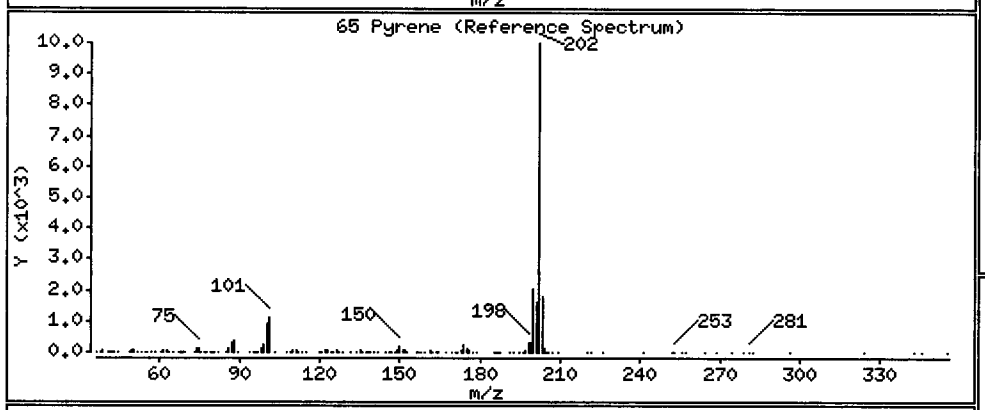
Column diameter: 0.25

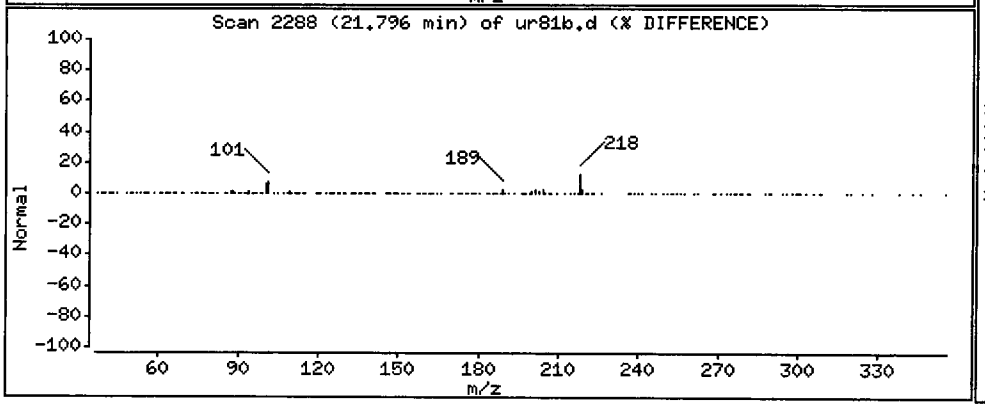
65 Pyrene

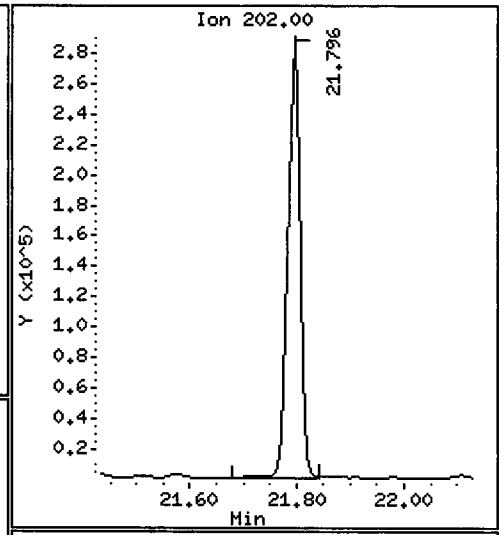
Concentration: 164.2 ug/kg

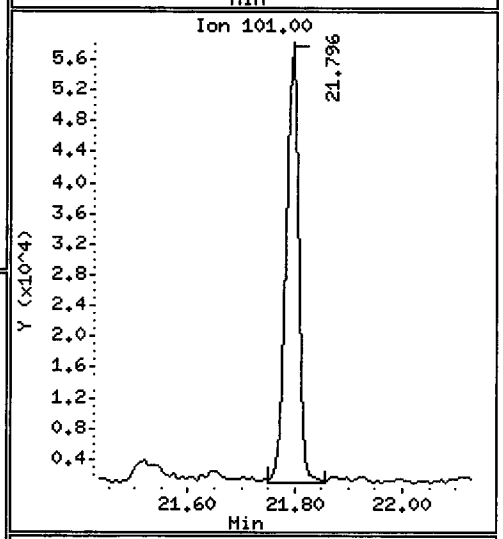


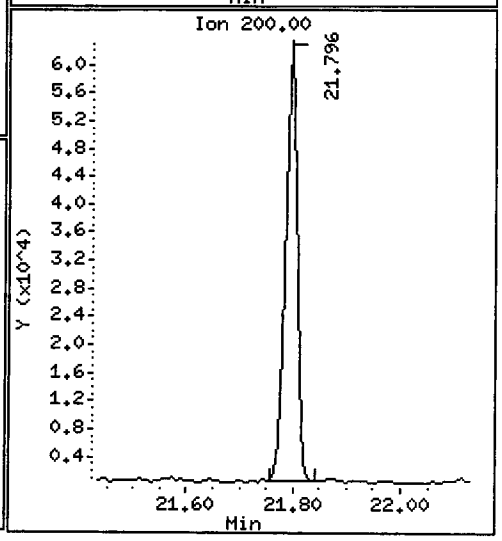












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05 Instrument: nt10.i

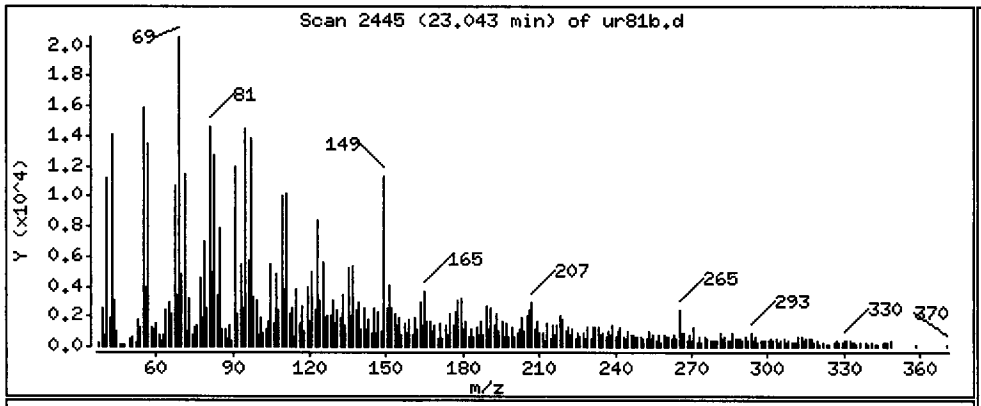
Sample Info: UR81B

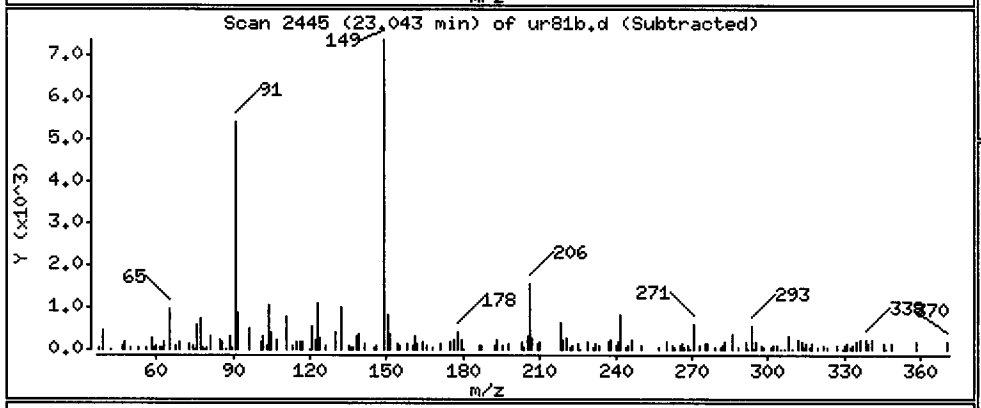
Volume Injected (uL): 1.0 Operator: VTS/YZ

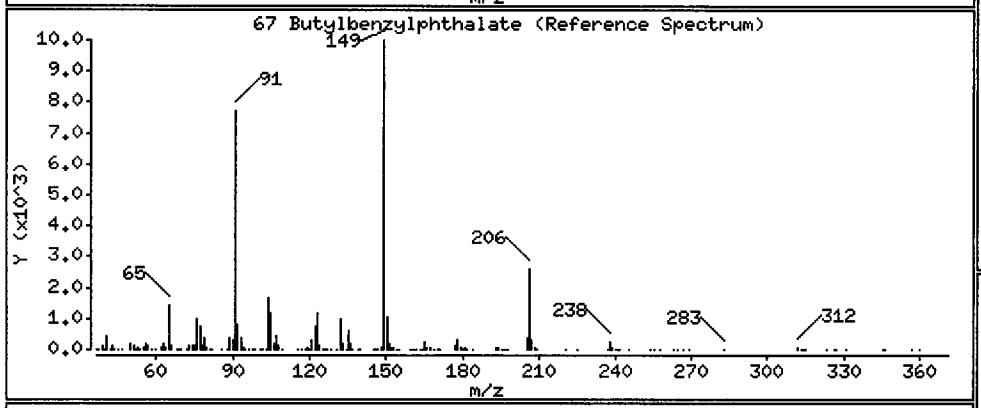
Column phase: ZB-5msi Column diameter: 0.25

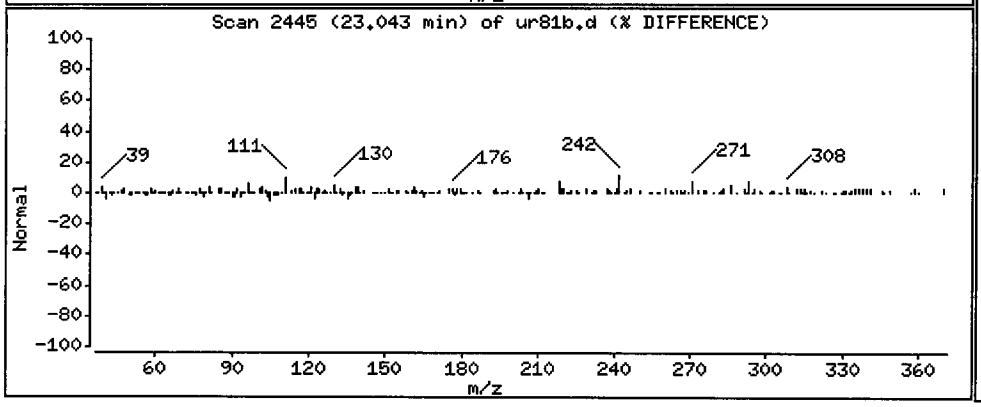
67 Butylbenzylphthalate Concentration: 11.58 ug/kg

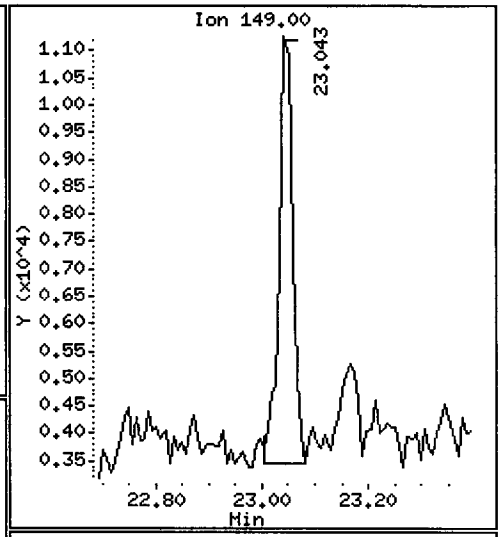
6 ug

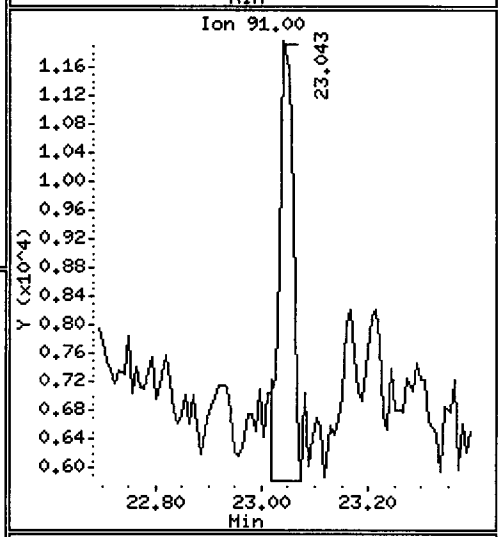


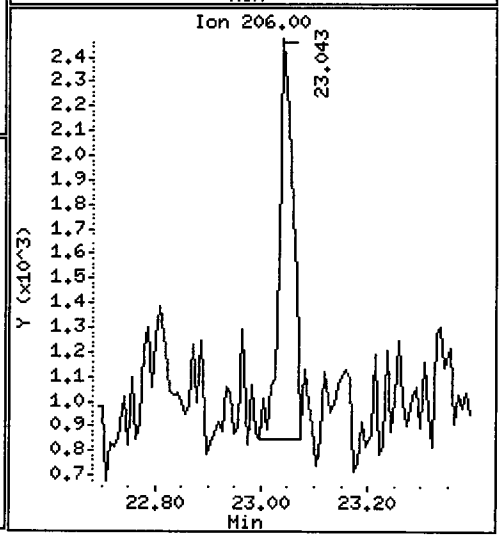












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

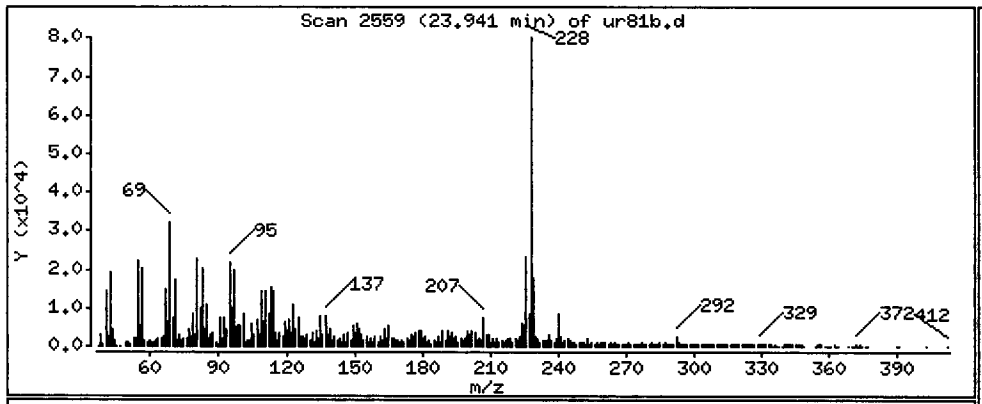
Client ID: IJ12-05 Instrument: nt10.i

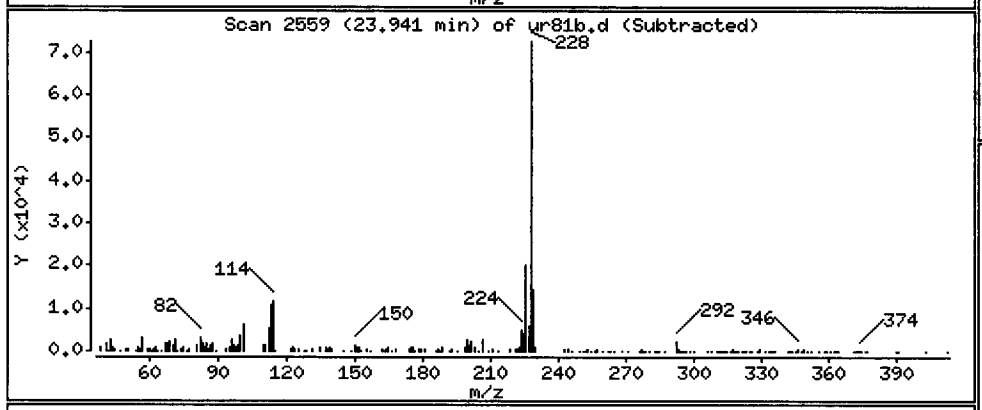
Sample Info: UR81B

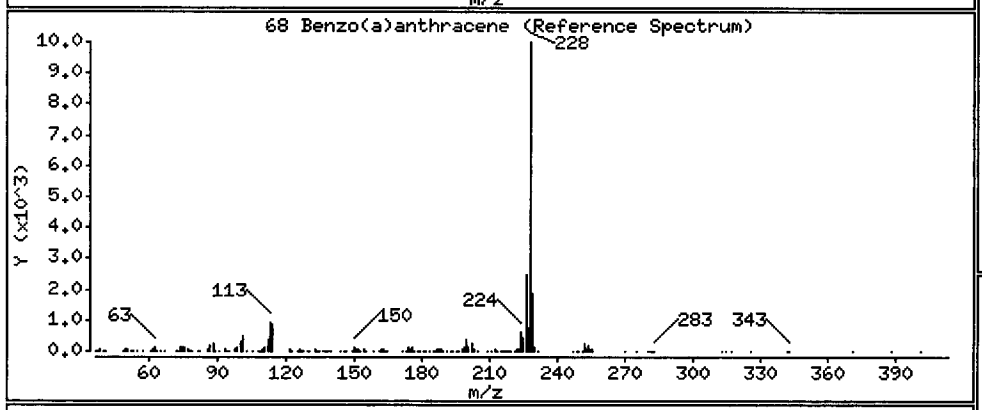
Volume Injected (uL): 1.0 Operator: VTS/YZ

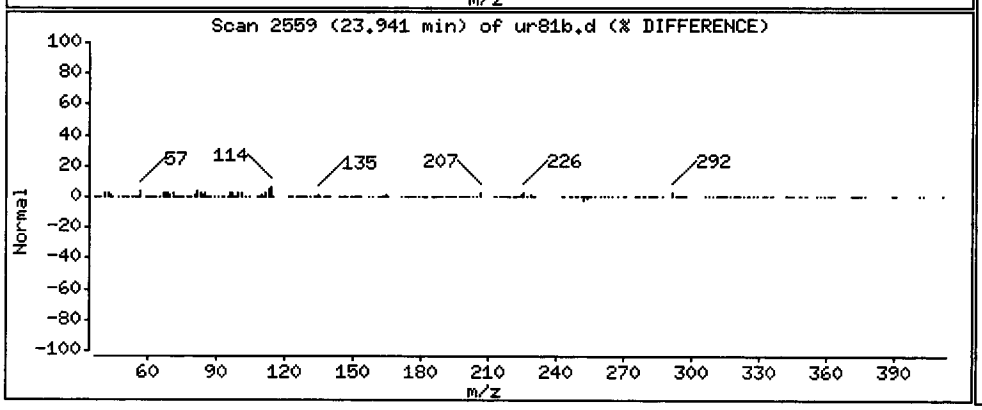
Column phase: ZB-5msi Column diameter: 0.25

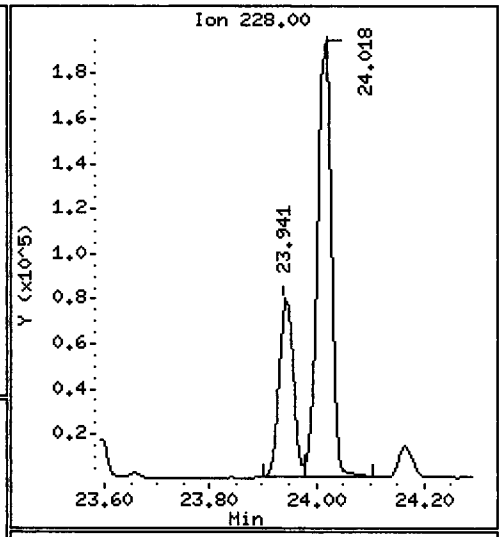
68 Benzo(a)anthracene Concentration: 56.60 ug/kg

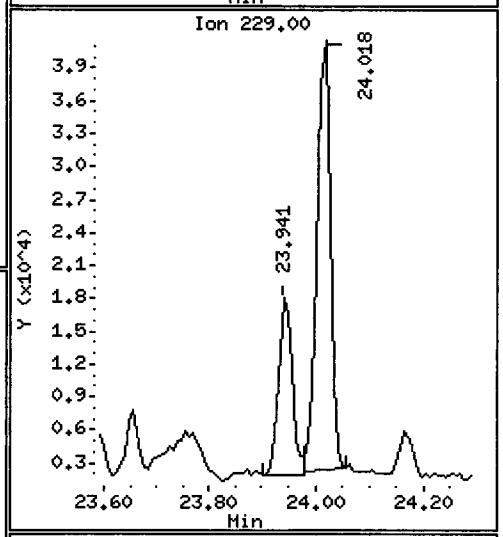


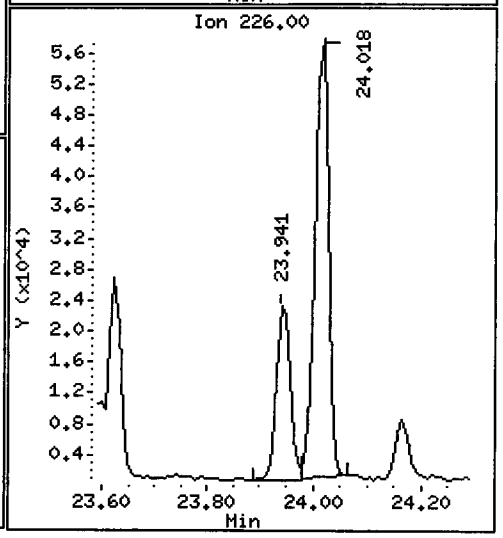












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

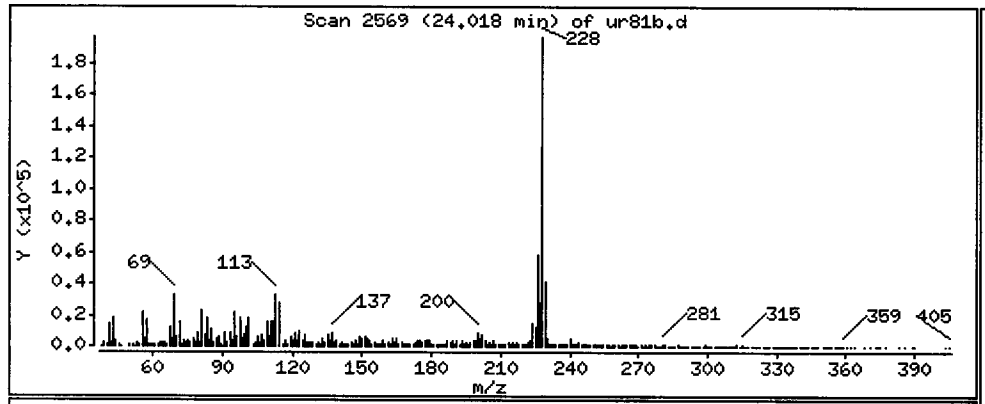
Operator: VTS/YZ

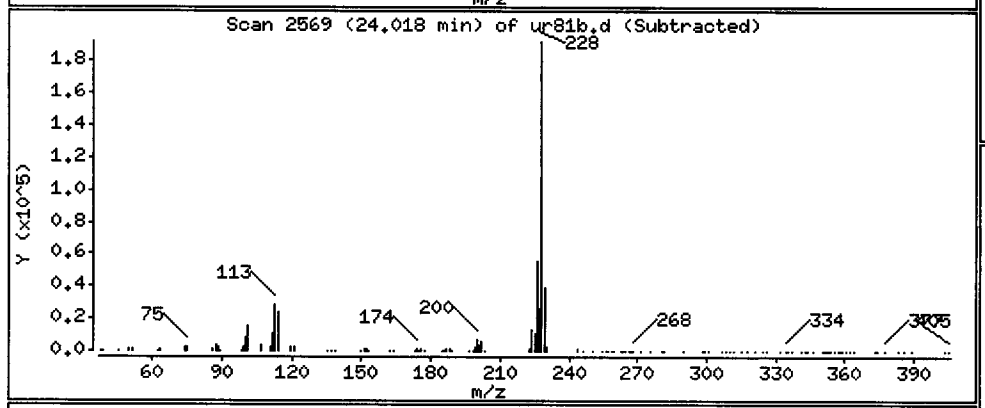
Column phase: ZB-5msi

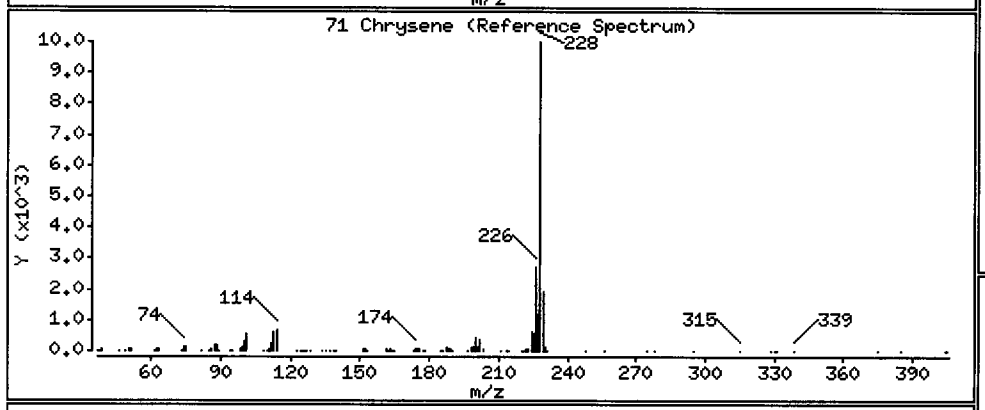
Column diameter: 0.25

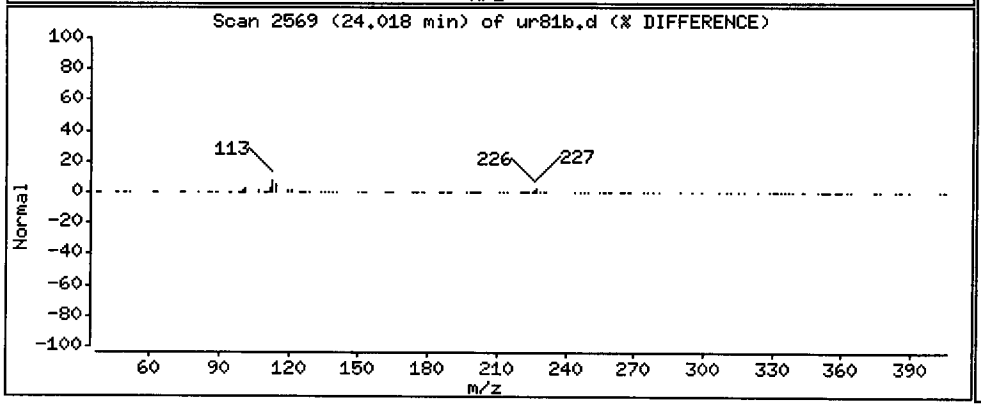
71 Chrysene

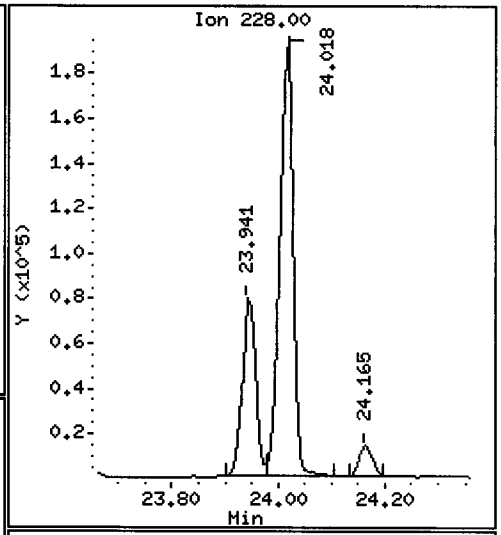
Concentration: 148.2 ug/kg

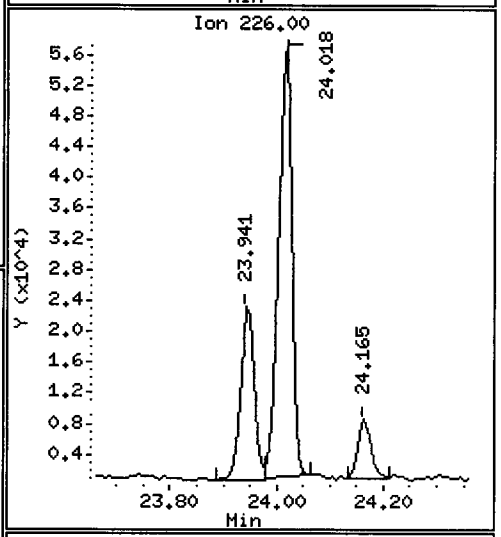


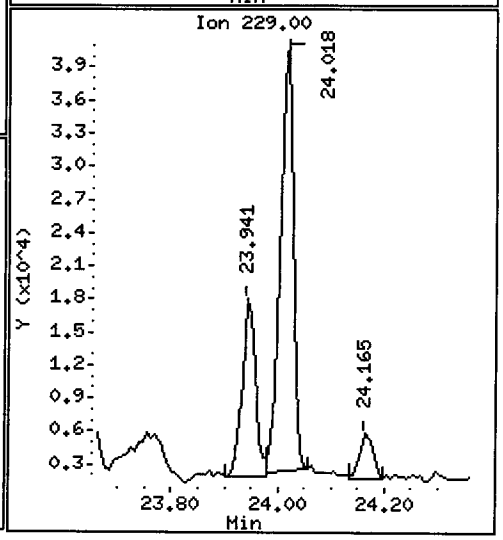












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05 Instrument: nt10.i

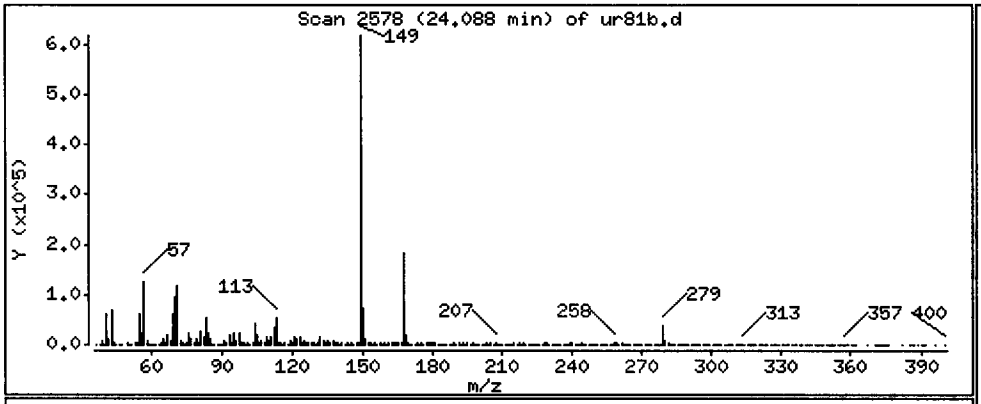
Sample Info: UR81B

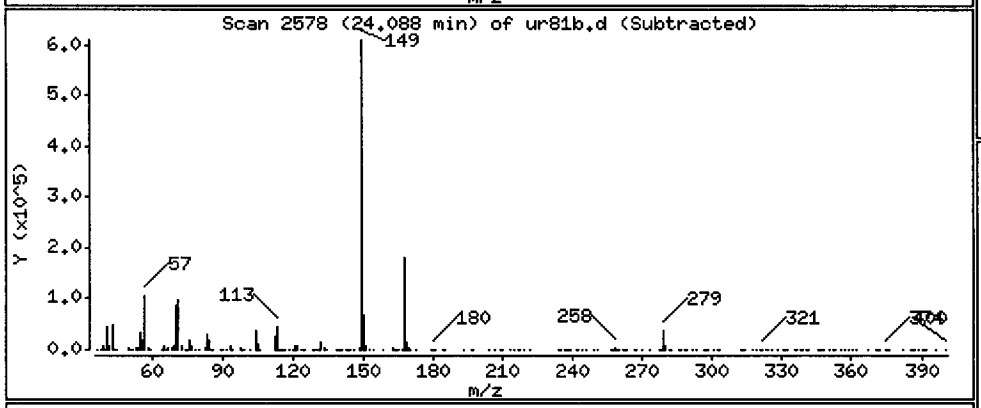
Volume Injected (uL): 1.0 Operator: VTS/YZ

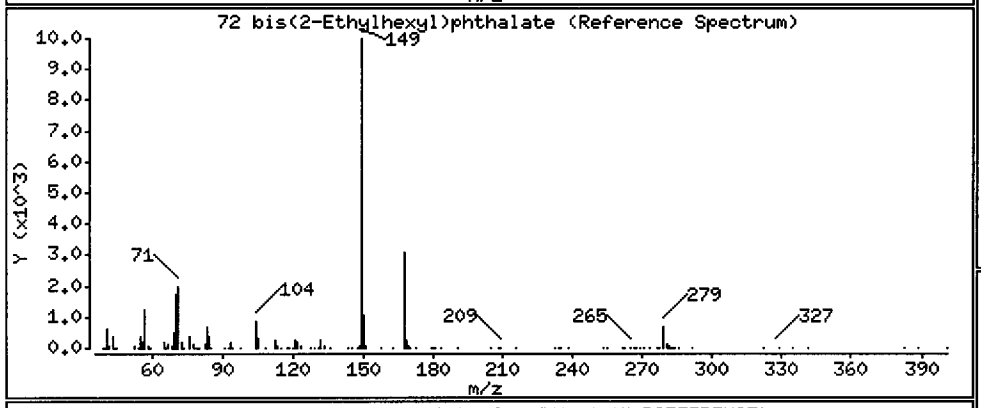
Column phase: ZB-5msi Column diameter: 0.25

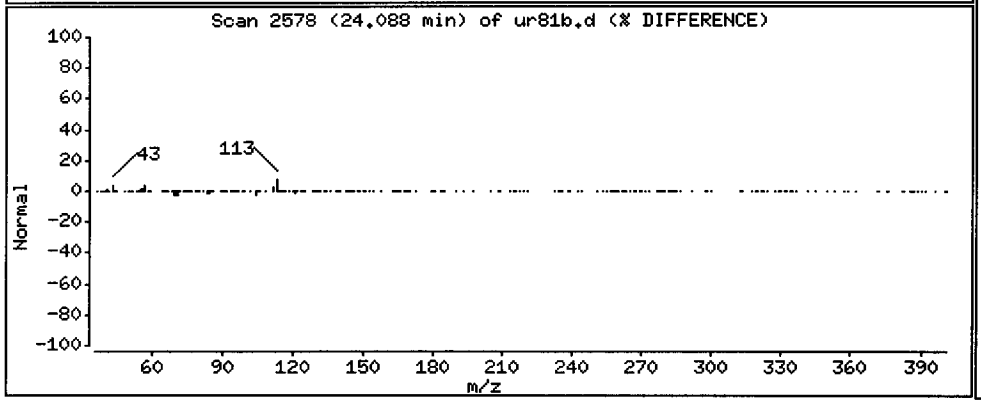
72 bis(2-Ethylhexyl)phthalate Concentration: 495.7 ug/kg

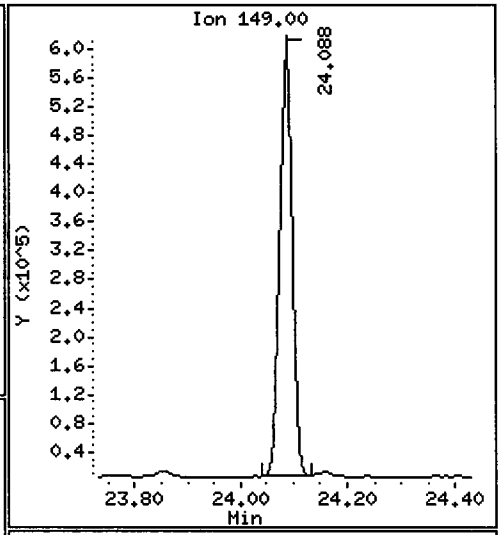
B

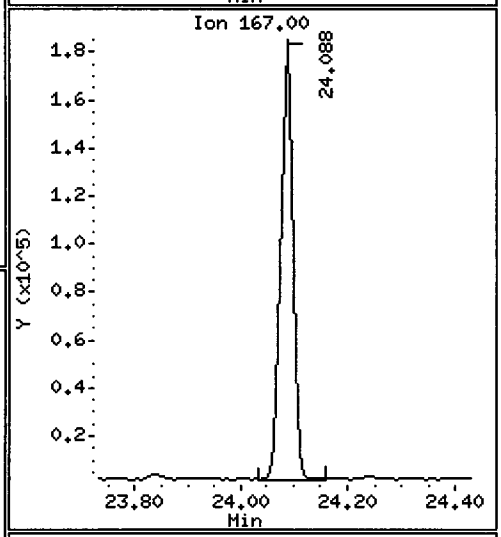


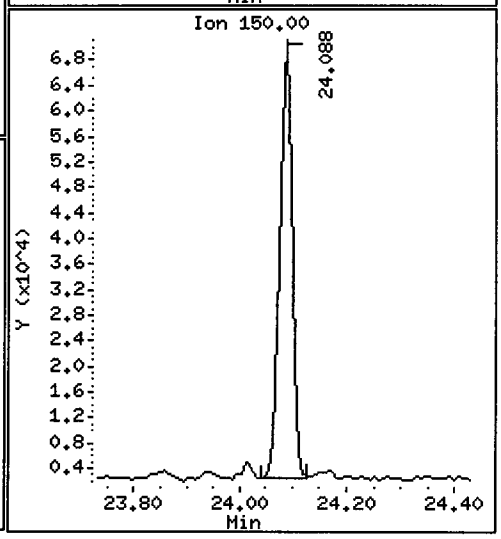












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

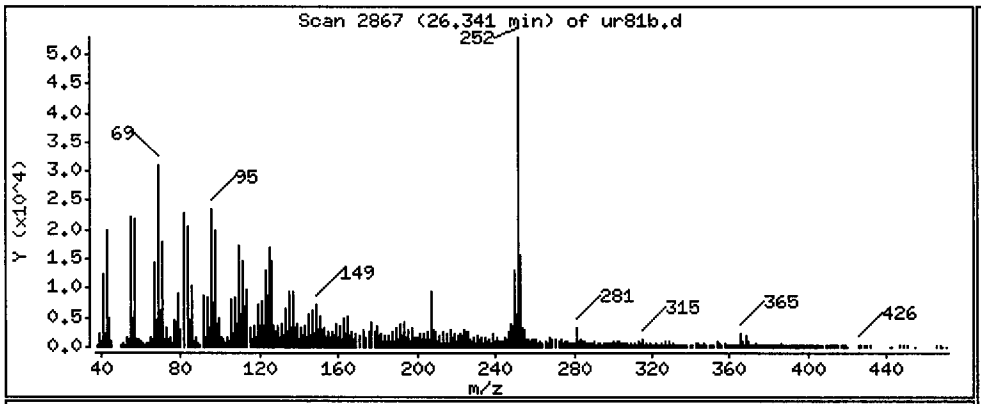
Client ID: IJ12-05 | Instrument: nt10.i

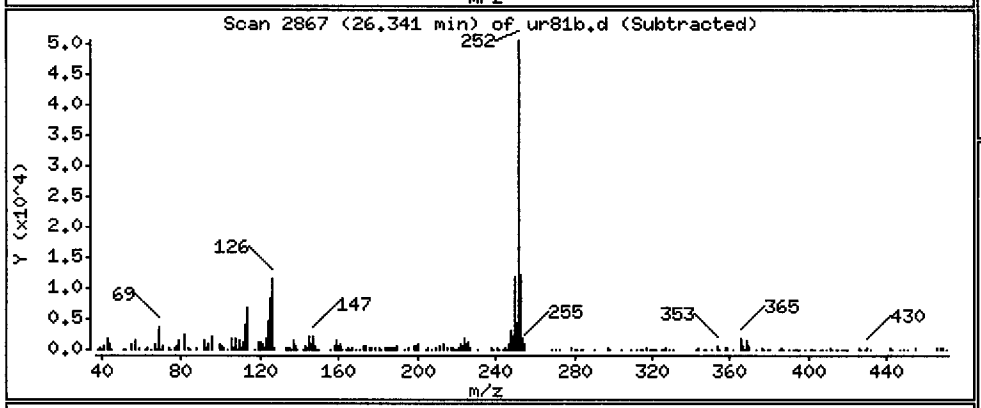
Sample Info: UR81B

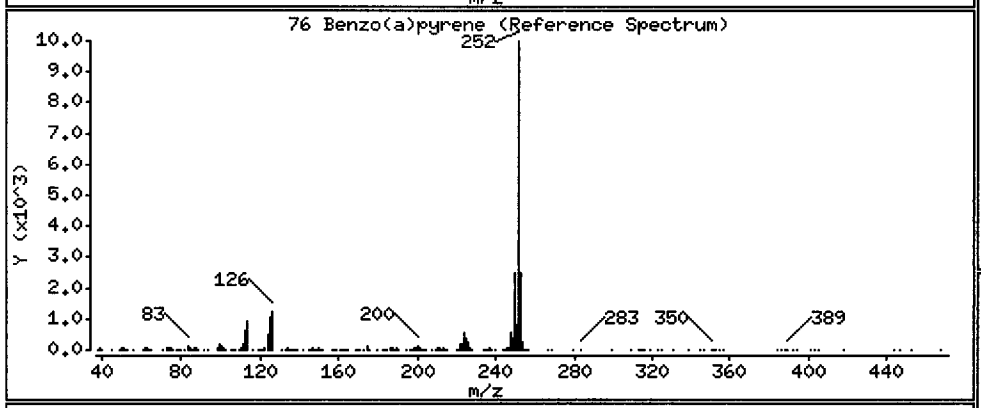
Volume Injected (uL): 1.0 | Operator: VTS/YZ

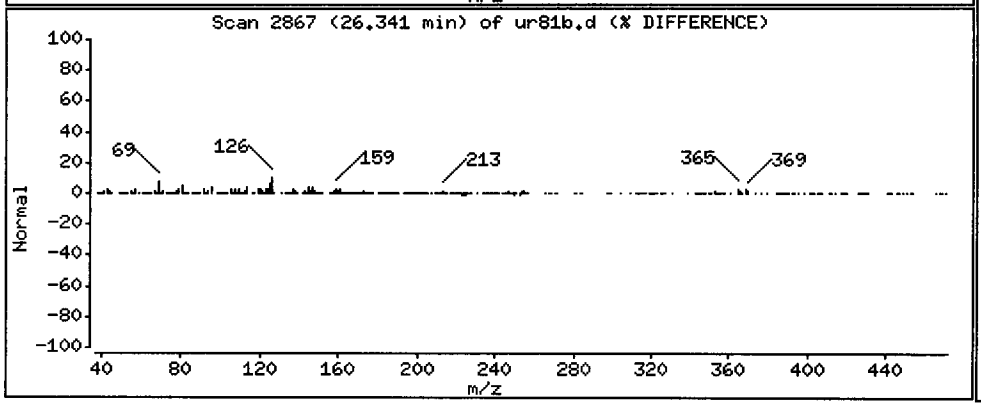
Column phase: ZB-5msi | Column diameter: 0.25

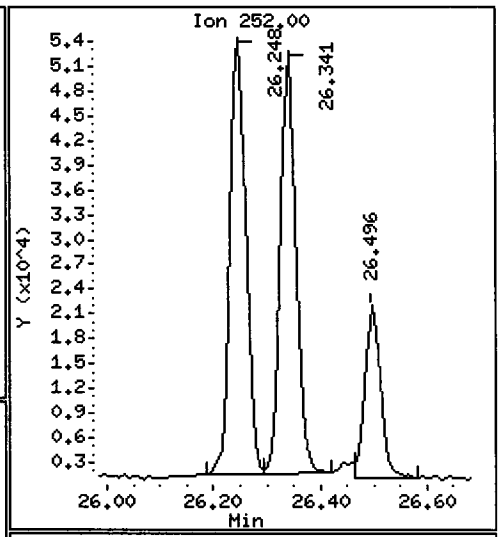
76 Benzo(a)pyrene | Concentration: 45.47 ug/kg

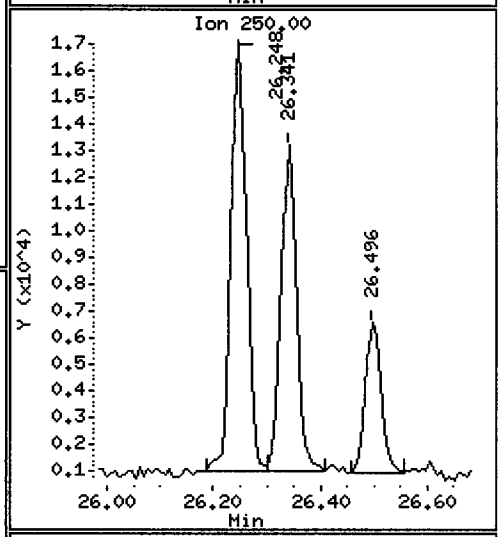


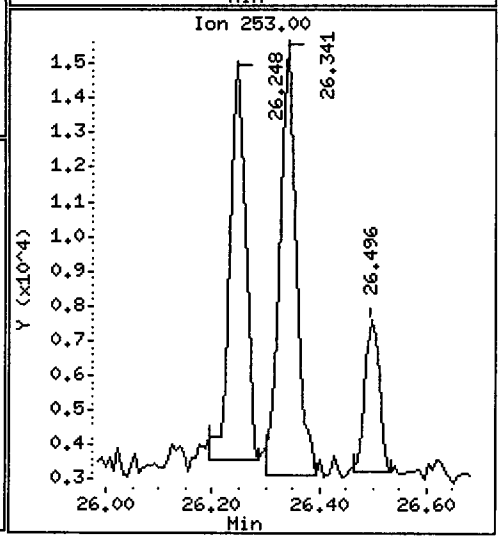












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

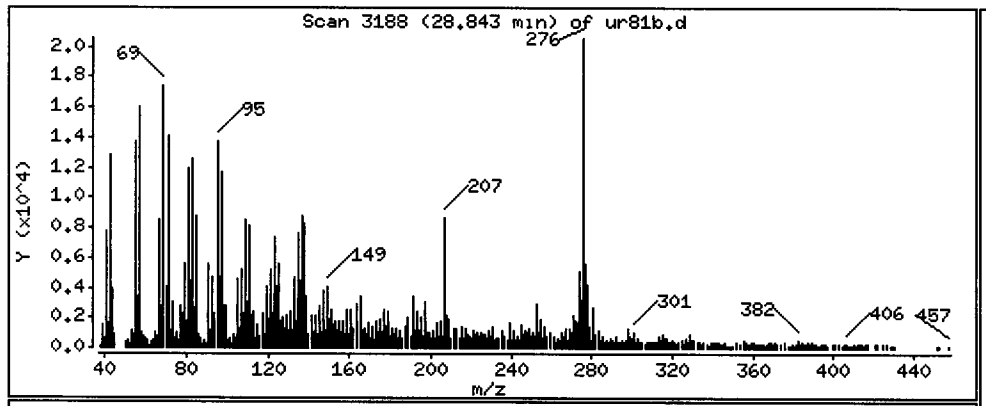
Operator: VTS/YZ

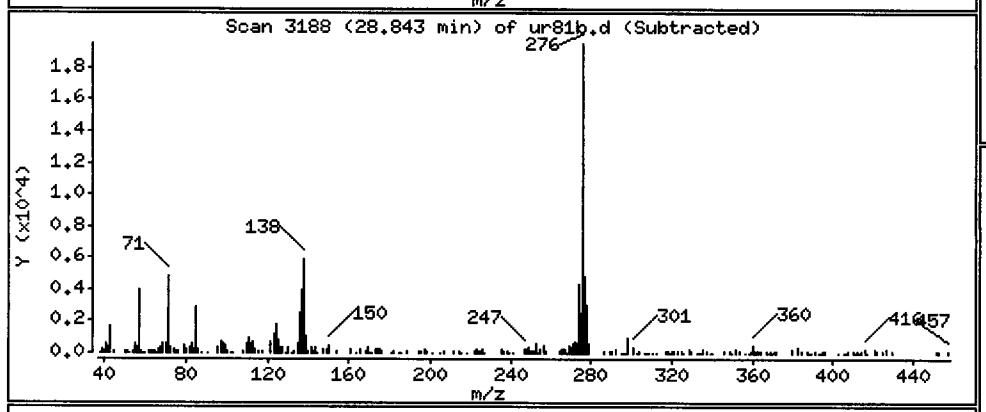
Column phase: ZB-5msi

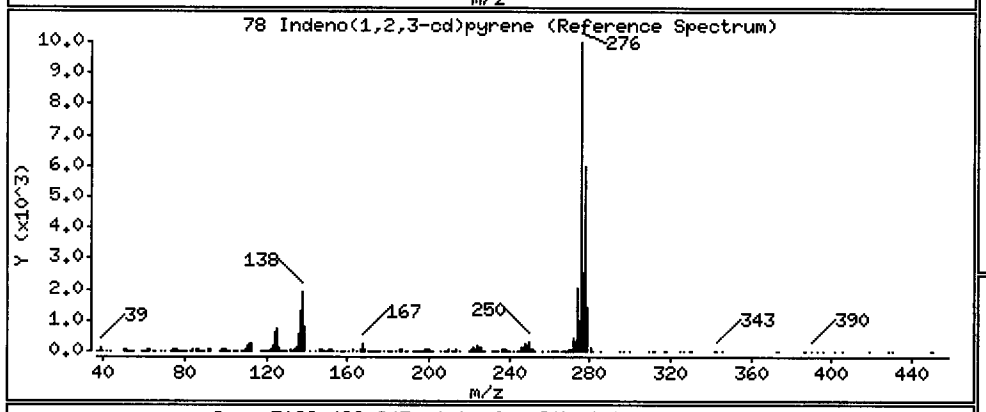
Column diameter: 0.25

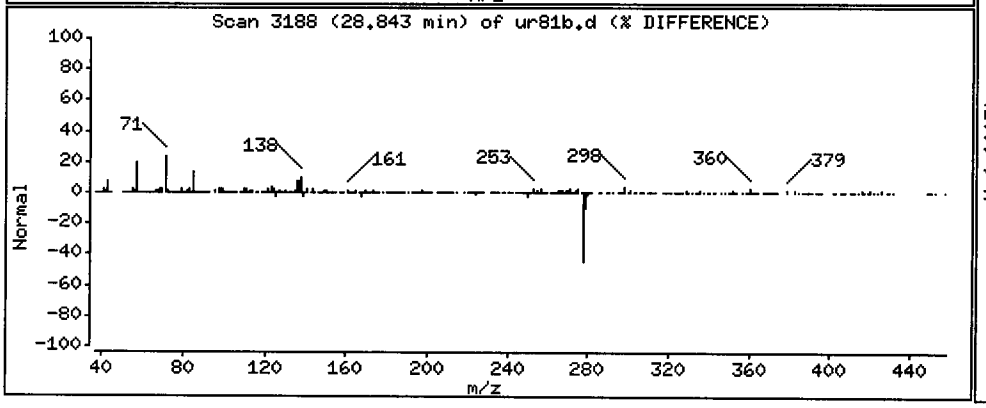
78 Indeno(1,2,3-cd)pyrene

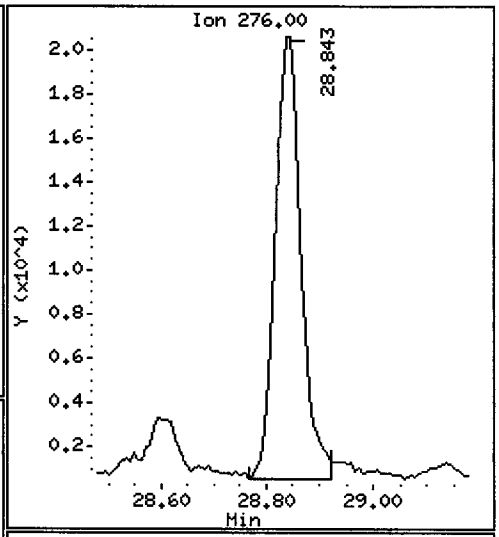
Concentration: 27.46 ug/kg

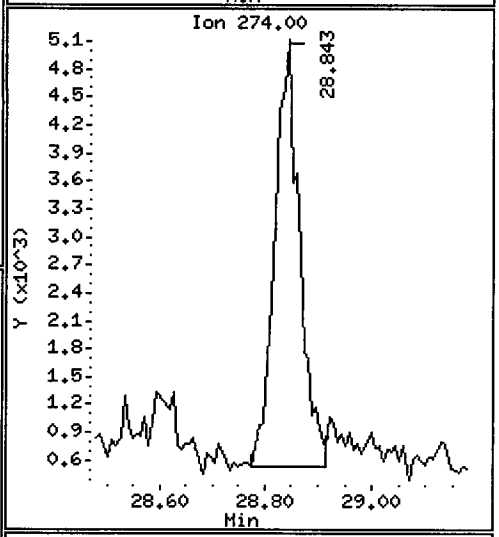


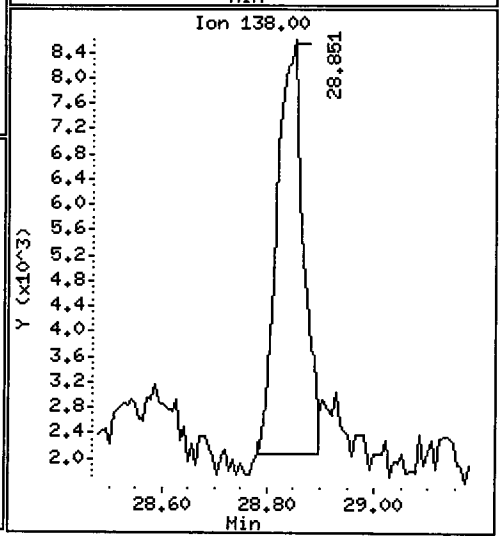












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

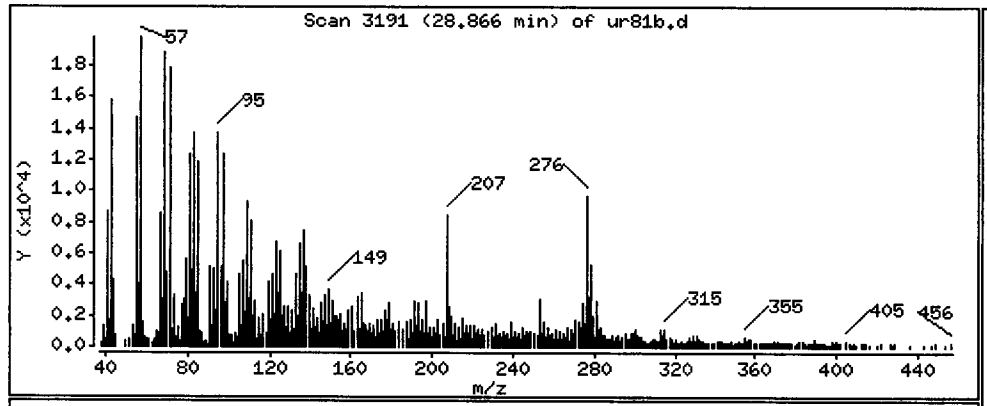
Operator: VTS/YZ

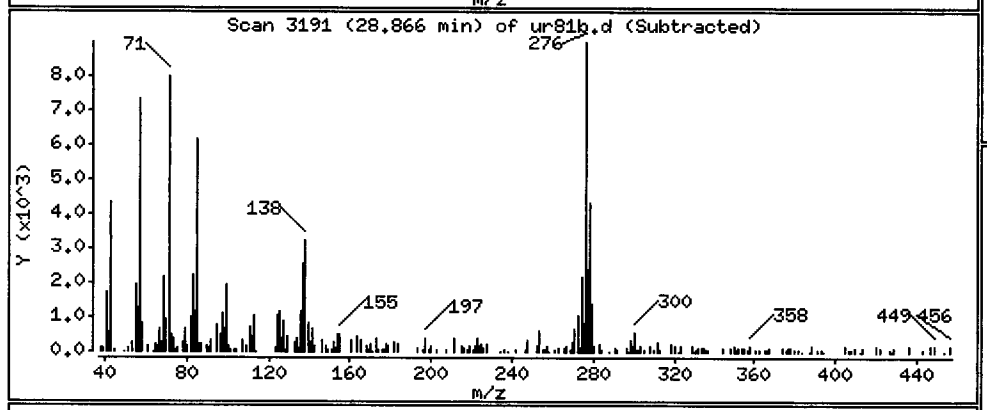
Column phase: ZB-5msi

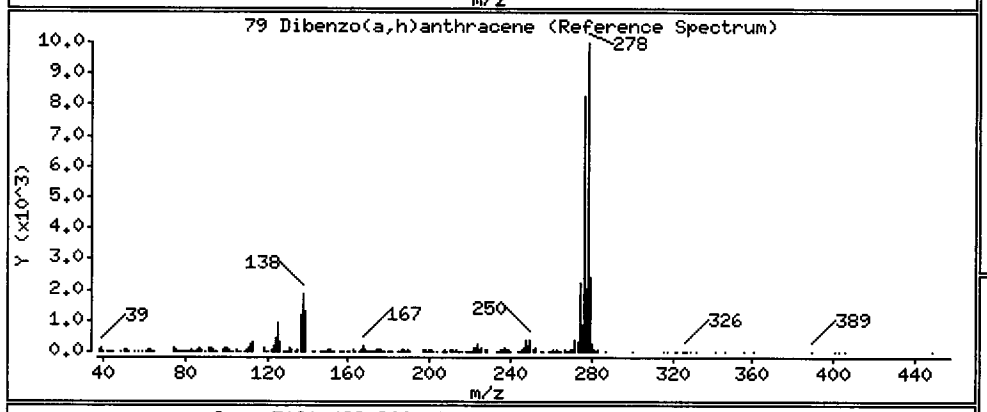
Column diameter: 0.25

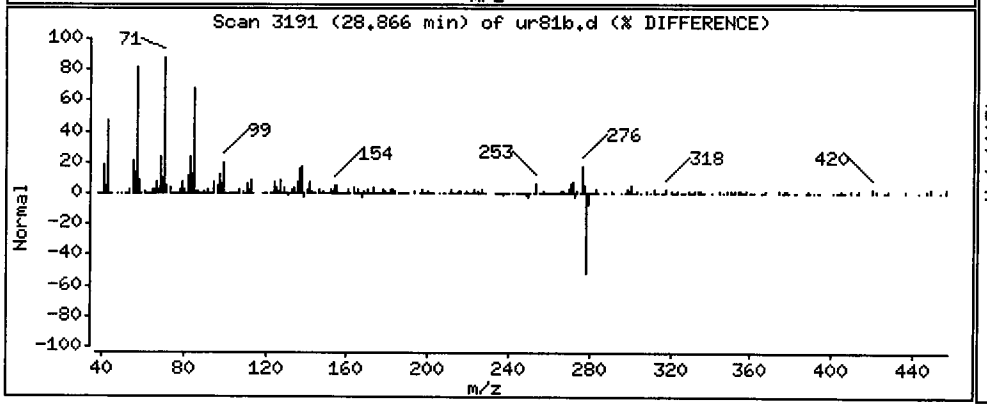
79 Dibenzo(a,h)anthracene

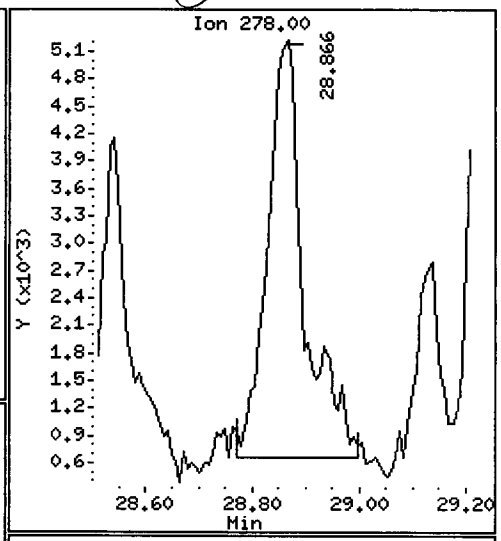
Concentration: 11.75 ug/kg

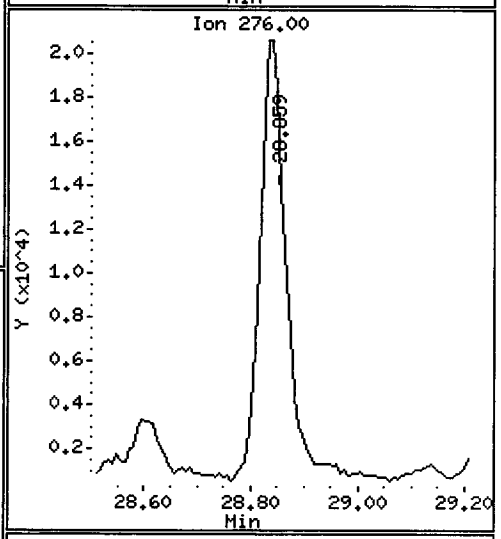


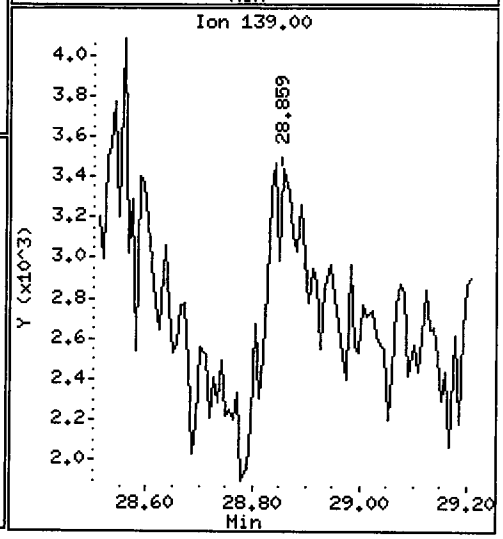












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

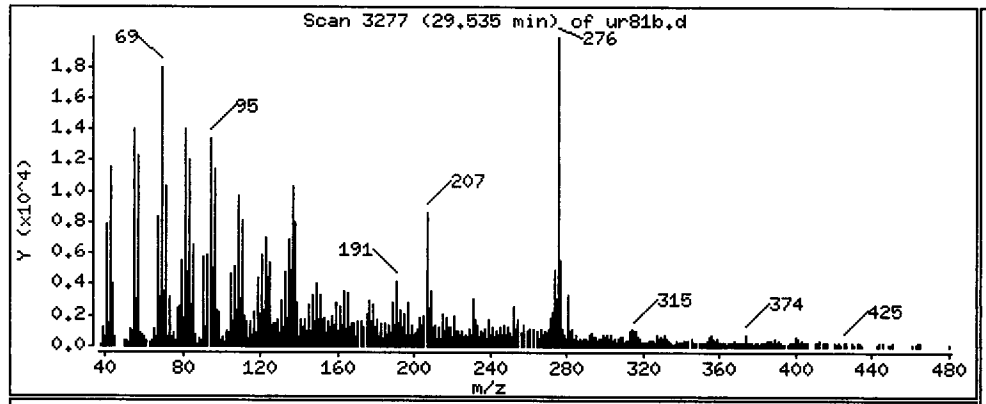
Operator: VTS/YZ

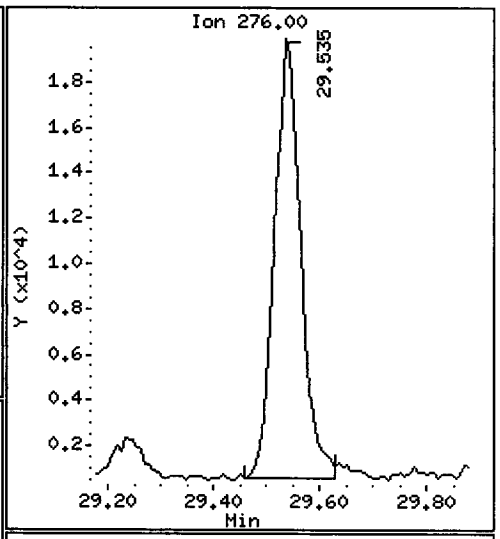
Column phase: ZB-5msi

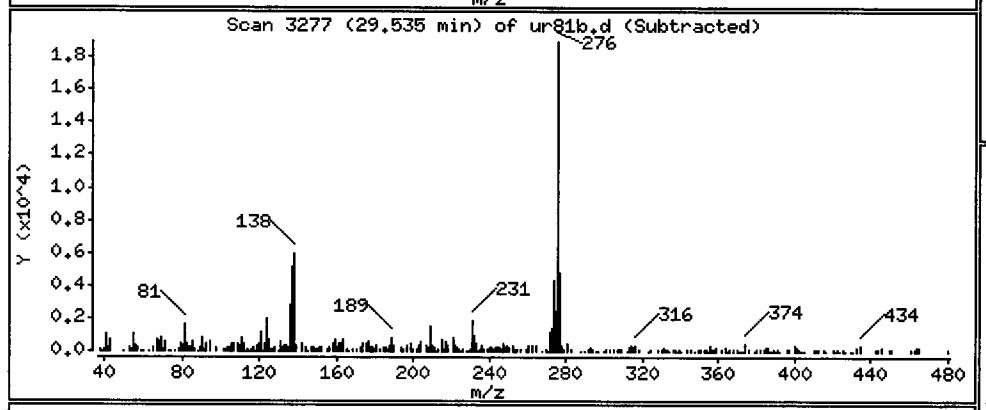
Column diameter: 0.25

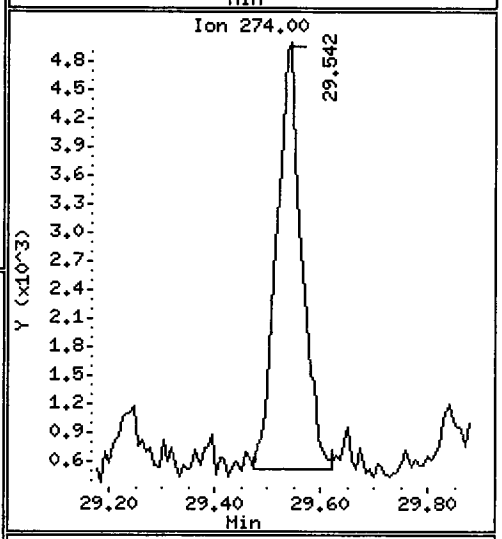
80 Benzo(g,h,i)perylene

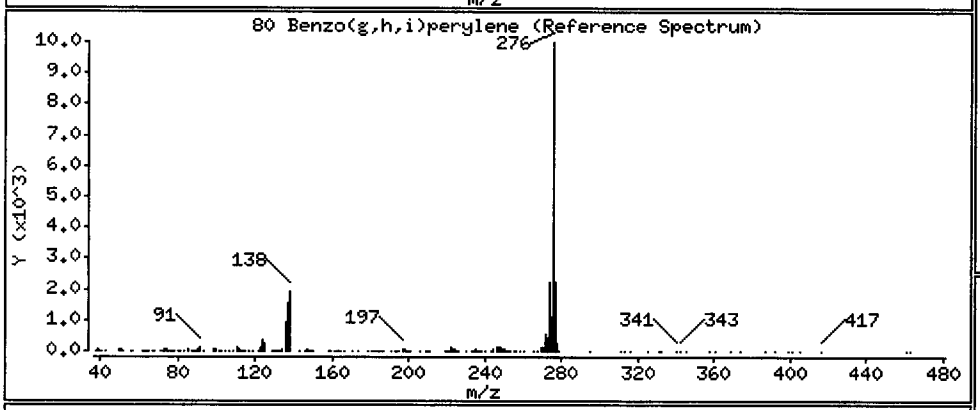
Concentration: 31.27 ug/kg

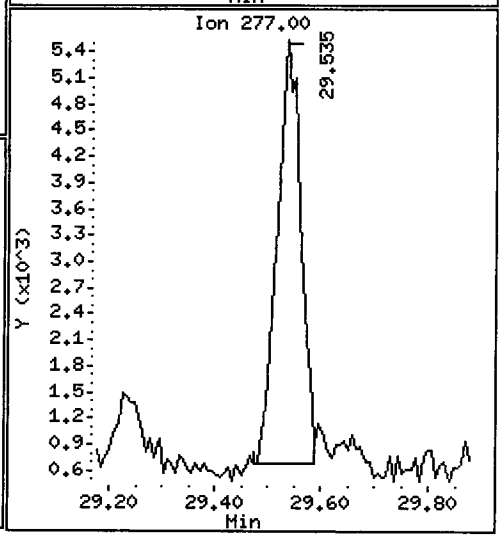


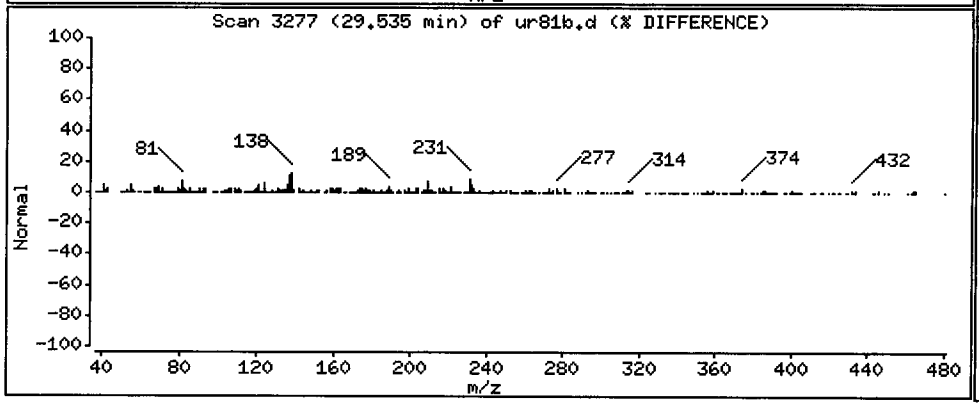












Data File: /chem1/nt10.i/20120508.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

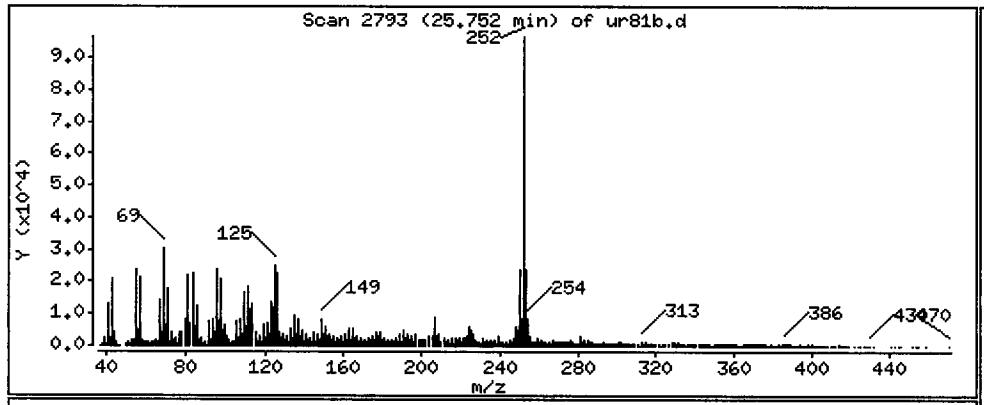
Operator: VTS/YZ

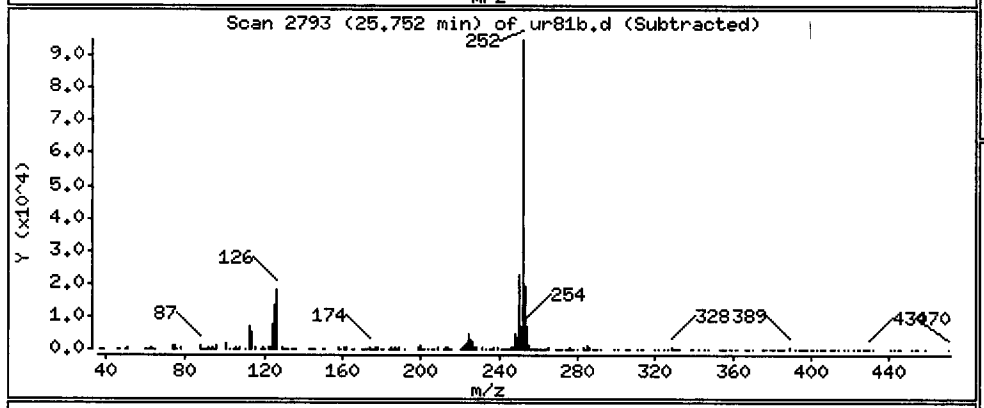
Column phase: ZB-5msi

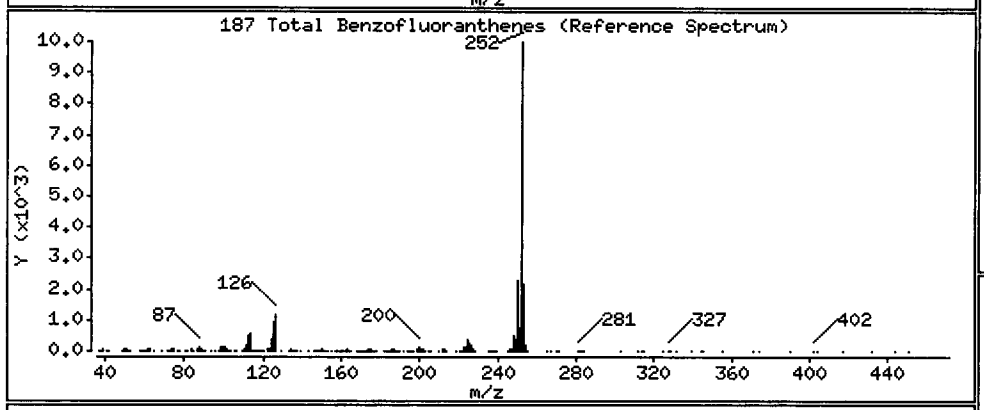
Column diameter: 0.25

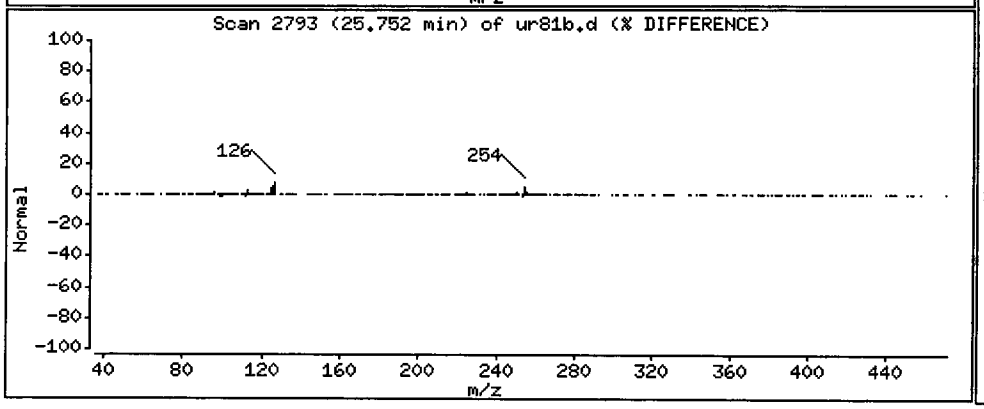
187 Total Benzofluoranthenes

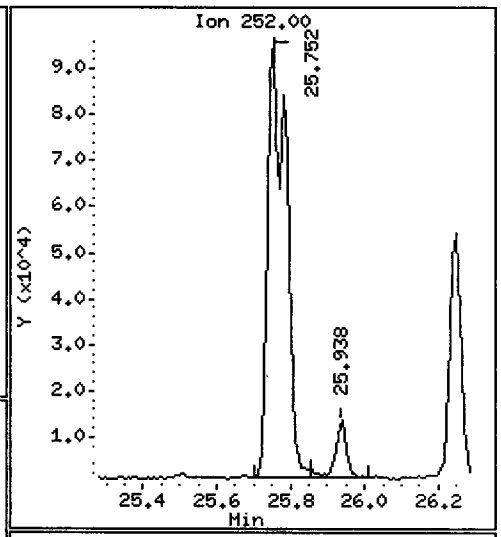
Concentration: 137.4 ug/kg

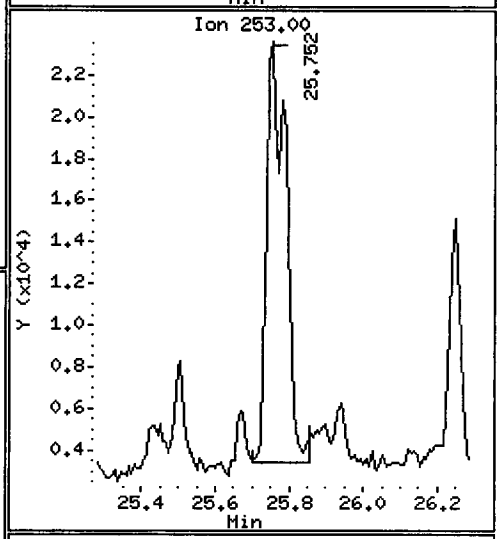


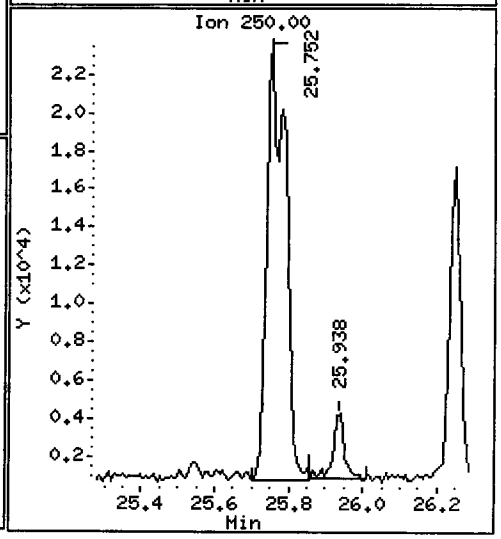






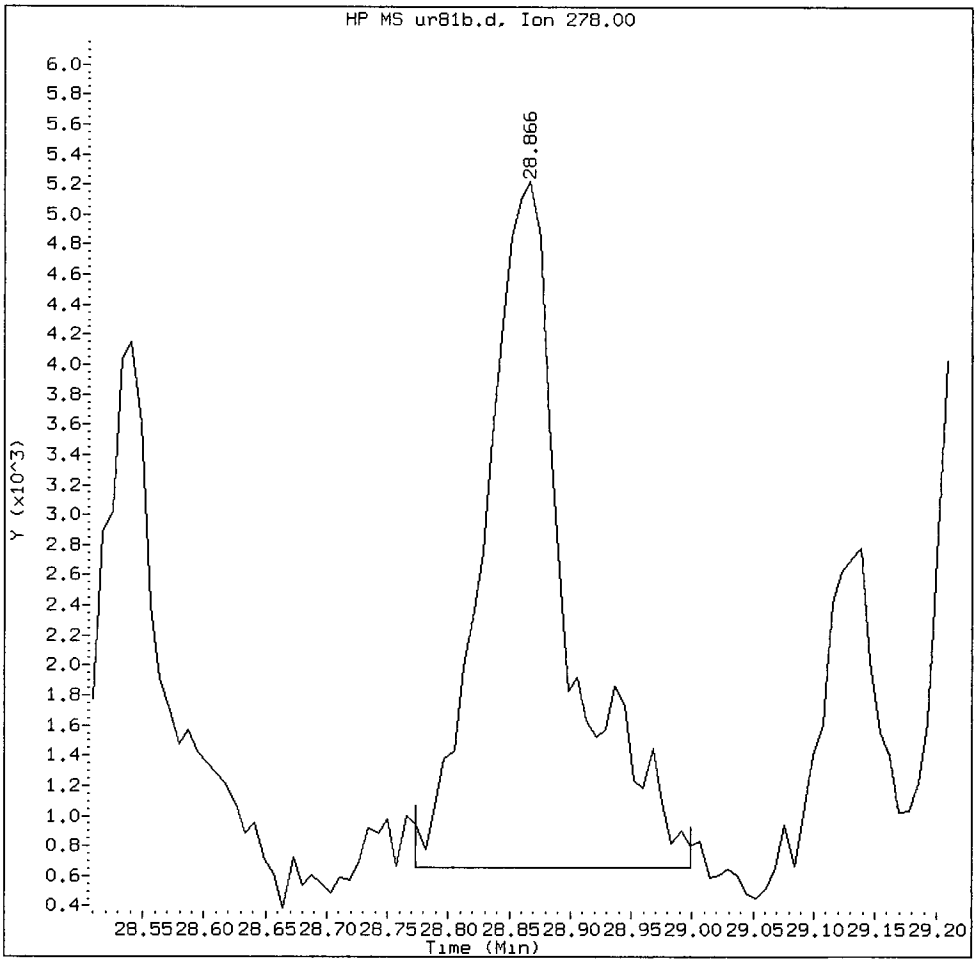






UR81B, /chem1/nt10.i/20120508.b/ur81b.d

Dibenzo(a,h)anthracene Amount: 0.12 Area: 22124



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81b.d

Lab ID: UR81B, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

VZ 5/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81c.d
Lab Smp Id: UR81C
Client Smp ID: IJ12-06
Inj Date : 08-MAY-2012 19:06
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : UR81C
Misc Info : 12-7394
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	23.10000	Weight of sample extracted (g)
M	55.60000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.690	6.667	(0.739)	372137	4.13360	403.0
$ 2 Phenol-d5	99	8.406	8.398	(0.929)	473732	4.23186	412.6
3 Phenol	94	8.429	8.421	(0.932)	28012	0.22830	22.26
$ 5 2-Chlorophenol-d4	132	8.661	8.653	(0.957)	418751	4.32224	421.4
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	263175	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.428	9.428	(1.042)	172430	2.62656	256.1
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.358	9.350	(1.034)	11867	0.20754	20.23
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.917	9.909	(1.096)	45242	0.44932	43.81
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.873)	258721	2.89816	282.6
22 2,4-Dimethylphenol	107	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	24 Benzoic acid	105	11.164	11.303	(0.953)	30977	0.43080	42.00
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.719	11.719	(1.000)	1044105	4.00000	
	28 Naphthalene	128	11.766	11.766	(1.004)	63082	0.24193	23.59
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	28665	0.16030 J	15.63
$	36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	560151	2.89361	282.1
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.635	15.627	(1.000)	567493	4.00000	
	44 Acenaphthene	153	Compound Not Detected.					
	46 Dibenzofuran	168	16.060	16.060	(1.027)	32748	0.14657 J	14.29
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	16.833	16.833	(1.077)	27169	0.15940 J	15.54
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.411	17.411	(1.114)	123460	4.74205	462.4
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.910	18.903	(1.000)	878921	4.00000	
	60 Phenanthrene	178	18.957	18.957	(1.002)	133388	0.61370	59.84
	61 Anthracene	178	19.057	19.050	(1.008)	50340	0.21942	21.39
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.386	21.363	(1.131)	320477	1.29541	126.3
	65 Pyrene	202	21.789	21.781	(0.909)	307308	1.15167	112.3
$	66 Terphenyl-d14	244	22.106	22.098	(0.922)	512911	3.06538	298.9
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	23.941	23.941	(0.999)	120125	0.50166	48.91
*	69 Chrysene-d12	240	23.972	23.964	(1.000)	882989	4.00000	
	71 Chrysene	228	24.011	24.010	(1.002)	183318	0.85761	83.62
	72 bis(2-Ethylhexyl)phthalate	149	24.088	24.080	(0.961)	132366	0.72950	71.13
*	134 Di-n-octylphthalate-d4	153	25.063	25.056	(1.000)	1395471	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.333	26.333	(0.996)	81147	0.38782	37.81
*	77 Perylene-d12	264	26.449	26.441	(1.000)	861311	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.835	28.828	(1.090)	55331	0.23240	22.66
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	29.535	29.527	(1.117)	58976	0.28651	27.93
	105 1-methylnaphthalene	142	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	25.745	25.783	(0.973)	231648	0.98853	96.38

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81c.d
Lab Smp Id: UR81C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7394

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-06
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	263175	-3.20
27 Naphthalene-d8	1080694	540347	2161388	1044105	-3.39
42 Acenaphthene-d10	623821	311910	1247642	567493	-9.03
59 Phenanthrene-d10	999143	499572	1998286	878921	-12.03
69 Chrysene-d12	1001009	500504	2002018	882989	-11.79
134 Di-n-octylphthala	1489422	744711	2978844	1395471	-6.31
77 Perylene-d12	988348	494174	1976696	861311	-12.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.05
59 Phenanthrene-d10	18.90	18.40	19.40	18.91	0.04
69 Chrysene-d12	23.96	23.46	24.46	23.97	0.03
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.03
77 Perylene-d12	26.44	25.94	26.94	26.45	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

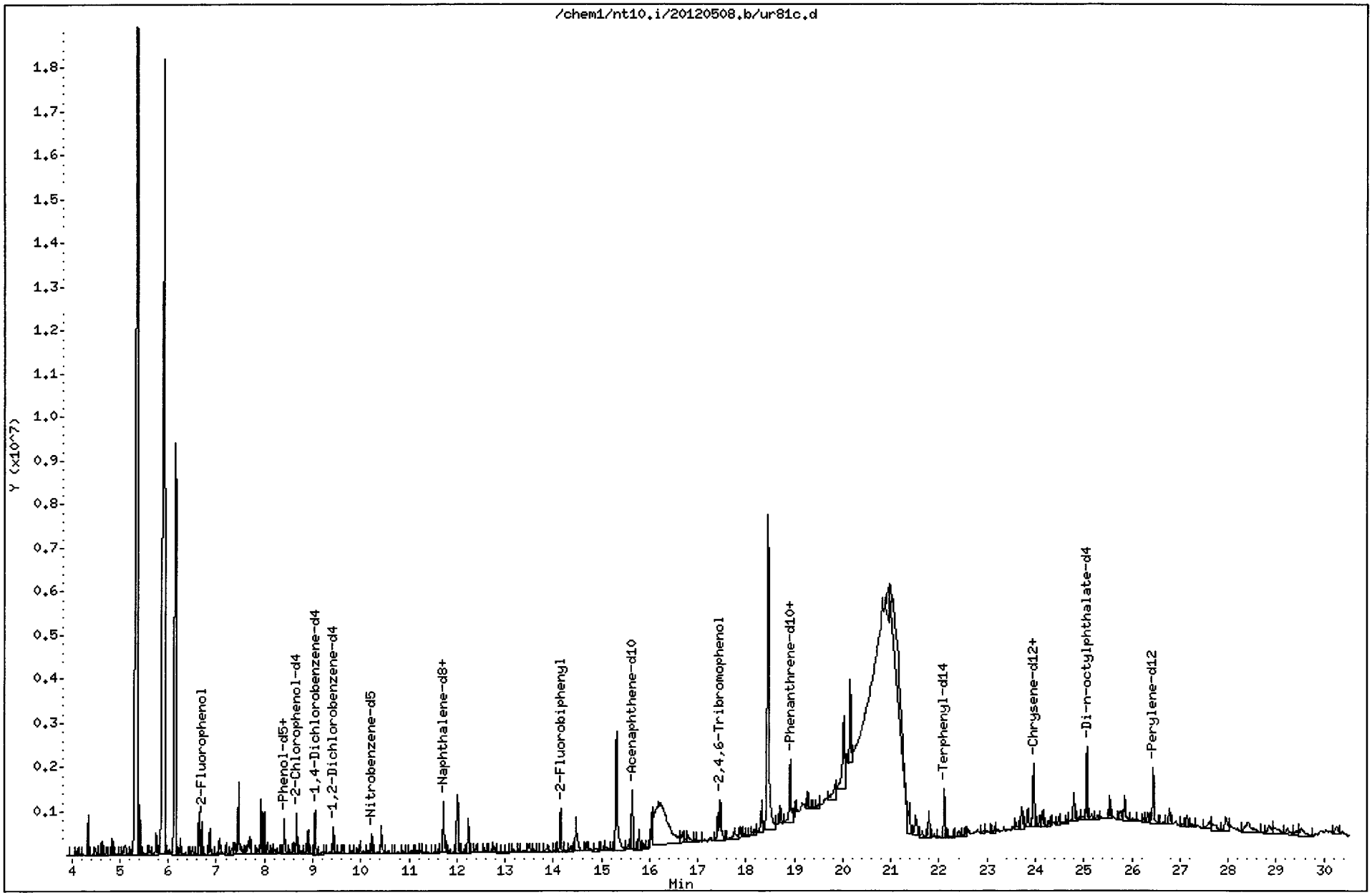
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81C
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7394

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-06
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	731.3	403.0	55.11	30-160
$ 2 Phenol-d5	731.3	412.6	56.42	30-160
$ 5 2-Chlorophenol-d4	731.3	421.4	57.63	30-160
$ 10 1,2-Dichlorobenzen	487.5	256.1	52.53	30-160
$ 18 Nitrobenzene-d5	487.5	282.6	57.96	30-160
$ 36 2-Fluorobiphenyl	487.5	282.1	57.87	30-160
$ 55 2,4,6-Tribromophen	731.3	462.4	63.23	30-160
$ 66 Terphenyl-d14	487.5	298.9	61.31	30-160

Data File: /chem1/nt10.i/20120508.b/ur81c.d
Date : 08-MAY-2012 19:06
Client ID: IJ12-06
Sample Info: UR81C
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

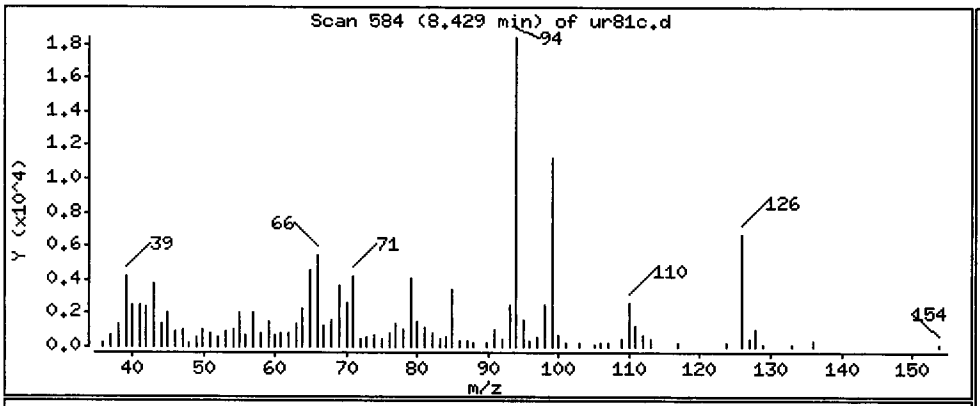
Operator: VTS/YZ

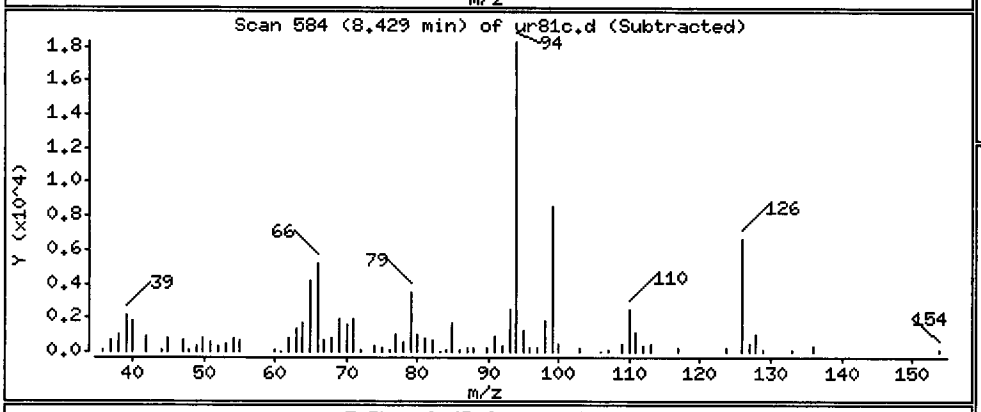
Column phase: ZB-5msi

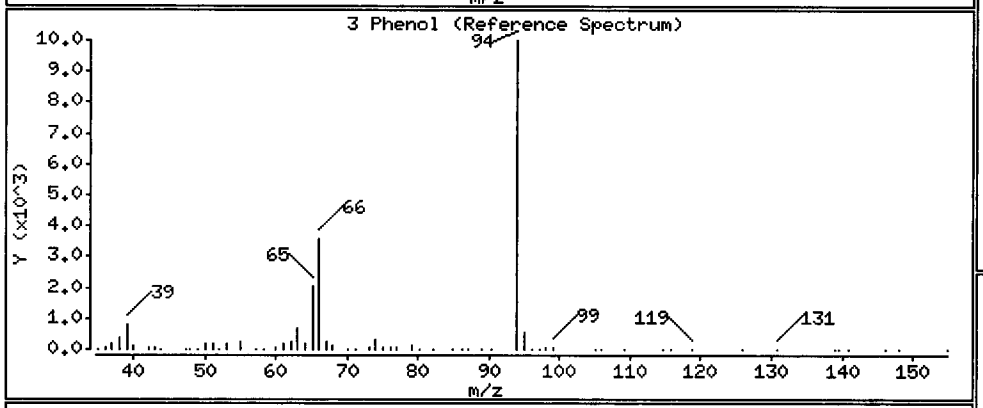
Column diameter: 0.25

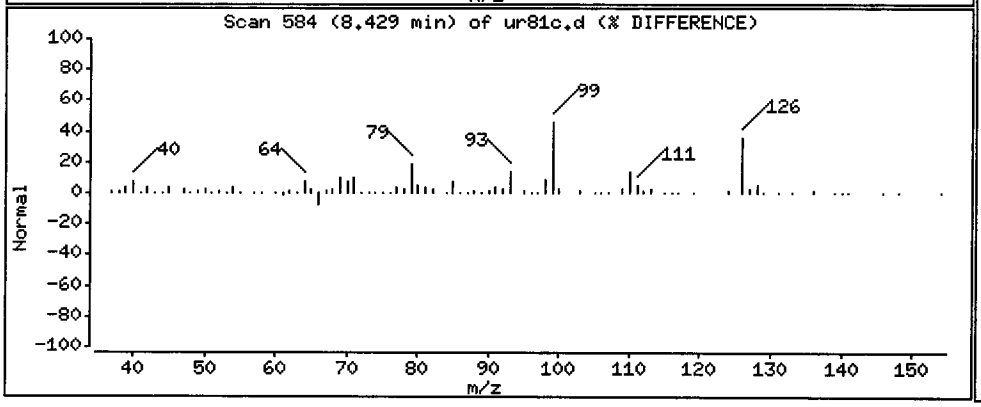
3 Phenol

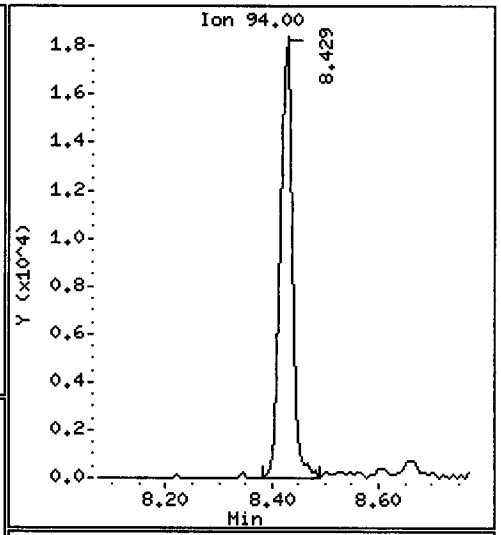
Concentration: 22.26 ug/kg

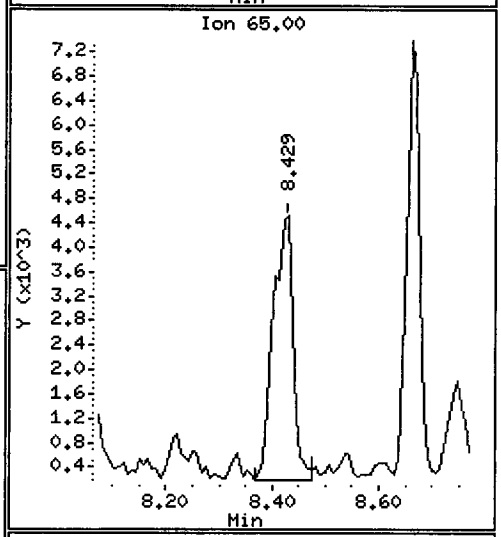


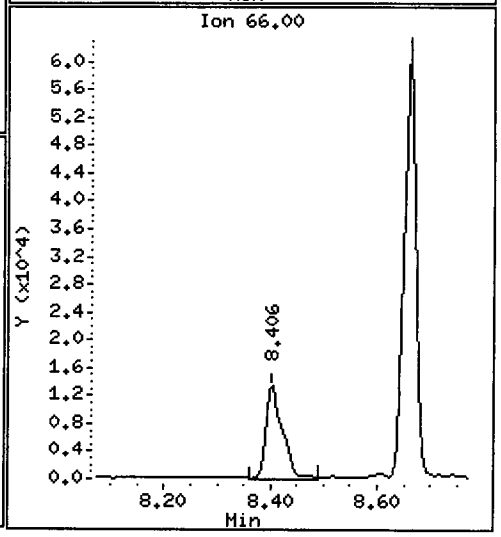












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

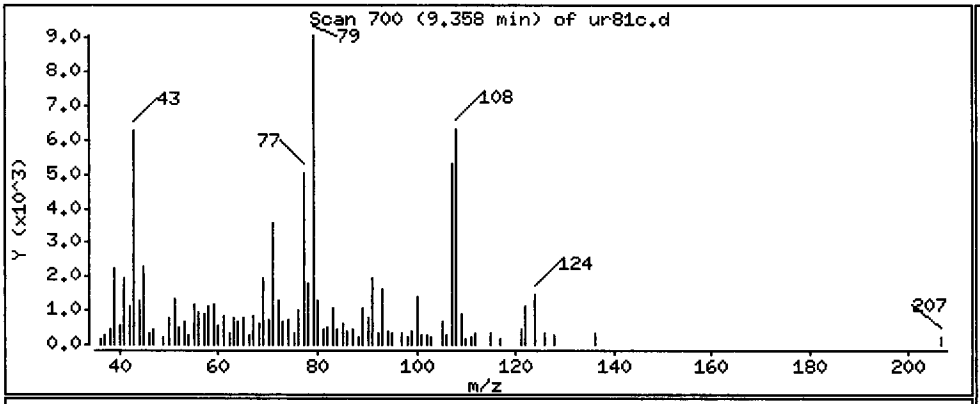
Client ID: IJ12-06 Instrument: nt10.i

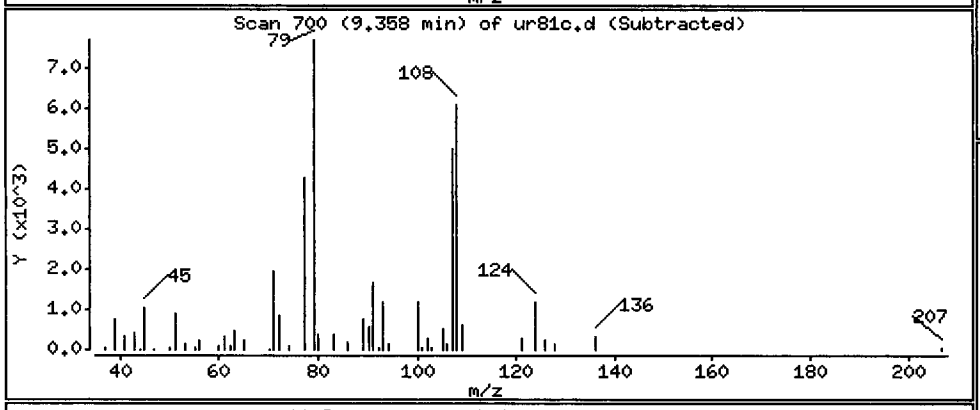
Sample Info: UR81C

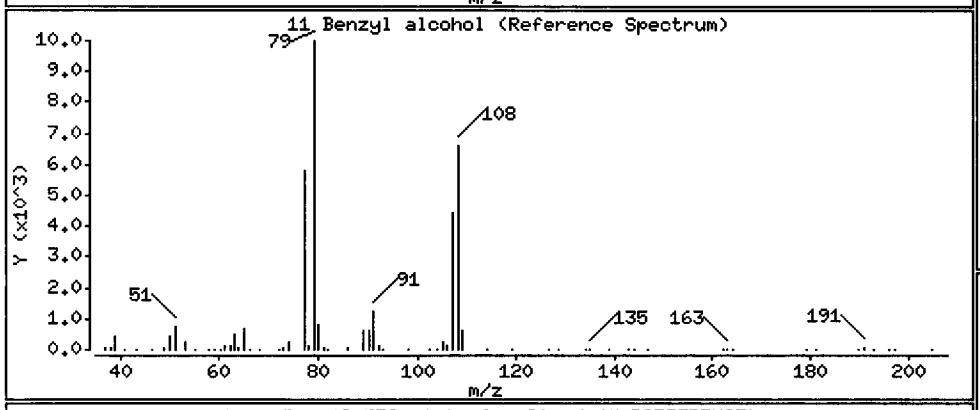
Volume Injected (uL): 1.0 Operator: VTS/YZ

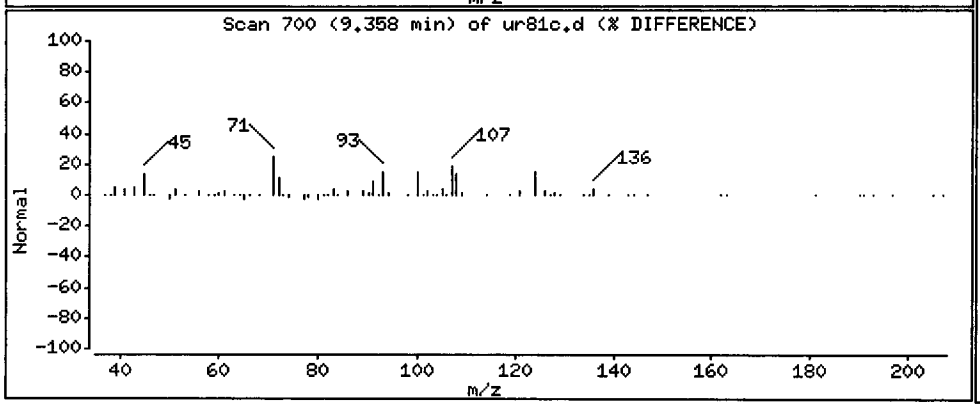
Column phase: ZB-5msi Column diameter: 0.25

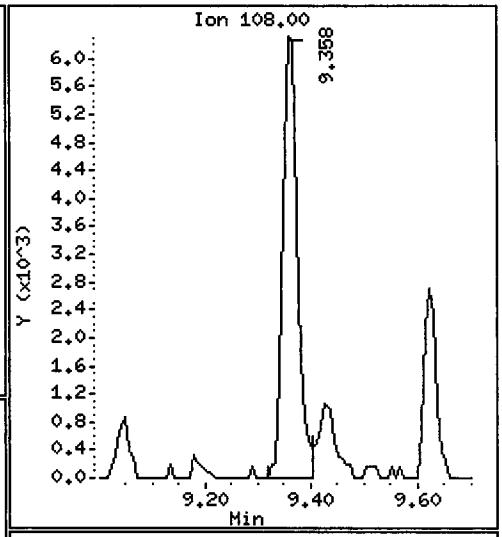
11 Benzyl alcohol Concentration: 20.23 ug/kg

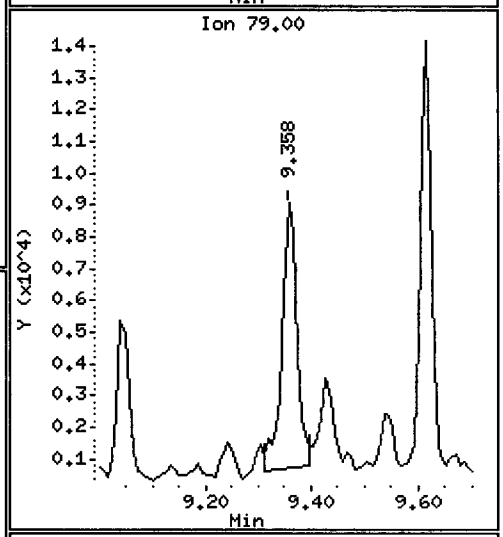


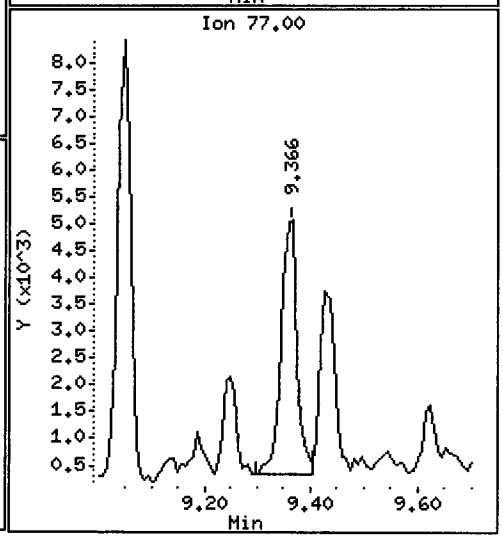












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

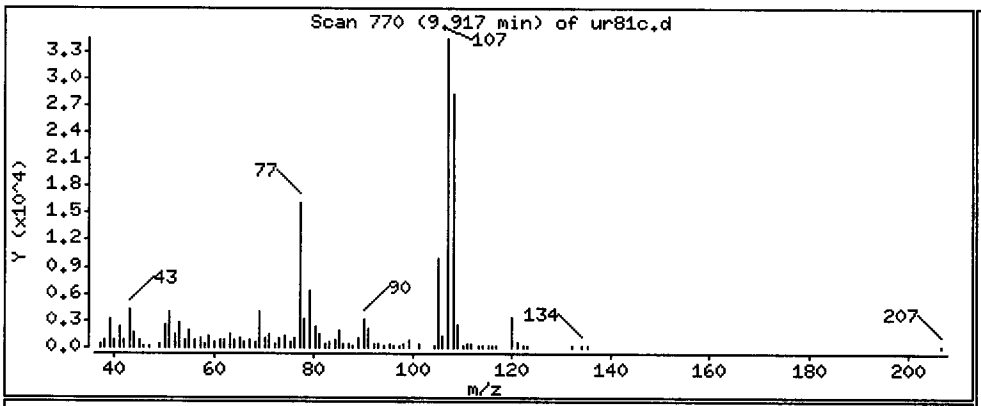
Operator: VTS/YZ

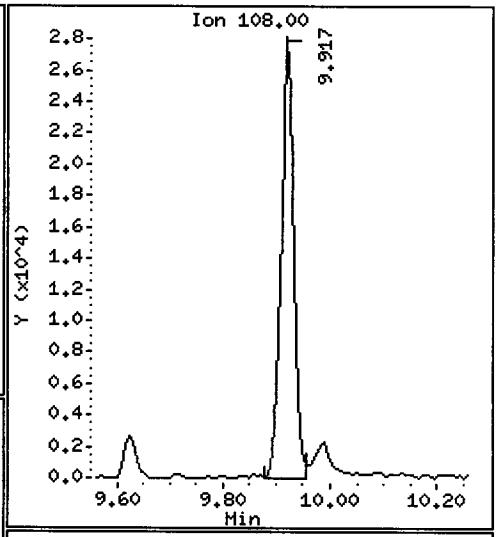
Column phase: ZB-5msi

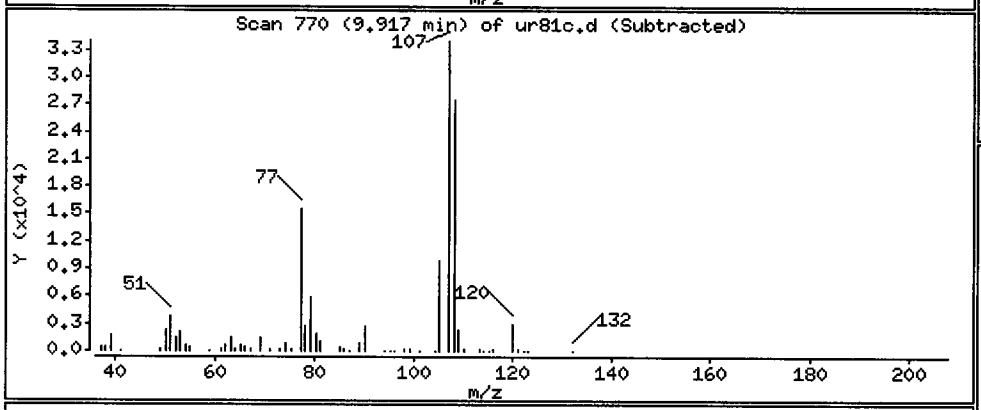
Column diameter: 0.25

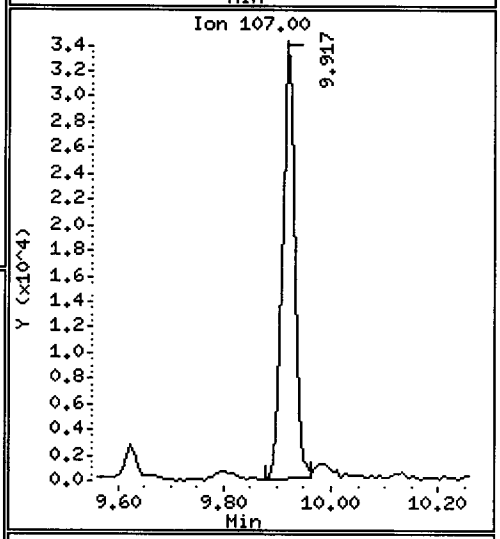
15 4-Methylphenol

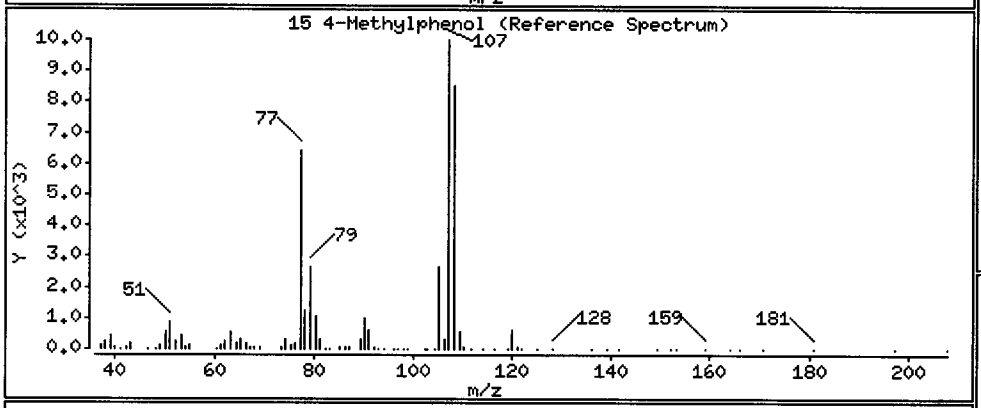
Concentration: 43.81 ug/kg

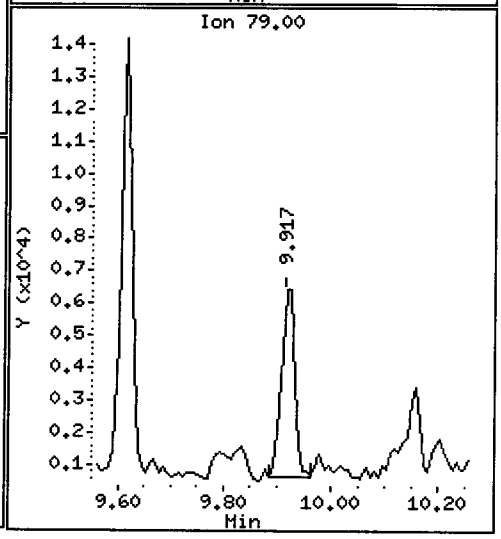


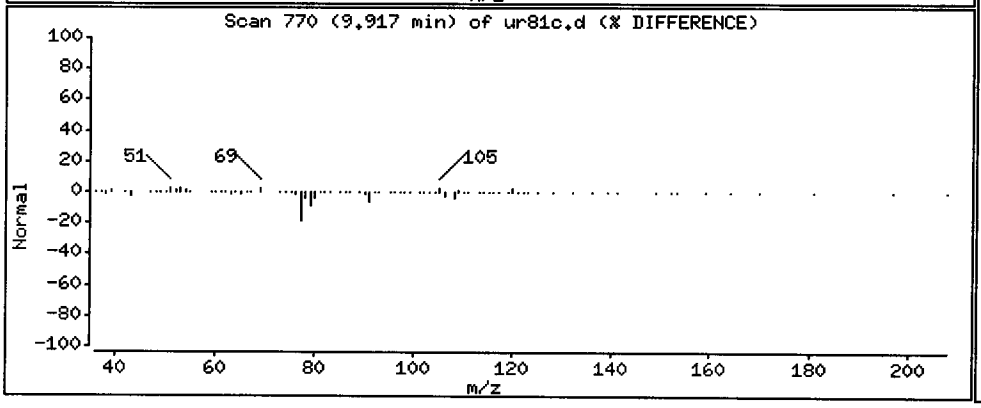












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

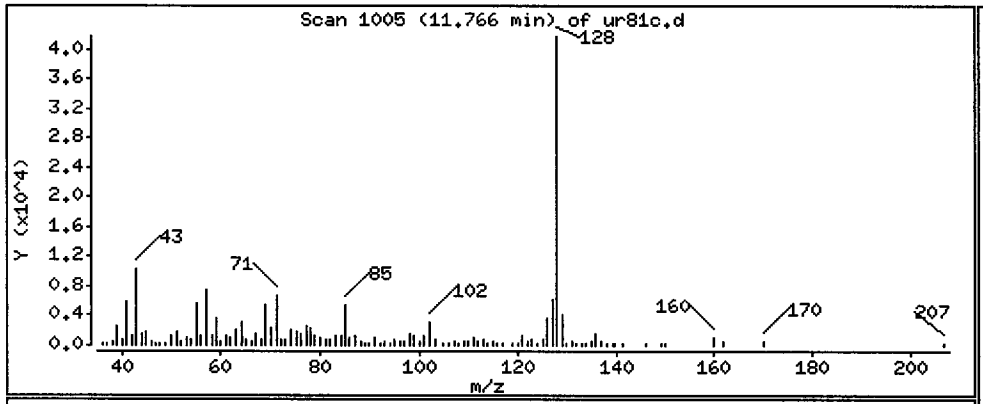
Client ID: IJ12-06 | Instrument: nt10.i

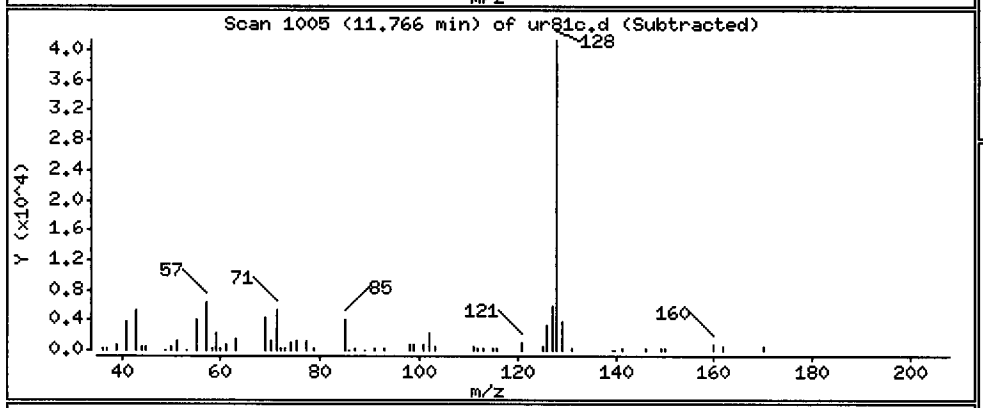
Sample Info: UR81C

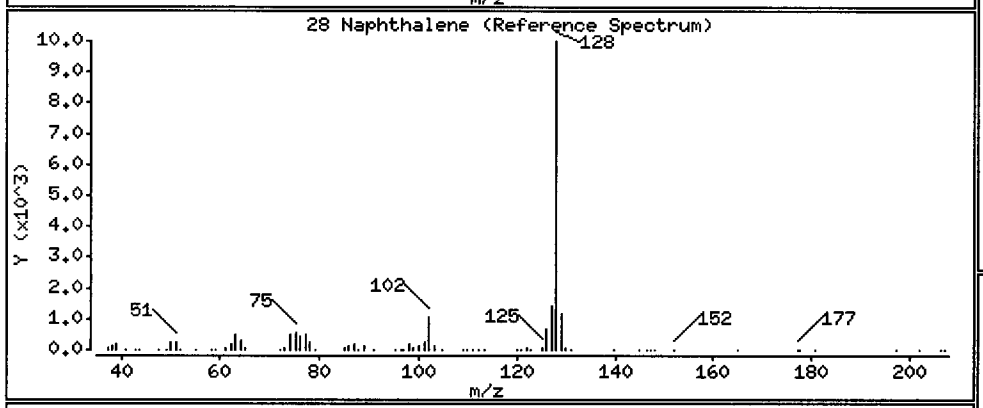
Volume Injected (uL): 1.0 | Operator: VTS/YZ

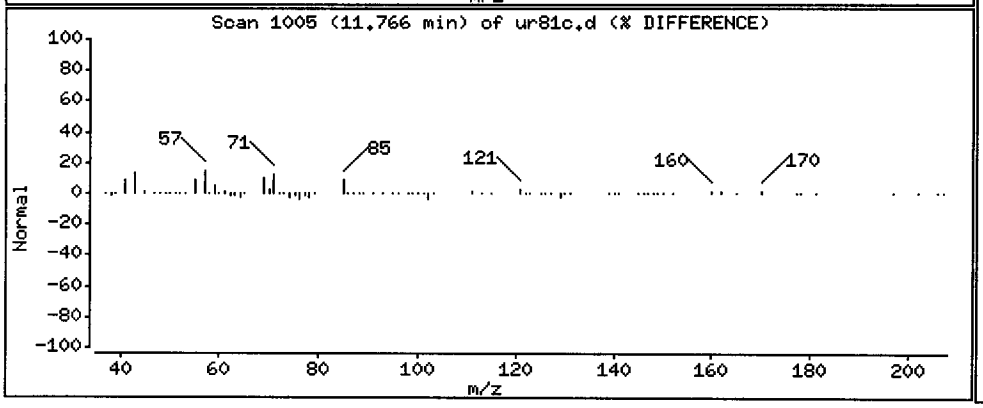
Column phase: ZB-5ms | Column diameter: 0.25

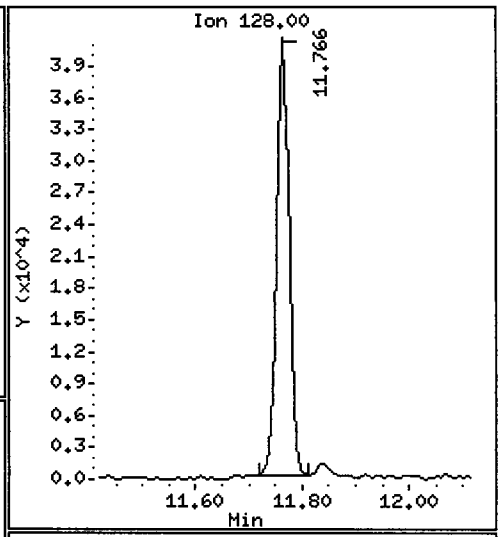
28 Naphthalene | Concentration: 23.59 ug/kg

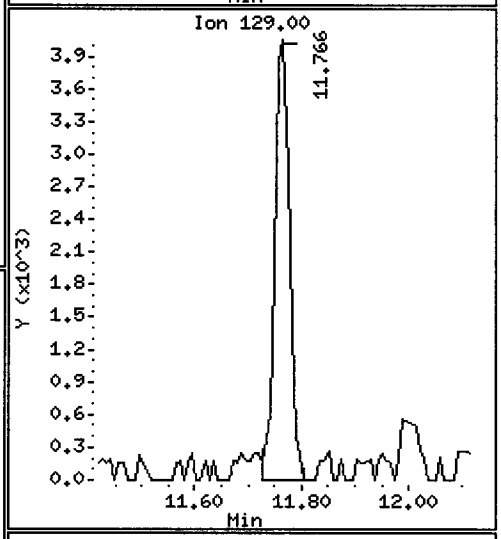


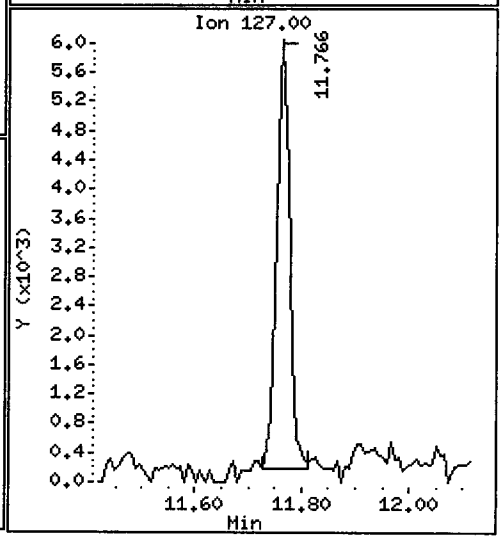












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

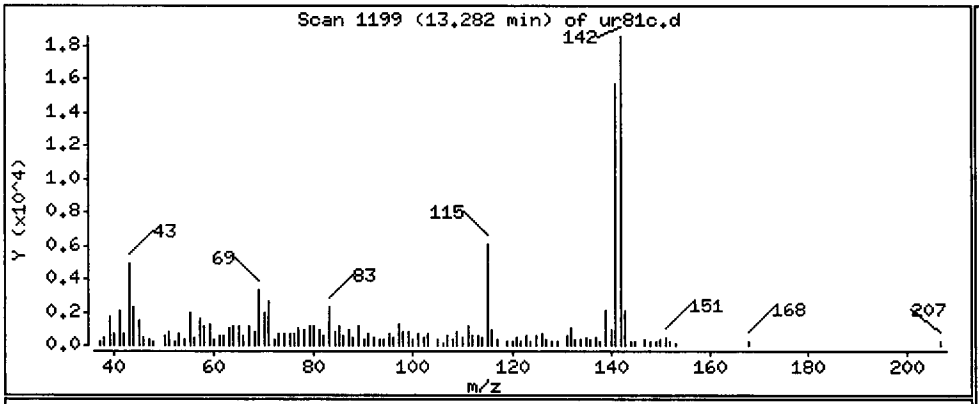
Client ID: IJ12-06 Instrument: nt10.i

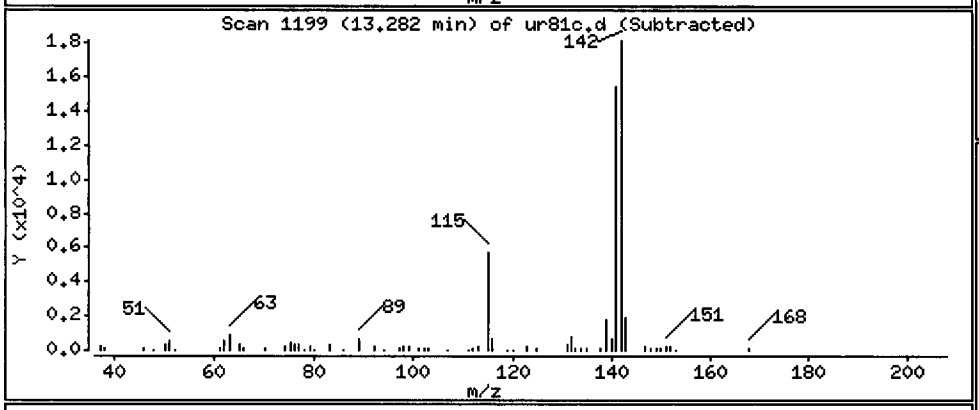
Sample Info: UR81C

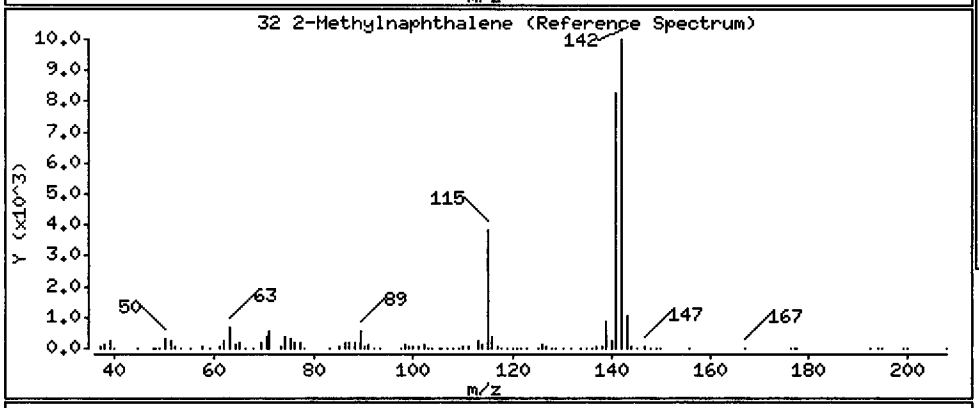
Volume Injected (uL): 1.0 Operator: VTS/YZ

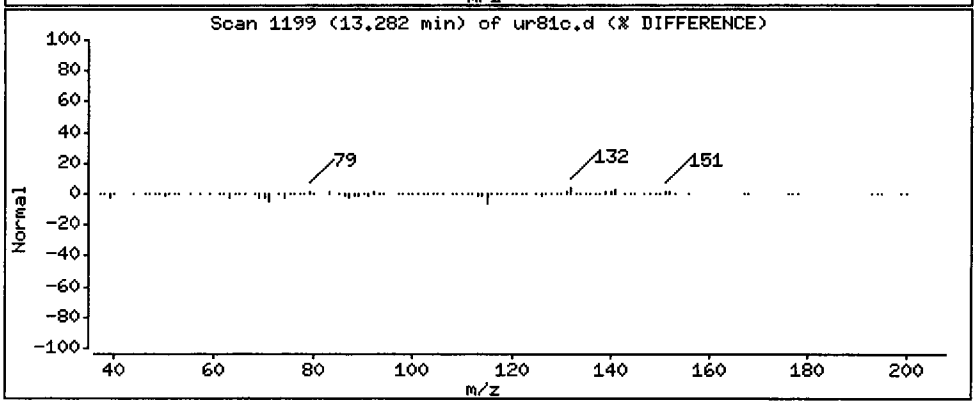
Column phase: ZB-5msi Column diameter: 0.25

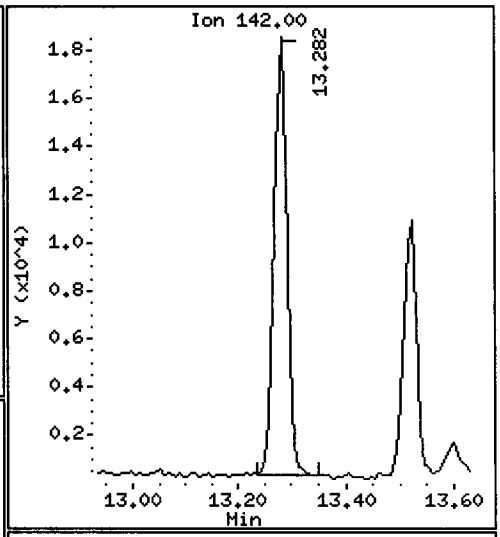
32 2-Methylnaphthalene Concentration: 15.63 ug/kg

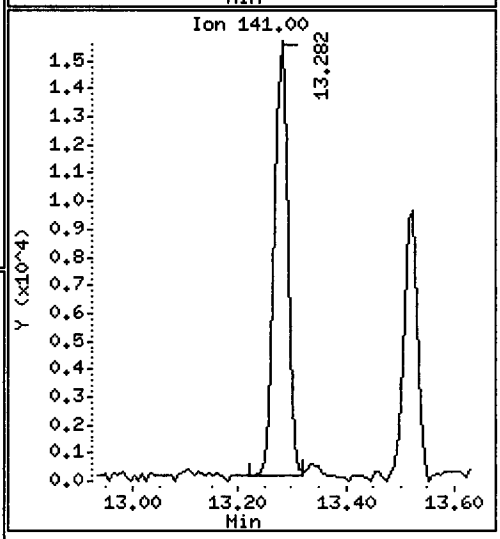












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

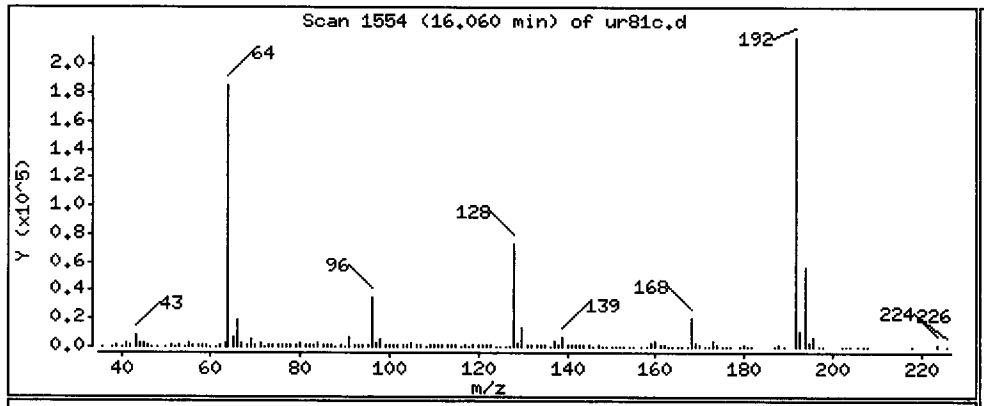
Operator: VTS/YZ

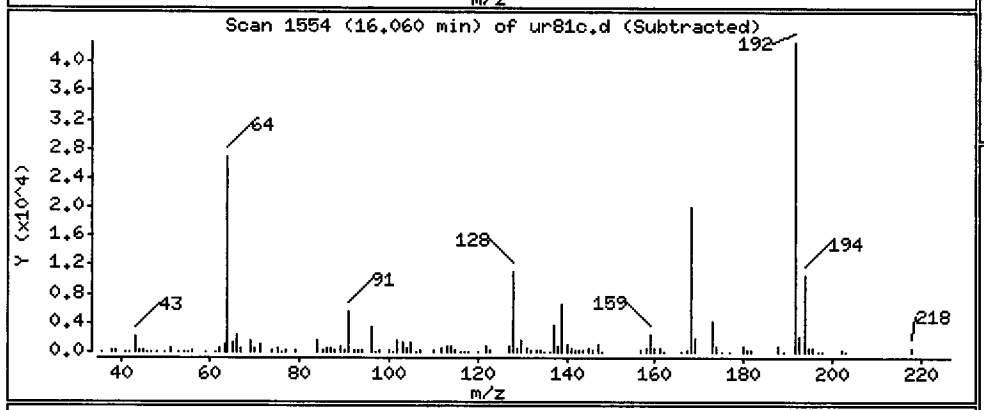
Column phase: ZB-5msi

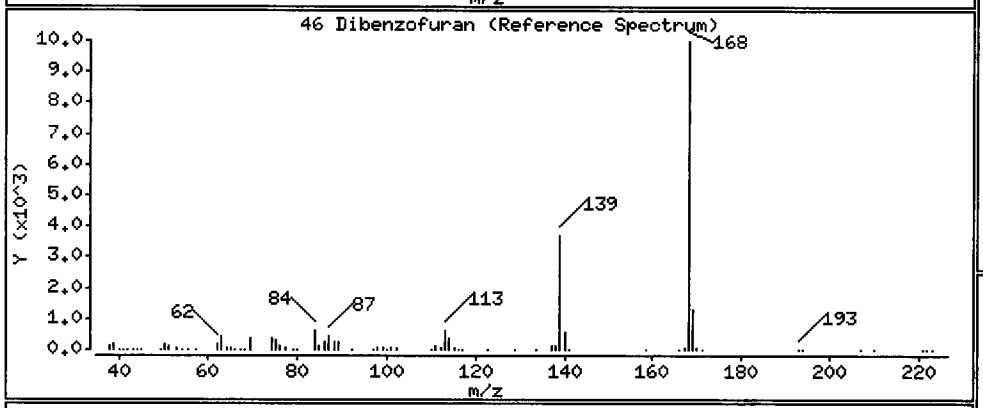
Column diameter: 0.25

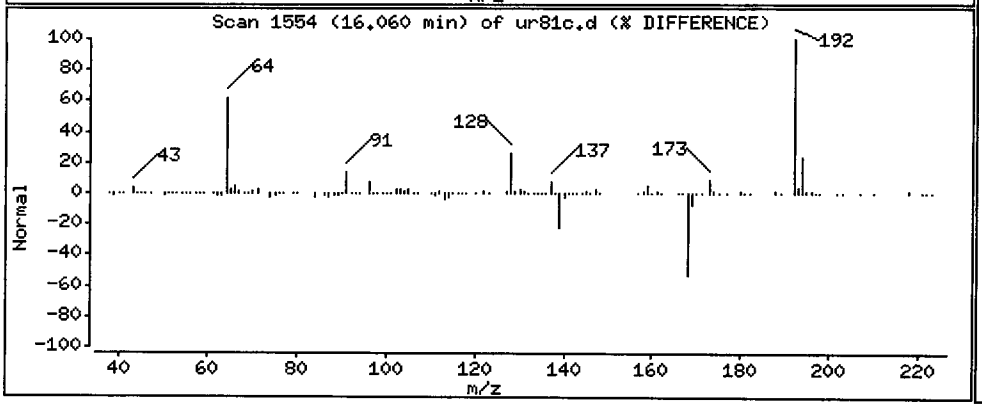
46 Dibenzofuran

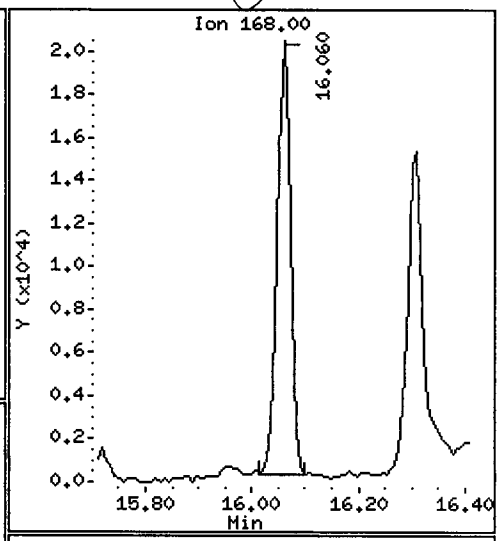
Concentration: 14.29 ug/kg

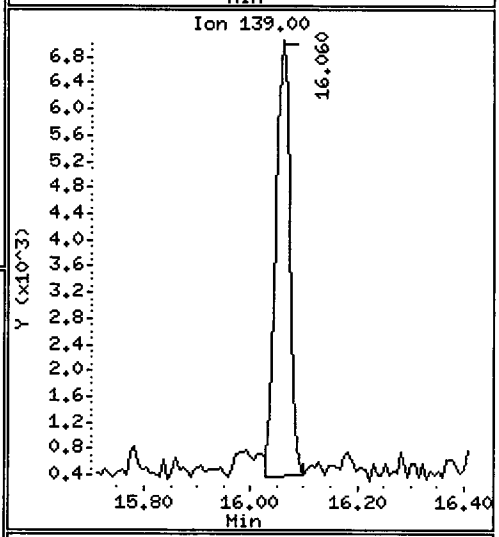


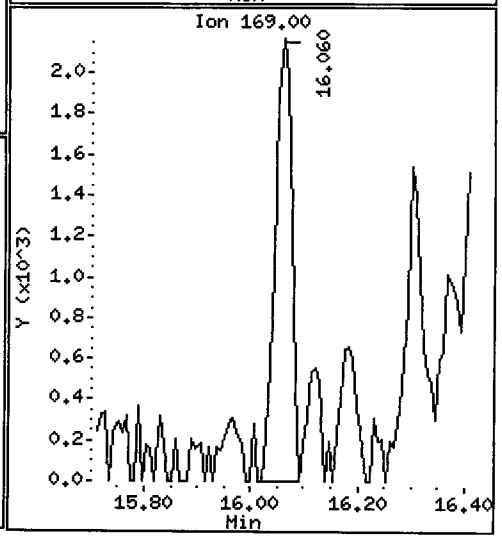












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

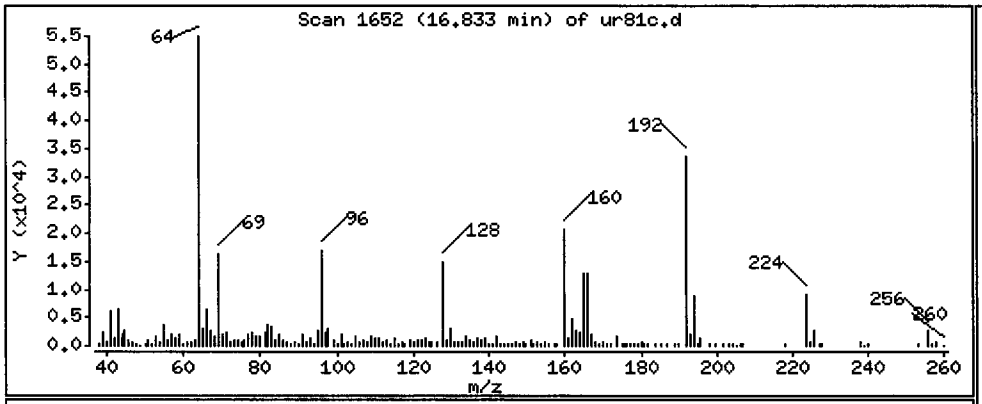
Client ID: IJ12-06 Instrument: nt10.i

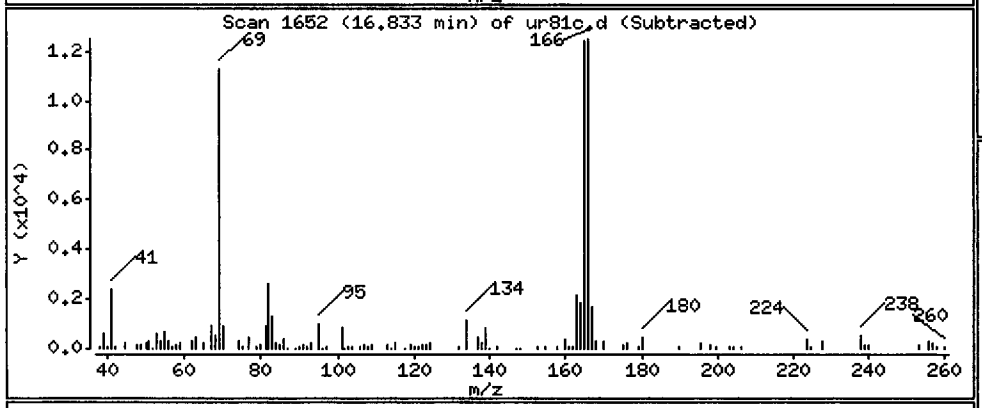
Sample Info: UR81C

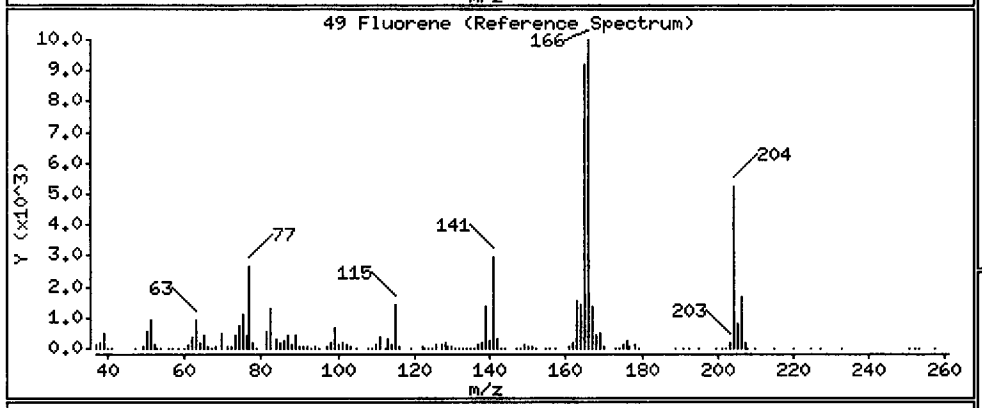
Volume Injected (uL): 1.0 Operator: VTS/YZ

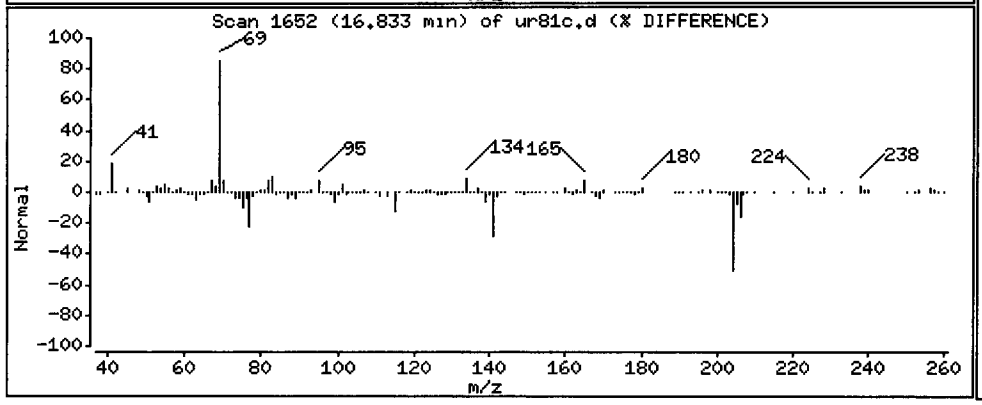
Column phase: ZB-5msi Column diameter: 0.25

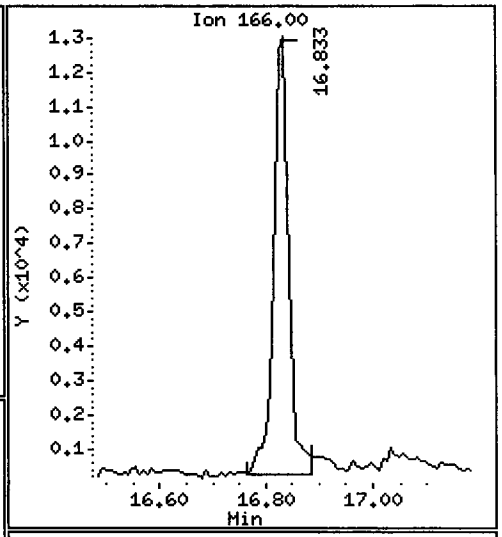
49 Fluorene Concentration: 15.54 ug/kg

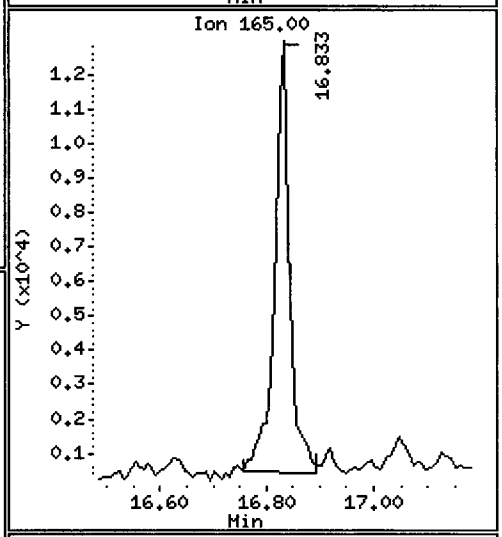


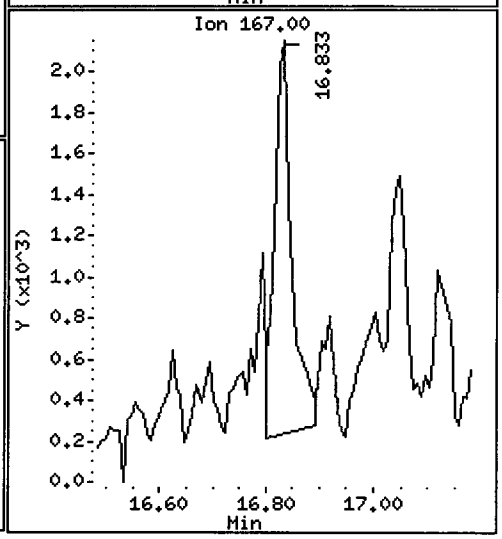












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

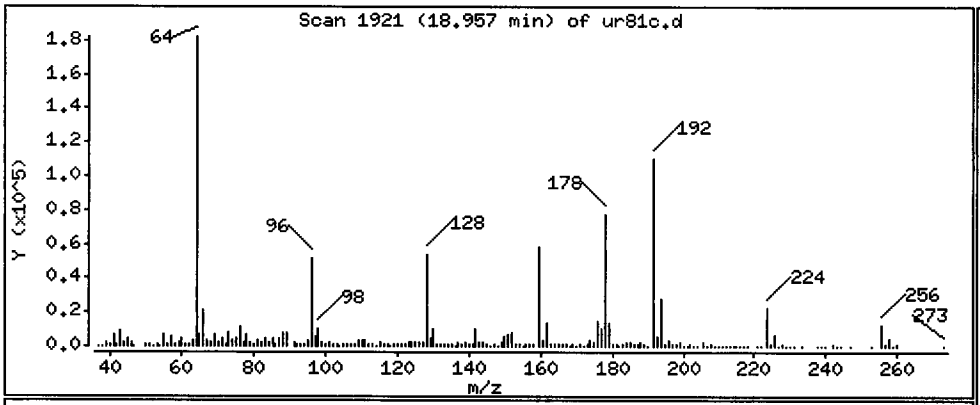
Operator: VTS/YZ

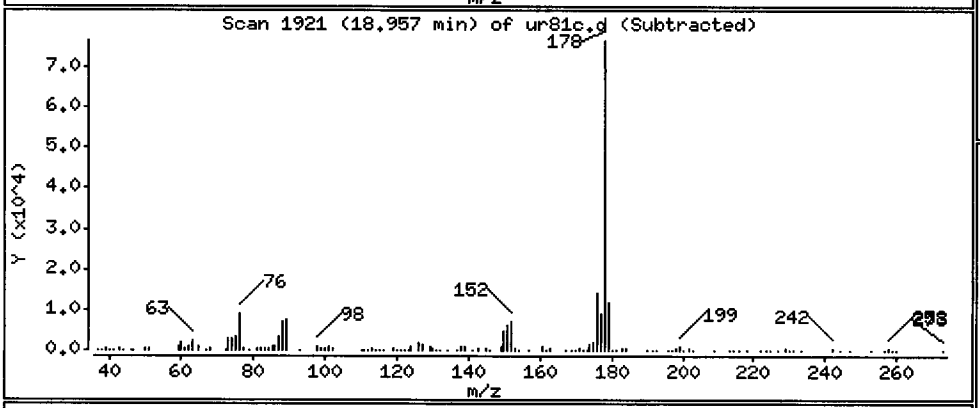
Column phase: ZB-5msi

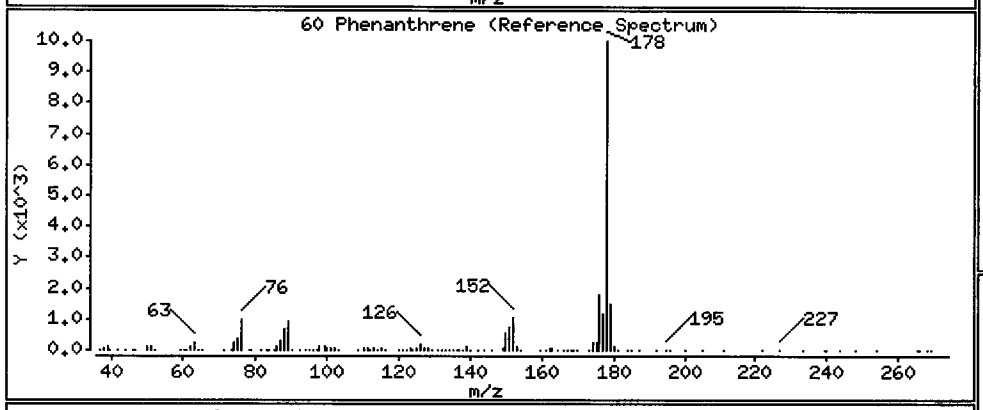
Column diameter: 0.25

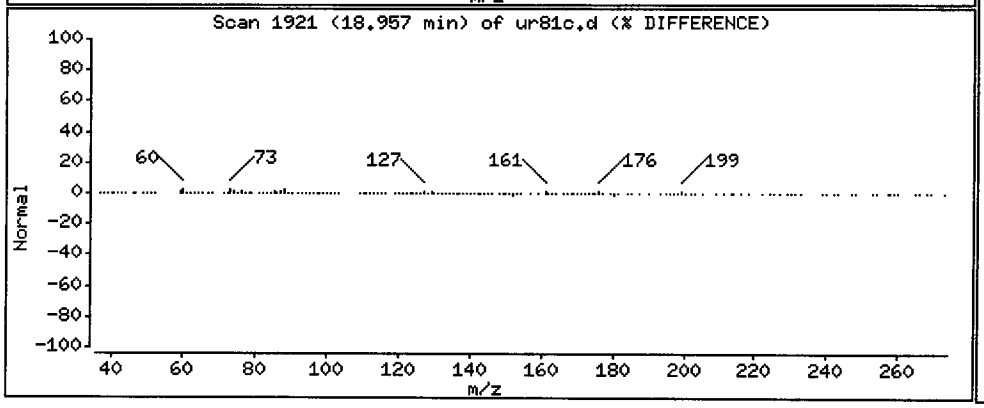
60 Phenanthrene

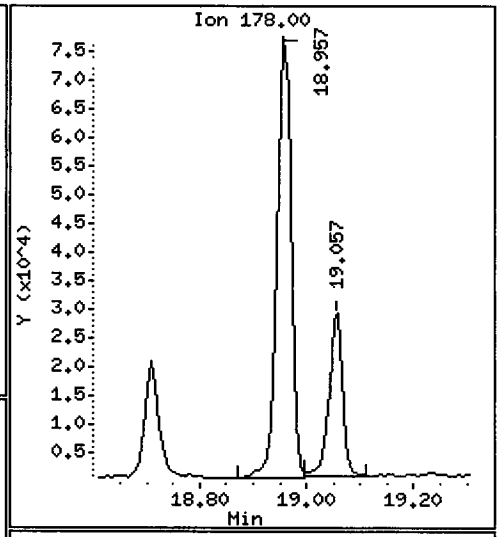
Concentration: 59.84 ug/kg

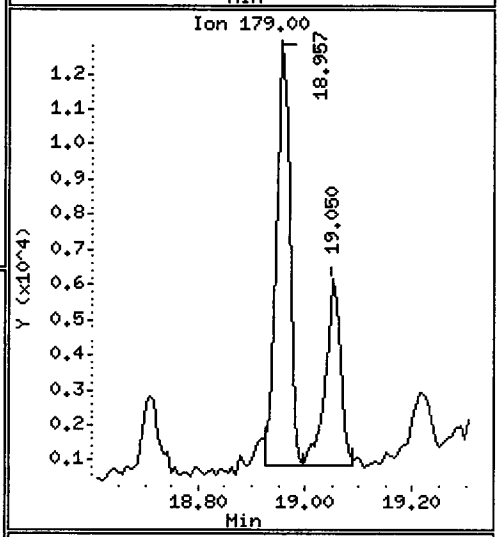


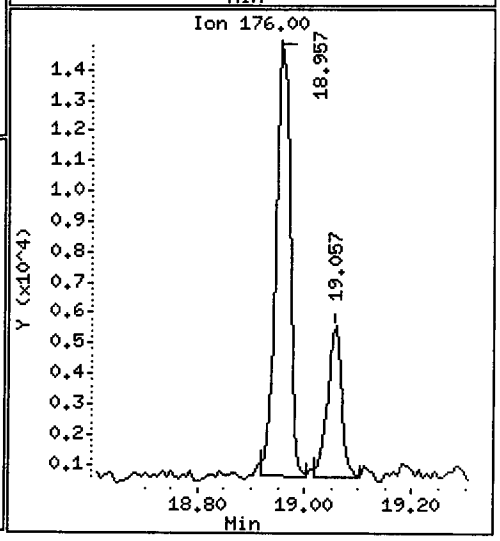












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

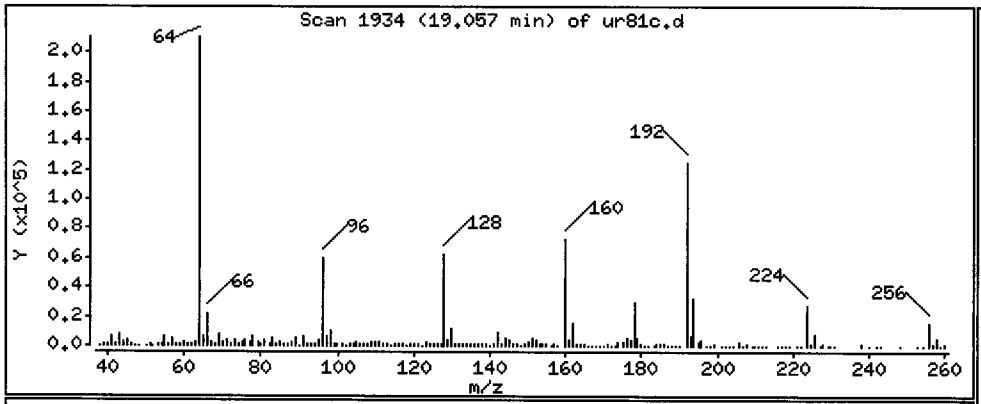
Operator: VTS/YZ

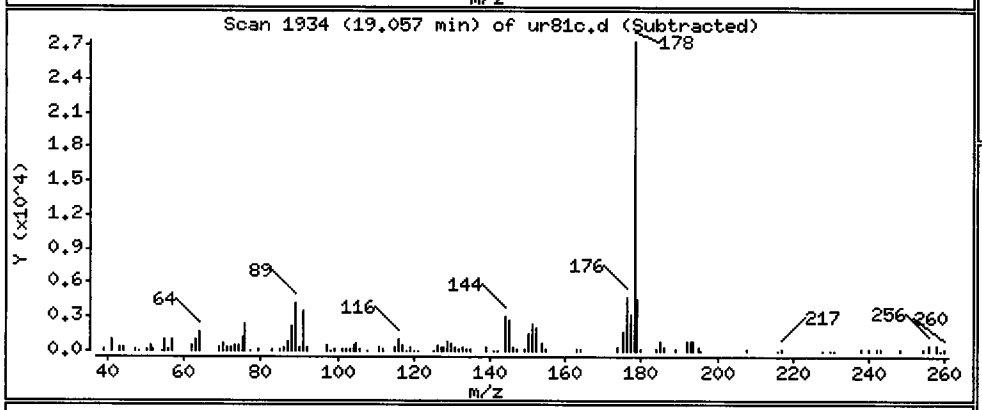
Column phase: ZB-5msi

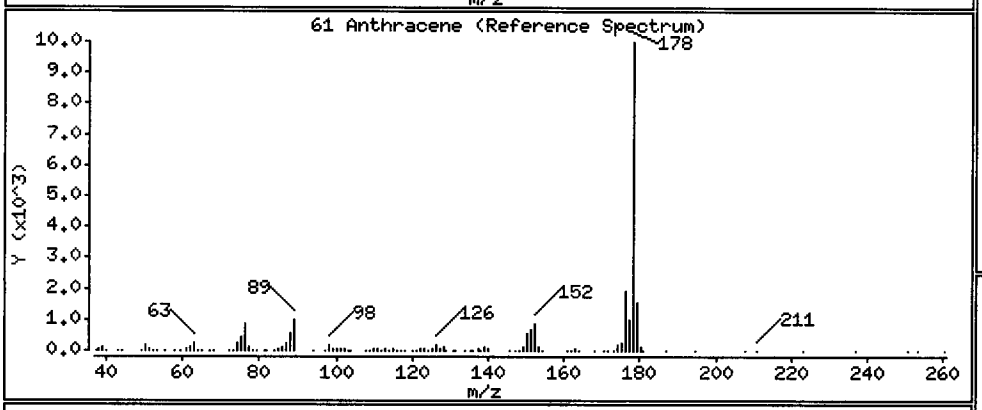
Column diameter: 0.25

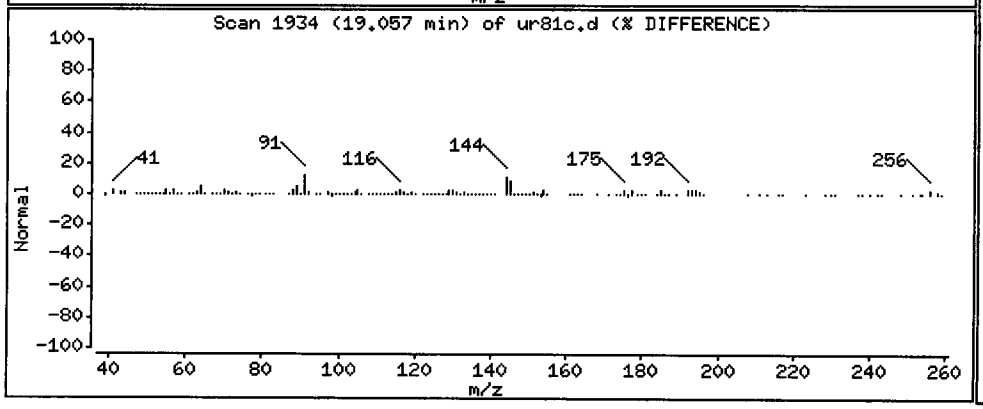
61 Anthracene

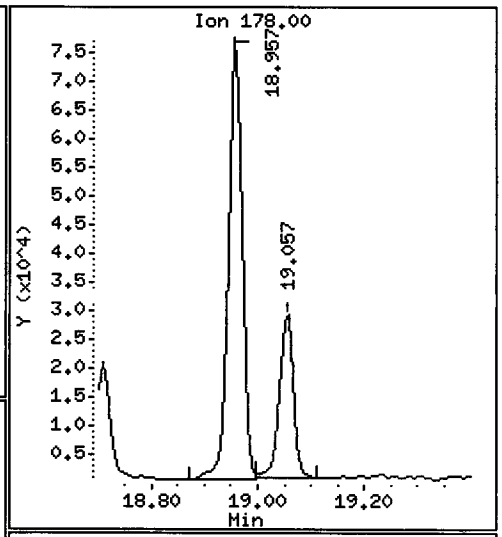
Concentration: 21.39 ug/kg

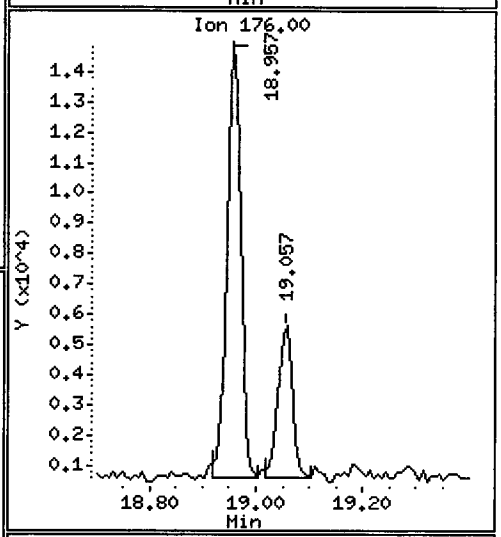


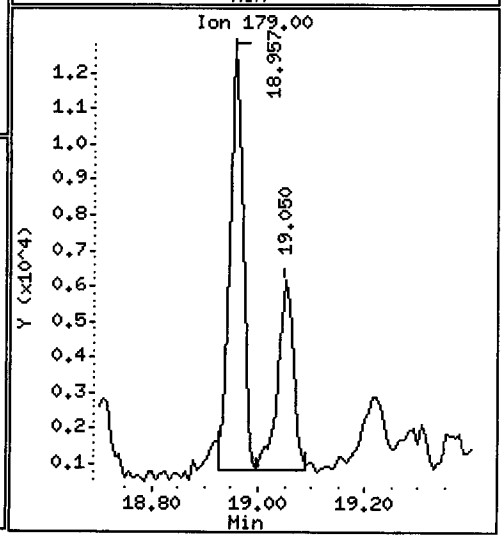












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

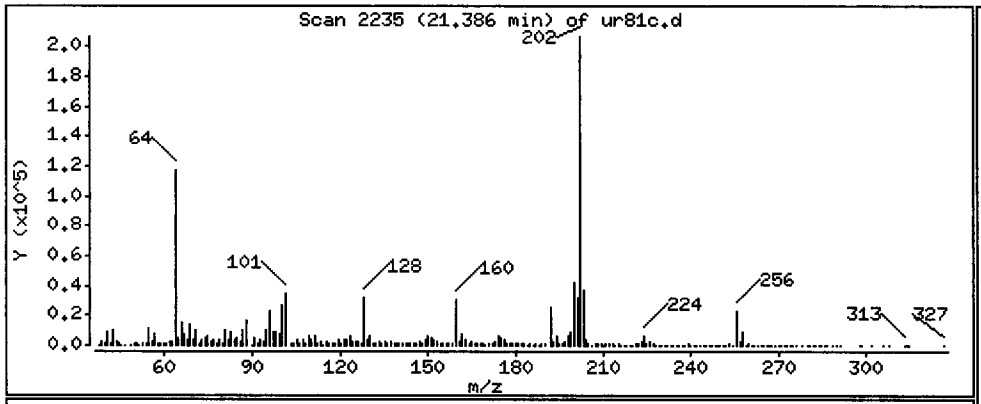
Client ID: IJ12-06 | Instrument: nt10.i

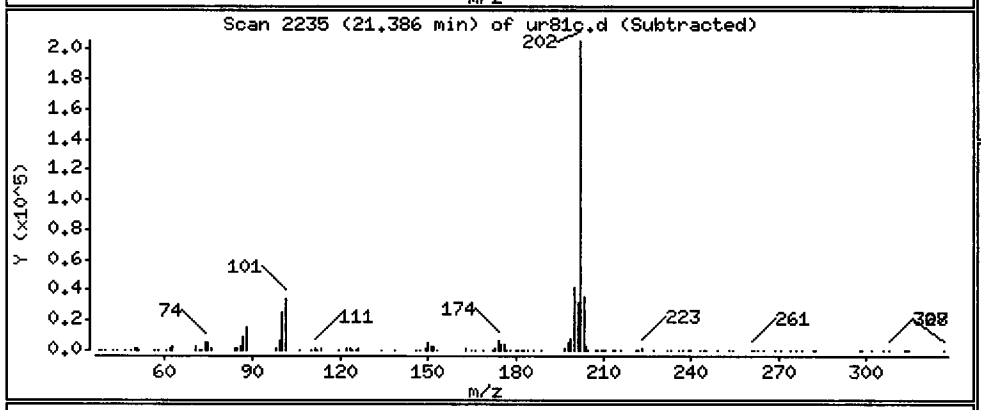
Sample Info: UR81C

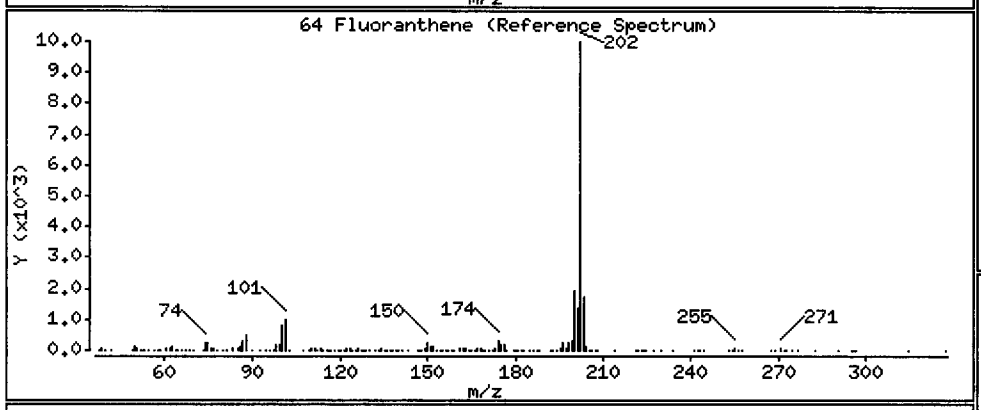
Volume Injected (uL): 1.0 | Operator: VTS/YZ

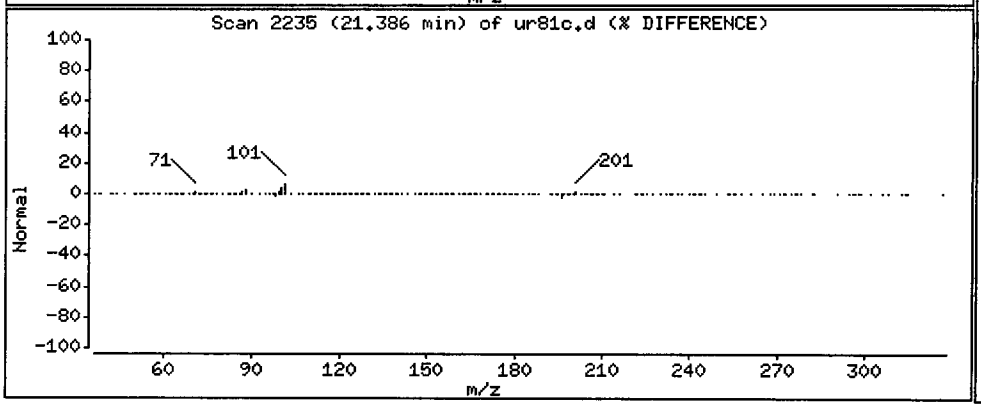
Column phase: ZB-5msi | Column diameter: 0.25

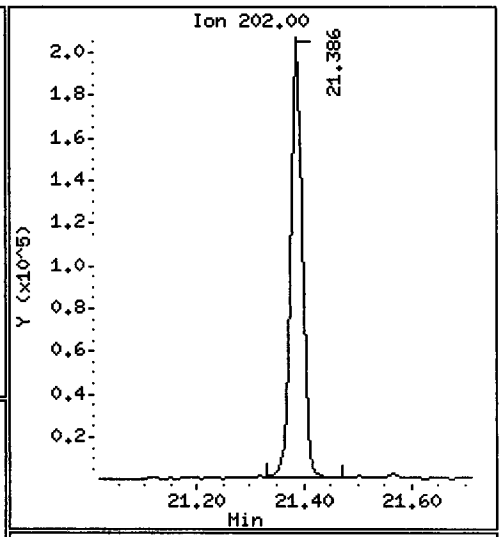
64 Fluoranthene | Concentration: 126.3 ug/kg

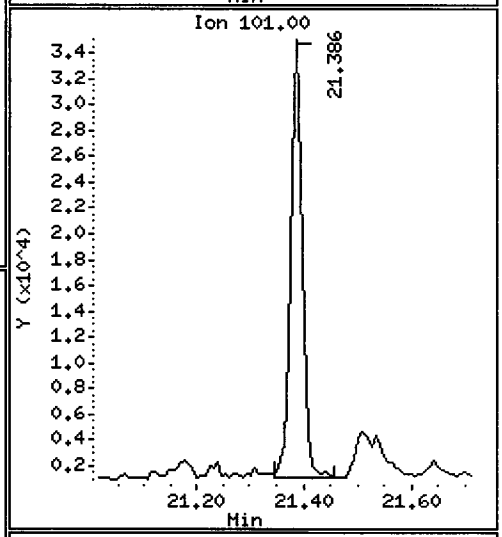


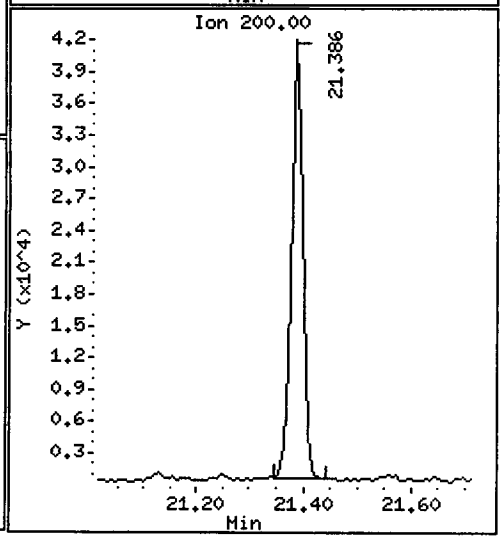












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

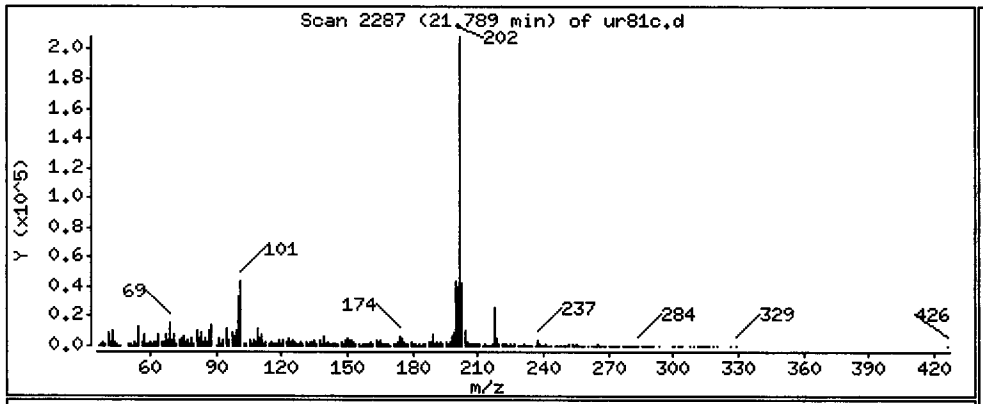
Operator: VTS/YZ

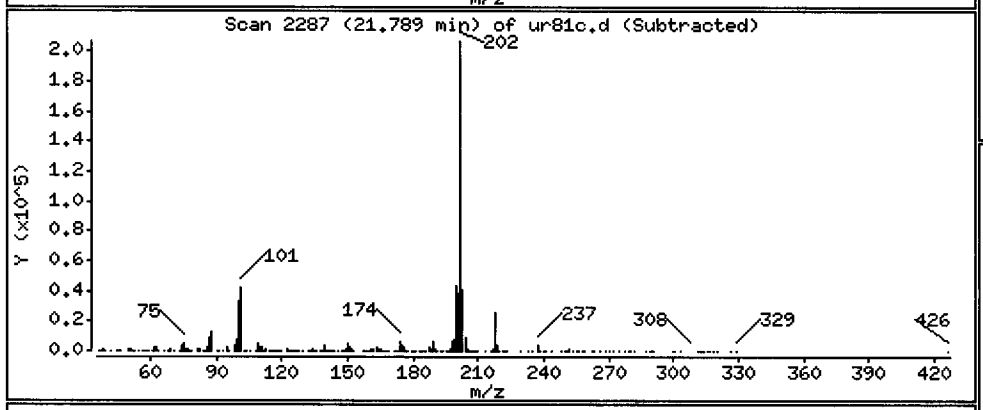
Column phase: ZB-5msi

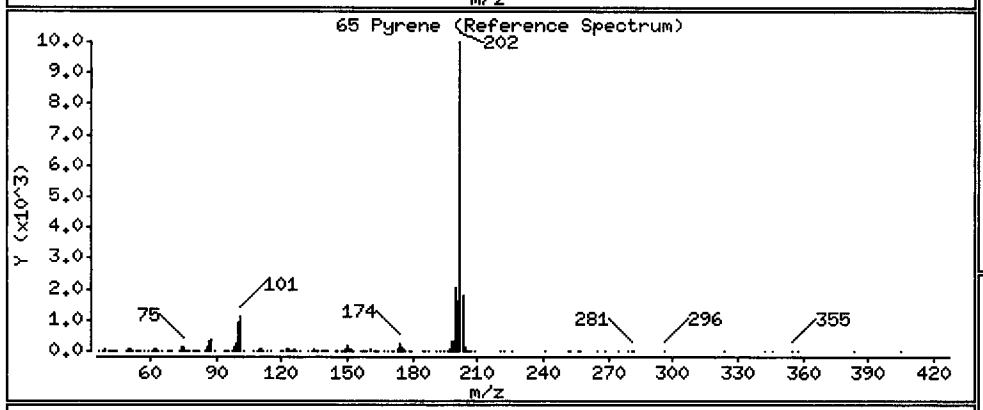
Column diameter: 0.25

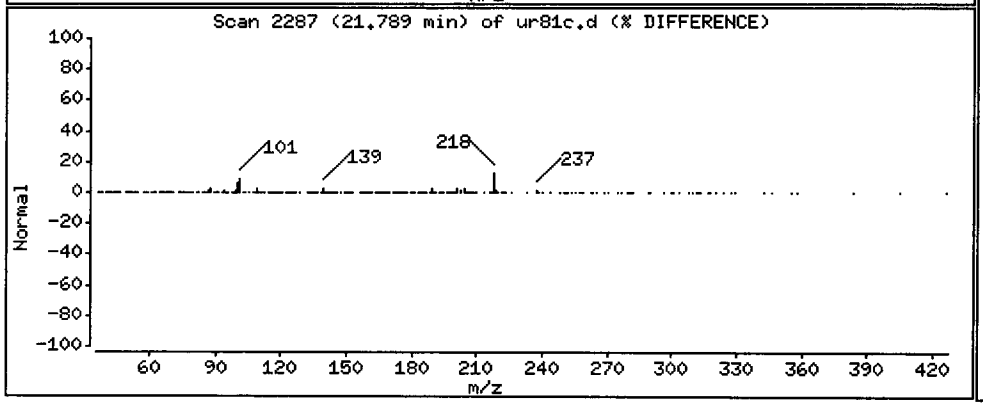
65 Pyrene

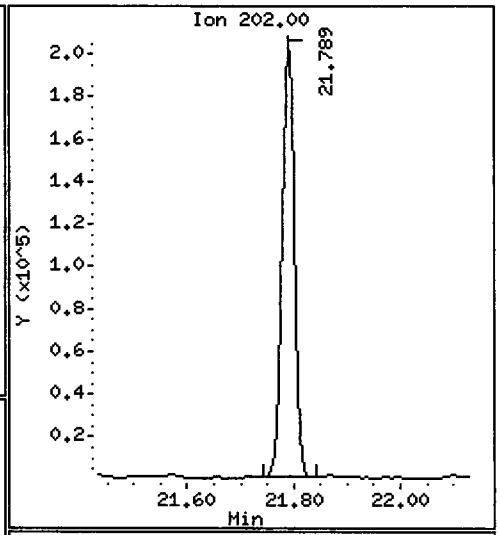
Concentration: 112.3 ug/kg

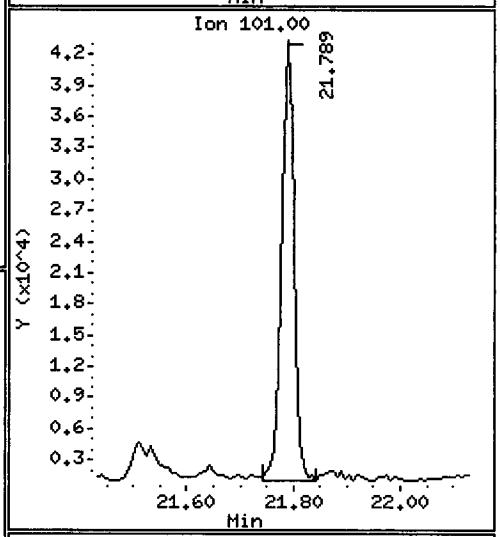


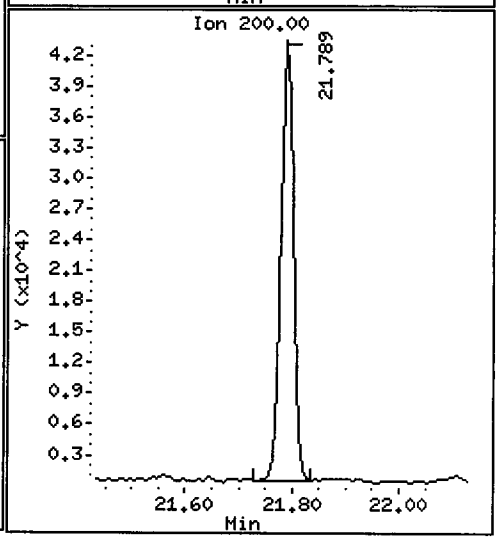












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

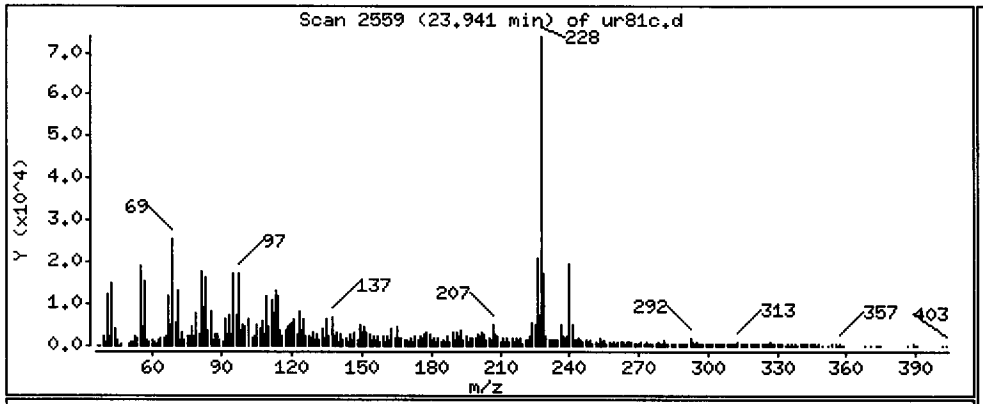
Operator: VTS/YZ

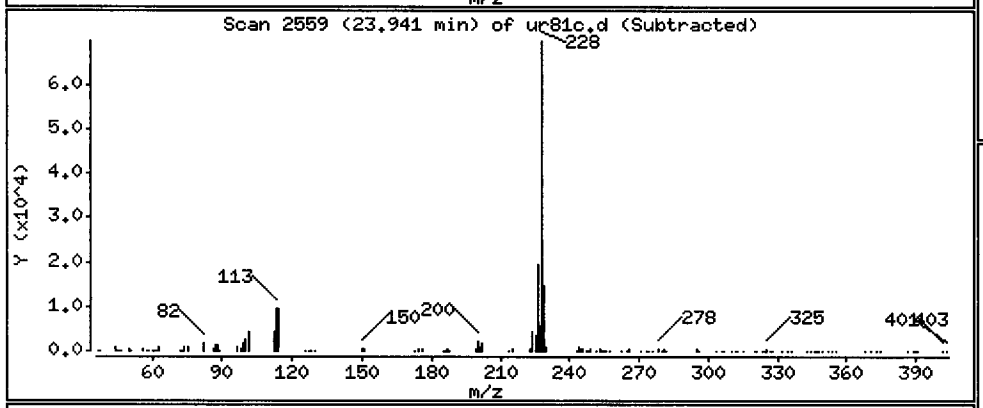
Column phase: ZB-5msi

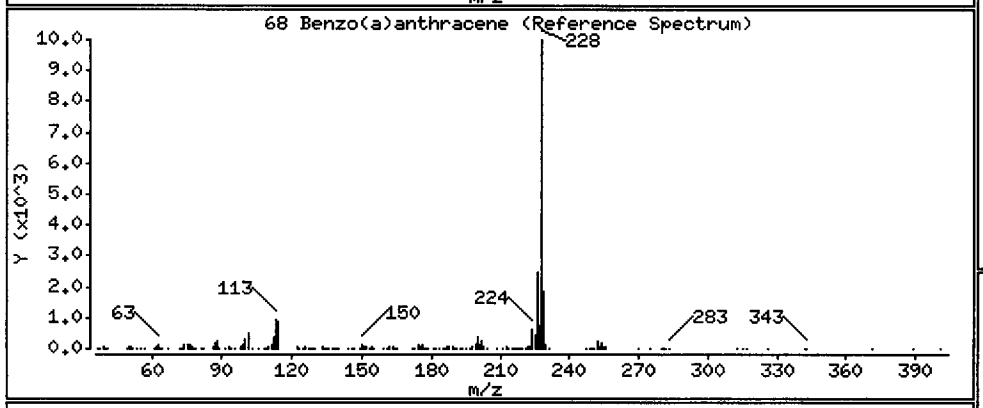
Column diameter: 0.25

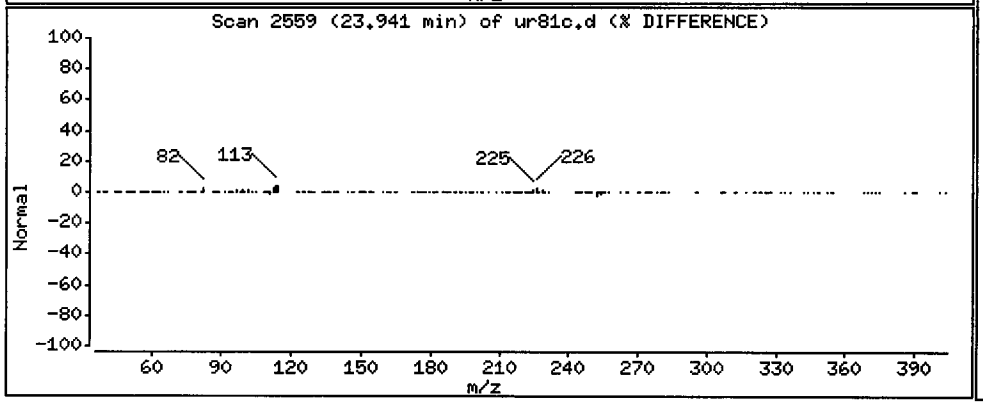
68 Benzo(a)anthracene

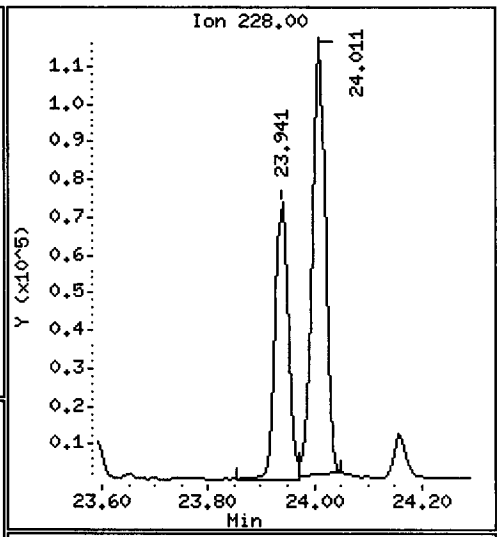
Concentration: 48.91 ug/kg

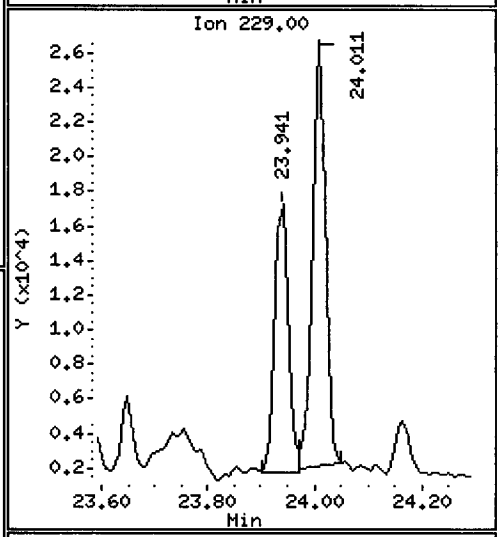


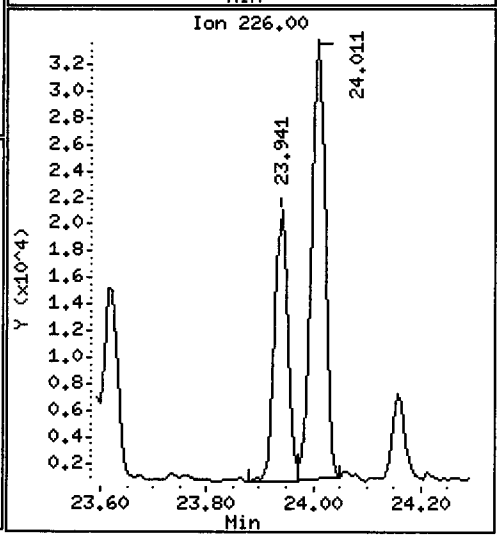












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

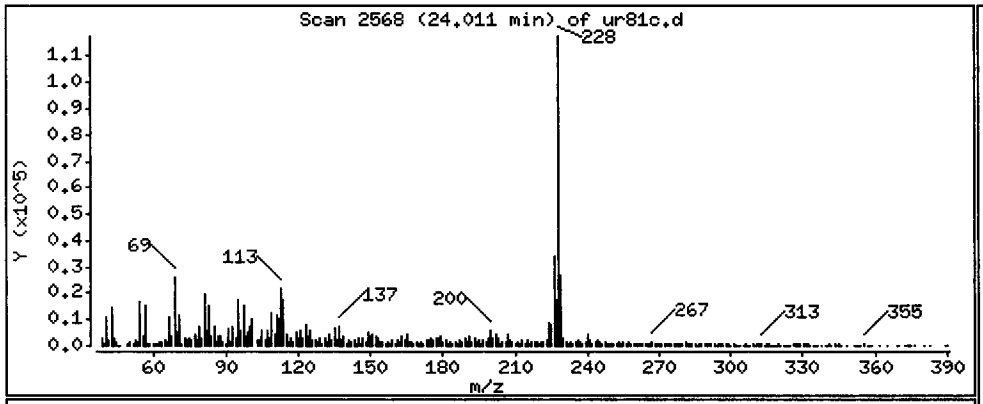
Client ID: IJ12-06 Instrument: nt10.i

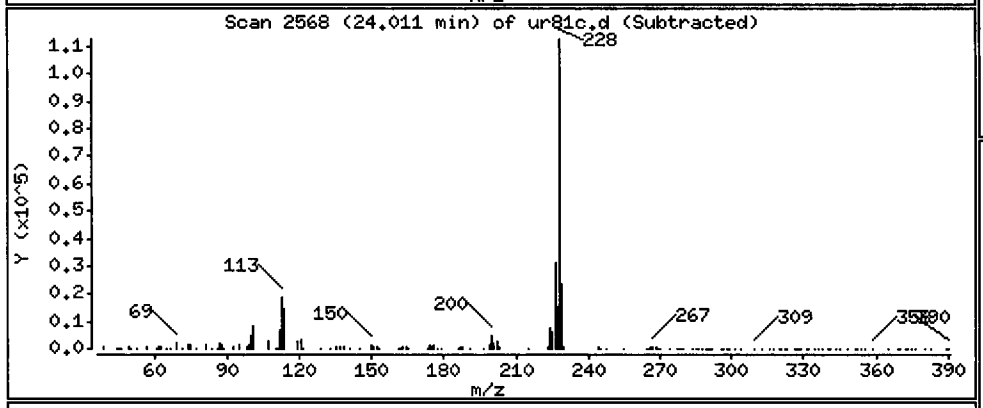
Sample Info: UR81C

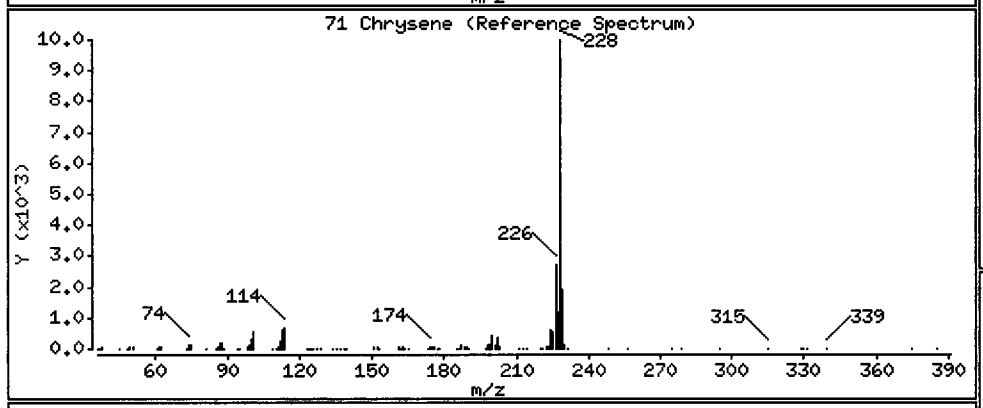
Volume Injected (uL): 1.0 Operator: VTS/YZ

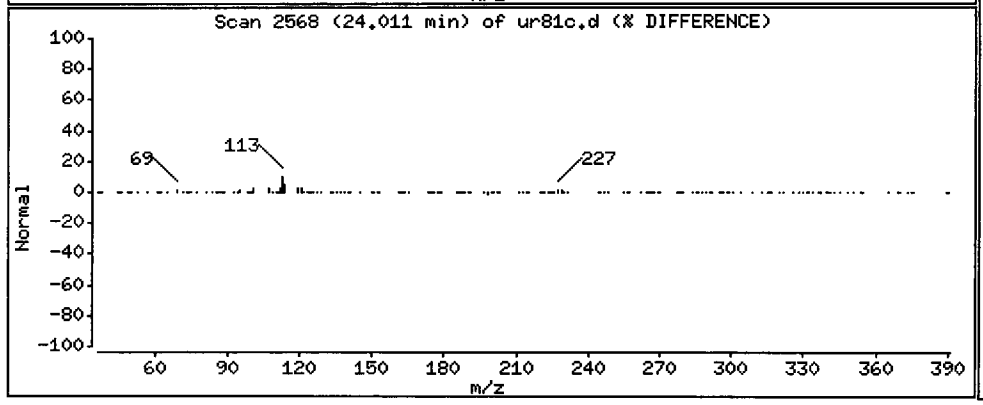
Column phase: ZB-5msi Column diameter: 0.25

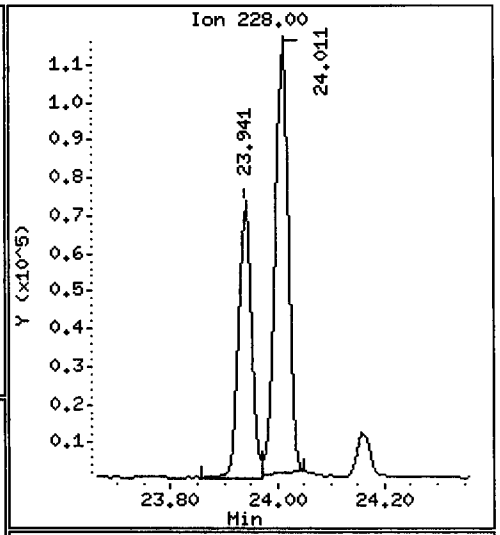
71 Chrysene Concentration: 83.62 ug/kg

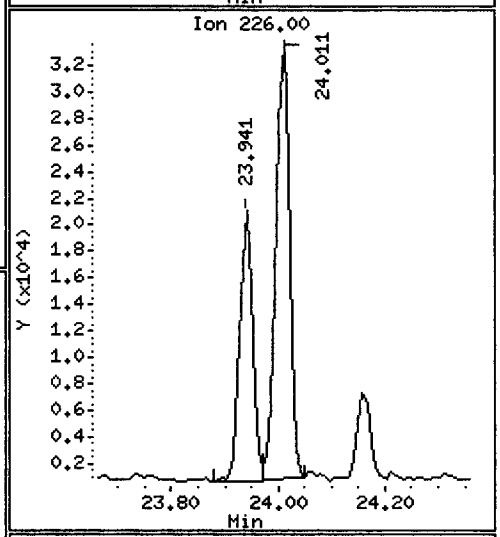


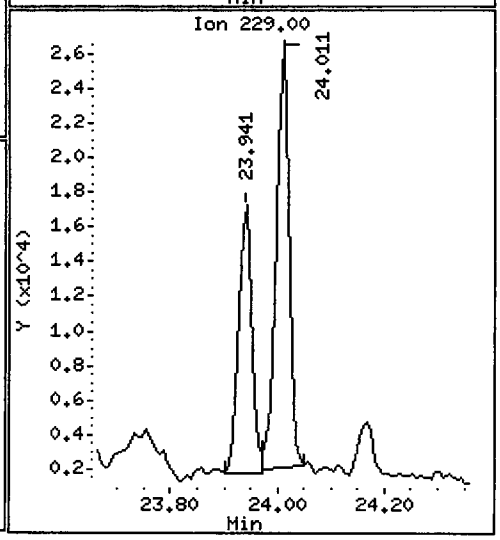












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06 Instrument: nt10.i

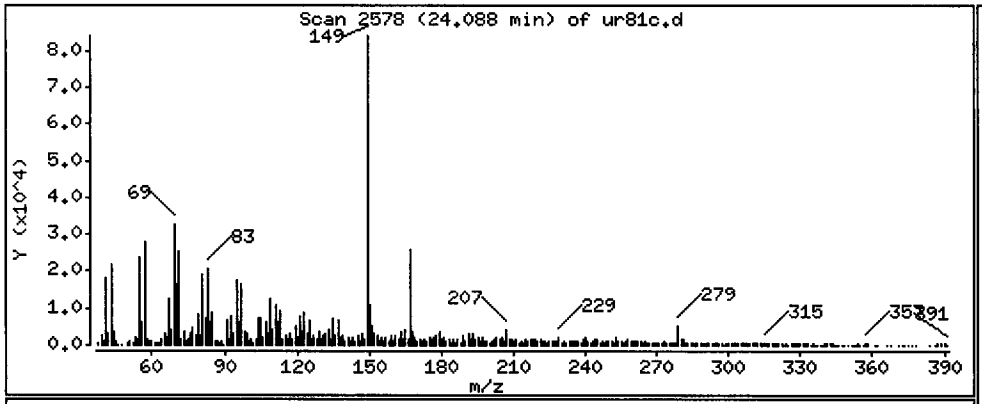
Sample Info: UR81C

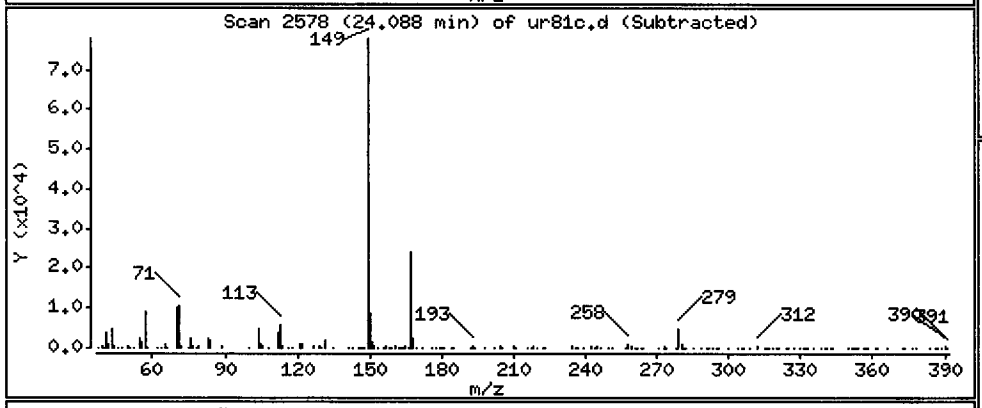
Volume Injected (uL): 1.0 Operator: VTS/YZ

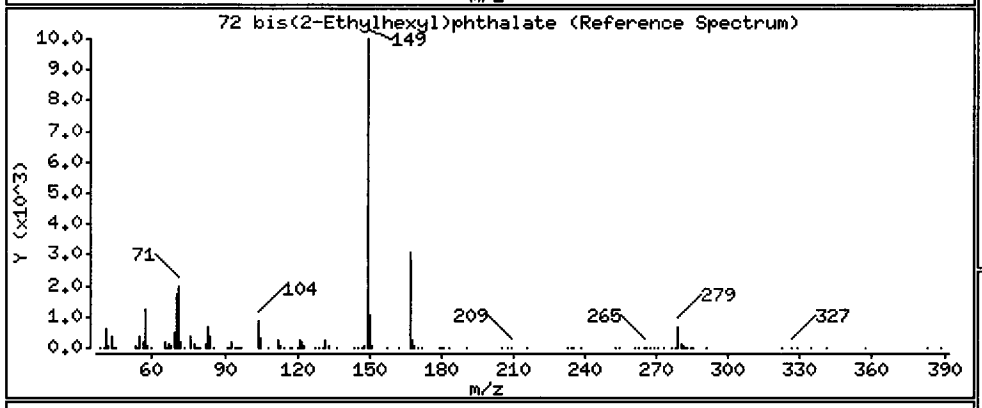
Column phase: ZB-5msi Column diameter: 0.25

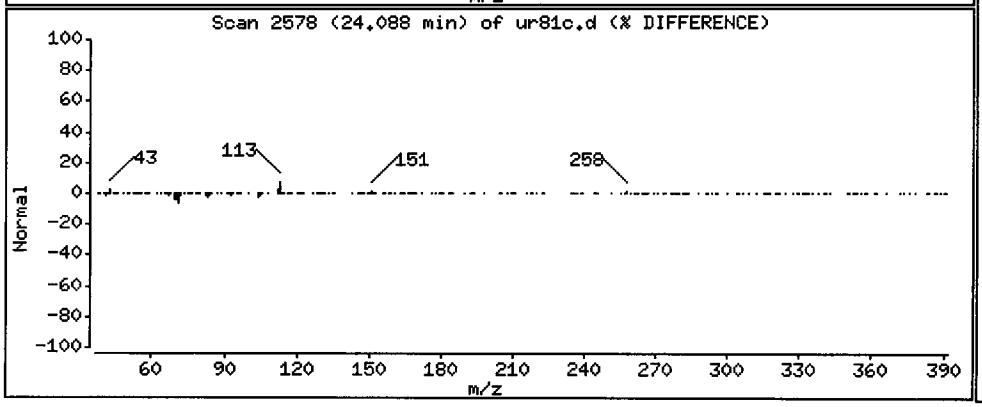
72 bis(2-Ethylhexyl)phthalate Concentration: 71.13 ug/kg

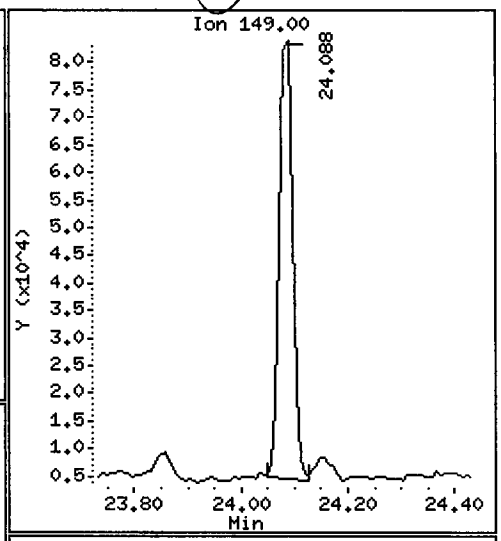
B

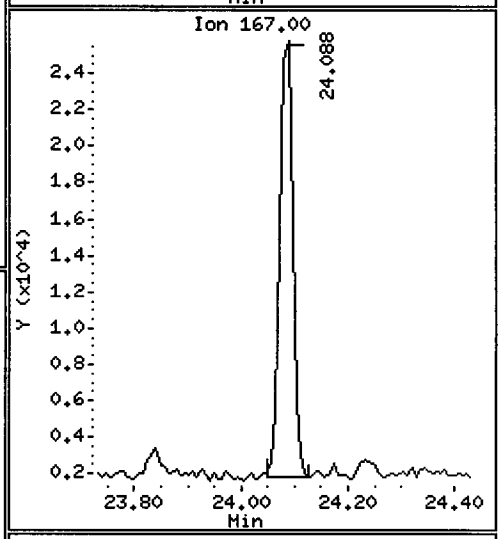


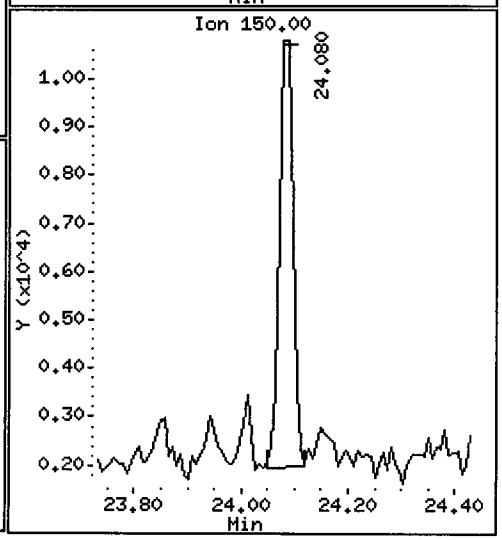












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

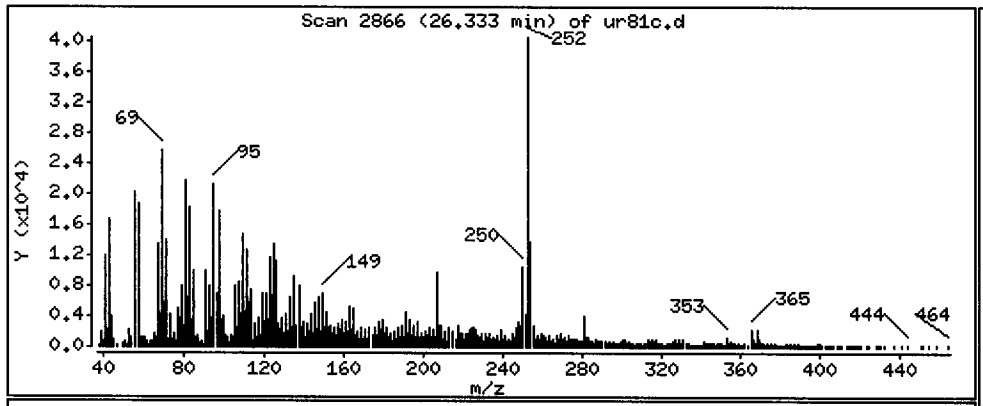
Client ID: IJ12-06 | Instrument: nt10.i

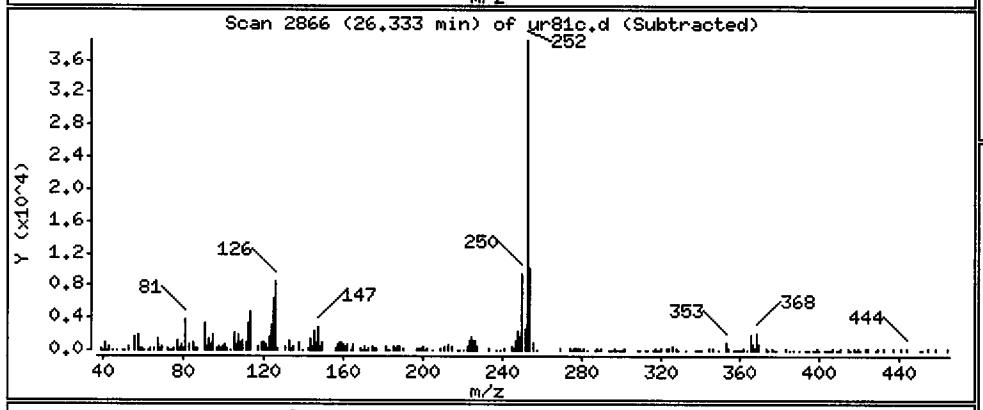
Sample Info: UR81C

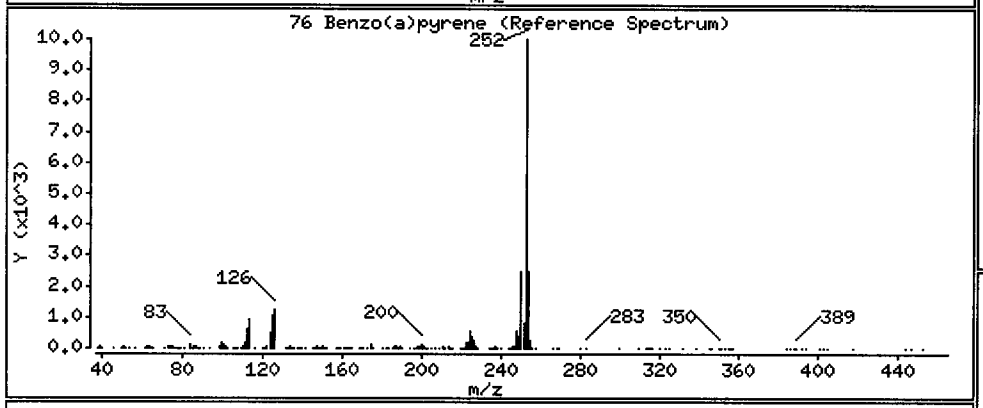
Volume Injected (uL): 1.0 | Operator: VTS/YZ

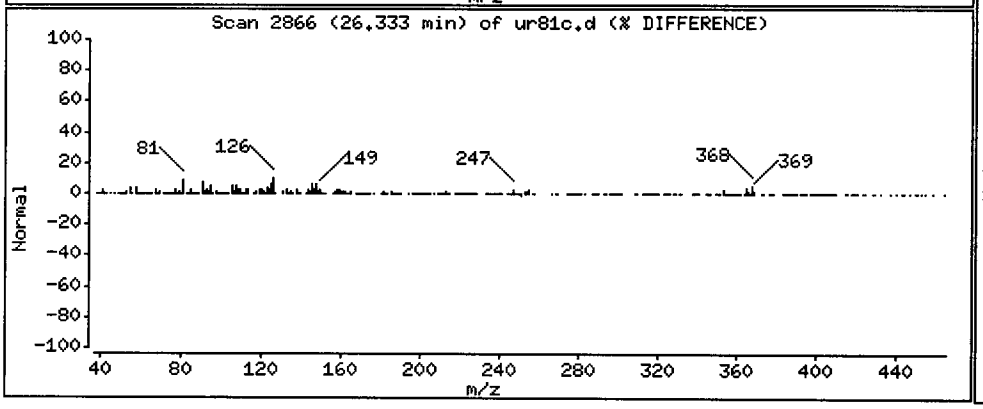
Column phase: ZB-5msi | Column diameter: 0.25

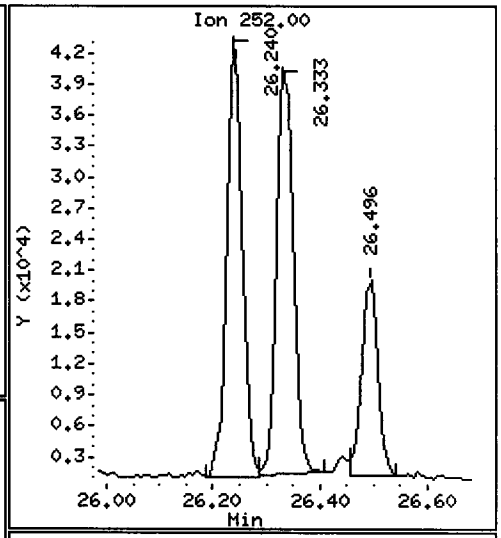
76 Benzo(a)pyrene | Concentration: 37.81 ug/kg

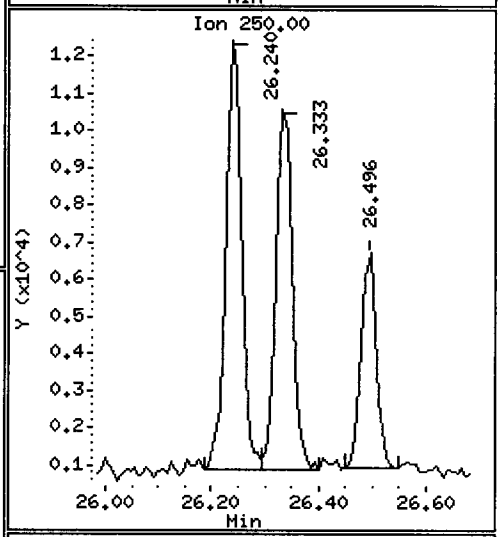


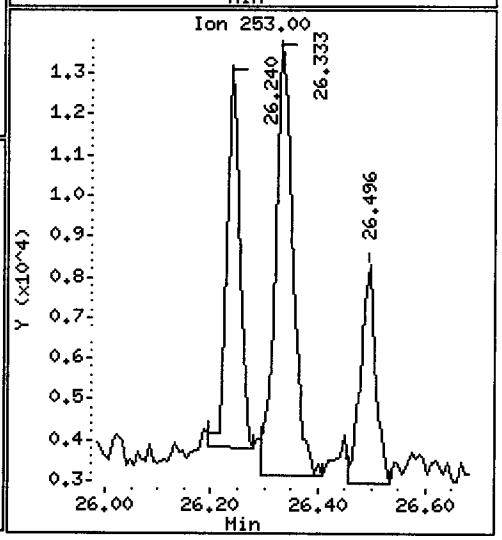












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

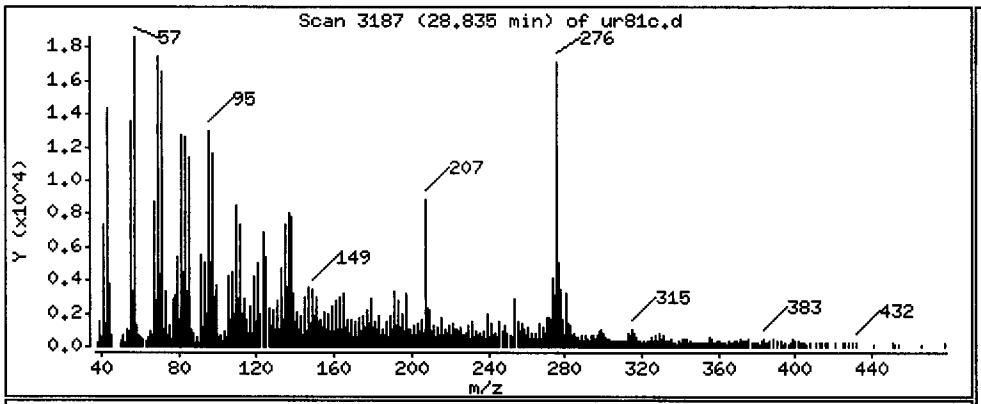
Client ID: IJ12-06 Instrument: nt10.i

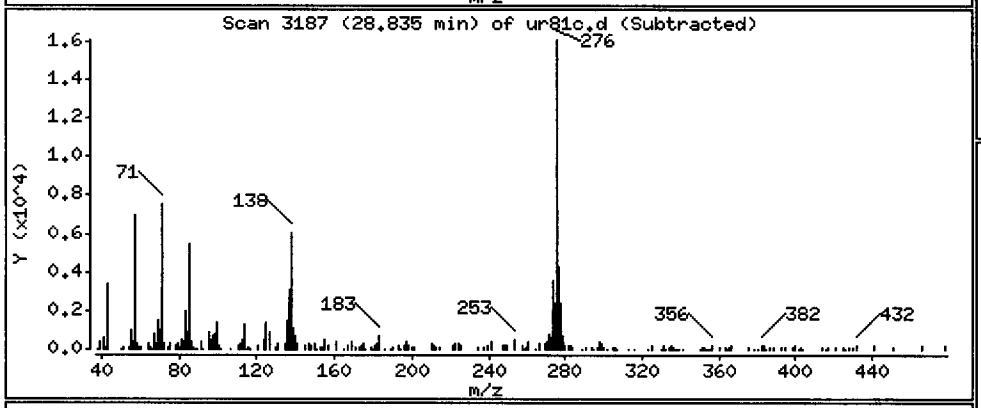
Sample Info: UR81C

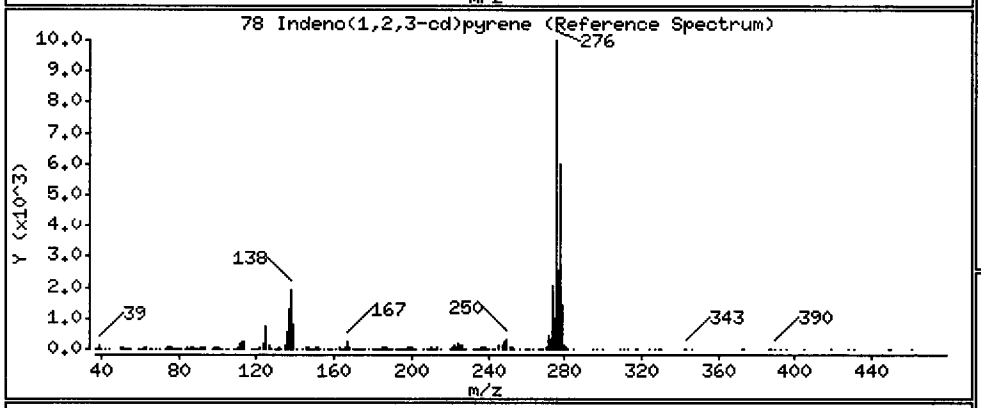
Volume Injected (uL): 1.0 Operator: VTS/YZ

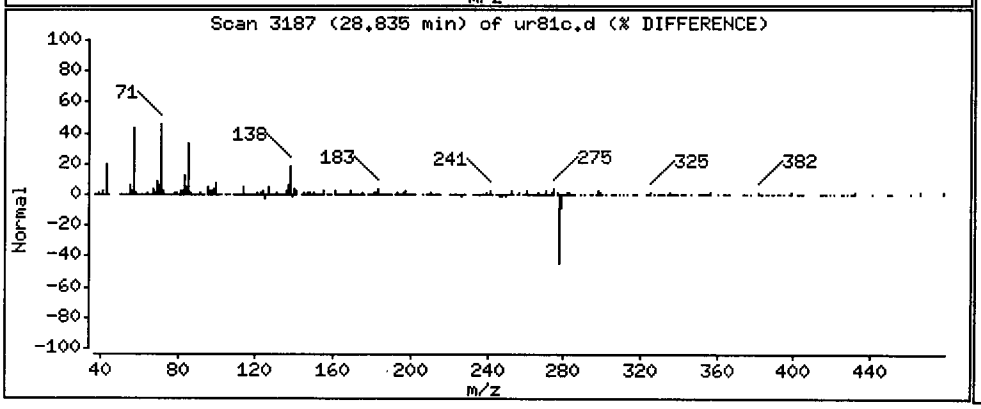
Column phase: ZB-5msi Column diameter: 0.25

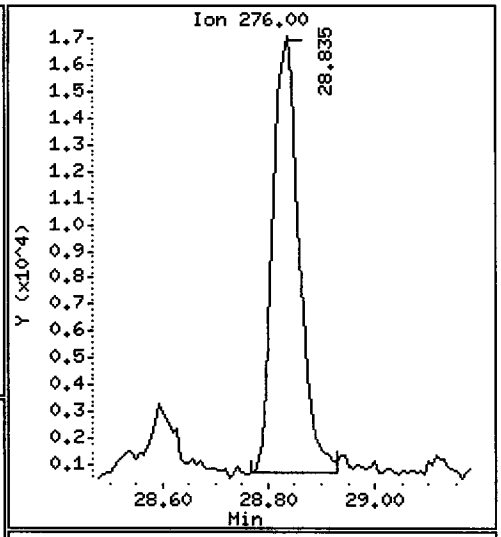
78 Indeno(1,2,3-cd)pyrene Concentration: 22.66 ug/kg

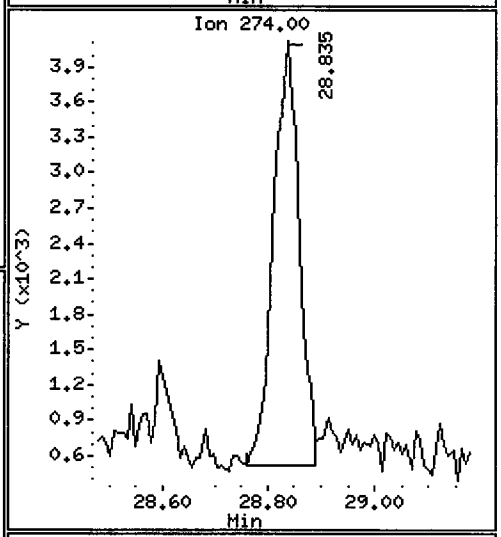


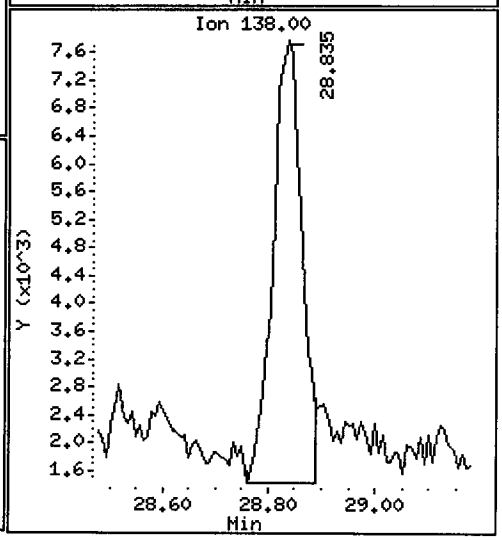












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

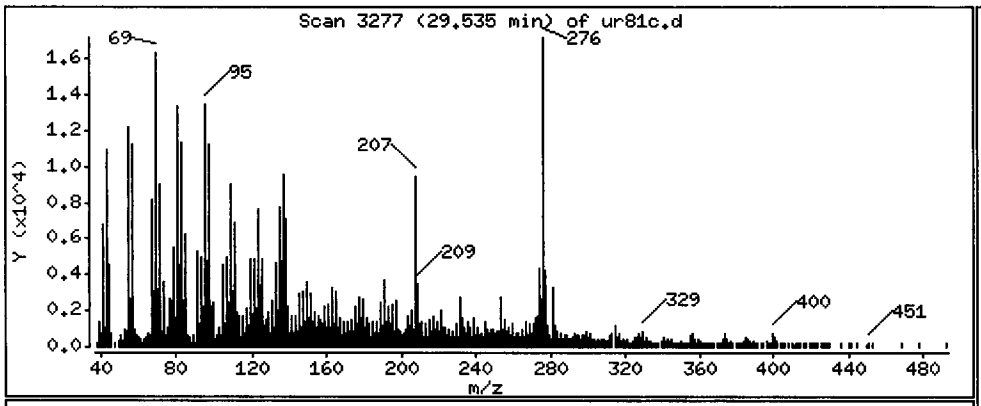
Client ID: IJ12-06 Instrument: nt10.i

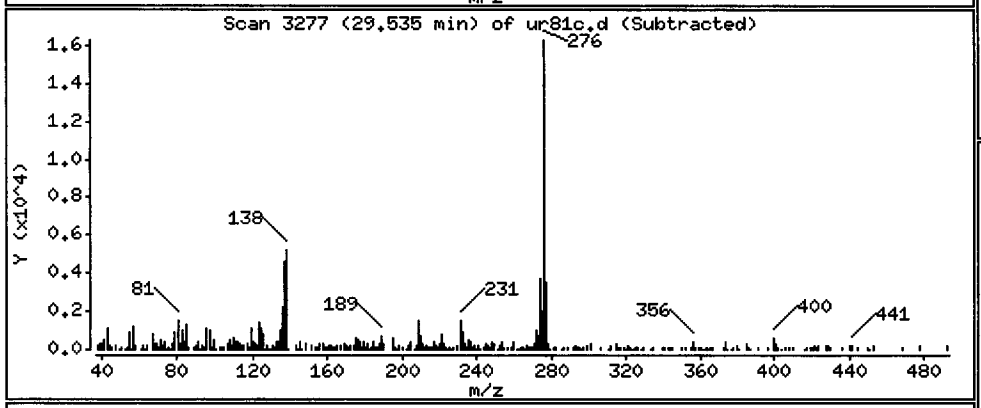
Sample Info: UR81C

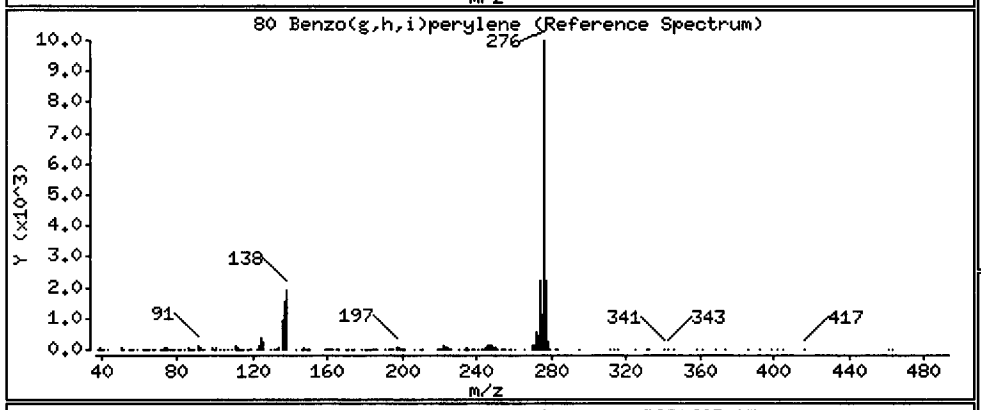
Volume Injected (uL): 1.0 Operator: VTS/YZ

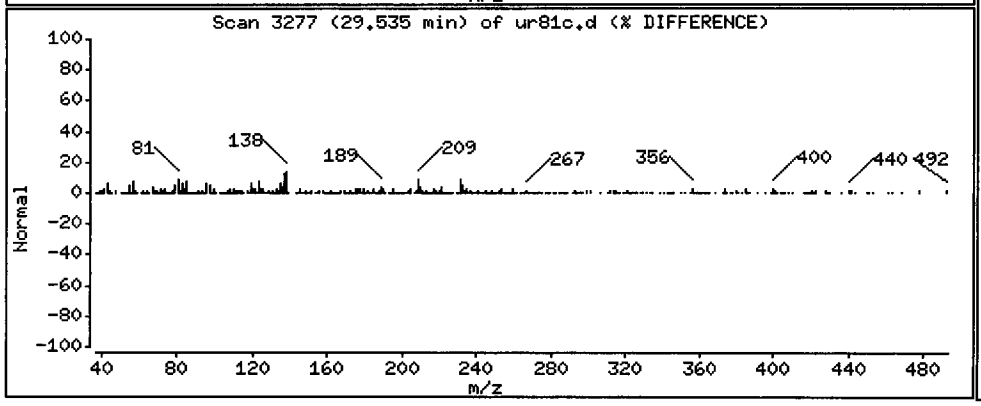
Column phase: ZB-5msi Column diameter: 0.25

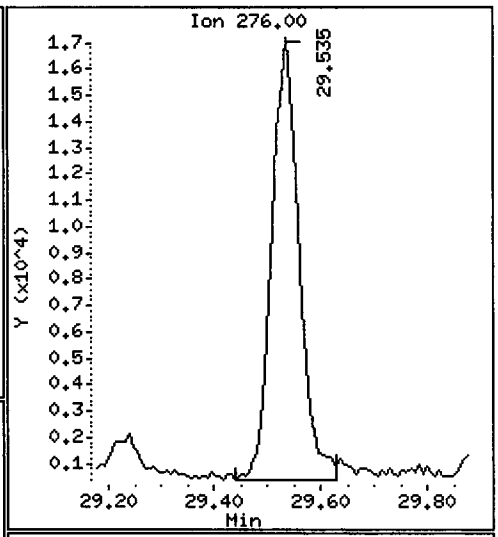
80 Benzo(g,h,i)perylene Concentration: 27.93 ug/kg

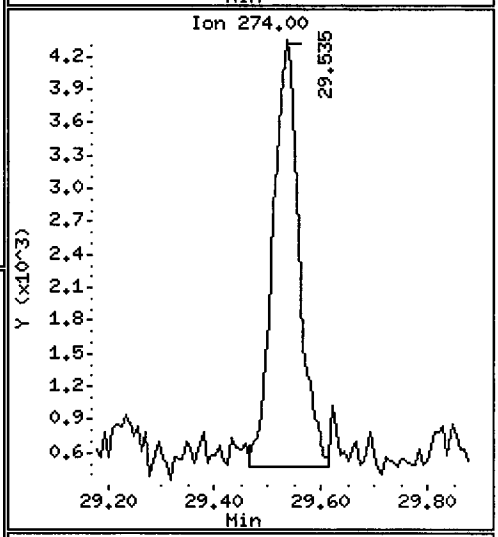


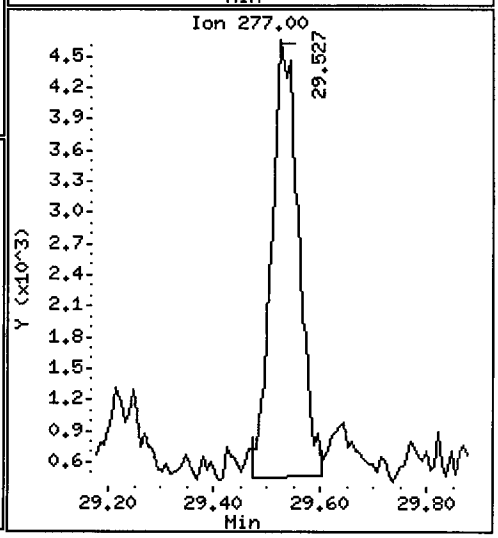












Data File: /chem1/nt10.i/20120508.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

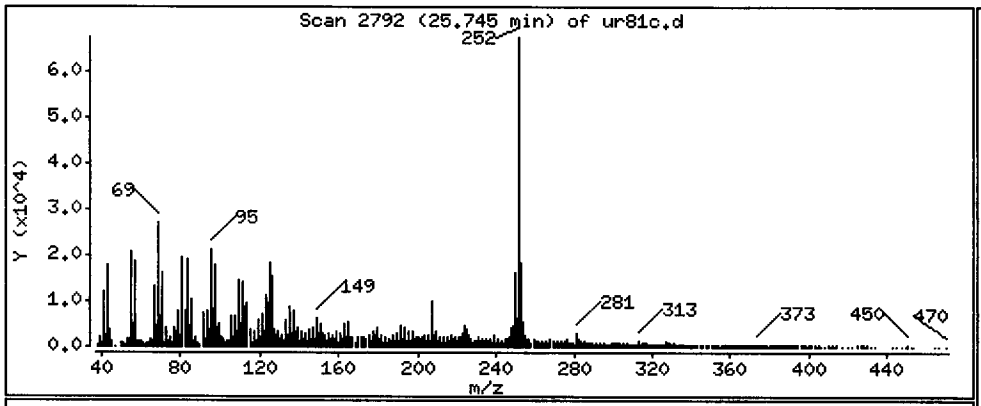
Operator: VTS/YZ

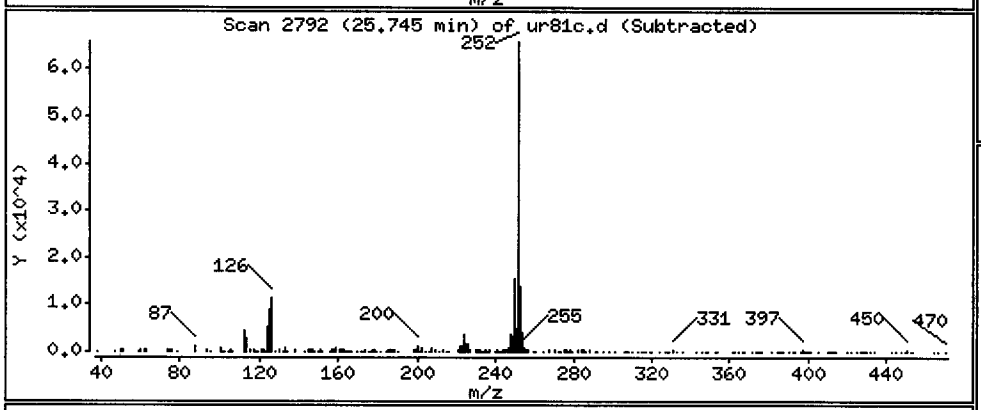
Column phase: ZB-5msi

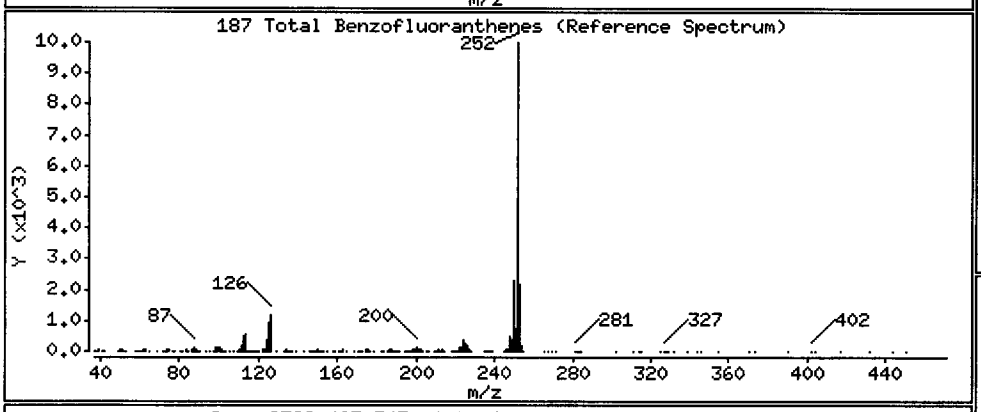
Column diameter: 0.25

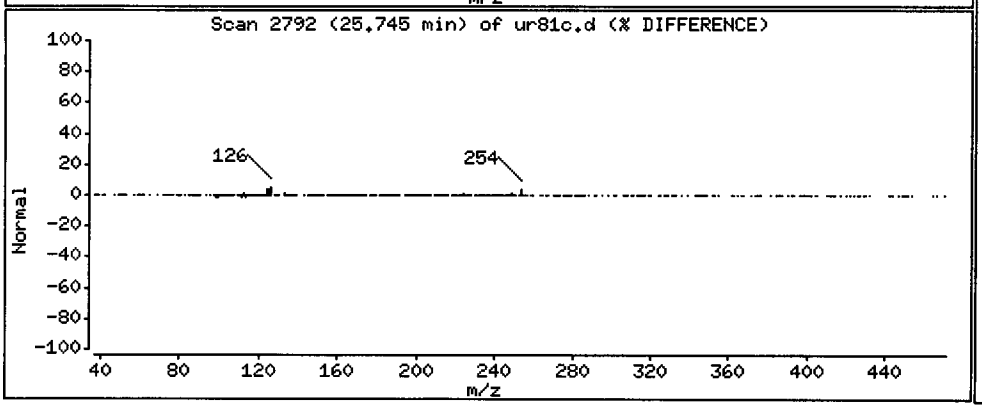
187 Total Benzofluoranthenes

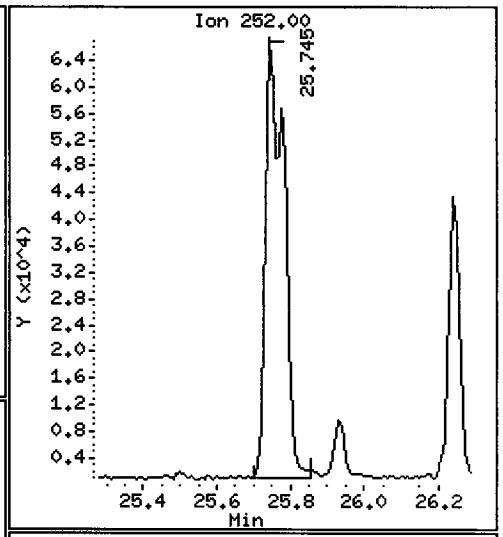
Concentration: 96.38 ug/kg

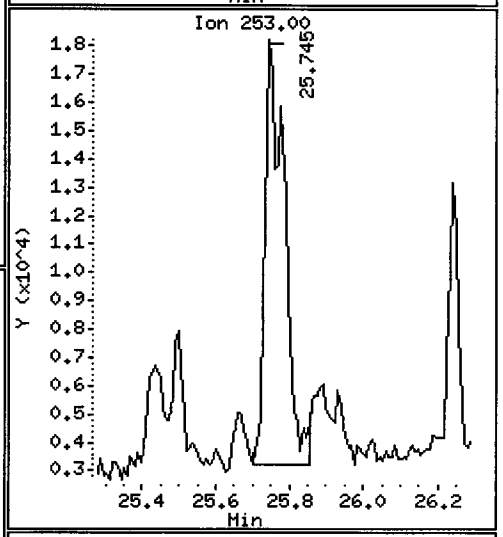


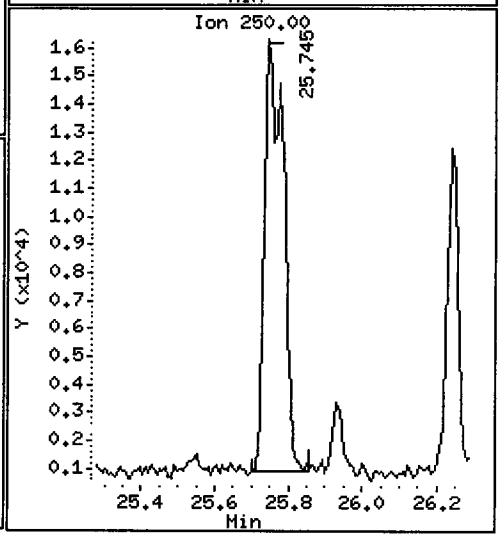












CO-ELUTION SUMMARY FOR FILE - ur81c.d

Lab ID: UR81C, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81d.d
Lab Smp Id: UR81D
Client Smp ID: IJ12-02
Inj Date : 08-MAY-2012 19:43
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : UR81D
Misc Info : 12-7395
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	24.20000	Weight of sample extracted (g)
M	57.20000	% Moisture

Cpnd Variable — Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.690	6.667	(0.739)	346008	4.32967	418.0
$ 2 Phenol-d5	99	8.406	8.398	(0.929)	440414	4.43204	427.9
3 Phenol	94	8.429	8.421	(0.932)	21135	0.19404 J	18.73
$ 5 2-Chlorophenol-d4	132	8.661	8.653	(0.957)	386966	4.49956	434.4
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	233615	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.043)	158877	2.72633	263.2
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.366	9.350	(1.035)	10049	0.19798 J	19.11
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.925	9.909	(1.097)	40708	0.45545	43.97
$ 18 Nitrobenzene-d5	82	10.228	10.228	(0.872)	241060	3.03641	293.2
22 2,4-Dimethylphenol	107	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	24 ~~Benzoic acid~~	105	~~11.164~~	~~11.303~~	~~(0.952)~~	30757	~~0.48097~~	46.44
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.727	11.719	(1.000)	928538	4.00000	
	28 Naphthalene	128	11.766	11.766	(1.003)	55063	0.23746	22.93
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	25442	0.15998	15.45
$	36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	521756	2.95064	284.9
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.634	15.627	(1.000)	518378	4.00000	
	44 Acenaphthene	153	Compound Not Detected.					
	46 Dibenzofuran	168	16.059	16.060	(1.027)	28600	0.14014	13.53
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	16.833	16.833	(1.077)	22222	0.14272	13.78
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.419	17.411	(1.114)	119950	5.04375	487.0
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.910	18.903	(1.000)	802209	4.00000	
	60 Phenanthrene	178	18.964	18.957	(1.003)	156248	0.78762	76.04
	61 Anthracene	178	19.057	19.050	(1.008)	50501	0.24117	23.28
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.394	21.363	(1.131)	389624	1.72551	166.6
	65 Pyrene	202	21.796	21.781	(0.909)	408767	1.69029	163.2
$	66 Terphenyl-d14	244	22.106	22.098	(0.922)	496298	3.27277	316.0
	67 Butylbenzylphthalate	149	23.042	23.042	(0.961)	11538	0.11208	10.82
	68 Benzo(a)anthracene	228	23.941	23.941	(0.999)	132637	0.61118	59.01
*	69 Chrysene-d12	240	23.972	23.964	(1.000)	800248	4.00000	
	71 Chrysene	228	24.010	24.010	(1.002)	307764	1.58866	153.4
	72 bis(2-Ethylhexyl)phthalate	149	24.080	24.080	(0.961)	178489	1.07678	104.0
*	134 Di-n-octylphthalate-d4	153	25.063	25.056	(1.000)	1274835	4.00000	
	73 Di-n-octylphthalate	149	25.079	25.071	(1.001)	67892	0.22376	21.60
	76 Benzo(a)pyrene	252	26.333	26.333	(0.996)	119620	0.62293	60.14
*	77 Perylene-d12	264	26.449	26.441	(1.000)	790471	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.835	28.828	(1.090)	92279	0.42233	40.77
	79 Dibenzo(a,h)anthracene	278	28.843	28.859	(1.091)	19617	0.11682	11.28
	80 Benzo(g,h,i)perylene	276	29.527	29.527	(1.116)	92593	0.49013	47.32
	105 1-methylnaphthalene	142	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	25.744	25.783	(0.973)	350086	1.62783	157.2

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81d.d
Lab Smp Id: UR81D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7395

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-02
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	233615	-14.07
27 Naphthalene-d8	1080694	540347	2161388	928538	-14.08
42 Acenaphthene-d10	623821	311910	1247642	518378	-16.90
59 Phenanthrene-d10	999143	499572	1998286	802209	-19.71
69 Chrysene-d12	1001009	500504	2002018	800248	-20.06
134 Di-n-octylphthala	1489422	744711	2978844	1274835	-14.41
77 Perylene-d12	988348	494174	1976696	790471	-20.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.05
59 Phenanthrene-d10	18.90	18.40	19.40	18.91	0.04
69 Chrysene-d12	23.96	23.46	24.46	23.97	0.03
134 Di-n-octylphthala	25.06	24.56	25.56	25.06	0.03
77 Perylene-d12	26.44	25.94	26.94	26.45	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81D
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7395

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-02
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	724.1	418.0	57.73	30-160
$ 2 Phenol-d5	724.1	427.9	59.09	30-160
$ 5 2-Chlorophenol-d4	724.1	434.4	59.99	30-160
$ 10 1,2-Dichlorobenzen	482.7	263.2	54.53	30-160
$ 18 Nitrobenzene-d5	482.7	293.2	60.73	30-160
$ 36 2-Fluorobiphenyl	482.7	284.9	59.01	30-160
$ 55 2,4,6-Tribromophen	724.1	487.0	67.25	30-160
$ 66 Terphenyl-d14	482.7	316.0	65.46	30-160

Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Sample Info: UR81D

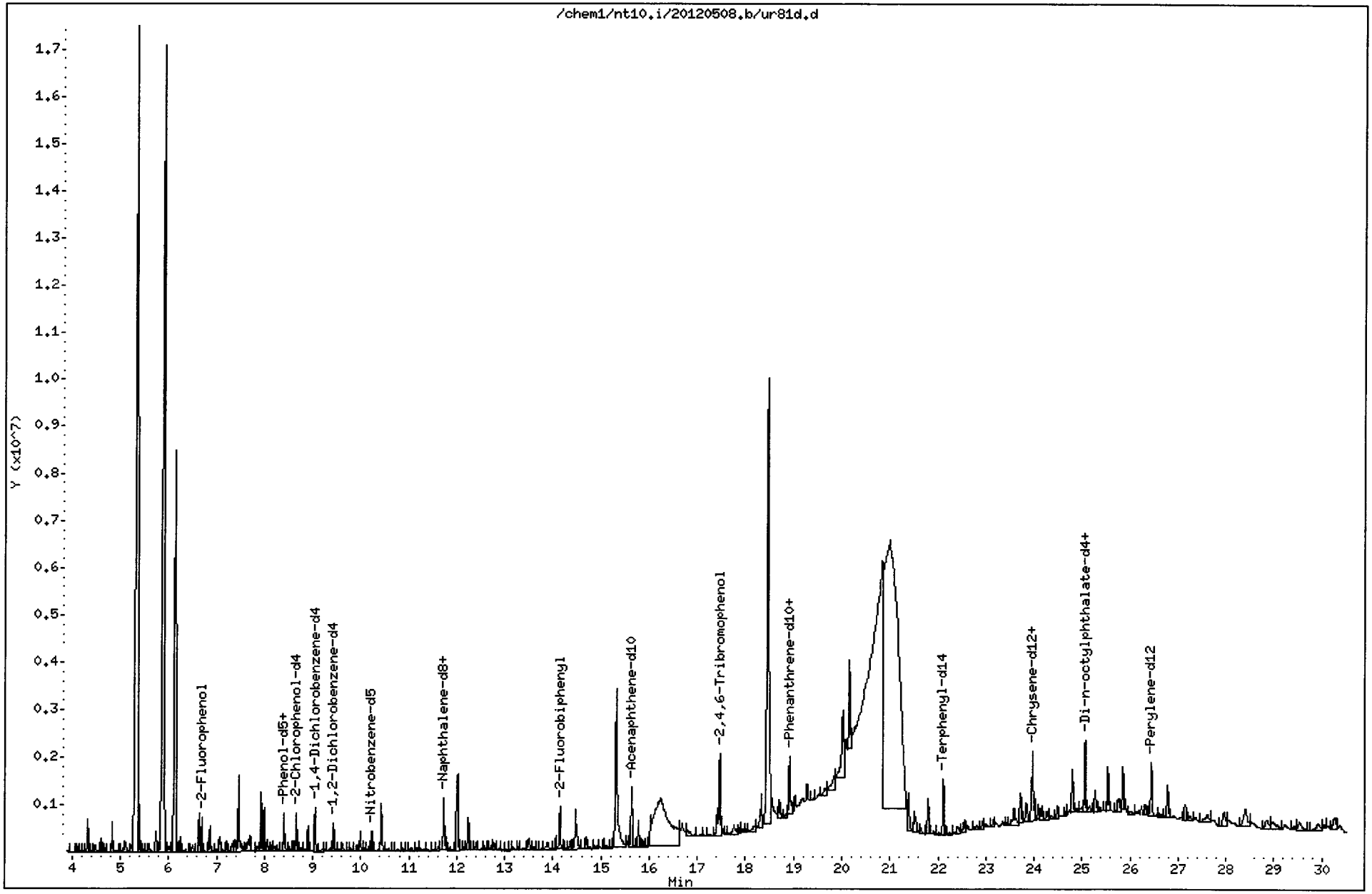
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

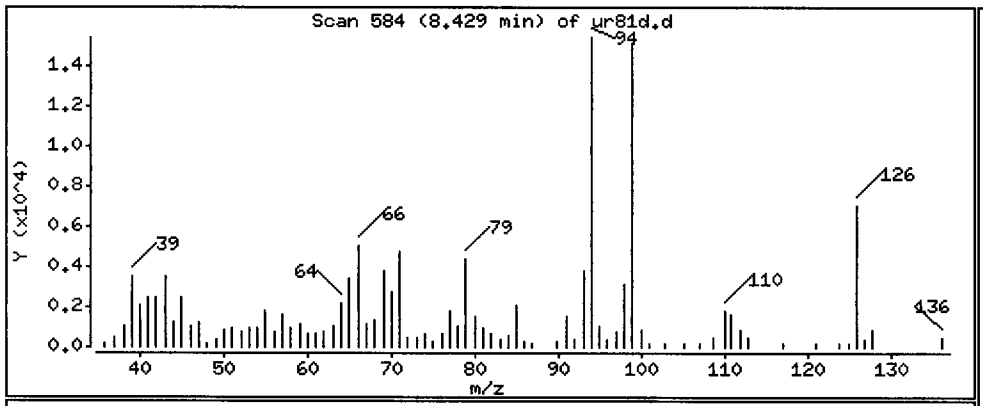
Operator: VTS/YZ

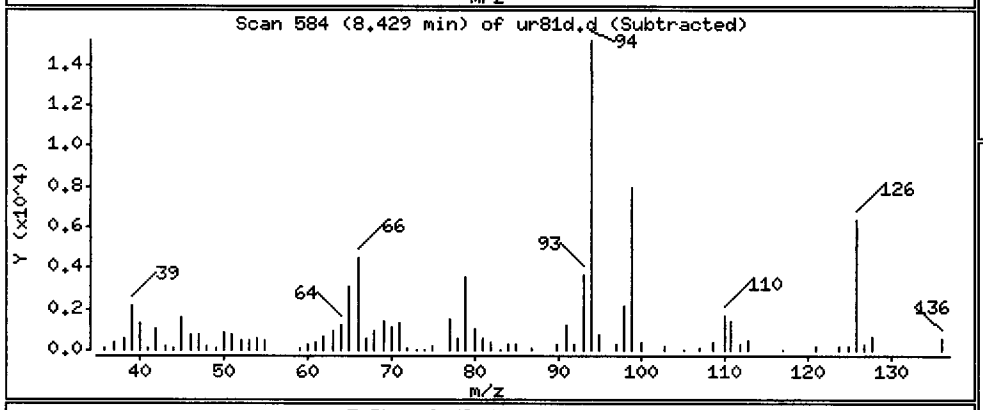
Column phase: ZB-5msi

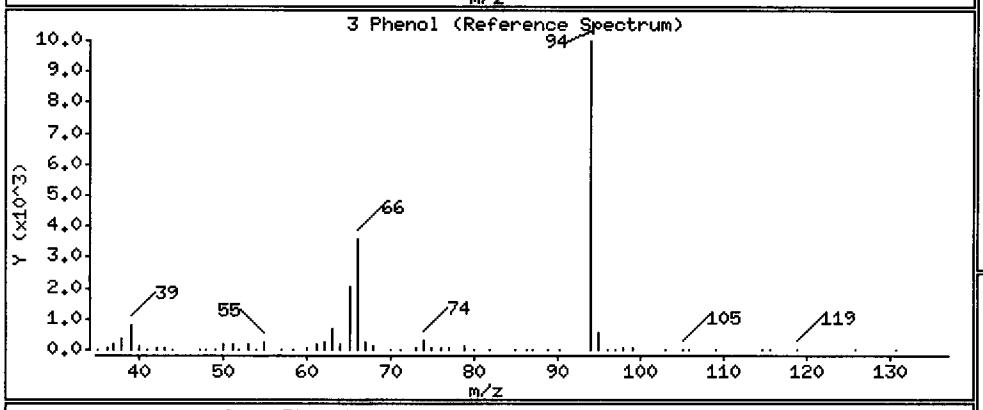
Column diameter: 0.25

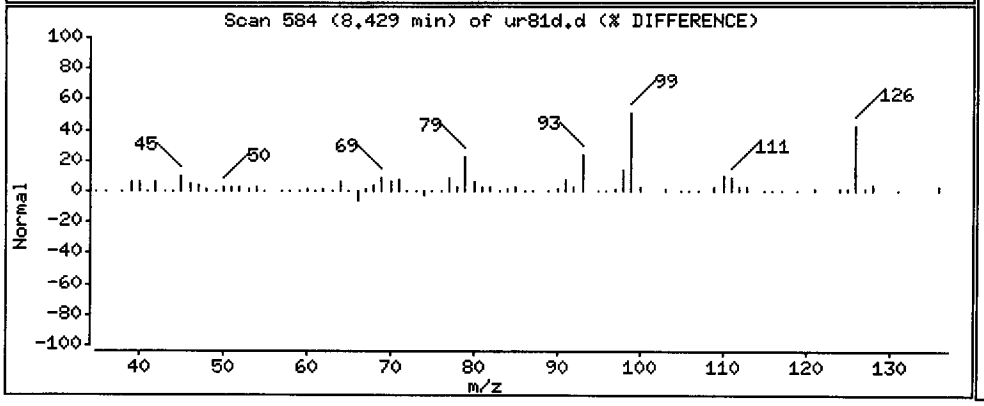
3 Phenol

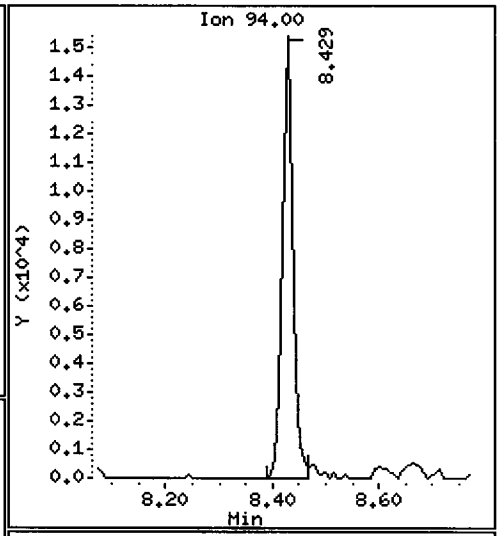
Concentration: 18.73 ug/kg

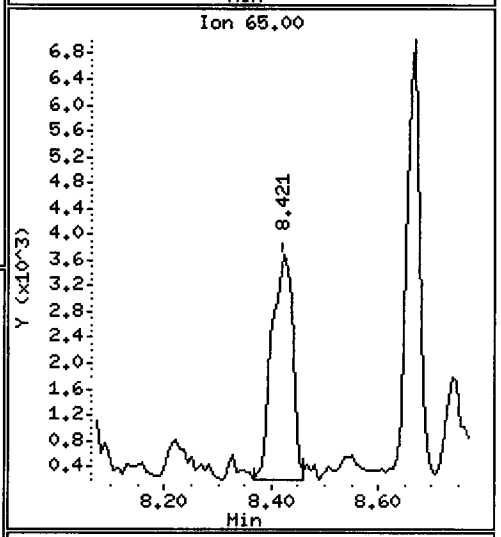


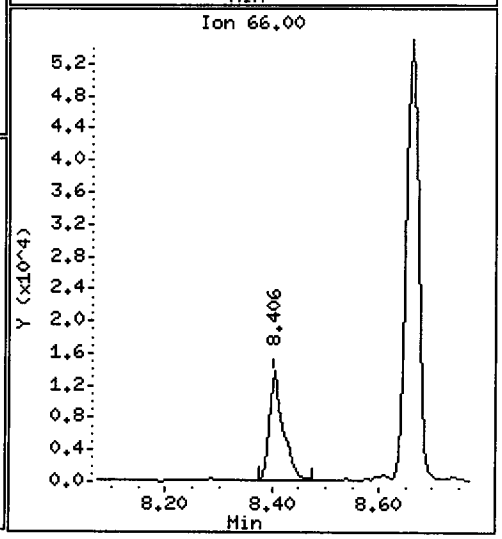












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

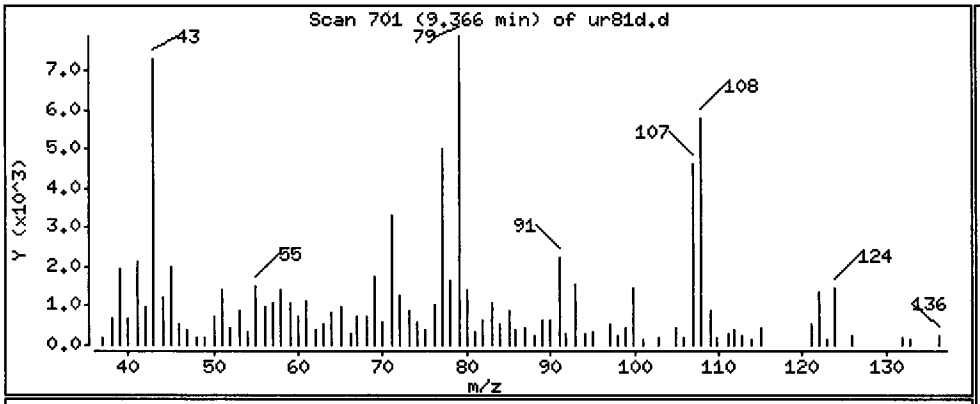
Client ID: IJ12-02 Instrument: nt10.i

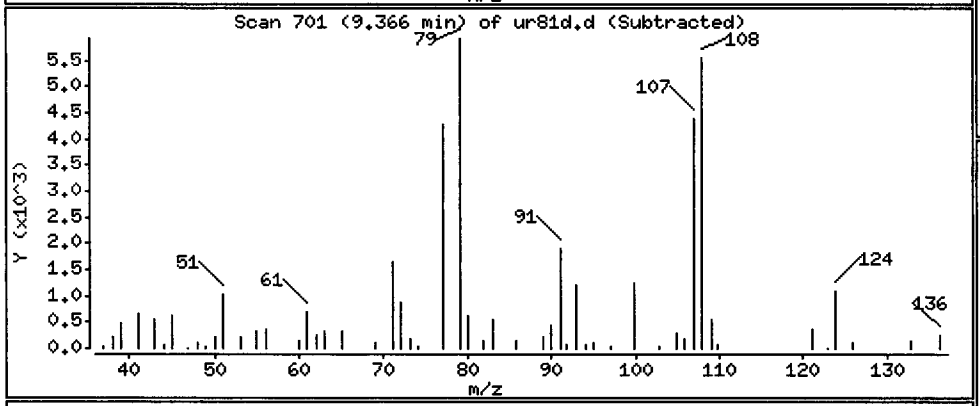
Sample Info: UR81D

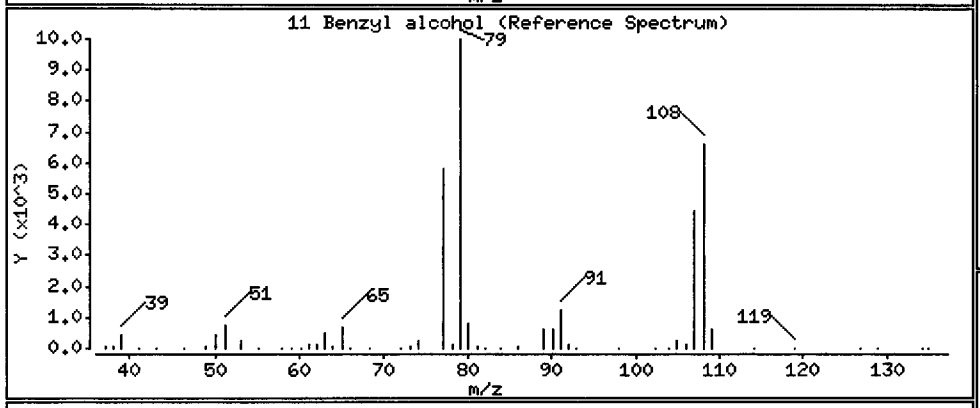
Volume Injected (uL): 1.0 Operator: VTS/YZ

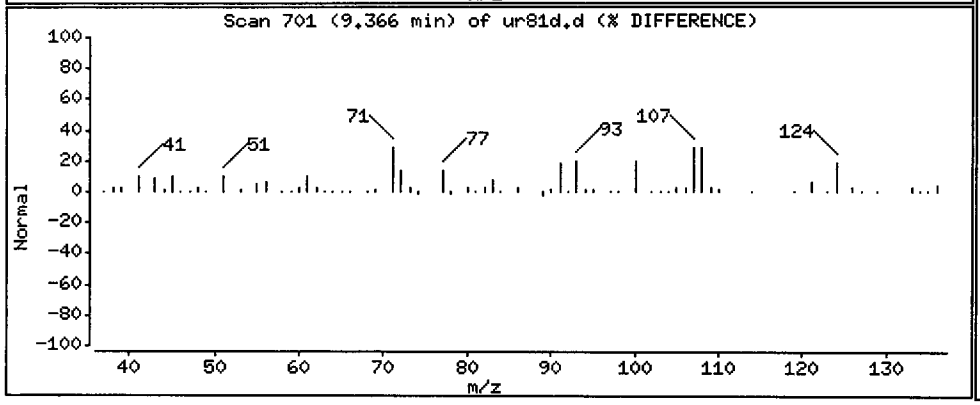
Column phase: ZB-5msi Column diameter: 0.25

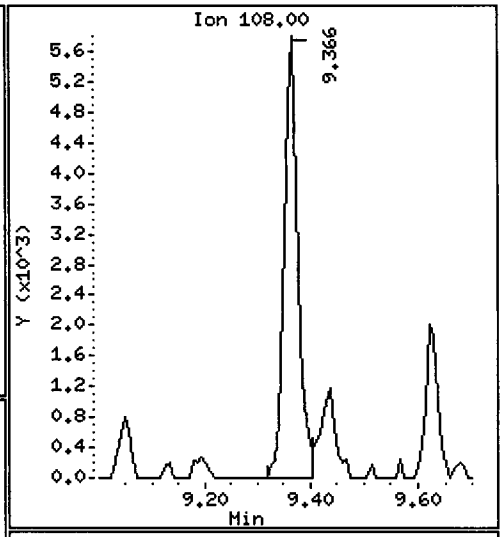
11 Benzyl alcohol Concentration: 19.11 ug/kg

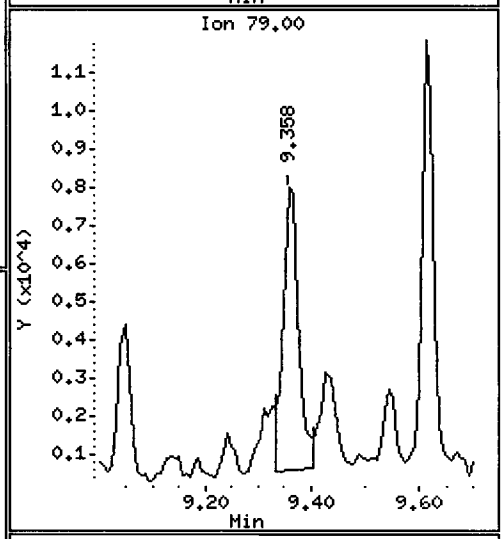


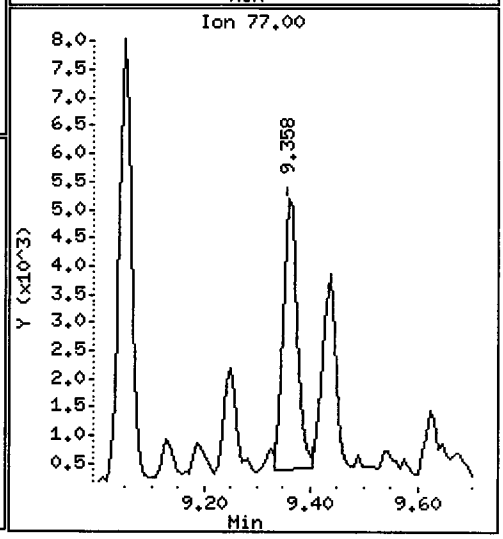












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

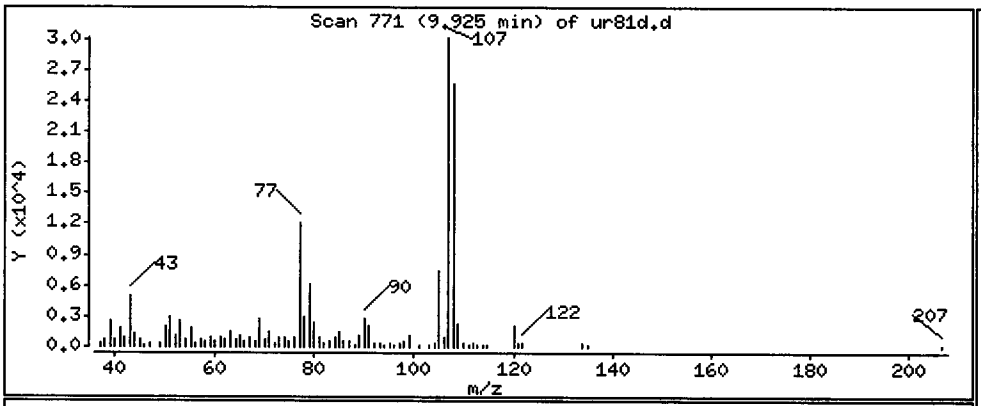
Operator: VTS/YZ

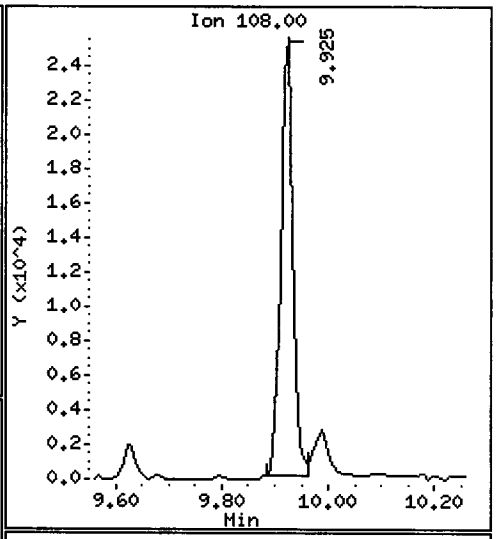
Column phase: ZB-5msi

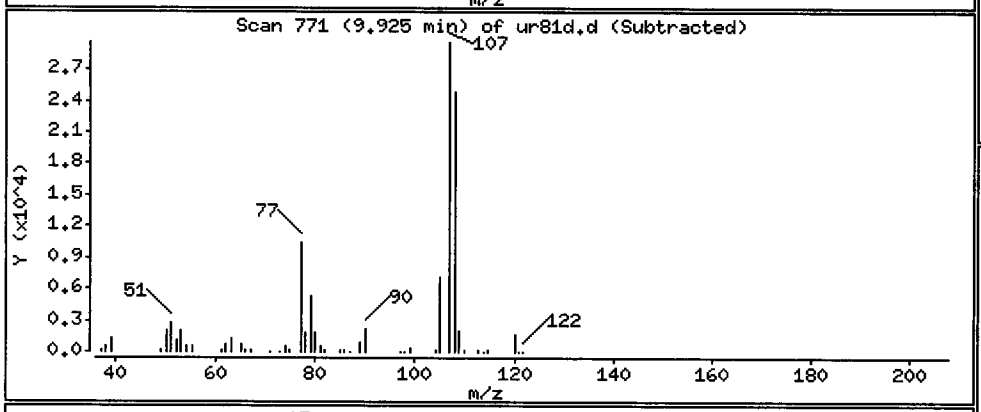
Column diameter: 0.25

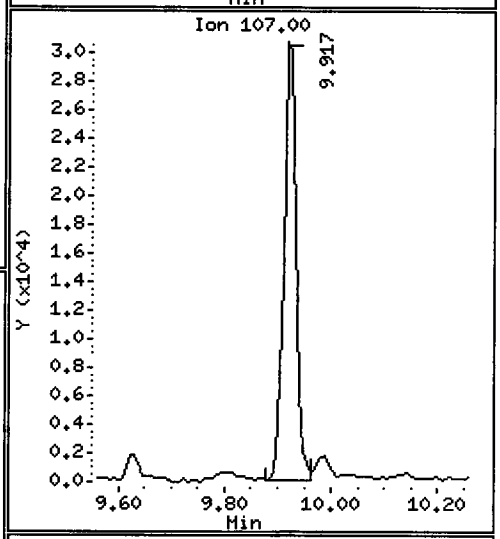
15 4-Methylphenol

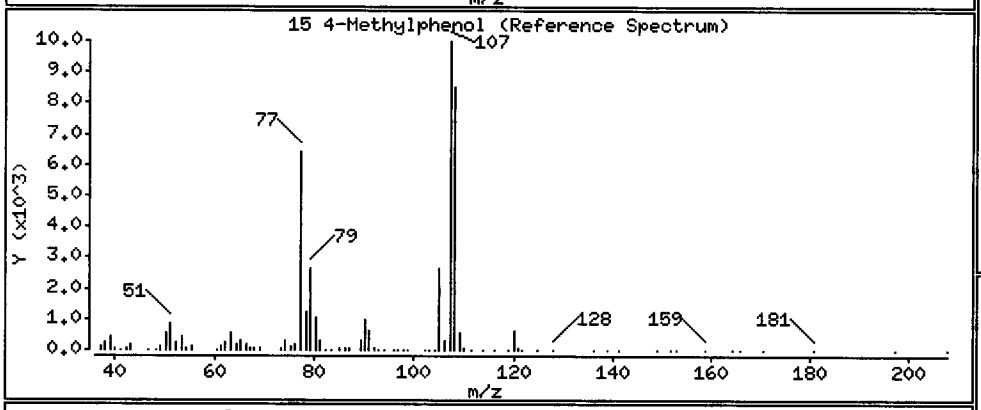
Concentration: 43.97 ug/kg

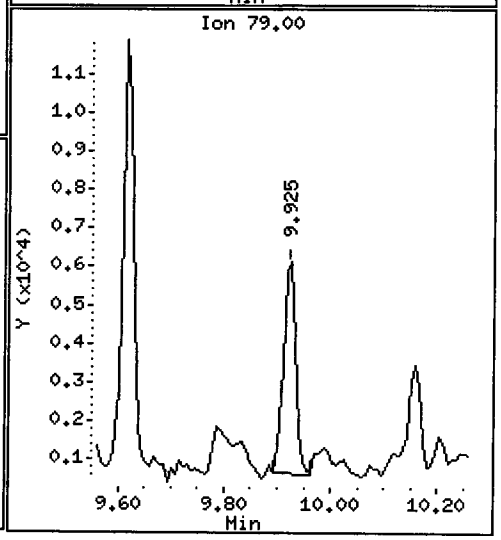


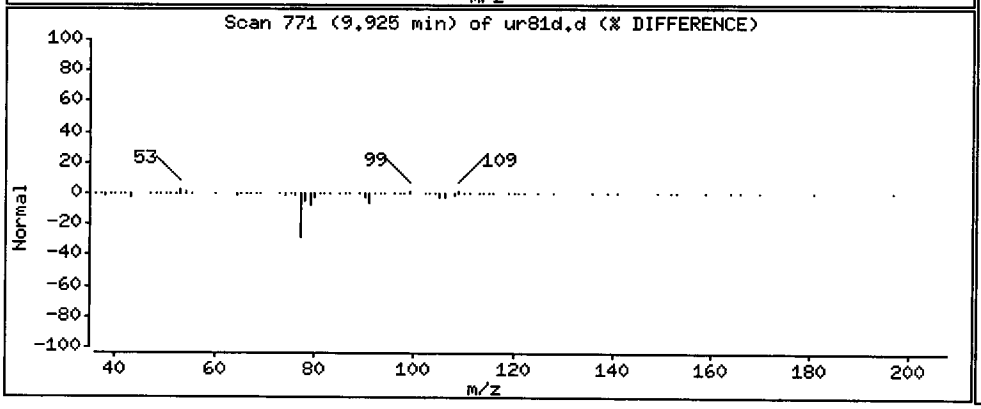












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

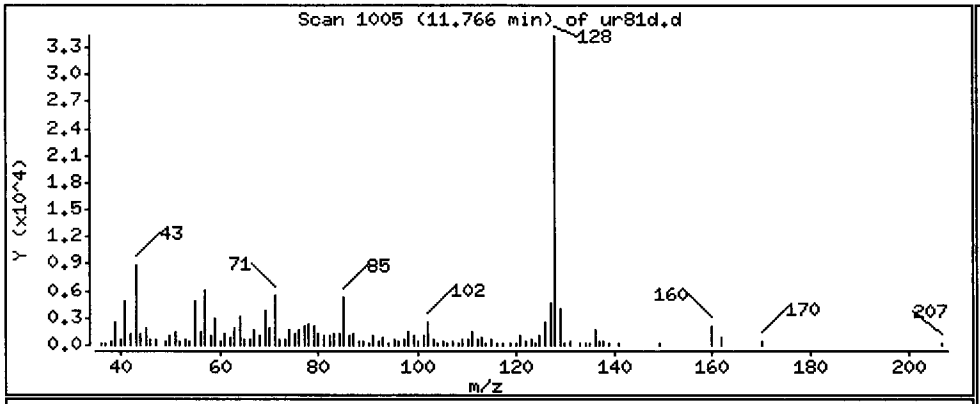
Client ID: IJ12-02 Instrument: nt10.i

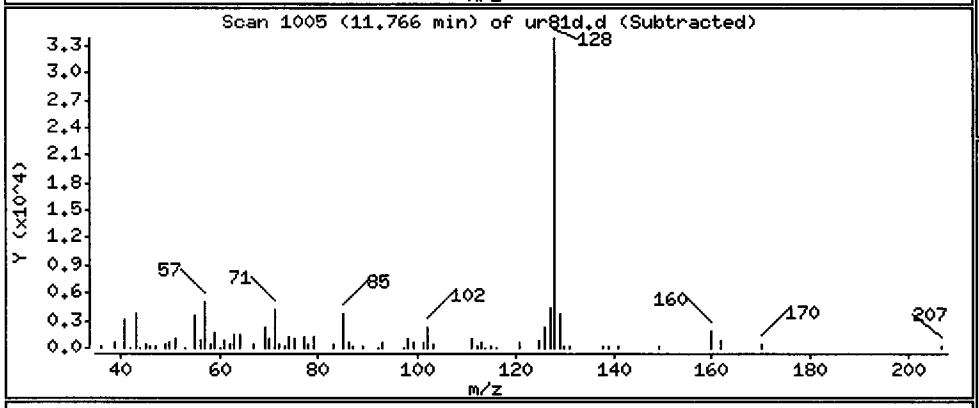
Sample Info: UR81D

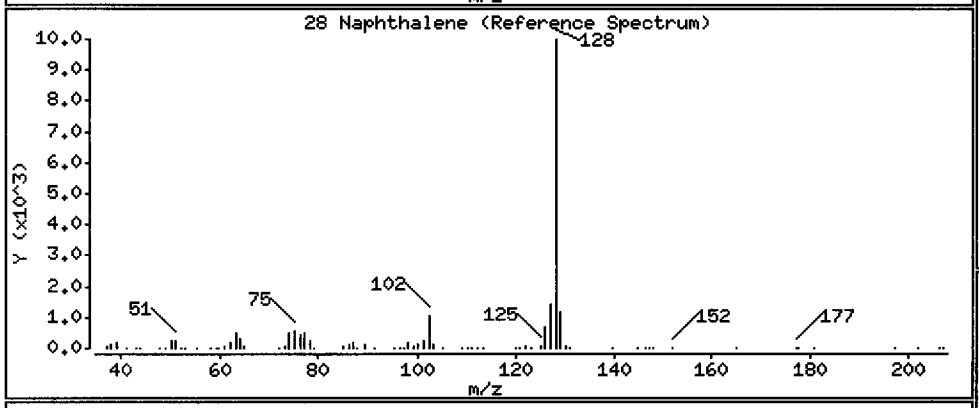
Volume Injected (uL): 1.0 Operator: VTS/YZ

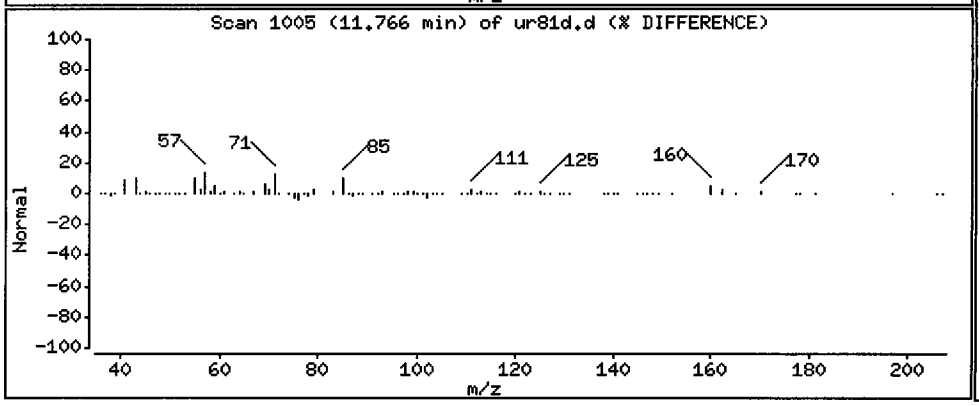
Column phase: ZB-5msi Column diameter: 0.25

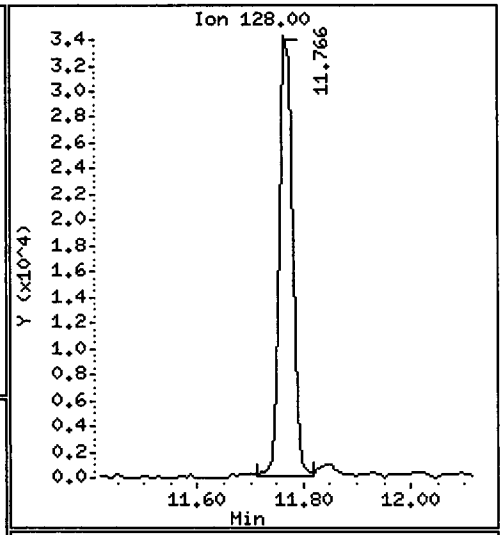
28 Naphthalene Concentration: 22.93 ug/kg

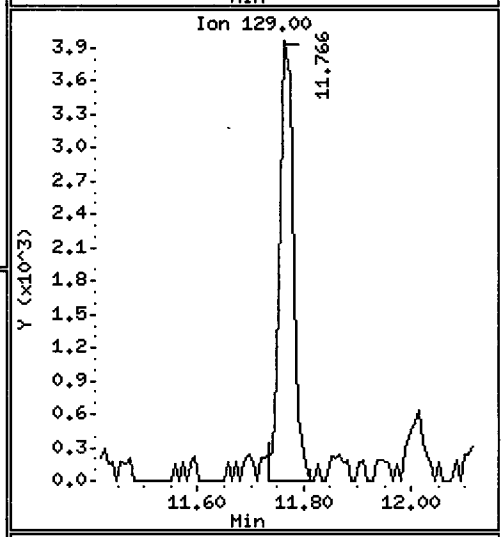


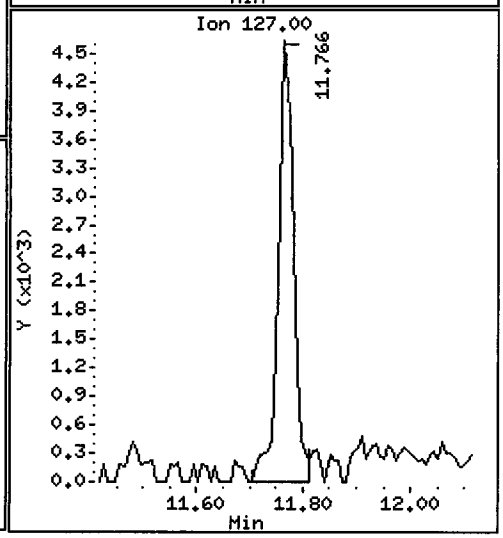












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

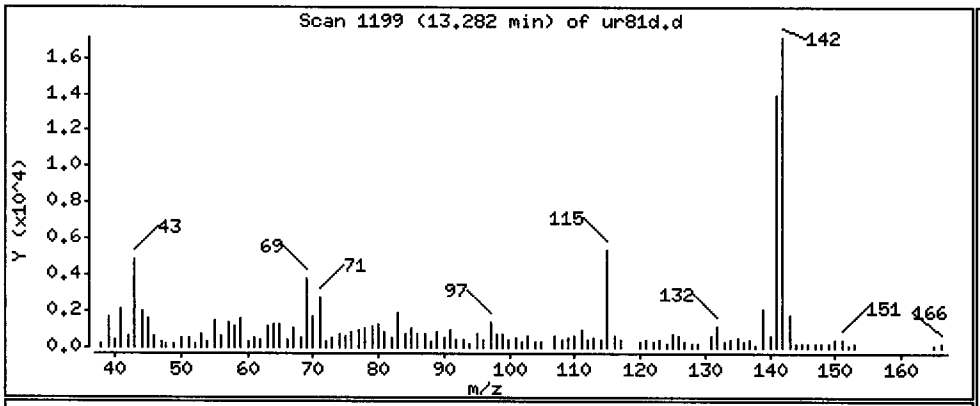
Operator: VTS/YZ

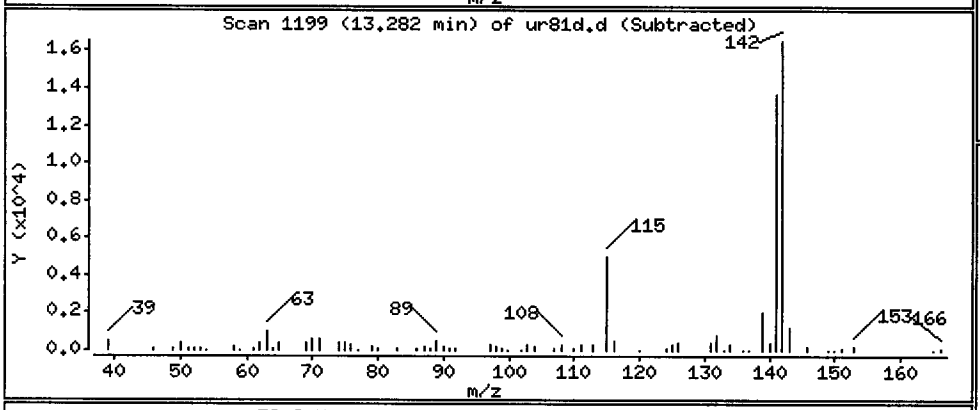
Column phase: ZB-5msi

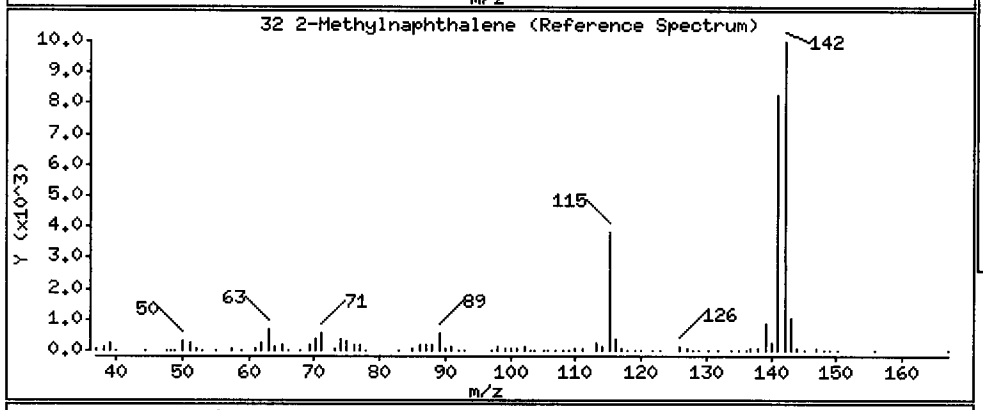
Column diameter: 0.25

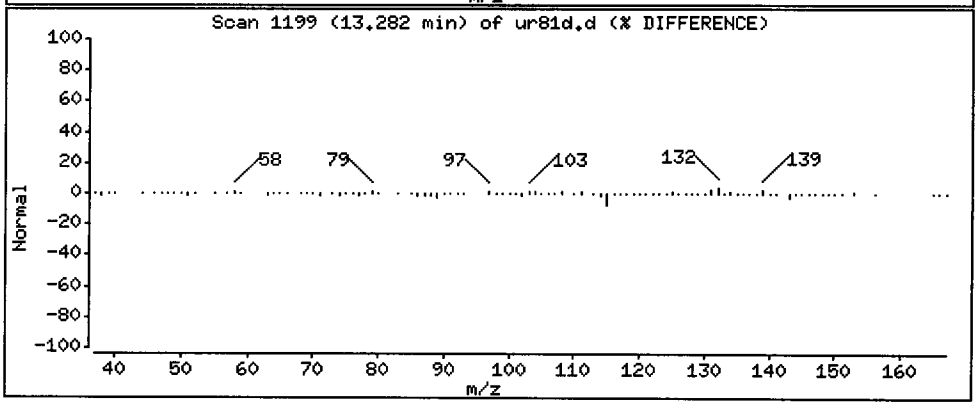
32 2-Methylnaphthalene

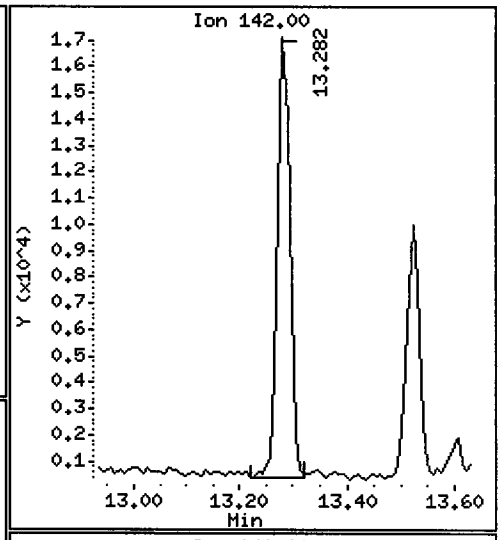
Concentration: 15.45 ug/kg

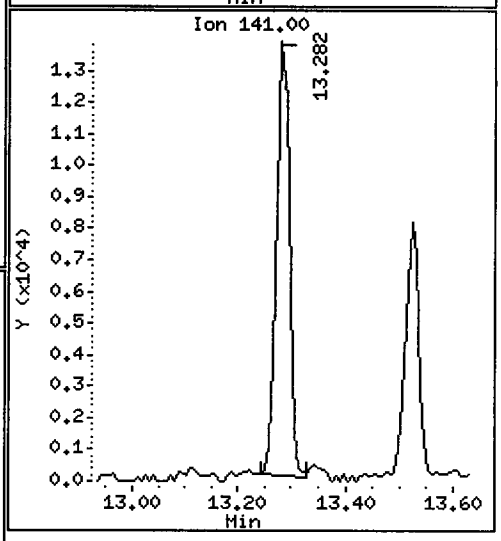












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

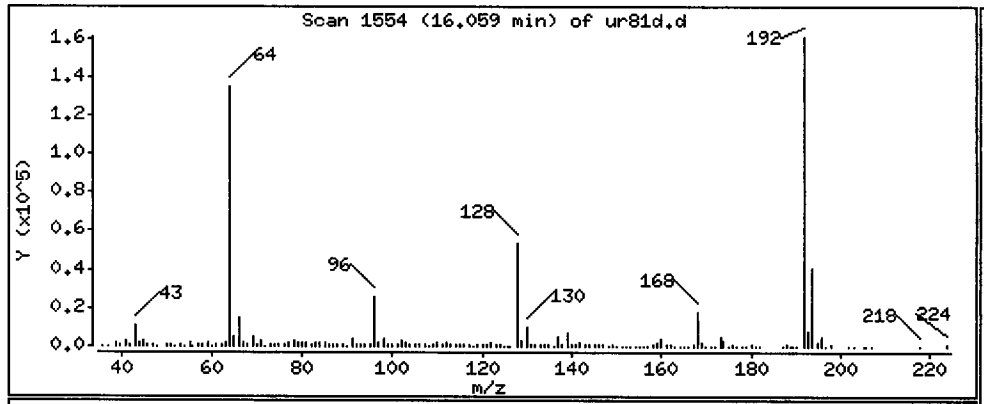
Operator: VTS/YZ

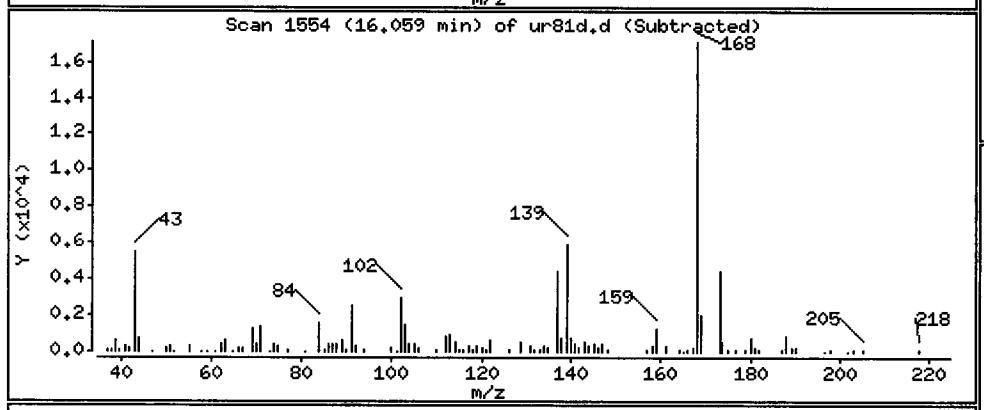
Column phase: ZB-5msi

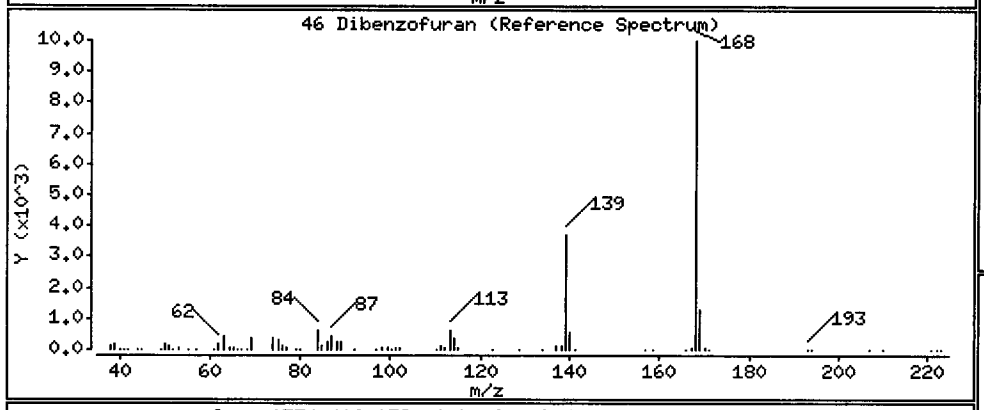
Column diameter: 0.25

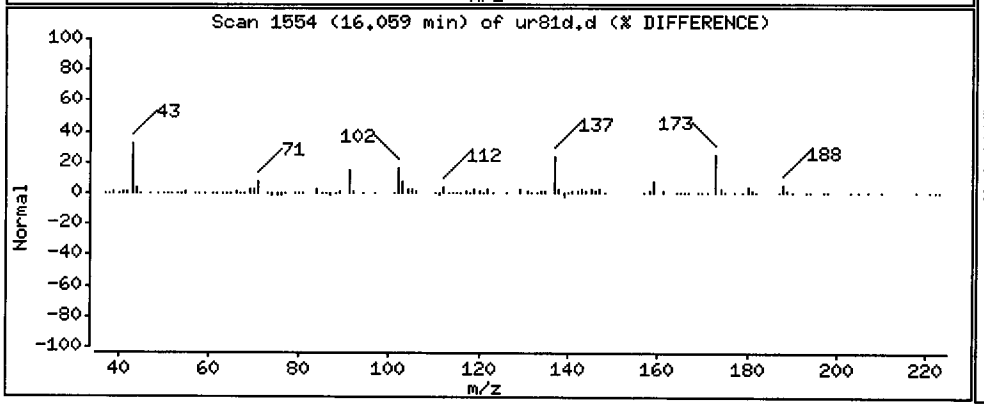
46 Dibenzofuran

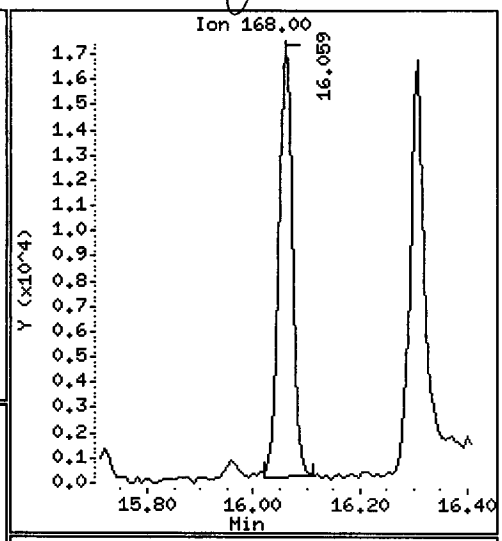
Concentration: 13.53 ug/kg

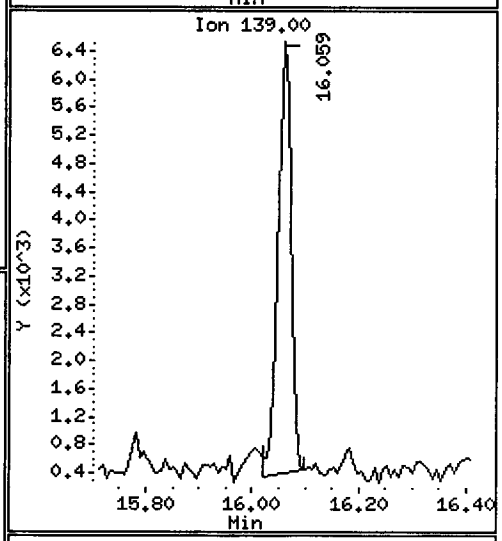


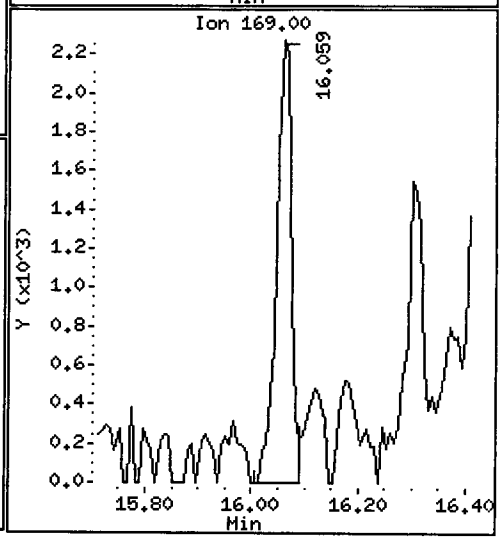












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

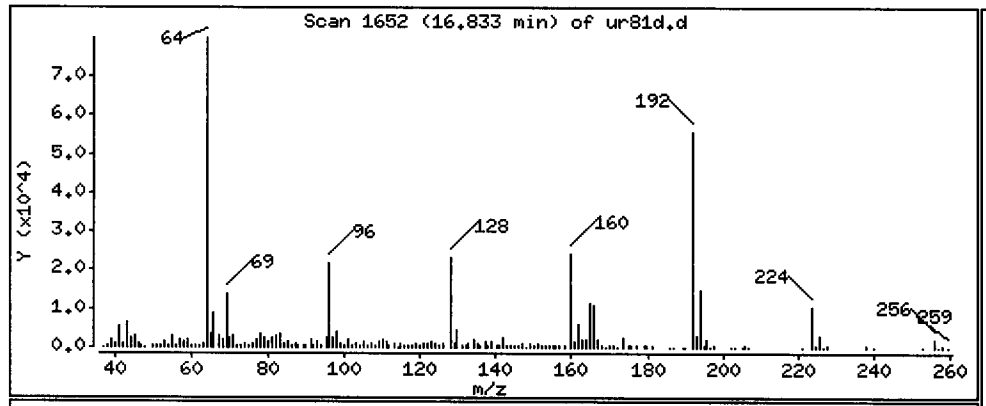
Operator: VTS/YZ

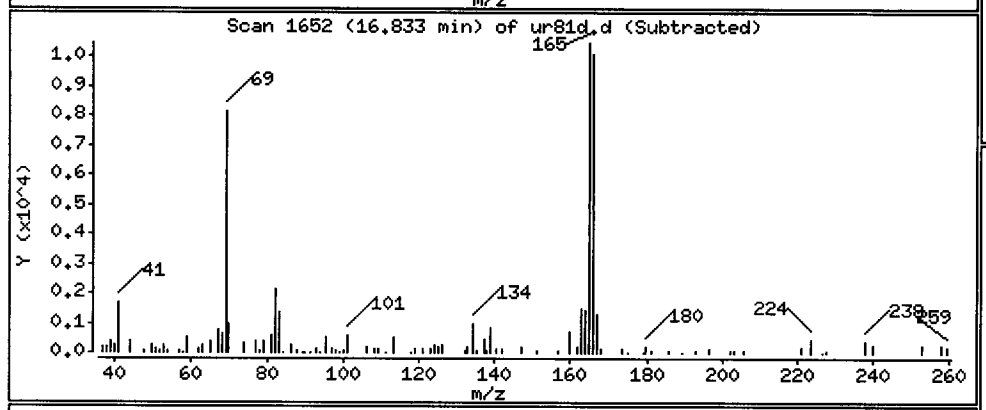
Column phase: ZB-5msi

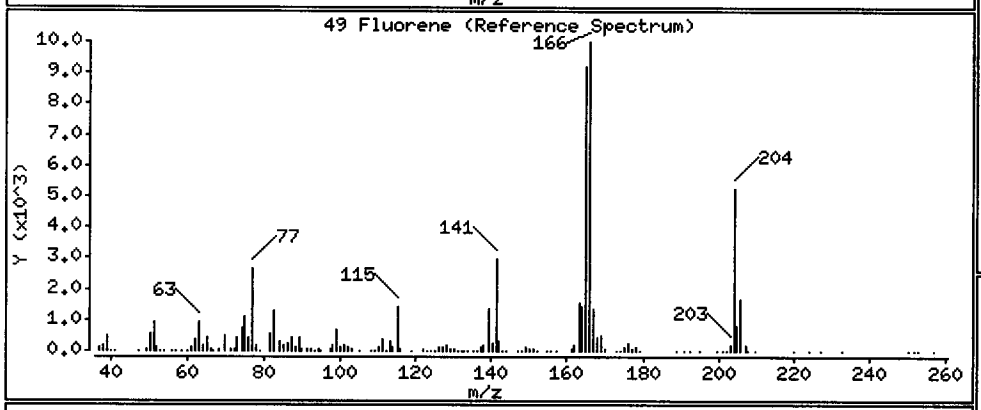
Column diameter: 0.25

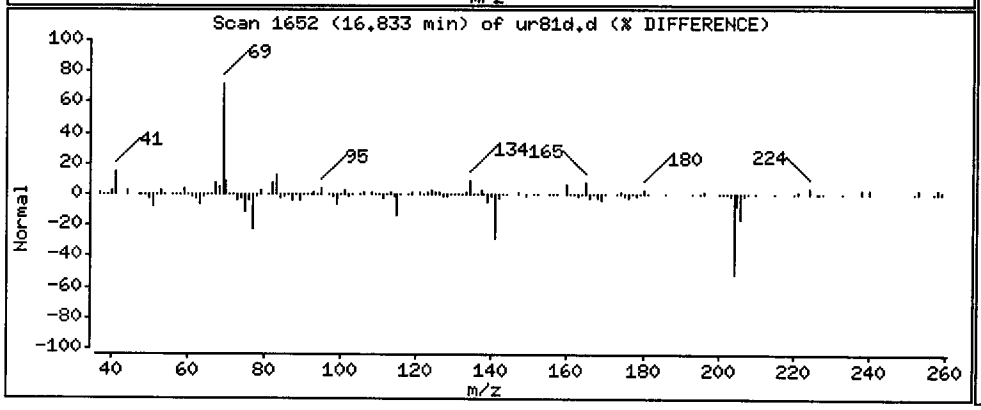
49 Fluorene

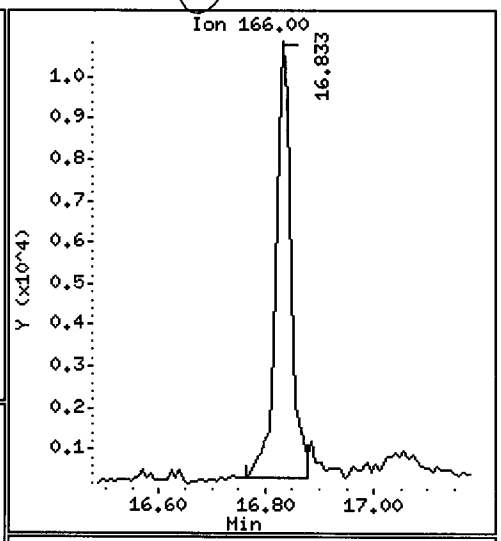
Concentration: 13.78 ug/kg

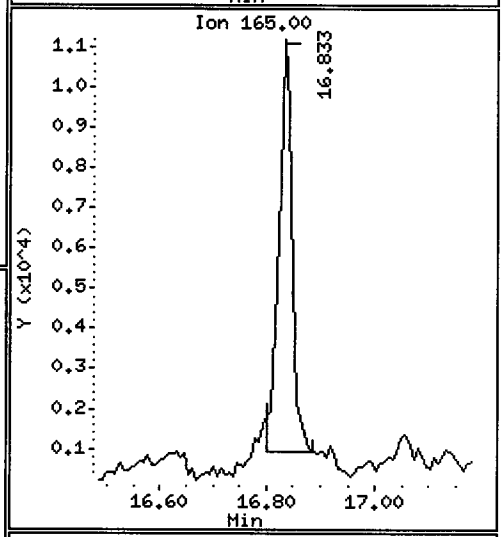


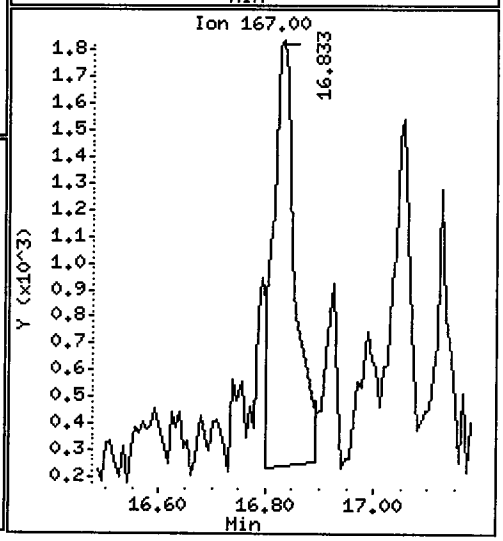












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

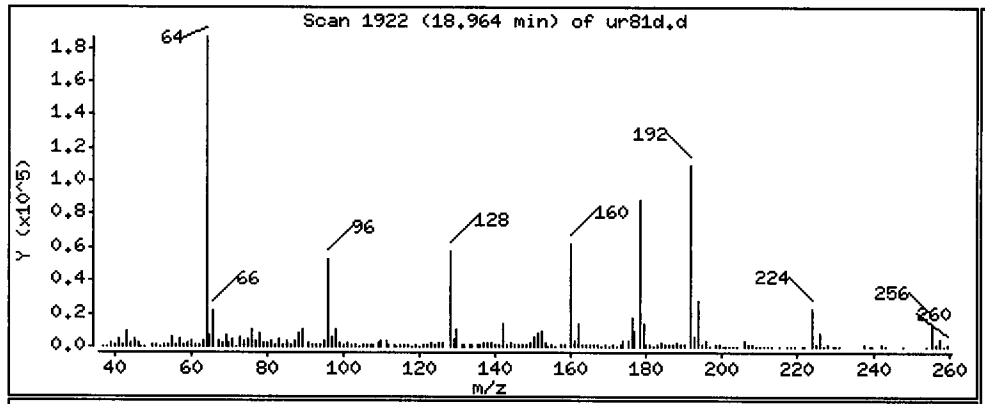
Operator: VTS/YZ

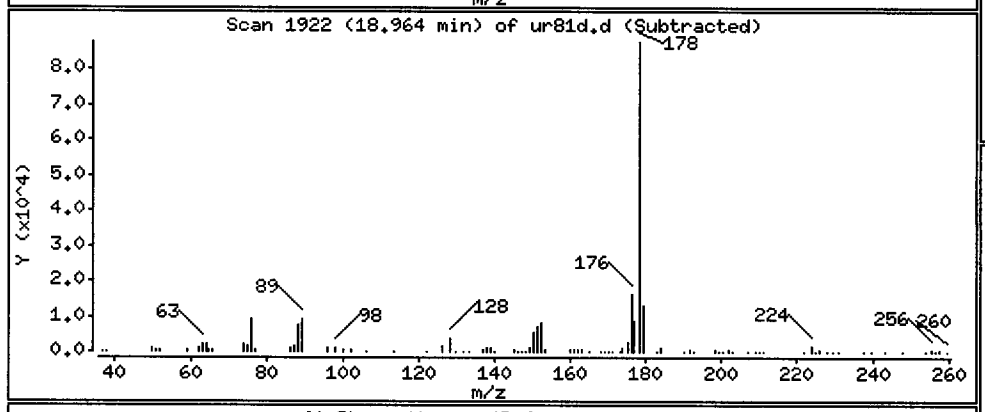
Column phase: ZB-5msi

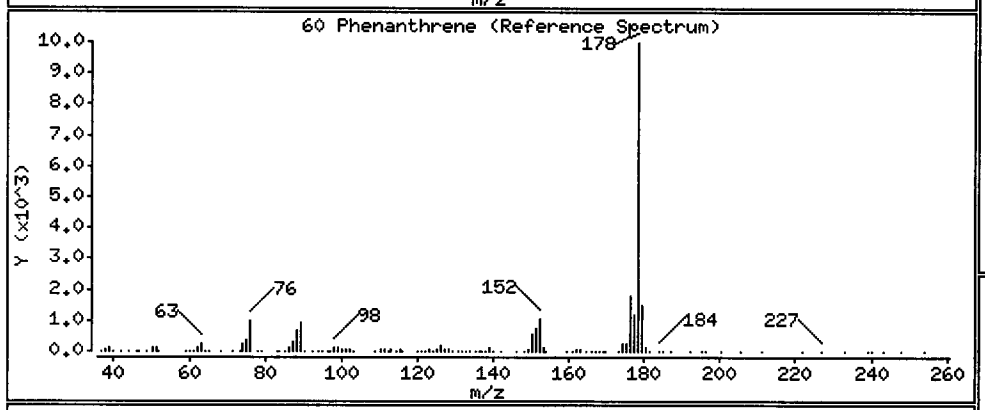
Column diameter: 0.25

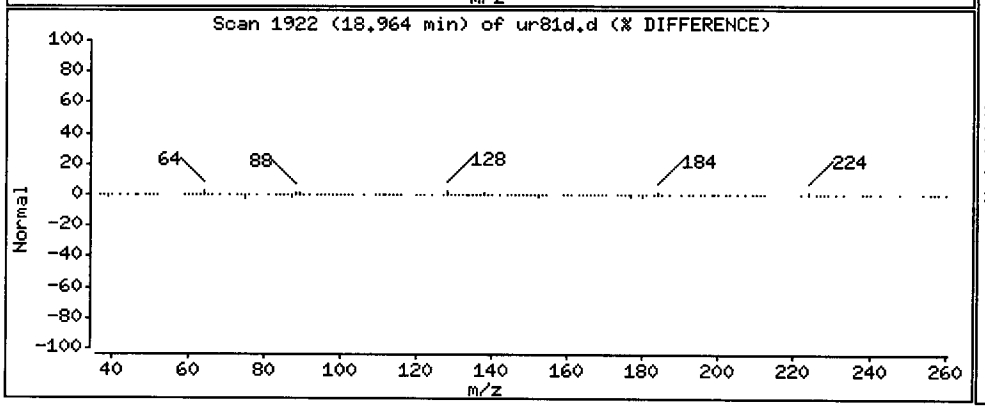
60 Phenanthrene

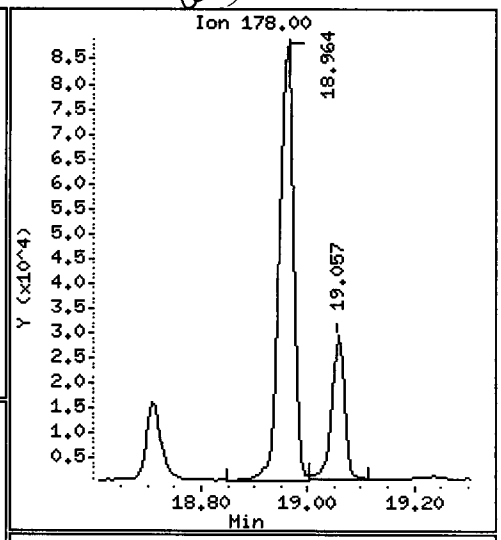
Concentration: 76.04 ug/kg

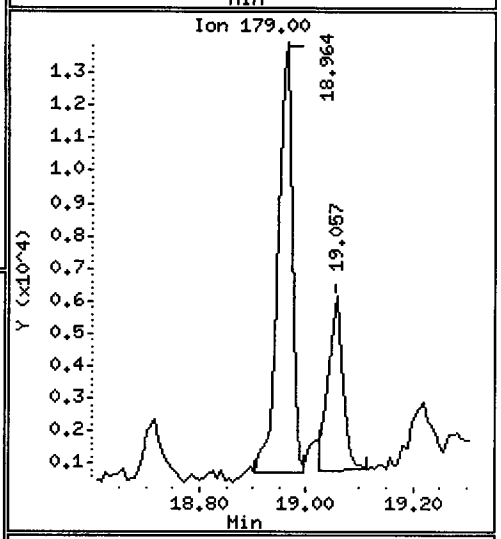


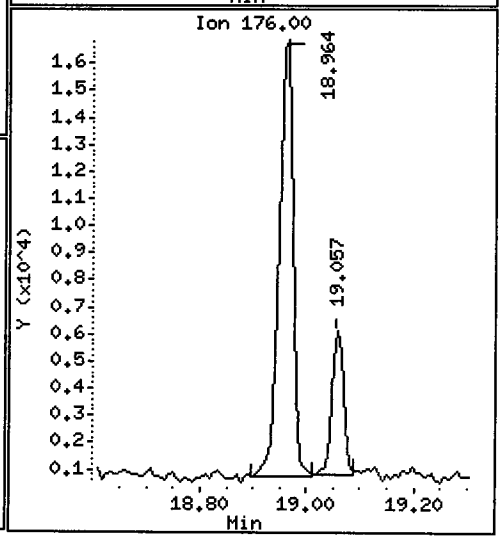












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

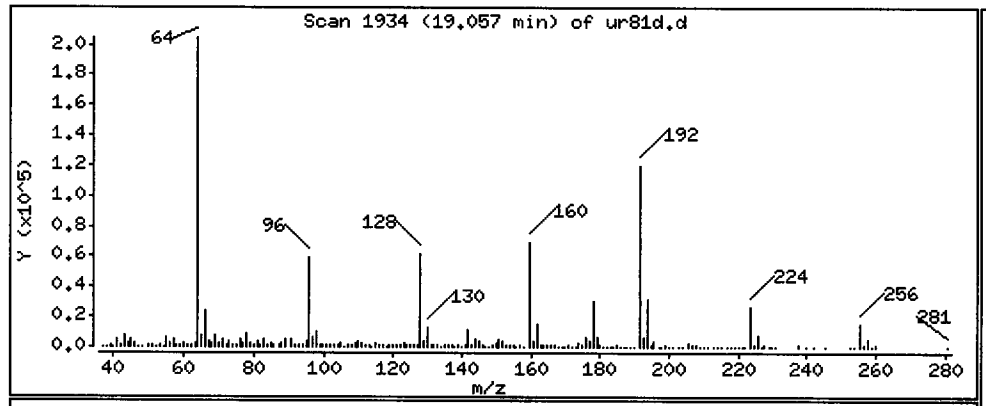
Operator: VTS/YZ

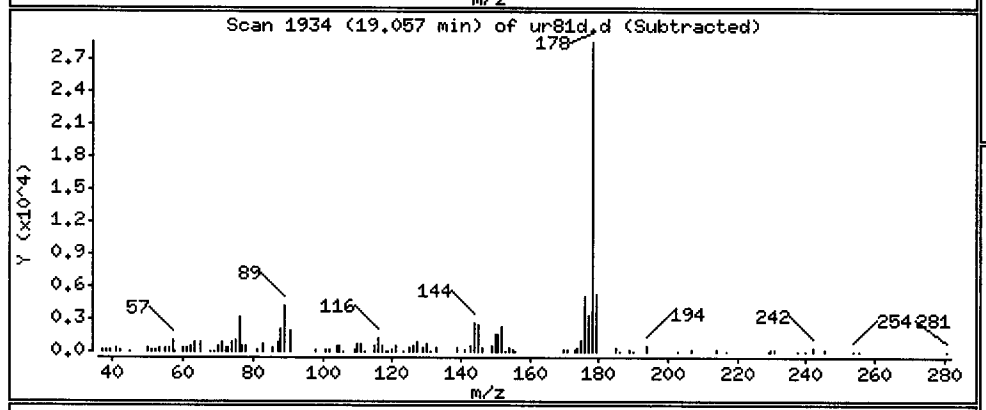
Column phase: ZB-5msi

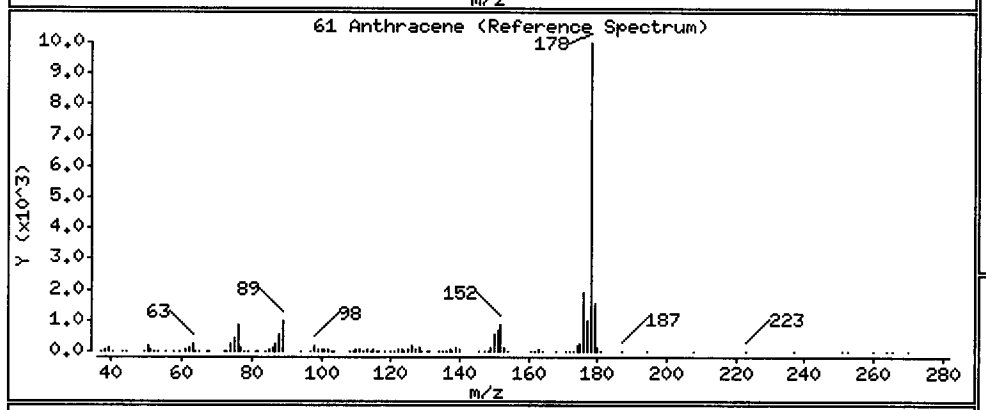
Column diameter: 0.25

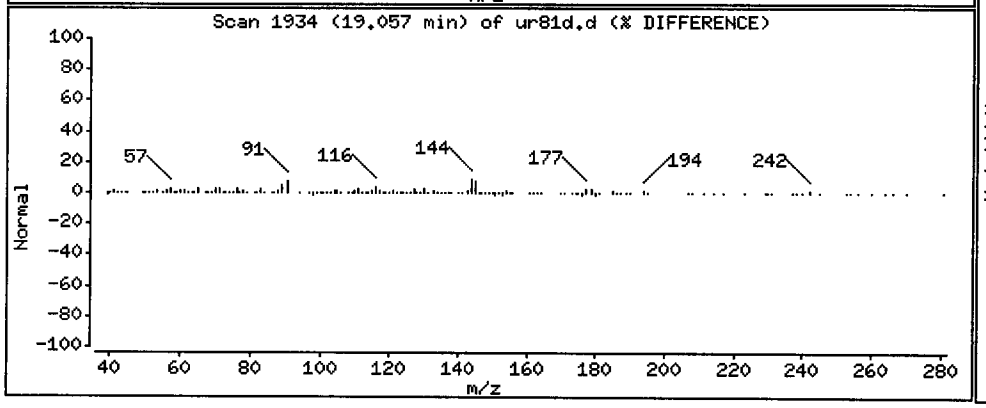
61 Anthracene

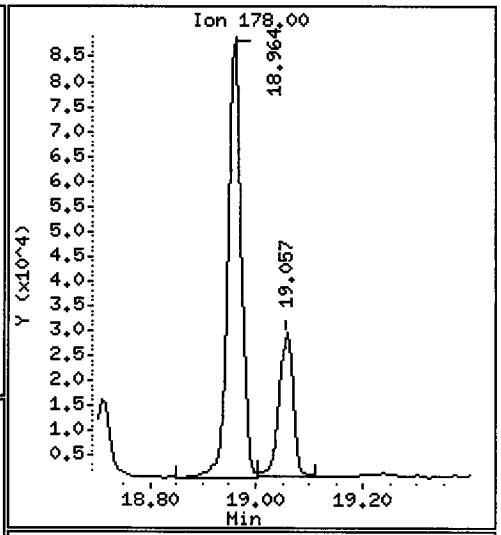
Concentration: 23.28 ug/kg

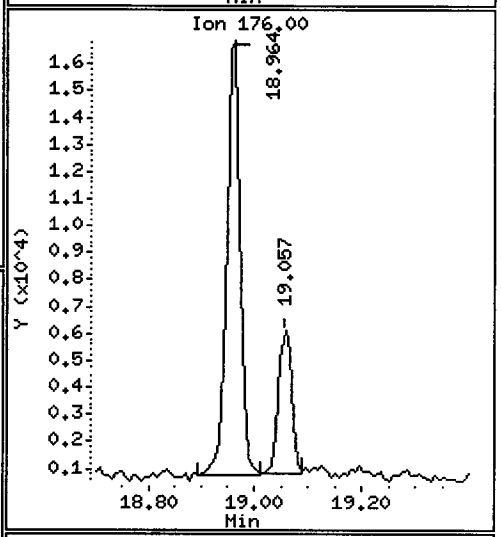


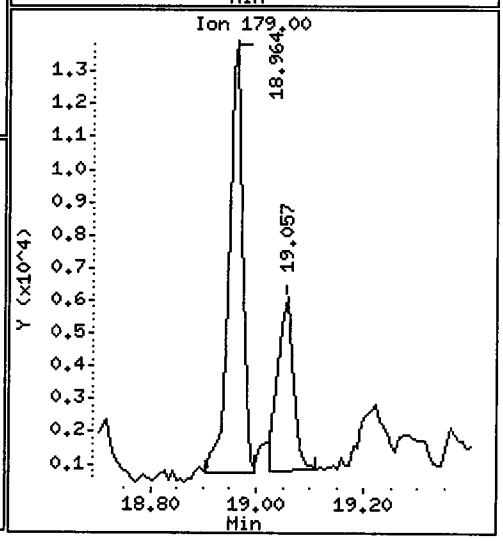












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

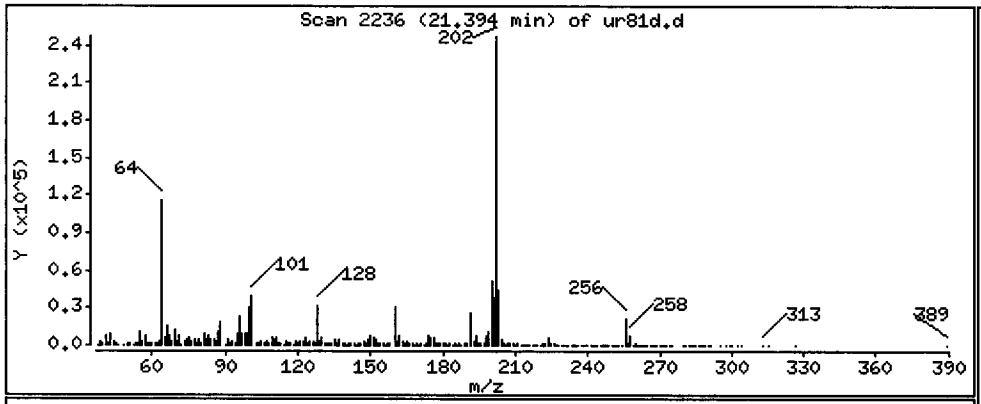
Client ID: IJ12-02 Instrument: nt10.i

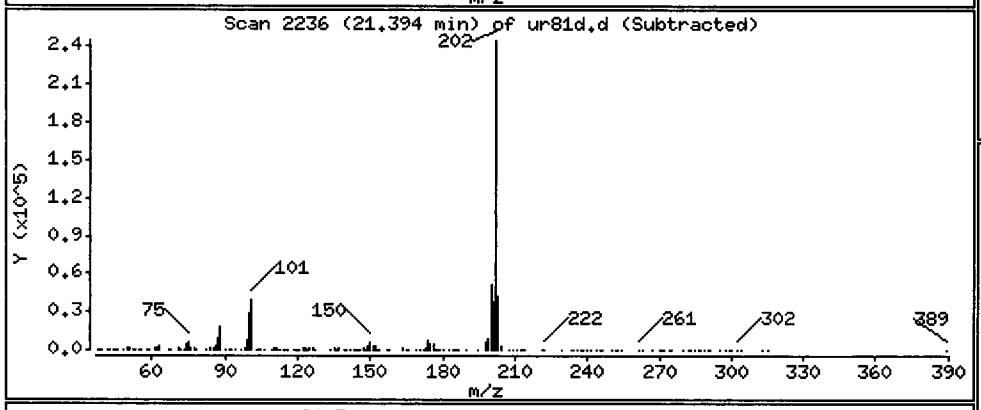
Sample Info: UR81D

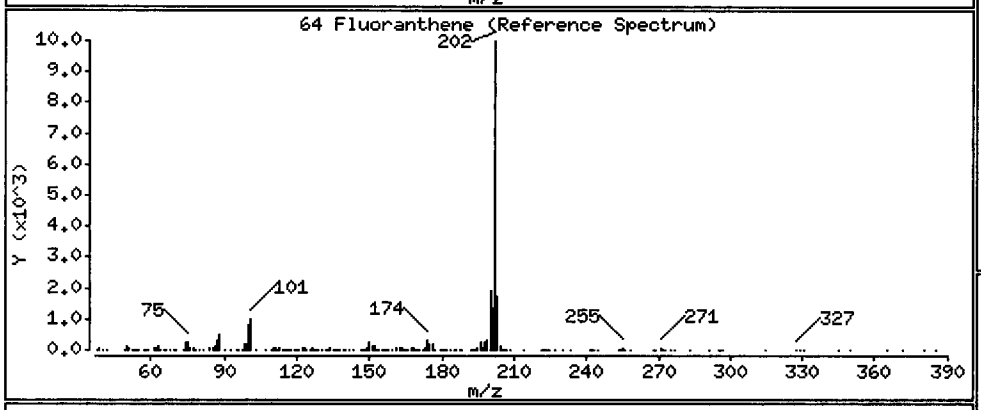
Volume Injected (uL): 1.0 Operator: VTS/YZ

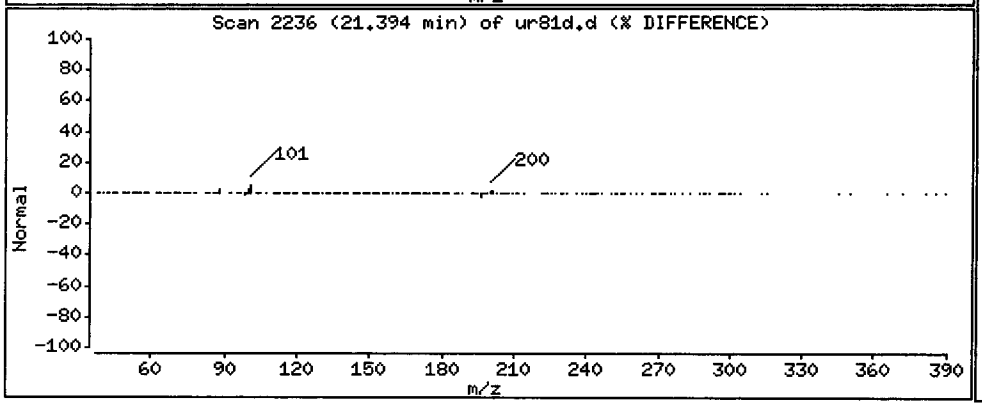
Column phase: ZB-5msi Column diameter: 0.25

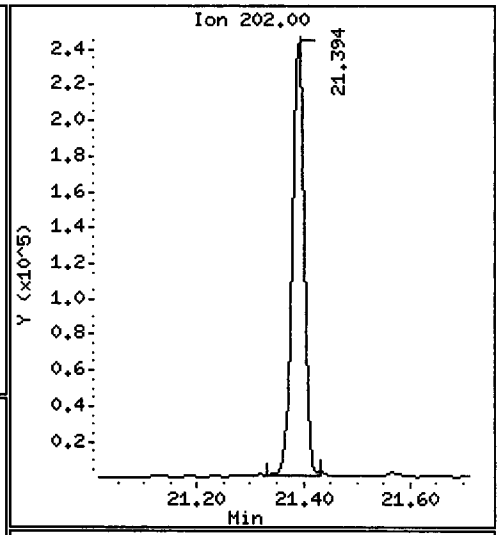
64 Fluoranthene Concentration: 166.6 ug/kg

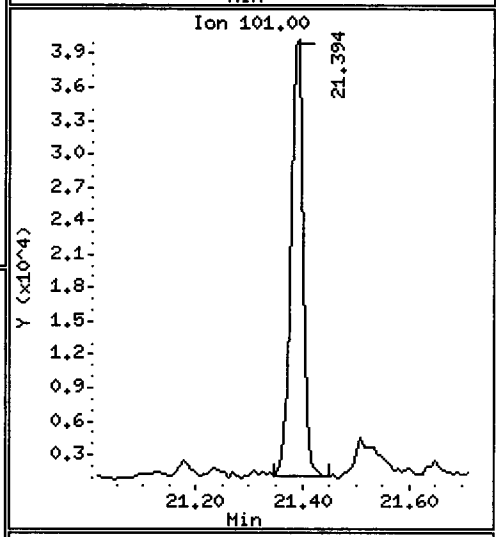


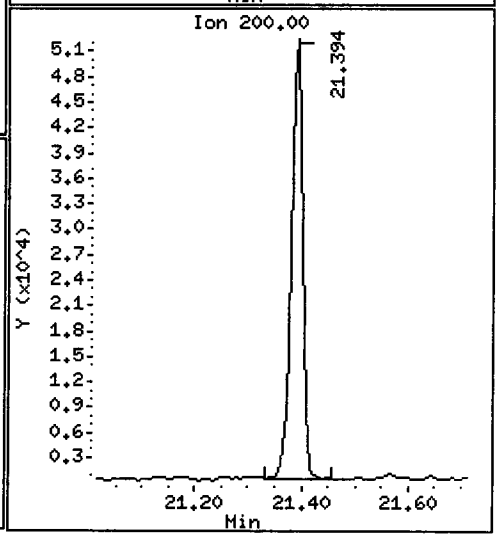












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

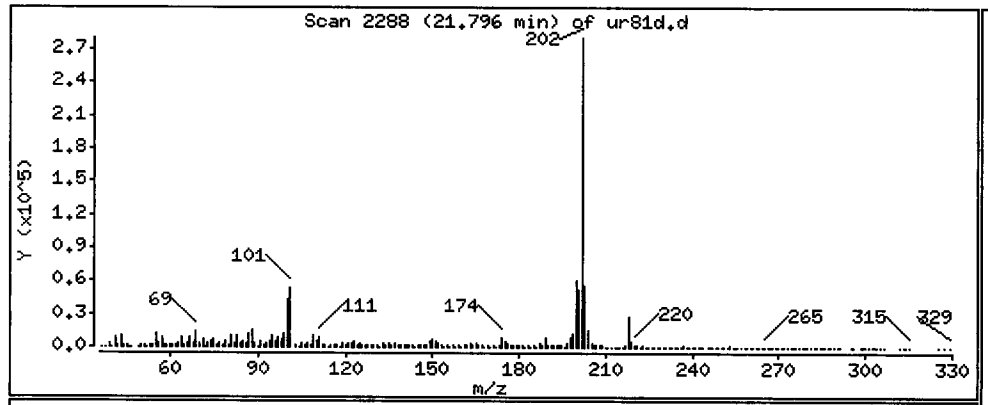
Operator: VTS/YZ

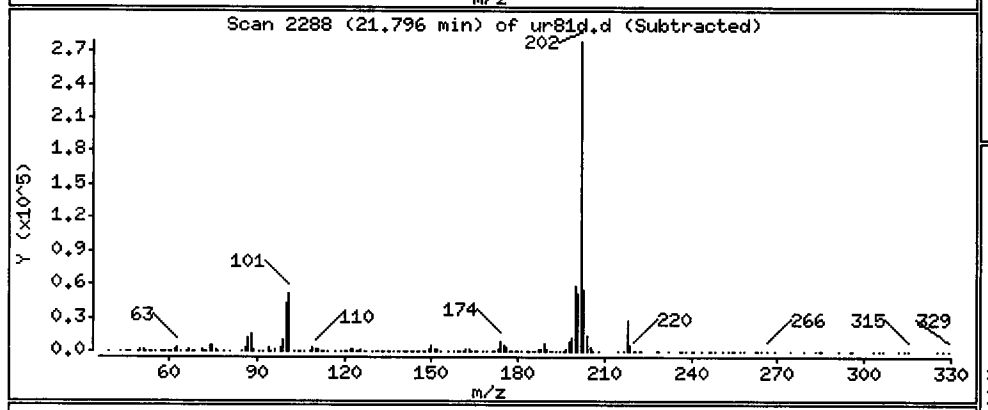
Column phase: ZB-5msi

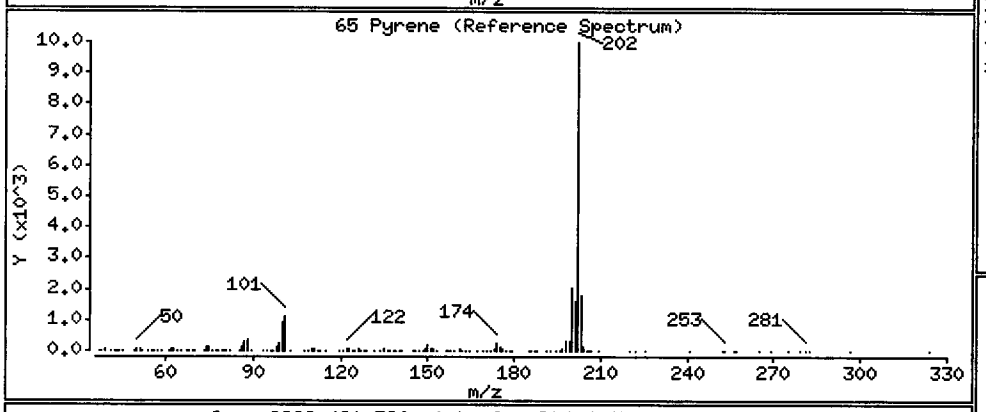
Column diameter: 0.25

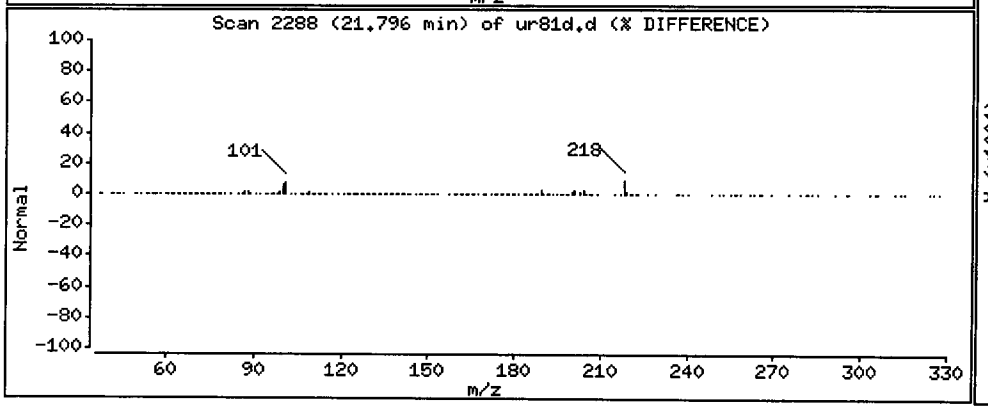
65 Pyrene

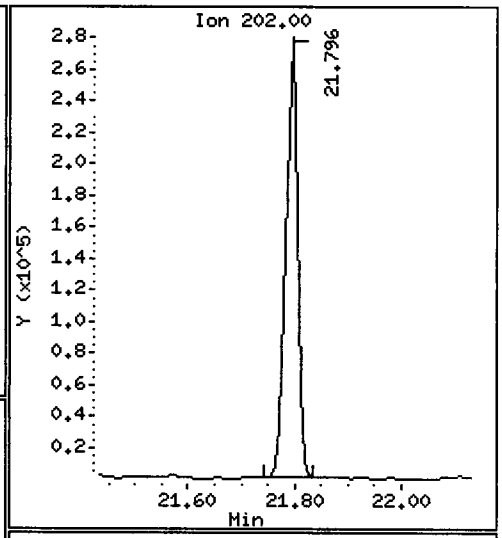
Concentration: 163.2 ug/kg

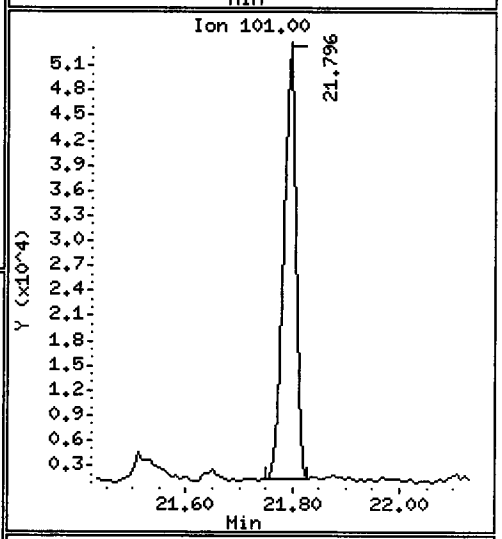


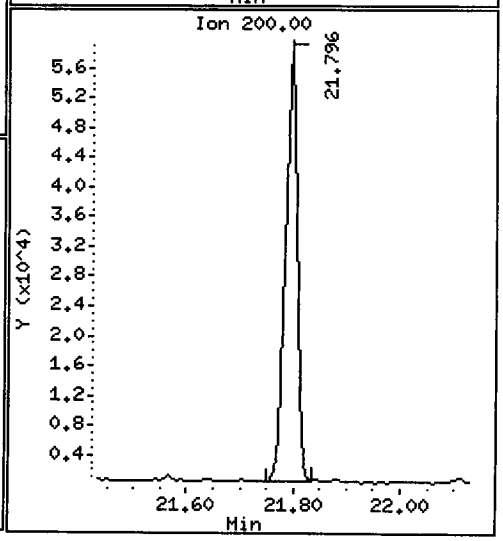












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

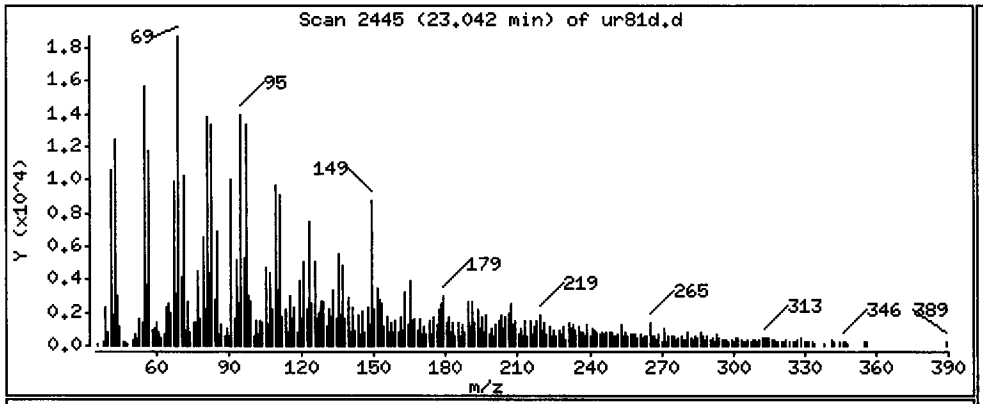
Operator: VTS/YZ

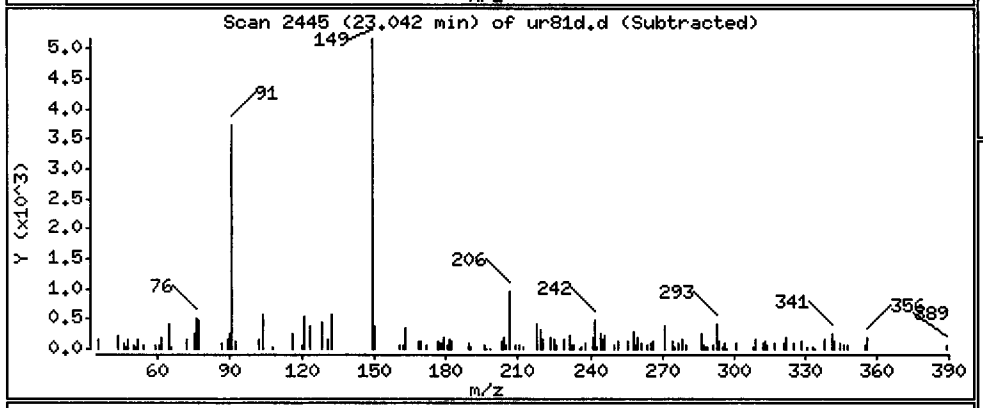
Column phase: ZB-5msi

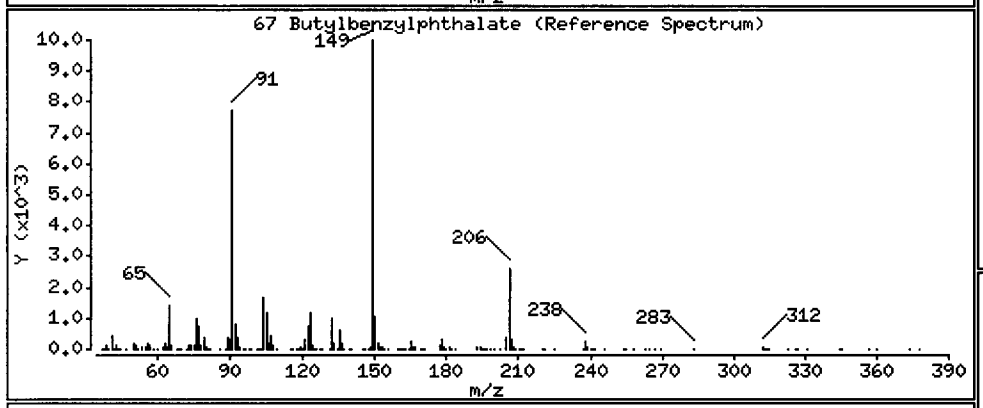
Column diameter: 0.25

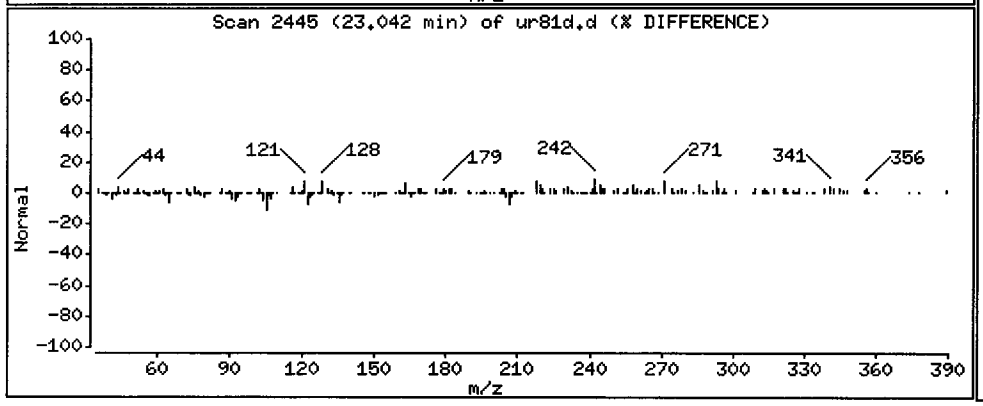
67 Butylbenzylphthalate

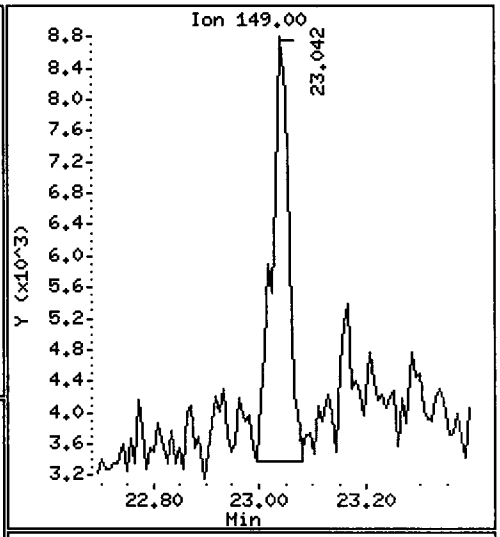
Concentration: 10.82 ug/kg

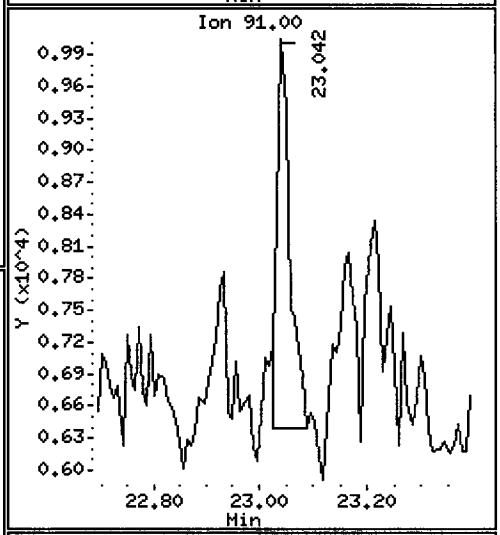


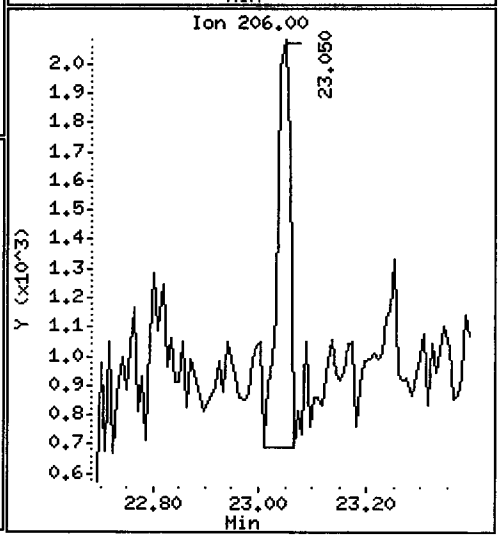












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

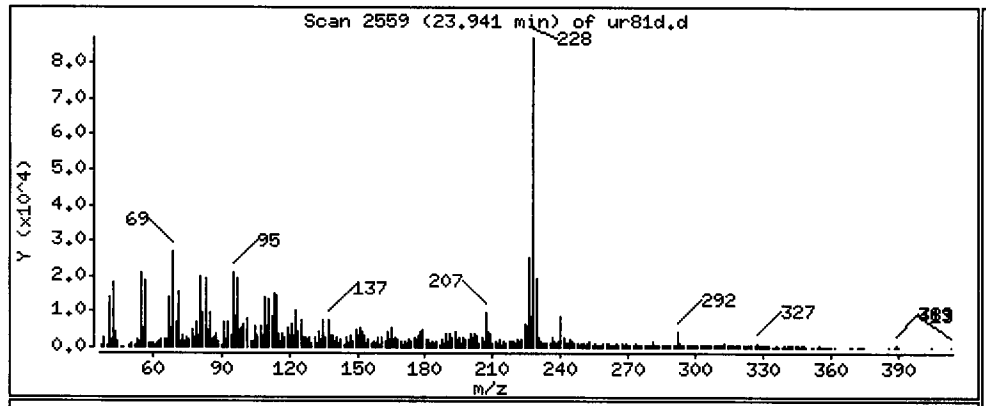
Operator: VTS/YZ

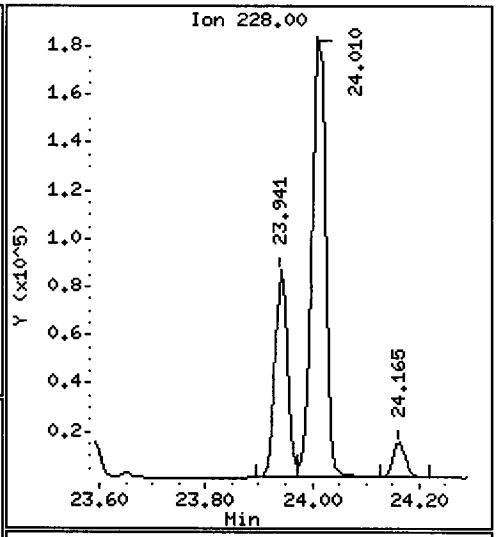
Column phase: ZB-5msi

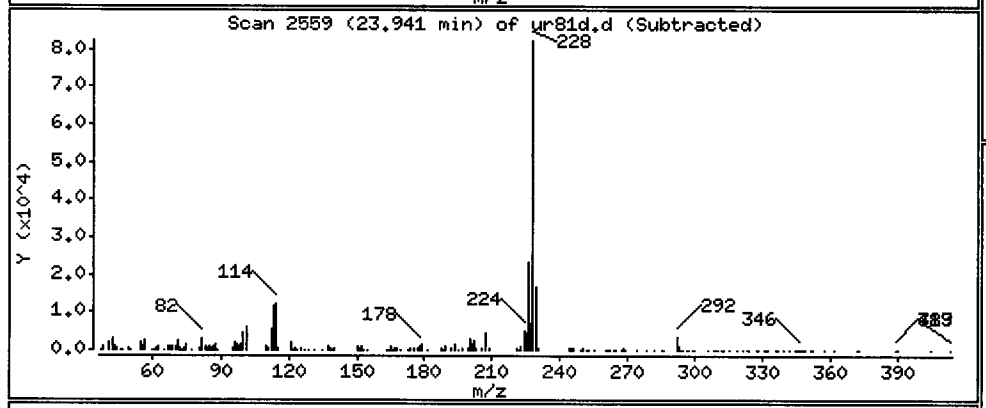
Column diameter: 0.25

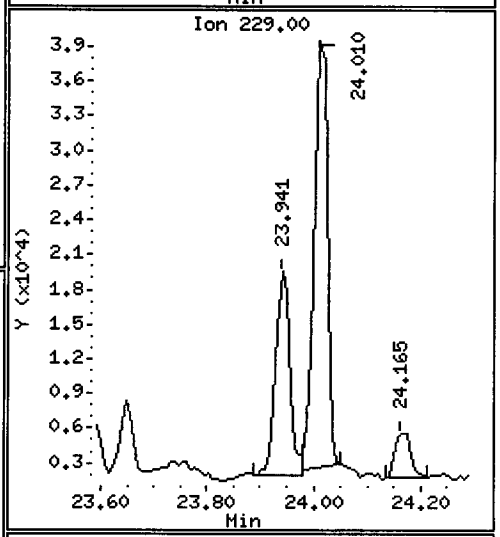
68 Benzo(a)anthracene

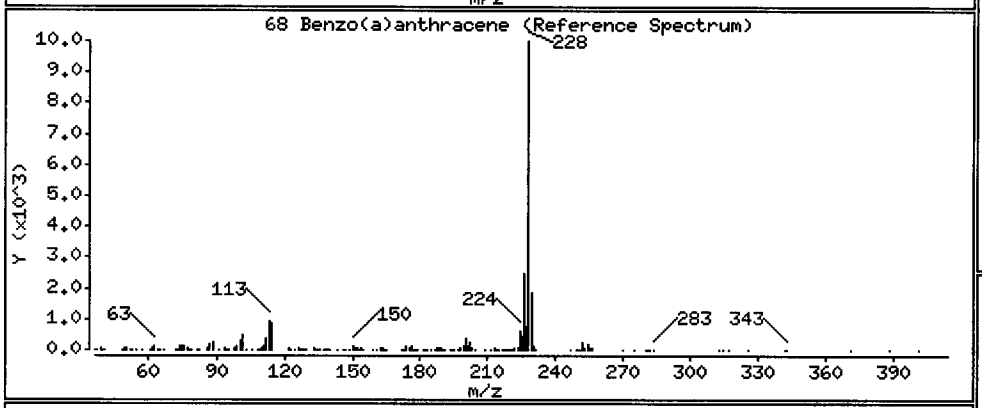
Concentration: 59.01 ug/kg

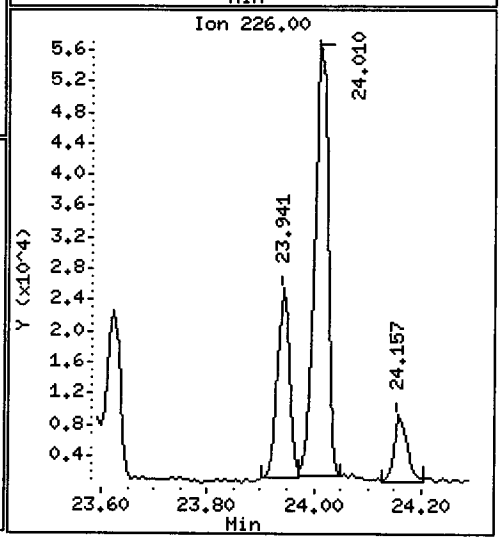


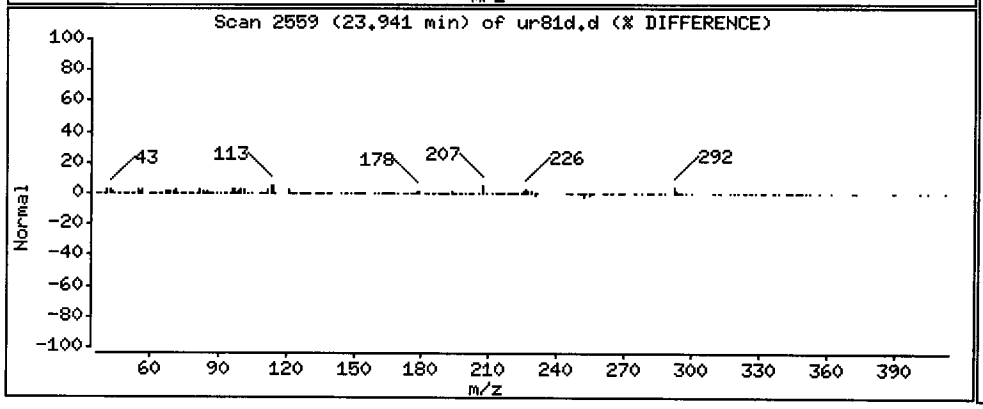












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

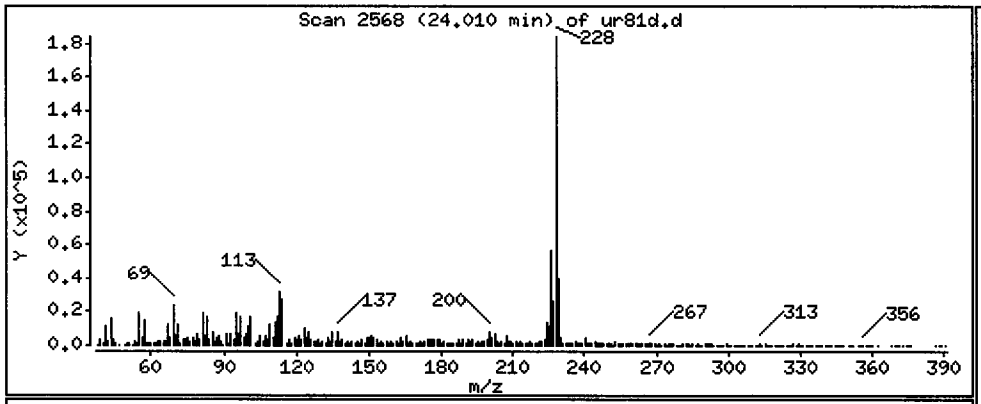
Client ID: IJ12-02 Instrument: nt10.i

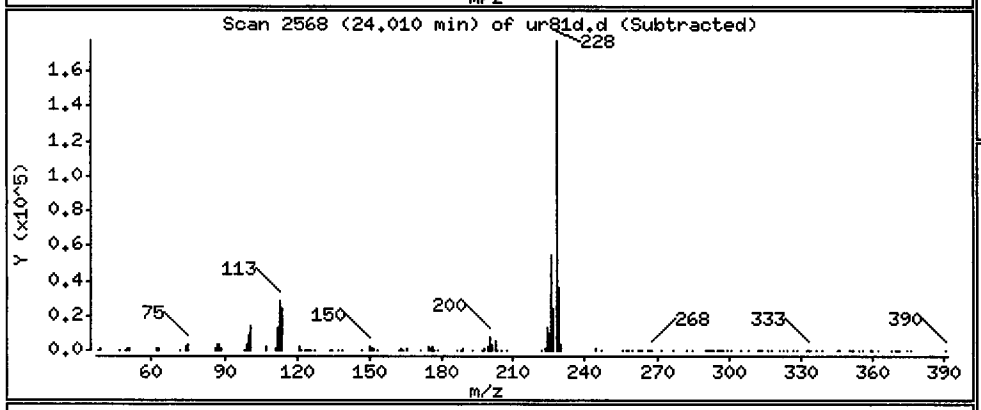
Sample Info: UR81D

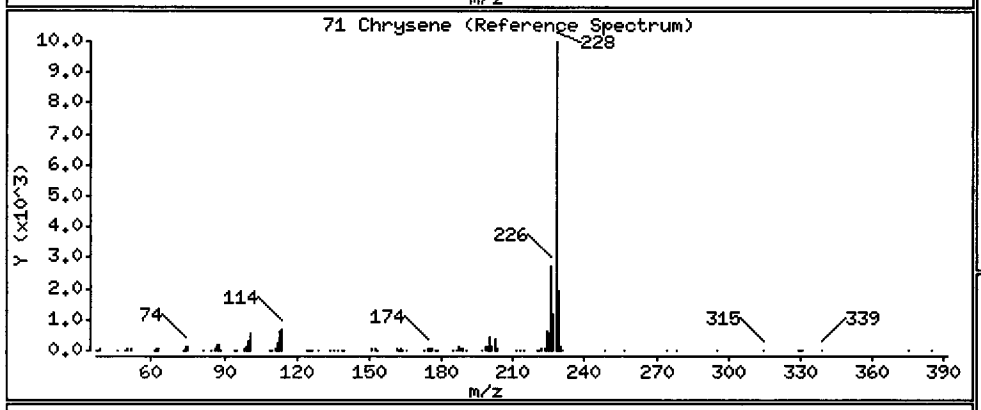
Volume Injected (uL): 1.0 Operator: VTS/YZ

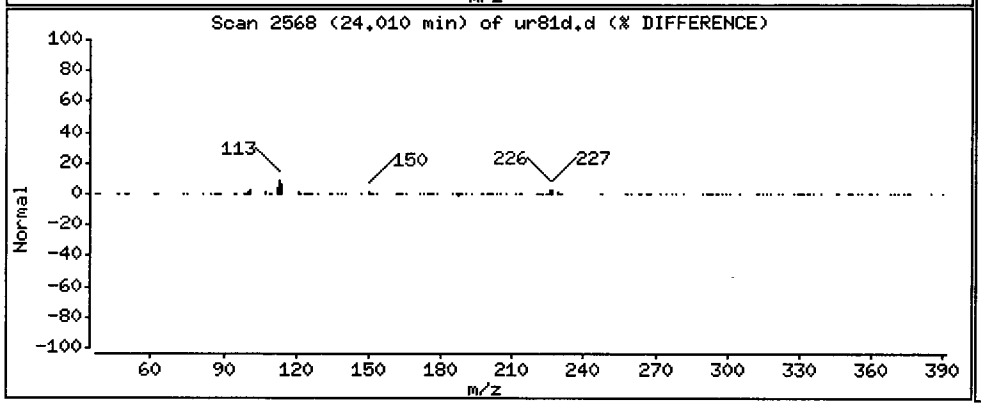
Column phase: ZB-5msi Column diameter: 0.25

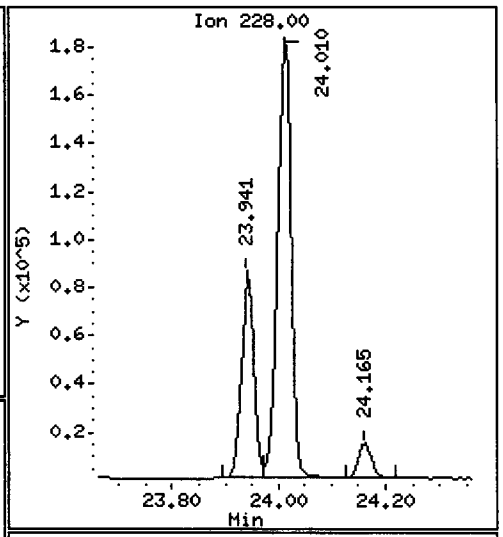
71 Chrysene Concentration: 153.4 ug/kg

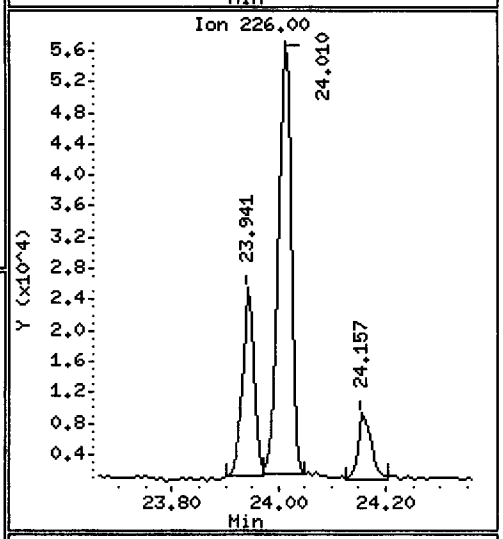


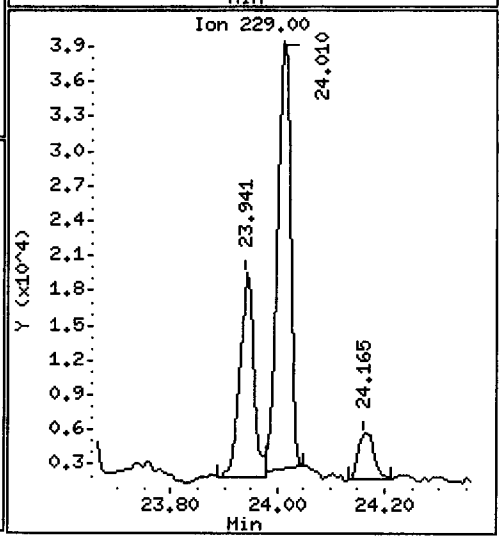












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

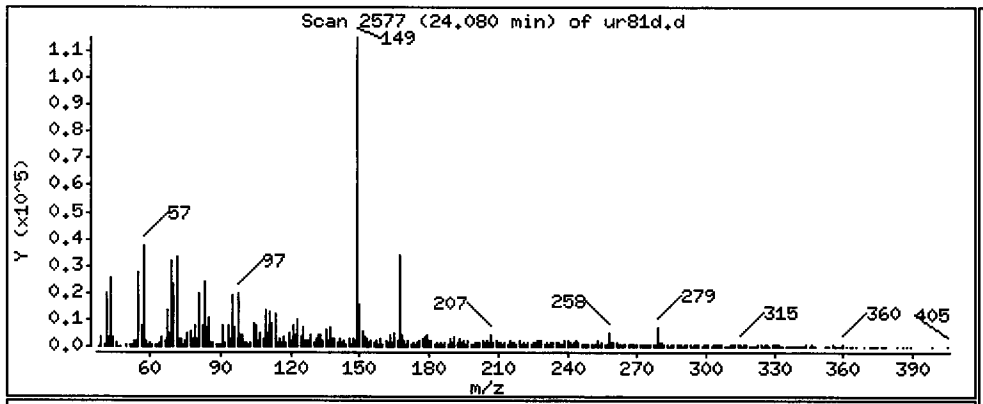
Operator: VTS/YZ

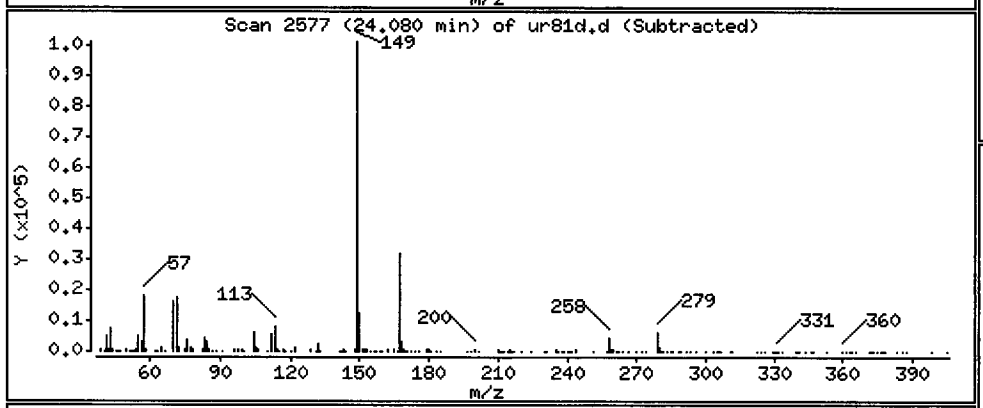
Column phase: ZB-5msi

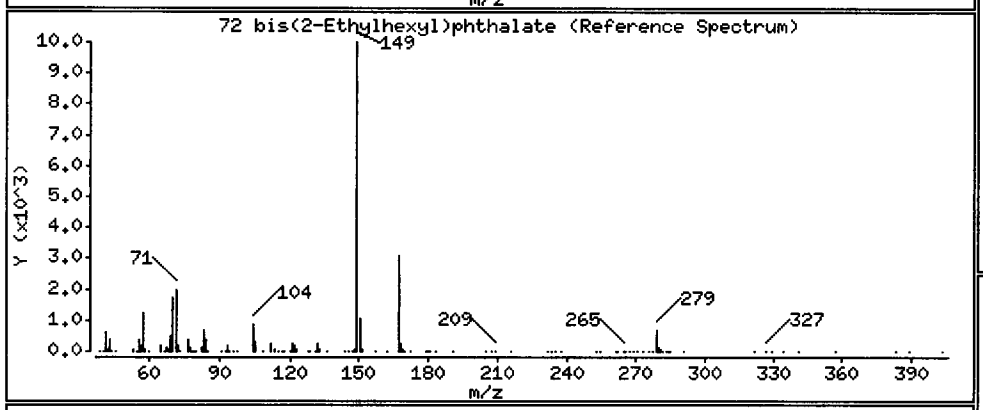
Column diameter: 0.25

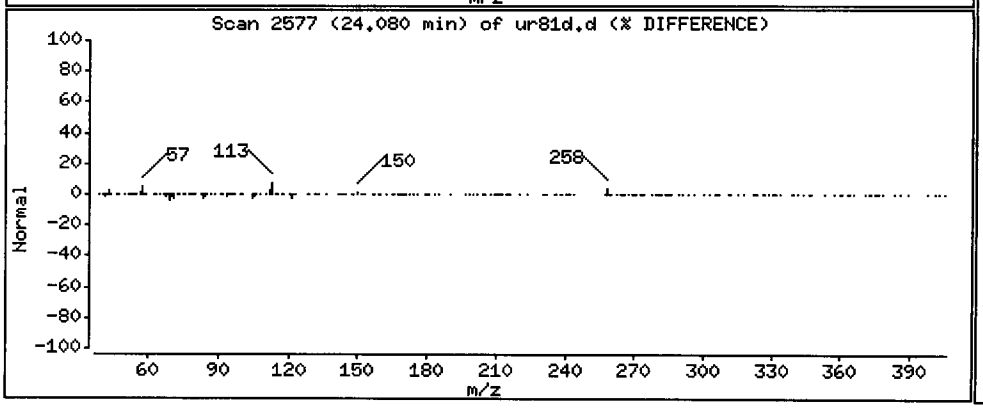
72 bis(2-Ethylhexyl)phthalate

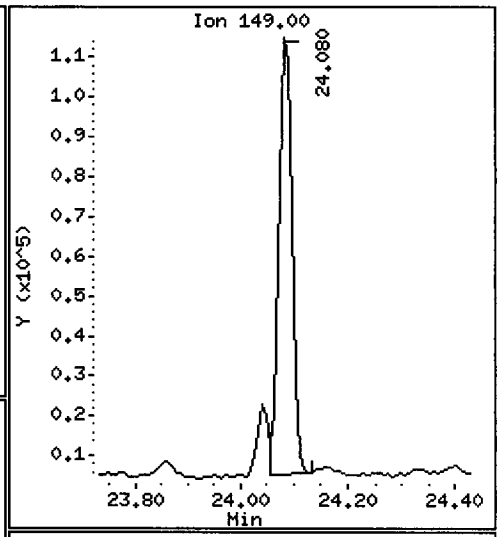
Concentration: 104.0 ug/kg

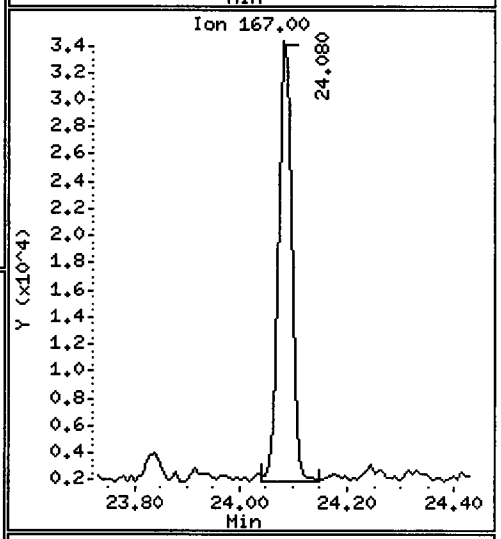


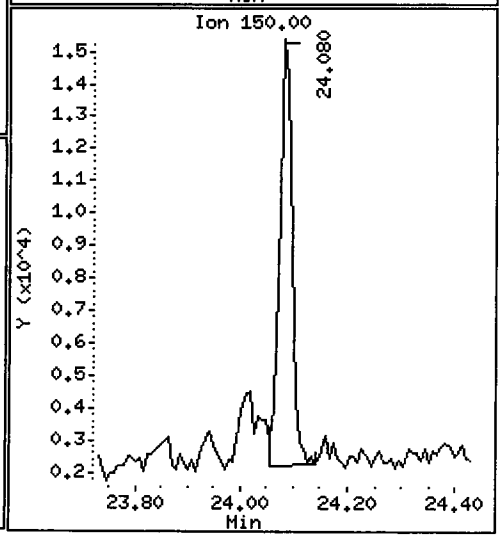












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

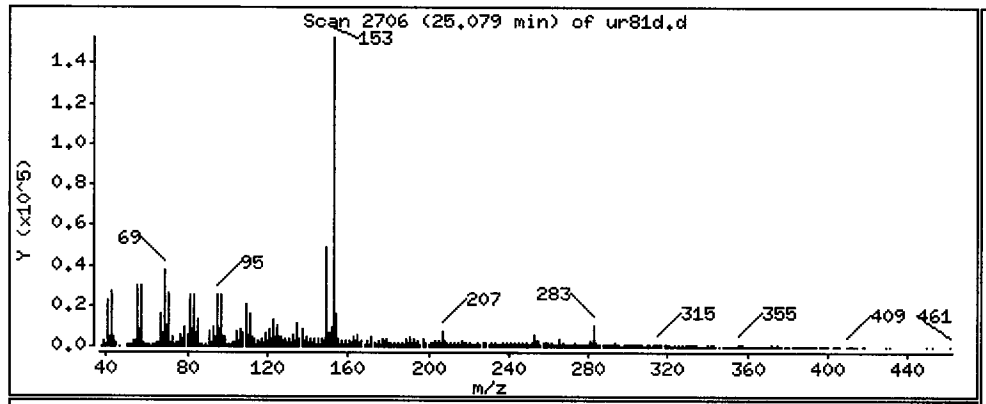
Operator: VTS/YZ

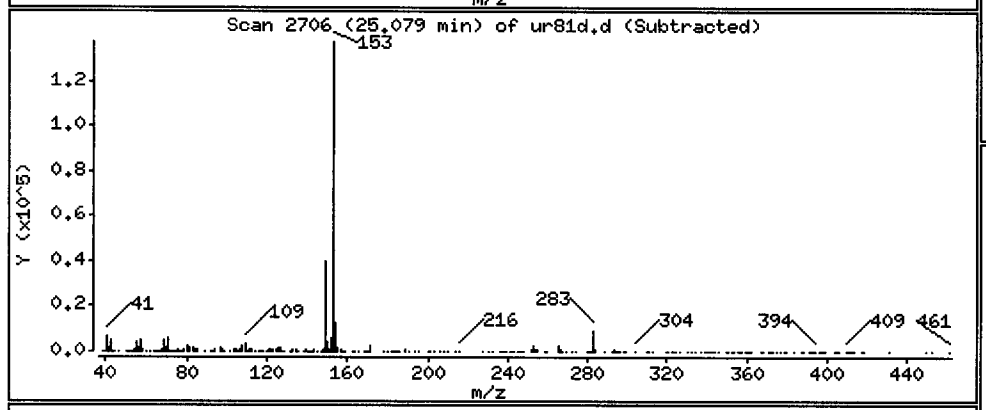
Column phase: ZB-5msi

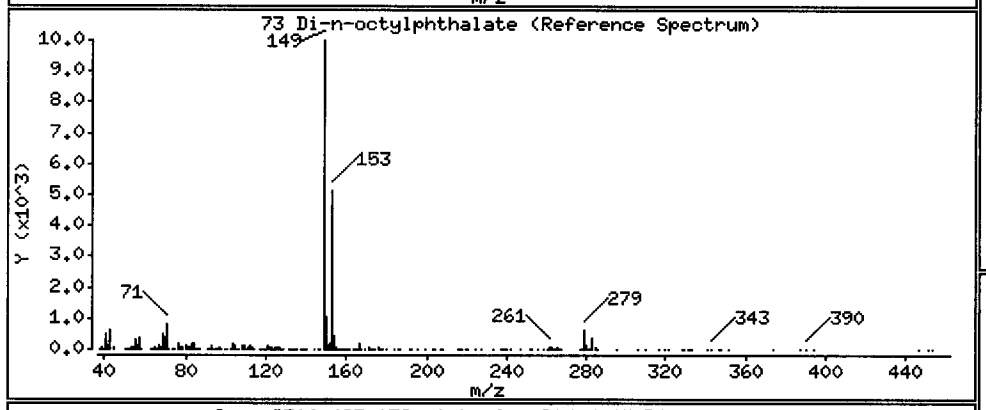
Column diameter: 0.25

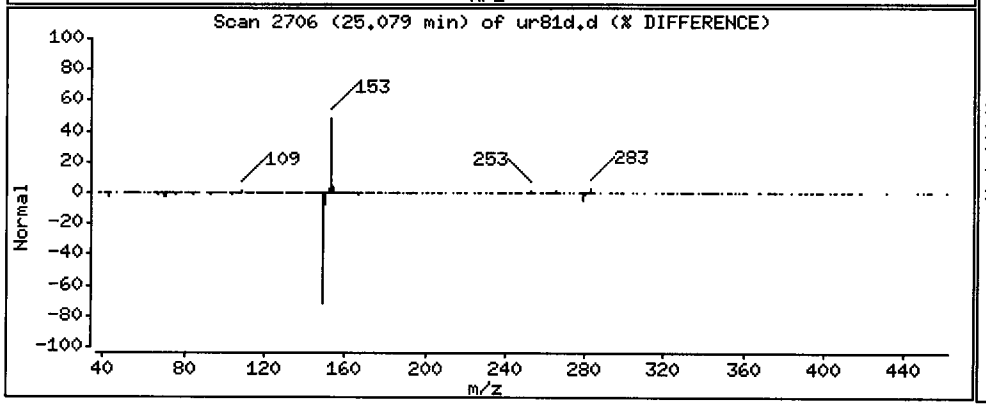
73 Di-n-octylphthalate

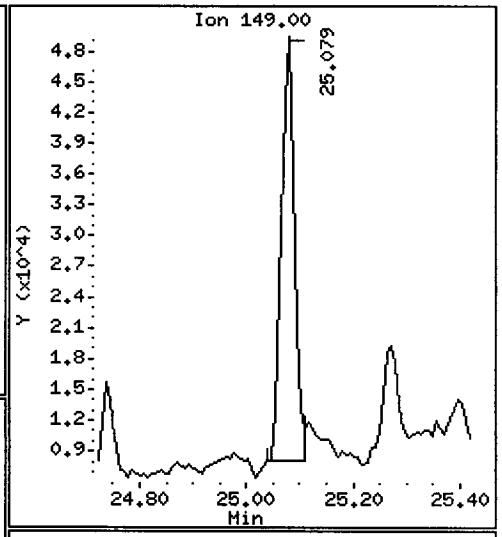
Concentration: 21.60 ug/kg

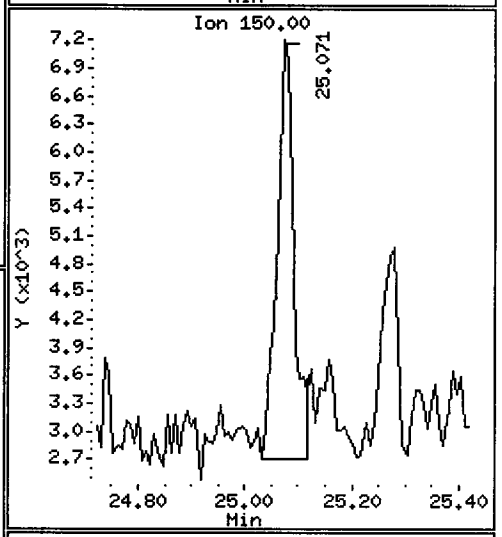


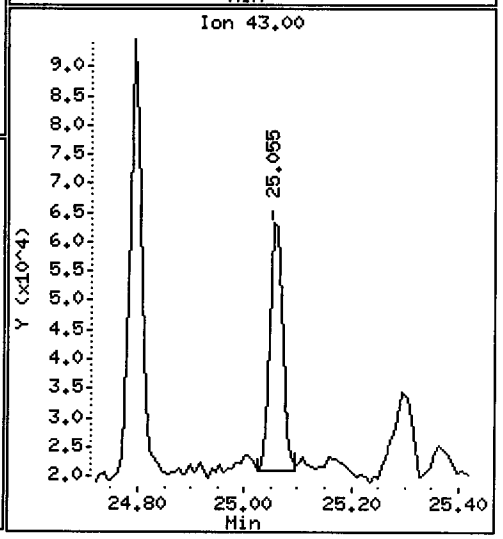












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

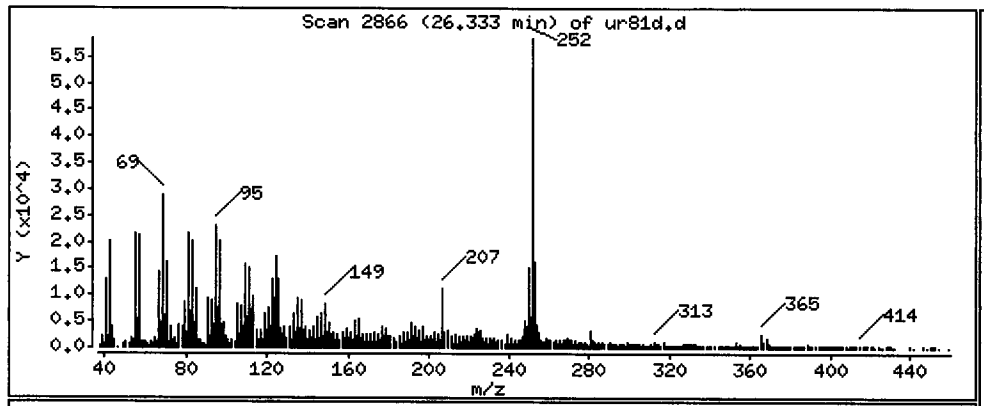
Operator: VTS/YZ

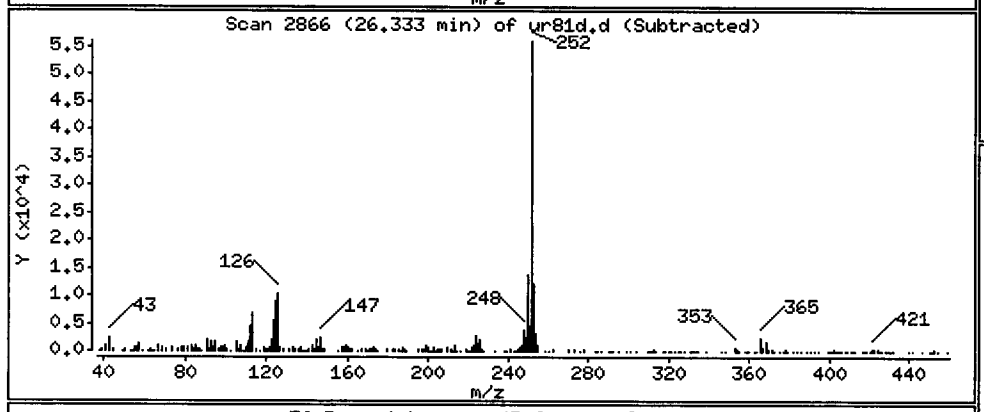
Column phase: ZB-5msi

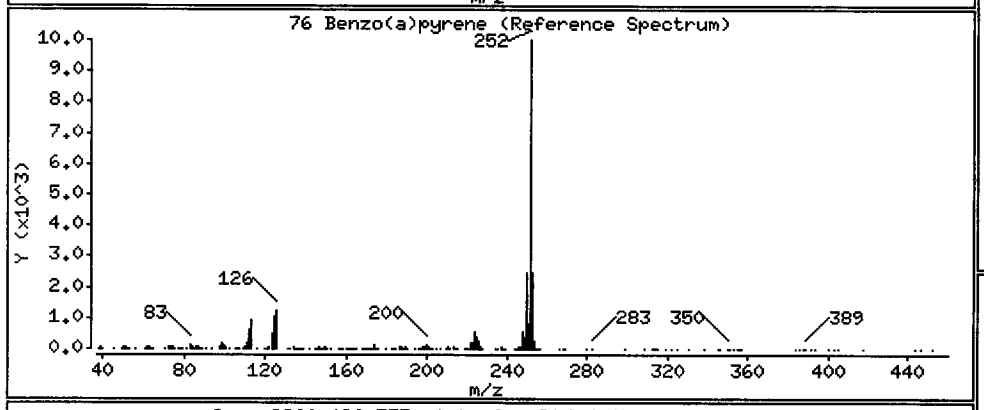
Column diameter: 0.25

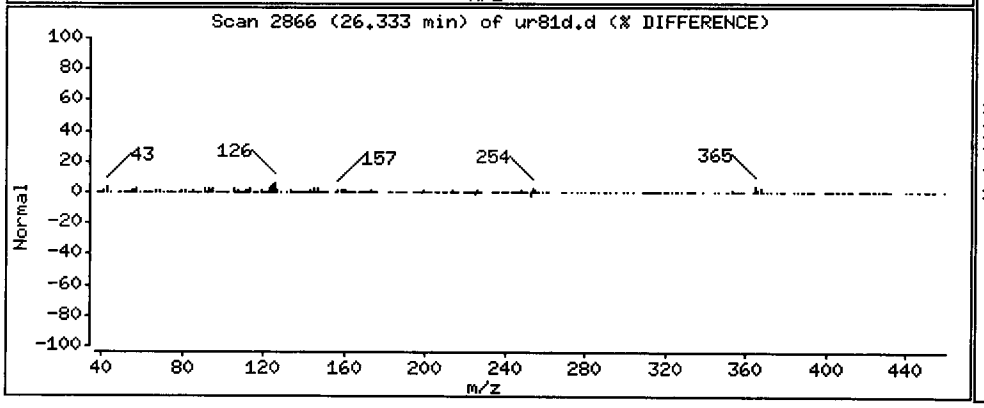
76 Benzo(a)pyrene

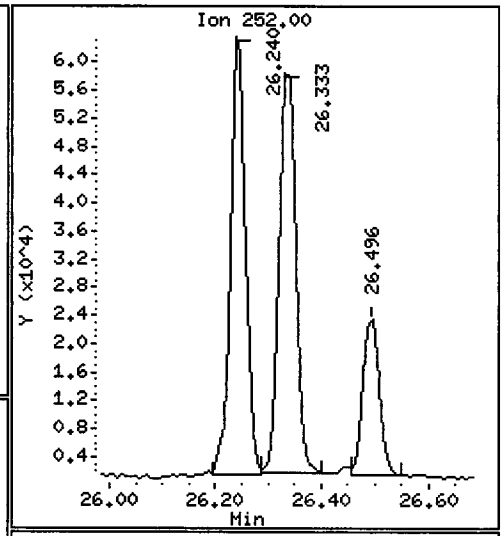
Concentration: 60.14 ug/kg

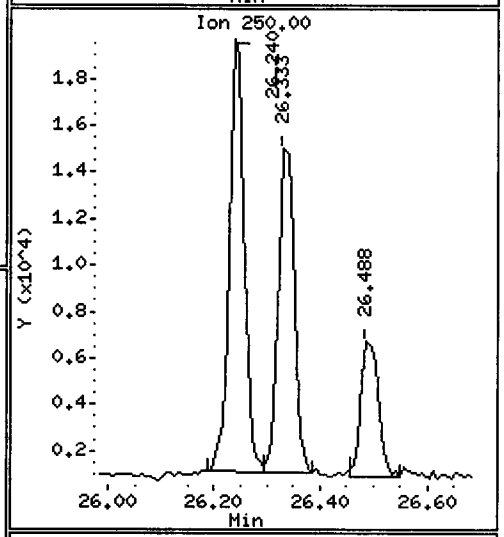


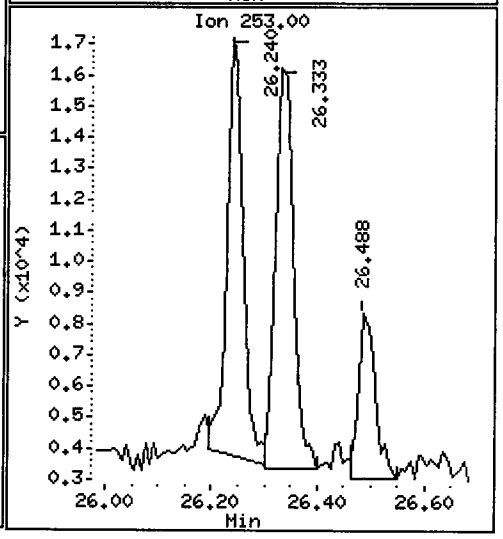












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

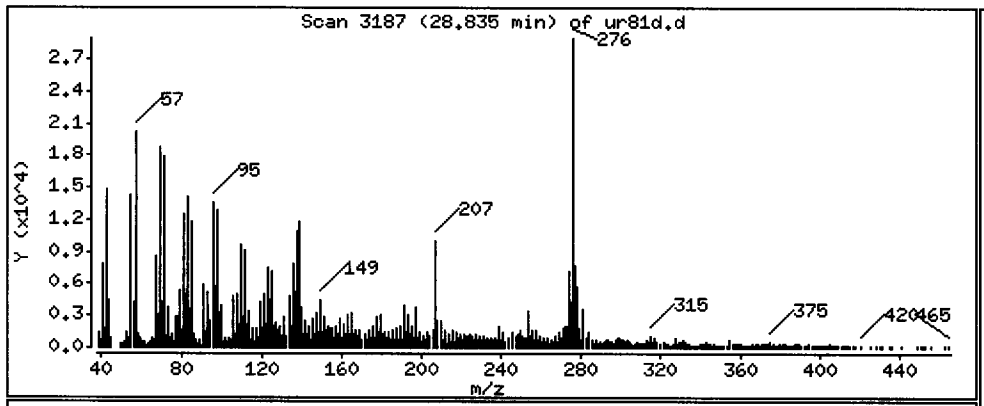
Operator: VTS/YZ

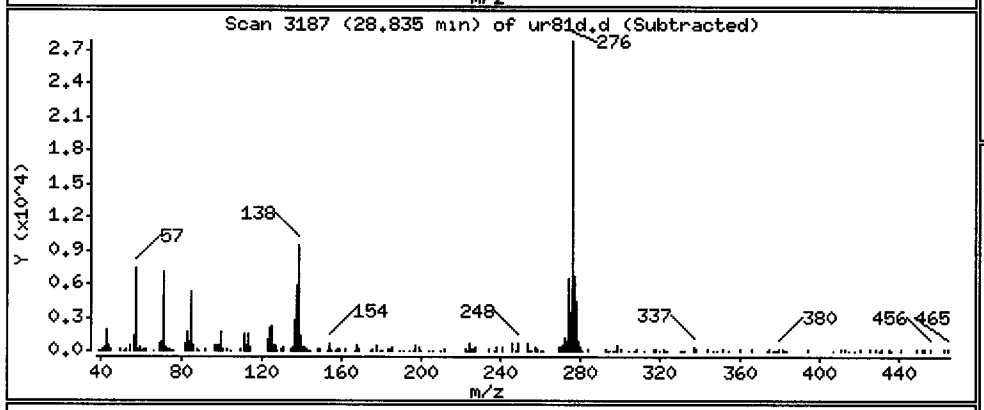
Column phase: ZB-5msi

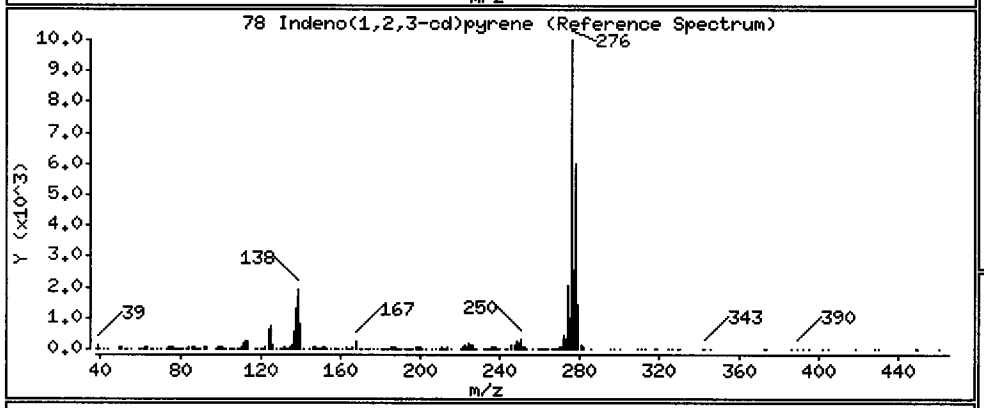
Column diameter: 0.25

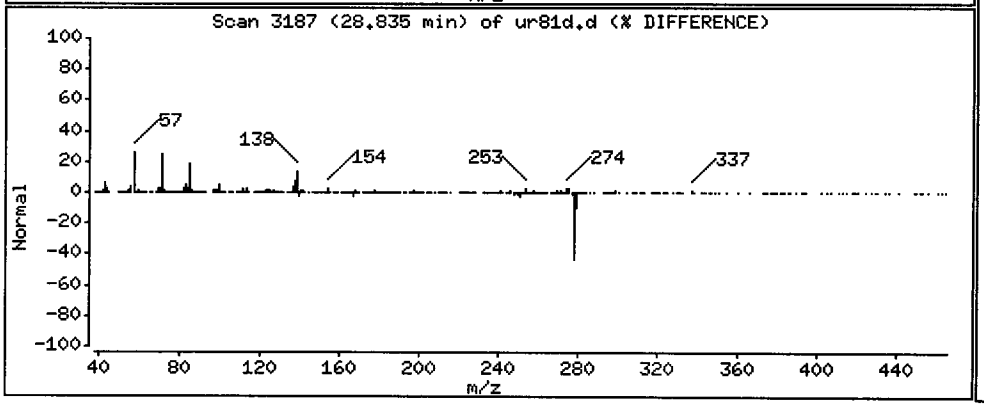
78 Indeno(1,2,3-cd)pyrene

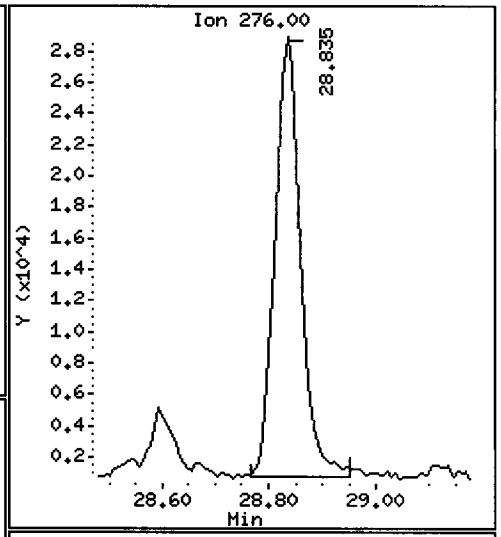
Concentration: 40.77 ug/kg

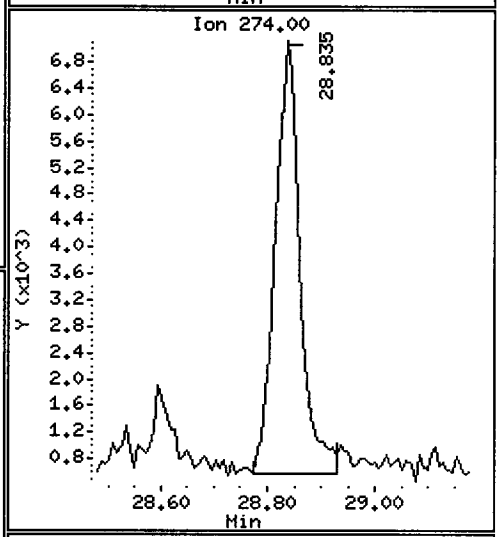


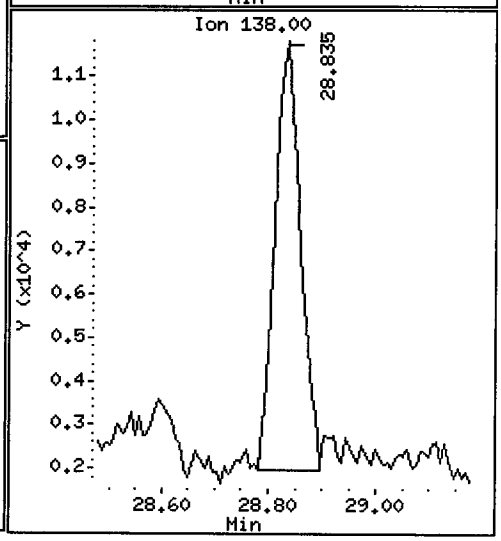












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

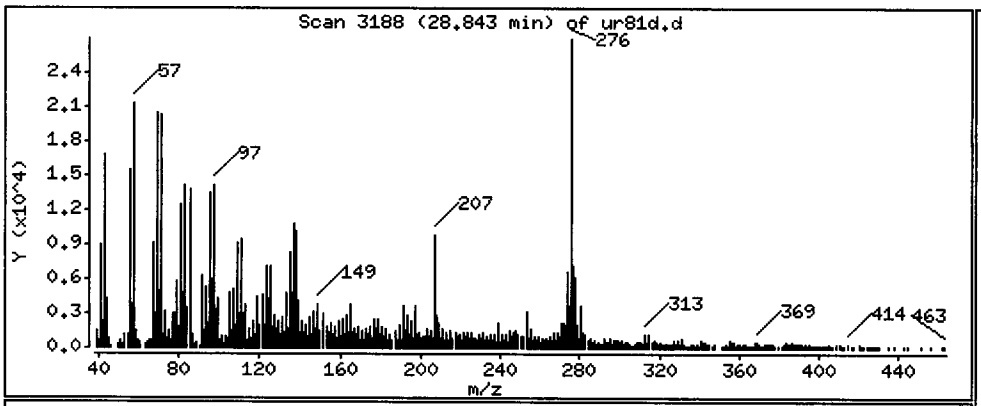
Operator: VTS/YZ

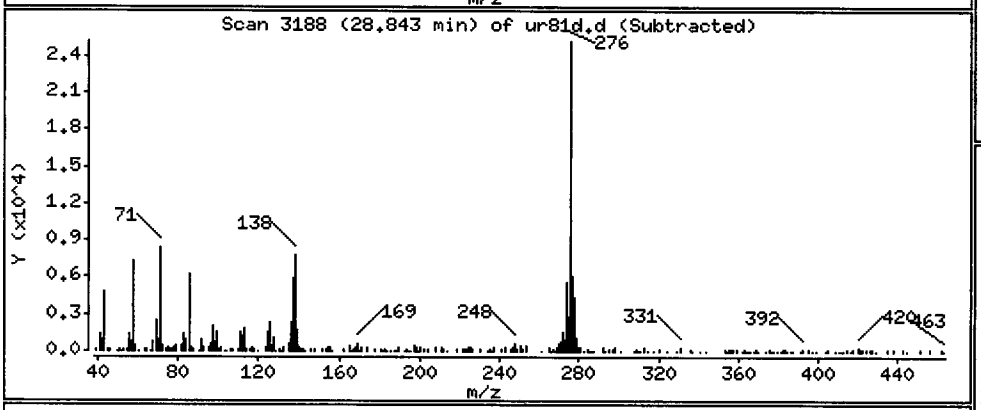
Column phase: ZB-5msi

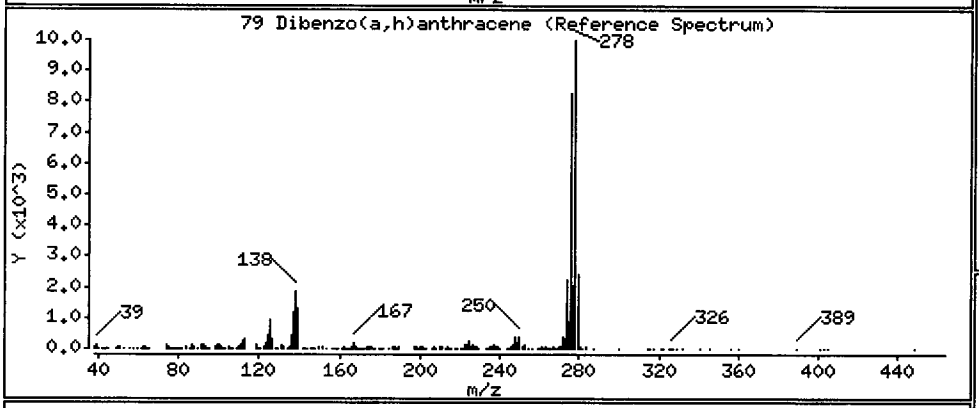
Column diameter: 0.25

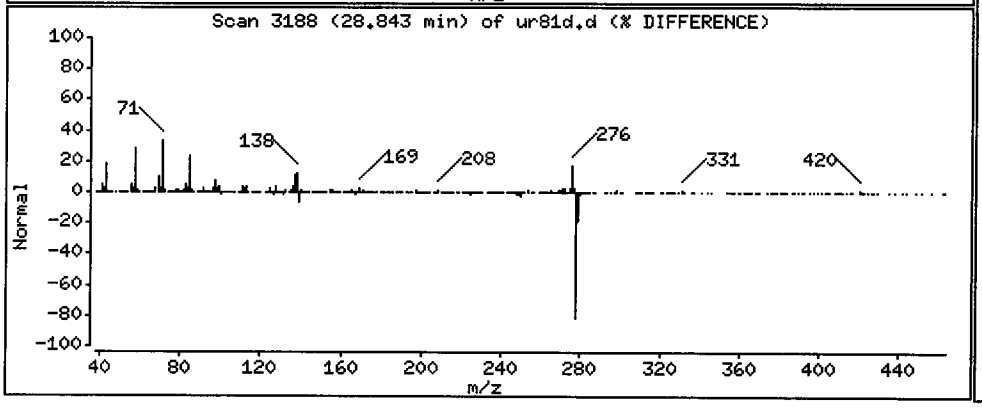
79 Dibenzo(a,h)anthracene

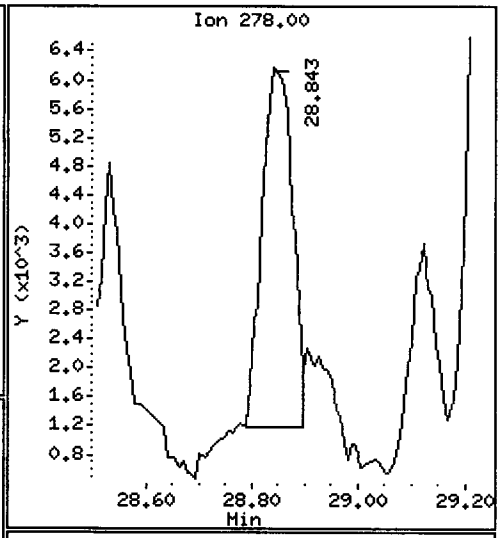
Concentration: 11.28 ug/kg

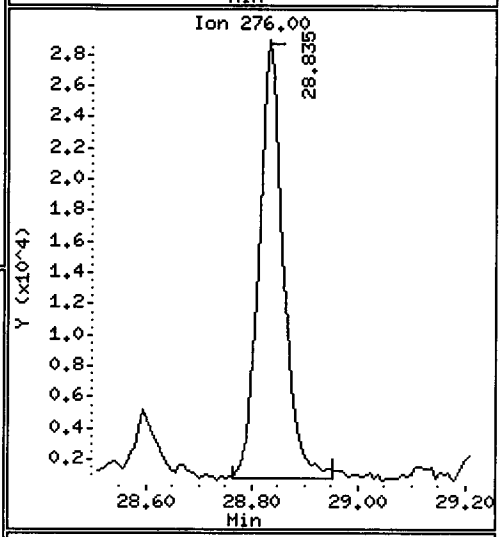


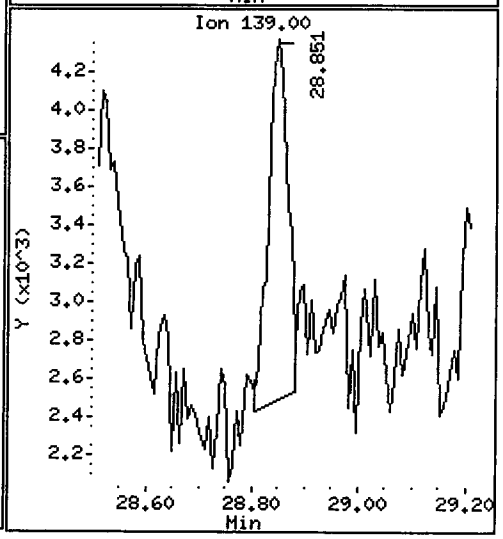












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

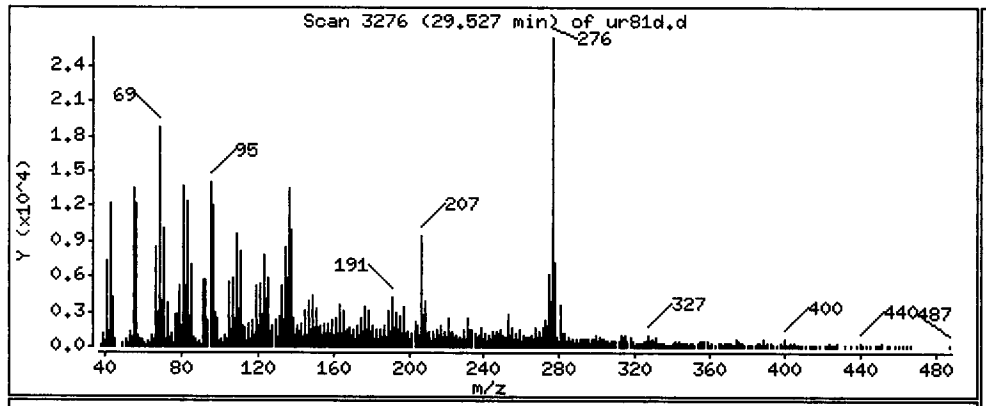
Client ID: IJ12-02 Instrument: nt10.i

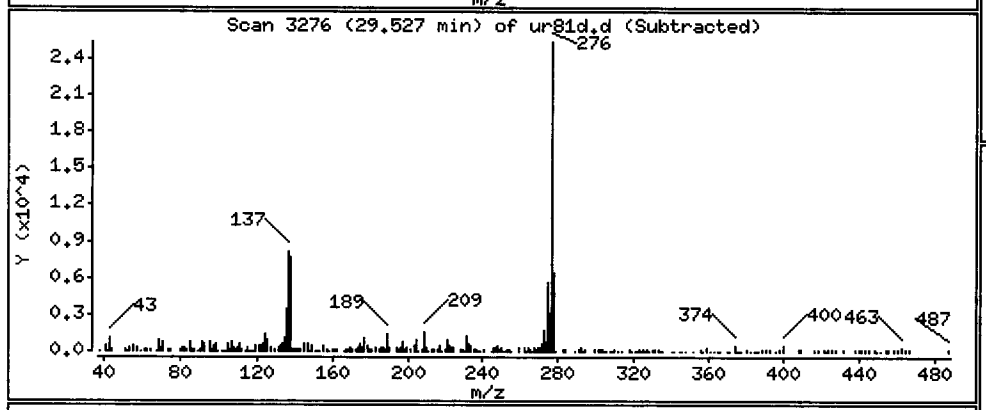
Sample Info: UR81D

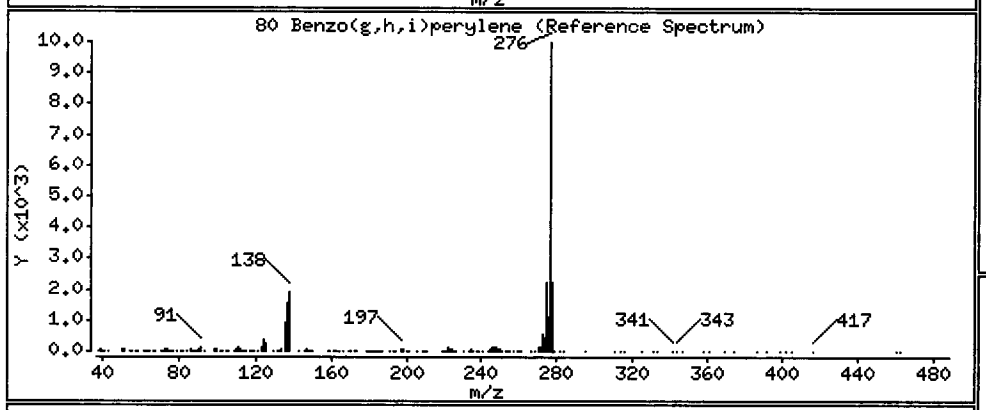
Volume Injected (uL): 1.0 Operator: VTS/YZ

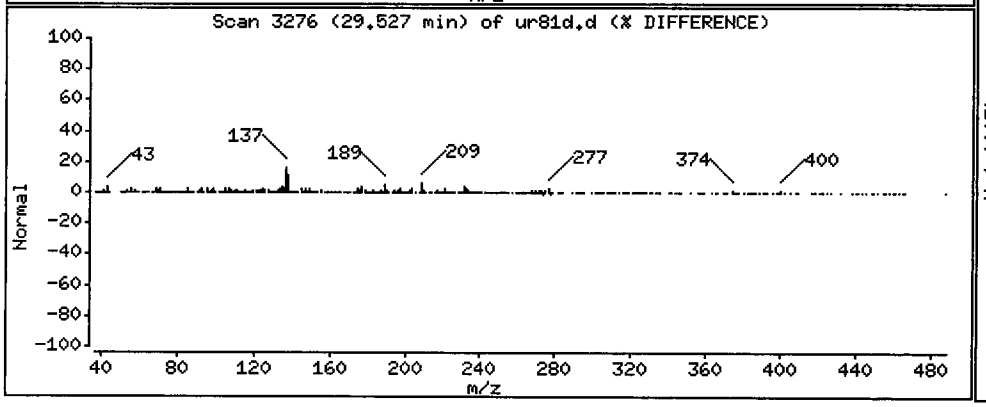
Column phase: ZB-5ms1 Column diameter: 0.25

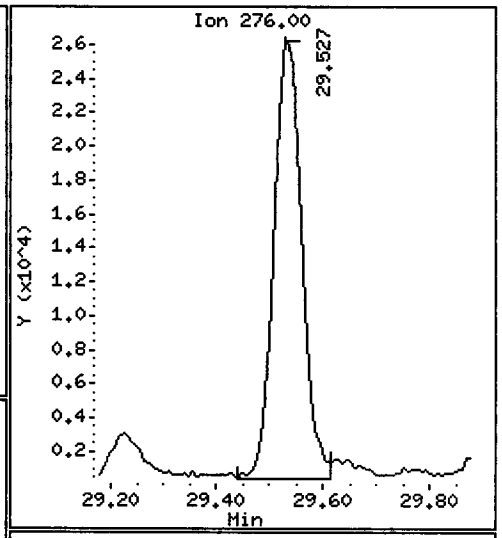
80 Benzo(g,h,i)perylene Concentration: 47.32 ug/kg

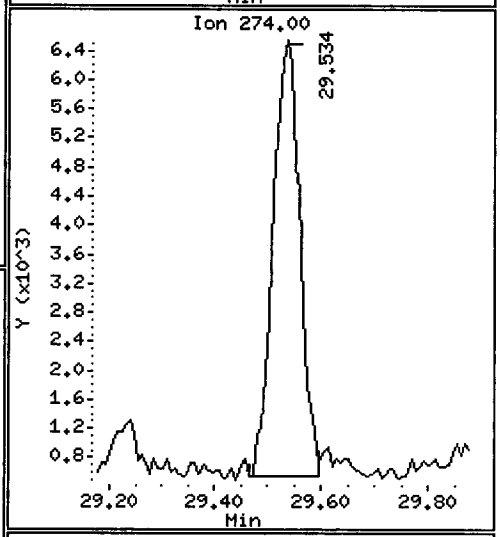


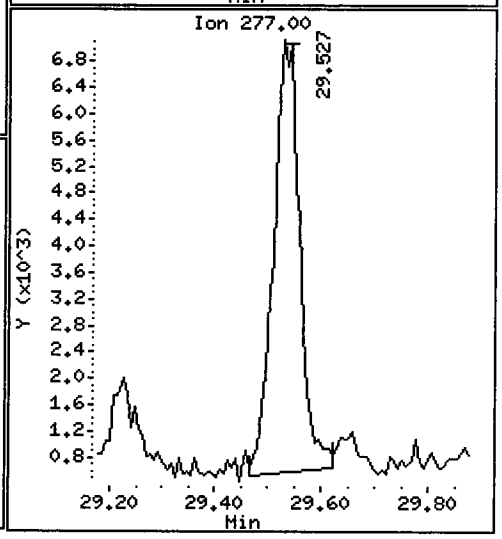












Data File: /chem1/nt10.i/20120508.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

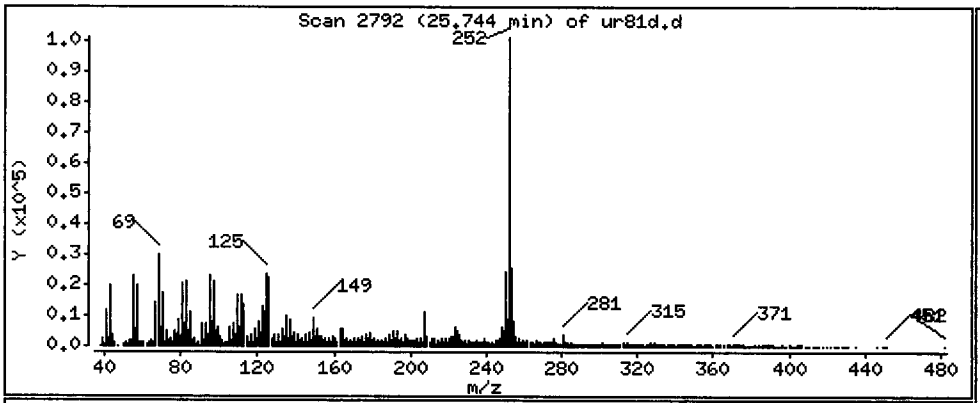
Operator: VTS/YZ

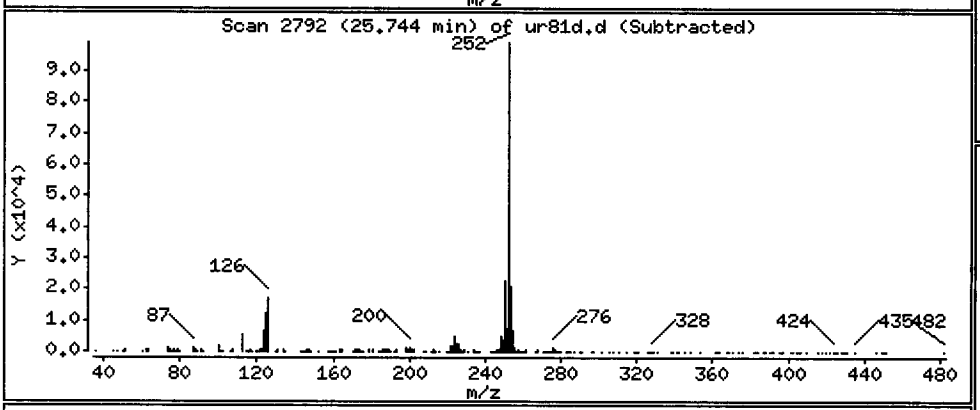
Column phase: ZB-5msi

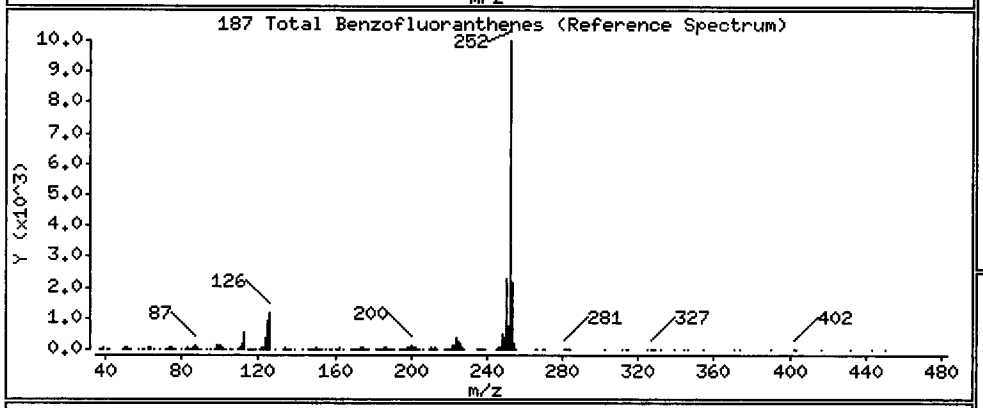
Column diameter: 0.25

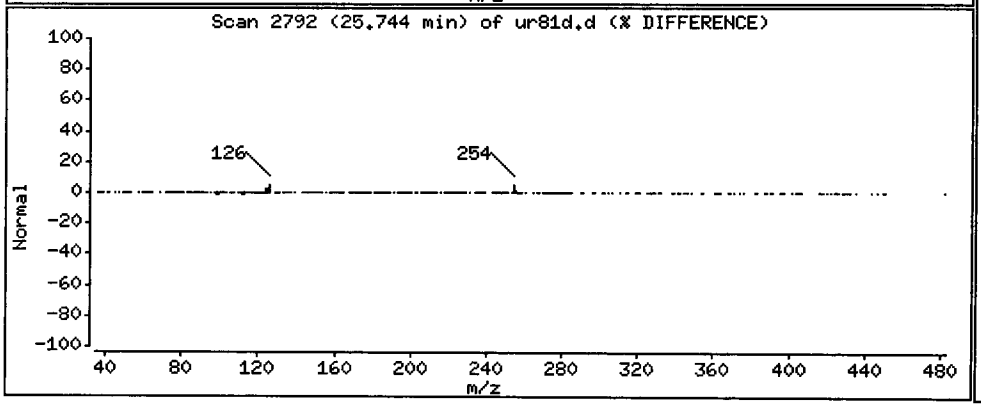
187 Total Benzofluoranthenes

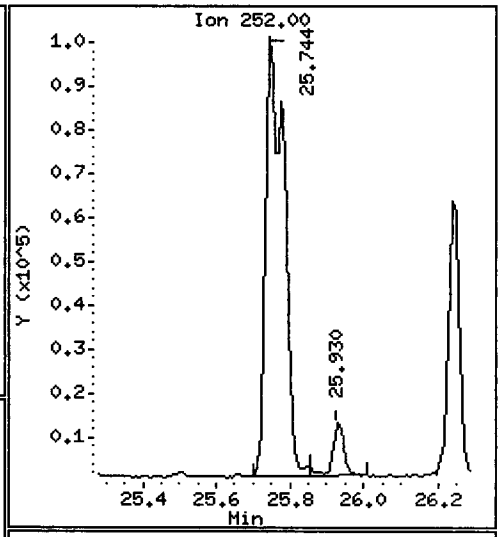
Concentration: 157.2 ug/kg

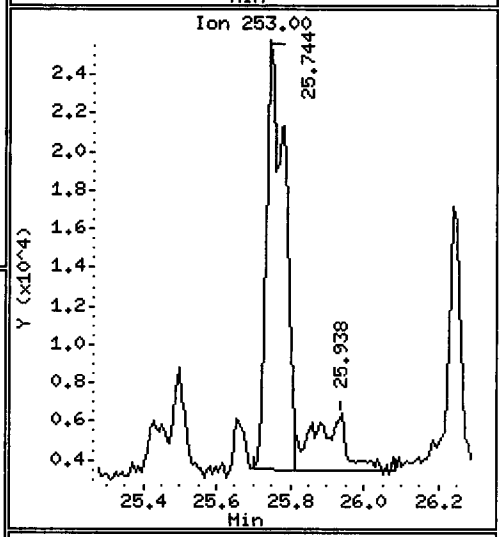


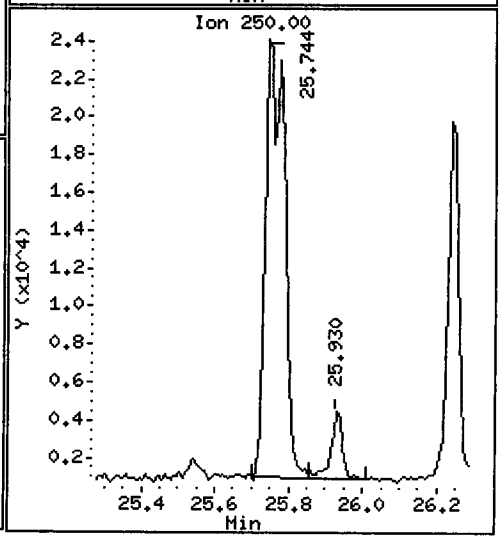












CO-ELUTION SUMMARY FOR FILE - ur81d.d

Lab ID: UR81D, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ 5/9/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81e.d
Lab Smp Id: UR81E
Client Smp ID: IJ12-04
Inj Date : 08-MAY-2012 20:19
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : UR81E
Misc Info : 12-7396
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	16.10000	Weight of sample extracted (g)
M	35.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.698	6.667	(0.740)	356457	4.12870	398.8
$ 2 Phenol-d5	99	8.406	8.398	(0.929)	470611	4.38371	423.5
3 Phenol	94	8.429	8.421	(0.932)	169811	1.44312	139.4
$ 5 2-Chlorophenol-d4	132	8.661	8.653	(0.957)	405905	4.36877	422.0
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	252385	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.043)	159551	2.53428	244.8
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.366	9.350	(1.035)	7396	0.13488	13.03
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.925	9.909	(1.097)	18585	0.19247	18.59
$ 18 Nitrobenzene-d5	82	10.236	10.228	(0.873)	250518	2.89171	279.3
22 2,4-Dimethylphenol	107	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
24 Benzoic acid	105	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.727	11.719	(1.000)	1013257	4.00000	
28 Naphthalene	128	11.766	11.766	(1.003)	73904	0.29206	28.21
30 Hexachlorobutadiene	225	Compound Not Detected.					
32 2-Methylnaphthalene	142	13.282	13.282	(1.133)	50377	0.29029	28.04
$ 36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	572477	3.06966	296.5
39 Dimethylphthalate	163	15.155	15.147	(0.969)	18810	0.11274 J	10.89
40 Acenaphthylene	152	15.294	15.286	(0.978)	194399	0.80229	77.50
* 42 Acenaphthene-d10	164	15.642	15.627	(1.000)	546718	4.00000	
44 Acenaphthene	153	15.712	15.696	(1.004)	101010	0.69843	67.47
46 Dibenzofuran	168	16.068	16.060	(1.027)	175450	0.81512	78.74
50 Diethylphthalate	149	Compound Not Detected.					
49 Fluorene	166	16.841	16.833	(1.077)	228615	1.39221	134.5
54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55 2,4,6-Tribromophenol	330	17.419	17.411	(1.114)	127823	5.09619	492.3
57 Hexachlorobenzene	284	Compound Not Detected.					
58 Pentachlorophenol	266	18.663	18.640	(0.986)	10857	0.29943 J	28.92
* 59 Phenanthrene-d10	188	18.918	18.903	(1.000)	858110	4.00000	
60 Phenanthrene	178	18.972	18.957	(1.003)	4266946	20.1077 E	1942
61 Anthracene	178	19.065	19.050	(1.008)	362768	1.61954	156.4
63 Di-n-butylphthalate	149	20.288	20.272	(1.072)	104213	0.37823	36.54
64 Fluoranthene	202	21.417	21.363	(1.132)	16095099	66.6361 E	6437
65 Pyrene	202	21.820	21.781	(0.910)	10949107	39.9332 E	3857
$ 66 Terphenyl-d14	244	22.114	22.098	(0.922)	557217	3.24091	313.1
67 Butylbenzylphthalate	149	Compound Not Detected.					
68 Benzo(a)anthracene	228	23.956	23.941	(0.999)	1409307	5.72768	553.3
* 69 Chrysene-d12	240	23.987	23.964	(1.000)	907309	4.00000	
71 Chrysene	228	24.034	24.010	(1.002)	4556987	20.7472 E	2004
72 bis(2-Ethylhexyl)phthalate	149	24.096	24.080	(0.961)	610169	3.29518	318.3
* 134 Di-n-octylphthalate-d4	153	25.071	25.056	(1.000)	1424098	4.00000	
73 Di-n-octylphthalate	149	Compound Not Detected.					
76 Benzo(a)pyrene	252	26.356	26.333	(0.996)	888171	4.15311	401.2
* 77 Perylene-d12	264	26.465	26.441	(1.000)	880330	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.867	28.828	(1.091)	553215	2.27342	219.6
79 Dibenzo(a,h)anthracene	278	28.882	28.859	(1.091)	131522	0.70327	67.93
80 Benzo(g,h,i)perylene	276	29.573	29.527	(1.117)	456596	2.17024	209.6
105 1-methylnaphthalene	142	13.522	13.514	(1.153)	34884	0.19714 J	19.04
187 Total Benzofluoranthenes	252	25.768	25.783	(0.974)	4894627	20.4359	1974

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81e.d
Lab Smp Id: UR81E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-04
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	252385	-7.17
27 Naphthalene-d8	1080694	540347	2161388	1013257	-6.24
42 Acenaphthene-d10	623821	311910	1247642	546718	-12.36
59 Phenanthrene-d10	999143	499572	1998286	858110	-14.12
69 Chrysene-d12	1001009	500504	2002018	907309	-9.36
134 Di-n-octylphthala	1489422	744711	2978844	1424098	-4.39
77 Perylene-d12	988348	494174	1976696	880330	-10.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.92	0.08
69 Chrysene-d12	23.96	23.46	24.46	23.99	0.10
134 Di-n-octylphthala	25.06	24.56	25.56	25.07	0.06
77 Perylene-d12	26.44	25.94	26.94	26.46	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81E
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-04
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	724.5	398.8	55.05	30-160
$ 2 Phenol-d5	724.5	423.5	58.45	30-160
$ 5 2-Chlorophenol-d4	724.5	422.0	58.25	30-160
$ 10 1,2-Dichlorobenzen	483.0	244.8	50.69	30-160
$ 18 Nitrobenzene-d5	483.0	279.3	57.83	30-160
$ 36 2-Fluorobiphenyl	483.0	296.5	61.39	30-160
$ 55 2,4,6-Tribromophen	724.5	492.3	67.95	30-160
$ 66 Terphenyl-d14	483.0	313.1	64.82	30-160

Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Sample Info: UR81E

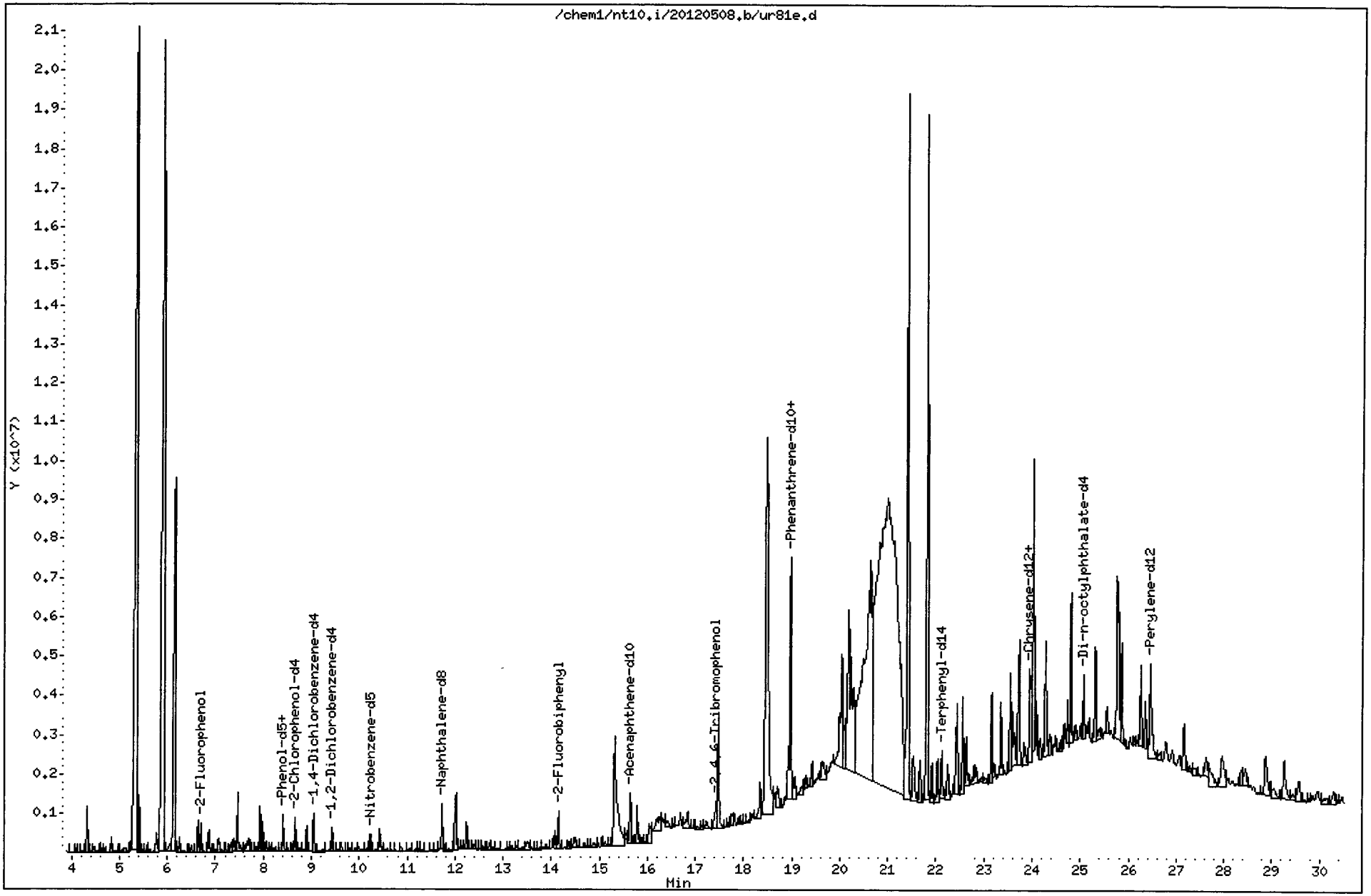
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

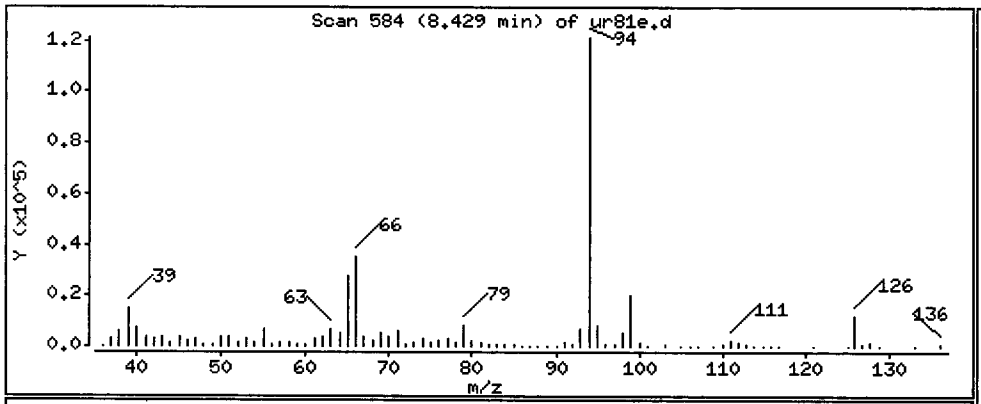
Operator: VTS/YZ

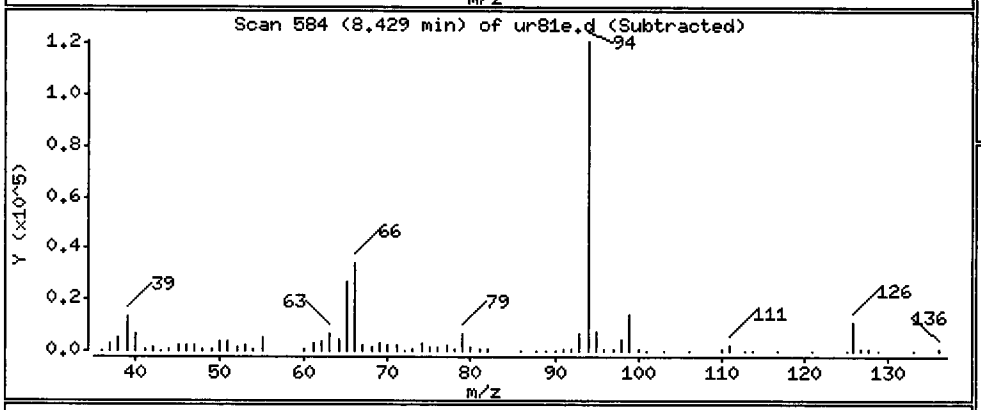
Column phase: ZB-5msi

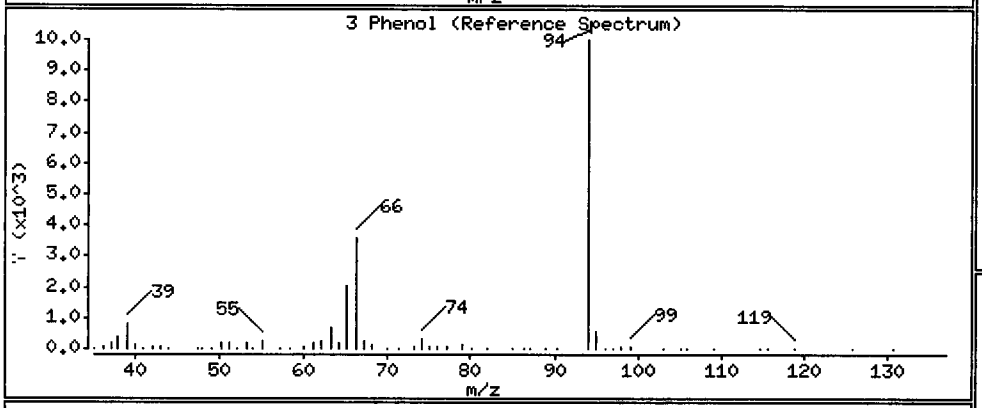
Column diameter: 0.25

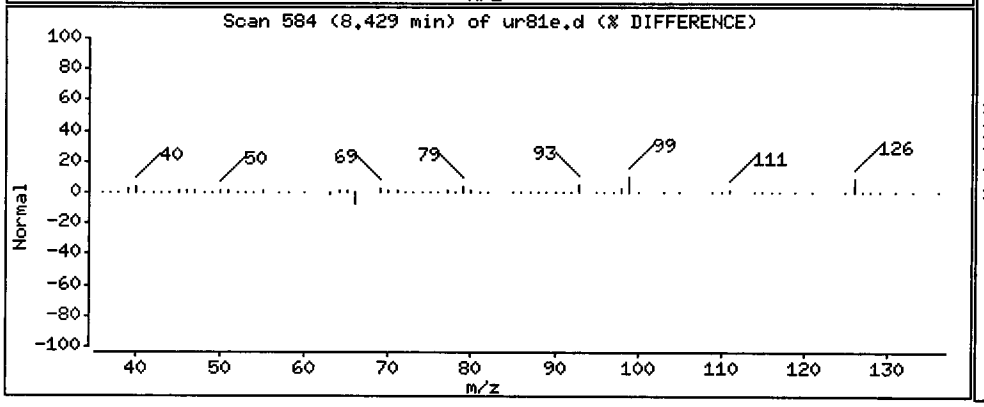
3 Phenol

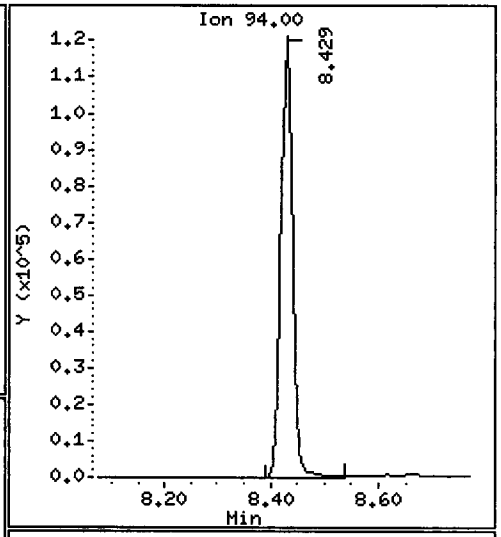
Concentration: 139.4 ug/kg

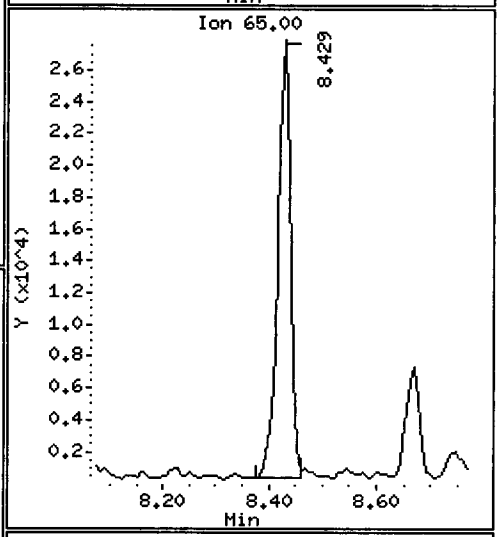


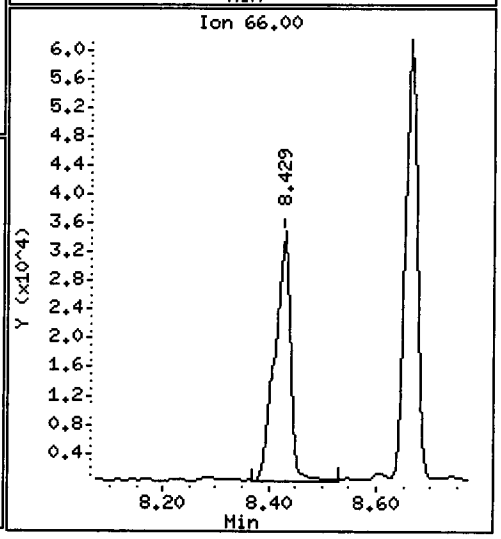












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

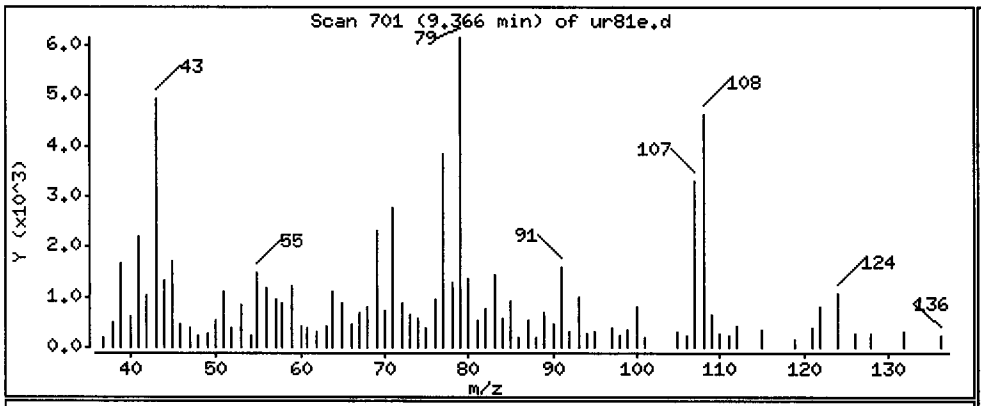
Client ID: IJ12-04 Instrument: nt10.i

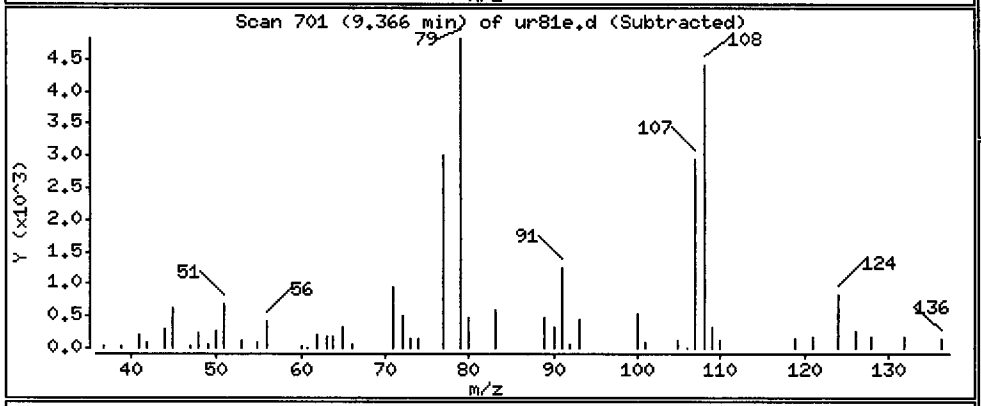
Sample Info: UR81E

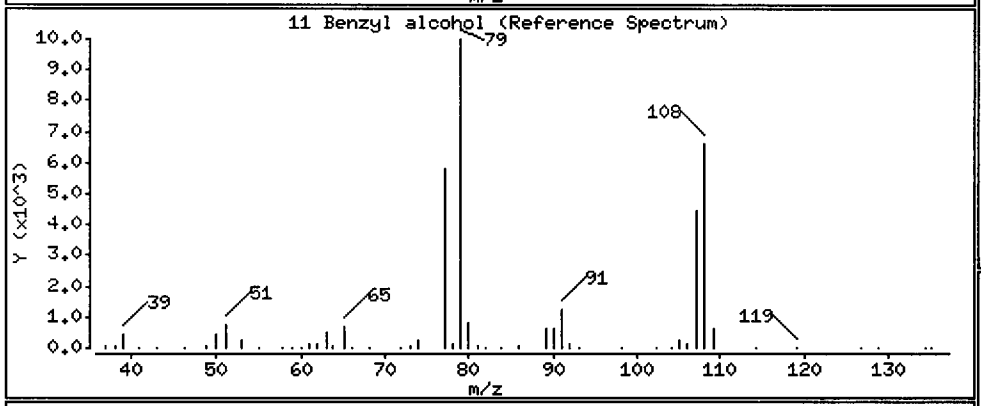
Volume Injected (uL): 1.0 Operator: VTS/YZ

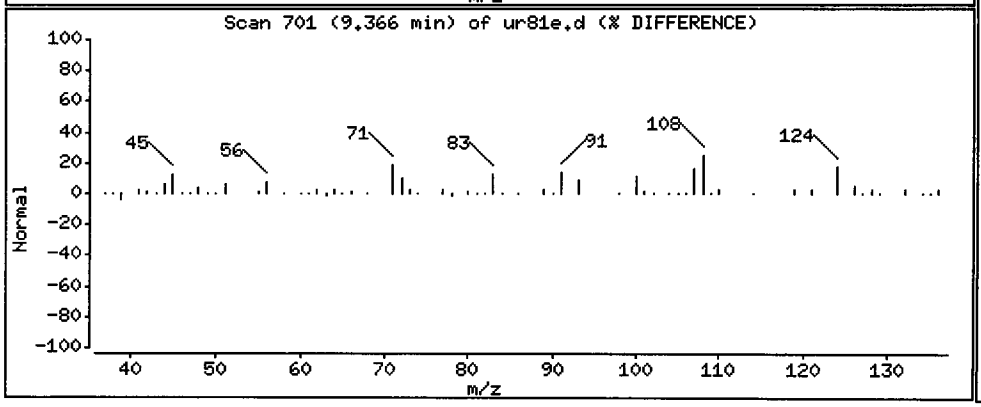
Column phase: ZB-5msi Column diameter: 0.25

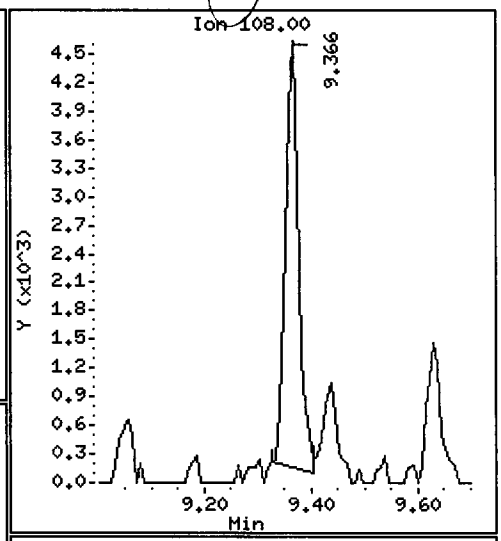
11 Benzyl alcohol Concentration: 13.03 ug/kg

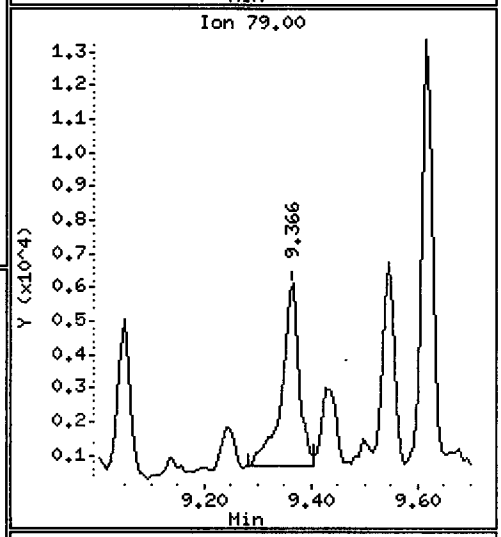


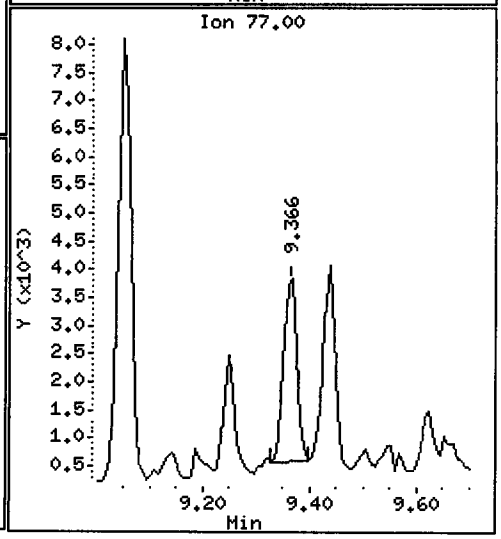












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

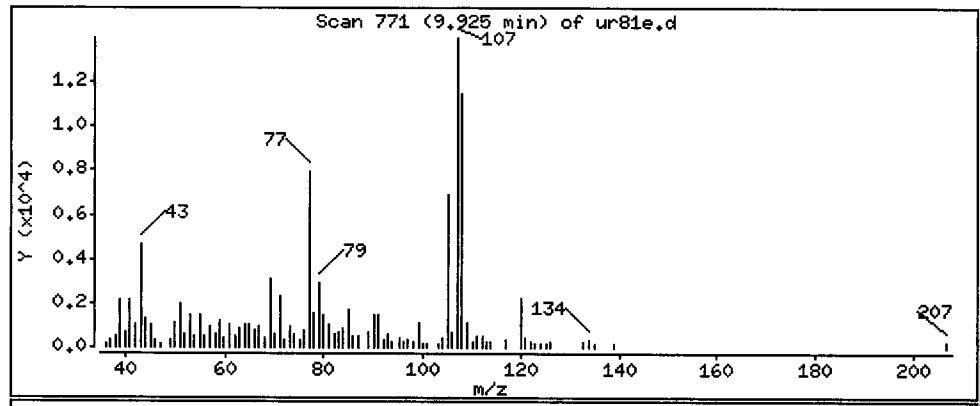
Operator: VTS/YZ

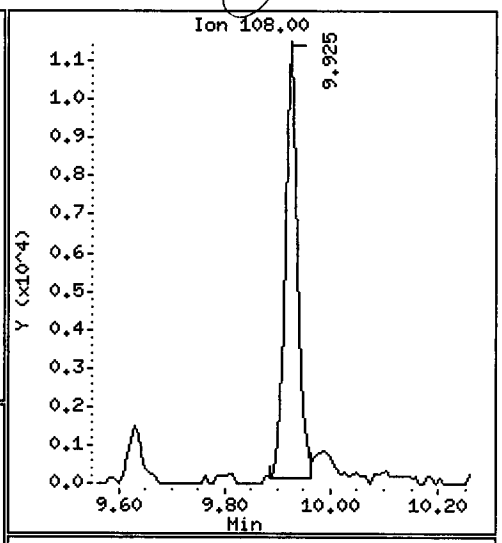
Column phase: ZB-5msi

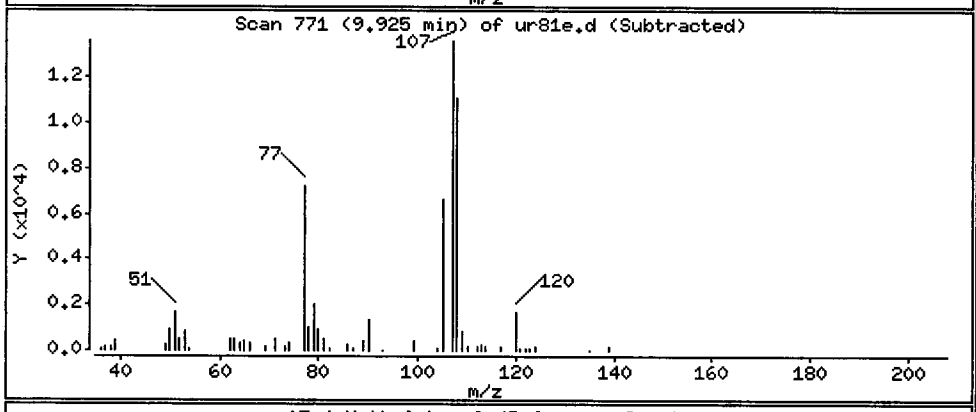
Column diameter: 0.25

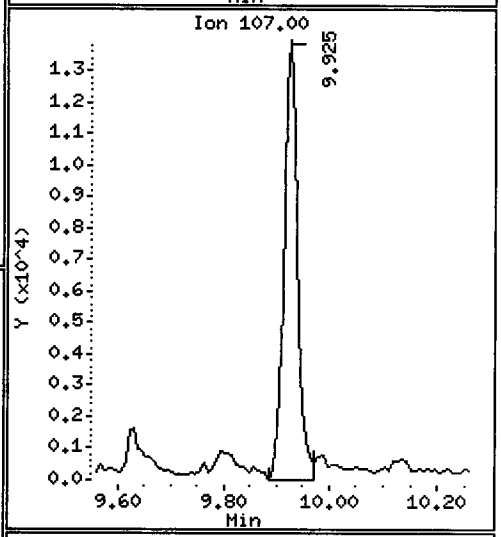
15 4-Methylphenol

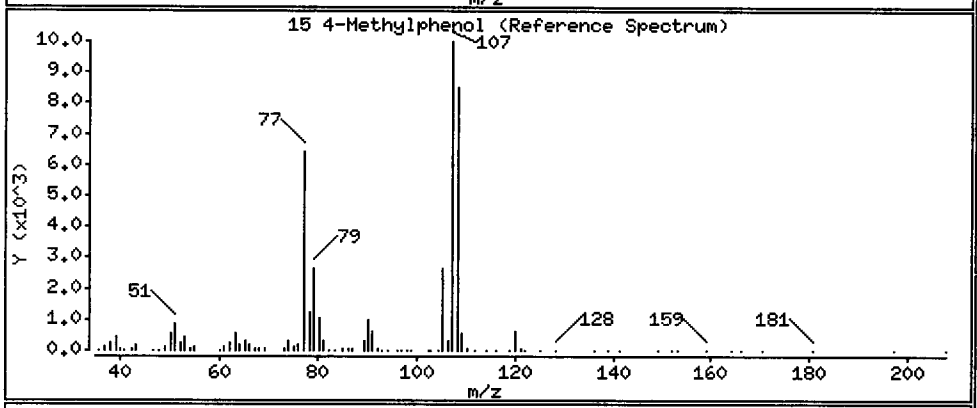
Concentration: 18.59 ug/kg

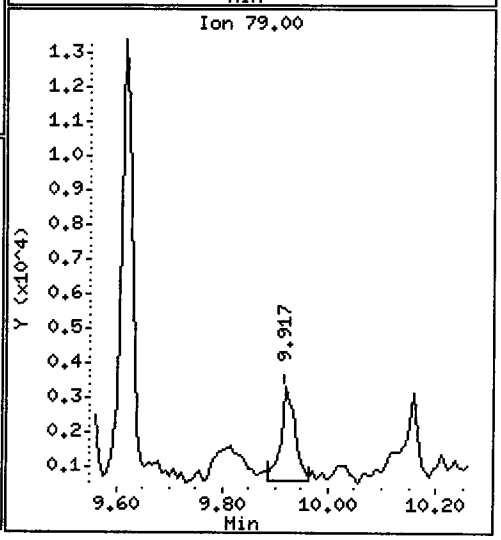


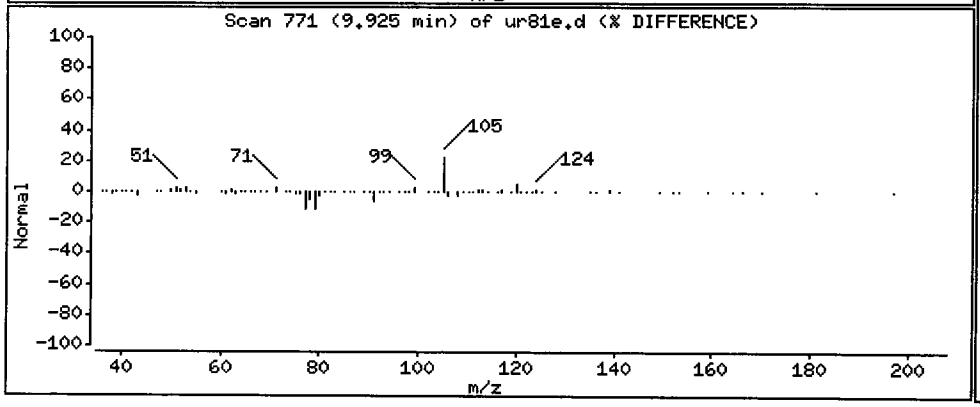












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

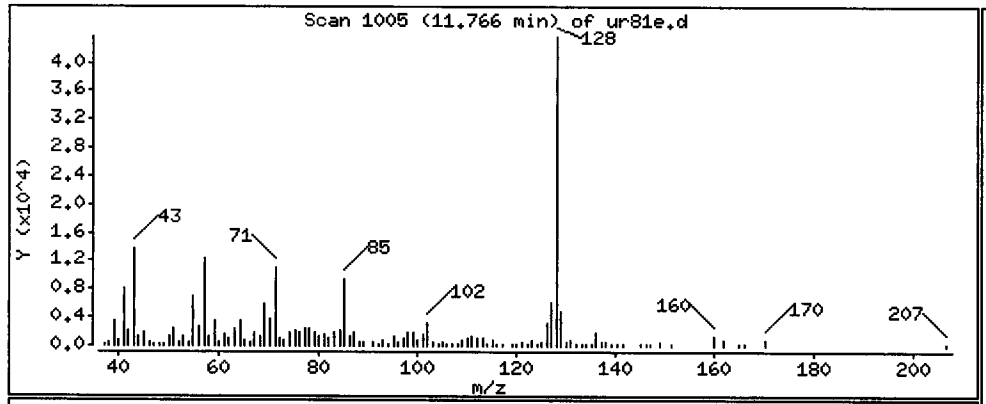
Operator: VTS/YZ

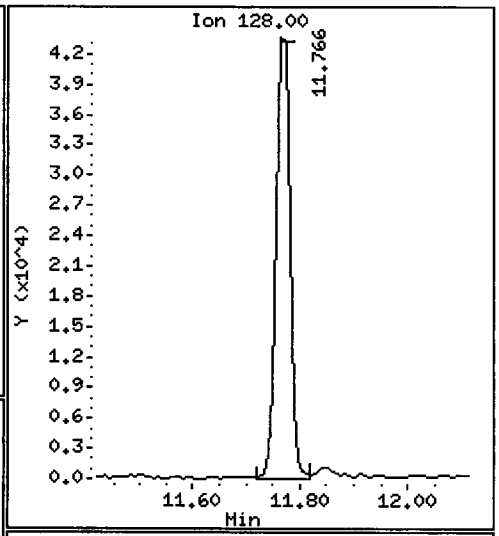
Column phase: ZB-5msi

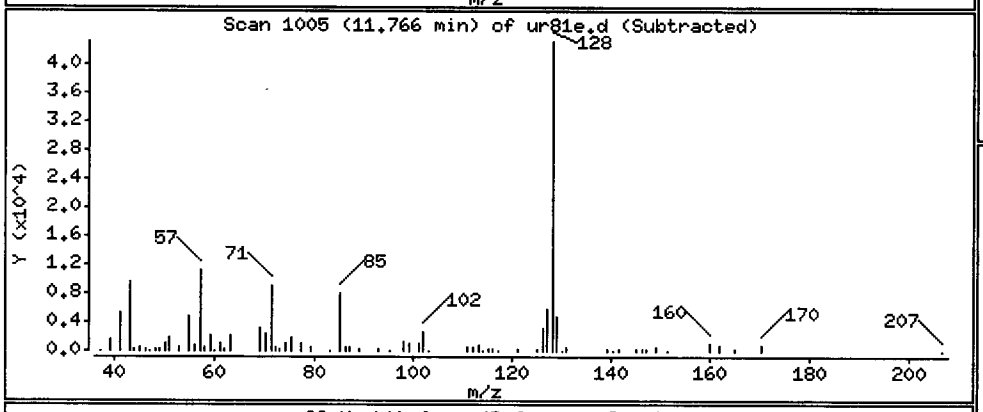
Column diameter: 0.25

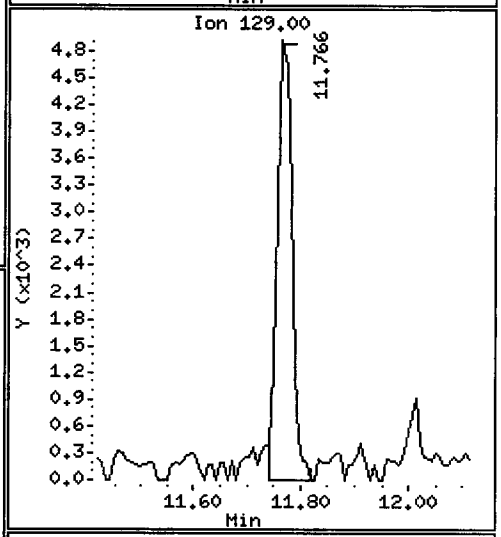
28 Naphthalene

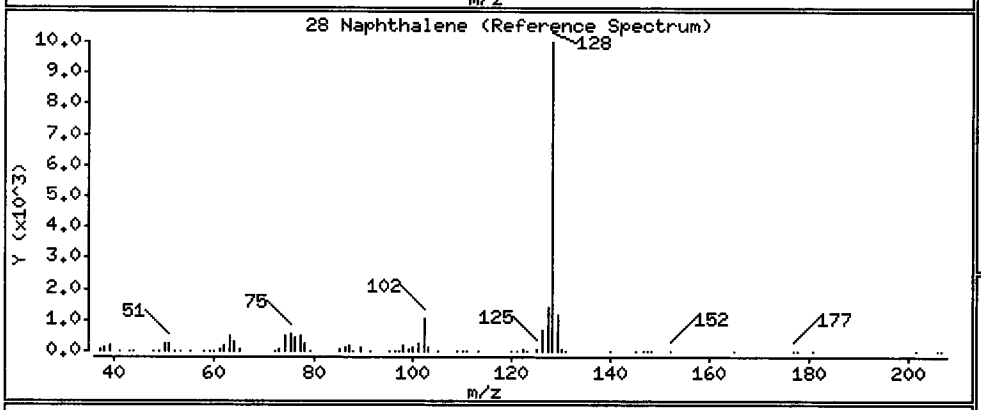
Concentration: 28.21 ug/kg

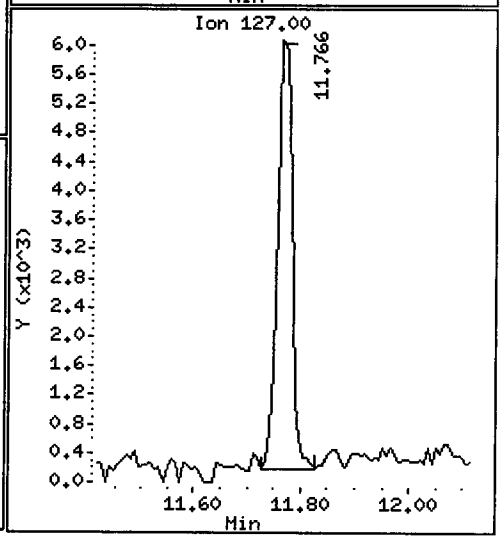


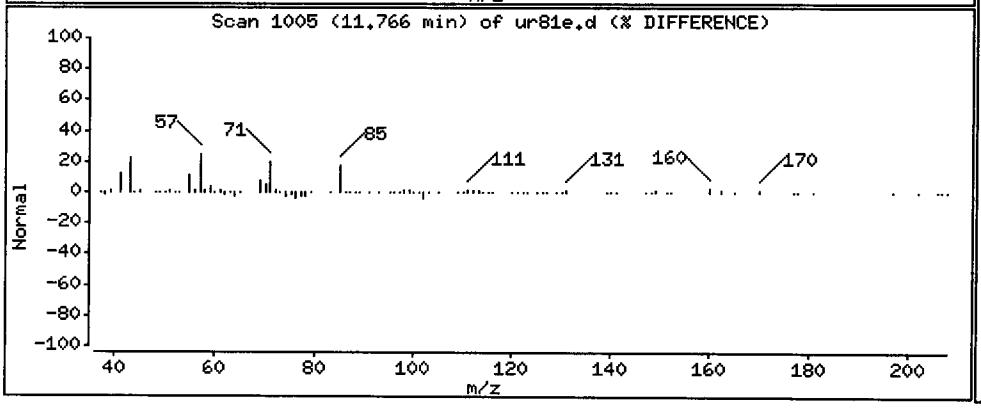












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

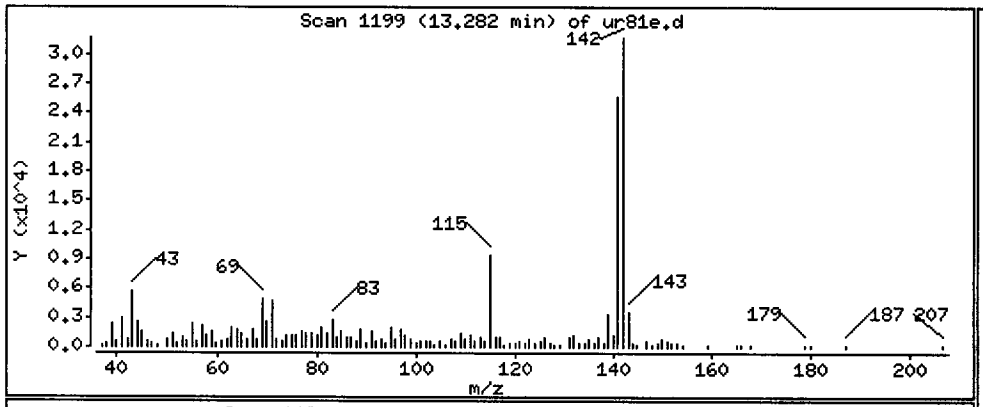
Operator: VTS/YZ

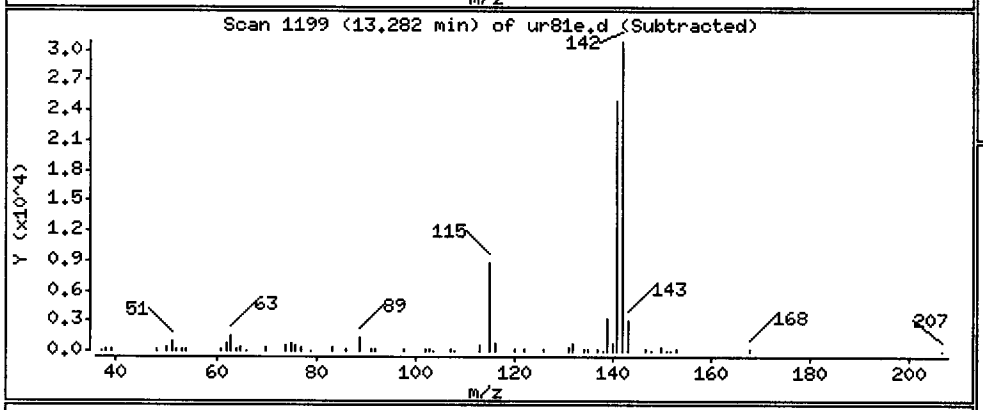
Column phase: ZB-5msi

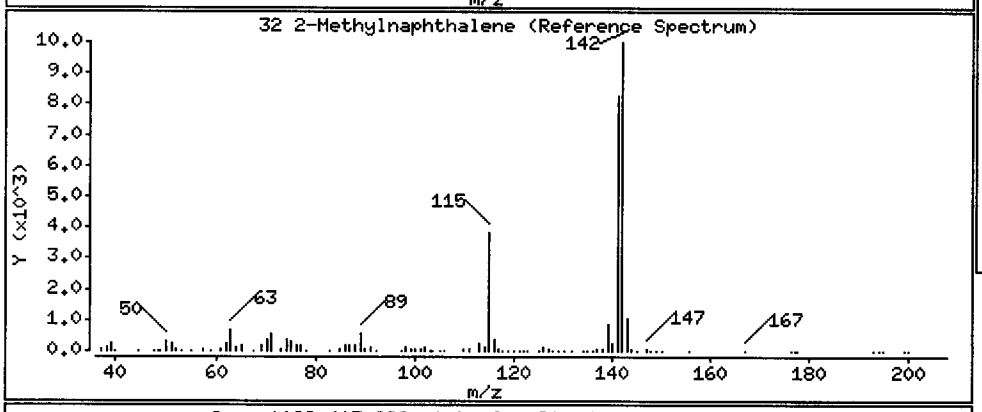
Column diameter: 0.25

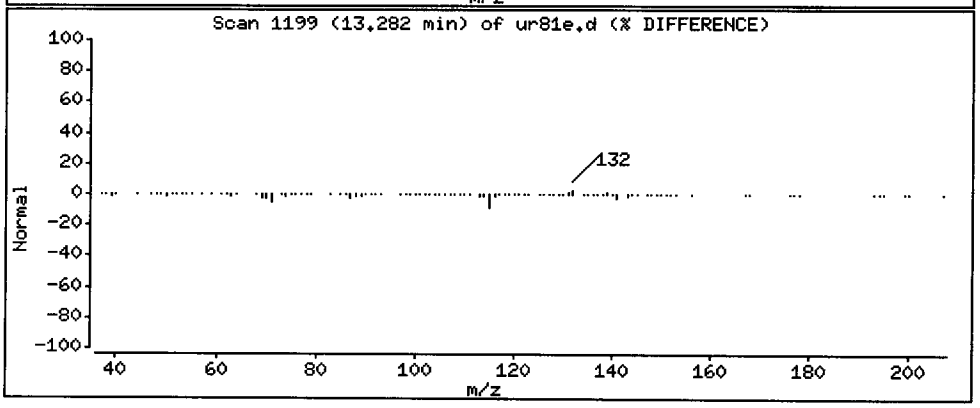
32 2-Methylnaphthalene

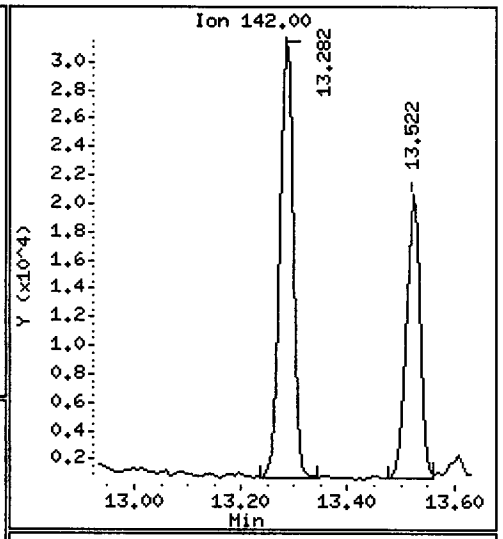
Concentration: 28.04 ug/kg

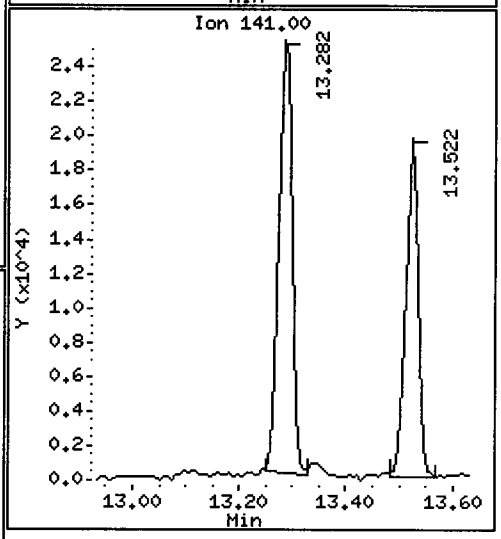












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

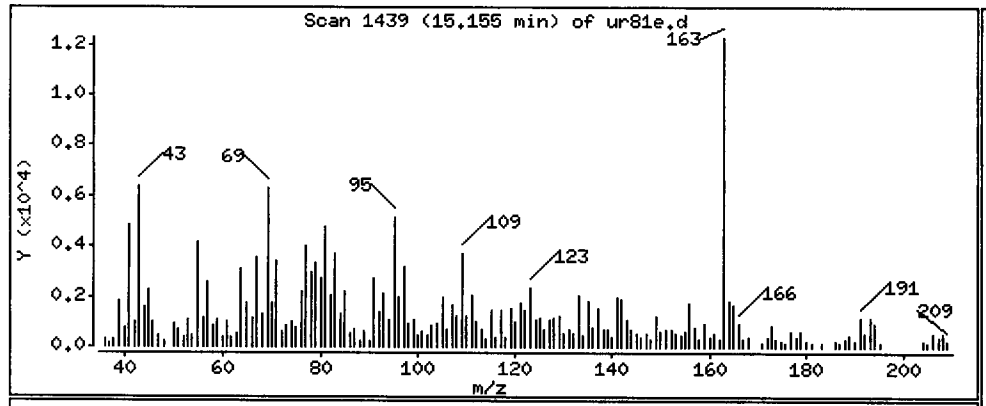
Operator: VTS/YZ

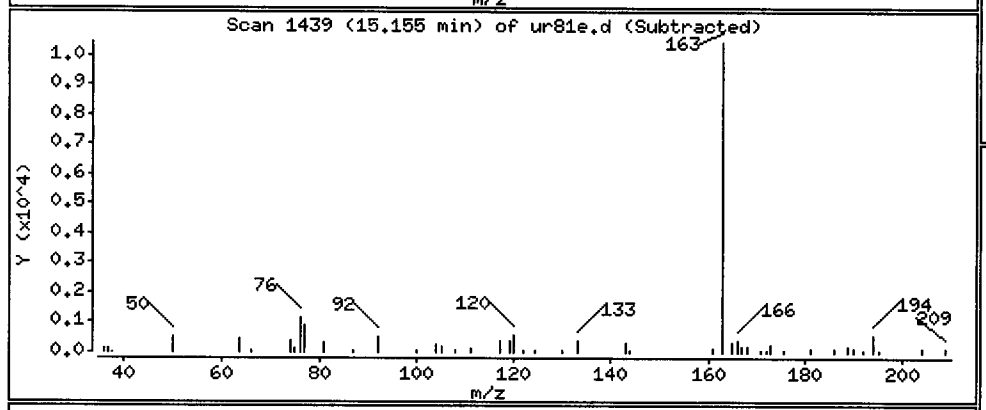
Column phase: ZB-5msi

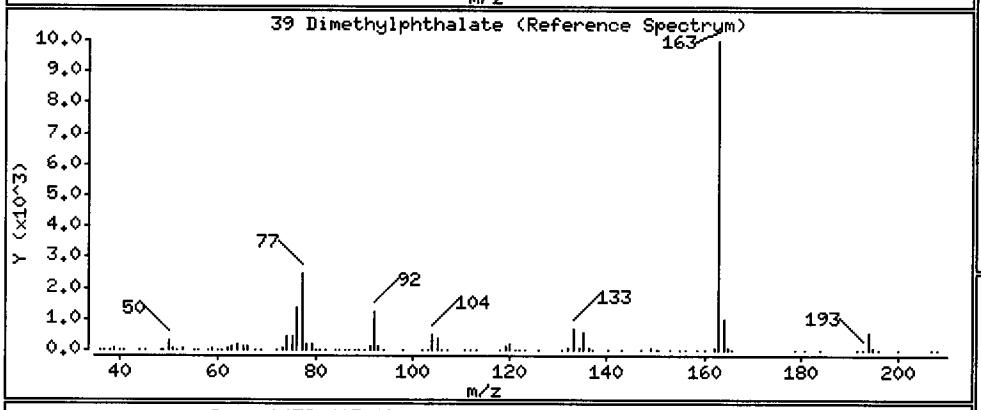
Column diameter: 0.25

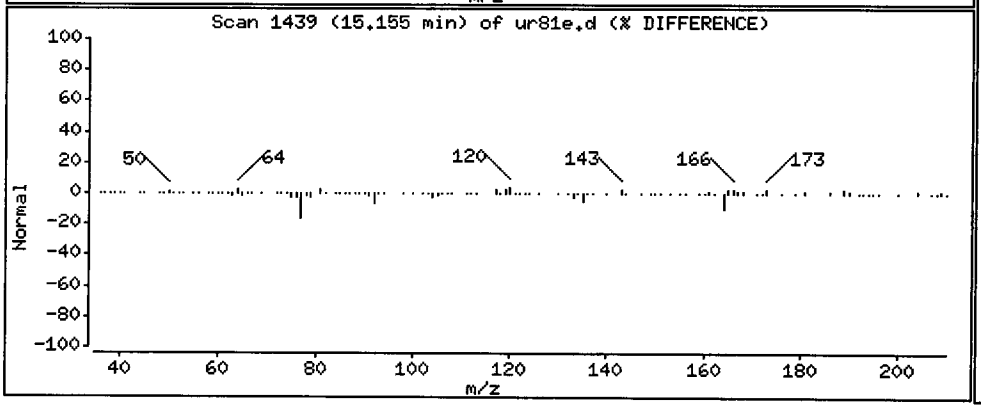
39 Dimethylphthalate

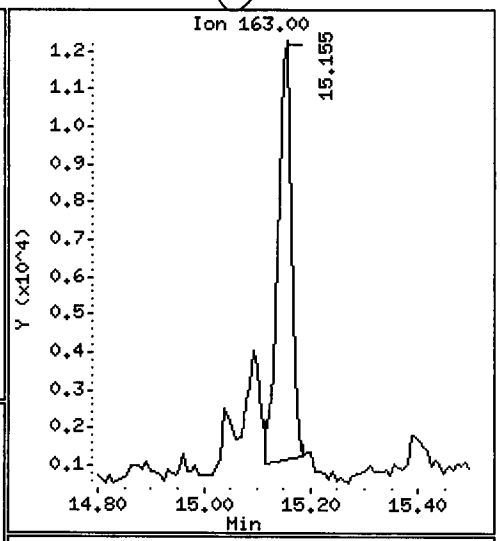
Concentration: 10.89 ug/kg

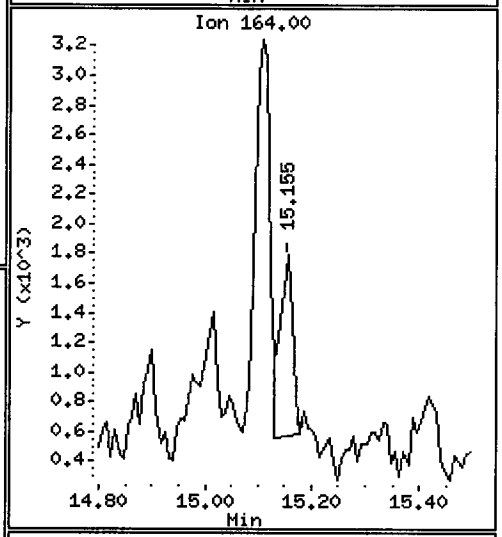


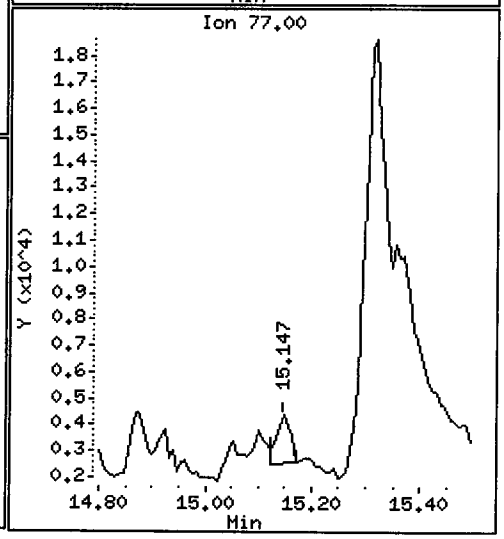












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

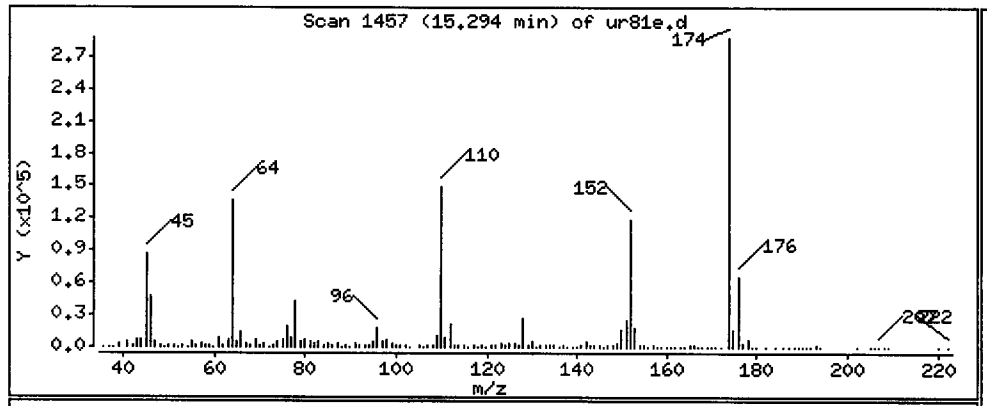
Operator: VTS/YZ

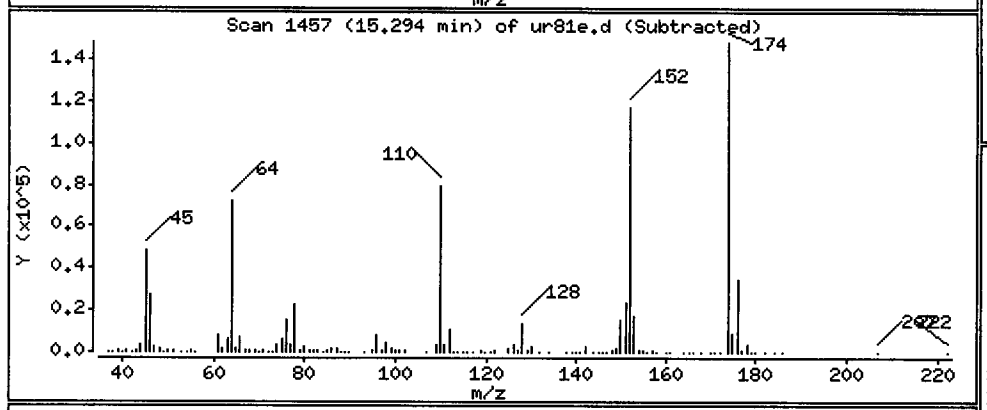
Column phase: ZB-5msi

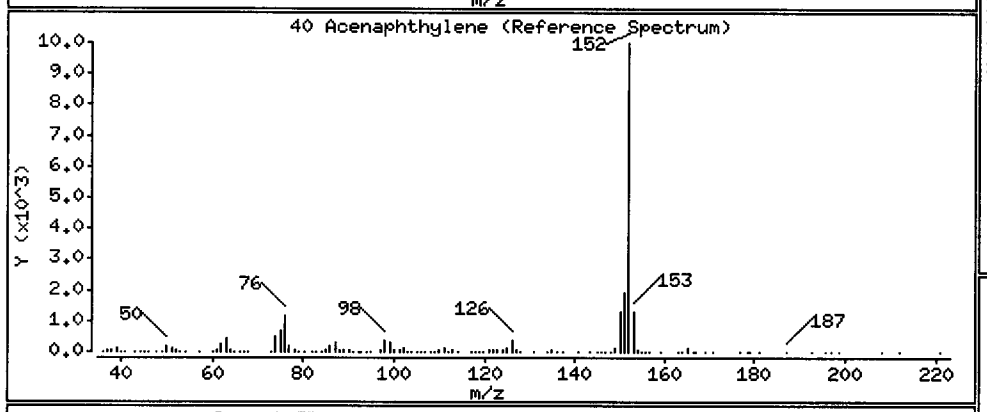
Column diameter: 0.25

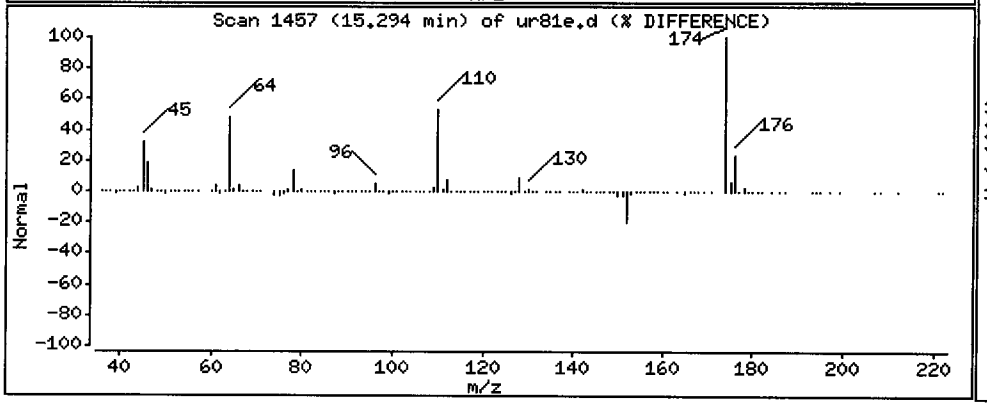
40 Acenaphthylene

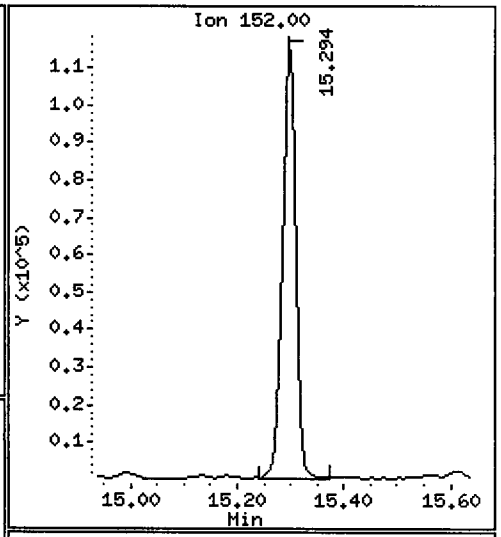
Concentration: 77.50 ug/kg

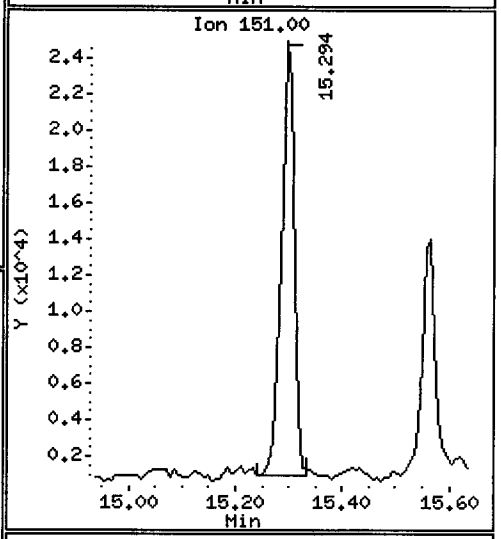


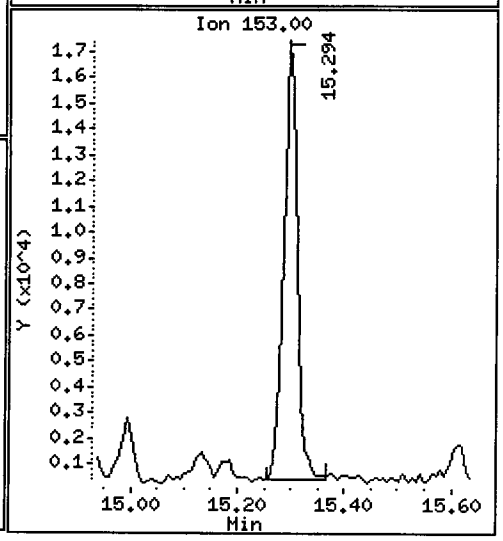












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

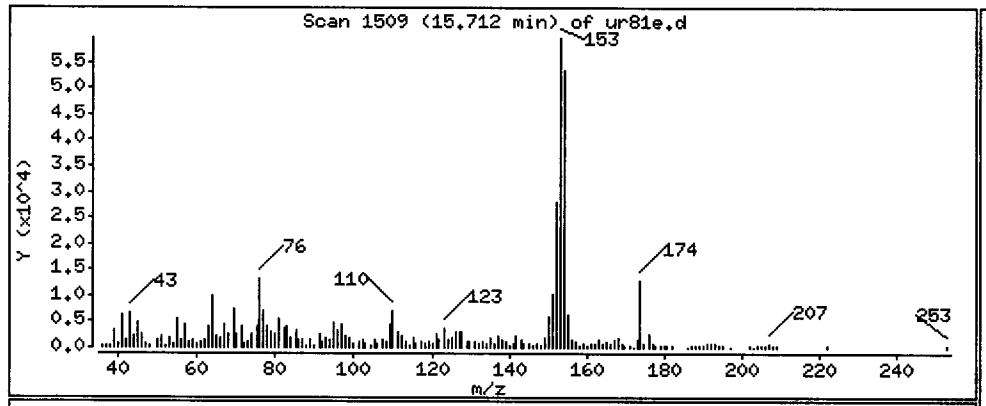
Operator: VTS/YZ

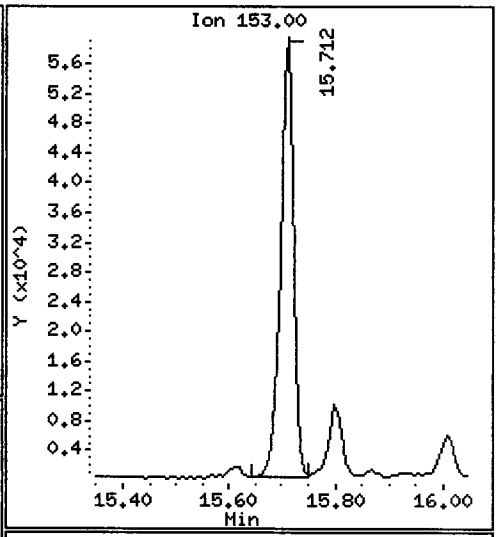
Column phase: ZB-5msi

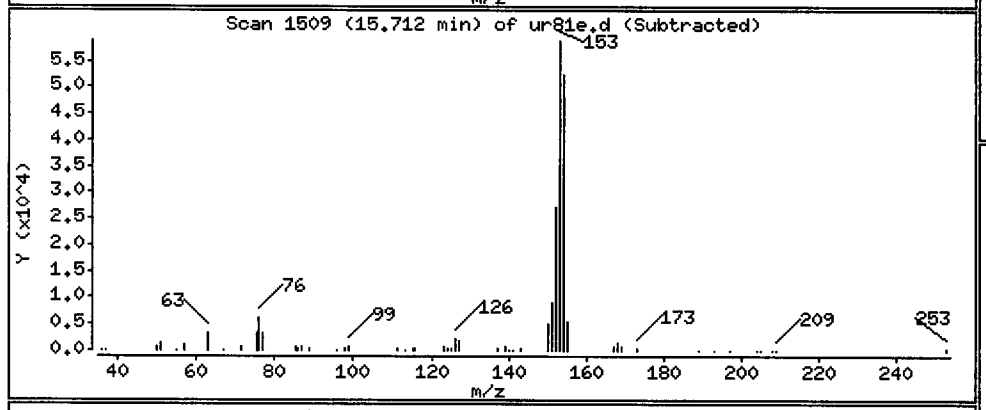
Column diameter: 0.25

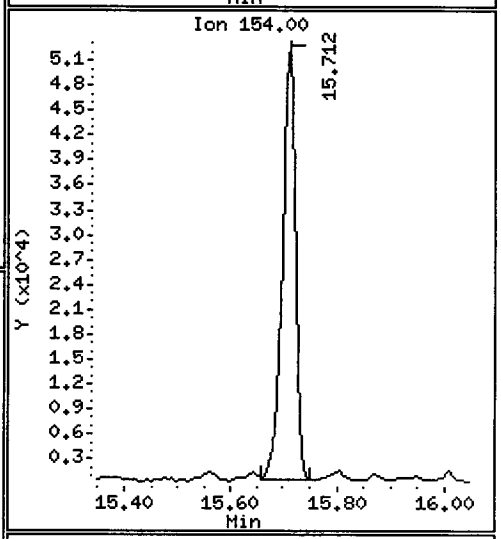
44 Acenaphthene

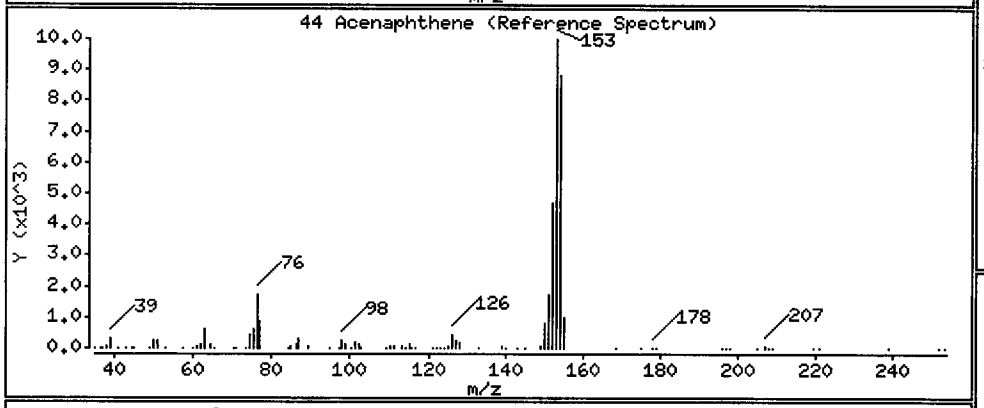
Concentration: 67.47 ug/kg

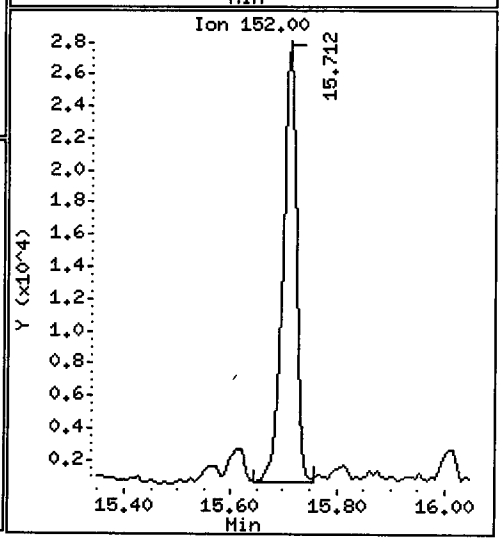


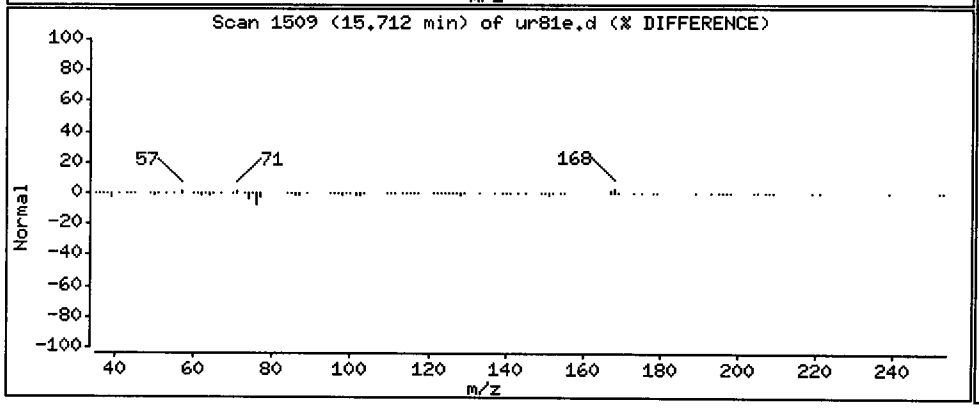












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

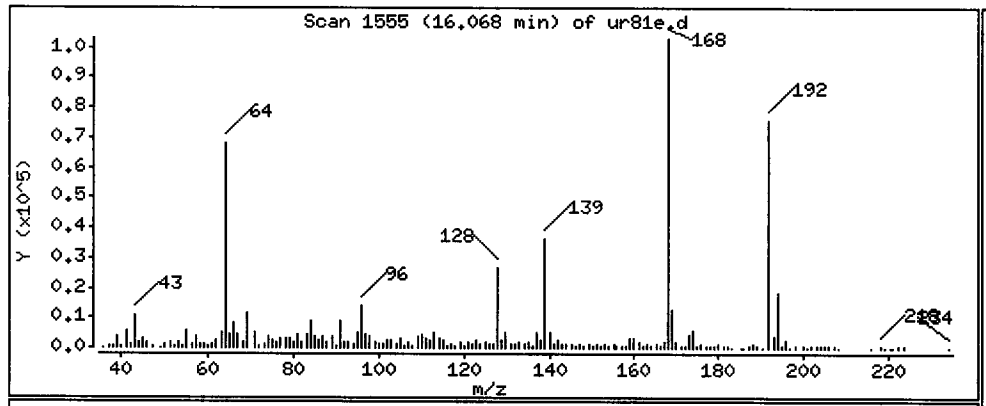
Operator: VTS/YZ

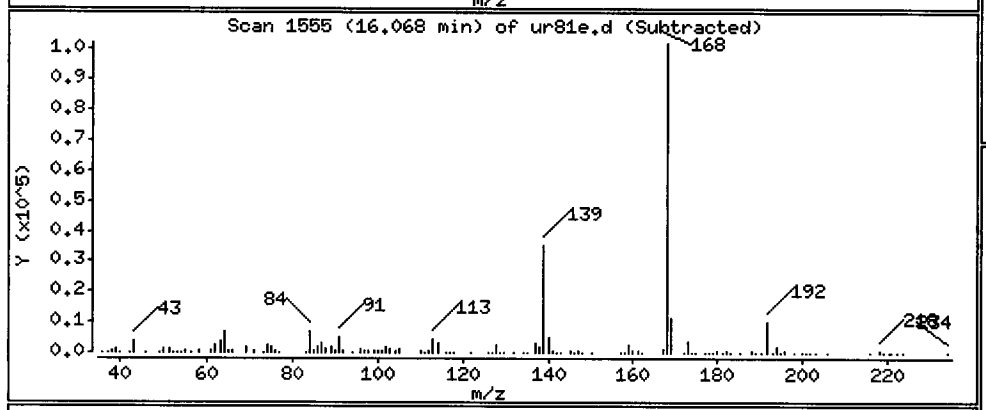
Column phase: ZB-5msi

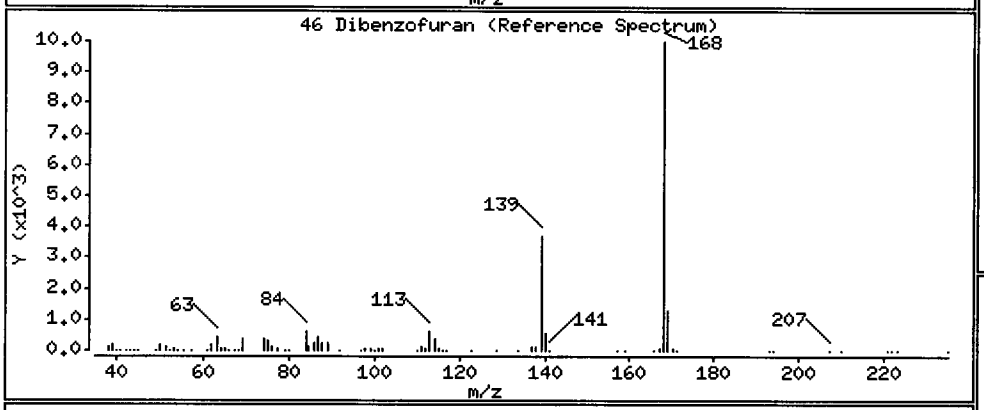
Column diameter: 0.25

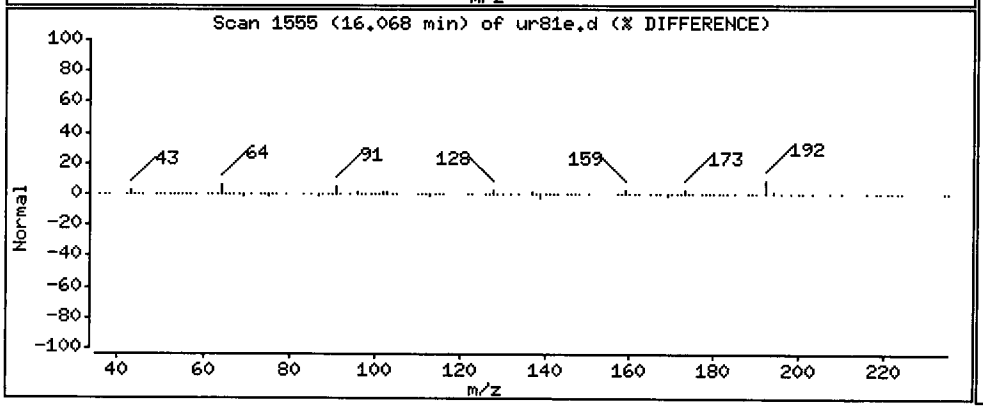
46 Dibenzofuran

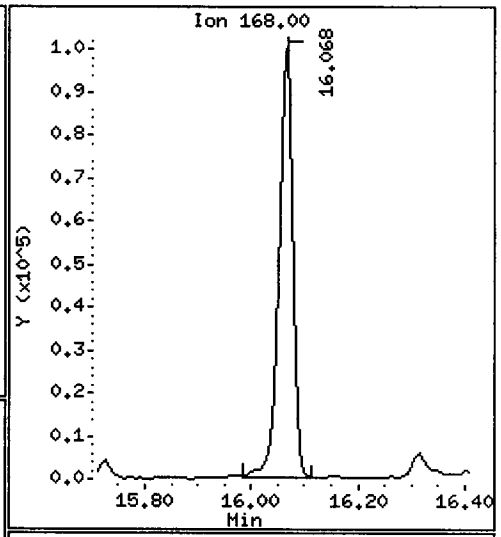
Concentration: 78.74 ug/kg

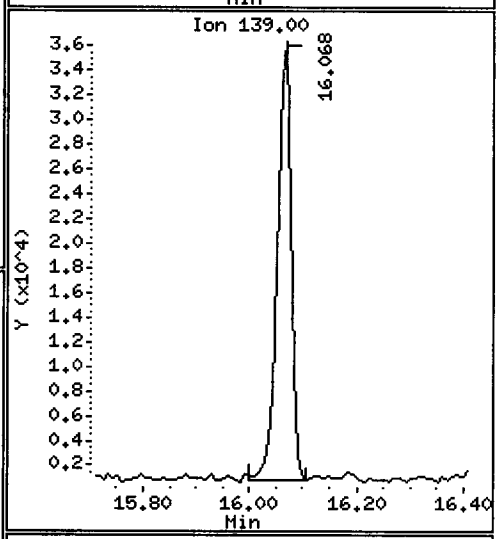


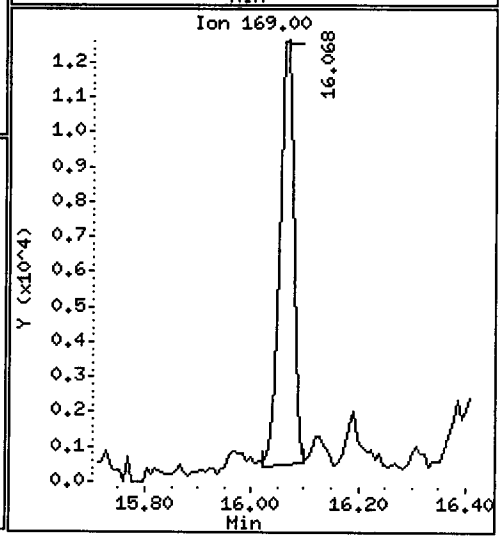












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

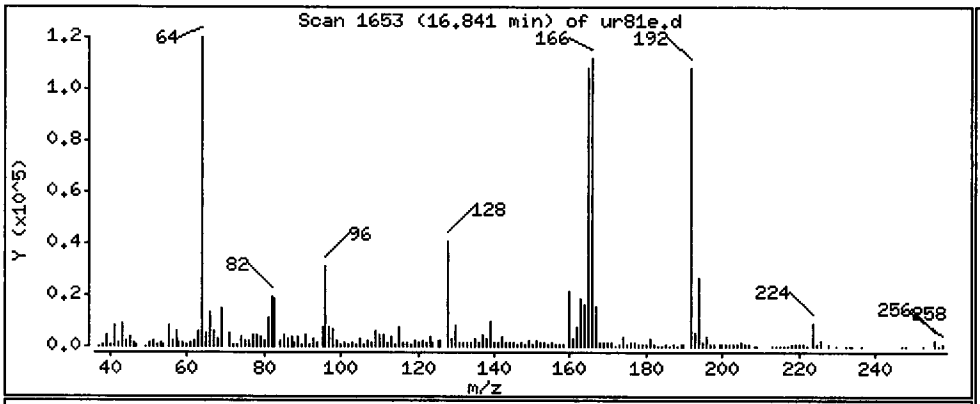
Operator: VTS/YZ

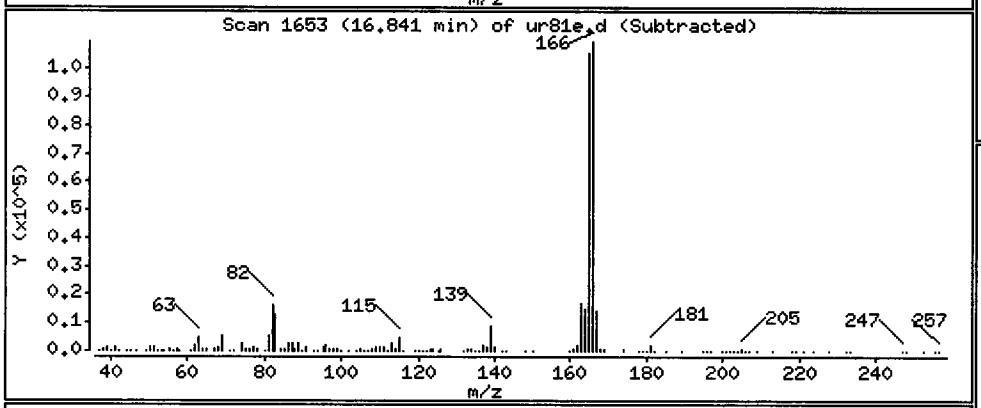
Column phase: ZB-5msi

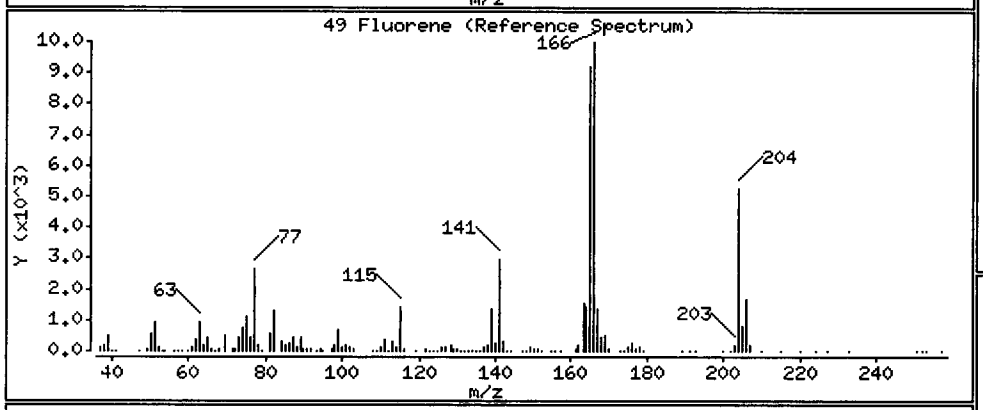
Column diameter: 0.25

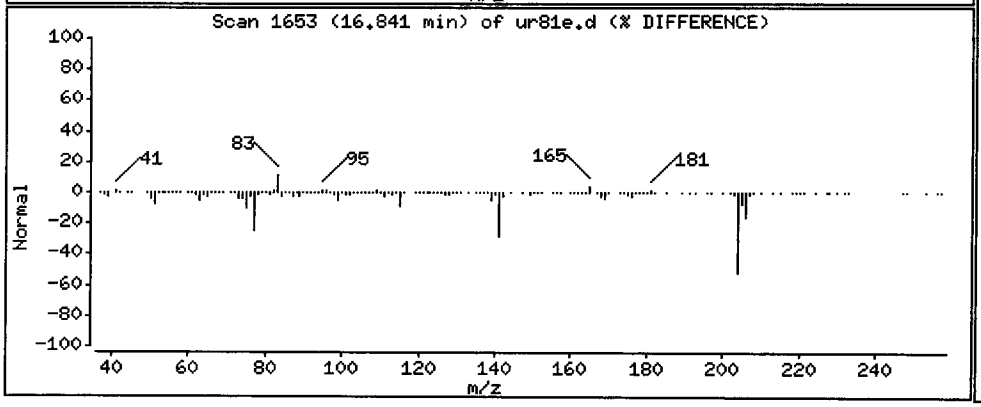
49 Fluorene

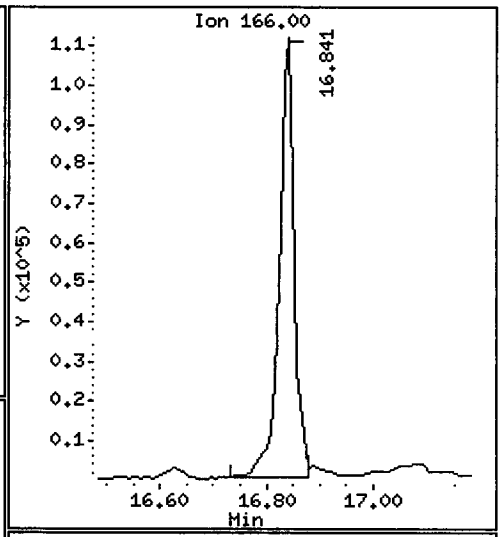
Concentration: 134.5 ug/kg

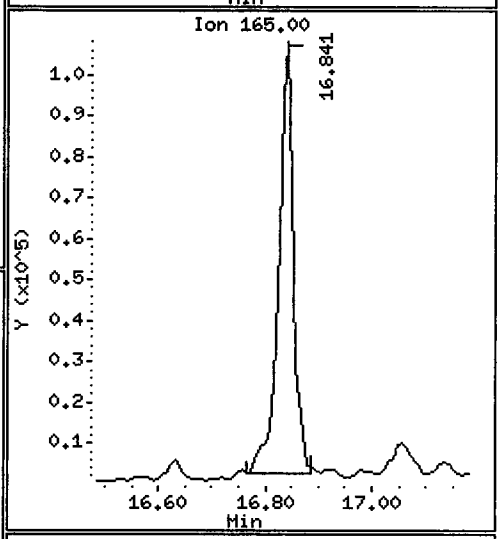


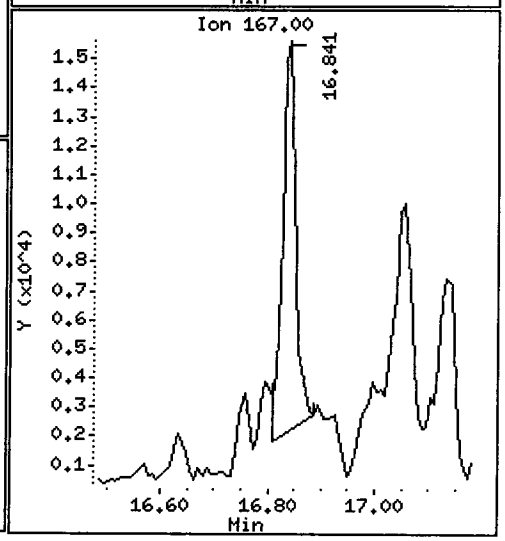












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

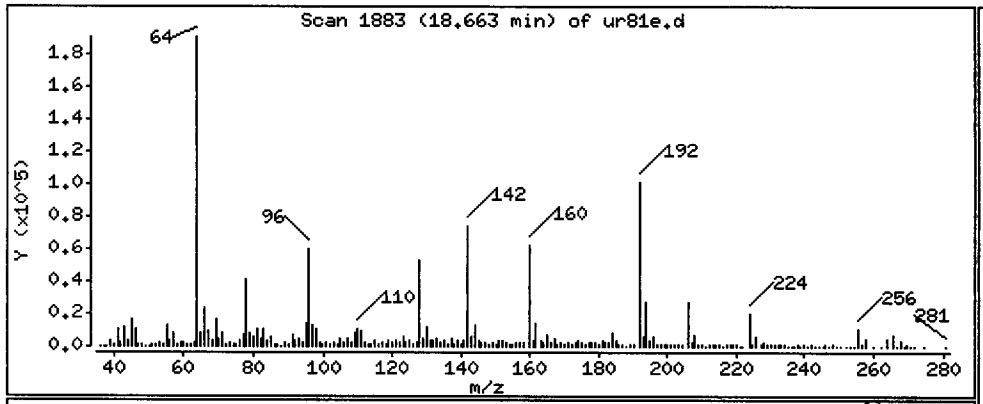
Client ID: IJ12-04 Instrument: nt10.i

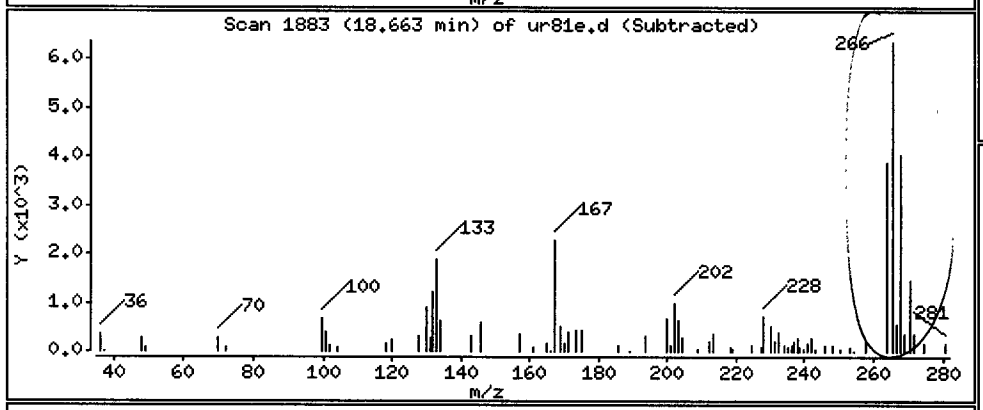
Sample Info: UR81E

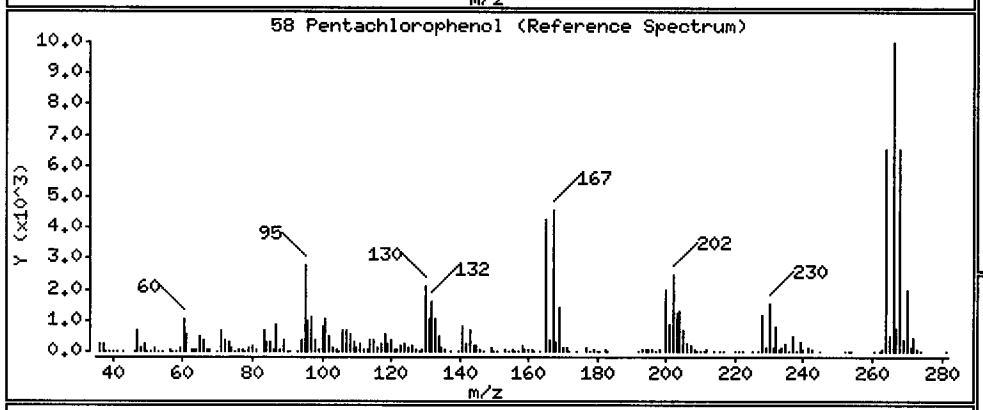
Volume Injected (uL): 1.0 Operator: VTS/YZ

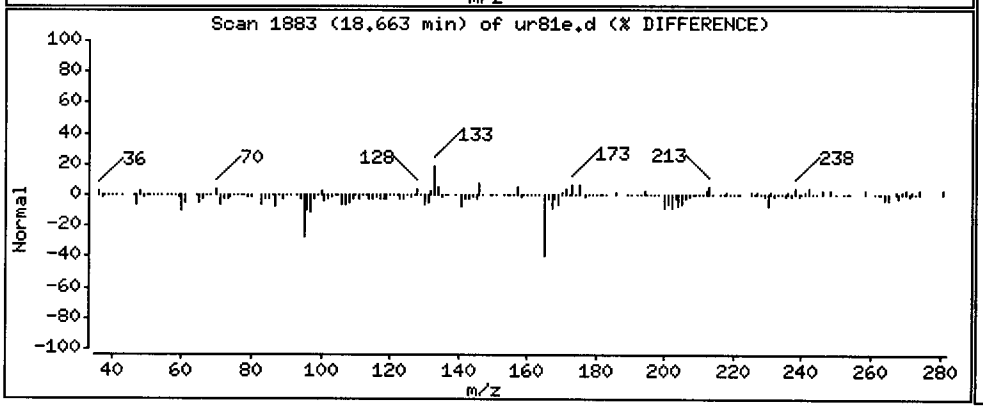
Column phase: ZB-5msi Column diameter: 0.25

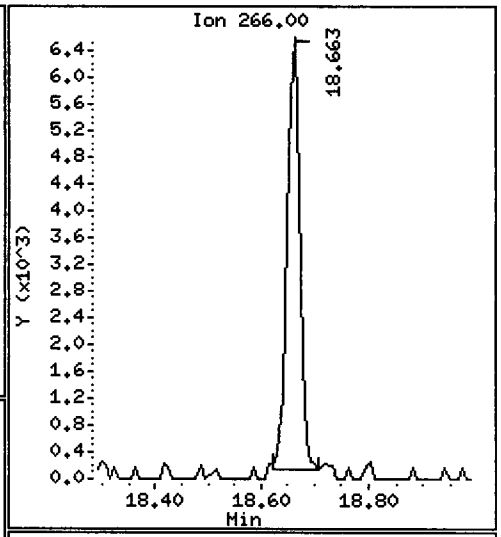
58 Pentachlorophenol Concentration: 28.92 ug/kg

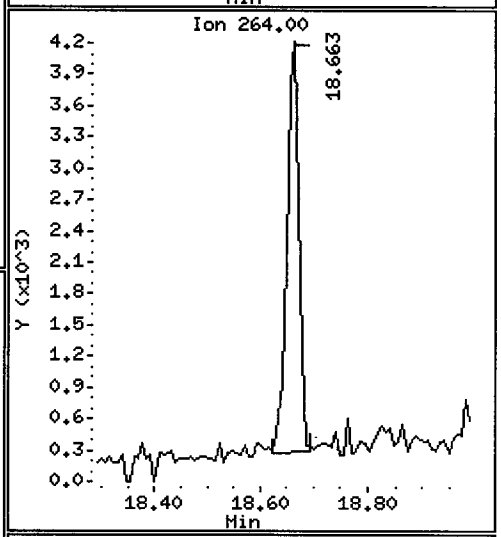


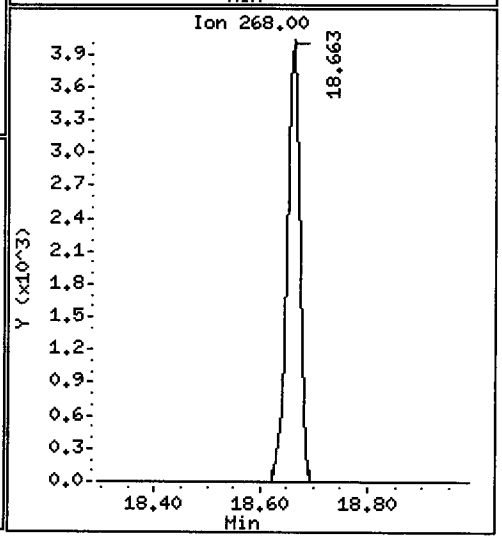












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04 | Instrument: nt10.i

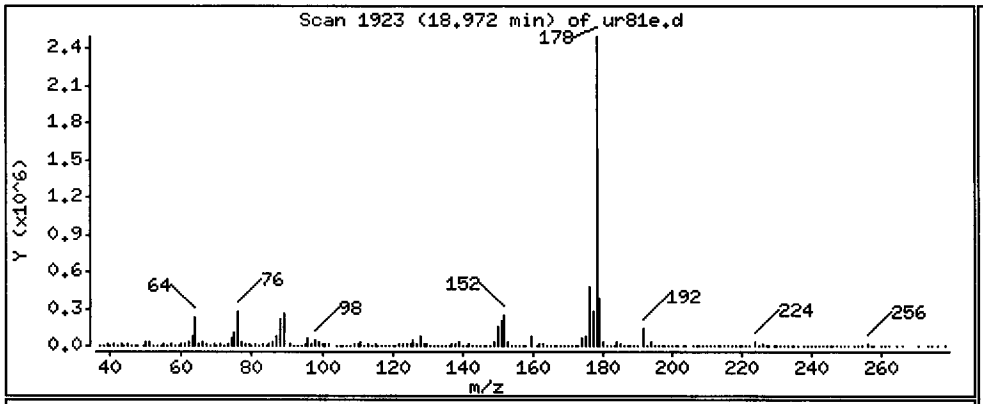
Sample Info: UR81E

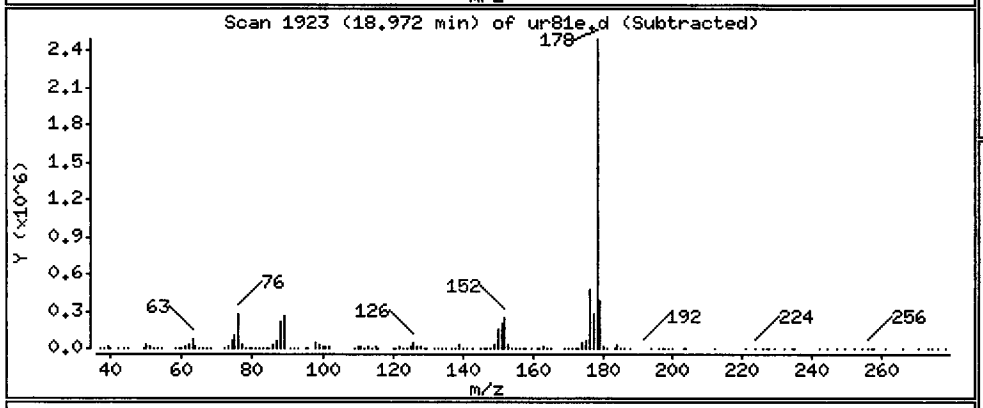
Volume Injected (uL): 1.0 | Operator: VTS/YZ

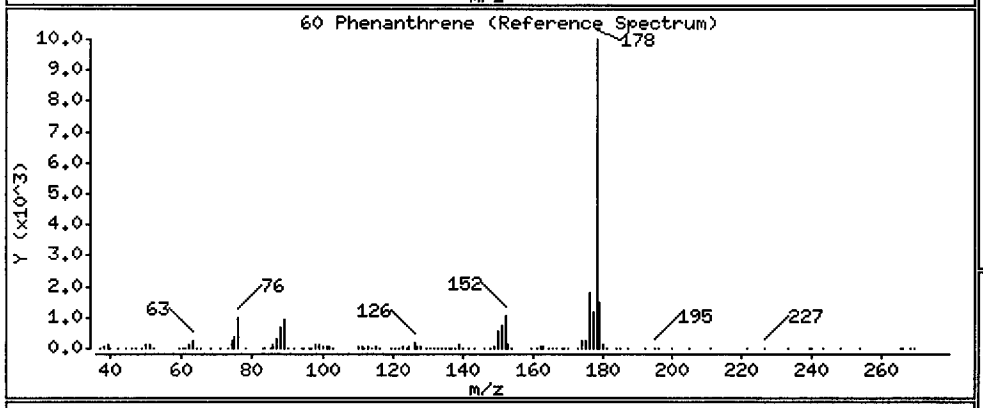
Column phase: ZB-5msi | Column diameter: 0.25

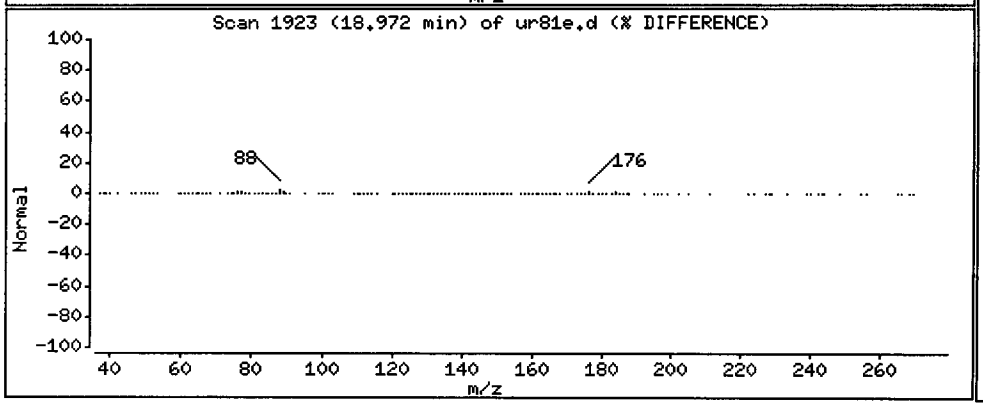
60 Phenanthrene | Concentration: 1942 ug/kg

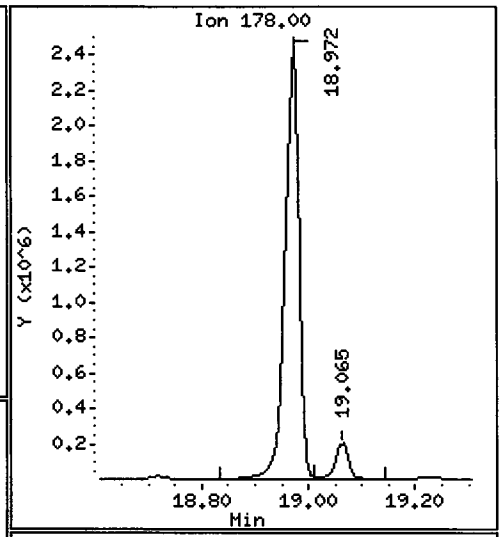
E

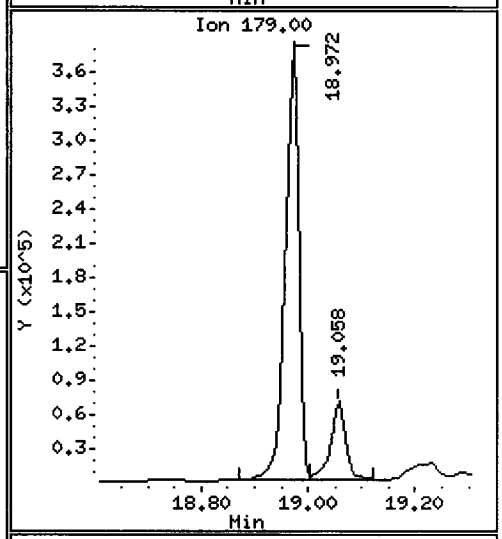


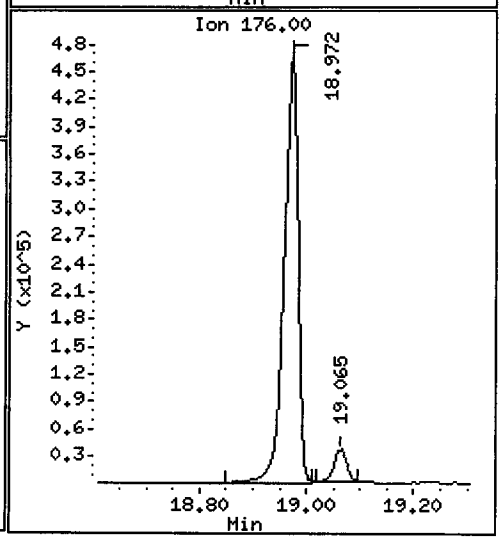












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

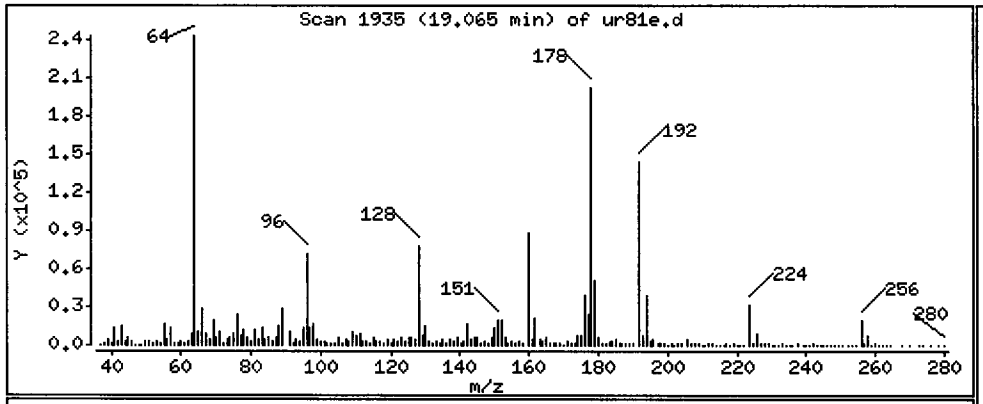
Client ID: IJ12-04 Instrument: nt10.i

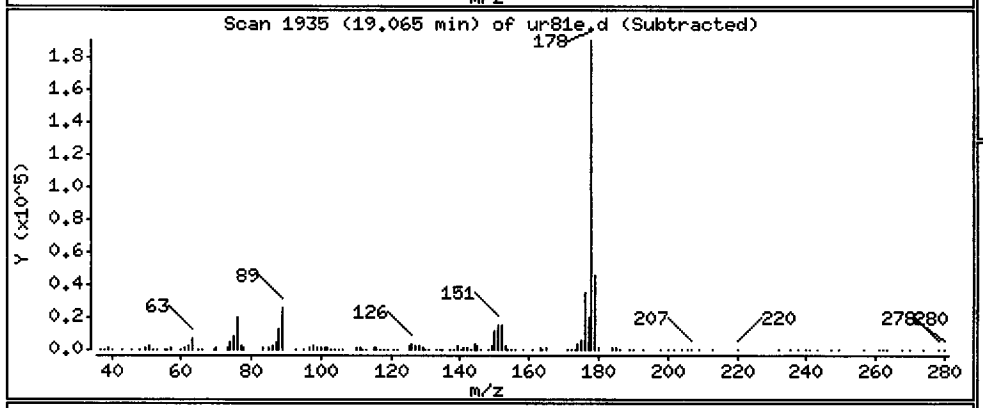
Sample Info: UR81E

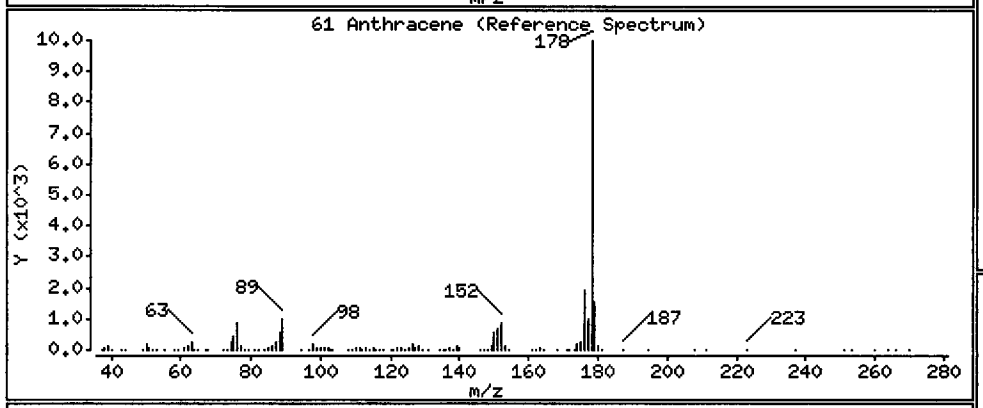
Volume Injected (uL): 1.0 Operator: VTS/YZ

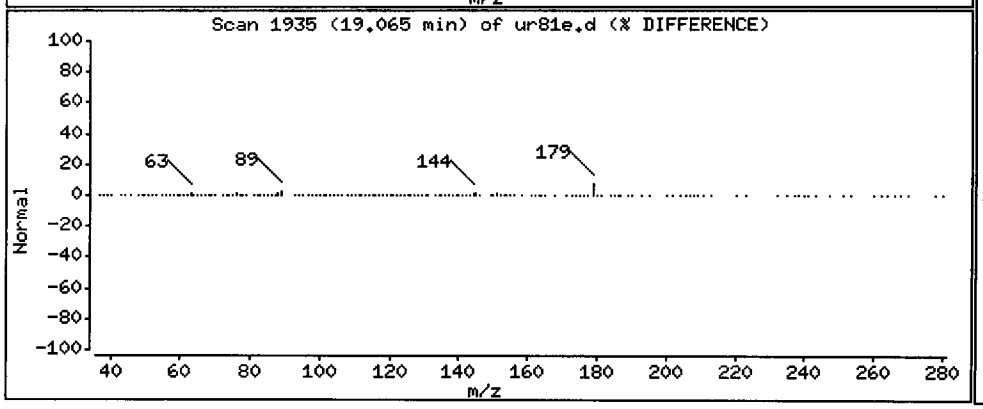
Column phase: ZB-5msi Column diameter: 0.25

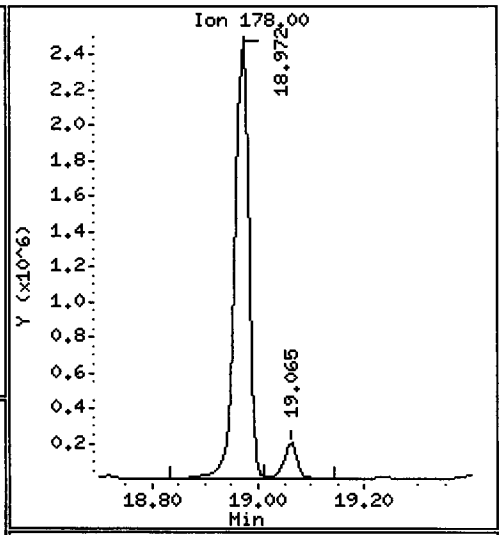
61 Anthracene Concentration: 156.4 ug/kg

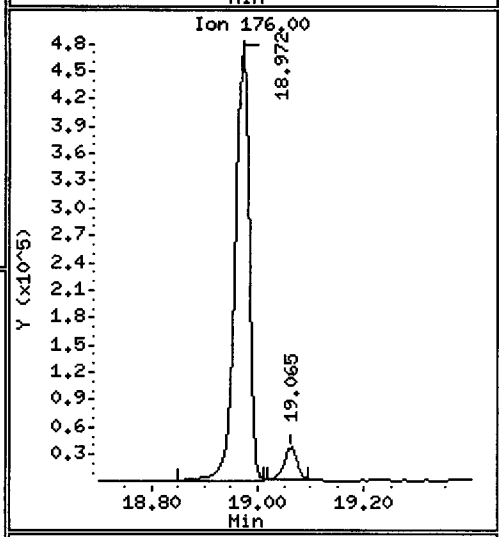


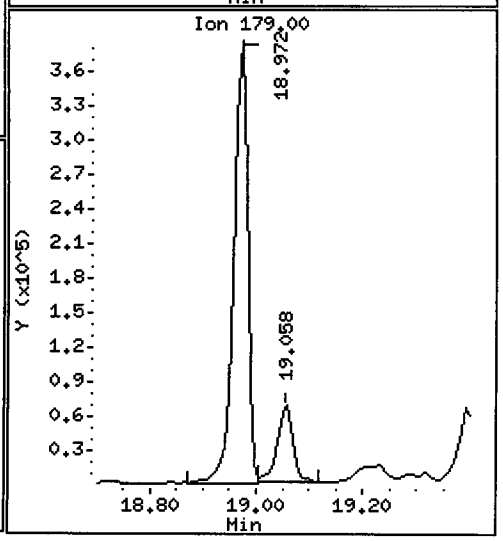












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

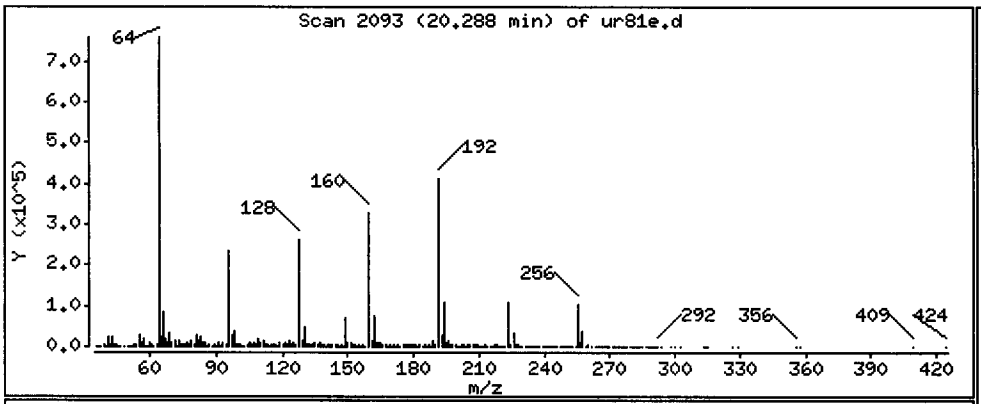
Client ID: IJ12-04 | Instrument: nt10.i

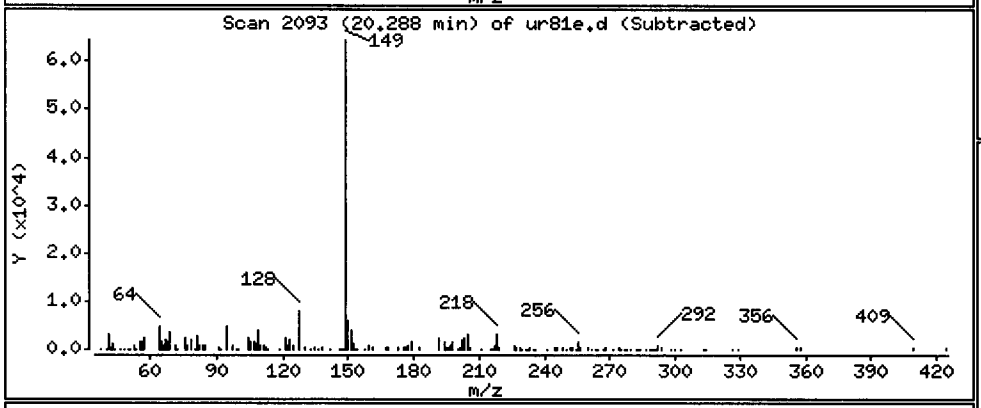
Sample Info: UR81E

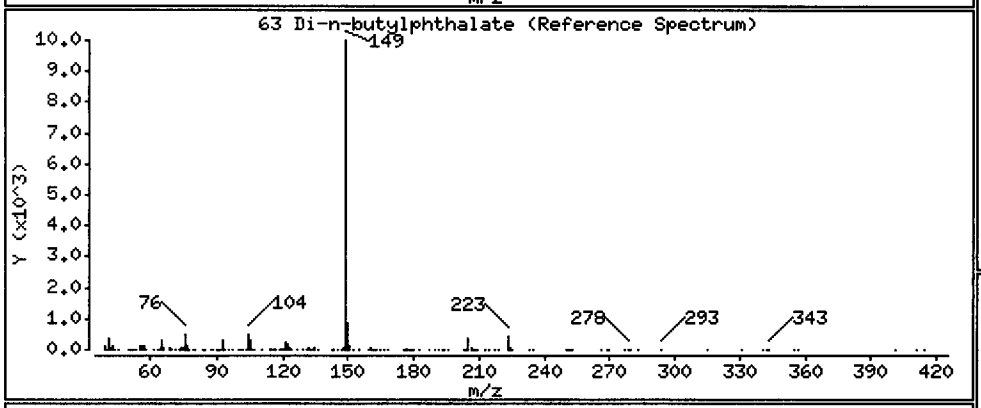
Volume Injected (uL): 1.0 | Operator: VTS/YZ

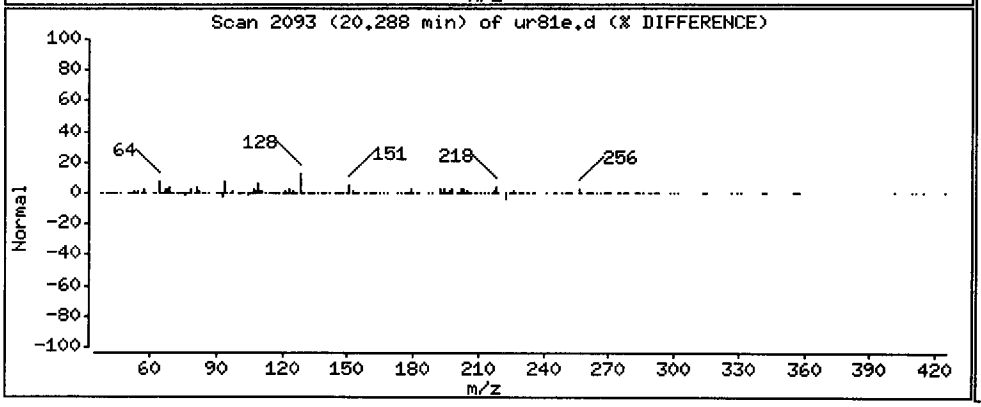
Column phase: ZB-5msi | Column diameter: 0.25

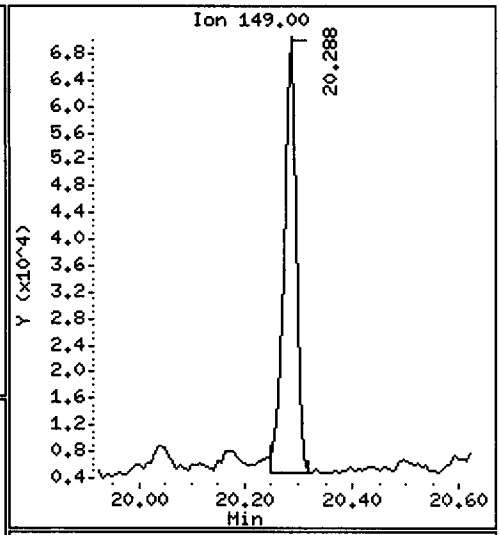
63 Di-n-butylphthalate | Concentration: 36.54 ug/kg

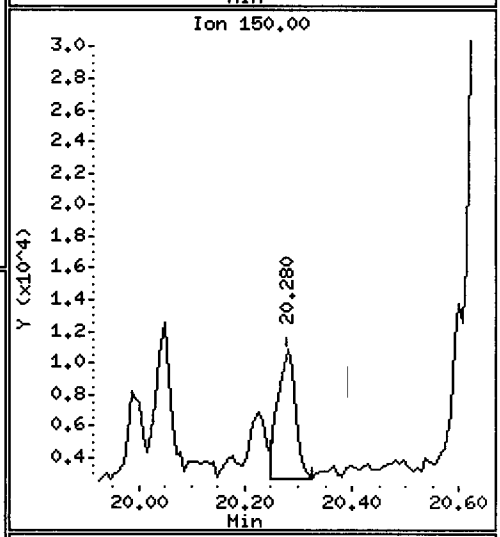


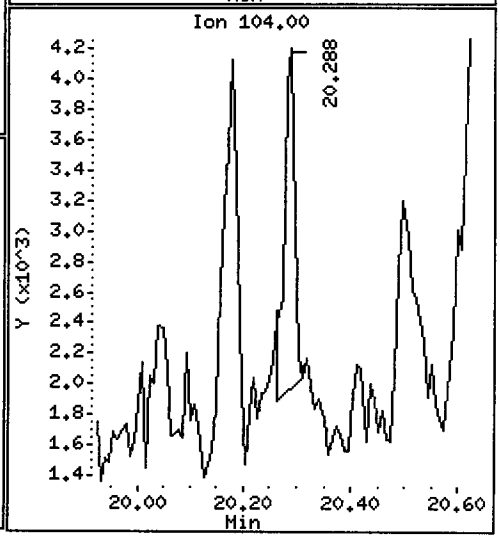












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

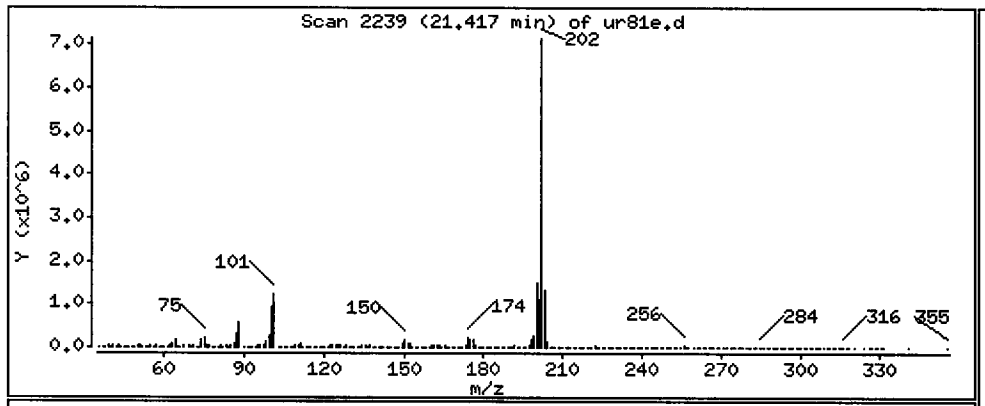
Operator: VTS/YZ

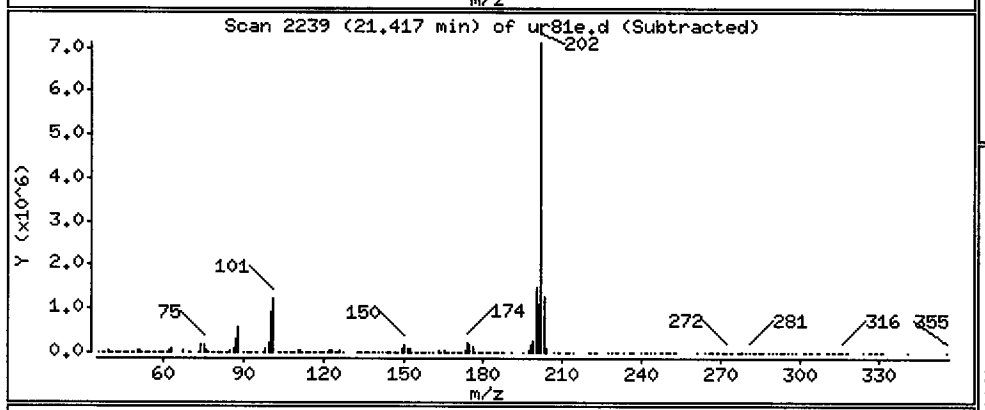
Column phase: ZB-5msi

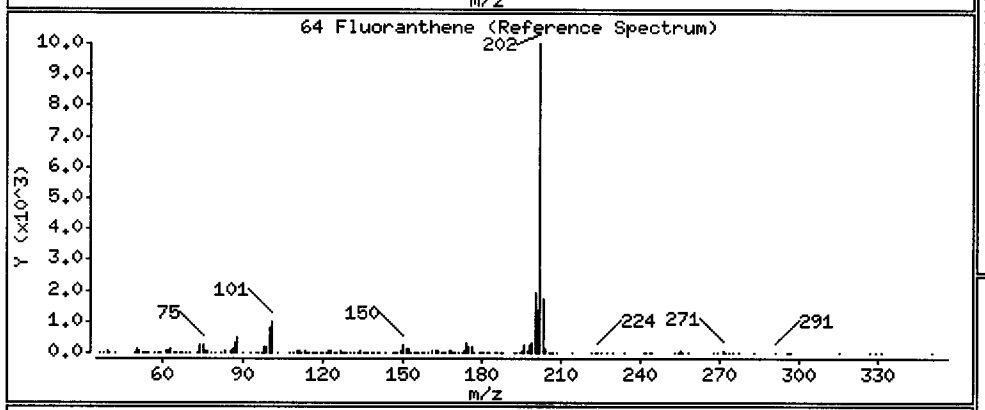
Column diameter: 0.25

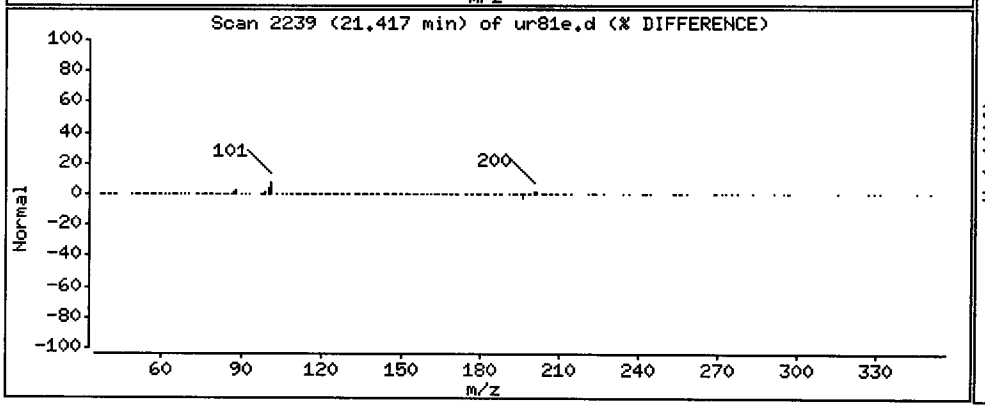
64 Fluoranthene

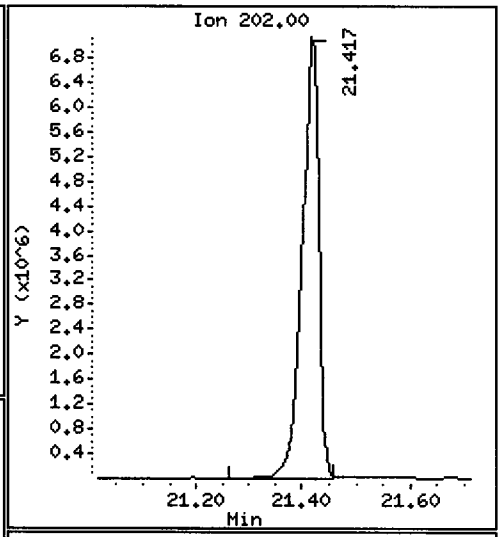
Concentration: 6437 ug/kg

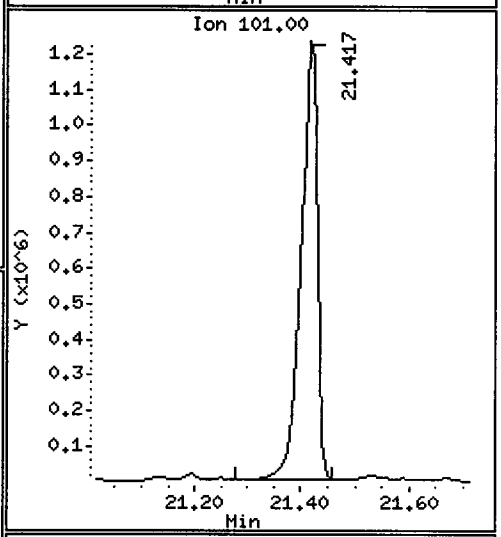


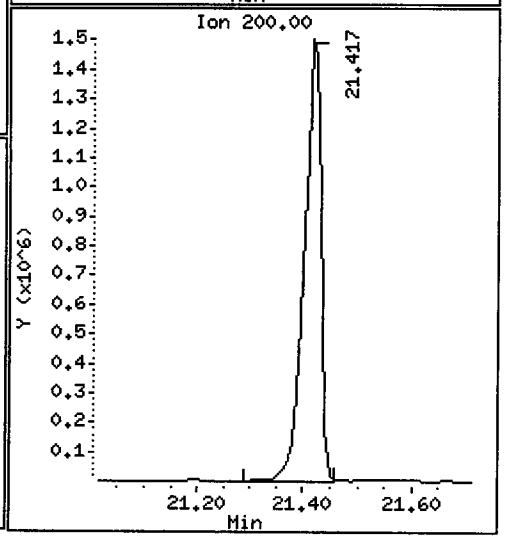












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

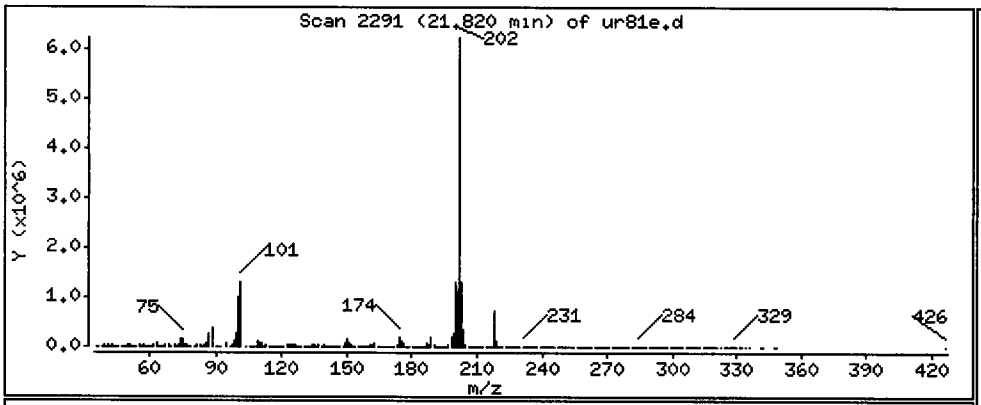
Operator: VTS/YZ

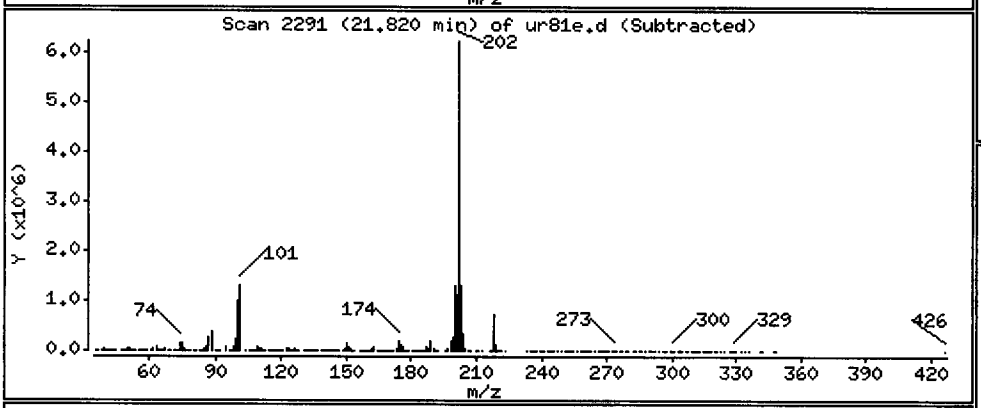
Column phase: ZB-5msi

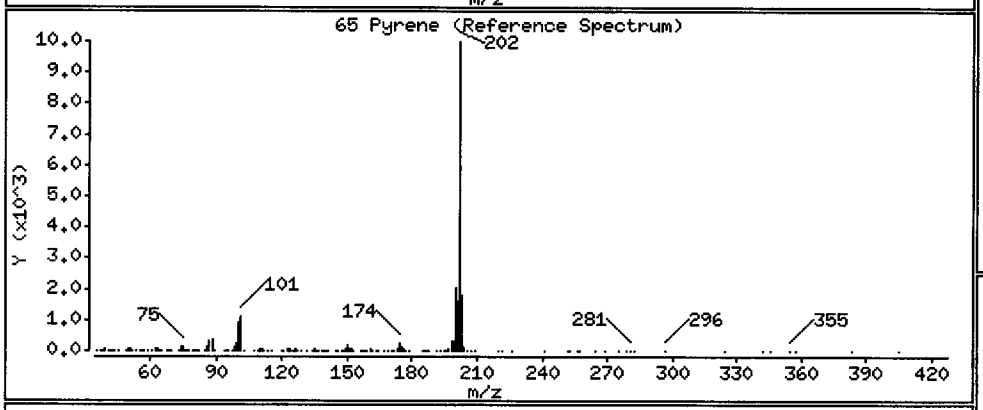
Column diameter: 0.25

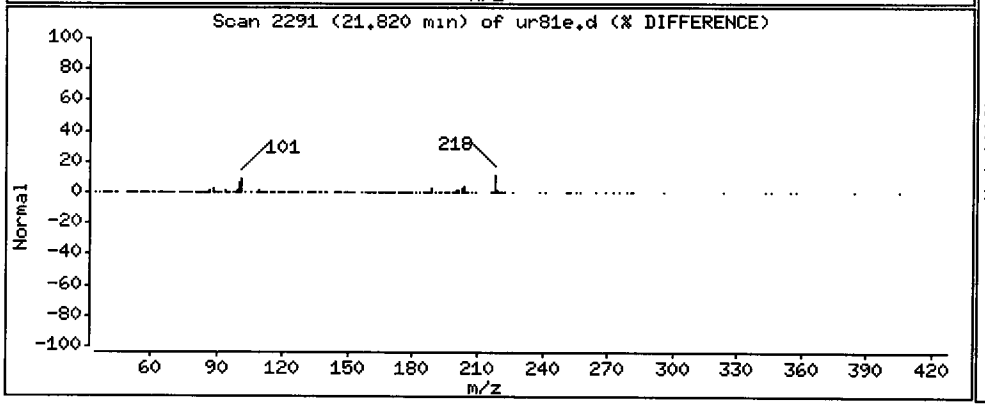
65 Pyrene

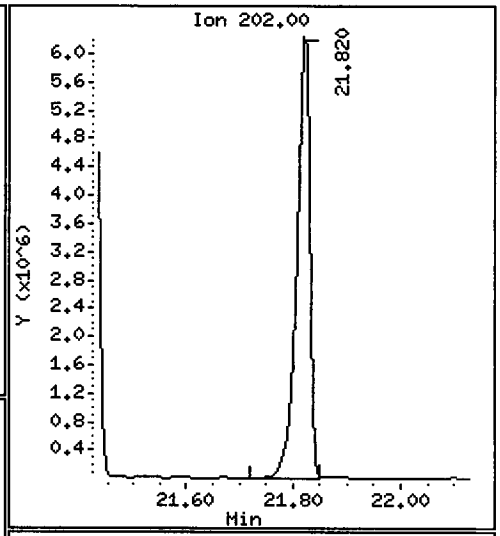
Concentration: 3857 ug/kg

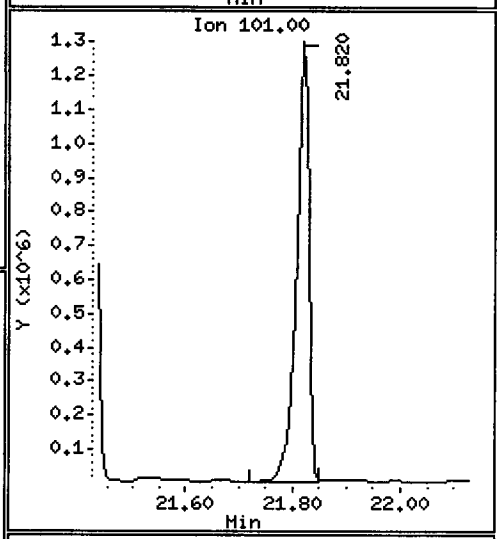


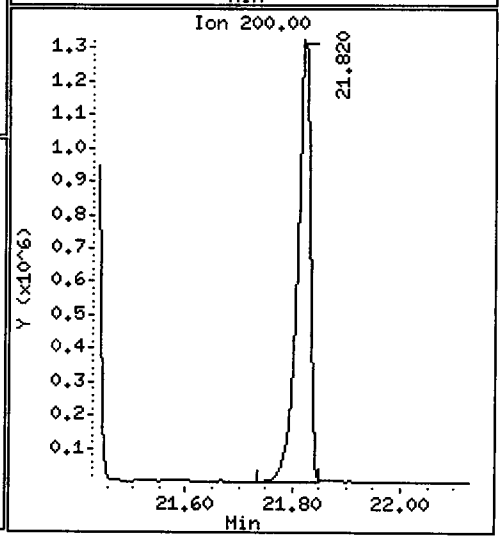












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

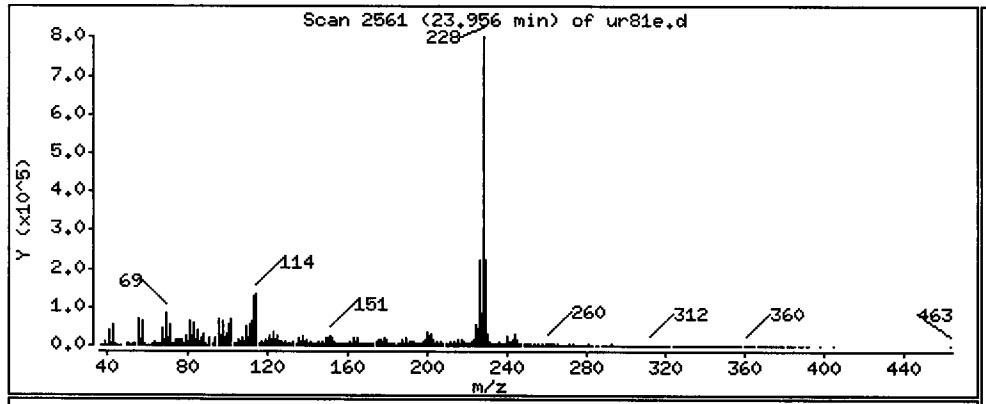
Operator: VTS/YZ

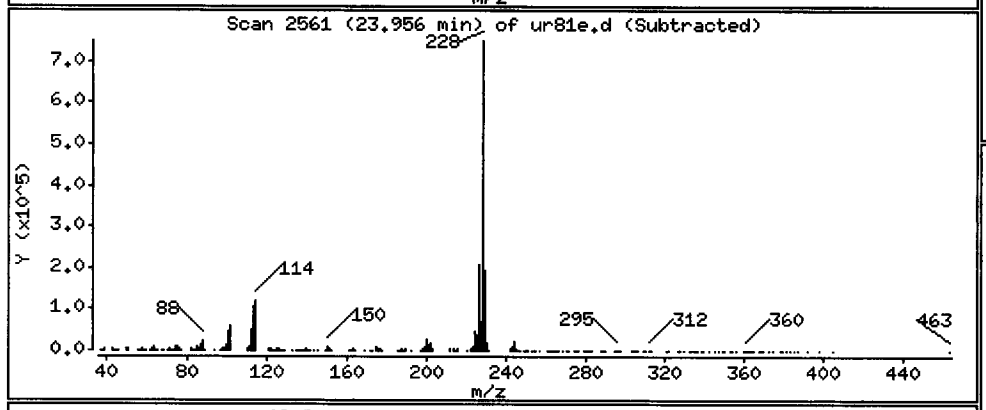
Column phase: ZB-5msi

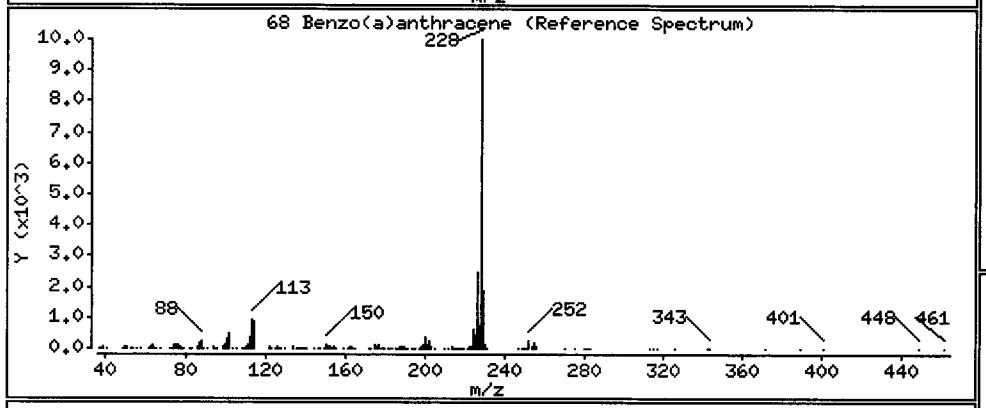
Column diameter: 0.25

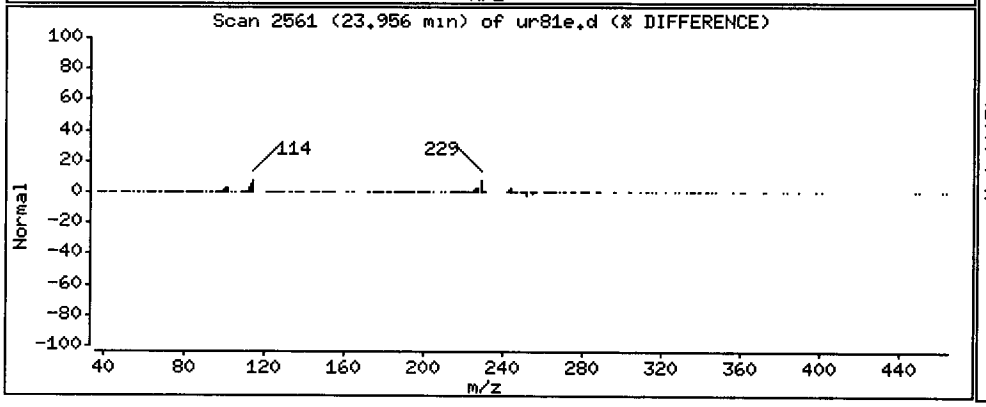
68 Benzo(a)anthracene

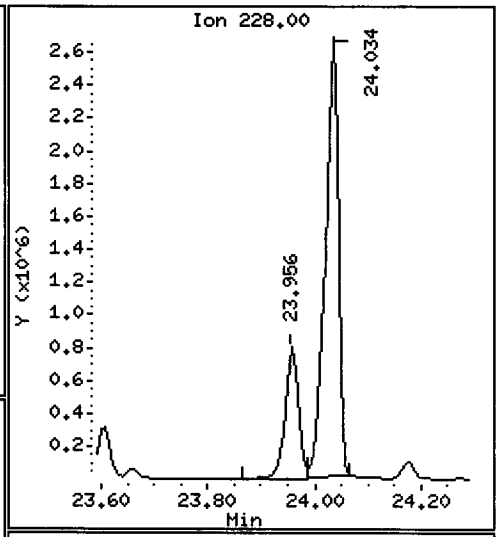
Concentration: 553.3 ug/kg

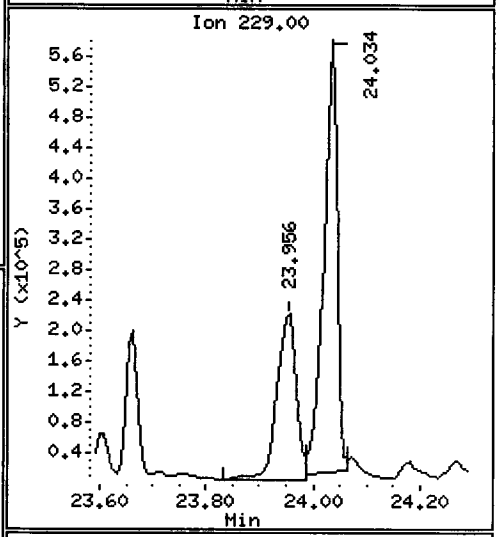


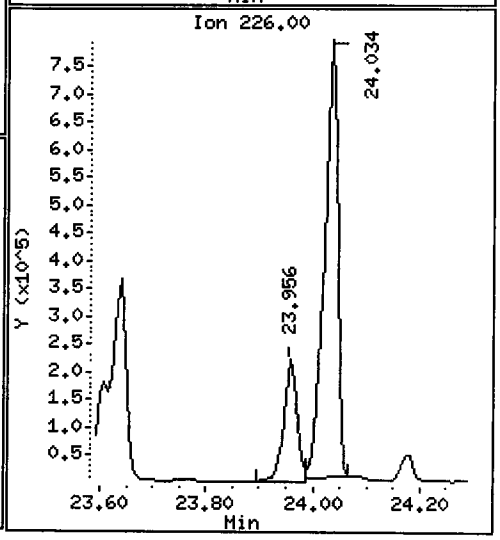












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

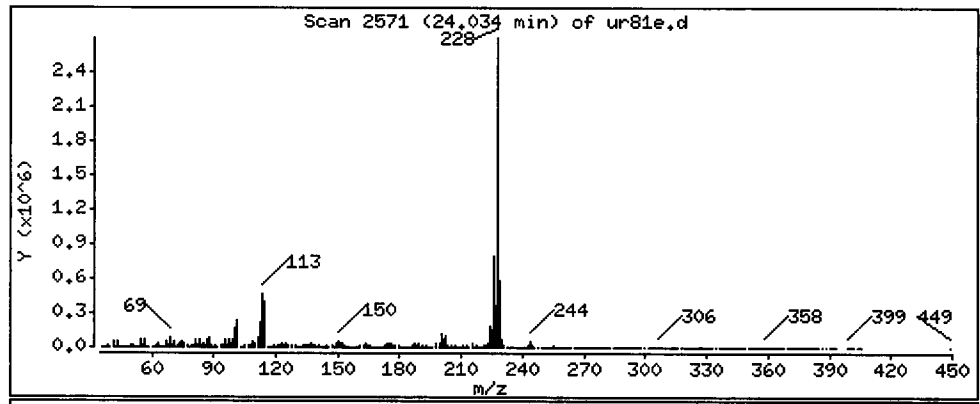
Operator: VTS/YZ

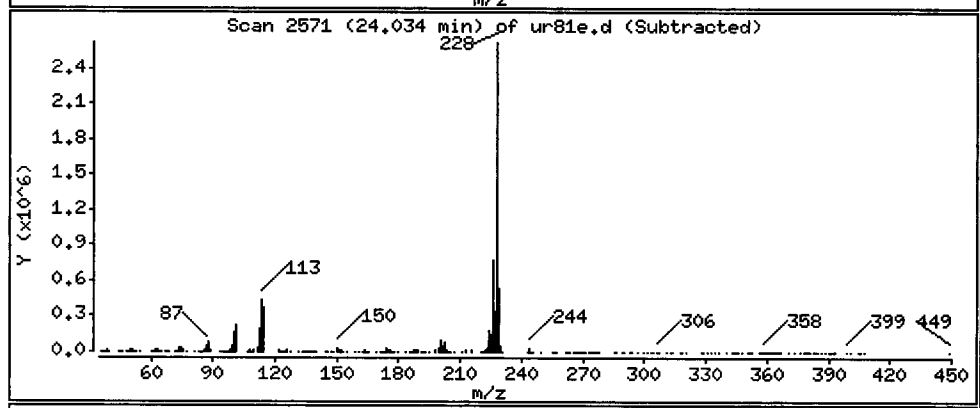
Column phase: ZB-5msi

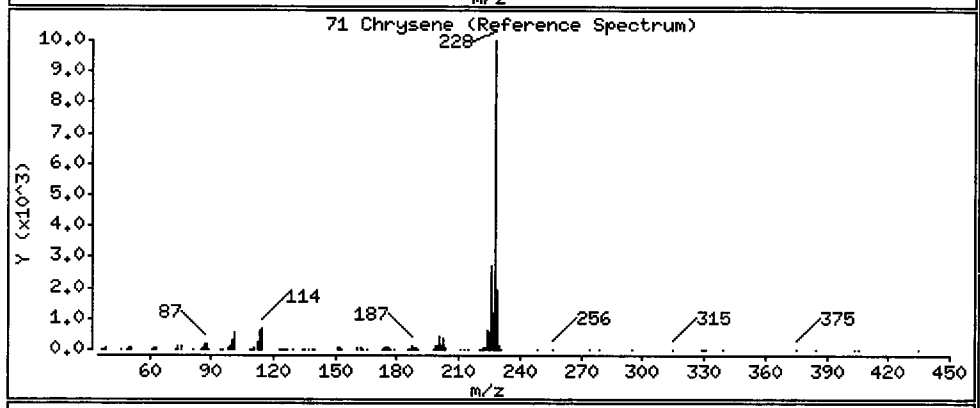
Column diameter: 0.25

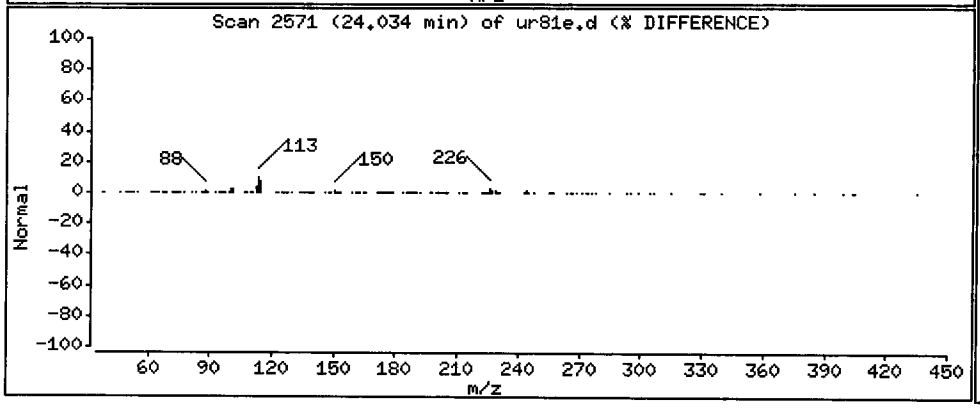
71 Chrysene

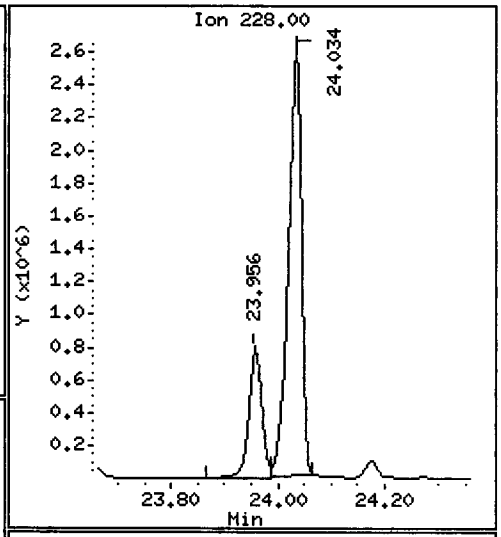
Concentration: 2004 ug/kg

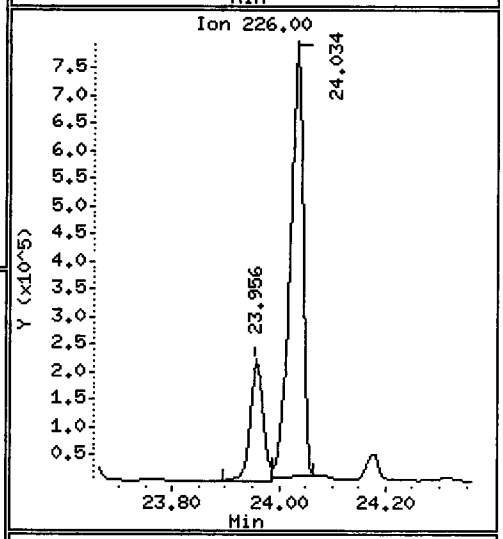


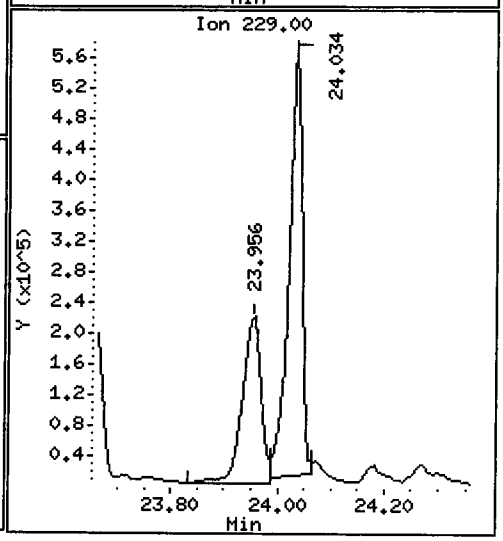












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04 | Instrument: nt10.i

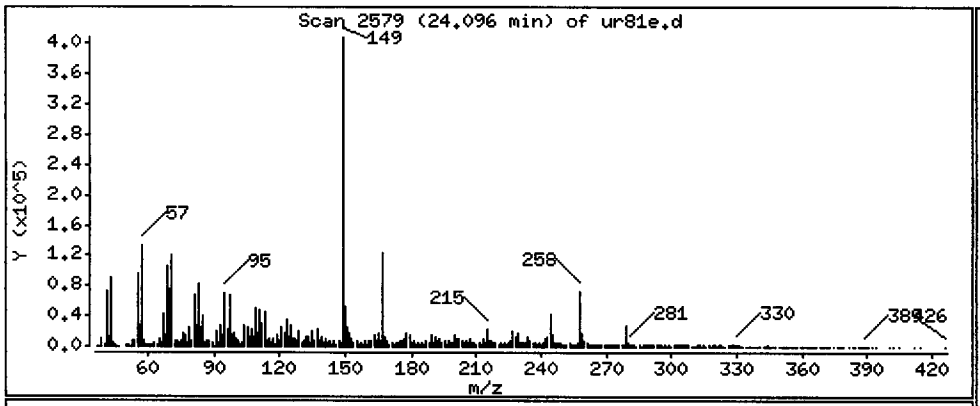
Sample Info: UR81E

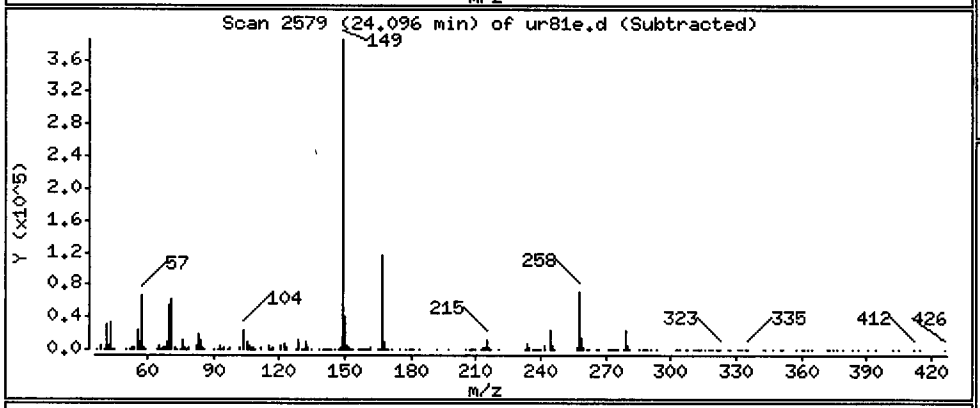
Volume Injected (uL): 1.0 | Operator: VTS/YZ

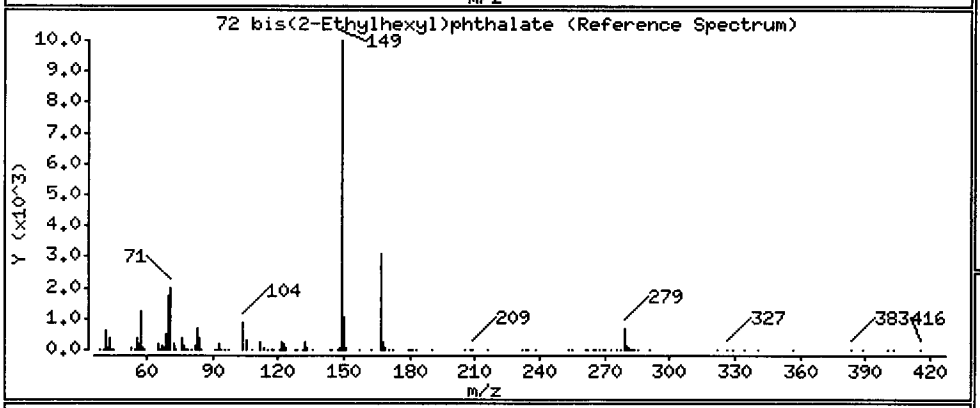
Column phase: ZB-5msi | Column diameter: 0.25

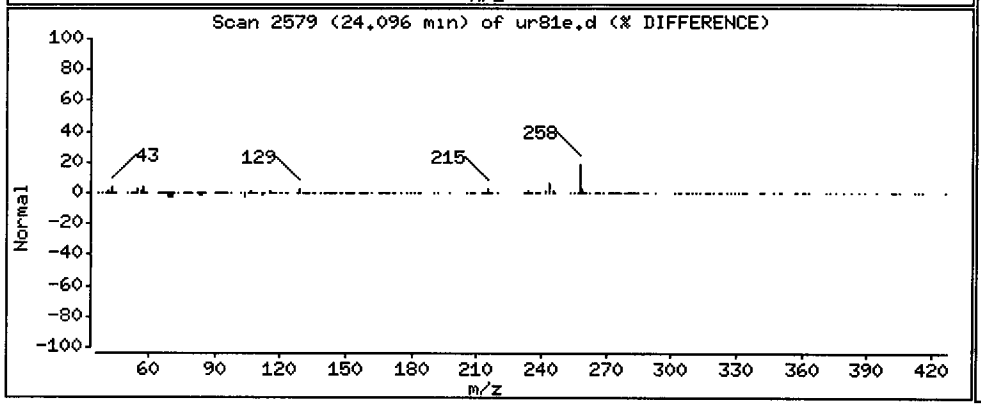
(B)

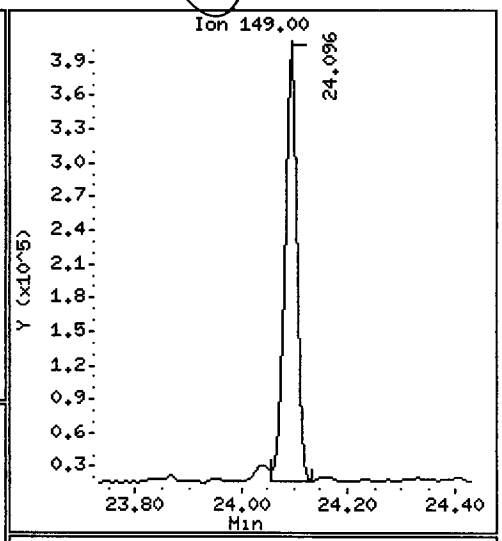
72 bis(2-Ethylhexyl)phthalate | Concentration: 318.3 ug/kg

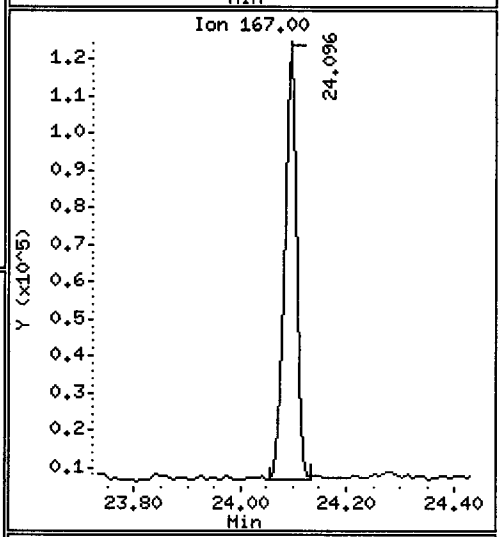


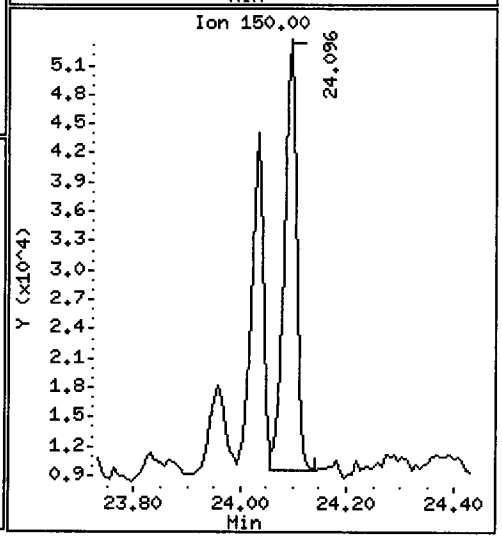












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

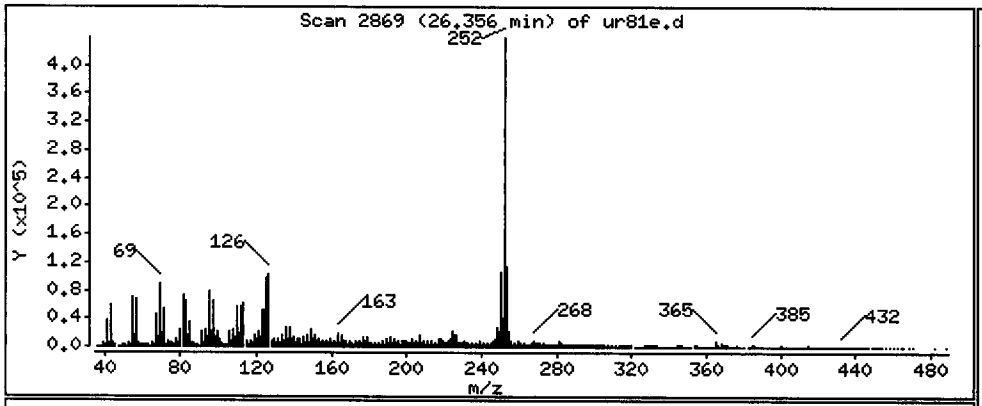
Operator: VTS/YZ

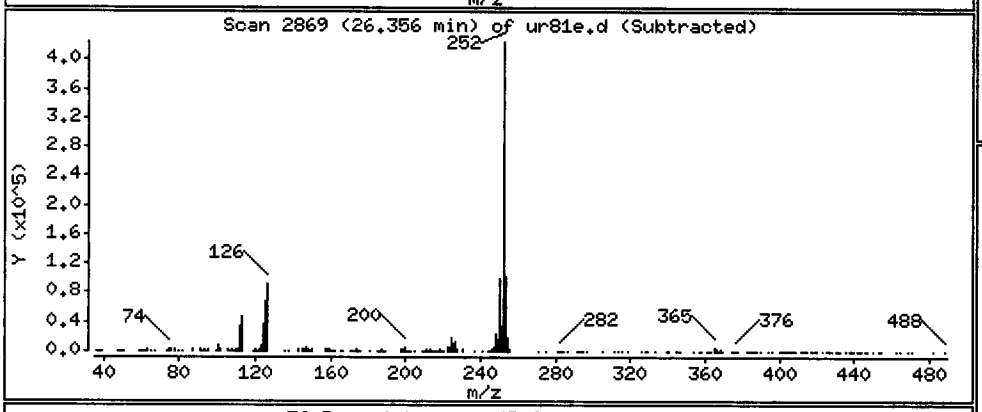
Column phase: ZB-5msi

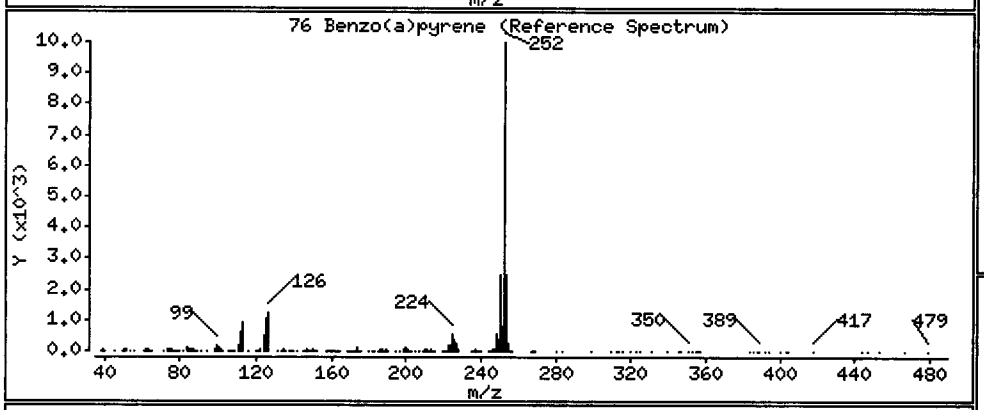
Column diameter: 0.25

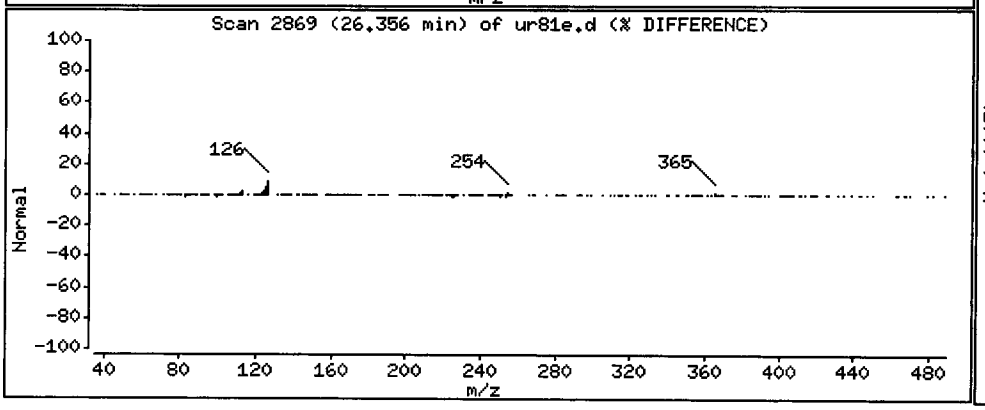
76 Benzo(a)pyrene

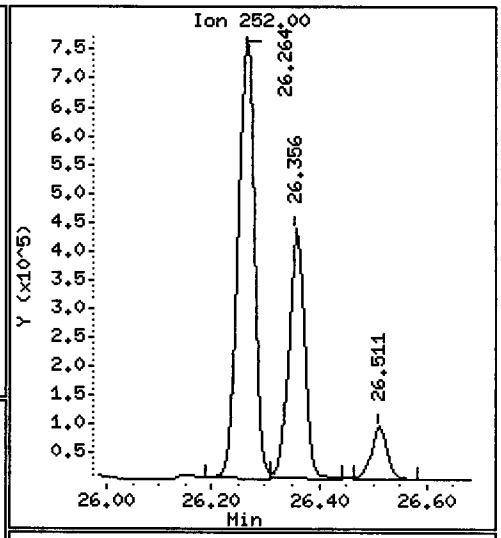
Concentration: 401.2 ug/kg

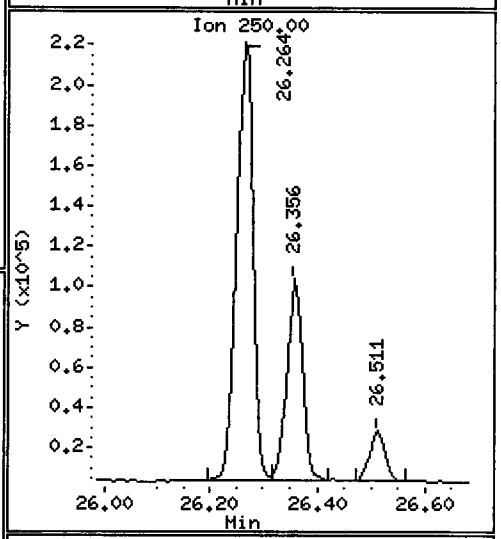


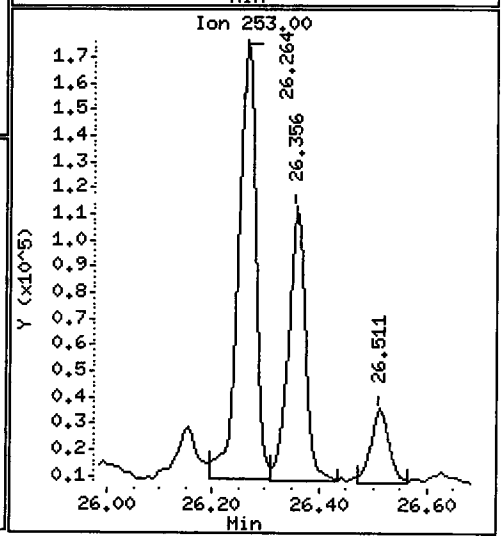












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

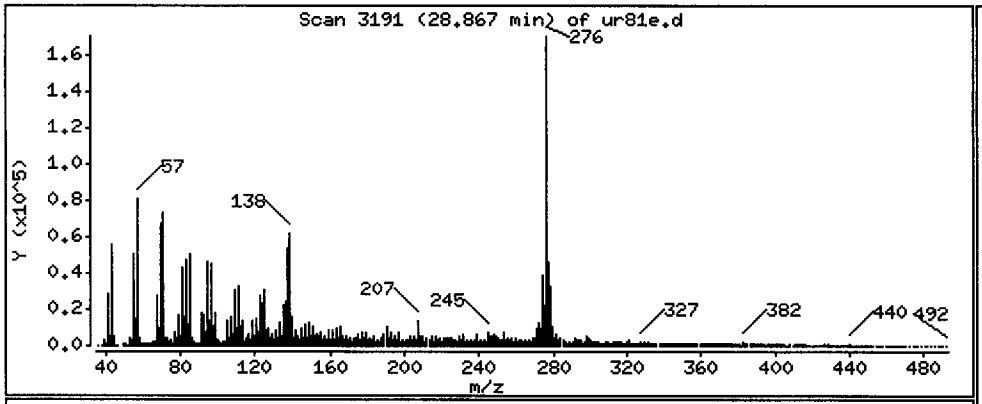
Client ID: IJ12-04 Instrument: nt10.i

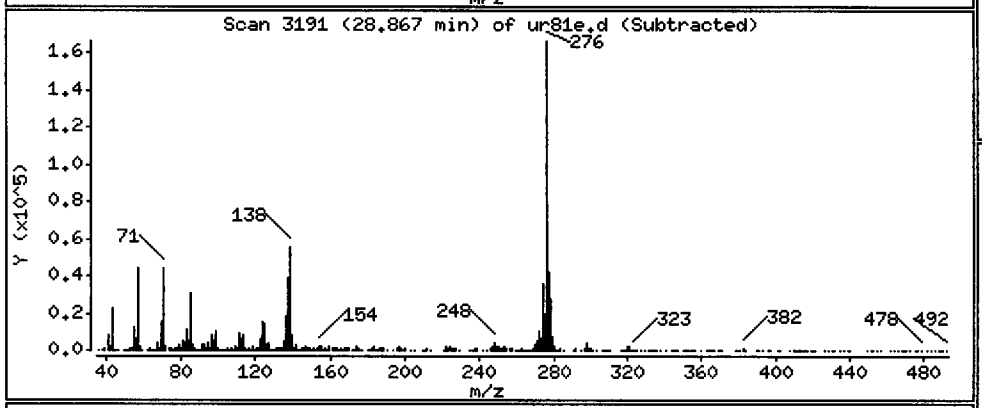
Sample Info: UR81E

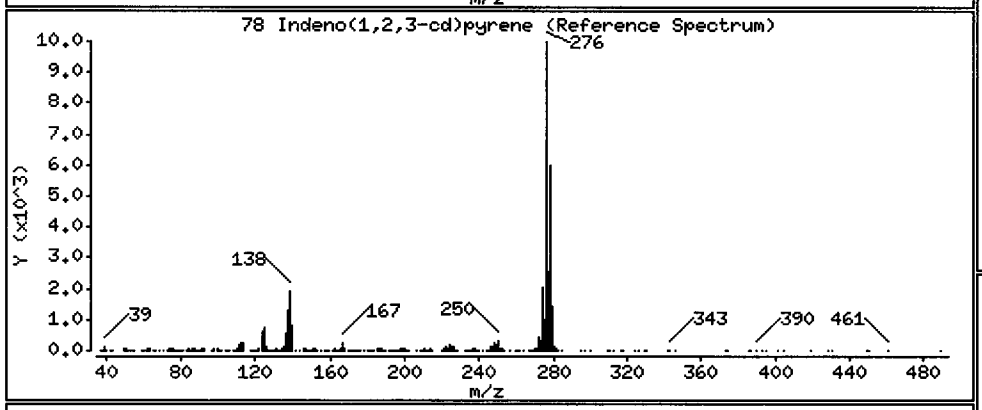
Volume Injected (uL): 1.0 Operator: VTS/YZ

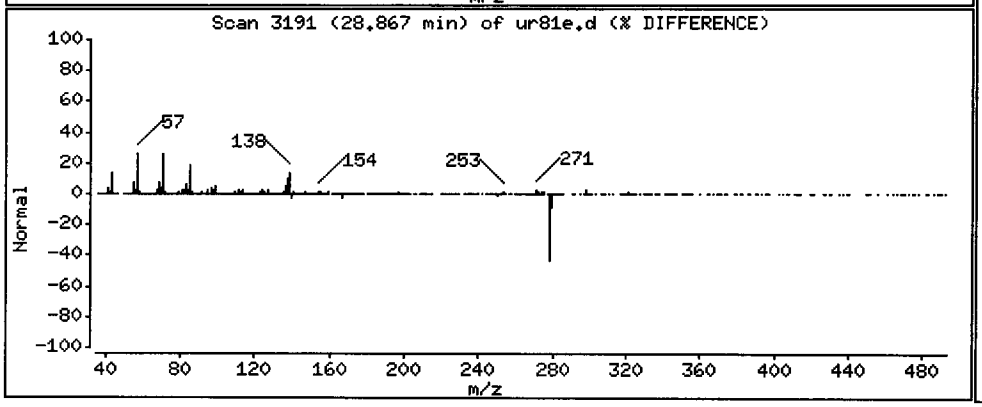
Column phase: ZB-5msi Column diameter: 0.25

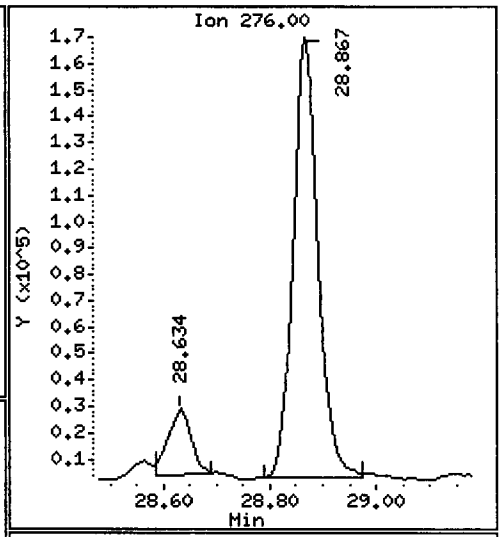
78 Indeno(1,2,3-cd)pyrene Concentration: 219.6 ug/kg

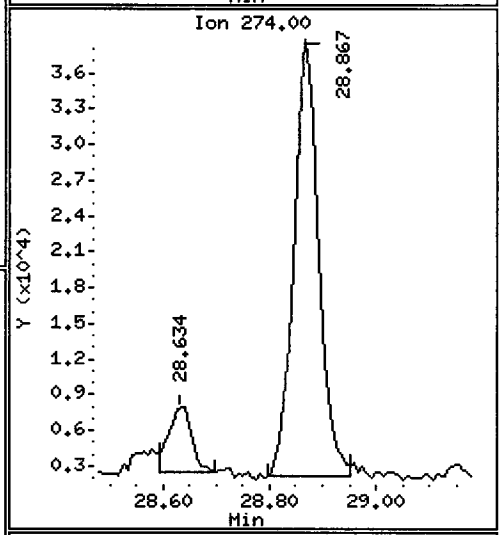


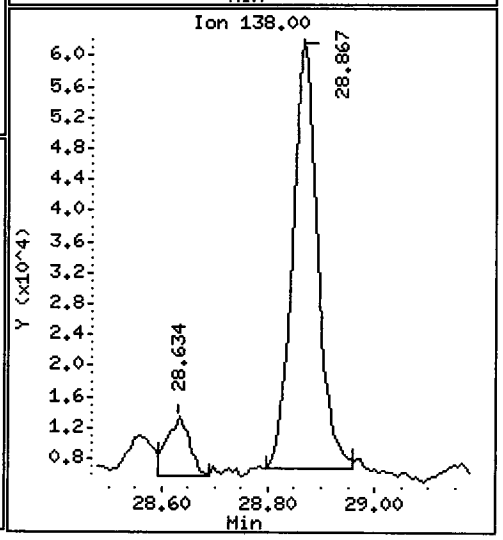












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

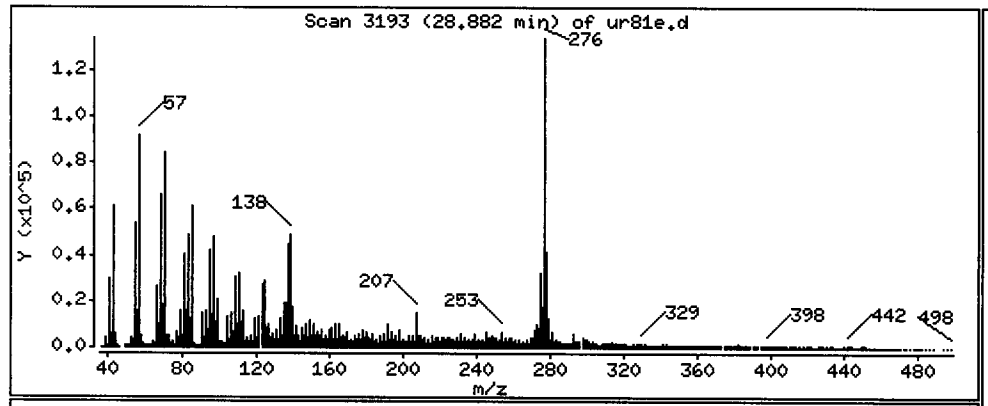
Operator: VTS/YZ

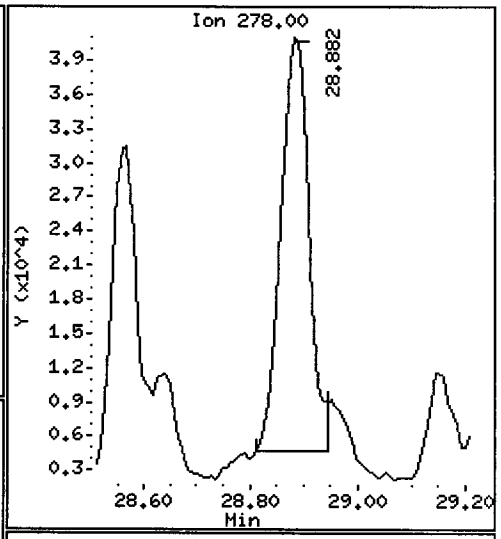
Column phase: ZB-5msi

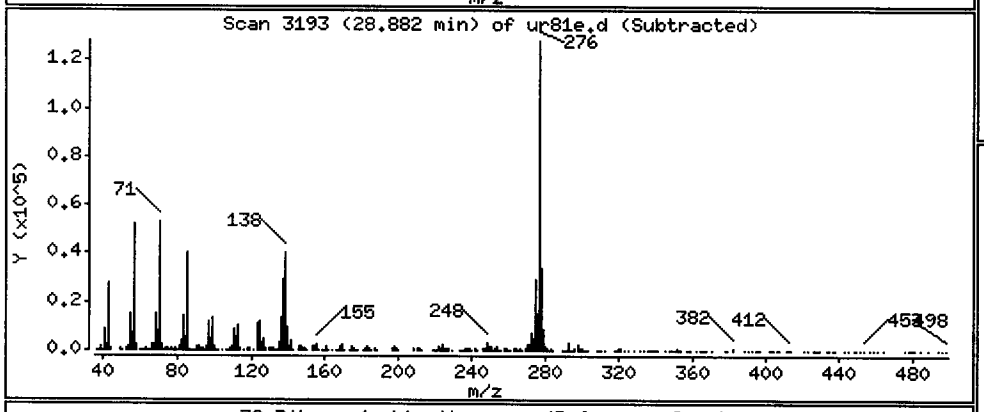
Column diameter: 0.25

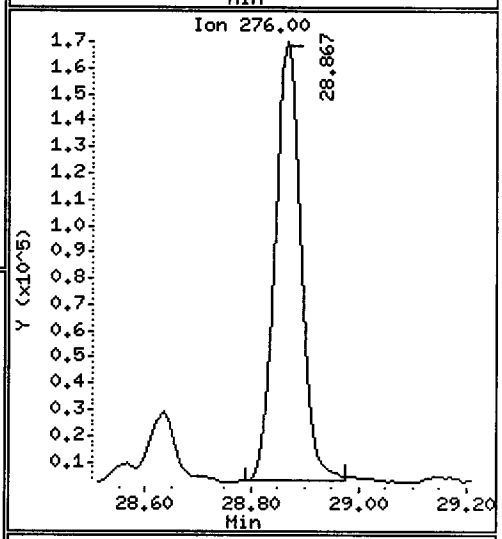
79 Dibenzo(a,h)anthracene

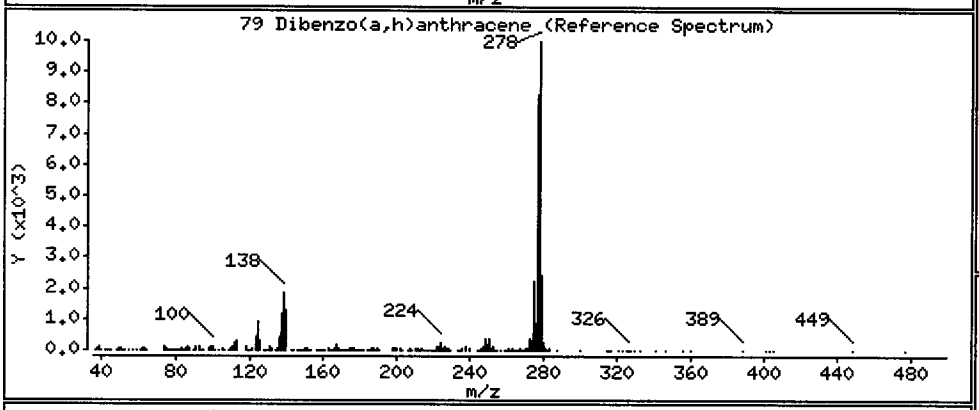
Concentration: 67.93 ug/kg

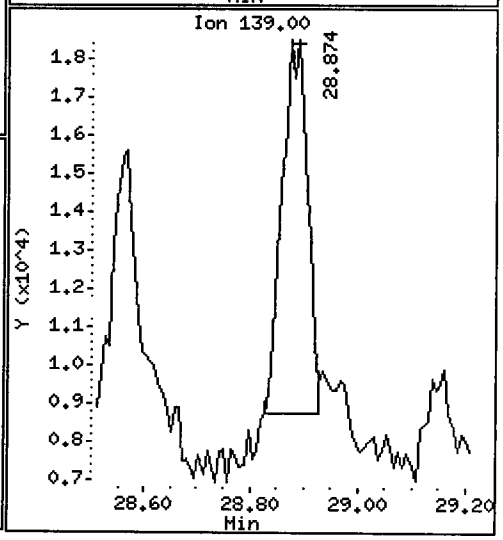


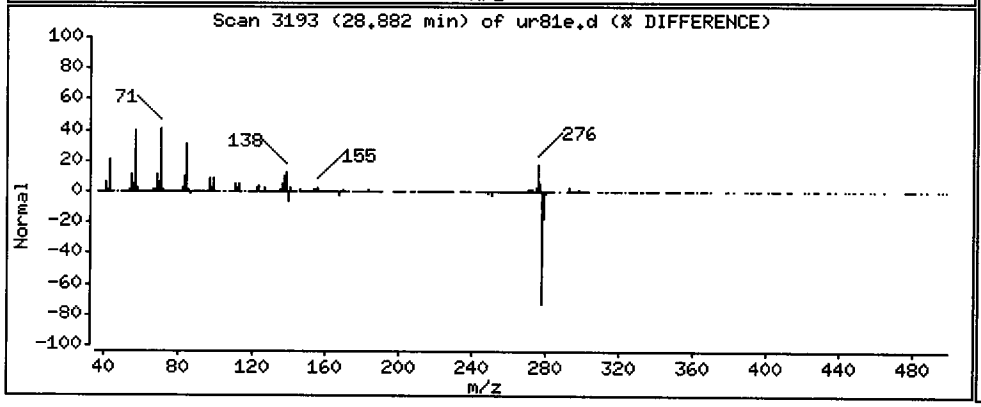












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

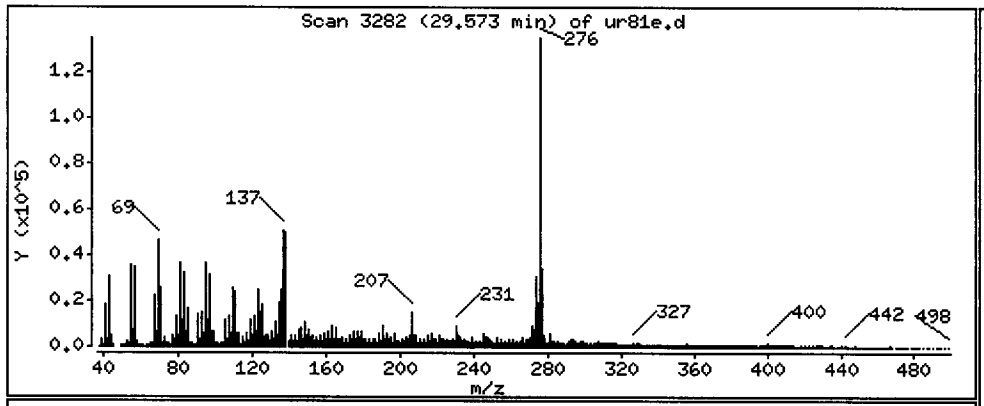
Operator: VTS/YZ

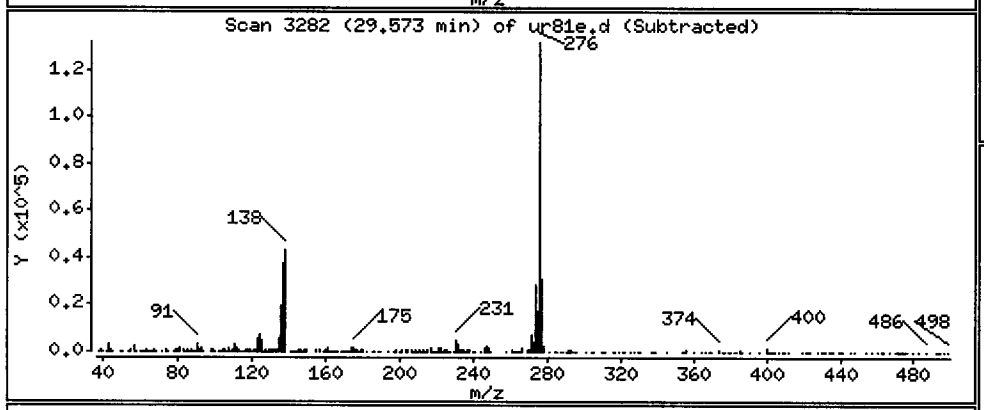
Column phase: ZB-5msi

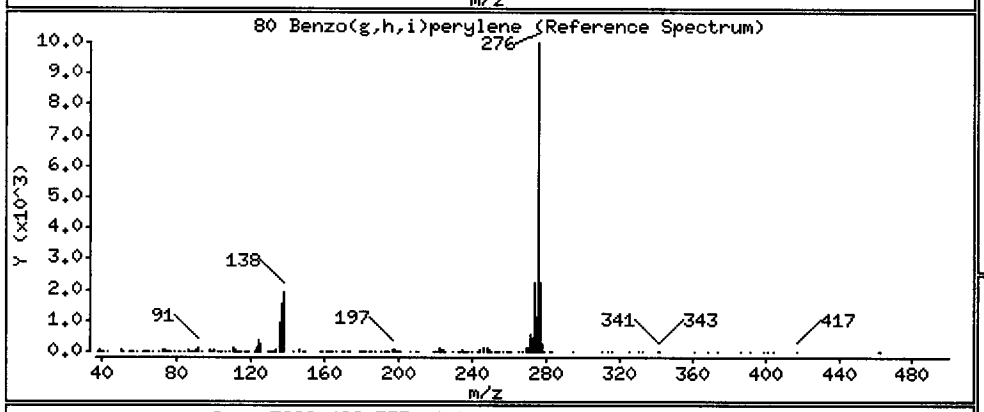
Column diameter: 0.25

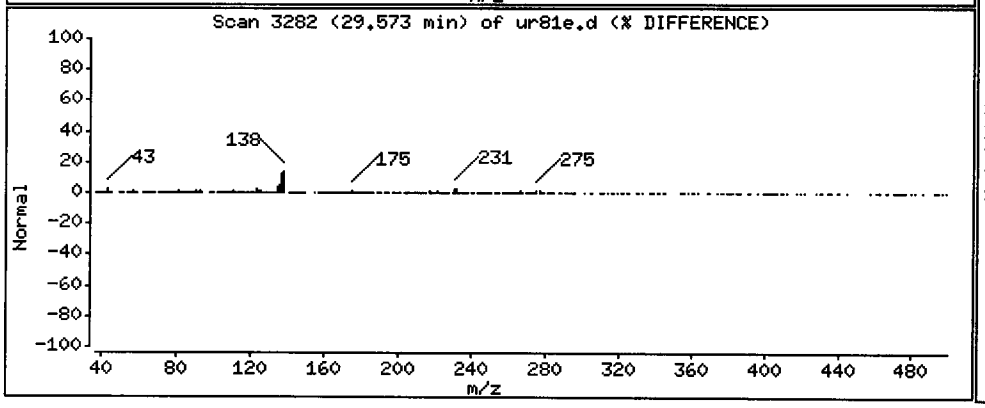
80 Benzo(g,h,i)perylene

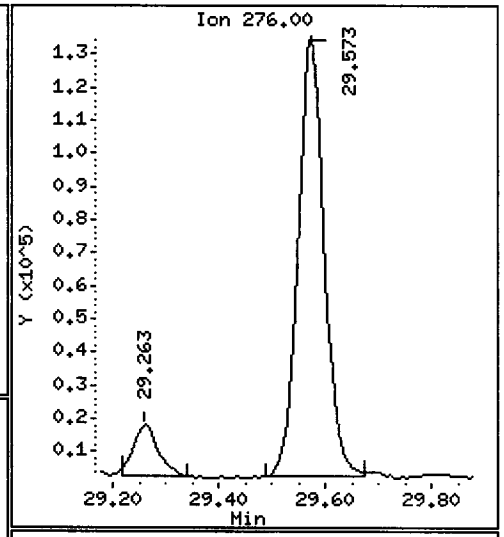
Concentration: 209.6 ug/kg

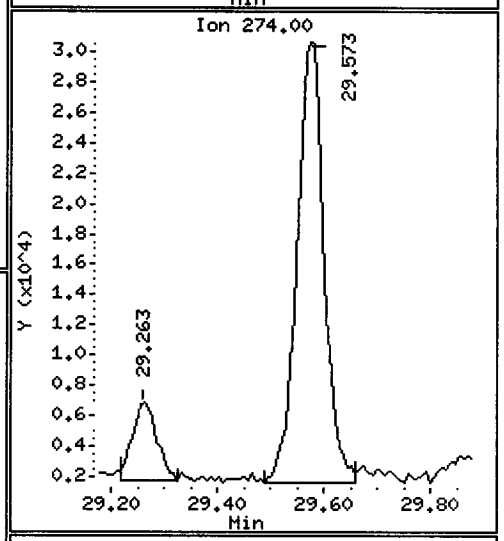


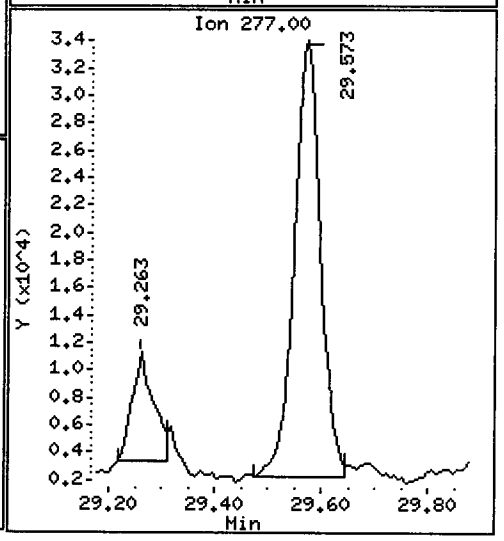












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

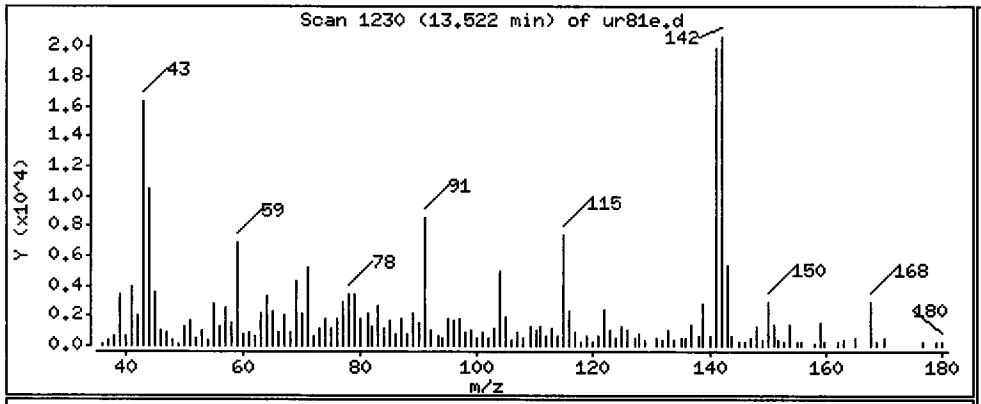
Operator: VTS/YZ

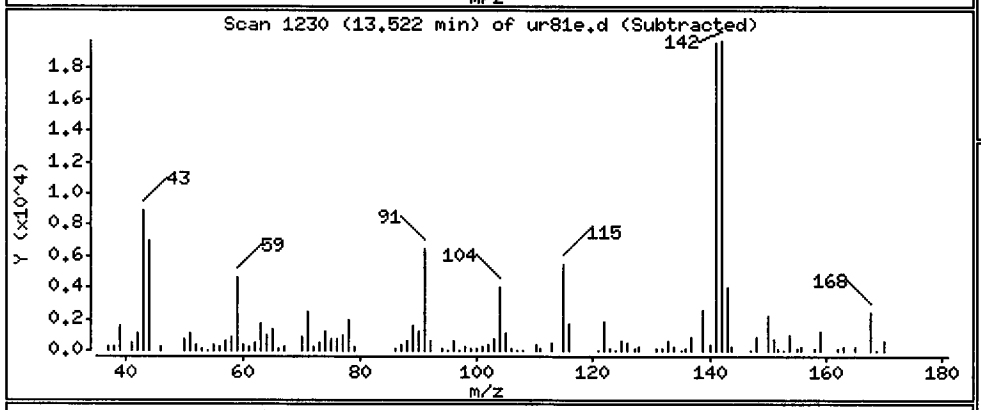
Column phase: ZB-5msi

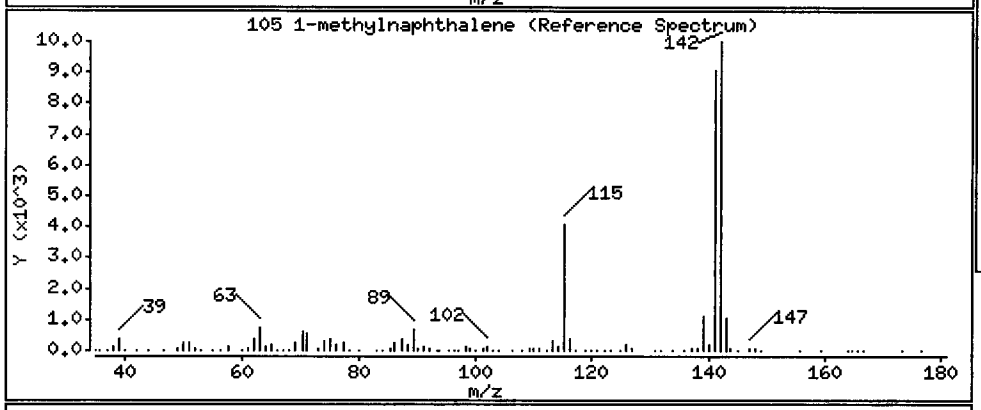
Column diameter: 0.25

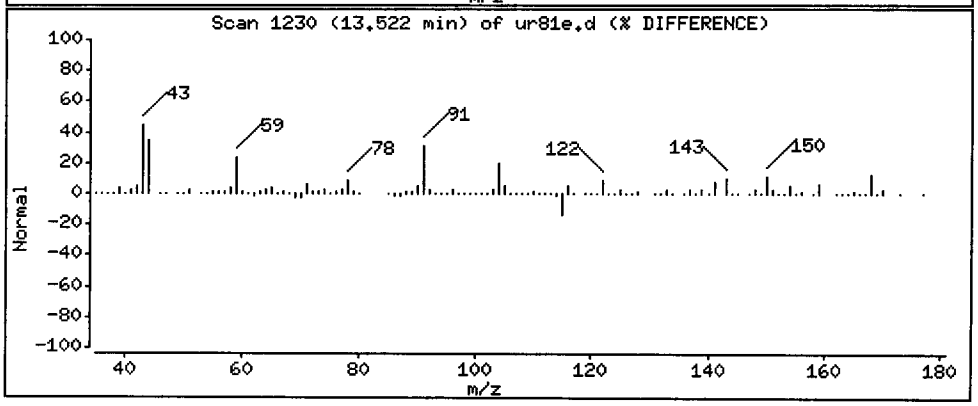
105 1-methylnaphthalene

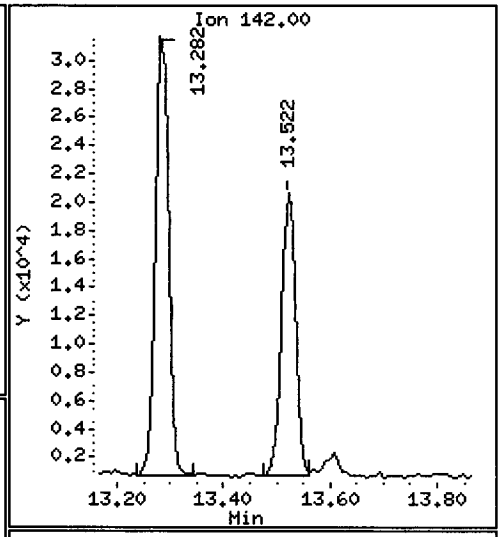
Concentration: 19.04 ug/kg

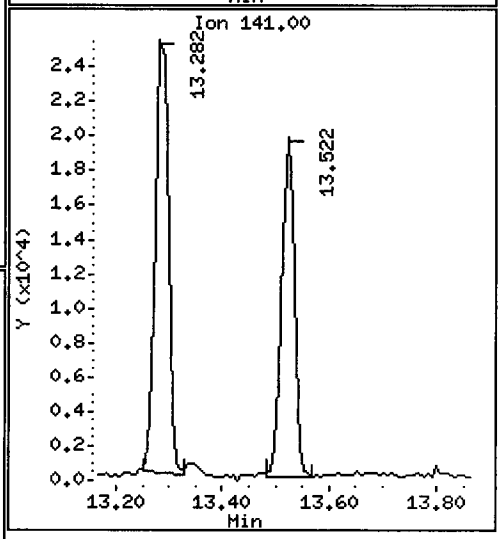












Data File: /chem1/nt10.i/20120508.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

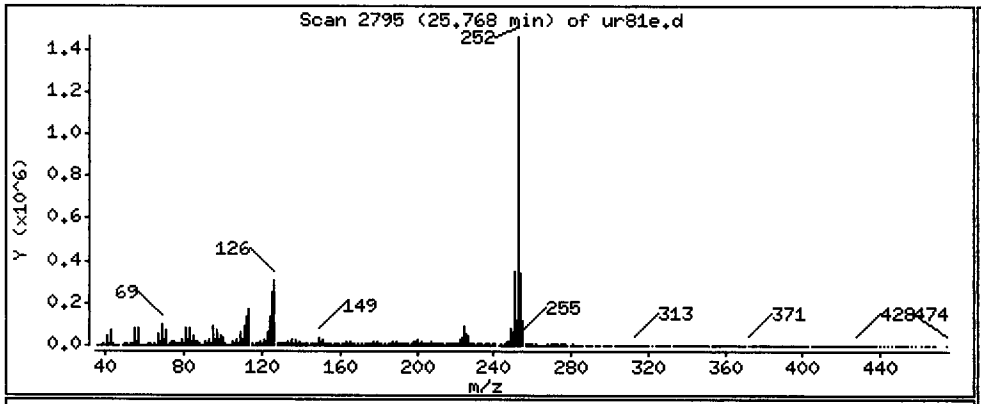
Operator: VTS/YZ

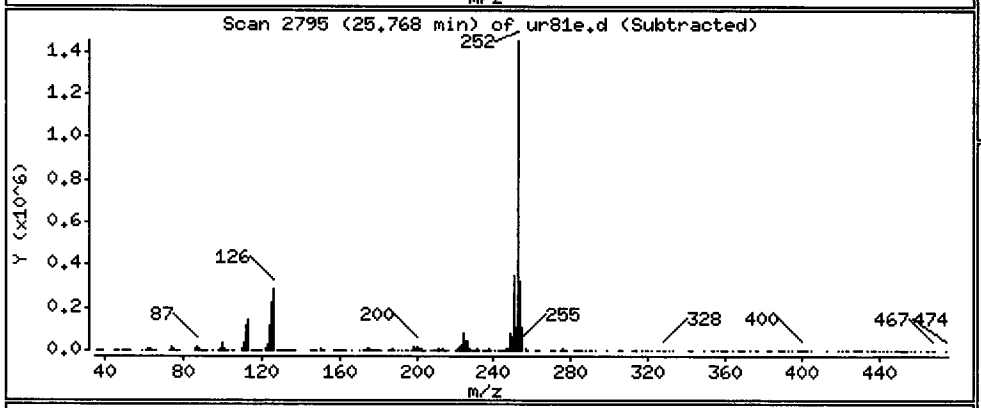
Column phase: ZB-5msi

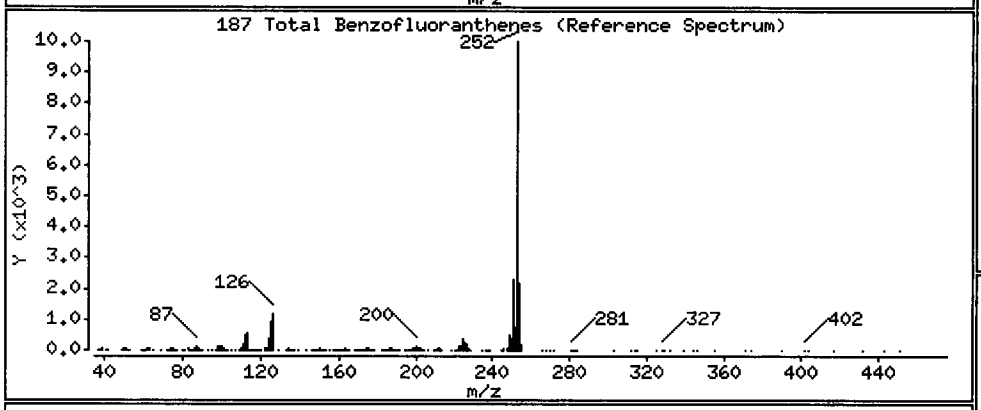
Column diameter: 0.25

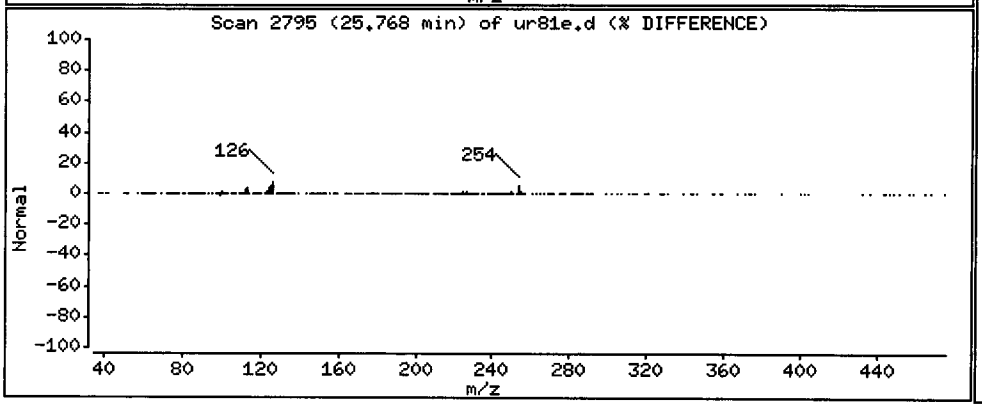
187 Total Benzofluoranthenes

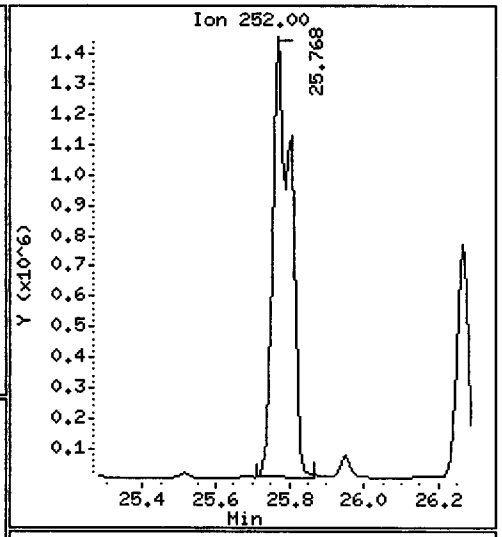
Concentration: 1974 ug/kg

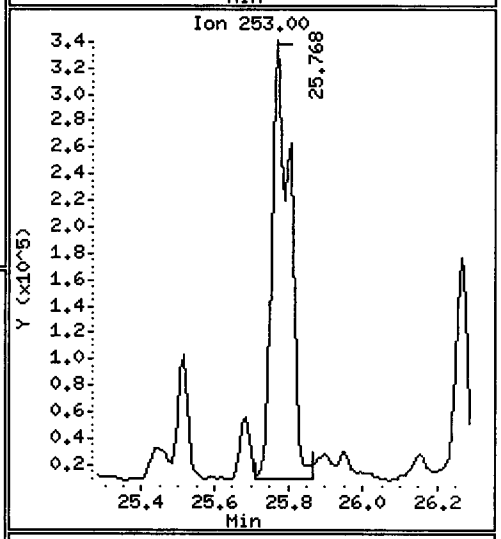


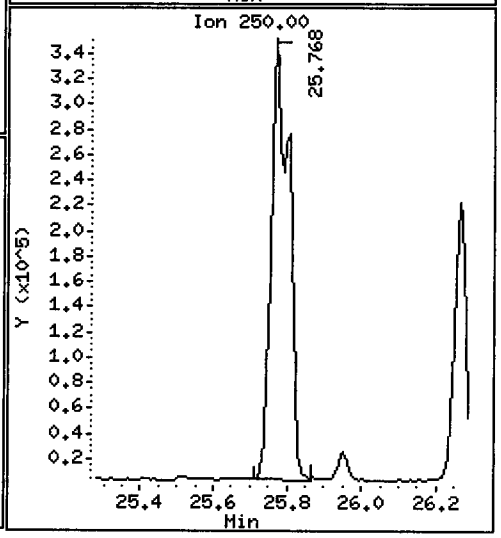












CO-ELUTION SUMMARY FOR FILE - ur81e.d

Lab ID: UR81E, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ - 5/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81f.d
Lab Smp Id: UR81F
Client Smp ID: IJ12-07
Inj Date : 08-MAY-2012 22:10
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : UR81F
Misc Info : 12-7397
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	23.00000	Weight of sample extracted (g)
M	56.10000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.698	6.667	(0.740)	335766	4.38184	434.0
$ 2 Phenol-d5	99	8.414	8.398	(0.929)	423742	4.44729	440.5
3 Phenol	94	8.437	8.421	(0.932)	36645	0.35089	34.75
$ 5 2-Chlorophenol-d4	132	8.669	8.653	(0.957)	373963	4.53499	449.1
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.056	9.040	(1.000)	224001	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.042)	159874	2.86119	283.4
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.366	9.350	(1.034)	16685	0.34283	33.95
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.933	9.909	(1.097)	42543	0.49641	49.16
$ 18 Nitrobenzene-d5	82	10.236	10.228	(0.873)	233488	3.08963	306.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	11624	0.14810	14.67
	24 Benzoic acid	105	11.195	11.303	(0.955)	37482	0.61575	60.98(H)
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.727	11.719	(1.000)	883880	4.00000	
	28 Naphthalene	128	11.774	11.766	(1.004)	84763	0.38400	38.03
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.290	13.282	(1.133)	37083	0.24497	24.26
$	36 2-Fluorobiphenyl	172	14.157	14.149	(0.905)	516805	3.11334	308.3
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	15.302	15.286	(0.978)	24698	0.11452	11.34
*	42 Acenaphthene-d10	164	15.642	15.627	(1.000)	486626	4.00000	
	44 Acenaphthene	153	15.712	15.696	(1.004)	13725	0.10662	10.56
	46 Dibenzofuran	168	16.067	16.060	(1.027)	44817	0.23393	23.17
	50 Diethylphthalate	149	16.740	16.732	(1.070)	28561	0.20096	19.90
	49 Fluorene	166	16.841	16.833	(1.077)	30759	0.21045	20.84
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.427	17.411	(1.114)	117148	5.24735	519.7
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.918	18.903	(1.000)	763786	4.00000	
	60 Phenanthrene	178	18.972	18.957	(1.003)	138615	0.73388	72.68
	61 Anthracene	178	19.065	19.050	(1.008)	57016	0.28598	28.32
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.402	21.363	(1.131)	455585	2.11912	209.9
	65 Pyrene	202	21.804	21.781	(0.909)	418416	1.72264	170.6
$	66 Terphenyl-d14	244	22.114	22.098	(0.922)	512131	3.36244	333.0
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	23.949	23.941	(0.999)	130374	0.59813	59.24
*	69 Chrysene-d12	240	23.980	23.964	(1.000)	803757	4.00000	
	71 Chrysene	228	24.026	24.010	(1.002)	248690	1.27812	126.6
	72 bis(2-Ethylhexyl)phthalate	149	24.096	24.080	(0.961)	84738	0.52204	51.70
*	134 Di-n-octylphthalate-d4	153	25.071	25.056	(1.000)	1248364	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.349	26.333	(0.996)	79305	0.42986	42.57
*	77 Perylene-d12	264	26.465	26.441	(1.000)	759449	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.859	28.828	(1.090)	46611	0.22203	21.99
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	29.566	29.527	(1.117)	39742	0.21896	21.69
	105 1-methylnaphthalene	142	13.530	13.514	(1.154)	24380	0.15794	15.64
	187 Total Benzofluoranthenes	252	25.760	25.783	(0.973)	281721	1.36345	135.0

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81f.d
Lab Smp Id: UR81F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7397

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-07
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	224001	-17.61
27 Naphthalene-d8	1080694	540347	2161388	883880	-18.21
42 Acenaphthene-d10	623821	311910	1247642	486626	-21.99
59 Phenanthrene-d10	999143	499572	1998286	763786	-23.56
69 Chrysene-d12	1001009	500504	2002018	803757	-19.71
134 Di-n-octylphthala	1489422	744711	2978844	1248364	-16.18
77 Perylene-d12	988348	494174	1976696	759449	-23.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.06	0.17
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.92	0.08
69 Chrysene-d12	23.96	23.46	24.46	23.98	0.07
134 Di-n-octylphthala	25.06	24.56	25.56	25.07	0.06
77 Perylene-d12	26.44	25.94	26.94	26.46	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81F
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7397

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-07
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	742.8	434.0	58.42	30-160
$ 2 Phenol-d5	742.8	440.5	59.30	30-160
$ 5 2-Chlorophenol-d4	742.8	449.1	60.47	30-160
$ 10 1,2-Dichlorobenzen	495.2	283.4	57.22	30-160
$ 18 Nitrobenzene-d5	495.2	306.0	61.79	30-160
$ 36 2-Fluorobiphenyl	495.2	308.3	62.27	30-160
$ 55 2,4,6-Tribromophen	742.8	519.7	69.96	30-160
$ 66 Terphenyl-d14	495.2	333.0	67.25	30-160

Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

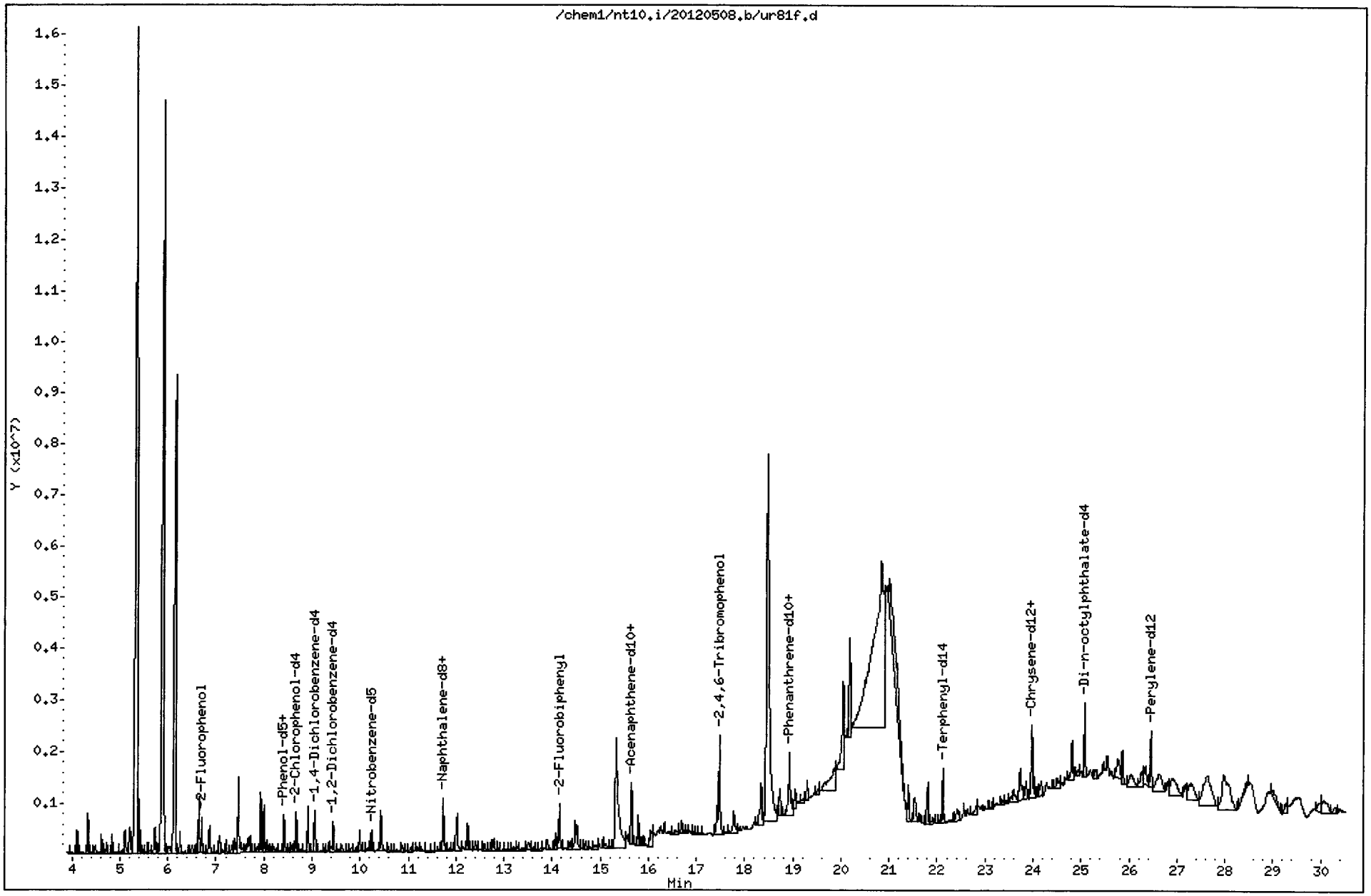
Sample Info: UR81F

Volume Injected (uL): 1.0

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

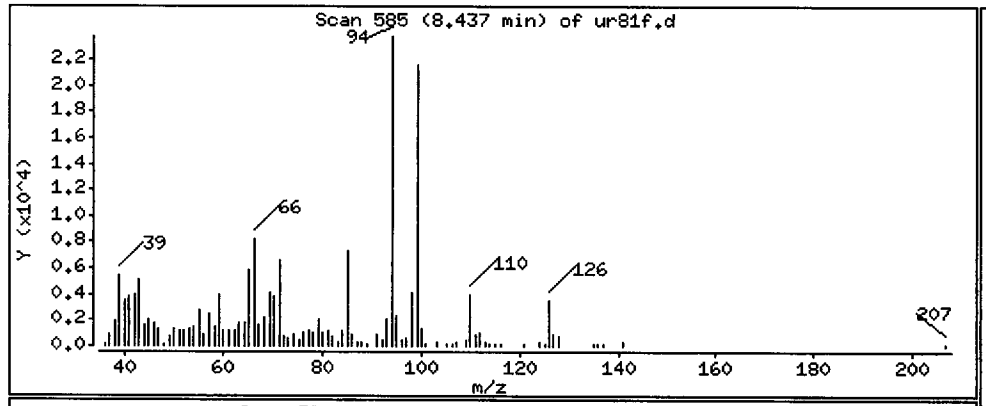
Operator: VTS/YZ

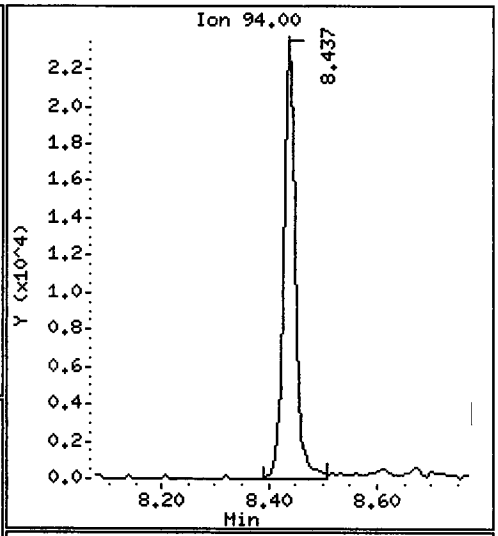
Column phase: ZB-5msi

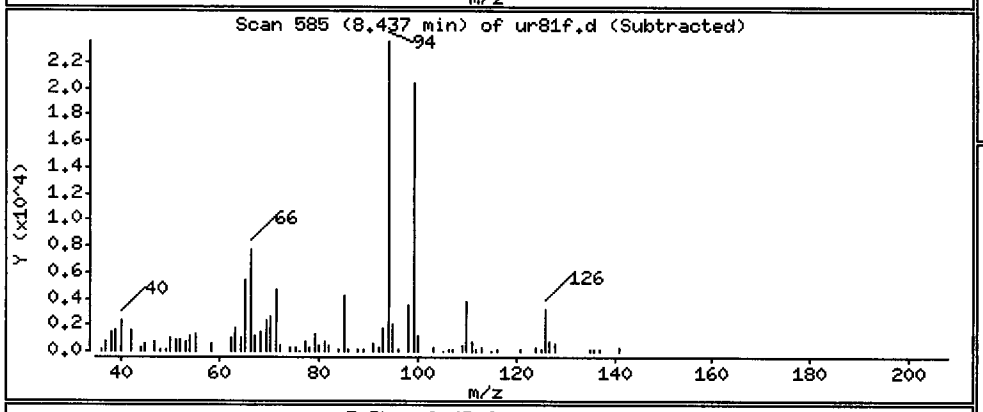
Column diameter: 0.25

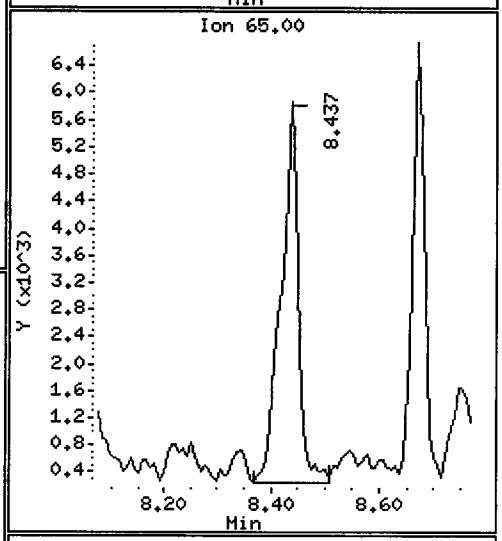
3 Phenol

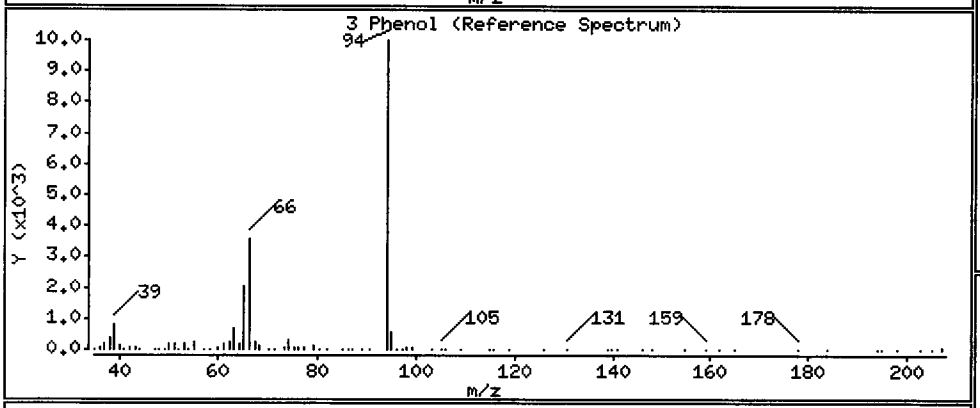
Concentration: 34.75 ug/kg

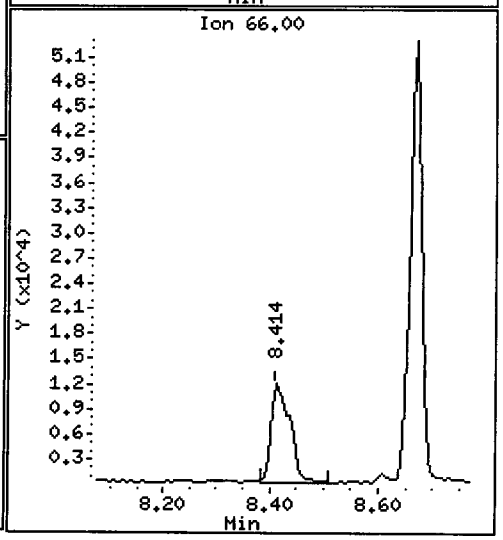


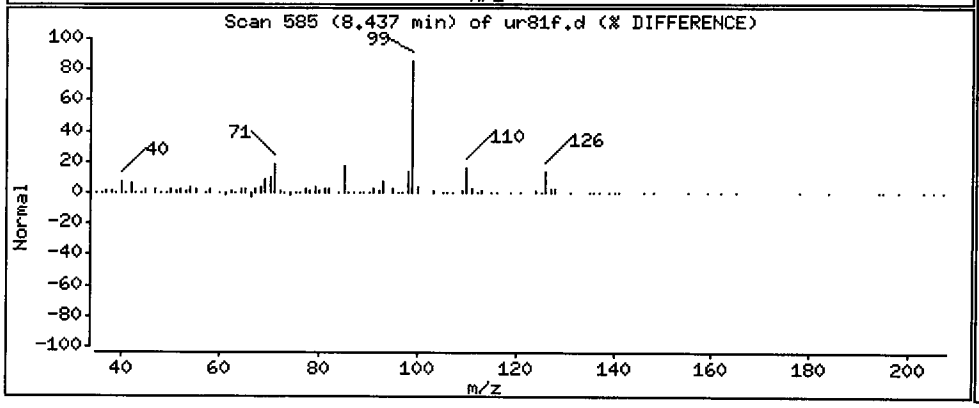












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

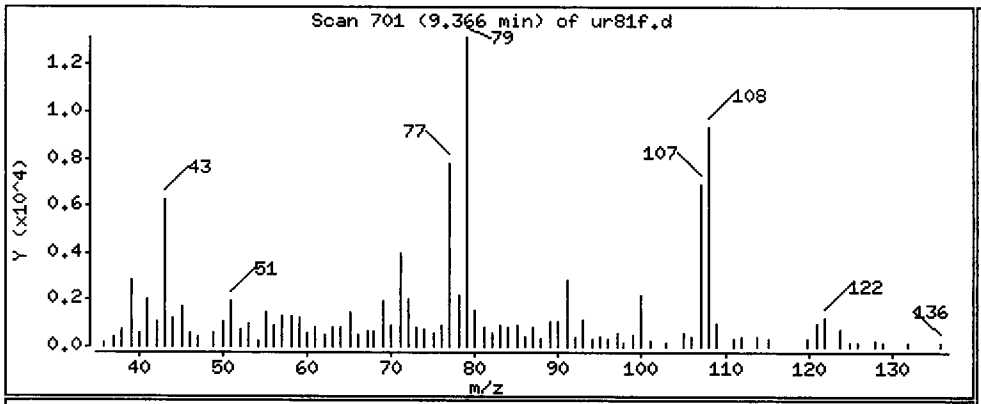
Operator: VTS/YZ

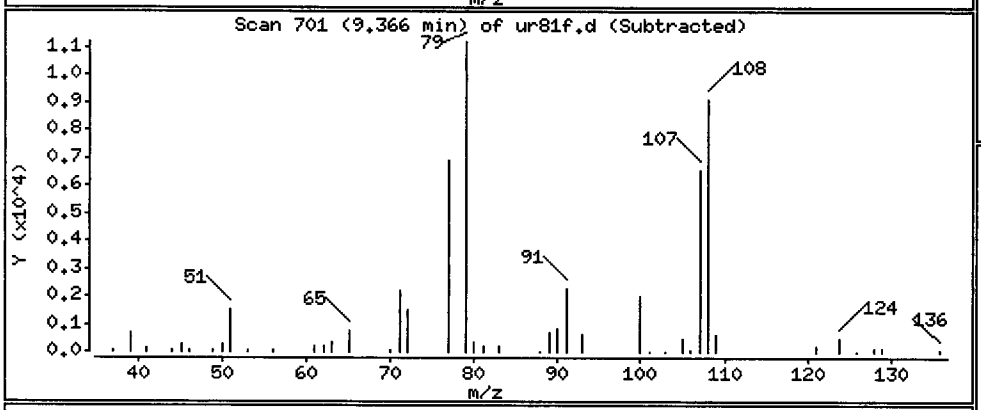
Column phase: ZB-5ms

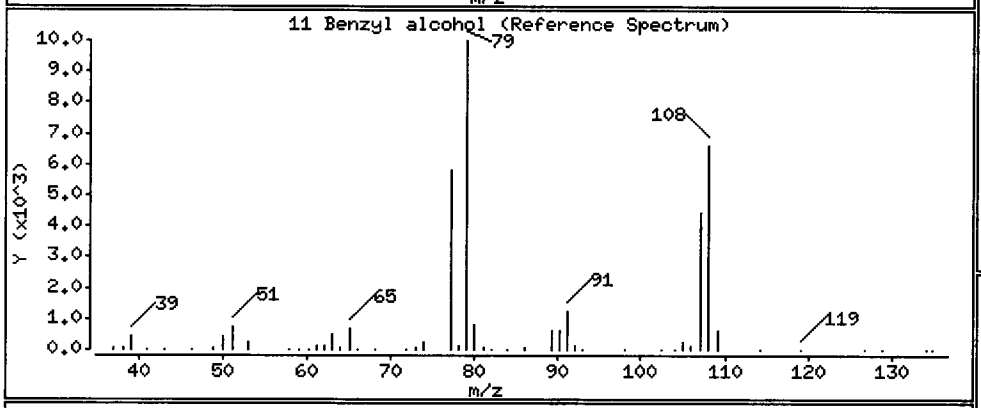
Column diameter: 0.25

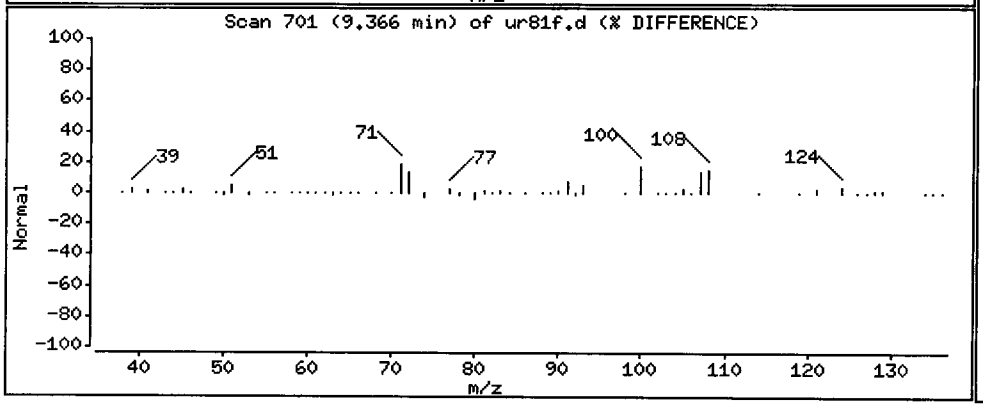
11 Benzyl alcohol

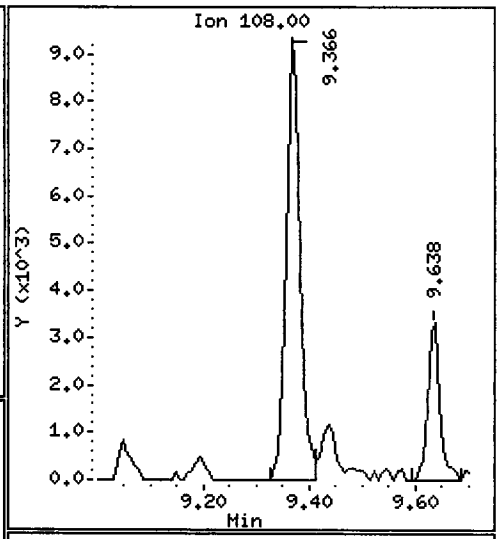
Concentration: 33.95 ug/kg

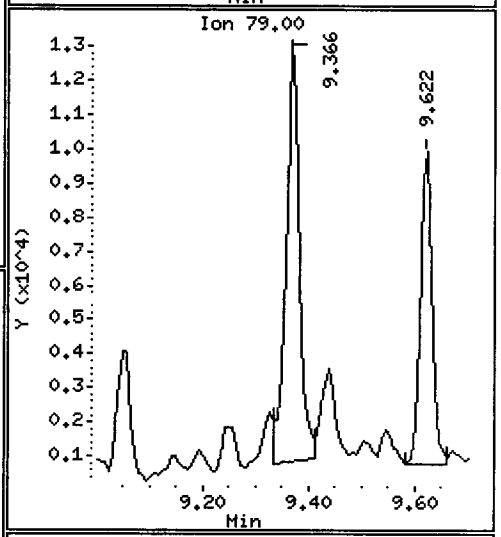


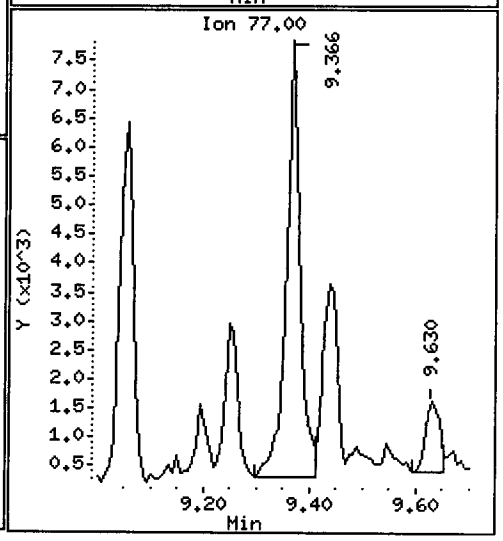












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

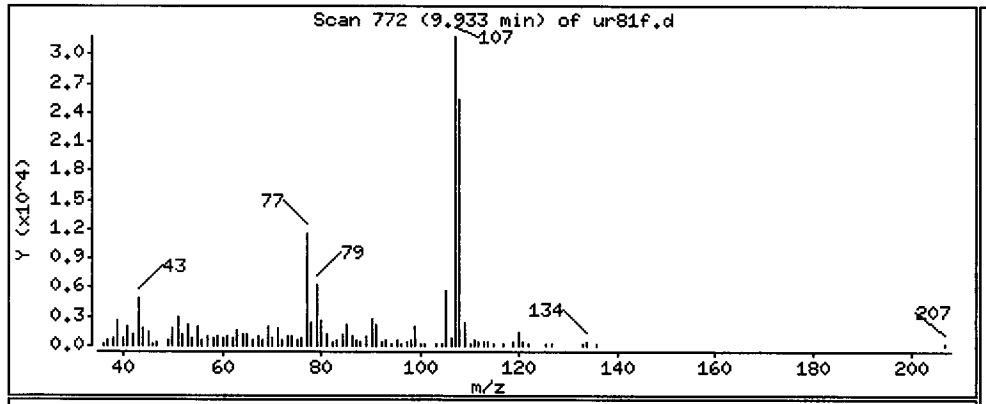
Operator: VTS/YZ

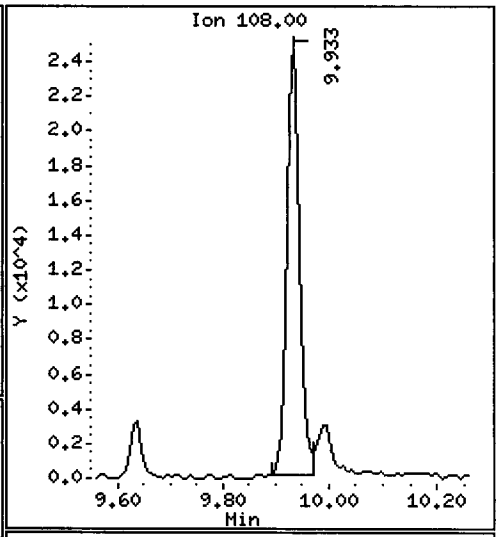
Column phase: ZB-5msi

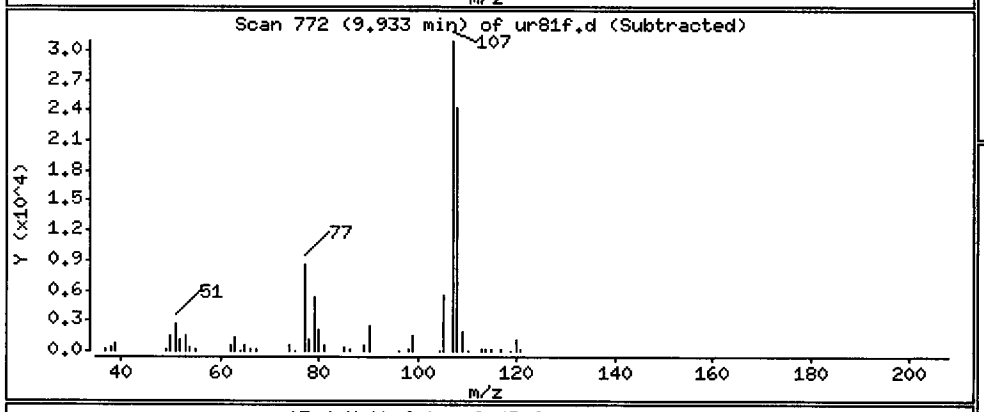
Column diameter: 0.25

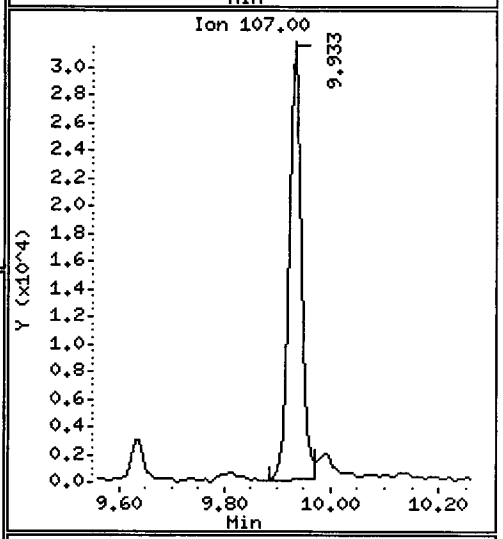
15 4-Methylphenol

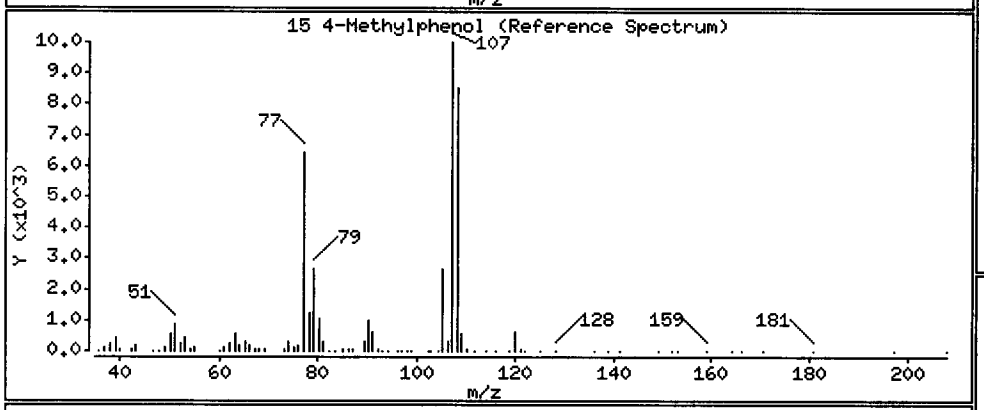
Concentration: 49.16 ug/kg

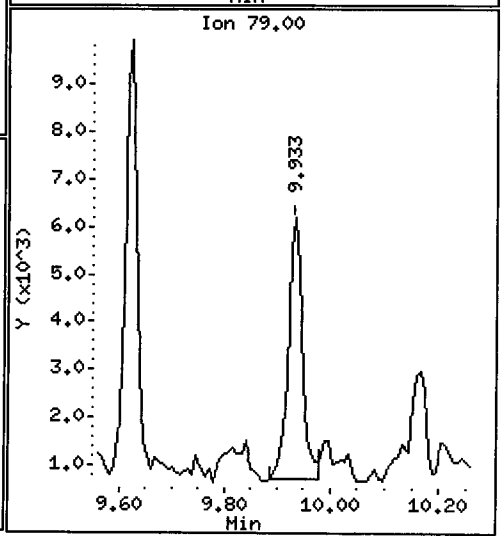


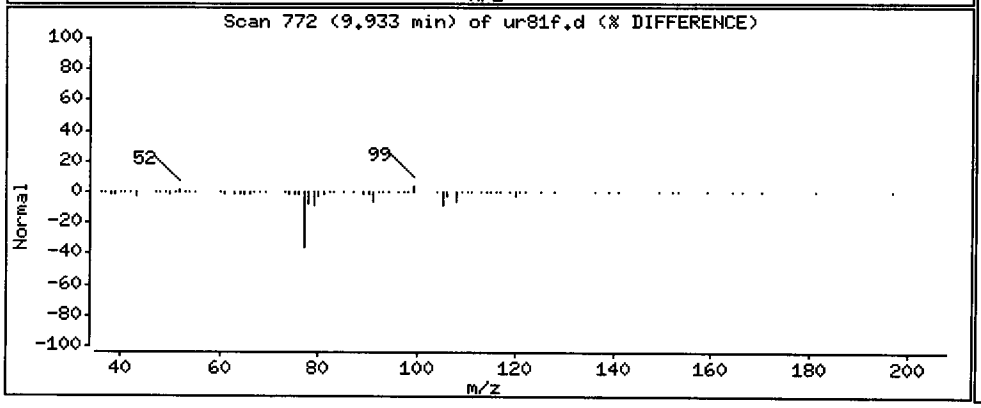












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

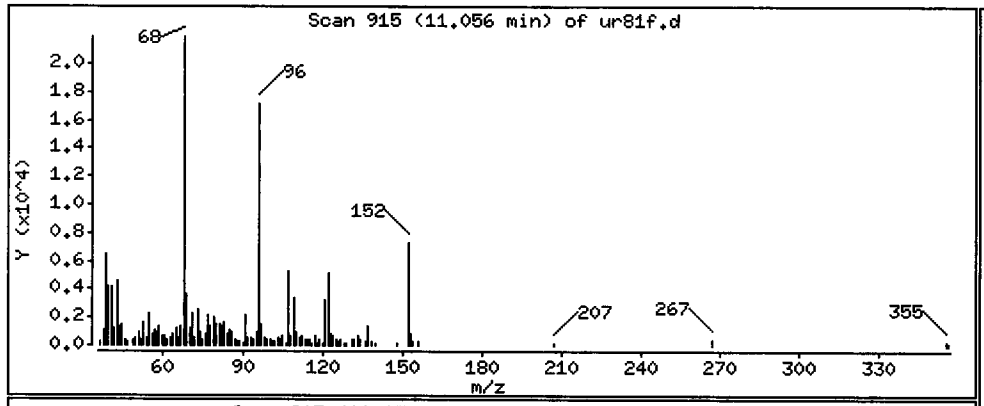
Operator: VTS/YZ

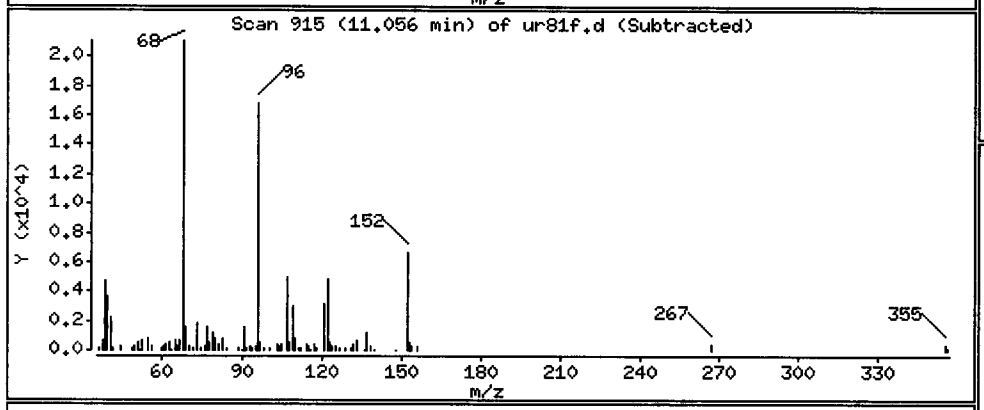
Column phase: ZB-5msi

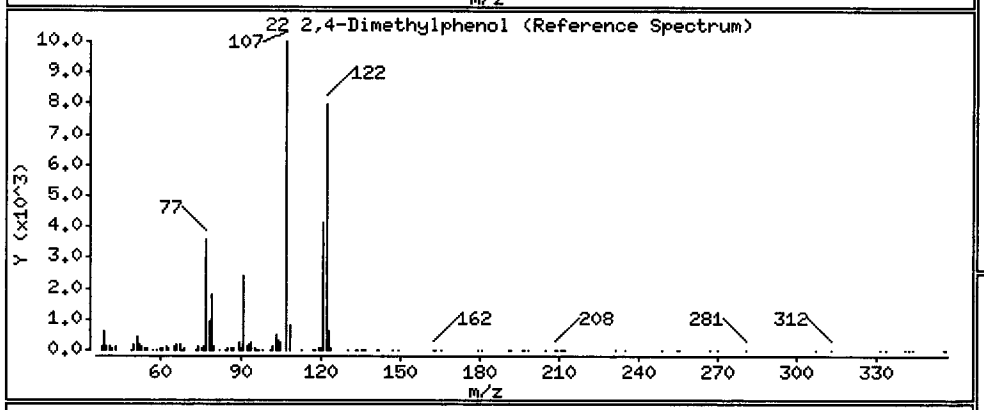
Column diameter: 0.25

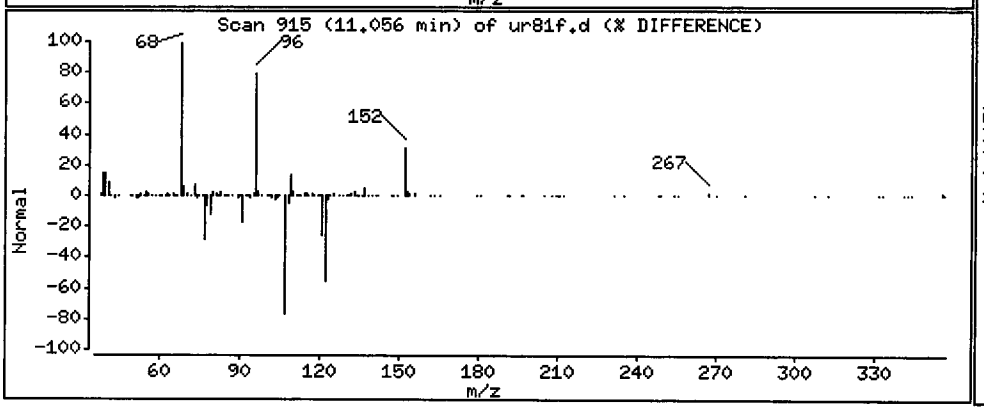
22 2,4-Dimethylphenol

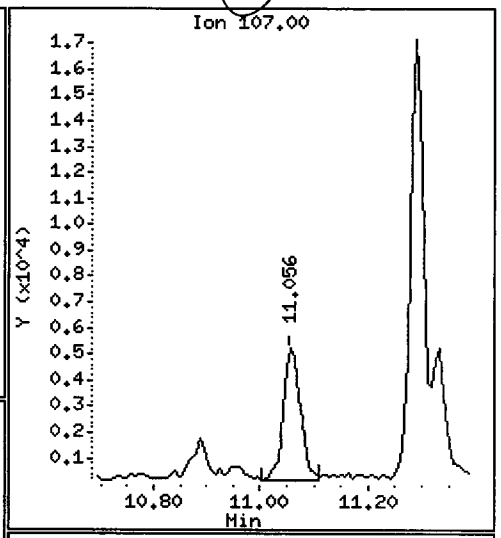
Concentration: 14.67 ug/kg

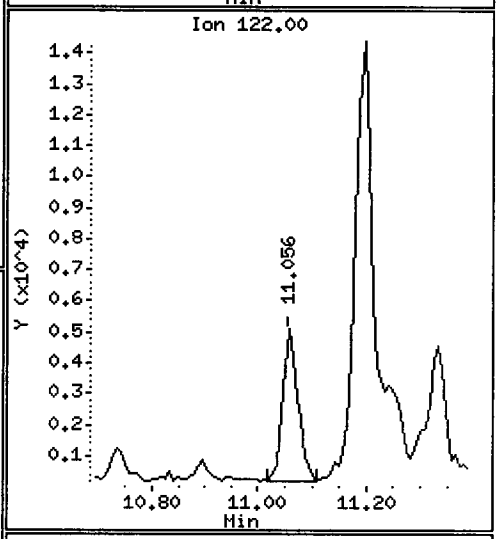


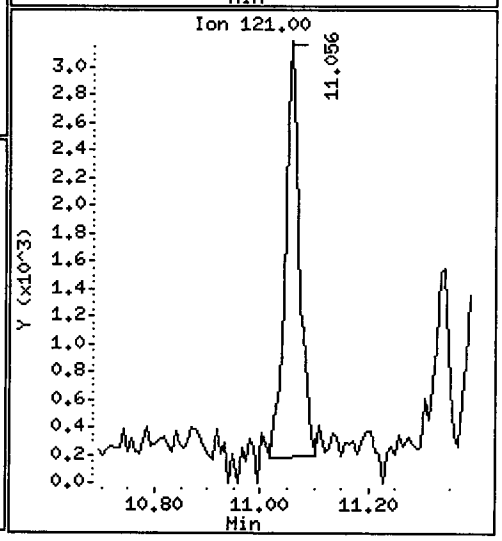












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

Operator: VTS/YZ

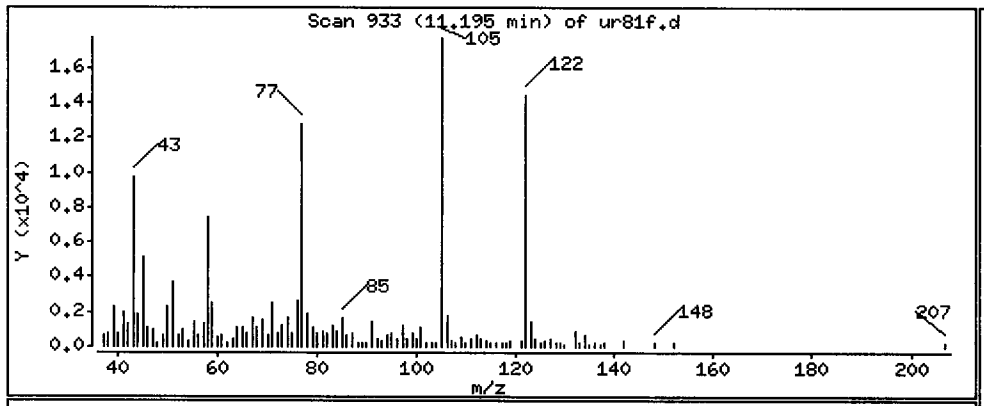
Column phase: ZB-5msi

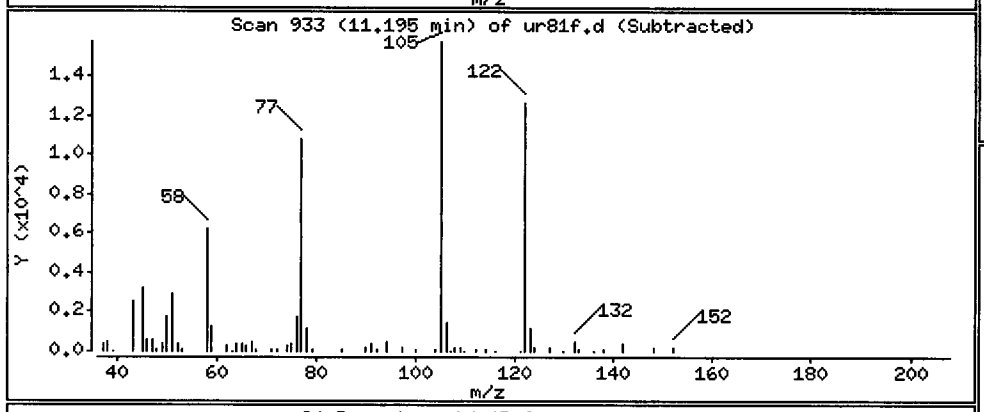
Column diameter: 0.25

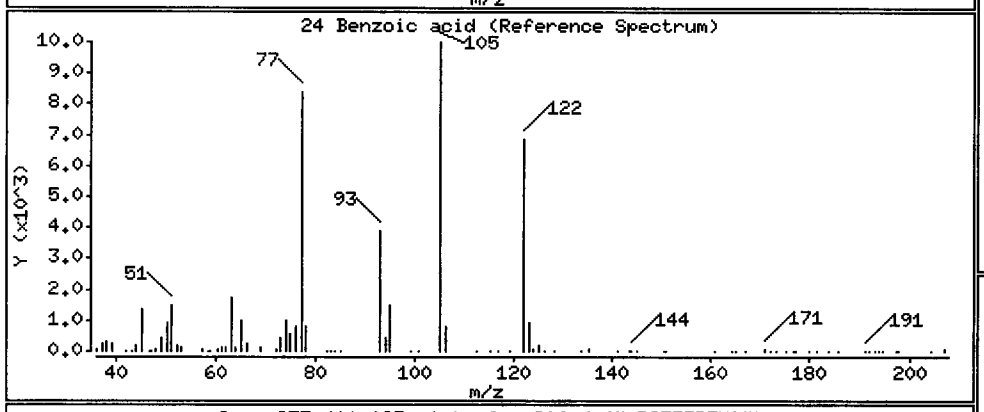
2mpL

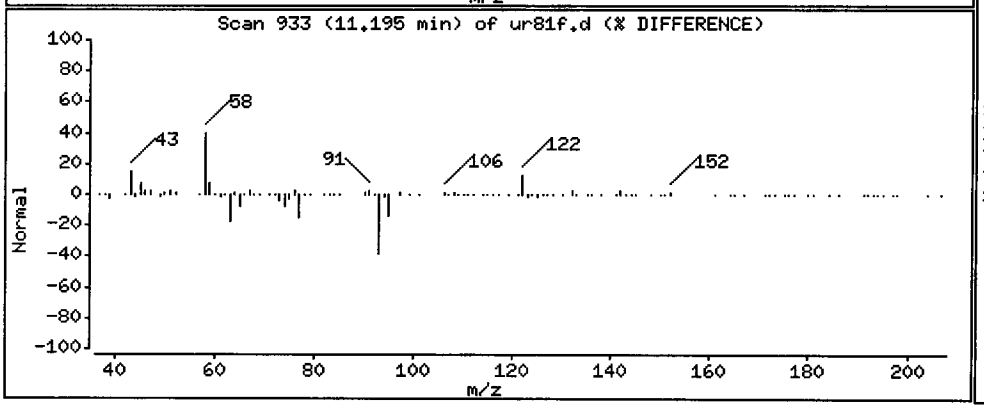
24 Benzoic acid

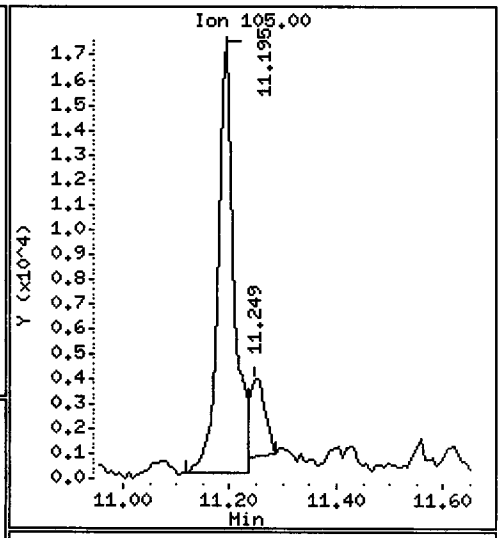
Concentration: 60.98 ug/kg

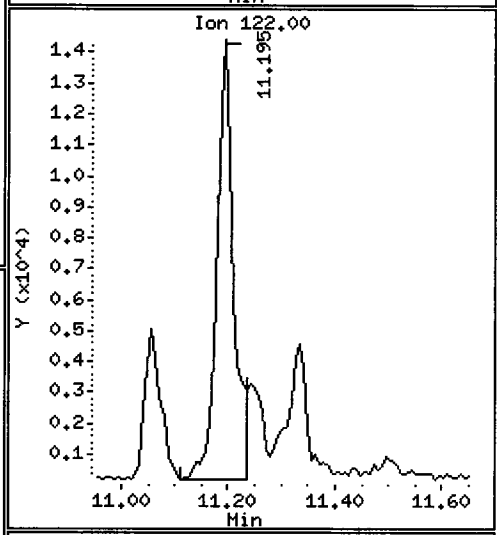


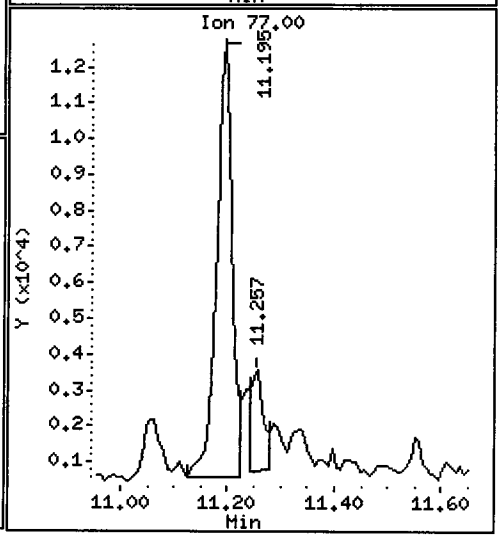












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

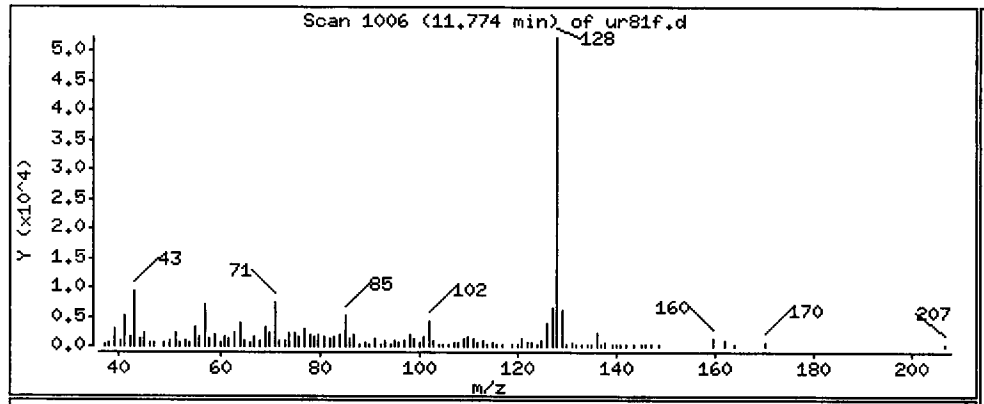
Operator: VTS/YZ

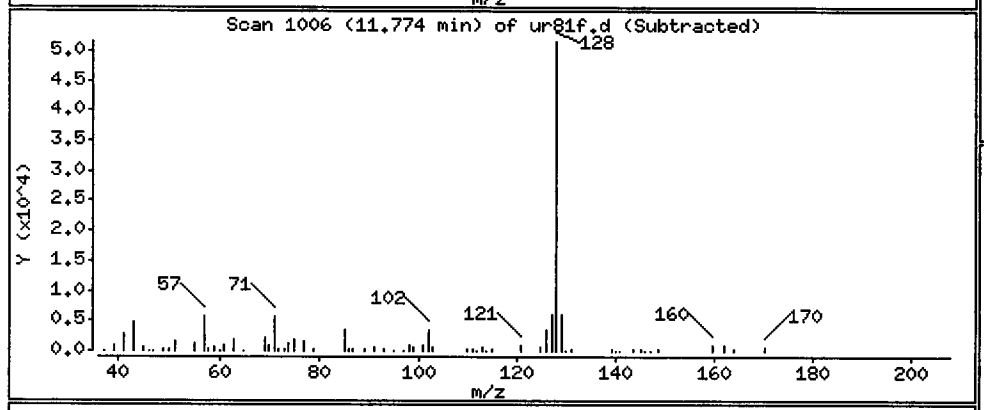
Column phase: ZB-5msi

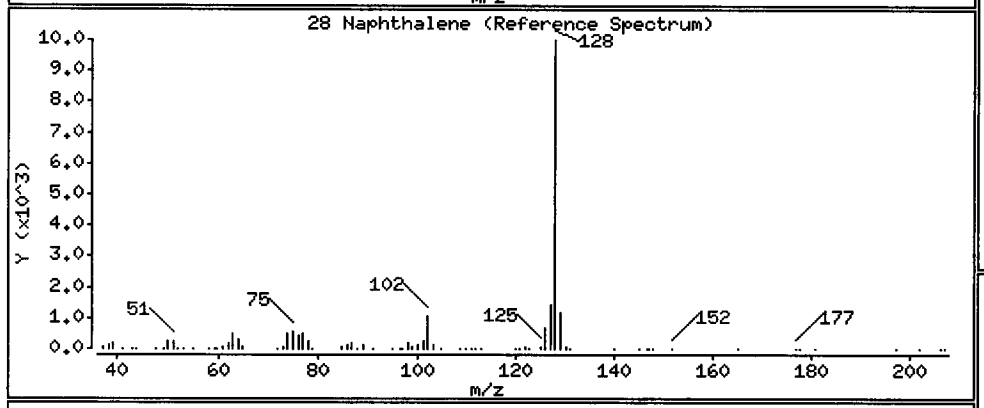
Column diameter: 0.25

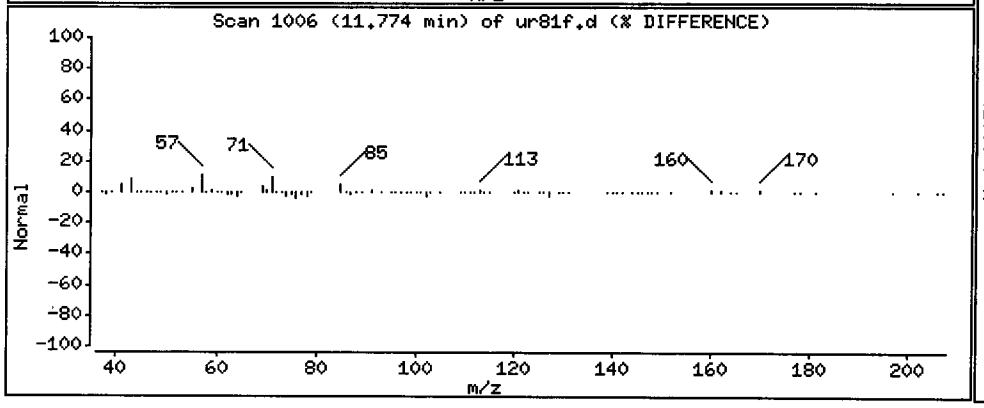
28 Naphthalene

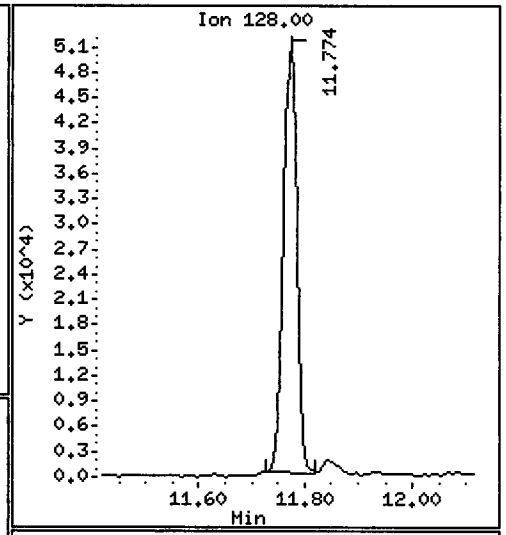
Concentration: 38.03 ug/kg

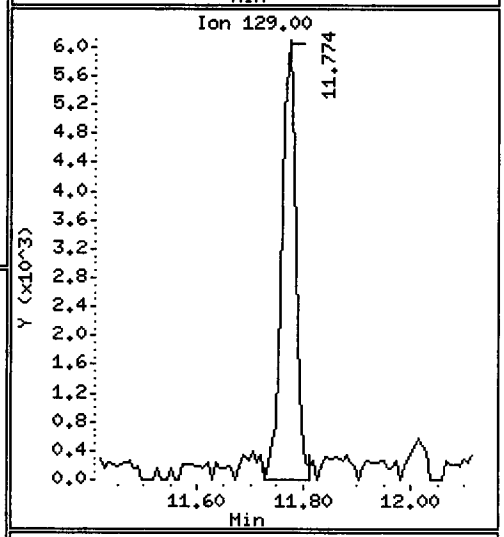


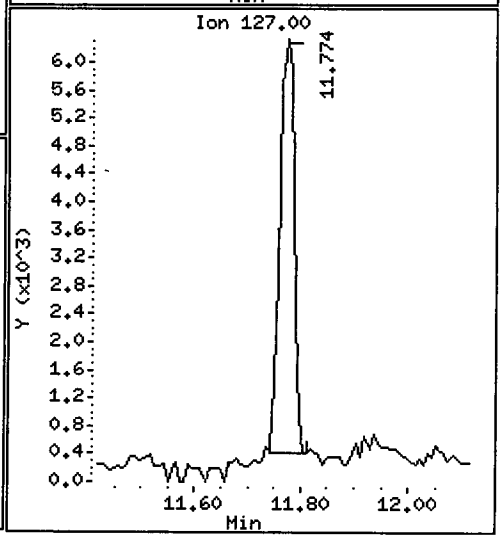












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

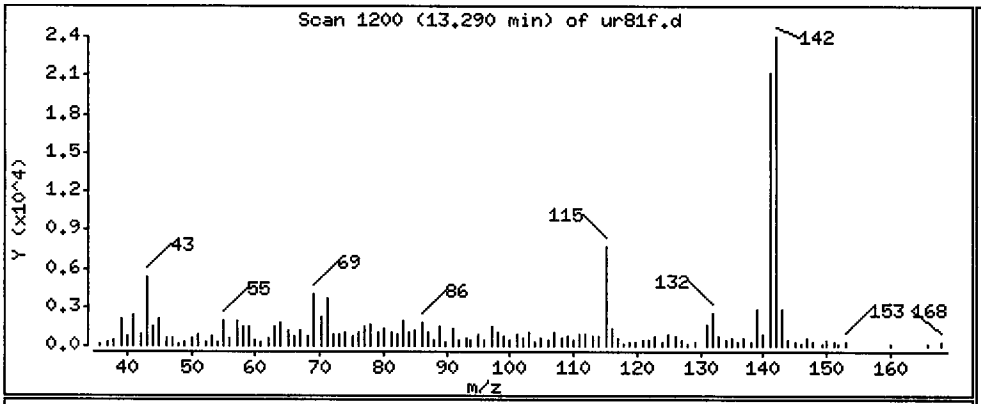
Operator: VTS/YZ

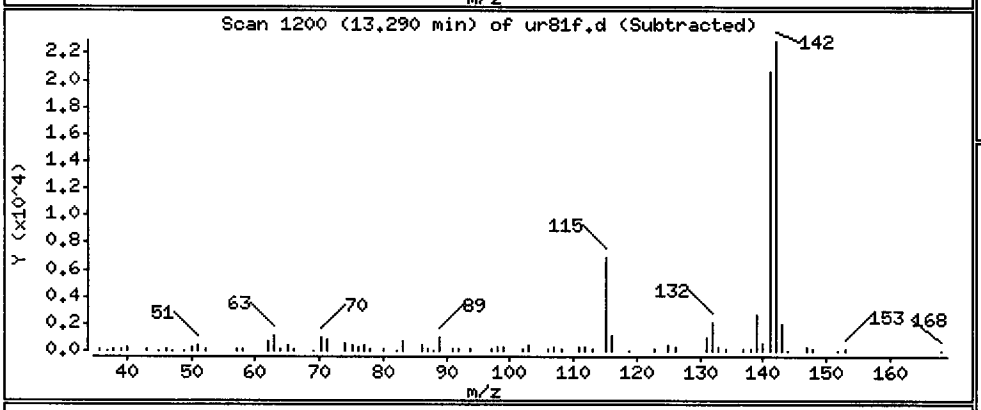
Column phase: ZB-5msi

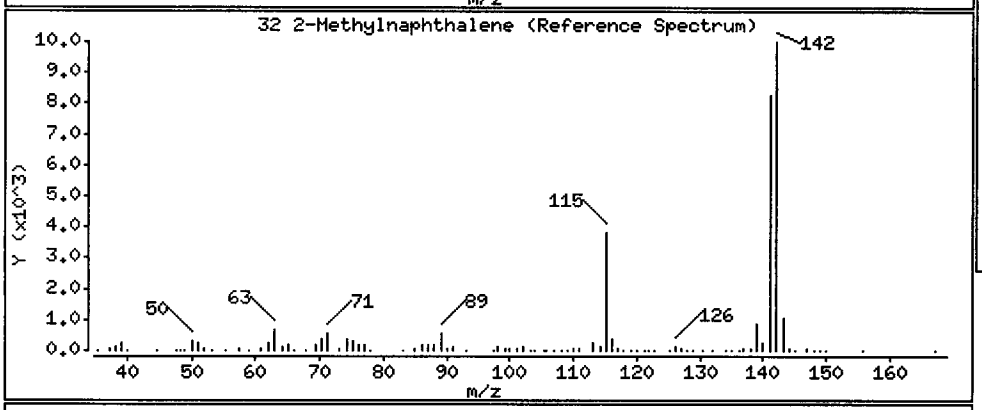
Column diameter: 0.25

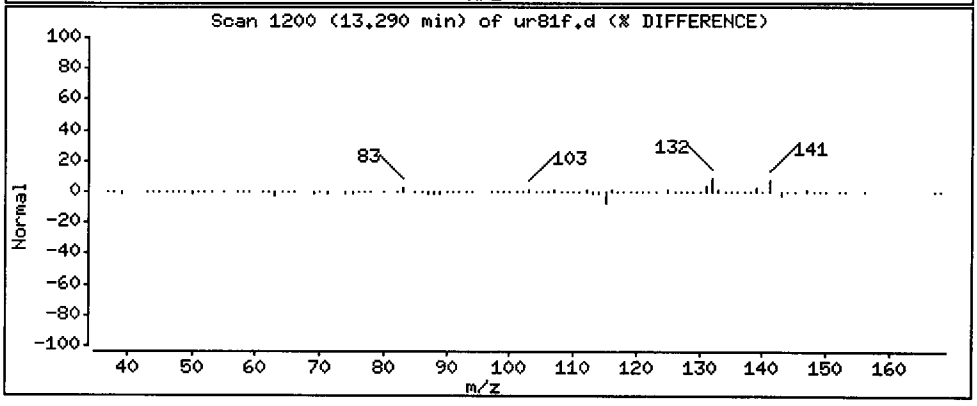
32 2-Methylnaphthalene

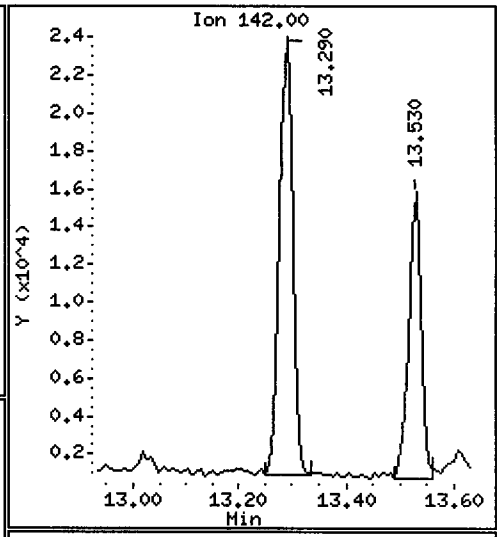
Concentration: 24.26 ug/kg

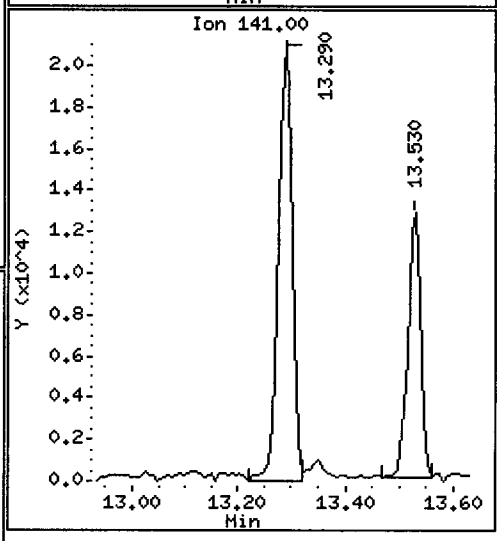












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

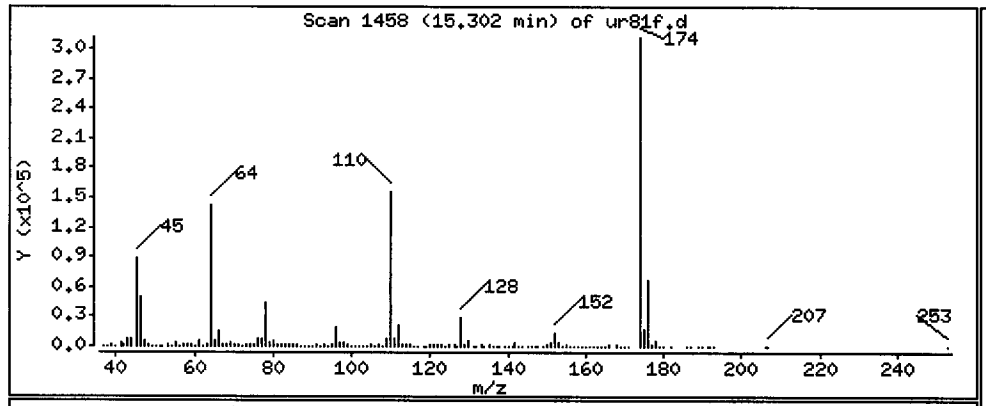
Operator: VTS/YZ

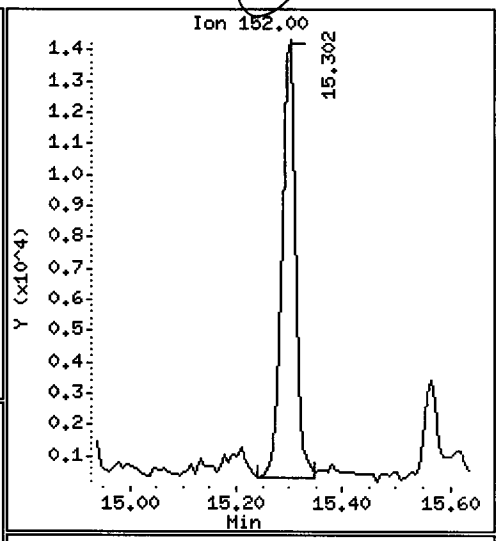
Column phase: ZB-5msi

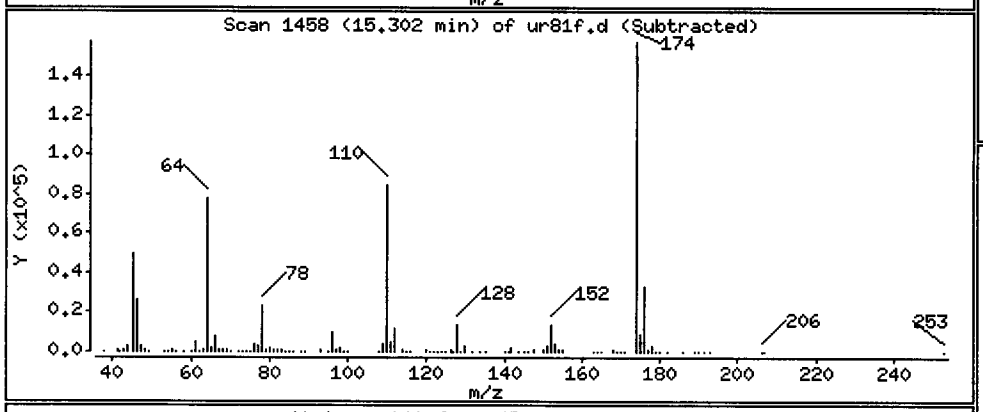
Column diameter: 0.25

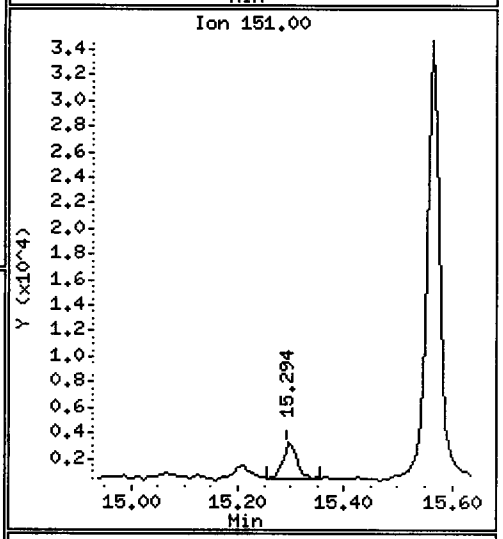
40 Acenaphthylene

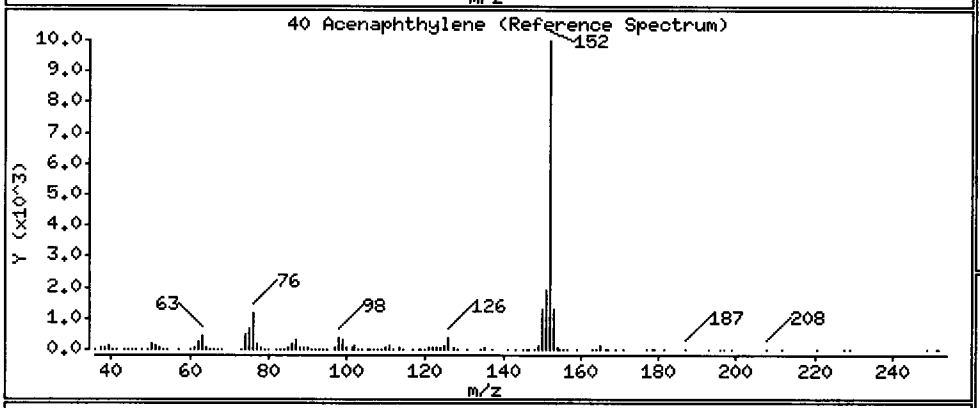
Concentration: 11.34 ug/kg

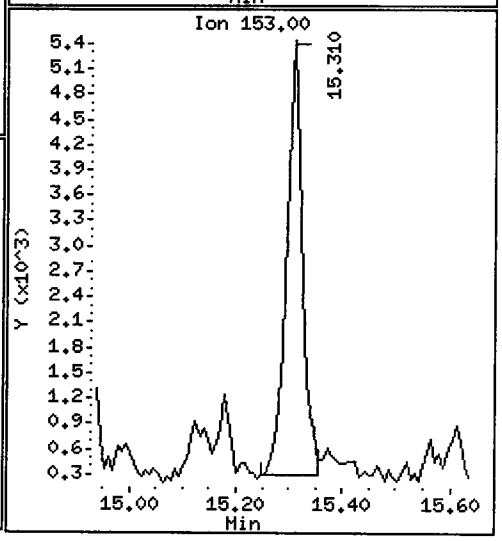


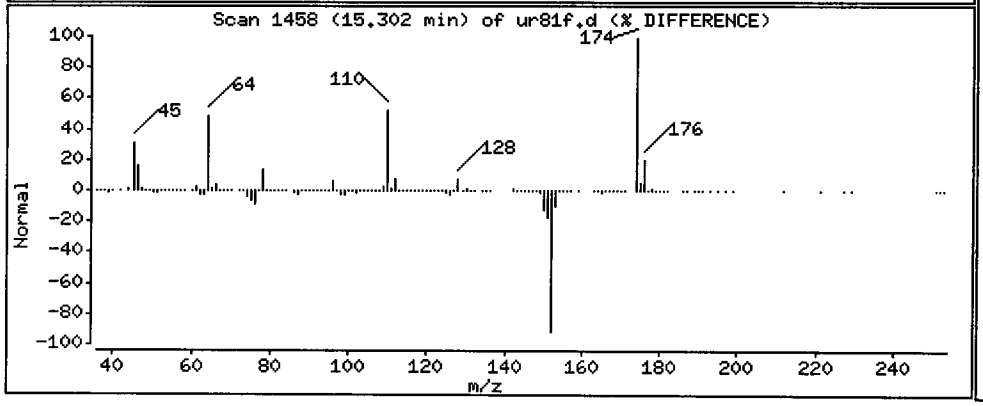












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

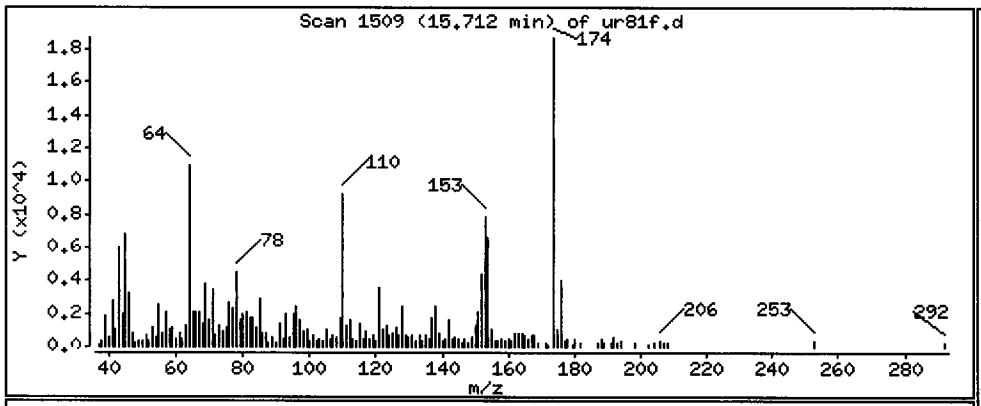
Operator: VTS/YZ

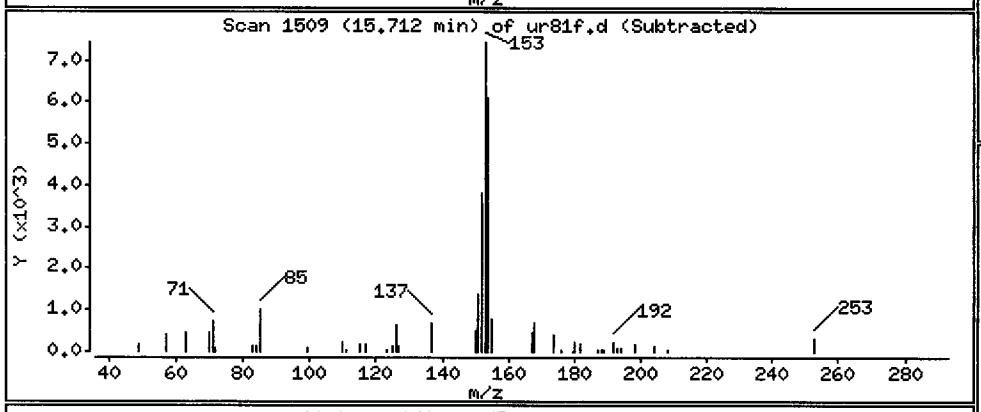
Column phase: ZB-5msi

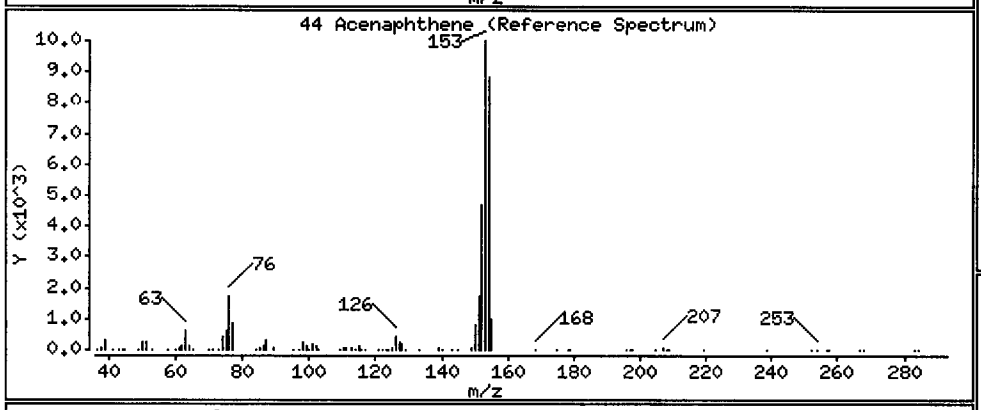
Column diameter: 0.25

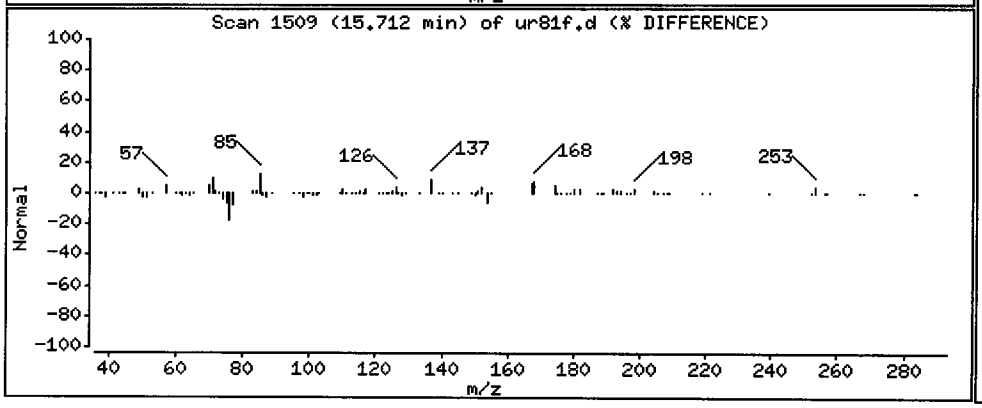
44 Acenaphthene

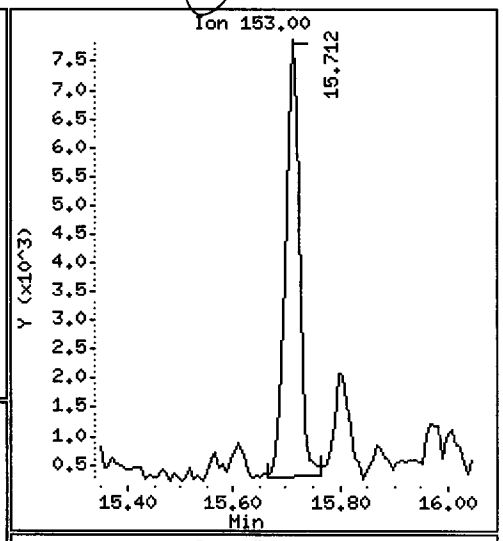
Concentration: 10.56 ug/kg

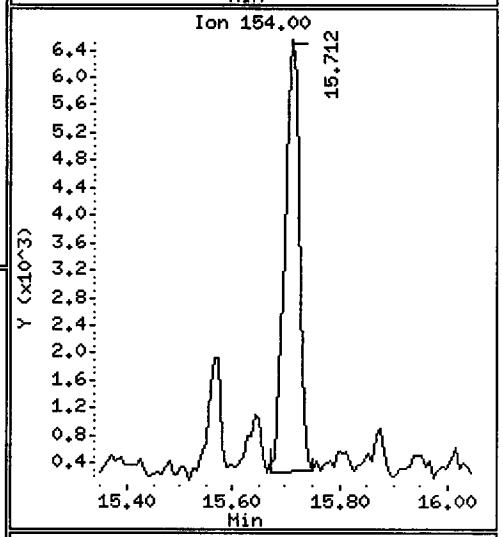


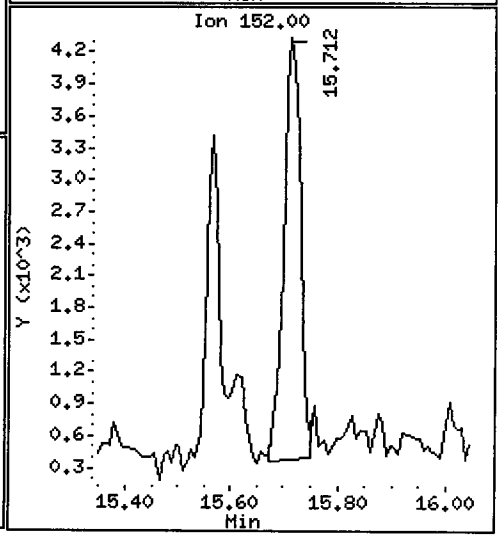












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

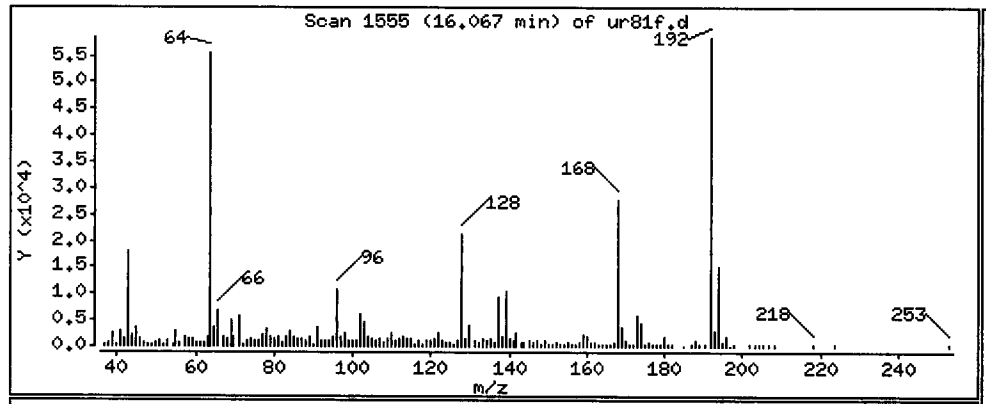
Operator: VTS/YZ

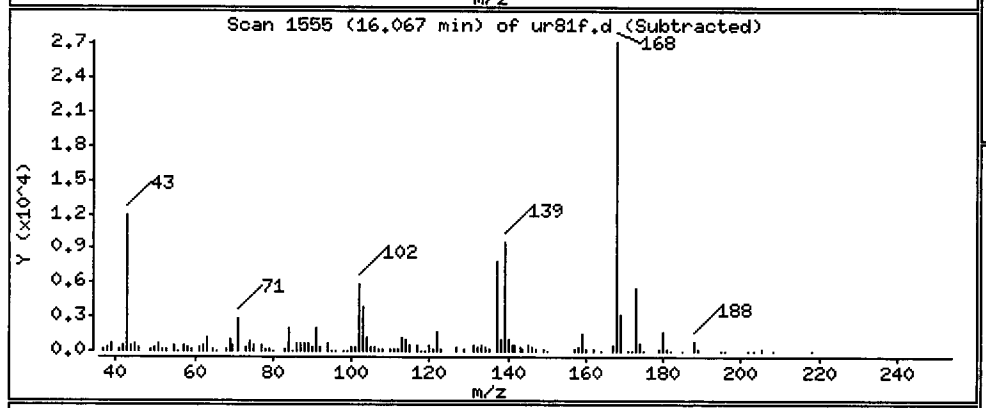
Column phase: ZB-5msi

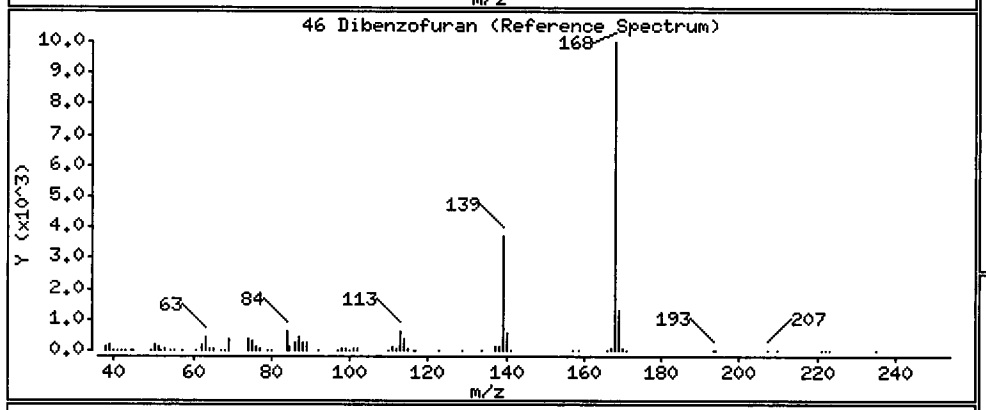
Column diameter: 0.25

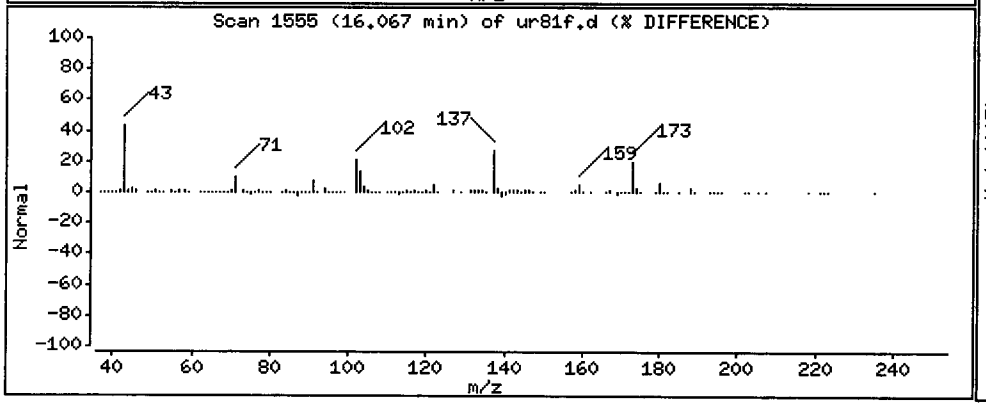
46 Dibenzofuran

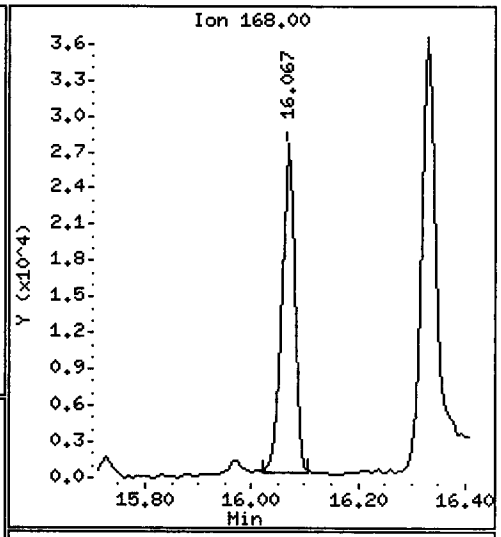
Concentration: 23.17 ug/kg

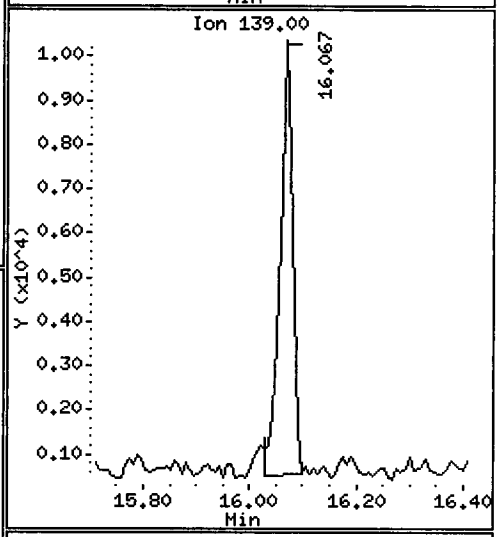


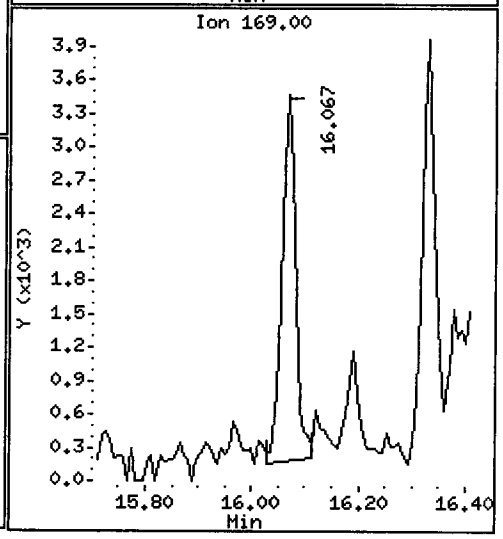












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

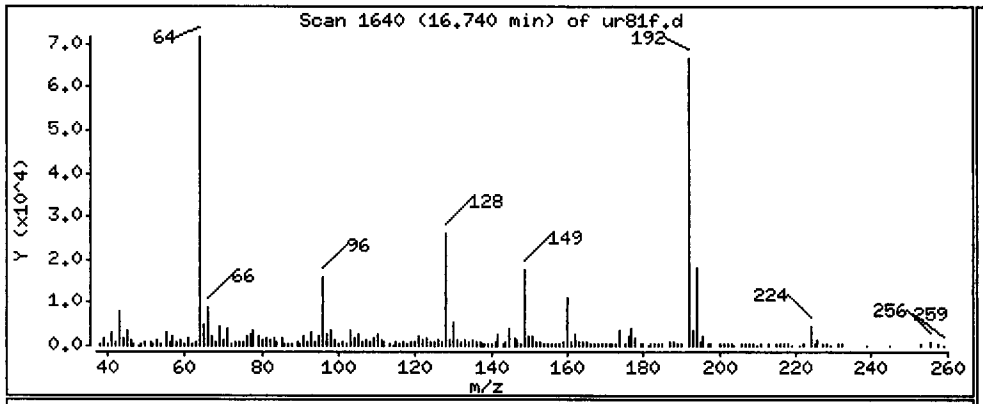
Client ID: IJ12-07 Instrument: nt10.i

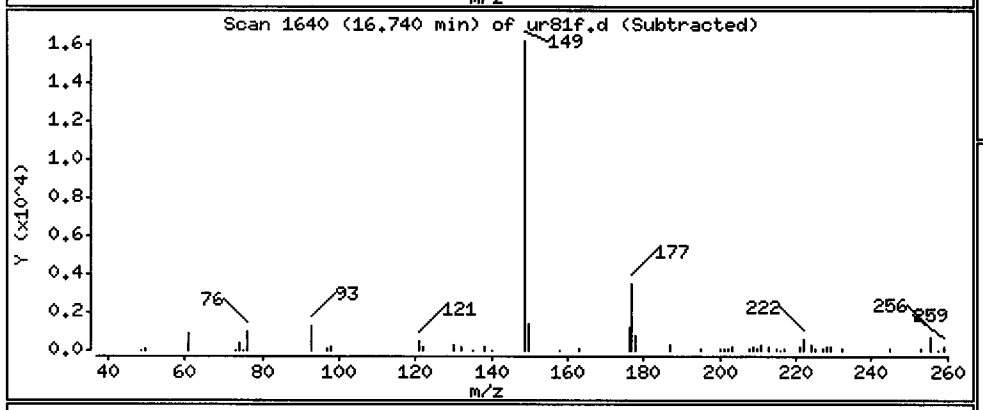
Sample Info: UR81F

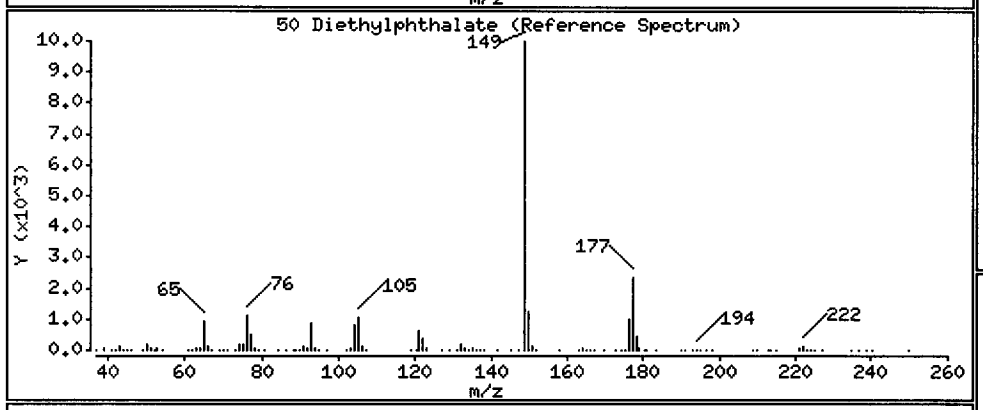
Volume Injected (uL): 1.0 Operator: VTS/YZ

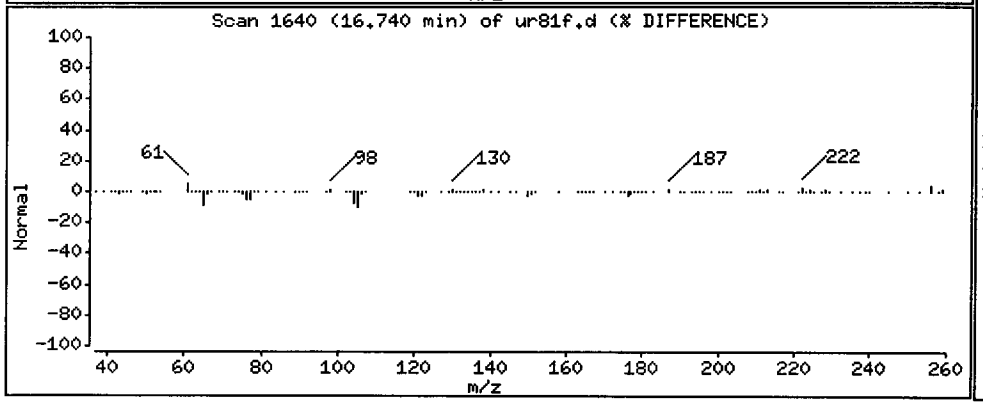
Column phase: ZB-5msi Column diameter: 0.25

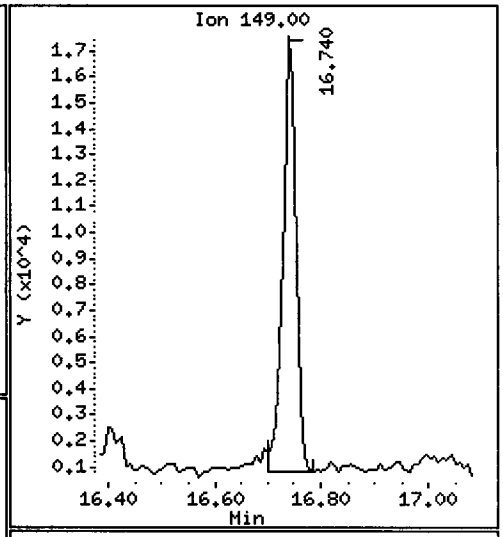
50 Diethylphthalate Concentration: 19.90 ug/kg

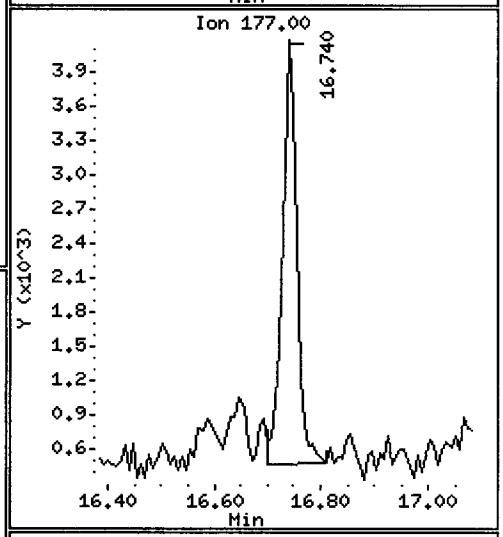


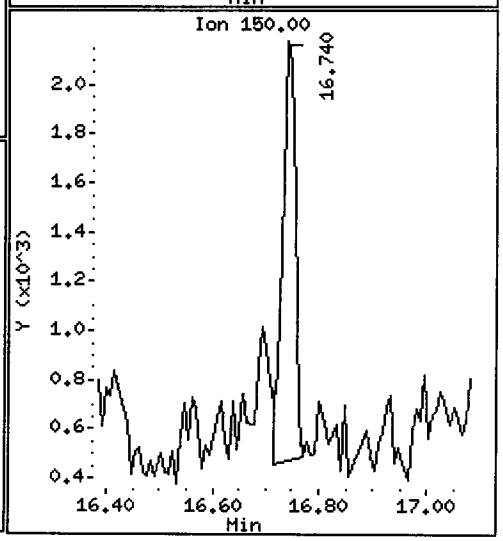












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

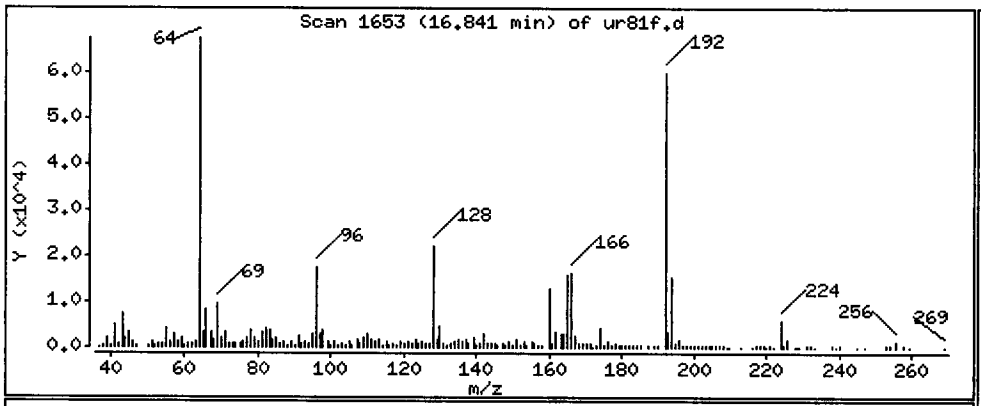
Operator: VTS/YZ

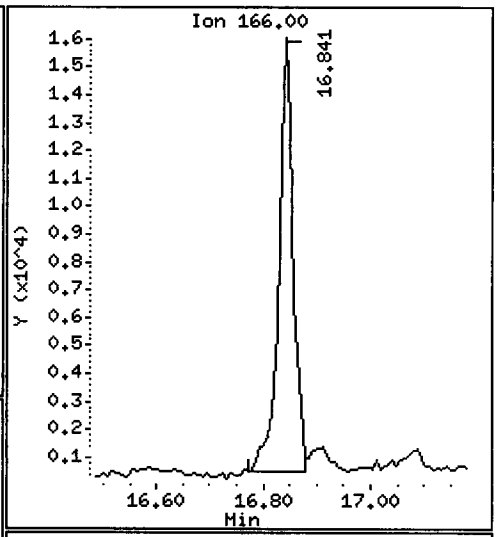
Column phase: ZB-5msi

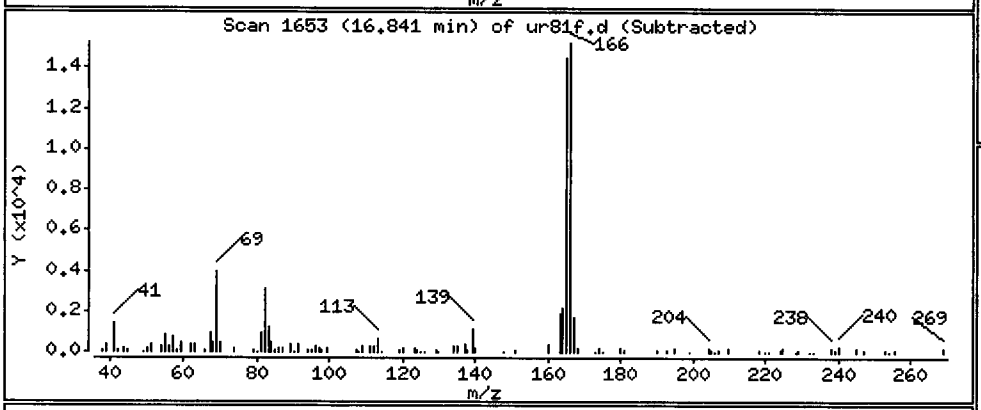
Column diameter: 0.25

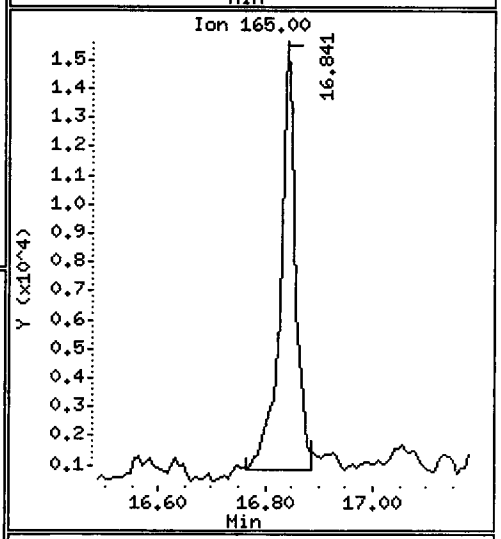
49 Fluorene

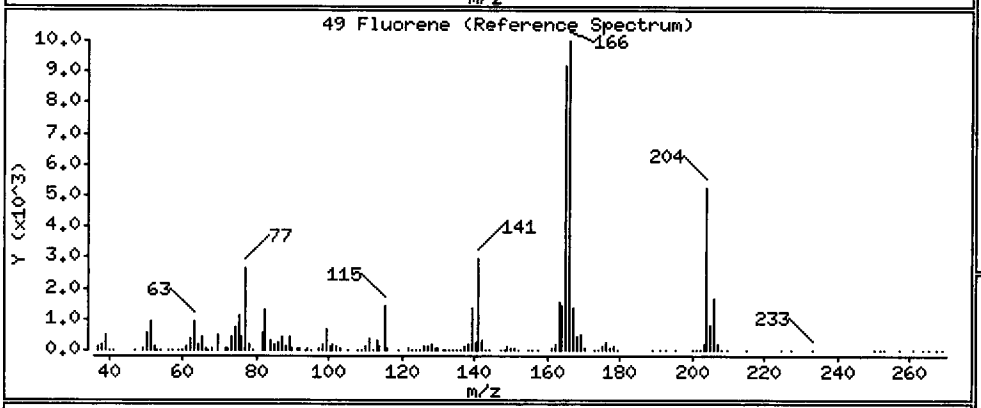
Concentration: 20.84 ug/kg

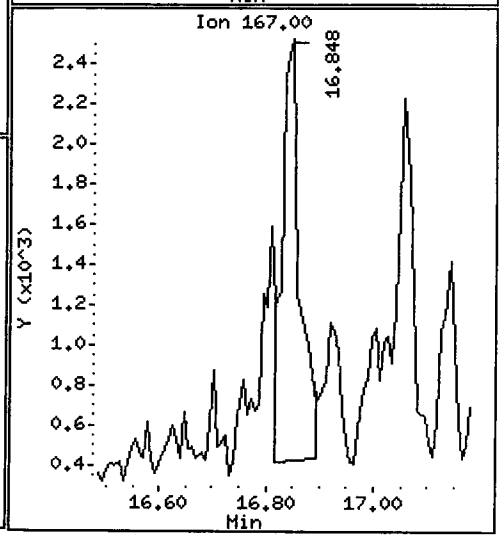


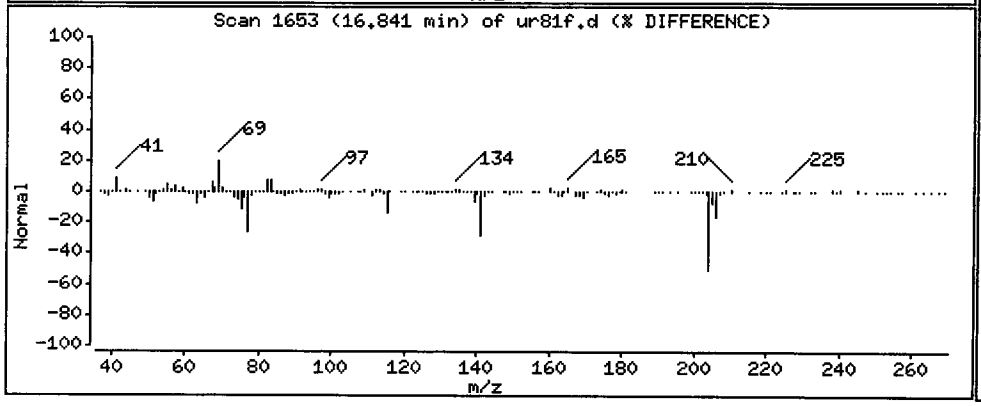












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

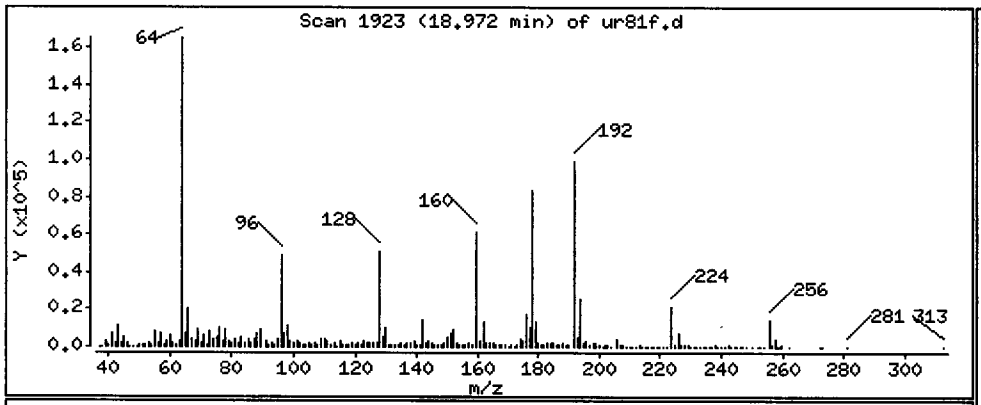
Operator: VTS/YZ

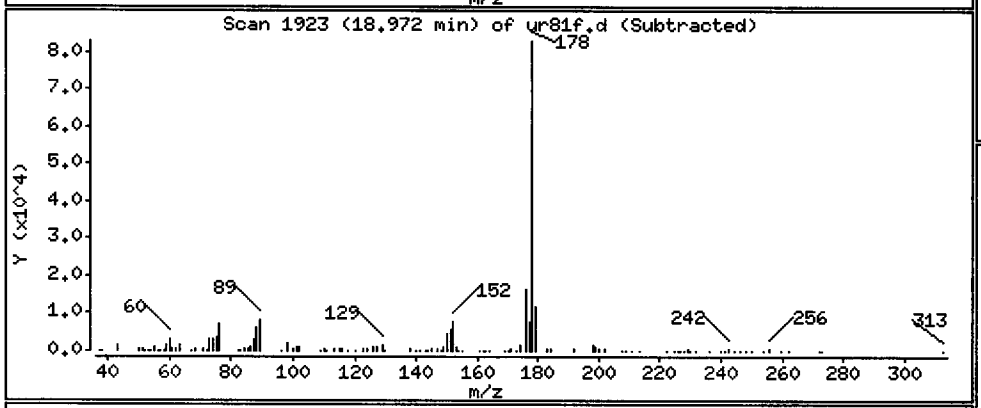
Column phase: ZB-5msi

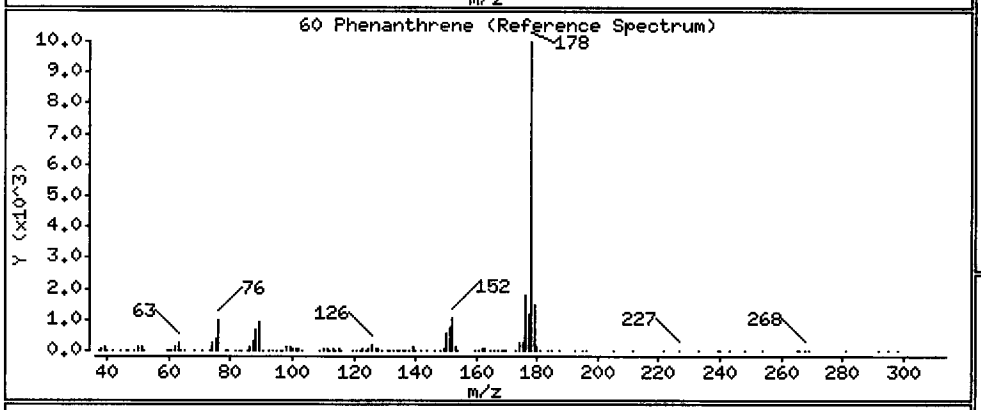
Column diameter: 0.25

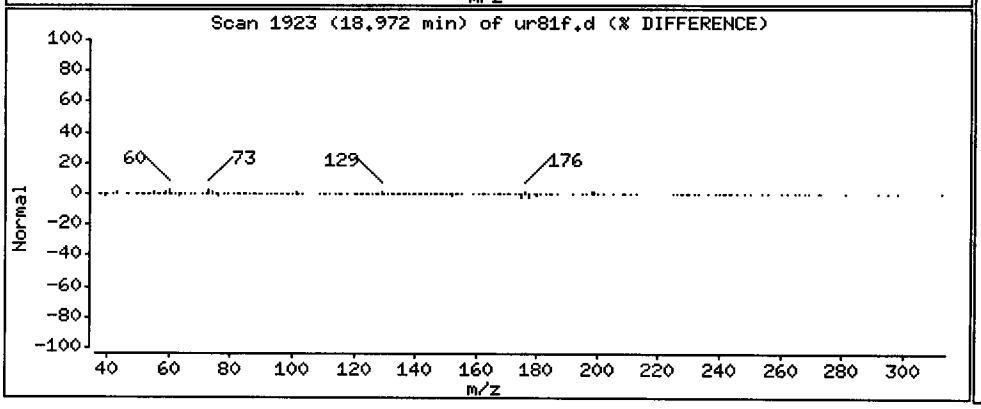
60 Phenanthrene

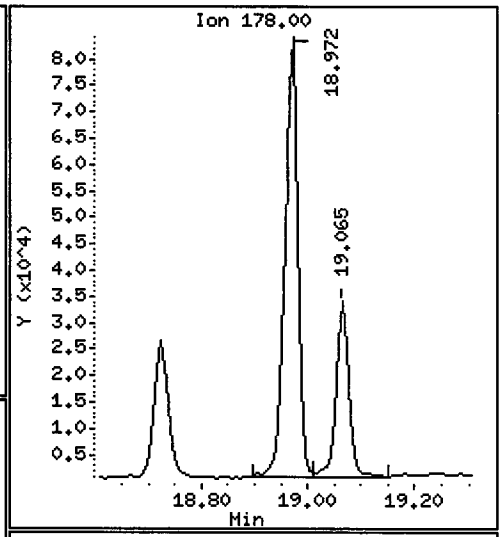
Concentration: 72.68 ug/kg

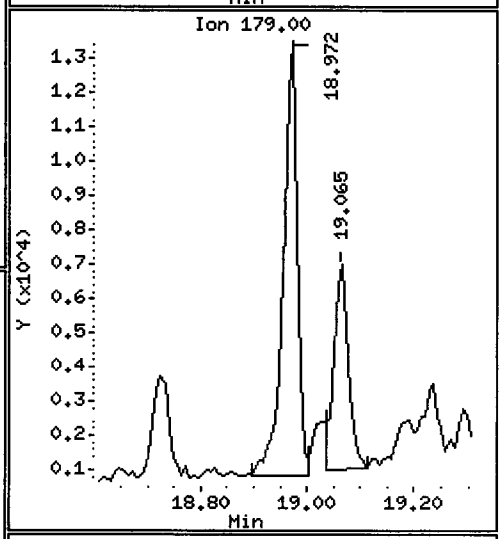


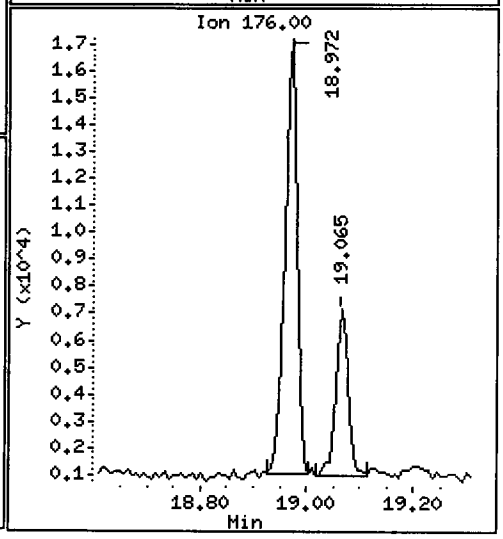












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

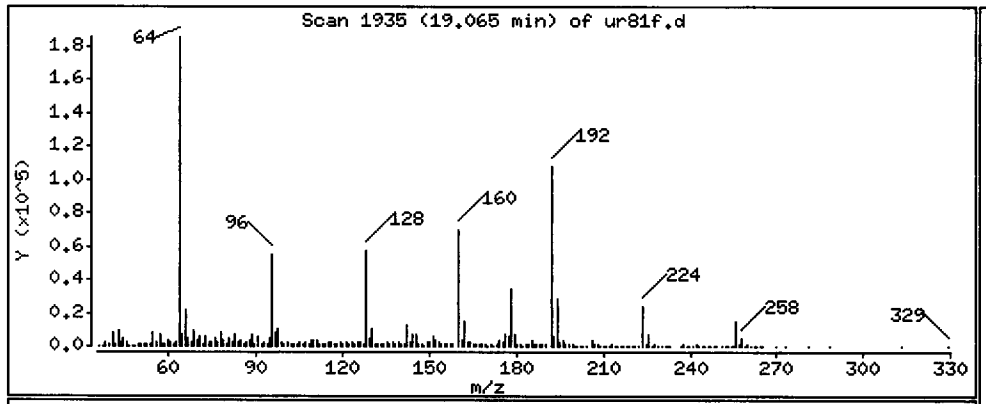
Operator: VTS/YZ

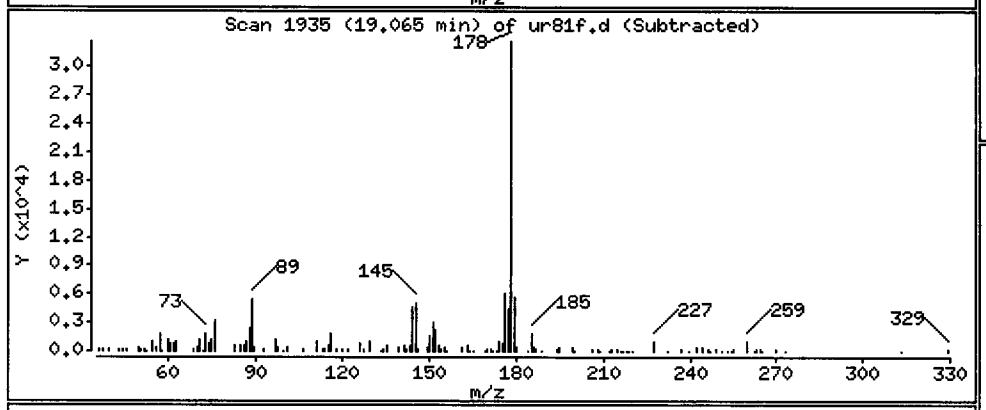
Column phase: ZB-5msi

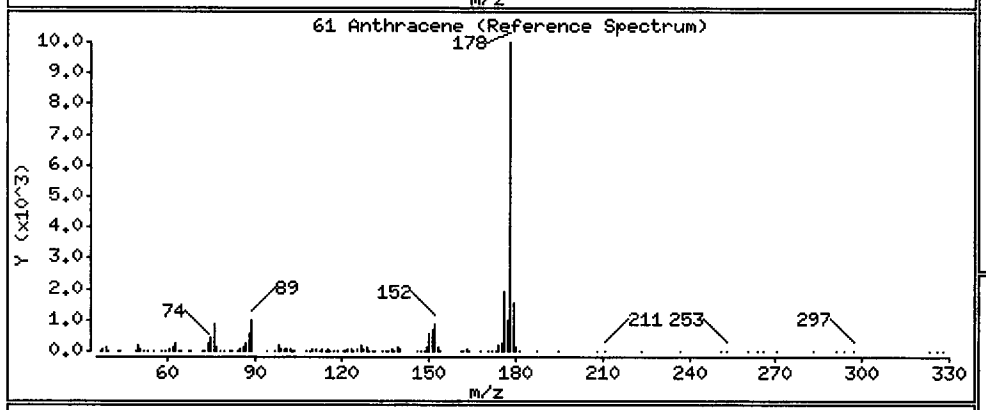
Column diameter: 0.25

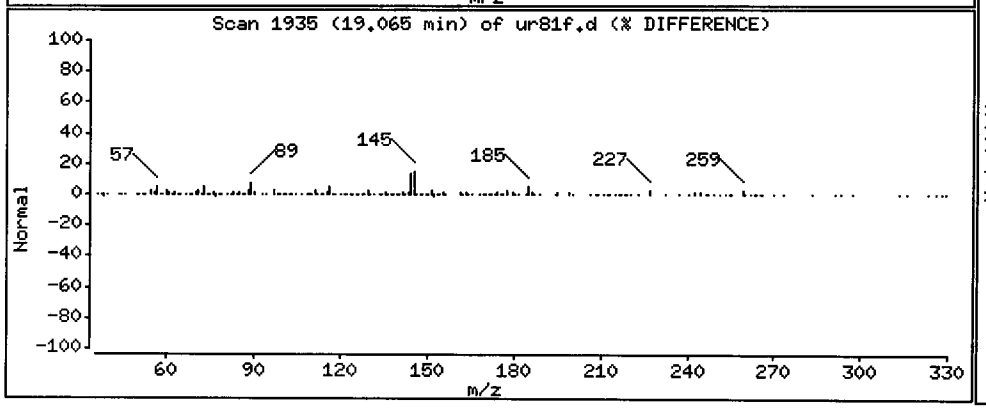
61 Anthracene

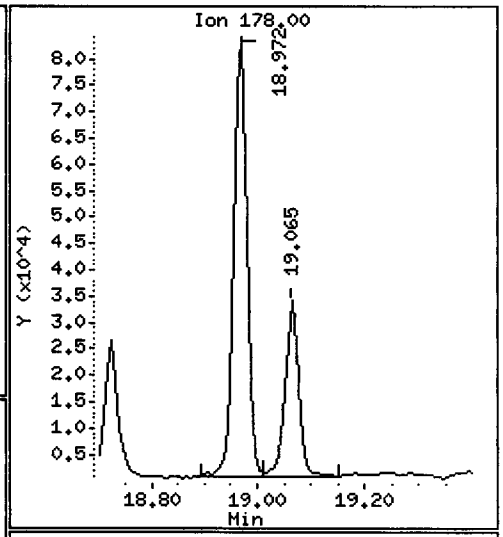
Concentration: 28.32 ug/kg

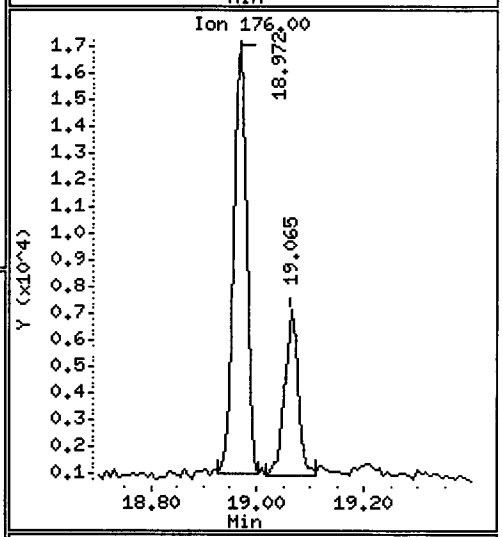


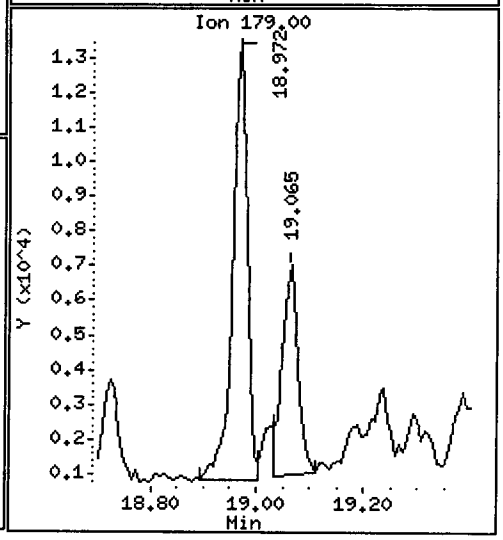












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

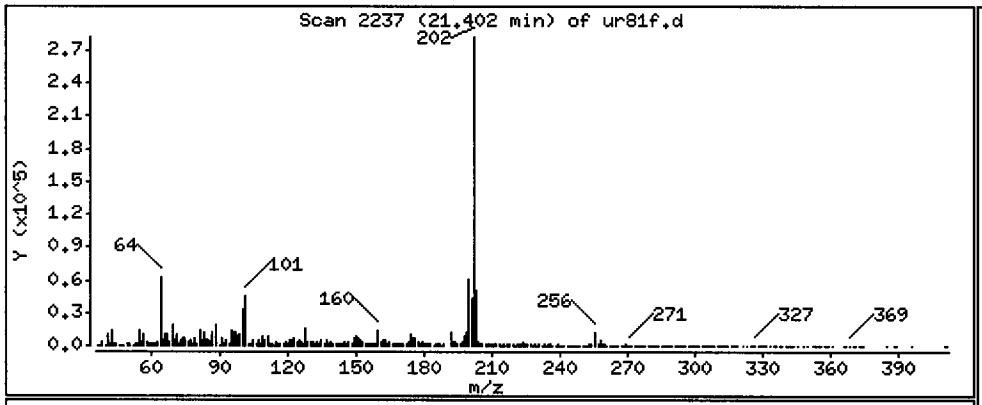
Client ID: IJ12-07 Instrument: nt10.i

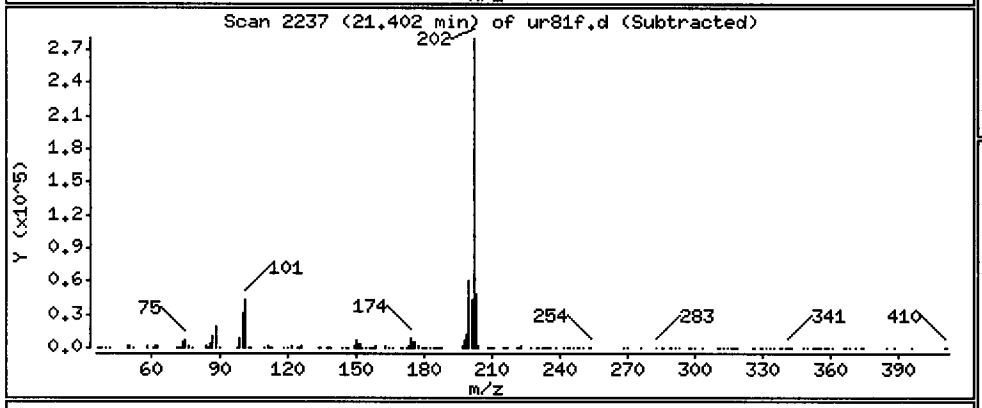
Sample Info: UR81F

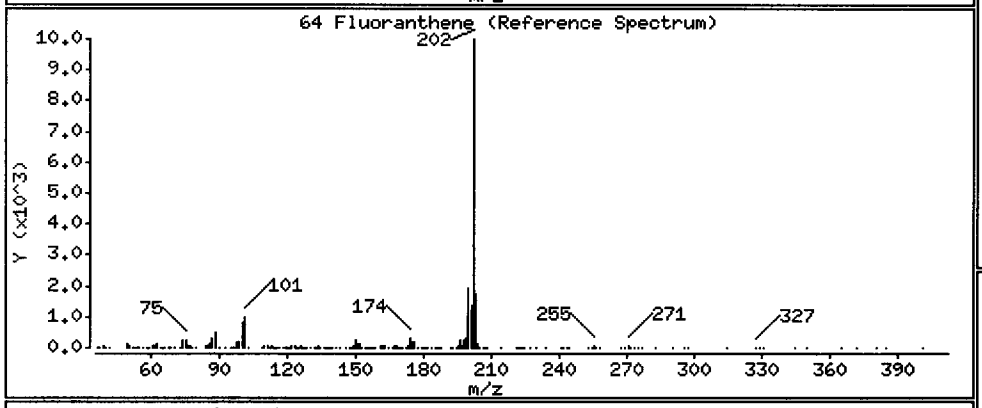
Volume Injected (uL): 1.0 Operator: VTS/YZ

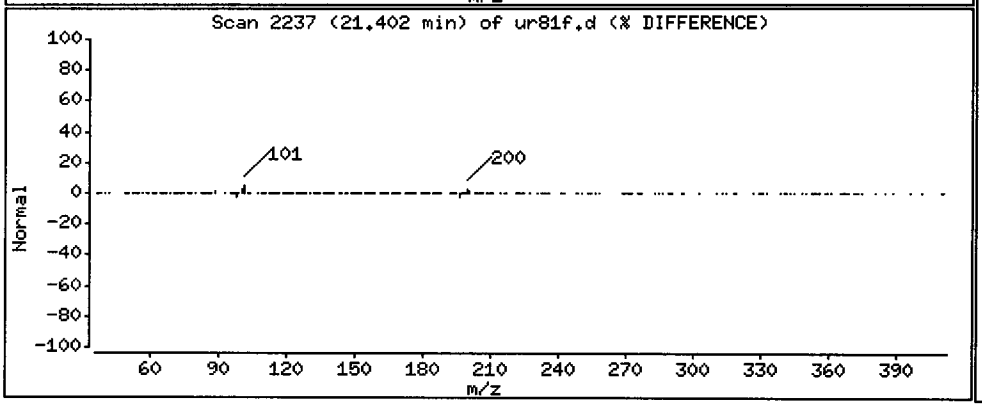
Column phase: ZB-5msi Column diameter: 0.25

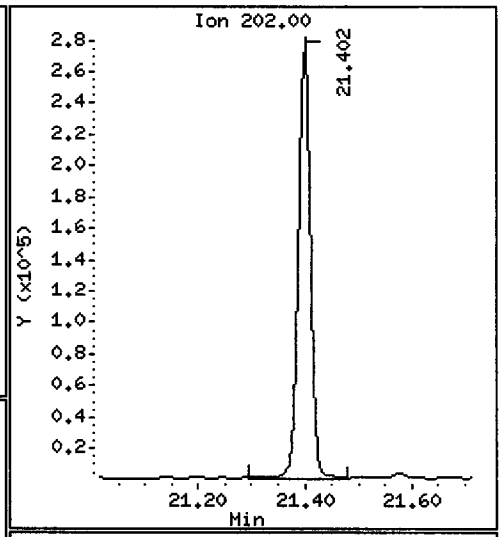
64 Fluoranthene Concentration: 209.9 ug/kg

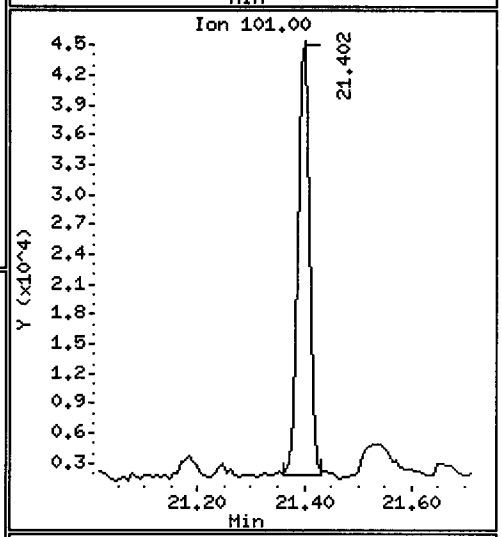


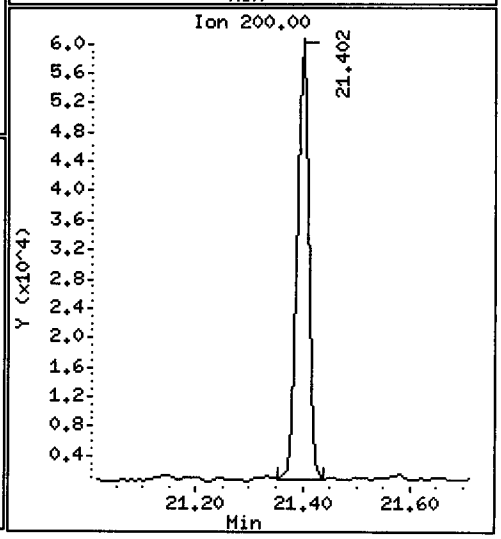












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

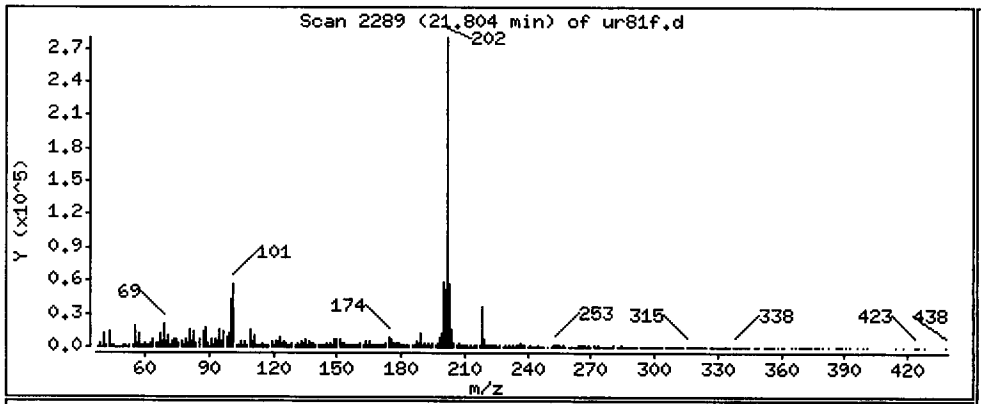
Operator: VTS/YZ

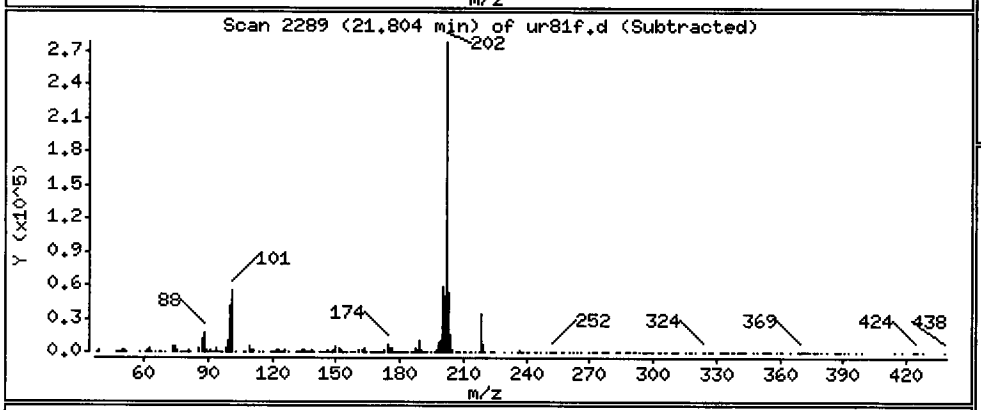
Column phase: ZB-5msi

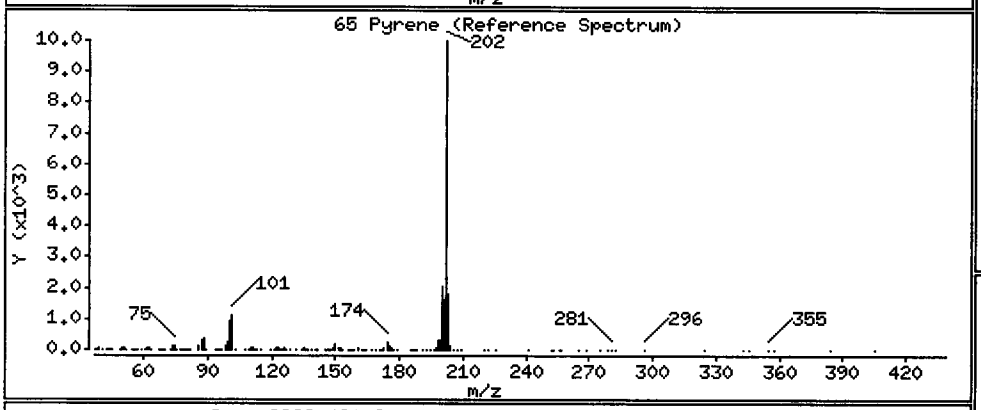
Column diameter: 0.25

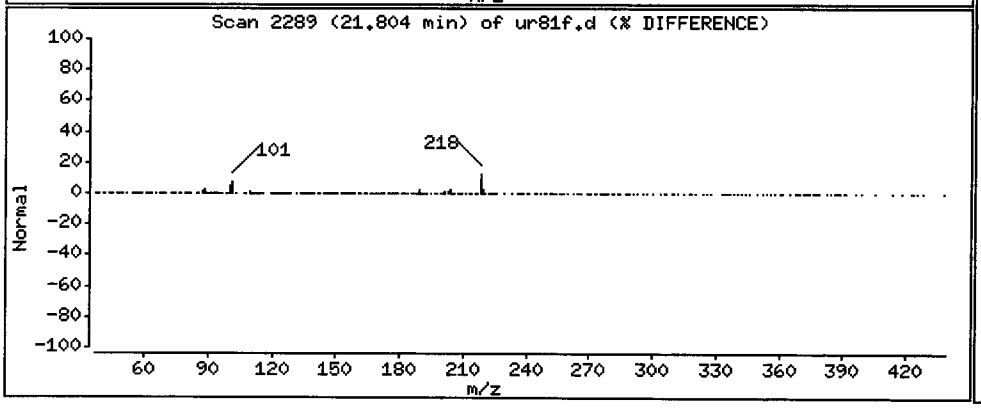
65 Pyrene

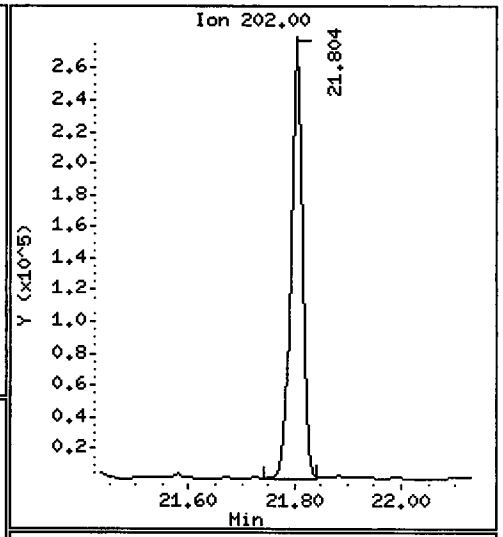
Concentration: 170.6 ug/kg

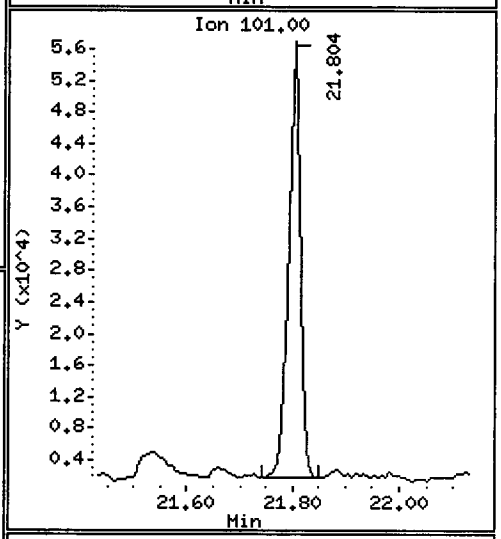


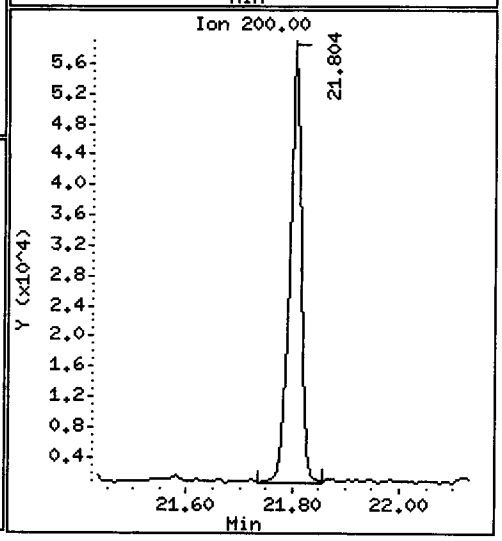












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

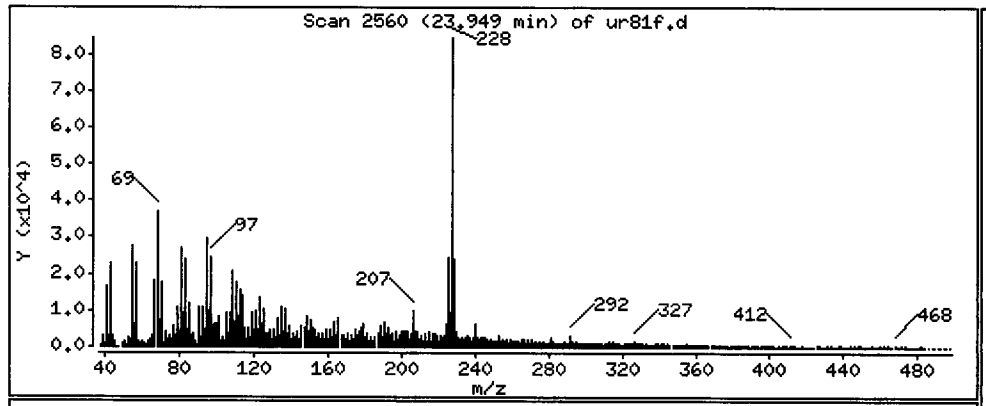
Operator: VTS/YZ

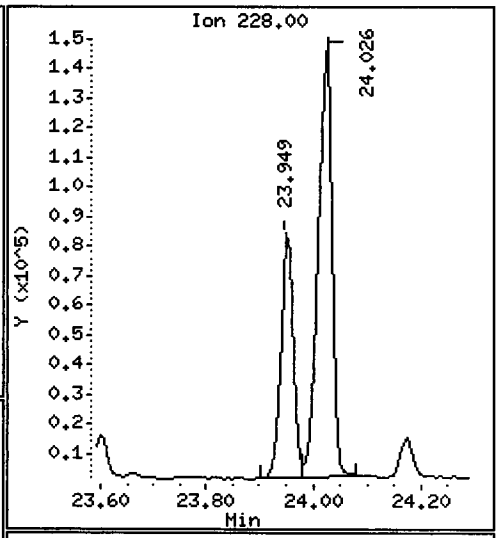
Column phase: ZB-5msi

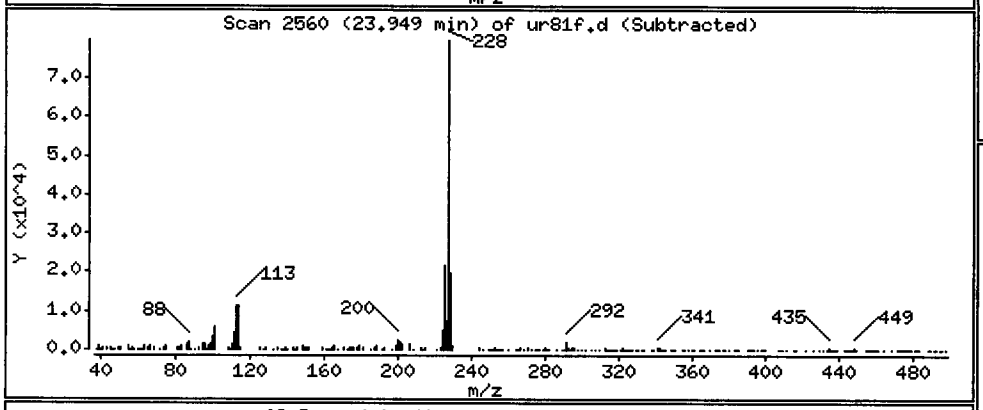
Column diameter: 0.25

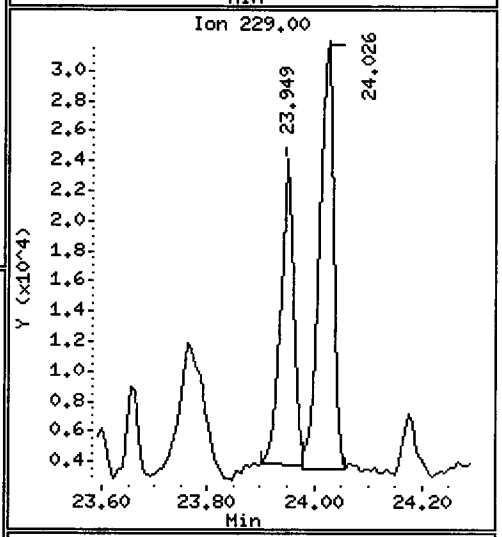
68 Benzo(a)anthracene

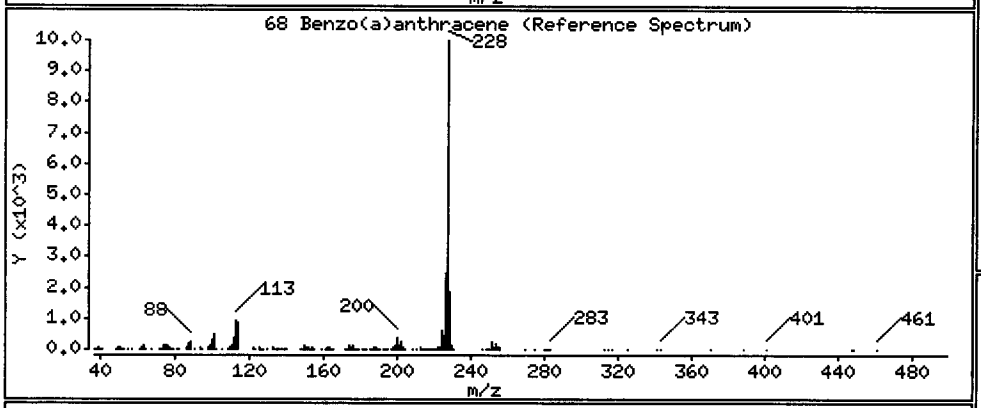
Concentration: 59.24 ug/kg

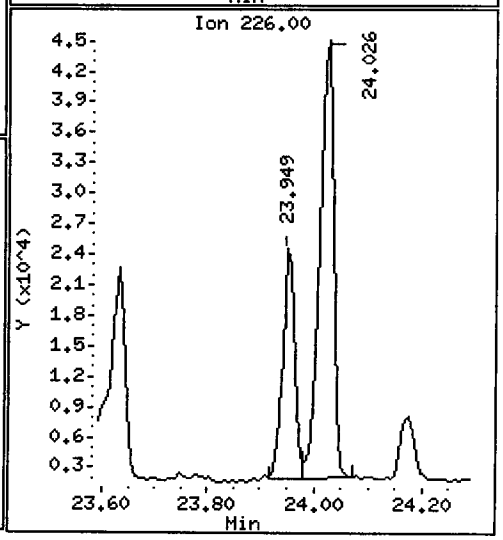


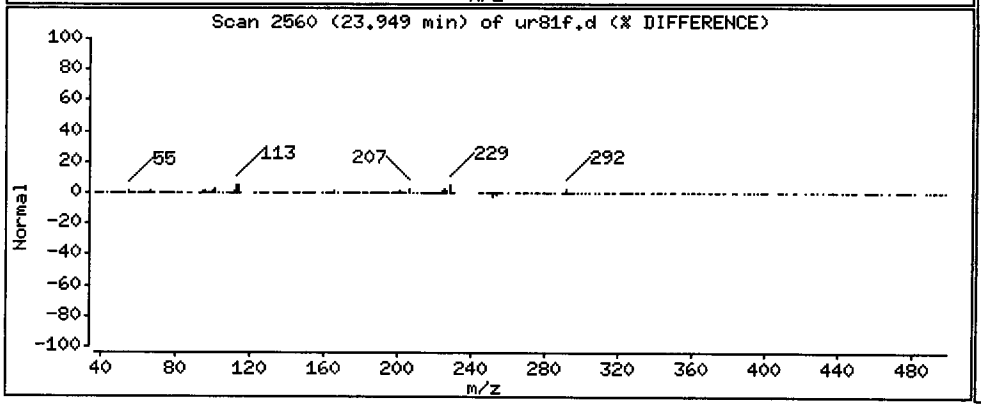












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

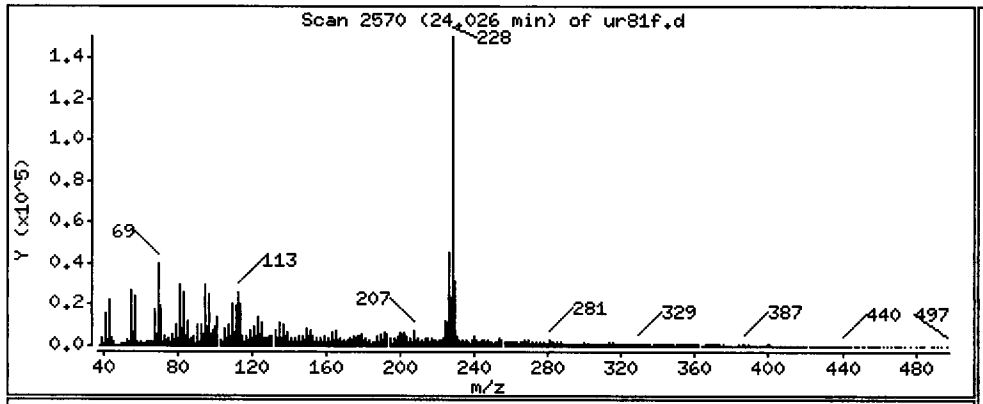
Client ID: IJ12-07 | Instrument: nt10.i

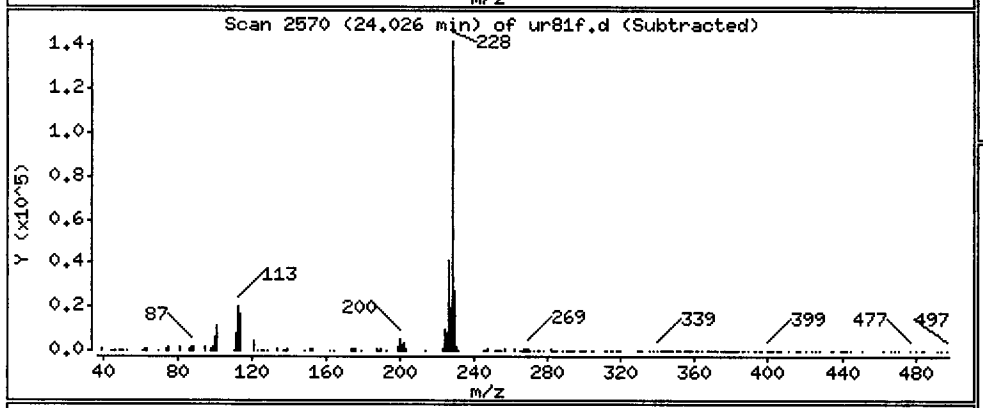
Sample Info: UR81F

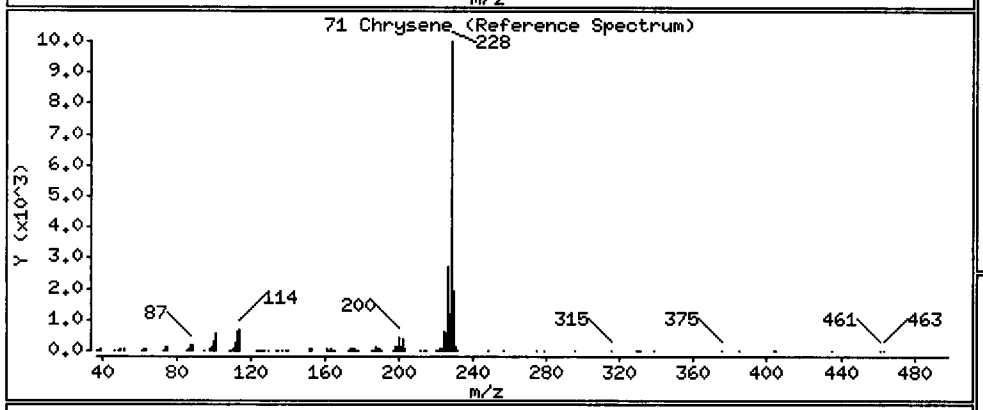
Volume Injected (uL): 1.0 | Operator: VTS/YZ

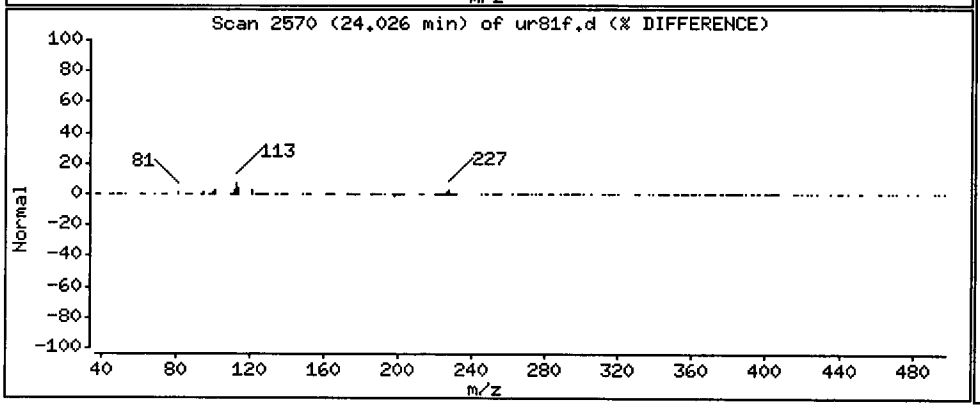
Column phase: ZB-5msi | Column diameter: 0.25

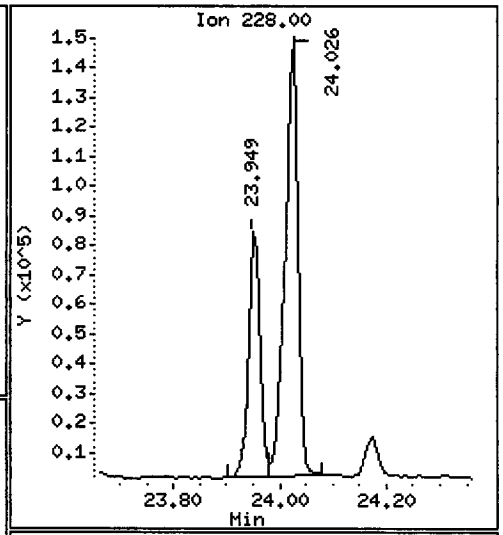
71 Chrysene | Concentration: 126.6 ug/kg

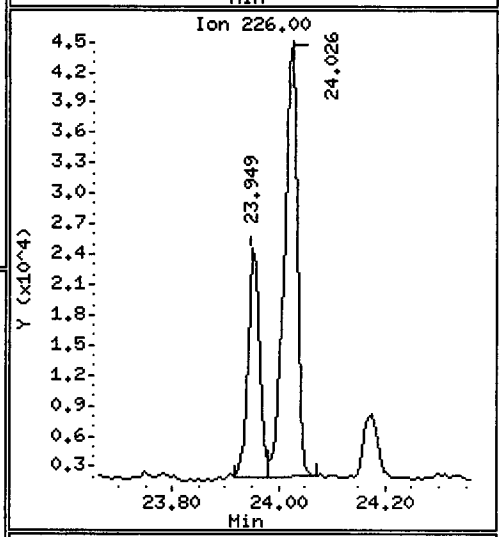


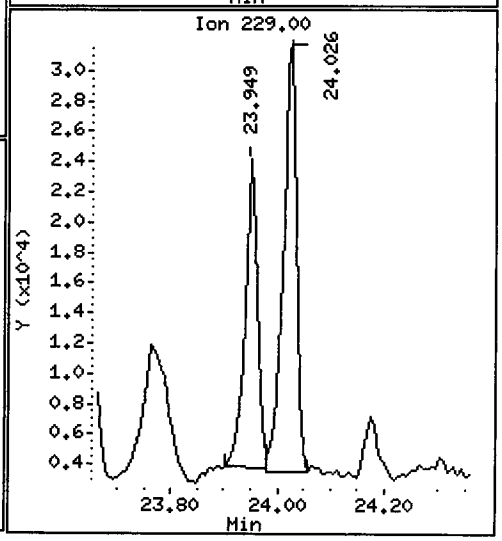












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

Operator: VTS/YZ

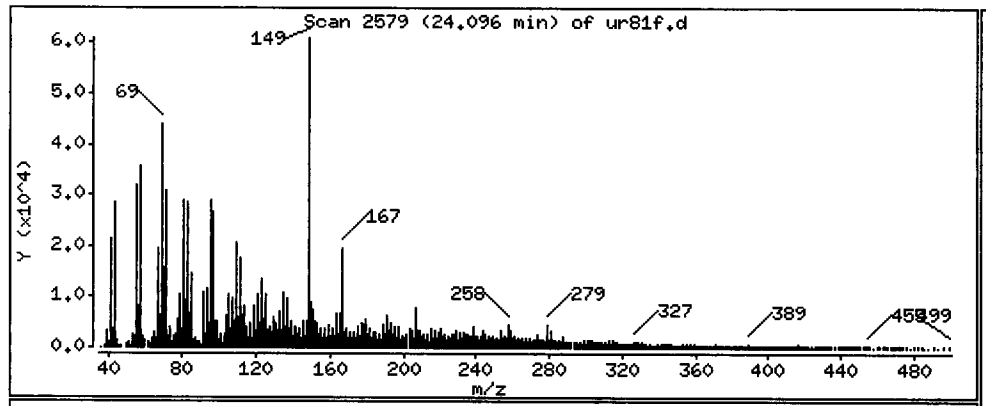
Column phase: ZB-5msi

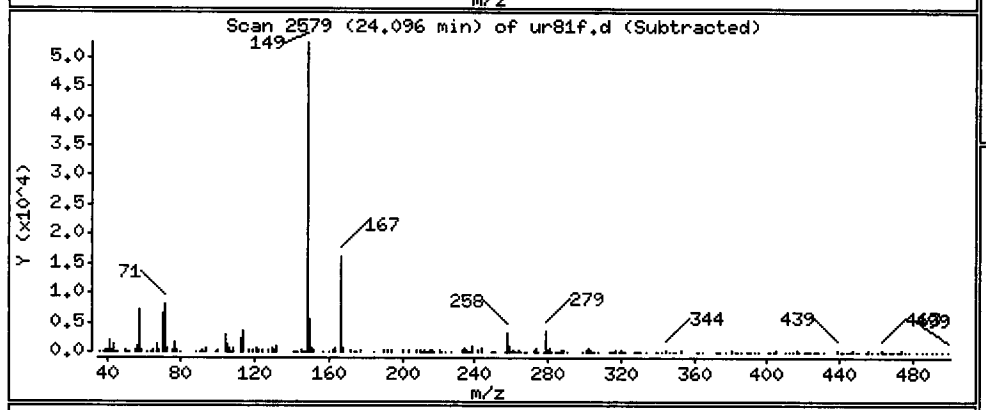
Column diameter: 0.25

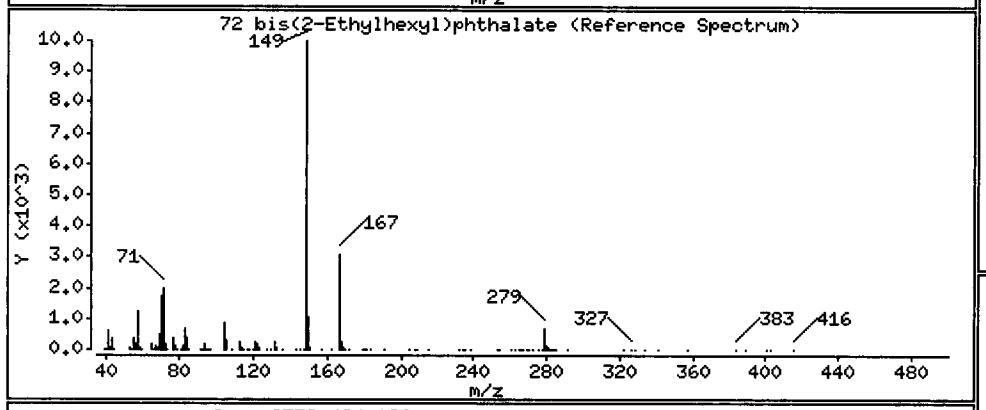
72 bis(2-Ethylhexyl)phthalate

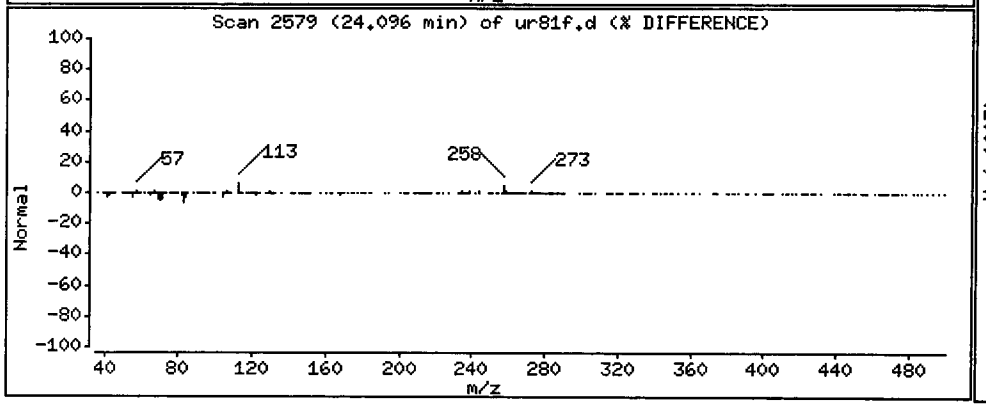
Concentration: 51.70 ug/kg

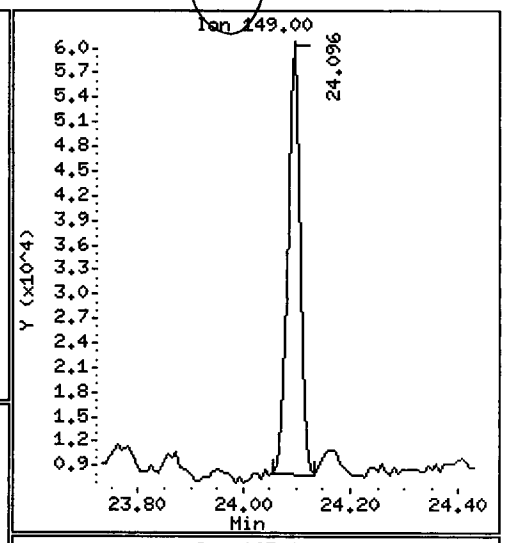
B

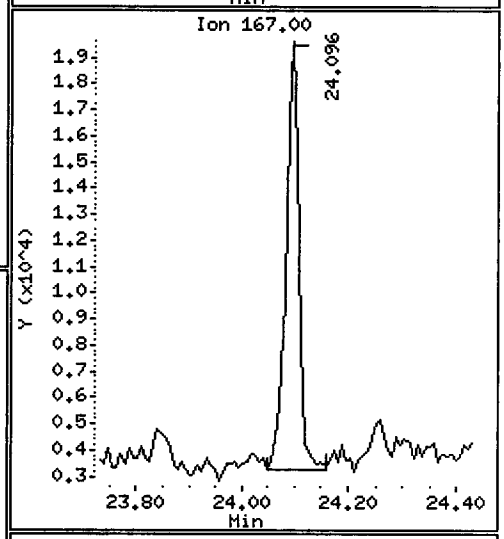


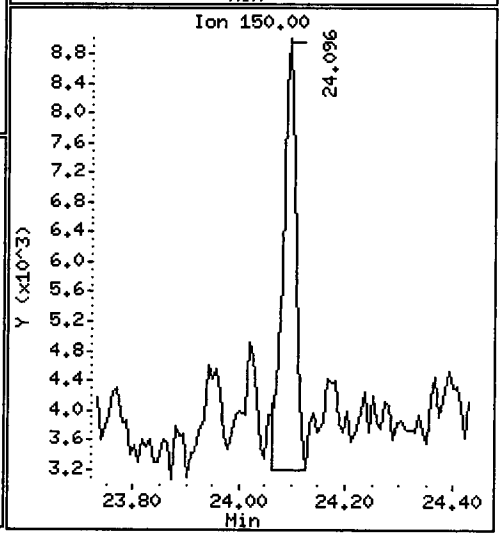












UR81 : 00649

Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

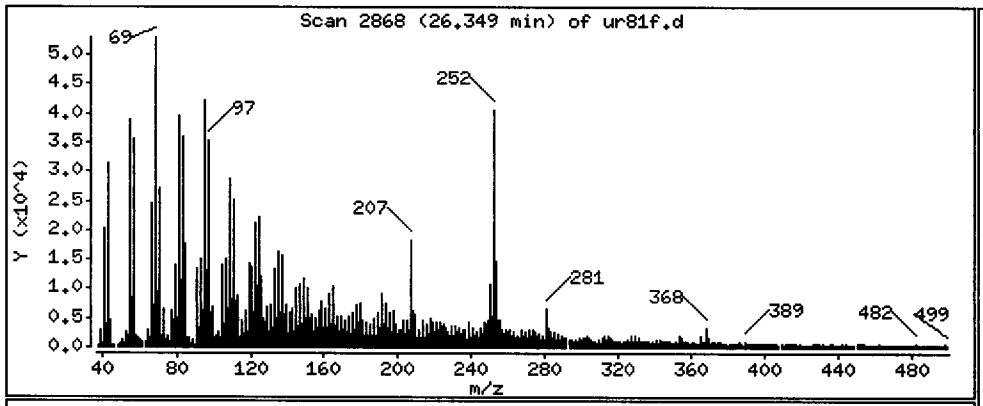
Operator: VTS/YZ

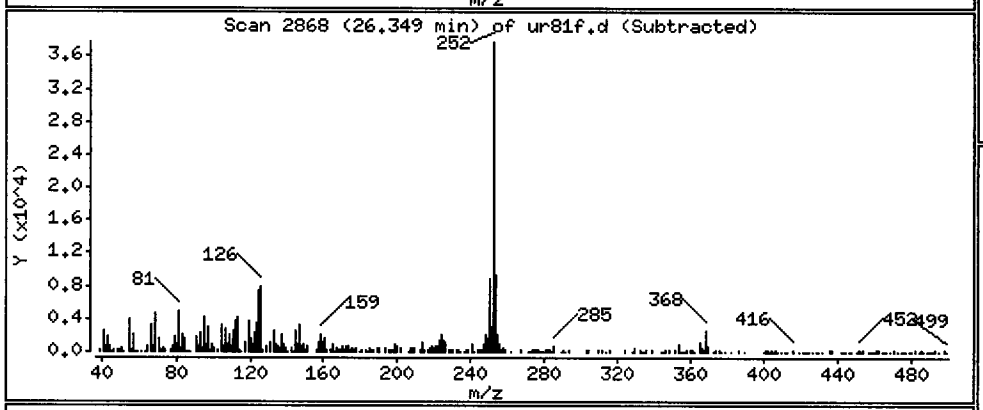
Column phase: ZB-5msi

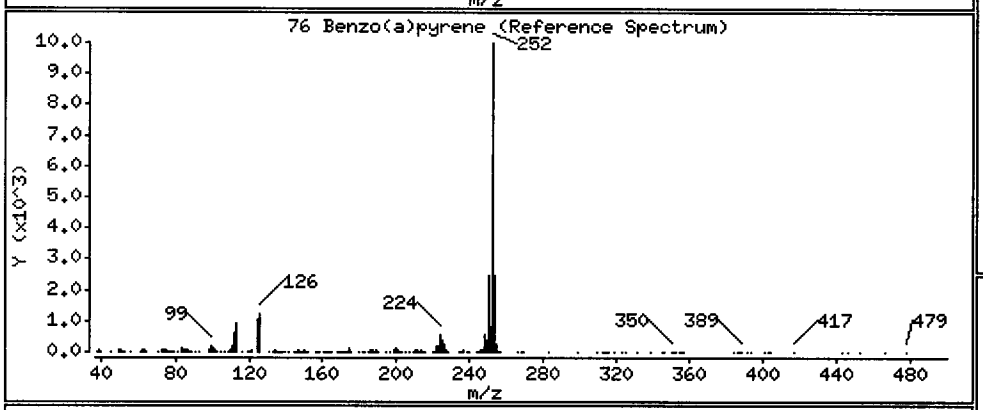
Column diameter: 0.25

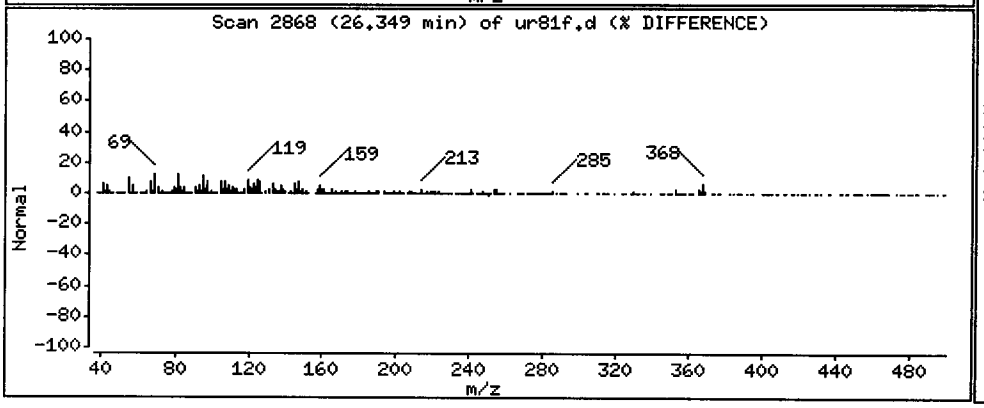
76 Benzo(a)pyrene

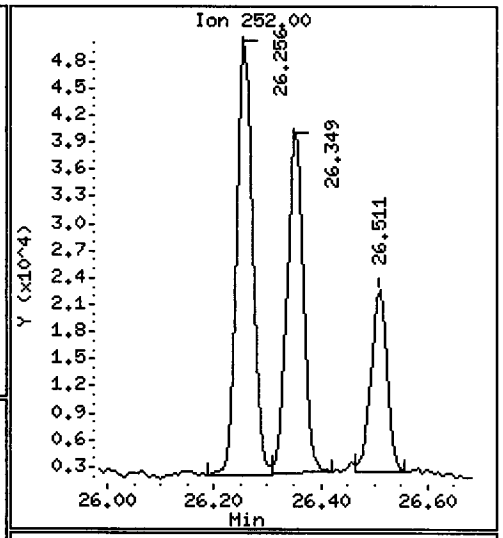
Concentration: 42.57 ug/kg

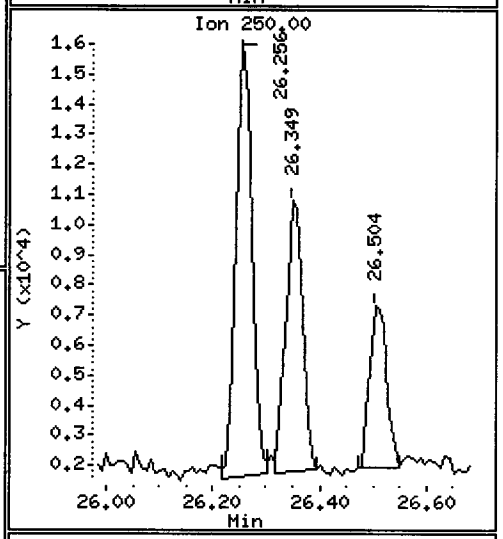


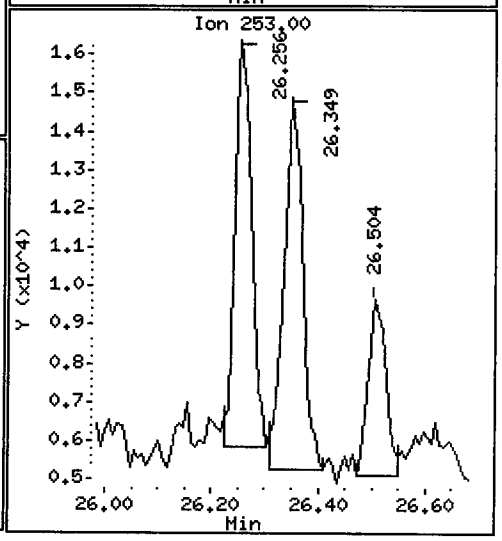












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

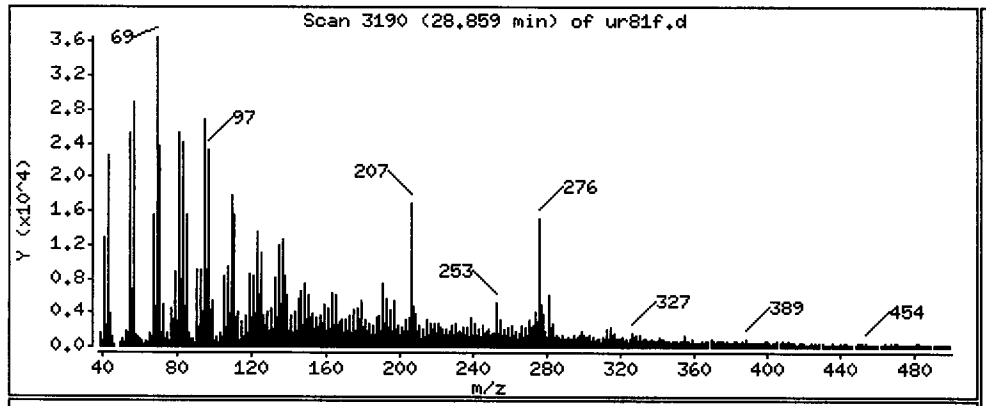
Client ID: IJ12-07 Instrument: nt10.i

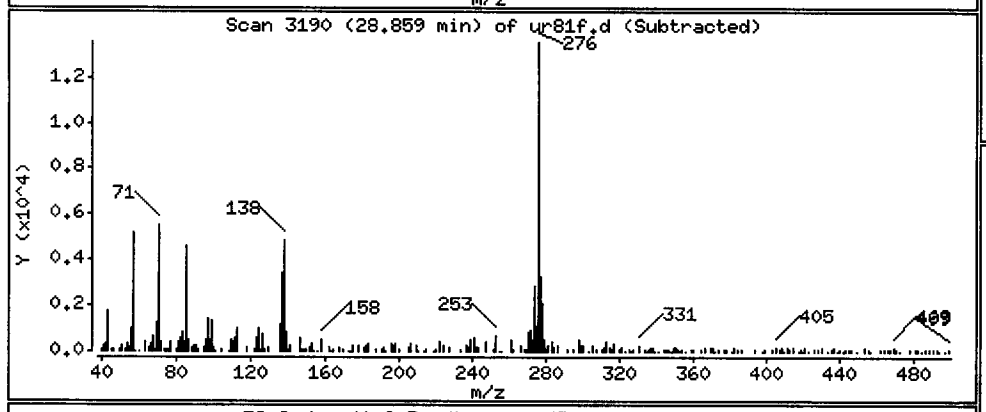
Sample Info: UR81F

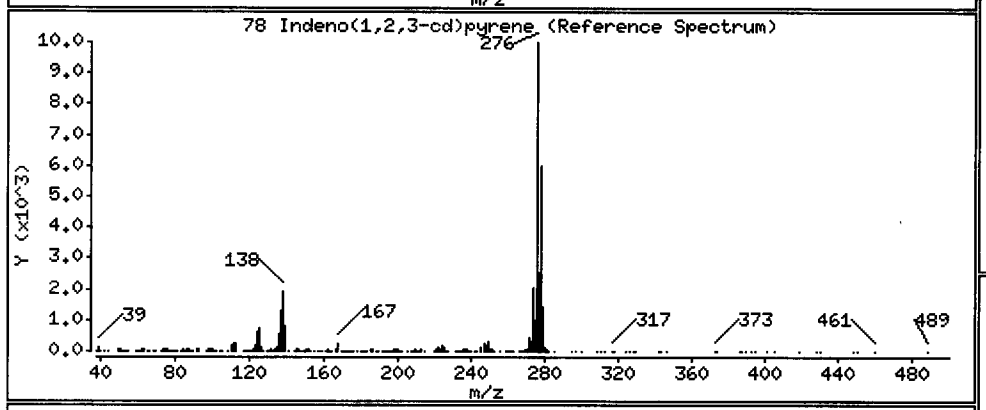
Volume Injected (uL): 1.0 Operator: VTS/YZ

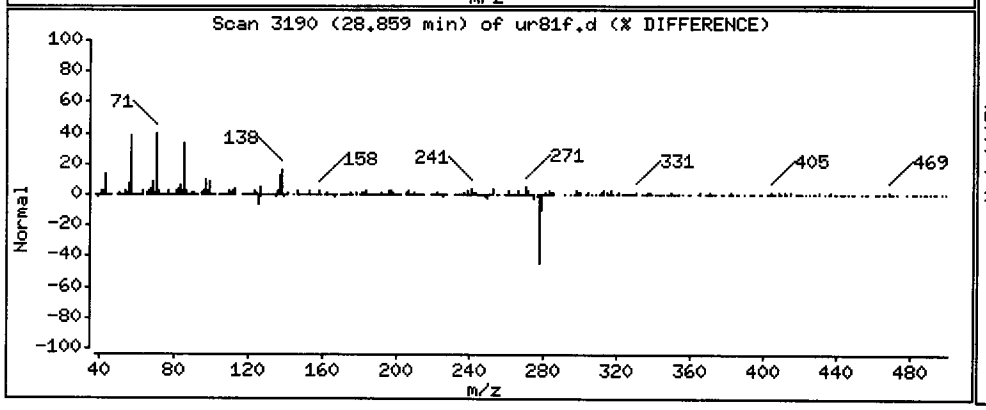
Column phase: ZB-5msi Column diameter: 0.25

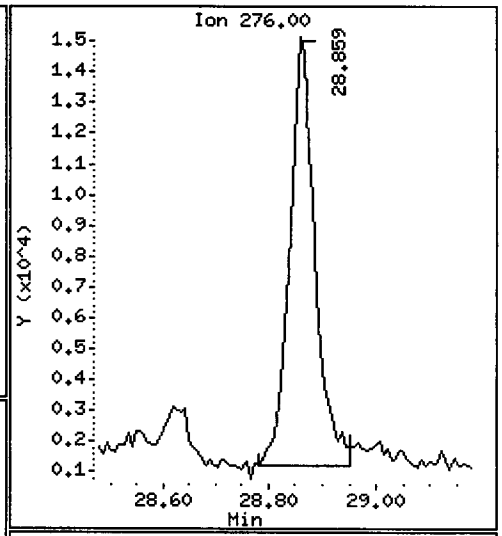
78 Indeno(1,2,3-cd)pyrene Concentration: 21.99 ug/kg

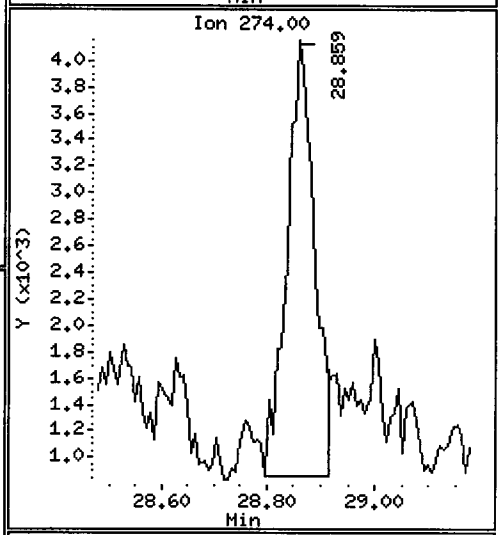


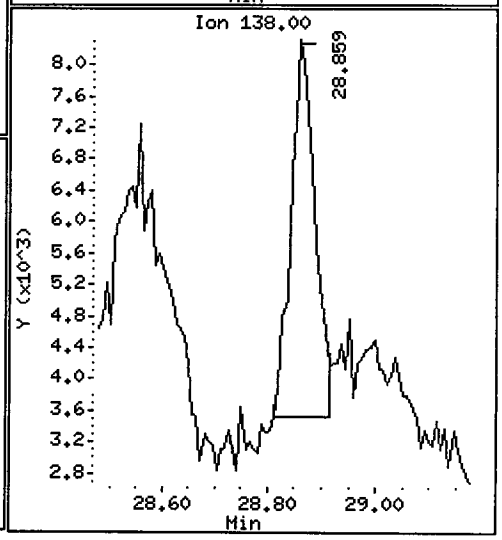












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

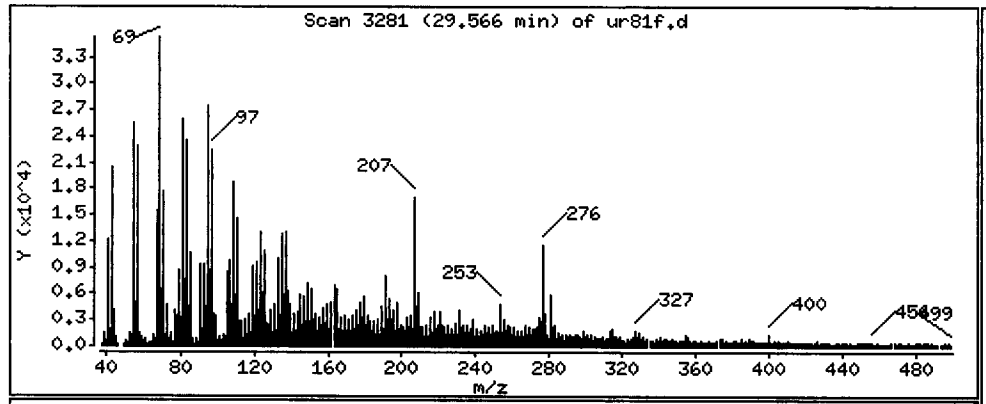
Operator: VTS/YZ

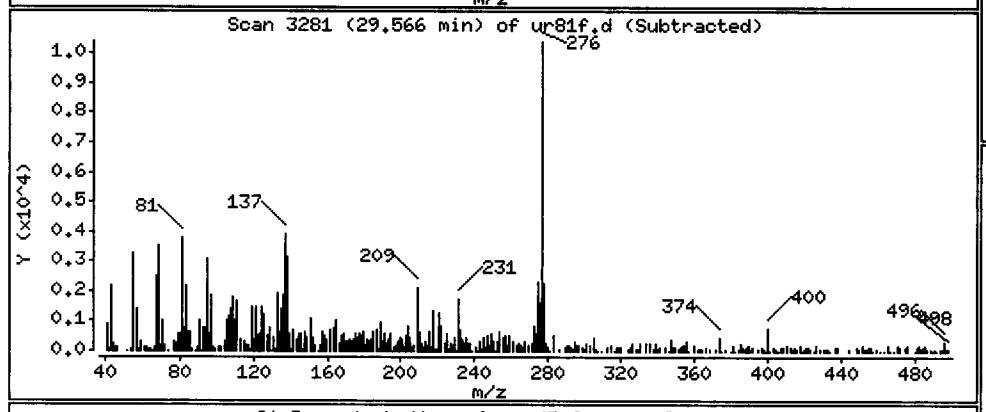
Column phase: ZB-5msi

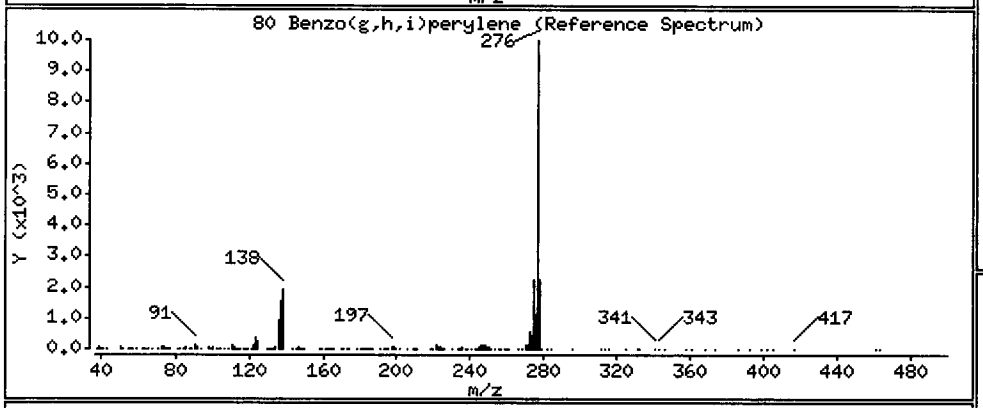
Column diameter: 0.25

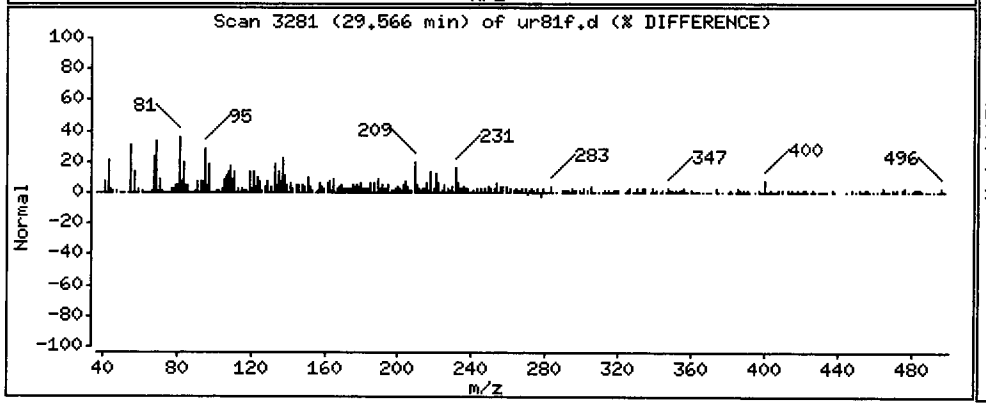
80 Benzo(g,h,i)perylene

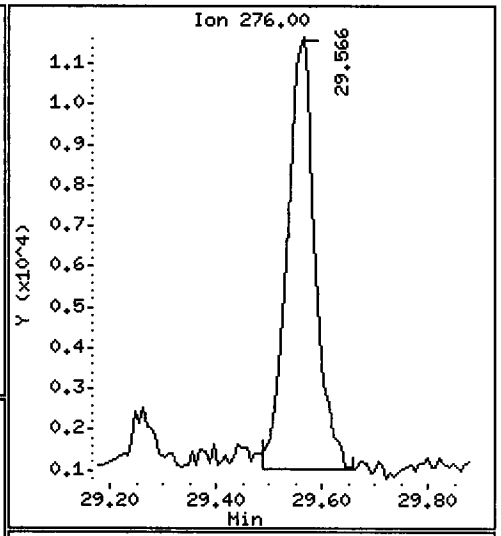
Concentration: 21.69 ug/kg

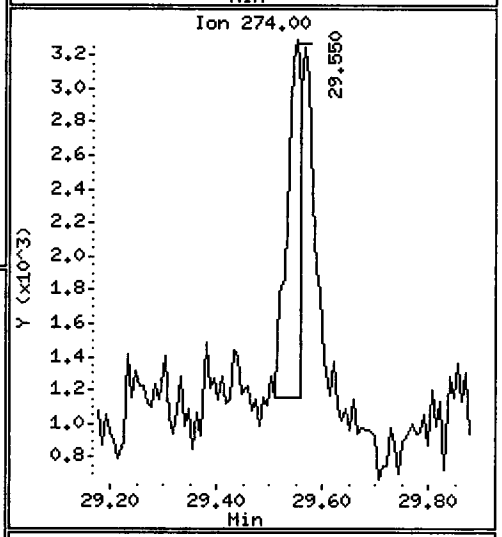


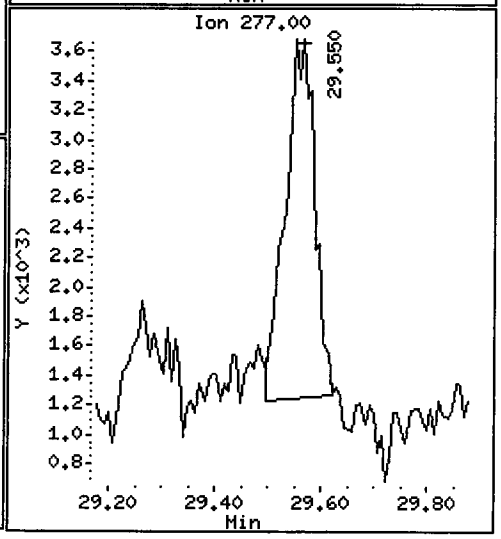












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

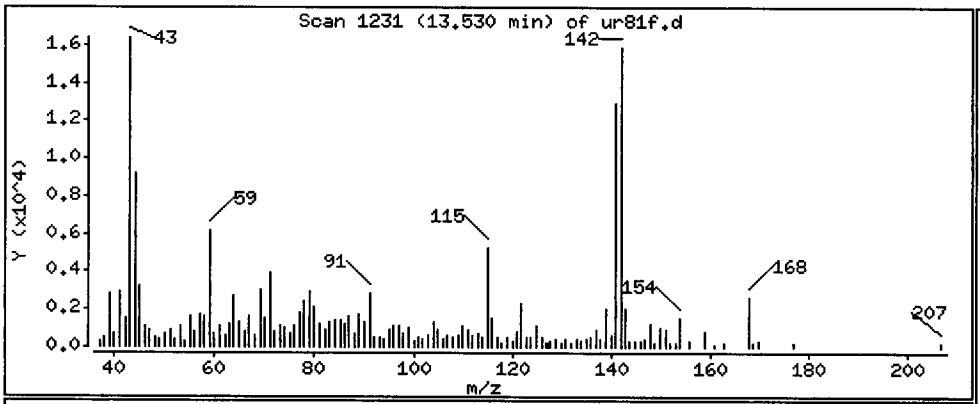
Operator: VTS/YZ

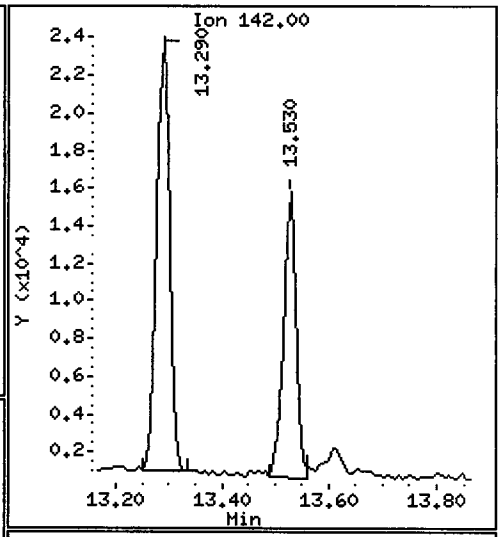
Column phase: ZB-5msi

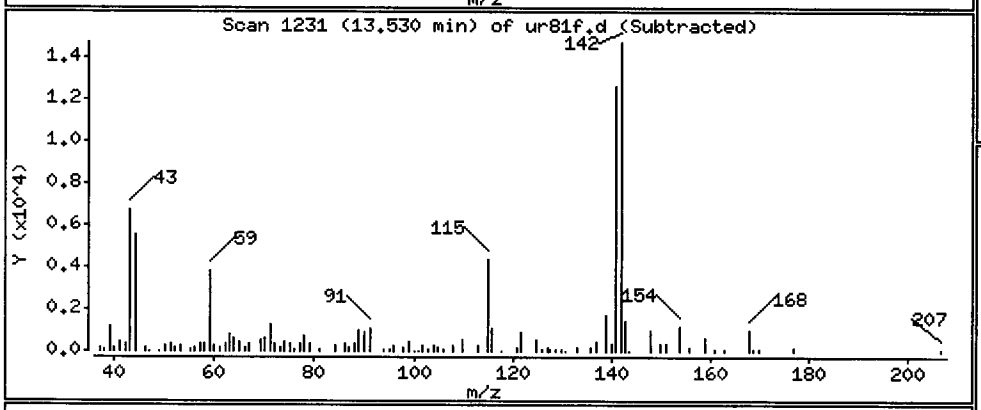
Column diameter: 0.25

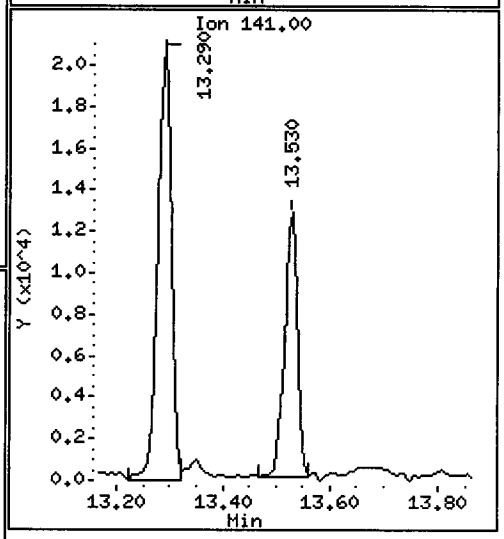
105 1-methylnaphthalene

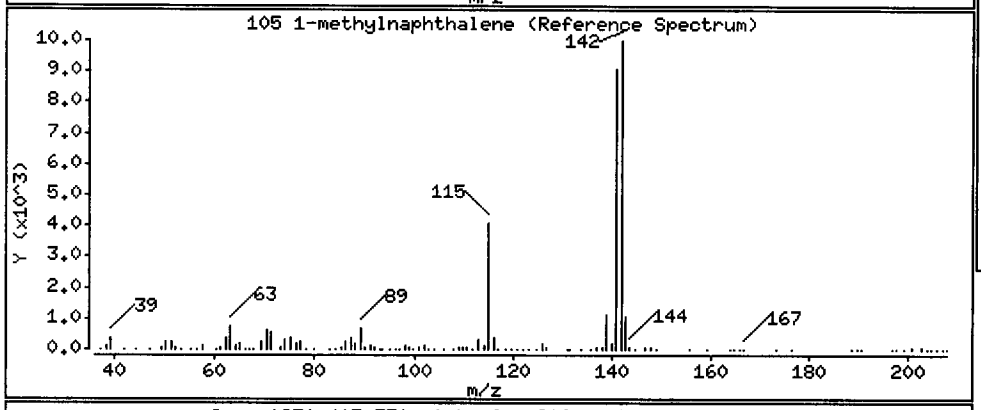
Concentration: 15.64 ug/kg

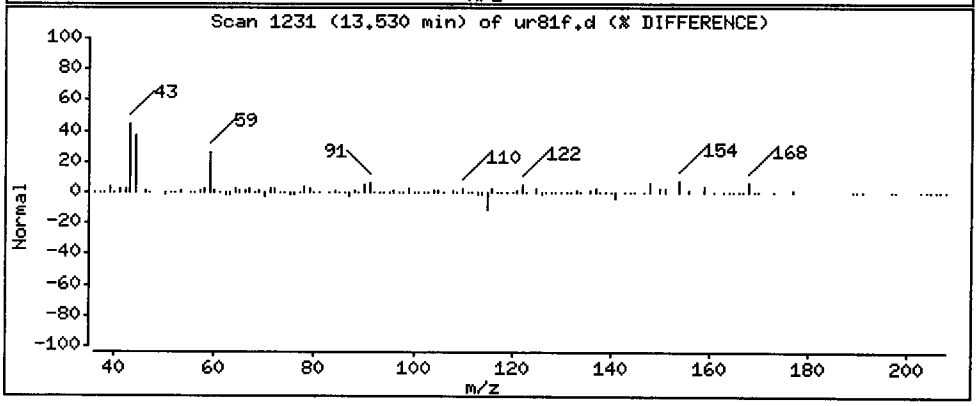












Data File: /chem1/nt10.i/20120508.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

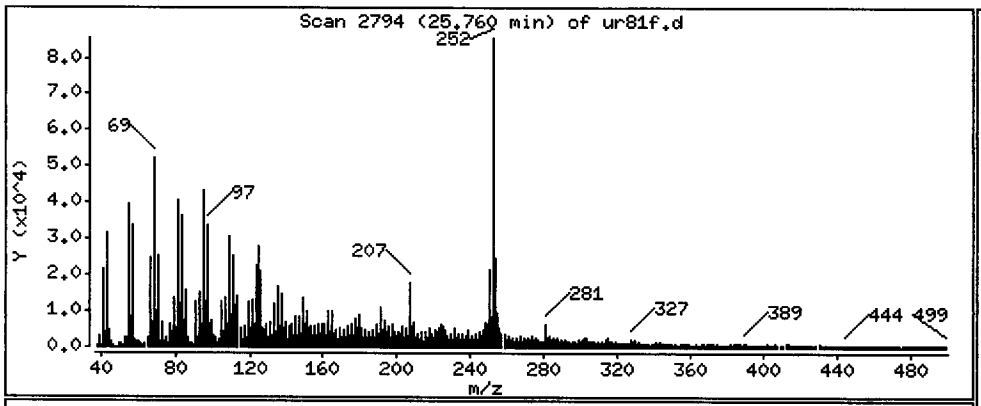
Operator: VTS/YZ

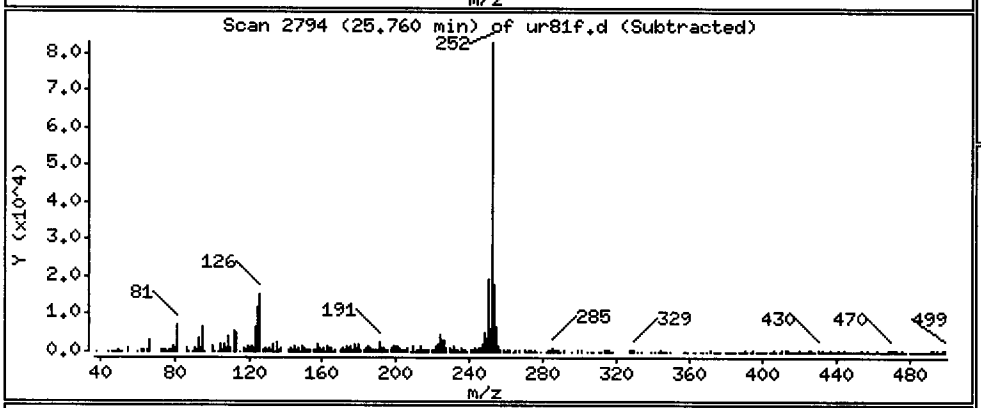
Column phase: ZB-5msi

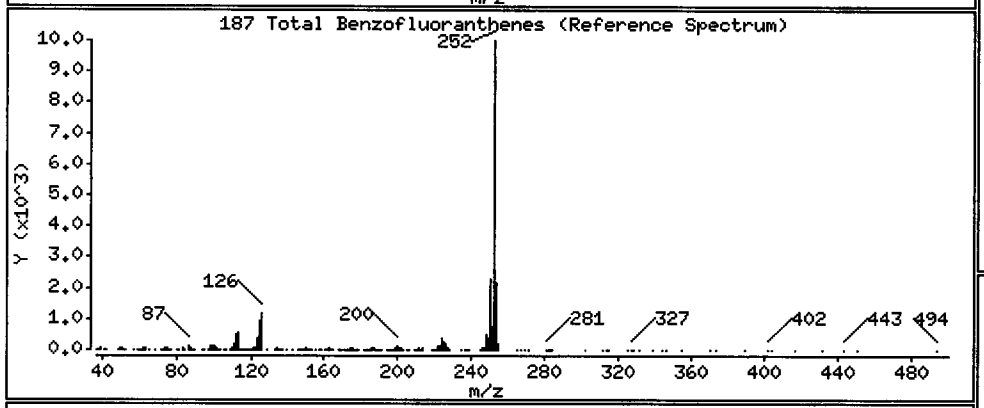
Column diameter: 0.25

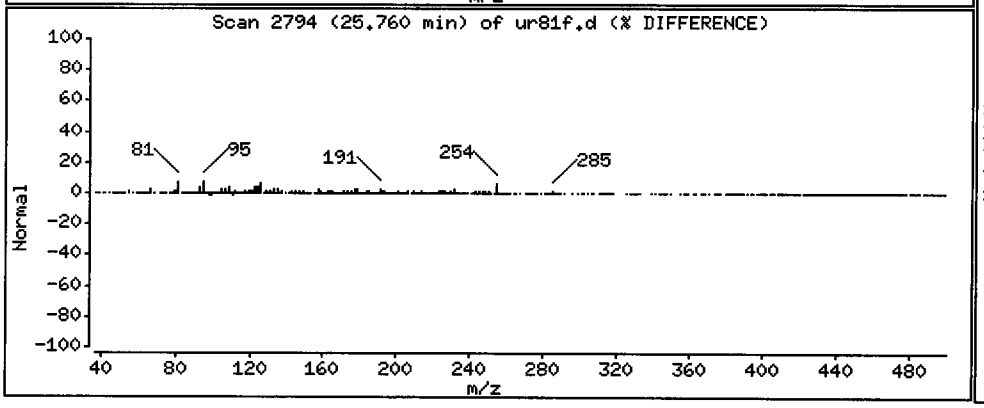
187 Total Benzofluoranthenes

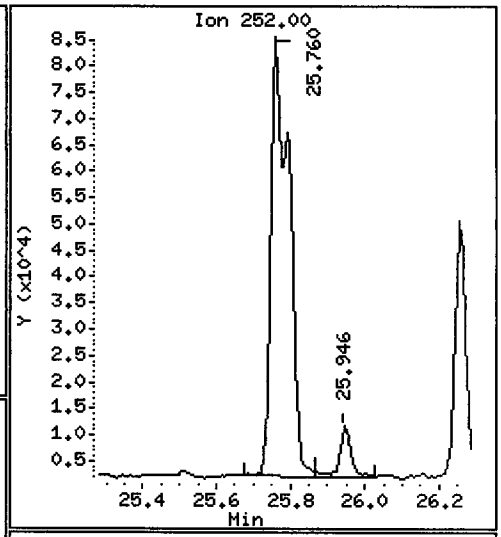
Concentration: 135.0 ug/kg

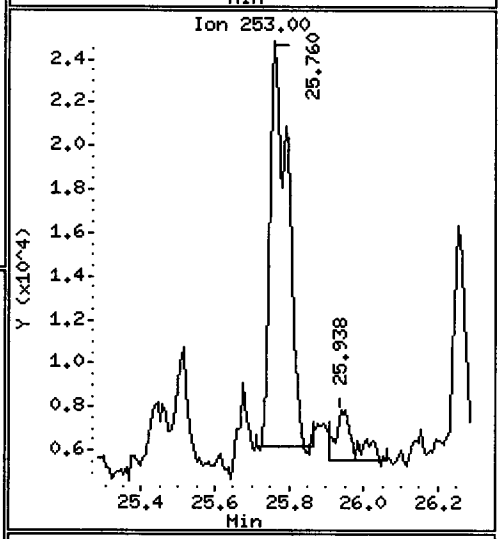


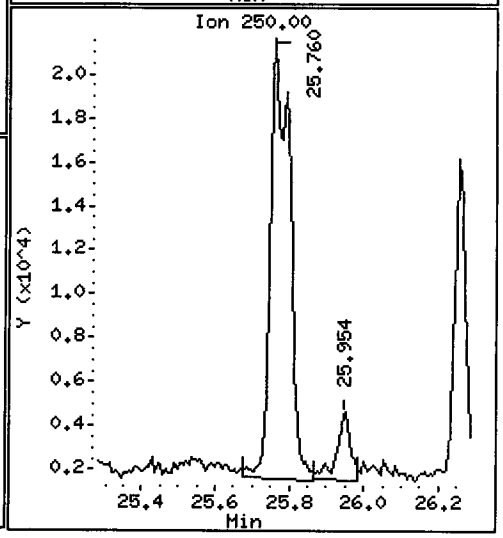












CO-ELUTION SUMMARY FOR FILE - ur81f.d

Lab ID: UR81F, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ 5/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81ems.d
Lab Smp Id: UR81EMS
Client Smp ID: IJ12-04 MS
Inj Date : 08-MAY-2012 20:57
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : UR81EMS
Misc Info : 12-7396
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 10-May-2012 10:46 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 14
QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	16.10000	Weight of sample extracted (g)
M	35.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.698	6.667	(0.740)	334260	4.08211	394.3
$ 2 Phenol-d5	99	8.413	8.398	(0.929)	449269	4.41246	426.2
3 Phenol	94	8.437	8.421	(0.932)	485517	4.35046	420.2
$ 5 2-Chlorophenol-d4	132	8.668	8.653	(0.957)	373099	4.23401	409.0
7 1,3-Dichlorobenzene	146	8.978	8.970	(0.991)	241197	2.45173	236.8
* 8 1,4-Dichlorobenzene-d4	152	9.055	9.040	(1.000)	239370	4.00000	
9 1,4-Dichlorobenzene	146	9.087	9.079	(1.003)	235716	2.46786	238.4
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.042)	148425	2.48574	240.1
12 1,2-Dichlorobenzene	146	9.467	9.459	(1.045)	236716	2.55294	246.6
11 Benzyl alcohol	108	9.366	9.350	(1.034)	167230	3.21548	310.6
13 2-Methylphenol	108	9.630	9.614	(1.063)	222510	2.53334	244.7
17 Hexachloroethane	117	10.096	10.088	(1.115)	68945	1.85032	178.7
15 4-Methylphenol	108	9.933	9.909	(1.097)	488366	5.33258	515.1
$ 18 Nitrobenzene-d5	82	10.235	10.228	(0.873)	229160	2.80550	271.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	727514	8.57598	828.4
	24 Benzoic acid	105	11.280	11.303	(0.962)	754546	11.4683	1108
	26 1,2,4-Trichlorobenzene	180	11.642	11.634	(0.993)	199111	2.56888	248.1
*	27 Naphthalene-d8	136	11.727	11.719	(1.000)	955354	4.00000	
	28 Naphthalene	128	11.773	11.766	(1.004)	764938	3.20615	309.7
	30 Hexachlorobutadiene	225	12.191	12.175	(1.040)	108782	2.55887	247.2
	32 2-Methylnaphthalene	142	13.289	13.282	(1.133)	524971	3.20844	309.9
$	36 2-Fluorobiphenyl	172	14.156	14.149	(0.905)	529461	2.91812	281.9
	39 Dimethylphthalate	163	15.162	15.147	(0.969)	569377	3.50783	338.8
	40 Acenaphthylene	152	15.302	15.286	(0.978)	1083509	4.59632	444.0
*	42 Acenaphthene-d10	164	15.642	15.627	(1.000)	531894	4.00000	
	44 Acenaphthene	153	15.712	15.696	(1.004)	552772	3.92864	379.5
	46 Dibenzofuran	168	16.067	16.060	(1.027)	774460	3.69831	357.2
	50 Diethylphthalate	149	16.748	16.732	(1.071)	546832	3.52022	340.0
	49 Fluorene	166	16.840	16.833	(1.077)	727325	4.55268	439.8
	54 N-Nitrosodiphenylamine	169	17.141	17.118	(0.906)	327605	2.99718	289.5
$	55 2,4,6-Tribromophenol	330	17.426	17.411	(1.114)	111973	4.58869	443.3
	57 Hexachlorobenzene	284	18.268	18.252	(0.965)	156614	3.03349	293.0
	58 Pentachlorophenol	266	18.663	18.640	(0.986)	355545	9.90964	957.2
*	59 Phenanthrene-d10	188	18.926	18.903	(1.000)	849107	4.00000	
	60 Phenanthrene	178	18.972	18.957	(1.002)	2795169	13.3117	1286(R)
	61 Anthracene	178	19.073	19.050	(1.008)	1143494	5.15914	498.4
	63 Di-n-butylphthalate	149	20.295	20.272	(1.072)	1118264	4.10169	396.2
	64 Fluoranthene	202	21.432	21.363	(1.132)	29385363	122.950 ES	11880(RM)
	65 Pyrene	202	21.843	21.781	(0.910)	19154474	70.1730 ES	6778(R)
$	66 Terphenyl-d14	244	22.121	22.098	(0.922)	525048	3.06751	296.3
	67 Butylbenzylphthalate	149	23.058	23.042	(0.961)	438798	3.77650	364.8
	68 Benzo(a)anthracene	228	23.964	23.941	(0.999)	2655313	10.8401	1047(R)
*	69 Chrysene-d12	240	23.995	23.964	(1.000)	903256	4.00000	
	71 Chrysene	228	24.049	24.010	(1.002)	7208756	32.9676 E	3185(R)
	72 bis(2-Ethylhexyl)phthalate	149	24.096	24.080	(0.961)	1021637	5.50949	532.2
*	134 Di-n-octylphthalate-d4	153	25.079	25.056	(1.000)	1426112	4.00000	
	73 Di-n-octylphthalate	149	25.086	25.071	(1.000)	1249338	3.68074	355.5
	76 Benzo(a)pyrene	252	26.372	26.333	(0.996)	2004091	9.58606	926.0(R)
*	77 Perylene-d12	264	26.472	26.441	(1.000)	860597	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.890	28.828	(1.091)	1486505	6.24882	603.6
	79 Dibenzo(a,h)anthracene	278	28.905	28.859	(1.092)	785616	4.29716	415.1
	80 Benzo(g,h,i)perylene	276	29.589	29.527	(1.118)	1148564	5.58441	539.4
	105 1-methylnaphthalene	142	13.529	13.514	(1.154)	514641	3.08463	298.0
	187 Total Benzofluoranthenes	252	25.783	25.783	(0.974)	10639520	45.4404 E	4389(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81ems.d
Lab Smp Id: UR81EMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-04 MS
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	239370	-11.95
27 Naphthalene-d8	1080694	540347	2161388	955354	-11.60
42 Acenaphthene-d10	623821	311910	1247642	531894	-14.74
59 Phenanthrene-d10	999143	499572	1998286	849107	-15.02
69 Chrysene-d12	1001009	500504	2002018	903256	-9.77
134 Di-n-octylphthala	1489422	744711	2978844	1426112	-4.25
77 Perylene-d12	988348	494174	1976696	860597	-12.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.06	0.17
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.93	0.12
69 Chrysene-d12	23.96	23.46	24.46	23.99	0.13
134 Di-n-octylphthala	25.06	24.56	25.56	25.08	0.09
77 Perylene-d12	26.44	25.94	26.94	26.47	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor
Sample Matrix: SOLID
Lab Smp Id: UR81EMS
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-04 MS
Operator: VTS/YZ
SampleType: MS
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	483.0	420.2	87.01	30-160
7	1,3-Dichlorobenzen	483.0	236.8	49.03	30-160
9	1,4-Dichlorobenzen	483.0	238.4	49.36	30-160
11	Benzyl alcohol	483.0	310.6	64.31	30-160
12	1,2-Dichlorobenzen	483.0	246.6	51.06	30-160
13	2-Methylphenol	483.0	244.7	50.67	30-160
15	4-Methylphenol	966.0	515.1	53.33	30-160
17	Hexachloroethane	483.0	178.7	37.01	30-160
22	2,4-Dimethylphenol	1449	828.4	57.17	30-160
24	Benzoic acid	2656	1108	41.70	30-160
26	1,2,4-Trichloroben	483.0	248.1	51.38	30-160
28	Naphthalene	483.0	309.7	64.12	30-160
30	Hexachlorobutadien	483.0	247.2	51.18	30-160
32	2-Methylnaphthalen	483.0	309.9	64.17	30-160
39	Dimethylphthalate	483.0	338.8	70.16	30-160
40	Acenaphthylene	483.0	444.0	91.93	30-160
44	Acenaphthene	483.0	379.5	78.57	30-160
46	Dibenzofuran	483.0	357.2	73.97	30-160
49	Fluorene	483.0	439.8	91.05	30-160
50	Diethylphthalate	483.0	340.0	70.40	30-160
54	N-Nitrosodiphenyla	483.0	289.5	59.94	30-160
57	Hexachlorobenzene	483.0	293.0	60.67	30-160
58	Pentachlorophenol	1449	957.2	66.06	30-160
60	Phenanthrene	483.0	1286	266.23*	30-160
61	Anthracene	483.0	498.4	103.18	30-160
63	Di-n-butylphthalat	483.0	396.2	82.03	30-160
64	Fluoranthene	483.0	11880	2458.99*	30-160
65	Pyrene	483.0	6778	1403.46*	30-160
67	Butylbenzylphthala	483.0	364.8	75.53	30-160
68	Benzo(a)anthracene	483.0	1047	216.80*	30-160
71	Chrysene	483.0	3185	659.35*	30-160
72	bis(2-Ethylhexyl)p	483.0	532.2	110.19	30-160
73	Di-n-octylphthalat	483.0	355.5	73.61	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	483.0	926.0	191.72*	30-160
78 Indeno(1,2,3-cd)py	483.0	603.6	124.98	30-160
79 Dibenzo(a,h)anthra	483.0	415.1	85.94	30-160
80 Benzo(g,h,i)peryle	483.0	539.4	111.69	30-160
105 1-methylnaphthalen	483.0	298.0	61.69	30-160
187 Total Benzofluoran	966.0	4389	454.40*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	724.5	394.3	54.43	30-160
$ 2 Phenol-d5	724.5	426.2	58.83	30-160
$ 5 2-Chlorophenol-d4	724.5	409.0	56.45	30-160
$ 10 1,2-Dichlorobenzen	483.0	240.1	49.71	30-160
$ 18 Nitrobenzene-d5	483.0	271.0	56.11	30-160
$ 36 2-Fluorobiphenyl	483.0	281.9	58.36	30-160
$ 55 2,4,6-Tribromophen	724.5	443.3	61.18	30-160
$ 66 Terphenyl-d14	483.0	296.3	61.35	30-160

Data File: /chem1/nt10.i/20120508.b/ur81ems.d

Date : 08-MAY-2012 20:57

Client ID: IJ12-04 MS

Sample Info: UR81EMS

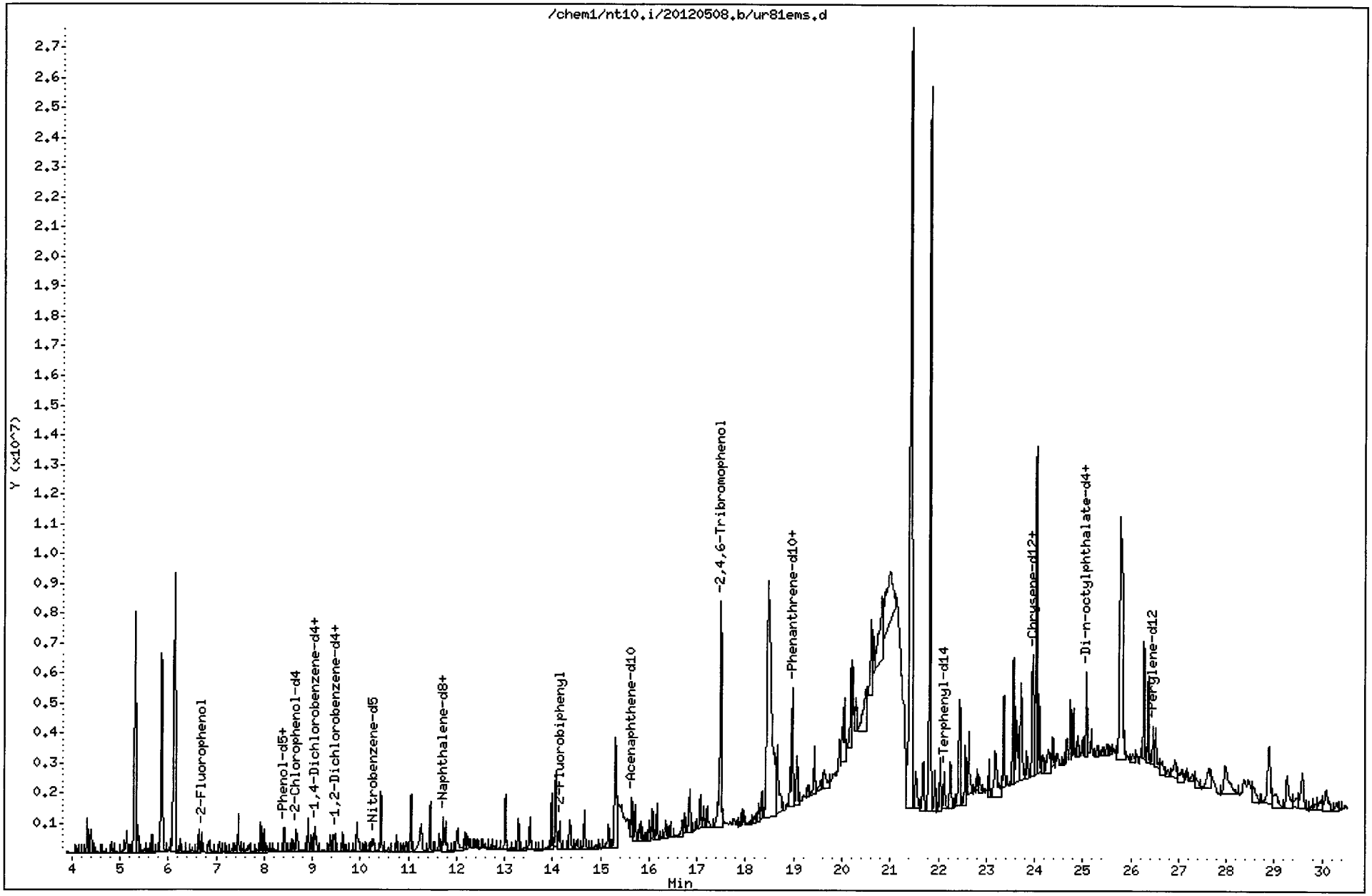
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

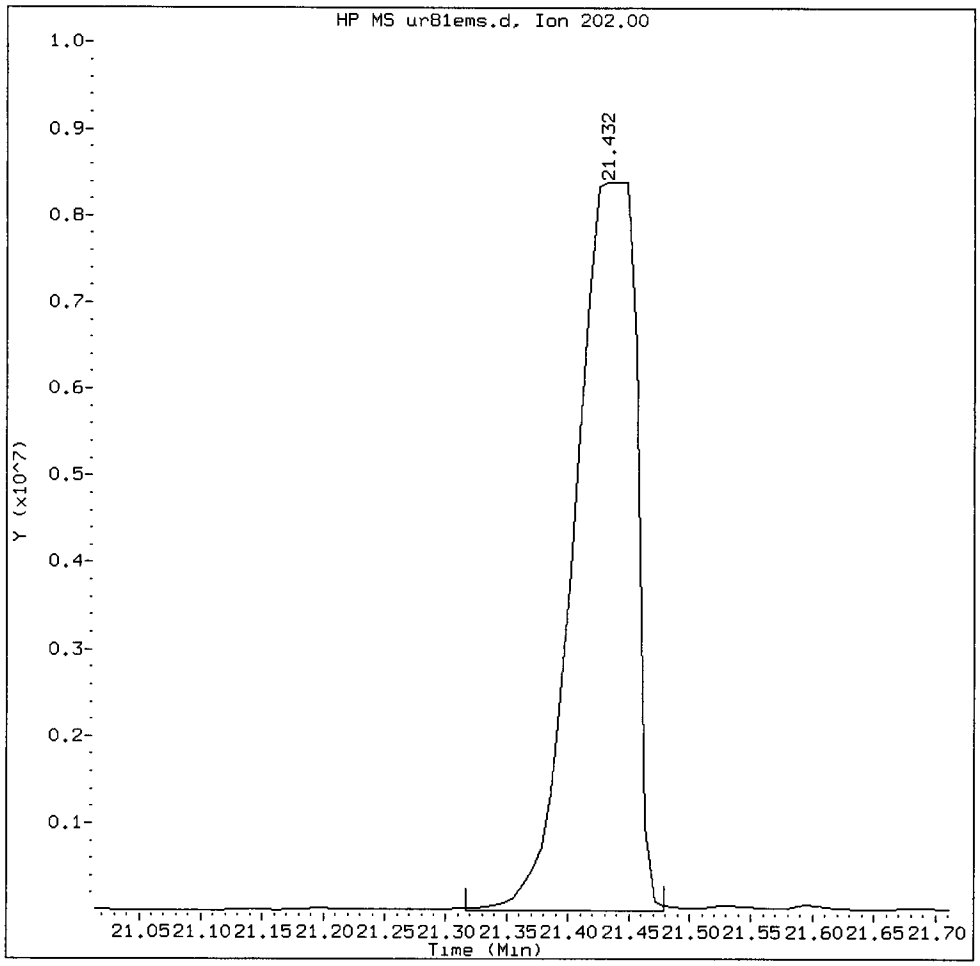
Operator: VTS/YZ

Column diameter: 0.25



UR81EMS, /chem1/nt10.i/20120508.b/ur81ems.d

Fluoranthene Amount: 122.95 Area: 29385363



MANUAL INTEGRATION for Fluoranthene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 9/10/12

CO-ELUTION SUMMARY FOR FILE - ur81ems.d

Lab ID: UR81EMS, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ 5/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81emsd.d
Lab Smp Id: UR81EMSD Client Smp ID: IJ12-04 MSD
Inj Date : 08-MAY-2012 21:33
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81EMSD
Misc Info : 12-7396
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 10-May-2012 10:46 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 15 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	16.00000	Weight of sample extracted (g)
M	35.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.698	6.667	(0.740)	372971	4.85844	472.2
$ 2 Phenol-d5	99	8.414	8.398	(0.930)	492104	5.15528	501.1
3 Phenol	94	8.437	8.421	(0.932)	527066	5.03753	489.7
$ 5 2-Chlorophenol-d4	132	8.668	8.653	(0.958)	416499	5.04155	490.0
7 1,3-Dichlorobenzene	146	8.978	8.970	(0.992)	269401	2.92093	283.9
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	224413	4.00000	
9 1,4-Dichlorobenzene	146	9.079	9.079	(1.003)	263229	2.93959	285.7
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.043)	164597	2.94031	285.8
12 1,2-Dichlorobenzene	146	9.467	9.459	(1.046)	262594	3.02078	293.6
11 Benzyl alcohol	108	9.366	9.350	(1.035)	187712	3.84986	374.2
13 2-Methylphenol	108	9.630	9.614	(1.064)	247019	2.99983	291.6
17 Hexachloroethane	117	10.096	10.088	(1.116)	78366	2.24333	218.1
15 4-Methylphenol	108	9.933	9.909	(1.098)	545841	6.35740	617.9
$ 18 Nitrobenzene-d5	82	10.235	10.228	(0.873)	255206	3.35085	325.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	809219	10.2306	994.4
	24 Benzoic acid	105	11.295	11.303	(0.963)	797351	12.9973	1263
	26 1,2,4-Trichlorobenzene	180	11.642	11.634	(0.993)	223914	3.09830	301.2
*	27 Naphthalene-d8	136	11.727	11.719	(1.000)	890782	4.00000	
	28 Naphthalene	128	11.773	11.766	(1.004)	1866213	8.38903	815.4(R)
	30 Hexachlorobutadiene	225	12.183	12.175	(1.039)	124501	3.14092	305.3
	32 2-Methylnaphthalene	142	13.290	13.282	(1.133)	1025456	6.72154	653.3
$	36 2-Fluorobiphenyl	172	14.156	14.149	(0.905)	587627	3.36211	326.8
	39 Dimethylphthalate	163	15.155	15.147	(0.969)	614389	3.92936	381.9
	40 Acenaphthylene	152	15.302	15.286	(0.978)	1133966	4.99365	485.4
*	42 Acenaphthene-d10	164	15.642	15.627	(1.000)	512372	4.00000	
	44 Acenaphthene	153	15.712	15.696	(1.004)	812972	5.99807	583.0
	46 Dibenzofuran	168	16.067	16.060	(1.027)	1772009	8.78436	853.8(R)
	50 Diethylphthalate	149	16.748	16.732	(1.071)	598213	3.99772	388.6
	49 Fluorene	166	16.840	16.833	(1.077)	1233837	8.01744	779.3(R)
	54 N-Nitrosodiphenylamine	169	17.141	17.118	(0.906)	370872	3.54033	344.1
$	55 2,4,6-Tribromophenol	330	17.427	17.411	(1.114)	124986	5.31712	516.8
	57 Hexachlorobenzene	284	18.268	18.252	(0.965)	173320	3.50282	340.5
	58 Pentachlorophenol	266	18.671	18.640	(0.986)	386552	11.2416	1093
*	59 Phenanthrene-d10	188	18.926	18.903	(1.000)	813777	4.00000	
	60 Phenanthrene	178	18.988	18.957	(1.003)	8258609	41.0383 E	3989(R)
	61 Anthracene	178	19.073	19.050	(1.008)	1292050	6.08247	591.2
	63 Di-n-butylphthalate	149	20.288	20.272	(1.072)	1360887	5.20832	506.3
	64 Fluoranthene	202	21.433	21.363	(1.132)	21539340	94.0342 ES	9140(R)
	65 Pyrene	202	21.835	21.781	(0.910)	13628446	51.0520 E	4962(R)
$	66 Terphenyl-d14	244	22.121	22.098	(0.922)	574625	3.43272	333.7
	67 Butylbenzylphthalate	149	23.058	23.042	(0.961)	487979	4.29430	417.4
	68 Benzo(a)anthracene	228	23.972	23.941	(0.999)	2702585	11.2814	1097(R)
*	69 Chrysene-d12	240	23.995	23.964	(1.000)	883372	4.00000	
	71 Chrysene	228	24.049	24.010	(1.002)	6243663	29.1967 E	2838(R)
	72 bis(2-Ethylhexyl)phthalate	149	24.096	24.080	(0.961)	1076317	6.10827	593.7
*	134 Di-n-octylphthalate-d4	153	25.079	25.056	(1.000)	1355160	4.00000	
	73 Di-n-octylphthalate	149	25.087	25.071	(1.000)	1338938	4.15125	403.5
	76 Benzo(a)pyrene	252	26.372	26.333	(0.996)	1742118	8.70660	846.3(R)
*	77 Perylene-d12	264	26.472	26.441	(1.000)	823667	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.897	28.828	(1.092)	1176788	5.16866	502.4
	79 Dibenzo(a,h)anthracene	278	28.905	28.859	(1.092)	716270	4.09351	397.9
	80 Benzo(g,h,i)perylene	276	29.597	29.527	(1.118)	881244	4.47678	435.1
	105 1-methylnaphthalene	142	13.530	13.514	(1.154)	812745	5.22452	507.8
	187 Total Benzofluoranthenes	252	25.783	25.783	(0.974)	8179372	36.4996	3548(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81emsd.d
Lab Smp Id: UR81EMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-04 MSD
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	224413	-17.46
27 Naphthalene-d8	1080694	540347	2161388	890782	-17.57
42 Acenaphthene-d10	623821	311910	1247642	512372	-17.87
59 Phenanthrene-d10	999143	499572	1998286	813777	-18.55
69 Chrysene-d12	1001009	500504	2002018	883372	-11.75
134 Di-n-octylphthala	1489422	744711	2978844	1355160	-9.01
77 Perylene-d12	988348	494174	1976696	823667	-16.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.93	0.12
69 Chrysene-d12	23.96	23.46	24.46	23.99	0.13
134 Di-n-octylphthala	25.06	24.56	25.56	25.08	0.09
77 Perylene-d12	26.44	25.94	26.94	26.47	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor
Sample Matrix: SOLID
Lab Smp Id: UR81EMSD
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-04 MSD
Operator: VTS/YZ
SampleType: MSD
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	486.0	489.7	100.75	30-160
7	1,3-Dichlorobenzen	486.0	283.9	58.42	30-160
9	1,4-Dichlorobenzen	486.0	285.7	58.79	30-160
11	Benzyl alcohol	486.0	374.2	77.00	30-160
12	1,2-Dichlorobenzen	486.0	293.6	60.42	30-160
13	2-Methylphenol	486.0	291.6	60.00	30-160
15	4-Methylphenol	972.0	617.9	63.57	30-160
17	Hexachloroethane	486.0	218.1	44.87	30-160
22	2,4-Dimethylphenol	1458	994.4	68.20	30-160
24	Benzoic acid	2673	1263	47.26	30-160
26	1,2,4-Trichloroben	486.0	301.2	61.97	30-160
28	Naphthalene	486.0	815.4	167.78*	30-160
30	Hexachlorobutadien	486.0	305.3	62.82	30-160
32	2-Methylnaphthalen	486.0	653.3	134.43	30-160
39	Dimethylphthalate	486.0	381.9	78.59	30-160
40	Acenaphthylene	486.0	485.4	99.87	30-160
44	Acenaphthene	486.0	583.0	119.96	30-160
46	Dibenzofuran	486.0	853.8	175.69*	30-160
49	Fluorene	486.0	779.3	160.35*	30-160
50	Diethylphthalate	486.0	388.6	79.95	30-160
54	N-Nitrosodiphenyla	486.0	344.1	70.81	30-160
57	Hexachlorobenzene	486.0	340.5	70.06	30-160
58	Pentachlorophenol	1458	1093	74.94	30-160
60	Phenanthrene	486.0	3989	820.77*	30-160
61	Anthracene	486.0	591.2	121.65	30-160
63	Di-n-butylphthalat	486.0	506.3	104.17	30-160
64	Fluoranthene	486.0	9140	1880.68*	30-160
65	Pyrene	486.0	4962	1021.04*	30-160
67	Butylbenzylphthala	486.0	417.4	85.89	30-160
68	Benzo(a)anthracene	486.0	1097	225.63*	30-160
71	Chrysene	486.0	2838	583.93*	30-160
72	bis(2-Ethylhexyl)p	486.0	593.7	122.17	30-160
73	Di-n-octylphthalat	486.0	403.5	83.03	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	486.0	846.3	174.13*	30-160
78 Indeno(1,2,3-cd)py	486.0	502.4	103.37	30-160
79 Dibenzo(a,h)anthra	486.0	397.9	81.87	30-160
80 Benzo(g,h,i)peryle	486.0	435.1	89.54	30-160
105 1-methylnaphthalen	486.0	507.8	104.49	30-160
187 Total Benzofluoran	972.0	3548	365.00*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	729.0	472.2	64.78	30-160
$ 2 Phenol-d5	729.0	501.1	68.74	30-160
$ 5 2-Chlorophenol-d4	729.0	490.0	67.22	30-160
$ 10 1,2-Dichlorobenzen	486.0	285.8	58.81	30-160
$ 18 Nitrobenzene-d5	486.0	325.7	67.02	30-160
$ 36 2-Fluorobiphenyl	486.0	326.8	67.24	30-160
$ 55 2,4,6-Tribromophen	729.0	516.8	70.89	30-160
$ 66 Terphenyl-d14	486.0	333.7	68.65	30-160

Data File: /chem1/nt10.i/20120508.b/ur81emsd.d

Date : 08-MAY-2012 21:33

Client ID: IJ12-04 MSD

Sample Info: UR81EMSD

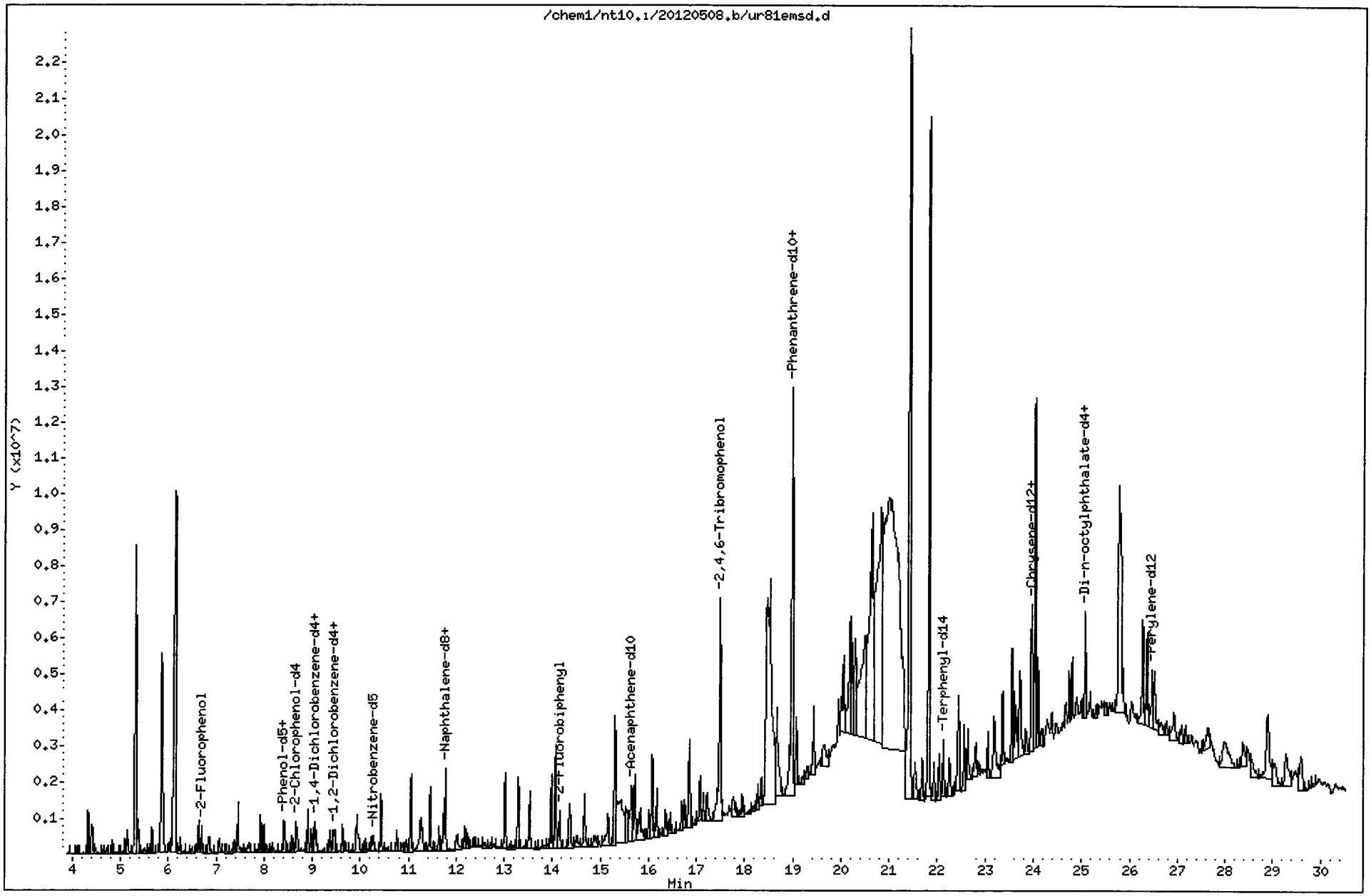
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ur81emsd.d

Lab ID: UR81EMSD, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

JR 5/10/12

Data file : /chem1/nt10.i/20120508.b/ur81g.d
Lab Smp Id: UR81G Client Smp ID: IJ12-01
Inj Date : 08-MAY-2012 22:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81G
Misc Info : 12-7398
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	17.30000	Weight of sample extracted (g)
M	38.60000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.706	6.667	(0.740)	326235	4.20540	395.9
$ 2 Phenol-d5	99	8.414	8.398	(0.929)	432165	4.48023	421.8
3 Phenol	94	8.437	8.421	(0.932)	63815	0.60357	56.82
$ 5 2-Chlorophenol-d4	132	8.669	8.653	(0.957)	375868	4.50236	423.9
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.056	9.040	(1.000)	226774	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.042)	149986	2.65140	249.6
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.366	9.350	(1.034)	16050	0.32575	30.67
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.933	9.909	(1.097)	55486	0.63952	60.21
$ 18 Nitrobenzene-d5	82	10.236	10.228	(0.873)	229677	2.93907	276.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	13633	0.16798	15.81
24 Benzoic acid	105	11.234	11.303	(0.958)	143105	2.27347	214.0
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.727	11.719	(1.000)	913992	4.00000	
28 Naphthalene	128	11.774	11.766	(1.004)	314328	1.37709	129.6
30 Hexachlorobutadiene	225	Compound Not Detected.					
32 2-Methylnaphthalene	142	13.290	13.282	(1.133)	127497	0.81448	76.68
$ 36 2-Fluorobiphenyl	172	14.157	14.149	(0.905)	529798	3.12631	294.3
39 Dimethylphthalate	163	15.101	15.147	(0.965)	63515	0.41895	39.44
40 Acenaphthylene	152	15.302	15.286	(0.978)	74098	0.33654	31.68
* 42 Acenaphthene-d10	164	15.642	15.627	(1.000)	496790	4.00000	
44 Acenaphthene	153	15.712	15.696	(1.004)	65478	0.49825	46.91
46 Dibenzofuran	168	16.067	16.060	(1.027)	136980	0.70035	65.93
50 Diethylphthalate	149	Compound Not Detected.					
49 Fluorene	166	16.841	16.833	(1.077)	113650	0.76166	71.70
54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55 2,4,6-Tribromophenol	330	17.427	17.411	(1.114)	124201	5.44945	513.0
57 Hexachlorobenzene	284	Compound Not Detected.					
58 Pentachlorophenol	266	18.671	18.640	(0.986)	8489	0.25234	23.76
* 59 Phenanthrene-d10	188	18.926	18.903	(1.000)	796154	4.00000	
60 Phenanthrene	178	18.972	18.957	(1.002)	1352088	6.86745	646.5
61 Anthracene	178	19.073	19.050	(1.008)	230392	1.10860	104.4
63 Di-n-butylphthalate	149	20.179	20.272	(1.066)	60827	0.23795	22.40
64 Fluoranthene	202	21.410	21.363	(1.131)	3258584	14.5409	1369
65 Pyrene	202	21.820	21.781	(0.909)	2811148	11.2743	1061
$ 66 Terphenyl-d14	244	22.129	22.098	(0.922)	530300	3.39168	319.3
67 Butylbenzylphthalate	149	Compound Not Detected.					
68 Benzo(a)anthracene	228	23.972	23.941	(0.999)	850070	3.79908	357.7
* 69 Chrysene-d12	240	23.995	23.964	(1.000)	825097	4.00000	
71 Chrysene	228	24.042	24.010	(1.002)	1483399	7.42661	699.2
72 bis(2-Ethylhexyl)phthalate	149	24.104	24.080	(0.961)	579788	3.44432	324.3
* 134 Di-n-octylphthalate-d4	153	25.087	25.056	(1.000)	1294596	4.00000	
73 Di-n-octylphthalate	149	25.094	25.071	(1.000)	66410	0.21553	20.29(M)
76 Benzo(a)pyrene	252	26.380	26.333	(0.996)	743639	3.99679	376.3
* 77 Perylene-d12	264	26.488	26.441	(1.000)	765903	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.913	28.828	(1.092)	410149	1.93731	182.4
79 Dibenzo(a,h)anthracene	278	28.929	28.859	(1.092)	128603	0.79040	74.41
80 Benzo(g,h,i)perylene	276	29.620	29.527	(1.118)	354509	1.93676	182.3
105 1-methylnaphthalene	142	13.530	13.514	(1.154)	121352	0.76027	71.57
187 Total Benzofluoranthenes	252	25.783	25.783	(0.973)	1878009	9.01247	848.5

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81g.d
Lab Smp Id: UR81G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7398

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-01
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	226774	-16.59
27 Naphthalene-d8	1080694	540347	2161388	913992	-15.43
42 Acenaphthene-d10	623821	311910	1247642	496790	-20.36
59 Phenanthrene-d10	999143	499572	1998286	796154	-20.32
69 Chrysene-d12	1001009	500504	2002018	825097	-17.57
134 Di-n-octylphthala	1489422	744711	2978844	1294596	-13.08
77 Perylene-d12	988348	494174	1976696	765903	-22.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.06	0.17
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.93	0.12
69 Chrysene-d12	23.96	23.46	24.46	24.00	0.13
134 Di-n-octylphthala	25.06	24.56	25.56	25.09	0.12
77 Perylene-d12	26.44	25.94	26.94	26.49	0.18

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

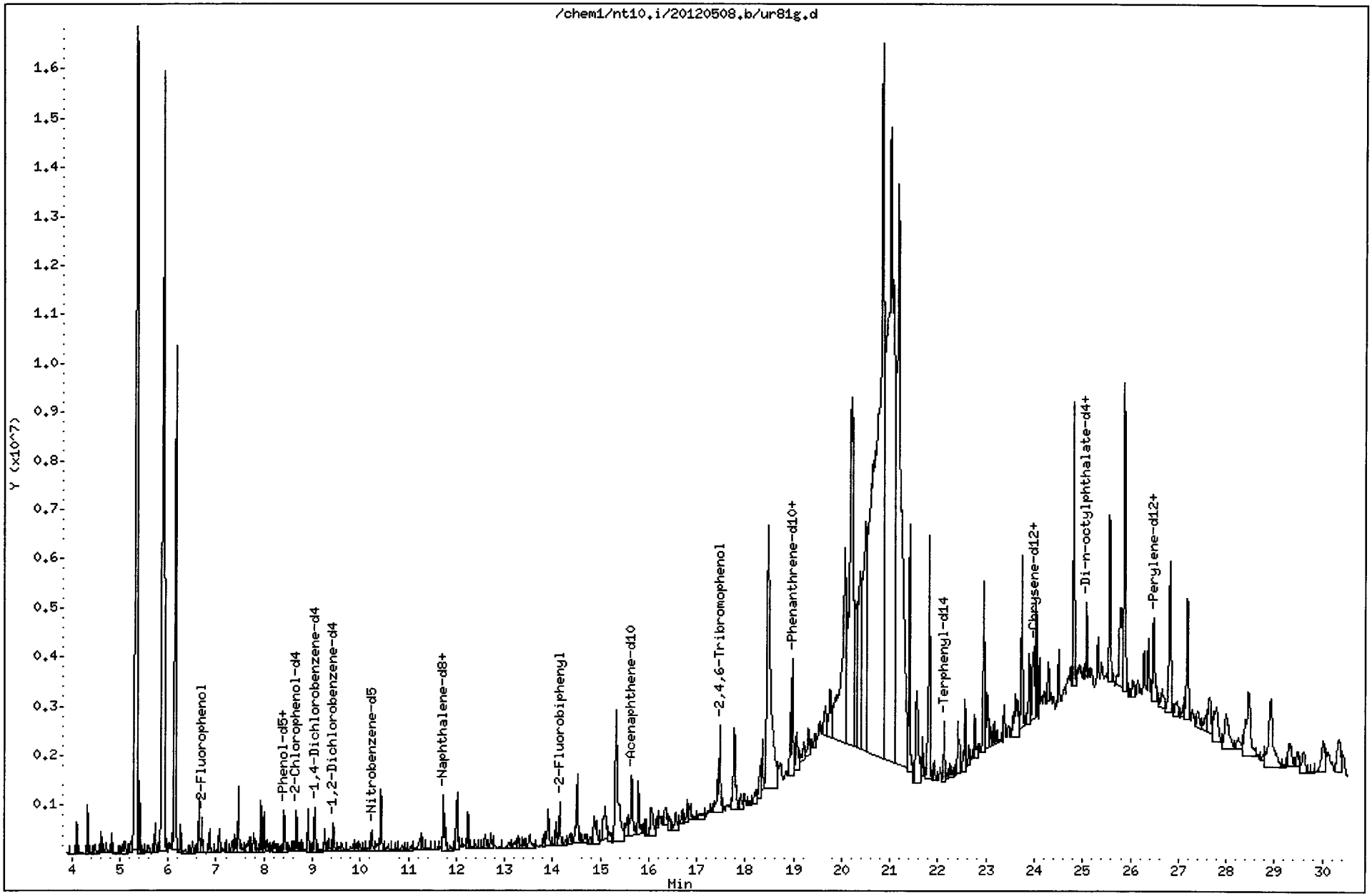
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81G
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7398

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-01
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	706.1	395.9	56.07	30-160
$ 2 Phenol-d5	706.1	421.8	59.74	30-160
$ 5 2-Chlorophenol-d4	706.1	423.9	60.03	30-160
$ 10 1,2-Dichlorobenzen	470.7	249.6	53.03	30-160
$ 18 Nitrobenzene-d5	470.7	276.7	58.78	30-160
$ 36 2-Fluorobiphenyl	470.7	294.3	62.53	30-160
$ 55 2,4,6-Tribromophen	706.1	513.0	72.66	30-160
$ 66 Terphenyl-d14	470.7	319.3	67.83	30-160

Data File: /chem1/nt10.i/20120508.b/ur81g.d
Date : 08-MAY-2012 22:47
Client ID: IJ12-01
Sample Info: UR81G
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

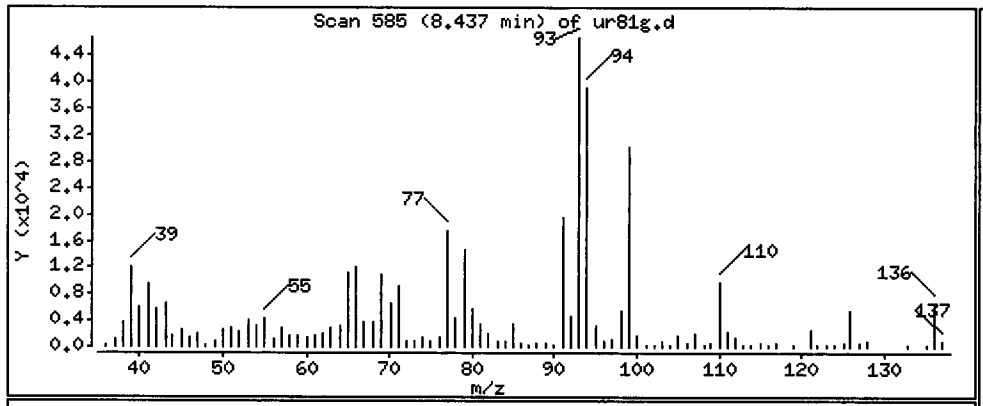
Operator: VTS/YZ

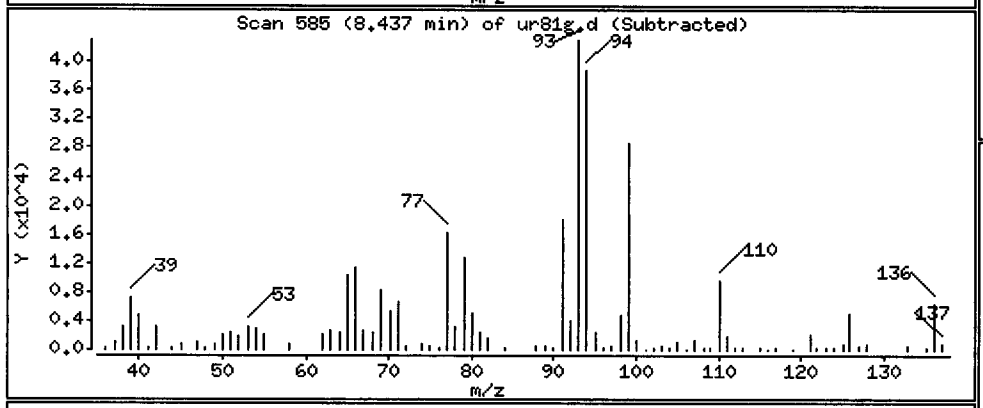
Column phase: ZB-5msi

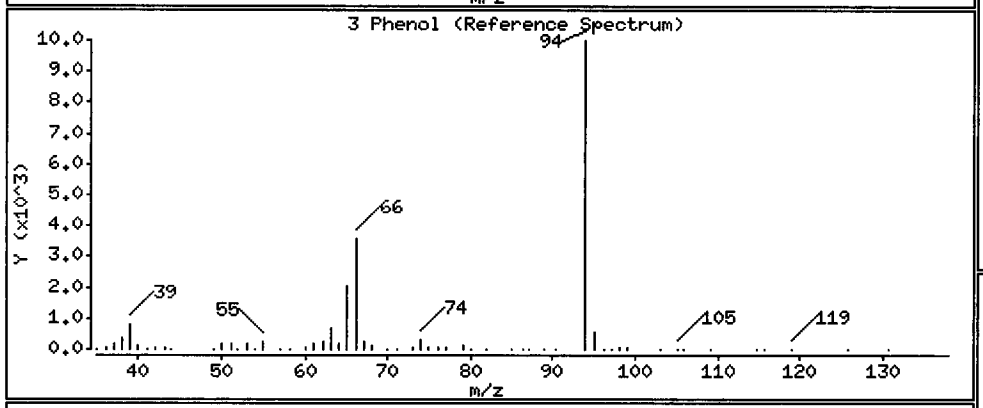
Column diameter: 0.25

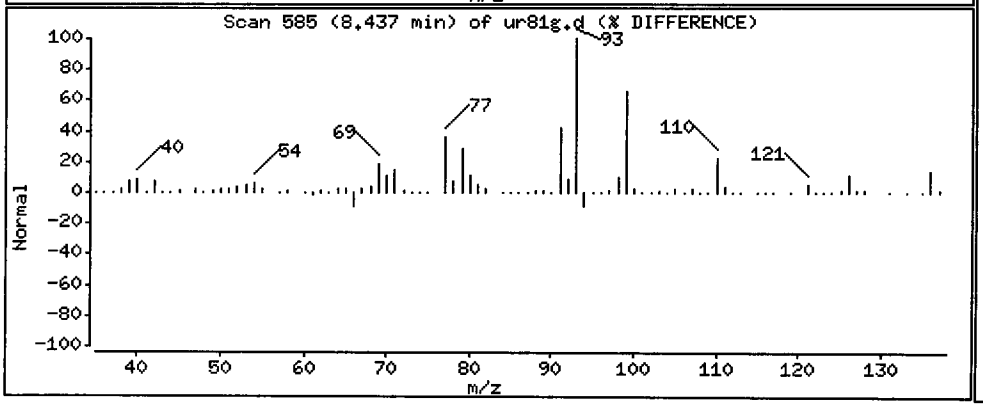
3 Phenol

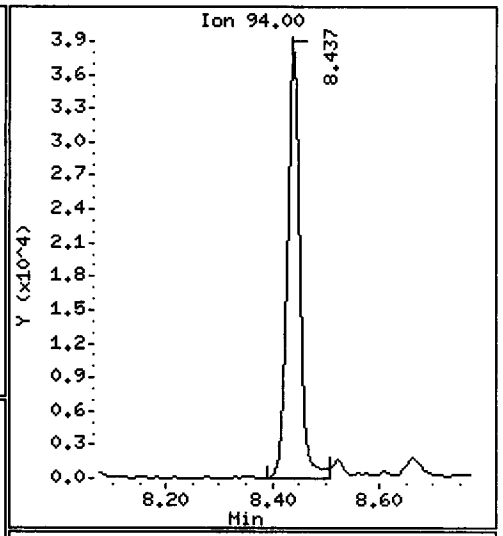
Concentration: 56.82 ug/kg

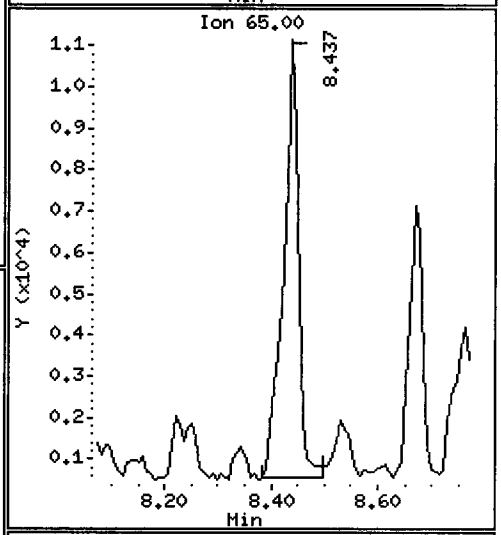


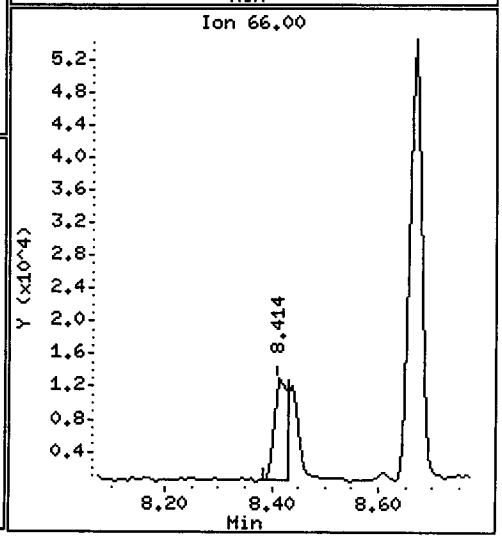












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

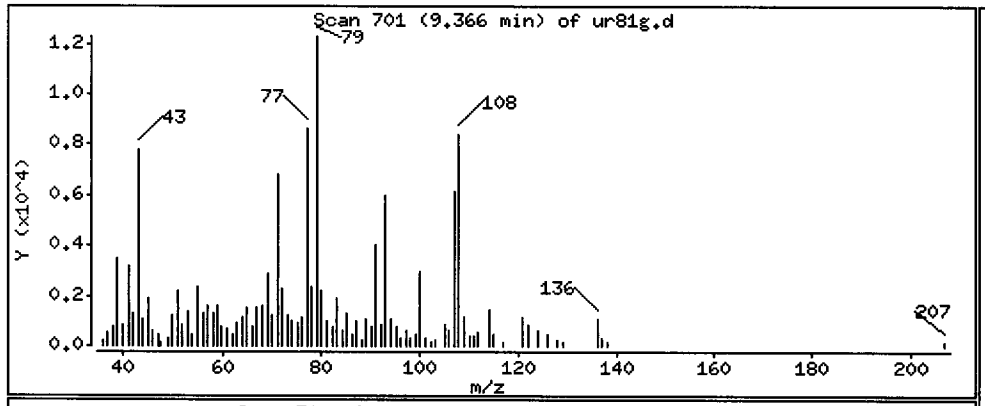
Operator: VTS/YZ

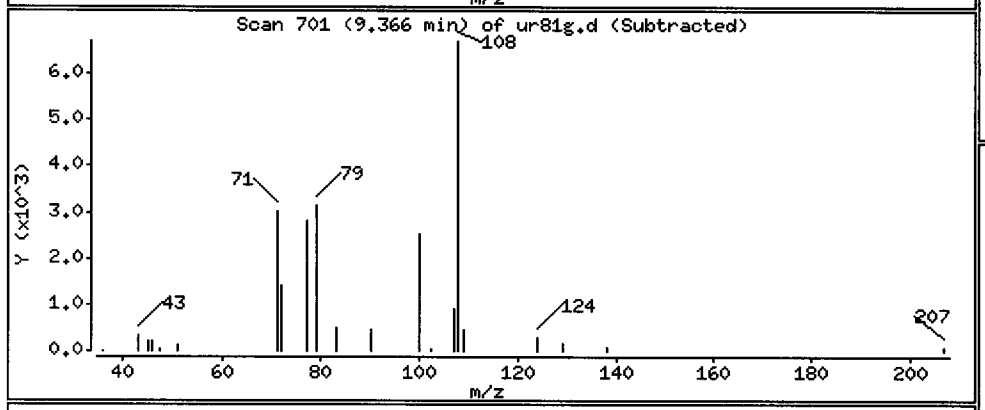
Column phase: ZB-5msi

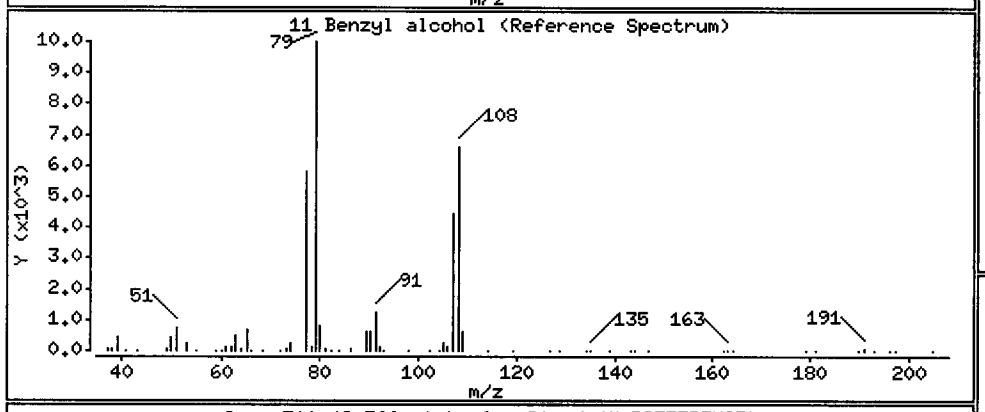
Column diameter: 0.25

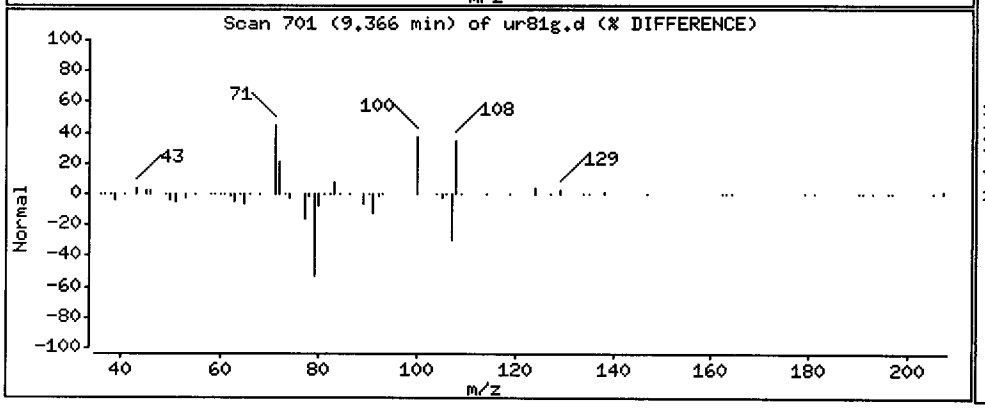
11 Benzyl alcohol

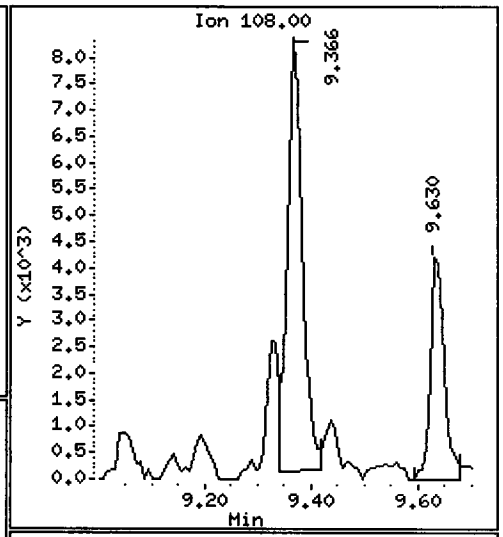
Concentration: 30.67 ug/kg

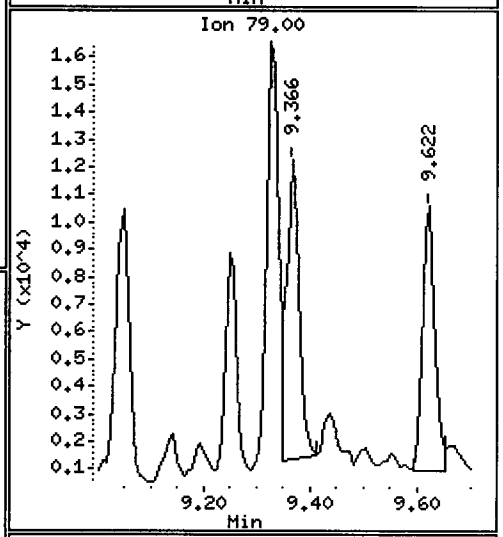


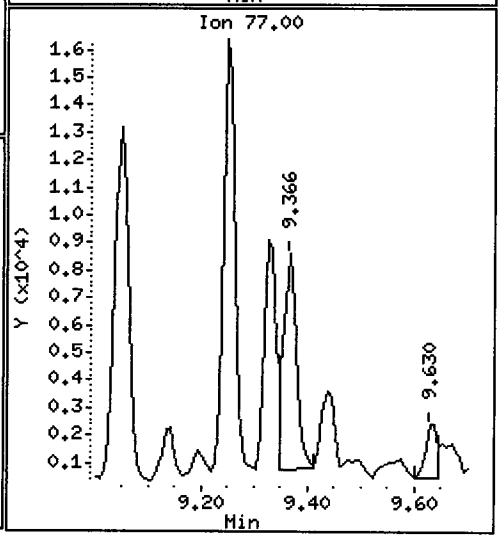












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

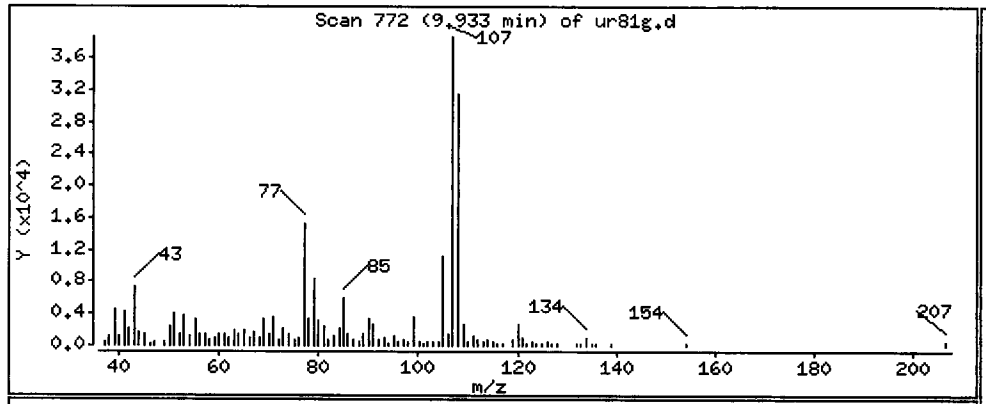
Client ID: IJ12-01 Instrument: nt10.i

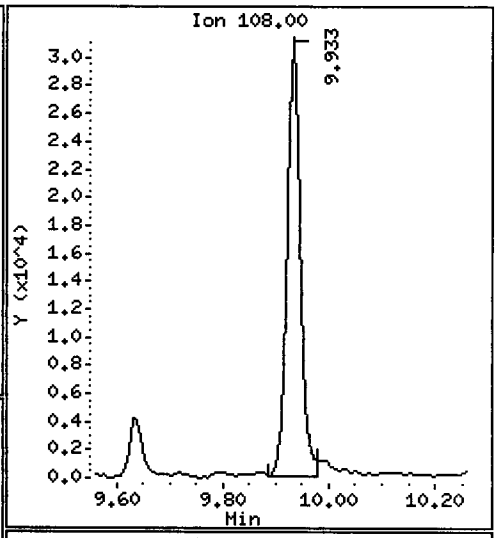
Sample Info: UR81G

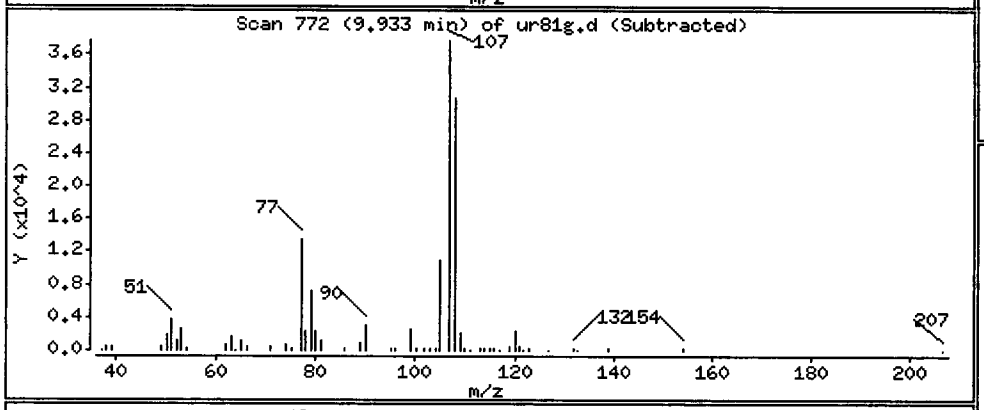
Volume Injected (uL): 1.0 Operator: VTS/YZ

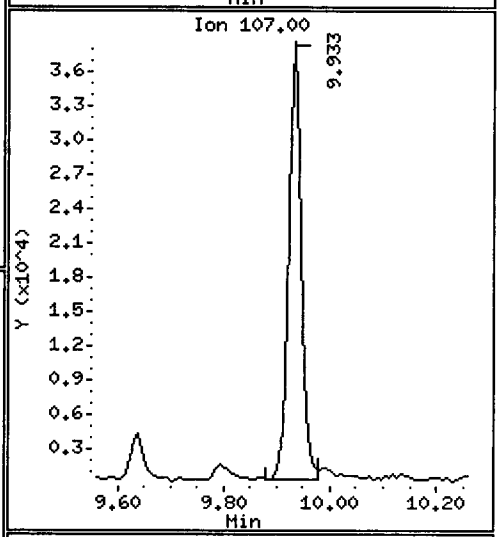
Column phase: ZB-5msi Column diameter: 0.25

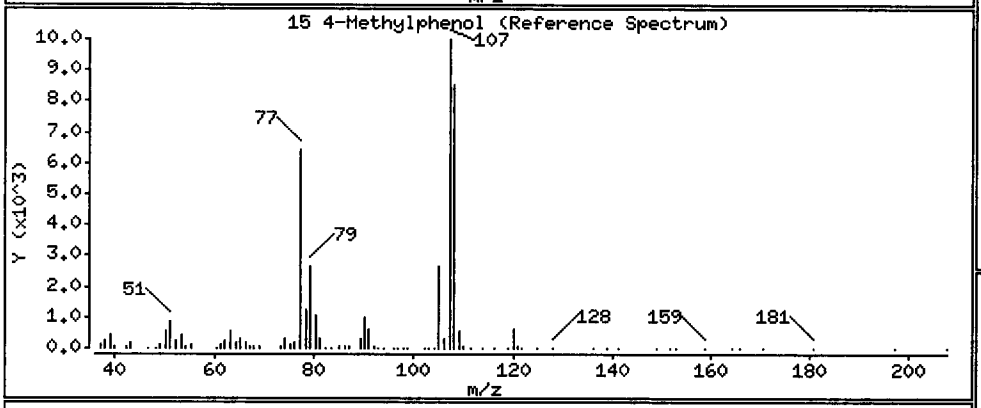
15 4-Methylphenol Concentration: 60.21 ug/kg

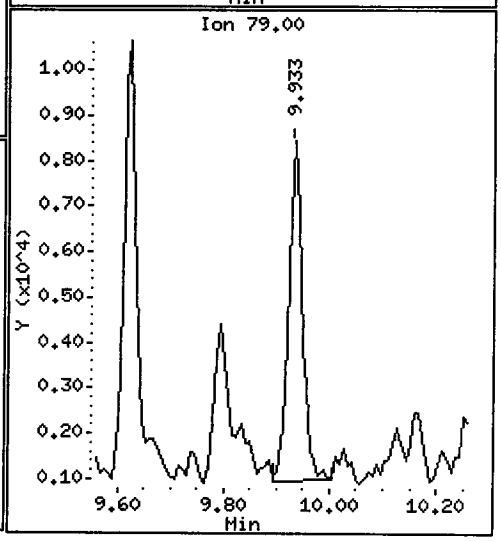


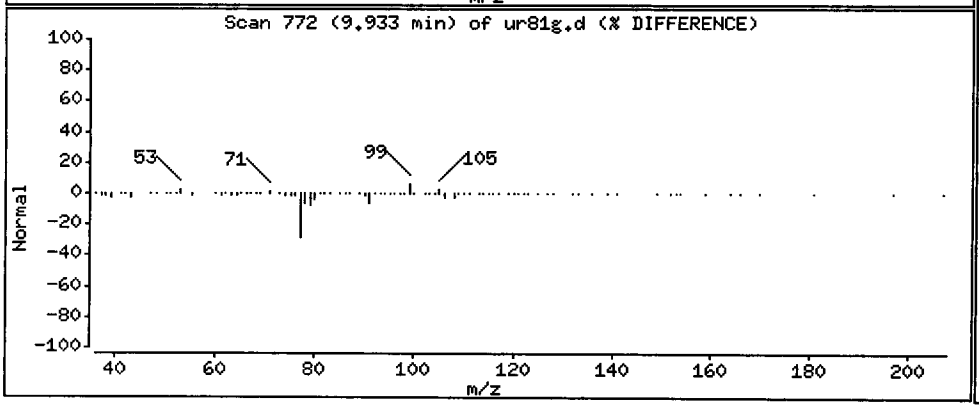












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

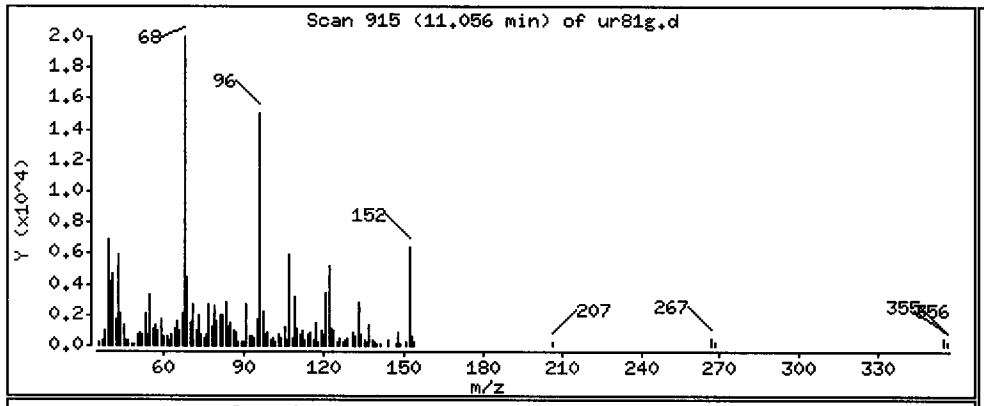
Operator: VTS/YZ

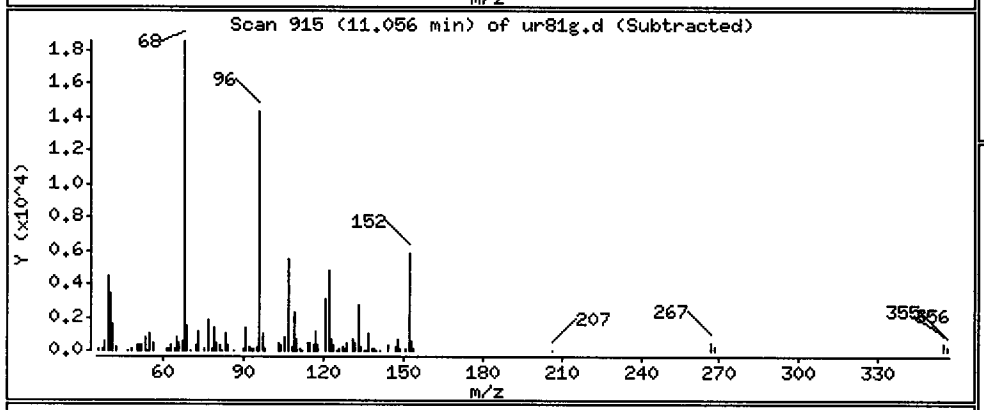
Column phase: ZB-5msi

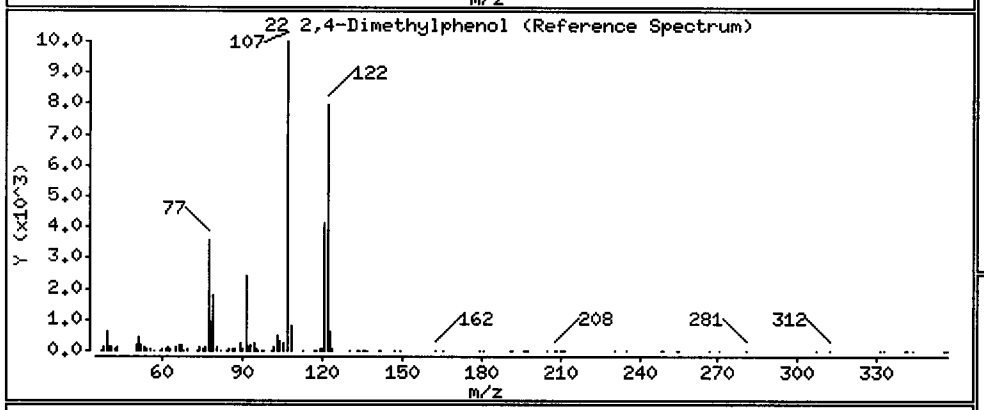
Column diameter: 0.25

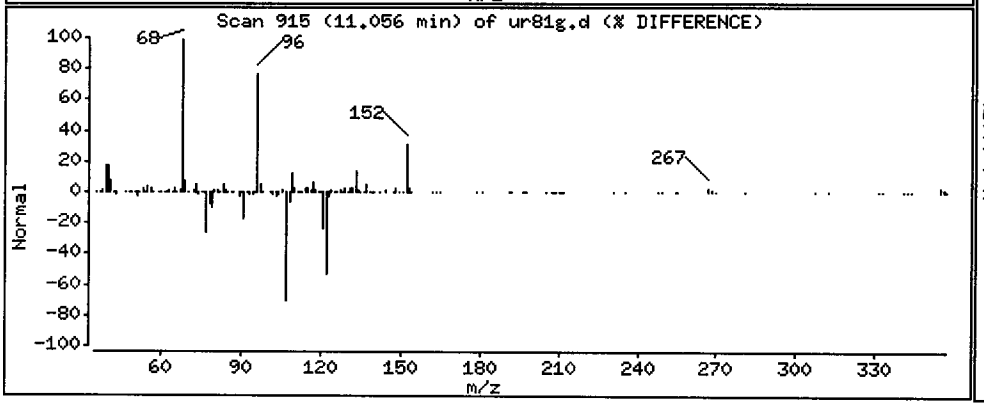
22 2,4-Dimethylphenol

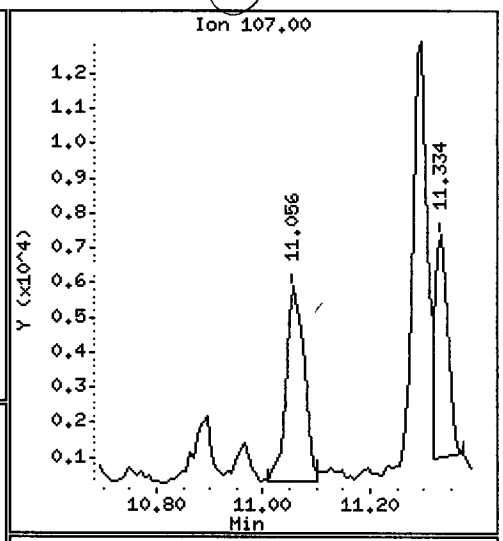
Concentration: 15.81 ug/kg

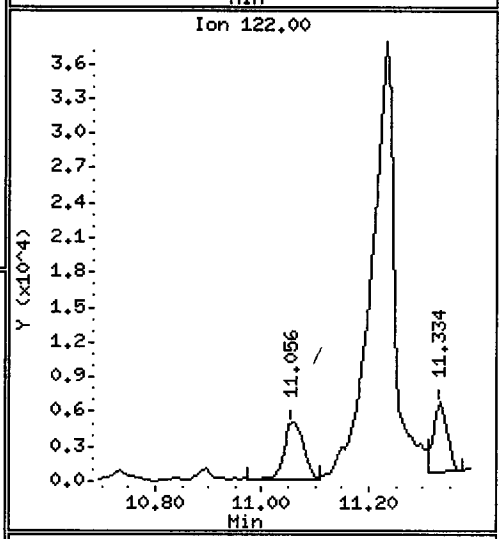


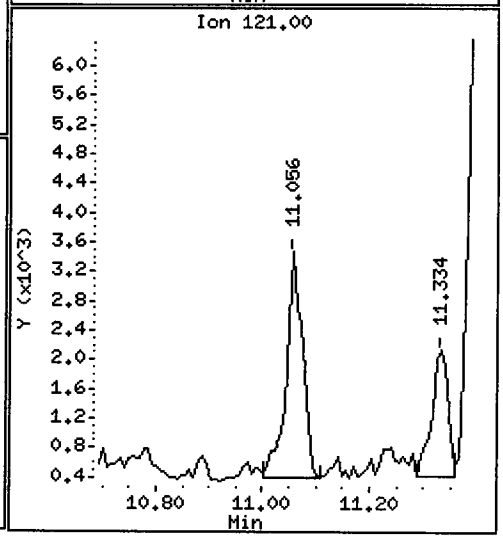












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

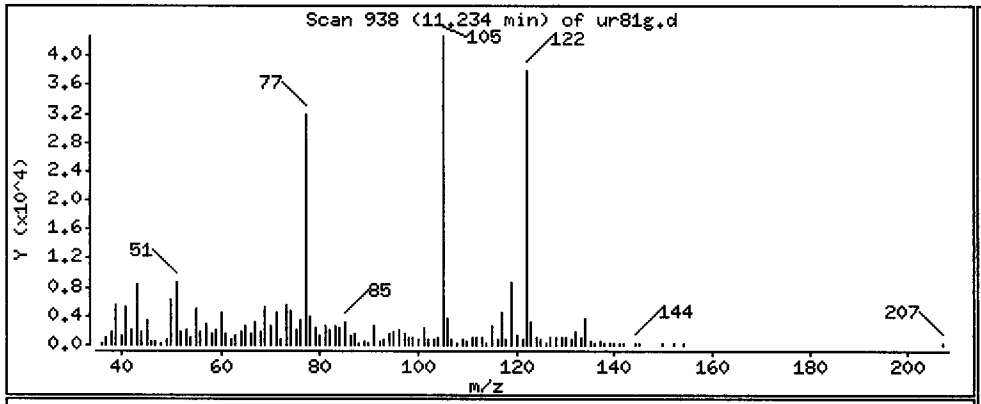
Operator: VTS/YZ

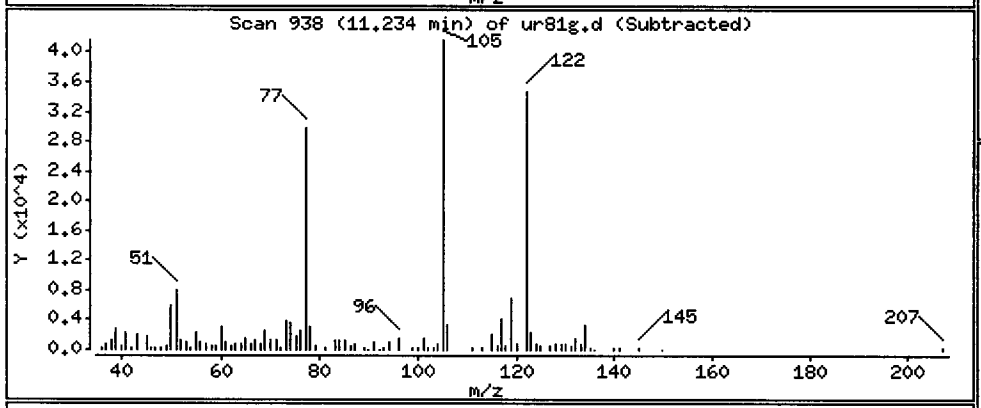
Column phase: ZB-5ms1

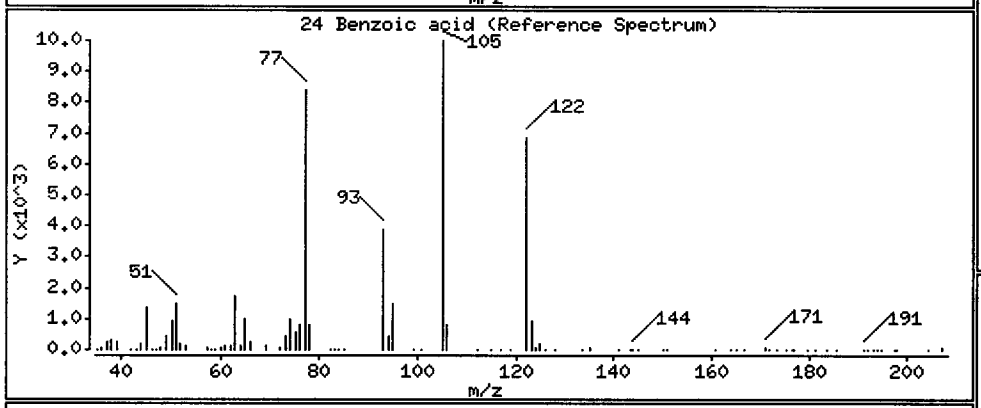
Column diameter: 0.25

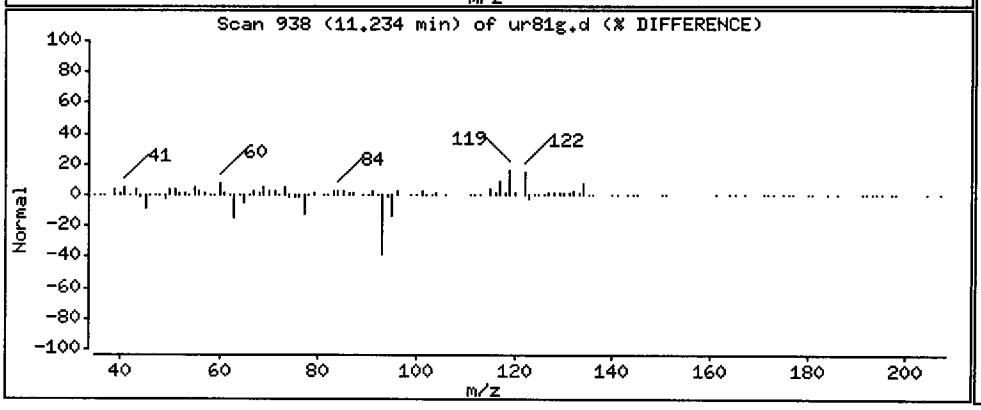
24 Benzoic acid

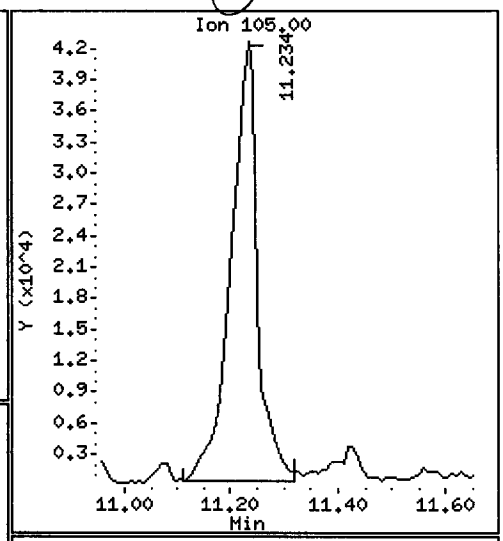
Concentration: 214.0 ug/kg

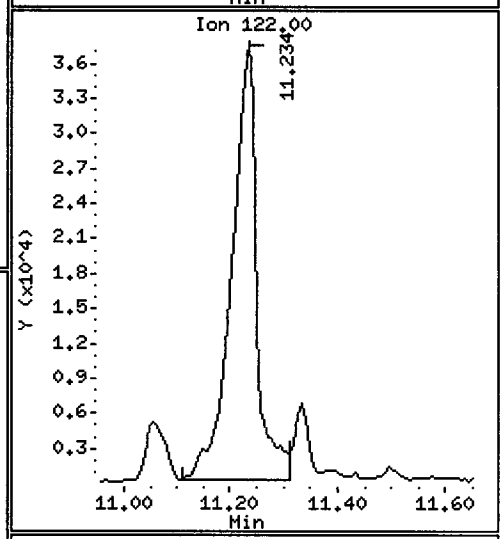


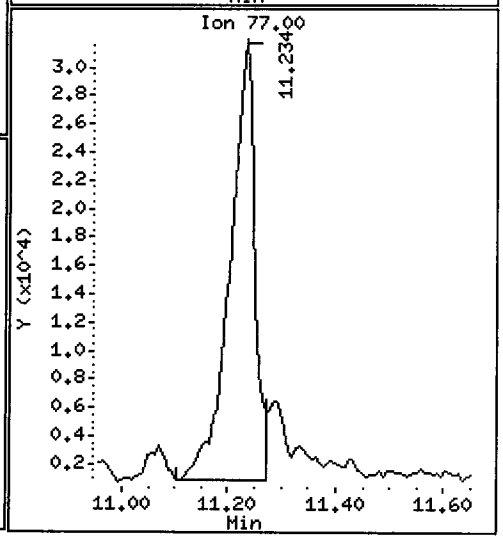












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

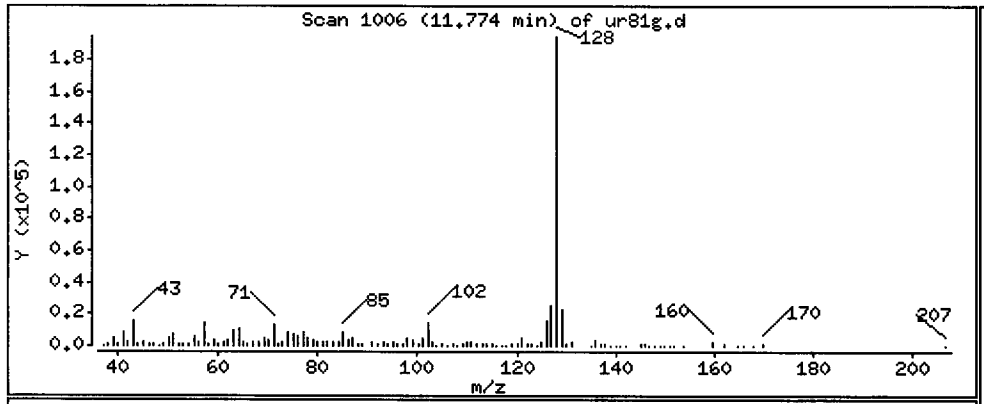
Client ID: IJ12-01 Instrument: nt10.i

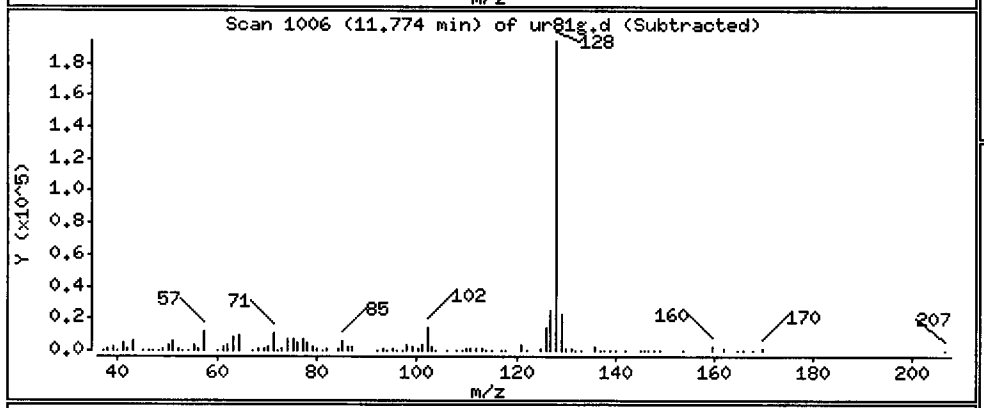
Sample Info: UR81G

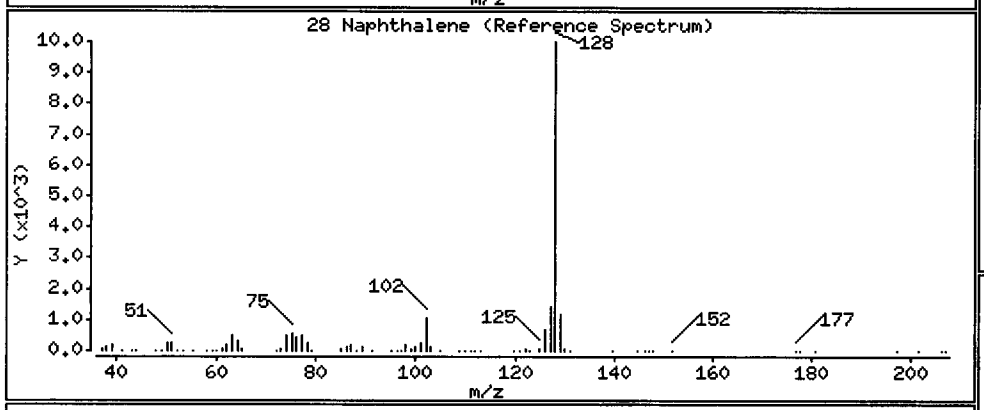
Volume Injected (uL): 1.0 Operator: VTS/YZ

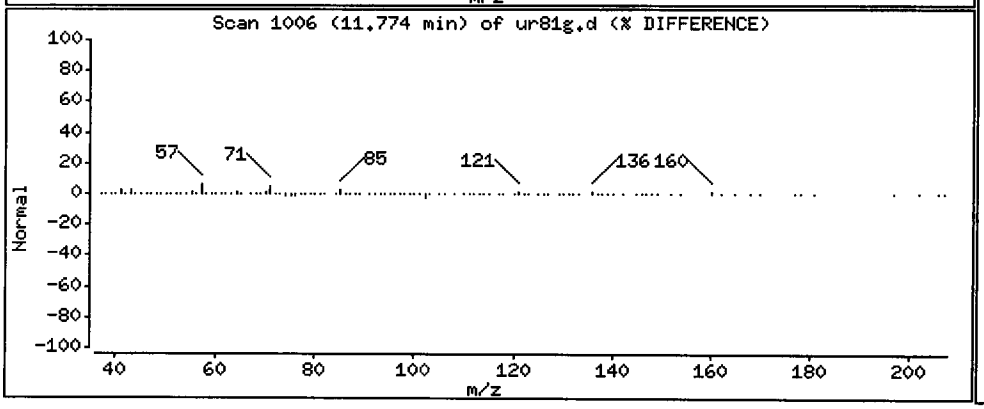
Column phase: ZB-5msi Column diameter: 0.25

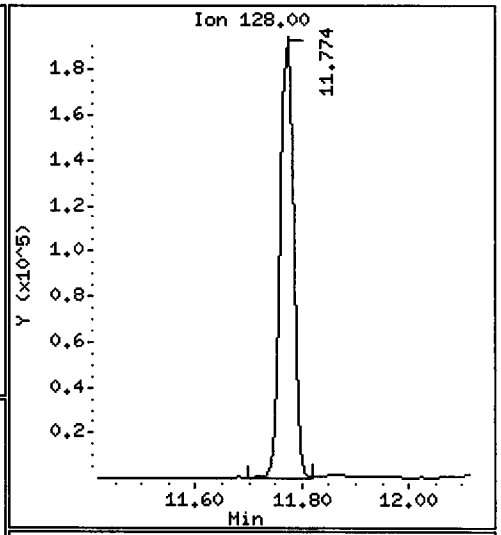
28 Naphthalene Concentration: 129.6 ug/kg

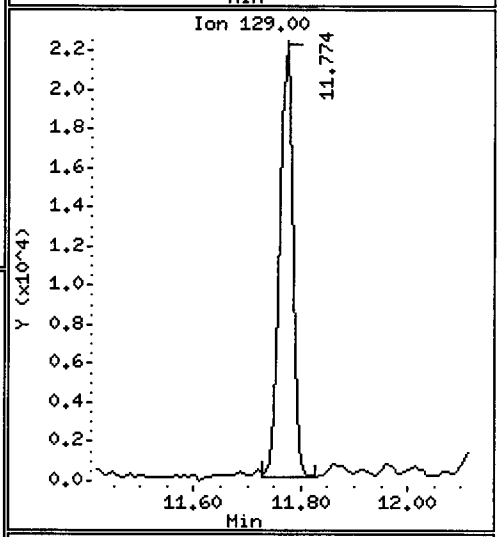


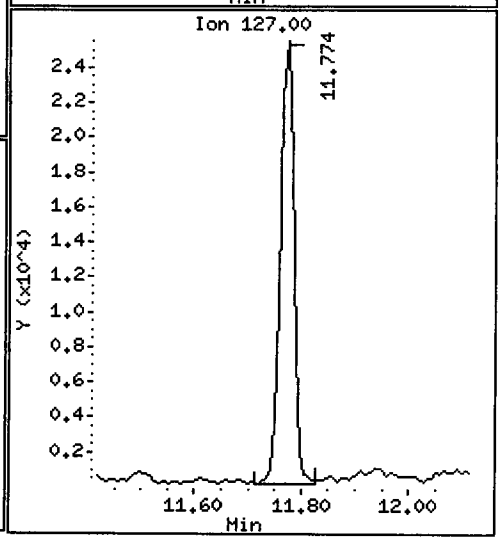












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

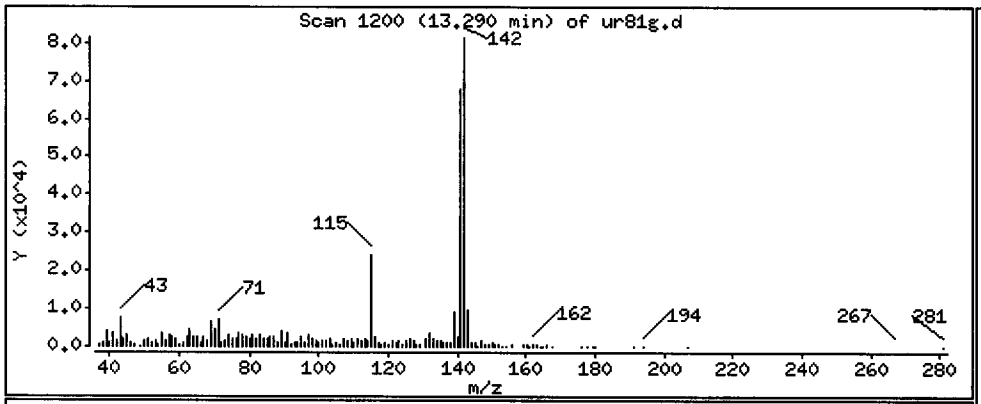
Client ID: IJ12-01 Instrument: nt10.i

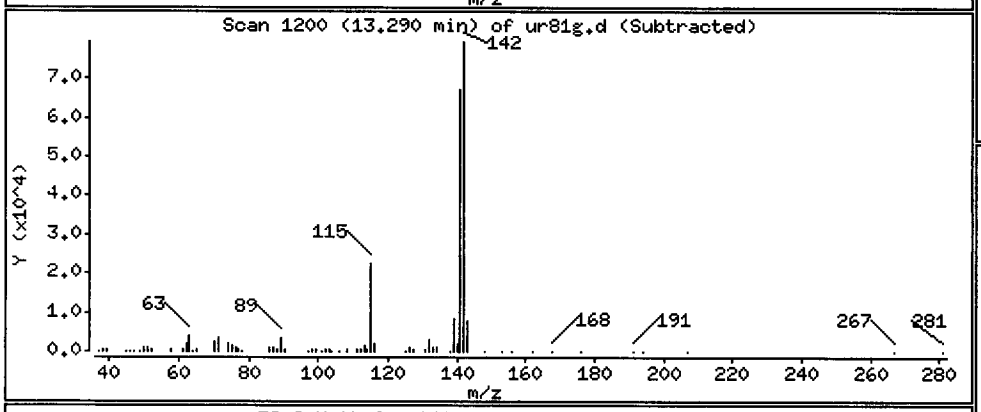
Sample Info: UR81G

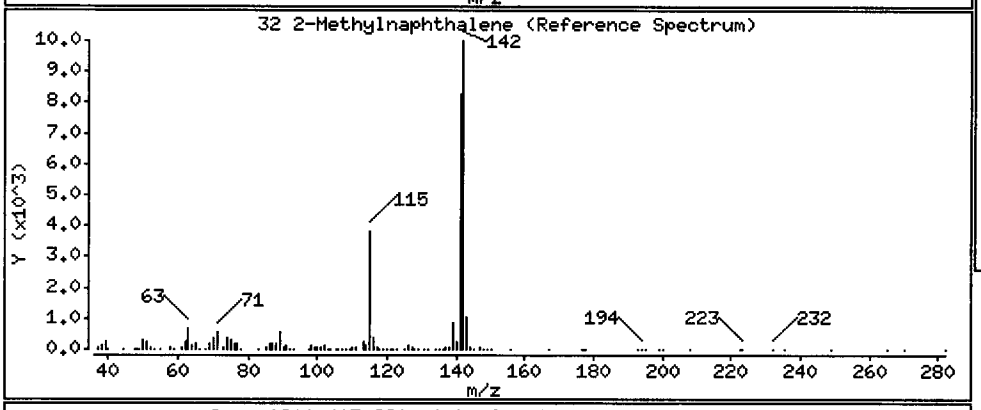
Volume Injected (uL): 1.0 Operator: VTS/YZ

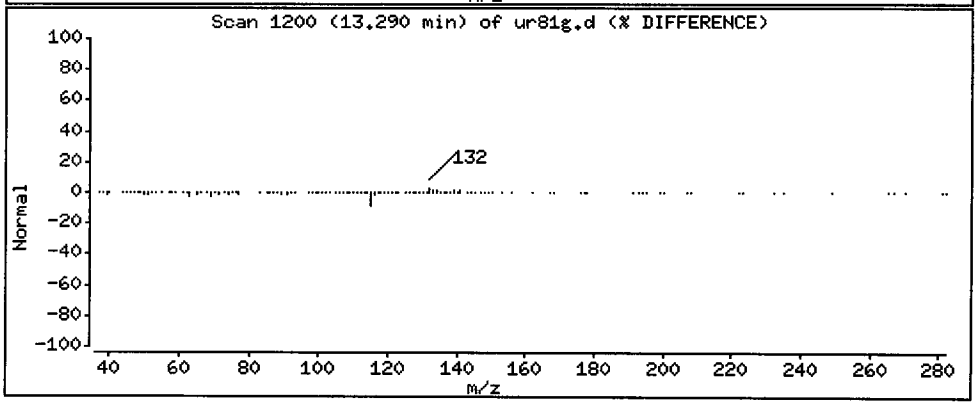
Column phase: ZB-5msi Column diameter: 0.25

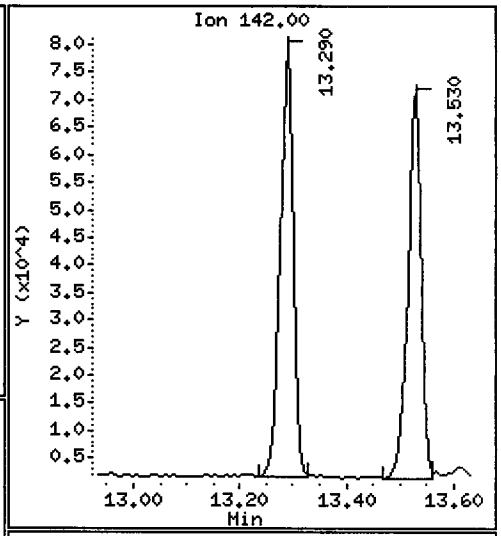
32 2-Methylnaphthalene Concentration: 76.68 ug/kg

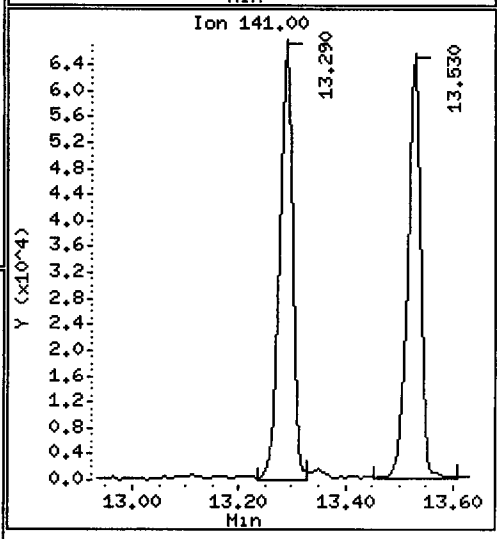












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01 Instrument: nt10.i

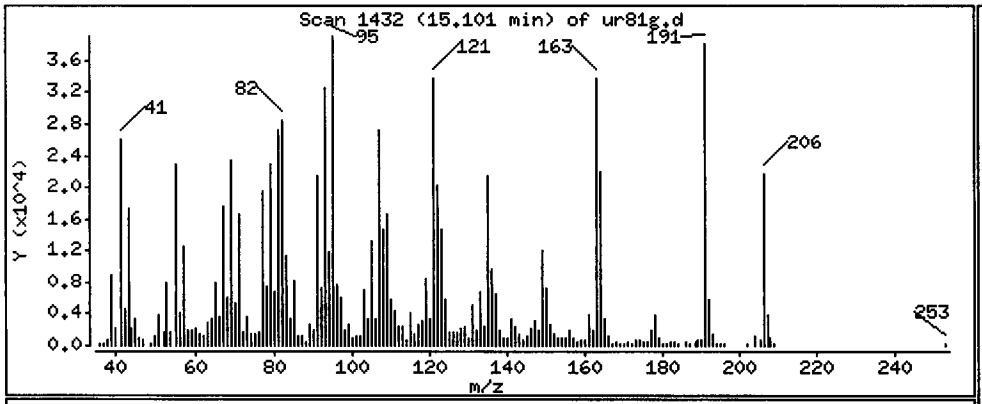
Sample Info: UR81G

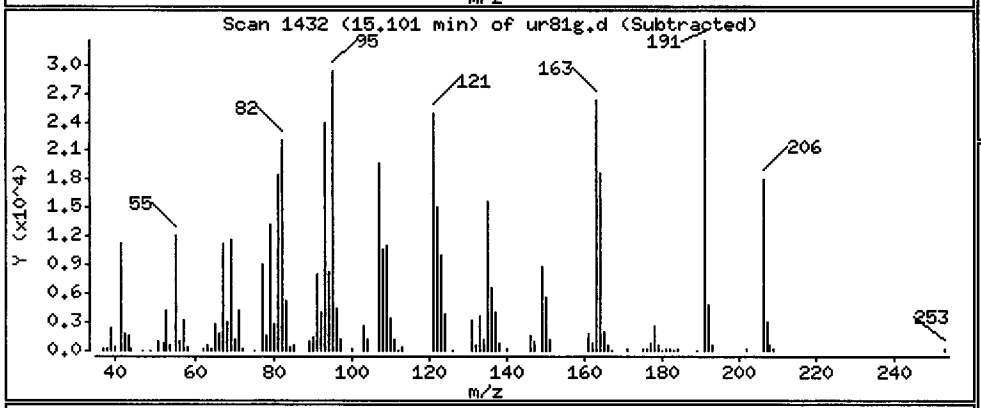
Volume Injected (uL): 1.0 Operator: VTS/YZ

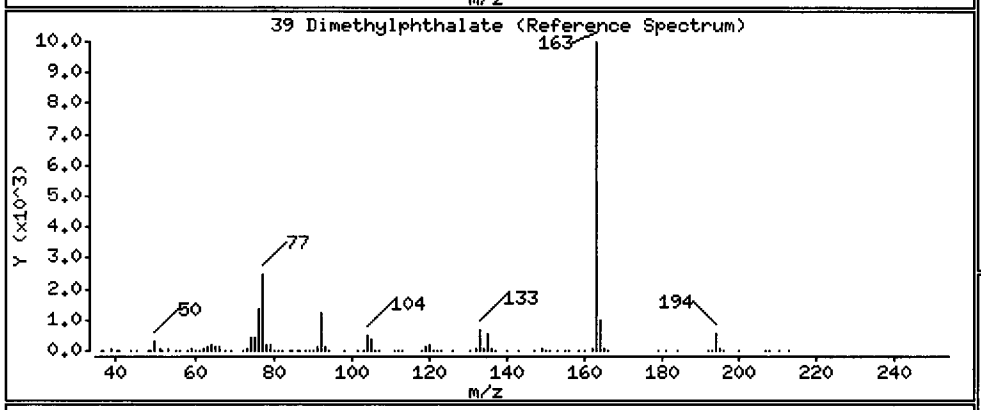
Column phase: ZB-5msi Column diameter: 0.25

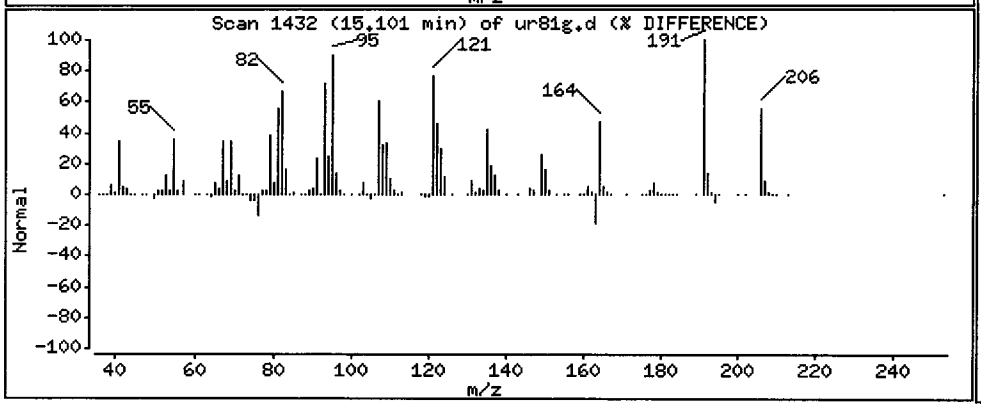
39 Dimethylphthalate Concentration: 39.44 ug/kg

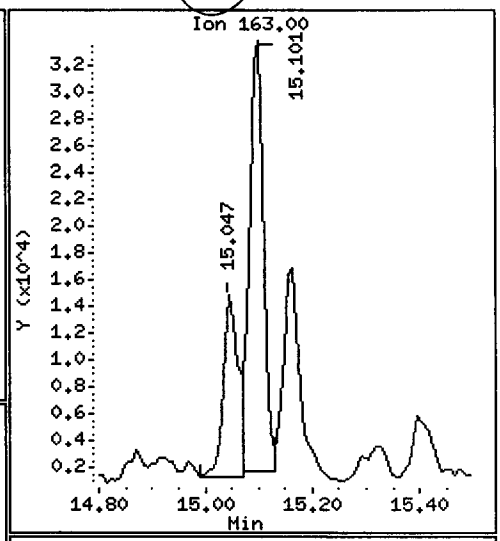
m

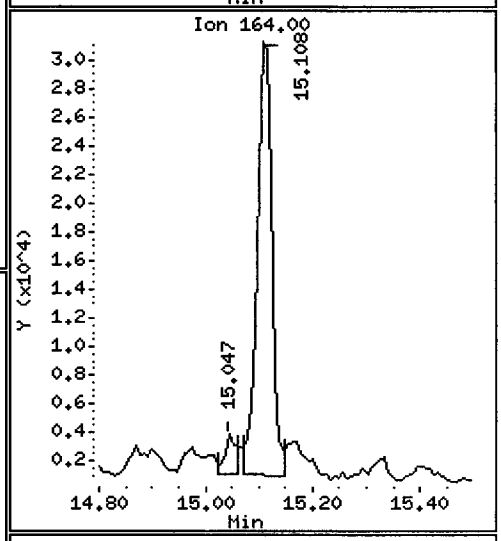


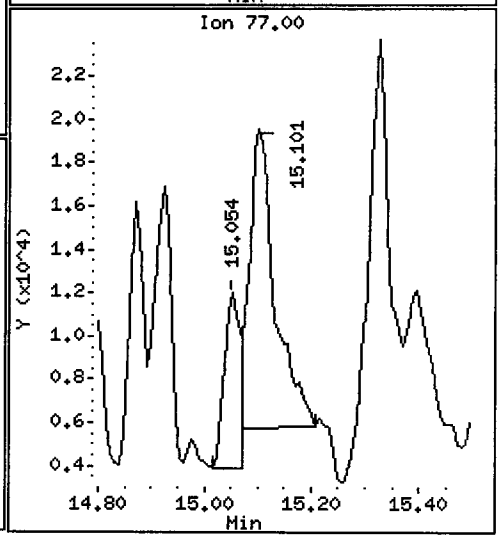












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

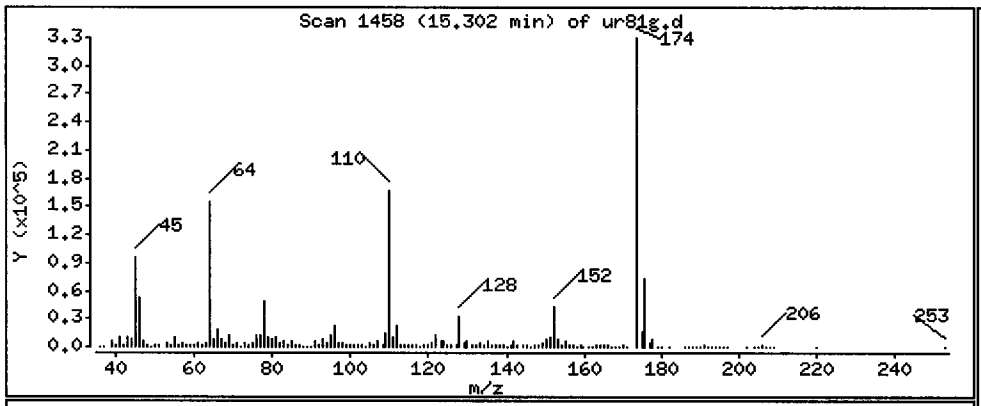
Client ID: IJ12-01 Instrument: nt10.i

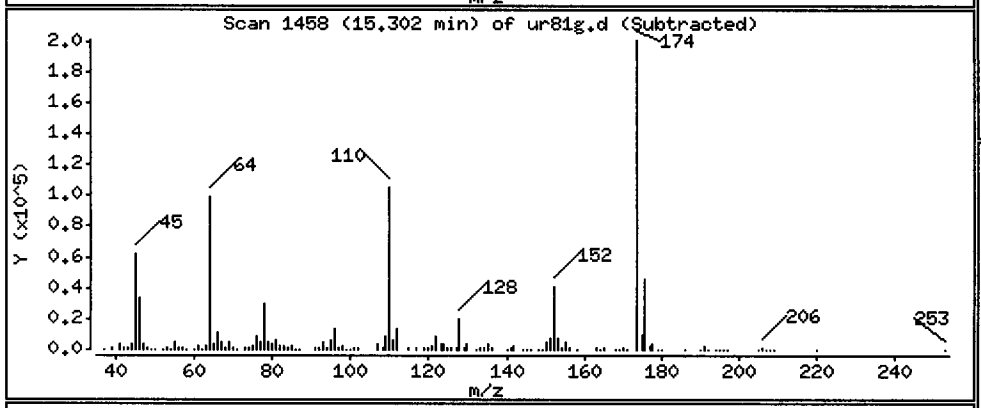
Sample Info: UR81G

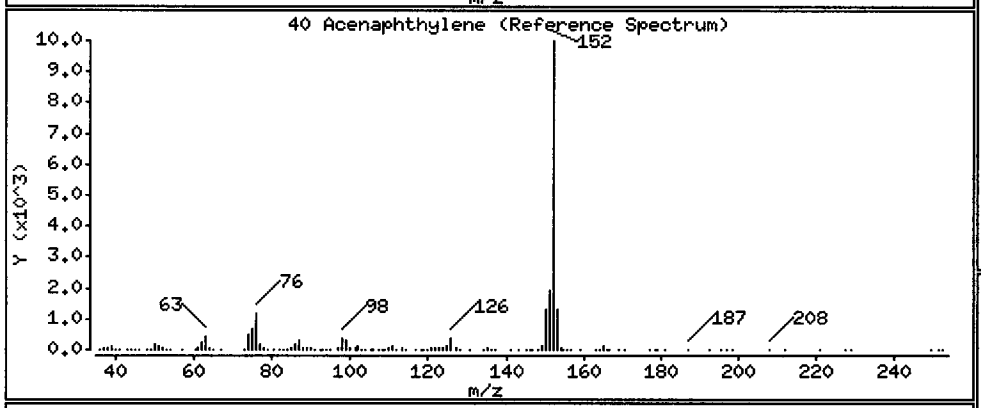
Volume Injected (uL): 1.0 Operator: VTS/YZ

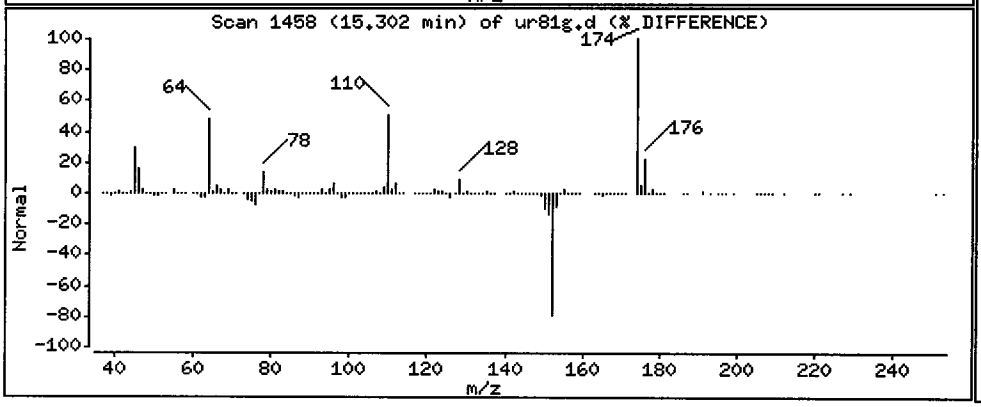
Column phase: ZB-5msi Column diameter: 0.25

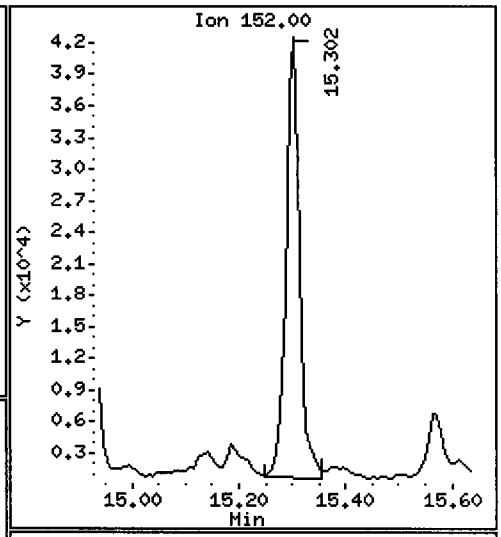
40 Acenaphthylene Concentration: 31.68 ug/kg

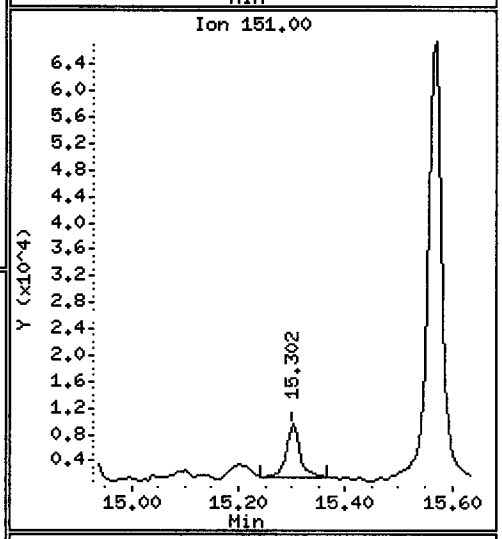


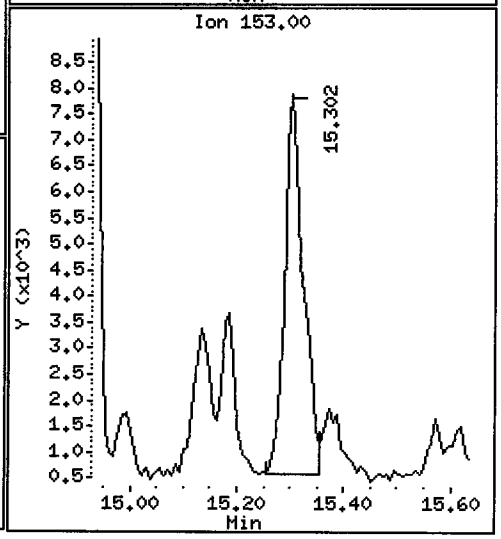












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

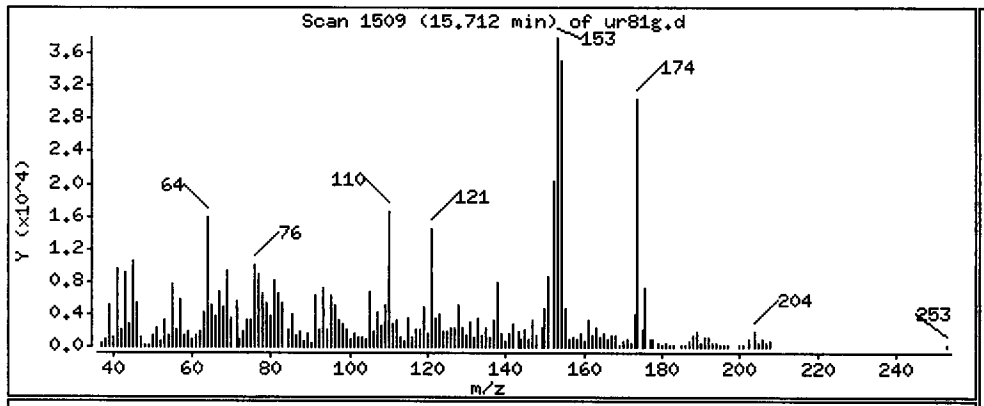
Client ID: IJ12-01 Instrument: nt10.i

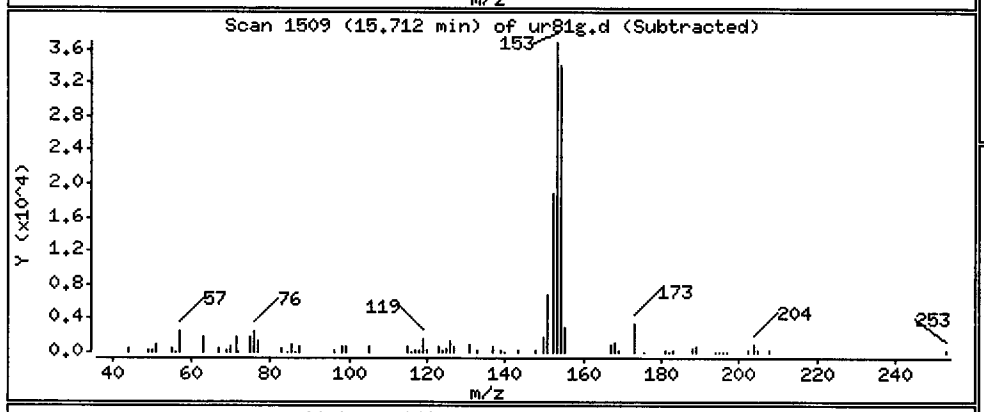
Sample Info: UR81G

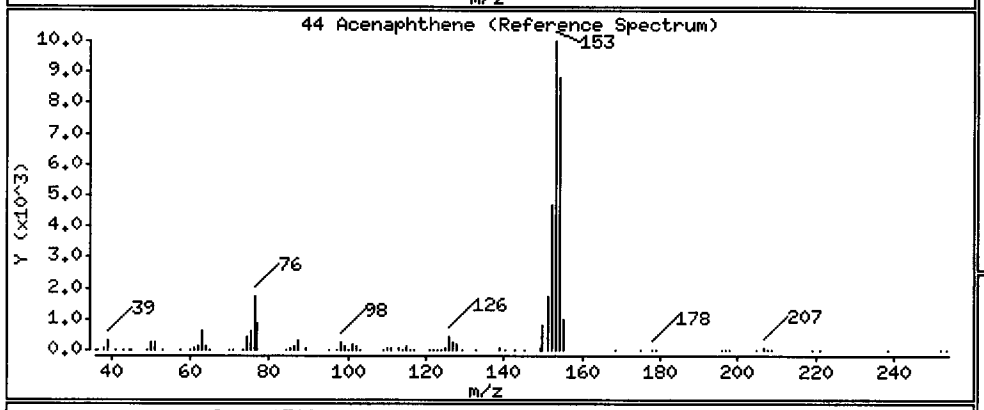
Volume Injected (uL): 1.0 Operator: VTS/YZ

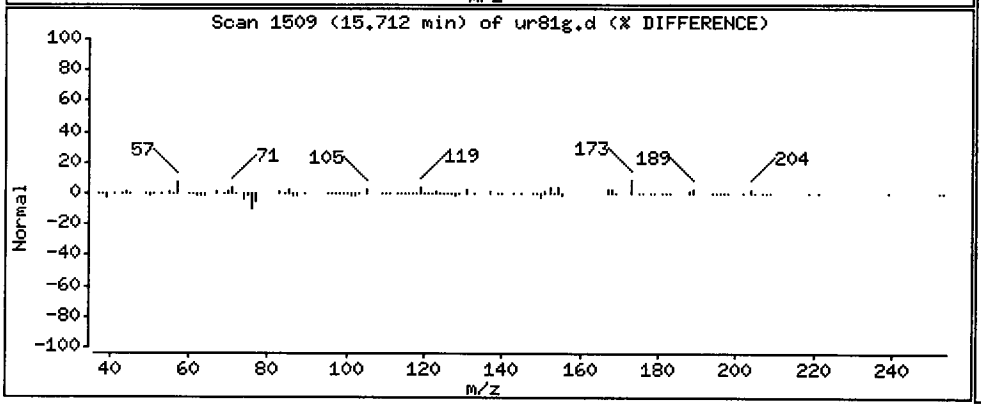
Column phase: ZB-5msi Column diameter: 0.25

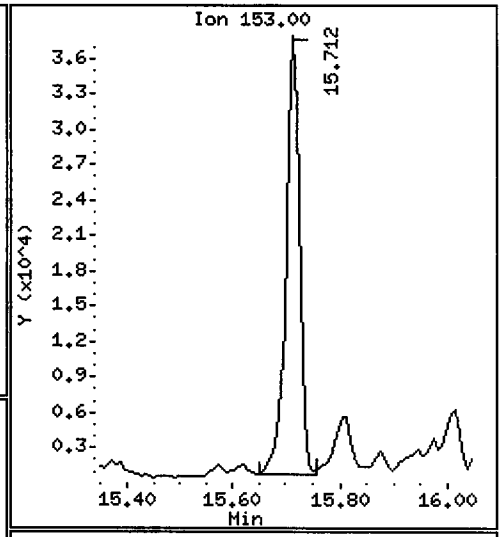
44 Acenaphthene Concentration: 46.91 ug/kg

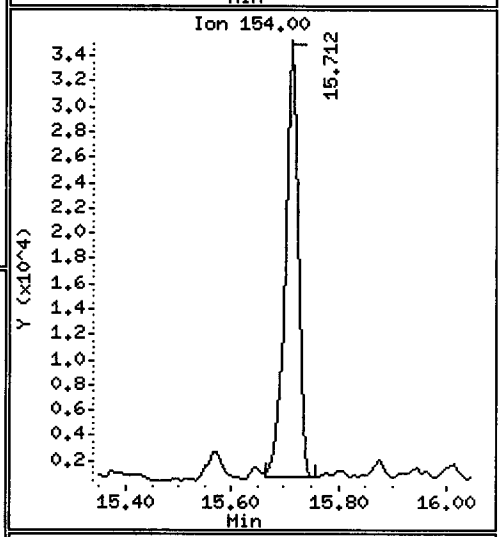


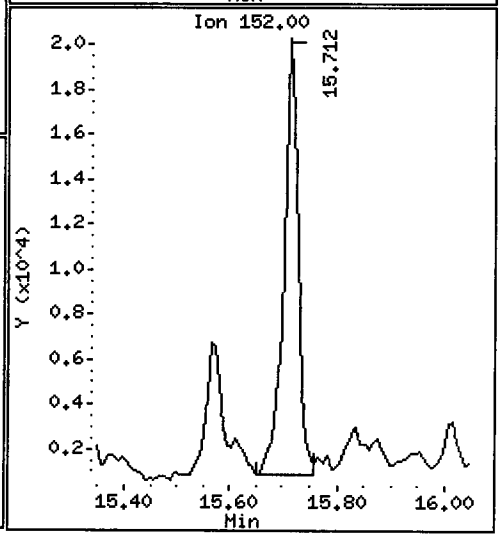












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

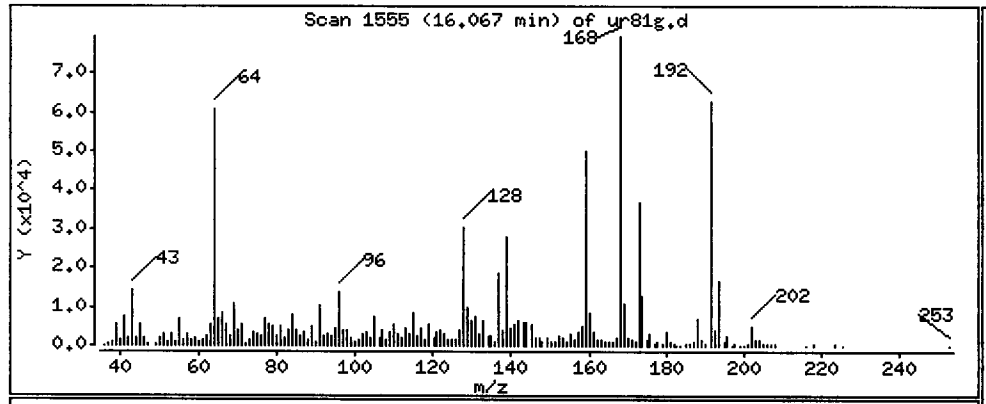
Operator: VTS/YZ

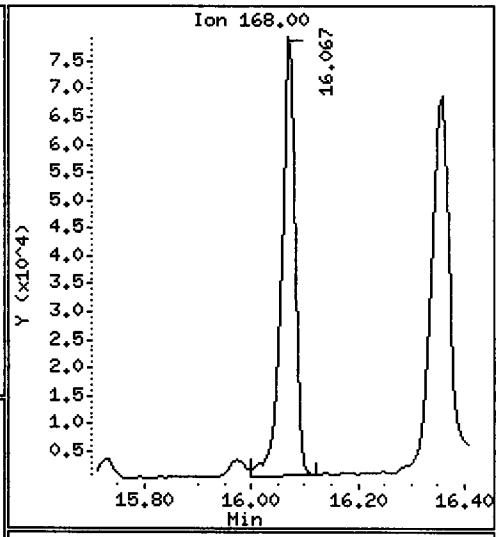
Column phase: ZB-5msi

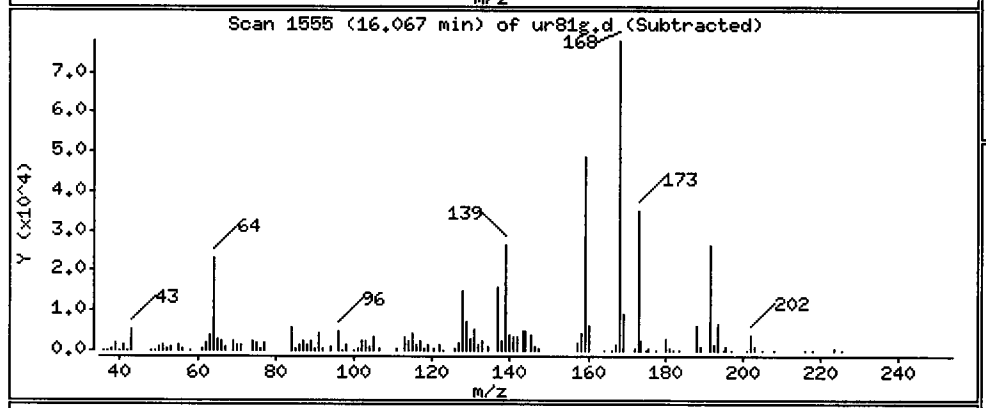
Column diameter: 0.25

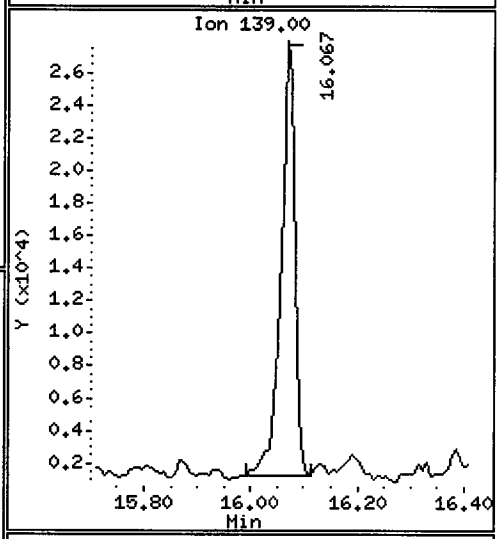
46 Dibenzofuran

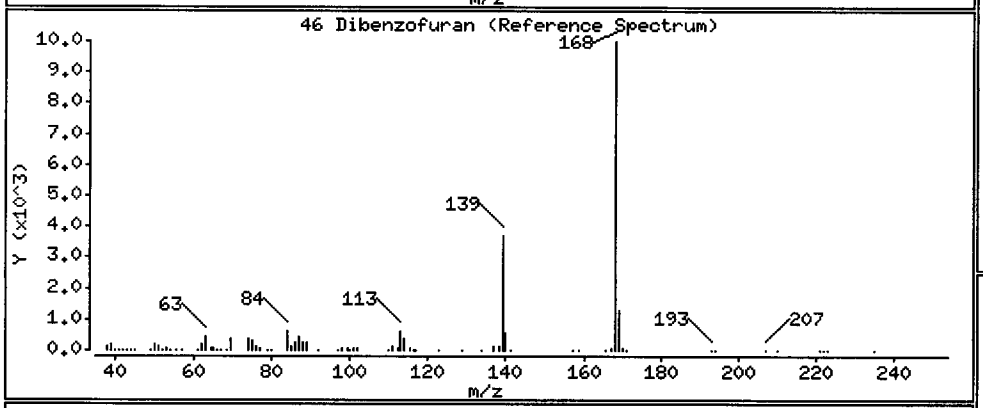
Concentration: 65.93 ug/kg

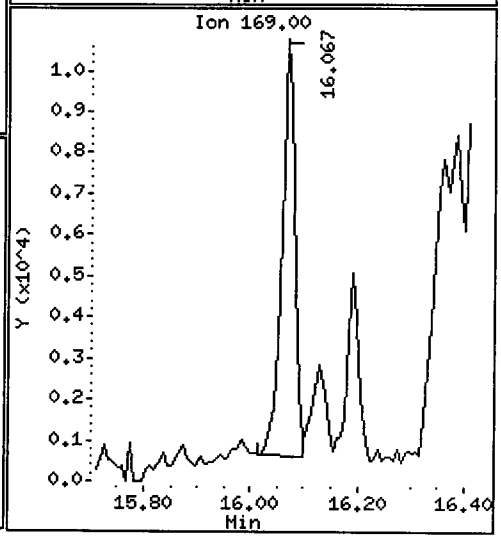


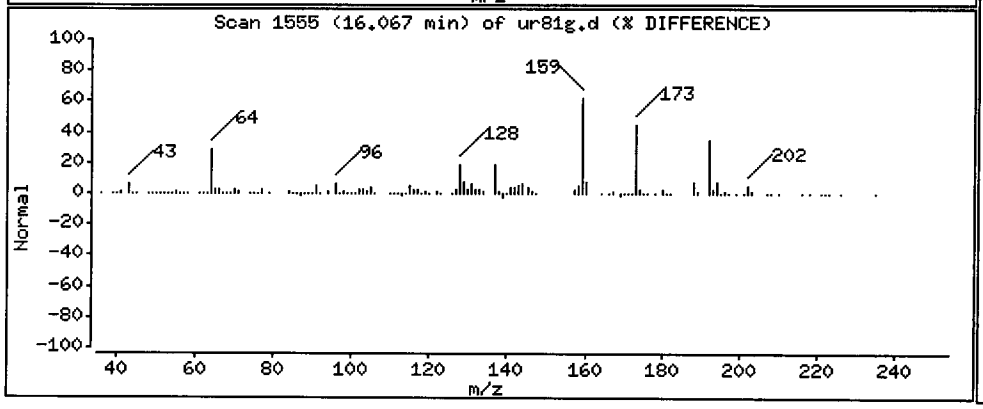












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

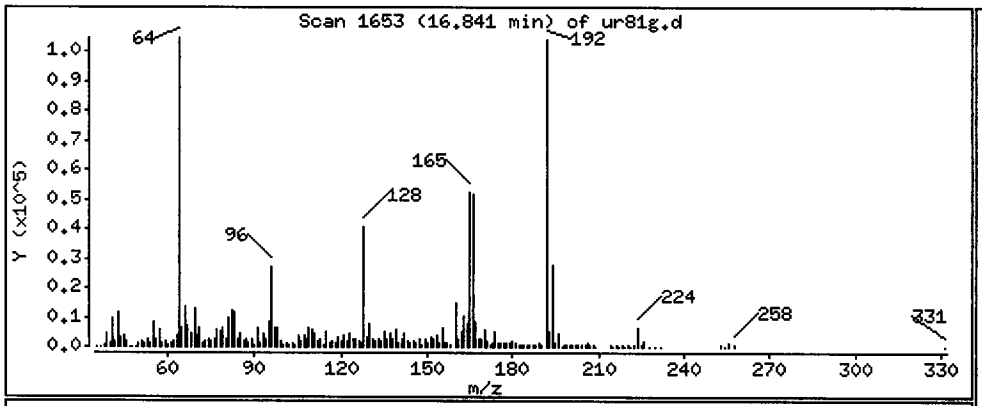
Operator: VTS/YZ

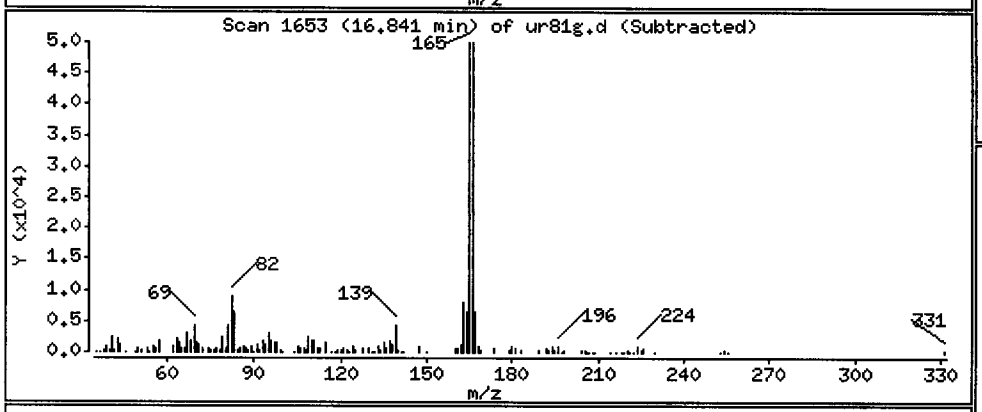
Column phase: ZB-5msi

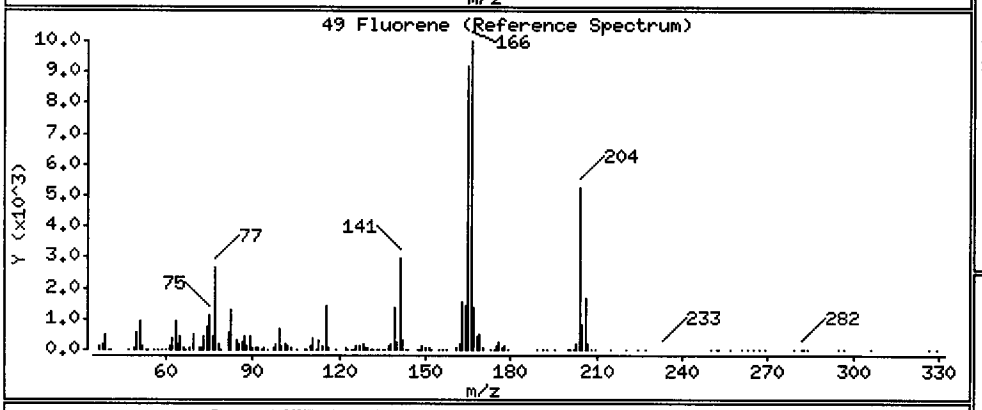
Column diameter: 0.25

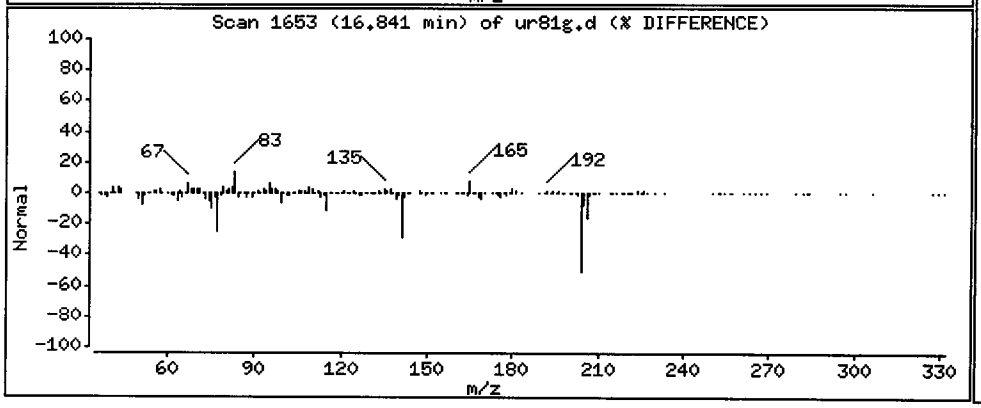
49 Fluorene

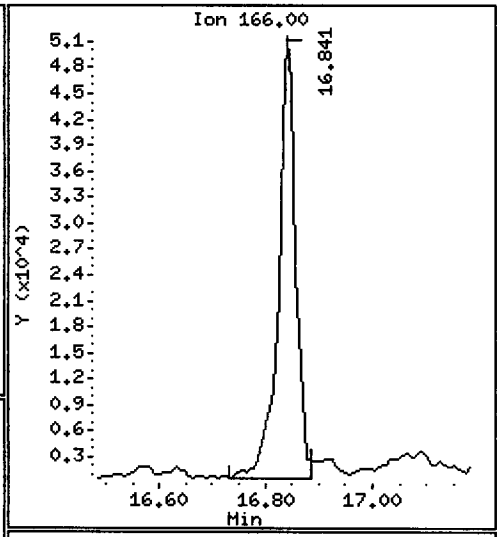
Concentration: 71.70 ug/kg

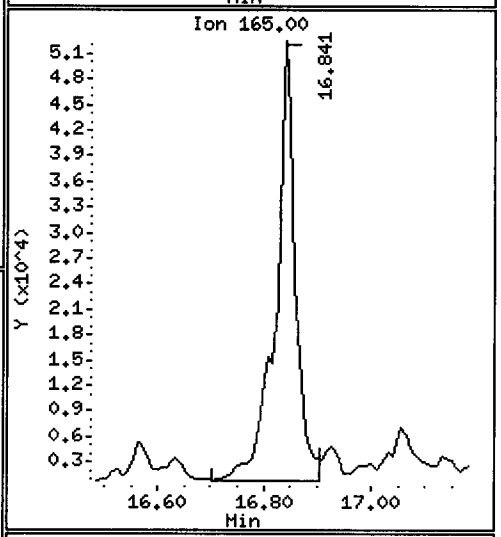


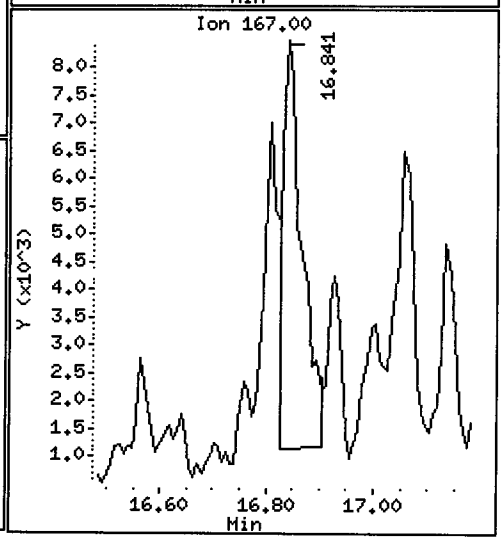












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

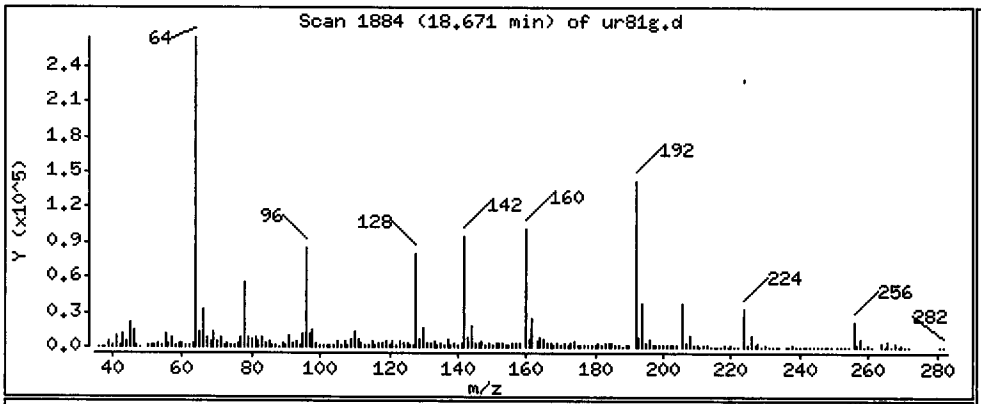
Operator: VTS/YZ

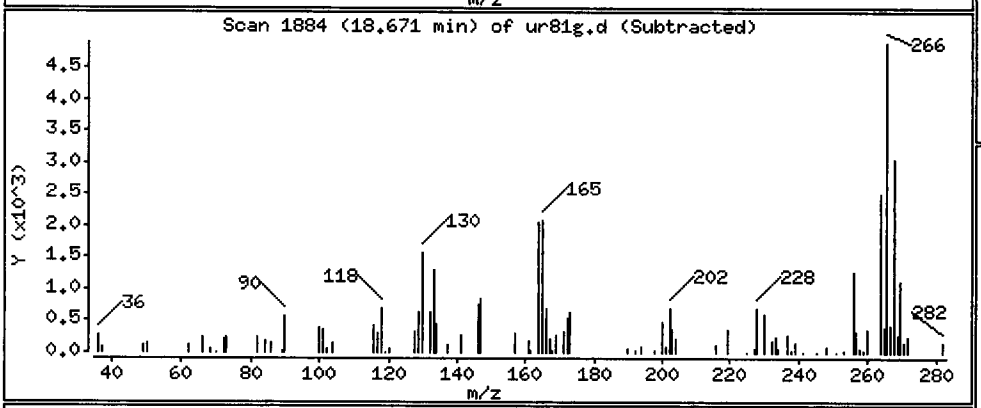
Column phase: ZB-5msi

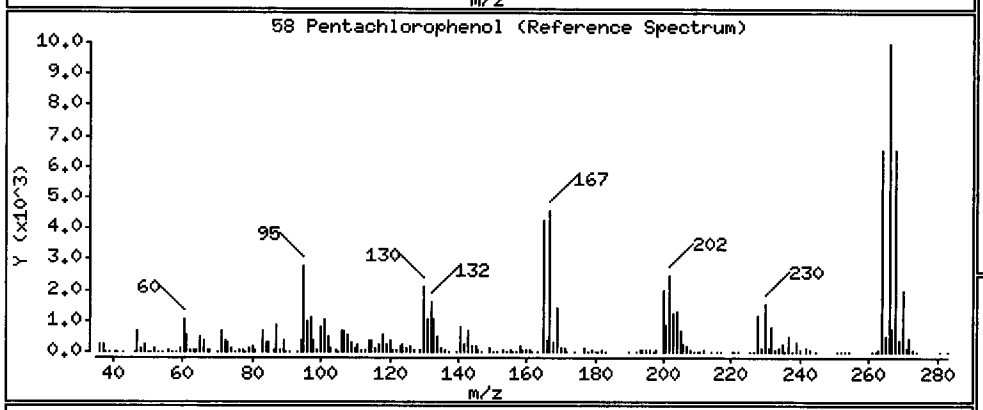
Column diameter: 0.25

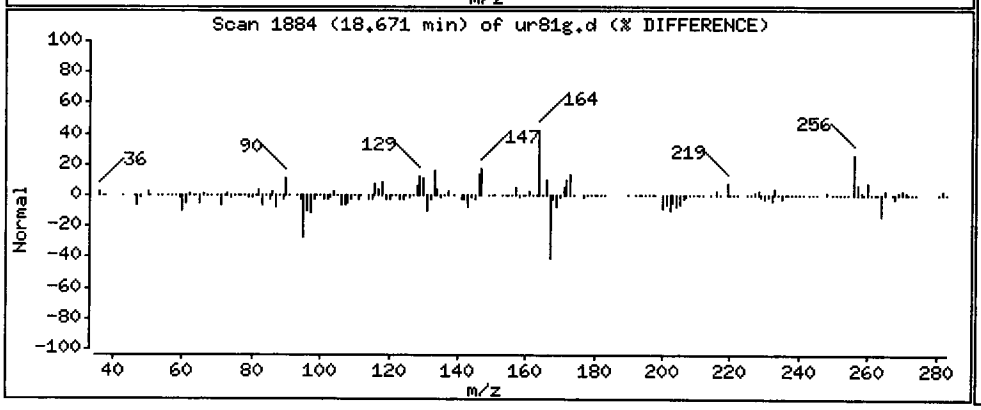
58 Pentachlorophenol

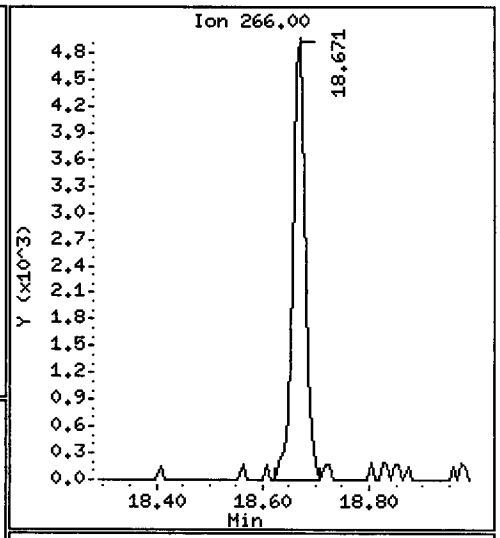
Concentration: 23.76 ug/kg

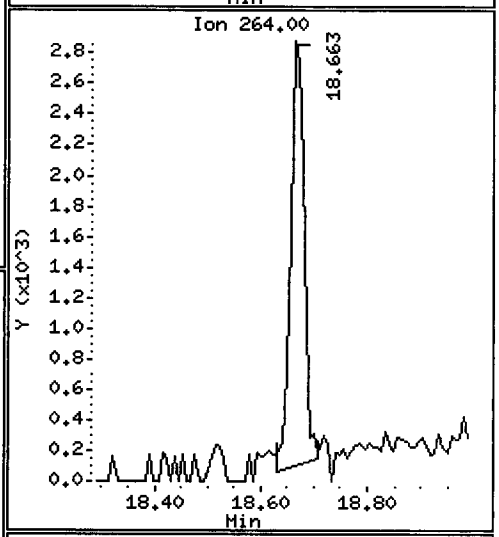


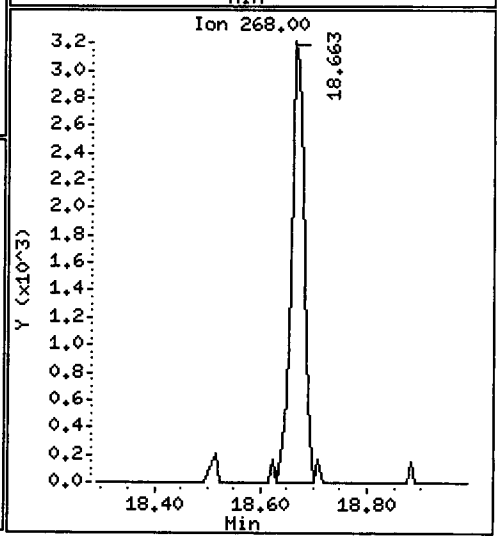












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

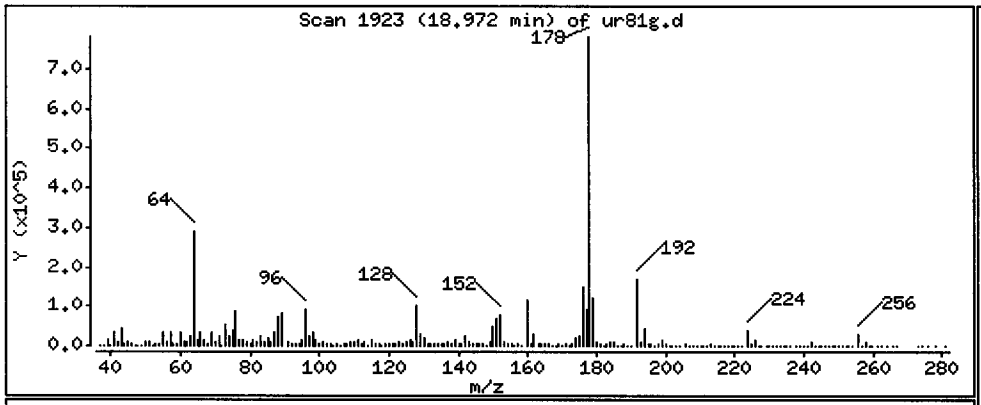
Client ID: IJ12-01 Instrument: nt10.i

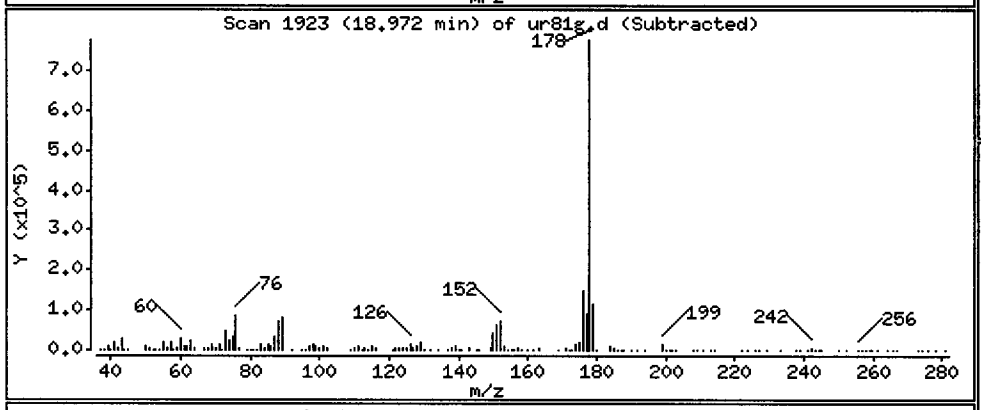
Sample Info: UR81G

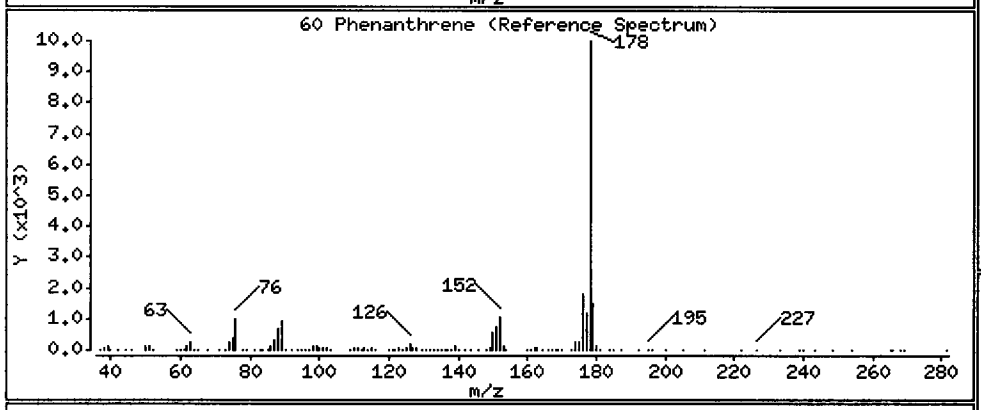
Volume Injected (uL): 1.0 Operator: VTS/YZ

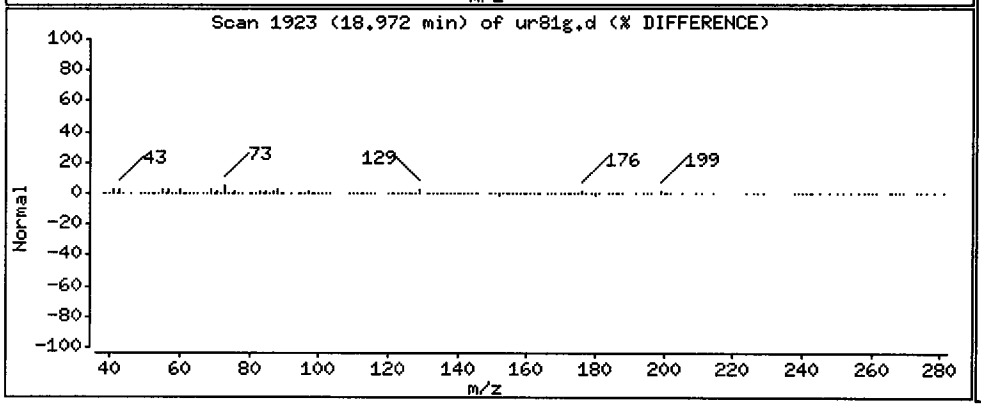
Column phase: ZB-5msi Column diameter: 0.25

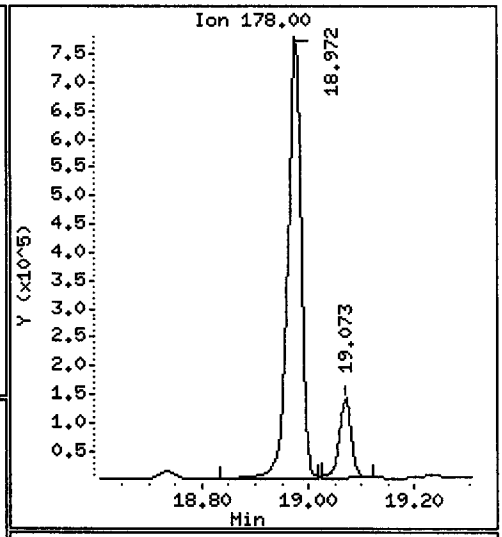
60 Phenanthrene Concentration: 646.5 ug/kg

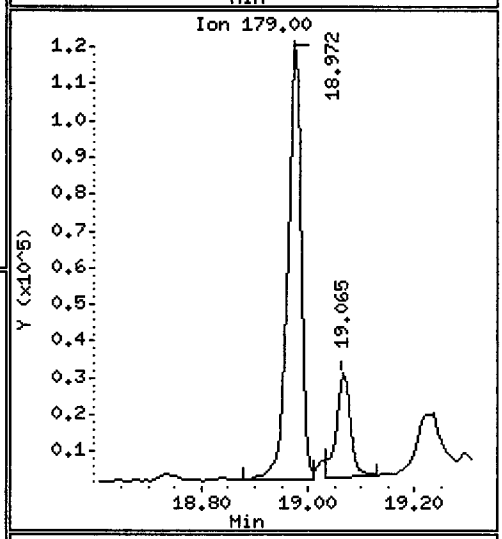


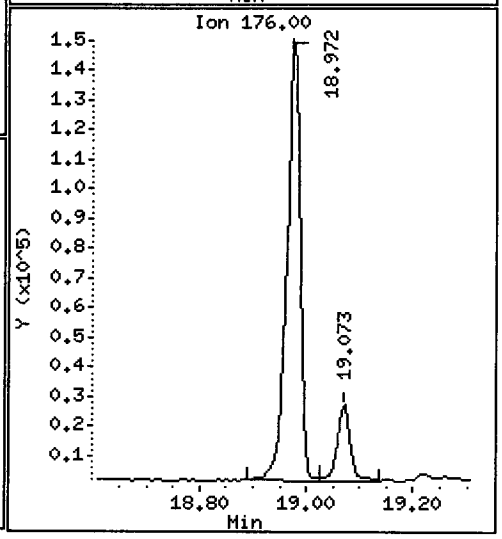












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

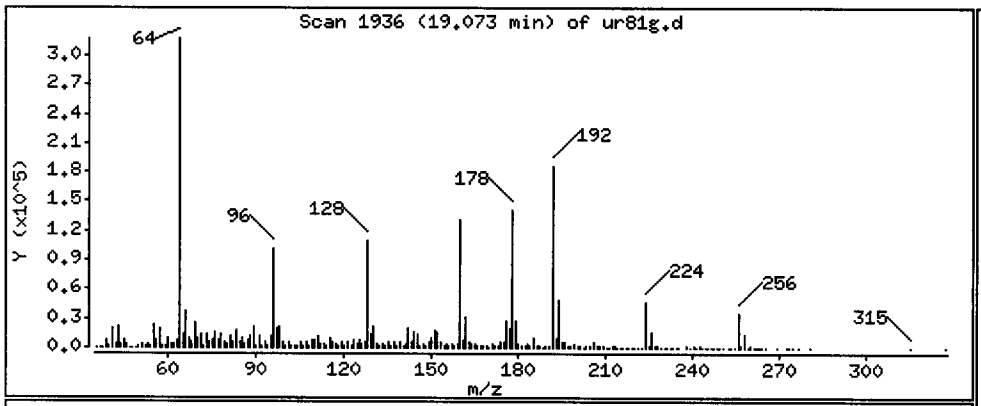
Operator: VTS/YZ

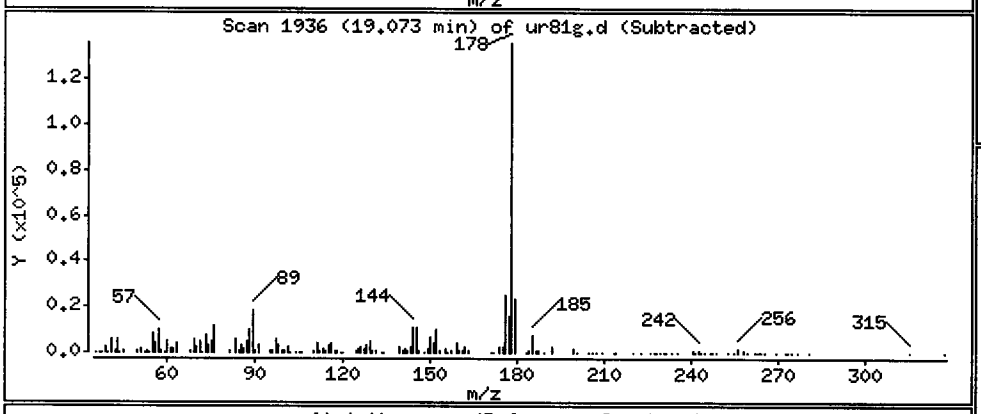
Column phase: ZB-5ms1

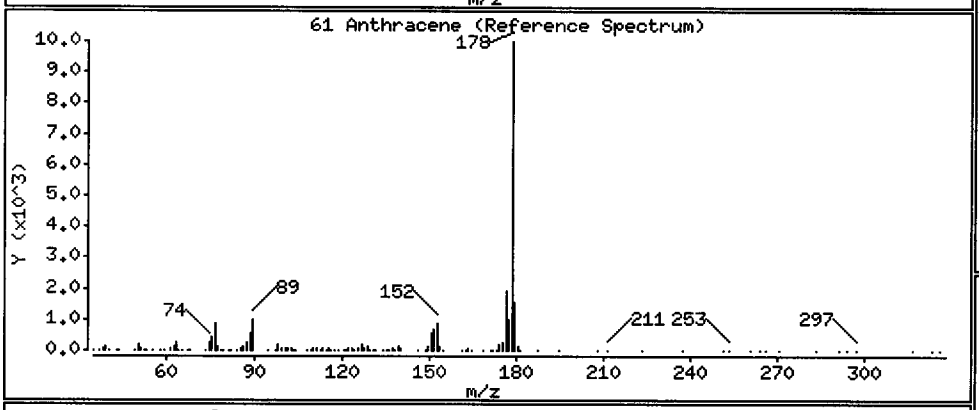
Column diameter: 0.25

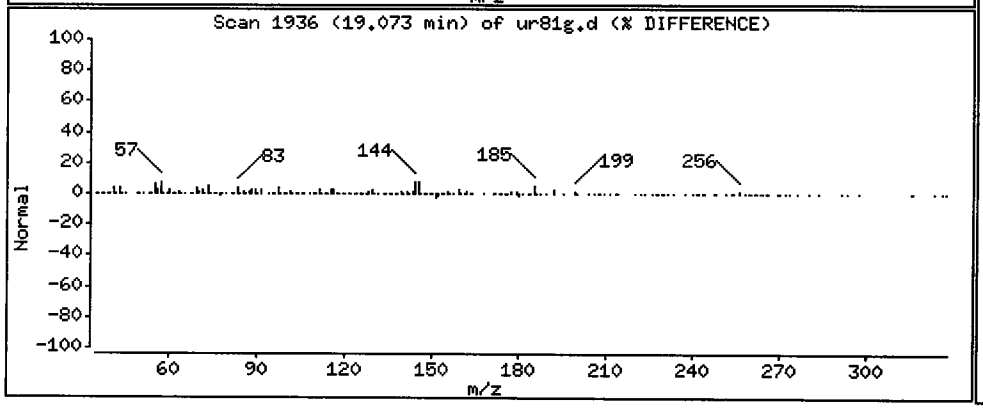
61 Anthracene

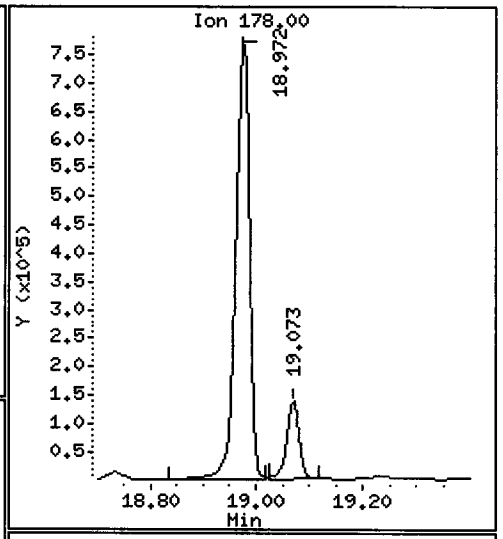
Concentration: 104.4 ug/kg

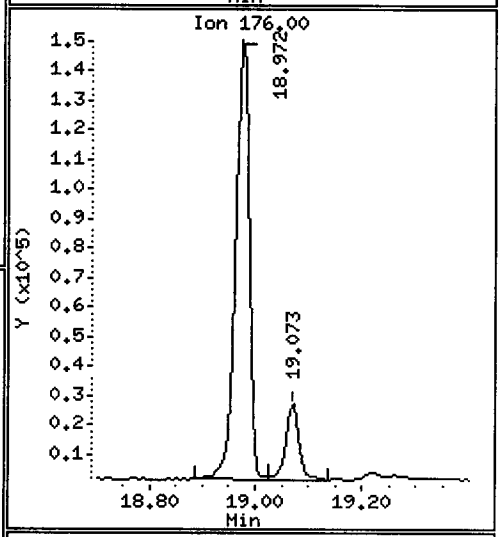


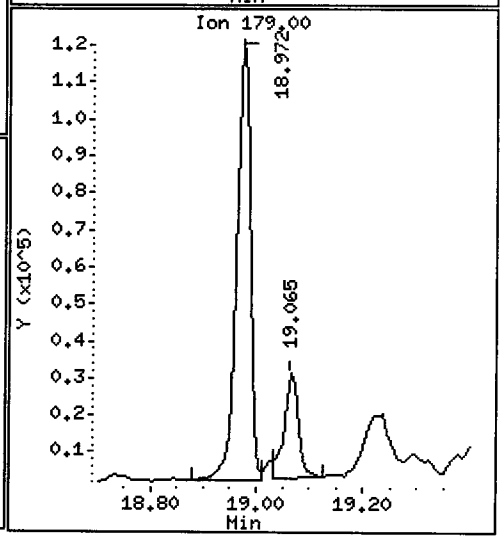












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

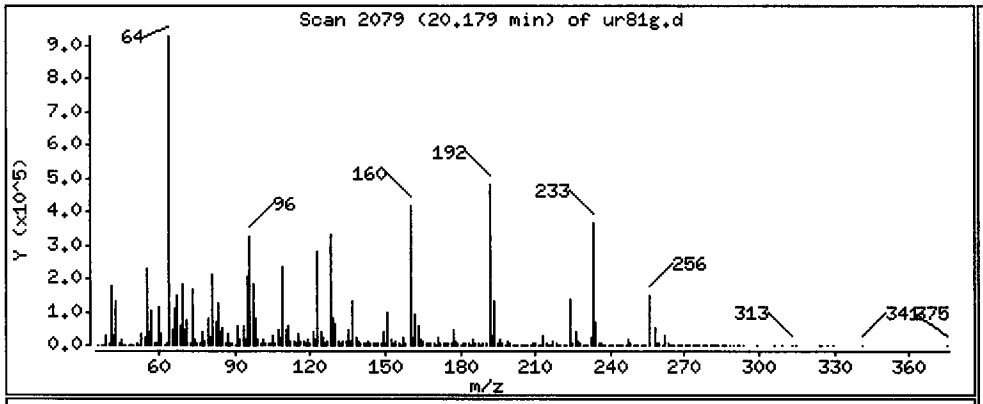
Client ID: IJ12-01 Instrument: nt10.i

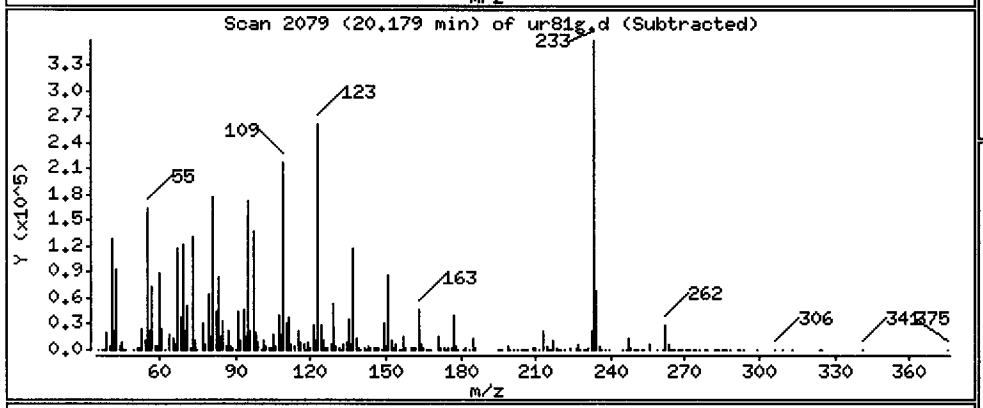
Sample Info: UR81G

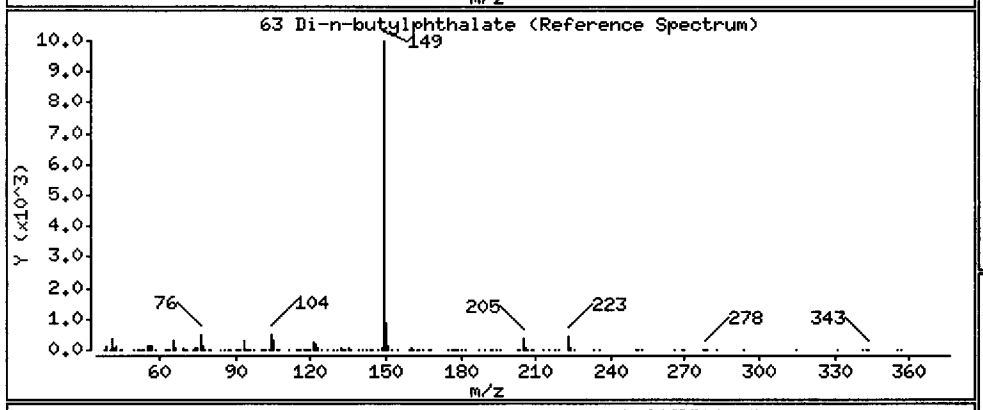
Volume Injected (uL): 1.0 Operator: VTS/YZ

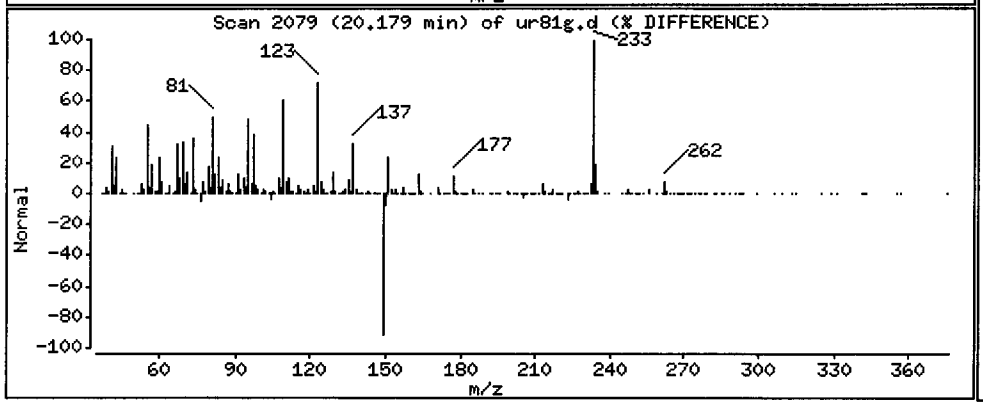
Column phase: ZB-5msi Column diameter: 0.25

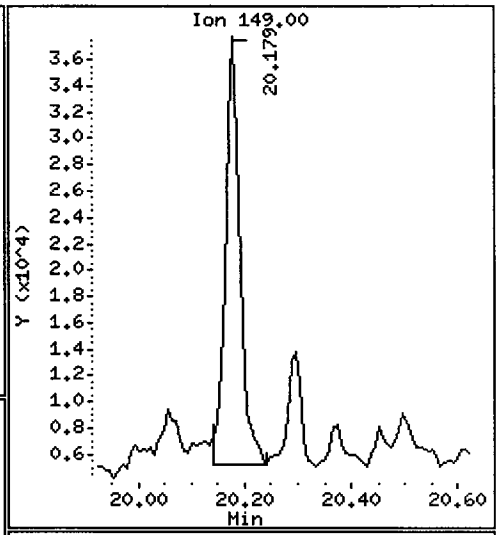
63 Di-n-butylphthalate Concentration: 22.40 ug/kg

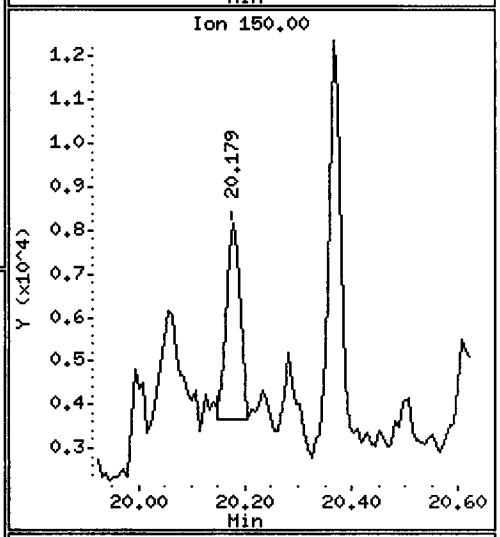


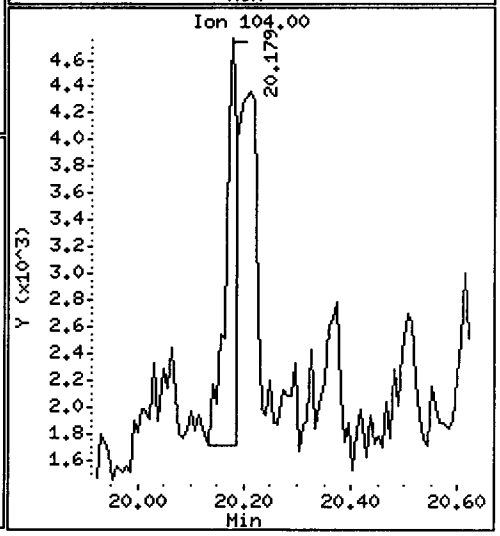












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

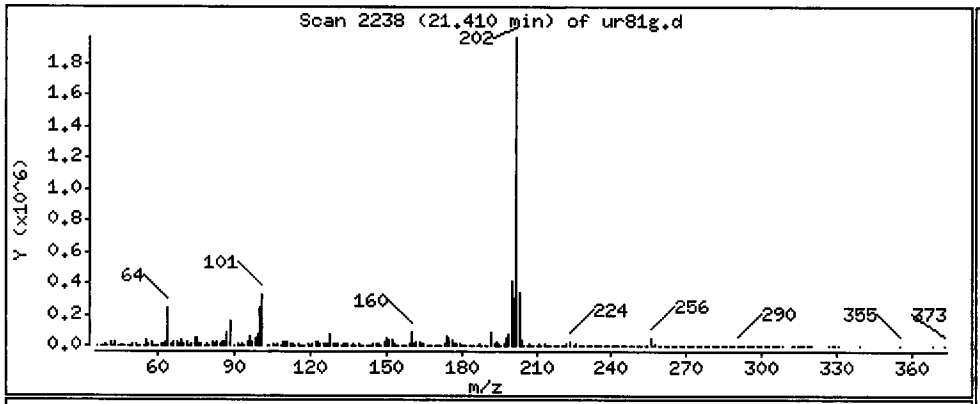
Operator: VTS/YZ

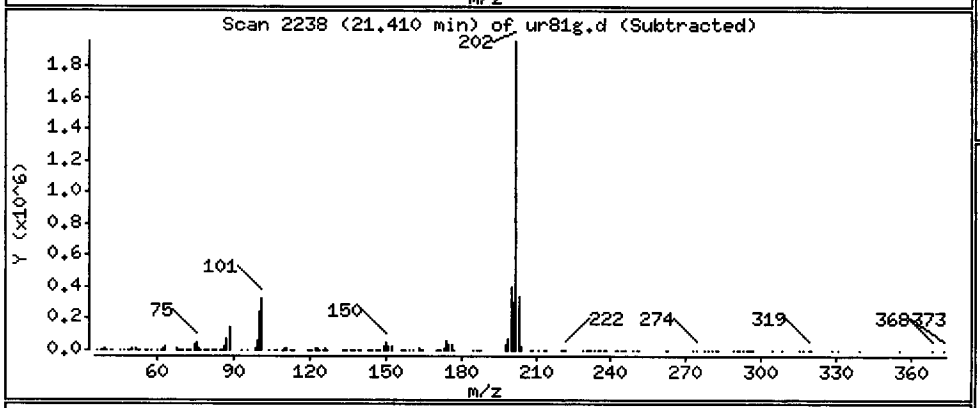
Column phase: ZB-5msi

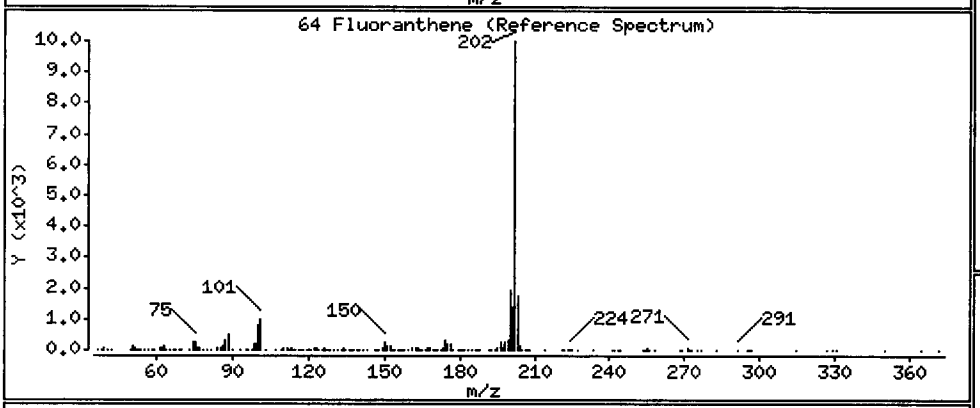
Column diameter: 0.25

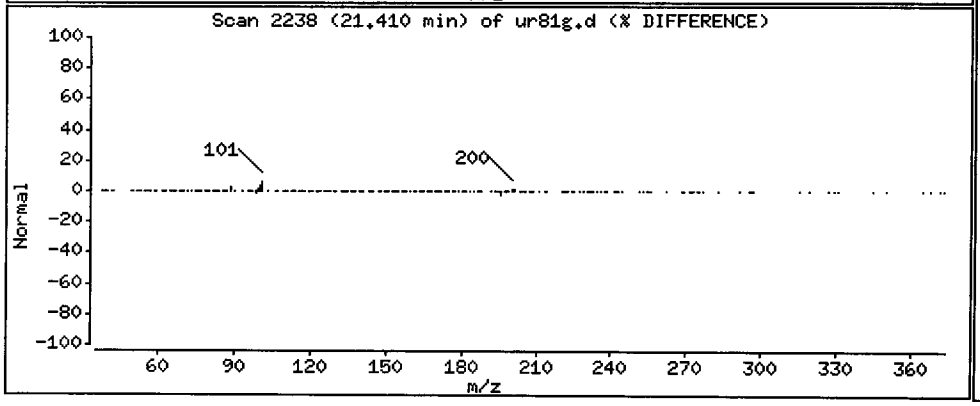
64 Fluoranthene

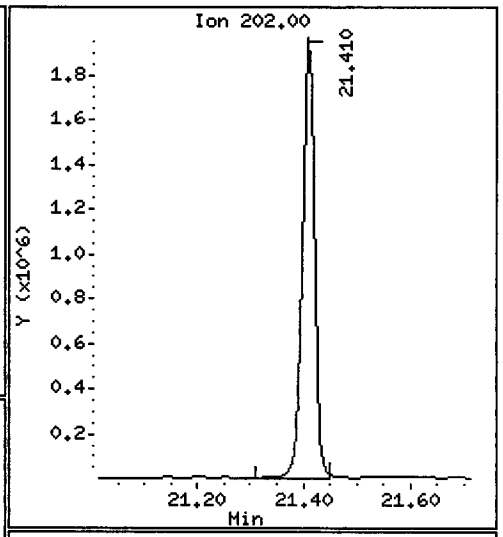
Concentration: 1369 ug/kg

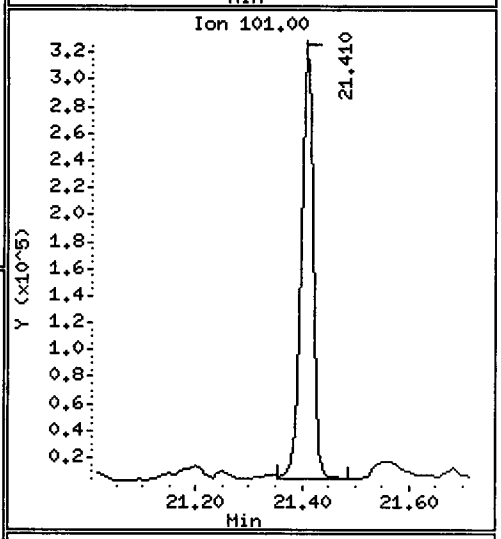


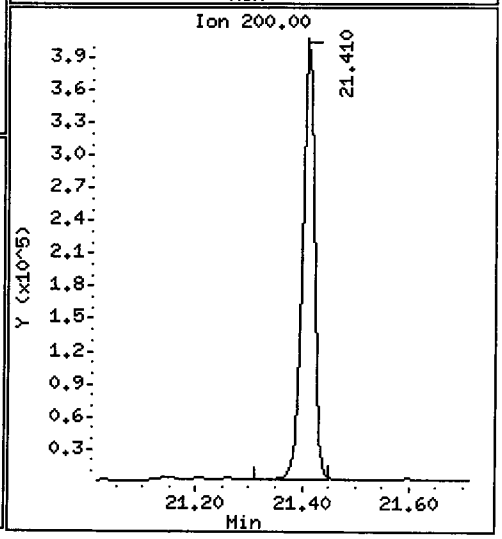












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

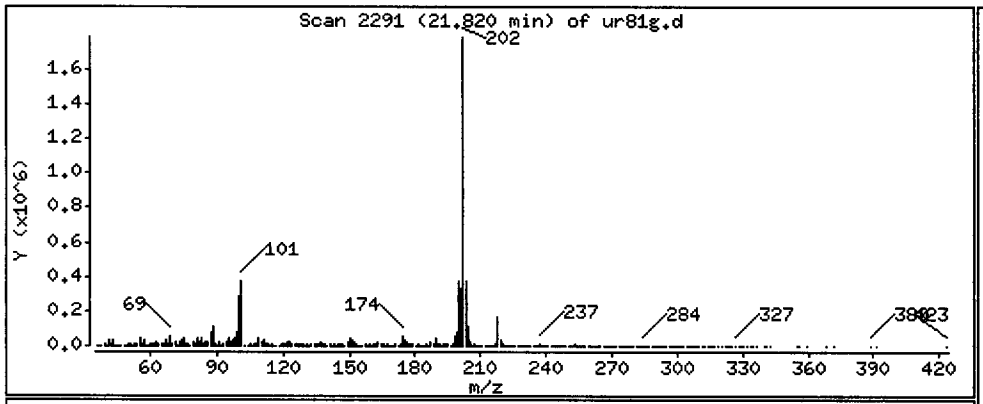
Client ID: IJ12-01 | Instrument: nt10.i

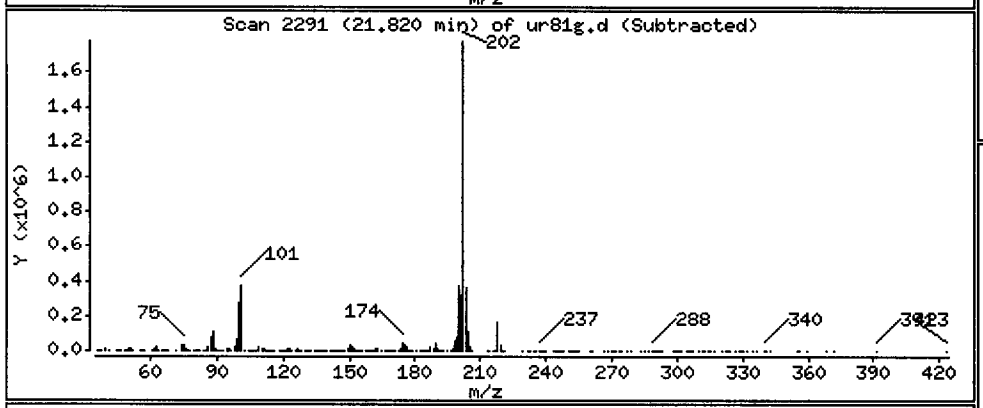
Sample Info: UR81G

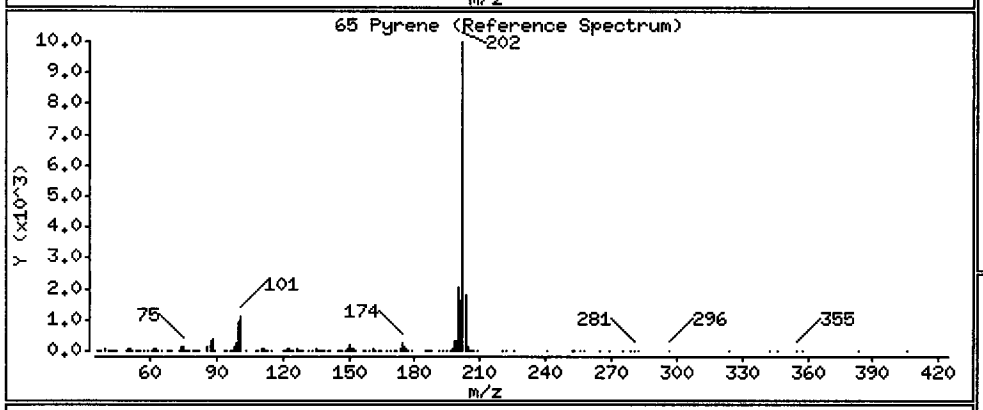
Volume Injected (uL): 1.0 | Operator: VTS/YZ

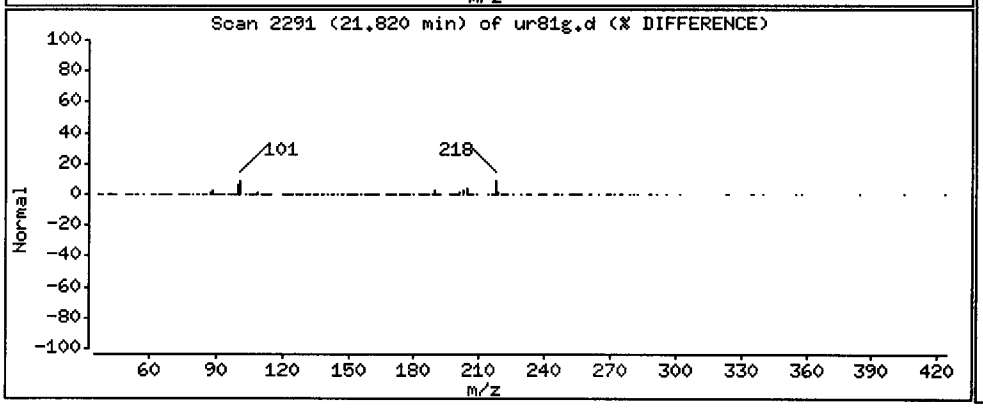
Column phase: ZB-5msi | Column diameter: 0.25

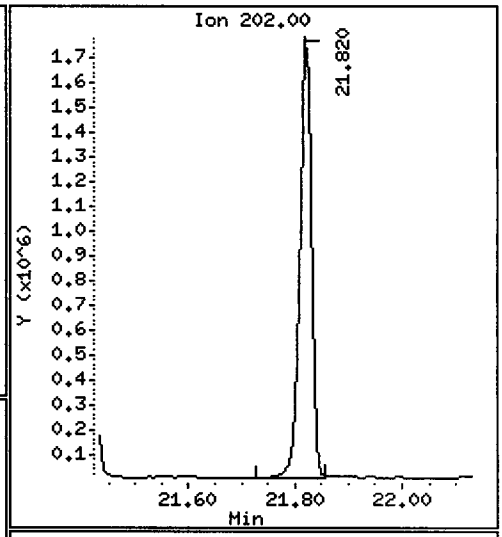
65 Pyrene | Concentration: 1061 ug/kg

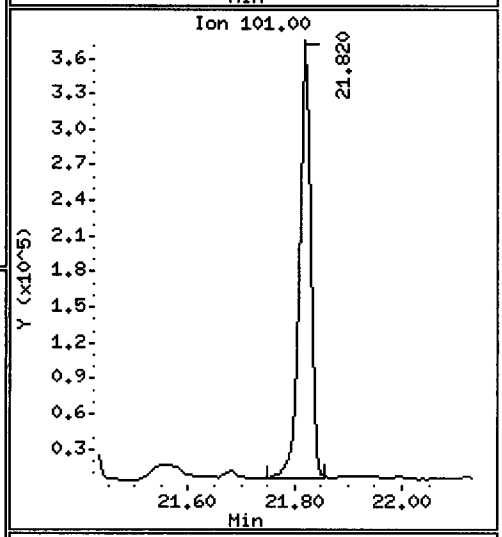


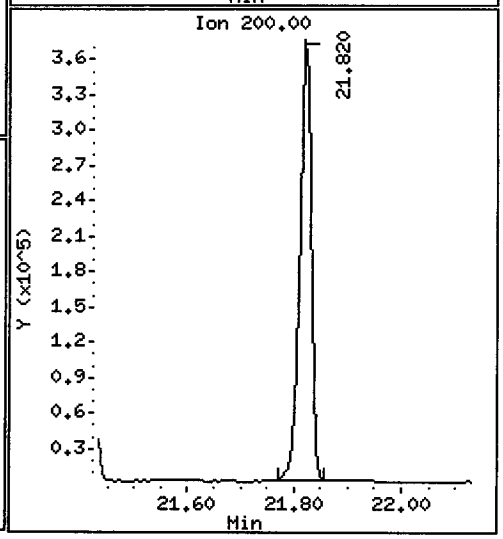












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

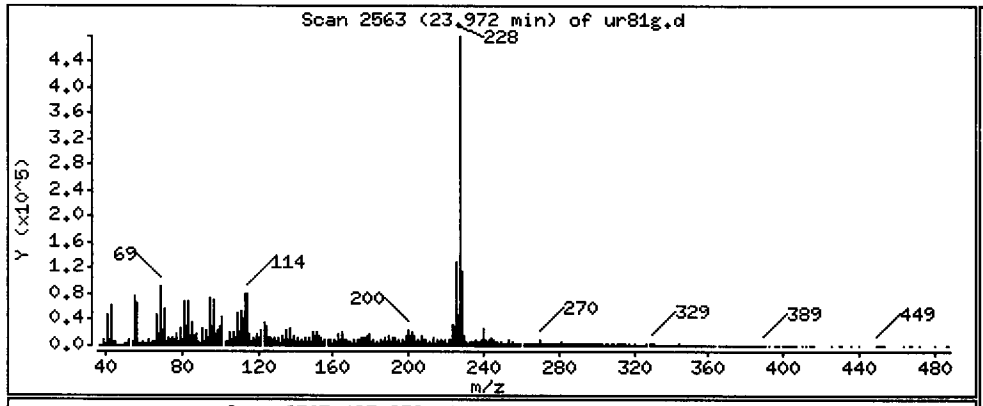
Operator: VTS/YZ

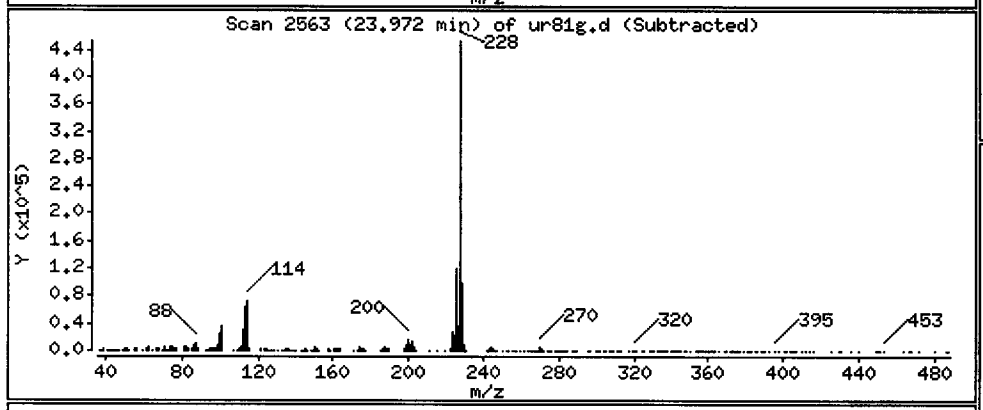
Column phase: ZB-5msi

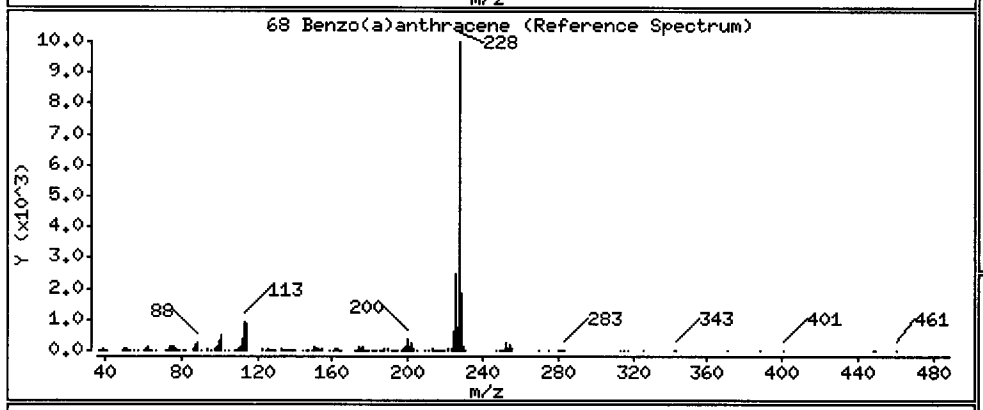
Column diameter: 0.25

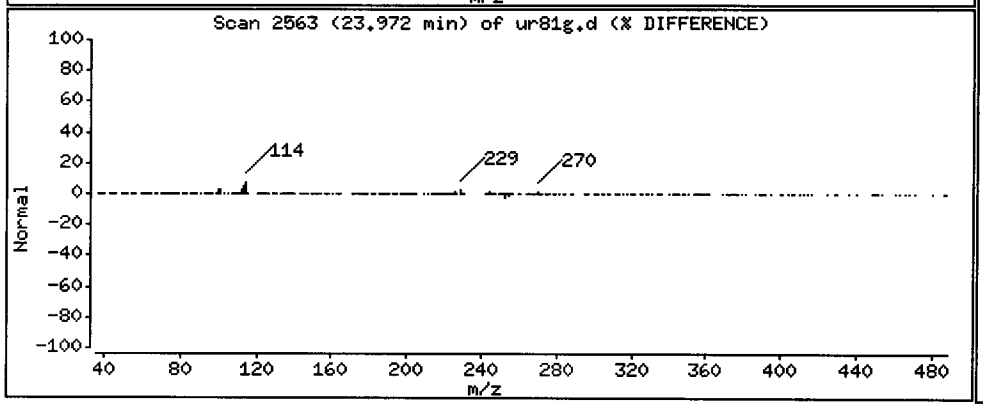
68 Benzo(a)anthracene

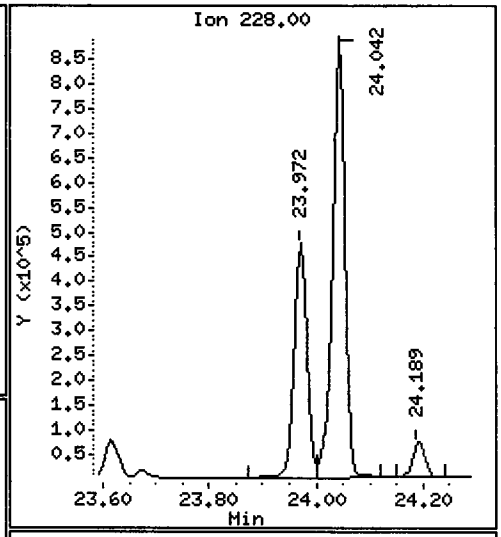
Concentration: 357.7 ug/kg

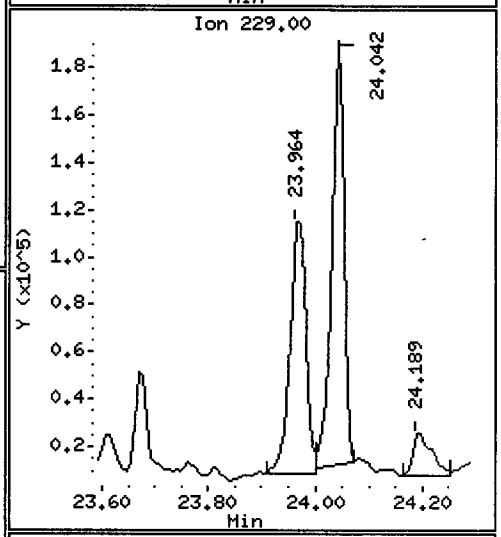


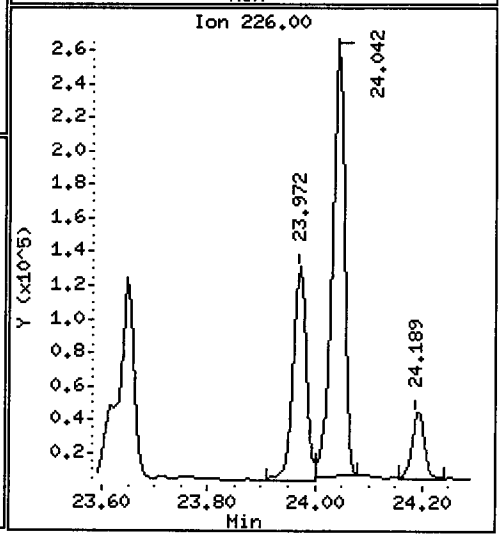












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

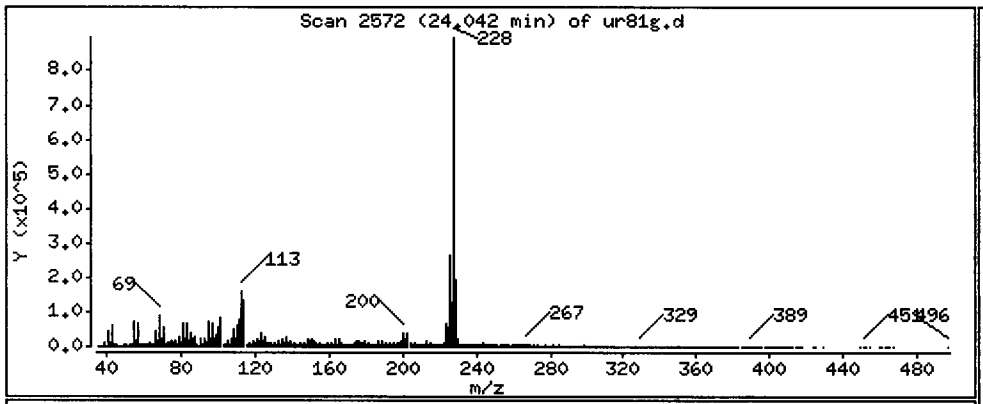
Client ID: IJ12-01 Instrument: nt10.i

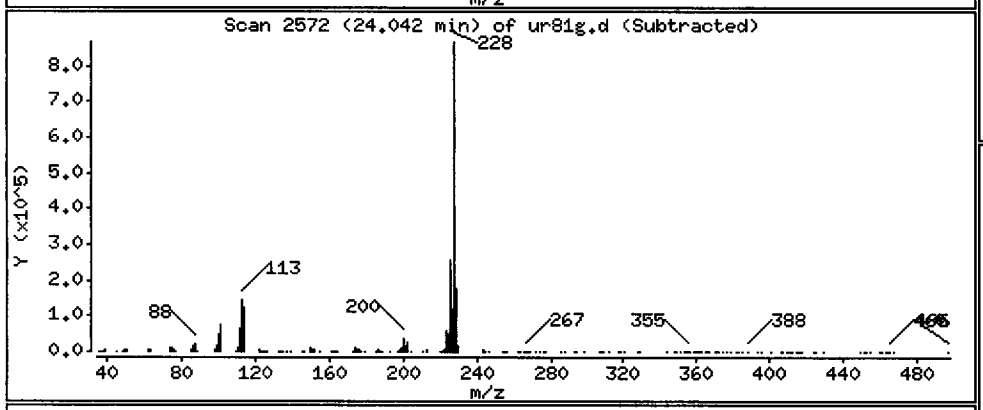
Sample Info: UR81G

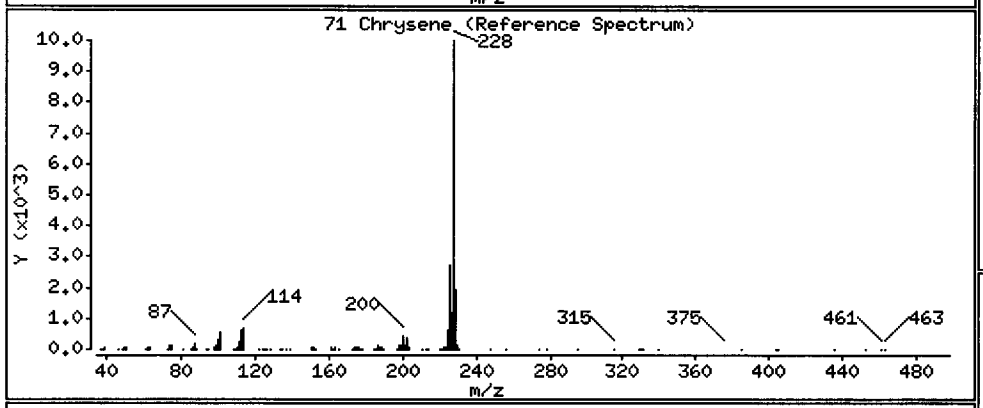
Volume Injected (uL): 1.0 Operator: VTS/YZ

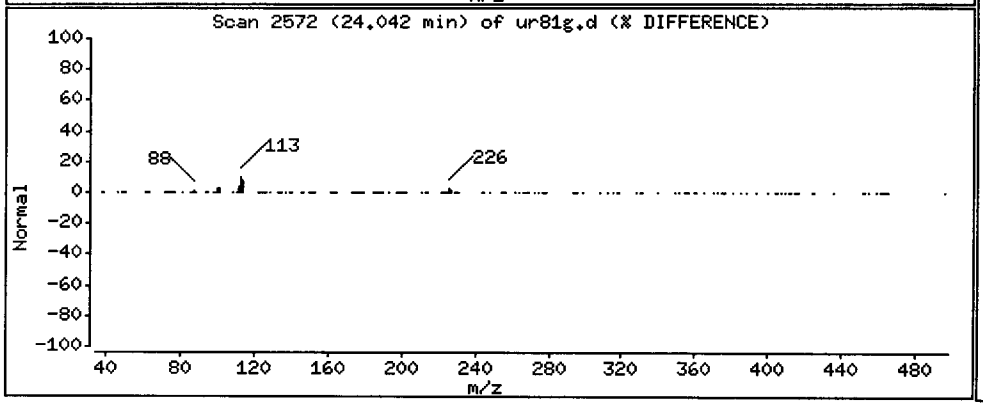
Column phase: ZB-5msi Column diameter: 0.25

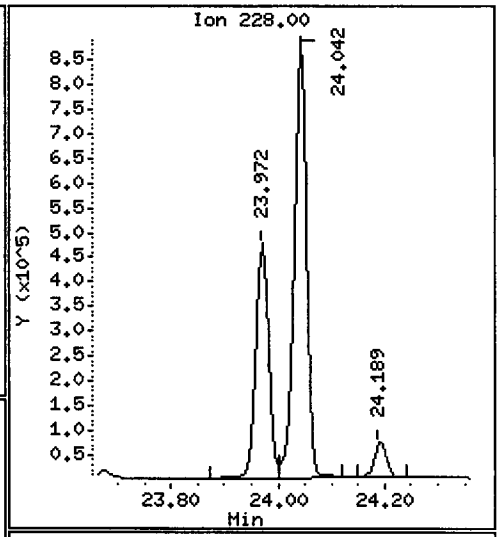
71 Chrysene Concentration: 699.2 ug/kg

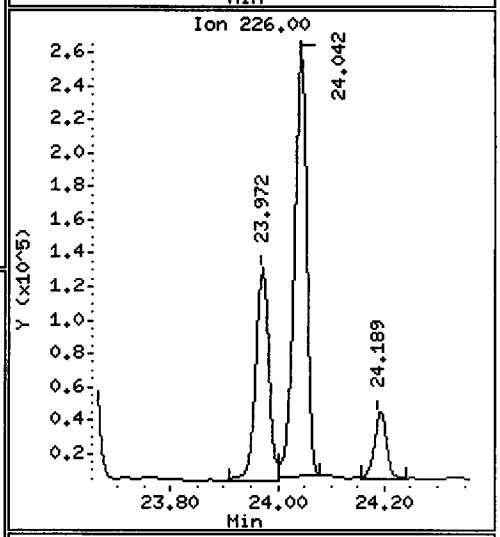


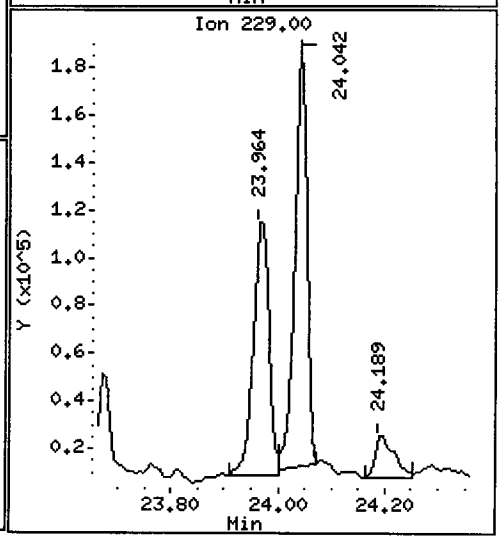












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

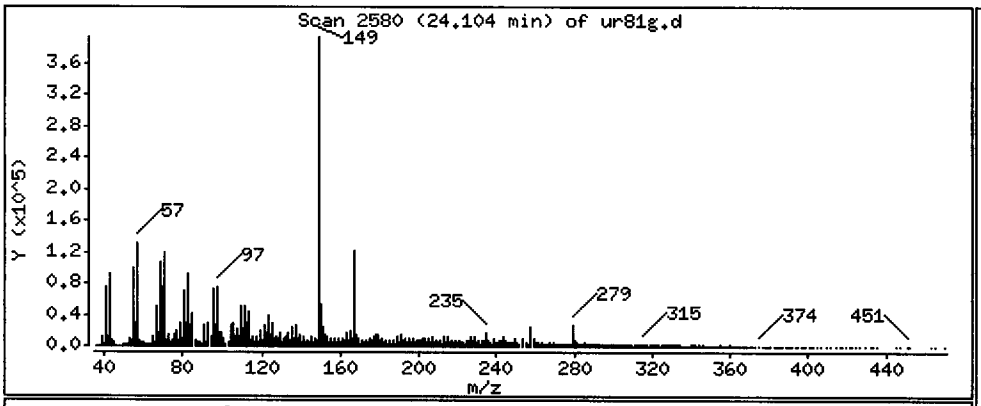
Operator: VTS/YZ

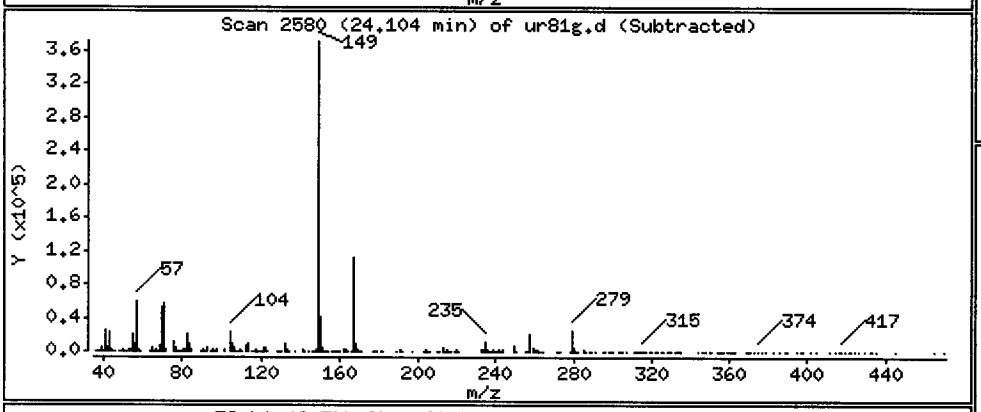
Column phase: ZB-5msi

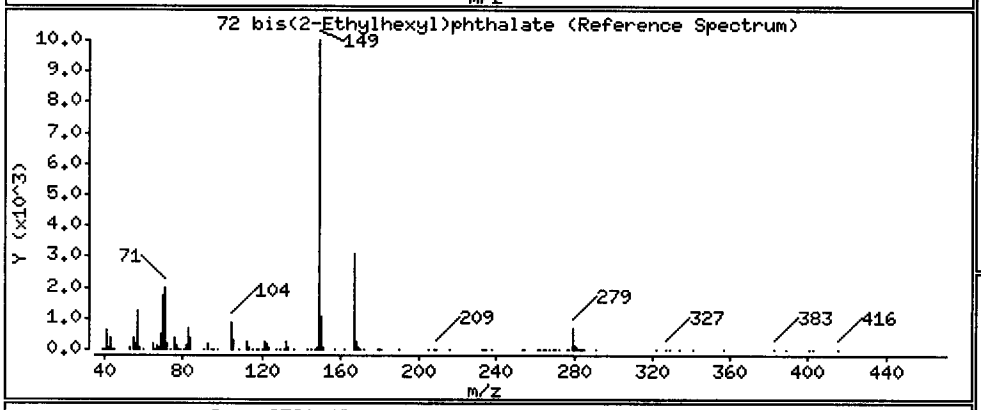
Column diameter: 0.25

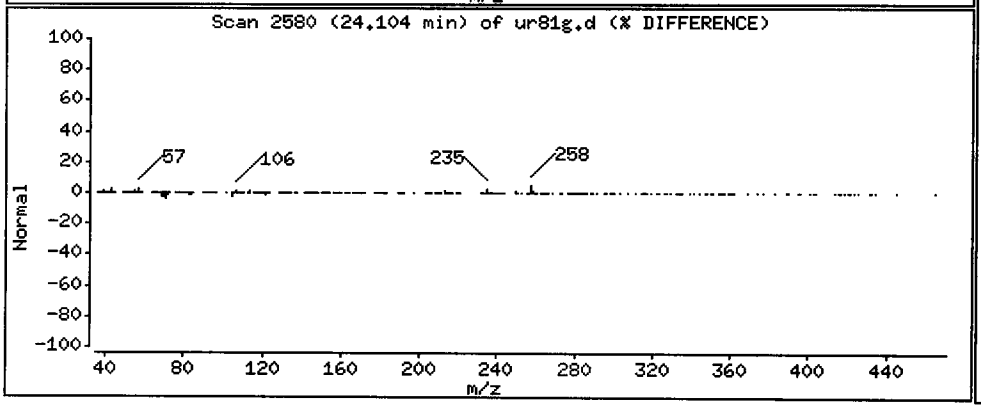
72 bis(2-Ethylhexyl)phthalate

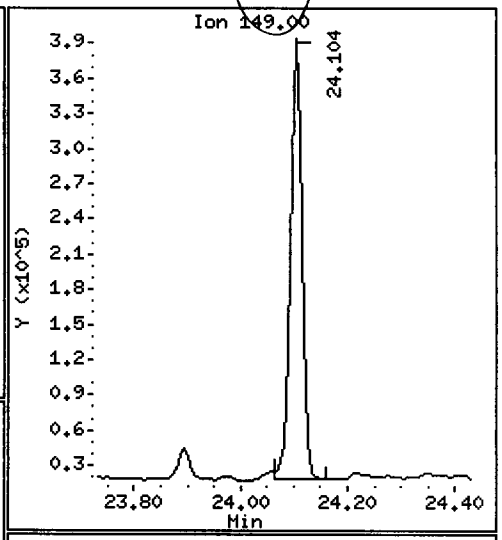
Concentration: 324.3 ug/kg

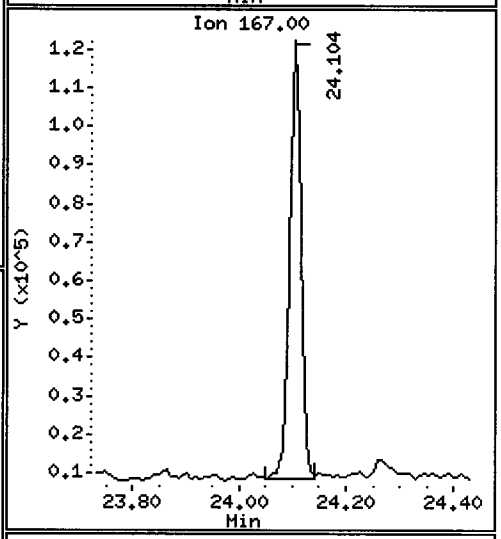


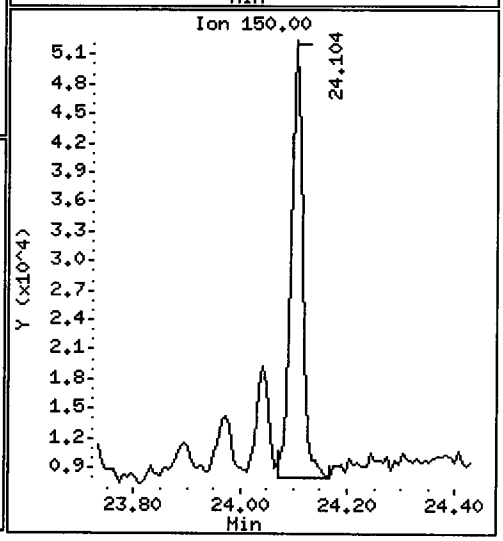












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

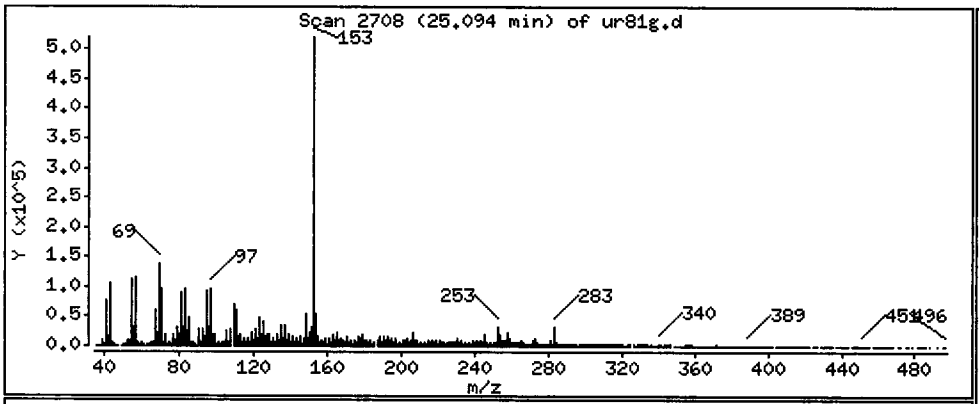
Operator: VTS/YZ

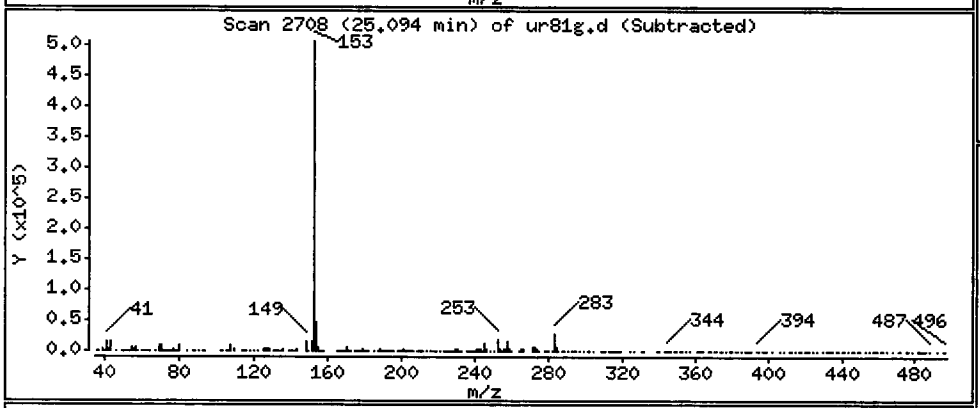
Column phase: ZB-5msi

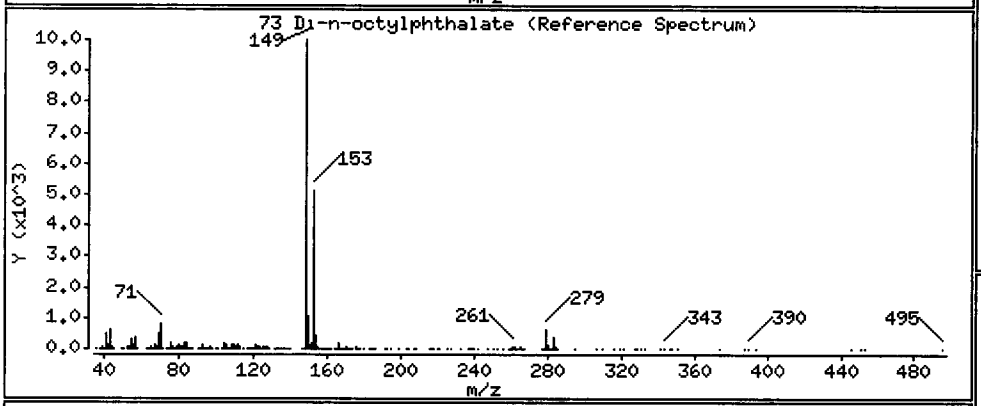
Column diameter: 0.25

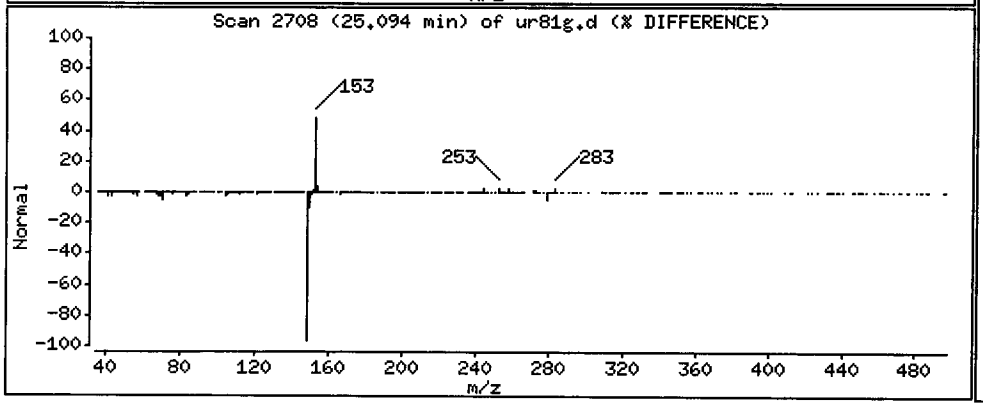
73 Di-n-octylphthalate

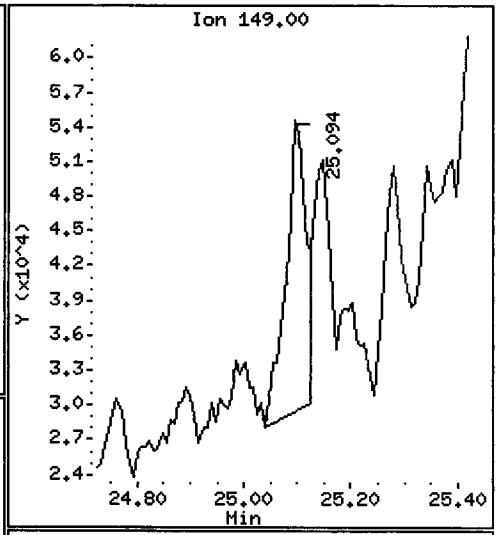
Concentration: 20.29 ug/kg

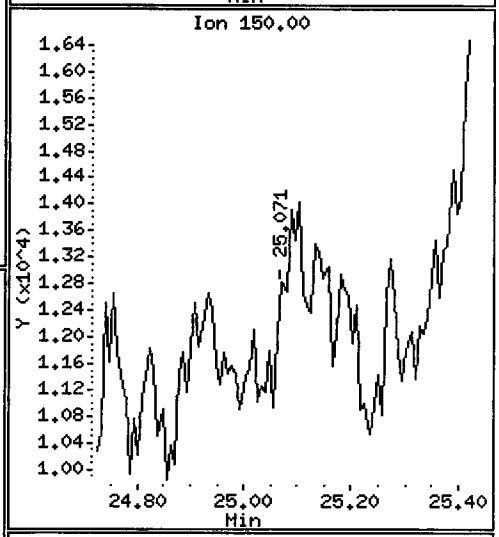


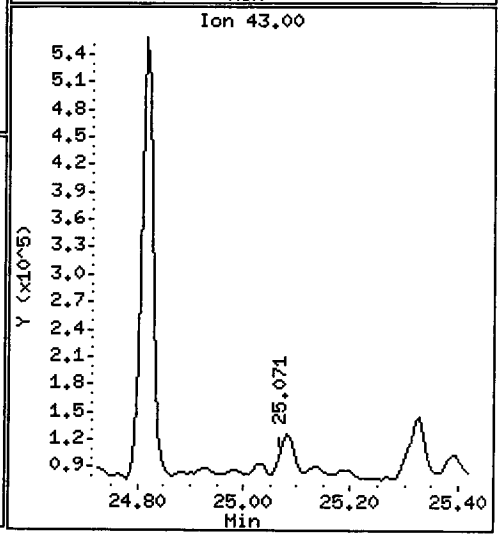












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

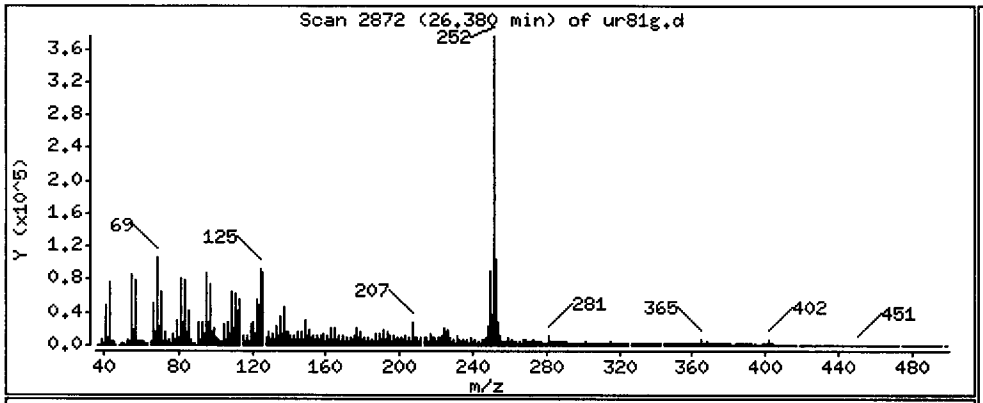
Client ID: IJ12-01 Instrument: nt10.i

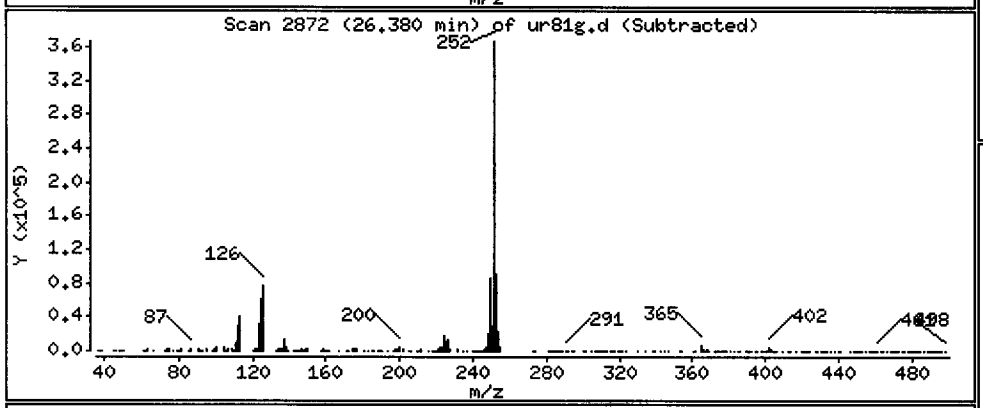
Sample Info: UR81G

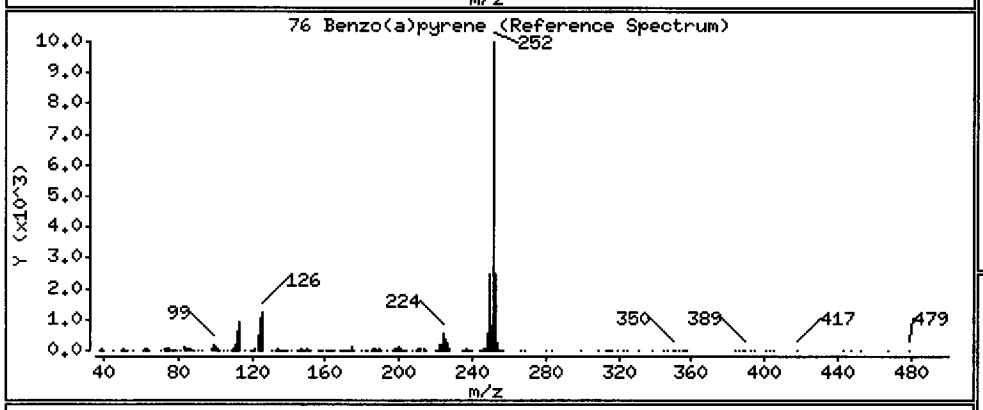
Volume Injected (uL): 1.0 Operator: VTS/YZ

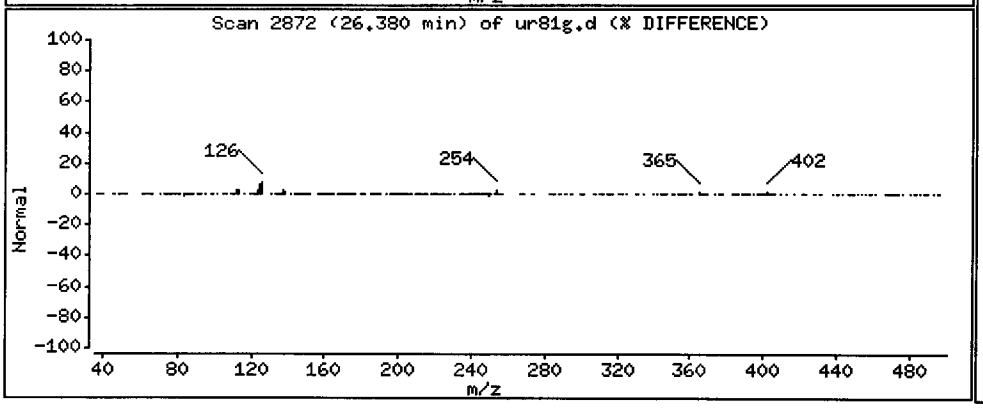
Column phase: ZB-5msi Column diameter: 0.25

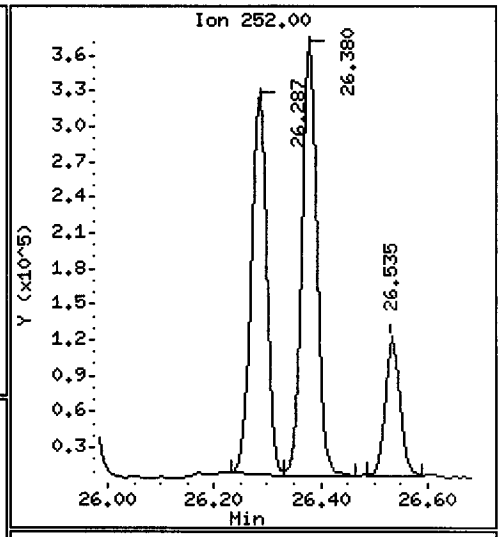
76 Benzo(a)pyrene Concentration: 376.3 ug/kg

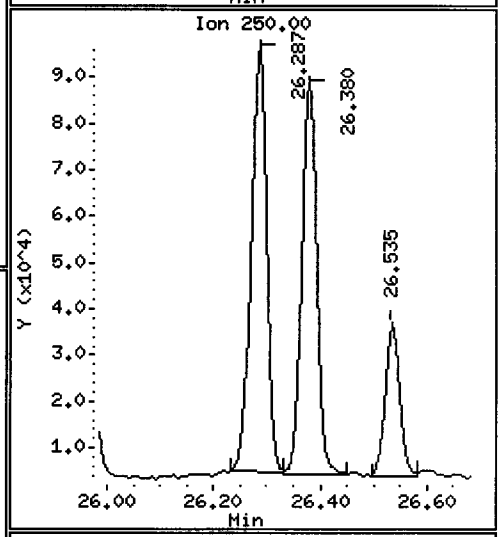


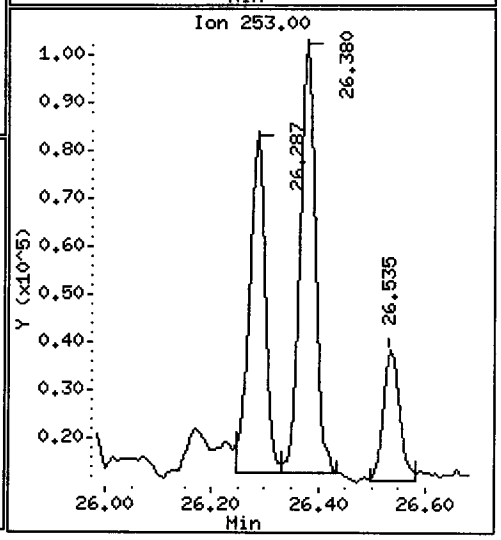












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

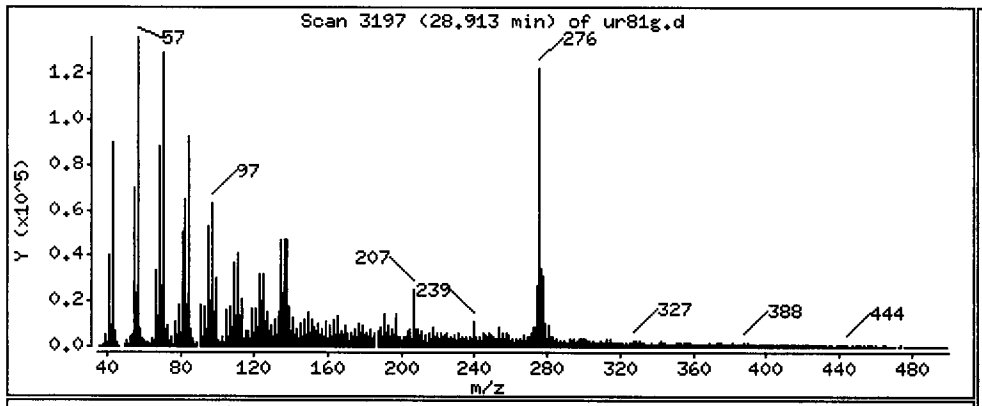
Operator: VTS/YZ

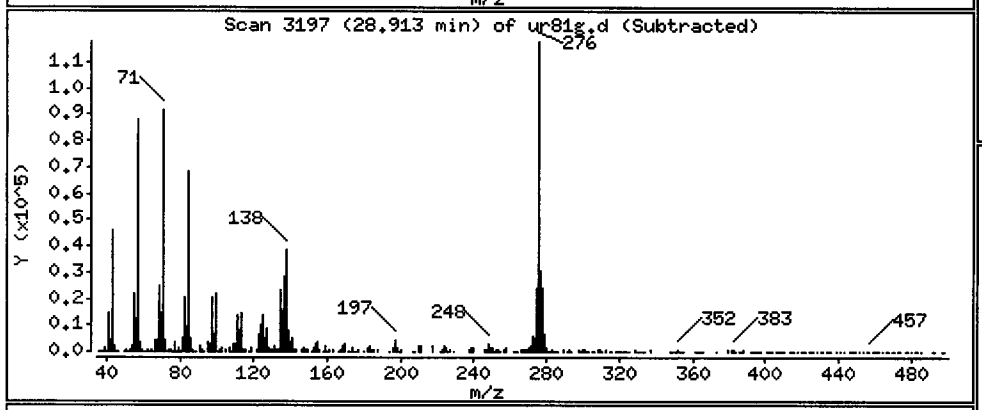
Column phase: ZB-5msi

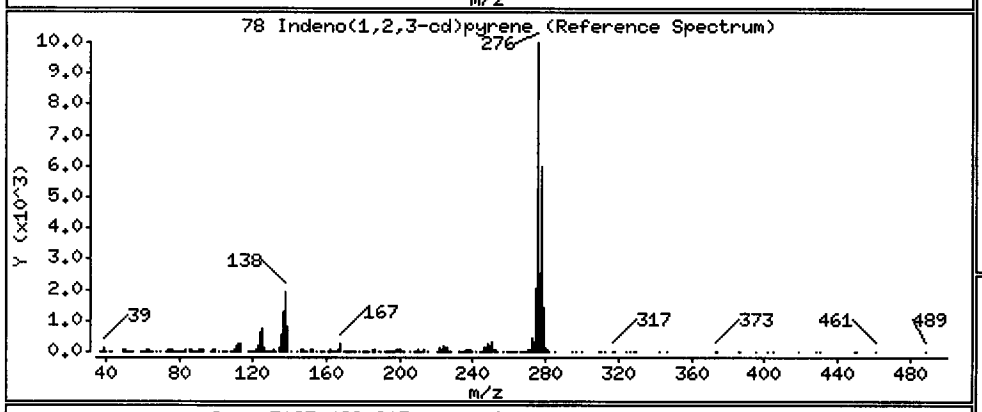
Column diameter: 0.25

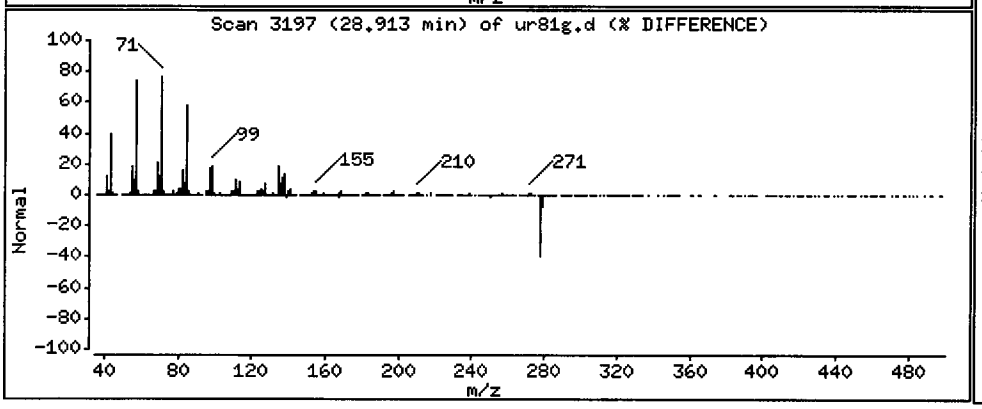
78 Indeno(1,2,3-cd)pyrene

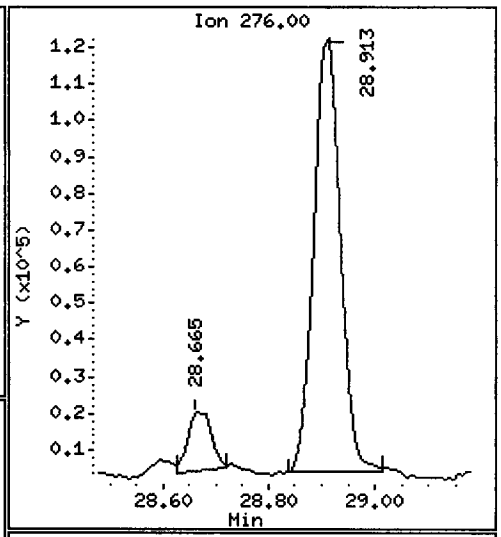
Concentration: 182.4 ug/kg

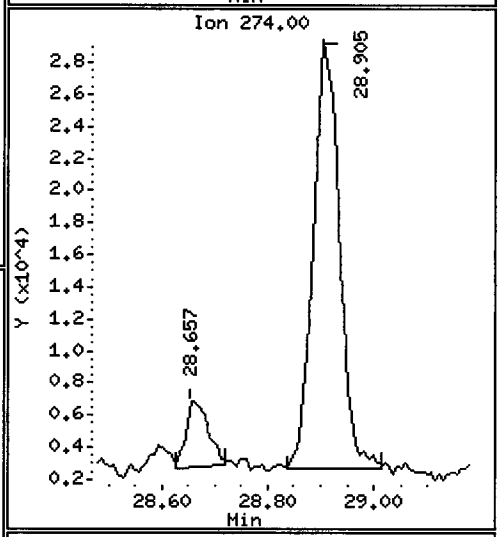


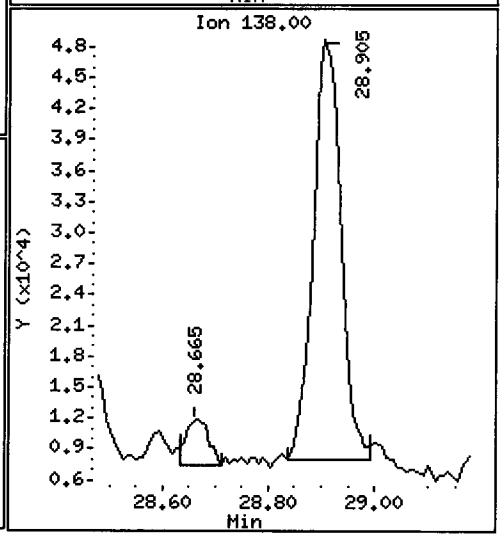












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

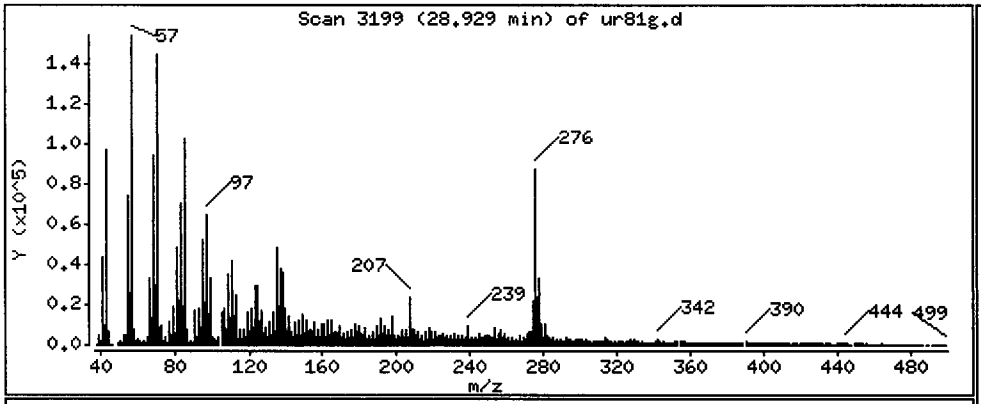
Client ID: IJ12-01 Instrument: nt10.i

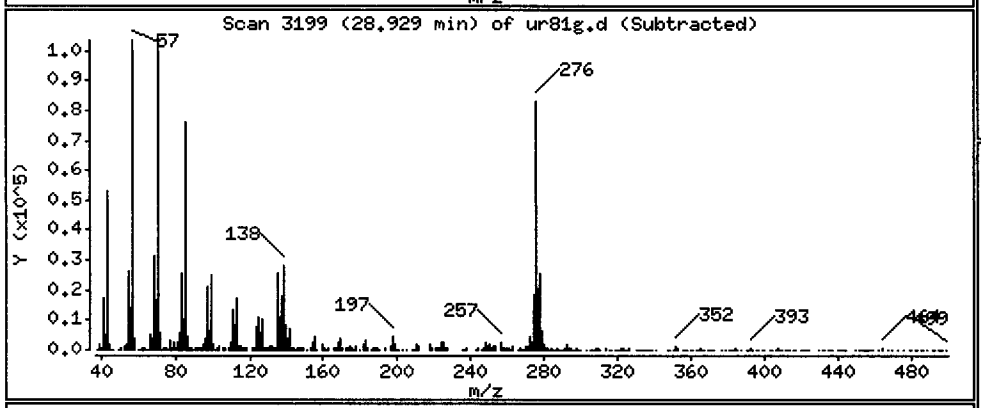
Sample Info: UR81G

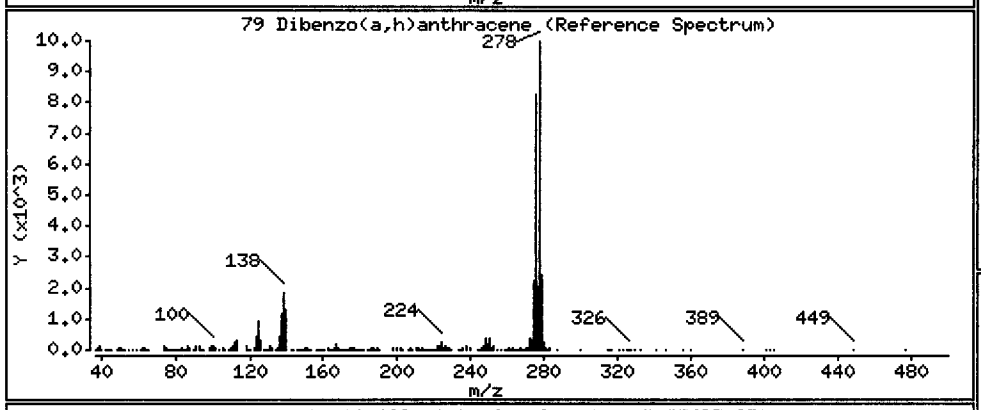
Volume Injected (uL): 1.0 Operator: VTS/YZ

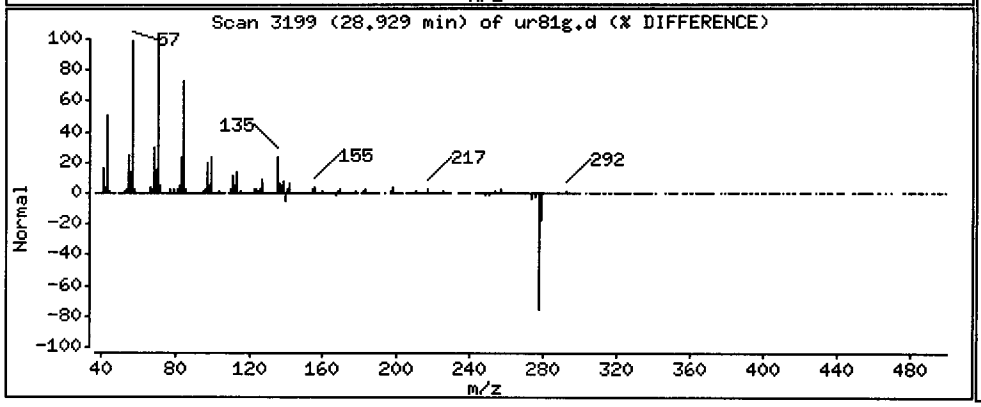
Column phase: ZB-5msi Column diameter: 0.25

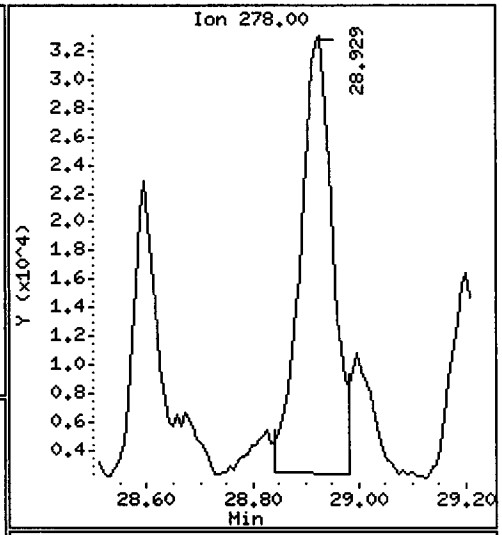
79 Dibenzo(a,h)anthracene Concentration: 74.41 ug/kg

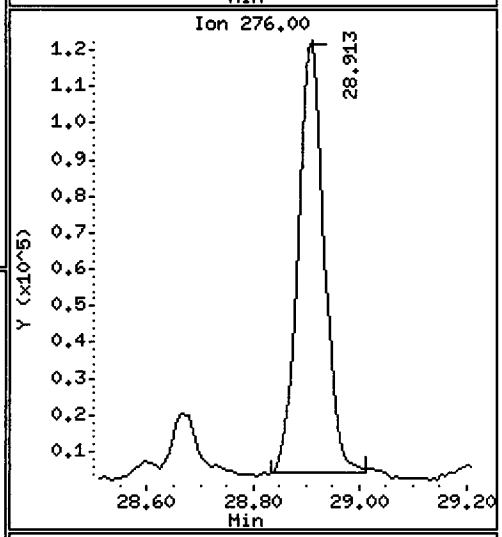


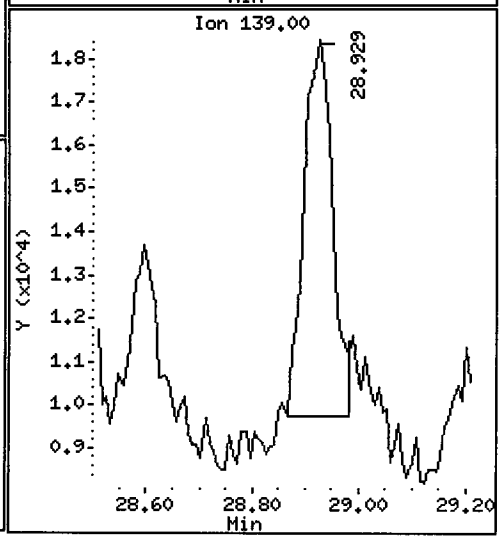












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

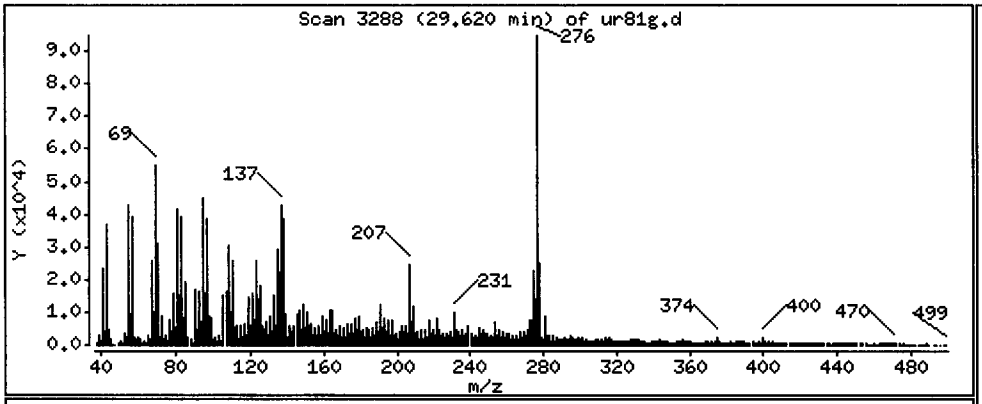
Client ID: IJ12-01 Instrument: nt10.i

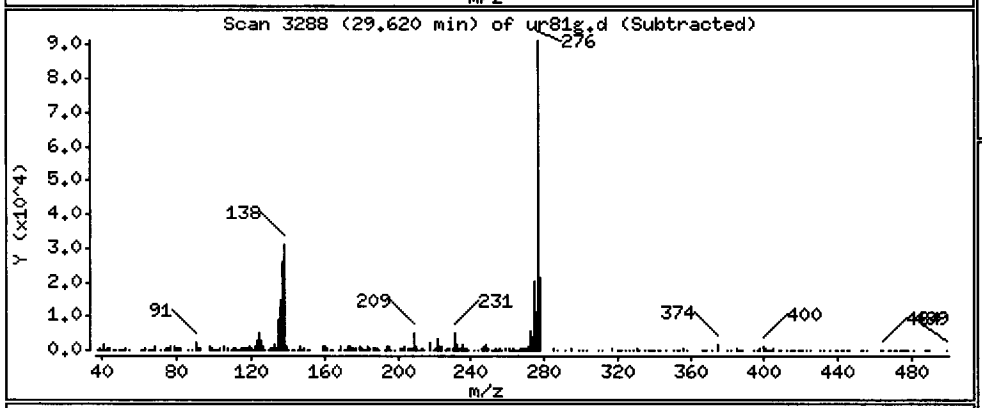
Sample Info: UR81G

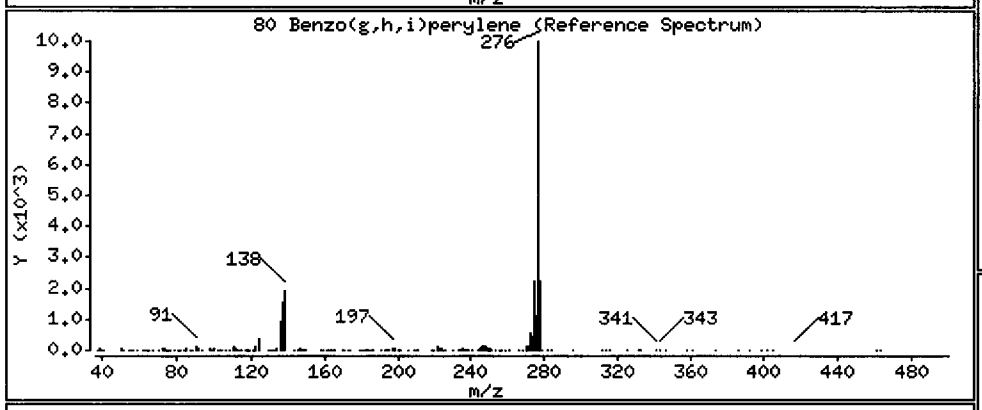
Volume Injected (uL): 1.0 Operator: VTS/YZ

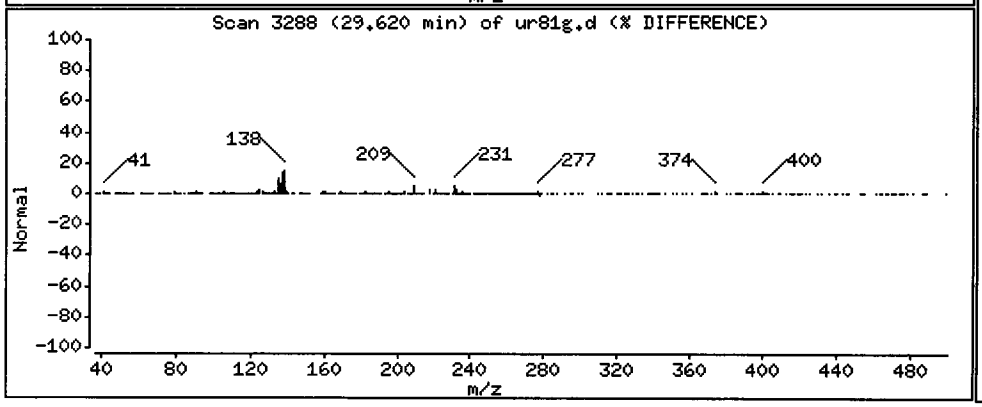
Column phase: ZB-5msi Column diameter: 0.25

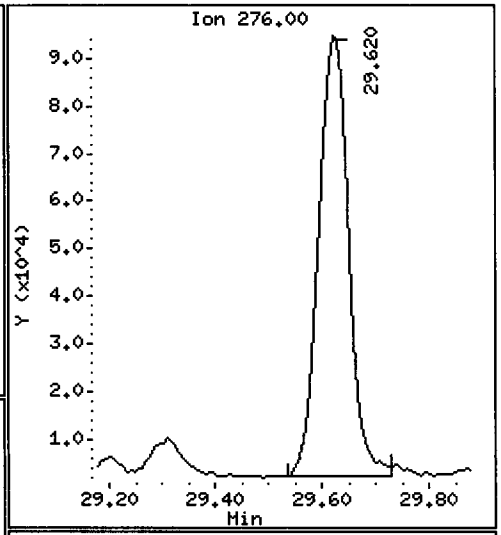
80 Benzo(g,h,i)perylene Concentration: 182.3 ug/kg

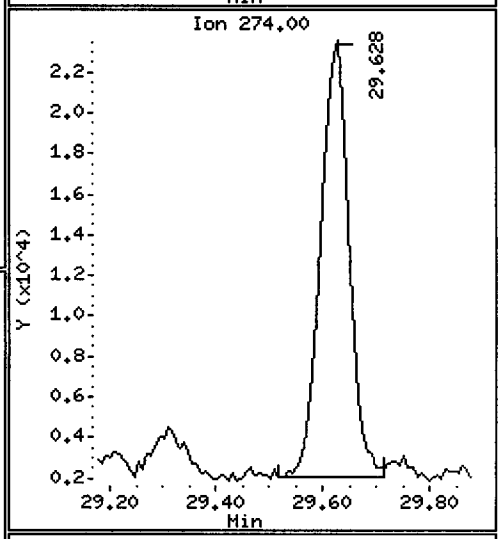


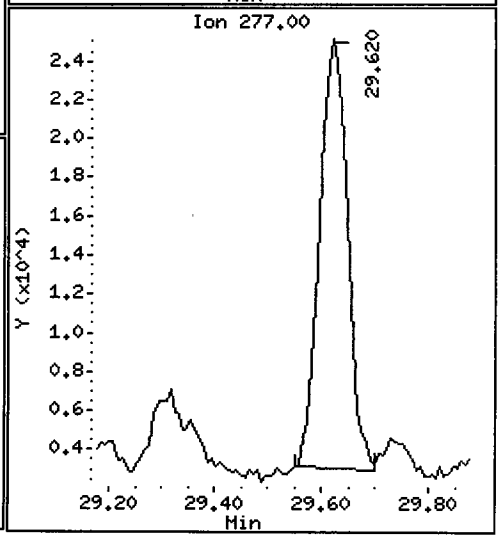












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

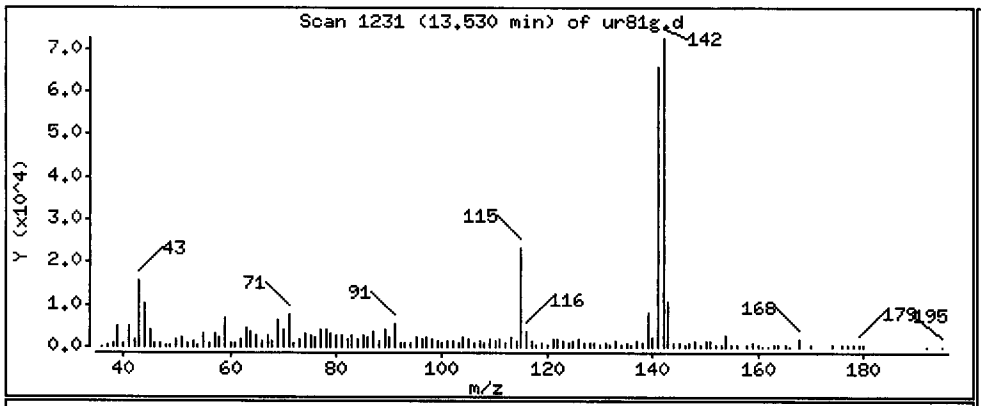
Operator: VTS/YZ

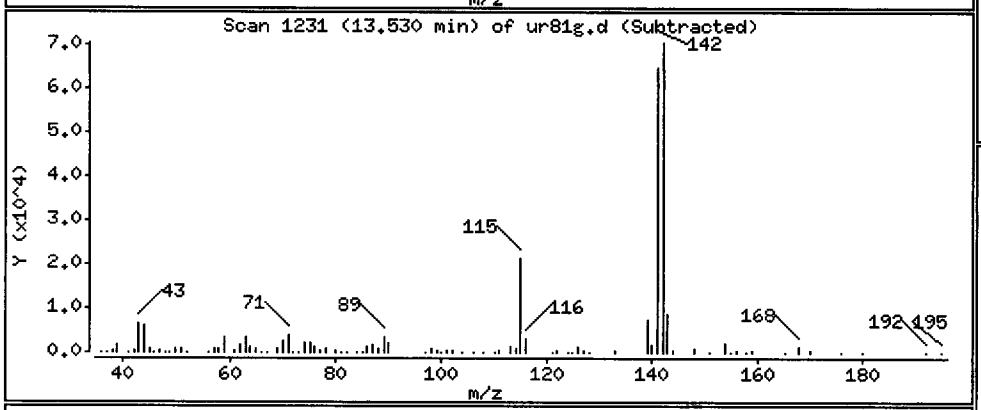
Column phase: ZB-5msi

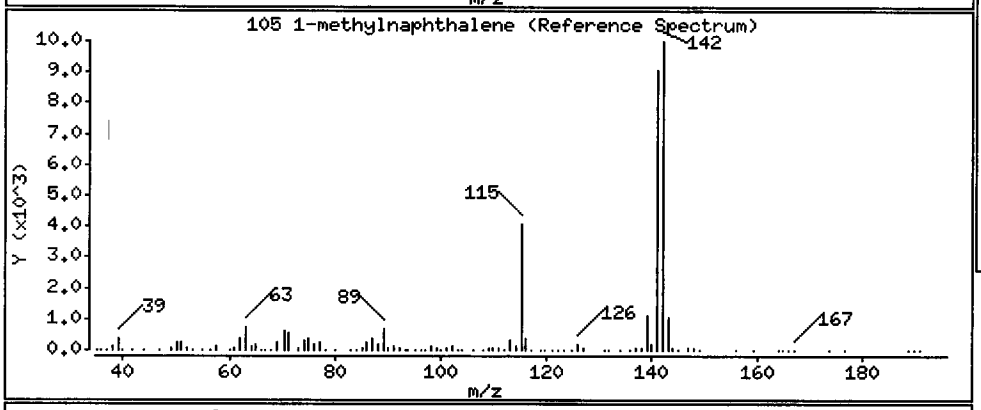
Column diameter: 0.25

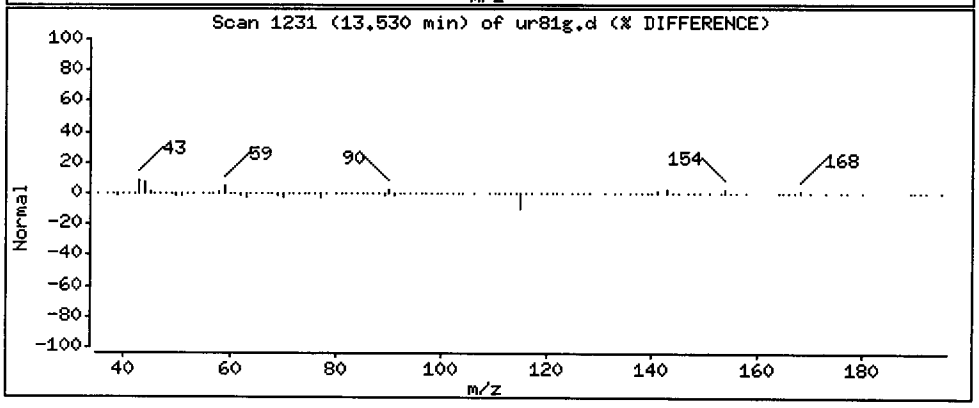
105 1-methylnaphthalene

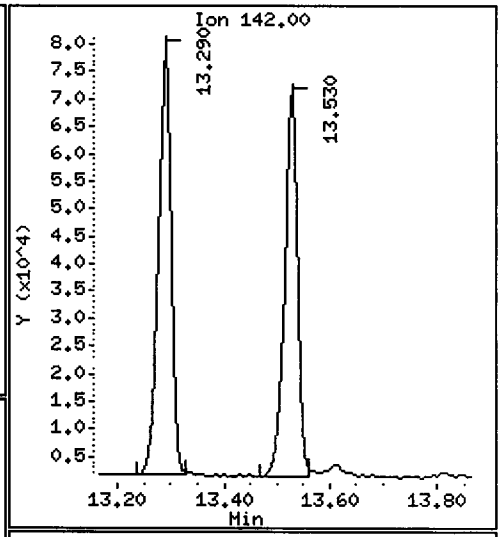
Concentration: 71.57 ug/kg

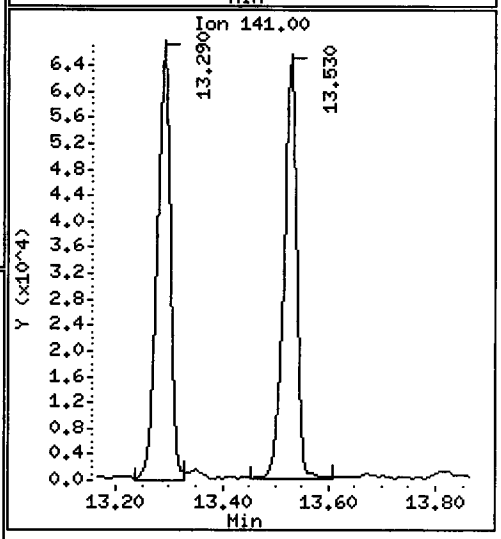












Data File: /chem1/nt10.i/20120508.b/ur81g.d

Date : 08-MAY-2012 22:47

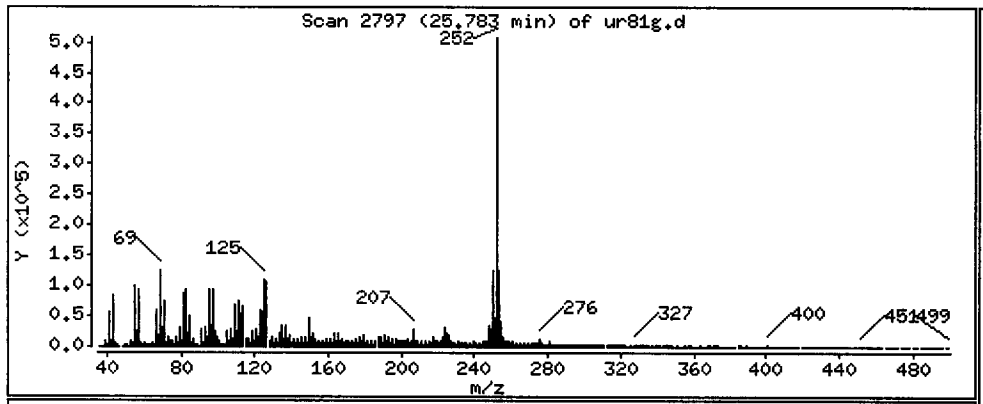
Client ID: IJ12-01 Instrument: nt10.i

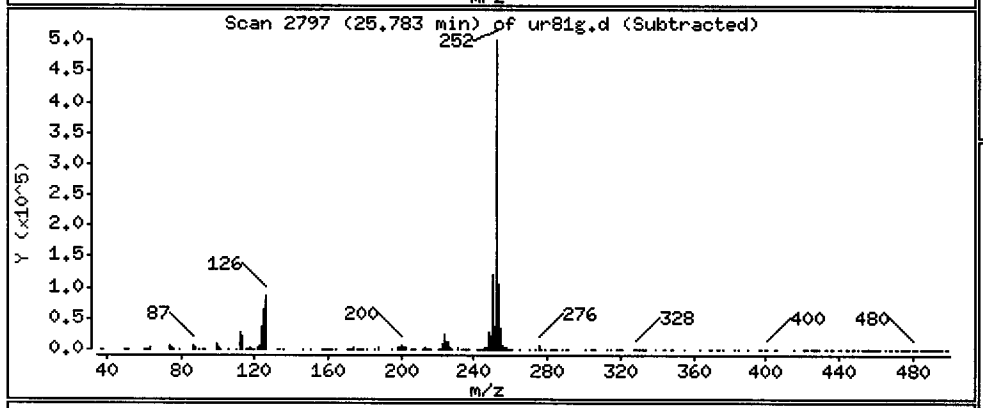
Sample Info: UR81G

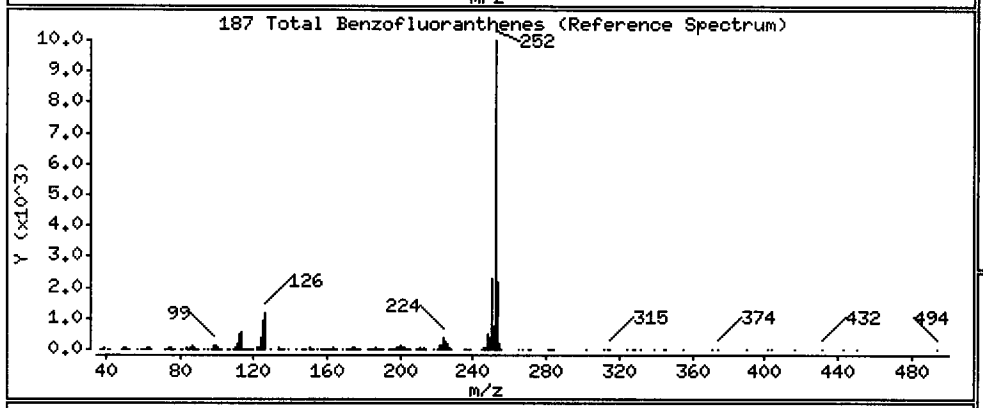
Volume Injected (uL): 1.0 Operator: VTS/YZ

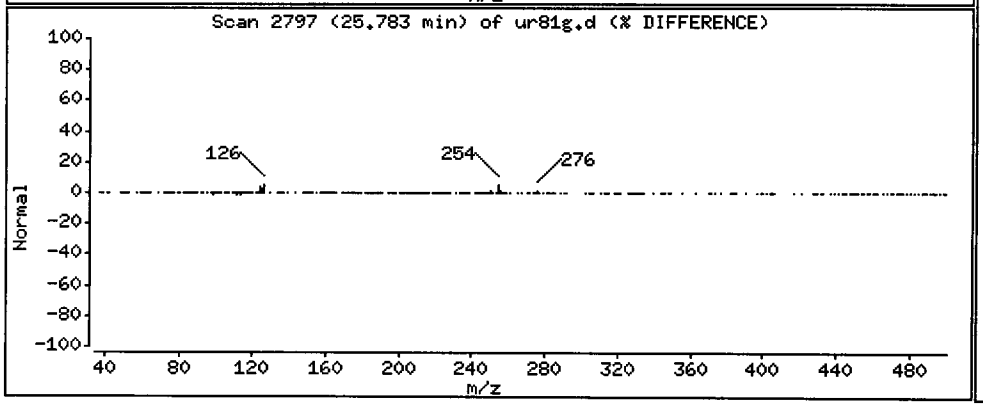
Column phase: ZB-5msi Column diameter: 0.25

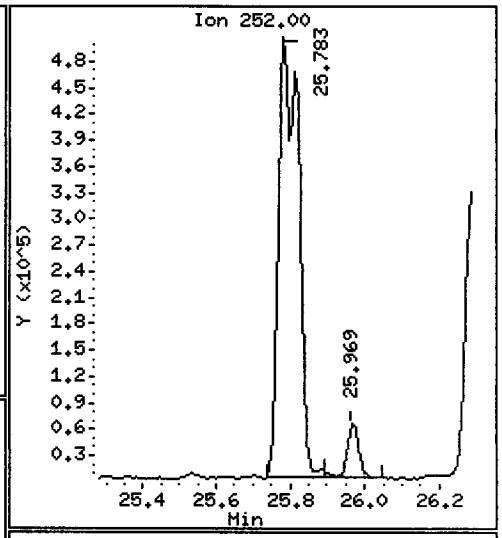
187 Total Benzofluoranthenes Concentration: 848.5 ug/kg

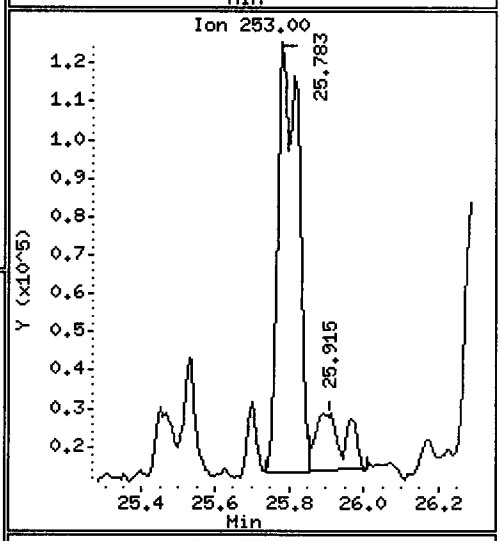


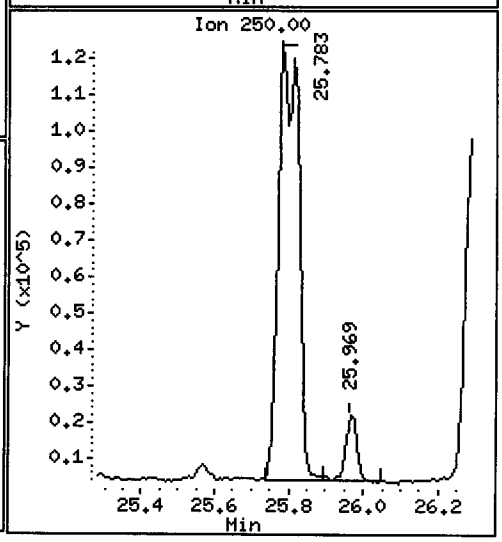






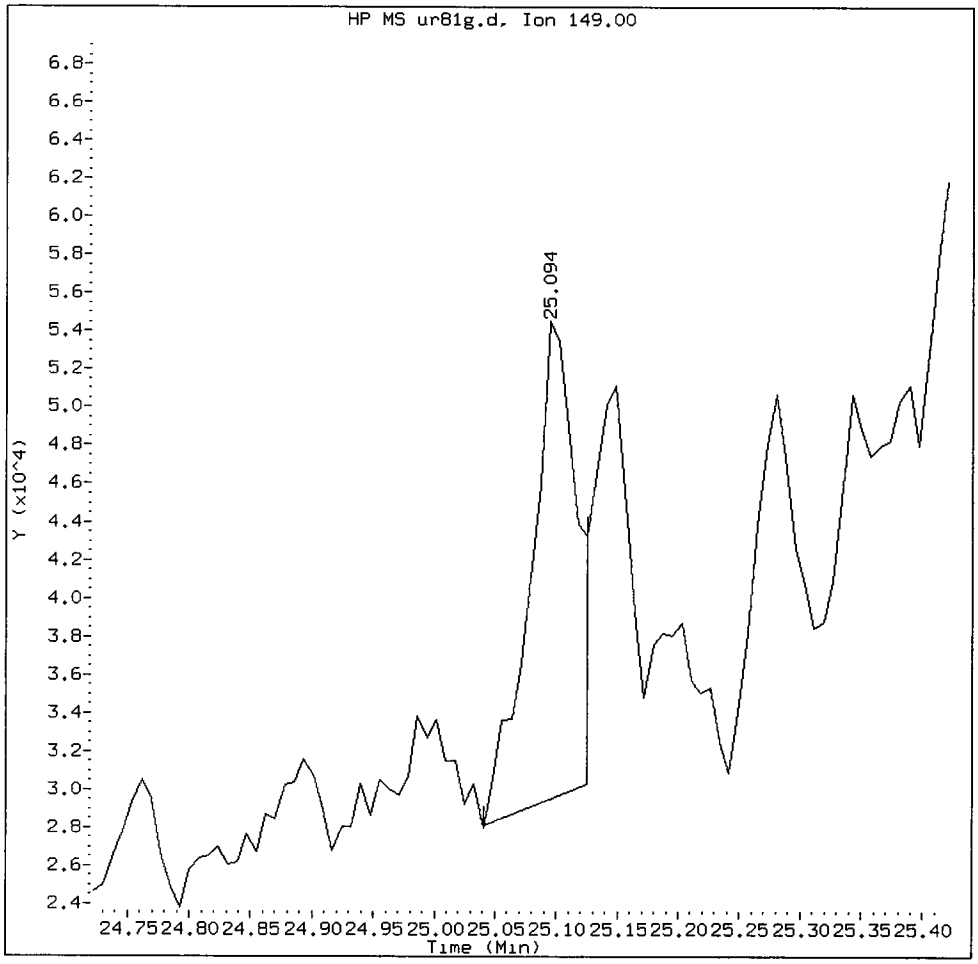






UR81G, /chem1/nt10.i/20120508.b/ur81g.d

Di-n-octylphthalate Amount: 0.22 Area: 66410



MANUAL INTEGRATION for Di-n-octylphthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 12 Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81g.d

Lab ID: UR81G, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

12 5/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81h.d
Lab Smp Id: UR81H
Client Smp ID: IJ12-58A
Inj Date : 08-MAY-2012 23:24
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : UR81H
Misc Info : 12-7399
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.30000	Weight of sample extracted (g)
M	59.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.706	6.667	(0.741)	336522	4.14403	406.4
$ 2 Phenol-d5	99	8.421	8.398	(0.931)	433623	4.29433	421.2
3 Phenol	94	8.444	8.421	(0.933)	44631	0.40325	39.55
$ 5 2-Chlorophenol-d4	132	8.668	8.653	(0.958)	382243	4.37398	429.0
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	237389	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.043)	157392	2.65791	260.7
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.374	9.350	(1.036)	24033	0.46596	45.70
13 2-Methylphenol	108	9.638	9.614	(1.065)	11197	0.12854	12.61
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.933	9.909	(1.098)	87571	0.96419	94.57
$ 18 Nitrobenzene-d5	82	10.235	10.228	(0.873)	232817	2.91639	286.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	22730	0.27416	26.89
24 Benzoic acid	105	11.218	11.303	(0.957)	76705	1.19288	117.0(H)
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.727	11.719	(1.000)	933694	4.00000	
28 Naphthalene	128	11.773	11.766	(1.004)	179734	0.77081	75.60
30 Hexachlorobutadiene	225	Compound Not Detected.					
32 2-Methylnaphthalene	142	13.289	13.282	(1.133)	110259	0.68950	67.63
$ 36 2-Fluorobiphenyl	172	14.156	14.149	(0.905)	527045	3.01115	295.3
39 Dimethylphthalate	163	15.093	15.147	(0.964)	16348	0.10440	10.24
40 Acenaphthylene	152	15.302	15.286	(0.978)	82067	0.36088	35.39
* 42 Acenaphthene-d10	164	15.650	15.627	(1.000)	513110	4.00000	
44 Acenaphthene	153	15.719	15.696	(1.004)	78703	0.57983	56.87
46 Dibenzofuran	168	16.075	16.060	(1.027)	263269	1.30322	127.8
50 Diethylphthalate	149	Compound Not Detected.					
49 Fluorene	166	16.848	16.833	(1.077)	166241	1.07868	105.8
54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55 2,4,6-Tribromophenol	330	17.434	17.411	(1.114)	115588	4.91024	481.6
57 Hexachlorobenzene	284	Compound Not Detected.					
58 Pentachlorophenol	266	18.670	18.640	(0.986)	11824	0.34985	34.31
* 59 Phenanthrene-d10	188	18.926	18.903	(1.000)	799838	4.00000	
60 Phenanthrene	178	18.980	18.957	(1.003)	2615068	13.2211	1297
61 Anthracene	178	19.073	19.050	(1.008)	237188	1.13605	111.4
63 Di-n-butylphthalate	149	Compound Not Detected.					
64 Fluoranthene	202	21.409	21.363	(1.131)	2609909	11.5926	1137
65 Pyrene	202	21.819	21.781	(0.909)	2097191	8.16224	800.5
$ 66 Terphenyl-d14	244	22.121	22.098	(0.922)	513135	3.18486	312.4
67 Butylbenzylphthalate	149	Compound Not Detected.					
68 Benzo(a)anthracene	228	23.964	23.941	(0.999)	406319	1.76221	172.8
* 69 Chrysene-d12	240	23.995	23.964	(1.000)	850235	4.00000	
71 Chrysene	228	24.034	24.010	(1.002)	899073	4.36811	428.4
72 bis(2-Ethylhexyl)phthalate	149	24.095	24.080	(0.961)	285883	1.67519	164.3
* 134 Di-n-octylphthalate-d4	153	25.071	25.056	(1.000)	1312482	4.00000	
73 Di-n-octylphthalate	149	Compound Not Detected.					
76 Benzo(a)pyrene	252	26.356	26.333	(0.996)	209913	1.10129	108.0
* 77 Perylene-d12	264	26.472	26.441	(1.000)	784622	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.874	28.828	(1.091)	101315	0.46714	45.82
79 Dibenzo(a,h)anthracene	278	28.890	28.859	(1.091)	34369	0.20619	20.22
80 Benzo(g,h,i)perylene	276	29.581	29.527	(1.117)	88672	0.47288	46.38
105 1-methylnaphthalene	142	13.529	13.514	(1.154)	81538	0.50006	49.04
187 Total Benzofluoranthenes	252	25.768	25.783	(0.973)	876032	4.10374	402.5

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81h.d
Lab Smp Id: UR81H
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7399

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-58A
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	237389	-12.68
27 Naphthalene-d8	1080694	540347	2161388	933694	-13.60
42 Acenaphthene-d10	623821	311910	1247642	513110	-17.75
59 Phenanthrene-d10	999143	499572	1998286	799838	-19.95
69 Chrysene-d12	1001009	500504	2002018	850235	-15.06
134 Di-n-octylphthala	1489422	744711	2978844	1312482	-11.88
77 Perylene-d12	988348	494174	1976696	784622	-20.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.06
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.15
59 Phenanthrene-d10	18.90	18.40	19.40	18.93	0.12
69 Chrysene-d12	23.96	23.46	24.46	23.99	0.13
134 Di-n-octylphthala	25.06	24.56	25.56	25.07	0.06
77 Perylene-d12	26.44	25.94	26.94	26.47	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

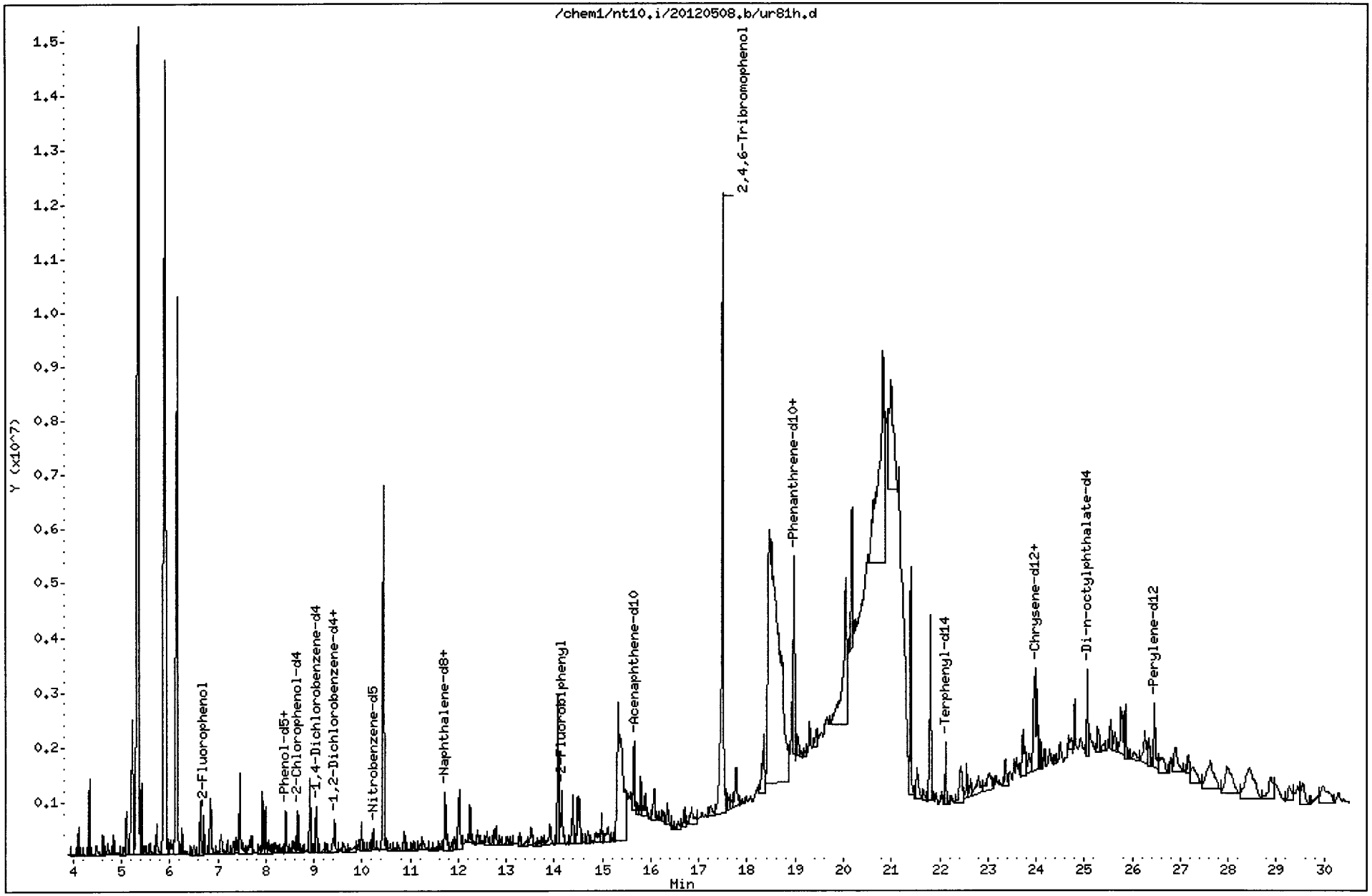
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81H
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7399

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-58A
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	735.6	406.4	55.25	30-160
$ 2 Phenol-d5	735.6	421.2	57.26	30-160
$ 5 2-Chlorophenol-d4	735.6	429.0	58.32	30-160
$ 10 1,2-Dichlorobenzen	490.4	260.7	53.16	30-160
$ 18 Nitrobenzene-d5	490.4	286.0	58.33	30-160
$ 36 2-Fluorobiphenyl	490.4	295.3	60.22	30-160
$ 55 2,4,6-Tribromophen	735.6	481.6	65.47	30-160
$ 66 Terphenyl-d14	490.4	312.4	63.70	30-160

Data File: /chem1/nt10.i/20120508.b/ur81h.d
Date : 08-MAY-2012 23:24
Client ID: IJ12-58A
Sample Info: UR81H
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

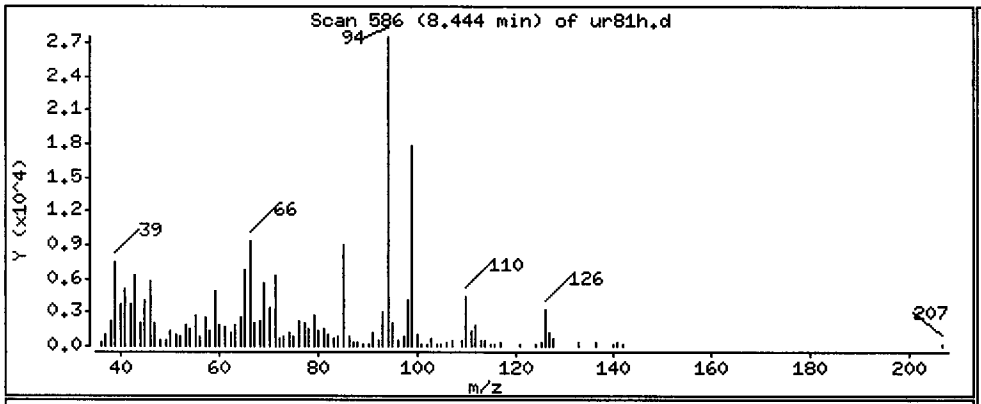
Operator: VTS/YZ

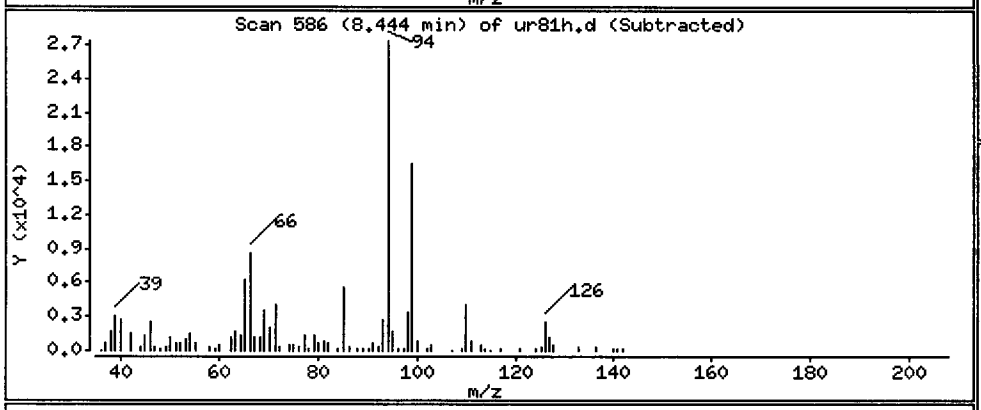
Column phase: ZB-5msi

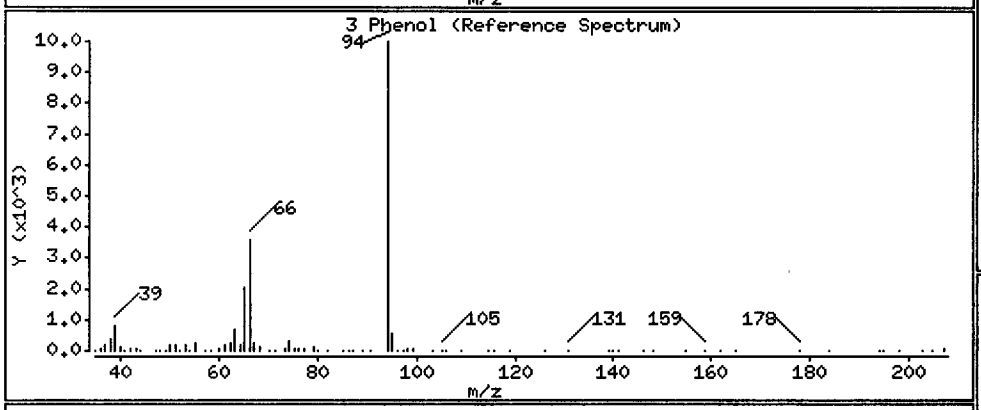
Column diameter: 0.25

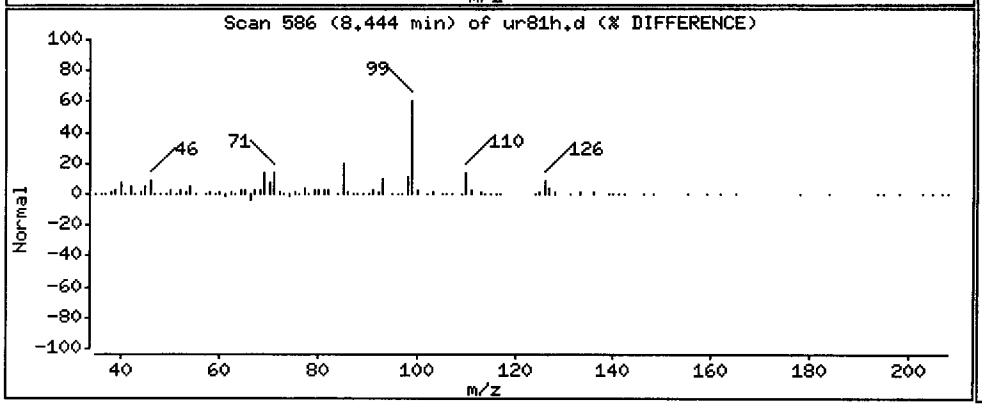
3 Phenol

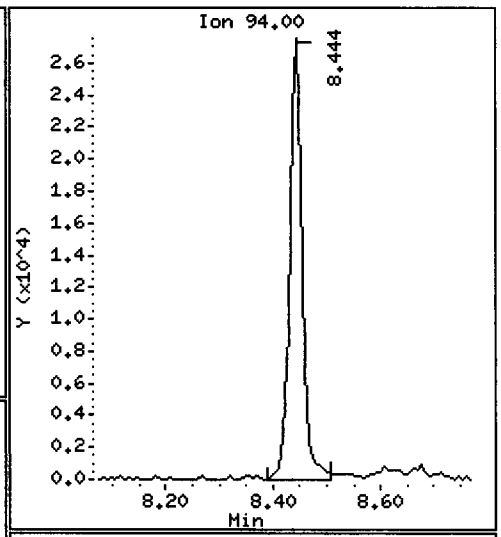
Concentration: 39.55 ug/kg

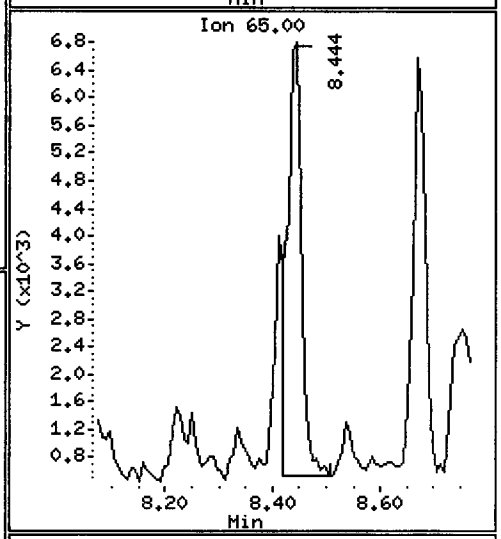


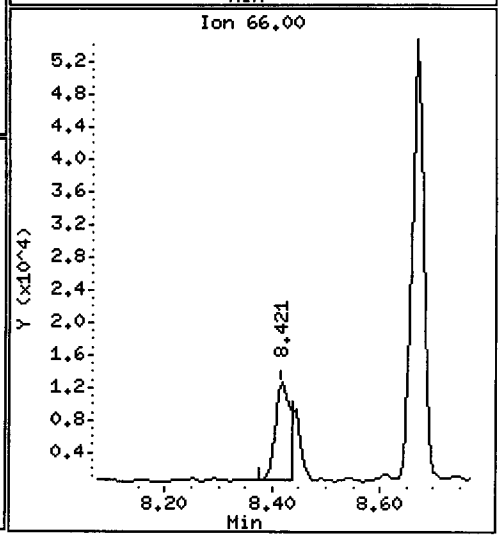












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

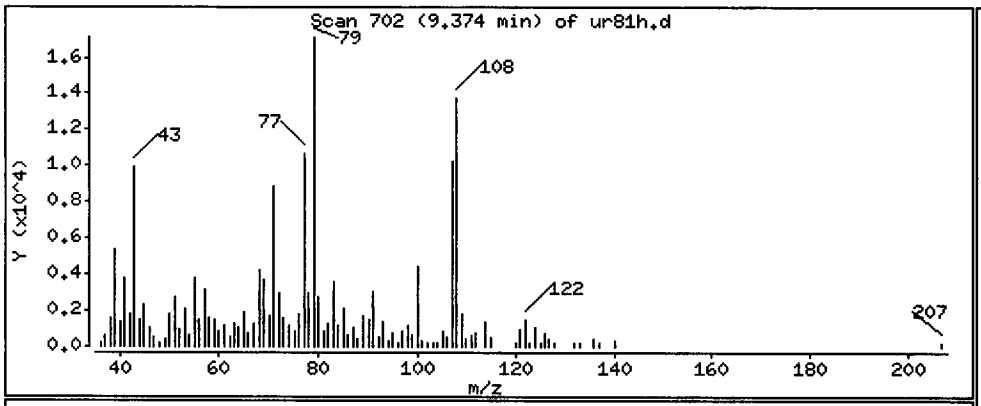
Operator: VTS/YZ

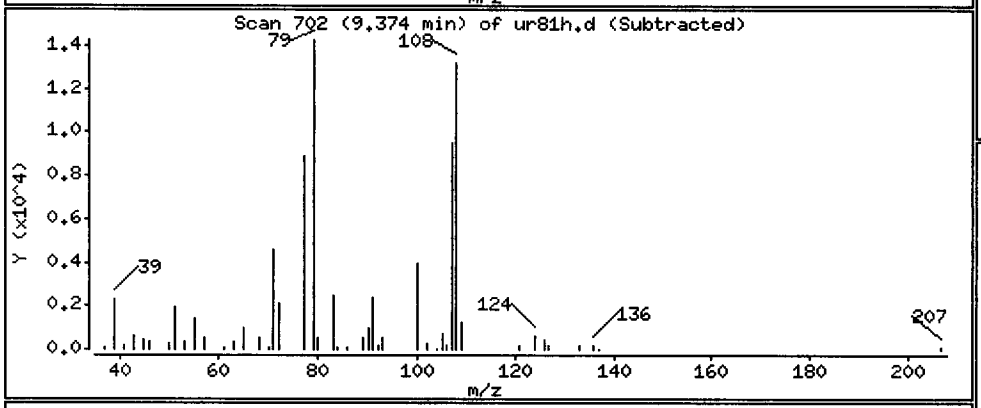
Column phase: ZB-5msi

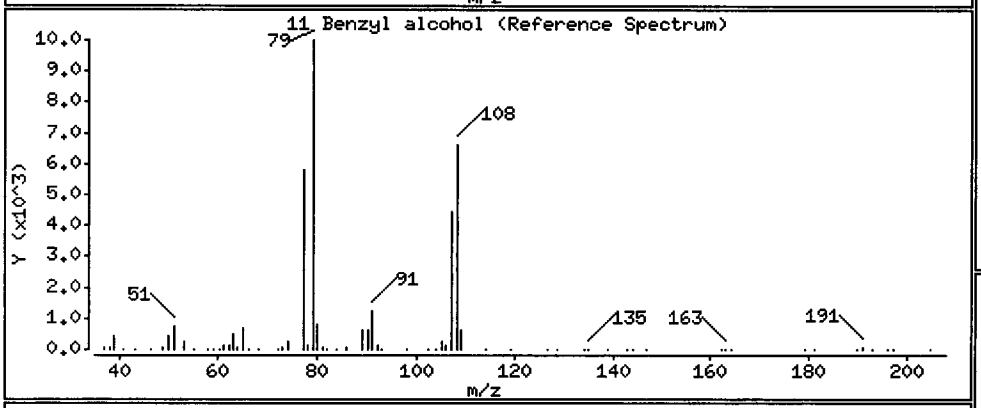
Column diameter: 0.25

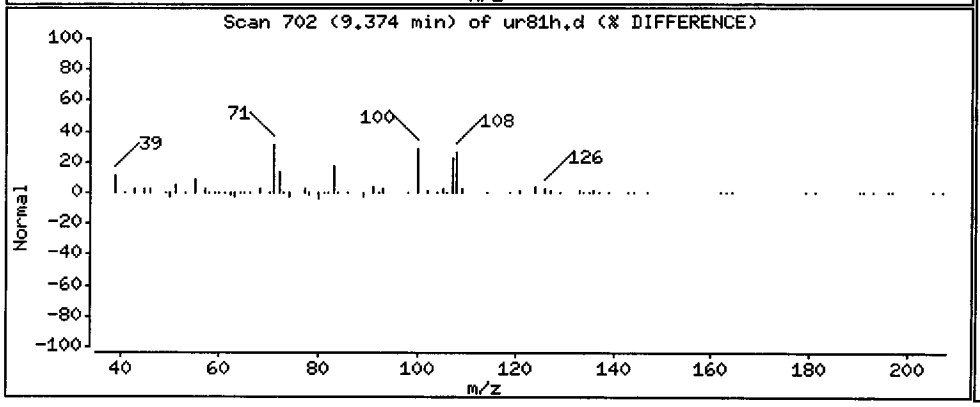
11 Benzyl alcohol

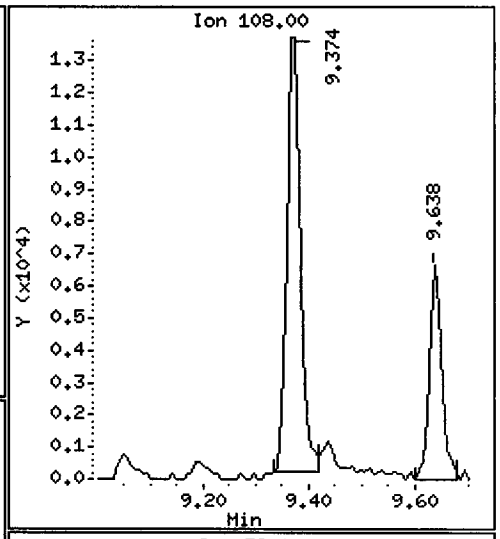
Concentration: 45.70 ug/kg

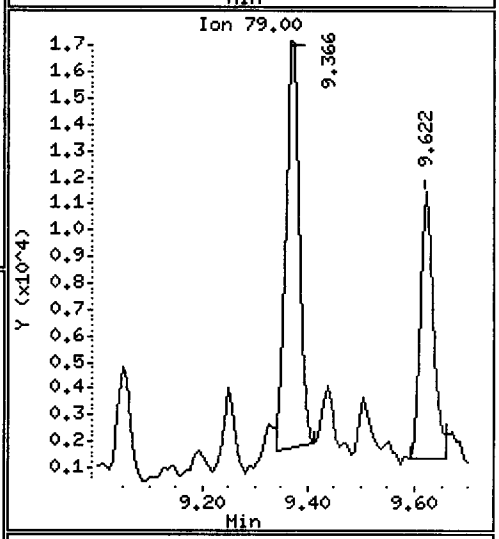


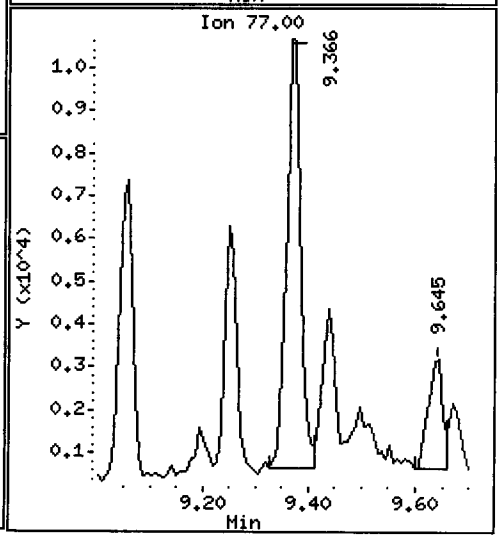












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

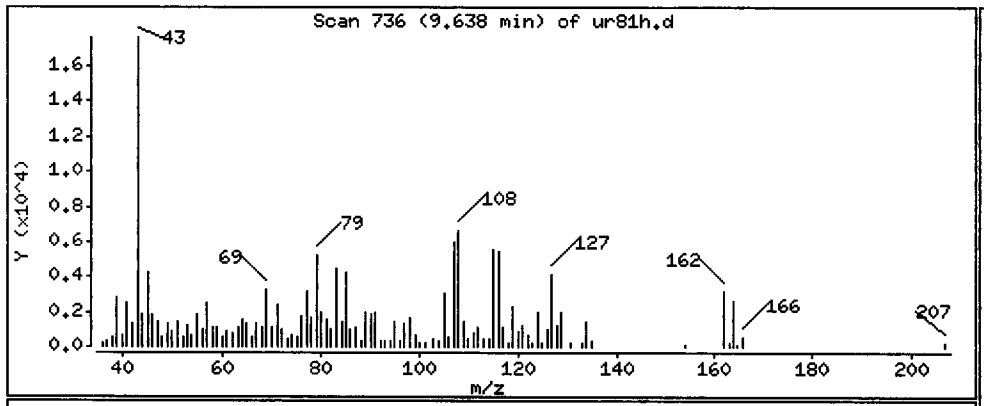
Operator: VTS/YZ

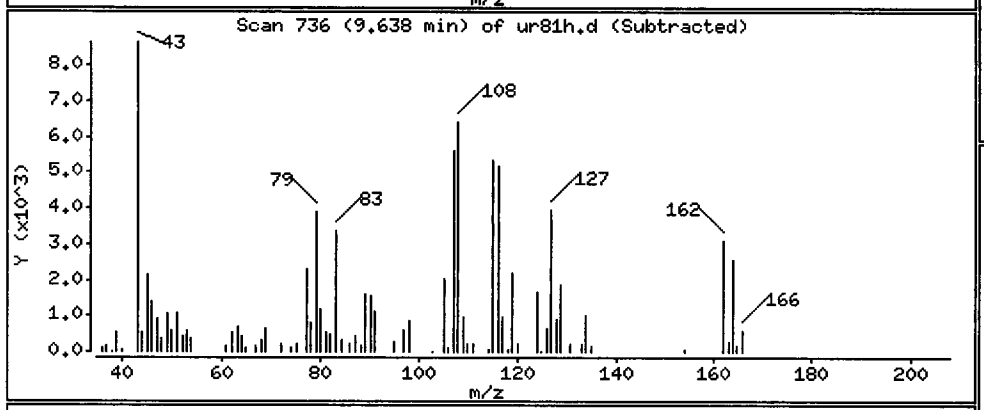
Column phase: ZB-5msi

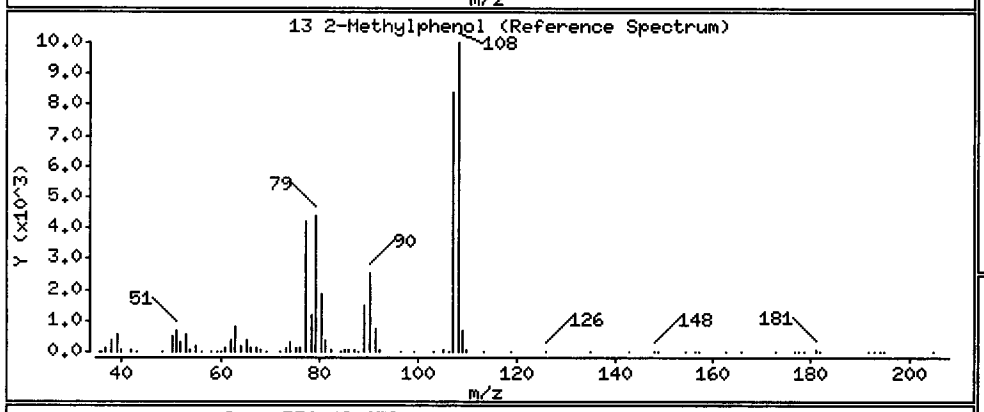
Column diameter: 0.25

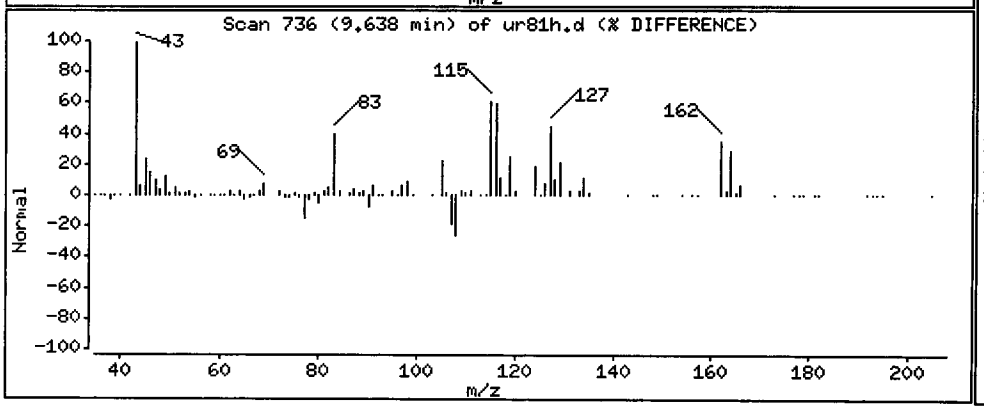
13 2-Methylphenol

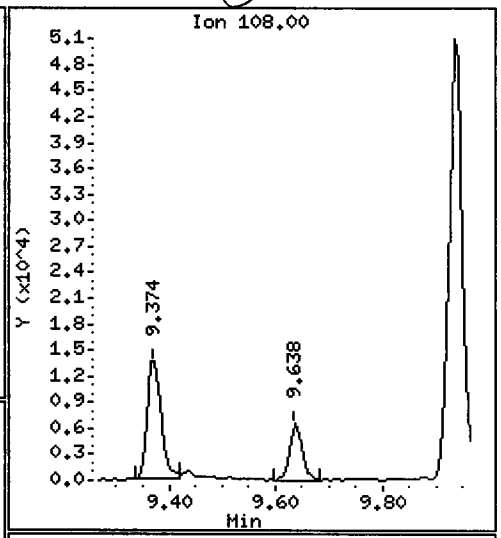
Concentration: 12.61 ug/kg

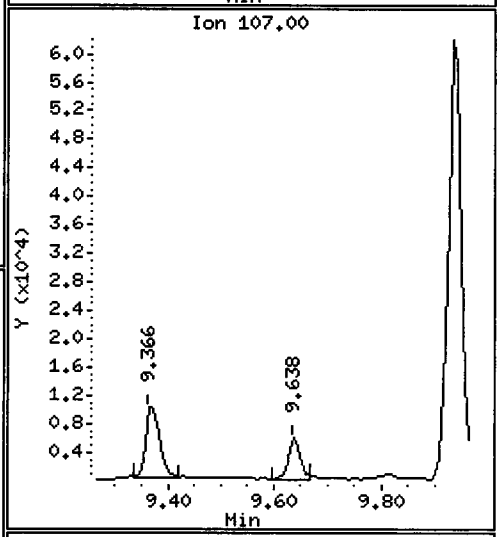


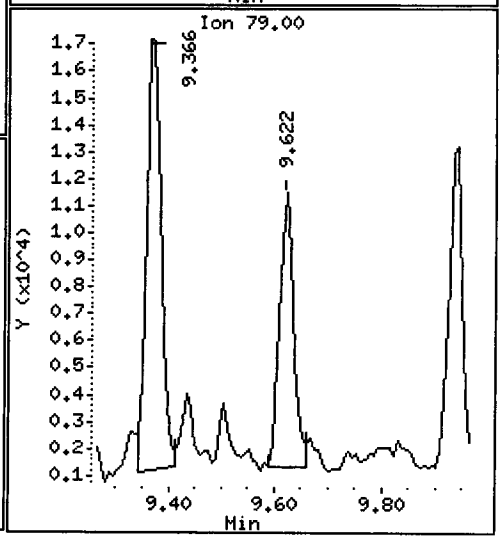












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

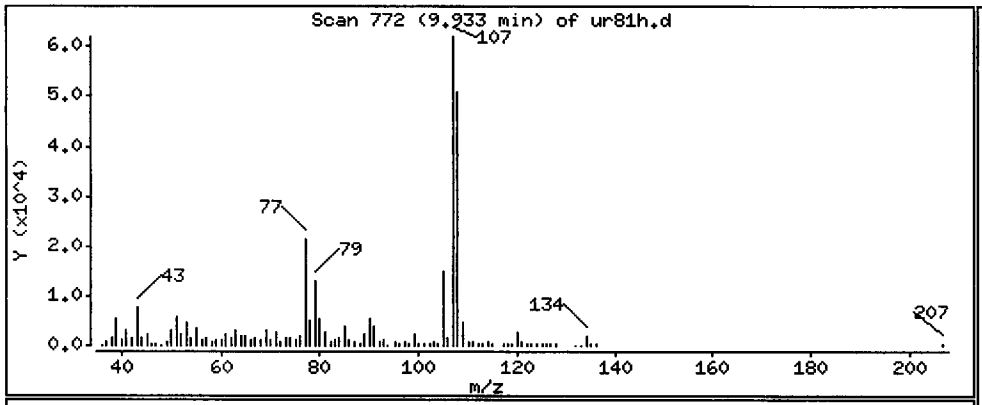
Operator: VTS/YZ

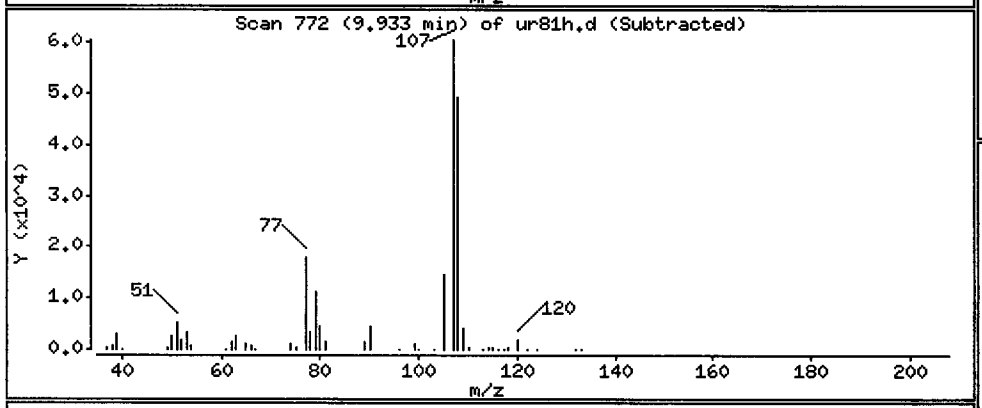
Column phase: ZB-5msi

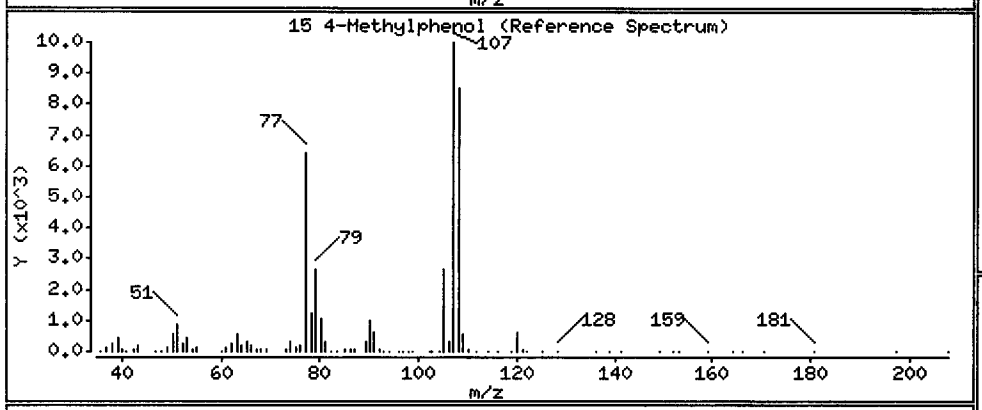
Column diameter: 0.25

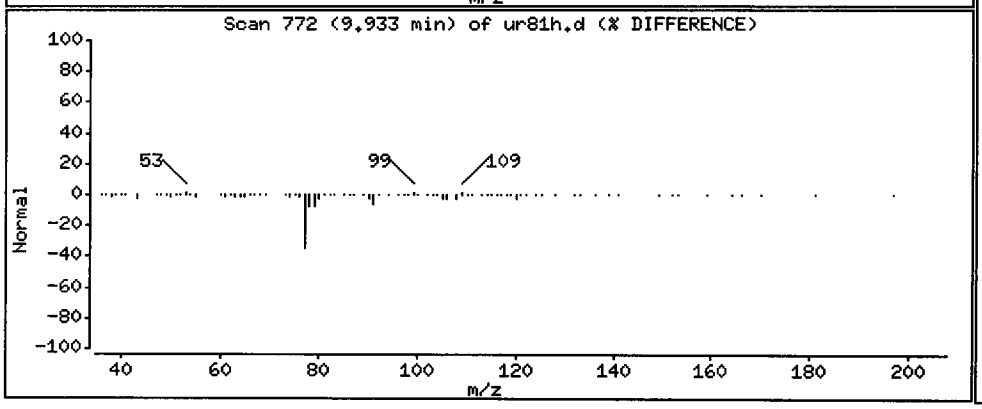
15 4-Methylphenol

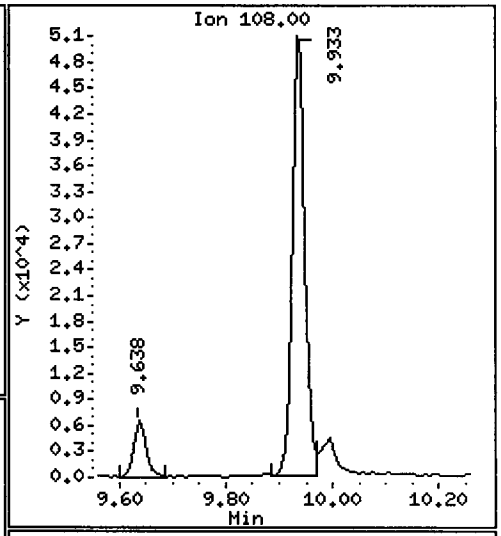
Concentration: 94.57 ug/kg

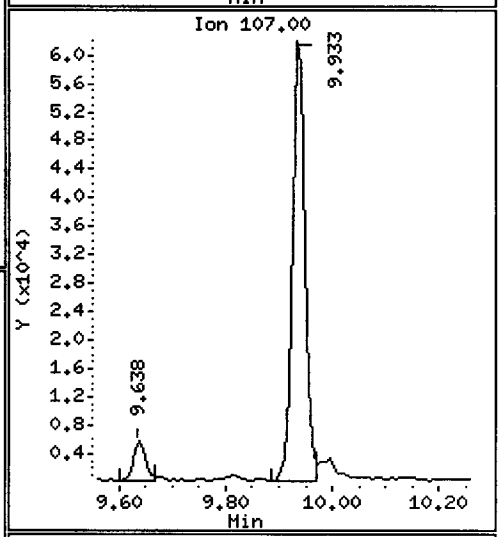


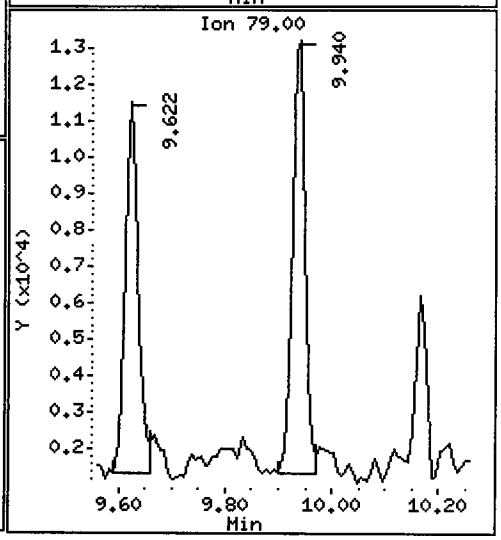












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

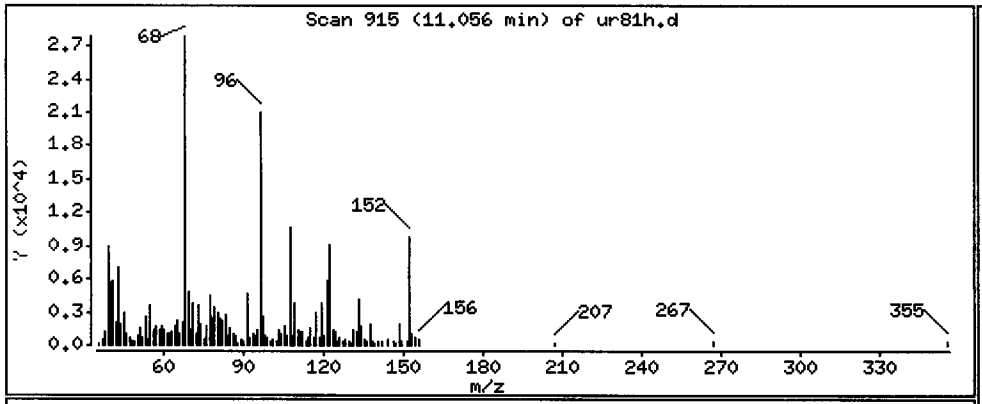
Operator: VTS/YZ

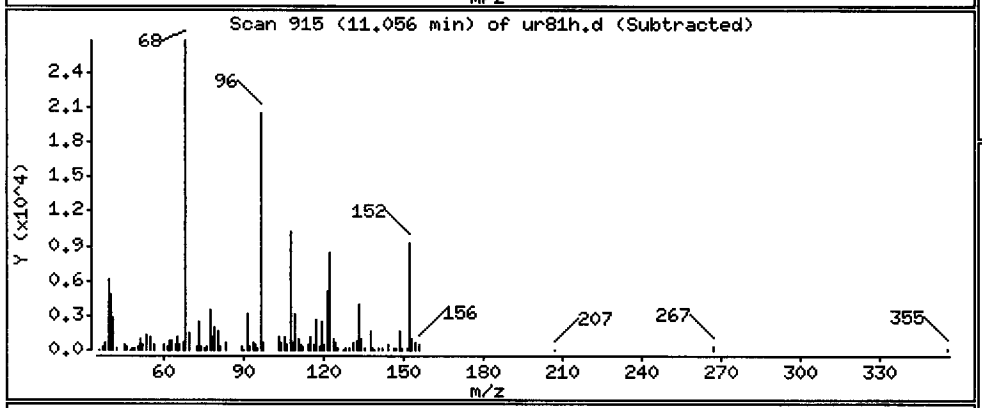
Column phase: ZB-5msi

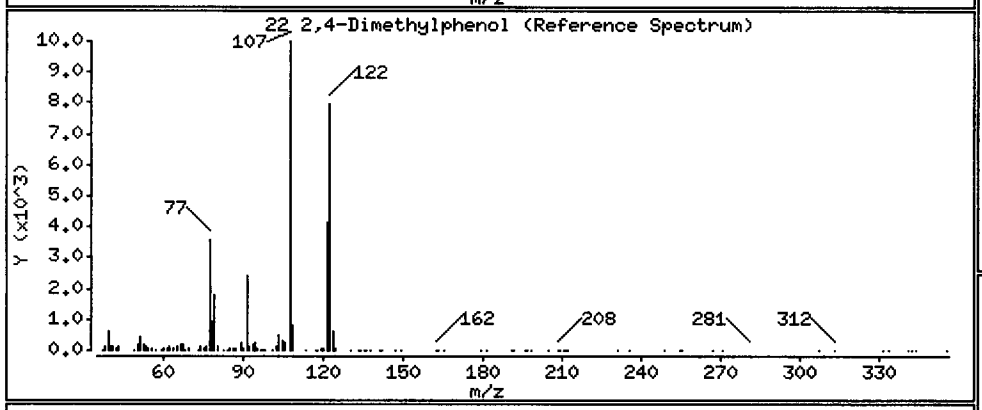
Column diameter: 0.25

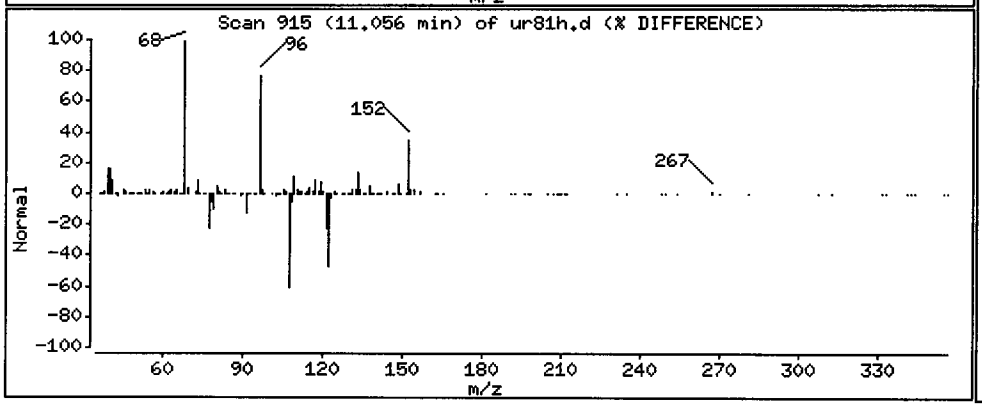
22 2,4-Dimethylphenol

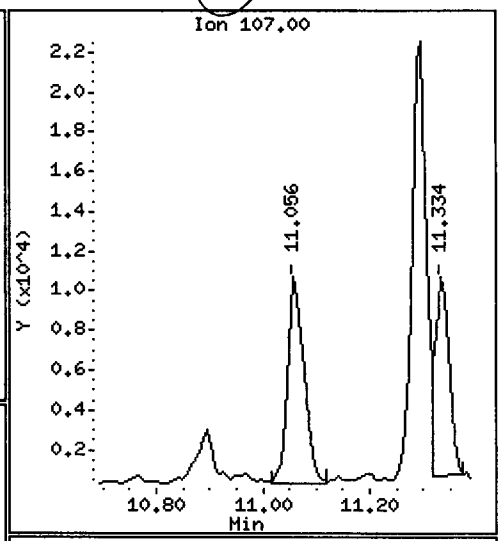
Concentration: 26.89 ug/kg

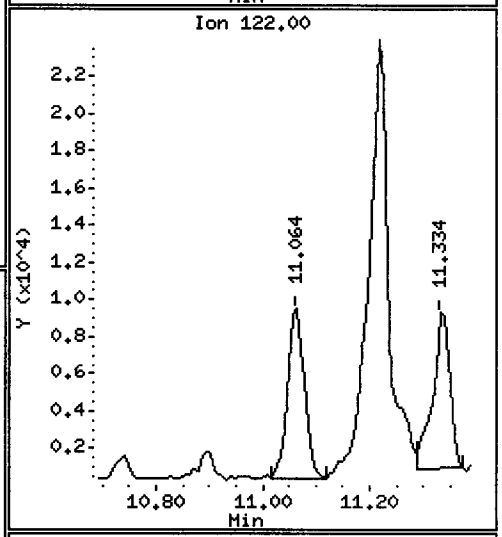


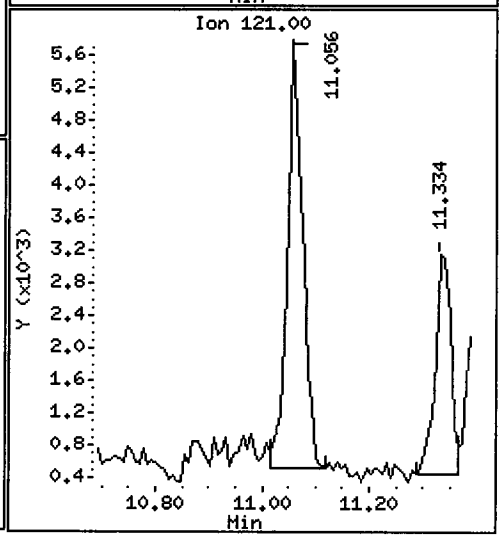












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

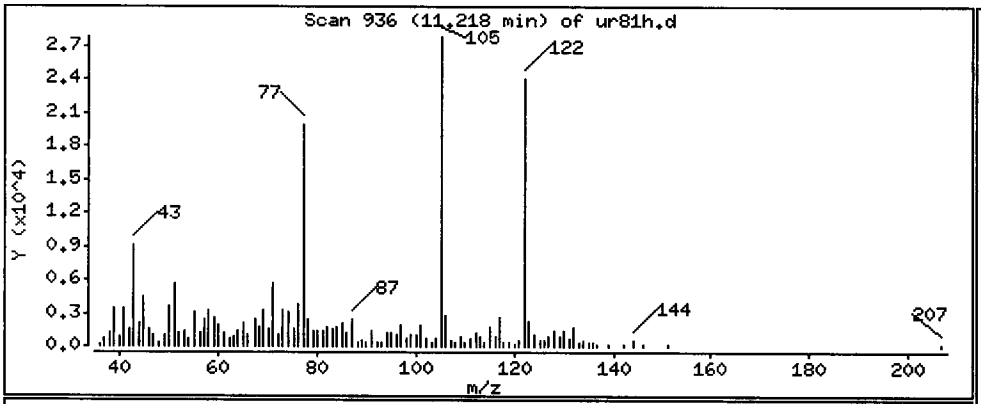
Operator: VTS/YZ

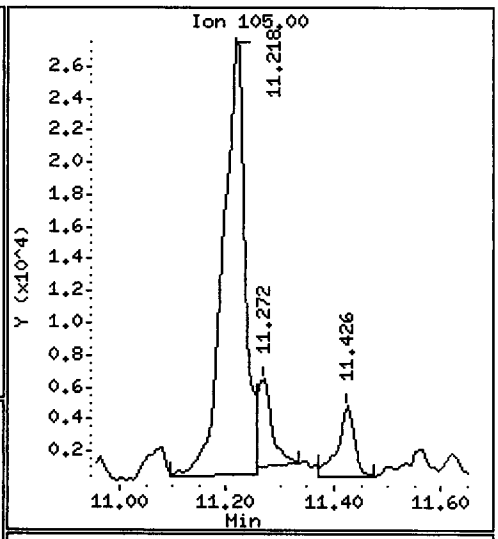
Column phase: ZB-5msi

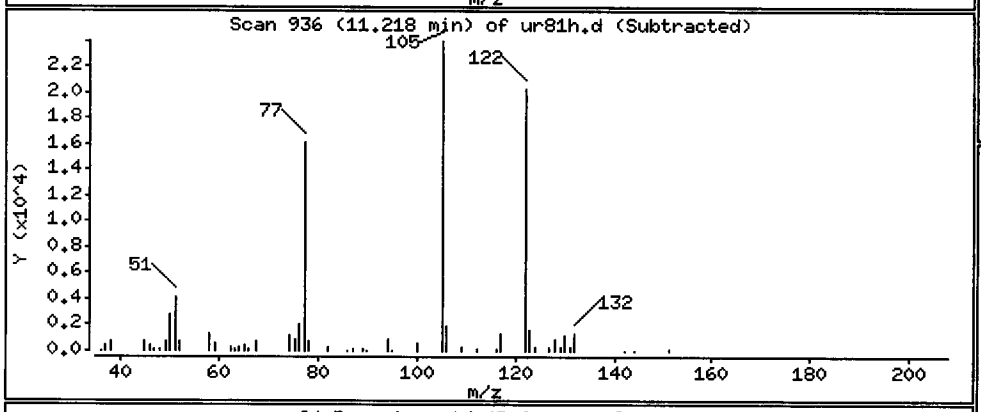
Column diameter: 0.25

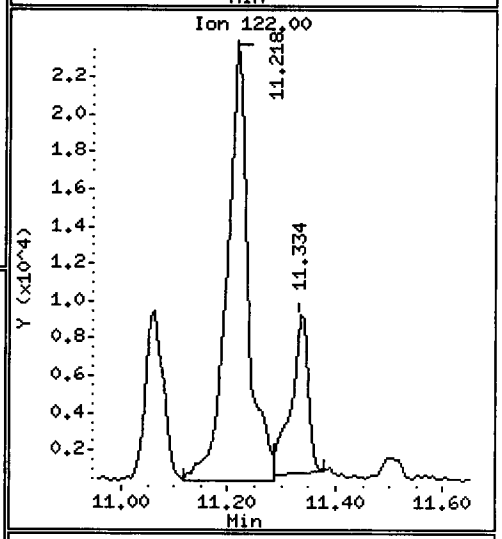
24 Benzoic acid

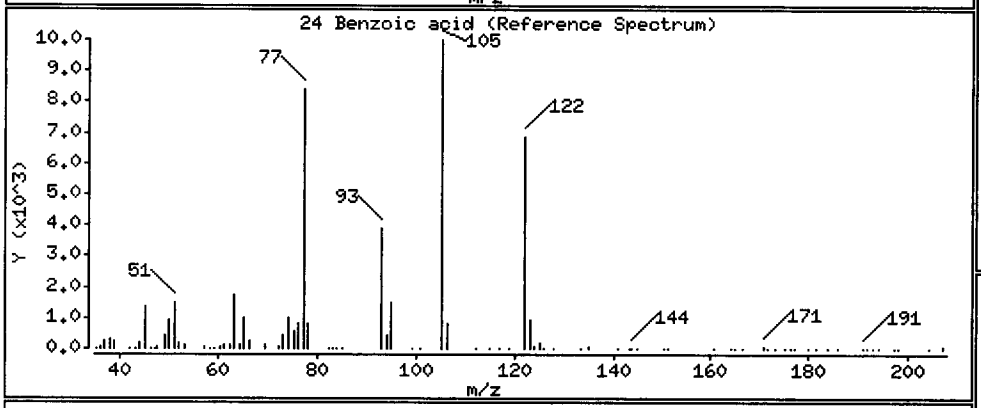
Concentration: 117.0 ug/kg

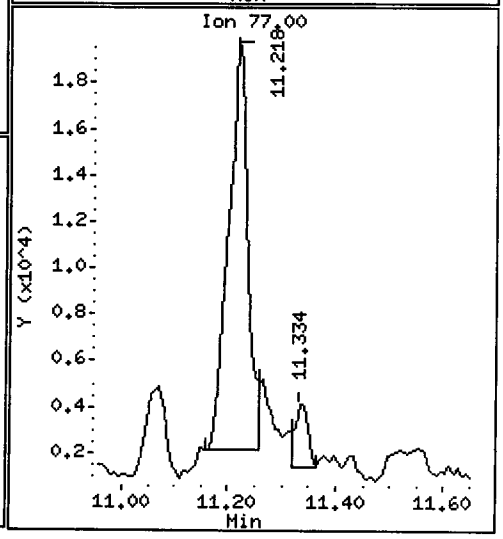


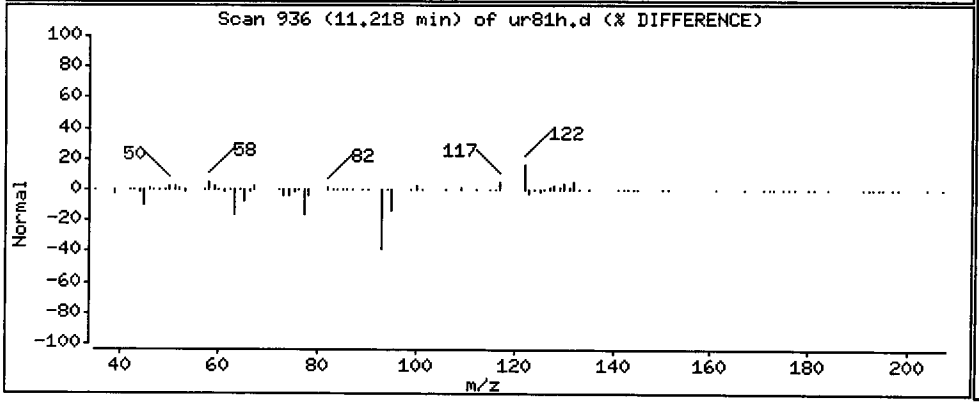












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

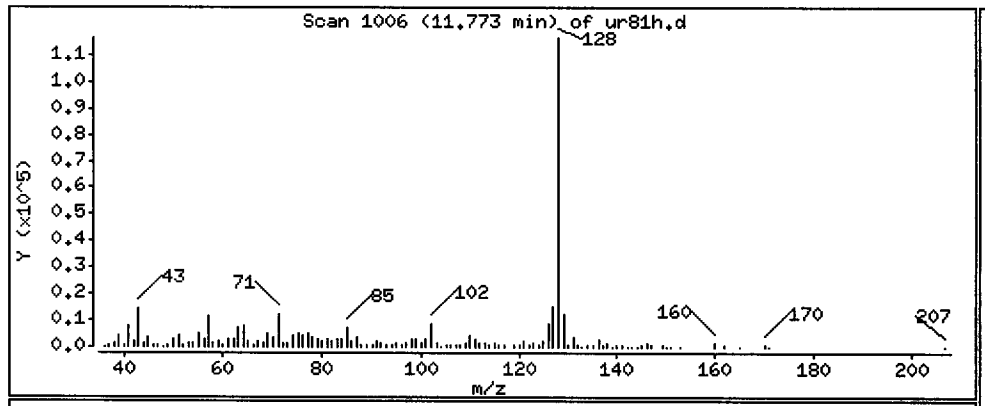
Operator: VTS/YZ

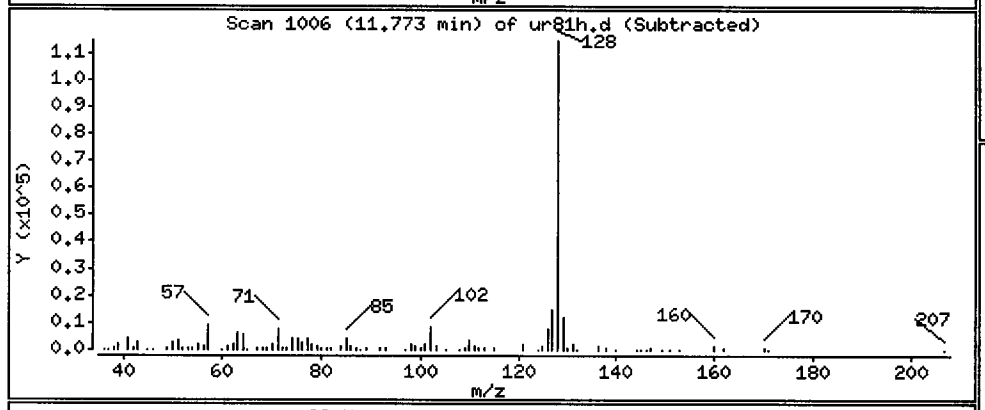
Column phase: ZB-5msi

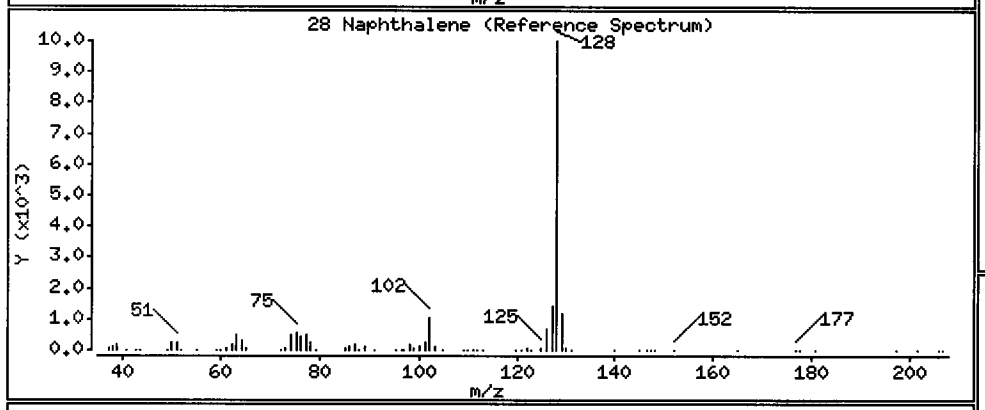
Column diameter: 0.25

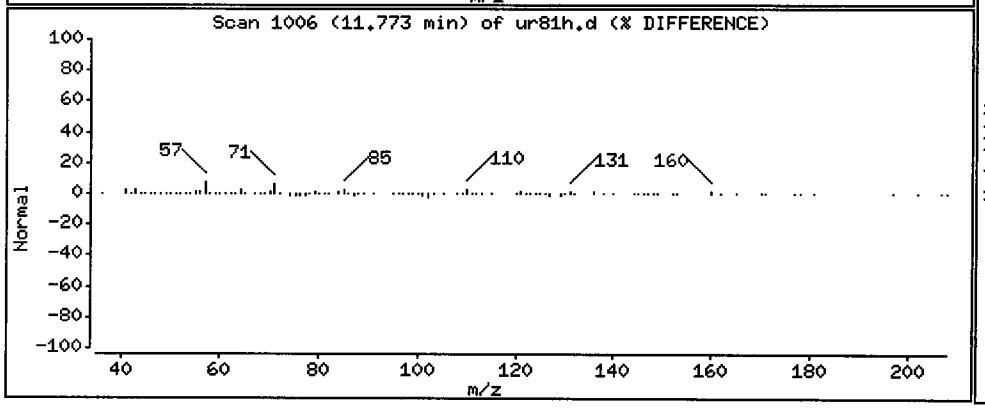
28 Naphthalene

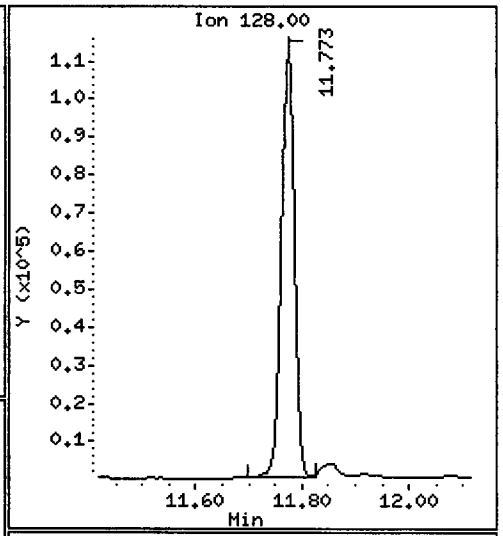
Concentration: 75.60 ug/kg

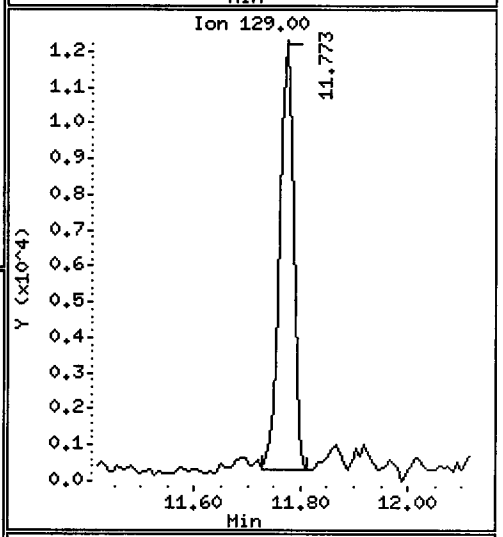


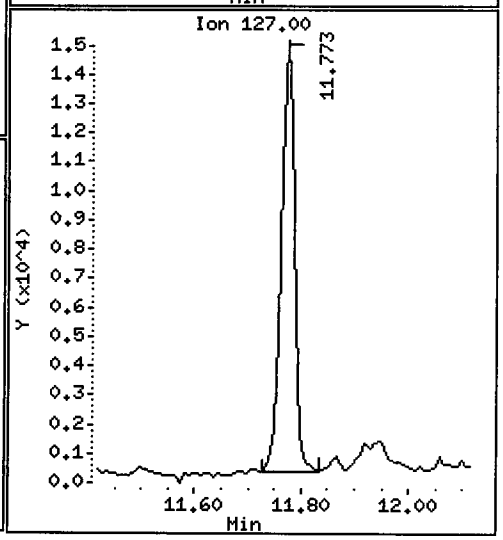












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

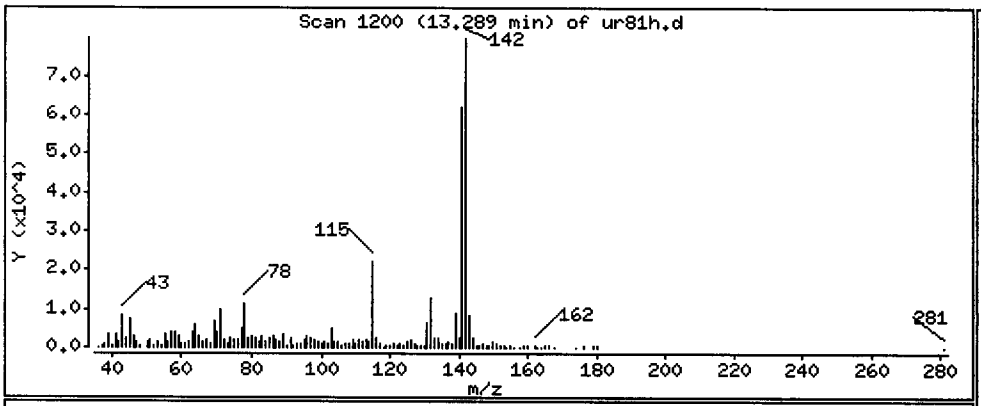
Operator: VTS/YZ

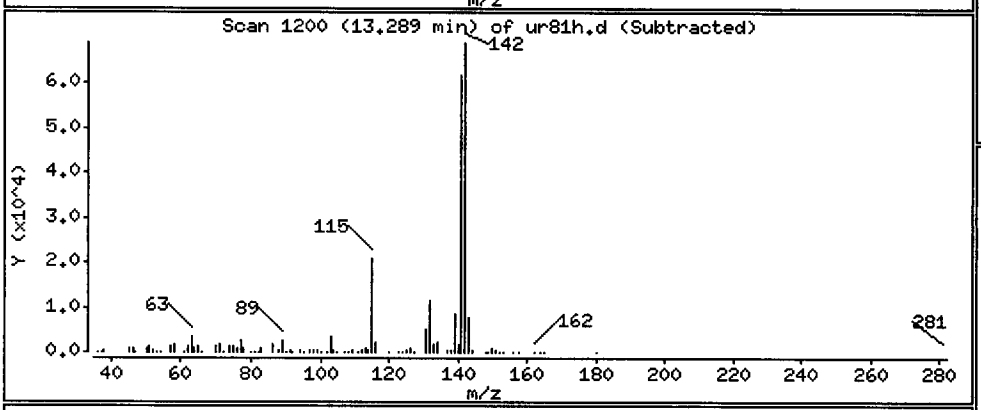
Column phase: ZB-5msi

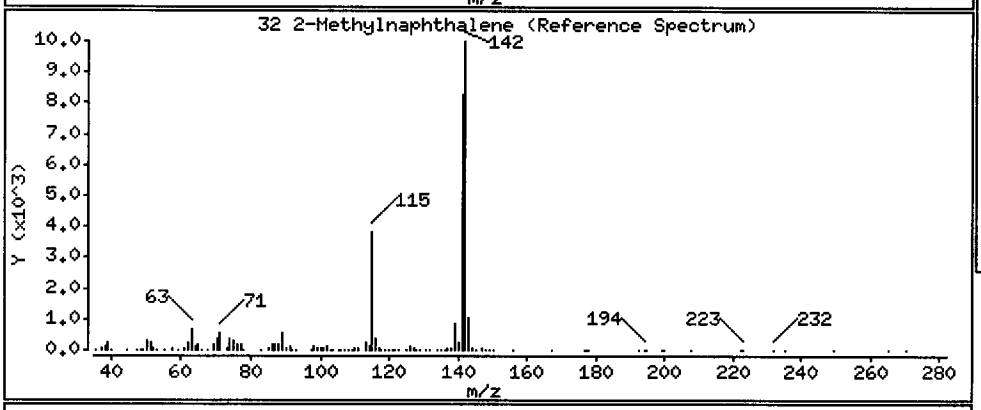
Column diameter: 0.25

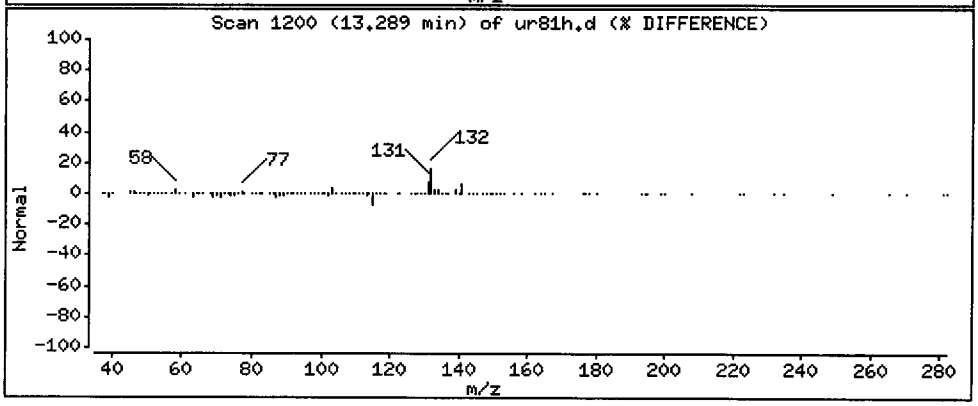
32 2-Methylnaphthalene

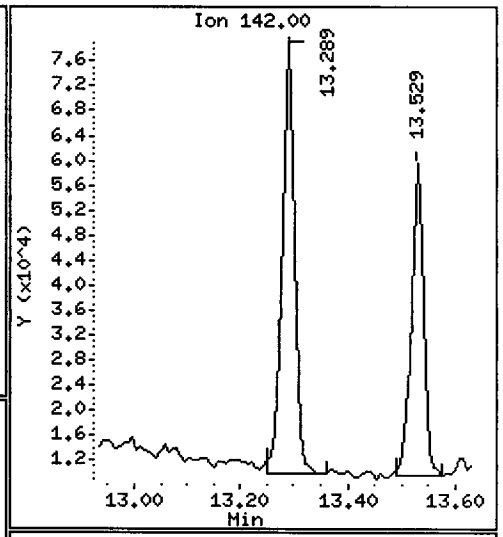
Concentration: 67.63 ug/kg

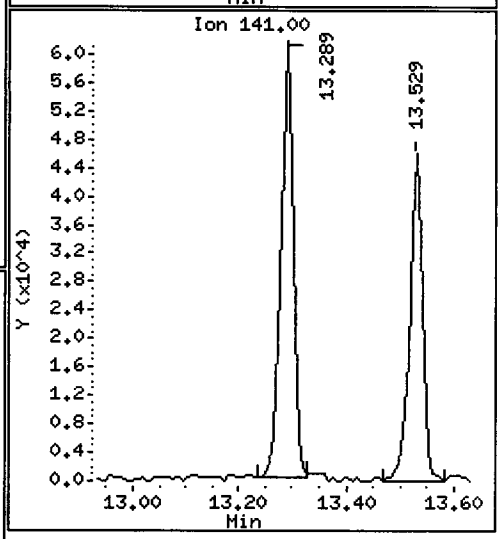












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

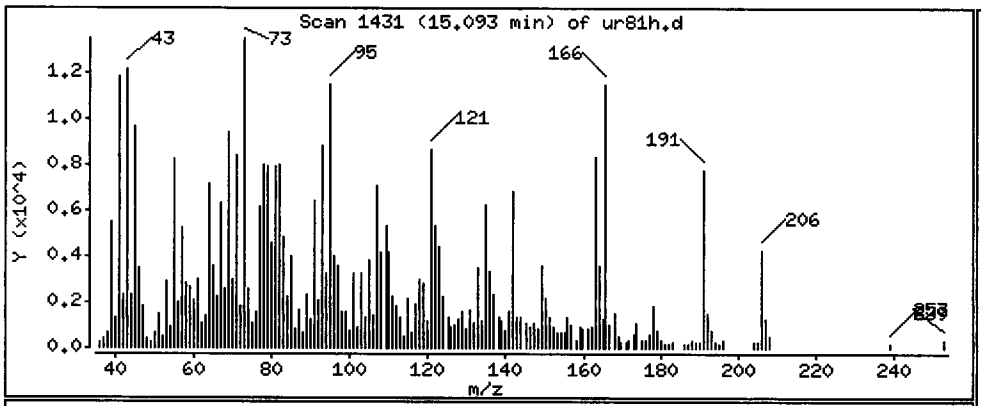
Operator: VTS/YZ

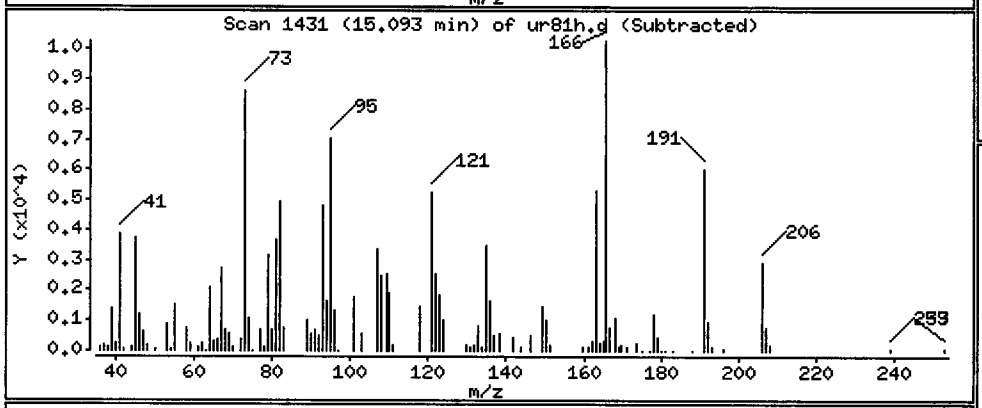
Column phase: ZB-5msi

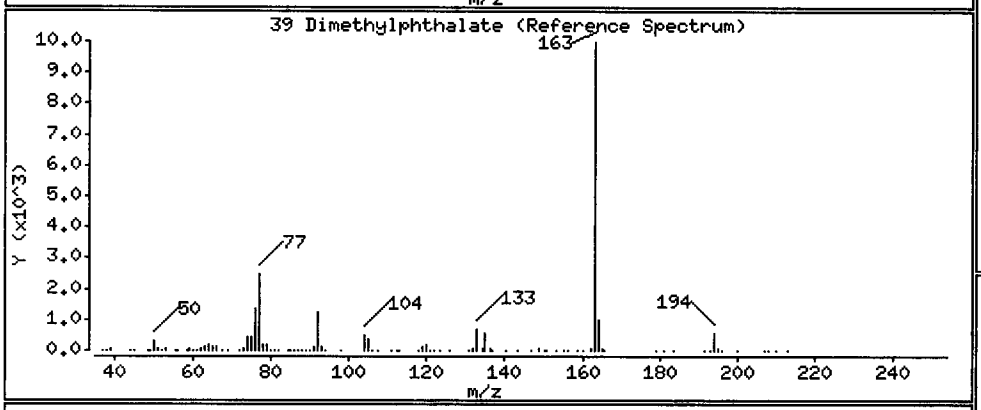
Column diameter: 0.25

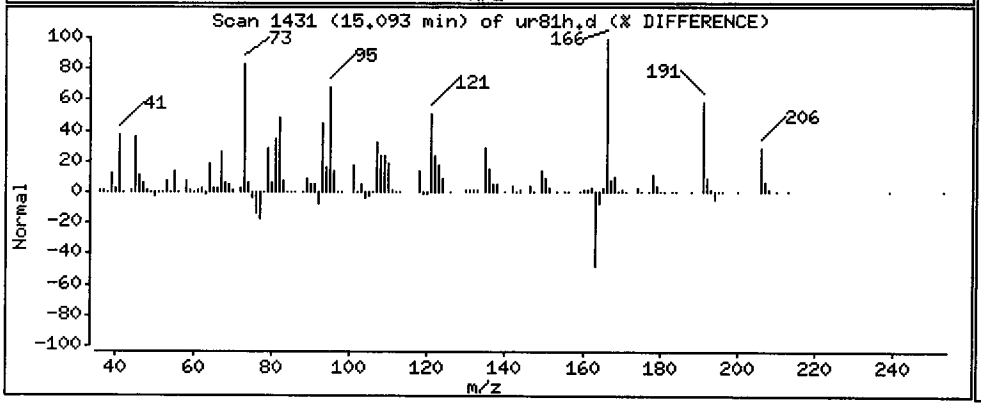
39 Dimethylphthalate

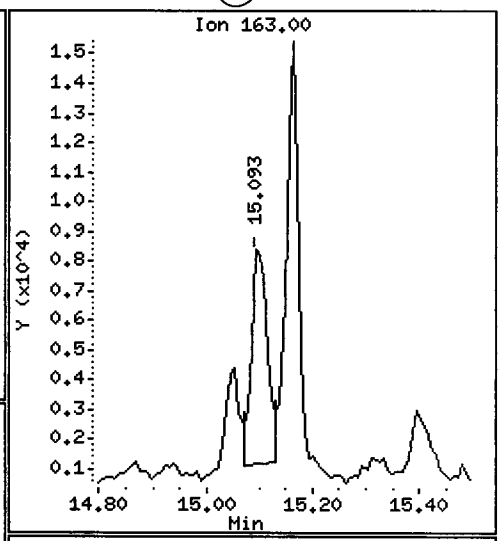
Concentration: 10.24 ug/kg

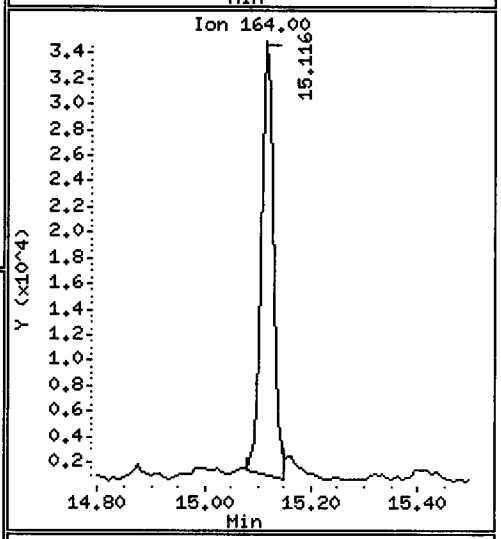


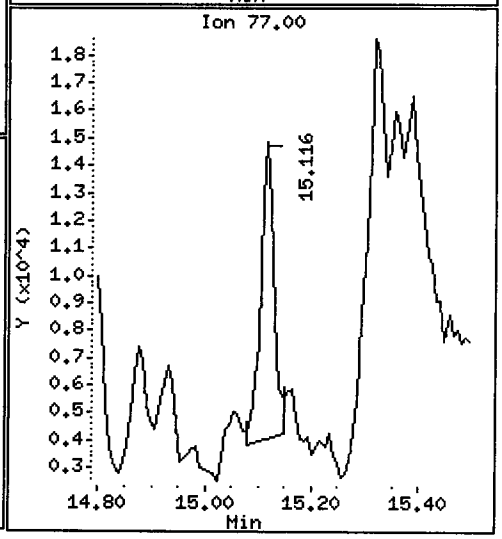












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

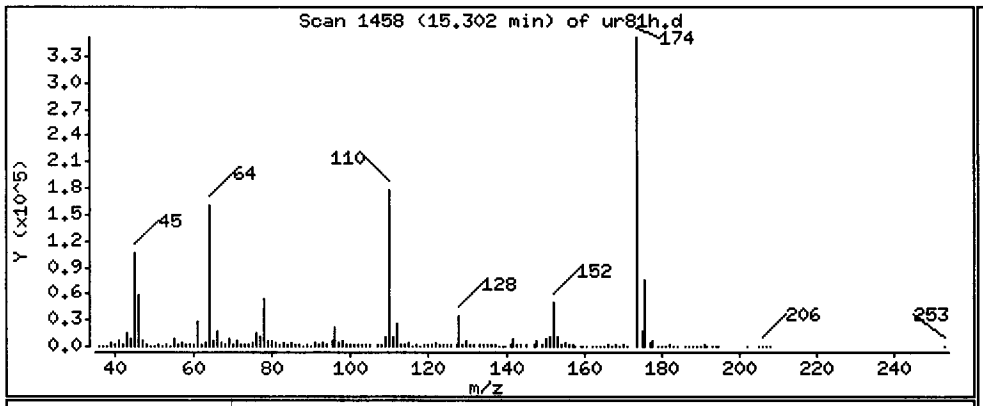
Operator: VTS/YZ

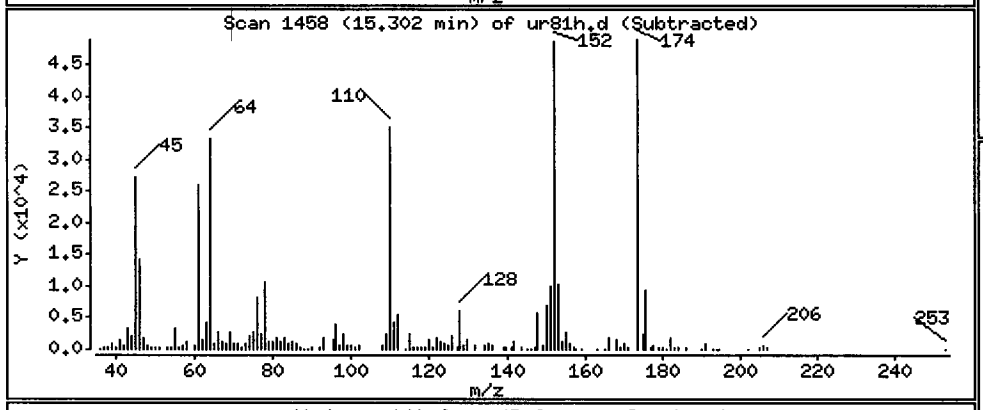
Column phase: ZB-5msi

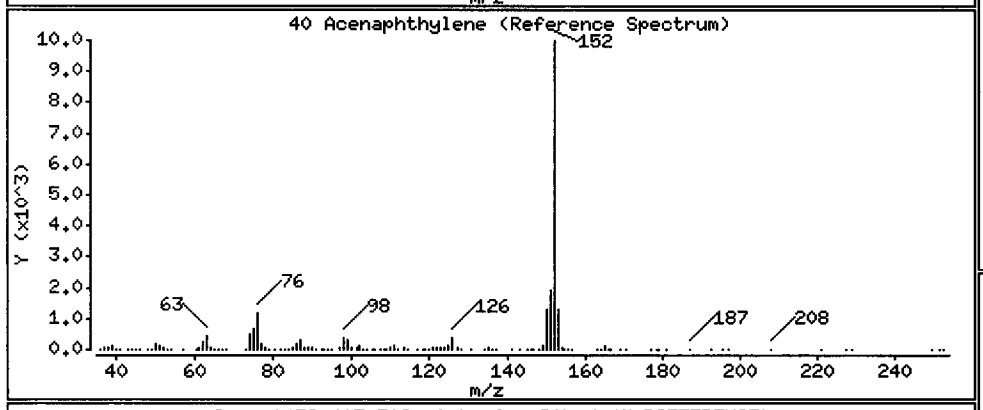
Column diameter: 0.25

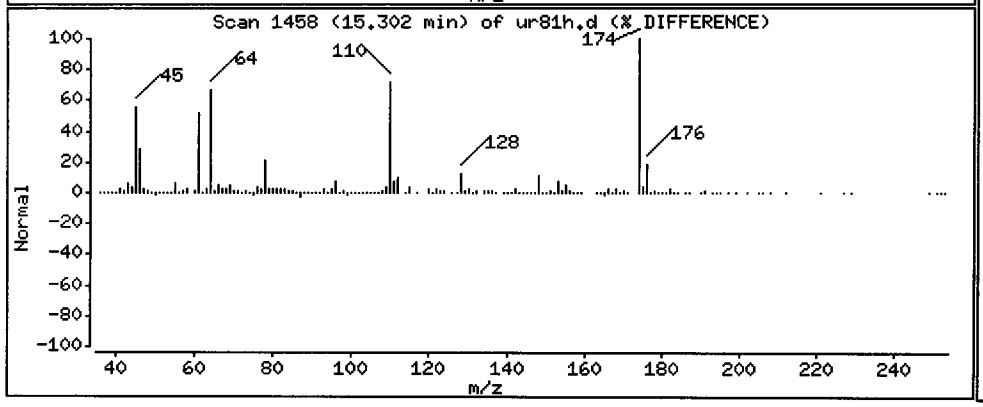
40 Acenaphthylene

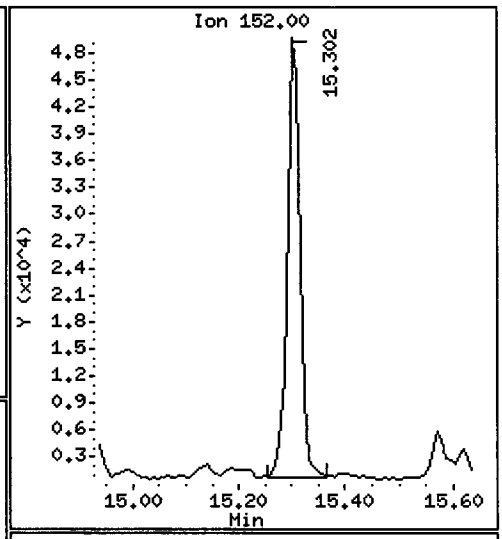
Concentration: 35.39 ug/kg

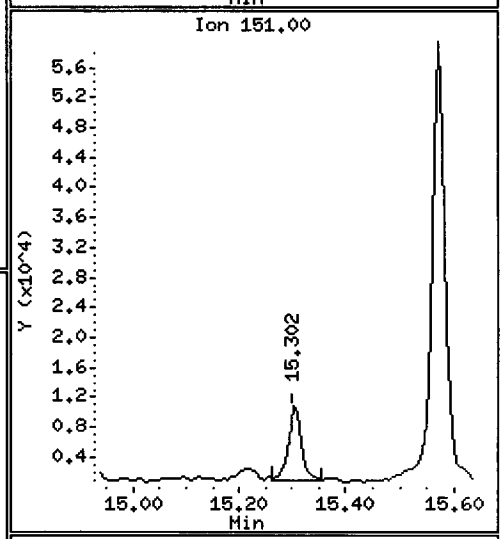


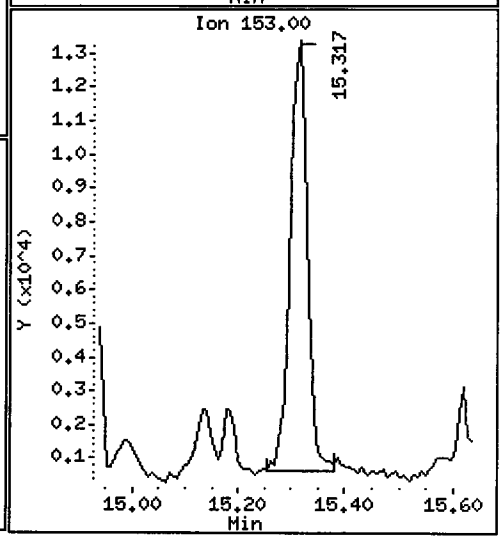












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

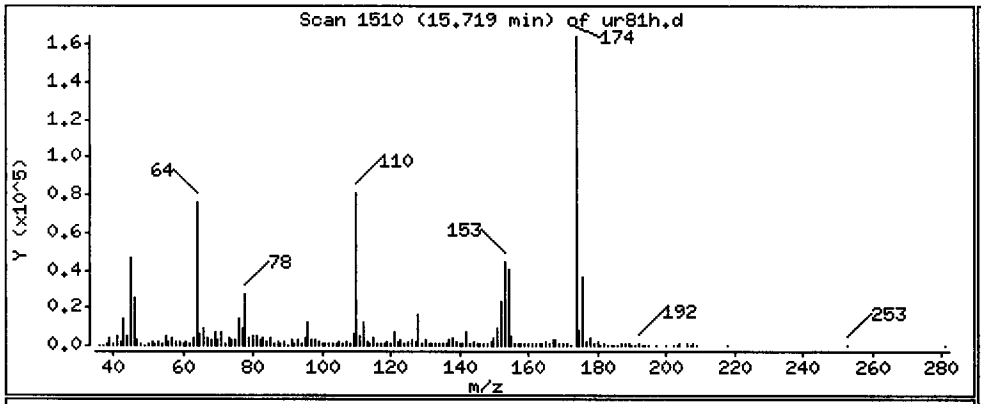
Operator: VTS/YZ

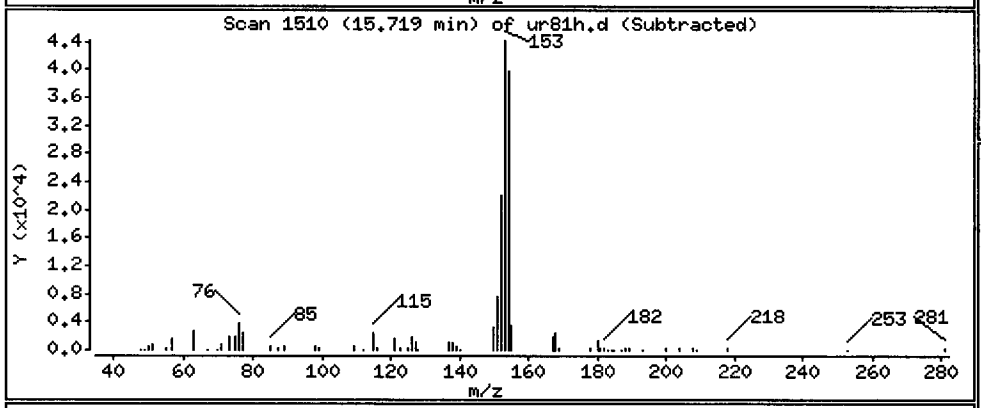
Column phase: ZB-5msi

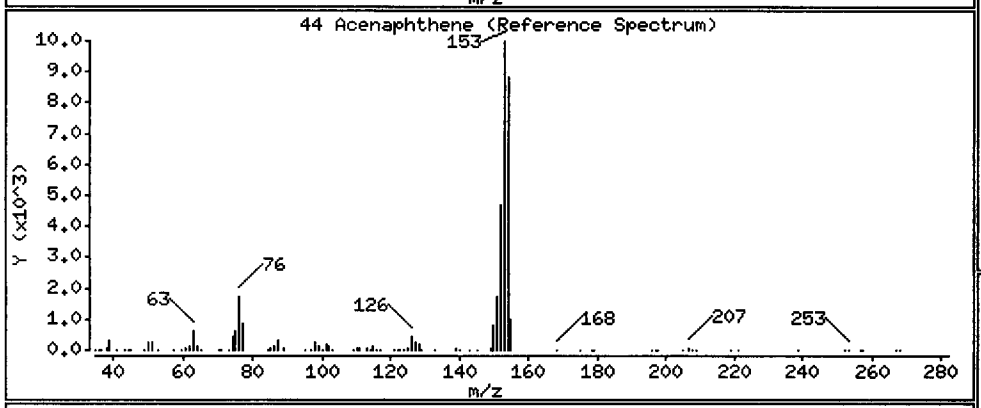
Column diameter: 0.25

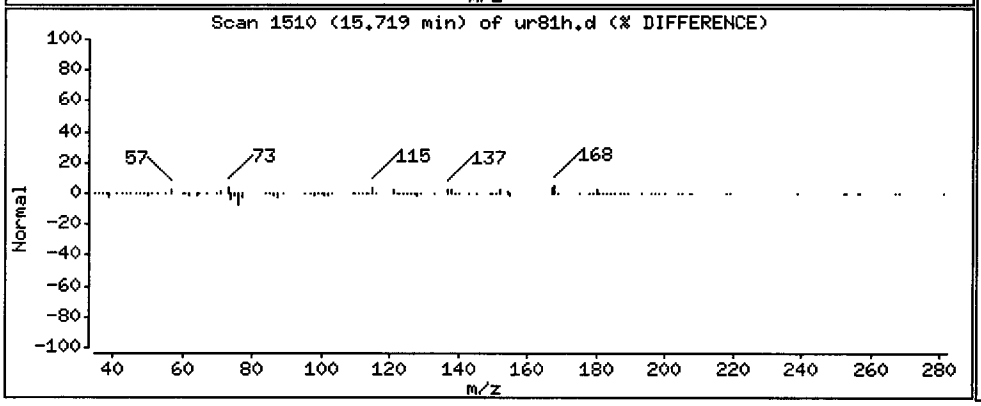
44 Acenaphthene

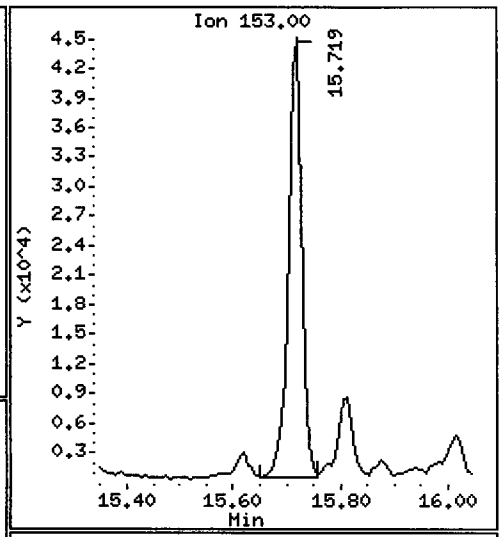
Concentration: 56.87 ug/kg

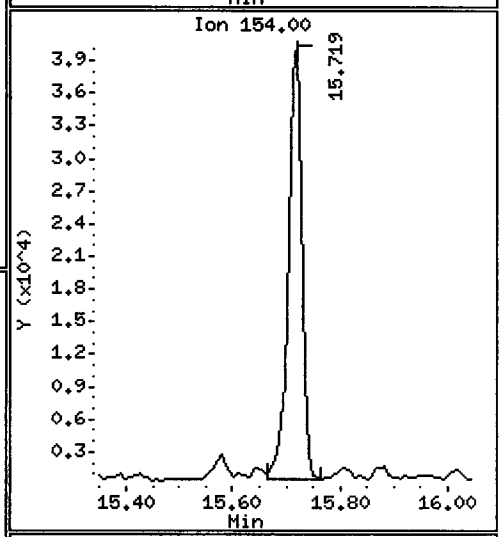


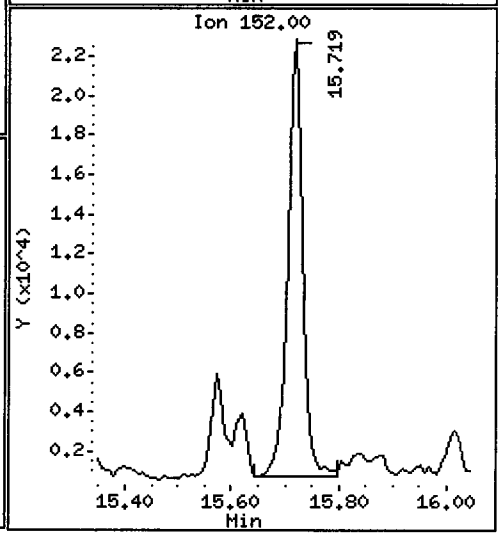












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

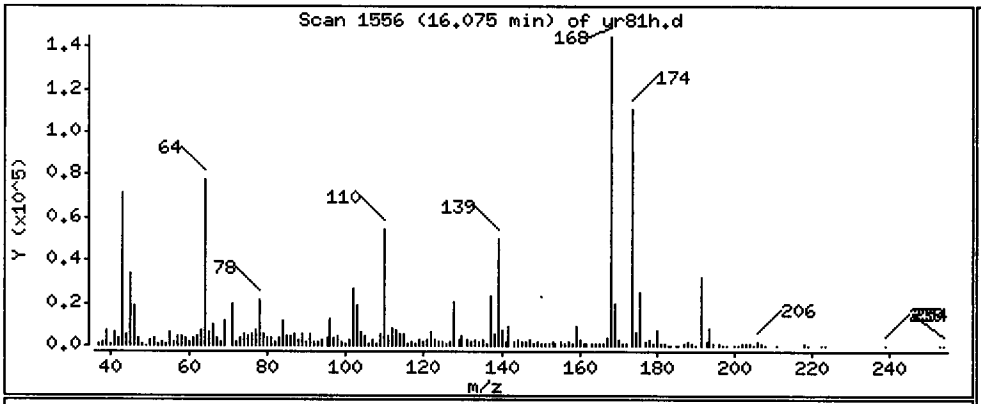
Operator: VTS/YZ

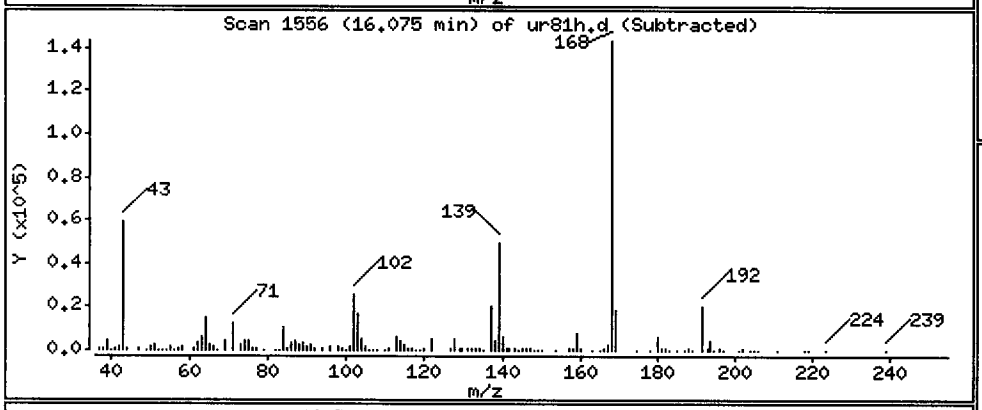
Column phase: ZB-5msi

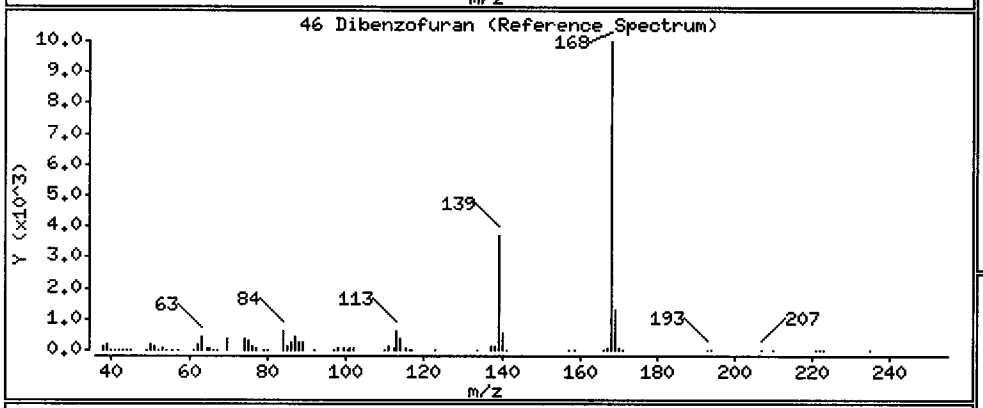
Column diameter: 0.25

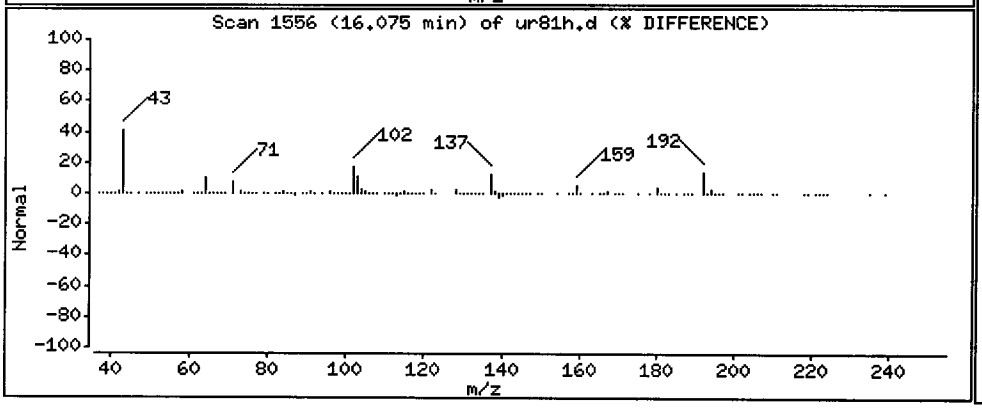
46 Dibenzofuran

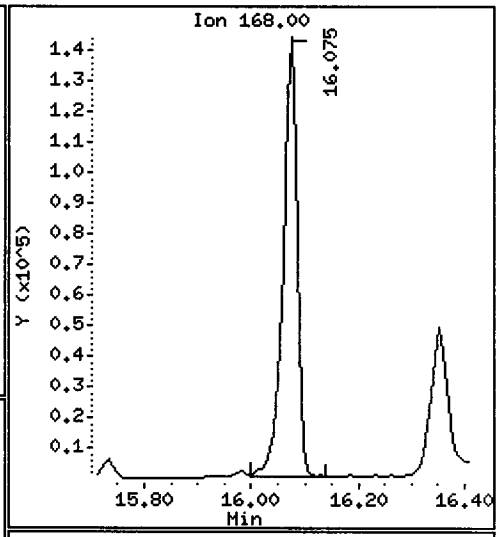
Concentration: 127.8 ug/kg

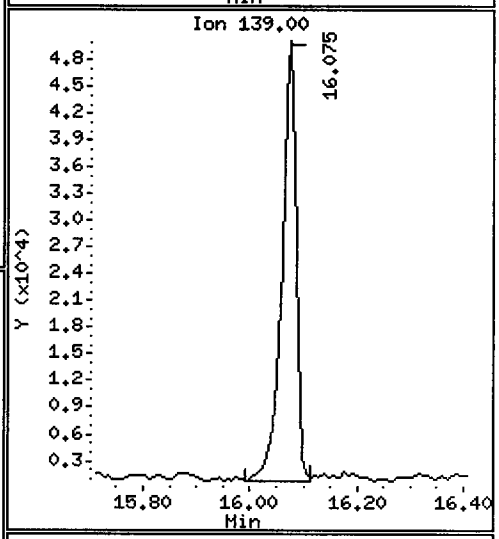


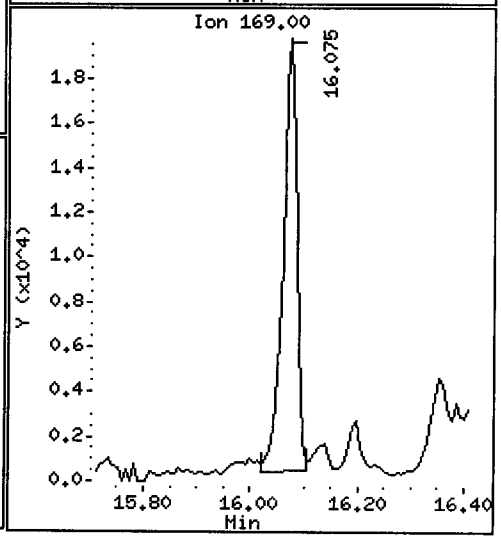












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

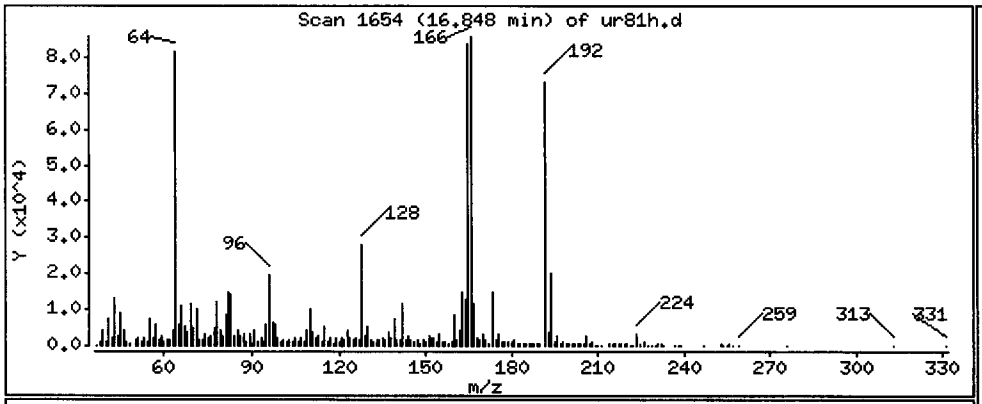
Operator: VTS/YZ

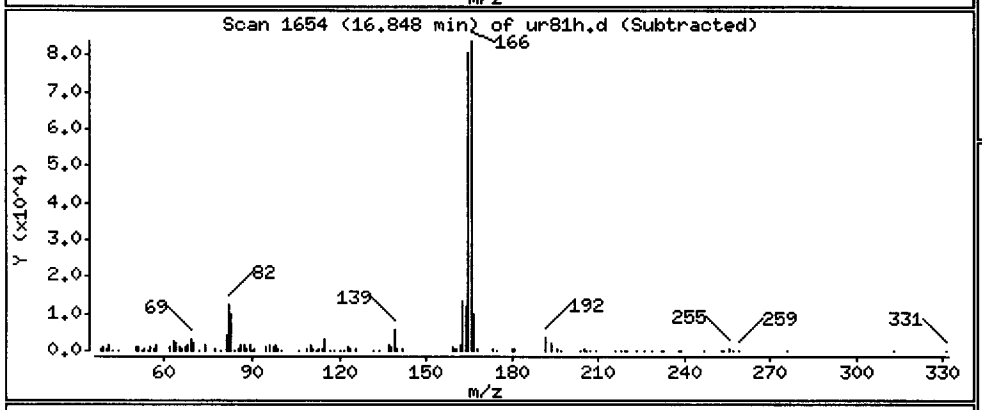
Column phase: ZB-5msi

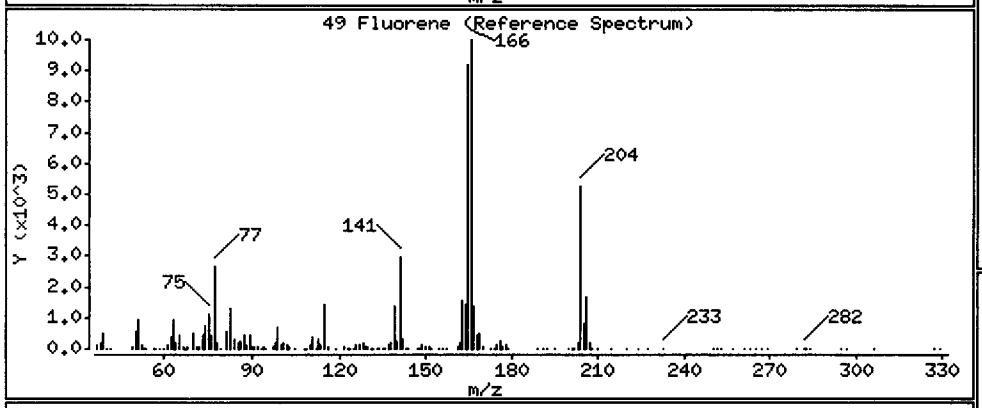
Column diameter: 0.25

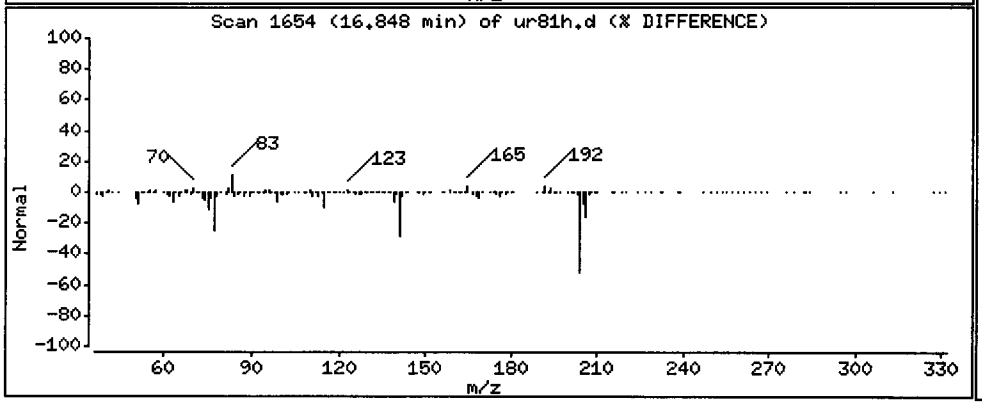
49 Fluorene

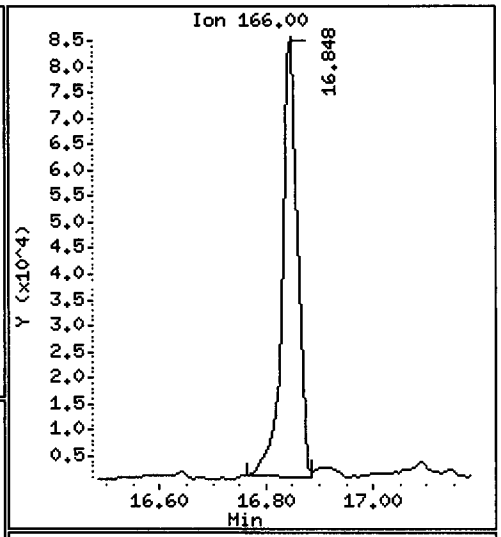
Concentration: 105.8 ug/kg

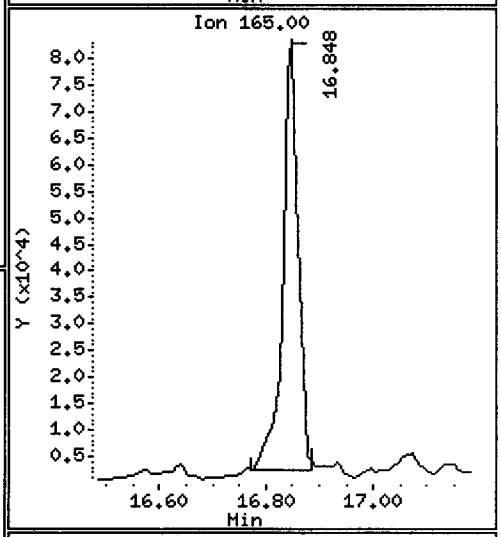


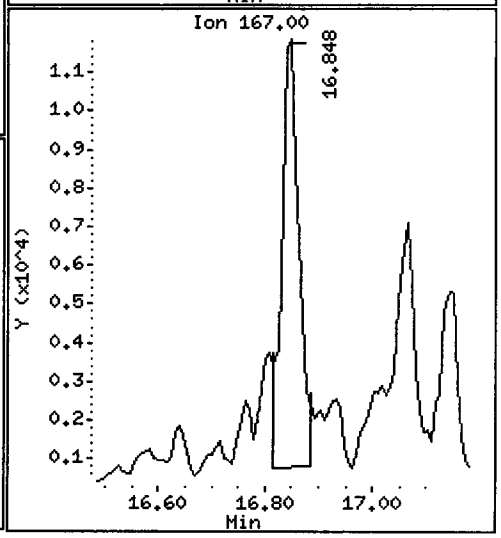












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

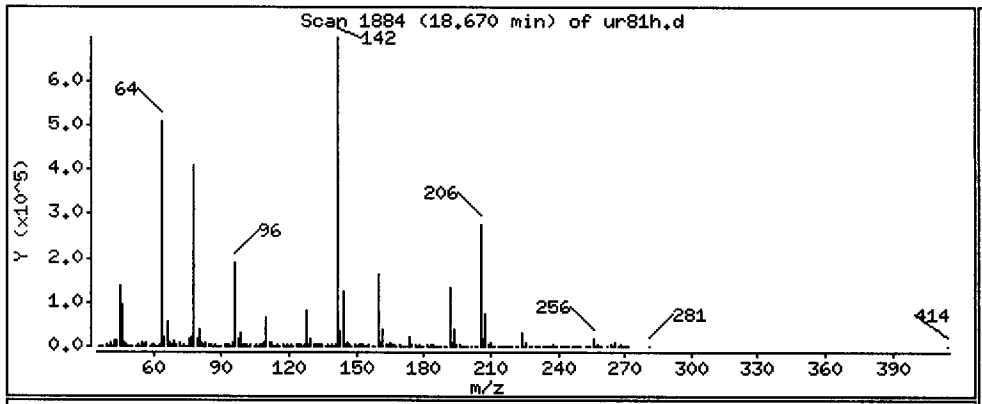
Operator: VTS/YZ

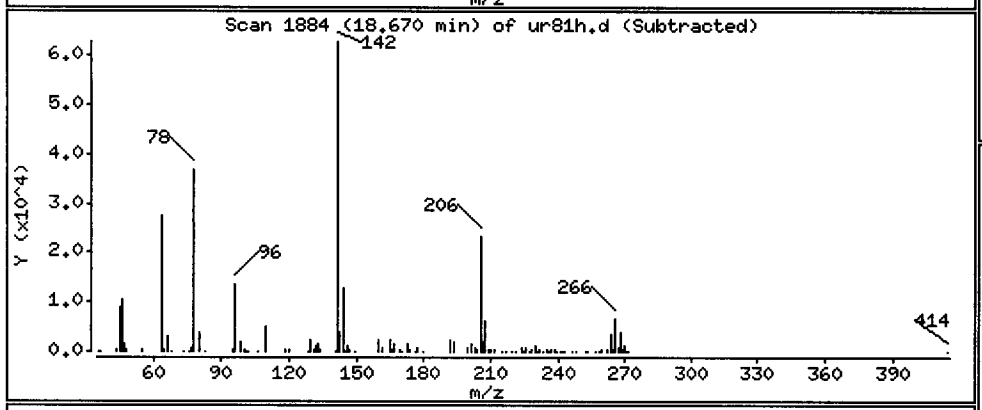
Column phase: ZB-5msi

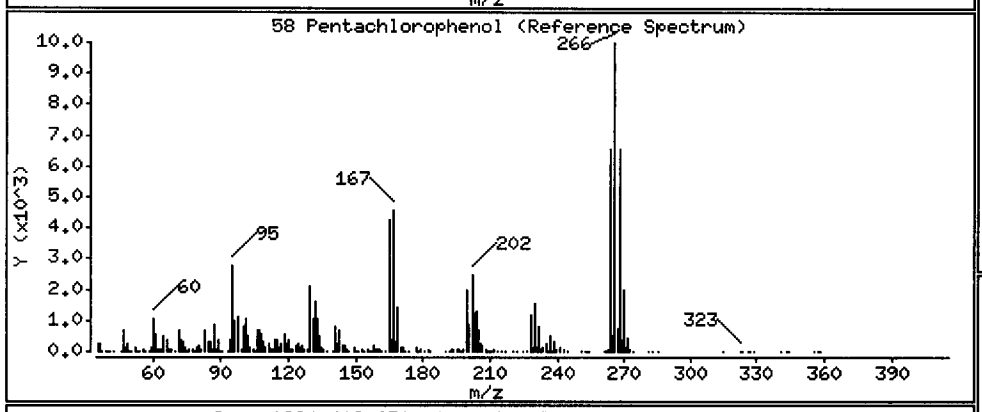
Column diameter: 0.25

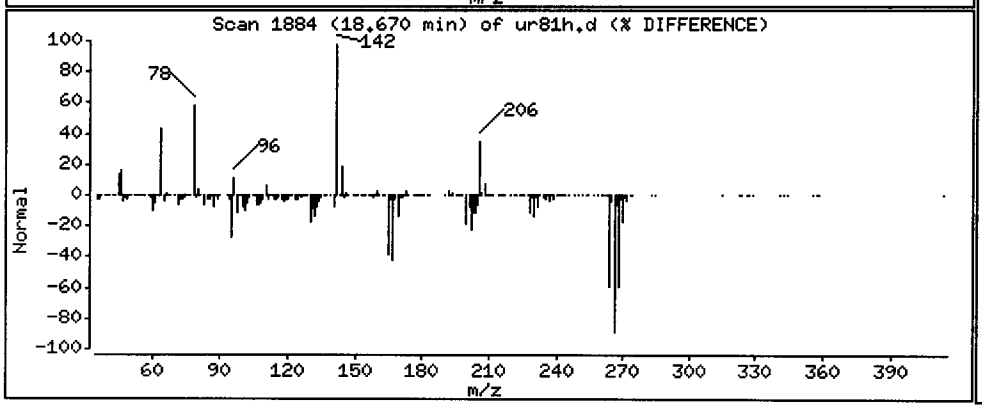
58 Pentachlorophenol

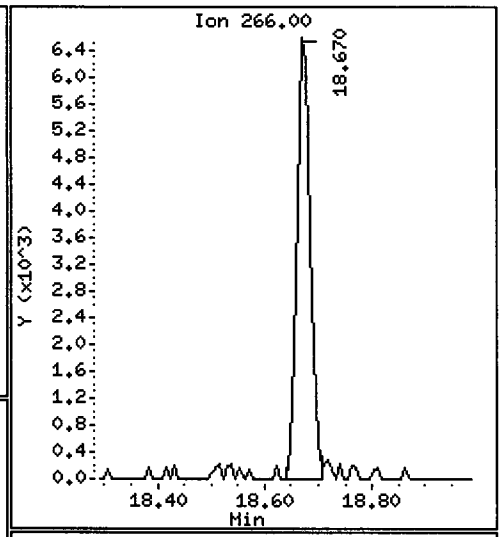
Concentration: 34.31 ug/kg

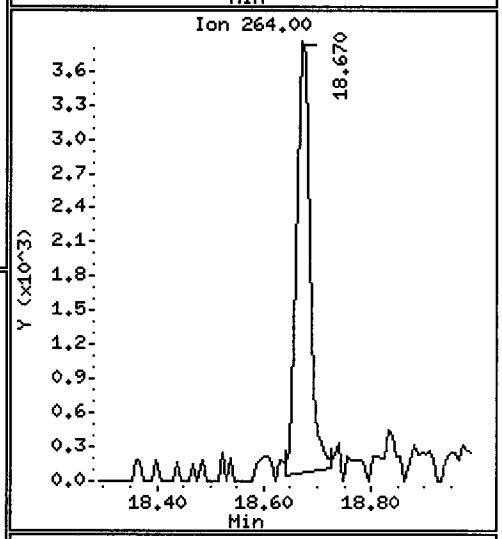


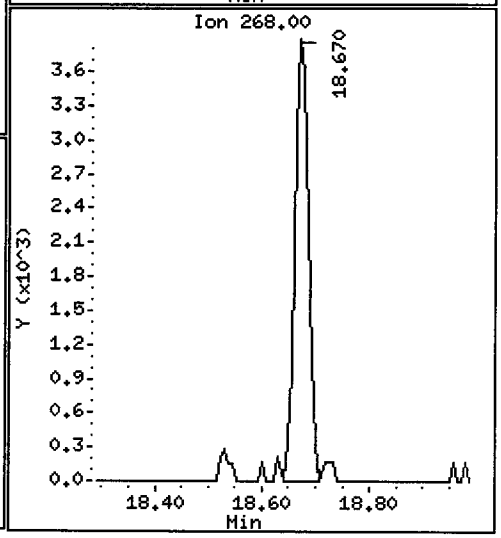












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

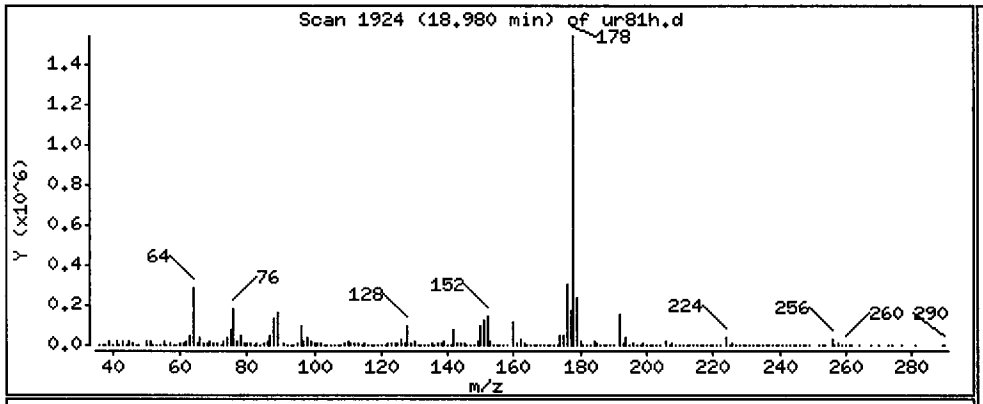
Operator: VTS/YZ

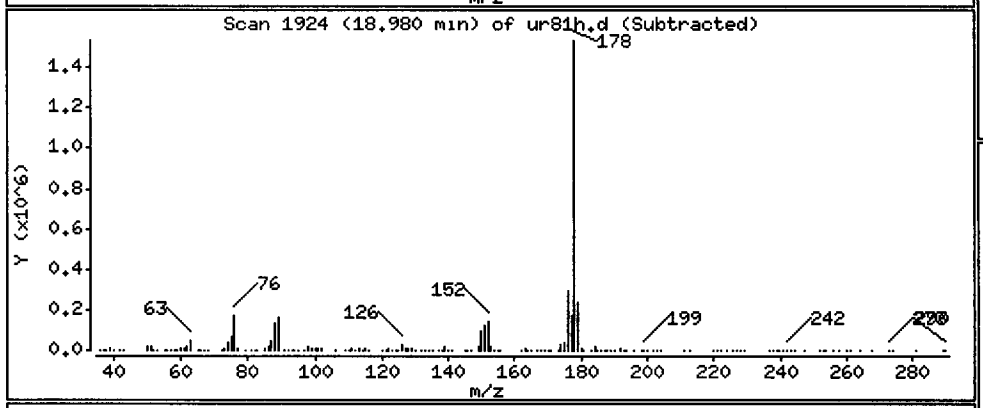
Column phase: ZB-5msi

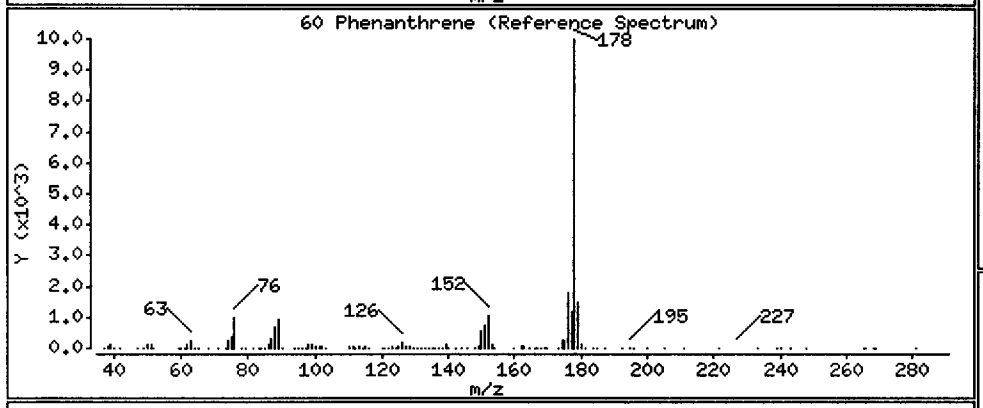
Column diameter: 0.25

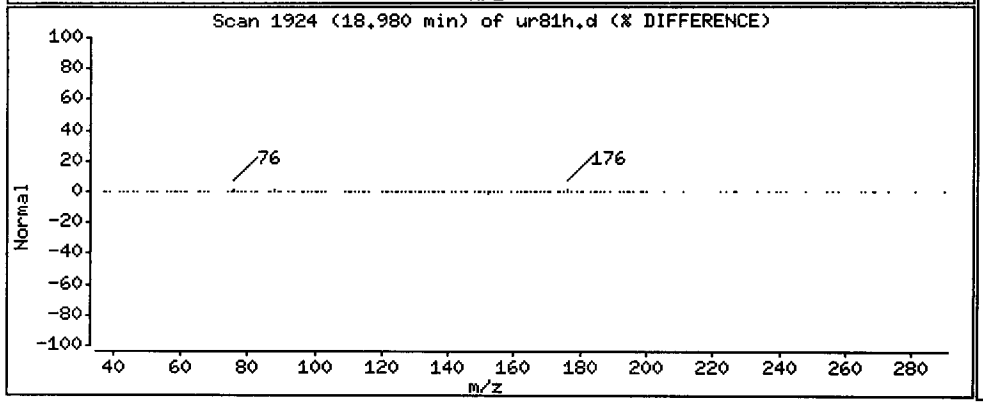
60 Phenanthrene

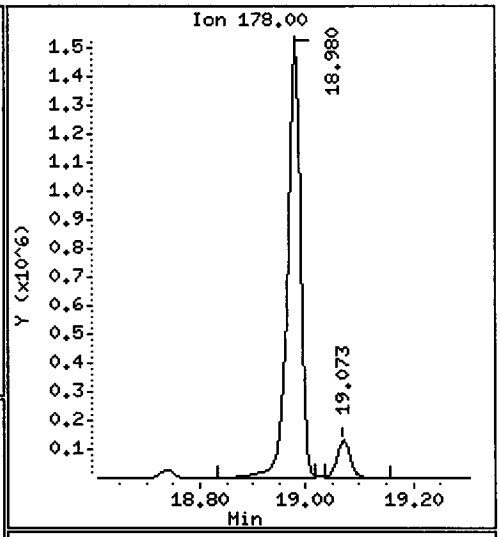
Concentration: 1297 ug/kg

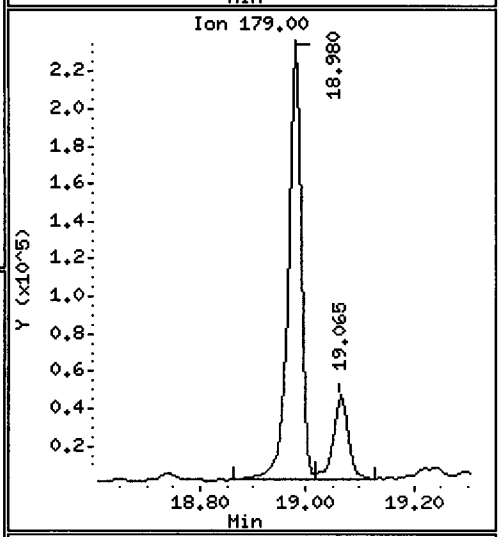


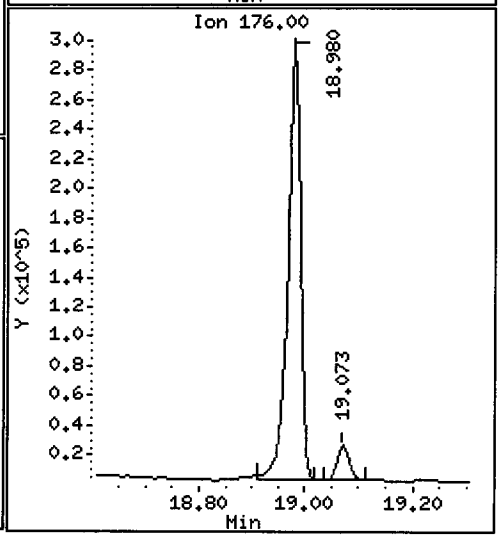












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

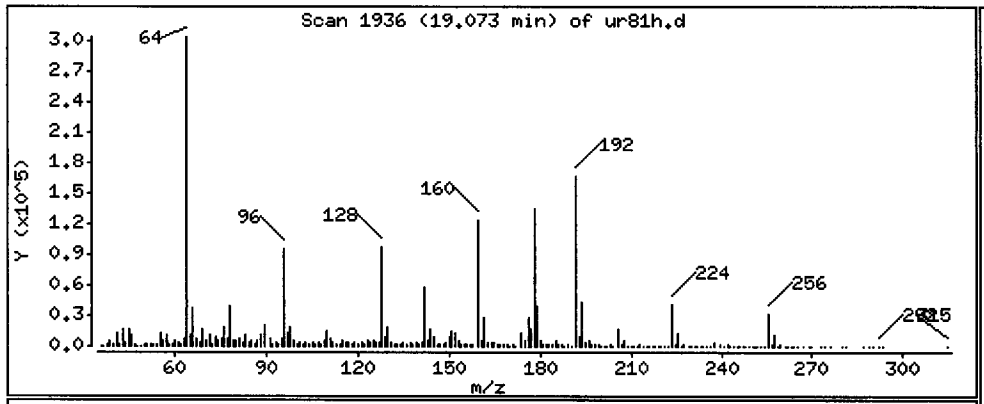
Operator: VTS/YZ

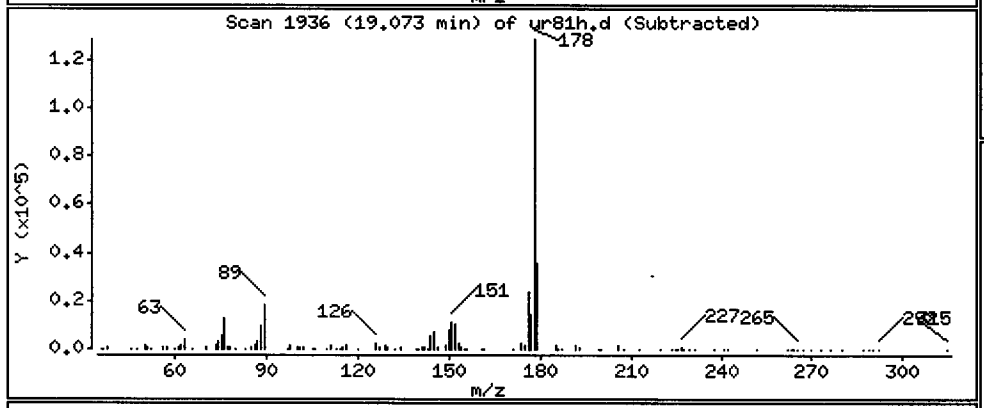
Column phase: ZB-5msi

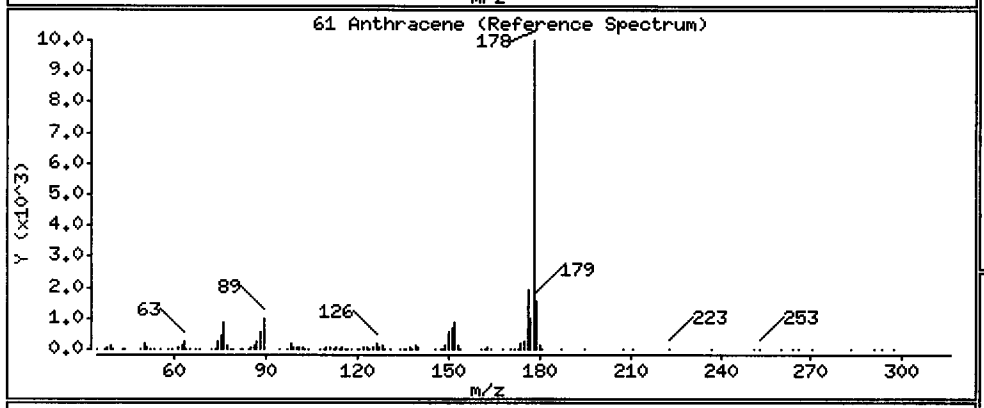
Column diameter: 0.25

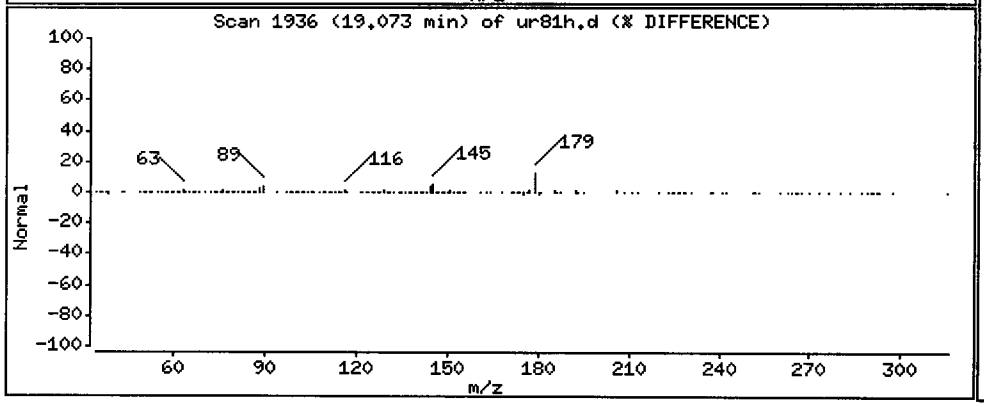
61 Anthracene

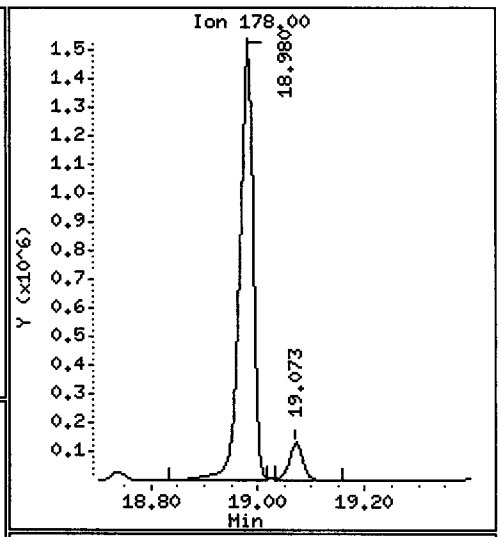
Concentration: 111.4 ug/kg

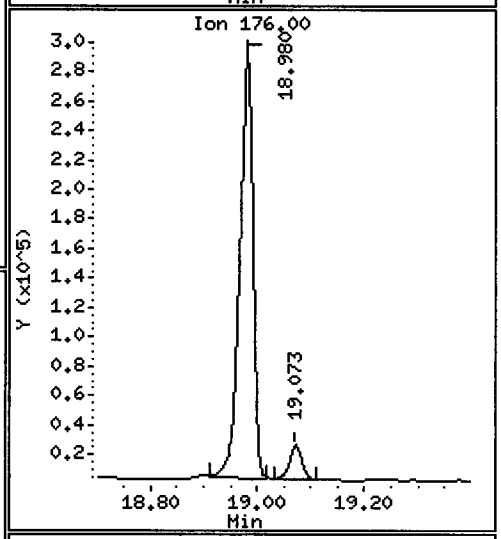


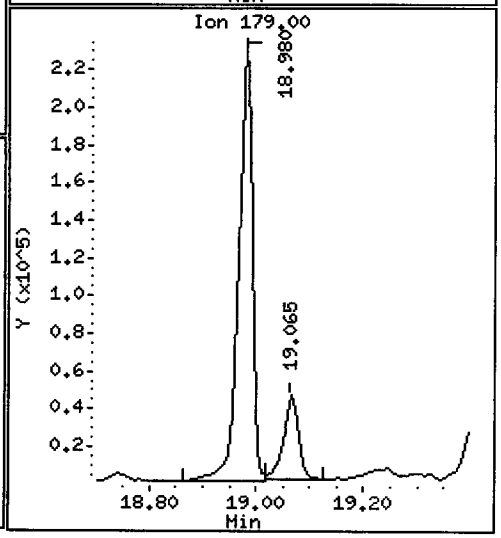












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

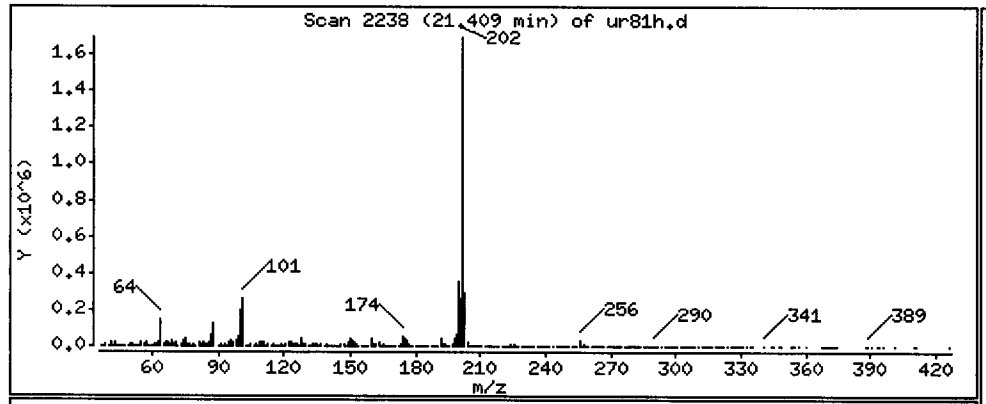
Operator: VTS/YZ

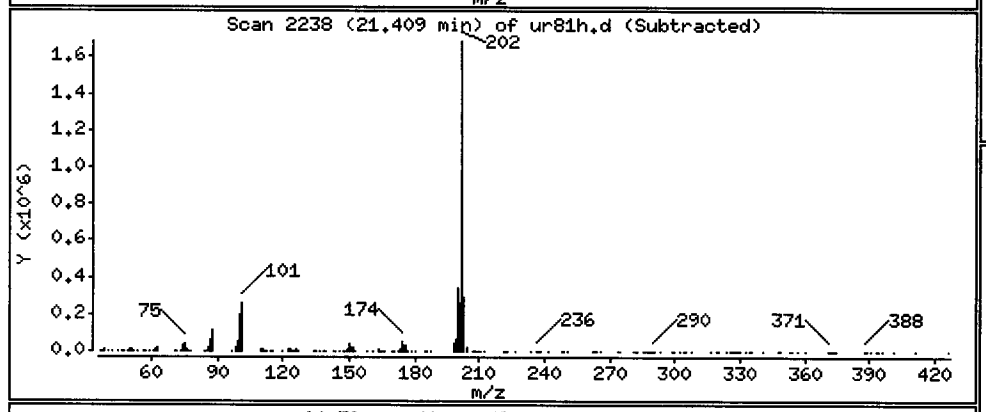
Column phase: ZB-5msi

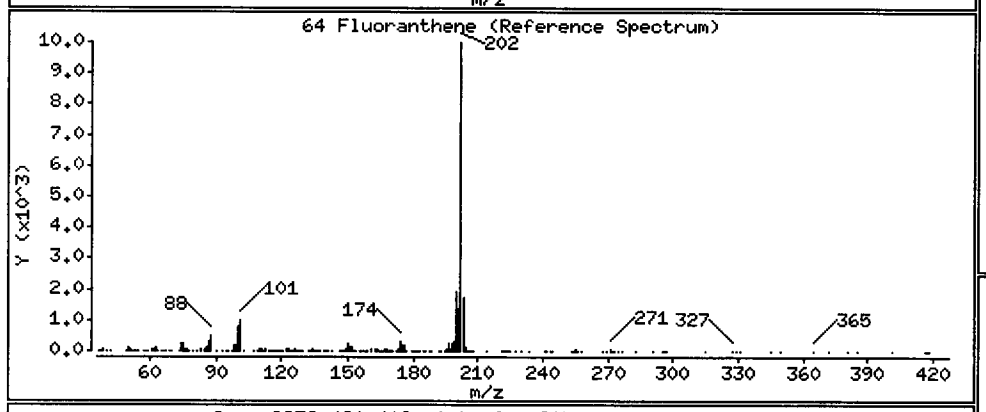
Column diameter: 0.25

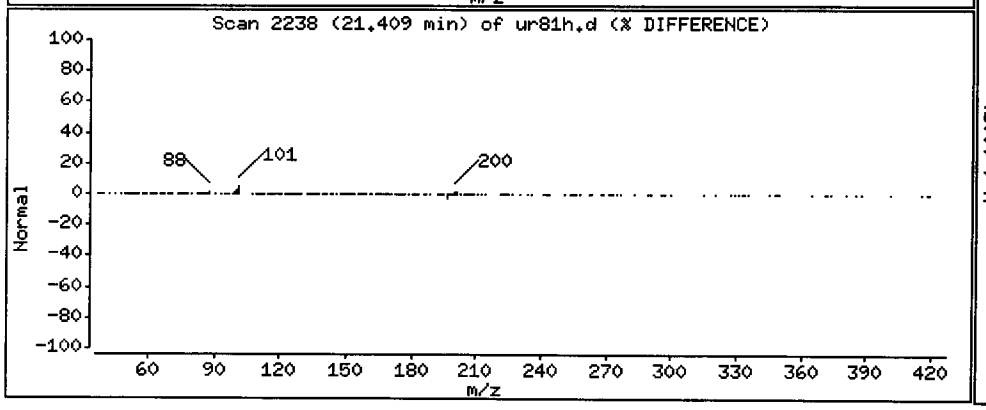
64 Fluoranthene

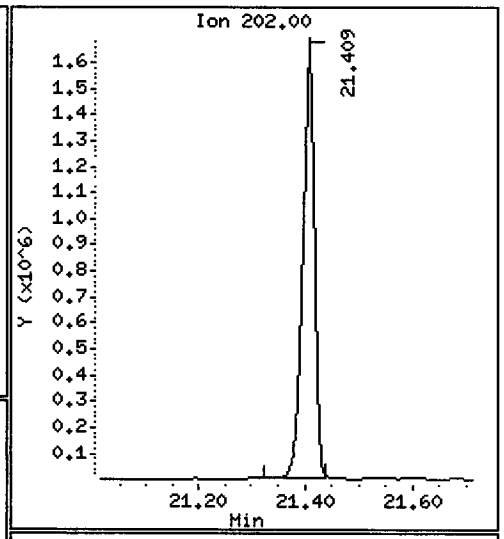
Concentration: 1137 ug/kg

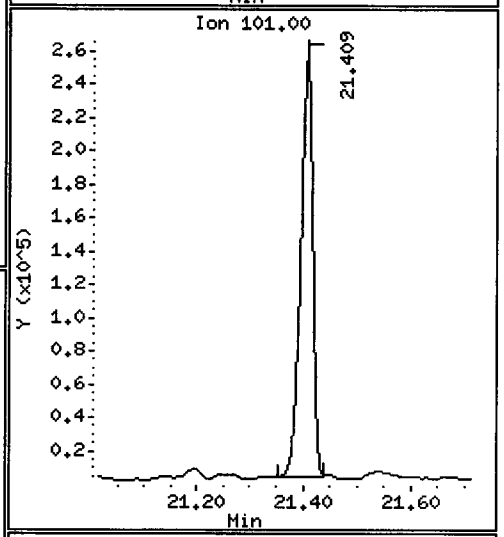


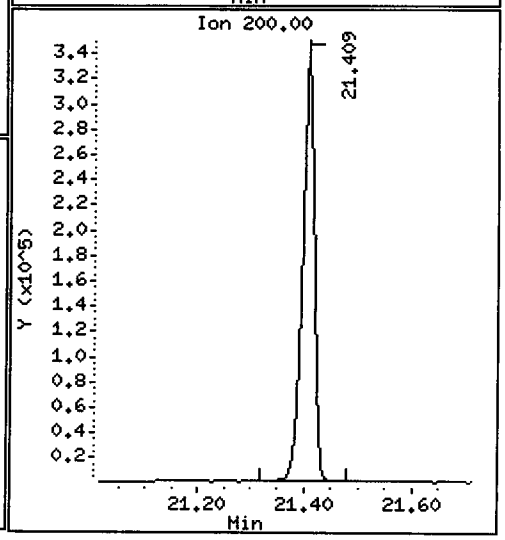












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

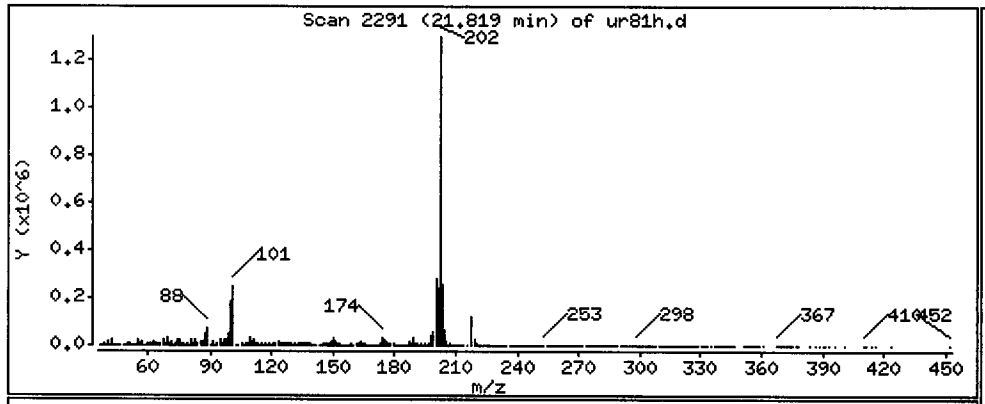
Operator: VTS/YZ

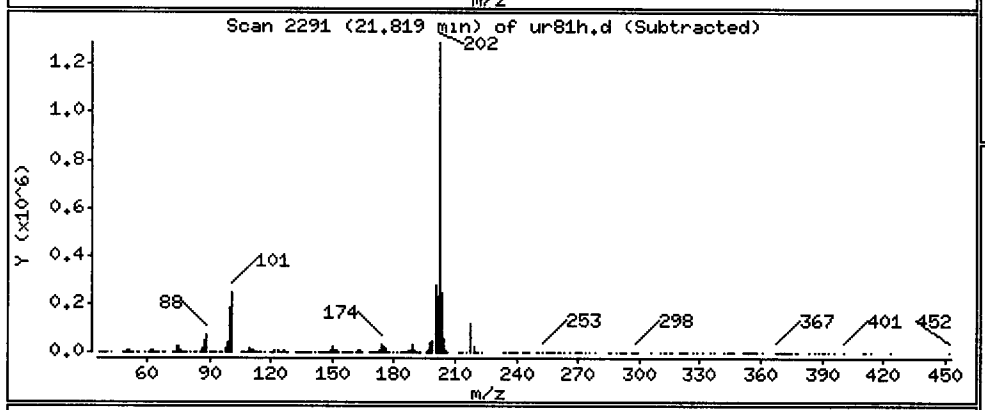
Column phase: ZB-5msi

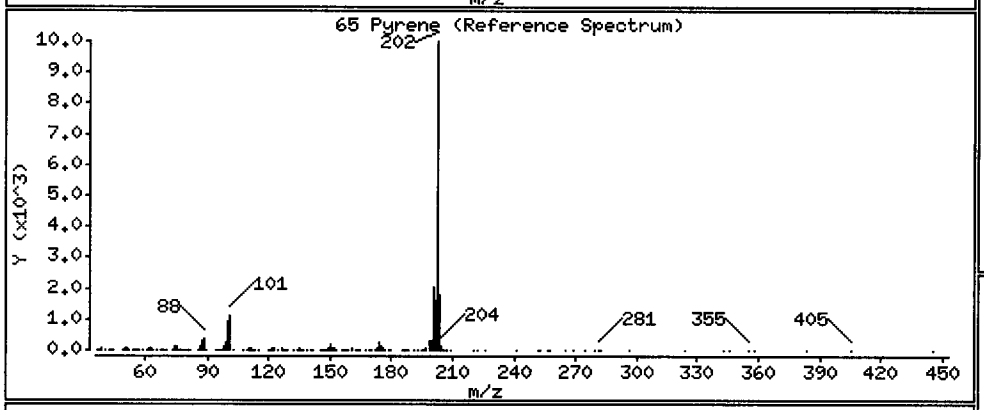
Column diameter: 0.25

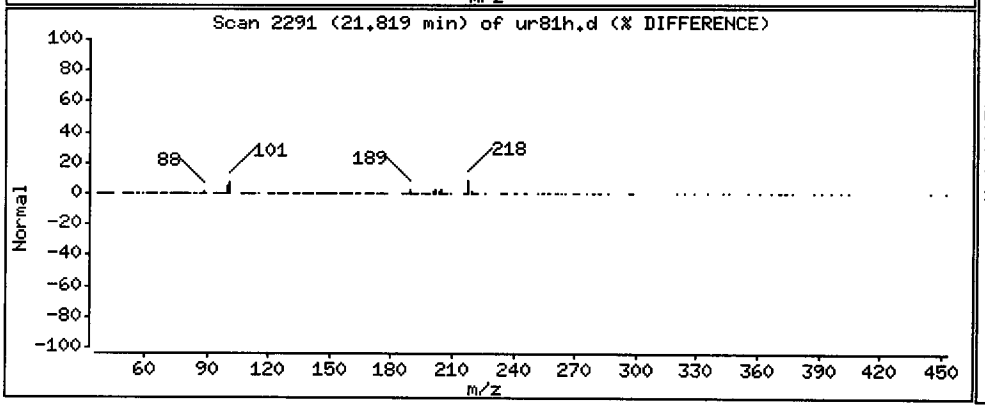
65 Pyrene

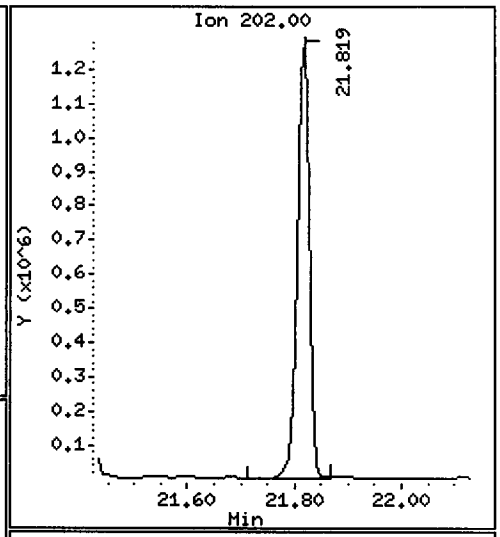
Concentration: 800.5 ug/kg

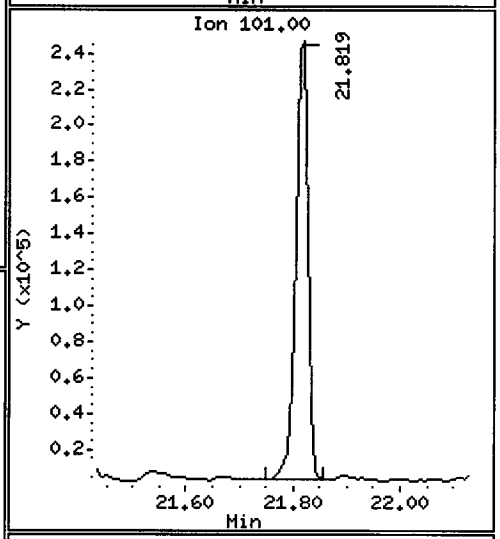


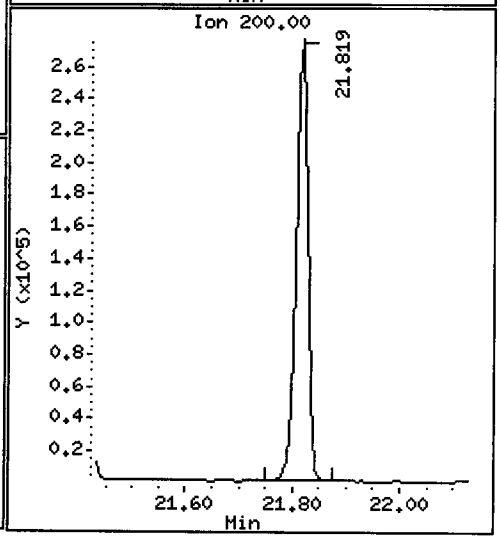












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

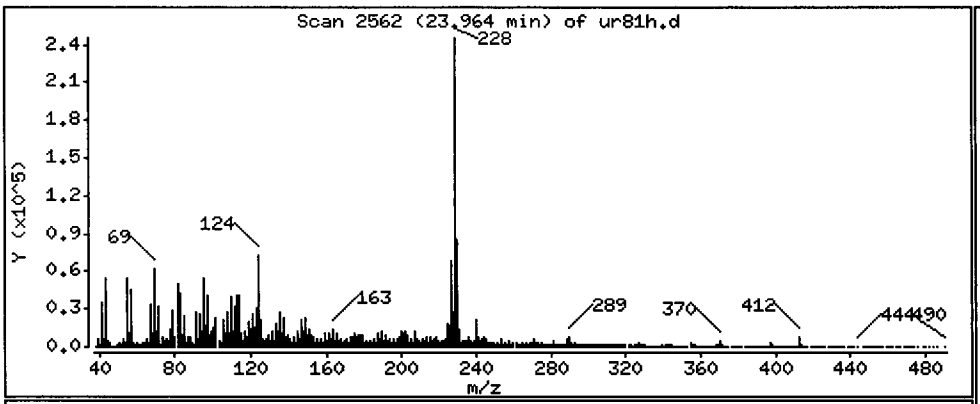
Operator: VTS/YZ

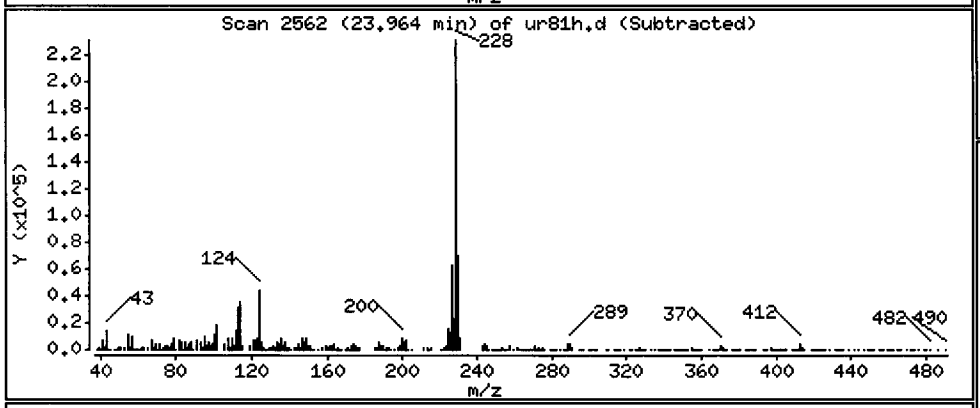
Column phase: ZB-5msi

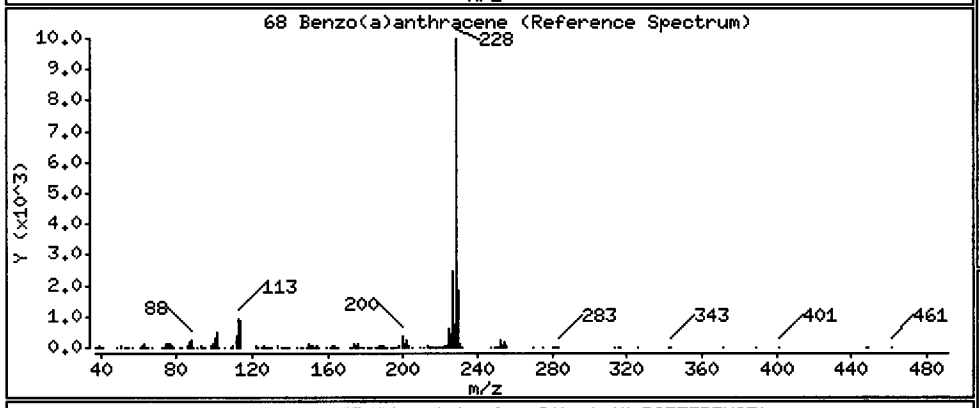
Column diameter: 0.25

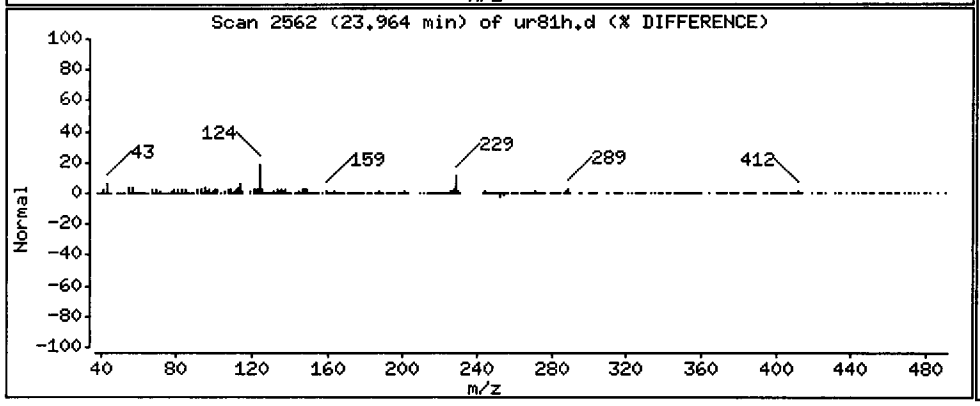
68 Benzo(a)anthracene

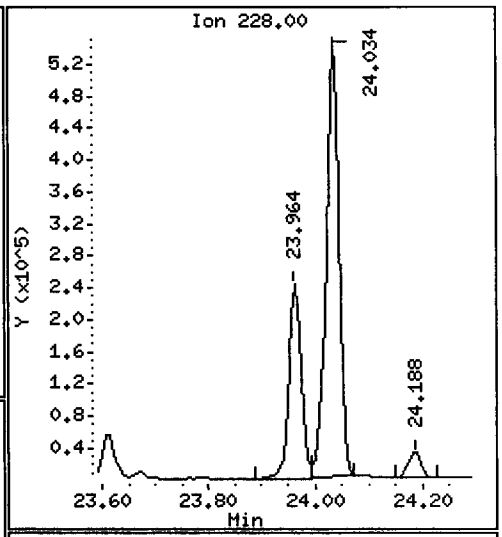
Concentration: 172.8 ug/kg

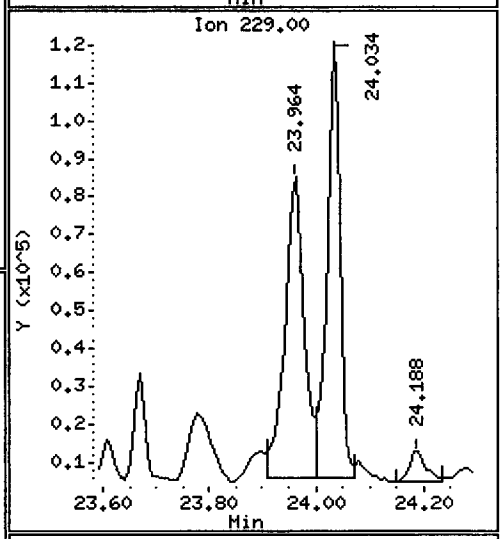


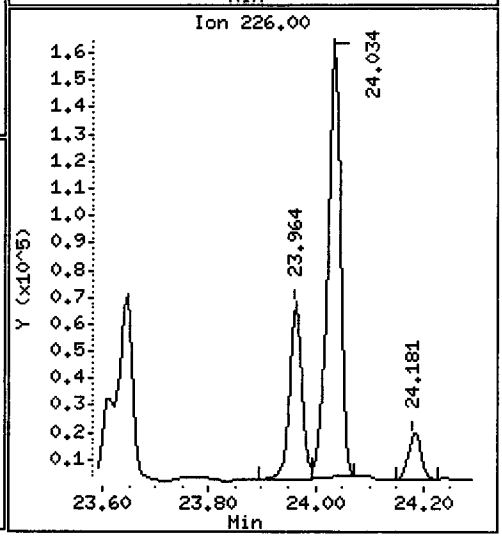












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

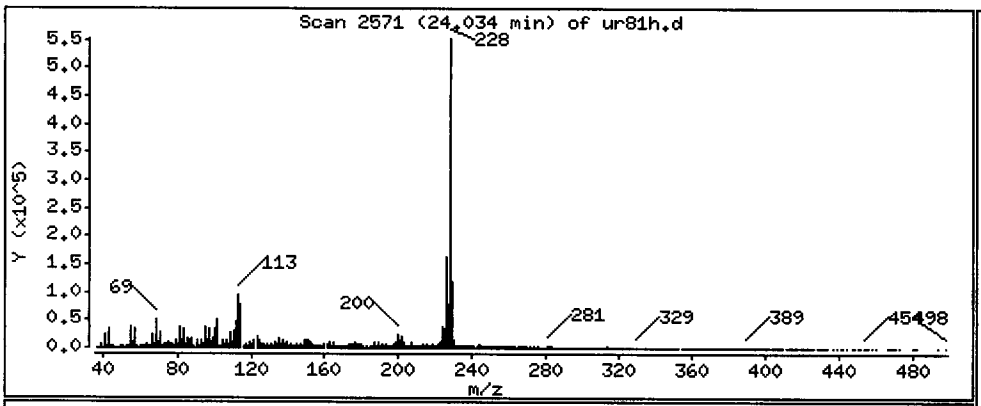
Operator: VTS/YZ

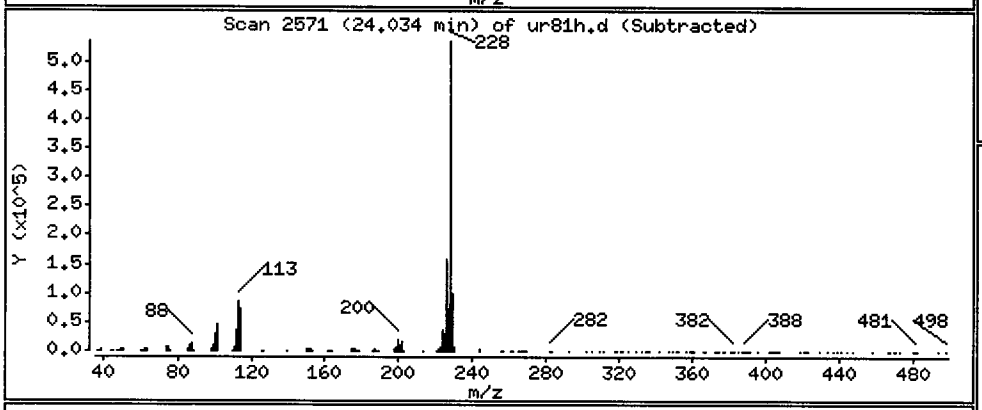
Column phase: ZB-5msi

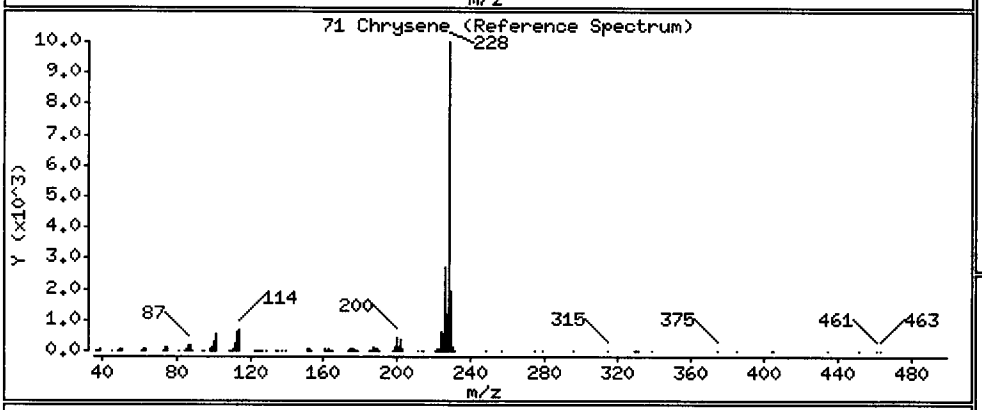
Column diameter: 0.25

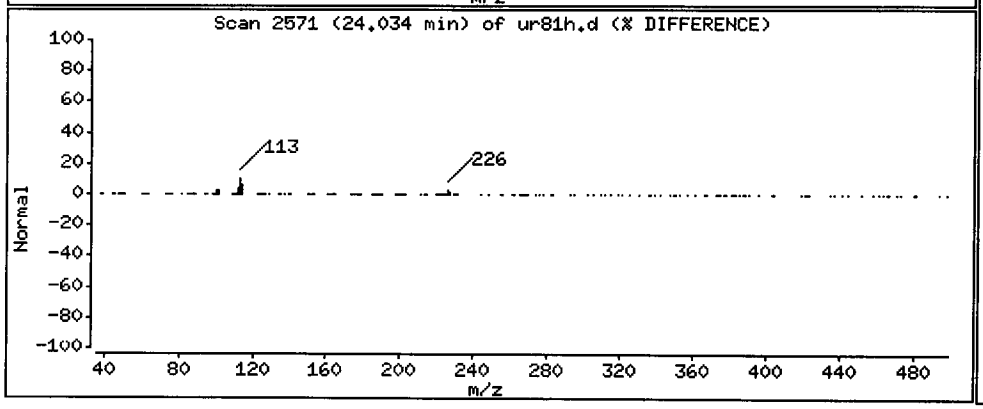
71 Chrysene

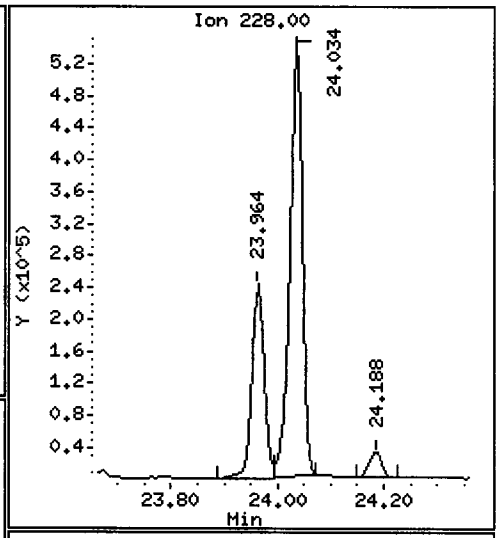
Concentration: 428.4 ug/kg

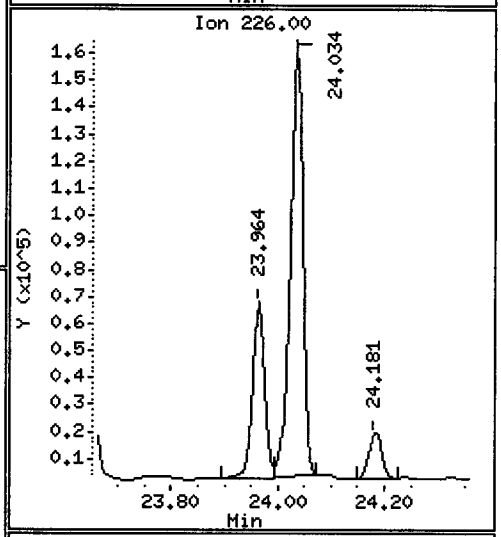


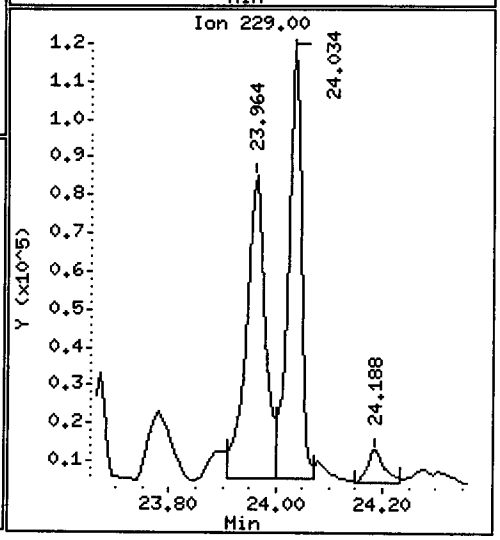












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

Operator: VTS/YZ

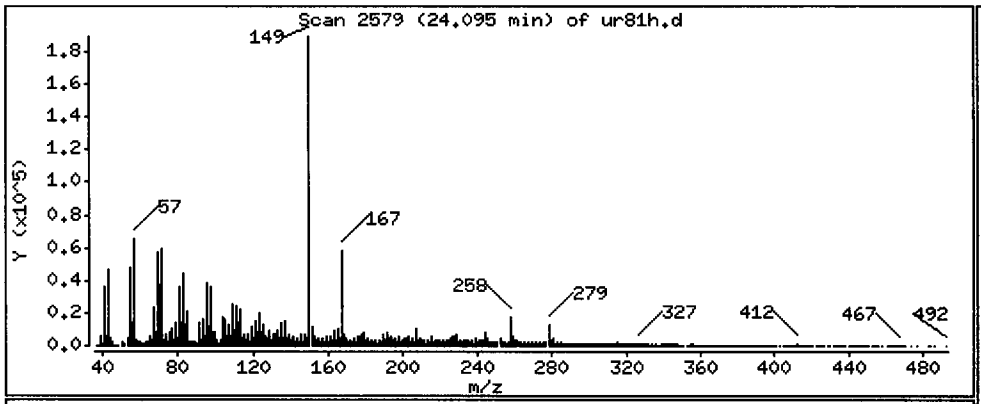
Column phase: ZB-5msi

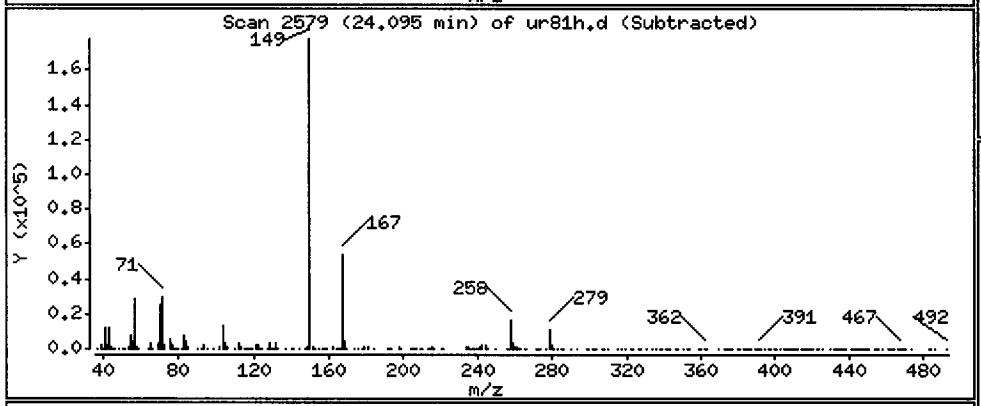
Column diameter: 0.25

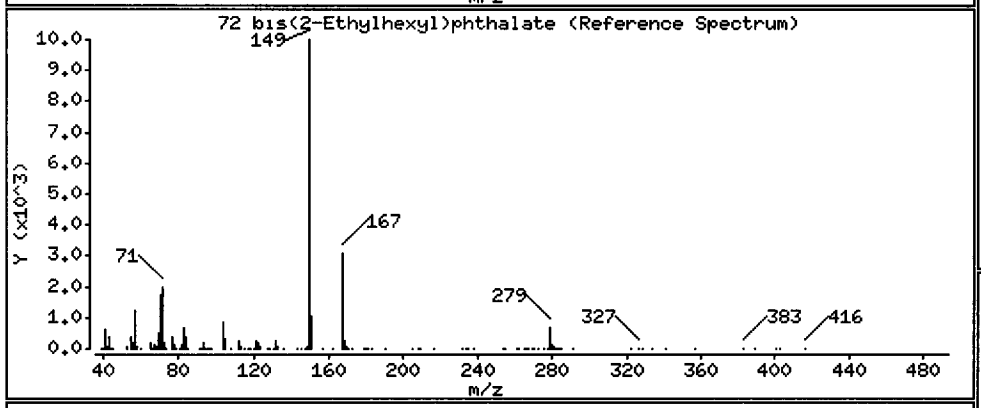
72 bis(2-Ethylhexyl)phthalate

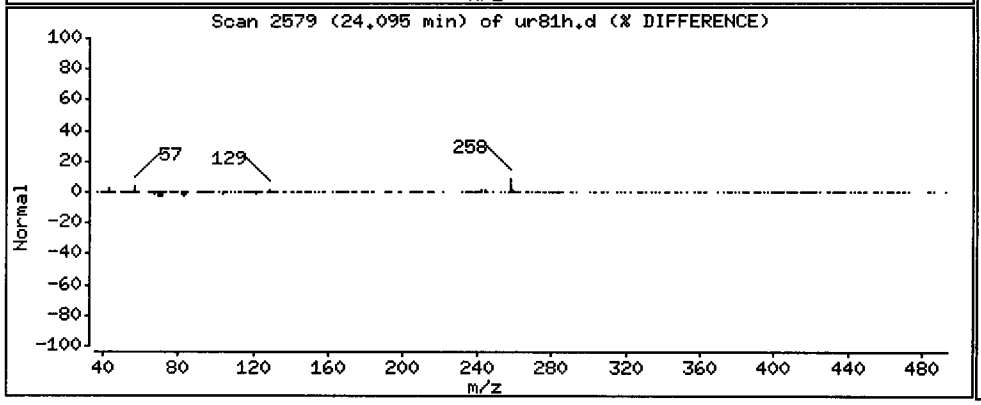
Concentration: 164.3 ug/kg

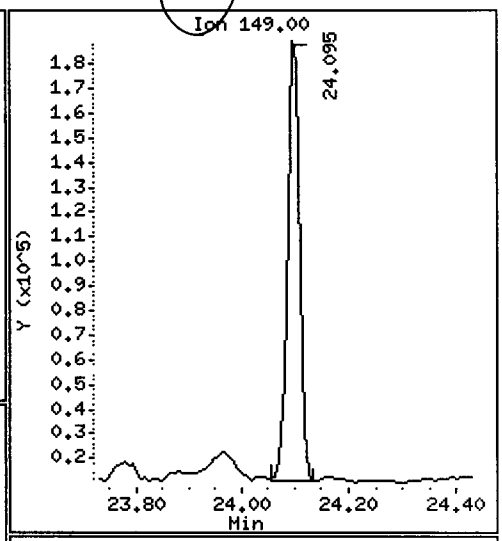
B

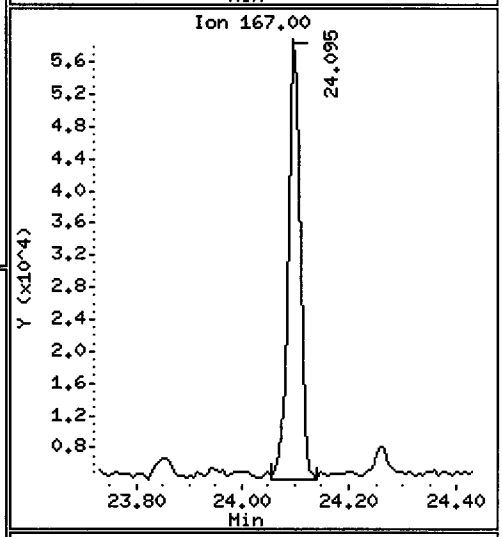


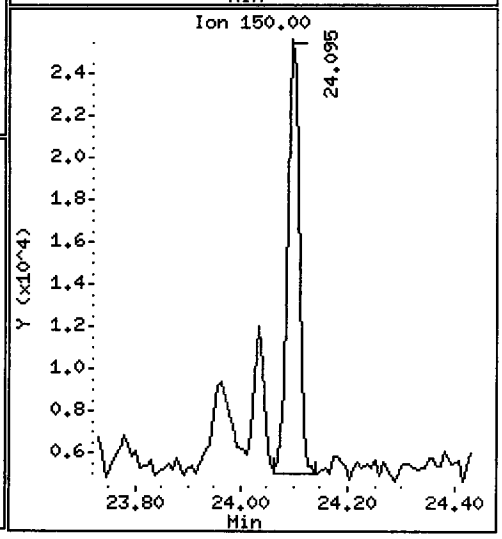












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

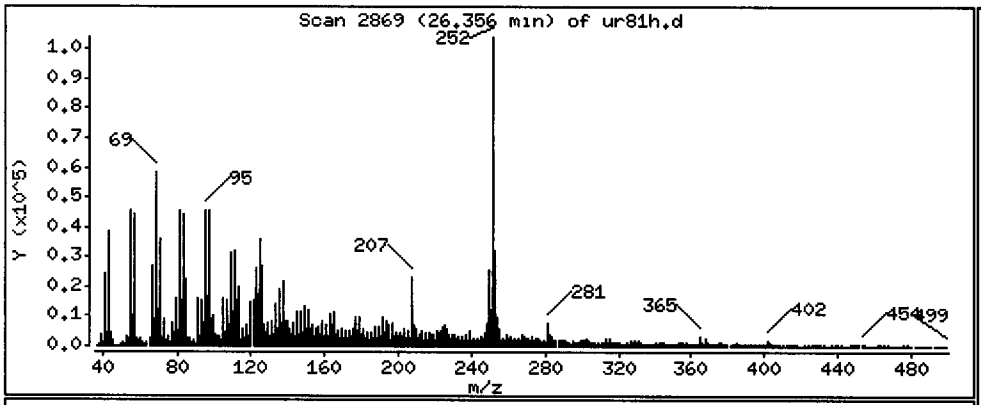
Operator: VTS/YZ

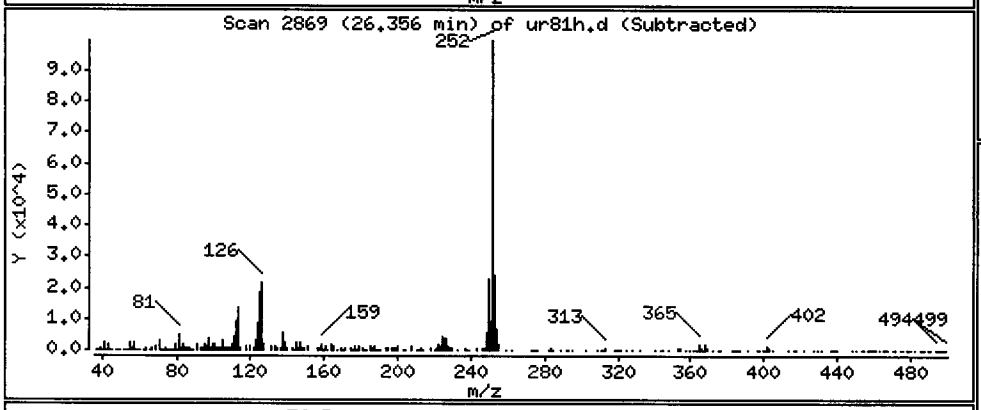
Column phase: ZB-5msi

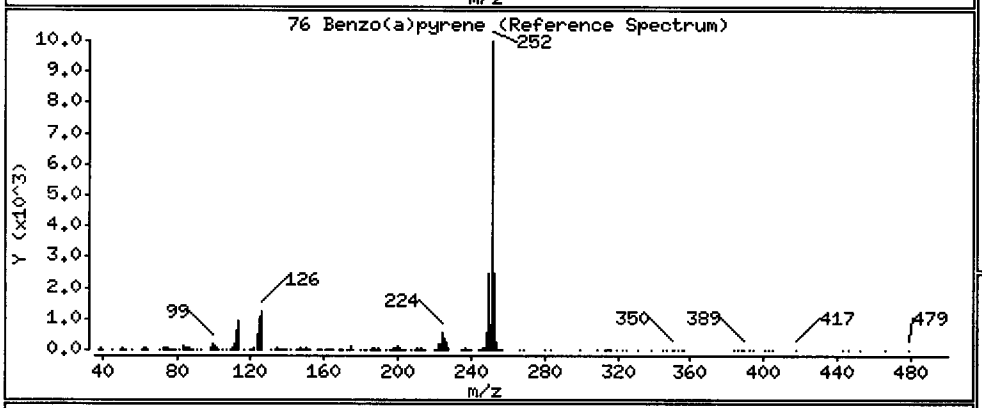
Column diameter: 0.25

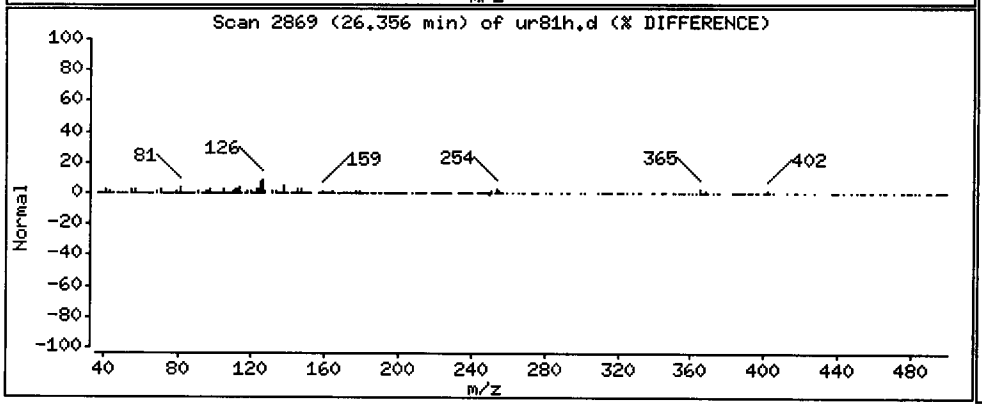
76 Benzo(a)pyrene

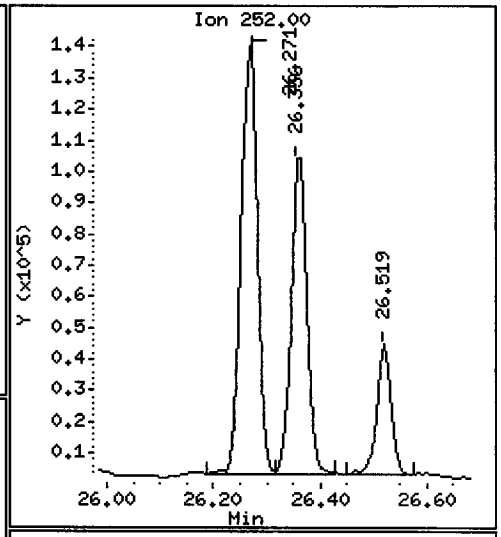
Concentration: 108.0 ug/kg

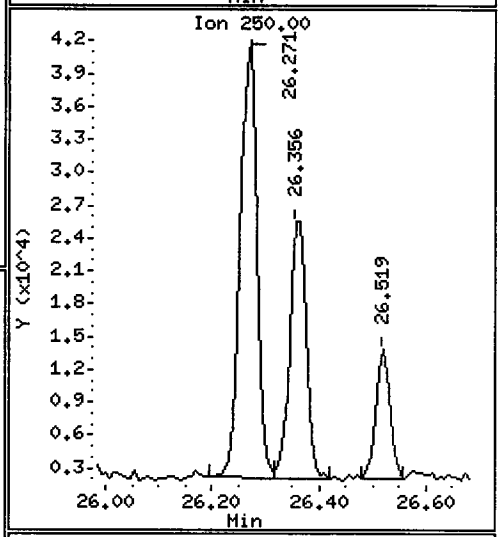


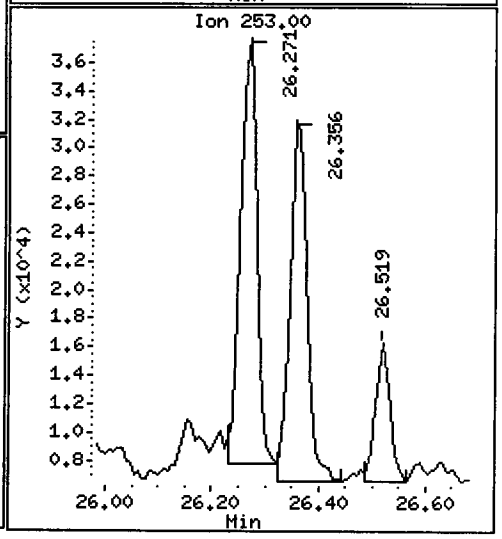












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

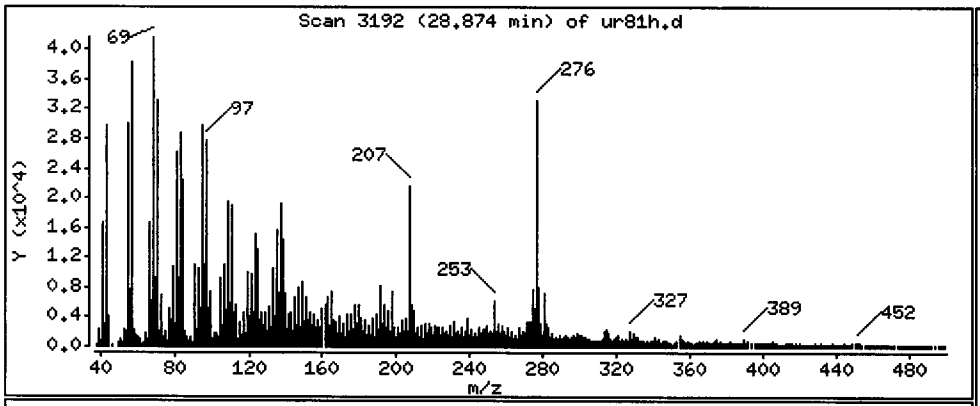
Operator: VTS/YZ

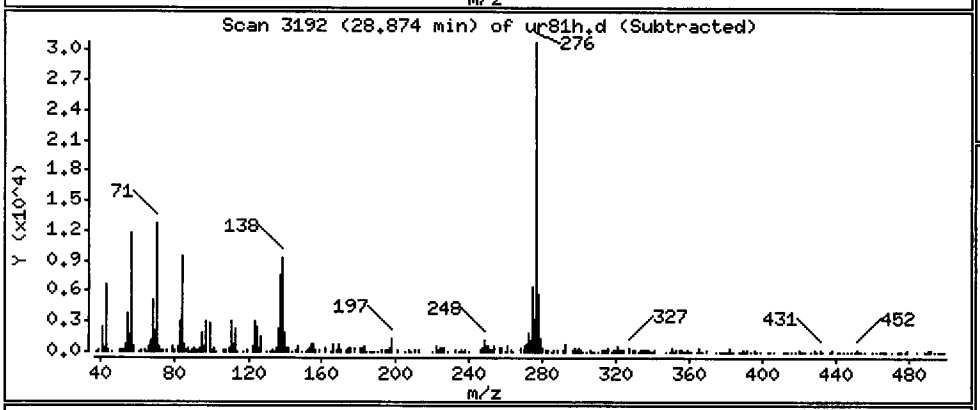
Column phase: ZB-5msi

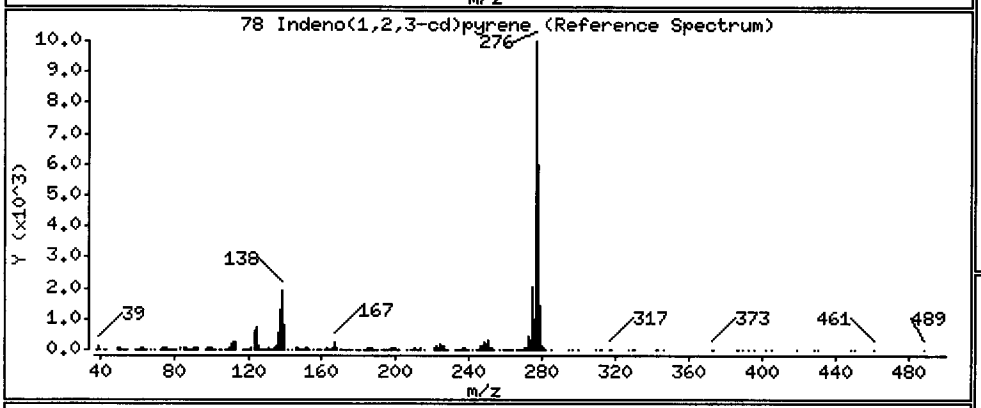
Column diameter: 0.25

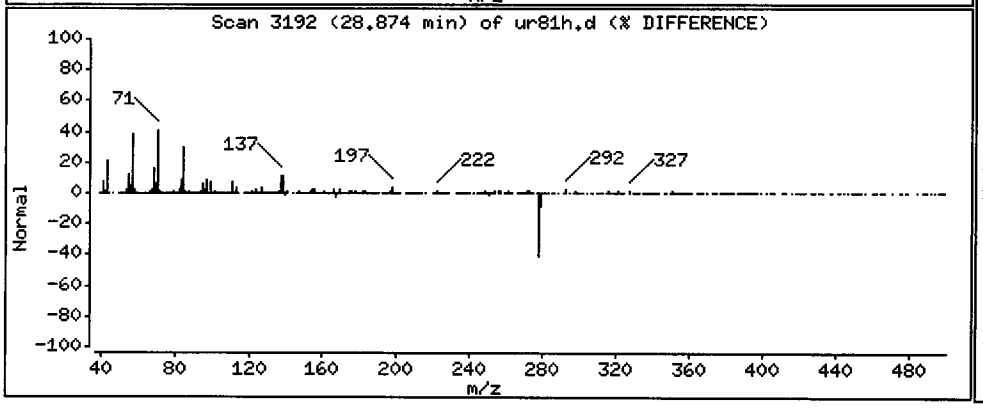
78 Indeno(1,2,3-cd)pyrene

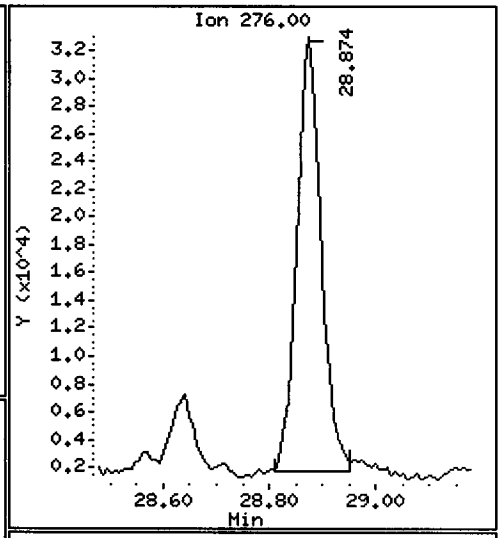
Concentration: 45.82 ug/kg

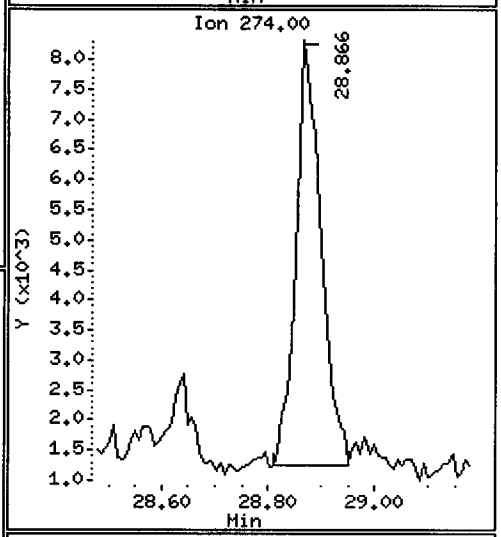


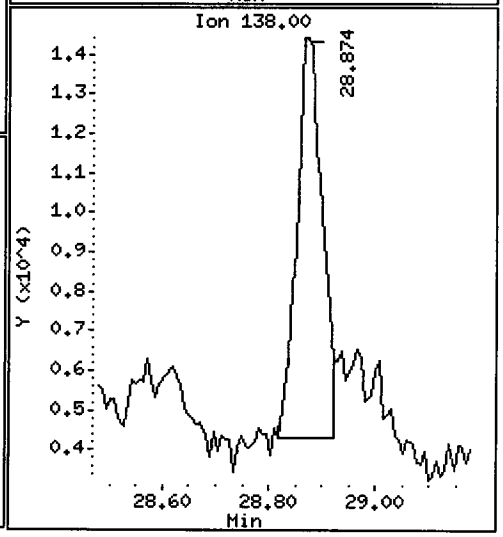












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

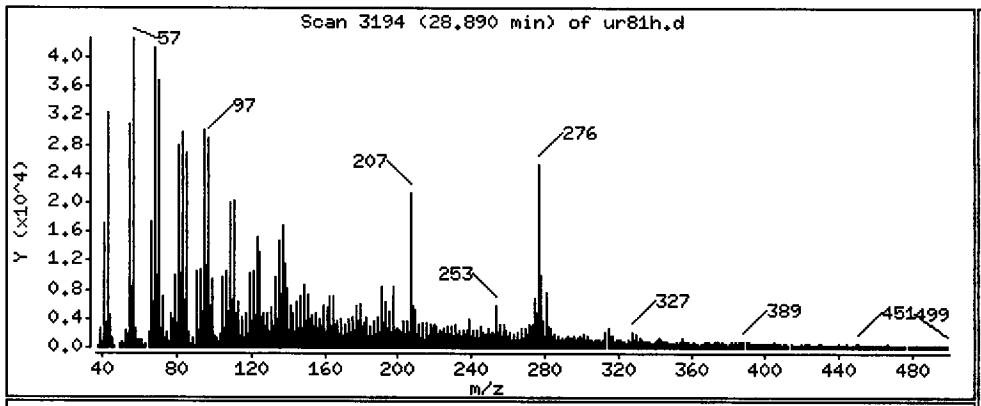
Operator: VTS/YZ

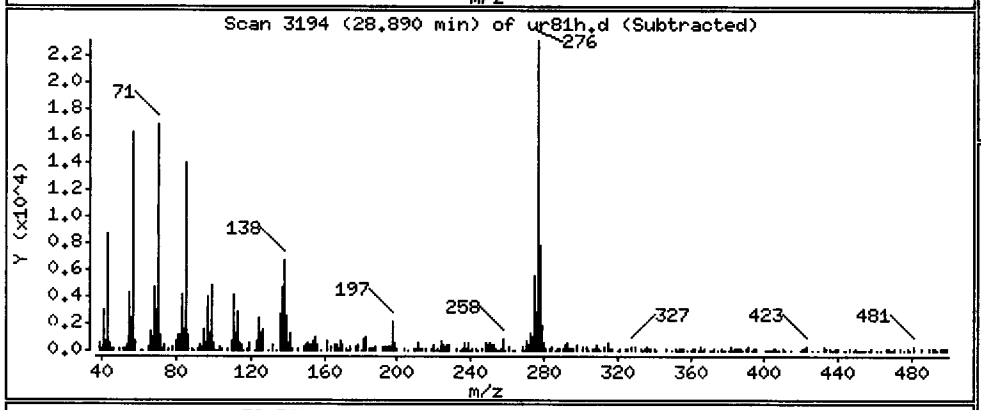
Column phase: ZB-5ms

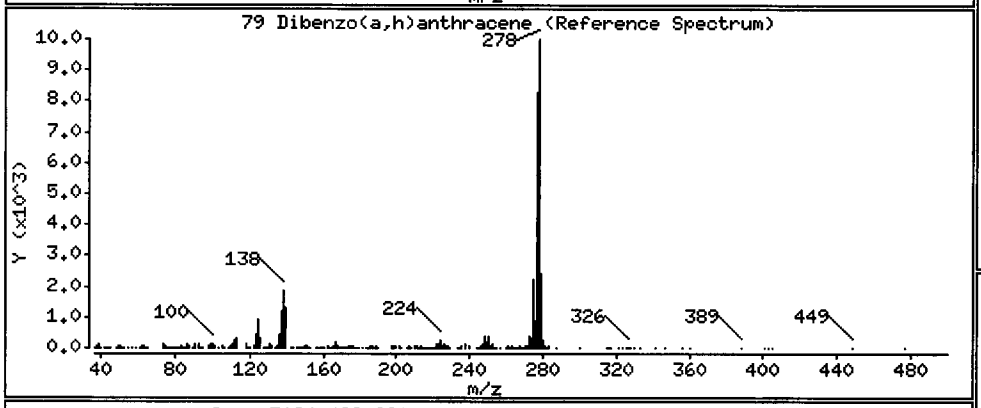
Column diameter: 0.25

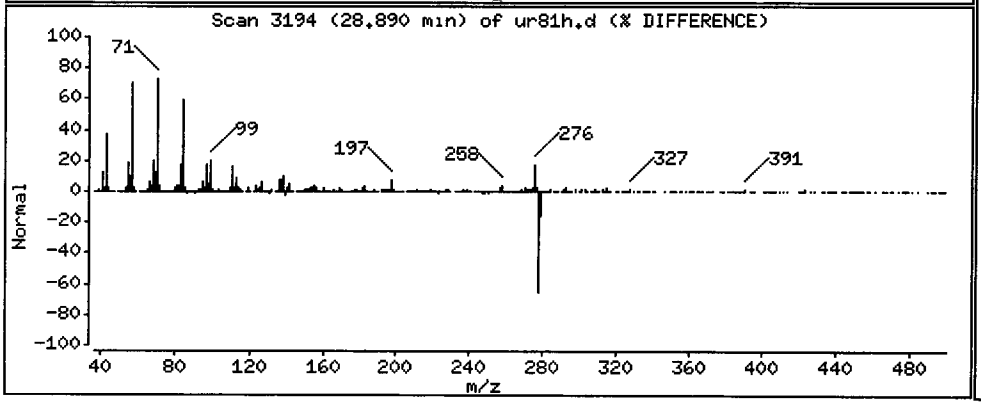
79 Dibenzo(a,h)anthracene

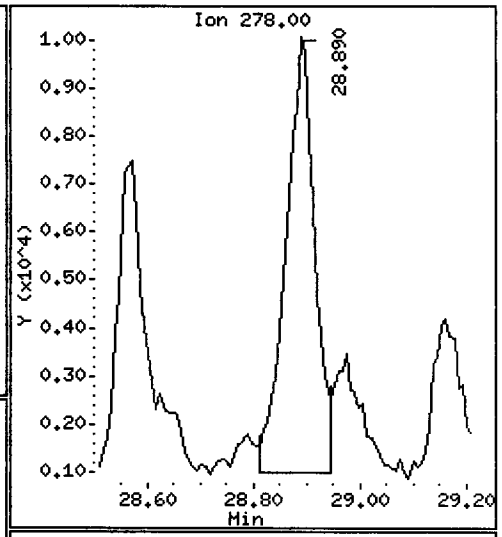
Concentration: 20.22 ug/kg

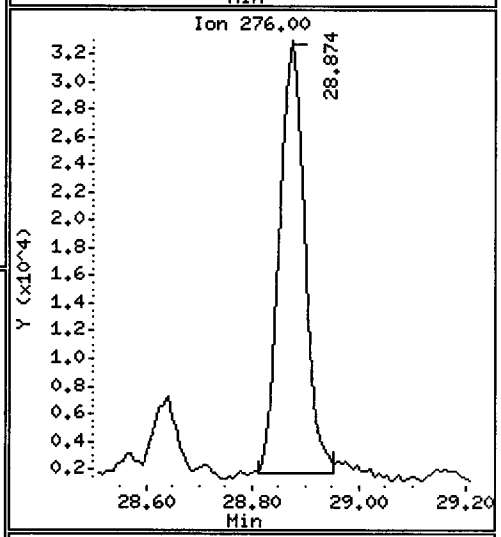


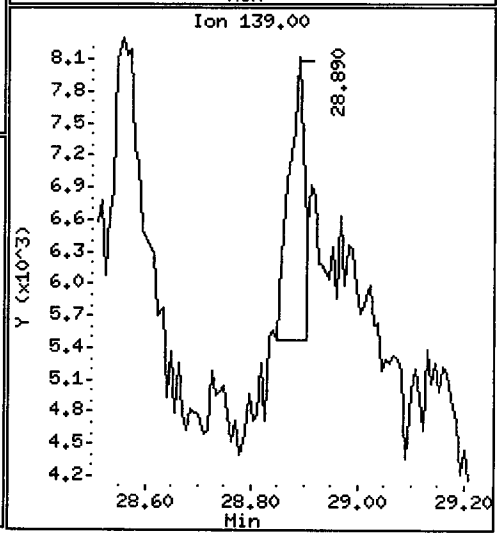












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

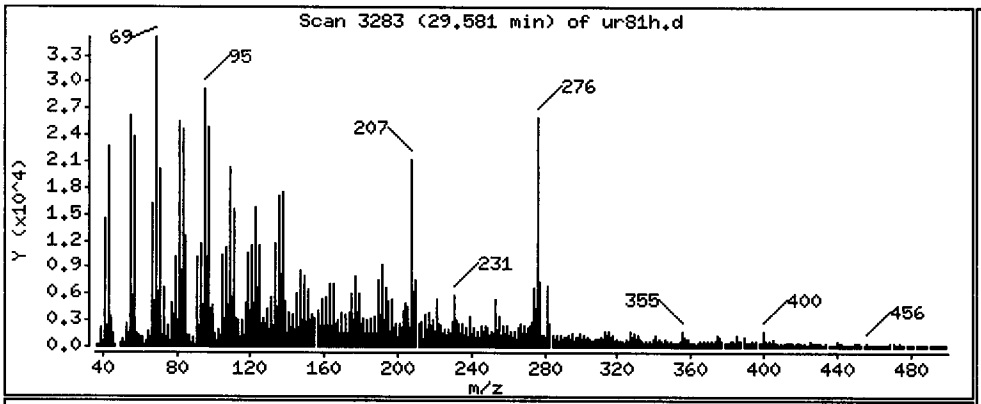
Operator: VTS/YZ

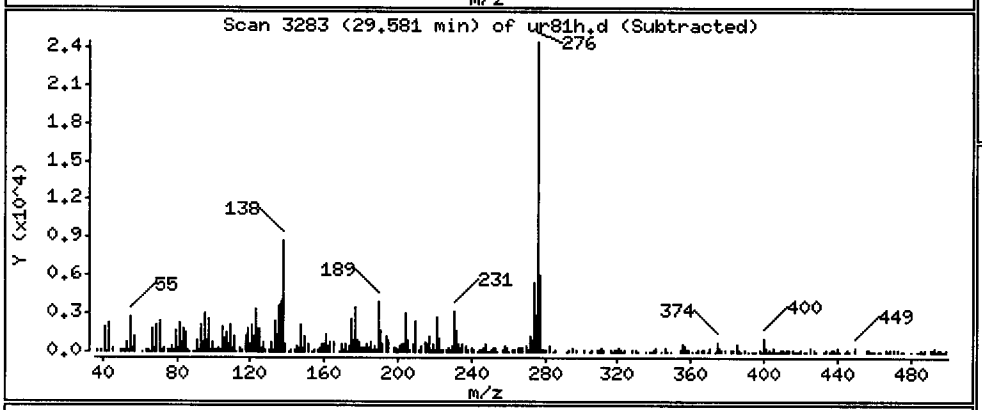
Column phase: ZB-5msi

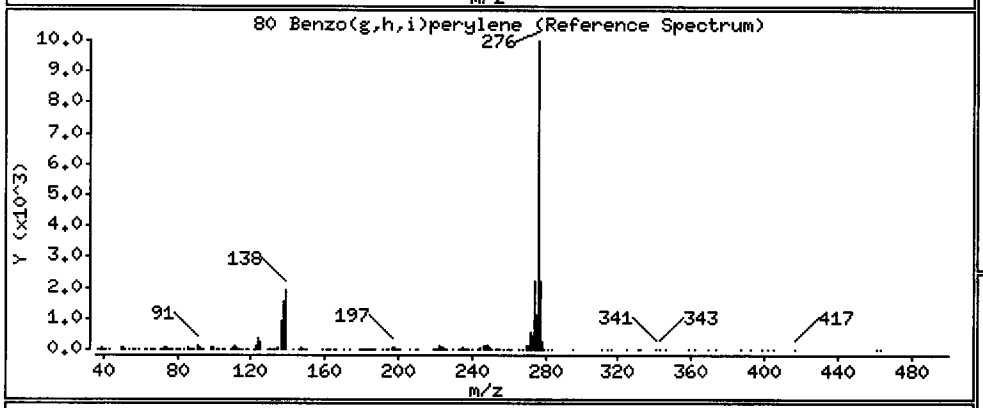
Column diameter: 0.25

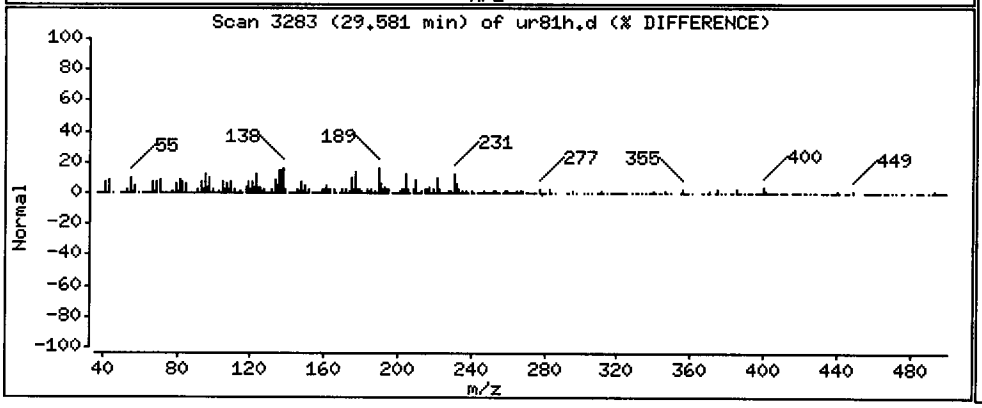
80 Benzo(g,h,i)perylene

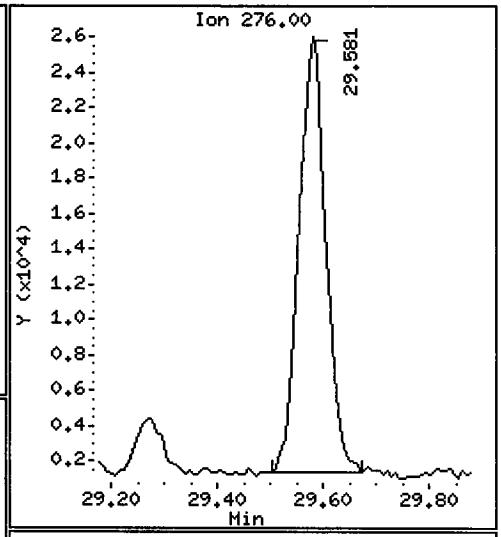
Concentration: 46.38 ug/kg

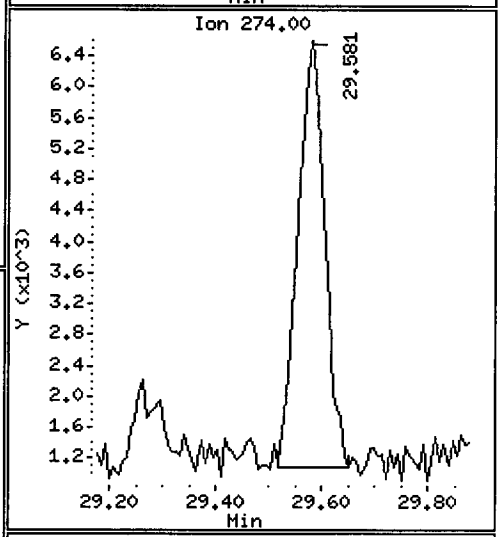


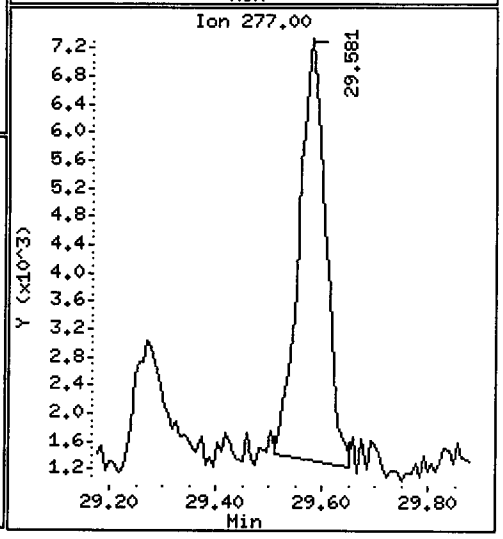












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

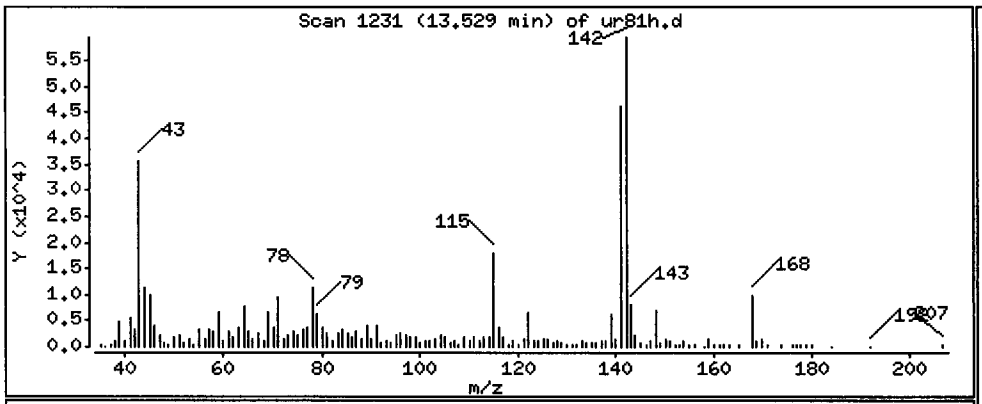
Operator: VTS/YZ

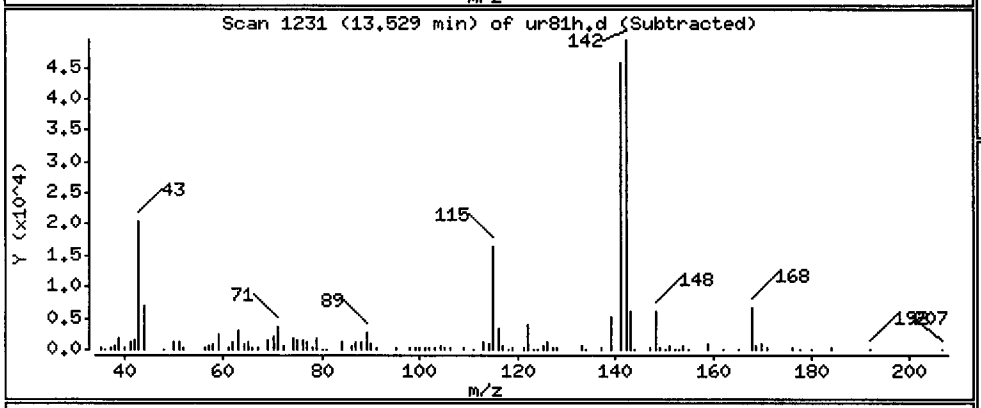
Column phase: ZB-5msi

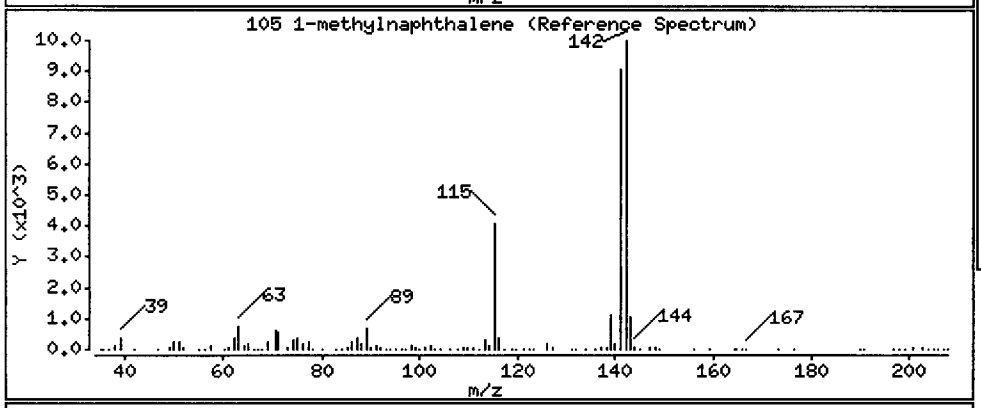
Column diameter: 0.25

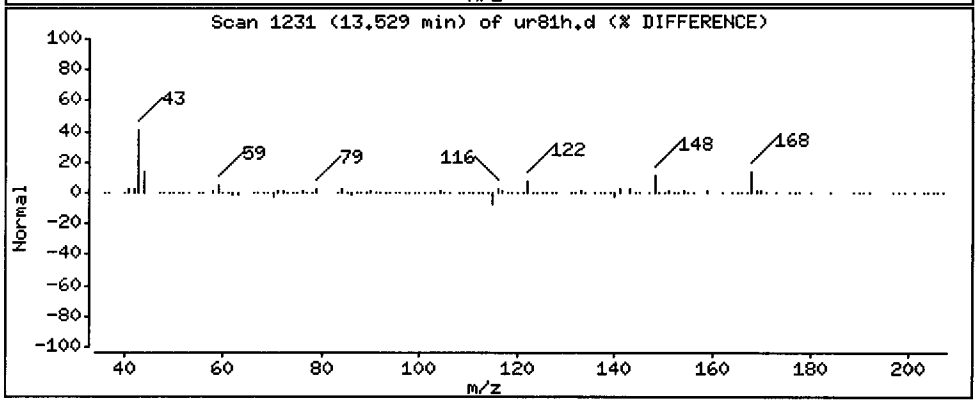
105 1-methylnaphthalene

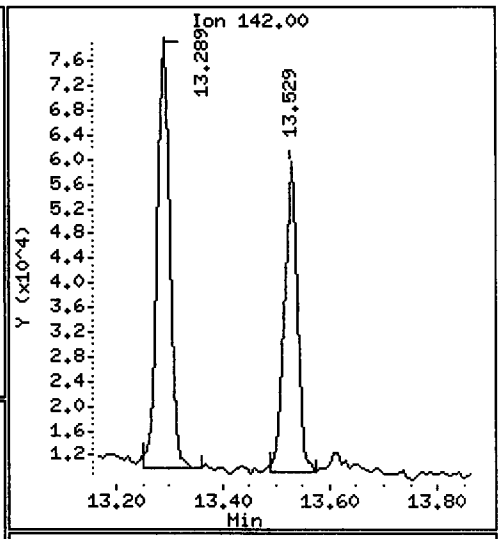
Concentration: 49.04 ug/kg

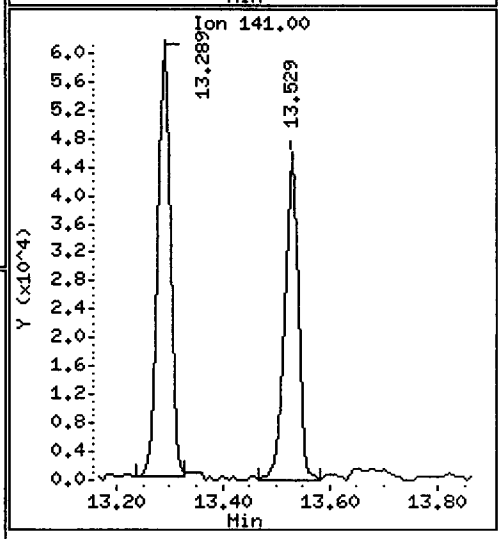












Data File: /chem1/nt10.i/20120508.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

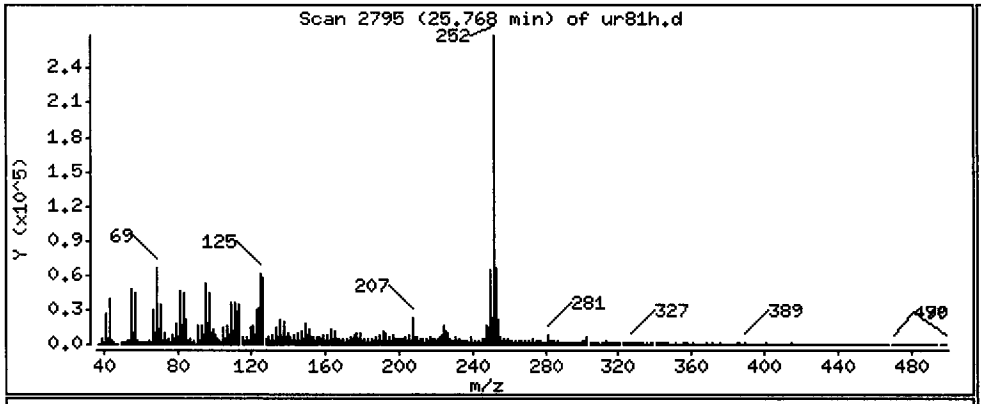
Operator: VTS/YZ

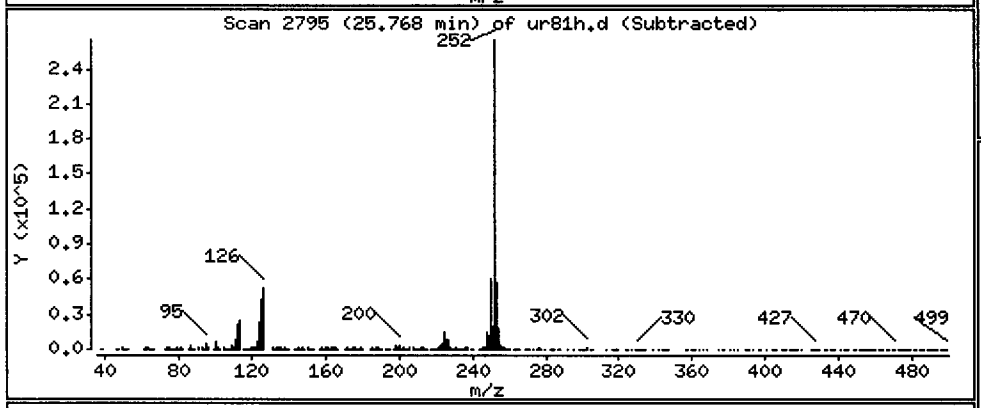
Column phase: ZB-5msi

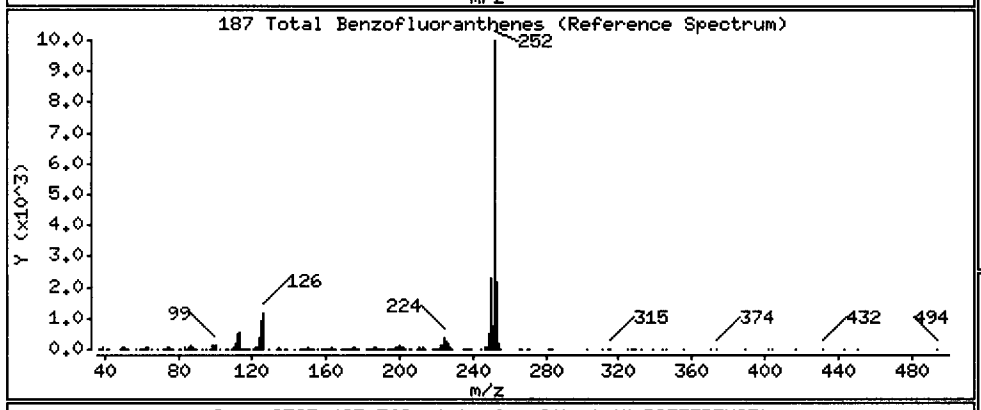
Column diameter: 0.25

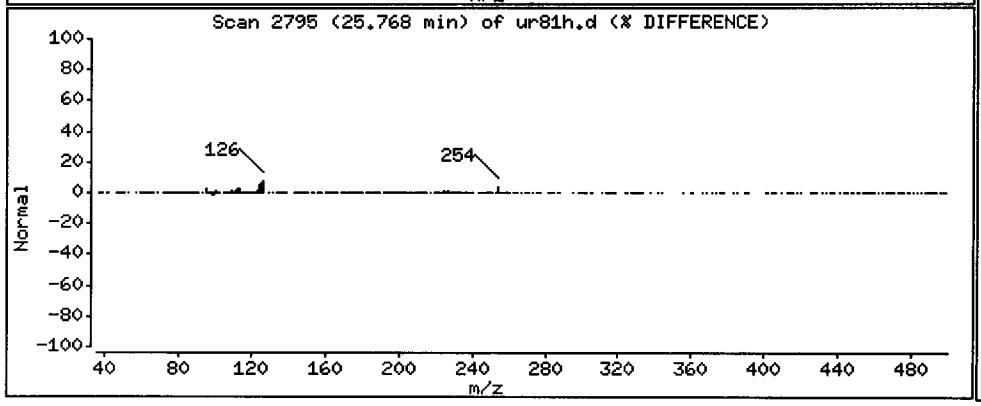
187 Total Benzofluoranthenes

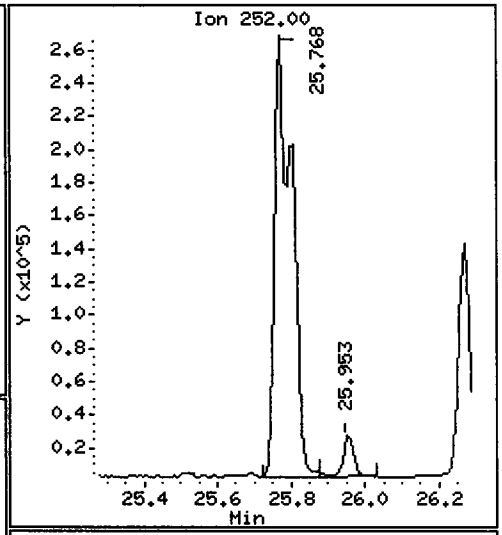
Concentration: 402.5 ug/kg

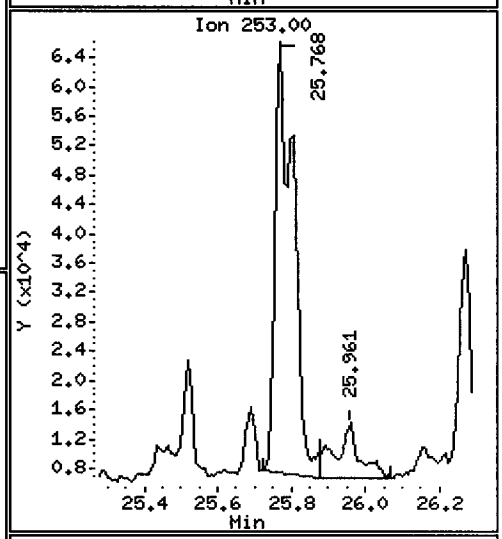


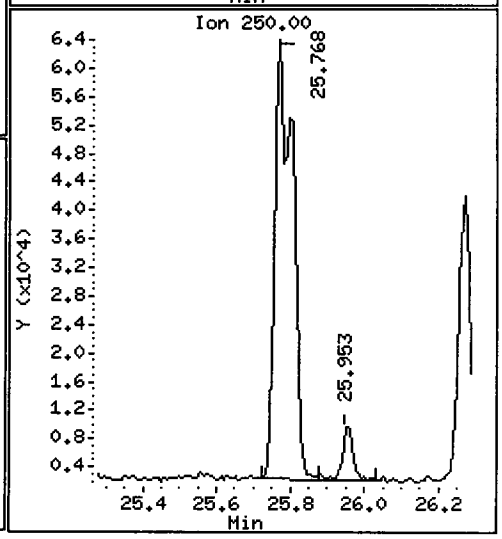












CO-ELUTION SUMMARY FOR FILE - ur81h.d

Lab ID: UR81H, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/10/12

Data file : /chem1/nt10.i/20120508.b/ur81i.d
Lab Smp Id: UR81I Client Smp ID: IJ12-11
Inj Date : 09-MAY-2012 00:01
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81I
Misc Info : 12-7400
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	19.20000	Weight of sample extracted (g)
M	46.90000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.706	6.667	(0.741)	352911	4.28020	419.8
$ 2 Phenol-d5	99	8.413	8.398	(0.930)	449672	4.38600	430.2
3 Phenol	94	8.437	8.421	(0.932)	59022	0.52522	51.52
$ 5 2-Chlorophenol-d4	132	8.668	8.653	(0.958)	400313	4.51156	442.5
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	241030	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.043)	167193	2.78077	272.8
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.366	9.350	(1.035)	17562	0.33535	32.89
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.933	9.909	(1.098)	46867	0.50823	49.85
$ 18 Nitrobenzene-d5	82	10.235	10.228	(0.873)	247381	3.08211	302.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	12526	0.15027	14.74
	24 Benzoic acid	105	11.203	11.303	(0.955)	43825	0.67787	66.49(H)
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.727	11.719	(1.000)	938759	4.00000	
	28 Naphthalene	128	11.773	11.766	(1.004)	122722	0.52347	51.34
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.290	13.282	(1.133)	48434	0.30124	29.55
$	36 2-Fluorobiphenyl	172	14.156	14.149	(0.905)	537390	2.98475	292.8
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.642	15.627	(1.000)	527809	4.00000	
	44 Acenaphthene	153	Compound Not Detected.					
	46 Dibenzofuran	168	16.067	16.060	(1.027)	43523	0.20945	20.54
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	16.840	16.833	(1.077)	29068	0.18336	17.98
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.427	17.411	(1.114)	121098	5.00104	490.5
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.918	18.903	(1.000)	819159	4.00000	
	60 Phenanthrene	178	18.964	18.957	(1.002)	113688	0.56122	55.05
	61 Anthracene	178	19.065	19.050	(1.008)	60671	0.28374	27.83
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.402	21.363	(1.131)	214041	0.92830	91.05
	65 Pyrene	202	21.804	21.781	(0.909)	205682	0.80118	78.58
$	66 Terphenyl-d14	244	22.113	22.098	(0.922)	510427	3.17069	311.0
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	23.956	23.941	(0.999)	55697	0.24176	23.71
*	69 Chrysene-d12	240	23.979	23.964	(1.000)	849529	4.00000	
	71 Chrysene	228	24.026	24.010	(1.002)	102315	0.49751	48.80
	72 bis(2-Ethylhexyl)phthalate	149	24.096	24.080	(0.961)	65980	0.38385	37.65
*	134 Di-n-octylphthalate-d4	153	25.071	25.056	(1.000)	1321968	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.356	26.333	(0.996)	35646	0.18819	18.46
*	77 Perylene-d12	264	26.465	26.441	(1.000)	779696	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	29.573	29.527	(1.117)	19710	0.10577	10.37
	105 1-methylnaphthalene	142	13.529	13.514	(1.154)	35174	0.21455	21.04
	187 Total Benzofluoranthenes	252	25.768	25.783	(0.974)	118787	0.55997	54.92

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81i.d
Lab Smp Id: UR81I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7400

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-11
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	241030	-11.34
27 Naphthalene-d8	1080694	540347	2161388	938759	-13.13
42 Acenaphthene-d10	623821	311910	1247642	527809	-15.39
59 Phenanthrene-d10	999143	499572	1998286	819159	-18.01
69 Chrysene-d12	1001009	500504	2002018	849529	-15.13
134 Di-n-octylphthala	1489422	744711	2978844	1321968	-11.24
77 Perylene-d12	988348	494174	1976696	779696	-21.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.92	0.08
69 Chrysene-d12	23.96	23.46	24.46	23.98	0.06
134 Di-n-octylphthala	25.06	24.56	25.56	25.07	0.06
77 Perylene-d12	26.44	25.94	26.94	26.46	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81I
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7400

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-11
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	735.6	419.8	57.07	30-160
$ 2 Phenol-d5	735.6	430.2	58.48	30-160
$ 5 2-Chlorophenol-d4	735.6	442.5	60.15	30-160
$ 10 1,2-Dichlorobenzen	490.4	272.8	55.62	30-160
$ 18 Nitrobenzene-d5	490.4	302.3	61.64	30-160
$ 36 2-Fluorobiphenyl	490.4	292.8	59.69	30-160
$ 55 2,4,6-Tribromophen	735.6	490.5	66.68	30-160
$ 66 Terphenyl-d14	490.4	311.0	63.41	30-160

Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

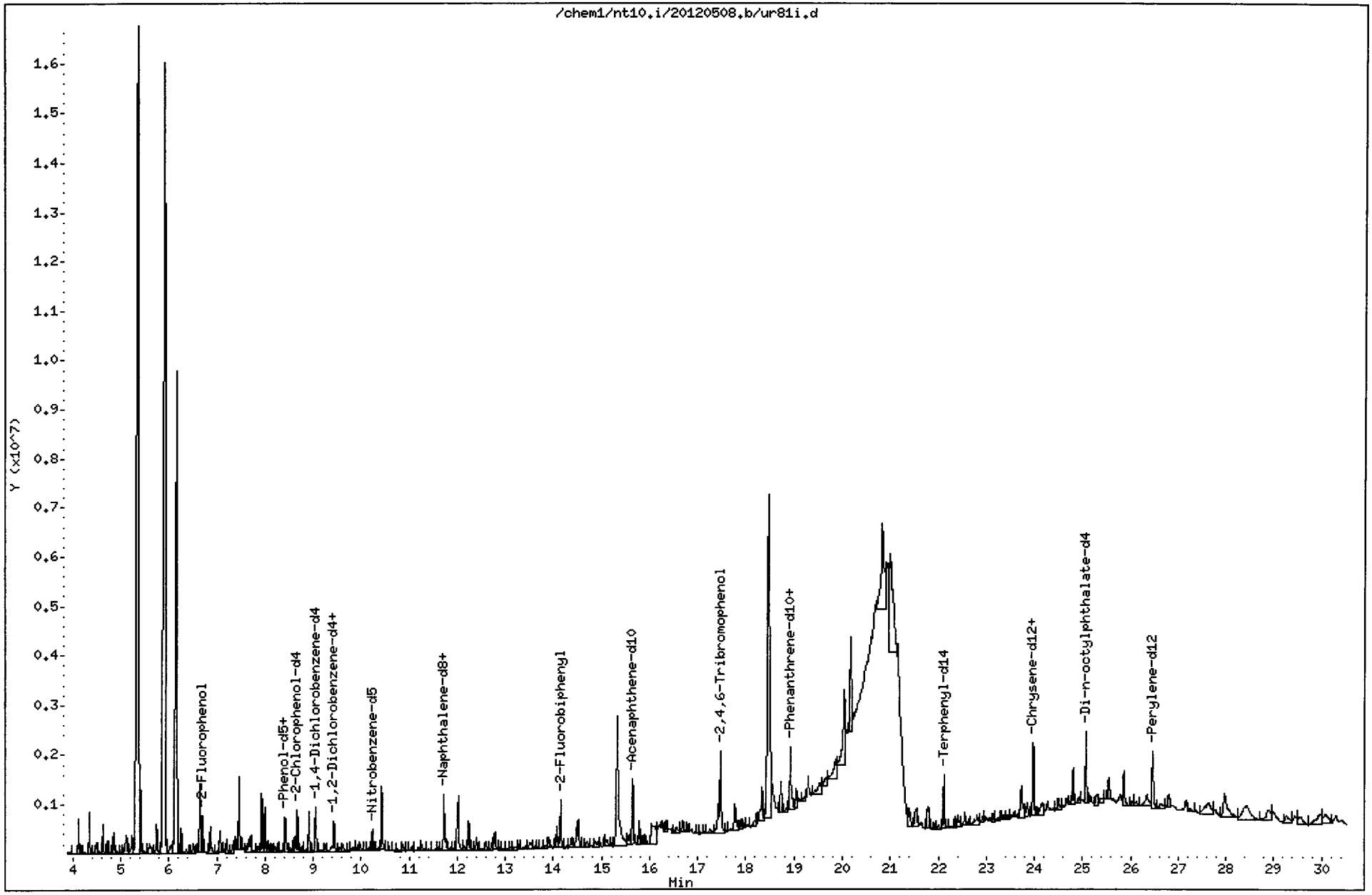
Sample Info: UR81I

Volume Injected (uL): 1.0

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

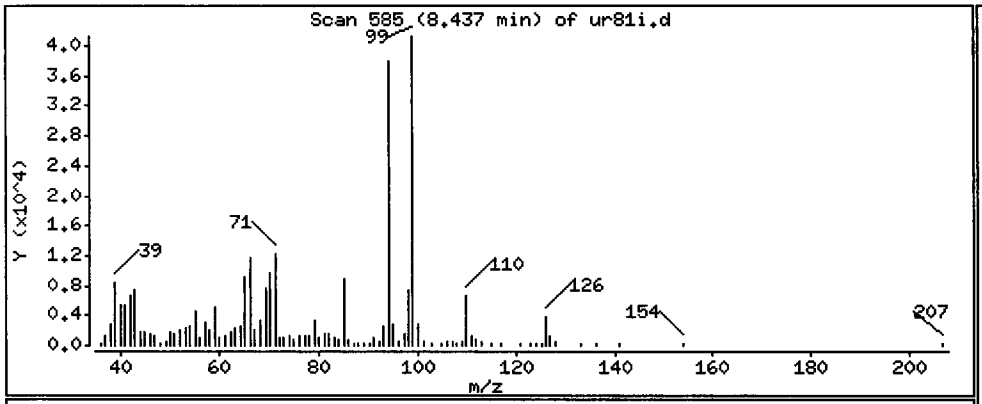
Client ID: IJ12-11 | Instrument: nt10.i

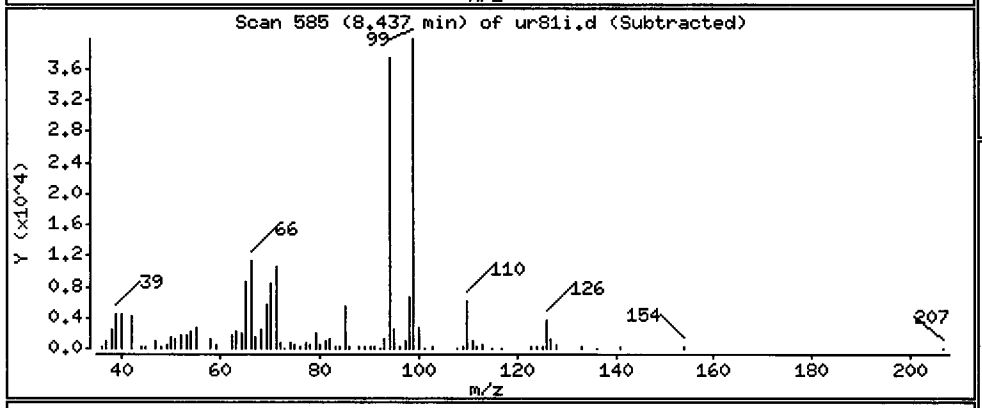
Sample Info: UR81I

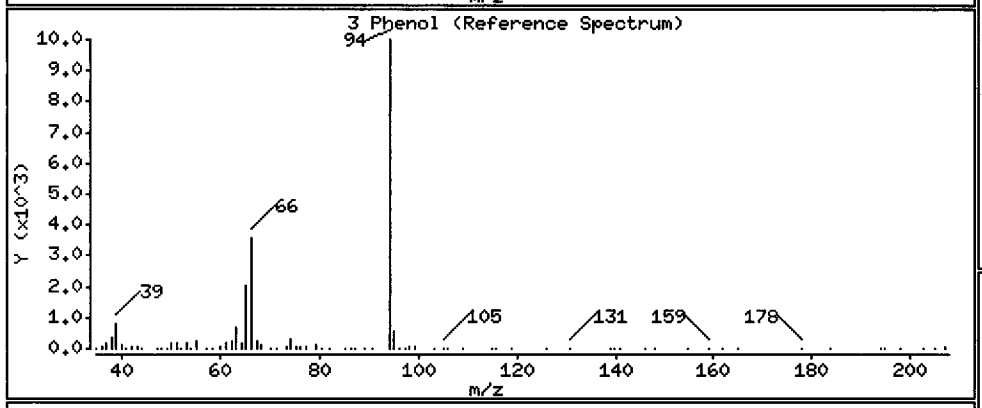
Volume Injected (uL): 1.0 | Operator: VTS/YZ

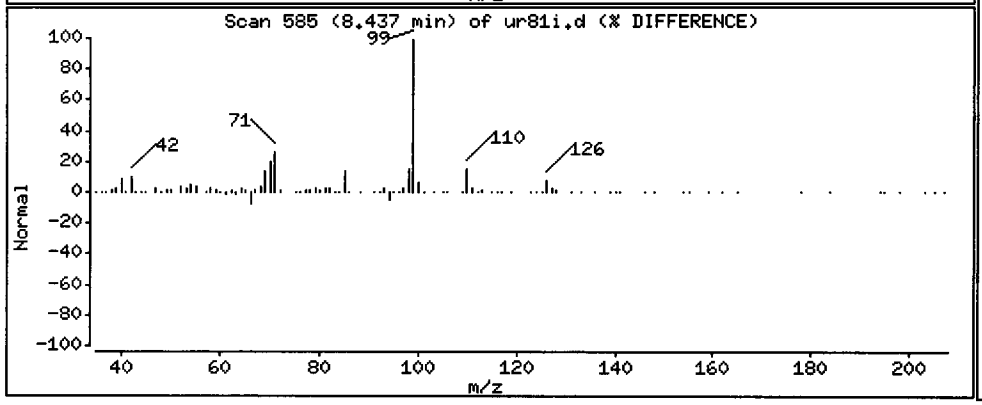
Column phase: ZB-5msi | Column diameter: 0.25

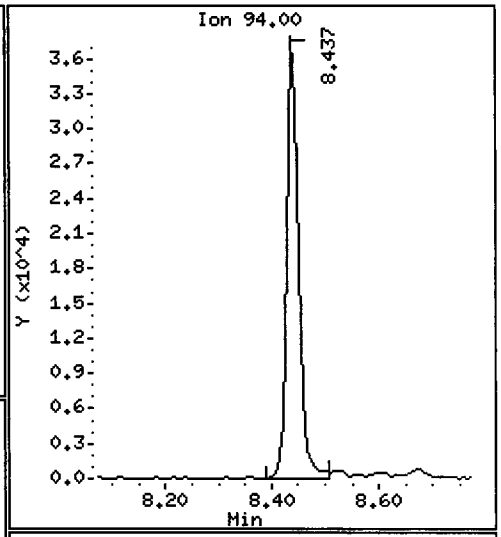
3 Phenol | Concentration: 51.52 ug/kg

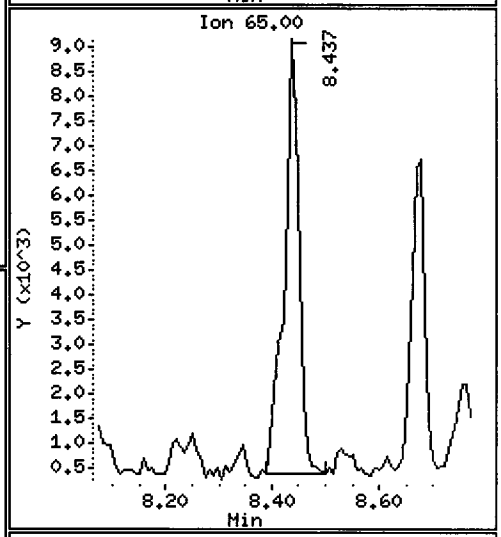


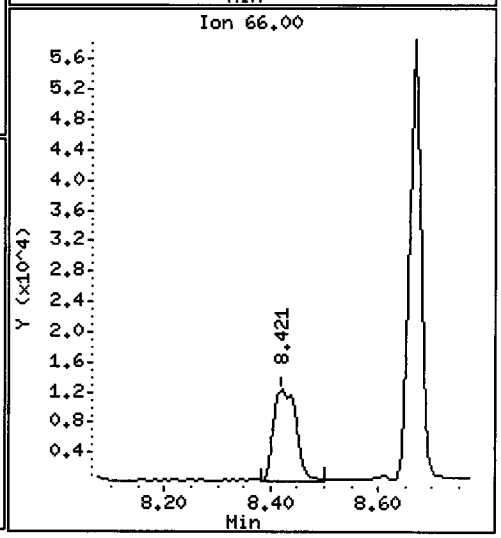












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

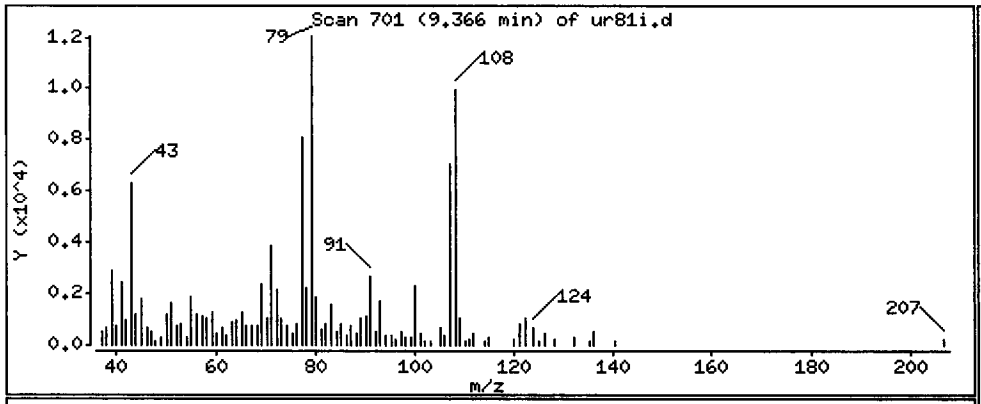
Client ID: IJ12-11 | Instrument: nt10.i

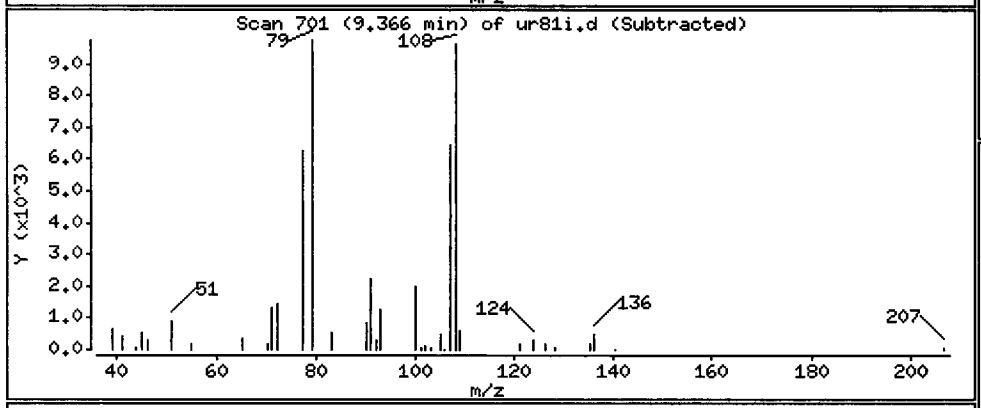
Sample Info: UR81I

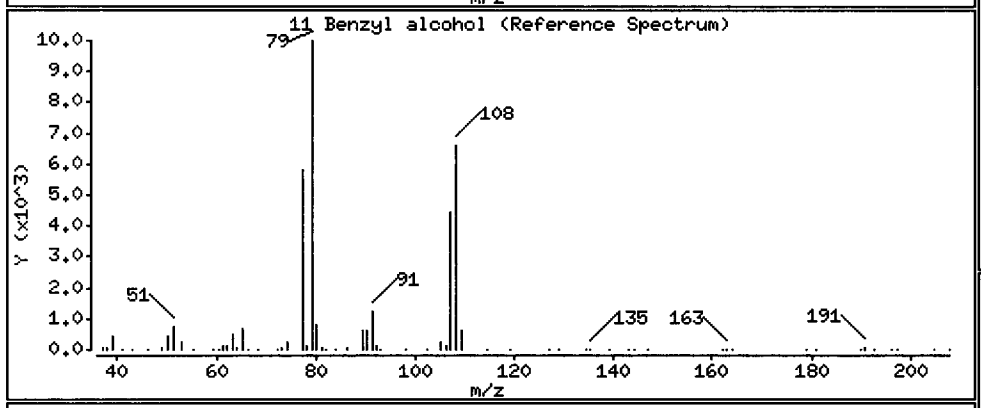
Volume Injected (uL): 1.0 | Operator: VTS/YZ

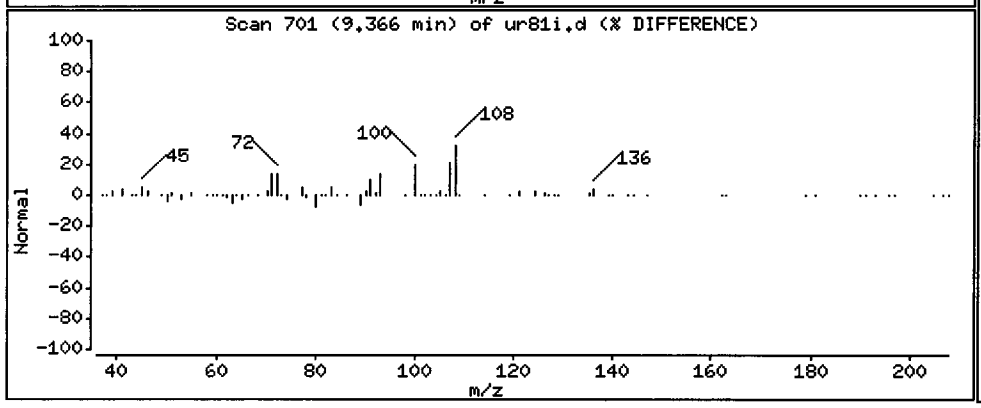
Column phase: ZB-5msi | Column diameter: 0.25

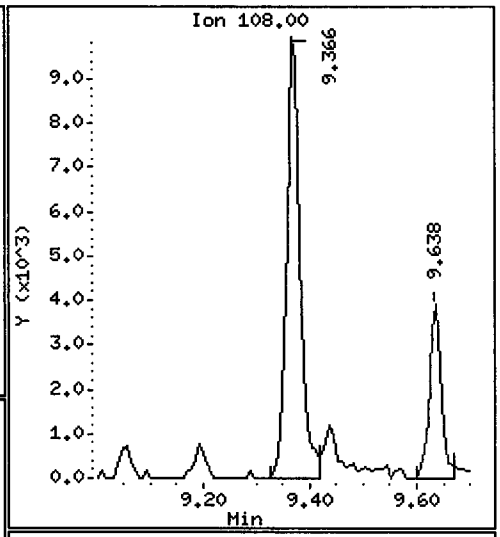
11 Benzyl alcohol | Concentration: 32.89 ug/kg

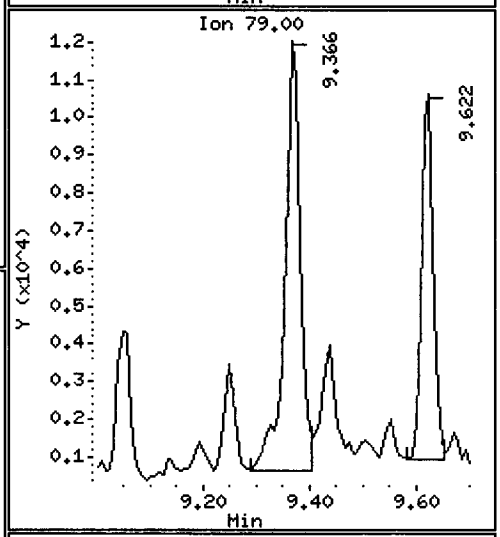


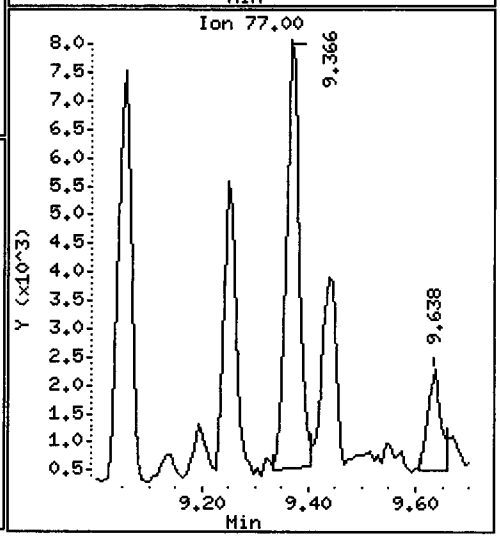












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

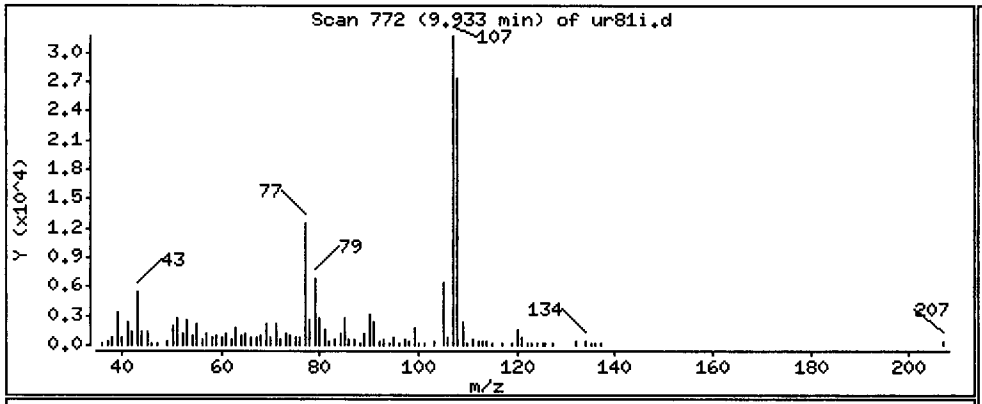
Client ID: IJ12-11 Instrument: nt10.i

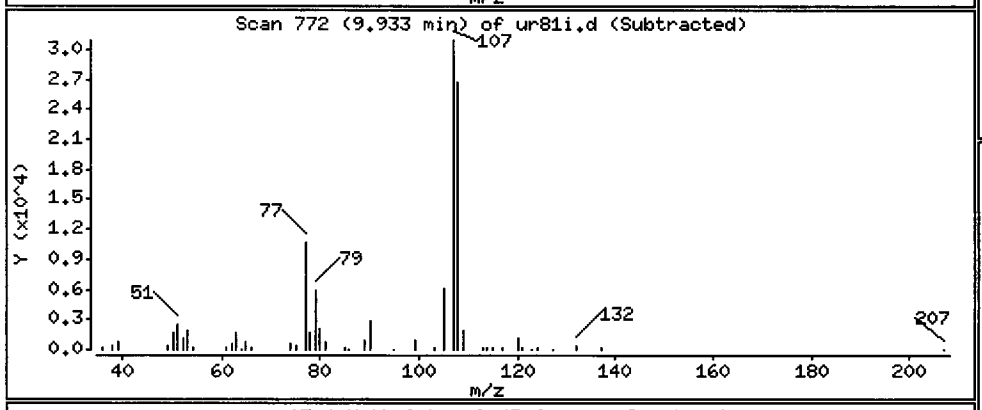
Sample Info: UR81I

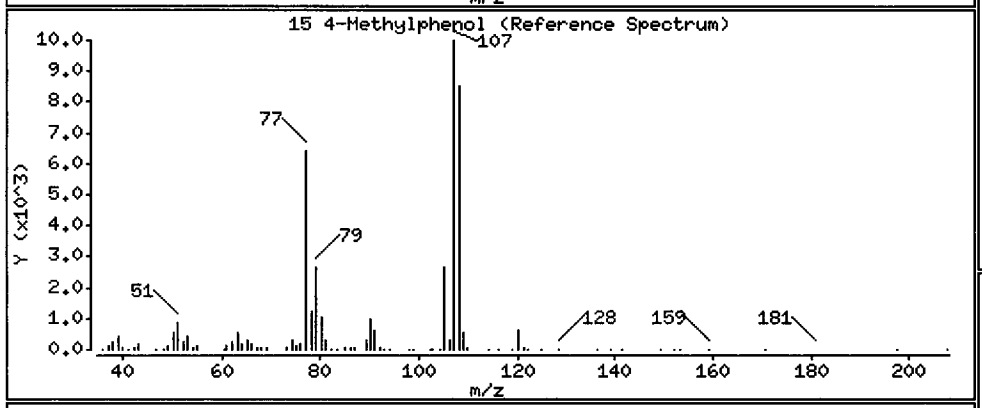
Volume Injected (uL): 1.0 Operator: VTS/YZ

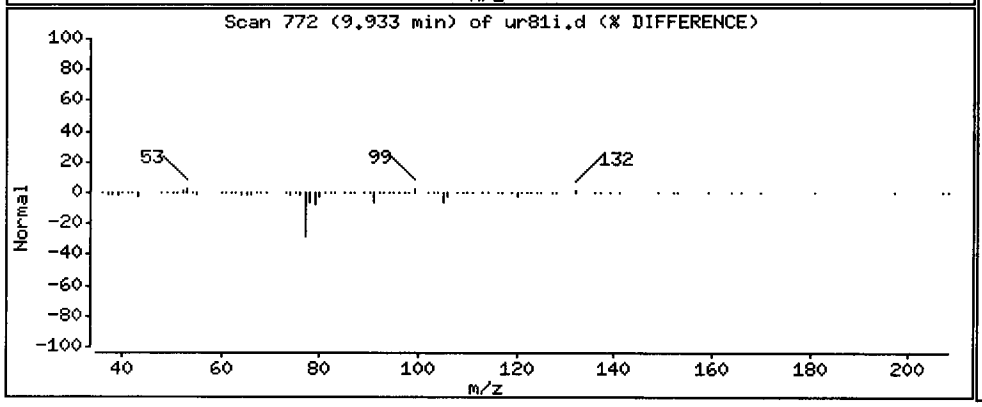
Column phase: ZB-5msi Column diameter: 0.25

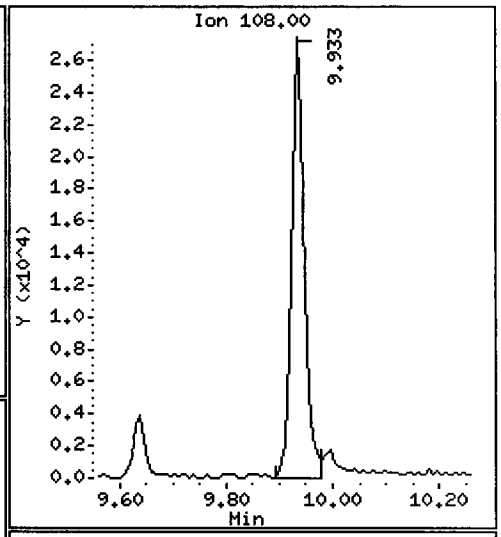
15 4-Methylphenol Concentration: 49.85 ug/kg

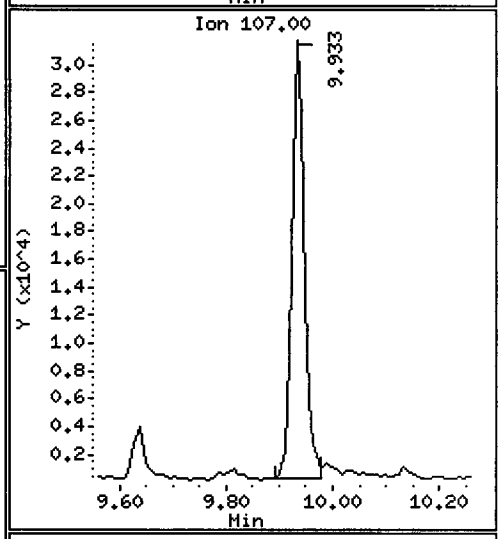


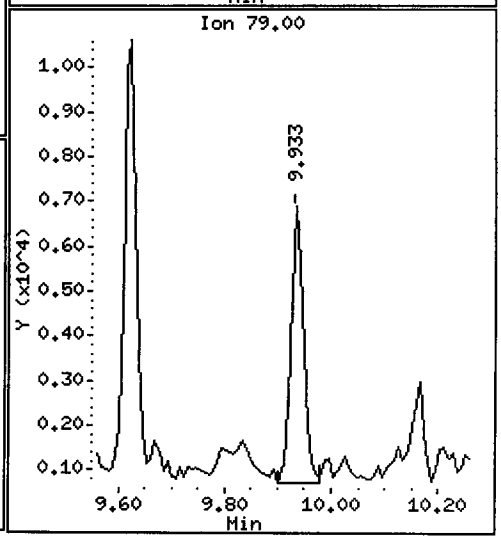












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

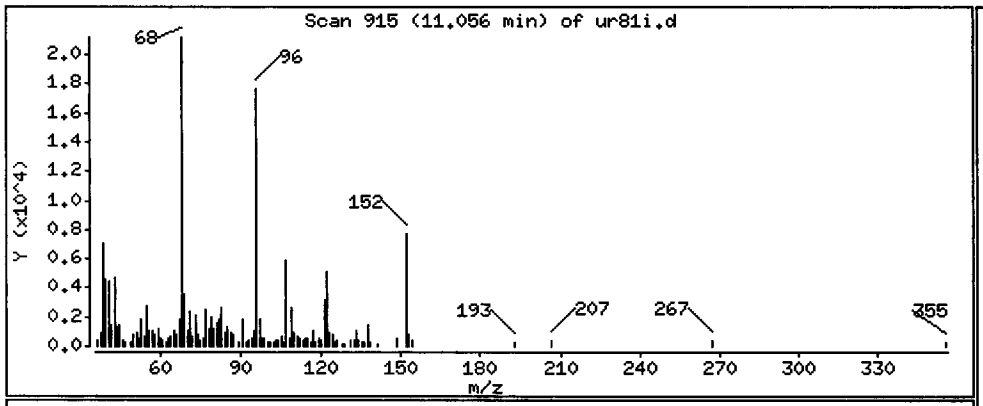
Client ID: IJ12-11 | Instrument: nt10.i

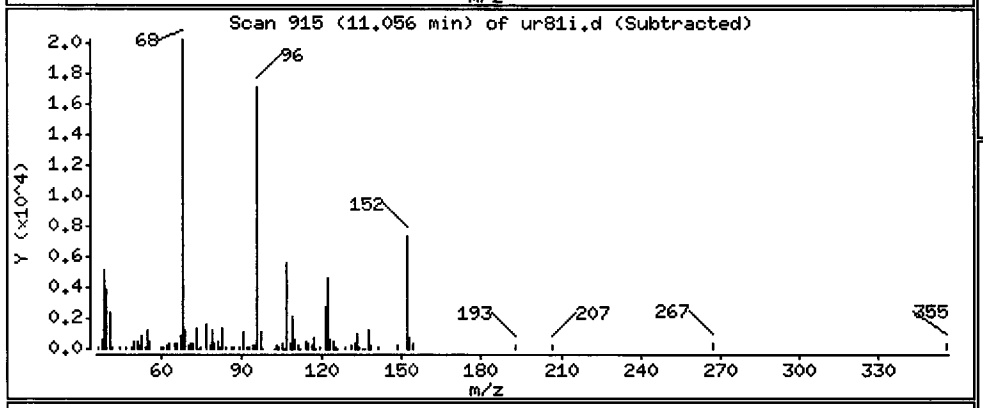
Sample Info: UR81I

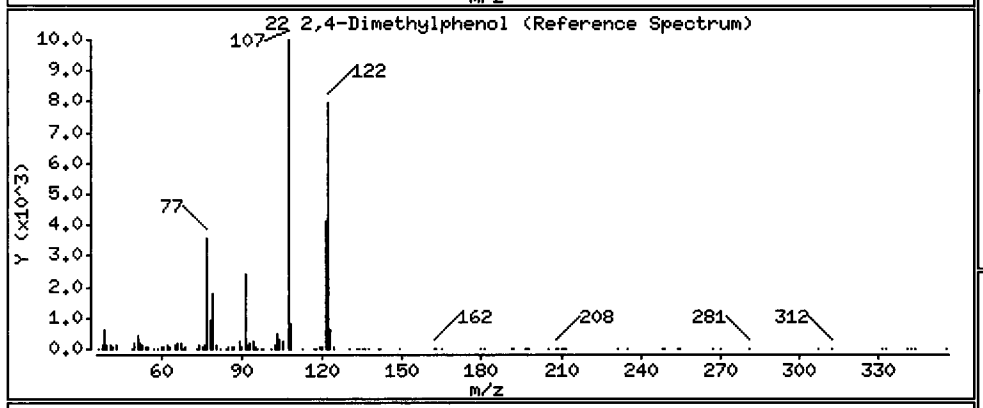
Volume Injected (uL): 1.0 | Operator: VTS/YZ

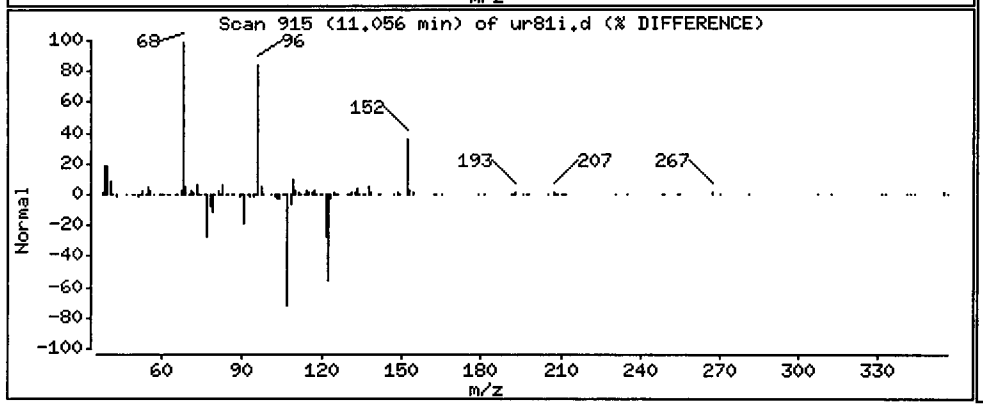
Column phase: ZB-5msi | Column diameter: 0.25

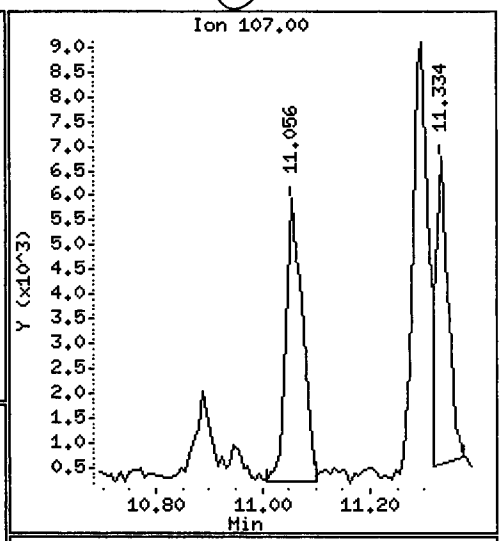
22 2,4-Dimethylphenol | Concentration: 14.74 ug/kg

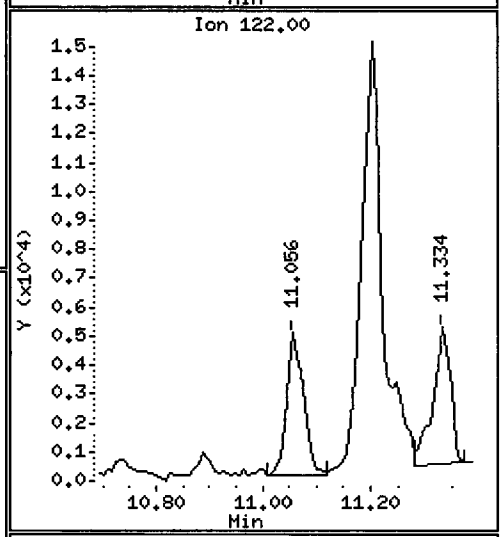


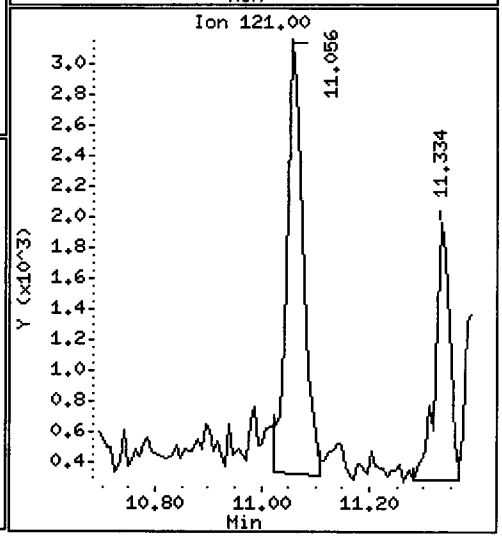












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

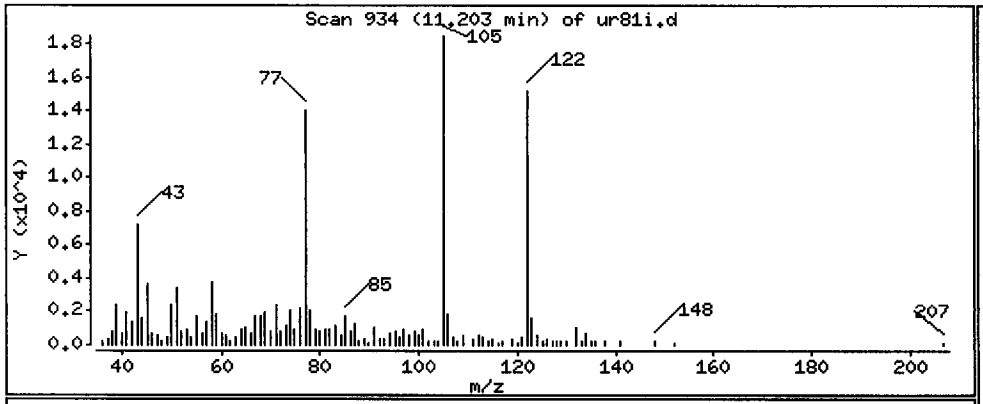
Operator: VTS/YZ

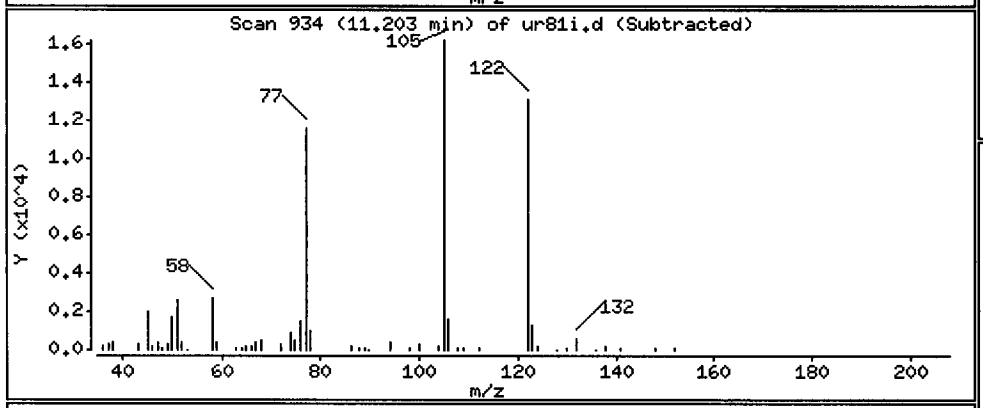
Column phase: ZB-5msi

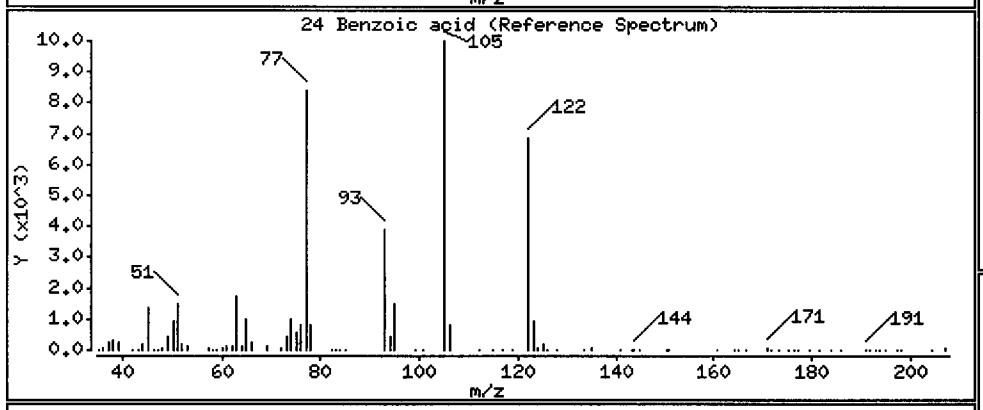
Column diameter: 0.25

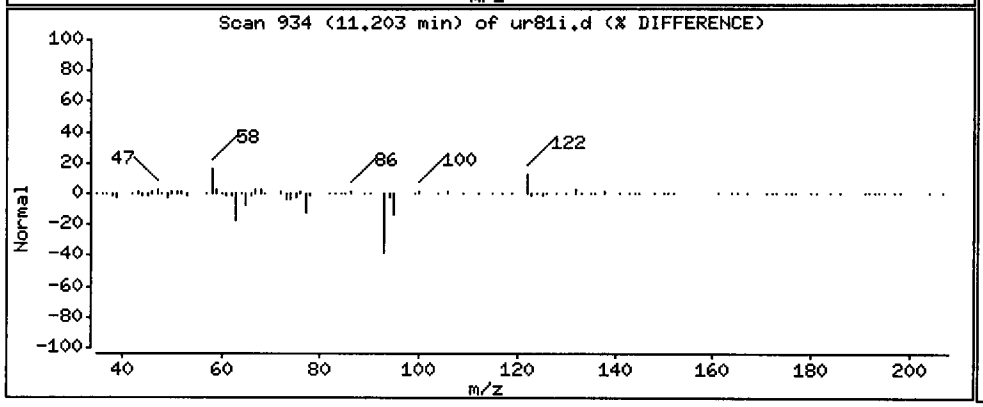
24 Benzoic acid

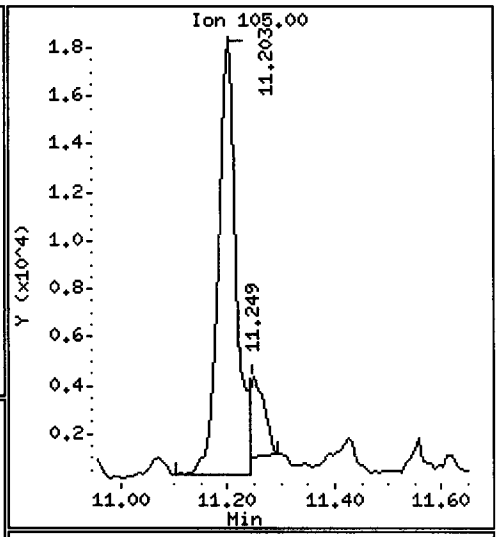
Concentration: 66.49 ug/kg

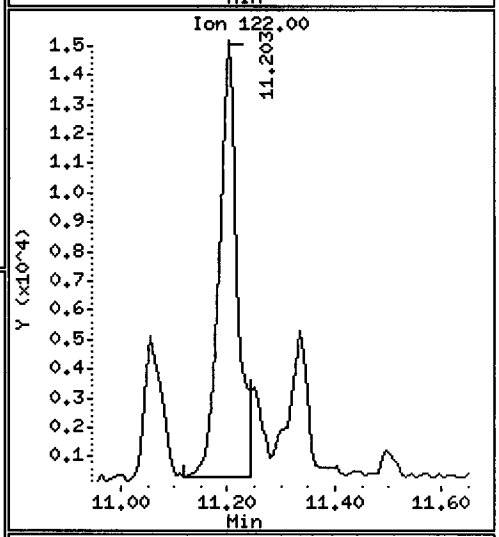


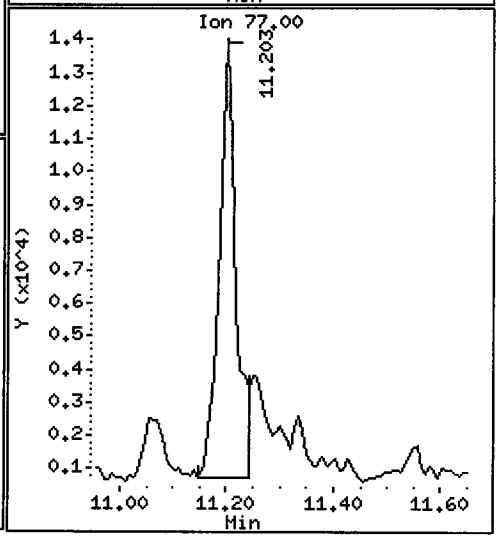












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

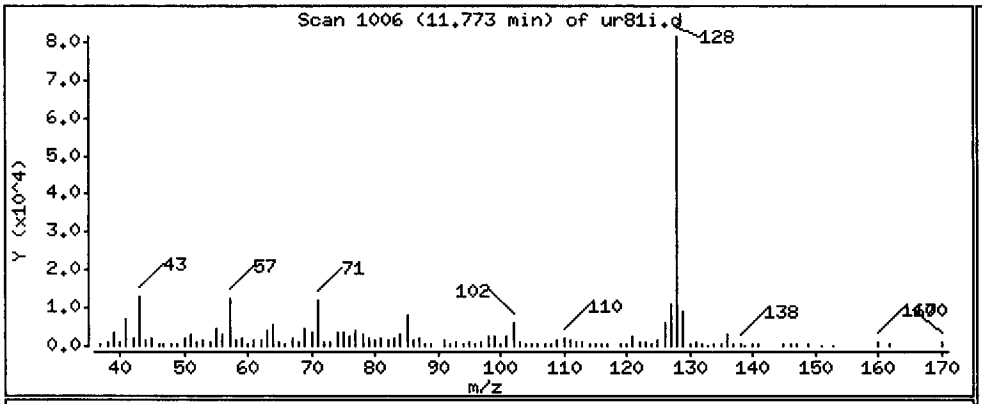
Client ID: IJ12-11 Instrument: nt10.i

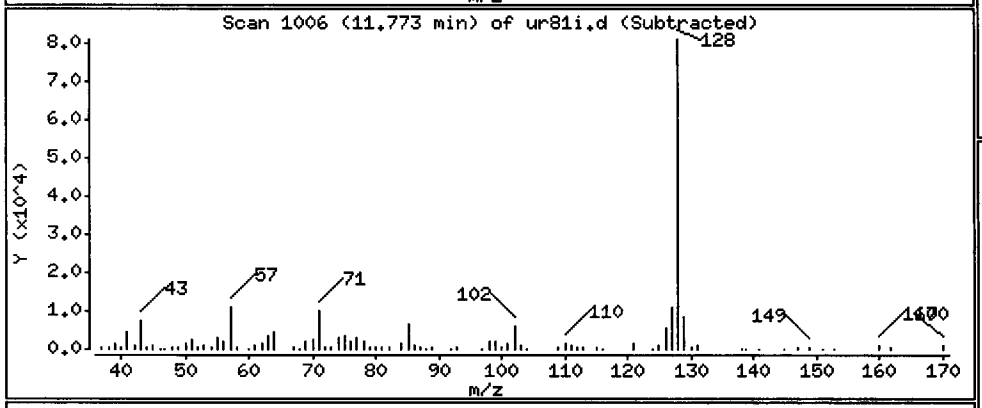
Sample Info: UR81I

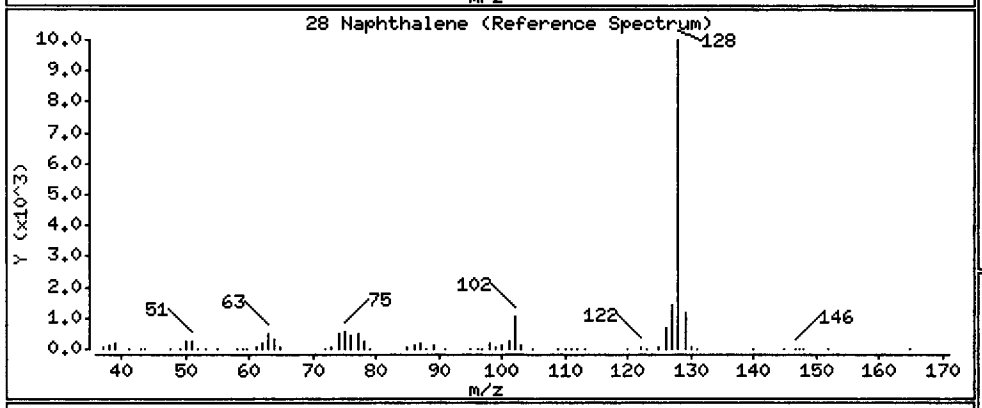
Volume Injected (uL): 1.0 Operator: VTS/YZ

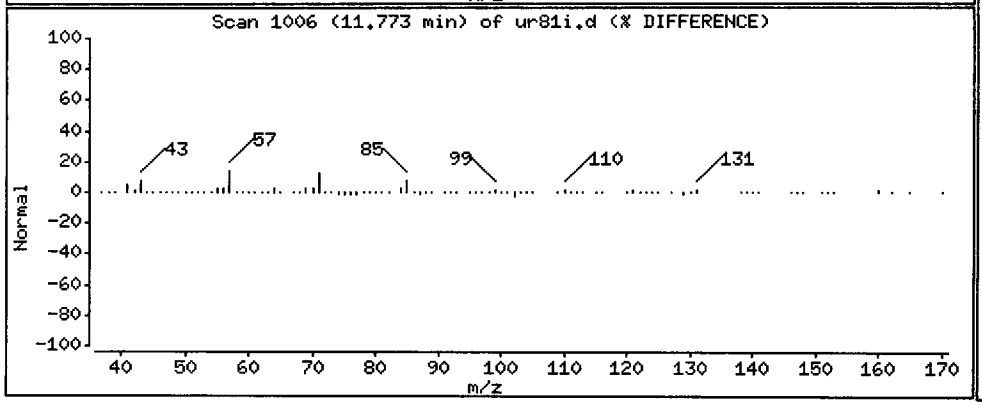
Column phase: ZB-5msi Column diameter: 0.25

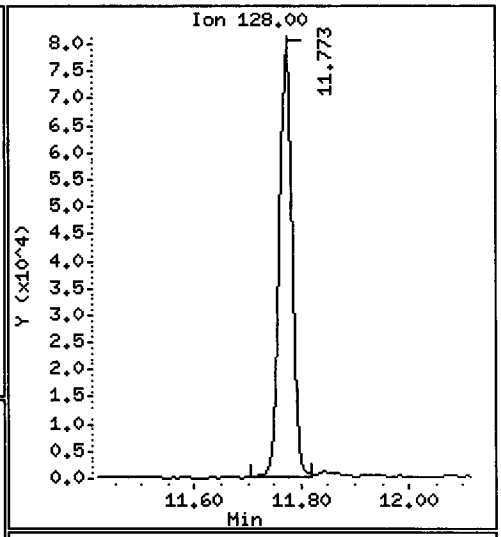
28 Naphthalene Concentration: 51.34 ug/kg

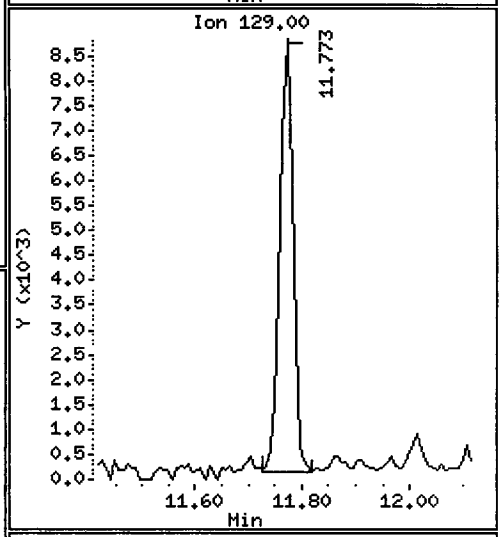


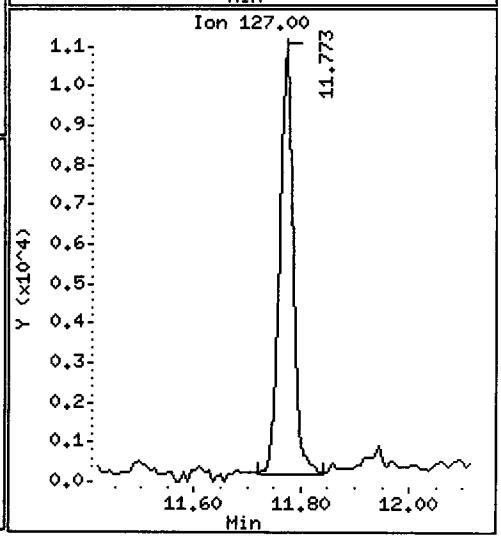












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

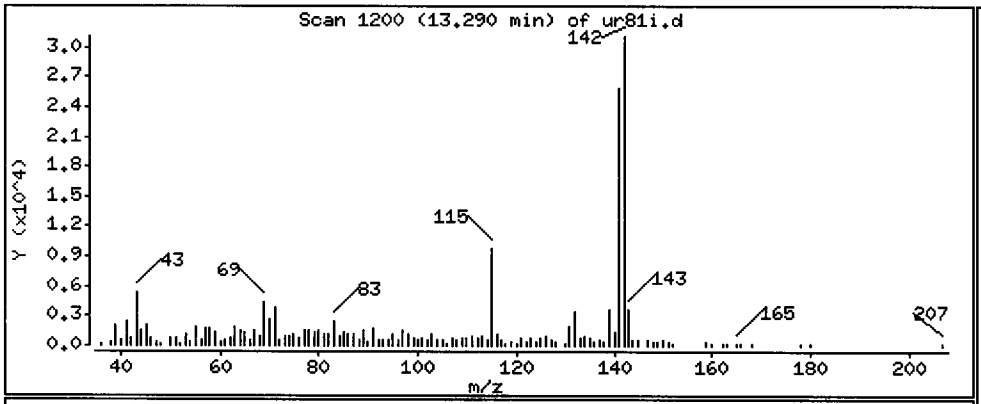
Operator: VTS/YZ

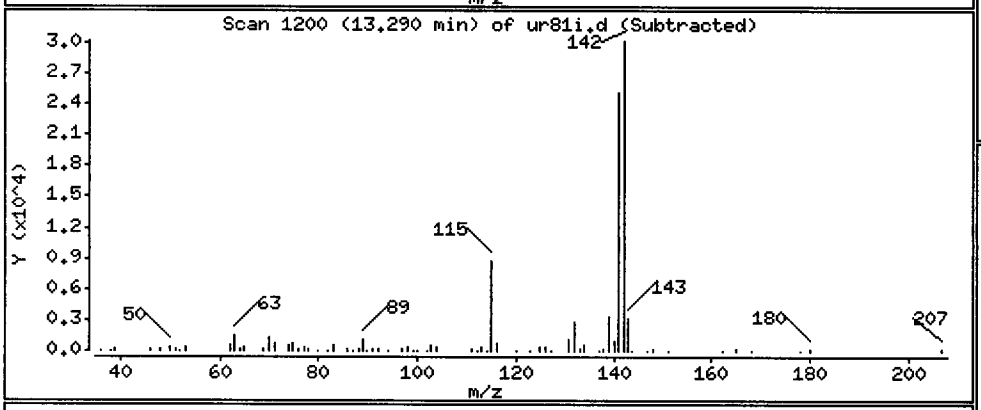
Column phase: ZB-5msi

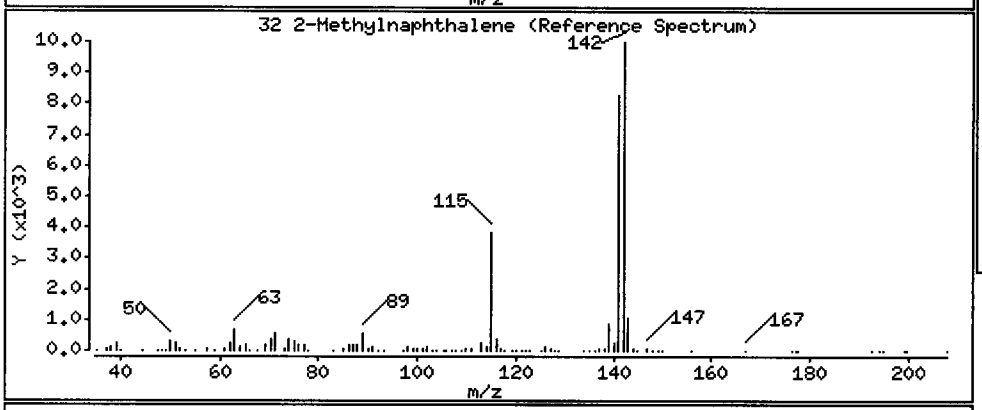
Column diameter: 0.25

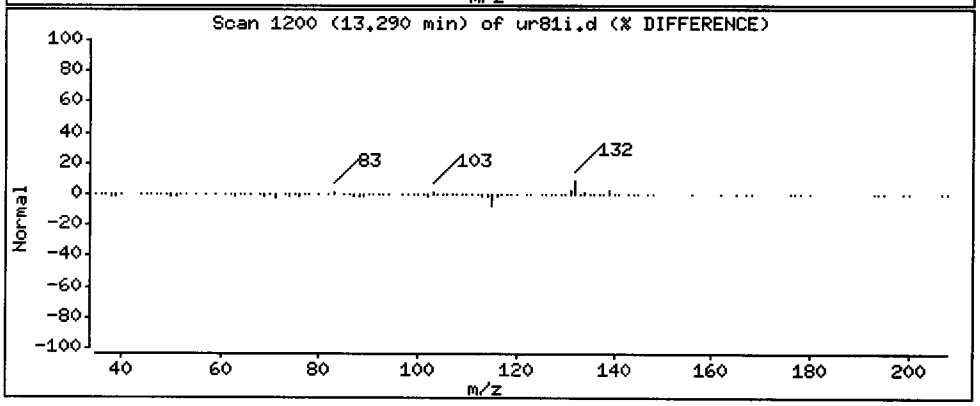
32 2-Methylnaphthalene

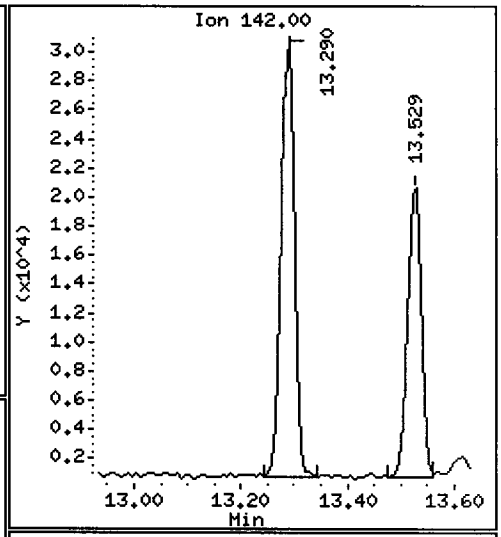
Concentration: 29.55 ug/kg

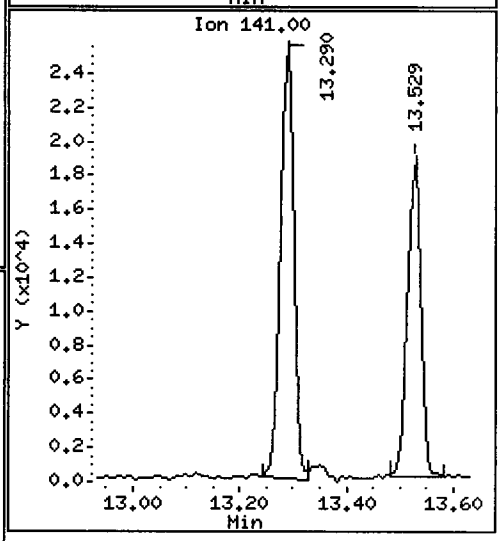












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

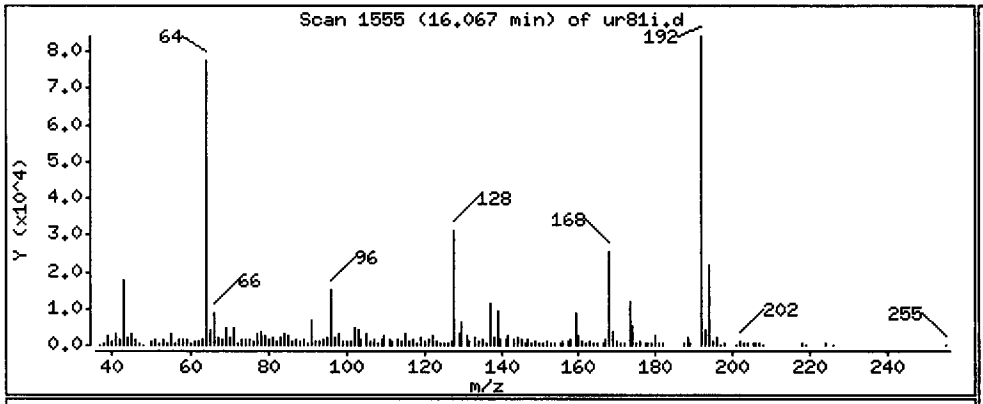
Client ID: IJ12-11 Instrument: nt10.i

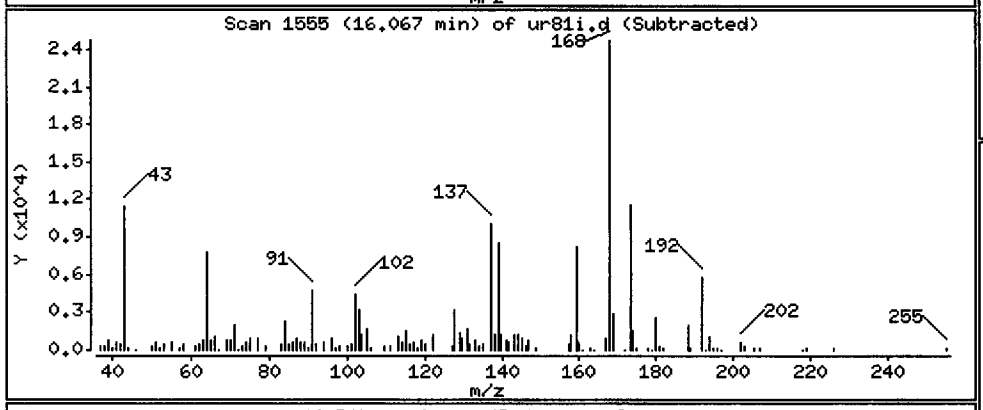
Sample Info: UR81I

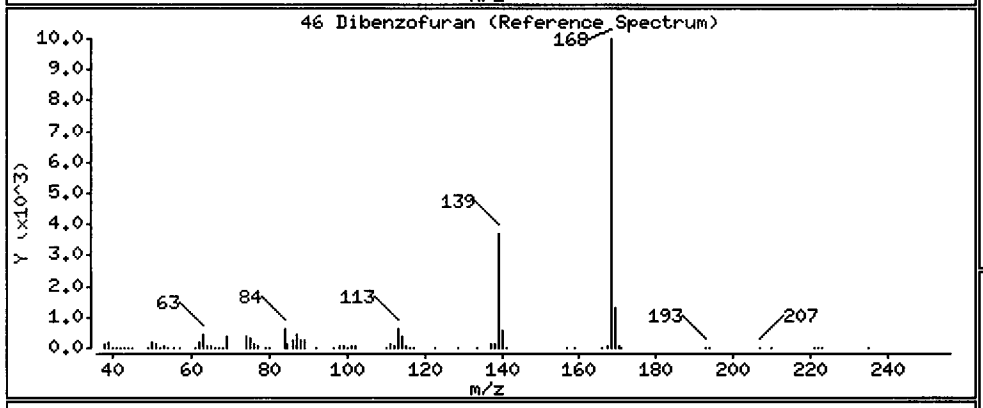
Volume Injected (uL): 1.0 Operator: VTS/YZ

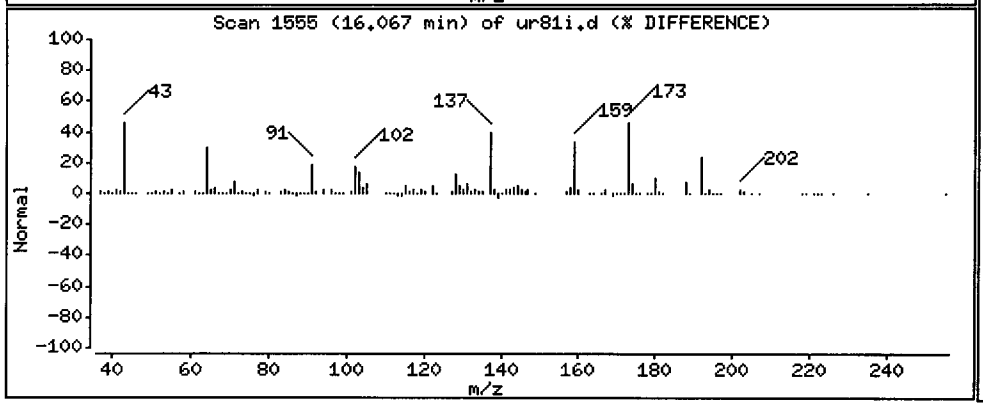
Column phase: ZB-5msi Column diameter: 0.25

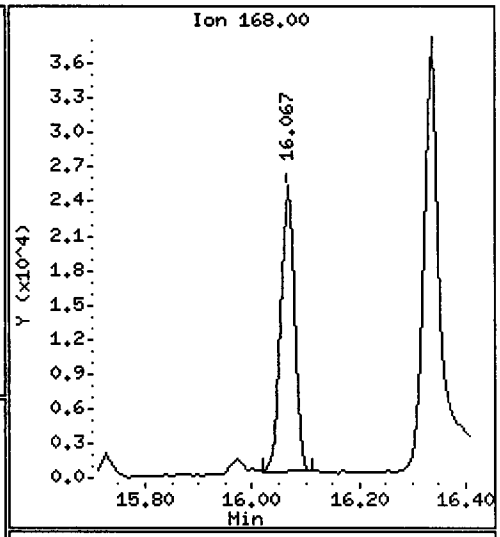
46 Dibenzofuran Concentration: 20.54 ug/kg

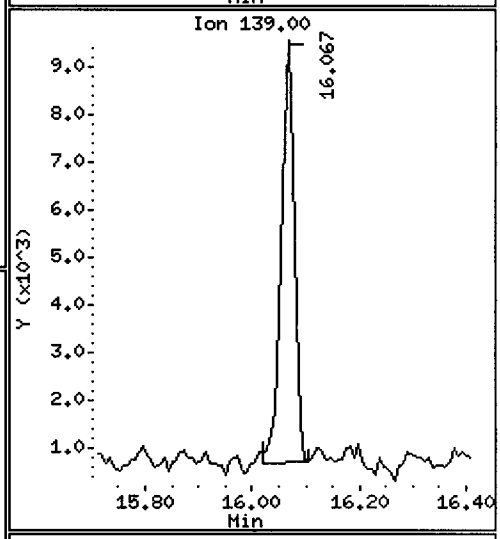


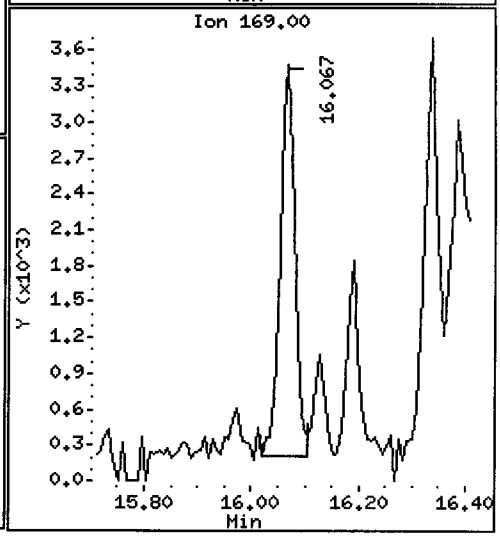












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

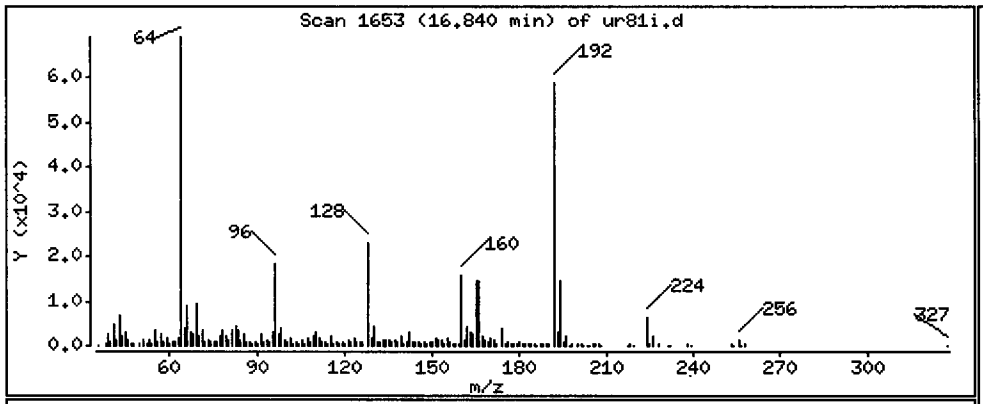
Client ID: IJ12-11 | Instrument: nt10.i

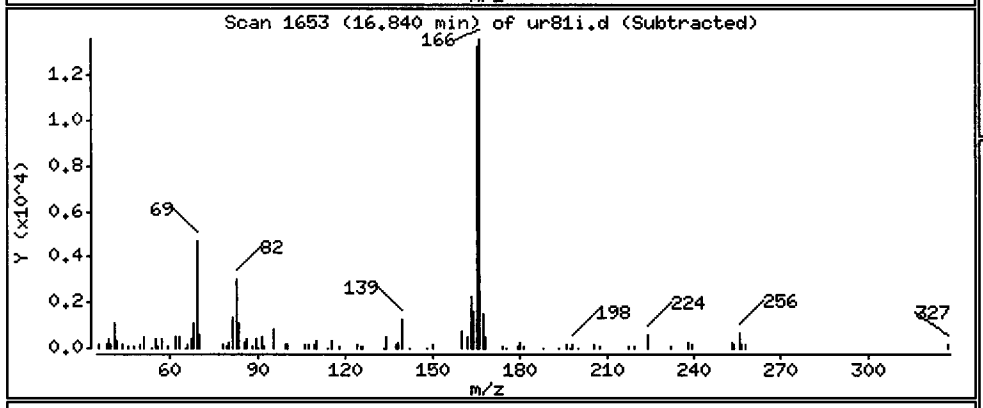
Sample Info: UR81I

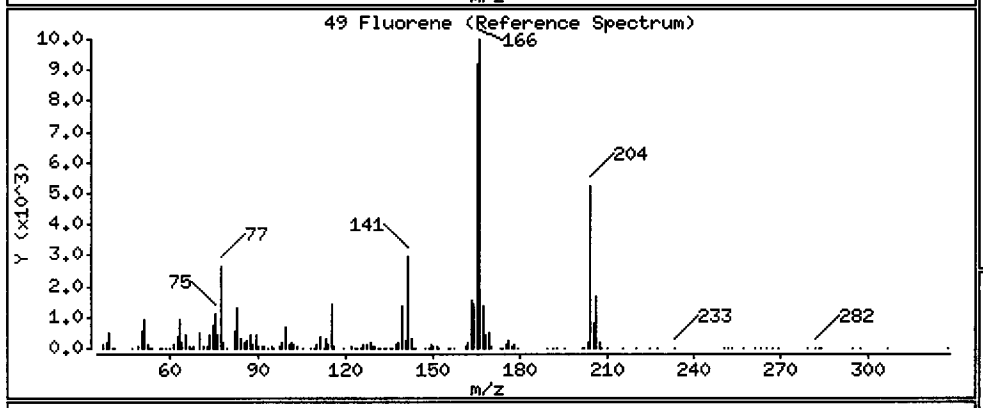
Volume Injected (uL): 1.0 | Operator: VTS/YZ

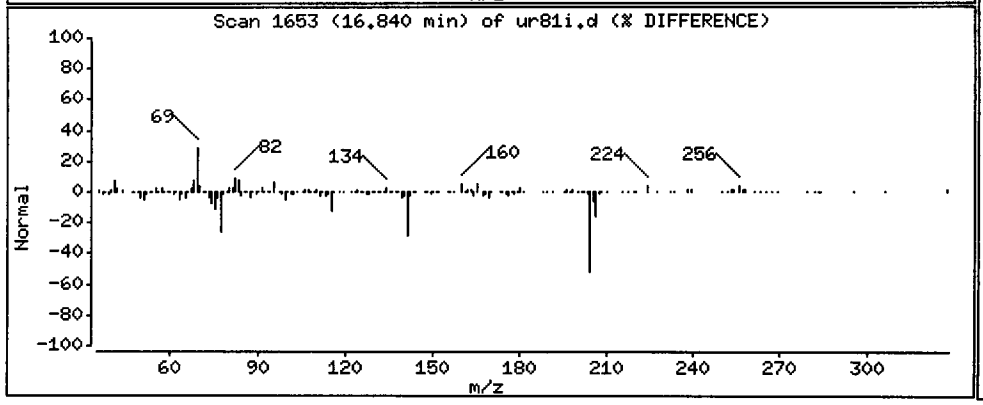
Column phase: ZB-5msi | Column diameter: 0.25

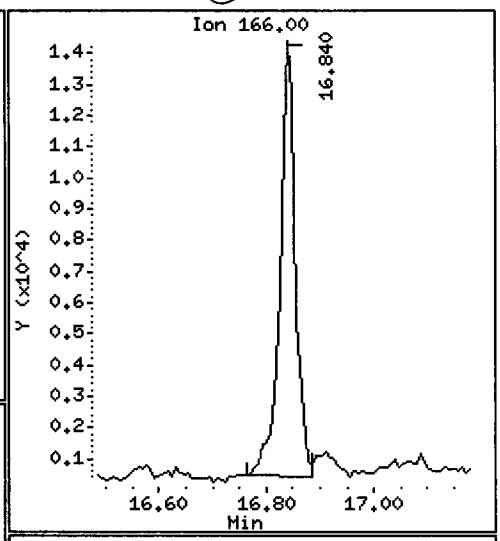
49 Fluorene | Concentration: 17.98 ug/kg

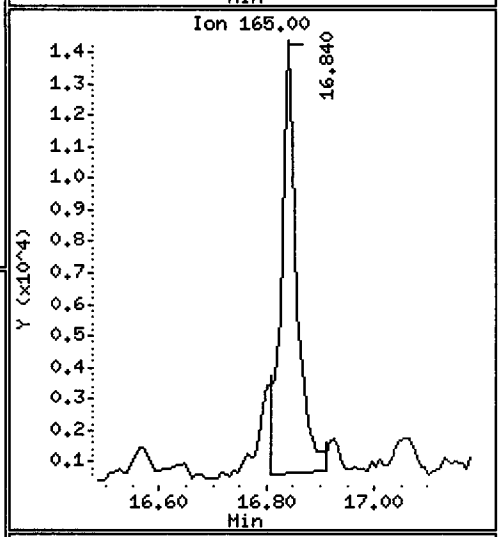


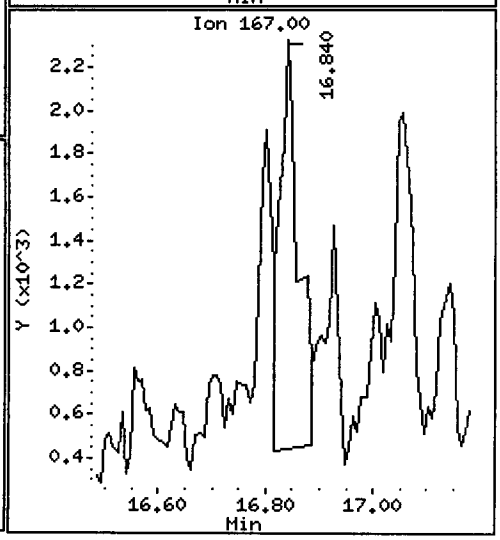












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

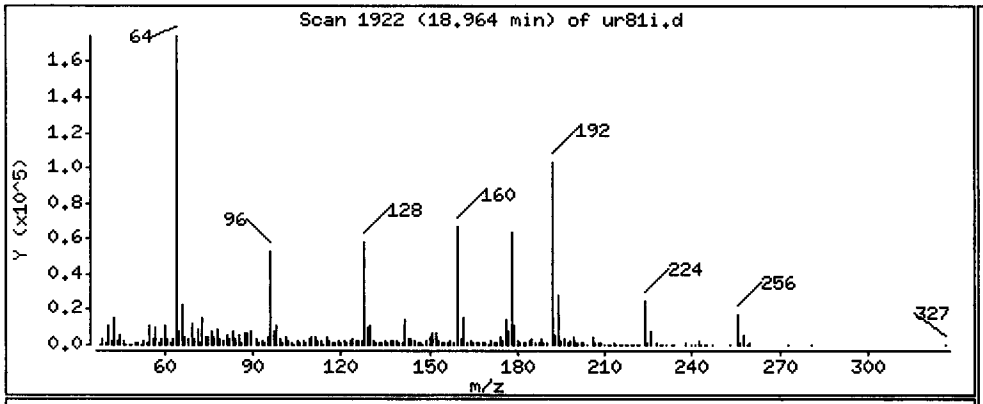
Client ID: IJ12-11 Instrument: nt10.i

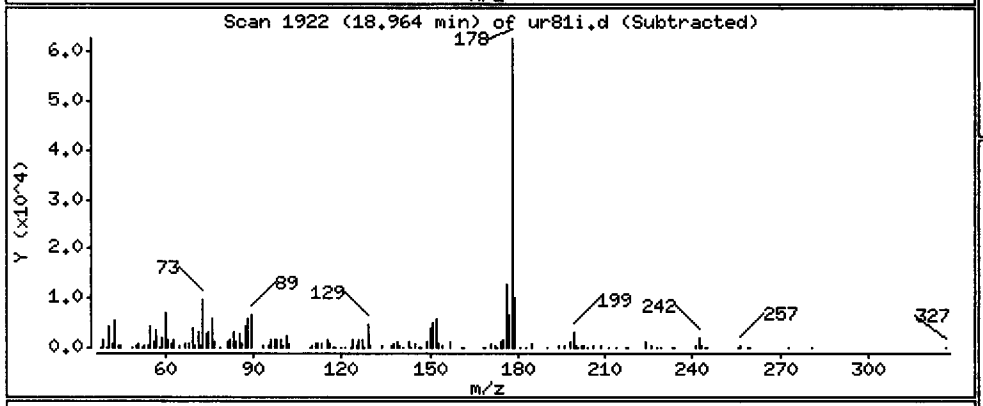
Sample Info: UR81I

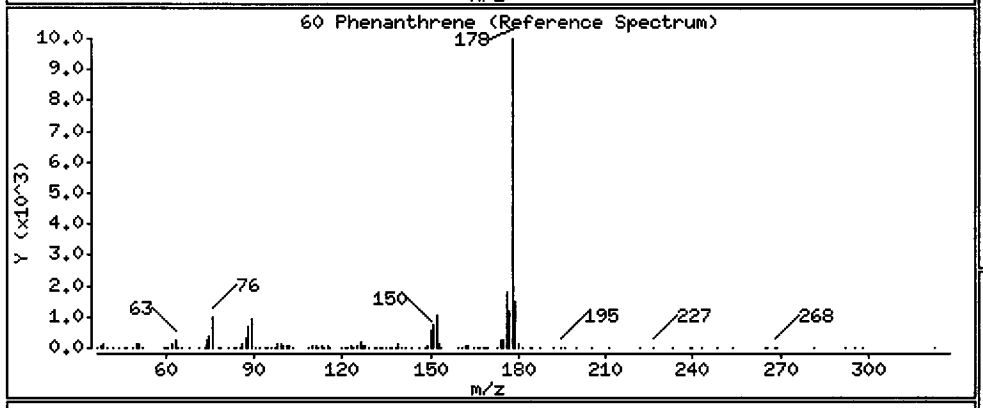
Volume Injected (uL): 1.0 Operator: VTS/YZ

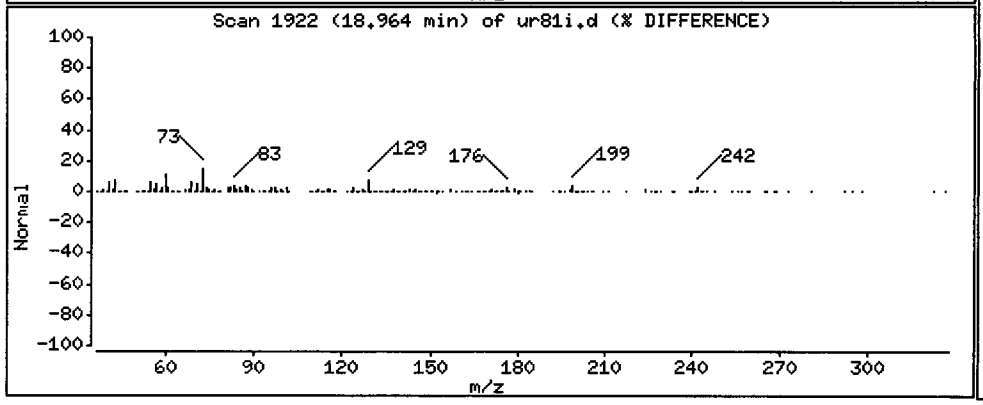
Column phase: ZB-5msi Column diameter: 0.25

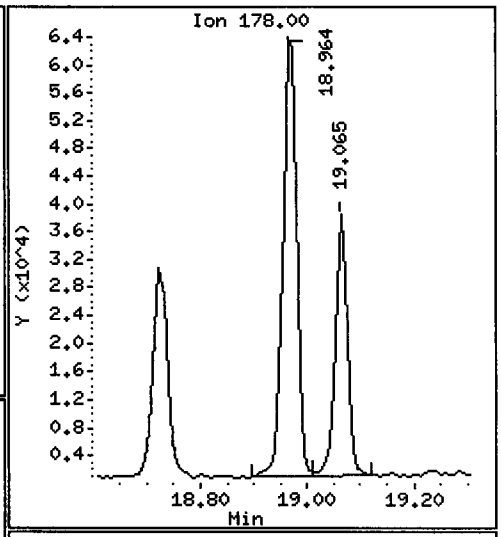
60 Phenanthrene Concentration: 55.05 ug/kg

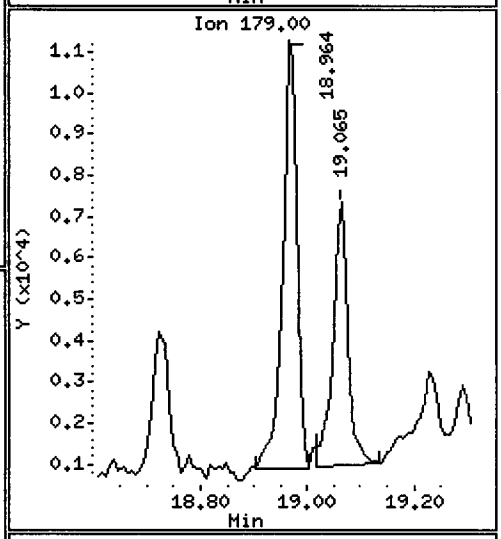


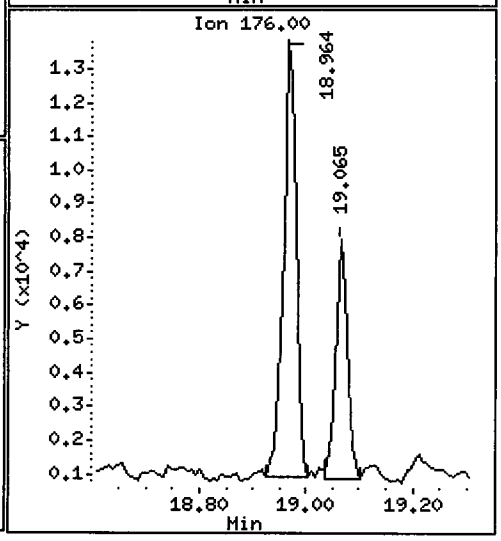












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

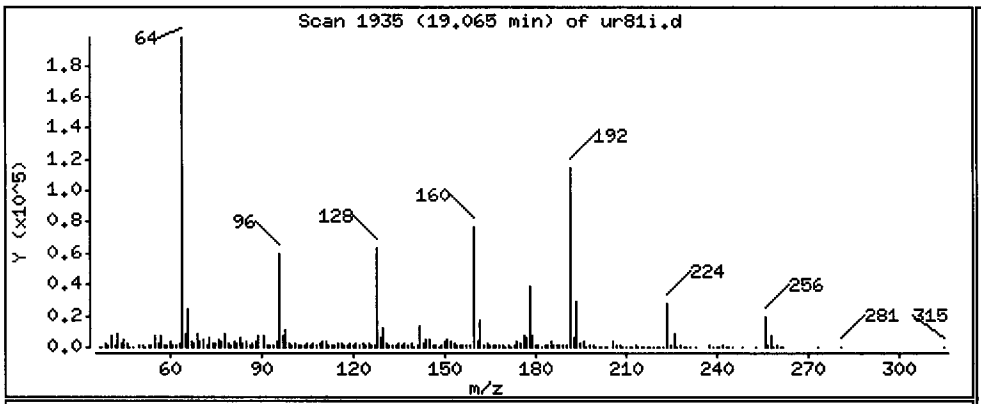
Client ID: IJ12-11 Instrument: nt10.i

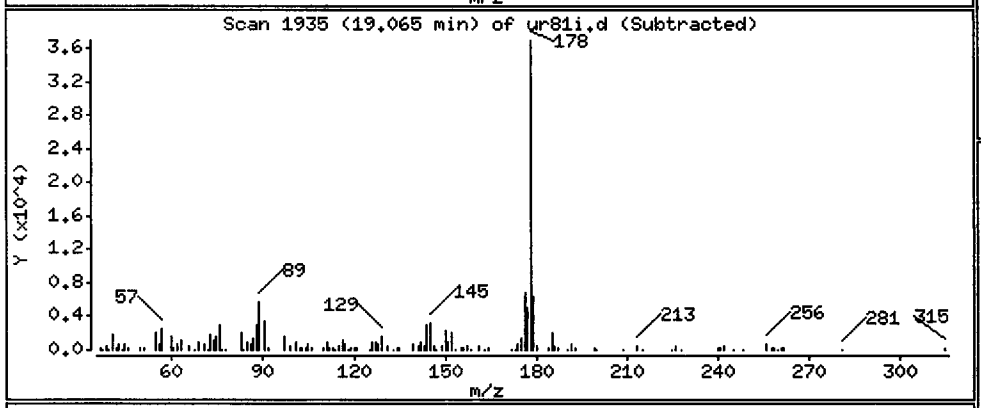
Sample Info: UR81I

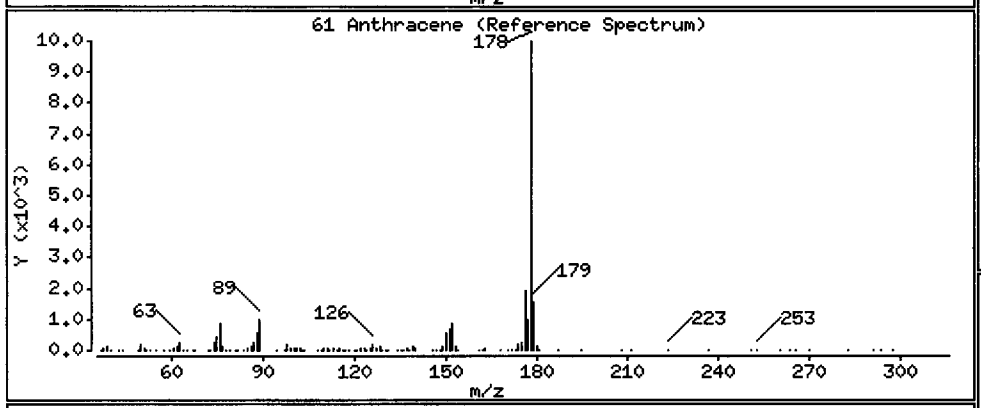
Volume Injected (uL): 1.0 Operator: VTS/YZ

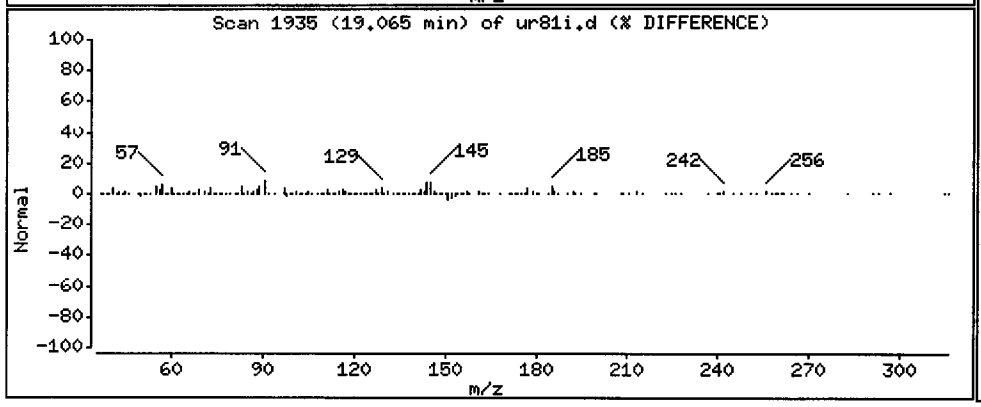
Column phase: ZB-5msi Column diameter: 0.25

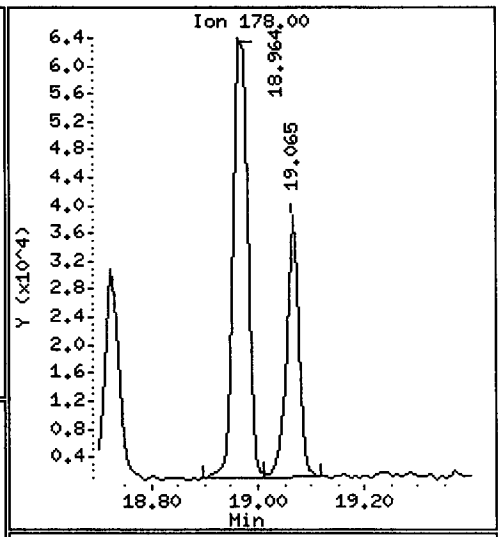
61 Anthracene Concentration: 27.83 ug/kg

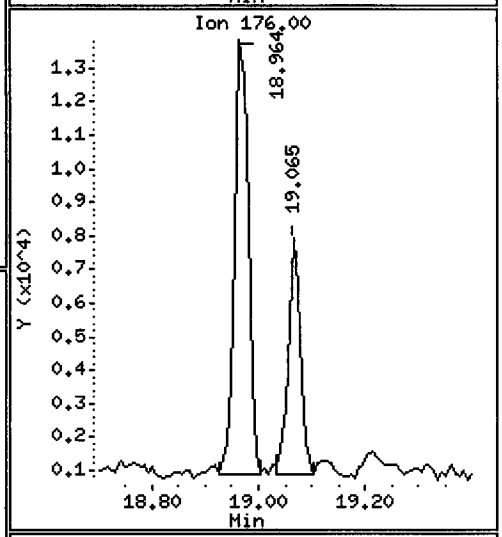


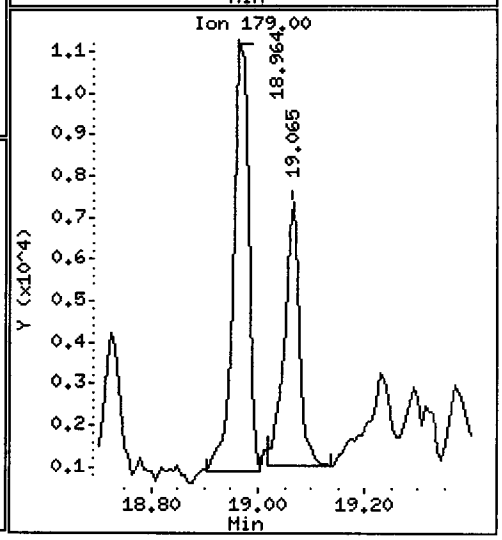












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

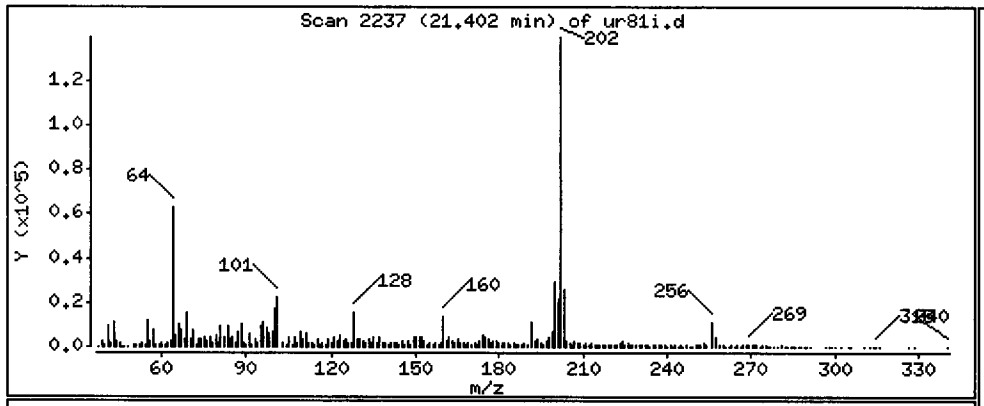
Operator: VTS/YZ

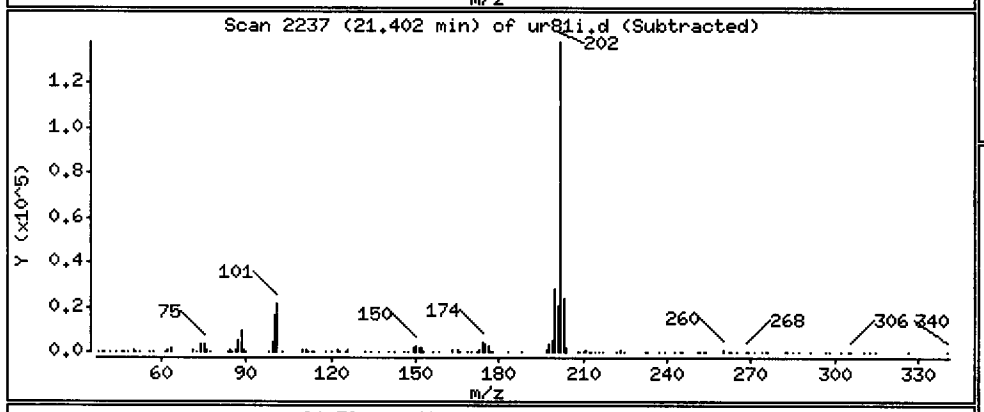
Column phase: ZB-5msi

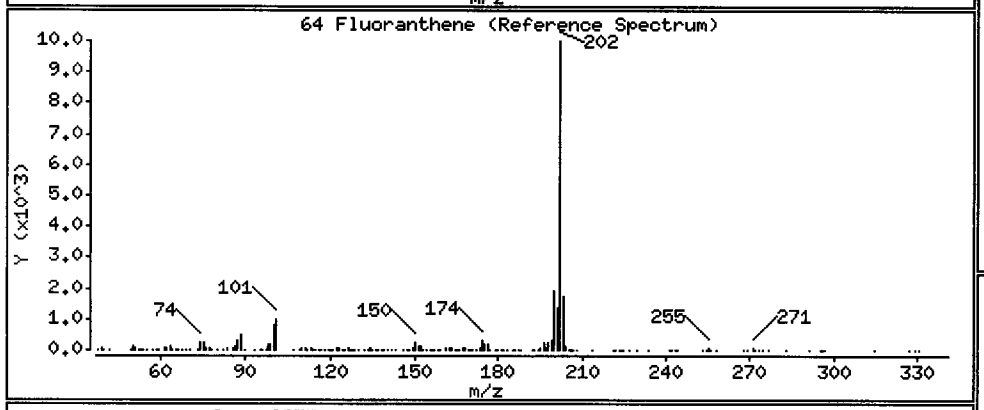
Column diameter: 0.25

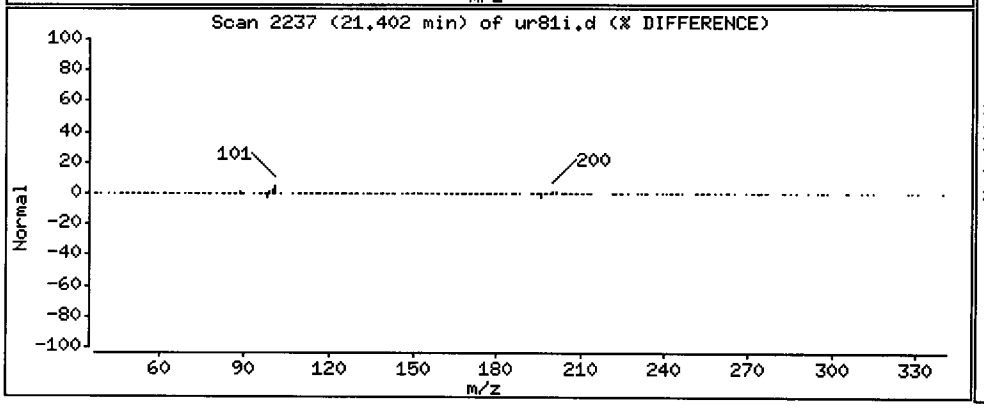
64 Fluoranthene

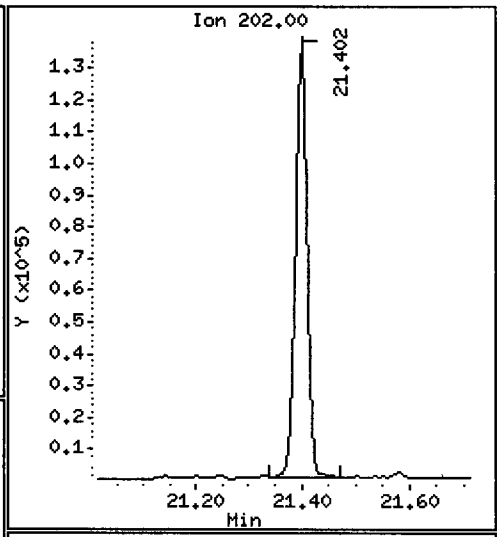
Concentration: 91.05 ug/kg

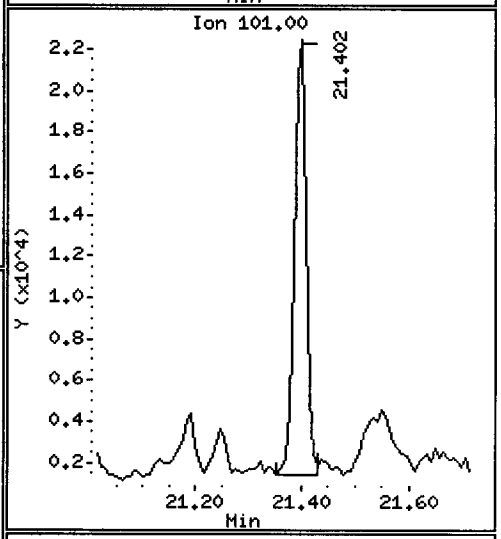


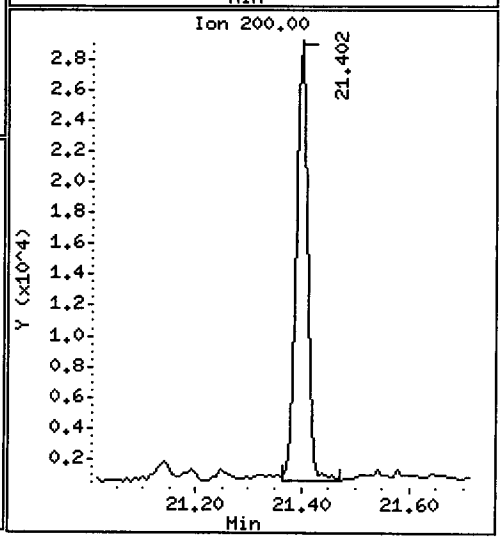












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

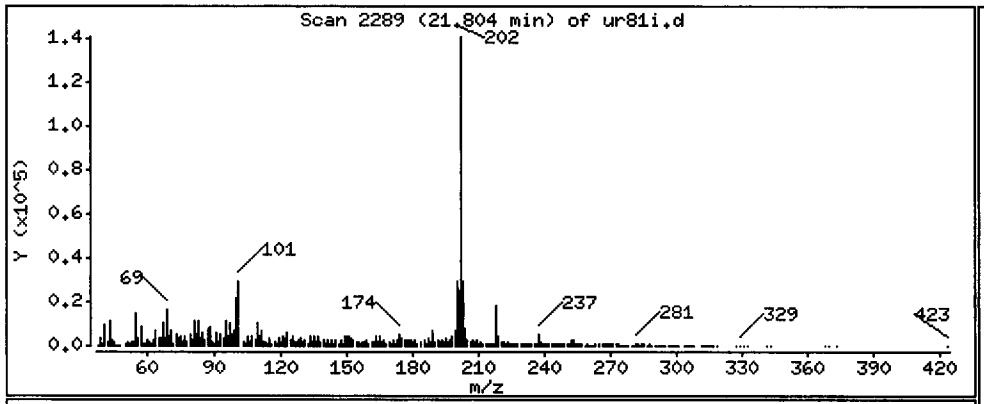
Client ID: IJ12-11 Instrument: nt10.i

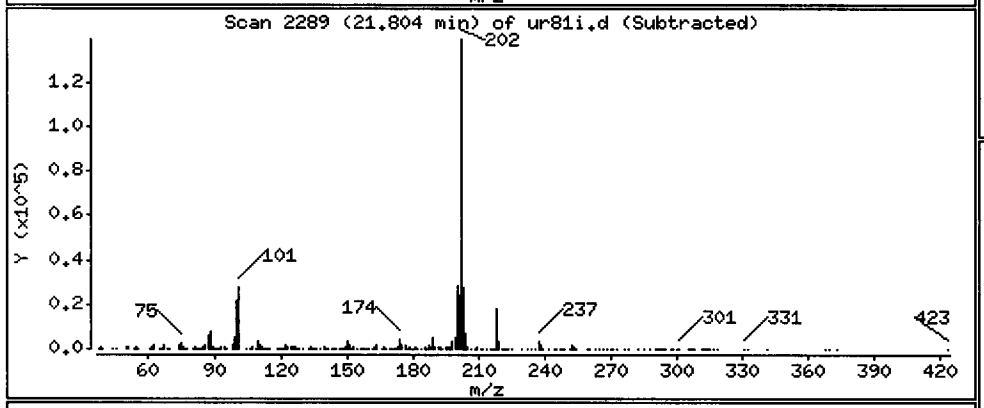
Sample Info: UR81I

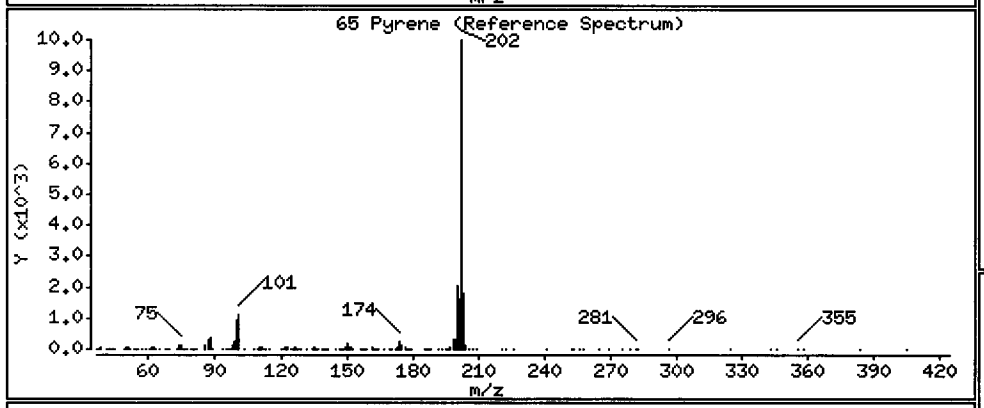
Volume Injected (uL): 1.0 Operator: VTS/YZ

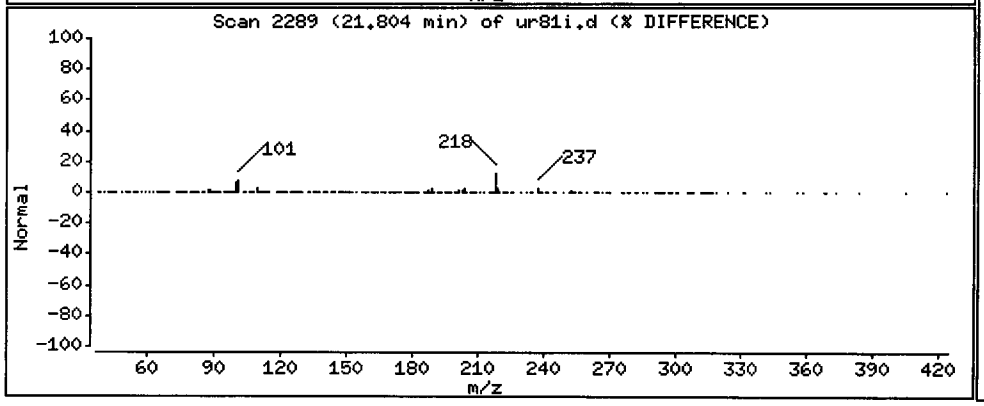
Column phase: ZB-5msi Column diameter: 0.25

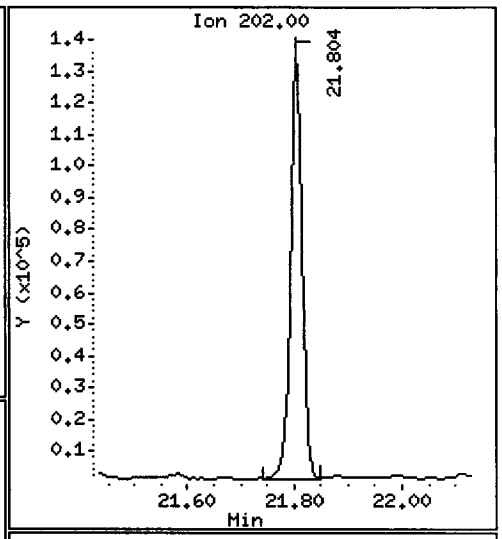
65 Pyrene Concentration: 78.58 ug/kg

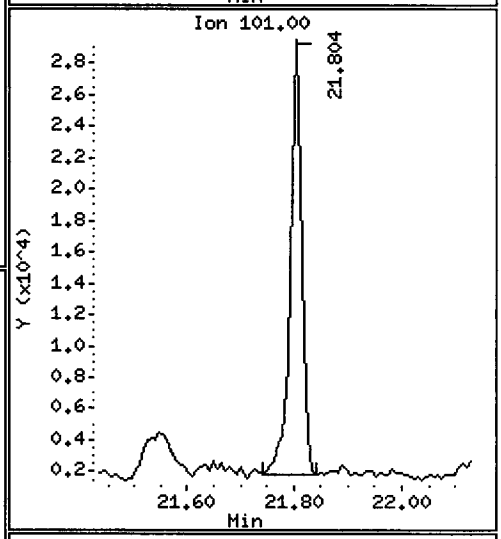


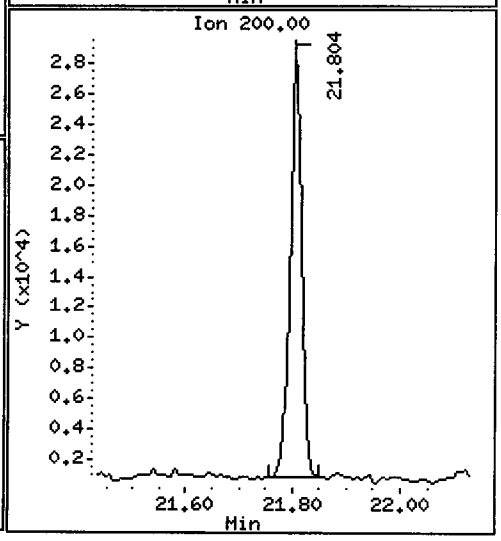












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

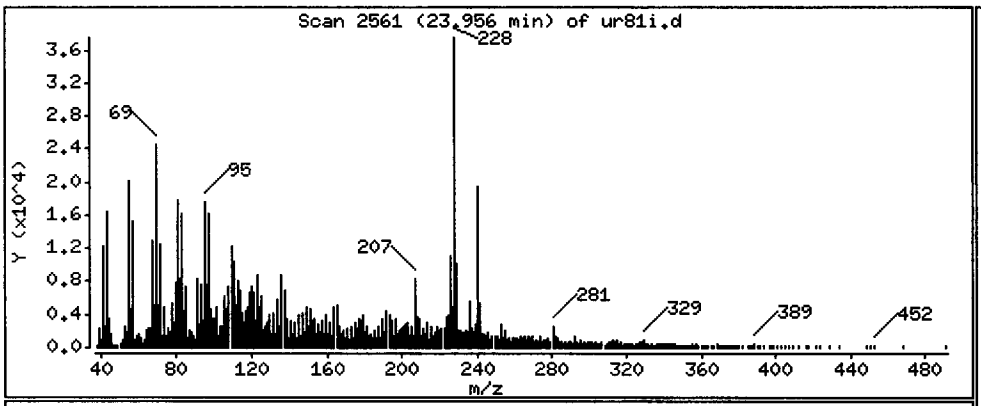
Client ID: IJ12-11 Instrument: nt10.i

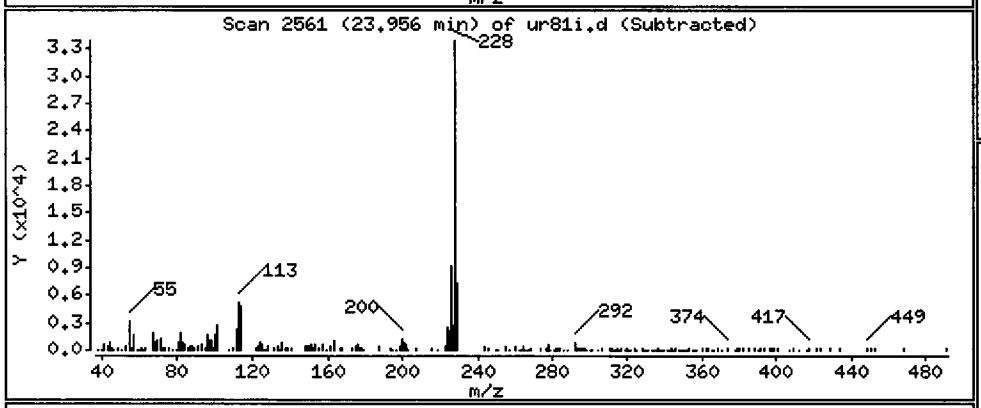
Sample Info: UR81I

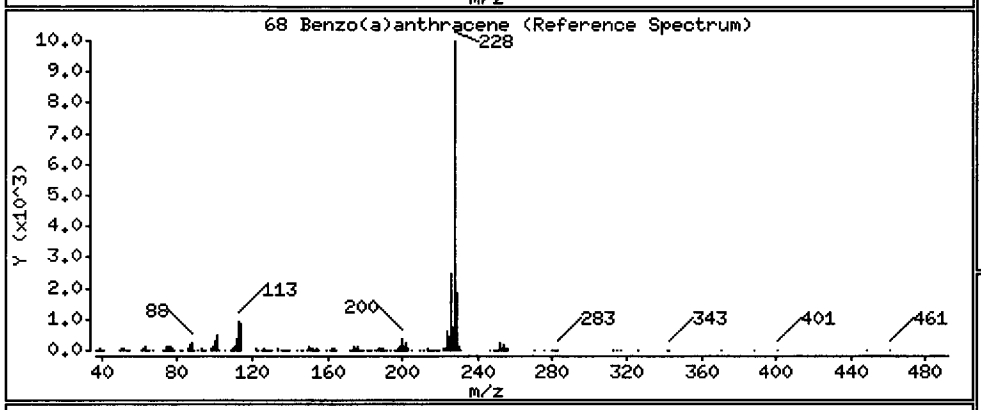
Volume Injected (uL): 1.0 Operator: VTS/YZ

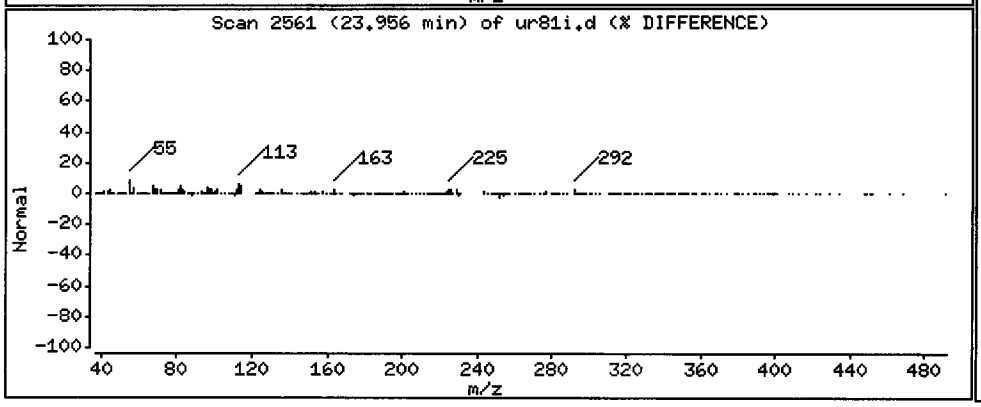
Column phase: ZB-5msi Column diameter: 0.25

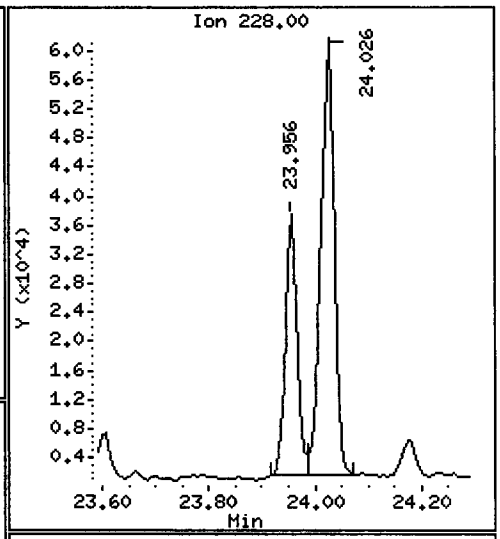
68 Benzo(a)anthracene Concentration: 23.71 ug/kg

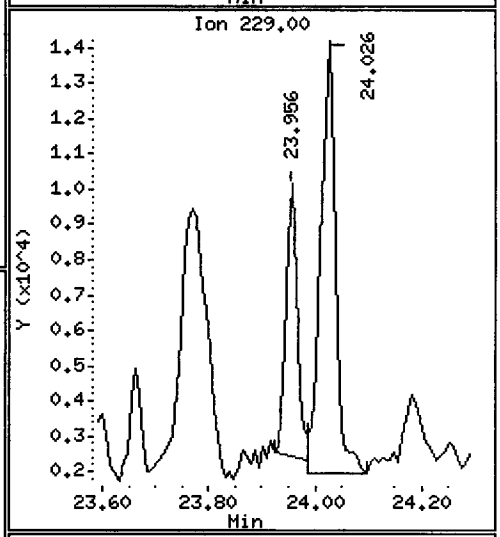


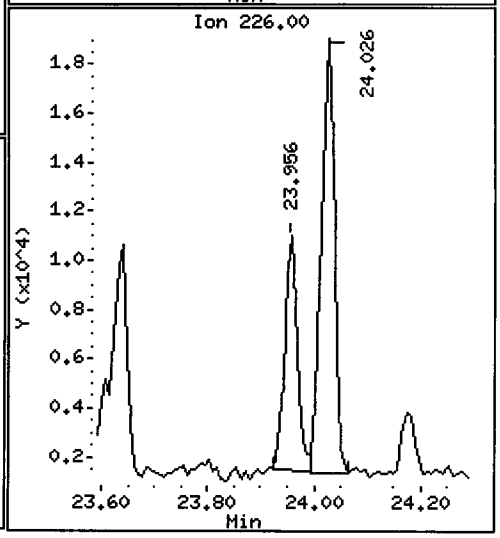












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

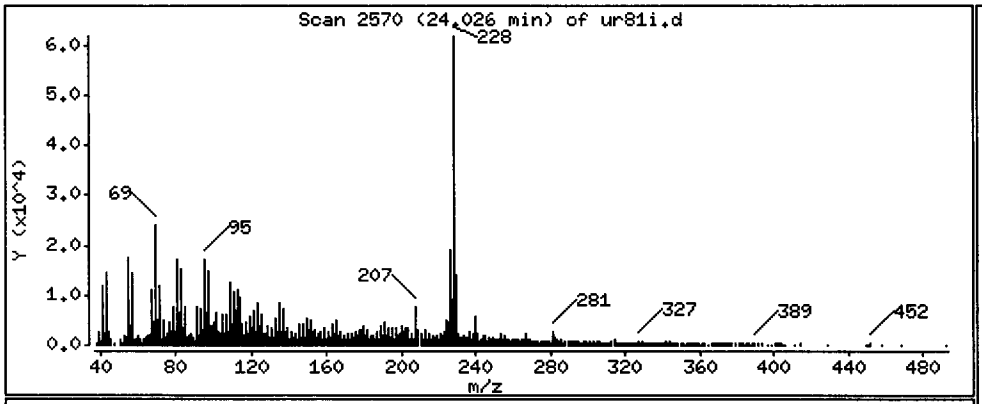
Client ID: IJ12-11 | Instrument: nt10.i

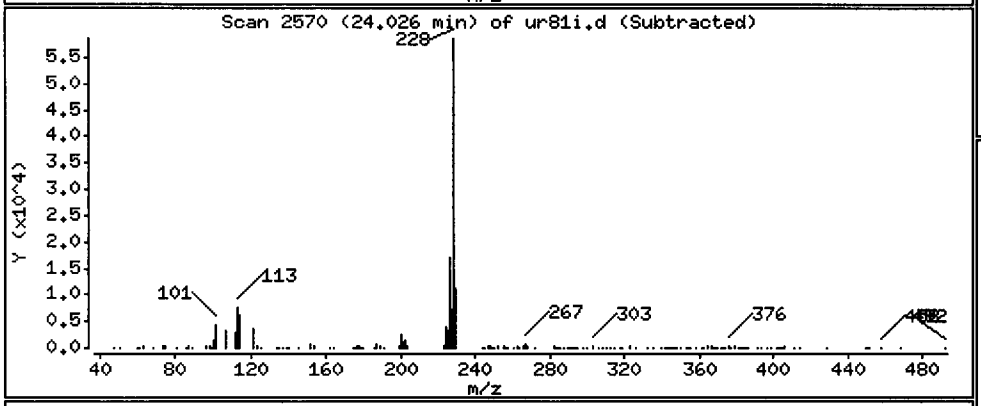
Sample Info: UR81I

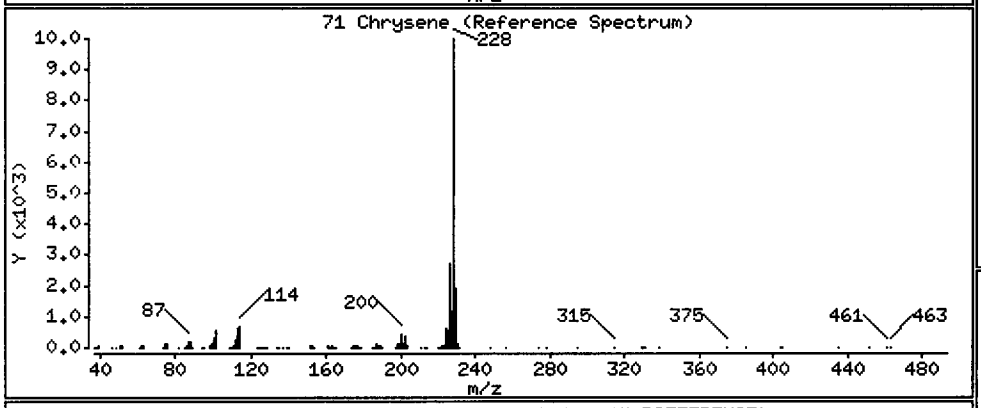
Volume Injected (uL): 1.0 | Operator: VTS/YZ

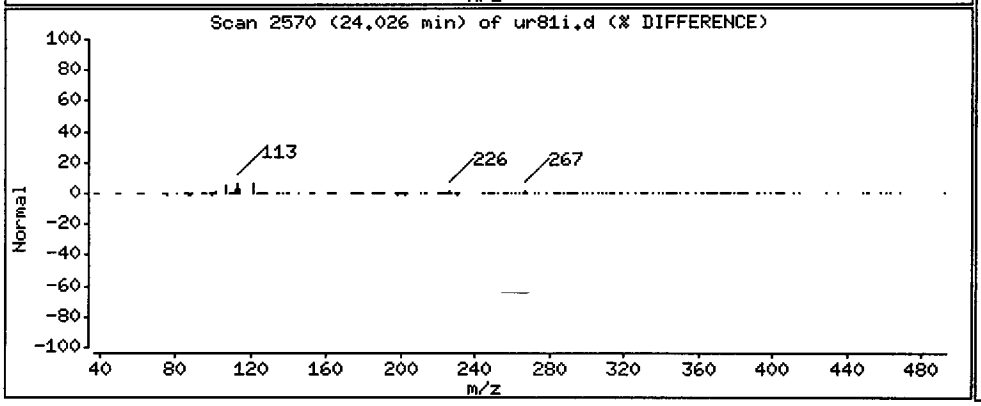
Column phase: ZB-5msi | Column diameter: 0.25

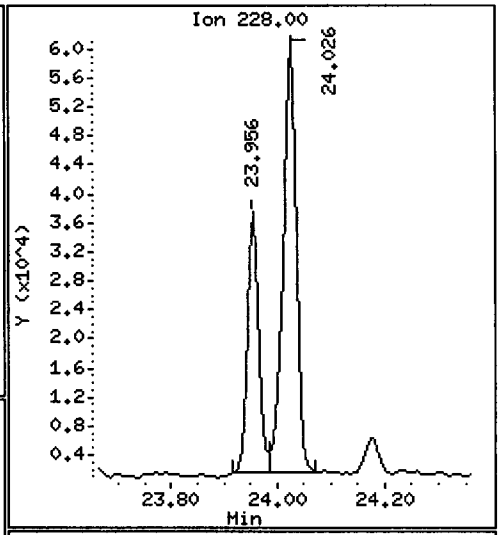
71 Chrysene | Concentration: 48.80 ug/kg

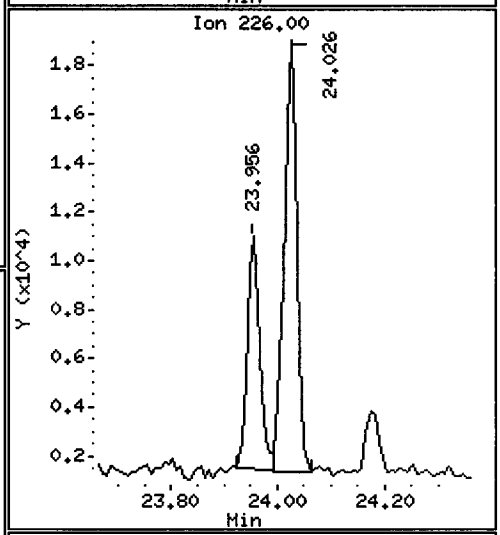


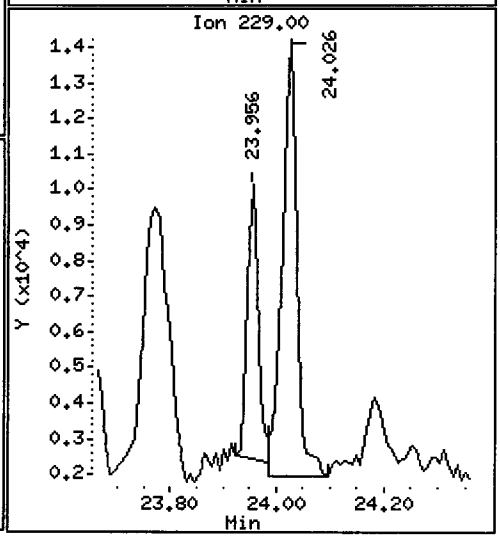












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

Operator: VTS/YZ

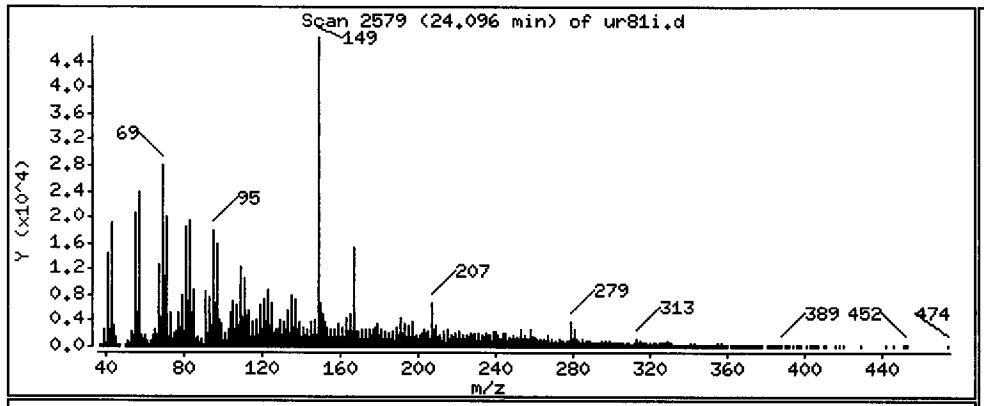
Column phase: ZB-5msi

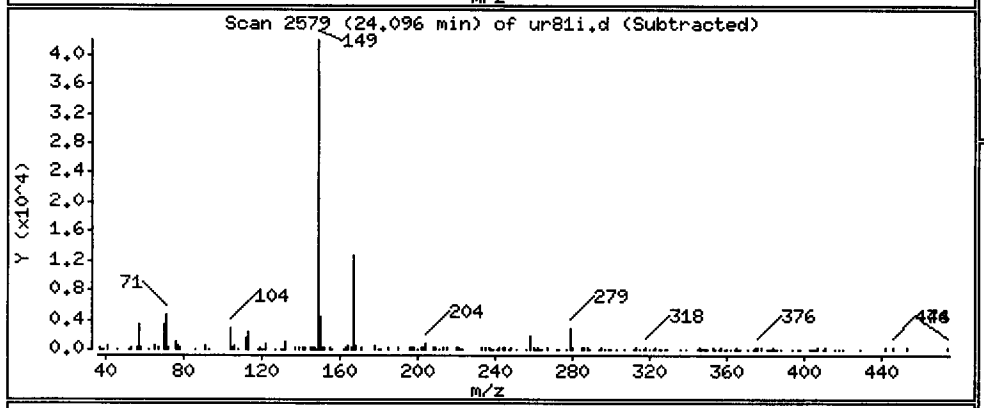
Column diameter: 0.25

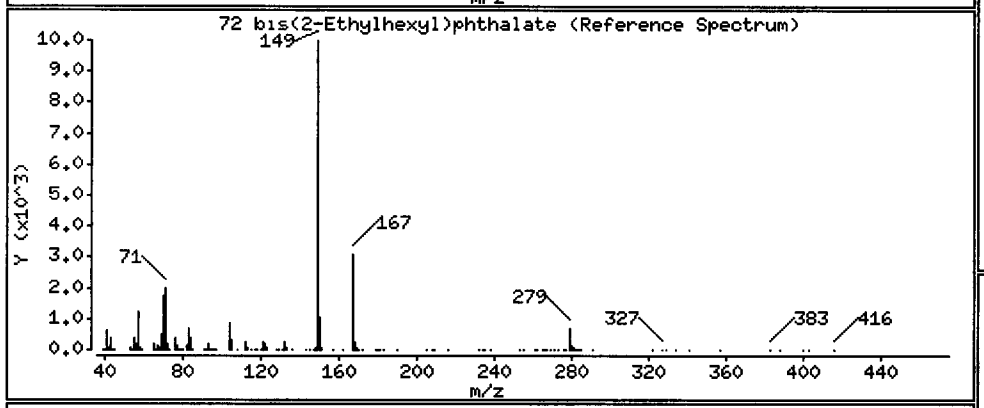
(B)

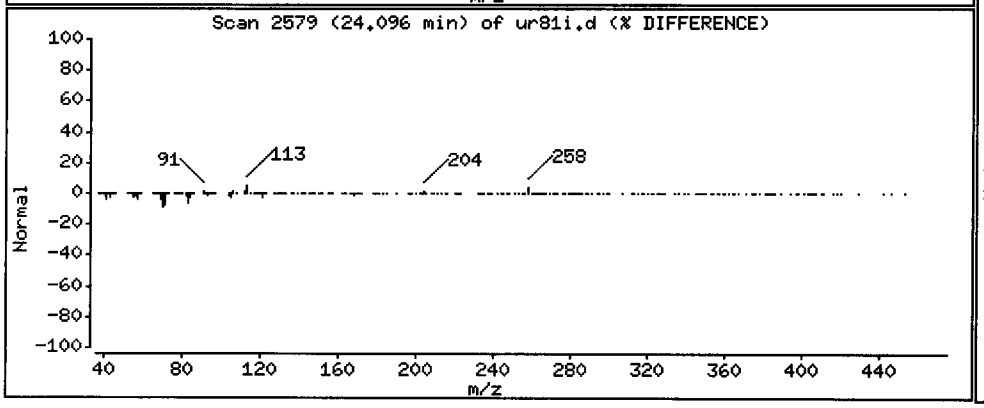
72 bis(2-Ethylhexyl)phthalate

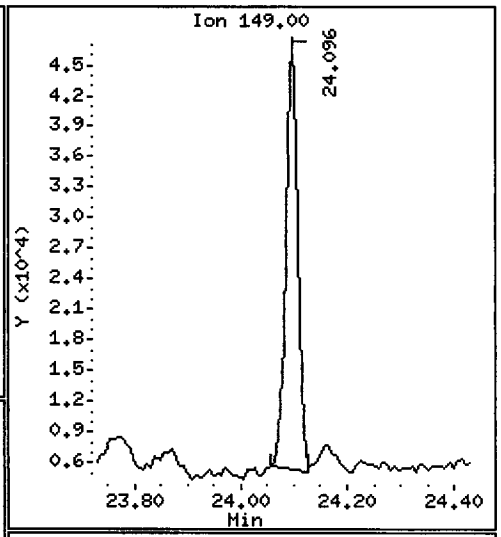
Concentration: 37.65 ug/kg

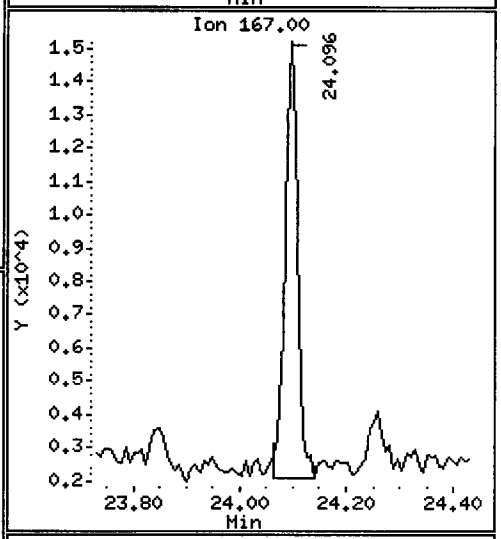


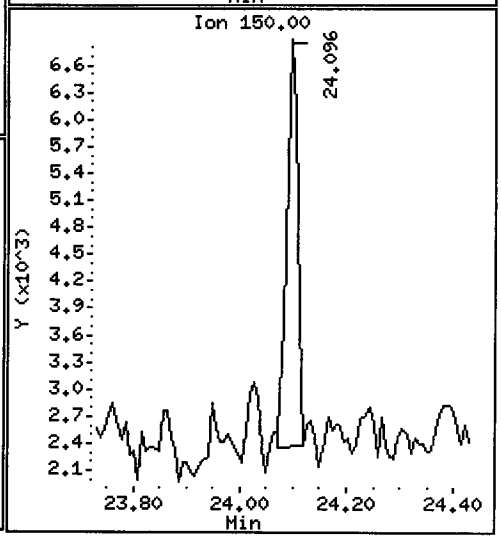












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

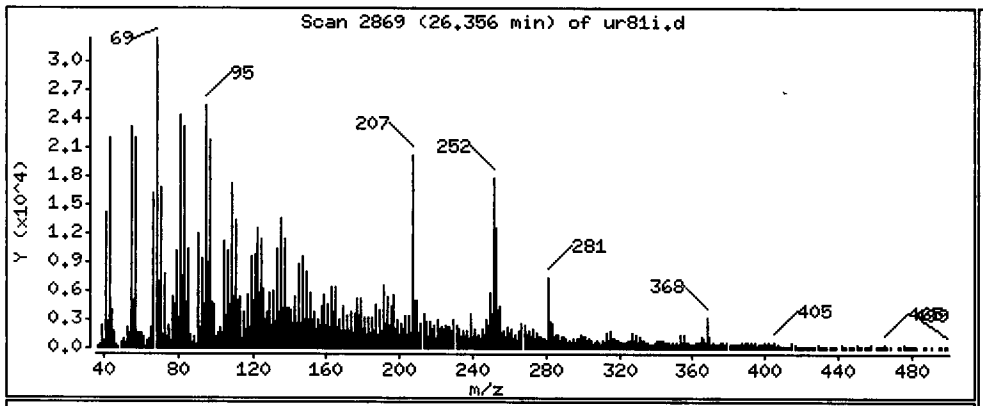
Operator: VTS/YZ

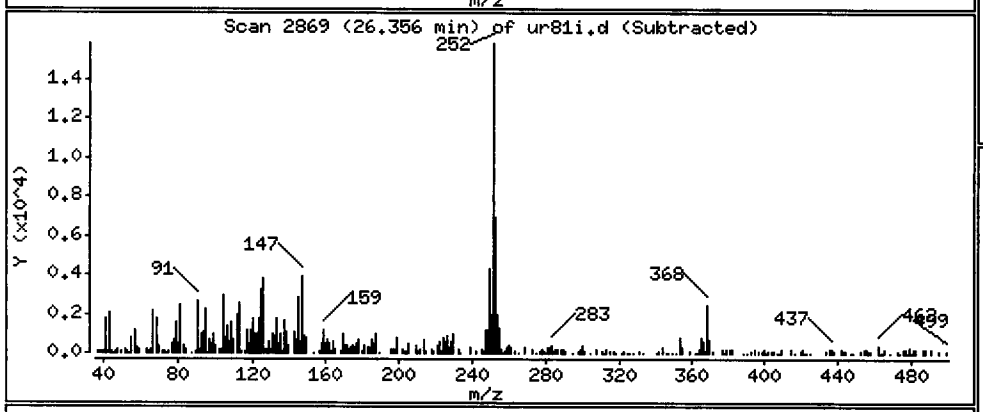
Column phase: ZB-5msi

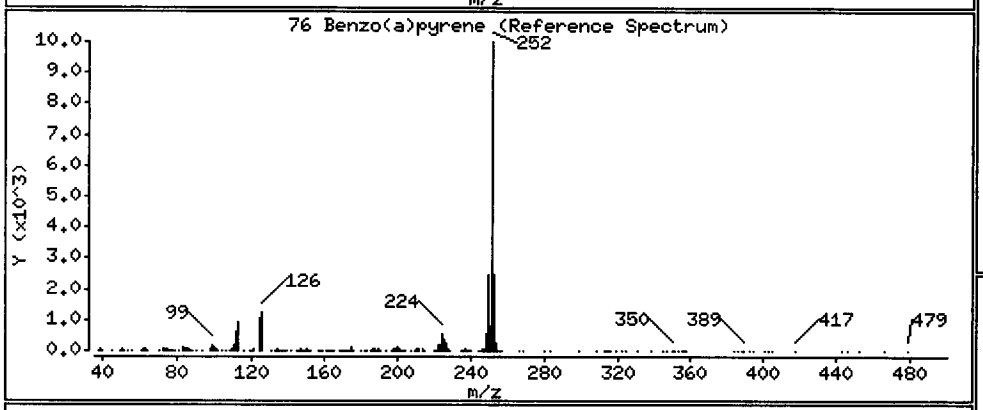
Column diameter: 0.25

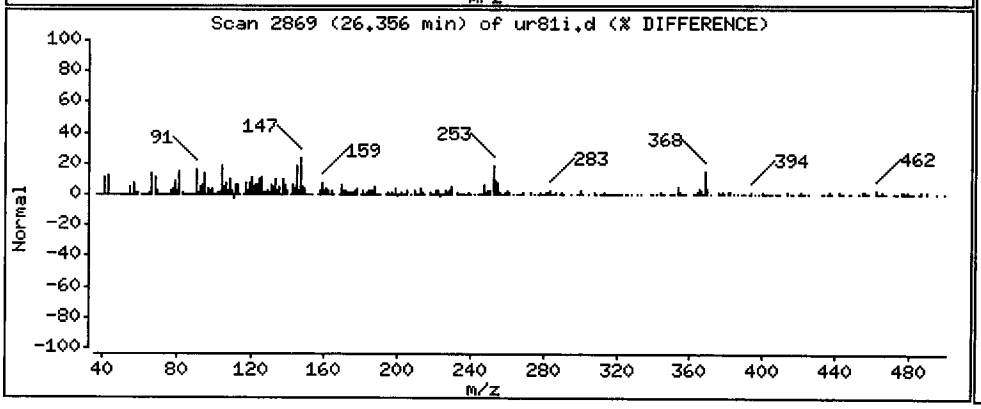
76 Benzo(a)pyrene

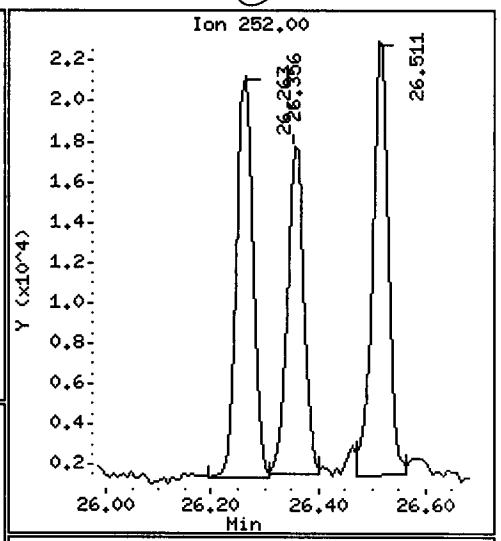
Concentration: 18.46 ug/kg

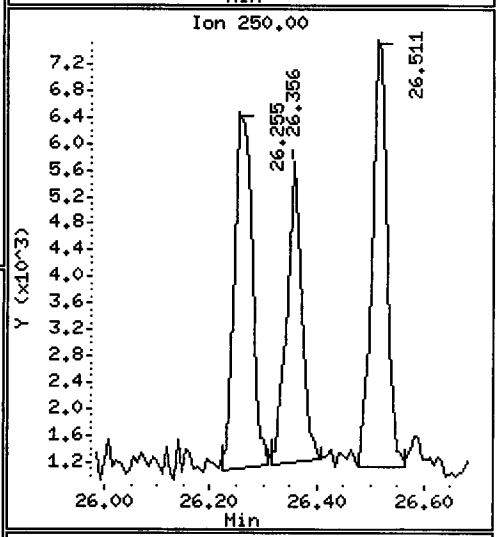


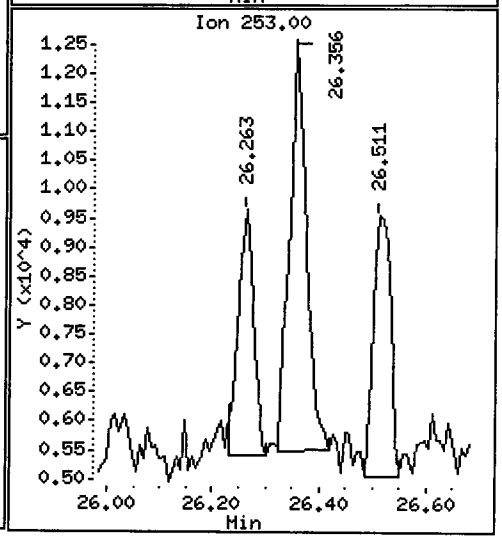












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

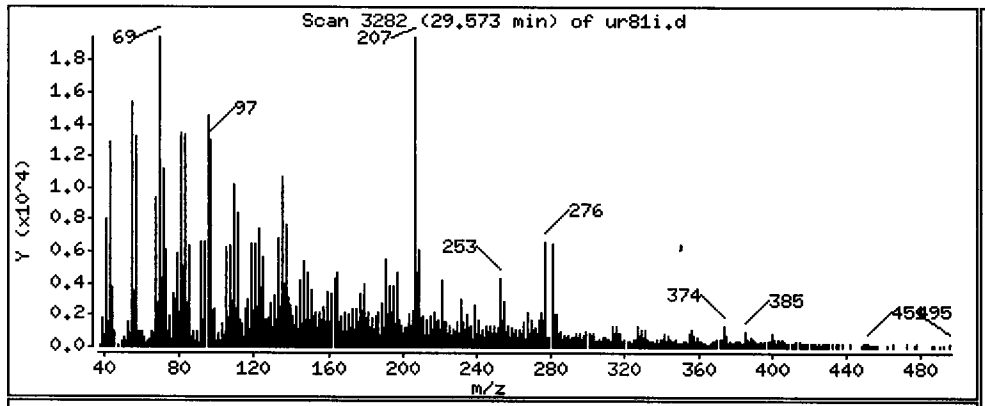
Operator: VTS/YZ

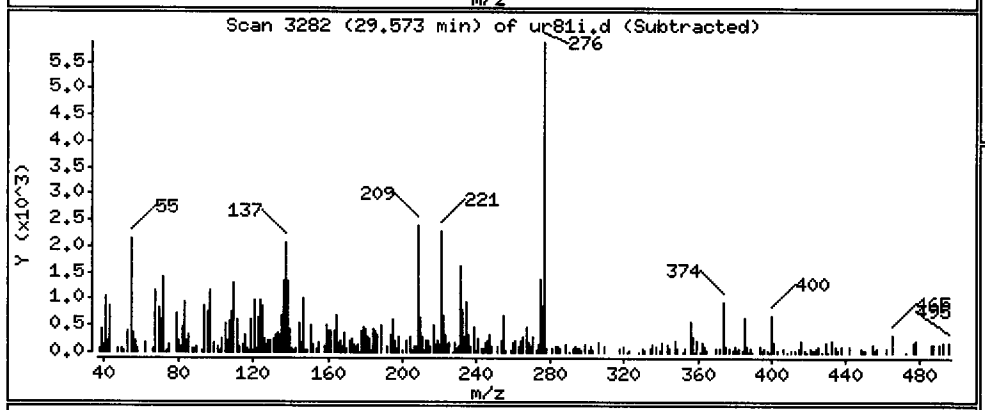
Column phase: ZB-5msi

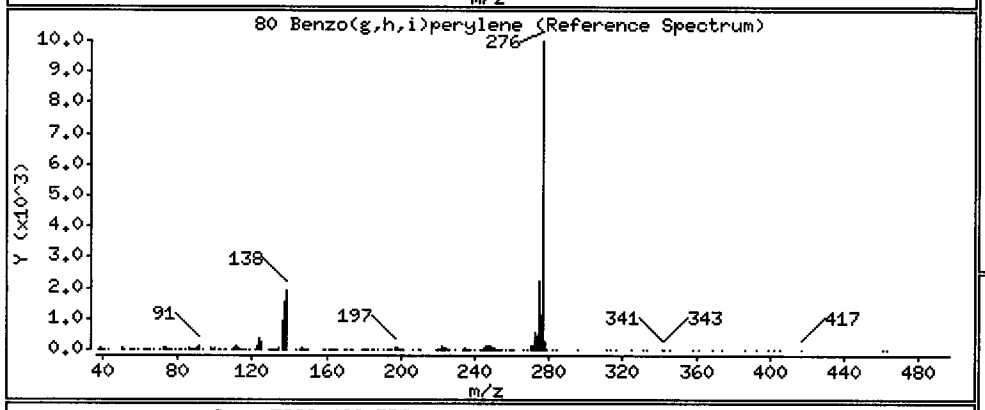
Column diameter: 0.25

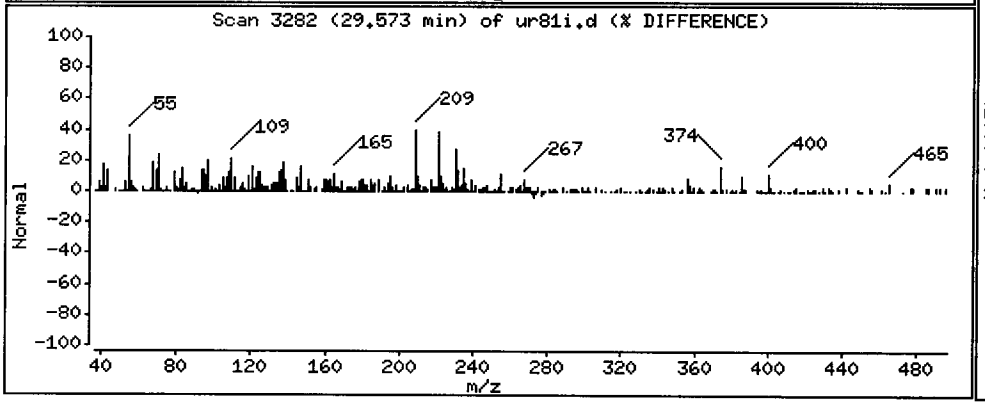
80 Benzo(g,h,i)perylene

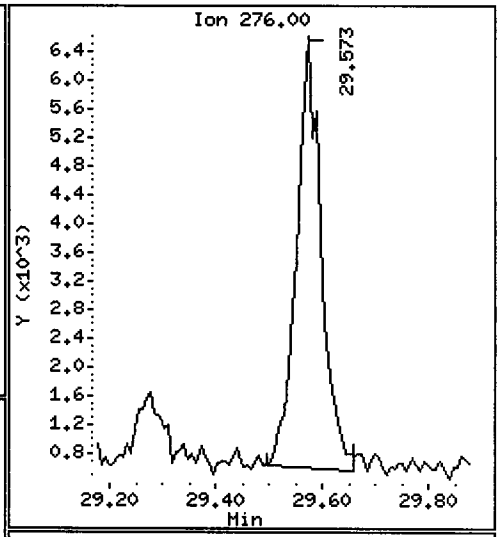
Concentration: 10.37 ug/kg

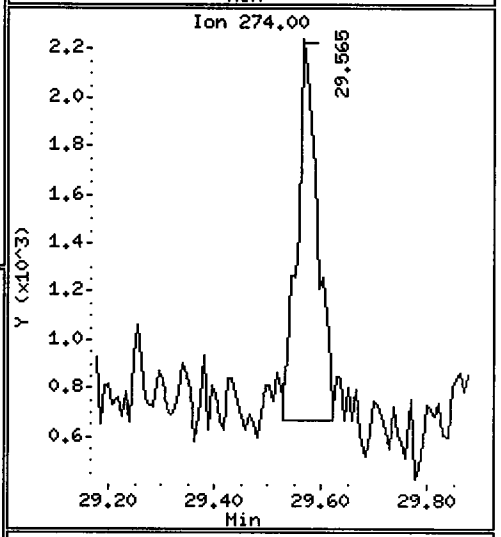


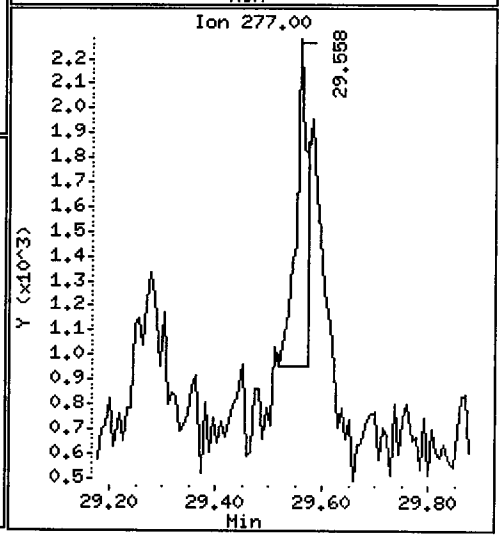












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

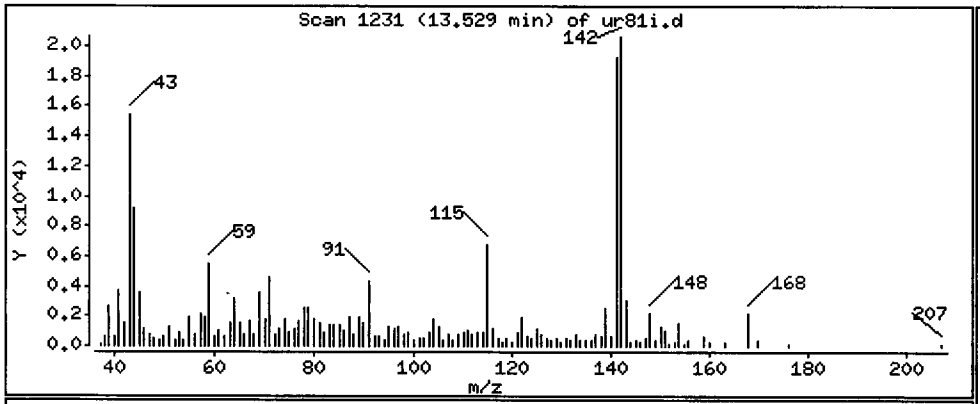
Client ID: IJ12-11 Instrument: nt10.i

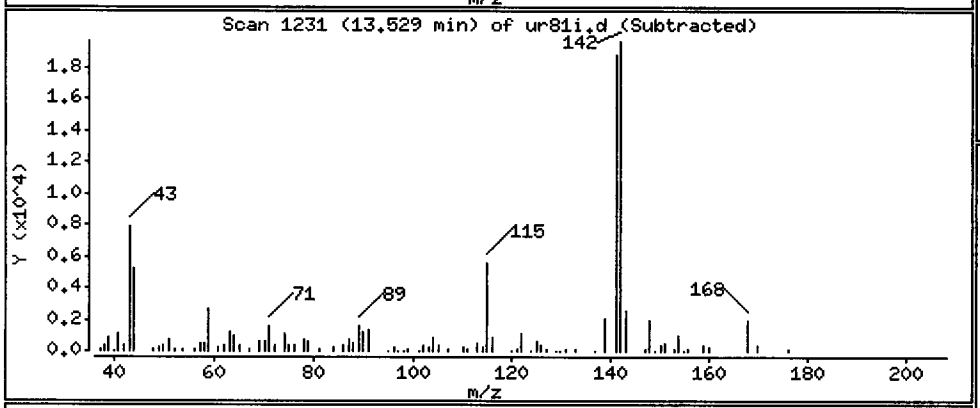
Sample Info: UR81I

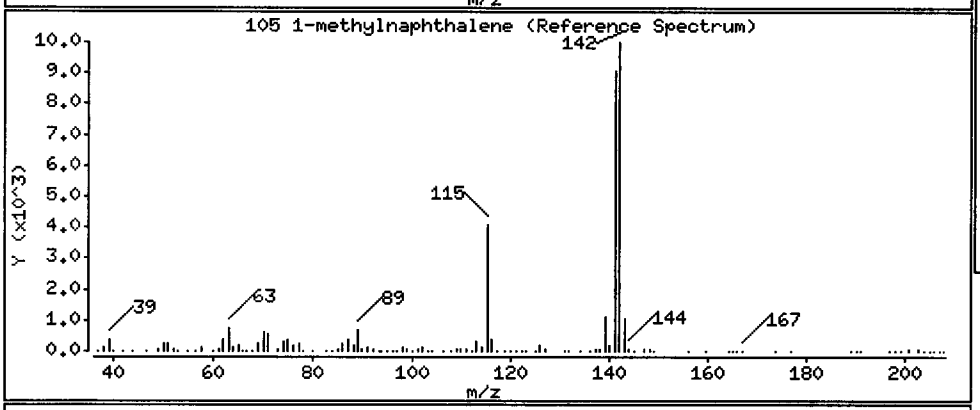
Volume Injected (uL): 1.0 Operator: VTS/YZ

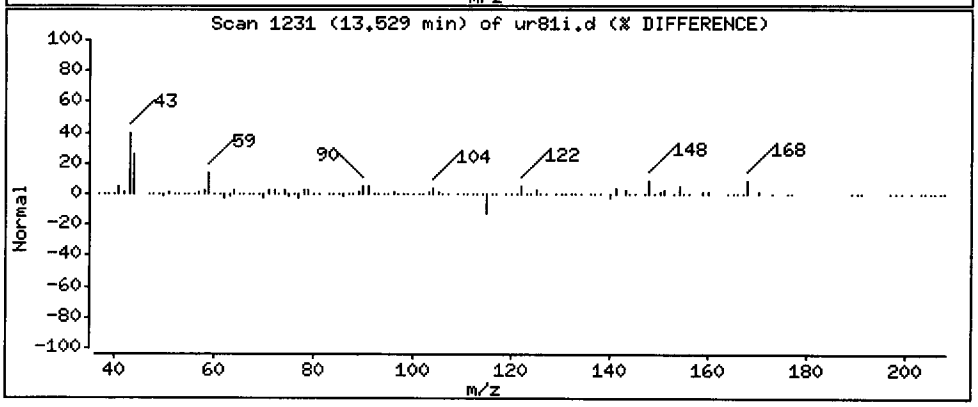
Column phase: ZB-5msi Column diameter: 0.25

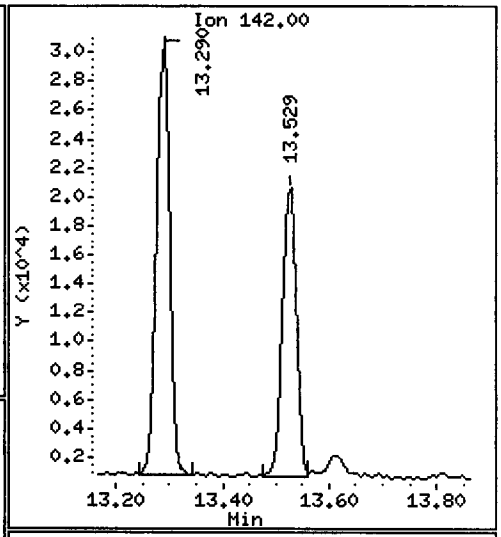
105 1-methylnaphthalene Concentration: 21.04 ug/kg

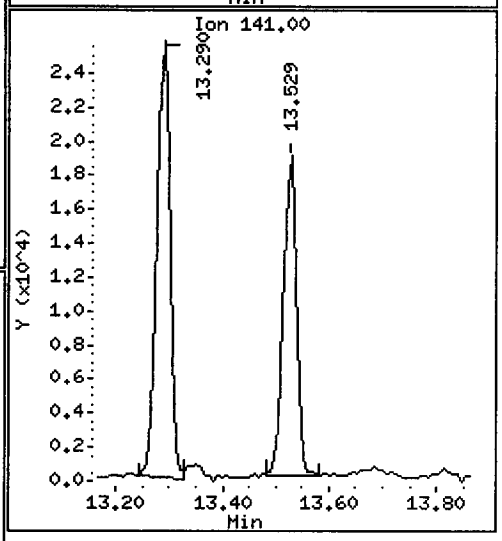












Data File: /chem1/nt10.i/20120508.b/ur81i.d

Date : 09-MAY-2012 00:01

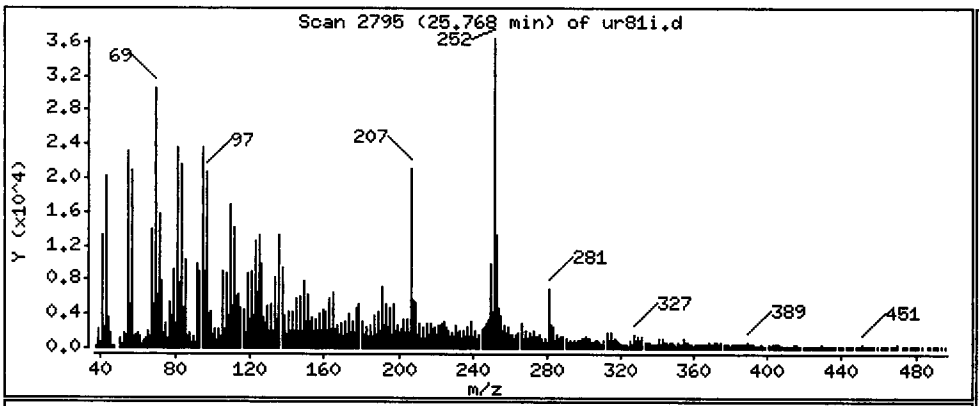
Client ID: IJ12-11 Instrument: nt10.i

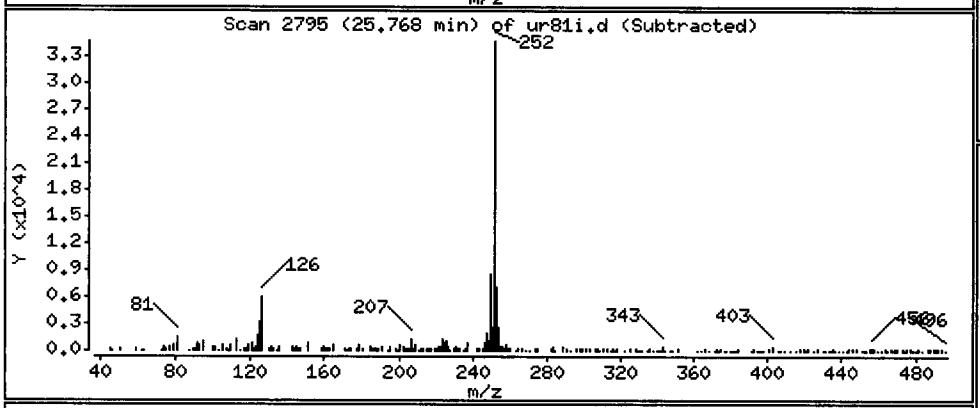
Sample Info: UR81I

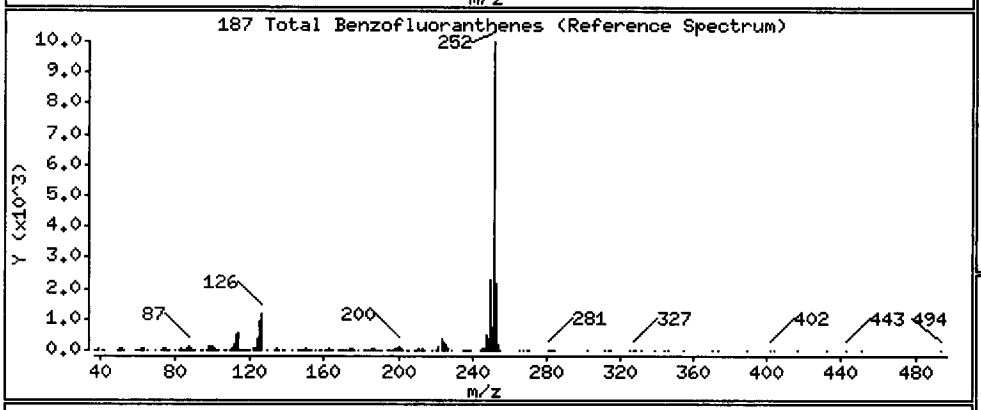
Volume Injected (uL): 1.0 Operator: VTS/YZ

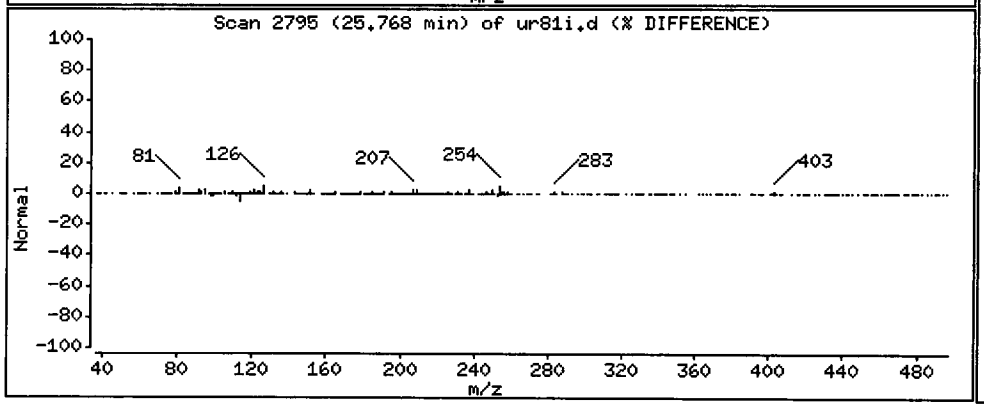
Column phase: ZB-5msi Column diameter: 0.25

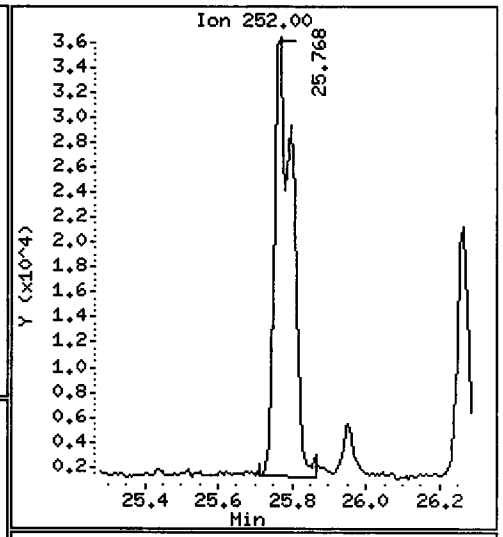
187 Total Benzofluoranthenes Concentration: 54.92 ug/kg

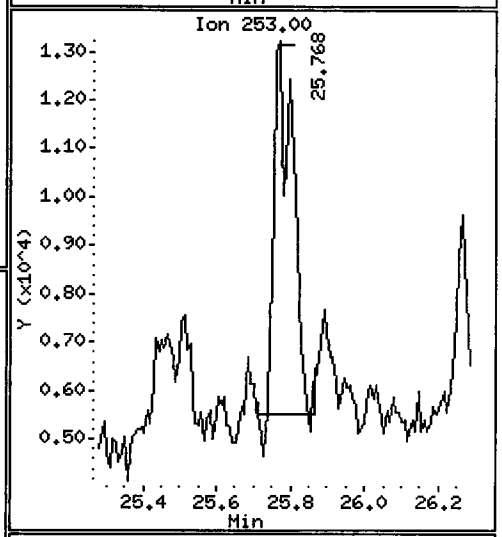


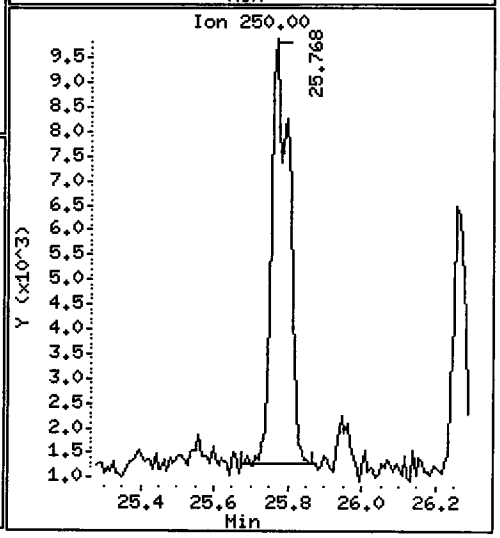












CO-ELUTION SUMMARY FOR FILE - ur81i.d

Lab ID: UR81I, Method: ABN.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/ur81j.d
Lab Smp Id: UR81J Client Smp ID: IJ12-08A
Inj Date : 09-MAY-2012 00:38
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81J
Misc Info : 12-7401
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.00000	Weight of sample extracted (g)
M	58.50000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.698	6.667	(0.740)	313706	3.85514	371.6
$ 2 Phenol-d5	99	8.413	8.398	(0.930)	389104	3.84554	370.7
3 Phenol	94	8.437	8.421	(0.932)	31244	0.28172	27.15
$ 5 2-Chlorophenol-d4	132	8.668	8.653	(0.958)	351820	4.01759	387.2
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	237877	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.043)	147374	2.48363	239.4
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	9.366	9.350	(1.035)	7127	0.13790	13.29
13 2-Methylphenol	108	9.933	9.614	(1.098)	33897	0.38835	37.43
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.933	9.909	(1.098)	42510	0.46709	45.02
$ 18 Nitrobenzene-d5	82	10.235	10.228	(0.873)	216984	2.70928	261.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	10623	0.12772	12.31
24 Benzoic acid	105	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.727	11.719	(1.000)	936718	4.00000	
28 Naphthalene	128	11.773	11.766	(1.004)	67080	0.28675	27.64
30 Hexachlorobutadiene	225	Compound Not Detected.					
32 2-Methylnaphthalene	142	13.290	13.282	(1.133)	31466	0.19614	18.90
$ 36 2-Fluorobiphenyl	172	14.149	14.149	(0.905)	485666	2.74921	265.0
39 Dimethylphthalate	163	15.155	15.147	(0.969)	89003	0.56317	54.28
40 Acenaphthylene	152	15.302	15.286	(0.978)	24864	0.10833	10.44
* 42 Acenaphthene-d10	164	15.642	15.627	(1.000)	517875	4.00000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	16.067	16.060	(1.027)	41554	0.20381	19.64
50 Diethylphthalate	149	Compound Not Detected.					
49 Fluorene	166	16.840	16.833	(1.077)	30889	0.19858	19.14
54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55 2,4,6-Tribromophenol	330	17.426	17.411	(1.114)	109456	4.60696	444.0
57 Hexachlorobenzene	284	Compound Not Detected.					
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	18.918	18.903	(1.000)	814744	4.00000	
60 Phenanthrene	178	18.964	18.957	(1.002)	199109	0.98823	95.25
61 Anthracene	178	19.057	19.050	(1.007)	82579	0.38829	37.43
63 Di-n-butylphthalate	149	Compound Not Detected.					
64 Fluoranthene	202	21.394	21.363	(1.131)	495612	2.16112	208.3
65 Pyrene	202	21.804	21.781	(0.909)	598331	2.40209	231.5
$ 66 Terphenyl-d14	244	22.113	22.098	(0.922)	481264	3.08119	297.0
67 Butylbenzylphthalate	149	Compound Not Detected.					
68 Benzo(a)anthracene	228	23.956	23.941	(0.999)	176621	0.79015	76.16
* 69 Chrysene-d12	240	23.987	23.964	(1.000)	824257	4.00000	
71 Chrysene	228	24.026	24.010	(1.002)	352269	1.76543	170.2
72 bis(2-Ethylhexyl)phthalate	149	24.088	24.080	(0.961)	180958	1.06046	102.2
* 134 Di-n-octylphthalate-d4	153	25.071	25.056	(1.000)	1312357	4.00000	
73 Di-n-octylphthalate	149	Compound Not Detected.					
76 Benzo(a)pyrene	252	26.356	26.333	(0.996)	113443	0.61961	59.72
* 77 Perylene-d12	264	26.465	26.441	(1.000)	753667	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.866	28.828	(1.091)	52772	0.25331	24.42
79 Dibenzo(a,h)anthracene	278	28.874	28.859	(1.091)	17425	0.10883	10.49(M)
80 Benzo(g,h,i)perylene	276	29.573	29.527	(1.117)	45950	0.25511	24.59
105 1-methylnaphthalene	142	13.522	13.514	(1.153)	19356	0.11832	11.40
187 Total Benzofluoranthenes	252	25.760	25.783	(0.973)	402724	1.96403	189.3

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81j.d
Lab Smp Id: UR81J
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7401

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: IJ12-08A
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	237877	-12.50
27 Naphthalene-d8	1080694	540347	2161388	936718	-13.32
42 Acenaphthene-d10	623821	311910	1247642	517875	-16.98
59 Phenanthrene-d10	999143	499572	1998286	814744	-18.46
69 Chrysene-d12	1001009	500504	2002018	824257	-17.66
134 Di-n-octylphthala	1489422	744711	2978844	1312357	-11.89
77 Perylene-d12	988348	494174	1976696	753667	-23.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.92	0.08
69 Chrysene-d12	23.96	23.46	24.46	23.99	0.10
134 Di-n-octylphthala	25.06	24.56	25.56	25.07	0.06
77 Perylene-d12	26.44	25.94	26.94	26.46	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81J
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7401

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-08A
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	722.9	371.6	51.40	30-160
$ 2 Phenol-d5	722.9	370.7	51.27	30-160
$ 5 2-Chlorophenol-d4	722.9	387.2	53.57	30-160
$ 10 1,2-Dichlorobenzen	481.9	239.4	49.67	30-160
$ 18 Nitrobenzene-d5	481.9	261.1	54.19	30-160
$ 36 2-Fluorobiphenyl	481.9	265.0	54.98	30-160
$ 55 2,4,6-Tribromophen	722.9	444.0	61.43	30-160
$ 66 Terphenyl-d14	481.9	297.0	61.62	30-160

Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

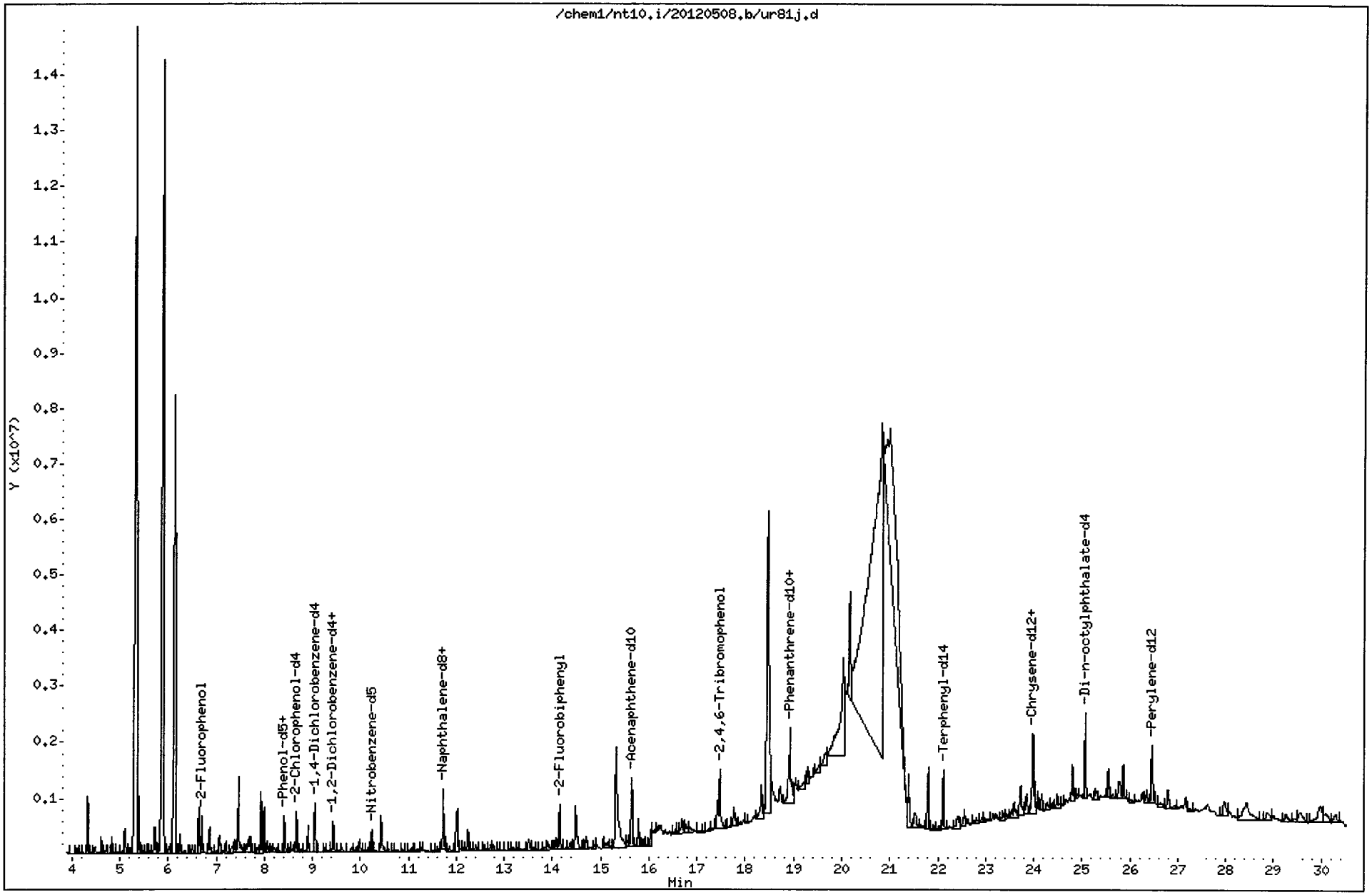
Sample Info: UR81J

Volume Injected (uL): 1.0

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

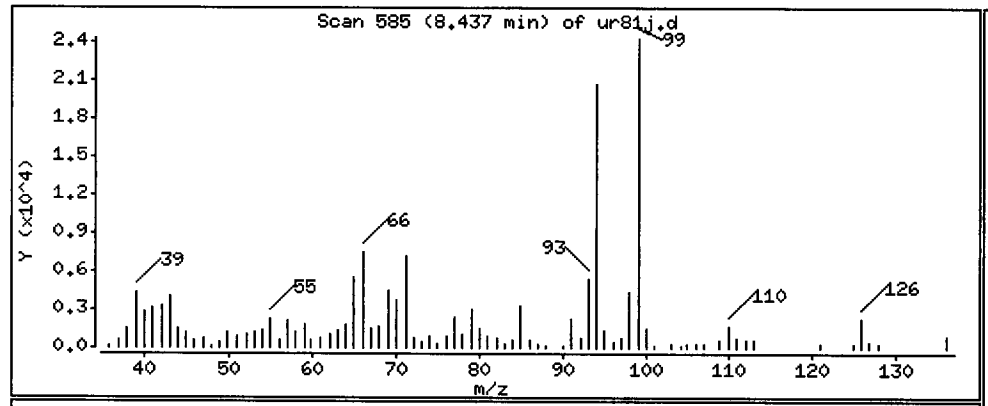
Operator: VTS/YZ

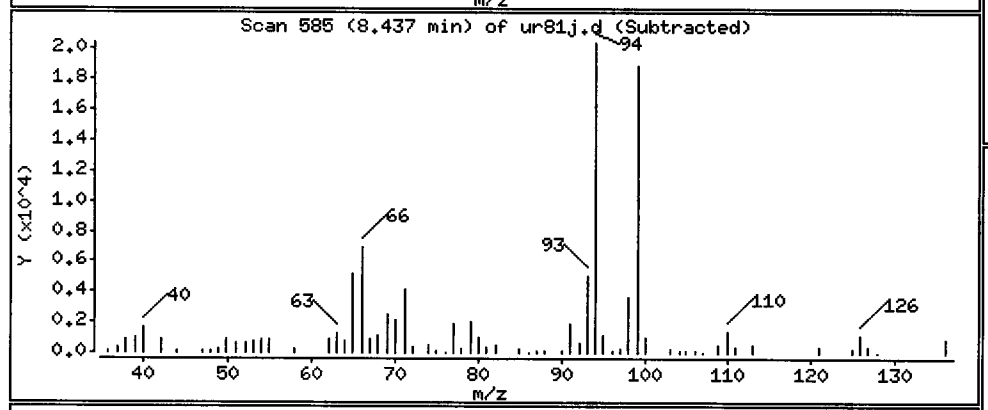
Column phase: ZB-5msi

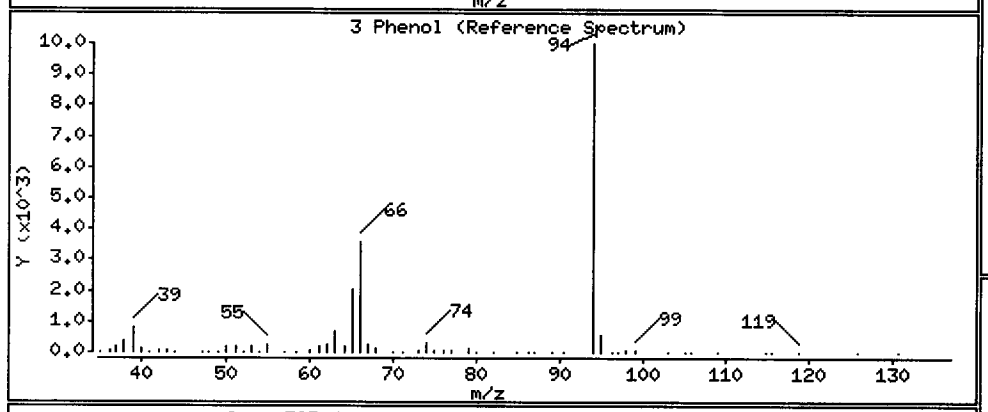
Column diameter: 0.25

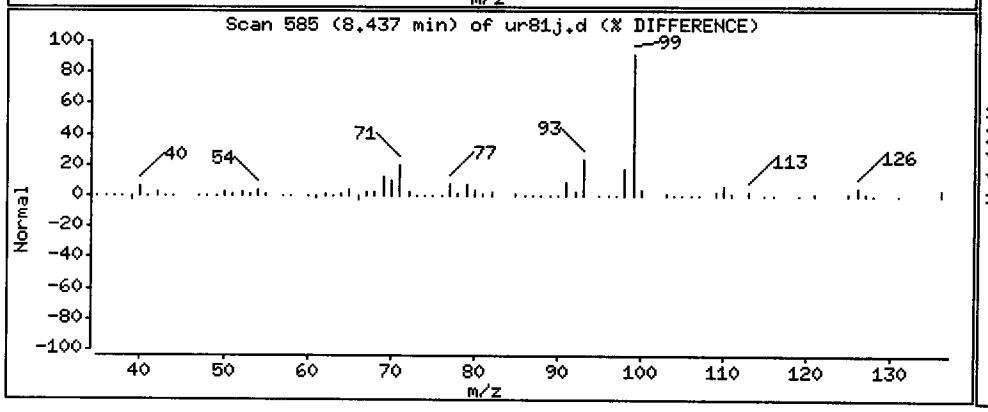
3 Phenol

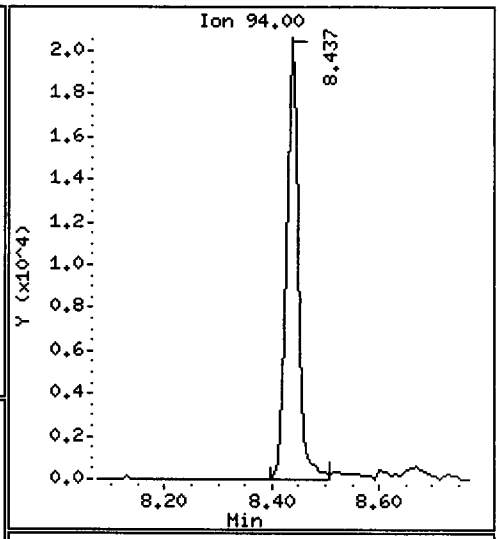
Concentration: 27.15 ug/kg

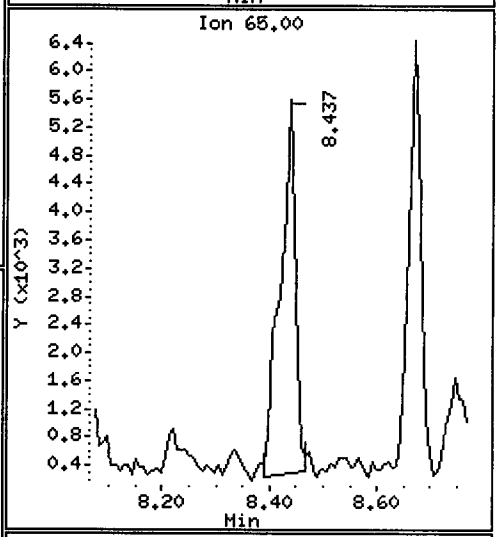


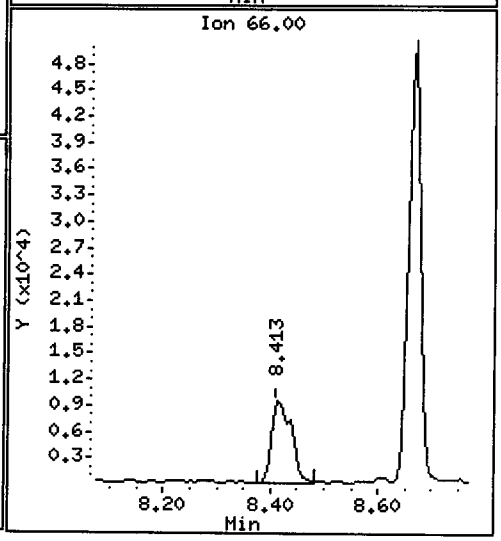












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

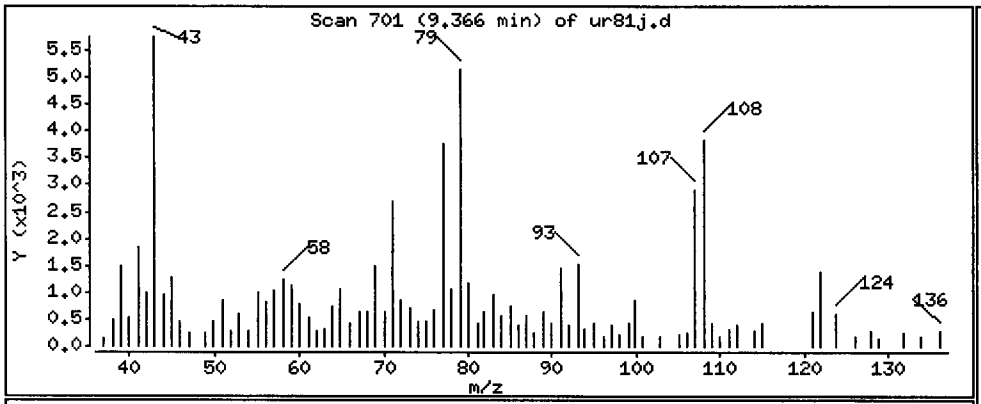
Operator: VTS/YZ

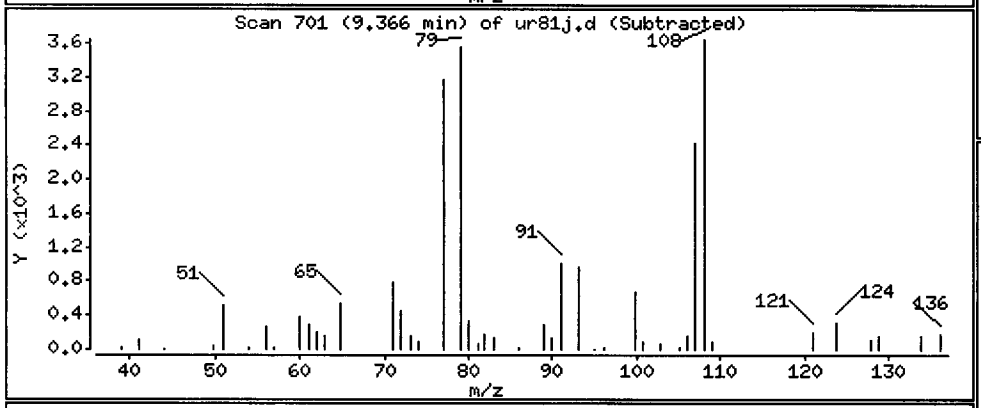
Column phase: ZB-5msi

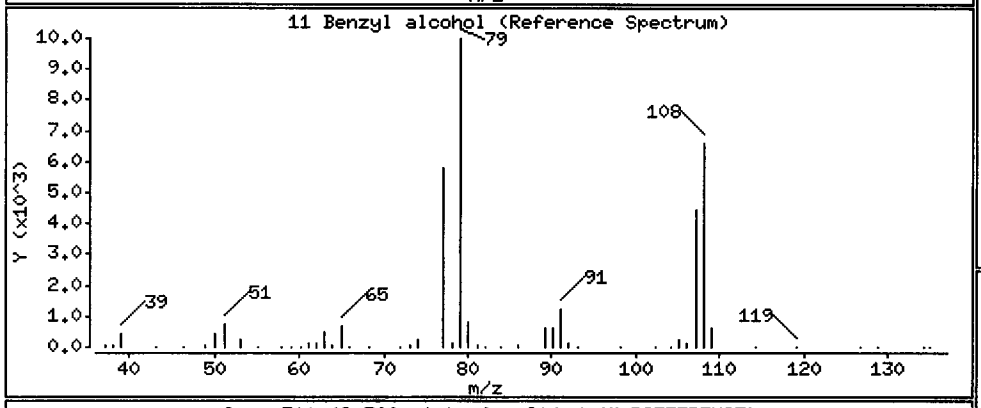
Column diameter: 0.25

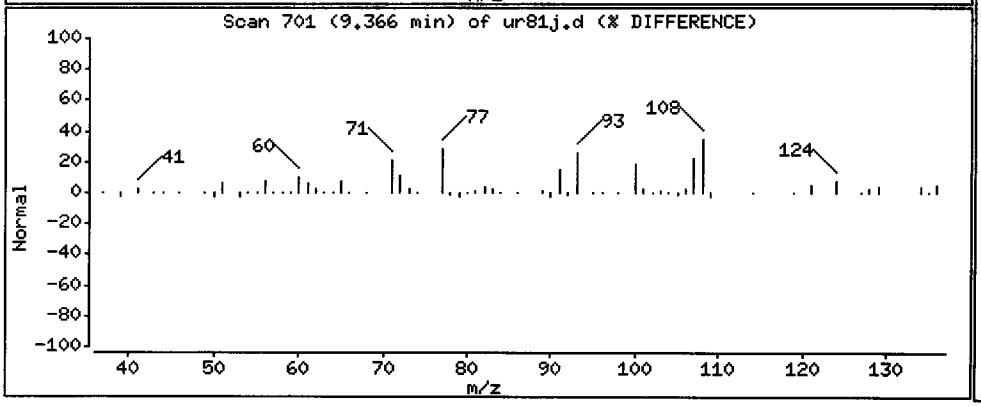
11 Benzyl alcohol

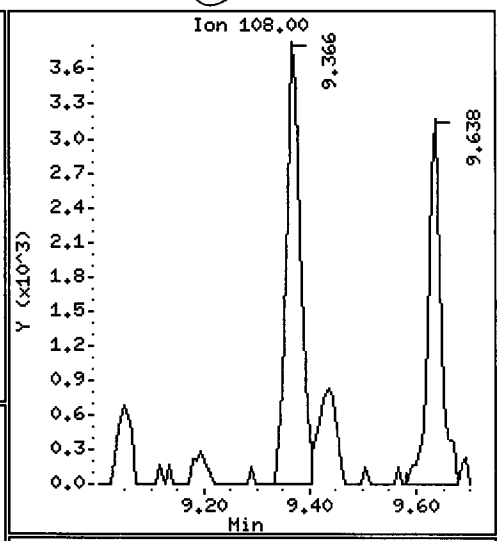
Concentration: 13.29 ug/kg

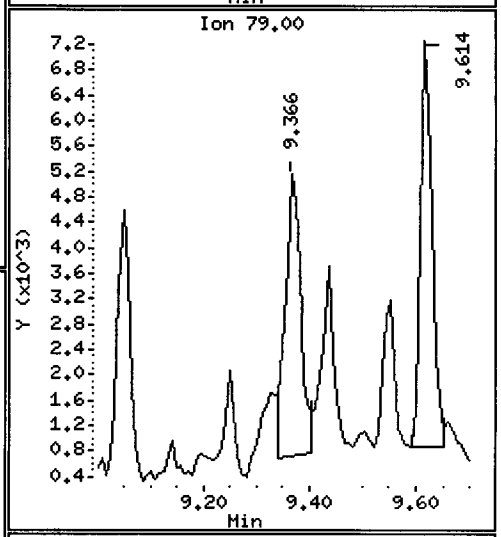


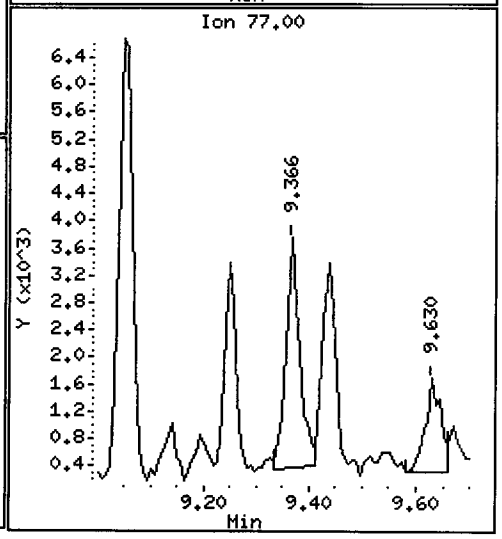












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

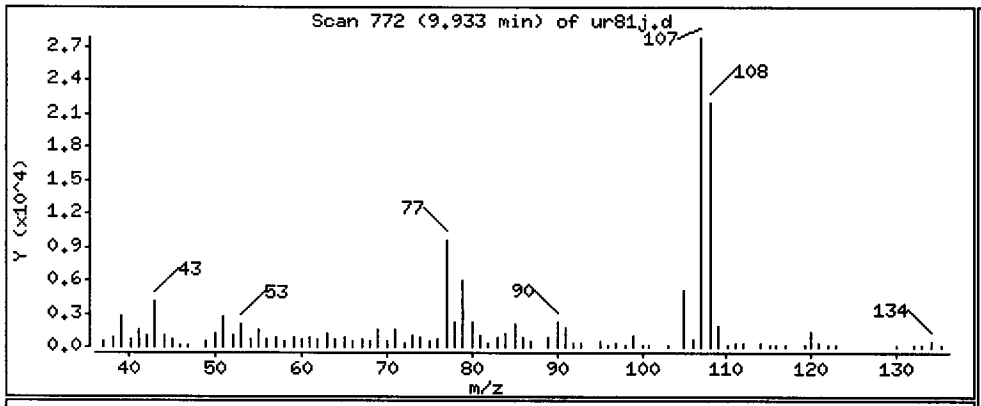
Operator: VTS/YZ

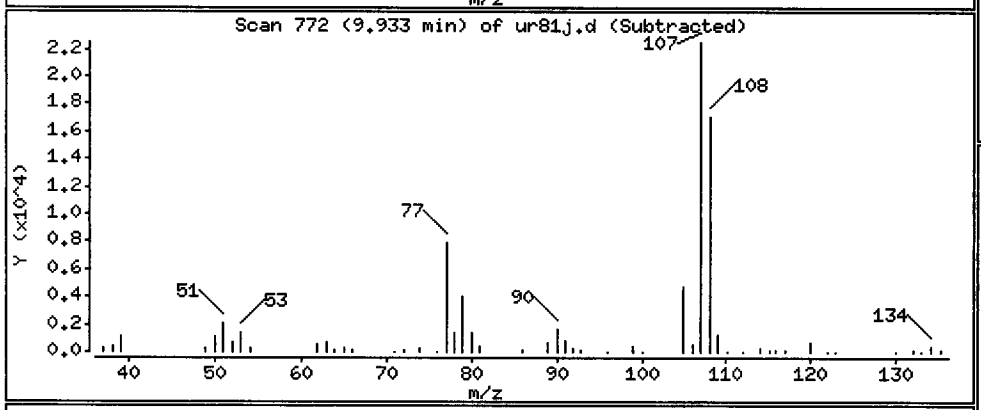
Column phase: ZB-5msi

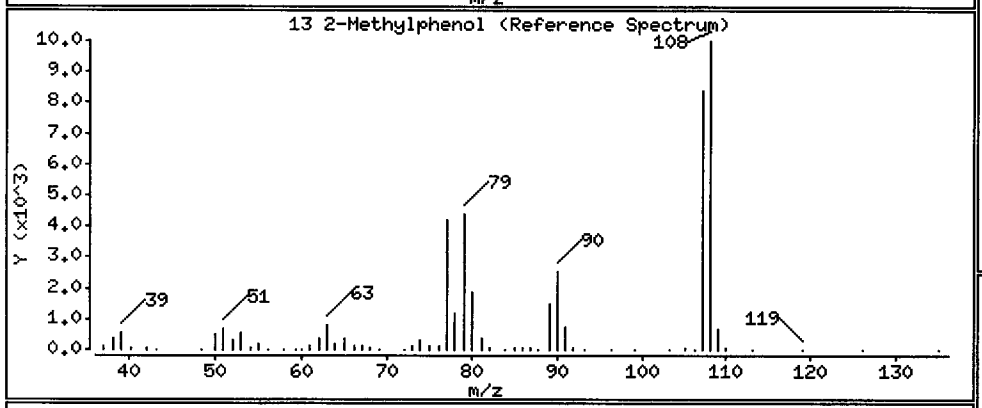
Column diameter: 0.25

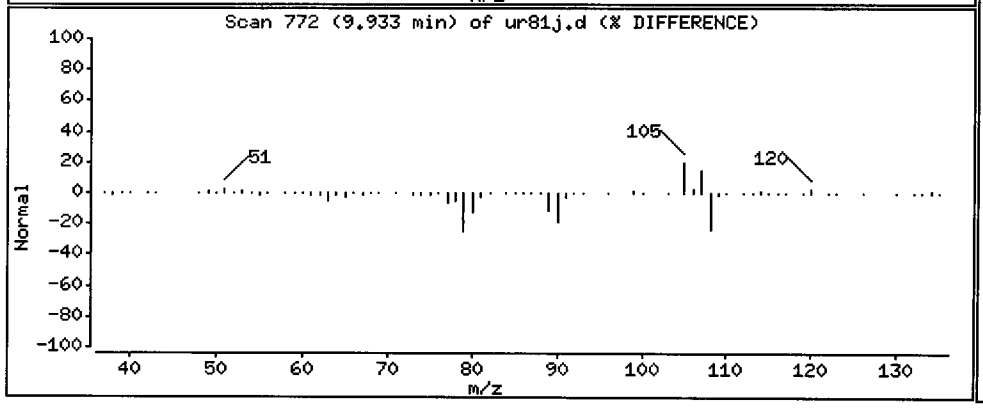
13 2-Methylphenol

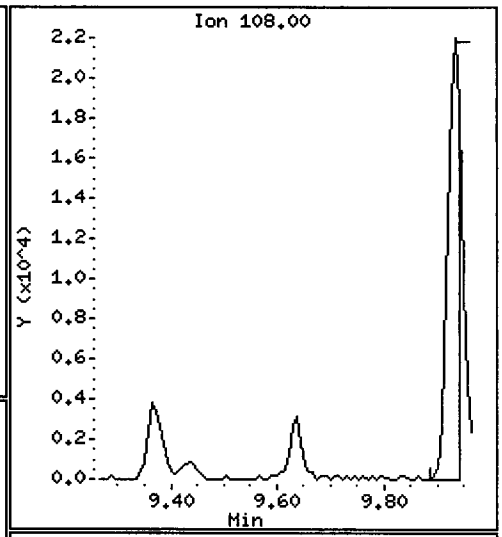
Concentration: 37.43 ug/kg

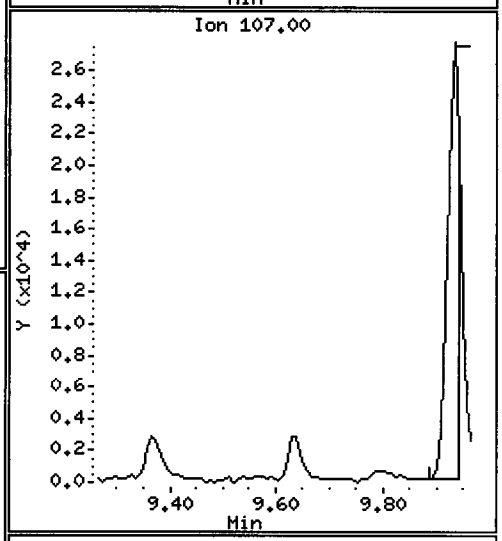


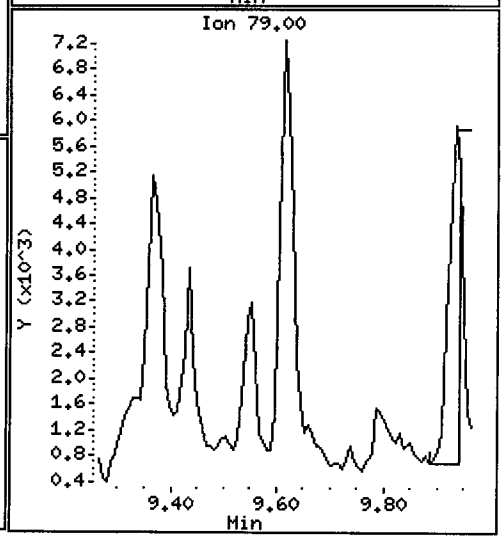












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

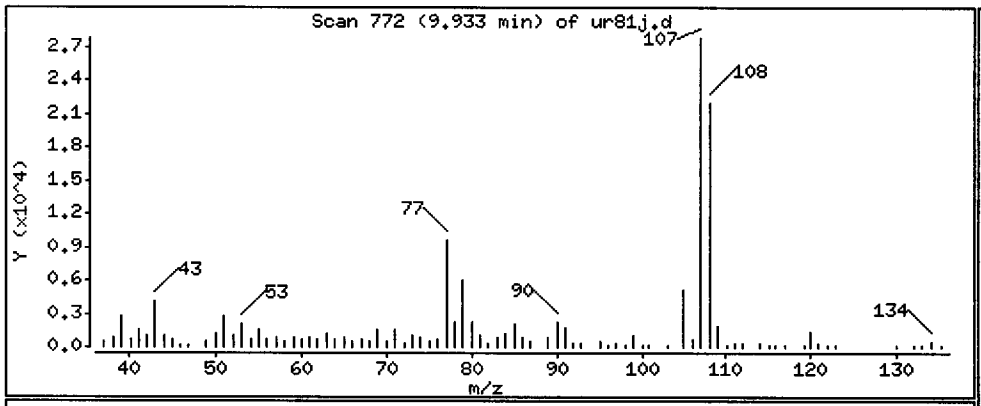
Operator: VTS/YZ

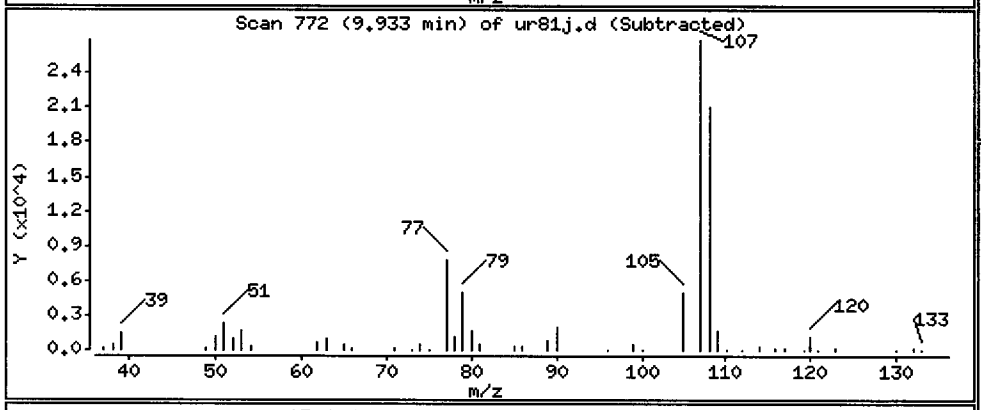
Column phase: ZB-5msi

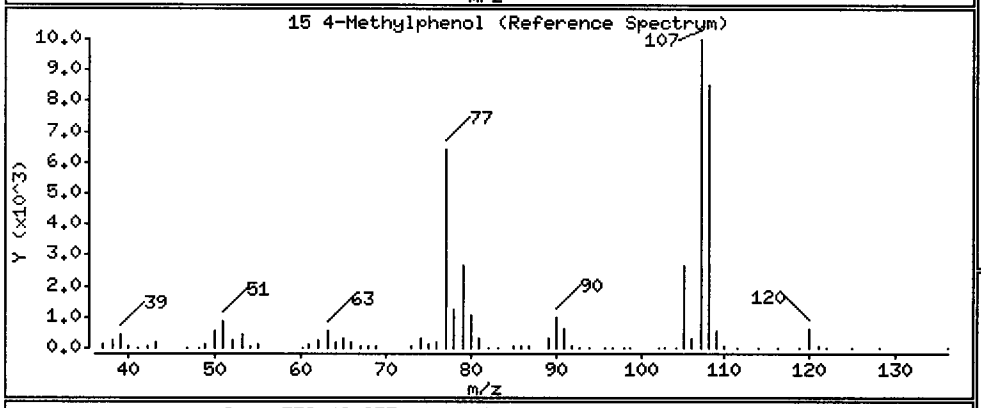
Column diameter: 0.25

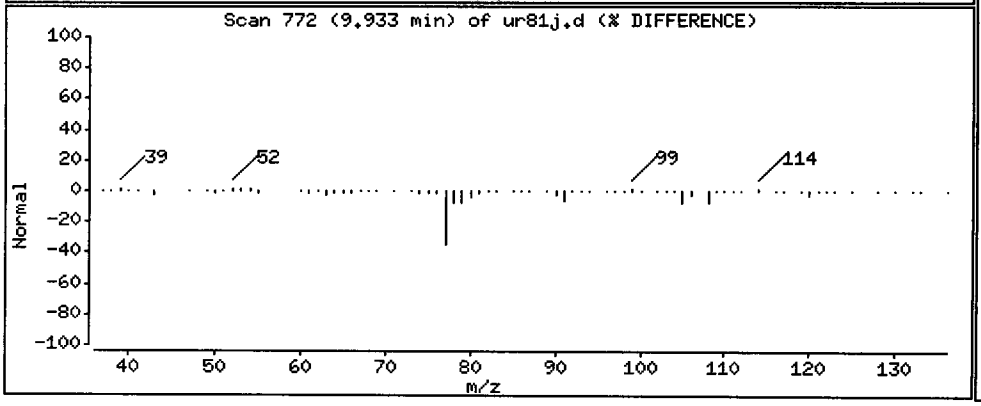
15 4-Methylphenol

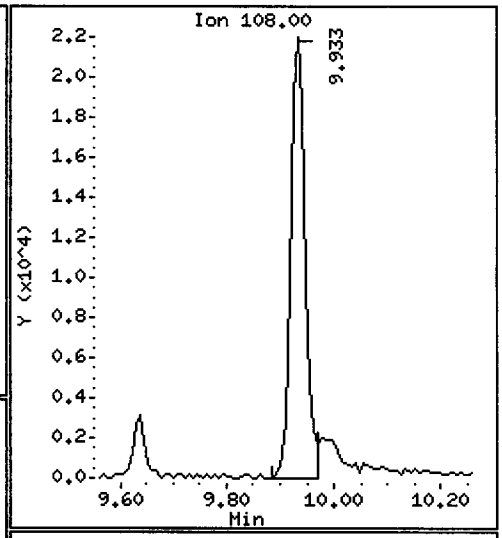
Concentration: 45.02 ug/kg

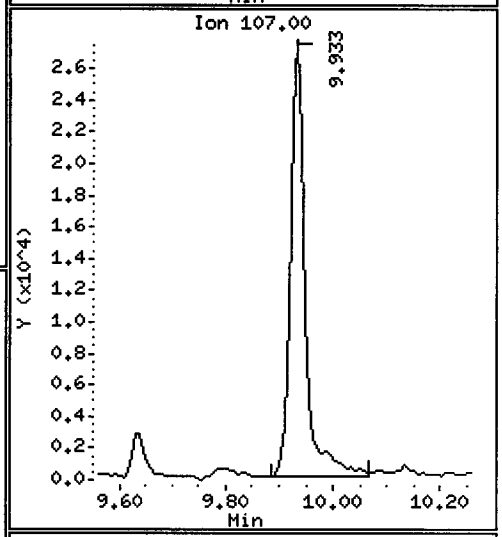


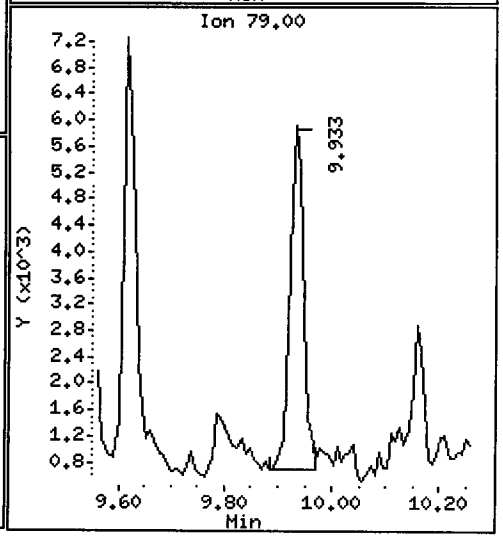












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

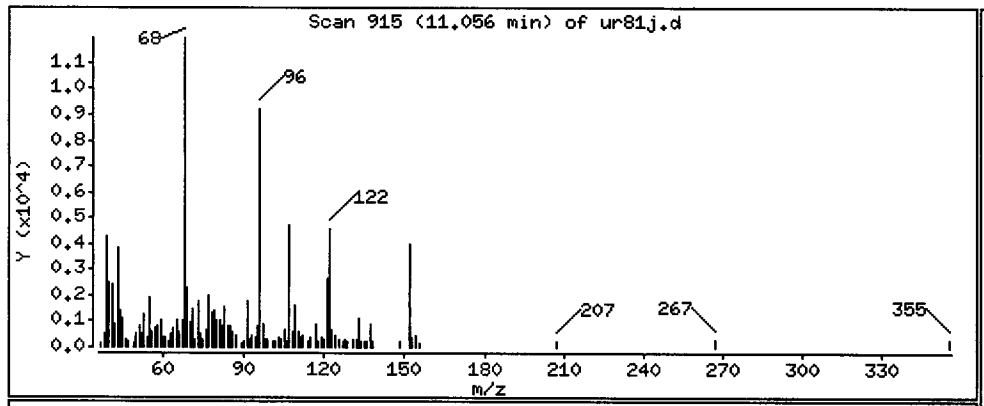
Operator: VTS/YZ

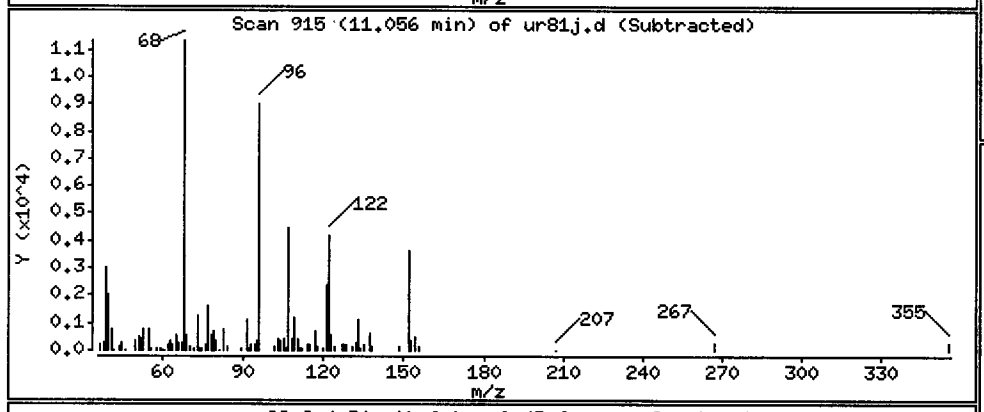
Column phase: ZB-5msi

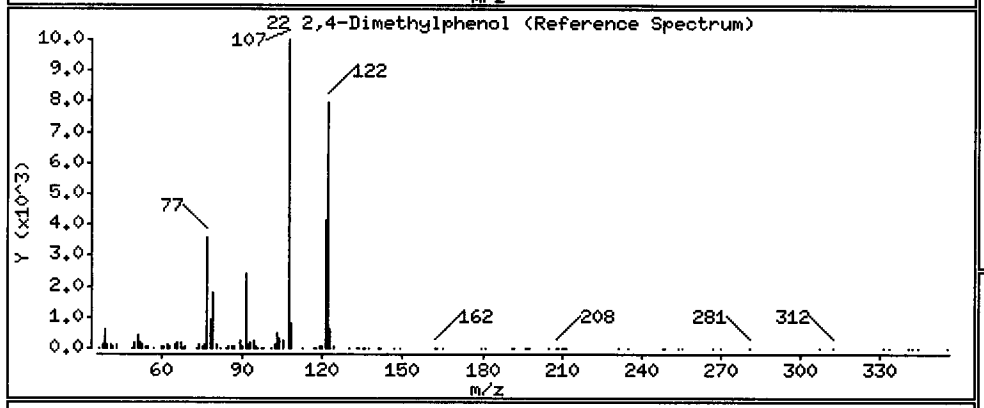
Column diameter: 0.25

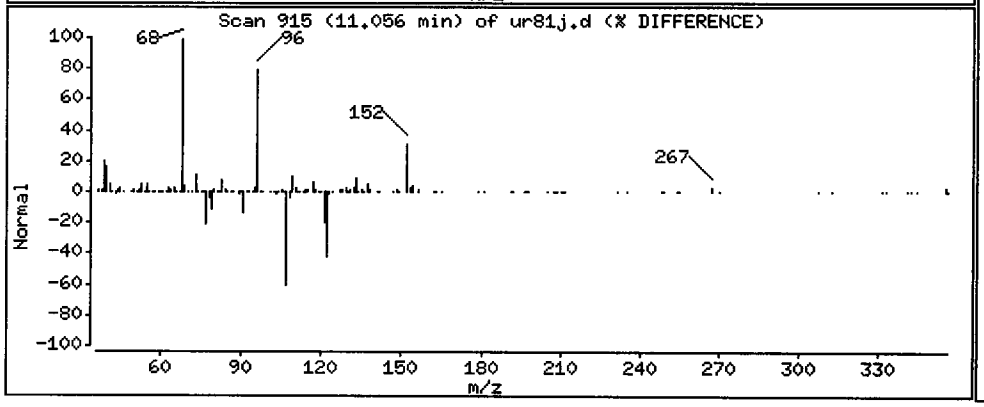
22 2,4-Dimethylphenol

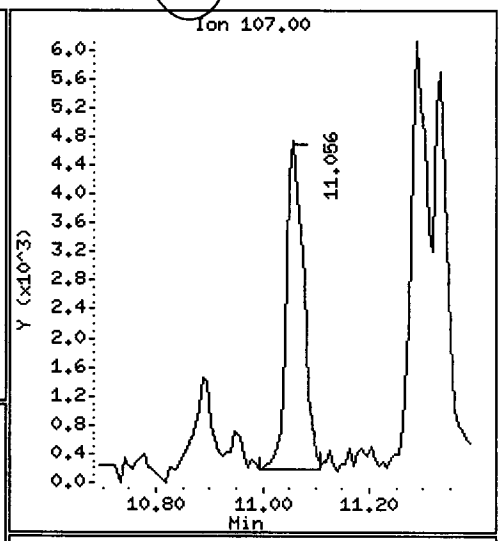
Concentration: 12.31 ug/kg

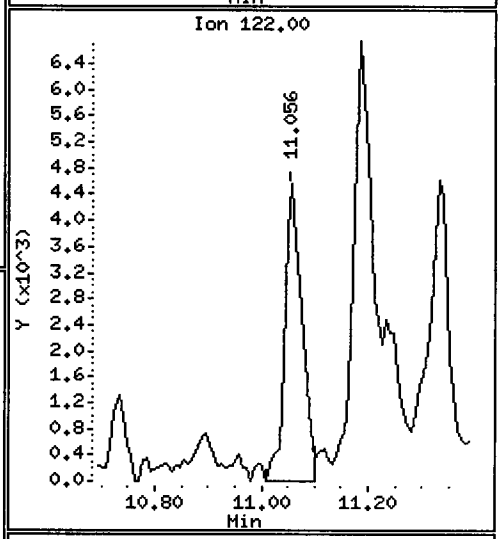


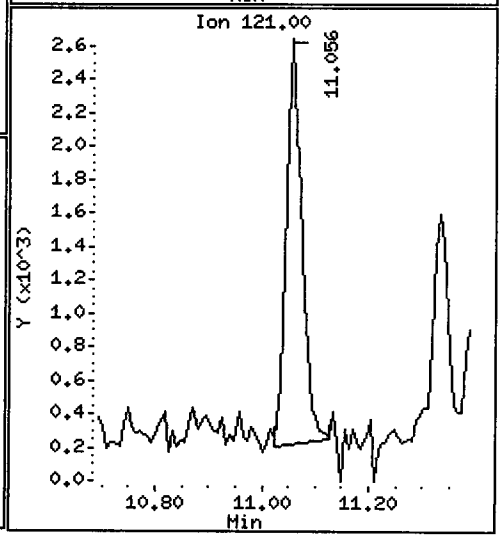












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

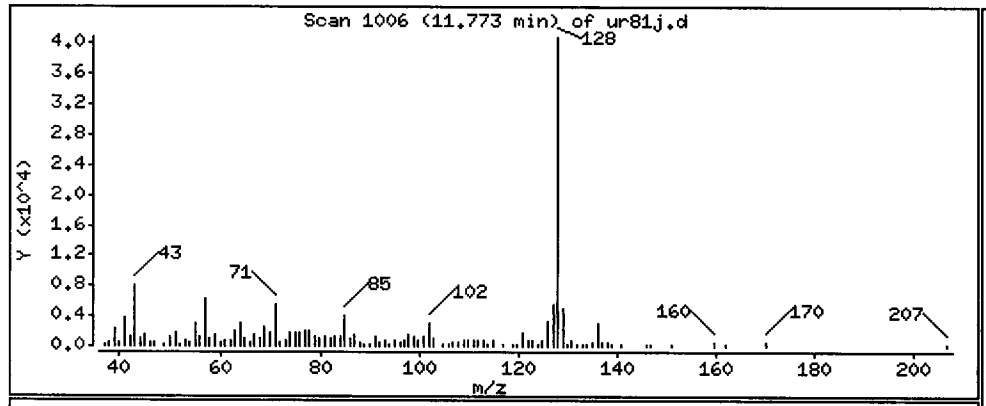
Operator: VTS/YZ

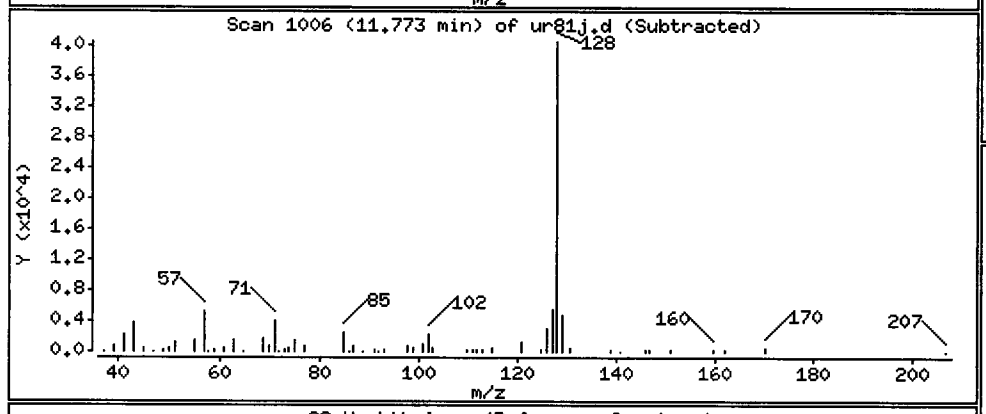
Column phase: ZB-5msi

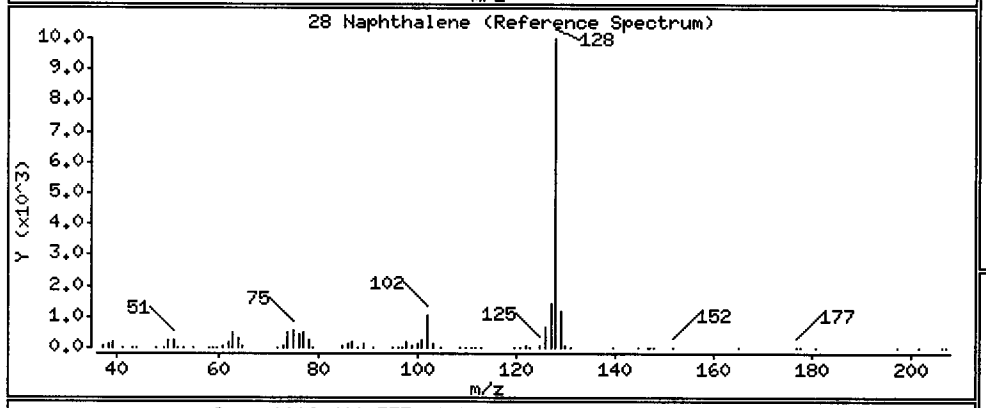
Column diameter: 0.25

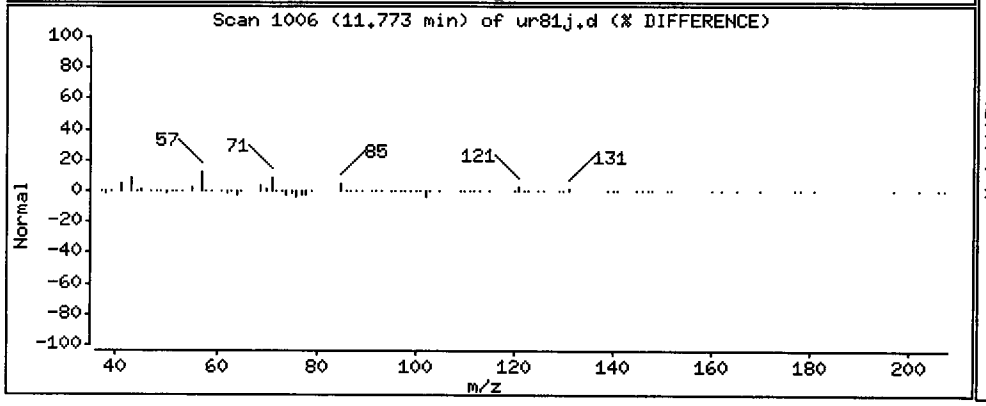
28 Naphthalene

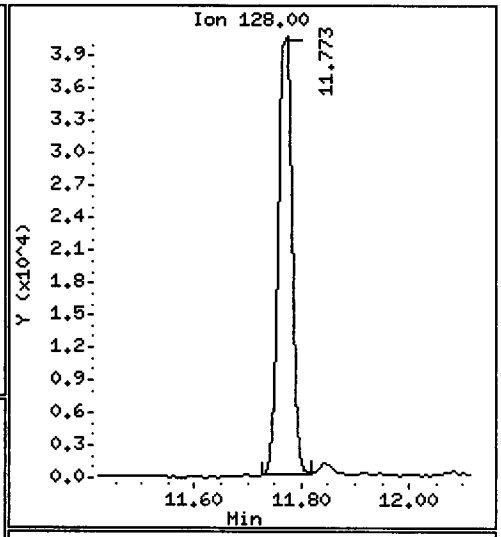
Concentration: 27.64 ug/kg

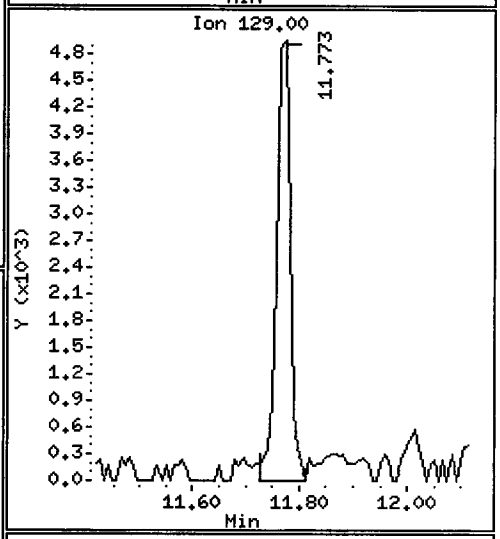


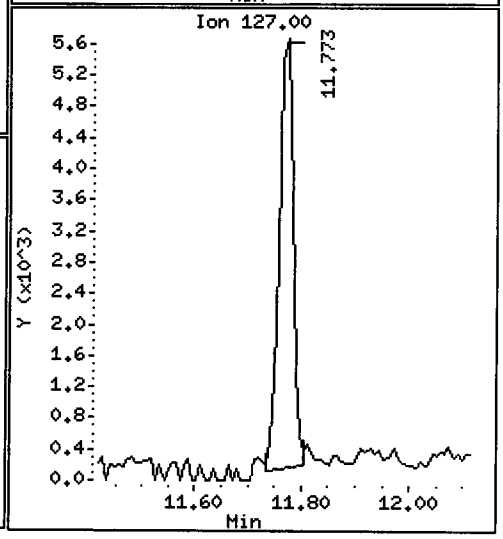












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

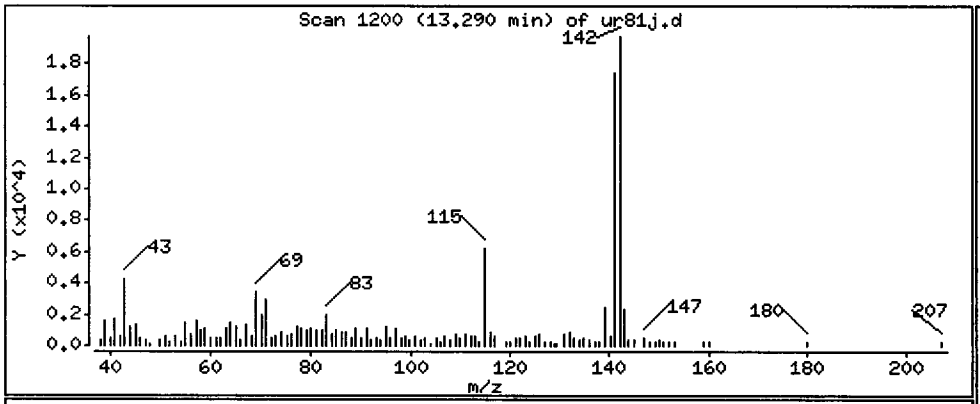
Operator: VTS/YZ

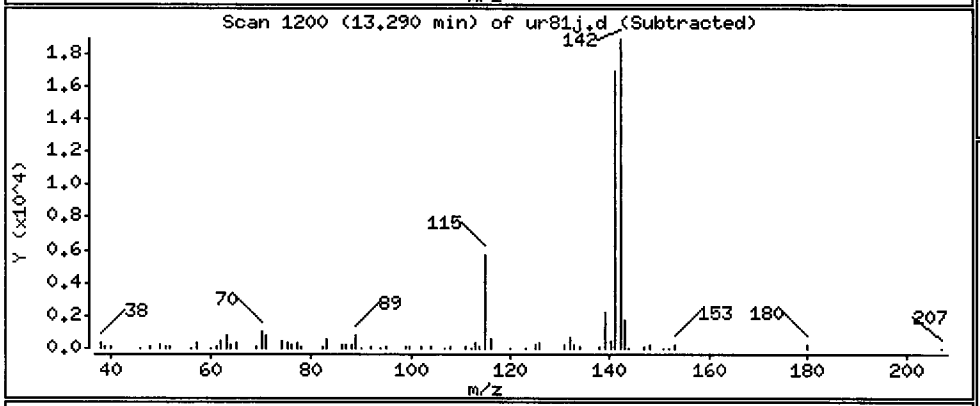
Column phase: ZB-5msi

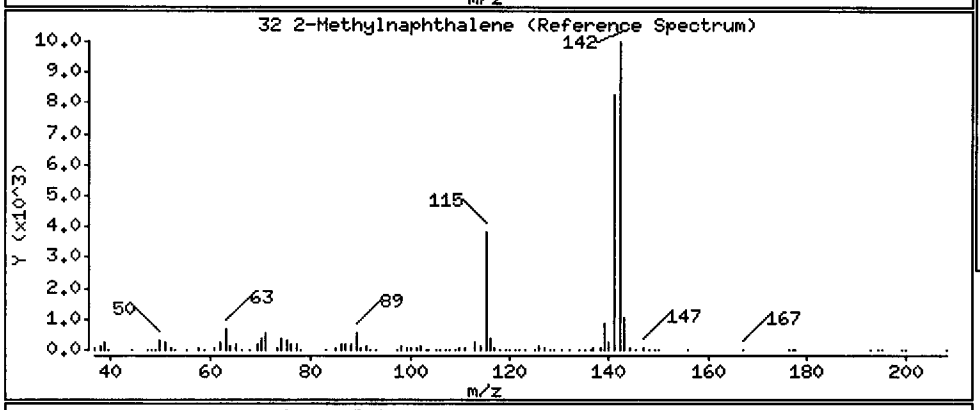
Column diameter: 0.25

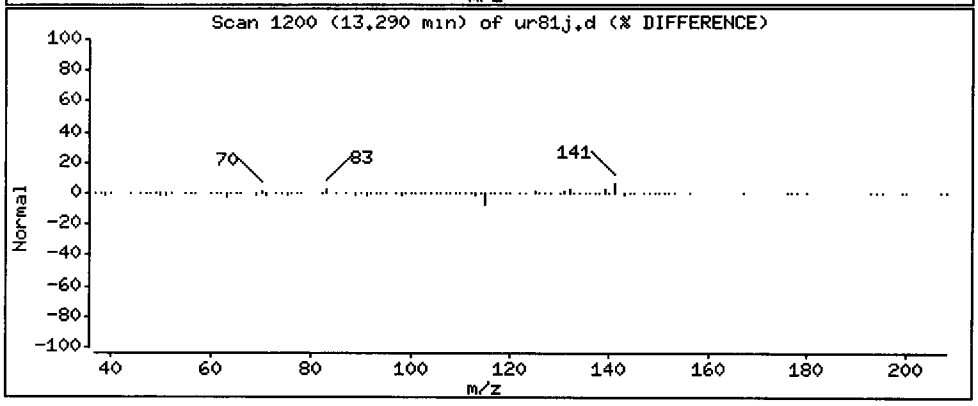
32 2-Methylnaphthalene

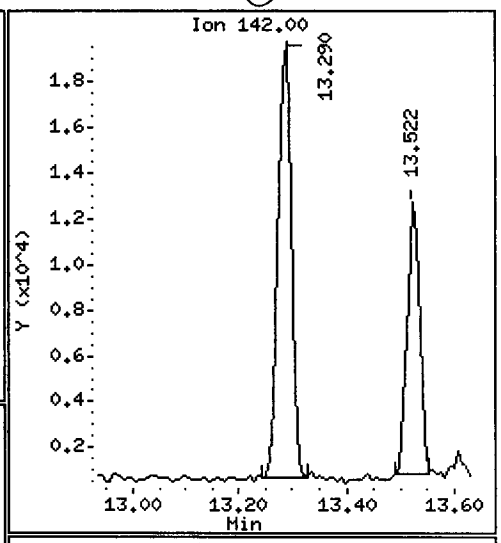
Concentration: 18.90 ug/kg

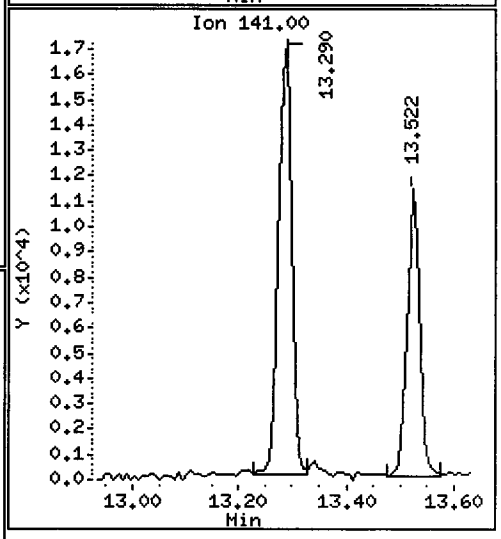












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

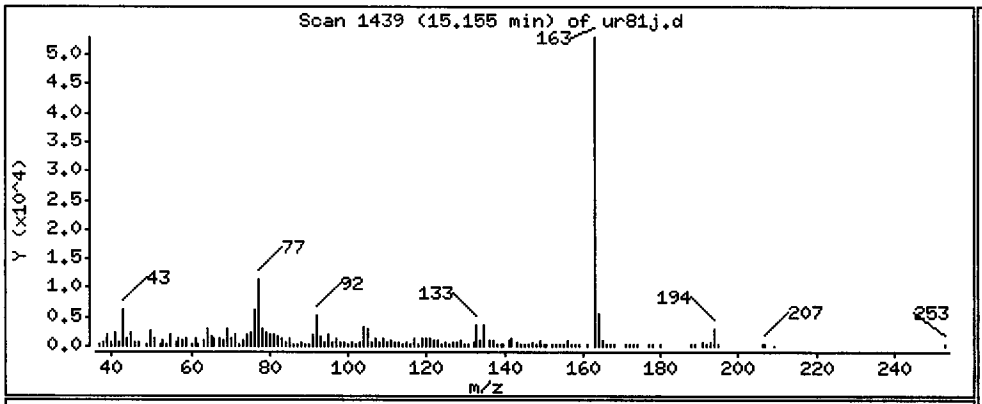
Operator: VTS/YZ

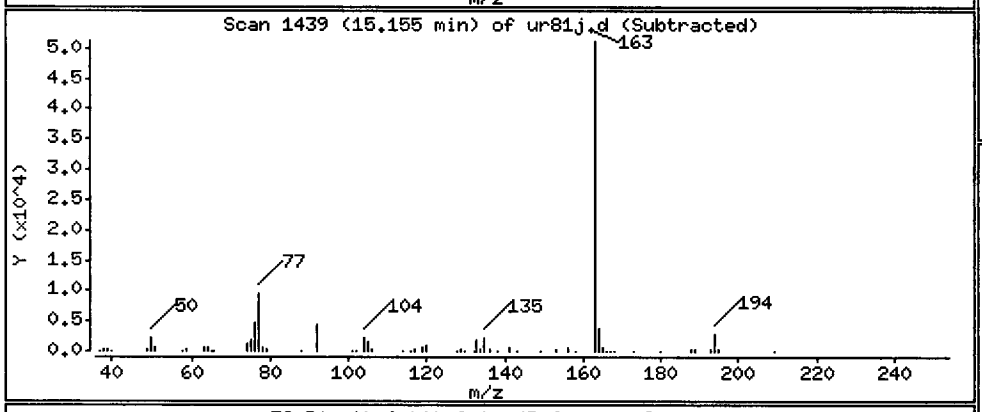
Column phase: ZB-5msi

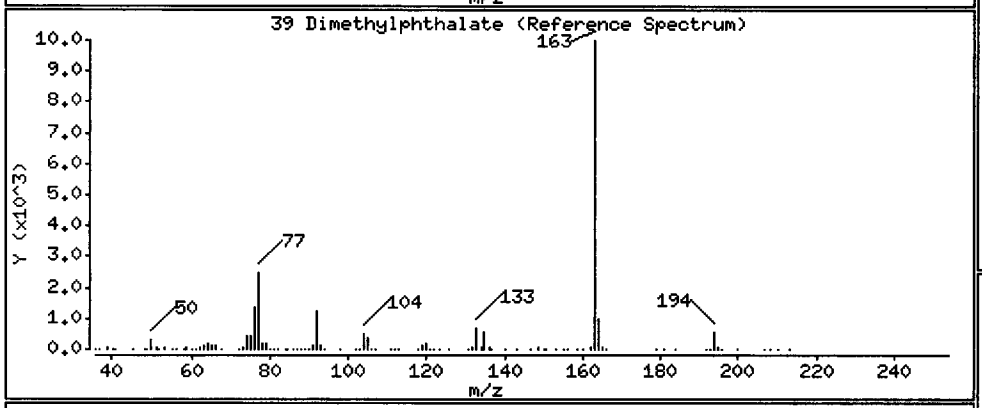
Column diameter: 0.25

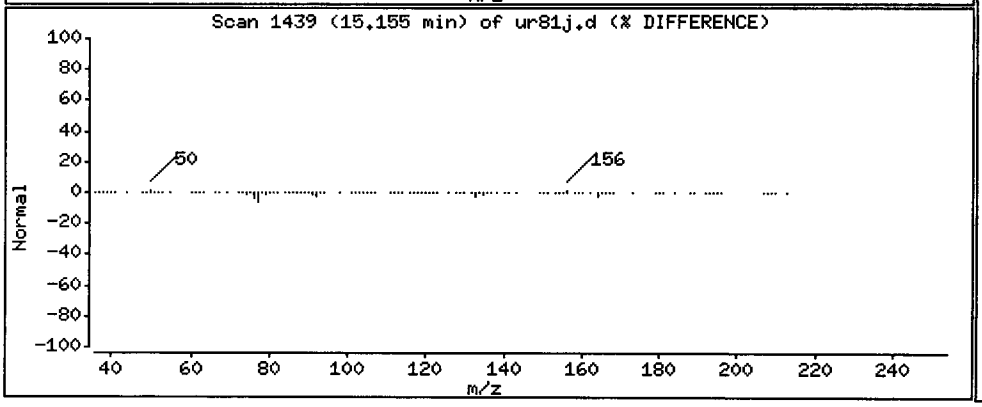
39 Dimethylphthalate

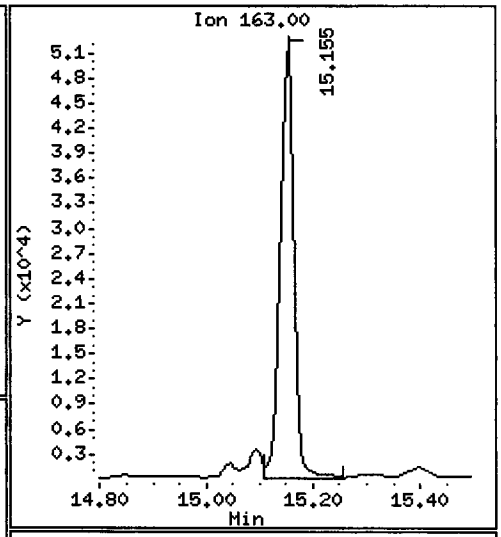
Concentration: 54.28 ug/kg

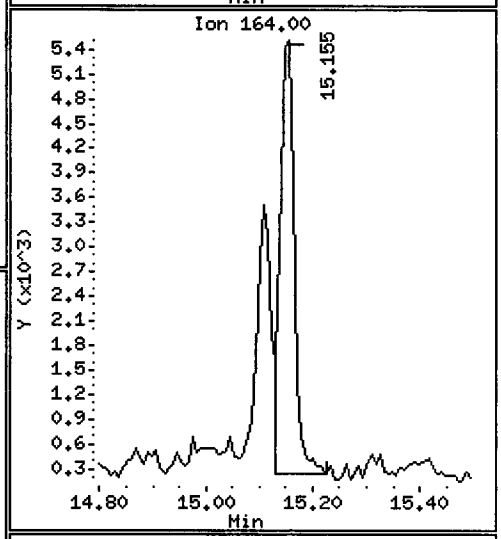


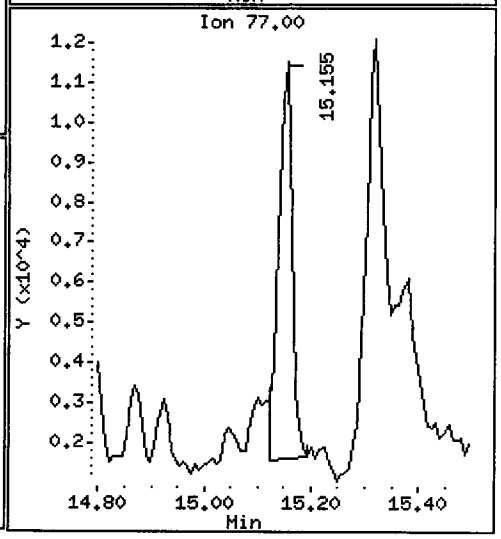












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

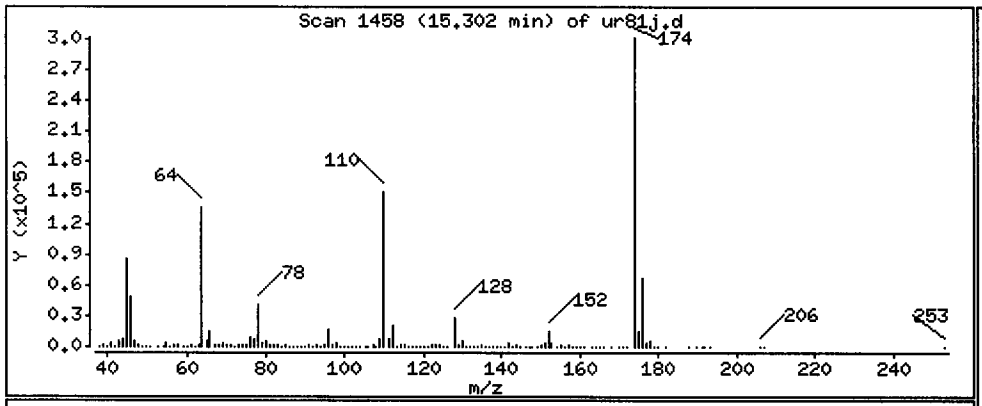
Operator: VTS/YZ

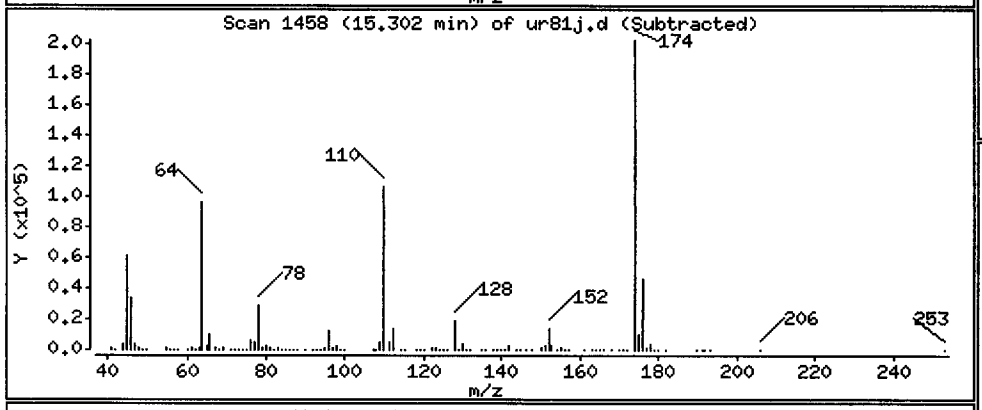
Column phase: ZB-5msi

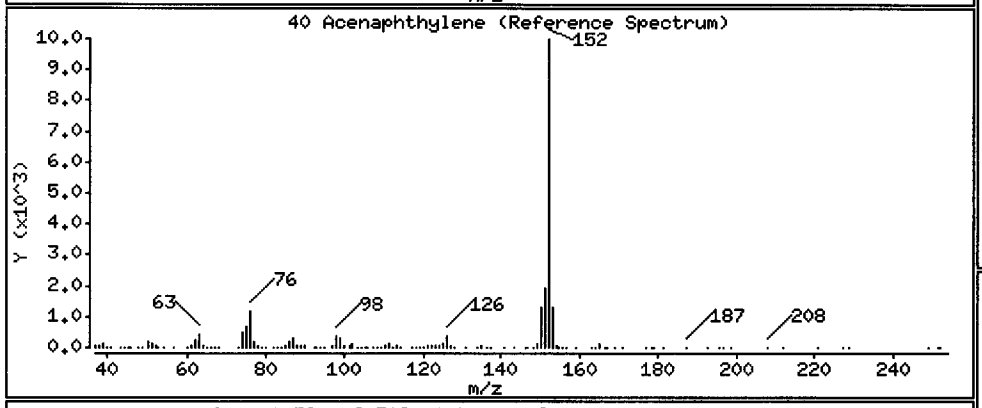
Column diameter: 0.25

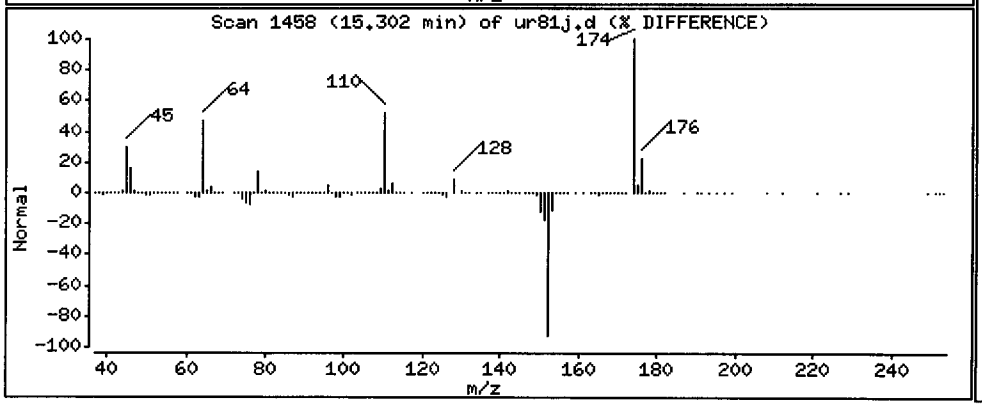
40 Acenaphthylene

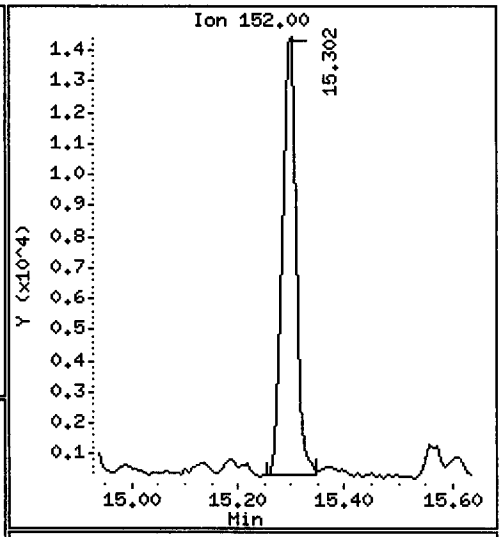
Concentration: 10.44 ug/kg

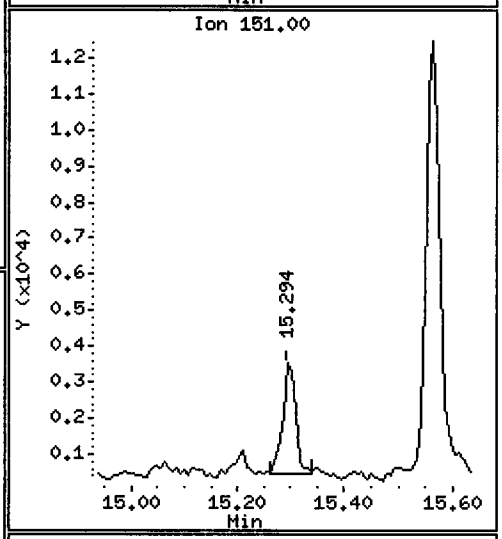


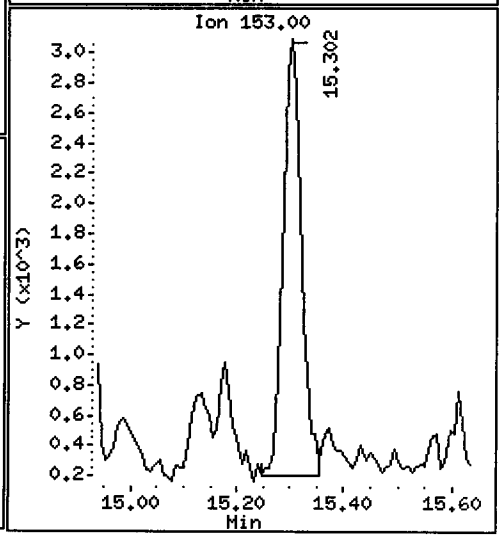












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

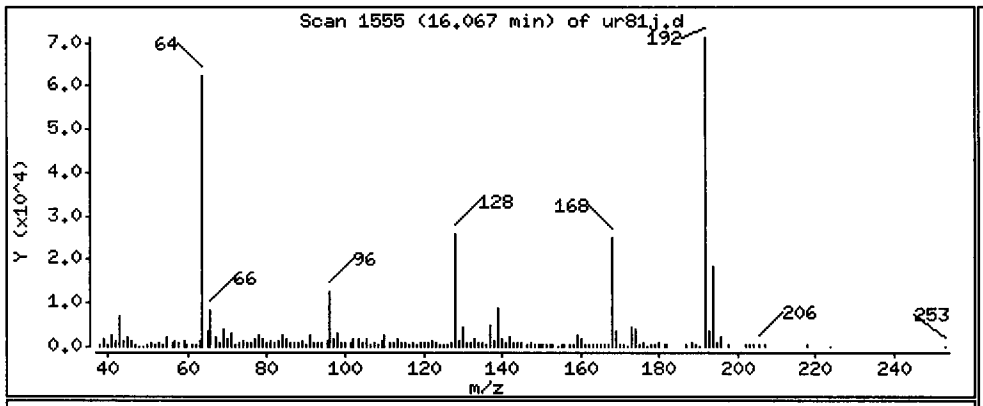
Operator: VTS/YZ

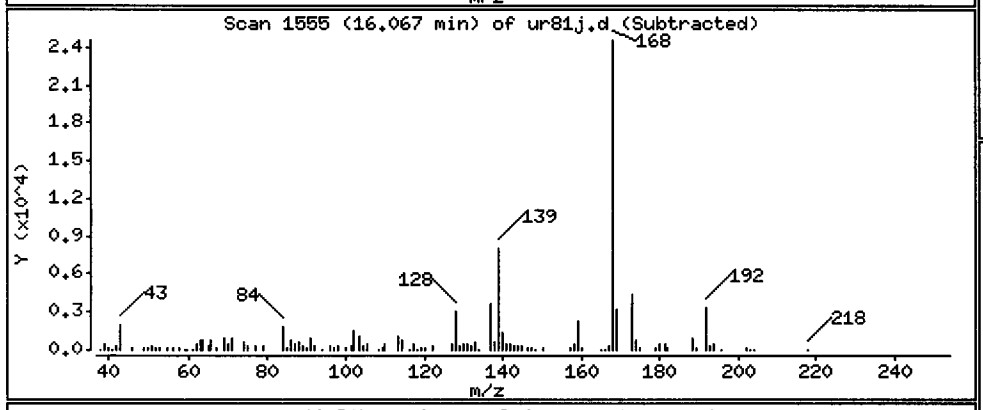
Column phase: ZB-5msi

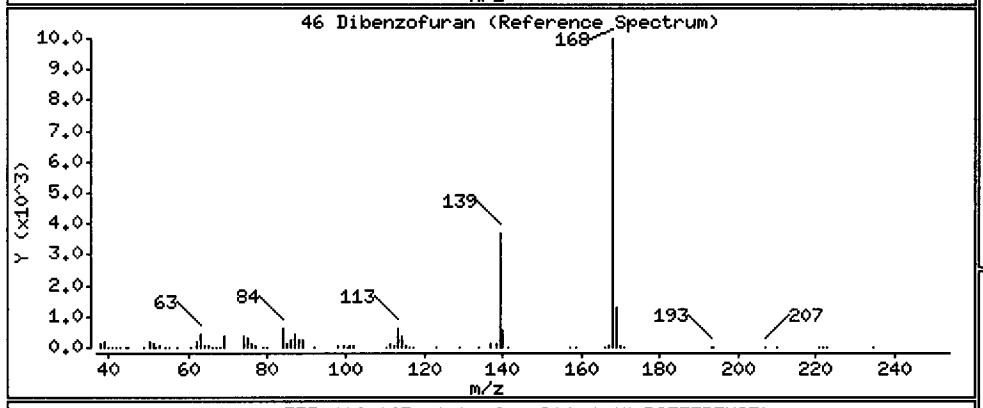
Column diameter: 0.25

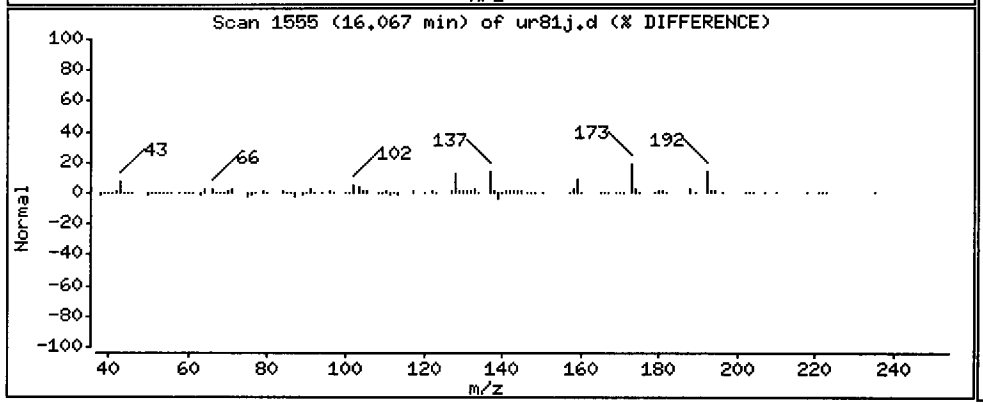
46 Dibenzofuran

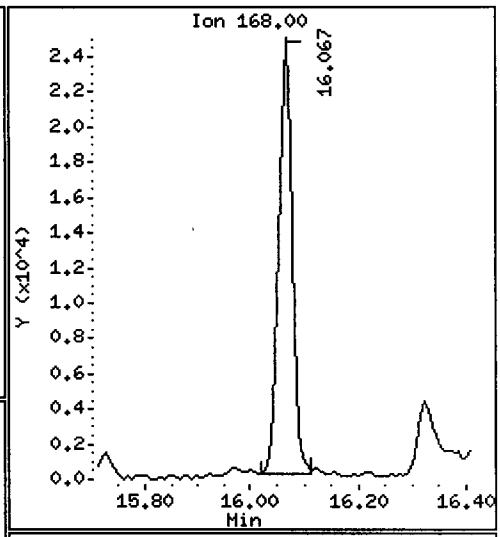
Concentration: 19.64 ug/kg

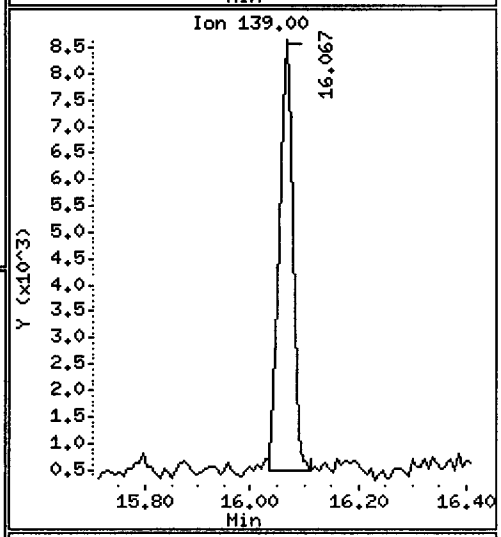


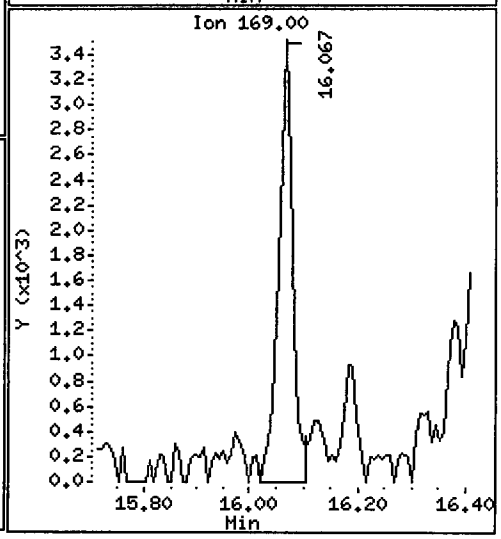












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

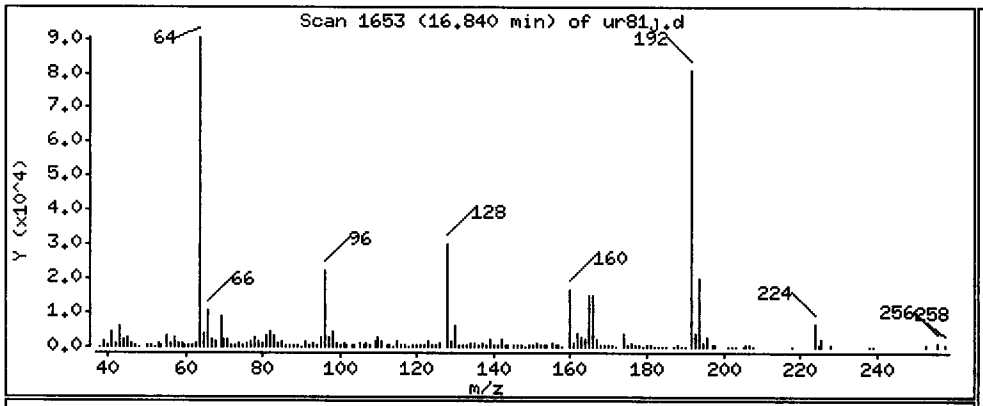
Operator: VTS/YZ

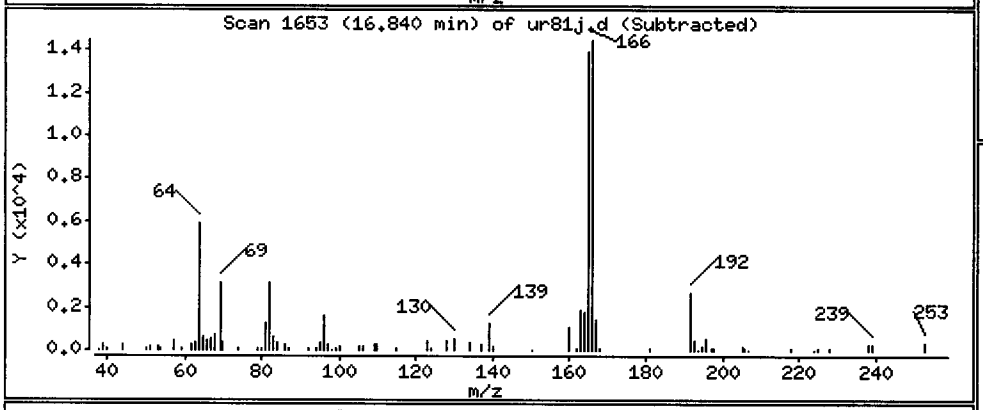
Column phase: ZB-5msi

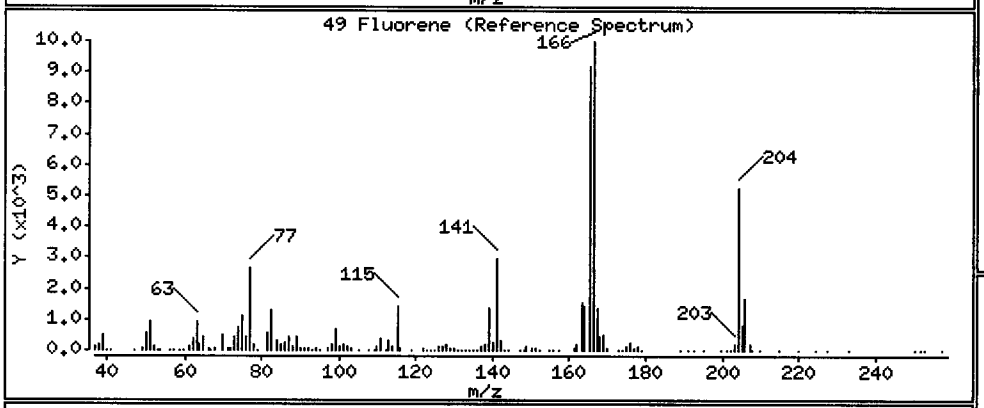
Column diameter: 0.25

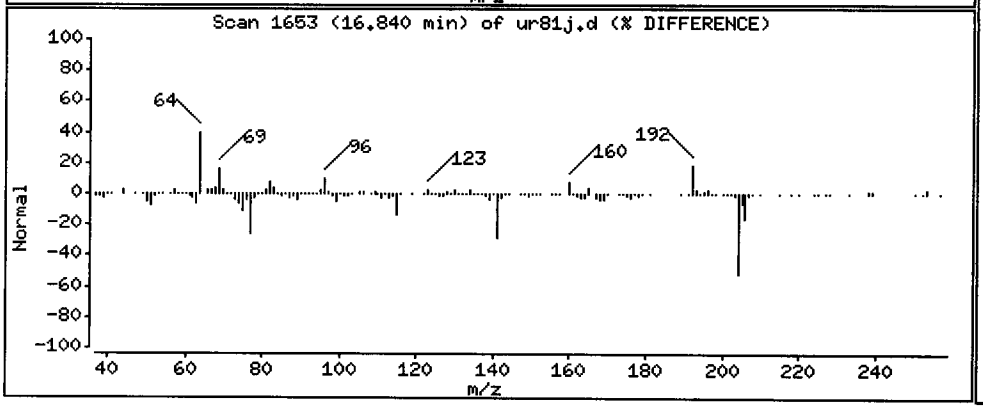
49 Fluorene

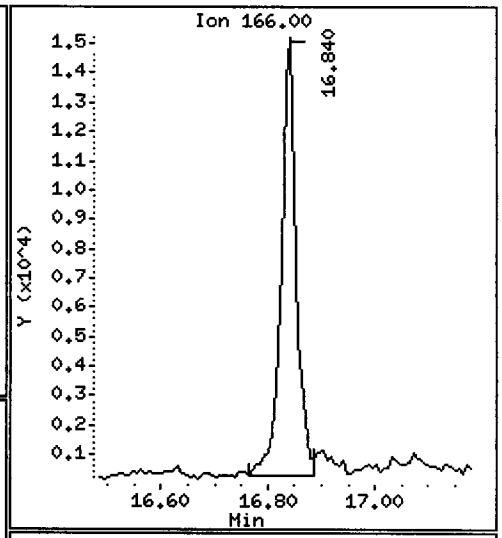
Concentration: 19.14 ug/kg

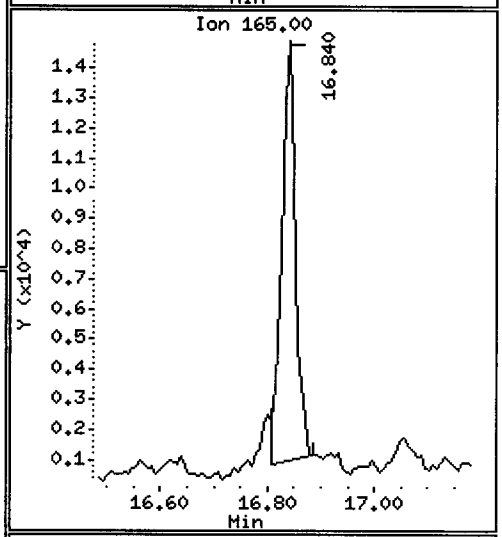


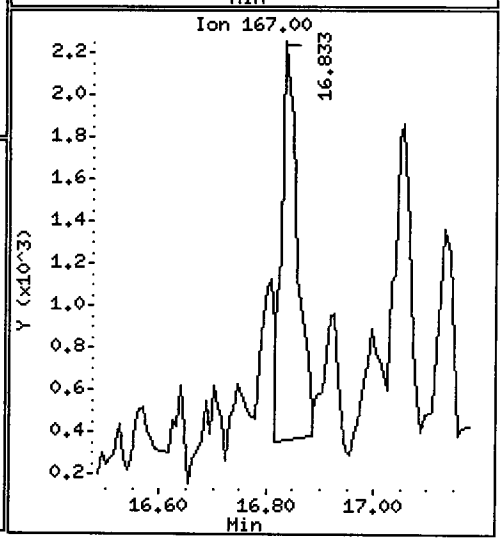












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

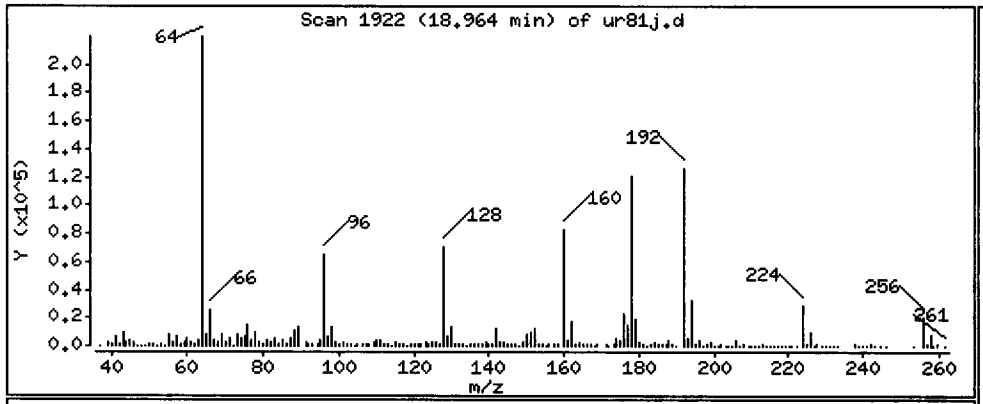
Operator: VTS/YZ

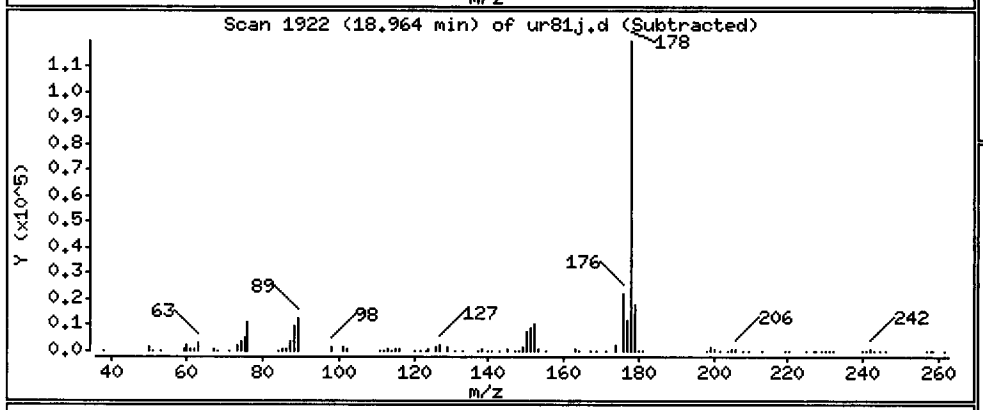
Column phase: ZB-5msi

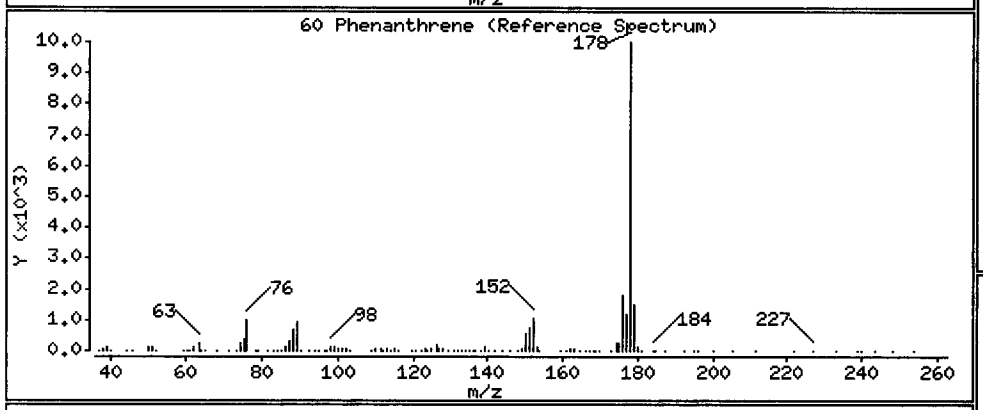
Column diameter: 0.25

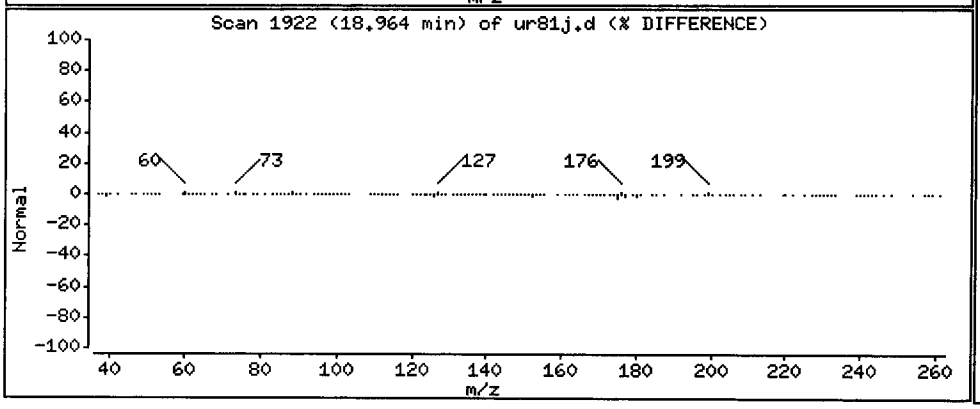
60 Phenanthrene

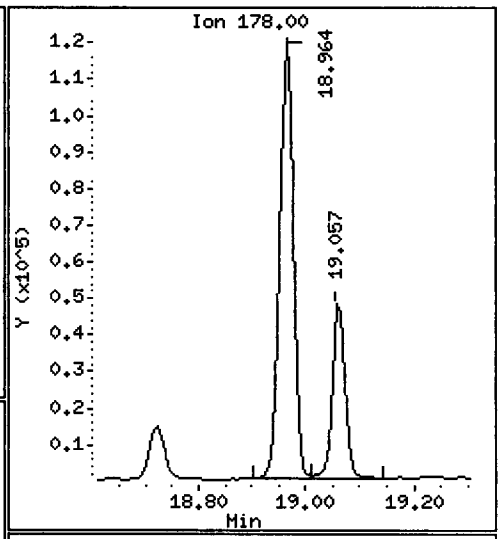
Concentration: 95.25 ug/kg

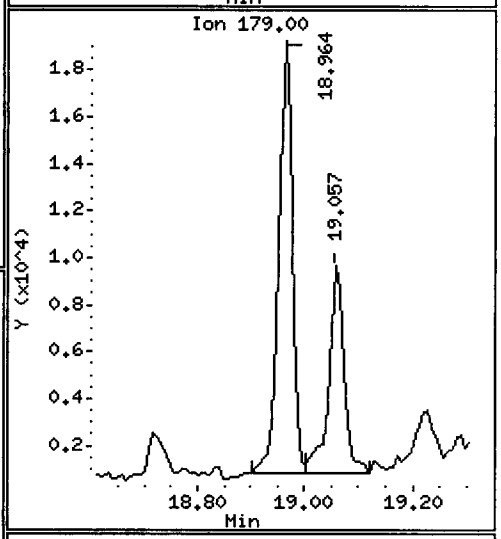


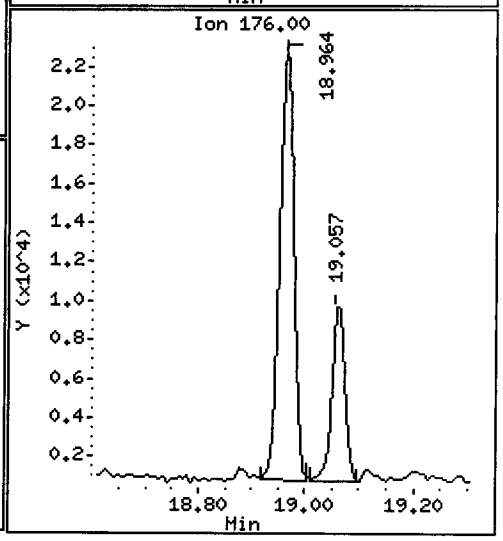












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

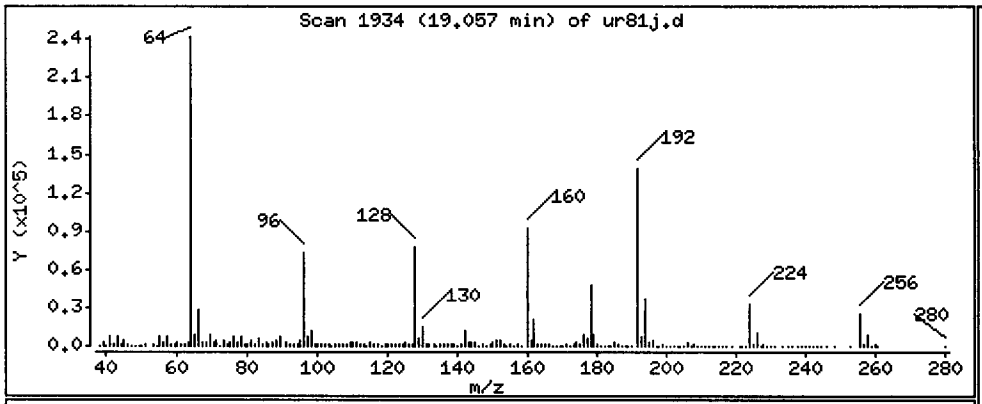
Operator: VTS/YZ

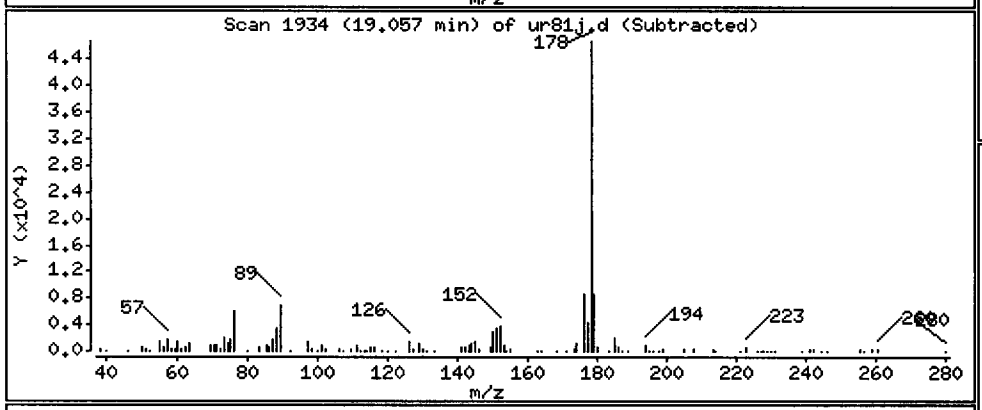
Column phase: ZB-5msi

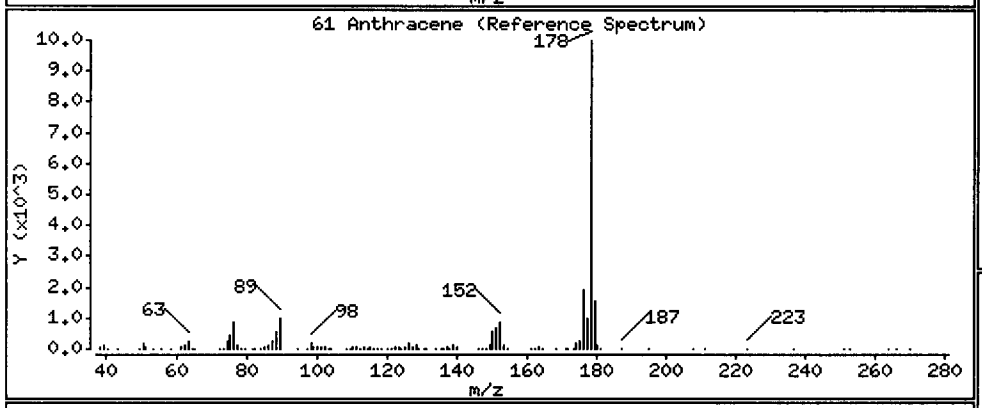
Column diameter: 0.25

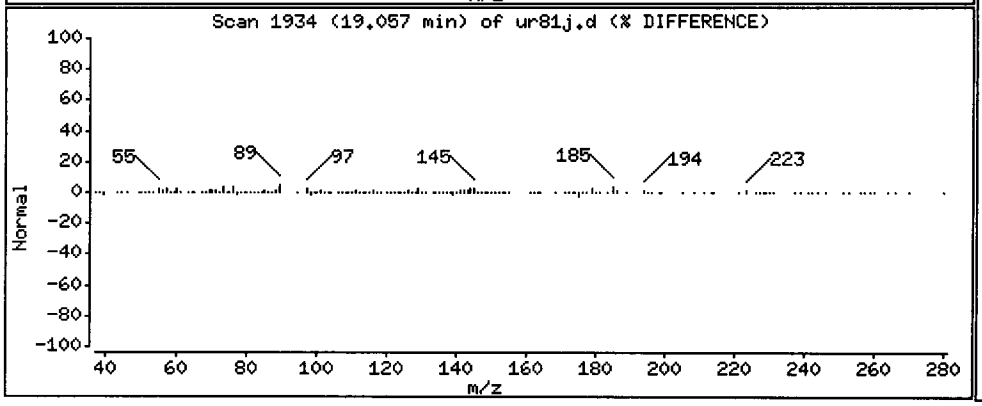
61 Anthracene

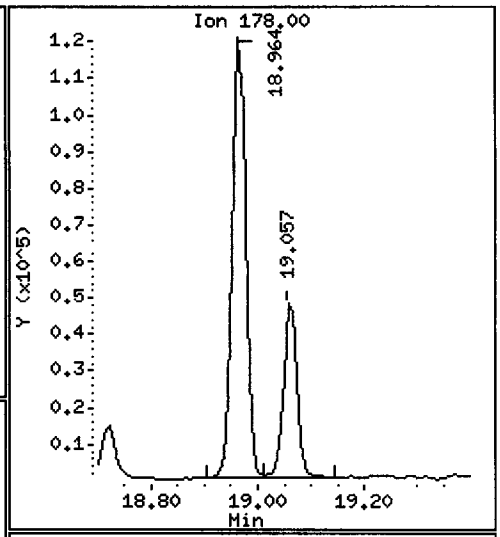
Concentration: 37.43 ug/kg

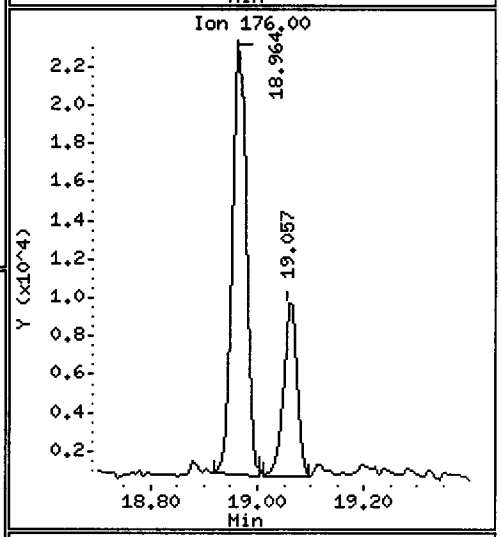


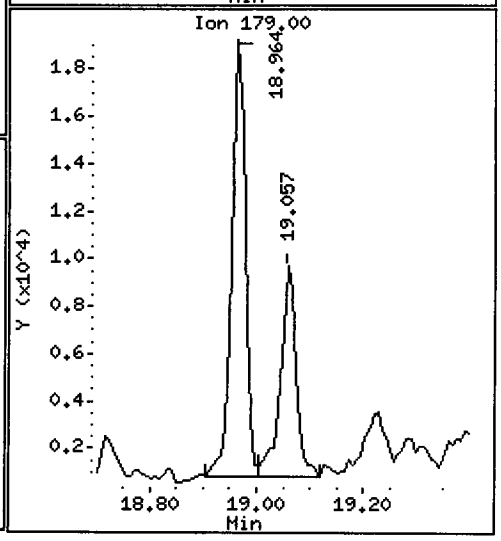












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

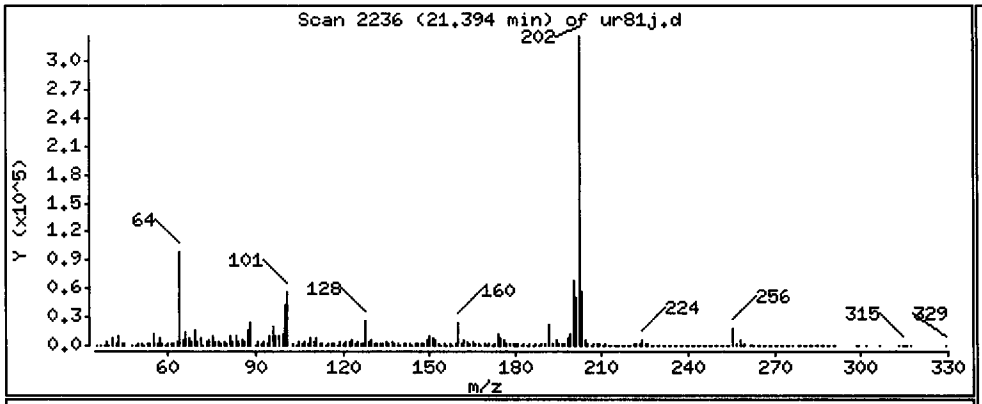
Operator: VTS/YZ

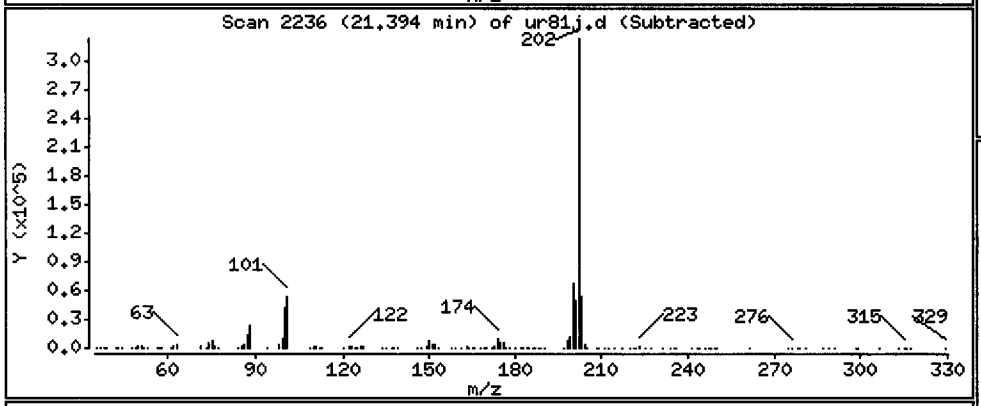
Column phase: ZB-5msi

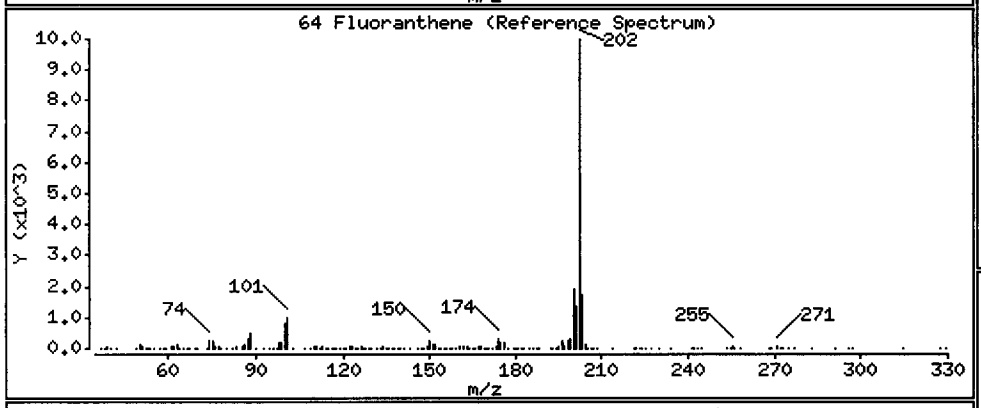
Column diameter: 0.25

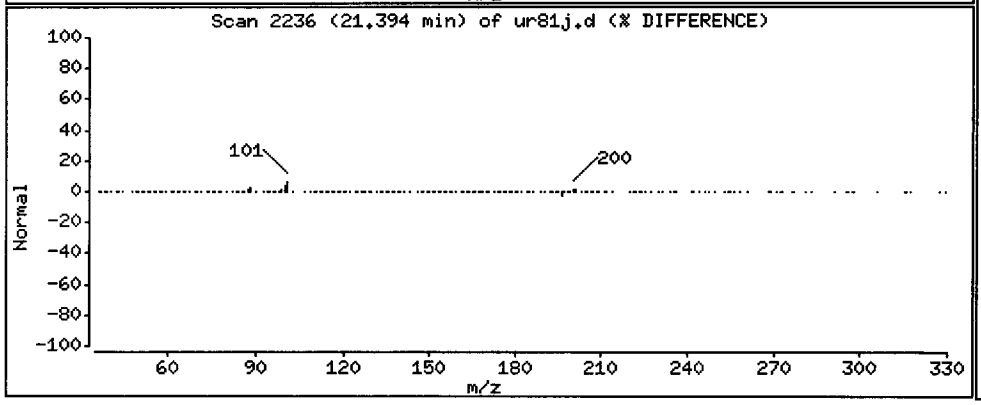
64 Fluoranthene

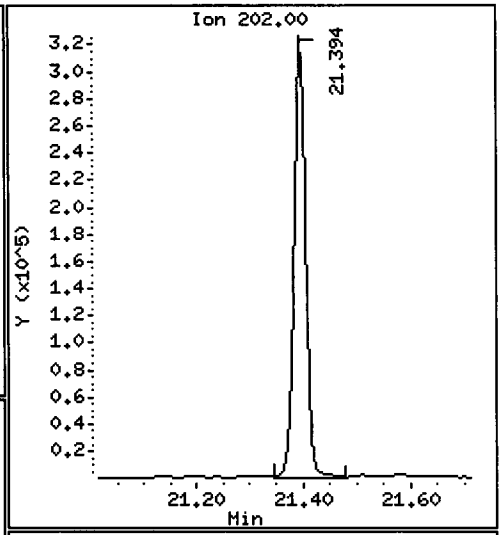
Concentration: 208.3 ug/kg

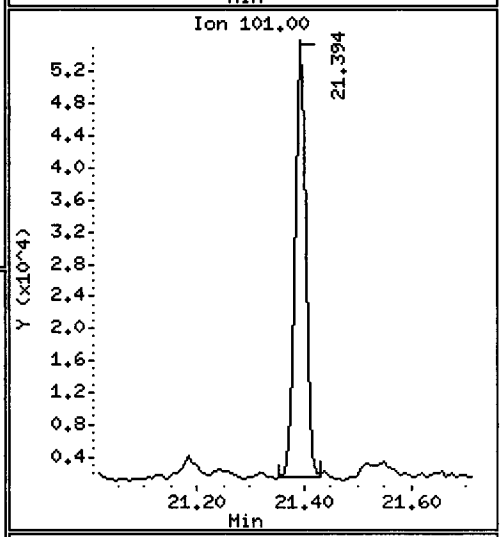


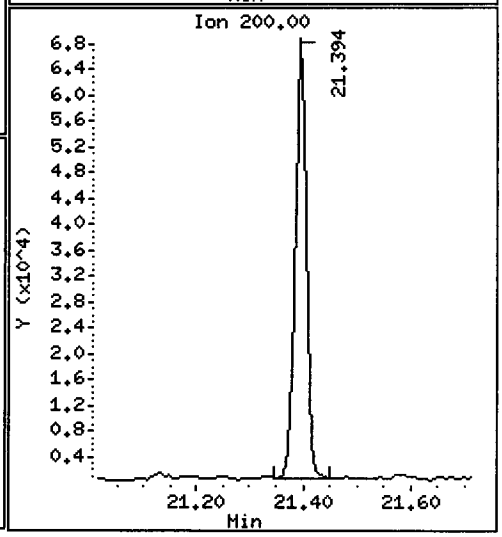












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

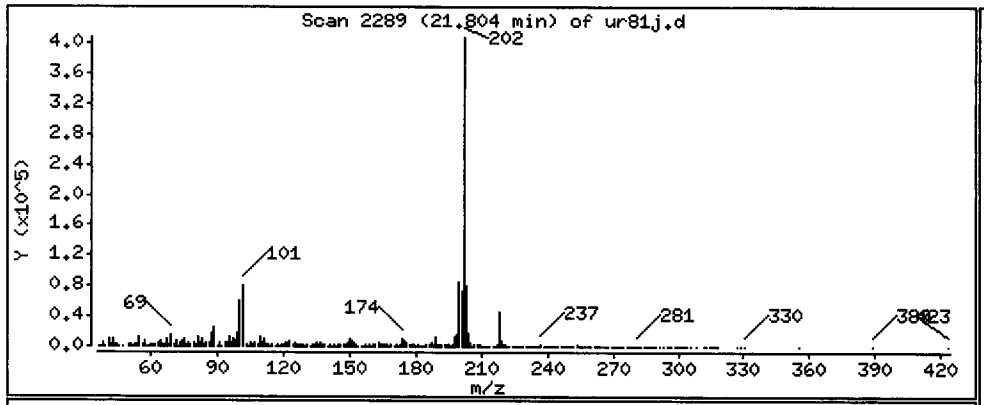
Operator: VTS/YZ

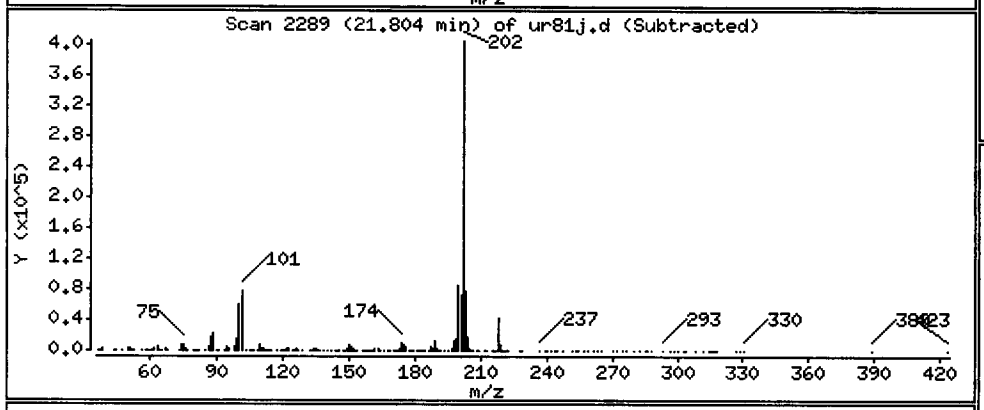
Column phase: ZB-5msi

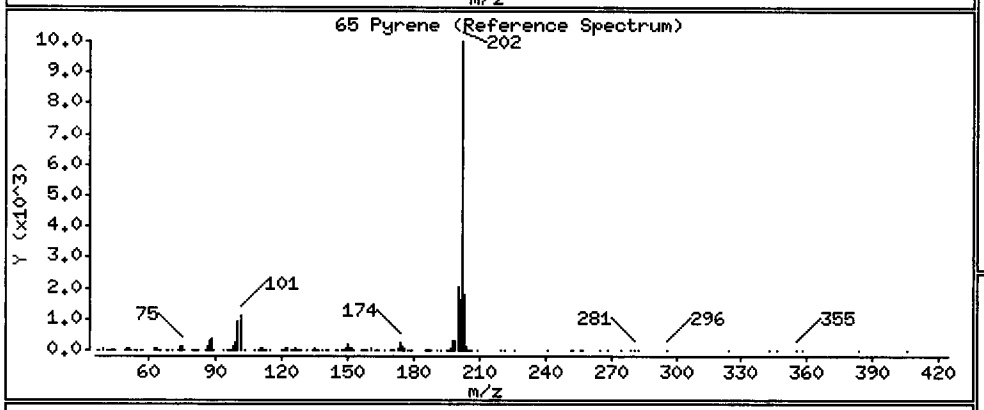
Column diameter: 0.25

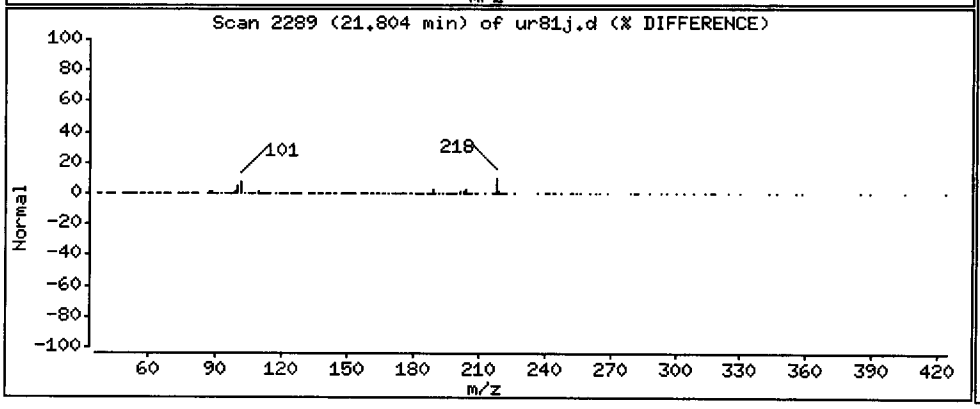
65 Pyrene

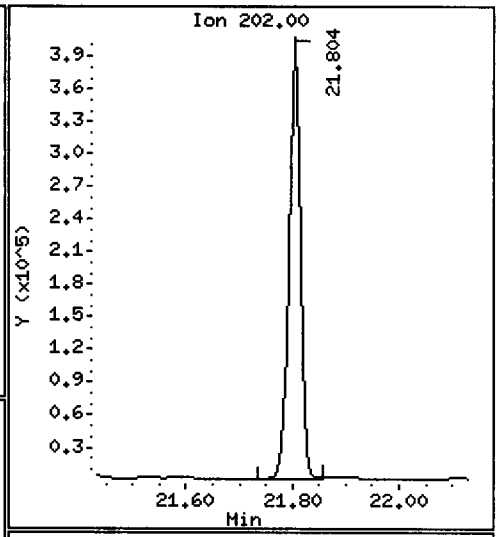
Concentration: 231.5 ug/kg

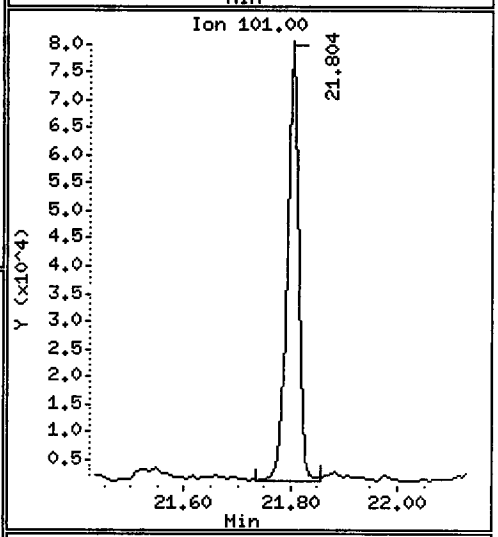


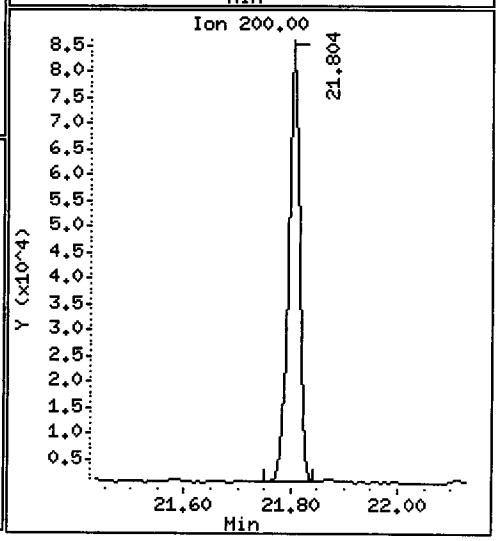












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

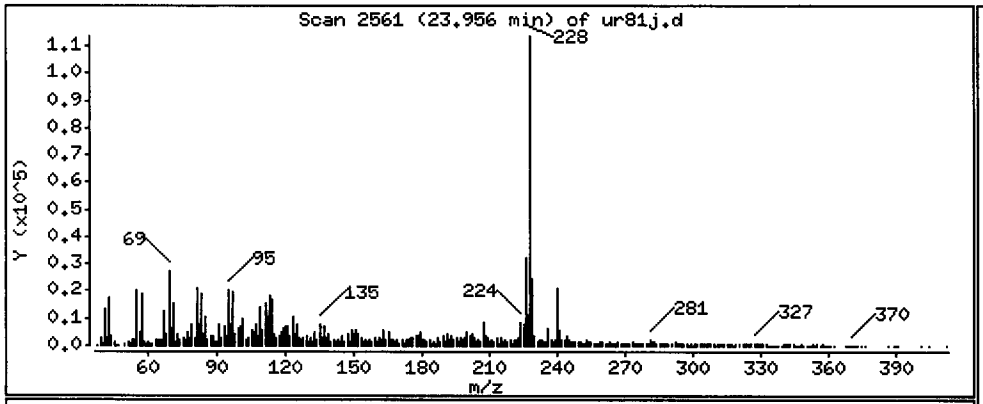
Operator: VTS/YZ

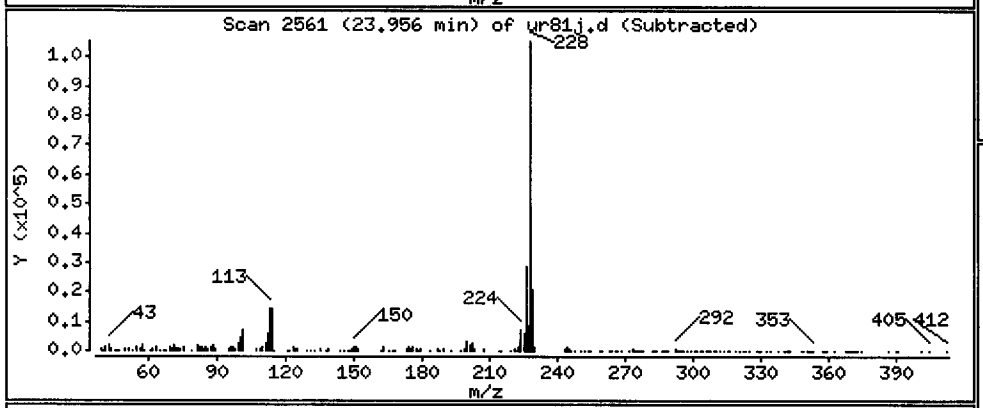
Column phase: ZB-5msi

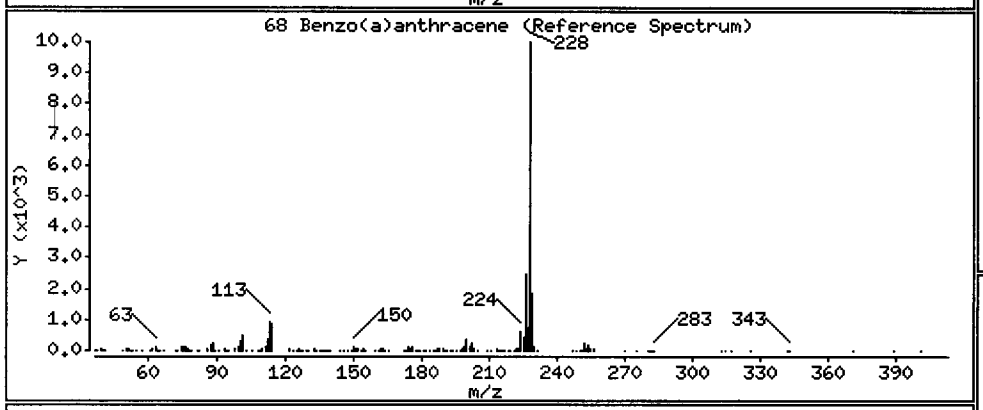
Column diameter: 0.25

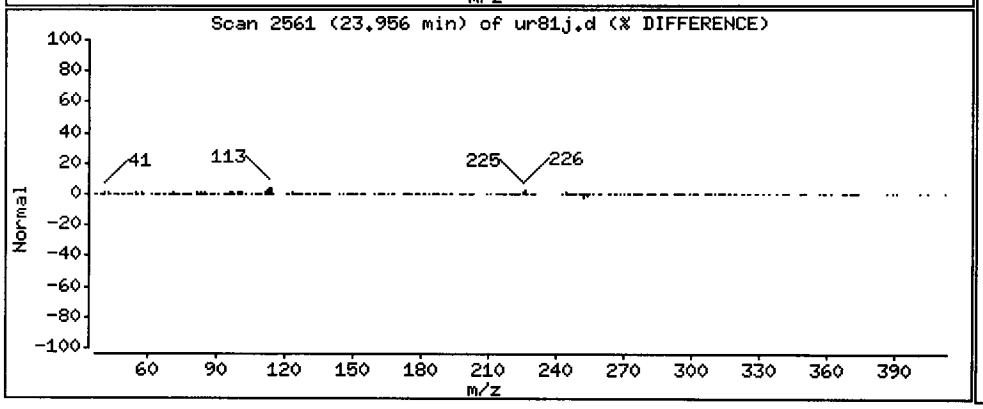
68 Benzo(a)anthracene

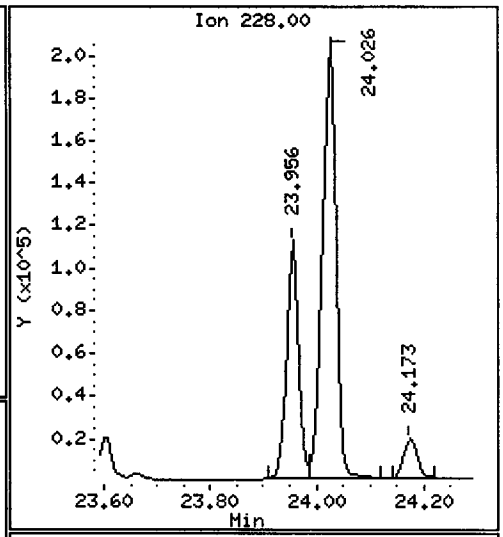
Concentration: 76.16 ug/kg

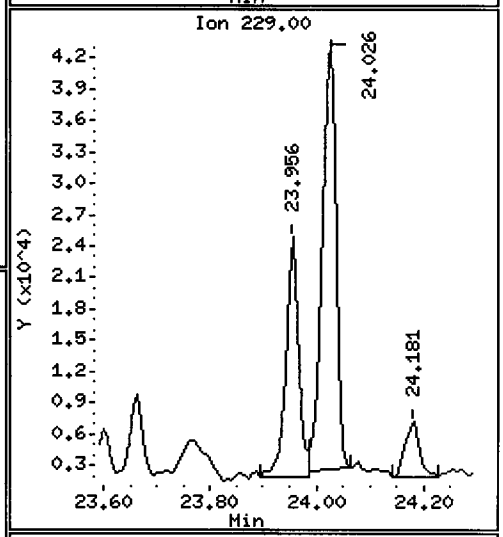


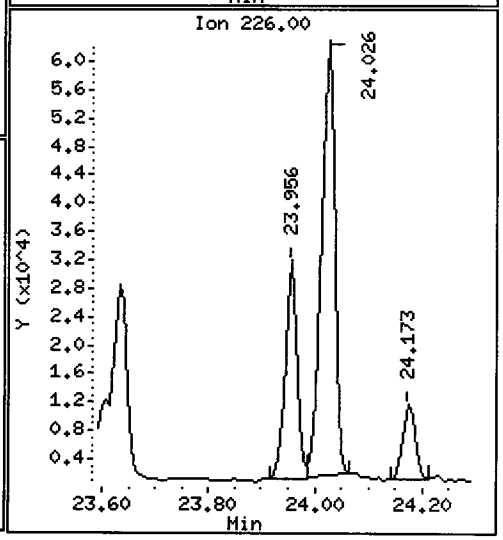












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

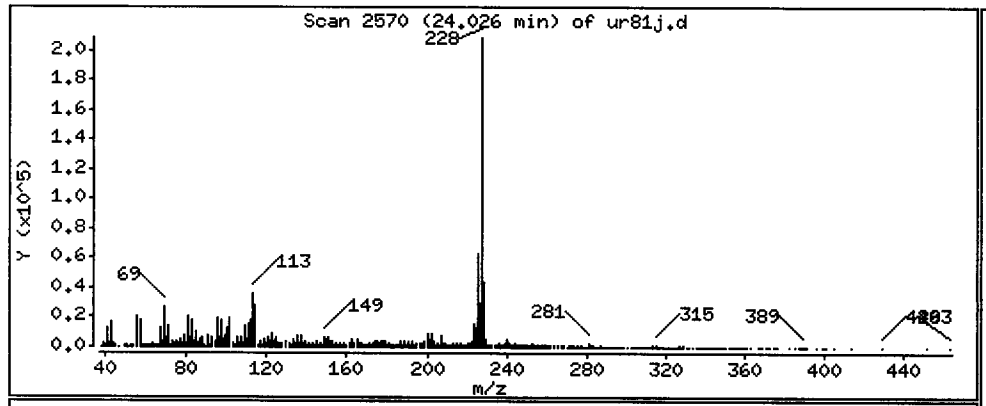
Operator: VTS/YZ

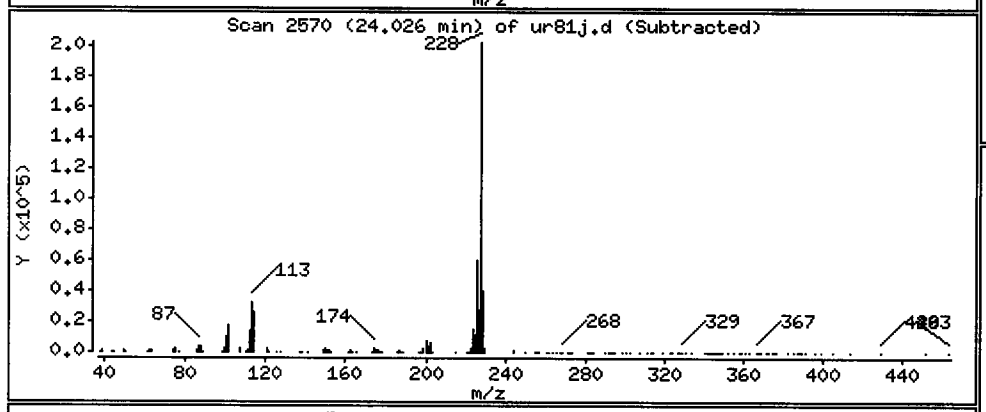
Column phase: ZB-5msi

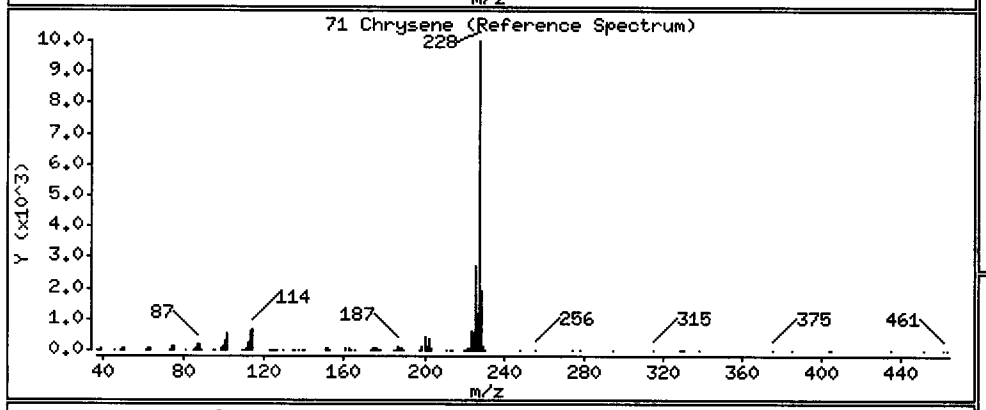
Column diameter: 0.25

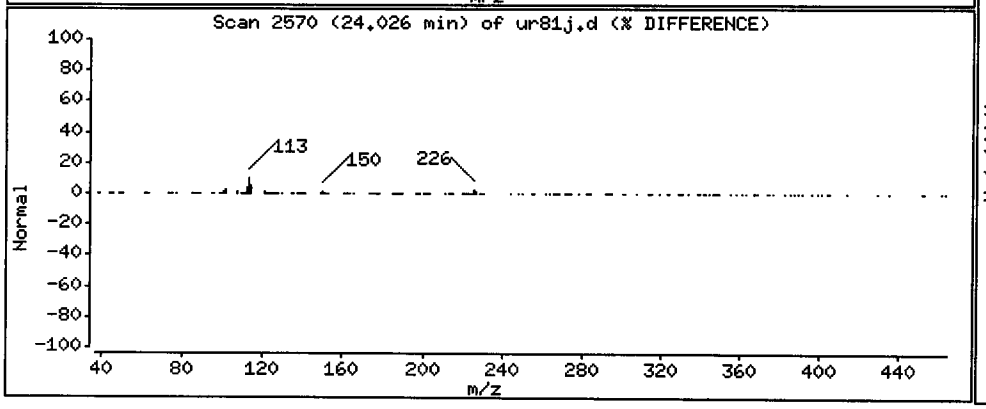
71 Chrysene

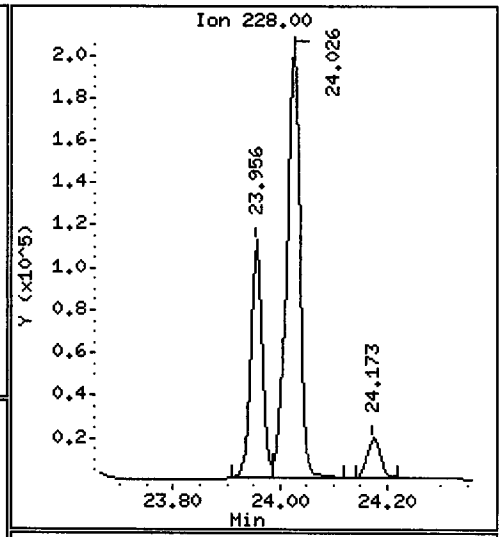
Concentration: 170.2 ug/kg

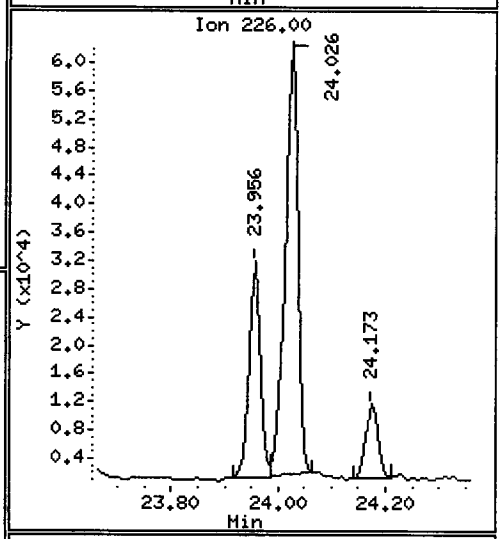


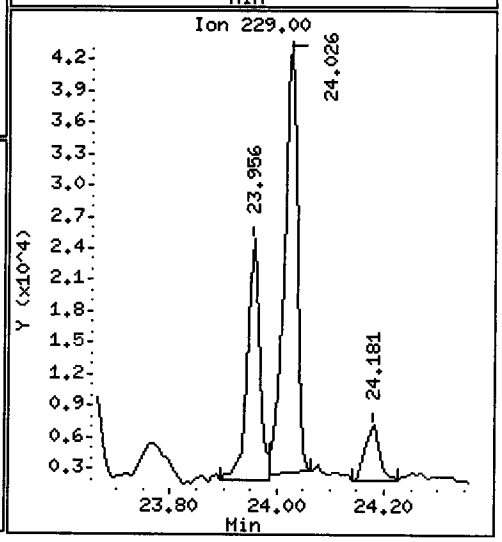












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

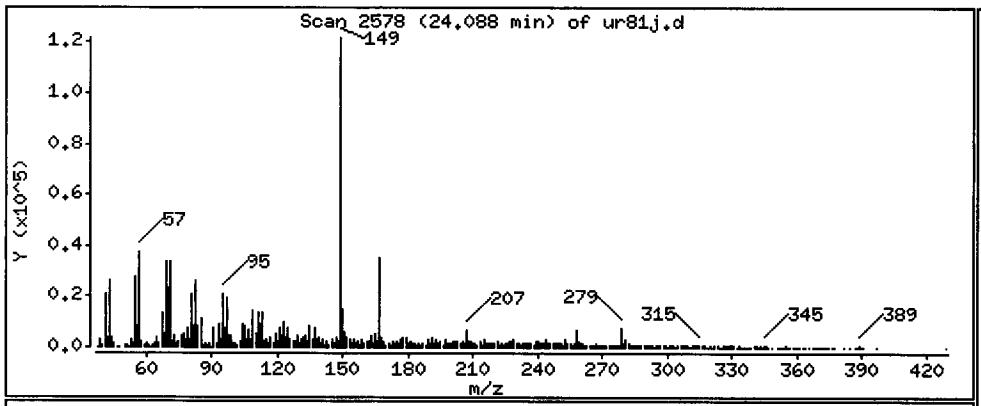
Operator: VTS/YZ

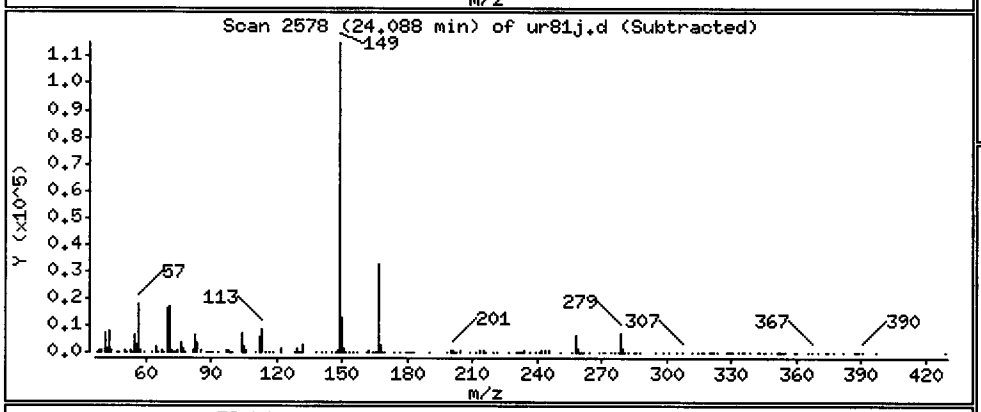
Column phase: ZB-5msi

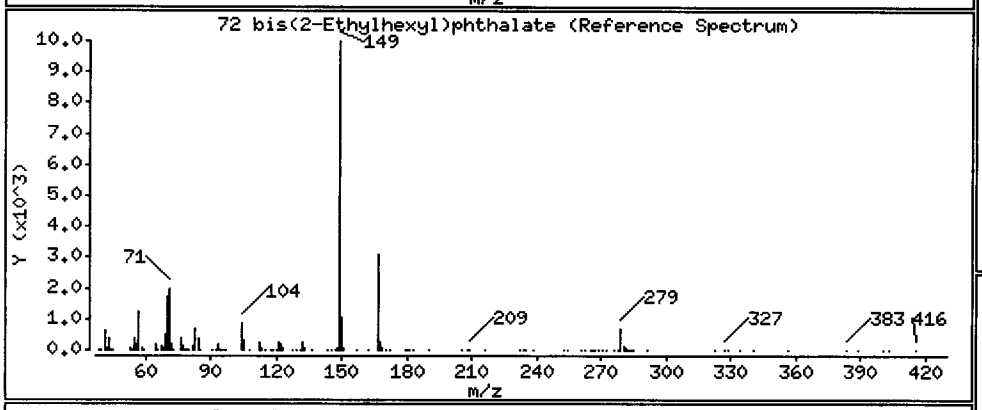
Column diameter: 0.25

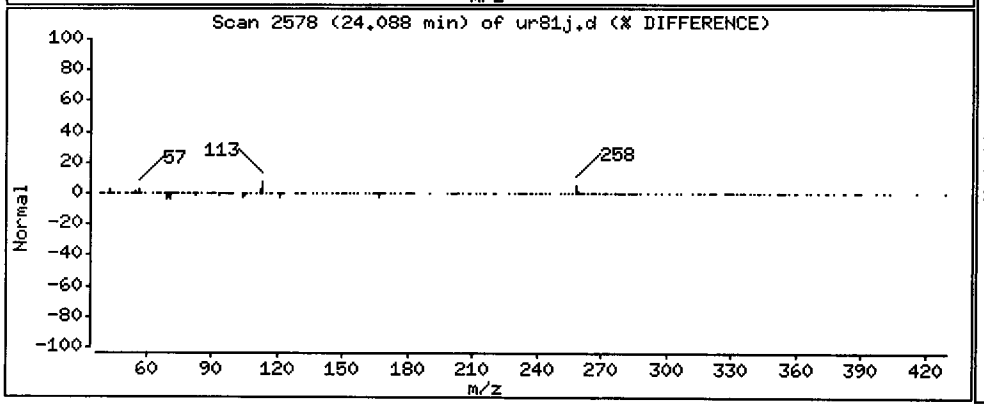
72 bis(2-Ethylhexyl)phthalate

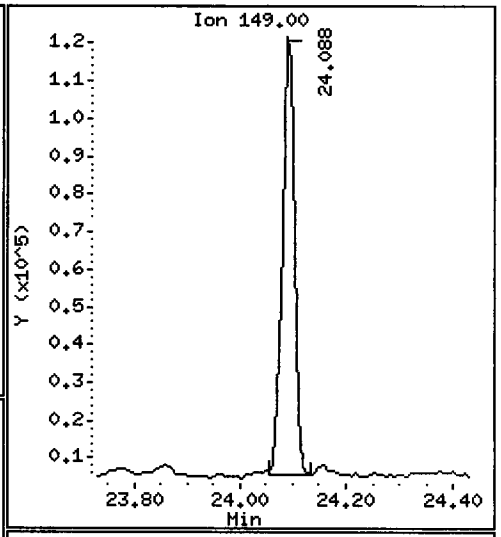
Concentration: 102.2 ug/kg

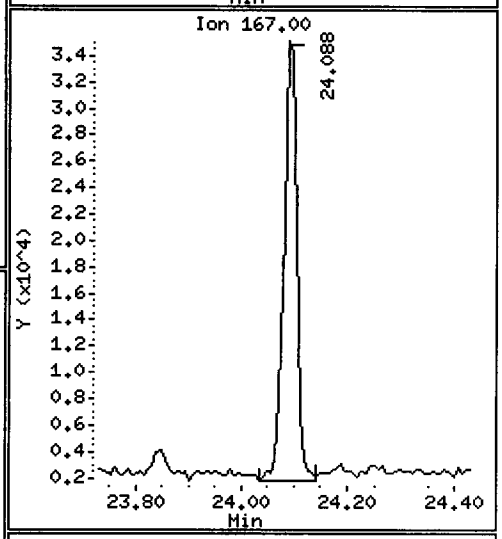


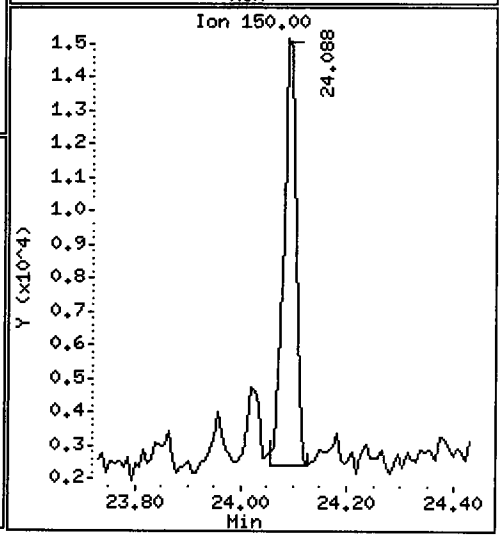












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

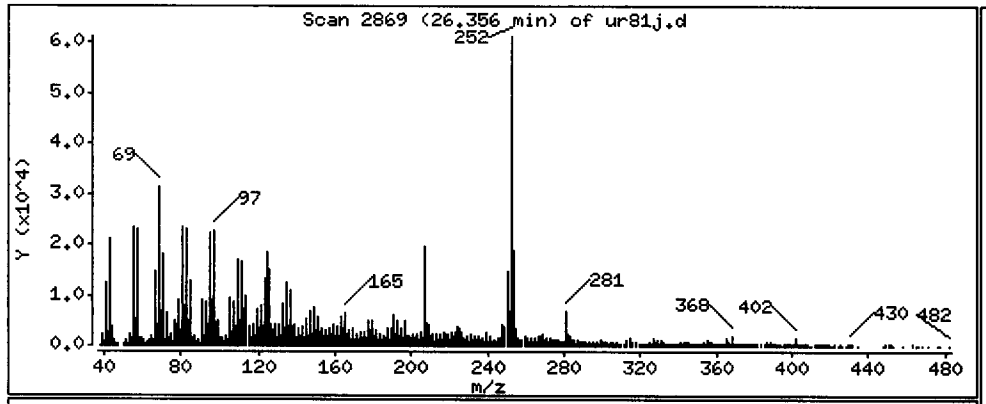
Operator: VTS/YZ

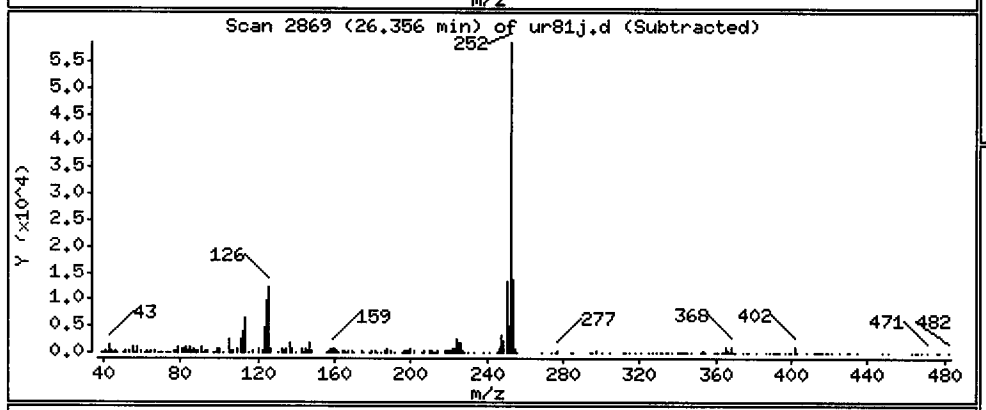
Column phase: ZB-5msi

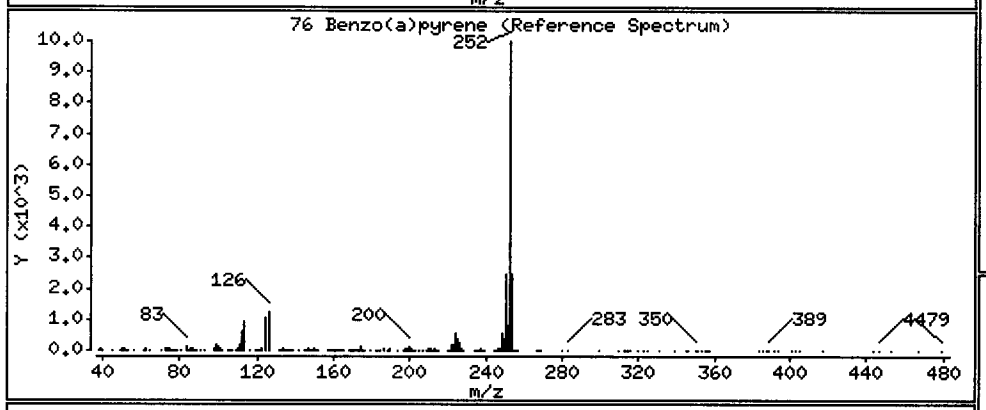
Column diameter: 0.25

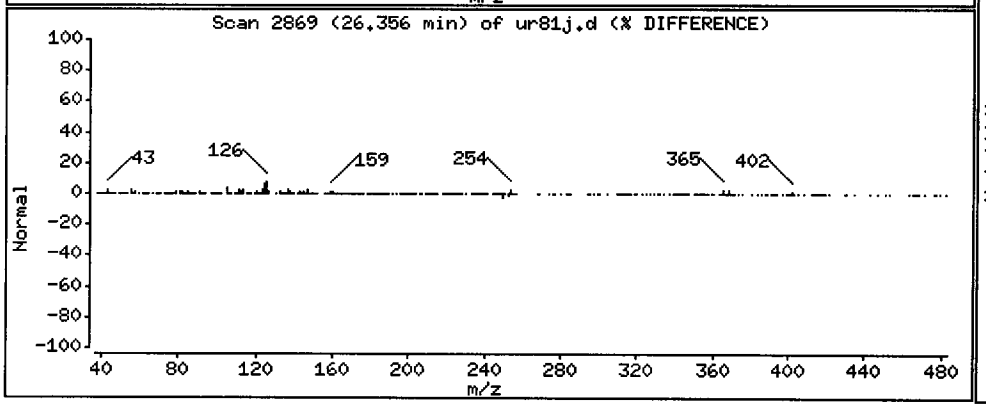
76 Benzo(a)pyrene

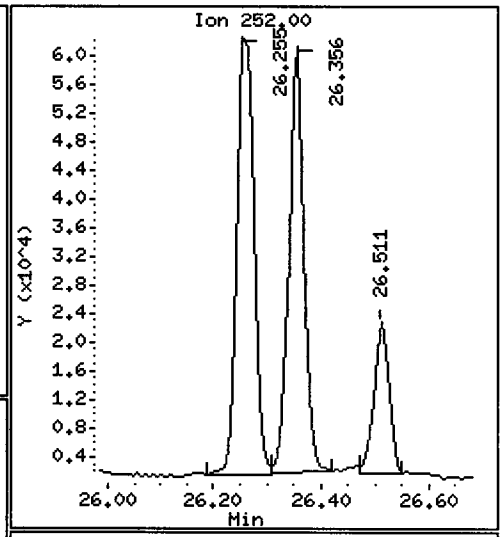
Concentration: 59.72 ug/kg

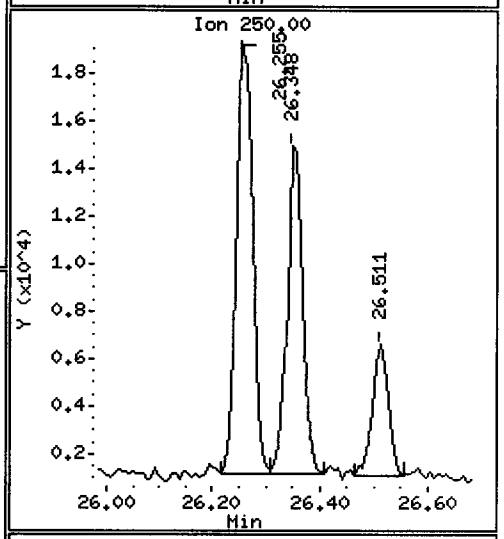


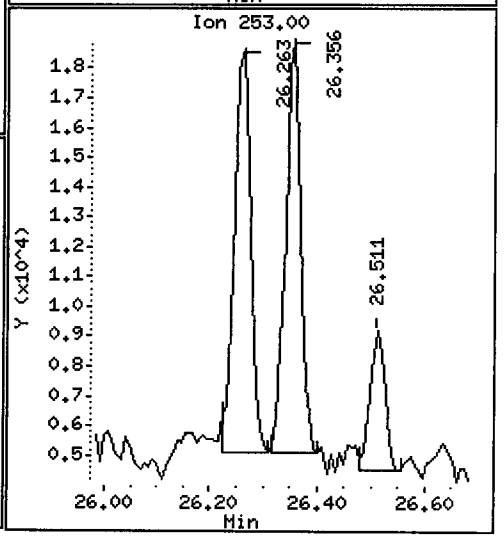












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

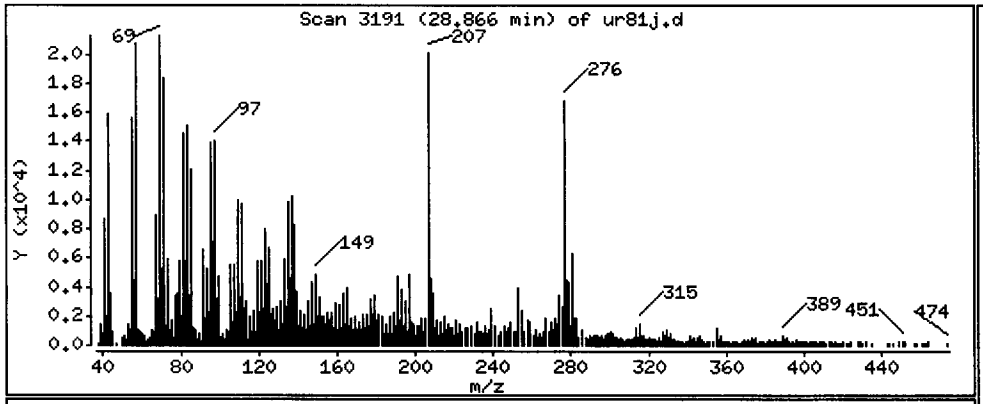
Operator: VTS/YZ

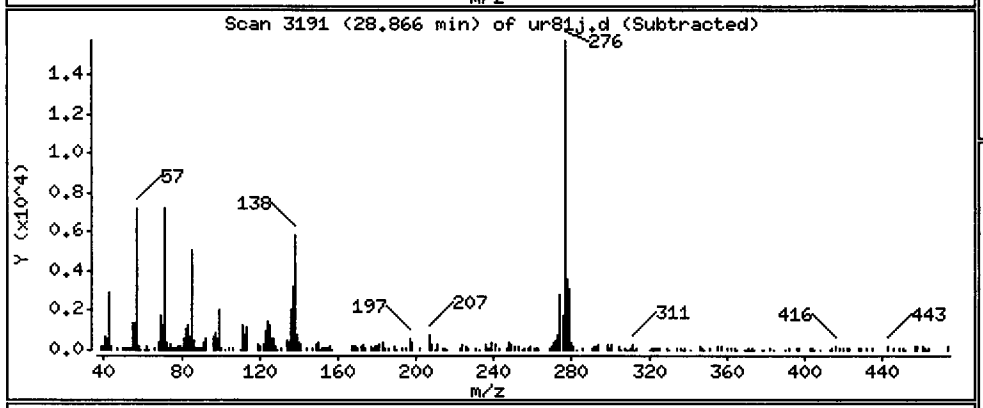
Column phase: ZB-5msi

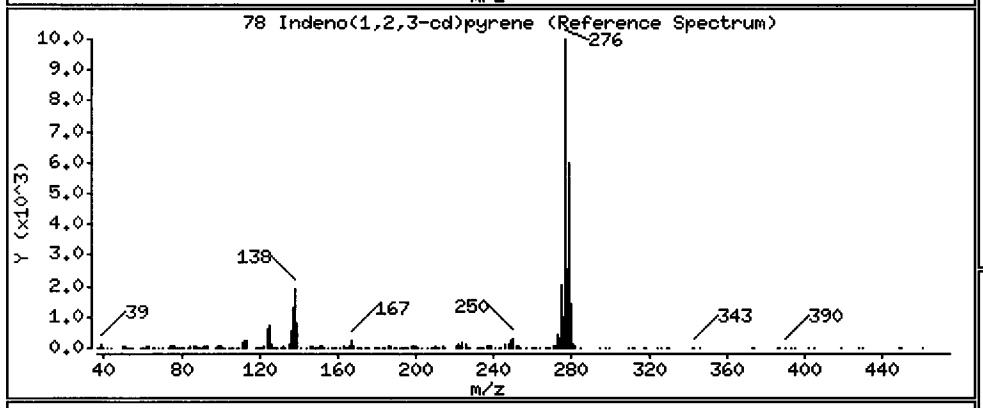
Column diameter: 0.25

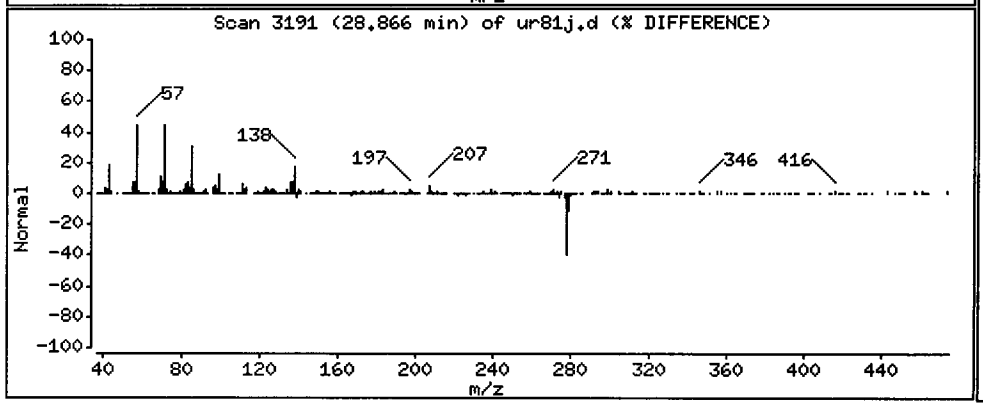
78 Indeno(1,2,3-cd)pyrene

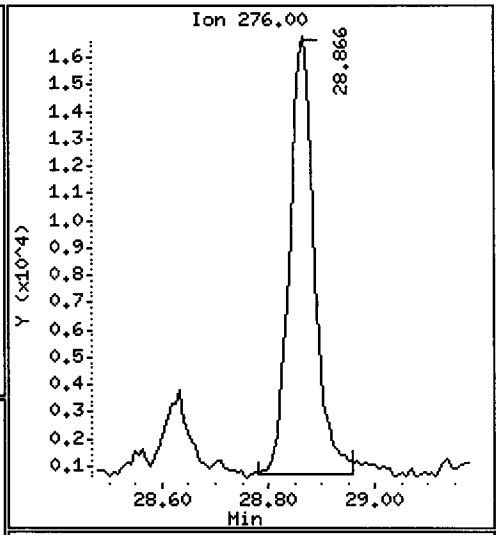
Concentration: 24.42 ug/kg

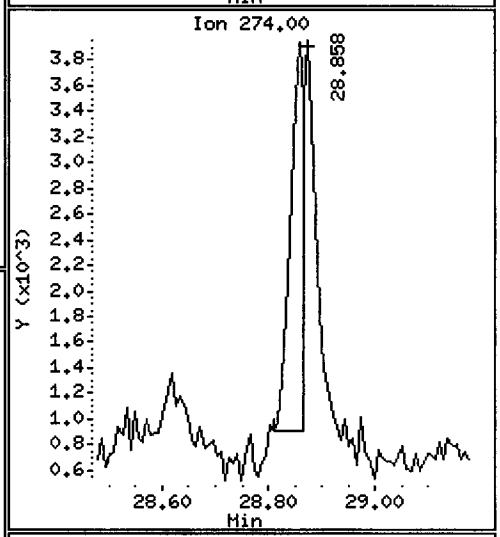


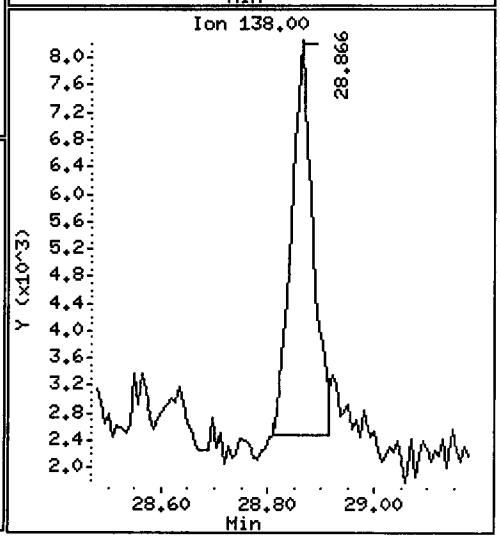












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

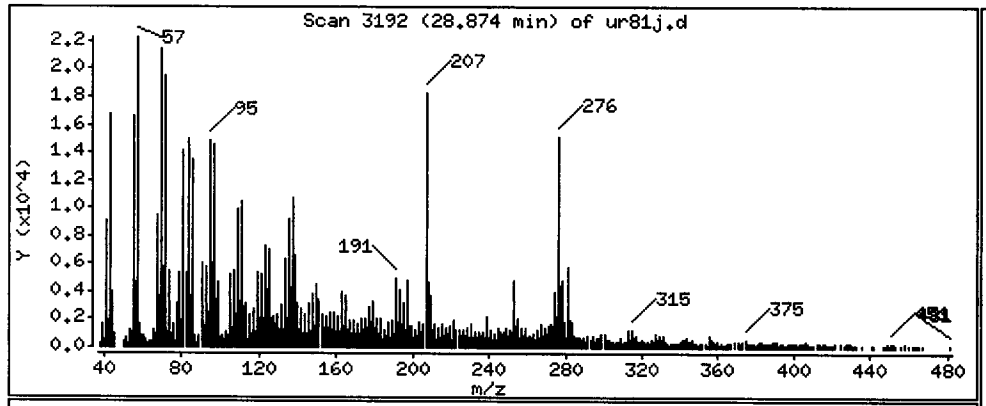
Operator: VTS/YZ

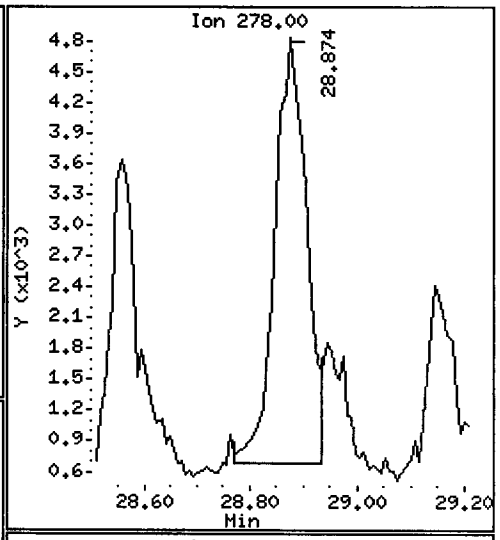
Column phase: ZB-5msi

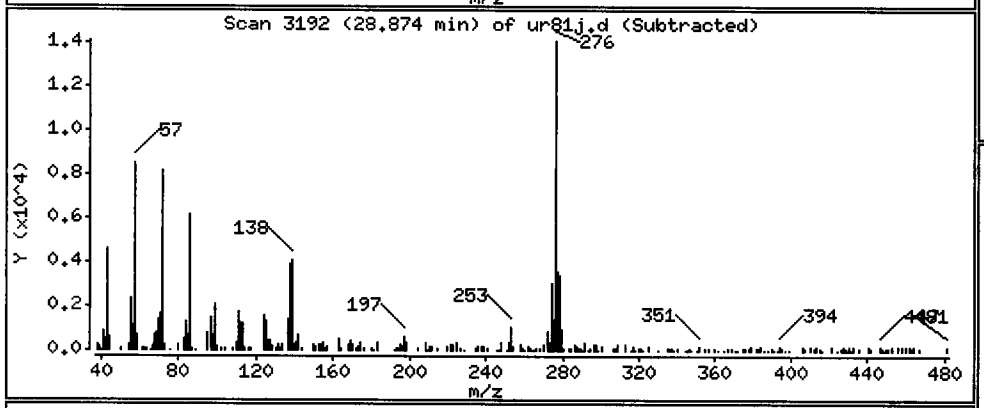
Column diameter: 0.25

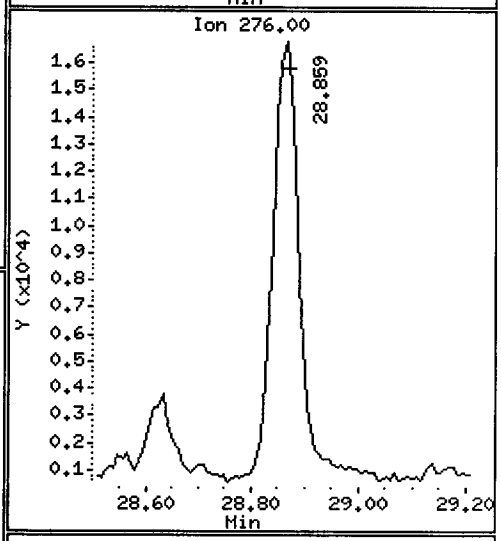
79 Dibenzo(a,h)anthracene

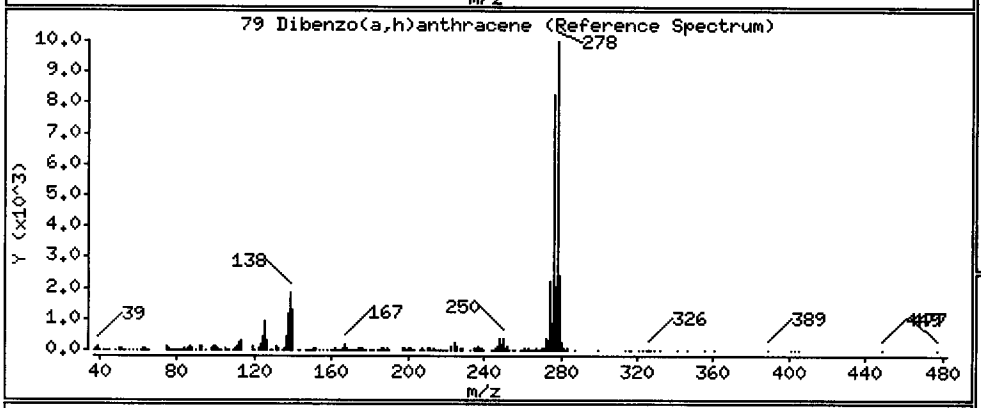
Concentration: 10.49 ug/kg

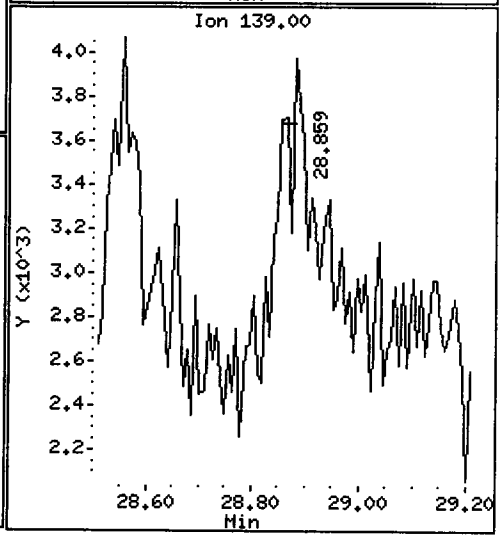


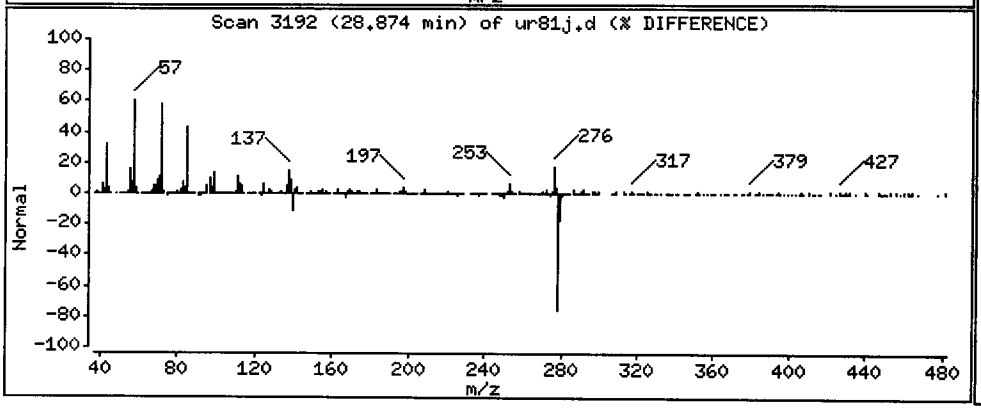












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

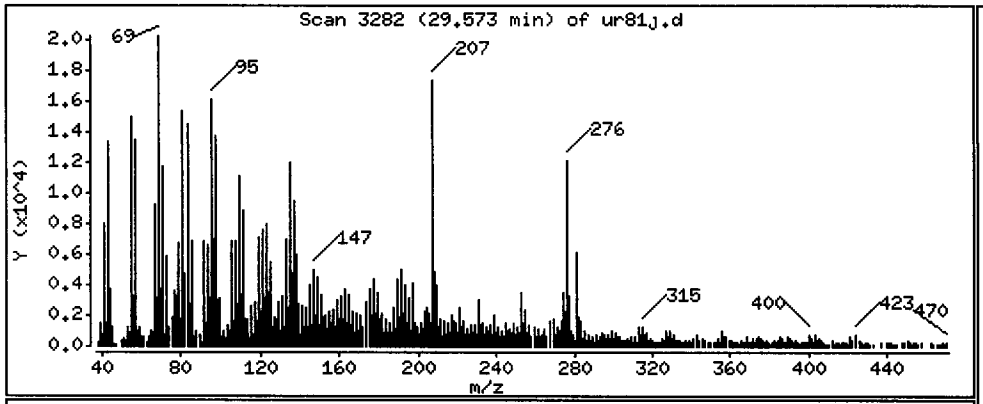
Operator: VTS/YZ

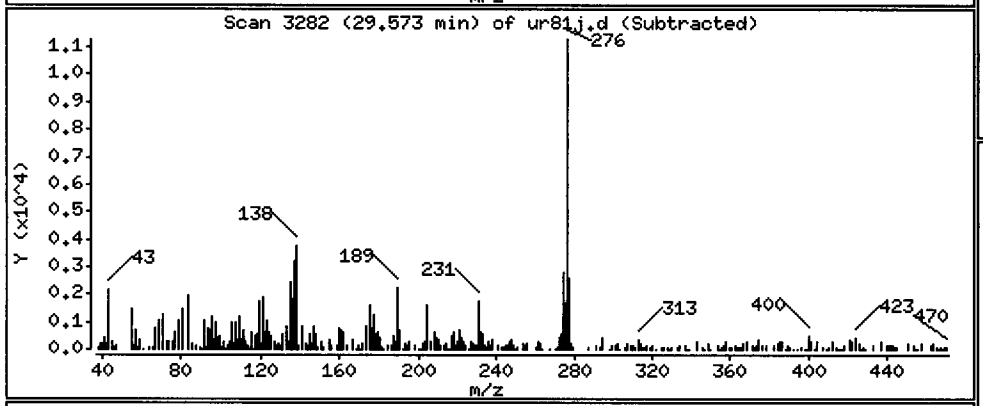
Column phase: ZB-5msi

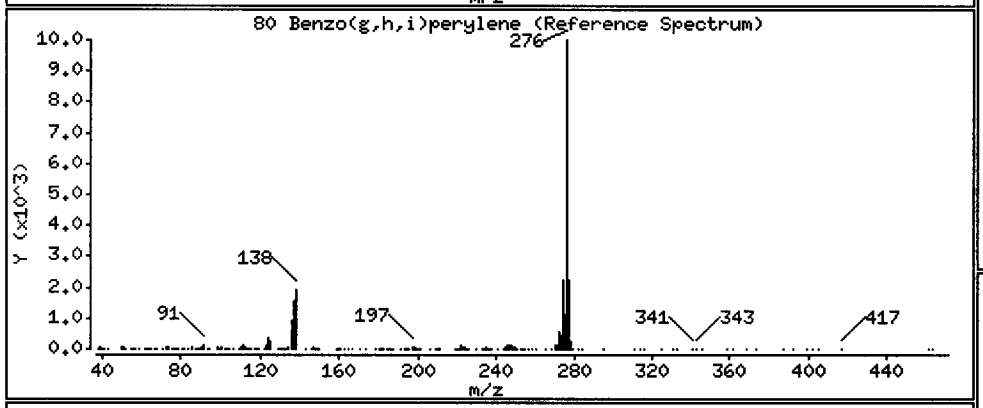
Column diameter: 0.25

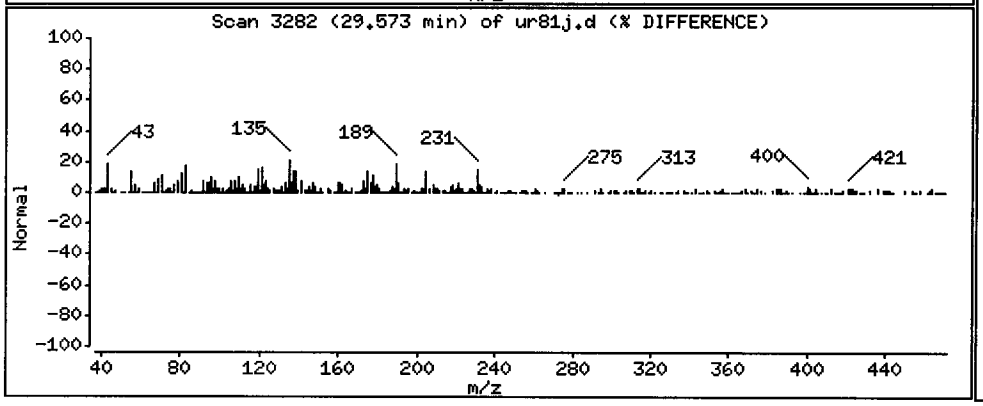
80 Benzo(g,h,i)perylene

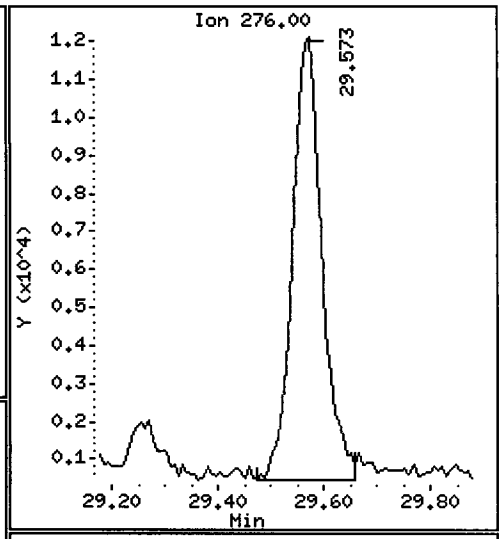
Concentration: 24.59 ug/kg

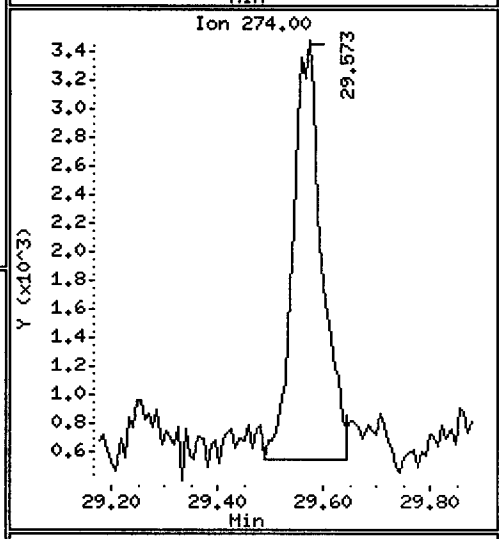


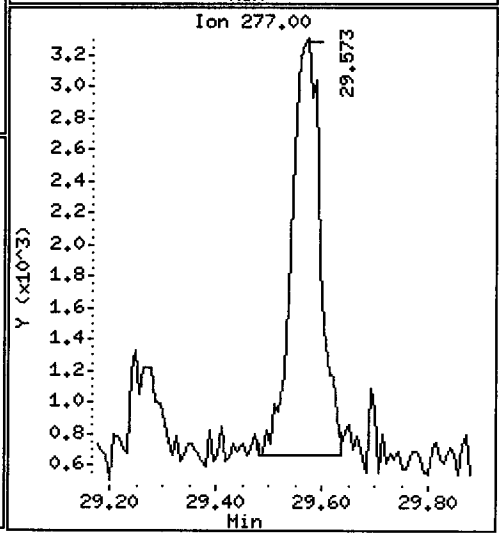












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

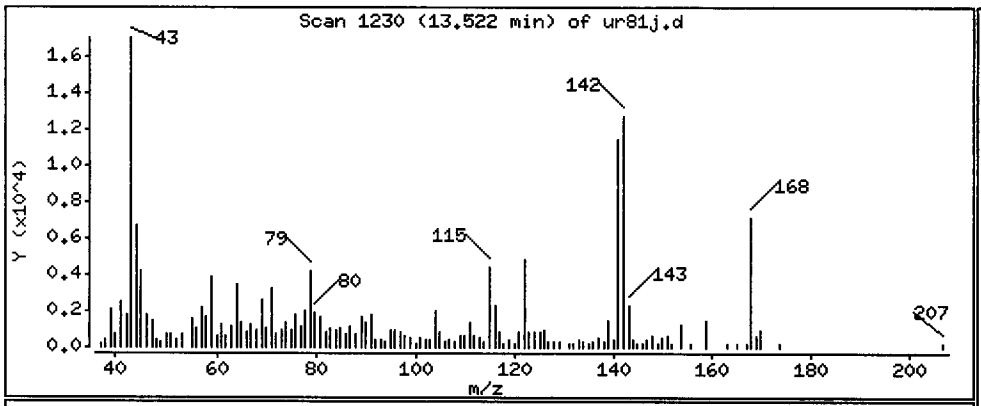
Operator: VTS/YZ

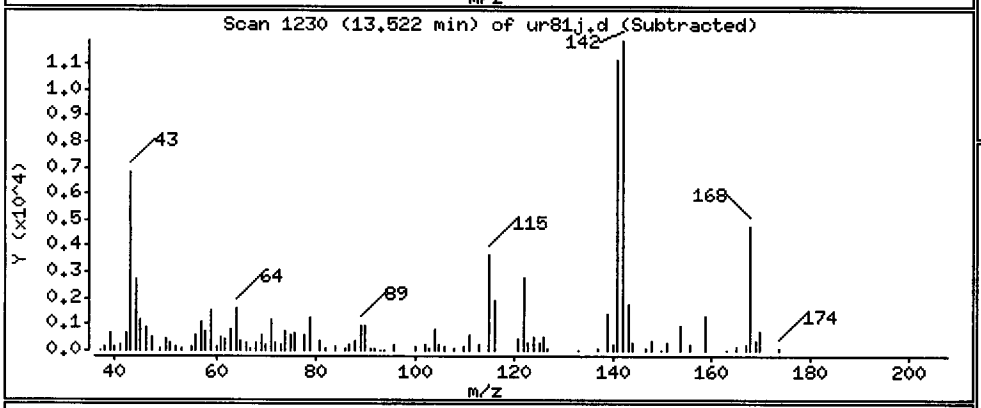
Column phase: ZB-5msi

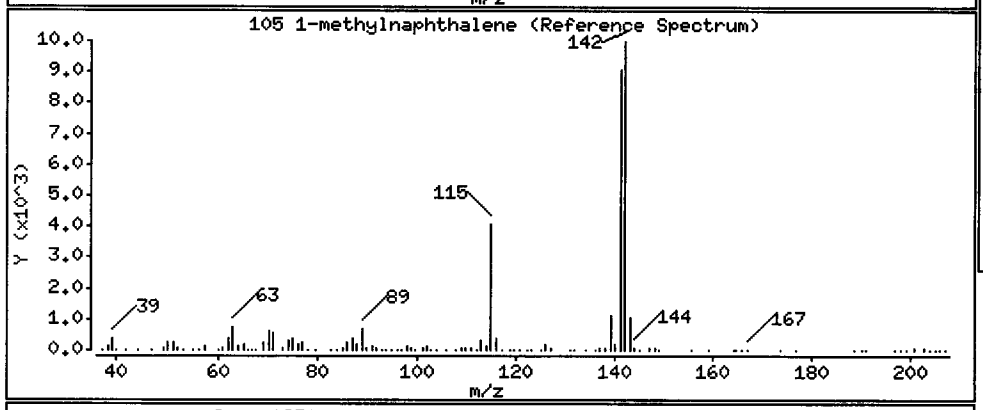
Column diameter: 0.25

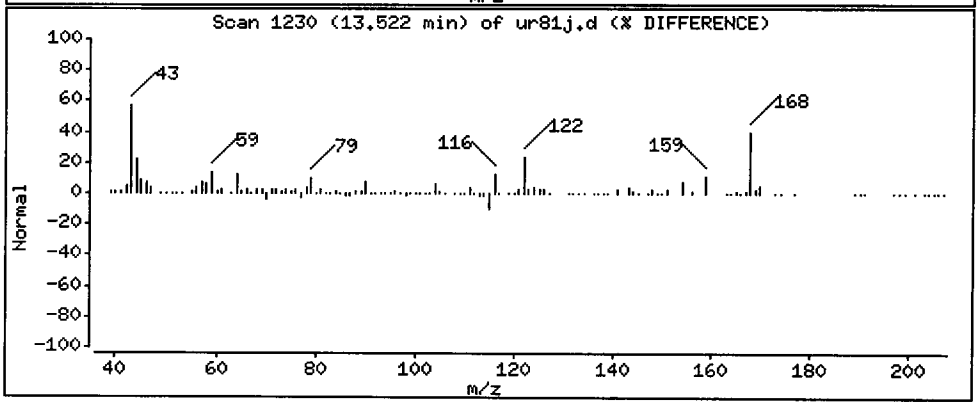
105 1-methylnaphthalene

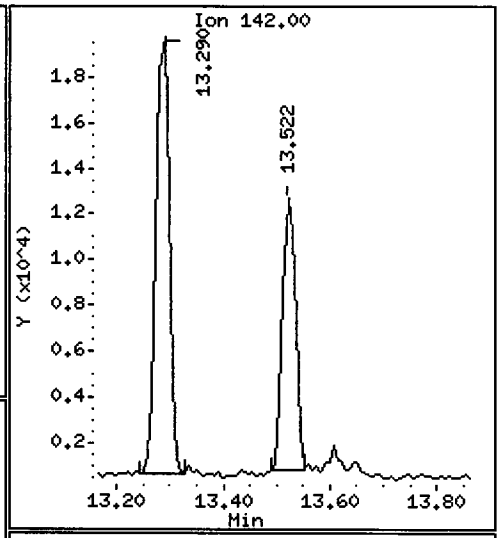
Concentration: 11.40 ug/kg

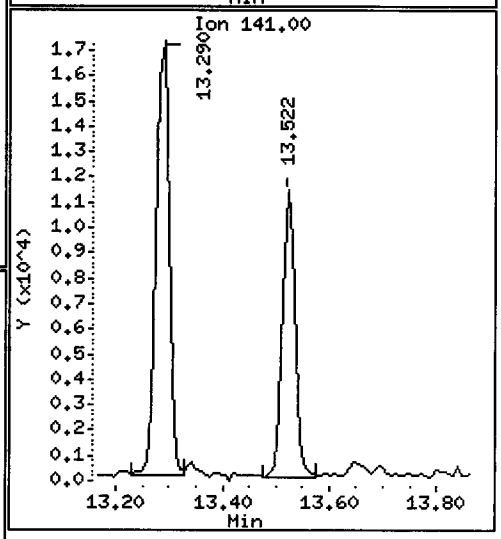












Data File: /chem1/nt10.i/20120508.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

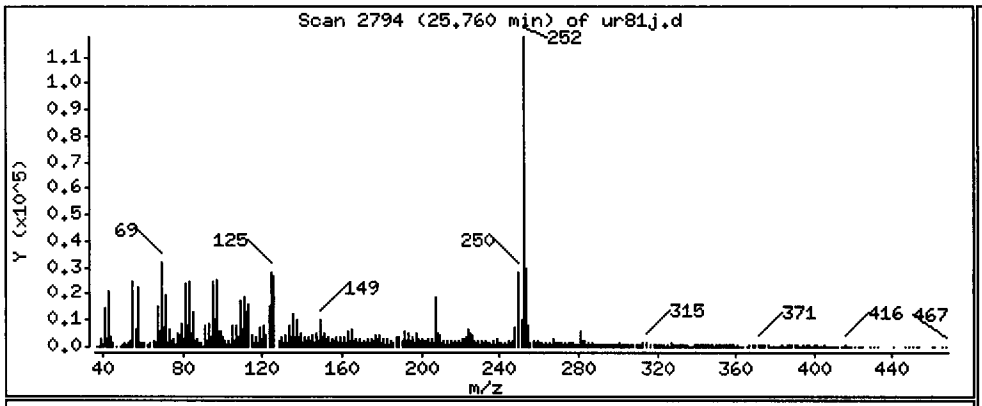
Operator: VTS/YZ

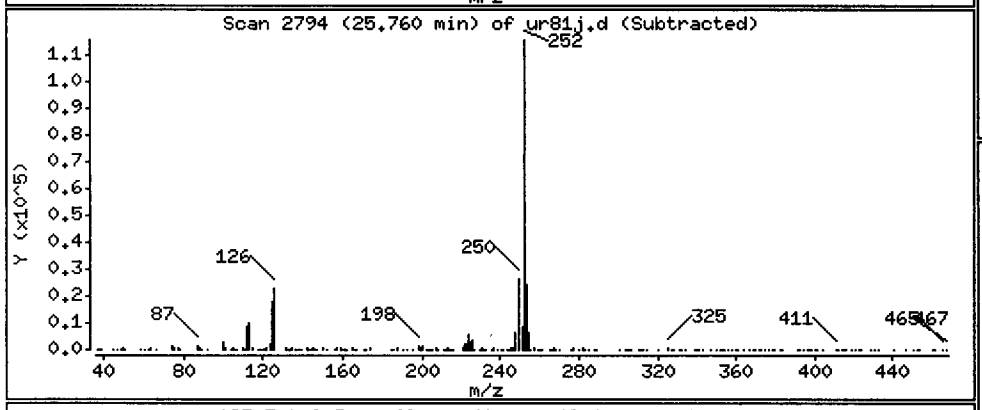
Column phase: ZB-5msi

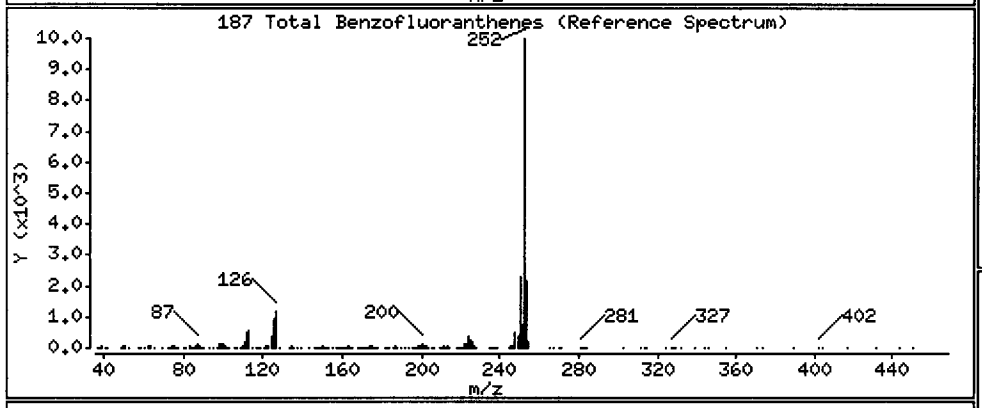
Column diameter: 0.25

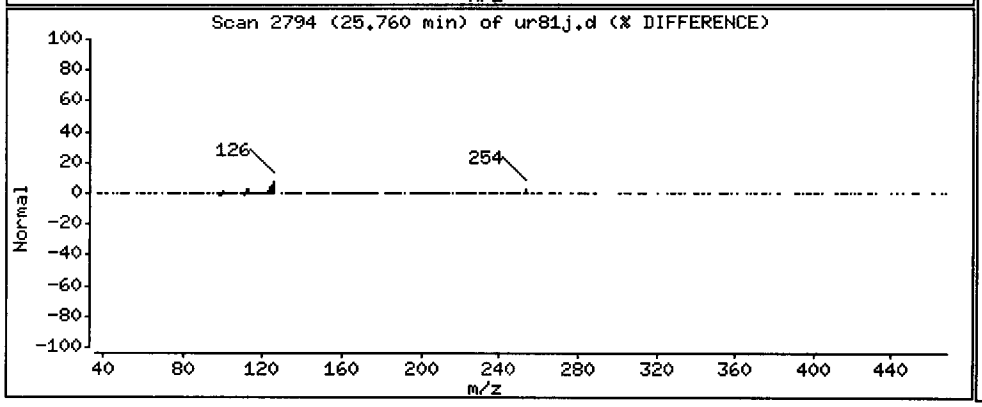
187 Total Benzofluoranthenes

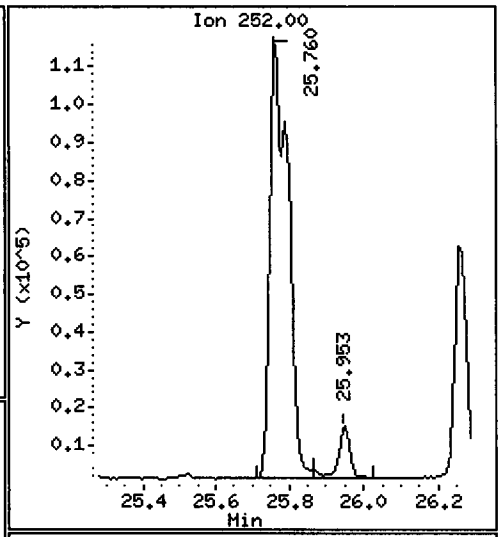
Concentration: 189.3 ug/kg

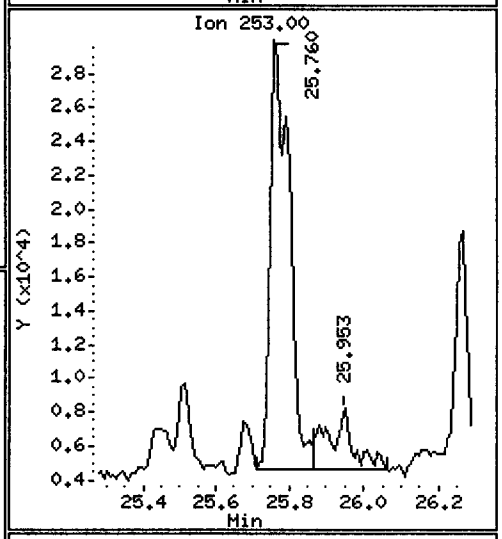


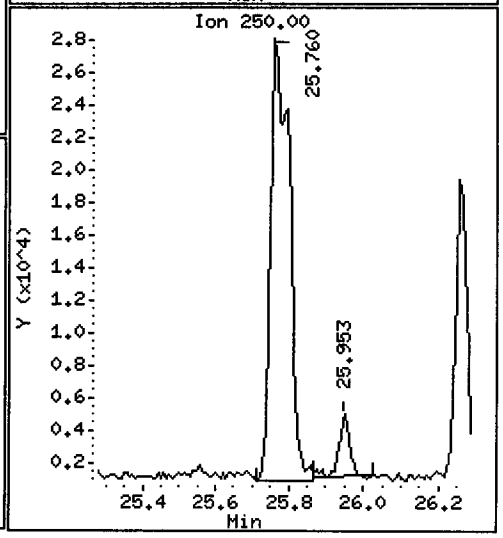






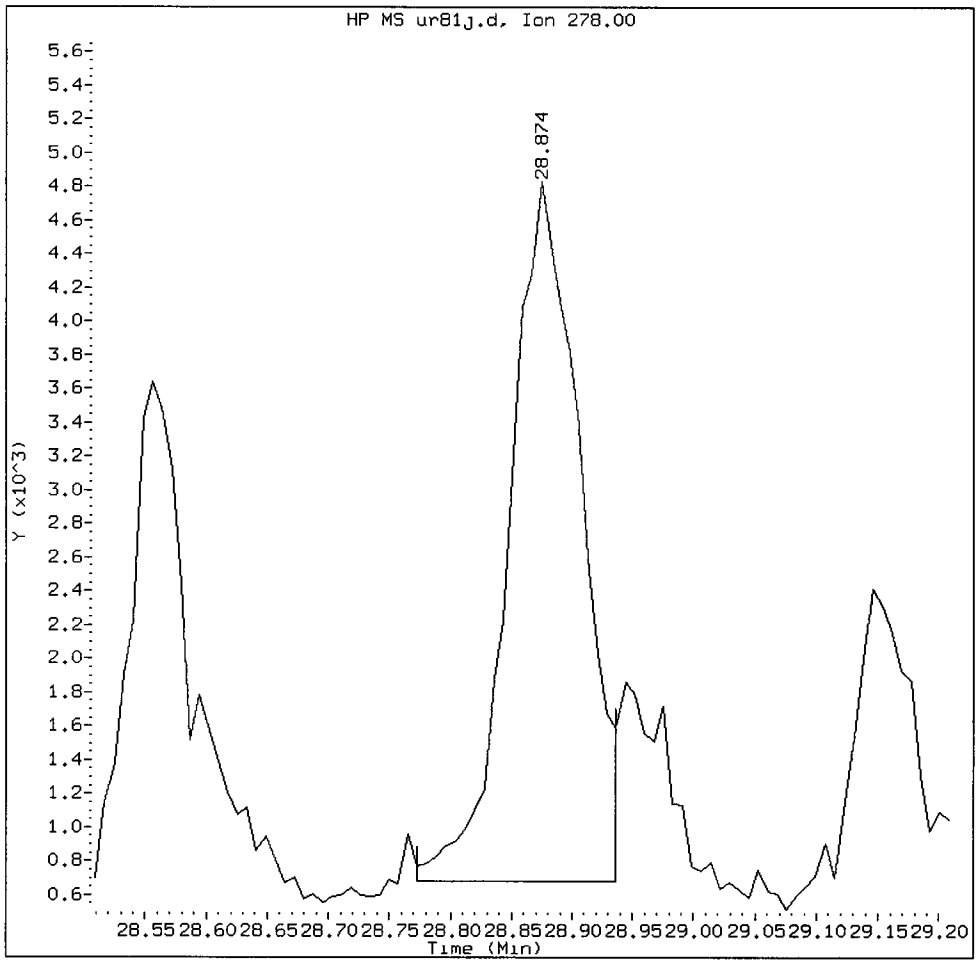






UR81J, /chem1/nt10.i/20120508.b/ur81j.d

Dibenzo(a,h)anthracene Amount: 0.11 Area: 17425



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YS Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81j.d

Lab ID: UR81J, Method: ABN.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/10/9

Data file : /chem1/nt10.i/20120508.b/us18a.d
Lab Smp Id: US18A Client Smp ID: I-1-Z
Inj Date : 09-MAY-2012 01:14
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : US18A
Misc Info : 12-7643
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	17.20000	Weight of sample extracted (g)
M	40.50000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.698	6.667	(0.740)	315976	4.53333	443.0
$ 2 Phenol-d5	99	8.414	8.398	(0.930)	394967	4.55720	445.3
3 Phenol	94	8.437	8.421	(0.932)	116399	1.22530	119.7
$ 5 2-Chlorophenol-d4	132	8.668	8.653	(0.958)	357339	4.76400	465.5
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.048	9.040	(1.000)	203754	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.043)	149818	2.94765	288.0
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	Compound Not Detected.					
13 2-Methylphenol	108	9.630	9.614	(1.064)	88909	1.18920	116.2
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.933	9.909	(1.098)	337285	4.32666	422.8
$ 18 Nitrobenzene-d5	82	10.236	10.228	(0.873)	215550	3.14757	307.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
22 2,4-Dimethylphenol	107	11.056	11.041	(0.943)	184246	2.59058	253.1
24 Benzoic acid	105	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.727	11.719	(1.000)	800954	4.00000	
28 Naphthalene	128	11.773	11.766	(1.004)	606939	3.03431	296.5
30 Hexachlorobutadiene	225	Compound Not Detected.					
32 2-Methylnaphthalene	142	13.290	13.282	(1.133)	414827	3.02401	295.5
$ 36 2-Fluorobiphenyl	172	14.156	14.149	(0.905)	507808	3.23629	316.2
39 Dimethylphthalate	163	15.101	15.147	(0.965)	185005	1.31795	128.8(H)
40 Acenaphthylene	152	15.302	15.286	(0.978)	69194	0.33941	33.16
* 42 Acenaphthene-d10	164	15.642	15.627	(1.000)	459989	4.00000	
44 Acenaphthene	153	15.712	15.696	(1.004)	79497	0.65332	63.84
46 Dibenzofuran	168	16.075	16.060	(1.028)	350407	1.93488	189.1
50 Diethylphthalate	149	Compound Not Detected.					
49 Fluorene	166	16.841	16.833	(1.077)	190871	1.38152	135.0
54 N-Nitrosodiphenylamine	169	17.134	17.118	(0.905)	34039	0.37298	36.45(H)
$ 55 2,4,6-Tribromophenol	330	17.427	17.411	(1.114)	108724	5.15203	503.4
57 Hexachlorobenzene	284	Compound Not Detected.					
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	18.926	18.903	(1.000)	708942	4.00000	
60 Phenanthrene	178	18.972	18.957	(1.002)	615022	3.50807	342.8
61 Anthracene	178	19.065	19.050	(1.007)	194107	1.04891	102.5
63 Di-n-butylphthalate	149	Compound Not Detected.					
64 Fluoranthene	202	21.409	21.363	(1.131)	883566	4.42779	432.7
65 Pyrene	202	21.820	21.781	(0.909)	883571	3.96684	387.6
$ 66 Terphenyl-d14	244	22.121	22.098	(0.922)	490641	3.51281	343.2
67 Butylbenzylphthalate	149	Compound Not Detected.					
68 Benzo(a)anthracene	228	23.964	23.941	(0.999)	262772	1.31462	128.5
* 69 Chrysene-d12	240	23.995	23.964	(1.000)	737067	4.00000	
71 Chrysene	228	24.042	24.010	(1.002)	322990	1.81017	176.9
72 bis(2-Ethylhexyl)phthalate	149	24.096	24.080	(0.961)	115156	0.75755	74.02
* 134 Di-n-octylphthalate-d4	153	25.079	25.056	(1.000)	1169084	4.00000	
73 Di-n-octylphthalate	149	Compound Not Detected.					
76 Benzo(a)pyrene	252	26.380	26.333	(0.996)	131454	0.80324	78.49
* 77 Perylene-d12	264	26.488	26.441	(1.000)	673672	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.898	28.828	(1.091)	52168	0.28015	27.37
79 Dibenzo(a,h)anthracene	278	28.913	28.859	(1.092)	15003	0.10483	10.24(M)
80 Benzo(g,h,i)perylene	276	29.612	29.527	(1.118)	49339	0.30645	29.94
105 1-methylnaphthalene	142	13.530	13.514	(1.154)	391622	2.79977	273.6
187 Total Benzofluoranthenes	252	25.783	25.783	(0.973)	312884	1.70708	166.8

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: us18a.d
Lab Smp Id: US18A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7643

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: I-1-Z
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	203754	-25.06
27 Naphthalene-d8	1080694	540347	2161388	800954	-25.89
42 Acenaphthene-d10	623821	311910	1247642	459989	-26.26
59 Phenanthrene-d10	999143	499572	1998286	708942	-29.04
69 Chrysene-d12	1001009	500504	2002018	737067	-26.37
134 Di-n-octylphthala	1489422	744711	2978844	1169084	-21.51
77 Perylene-d12	988348	494174	1976696	673672	-31.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.93	0.12
69 Chrysene-d12	23.96	23.46	24.46	24.00	0.13
134 Di-n-octylphthala	25.06	24.56	25.56	25.08	0.09
77 Perylene-d12	26.44	25.94	26.94	26.49	0.18

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: US18A
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7643

Client SDG: US18
Fraction: SV
Client Smp ID: I-1-Z
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	732.9	443.0	60.44	30-160
$ 2 Phenol-d5	732.9	445.3	60.76	30-160
$ 5 2-Chlorophenol-d4	732.9	465.5	63.52	30-160
$ 10 1,2-Dichlorobenzen	488.6	288.0	58.95	30-160
$ 18 Nitrobenzene-d5	488.6	307.6	62.95	30-160
$ 36 2-Fluorobiphenyl	488.6	316.2	64.73	30-160
$ 55 2,4,6-Tribromophen	732.9	503.4	68.69	30-160
$ 66 Terphenyl-d14	488.6	343.2	70.26	30-160

Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Sample Info: US18A

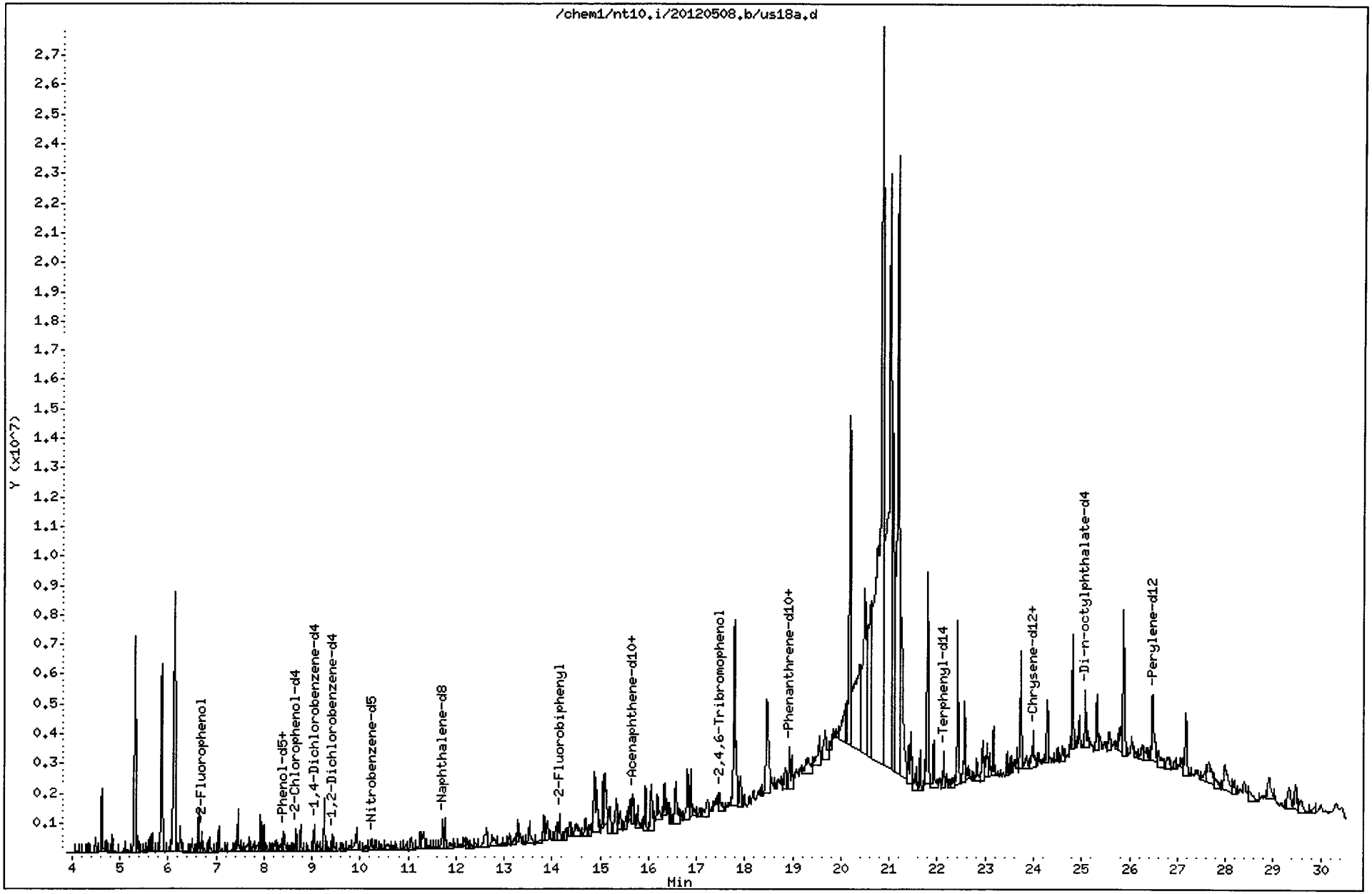
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

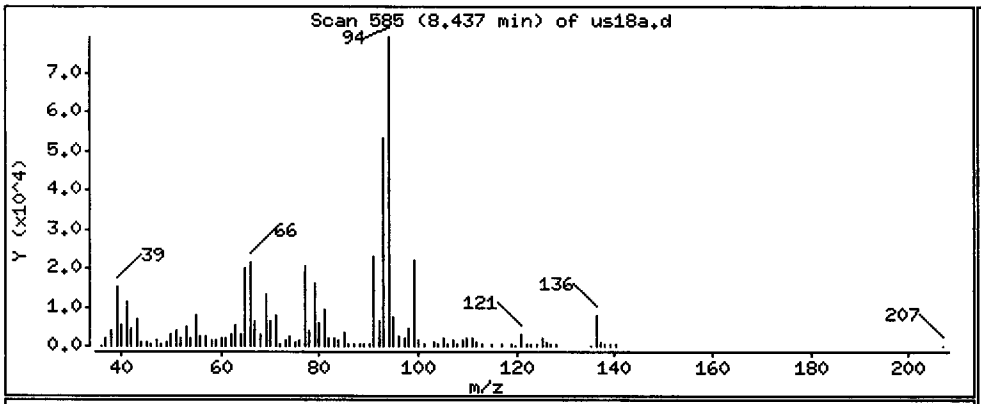
Operator: VTS/YZ

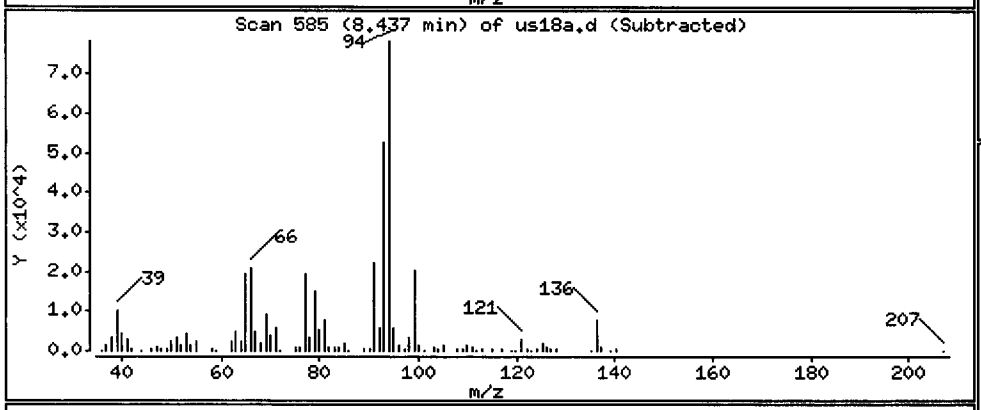
Column phase: ZB-5msi

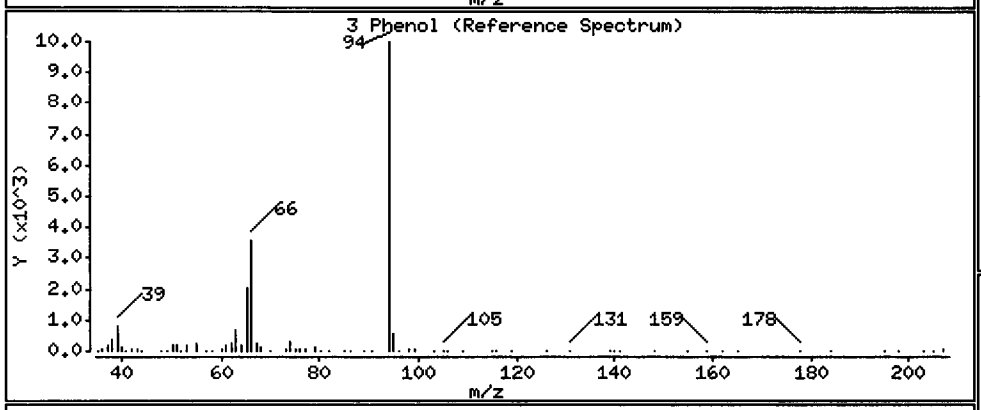
Column diameter: 0.25

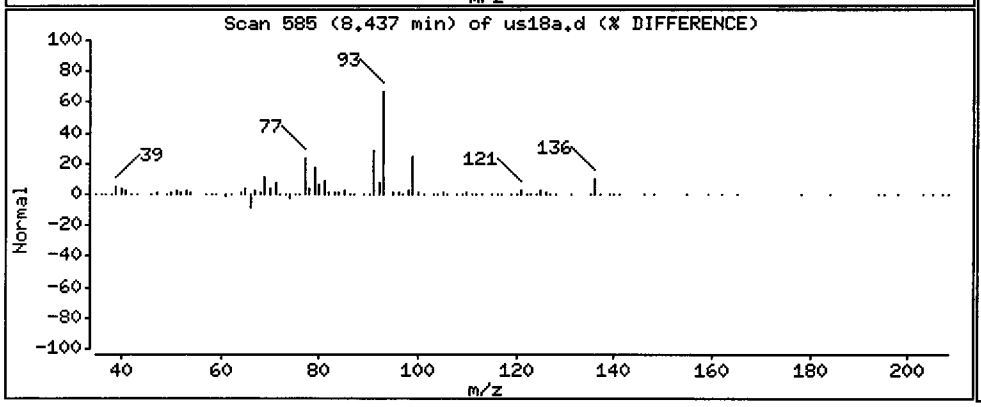
3 Phenol

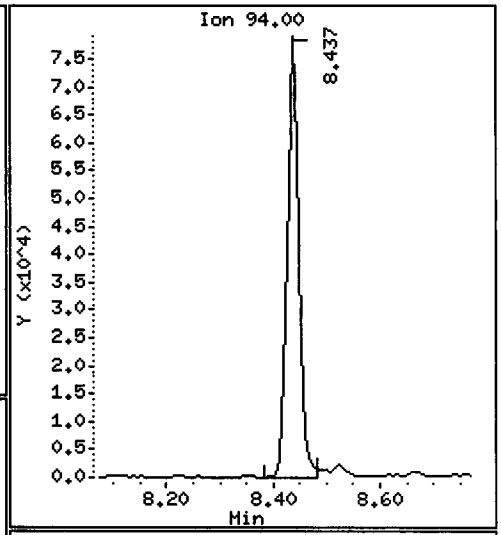
Concentration: 119.7 ug/kg

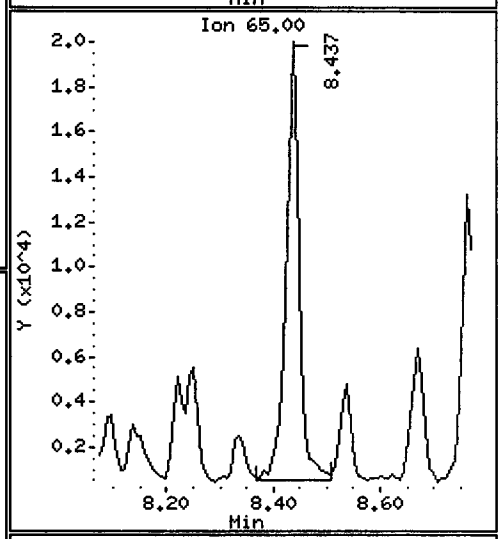


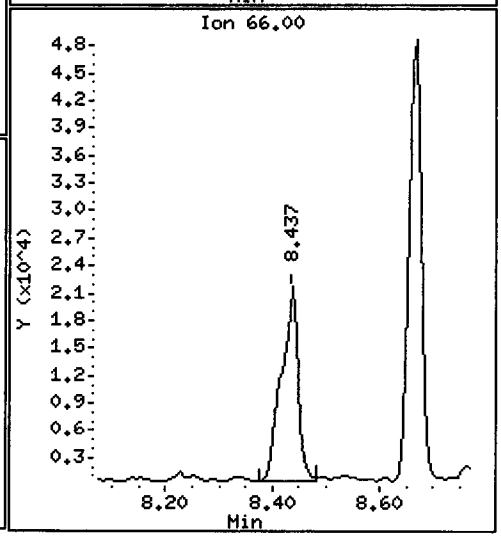












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

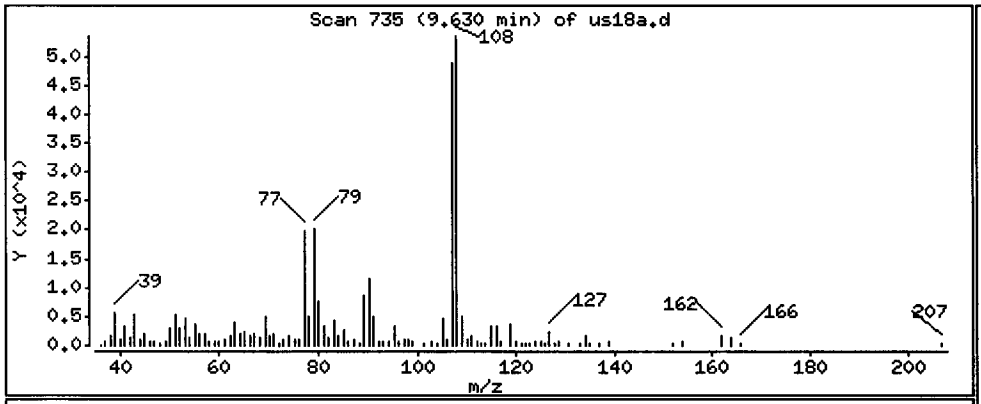
Operator: VTS/YZ

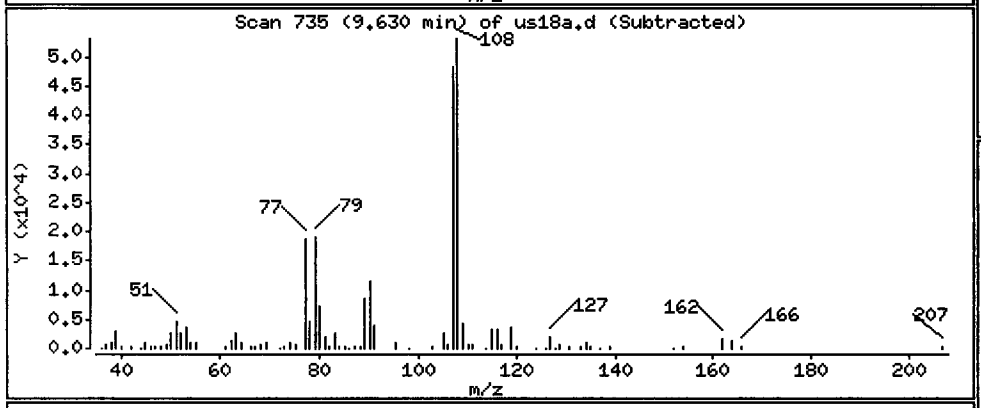
Column phase: ZB-5msi

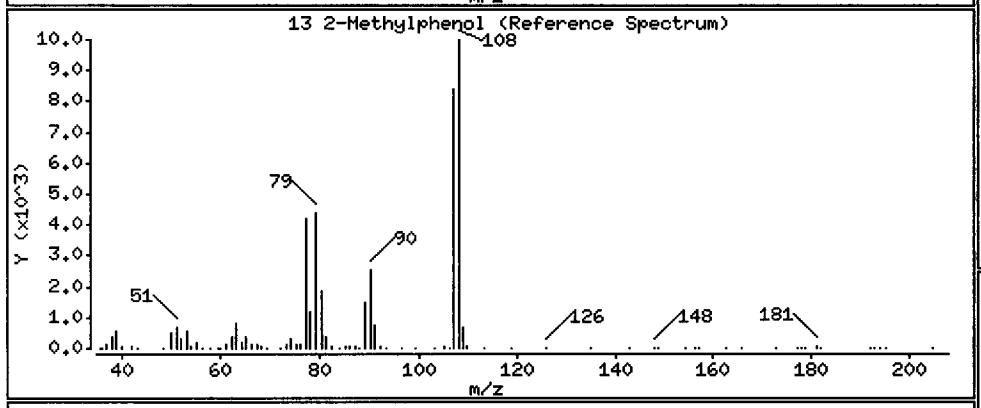
Column diameter: 0.25

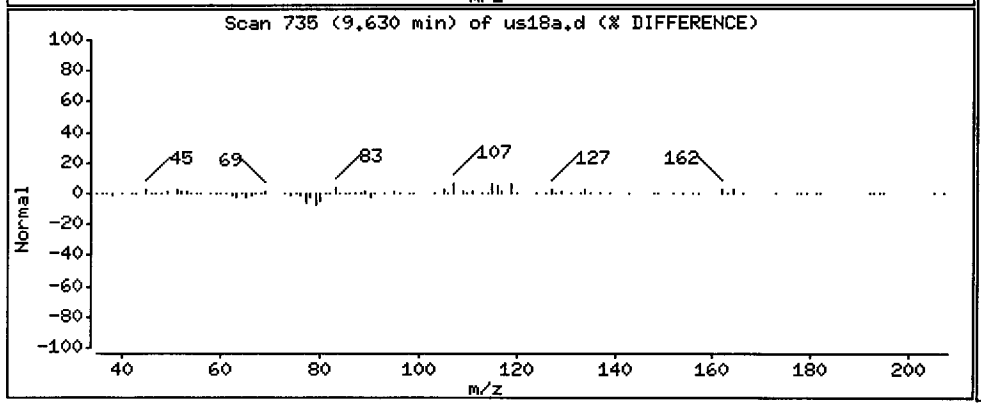
13 2-Methylphenol

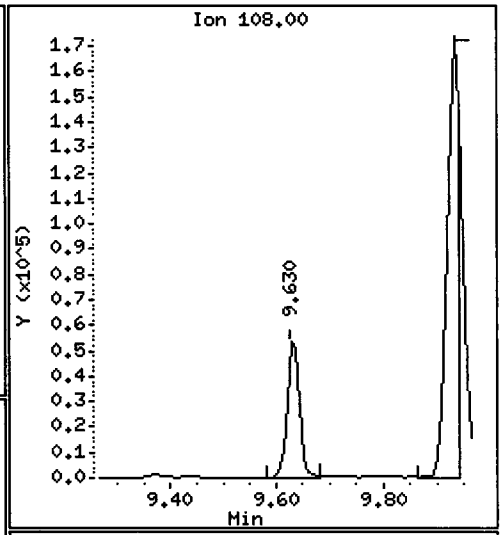
Concentration: 116.2 ug/kg

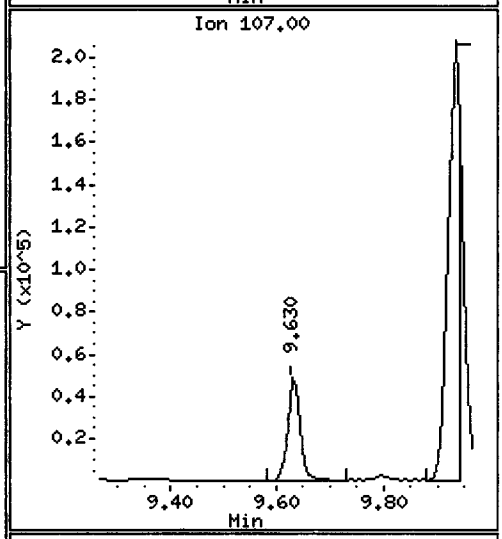


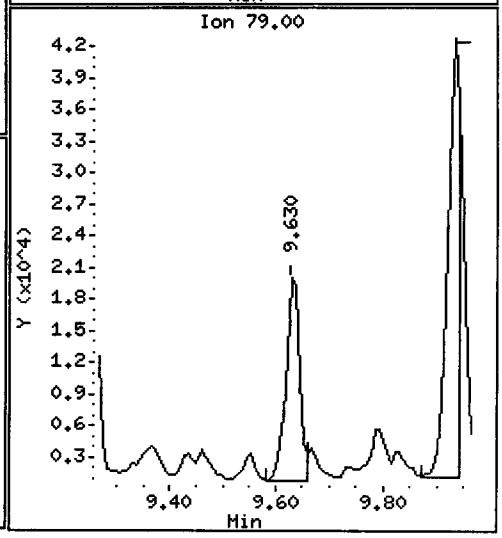












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

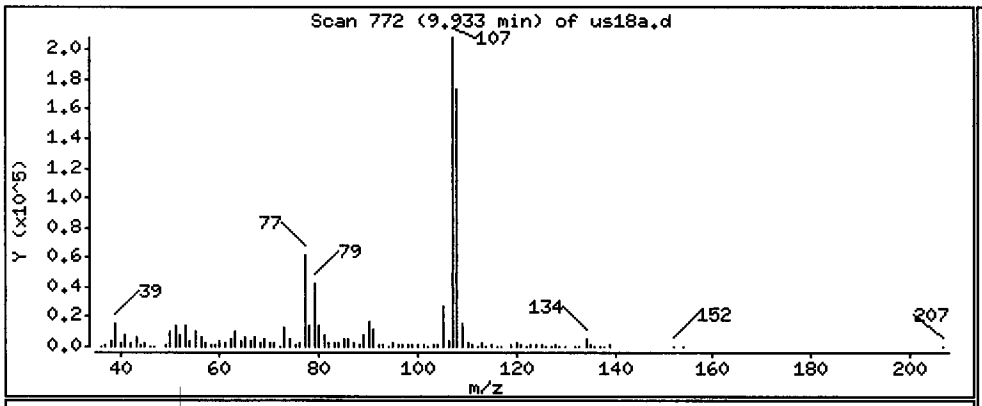
Operator: VTS/YZ

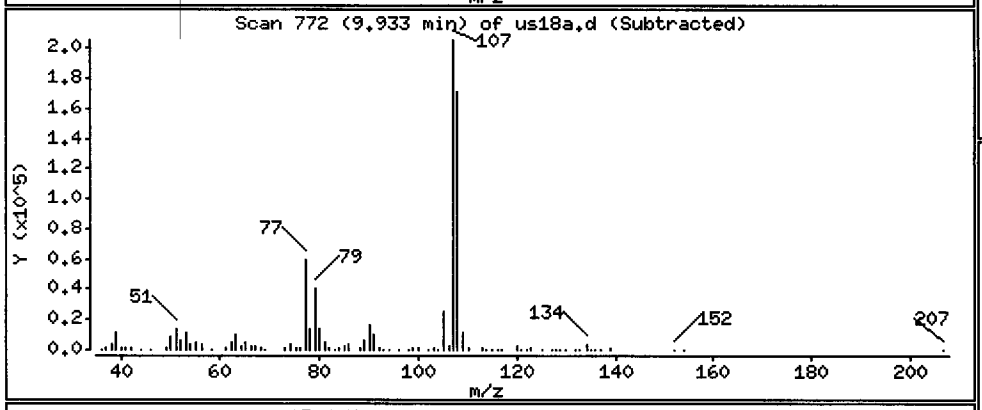
Column phase: ZB-5msi

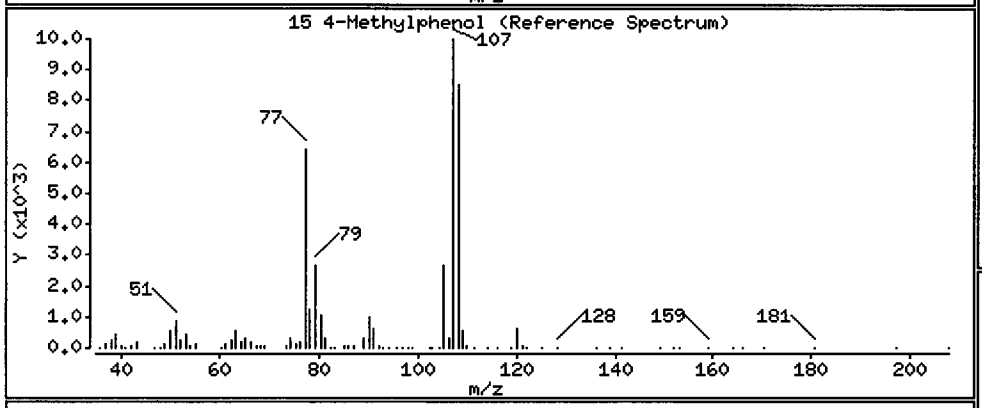
Column diameter: 0.25

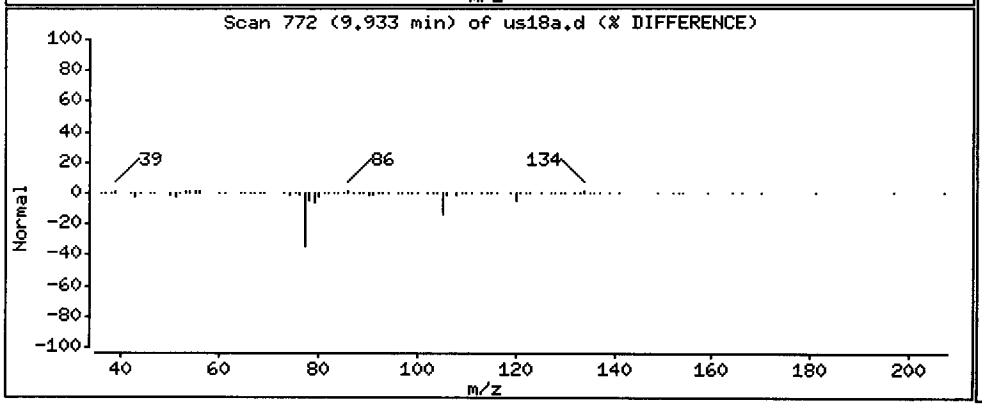
15 4-Methylphenol

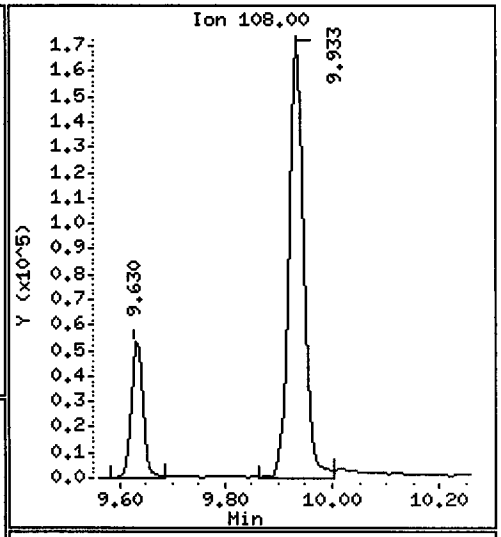
Concentration: 422.8 ug/kg

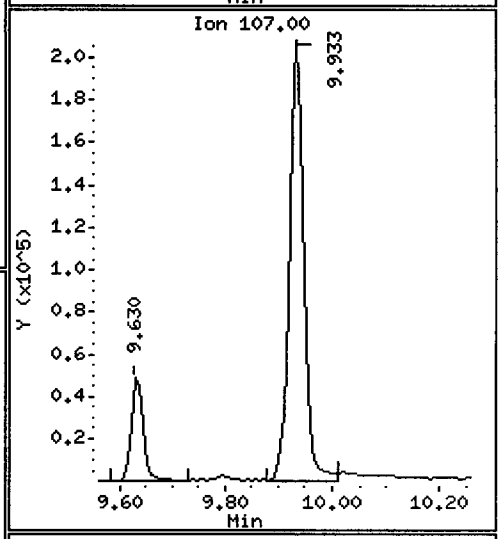


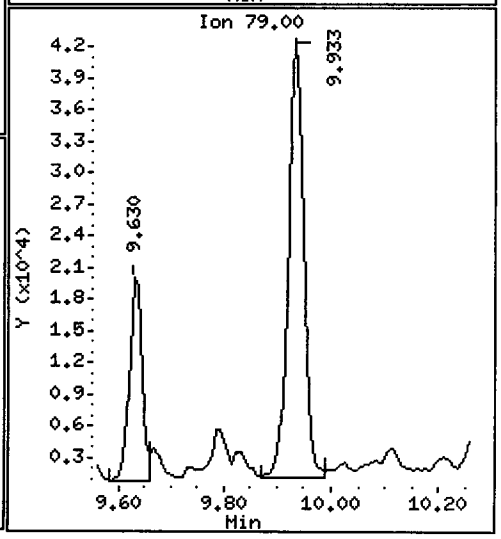












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

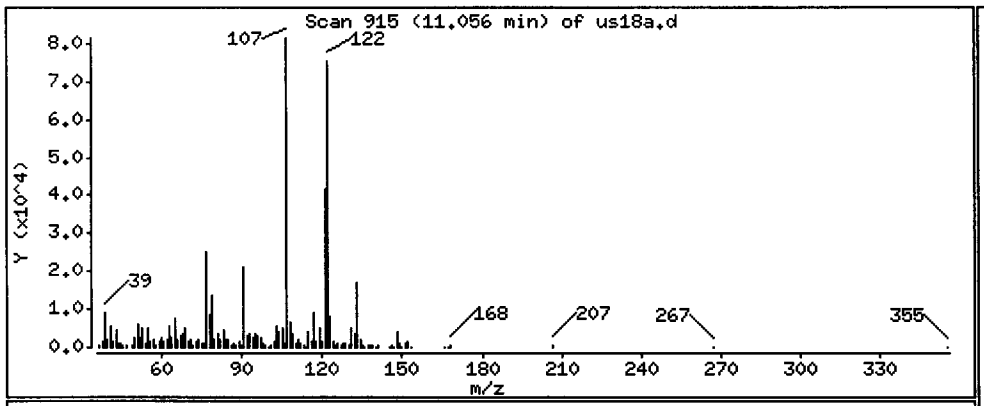
Operator: VTS/YZ

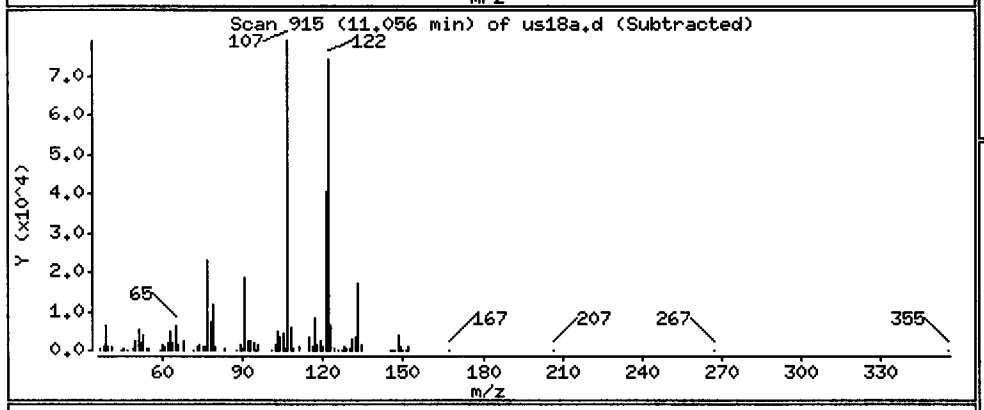
Column phase: ZB-5msi

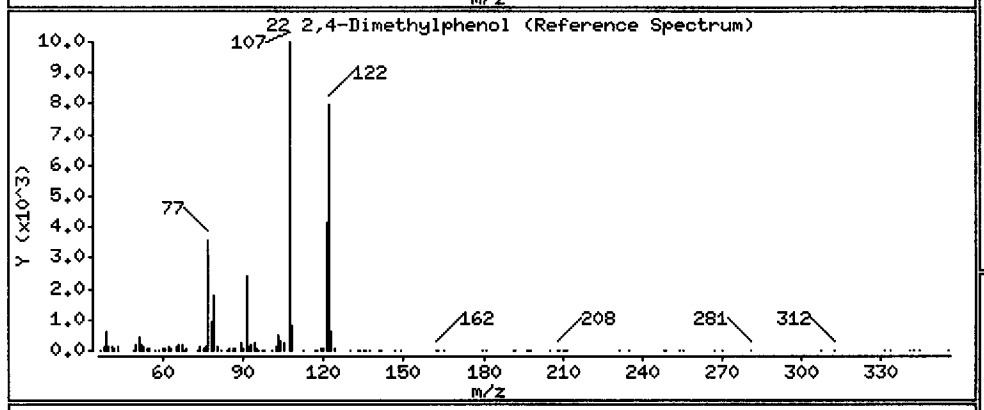
Column diameter: 0.25

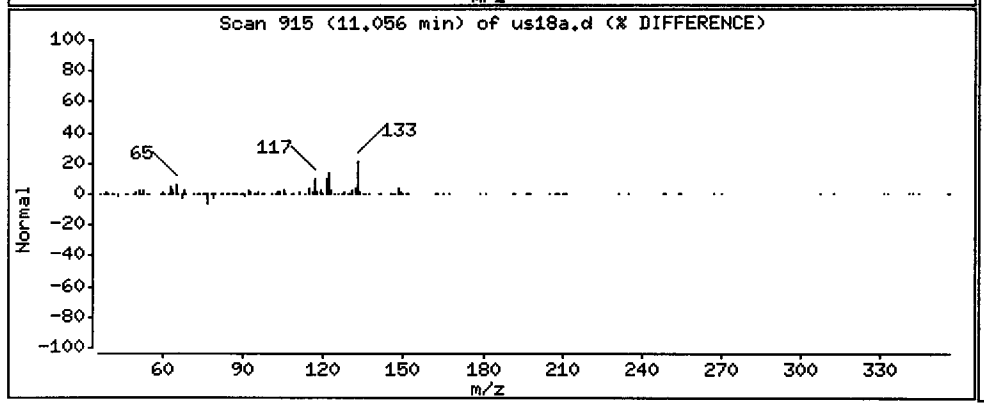
22 2,4-Dimethylphenol

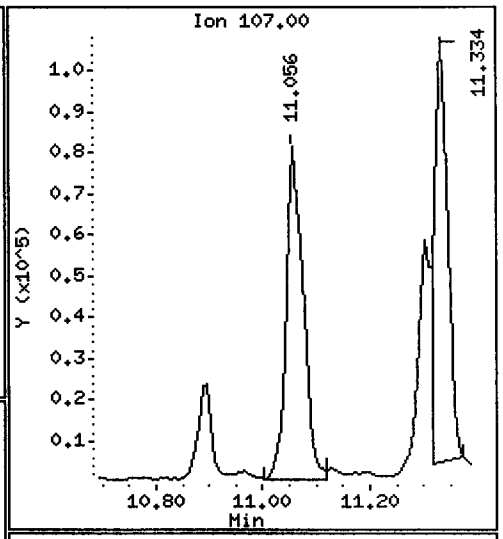
Concentration: 253.1 ug/kg

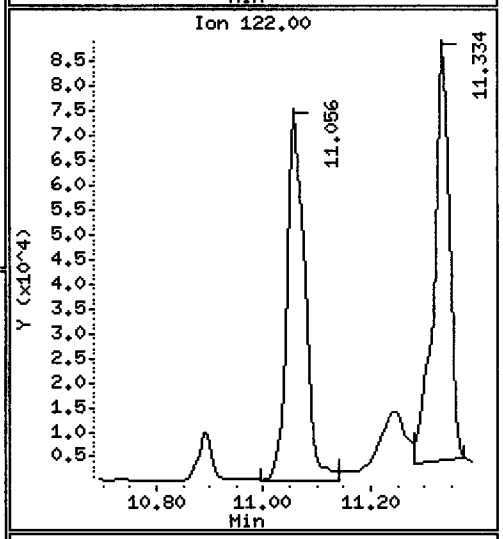


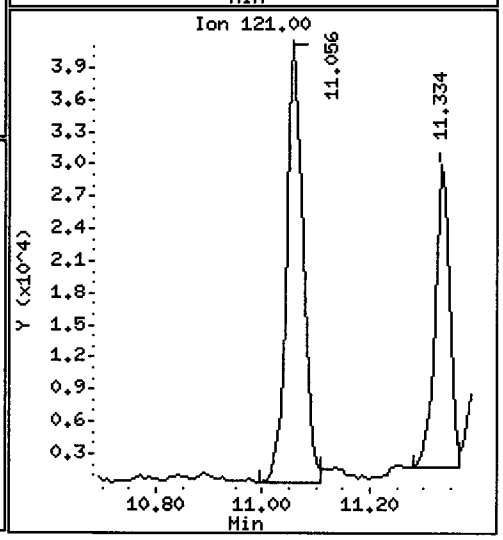












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

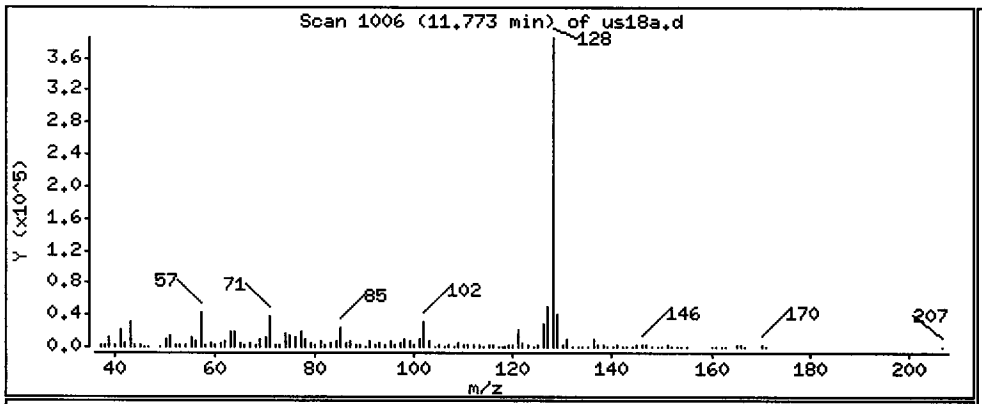
Operator: VTS/YZ

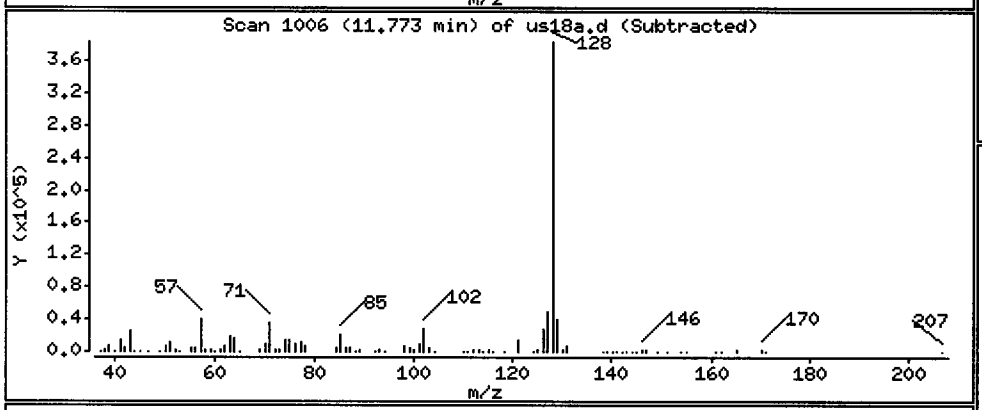
Column phase: ZB-5msi

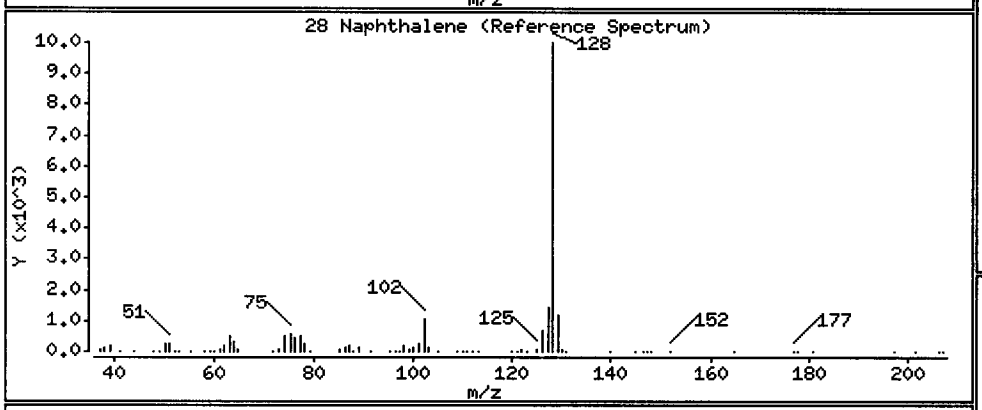
Column diameter: 0.25

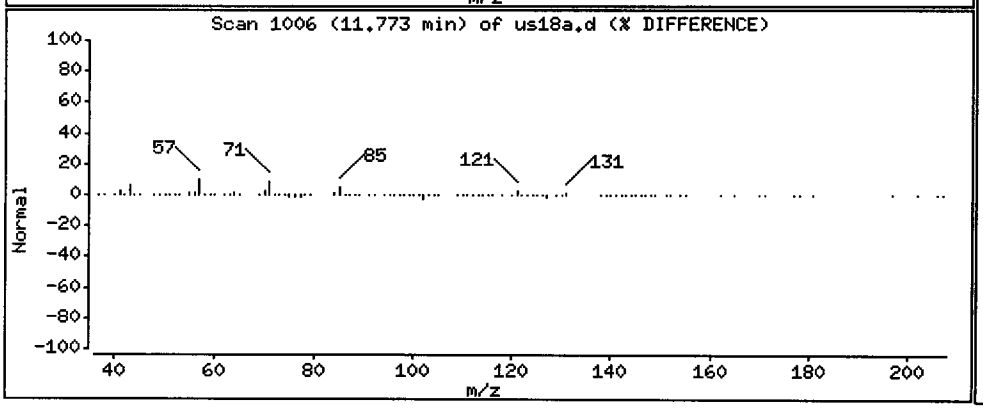
28 Naphthalene

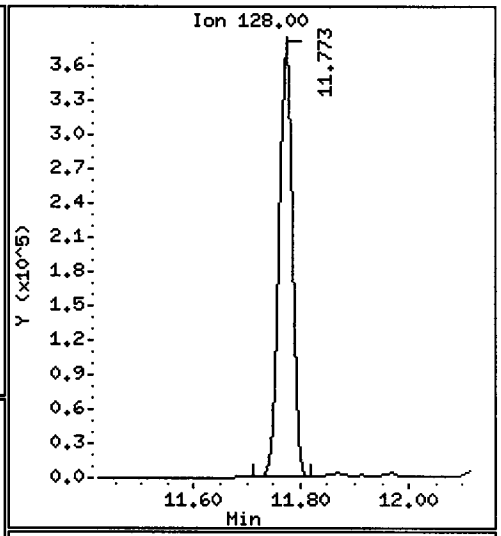
Concentration: 296.5 ug/kg

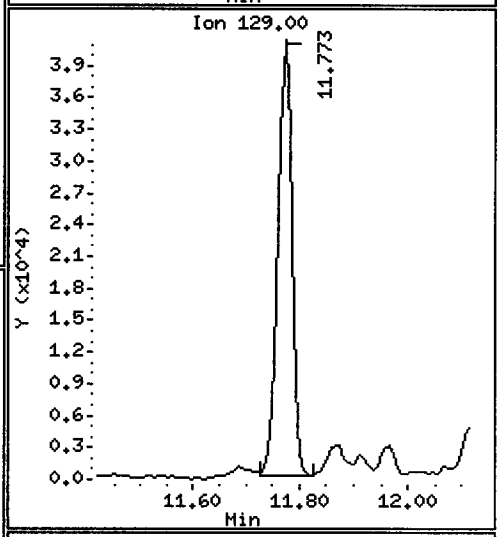


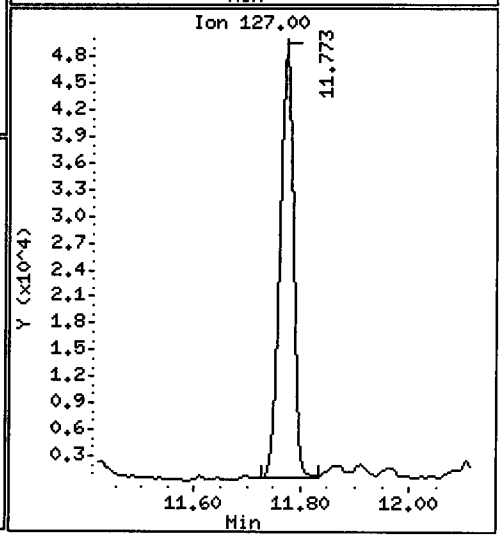












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

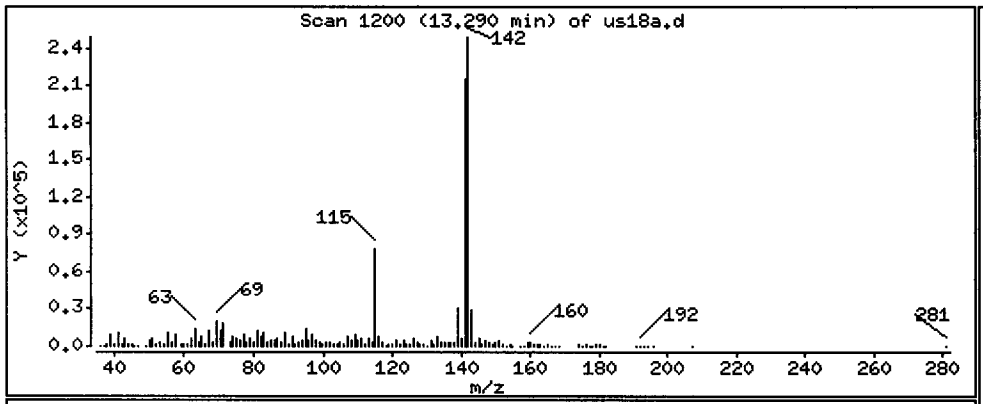
Operator: VTS/YZ

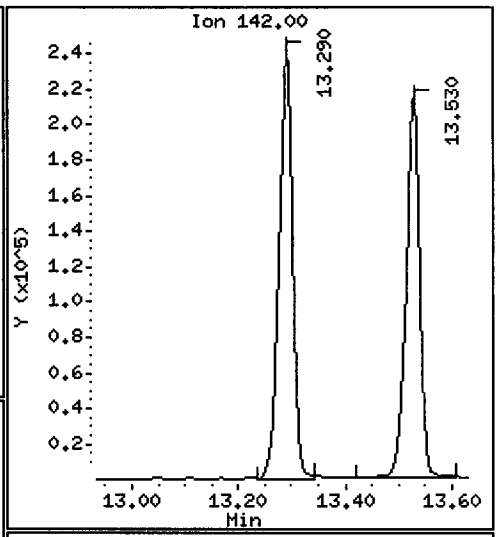
Column phase: ZB-5msi

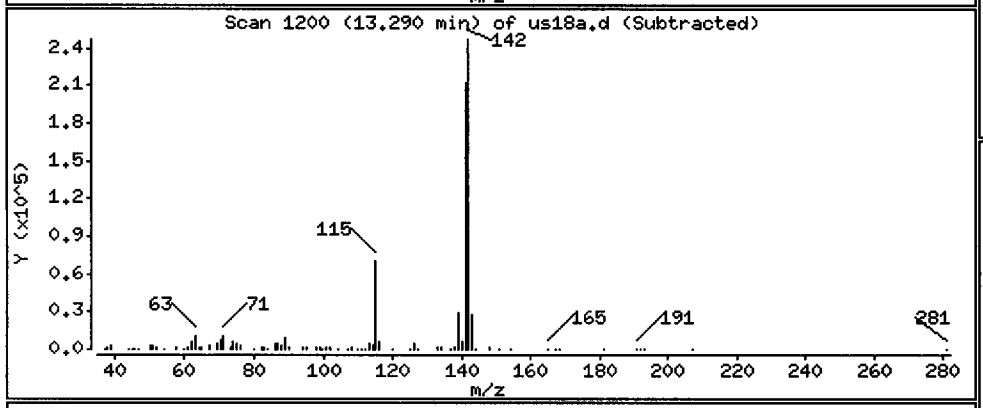
Column diameter: 0.25

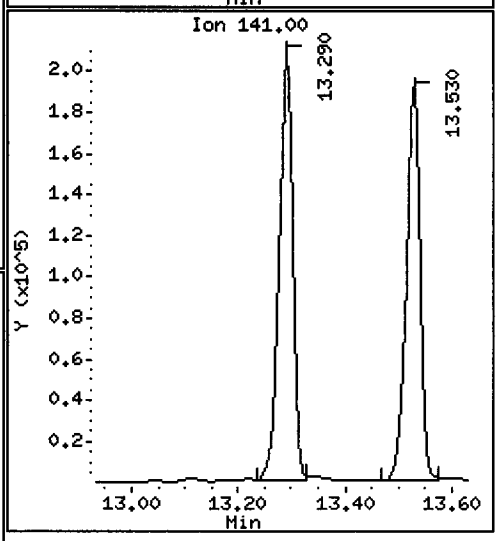
32 2-Methylnaphthalene

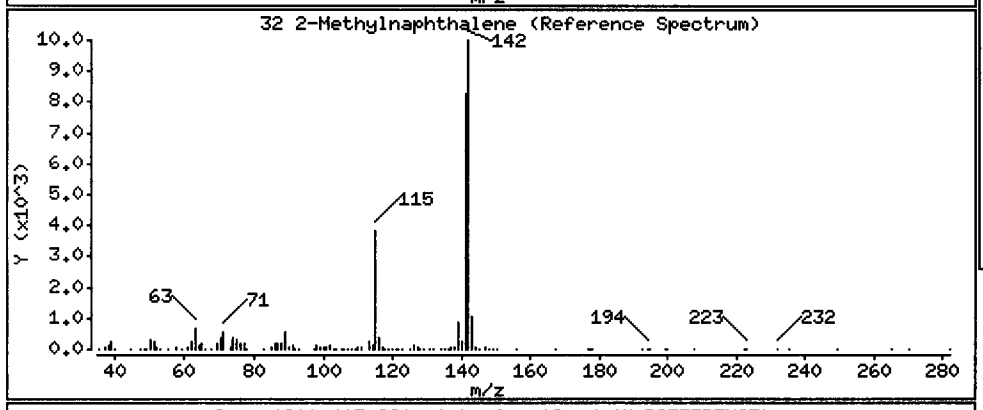
Concentration: 295.5 ug/kg

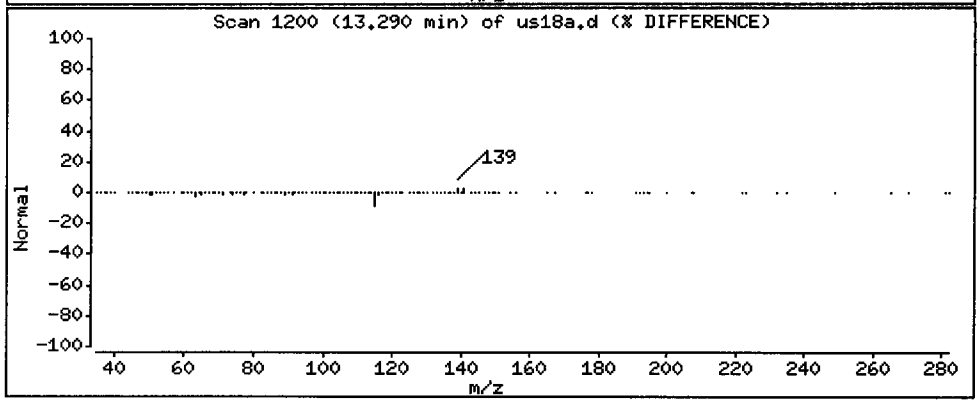












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

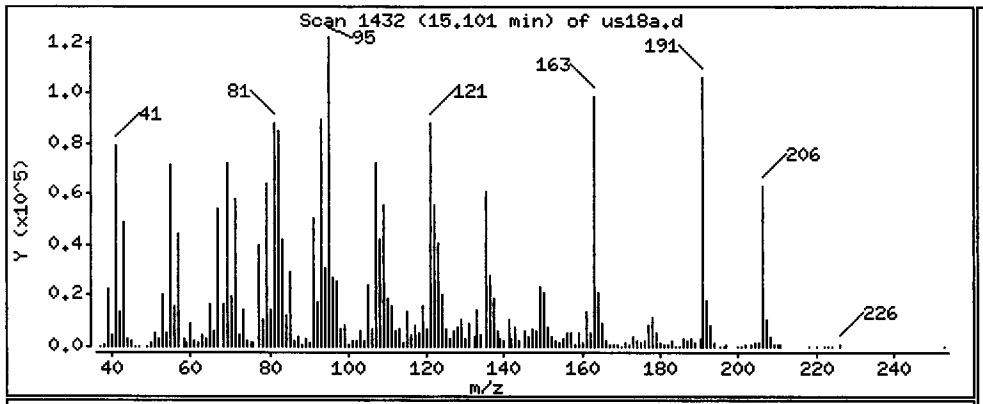
Operator: VTS/YZ

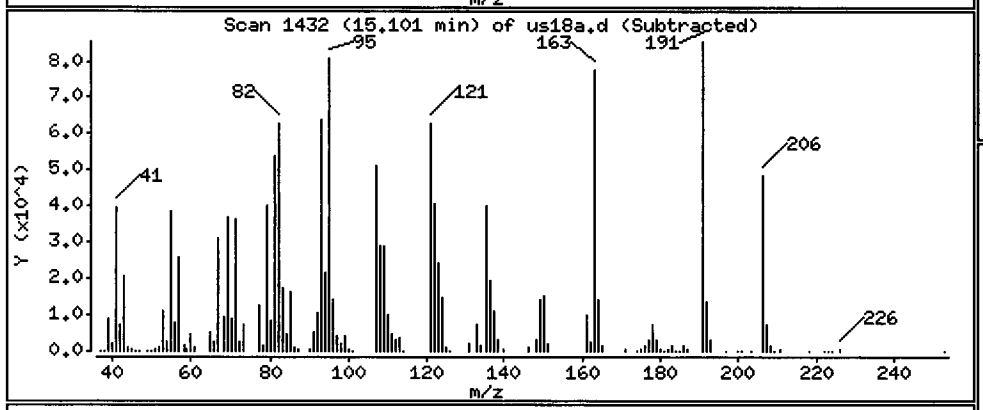
Column phase: ZB-5msi

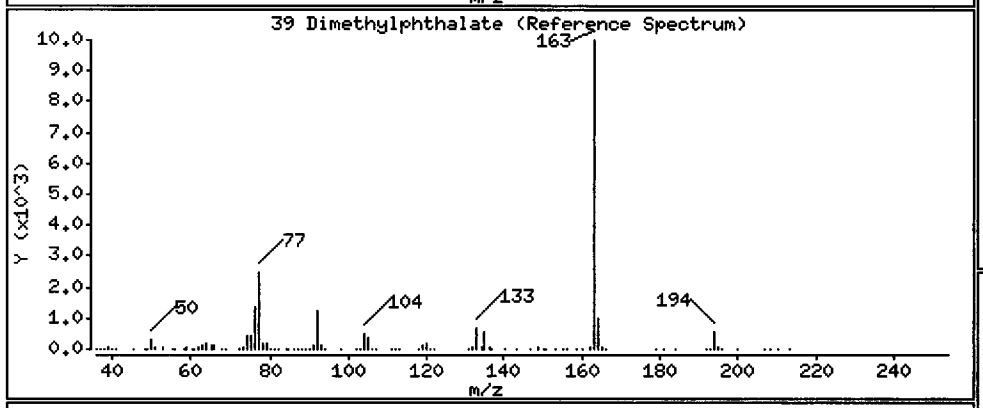
Column diameter: 0.25

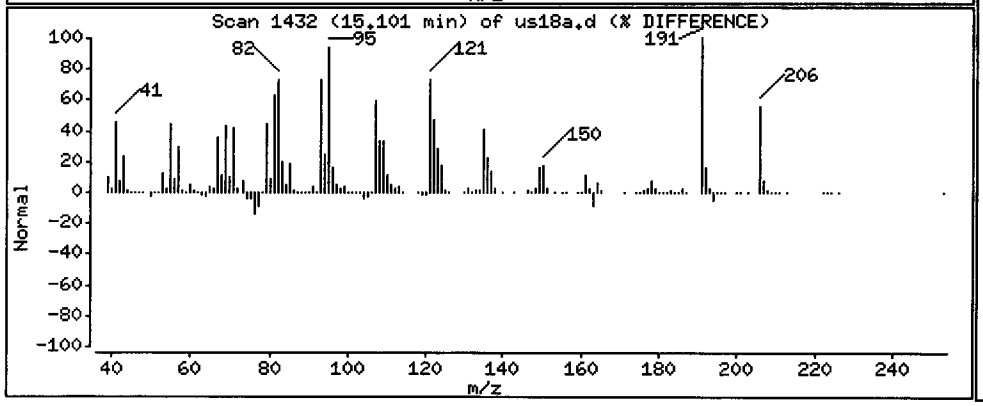
39 Dimethylphthalate

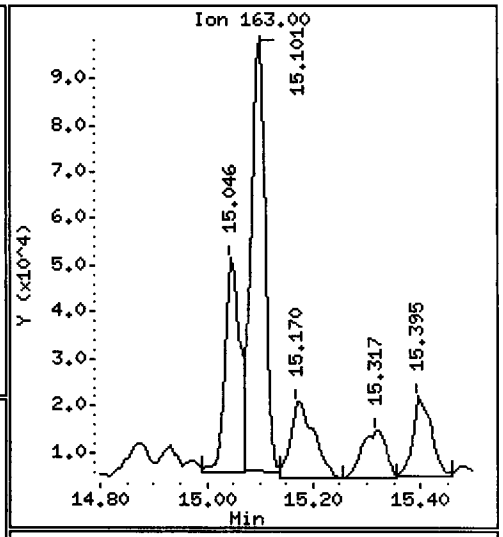
Concentration: 128.8 ug/kg

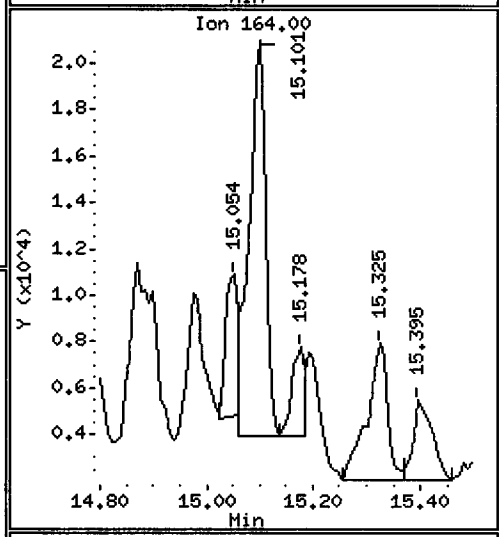


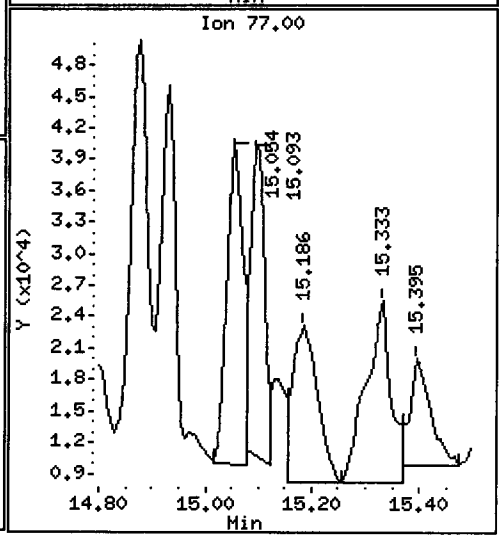












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

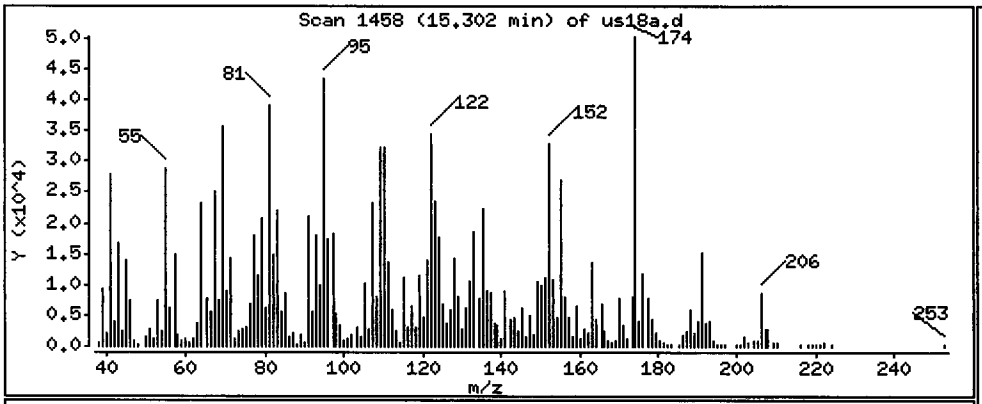
Operator: VTS/YZ

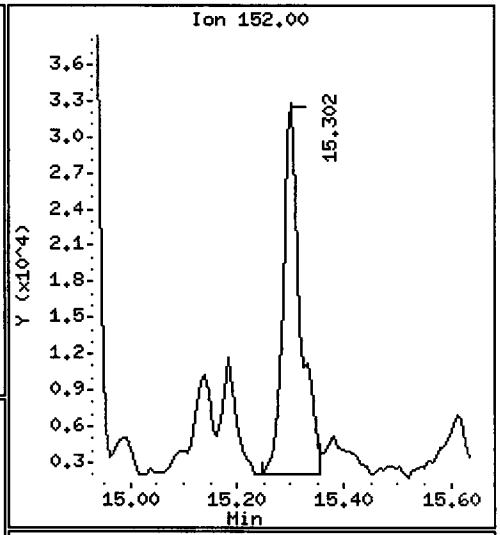
Column phase: ZB-5msi

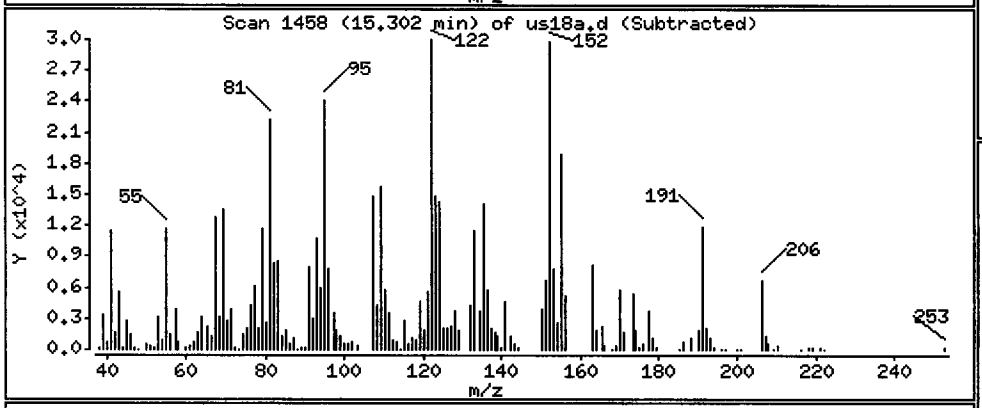
Column diameter: 0.25

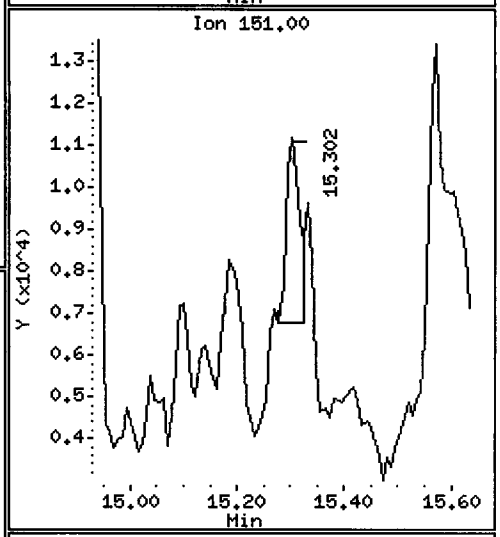
40 Acenaphthylene

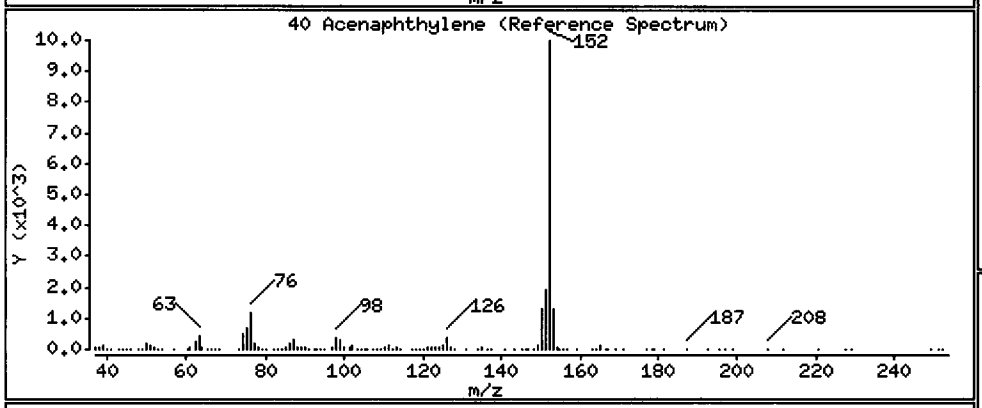
Concentration: 33.16 ug/kg

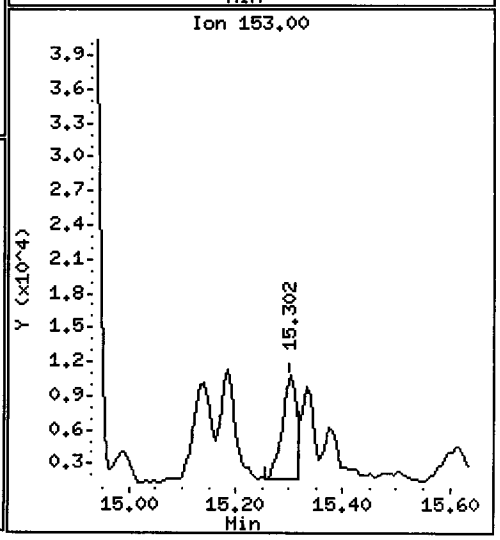


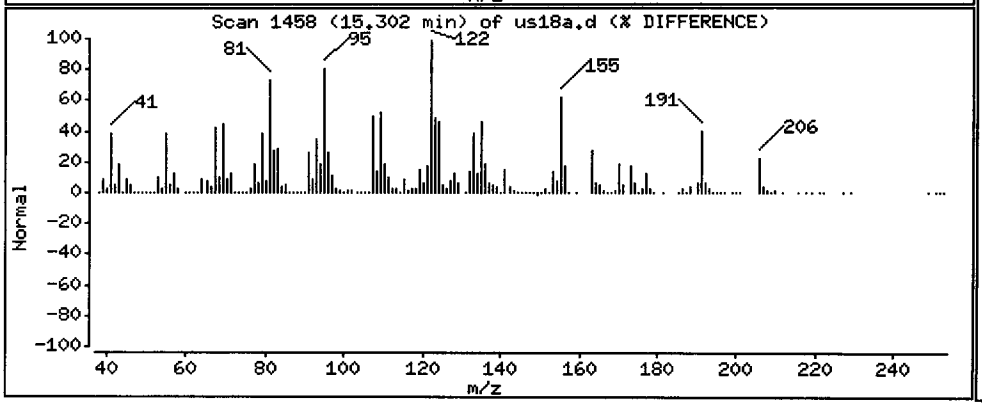












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

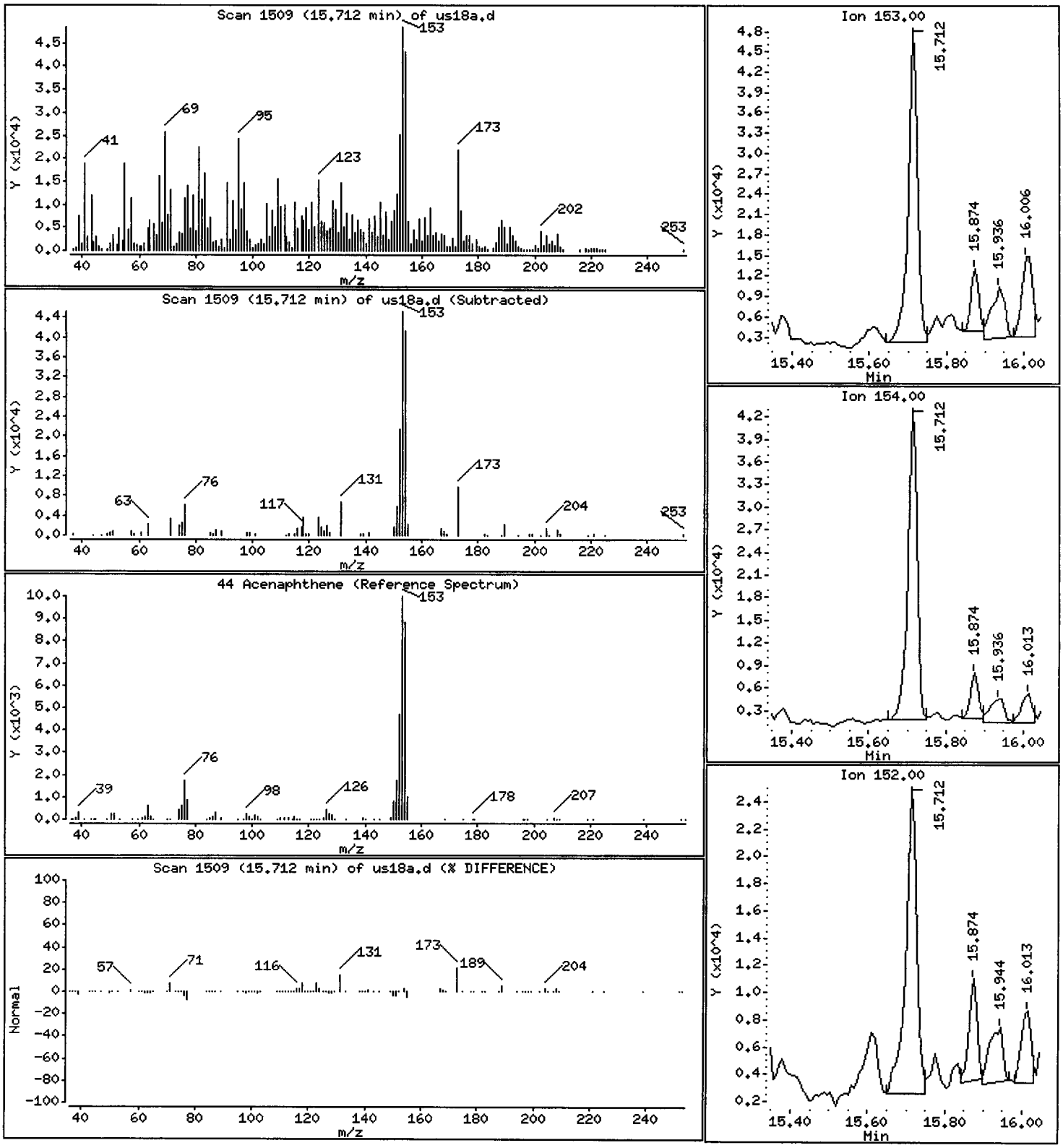
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 63.84 ug/kg



Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

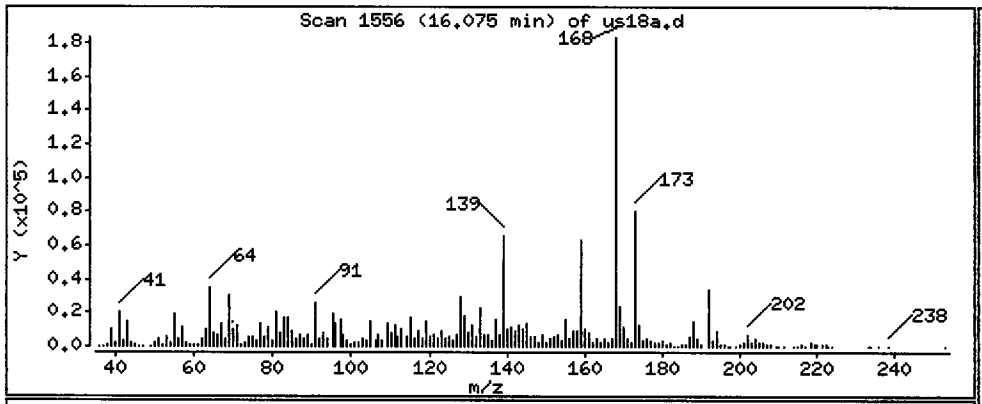
Operator: VTS/YZ

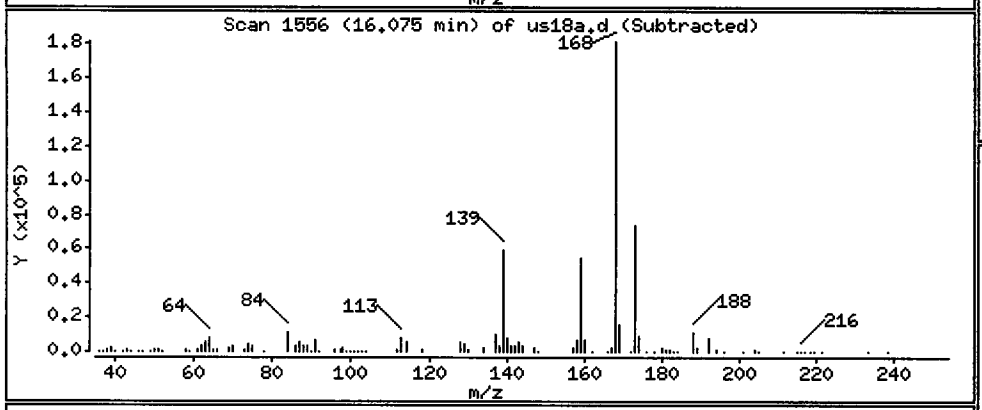
Column phase: ZB-5msi

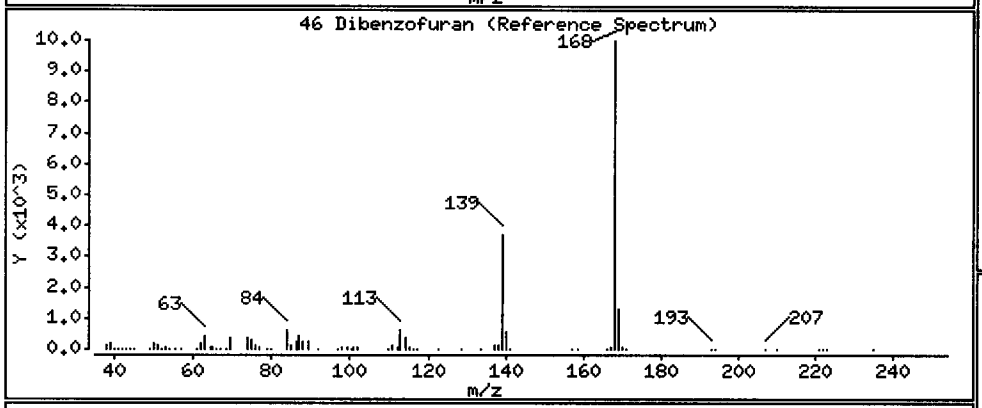
Column diameter: 0.25

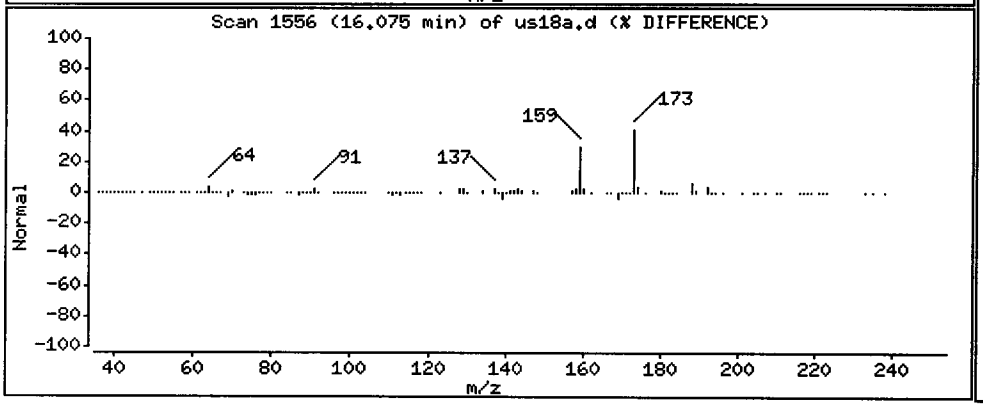
46 Dibenzofuran

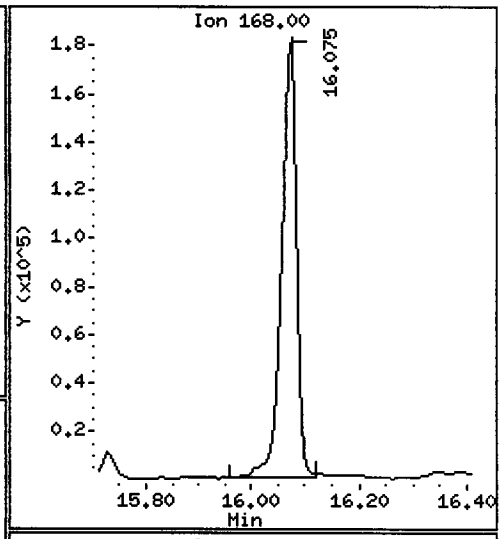
Concentration: 189.1 ug/kg

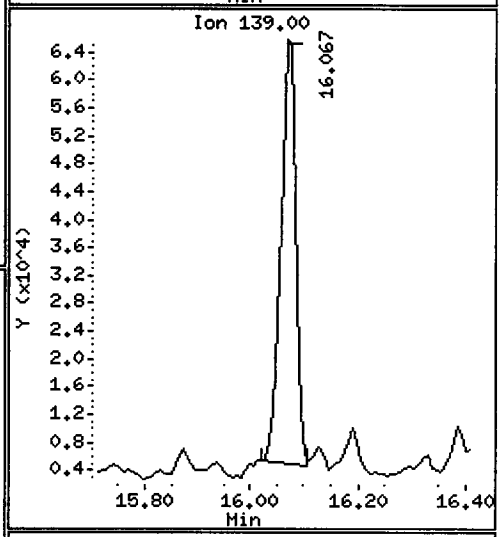


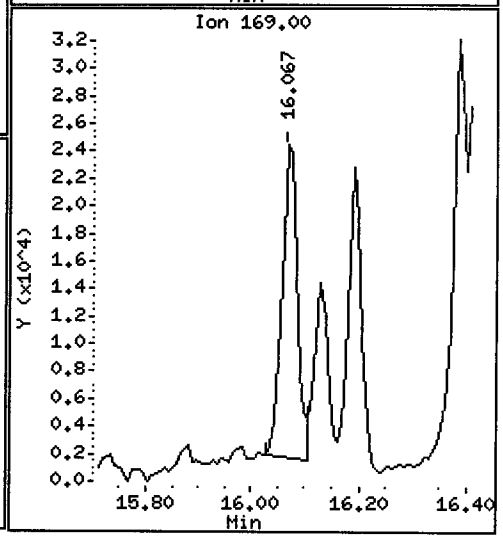












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

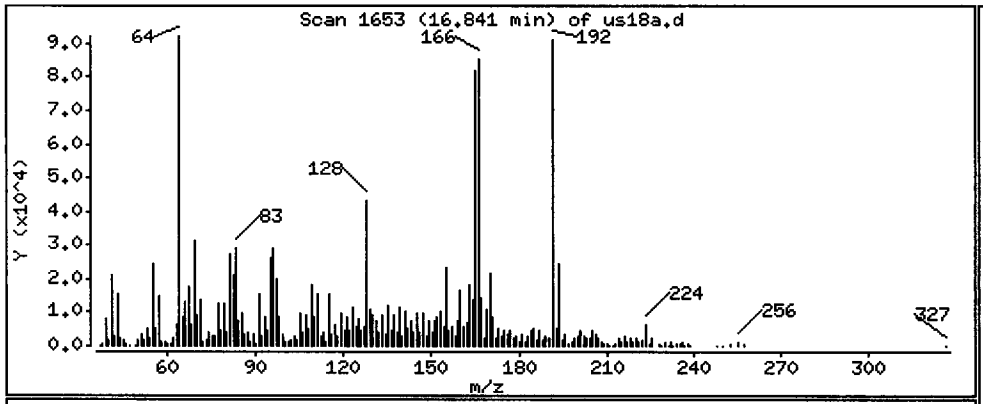
Operator: VTS/YZ

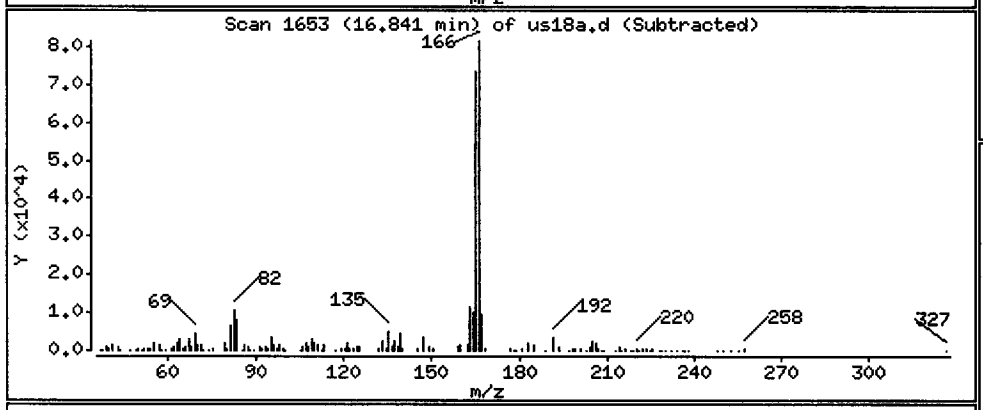
Column phase: ZB-5msi

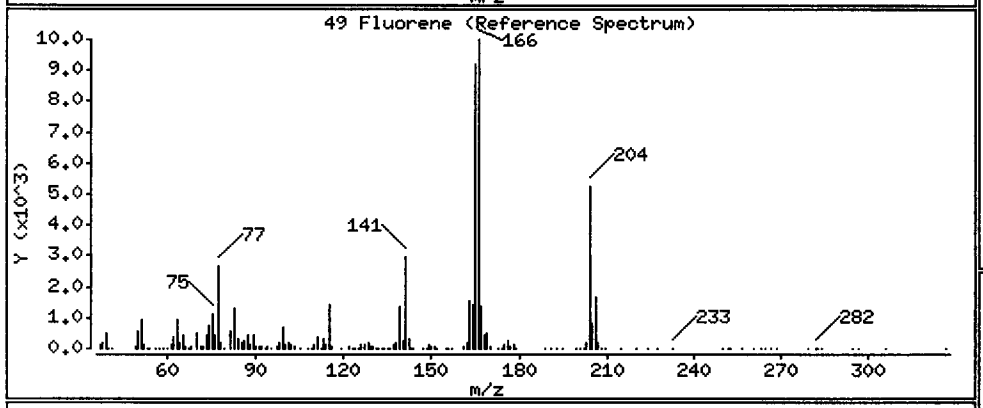
Column diameter: 0.25

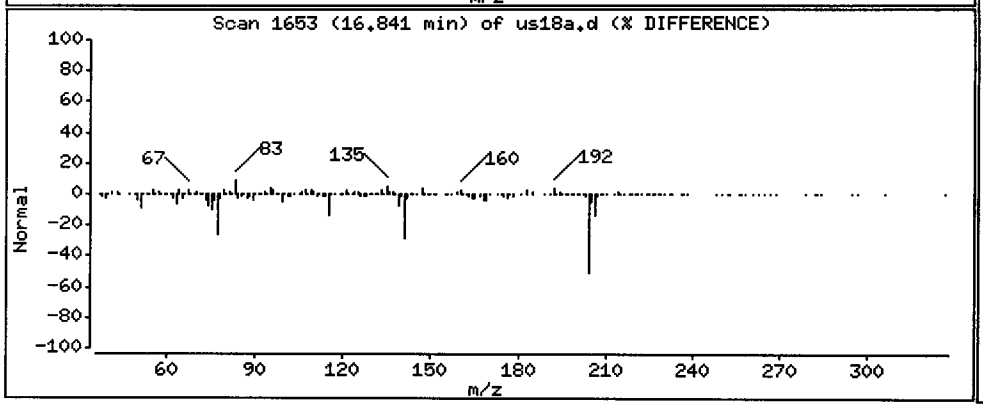
49 Fluorene

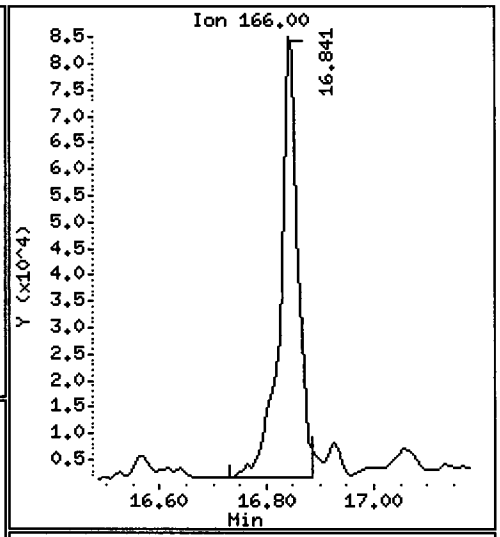
Concentration: 135.0 ug/kg

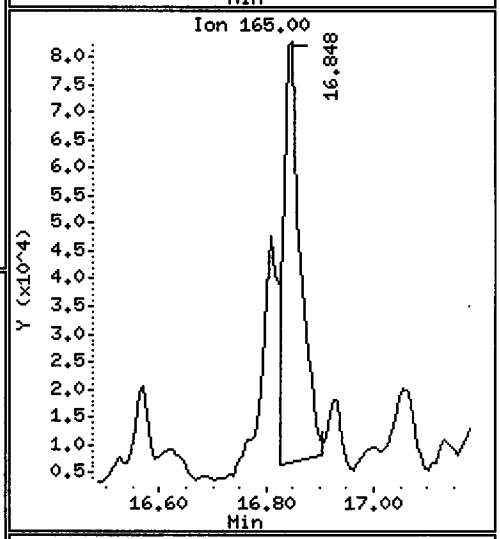


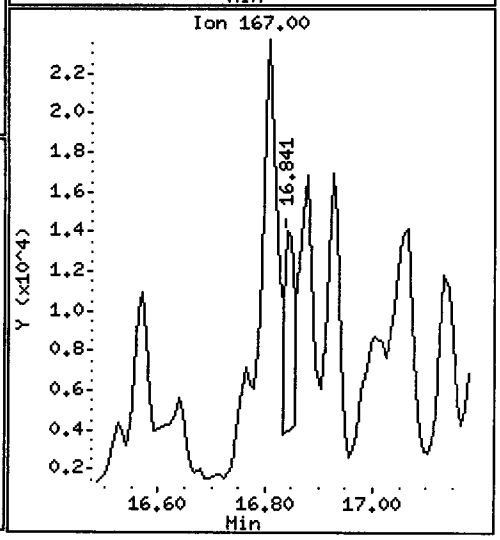












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

Operator: VTS/YZ

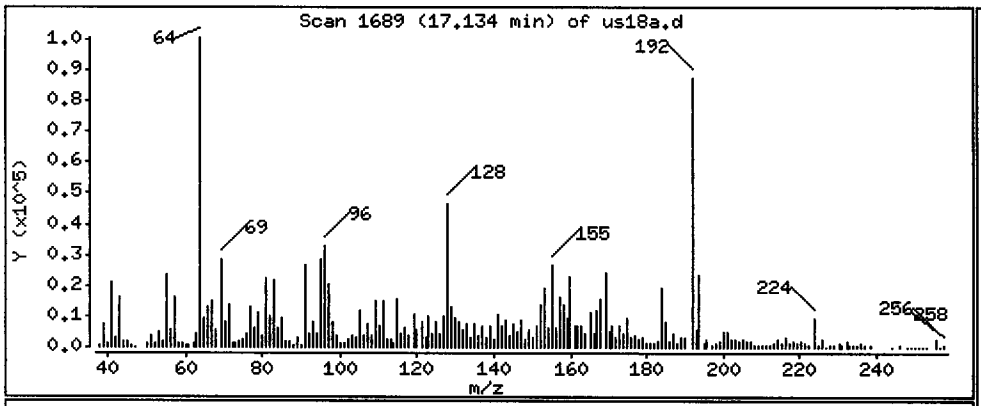
Column phase: ZB-5msi

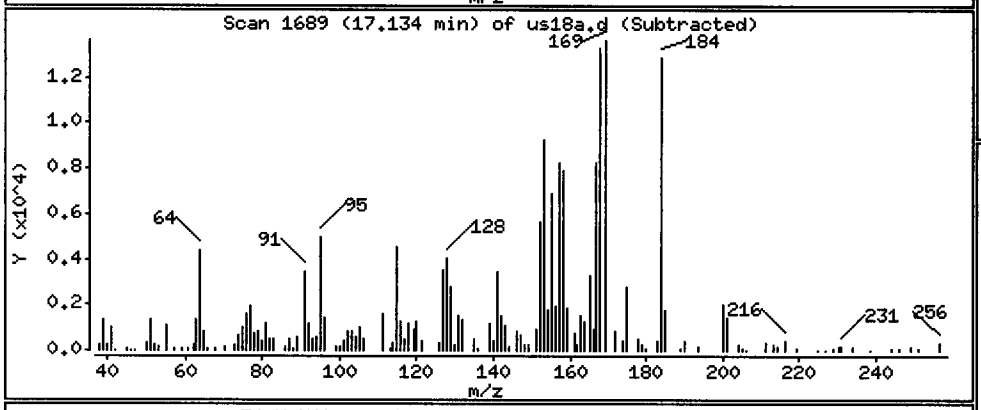
Column diameter: 0.25

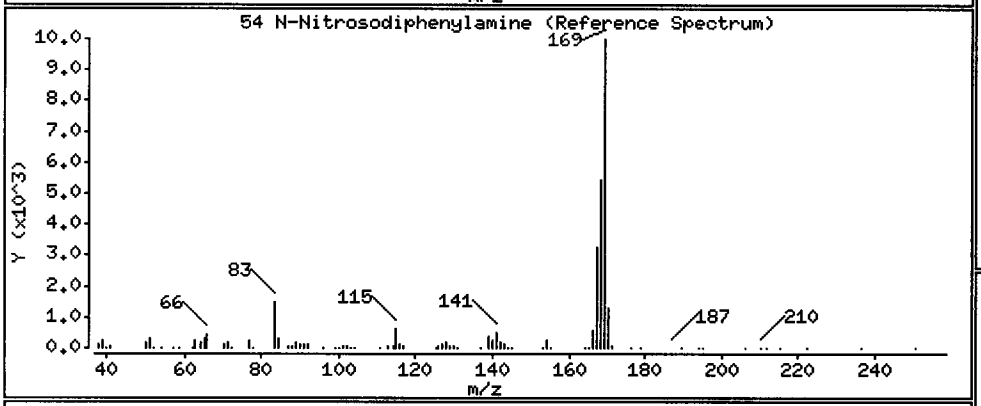
54 N-Nitrosodiphenylamine

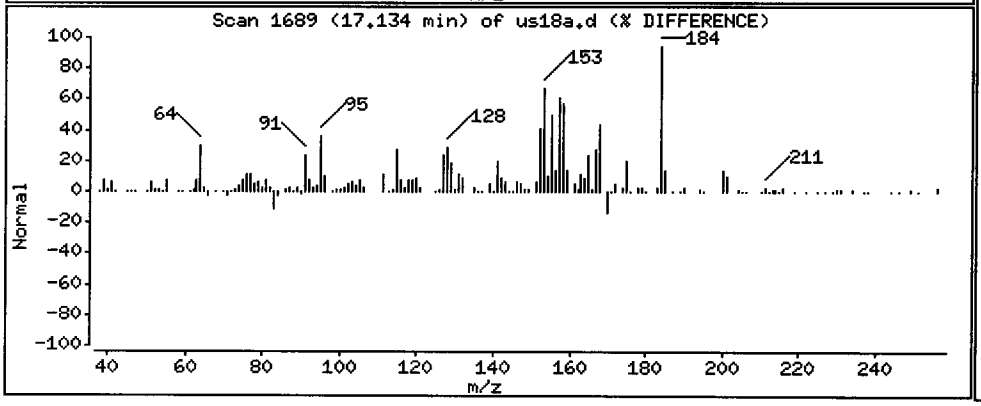
Concentration: 36.45 ug/kg

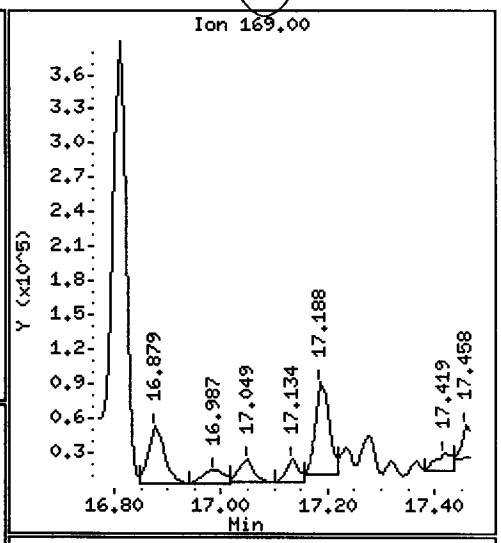
(B)

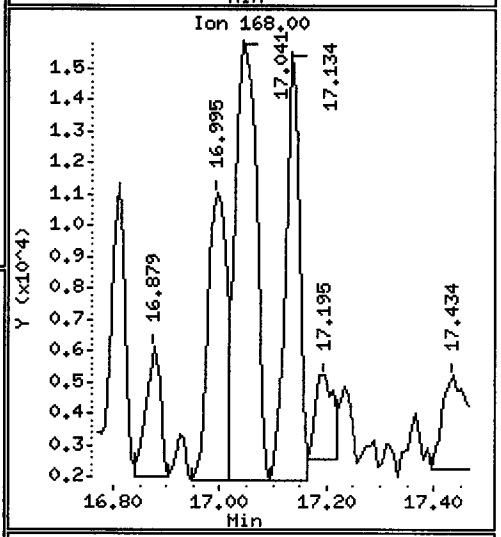


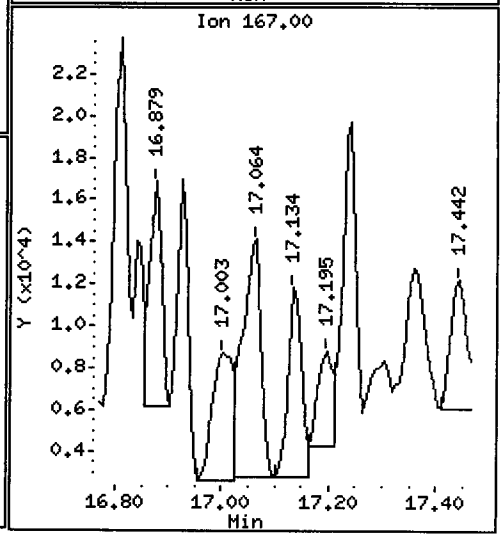












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

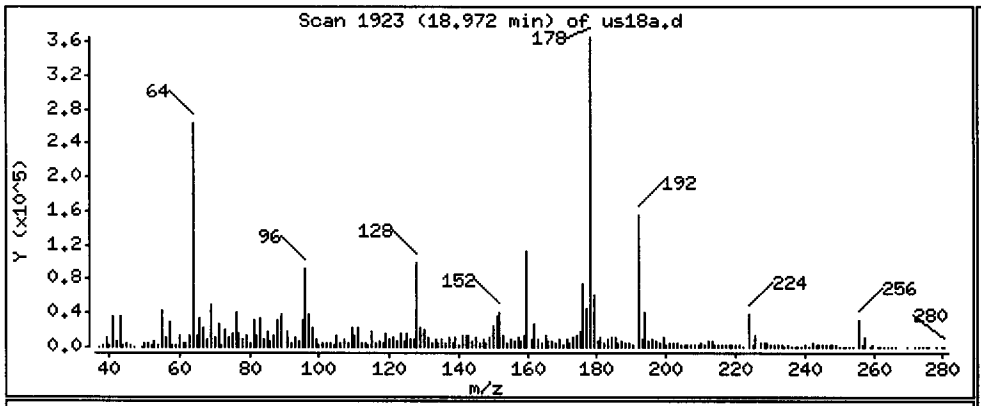
Operator: VTS/YZ

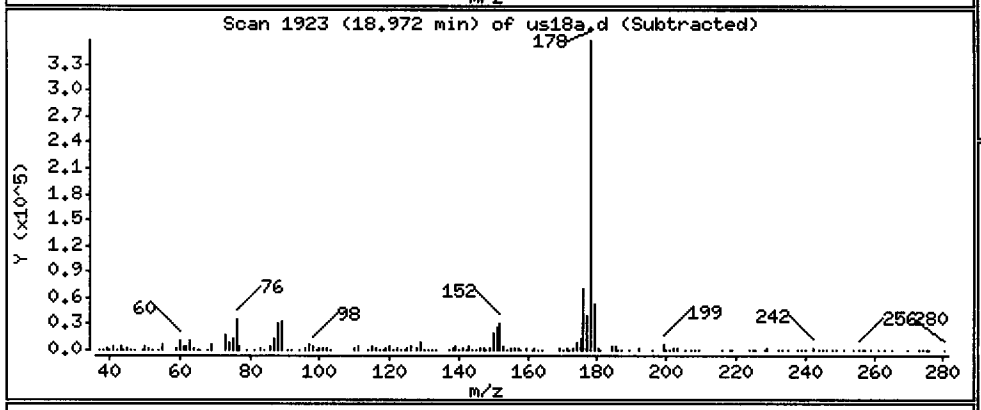
Column phase: ZB-5msi

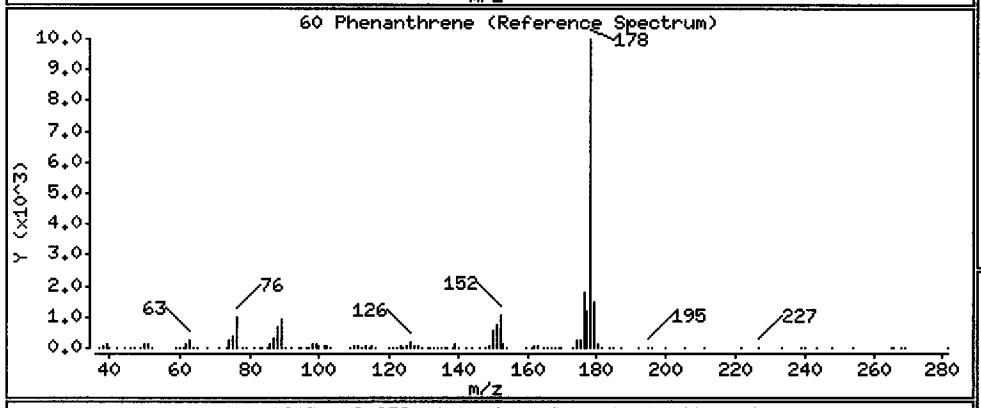
Column diameter: 0.25

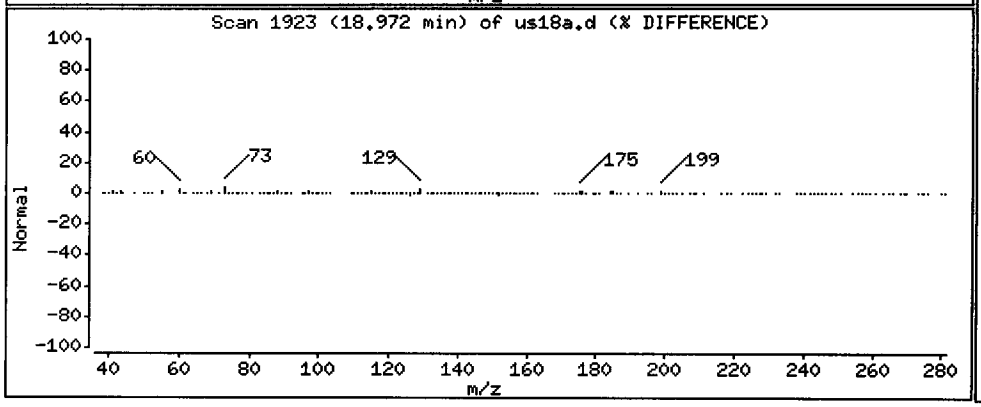
60 Phenanthrene

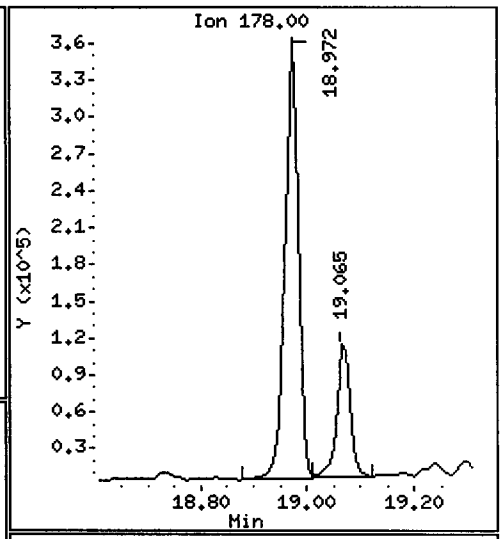
Concentration: 342.8 ug/kg

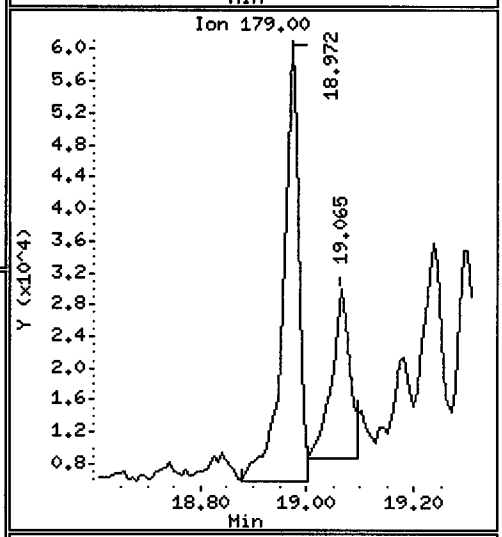


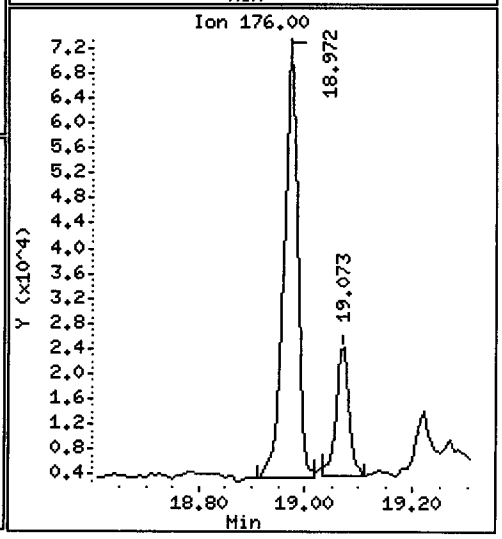












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

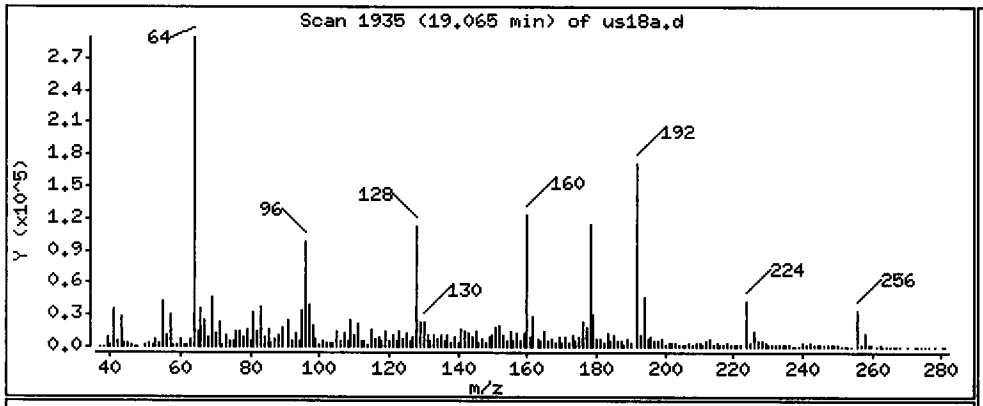
Operator: VTS/YZ

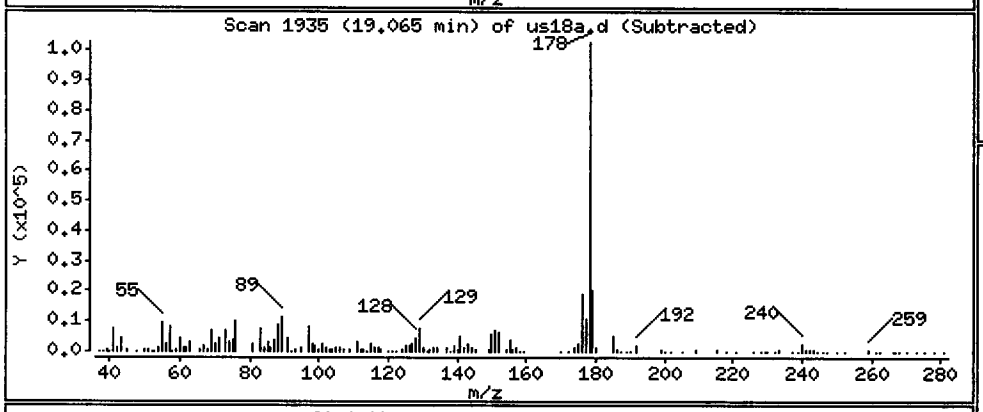
Column phase: ZB-5msi

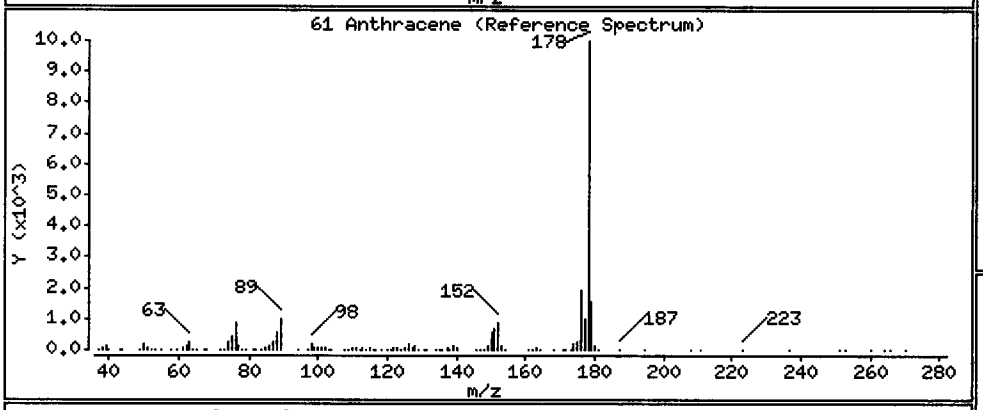
Column diameter: 0.25

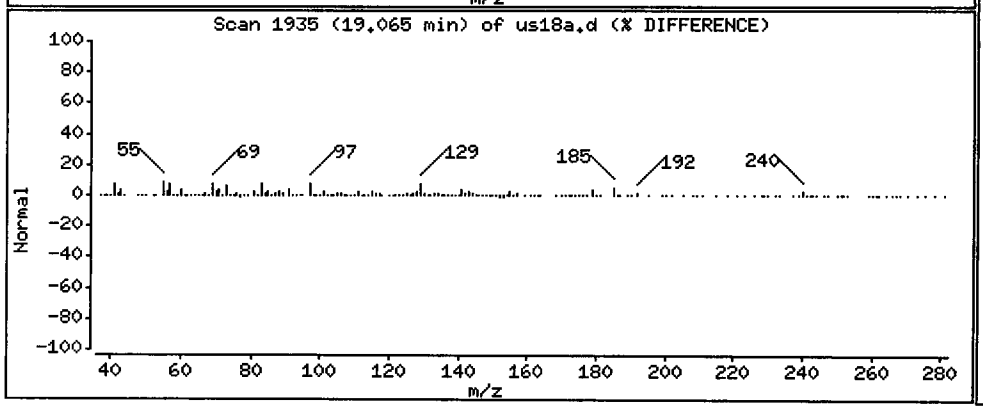
61 Anthracene

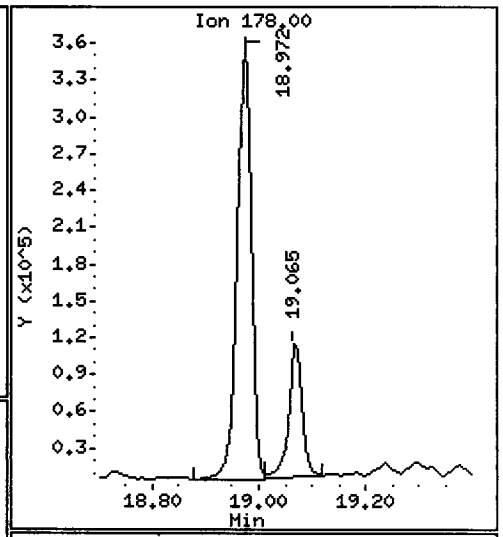
Concentration: 102.5 ug/kg

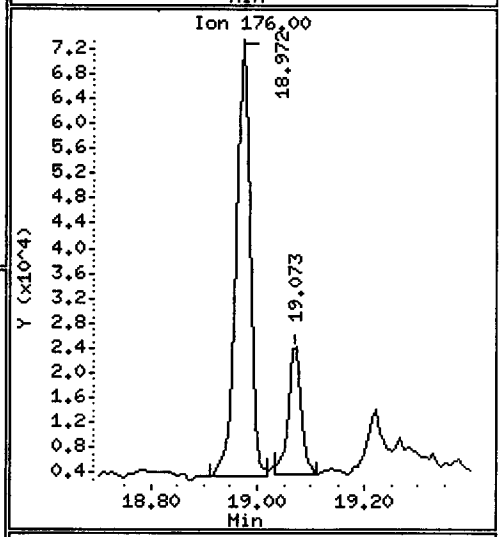


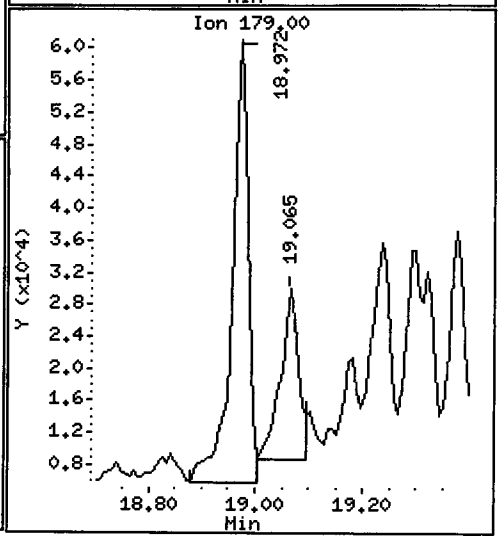












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

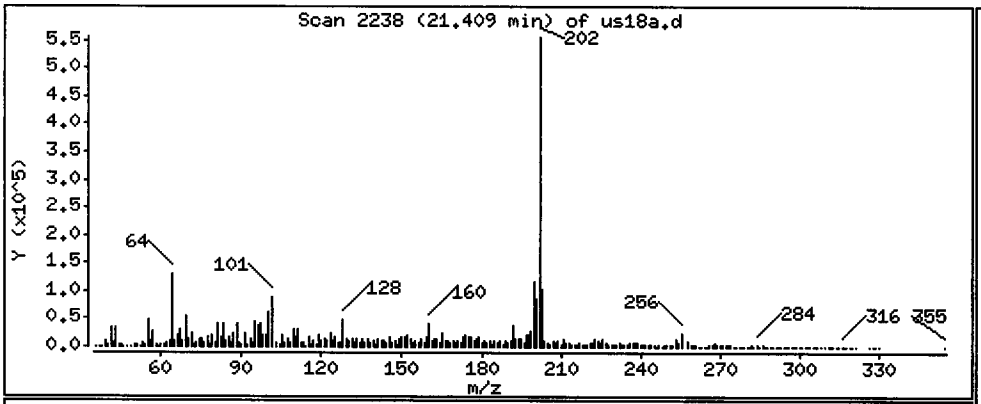
Operator: VTS/YZ

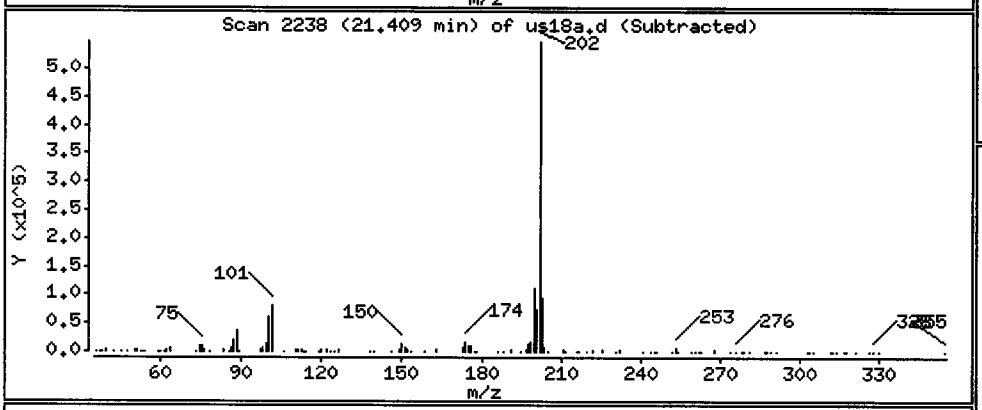
Column phase: ZB-5msi

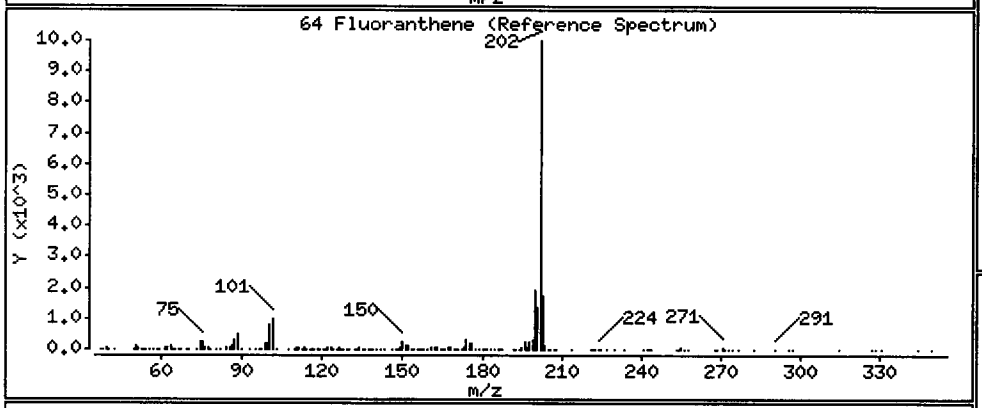
Column diameter: 0.25

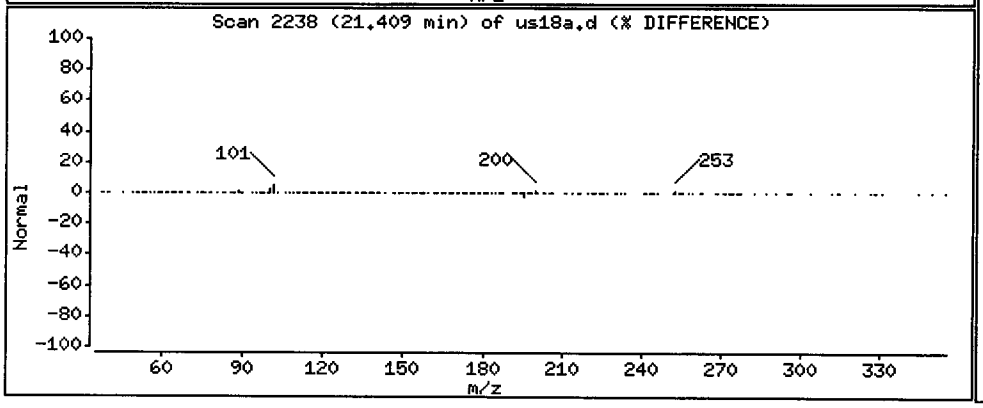
64 Fluoranthene

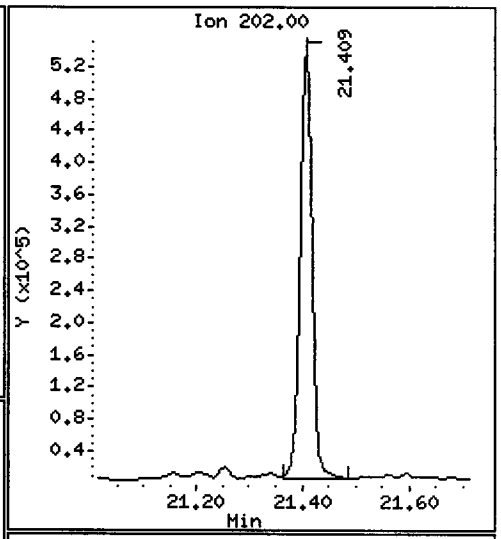
Concentration: 432.7 ug/kg

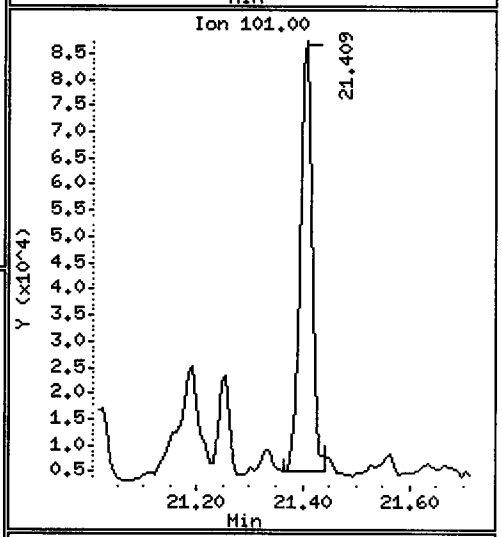


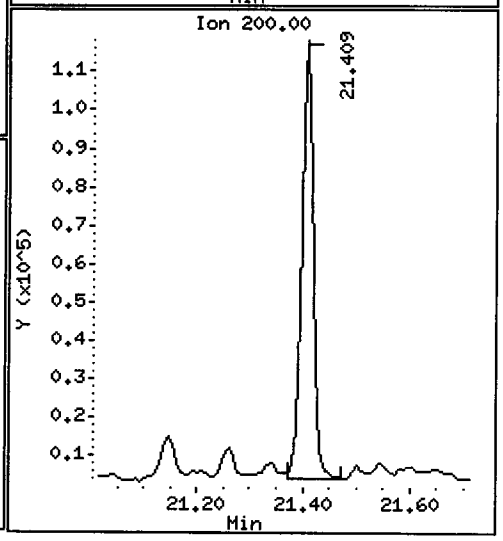












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

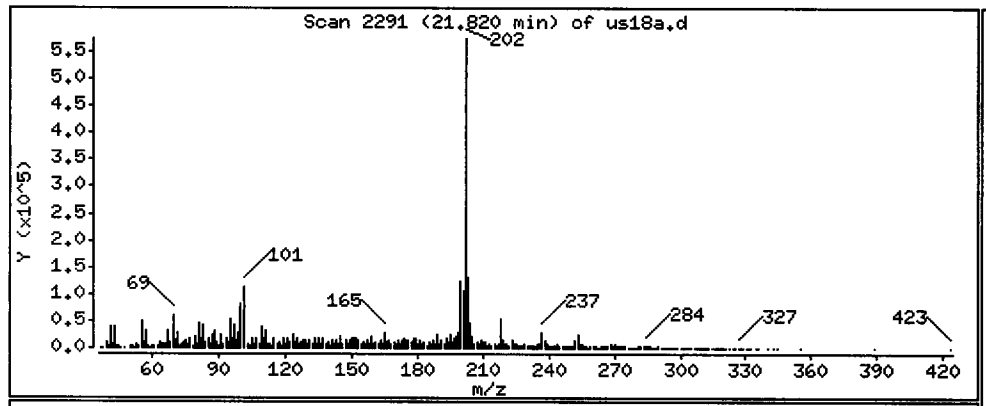
Operator: VTS/YZ

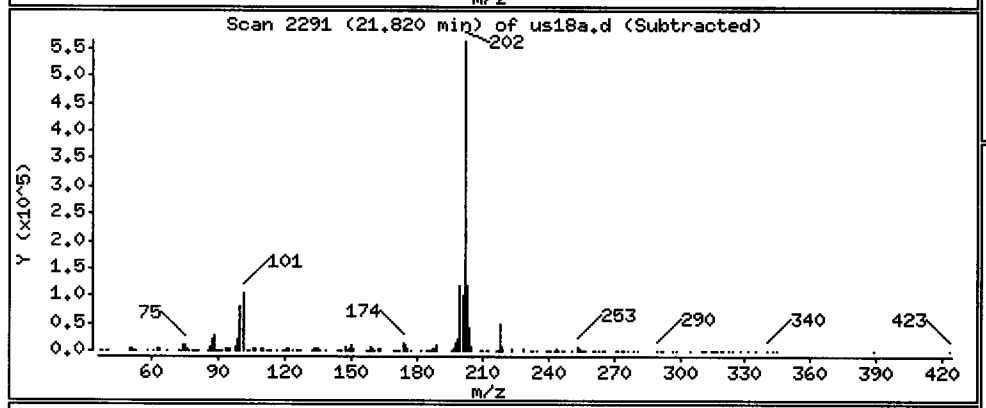
Column phase: ZB-5msi

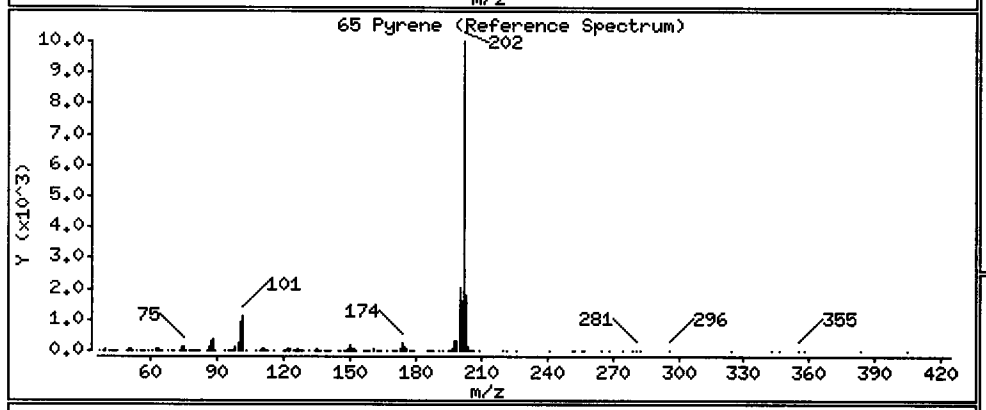
Column diameter: 0.25

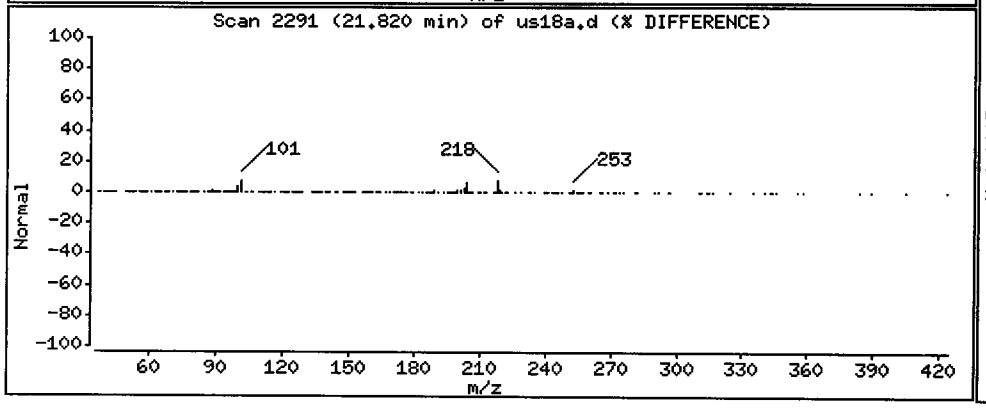
65 Pyrene

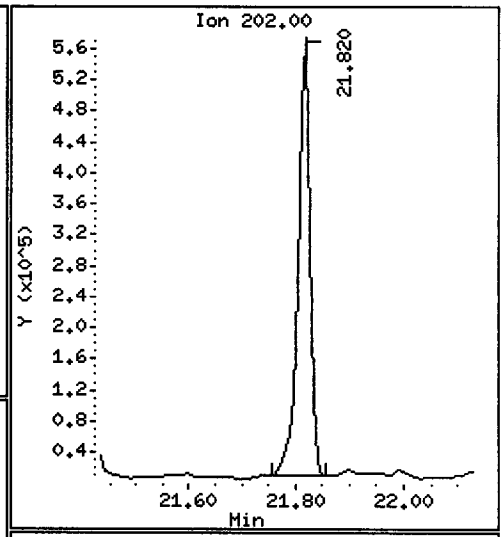
Concentration: 387.6 ug/kg

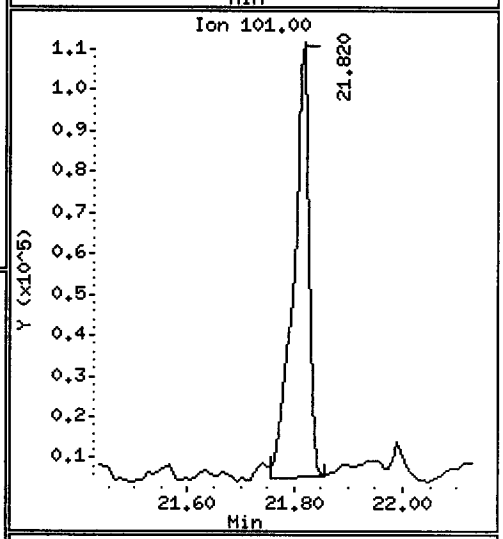


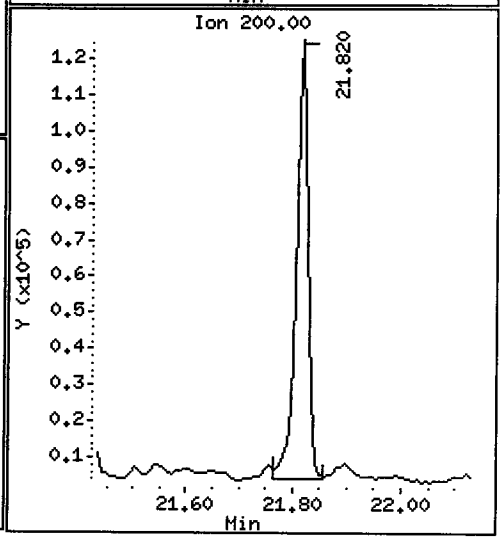












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

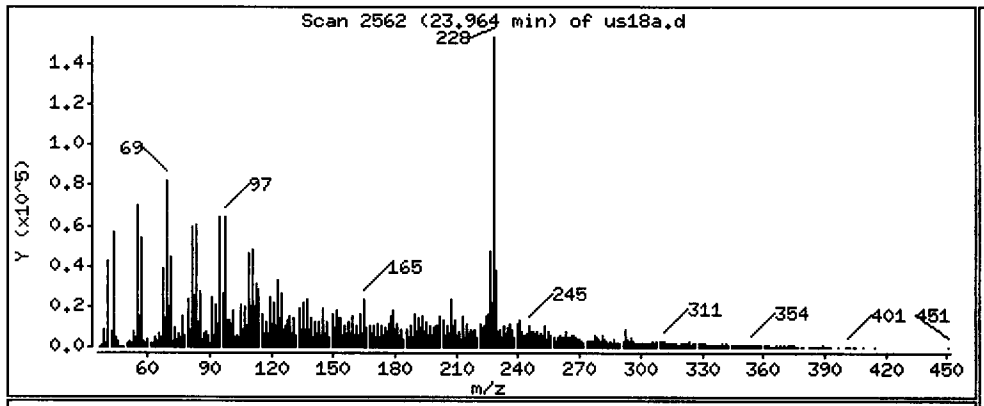
Operator: VTS/YZ

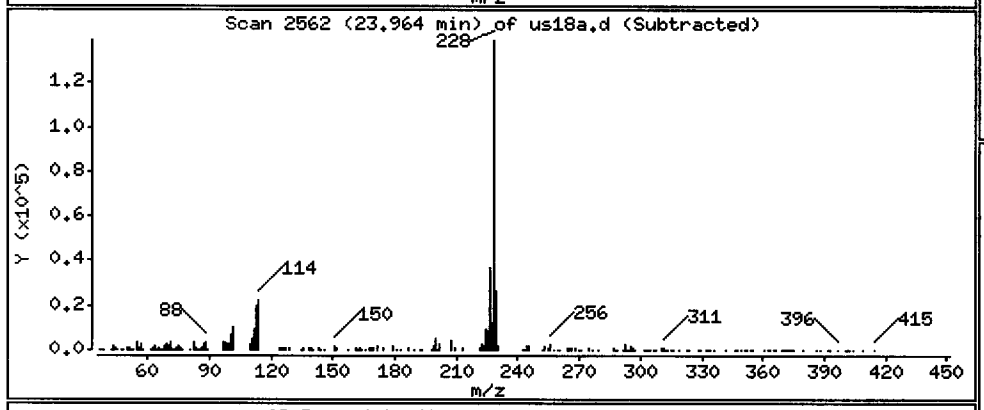
Column phase: ZB-5msi

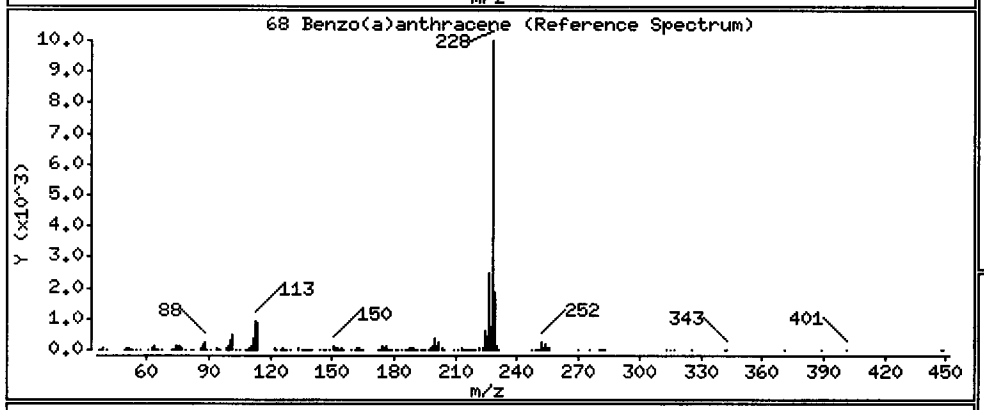
Column diameter: 0.25

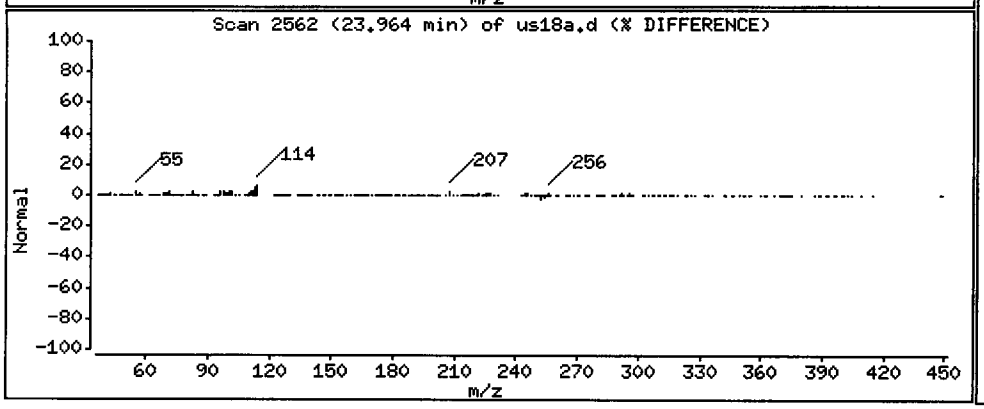
68 Benzo(a)anthracene

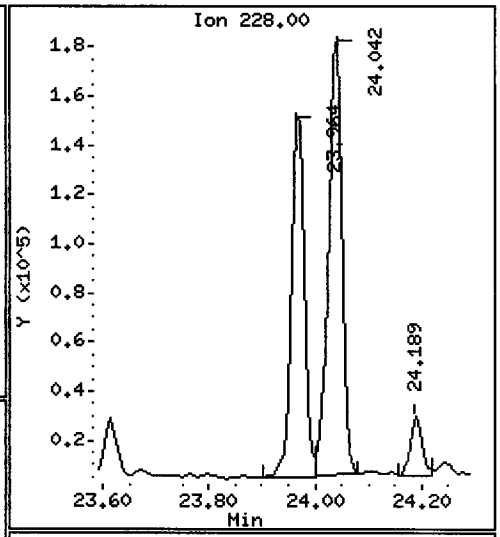
Concentration: 128.5 ug/kg

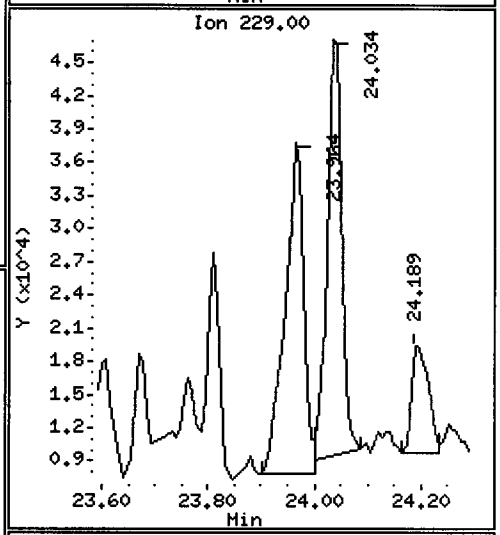


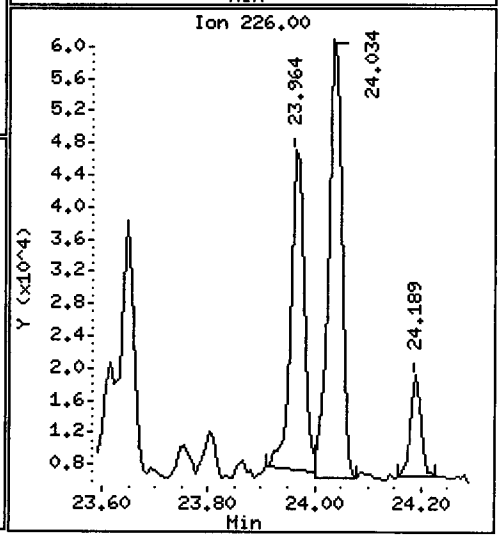












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

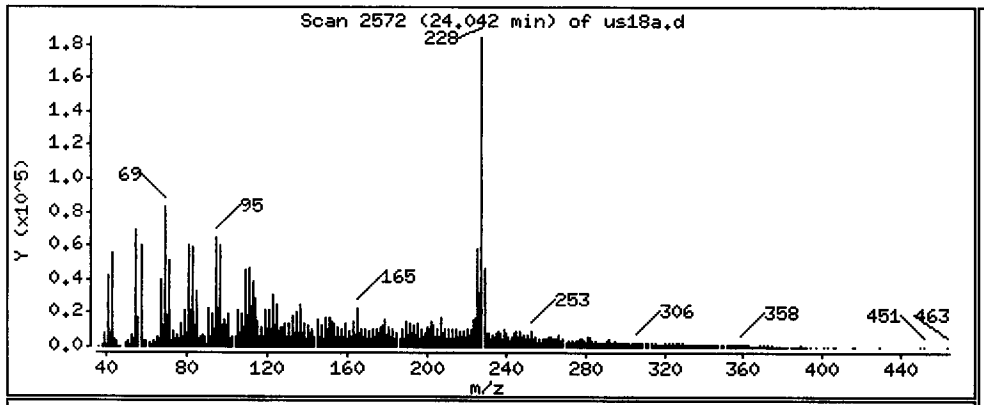
Operator: VTS/YZ

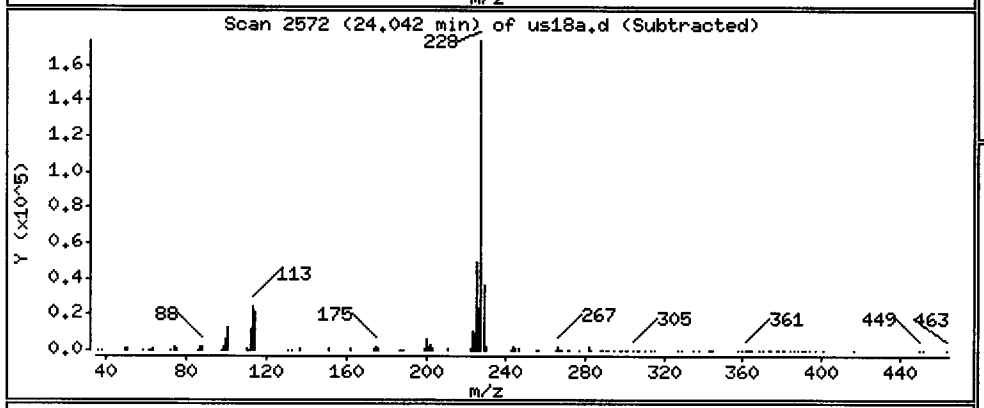
Column phase: ZB-5msi

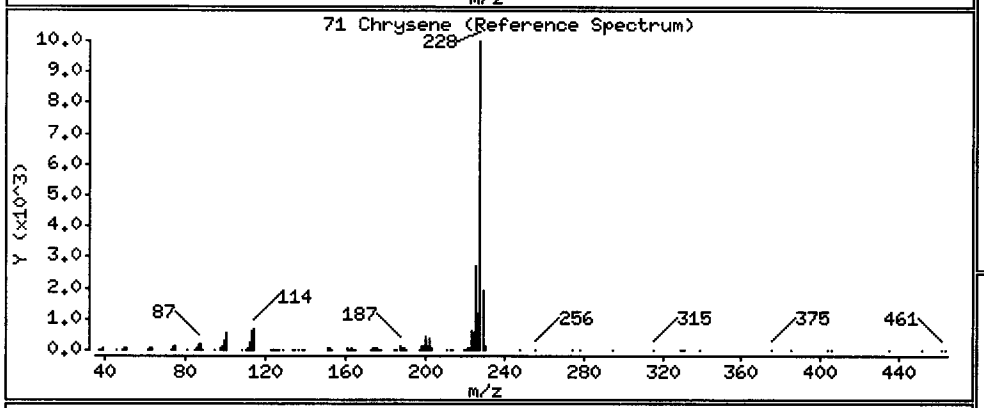
Column diameter: 0.25

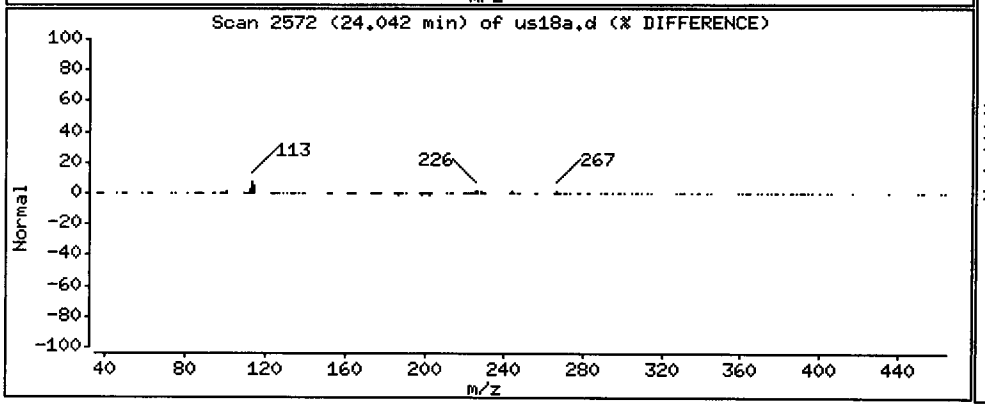
71 Chrysene

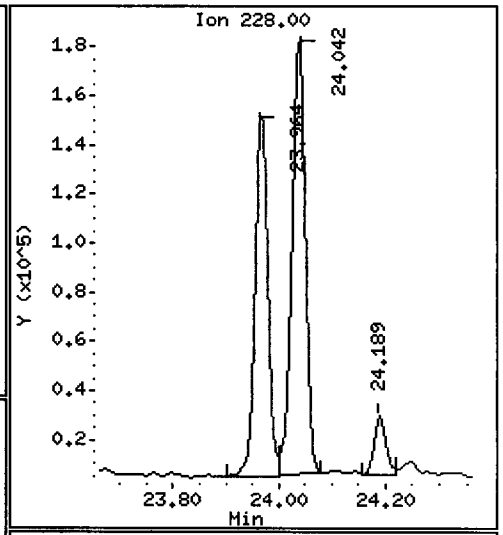
Concentration: 176.9 ug/kg

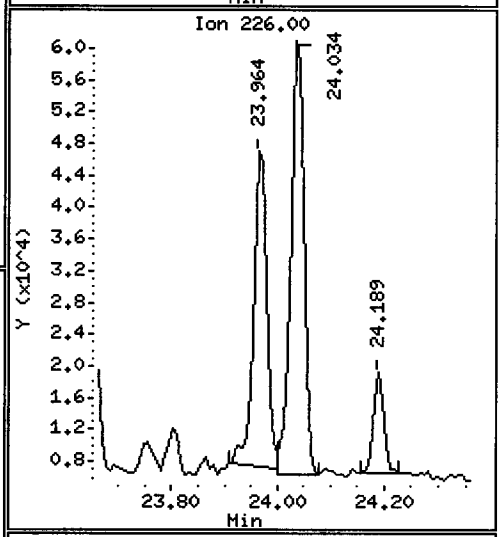


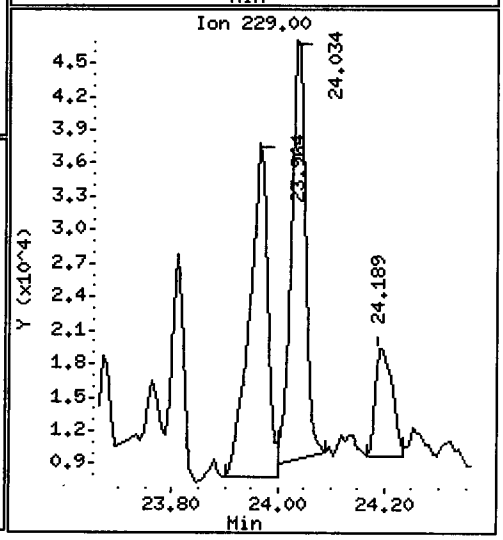












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

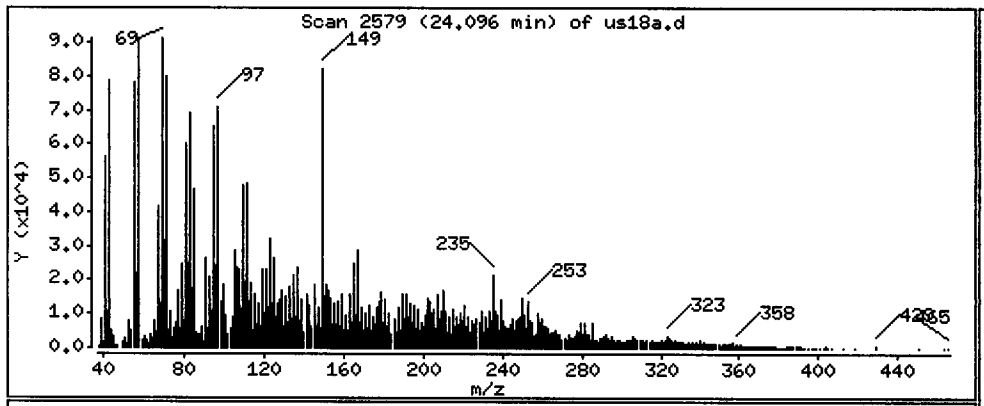
Operator: VTS/YZ

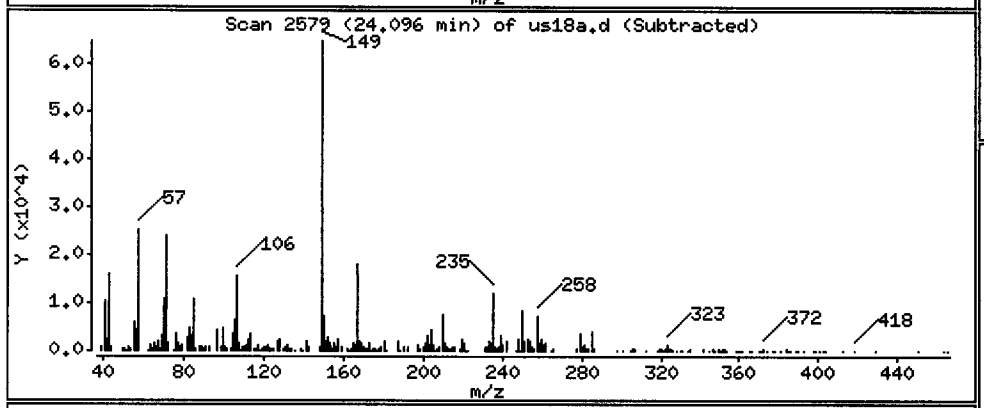
Column phase: ZB-5msi

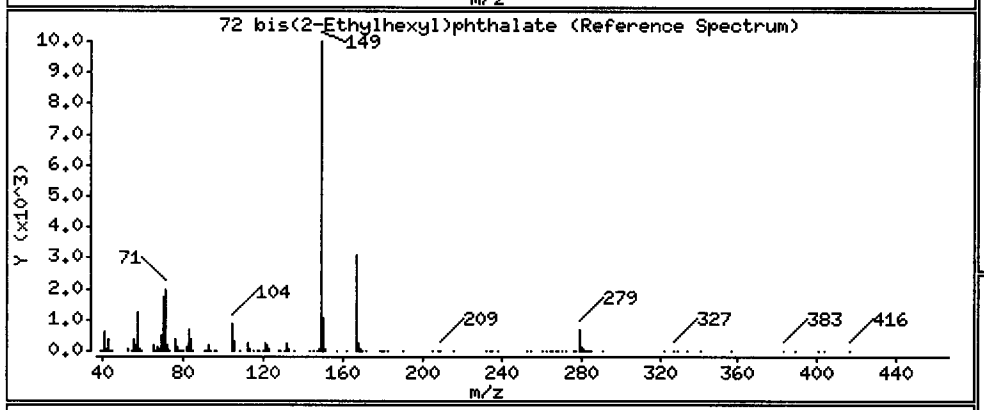
Column diameter: 0.25

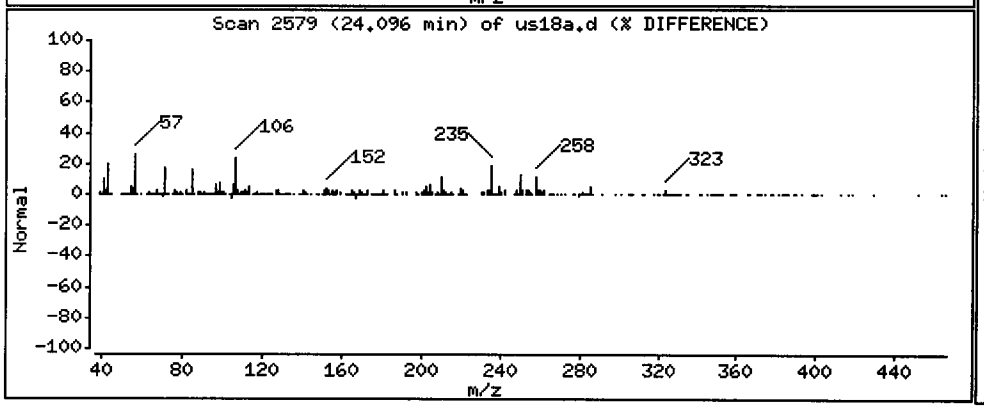
72 bis(2-Ethylhexyl)phthalate

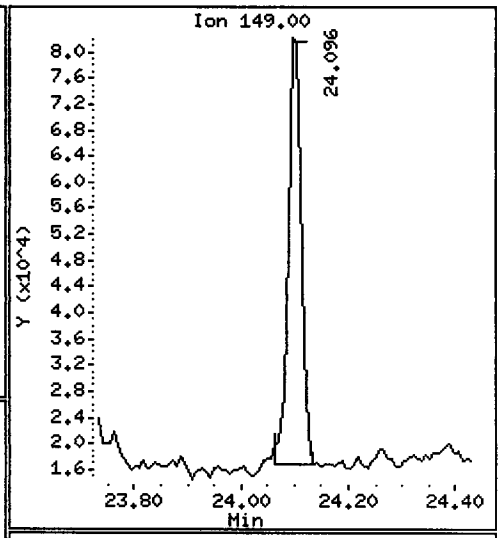
Concentration: 74.02 ug/kg

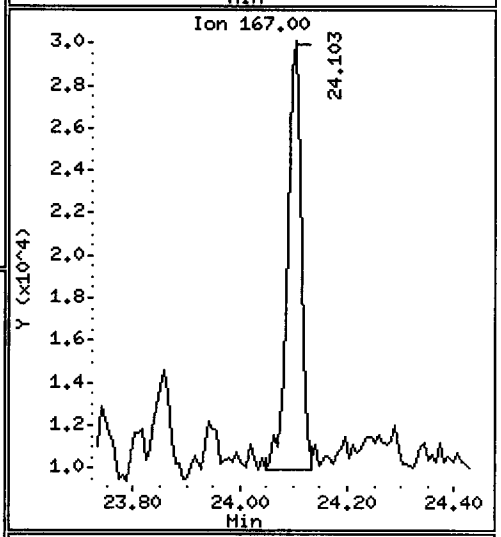


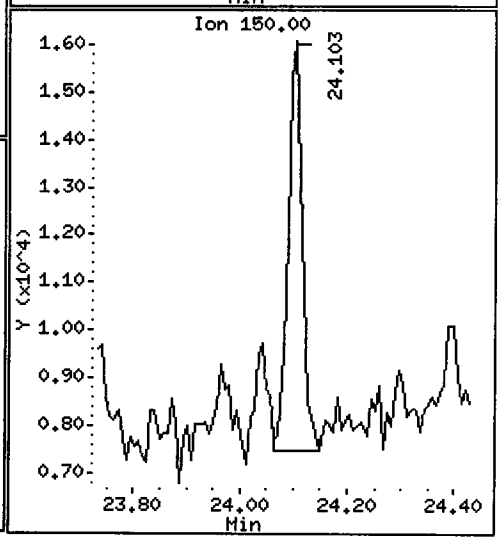












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

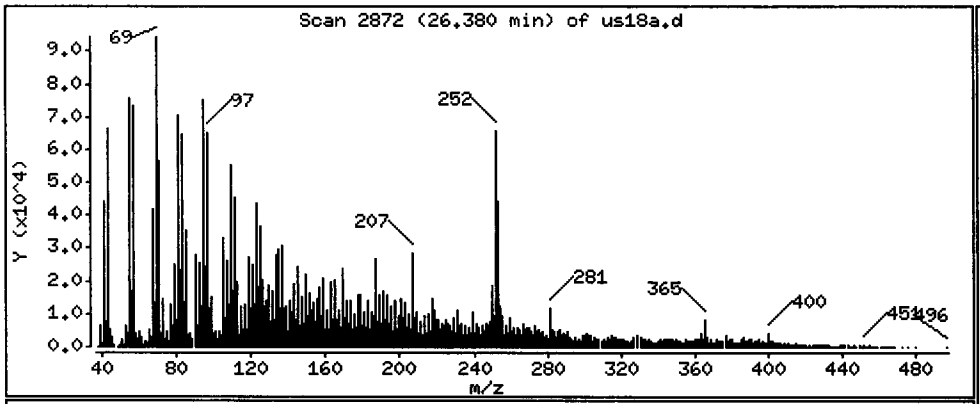
Operator: VTS/YZ

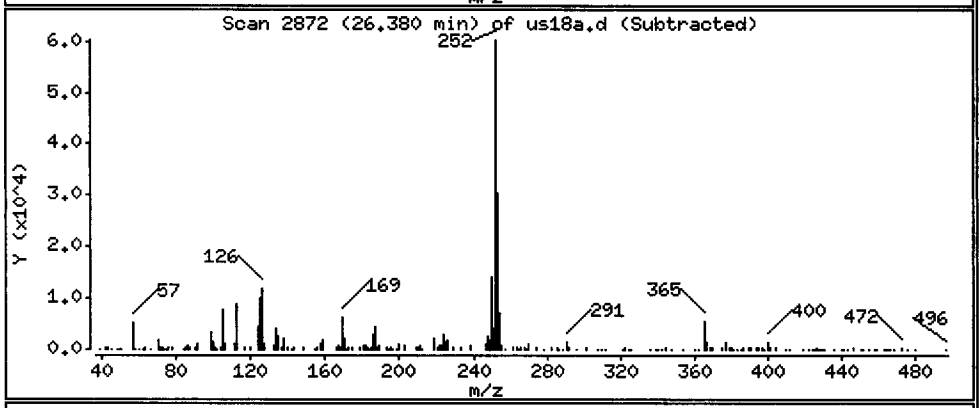
Column phase: ZB-5msi

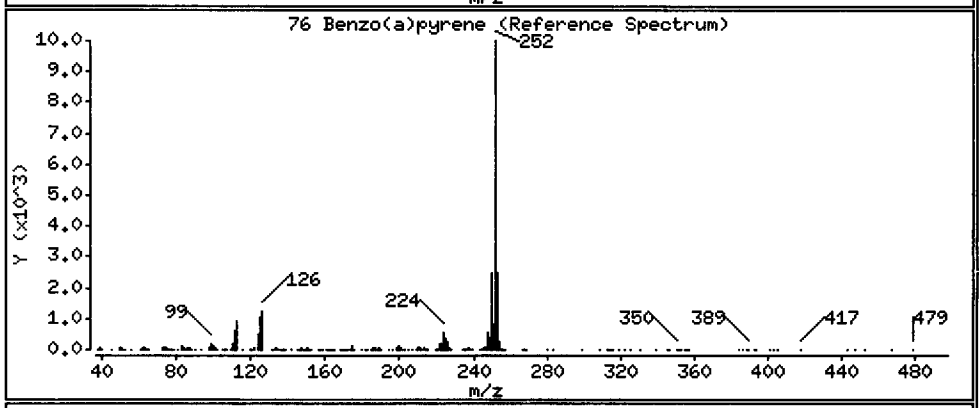
Column diameter: 0.25

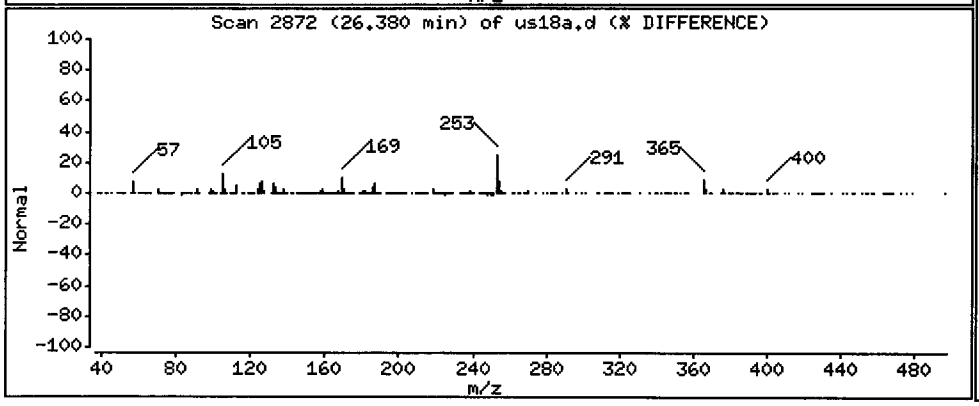
76 Benzo(a)pyrene

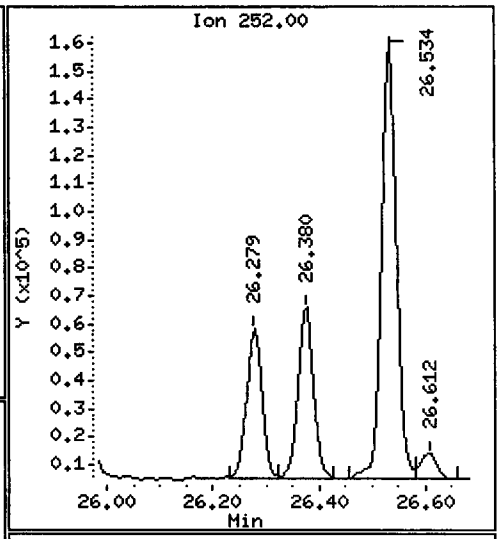
Concentration: 78.49 ug/kg

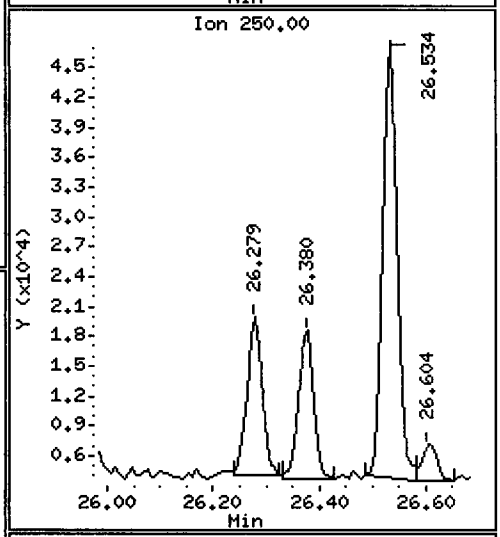


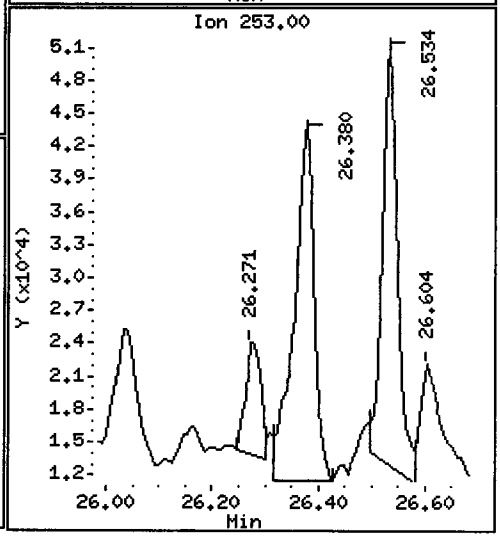












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

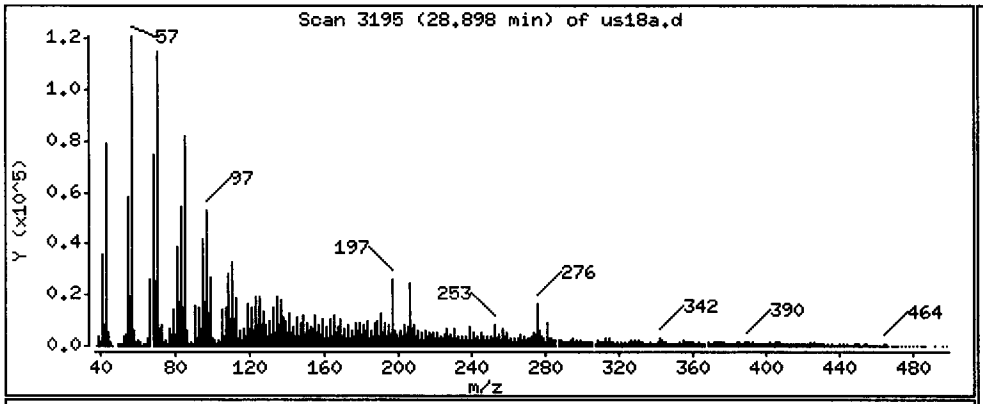
Operator: VTS/YZ

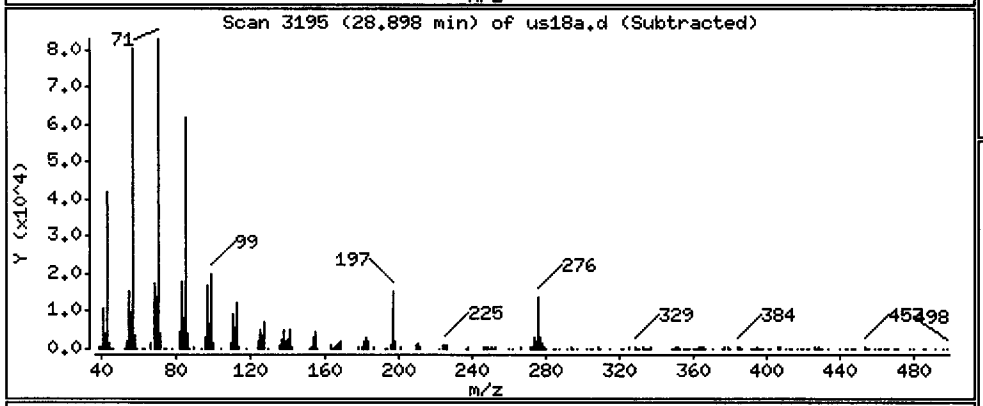
Column phase: ZB-5msi

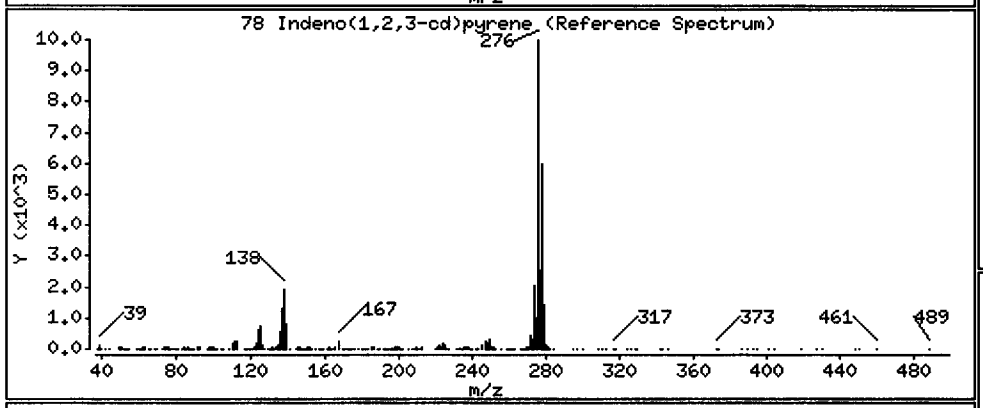
Column diameter: 0.25

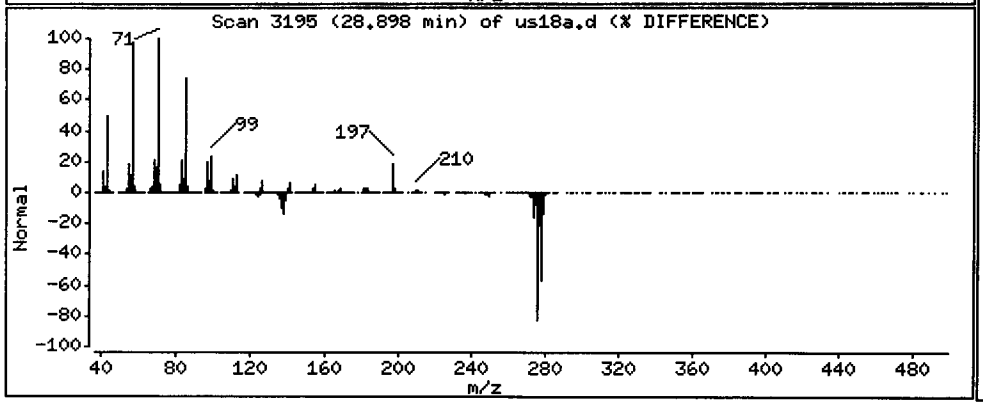
78 Indeno(1,2,3-cd)pyrene

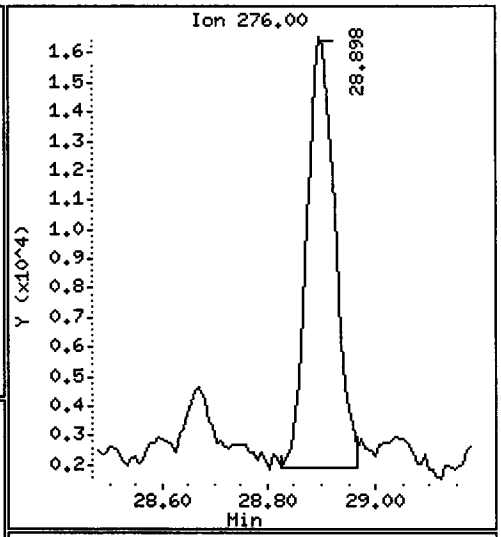
Concentration: 27.37 ug/kg

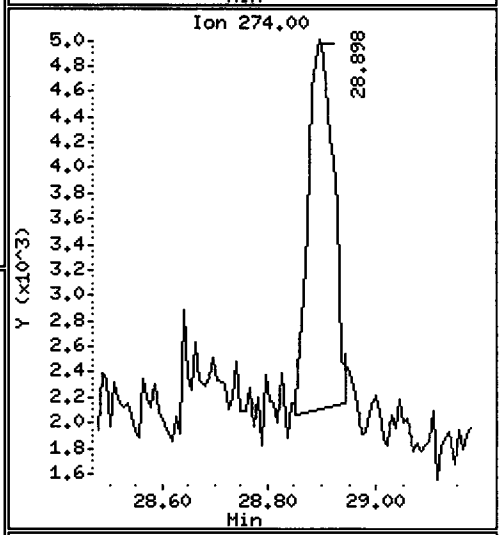


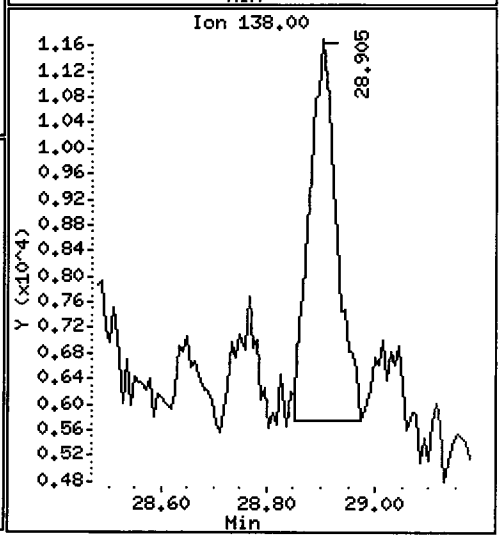












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

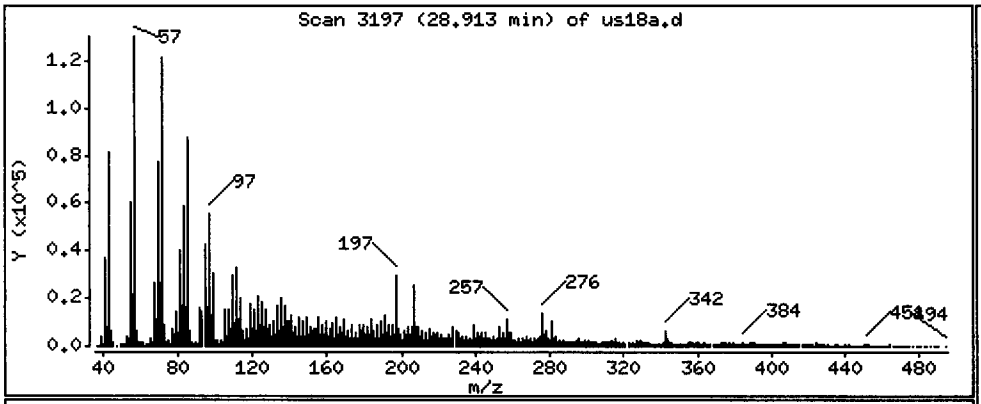
Operator: VTS/YZ

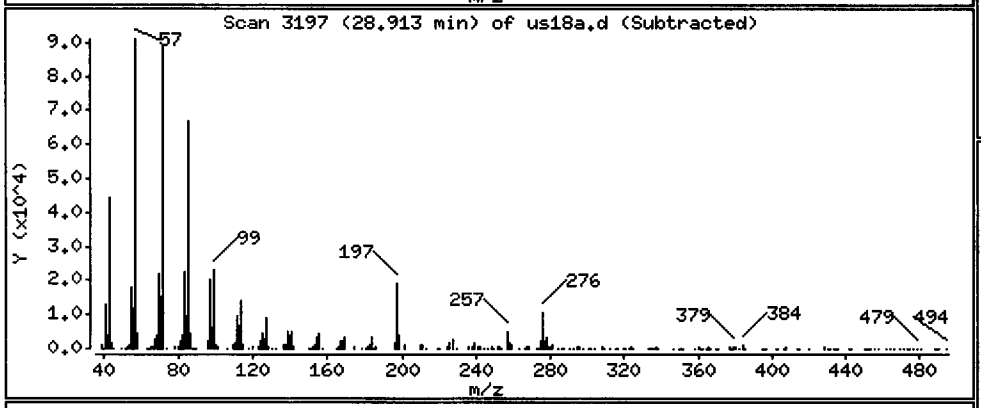
Column phase: ZB-5msi

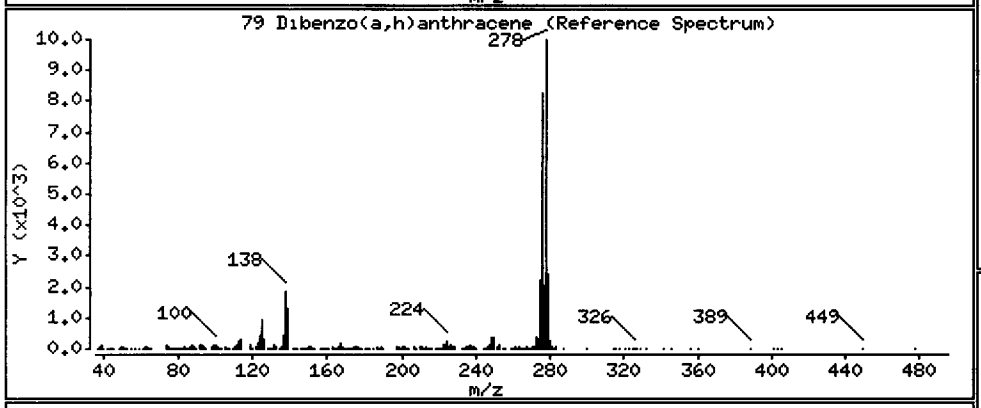
Column diameter: 0.25

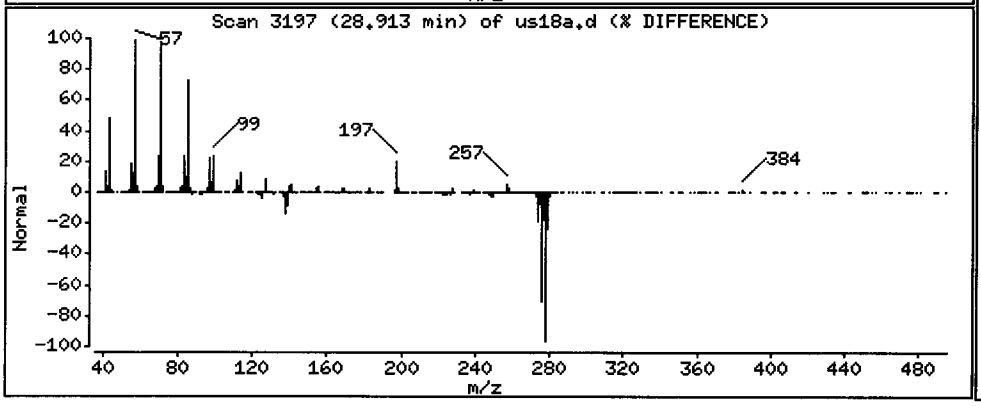
79 Dibenzo(a,h)anthracene

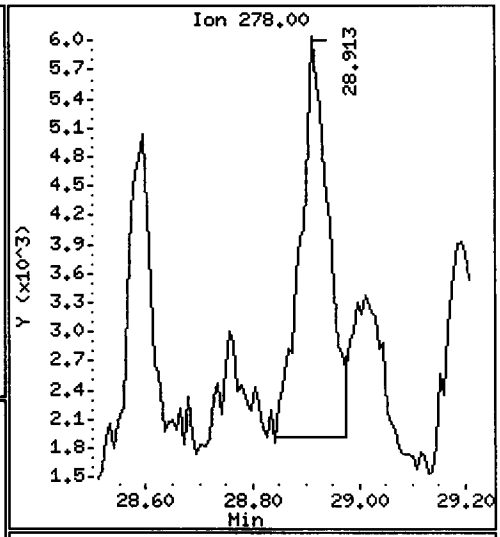
Concentration: 10.24 ug/kg

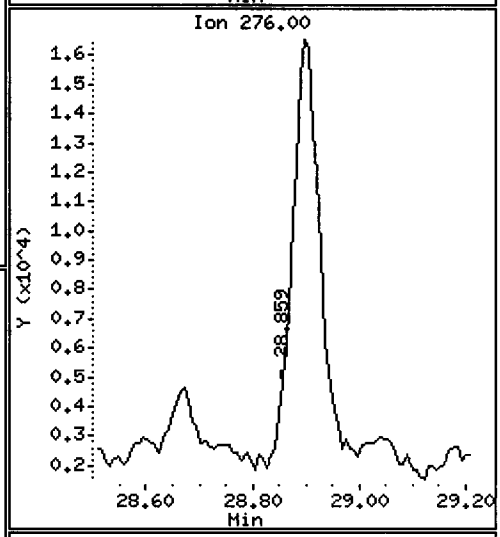


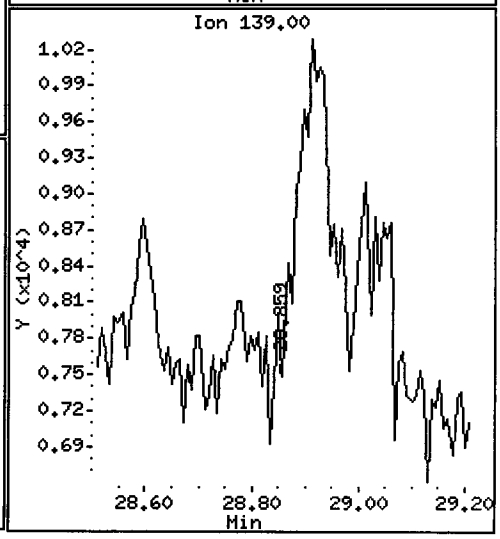












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

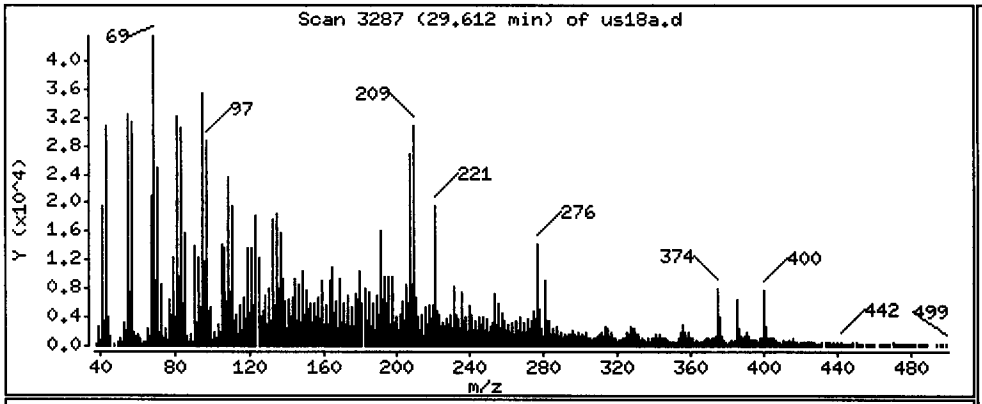
Operator: VTS/YZ

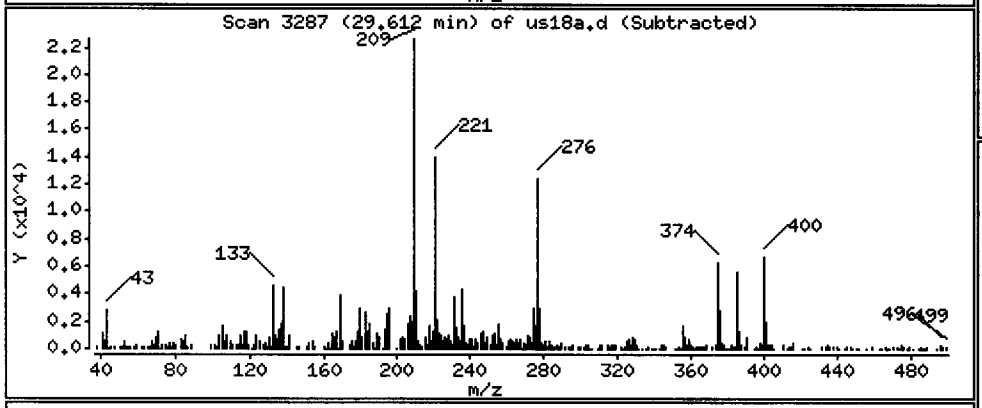
Column phase: ZB-5msi

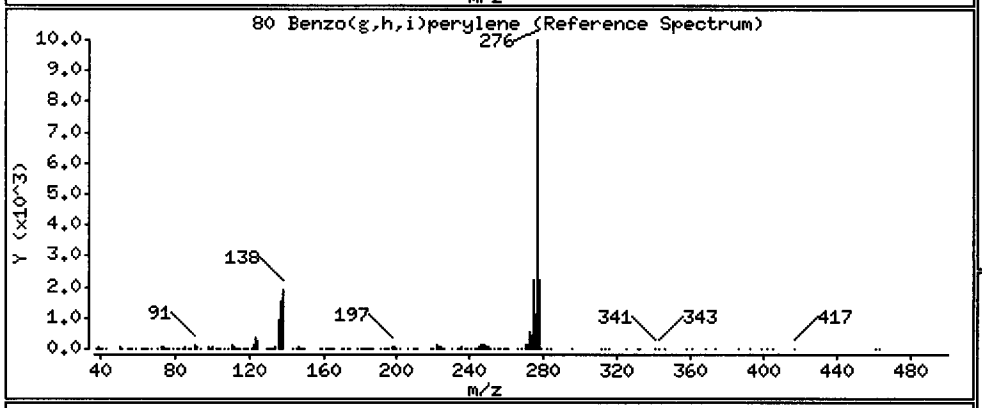
Column diameter: 0.25

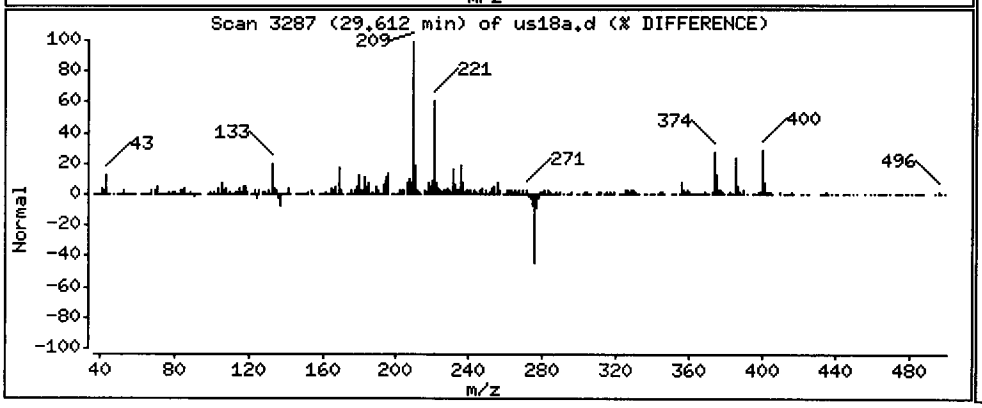
80 Benzo(g,h,i)perylene

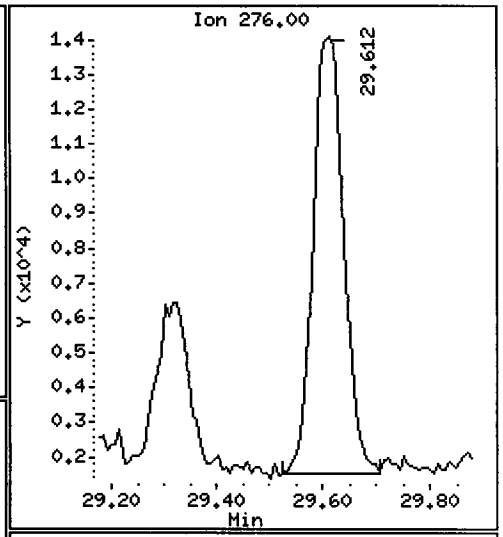
Concentration: 29.94 ug/kg

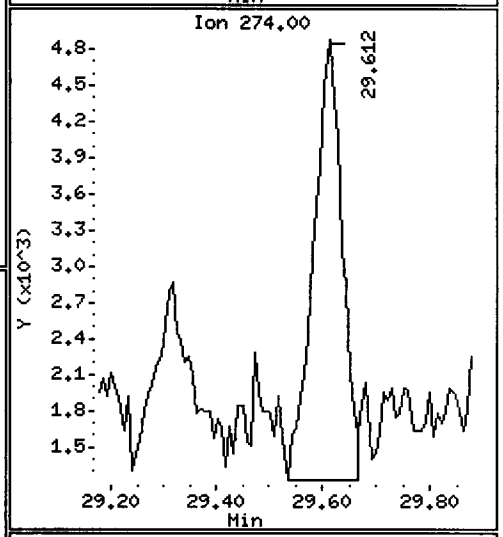


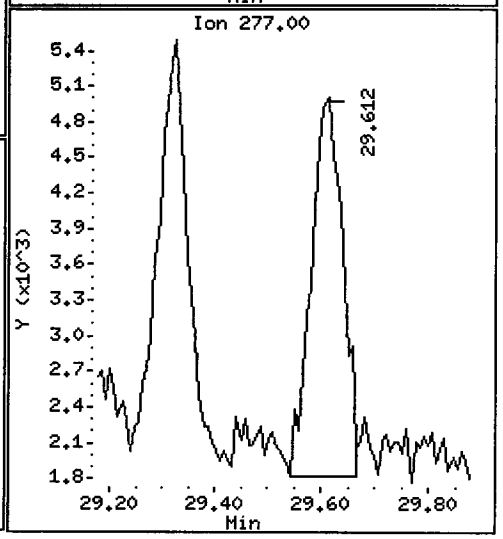












Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

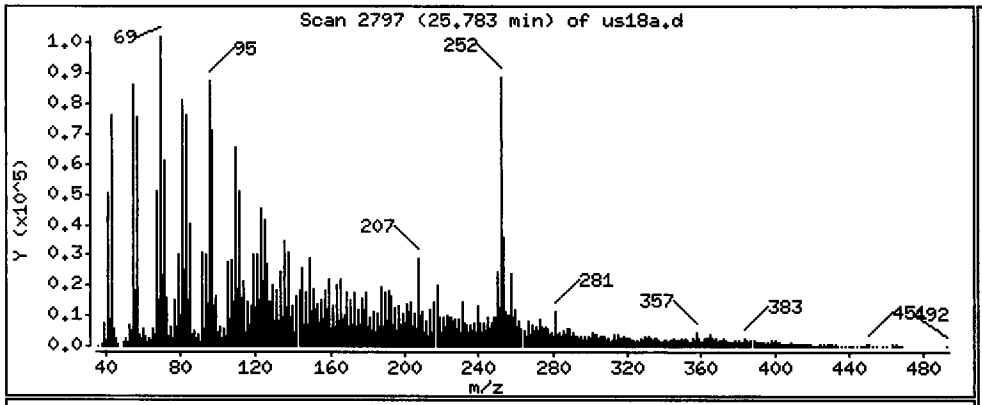
Operator: VTS/YZ

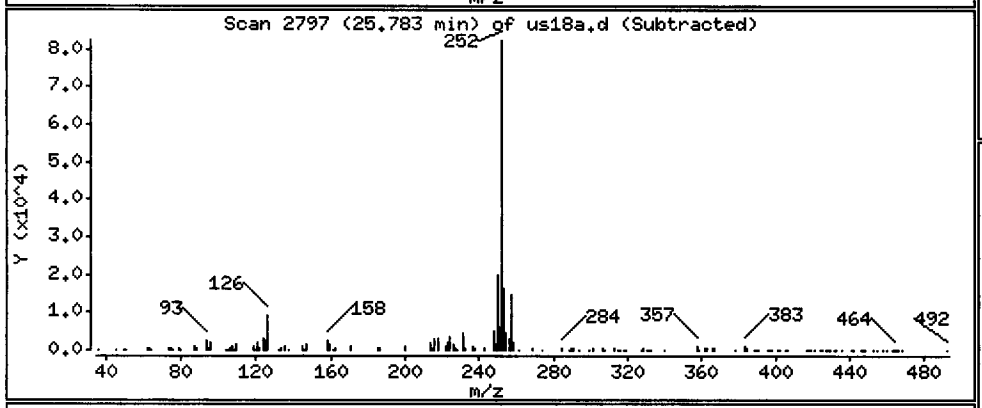
Column phase: ZB-5msi

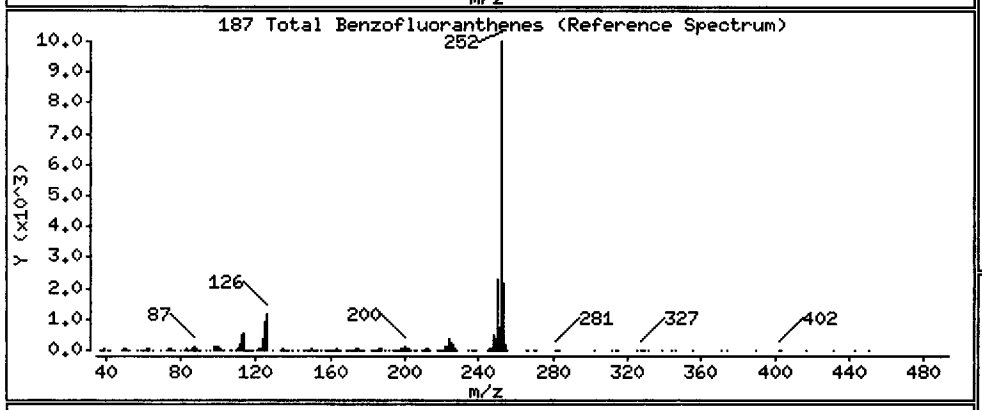
Column diameter: 0.25

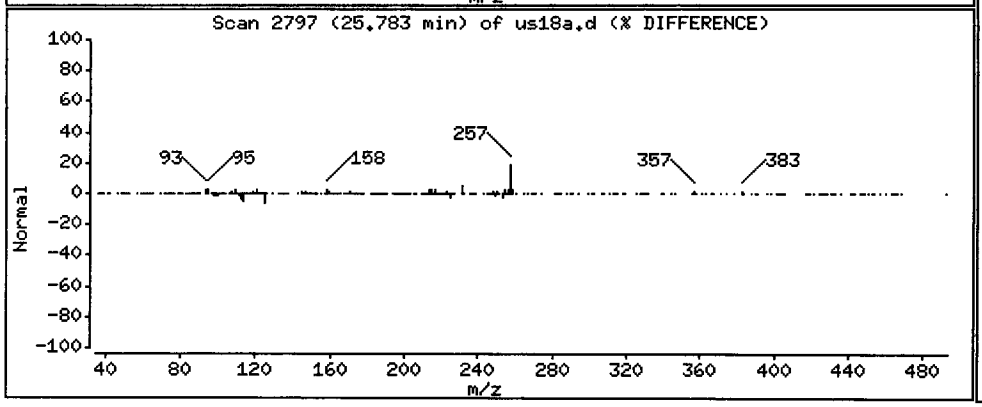
187 Total Benzofluoranthenes

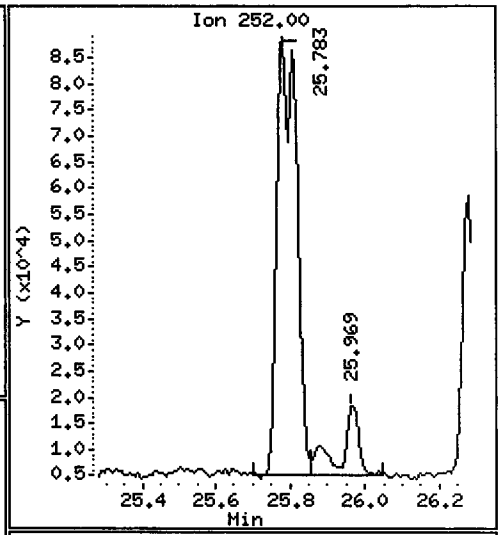
Concentration: 166.8 ug/kg

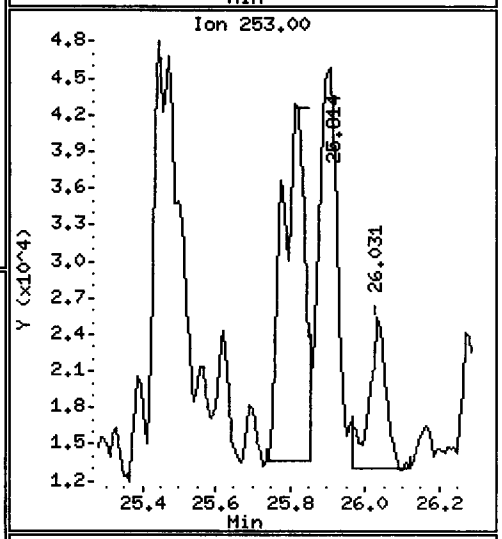


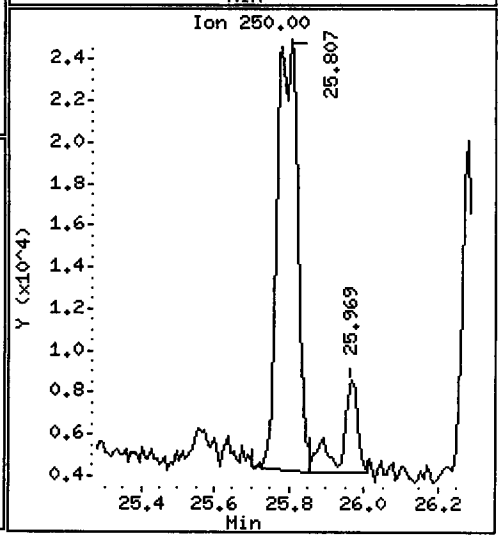






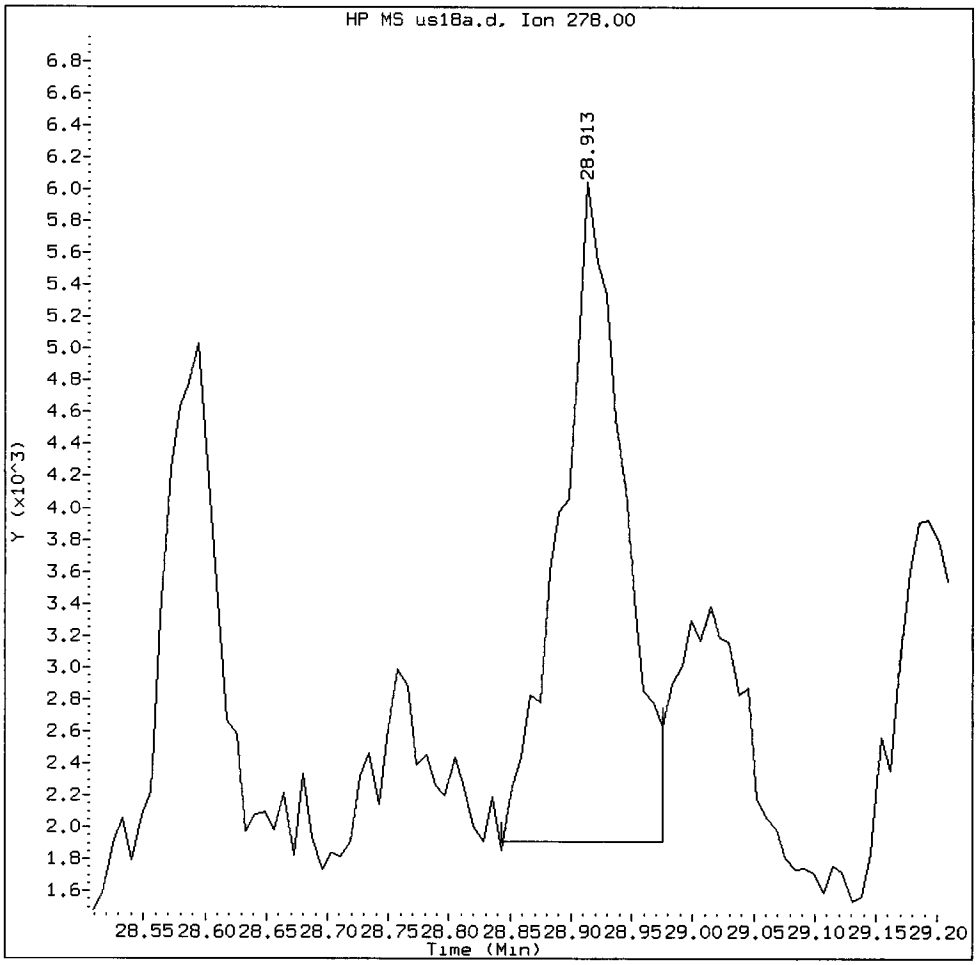






US18A, /chem1/nt10.i/20120508.b/us18a.d

Dibenzo(a,h)anthracene Amount: 0.10 Area: 15003



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YR Date: 5/19/12

Data File: /chem1/nt10.i/20120508.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

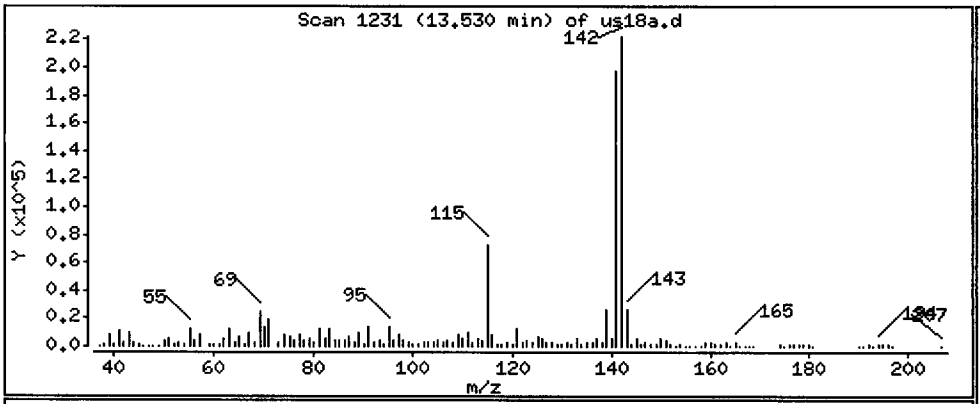
Operator: VTS/YZ

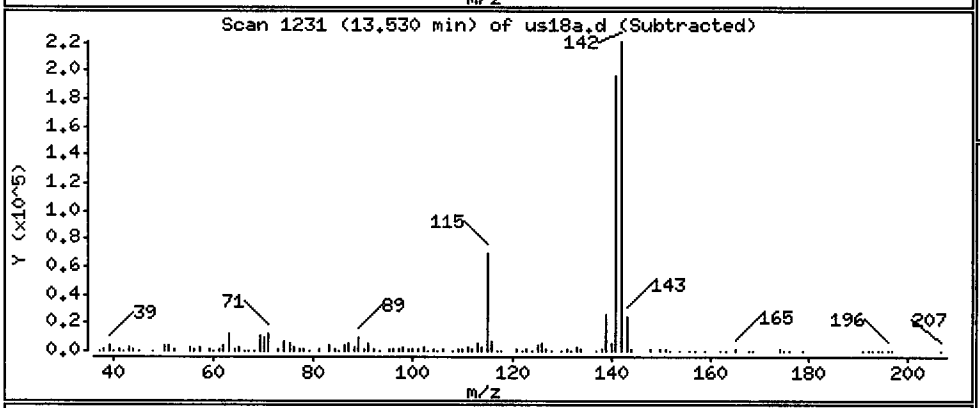
Column phase: ZB-5msi

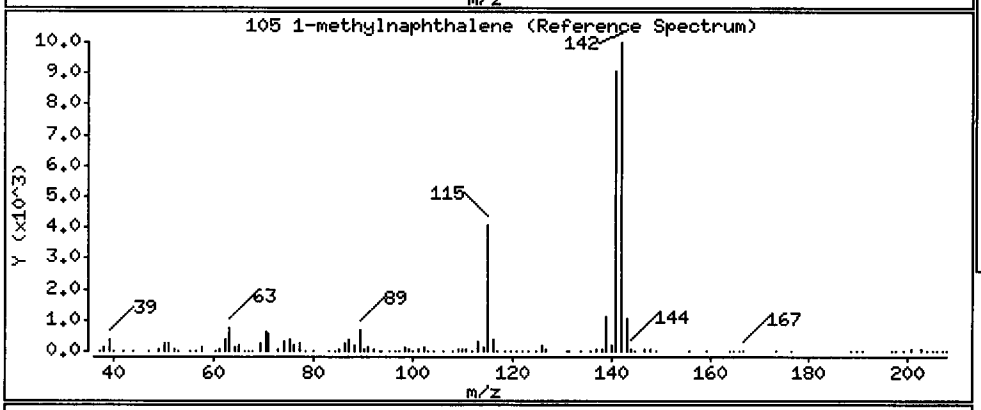
Column diameter: 0.25

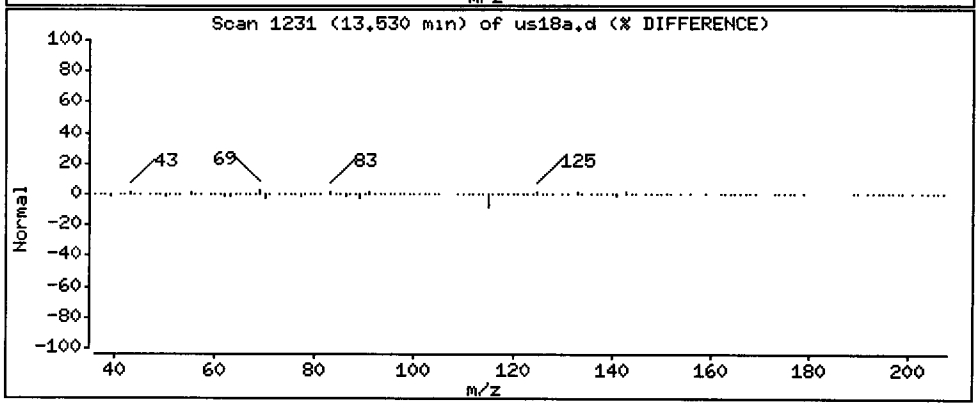
105 1-methylnaphthalene

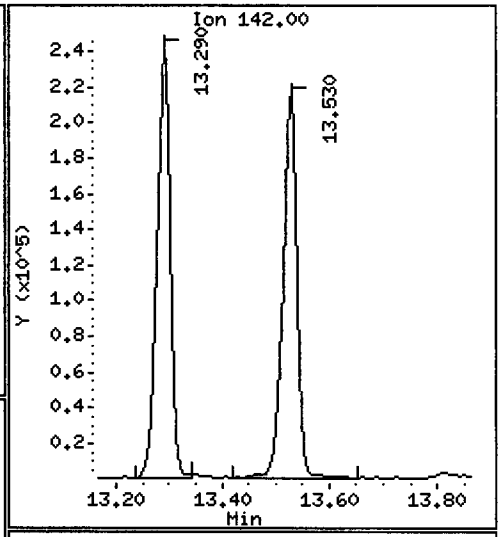
Concentration: 273.6 ug/kg

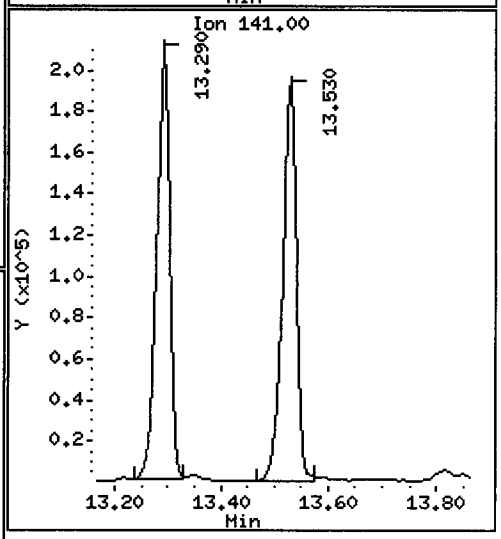












CO-ELUTION SUMMARY FOR FILE - us18a.d

Lab ID: US18A, Method: ABN.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

VZ 5/14/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120508.b/us18b.d
Lab Smp Id: US18B Client Smp ID: I-2-A-Z
Inj Date : 09-MAY-2012 01:51
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : US18B
Misc Info : 12-7644
Comment : 1ul Injection
Method : /chem1/nt10.i/20120508.b/ABN.m
Meth Date : 09-May-2012 09:38 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	20.30000	Weight of sample extracted (g)
M	48.80000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.698	6.667	(0.740)	320751	4.34024	417.6
$ 2 Phenol-d5	99	8.421	8.398	(0.930)	406113	4.41943	425.2
3 Phenol	94	8.444	8.421	(0.932)	61690	0.61248	58.93
$ 5 2-Chlorophenol-d4	132	8.668	8.653	(0.957)	364935	4.58870	441.5
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.056	9.040	(1.000)	216035	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.436	9.428	(1.042)	150474	2.79226	268.7
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	Compound Not Detected.					
13 2-Methylphenol	108	9.638	9.614	(1.064)	35068	0.44239	42.56
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	9.933	9.909	(1.097)	195658	2.36720	227.8
$ 18 Nitrobenzene-d5	82	10.235	10.228	(0.872)	219386	3.02638	291.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	11.056	11.041	(0.942)	86249	1.14562	110.2
	24 Benzoic acid	105	11.226	11.303	(0.957)	49684	0.85089	81.87
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.735	11.719	(1.000)	847853	4.00000	
	28 Naphthalene	128	11.773	11.766	(1.003)	345365	1.63110	156.9
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.290	13.282	(1.132)	192910	1.32849	127.8
$	36 2-Fluorobiphenyl	172	14.156	14.149	(0.905)	497806	3.04599	293.1
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	15.302	15.286	(0.978)	28578	0.13459	12.95
*	42 Acenaphthene-d10	164	15.642	15.627	(1.000)	479101	4.00000	
	44 Acenaphthene	153	15.712	15.696	(1.004)	35124	0.27714	26.66
	46 Dibenzofuran	168	16.075	16.060	(1.028)	164983	0.87466	84.15
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	16.848	16.833	(1.077)	88109	0.61229	58.91
	54 N-Nitrosodiphenylamine	169	17.141	17.118	(0.906)	11274	0.11958	11.51
$	55 2,4,6-Tribromophenol	330	17.434	17.411	(1.115)	110054	5.00702	481.7
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.926	18.903	(1.000)	732365	4.00000	
	60 Phenanthrene	178	18.972	18.957	(1.002)	235670	1.30126	125.2
	61 Anthracene	178	19.073	19.050	(1.008)	108995	0.57014	54.86
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.402	21.363	(1.131)	496880	2.41036	231.9
	65 Pyrene	202	21.812	21.781	(0.909)	455357	1.92964	185.7
$	66 Terphenyl-d14	244	22.121	22.098	(0.922)	497528	3.36224	323.5
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	23.964	23.941	(0.999)	139683	0.65961	63.46
*	69 Chrysene-d12	240	23.987	23.964	(1.000)	780884	4.00000	
	71 Chrysene	228	24.034	24.010	(1.002)	136696	0.72311	69.57
	72 bis(2-Ethylhexyl)phthalate	149	24.103	24.080	(0.961)	131750	0.81753	78.66
*	134 Di-n-octylphthalate-d4	153	25.079	25.056	(1.000)	1239412	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.372	26.333	(0.996)	75675	0.43236	41.60
*	77 Perylene-d12	264	26.480	26.441	(1.000)	720487	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.890	28.828	(1.091)	31779	0.15957	15.35
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	29.604	29.527	(1.118)	34574	0.20079	19.32
	105 1-methylnaphthalene	142	13.530	13.514	(1.153)	170500	1.15151	110.8
	187 Total Benzofluoranthenes	252	25.776	25.783	(0.973)	175744	0.89655	86.26

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: us18b.d
Lab Smp Id: US18B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7644

Calibration Date: 08-MAY-2012
Calibration Time: 14:10
Client Smp ID: I-2-A-Z
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	216035	-20.54
27 Naphthalene-d8	1080694	540347	2161388	847853	-21.55
42 Acenaphthene-d10	623821	311910	1247642	479101	-23.20
59 Phenanthrene-d10	999143	499572	1998286	732365	-26.70
69 Chrysene-d12	1001009	500504	2002018	780884	-21.99
134 Di-n-octylphthala	1489422	744711	2978844	1239412	-16.79
77 Perylene-d12	988348	494174	1976696	720487	-27.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.06	0.17
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.13
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.10
59 Phenanthrene-d10	18.90	18.40	19.40	18.93	0.12
69 Chrysene-d12	23.96	23.46	24.46	23.99	0.10
134 Di-n-octylphthala	25.06	24.56	25.56	25.08	0.09
77 Perylene-d12	26.44	25.94	26.94	26.48	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

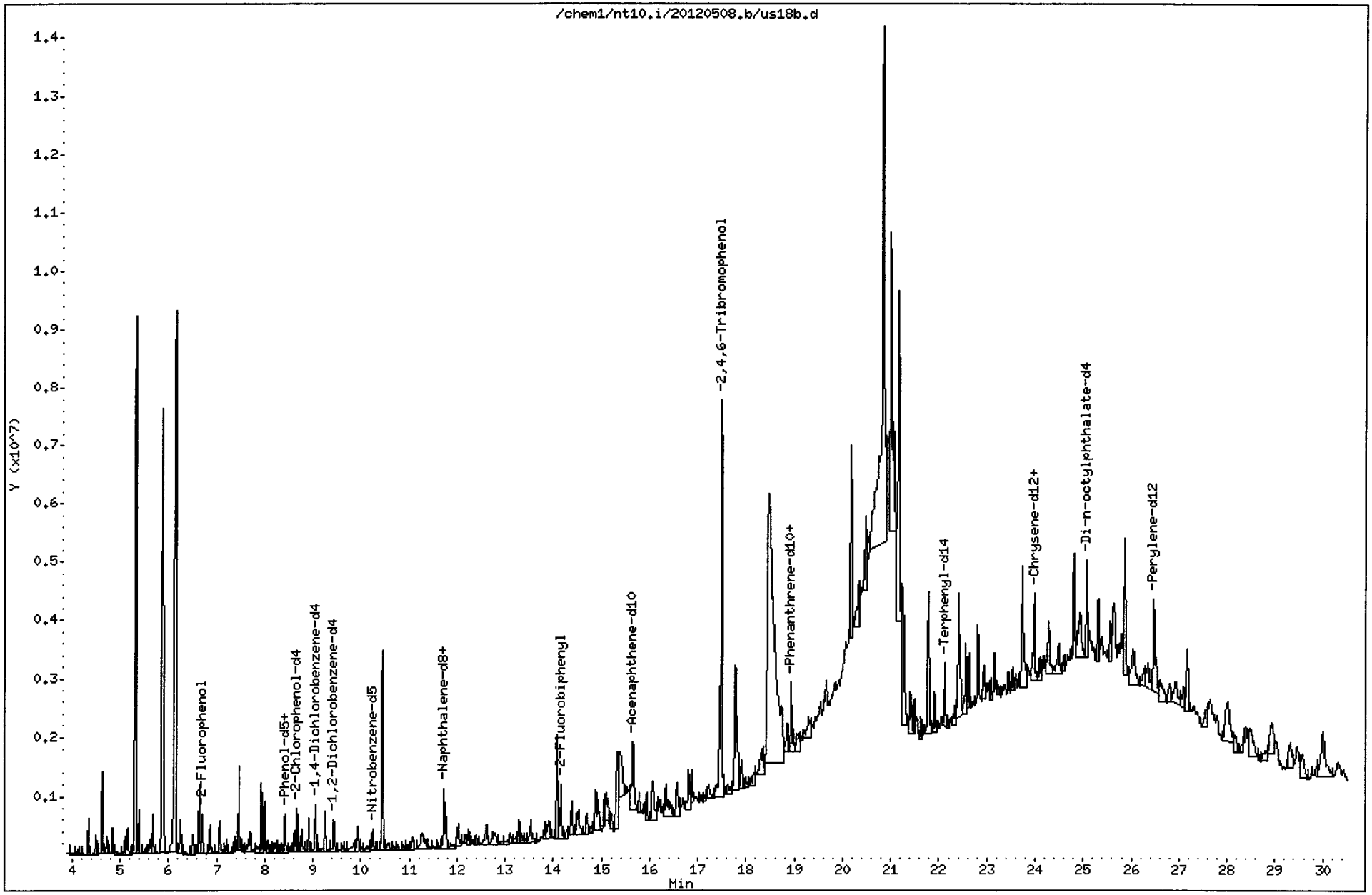
Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: US18B
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120508.b/ABN.m
Misc Info: 12-7644

Client SDG: US18
Fraction: SV
Client Smp ID: I-2-A-Z
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	721.6	417.6	57.87	30-160
$ 2 Phenol-d5	721.6	425.2	58.93	30-160
$ 5 2-Chlorophenol-d4	721.6	441.5	61.18	30-160
$ 10 1,2-Dichlorobenzen	481.1	268.7	55.85	30-160
$ 18 Nitrobenzene-d5	481.1	291.2	60.53	30-160
$ 36 2-Fluorobiphenyl	481.1	293.1	60.92	30-160
$ 55 2,4,6-Tribromophen	721.6	481.7	66.76	30-160
$ 66 Terphenyl-d14	481.1	323.5	67.24	30-160

Data File: /chem1/nt10.i/20120508.b/us18b.d
Date : 09-MAY-2012 01:51
Client ID: I-2-A-Z
Sample Info: US18B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

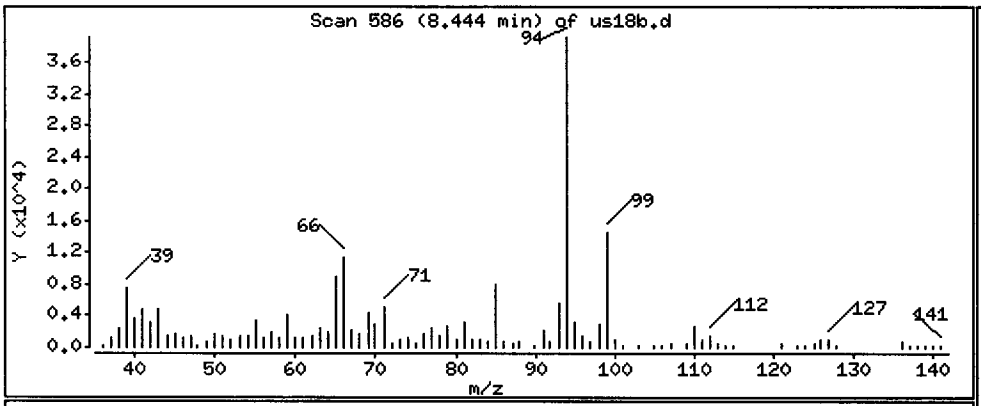
Operator: VTS/YZ

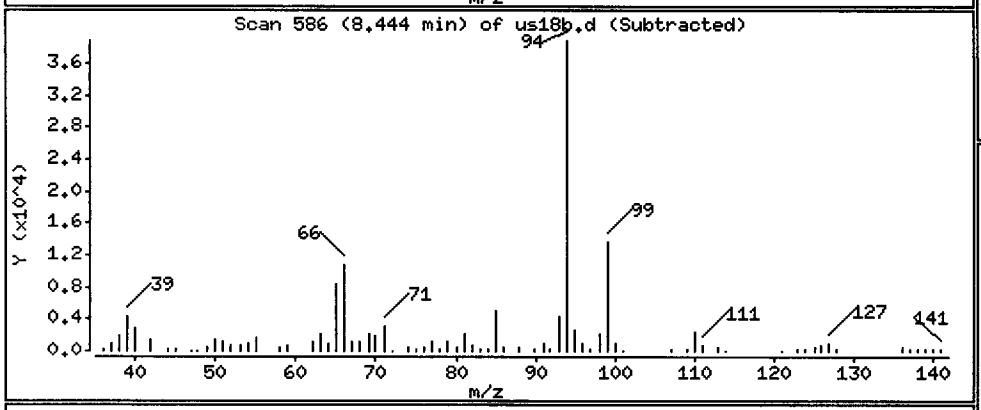
Column phase: ZB-5msi

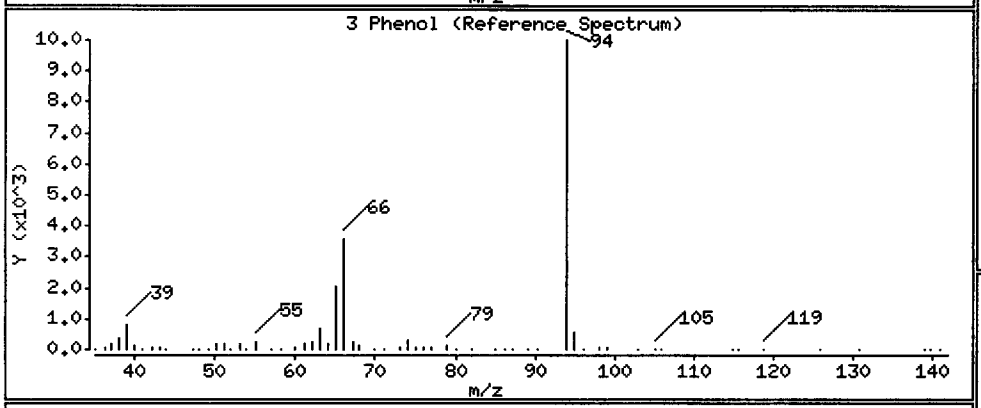
Column diameter: 0.25

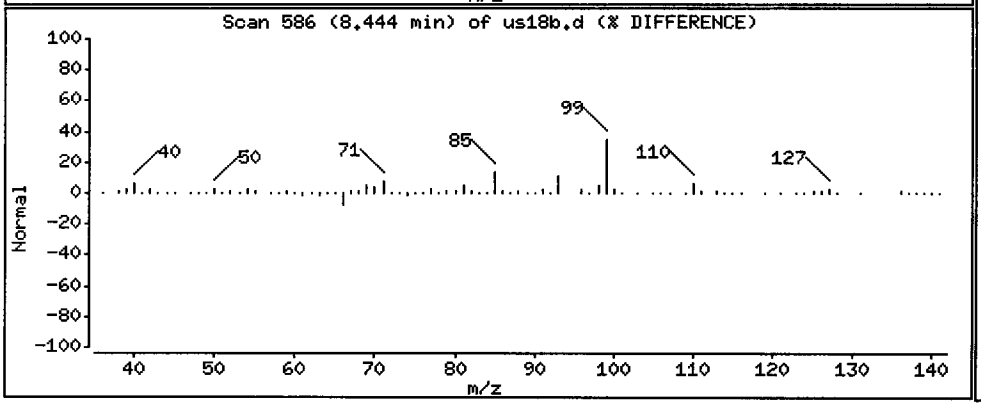
3 Phenol

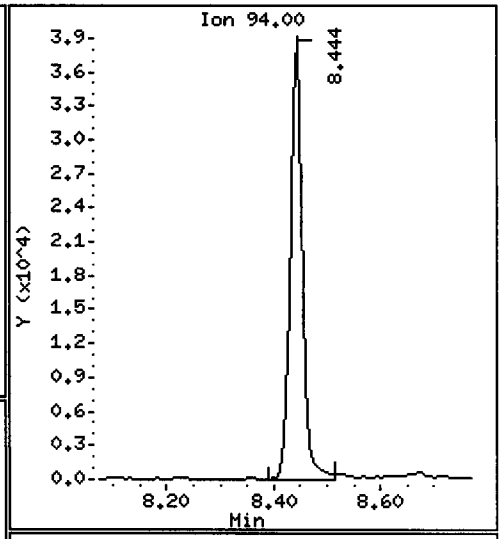
Concentration: 58.93 ug/kg

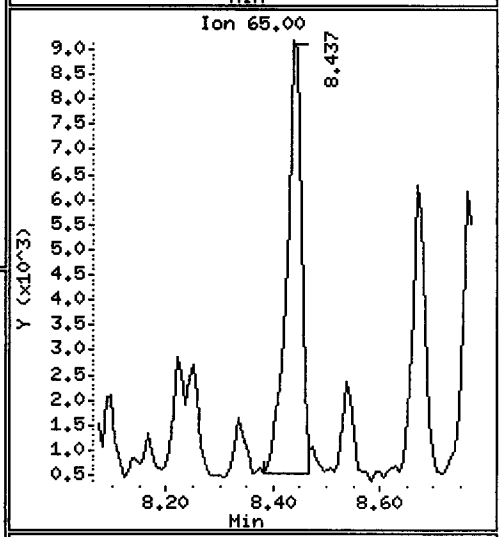


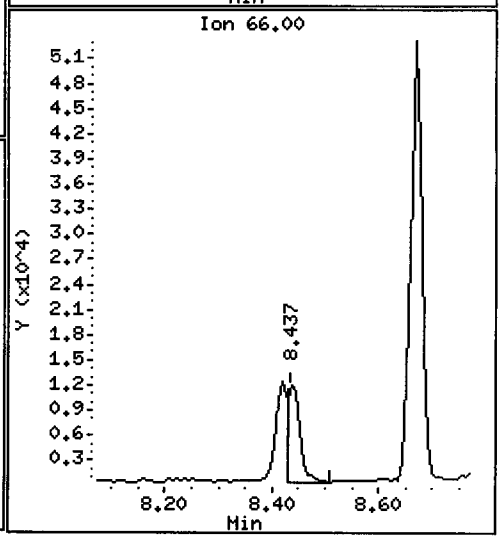












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

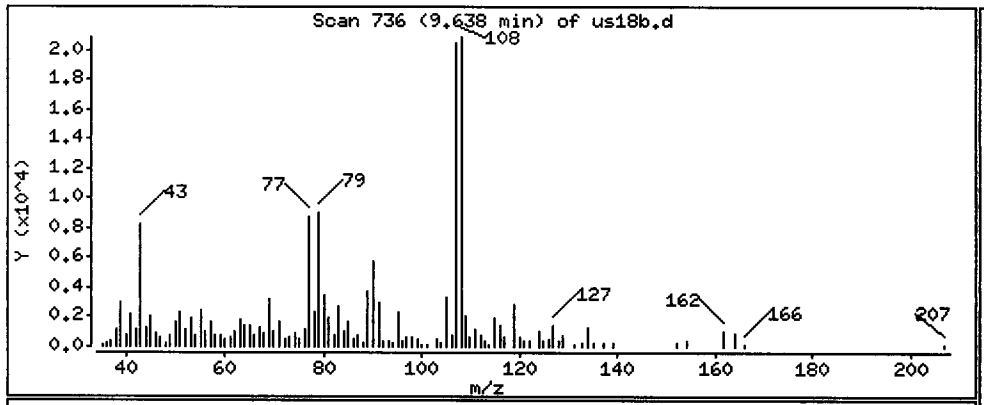
Operator: VTS/YZ

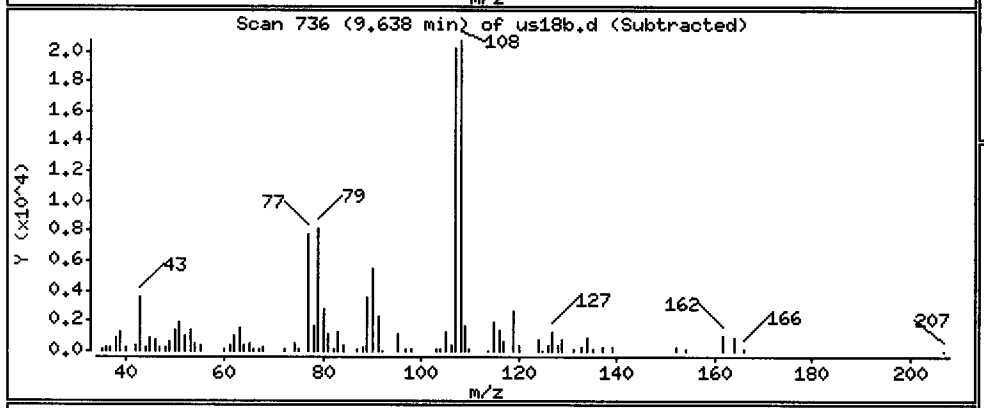
Column phase: ZB-5msi

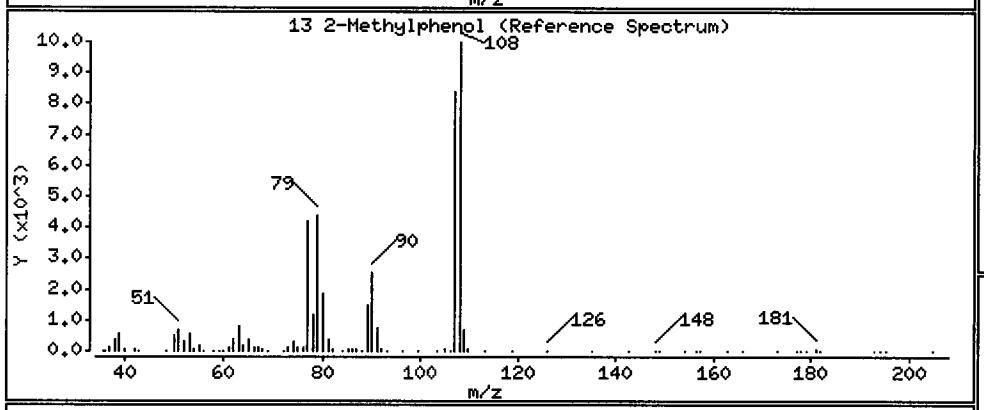
Column diameter: 0.25

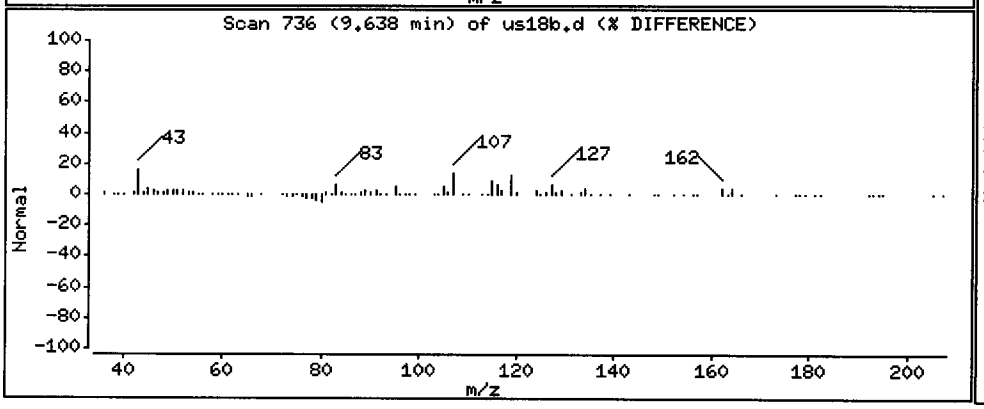
13 2-Methylphenol

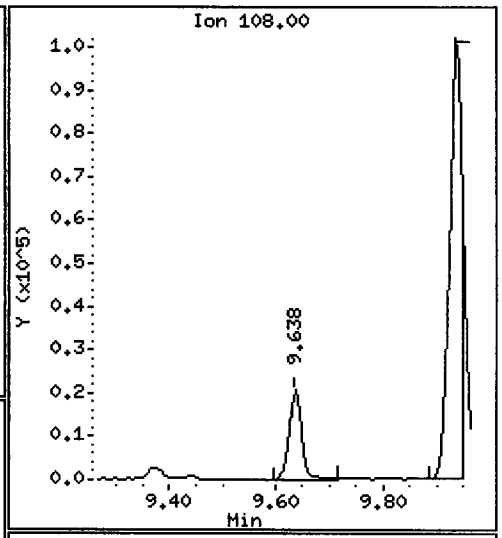
Concentration: 42.56 ug/kg

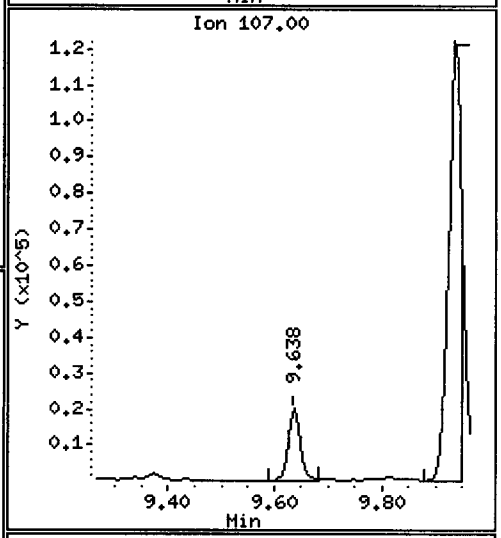


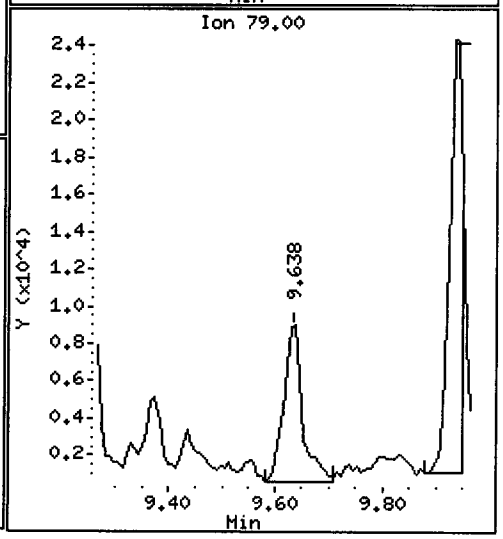












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

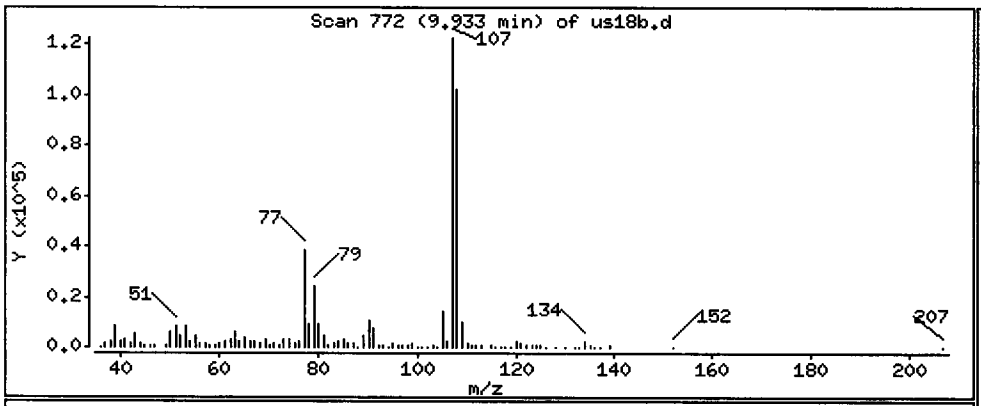
Operator: VTS/YZ

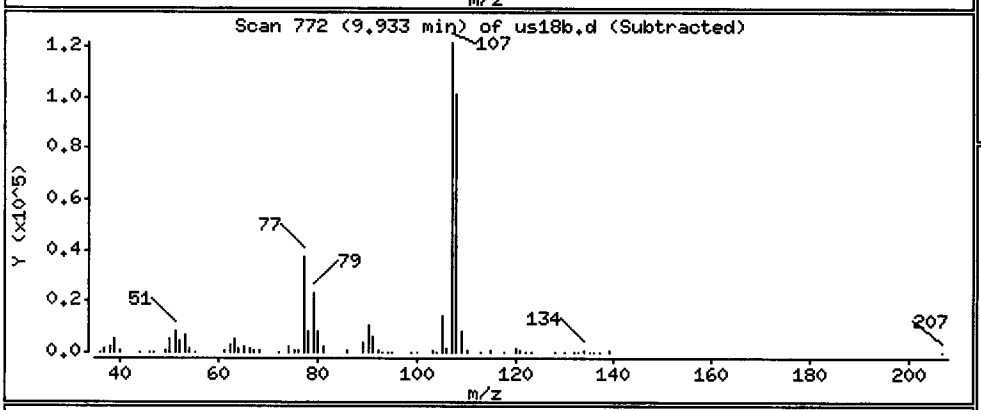
Column phase: ZB-5msi

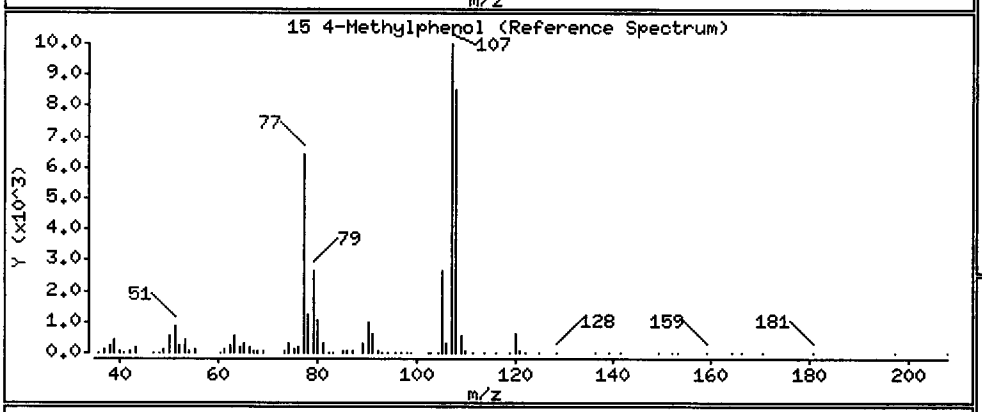
Column diameter: 0.25

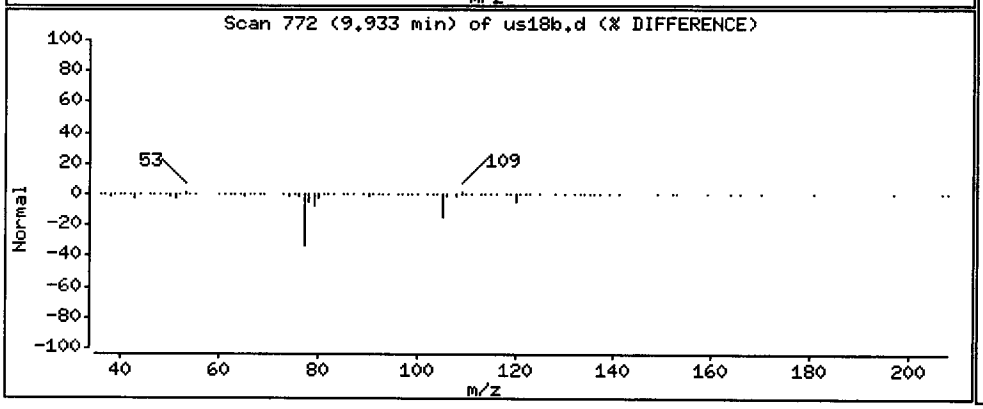
15 4-Methylphenol

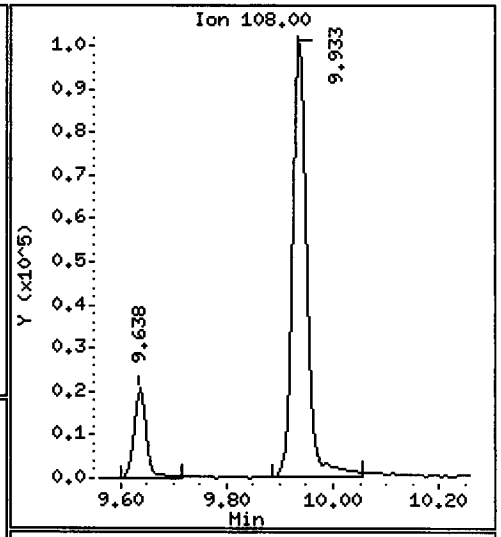
Concentration: 227.8 ug/kg

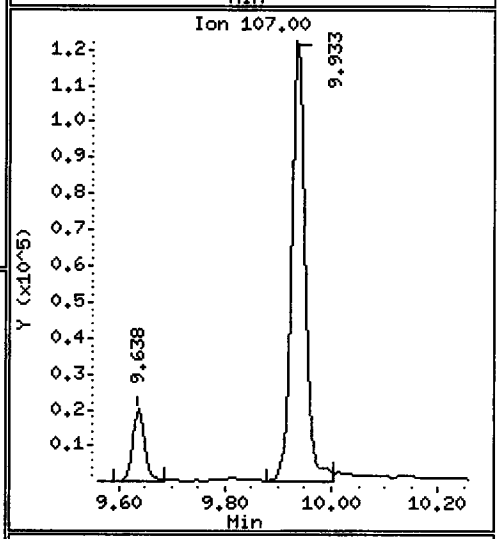


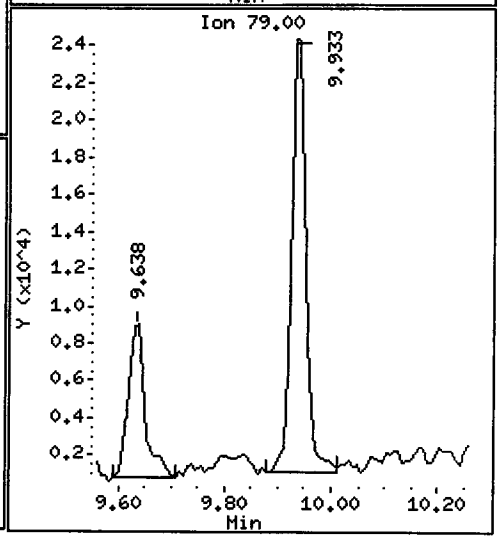












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

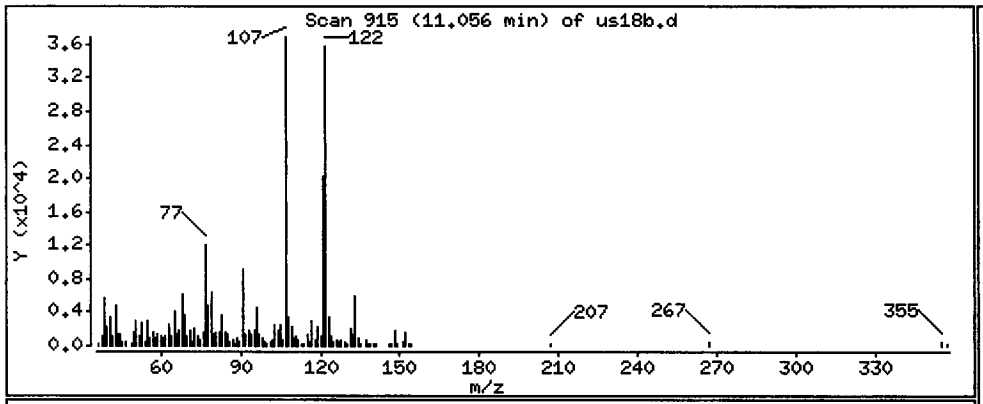
Operator: VTS/YZ

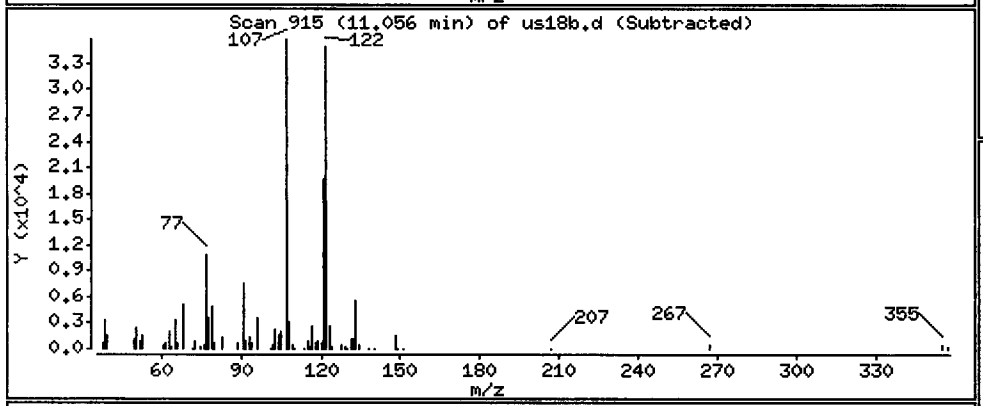
Column phase: ZB-5msi

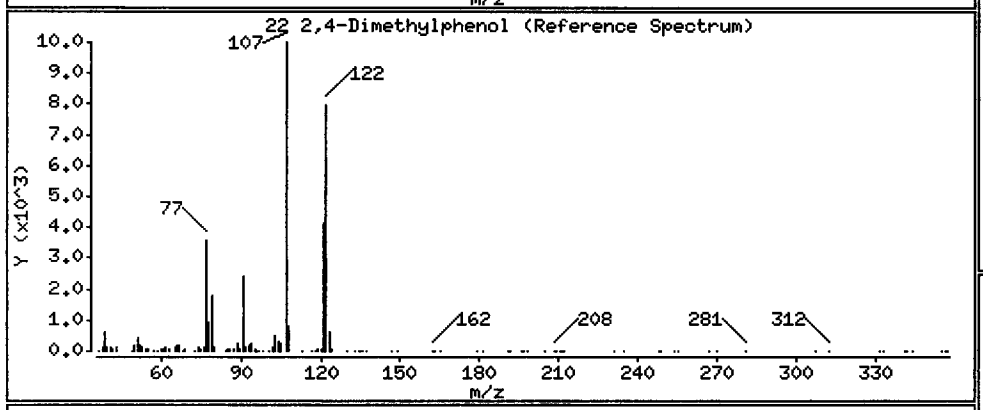
Column diameter: 0.25

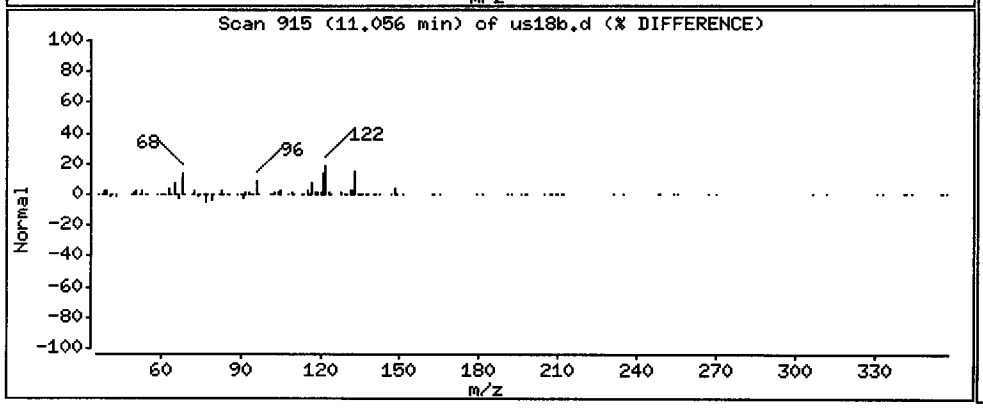
22 2,4-Dimethylphenol

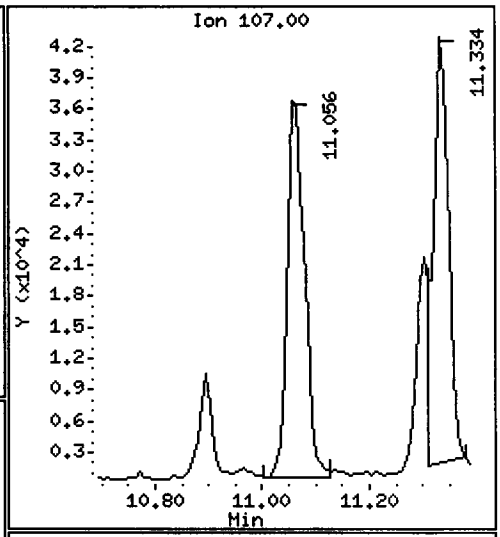
Concentration: 110.2 ug/kg

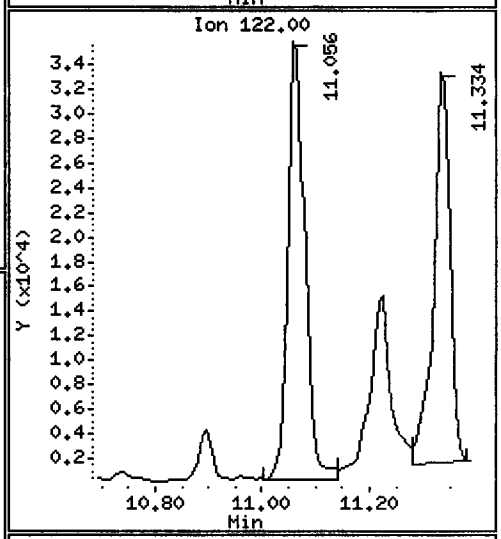


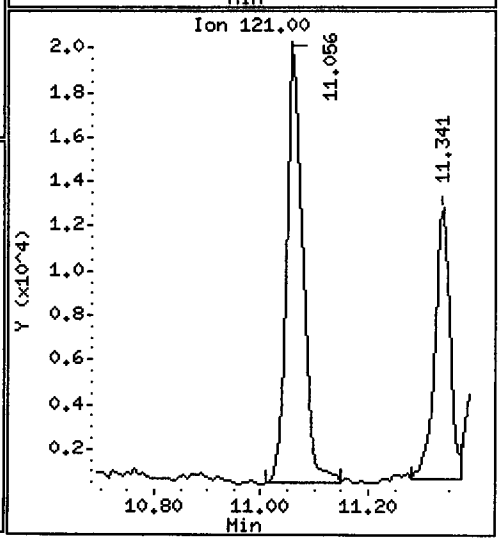












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

Operator: VTS/YZ

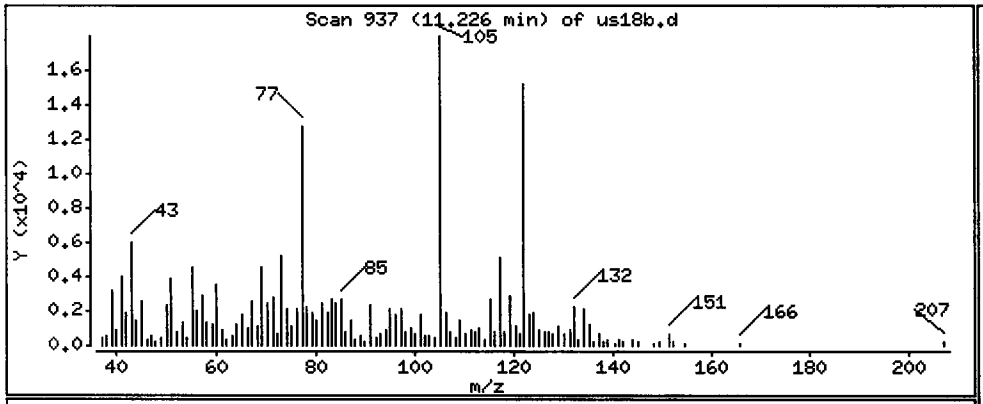
Column phase: ZB-5ms1

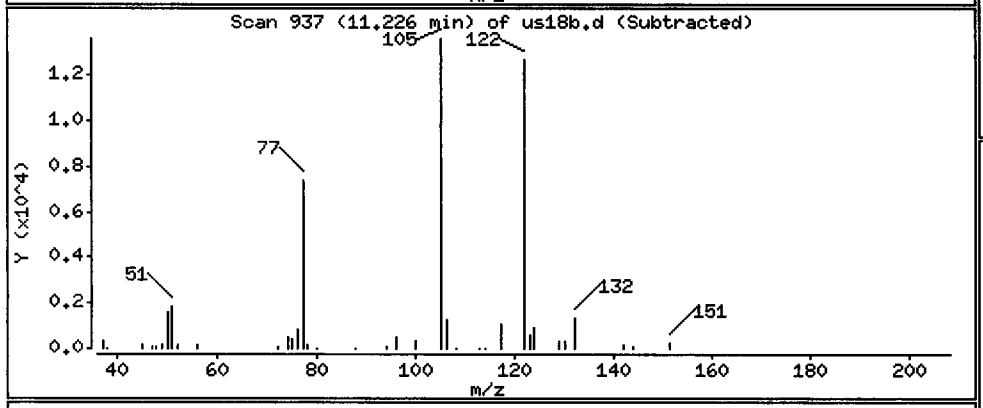
Column diameter: 0.25

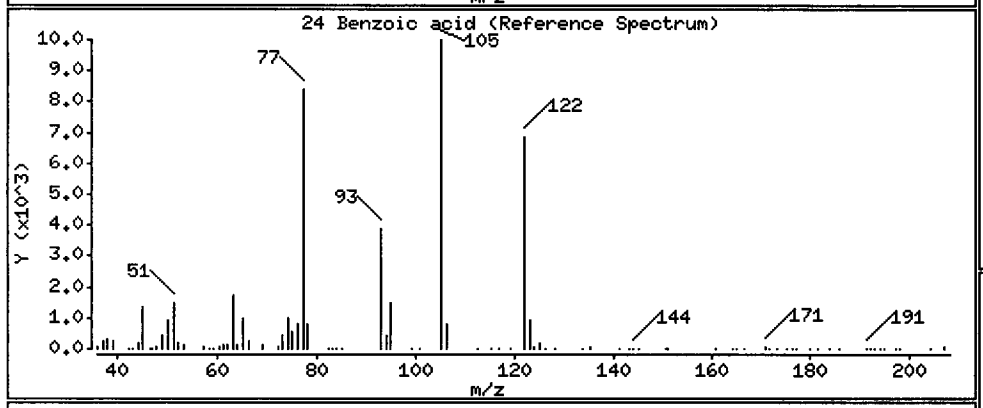
CMPL

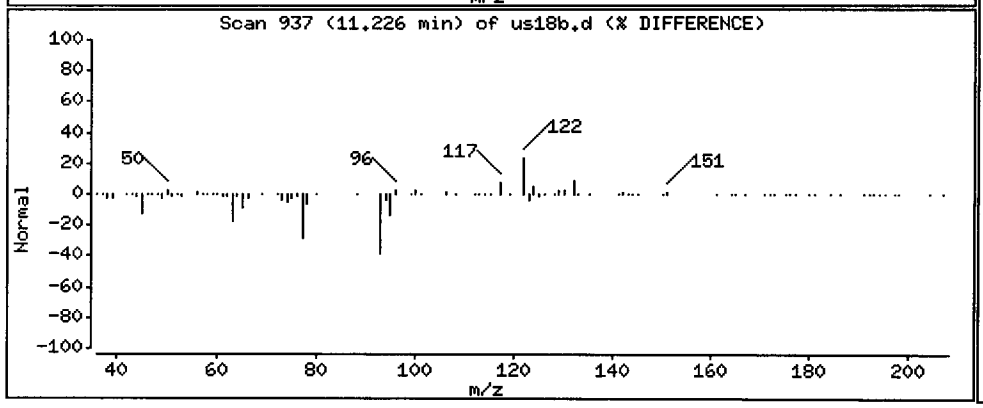
24 Benzoic acid

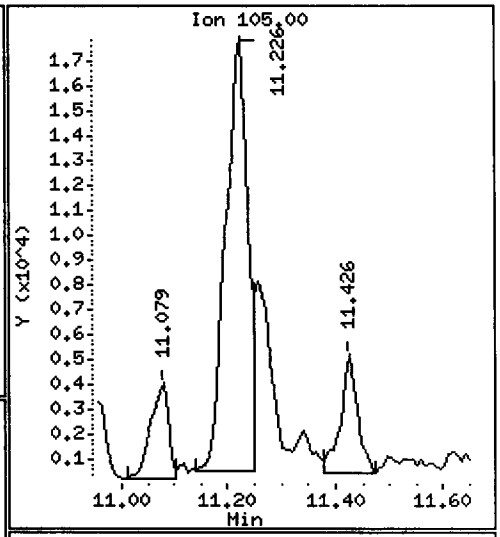
Concentration: 81.87 ug/kg

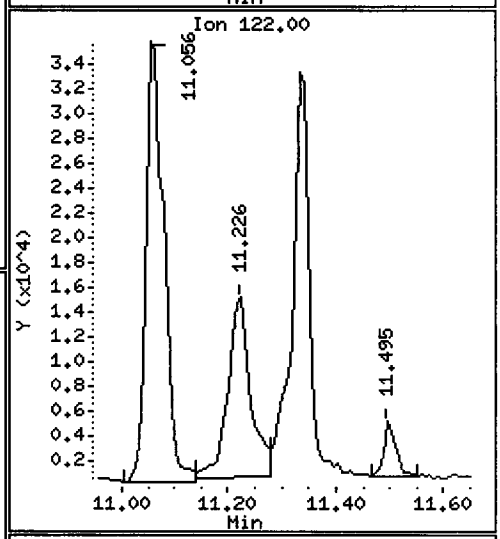


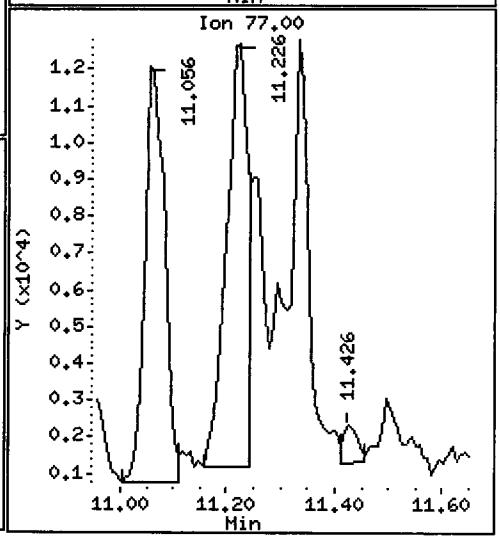












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

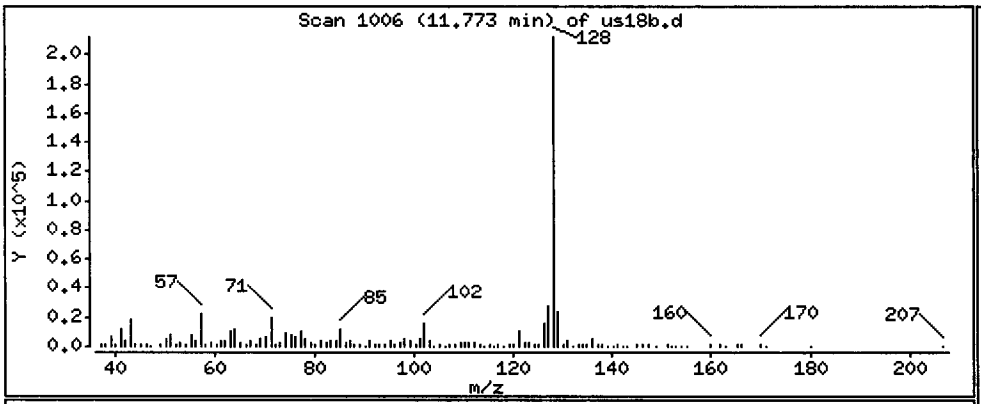
Operator: VTS/YZ

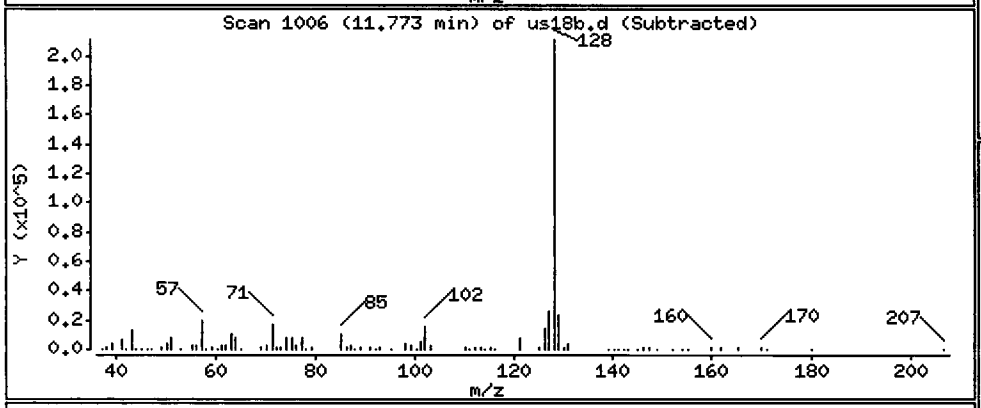
Column phase: ZB-5msi

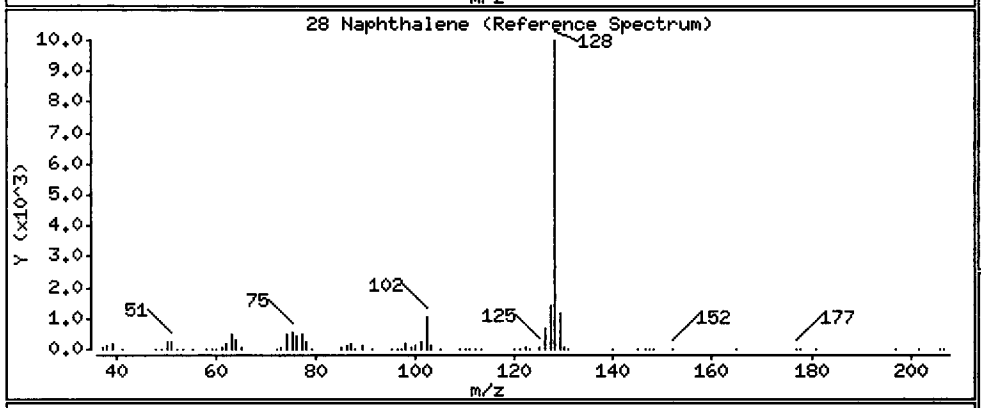
Column diameter: 0.25

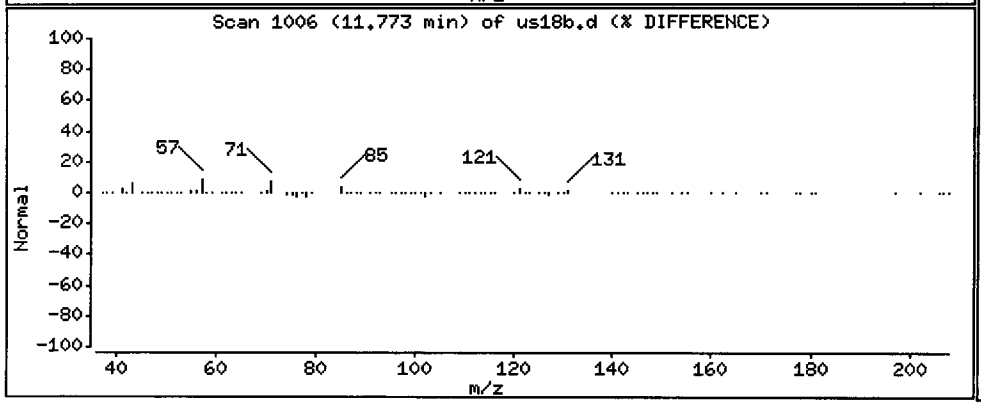
28 Naphthalene

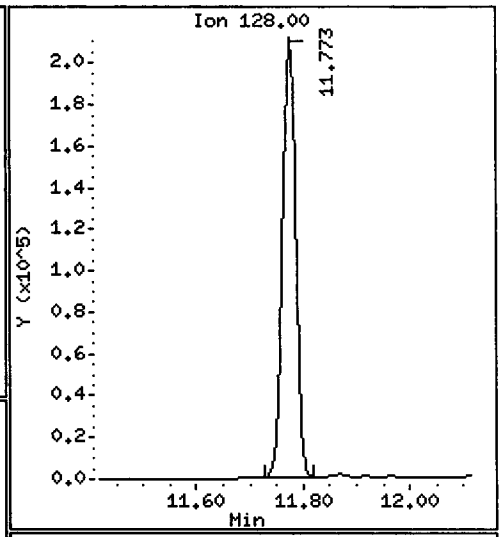
Concentration: 156.9 ug/kg

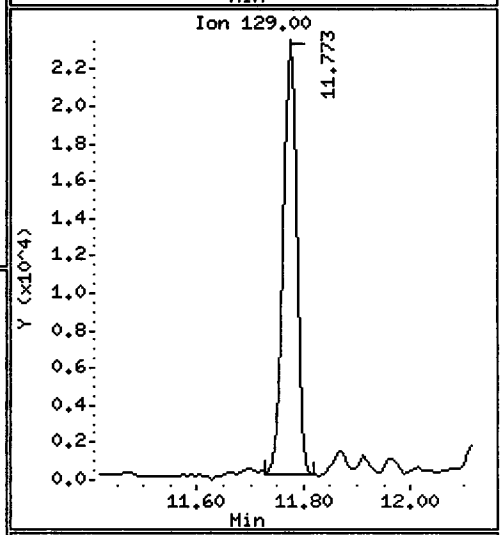


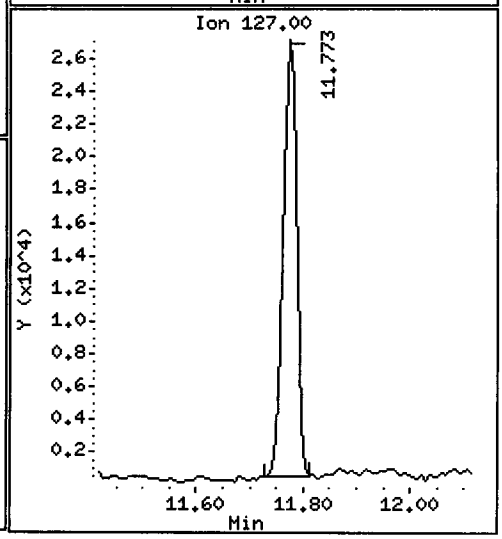












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

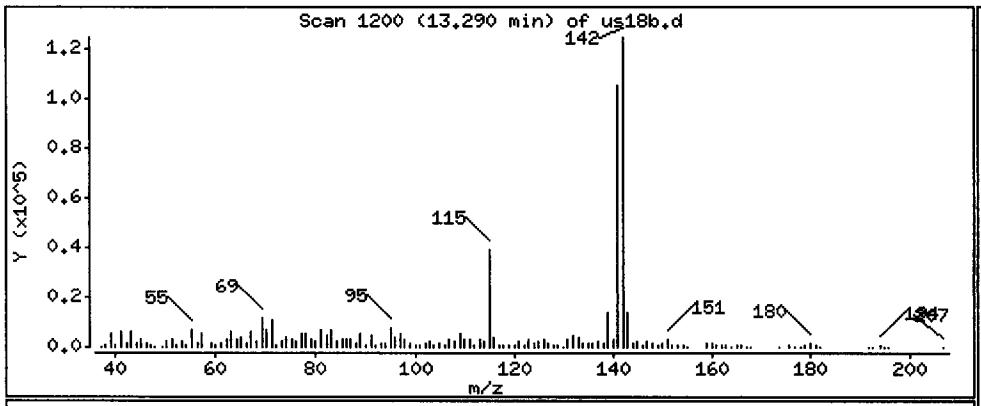
Operator: VTS/YZ

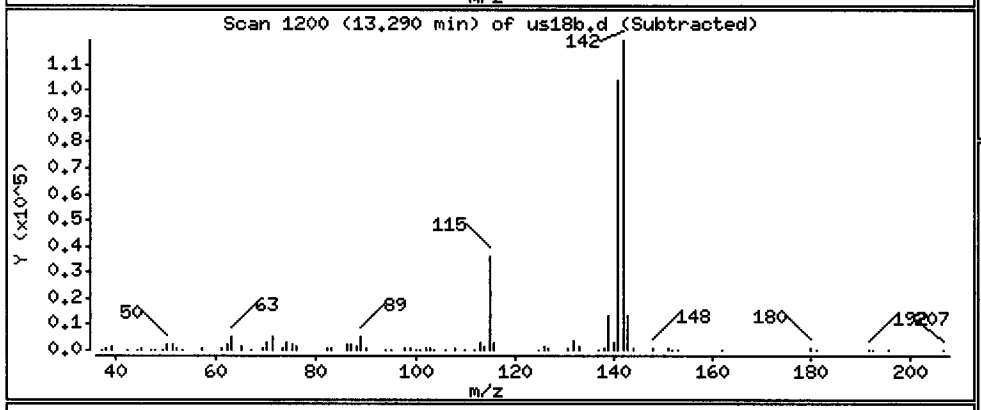
Column phase: ZB-5msi

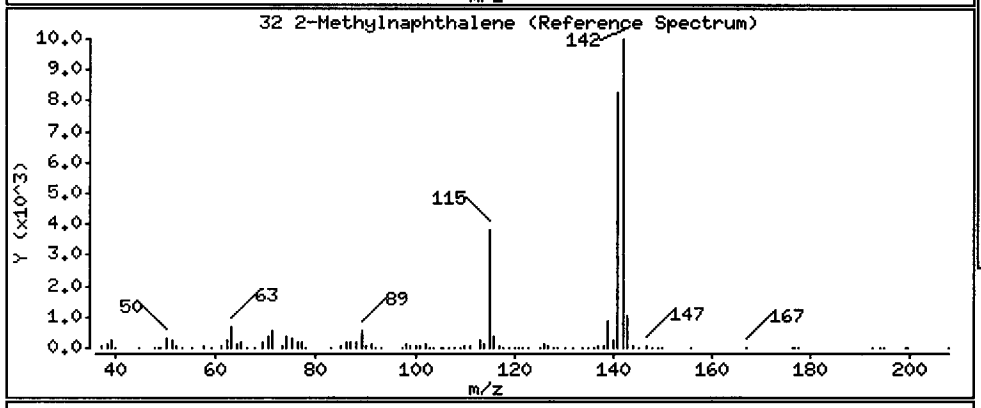
Column diameter: 0.25

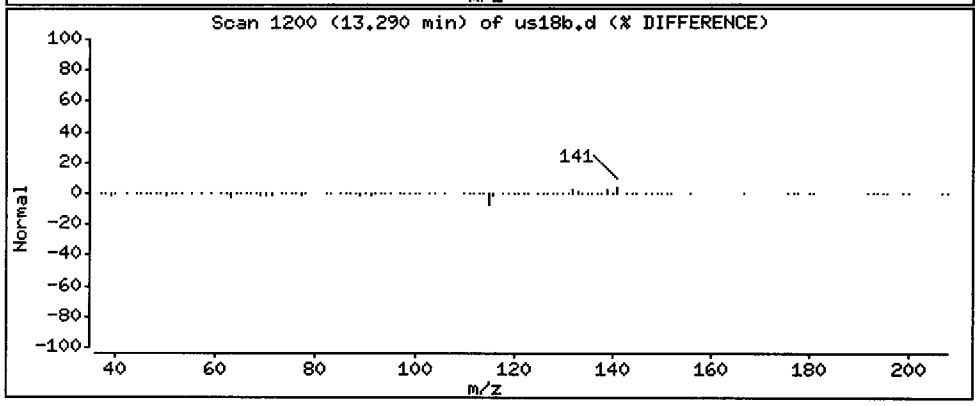
32 2-Methylnaphthalene

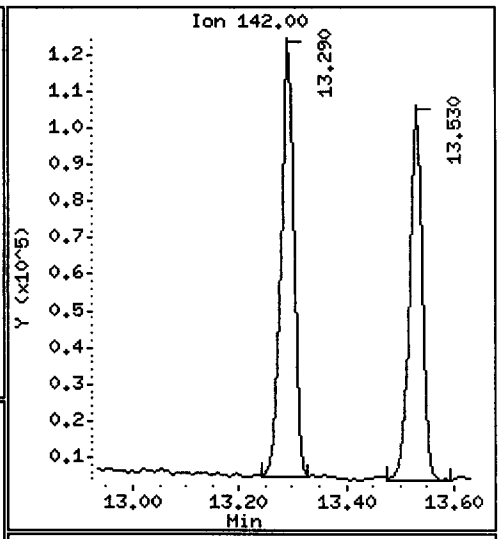
Concentration: 127.8 ug/kg

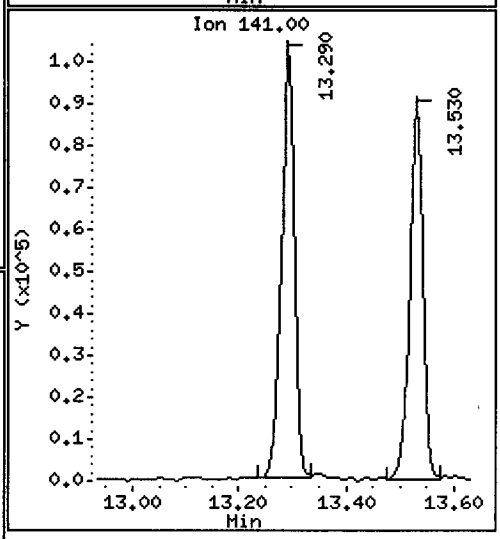












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

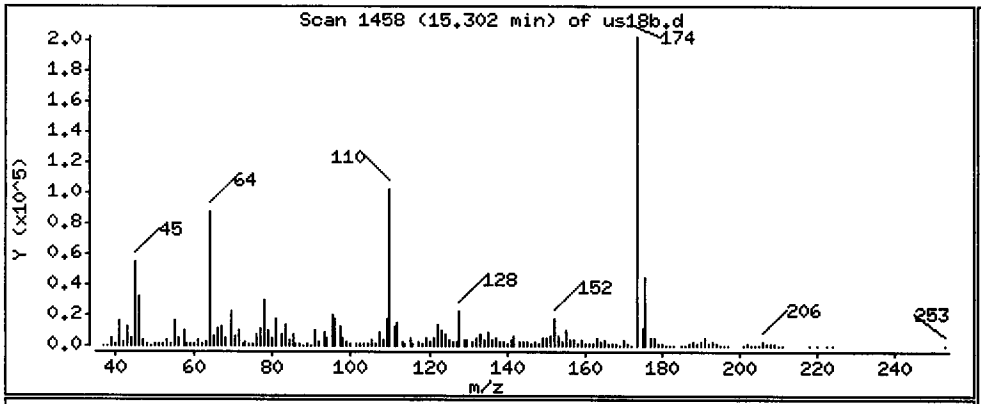
Operator: VTS/YZ

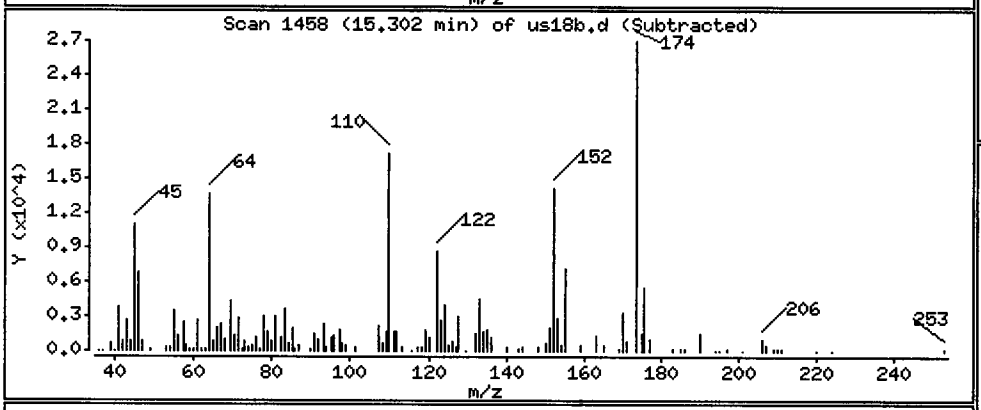
Column phase: ZB-5msi

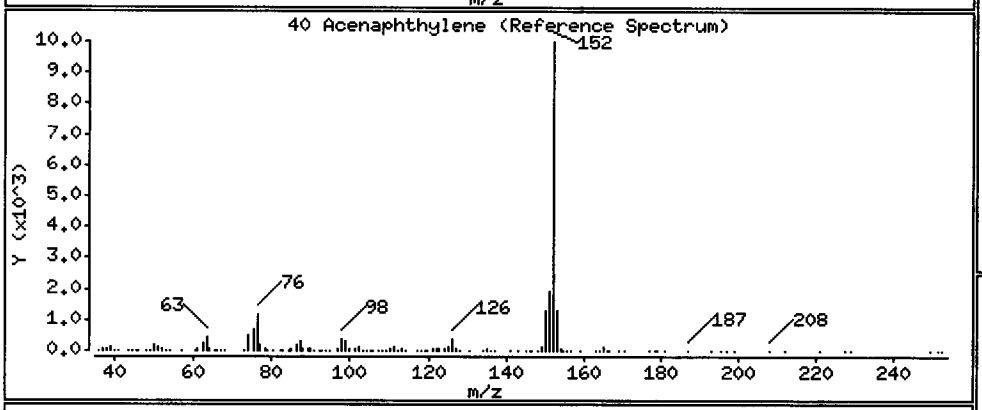
Column diameter: 0.25

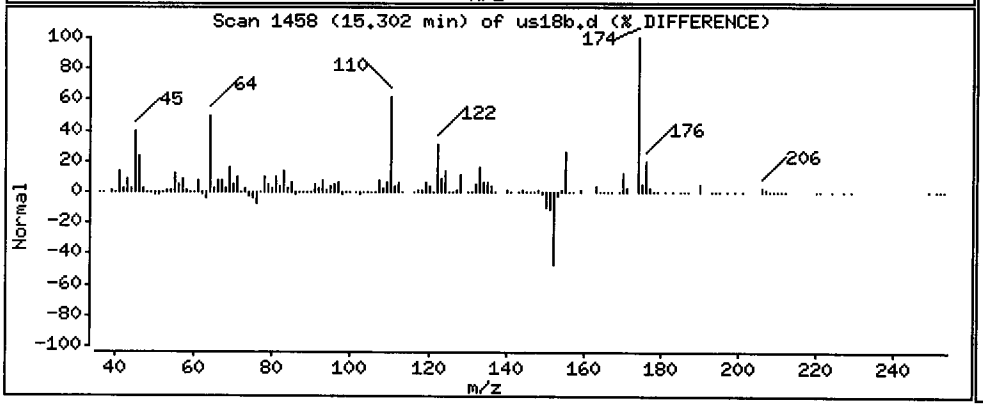
40 Acenaphthylene

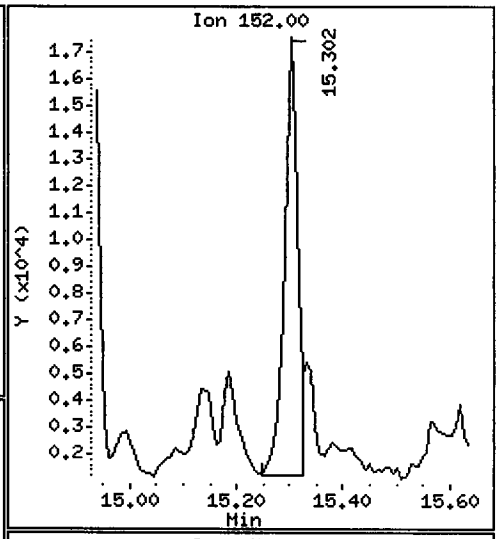
Concentration: 12.95 ug/kg

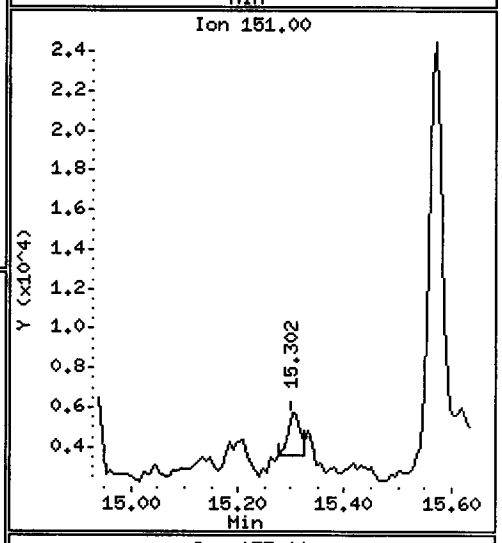


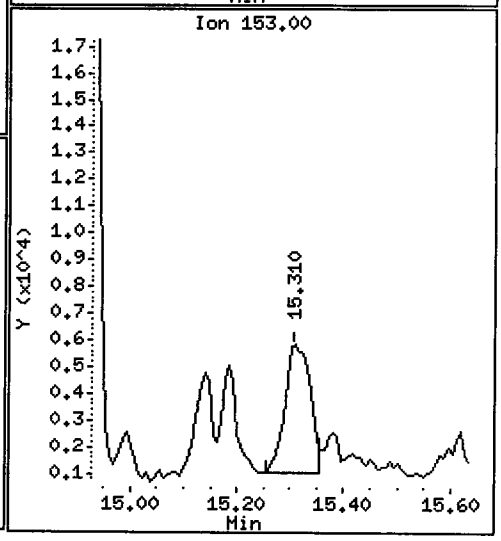












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

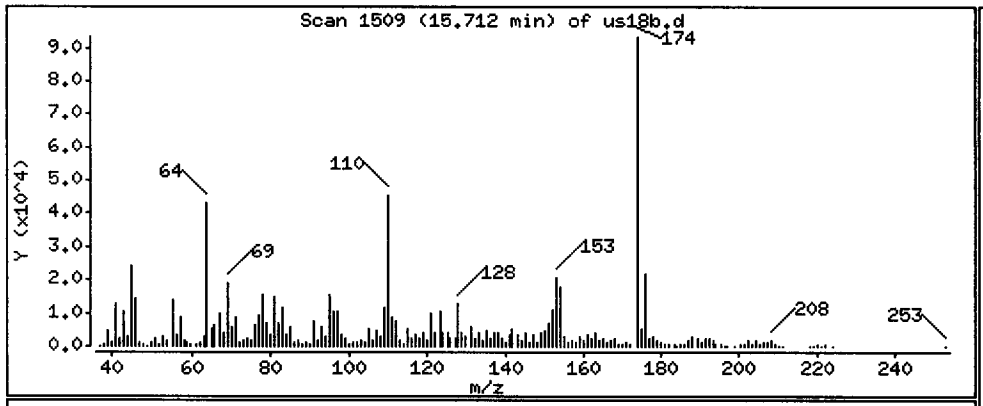
Operator: VTS/YZ

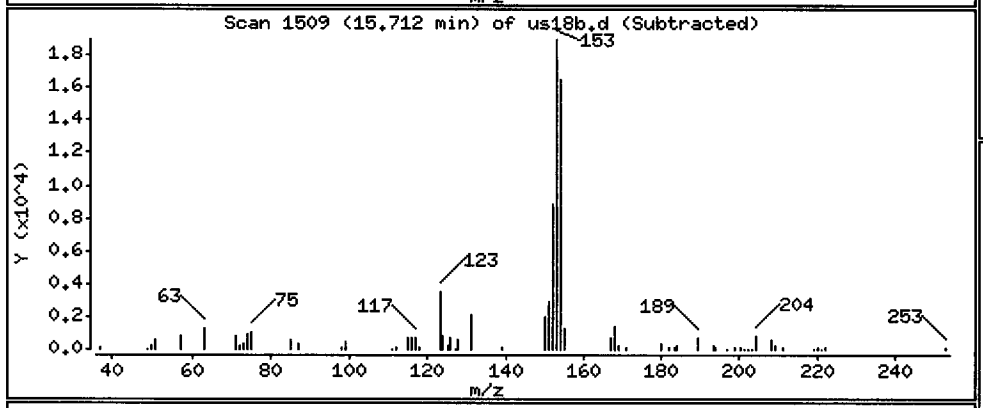
Column phase: ZB-5msi

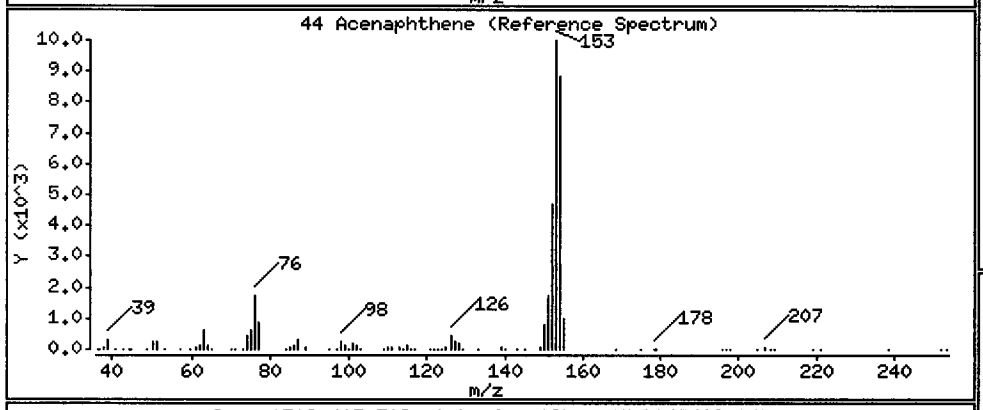
Column diameter: 0.25

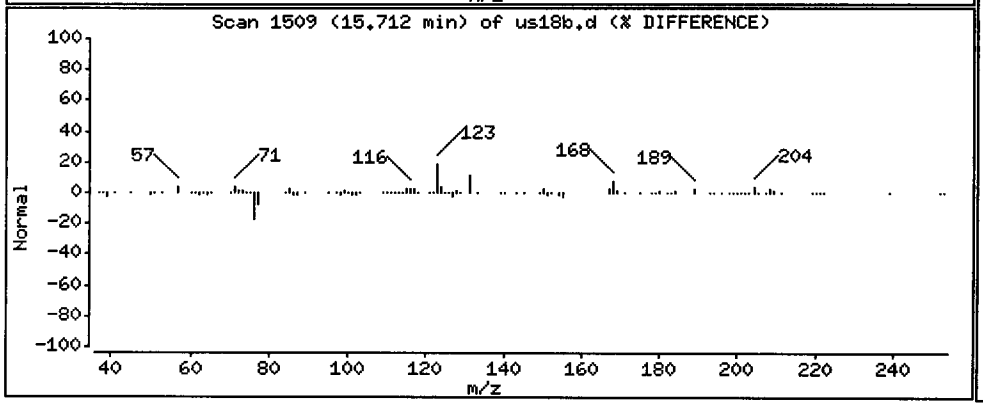
44 Acenaphthene

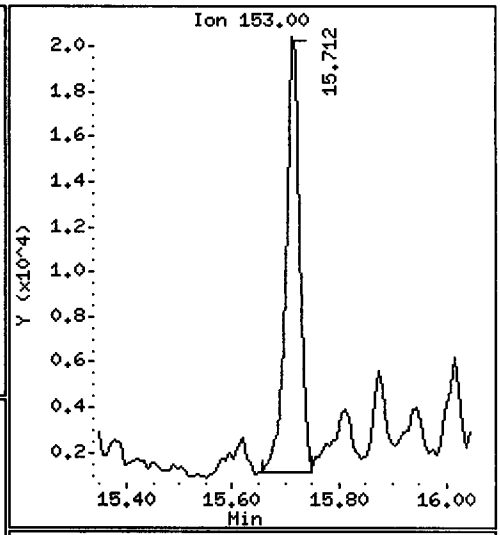
Concentration: 26.66 ug/kg

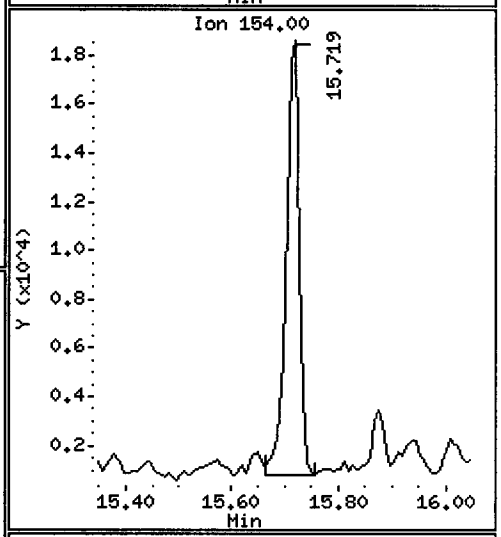


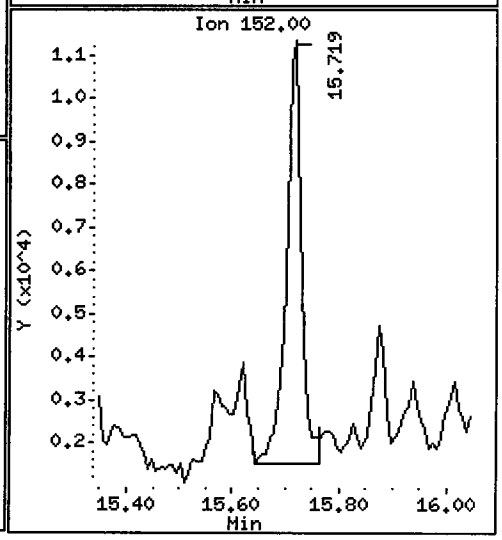












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

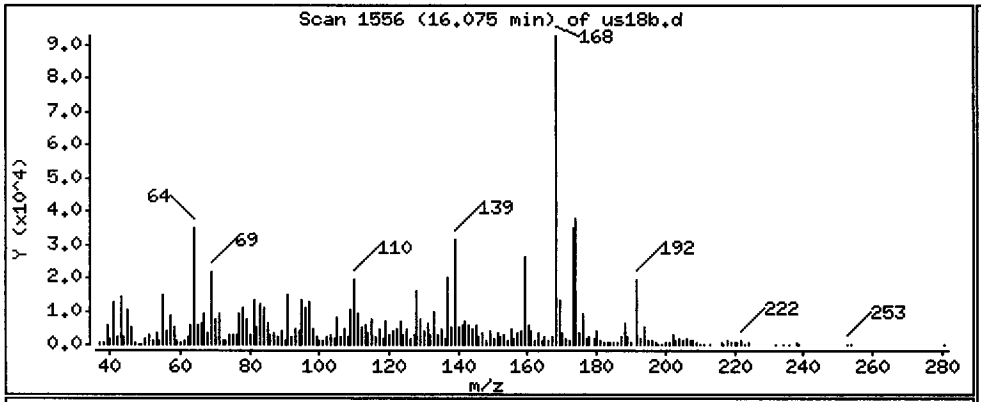
Operator: VTS/YZ

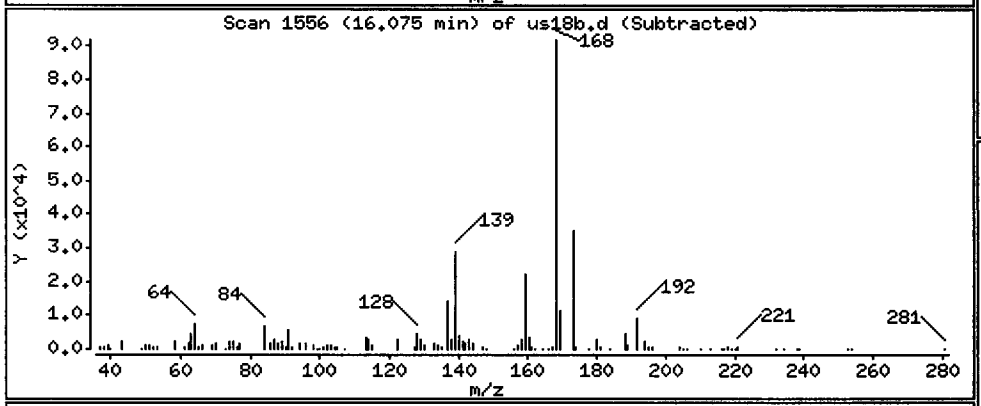
Column phase: ZB-5msi

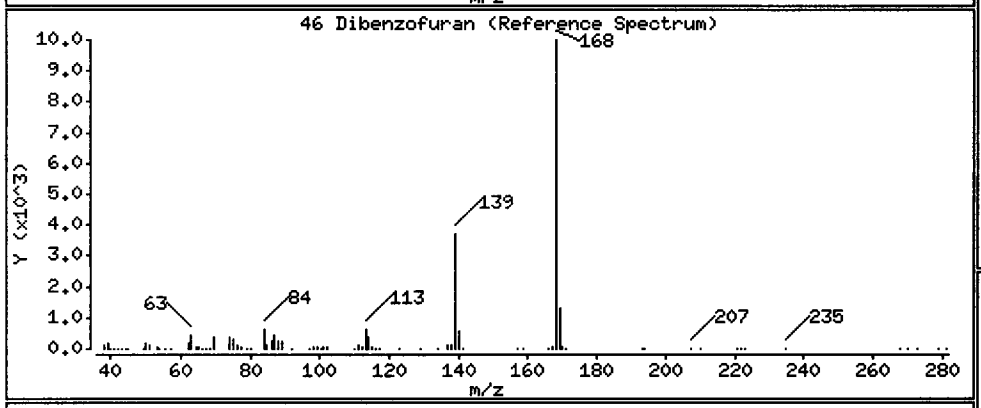
Column diameter: 0.25

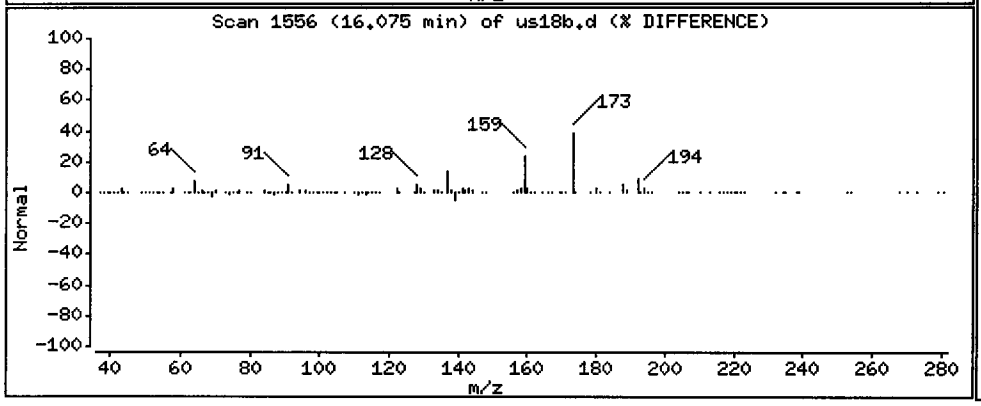
46 Dibenzofuran

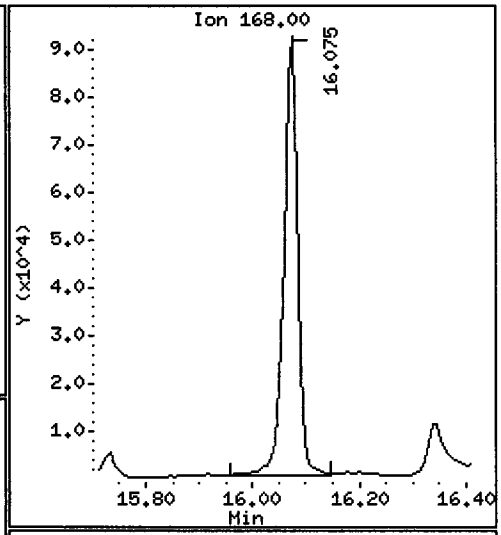
Concentration: 84.15 ug/kg

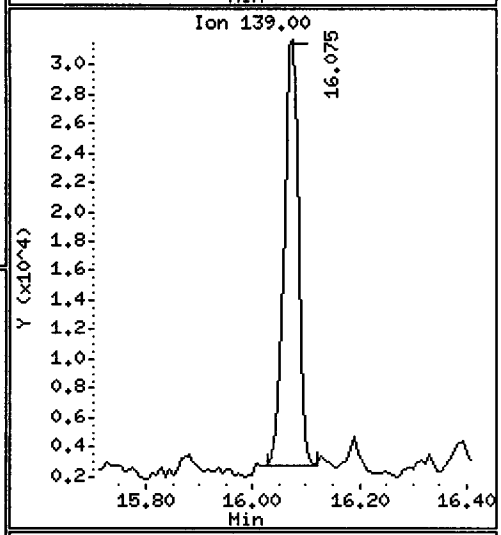


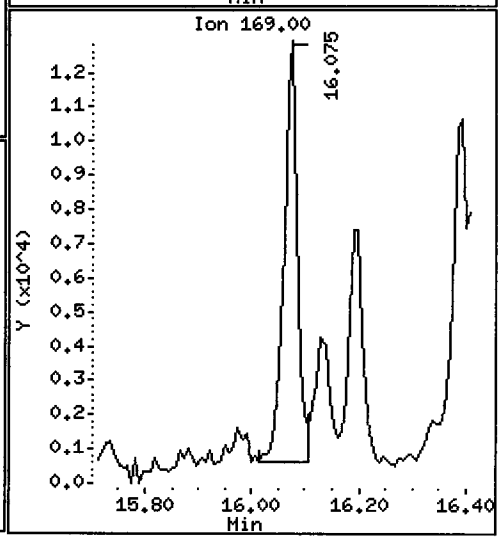












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

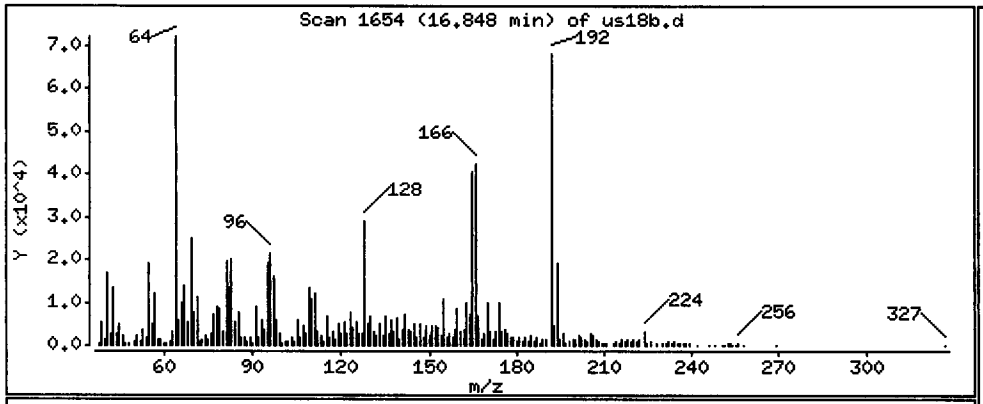
Operator: VTS/YZ

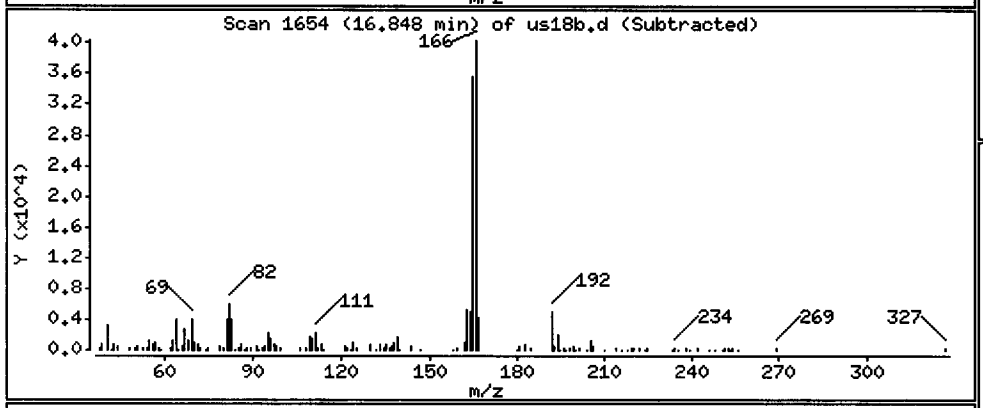
Column phase: ZB-5msi

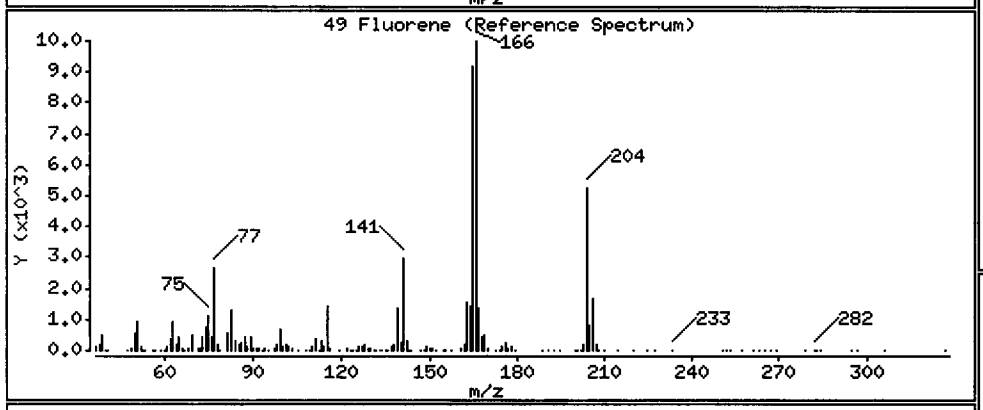
Column diameter: 0.25

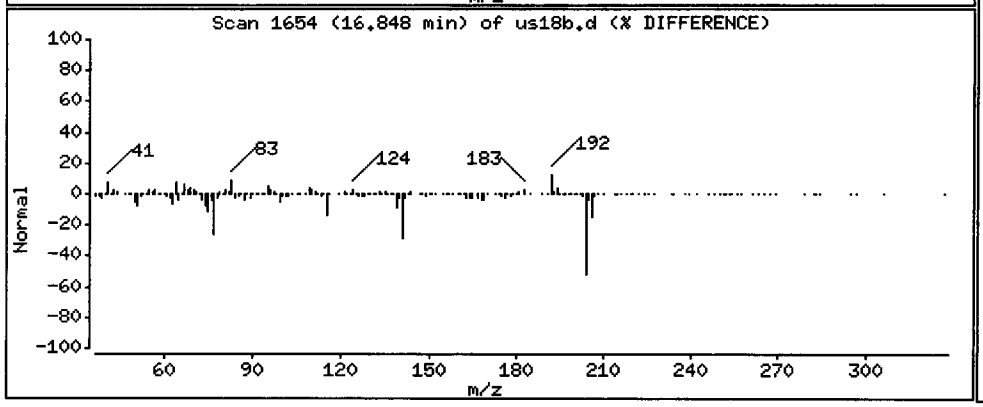
49 Fluorene

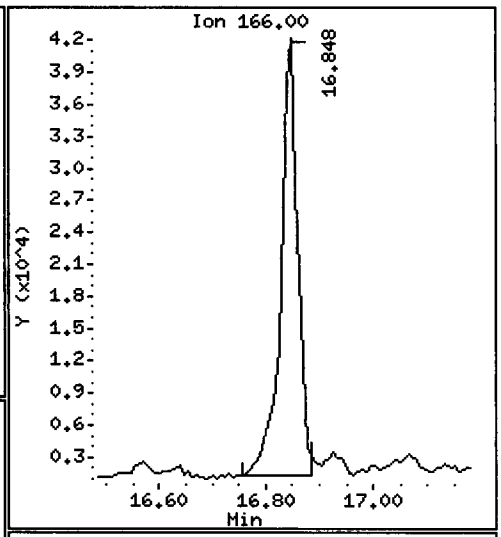
Concentration: 58.91 ug/kg

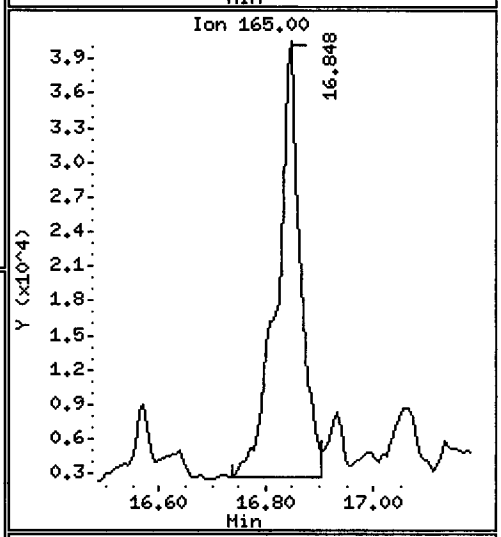


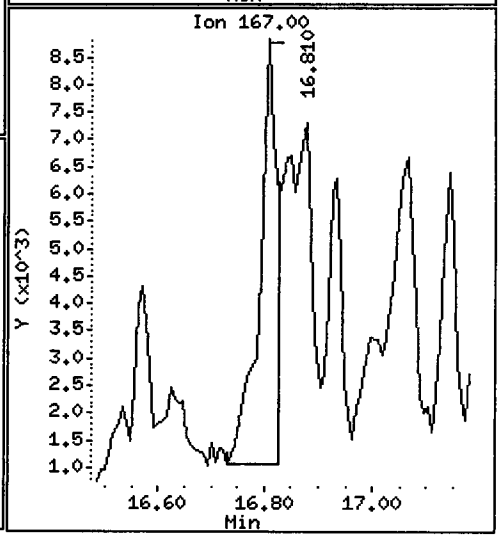












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

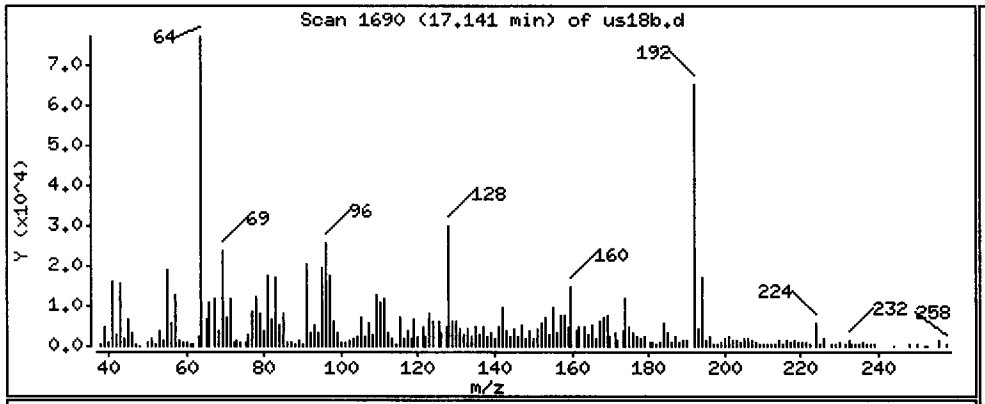
Operator: VTS/YZ

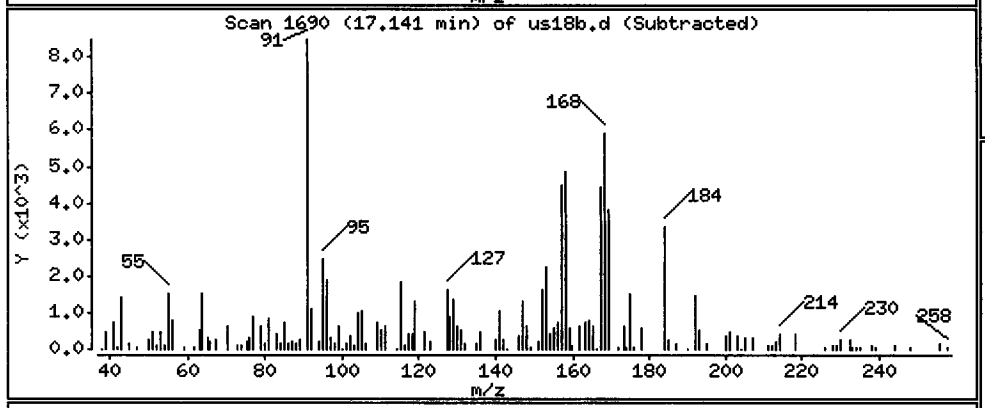
Column phase: ZB-5msi

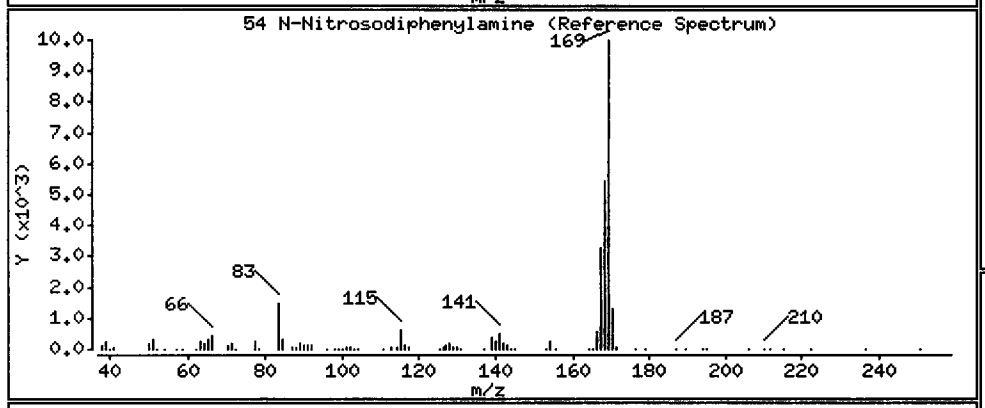
Column diameter: 0.25

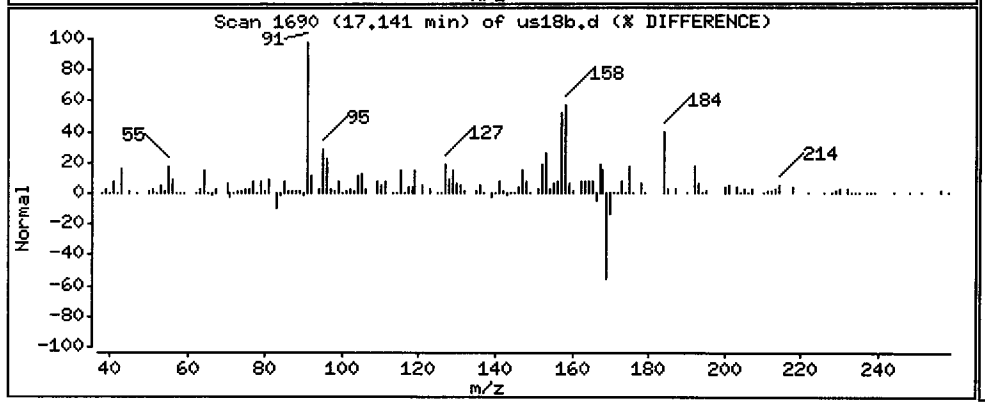
54 N-Nitrosodiphenylamine

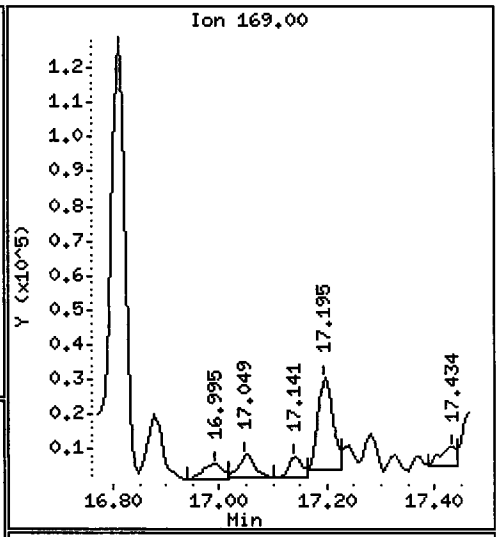
Concentration: 11.51 ug/kg

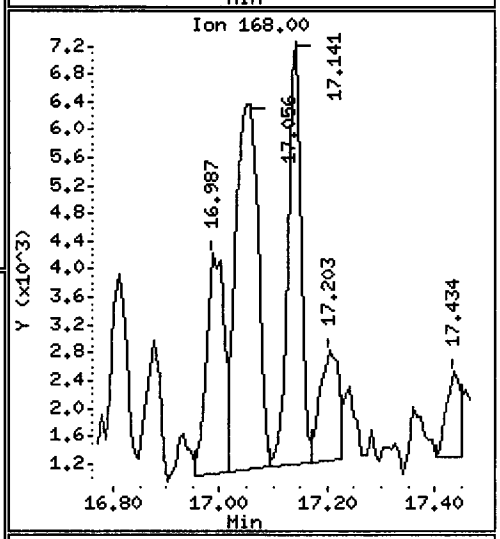


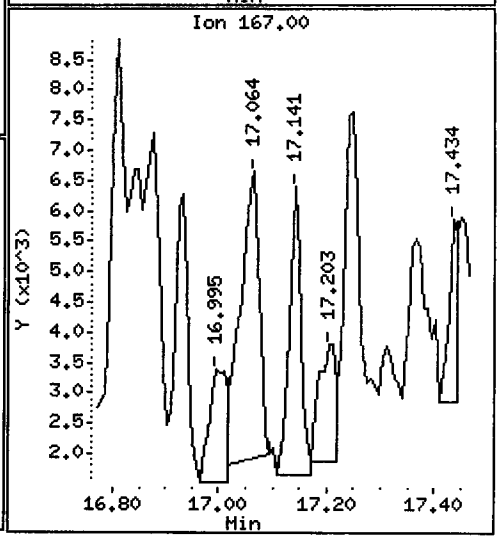












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

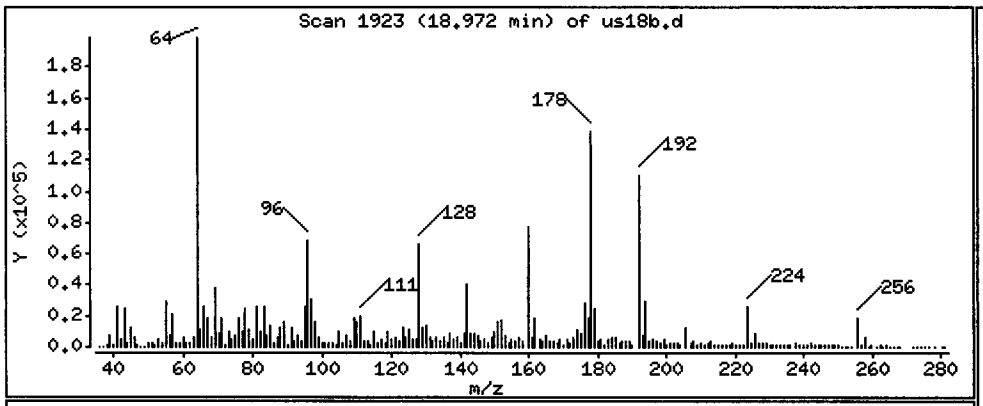
Operator: VTS/YZ

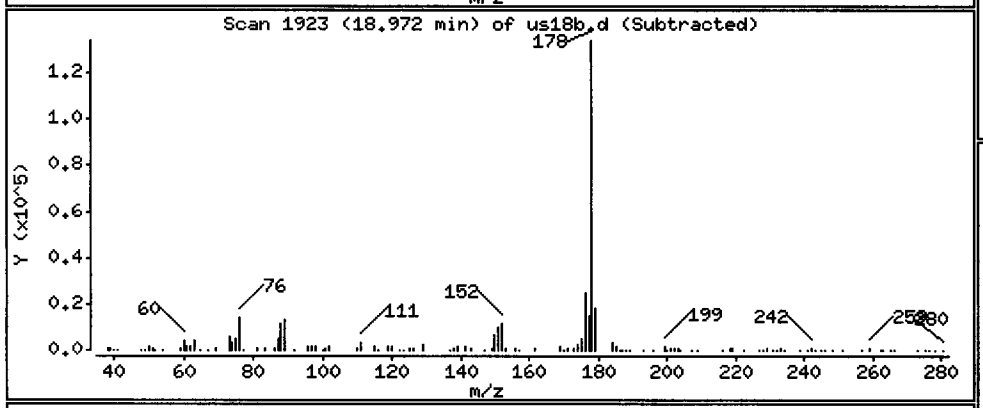
Column phase: ZB-5msi

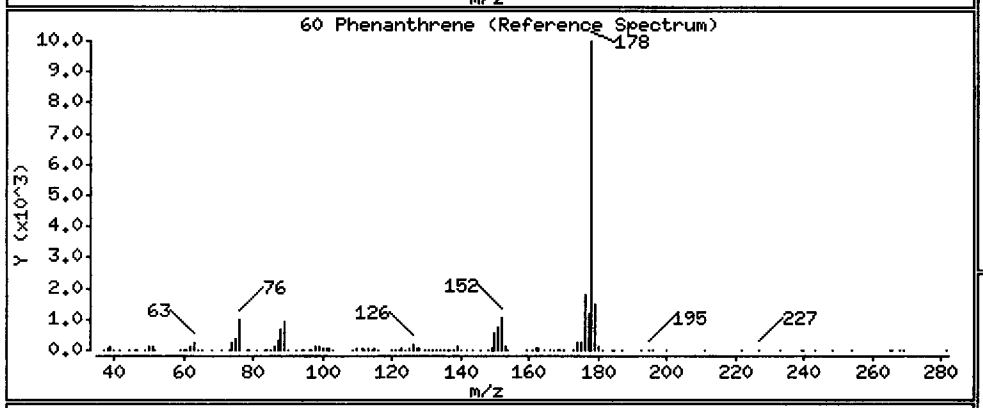
Column diameter: 0.25

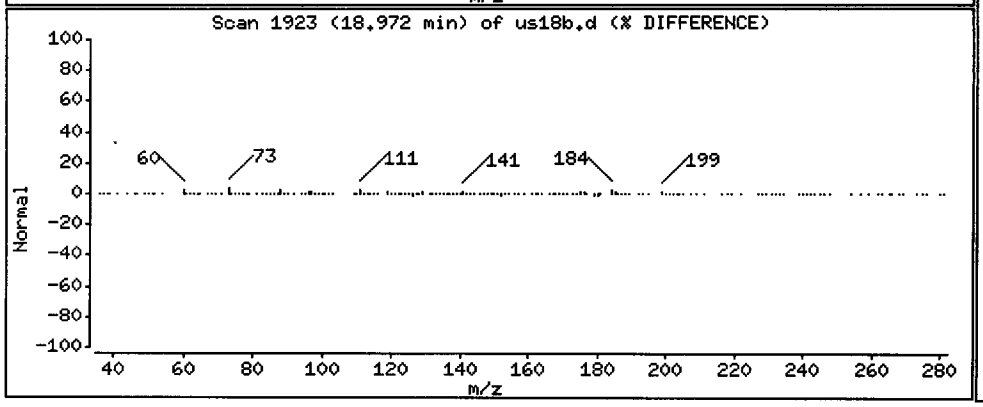
60 Phenanthrene

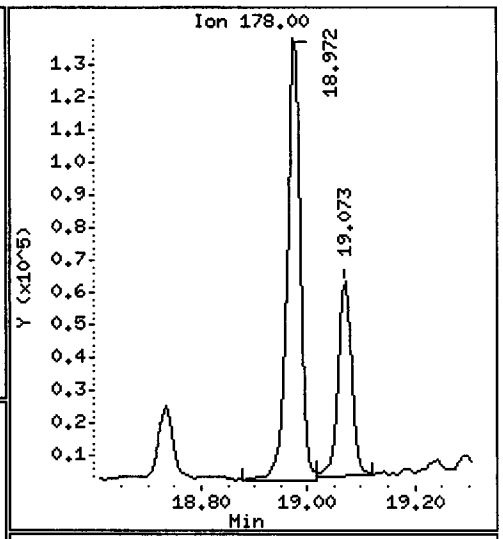
Concentration: 125.2 ug/kg

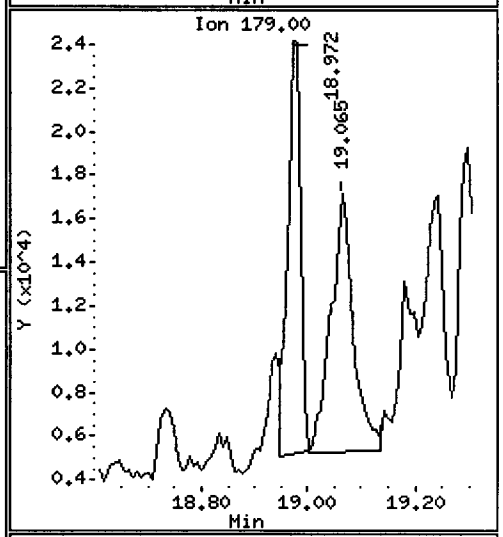


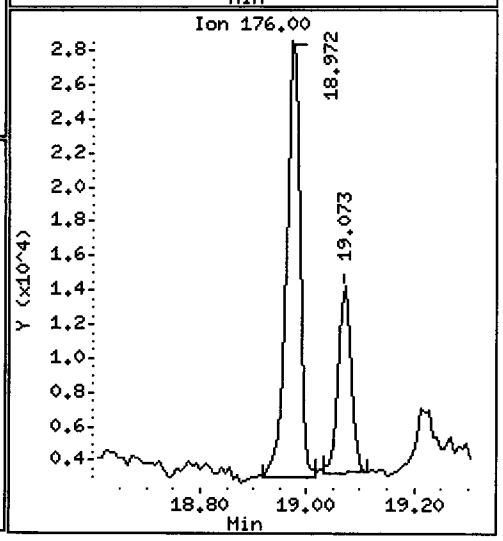












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

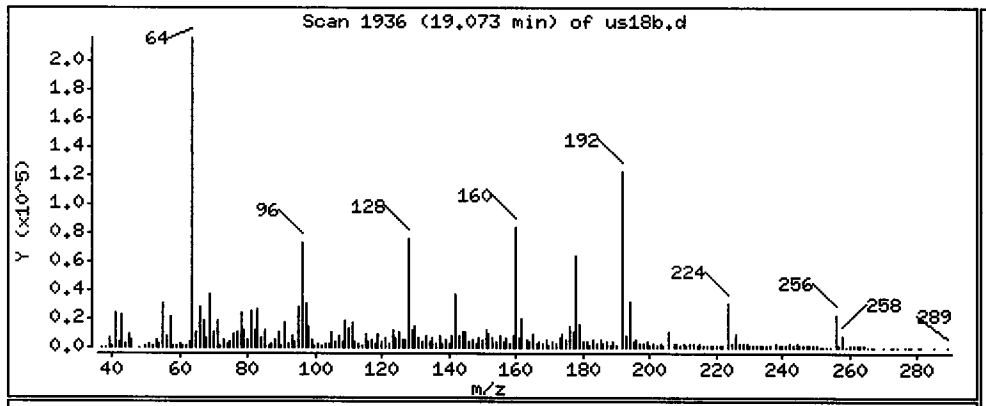
Operator: VTS/YZ

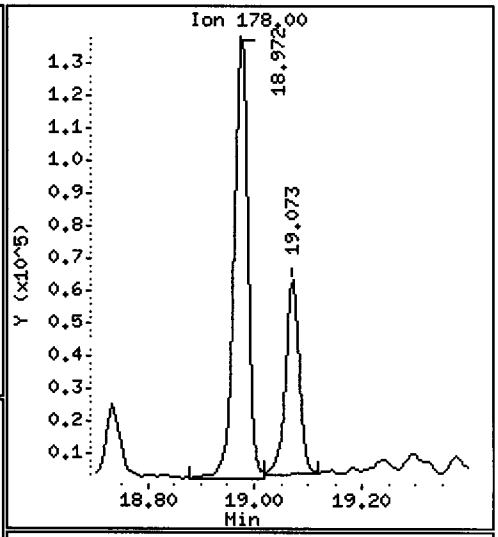
Column phase: ZB-5msi

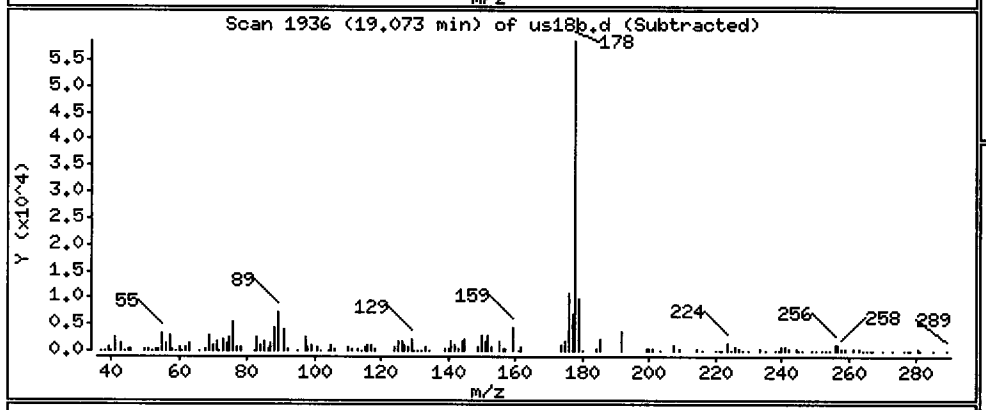
Column diameter: 0.25

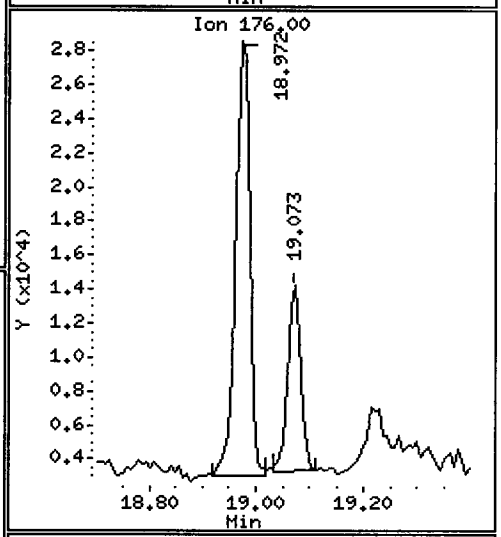
61 Anthracene

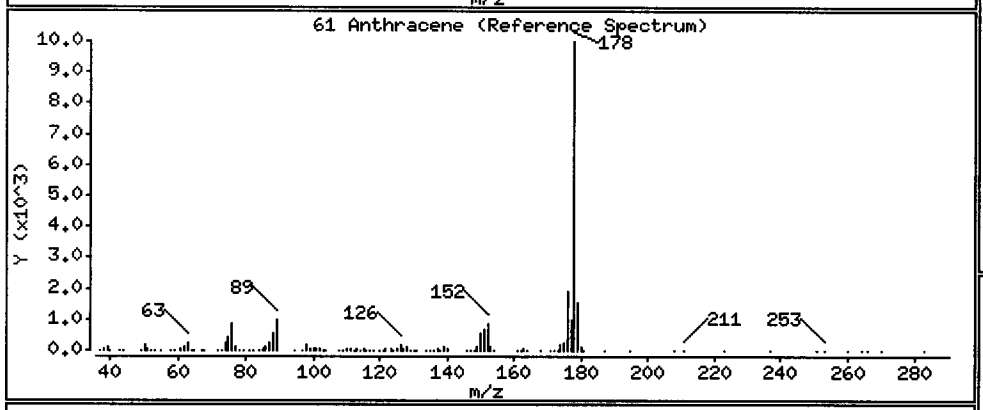
Concentration: 54.86 ug/kg

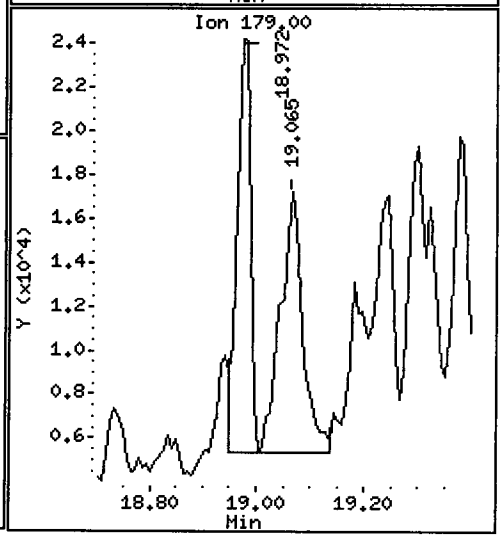


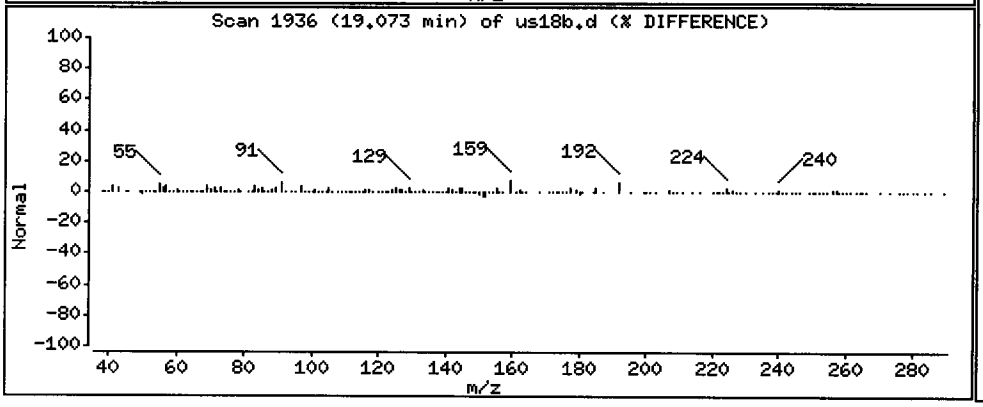












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

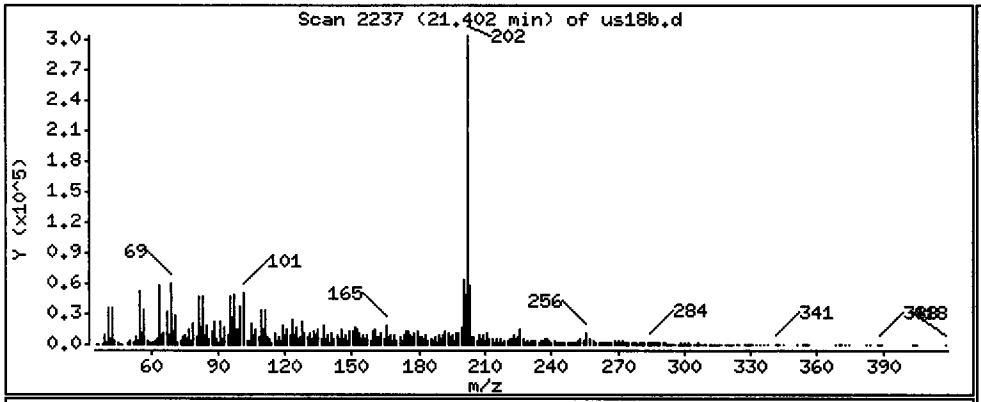
Operator: VTS/YZ

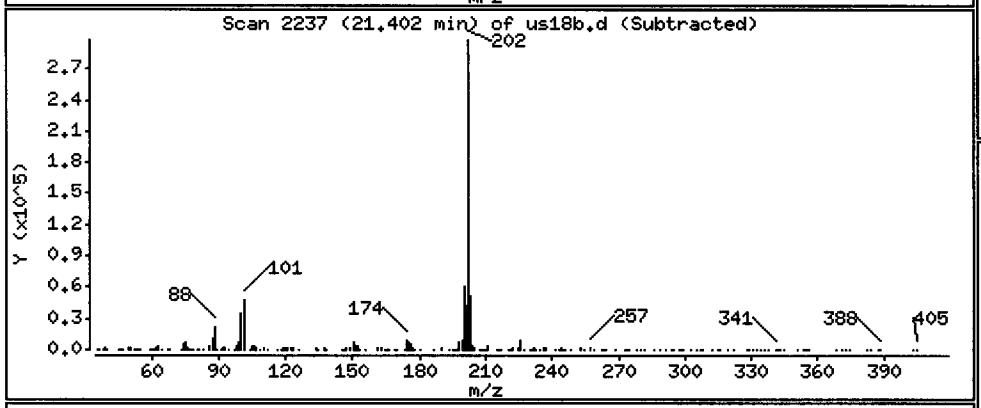
Column phase: ZB-5msi

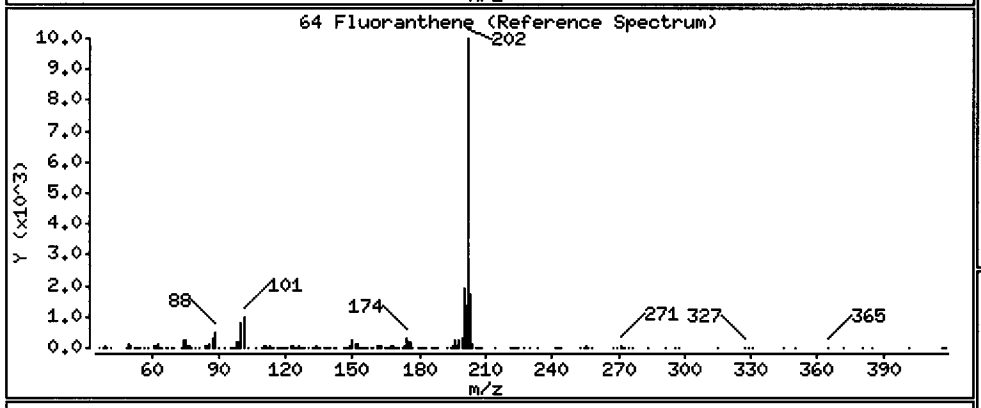
Column diameter: 0.25

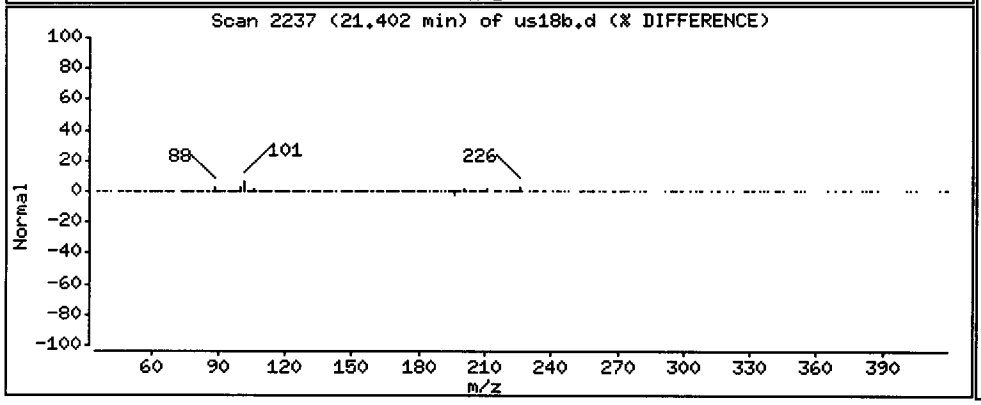
64 Fluoranthene

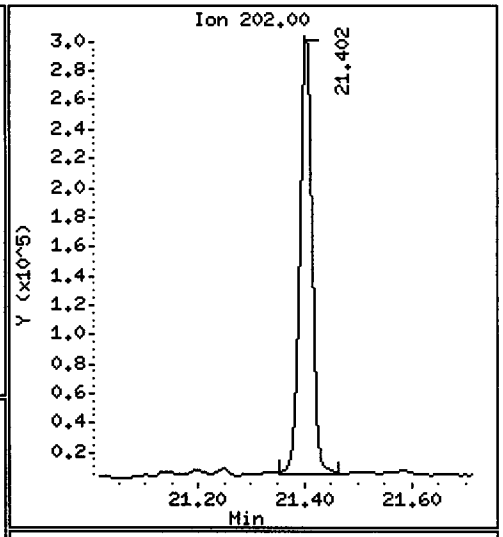
Concentration: 231.9 ug/kg

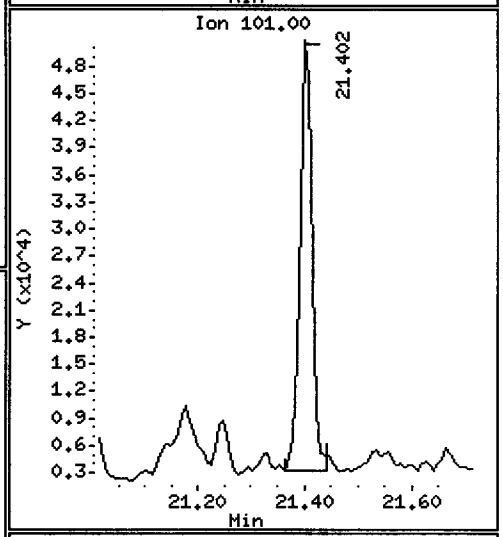


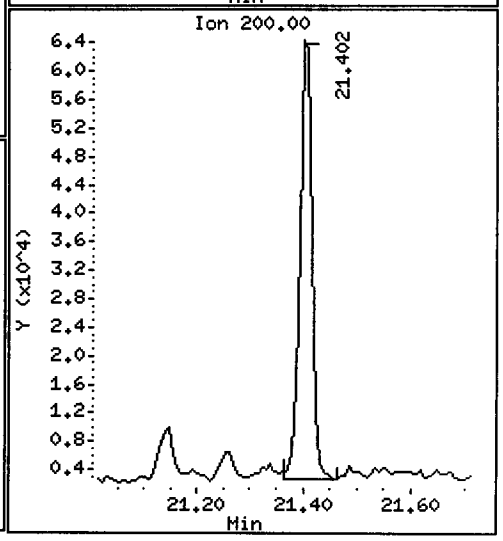












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

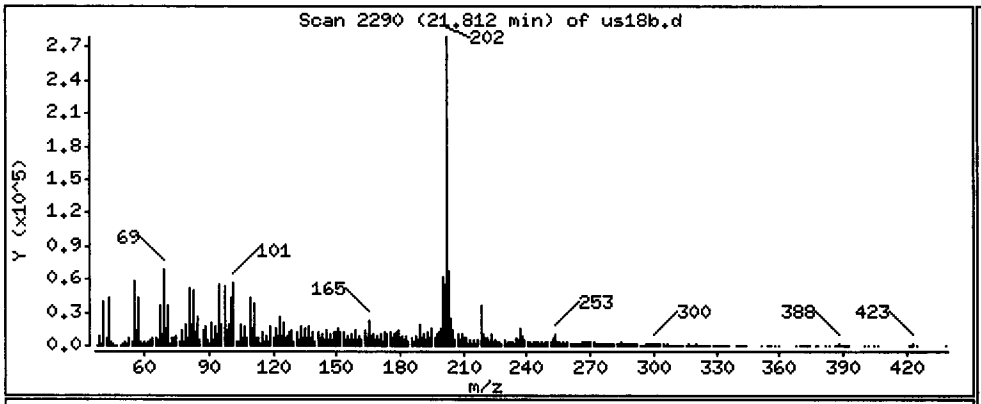
Operator: VTS/YZ

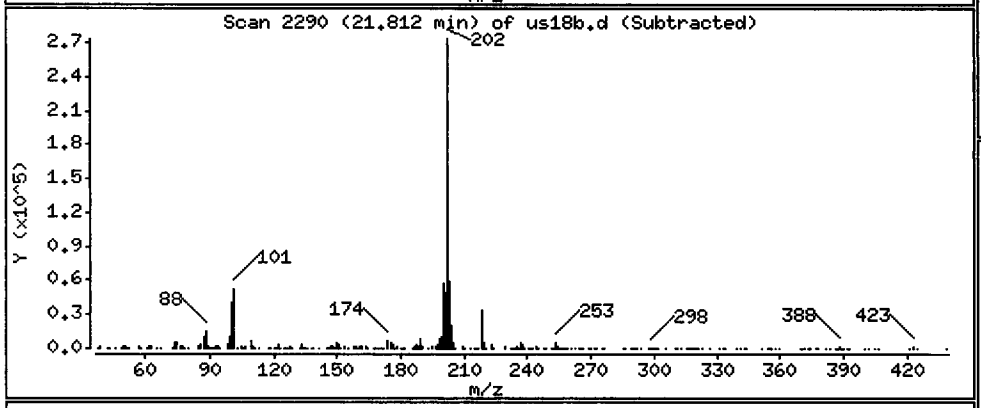
Column phase: ZB-5msi

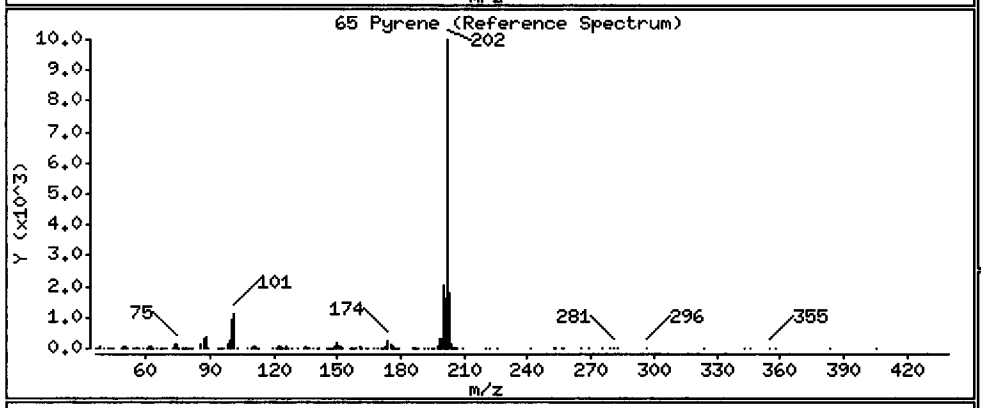
Column diameter: 0.25

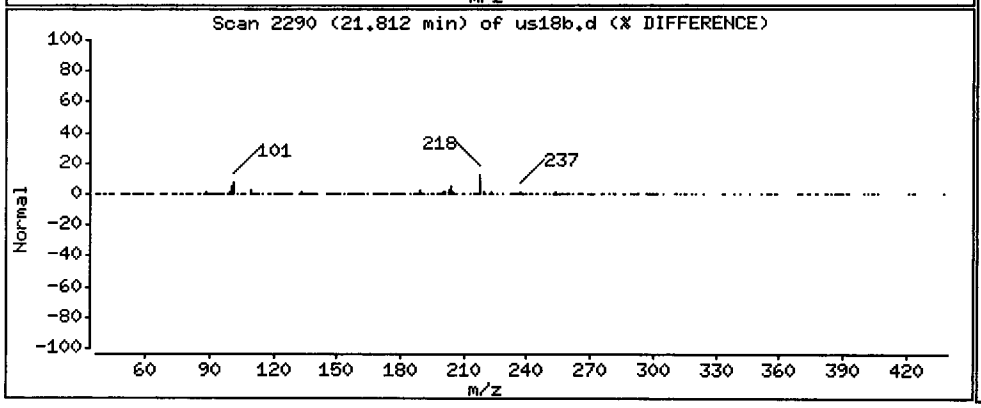
65 Pyrene

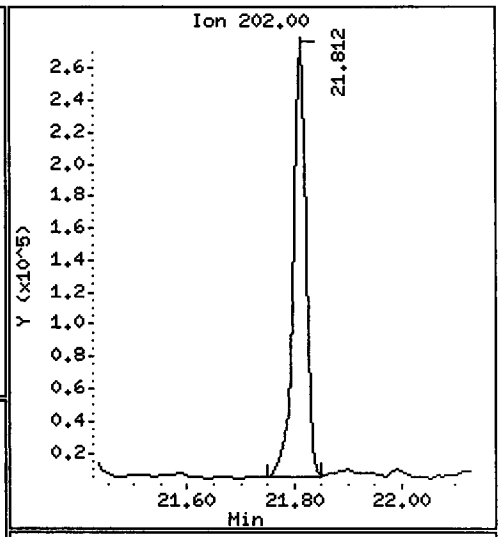
Concentration: 185.7 ug/kg

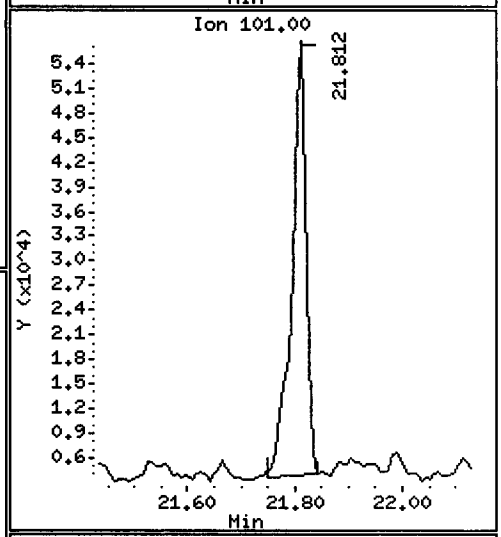


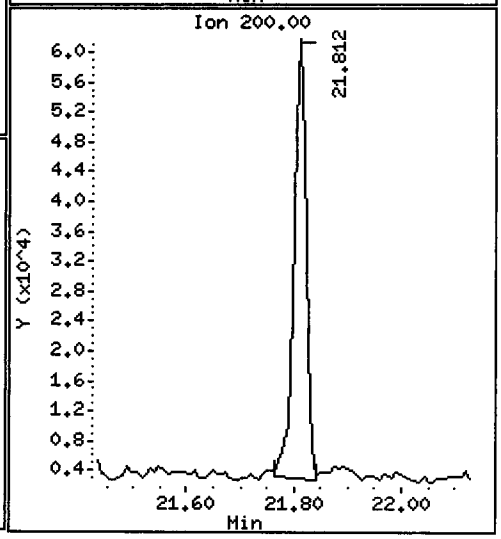












UR81 : 00848

Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

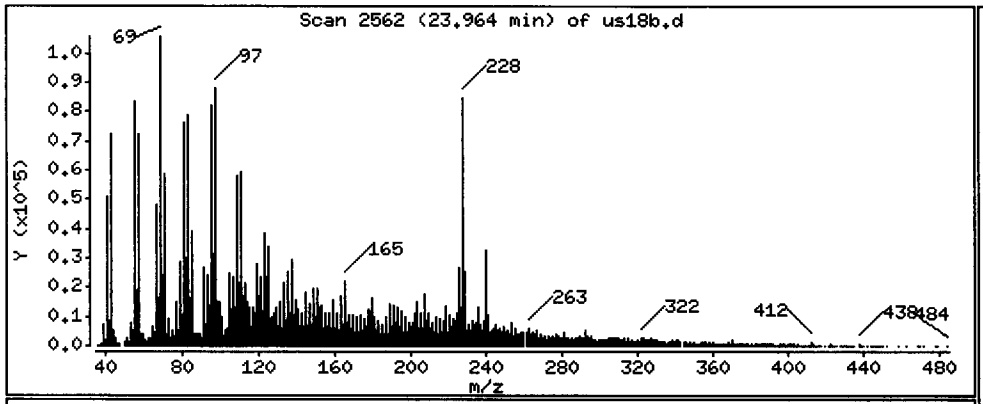
Operator: VTS/YZ

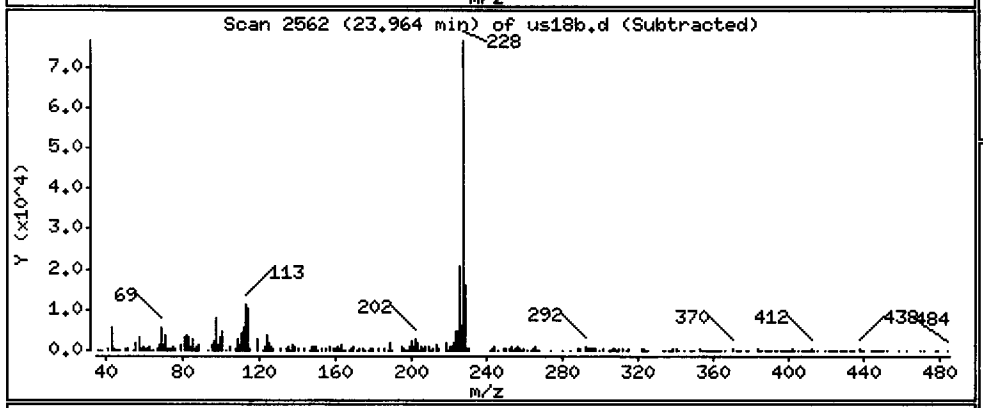
Column phase: ZB-5msi

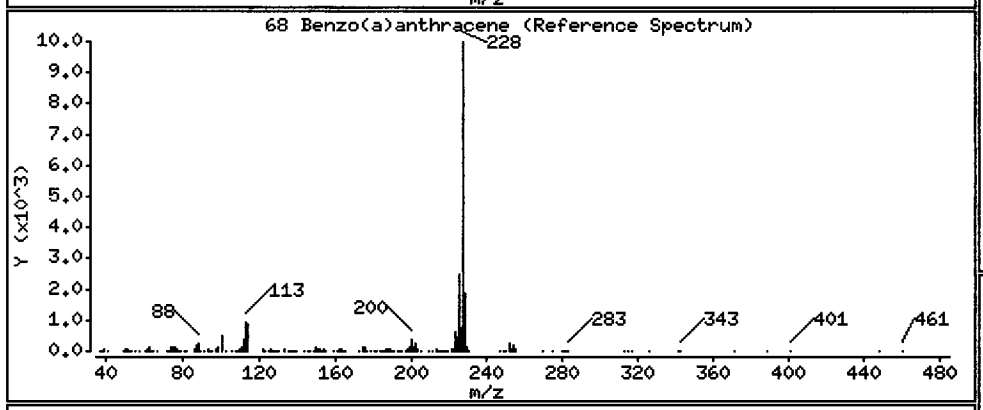
Column diameter: 0.25

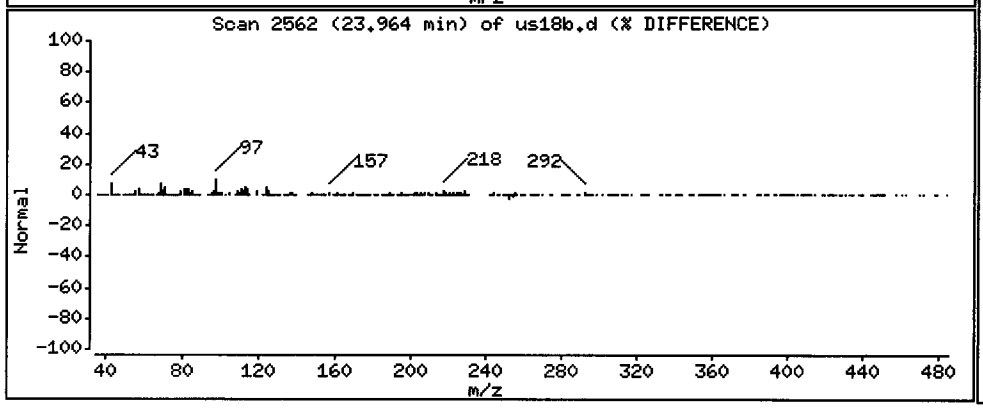
68 Benzo(a)anthracene

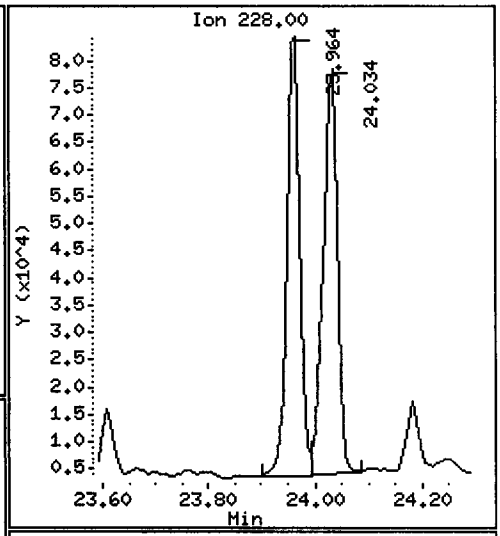
Concentration: 63.46 ug/kg

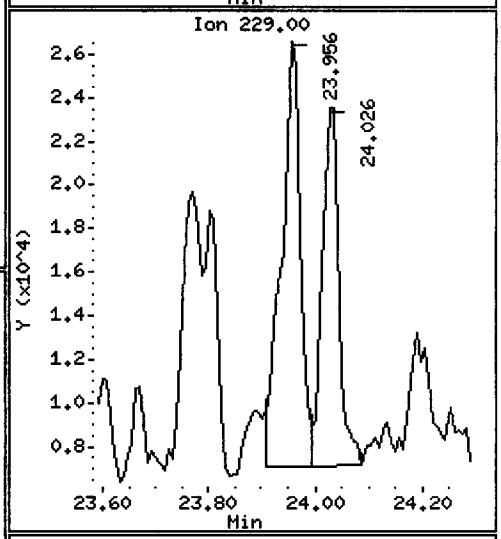


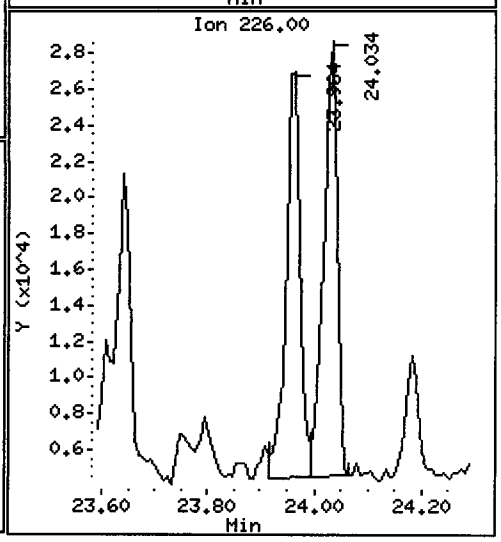












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

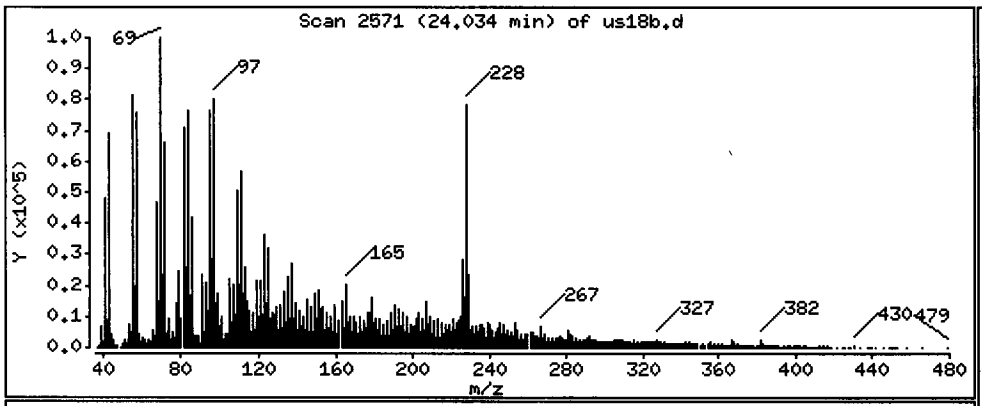
Operator: VTS/YZ

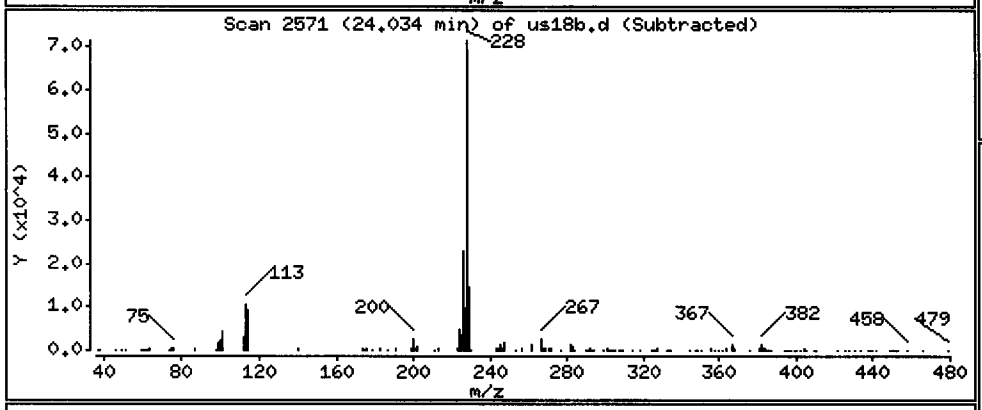
Column phase: ZB-5msi

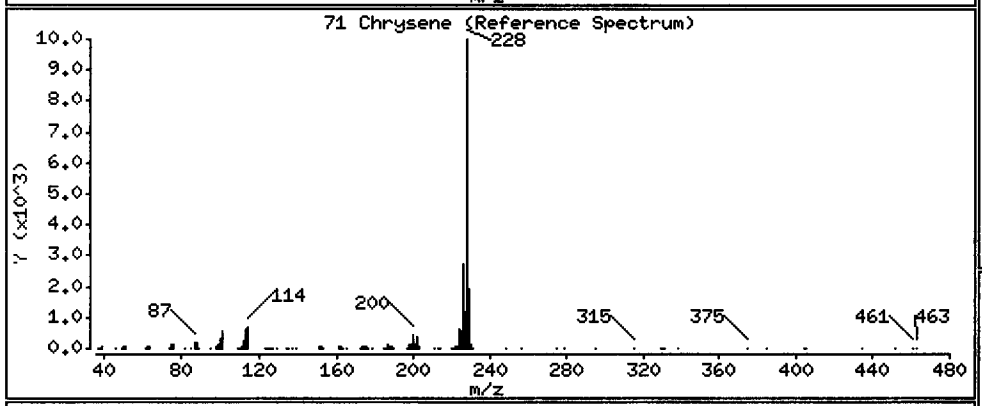
Column diameter: 0.25

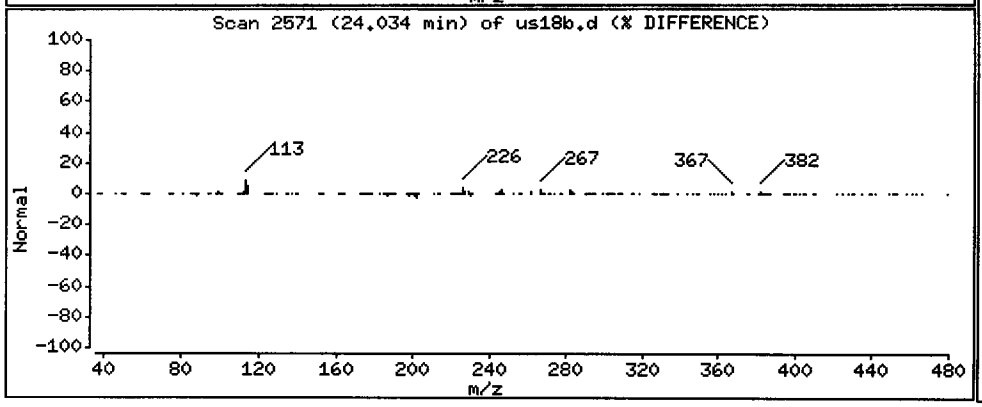
71 Chrysene

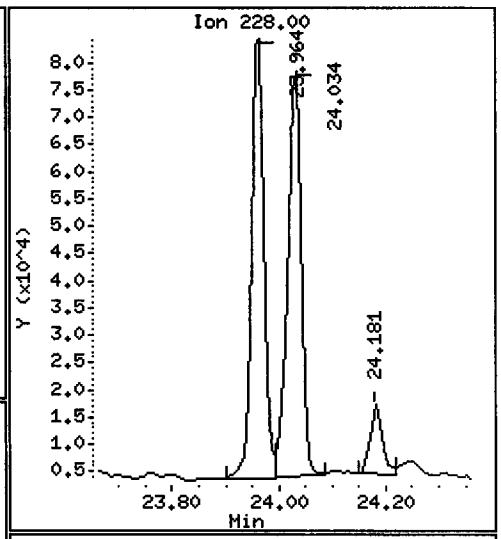
Concentration: 69.57 ug/kg

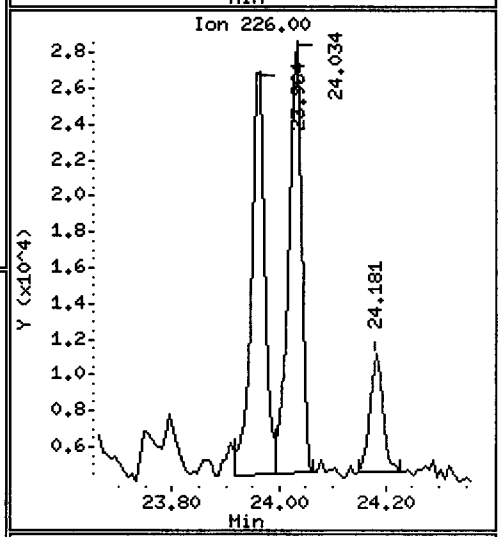


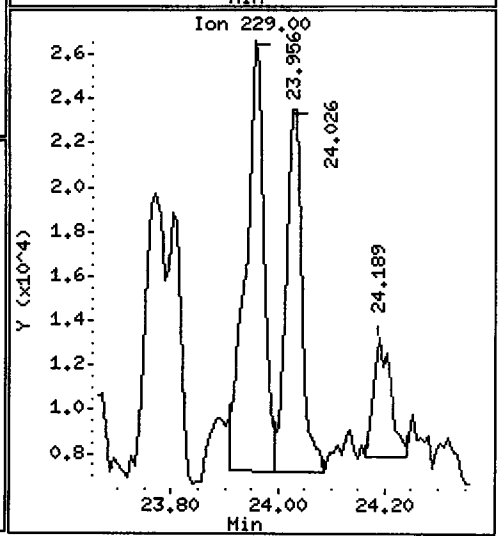












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

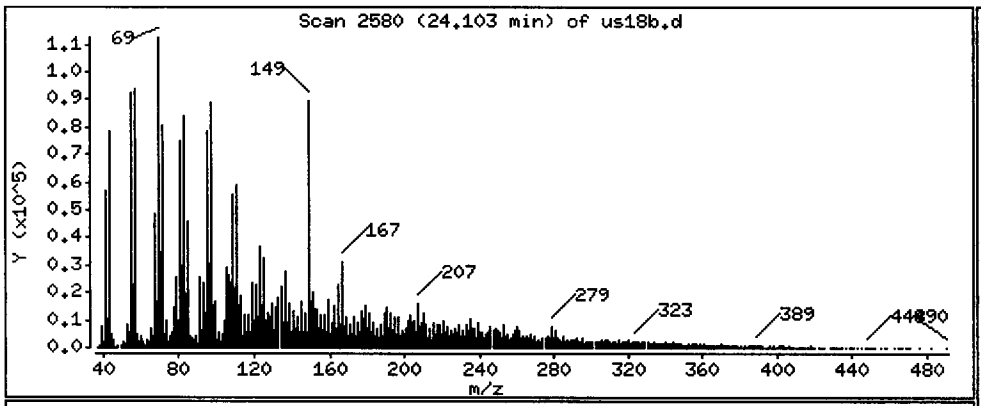
Operator: VTS/YZ

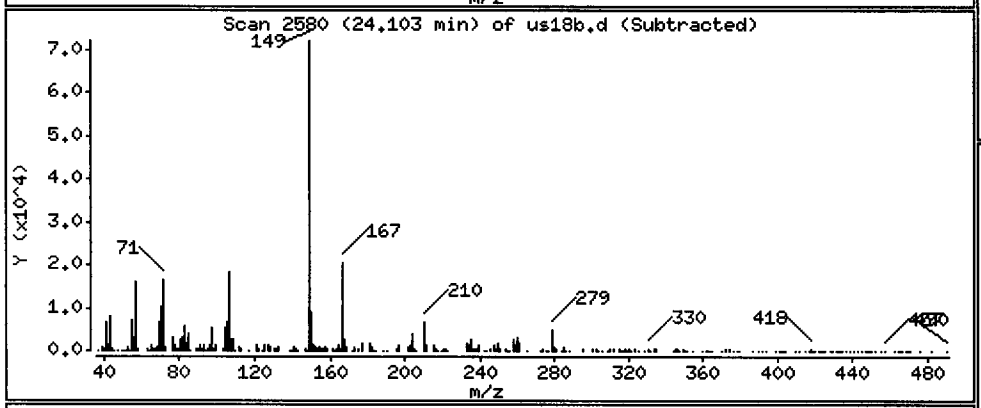
Column phase: ZB-5msi

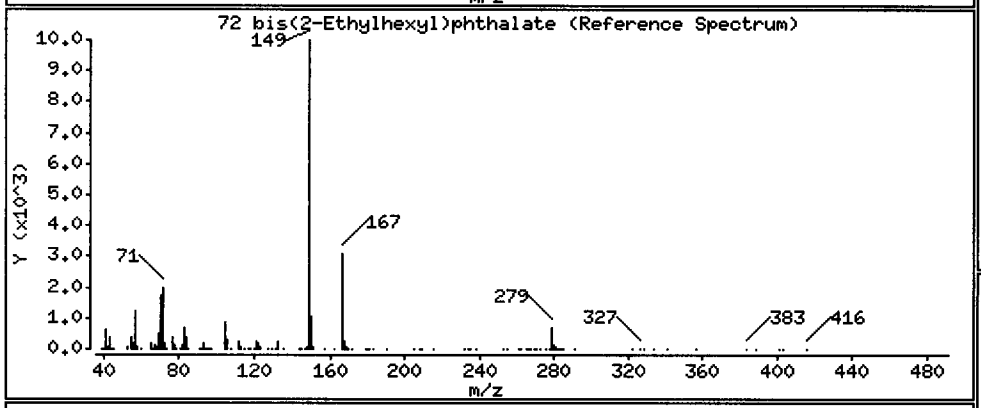
Column diameter: 0.25

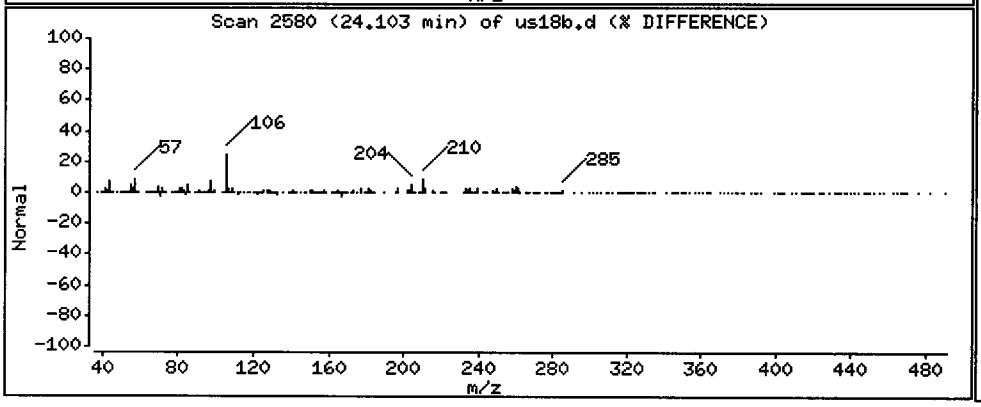
72 bis(2-Ethylhexyl)phthalate

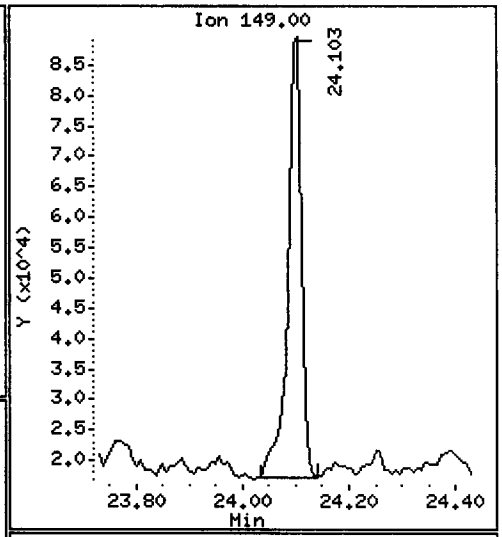
Concentration: 78.66 ug/kg

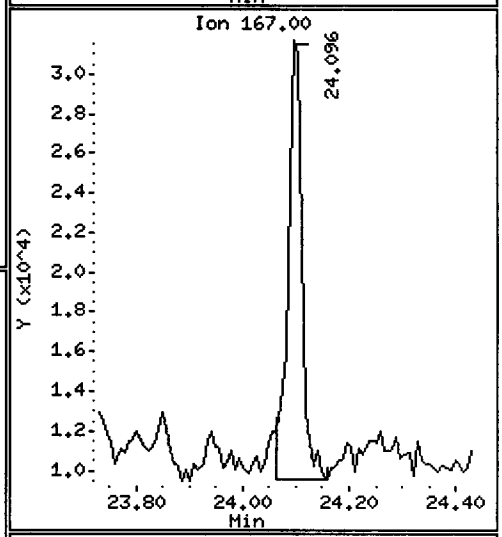


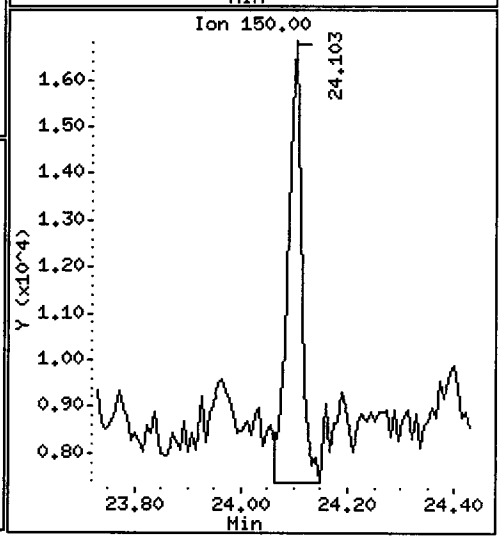












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

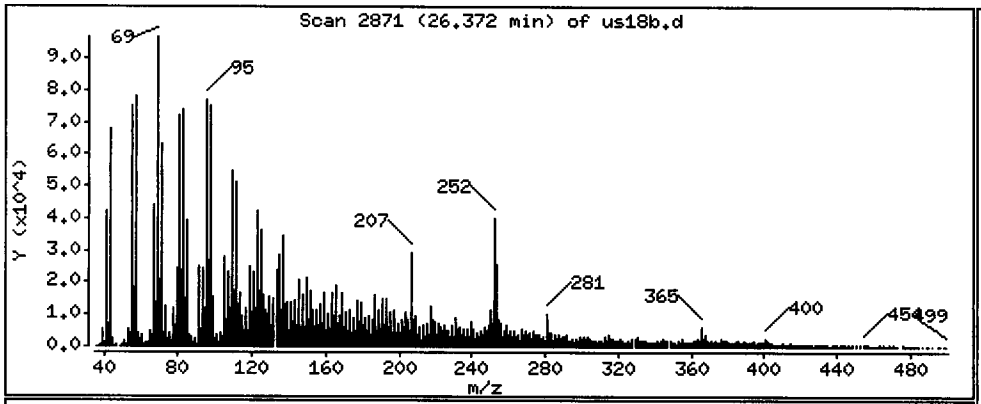
Operator: VTS/YZ

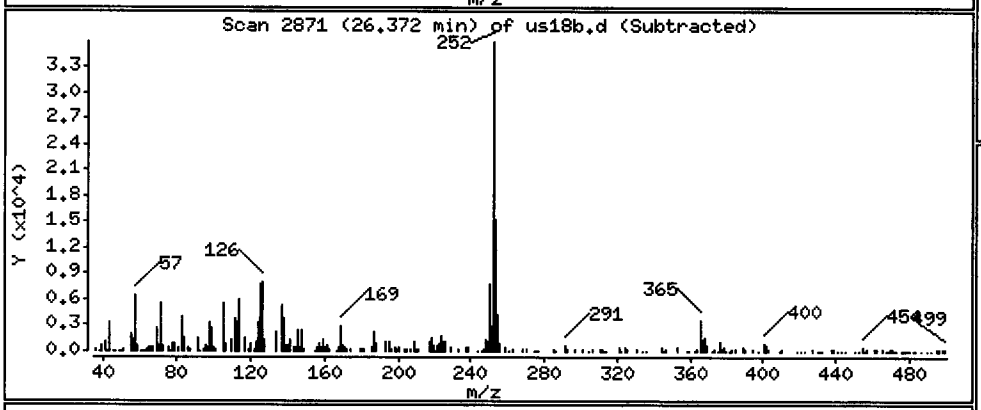
Column phase: ZB-5msi

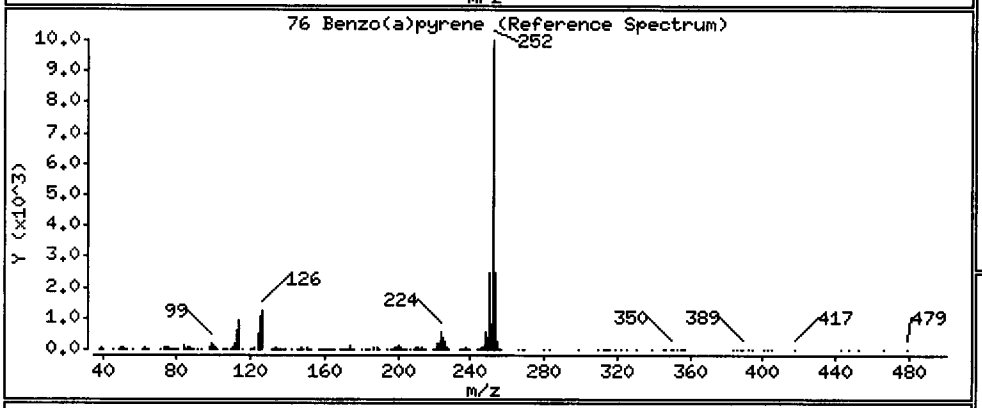
Column diameter: 0.25

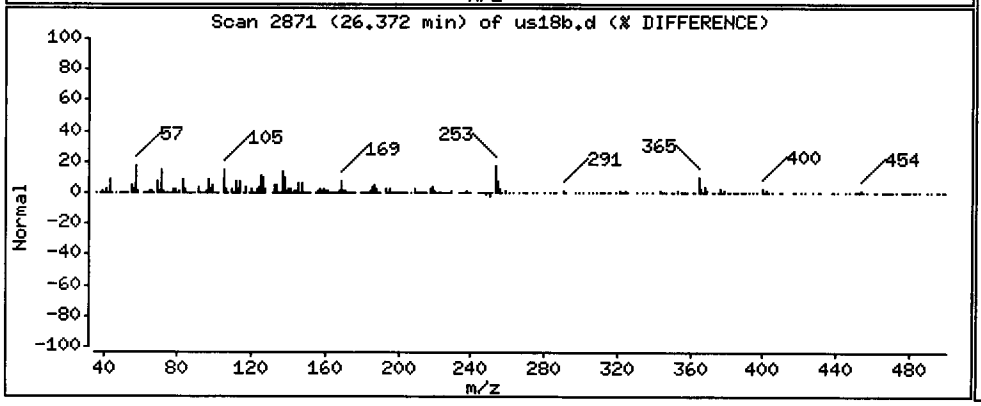
76 Benzo(a)pyrene

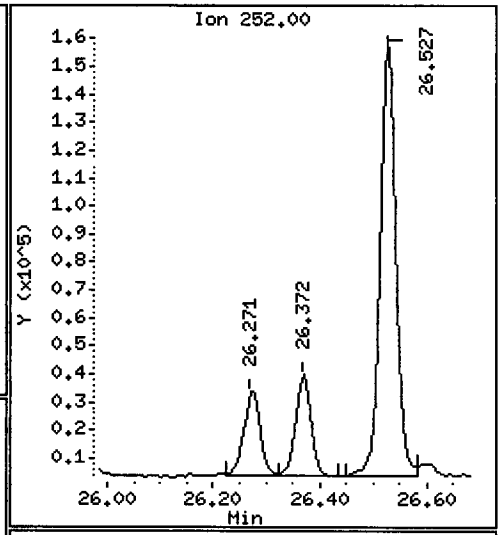
Concentration: 41.60 ug/kg

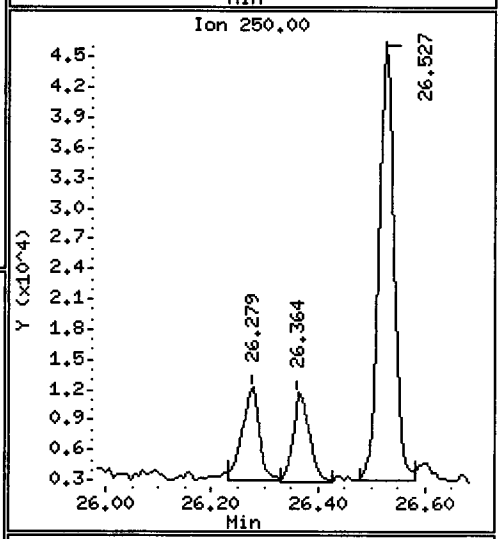


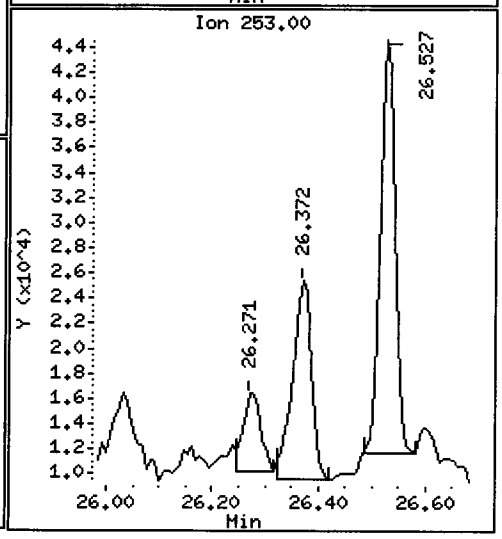












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

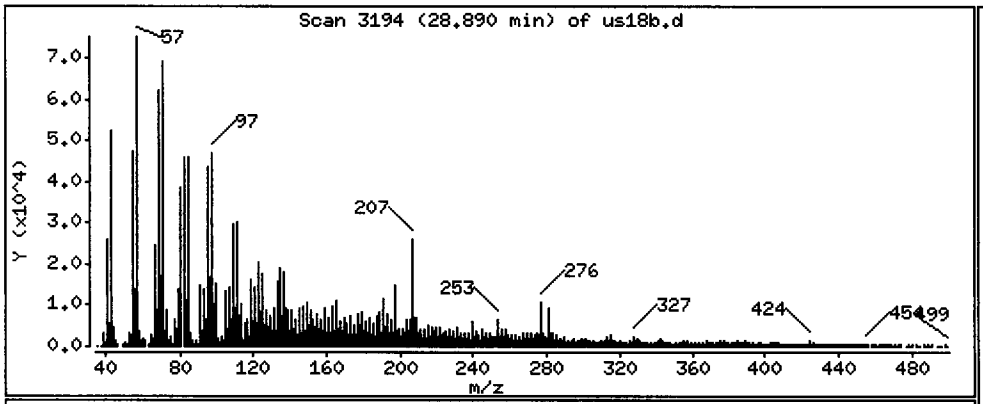
Operator: VTS/YZ

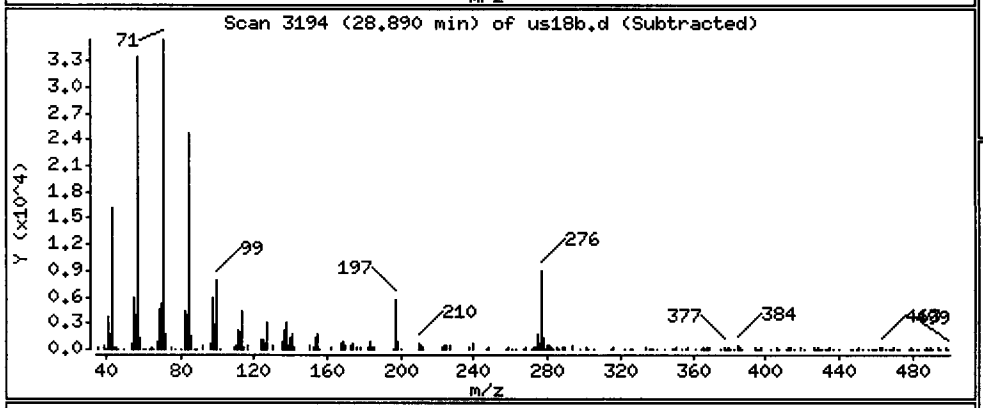
Column phase: ZB-5msi

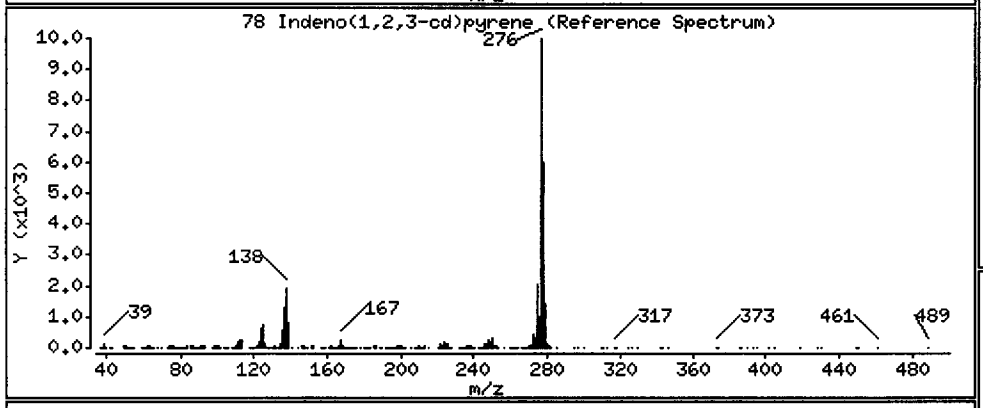
Column diameter: 0.25

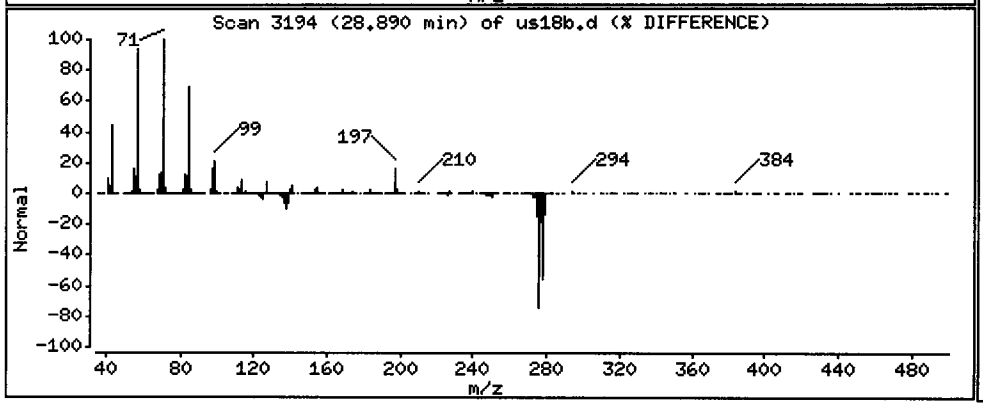
78 Indeno(1,2,3-cd)pyrene

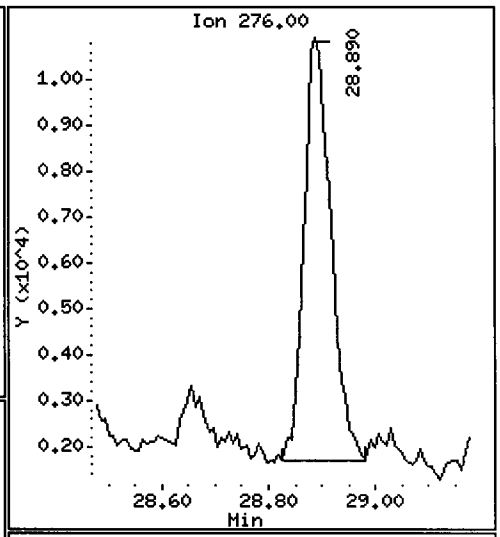
Concentration: 15.35 ug/kg

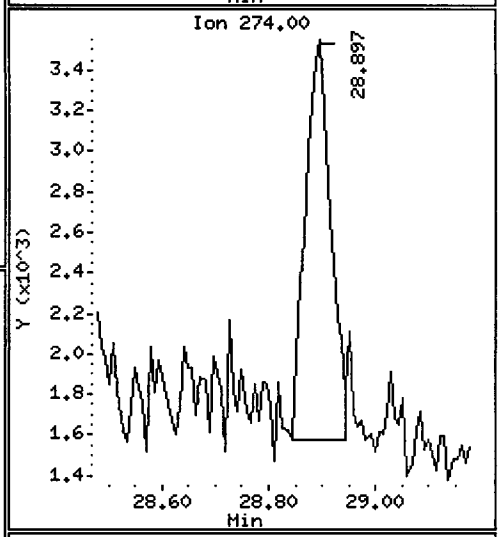


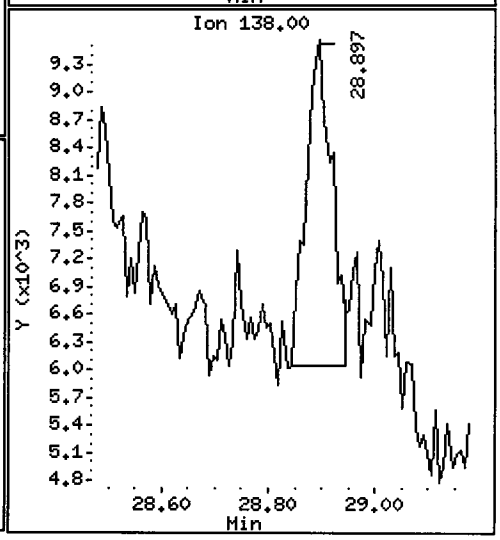












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

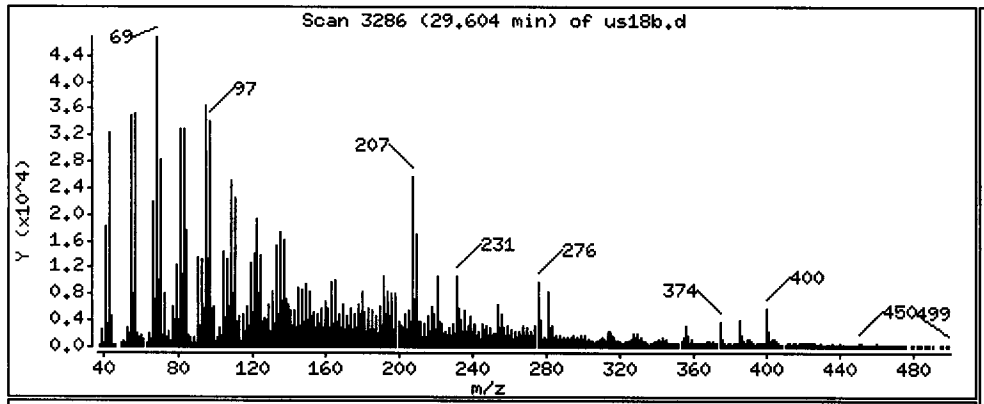
Operator: VTS/YZ

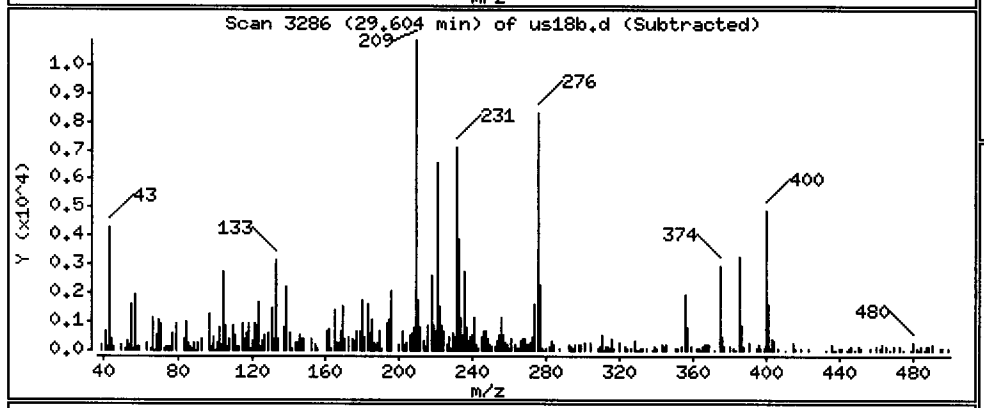
Column phase: ZB-5msi

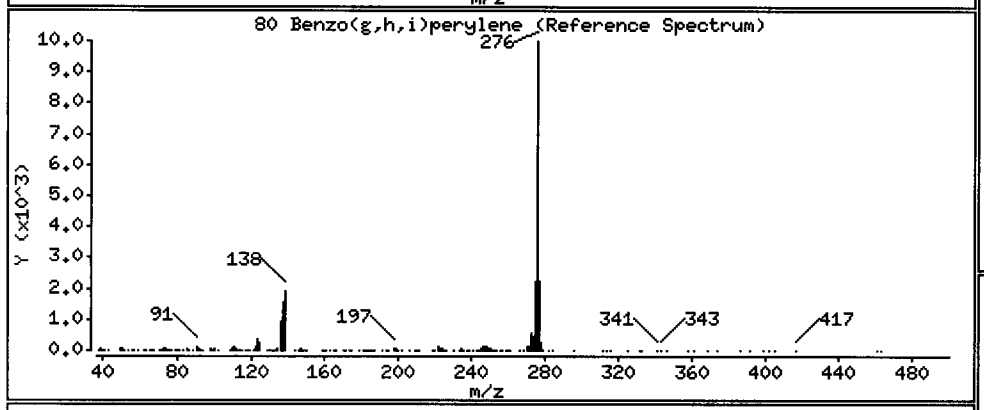
Column diameter: 0.25

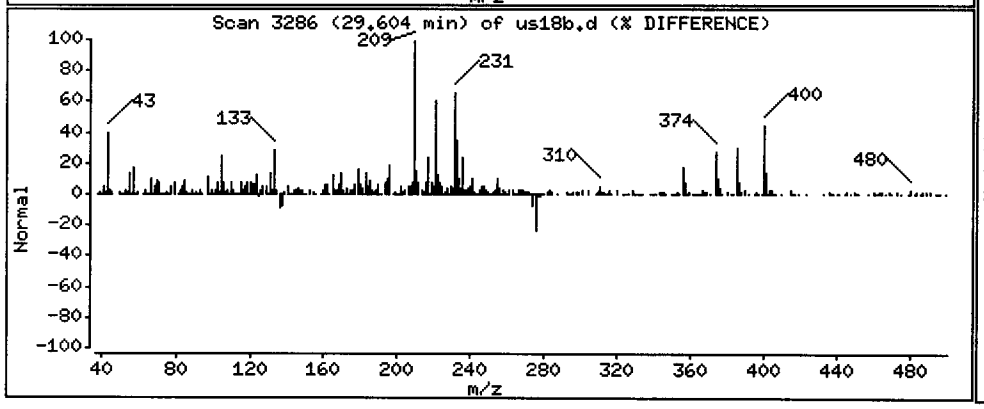
80 Benzo(g,h,i)perylene

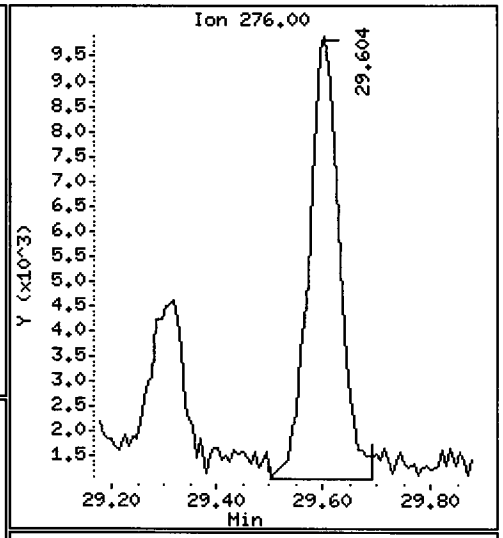
Concentration: 19.32 ug/kg

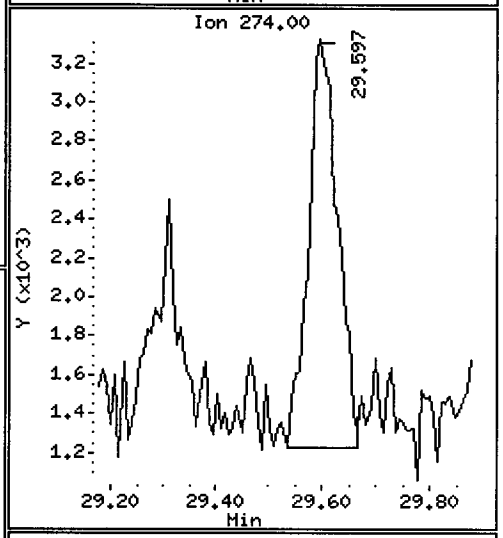


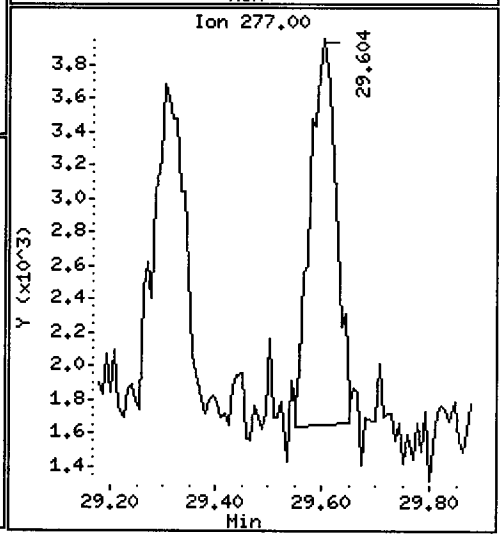












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

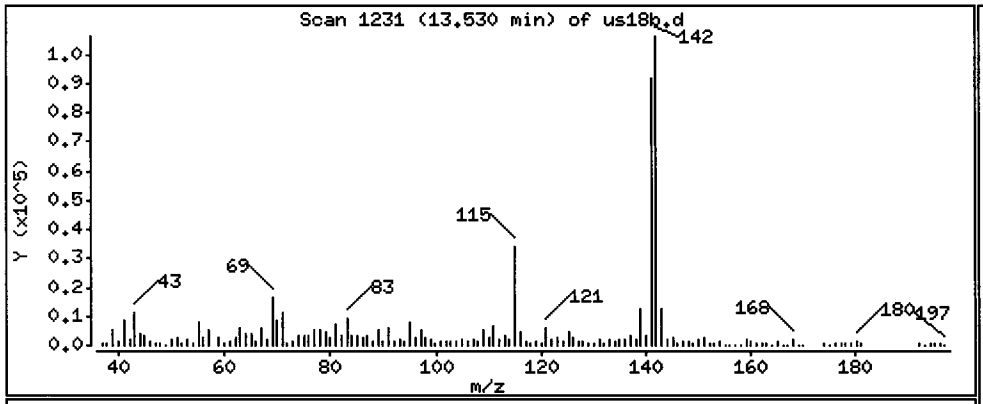
Operator: VTS/YZ

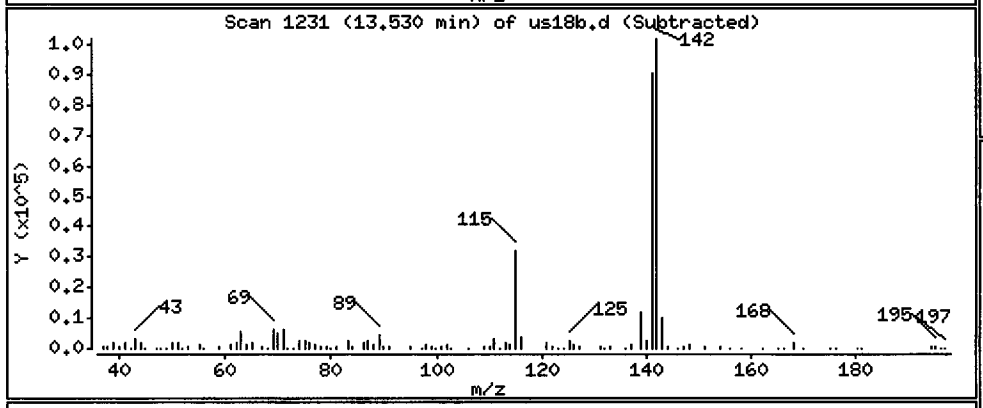
Column phase: ZB-5msi

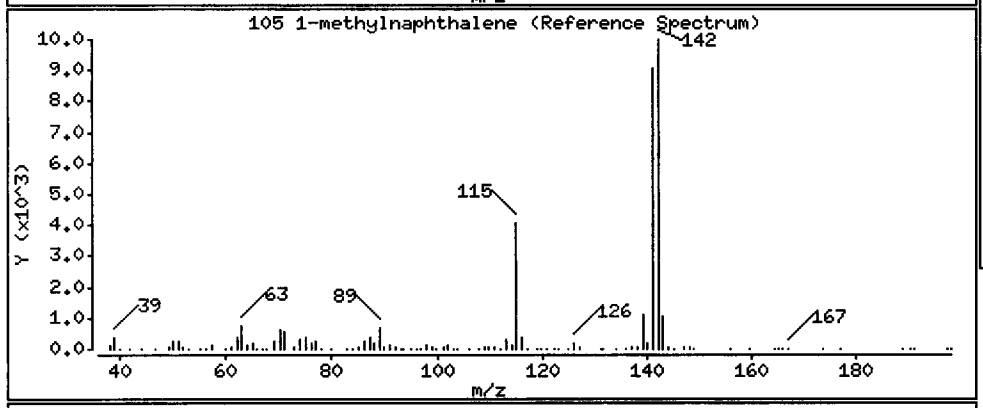
Column diameter: 0.25

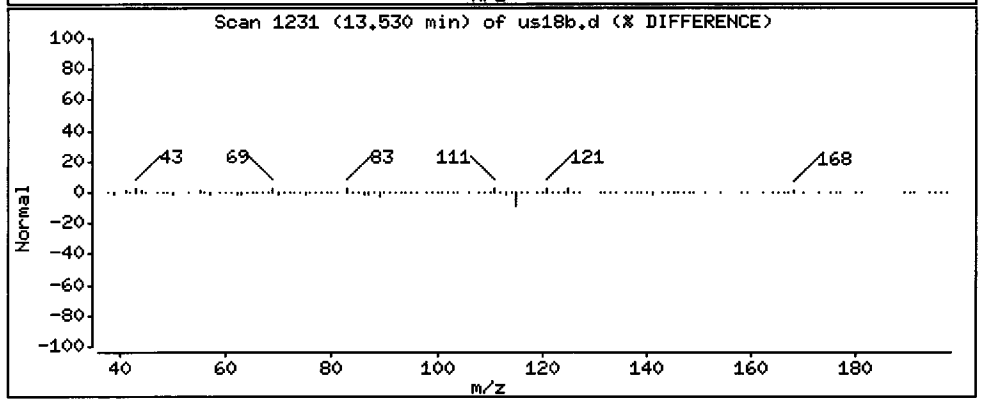
105 1-methylnaphthalene

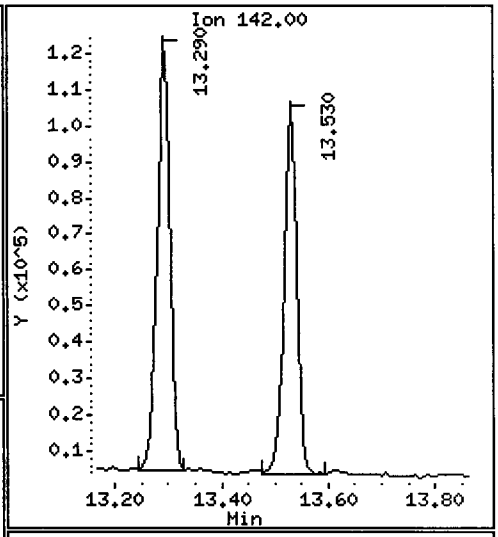
Concentration: 110.8 ug/kg

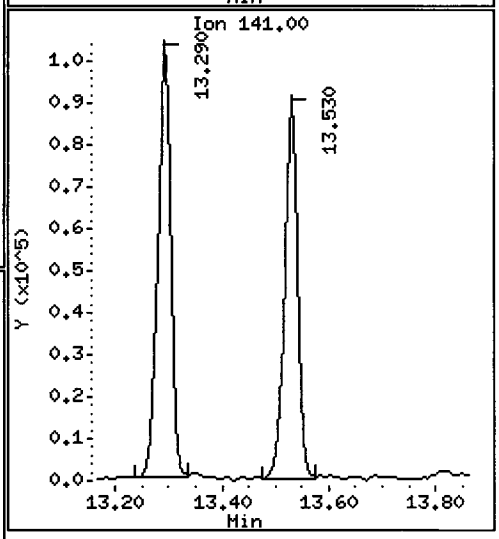












Data File: /chem1/nt10.i/20120508.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

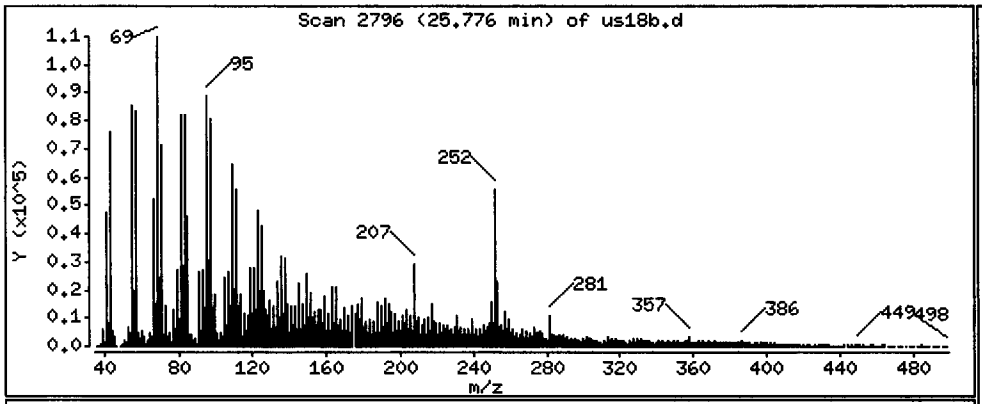
Operator: VTS/YZ

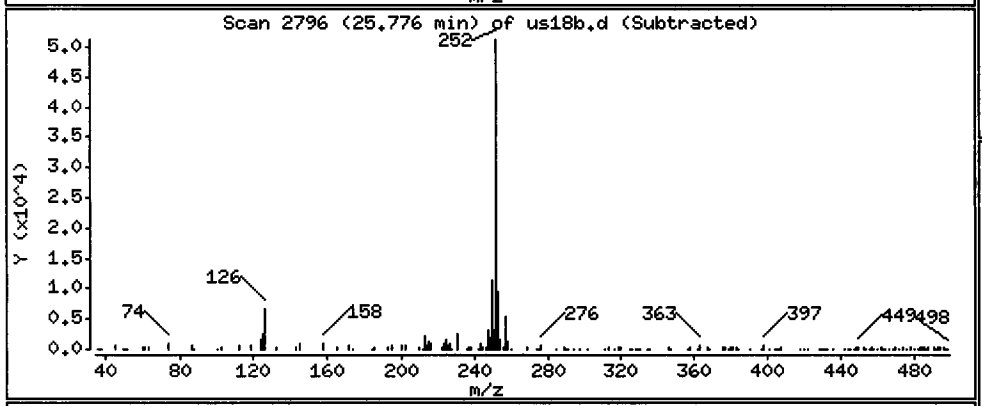
Column phase: ZB-5msi

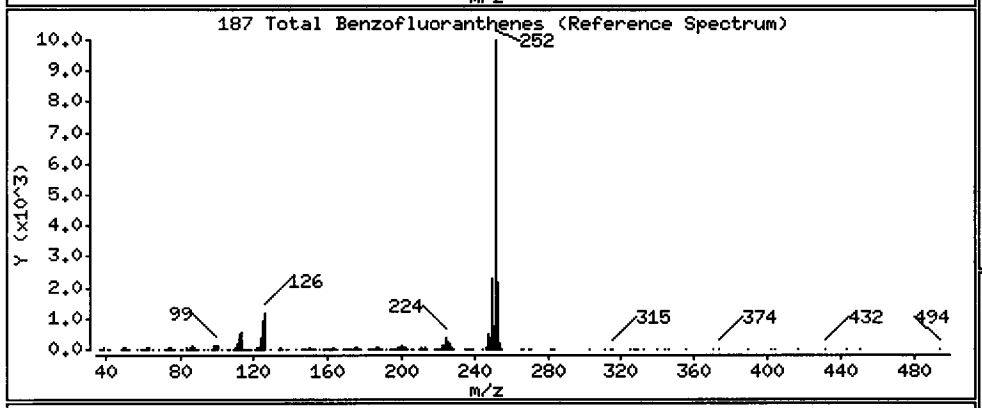
Column diameter: 0.25

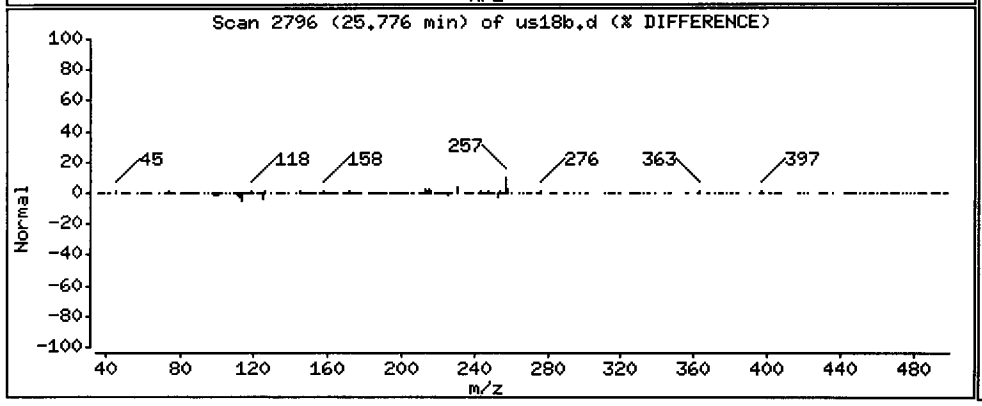
187 Total Benzofluoranthenes

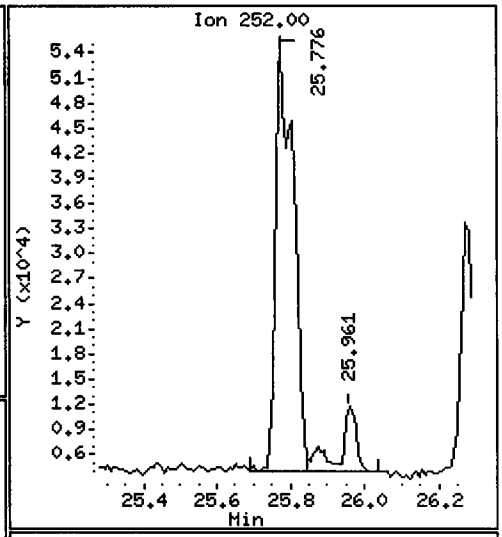
Concentration: 86.26 ug/kg

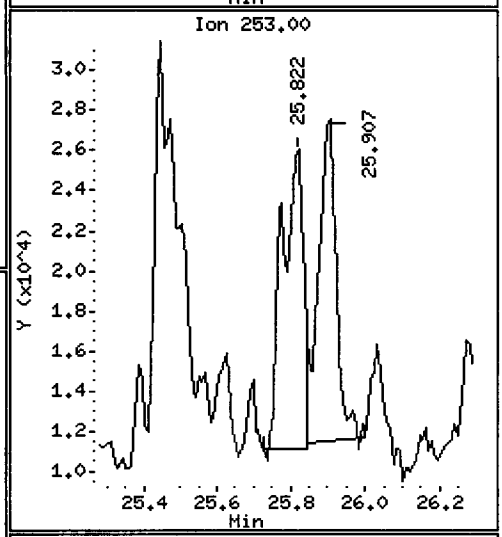


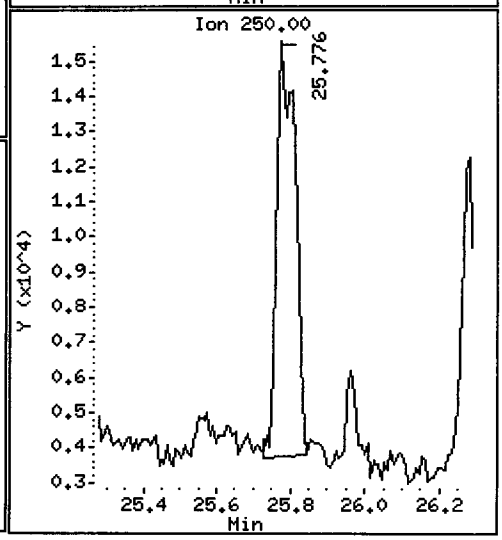












CO-ELUTION SUMMARY FOR FILE - us18b.d

Lab ID: US18B, Method: ABN.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20120509.b

Instrument: nt10.i Date: 09-MAY-2012 Method: ABN.m

INITIAL CAL: 07-MAY-2012

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 09-MAY-2012

Compound	%D
Pentachlorophenol	-20.9

Data File: /chem1/nt10.i/20120509.b/df0509.d

Date : 09-MAY-2012 15:54

Client ID: DFTPP

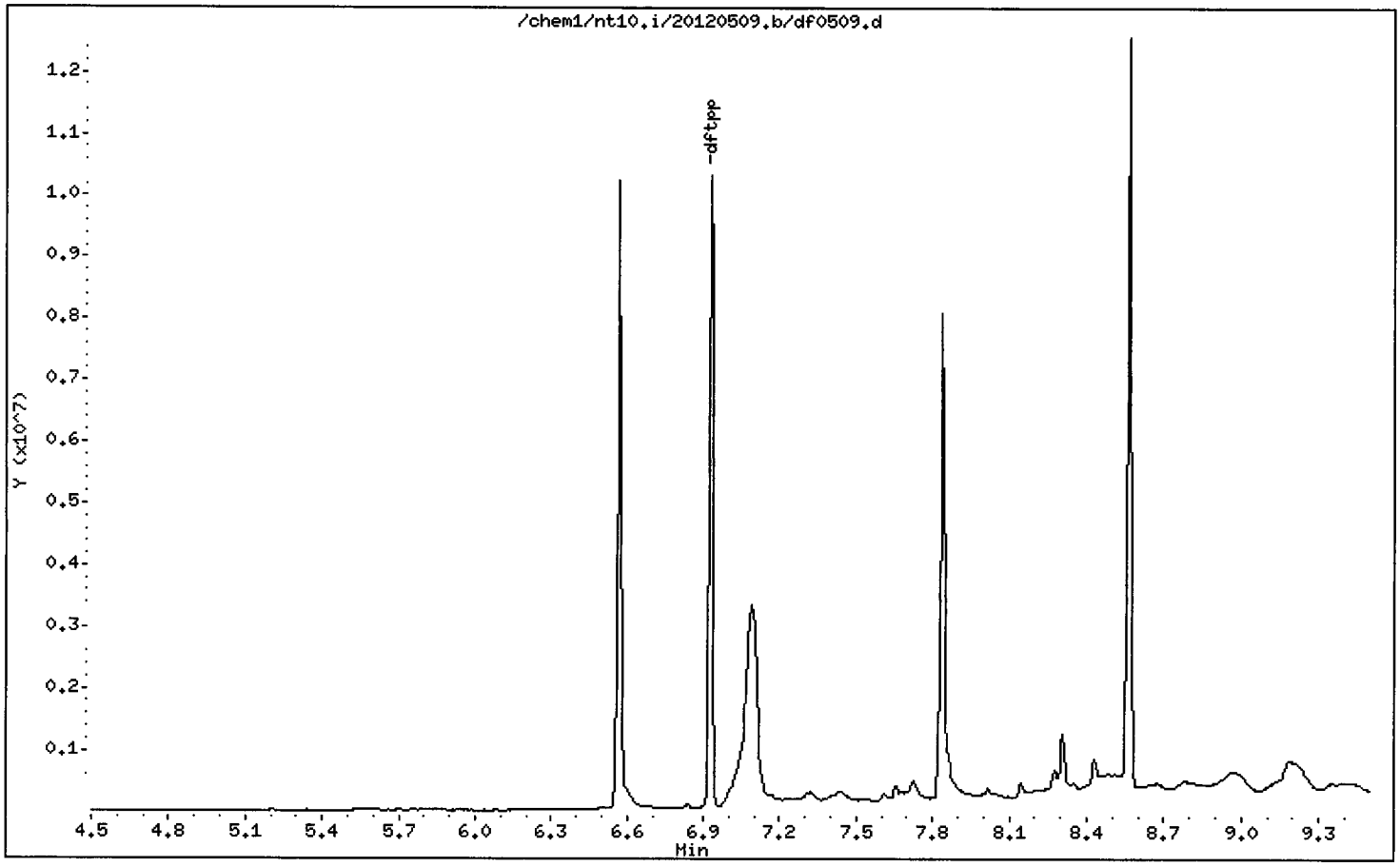
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120509.b/df0509.d

Date : 09-MAY-2012 15:54

Client ID: DFTPP

Instrument: nt10.i

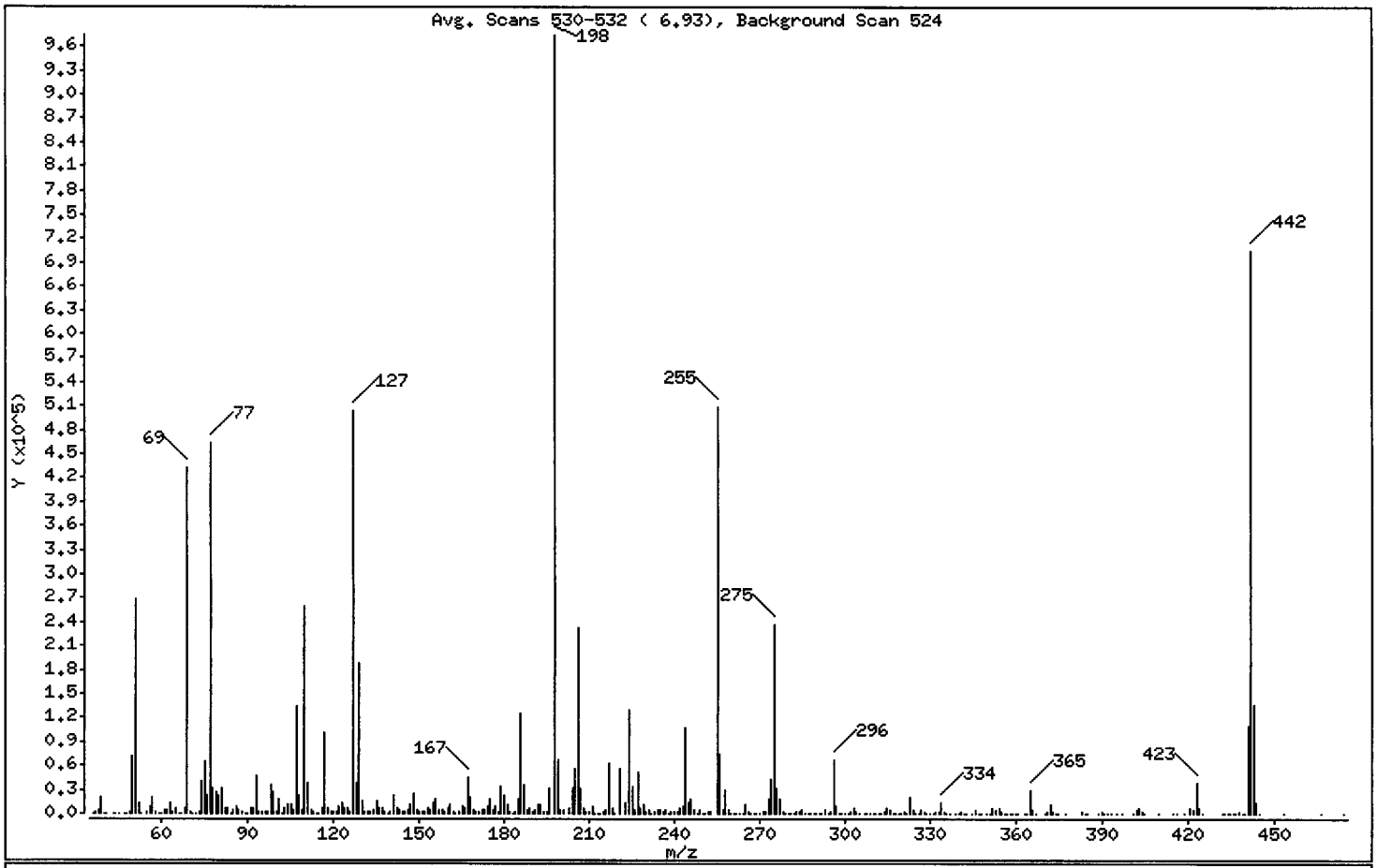
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	27.51
68	Less than 2.00% of mass 69	0.61 (1.38)
69	Mass 69 relative abundance	44.36
70	Less than 2.00% of mass 69	0.19 (0.44)
127	10.00 - 80.00% of mass 198	51.70
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.90
275	10.00 - 60.00% of mass 198	24.39
365	Greater than 1.00% of mass 198	3.10
441	0.01 - 24.00% of mass 442	11.19 (15.45)
442	50.00 - 200.00% of mass 198	72.44
443	15.00 - 24.00% of mass 442	14.08 (19.43)

Data File: /chem1/nt10.i/20120509.b/df0509.d

Date : 09-MAY-2012 15:54

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0509.d
Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524
Location of Maximum: 198.00
Number of points: 368

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	234	131.00	3287	228.00	7621	323.00	20656
37.00	1294	132.00	1701	229.00	10864	324.00	3952
38.00	3484	133.00	1183	230.00	1624	325.00	496
39.00	20488	134.00	4971	231.00	5169	326.00	545
40.00	1075	135.00	15050	232.00	764	327.00	4192
41.00	1053	136.00	5903	233.00	1131	328.00	2249
42.00	67	137.00	7322	234.00	3393	329.00	424
43.00	16	138.00	1645	235.00	3787	330.00	153
44.00	586	139.00	879	236.00	2645	331.00	226
45.00	653	140.00	2072	237.00	4444	332.00	1752
47.00	58	141.00	22656	238.00	838	333.00	2212
48.00	53	142.00	7453	239.00	2318	334.00	13390
49.00	1836	143.00	5329	240.00	1748	335.00	3320
50.00	70944	144.00	1366	241.00	2901	336.00	474
51.00	267840	145.00	1669	242.00	7393	337.00	56
52.00	13518	146.00	3797	243.00	8129	339.00	364
53.00	525	147.00	11543	244.00	106776	340.00	362
55.00	2303	148.00	25352	245.00	14207	341.00	2494
56.00	8993	149.00	5095	246.00	18720	342.00	703
57.00	21168	150.00	1506	247.00	4135	343.00	121
58.00	1323	151.00	3306	248.00	1032	345.00	73
59.00	339	152.00	1609	249.00	3766	346.00	4567
60.00	294	153.00	6623	250.00	879	347.00	910
61.00	4145	154.00	5466	251.00	1034	348.00	115
62.00	4849	155.00	13118	252.00	1194	350.00	227
63.00	14345	156.00	18160	253.00	2789	351.00	457
64.00	2103	157.00	4090	255.00	508416	352.00	6688
65.00	7550	158.00	4067	256.00	74664	353.00	4261
66.00	483	159.00	3348	257.00	5503	354.00	6335
67.00	768	160.00	6615	258.00	30176	355.00	1315
68.00	5971	161.00	11091	259.00	4619	356.00	128
69.00	432000	162.00	3208	260.00	915	357.00	78
70.00	1896	163.00	1016	261.00	944	358.00	63
71.00	627	164.00	1351	262.00	264	359.00	511
72.00	310	165.00	8371	263.00	634	360.00	194

Data File: /chem1/nt10.i/20120509.b/df0509.d

Date : 09-MAY-2012 15:54

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0509.d
Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524
Location of Maximum: 198.00
Number of points: 368

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	3120	166.00	6783	264.00	896	361.00	125
74.00	39224	167.00	45328	265.00	12267	363.00	176
75.00	64040	168.00	19368	266.00	1332	364.00	75
76.00	21680	169.00	3590	267.00	208	365.00	30144
77.00	463552	170.00	1699	268.00	205	366.00	4232
78.00	30592	171.00	2015	269.00	191	367.00	328
79.00	27896	172.00	4099	270.00	705	370.00	677
80.00	21368	173.00	5586	271.00	1235	371.00	1760
81.00	32016	174.00	9624	272.00	1845	372.00	11050
82.00	7751	175.00	18184	273.00	17728	373.00	2735
83.00	7470	176.00	5422	274.00	41784	374.00	363
84.00	688	177.00	8262	275.00	237504	375.00	53
85.00	4828	178.00	2639	276.00	30984	377.00	367
86.00	8528	179.00	33032	277.00	18888	383.00	3166
87.00	3664	180.00	23264	278.00	3074	384.00	740
88.00	1518	181.00	11154	279.00	857	385.00	379
89.00	688	182.00	1863	280.00	118	389.00	225
90.00	154	183.00	992	281.00	317	390.00	1524
91.00	7364	184.00	2524	282.00	525	391.00	932
92.00	7456	185.00	16832	283.00	2427	392.00	795
93.00	48120	186.00	124760	284.00	1616	393.00	260
94.00	3205	187.00	35376	285.00	3367	395.00	61
95.00	1790	188.00	3701	286.00	745	397.00	187
96.00	2754	189.00	7170	287.00	191	401.00	737
97.00	1473	190.00	1472	288.00	299	402.00	4031
98.00	36168	191.00	3581	289.00	918	403.00	6263
99.00	27792	192.00	10504	290.00	706	404.00	2176
100.00	2418	193.00	11871	291.00	525	405.00	369
101.00	17976	194.00	2374	292.00	1016	410.00	163
102.00	802	195.00	2000	293.00	4262	415.00	239
103.00	5911	196.00	30640	294.00	1109	416.00	51
104.00	10766	198.00	973760	295.00	1777	419.00	377
105.00	10845	199.00	67152	296.00	66704	421.00	5714
106.00	3402	200.00	5325	297.00	9229	422.00	4950
107.00	134976	201.00	5283	298.00	727	423.00	37616

Data File: /chem1/nt10.i/20120509.b/df0509.d

Date : 09-MAY-2012 15:54

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

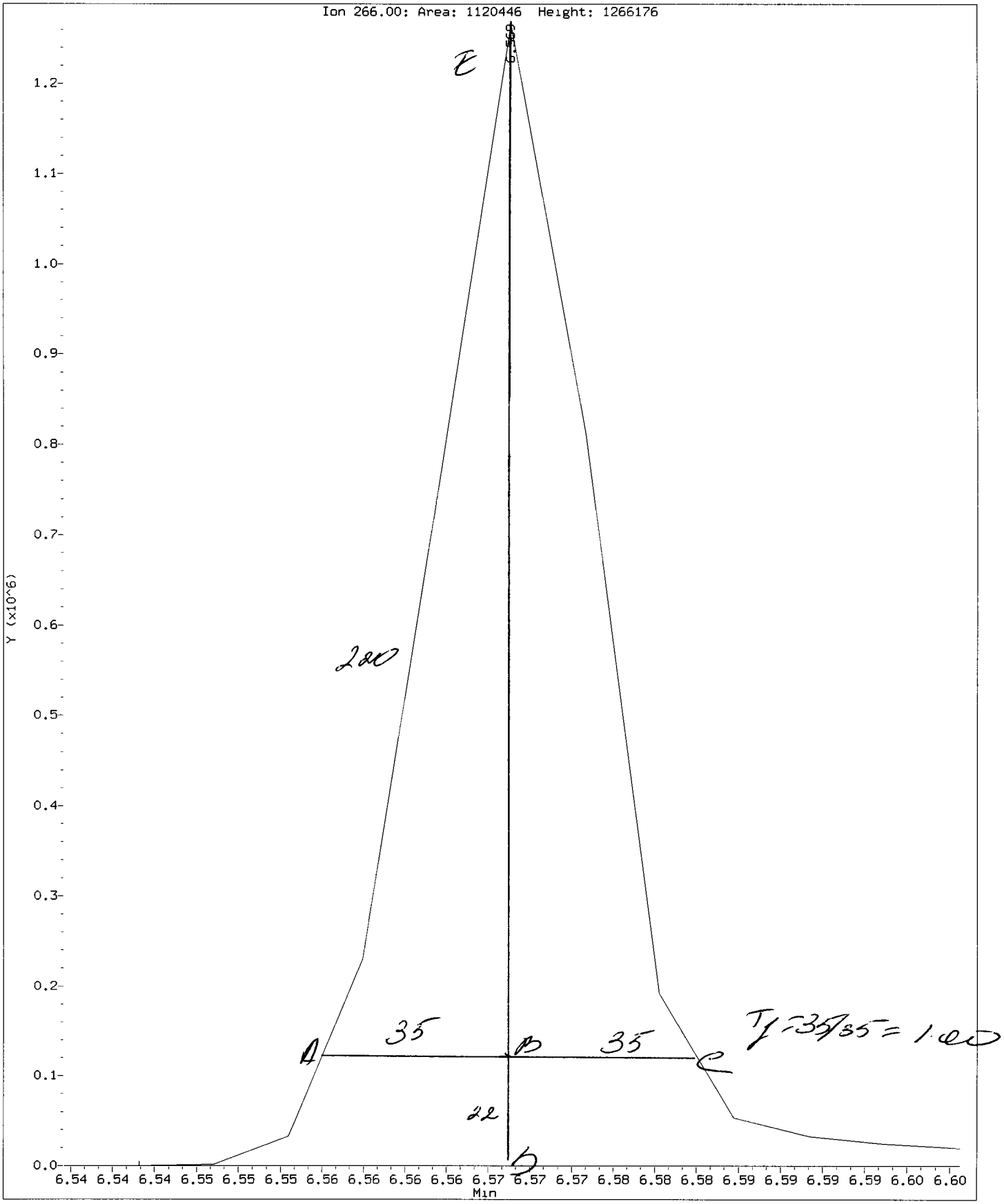
Column diameter: 0.25

Data File: df0509.d
Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524
Location of Maximum: 198.00
Number of points: 368

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	21656	203.00	6412	299.00	440	424.00	7422
109.00	4137	204.00	32328	300.00	214	425.00	703
110.00	258880	205.00	55896	301.00	981	432.00	172
111.00	38808	206.00	232320	302.00	1299	433.00	248
112.00	4630	207.00	30704	303.00	7623	434.00	265
113.00	1463	208.00	7313	304.00	2222	435.00	347
114.00	265	209.00	2350	305.00	334	436.00	341
115.00	623	210.00	2991	307.00	184	437.00	1096
116.00	7323	211.00	9613	308.00	1079	438.00	1120
117.00	100880	212.00	484	309.00	742	439.00	875
118.00	7281	213.00	762	310.00	903	440.00	642
119.00	1561	214.00	417	311.00	378	441.00	108976
120.00	1876	215.00	2488	312.00	282	442.00	705408
121.00	1308	216.00	4868	313.00	664	443.00	137088
122.00	8397	217.00	63176	314.00	3219	444.00	13219
123.00	13520	218.00	7614	315.00	7678	445.00	791
124.00	5830	219.00	878	316.00	4401	453.00	138
125.00	6175	221.00	56776	317.00	982	466.00	114
126.00	2465	223.00	14155	318.00	108	474.00	78
127.00	503424	224.00	129832	319.00	159		
128.00	37776	225.00	32592	320.00	294		
129.00	188416	226.00	3622	321.00	2335		
130.00	16075	227.00	51016	322.00	1098		

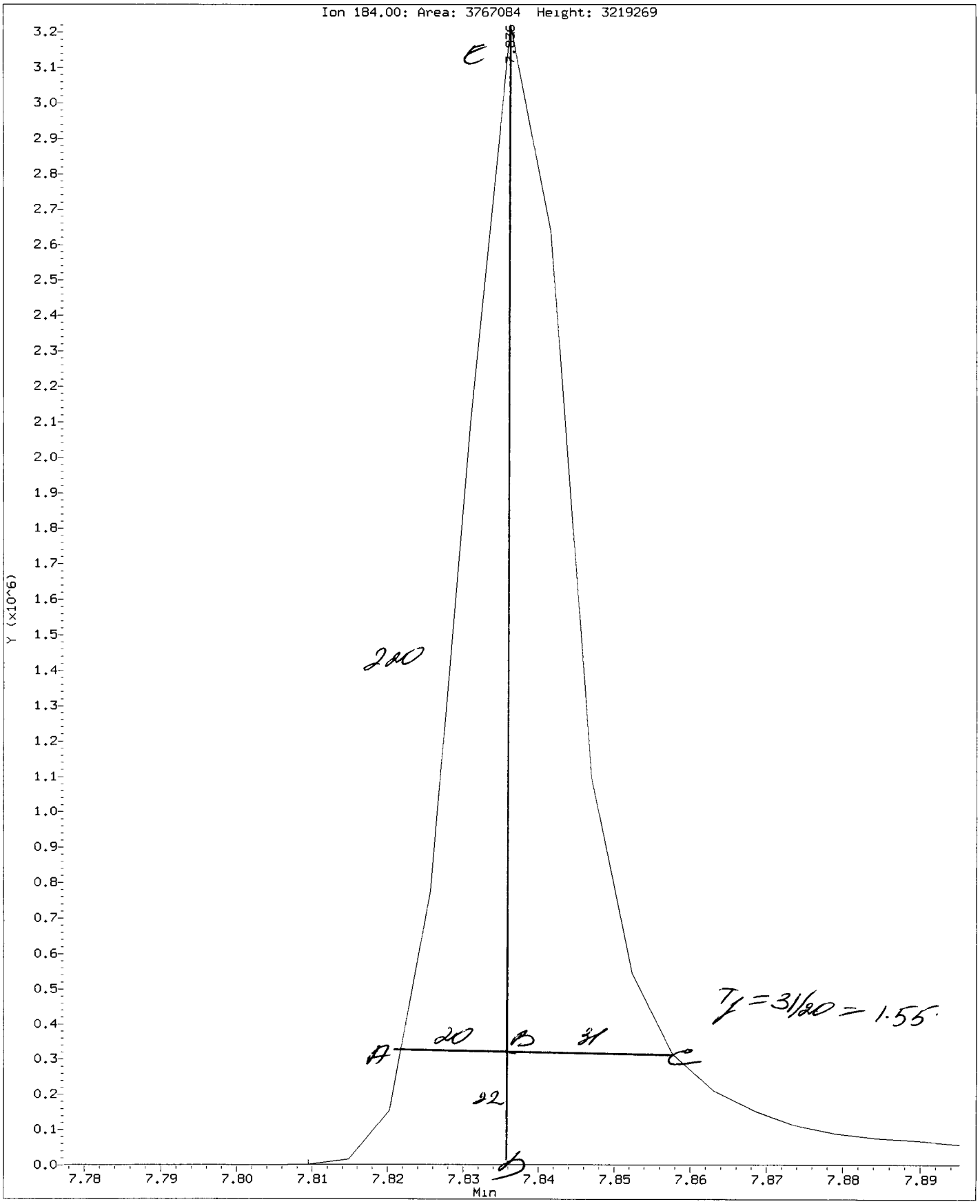
Data File: /chem1/nt10.i/20120509.b/ddt.b/df0509.d
Injection Date: 09-MAY-2012 15:54
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20120509.b/ddt.b/df0509.d
Injection Date: 09-MAY-2012 15:54
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120509.b/ddt.b/df0509.d ARI ID: DFTPP
Method: /chem1/nt10.i/20120509.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 09-MAY-2012 15:54 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.569	1120446
Benzidine	7.836	3767084
4,4'-DDE	8.018	11299
4,4'-DDD	8.307	179151
4,4'-DDT	8.564	2176454

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(11299 + 179151) * 100}{(11299 + 179151 + 2176454)}$$

DDT Percent Breakdown = 8.0 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0509.d
Analysis Type:
Lab Sample ID: CC0509
Method: /chem1/nt10.i/20120509.b/ABN.m

Injection Date: 09-MAY-2012 16:09
Init. Cal. Date(s): 07-MAY-2012 07-MAY-2012
Init. Cal. Times: 14:23 19:19
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.36833	1.32875	1.32875	0.010	-2.89246	20.00000	Averaged	
$ 2 Phenol-d5	1.70144	1.60992	1.60992	0.010	-5.37864	20.00000	Averaged	
3 Phenol	1.86492	1.76011	1.76011	0.100	-5.62017	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.47252	1.42556	1.42556	0.010	-3.18932	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.64396	1.58951	1.58951	0.010	-3.31209	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.59609	1.53928	1.53928	0.010	-3.55960	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	0.99780	0.95083	0.95083	0.010	-4.70715	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.54945	1.48465	1.48465	0.010	-4.18215	20.00000	Averaged	
11 Benzyl alcohol	0.86908	0.79698	0.79698	0.010	-8.29606	20.00000	Averaged	
13 2-Methylphenol	1.46773	1.38792	1.38792	0.700	-5.43782	20.00000	Averaged	
17 Hexachloroethane	0.62265	0.62269	0.62269	0.300	0.00524	20.00000	Averaged	
15 4-Methylphenol	1.53038	1.40630	1.40630	0.600	-8.10774	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.34200	0.33100	0.33100	0.010	-3.21577	20.00000	Averaged	
22 2,4-Dimethylphenol	0.35518	0.33737	0.33737	0.200	-5.01603	20.00000	Averaged	
24 Benzoic acid	0.27548	0.25470	0.25470	0.010	-7.54165	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.32452	0.30015	0.30015	0.010	-7.51122	20.00000	Averaged	
28 Naphthalene	0.99894	0.96440	0.96440	0.100	-3.45712	20.00000	Averaged	
30 Hexachlorobutadiene	0.17799	0.16807	0.16807	0.010	-5.57634	20.00000	Averaged	
32 2-Methylnaphthalene	0.68507	0.67892	0.67892	0.300	-0.89753	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.36447	1.27828	1.27828	0.010	-6.31692	20.00000	Averaged	
39 Dimethylphthalate	1.22066	1.14430	1.14430	0.010	-6.25611	20.00000	Averaged	
40 Acenaphthylene	1.77279	1.85639	1.85639	0.900	4.71571	20.00000	Averaged	
44 Acenaphthene	1.05813	1.01570	1.01570	0.100	-4.00973	20.00000	Averaged	
46 Dibenzofuran	1.57482	1.49216	1.49216	0.800	-5.24899	20.00000	Averaged	
50 Diethylphthalate	1.16820	1.12892	1.12892	0.010	-3.36300	20.00000	Averaged	
49 Fluorene	1.20142	1.25941	1.25941	0.100	4.82668	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.51491	0.48970	0.48970	0.010	-4.89640	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.18351	0.16288	0.16288	0.010	-11.24136	20.00000	Averaged	
57 Hexachlorobenzene	0.24321	0.21377	0.21377	0.100	-12.10708	20.00000	Averaged	
58 Pentachlorophenol	0.16902	0.13376	0.13376	0.010	-20.85848	20.00000	Averaged	<-
60 Phenanthrene	0.98917	0.96043	0.96043	0.700	-2.90533	20.00000	Averaged	
61 Anthracene	1.04413	1.04947	1.04947	0.700	0.51198	20.00000	Averaged	
63 Di-n-butylphthalate	1.28434	1.34617	1.34617	0.010	4.81441	20.00000	Averaged	
64 Fluoranthene	1.12590	1.11122	1.11122	0.600	-1.30451	20.00000	Averaged	
65 Pyrene	1.20879	1.15210	1.15210	0.600	-4.68921	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0509.d
Analysis Type:
Lab Sample ID: CC0509
Method: /chem1/nt10.i/20120509.b/ABN.m

Injection Date: 09-MAY-2012 16:09
Init. Cal. Date(s): 07-MAY-2012 07-MAY-2012
Init. Cal. Times: 14:23 19:19
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 66 Terphenyl-d14	0.75799	0.68713	0.68713	0.010	-9.34746	20.00000	Averaged
67 Butylbenzylphthalate	0.51455	0.53234	0.53234	0.010	3.45876	20.00000	Averaged
68 Benzo(a)anthracene	1.08475	1.02220	1.02220	0.700	-5.76634	20.00000	Averaged
71 Chrysene	0.96833	0.91405	0.91405	0.700	-5.60524	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.52011	0.48961	0.48961	0.010	-5.86338	20.00000	Averaged
73 Di-n-octylphthalate	0.95203	0.86480	0.86480	0.010	-9.16272	20.00000	Averaged
76 Benzo(a)pyrene	0.97171	0.93946	0.93946	0.700	-3.31874	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.10568	1.08772	1.08772	0.500	-1.62434	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.84975	0.87870	0.87870	0.400	3.40702	20.00000	Averaged
80 Benzo(g,h,i)perylene	0.95596	0.91198	0.91198	0.500	-4.60054	20.00000	Averaged
105 1-methylnaphthalene	0.69855	0.68480	0.68480	0.010	-1.96795	20.00000	Averaged
187 Total Benzofluoranthenes	1.08828	1.01459	1.01459	0.010	-6.77074	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/10/12

Data file : /chem1/nt10.i/20120509.b/cc0509.d
Lab Smp Id: CC0509
Inj Date : 09-MAY-2012 16:09
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0509
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120509.b/ABN.m
Meth Date : 09-May-2012 16:46 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.683	6.683	(0.738)	369264	5.00000	4.855
$	2 Phenol-d5	99	8.414	8.414	(0.929)	447403	5.00000	4.731
	3 Phenol	94	8.437	8.437	(0.932)	489139	5.00000	4.719
$	5 2-Chlorophenol-d4	132	8.668	8.668	(0.957)	396167	5.00000	4.841
	7 1,3-Dichlorobenzene	146	8.986	8.986	(0.992)	441729	5.00000	4.834
*	8 1,4-Dichlorobenzene-d4	152	9.056	9.056	(1.000)	222322	4.00000	
	9 1,4-Dichlorobenzene	146	9.087	9.087	(1.003)	427771	5.00000	4.822
$	10 1,2-Dichlorobenzene-d4	152	9.444	9.444	(1.043)	264238	5.00000	4.765
	12 1,2-Dichlorobenzene	146	9.467	9.467	(1.045)	412589	5.00000	4.791
	11 Benzyl alcohol	108	9.374	9.374	(1.035)	221483	5.00000	4.585
	13 2-Methylphenol	108	9.638	9.638	(1.064)	385706	5.00000	4.728
	17 Hexachloroethane	117	10.103	10.103	(1.116)	173046	5.00000	5.000
	15 4-Methylphenol	108	9.933	9.933	(1.097)	390815	5.00000	4.595
$	18 Nitrobenzene-d5	82	10.243	10.243	(0.873)	362857	5.00000	4.839
	22 2,4-Dimethylphenol	107	11.056	11.056	(0.942)	739674	10.0000	9.498
	24 Benzoic acid	105	11.334	11.334	(0.966)	1116855	20.0000	18.49
	26 1,2,4-Trichlorobenzene	180	11.650	11.650	(0.993)	329035	5.00000	4.624
*	27 Naphthalene-d8	136	11.735	11.735	(1.000)	876995	4.00000	
	28 Naphthalene	128	11.781	11.781	(1.004)	1057220	5.00000	4.827
	30 Hexachlorobutadiene	225	12.191	12.191	(1.039)	184243	5.00000	4.721
	32 2-Methylnaphthalene	142	13.290	13.290	(1.132)	744265	5.00000	4.955
$	36 2-Fluorobiphenyl	172	14.156	14.156	(0.905)	814801	5.00000	4.684
	39 Dimethylphthalate	163	15.162	15.162	(0.969)	729399	5.00000	4.687
	40 Acenaphthylene	152	15.302	15.302	(0.978)	1183299	5.00000	5.236
*	42 Acenaphthene-d10	164	15.642	15.642	(1.000)	509936	4.00000	
	44 Acenaphthene	153	15.712	15.712	(1.004)	647428	5.00000	4.800
	46 Dibenzofuran	168	16.075	16.075	(1.028)	951130	5.00000	4.738

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
50 Diethylphthalate	149	16.748	16.748	(1.071)	719594	5.00000	4.832
49 Fluorene	166	16.848	16.848	(1.077)	802775	5.00000	5.241
54 N-Nitrosodiphenylamine	169	17.141	17.141	(0.906)	495556	5.00000	4.755
$ 55 2,4,6-Tribromophenol	330	17.427	17.427	(1.114)	103823	5.00000	4.438
57 Hexachlorobenzene	284	18.268	18.268	(0.965)	216321	5.00000	4.395
58 Pentachlorophenol	266	18.663	18.663	(0.986)	270726	10.0000	7.914
* 59 Phenanthrene-d10	188	18.926	18.926	(1.000)	809564	4.00000	
60 Phenanthrene	178	18.972	18.972	(1.002)	971916	5.00000	4.855
61 Anthracene	178	19.073	19.073	(1.008)	1062020	5.00000	5.026
63 Di-n-butylphthalate	149	20.280	20.280	(1.072)	1362264	5.00000	5.241
64 Fluoranthene	202	21.378	21.378	(1.130)	1124501	5.00000	4.935
65 Pyrene	202	21.796	21.796	(0.909)	1172585	5.00000	4.766
$ 66 Terphenyl-d14	244	22.113	22.113	(0.922)	699350	5.00000	4.533
67 Butylbenzylphthalate	149	23.058	23.058	(0.962)	541807	5.00000	5.173
68 Benzo(a)anthracene	228	23.956	23.956	(0.999)	1040375	5.00000	4.712
* 69 Chrysene-d12	240	23.979	23.979	(1.000)	814222	4.00000	
71 Chrysene	228	24.026	24.026	(1.002)	930300	5.00000	4.720
72 bis(2-Ethylhexyl)phthalate	149	24.096	24.096	(0.961)	796991	5.00000	4.707
* 134 Di-n-octylphthalate-d4	153	25.071	25.071	(1.000)	1302247	4.00000	
73 Di-n-octylphthalate	149	25.079	25.079	(1.000)	1407727	5.00000	4.542
76 Benzo(a)pyrene	252	26.356	26.356	(0.996)	943492	5.00000	4.834
* 77 Perylene-d12	264	26.465	26.465	(1.000)	803430	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.866	28.866	(1.091)	1092382	5.00000	4.919
79 Dibenzo(a,h)anthracene	278	28.890	28.890	(1.092)	882464	5.00000	5.170
80 Benzo(g,h,i)perylene	276	29.565	29.565	(1.117)	915888	5.00000	4.770
105 1-methylnaphthalene	142	13.530	13.530	(1.153)	750709	5.00000	4.902
187 Total Benzofluoranthenes	252	25.799	25.799	(0.975)	2037889	10.0000	9.323

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0509.d
Lab Smp Id: CC0509
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120509.b/ABN.m
Misc Info:

Calibration Date: 09-MAY-2012
Calibration Time: 16:09

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	222322	-18.23
27 Naphthalene-d8	1080694	540347	2161388	876995	-18.85
42 Acenaphthene-d10	623821	311910	1247642	509936	-18.26
59 Phenanthrene-d10	999143	499572	1998286	809564	-18.97
69 Chrysene-d12	1001009	500504	2002018	814222	-18.66
134 Di-n-octylphthala	1489422	744711	2978844	1302247	-12.57
77 Perylene-d12	988348	494174	1976696	803430	-18.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.64	15.14	16.14	15.64	0.00
59 Phenanthrene-d10	18.93	18.43	19.43	18.93	0.00
69 Chrysene-d12	23.98	23.48	24.48	23.98	0.00
134 Di-n-octylphthala	25.07	24.57	25.57	25.07	0.00
77 Perylene-d12	26.46	25.96	26.96	26.46	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120509.b/cc0509.d

Date : 09-MAY-2012 16:09

Client ID:

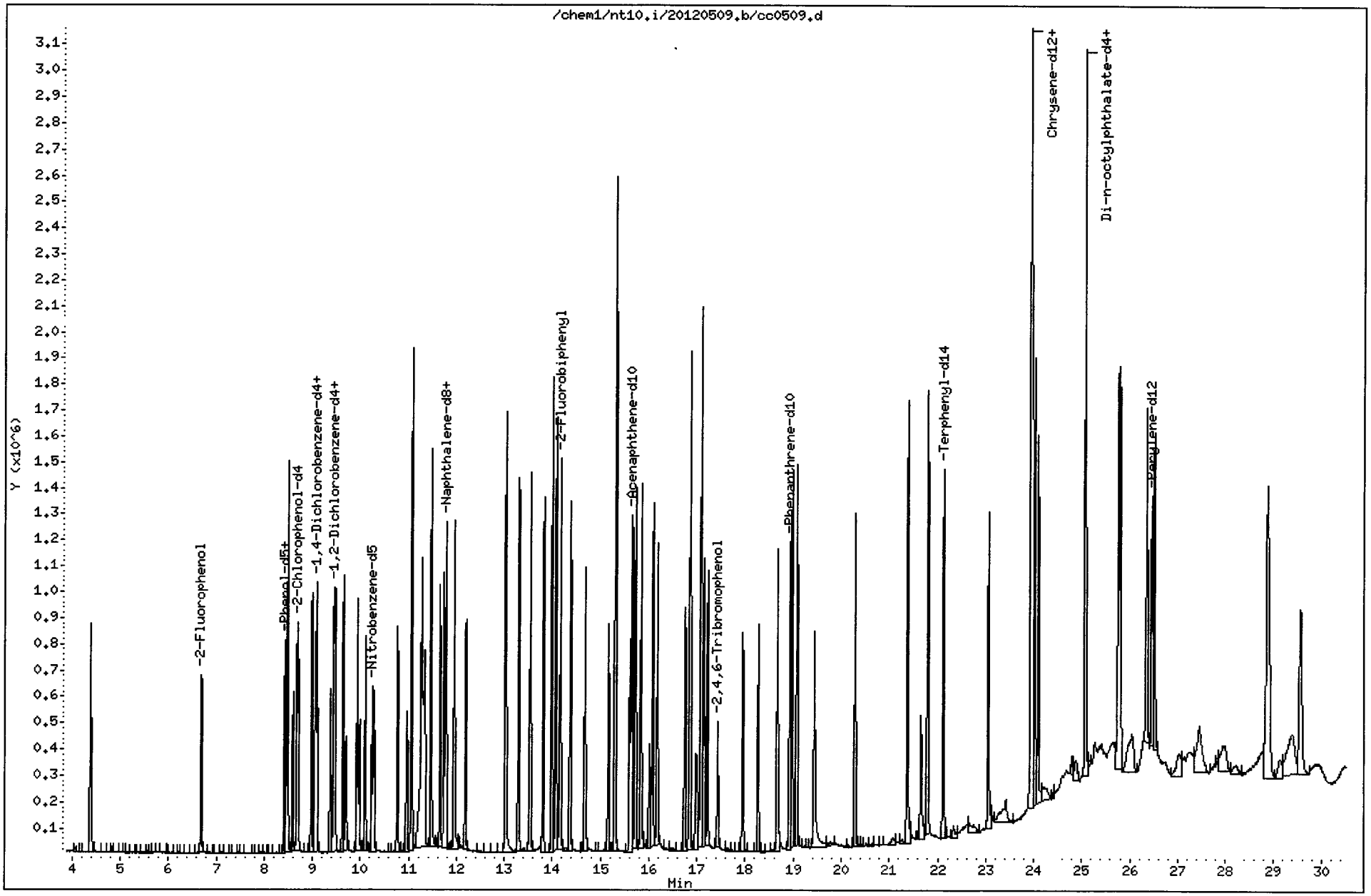
Sample Info: CC0509

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - cc0509.d

Lab ID: CC0509, Method: ABN.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Y25/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120509.b/ur81e5.d
Lab Smp Id: UR81E Client Smp ID: IJ12-04
Inj Date : 09-MAY-2012 16:46
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UR81E,5
Misc Info : 12-7396
Comment : 1ul Injection
Method : /chem1/nt10.i/20120509.b/ABN.m
Meth Date : 09-May-2012 16:46 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 4
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.690	6.683	(0.739)	63312	0.77573	387.9
$ 2 Phenol-d5	99	8.421	8.414	(0.930)	67080	0.66098	330.5
3 Phenol	94	8.444	8.437	(0.932)	26156	0.23514	117.6
$ 5 2-Chlorophenol-d4	132	8.668	8.668	(0.957)	65451	0.74519	372.6
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.055	9.056	(1.000)	238587	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.444	9.444	(1.043)	29681	0.49871	249.4
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	Compound Not Detected.					
$ 18 Nitrobenzene-d5	82	10.243	10.243	(0.873)	40331	0.51963	259.8
22 2,4-Dimethylphenol	107	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.735	11.735	(1.000)	907775	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.156	14.156	(0.905)	99337	0.56525	282.6
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	15.302	15.302	(0.978)	34407	0.15069	75.35
*	42 Acenaphthene-d10	164	15.642	15.642	(1.000)	515185	4.00000	
	44 Acenaphthene	153	15.712	15.712	(1.004)	18480	0.13560	67.80
	46 Dibenzofuran	168	16.067	16.075	(1.027)	32817	0.16180	80.90
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	16.840	16.848	(1.077)	40229	0.25998	130.0
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.426	17.427	(1.114)	20244	0.85651	428.3
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.918	18.926	(1.000)	822308	4.00000	
	60 Phenanthrene	178	18.972	18.972	(1.003)	792750	3.89843	1949
	61 Anthracene	178	19.065	19.073	(1.008)	61706	0.28747	143.7
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.386	21.378	(1.130)	3110000	13.4365	6718
	65 Pyrene	202	21.796	21.796	(0.909)	2077474	8.13600	4068
$	66 Terphenyl-d14	244	22.113	22.113	(0.922)	108452	0.67733	338.7
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	23.948	23.956	(0.999)	252800	1.10324	551.6
*	69 Chrysene-d12	240	23.979	23.979	(1.000)	844958	4.00000	
	71 Chrysene	228	24.026	24.026	(1.002)	826178	4.03902	2020
	72 bis(2-Ethylhexyl)phthalate	149	24.095	24.096	(0.961)	113025	0.65879	329.4
*	134 Di-n-octylphthalate-d4	153	25.071	25.071	(1.000)	1319452	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.356	26.356	(0.996)	162283	0.80129	400.6
*	77 Perylene-d12	264	26.465	26.465	(1.000)	833691	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.866	28.866	(1.091)	112059	0.48626	243.1
	79 Dibenzo(a,h)anthracene	278	28.890	28.890	(1.092)	26702	0.15077	75.38
	80 Benzo(g,h,i)perylene	276	29.565	29.565	(1.117)	102441	0.51415	257.1
	105 1-methylnaphthalene	142	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	25.760	25.799	(0.973)	896050	3.95046	1975

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81e5.d
Lab Smp Id: UR81E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120509.b/ABN.m
Misc Info: 12-7396

Calibration Date: 09-MAY-2012
Calibration Time: 16:09
Client Smp ID: IJ12-04
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	271872	135936	543744	238587	-12.24
27 Naphthalene-d8	1080694	540347	2161388	907775	-16.00
42 Acenaphthene-d10	623821	311910	1247642	515185	-17.41
59 Phenanthrene-d10	999143	499572	1998286	822308	-17.70
69 Chrysene-d12	1001009	500504	2002018	844958	-15.59
134 Di-n-octylphthala	1489422	744711	2978844	1319452	-11.41
77 Perylene-d12	988348	494174	1976696	833691	-15.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.64	15.14	16.14	15.64	0.00
59 Phenanthrene-d10	18.93	18.43	19.43	18.92	-0.04
69 Chrysene-d12	23.98	23.48	24.48	23.98	0.00
134 Di-n-octylphthala	25.07	24.57	25.57	25.07	0.00
77 Perylene-d12	26.46	25.96	26.96	26.46	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81E
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120509.b/ABN.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-04
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	387.9	51.72	30-160
$ 2 Phenol-d5	750.0	330.5	44.07	30-160
$ 5 2-Chlorophenol-d4	750.0	372.6	49.68	30-160
$ 10 1,2-Dichlorobenzen	500.0	249.4	49.87	30-160
$ 18 Nitrobenzene-d5	500.0	259.8	51.96	30-160
$ 36 2-Fluorobiphenyl	500.0	282.6	56.53	30-160
$ 55 2,4,6-Tribromophen	750.0	428.3	57.10	30-160
$ 66 Terphenyl-d14	500.0	338.7	67.73	30-160

Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

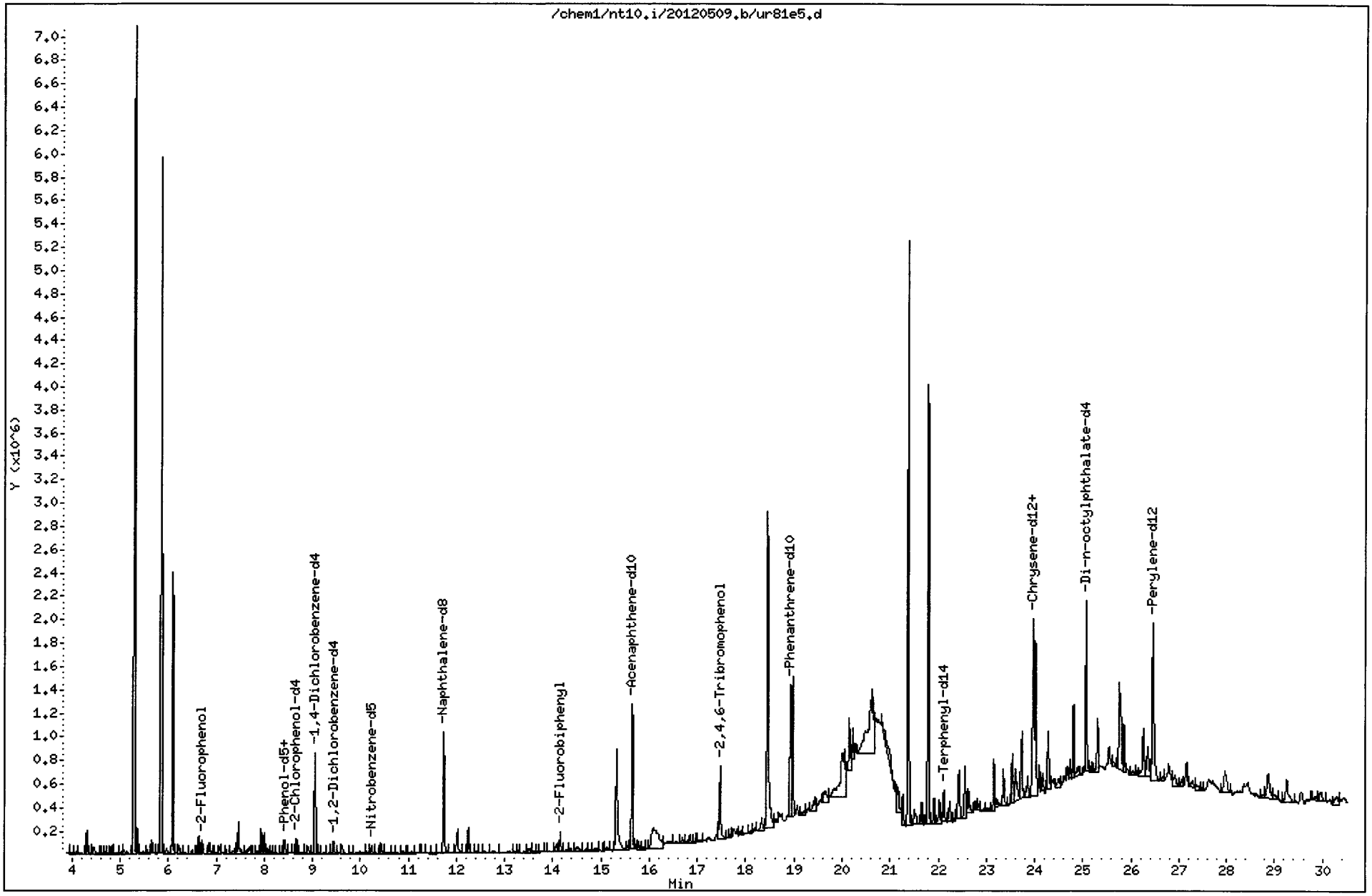
Sample Info: UR81E,5

Volume Injected (uL): 1.0

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

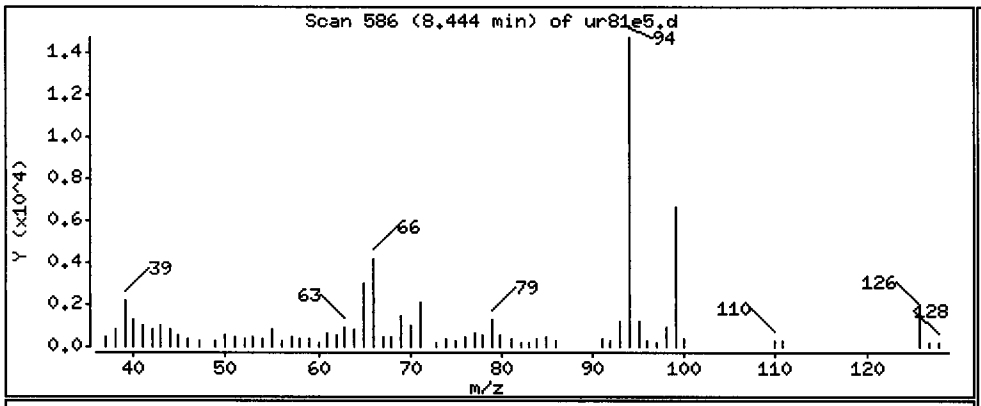
Client ID: IJ12-04 Instrument: nt10.i

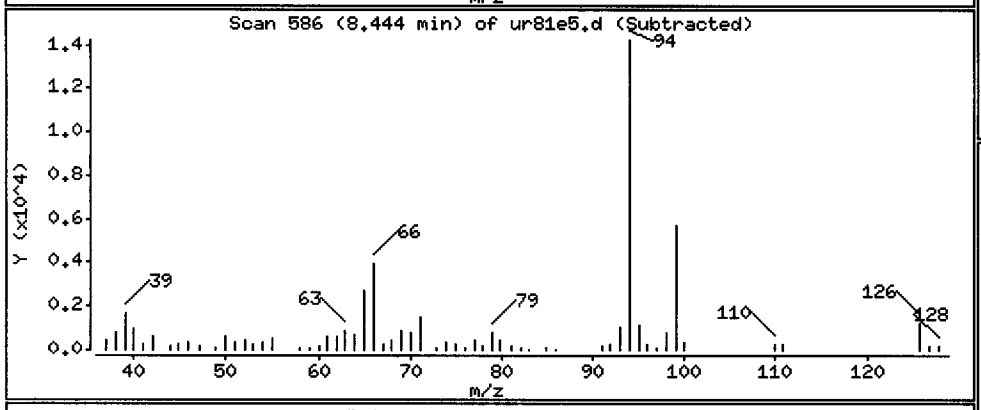
Sample Info: UR81E,5

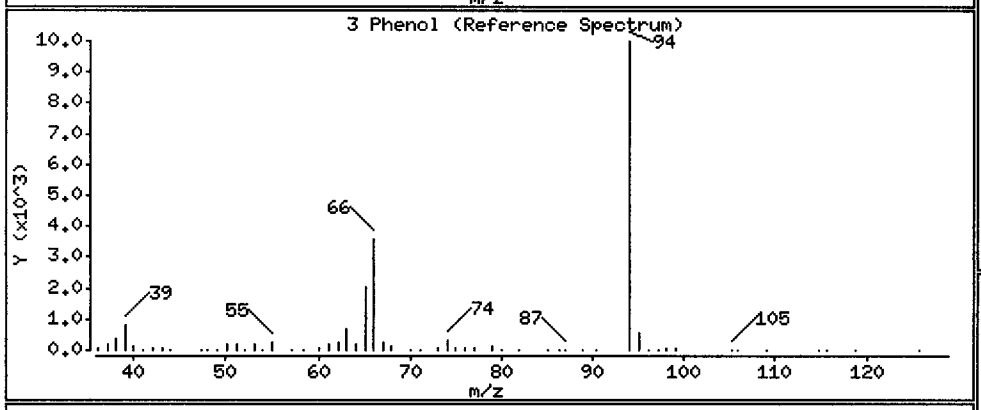
Volume Injected (uL): 1.0 Operator: VTS/YZ

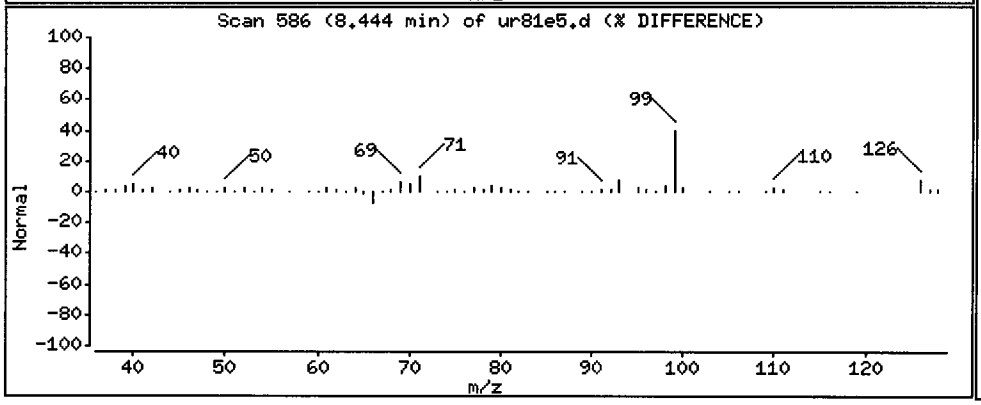
Column phase: ZB-5msi Column diameter: 0.25

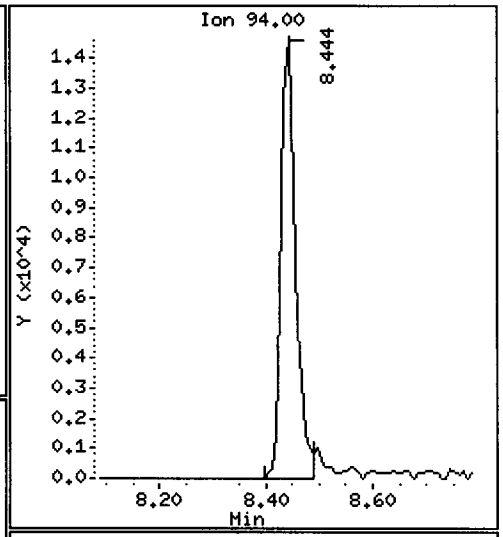
3 Phenol Concentration: 117.6 ug/kg

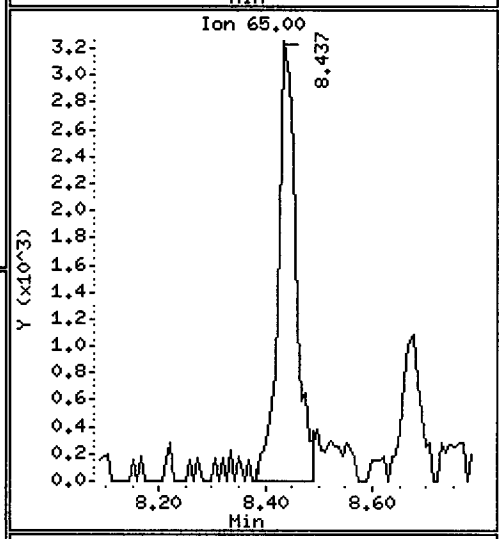


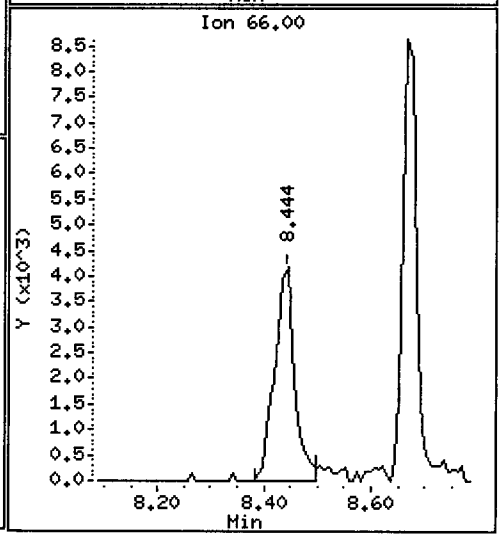












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

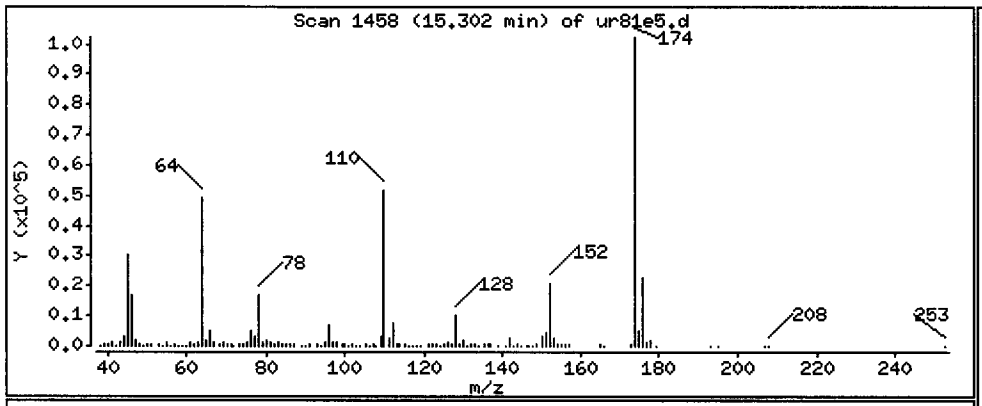
Client ID: IJ12-04 | Instrument: nt10.i

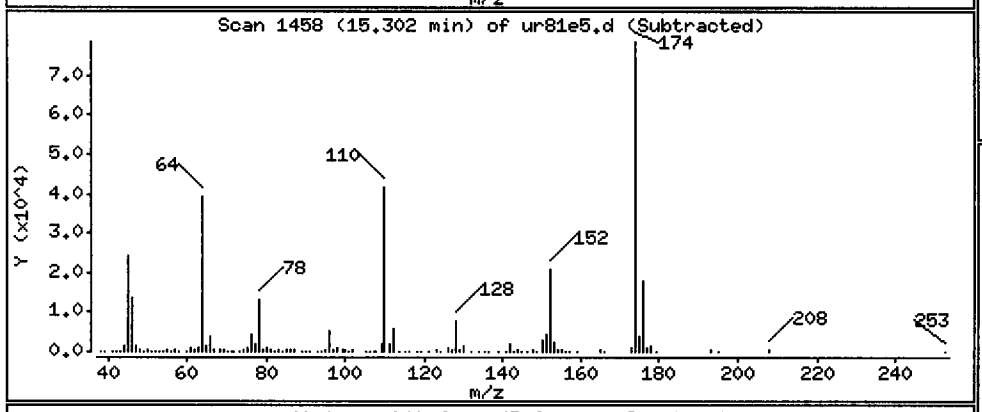
Sample Info: UR81E,5

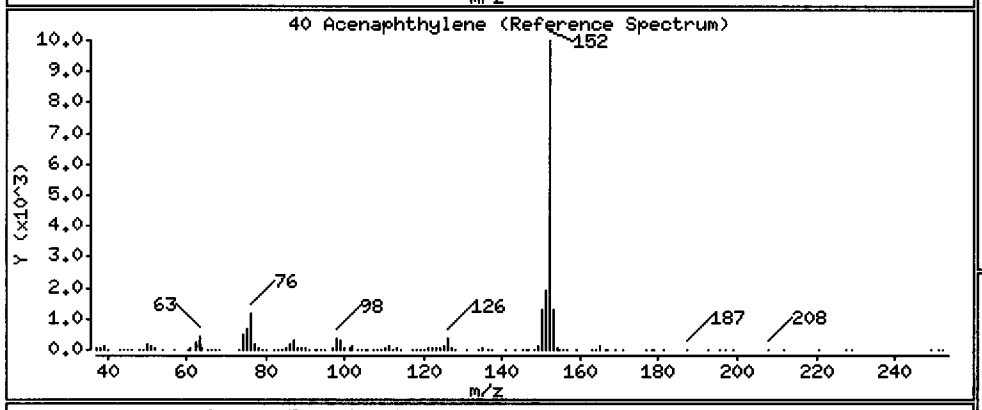
Volume Injected (uL): 1.0 | Operator: VTS/YZ

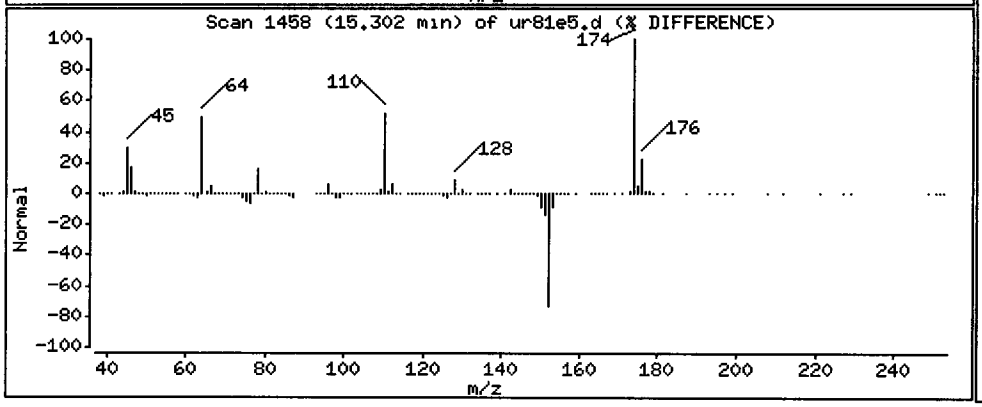
Column phase: ZB-5msi | Column diameter: 0.25

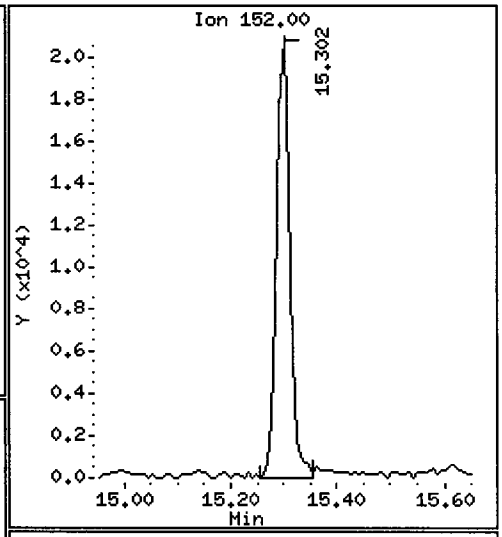
40 Acenaphthylene | Concentration: 75.35 ug/kg

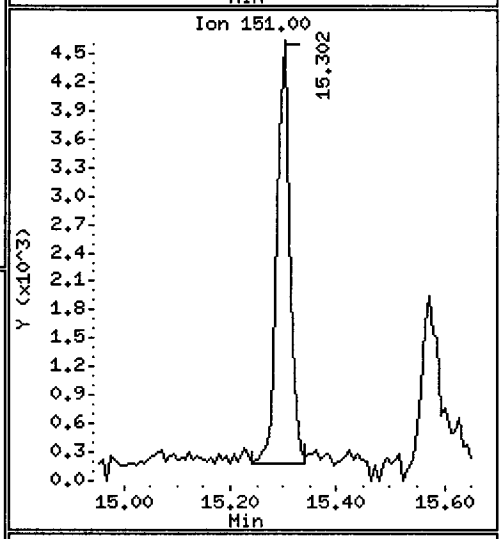


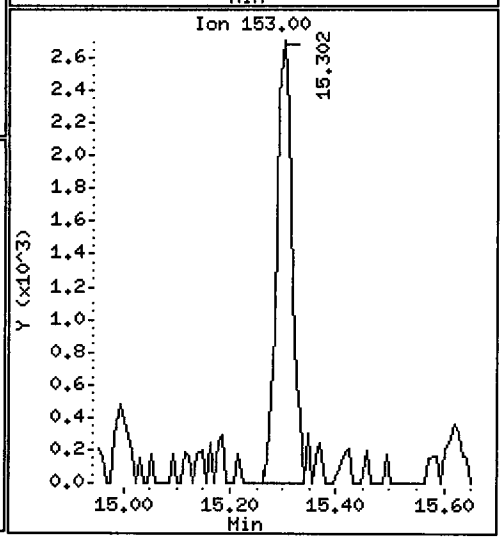












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

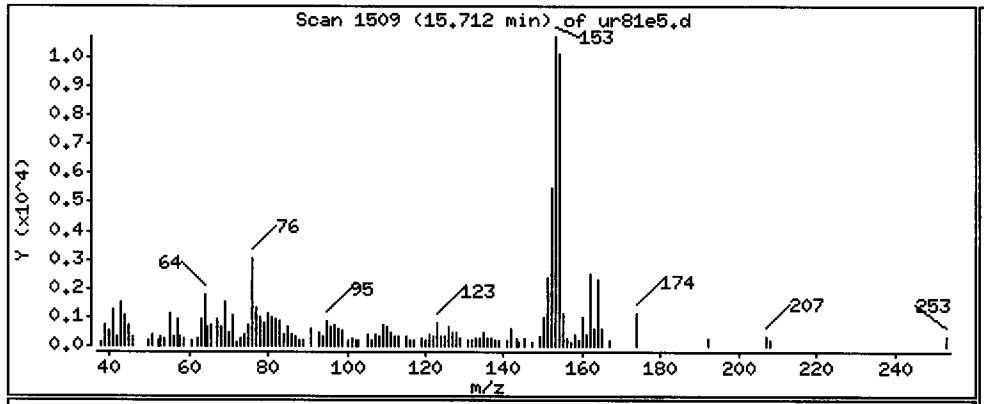
Operator: VTS/YZ

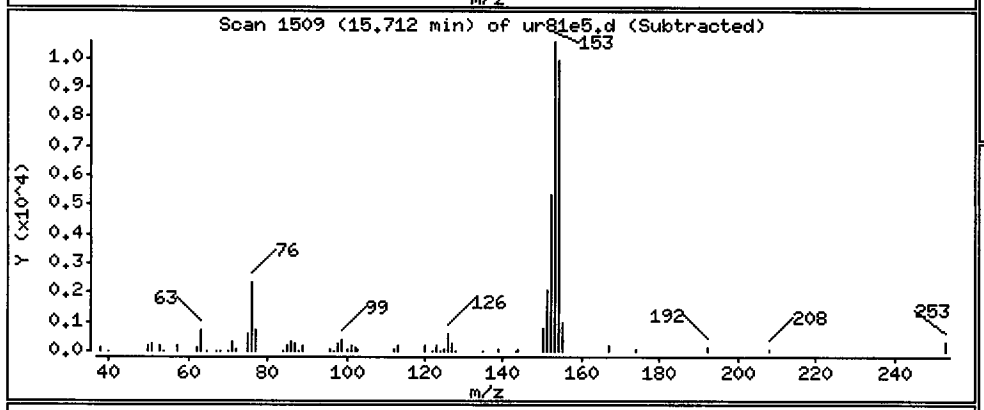
Column phase: ZB-5msi

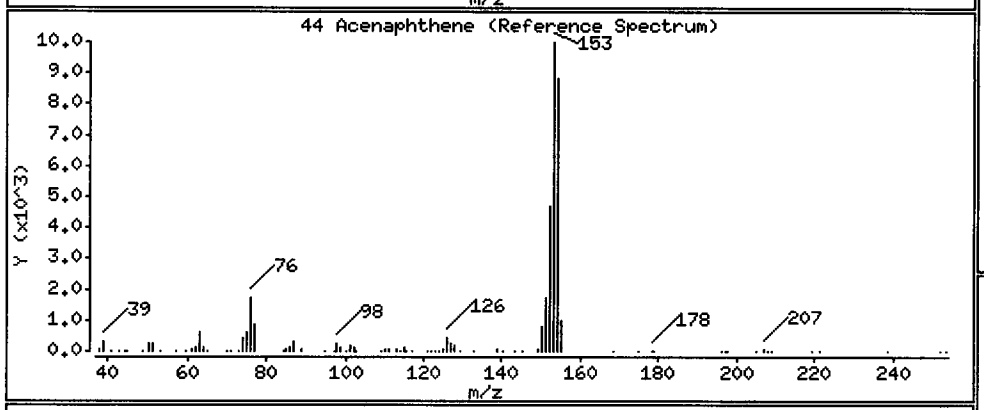
Column diameter: 0.25

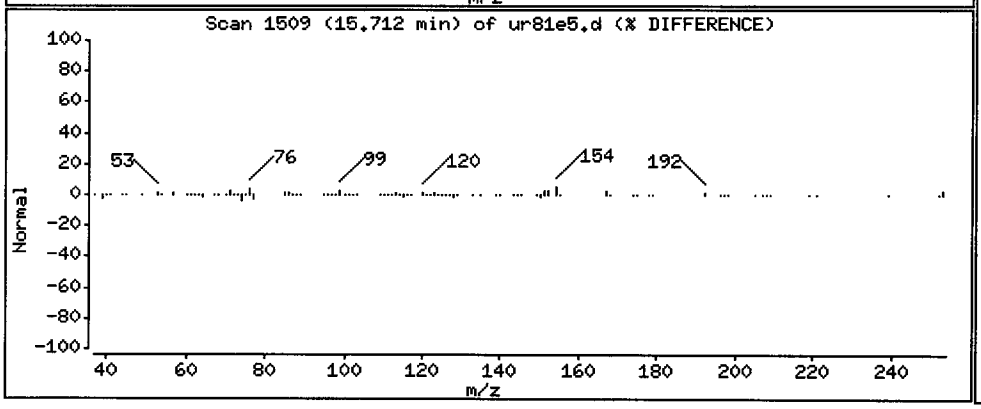
44 Acenaphthene

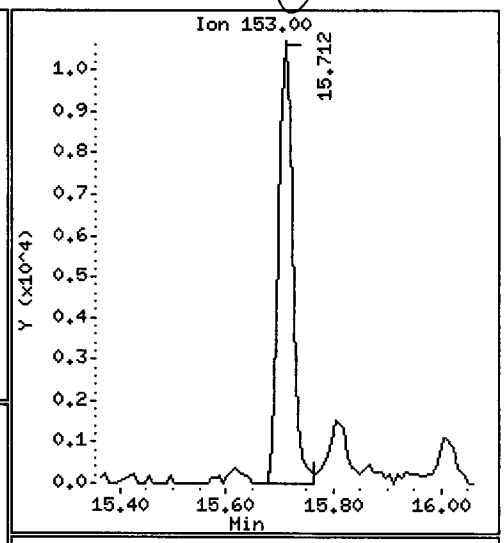
Concentration: 67.80 ug/kg

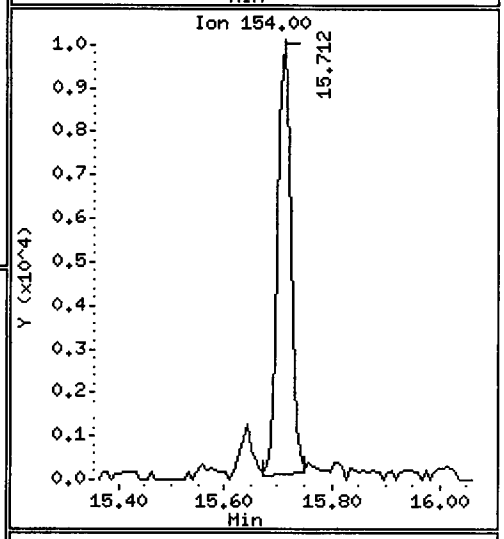


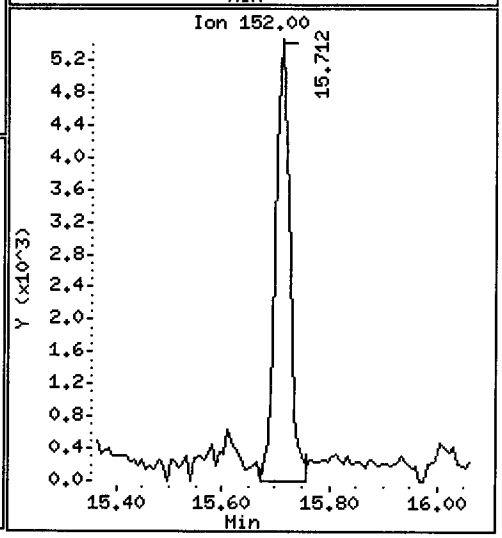












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

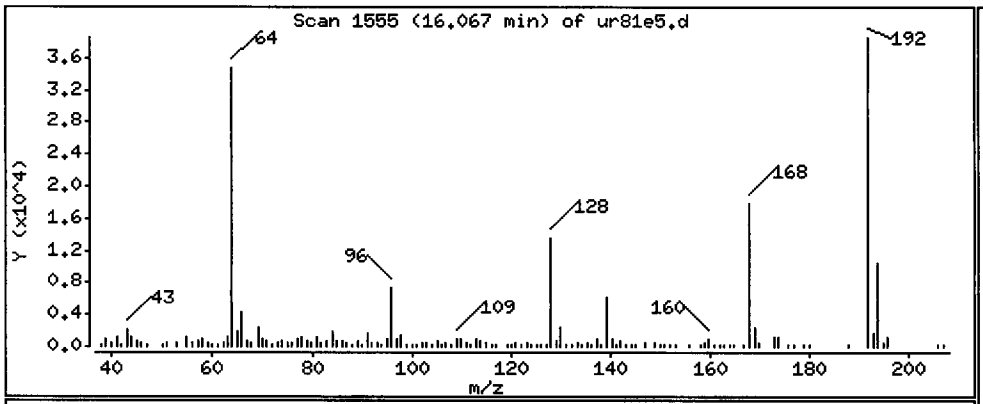
Client ID: IJ12-04 Instrument: nt10.i

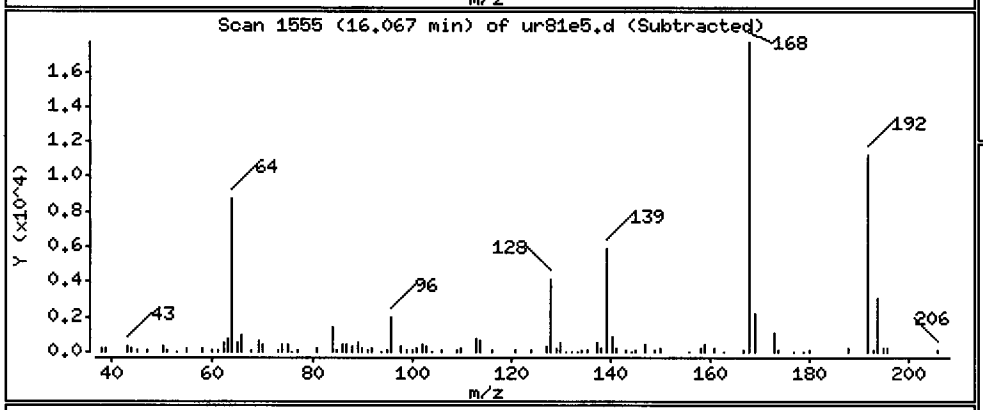
Sample Info: UR81E,5

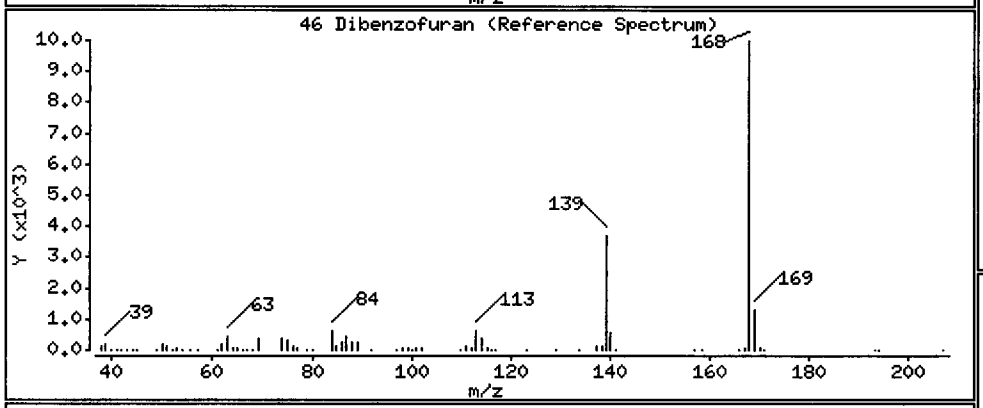
Volume Injected (uL): 1.0 Operator: VTS/YZ

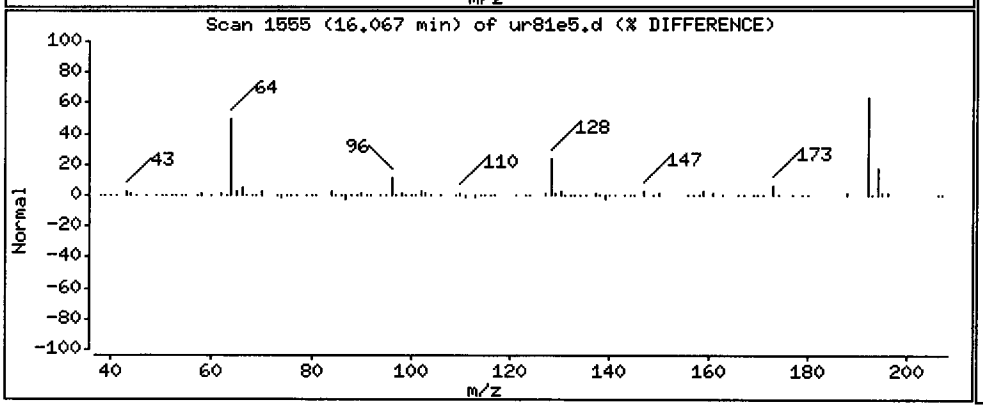
Column phase: ZB-5msi Column diameter: 0.25

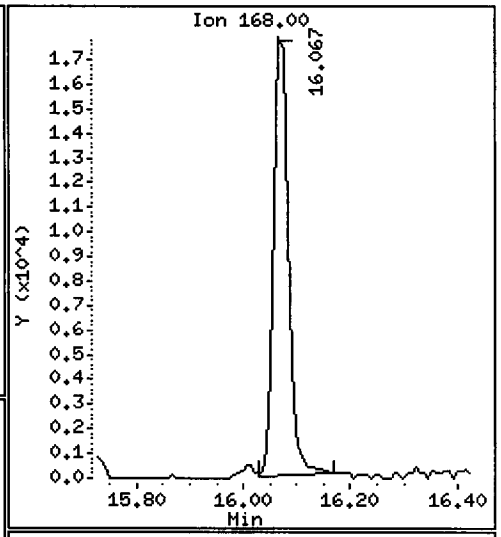
46 Dibenzofuran Concentration: 80.90 ug/kg

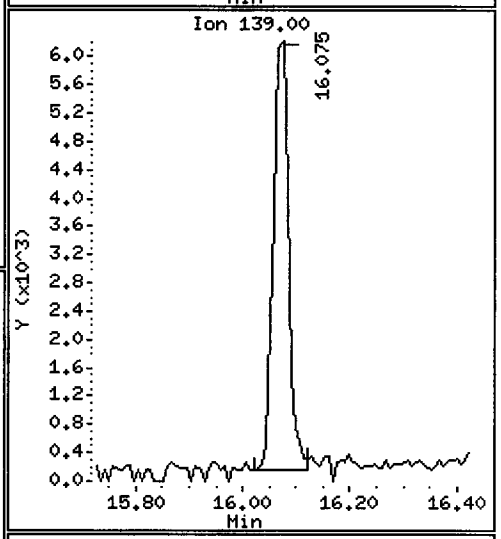


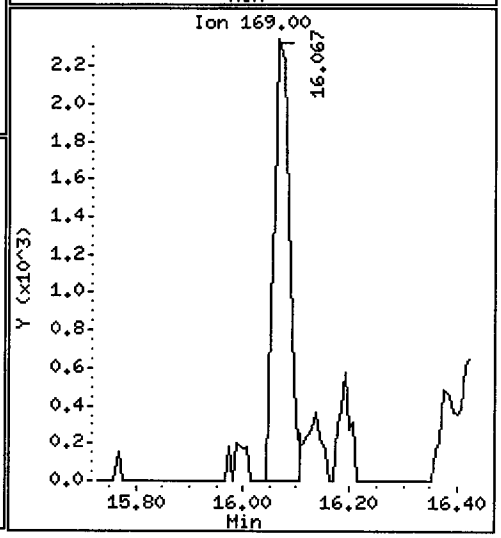












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

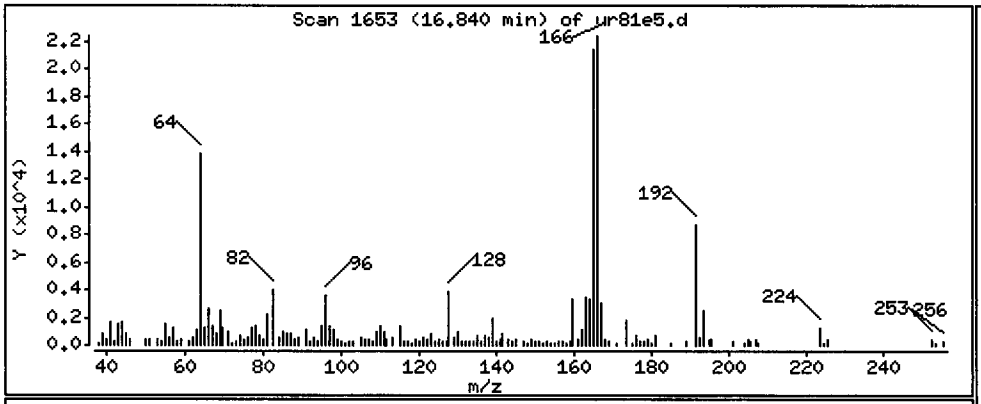
Operator: VTS/YZ

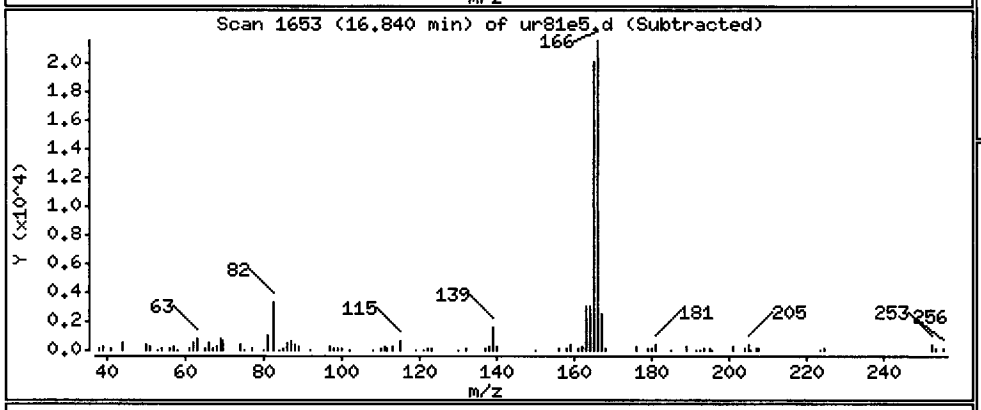
Column phase: ZB-5msi

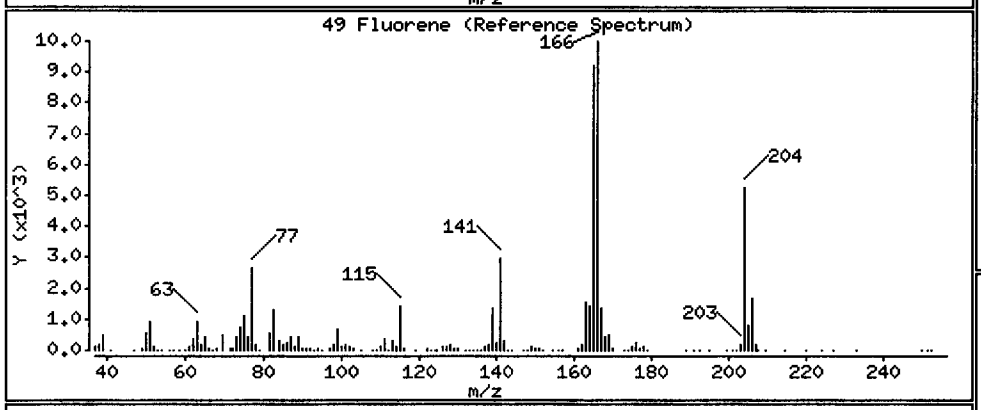
Column diameter: 0.25

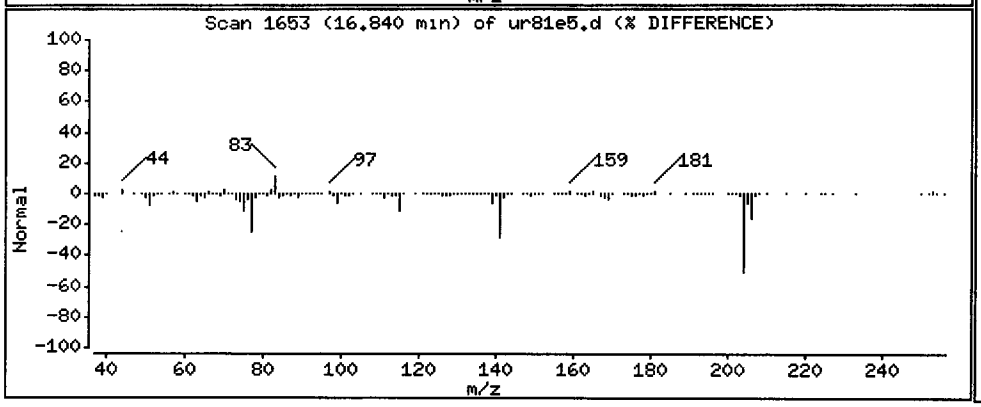
49 Fluorene

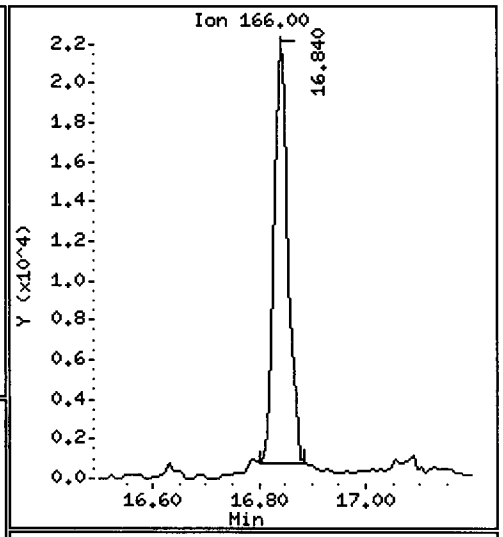
Concentration: 130.0 ug/kg

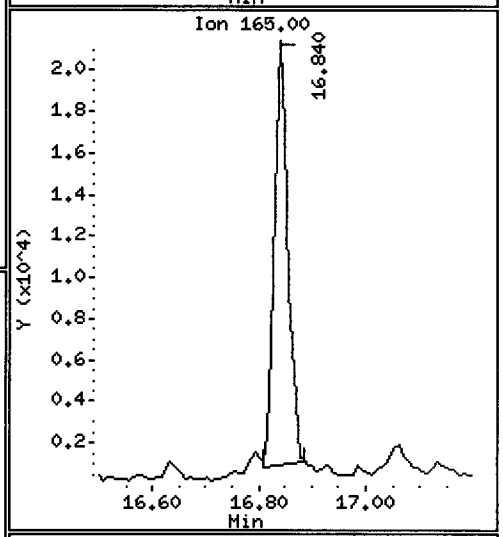


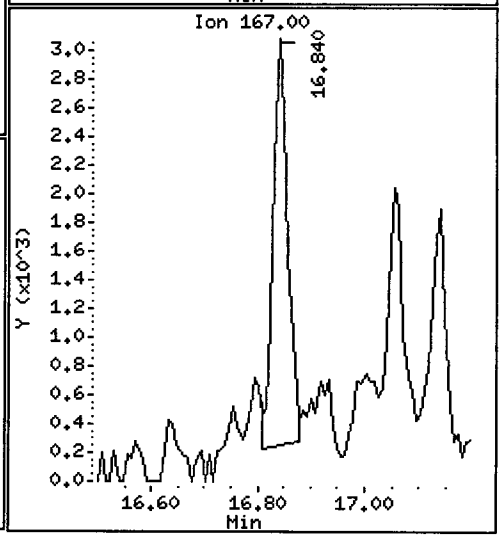












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

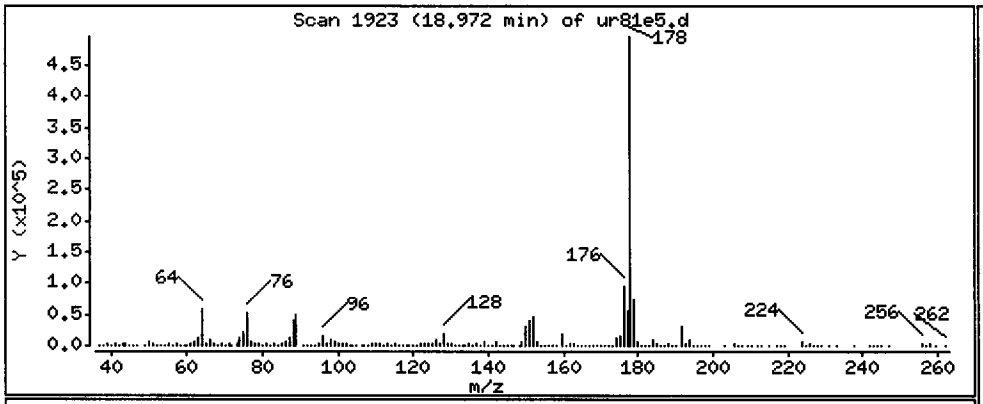
Client ID: IJ12-04 | Instrument: nt10.i

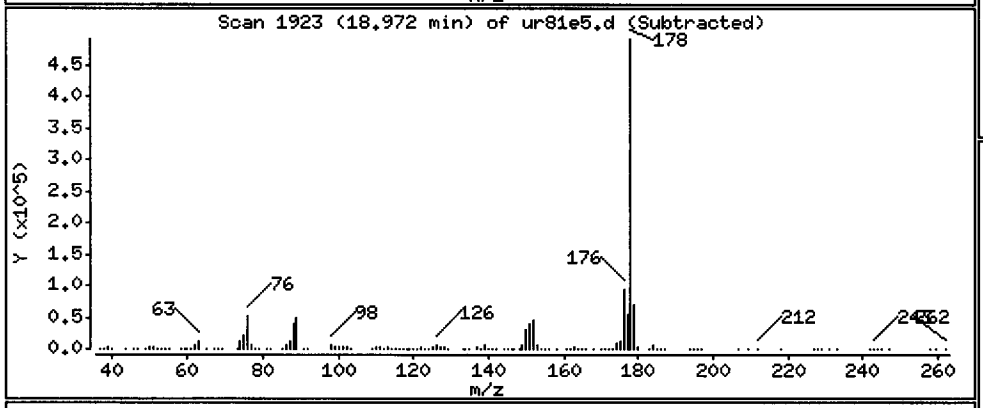
Sample Info: UR81E,5

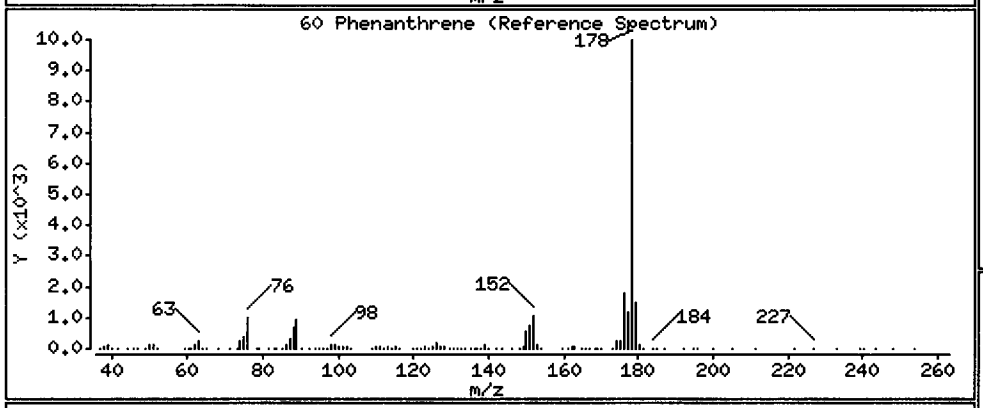
Volume Injected (uL): 1.0 | Operator: VTS/YZ

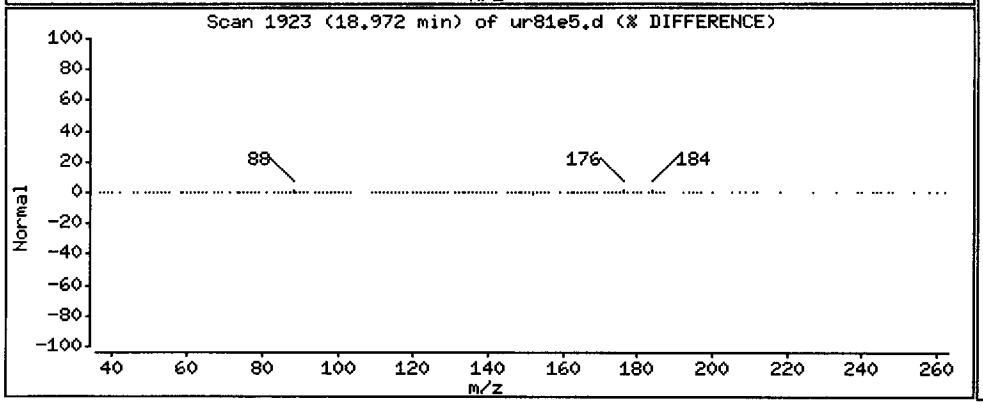
Column phase: ZB-5msi | Column diameter: 0.25

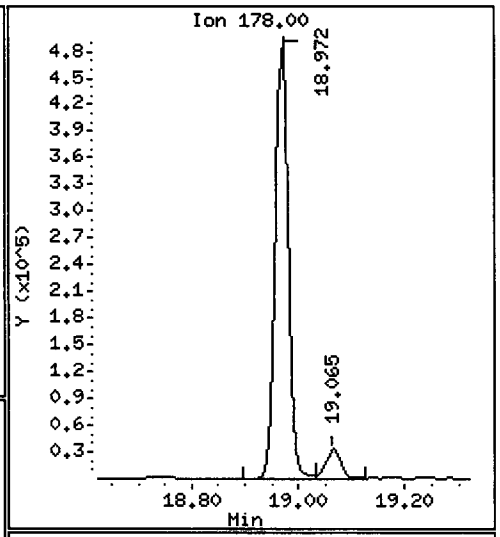
60 Phenanthrene | Concentration: 1949 ug/kg

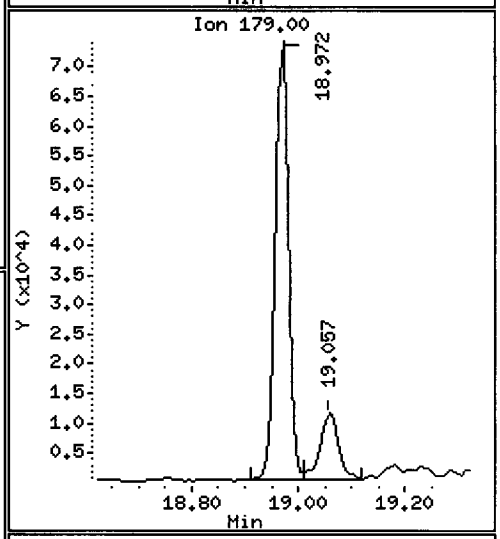


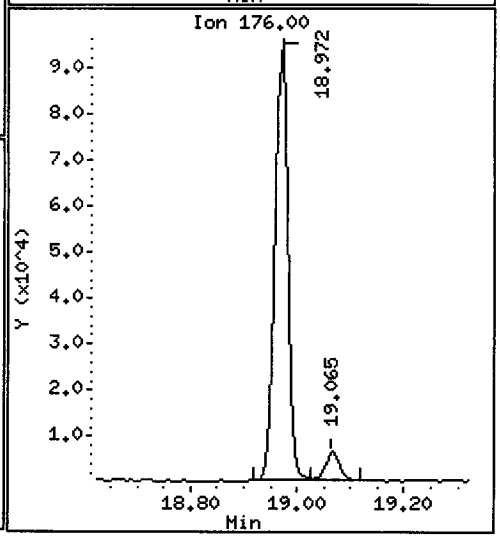












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

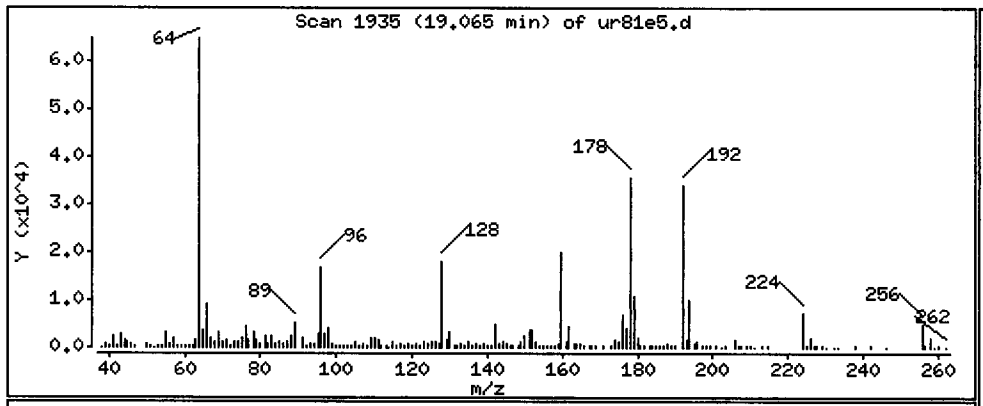
Operator: VTS/YZ

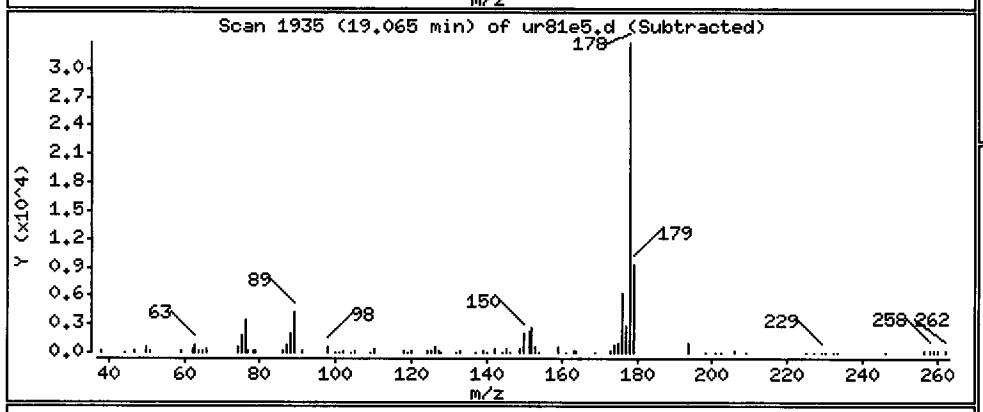
Column phase: ZB-5msi

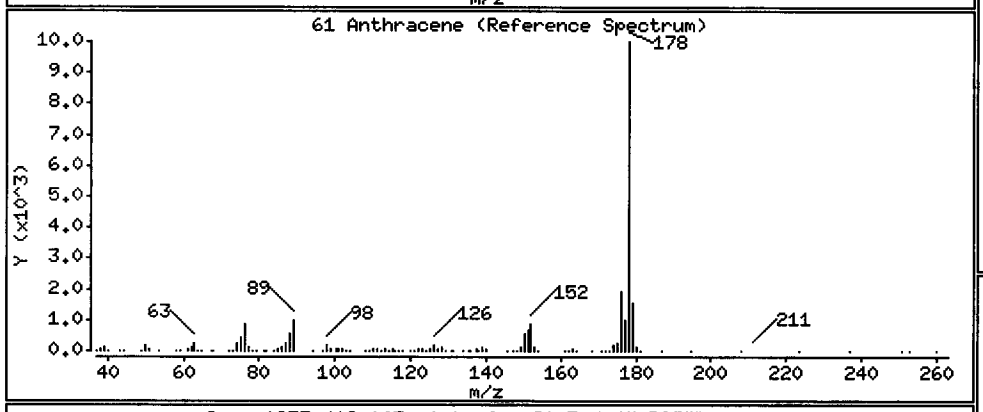
Column diameter: 0.25

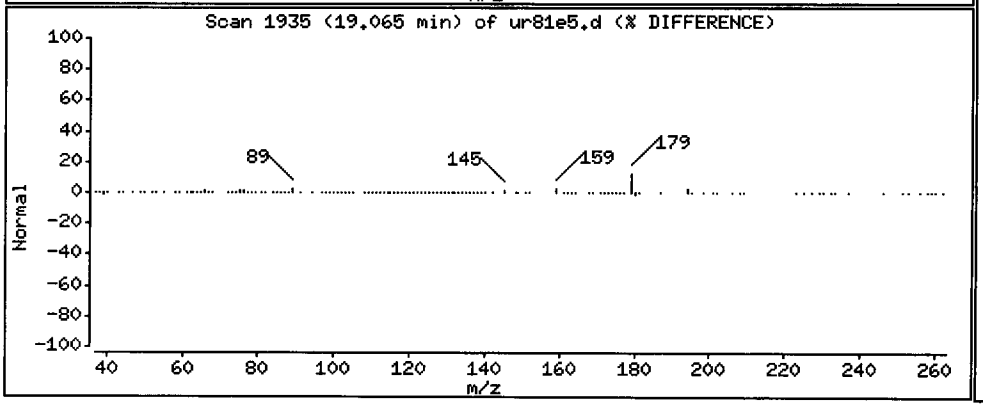
61 Anthracene

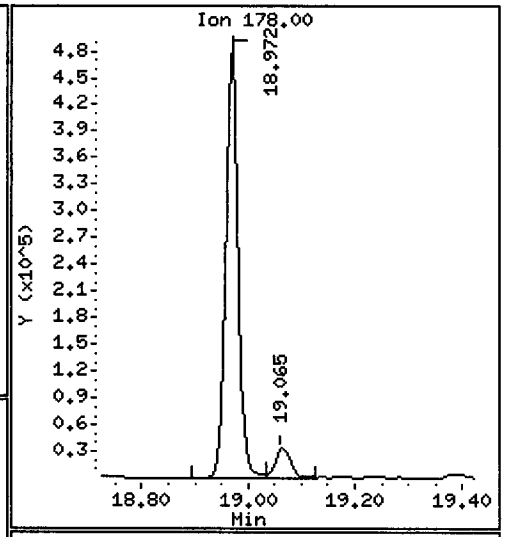
Concentration: 143.7 ug/kg

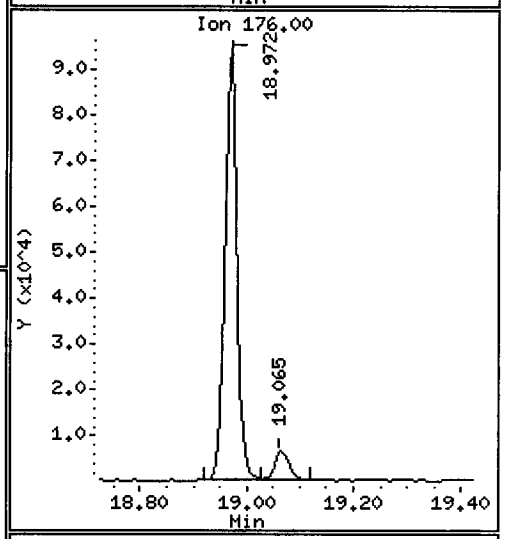


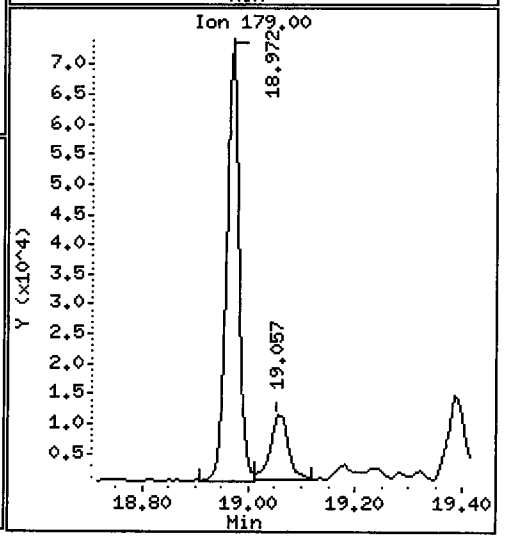












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

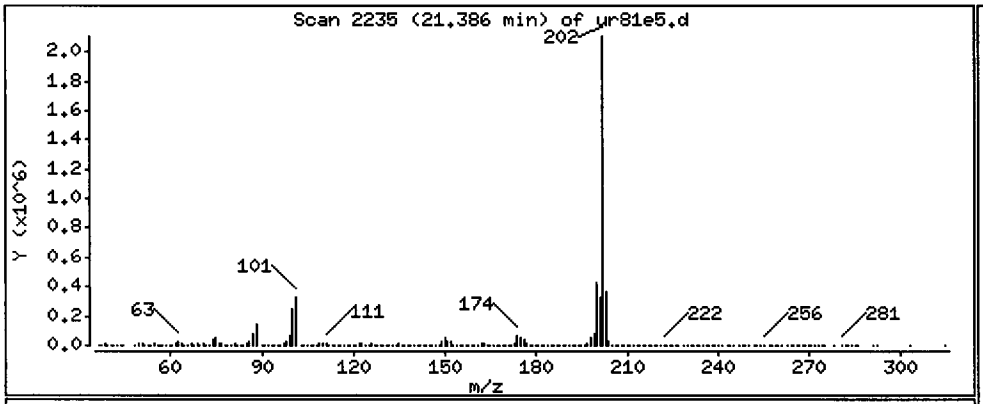
Client ID: IJ12-04 Instrument: nt10.i

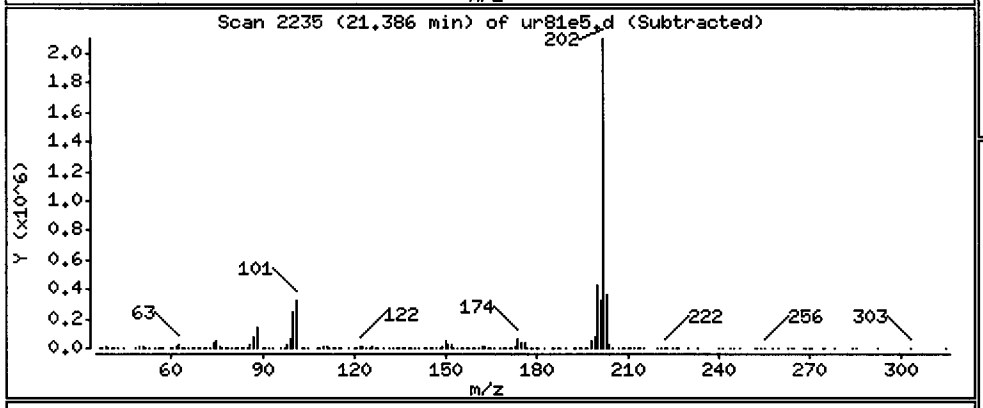
Sample Info: UR81E,5

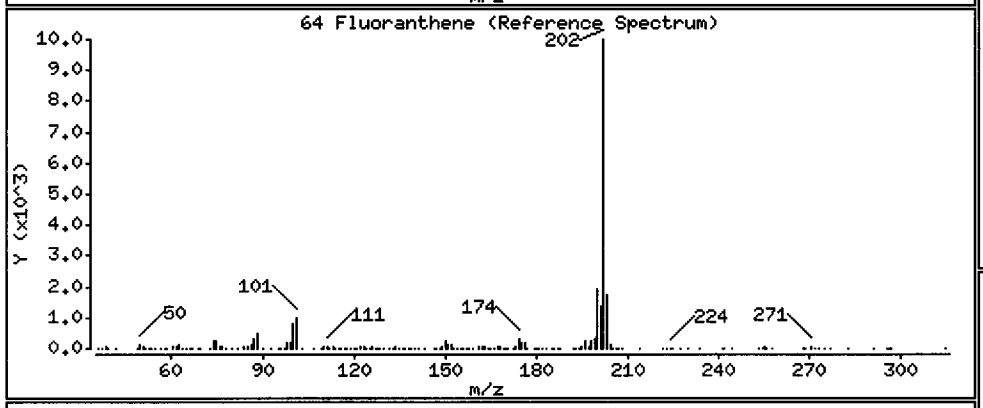
Volume Injected (uL): 1.0 Operator: VTS/YZ

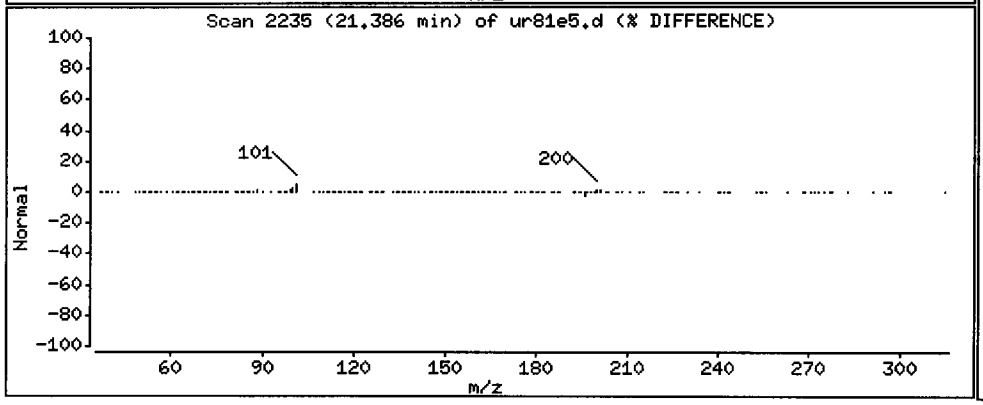
Column phase: ZB-5msi Column diameter: 0.25

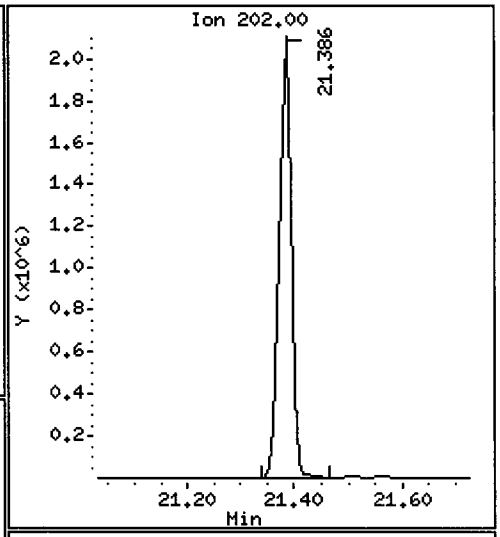
64 Fluoranthene Concentration: 6718 ug/kg

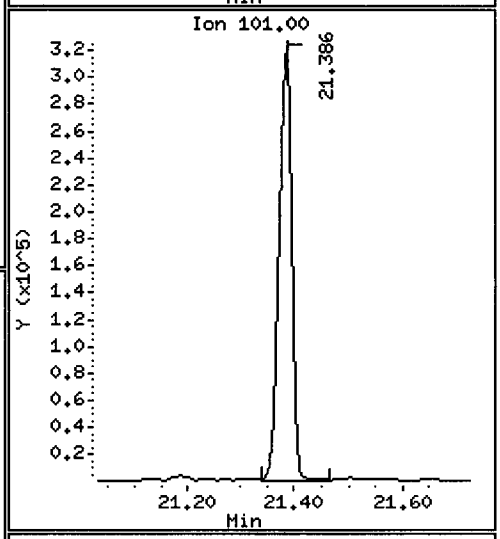


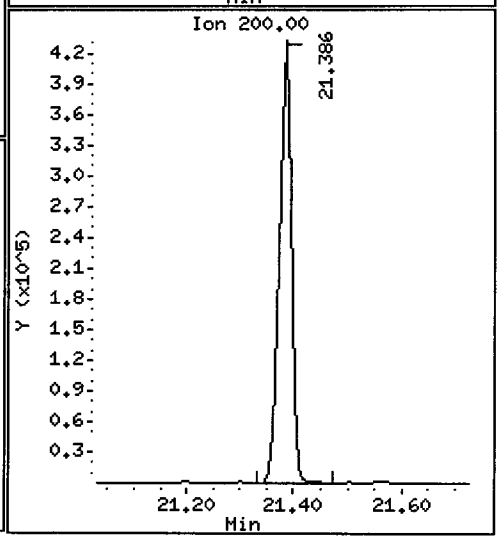












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

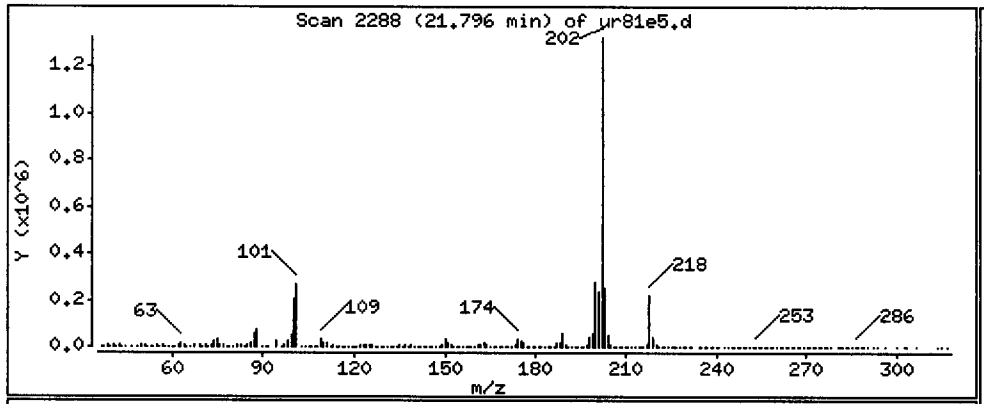
Operator: VTS/YZ

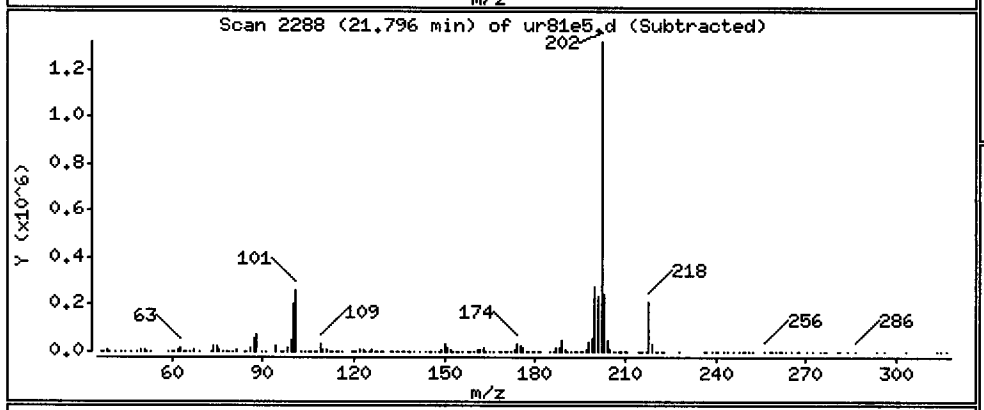
Column phase: ZB-5msi

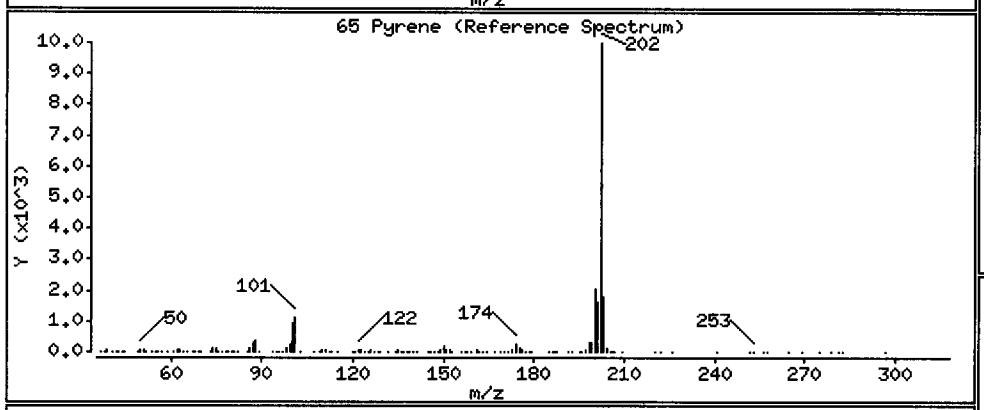
Column diameter: 0.25

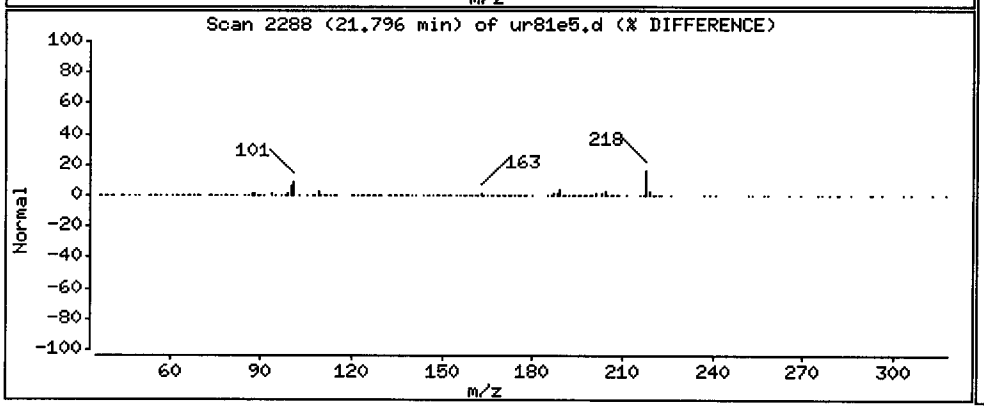
65 Pyrene

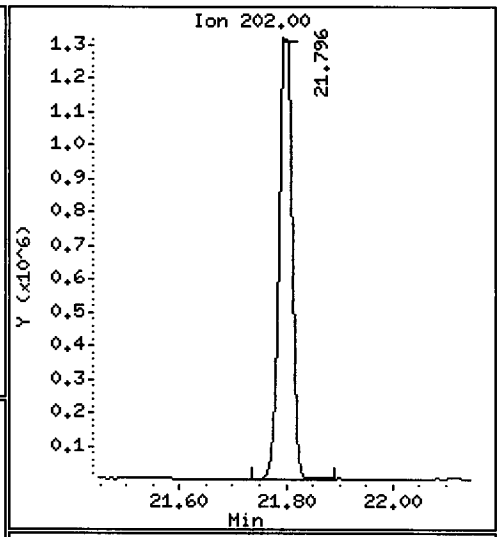
Concentration: 4068 ug/kg

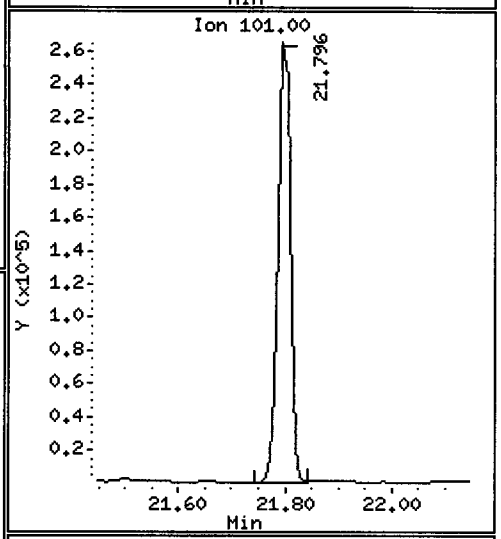


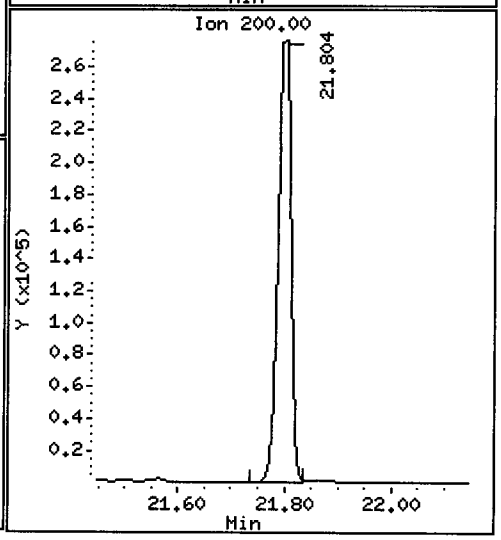












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

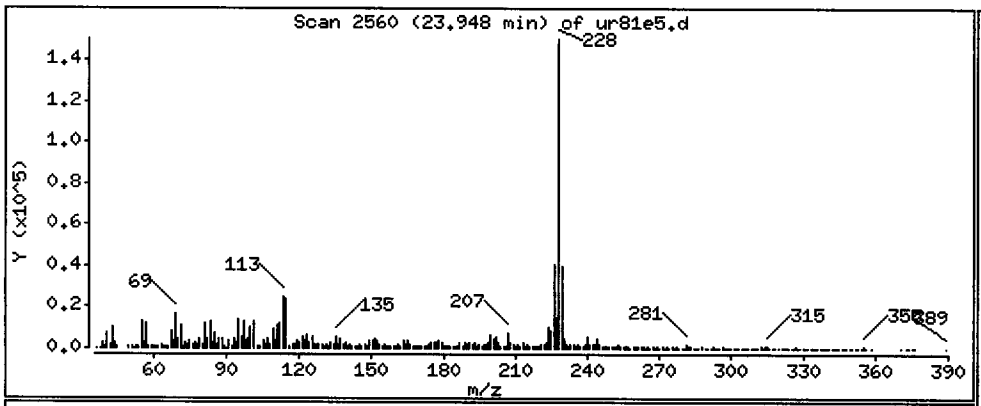
Operator: VTS/YZ

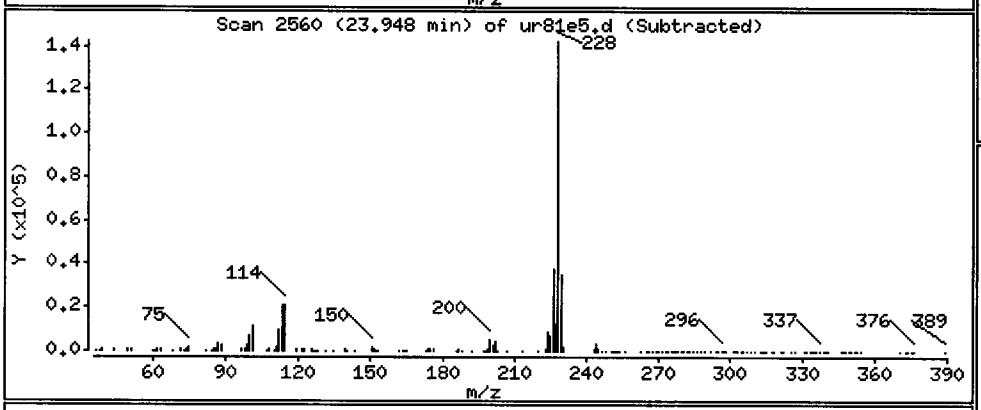
Column phase: ZB-5msi

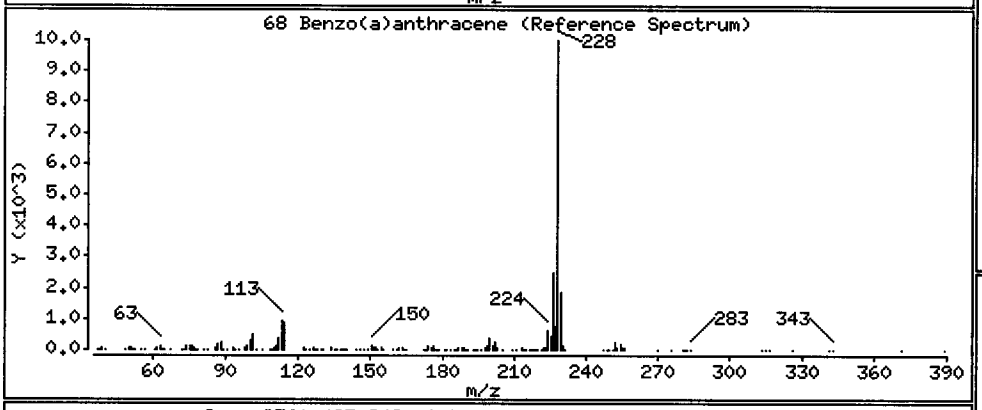
Column diameter: 0.25

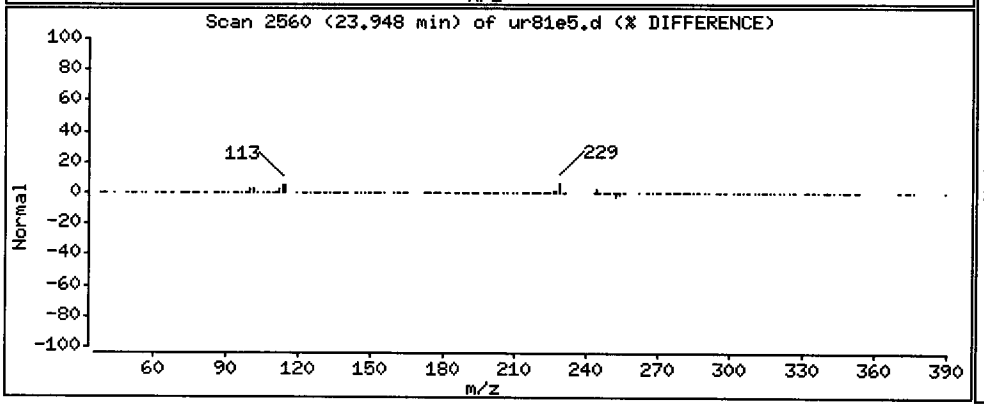
68 Benzo(a)anthracene

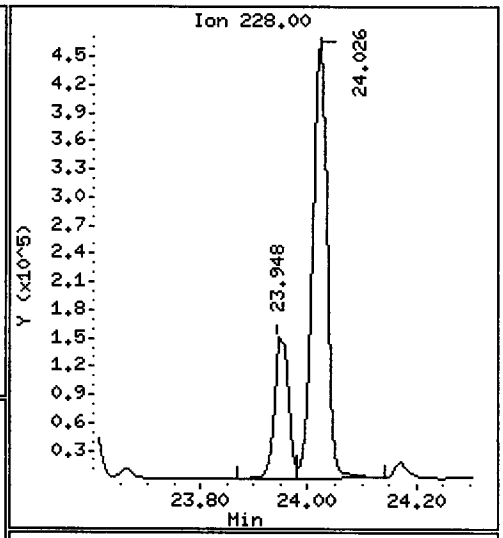
Concentration: 551.6 ug/kg

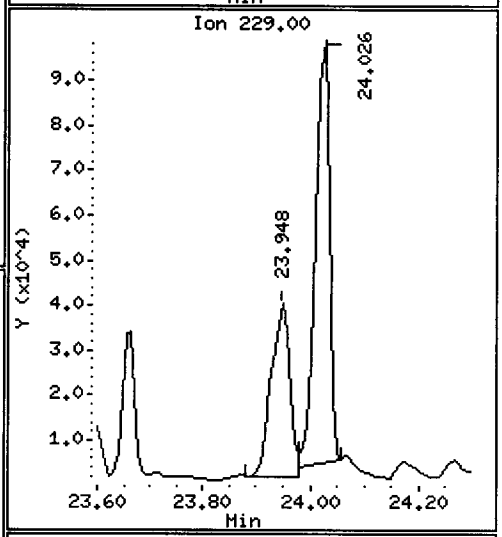


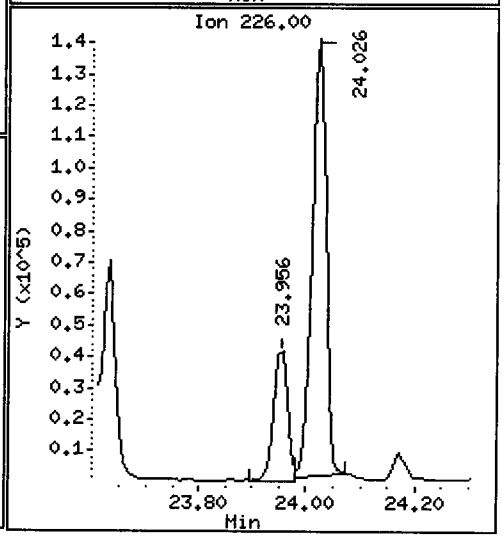












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

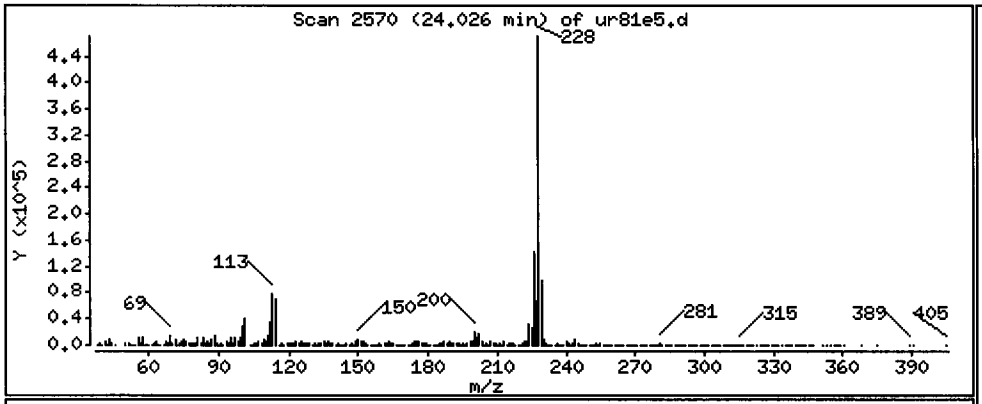
Client ID: IJ12-04 | Instrument: nt10.i

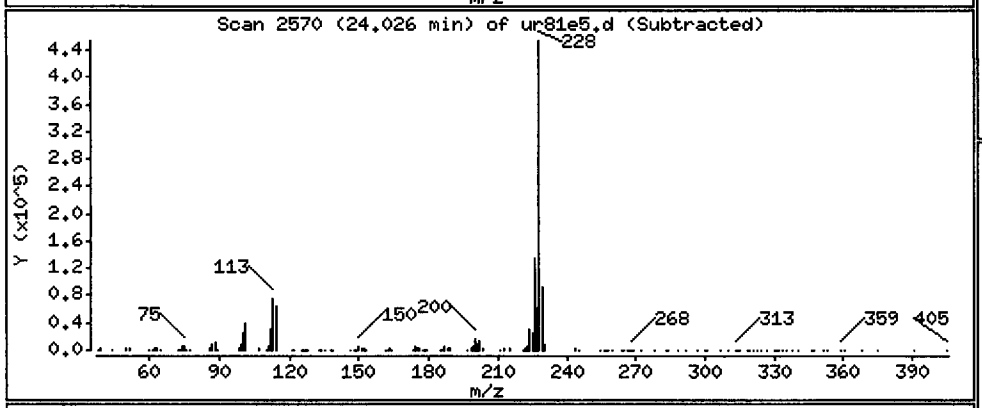
Sample Info: UR81E,5

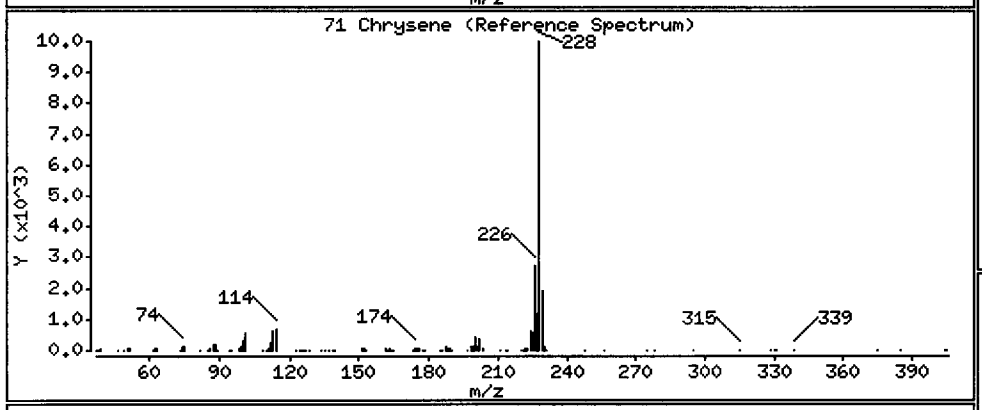
Volume Injected (uL): 1.0 | Operator: VTS/YZ

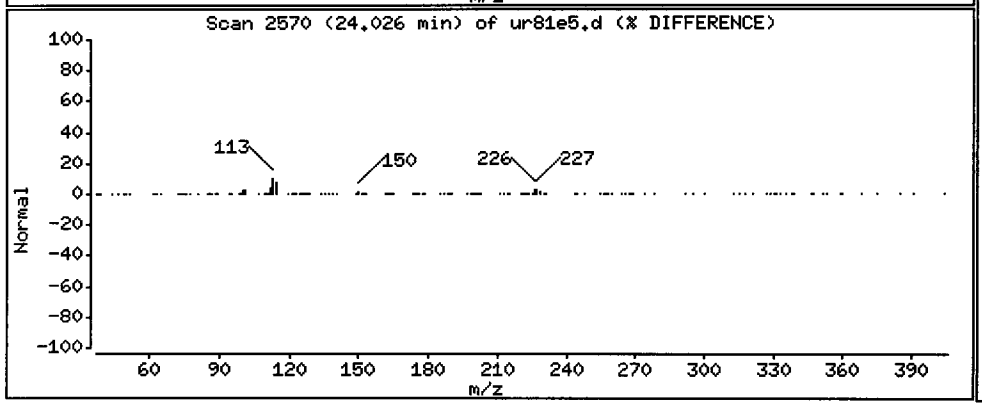
Column phase: ZB-5msi | Column diameter: 0.25

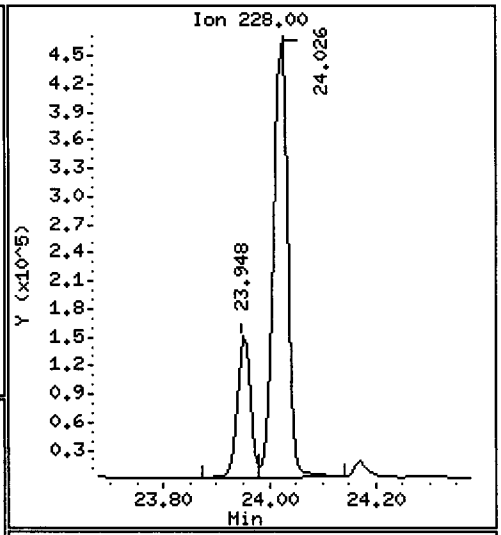
71 Chrysene | Concentration: 2020 ug/kg

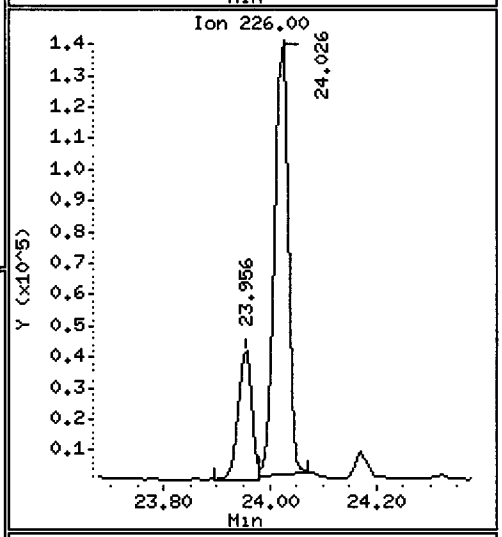


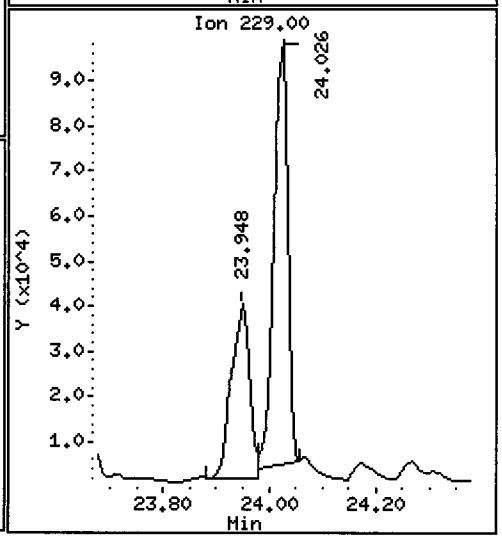












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

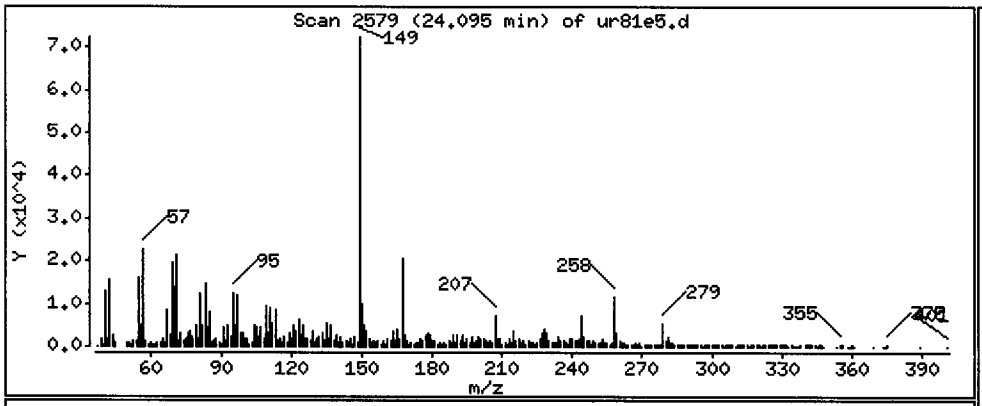
Operator: VTS/YZ

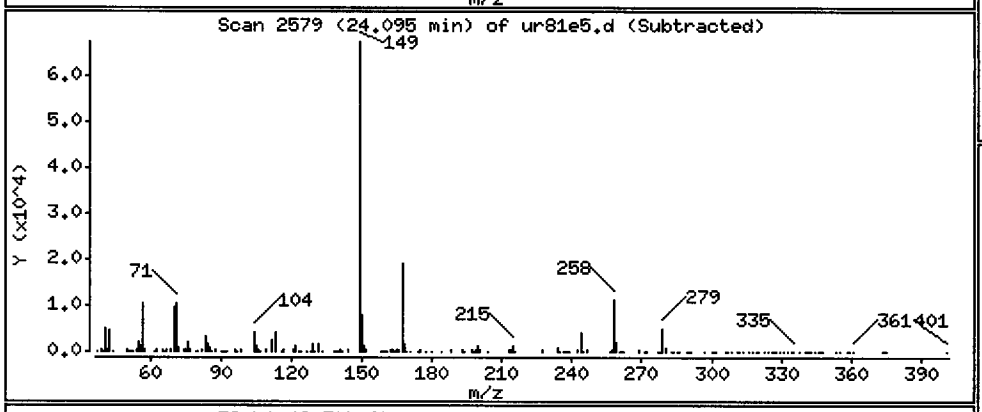
Column phase: ZB-5msi

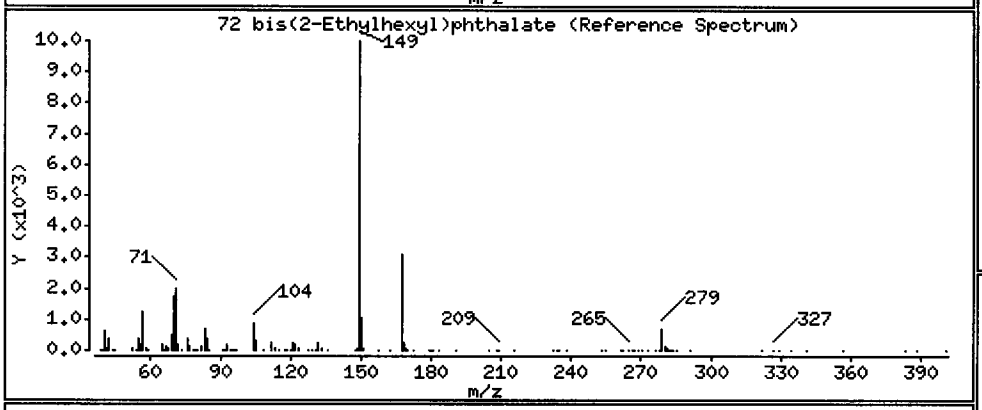
Column diameter: 0.25

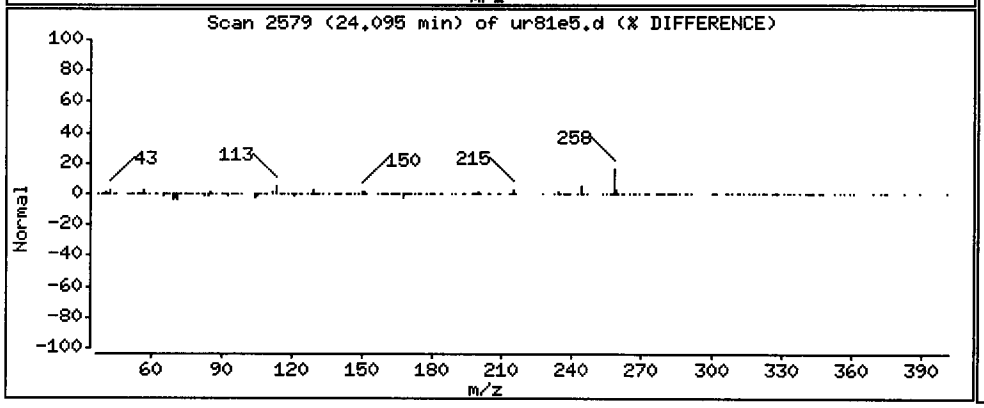
72 bis(2-Ethylhexyl)phthalate

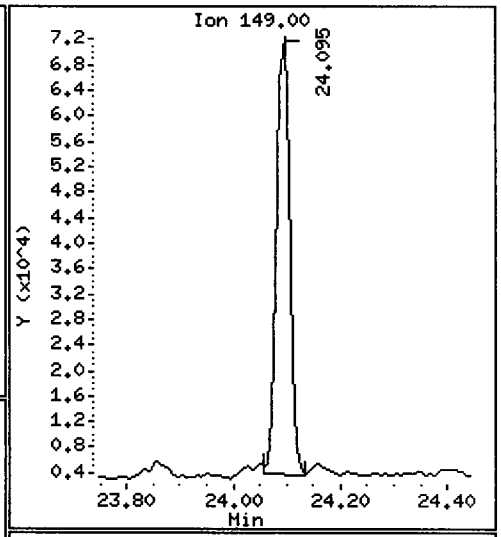
Concentration: 329.4 ug/kg

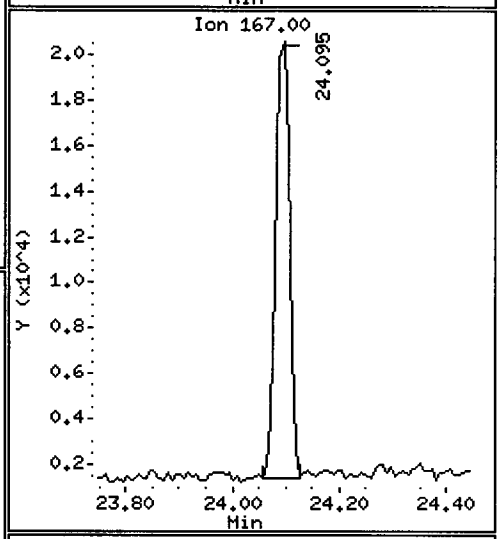


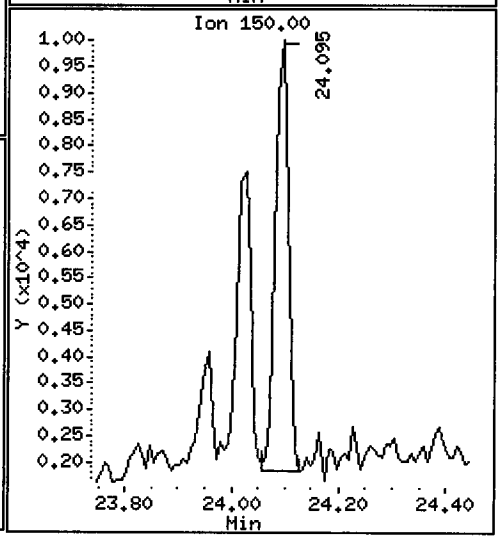












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

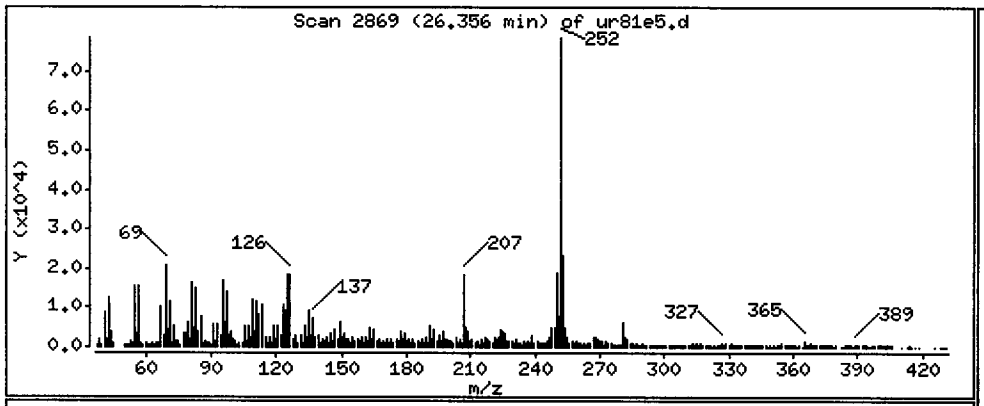
Client ID: IJ12-04 Instrument: nt10.i

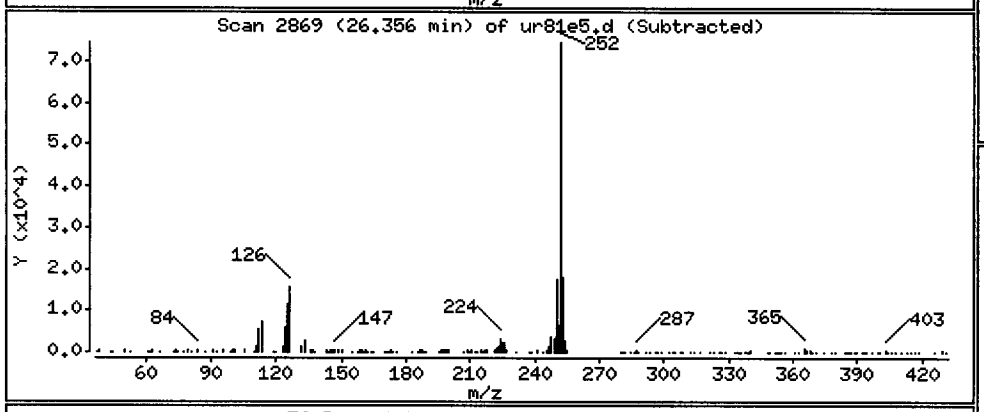
Sample Info: UR81E,5

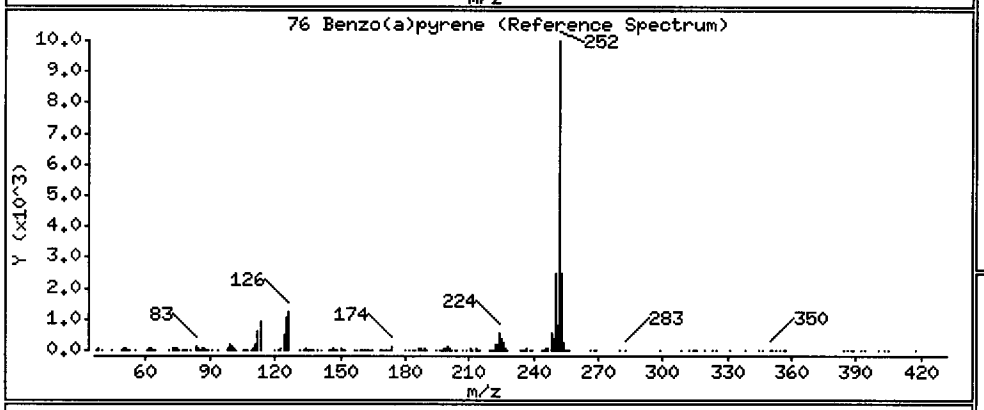
Volume Injected (uL): 1.0 Operator: VTS/YZ

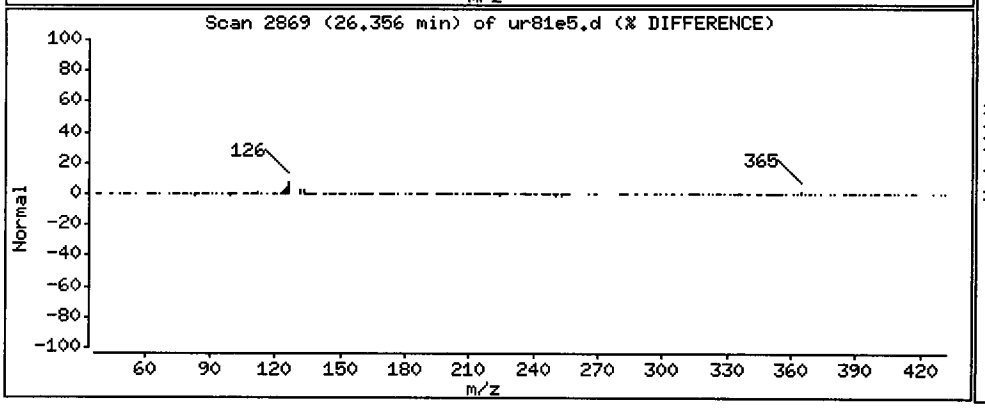
Column phase: ZB-5msi Column diameter: 0.25

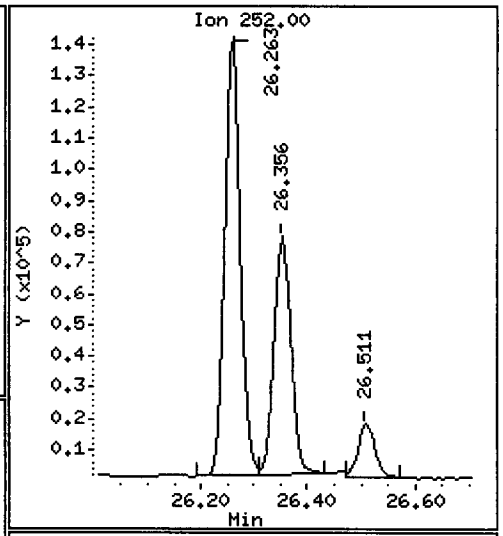
76 Benzo(a)pyrene Concentration: 400.6 ug/kg

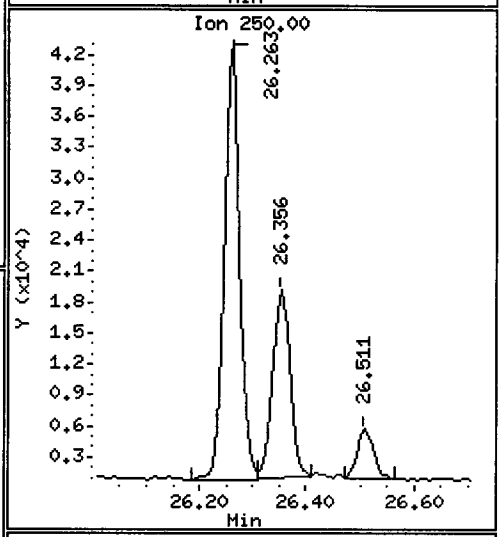


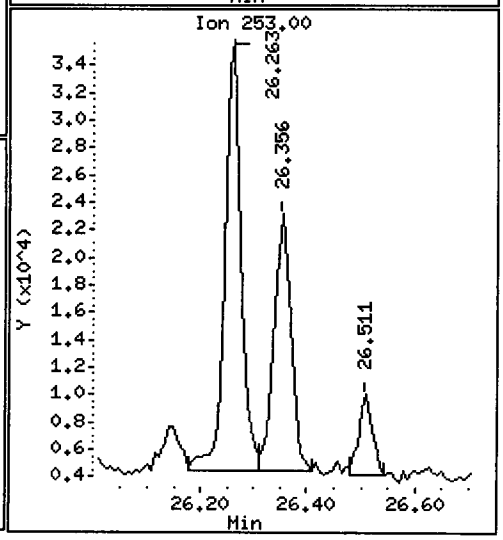












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

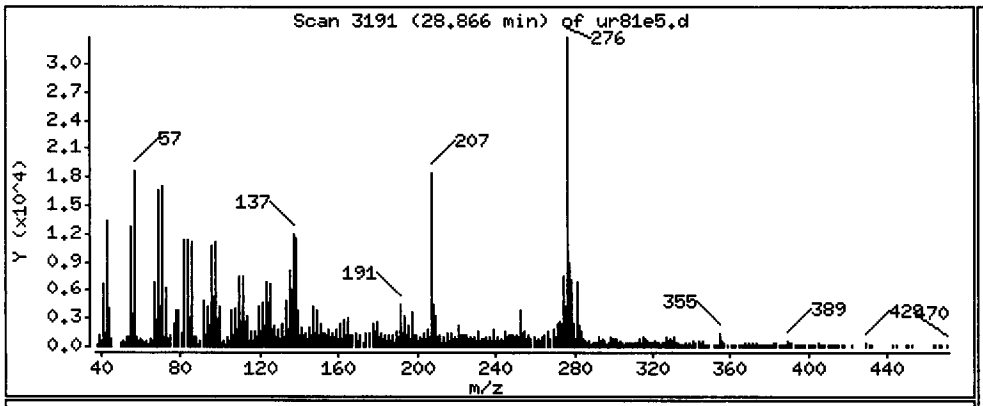
Client ID: IJ12-04 Instrument: nt10.i

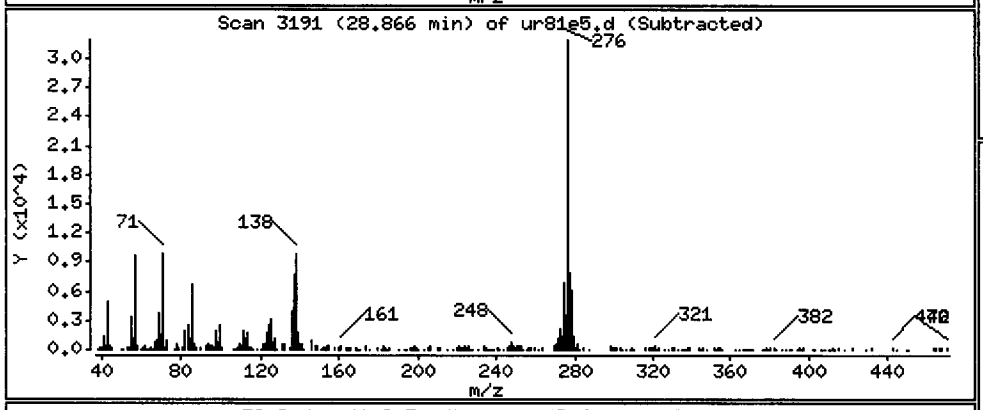
Sample Info: UR81E,5

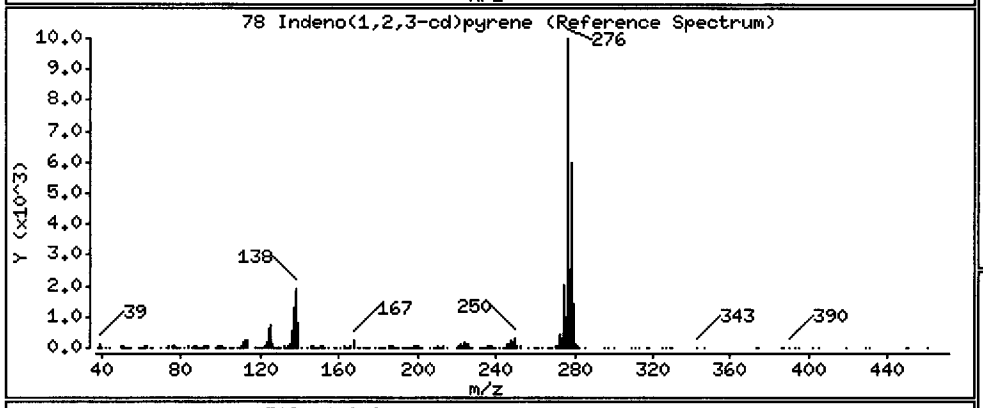
Volume Injected (uL): 1.0 Operator: VTS/YZ

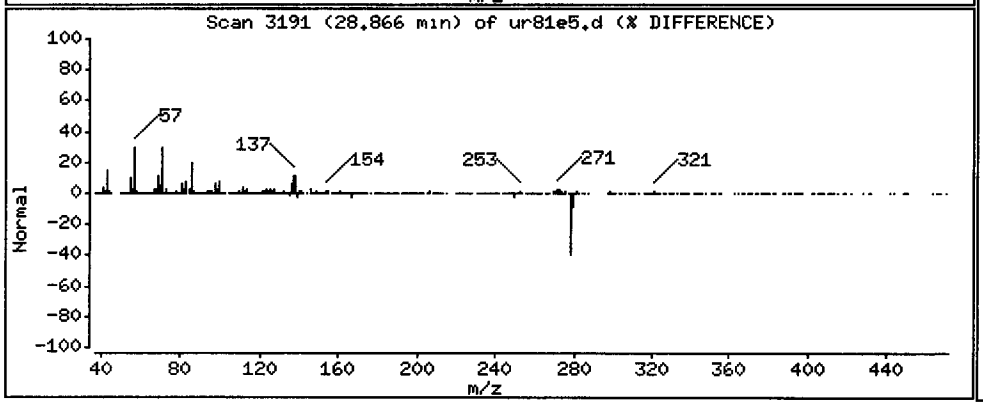
Column phase: ZB-5msi Column diameter: 0.25

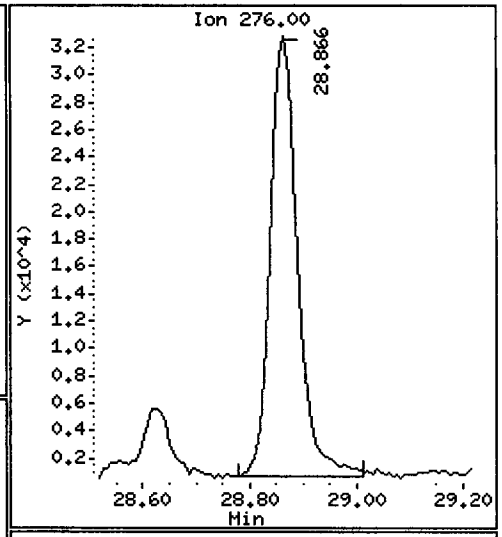
78 Indeno(1,2,3-cd)pyrene Concentration: 243.1 ug/kg

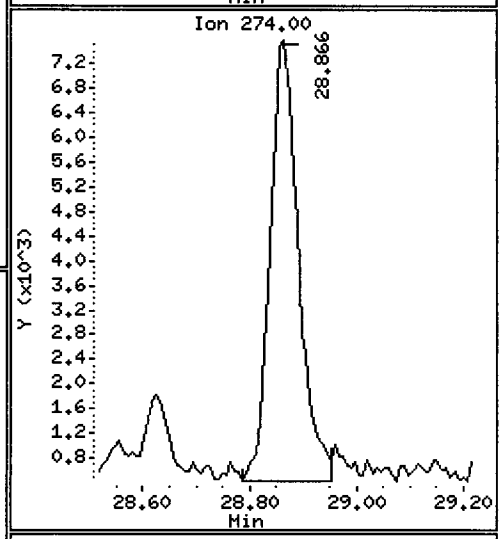


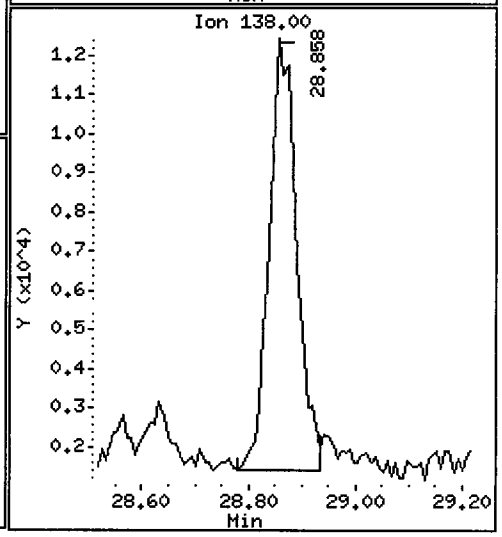












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

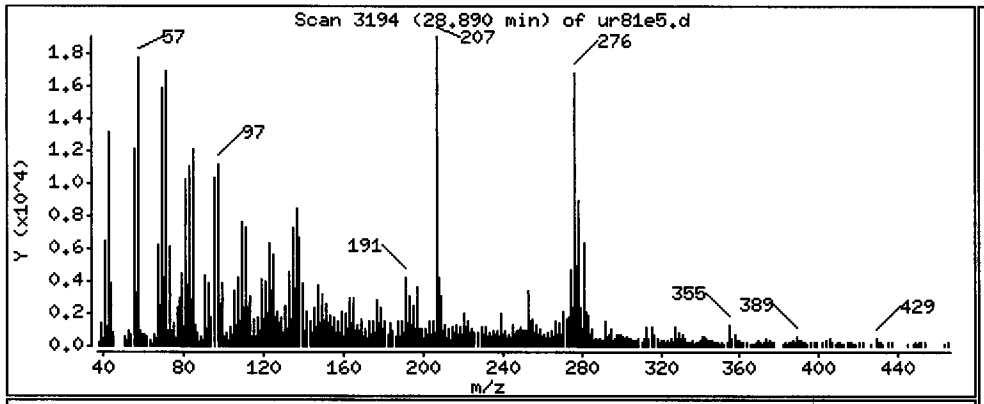
Client ID: IJ12-04 Instrument: nt10.i

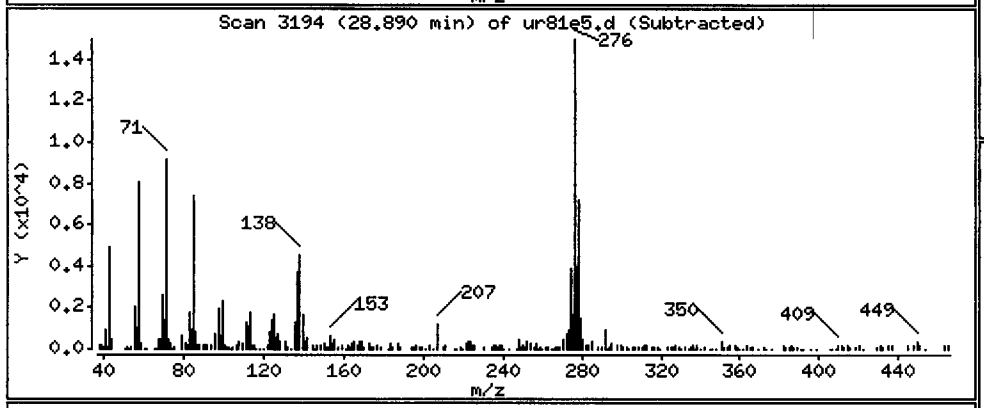
Sample Info: UR81E,5

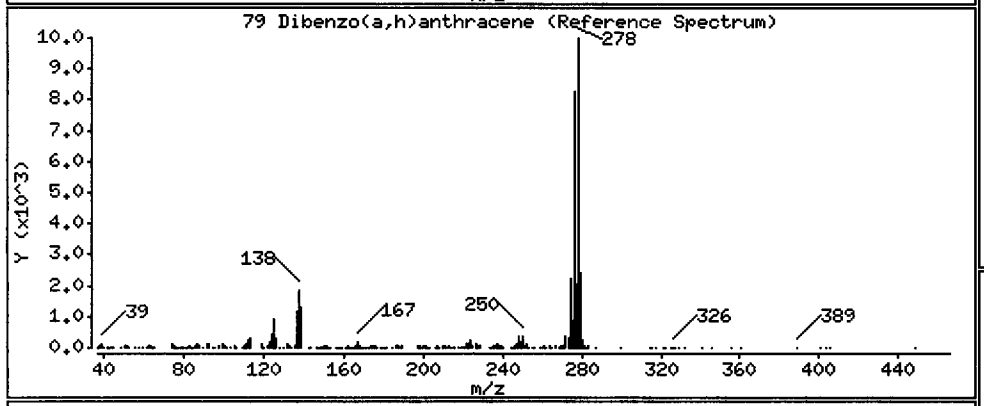
Volume Injected (uL): 1.0 Operator: VTS/YZ

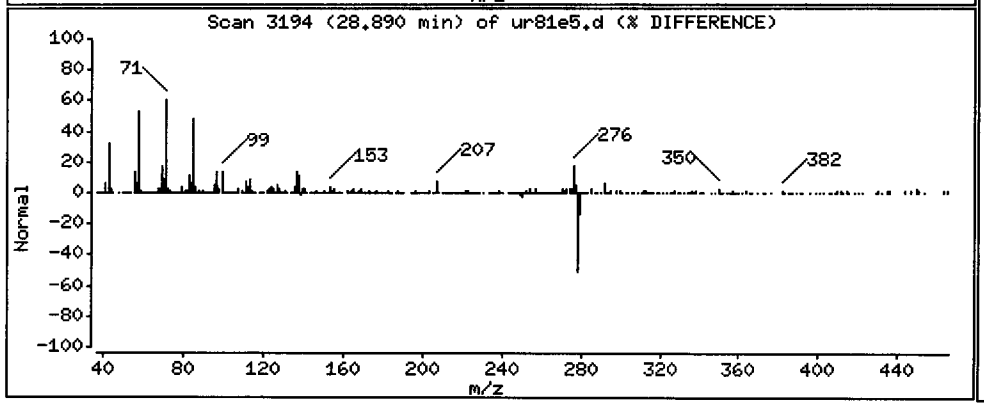
Column phase: ZB-5msi Column diameter: 0.25

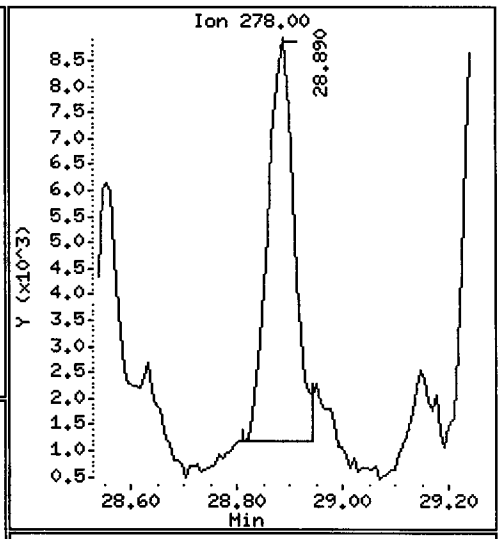
79 Dibenzo(a,h)anthracene Concentration: 75.38 ug/kg

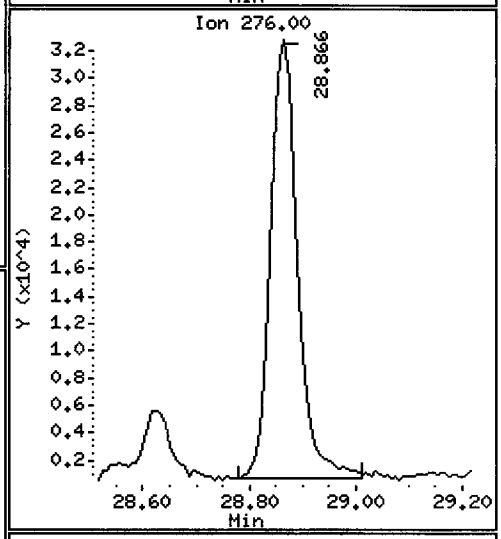


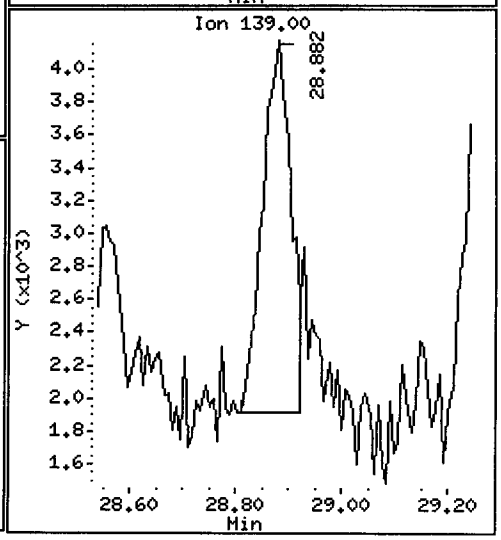












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

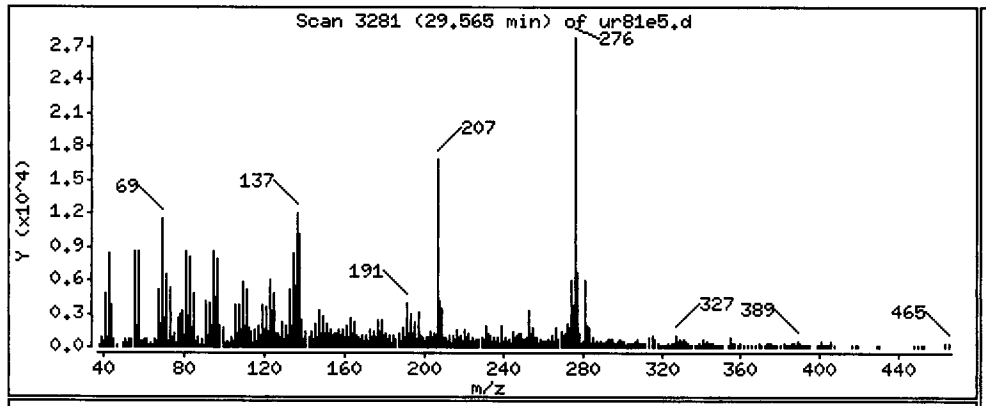
Operator: VTS/YZ

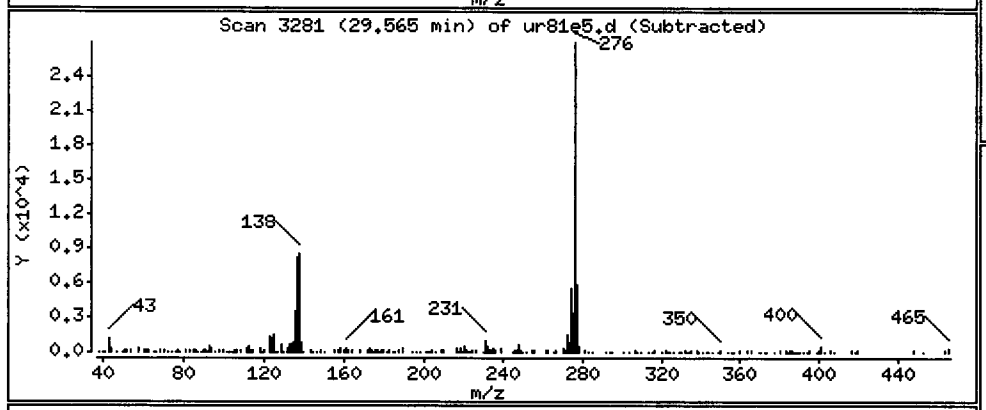
Column phase: ZB-5msi

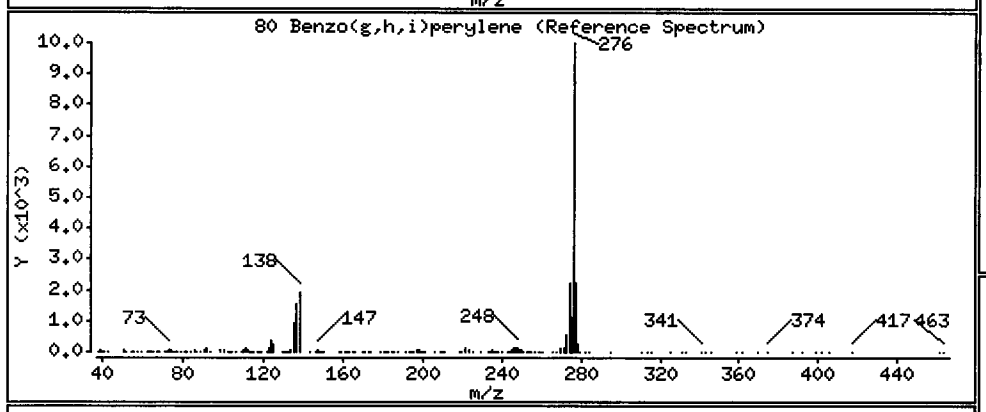
Column diameter: 0.25

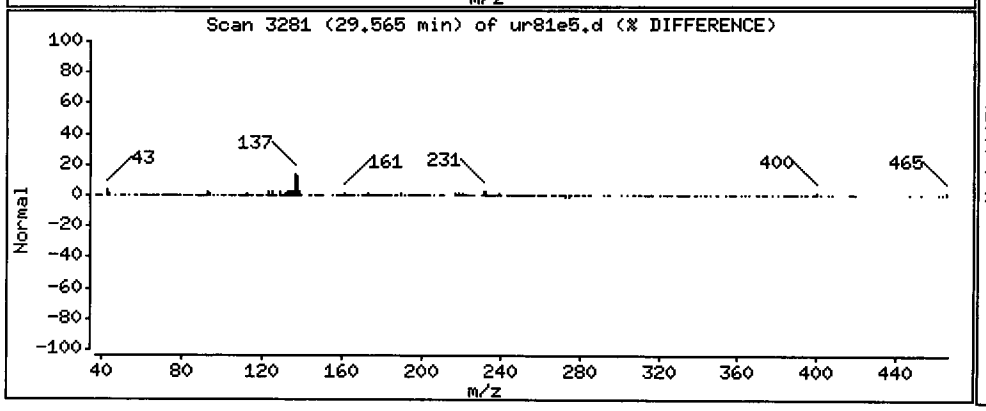
80 Benzo(g,h,i)perylene

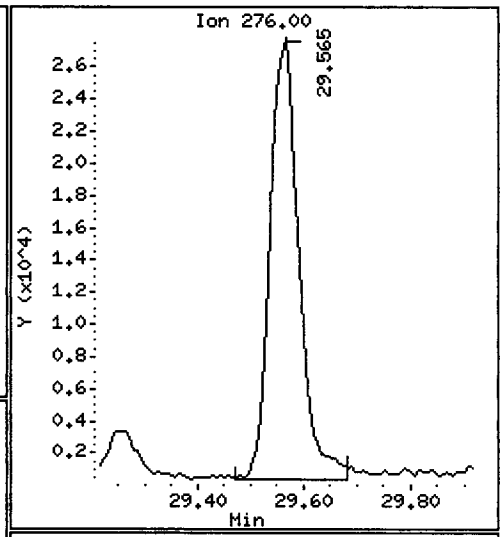
Concentration: 257.1 ug/kg

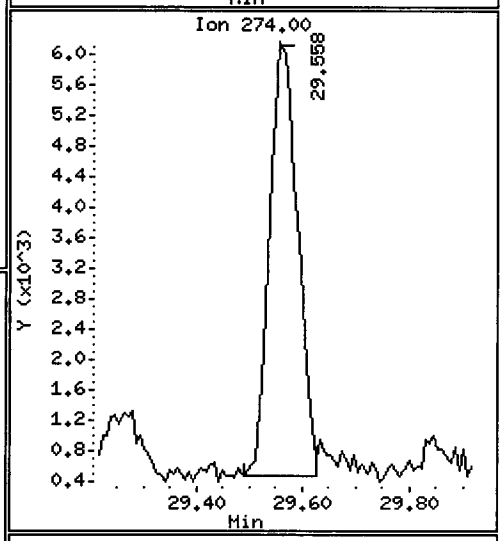


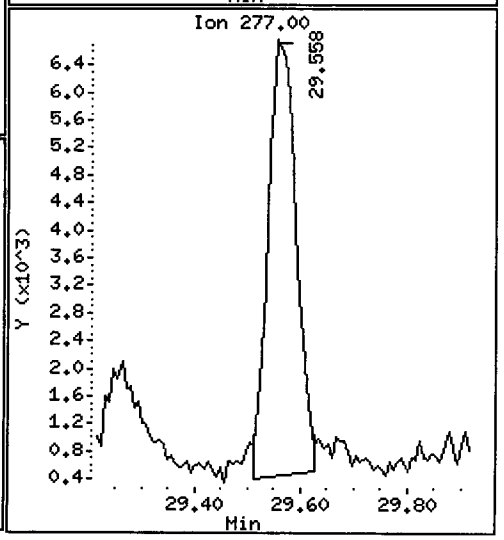












Data File: /chem1/nt10.i/20120509.b/ur81e5.d

Date : 09-MAY-2012 16:46

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E,5

Volume Injected (uL): 1.0

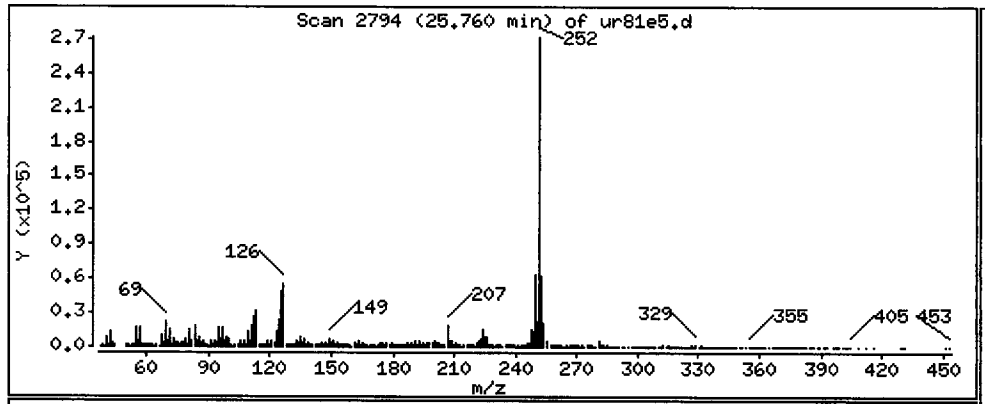
Operator: VTS/YZ

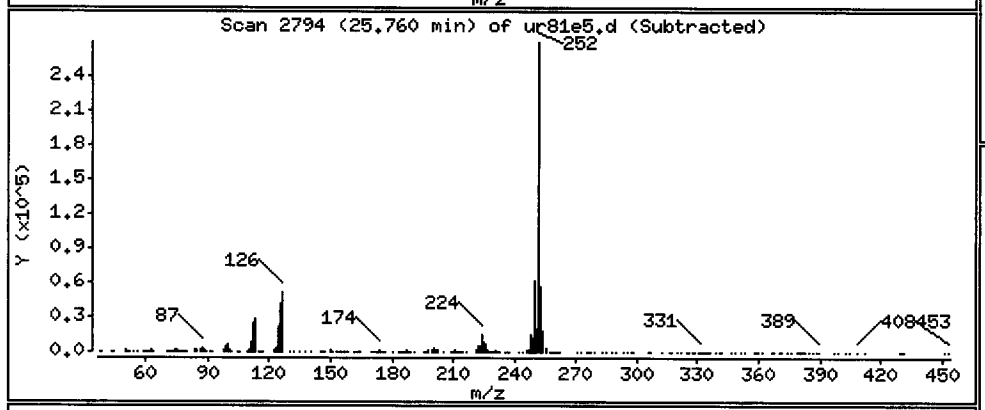
Column phase: ZB-5msi

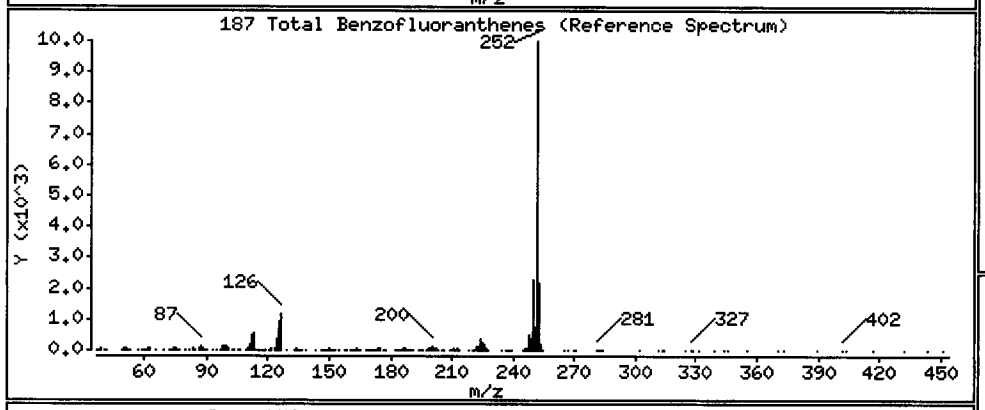
Column diameter: 0.25

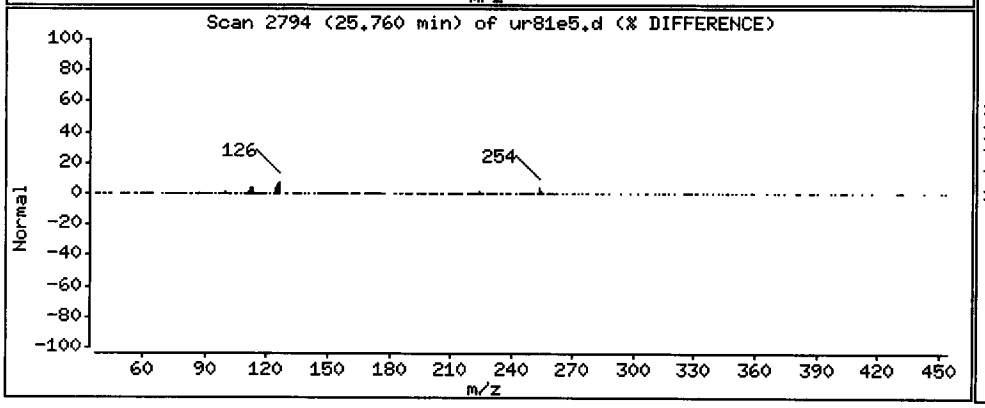
187 Total Benzofluoranthenes

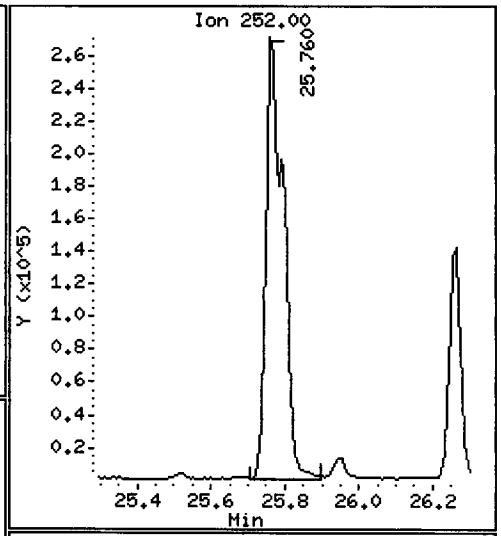
Concentration: 1975 ug/kg

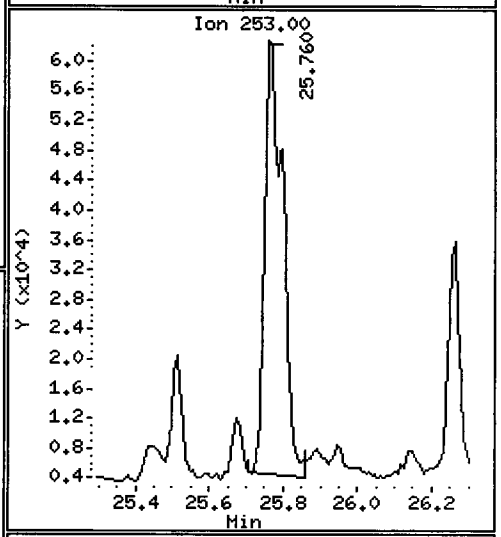


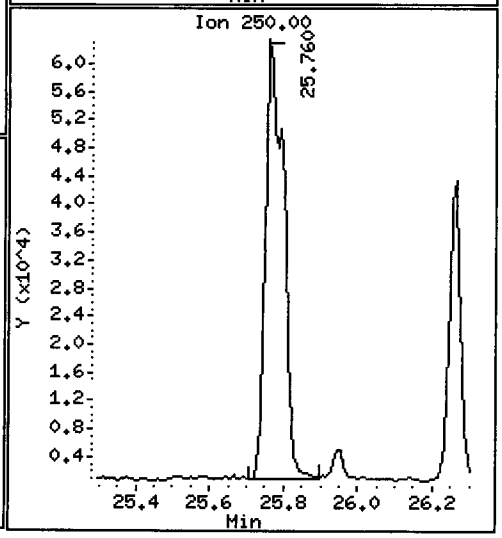












CO-ELUTION SUMMARY FOR FILE - ur81e5.d

Lab ID: UR81E, Method: ABN.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8270 BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (6.7-20ppb)

ARI Job No(s) UR81, US18 Page 1 of 2 Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID NL 5/2/12 Analyst/Date
	UR81 MBS	10.00g	(1:1) WW Y/N 5/4/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave M 5/2/12 Analyst/Date
	SBS	10.00g	(1:1) SP Y/N 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	SBS Dup.	10.00g	(1:1) SP Y/N 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C YL 05/03/12 Analyst/Date
	QLS	10.00g	(1:1) SP Y/N 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	QLS (SIM)	10.00g	(1:1) SP Y/N 5/7/12	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3 SP 5/4/12 Analyst/Date
4	A	25.26	(1:1) WW Y/N 5/4/12	1mL	1mL		
4	B	25.26	(1:1) Y/N	1mL	1mL		GPC Prep Filter (1:1) SP 5/4/12 Analyst/Date
4	C	23.08	(1:1) Y/N	1mL	1mL		
4	D	24.24	(1:1) Y/N	1mL	1mL		
4	E	16.06	(1:1) Y/N	1mL	1mL		Post GPC KD 80-85°C YL 5/7/12 Analyst/Date
4	Ems	16.07	(1:1) SP Y/N 5/7/12	1mL	1mL		
4	Ems0	16.05	(1:1) SP Y/N 5/7/12	1mL	1mL		
4	F	23.04	(1:1) WW Y/N 5/4/12	1mL	1mL		TurboVap 1 2 3
4	G	17.32	(1:1) Y/N	1mL	1mL		
Analyst/Date	NL 5/2/12						CSZ 5/8/12 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (1953-4)	100/150µg/mL	50µL	7/5/12	NL	SP
Full List Spike (Freezer)	7 (1926-2)	100µg/mL	50µL	5/31/12	M	SP
Base Spike	56(1952-3)	200µg/mL	50µL	8/14/12	M	SP
Acid Spike	38(1926-3)	100/150µg/mL	50µL	6/15/12	M	SP
QLS Spike (14 in Freezer)	14(1901-1)	100/200µg/mL	20µL	6/21/12	M	SP
SIM QLS Spike (Freezer)	25(1901-1)	1µg/mL	50µL	6/21/12	M	SP

Extraction Time: 1620 Balance ID: B392988082

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD ~~(small~~ or large drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8270 BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

ARI Job No(s) UR81, U518 Page 2 of 2

PSDDA (6.7-20ppb)
Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID NL 5/2/12 Analyst/Date
	~~MBS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	Microwave M 5/2/12 Analyst/Date
	~~SBS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~SBS Dup.~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C YL 05/03/12 Analyst/Date
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 2 3 SP 5/4/12 Analyst/Date
4	UR81 H	25.26	(1:1) Y / N 5/4/12	1mL	1mL		
4	I	19.25	(1:1) Y / N	1mL	1mL		GPC Prep Filter (1:1) SP 5/4/12 Analyst/Date
4	J	25.02	(1:1) Y / N	1mL	1mL		
1	U518 A	17.17	(1:1) Y / N	1mL	1mL		
1	B	20.34	(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C YL 5/7/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 CJZ 5/8/12
			(1:1) Y / N	1mL	1mL		
Analyst/Date		NL 5/2/12	5/4/12				CJZ 5/12/ Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (1953-4)	100/150µg/mL	50µL	7/5/12 SP 5/4/12	NL	SP
~~Full List Spike (Freezer)~~	~~7 ( )~~	~~100µg/mL~~	~~50µL~~			
~~Base Spike~~	~~56( )~~	~~200µg/mL~~	~~50µL~~			
~~Acid Spike~~	~~38( )~~	~~100/150µg/mL~~	~~50µL~~			
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			

Extraction Time: 1020 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small or large drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SIM ABN Initial Calibration Notes GC/MS SVOA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 5/7/12 Internal Standard ID 1875-1 Expiration 7/15/12

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal acceptable?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	1949-2	12/19/12	Ultra	1941-1	7/27/12
	1950-1	10/31/12		1940-1	7/27/12
	1891-2	6/1/12		1932-2	7/6/12
	1892-2	7/5/12			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YZ **Date:** 5/8/12

Reviewer: VD **Date:** 5/8/12

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/7/12 Analysis: ABN/SIMABN Analyst: YZ

GC Program: ABN 2 Column No: 227815 Column Type: 2B5MSI

Instrument Tune (.U or .CT.): 112164 EM Voltage: 1800

Calibration File: DF 0507 Curve Date: 05/07/12 Injection Vol.: wl

IS/SS	Ical/Ccal		LCS/ICV
1875-1	1949-2	1891-2	1941-1
	1950-1	1892-1	1940-1
			1932-2.

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120507.b

	Time	Filename	LabID	ClientId	DF													
1	1408	df0507.d	DFTPP	DFTPP	1	NO ISTDS FOUND												
2	1423	ic0507a d	IC05075		1	9 03	315762	11 70	1199290	15.60	650854	18 88	1172289	23 94	1224636	26 40	1222978	
3	1537	ic0507c d	IC05070 2		1	9 03	334570	11 70	1251159	15 60	636887	18 88	1179700	23 94	1188152	26 41	1123072	
4	1614	ic0507d.d	IC05071		1	9 03	311248	11.70	1166872	15 60	603218	18 88	1096026	23.94	1131082	26 41	1082499	
5	1651	ic0507e d	IC05072 5		1	9 03	303854	11 70	1153113	15 61	601696	18.88	1096175	23.94	1149245	26.41	1115027	
6	1728	ic0507f d	IC0507.05		1	9 03	324118	11 70	1215248	15 61	600890	18 88	1116742	23 94	1108044	26 42	1054002	
7	1842	ic0507h d	IC05070 1		1	9 04	313686	11 71	1205070	15 62	613587	18 88	1067455	23 95	1049206	26 42	1008820	
8	1919	ic0507i d	IC05070 5		1	9 04	302837	11.71	1162091	15 62	600183	18 89	1085991	23 95	1082451	26 42	1031653	
9	2033	ur87mb d	UR87MBS1	UR87MBS1	1	9.04	290258	11 71	1127323	15 62	576217	18 89	1051411	23 95	1026463	26.42	916181	
10	2111	ur87sb d	UR87LCSS1	UR87LCSS1	1	9 05	292806	11.72	1121369	15 62	591377	18 90	1040340	23 96	1077077	26.43	1000234	
11	2147	ur87srm d	UR87SRM1	SQ-1	1	9 04	307170	11 72	1196172	15.62	617110	18 90	1080365	23 95	1063812	26 42	1023489	
12	2224	ur87a d	UR87A	MD1_0-4	1	9 05	305377	11.72	1179930	15 62	586093	18 90	1035098	23 96	1065743	26 44	1065291	
13	2301	ur87ams d	UR87AMS	MD1_0-4 MS	1	9 05	287638	11 72	1110222	15 63	571387	18 91	997454	23 97	1045376	26 45	1060360	
14	2338	ur87amsd d	UR87AMSD	MD1_0-4 MSD	1	9 05	249123	11 72	954244	15 63	489694	18 91	857171	23 97	896170	26 45	926948	
15	0015	ur87b d	UR87B	MD2_0-4	1	9 05	305137	11 72	1184192	15 63	596339	18 91	1047705	23.97	1114505	26.45	1071152	
16	0052	ur87c d	UR87C	MD3_0-4	1	9 05	304403	11 72	1182298	15.63	602028	18 91	1070390	23 97	1086055	26 45	1091470	

YZ 5/9/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20120507.b/SIM.b

ARI Job No.: IC05 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 07-MAY-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1423	ic0507a.d	IC05075		1	NO MANUAL INTEGRATION
1537	ic0507c.d	IC05070.2		1	NO MANUAL INTEGRATION
1614	ic0507d.d	IC05071		1	NO MANUAL INTEGRATION
1651	ic0507e.d	IC05072.5		1	NO MANUAL INTEGRATION
1728	ic0507f.d	IC0507.05		1	NO MANUAL INTEGRATION
1919	ic0507i.d	IC05070.5		1	NO MANUAL INTEGRATION
1842	ic0508h.d	IC05070.1		1	NO MANUAL INTEGRATION

Report Date : 08-May-2012 13:41

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120507.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0507a	ic0507c	ic0507d	ic0507e	ic0507f	ic0508h	ic0507i
INJ.DATE:	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012	07-MAY-2012
INJ.TIME:	14:23	15:37	16:14	16:51	17:28	18:42	19:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.657	6.664	6.665	6.664	6.665	6.664	6.664	6.657	6.157-7.157	6.663	0.003
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.612	7.112-8.112	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.296	16.796-17.796	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.196	29.696-30.696	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.852	23.352-24.352	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.862	27.362-28.362	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.855	19.355-20.355	+++++	+++++

Reviewer 1 YZ Date: 5/8/12
Reviewer 2 VT Date: 5/8/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120507.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.934	14.434-15.434	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
	3 Phenol	8.403	8.403	8.403	8.403	8.403	8.411	8.411	8.403	7.903-8.903	8.405	0.004
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
	7 1,3-Dichlorobenzene	8.952	8.960	8.960	8.960	8.960	8.960	8.968	8.952	8.452-9.452	8.960	0.004
*	8 1,4-Dichlorobenzene-d4	9.030	9.030	9.030	9.030	9.030	9.037	9.037	9.030	8.530-9.530	9.032	0.004
	9 1,4-Dichlorobenzene	9.061	9.061	9.061	9.061	9.061	9.068	9.068	9.061	8.561-9.561	9.063	0.004
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
	11 Benzyl alcohol	9.332	9.340	9.332	9.340	9.340	9.340	9.348	9.332	8.832-9.832	9.339	0.005
	12 1,2-Dichlorobenzene	9.441	9.441	9.441	9.441	9.441	9.449	9.449	9.441	8.941-9.941	9.443	0.004
	13 2-Methylphenol	9.596	9.596	9.596	9.604	9.604	9.604	9.612	9.596	9.096-10.096	9.602	0.006
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.966	8.466-9.466	+++++	+++++
	15 4-Methylphenol	9.891	9.891	9.891	9.899	9.899	9.899	9.899	9.891	9.391-10.391	9.896	0.004
	16 N-Nitroso-di-n-propyla	9.946	9.946	9.946	9.946	9.946	9.953	9.953	9.946	9.446-10.446	9.948	0.004
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.274	8.774-9.774	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.618	8.118-9.118	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120507.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	11.015	11.015	11.015	11.023	11.015	11.023	11.030	11.015	10.515-11.515	11.019	0.006
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.248	9.748-10.748	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.616	11.616	11.616	11.616	11.616	11.624	11.624	11.616	11.116-12.116	11.619	0.004
*	27 Naphthalene-d8	11.701	11.701	11.701	11.701	11.701	11.709	11.709	11.701	11.201-12.201	11.703	0.004
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.480	8.980-9.980	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.157	12.157	12.157	12.157	12.157	12.165	12.165	12.157	11.657-12.657	12.159	0.004
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.533	10.033-11.033	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
	39 Dimethylphthalate	15.113	15.113	15.113	15.121	15.121	15.129	15.129	15.113	14.613-15.613	15.120	0.007
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.601	15.601	15.601	15.609	15.609	15.616	15.616	15.601	15.101-16.101	15.607	0.007
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120507.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.055	12.555-13.555	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.706	16.698	16.699	16.706	16.706	16.714	16.714	16.706	16.206-17.206	16.706	0.006
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.466	12.966-13.966	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.587	13.087-14.087	+++++	+++++
	54 N-Nitrosodiphenylamine	17.092	17.092	17.092	17.092	17.092	17.100	17.108	17.092	16.592-17.592	17.096	0.006
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.219	18.219	18.219	18.219	18.219	18.226	18.234	18.219	17.719-18.719	18.222	0.006
	58 Pentachlorophenol	18.614	18.614	18.614	18.614	18.614	18.621	18.629	18.614	18.114-19.114	18.617	0.006
*	59 Phenanthrene-d10	18.877	18.877	18.877	18.877	18.877	18.884	18.892	18.877	18.377-19.377	18.880	0.006
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.286	14.786-15.786	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.761	15.261-16.261	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.064	22.072	22.072	22.072	22.072	22.080	22.087	22.064	21.564-22.564	22.074	0.007
	67 Butylbenzylphthalate	23.009	23.017	23.017	23.017	23.017	23.032	23.032	23.009	22.509-23.509	23.020	0.009
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120507.b/SIM.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 69 Chrysene-d12	23.938	23.938	23.938	23.938	23.938	23.954	23.953	23.938	23.438-24.438	23.943	0.008
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.185	19.685-20.685	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.382	21.882-22.882	+++++	+++++
* 77 Perylene-d12	26.400	26.408	26.408	26.408	26.416	26.423	26.423	26.400	25.900-26.900	26.412	0.009
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
79 Dibenzo(a,h)anthracene	28.802	28.801	28.802	28.809	28.809	28.825	28.825	28.802	28.302-29.302	28.810	0.010
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.162	24.662-25.662	+++++	+++++
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$ 88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.434	15.934-16.934	+++++	+++++
90 N-Nitrosodimethylamine	4.363	4.371	4.363	4.363	4.379	4.371	4.363	4.363	3.863-4.863	4.368	0.006
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.897	7.397-8.397	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.833	21.333-22.333	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.896	14.396-15.396	+++++	+++++
$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.819	14.319-15.319	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.950	26.450-27.450	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20120507.b/SIM.b/ic0507f.d
Level 2: /chem1/nt10.i/20120507.b/SIM.b/ic0508h.d
Level 3: /chem1/nt10.i/20120507.b/SIM.b/ic0507c.d
Level 4: /chem1/nt10.i/20120507.b/SIM.b/ic0507i.d
Level 5: /chem1/nt10.i/20120507.b/SIM.b/ic0507d.d
Level 6: /chem1/nt10.i/20120507.b/SIM.b/ic0507e.d
Level 7: /chem1/nt10.i/20120507.b/SIM.b/ic0507a.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
138 Chlorobenzilate	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
139 Isodrin	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
140 Diallate A	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
141 Diallate B	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
142 1,2-Dibromo-3-Chloropropane	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
135 2,3,5,6-Tetrachlorophenol	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
3 Phenol	1.87142	1.87627	1.84505	1.85959	1.85898	1.75224		
	1.65886						1.81749	4.495
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
6 2-Chlorophenol	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
7 1,3-Dichlorobenzene	1.85908	1.84988	1.76902	1.73960	1.71923	1.60497	1.55199	1.72768	6.685
9 1,4-Dichlorobenzene	1.80700	1.77885	1.68240	1.67375	1.64293	1.55474	1.50799	1.66395	6.528
11 Benzyl alcohol	0.91670	0.95191	0.92800	0.94683	0.94609	0.92467	0.89870	0.93041	2.063
12 1,2-Dichlorobenzene	1.71691	1.71229	1.65789	1.63911	1.62594	1.51696	1.46204	1.61873	5.931
13 2-Methylphenol	1.48588	1.48811	1.47234	1.46500	1.50179	1.41759	1.38848	1.45988	2.838
14 2,2'-oxybis(1-Chloropropane)	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
15 4-Methylphenol	1.52957	1.54843	1.54879	1.54980	1.57163	1.51025	1.46441	1.53184	2.306
16 N-Nitroso-di-n-propylamine	0.85771	0.88738	0.85842	0.85567	0.83437	0.79897	0.76479	0.83676	4.985

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.38060	0.37083	0.38059	0.37162	0.37924	0.35116	0.33249	0.36665	4.975
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.38063	0.37339	0.36780	0.35134	0.35794	0.33148	0.32363	0.35517	5.993

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
30 Hexachlorobutadiene	0.20559	0.20248	0.19945	0.19213	0.19759	0.18464		
	0.18475						0.19523	4.259
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
38 2-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.32377 / 1.07593	1.24670	1.27800	1.20506	1.25992	1.17252	1.22313	6.642
40 Acenaphthylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
48 2,4-Dinitrotoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.41430 / 1.19738	1.36059	1.39576	1.30781	1.39493	1.30193	1.33896	5.695
51 4-Chlorophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.54179 / 0.47715	0.56392	0.56201	0.54479	0.56093	0.51149	0.53744	6.000
56 4-Bromophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.30209 / 0.25079	0.30517	0.29806	0.27622	0.28730	0.26337	0.28329	7.306

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
58 Pentachlorophenol	0.14446	0.14526	0.16308	0.16613	0.18822	0.18638		
	0.18441						0.16828	11.156
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
67 Butylbenzylphthalate	0.45955	0.47419	0.50573	0.47419	0.51410	0.47854		
	0.46705						0.48190	4.197
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
70 3,3'-Dichlorobenzidine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 Chrysene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 Di-n-octylphthalate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 Benzo(b)fluoranthene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Benzo(k)fluoranthene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 Benzo(a)pyrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
79 Dibenzo(a,h)anthracene	0.83522 / 0.84969	0.83190	0.87569	0.83446	0.91210	0.85629	0.85648	3.387

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
80 Benzo(g,h,i)perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.86734 / 0.75694	0.87240	0.82697	0.85897	0.83490	0.79524	0.83039	5.064
91 Aniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 1,2-Diphenylhydrazine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 p-Cymene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 Perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 1 2-Fluorophenol	1.41899	1.42219	1.38566	1.38538	1.38680	1.32317		
	1.29028						1.37321	3.563
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2012 14:23
End Cal Date : 07-MAY-2012 19:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Cal Date : 08-May-2012 13:41 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
	5.000 Level 7							
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 66 Terphenyl-d14	0.66712	0.68132	0.66465	0.63069	0.65047	0.59374		
	0.56937						0.63677	6.507
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

12 5/8/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120507.b/SIM.b/ic0507a.d
Lab Smp Id: IC05075
Inj Date : 07-MAY-2012 14:23
Operator : YZ Inst ID: nt10.i
Smp Info : IC05075
Misc Info :
Comment :
Method : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 13:42 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 2-Fluorophenol	112	6 657	6 664	(0 737)	509275	5.00000	4 698
	3 Phenol	94	8 403	8 411	(0 931)	654756	5.00000	4 564
	7 1,3-Dichlorobenzene	146	8.952	8 968	(0.991)	612573	5 00000	4 492
*	8 1,4-Dichlorobenzene-d4	152	9.030	9.037	(1 000)	315762	4 00000	
	9 1,4-Dichlorobenzene	146	9.061	9.068	(1.003)	595207	5.00000	4 531
	11 Benzyl alcohol	79	9 332	9.348	(1.034)	354720	5.00000	4 830
	12 1,2-Dichlorobenzene	146	9.441	9 449	(1 046)	577069	5.00000	4 516
	13 2-Methylphenol	108	9.596	9 612	(1.063)	548036	5.00000	4 755
	15 4-Methylphenol	108	9.891	9 899	(1 095)	578005	5 00000	4 780
	16 N-Nitroso-di-n-propylamine	70	9.946	9 953	(1 101)	301865	5.00000	4 570
	22 2,4-Dimethylphenol	107	11 015	11.030	(0.941)	996891	10 0000	9 068
	26 1,2,4-Trichlorobenzene	180	11 616	11 624	(0.993)	485156	5.00000	4 556
*	27 Naphthalene-d8	136	11 701	11.709	(1.000)	1199290	4.00000	
	30 Hexachlorobutadiene	225	12 157	12 165	(1.039)	276959	5.00000	4 732
	39 Dimethylphthalate	163	15 113	15 129	(0.969)	875342	5.00000	4 398
*	42 Acenaphthene-d10	162	15 601	15 616	(1 000)	650854	4.00000	
	50 Diethylphthalate	149	16 706	16 714	(1 071)	974150	5 00000	4 471
	54 N-Nitrosodiphenylamine	169	17.092	17 108	(0 905)	699192	5 00000	4 439
	57 Hexachlorobenzene	284	18.219	18 234	(0.965)	367494	5.00000	4 426
	58 Pentachlorophenol	266	18.614	18 629	(0.986)	540461	10 0000	10 96
*	59 Phenanthrene-d10	188	18.877	18.892	(1.000)	1172289	4 00000	
S	66 Terphenyl-d14	244	22.064	22 087	(0.922)	871590	5 00000	4.471
	67 Butylbenzylphthalate	149	23.009	23 032	(0.961)	714953	5 00000	4 846
*	69 Chrysene-d12	240	23 938	23 953	(1.000)	1224636	4 00000	
*	77 Perylene-d12	264	26.400	26.423	(1 000)	1222978	4.00000	
	79 Dibenzo(a,h)anthracene	278	28 802	28 825	(1.091)	1298938	5.00000	4 960
	90 N-Nitrosodimethylamine	74	4.363	4 363	(0.483)	597529	10 0000	9 115

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507a.d
Lab Smp Id: IC05075
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 16:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	315762	1.45
27 Naphthalene-d8	1166872	583436	2333744	1199290	2.78
42 Acenaphthene-d10	603218	301609	1206436	650854	7.90
59 Phenanthrene-d10	1096026	548013	2192052	1172289	6.96
69 Chrysene-d12	1131082	565541	2262164	1224636	8.27
77 Perylene-d12	1082499	541250	2164998	1222978	12.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.03	8.53	9.53	9.03	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.88	18.38	19.38	18.88	0.00
69 Chrysene-d12	23.94	23.44	24.44	23.94	0.00
77 Perylene-d12	26.41	25.91	26.91	26.40	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.1/20120507.b/SIM.b/ic0507a.d

Date : 07-MAY-2012 14:23

Client ID:

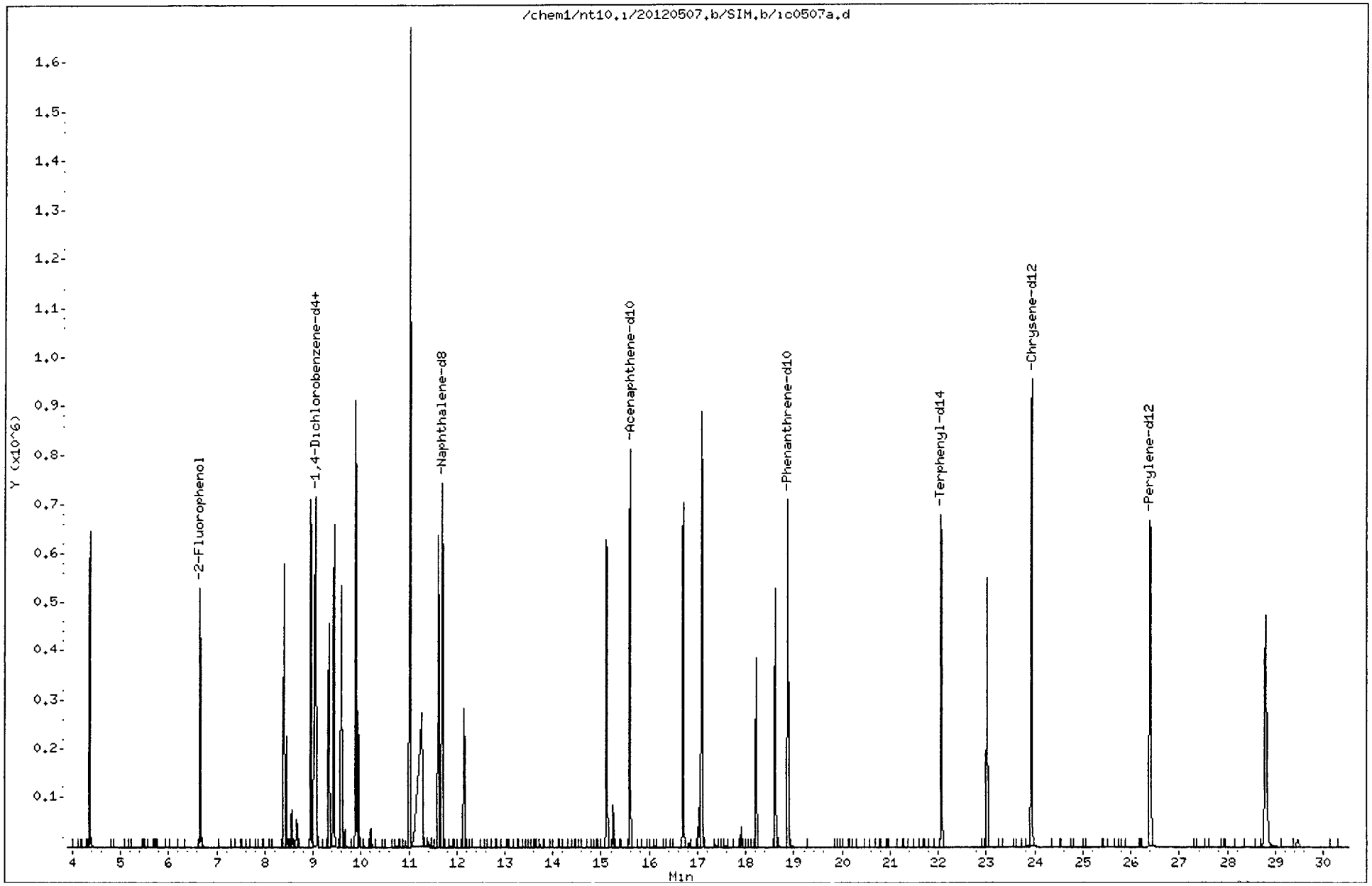
Sample Info: IC05075

Column phase: ZB-5ms1

Instrument: nt10.1

Operator: YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0507a.d

Lab ID: IC05075, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/9/12

Data file : /chem1/nt10.i/20120507.b/SIM.b/ic0507c.d
Lab Smp Id: IC05070.2
Inj Date : 07-MAY-2012 15:37
Operator : YZ Inst ID: nt10.i
Smp Info : IC05070.2
Misc Info :
Comment :
Method : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 13:42 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.664	6 664	(0 738)	23180	0 20000	0.2018
	3 Phenol	94	8.403	8.411	(0.931)	30865	0 20000	0 2030
	7 1,3-Dichlorobenzene	146	8.960	8.968	(0.992)	29593	0 20000	0 2048
*	8 1,4-Dichlorobenzene-d4	152	9.030	9 037	(1.000)	334570	4 00000	
	9 1,4-Dichlorobenzene	146	9.061	9 068	(1 003)	28144	0 20000	0.2022
	11 Benzyl alcohol	79	9.340	9 348	(1 034)	15524	0 20000	0 1995
	12 1,2-Dichlorobenzene	146	9 441	9 449	(1 046)	27734	0 20000	0 2048
	13 2-Methylphenol	108	9.596	9 612	(1.063)	24630	0 20000	0 2017
	15 4-Methylphenol	108	9 891	9 899	(1 095)	25909	0.20000	0.2022
	16 N-Nitroso-di-n-propylamine	70	9.946	9 953	(1.101)	14360	0 20000	0 2052
	22 2,4-Dimethylphenol	107	11 015	11 030	(0 941)	47618	0.40000	0.4152
	26 1,2,4-Trichlorobenzene	180	11 616	11 624	(0.993)	23009	0.20000	0.2071
*	27 Naphthalene-d8	136	11 701	11 709	(1 000)	1251159	4.00000	
	30 Hexachlorobutadiene	225	12 157	12.165	(1 039)	12477	0.20000	0.2043
	39 Dimethylphthalate	163	15.113	15 129	(0 969)	40697	0 20000	0 2090
*	42 Acenaphthene-d10	162	15.601	15 616	(1 000)	636887	4.00000	
	50 Diethylphthalate	149	16.698	16.714	(1 070)	44447	0 20000	0.2085
	54 N-Nitrosodiphenylamine	169	17 092	17 108	(0 905)	33150	0.20000	0.2091
	57 Hexachlorobenzene	284	18.219	18.234	(0.965)	17581	0.20000	0.2104
	58 Pentachlorophenol	266	18 614	18 629	(0 986)	19238	0 40000	0 3876
*	59 Phenanthrene-d10	188	18.877	18.892	(1 000)	1179700	4.00000	
$	66 Terphenyl-d14	244	22 072	22.087	(0.922)	39485	0 20000	0 2088
	67 Butylbenzylphthalate	149	23 017	23 032	(0.962)	30044	0 20000	0.2099
*	69 Chrysene-d12	240	23 938	23 953	(1 000)	1188152	4 00000	
*	77 Perylene-d12	264	26 408	26 423	(1 000)	1123072	4 00000	
	79 Dibenzo(a,h)anthracene	278	28 801	28 825	(1.091)	49173	0 20000	0 2045
	90 N-Nitrosodimethylamine	74	4.371	4 363	(0 484)	27668	0 40000	0 3984

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507c.d
Lab Smp Id: IC05070.2
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 16:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	334570	7.49
27 Naphthalene-d8	1166872	583436	2333744	1251159	7.22
42 Acenaphthene-d10	603218	301609	1206436	636887	5.58
59 Phenanthrene-d10	1096026	548013	2192052	1179700	7.63
69 Chrysene-d12	1131082	565541	2262164	1188152	5.05
77 Perylene-d12	1082499	541250	2164998	1123072	3.75

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.03	8.53	9.53	9.03	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.88	18.38	19.38	18.88	0.00
69 Chrysene-d12	23.94	23.44	24.44	23.94	0.00
77 Perylene-d12	26.41	25.91	26.91	26.41	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

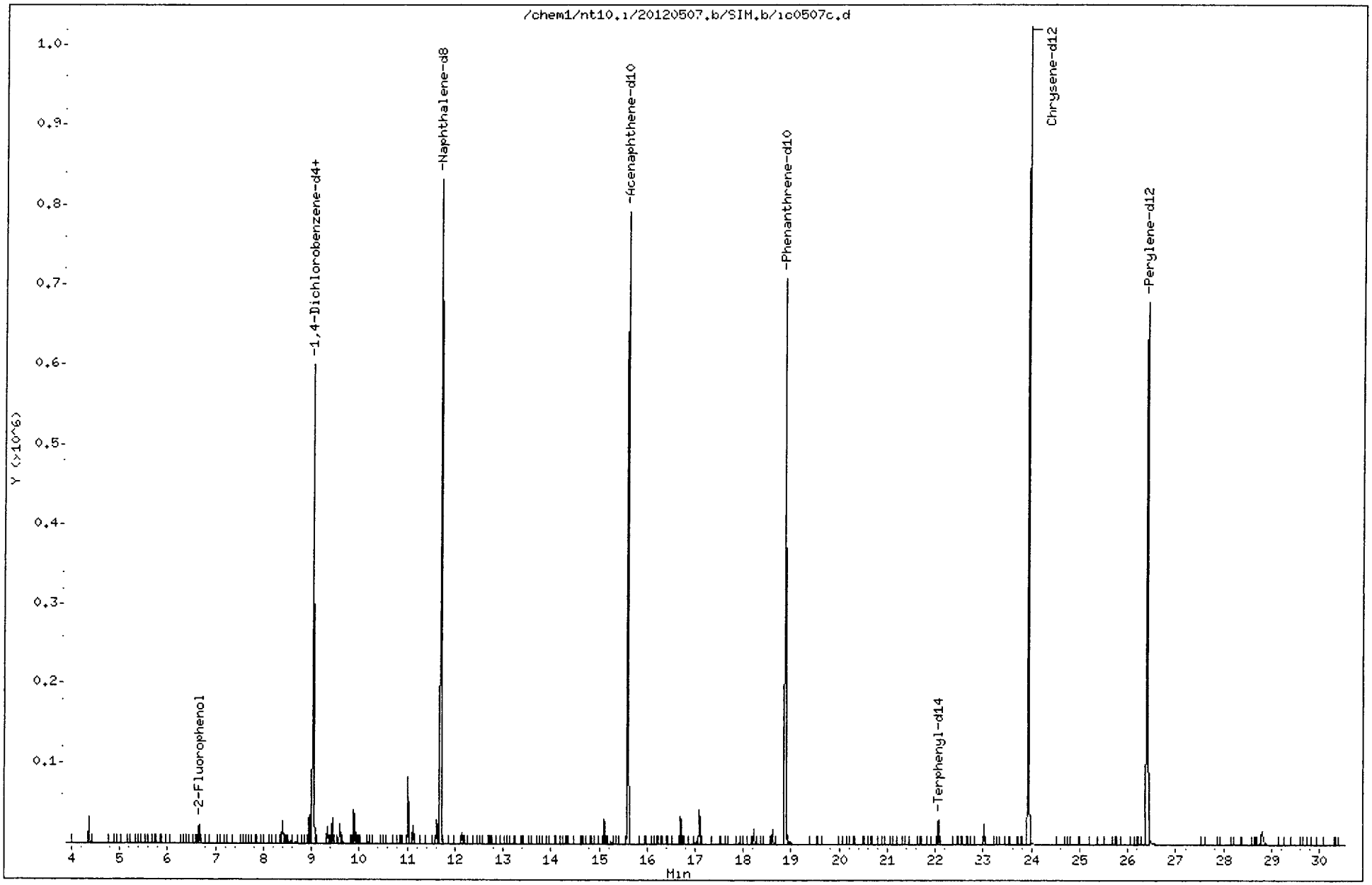
Data File: /chem1/nt10.1/20120507.b/SIM.b/1c0507c.d
Date : 07-MAY-2012 15:37
Client ID:
Sample Info: IC05070.2

Instrument: nt10.1

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0507c.d

Lab ID: IC05070.2, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/8/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120507.b/SIM.b/ic0507d.d
Lab Smp Id: IC05071
Inj Date : 07-MAY-2012 16:14
Operator : YZ Inst ID: nt10.i
Smp Info : IC05071
Misc Info :
Comment :
Method : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 13:42 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6 665	6 664	(0.738)	107910	1 00000	1 010
	3 Phenol	94	8.403	8 411	(0 931)	144651	1 00000	1 023
	7 1,3-Dichlorobenzene	146	8 960	8 968	(0.992)	133777	1 00000	0.9951
*	8 1,4-Dichlorobenzene-d4	152	9 030	9 037	(1 000)	311248	4.00000	
	9 1,4-Dichlorobenzene	146	9.061	9 068	(1.003)	127840	1 00000	0 9874
	11 Benzyl alcohol	79	9.332	9 348	(1 034)	73617	1 00000	1 017
	12 1,2-Dichlorobenzene	146	9 441	9 449	(1 046)	126518	1 00000	1 004
	13 2-Methylphenol	108	9 596	9 612	(1.063)	116857	1 00000	1.029
	15 4-Methylphenol	108	9.891	9 899	(1 095)	122292	1 00000	1 026
	16 N-Nitroso-di-n-propylamine	70	9.946	9 953	(1 101)	64924	1 00000	0 9971
	22 2,4-Dimethylphenol	107	11.015	11 030	(0.941)	221263	2.00000	2 069
	26 1,2,4-Trichlorobenzene	180	11 616	11 624	(0.993)	104417	1.00000	1.008
*	27 Naphthalene-d8	136	11.701	11.709	(1.000)	1166872	4 00000	
	30 Hexachlorobutadiene	225	12.157	12 165	(1 039)	57642	1 00000	1.012
	39 Dimethylphthalate	163	15.113	15 129	(0.969)	190001	1.00000	1 030
*	42 Acenaphthene-d10	162	15.601	15.616	(1.000)	603218	4 00000	
	50 Diethylphthalate	149	16.699	16 714	(1.070)	210362	1 00000	1 042
	54 N-Nitrosodiphenylamine	169	17 092	17 108	(0 905)	153698	1 00000	1 044
	57 Hexachlorobenzene	284	18.219	18 234	(0.965)	78722	1 00000	1 014
	58 Pentachlorophenol	266	18 614	18 629	(0 986)	103147	2 00000	2.237
*	59 Phenanthrene-d10	188	18 877	18.892	(1.000)	1096026	4 00000	
$	66 Terphenyl-d14	244	22 072	22.087	(0.922)	183935	1 00000	1 022
	67 Butylbenzylphthalate	149	23 017	23 032	(0.962)	145371	1.00000	1.067
*	69 Chrysene-d12	240	23 938	23.953	(1 000)	1131082	4 00000	
*	77 Perylene-d12	264	26 408	26.423	(1 000)	1082499	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.802	28 825	(1.091)	246838	1 00000	1.065
	90 N-Nitrosodimethylamine	74	4 363	4.363	(0.483)	129930	2 00000	2.011

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507d.d
Lab Smp Id: IC05071
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 16:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	311248	0.00
27 Naphthalene-d8	1166872	583436	2333744	1166872	0.00
42 Acenaphthene-d10	603218	301609	1206436	603218	0.00
59 Phenanthrene-d10	1096026	548013	2192052	1096026	0.00
69 Chrysene-d12	1131082	565541	2262164	1131082	0.00
77 Perylene-d12	1082499	541250	2164998	1082499	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.03	8.53	9.53	9.03	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.60	0.00
59 Phenanthrene-d10	18.88	18.38	19.38	18.88	0.00
69 Chrysene-d12	23.94	23.44	24.44	23.94	0.00
77 Perylene-d12	26.41	25.91	26.91	26.41	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/SIM.b/ic0507d.d

Date : 07-MAY-2012 16:14

Client ID:

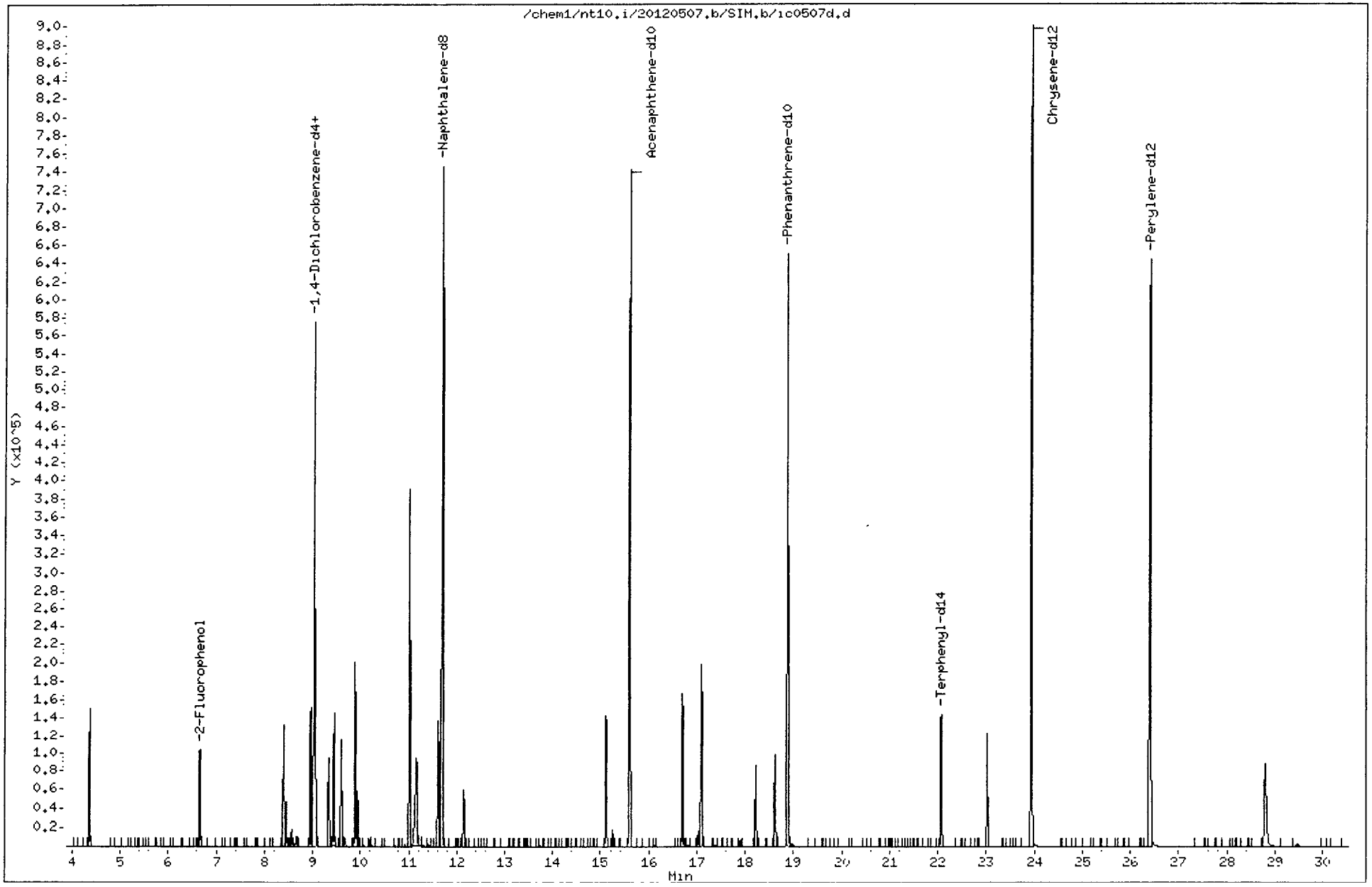
Sample Info: IC05071

Column phase: ZB-5ms1

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0507d.d

Lab ID: IC05071, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/8/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120507.b/SIM.b/ic0507e.d
Lab Smp Id: IC05072.5
Inj Date : 07-MAY-2012 16:51
Operator : YZ Inst ID: nt10.i
Smp Info : IC05072.5
Misc Info :
Comment :
Method : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 13:42 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.664	6.664	(0 738)	251282	2.50000	2.409
	3 Phenol	94	8.403	8.411	(0 931)	332765	2 50000	2 410
	7 1,3-Dichlorobenzene	146	8 960	8.968	(0 992)	304798	2 50000	2 322
*	8 1,4-Dichlorobenzene-d4	152	9.030	9.037	(1 000)	303854	4 00000	
	9 1,4-Dichlorobenzene	146	9.061	9.068	(1.003)	295259	2 50000	2 336
	11 Benzyl alcohol	79	9 340	9.348	(1 034)	175603	2.50000	2 485
	12 1,2-Dichlorobenzene	146	9.441	9.449	(1 046)	288084	2.50000	2 343
	13 2-Methylphenol	108	9 604	9.612	(1 064)	269213	2 50000	2 428
	15 4-Methylphenol	108	9 899	9 899	(1.096)	286810	2 50000	2 465
	16 N-Nitroso-di-n-propylamine	70	9 946	9.953	(1 101)	151732	2.50000	2 387
	22 2,4-Dimethylphenol	107	11 023	11 030	(0.942)	506160	5.00000	4 789
	26 1,2,4-Trichlorobenzene	180	11 616	11.624	(0.993)	238896	2.50000	2 333
*	27 Naphthalene-d8	136	11.701	11 709	(1 000)	1153113	4 00000	
	30 Hexachlorobutadiene	225	12 157	12.165	(1 039)	133068	2.50000	2 364
	39 Dimethylphthalate	163	15 121	15.129	(0 969)	440936	2.50000	2 397
*	42 Acenaphthene-d10	162	15 609	15.616	(1.000)	601696	4.00000	
	50 Diethylphthalate	149	16 706	16.714	(1 070)	489604	2.50000	2.431
	54 N-Nitrosodiphenylamine	169	17.092	17 108	(0 905)	350426	2 50000	2 379
	57 Hexachlorobenzene	284	18 219	18 234	(0 965)	180435	2 50000	2 324
	58 Pentachlorophenol	266	18 614	18 629	(0 986)	255378	5.00000	5.538
*	59 Phenanthrene-d10	188	18 877	18 892	(1 000)	1096175	4.00000	
$	66 Terphenyl-d14	244	22 072	22 087	(0.922)	426468	2 50000	2 331
	67 Butylbenzylphthalate	149	23 017	23 032	(0.962)	343722	2.50000	2 483
*	69 Chrysene-d12	240	23 938	23 953	(1.000)	1149245	4.00000	
*	77 Perylene-d12	264	26 408	26 423	(1 000)	1115027	4.00000	
	79 Dibenzo(a,h)anthracene	278	28 809	28 825	(1.091)	596744	2.50000	2 499
	90 N-Nitrosodimethylamine	74	4 363	4 363	(0 483)	302045	5 00000	4 788

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507e.d
Lab Smp Id: IC05072.5
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 16:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	303854	-2.38
27 Naphthalene-d8	1166872	583436	2333744	1153113	-1.18
42 Acenaphthene-d10	603218	301609	1206436	601696	-0.25
59 Phenanthrene-d10	1096026	548013	2192052	1096175	0.01
69 Chrysene-d12	1131082	565541	2262164	1149245	1.61
77 Perylene-d12	1082499	541250	2164998	1115027	3.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.03	8.53	9.53	9.03	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.61	0.05
59 Phenanthrene-d10	18.88	18.38	19.38	18.88	0.00
69 Chrysene-d12	23.94	23.44	24.44	23.94	0.00
77 Perylene-d12	26.41	25.91	26.91	26.41	0.00

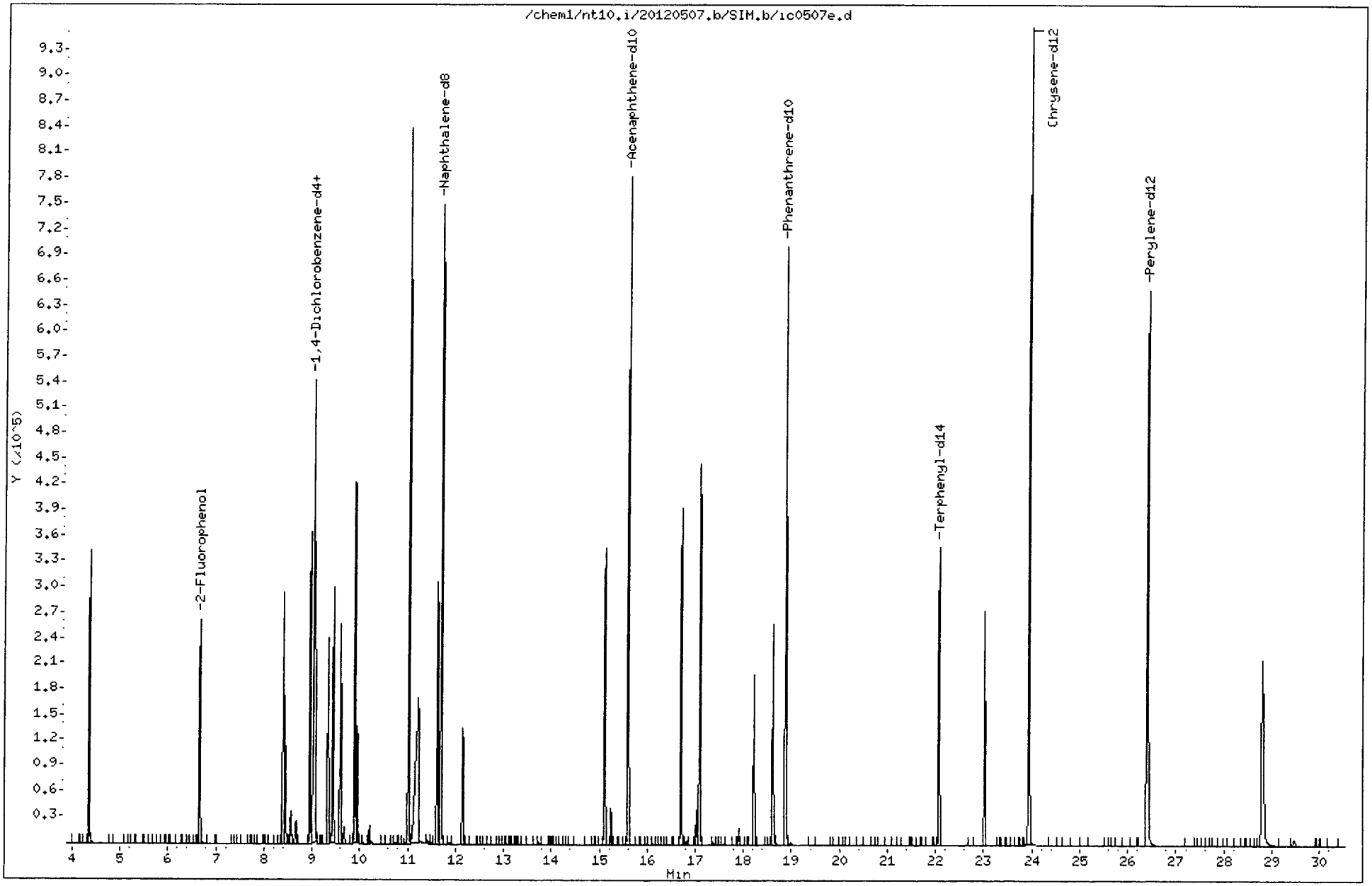
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/SIM.b/ic0507e.d
Date : 07-MAY-2012 16:51
Client ID:
Sample Info: IC05072.5

Column phase: ZB-5ms1

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0507e.d

Lab ID: IC05072.5, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120507.b/SIM.b/ic0507f.d
Lab Smp Id: IC0507.05
Inj Date : 07-MAY-2012 17:28
Operator : YZ Inst ID: nt10.i
Smp Info : IC0507.05
Misc Info :
Comment :
Method : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 13:42 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/8/12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6 665	6.664	(0 738)	5749	0.05000	0 05167
	3 Phenol	94	8.403	8.411	(0 931)	7582	0 05000	0 05148
	7 1,3-Dichlorobenzene	146	8.960	8.968	(0 992)	7532	0 05000	0.05380
*	8 1,4-Dichlorobenzene-d4	152	9.030	9 037	(1 000)	324118	4 00000	
	9 1,4-Dichlorobenzene	146	9 061	9.068	(1 003)	7321	0 05000	0 05430
	11 Benzyl alcohol	79	9.340	9 348	(1 034)	3714	0 05000	0 04926
	12 1,2-Dichlorobenzene	146	9.441	9.449	(1 046)	6956	0 05000	0.05303
	13 2-Methylphenol	108	9.604	9 612	(1.064)	6020	0.05000	0.05089
	15 4-Methylphenol	108	9.899	9 899	(1 096)	6197	0.05000	0 04993
	16 N-Nitroso-di-n-propylamine	70	9 946	9 953	(1.101)	3475	0.05000	0 05125
	22 2,4-Dimethylphenol	107	11 015	11.030	(0.941)	11563	0 10000	0 1038
	26 1,2,4-Trichlorobenzene	180	11.616	11.624	(0.993)	5782	0 05000	0.05358
*	27 Naphthalene-d8	136	11 701	11 709	(1.000)	1215248	4 00000	
	30 Hexachlorobutadiene	225	12.157	12 165	(1.039)	3123	0 05000	0 05265
	39 Dimethylphthalate	163	15.121	15 129	(0 969)	9943	0.05000	0.05411
*	42 Acenaphthene-d10	162	15.609	15 616	(1 000)	600890	4 00000	
	50 Diethylphthalate	149	16 706	16.714	(1.070)	10623	0 05000	0 05281
	54 N-Nitrosodiphenylamine	169	17 092	17 108	(0 905)	7563	0.05000	0 05040
	57 Hexachlorobenzene	284	18.219	18.234	(0.965)	4217	0 05000	0.05332
	58 Pentachlorophenol	266	18.614	18.629	(0 986)	4033	0 10000	0 08584
*	59 Phenanthrene-d10	188	18.877	18 892	(1 000)	1116742	4 00000	
$	66 Terphenyl-d14	244	22.072	22 087	(0 922)	9240	0 05000	0 05238
	67 Butylbenzylphthalate	149	23.017	23.032	(0 962)	6365	0 05000	0 04768
*	69 Chrysene-d12	240	23 938	23.953	(1 000)	1108044	4.00000	
*	77 Perylene-d12	264	26.416	26.423	(1 000)	1054002	4.00000	
	79 Dibenzo(a,h)anthracene	278	28 809	28.825	(1 091)	11004	0 05000	0 04876
	90 N-Nitrosodimethylamine	74	4 379	4.363	(0 485)	7028	0 10000	0.1044

Data File: /chem1/nt10.i/20120507.b/SIM.b/ic0507f.d
Report Date: 08-May-2012 13:43

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507f.d
Lab Smp Id: IC0507.05
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 16:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	324118	4.13
27 Naphthalene-d8	1166872	583436	2333744	1215248	4.15
42 Acenaphthene-d10	603218	301609	1206436	600890	-0.39
59 Phenanthrene-d10	1096026	548013	2192052	1116742	1.89
69 Chrysene-d12	1131082	565541	2262164	1108044	-2.04
77 Perylene-d12	1082499	541250	2164998	1054002	-2.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.03	8.53	9.53	9.03	0.00
27 Naphthalene-d8	11.70	11.20	12.20	11.70	0.00
42 Acenaphthene-d10	15.60	15.10	16.10	15.61	0.05
59 Phenanthrene-d10	18.88	18.38	19.38	18.88	0.00
69 Chrysene-d12	23.94	23.44	24.44	23.94	0.00
77 Perylene-d12	26.41	25.91	26.91	26.42	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120507.b/SIM.b/ic0507f.d

Date : 07-MAY-2012 17:28

Client ID:

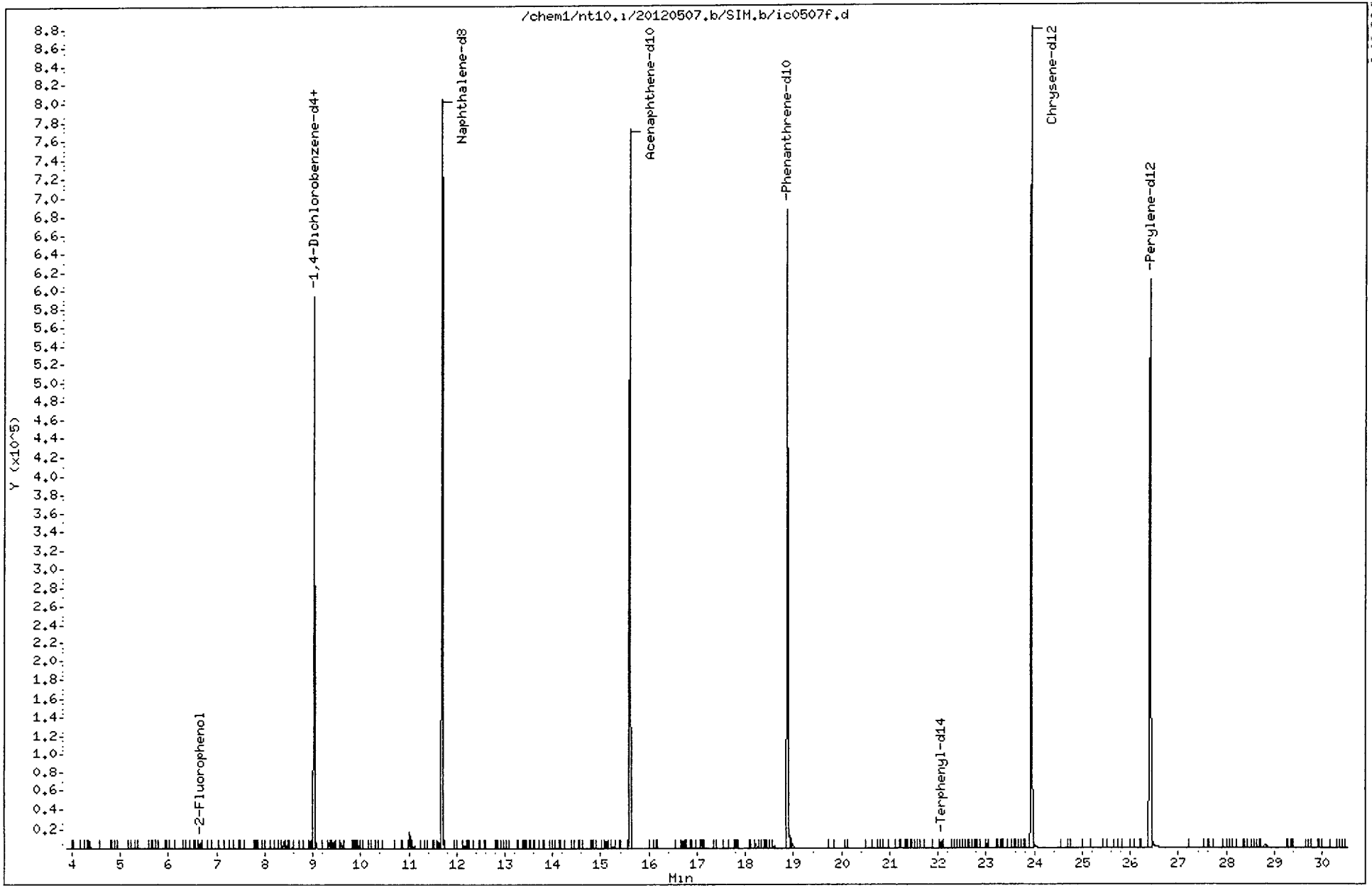
Sample Info: IC0507.05

Column phase: ZB-5ms1

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0507f.d

Lab ID: IC0507.05, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

*E 5/8/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120507.b/SIM.b/ic0507h.d
Lab Smp Id: IC05070.1
Inj Date : 07-MAY-2012 18:42
Operator : YZ Inst ID: nt10.i
Smp Info : IC05070.1
Misc Info :
Comment :
Method : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 13:42 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6 664	6.664	(0 737)	11153	0 10000	0 1036
	3 Phenol	94	8.411	8 411	(0.931)	14714	0.10000	0 1032
	7 1,3-Dichlorobenzene	146	8.960	8 968	(0 991)	14507	0 10000	0 1071
*	8 1,4-Dichlorobenzene-d4	152	9 037	9.037	(1 000)	313686	4 00000	
	9 1,4-Dichlorobenzene	146	9.068	9.068	(1.003)	13950	0 10000	0 1069
	11 Benzyl alcohol	79	9.340	9.348	(1.033)	7465	0.10000	0 1023
	12 1,2-Dichlorobenzene	146	9 449	9.449	(1 046)	13428	0 10000	0.1058
	13 2-Methylphenol	108	9 604	9.612	(1 063)	11670	0.10000	0 1019
	15 4-Methylphenol	108	9.899	9 899	(1.095)	12143	0 10000	0.1011
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1 101)	6959	0 10000	0 1061
	22 2,4-Dimethylphenol	107	11.023	11 030	(0 941)	22344	0.20000	0 2023
	26 1,2,4-Trichlorobenzene	180	11.624	11.624	(0.993)	11249	0 10000	0.1051
*	27 Naphthalene-d8	136	11.709	11 709	(1.000)	1205070	4 00000	
	30 Hexachlorobutadiene	225	12.165	12.165	(1 039)	6100	0 10000	0 1037
	39 Dimethylphthalate	163	15.129	15.129	(0 969)	19124	0.10000	0 1019
*	42 Acenaphthene-d10	162	15.616	15.616	(1.000)	613587	4.00000	
	50 Diethylphthalate	149	16.714	16 714	(1.070)	20871	0 10000	0 1016
	54 N-Nitrosodiphenylamine	169	17.100	17 108	(0 906)	15049	0.10000	0 1049
	57 Hexachlorobenzene	284	18.226	18.234	(0 965)	8144	0.10000	0 1077
	58 Pentachlorophenol	266	18 621	18.629	(0 986)	7753	0 20000	0 1726
*	59 Phenanthrene-d10	188	18 884	18.892	(1 000)	1067455	4 00000	
$	66 Terphenyl-d14	244	22.080	22 087	(0 922)	17871	0.10000	0 1070
	67 Butylbenzylphthalate	149	23.032	23 032	(0.962)	12438	0.10000	0.09840
*	69 Chrysene-d12	240	23.954	23 953	(1 000)	1049206	4.00000	
*	77 Perylene-d12	264	26.423	26.423	(1 000)	1008820	4.00000	
	79 Dibenzo(a,h)anthracene	278	28 825	28.825	(1.091)	20981	0 10000	0.09713
	90 N-Nitrosodimethylamine	74	4 371	4.363	(0 484)	13683	0 20000	0 2101

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0507h.d
Lab Smp Id: IC05070.1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2012
Calibration Time: 16:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	313686	0.78
27 Naphthalene-d8	1166872	583436	2333744	1205070	3.27
42 Acenaphthene-d10	603218	301609	1206436	613587	1.72
59 Phenanthrene-d10	1096026	548013	2192052	1067455	-2.61
69 Chrysene-d12	1131082	565541	2262164	1049206	-7.24
77 Perylene-d12	1082499	541250	2164998	1008820	-6.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.03	8.53	9.53	9.04	0.08
27 Naphthalene-d8	11.70	11.20	12.20	11.71	0.06
42 Acenaphthene-d10	15.60	15.10	16.10	15.62	0.10
59 Phenanthrene-d10	18.88	18.38	19.38	18.88	0.04
69 Chrysene-d12	23.94	23.44	24.44	23.95	0.06
77 Perylene-d12	26.41	25.91	26.91	26.42	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

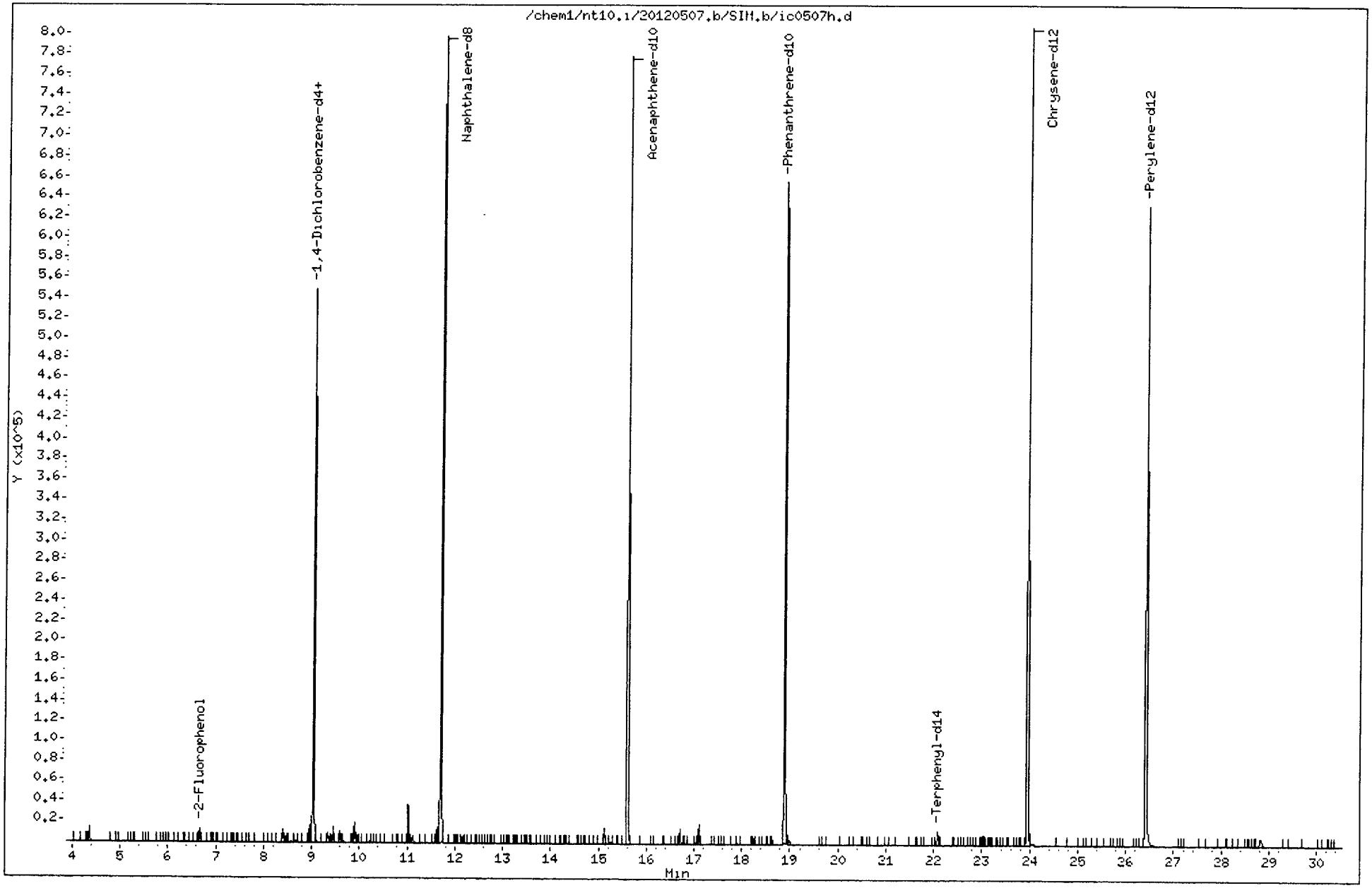
Data File: /chem1/nt10.1/20120507.b/SIM.b/ic0507h.d
Date : 07-MAY-2012 18:42
Client ID:
Sample Info: IC05070.1

Instrument: nt10.1

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0507h.d

Lab ID: IC05070.1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/9/12

Data file : /chem1/nt10.i/20120507.b/SIM.b/ic0507i.d
Lab Smp Id: IC05070.5
Inj Date : 07-MAY-2012 19:19
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : IC05070.5
Misc Info :
Comment :
Method : /chem1/nt10.i/20120507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 13:42 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 10
Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDA.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6 664	6 664	(0 737)	52443	0.50000	0 5044
3 Phenol	94	8 411	8 411	(0 931)	70394	0.50000	0.5116
7 1,3-Dichlorobenzene	146	8 968	8.968	(0.992)	65852	0 50000	0.5035
* 8 1,4-Dichlorobenzene-d4	152	9.037	9.037	(1 000)	302837	4 00000	
9 1,4-Dichlorobenzene	146	9.068	9.068	(1 003)	63359	0 50000	0 5029
11 Benzyl alcohol	79	9.348	9.348	(1 034)	35842	0 50000	0 5088
12 1,2-Dichlorobenzene	146	9 449	9.449	(1.046)	62048	0 50000	0 5063
13 2-Methylphenol	108	9 612	9.612	(1.064)	55457	0 50000	0.5018
15 4-Methylphenol	108	9.899	9.899	(1 095)	58667	0 50000	0 5059
16 N-Nitroso-di-n-propylamine	70	9 953	9.953	(1.101)	32391	0 50000	0.5113
22 2,4-Dimethylphenol	107	11 030	11.030	(0.942)	107964	1 00000	1.014
26 1,2,4-Trichlorobenzene	180	11.624	11.624	(0.993)	51036	0 50000	0 4946
* 27 Naphthalene-d8	136	11 709	11 709	(1.000)	1162091	4 00000	
30 Hexachlorobutadiene	225	12.165	12.165	(1 039)	27909	0.50000	0.4921
39 Dimethylphthalate	163	15 129	15.129	(0 969)	90407	0 50000	0.4926
* 42 Acenaphthene-d10	162	15.616	15.616	(1.000)	600183	4.00000	
50 Diethylphthalate	149	16.714	16 714	(1.070)	98116	0 50000	0 4884
54 N-Nitrosodiphenylamine	169	17 108	17.108	(0.906)	73955	0 50000	0 5068
57 Hexachlorobenzene	284	18 234	18.234	(0.965)	37497	0 50000	0.4875
58 Pentachlorophenol	266	18 629	18 629	(0 986)	45105	1.00000	0.9873
* 59 Phenanthrene-d10	188	18 892	18 892	(1 000)	1085991	4.00000	
$ 66 Terphenyl-d14	244	22.087	22 087	(0.922)	85337	0.50000	0 4952
67 Butylbenzylphthalate	149	23.032	23.032	(0.962)	64161	0 50000	0 4920
* 69 Chrysene-d12	240	23 953	23 953	(1.000)	1082451	4.00000	
* 77 Perylene-d12	264	26.423	26.423	(1.000)	1031653	4 00000	
79 Dibenzo(a,h)anthracene	278	28 825	28.825	(1.091)	107609	0.50000	0 4871
90 N-Nitrosodimethylamine	74	4 363	4 363	(0.483)	65032	1 00000	1.034

Data File: /chem1/nt10.1/20120507.b/SIM.b/ic05071.d

Date : 07-MAY-2012 19:19

Client ID:

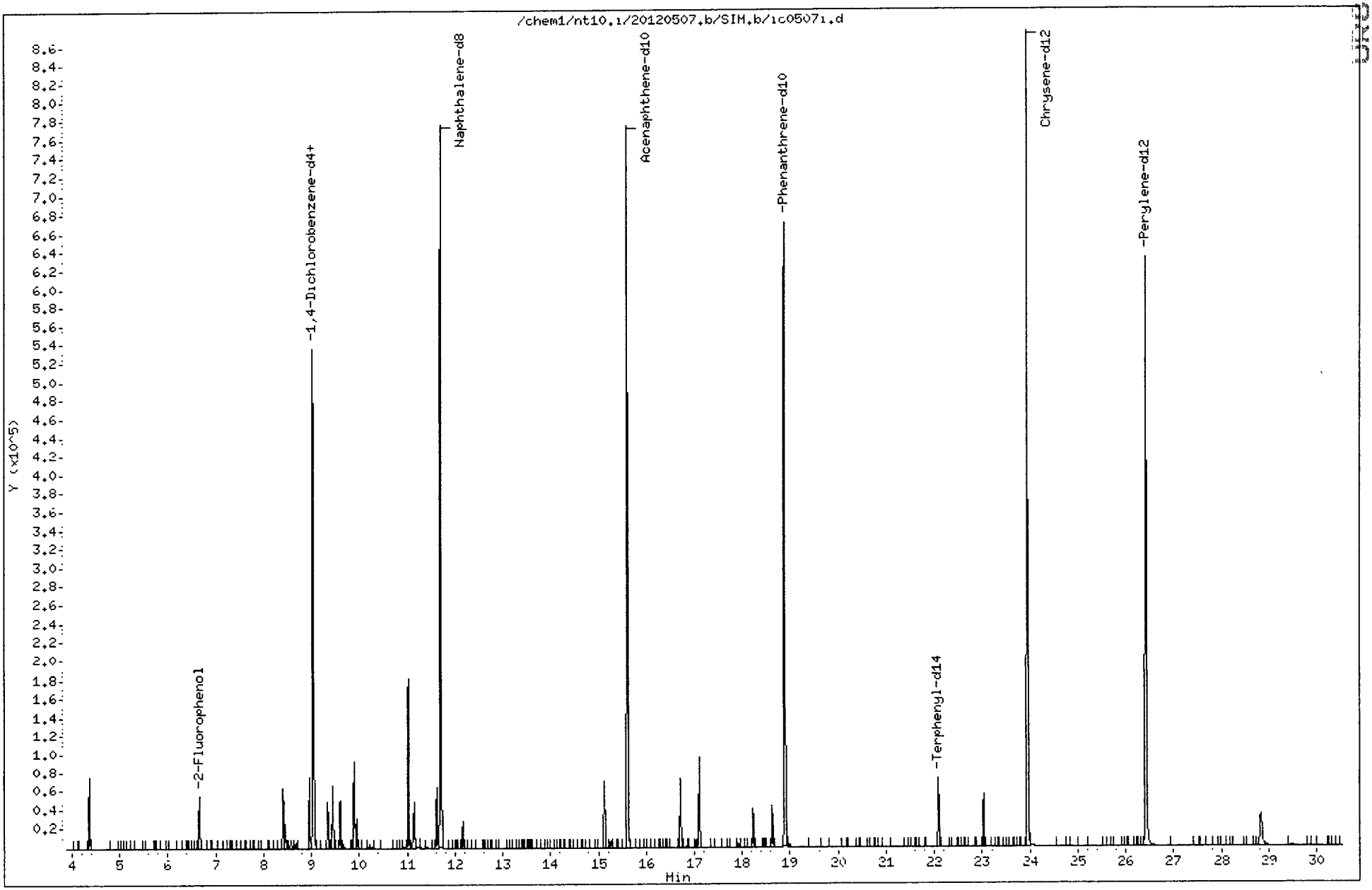
Sample Info: IC05070.5

Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS/YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0507i.d

Lab ID: IC05070.5, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Data File: /chem1/nt10.1/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

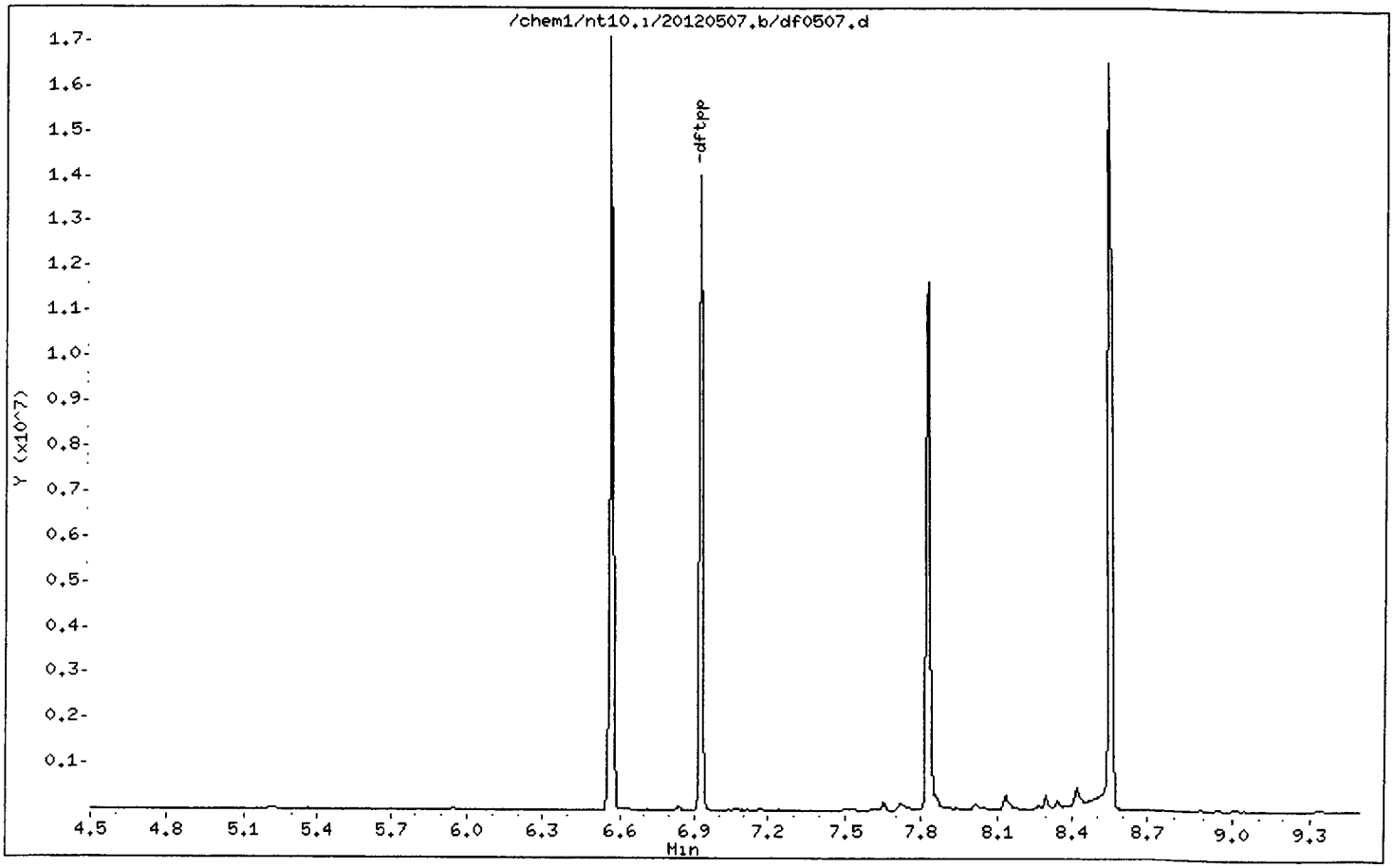
Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25



Data File: /chem1/nt10.i/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Instrument: nt10.i

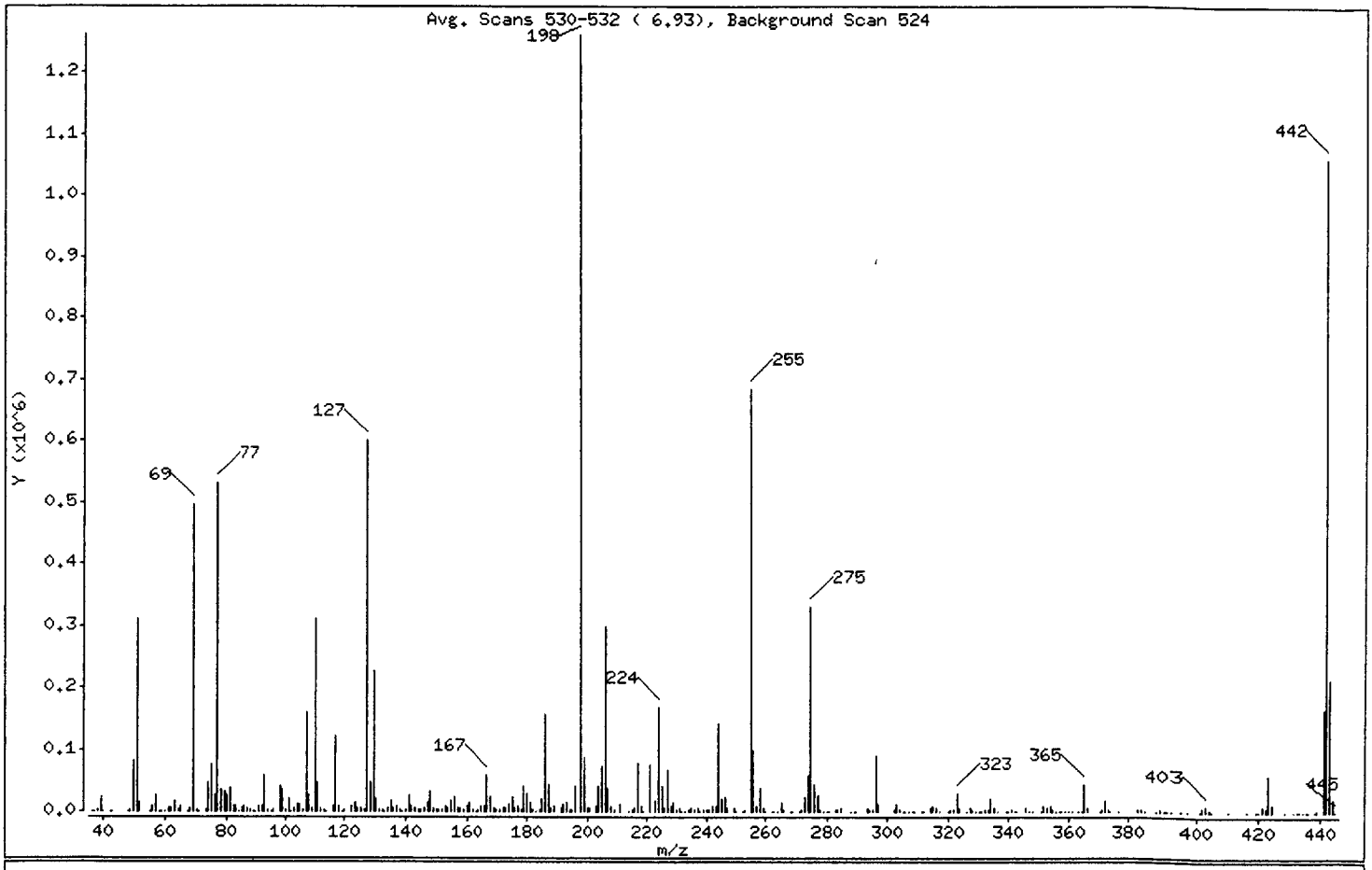
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	24.51
68	Less than 2.00% of mass 69	0.57 (1.44)
69	Mass 69 relative abundance	39.24
70	Less than 2.00% of mass 69	0.17 (0.44)
127	10.00 - 80.00% of mass 198	47.64
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.83
275	10.00 - 60.00% of mass 198	26.26
365	Greater than 1.00% of mass 198	3.43
441	0.01 - 24.00% of mass 442	13.08 (15.54)
442	50.00 - 200.00% of mass 198	84.18
443	15.00 - 24.00% of mass 442	16.97 (20.16)

Data File: /chem1/nt10.i/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d
Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524
Location of Maximum: 198.00
Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	318	129.00	227328	226.00	4446	321.00	3164
37.00	1396	130.00	19184	227.00	67160	322.00	1680
38.00	4278	131.00	3433	228.00	9322	323.00	29344
39.00	23920	132.00	1792	229.00	14027	324.00	5630
40.00	1054	133.00	732	230.00	2116	325.00	607
41.00	653	134.00	5849	231.00	6493	326.00	577
42.00	210	135.00	17584	232.00	945	327.00	5732
43.00	45	136.00	7251	233.00	1179	328.00	2723
44.00	410	137.00	8583	234.00	4205	329.00	604
45.00	524	138.00	1981	235.00	4731	330.00	144
48.00	149	139.00	1060	236.00	3421	331.00	240
49.00	2074	140.00	2634	237.00	5207	332.00	2241
50.00	82424	141.00	27264	238.00	973	333.00	2981
51.00	309312	142.00	9410	239.00	2559	334.00	19024
52.00	15855	143.00	6279	240.00	2169	335.00	4951
53.00	702	144.00	1772	241.00	3895	336.00	452
54.00	74	145.00	1785	242.00	9756	339.00	456
55.00	1440	146.00	4681	243.00	10133	340.00	494
56.00	10077	147.00	13587	244.00	142912	341.00	3509
57.00	24776	148.00	30472	245.00	19040	342.00	966
58.00	1235	149.00	6364	246.00	24296	343.00	57
59.00	221	150.00	1603	247.00	5286	346.00	6116
60.00	422	151.00	3821	248.00	1257	347.00	1323
61.00	4648	152.00	1805	249.00	4809	348.00	66
62.00	5819	153.00	8658	250.00	1076	350.00	357
63.00	16272	154.00	6689	251.00	1282	351.00	463
64.00	2253	155.00	16372	252.00	1408	352.00	9213
65.00	8135	156.00	22432	253.00	3310	353.00	6377
66.00	526	157.00	4749	255.00	685888	354.00	9003
67.00	354	158.00	5014	256.00	99696	355.00	1694
68.00	7152	159.00	3889	257.00	7807	356.00	136
69.00	495296	160.00	8225	258.00	37888	357.00	152
70.00	2157	161.00	13422	259.00	6194	358.00	129
71.00	197	162.00	3754	260.00	1033	359.00	743
72.00	293	163.00	1187	261.00	1260	360.00	154

Data File: /chem1/nt10.1/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524

Location of Maximum: 198.00

Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	3129	164.00	1664	262.00	198	361.00	157
74.00	45664	165.00	10098	263.00	387	363.00	60
75.00	75280	166.00	8576	264.00	1014	364.00	174
76.00	24824	167.00	56848	265.00	15502	365.00	43264
77.00	531776	168.00	23584	266.00	2135	366.00	5966
78.00	36128	169.00	4666	267.00	310	367.00	440
79.00	32744	170.00	1935	268.00	159	370.00	1113
80.00	26328	171.00	2238	269.00	236	371.00	2611
81.00	37240	172.00	4846	270.00	923	372.00	16181
82.00	9129	173.00	6455	271.00	1444	373.00	3800
83.00	8767	174.00	11500	272.00	2001	374.00	498
84.00	716	175.00	22144	273.00	21976	377.00	366
85.00	5883	176.00	7120	274.00	56744	383.00	4241
86.00	9795	177.00	8919	275.00	331456	384.00	1502
87.00	4694	178.00	3435	276.00	43520	385.00	381
88.00	1808	179.00	41824	277.00	25648	389.00	291
89.00	1007	180.00	28368	278.00	4333	390.00	2152
90.00	263	181.00	14025	279.00	939	391.00	1342
91.00	7961	182.00	2163	280.00	124	392.00	1063
92.00	8890	183.00	1442	281.00	271	393.00	156
93.00	57168	184.00	3201	282.00	723	395.00	166
94.00	4168	185.00	20152	283.00	3115	397.00	159
95.00	871	186.00	157952	284.00	1881	401.00	1109
96.00	2471	187.00	44096	285.00	4787	402.00	5942
97.00	913	188.00	4434	286.00	895	403.00	8451
98.00	41896	189.00	8949	288.00	358	404.00	3039
99.00	33664	190.00	1436	289.00	1205	405.00	524
100.00	3018	191.00	4457	290.00	914	410.00	319
101.00	21184	192.00	13048	291.00	713	415.00	531
102.00	1239	193.00	14685	292.00	1287	416.00	161
103.00	6653	194.00	3025	293.00	5920	419.00	117
104.00	12777	195.00	2442	294.00	1620	420.00	150
105.00	11760	196.00	39840	295.00	1655	421.00	7691
106.00	4059	198.00	1262080	296.00	90072	422.00	7063
107.00	160000	199.00	86160	297.00	12450	423.00	56848

Data File: /chem1/nt10.i/20120507.b/df0507.d

Date : 07-MAY-2012 14:08

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 530-532 (6.93), Background Scan 524

Location of Maximum: 198.00

Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	25224	200.00	6235	298.00	848	424.00	11528
109.00	4419	201.00	6506	299.00	278	425.00	999
110.00	311424	203.00	7684	301.00	1135	428.00	53
111.00	45456	204.00	41272	302.00	1719	430.00	51
112.00	5317	205.00	71792	303.00	10475	431.00	55
113.00	1735	206.00	297472	304.00	2897	432.00	137
114.00	418	207.00	38440	305.00	362	433.00	142
115.00	661	208.00	9516	306.00	75	434.00	318
116.00	8583	209.00	2713	307.00	158	435.00	301
117.00	121760	211.00	11963	308.00	1440	436.00	493
118.00	8665	213.00	857	309.00	929	437.00	806
119.00	1347	214.00	309	310.00	1056	438.00	415
120.00	2052	215.00	3015	311.00	305	439.00	1467
121.00	562	216.00	6356	312.00	309	441.00	165056
122.00	10033	217.00	78984	313.00	965	442.00	1062400
123.00	15627	218.00	9688	314.00	4393	443.00	214144
124.00	6856	219.00	935	315.00	10043	444.00	19560
125.00	6859	221.00	76176	316.00	5753	445.00	1283
126.00	1668	223.00	18328	317.00	1006		
127.00	601216	224.00	166848	319.00	175		
128.00	45280	225.00	41704	320.00	419		

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120507.b/ddt.b/df0507.d
Method: /chem1/nt10.i/20120507.b/ddt.b/sw846ddt.m
Analysis Date: 07-MAY-2012 14:08

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.569	1814388
Benzidine	7.831	4884099
4,4'-DDE	8.013	10324
4,4'-DDD	8.296	59489
4,4'-DDT	8.558	3106815

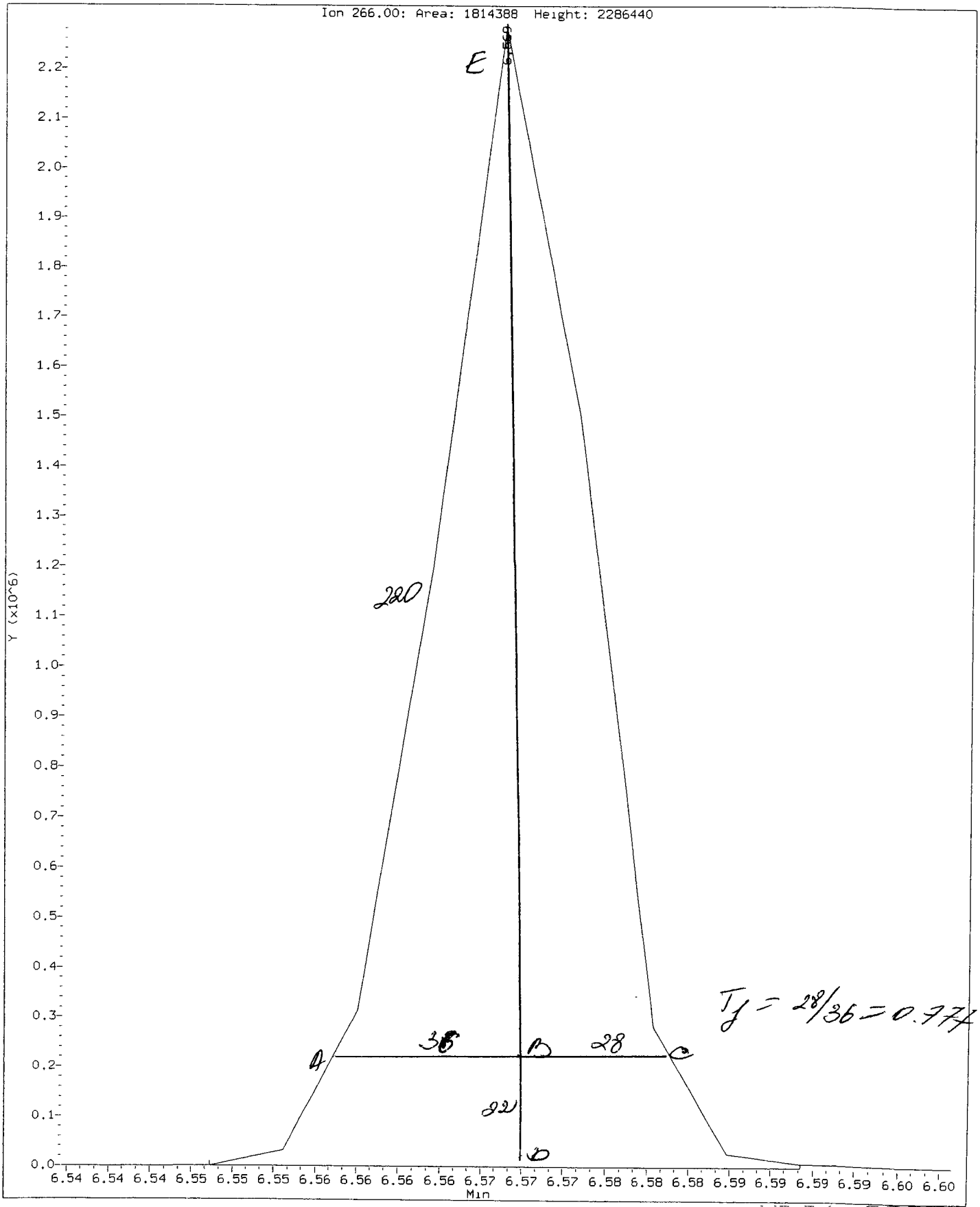
$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(10324 + 59489) * 100}{(10324 + 59489 + 3106815)}$$

DDT Percent Breakdown = 2.2 %

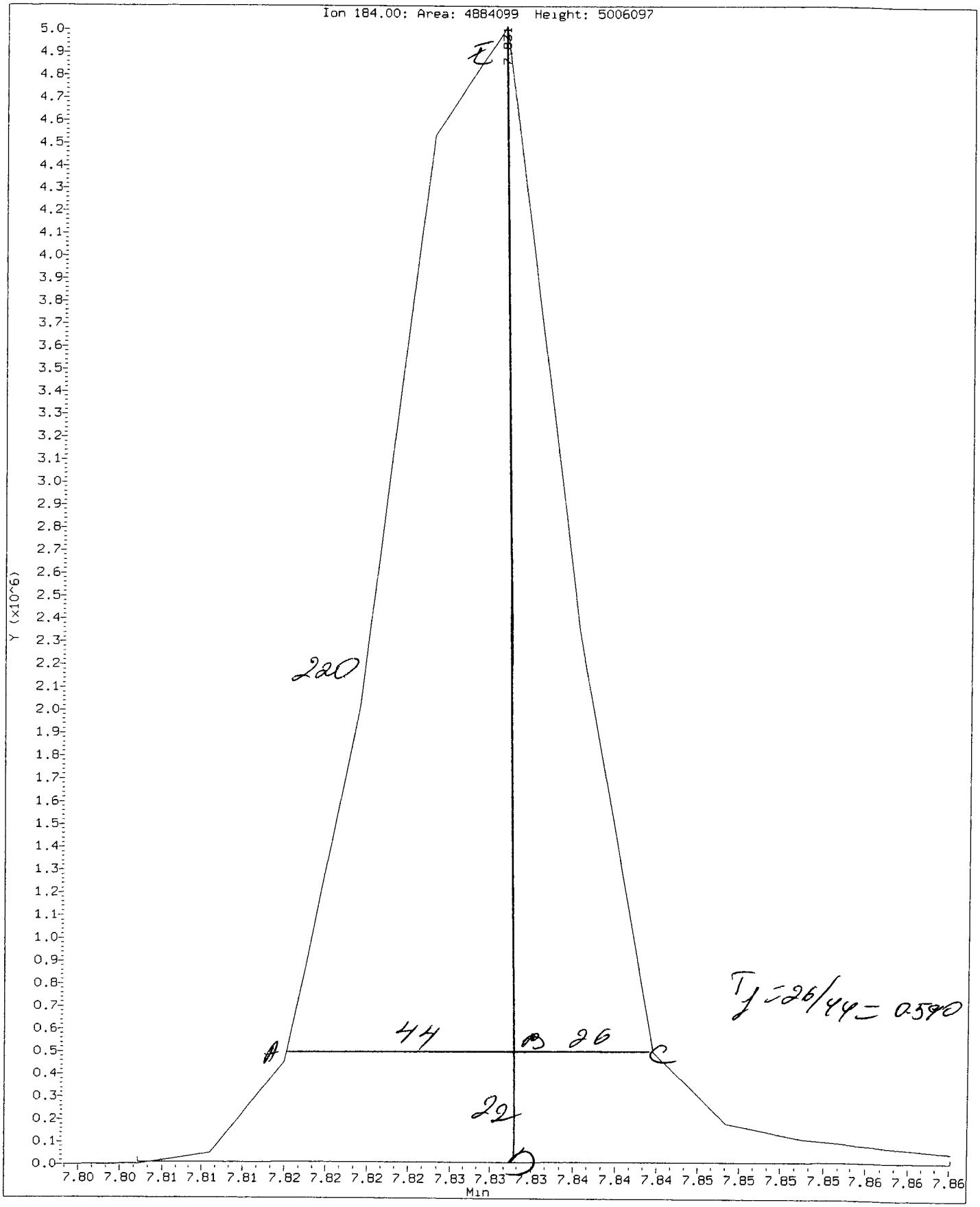
Data File: /chem1/nt10.i/20120507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2012 14:08
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20120507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2012 14:08
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: 1A81 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): SIM SVOA

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 5/7/12 Analysis Start Date: 5/8/12

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO
Peak Tailing Factor ≤2?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
ICal acceptable? Q flag applied?	YES / NO YES / NO	CCal acceptable? Q flag applied?	YES / NO YES / NO
Surrogate Recovery in Control?	YES / NO	Special Analysis Criteria Met?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: YZ **Date:** 5/11/12

Reviewer: VD **Date:** 5-11-12

UR81 : 000057

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: US18 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): SIM SVOA

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 5/7/12 Analysis Start Date: 5/8/12

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO
Peak Tailing Factor ≤2?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO	Q flag applied?	YES / NO
Surrogate Recovery in Control?	YES / NO	Special Analysis Criteria Met?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: YZ **Date:** 5/11/12

Reviewer: VD **Date:** 5-12-12

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/8/12 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN2 Column No: 227815 Column Type: ZB5 msi

Instrument Tune (.U or .CT.): 111216U EM Voltage: 1800

Calibration File: DF0508 Curve Date: 05/09/12 Injection Vol.: 1 ul

IS/SS	Ical/Ccal	LCS/ICV
1875-1	1949-2 1891-2	
	1950-1 1892-1	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120508.b

	Time	Filename	LabID	ClientId	DF											
1	1355	df0508 d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1447	cc0508a d	CC0508A		1	9.04	281871	11.72	1063862	15.63	545608	18.91	960002	23 97	1032849	26.45	1001433
3	1601	ur81mb d	UR81MBS1	UR81MBS1	1	9.05	244052	11 72	907452	15 63	452562	18 91	837942	23.97	870173	26.45	814714
4	1638	ur81sb.d	UR81LCSS1	UR81LCSS1	1	9 05	290476	11 72	1115894	15 63	576350	18 91	997180	23 97	1057846	26.44	1025862
5	1715	ur81sbd.d	UR81LCSDS1	UR81LCSDS1	1	9 05	293315	11.72	1121221	15.63	582349	18 91	1005744	23 97	1079452	26 44	1055126
6	1752	ur81a d	UR81A	IJ12-03	1	9.05	294823	11 72	1141852	15.64	567855	18 91	993737	23.98	1045665	26 45	1050280
7	1829	ur81b d	UR81B	IJ12-05	1	9.05	302232	11.72	1172866	15 63	598862	18 92	1037978	23 98	1096556	26.45	1088470
8	1906	ur81c d	UR81C	IJ12-06	1	9.05	306858	11 72	1195248	15 63	600305	18 91	1044431	23 97	1071028	26.45	1091355
9	1943	ur81d d	UR81D	IJ12-02	1	9.05	272772	11.72	1073367	15 64	546433	18 92	951777	23.97	989287	26.45	998041
10	2019	ur81e d	UR81E	IJ12-04	1	9 05	293188	11.73	1152151	15 64	580230	18.92	1008426	23.98	1109027	26 47	1100110
11	2057	ur81ems d	UR81EMS	IJ12-04 MS	1	9.05	276545	11 73	1071007	15 65	555543	18 92	985434	24.00	1102819	26 48	1083146
12	2133	ur81emsd d	UR81EMSD	IJ12-04 MSD	1	9.05	261118	11 73	1022446	15.65	532931	18 93	961807	24 00	1071245	26 48	1007487
13	2210	ur81f d	UR81F	IJ12-07	1	9.05	255686	11 73	1005774	15 65	518049	18 92	906909	23 98	959129	26 46	962015
14	2247	ur81g.d	UR81G	IJ12-01	1	9 05	267099	11 73	1018218	15 65	525343	18.92	932581	24 00	1010605	26.49	995116
15	2324	ur81h.d	UR81H	IJ12-58A	1	9 05	275915	11.73	1068919	15.65	538307	18.93	952406	23.99	1037522	26 47	1000508
16	0001	ur81i d	UR81I	IJ12-11	1	9.05	280442	11.73	1085710	15.65	548469	18 92	969866	23 98	1039166	26.47	982768
17	0038	ur81j.d	UR81J	IJ12-08A	1	9 05	274453	11 73	1058308	15 64	539391	18.92	943487	23 98	1019736	26.47	953840
18	0114	us18a d	US18A	I-1-Z	1	9.05	236940	11.73	906203	15 65	471204	18 92	829505	24.00	907068	26.49	889039
19	0151	us18b.d	US18B	I-2-A-Z	1	9.05	253680	11.73	973593	15.65	498345	18.93	877752	23.99	966194	26.48	927301

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

YZ 5/11/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20120508.b/SIM.b

ARI Job No.: UR81 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 08-MAY-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1601	ur81mb.d	UR81MBS1	UR81MBS1	1	Diethylphthalate,
1638	ur81sb.d	UR81LCSS1	UR81LCSS1	1	NO MANUAL INTEGRATION
1715	ur81sbd.d	UR81LCSDS1	UR81LCSDS1	1	NO MANUAL INTEGRATION
1752	ur81a.d	UR81A	IJ12-03	1	Benzyl alcohol, Diethylphthalate, Pentachlorophenol, Butylbenzylphthalate,
1829	ur81b.d	UR81B	IJ12-05	1	Benzyl alcohol, Dimethylphthalate, Butylbenzylphthalate,
1906	ur81c.d	UR81C	IJ12-06	1	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, Butylbenzylphthalate,
1943	ur81d.d	UR81D	IJ12-02	1	Benzyl alcohol, Diethylphthalate, Butylbenzylphthalate,
2019	ur81e.d	UR81E	IJ12-04	1	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, N-Nitrosodiphenylamine, Butylbenzylphthalate, Dibenzo(a,h)anthracene,
2057	ur81ems.d	UR81EMS	IJ12-04 MS	1	NO MANUAL INTEGRATION
2133	ur81emsd.d	UR81EMSD	IJ12-04 MS	1	NO MANUAL INTEGRATION
2210	ur81f.d	UR81F	IJ12-07	1	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, Dibenzo(a,h)anthracene,
2247	ur81g.d	UR81G	IJ12-01	1	Diethylphthalate, Pentachlorophenol,
2324	ur81h.d	UR81H	IJ12-58A	1	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, Pentachlorophenol,
0001	ur81i.d	UR81I	IJ12-11	1	Benzyl alcohol, Diethylphthalate, Dibenzo(a,h)anthracene,
0038	ur81j.d	UR81J	IJ12-08A	1	Benzyl alcohol, Diethylphthalate,
0114	us18a.d	US18A	I-1-Z	1	Benzyl alcohol, Diethylphthalate, Pentachlorophenol, Dibenzo(a,h)anthracene,
0151	us18b.d	US18B	I-2-A-Z	1	Benzyl alcohol, 1,2,4-Trichlorobenzene, Dimethylphthalate, Diethylphthalate, Hexachlorobenzene, Pentachlorophenol, Butylbenzylphthalate, Dibenzo(a,h)anthracene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20120508.b/SIM.b

Instrument: nt10.i Date: 08-MAY-2012 Method: SIM.b/SIMABN2.m

INITIAL CAL: 07-MAY-2012

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 08-MAY-2012

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

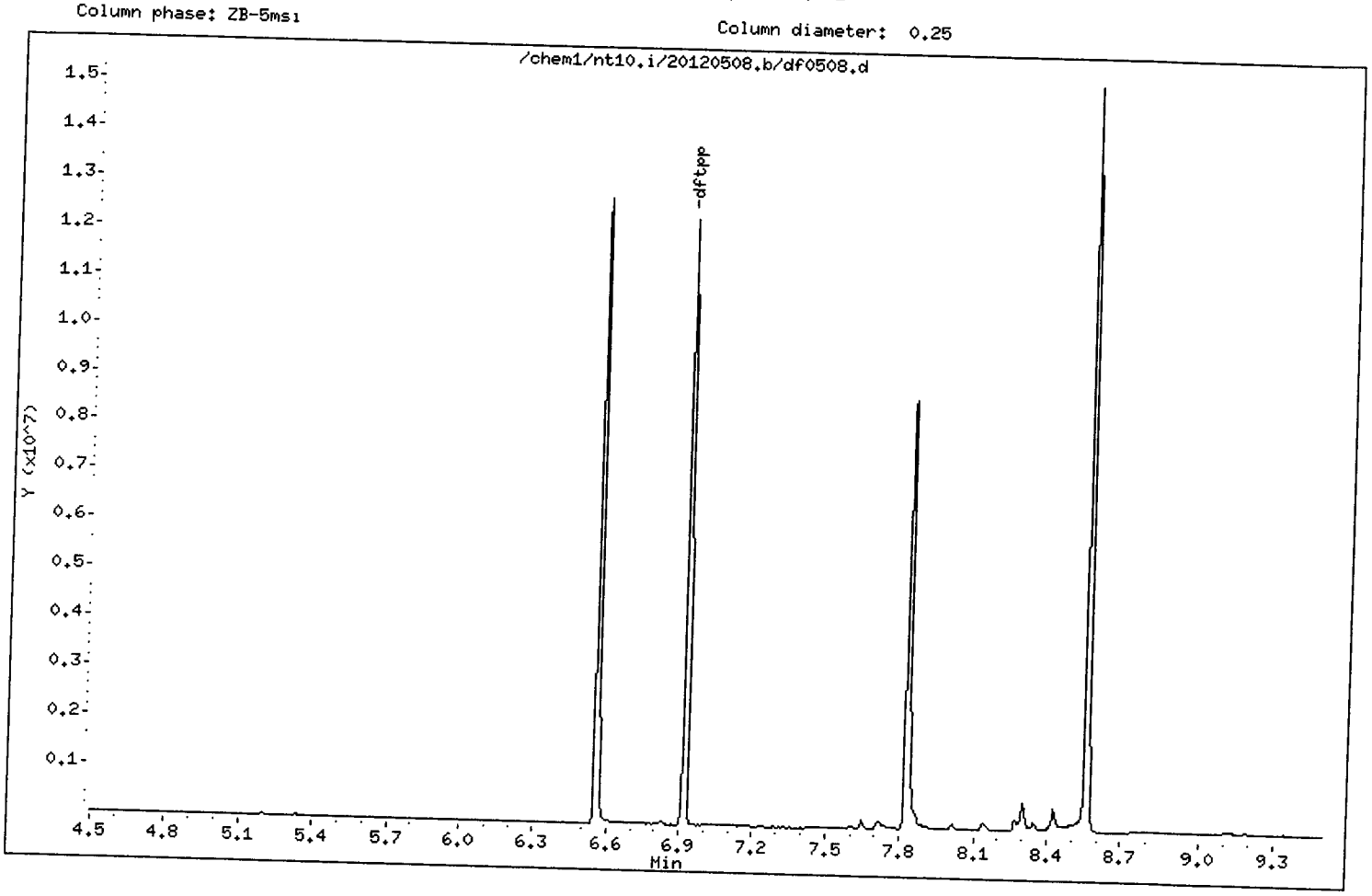
Sample Info: DFTPP

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Instrument: nt10.i

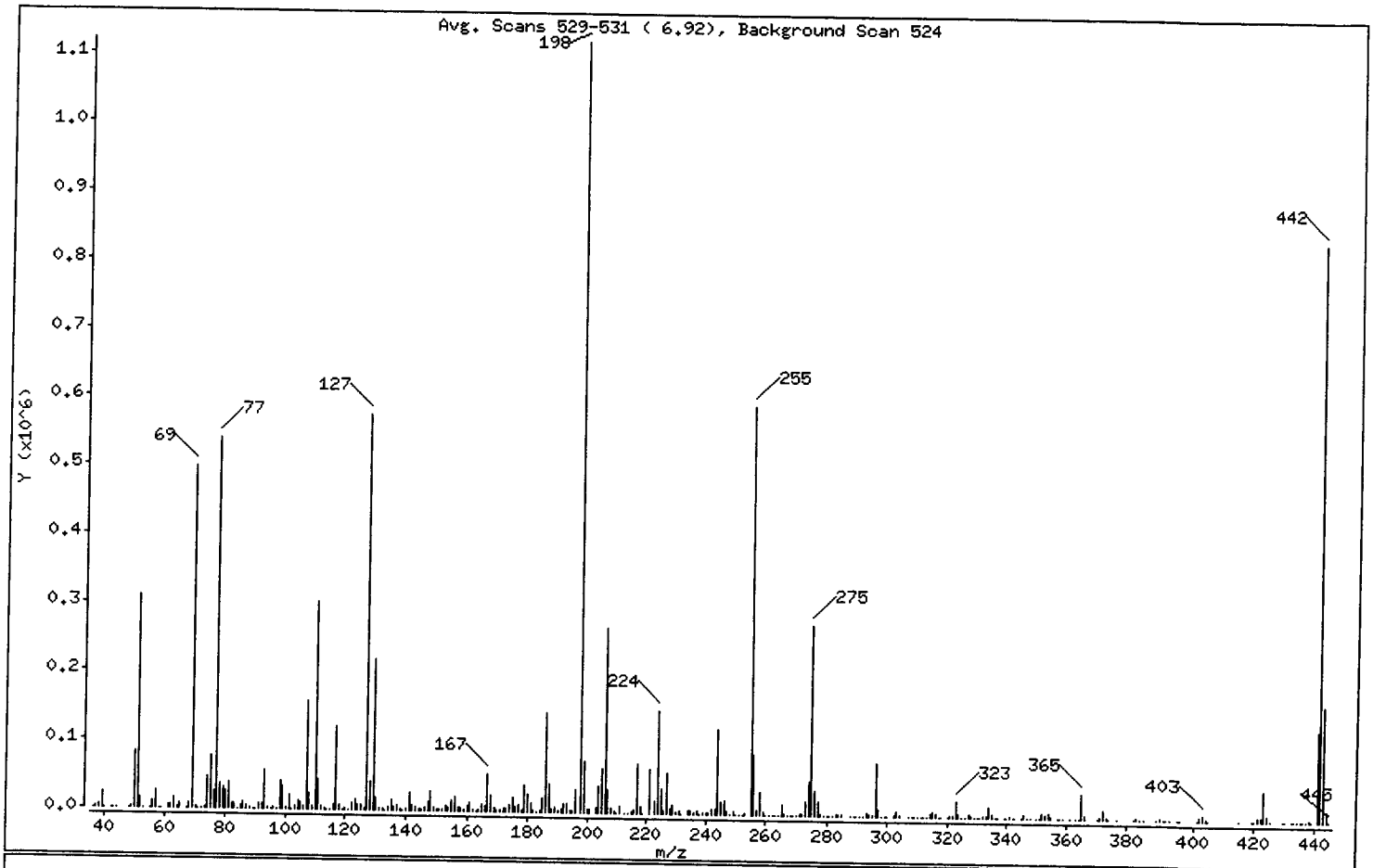
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	27.62
68	Less than 2.00% of mass 69	0.64 (1.45)
69	Mass 69 relative abundance	44.26
70	Less than 2.00% of mass 69	0.19 (0.44)
127	10.00 - 80.00% of mass 198	51.34
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 60.00% of mass 198	24.67
365	Greater than 1.00% of mass 198	3.29
441	0.01 - 24.00% of mass 442	11.68 (15.65)
442	50.00 - 200.00% of mass 198	74.65
443	15.00 - 24.00% of mass 442	14.87 (19.93)

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 529-531 (6.92), Background Scan 524

Location of Maximum: 198.00

Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	182	129.00	220032	226.00	3869	321.00	2608
37.00	1346	130.00	18120	227.00	60224	322.00	1363
38.00	4076	131.00	3710	228.00	8754	323.00	24488
39.00	24072	132.00	1774	229.00	12414	324.00	4579
40.00	1073	133.00	711	230.00	1883	325.00	495
41.00	437	134.00	5873	231.00	5495	326.00	573
42.00	199	135.00	16142	232.00	1065	327.00	5150
43.00	124	136.00	6401	233.00	981	328.00	2362
44.00	804	137.00	7623	234.00	4193	329.00	497
45.00	730	138.00	1939	235.00	4447	330.00	50
47.00	61	139.00	1040	236.00	3116	331.00	73
48.00	124	140.00	2602	237.00	4724	332.00	2024
49.00	1875	141.00	25168	238.00	778	333.00	2503
50.00	81856	142.00	8248	239.00	2343	334.00	15981
51.00	309824	143.00	6159	240.00	1993	335.00	3877
52.00	16400	144.00	1734	241.00	3646	336.00	493
53.00	571	145.00	1549	242.00	8622	337.00	109
54.00	66	146.00	4414	243.00	8913	339.00	469
55.00	1243	147.00	13620	244.00	124448	340.00	323
56.00	9963	148.00	29352	245.00	16784	341.00	2981
57.00	24744	149.00	5995	246.00	21456	342.00	739
58.00	1012	150.00	1637	247.00	4514	343.00	74
59.00	410	151.00	3475	248.00	1146	345.00	129
60.00	293	152.00	2253	249.00	3948	346.00	5450
61.00	4487	153.00	7776	250.00	953	347.00	1021
62.00	5669	154.00	6334	251.00	1065	348.00	55
63.00	15994	155.00	15080	252.00	1198	350.00	249
64.00	2280	156.00	21664	253.00	3142	351.00	543
65.00	8854	157.00	4819	255.00	594112	352.00	7339
66.00	465	158.00	4887	256.00	87728	353.00	5238
67.00	338	159.00	3538	257.00	6785	354.00	7162
68.00	7182	160.00	8237	258.00	34288	355.00	1553
69.00	496512	161.00	12541	259.00	5199	356.00	247
70.00	2165	162.00	3567	260.00	822	357.00	150
71.00	114	163.00	935	261.00	1065	358.00	144

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 529-531 (6.92), Background Scan 524

Location of Maximum: 198.00

Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	237	164.00	1505	262.00	190	359.00	564
73.00	3145	165.00	9090	263.00	419	361.00	124
74.00	45968	166.00	8256	264.00	863	363.00	152
75.00	76136	167.00	53200	265.00	14184	364.00	262
76.00	24832	168.00	22560	266.00	1918	365.00	36928
77.00	540096	169.00	4009	267.00	378	366.00	4933
78.00	36096	170.00	1616	268.00	117	367.00	272
79.00	31736	171.00	2054	269.00	235	370.00	809
80.00	25248	172.00	4341	270.00	867	371.00	1924
81.00	37488	173.00	6289	271.00	1457	372.00	12777
82.00	8936	174.00	10771	272.00	1980	373.00	3173
83.00	8560	175.00	20040	273.00	20096	374.00	341
84.00	618	176.00	6497	274.00	48216	377.00	370
85.00	5908	177.00	9337	275.00	276800	382.00	53
86.00	9286	178.00	3232	276.00	37232	383.00	3627
87.00	4830	179.00	38936	277.00	21816	384.00	844
88.00	1699	180.00	26600	278.00	3542	385.00	338
89.00	905	181.00	12783	279.00	793	389.00	63
90.00	147	182.00	2190	280.00	54	390.00	1873
91.00	7850	183.00	1199	281.00	332	391.00	1162
92.00	8575	184.00	2931	282.00	600	392.00	800
93.00	56144	185.00	19448	283.00	2694	393.00	143
94.00	3857	186.00	144128	284.00	1772	395.00	62
95.00	912	187.00	40096	285.00	3761	396.00	52
96.00	2554	188.00	4017	286.00	834	397.00	54
97.00	903	189.00	8293	288.00	264	401.00	768
98.00	42176	190.00	1464	289.00	913	402.00	4855
99.00	32528	191.00	4288	290.00	795	403.00	6664
100.00	2968	192.00	11874	291.00	645	404.00	2700
101.00	21016	193.00	13525	292.00	1140	405.00	339
102.00	1037	194.00	2708	293.00	5027	410.00	208
103.00	6415	195.00	1583	294.00	1382	415.00	312
104.00	12335	196.00	34280	295.00	2192	416.00	102
105.00	11578	198.00	1121792	296.00	78360	419.00	52
106.00	3909	199.00	76024	297.00	10909	420.00	104

Data File: /chem1/nt10.i/20120508.b/df0508.d

Date : 08-MAY-2012 13:55

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 529-531 (6.92), Background Scan 524

Location of Maximum: 198.00

Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
107.00	157440	200.00	5706	298.00	817	421.00	6272
108.00	24224	201.00	6058	299.00	139	422.00	6094
109.00	4230	203.00	7222	300.00	61	423.00	44376
110.00	302784	204.00	38088	301.00	1109	424.00	8613
111.00	44312	205.00	65008	302.00	1546	425.00	822
112.00	5443	206.00	268096	303.00	8594	429.00	106
113.00	1602	207.00	34648	304.00	2449	430.00	50
114.00	466	208.00	8639	305.00	287	432.00	133
115.00	676	209.00	2862	307.00	84	433.00	139
116.00	8594	210.00	1089	308.00	1065	434.00	210
117.00	120176	211.00	11061	309.00	852	435.00	568
118.00	8707	213.00	807	310.00	1112	436.00	323
119.00	977	214.00	325	311.00	231	437.00	700
120.00	2078	215.00	2867	312.00	262	438.00	1311
121.00	798	216.00	5951	313.00	871	439.00	812
122.00	9720	217.00	72408	314.00	3994	441.00	131032
123.00	15444	218.00	9111	315.00	8677	442.00	837376
124.00	6694	219.00	871	316.00	4640	443.00	166848
125.00	6800	221.00	64560	317.00	803	444.00	15581
126.00	1697	223.00	16824	318.00	109	445.00	934
127.00	575936	224.00	150784	319.00	138		
128.00	42296	225.00	37256	320.00	431		

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120508.b/ddt.b/df0508.d
Method: /chem1/nt10.i/20120508.b/ddt.b/sw846ddt.m
Analysis Date: 08-MAY-2012 13:55

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.563	1410959
Benzidine	7.831	3865821
4,4'-DDE	8.013	12210
4,4'-DDD	8.301	111425
4,4'-DDT	8.558	2651331

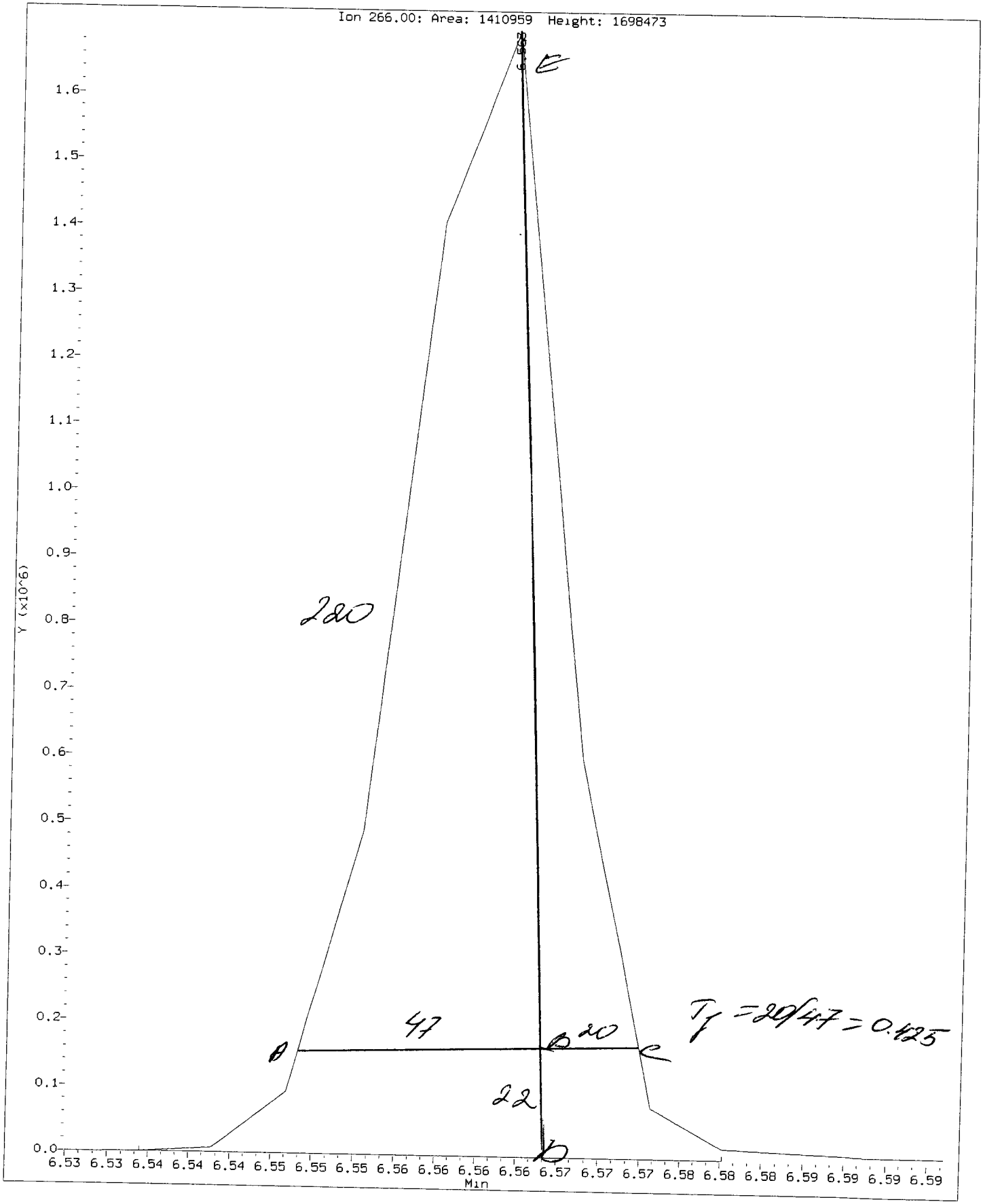
$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(12210 + 111425) * 100}{(12210 + 111425 + 2651331)}$$

DDT Percent Breakdown = 4.5 %

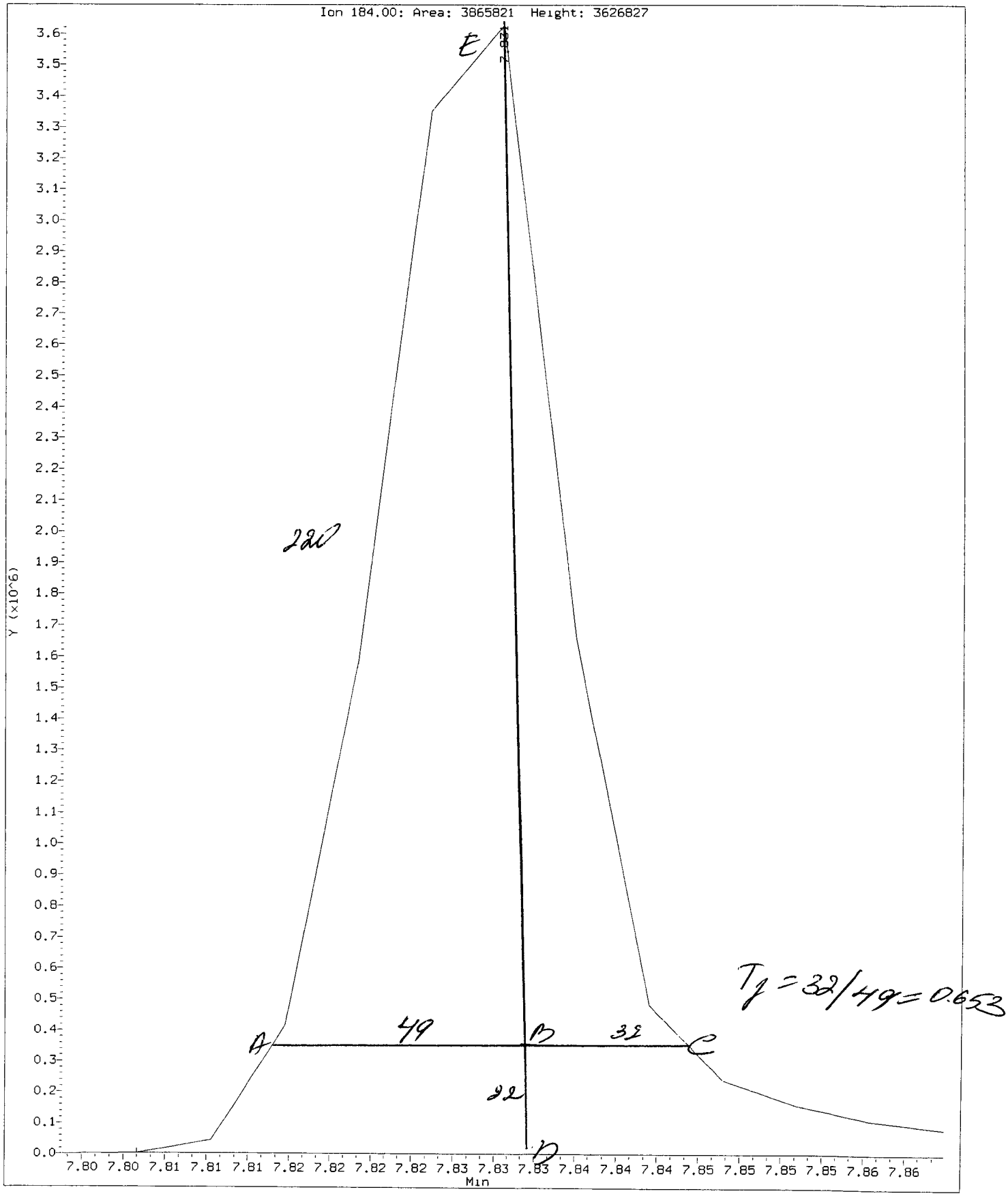
Data File: /chem1/nt10.i/20120508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2012 13:55
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20120508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2012 13:55
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 08-MAY-2012 14:47
Lab File ID: cc0508a.d Init. Cal. Date(s): 07-MAY-2012 07-MAY-2012
Analysis Type: Init. Cal. Times: 14:23 19:19
Lab Sample ID: CC0508A Quant Type: ISTD
Method: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.37321	1.38839	0.010	1.10516	20.00000	Averaged
3 Phenol	1.81749	1.70820	0.010	-6.01305	20.00000	Averaged
7 1,3-Dichlorobenzene	1.72768	1.72538	0.010	-0.13343	20.00000	Averaged
9 1,4-Dichlorobenzene	1.66395	1.66020	0.010	-0.22552	20.00000	Averaged
11 Benzyl alcohol	0.93041	0.81056	0.010	-12.88226	20.00000	Averaged
12 1,2-Dichlorobenzene	1.61873	1.63006	0.010	0.69965	20.00000	Averaged
13 2-Methylphenol	1.45988	1.38683	0.010	-5.00426	20.00000	Averaged
15 4-Methylphenol	1.53184	1.41125	0.010	-7.87236	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.83676	0.82593	0.050	-1.29363	20.00000	Averaged
22 2,4-Dimethylphenol	0.36665	0.36554	0.010	-0.30321	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.35517	0.34798	0.010	-2.02493	20.00000	Averaged
30 Hexachlorobutadiene	0.19523	0.19232	0.010	-1.49071	20.00000	Averaged
39 Dimethylphthalate	1.22313	1.21545	0.010	-0.62743	20.00000	Averaged
50 Diethylphthalate	1.33896	1.37857	0.010	2.95878	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.53744	0.55681	0.010	3.60451	20.00000	Averaged
57 Hexachlorobenzene	0.28329	0.27597	0.010	-2.58330	20.00000	Averaged
58 Pentachlorophenol	0.16828	0.16398	0.005	-2.55313	20.00000	Averaged
$ 66 Terphenyl-d14	0.63677	0.62397	0.010	-2.00958	20.00000	Averaged
67 Butylbenzylphthalate	0.48190	0.53142	0.010	10.27411	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.85648	0.86488	0.010	0.98075	20.00000	Averaged
90 N-Nitrosodimethylamine	0.83039	0.89327	0.010	7.57199	20.00000	Averaged

YZ 5/11/12

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/cc0508a.d
Lab Smp Id: CC0508A
Inj Date : 08-MAY-2012 14:47
Operator : YZ Inst ID: nt10.i
Smp Info : CC0508A
Misc Info :
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.680	6.680	(0.738)	97836	1.00000	1 011
	3 Phenol	94	8 418	8.418	(0.931)	120373	1.00000	0.9399
	7 1,3-Dichlorobenzene	146	8 975	8 975	(0 992)	121583	1.00000	0.9987
*	8 1,4-Dichlorobenzene-d4	152	9.045	9.045	(1 000)	281871	4.00000	
	9 1,4-Dichlorobenzene	146	9 076	9.076	(1 003)	116990	1.00000	0.9977
	11 Benzyl alcohol	79	9 355	9.355	(1.034)	57118	1.00000	0.8712
	12 1,2-Dichlorobenzene	146	9.464	9.464	(1 046)	114866	1.00000	1 007
	13 2-Methylphenol	108	9 619	9.619	(1.063)	97726	1.00000	0.9500
	15 4-Methylphenol	108	9.914	9.914	(1.096)	99447	1.00000	0.9213
	16 N-Nitroso-di-n-propylamine	70	9.961	9.961	(1.101)	58201	1.00000	0.9871
	22 2,4-Dimethylphenol	107	11 038	11.038	(0.941)	194440	2.00000	1 994
	26 1,2,4-Trichlorobenzene	180	11.639	11 639	(0 993)	92550	1.00000	0 9798
*	27 Naphthalene-d8	136	11.724	11 724	(1.000)	1063862	4.00000	
	30 Hexachlorobutadiene	225	12.180	12.180	(1.039)	51150	1.00000	0.9851
	39 Dimethylphthalate	163	15.144	15 144	(0.969)	165790	1 00000	0 9937
*	42 Acenaphthene-d10	162	15.632	15.632	(1.000)	545608	4 00000	
	50 Diethylphthalate	149	16.729	16.729	(1.070)	188040	1.00000	1.030
	54 N-Nitrosodiphenylamine	169	17.123	17.123	(0.906)	133635	1.00000	1.036
	57 Hexachlorobenzene	284	18.250	18.250	(0.965)	66232	1.00000	0 9742
	58 Pentachlorophenol	266	18.644	18.644	(0.986)	78710	2.00000	1.949
*	59 Phenanthrene-d10	188	18.908	18.908	(1.000)	960002	4.00000	
$	66 Terphenyl-d14	244	22.095	22.095	(0.922)	161116	1.00000	0.9799
	67 Butylbenzylphthalate	149	23.047	23.047	(0.962)	137218	1.00000	1.103
*	69 Chrysene-d12	240	23.969	23.969	(1.000)	1032849	4.00000	
*	77 Perylene-d12	264	26.446	26.446	(1.000)	1001433	4.00000	
	79 Dibenzo(a,h)anthracene	278	28 864	28.864	(1.091)	216529	1.00000	1.010
	90 N-Nitrosodimethylamine	74	4 371	4.371	(0 483)	125893	2.00000	2.151

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0508a.d
Lab Smp Id: CC0508A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 08-MAY-2012
Calibration Time: 14:47

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	281871	-9.44
27 Naphthalene-d8	1166872	583436	2333744	1063862	-8.83
42 Acenaphthene-d10	603218	301609	1206436	545608	-9.55
59 Phenanthrene-d10	1096026	548013	2192052	960002	-12.41
69 Chrysene-d12	1131082	565541	2262164	1032849	-8.68
77 Perylene-d12	1082499	541250	2164998	1001433	-7.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.04	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.00
59 Phenanthrene-d10	18.91	18.41	19.41	18.91	0.00
69 Chrysene-d12	23.97	23.47	24.47	23.97	0.00
77 Perylene-d12	26.45	25.95	26.95	26.45	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.1/20120508.b/SIM.b/cc0508a.d

Date : 08-MAY-2012 14:47

Client ID:

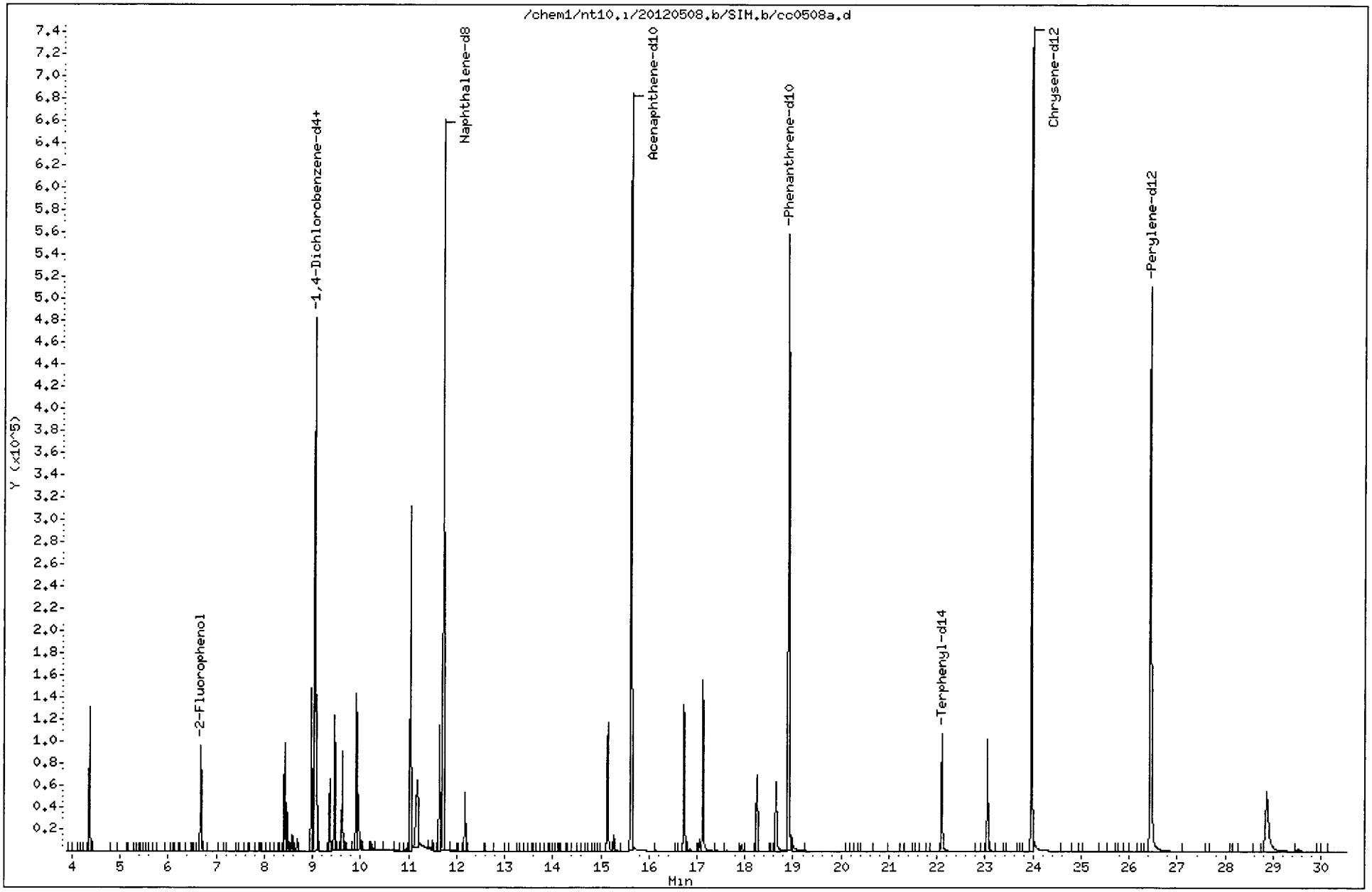
Sample Info: CC0508A

Column phase: ZB-5ms1

Instrument: nt10.1

Operator: YZ

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - cc0508a.d

Lab ID: CC0508A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/10/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81mb.d
Lab Smp Id: UR81MBS1 Client Smp ID: UR81MBS1
Inj Date : 08-MAY-2012 16:01
Operator : YZ Inst ID: nt10.i
Smp Info : UR81MBS1
Misc Info : 12-7396
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.688	6.680	(0.739)	428861	5.11867	511.9
3 Phenol	94	8.426	8.418	(0.932)	3786	0.03414	3.414(R)
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.045	9.045	(1 000)	244052	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	Compound Not Detected.					
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
15 4-Methylphenol	108	Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11 724	11 724	(1.000)	907452	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.632	15.632	(1.000)	452562	4.00000	
	50 Diethylphthalate	149	16.729	16 729	(1 070)	5128	0.03385 J	3.385(RM)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.908	18.908	(1.000)	837942	4.00000	
$	66 Terphenyl-d14	244	22.103	22.095	(0.922)	602277	4.34782	434.8
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	23.969	23.969	(1.000)	870173	4.00000	
*	77 Perylene-d12	264	26.446	26 446	(1.000)	814714	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81mb.d
Lab Smp Id: UR81MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: UR81MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	244052	-21.59
27 Naphthalene-d8	1166872	583436	2333744	907452	-22.23
42 Acenaphthene-d10	603218	301609	1206436	452562	-24.98
59 Phenanthrene-d10	1096026	548013	2192052	837942	-23.55
69 Chrysene-d12	1131082	565541	2262164	870173	-23.07
77 Perylene-d12	1082499	541250	2164998	814714	-24.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.00
59 Phenanthrene-d10	18.91	18.41	19.41	18.91	0.00
69 Chrysene-d12	23.97	23.47	24.47	23.97	0.00
77 Perylene-d12	26.45	25.95	26.95	26.45	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

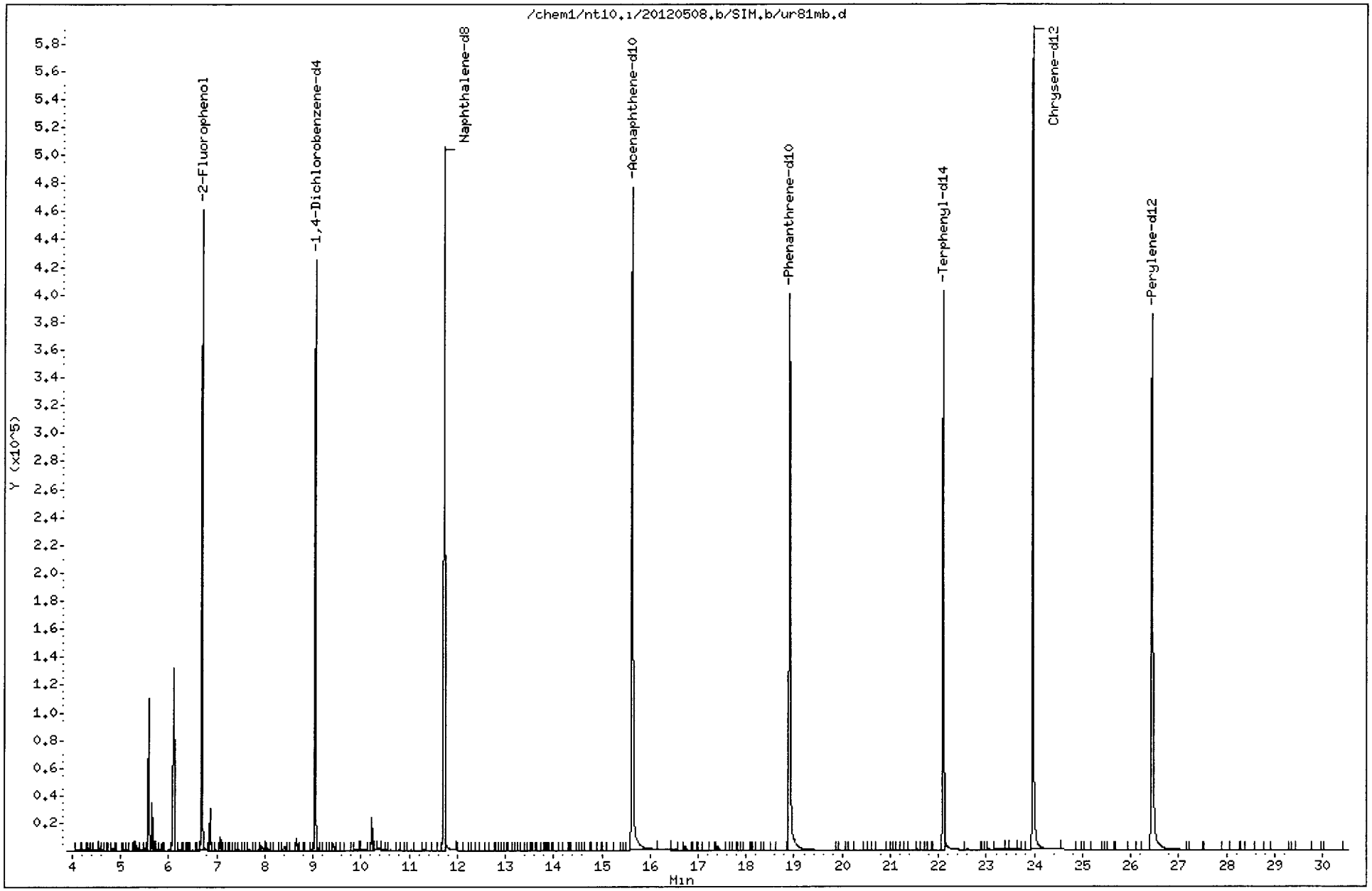
Client SDG: UR81
Fraction: SV
Client Smp ID: UR81MBS1
Operator: YZ
SampleType: BLANK
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	3.414	0.68*	30-160
7 1,3-Dichlorobenze	500.0	0.000	*	30-160
9 1,4-Dichlorobenze	500.0	0.000	*	30-160
11 Benzyl alcohol	500.0	0.000	*	30-160
12 1,2-Dichlorobenze	500.0	0.000	*	30-160
13 2-Methylphenol	500.0	0.000	*	30-160
15 4-Methylphenol	1000	0.000	*	30-160
16 N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22 2,4-Dimethylphenol	1000	0.000	*	30-160
26 1,2,4-Trichlorobe	500.0	0.000	*	30-160
30 Hexachlorobutadie	500.0	0.000	*	30-160
39 Dimethylphthalate	500.0	0.000	*	30-160
50 Diethylphthalate	500.0	3.385	0.68*	30-160
54 N-Nitrosodiphenyl	500.0	0.000	*	30-160
57 Hexachlorobenzene	500.0	0.000	*	30-160
58 Pentachlorophenol	1000	0.000	*	30-160
67 Butylbenzylphthal	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90 N-Nitrosodimethyl	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	511.9	68.25	30-160
$ 66 Terphenyl-d14	500.0	434.8	86.96	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81mb.d
Date : 08-MAY-2012 16:01
Client ID: UR81MBS1
Sample Info: UR81MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5ms1

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81mb.d

Date : 08-MAY-2012 16:01

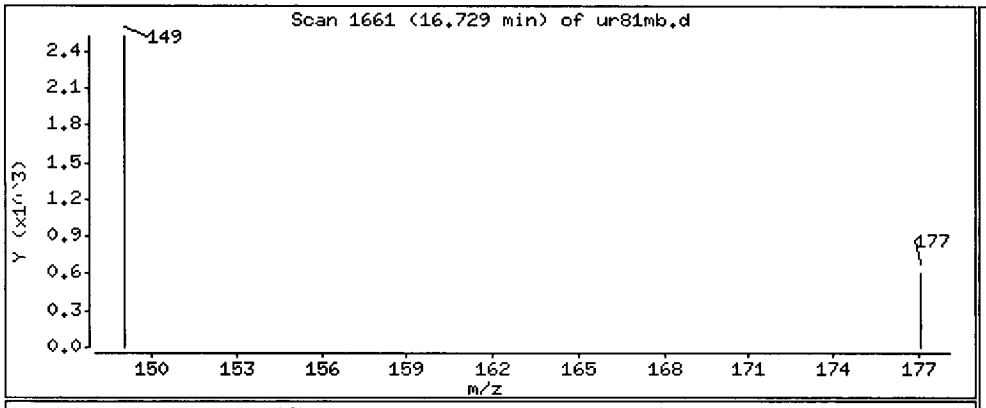
Client ID: UR81MBS1 | Instrument: nt10.i

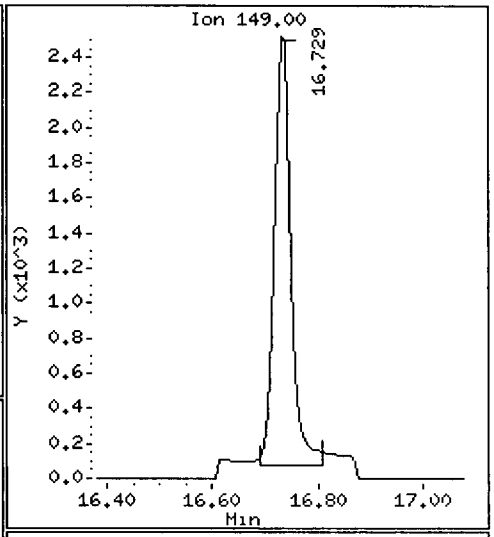
Sample Info: UR81MBS1

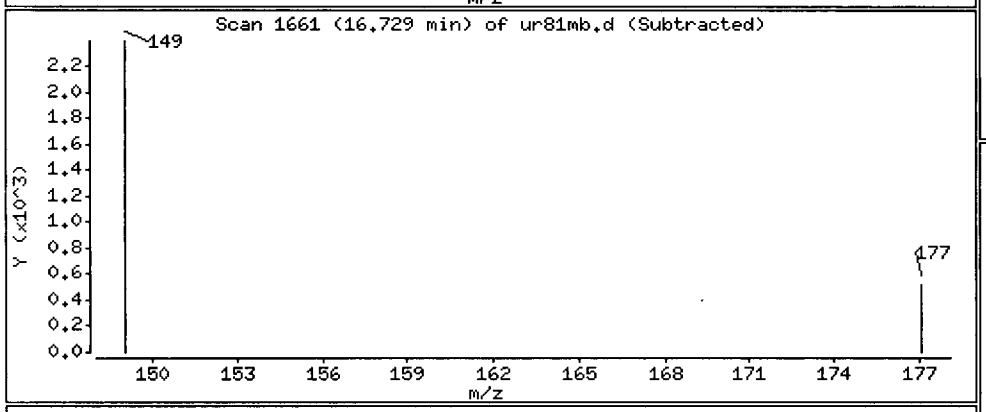
Volume Injected (uL): 1.0 | Operator: YZ

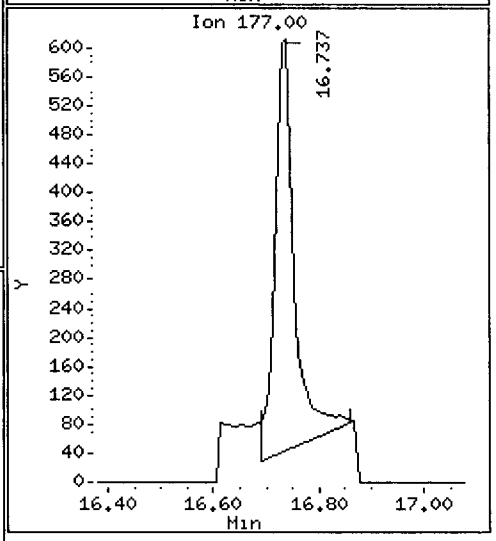
Column phase: ZB-5msi | Column diameter: 0.25

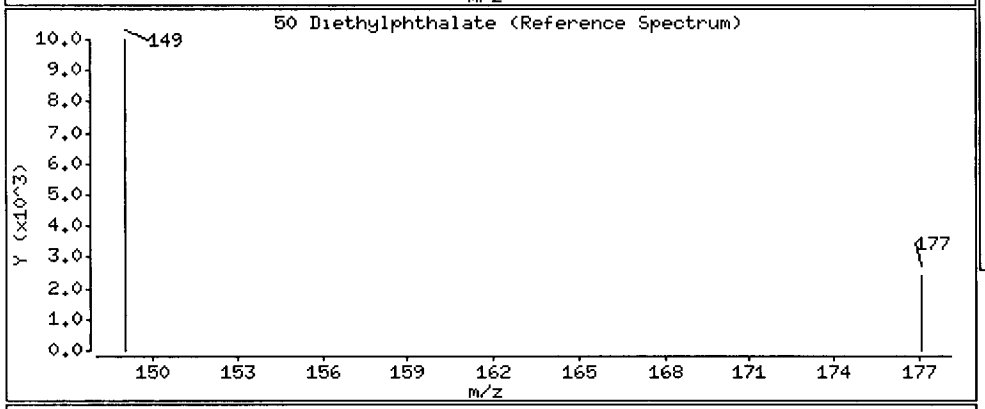
50 Diethylphthalate | Concentration: 3.385 ug/kg

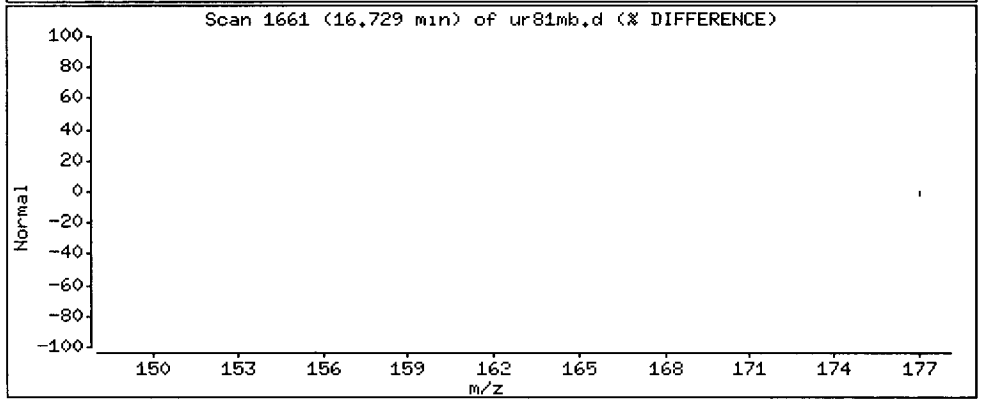






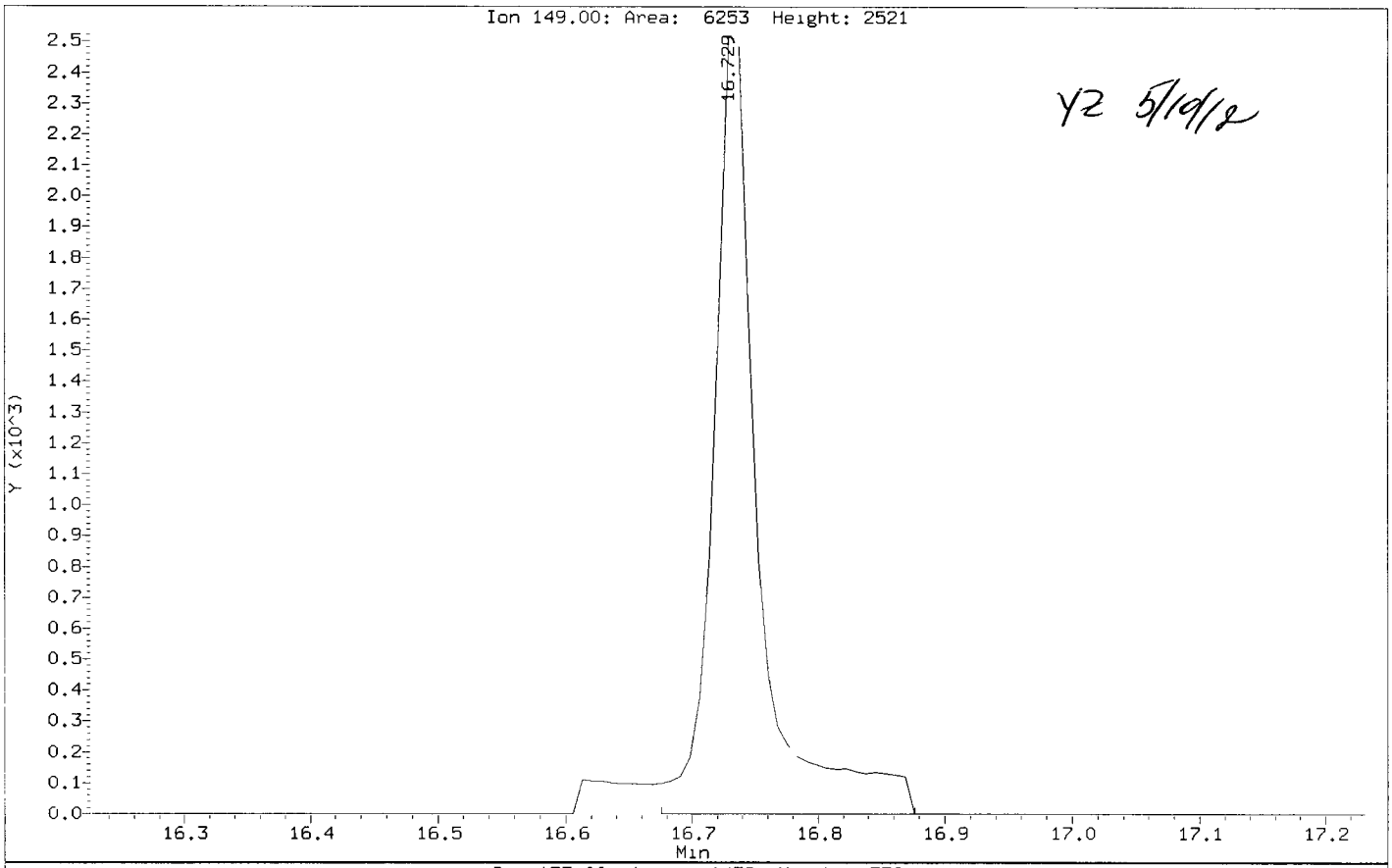


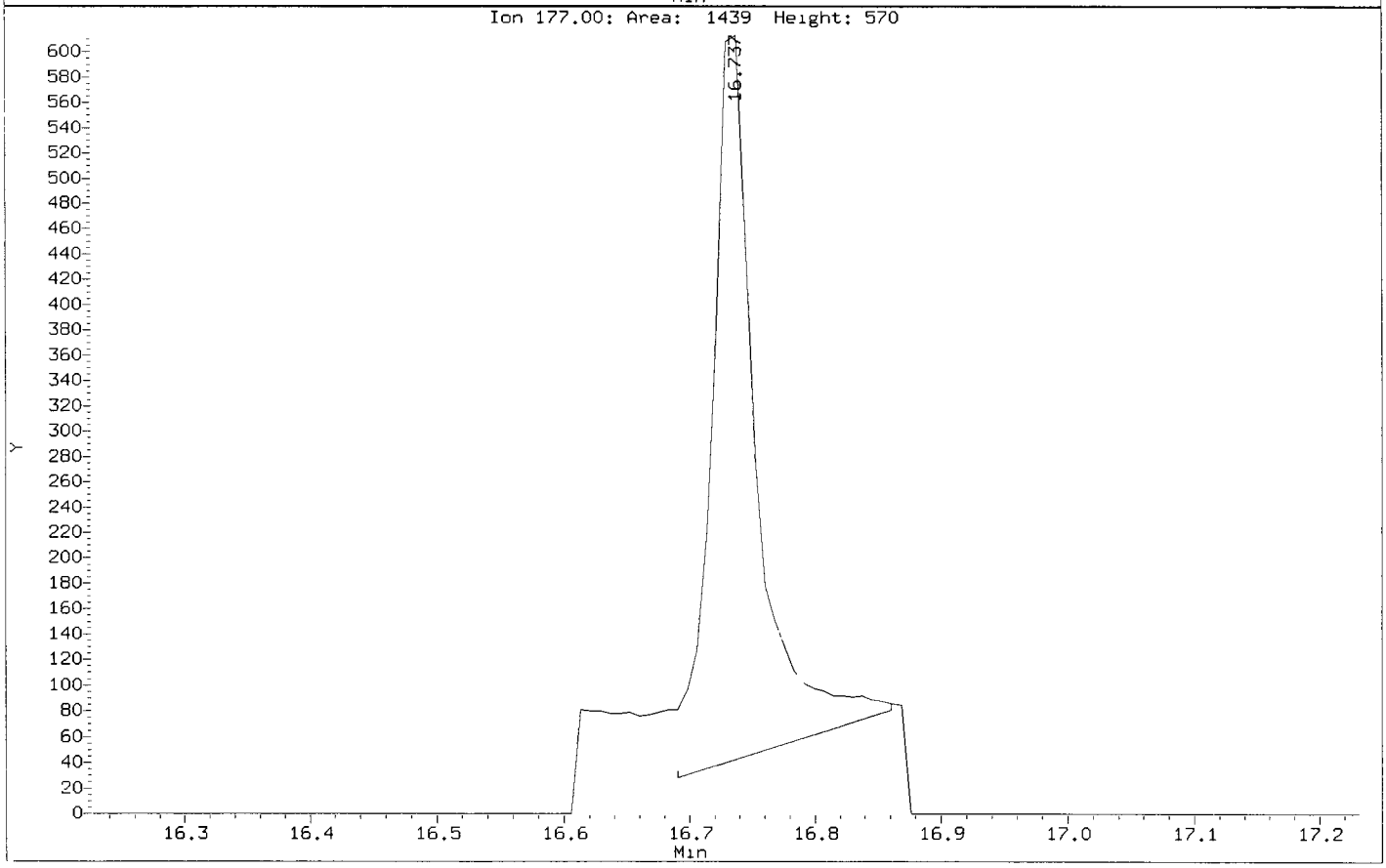




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81mb.d
Injection Date: 08-MAY-2012 16:01
Instrument: nt10.i
Client Sample ID: UR81MBS1

Compound: Diethylphthalate
CAS Number: 84-66-2

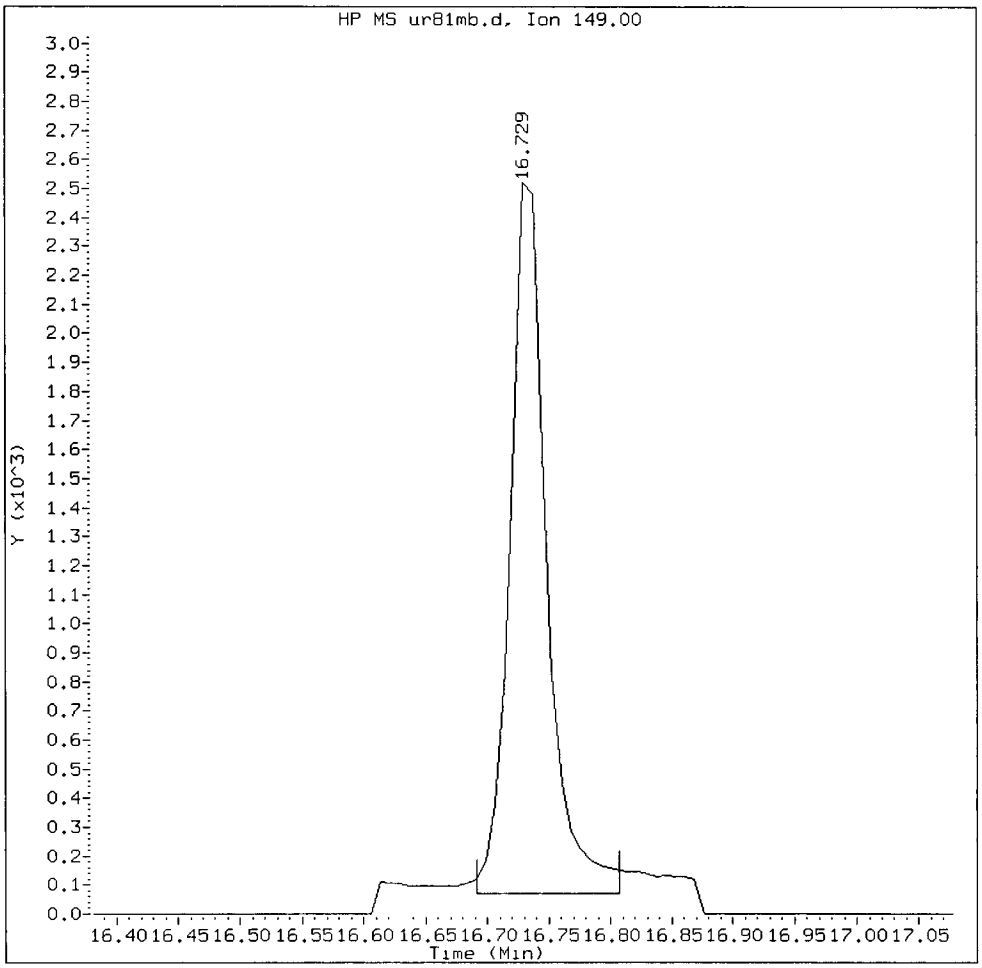




UR81 : 00981

UR81MBS1, /chem1/nt10.i/20120508.b/SIM.b/ur81mb.d

Diethylphthalate Amount: 0.03 Area: 5128



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YR Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81mb.d

Lab ID: UR81MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

12 5/9/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81sb.d
Lab Smp Id: UR81LCSS1 Client Smp ID: UR81LCSS1
Inj Date : 08-MAY-2012 16:38
Operator : YZ Inst ID: nt10.i
Smp Info : UR81LCSS1
Misc Info : 12-7396
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 15:35 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.688	6.680	(0.739)	452850	4.54117	454.1
3 Phenol	94	8.426	8 418	(0.932)	382629	2.89905	289.9
7 1,3-Dichlorobenzene	146	8.975	8.975	(0.992)	338550	2.69842	269.8
* 8 1,4-Dichlorobenzene-d4	152	9.045	9.045	(1.000)	290476	4.00000	
9 1,4-Dichlorobenzene	146	9.076	9.076	(1.003)	325810	2.69633	269.6
11 Benzyl alcohol	79	9.363	9.355	(1.035)	222444	3.29226	329.2
12 1,2-Dichlorobenzene	146	9 464	9.464	(1.046)	326357	2.77631	277.6
13 2-Methylphenol	108	9.620	9.619	(1.063)	266055	2.50959	251.0
15 4-Methylphenol	108	9.922	9.914	(1.097)	579463	5.20909	520.9
16 N-Nitroso-di-n-propylamine	70	9.969	9.961	(1.102)	174932	2.87885	287.9
22 2,4-Dimethylphenol	107	11.046	11.038	(0.942)	637375	6.23136	623.1
26 1,2,4-Trichlorobenzene	180	11.640	11.639	(0.993)	270443	2.72944	272 9
* 27 Naphthalene-d8	136	11.725	11.724	(1 000)	1115894	4.00000	
30 Hexachlorobutadiene	225	12.180	12.180	(1.039)	152075	2 79218	279.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15.144	15.144	(0.969)	618786	3.51110	351.1
*	42 Acenaphthene-d10	162	15.632	15.632	(1.000)	576350	4.00000	
	50 Diethylphthalate	149	16.737	16.729	(1.071)	725599	3.76100	376.1
	54 N-Nitrosodiphenylamine	169	17.123	17.123	(0.906)	464293	3.46537	346.5
	57 Hexachlorobenzene	284	18.250	18.250	(0.965)	224152	3.17398	317.4
	58 Pentachlorophenol	266	18.645	18.644	(0.986)	460552	10.9785	1098
*	59 Phenanthrene-d10	188	18.908	18.908	(1.000)	997180	4.00000	
$	66 Terphenyl-d14	244	22.095	22.095	(0.922)	590163	3.50453	350 5
	67 Butylbenzylphthalate	149	23.048	23.047	(0.962)	529370	4.15371	415.4
*	69 Chrysene-d12	240	23.969	23.969	(1.000)	1057846	4 00000	
*	77 Perylene-d12	264	26.439	26.446	(1.000)	1025862	4 00000	
	79 Dibenzo(a,h)anthracene	278	28.856	28.864	(1.091)	849956	3 86946	386.9
	90 N-Nitrosodimethylamine	74	4.410	4.371	(0.488)	475958	7 89286	789.3

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81sb.d
Lab Smp Id: UR81LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: UR81LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	290476	-6.67
27 Naphthalene-d8	1166872	583436	2333744	1115894	-4.37
42 Acenaphthene-d10	603218	301609	1206436	576350	-4.45
59 Phenanthrene-d10	1096026	548013	2192052	997180	-9.02
69 Chrysene-d12	1131082	565541	2262164	1057846	-6.47
77 Perylene-d12	1082499	541250	2164998	1025862	-5.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.00
59 Phenanthrene-d10	18.91	18.41	19.41	18.91	0.00
69 Chrysene-d12	23.97	23.47	24.47	23.97	0.00
77 Perylene-d12	26.45	25.95	26.95	26.44	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

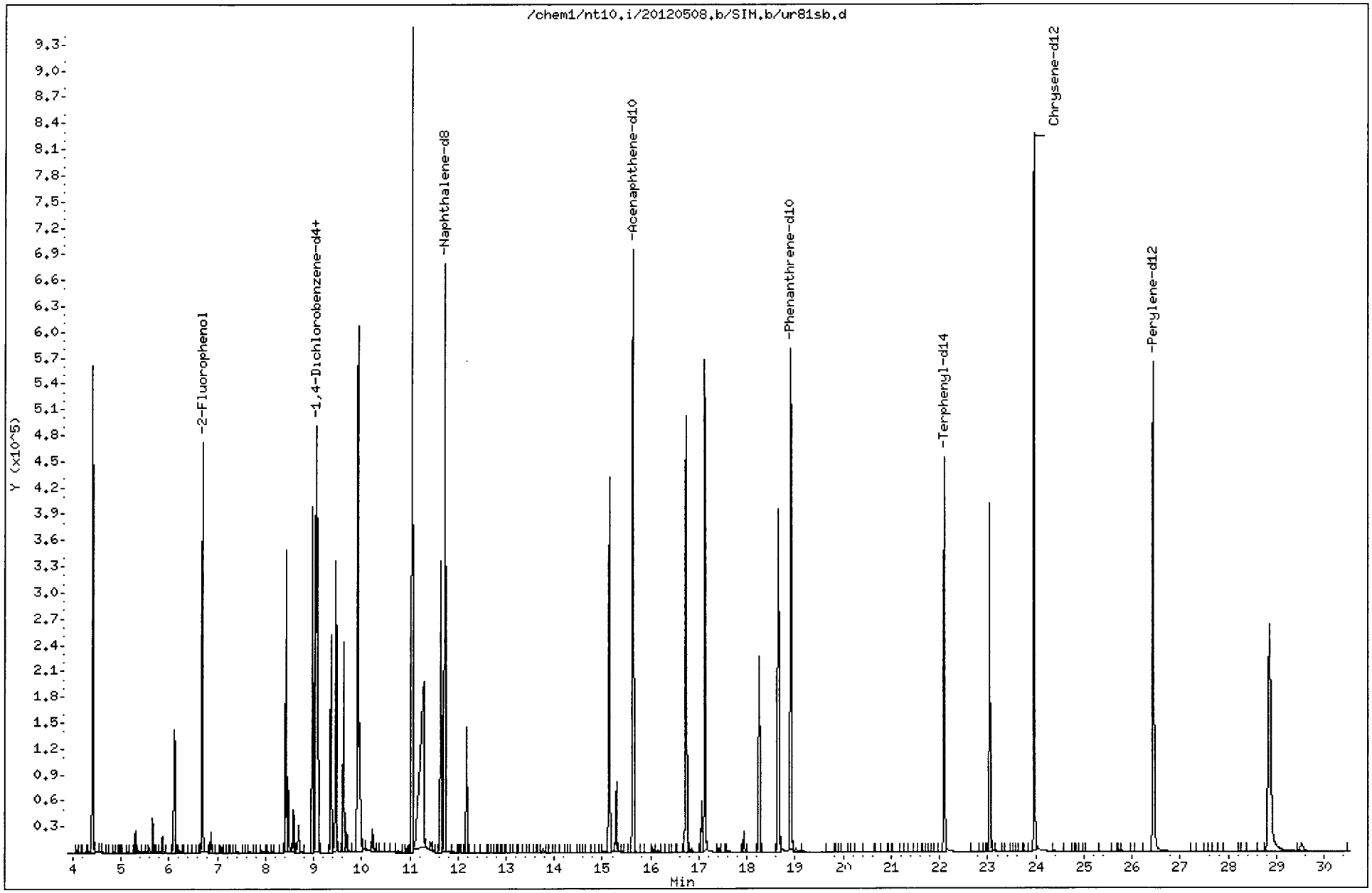
Client SDG: UR81
Fraction: SV
Client Smp ID: UR81LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	289.9	57.98	30-160
7 1,3-Dichlorobenzen	500.0	269.8	53.97	30-160
9 1,4-Dichlorobenzen	500.0	269.6	53.93	30-160
11 Benzyl alcohol	500.0	329.2	65.85	30-160
12 1,2-Dichlorobenzen	500.0	277.6	55.53	30-160
13 2-Methylphenol	500.0	251.0	50.19	30-160
15 4-Methylphenol	1000	520.9	52.09	30-160
16 N-Nitroso-di-n-pro	500.0	287.9	57.58	30-160
22 2,4-Dimethylphenol	1000	623.1	62.31	30-160
26 1,2,4-Trichloroben	500.0	272.9	54.59	30-160
30 Hexachlorobutadien	500.0	279.2	55.84	30-160
39 Dimethylphthalate	500.0	351.1	70.22	30-160
50 Diethylphthalate	500.0	376.1	75.22	30-160
54 N-Nitrosodiphenyla	500.0	346.5	69.31	30-160
57 Hexachlorobenzene	500.0	317.4	63.48	30-160
58 Pentachlorophenol	1000	1098	109.78	30-160
67 Butylbenzylphthala	500.0	415.4	83.07	30-160
79 Dibenzo(a,h)anthra	500.0	386.9	77.39	30-160
90 N-Nitrosodimethyla	1000	789.3	78.93	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	454.1	60.55	30-160
$ 66 Terphenyl-d14	500.0	350.5	70.09	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81sb.d
Date : 08-MAY-2012 16:38
Client ID: UR81LCSS1
Sample Info: UR81LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ur81sb.d

Lab ID: UR81LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81sbd.d
Lab Smp Id: UR81LCSDS1 Client Smp ID: UR81LCSDS1
Inj Date : 08-MAY-2012 17:15
Operator : YZ Inst ID: nt10.i
Smp Info : UR81LCSDS1
Misc Info : 12-7396
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 15:35 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 8 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.688	6.680	(0.739)	448063	4.44967	445.0
3 Phenol	94	8.426	8.418	(0.931)	387123	2.90471	290 5
7 1,3-Dichlorobenzene	146	8.975	8.975	(0.991)	348273	2.74905	274.9
* 8 1,4-Dichlorobenzene-d4	152	9.053	9 045	(1.000)	293315	4.00000	
9 1,4-Dichlorobenzene	146	9.076	9.076	(1 003)	334116	2 73831	273.8
11 Benzyl alcohol	79	9.363	9.355	(1.034)	218893	3.20835	320.8
12 1,2-Dichlorobenzene	146	9.464	9 464	(1.045)	334857	2.82104	282.1
13 2-Methylphenol	108	9.620	9.619	(1.063)	266275	2.48736	248.7
15 4-Methylphenol	108	9.930	9.914	(1.097)	576862	5.13552	513.6
16 N-Nitroso-di-n-propylamine	70	9.969	9.961	(1.101)	177900	2.89935	289.9
22 2,4-Dimethylphenol	107	11.046	11.038	(0 942)	568207	5.52874	552.9
26 1,2,4-Trichlorobenzene	180	11.640	11.639	(0.993)	276282	2.77512	277 5
* 27 Naphthalene-d8	136	11.724	11.724	(1.000)	1121221	4.00000	
30 Hexachlorobutadiene	225	12.180	12.180	(1.039)	156533	2.86038	286.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15 152	15.144	(0.969)	618736	3.47465	347.5
*	42 Acenaphthene-d10	162	15.632	15.632	(1.000)	582349	4 00000	
	50 Diethylphthalate	149	16.737	16.729	(1.071)	729511	3 74233	374.2
	54 N-Nitrosodiphenylamine	169	17.131	17.123	(0.906)	458651	3 39411	339.4
	57 Hexachlorobenzene	284	18.250	18.250	(0.965)	224144	3 14684	314.7
	58 Pentachlorophenol	266	18.652	18.644	(0.986)	462076	10.9210	1092
*	59 Phenanthrene-d10	188	18.908	18.908	(1.000)	1005744	4.00000	
$	66 Terphenyl-d14	244	22.103	22.095	(0.922)	579625	3.37306	337 3
	67 Butylbenzylphthalate	149	23.040	23.047	(0.961)	535180	4.11524	411 5
*	69 Chrysene-d12	240	23.969	23.969	(1.000)	1079452	4.00000	
*	77 Perylene-d12	264	26.439	26.446	(1.000)	1055126	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.848	28.864	(1.091)	877149	3 88251	388.3
	90 N-Nitrosodimethylamine	74	4 410	4.371	(0.487)	488381	8.02049	802 0

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81sbd.d
Lab Smp Id: UR81LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: UR81LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	293315	-5.76
27 Naphthalene-d8	1166872	583436	2333744	1121221	-3.91
42 Acenaphthene-d10	603218	301609	1206436	582349	-3.46
59 Phenanthrene-d10	1096026	548013	2192052	1005744	-8.24
69 Chrysene-d12	1131082	565541	2262164	1079452	-4.56
77 Perylene-d12	1082499	541250	2164998	1055126	-2.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.00
59 Phenanthrene-d10	18.91	18.41	19.41	18.91	0.00
69 Chrysene-d12	23.97	23.47	24.47	23.97	0.00
77 Perylene-d12	26.45	25.95	26.95	26.44	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: UR81LCSDS1
Operator: YZ
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	290.5	58.09	30-160
7 1,3-Dichlorobenzen	500.0	274.9	54.98	30-160
9 1,4-Dichlorobenzen	500.0	273.8	54.77	30-160
11 Benzyl alcohol	500.0	320.8	64.17	30-160
12 1,2-Dichlorobenzen	500.0	282.1	56.42	30-160
13 2-Methylphenol	500.0	248.7	49.75	30-160
15 4-Methylphenol	1000	513.6	51.36	30-160
16 N-Nitroso-di-n-pro	500.0	289.9	57.99	30-160
22 2,4-Dimethylphenol	1000	552.9	55.29	30-160
26 1,2,4-Trichloroben	500.0	277.5	55.50	30-160
30 Hexachlorobutadien	500.0	286.0	57.21	30-160
39 Dimethylphthalate	500.0	347.5	69.49	30-160
50 Diethylphthalate	500.0	374.2	74.85	30-160
54 N-Nitrosodiphenyla	500.0	339.4	67.88	30-160
57 Hexachlorobenzene	500.0	314.7	62.94	30-160
58 Pentachlorophenol	1000	1092	109.21	30-160
67 Butylbenzylphthala	500.0	411.5	82.30	30-160
79 Dibenzo(a,h)anthra	500.0	388.3	77.65	30-160
90 N-Nitrosodimethyla	1000	802.0	80.20	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	445.0	59.33	30-160
$ 66 Terphenyl-d14	500.0	337.3	67.46	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81sbd.d

Date : 08-MAY-2012 17:15

Client ID: UR81LCSDS1

Instrument: nt10.i

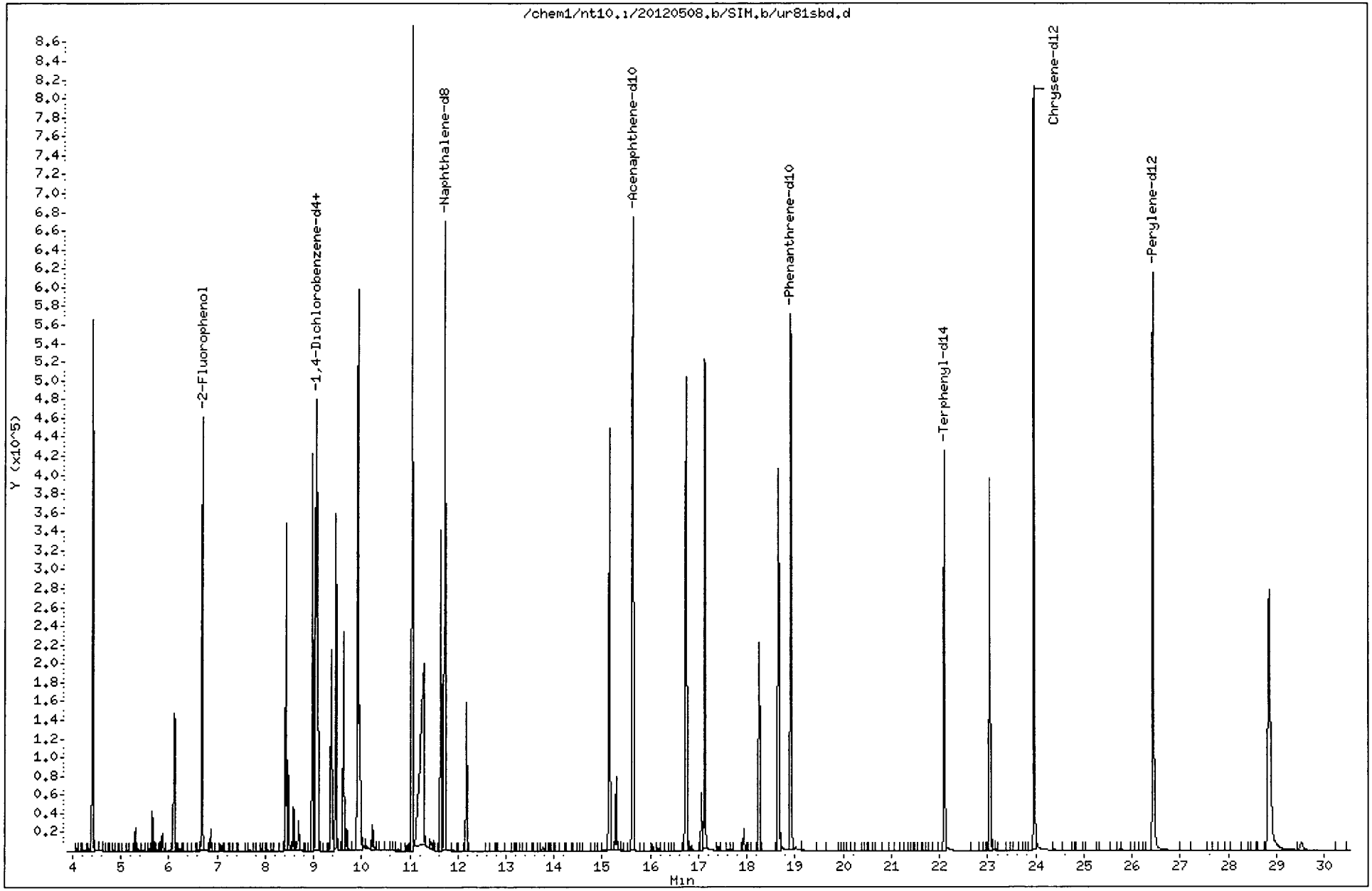
Sample Info: UR81LCSDS1

Volume Injected (uL): 1.0

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ur81sbd.d

Lab ID: UR81LCSDS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-20

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81a.d
Lab Smp Id: UR81A Client Smp ID: IJ12-03
Inj Date : 08-MAY-2012 17:52
Operator : YZ Inst ID: nt10.i
Smp Info : UR81A
Misc Info : 12-7392
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.26000	Weight of sample extracted (g)
M	59.30000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.695	6.680	(0.740)	418569	4.13551	402.3
3 Phenol	94	8.426	8.418	(0.932)	45047	0.33627	32.71
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9 045	9.045	(1.000)	294823	4 00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9.363	9.355	(1 035)	22419	0 32692	31.80(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9.627	9.619	(1.064)	7160	0.06654 J	6 472
15 4-Methylphenol	108	9.922	9.914	(1.097)	60617	0.53688	52 22
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11.046	11.038	(0.942)	14604	0.13953	13.57
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.724	11 724	(1.000)	1141852	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.639	15.632	(1.000)	567855	4.00000	
	50 Diethylphthalate	149	16.737	16.729	(1.070)	28008	0.14735	14.33(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	18.652	18.644	(0.986)	6273	0.15005	14.60(M)
*	59 Phenanthrene-d10	188	18 908	18.908	(1.000)	993737	4.00000	
$	66 Terphenyl-d14	244	22 111	22.095	(0.922)	519325	3.11980	303.5
	67 Butylbenzylphthalate	149	23 047	23.047	(0.961)	18599	0.14764	14.36(M)
*	69 Chrysene-d12	240	23.977	23.969	(1.000)	1045665	4.00000	
*	77 Perylene-d12	264	26.446	26.446	(1.000)	1050280	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.864	28.864	(1.091)	41873	0.18620	18.11
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81a.d
Lab Smp Id: UR81A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7392

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-03
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	294823	-5.28
27 Naphthalene-d8	1166872	583436	2333744	1141852	-2.14
42 Acenaphthene-d10	603218	301609	1206436	567855	-5.86
59 Phenanthrene-d10	1096026	548013	2192052	993737	-9.33
69 Chrysene-d12	1131082	565541	2262164	1045665	-7.55
77 Perylene-d12	1082499	541250	2164998	1050280	-2.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.05
59 Phenanthrene-d10	18.91	18.41	19.41	18.91	0.00
69 Chrysene-d12	23.97	23.47	24.47	23.98	0.03
77 Perylene-d12	26.45	25.95	26.95	26.45	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7392

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-03
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	729.5	402.3	55.14	30-160
$ 66 Terphenyl-d14	486.3	303.5	62.40	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Sample Info: UR81A

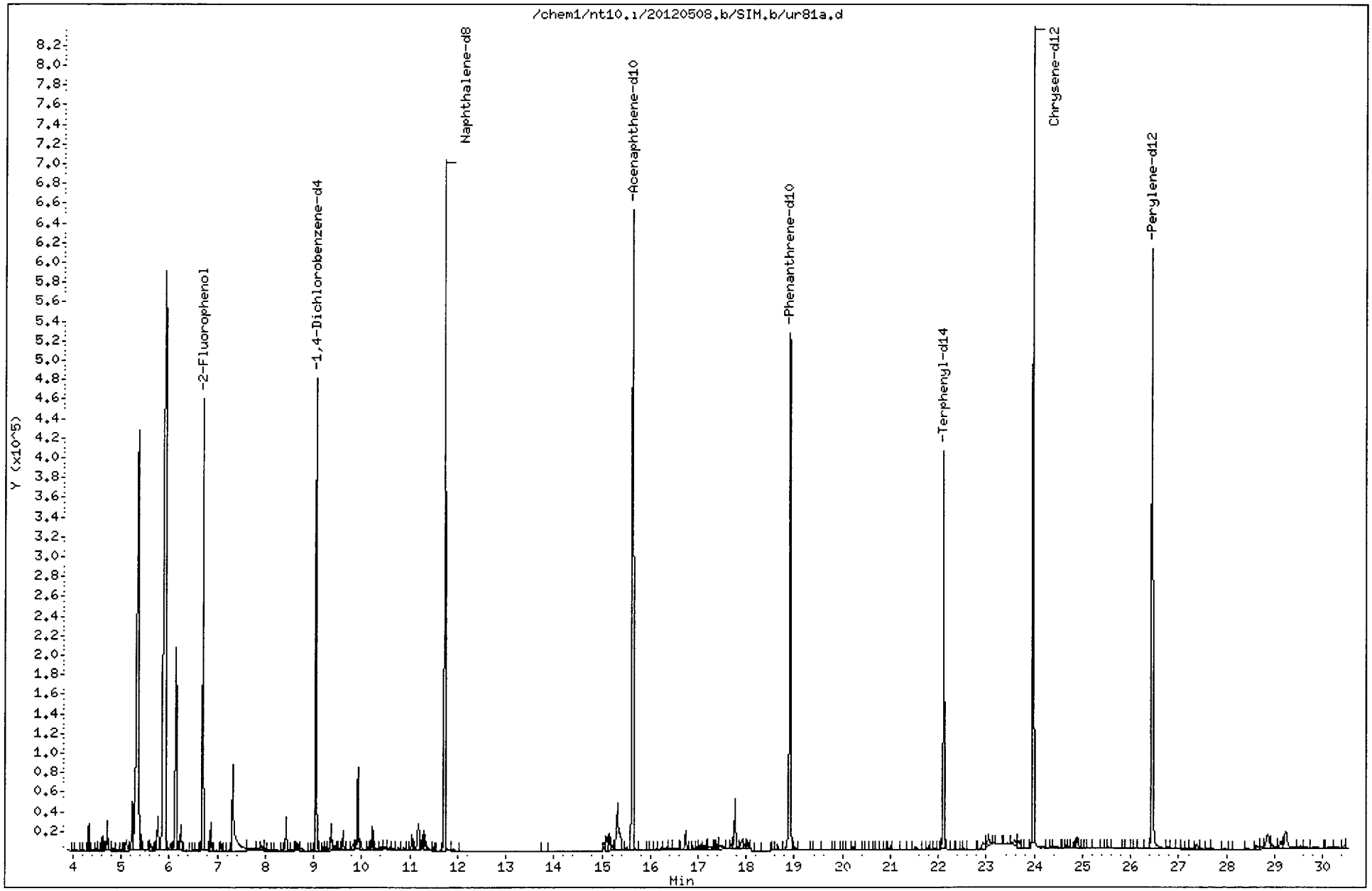
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

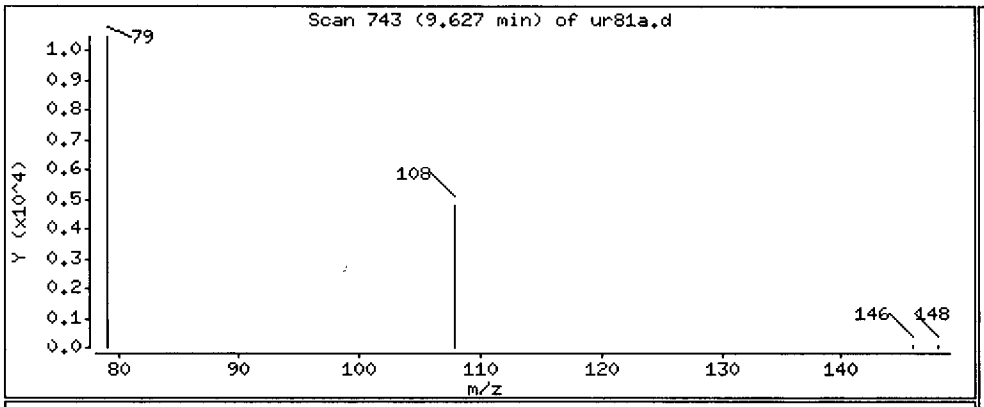
Operator: YZ

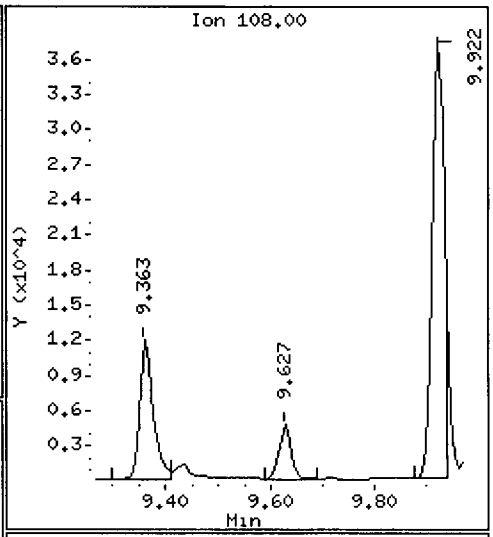
Column phase: ZB-5ms1

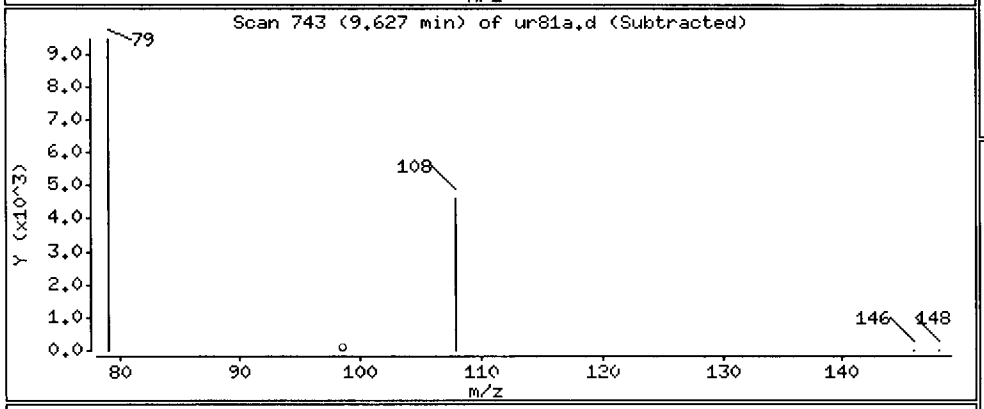
Column diameter: 0.25

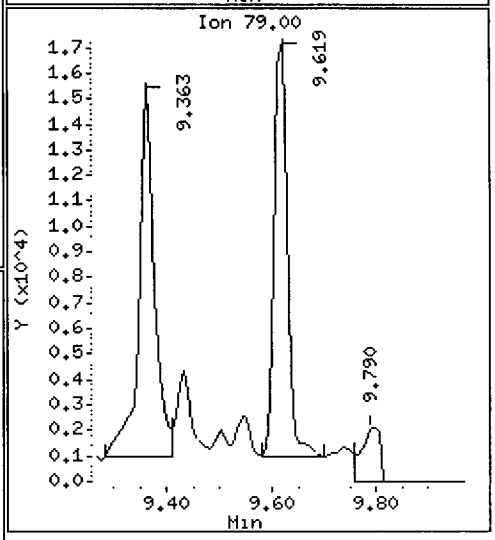
13 2-Methylphenol

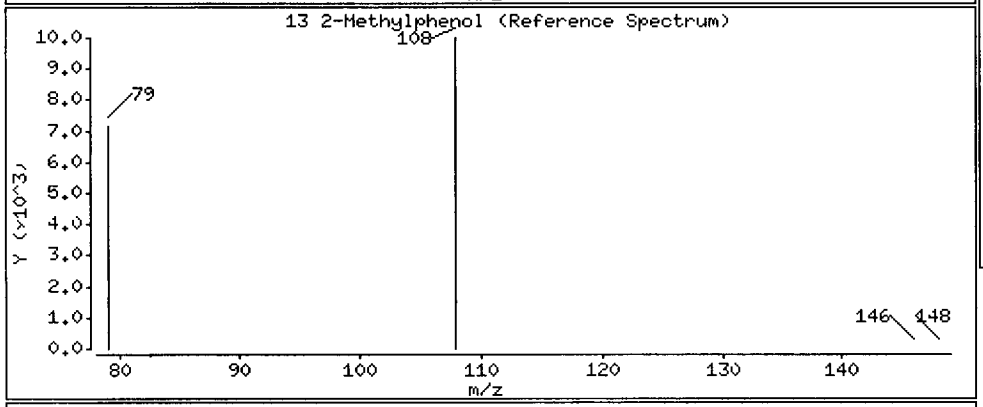
Concentration: 6.472 ug/kg

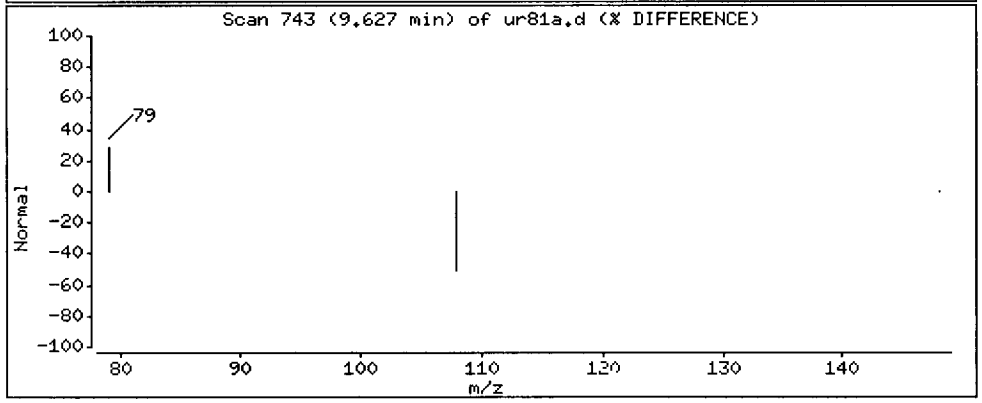












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

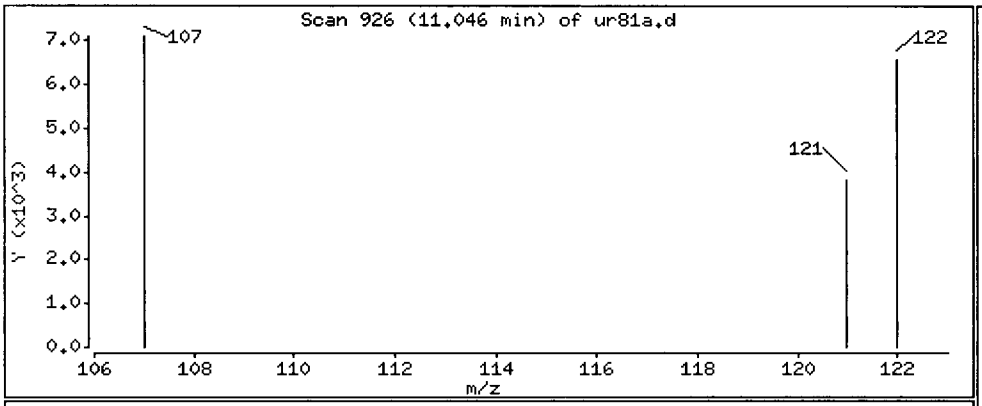
Operator: YZ

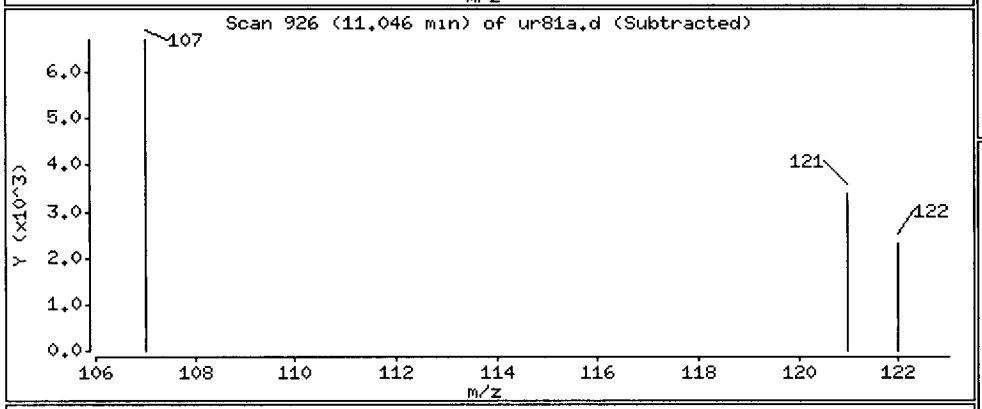
Column phase: ZB-5msi

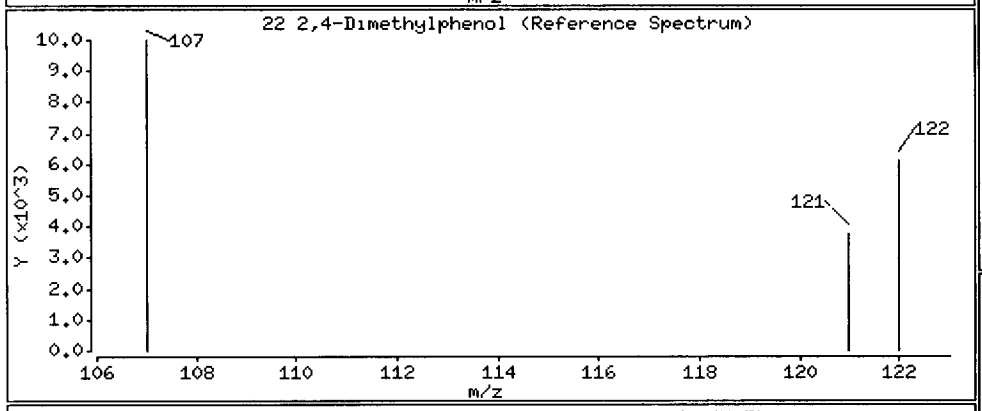
Column diameter: 0.25

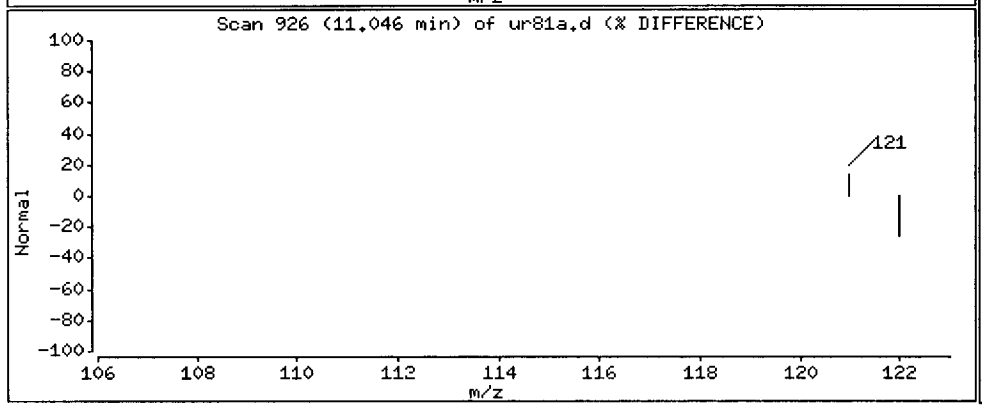
22 2,4-Dimethylphenol

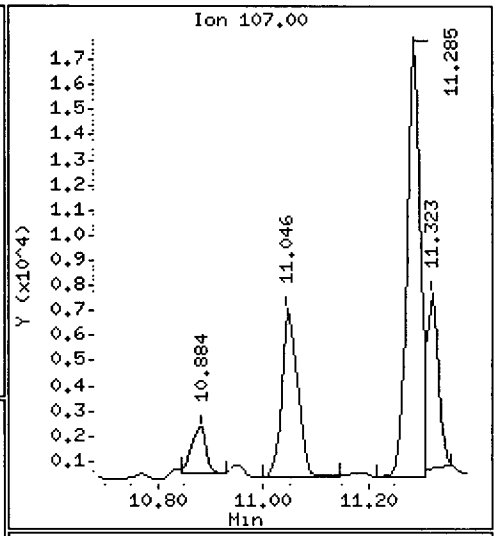
Concentration: 13.57 ug/kg

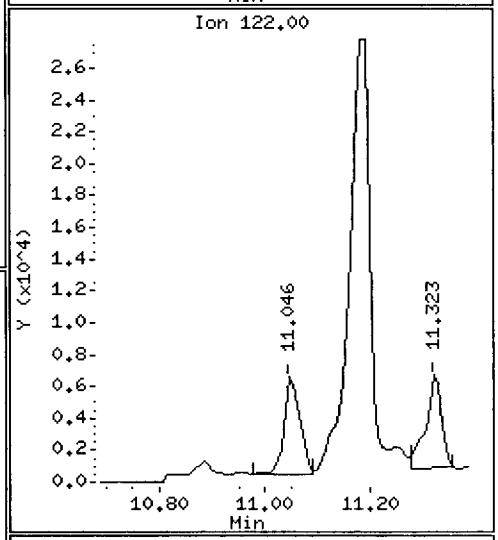


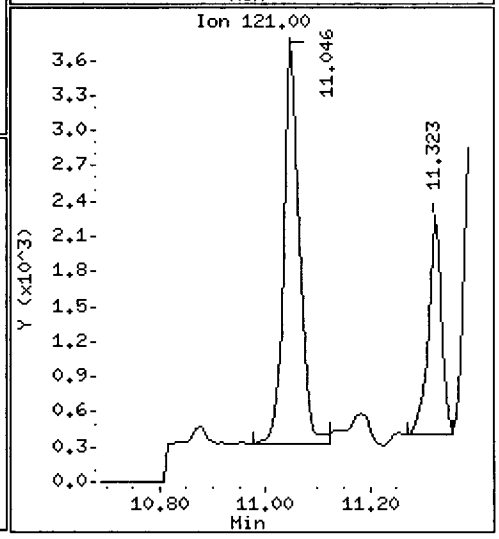












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

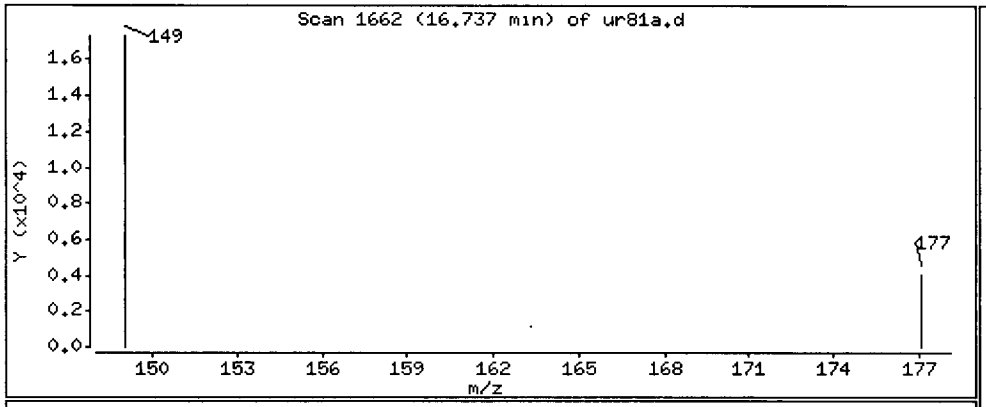
Operator: YZ

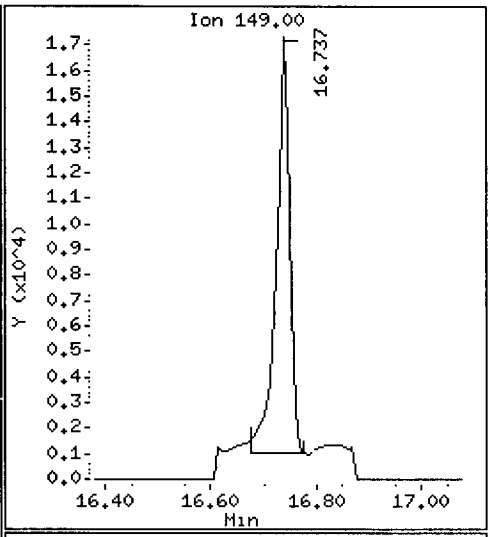
Column phase: ZB-5msi

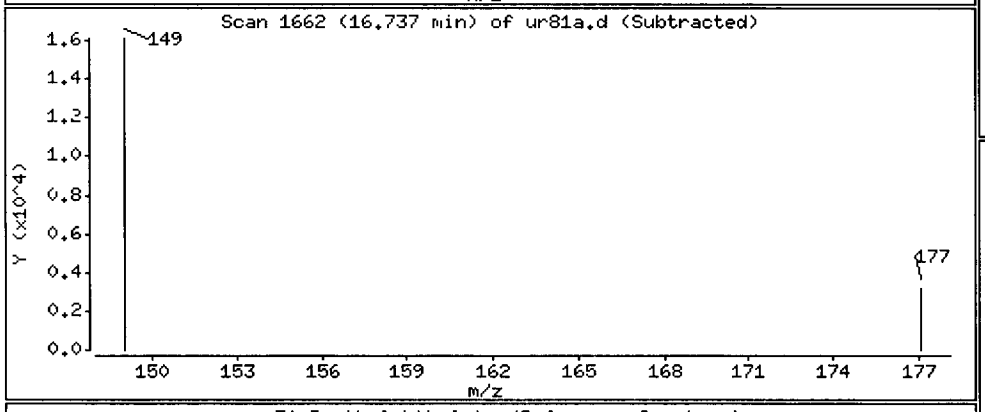
Column diameter: 0.25

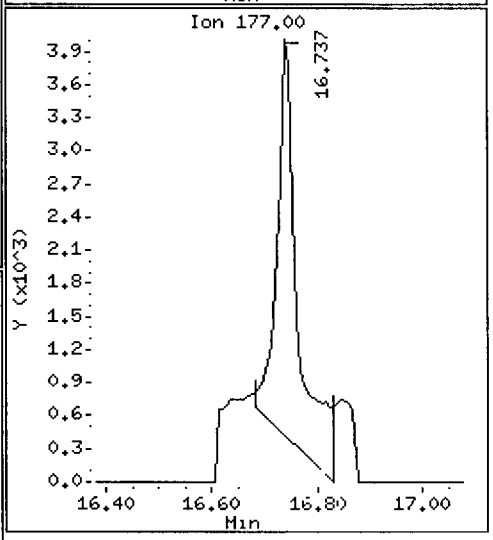
50 Diethylphthalate

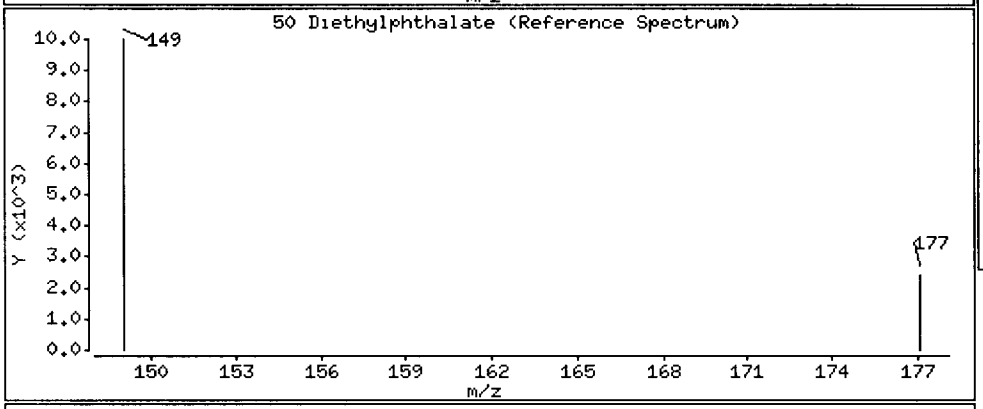
Concentration: 14.33 ug/kg

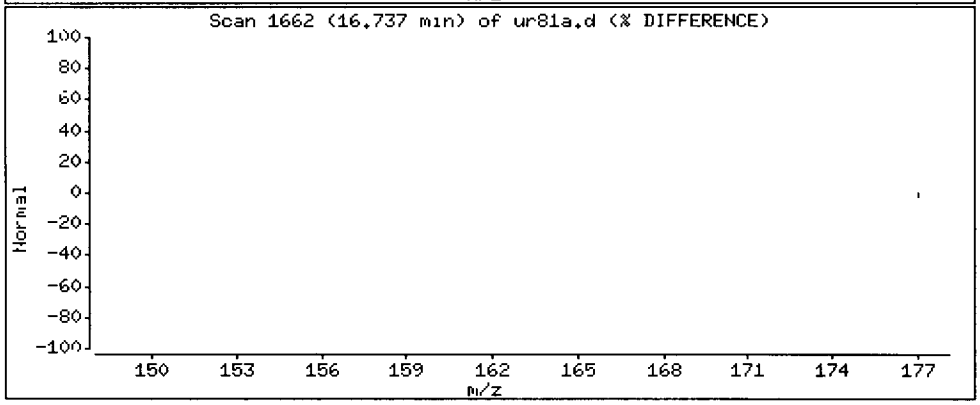












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

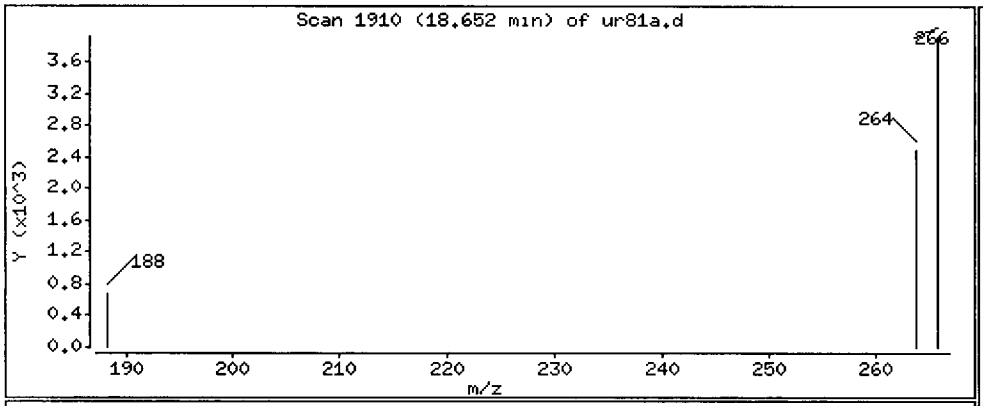
Operator: YZ

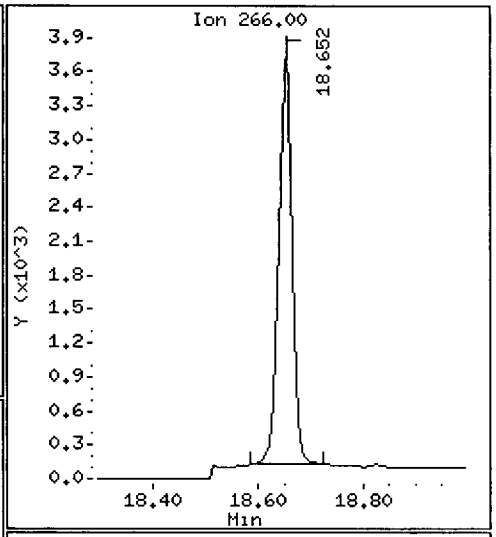
Column phase: ZB-5msi

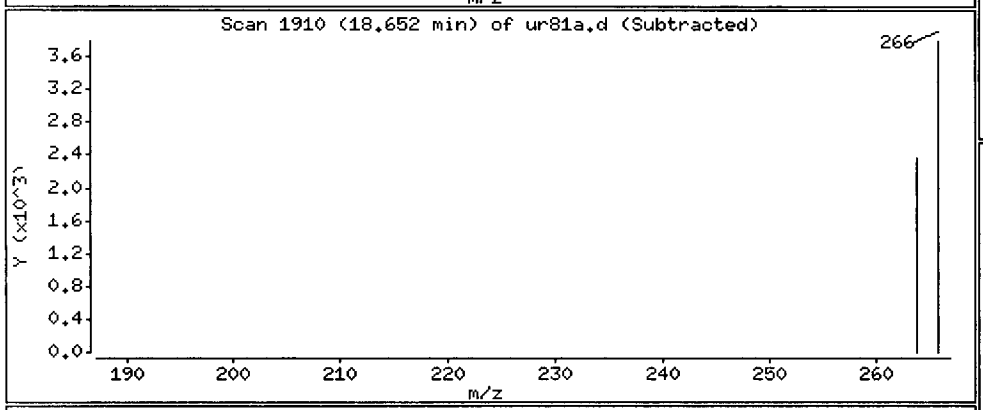
Column diameter: 0.25

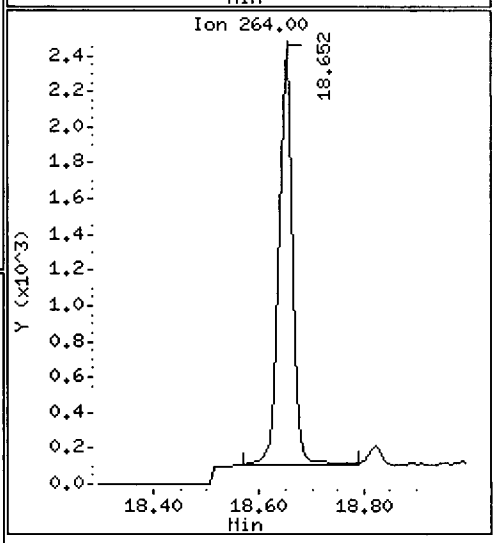
58 Pentachlorophenol

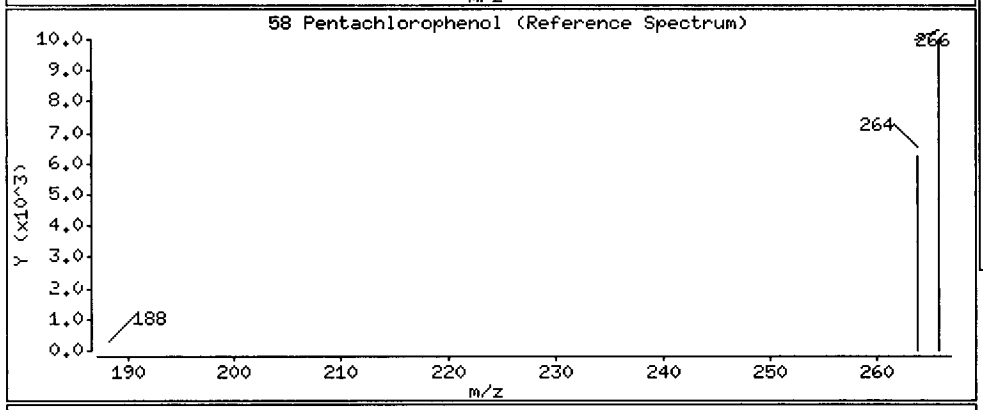
Concentration: 14.60 ug/kg

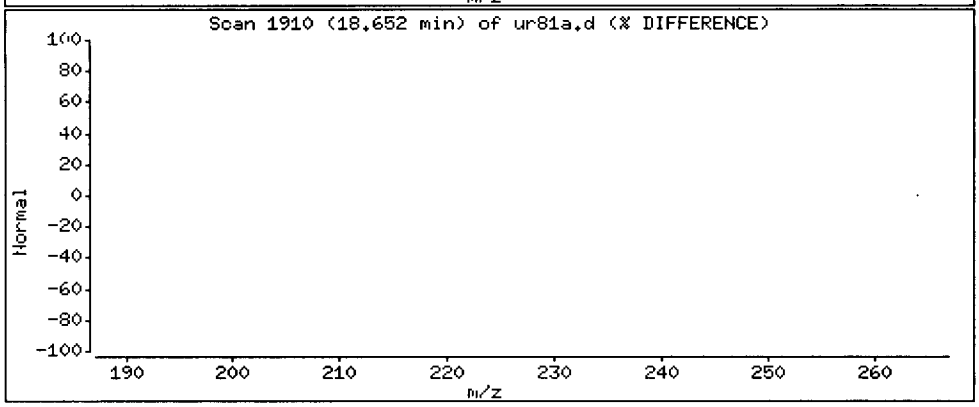












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Date : 08-MAY-2012 17:52

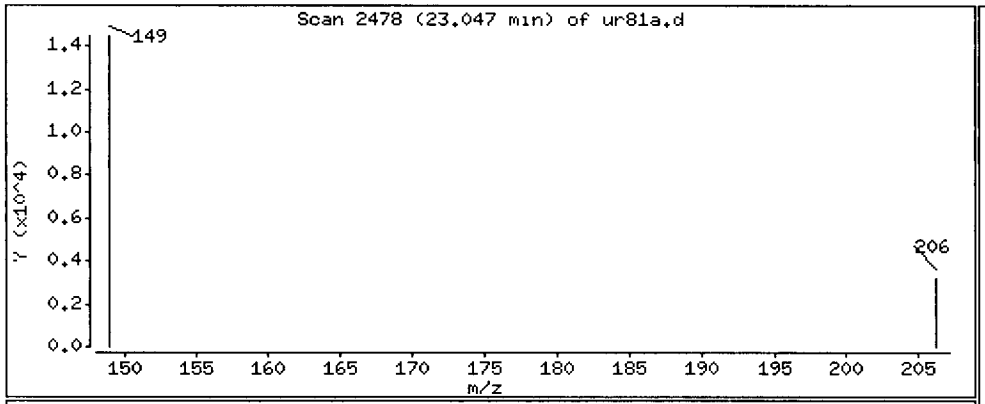
Client ID: IJ12-03 | Instrument: nt10.i

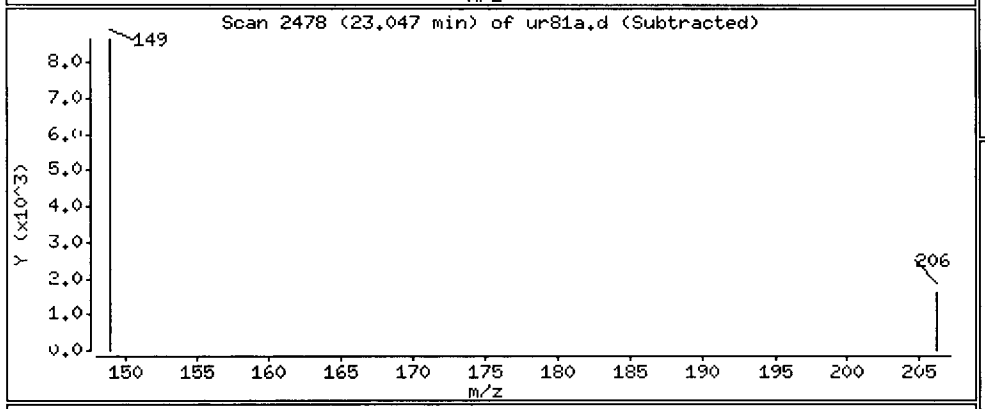
Sample Info: UR81A

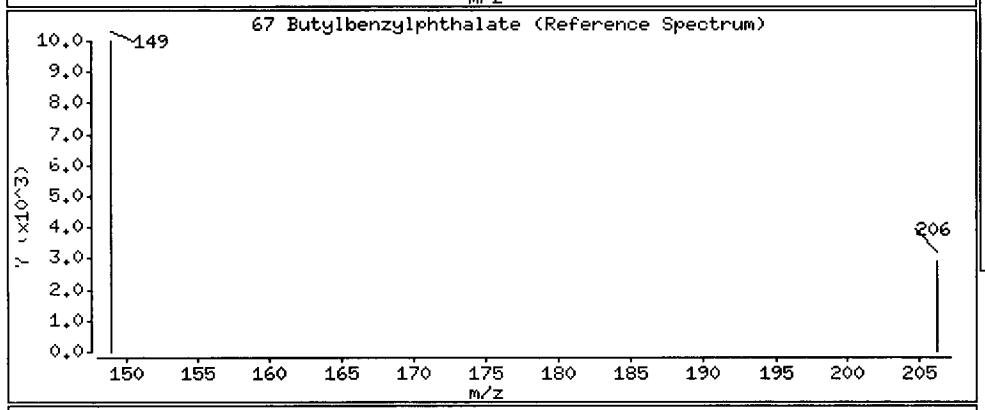
Volume Injected (uL): 1.0 | Operator: YZ

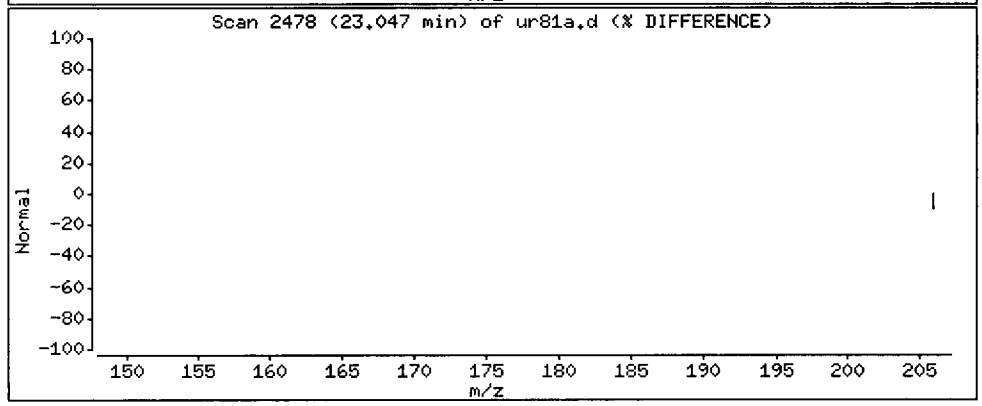
Column phase: ZB-5msi | Column diameter: 0.25

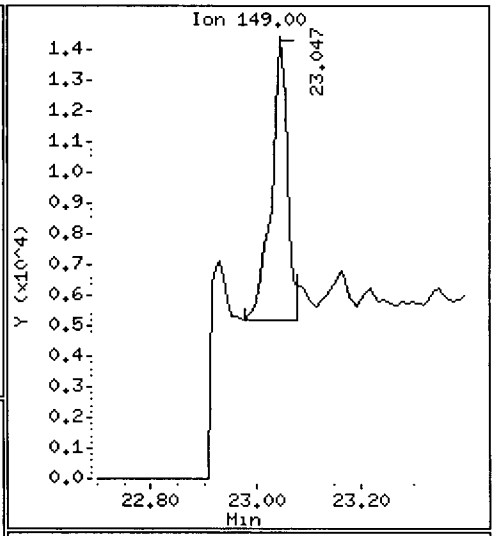
67 Butylbenzylphthalate | Concentration: 14.36 ug/kg

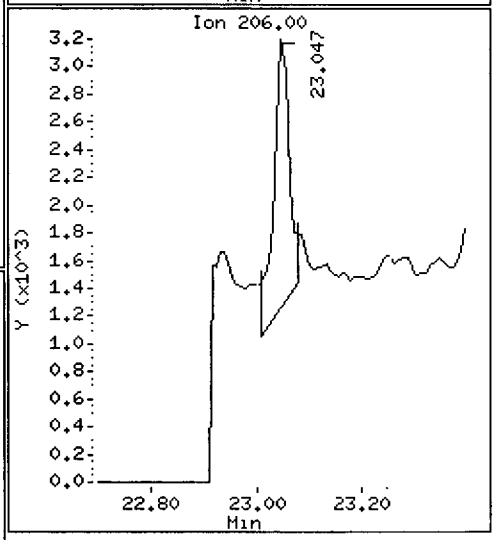












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Date : 08-MAY-2012 17:52

Client ID: IJ12-03

Instrument: nt10.i

Sample Info: UR81A

Volume Injected (uL): 1.0

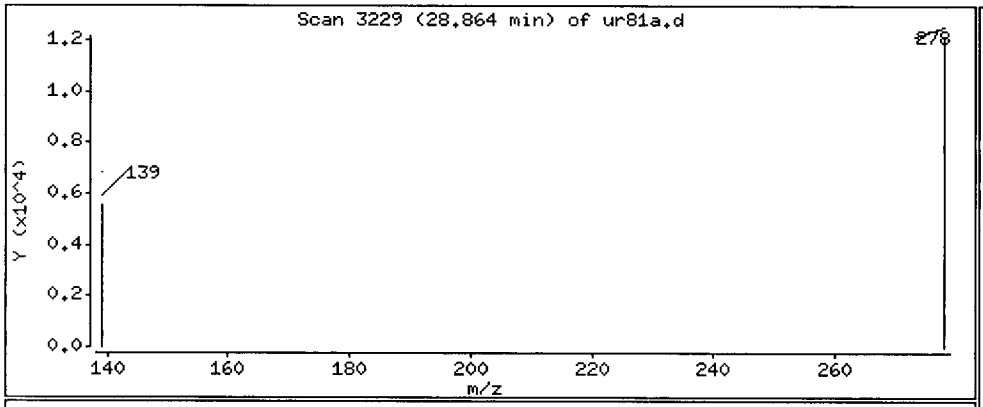
Operator: YZ

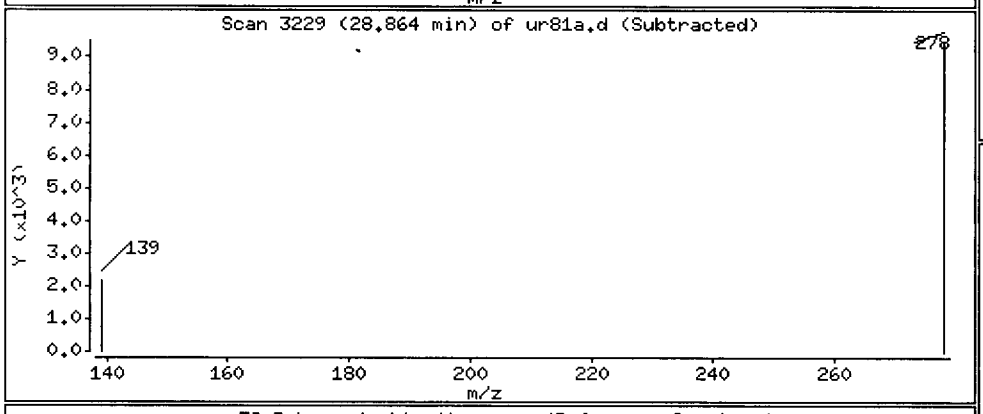
Column phase: ZB-5msi

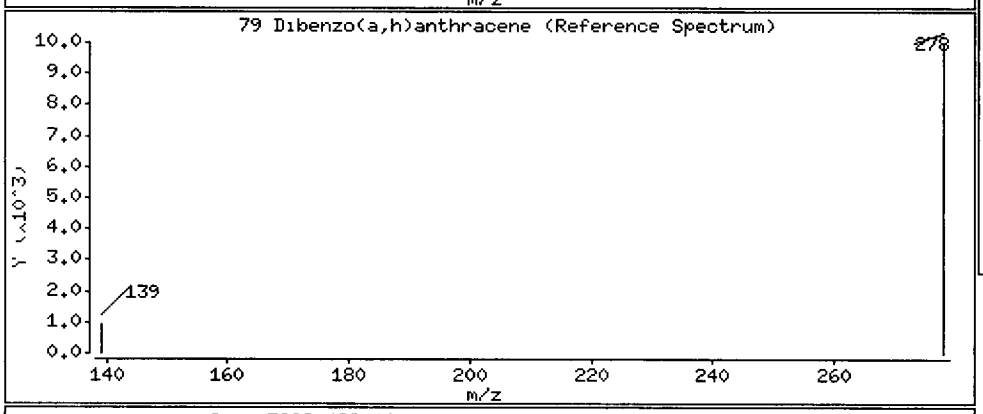
Column diameter: 0.25

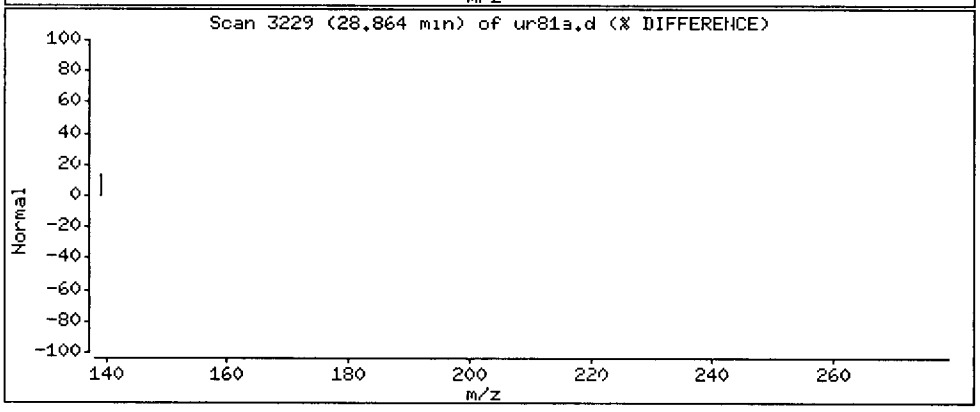
79 Dibenzo(a,h)anthracene

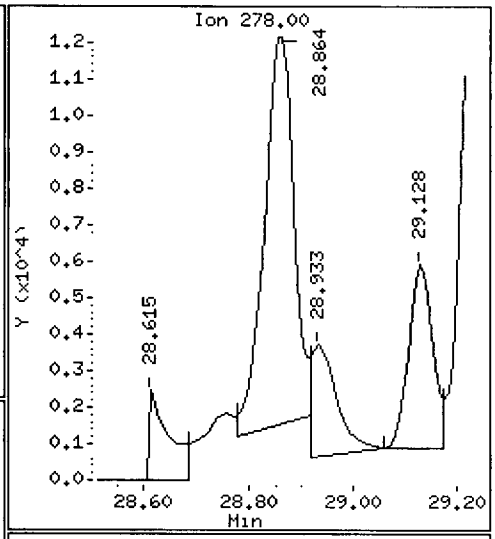
Concentration: 18.11 ug/kg

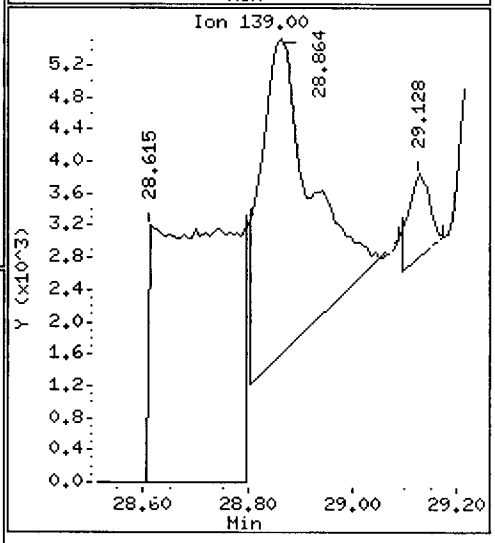






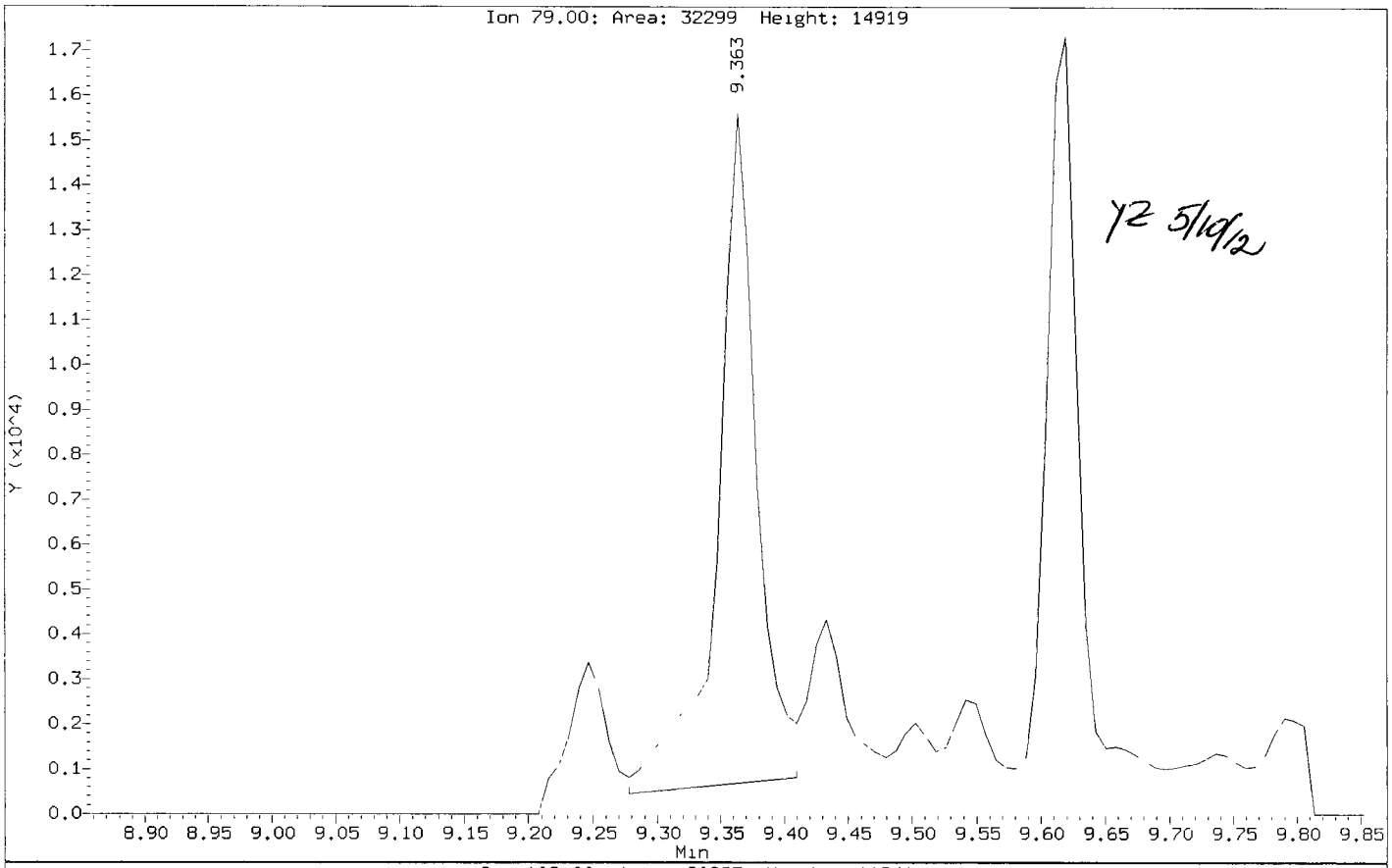


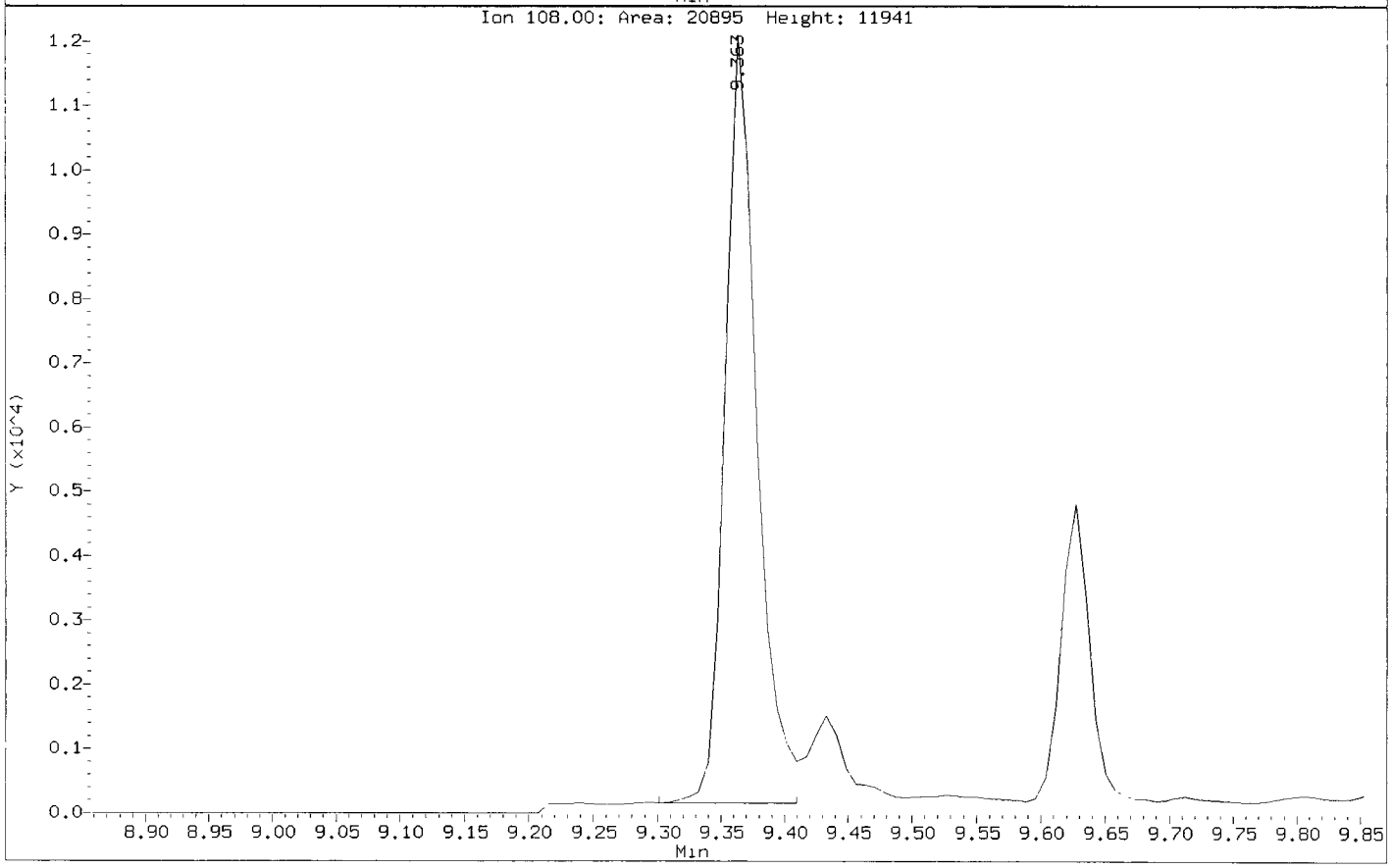




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d
Injection Date: 08-MAY-2012 17:52
Instrument: nt10.i
Client Sample ID: IJ12-03

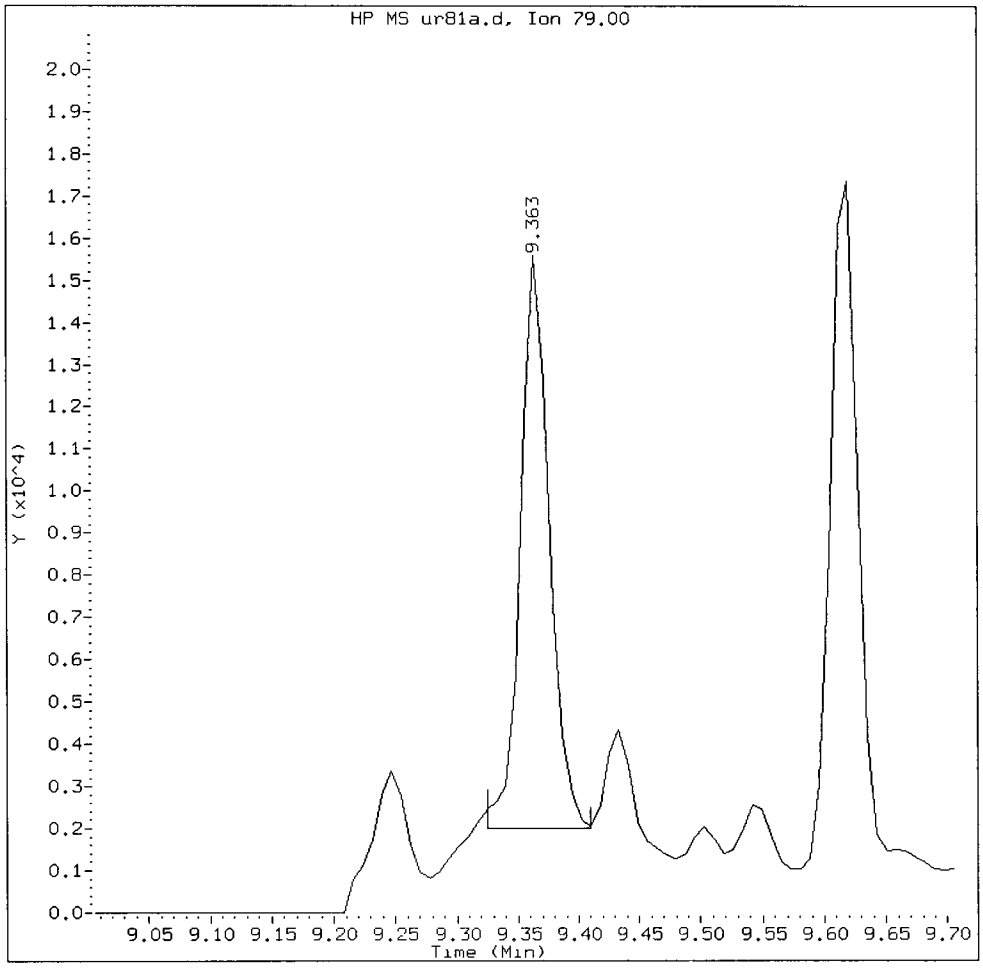
Compound: Benzyl alcohol
CAS Number: 100-51-6





UR81A, /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Benzyl alcohol Amount: 0.33 Area: 22419



MANUAL INTEGRATION for Benzyl alcohol

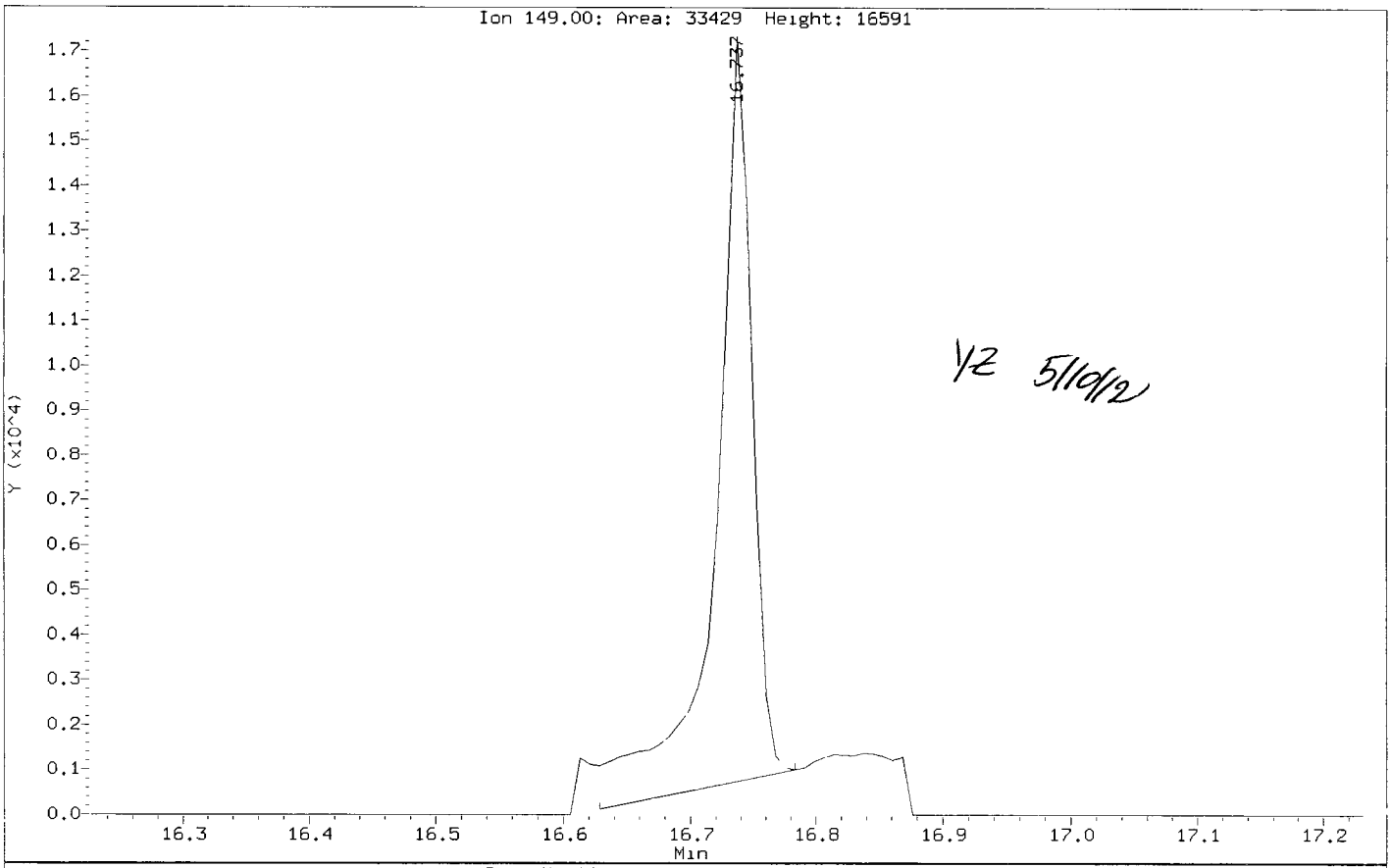
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

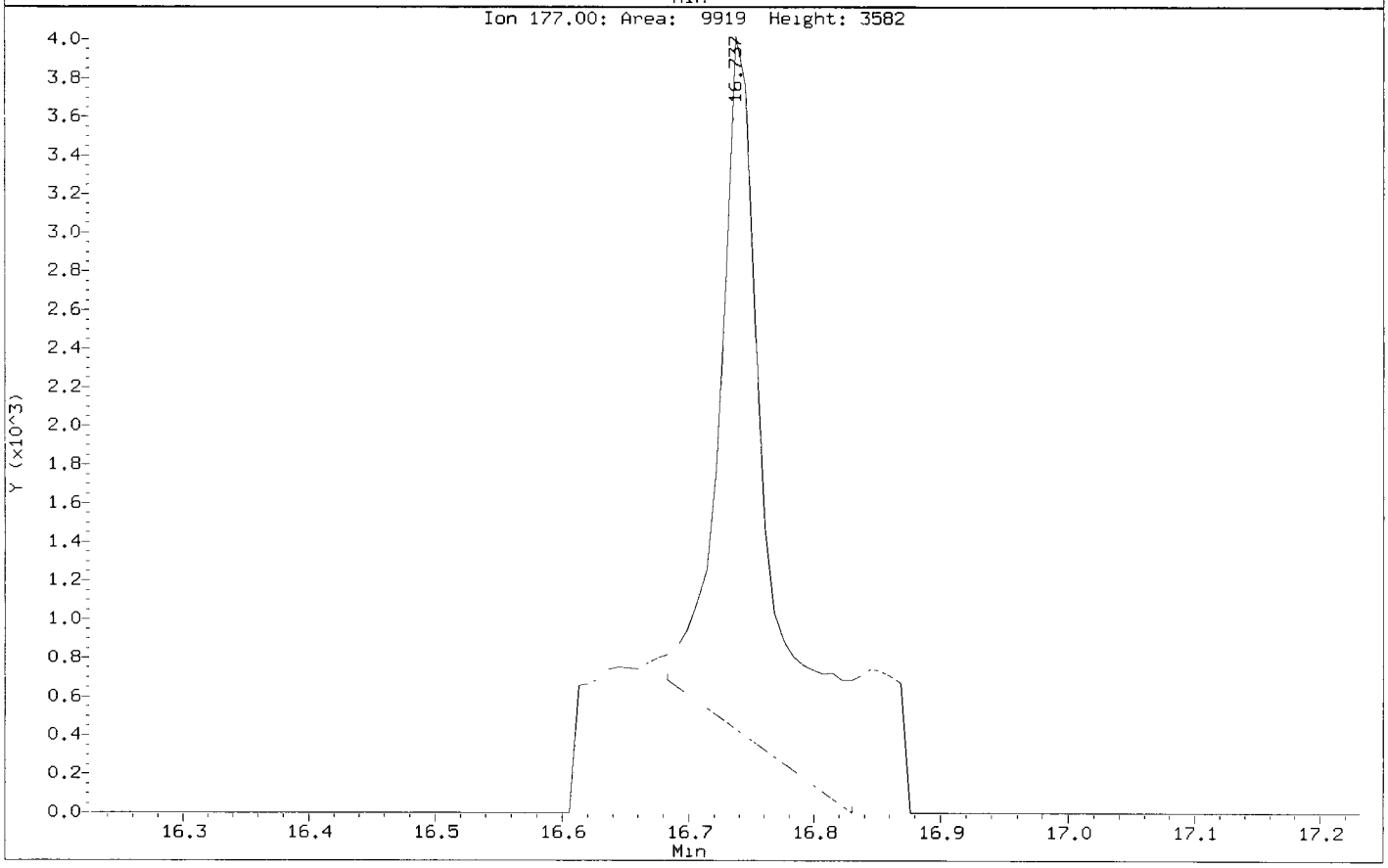
Analyst: VZ Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d
Injection Date: 08-MAY-2012 17:52
Instrument: nt10.i
Client Sample ID: IJ12-03

Compound: Diethylphthalate
CAS Number: 84-66-2

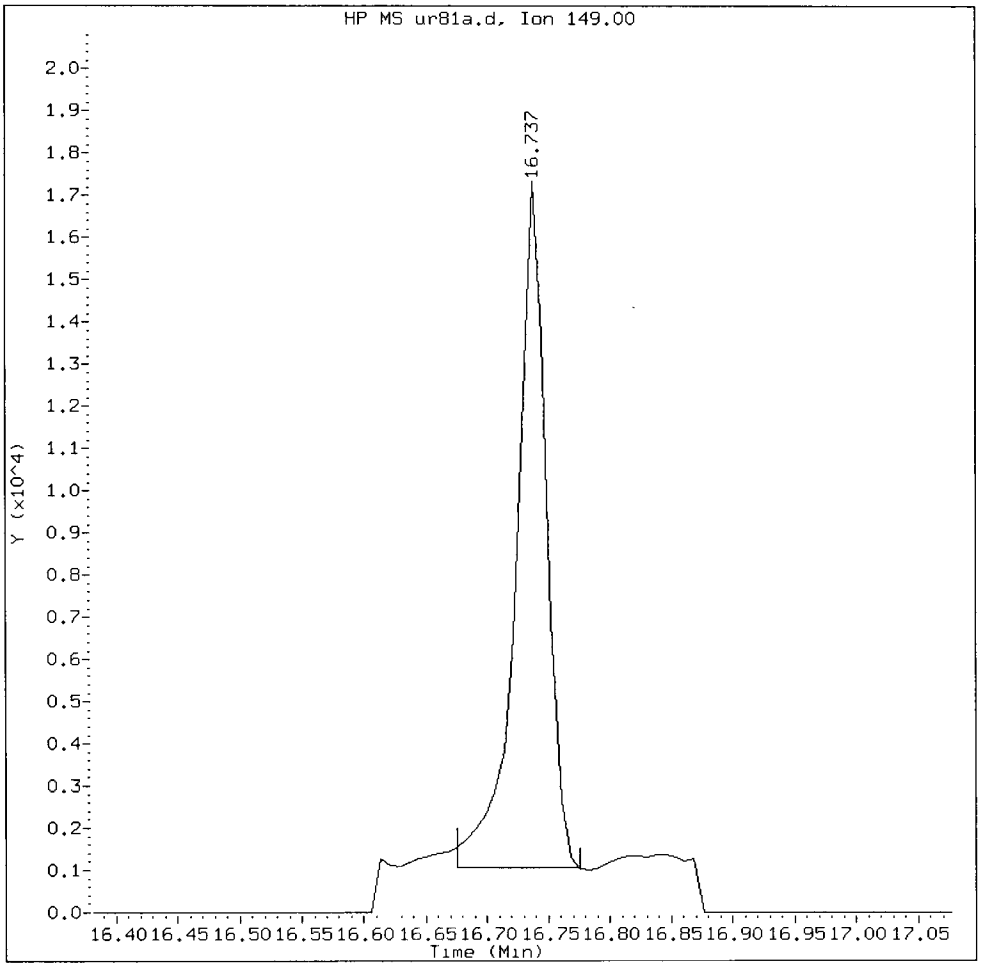


YZ 5/10/12



UR81A, /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Diethylphthalate Amount: 0.15 Area: 28008



MANUAL INTEGRATION for Diethylphthalate

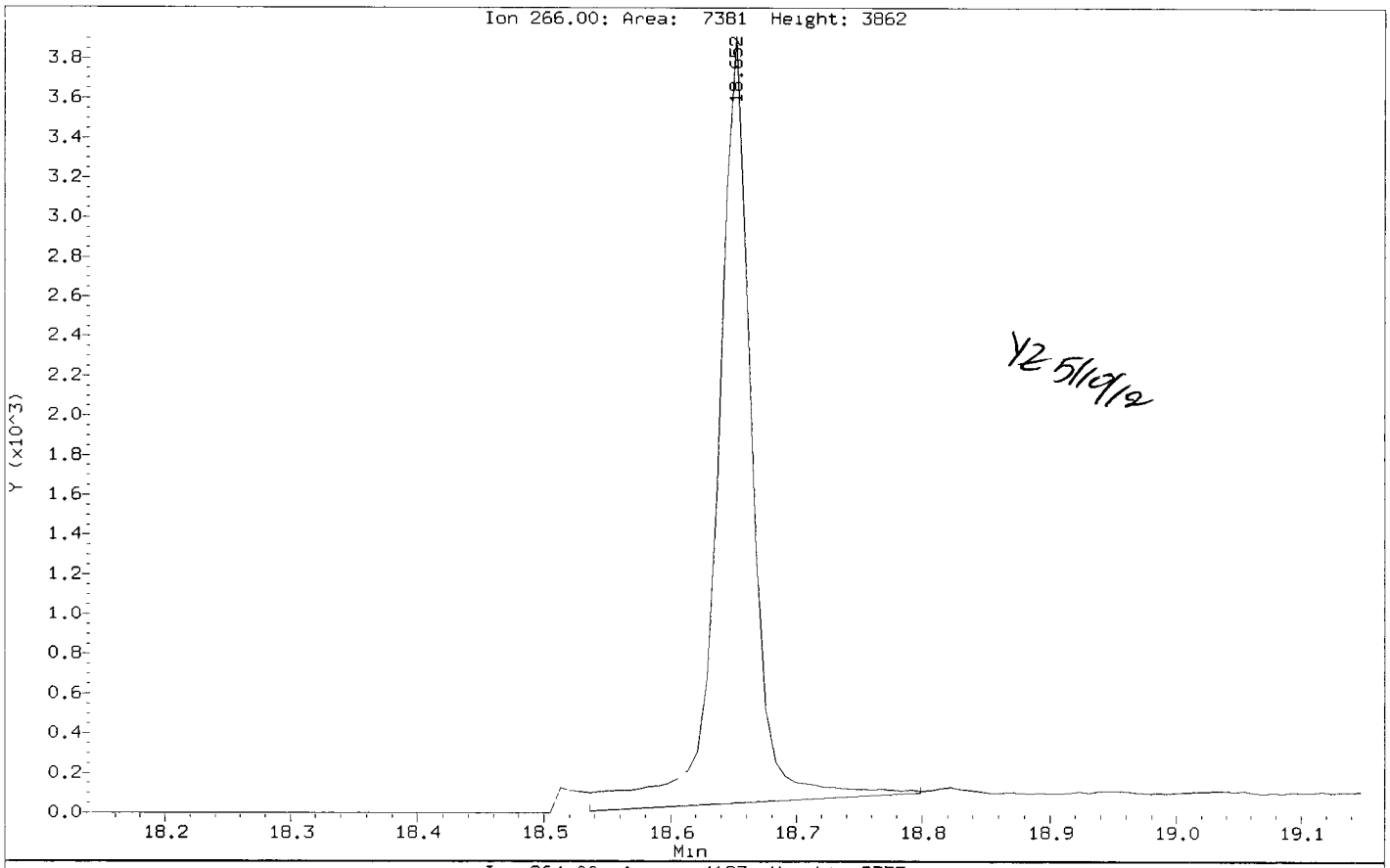
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

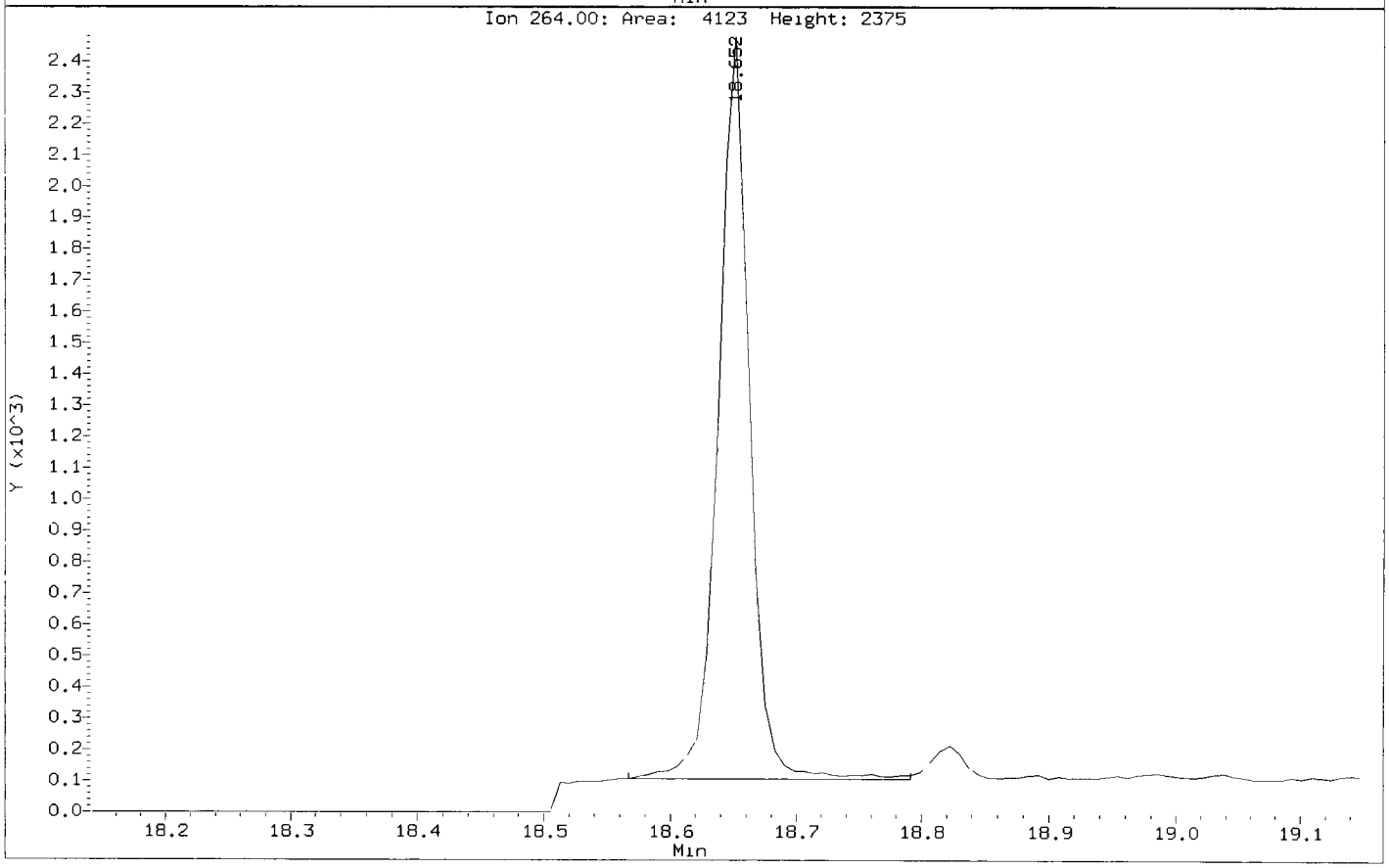
5. Other _____

Analyst: YB Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d
Injection Date: 08-MAY-2012 17:52
Instrument: nt10.i
Client Sample ID: IJ12-03

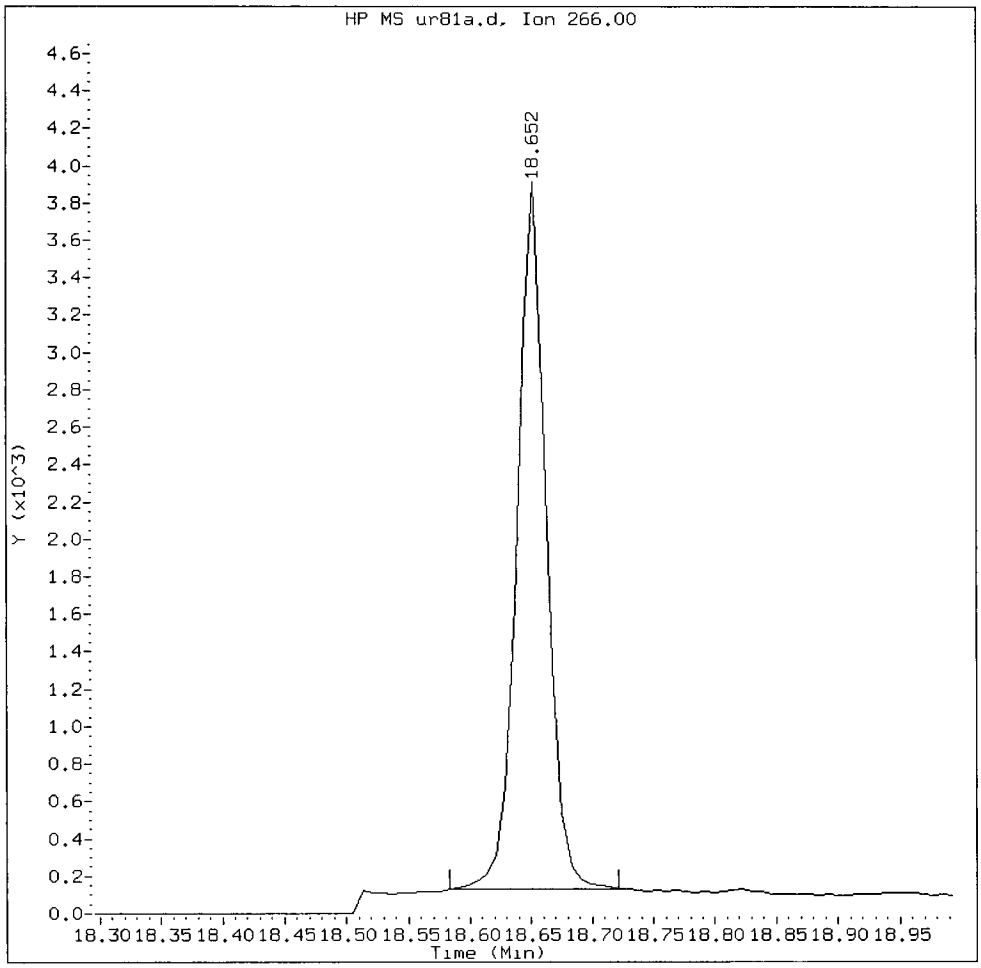
Compound: Pentachlorophenol
CAS Number: 87-86-5





UR81A, /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Pentachlorophenol Amount: 0.15 Area: 6273



MANUAL INTEGRATION for Pentachlorophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

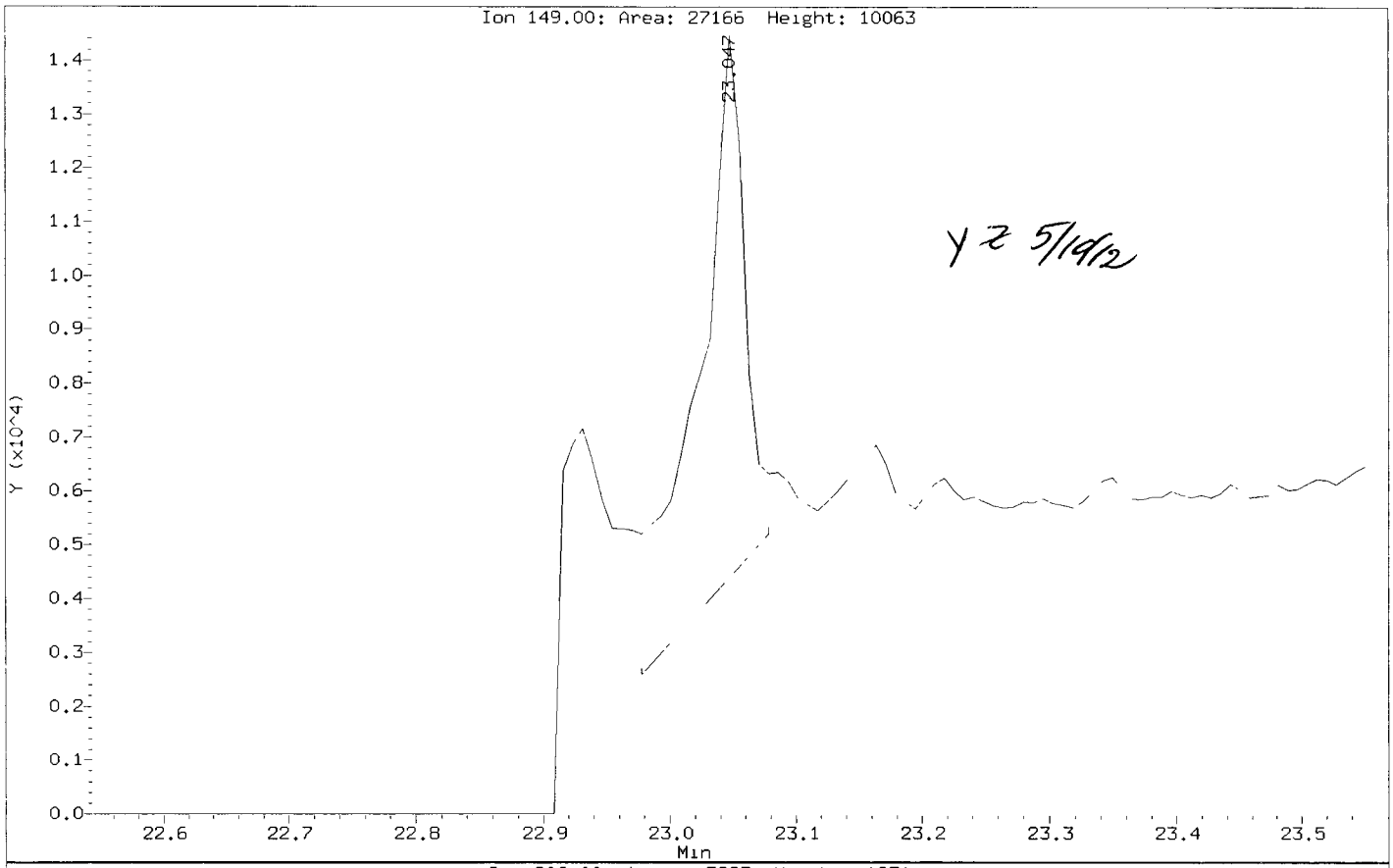
5. Other _____

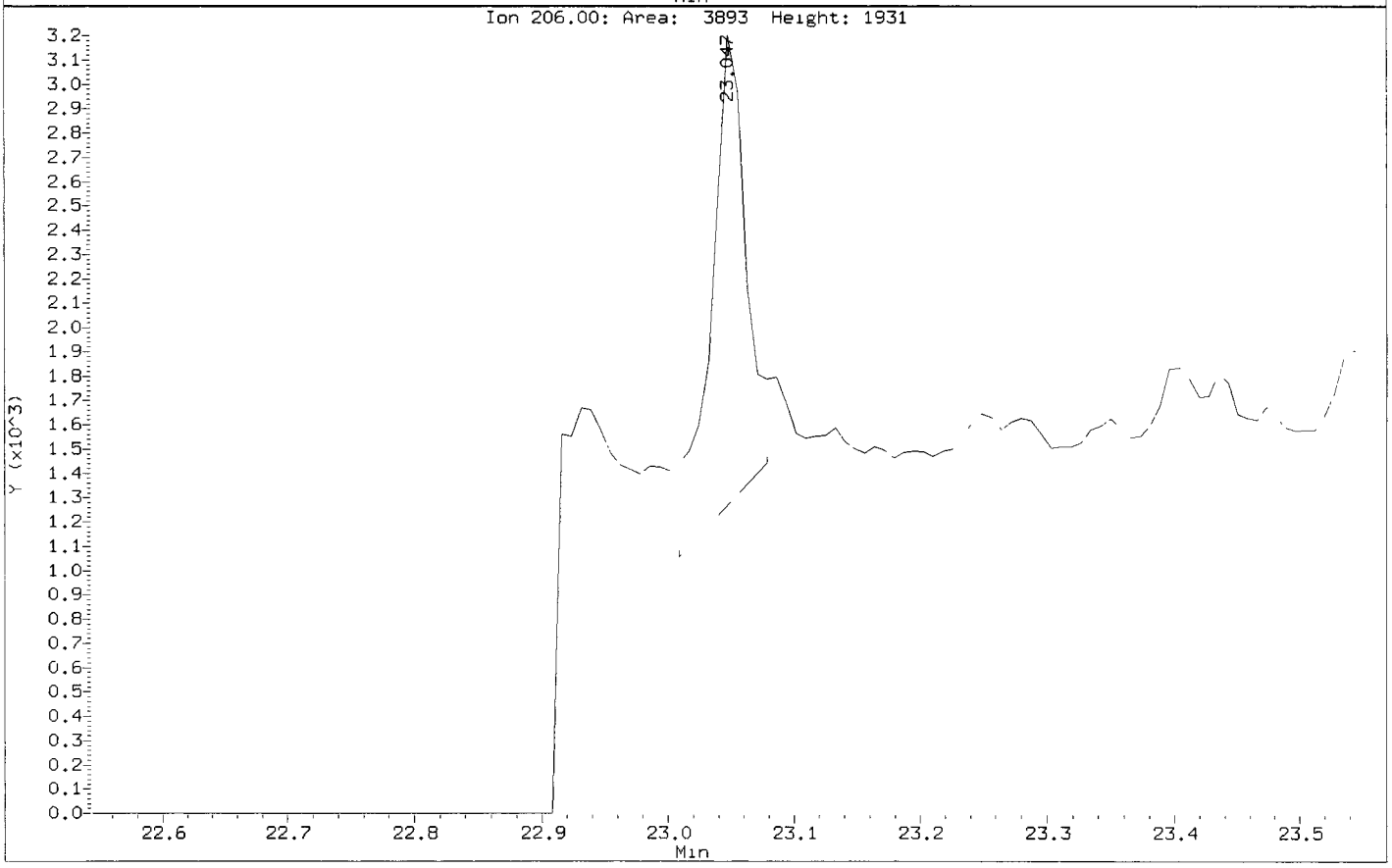
Analyst: VB Date: 5/10/12

UR81:010612

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81a.d
Injection Date: 08-MAY-2012 17:52
Instrument: nt10.i
Client Sample ID: IJ12-03

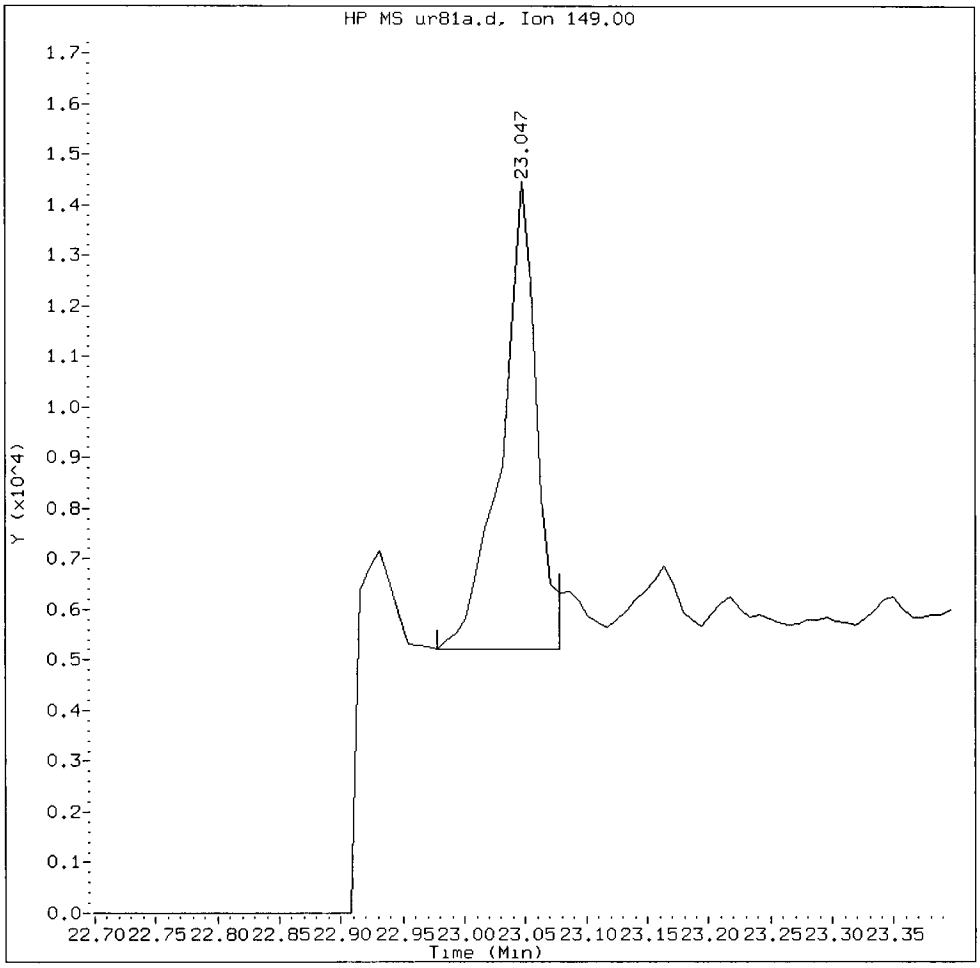
Compound: Butylbenzylphthalate
CAS Number: 85-68-7





UR81A, /chem1/nt10.i/20120508.b/SIM.b/ur81a.d

Butylbenzylphthalate Amount: 0.15 Area: 18599



MANUAL INTEGRATION for Butylbenzylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81a.d

Lab ID: UR81A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81b.d
Lab Smp Id: UR81B
Client Smp ID: IJ12-05
Inj Date : 08-MAY-2012 18:29
Operator : YZ
Inst ID: nt10.i
Smp Info : UR81B
Misc Info : 12-7393
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev
Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19
Cal File: ic0507i.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.26000	Weight of sample extracted (g)
M	59.50000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.695	6 680	(0.740)	430622	4.15030	405 7
3 Phenol	94	8.426	8 418	(0.931)	21446	0.15617	15 27
7 1,3-Dichlorobenzene	146	Compound Not Detected					
* 8 1,4-Dichlorobenzene-d4	152	9 053	9.045	(1.000)	302232	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected					
11 Benzyl alcohol	79	9 363	9.355	(1.034)	11882	0.16902	16.52(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9.627	9 619	(1 063)	3703	0.03357 J	3 281
15 4-Methylphenol	108	9.922	9 914	(1 096)	39394	0.34036	33 27
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected					
22 2,4-Dimethylphenol	107	11.046	11.038	(0.942)	6482	0.06029 M	5.894
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.724	11.724	(1.000)	1172866	4 00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.152	15.144	(0.969)	12974	0.07085	6.925(M)
*	42 Acenaphthene-d10	162	15.632	15.632	(1.000)	598862	4.00000	
	50 Diethylphthalate	149	16.737	16.729	(1.071)	35292	0.17605	17 21
	~~54 N-Nitrosodiphenylamine~~	~~169~~	~~17.185~~	~~17.123~~	~~(0.908)~~	~~4505~~	~~0.03230~~	~~3.158~~
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.916	18.908	(1.000)	1037978	4.00000	
$	66 Terphenyl-d14	244	22.111	22 095	(0 922)	529073	3.03086	296.3
	67 Butylbenzylphthalate	149	23.048	23.047	(0 961)	15139	0.11459	11 20(M)
*	69 Chrysene-d12	240	23.977	23.969	(1.000)	1096556	4.00000	
*	77 Perylene-d12	264	26.454	26.446	(1.000)	1088470	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.864	28.864	(1.091)	22868	0.09812	9 591
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81b.d
Lab Smp Id: UR81B
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7393

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-05
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	302232	-2.90
27 Naphthalene-d8	1166872	583436	2333744	1172866	0.51
42 Acenaphthene-d10	603218	301609	1206436	598862	-0.72
59 Phenanthrene-d10	1096026	548013	2192052	1037978	-5.30
69 Chrysene-d12	1131082	565541	2262164	1096556	-3.05
77 Perylene-d12	1082499	541250	2164998	1088470	0.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.00
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.04
69 Chrysene-d12	23.97	23.47	24.47	23.98	0.03
77 Perylene-d12	26.45	25.95	26.95	26.45	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

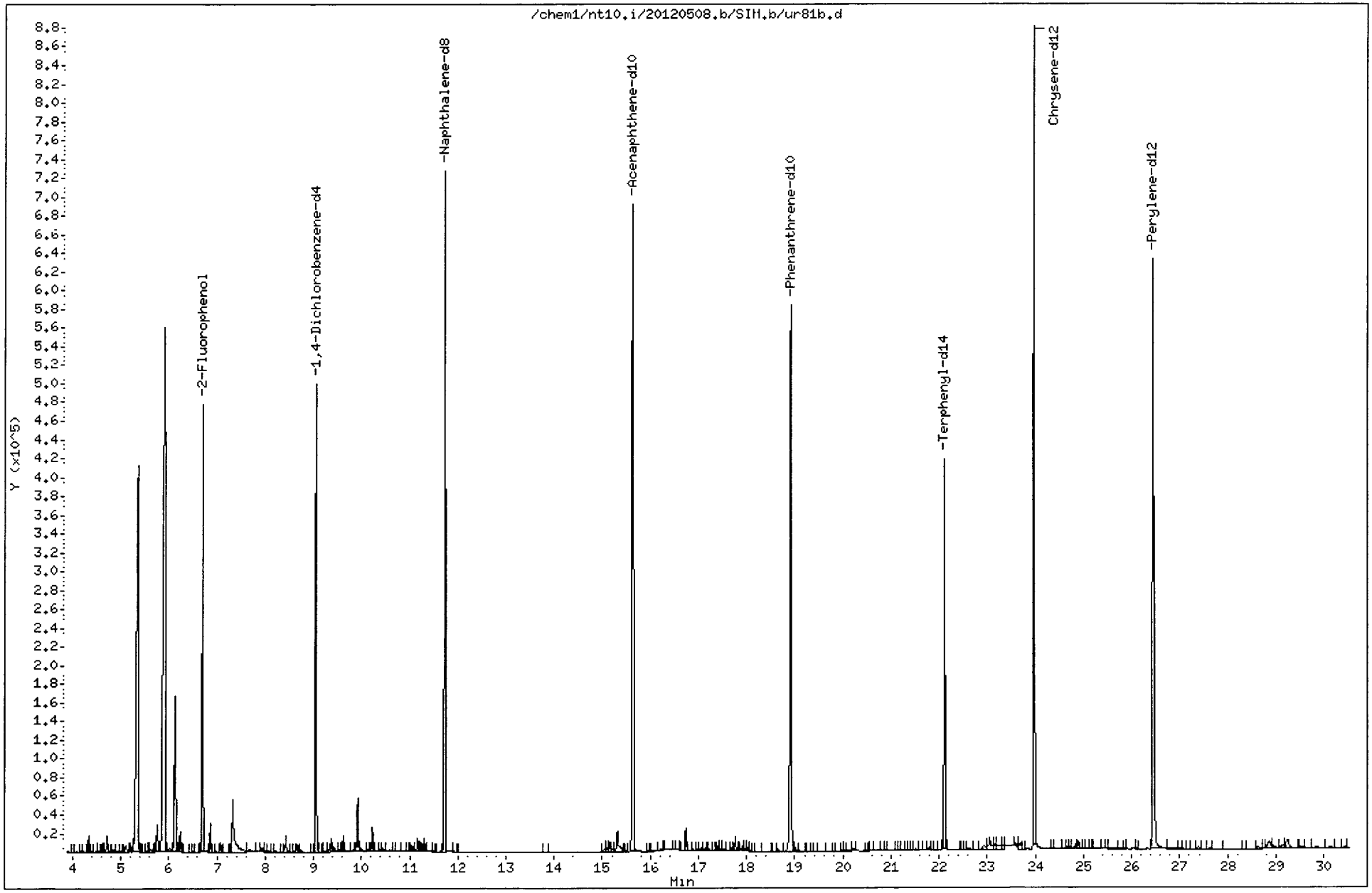
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81B
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7393

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-05
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	733.1	405.7	55.34	30-160
$ 66 Terphenyl-d14	488.7	296.3	60.62	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d
Date : 08-MAY-2012 18:29
Client ID: IJ12-05
Sample Info: UR81B
Volume Injected (uL): 1.0
Column phase: ZB-5ms1

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Date : 08-MAY-2012 18:29

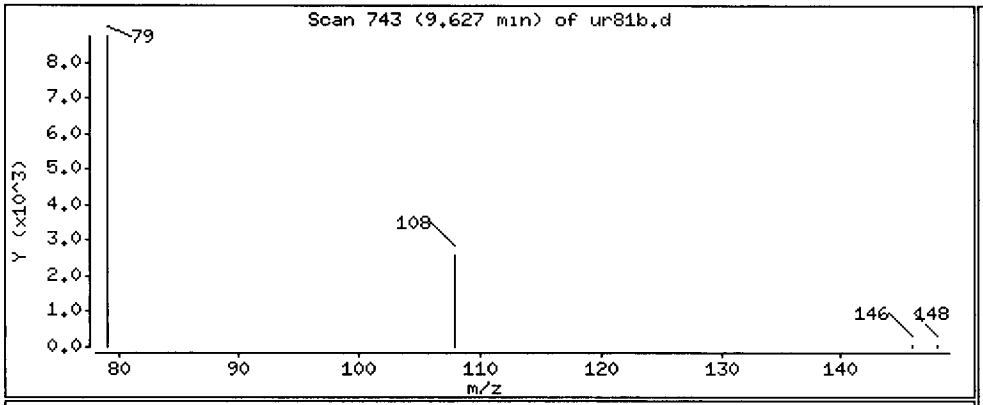
Client ID: IJ12-05 Instrument: nt10.i

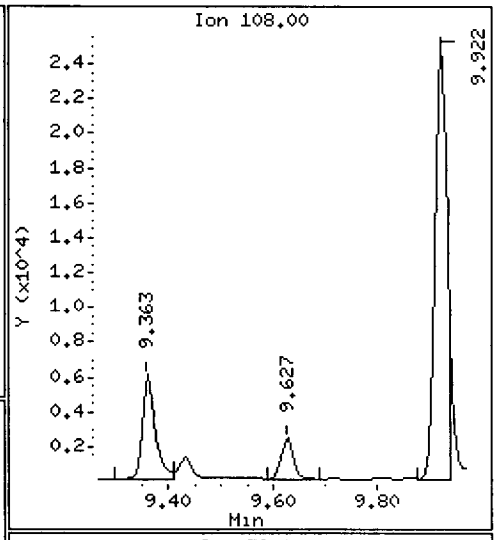
Sample Info: UR81B

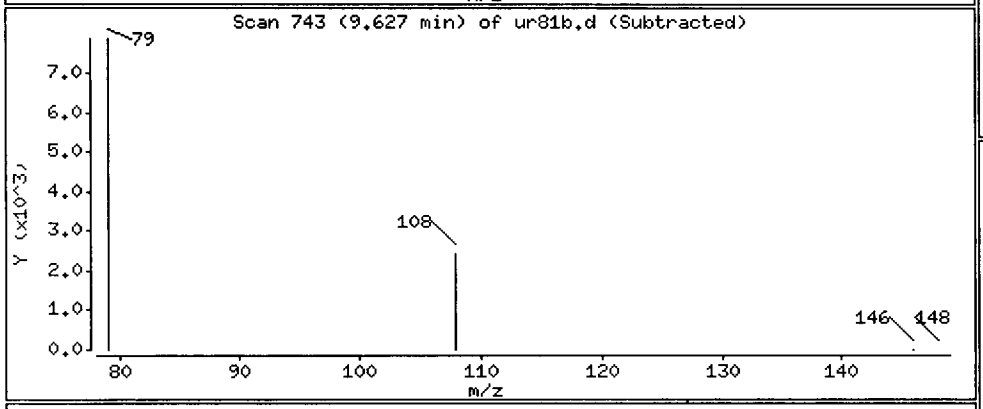
Volume Injected (uL): 1.0 Operator: YZ

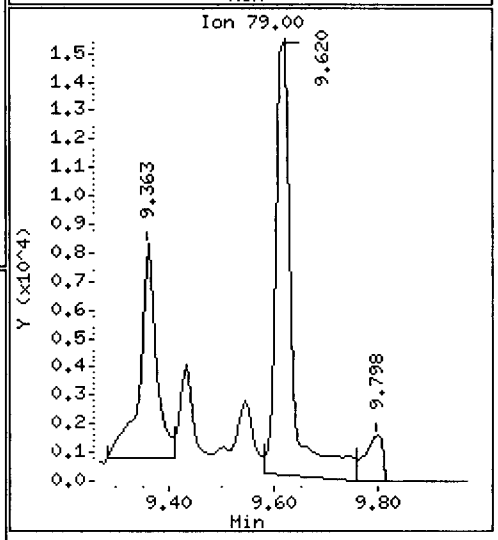
Column phase: ZB-5msi Column diameter: 0.25

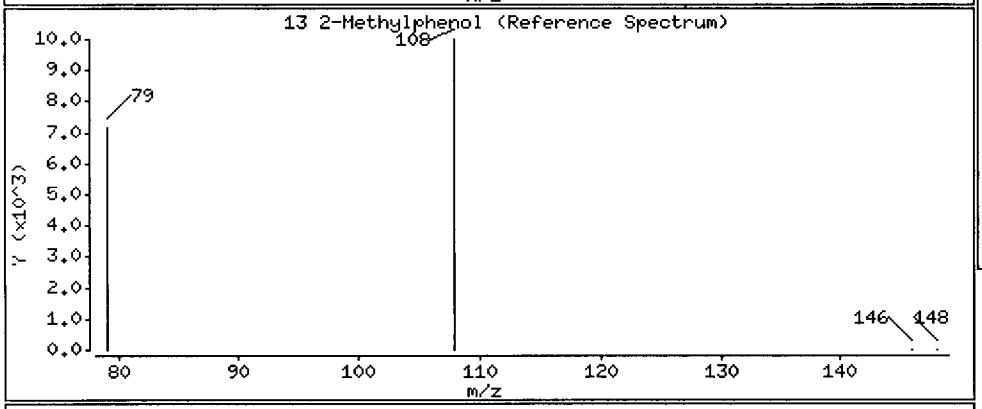
13 2-Methylphenol Concentration: 3.281 ug/kg

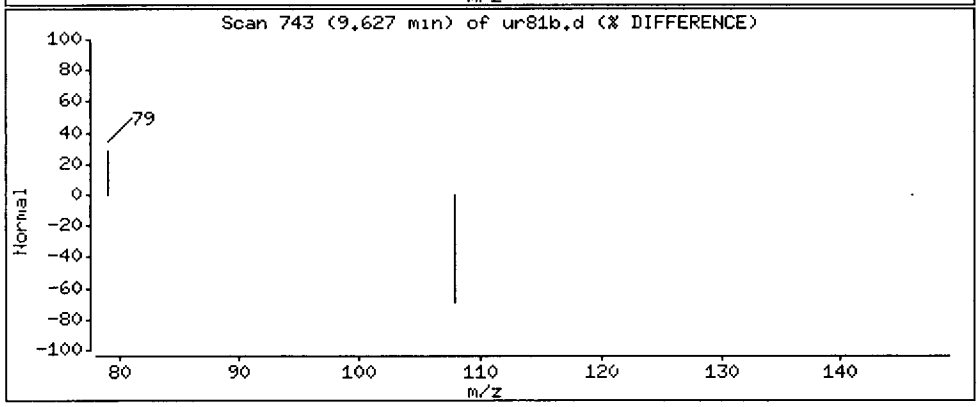












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

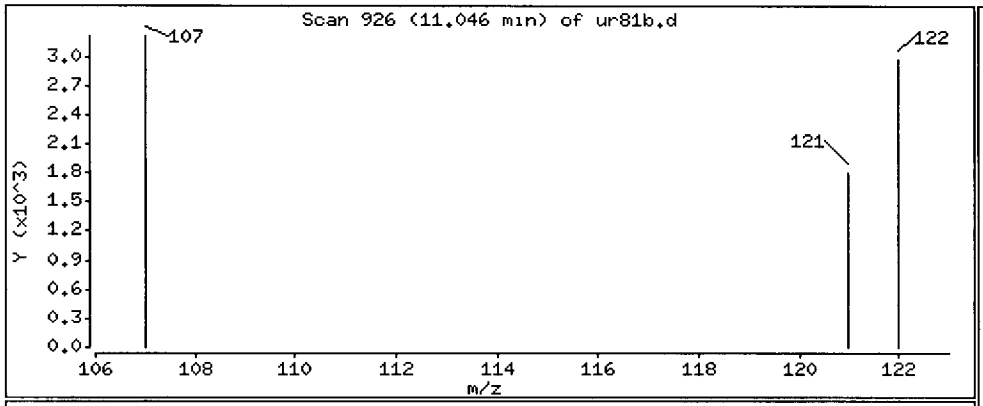
Operator: YZ

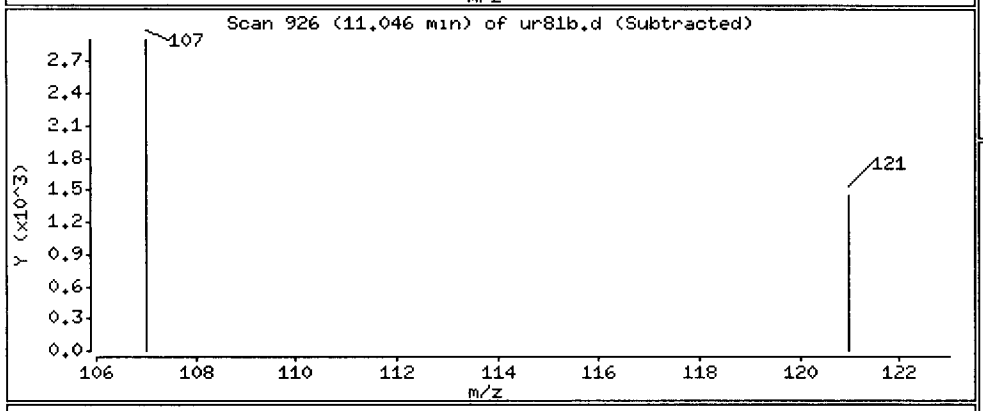
Column phase: ZB-5msi

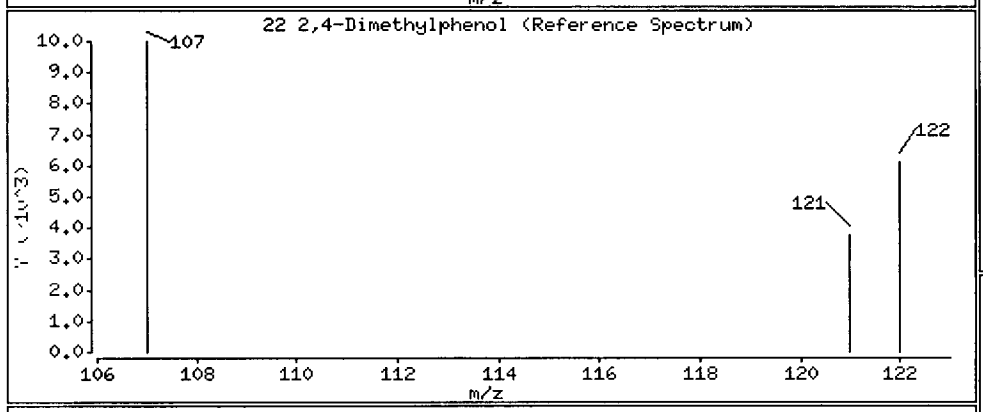
Column diameter: 0.25

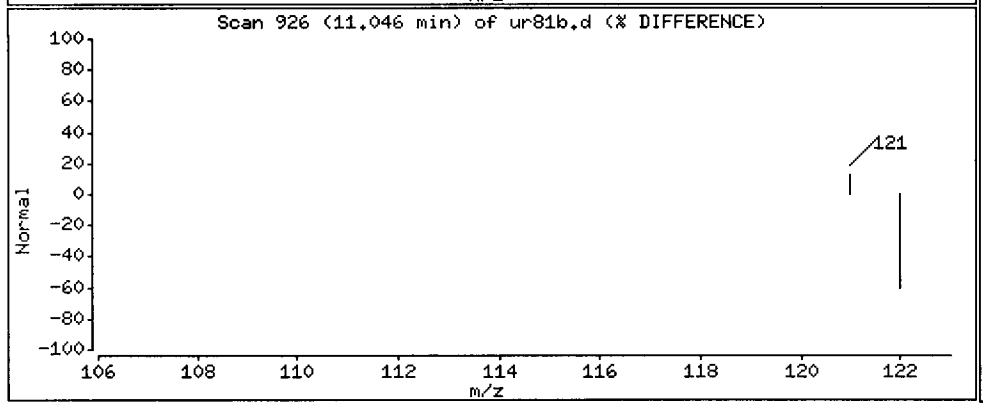
22 2,4-Dimethylphenol

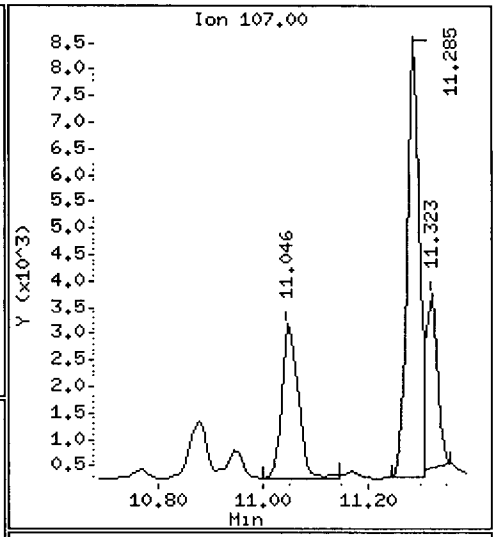
Concentration: 5.894 ug/kg

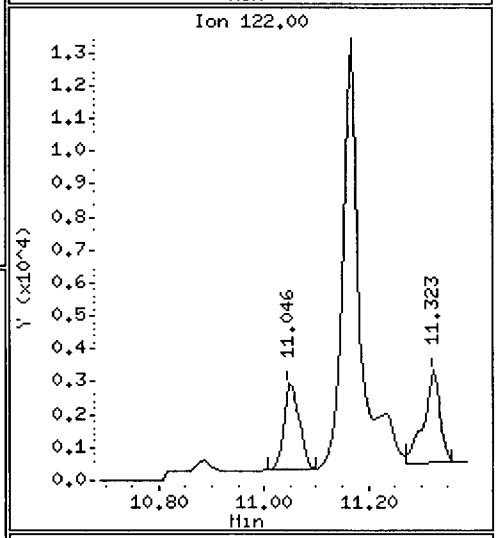


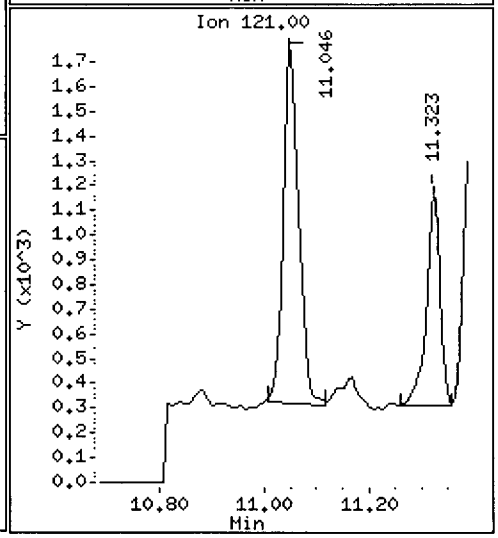












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Date : 08-MAY-2012 18:29

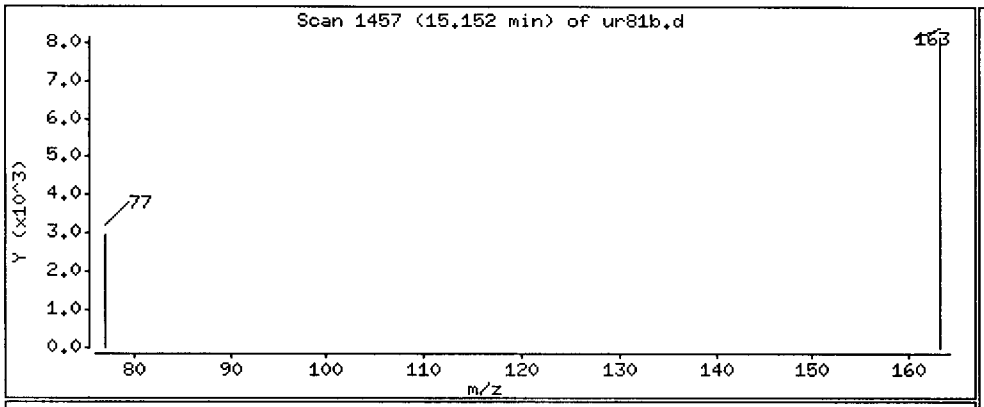
Client ID: IJ12-05 Instrument: nt10.i

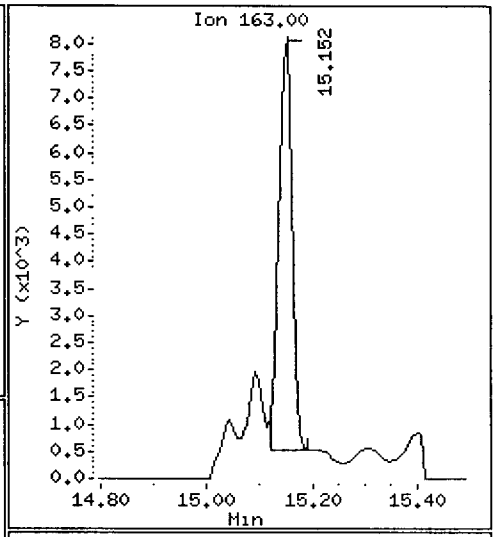
Sample Info: UR81B

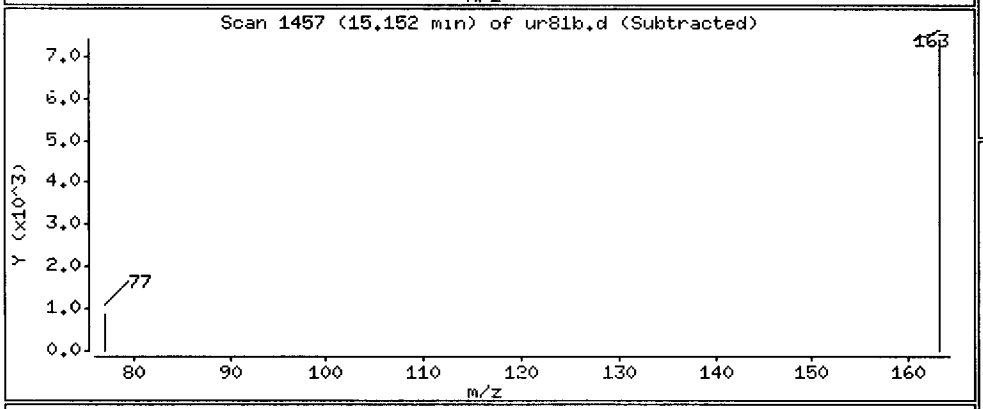
Volume Injected (uL): 1.0 Operator: YZ

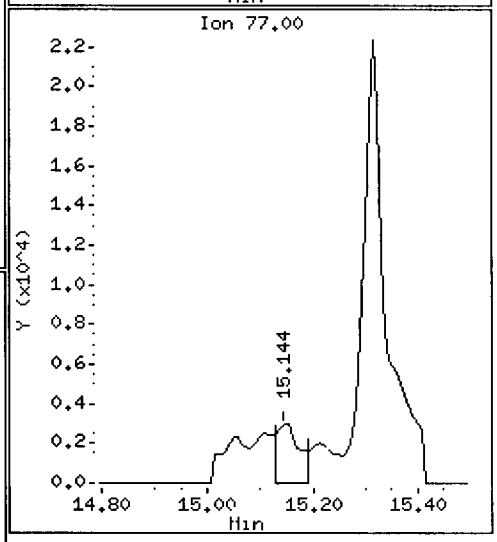
Column phase: ZB-5msi Column diameter: 0.25

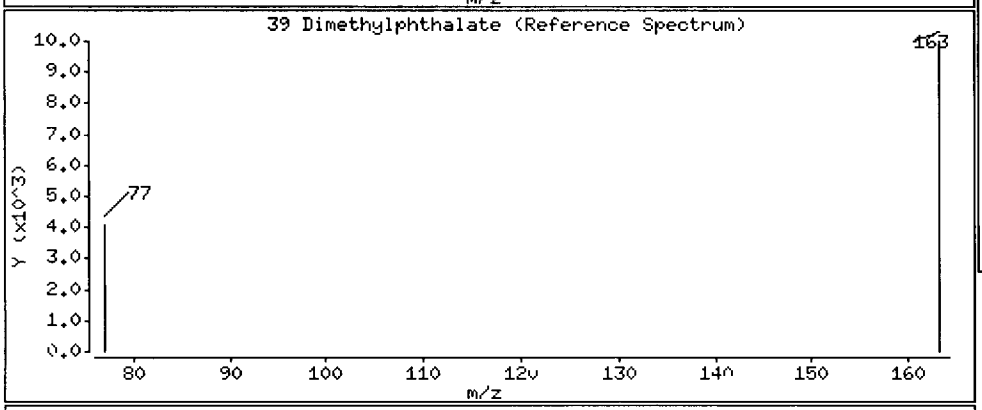
39 Dimethylphthalate Concentration: 6.925 ug/kg

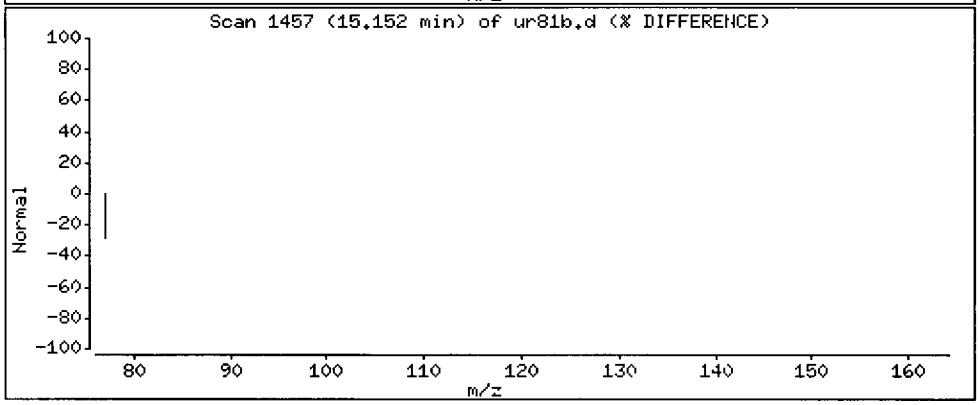












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Date : 08-MAY-2012 18:29

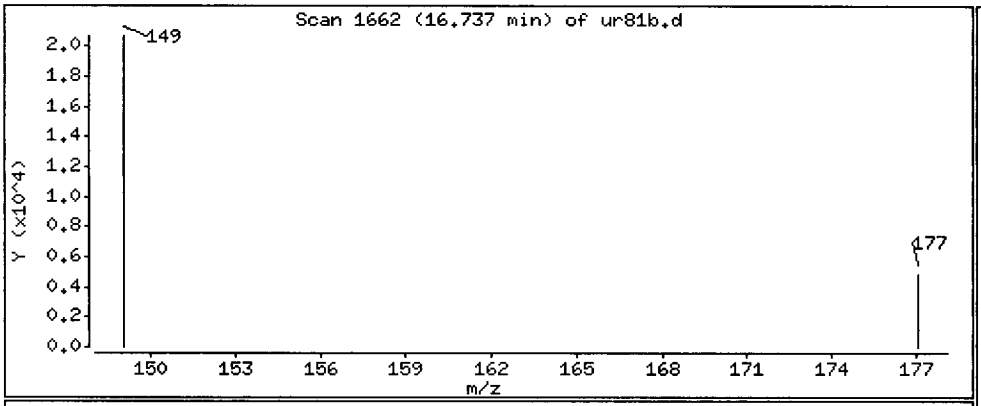
Client ID: IJ12-05 | Instrument: nt10.i

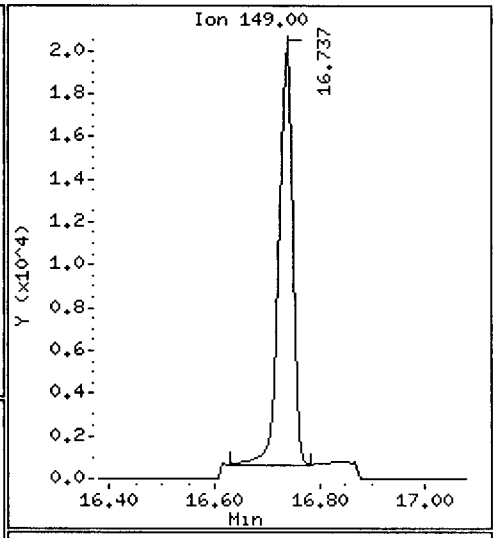
Sample Info: UR81B

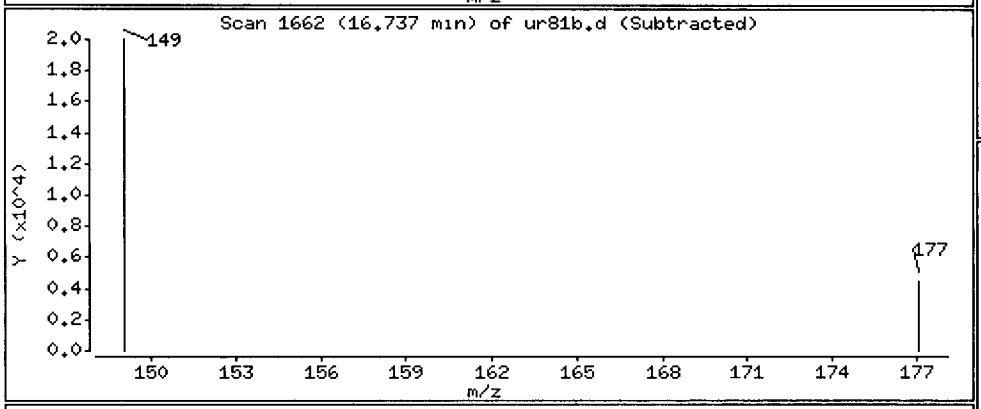
Volume Injected (uL): 1.0 | Operator: YZ

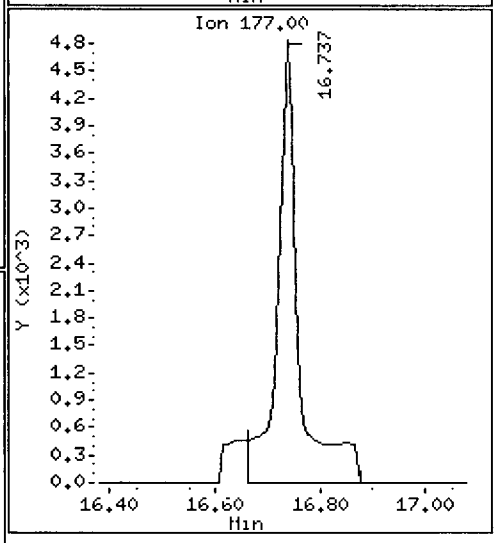
Column phase: ZB-5msi | Column diameter: 0.25

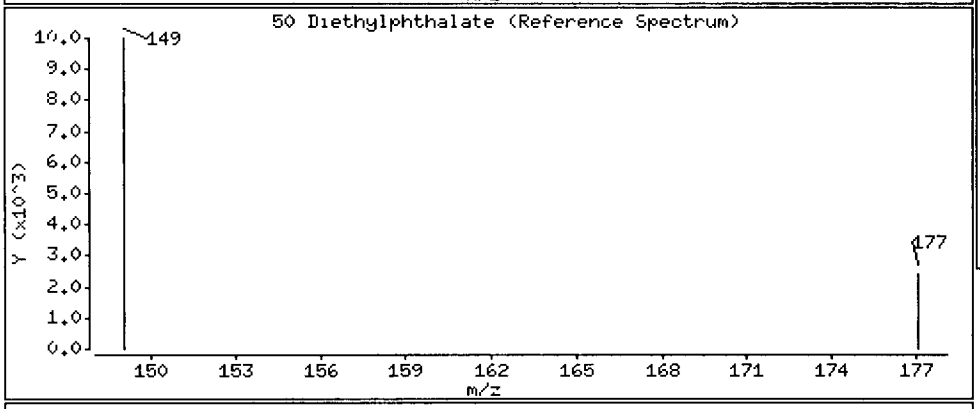
50 Diethylphthalate | Concentration: 17.21 ug/kg

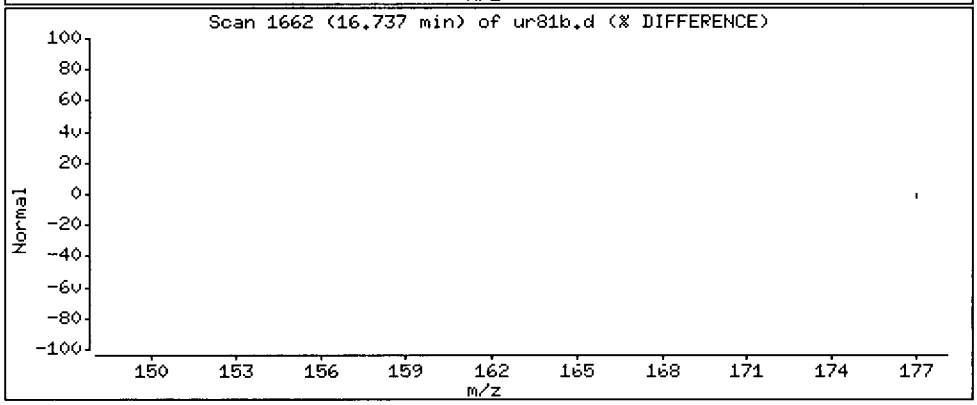












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

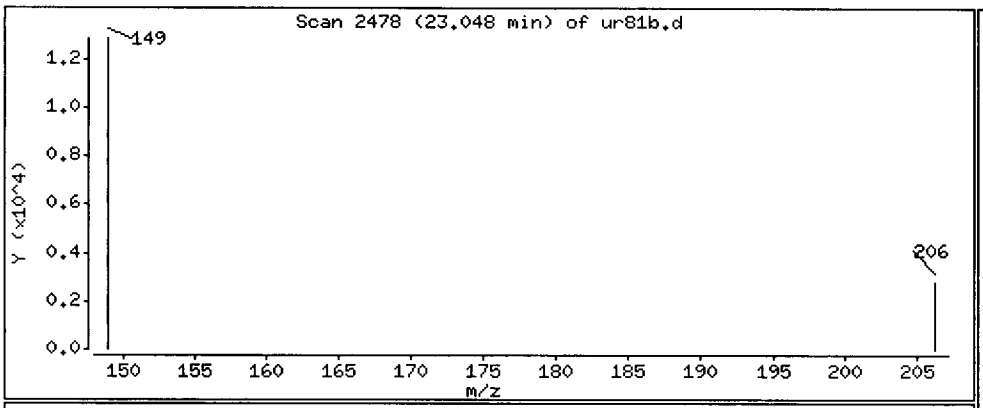
Operator: YZ

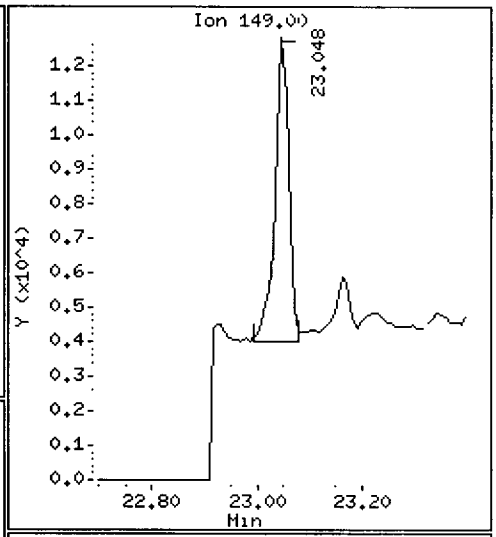
Column phase: ZB-5msi

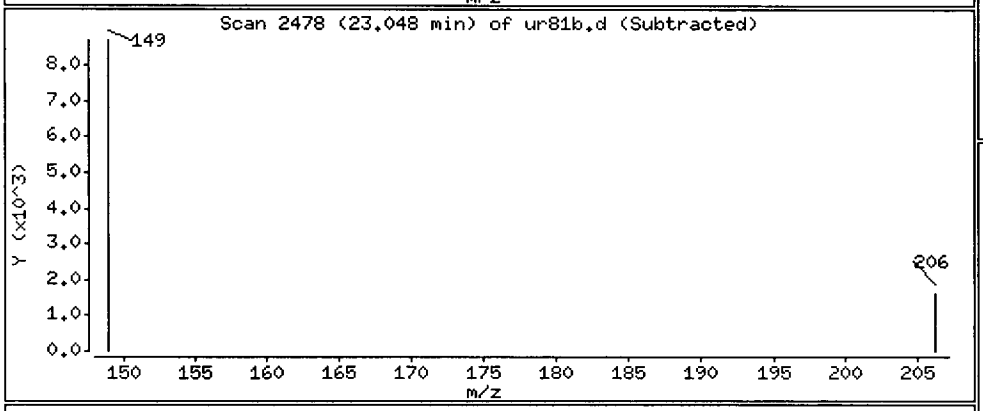
Column diameter: 0.25

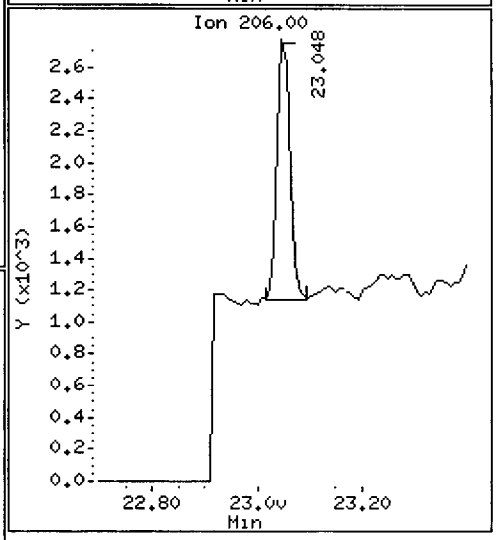
67 Butylbenzylphthalate

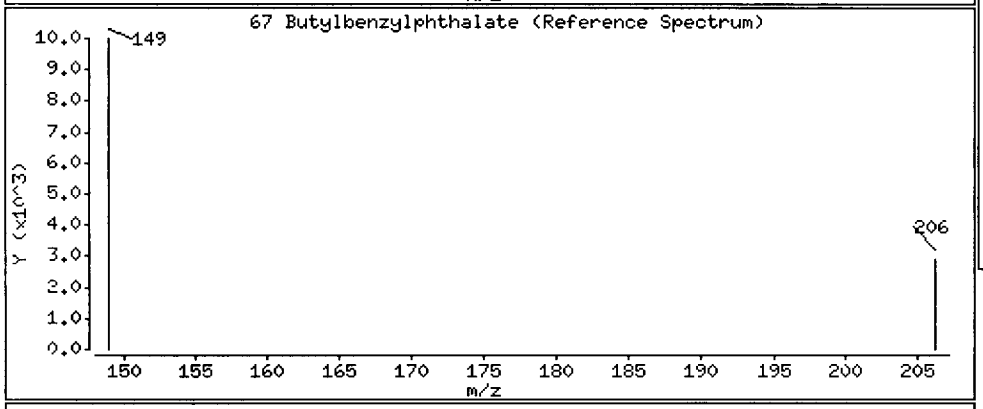
Concentration: 11.20 ug/kg

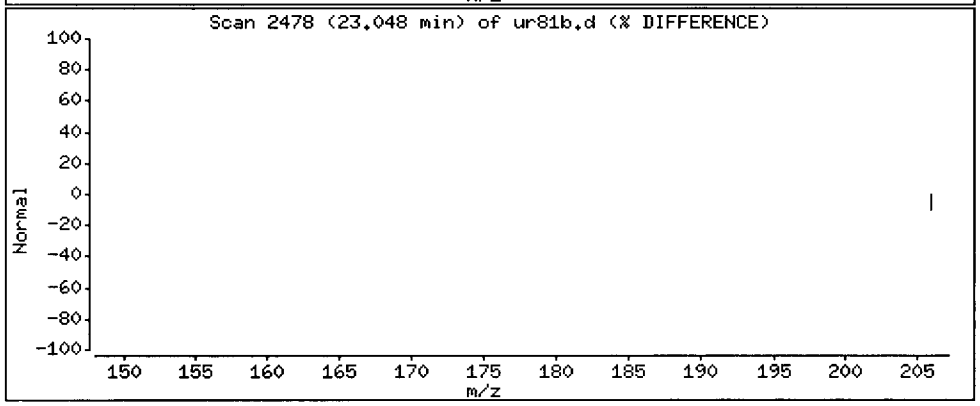












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Date : 08-MAY-2012 18:29

Client ID: IJ12-05

Instrument: nt10.i

Sample Info: UR81B

Volume Injected (uL): 1.0

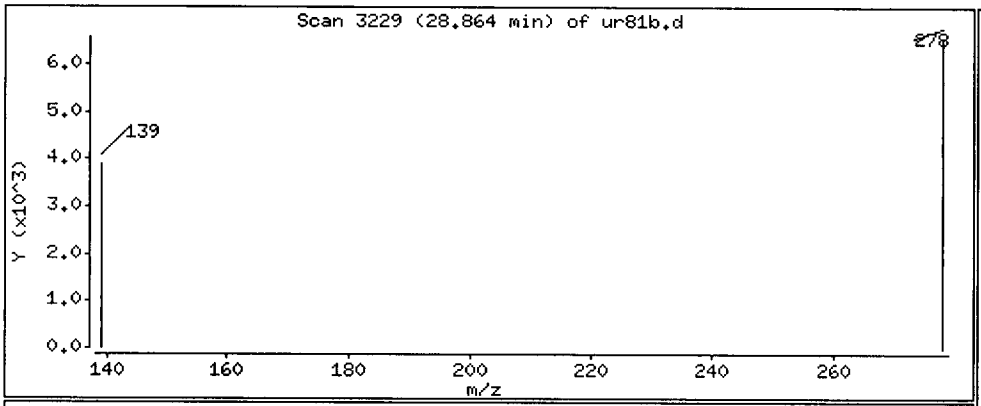
Operator: YZ

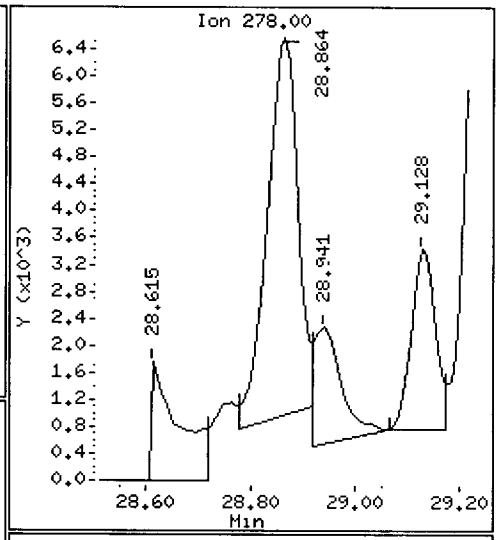
Column phase: ZB-5msi

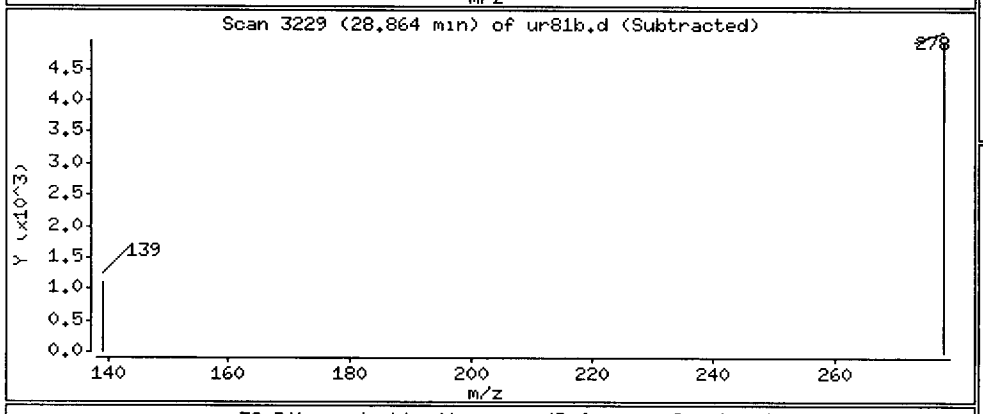
Column diameter: 0.25

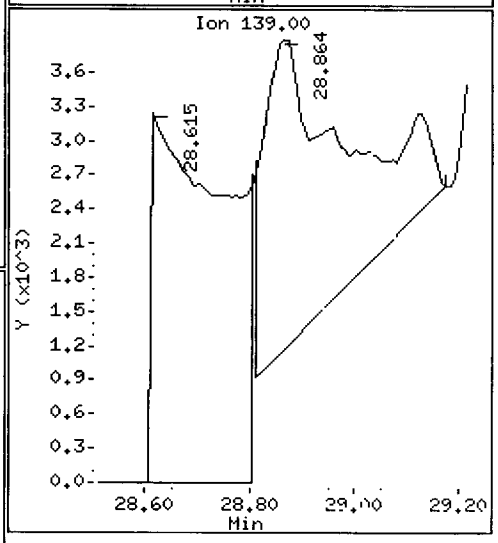
79 Dibenzo(a,h)anthracene

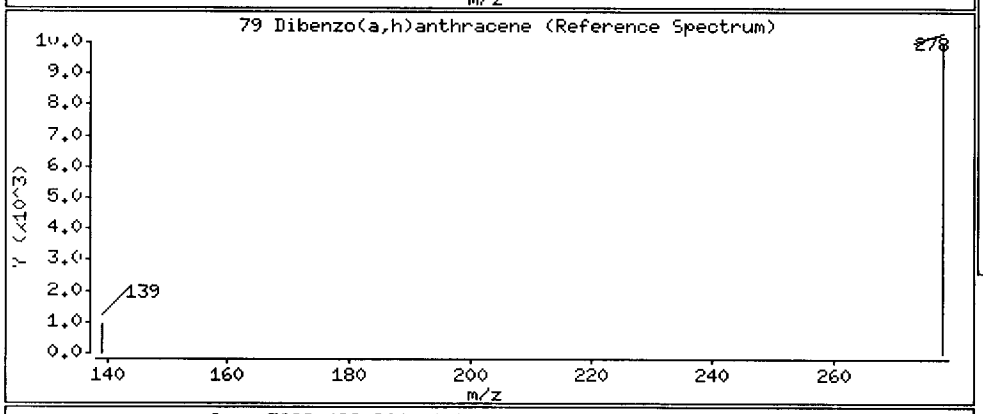
Concentration: 9.591 ug/kg

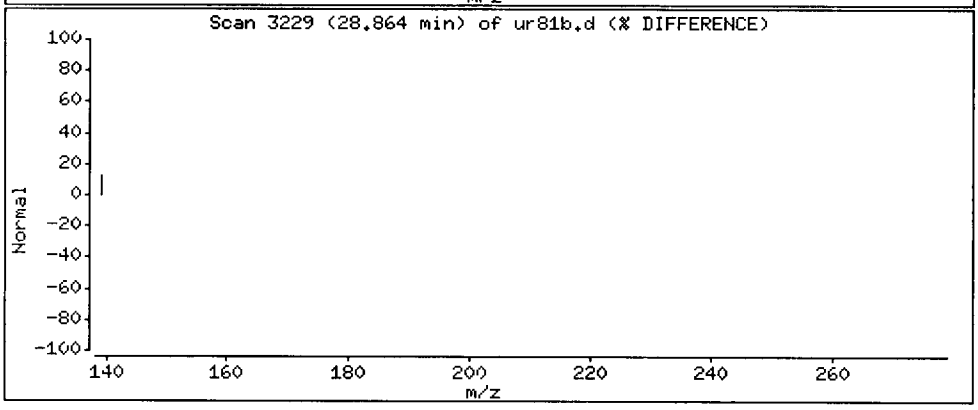






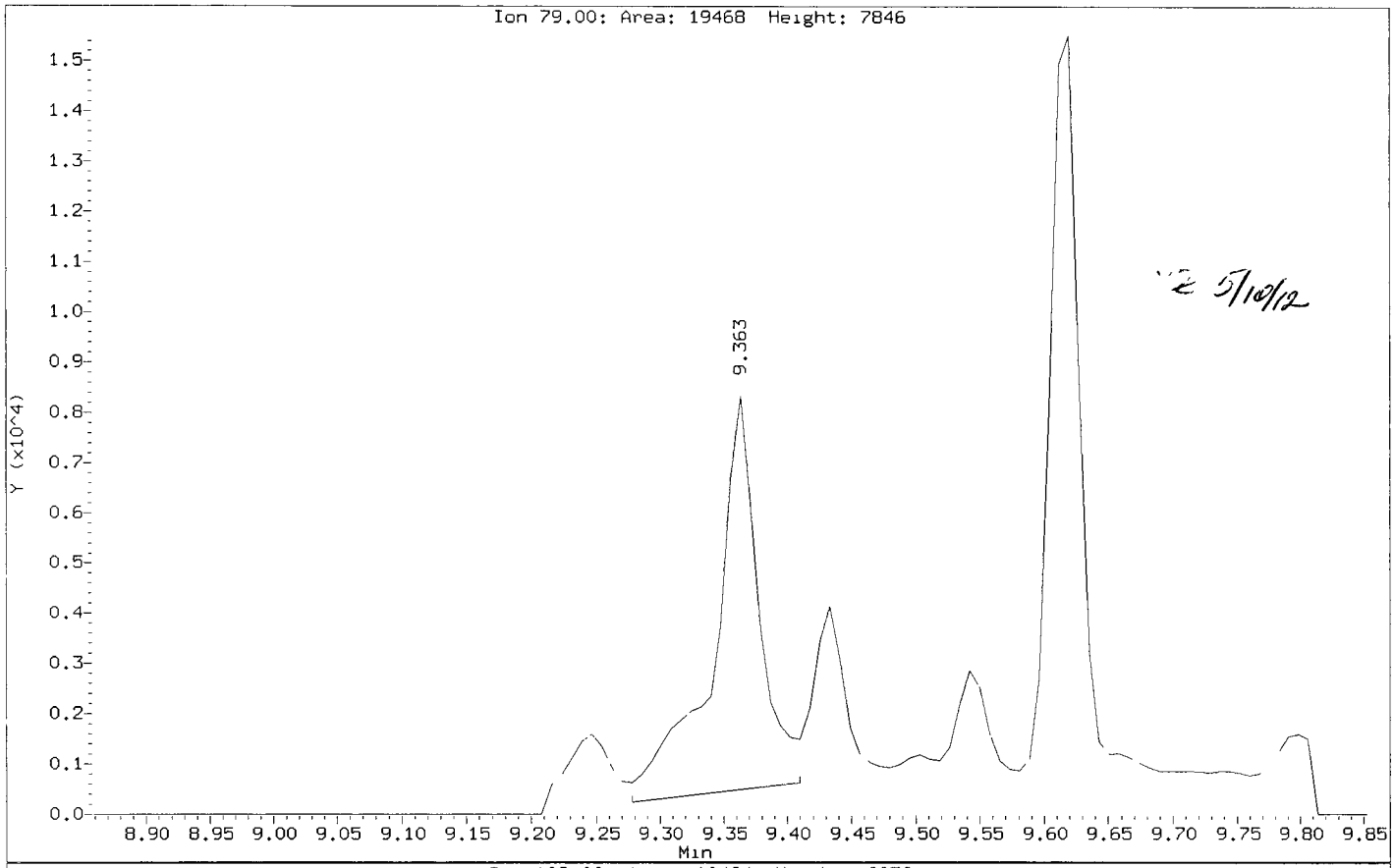


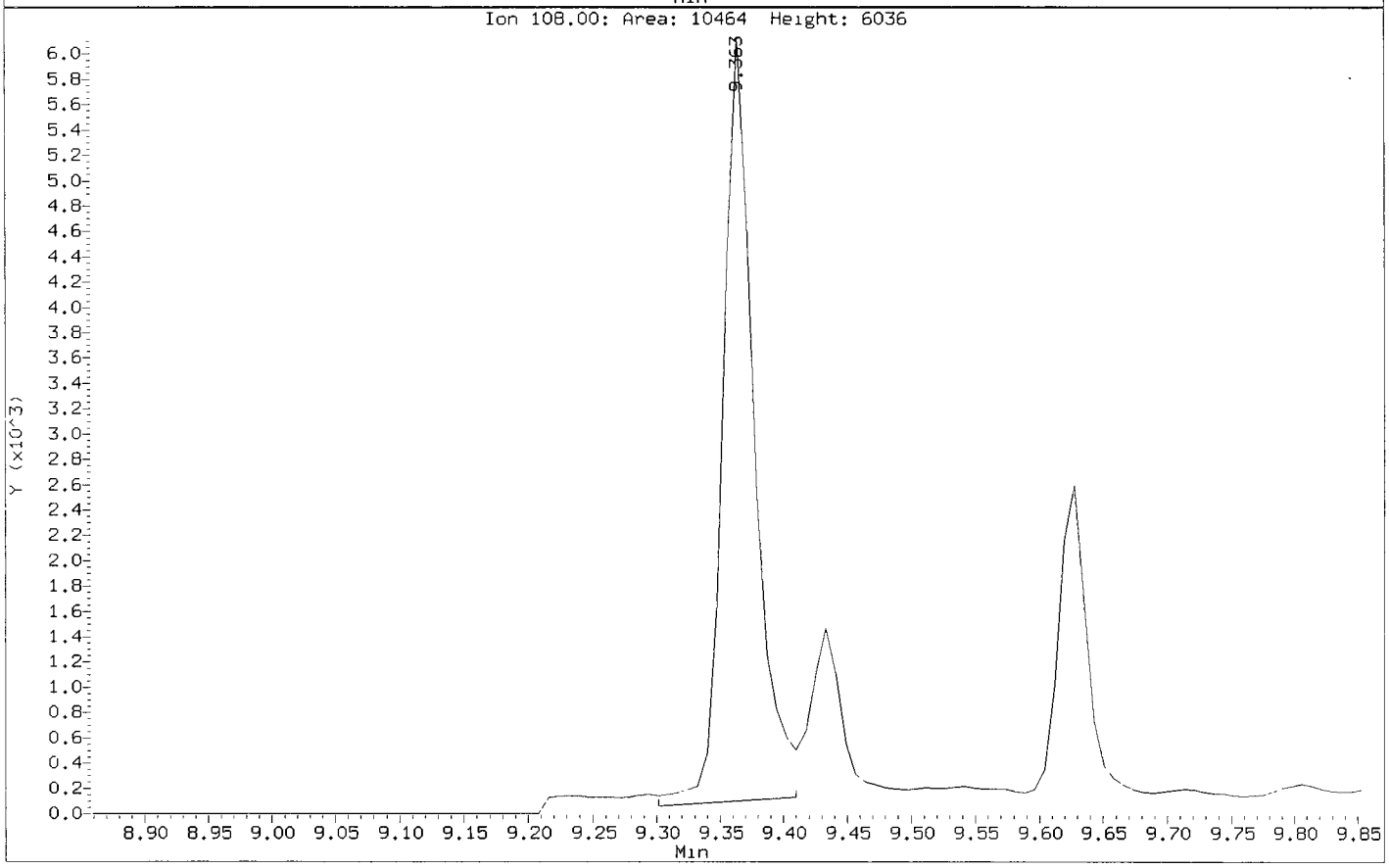




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d
Injection Date: 08-MAY-2012 18:29
Instrument: nt10.i
Client Sample ID: IJ12-05

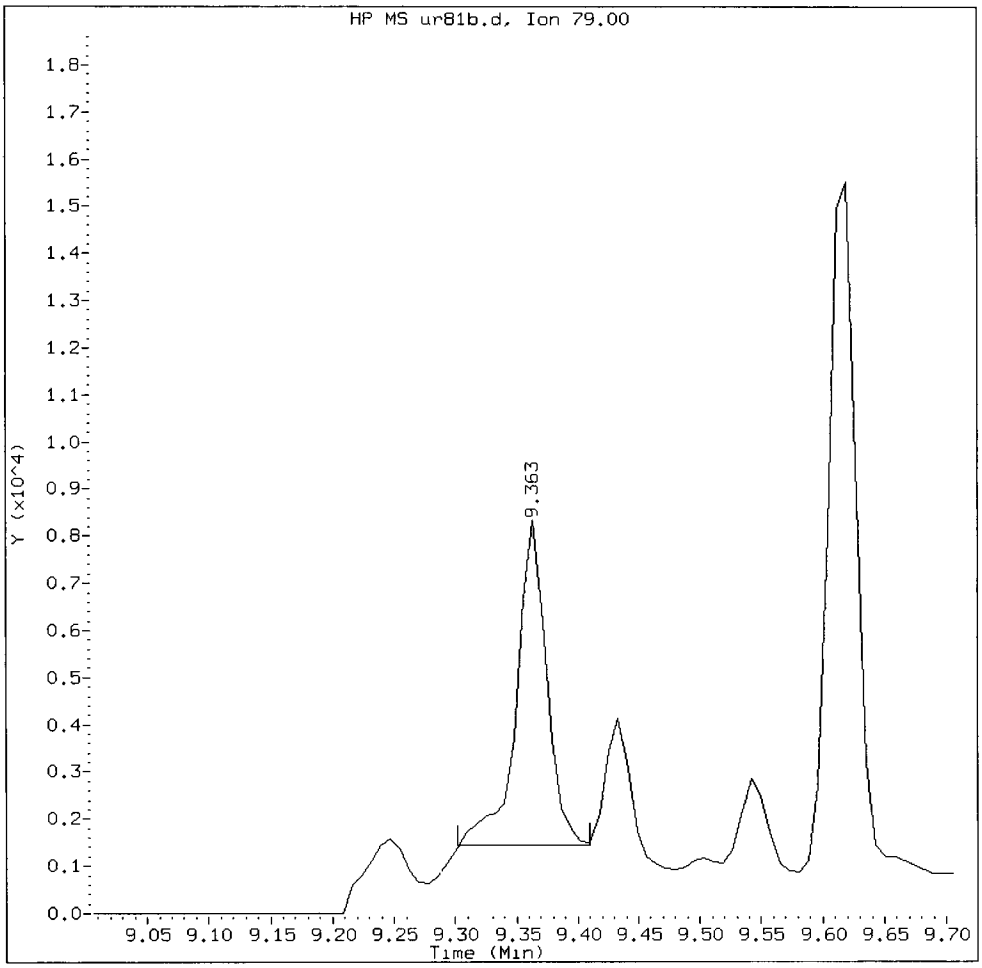
Compound: Benzyl alcohol
CAS Number: 100-51-6





UR81B, /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Benzyl alcohol Amount: 0.17 Area: 11882



MANUAL INTEGRATION for Benzyl alcohol

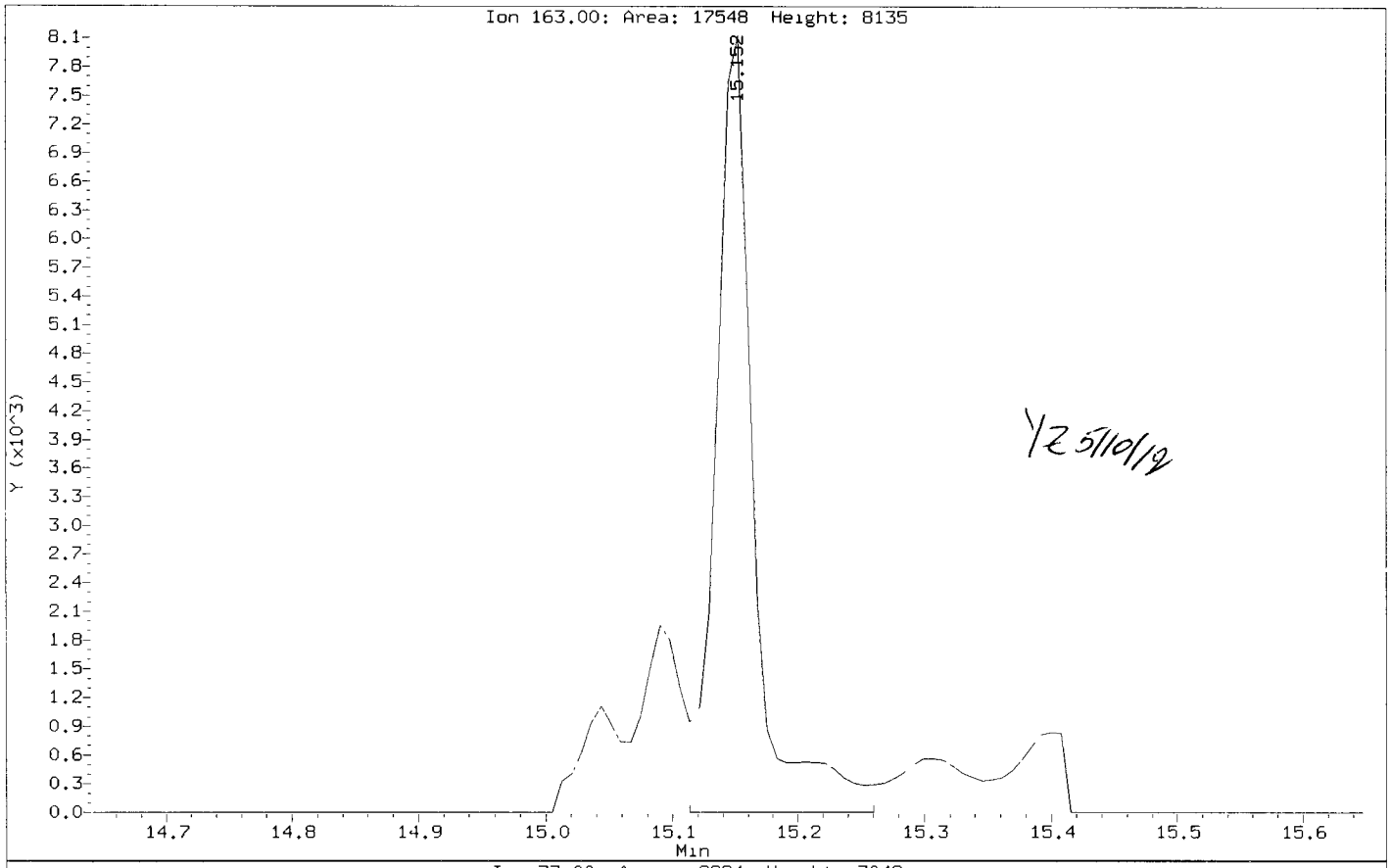
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

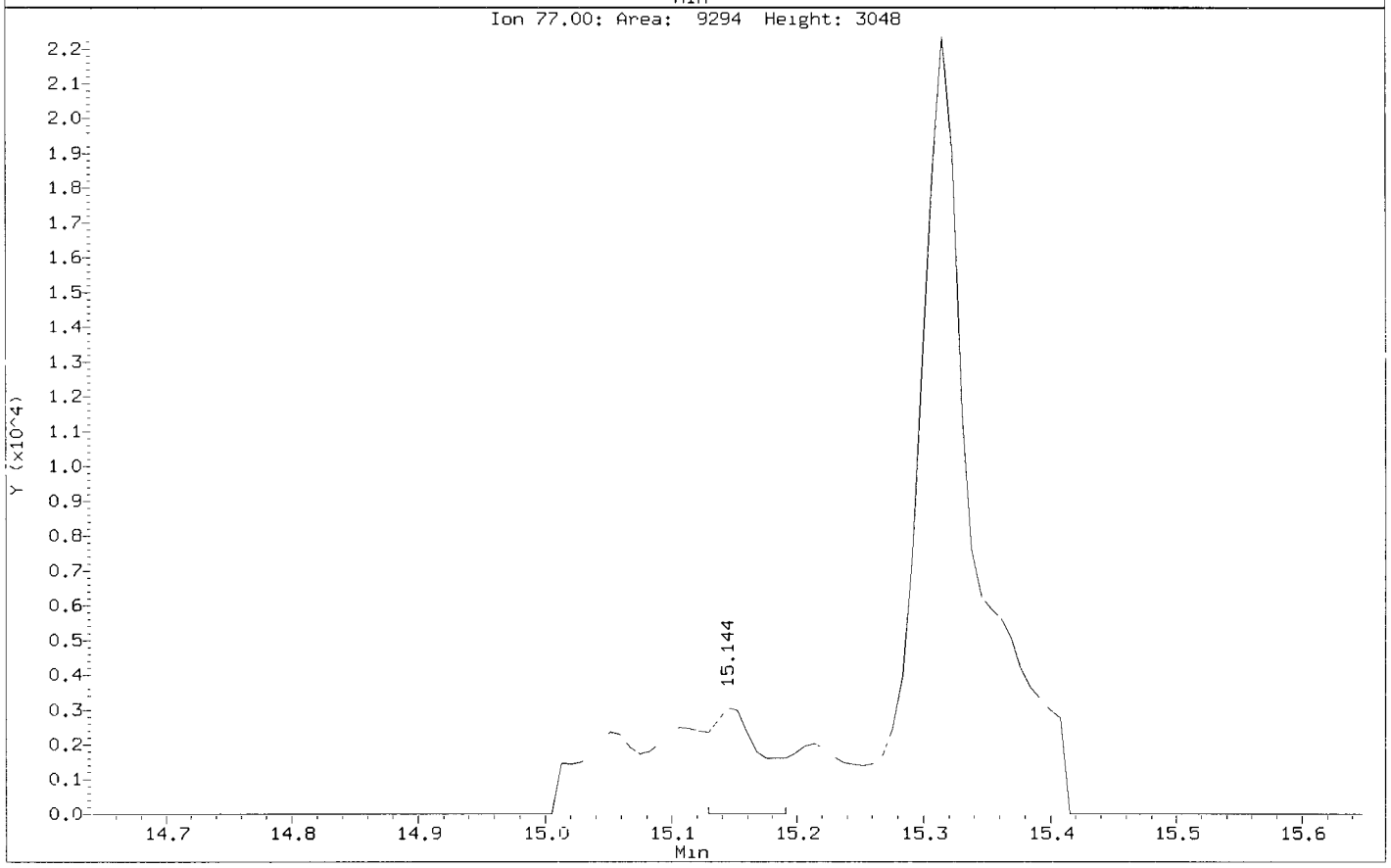
5. Other _____

Analyst: YZ Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d
Injection Date: 08-MAY-2012 18:29
Instrument: nt10.i
Client Sample ID: IJ12-05

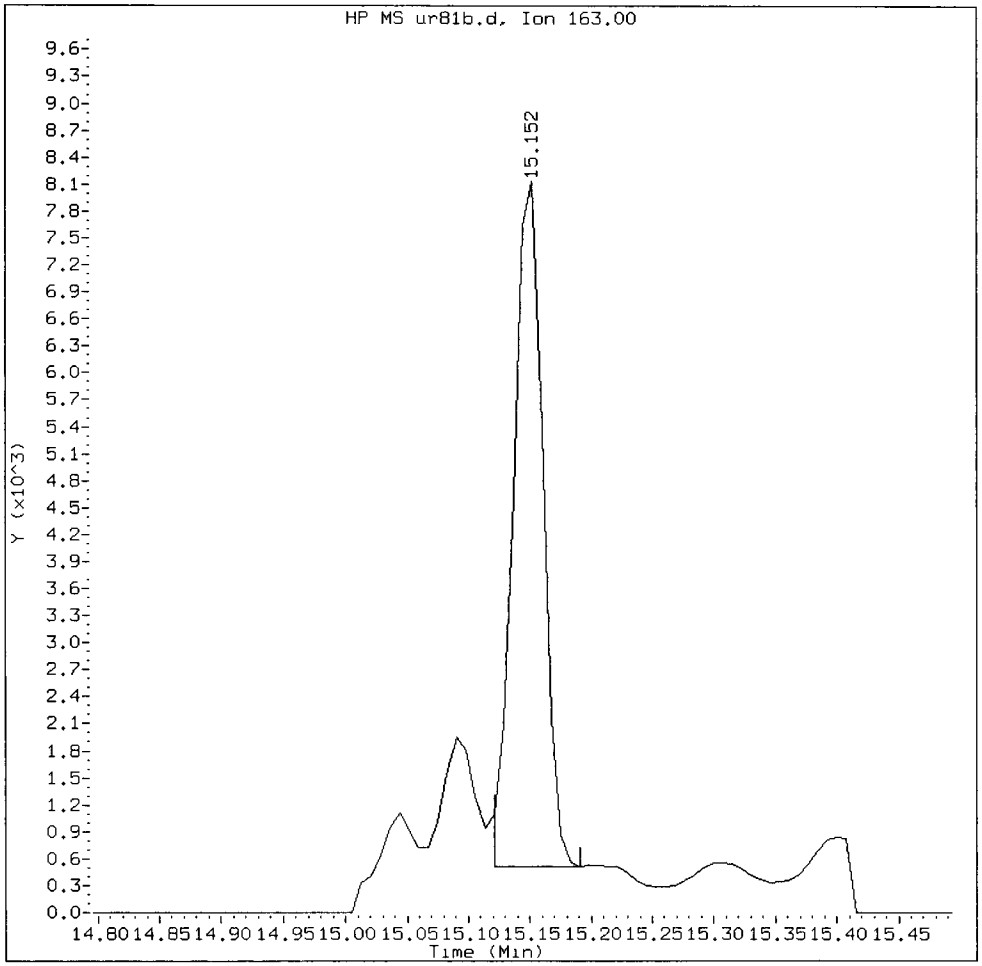
Compound: Dimethylphthalate
CAS Number: 131-11-3





UR81B, /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Dimethylphthalate Amount: 0.07 Area: 12974



MANUAL INTEGRATION for Dimethylphthalate

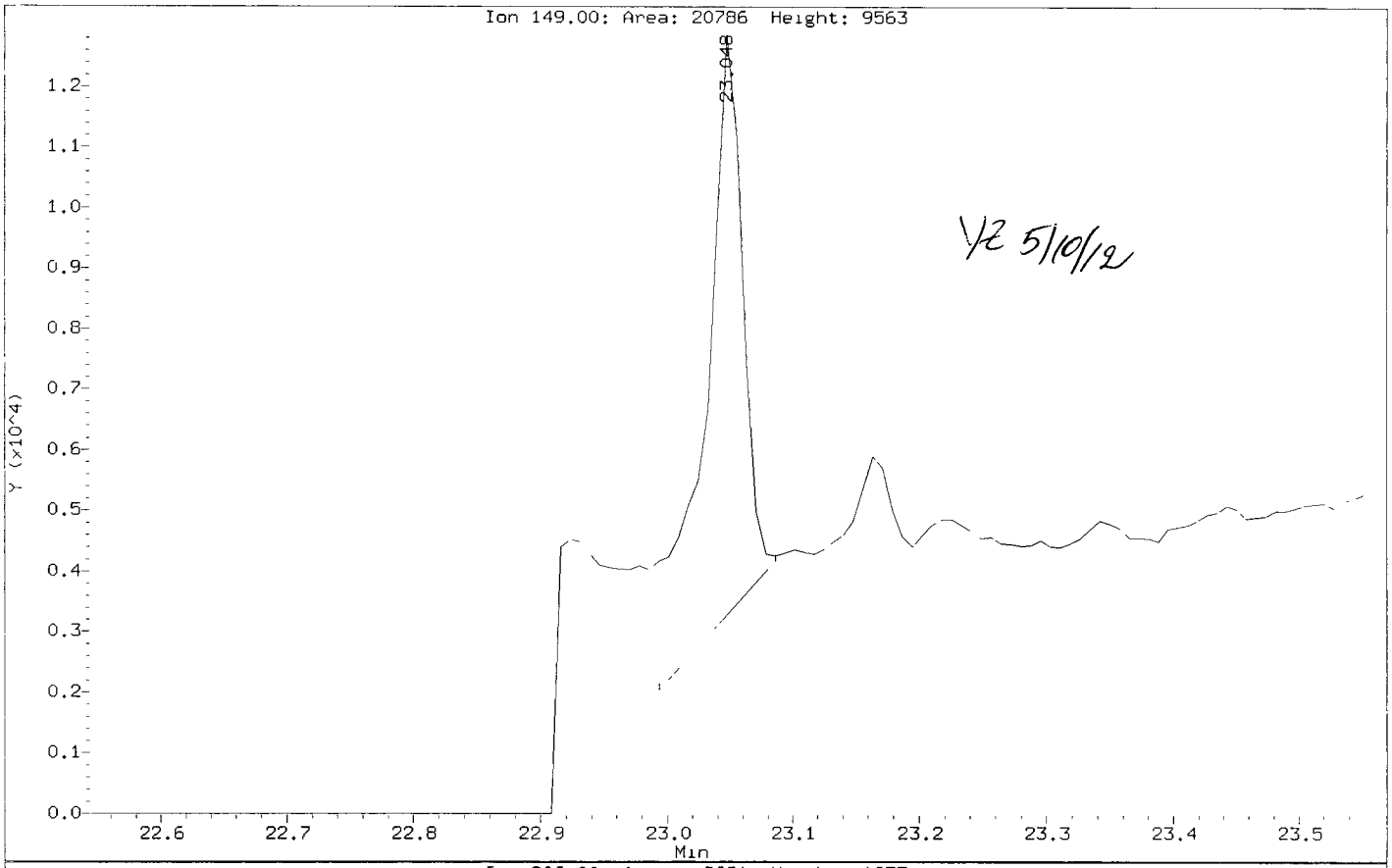
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

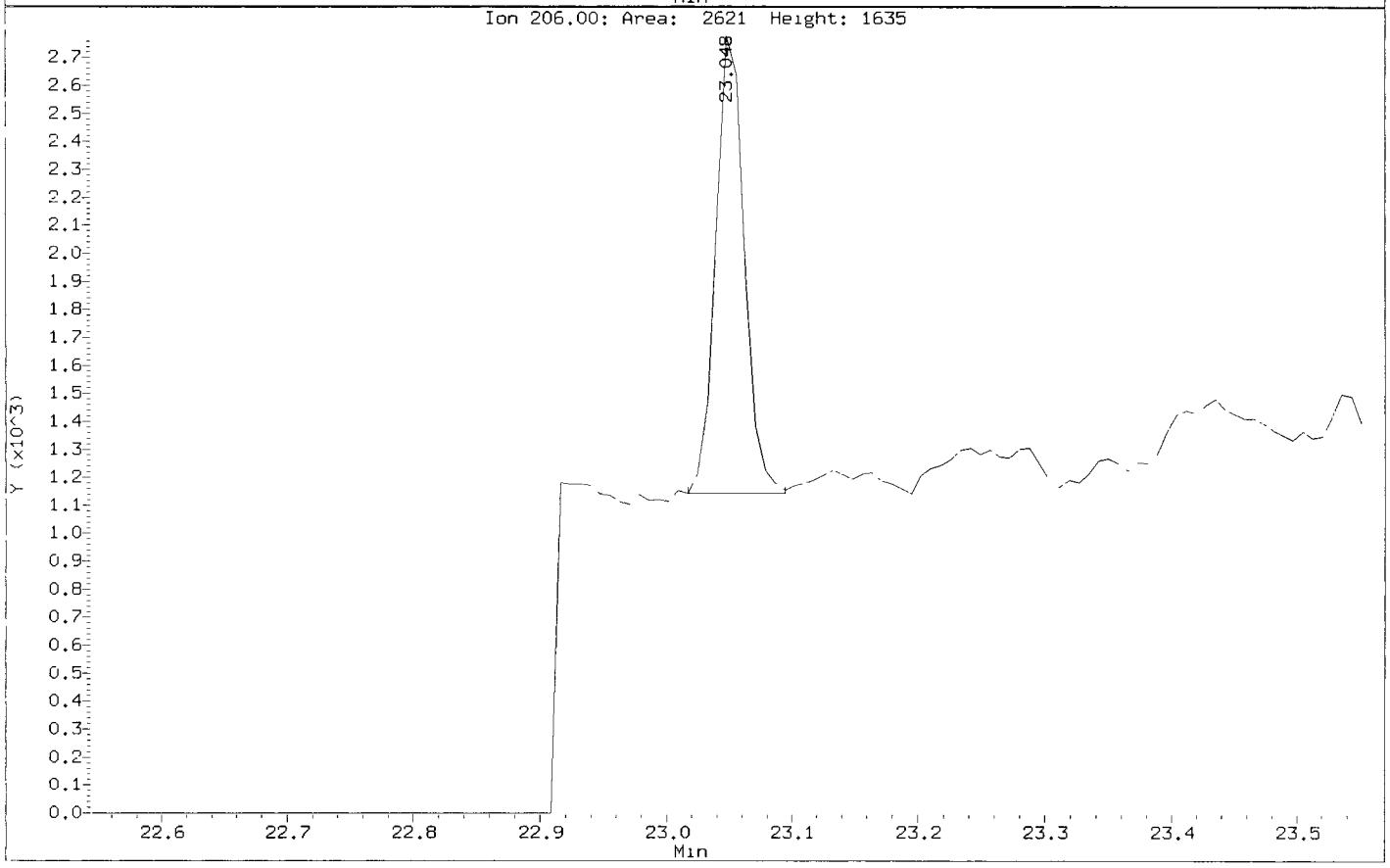
Analyst: VZ Date: 5/19/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81b.d
Injection Date: 08-MAY-2012 18:29
Instrument: nt10.i
Client Sample ID: IJ12-05

Compound: Butylbenzylphthalate
CAS Number: 85-68-7



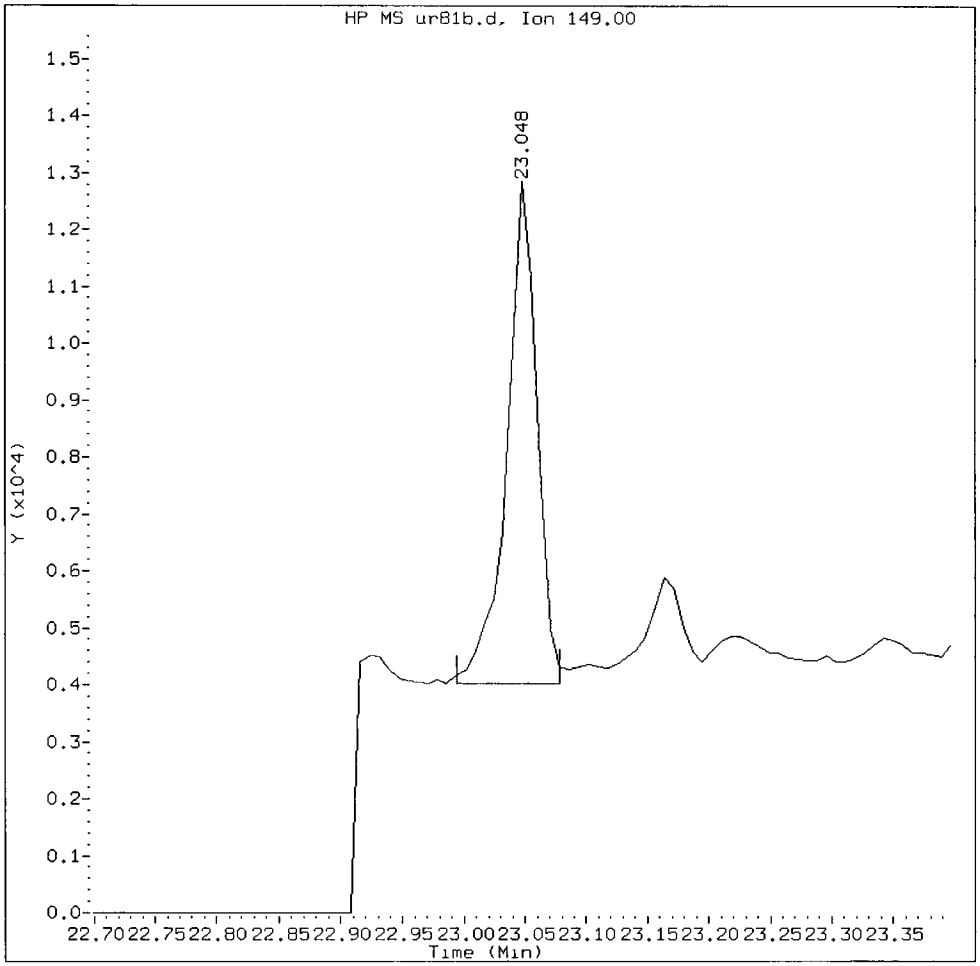
YZ 5/10/12



UR81 : 01031

UR81B, /chem1/nt10.i/20120508.b/SIM.b/ur81b.d

Butylbenzylphthalate Amount: 0.11 Area: 15139



MANUAL INTEGRATION for Butylbenzylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81b.d

Lab ID: UR81B, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/10/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81c.d
Lab Smp Id: UR81C Client Smp ID: IJ12-06
Inj Date : 08-MAY-2012 19:06
Operator : YZ Inst ID: nt10.i
Smp Info : UR81C
Misc Info : 12-7394
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	23.09000	Weight of sample extracted (g)
M	55.60000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.695	6.680	(0.740)	418187	3.96969	387 2
3 Phenol	94	8.426	8.418	(0.931)	30731	0.22041	21.50
7 1,3-Dichlorobenzene	146	Compound Not Detected					
* 8 1,4-Dichlorobenzene-d4	152	9.053	9.045	(1.000)	306858	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9.363	9.355	(1.034)	14545	0 20378	19.88(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9 627	9.619	(1.063)	4447	0 03971	3.873
15 4-Methylphenol	108	9.922	9 914	(1.096)	49892	0.42456	41 41
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected					
22 2,4-Dimethylphenol	107	11.046	11.038	(0.942)	8438	0.07702 M	7.513
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.724	11.724	(1.000)	1195248	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15.152	15.144	(0.969)	11406	0.06214	6.061(M)
*	42 Acenaphthene-d10	162	15.632	15.632	(1.000)	600305	4.00000	
	50 Diethylphthalate	149	16 737	16.729	(1.071)	18710	0.09311	9.082(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.908	18.908	(1.000)	1044431	4.00000	
$	66 Terphenyl-d14	244	22.103	22.095	(0 922)	510716	2.99543	292.2
	67 Butylbenzylphthalate	149	23.048	23.047	(0.962)	8898	0.06896	6.726(M)
*	69 Chrysene-d12	240	23.969	23.969	(1.000)	1071028	4.00000	
*	77 Perylene-d12	264	26.447	26.446	(1.000)	1091355	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.856	28.864	(1 091)	20478	0.08763	8.548
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81c.d
Lab Smp Id: UR81C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7394

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-06
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	306858	-1.41
27 Naphthalene-d8	1166872	583436	2333744	1195248	2.43
42 Acenaphthene-d10	603218	301609	1206436	600305	-0.48
59 Phenanthrene-d10	1096026	548013	2192052	1044431	-4.71
69 Chrysene-d12	1131082	565541	2262164	1071028	-5.31
77 Perylene-d12	1082499	541250	2164998	1091355	0.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.63	0.00
59 Phenanthrene-d10	18.91	18.41	19.41	18.91	0.00
69 Chrysene-d12	23.97	23.47	24.47	23.97	0.00
77 Perylene-d12	26.45	25.95	26.95	26.45	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

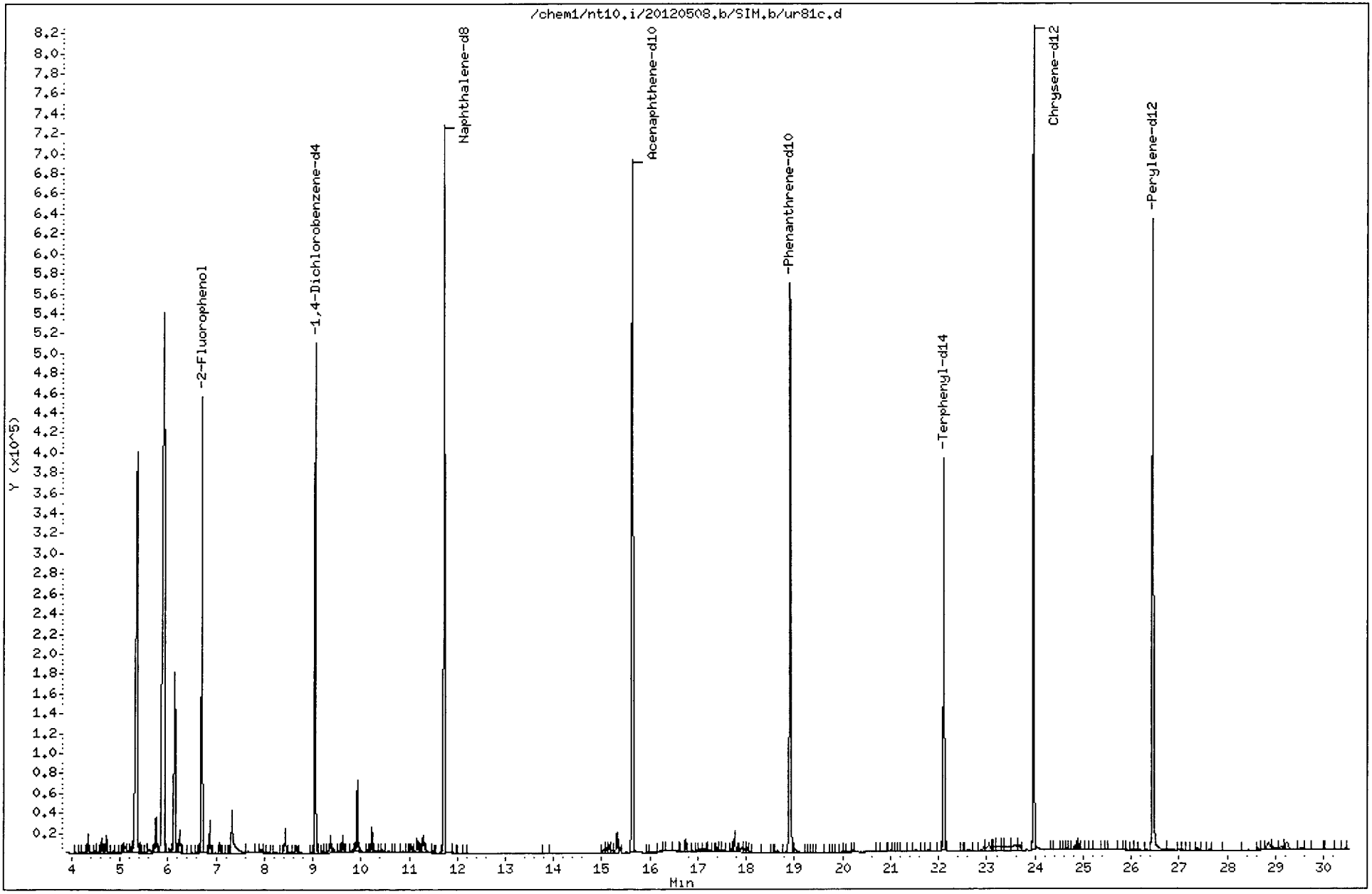
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81C
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7394

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-06
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	731.6	387.2	52.93	30-160
$ 66 Terphenyl-d14	487.7	292.2	59.91	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d
Date : 08-MAY-2012 19:06
Client ID: IJ12-06
Sample Info: UR81C
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

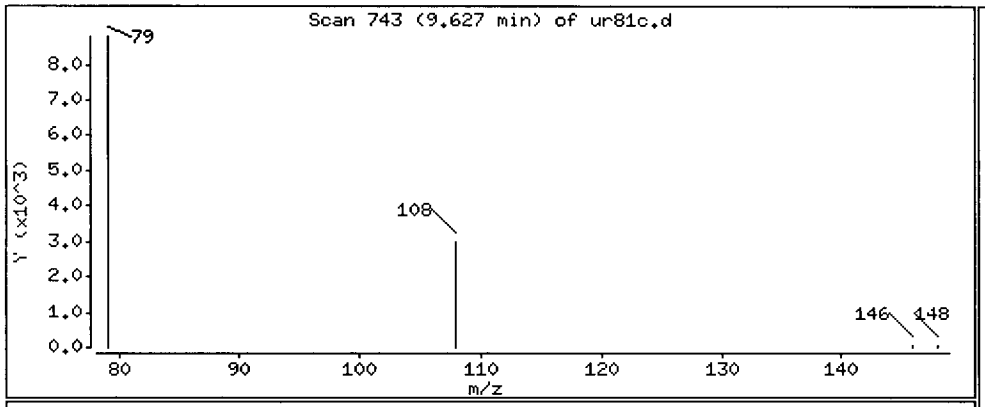
Operator: YZ

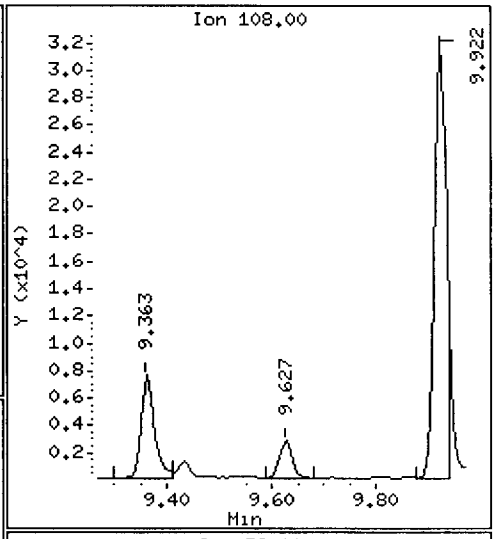
Column phase: ZB-5msi

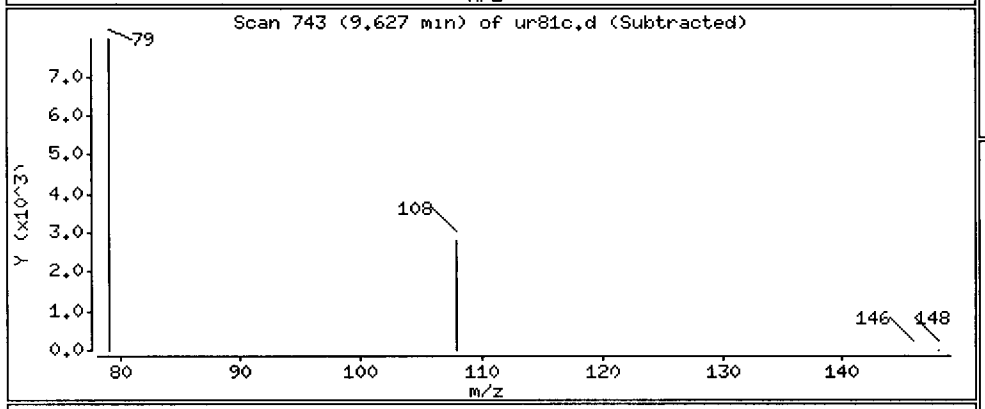
Column diameter: 0.25

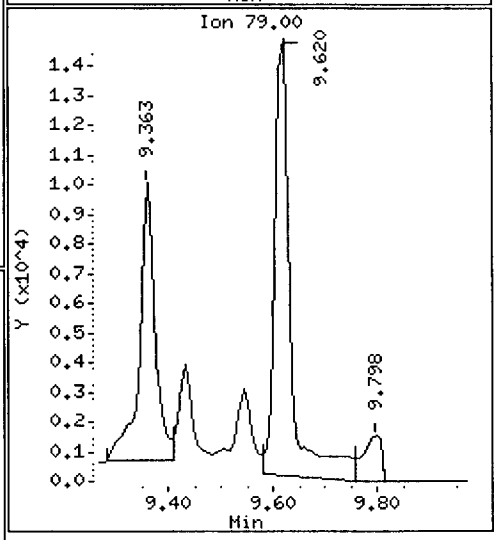
13 2-Methylphenol

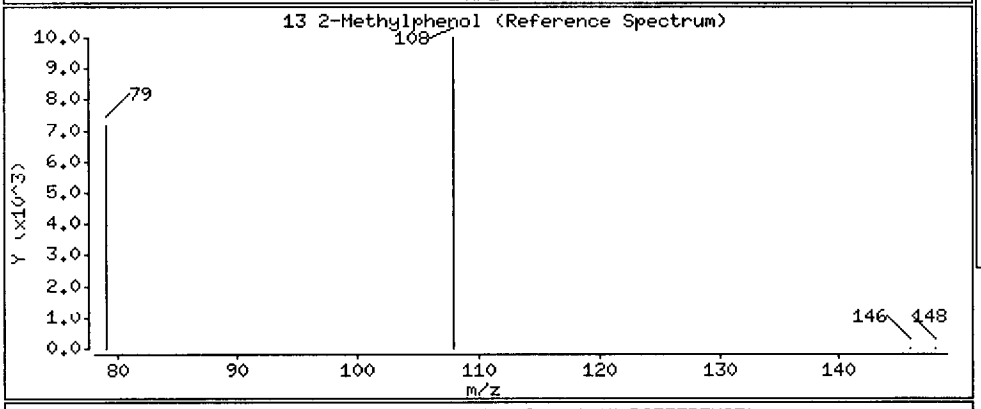
Concentration: 3.873 ug/kg

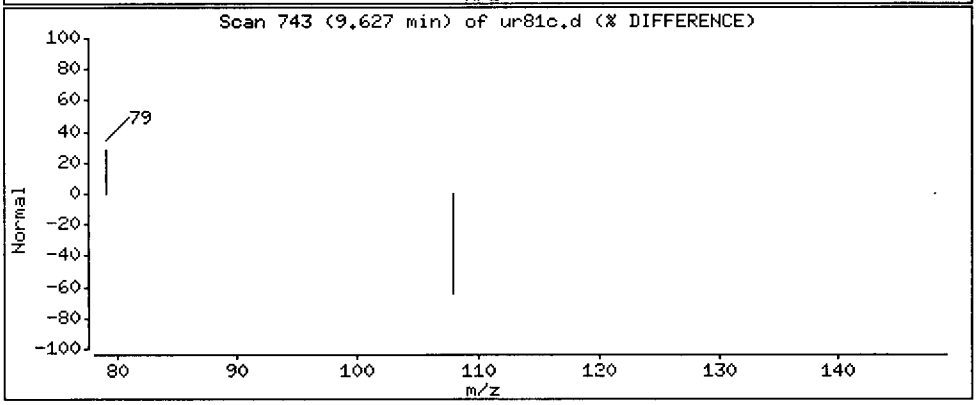












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

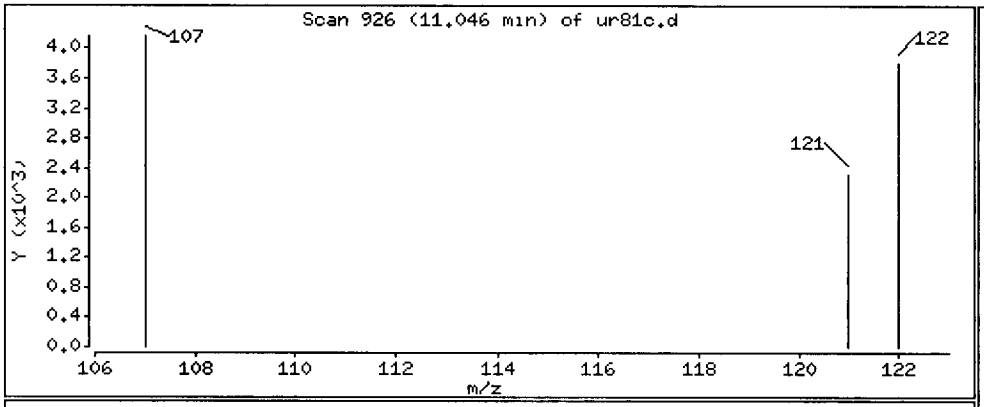
Operator: YZ

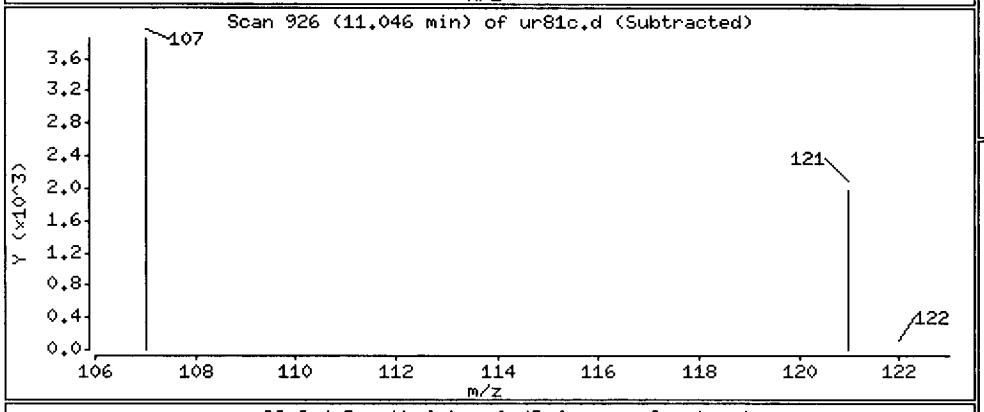
Column phase: ZB-5msi

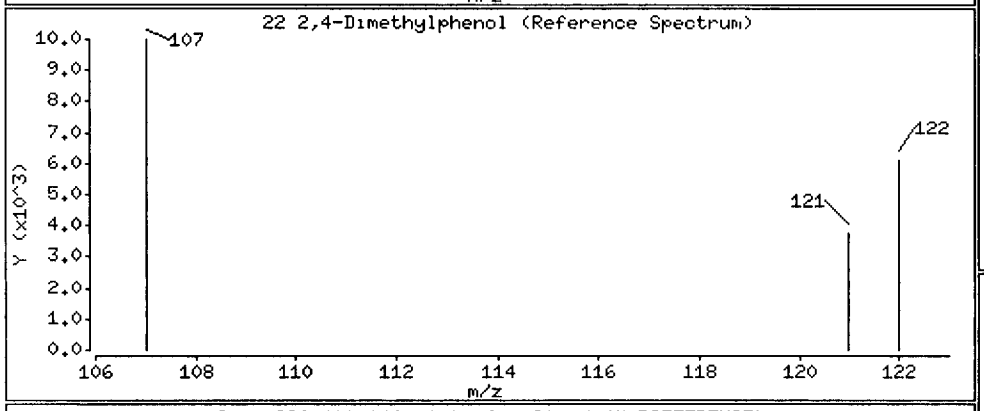
Column diameter: 0.25

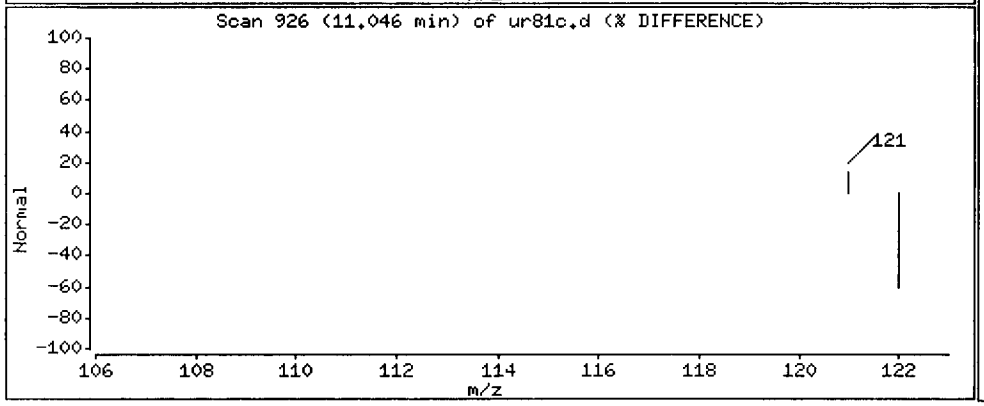
22 2,4-Dimethylphenol

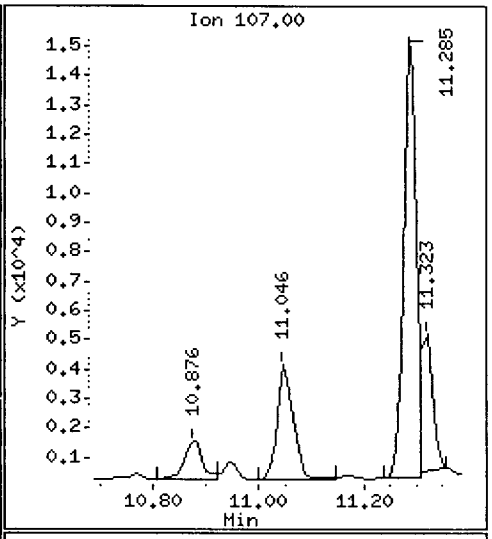
Concentration: 7.513 ug/kg

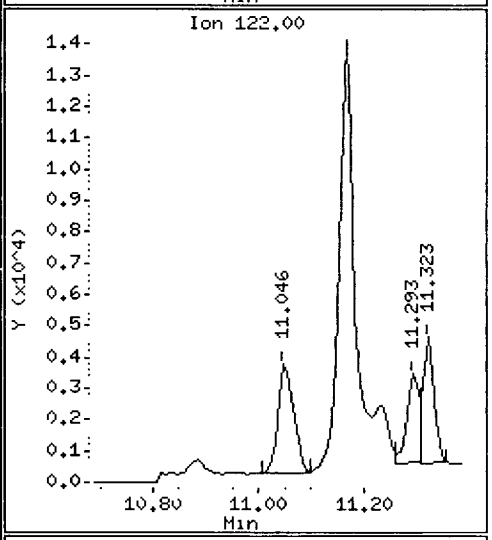


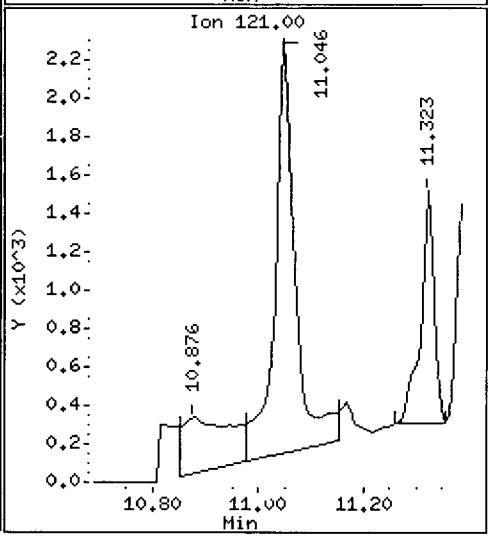












UR81 : 01040

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

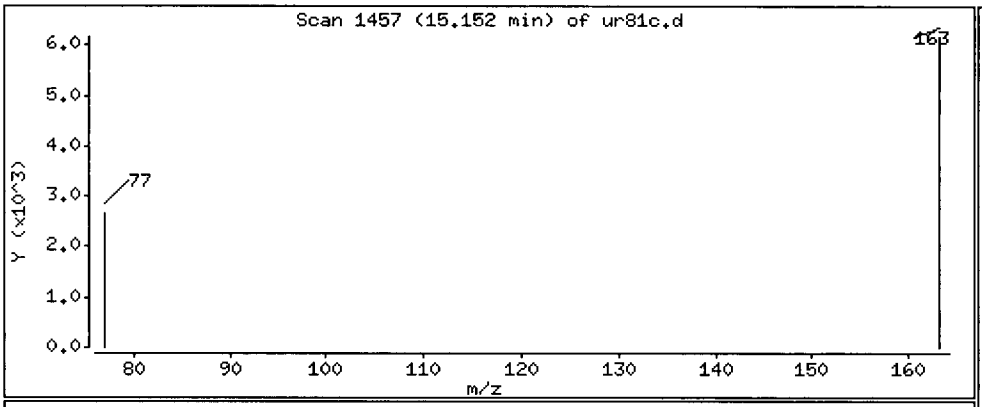
Operator: YZ

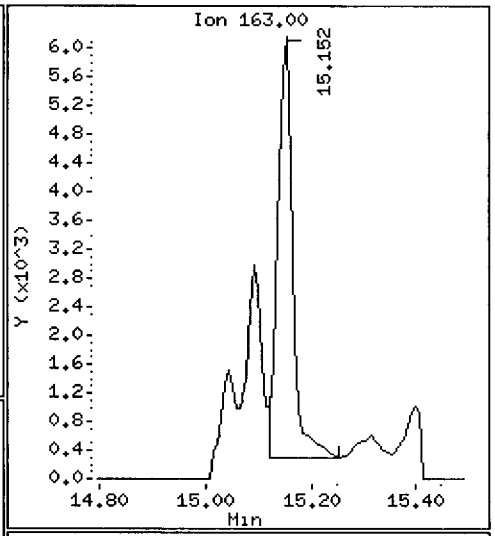
Column phase: ZB-5msi

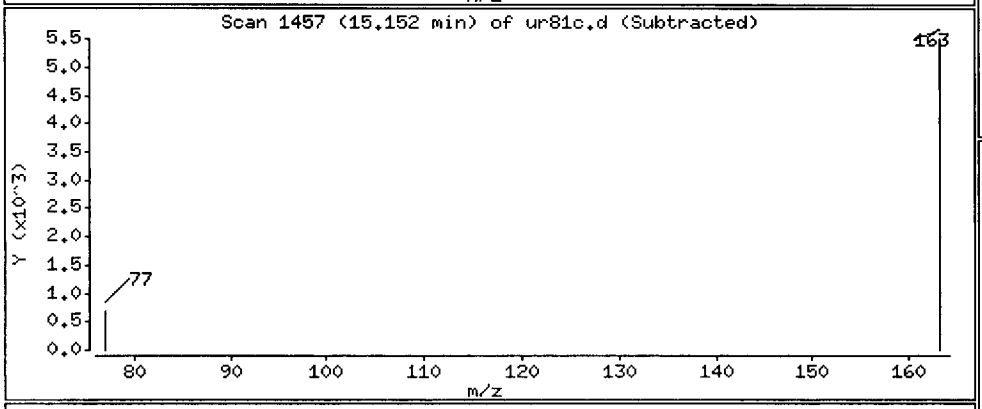
Column diameter: 0.25

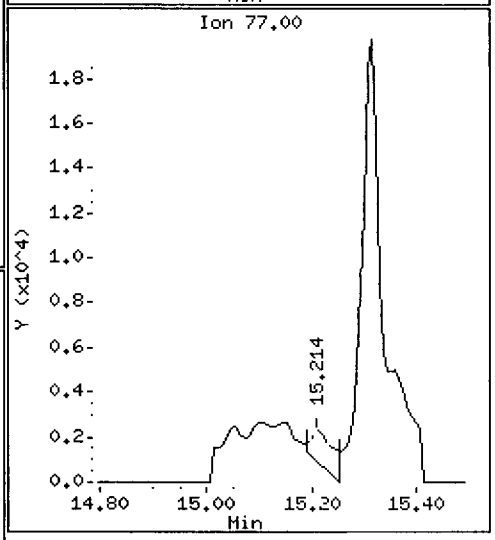
39 Dimethylphthalate

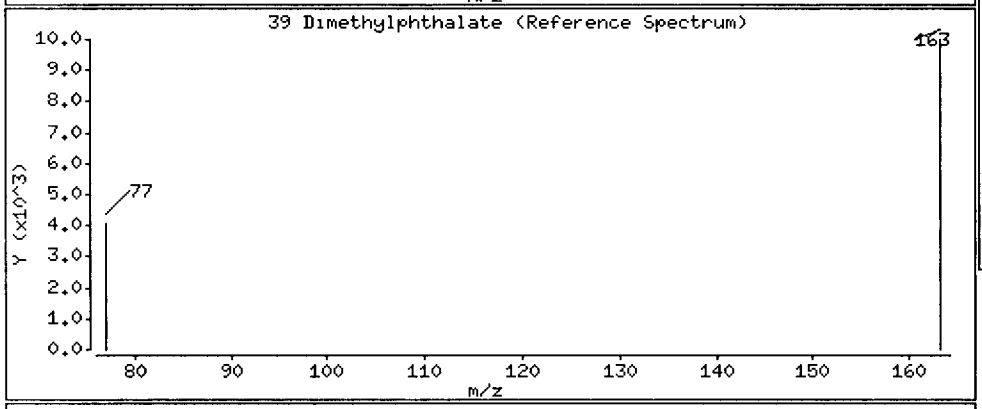
Concentration: 6.061 ug/kg

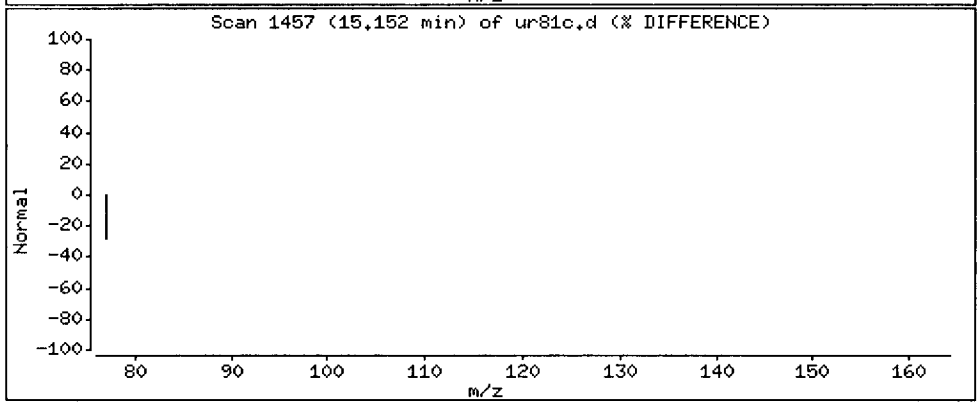












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

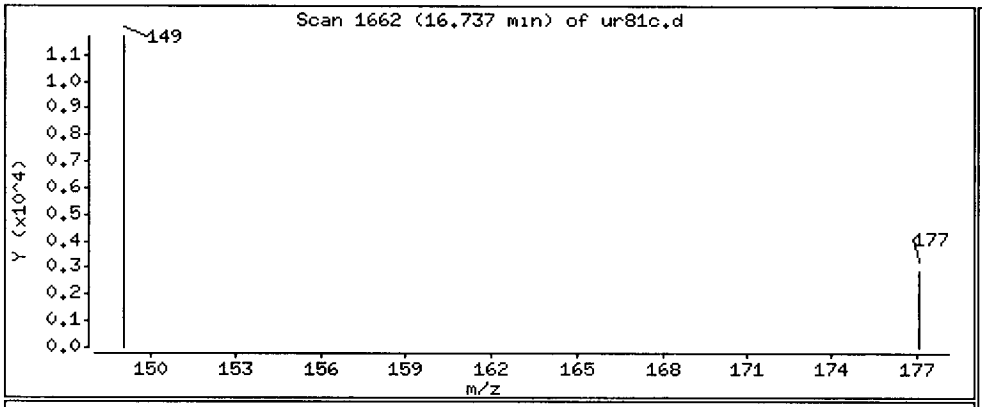
Operator: YZ

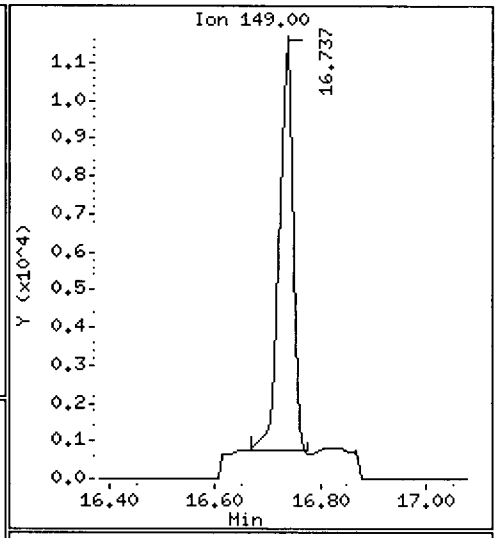
Column phase: ZB-5msi

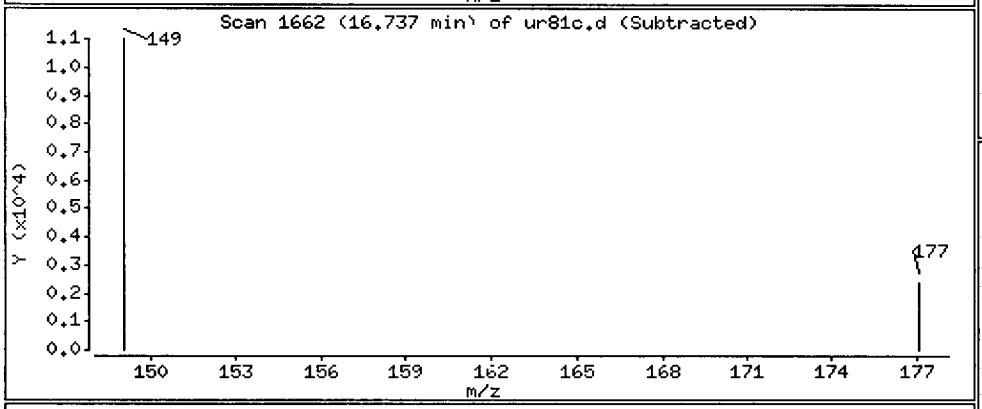
Column diameter: 0.25

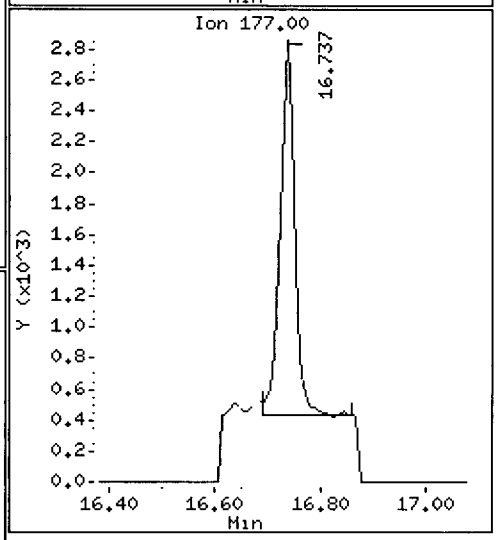
50 Diethylphthalate

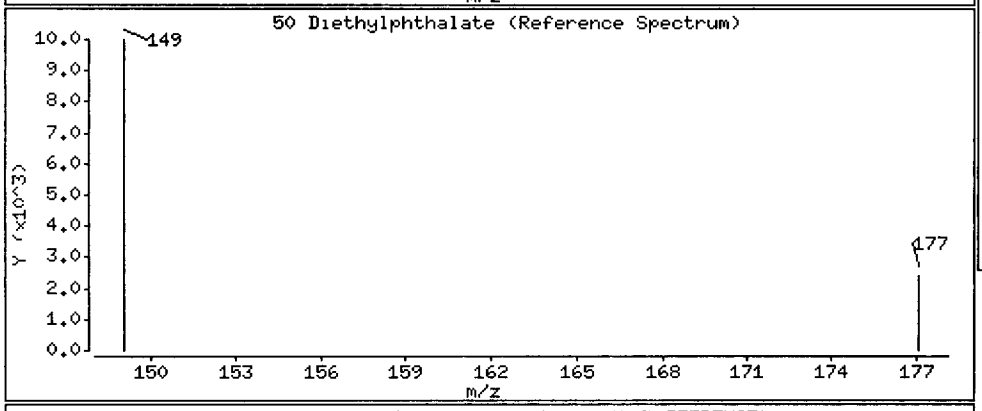
Concentration: 9.082 ug/kg

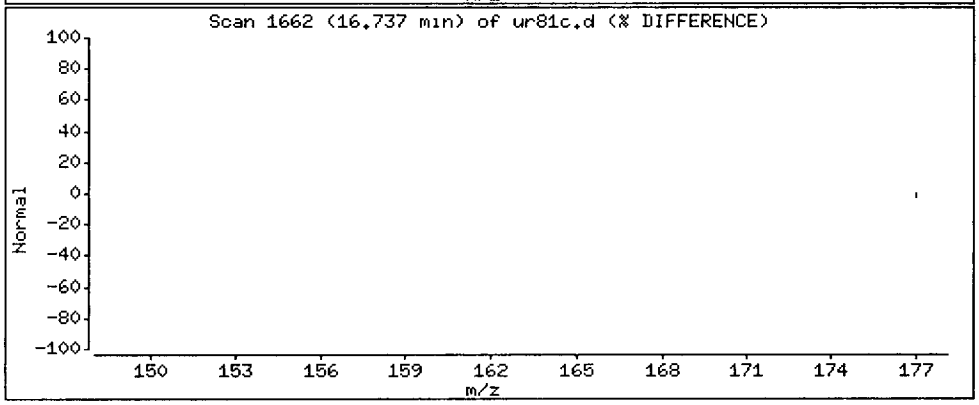












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Date : 08-MAY-2012 19:06

Client ID: IJ12-06

Instrument: nt10.i

Sample Info: UR81C

Volume Injected (uL): 1.0

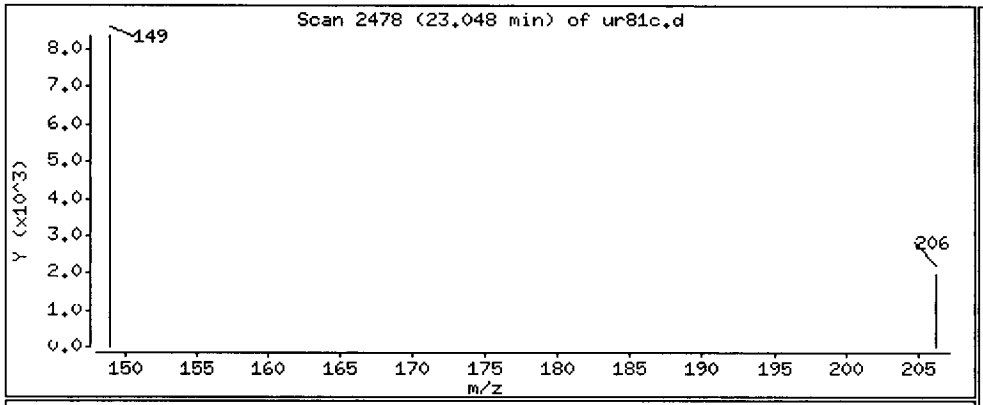
Operator: YZ

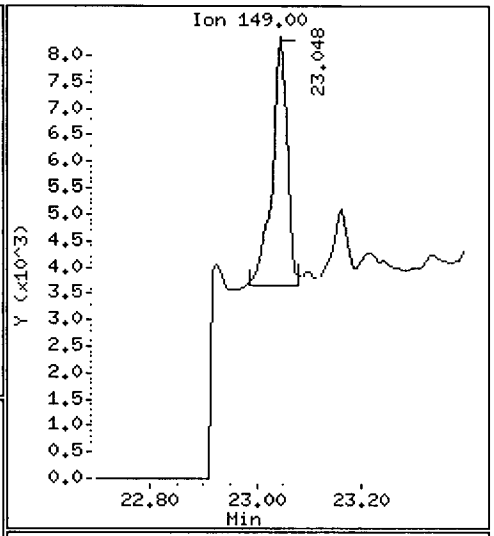
Column phase: ZB-5ms1

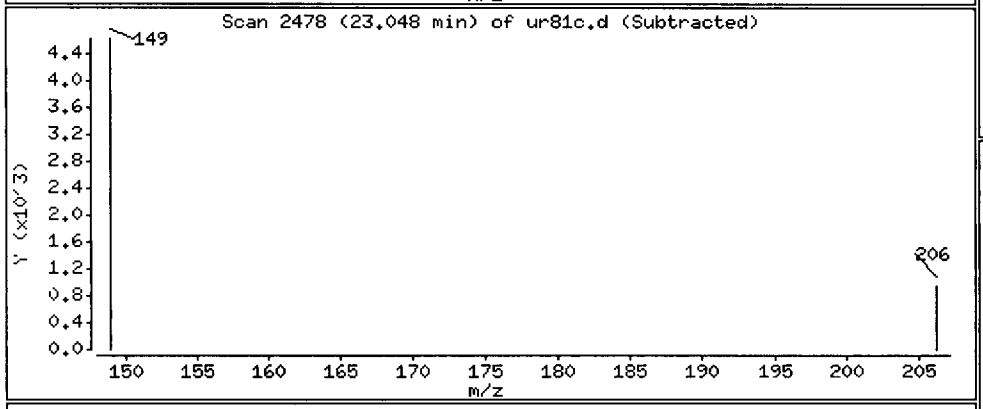
Column diameter: 0.25

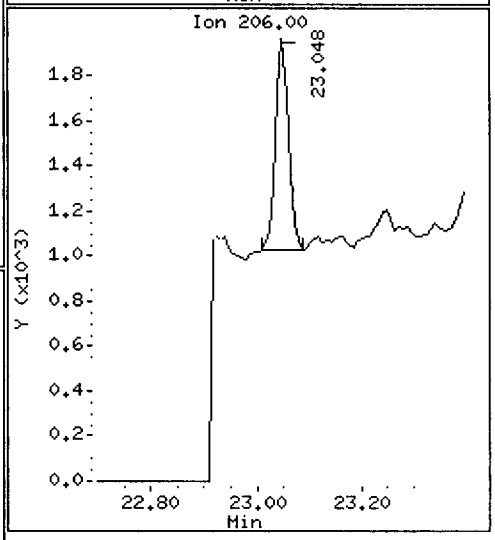
67 Butylbenzylphthalate

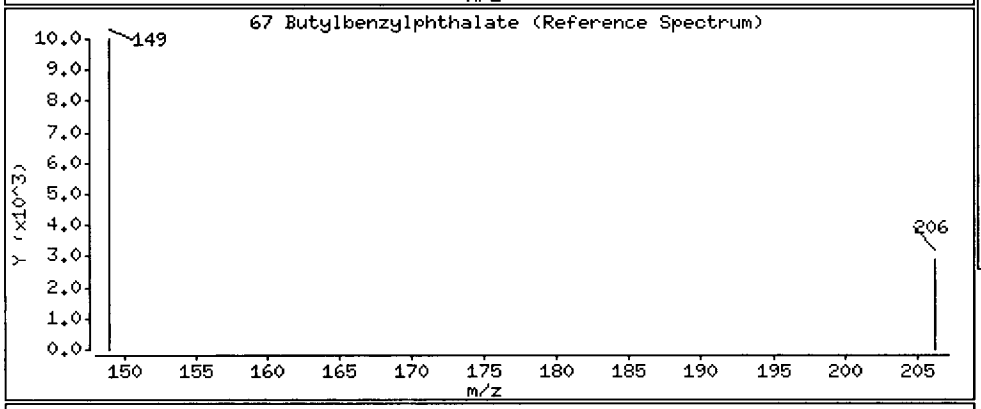
Concentration: 6.726 ug/kg

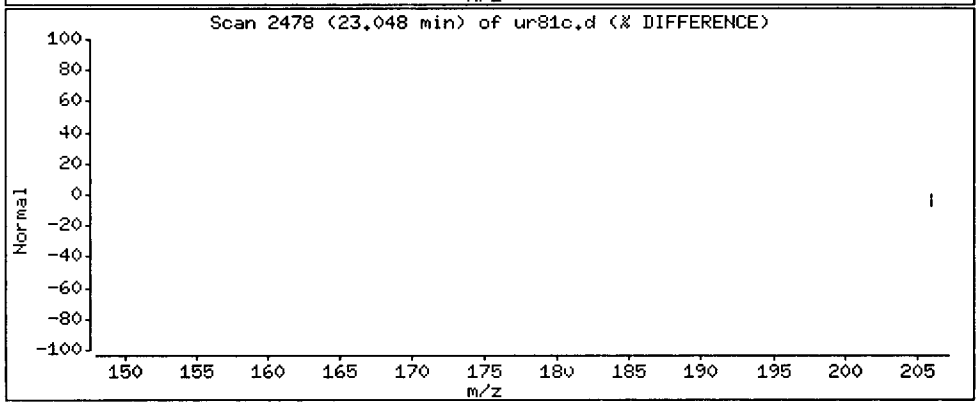












Data File: /chem1/nt10.1/20120508.b/SIM.b/ur81c.d

Date : 08-MAY-2012 19:06

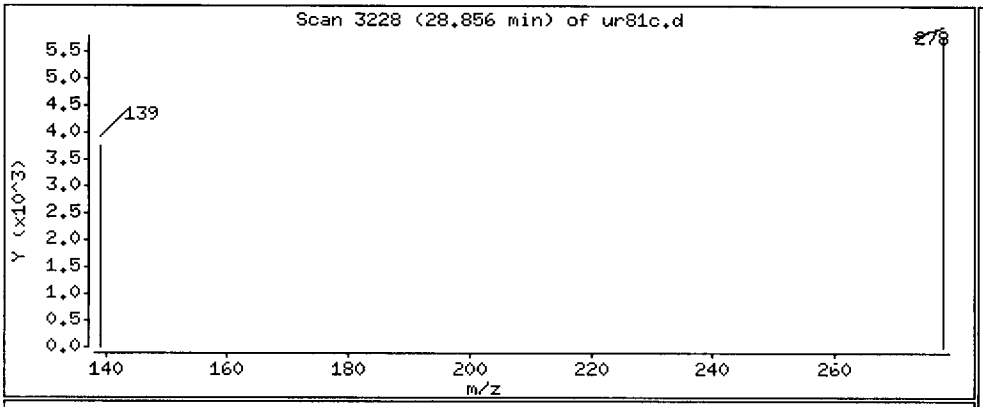
Client ID: IJ12-06 | Instrument: nt10.1

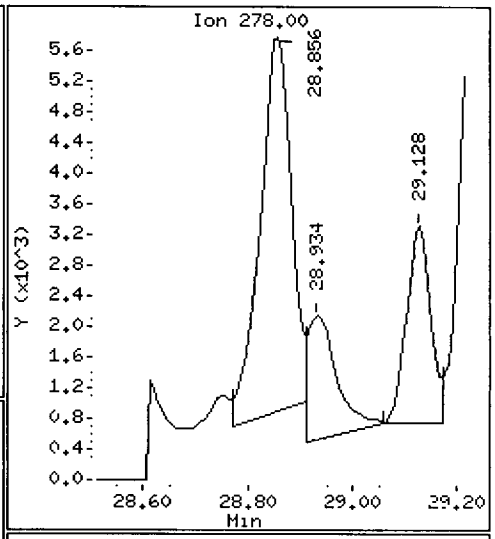
Sample Info: UR81C

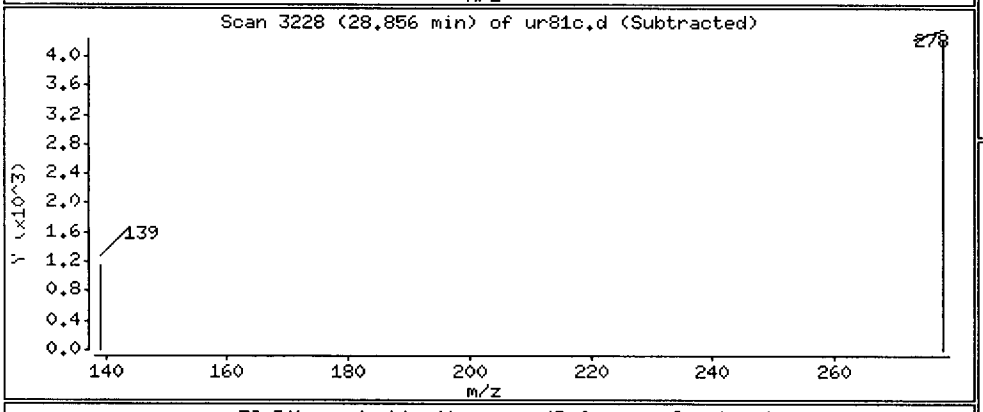
Volume Injected (uL): 1.0 | Operator: YZ

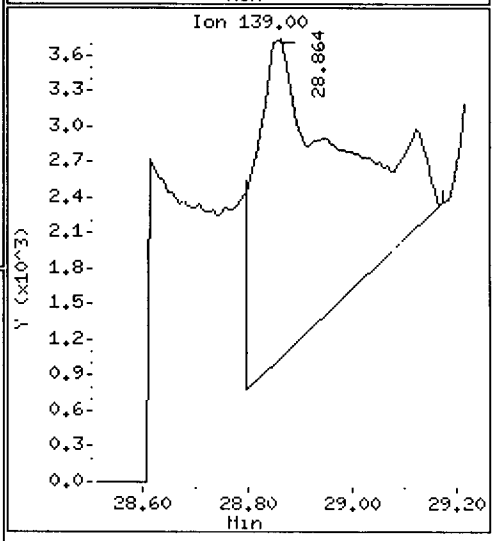
Column phase: ZB-5msi | Column diameter: 0.25

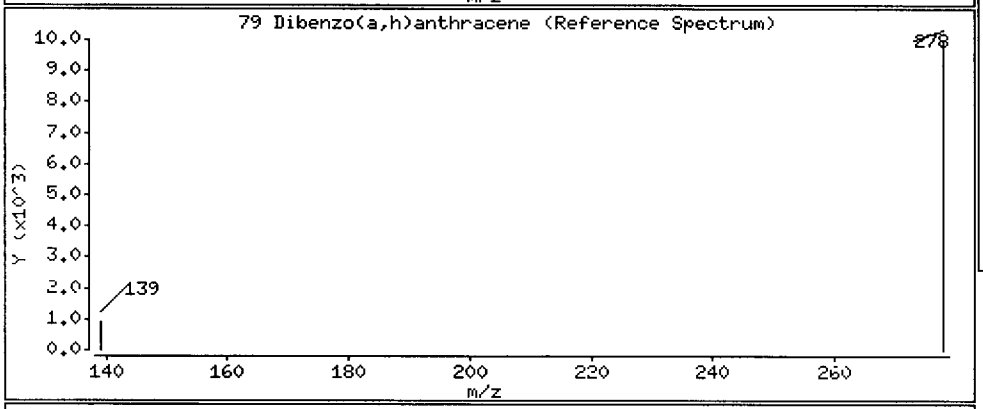
79 Dibenzo(a,h)anthracene | Concentration: 8.548 ug/kg

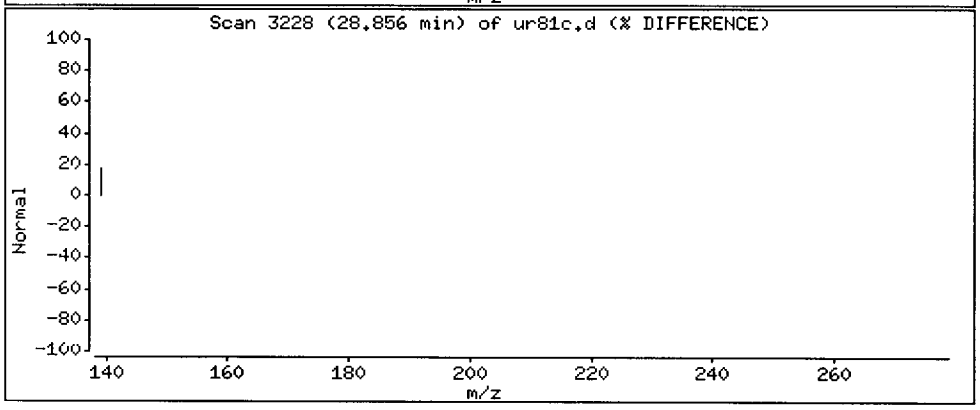






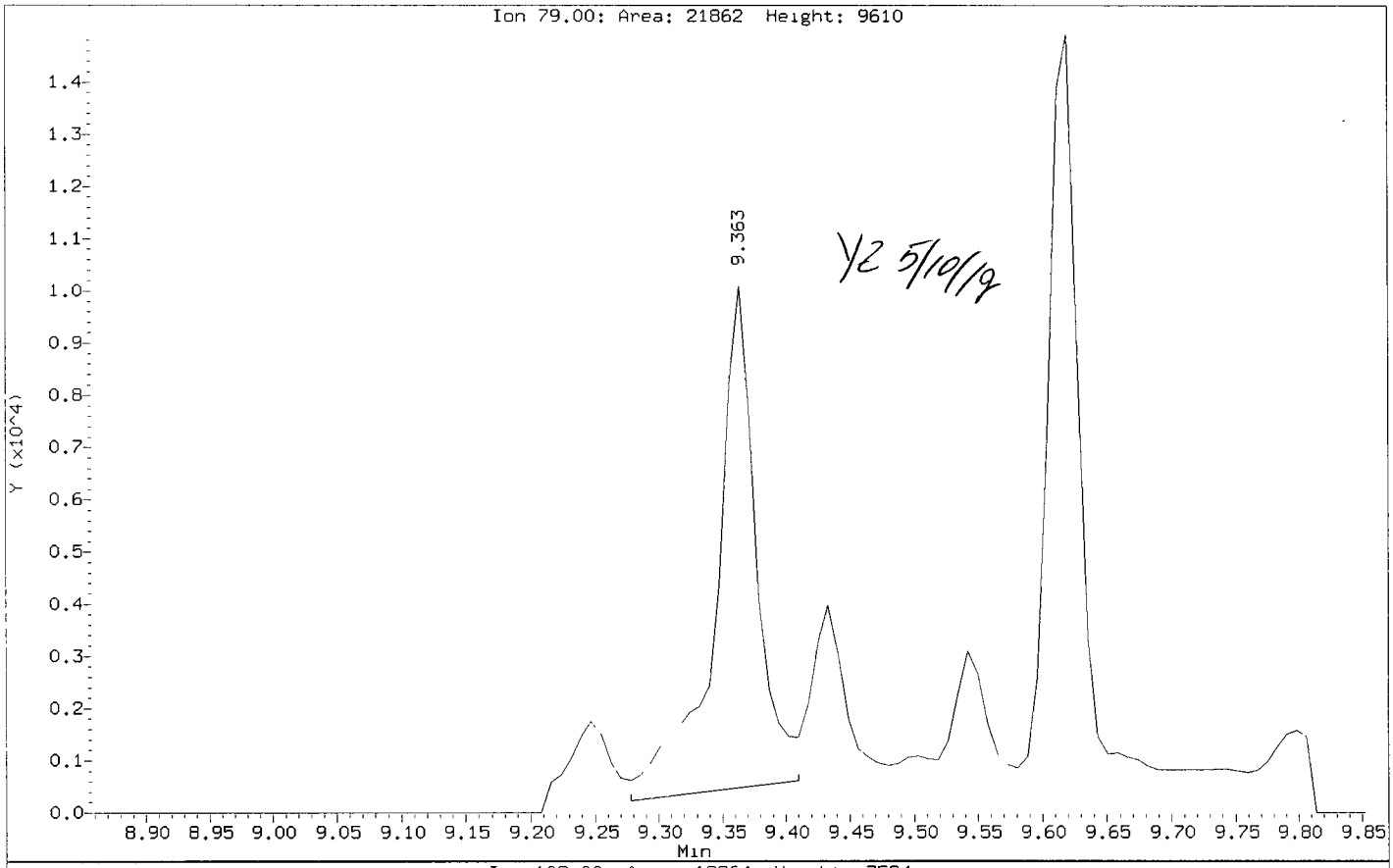


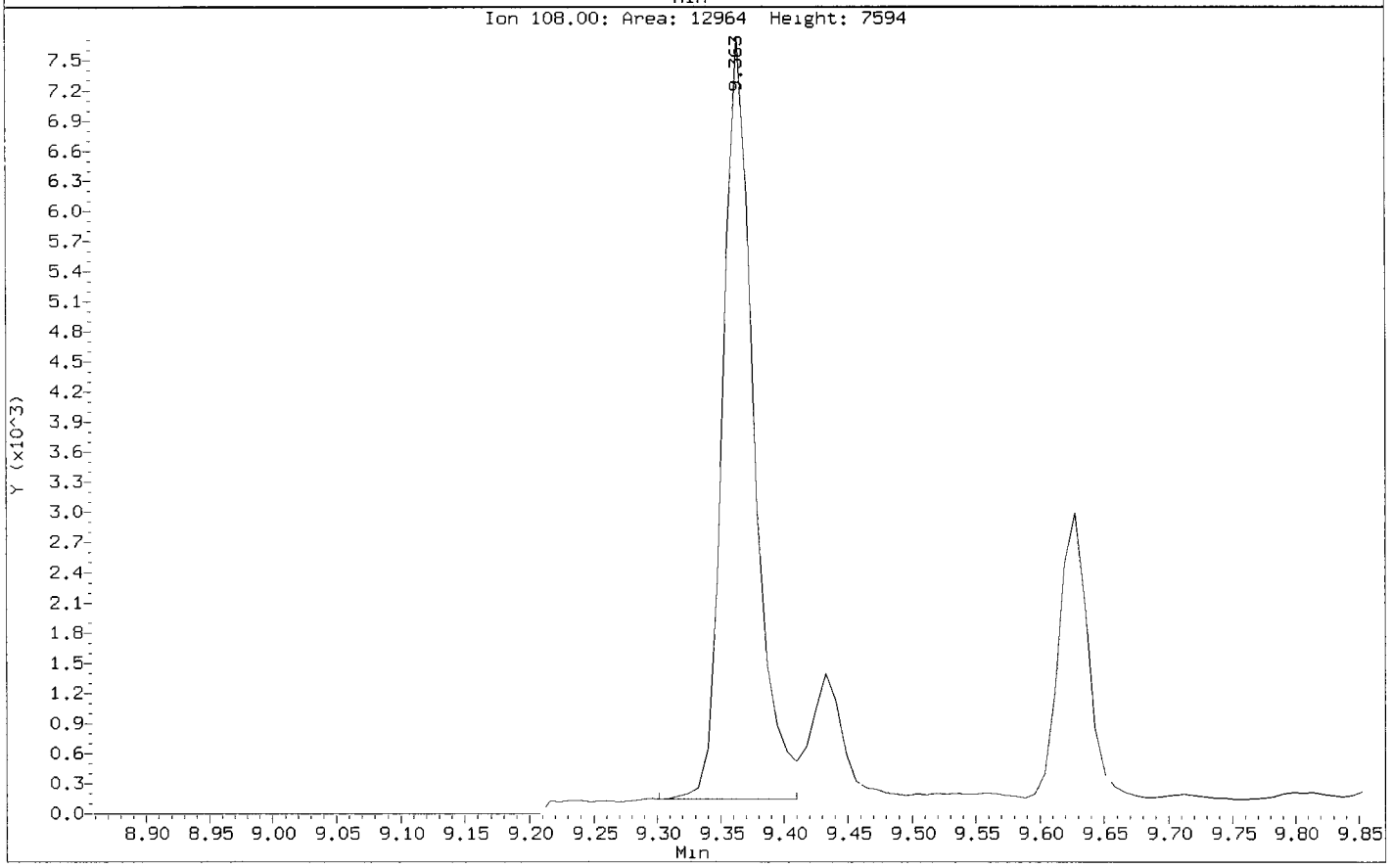




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d
Injection Date: 08-MAY-2012 19:06
Instrument: nt10.i
Client Sample ID: IJ12-06

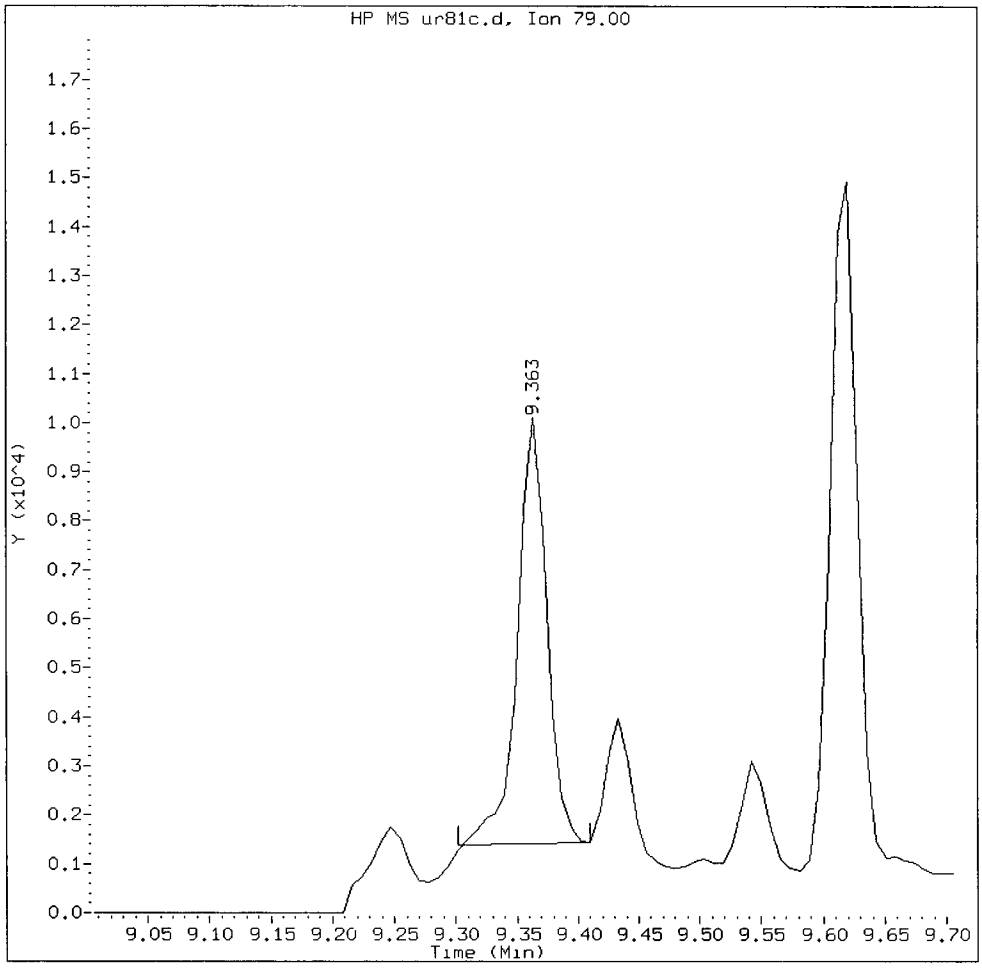
Compound: Benzyl alcohol
CAS Number: 100-51-6





UR81C, /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Benzyl alcohol Amount: 0.20 Area: 14545



MANUAL INTEGRATION for Benzyl alcohol

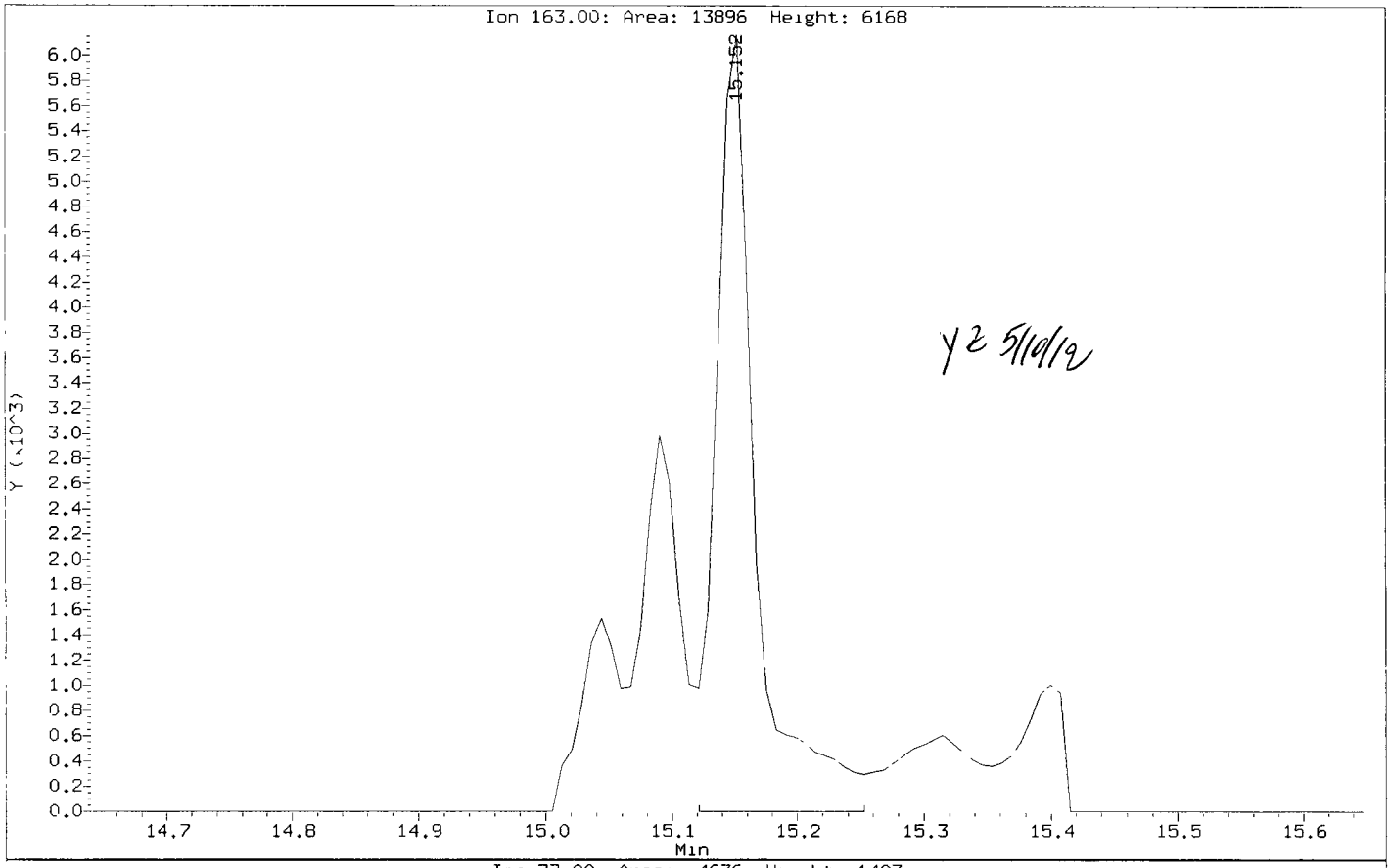
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

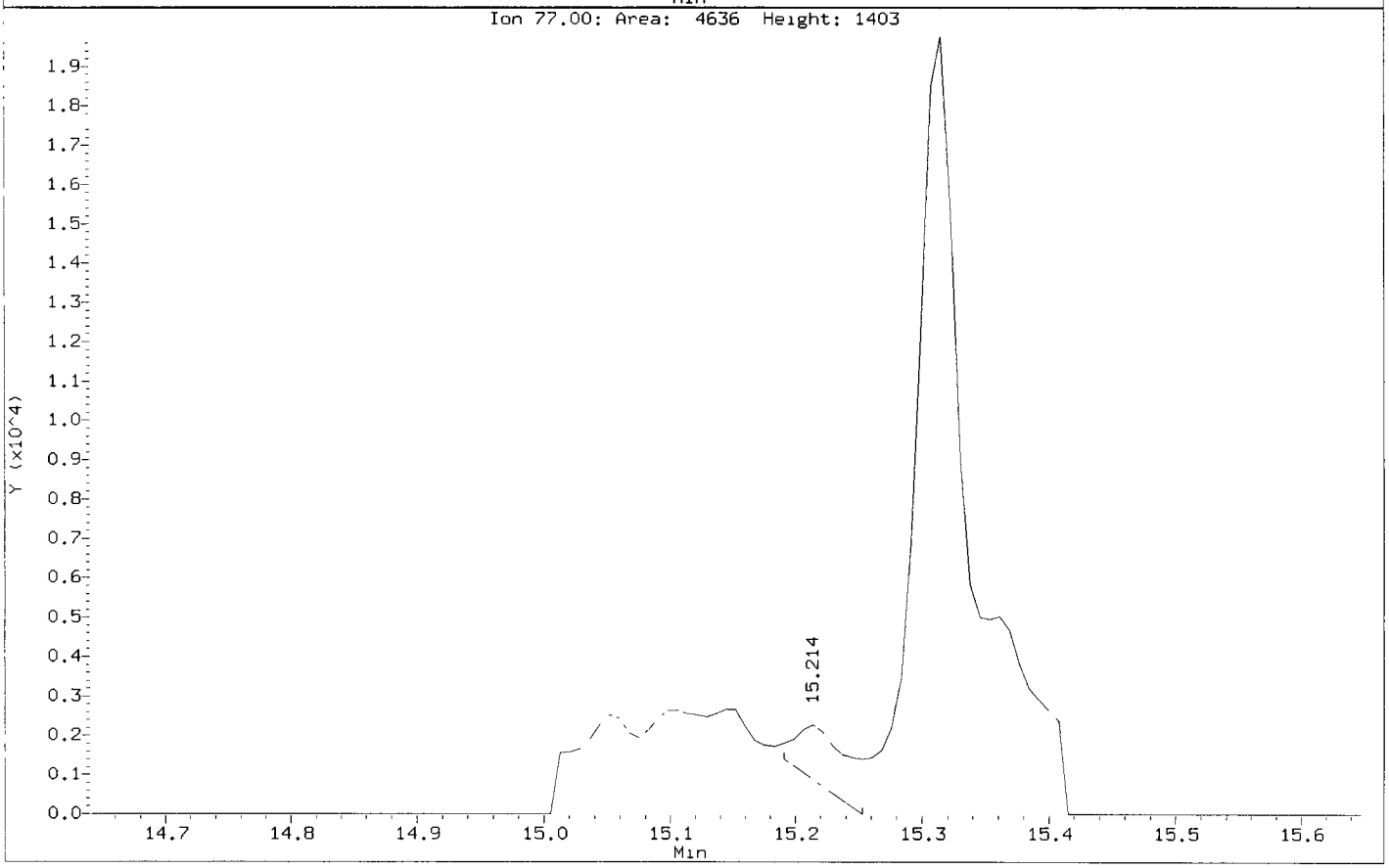
5. Other _____

Analyst: YZ Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d
Injection Date: 08-MAY-2012 19:06
Instrument: nt10.i
Client Sample ID: IJ12-06

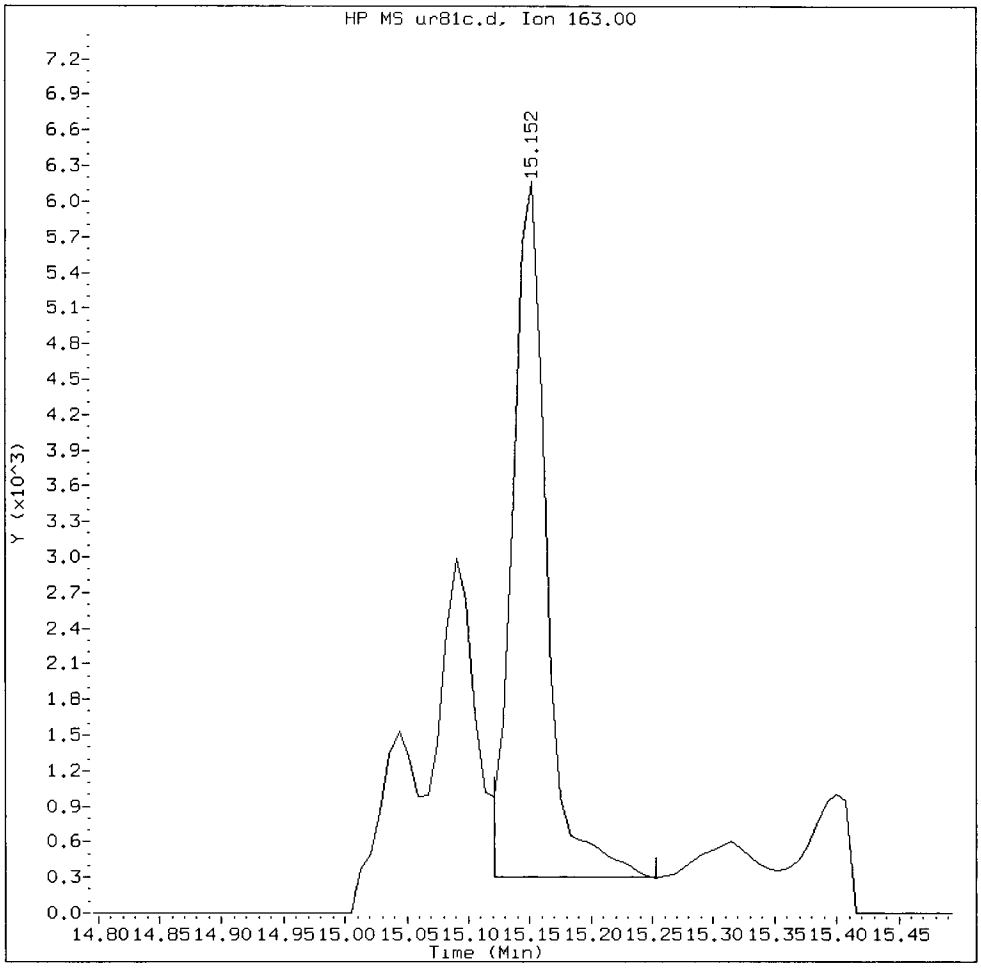
Compound: Dimethylphthalate
CAS Number: 131-11-3





UR81C, /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Dimethylphthalate Amount: 0.06 Area: 11406



MANUAL INTEGRATION for Dimethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

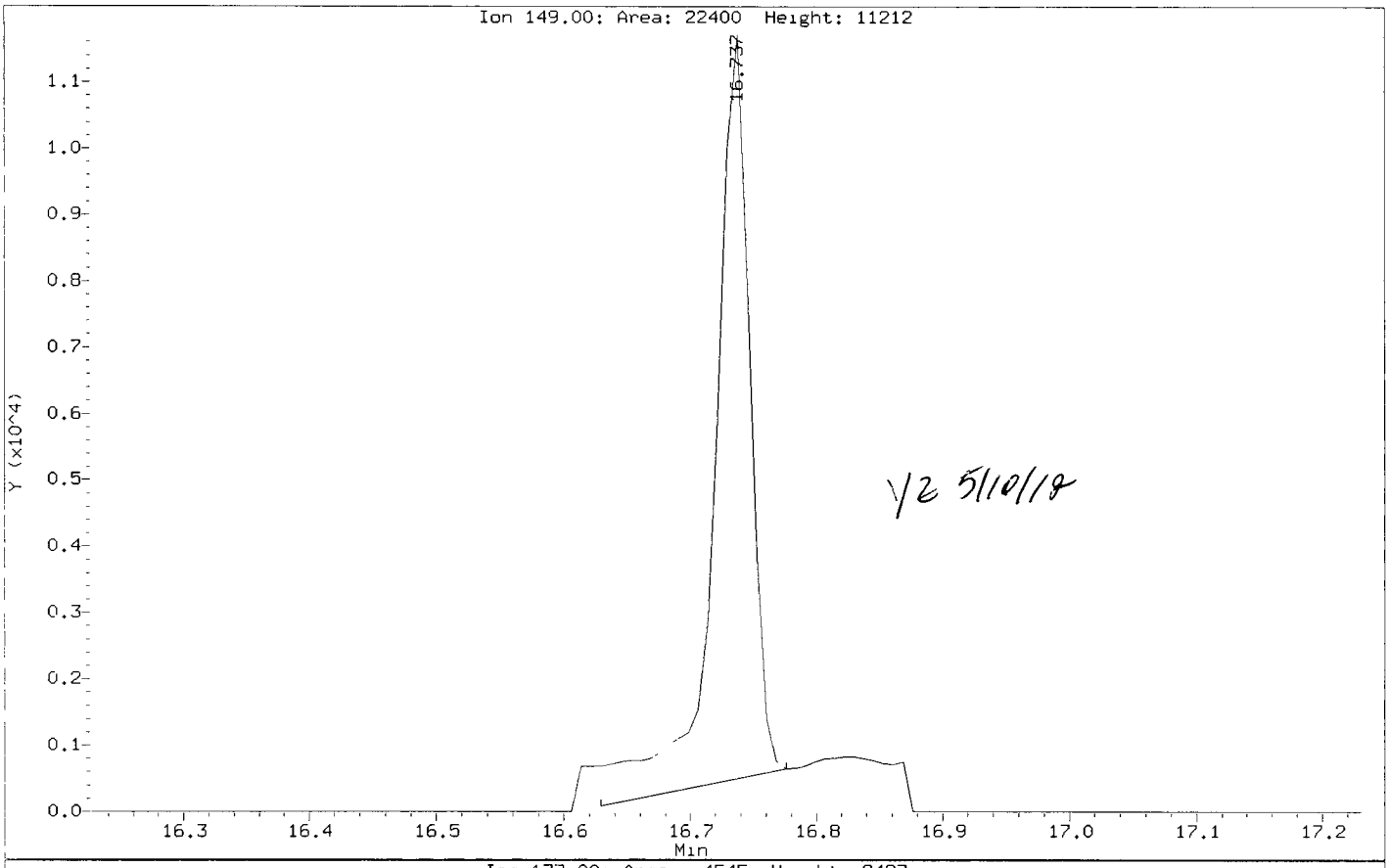
5. Other _____

Analyst: YZ Date: 5/19/12

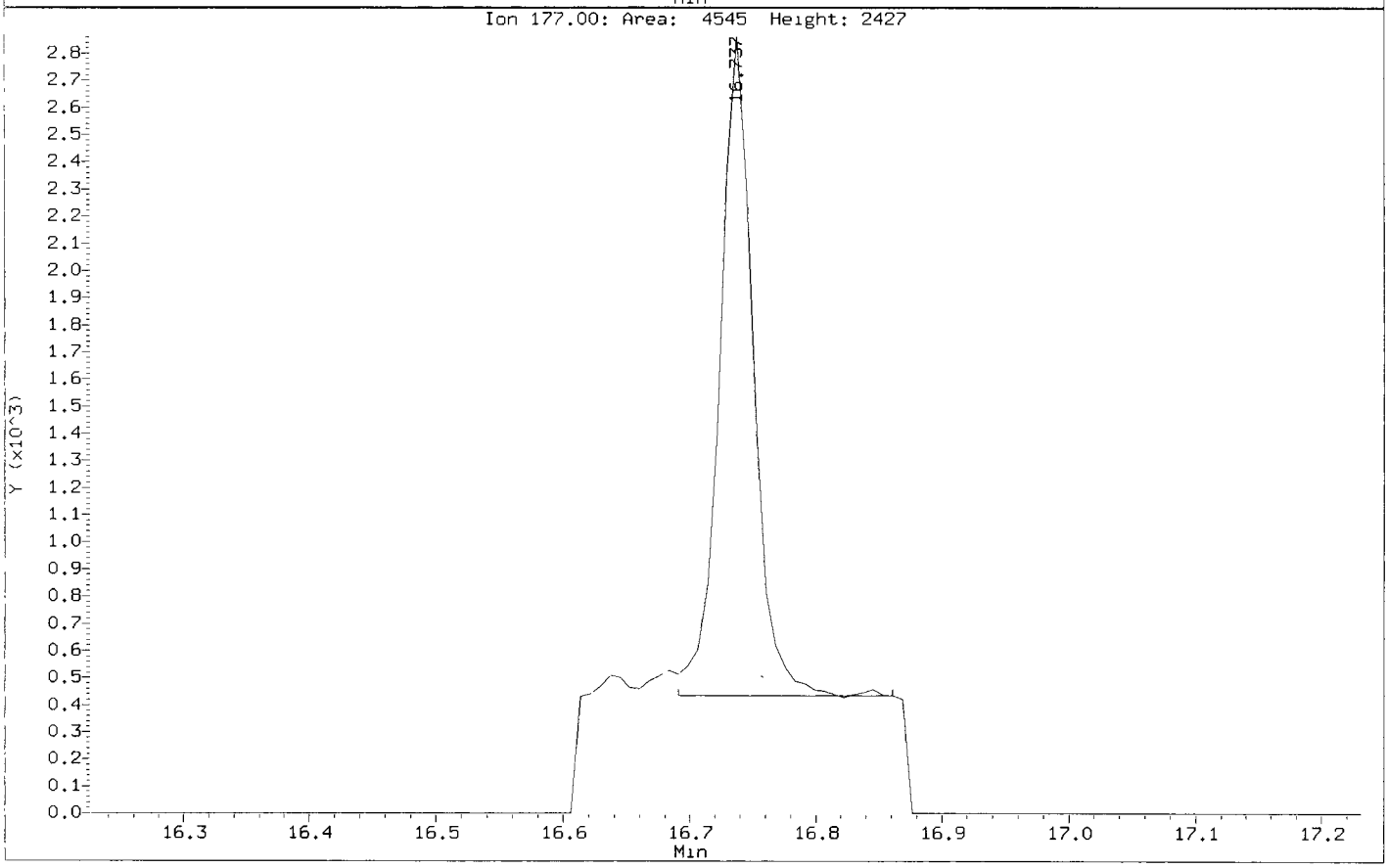
UR81 : 81848

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81c.d
Injection Date: 08-MAY-2012 19:06
Instrument: nt10.i
Client Sample ID: IJ12-06

Compound: Diethylphthalate
CAS Number: 84-66-2

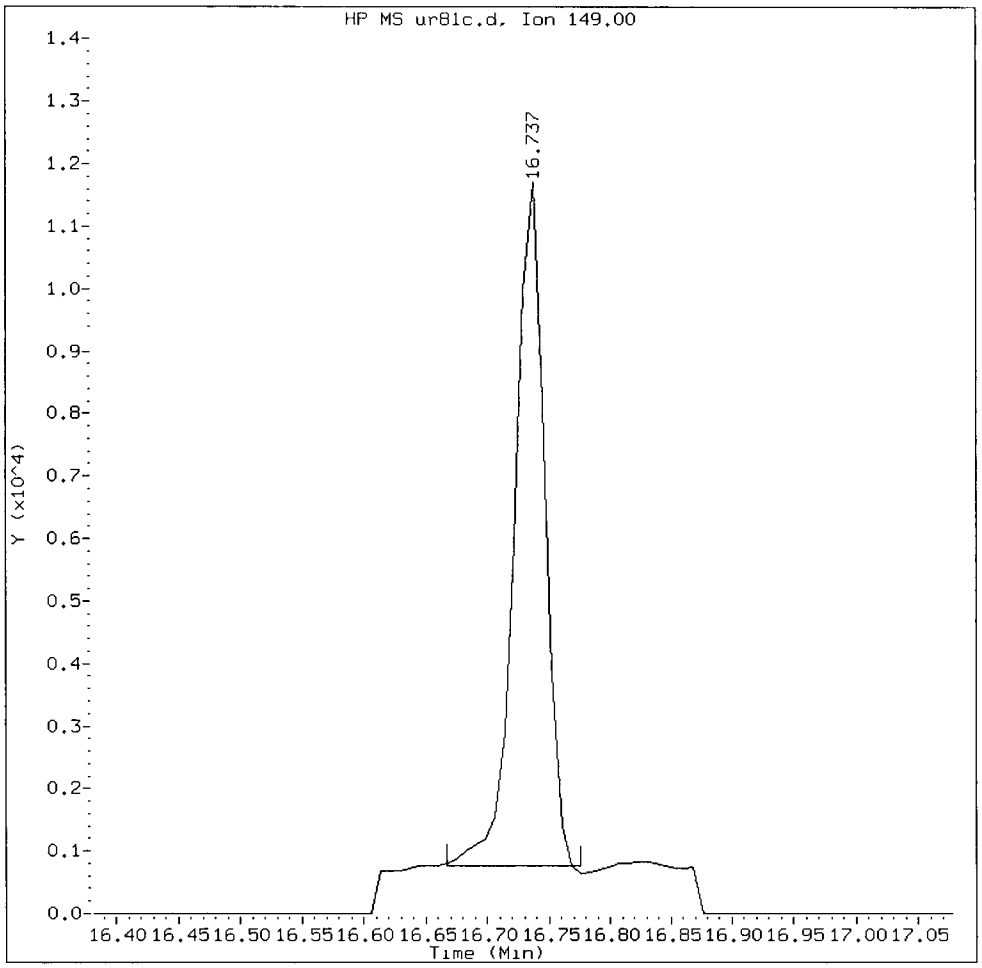


YZ 5/10/18



UR81C, /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Diethylphthalate Amount: 0.09 Area: 18710



MANUAL INTEGRATION for Diethylphthalate

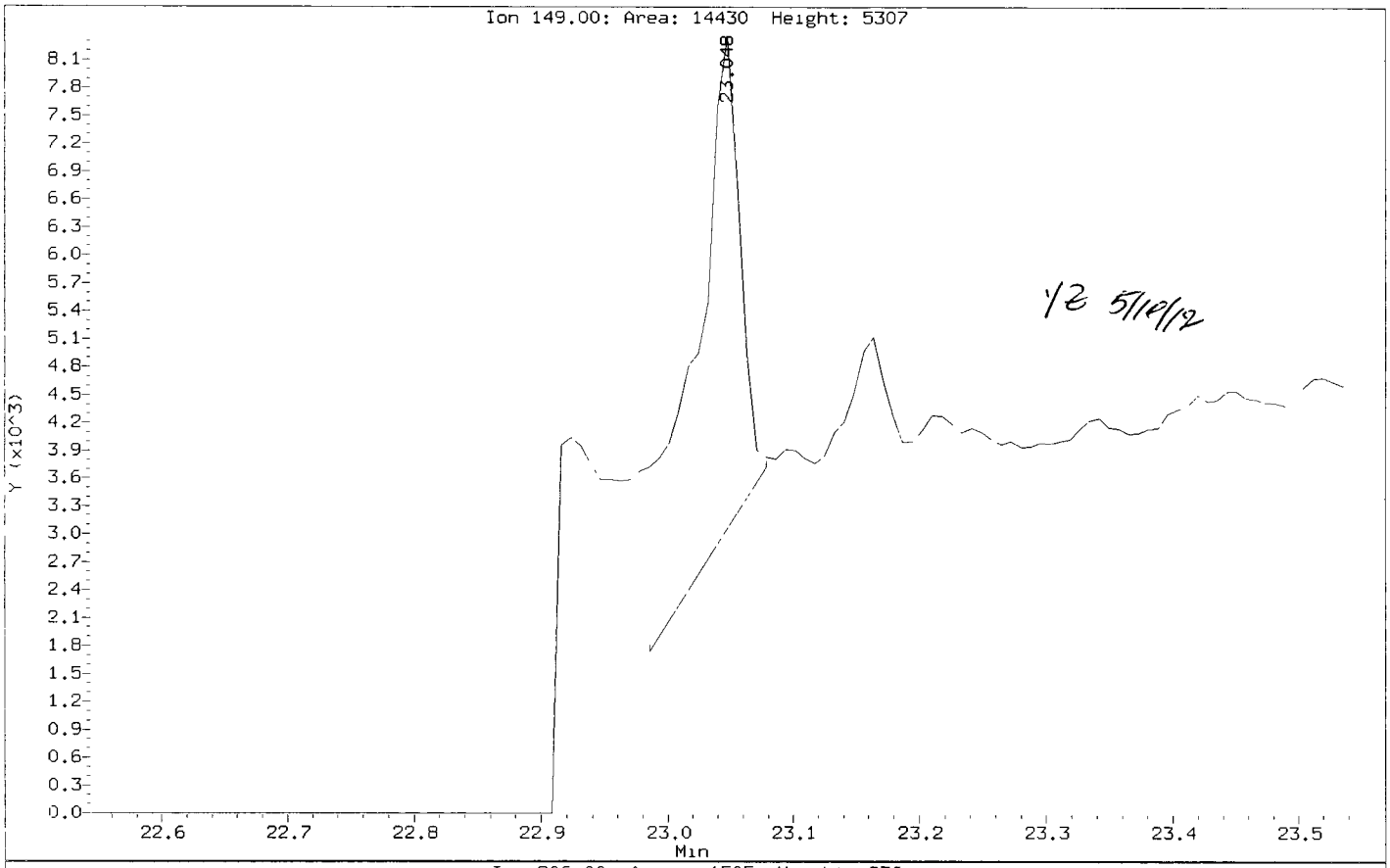
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

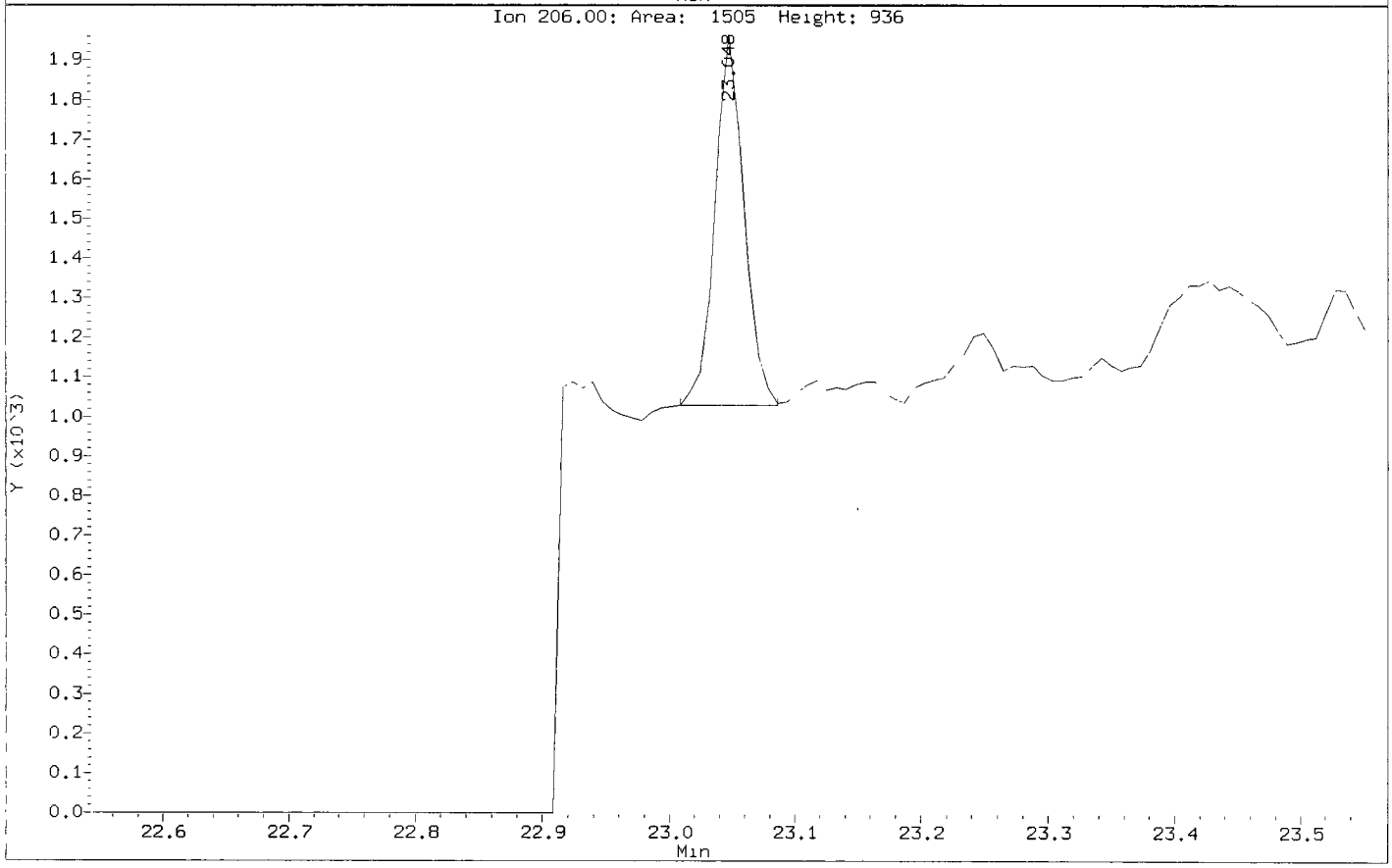
5. Other _____

Analyst: YZ Date: 5/10/12

Data File: /chem1/nt10.1/20120508.b/SIM.b/ur81c.d
Injection Date: 08-MAY-2012 19:06
Instrument: nt10.1
Client Sample ID: IJ12-06

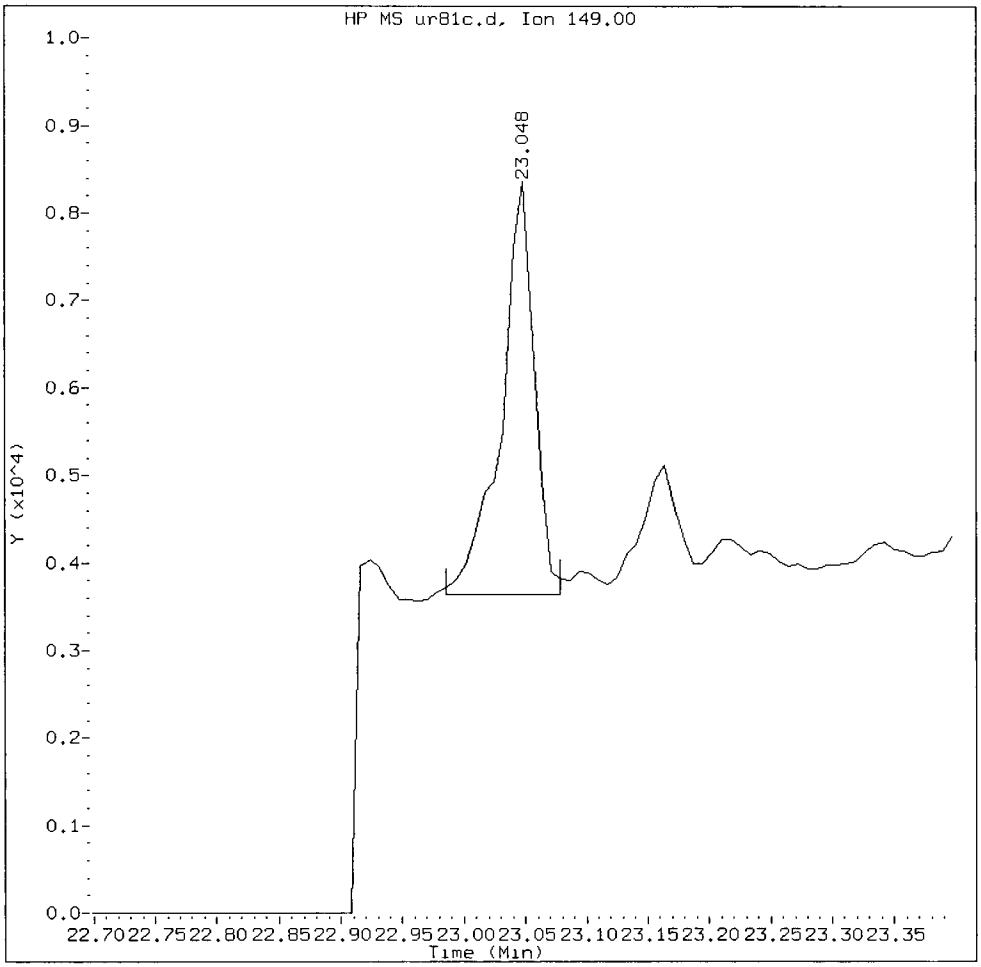
Compound: Butylbenzylphthalate
CAS Number: 85-68-7





UR81C, /chem1/nt10.i/20120508.b/SIM.b/ur81c.d

Butylbenzylphthalate Amount: 0.07 Area: 8898



MANUAL INTEGRATION for Butylbenzylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81c.d

Lab ID: UR81C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/10/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81d.d
Lab Smp Id: UR81D Client Smp ID: IJ12-02
Inj Date : 08-MAY-2012 19:43
Operator : YZ Inst ID: nt10.i
Smp Info : UR81D
Misc Info : 12-7395
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	24.23000	Weight of sample extracted (g)
M	57.20000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.695	6 680	(0 740)	385822	4 12013	397.3
3 Phenol	94	8.434	8 418	(0 932)	23825	0.19223	18.54
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.053	9.045	(1.000)	272772	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9.363	9.355	(1.034)	13811	0.21768	20.99(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9.627	9.619	(1.063)	3428	0.03443	3 320
15 4-Methylphenol	108	9.922	9.914	(1.096)	46526	0.44539	42.95
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11.053	11.038	(0.943)	6057	0.06156 M	5 936
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.724	11 724	(1.000)	1073367	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

UR81 : 01054

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
39 Dimethylphthalate	163	15.152	15.144	(0.969)	14185	0.08489	8.186
* 42 Acenaphthene-d10	162	15.639	15.632	(1.000)	546433	4 00000	
50 Diethylphthalate	149	16.737	16.729	(1.070)	12346	0.06750	6.509(M)
54 N-Nitrosodiphenylamine	169	Compound Not Detected					
57 Hexachlorobenzene	284	Compound Not Detected					
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	18.915	18.908	(1.000)	951777	4 00000	
$ 66 Terphenyl-d14	244	22.111	22.095	(0.922)	484842	3.07864	296 9
67 Butylbenzylphthalate	149	23.047	23.047	(0.962)	12843	0.10776	10.39(M)
* 69 Chrysene-d12	240	23.969	23.969	(1.000)	989287	4.00000	
* 77 Perylene-d12	264	26.446	26.446	(1.000)	998041	4 00000	
79 Dibenzo(a,h)anthracene	278	28.856	28.864	(1.091)	29829	0 13958	13.46
90 N-Nitrosodimethylamine	74	Compound Not Detected					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81d.d
Lab Smp Id: UR81D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7395

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-02
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	272772	-12.36
27 Naphthalene-d8	1166872	583436	2333744	1073367	-8.01
42 Acenaphthene-d10	603218	301609	1206436	546433	-9.41
59 Phenanthrene-d10	1096026	548013	2192052	951777	-13.16
69 Chrysene-d12	1131082	565541	2262164	989287	-12.54
77 Perylene-d12	1082499	541250	2164998	998041	-7.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.05
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.04
69 Chrysene-d12	23.97	23.47	24.47	23.97	0.00
77 Perylene-d12	26.45	25.95	26.95	26.45	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

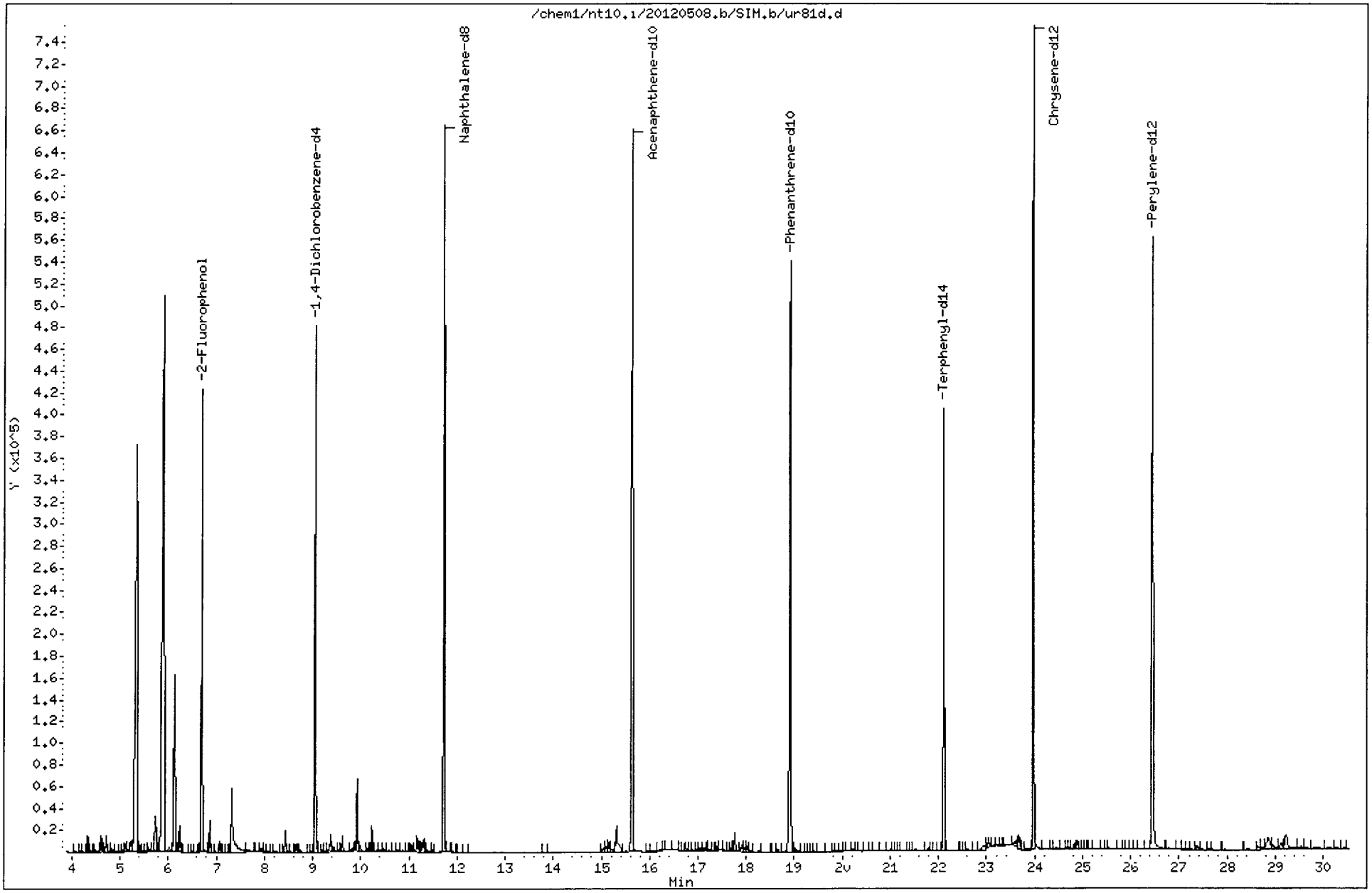
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81D
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7395

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-02
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	723.2	397.3	54.94	30-160
$ 66 Terphenyl-d14	482.1	296.9	61.57	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d
Date : 08-MAY-2012 19:43
Client ID: IJ12-02
Sample Info: UR81D
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

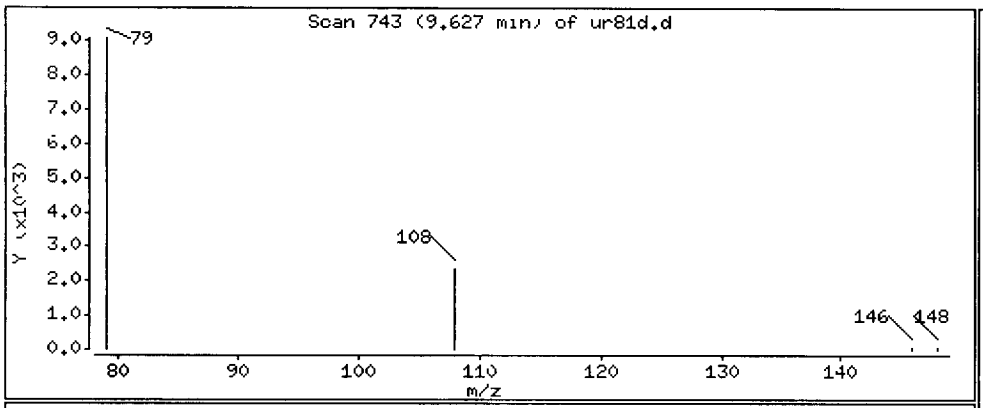
Operator: YZ

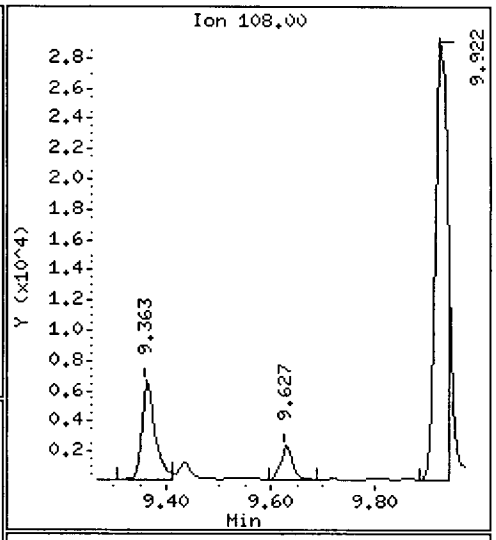
Column phase: ZB-5msi

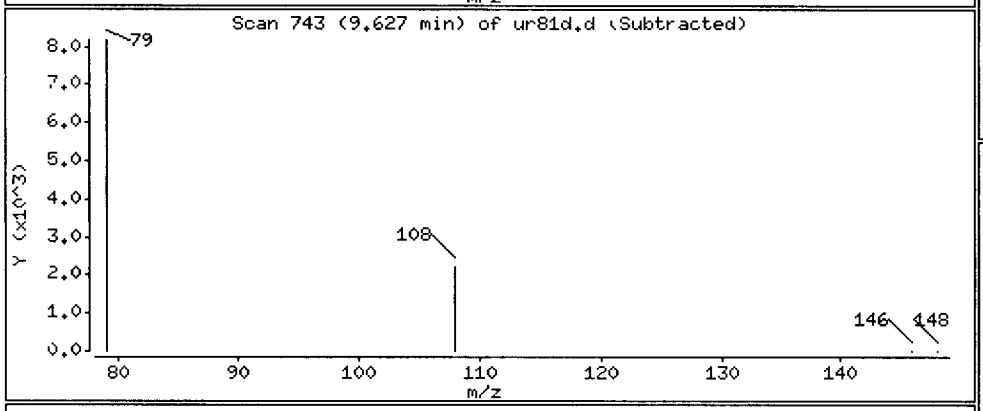
Column diameter: 0.25

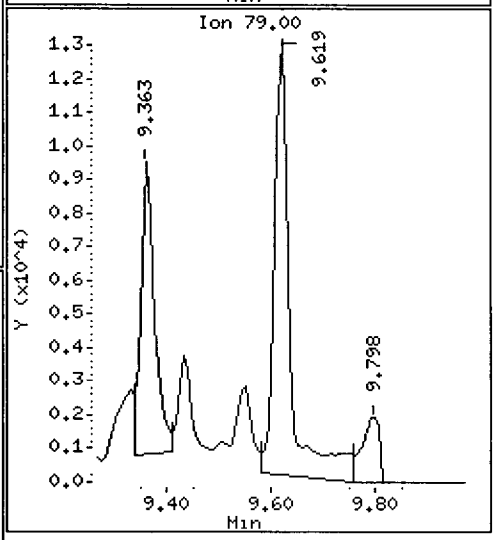
13 2-Methylphenol

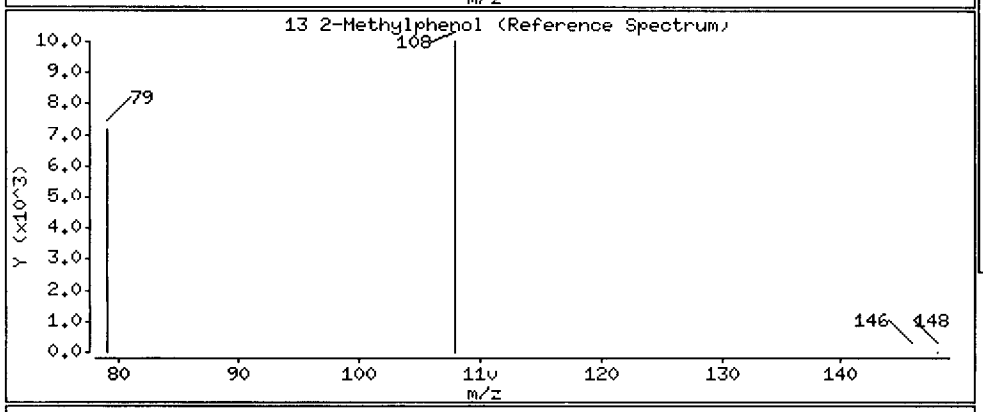
Concentration: 3.320 ug/kg

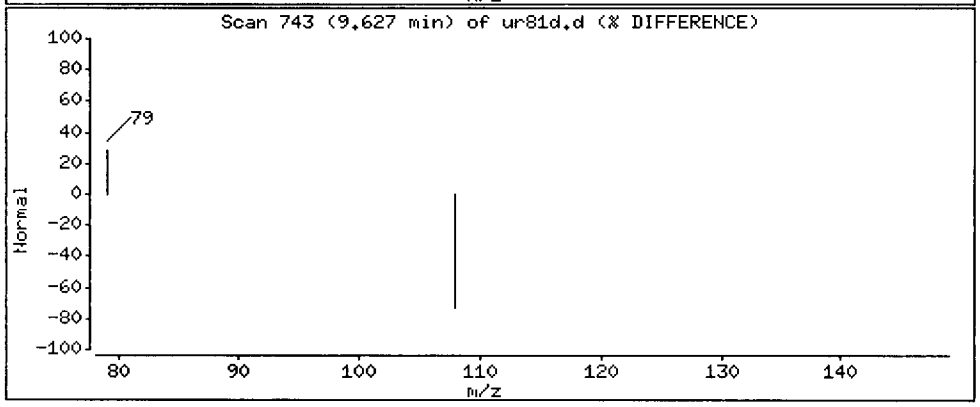












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Date : 08-MAY-2012 19:43

Client ID: IJ12-02

Instrument: nt10.i

Sample Info: UR81D

Volume Injected (uL): 1.0

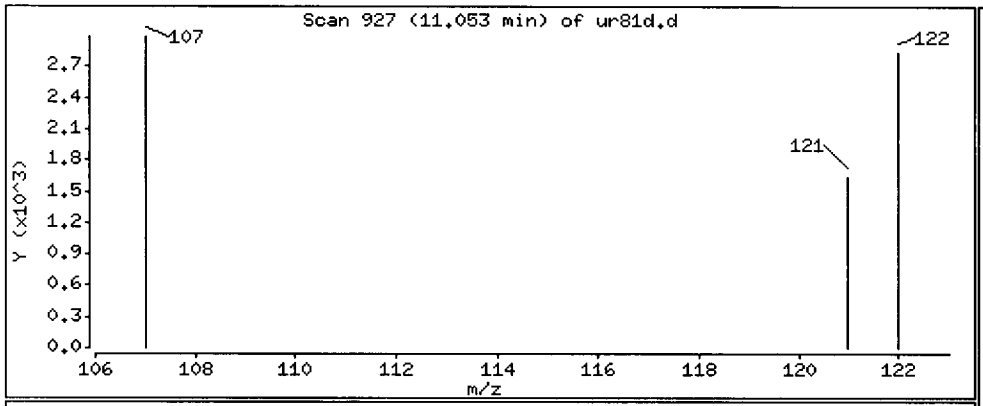
Operator: YZ

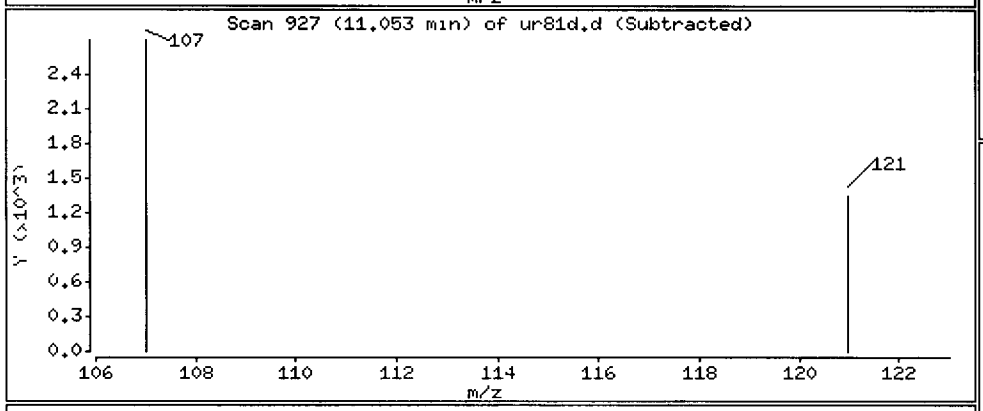
Column phase: ZB-5msi

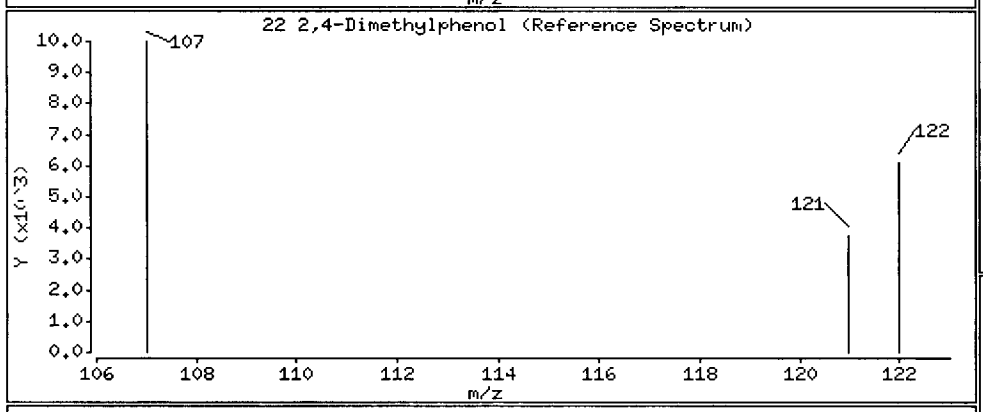
Column diameter: 0.25

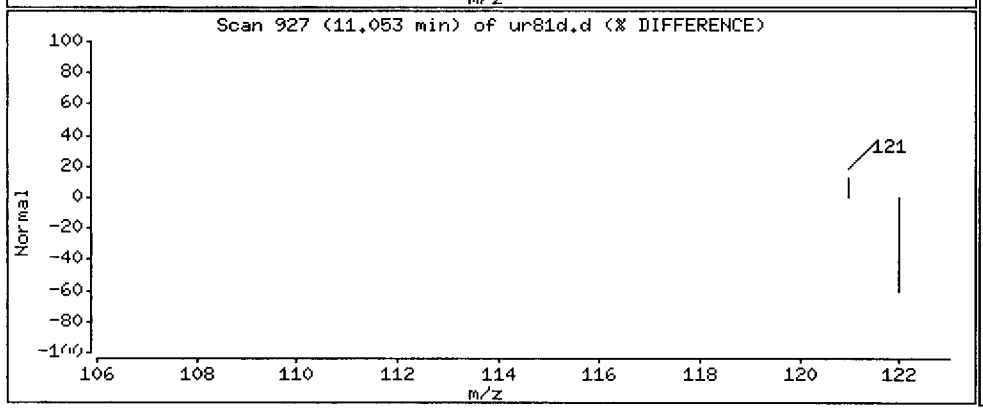
22 2,4-Dimethylphenol

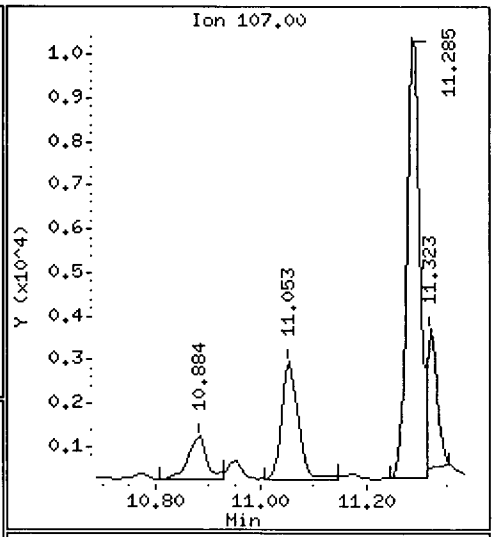
Concentration: 5.936 ug/kg

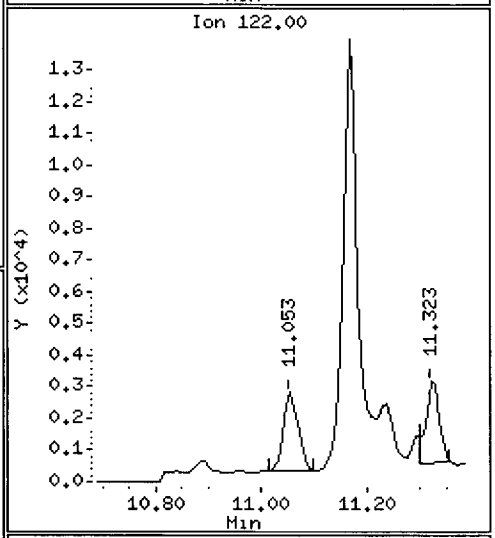


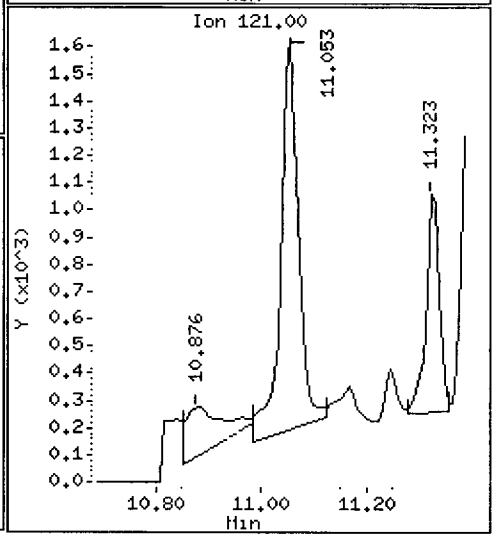












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Date : 08-MAY-2012 19:43

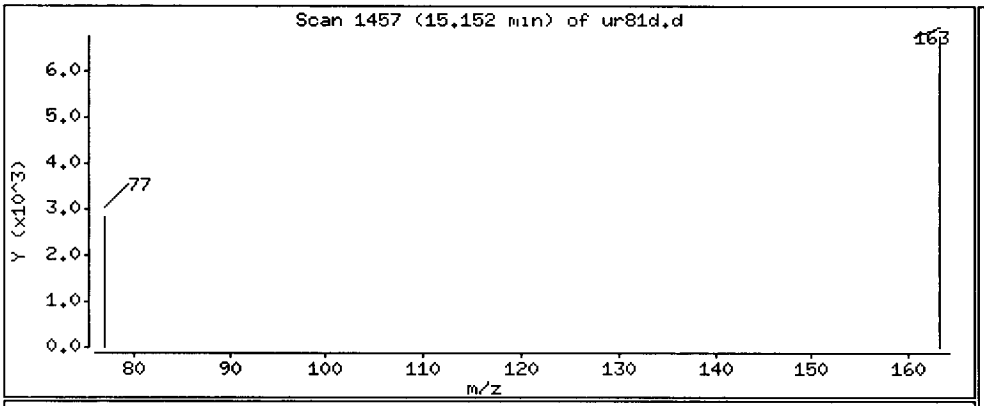
Client ID: IJ12-02 | Instrument: nt10.i

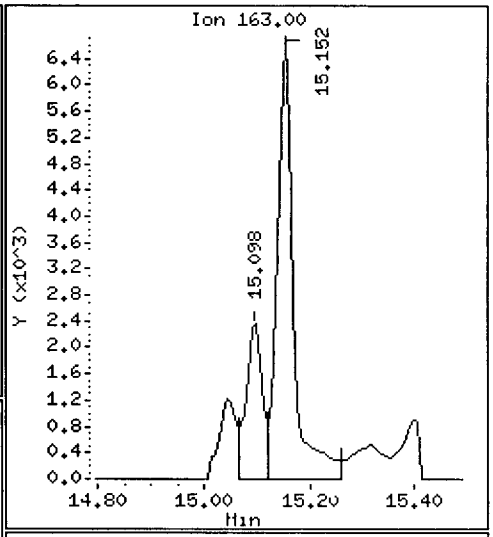
Sample Info: UR81D

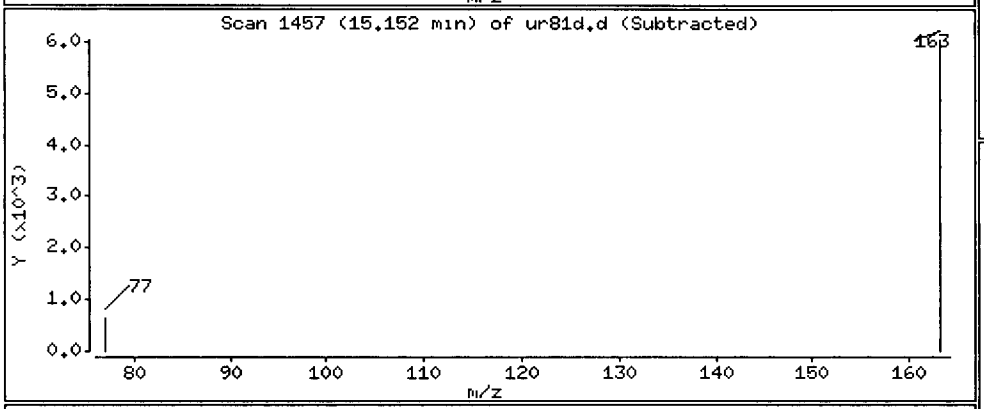
Volume Injected (uL): 1.0 | Operator: YZ

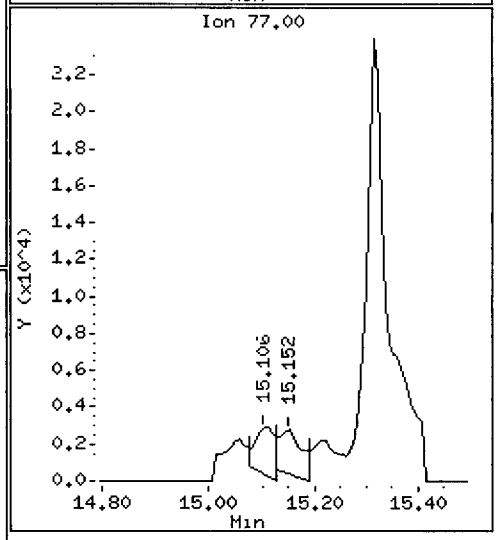
Column phase: ZB-5msi | Column diameter: 0.25

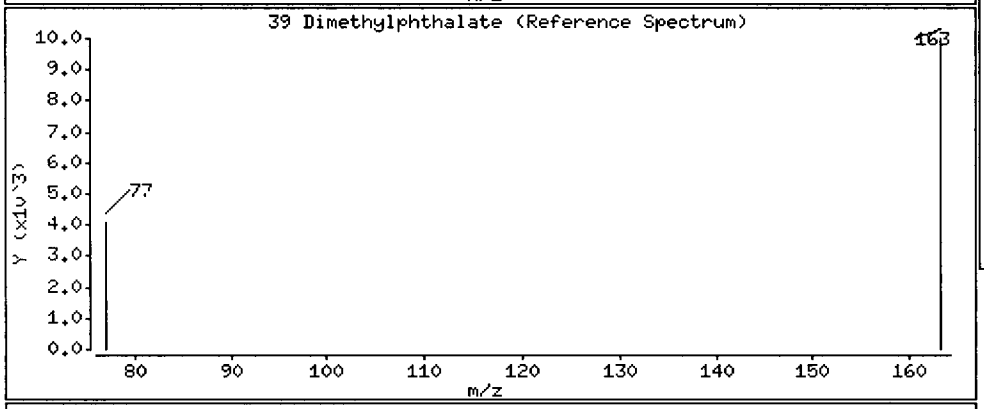
39 Dimethylphthalate | Concentration: 8.186 ug/kg

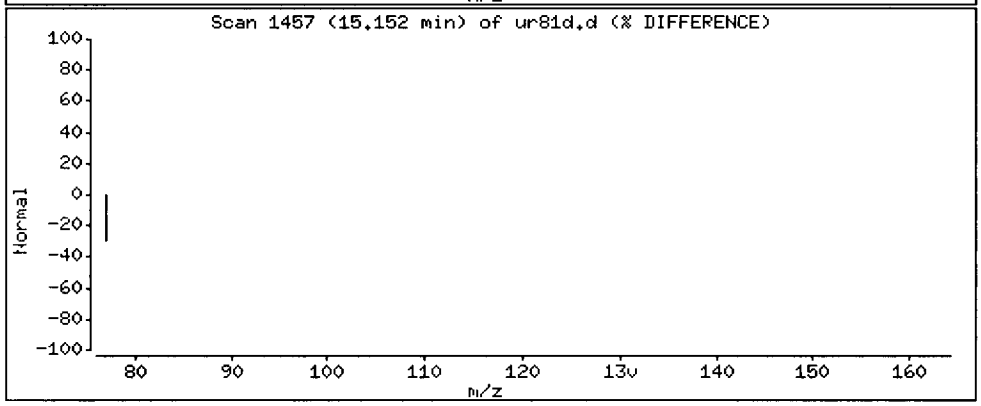












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Date : 08-MAY-2012 19:43

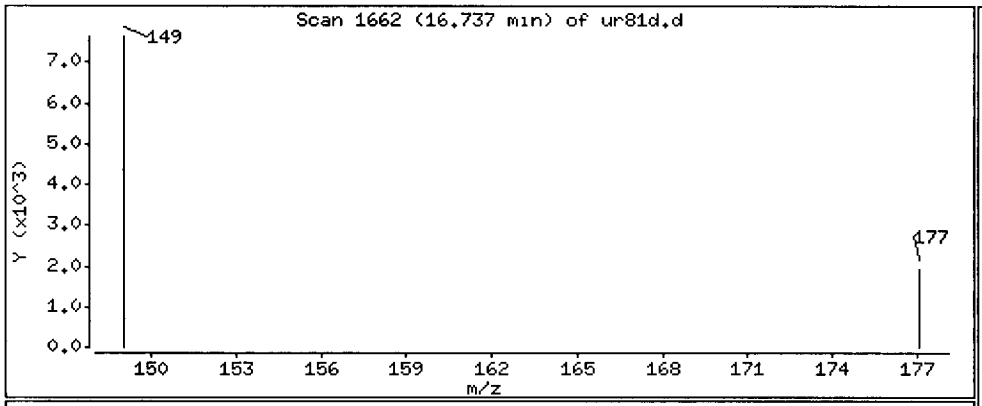
Client ID: IJ12-02 Instrument: nt10.i

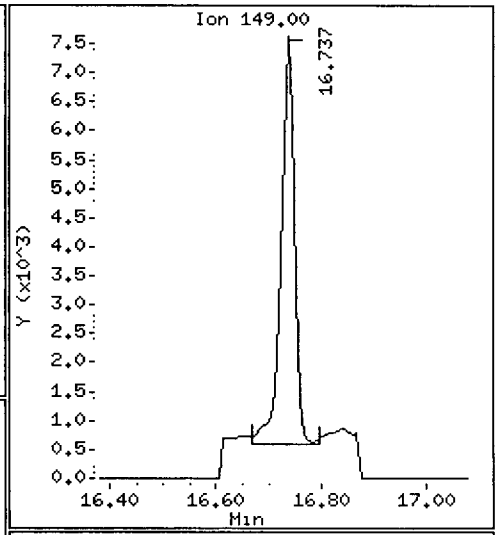
Sample Info: UR81D

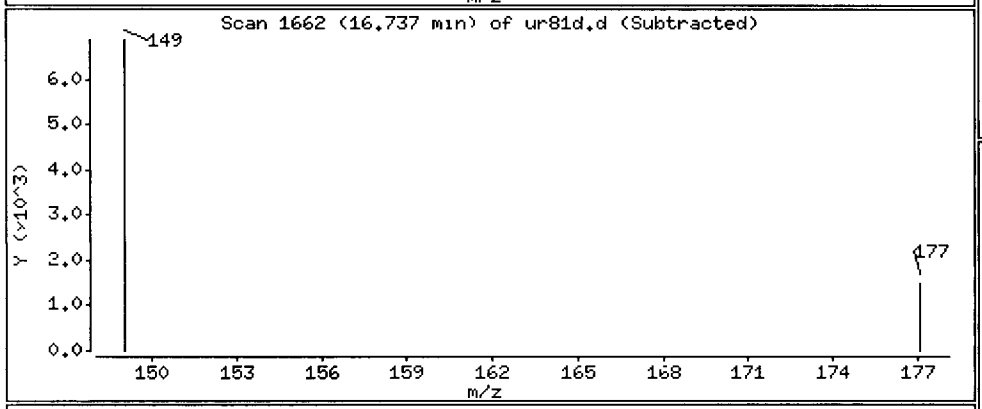
Volume Injected (uL): 1.0 Operator: YZ

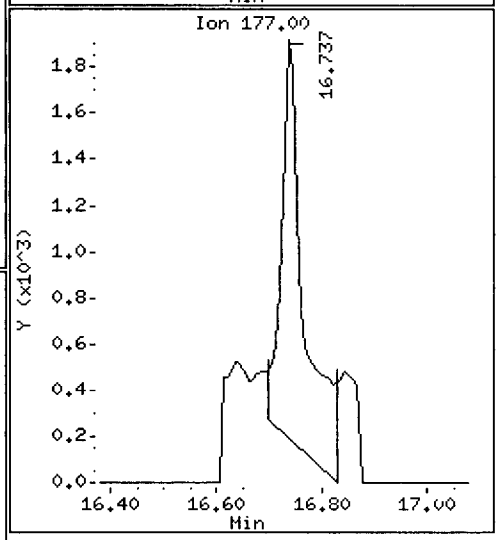
Column phase: ZB-5ms1 Column diameter: 0.25

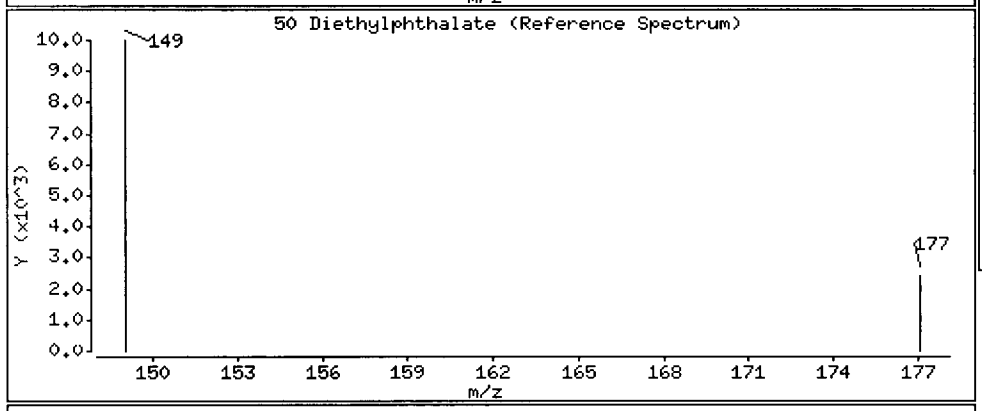
50 Diethylphthalate Concentration: 6.509 ug/kg

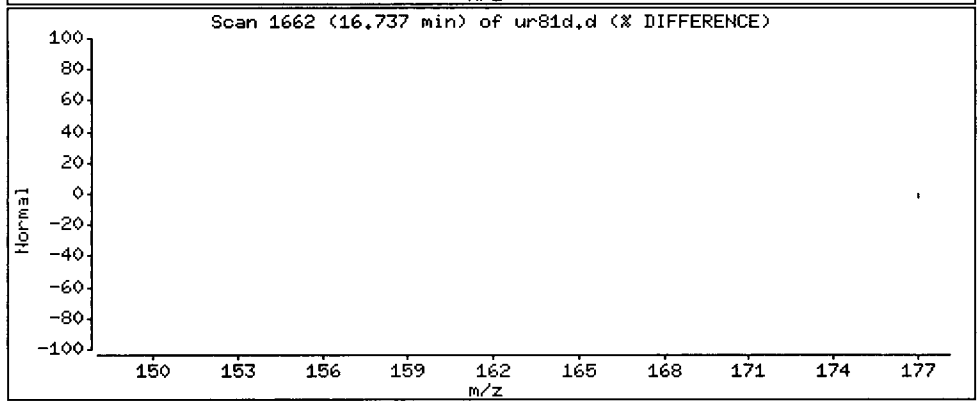












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Date : 08-MAY-2012 19:43

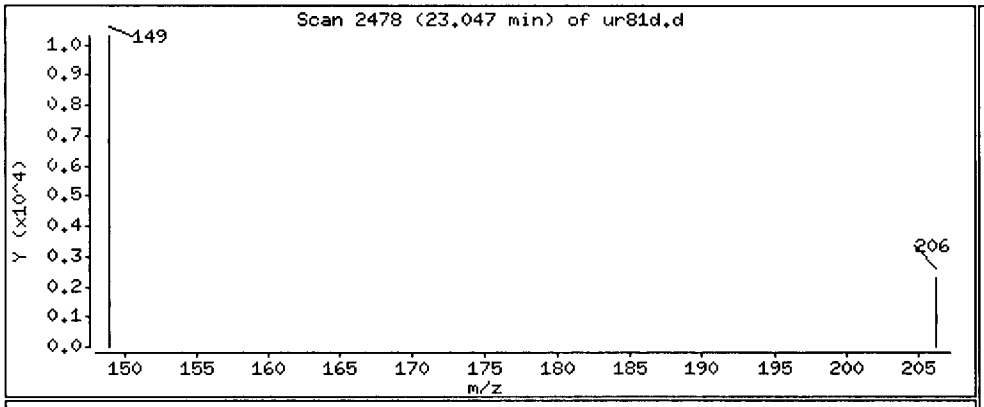
Client ID: IJ12-02 Instrument: nt10.i

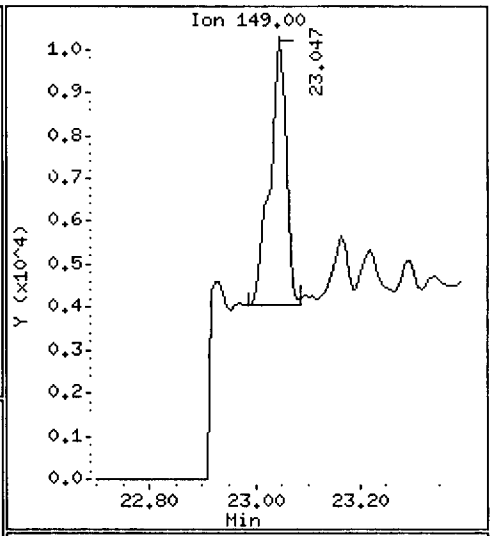
Sample Info: UR81D

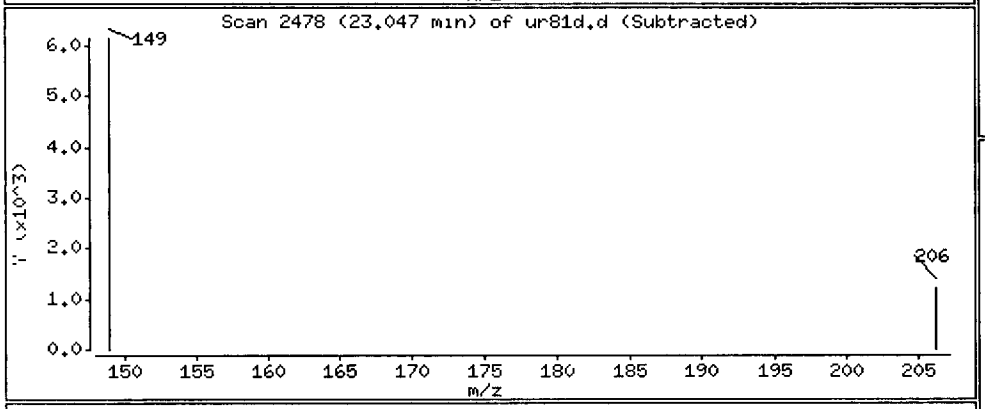
Volume Injected (uL): 1.0 Operator: YZ

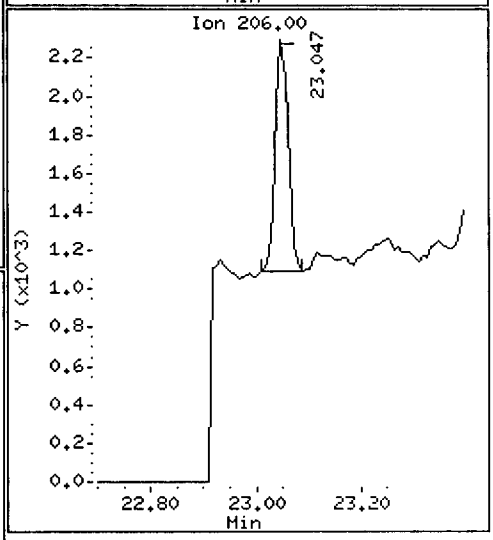
Column phase: ZB-5msi Column diameter: 0.25

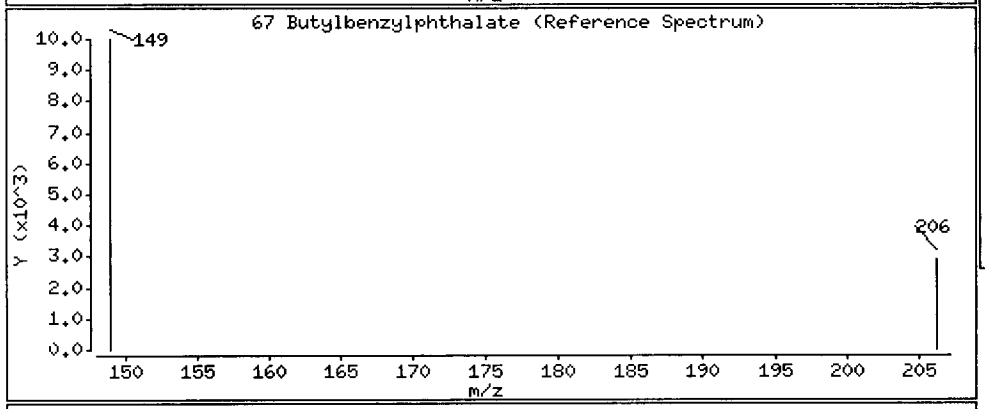
67 Butylbenzylphthalate Concentration: 10.39 ug/kg

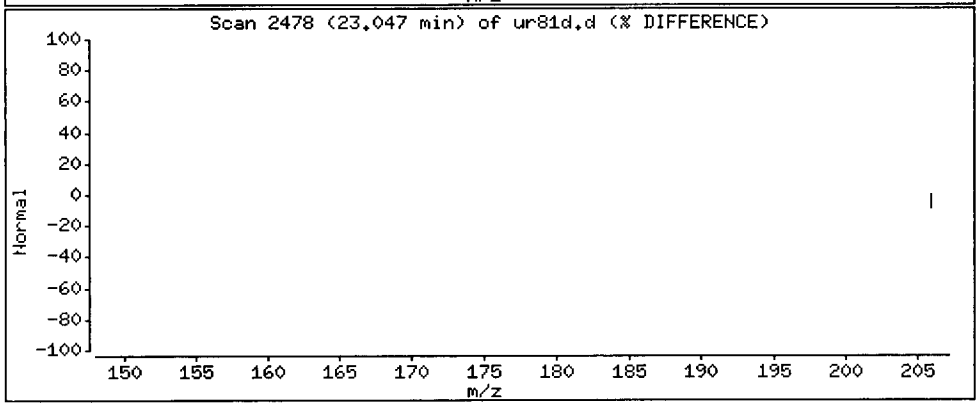












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Date : 08-MAY-2012 19:43

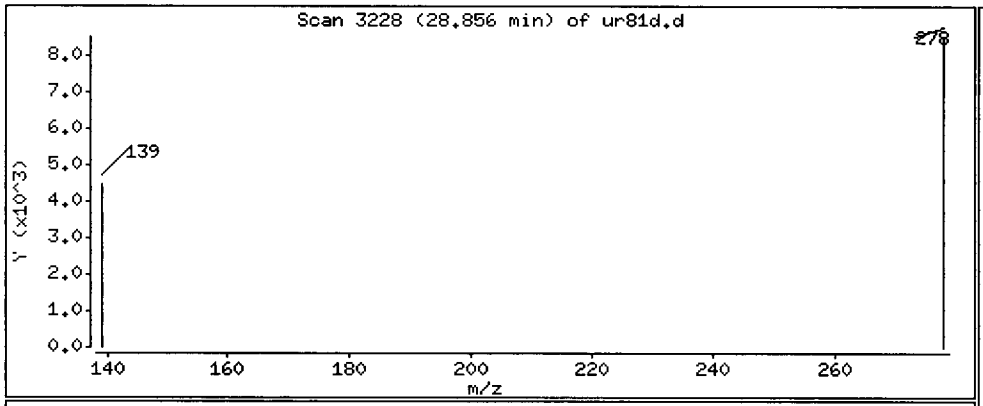
Client ID: IJ12-02 | Instrument: nt10.i

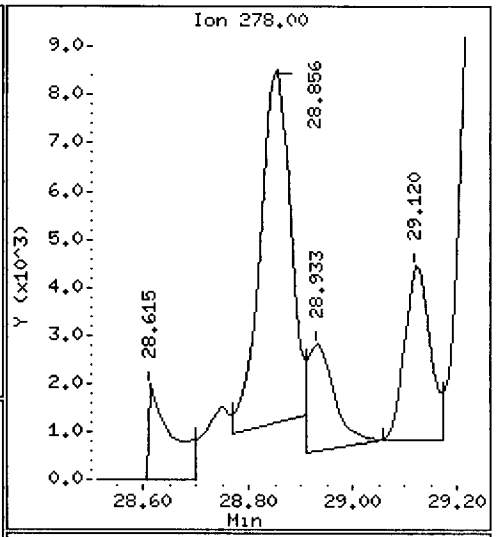
Sample Info: UR81D

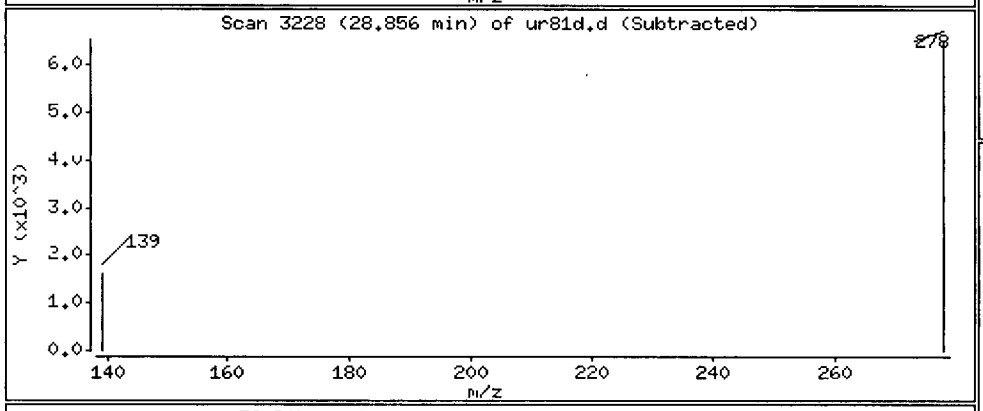
Volume Injected (uL): 1.0 | Operator: YZ

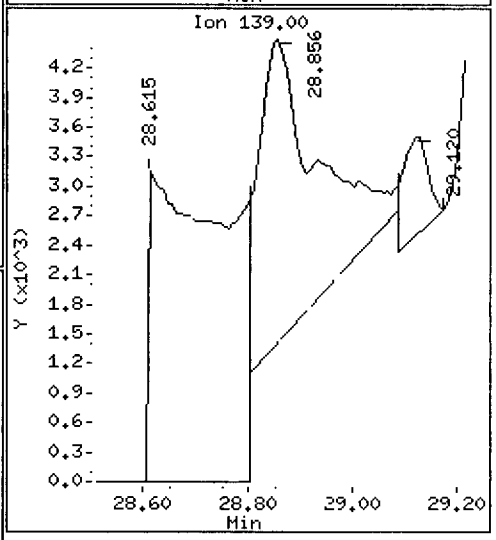
Column phase: ZB-5ms1 | Column diameter: 0.25

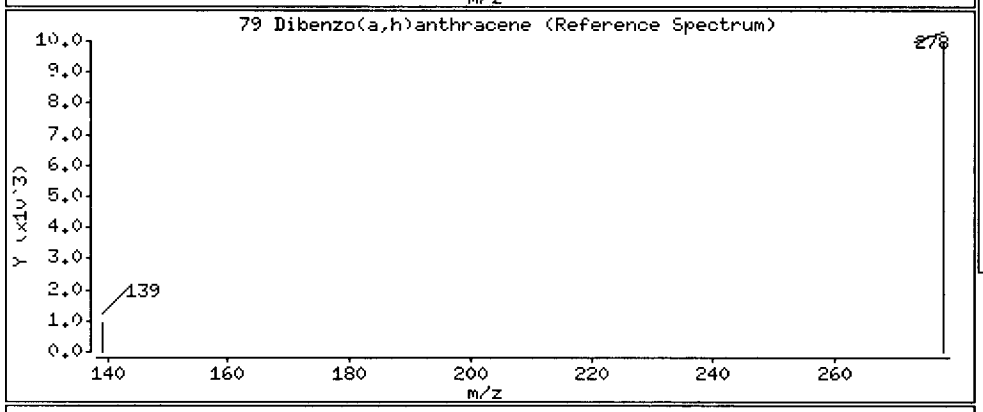
79 Dibenzo(a,h)anthracene | Concentration: 13.46 ug/kg

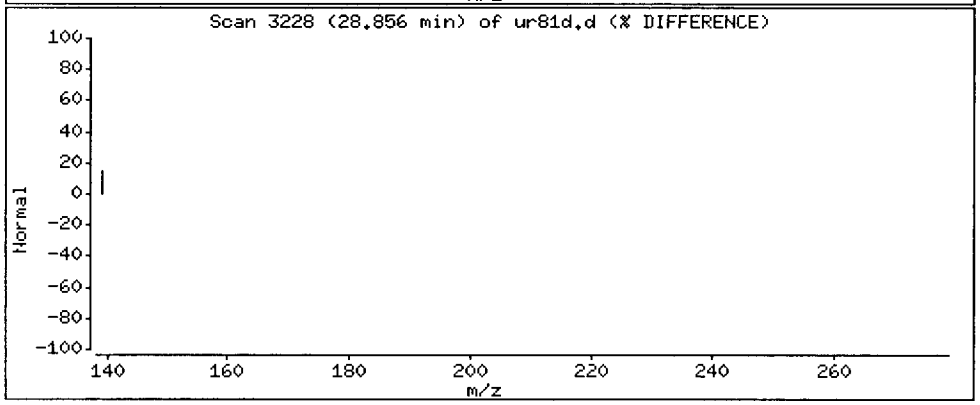






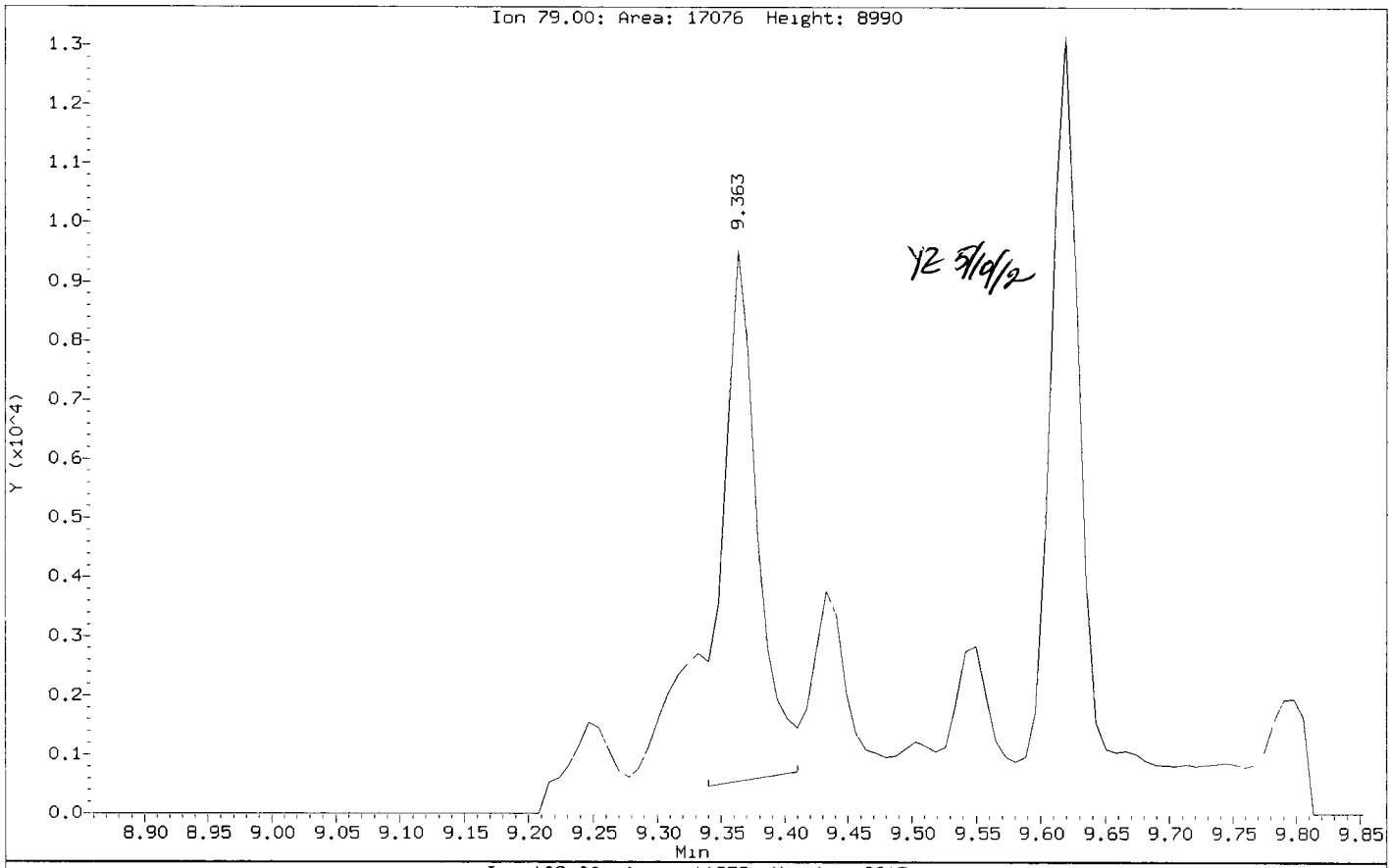


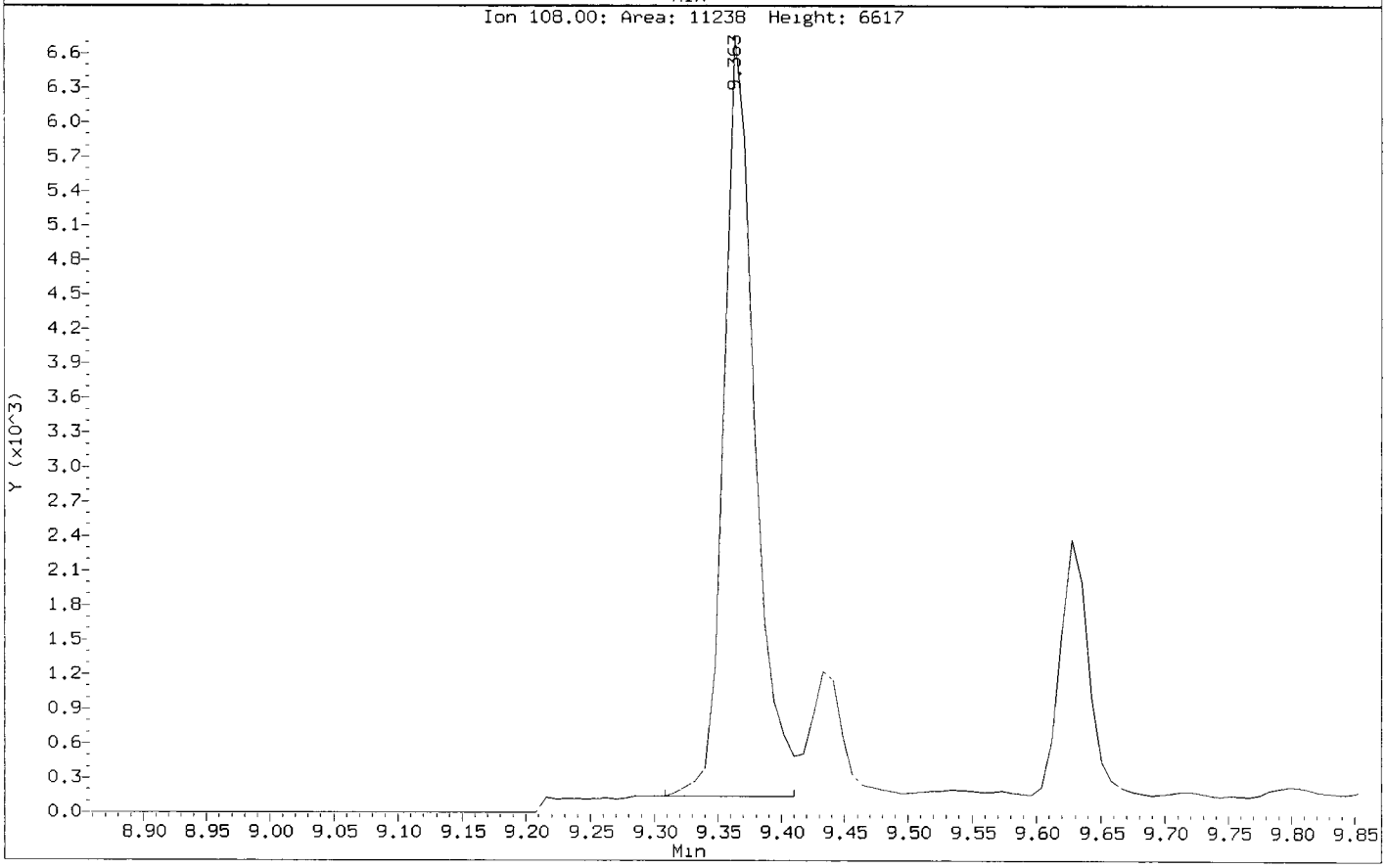




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d
Injection Date: 08-MAY-2012 19:43
Instrument: nt10.i
Client Sample ID: IJ12-02

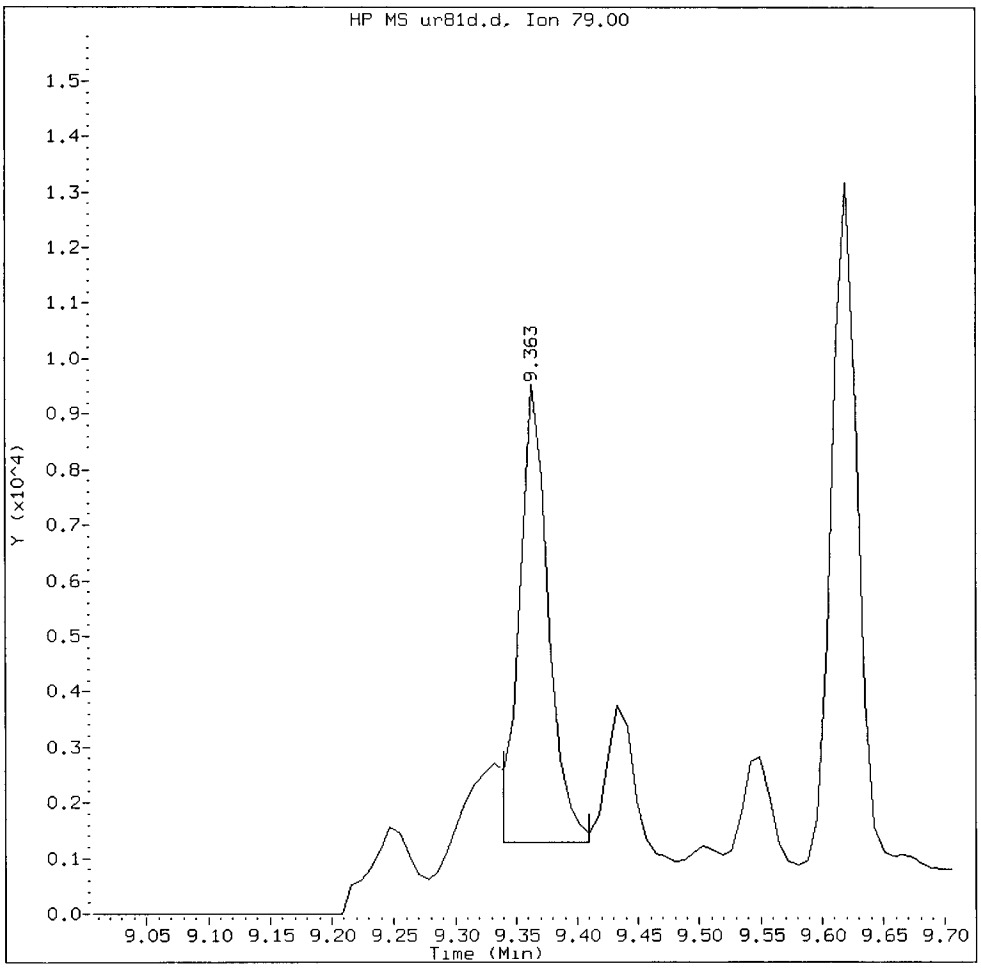
Compound: Benzyl alcohol
CAS Number: 100-51-6





UR81D, /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Benzyl alcohol Amount: 0.22 Area: 13811



MANUAL INTEGRATION for Benzyl alcohol

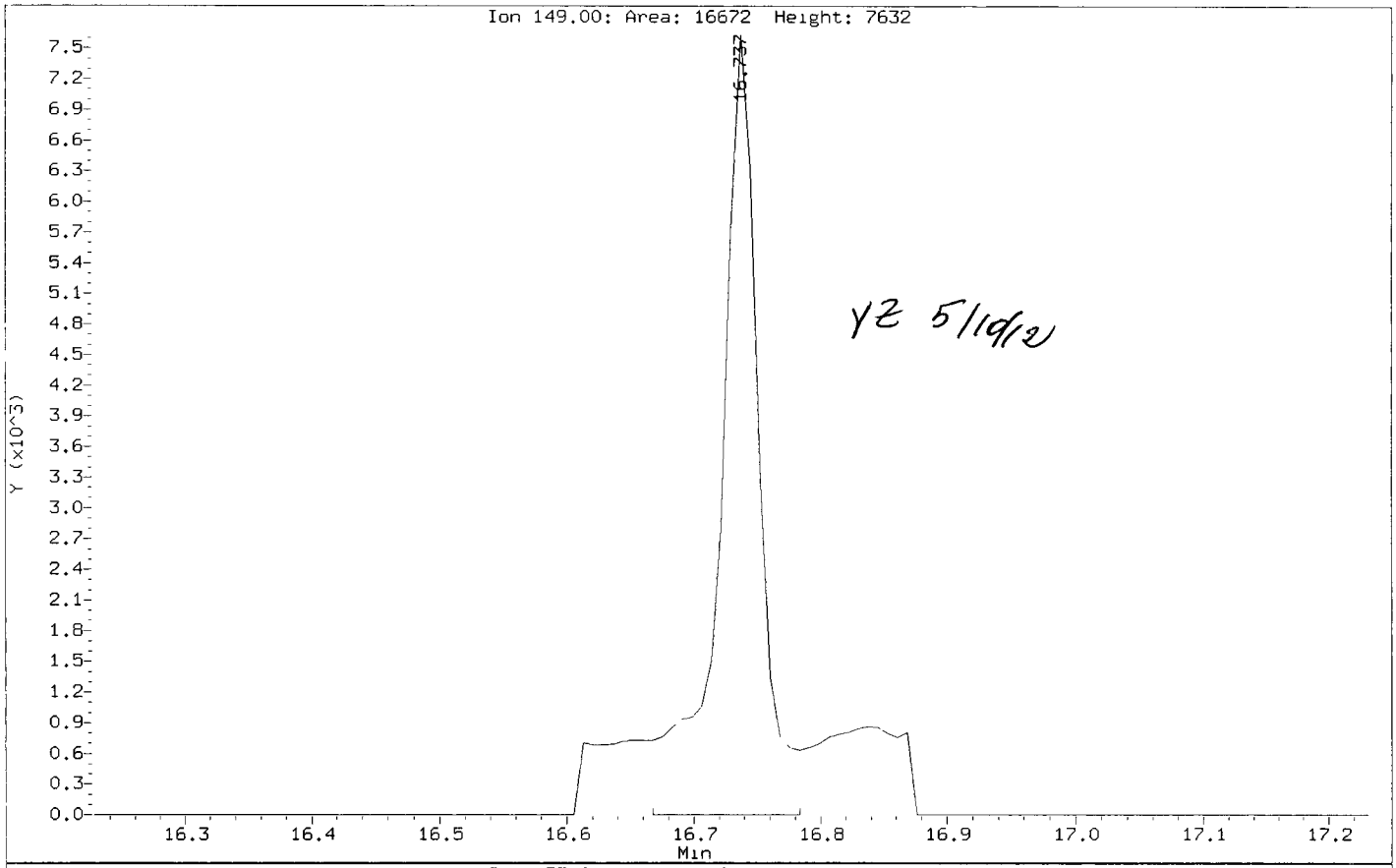
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

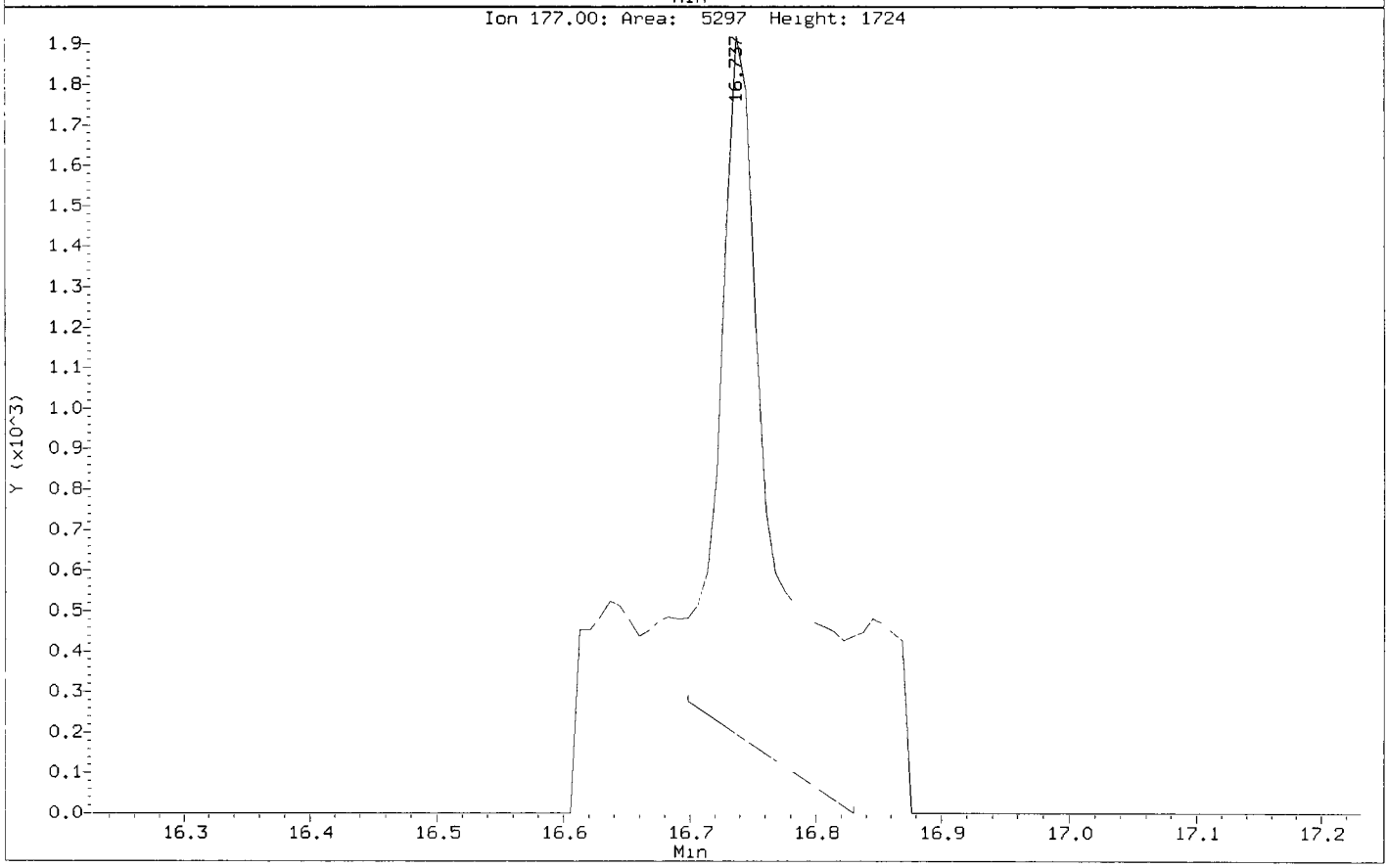
5. Other _____

Analyst: VZ Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81d.d
Injection Date: 08-MAY-2012 19:43
Instrument: nt10.i
Client Sample ID: IJ12-02

Compound: Diethylphthalate
CAS Number: 84-66-2

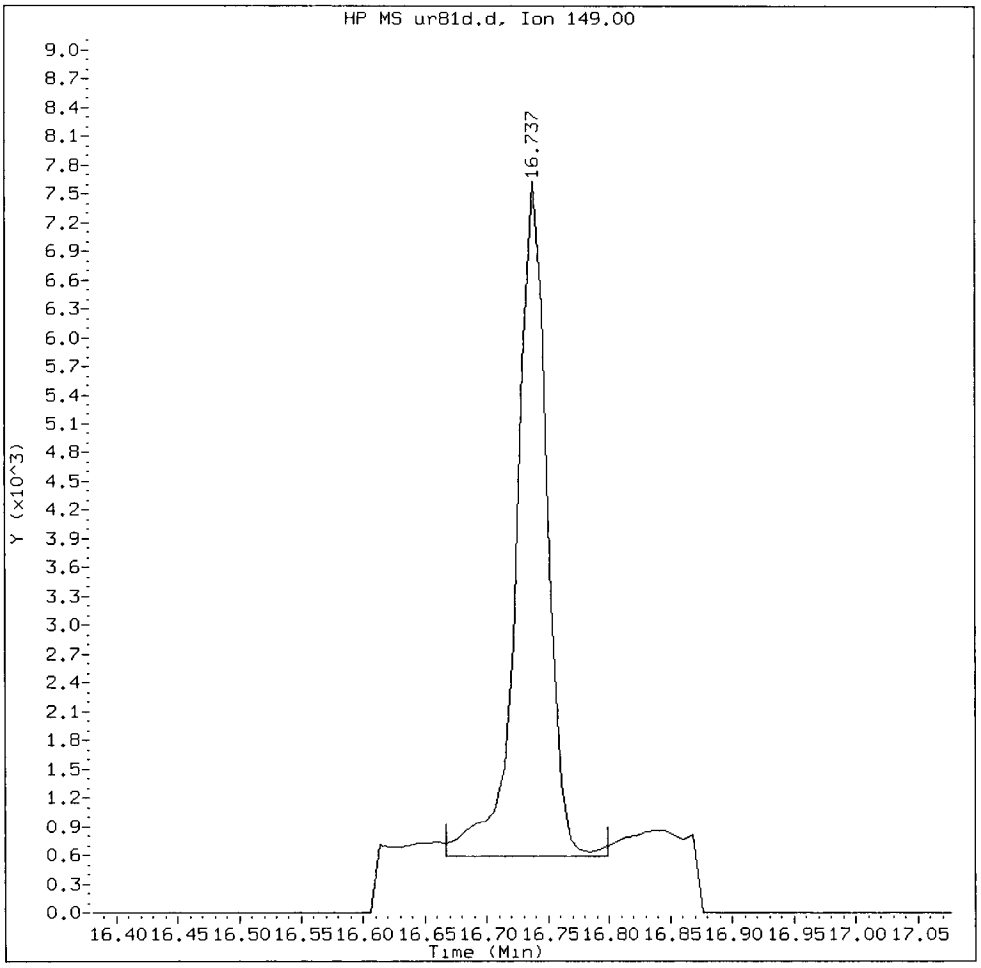




UR81:01057

UR81D, /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Diethylphthalate Amount: 0.07 Area: 12346



MANUAL INTEGRATION for Diethylphthalate

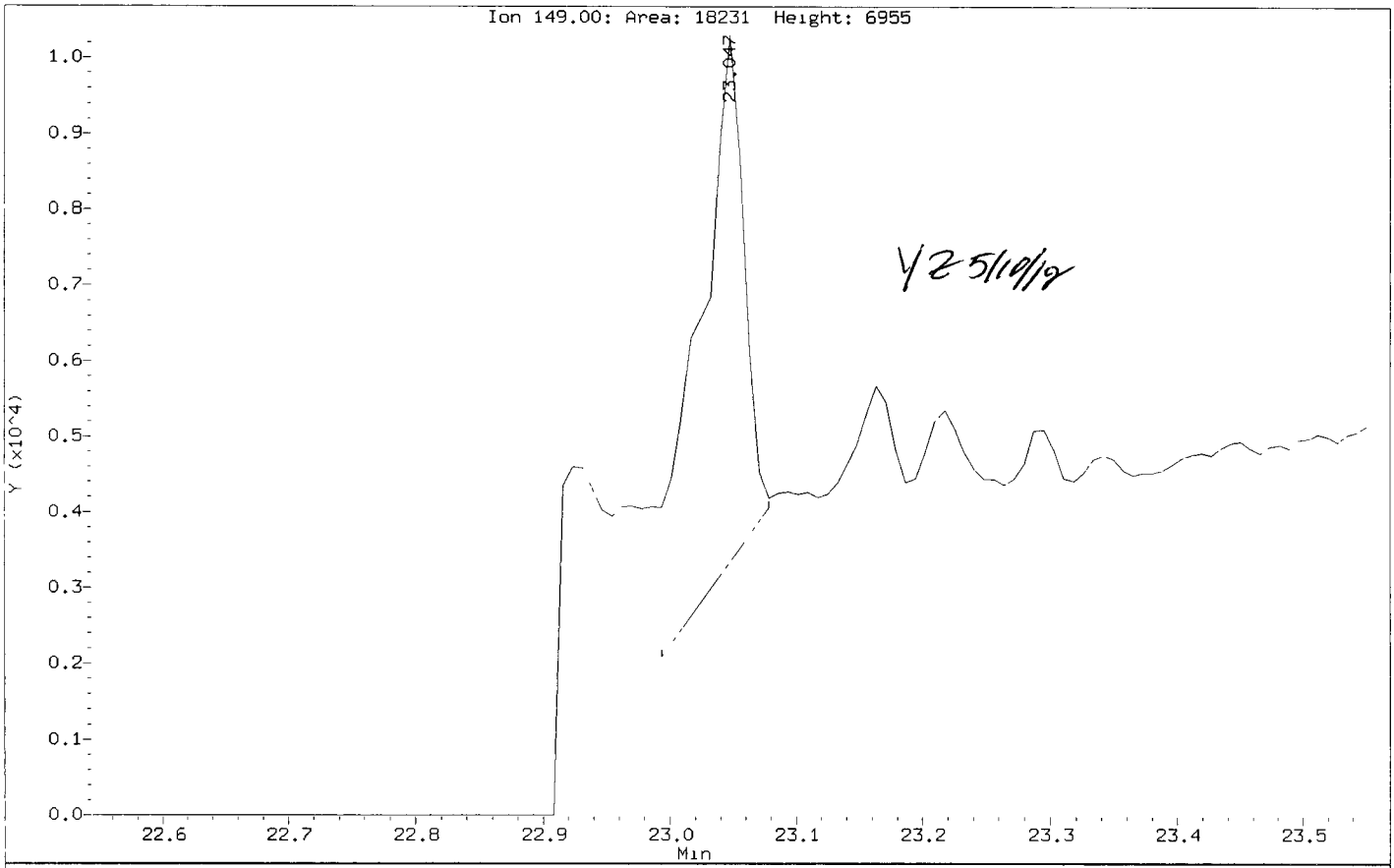
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

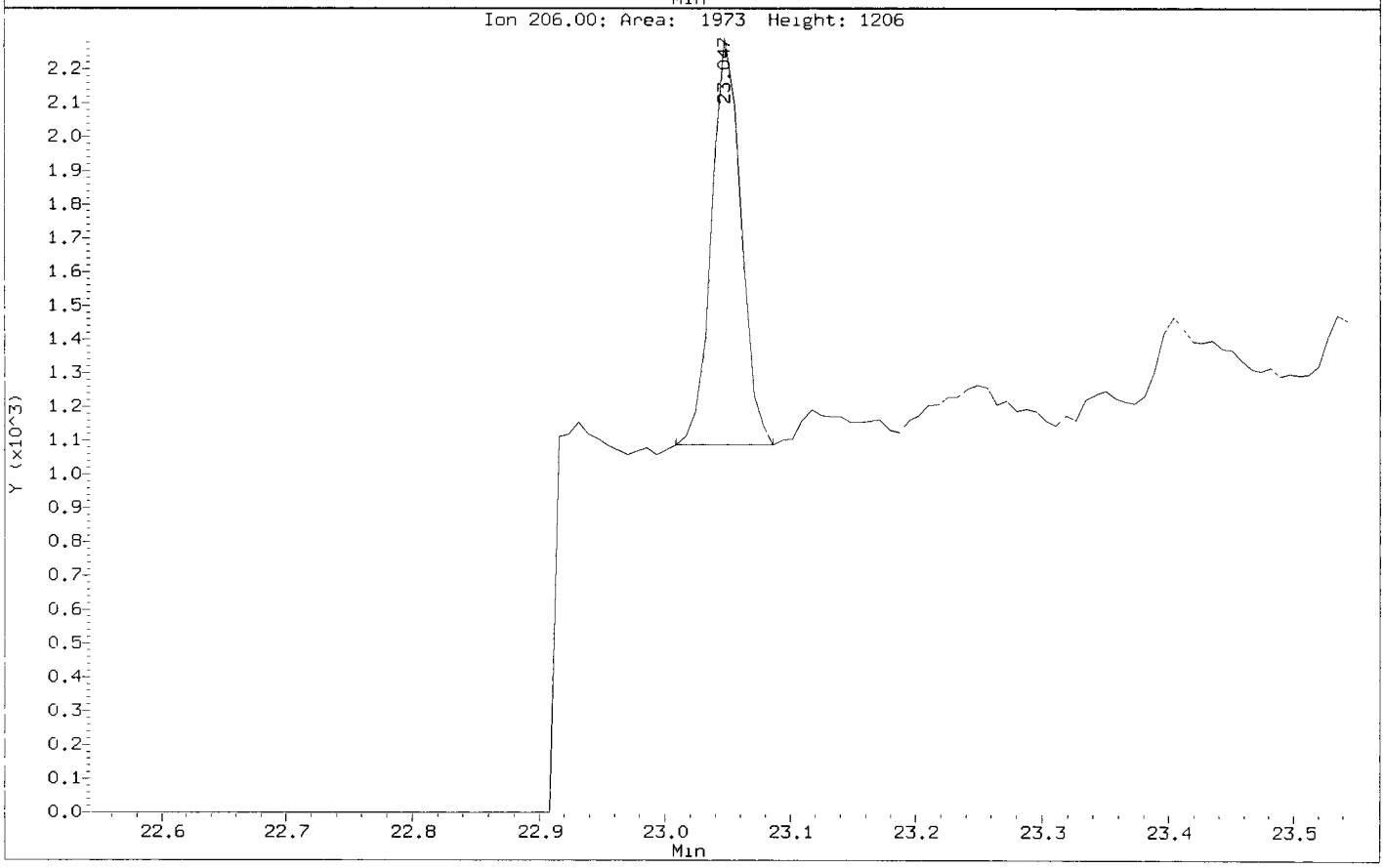
5. Other _____

Analyst: VR Date: 5/10/12

Data File: /chem1/nt10.1/20120508.b/SIM.b/ur81d.d
Injection Date: 08-MAY-2012 19:43
Instrument: nt10.1
Client Sample ID: IJ12-02

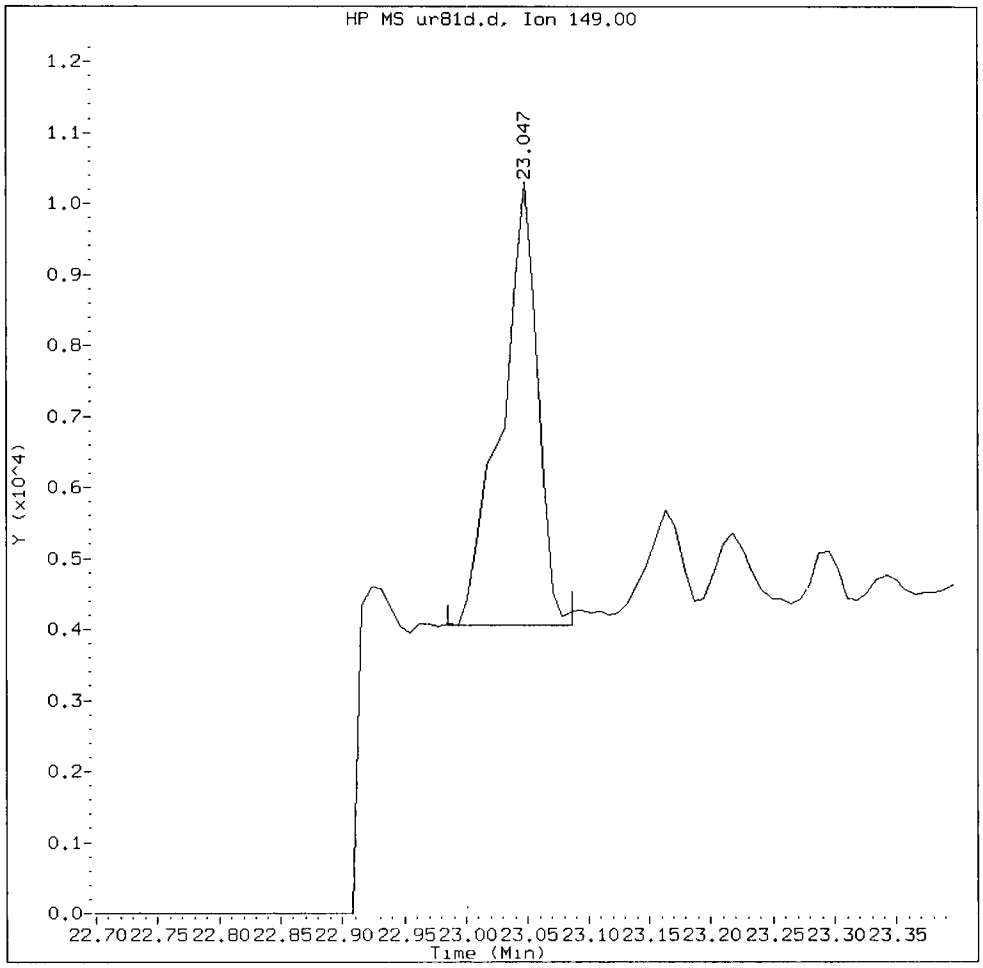
Compound: Butylbenzylphthalate
CAS Number: 85-68-7





UR81D, /chem1/nt10.i/20120508.b/SIM.b/ur81d.d

Butylbenzylphthalate Amount: 0.11 Area: 12843



MANUAL INTEGRATION for Butylbenzylphthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - ur81d.d

Lab ID: UR81D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/9/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81e.d
Lab Smp Id: UR81E Client Smp ID: IJ12-04
Inj Date : 08-MAY-2012 20:19
Operator : YZ Inst ID: nt10.i
Smp Info : UR81E
Misc Info : 12-7396
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	16.07000	Weight of sample extracted (g)
M	35.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.696	6.680	(0.740)	397895	3.95317	382.6
3 Phenol	94	8.434	8.418	(0.932)	185382	1.39159	134.7
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9 053	9.045	(1.000)	293188	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9.364	9.355	(1.034)	10469	0.15351	14.86(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
15 4-Methylphenol	108	9.930	9.914	(1.097)	21483	0.19134	18.52
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.732	11 724	(1 000)	1152151	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
39 Dimethylphthalate	163	15.152	15.144	(0.969)	18334	0.10333	10.00(M)
* 42 Acenaphthene-d10	162	15 640	15 632	(1.000)	580230	4 00000	
50 Diethylphthalate	149	16.745	16 729	(1 071)	7971	0 04104	3.972(M)
54 N-Nitrosodiphenylamine	169	17.131	17.123	(0 905)	7536	~~0.05562~~	~~5.383(M)~~
57 Hexachlorobenzene	284	Compound Not Detected					
58 Pentachlorophenol	266	18.660	18.644	(0.986)	14580	0.34368	33 26
* 59 Phenanthrene-d10	188	18.923	18.908	(1.000)	1008426	4.00000	
$ 66 Terphenyl-d14	244	22.119	22.095	(0.922)	554166	3.13891	303.8
67 Butylbenzylphthalate	149	23.056	23.047	(0.961)	13168	0.09855	9.538(M)
* 69 Chrysene-d12	240	23.985	23.969	(1.000)	1109027	4.00000	
* 77 Perylene-d12	264	26.470	26.446	(1 000)	1100110	4.00000	
79 Dibenzo(a,h)anthracene	278	28.879	28.864	(1.091)	170265	0.72282	69 95(M)
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

(BJ) NOT reported VJ

U

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81e.d
Lab Smp Id: UR81E
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-04
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	293188	-5.80
27 Naphthalene-d8	1166872	583436	2333744	1152151	-1.26
42 Acenaphthene-d10	603218	301609	1206436	580230	-3.81
59 Phenanthrene-d10	1096026	548013	2192052	1008426	-7.99
69 Chrysene-d12	1131082	565541	2262164	1109027	-1.95
77 Perylene-d12	1082499	541250	2164998	1100110	1.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.05
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.08
69 Chrysene-d12	23.97	23.47	24.47	23.98	0.07
77 Perylene-d12	26.45	25.95	26.95	26.47	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

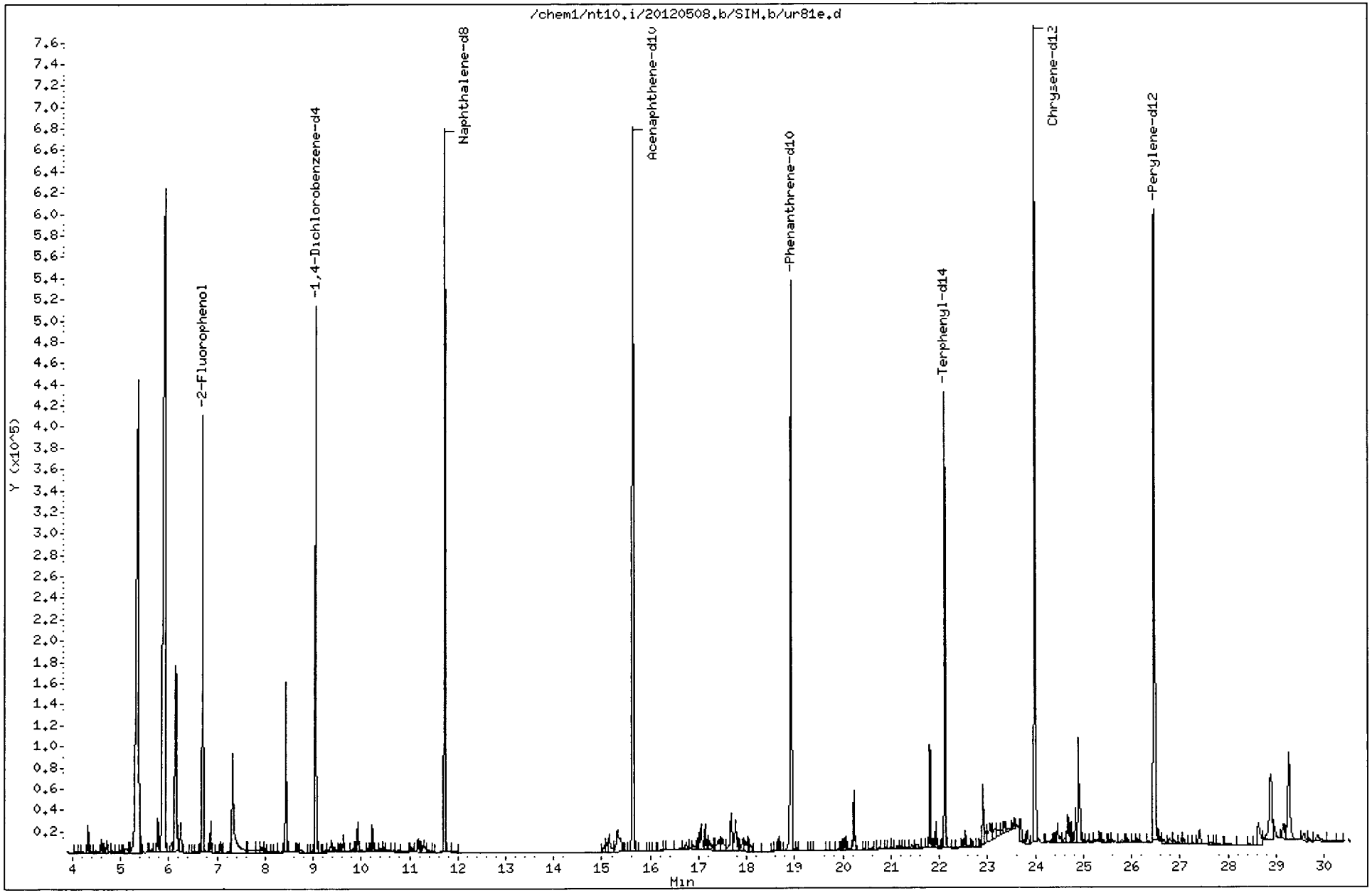
RECOVERY REPORT

Client Name: Anchor QEA, LLC
Client SDG: UR81
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: UR81E
Client Smp ID: IJ12-04
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	725.8	382.6	52.71	30-160
$ 66 Terphenyl-d14	483.9	303.8	62.78	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d
Date : 08-MAY-2012 20:19
Client ID: IJ12-04
Sample Info: UR81E
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Date : 08-MAY-2012 20:19

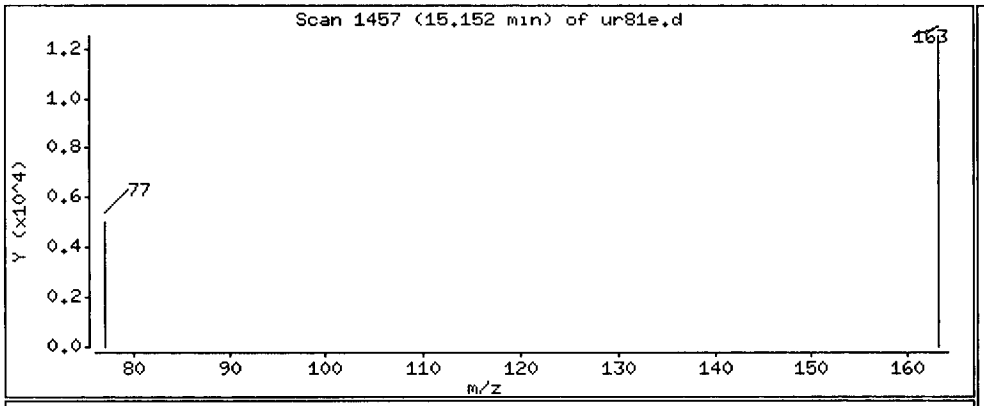
Client ID: IJ12-04 | Instrument: nt10.i

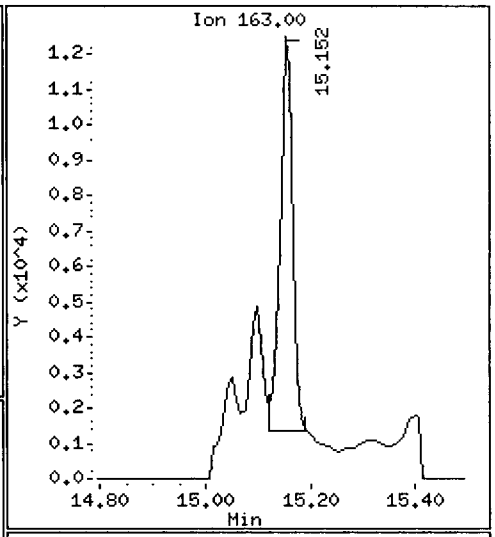
Sample Info: UR81E

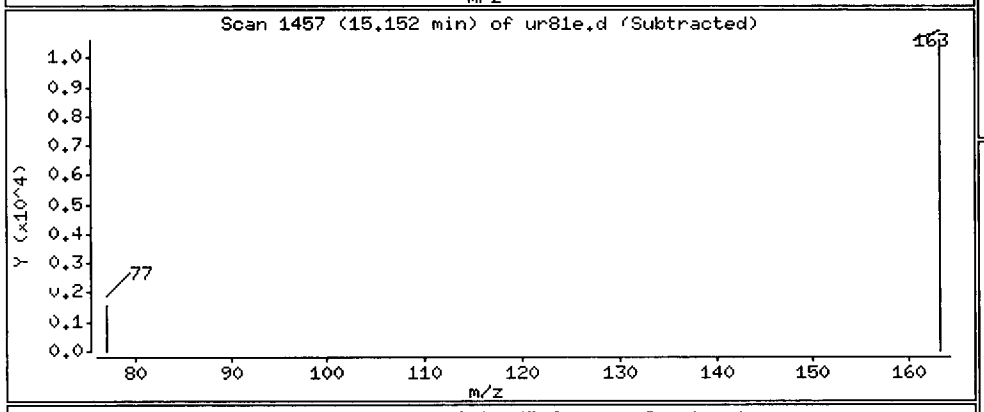
Volume Injected (uL): 1.0 | Operator: YZ

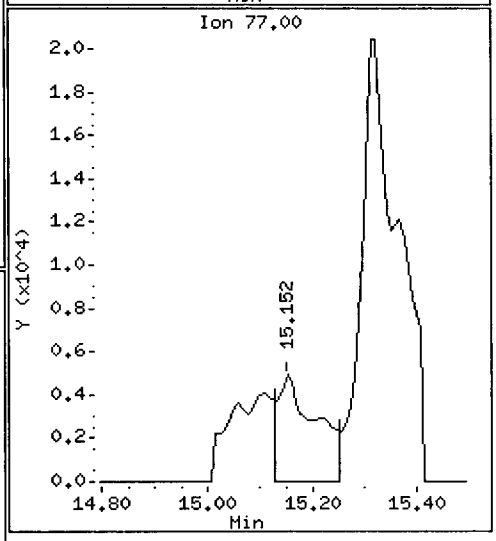
Column phase: ZB-5ms1 | Column diameter: 0.25

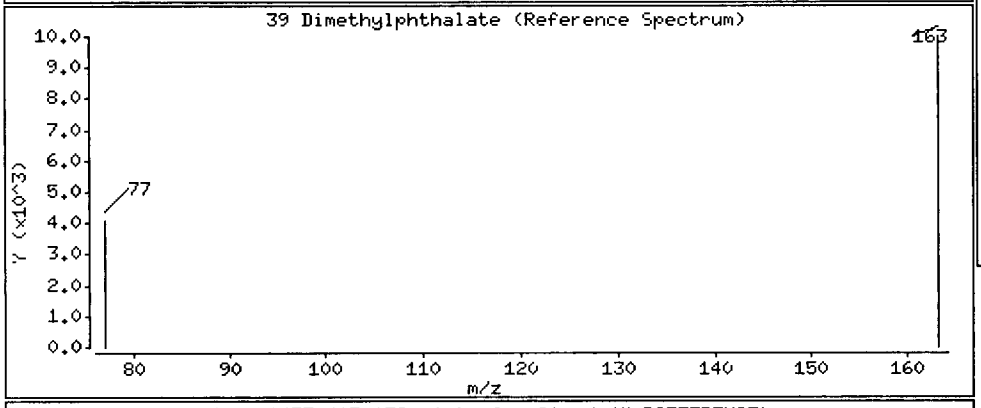
39 Dimethylphthalate | Concentration: 10.00 ug/kg

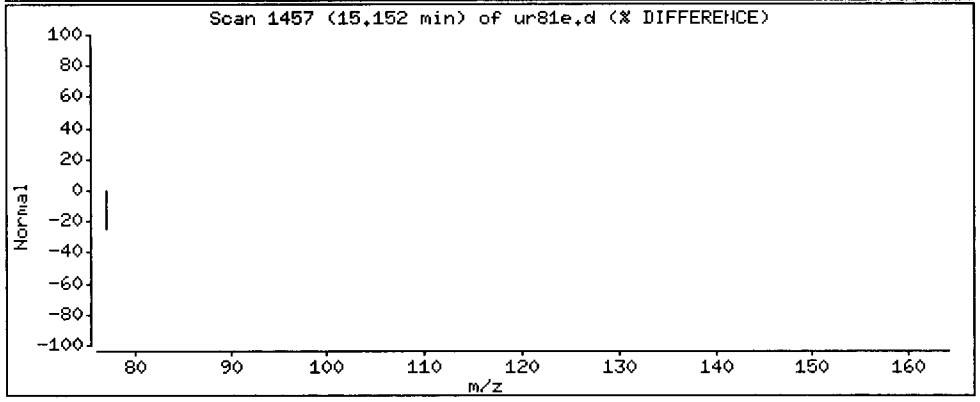












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

Operator: YZ

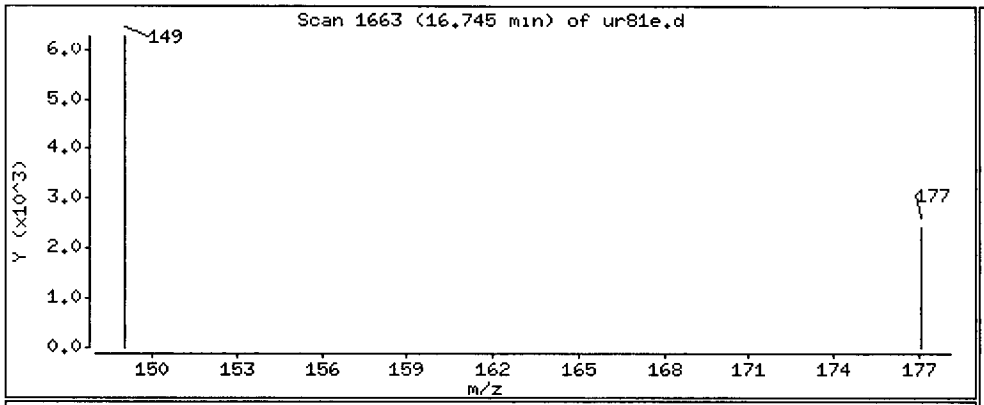
Column phase: ZB-5msi

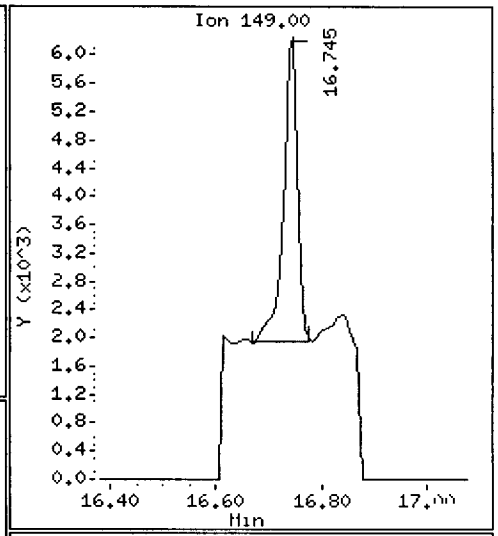
Column diameter: 0.25

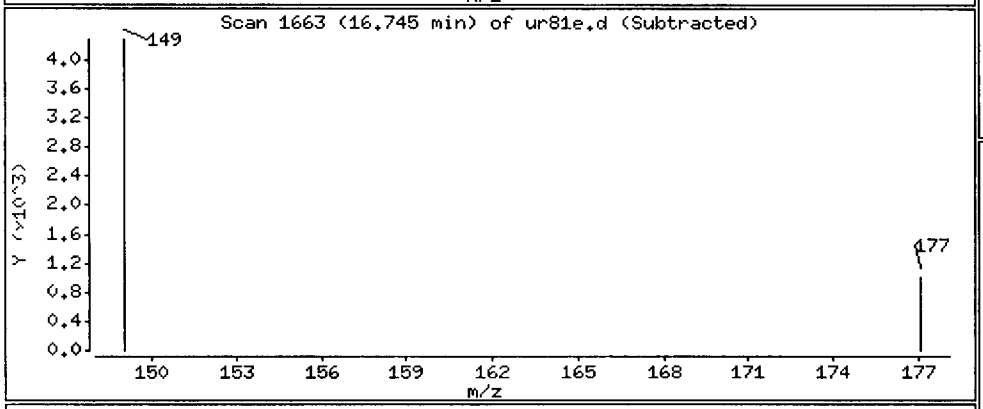
50 Diethylphthalate

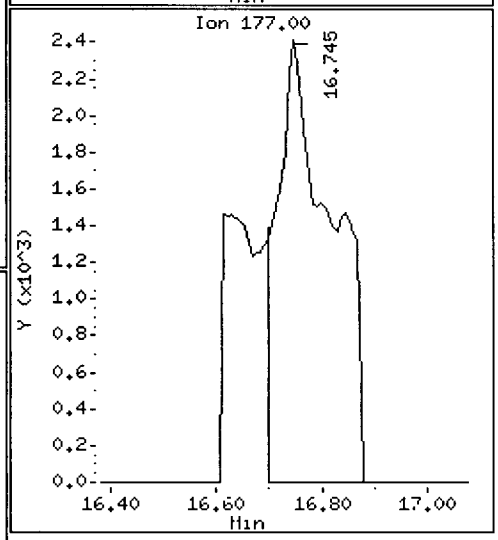
Concentration: 3.972 ug/kg

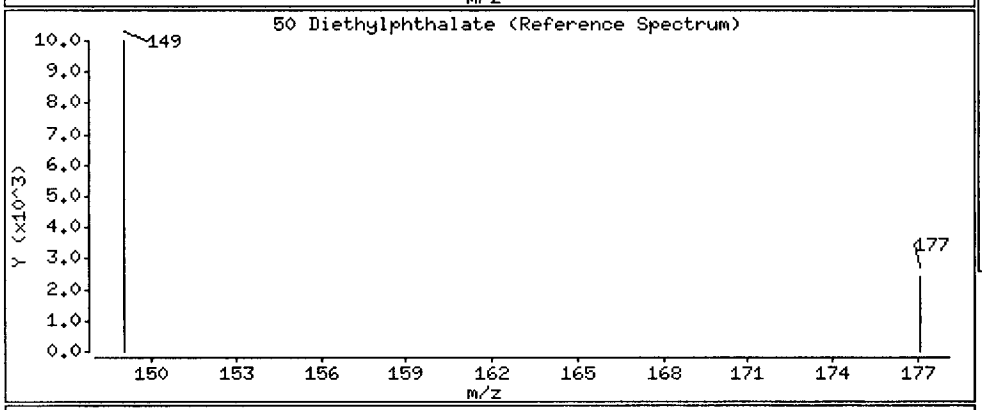
BJ Removed

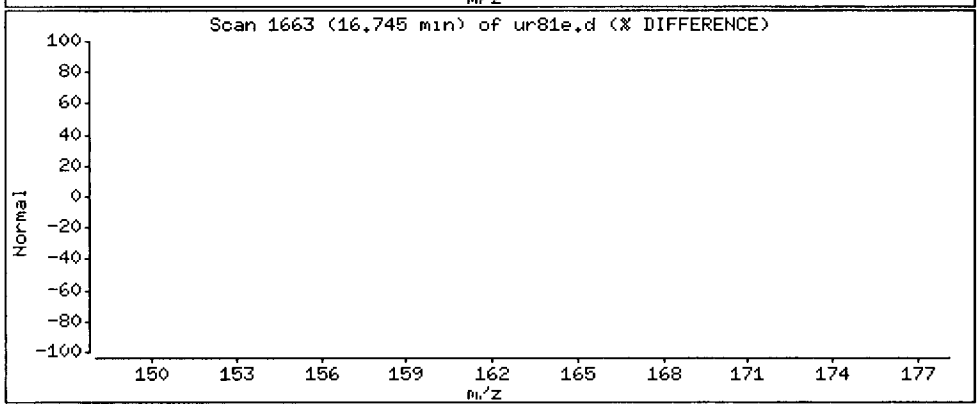












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.i

Sample Info: UR81E

Volume Injected (uL): 1.0

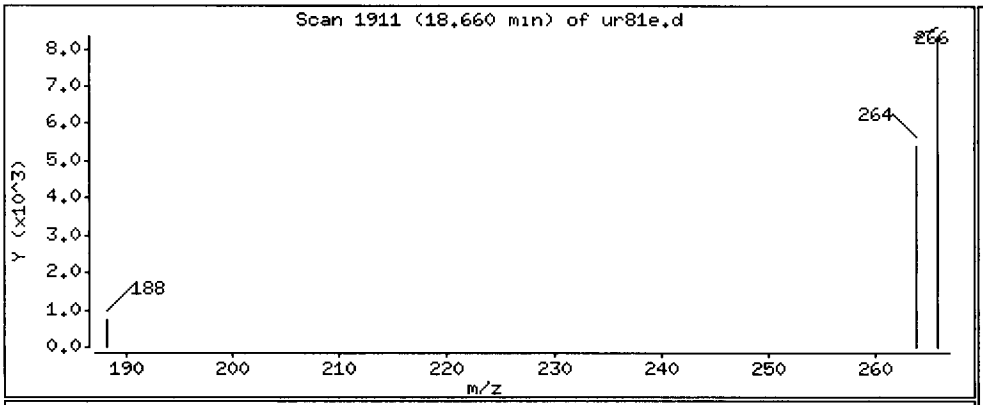
Operator: YZ

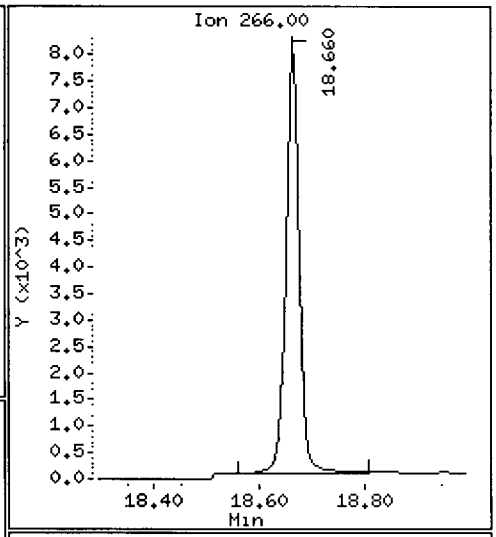
Column phase: ZB-5msi

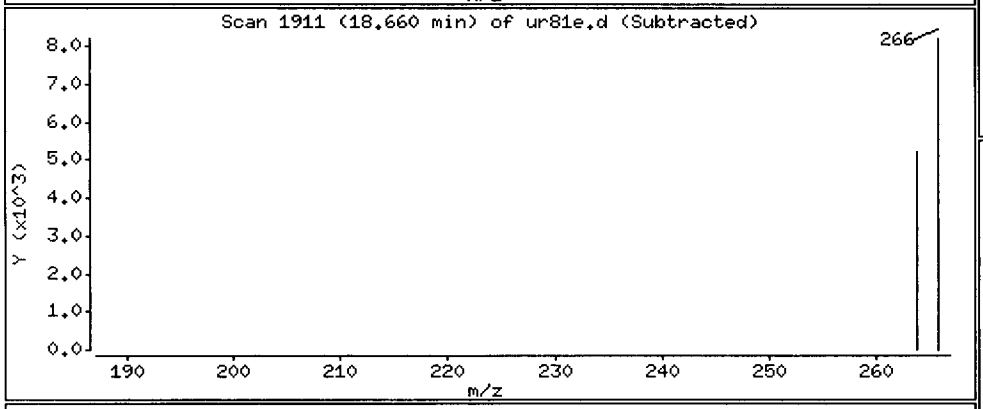
Column diameter: 0.25

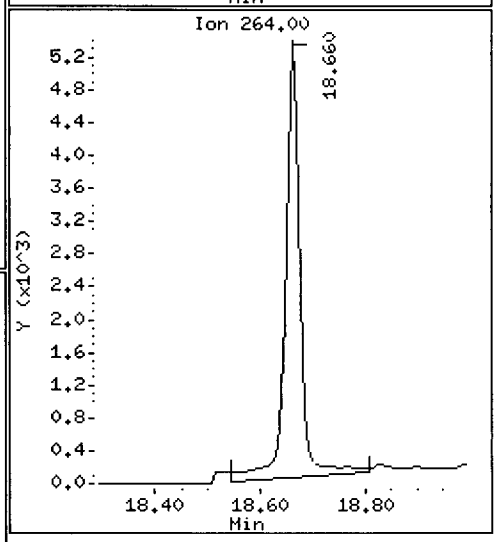
58 Pentachlorophenol

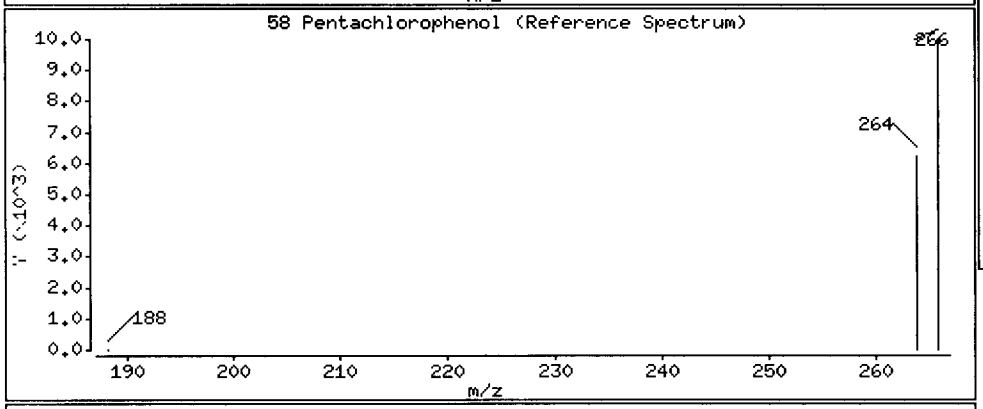
Concentration: 33.26 ug/kg

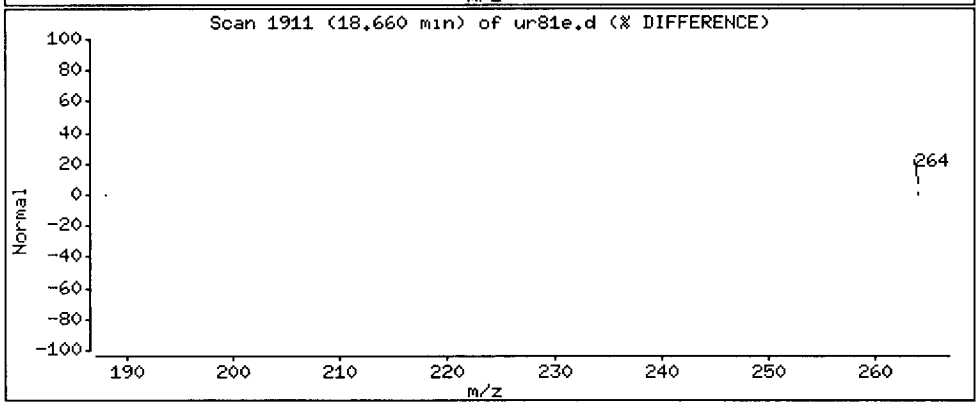












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Date : 08-MAY-2012 20:19

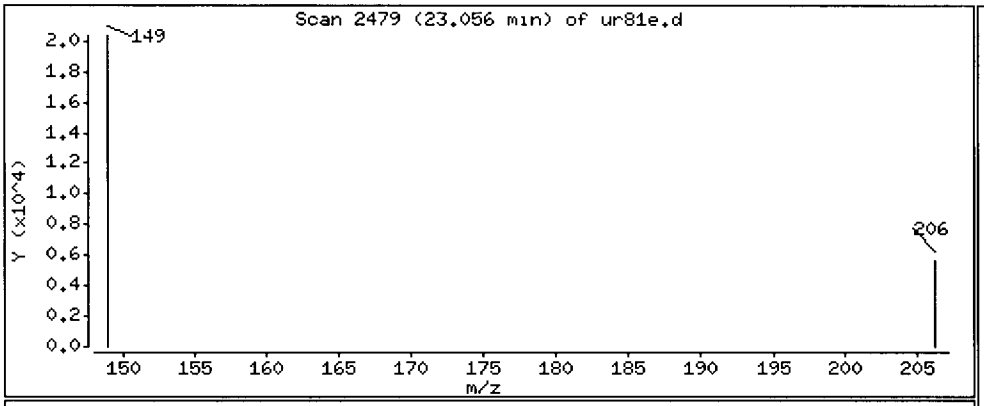
Client ID: IJ12-04 Instrument: nt10.i

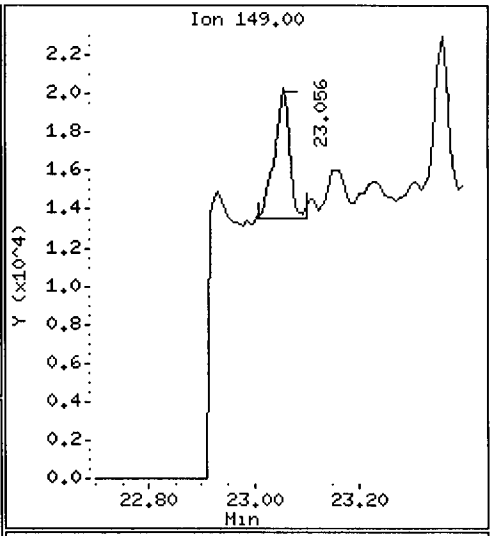
Sample Info: UR81E

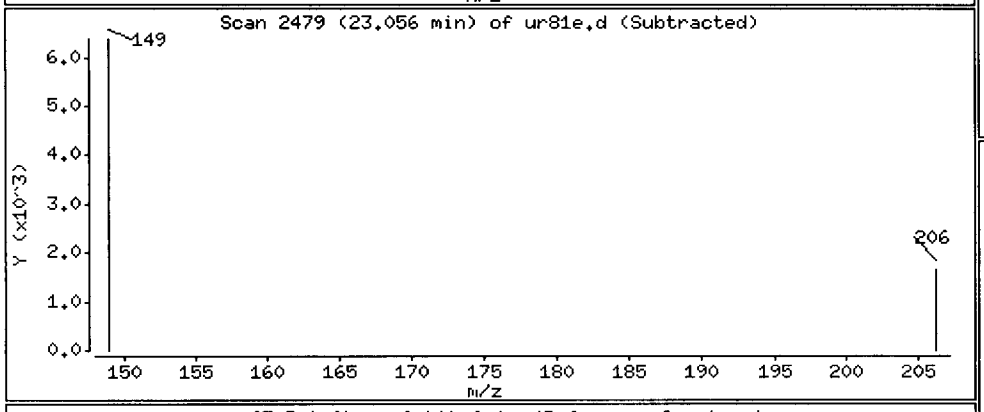
Volume Injected (uL): 1.0 Operator: YZ

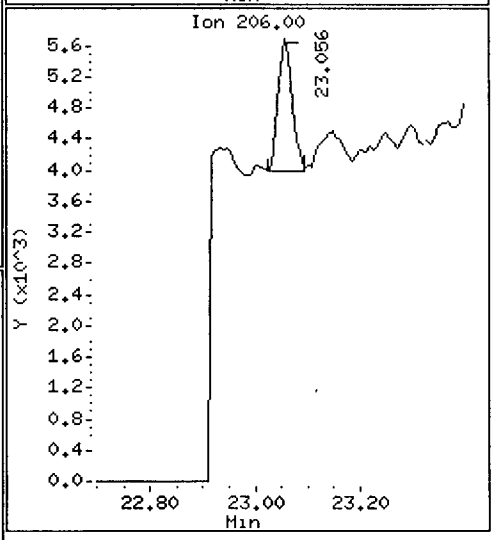
Column phase: ZB-5msi Column diameter: 0.25

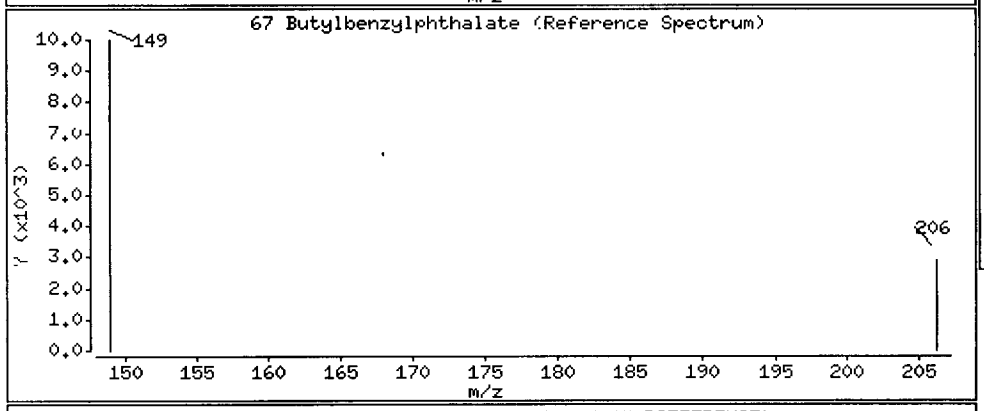
67 Butylbenzylphthalate Concentration: 9.538 ug/kg

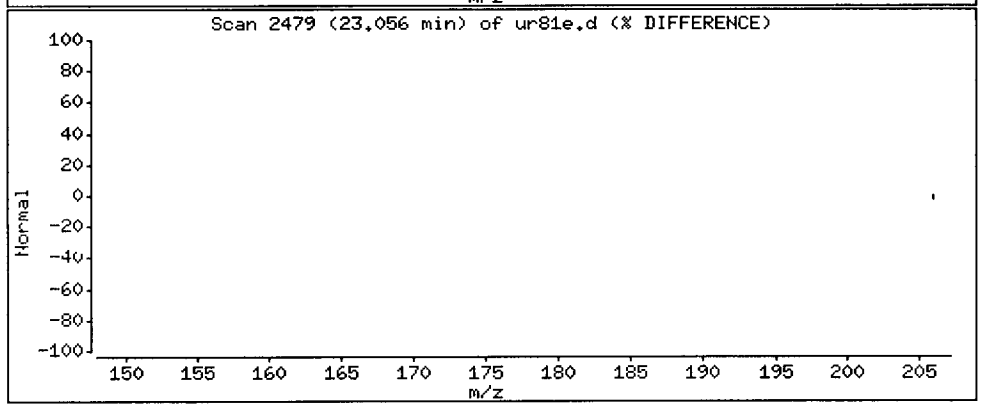












Data File: /chem1/nt10.1/20120508.b/SIM.b/ur81e.d

Date : 08-MAY-2012 20:19

Client ID: IJ12-04

Instrument: nt10.1

Sample Info: UR81E

Volume Injected (uL): 1.0

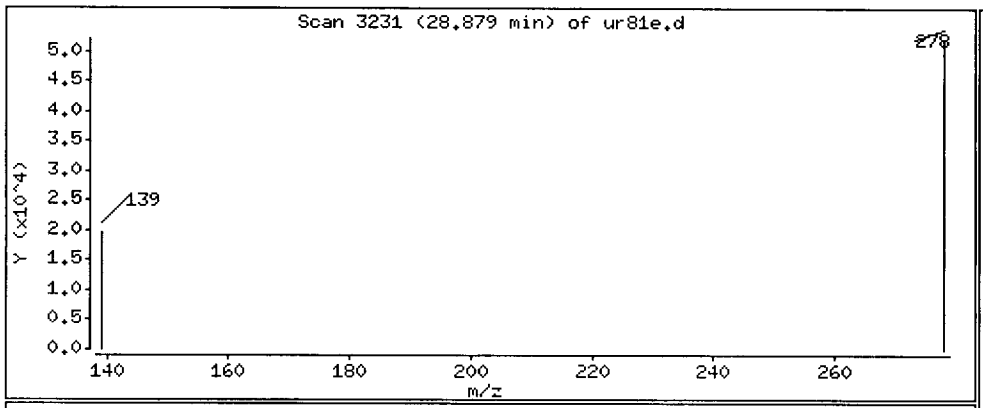
Operator: YZ

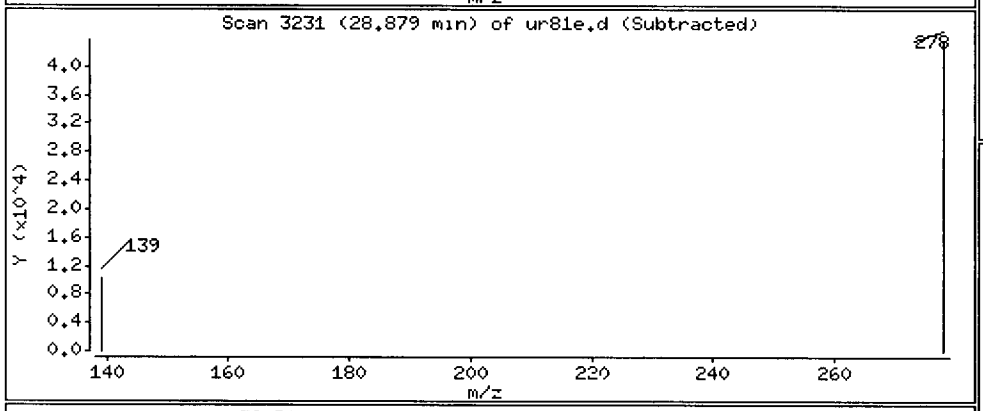
Column phase: ZB-5msi

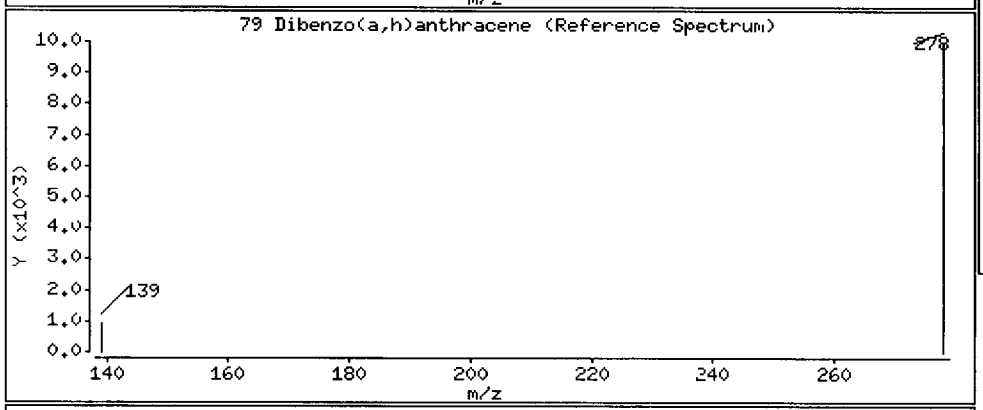
Column diameter: 0.25

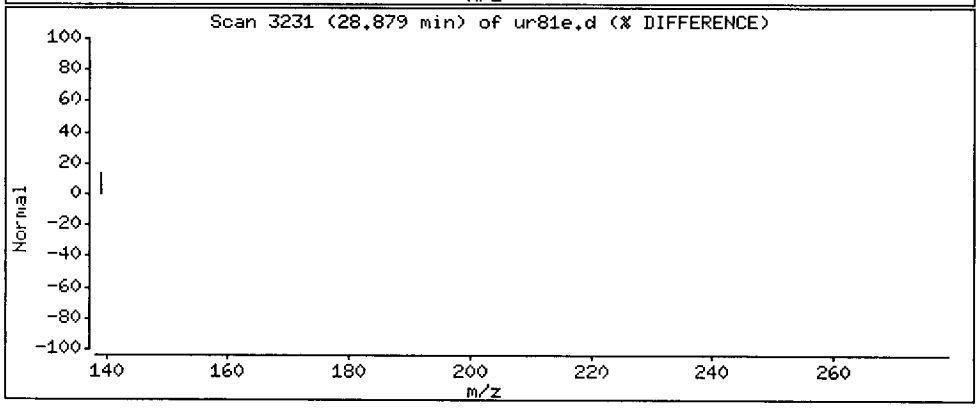
79 Dibenzo(a,h)anthracene

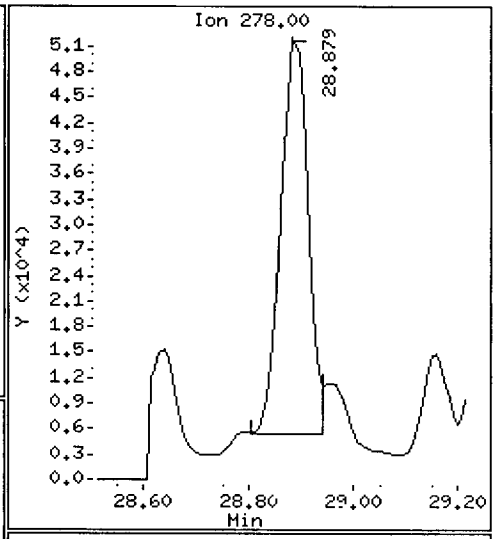
Concentration: 69.95 ug/kg

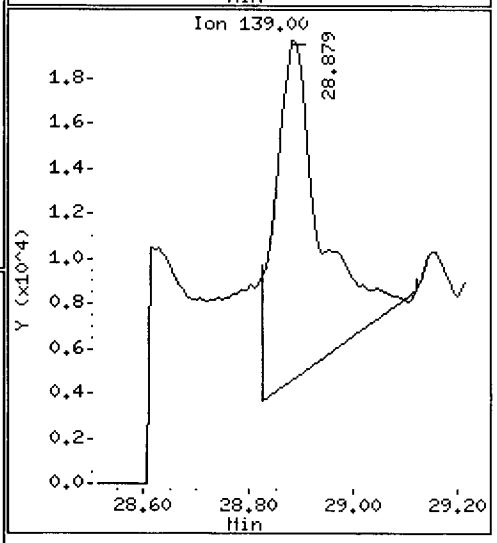






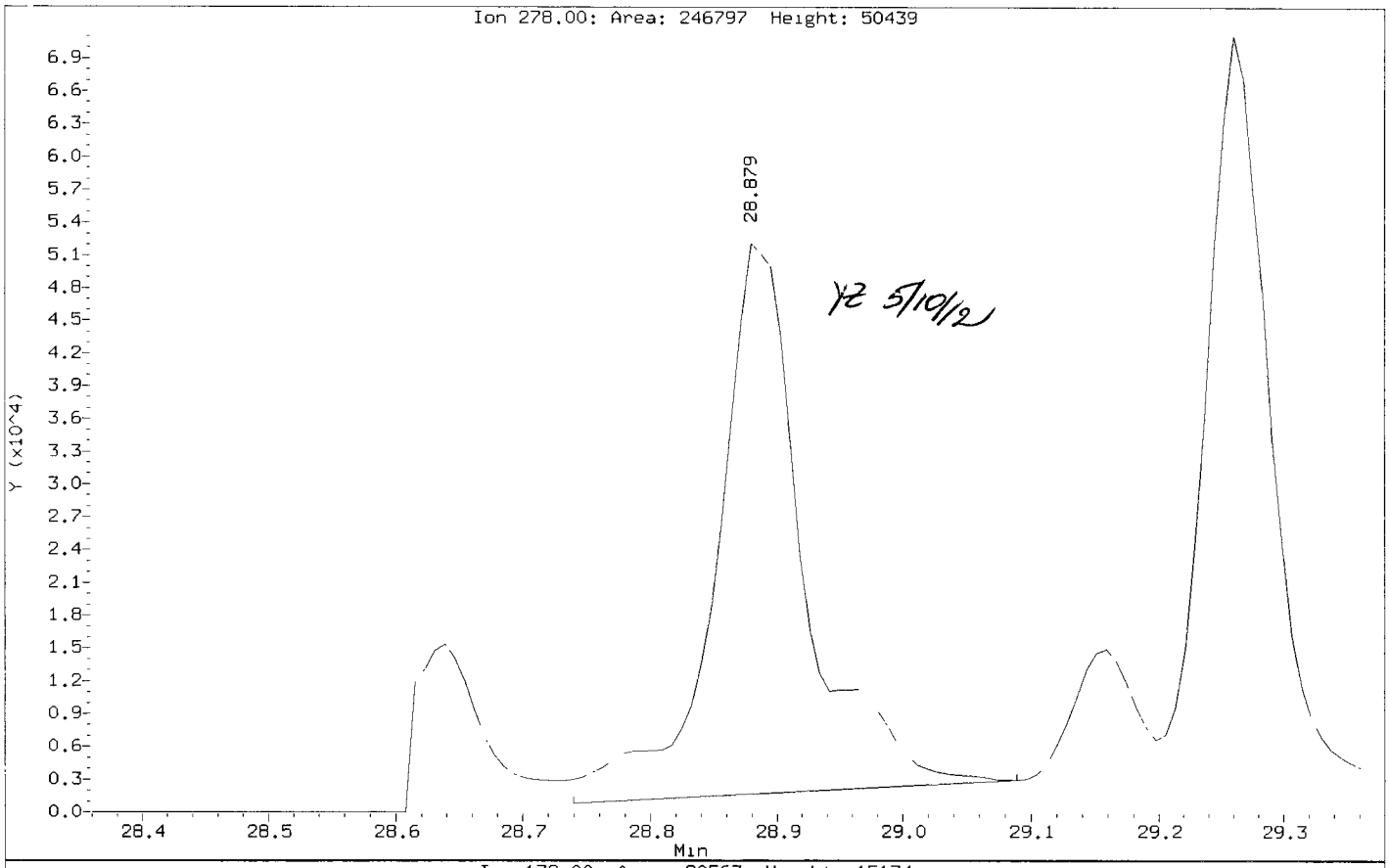


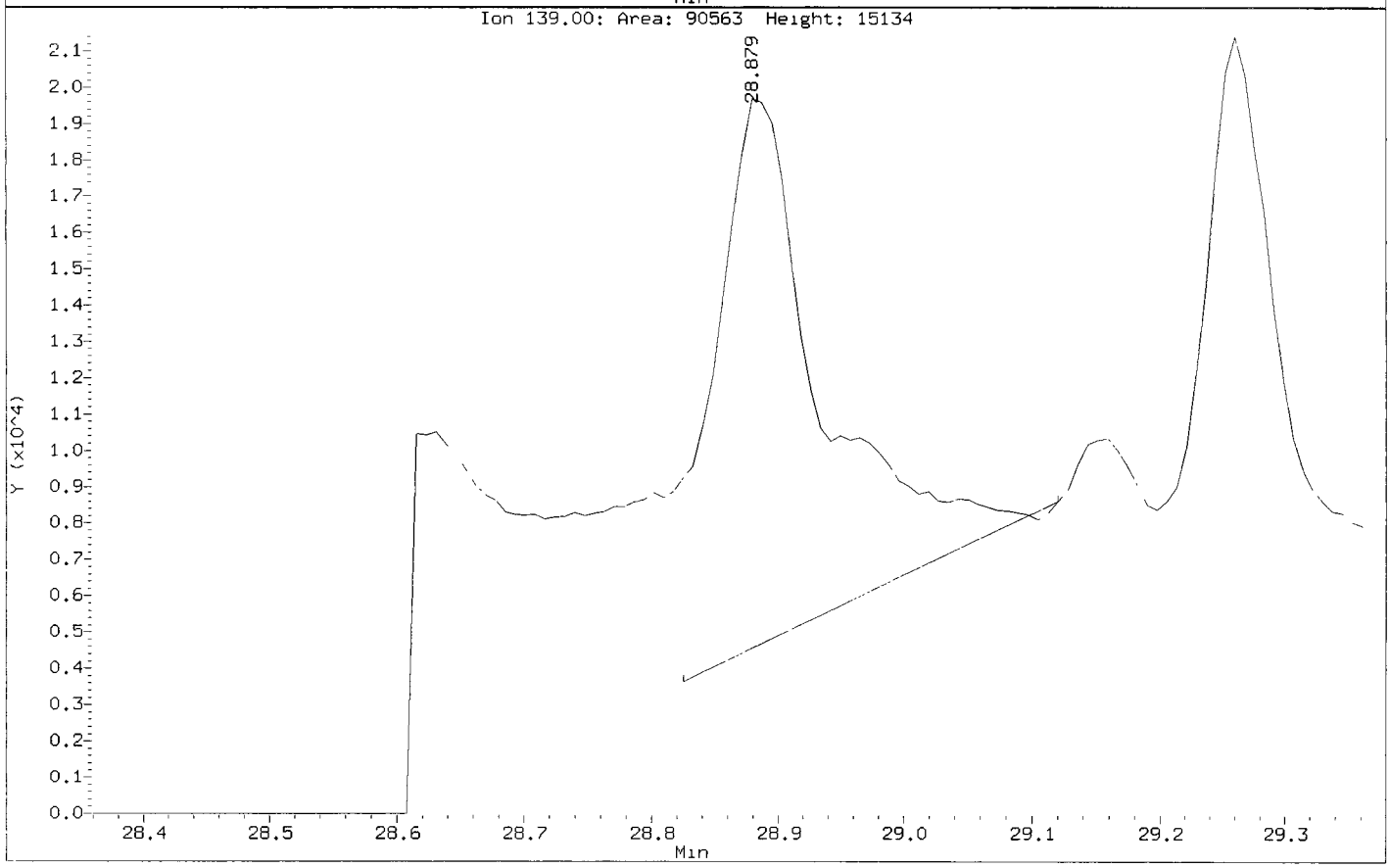




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d
Injection Date: 08-MAY-2012 20:19
Instrument: nt10.i
Client Sample ID: IJ12-04

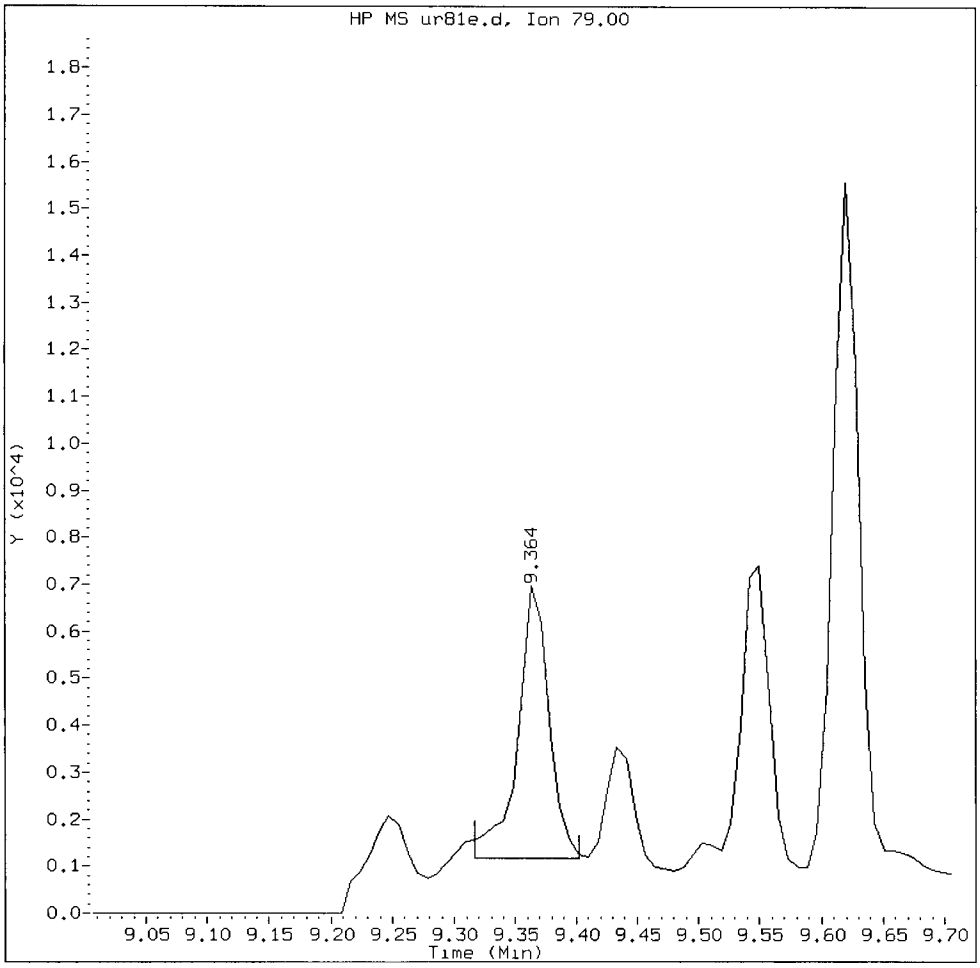
Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





UR81E, /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Benzyl alcohol Amount: 0.15 Area: 10469



MANUAL INTEGRATION for Benzyl alcohol

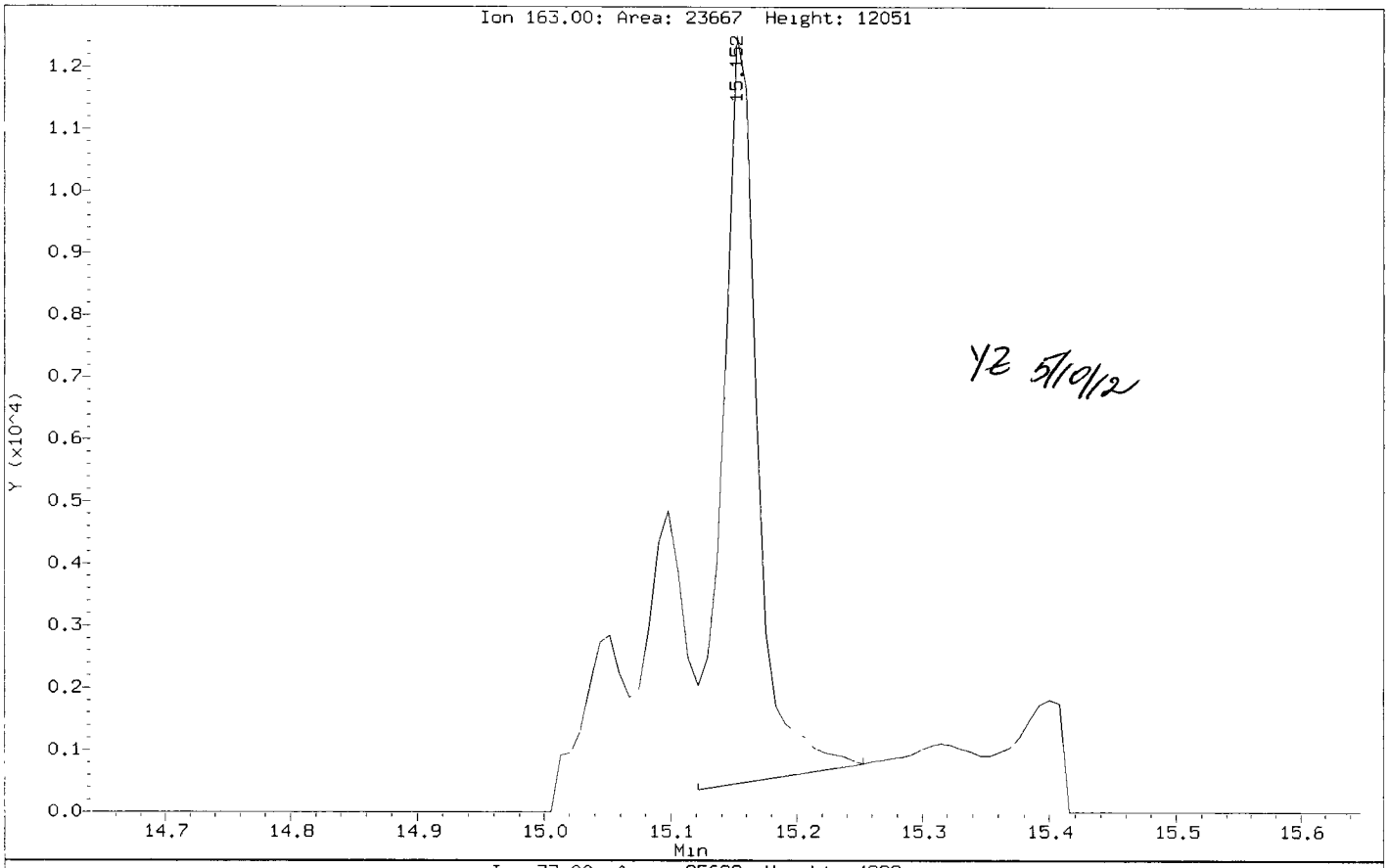
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

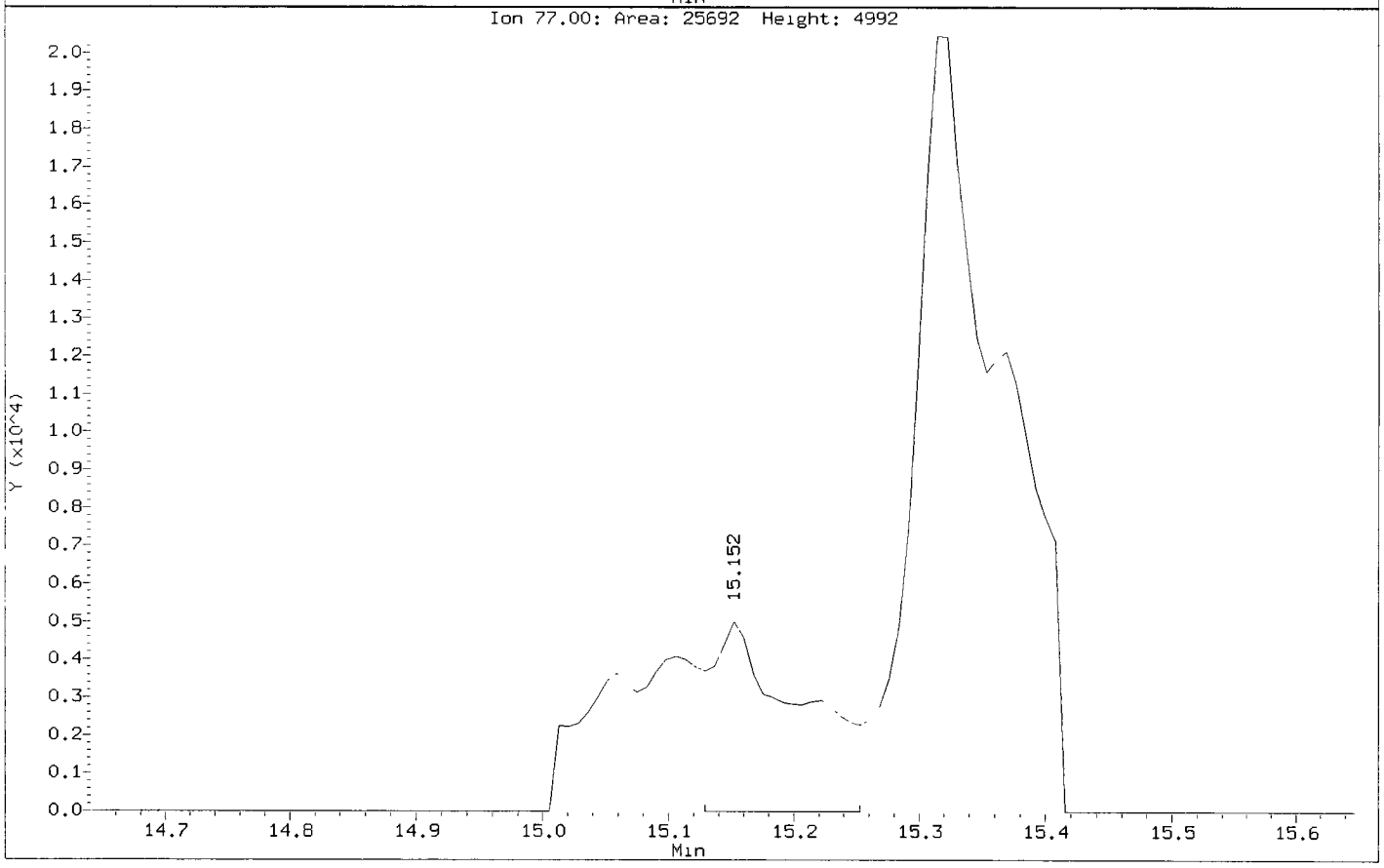
5. Other _____

Analyst: VZ Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d
Injection Date: 08-MAY-2012 20:19
Instrument: nt10.i
Client Sample ID: IJ12-04

Compound: Dimethylphthalate
CAS Number: 131-11-3

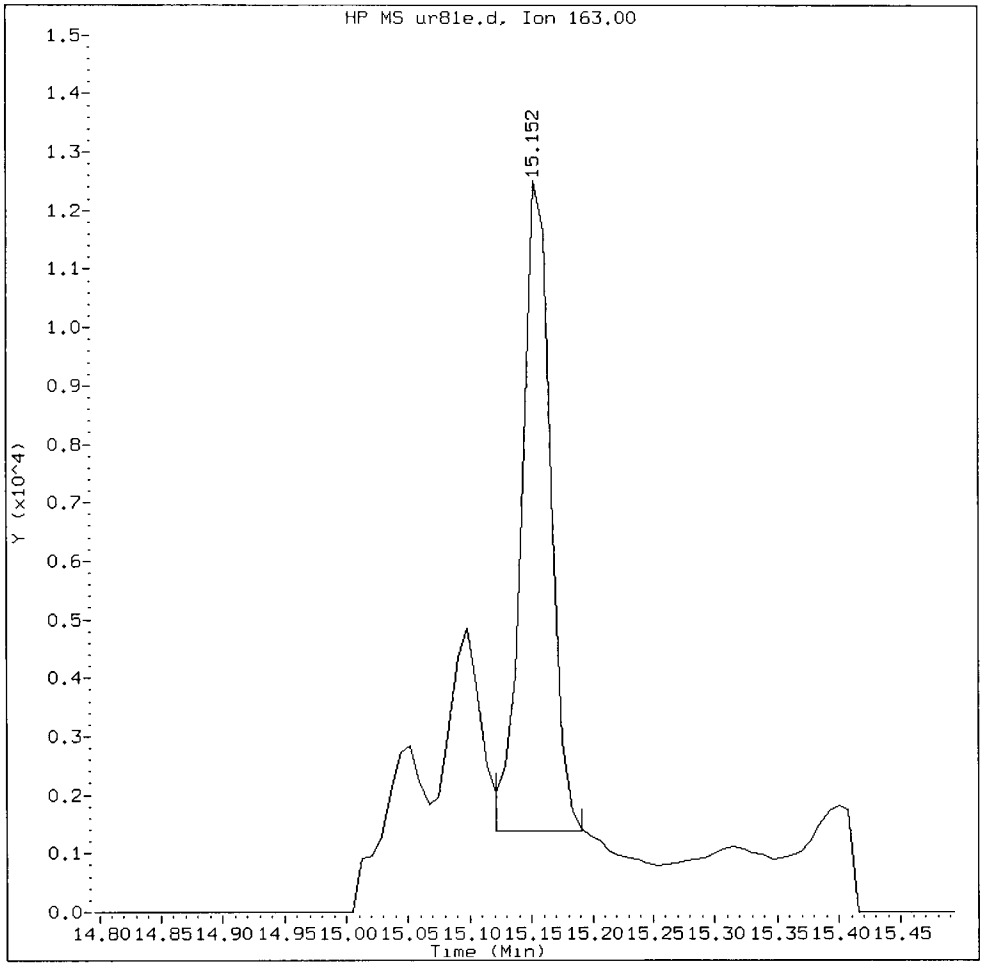




UR81 : 01884

UR81E, /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Dimethylphthalate Amount: 0.10 Area: 18334



MANUAL INTEGRATION for Dimethylphthalate

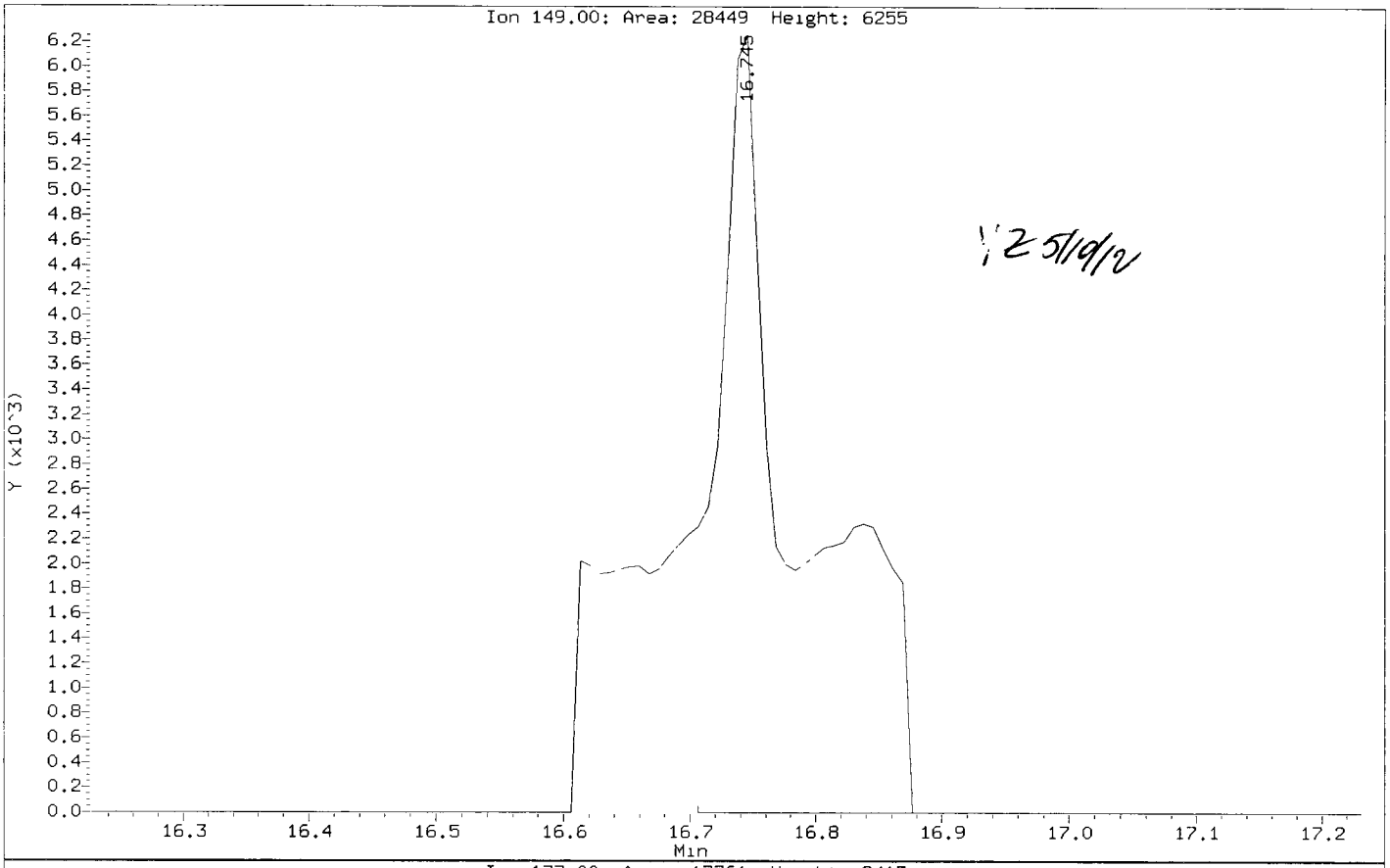
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

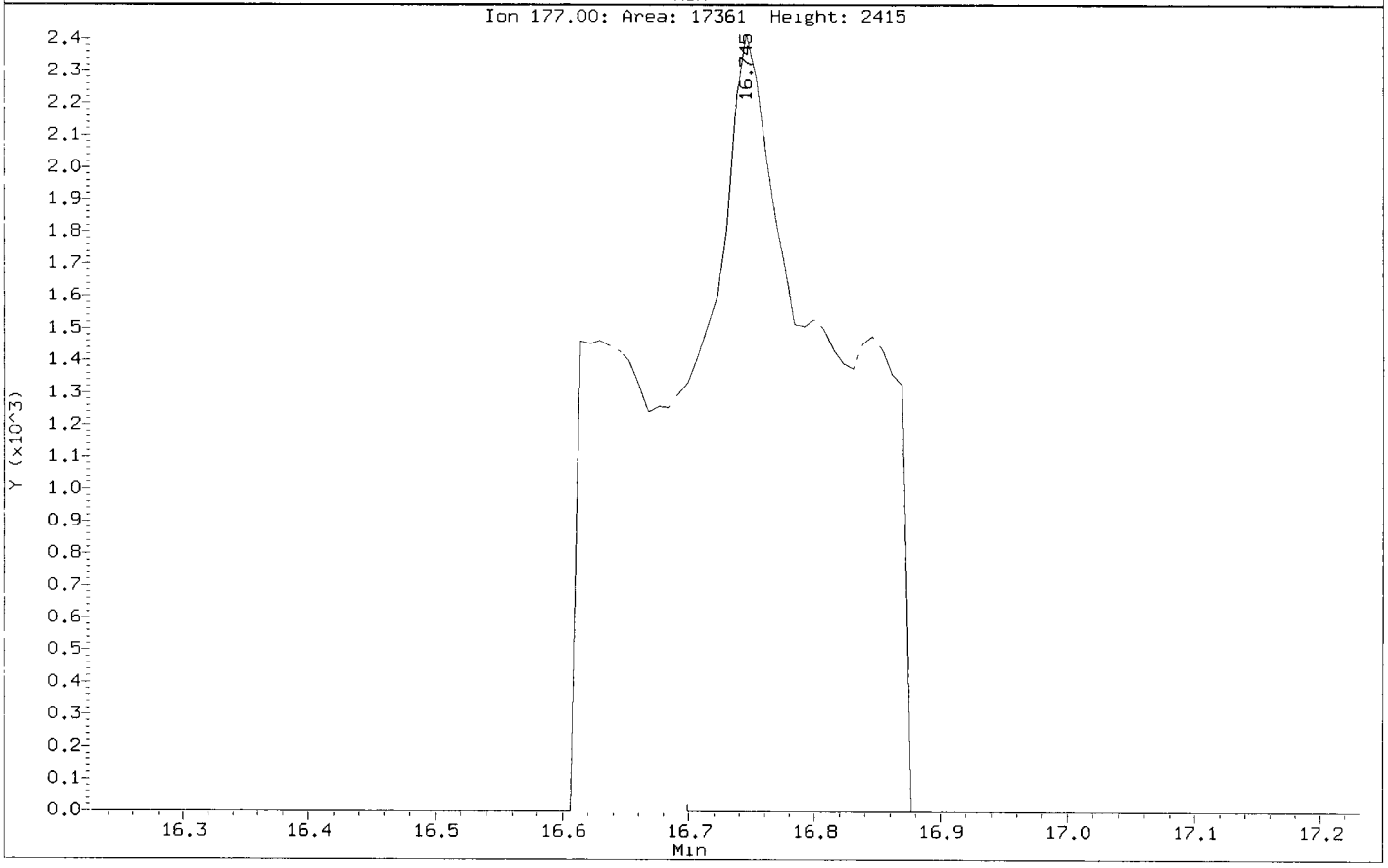
5. Other _____

Analyst: VE Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81e.d
Injection Date: 08-MAY-2012 20:19
Instrument: nt10.i
Client Sample ID: IJ12-04

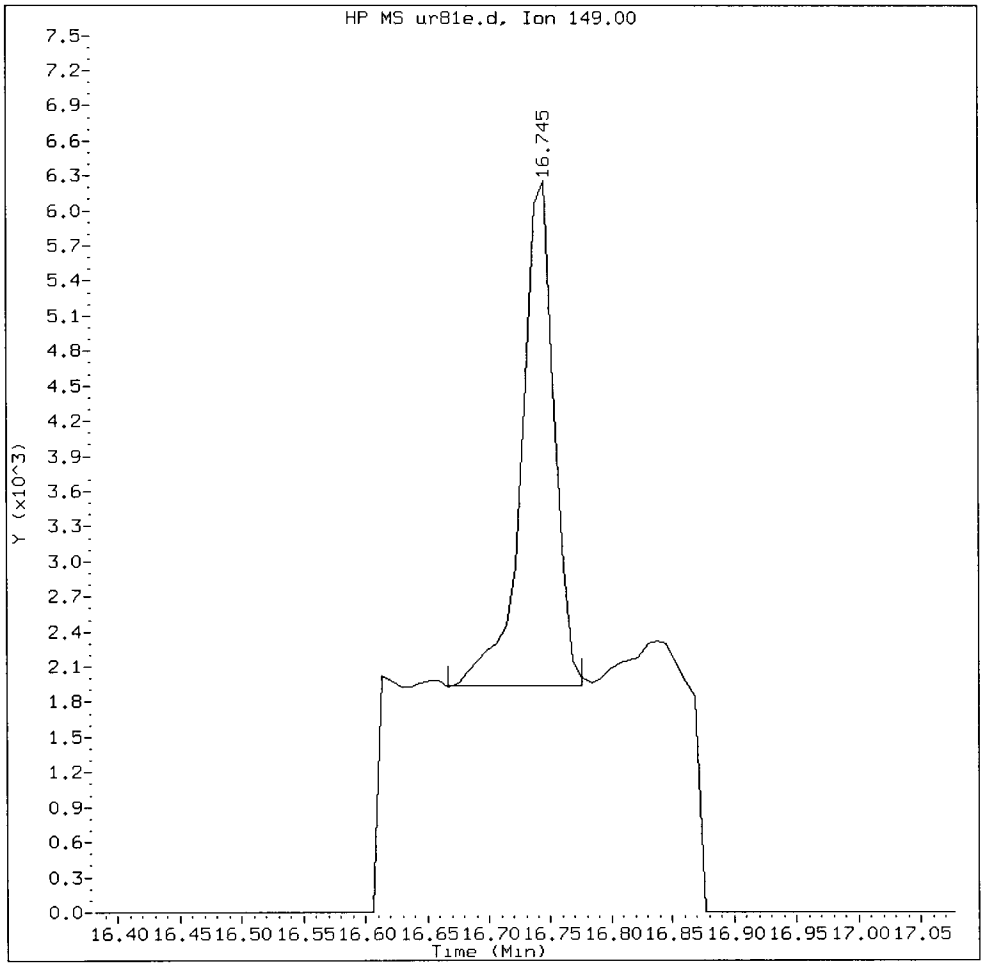
Compound: Diethylphthalate
CAS Number: 84-66-2





UR81E, /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Diethylphthalate Amount: 0.04 Area: 7971



MANUAL INTEGRATION for Diethylphthalate

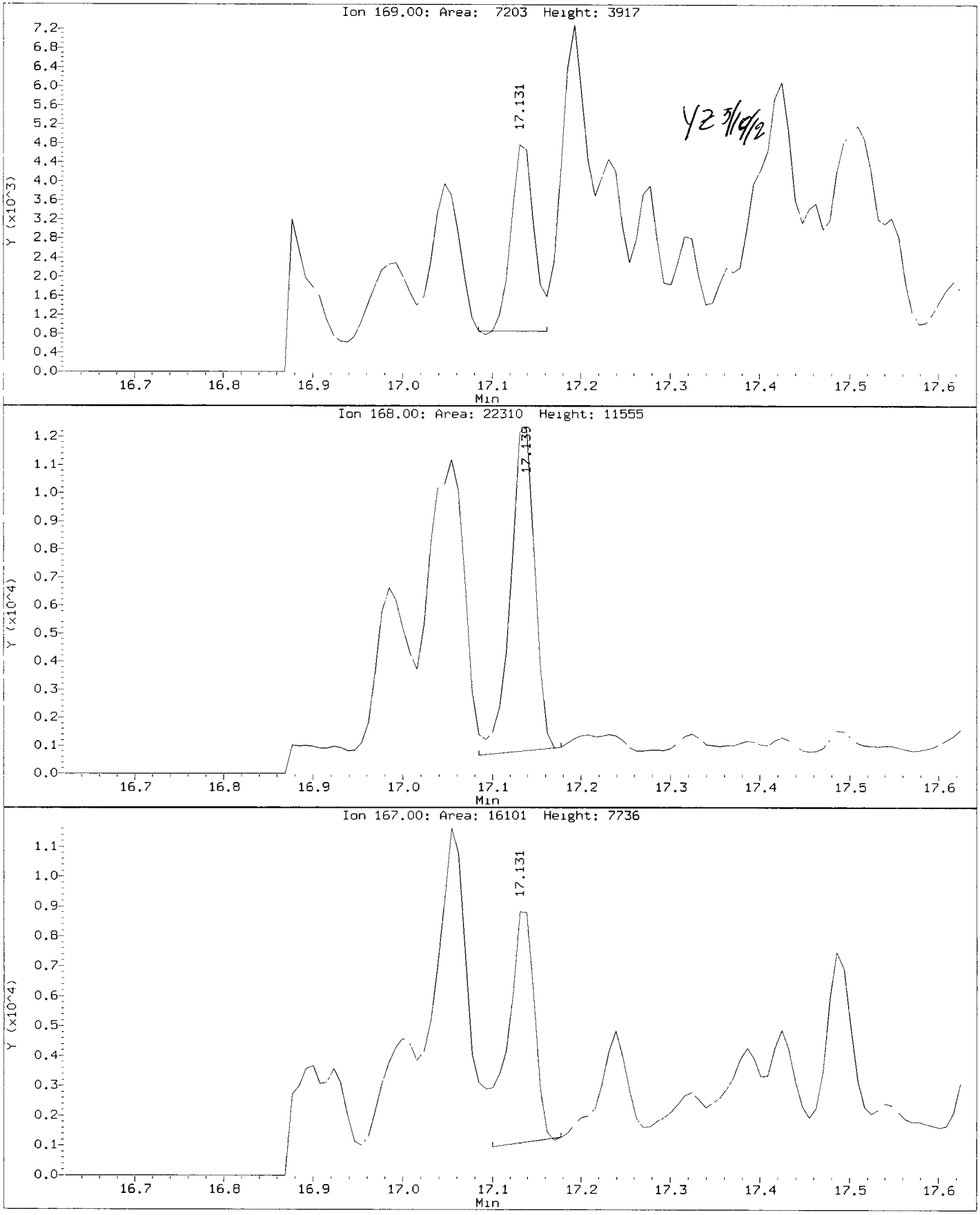
1. Baseline correction ✓
2. Poor chromatography ✓
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/19/12

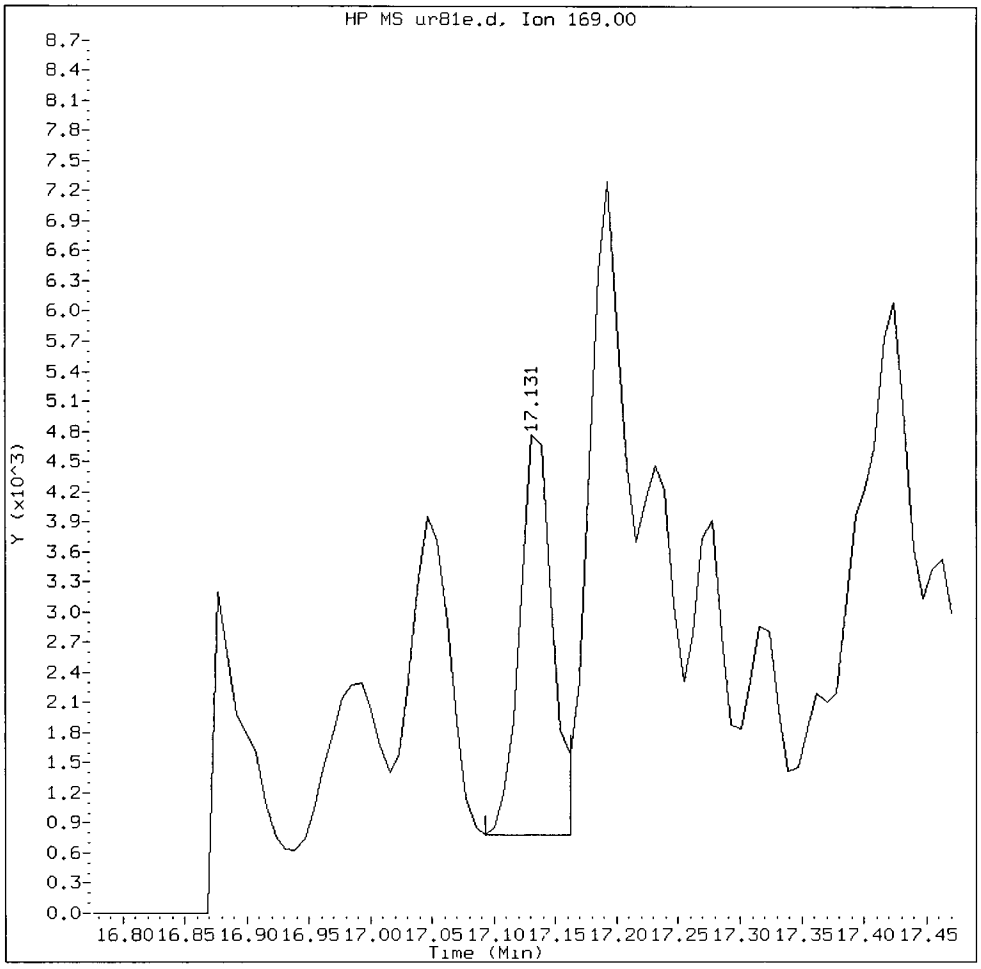
Data File: /chem1/nt10.1/20120508.b/SIM.b/ur81e.d
Injection Date: 08-MAY-2012 20:19
Instrument: nt10.1
Client Sample ID: IJ12-04

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



UR81E, /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

N-Nitrosodiphenylamine Amount: 0.06 Area: 7536



MANUAL INTEGRATION for N-Nitrosodiphenylamine

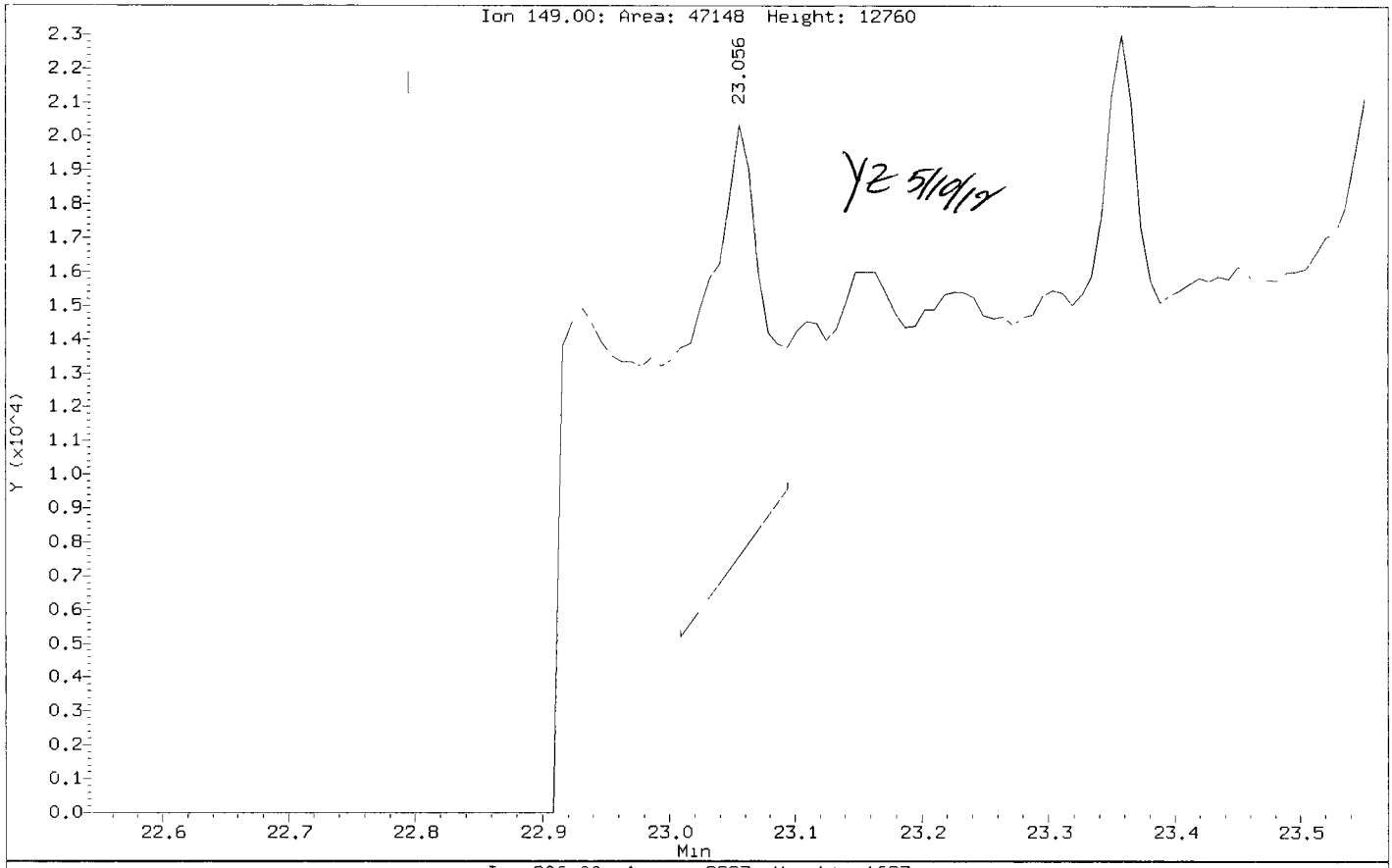
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

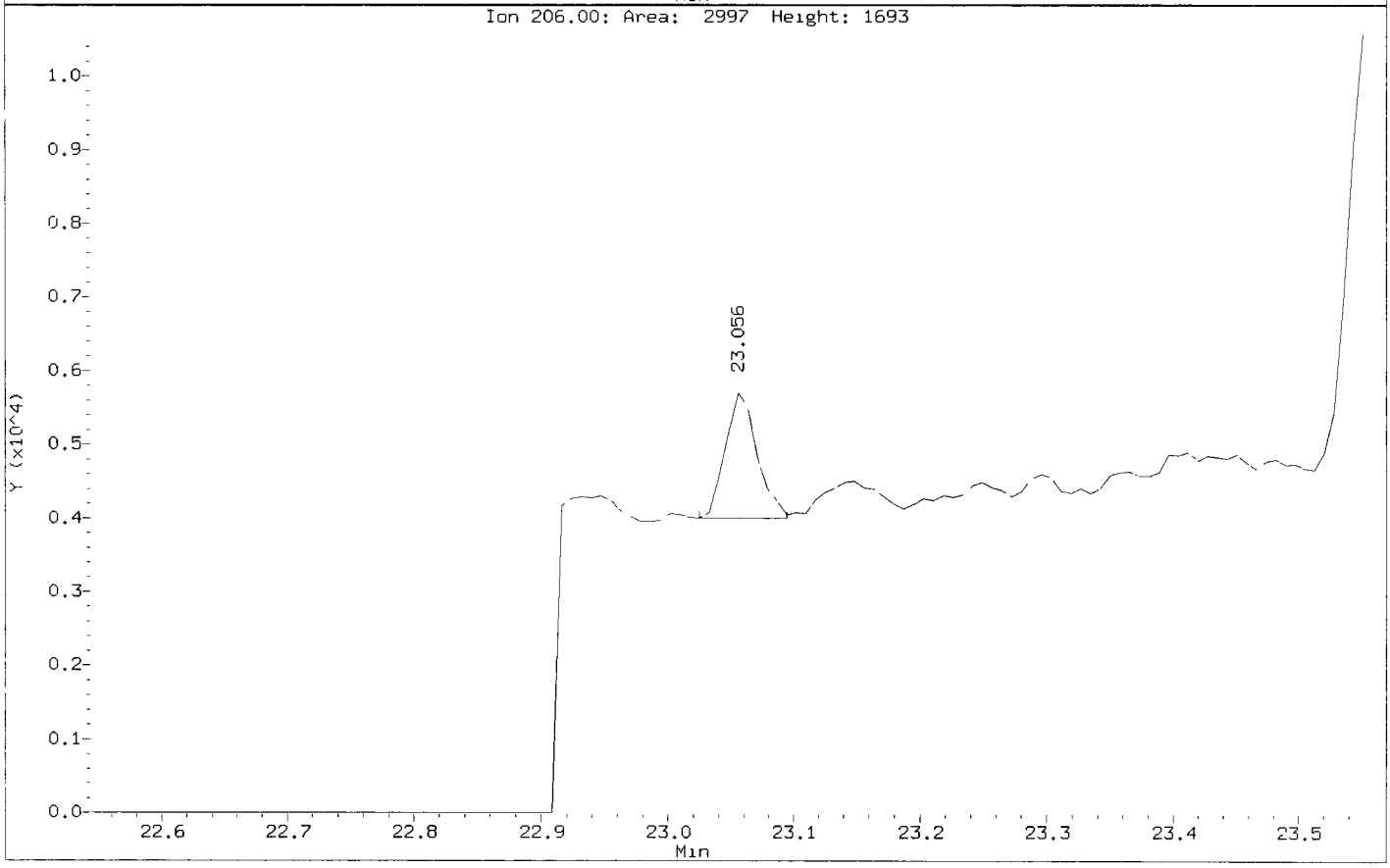
5. Other _____

Analyst: YZ Date: 5/10/12

Data File: /chem1/nt10.1/20120508.b/SIM.b/ur81e.d
Injection Date: 08-MAY-2012 20:19
Instrument: nt10.1
Client Sample ID: IJ12-04

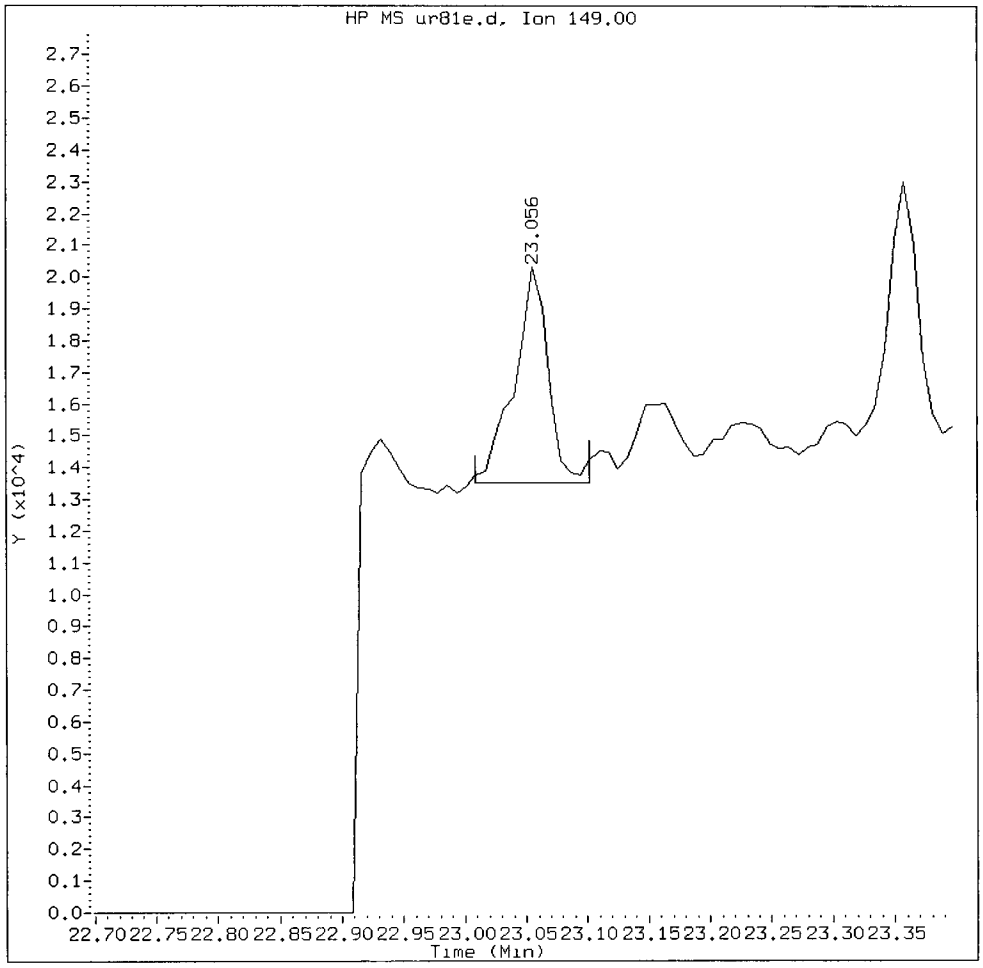
Compound: Butylbenzylphthalate
CAS Number: 85-68-7





UR81E, /chem1/nt10.i/20120508.b/SIM.b/ur81e.d

Butylbenzylphthalate Amount: 0.10 Area: 13168



MANUAL INTEGRATION for Butylbenzylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/10/12

CO-ELUTION SUMMARY FOR FILE - ur81e.d

Lab ID: UR81E, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/10/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81ems.d
Lab Smp Id: UR81EMS Client Smp ID: IJ12-04 MS
Inj Date : 08-MAY-2012 20:57
Operator : YZ Inst ID: nt10.i
Smp Info : UR81EMS
Misc Info : 12-7396
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 15:35 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 14 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	16.07000	Weight of sample extracted (g)
M	35.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.703	6.680	(0.740)	378120	3.98279	385.4
3 Phenol	94	8 442	8 418	(0.932)	522808	4.16069	402.7
7 1,3-Dichlorobenzene	146	8.983	8.975	(0.992)	276864	2.31791	224 3
* 8 1,4-Dichlorobenzene-d4	152	9.053	9.045	(1.000)	276545	4.00000	
9 1,4-Dichlorobenzene	146	9.084	9.076	(1.003)	270075	2 34768	227.2
11 Benzyl alcohol	79	9.371	9.355	(1.035)	210219	3.26806	316.3
12 1,2-Dichlorobenzene	146	9.472	9.464	(1.046)	270015	2 41272	233.5
13 2-Methylphenol	108	9.635	9.619	(1.064)	251583	2.49263	241.2
15 4-Methylphenol	108	9 938	9.914	(1.098)	560596	5.29335	512.3
16 N-Nitroso-di-n-propylamine	70	9 976	9.961	(1 102)	167496	2.89533	280.2
22 2,4-Dimethylphenol	107	11 053	11 038	(0.942)	804051	8.19034	792.6
26 1,2,4-Trichlorobenzene	180	11.647	11.639	(0.993)	235056	2.47172	239.2
* 27 Naphthalene-d8	136	11 732	11 724	(1 000)	1071007	4.00000	
30 Hexachlorobutadiene	225	12 188	12.180	(1 039)	129539	2.47809	239.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15 160	15.144	(0.969)	559847	3.29564	318 9
*	42 Acenaphthene-d10	162	15 647	15 632	(1.000)	555543	4.00000	
	50 Diethylphthalate	149	16.753	16.729	(1.071)	625390	3.36300	325.5
	54 N-Nitrosodiphenylamine	169	17.146	17.123	(0 906)	379333	2.86499	277 3
	57 Hexachlorobenzene	284	18.273	18.250	(0.966)	202303	2.89874	280 5
	58 Pentachlorophenol	266	18.668	18.644	(0.986)	415859	10.0312	970.8
*	59 Phenanthrene-d10	188	18.923	18.908	(1.000)	985434	4.00000	
$	66 Terphenyl-d14	244	22.118	22.095	(0.922)	522947	2.97875	288.3
	67 Butylbenzylphthalate	149	23.063	23.047	(0.961)	499072	3.75628	363.5
*	69 Chrysene-d12	240	24.000	23.969	(1.000)	1102819	4.00000	
*	77 Perylene-d12	264	26.477	26 446	(1.000)	1083146	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.910	28.864	(1.092)	1038021	4.47572	433 1
	90 N-Nitrosodimethylamine	74	4.394	4.371	(0.485)	421838	7.34778	711.1

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81ems.d
Lab Smp Id: UR81EMS
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-04 MS
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	276545	-11.15
27 Naphthalene-d8	1166872	583436	2333744	1071007	-8.22
42 Acenaphthene-d10	603218	301609	1206436	555543	-7.90
59 Phenanthrene-d10	1096026	548013	2192052	985434	-10.09
69 Chrysene-d12	1131082	565541	2262164	1102819	-2.50
77 Perylene-d12	1082499	541250	2164998	1083146	0.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.08
69 Chrysene-d12	23.97	23.47	24.47	24.00	0.13
77 Perylene-d12	26.45	25.95	26.95	26.48	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor
Sample Matrix: SOLID
Lab Smp Id: UR81EMS
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

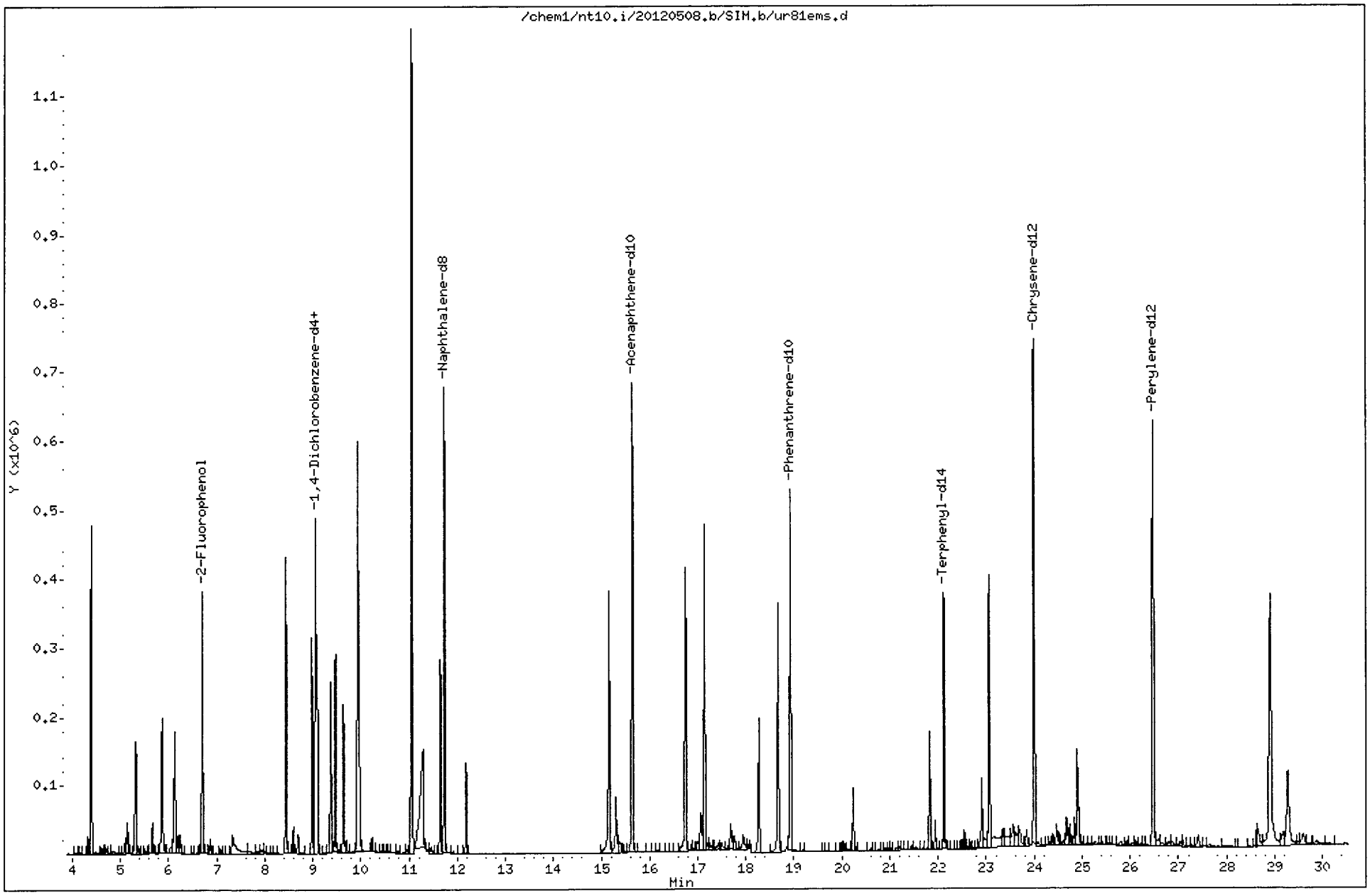
Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-04 MS
Operator: YZ
SampleType: MS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	483.9	402.7	83.21	30-160
7 1,3-Dichlorobenzen	483.9	224.3	46.36	30-160
9 1,4-Dichlorobenzen	483.9	227.2	46.95	30-160
11 Benzyl alcohol	483.9	316.3	65.36	30-160
12 1,2-Dichlorobenzen	483.9	233.5	48.25	30-160
13 2-Methylphenol	483.9	241.2	49.85	30-160
15 4-Methylphenol	967.8	512.3	52.93	30-160
16 N-Nitroso-di-n-pro	483.9	280.2	57.91	30-160
22 2,4-Dimethylphenol	967.8	792.6	81.90	30-160
26 1,2,4-Trichloroben	483.9	239.2	49.43	30-160
30 Hexachlorobutadien	483.9	239.8	49.56	30-160
39 Dimethylphthalate	483.9	318.9	65.91	30-160
50 Diethylphthalate	483.9	325.5	67.26	30-160
54 N-Nitrosodiphenyla	483.9	277.3	57.30	30-160
57 Hexachlorobenzene	483.9	280.5	57.97	30-160
58 Pentachlorophenol	967.8	970.8	100.31	30-160
67 Butylbenzylphthala	483.9	363.5	75.13	30-160
79 Dibenzo(a,h)anthra	483.9	433.1	89.51	30-160
90 N-Nitrosodimethyla	967.8	711.1	73.48	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	725.8	385.4	53.10	30-160
$ 66 Terphenyl-d14	483.9	288.3	59.57	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81ems.d
Date : 08-MAY-2012 20:57
Client ID: IJ12-04 MS
Sample Info: UR81EMS
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ur81ems.d

Lab ID: UR81EMS, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc. YZ 5/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81emsd.d
Lab Smp Id: UR81EMSD Client Smp ID: IJ12-04 MSD
Inj Date : 08-MAY-2012 21:33
Operator : YZ Inst ID: nt10.i
Smp Info : UR81EMSD
Misc Info : 12-7396
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2012 15:35 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	16.05000	Weight of sample extracted (g)
M	35.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.703	6.680	(0.740)	419093	4.67516	453.0
3 Phenol	94	8.442	8.418	(0.932)	576252	4 85696	470.6
7 1,3-Dichlorobenzene	146	8.983	8.975	(0.992)	310537	2 75342	266.8
* 8 1,4-Dichlorobenzene-d4	152	9.053	9 045	(1.000)	261118	4.00000	
9 1,4-Dichlorobenzene	146	9 084	9 076	(1.003)	304175	2.80031	271.3
11 Benzyl alcohol	79	9 363	9 355	(1.034)	233901	3.85105	373.2
12 1,2-Dichlorobenzene	146	9.464	9.464	(1.045)	303112	2.86847	277.9
13 2-Methylphenol	108	9.635	9.619	(1 064)	281366	2.95241	286.1
15 4-Methylphenol	108	9.938	9.914	(1.098)	626708	6.26722	607 3
16 N-Nitroso-di-n-propylamine	70	9.977	9.961	(1.102)	186580	3.41576	331 0
22 2,4-Dimethylphenol	107	11.054	11.038	(0.942)	901476	9.61888	932 0
26 1,2,4-Trichlorobenzene	180	11.647	11.639	(0.993)	261429	2.87961	279 0
* 27 Naphthalene-d8	136	11.732	11.724	(1.000)	1022446	4 00000	
30 Hexachlorobutadiene	225	12 188	12 180	(1.039)	144689	2.89937	280.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15.160	15.144	(0.969)	602741	3.69869	358.4
*	42 Acenaphthene-d10	162	15.647	15.632	(1.000)	532931	4 00000	
	50 Diethylphthalate	149	16 753	16.729	(1.071)	699413	3 92063	379.9
	54 N-Nitrosodiphenylamine	169	17.139	17.123	(0.905)	435445	3.36958	326.5
	57 Hexachlorobenzene	284	18.273	18.250	(0.965)	224872	3.30128	319.9
	58 Pentachlorophenol	266	18.668	18.644	(0.986)	457943	11.3177	1097
*	59 Phenanthrene-d10	188	18.931	18.908	(1.000)	961807	4.00000	
$	66 Terphenyl-d14	244	22.126	22.095	(0.922)	565501	3.31608	321.3
	67 Butylbenzylphthalate	149	23.063	23.047	(0.961)	545715	4.22840	409.7
*	69 Chrysene-d12	240	24.000	23.969	(1.000)	1071245	4.00000	
*	77 Perylene-d12	264	26.477	26.446	(1.000)	1007487	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.910	28.864	(1.092)	928807	4.30556	417.2
	90 N-Nitrosodimethylamine	74	4.402	4.371	(0.486)	465478	8.58694	832.1

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81emsd.d
Lab Smp Id: UR81EMSD
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-04 MSD
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	261118	-16.11
27 Naphthalene-d8	1166872	583436	2333744	1022446	-12.38
42 Acenaphthene-d10	603218	301609	1206436	532931	-11.65
59 Phenanthrene-d10	1096026	548013	2192052	961807	-12.25
69 Chrysene-d12	1131082	565541	2262164	1071245	-5.29
77 Perylene-d12	1082499	541250	2164998	1007487	-6.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.93	0.12
69 Chrysene-d12	23.97	23.47	24.47	24.00	0.13
77 Perylene-d12	26.45	25.95	26.95	26.48	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor
Sample Matrix: SOLID
Lab Smp Id: UR81EMSD
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7396

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-04 MSD
Operator: YZ
SampleType: MS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	484.5	470.6	97.14	30-160
7 1,3-Dichlorobenzen	484.5	266.8	55.07	30-160
9 1,4-Dichlorobenzen	484.5	271.3	56.01	30-160
11 Benzyl alcohol	484.5	373.2	77.02	30-160
12 1,2-Dichlorobenzen	484.5	277.9	57.37	30-160
13 2-Methylphenol	484.5	286.1	59.05	30-160
15 4-Methylphenol	969.0	607.3	62.67	30-160
16 N-Nitroso-di-n-pro	484.5	331.0	68.32	30-160
22 2,4-Dimethylphenol	969.0	932.0	96.19	30-160
26 1,2,4-Trichloroben	484.5	279.0	57.59	30-160
30 Hexachlorobutadien	484.5	280.9	57.99	30-160
39 Dimethylphthalate	484.5	358.4	73.97	30-160
50 Diethylphthalate	484.5	379.9	78.41	30-160
54 N-Nitrosodiphenyla	484.5	326.5	67.39	30-160
57 Hexachlorobenzene	484.5	319.9	66.03	30-160
58 Pentachlorophenol	969.0	1097	113.18	30-160
67 Butylbenzylphthala	484.5	409.7	84.57	30-160
79 Dibenzo(a,h)anthra	484.5	417.2	86.11	30-160
90 N-Nitrosodimethyla	969.0	832.1	85.87	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	726.7	453.0	62.34	30-160
$ 66 Terphenyl-d14	484.5	321.3	66.32	30-160

Data File: /chem1/nt10.1/20120508.b/SIM.b/ur81emsd.d

Date : 08-MAY-2012 21:33

Client ID: IJ12-04 MSD

Instrument: nt10.1

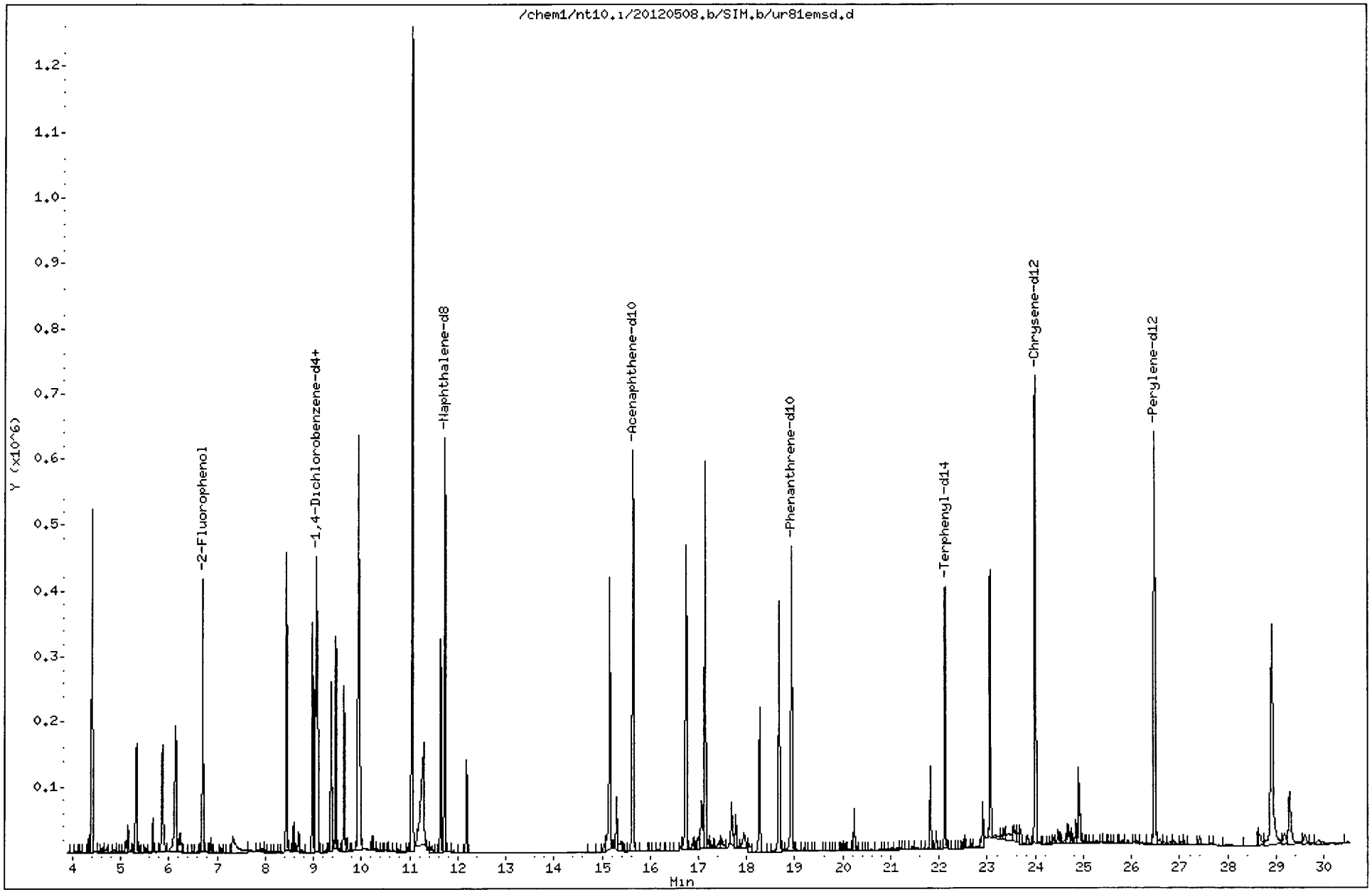
Sample Info: UR81EMSD

Volume Injected (uL): 1.0

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ur81emsd.d

Lab ID: UR81EMSD, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/9/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81f.d
Lab Smp Id: UR81F Client Smp ID: IJ12-07
Inj Date : 08-MAY-2012 22:10
Operator : YZ Inst ID: nt10.i
Smp Info : UR81F
Misc Info : 12-7397
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	23.03000	Weight of sample extracted (g)
M	56.10000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.703	6.680	(0.740)	377592	4.30169	425.5
3 Phenol	94	8.442	8.418	(0.932)	39721	0.34190	33.82
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9 053	9.045	(1.000)	255686	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected					
11 Benzyl alcohol	79	9 371	9.355	(1 035)	20459	0.34400	34 03(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected					
13 2-Methylphenol	108	9 635	9.619	(1.064)	5683	0.06090	6 024
15 4-Methylphenol	108	9.938	9 914	(1 098)	48445	0 49475	48.94
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11.054	11 038	(0.942)	12365	0.13412	13 27
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.732	11.724	(1.000)	1005774	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.160	15 144	(0.969)	11828	0.07467	7.385(M)
*	42 Acenaphthene-d10	162	15 647	15.632	(1.000)	518049	4.00000	
	50 Diethylphthalate	149	16 745	16.729	(1.070)	33143	0.19112	18.90(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.923	18.908	(1.000)	906909	4.00000	
$	66 Terphenyl-d14	244	22 119	22 095	(0.922)	506216	3 31543	327.9
	67 Butylbenzylphthalate	149	23 055	23.047	(0.961)	5698	0.04931	4 877
*	69 Chrysene-d12	240	23 985	23.969	(1.000)	959129	4.00000	
*	77 Perylene-d12	264	26.462	26 446	(1.000)	962015	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.879	28.864	(1.091)	17302	0.08400	8.308(M)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81f.d
Lab Smp Id: UR81F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7397

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-07
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	255686	-17.85
27 Naphthalene-d8	1166872	583436	2333744	1005774	-13.81
42 Acenaphthene-d10	603218	301609	1206436	518049	-14.12
59 Phenanthrene-d10	1096026	548013	2192052	906909	-17.25
69 Chrysene-d12	1131082	565541	2262164	959129	-15.20
77 Perylene-d12	1082499	541250	2164998	962015	-11.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.08
69 Chrysene-d12	23.97	23.47	24.47	23.98	0.07
77 Perylene-d12	26.45	25.95	26.95	26.46	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81F
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7397

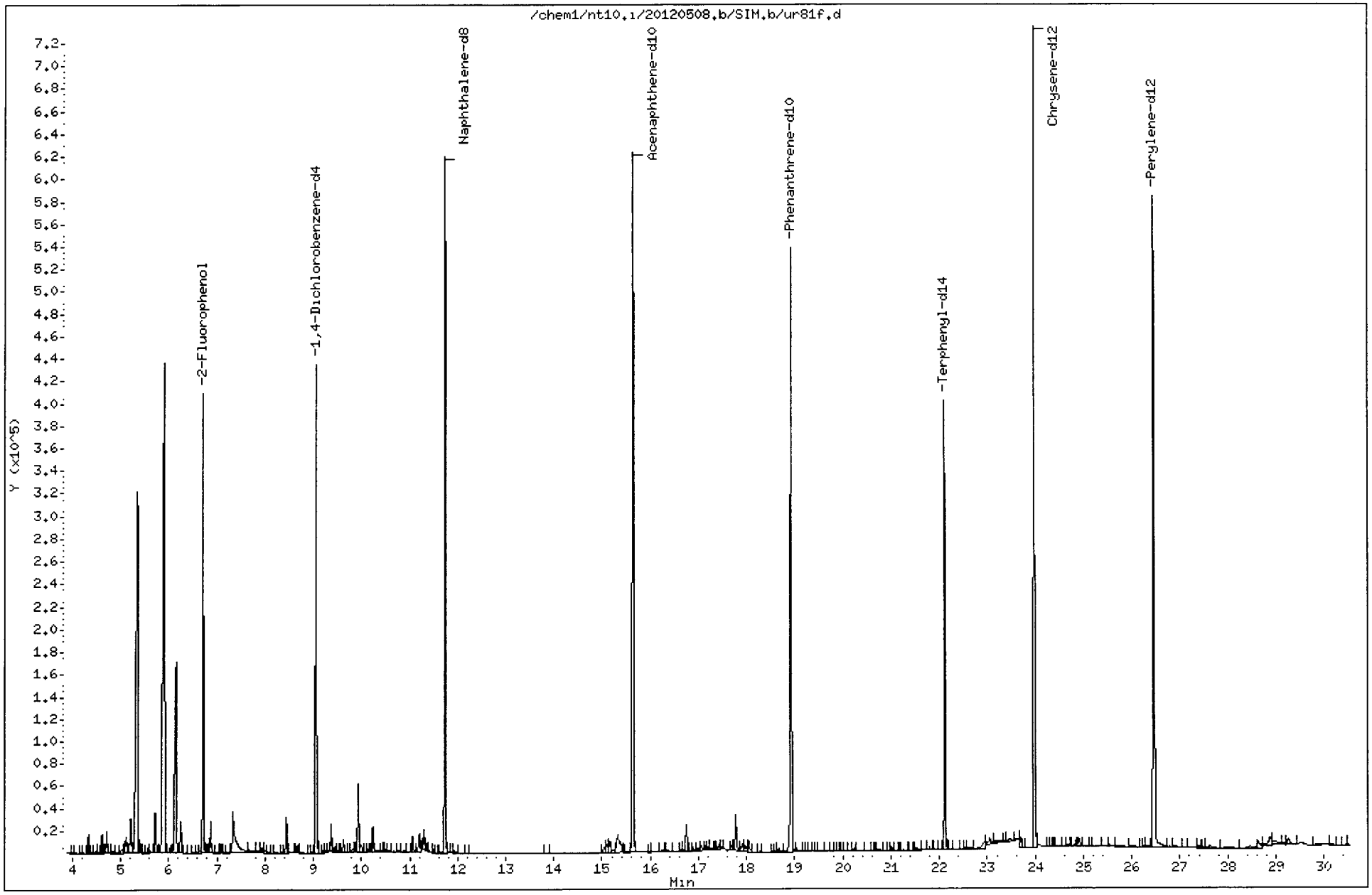
Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-07
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	741.8	425.5	57.36	30-160
$ 66 Terphenyl-d14	494.6	327.9	66.31	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d
Date : 08-MAY-2012 22:10
Client ID: IJ12-07
Sample Info: UR81F
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



UR81 : 01109

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

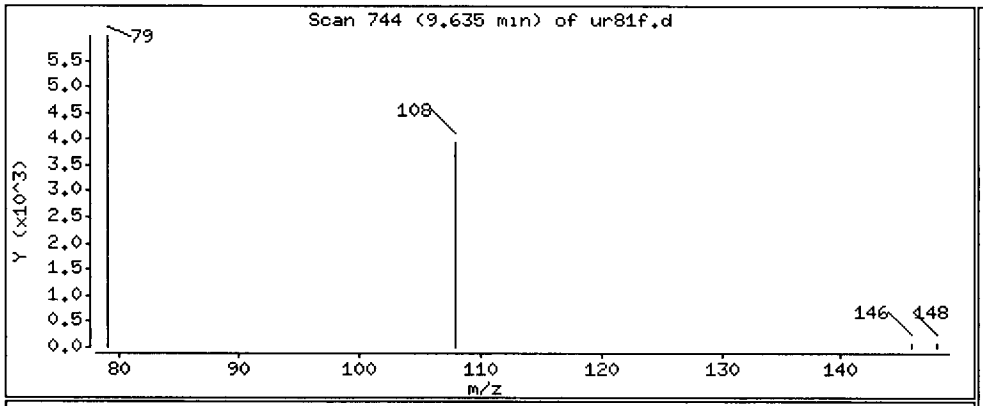
Operator: YZ

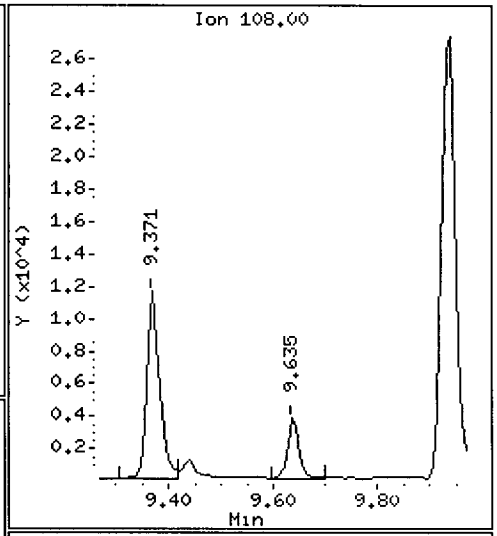
Column phase: ZB-5msi

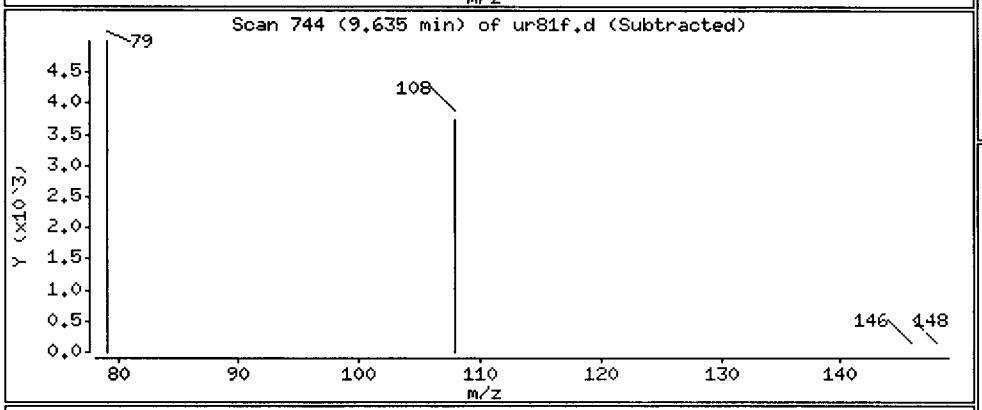
Column diameter: 0.25

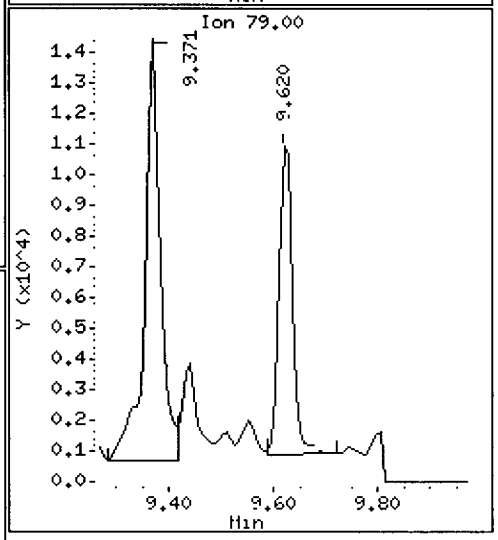
13 2-Methylphenol

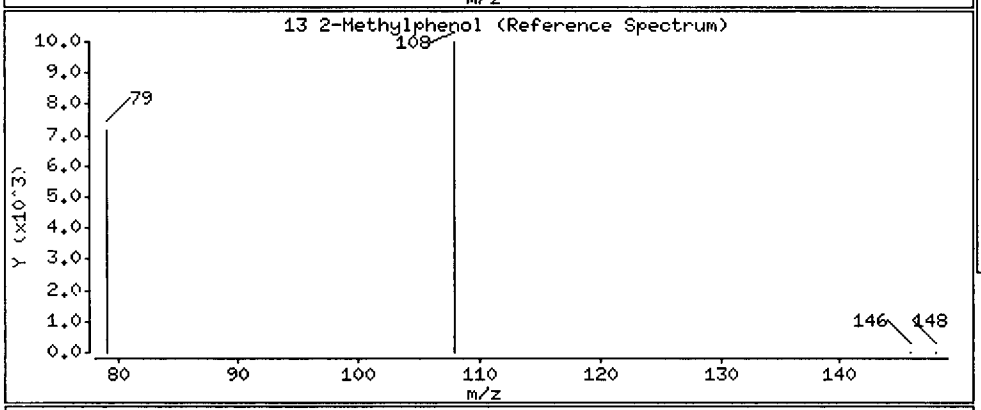
Concentration: 6.024 ug/kg

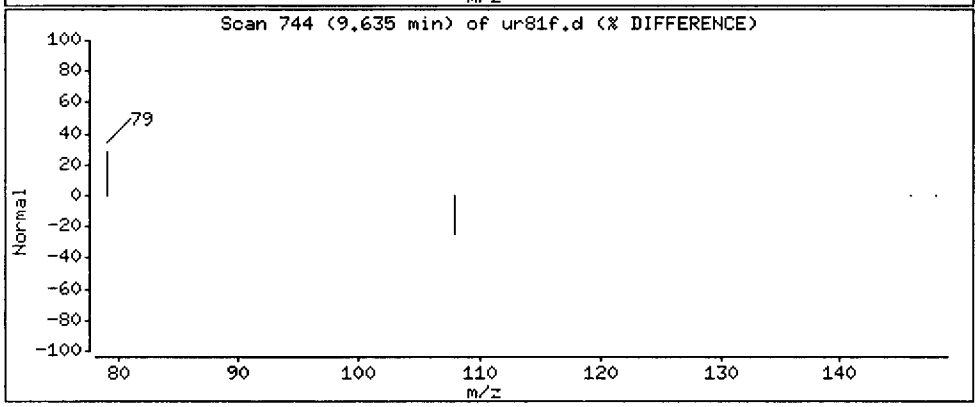












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

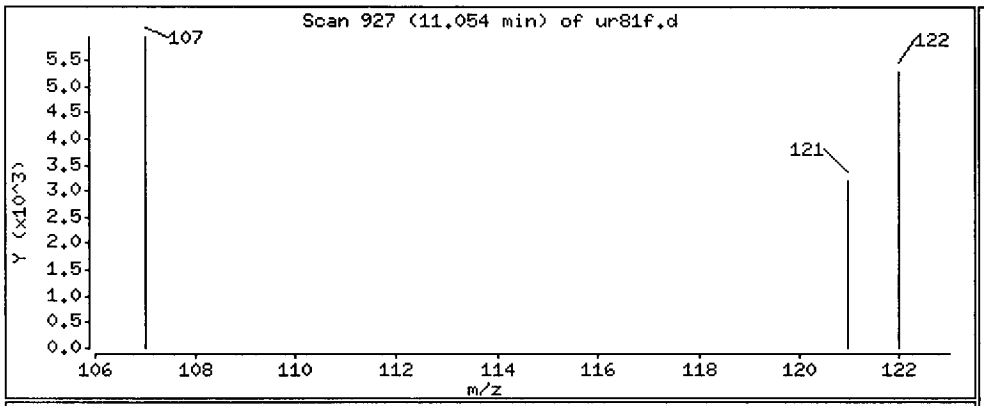
Operator: YZ

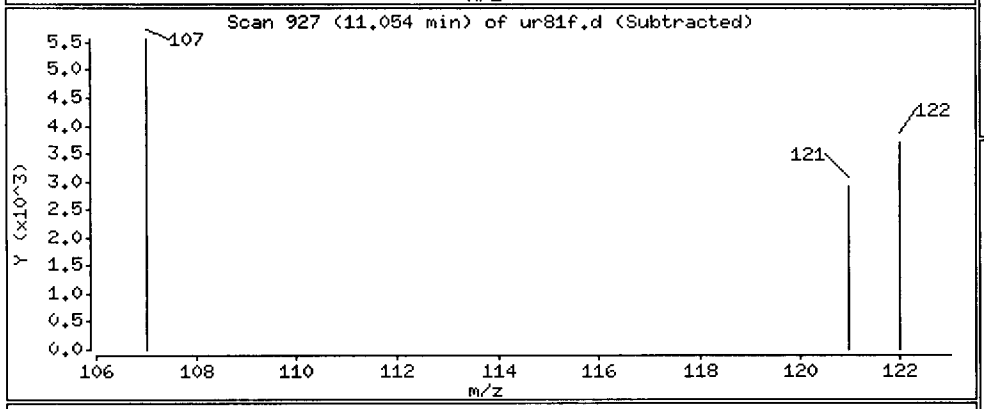
Column phase: ZB-5msi

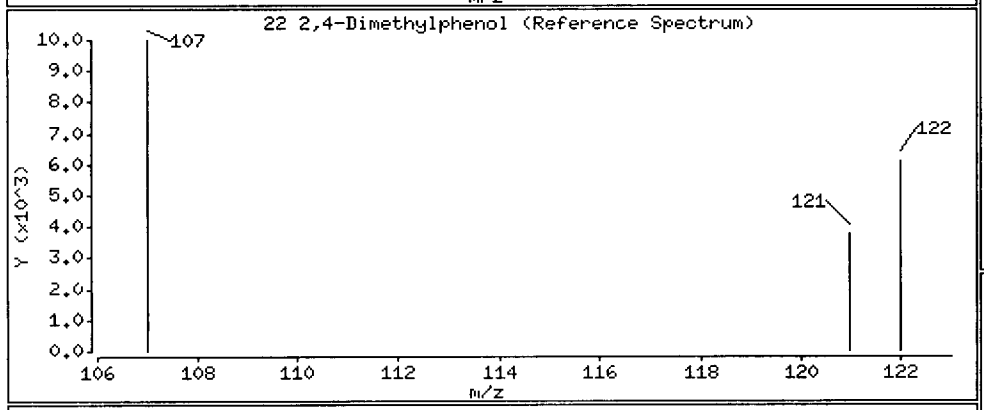
Column diameter: 0.25

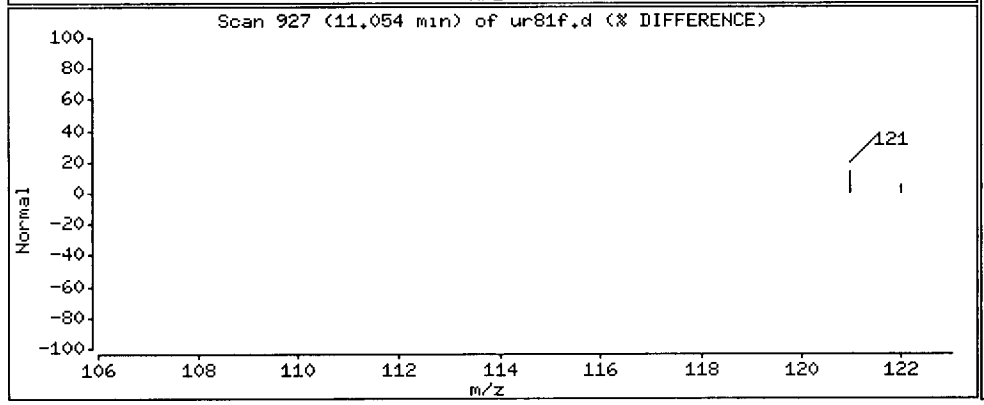
22 2,4-Dimethylphenol

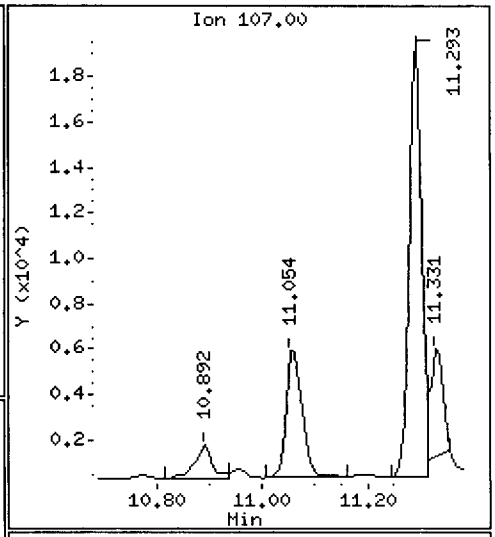
Concentration: 13.27 ug/kg

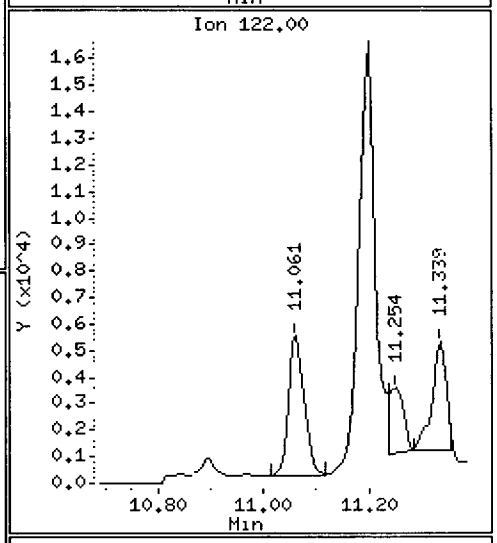


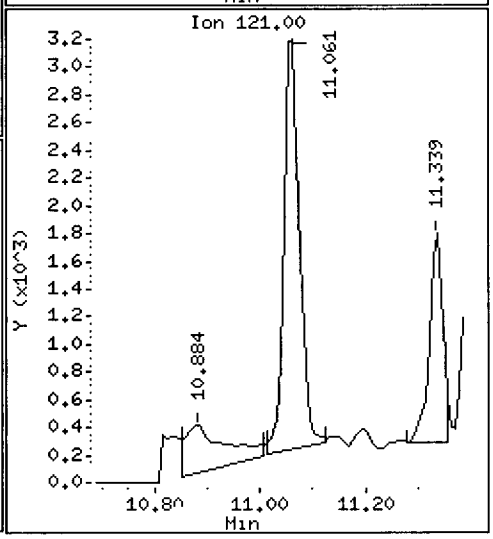












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

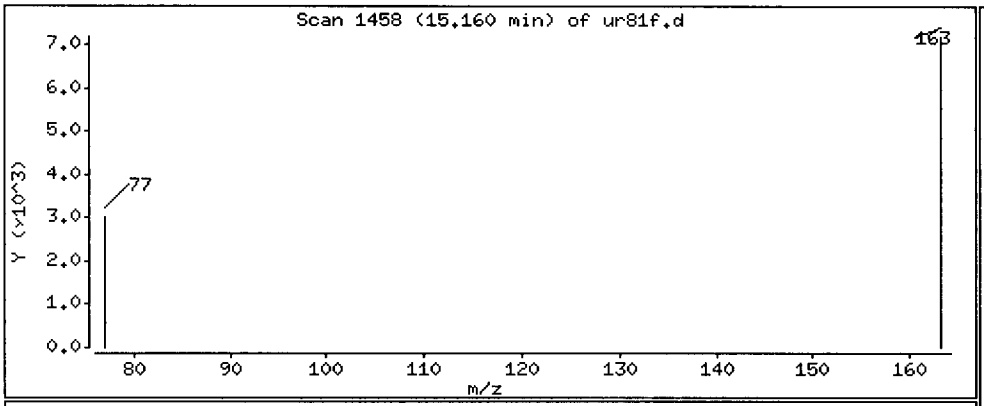
Operator: YZ

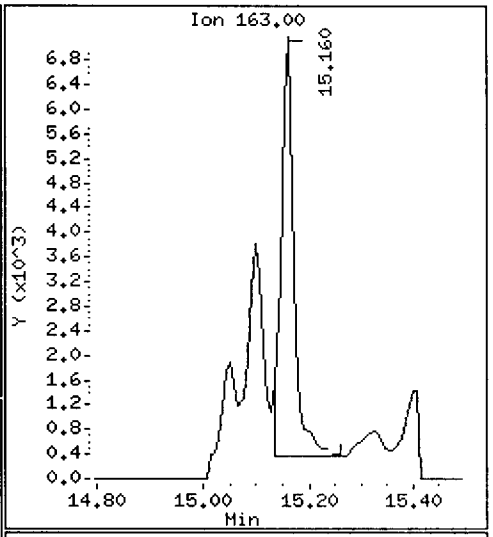
Column phase: ZB-5ms1

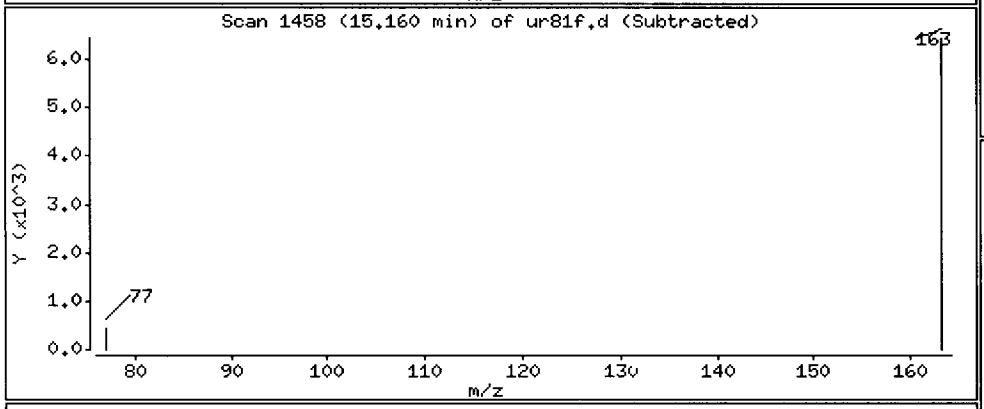
Column diameter: 0.25

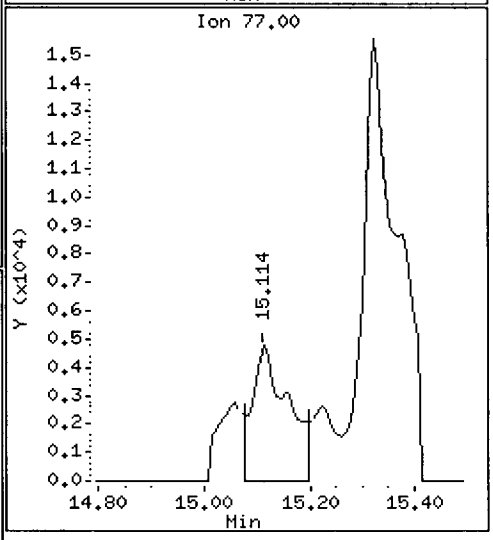
39 Dimethylphthalate

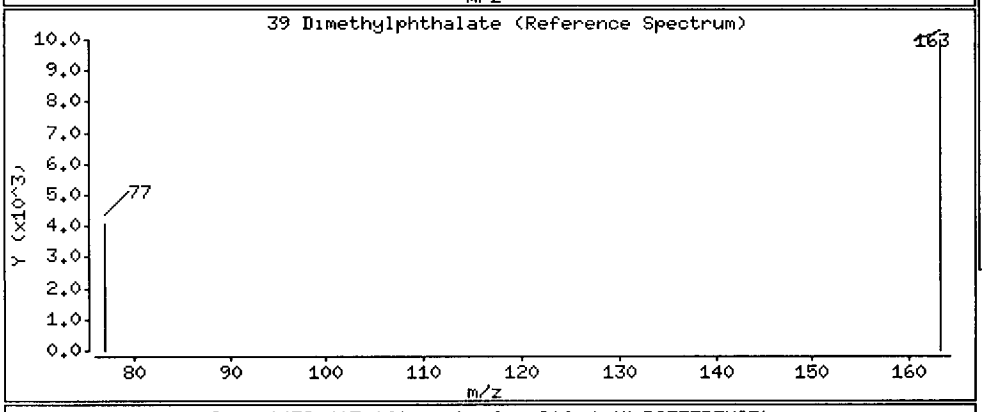
Concentration: 7.385 ug/kg

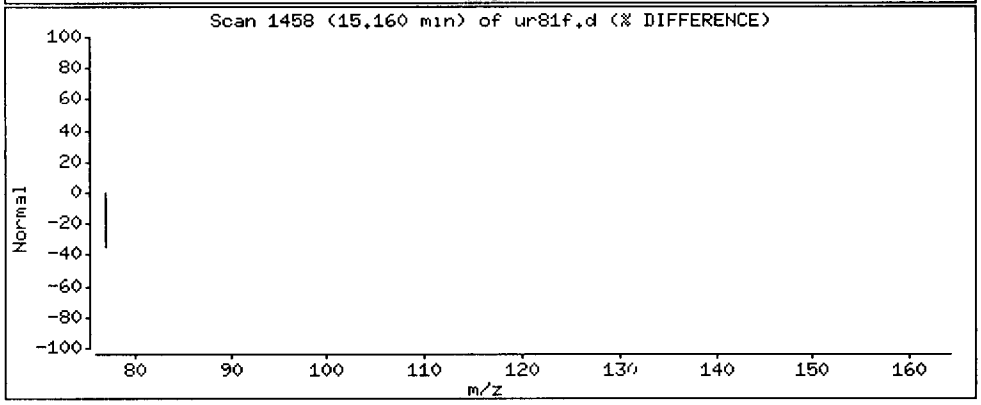












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

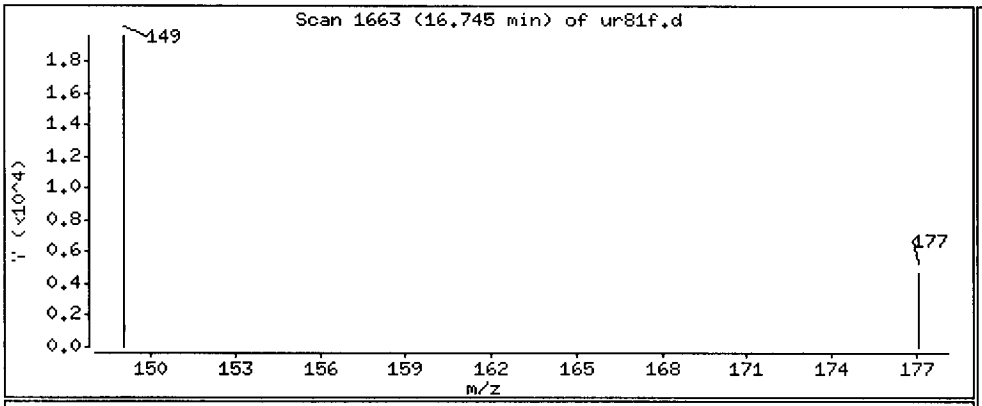
Operator: YZ

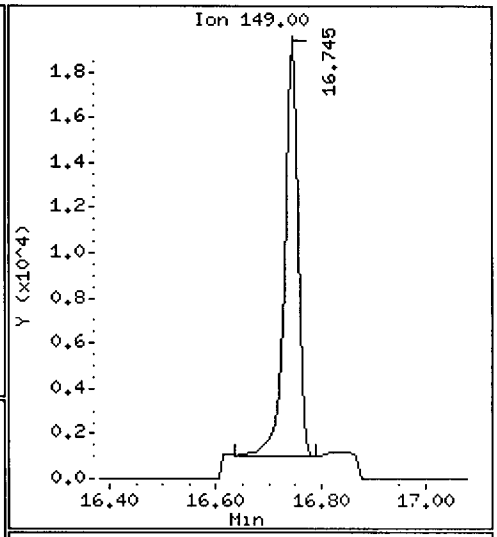
Column phase: ZB-5msi

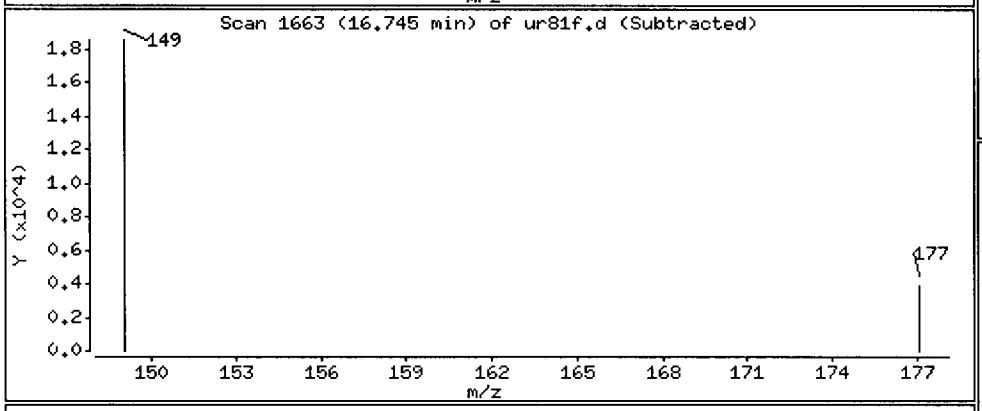
Column diameter: 0.25

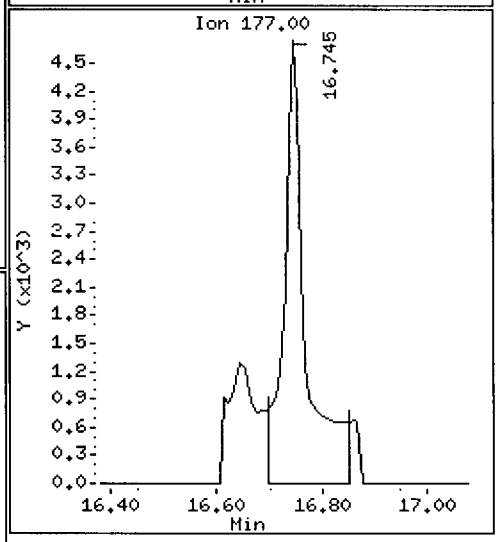
50 Diethylphthalate

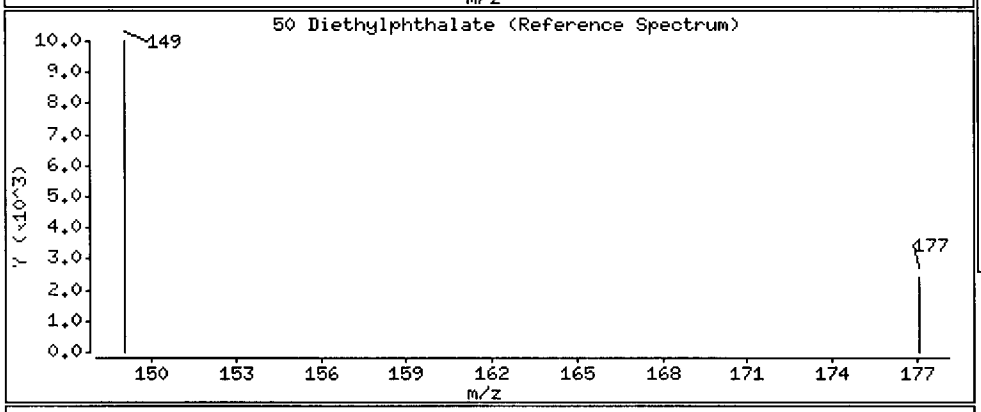
Concentration: 18.90 ug/kg

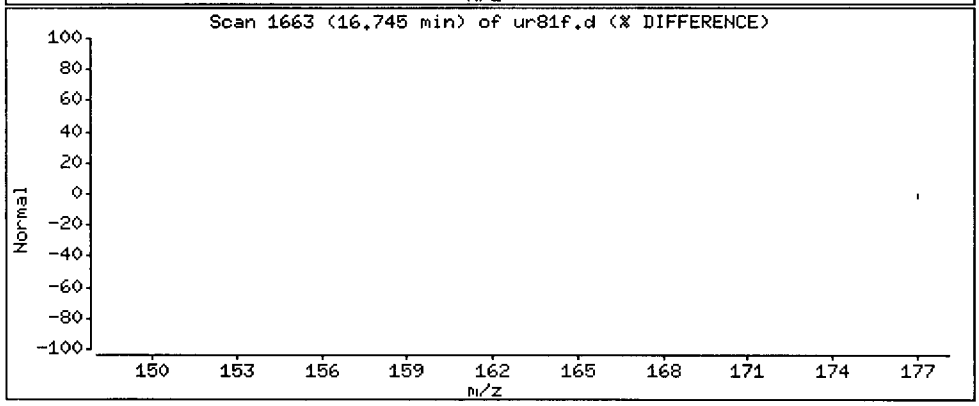












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Date : 08-MAY-2012 22:10

Client ID: IJ12-07

Instrument: nt10.i

Sample Info: UR81F

Volume Injected (uL): 1.0

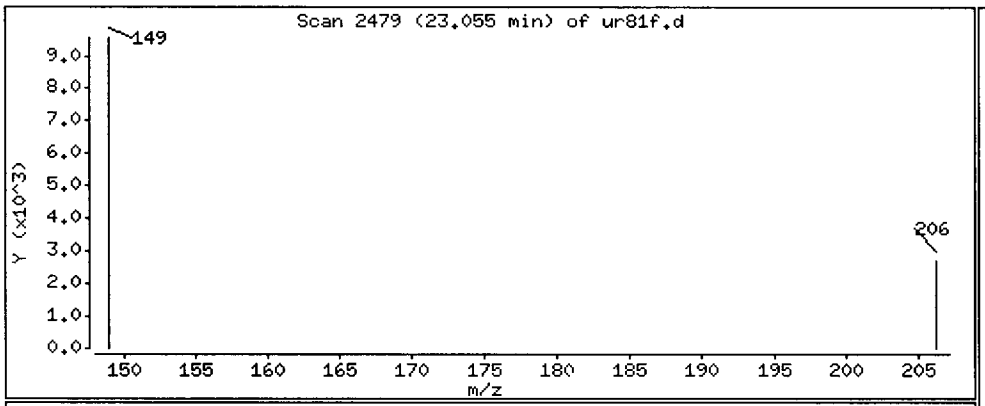
Operator: YZ

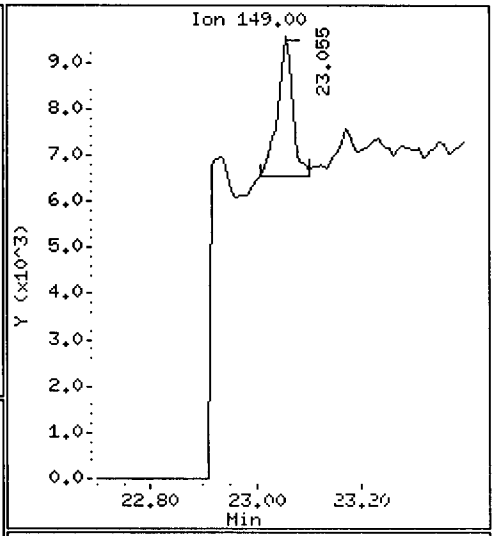
Column phase: ZB-5msi

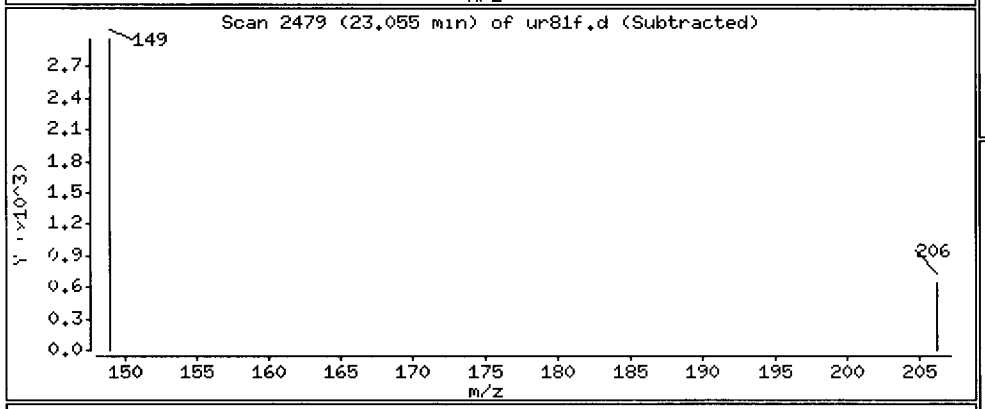
Column diameter: 0.25

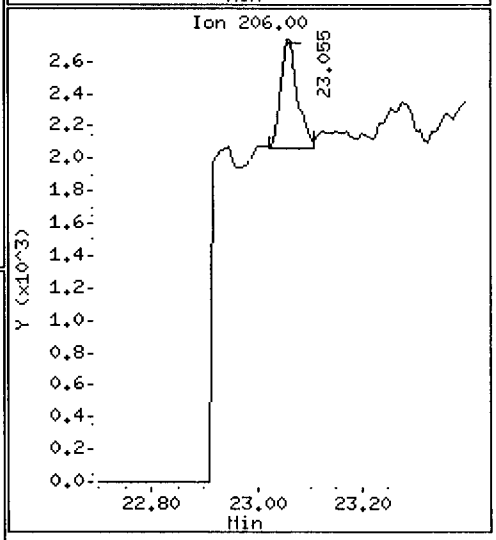
67 Butylbenzylphthalate

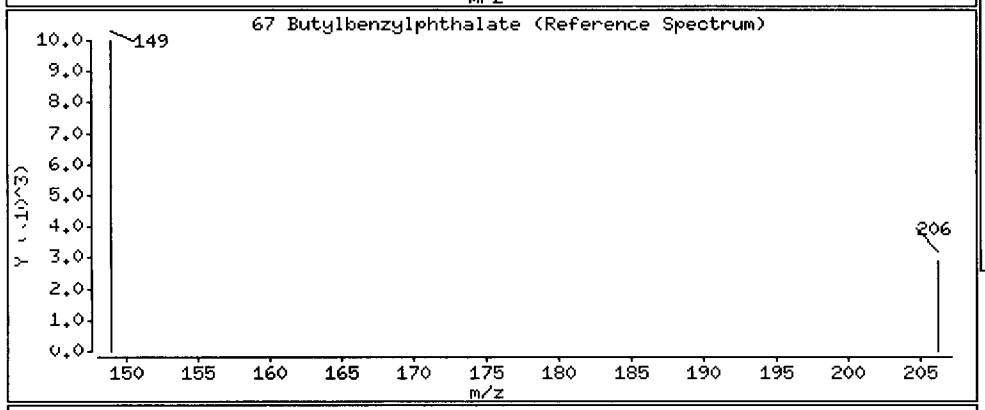
Concentration: 4.877 ug/kg

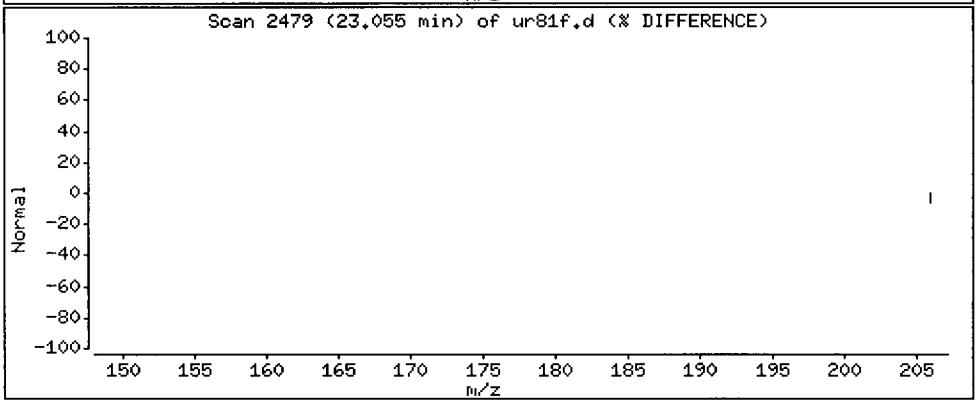












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Date : 08-MAY-2012 22:10

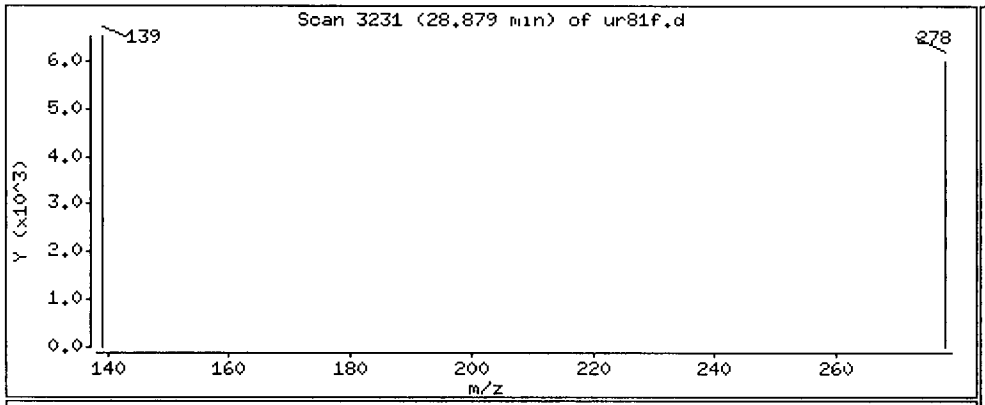
Client ID: IJ12-07 | Instrument: nt10.i

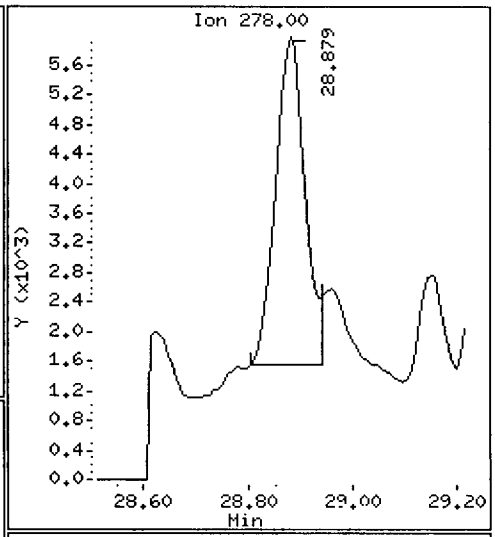
Sample Info: UR81F

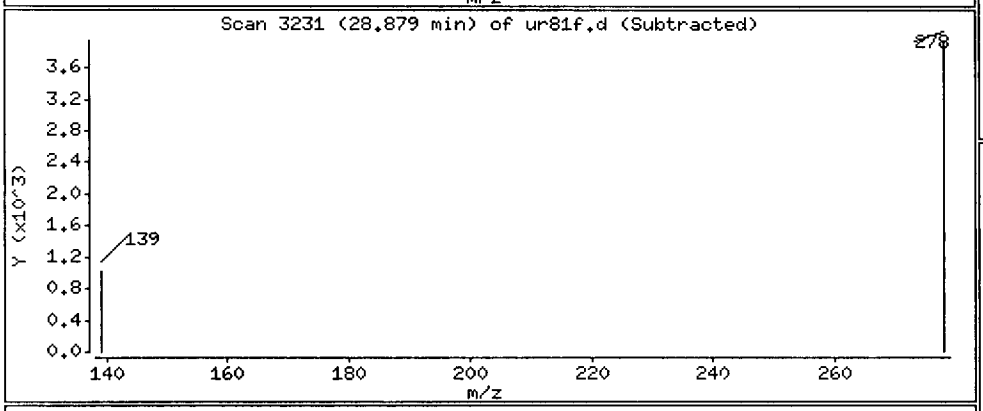
Volume Injected (uL): 1.0 | Operator: YZ

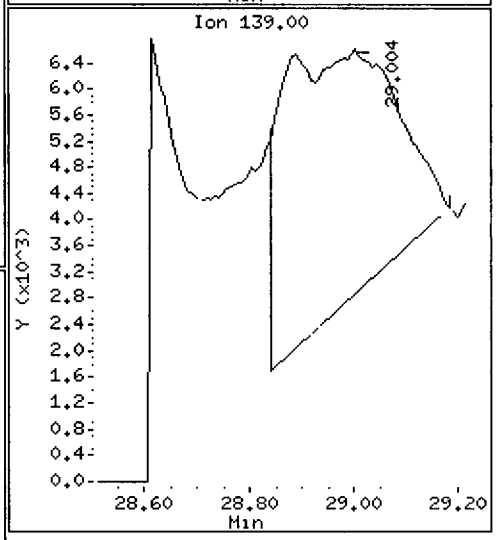
Column phase: ZB-5msi | Column diameter: 0.25

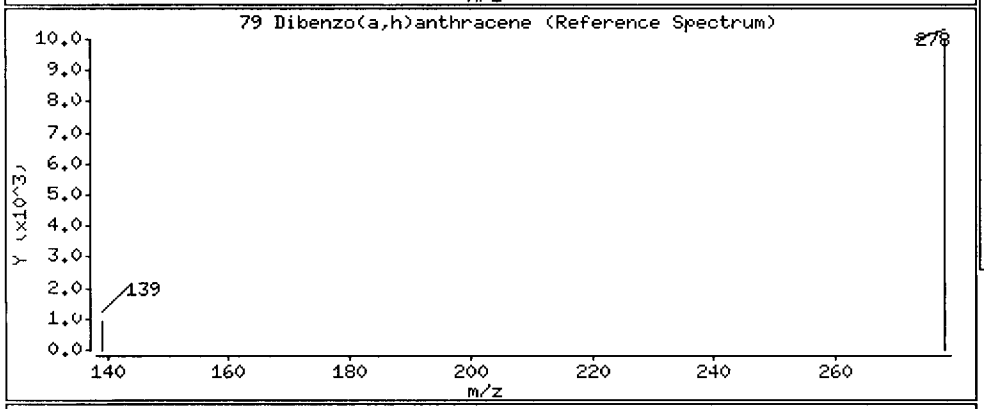
79 Dibenzo(a,h)anthracene | Concentration: 8.308 ug/kg

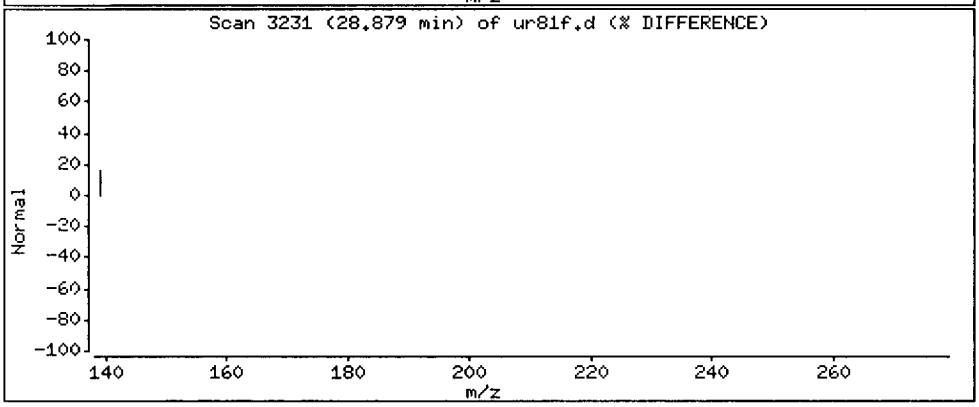






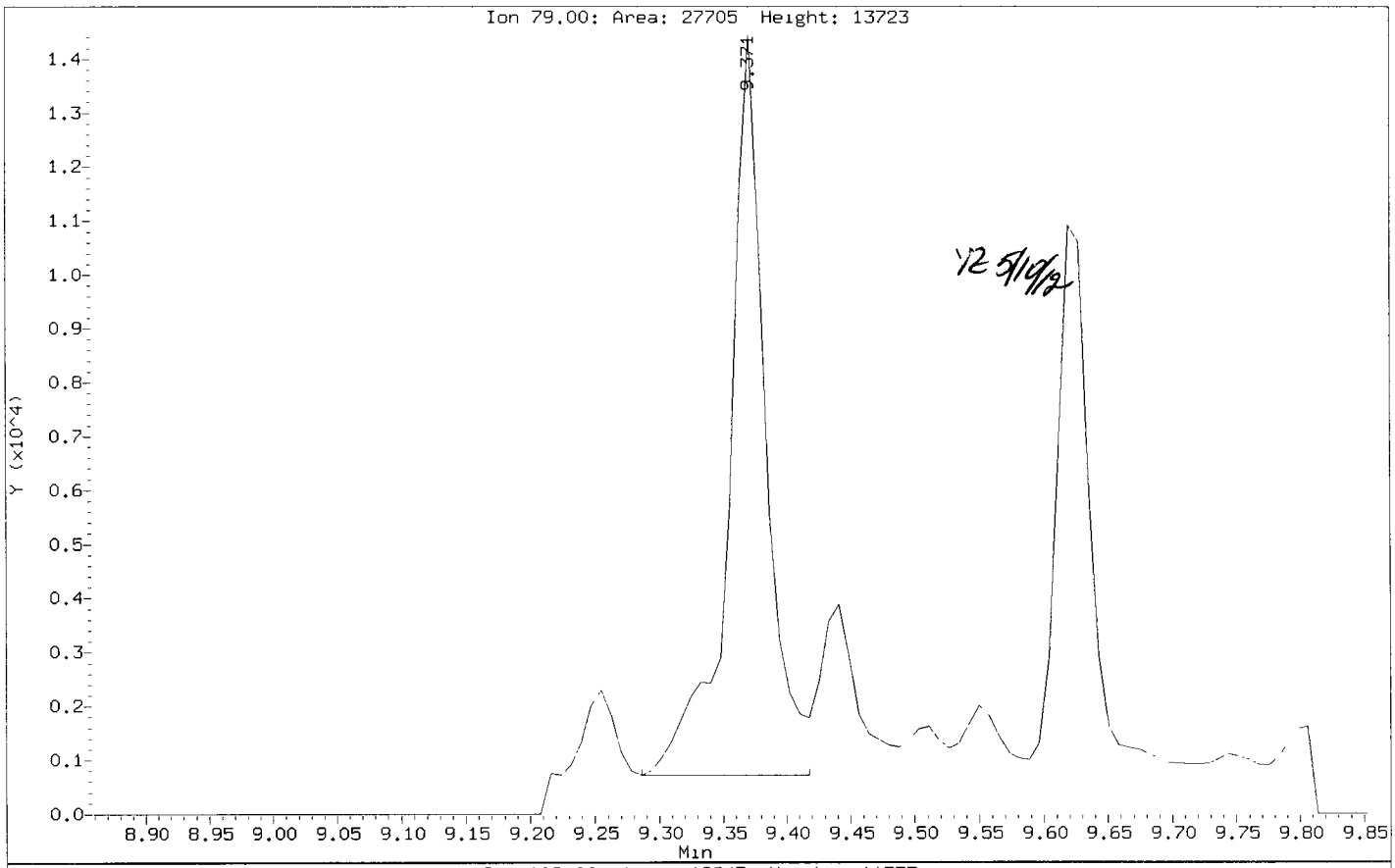


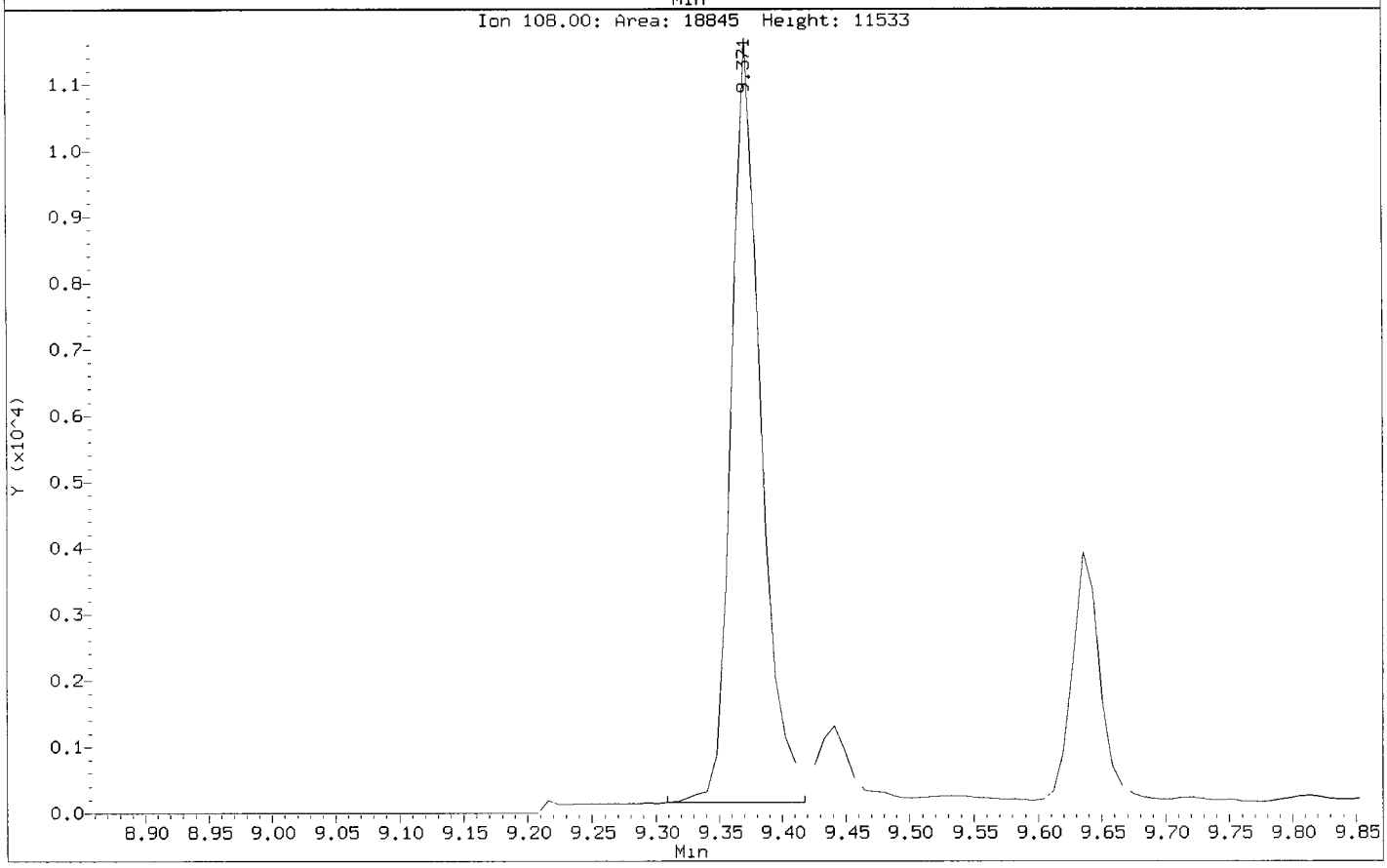




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d
Injection Date: 08-MAY-2012 22:10
Instrument: nt10.i
Client Sample ID: IJ12-07

Compound: Benzyl alcohol
CAS Number: 100-51-6

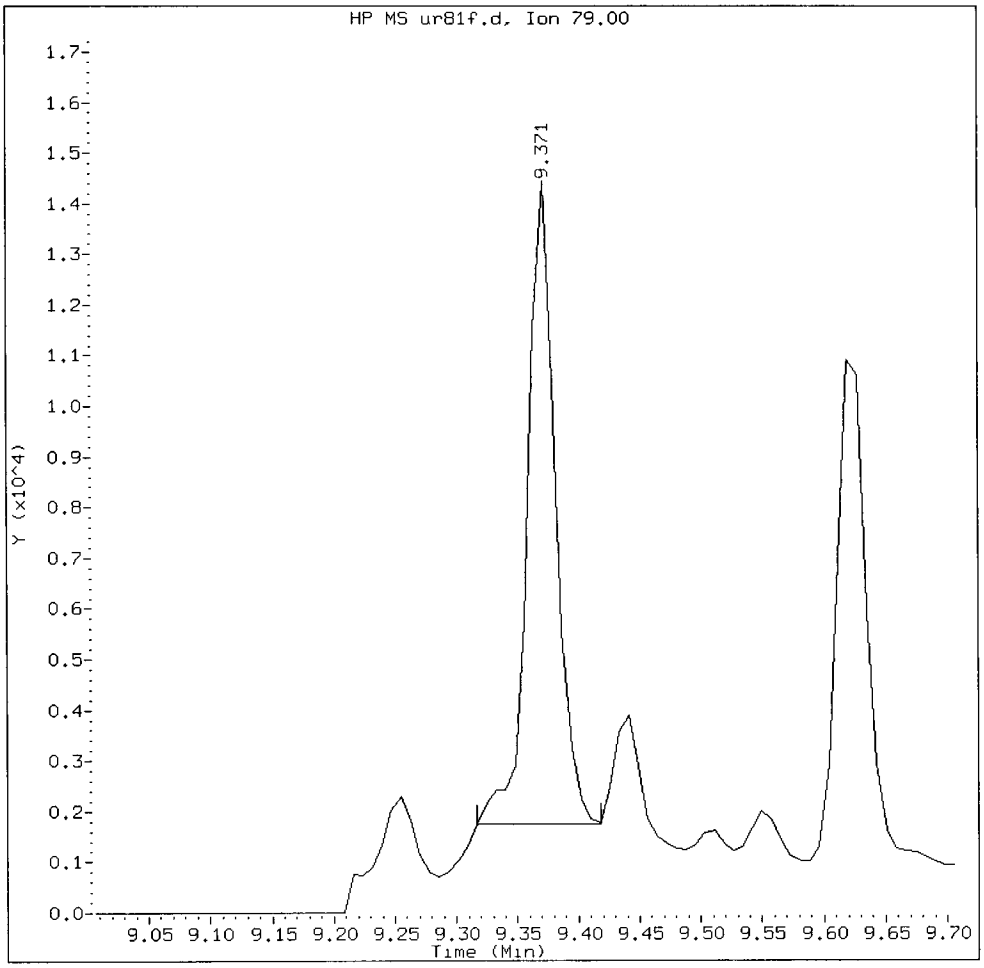




UR81 - 01115

UR81F, /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Benzyl alcohol Amount: 0.34 Area: 20459



MANUAL INTEGRATION for Benzyl alcohol

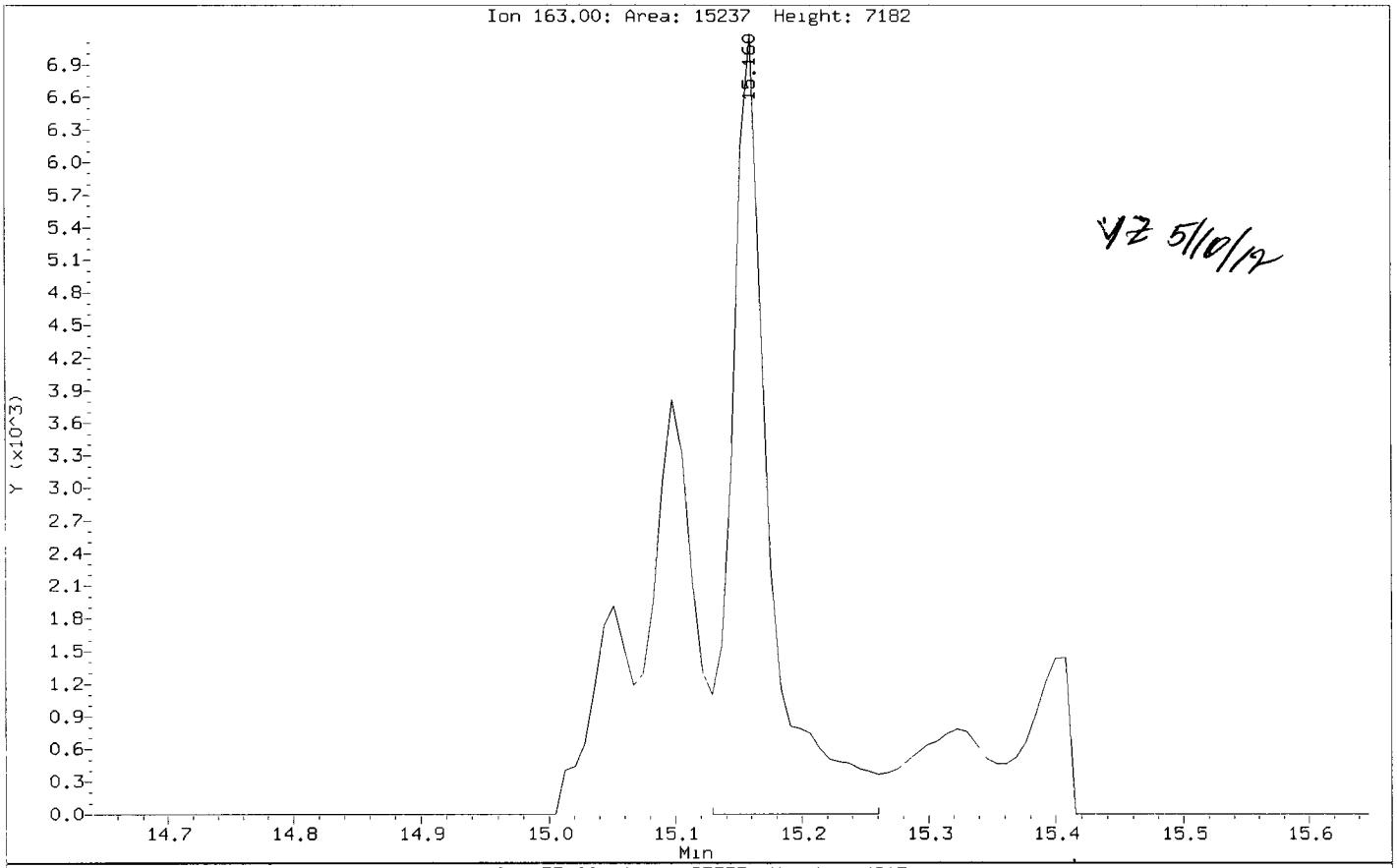
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

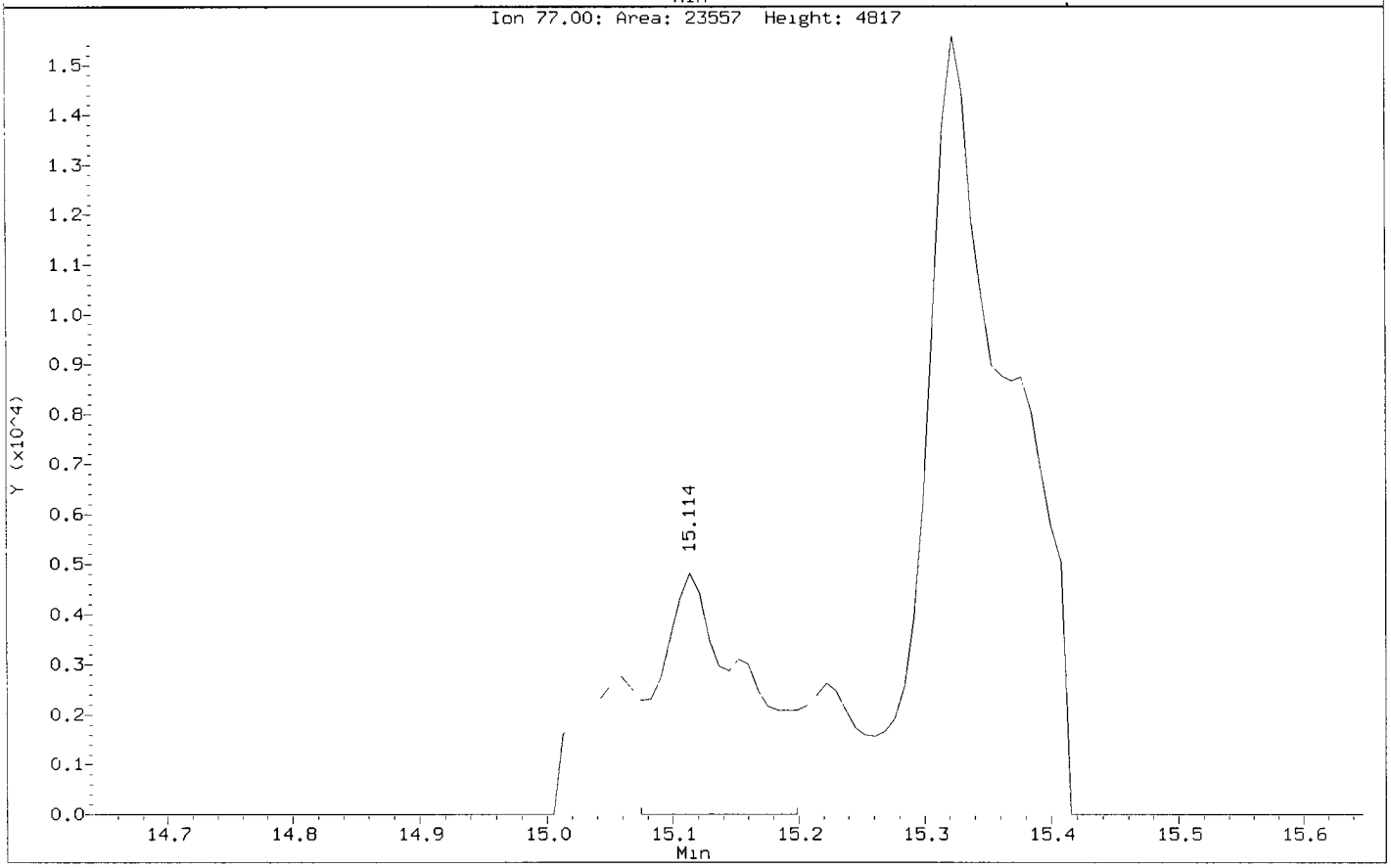
Analyst: VZ Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d
Injection Date: 08-MAY-2012 22:10
Instrument: nt10.i
Client Sample ID: IJ12-07

Compound: Dimethylphthalate
CAS Number: 131-11-3

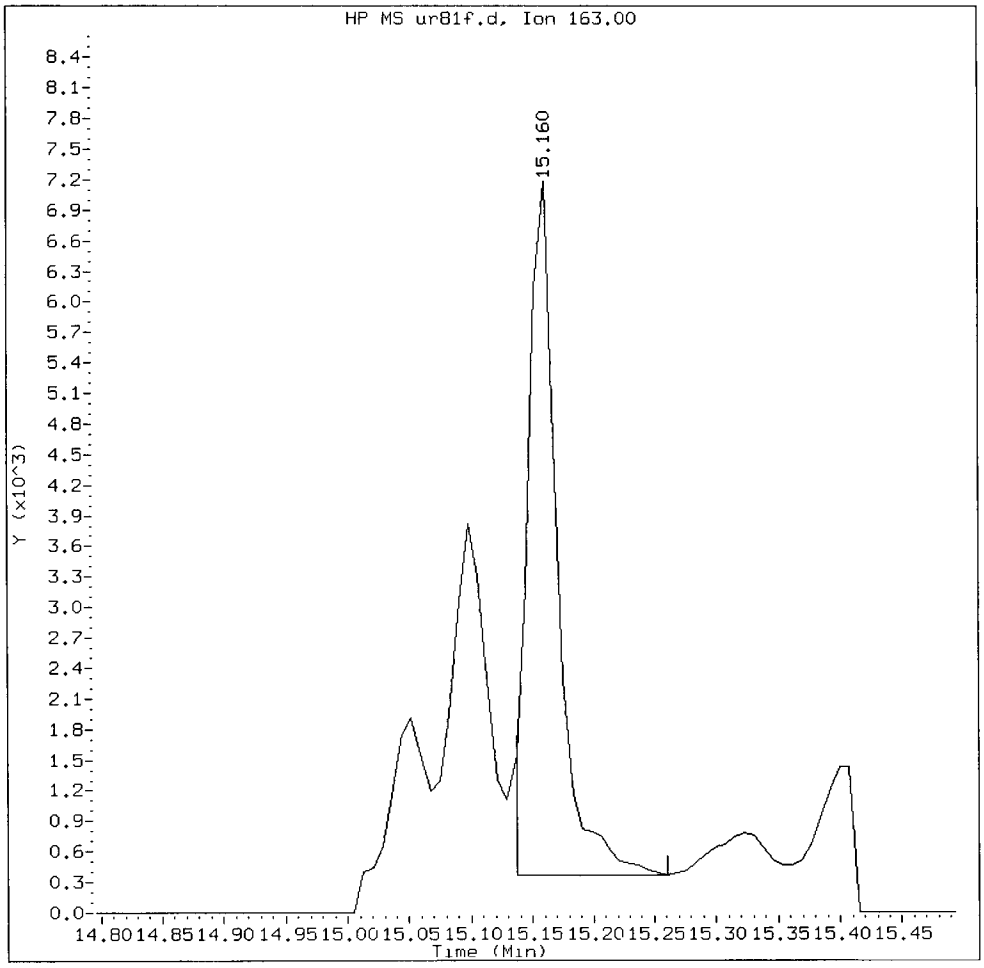


YZ 5/10/12



UR81F, /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Dimethylphthalate Amount: 0.07 Area: 11828



MANUAL INTEGRATION for Dimethylphthalate

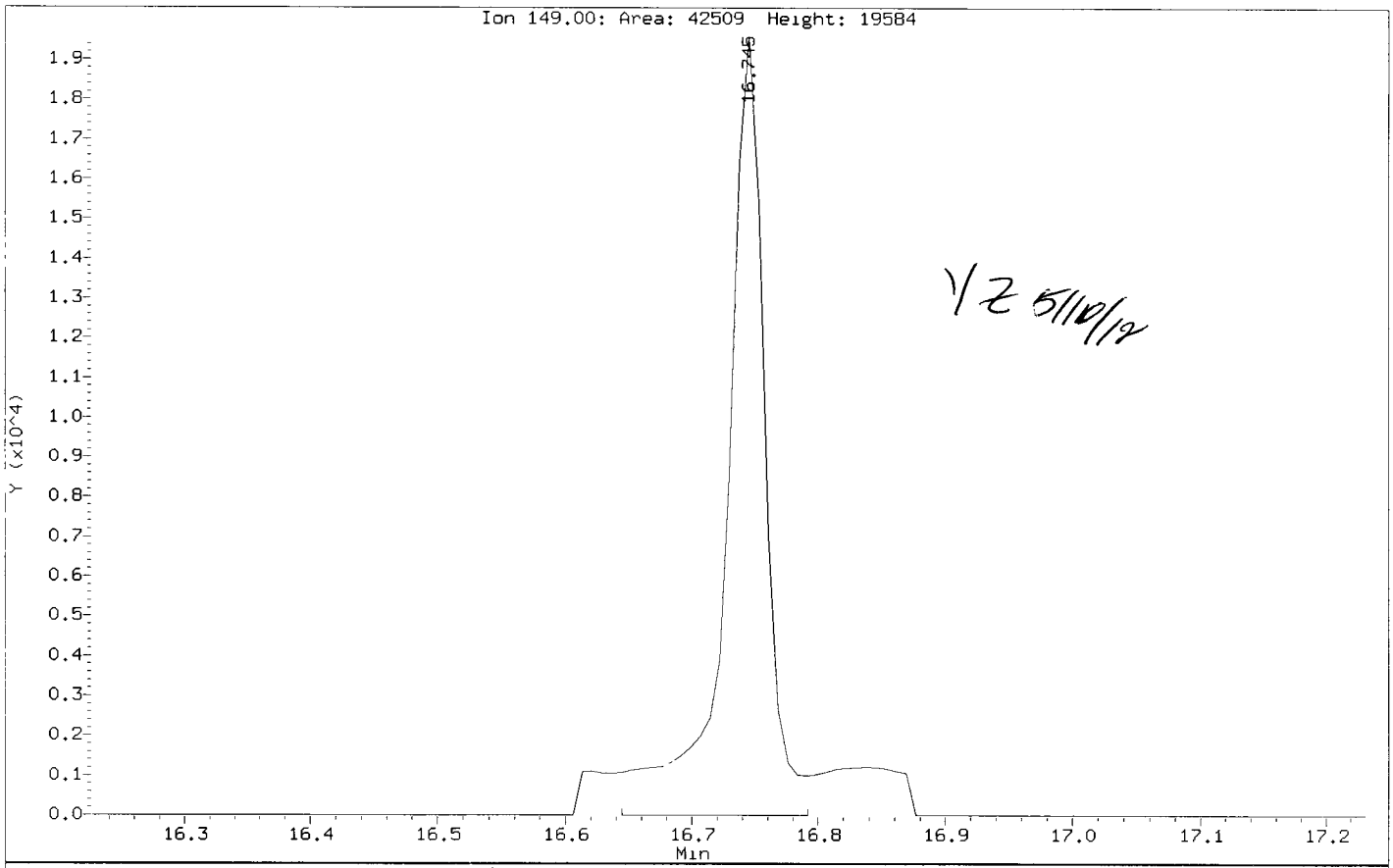
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

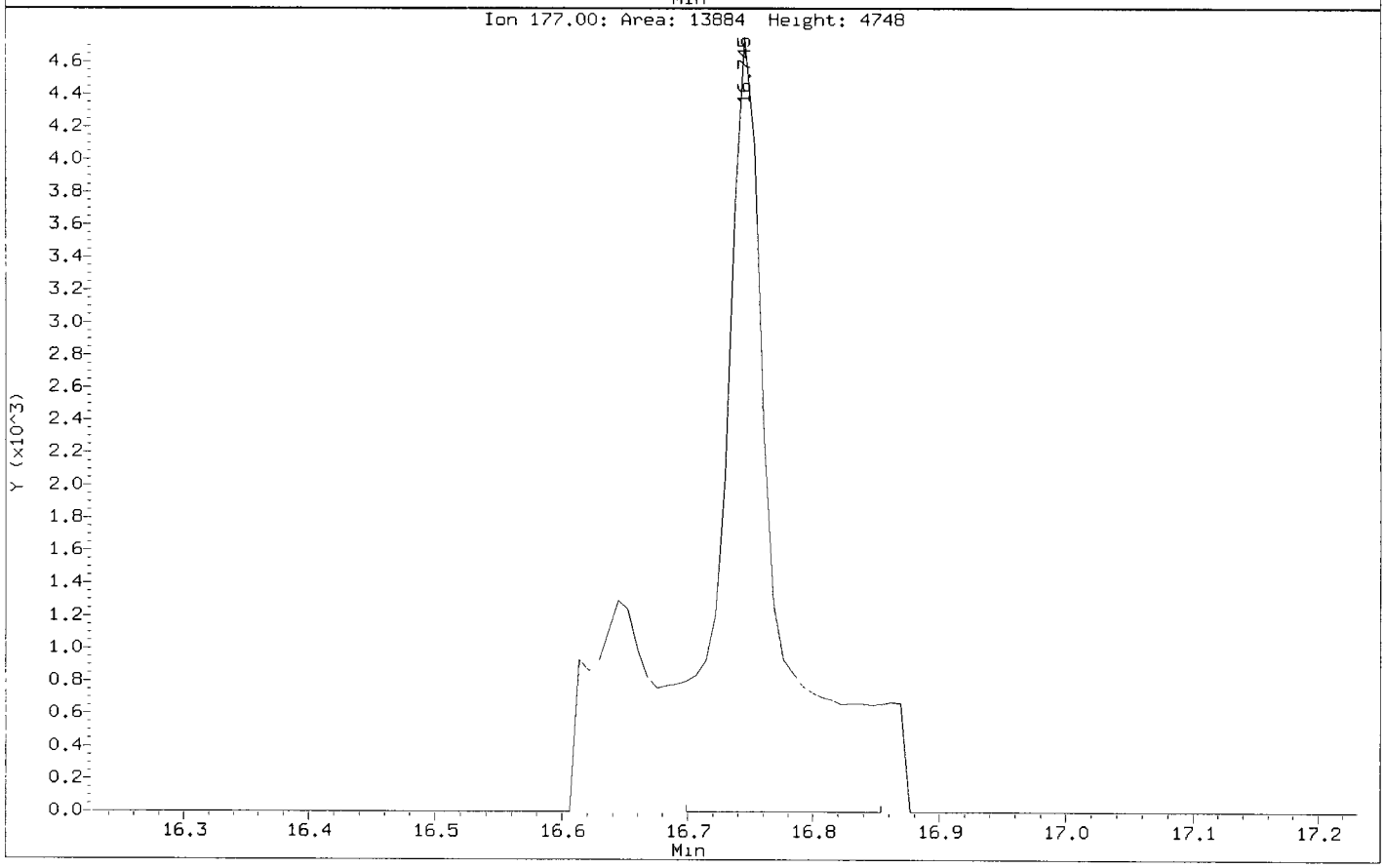
Analyst: VZ Date: 5/10/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d
Injection Date: 08-MAY-2012 22:10
Instrument: nt10.i
Client Sample ID: IJ12-07

Compound: Diethylphthalate
CAS Number: 84-66-2

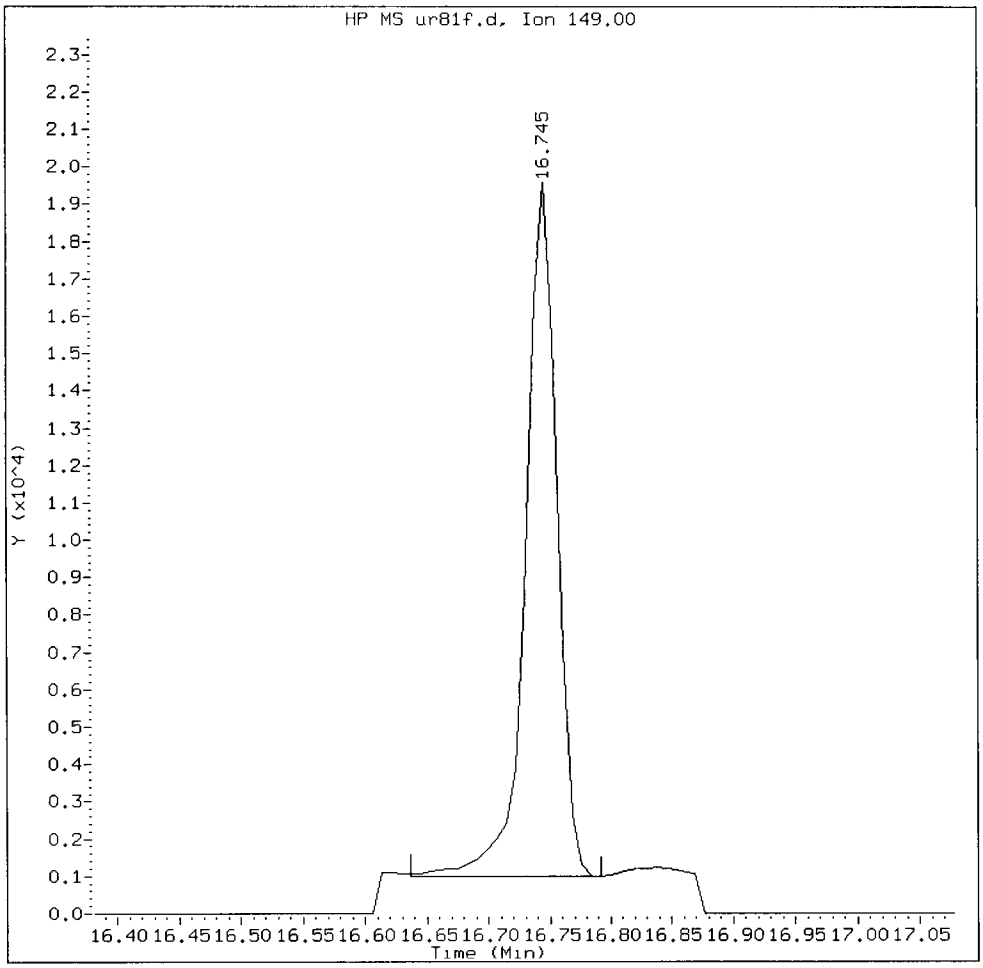


1/2 5/10/12



UR81F, /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Diethylphthalate Amount: 0.19 Area: 33143



MANUAL INTEGRATION for Diethylphthalate

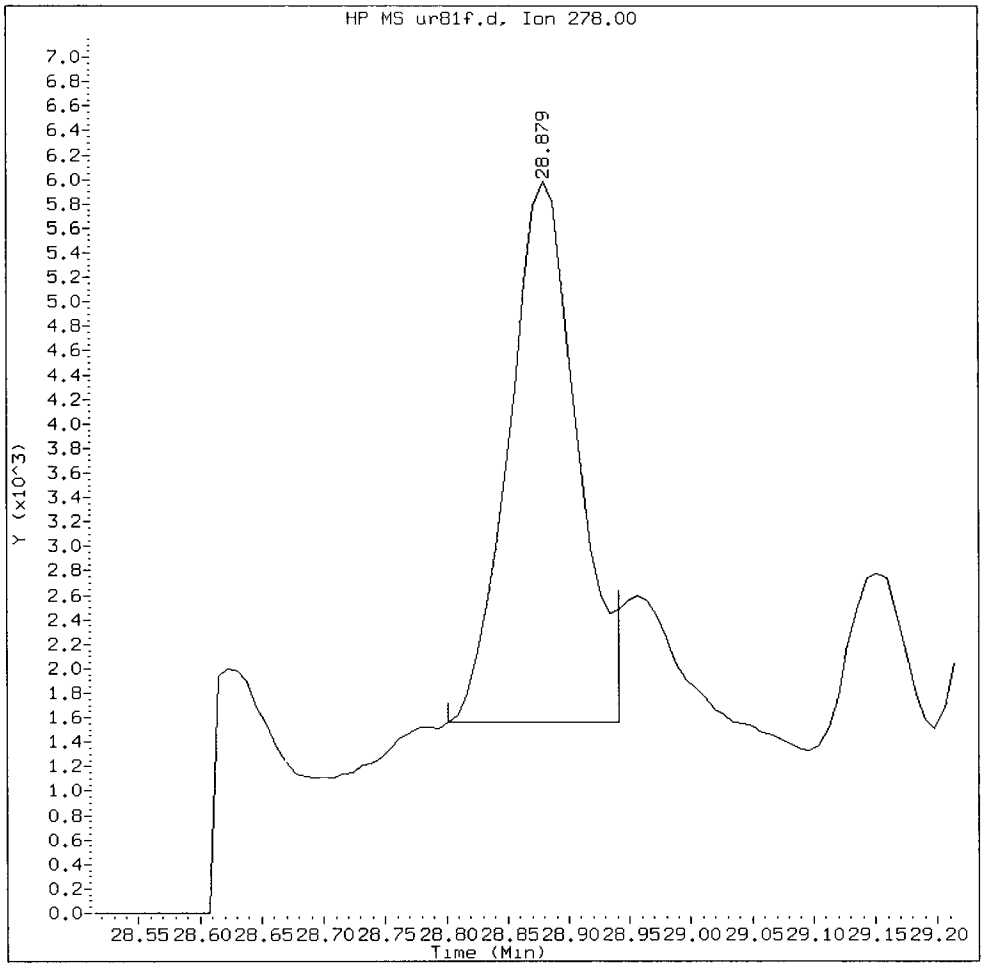
1. Baseline correction ✓
2. Poor chromatography ✓
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 5/14/12

UR81F, /chem1/nt10.i/20120508.b/SIM.b/ur81f.d

Dibenzo(a,h)anthracene Amount: 0.08 Area: 17302



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

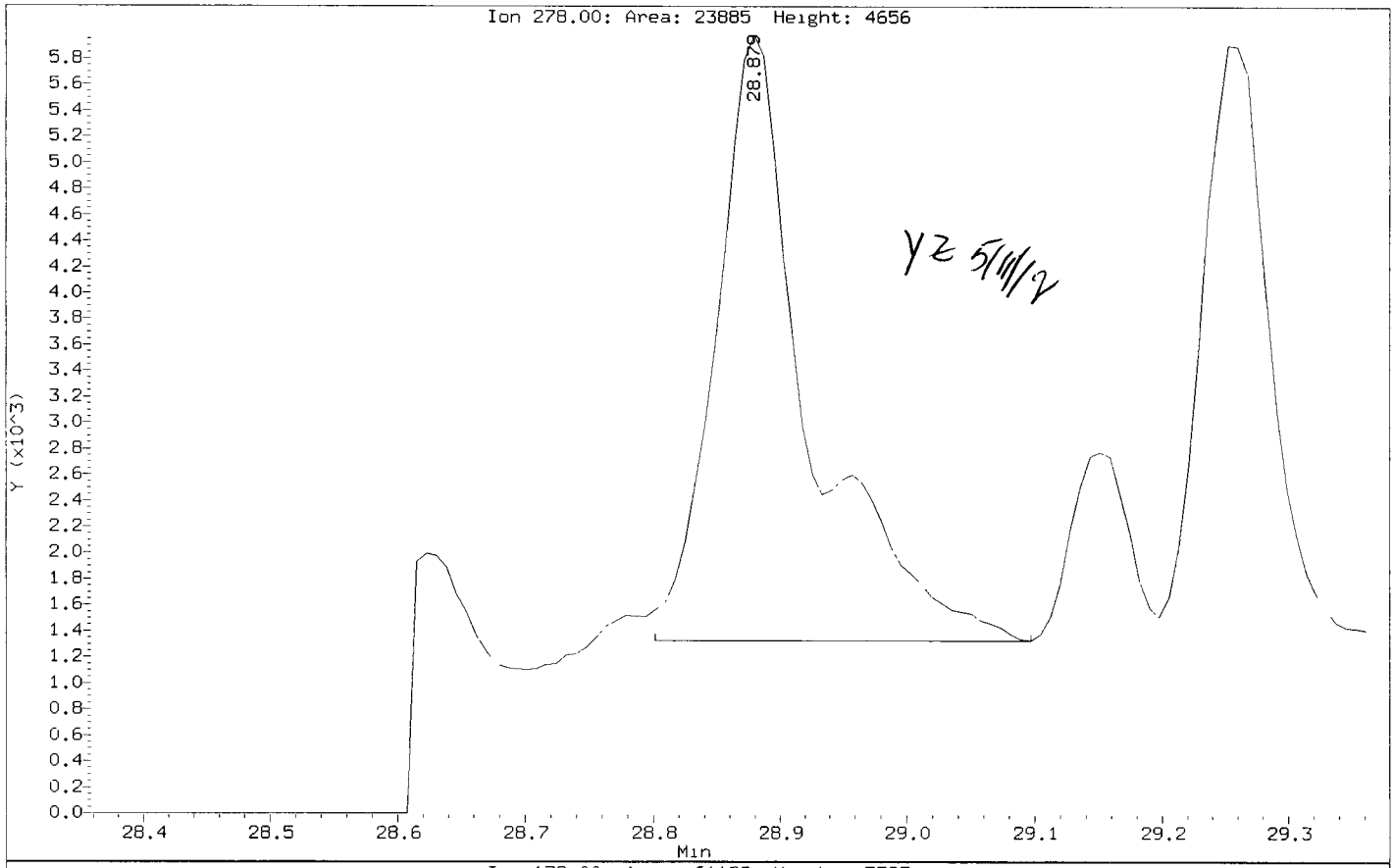
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

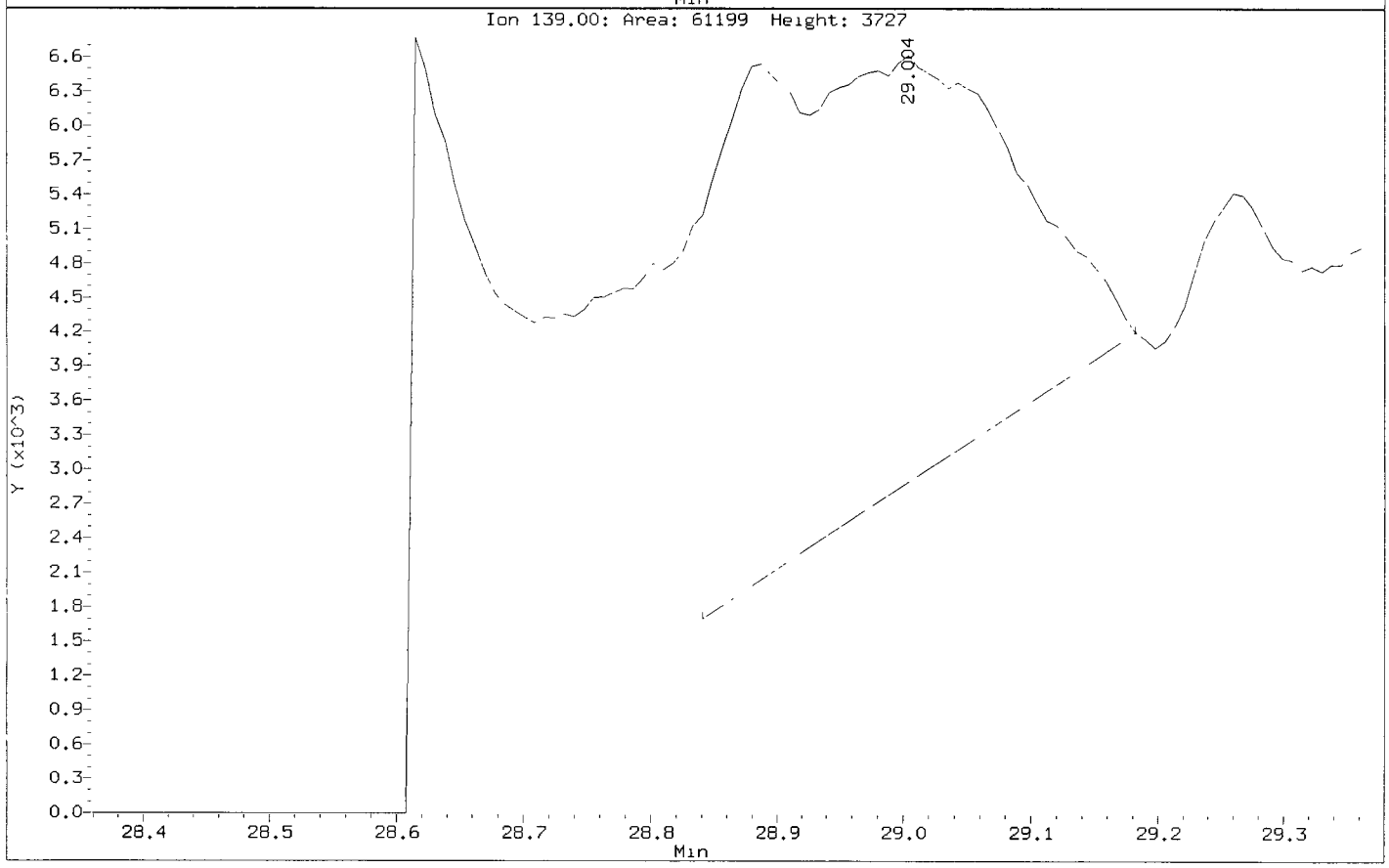
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81f.d
Injection Date: 08-MAY-2012 22:10
Instrument: nt10.i
Client Sample ID: IJ12-07

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





UR81 : 81123

CO-ELUTION SUMMARY FOR FILE - ur81f.d

Lab ID: UR81F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81g.d
Lab Smp Id: UR81G Client Smp ID: IJ12-01
Inj Date : 08-MAY-2012 22:47
Operator : YZ Inst ID: nt10.i
Smp Info : UR81G
Misc Info : 12-7398
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	17.31000	Weight of sample extracted (g)
M	38.60000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.711	6 680	(0.741)	367361	4 00630	376.9
3 Phenol	94	8.442	8 418	(0.932)	68721	0 56625	53.28
7 1,3-Dichlorobenzene	146	Compound Not Detected					
* 8 1,4-Dichlorobenzene-d4	152	9.053	9.045	(1.000)	267099	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9 371	9.355	(1.035)	22232	0.35784	33 67
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9.635	9.619	(1.064)	8410	0.08627	8 117
15 4-Methylphenol	108	9.938	9.914	(1.098)	62134	0.60744	57.15
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11.061	11 038	(0.943)	15287	0.16379	15.41
26 1,2,4-Trichlorobenzene	180	Compound Not Detected					
* 27 Naphthalene-d8	136	11.732	11 724	(1.000)	1018218	4 00000	
30 Hexachlorobutadiene	225	Compound Not Detected					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.160	15.144	(0.969)	48188	0.29997	28 22(H)
*	42 Acenaphthene-d10	162	15.647	15.632	(1 000)	525343	4 00000	
	50 Diethylphthalate	149	16.745	16.729	(1 070)	13652	0.07763	7 304(M)
	54 N-Nitrosodiphenylamine	169	17.139	17.123	(0 906)	7707	~~0.06151~~	5 787 U UJ
	57 Hexachlorobenzene	284	Compound Not Detected					
	58 Pentachlorophenol	266	18.668	18.644	(0.986)	10320	0 26304	24.75(M)
*	59 Phenanthrene-d10	188	18.923	18.908	(1.000)	932581	4.00000	
$	66 Terphenyl-d14	244	22.126	22.095	(0.922)	527436	3.27845	308.5
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	24.000	23.969	(1.000)	1010605	4.00000	
*	77 Perylene-d12	264	26.493	26.446	(1.000)	995116	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.926	28.864	(1.092)	167187	0.78464	73.83(H)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81g.d
Lab Smp Id: UR81G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7398

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-01
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	267099	-14.18
27 Naphthalene-d8	1166872	583436	2333744	1018218	-12.74
42 Acenaphthene-d10	603218	301609	1206436	525343	-12.91
59 Phenanthrene-d10	1096026	548013	2192052	932581	-14.91
69 Chrysene-d12	1131082	565541	2262164	1010605	-10.65
77 Perylene-d12	1082499	541250	2164998	995116	-8.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.08
69 Chrysene-d12	23.97	23.47	24.47	24.00	0.13
77 Perylene-d12	26.45	25.95	26.95	26.49	0.18

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81G
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7398

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-01
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	705.7	376.9	53.42	30-160
$ 66 Terphenyl-d14	470.4	308.5	65.57	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Sample Info: UR81G

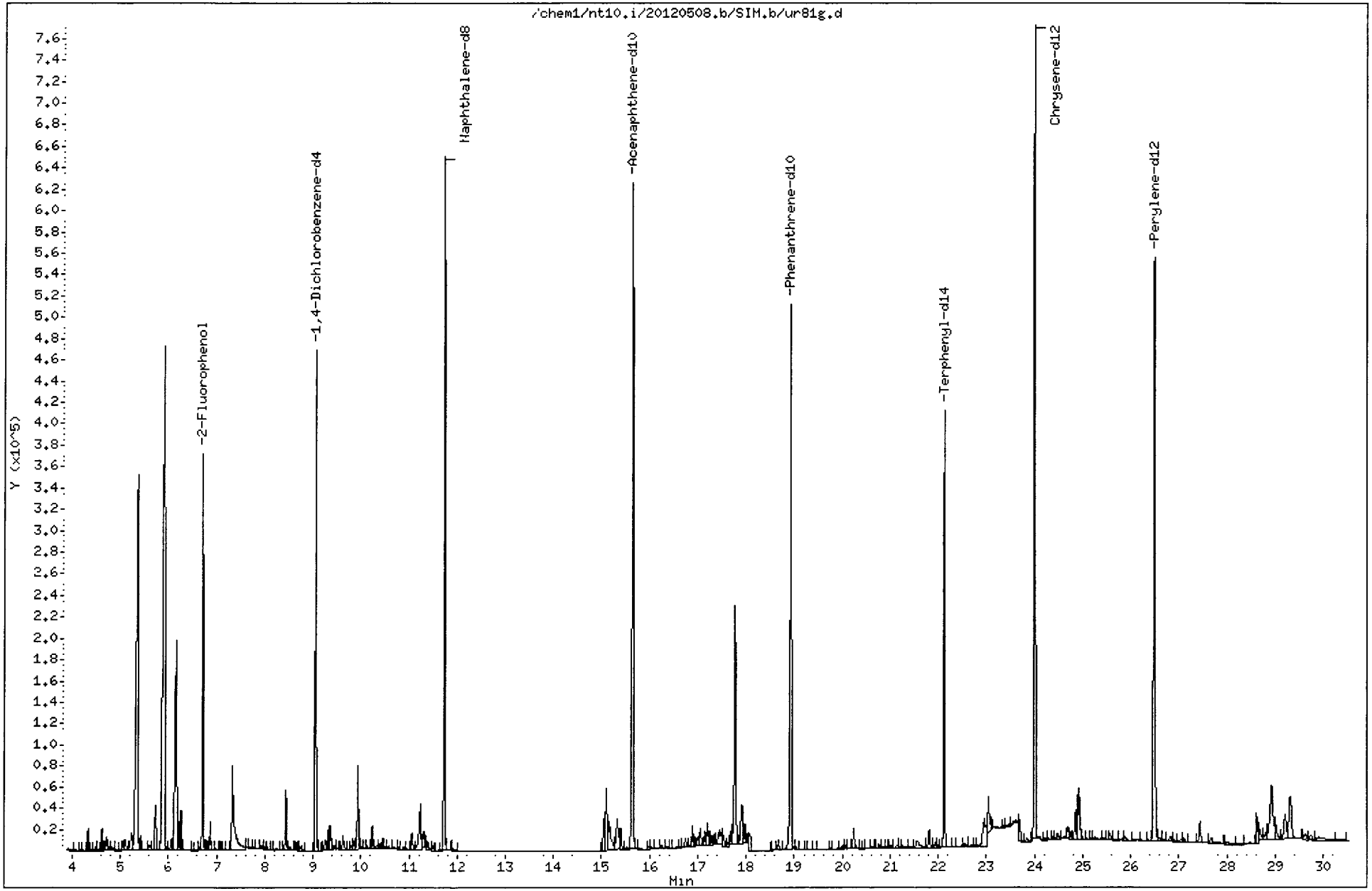
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

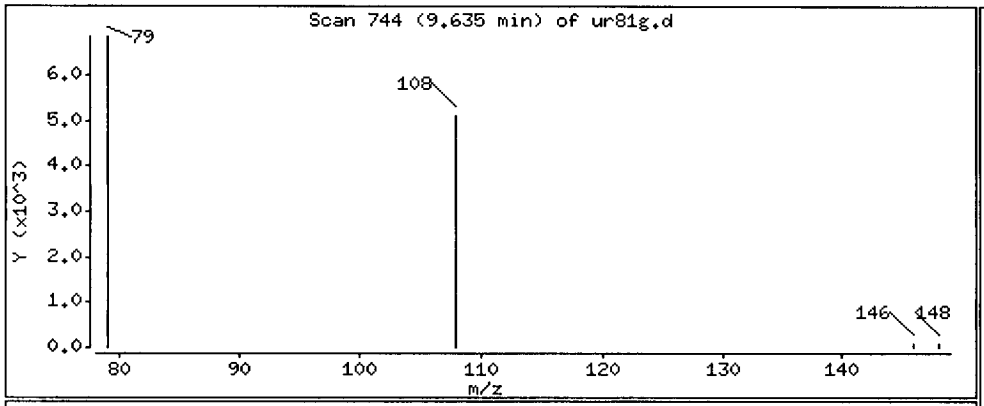
Operator: YZ

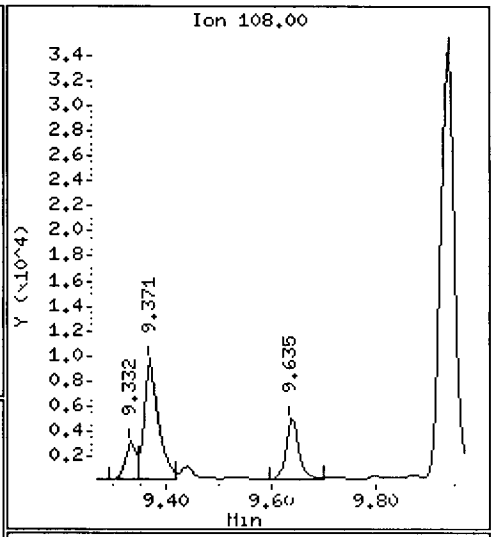
Column phase: ZB-5msi

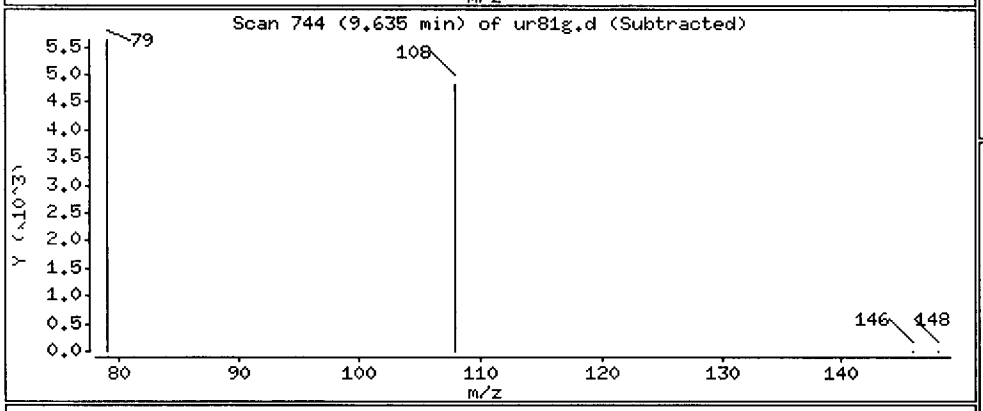
Column diameter: 0.25

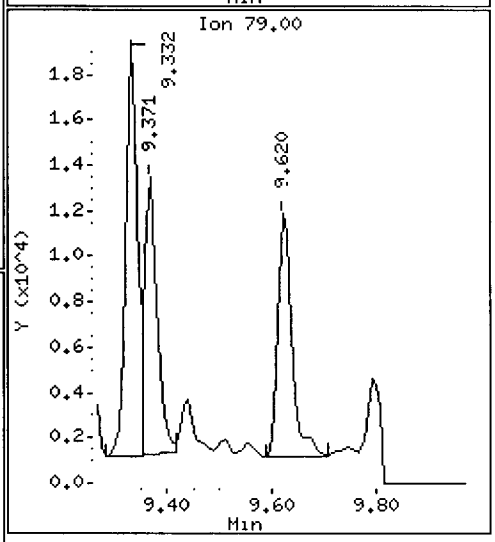
13 2-Methylphenol

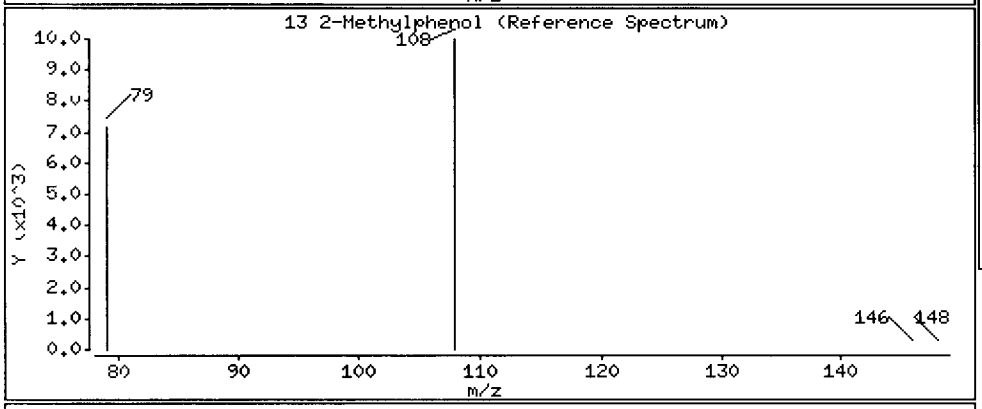
Concentration: 8.117 ug/kg

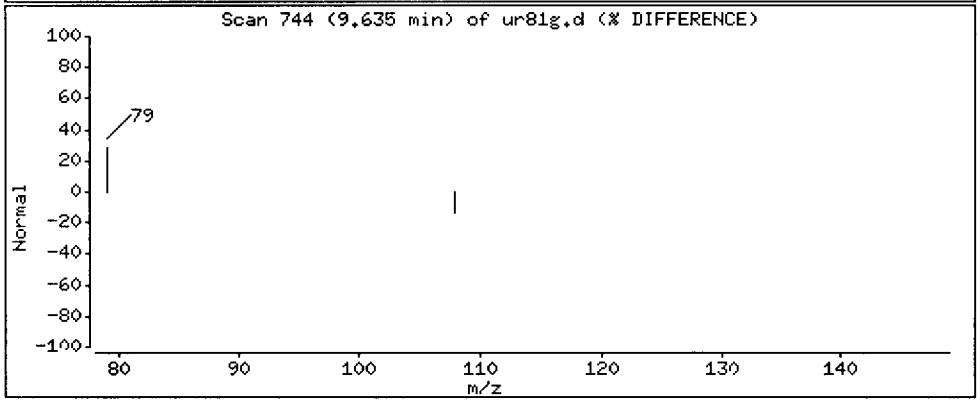












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

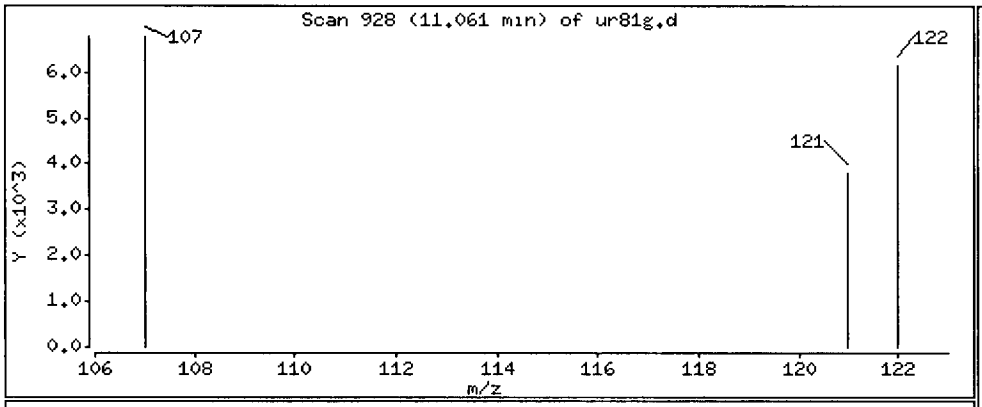
Operator: YZ

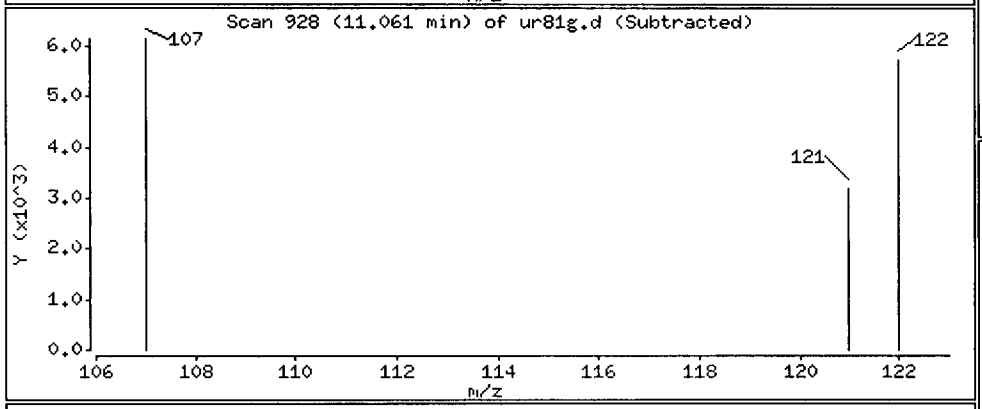
Column phase: ZB-5msi

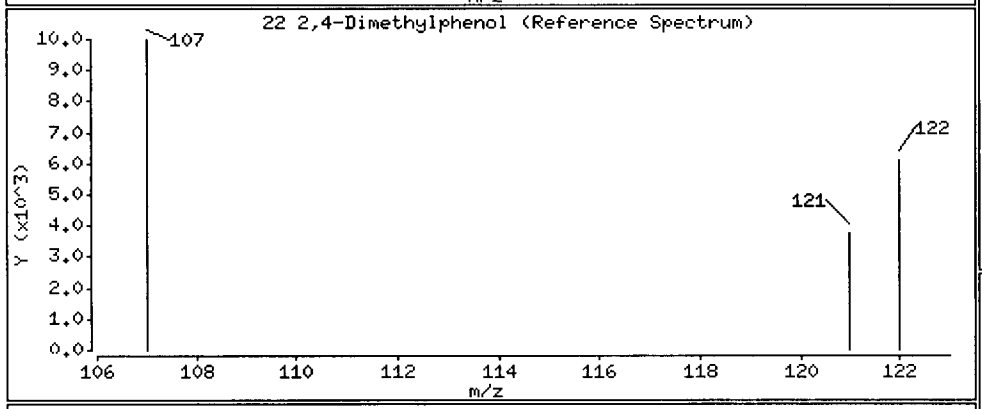
Column diameter: 0.25

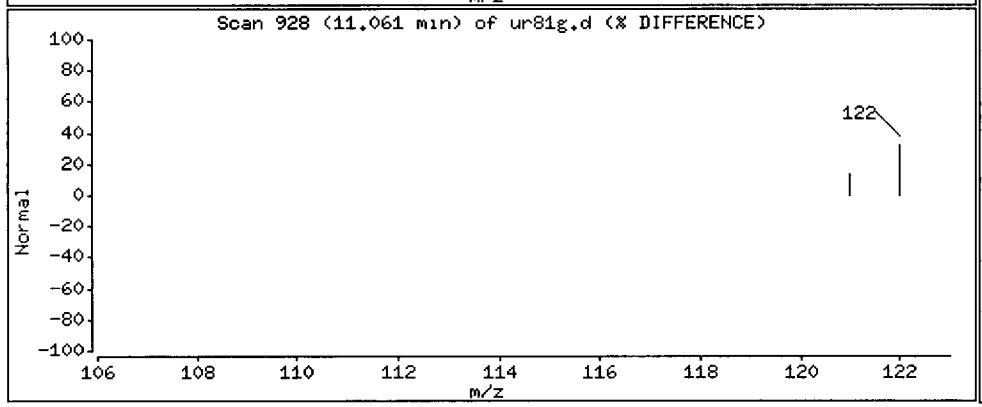
22 2,4-Dimethylphenol

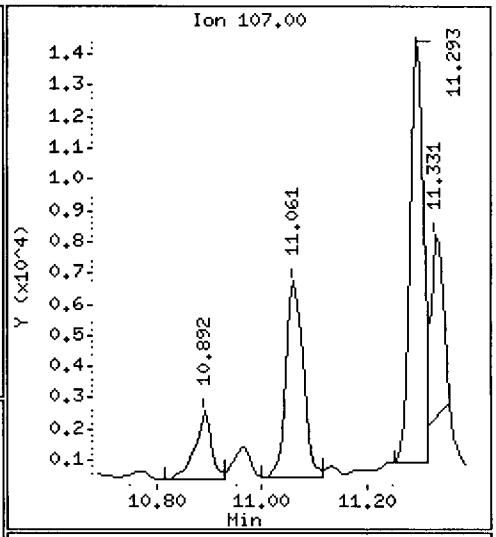
Concentration: 15.41 ug/kg

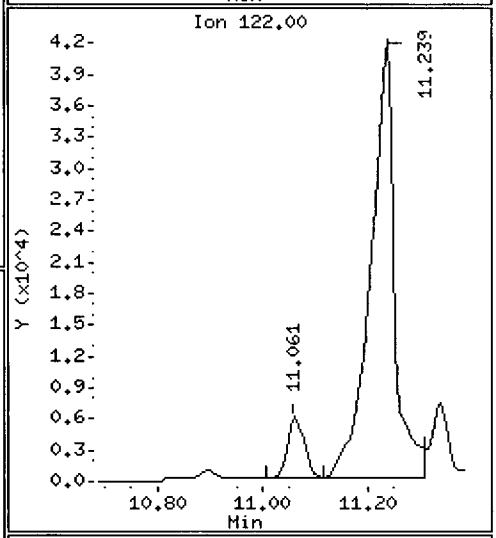


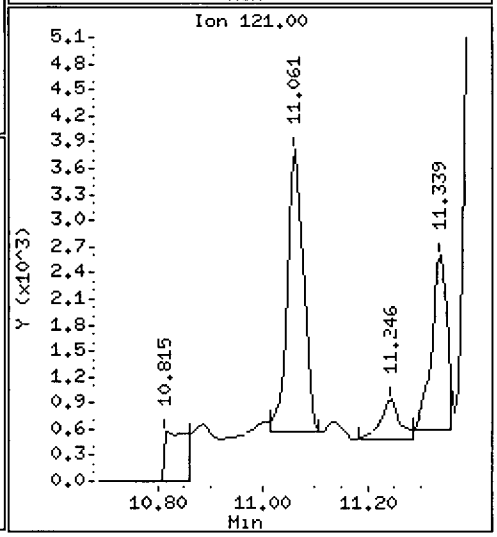












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Date : 08-MAY-2012 22:47

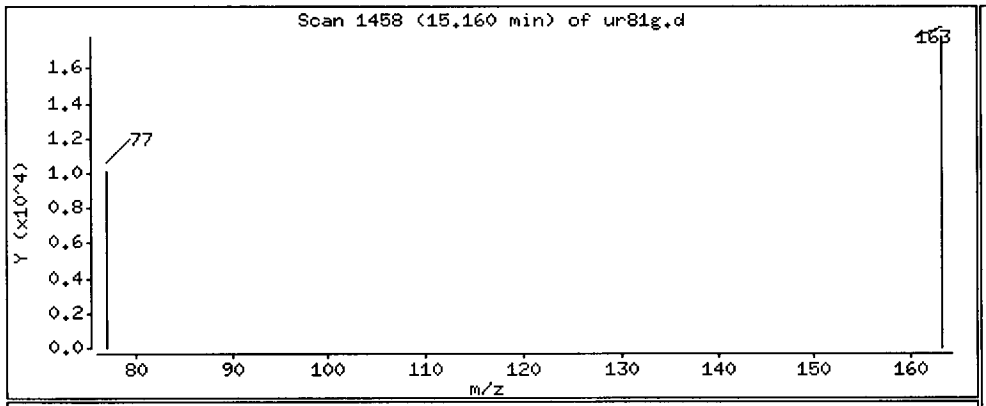
Client ID: IJ12-01 | Instrument: nt10.i

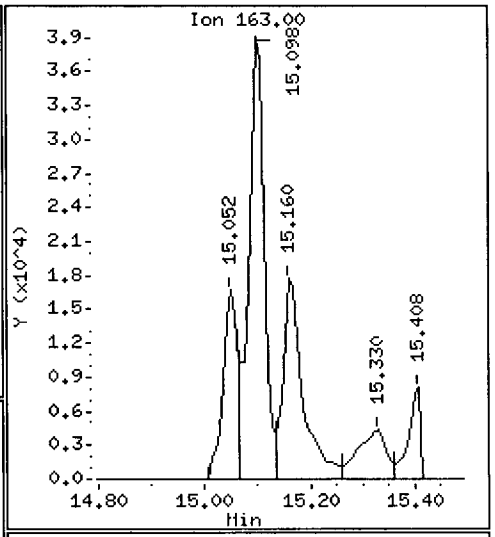
Sample Info: UR81G

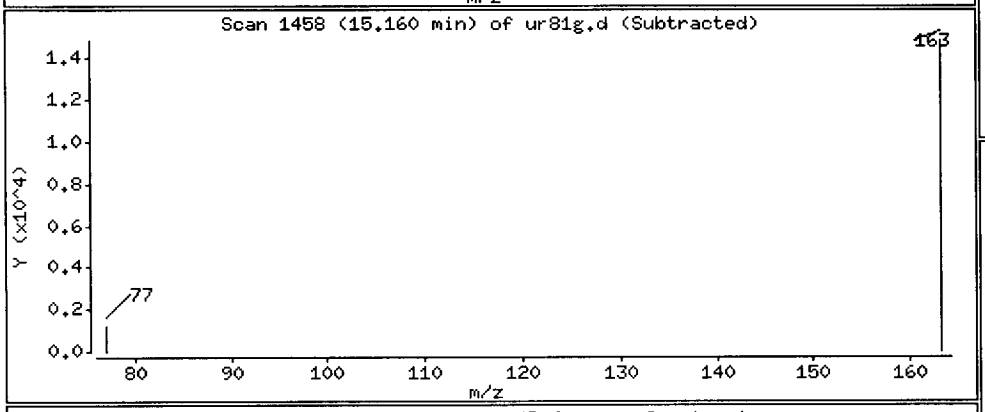
Volume Injected (uL): 1.0 | Operator: YZ

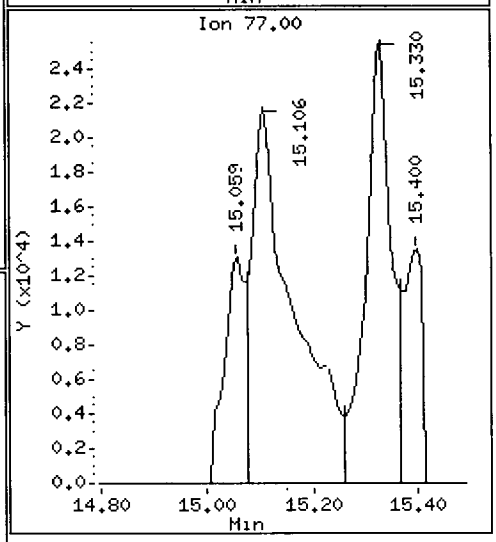
Column phase: ZB-5msi | Column diameter: 0.25

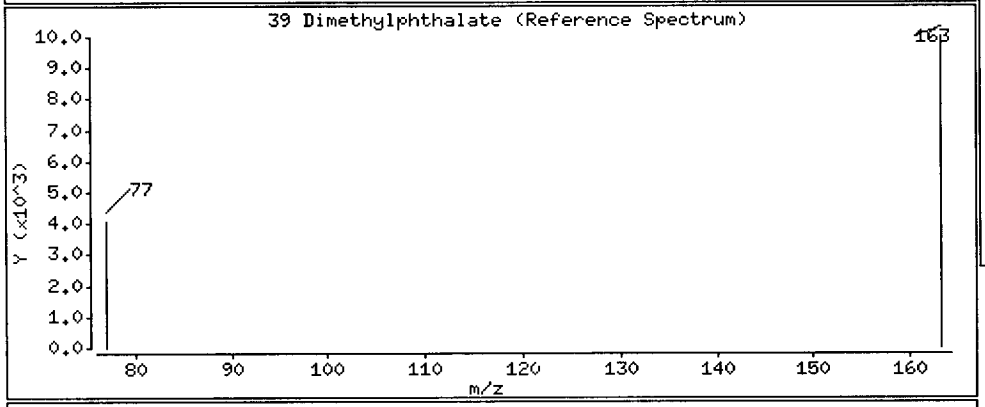
39 Dimethylphthalate | Concentration: 28.22 ug/kg

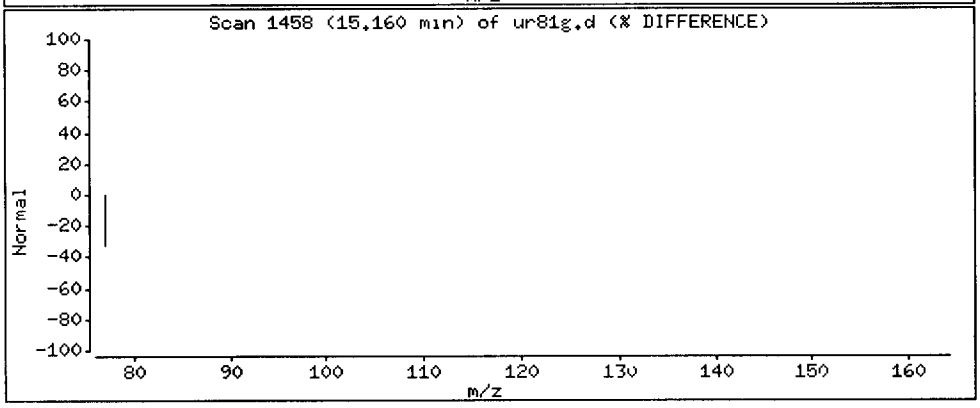












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Date : 08-MAY-2012 22:47

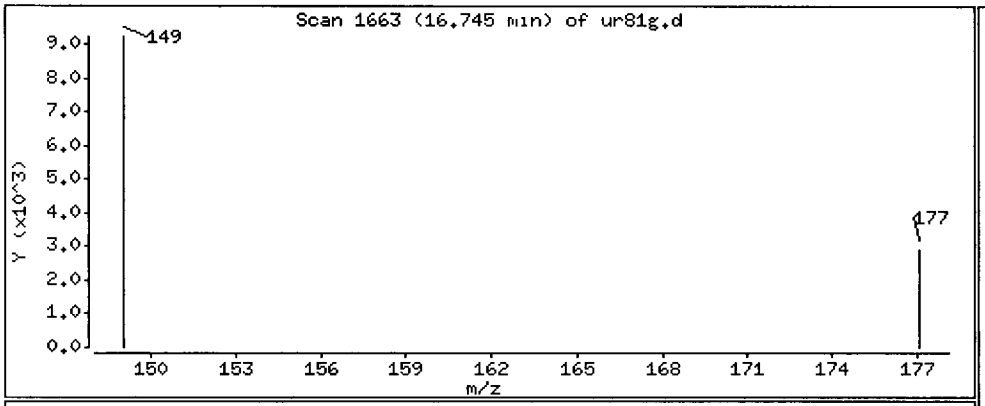
Client ID: IJ12-01 Instrument: nt10.i

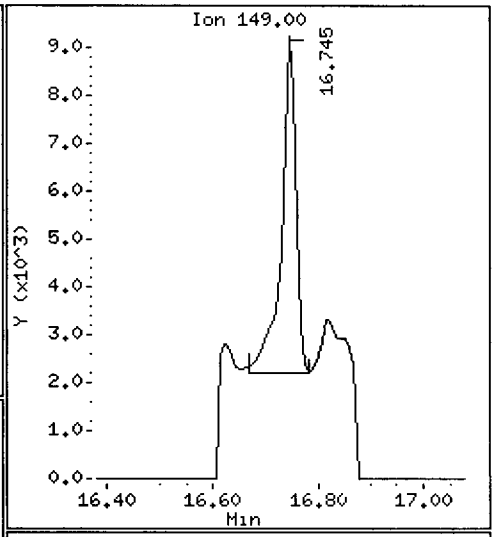
Sample Info: UR81G

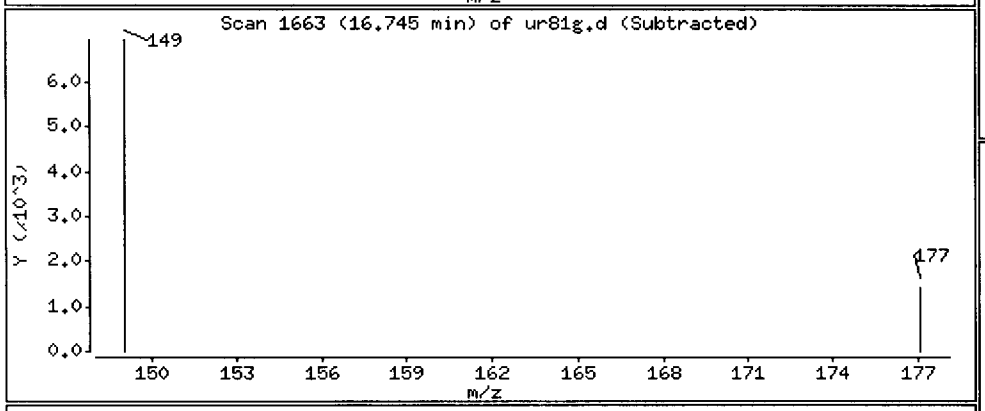
Volume Injected (uL): 1.0 Operator: YZ

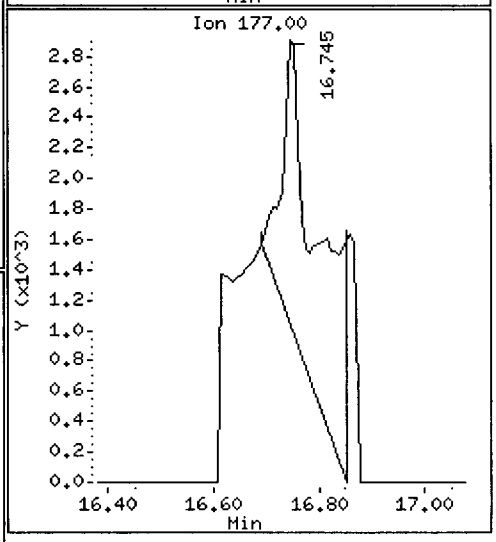
Column phase: ZB-5ms1 Column diameter: 0.25

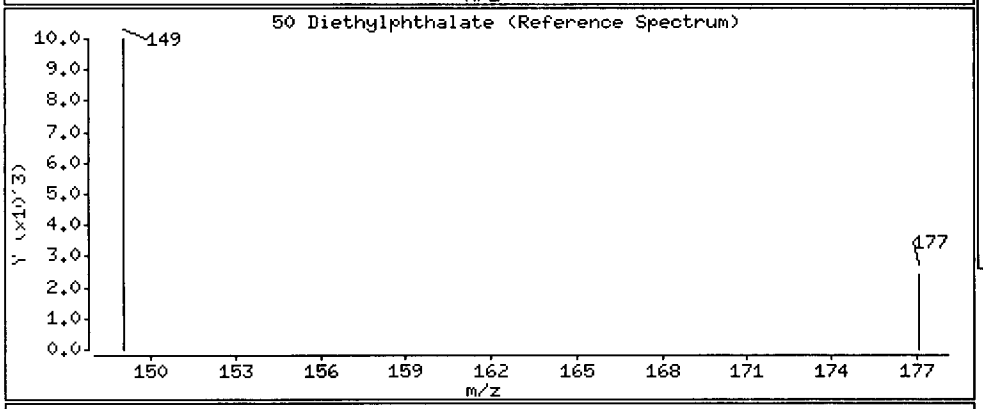
50 Diethylphthalate Concentration: 7.304 ug/kg

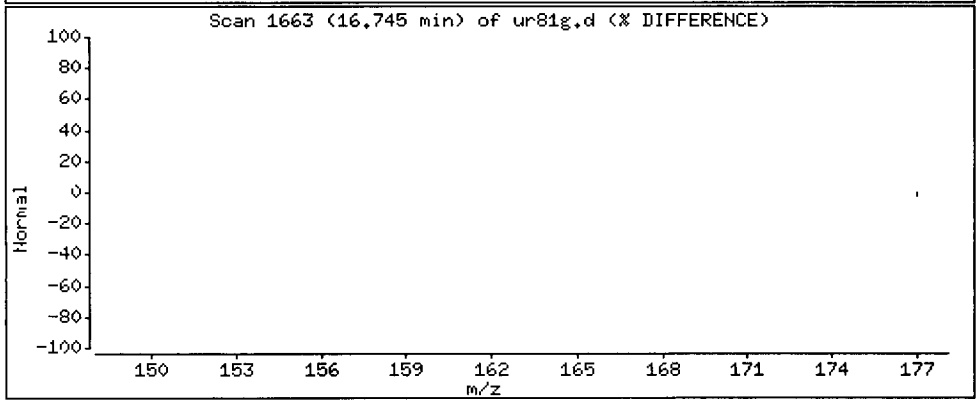












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

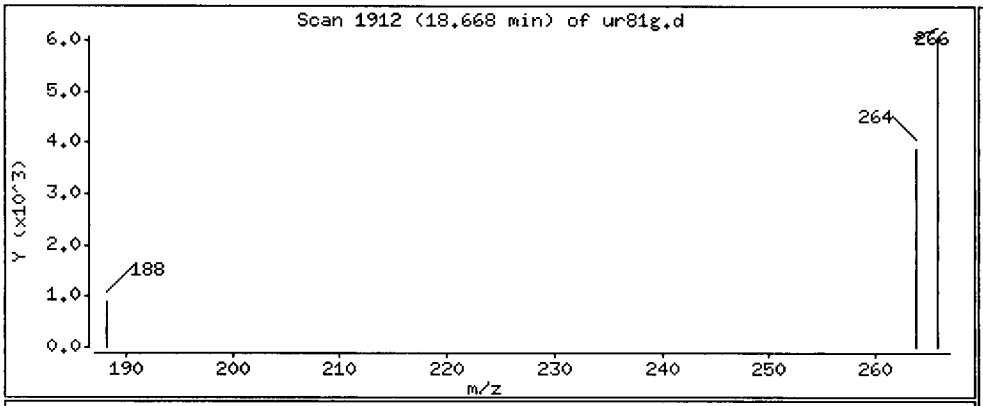
Operator: YZ

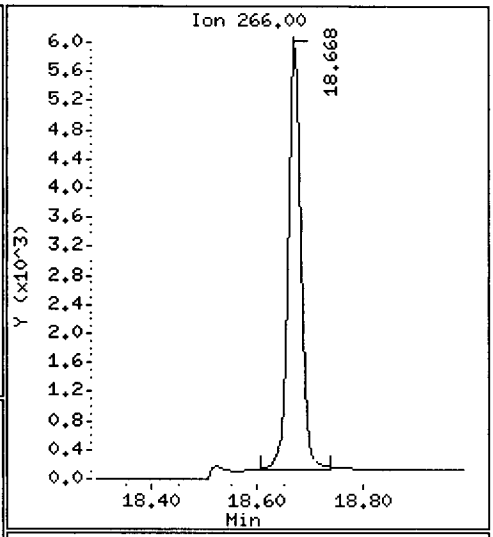
Column phase: ZB-5ms1

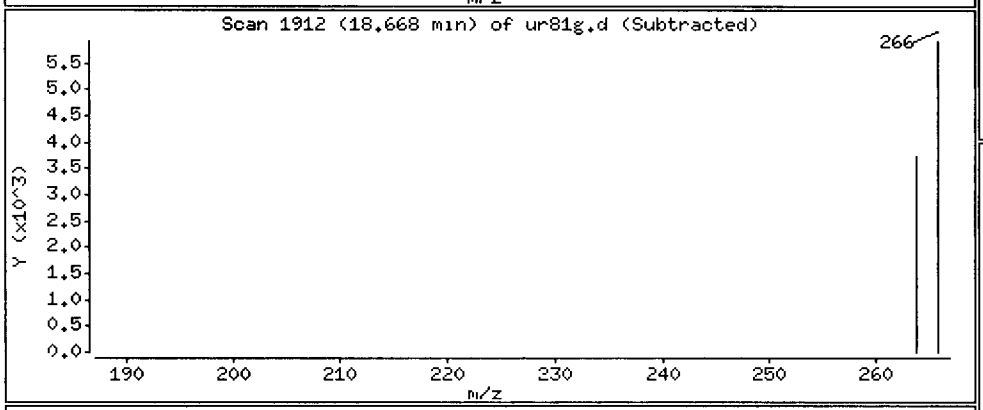
Column diameter: 0.25

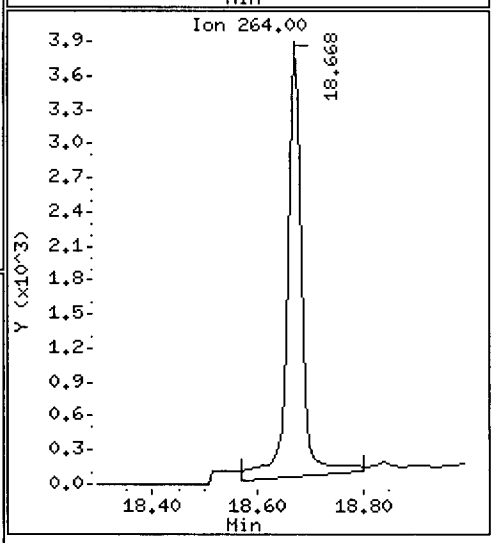
58 Pentachlorophenol

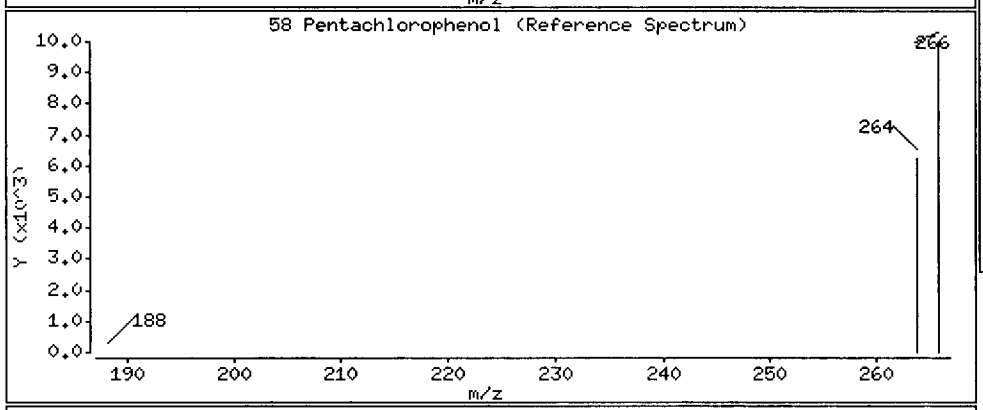
Concentration: 24.75 ug/kg

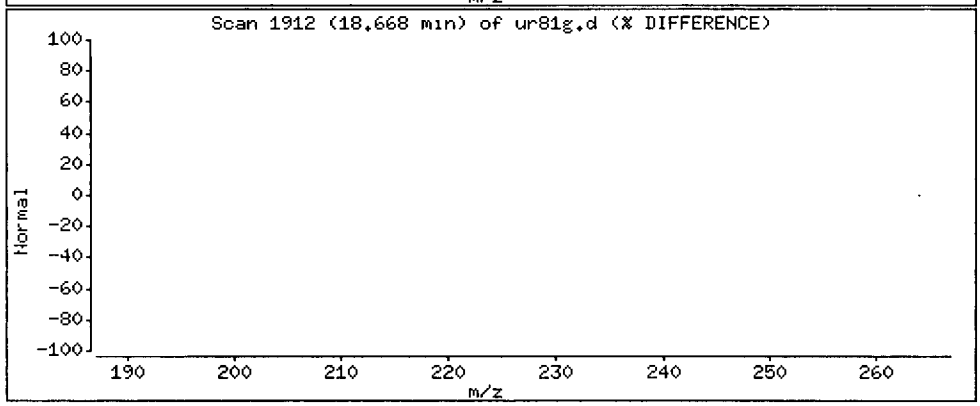












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Date : 08-MAY-2012 22:47

Client ID: IJ12-01

Instrument: nt10.i

Sample Info: UR81G

Volume Injected (uL): 1.0

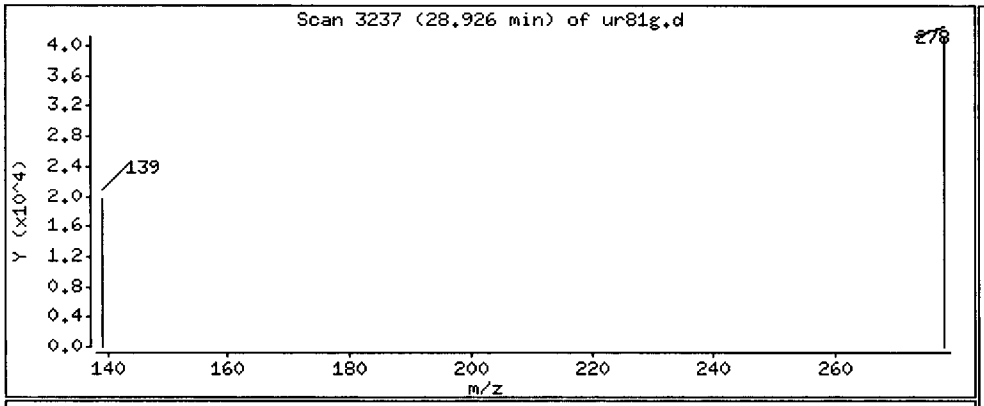
Operator: YZ

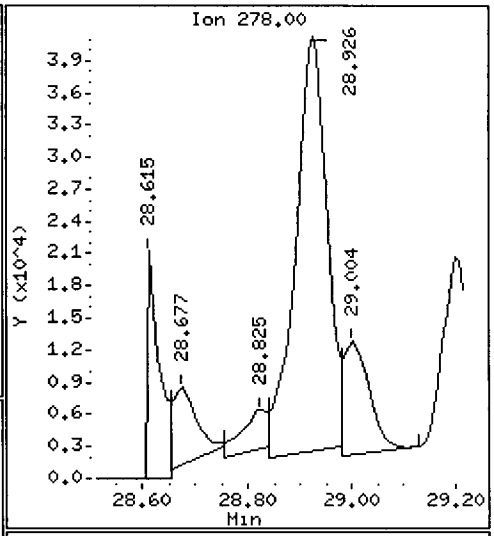
Column phase: ZB-5msi

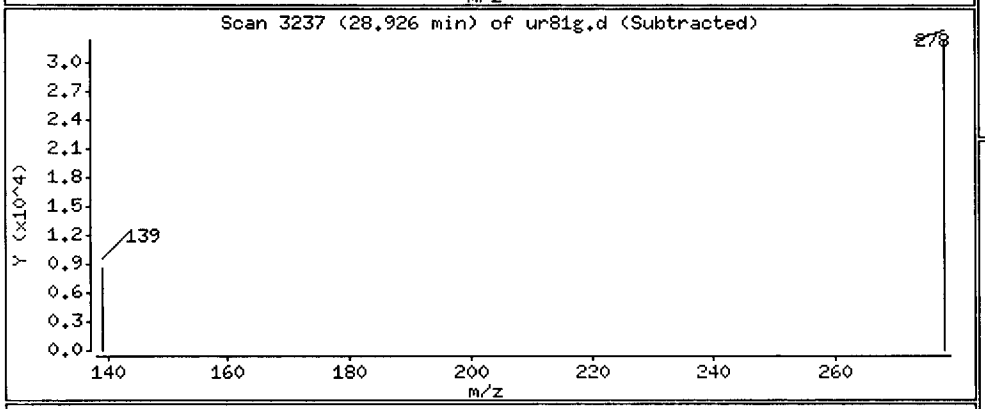
Column diameter: 0.25

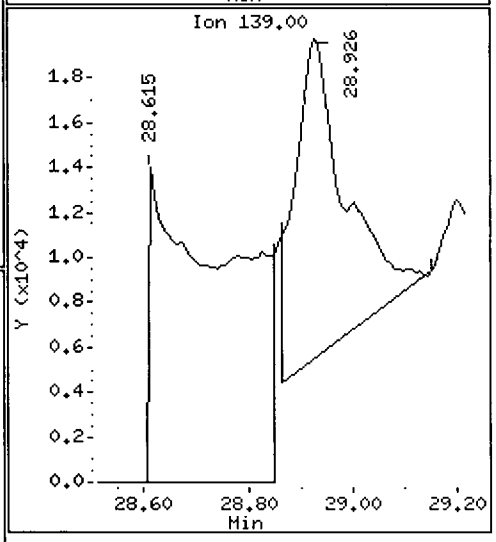
79 Dibenzo(a,h)anthracene

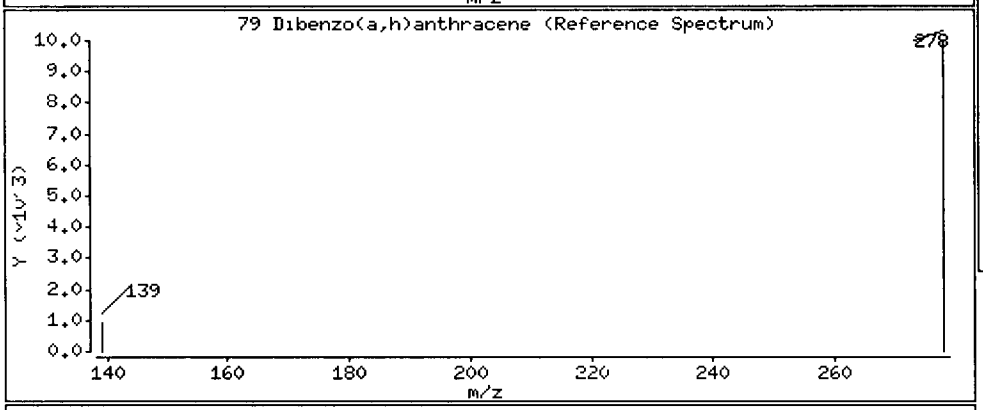
Concentration: 73.83 ug/kg

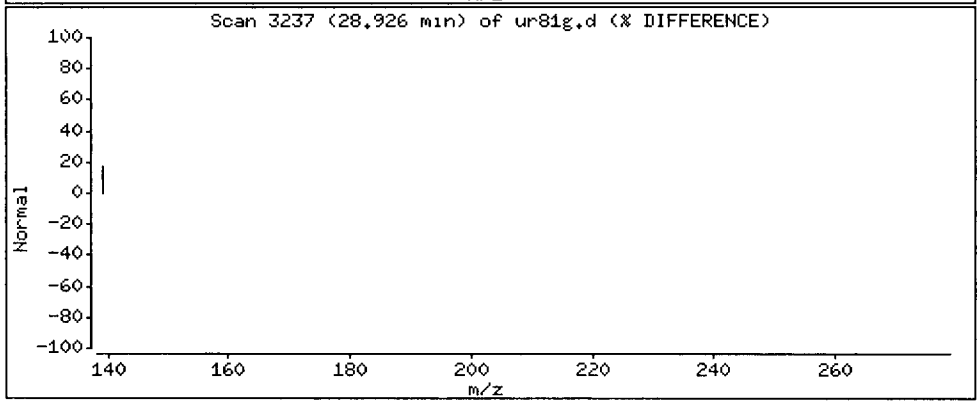






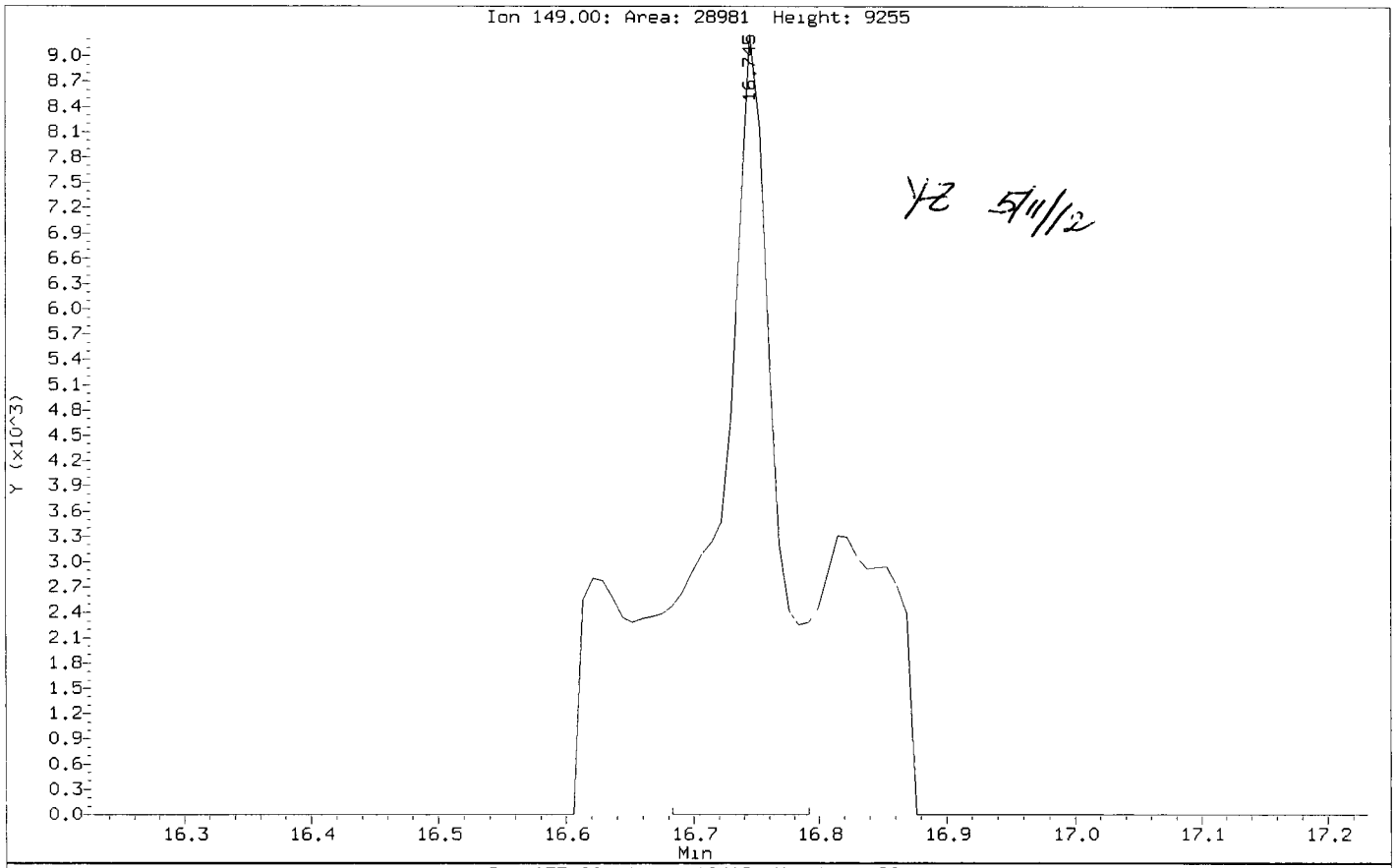


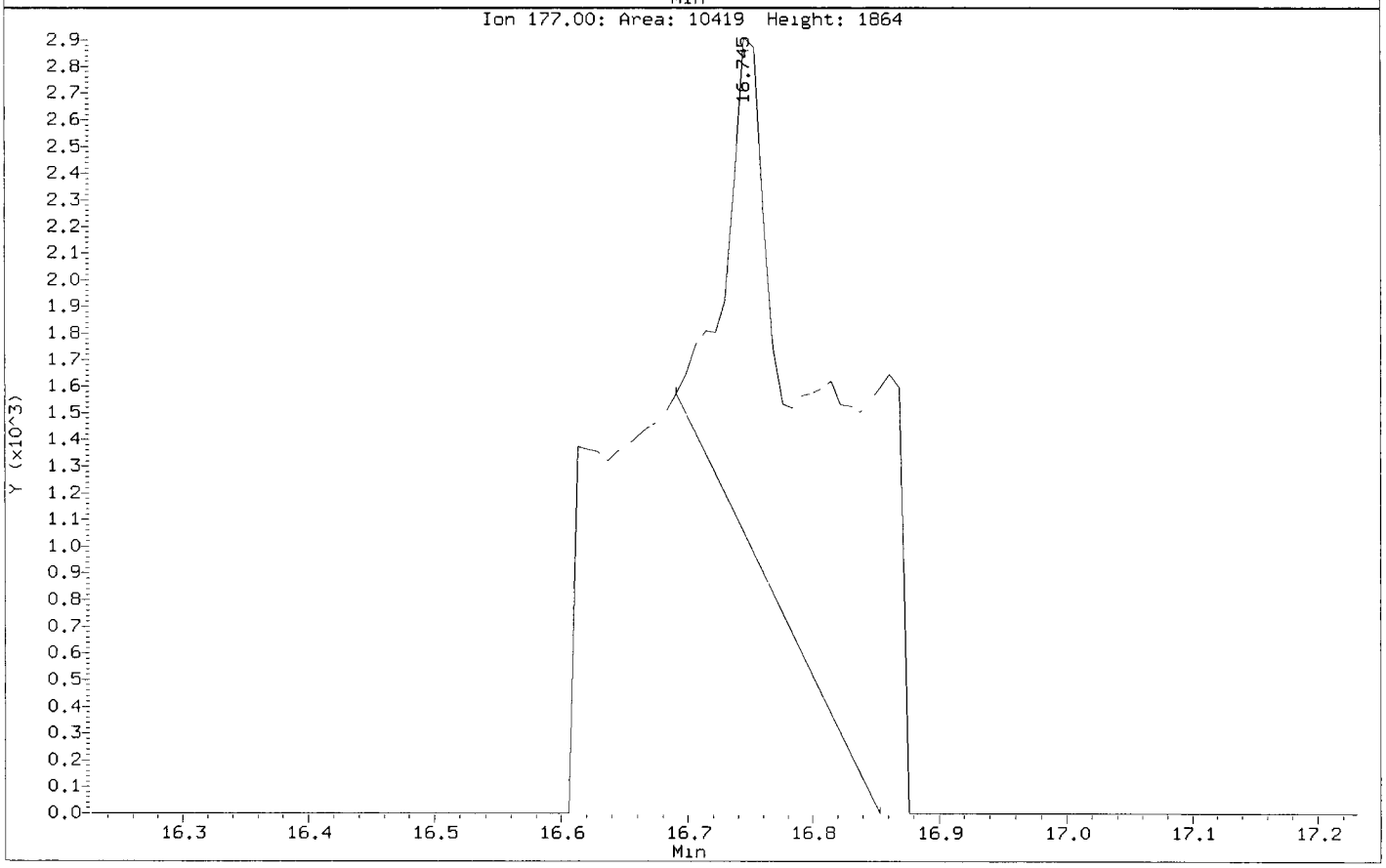




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d
Injection Date: 08-MAY-2012 22:47
Instrument: nt10.i
Client Sample ID: IJ12-01

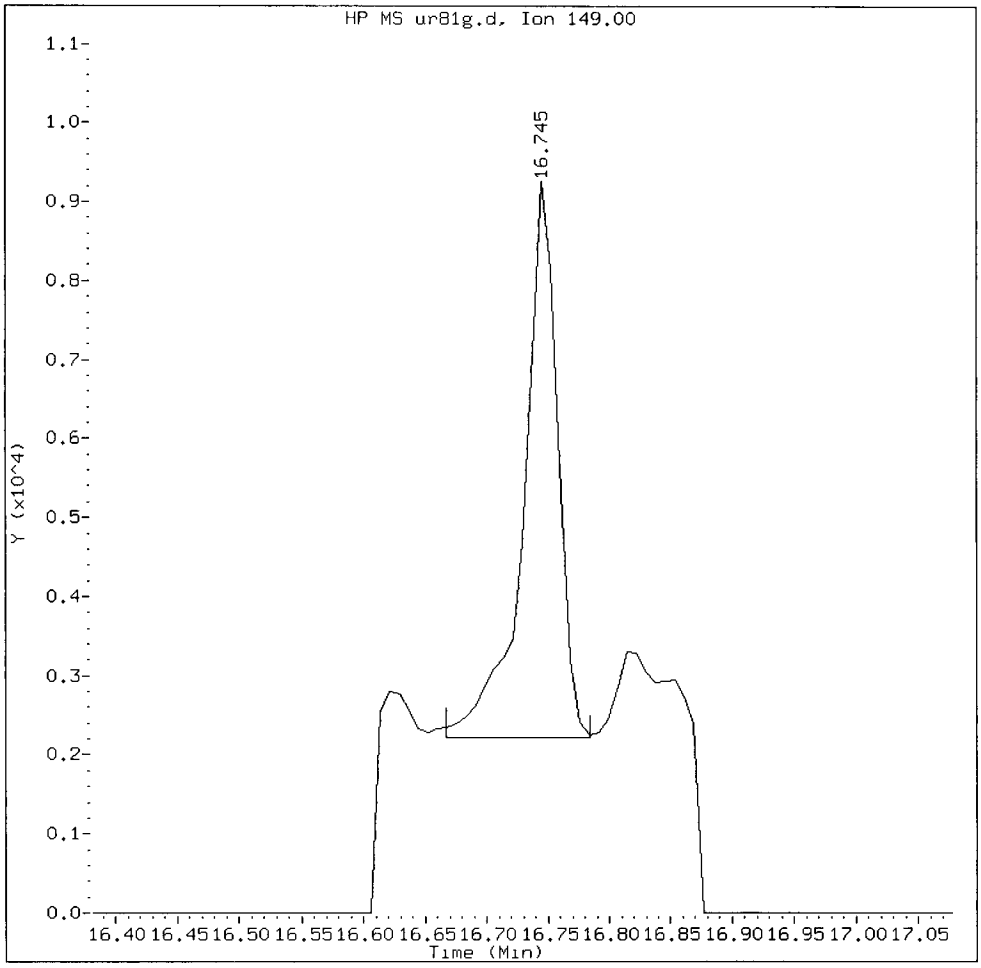
Compound: Diethylphthalate
CAS Number: 84-66-2





UR81G, /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Diethylphthalate Amount: 0.08 Area: 13652



MANUAL INTEGRATION for Diethylphthalate

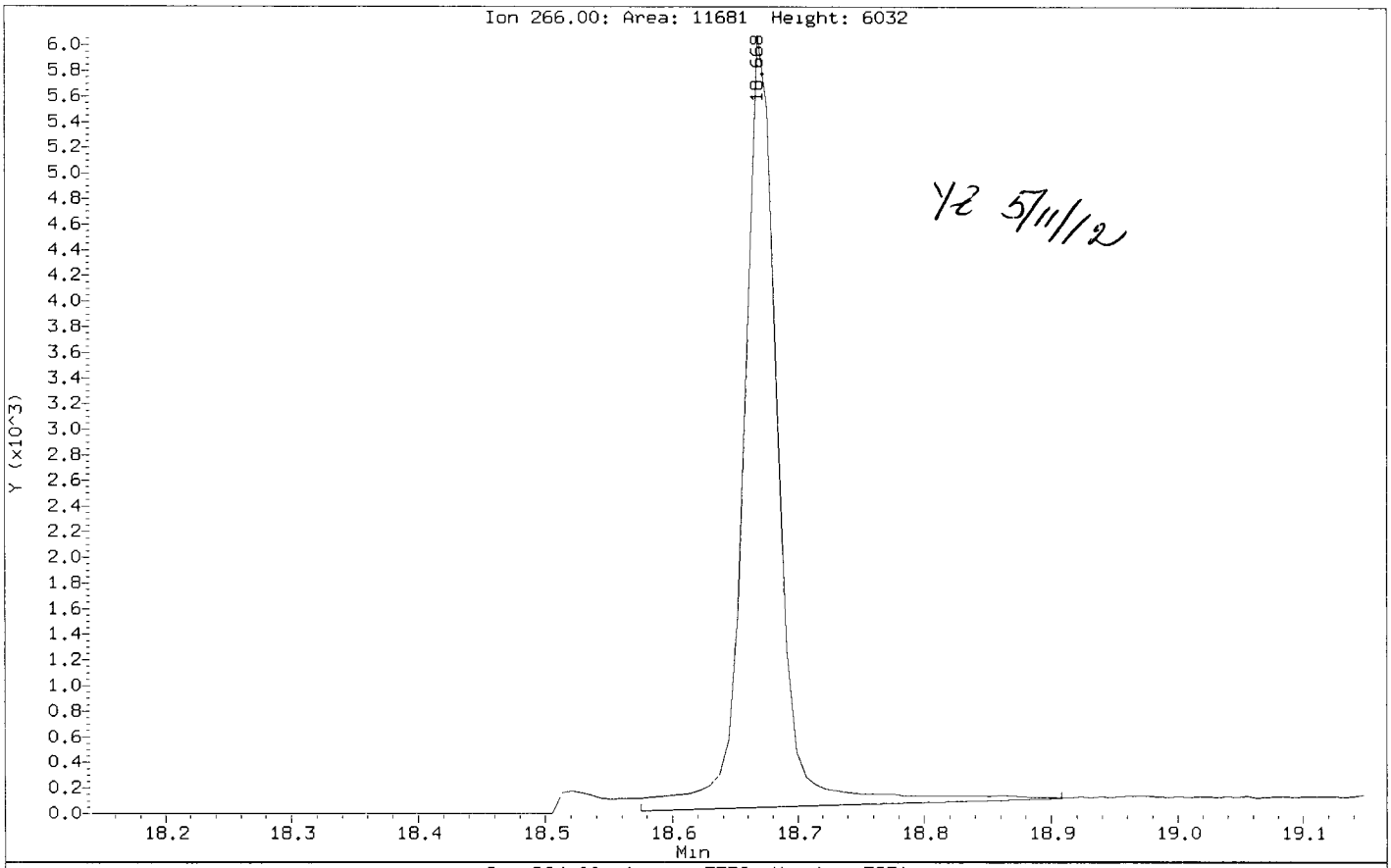
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

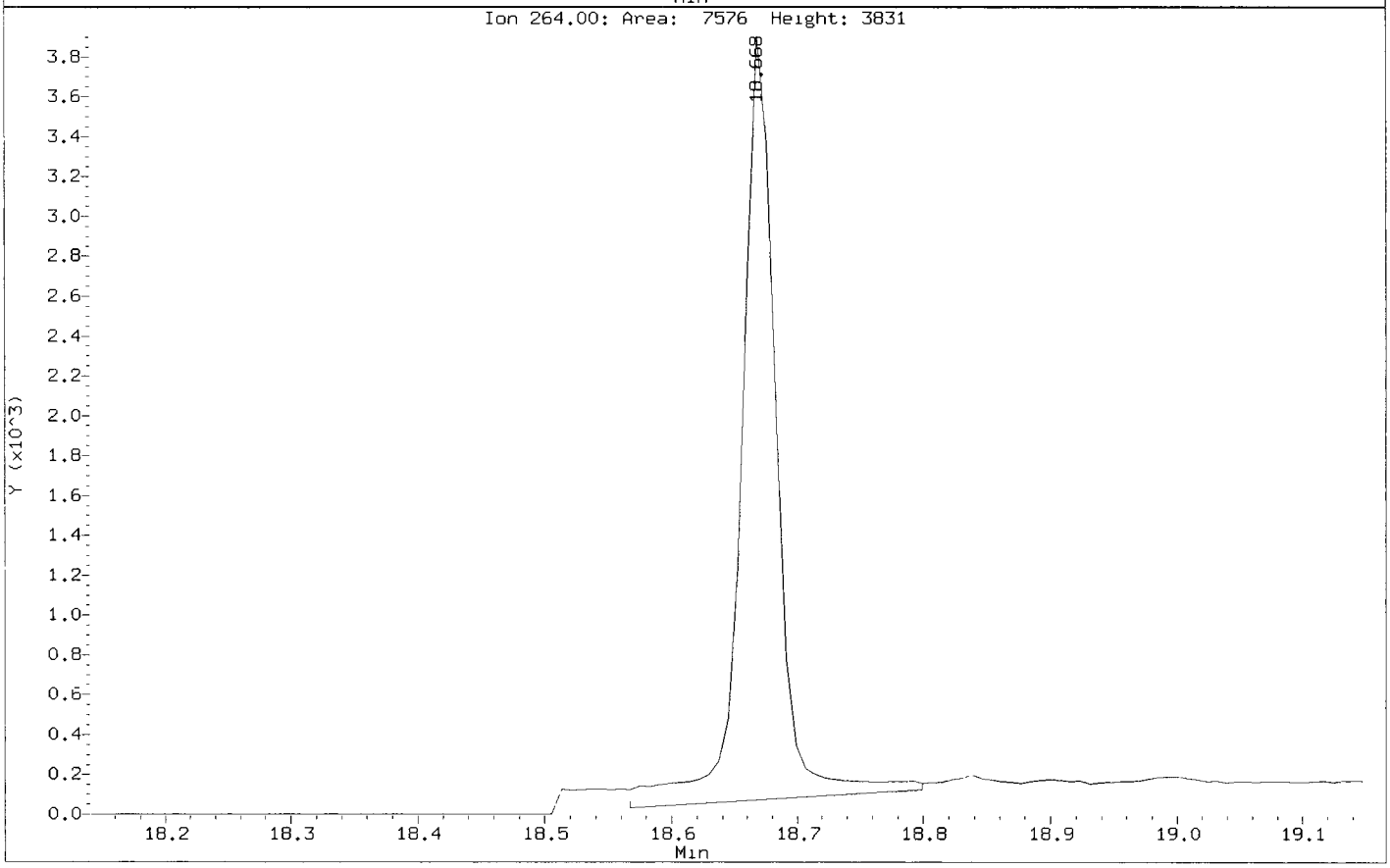
Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81g.d
Injection Date: 08-MAY-2012 22:47
Instrument: nt10.i
Client Sample ID: IJ12-01

Compound: Pentachlorophenol
CAS Number: 87-86-5



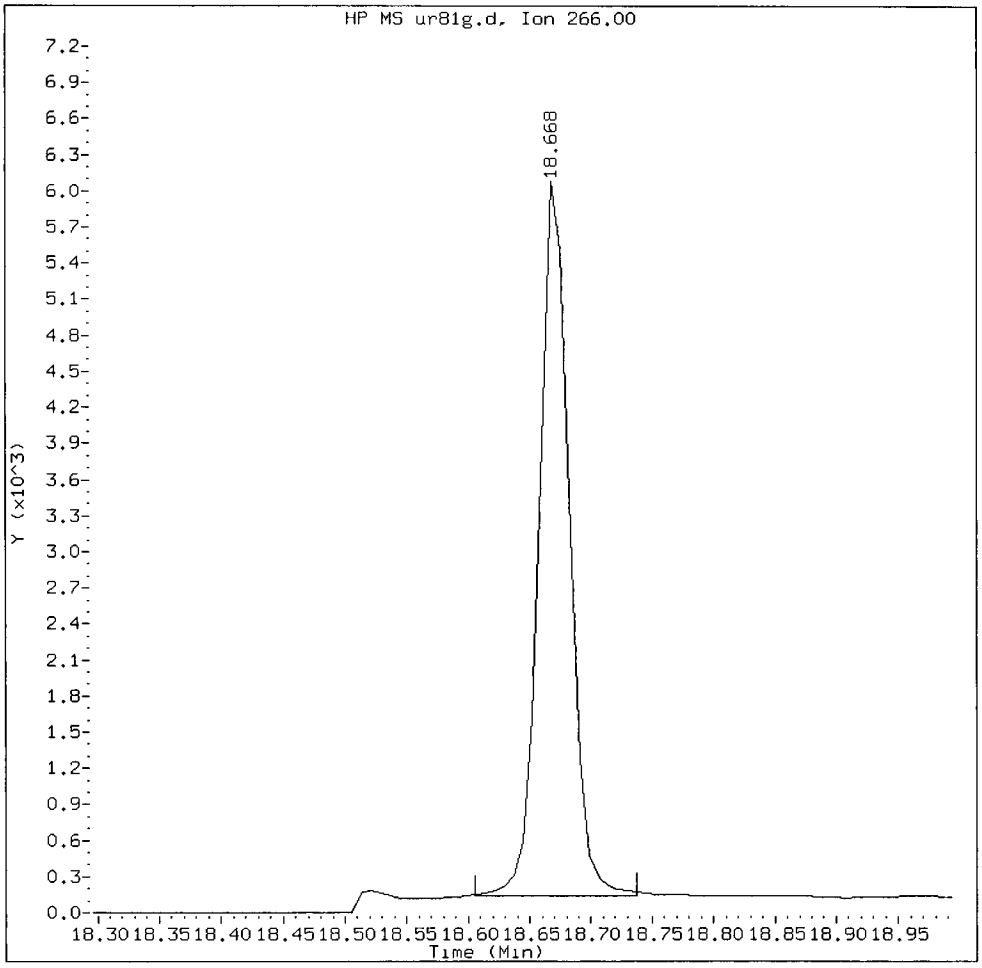
YZ 5/11/12



UR81 : 01138

UR81G, /chem1/nt10.i/20120508.b/SIM.b/ur81g.d

Pentachlorophenol Amount: 0.26 Area: 10320



MANUAL INTEGRATION for Pentachlorophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YJ Date: 5/11/12

UR81:61139

CO-ELUTION SUMMARY FOR FILE - ur81g.d

Lab ID: UR81G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

YZ 5/11/12

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81h.d
Lab Smp Id: UR81H Client Smp ID: IJ12-58A
Inj Date : 08-MAY-2012 23:24
Operator : YZ Inst ID: nt10.i
Smp Info : UR81H
Misc Info : 12-7399
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.26000	Weight of sample extracted (g)
M	59.70000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.711	6.680	(0.741)	377604	3.98643	391.6
3 Phenol	94	8.449	8.418	(0.933)	47437	0.37838	37.17
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.053	9 045	(1.000)	275915	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9.371	9 355	(1.035)	28562	0.44504	43 72(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9.643	9 619	(1.065)	11304	0.11225	11.03
15 4-Methylphenol	108	9 938	9 914	(1.098)	98761	0 93467	91 82
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11 061	11.038	(0.943)	25212	0.25732	25 28
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.732	11.724	(1.000)	1068919	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.167	15.144	(0.969)	25947	0.15763	15.48(M)
*	42 Acenaphthene-d10	162	15.647	15.632	(1.000)	538307	4.00000	
	50 Diethylphthalate	149	16.753	16.729	(1.071)	12397	0.06880	6.758(M)
	54 N-Nitrosodiphenylamine	169	17.146	17.123	(0.906)	5530	~~0.04321~~	4 245
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	18.675	18.644	(0.986)	13663	0.34100	33.50(M)
*	59 Phenanthrene-d10	188	18.931	18.908	(1.000)	952406	4.00000	
$	66 Terphenyl-d14	244	22.126	22.095	(0.922)	498909	3.02068	296.7
	67 Butylbenzylphthalate	149	23.032	23.047	(0.960)	15198	0.12159	11 94
*	69 Chrysene-d12	240	23.992	23.969	(1.000)	1037522	4.00000	
*	77 Perylene-d12	264	26.470	26 446	(1.000)	1000508	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.895	28.864	(1.092)	38565	0.18002	17.68
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81h.d
Lab Smp Id: UR81H
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7399

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-58A
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	275915	-11.35
27 Naphthalene-d8	1166872	583436	2333744	1068919	-8.39
42 Acenaphthene-d10	603218	301609	1206436	538307	-10.76
59 Phenanthrene-d10	1096026	548013	2192052	952406	-13.10
69 Chrysene-d12	1131082	565541	2262164	1037522	-8.27
77 Perylene-d12	1082499	541250	2164998	1000508	-7.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.93	0.12
69 Chrysene-d12	23.97	23.47	24.47	23.99	0.10
77 Perylene-d12	26.45	25.95	26.95	26.47	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

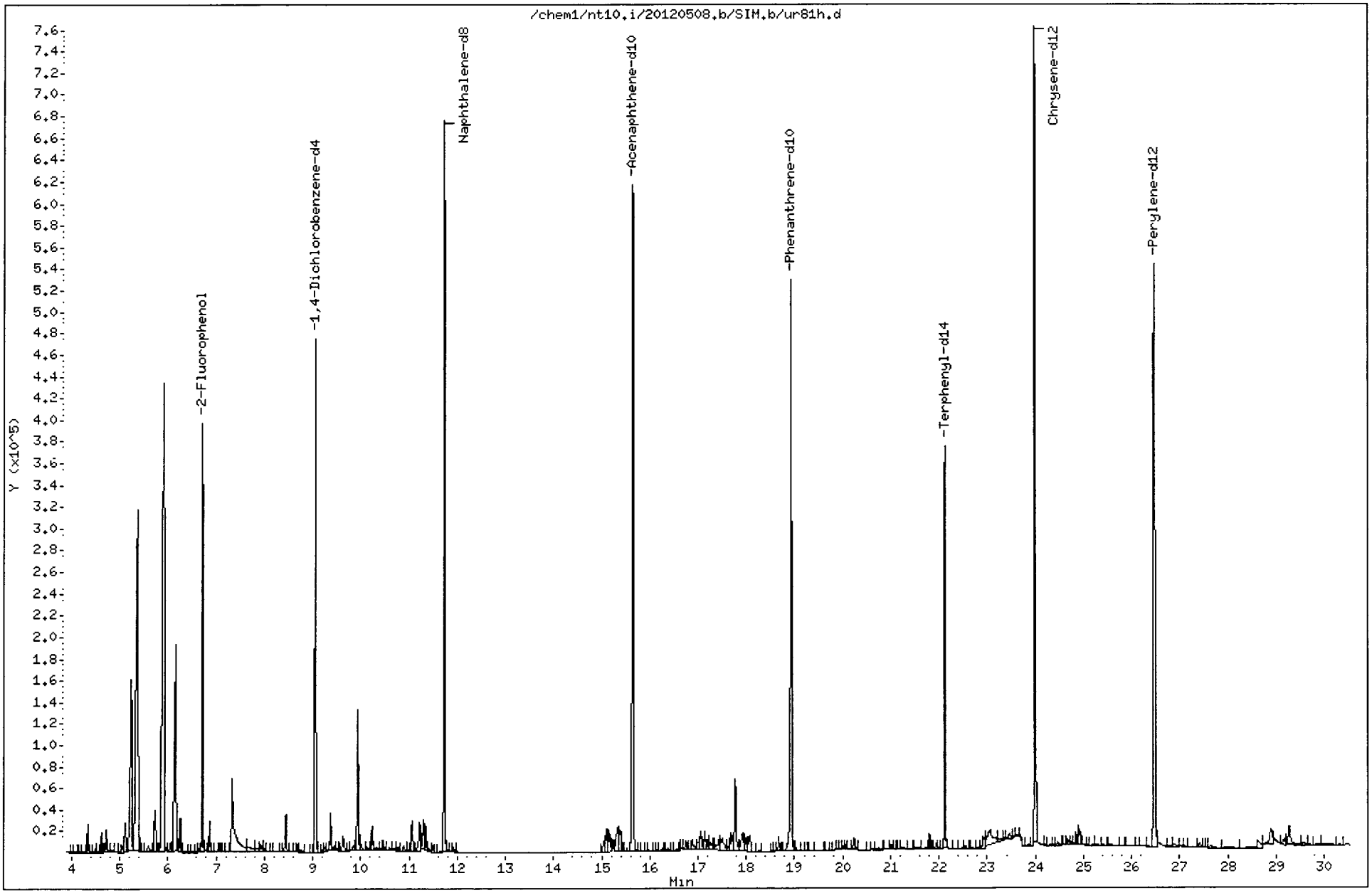
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81H
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7399

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-58A
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	736.8	391.6	53.15	30-160
$ 66 Terphenyl-d14	491.2	296.7	60.41	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d
Date : 08-MAY-2012 23:24
Client ID: IJ12-58A
Sample Info: UR81H
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

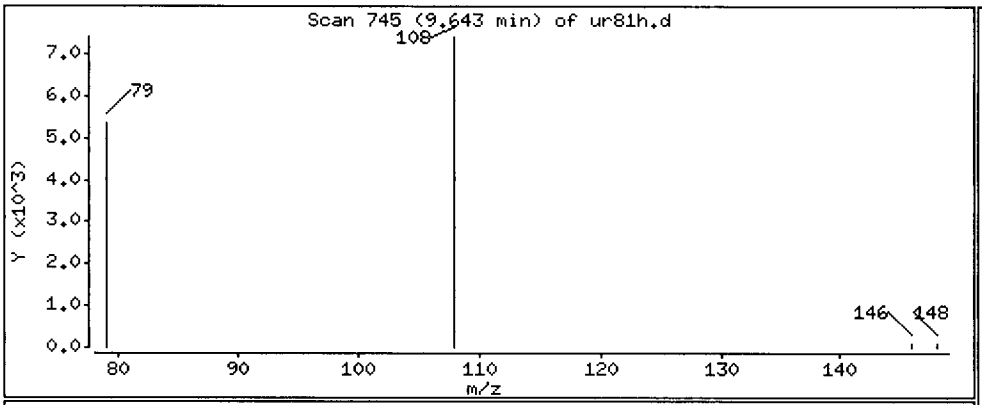
Operator: YZ

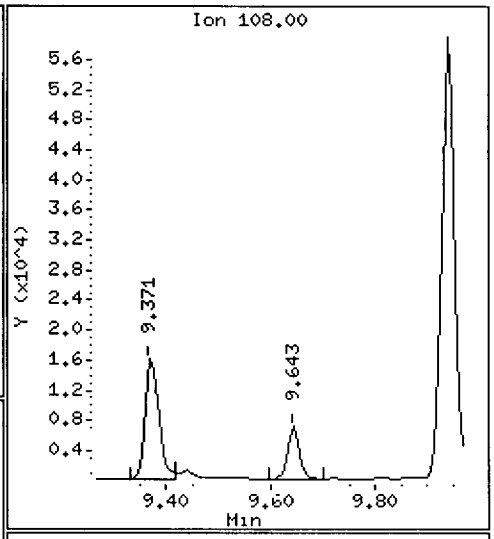
Column phase: ZB-5msi

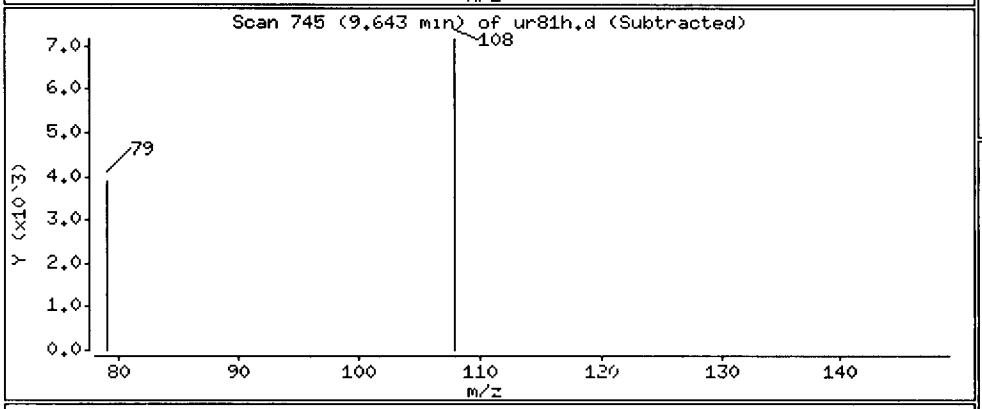
Column diameter: 0.25

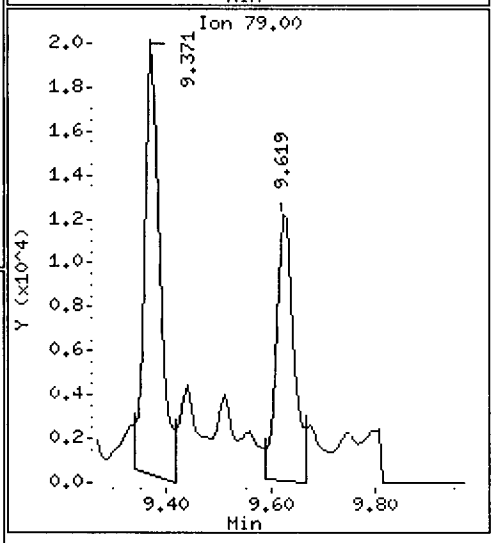
13 2-Methylphenol

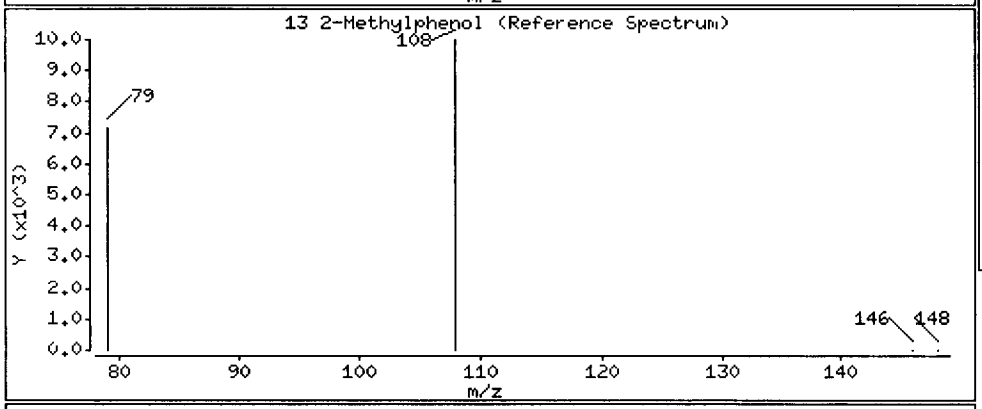
Concentration: 11.03 ug/kg

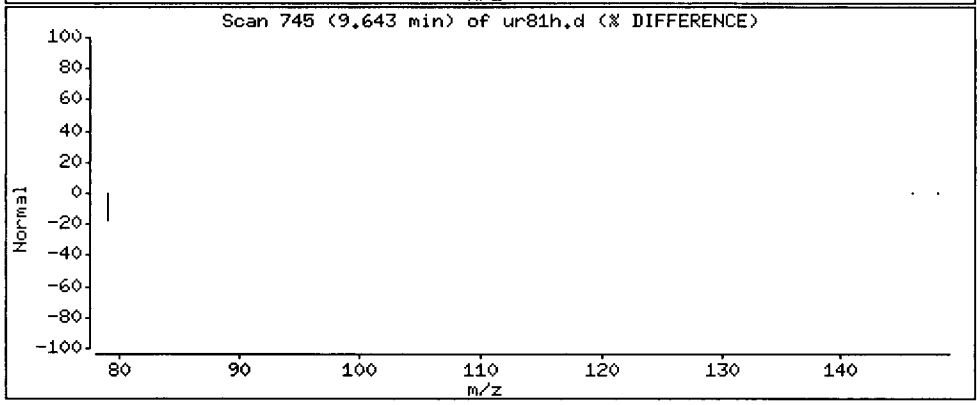












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

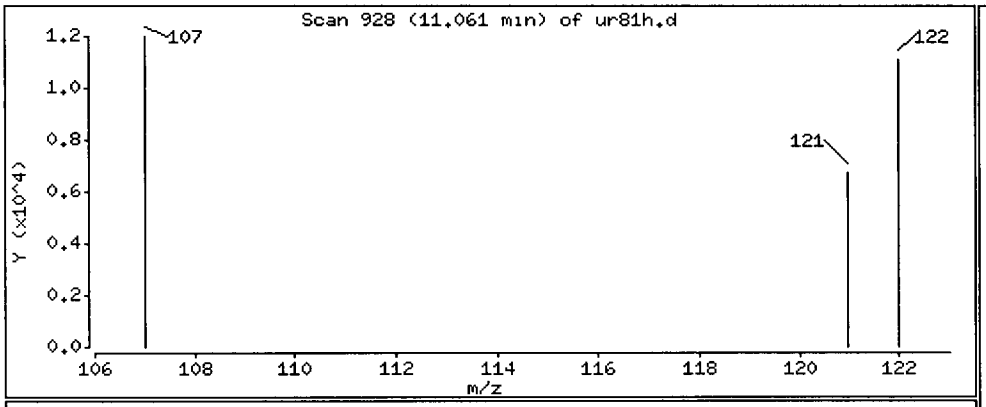
Operator: YZ

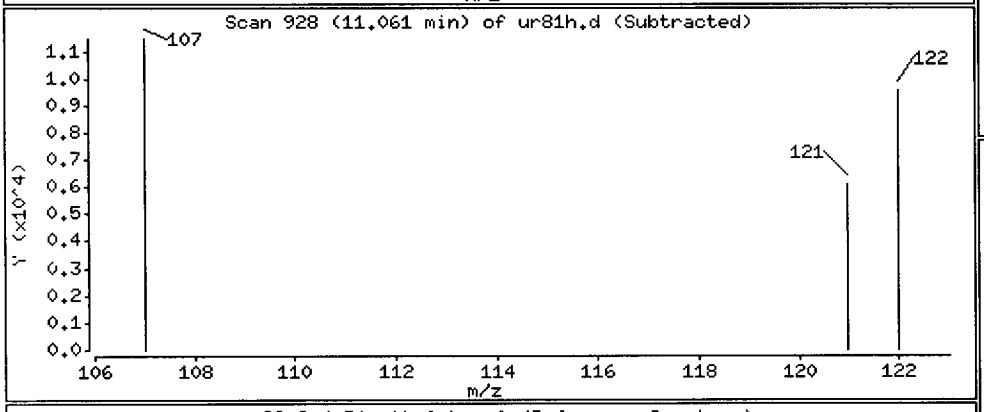
Column phase: ZB-5msi

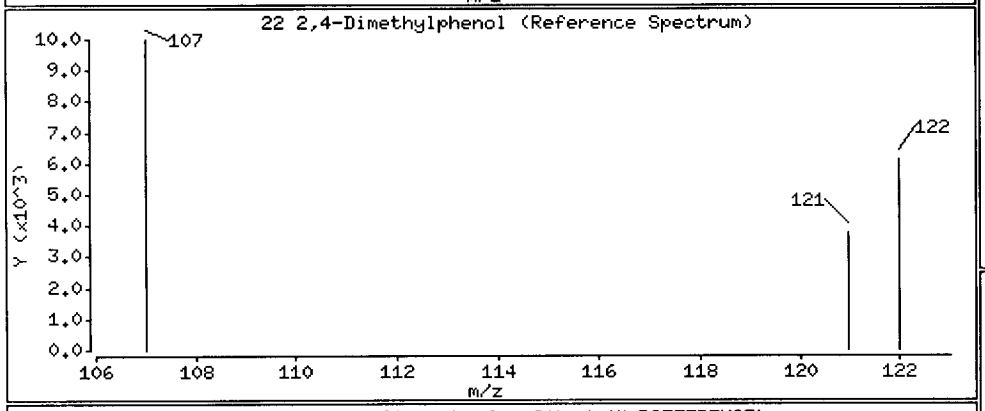
Column diameter: 0.25

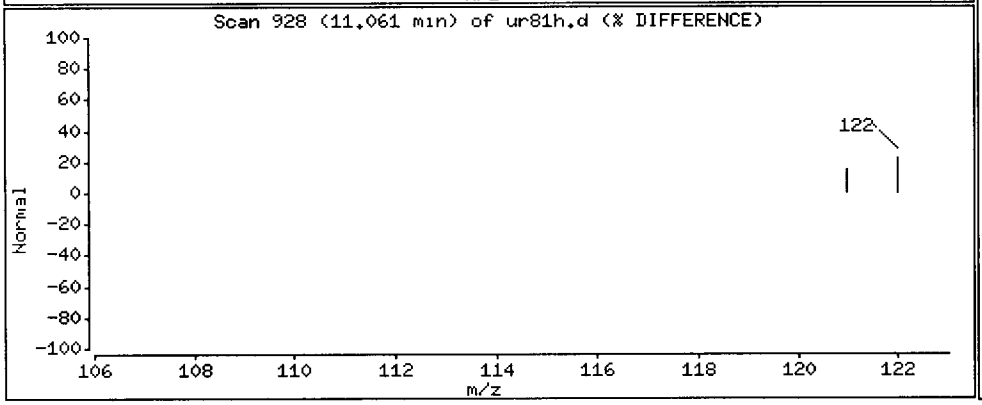
22 2,4-Dimethylphenol

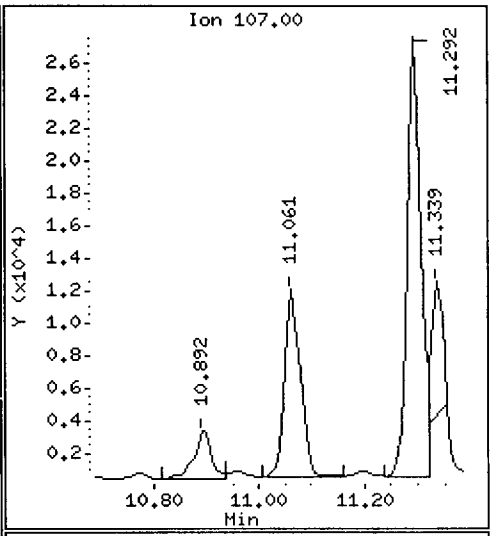
Concentration: 25.28 ug/kg

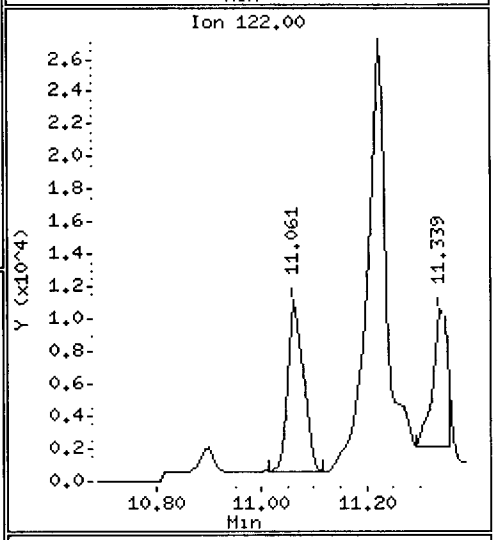


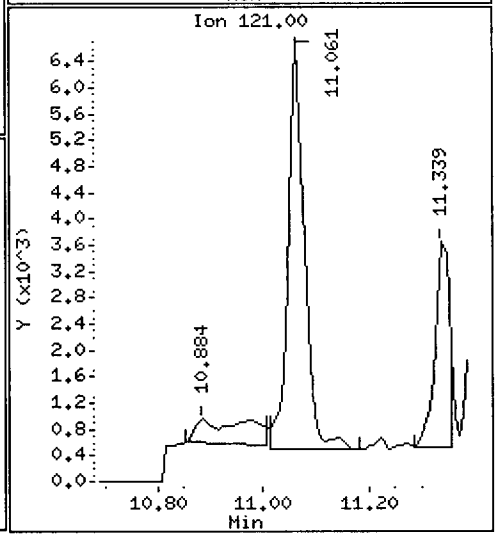












UR81:01147

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

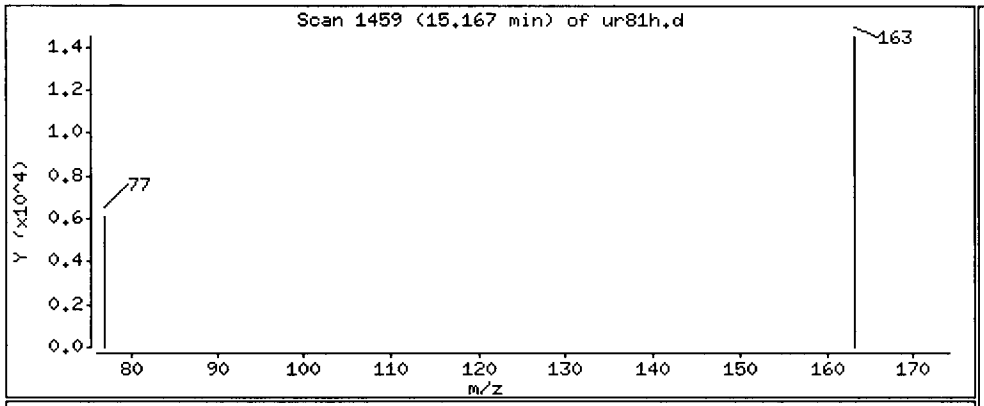
Operator: YZ

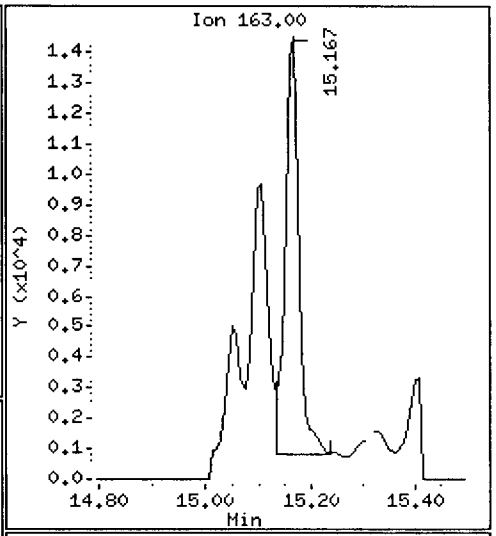
Column phase: ZB-5msi

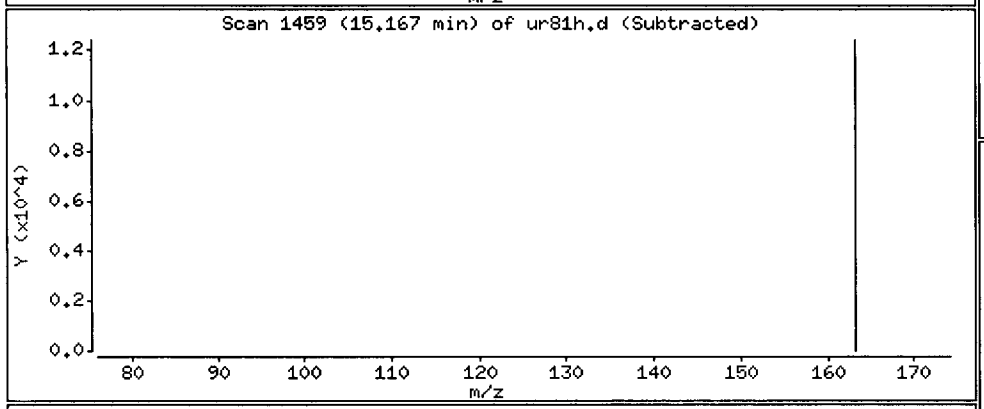
Column diameter: 0.25

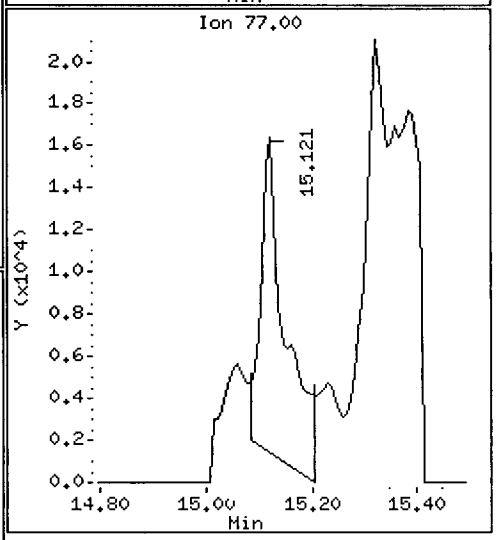
39 Dimethylphthalate

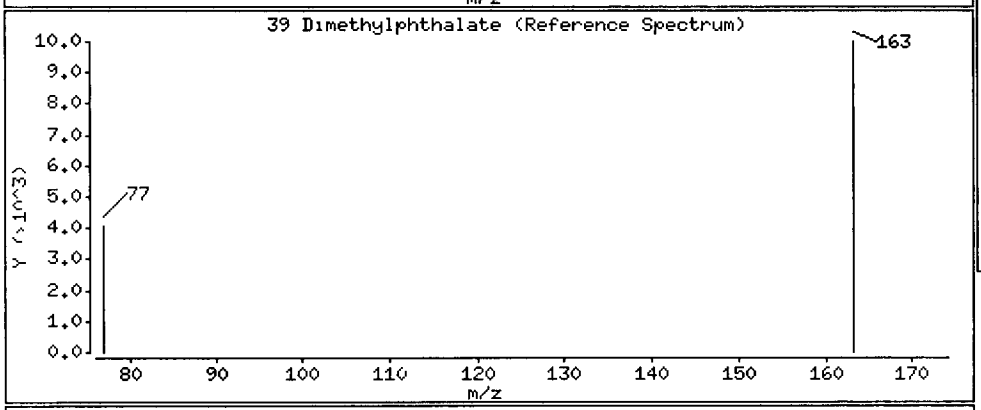
Concentration: 15.48 ug/kg

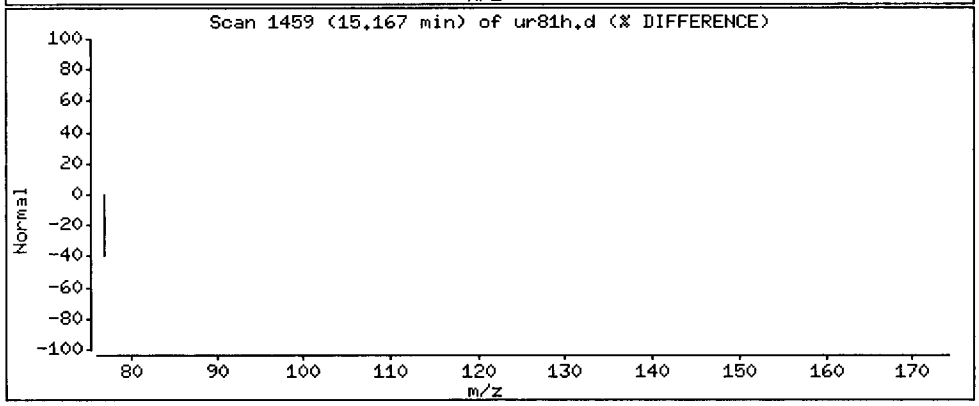












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

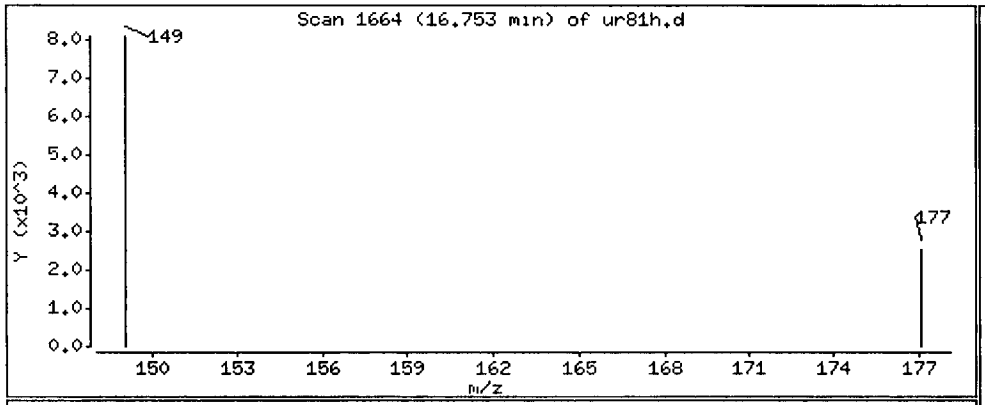
Operator: YZ

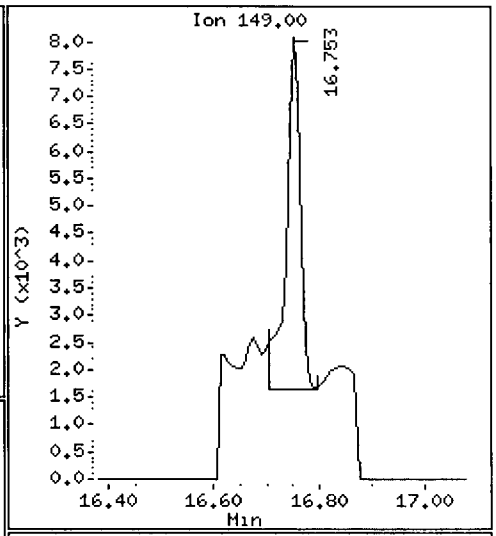
Column phase: ZB-5msi

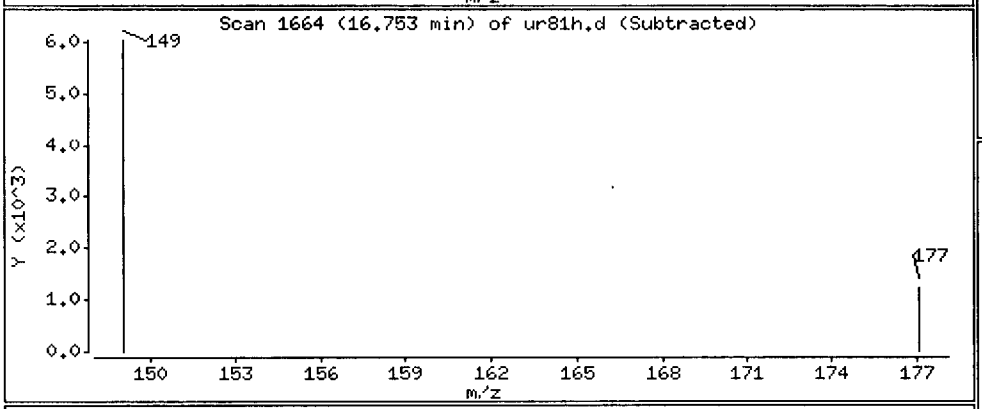
Column diameter: 0.25

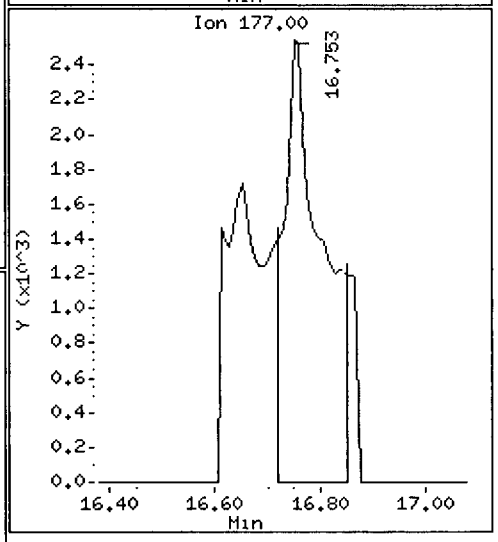
50 Diethylphthalate

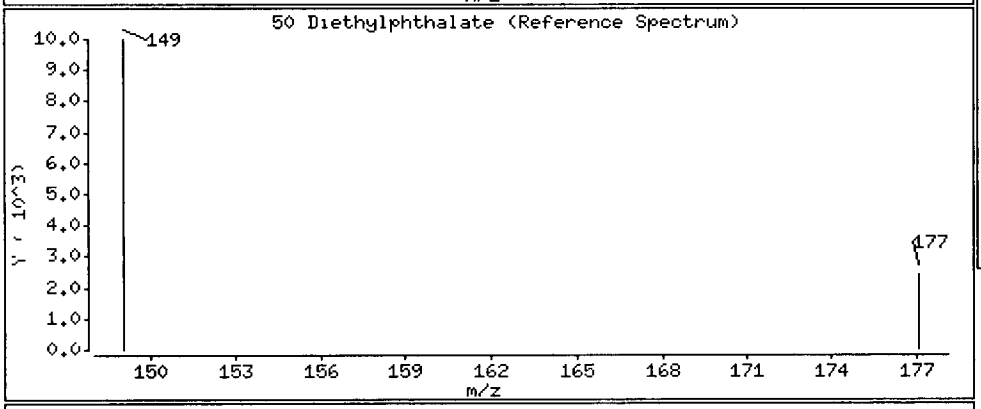
Concentration: 6.758 ug/kg

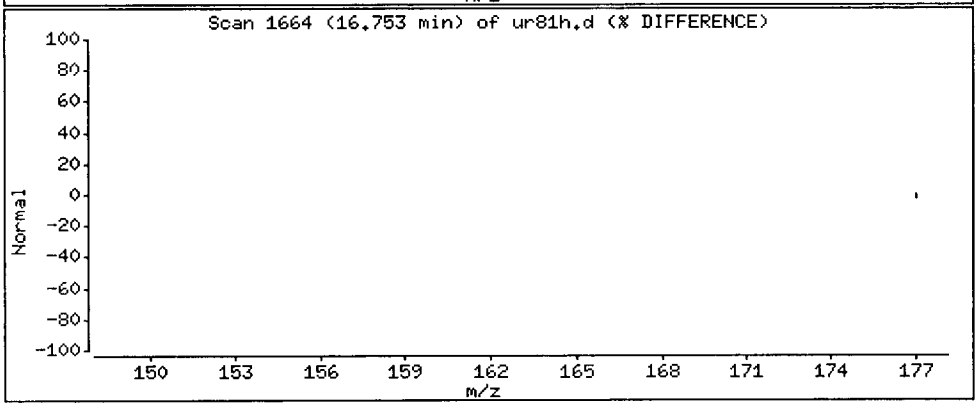












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

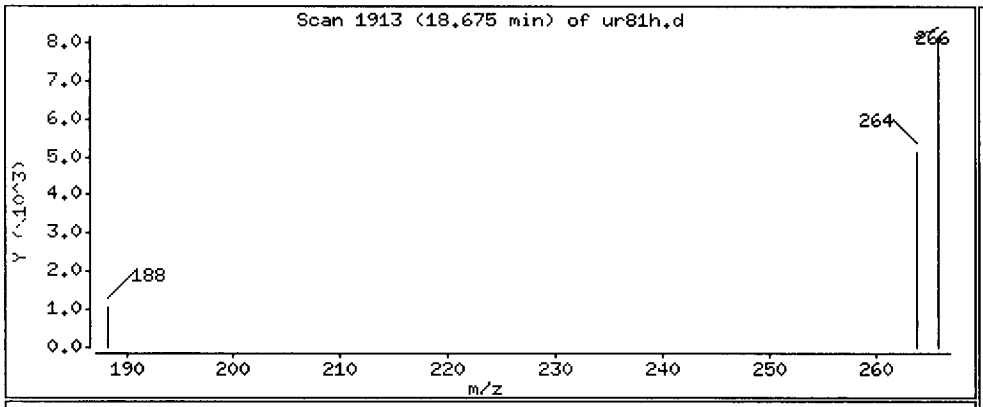
Operator: YZ

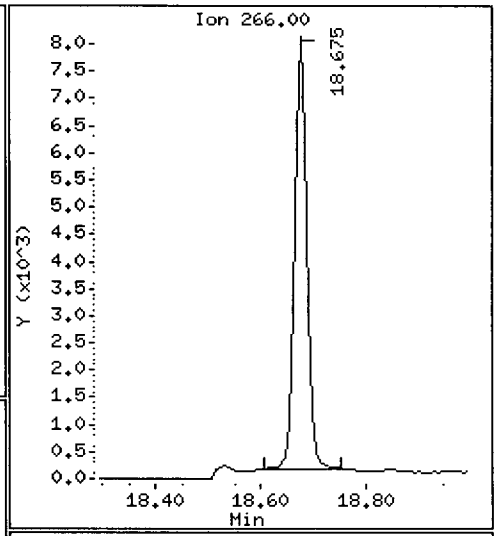
Column phase: ZB-5msi

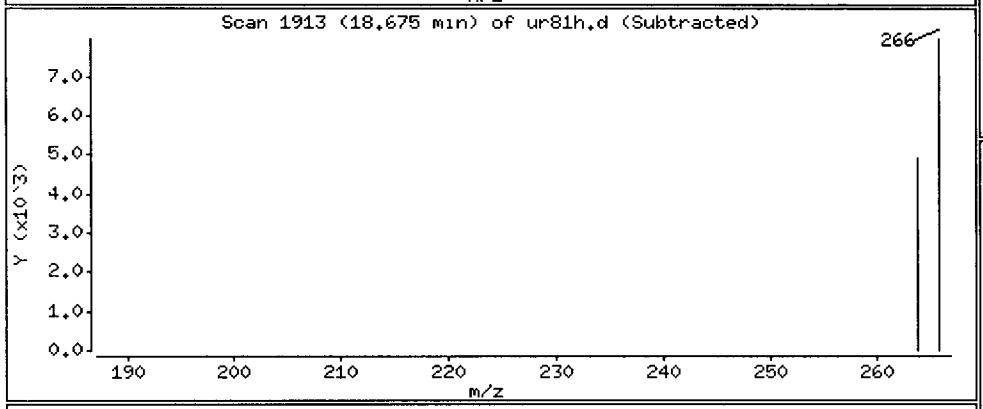
Column diameter: 0.25

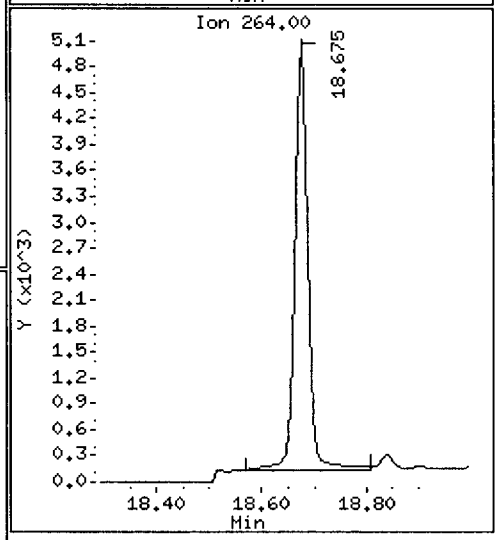
58 Pentachlorophenol

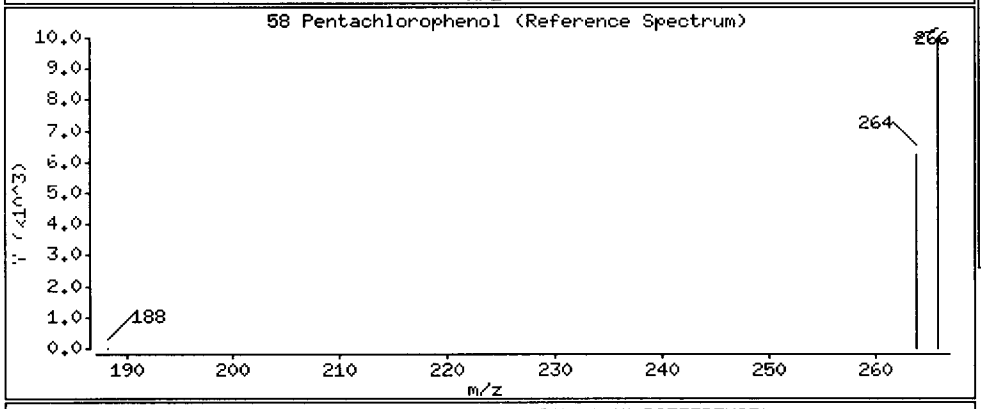
Concentration: 33.50 ug/kg

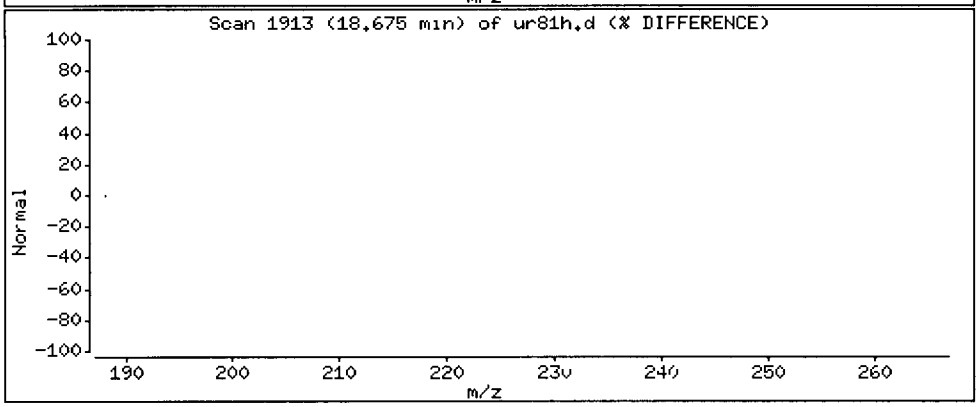












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

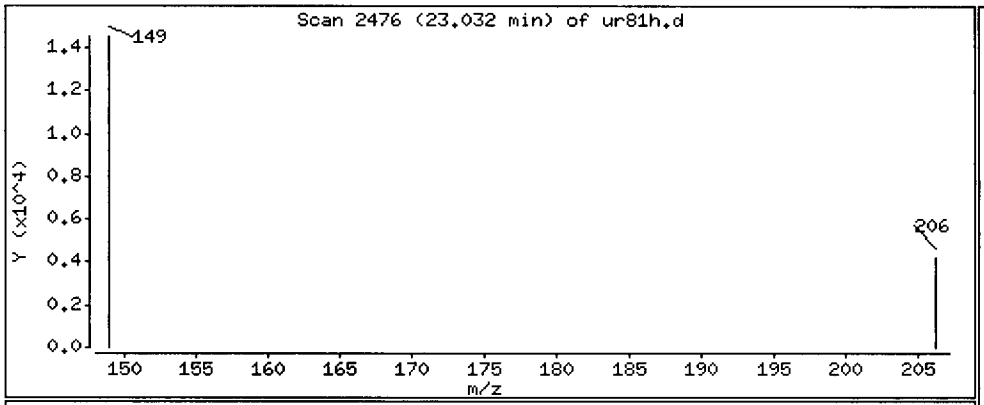
Operator: YZ

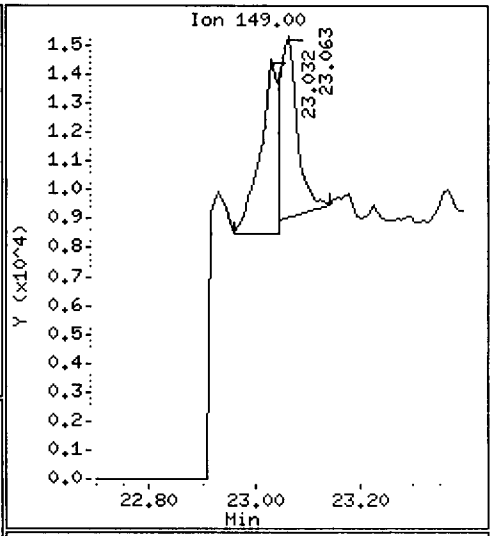
Column phase: ZB-5msi

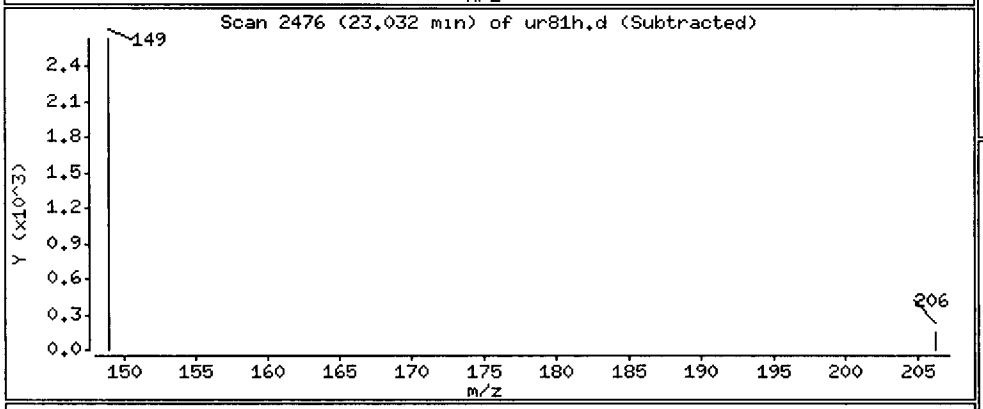
Column diameter: 0.25

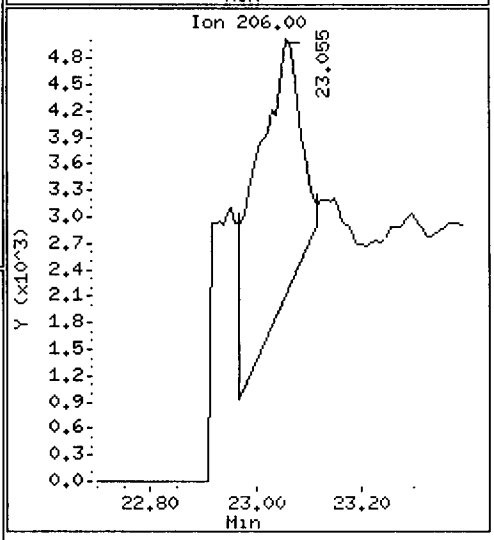
67 Butylbenzylphthalate

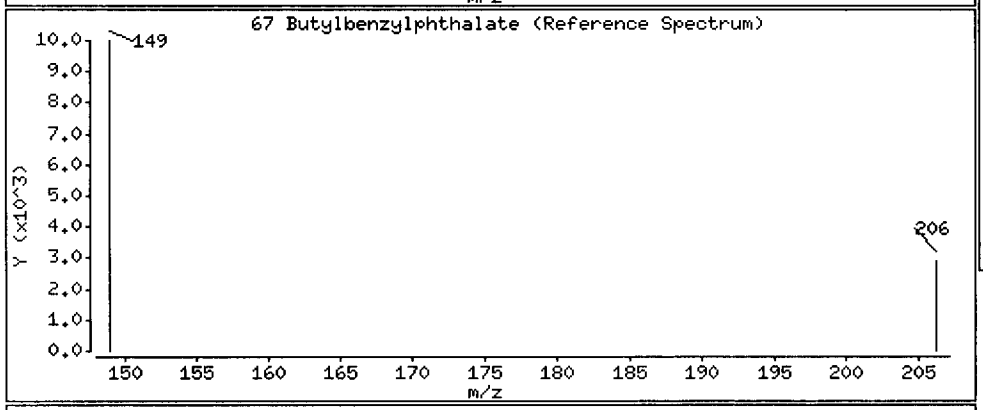
Concentration: 11.94 ug/kg

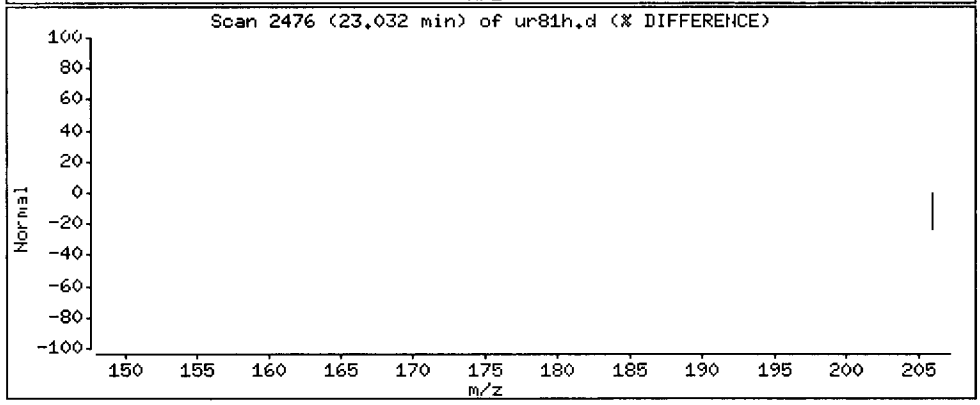












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Date : 08-MAY-2012 23:24

Client ID: IJ12-58A

Instrument: nt10.i

Sample Info: UR81H

Volume Injected (uL): 1.0

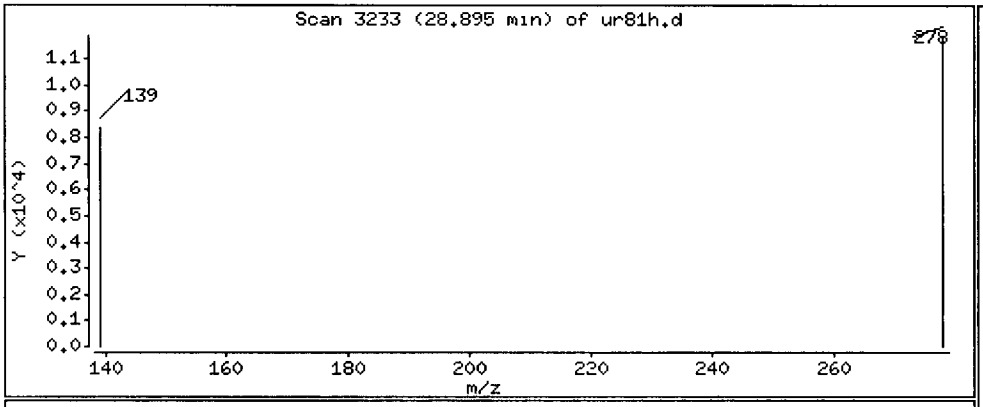
Operator: YZ

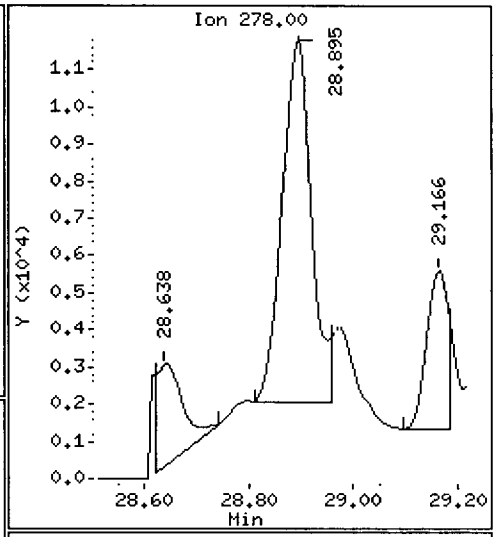
Column phase: ZB-5msi

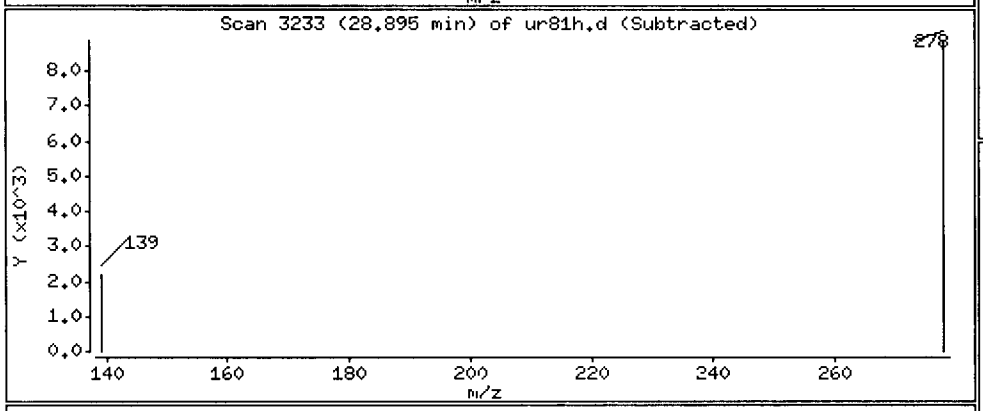
Column diameter: 0.25

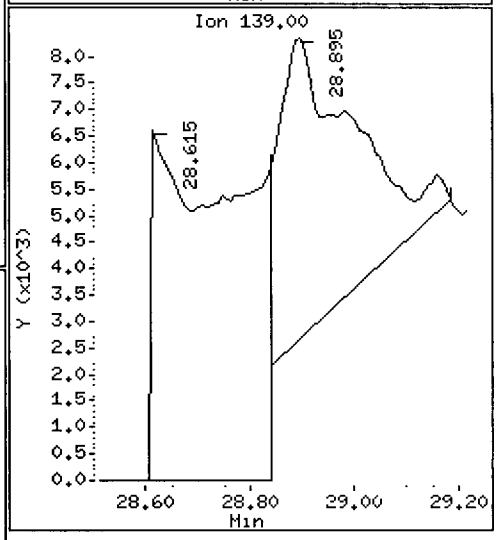
79 Dibenzo(a,h)anthracene

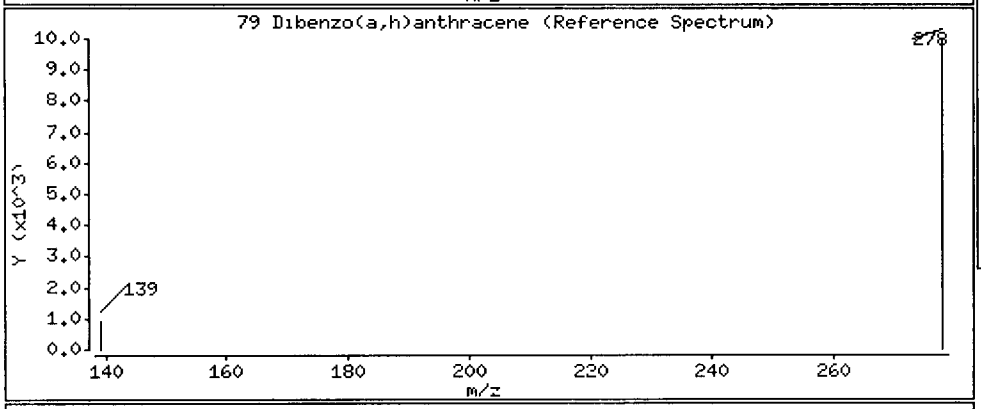
Concentration: 17.68 ug/kg

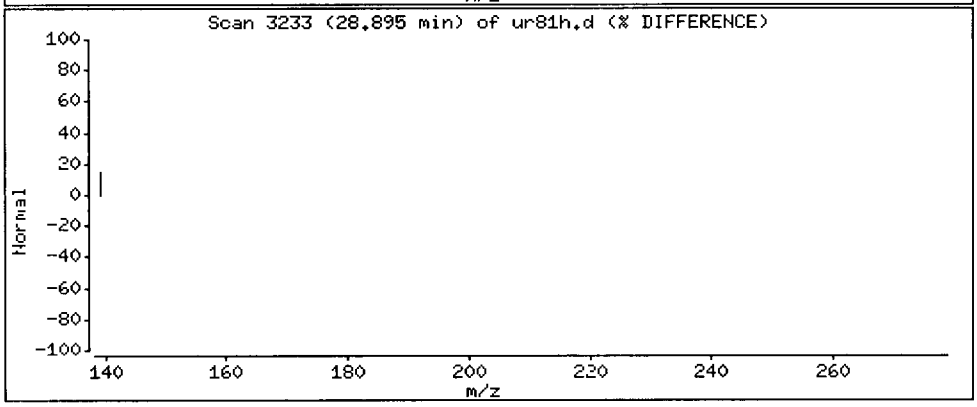






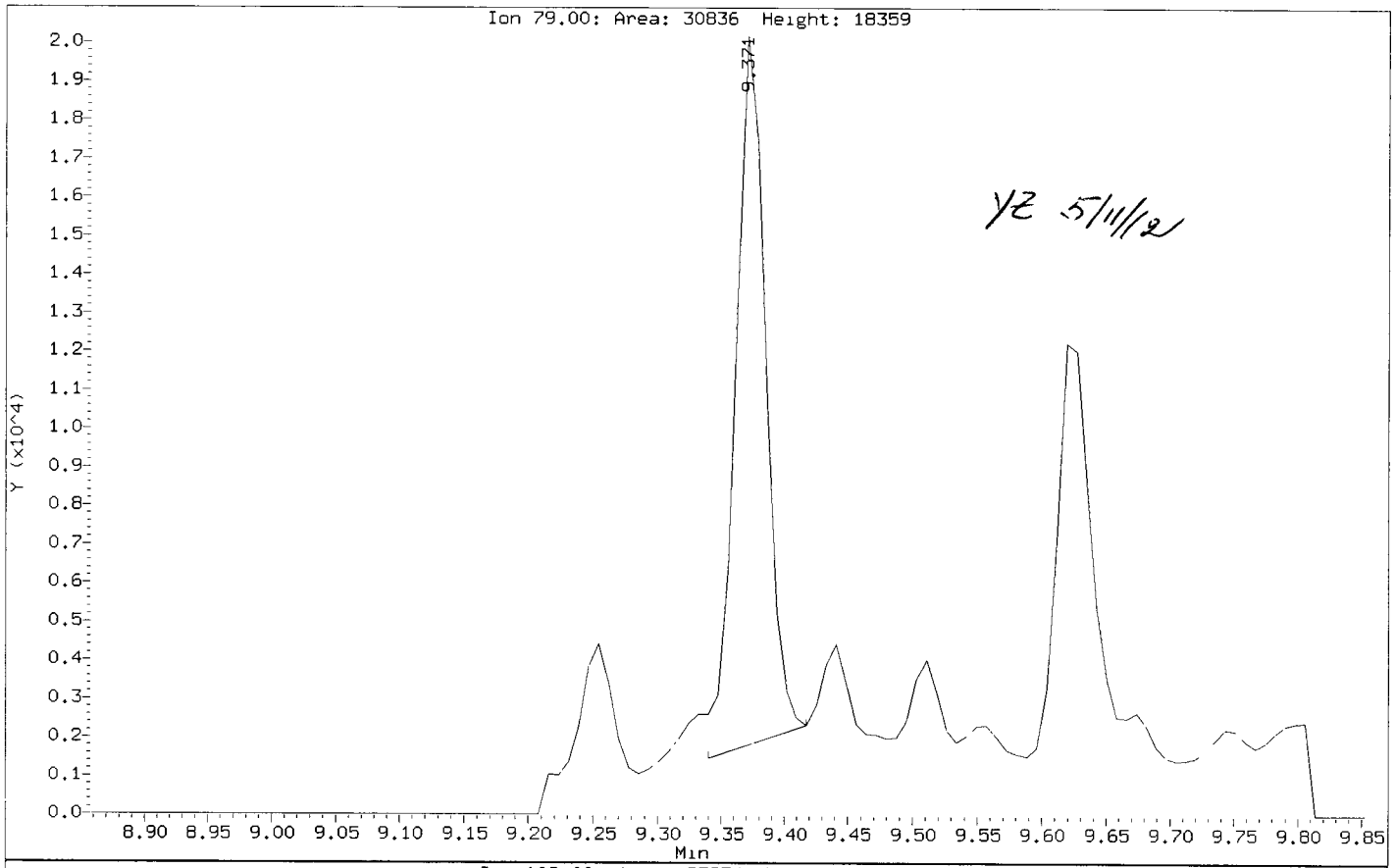


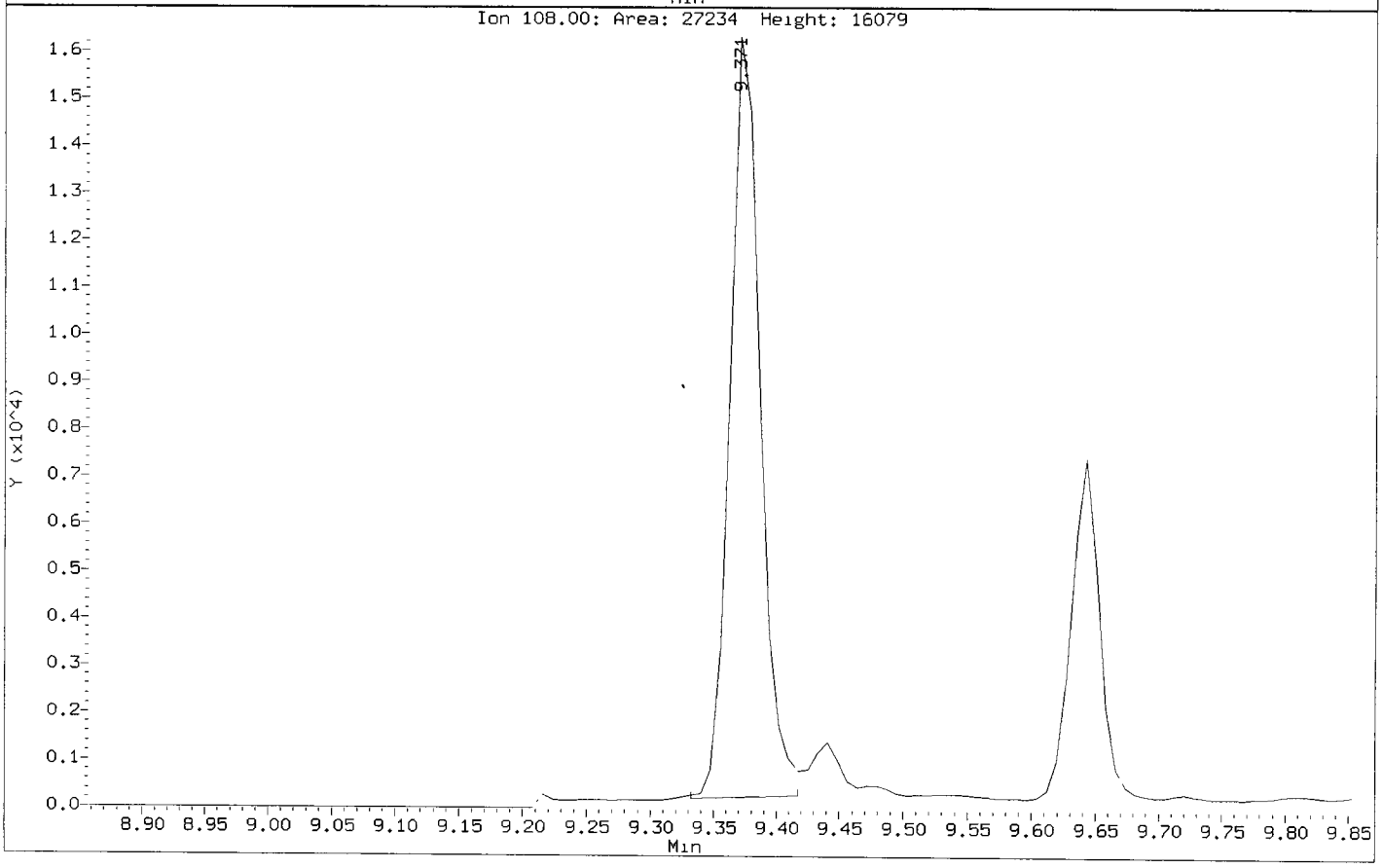




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d
Injection Date: 08-MAY-2012 23:24
Instrument: nt10.i
Client Sample ID: IJ12-58A

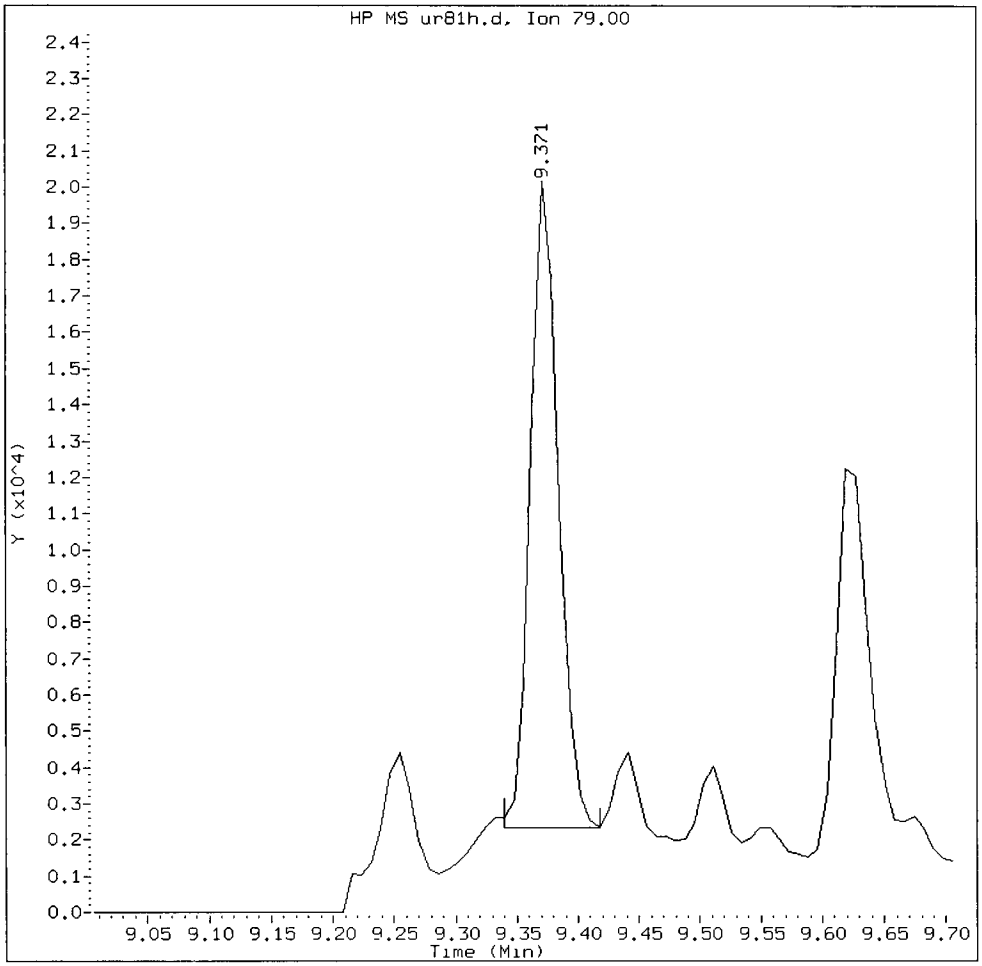
Compound: Benzyl alcohol
CAS Number: 100-51-6





UR81H, /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Benzyl alcohol Amount: 0.45 Area: 28562



MANUAL INTEGRATION for Benzyl alcohol

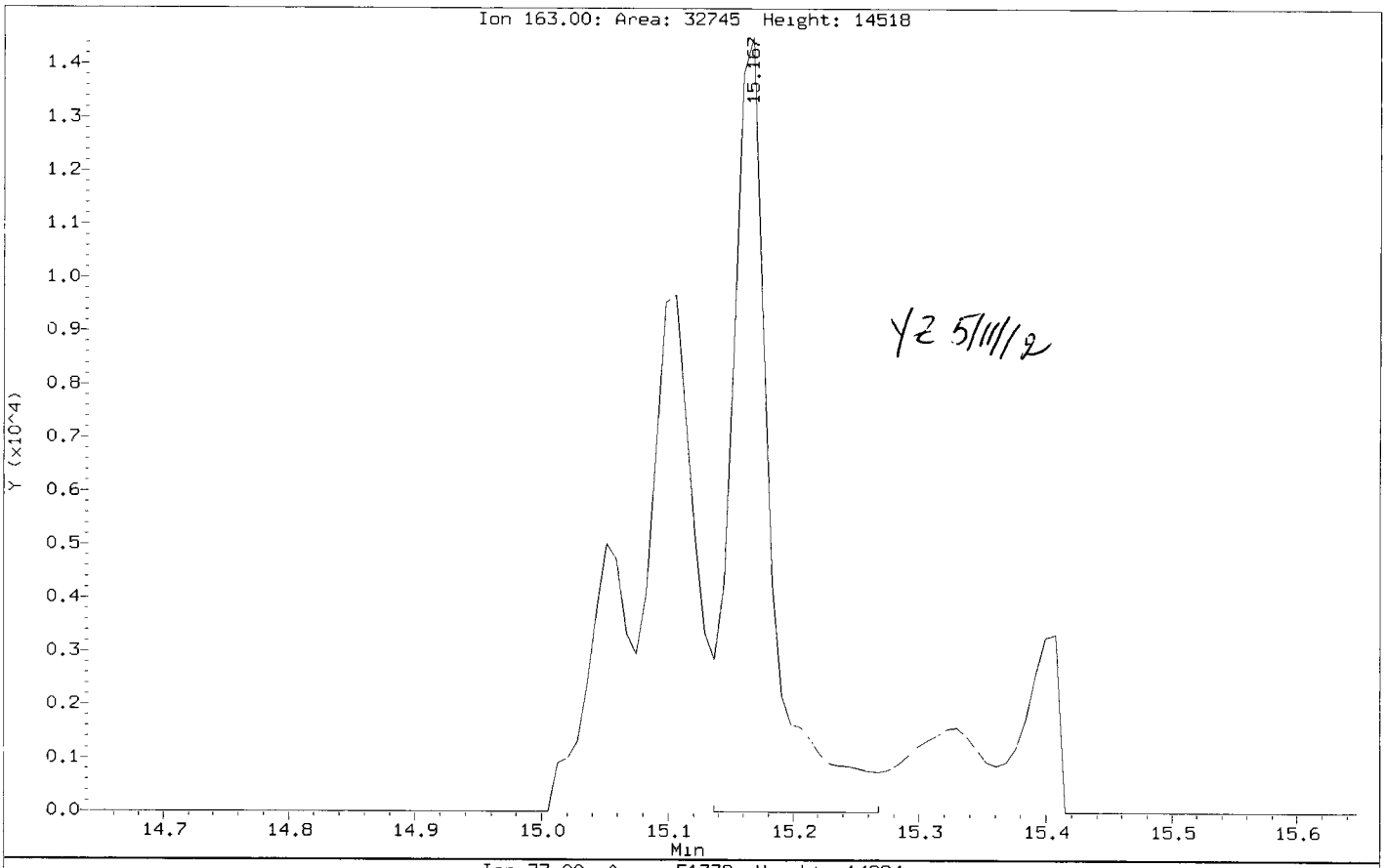
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

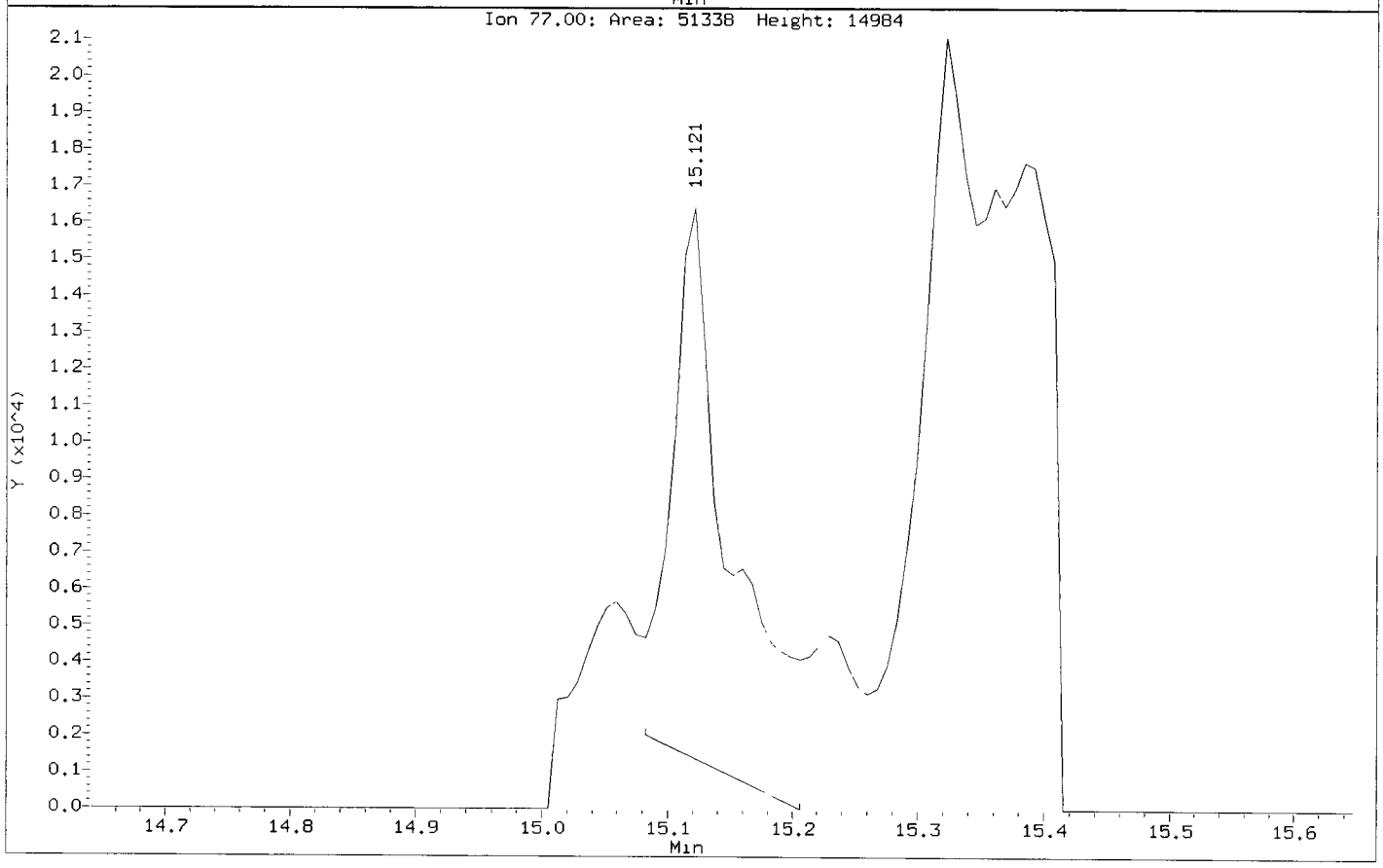
5. Other _____

Analyst: YR Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d
Injection Date: 08-MAY-2012 23:24
Instrument: nt10.i
Client Sample ID: IJ12-58A

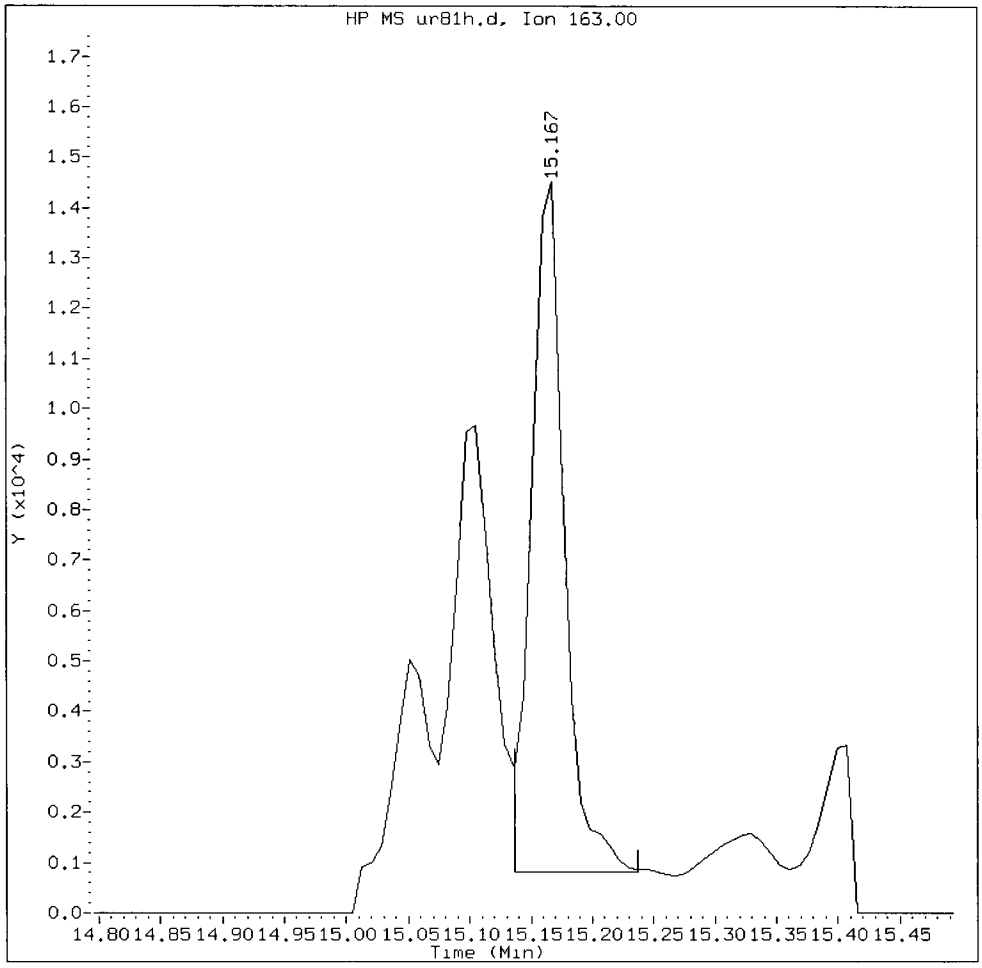
Compound: Dimethylphthalate
CAS Number: 131-11-3





UR81H, /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Dimethylphthalate Amount: 0.16 Area: 25947



MANUAL INTEGRATION for Dimethylphthalate

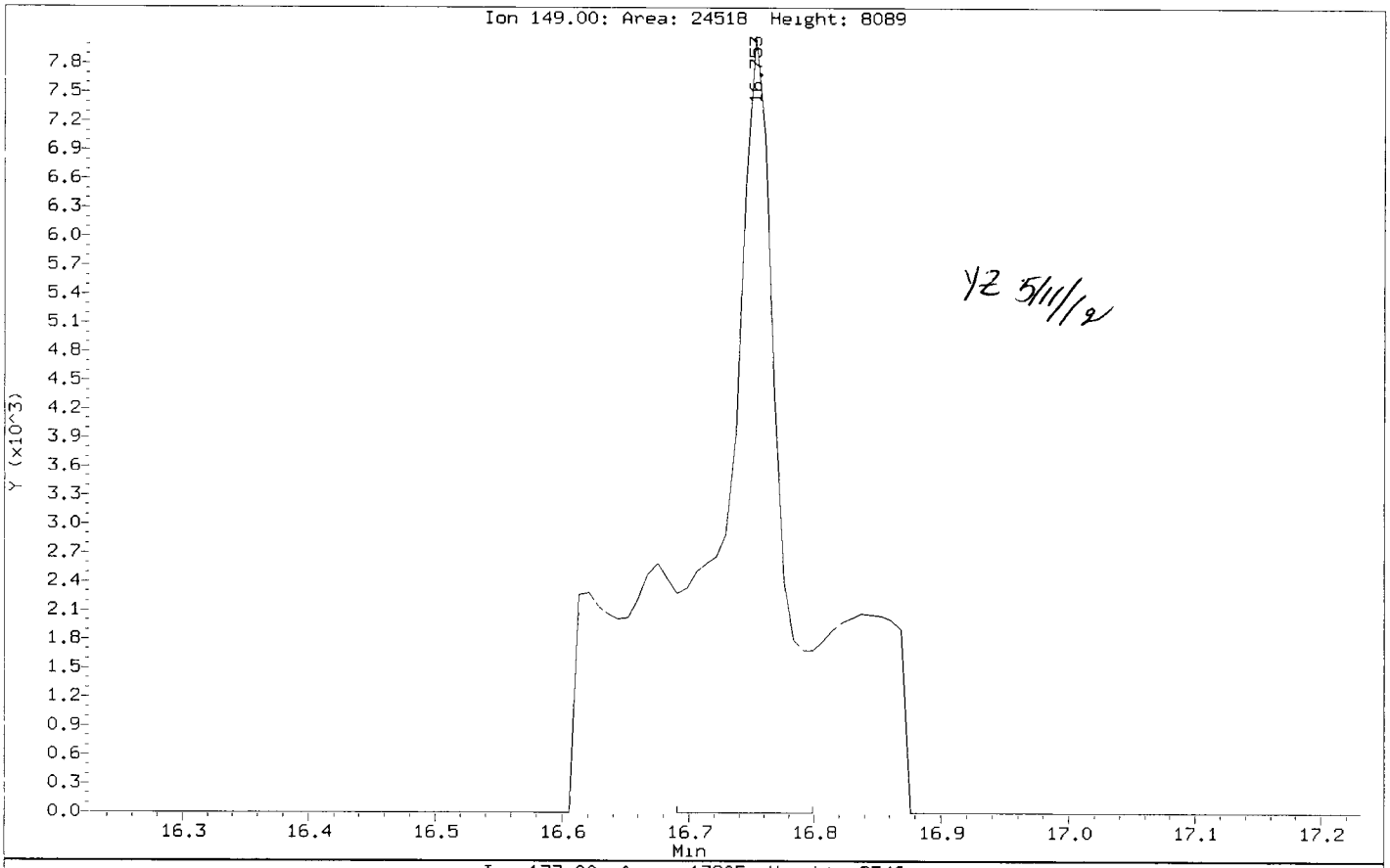
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

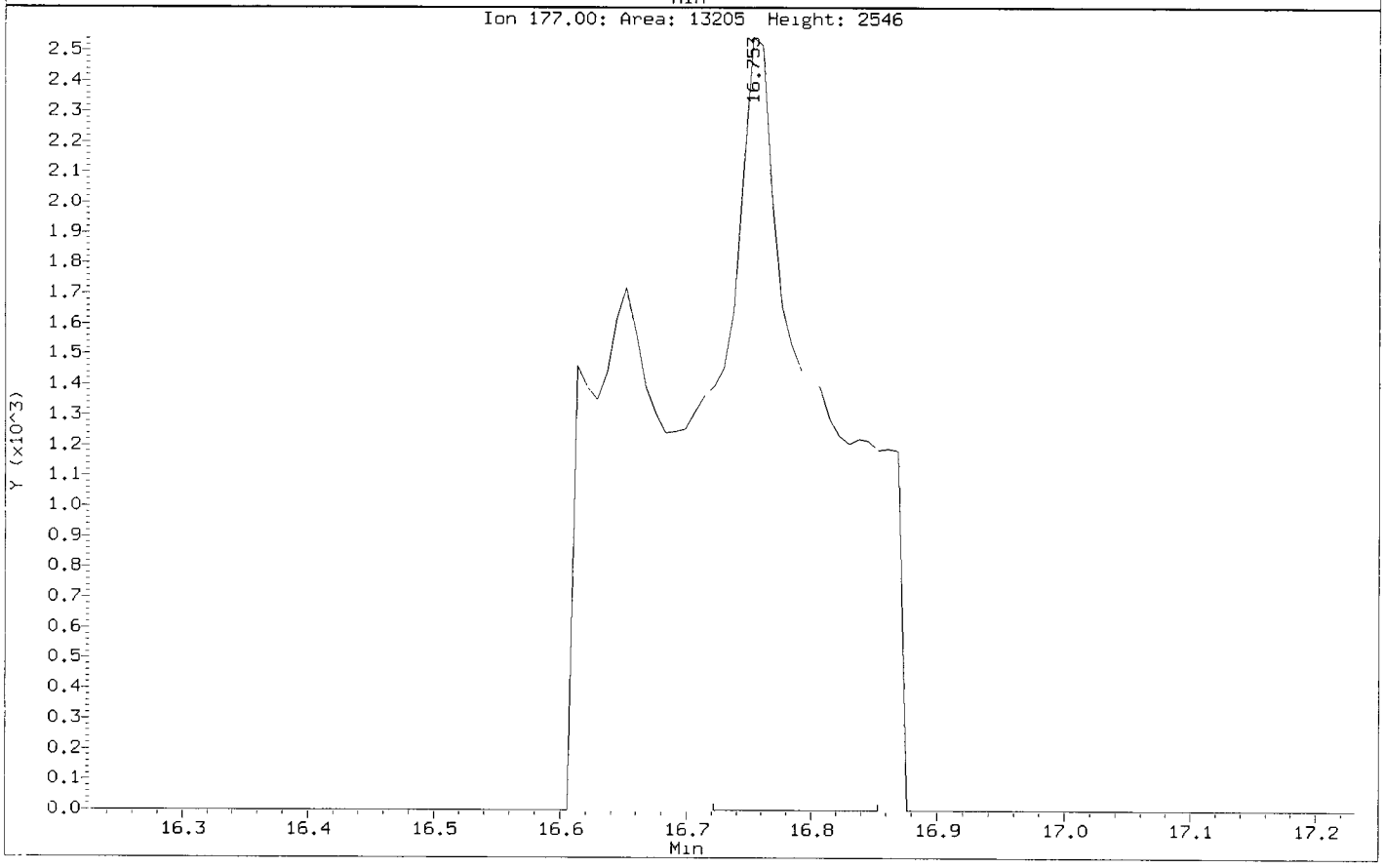
Analyst: YZ Date: 5/4/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d
Injection Date: 08-MAY-2012 23:24
Instrument: nt10.i
Client Sample ID: IJ12-58A

Compound: Diethylphthalate
CAS Number: 84-66-2

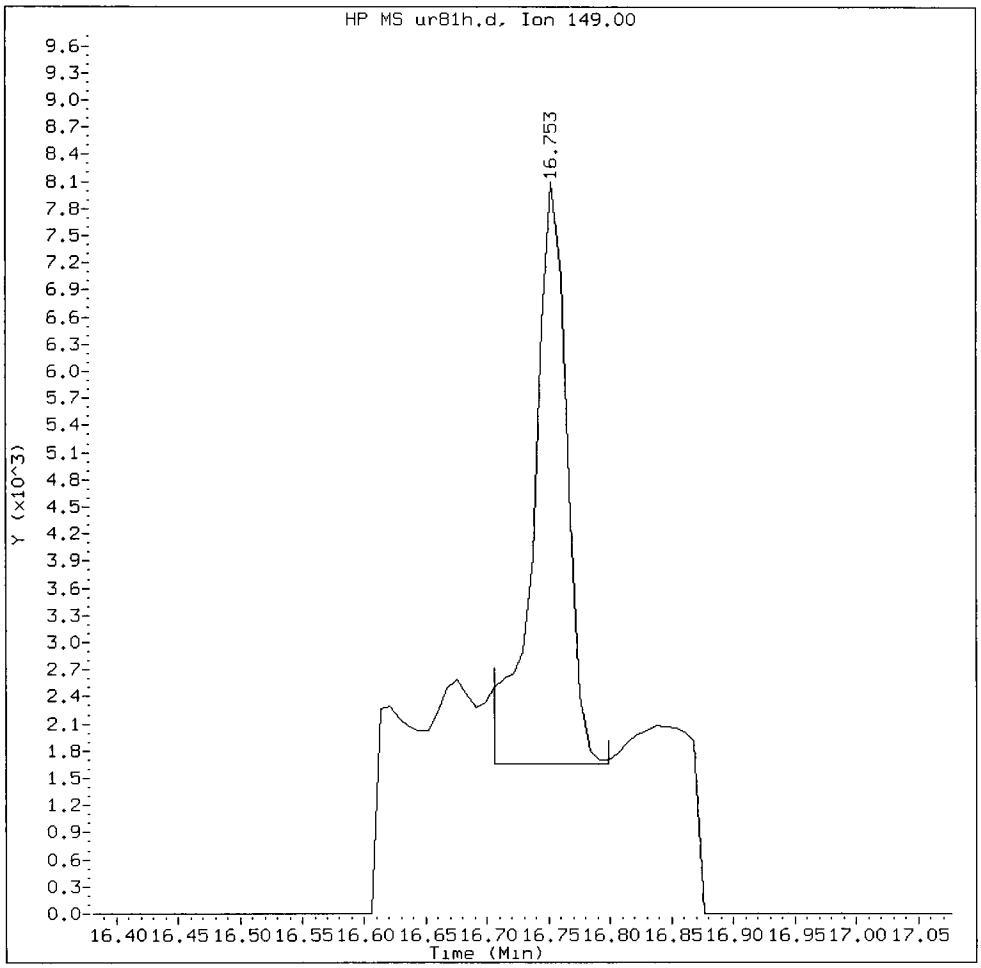


YZ 5/11/12



UR81H, /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Diethylphthalate Amount: 0.07 Area: 12397



MANUAL INTEGRATION for Diethylphthalate

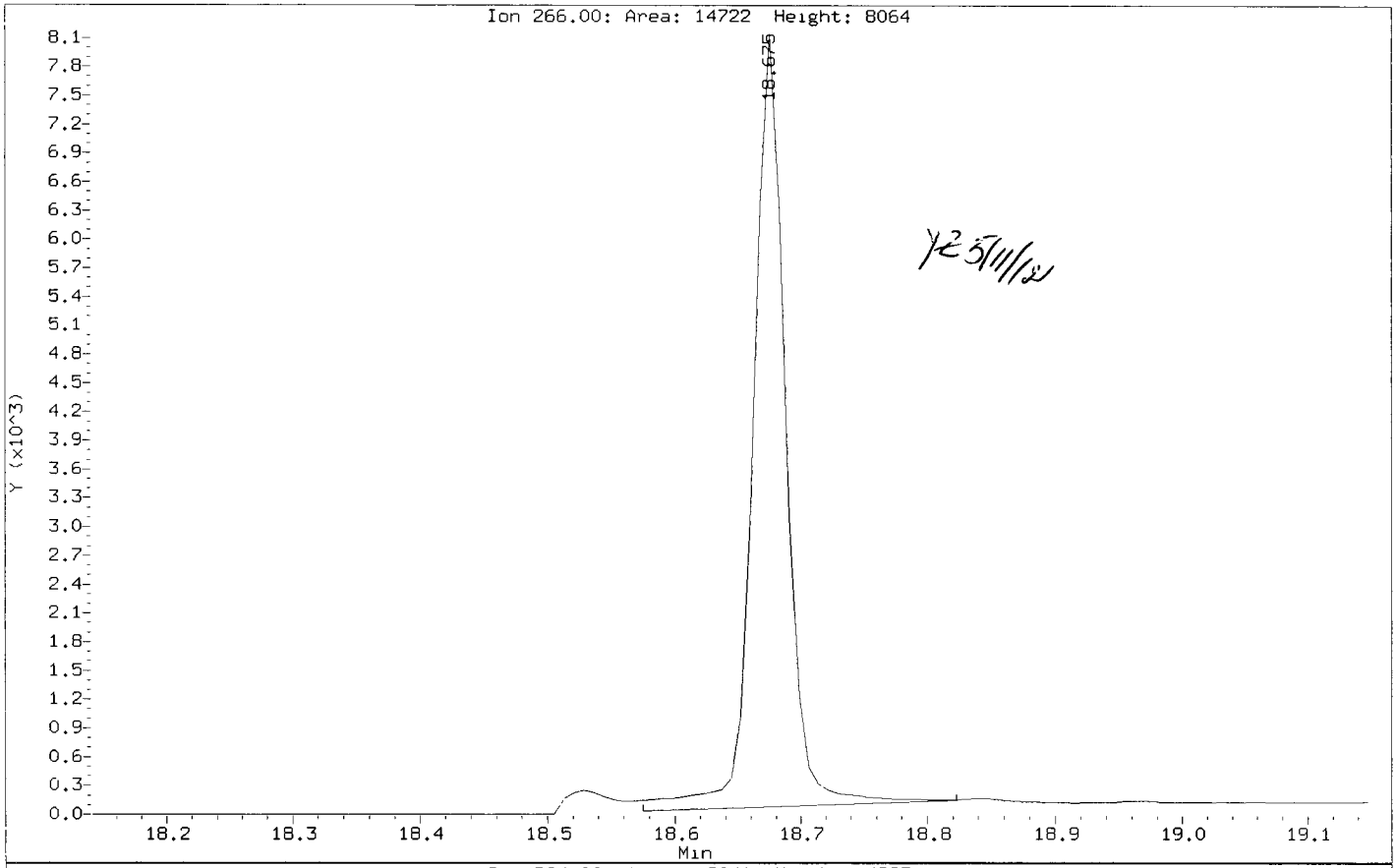
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

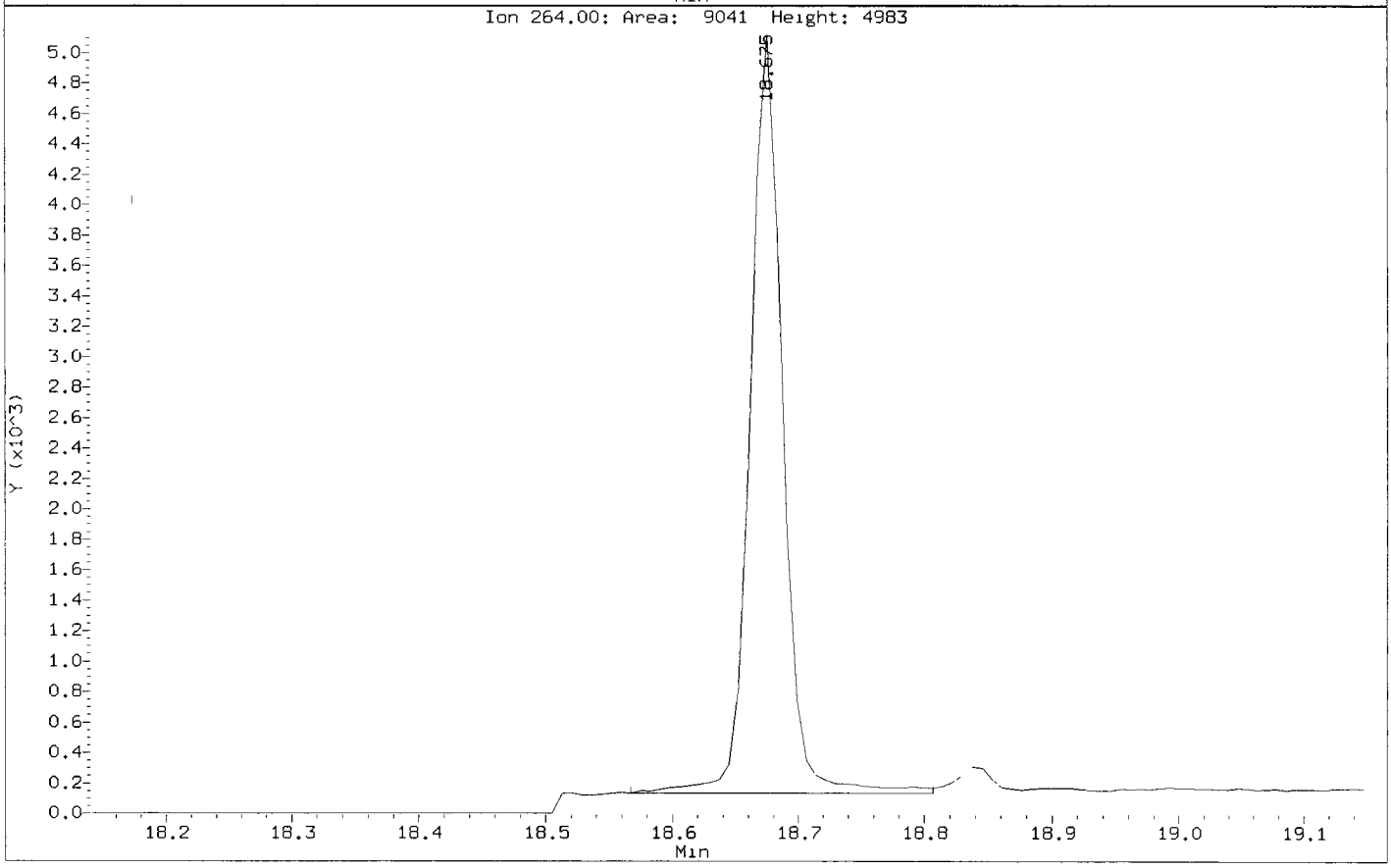
Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81h.d
Injection Date: 08-MAY-2012 23:24
Instrument: nt10.i
Client Sample ID: IJ12-58A

Compound: Pentachlorophenol
CAS Number: 87-86-5

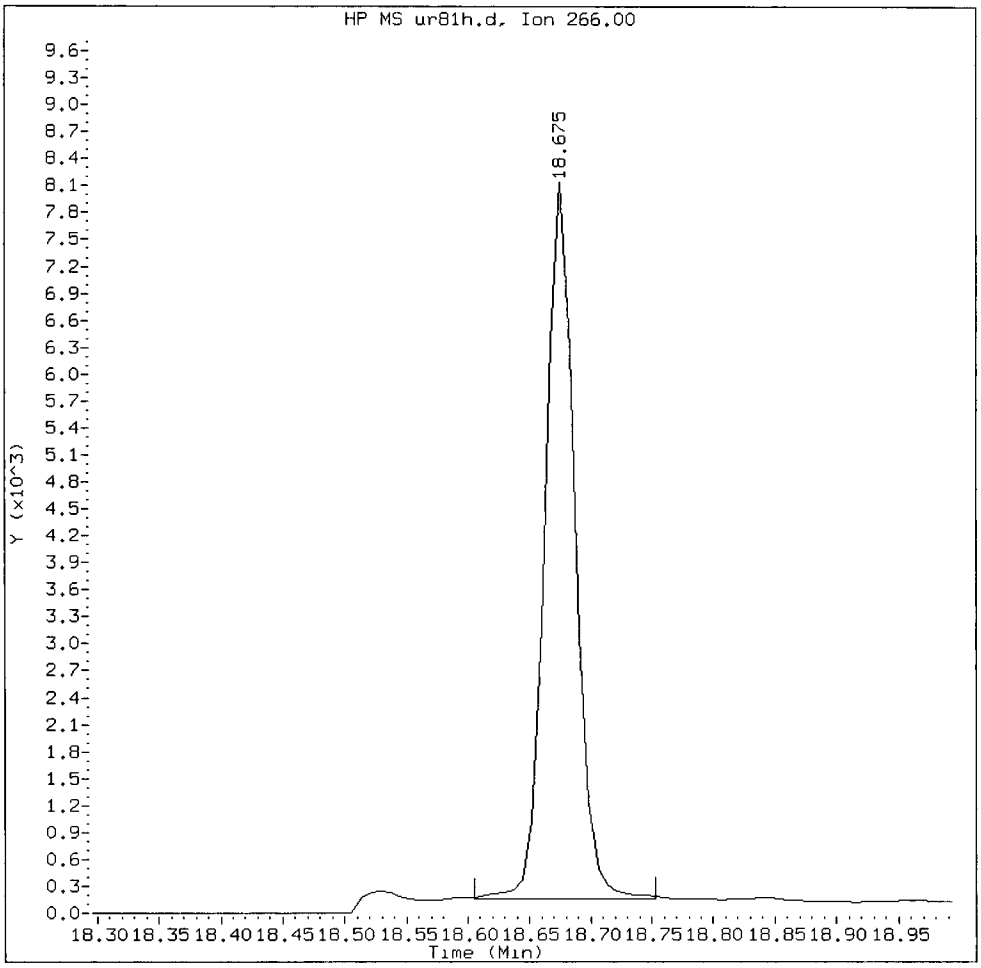


Y2 5/11/12



UR81H, /chem1/nt10.i/20120508.b/SIM.b/ur81h.d

Pentachlorophenol Amount: 0.34 Area: 13663



MANUAL INTEGRATION for Pentachlorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - ur81h.d

Lab ID: UR81H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 08-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/11/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81i.d
Lab Smp Id: UR81I Client Smp ID: IJ12-11
Inj Date : 09-MAY-2012 00:01
Operator : YZ Inst ID: nt10.i
Smp Info : UR81I
Misc Info : 12-7400
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	19.25000	Weight of sample extracted (g)
M	46.90000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.711	6.680	(0 741)	402568	4.18138	409 1
3 Phenol	94	8 442	8.418	(0 932)	62741	0 49238	48.17
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.053	9 045	(1.000)	280442	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9.371	9.355	(1 035)	20152	0.30893	30.22(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9.635	9.619	(1.064)	6581	0.06430	6.290
15 4-Methylphenol	108	9 938	9.914	(1.098)	51373	0.47834	46.80
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11.061	11.038	(0.943)	13599	0.13665	13.37
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.732	11.724	(1.000)	1085710	4 00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15 160	15.144	(0.969)	11664	0.06955	6.804
*	42 Acenaphthene-d10	162	15.647	15.632	(1.000)	548469	4.00000	
	50 Diethylphthalate	149	16.745	16.729	(1 070)	13138	0.07156	7.001(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18 923	18.908	(1 000)	969866	4.00000	
$	66 Terphenyl-d14	244	22 118	22.095	(0.922)	502848	3.03971	297 4
	67 Butylbenzylphthalate	149	23.055	23.047	(0.961)	5176	0.04134	4 045
*	69 Chrysene-d12	240	23.984	23.969	(1.000)	1039166	4.00000	
*	77 Perylene-d12	264	26.470	26.446	(1.000)	982768	4 00000	
	79 Dibenzo(a,h)anthracene	278	28.895	28.864	(1.092)	6824	0.03243	3.173(M)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81i.d
Lab Smp Id: UR81I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7400

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-11
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	280442	-9.90
27 Naphthalene-d8	1166872	583436	2333744	1085710	-6.96
42 Acenaphthene-d10	603218	301609	1206436	548469	-9.08
59 Phenanthrene-d10	1096026	548013	2192052	969866	-11.51
69 Chrysene-d12	1131082	565541	2262164	1039166	-8.13
77 Perylene-d12	1082499	541250	2164998	982768	-9.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.08
69 Chrysene-d12	23.97	23.47	24.47	23.98	0.06
77 Perylene-d12	26.45	25.95	26.95	26.47	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81I
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7400

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-11
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	733.7	409.1	55.75	30-160
$ 66 Terphenyl-d14	489.2	297.4	60.79	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Sample Info: UR81I

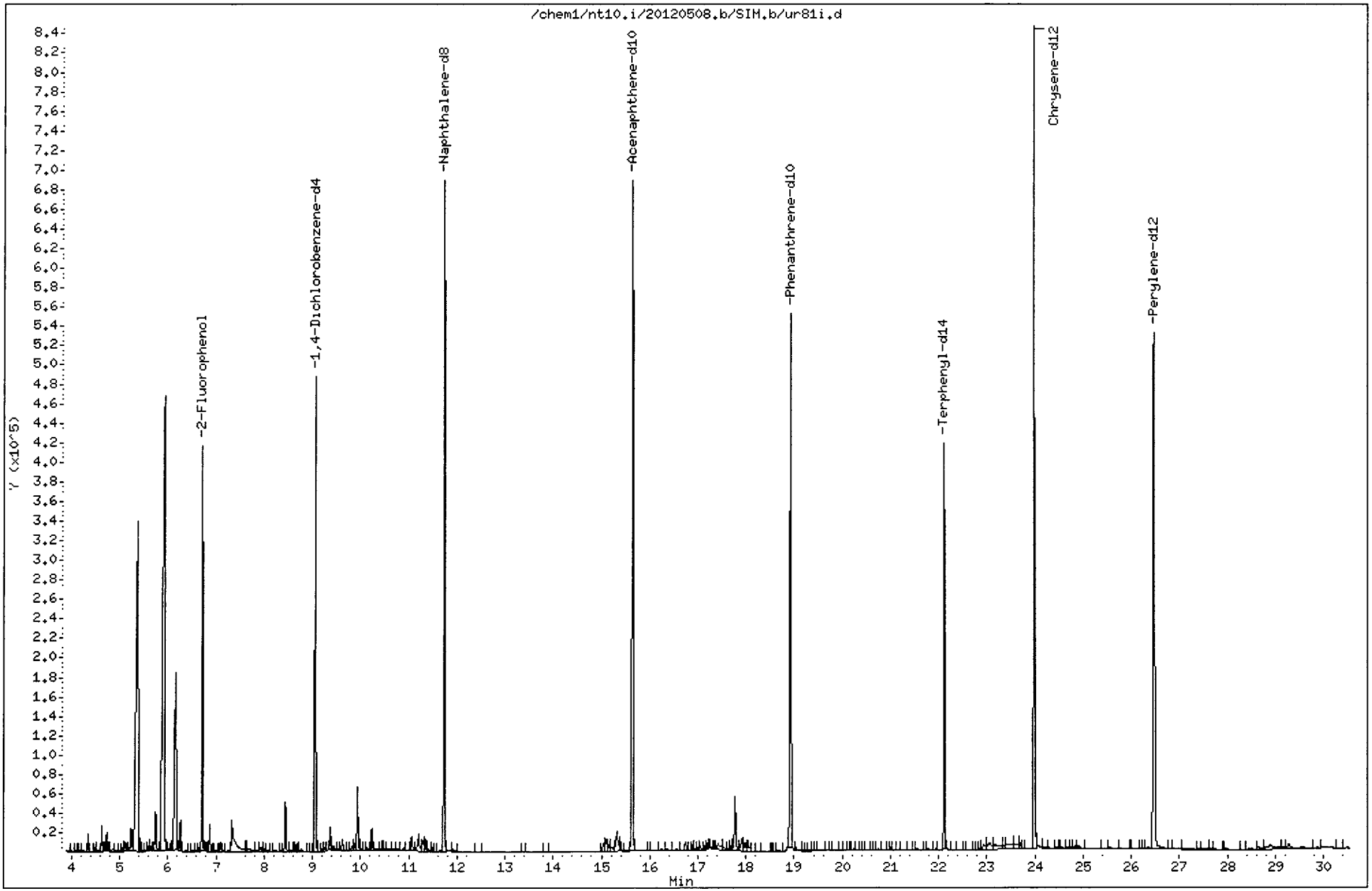
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



UR81 : 01155

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Date : 09-MAY-2012 00:01

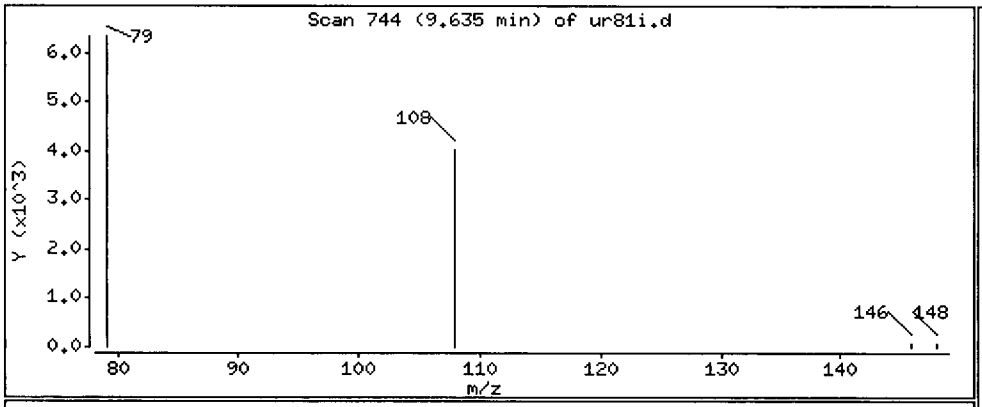
Client ID: IJ12-11 Instrument: nt10.i

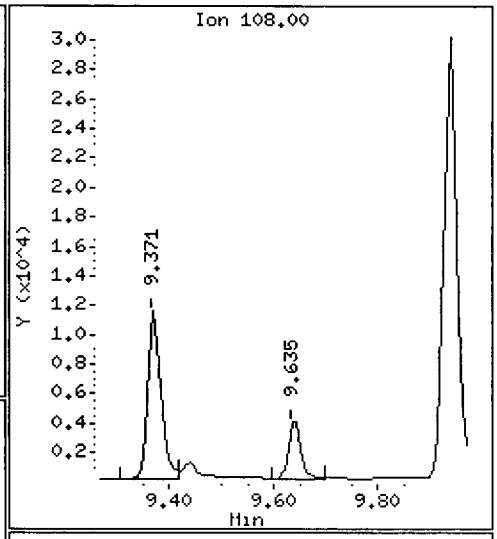
Sample Info: UR81I

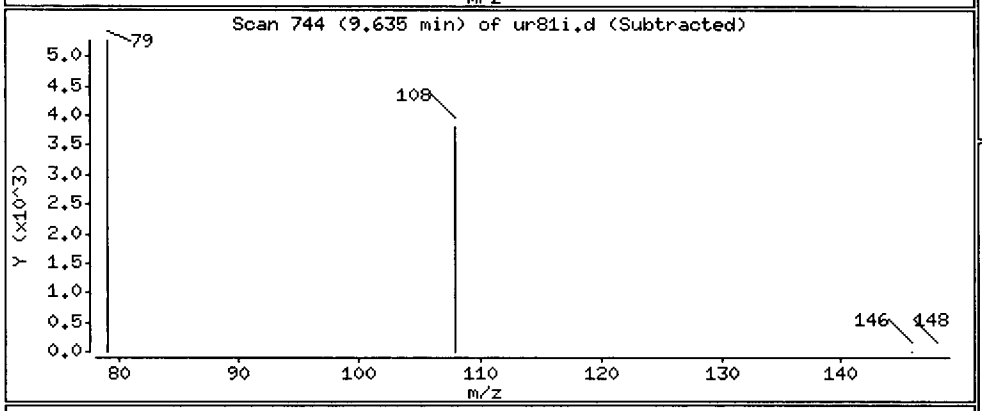
Volume Injected (uL): 1.0 Operator: YZ

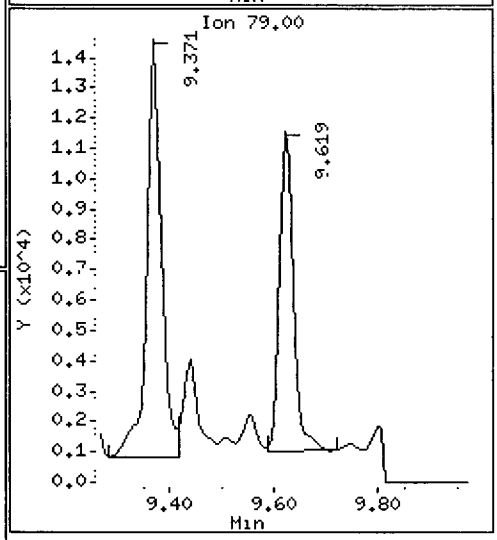
Column phase: ZB-5ms1 Column diameter: 0.25

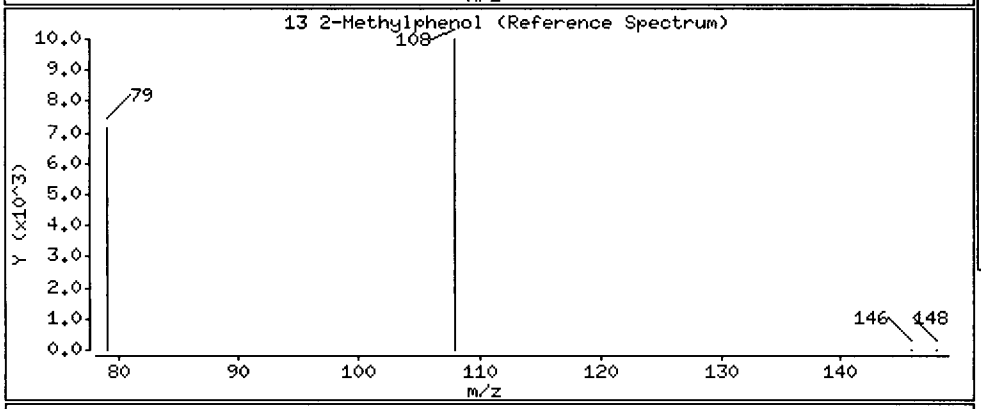
13 2-Methylphenol Concentration: 6.290 ug/kg

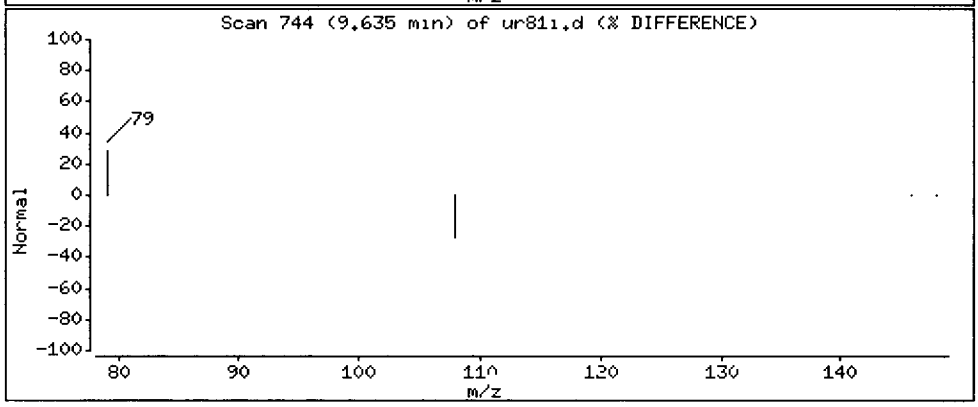












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

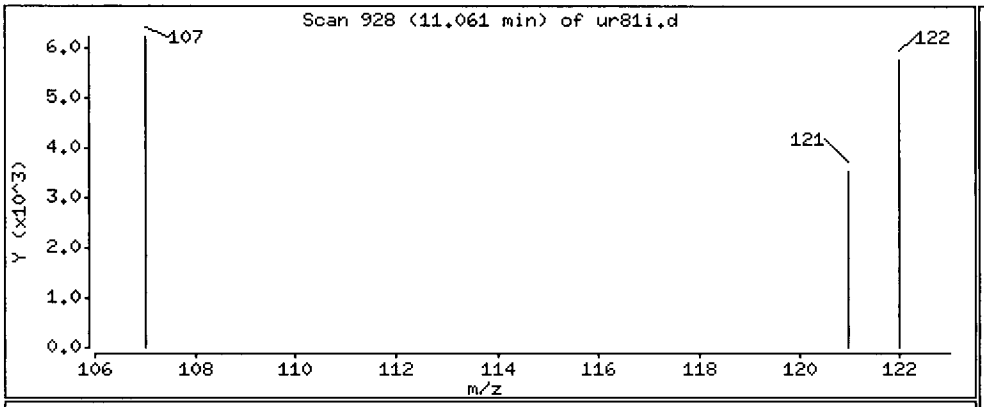
Operator: YZ

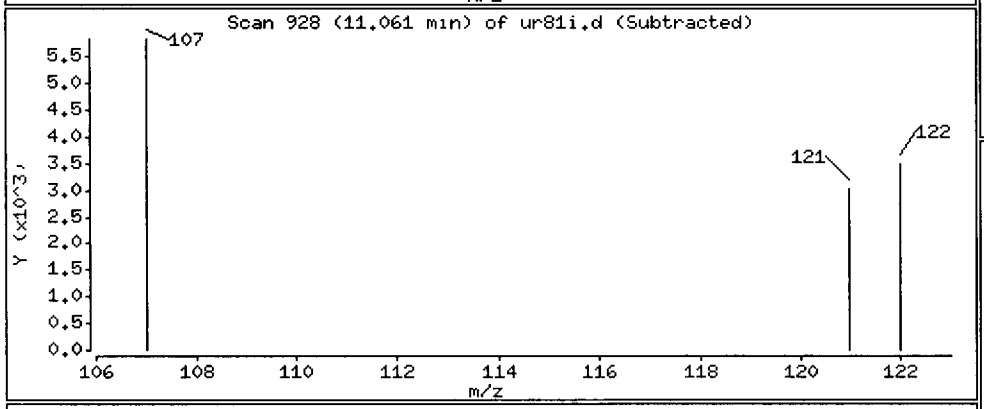
Column phase: ZB-5msi

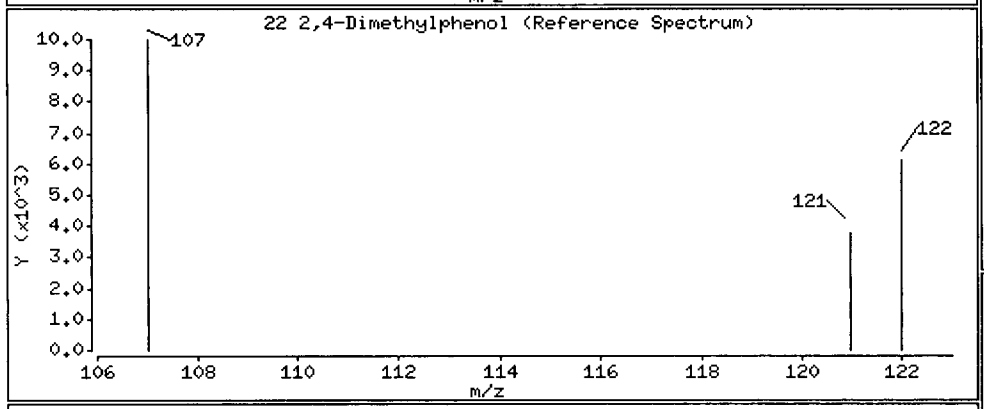
Column diameter: 0.25

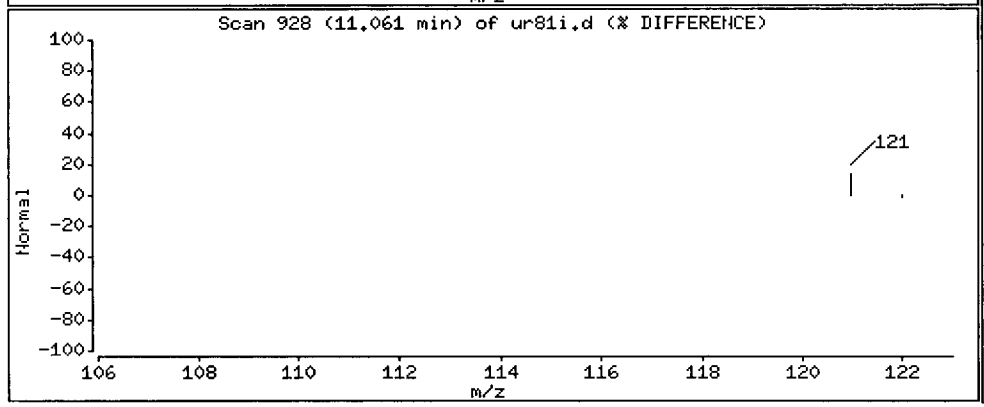
22 2,4-Dimethylphenol

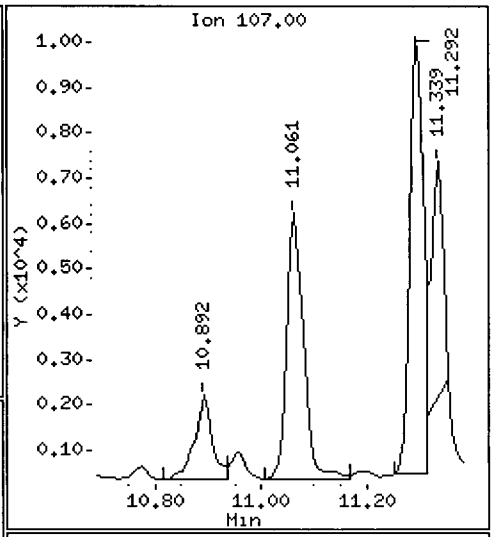
Concentration: 13.37 ug/kg

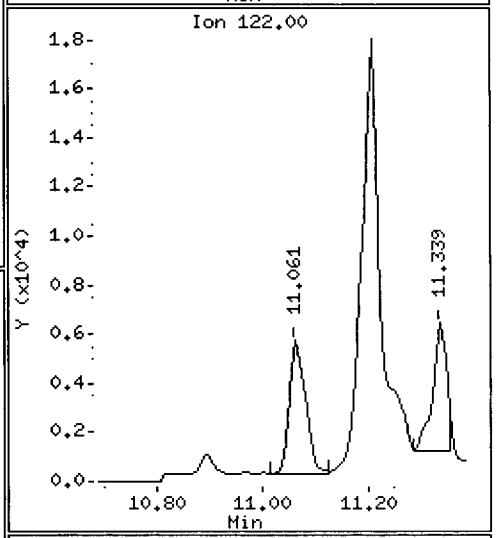


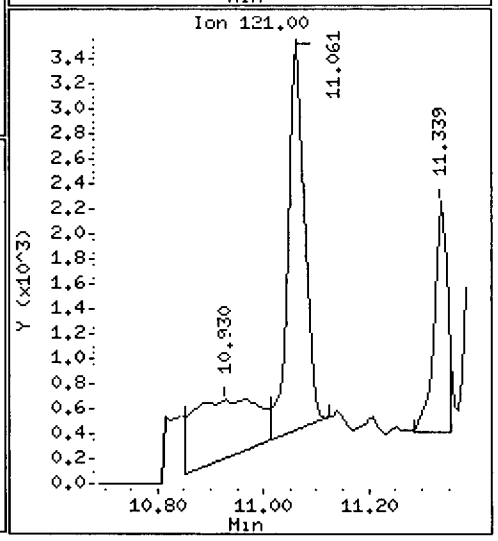












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

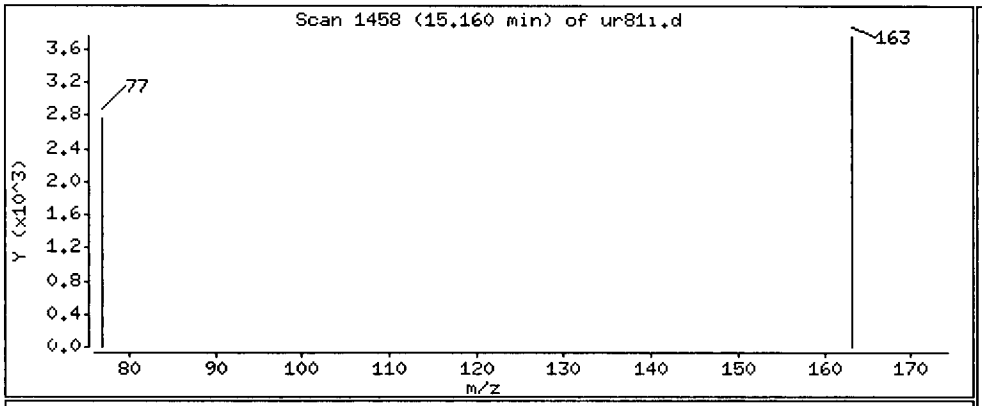
Operator: YZ

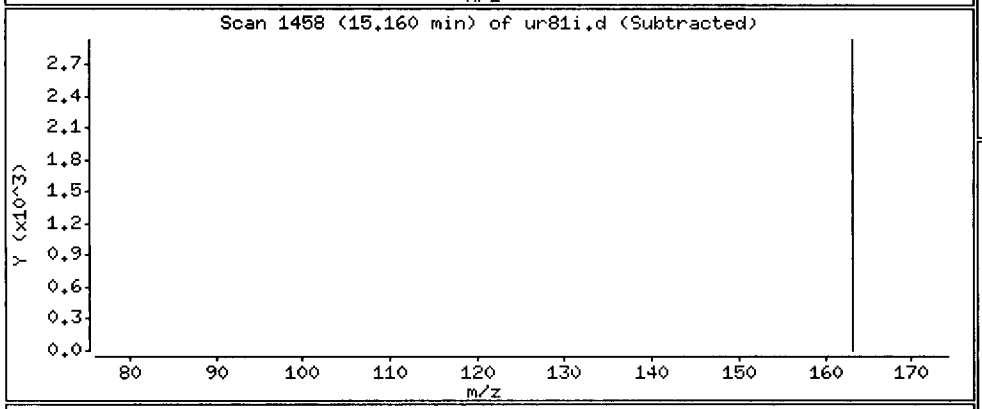
Column phase: ZB-5msi

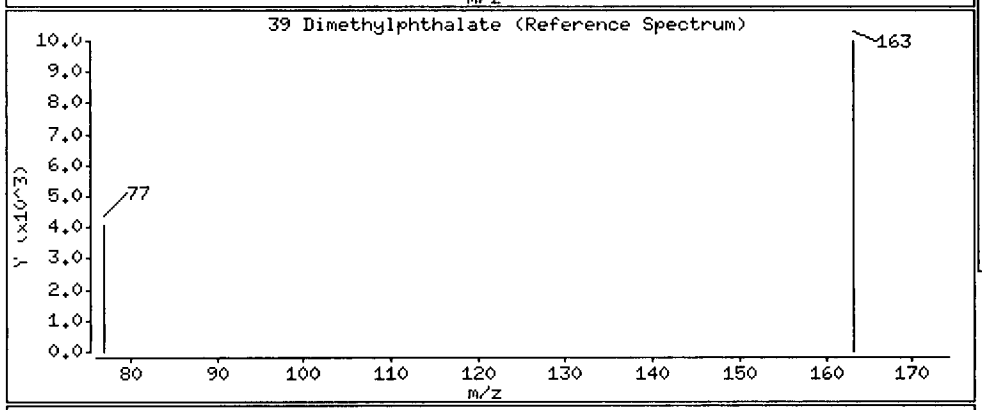
Column diameter: 0.25

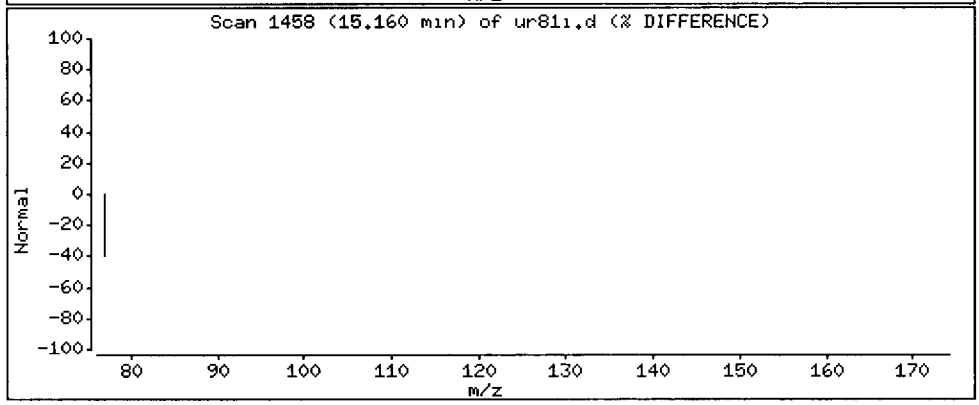
39 Dimethylphthalate

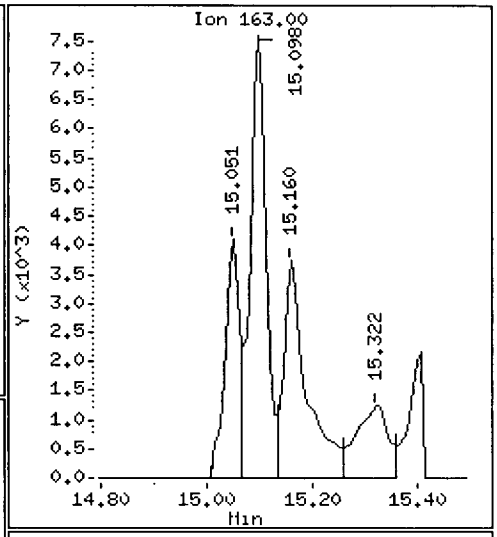
Concentration: 6.804 ug/kg

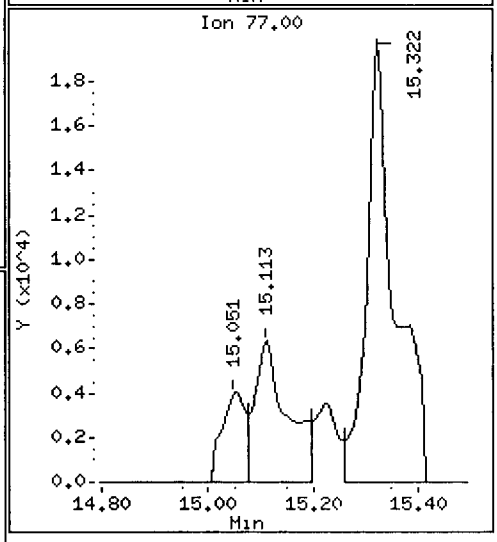












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Date : 09-MAY-2012 00:01

Client ID: IJ12-11

Instrument: nt10.i

Sample Info: UR81I

Volume Injected (uL): 1.0

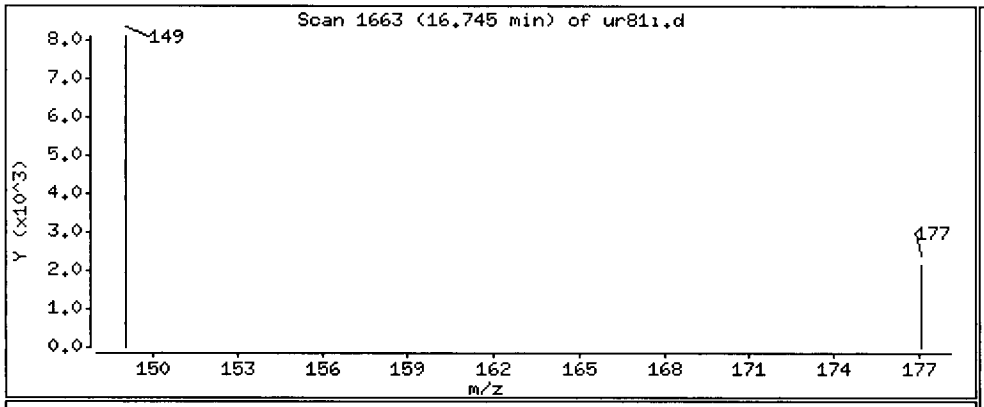
Operator: YZ

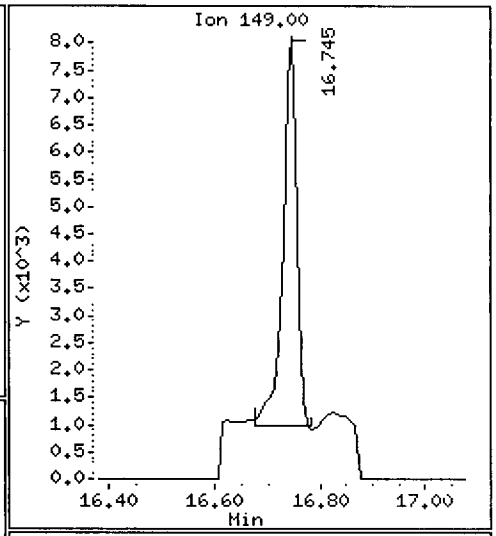
Column phase: ZB-5msi

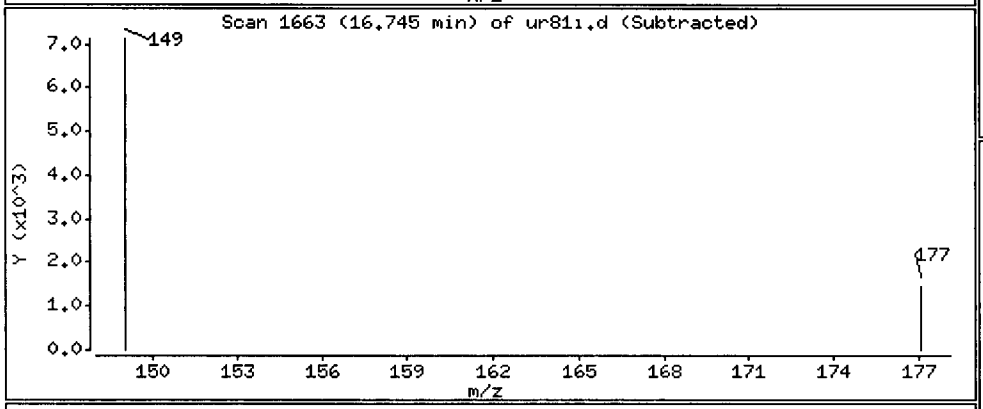
Column diameter: 0.25

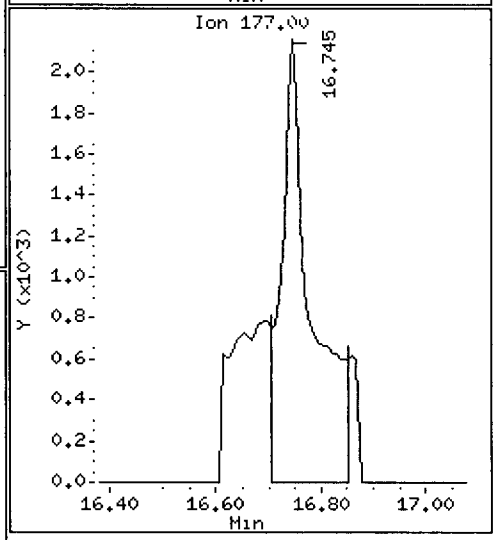
50 Diethylphthalate

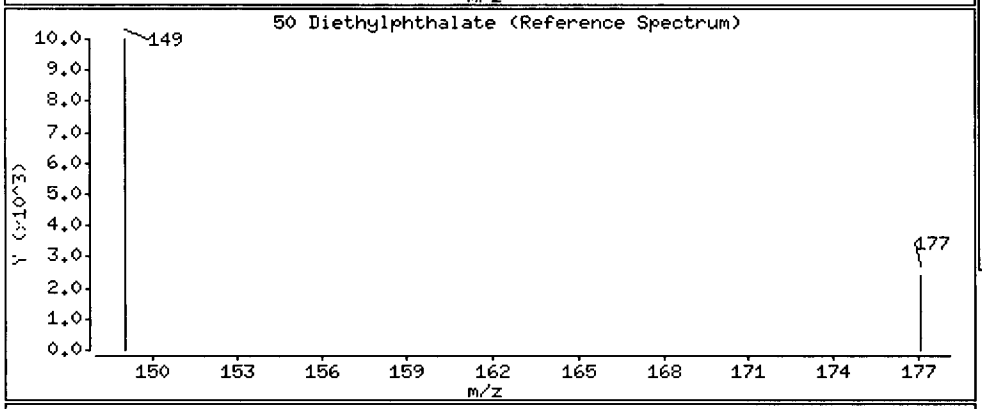
Concentration: 7.001 ug/kg

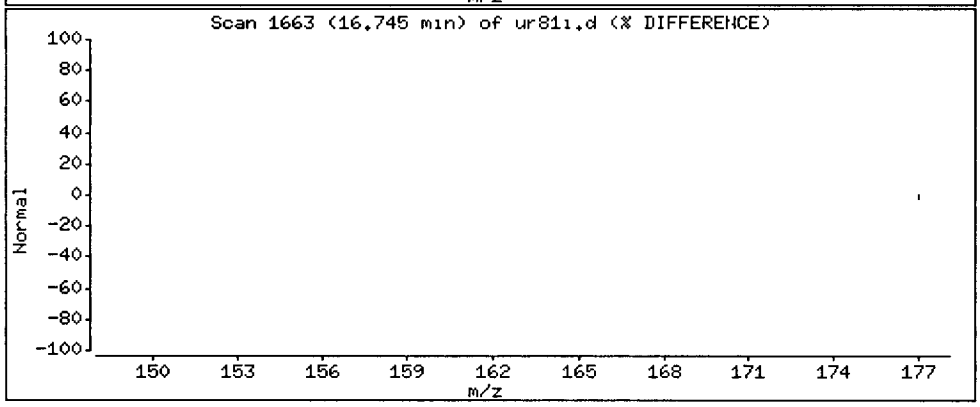












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Date : 09-MAY-2012 00:01

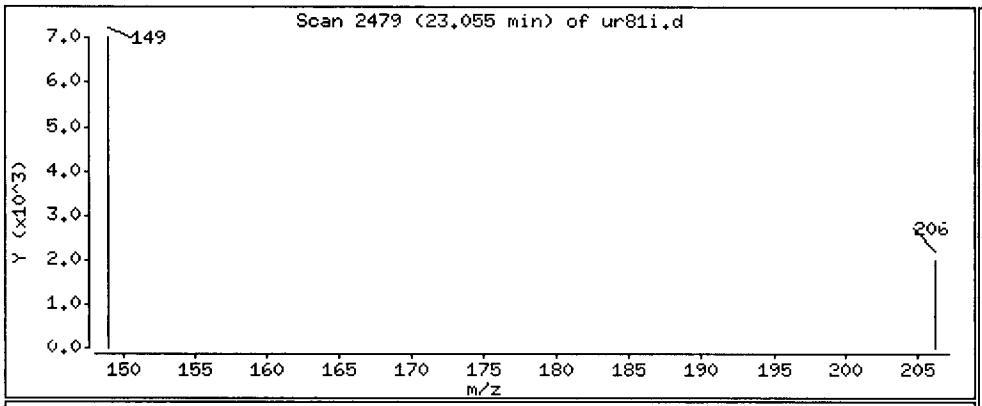
Client ID: IJ12-11 | Instrument: nt10.i

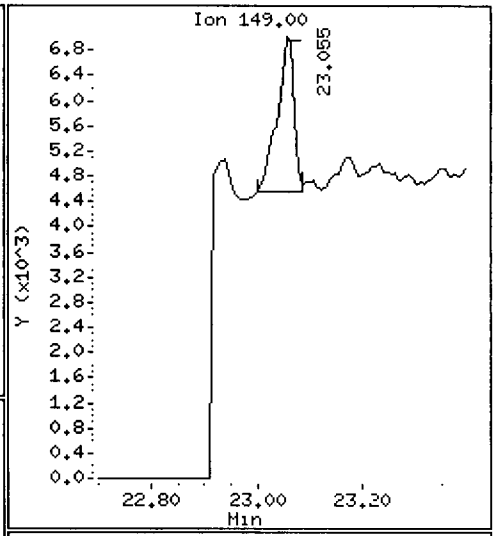
Sample Info: UR81I

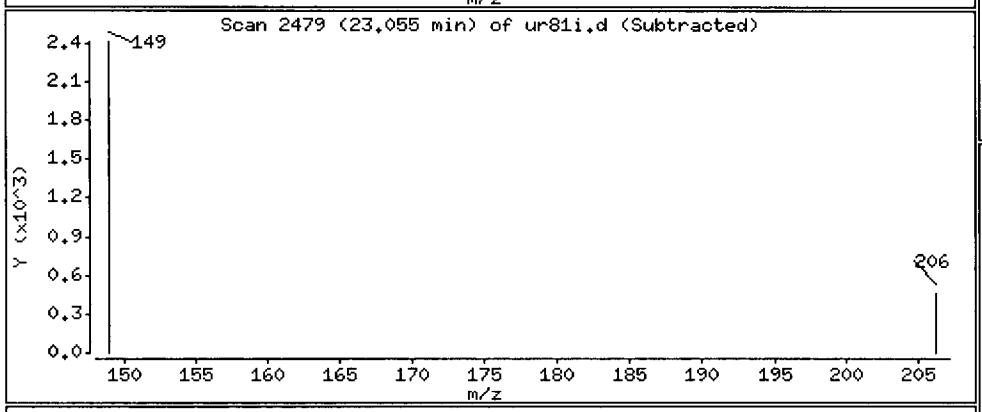
Volume Injected (uL): 1.0 | Operator: YZ

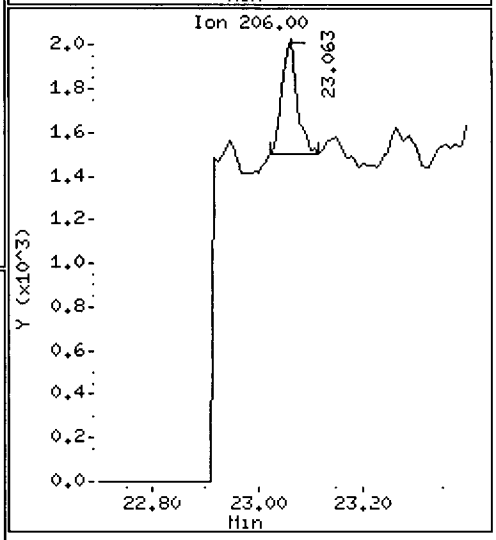
Column phase: ZB-5msi | Column diameter: 0.25

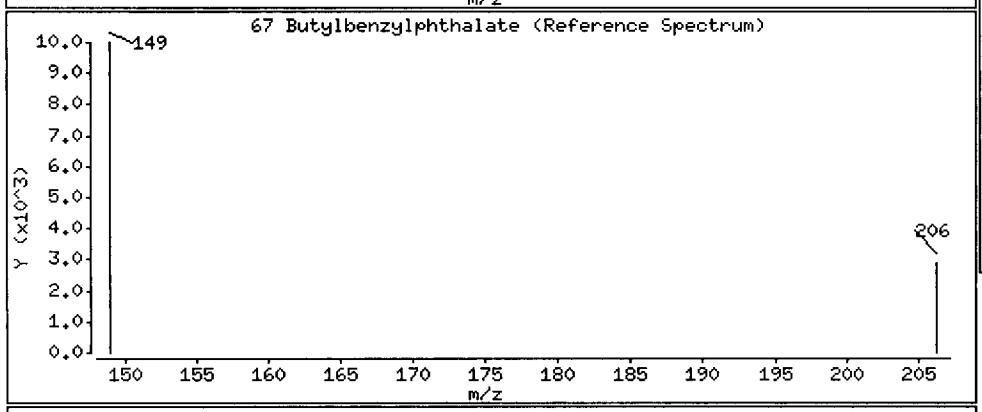
67 Butylbenzylphthalate | Concentration: 4.045 ug/kg

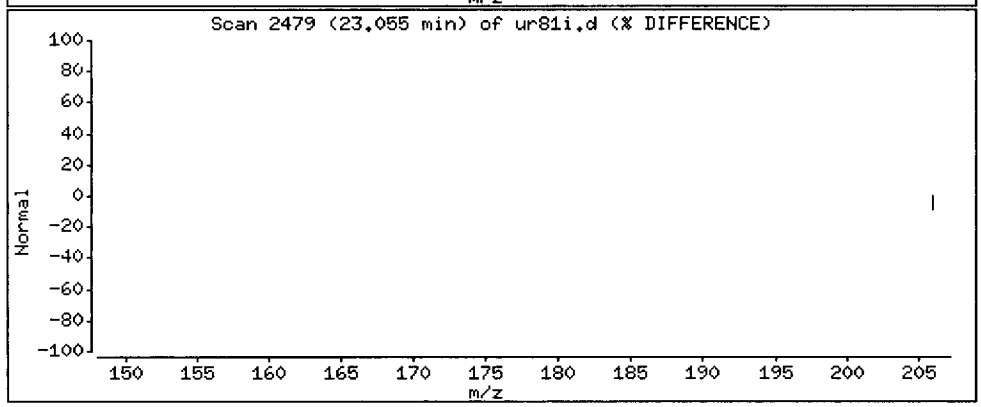












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Date : 09-MAY-2012 00:01

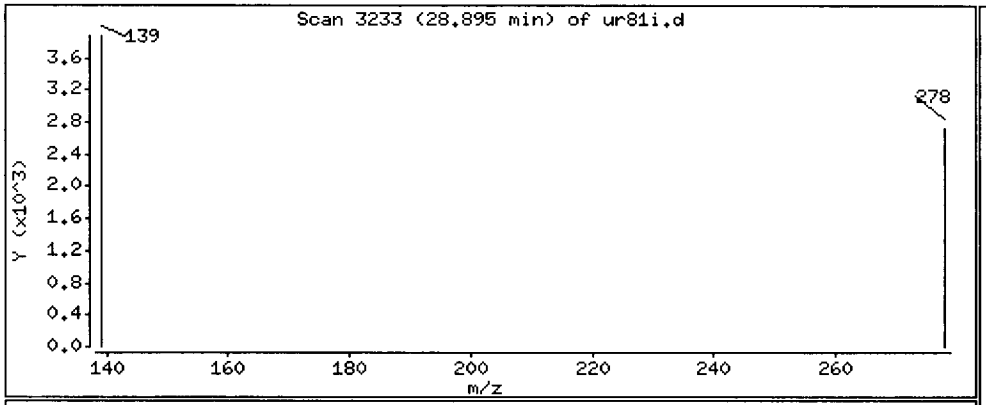
Client ID: IJ12-11 | Instrument: nt10.i

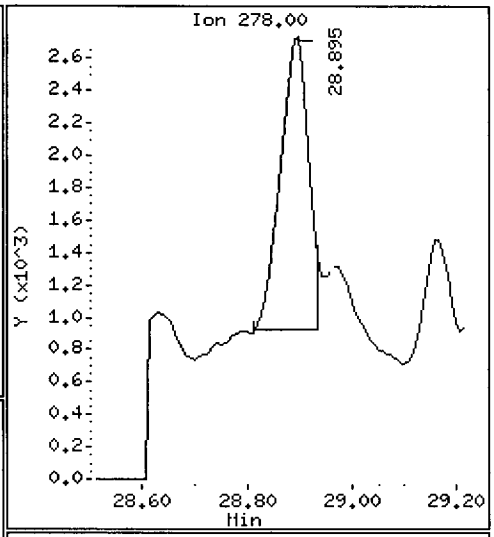
Sample Info: UR81I

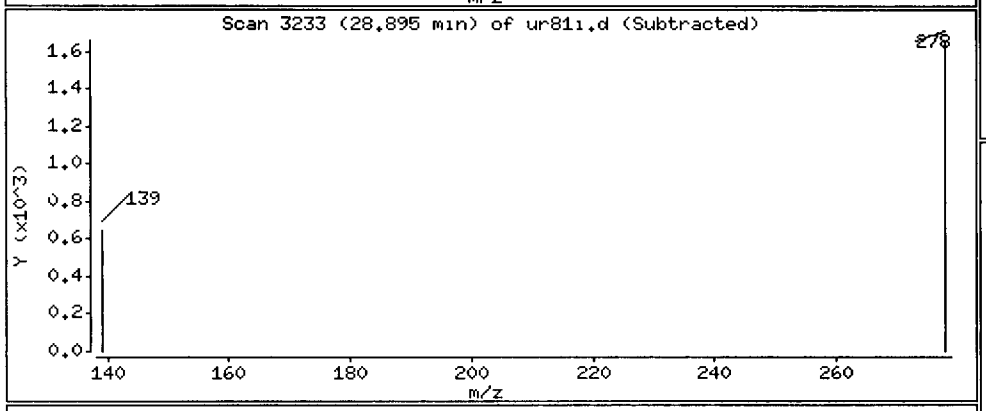
Volume Injected (uL): 1.0 | Operator: YZ

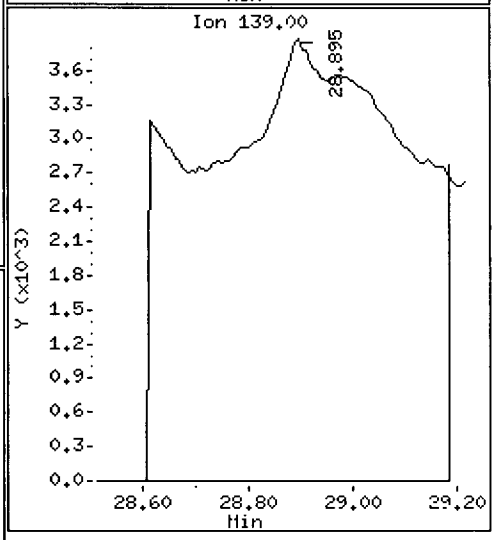
Column phase: ZB-5msi | Column diameter: 0.25

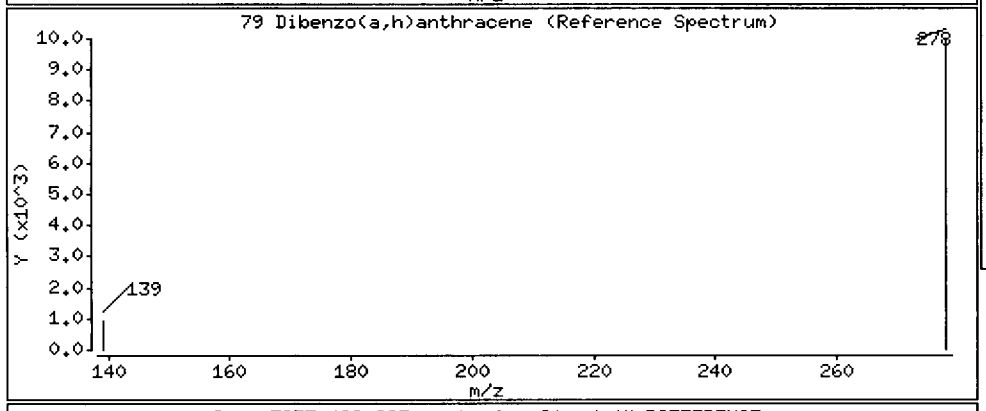
79 Dibenzo(a,h)anthracene | Concentration: 3.173 ug/kg

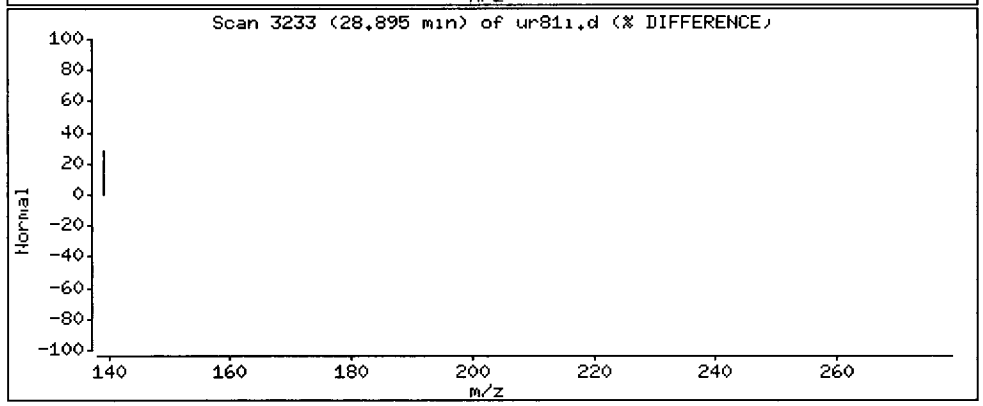






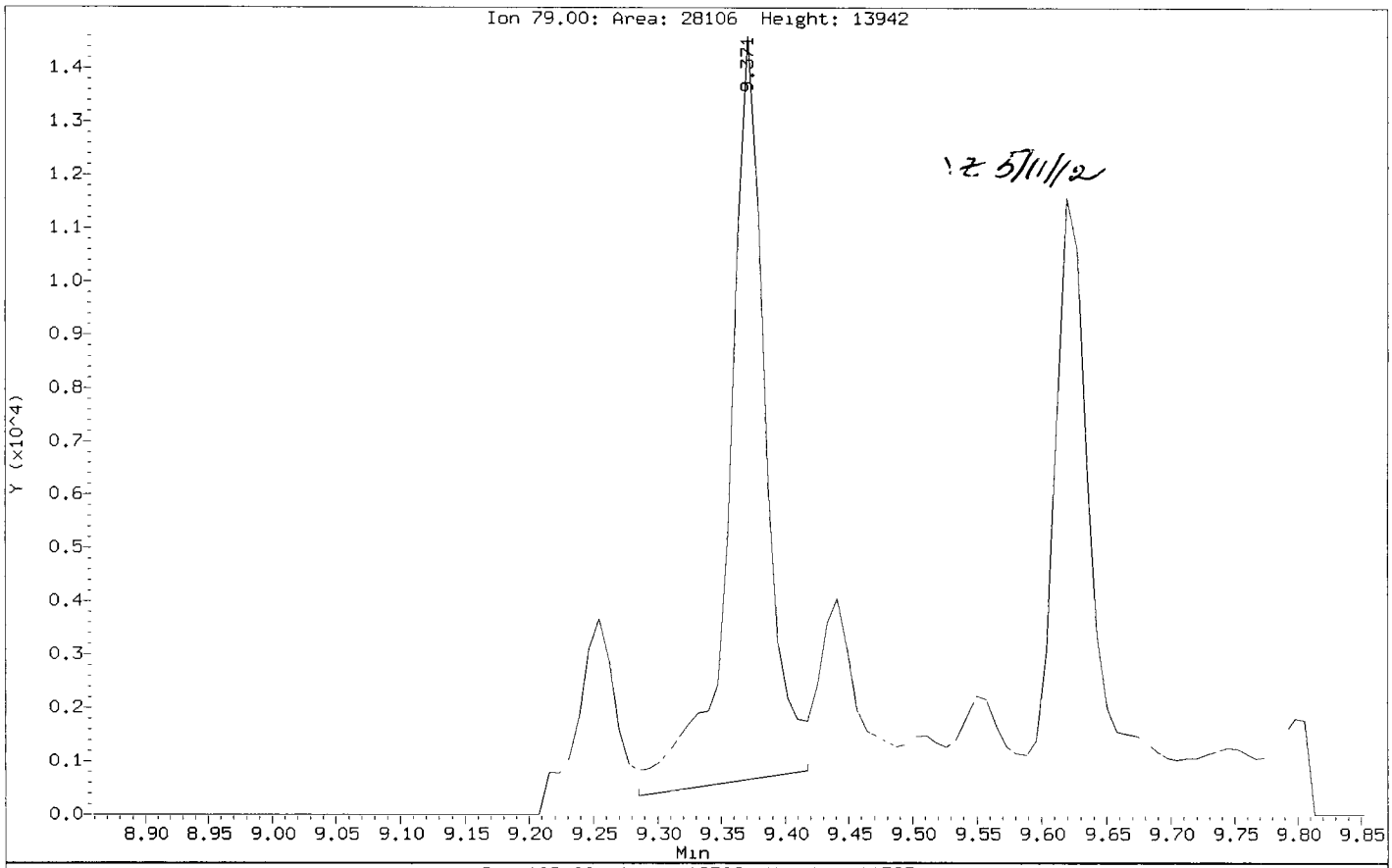


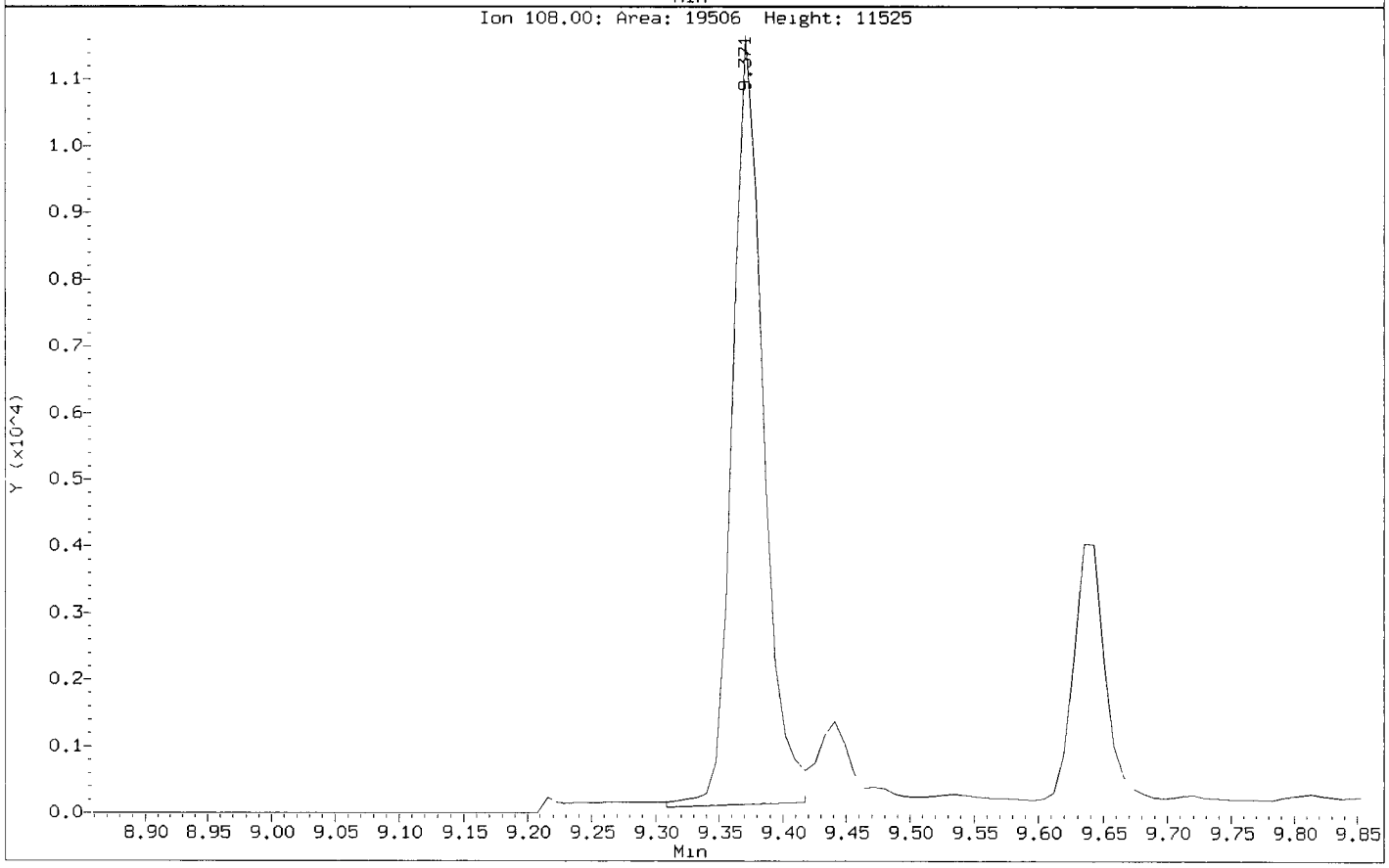




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d
Injection Date: 09-MAY-2012 00:01
Instrument: nt10.i
Client Sample ID: IJ12-11

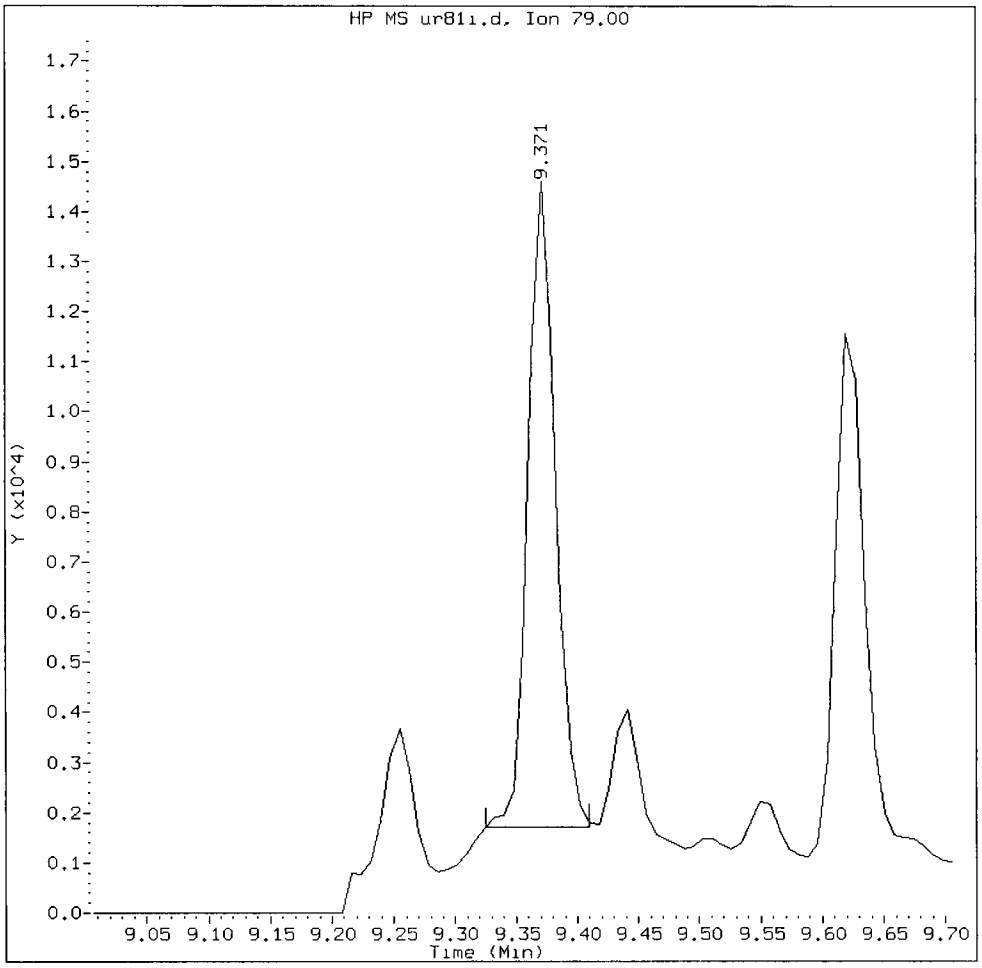
Compound: Benzyl alcohol
CAS Number: 100-51-6





UR81I, /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Benzyl alcohol Amount: 0.31 Area: 20152



MANUAL INTEGRATION for Benzyl alcohol

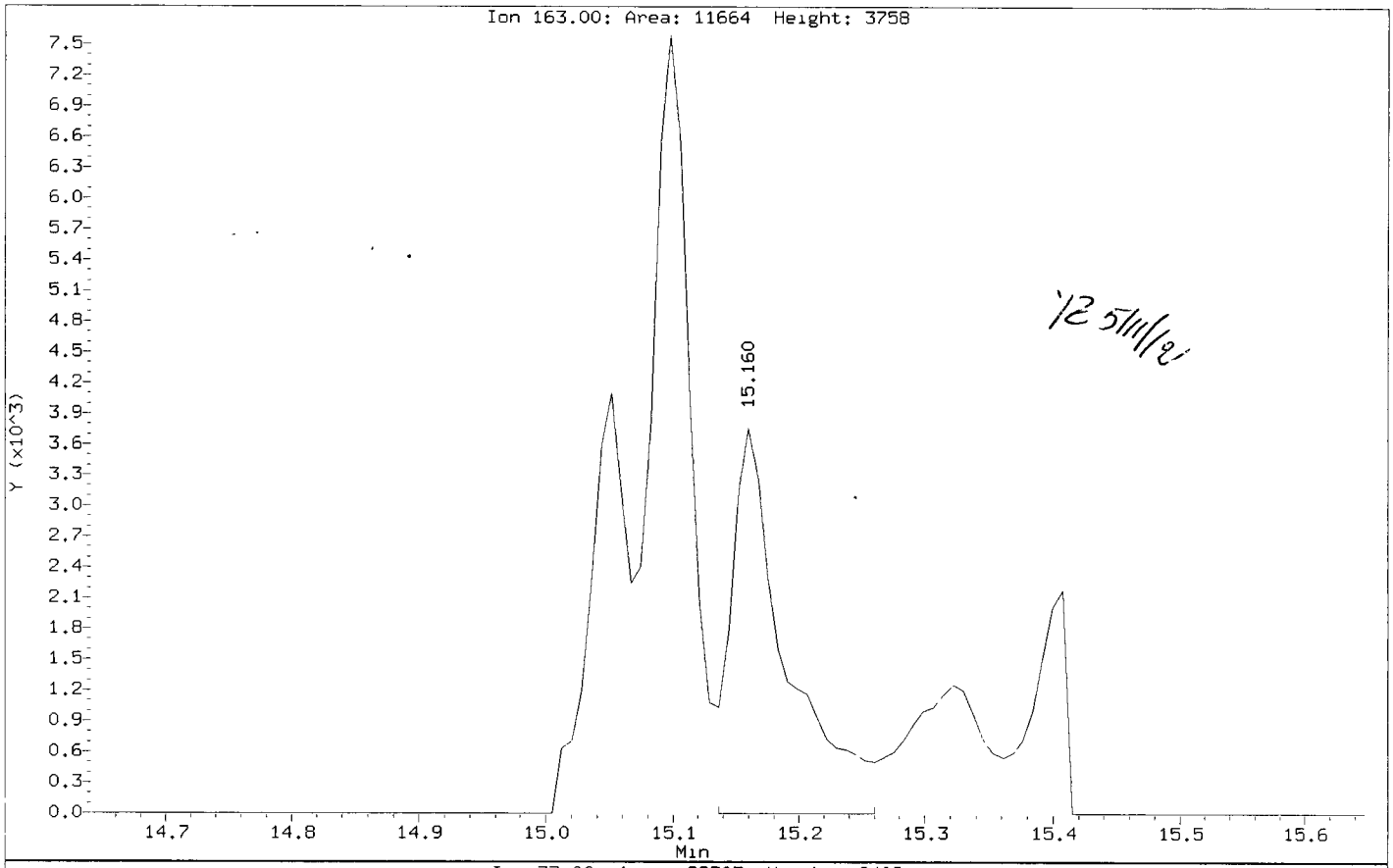
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

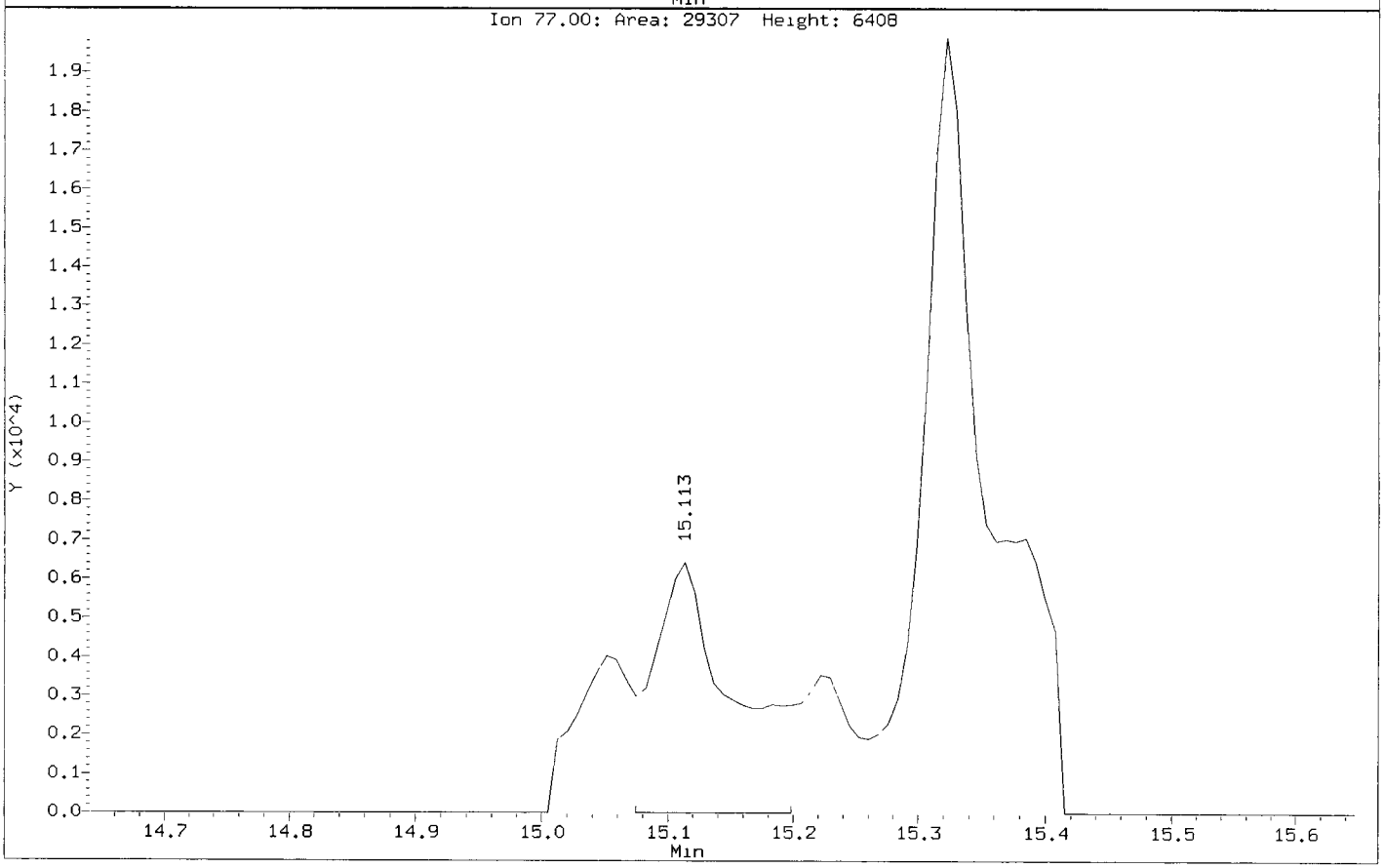
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur811.d
Injection Date: 09-MAY-2012 00:01
Instrument: nt10.i
Client Sample ID: IJ12-11

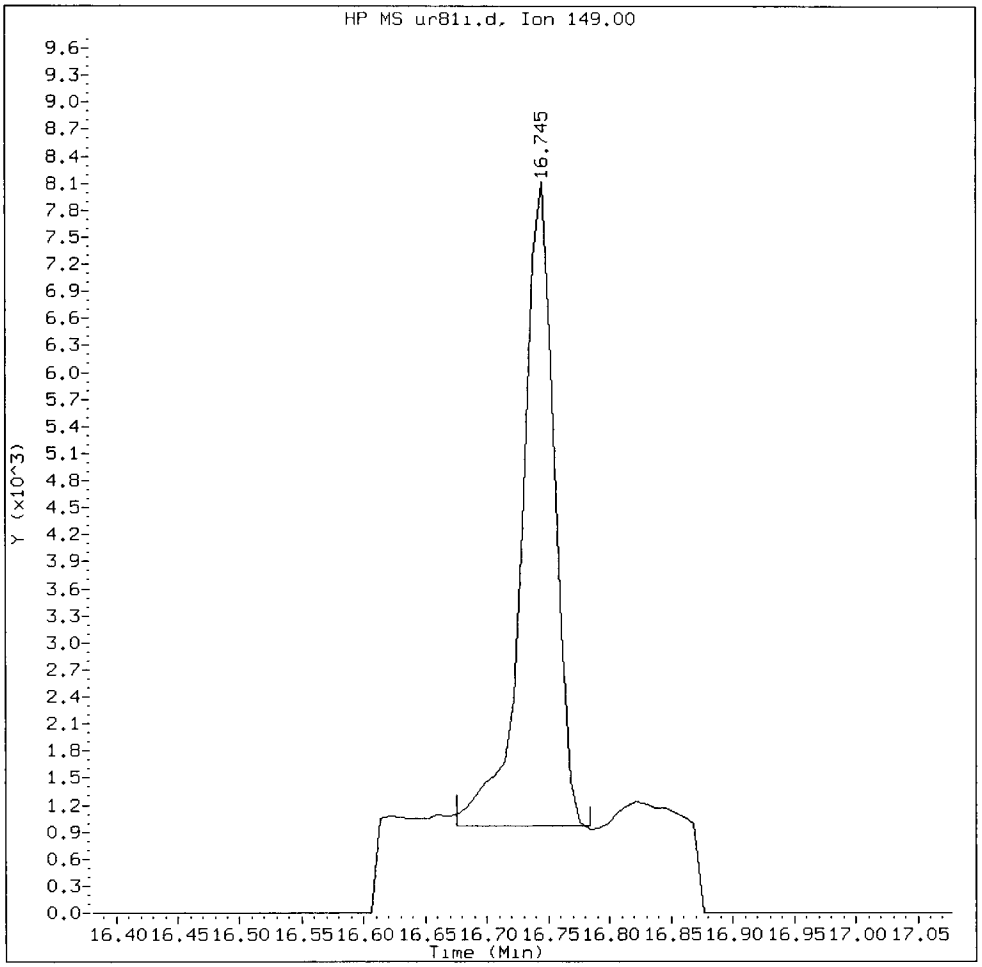
Compound: Dimethylphthalate
CAS Number: 131-11-3





UR81I, /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Diethylphthalate Amount: 0.07 Area: 13138



MANUAL INTEGRATION for Diethylphthalate

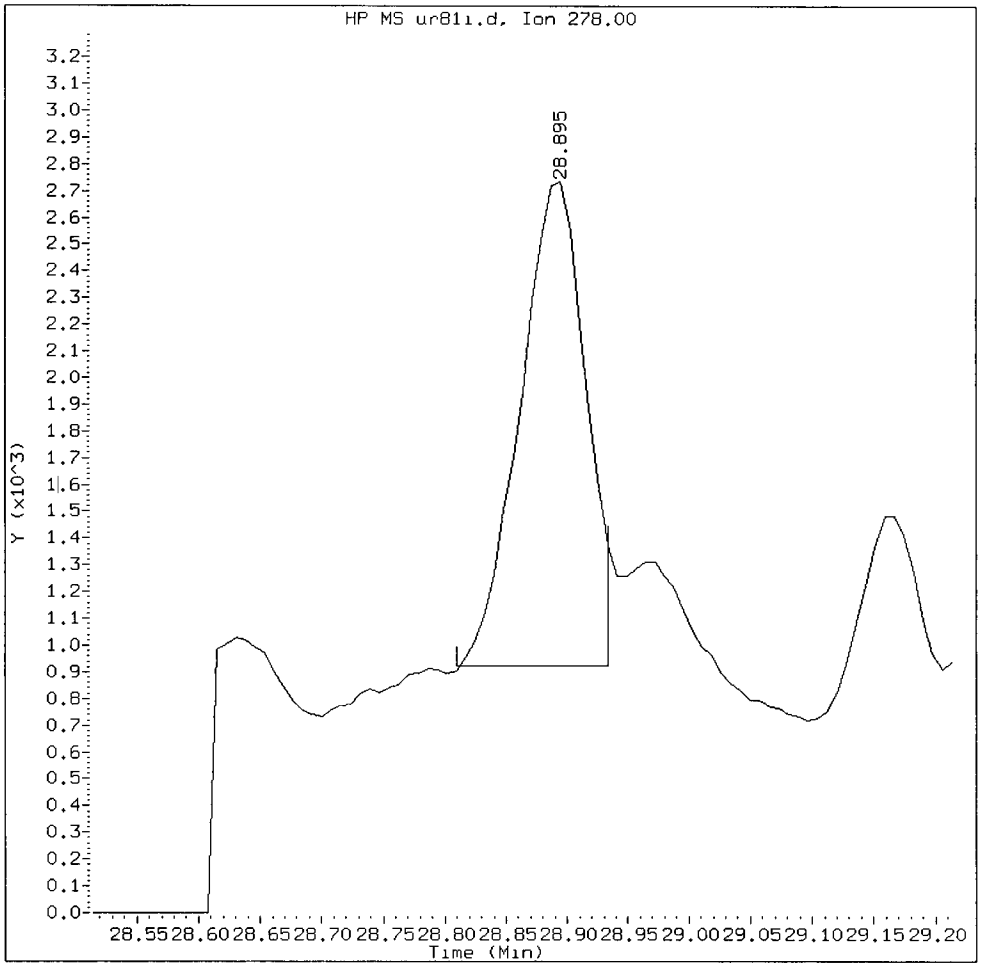
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/11/12

UR81I, /chem1/nt10.i/20120508.b/SIM.b/ur81i.d

Dibenzo(a,h)anthracene Amount: 0.03 Area: 6824



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

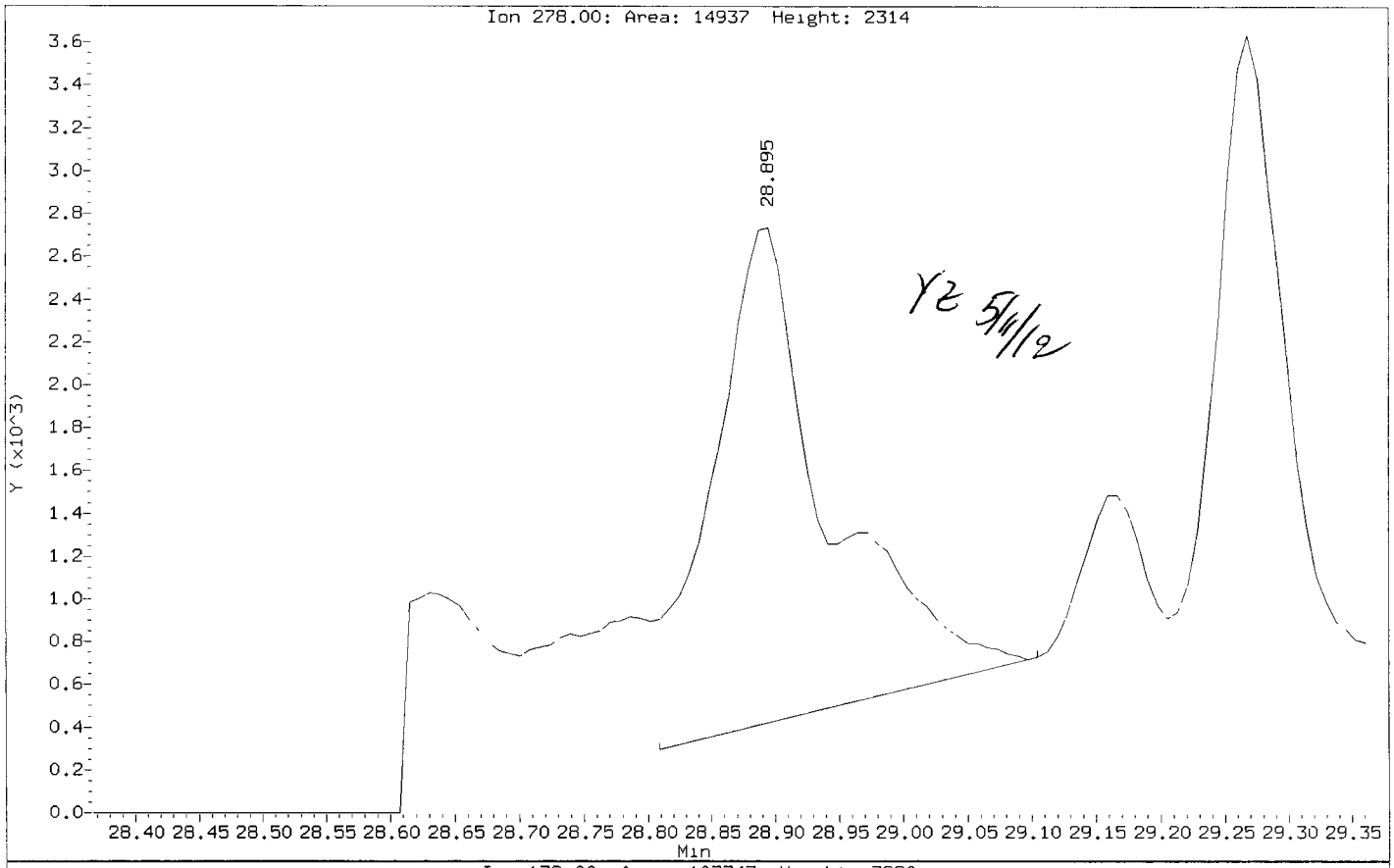
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

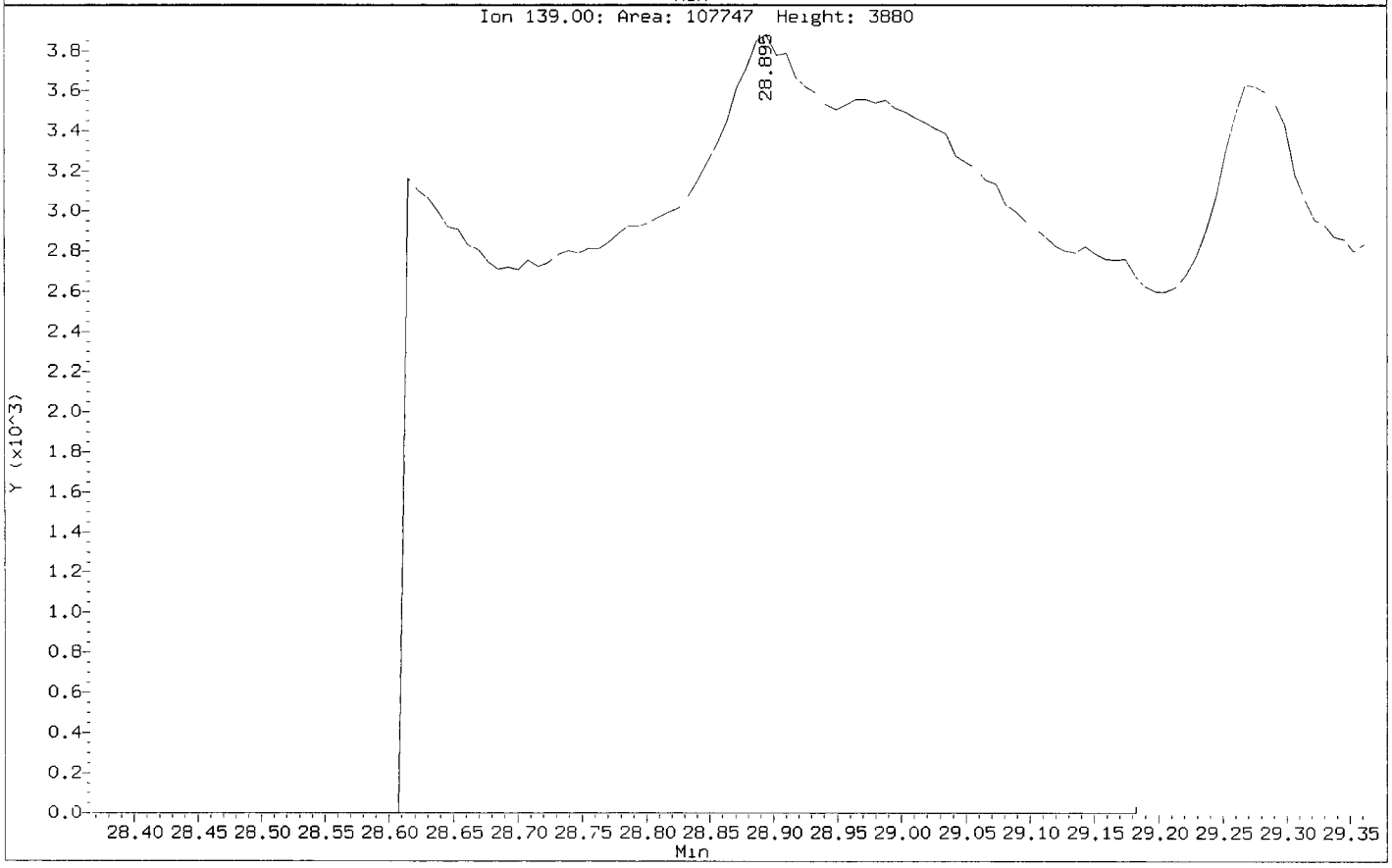
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur811.d
Injection Date: 09-MAY-2012 00:01
Instrument: nt10.i
Client Sample ID: IJ12-11

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





CO-ELUTION SUMMARY FOR FILE - ur81i.d

Lab ID: UR81I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/11/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/ur81j.d
Lab Smp Id: UR81J Client Smp ID: IJ12-08A
Inj Date : 09-MAY-2012 00:38
Operator : YZ Inst ID: nt10.i
Smp Info : UR81J
Misc Info : 12-7401
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	25.01000	Weight of sample extracted (g)
M	58.50000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.703	6 680	(0.740)	356262	3.78116	364 3
3 Phenol	94	8.442	8.418	(0.932)	34795	0.27902	26.88
7 1,3-Dichlorobenzene	146	Compound Not Detected					
* 8 1,4-Dichlorobenzene-d4	152	9.053	9.045	(1 000)	274453	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	9 371	9.355	(1.035)	8368	0.13108	12.63(M)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9 635	9 619	(1.064)	5459	0 05450	5.251
15 4-Methylphenol	108	9.938	9.914	(1.098)	47313	0.45015	43.37
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11.061	11.038	(0.943)	11708	0.12069	11.63
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.732	11.724	(1.000)	1058308	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.160	15.144	(0.969)	88806	0 53843	51.88
*	42 Acenaphthene-d10	162	15.639	15.632	(1.000)	539391	4.00000	
	50 Diethylphthalate	149	16.737	16.729	(1.070)	15021	0.08319	8.015(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.915	18.908	(1.000)	943487	4.00000	
$	66 Terphenyl-d14	244	22 118	22.095	(0.922)	481721	2.96748	285.9
	67 Butylbenzylphthalate	149	23.055	23.047	(0.961)	7765	0.06321	6.090
*	69 Chrysene-d12	240	23.984	23 969	(1.000)	1019736	4.00000	
*	77 Perylene-d12	264	26.470	26 446	(1 000)	953840	4.00000	
	79 Dibenzo(a,h)anthracene	278	28 879	28.864	(1.091)	20350	0 09964	9.600
	90 N-Nitrosodimethylamine	74	Compound Not Detected					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ur81j.d
Lab Smp Id: UR81J
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7401

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: IJ12-08A
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	274453	-11.82
27 Naphthalene-d8	1166872	583436	2333744	1058308	-9.30
42 Acenaphthene-d10	603218	301609	1206436	539391	-10.58
59 Phenanthrene-d10	1096026	548013	2192052	943487	-13.92
69 Chrysene-d12	1131082	565541	2262164	1019736	-9.84
77 Perylene-d12	1082499	541250	2164998	953840	-11.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.64	0.05
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.04
69 Chrysene-d12	23.97	23.47	24.47	23.98	0.06
77 Perylene-d12	26.45	25.95	26.95	26.47	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

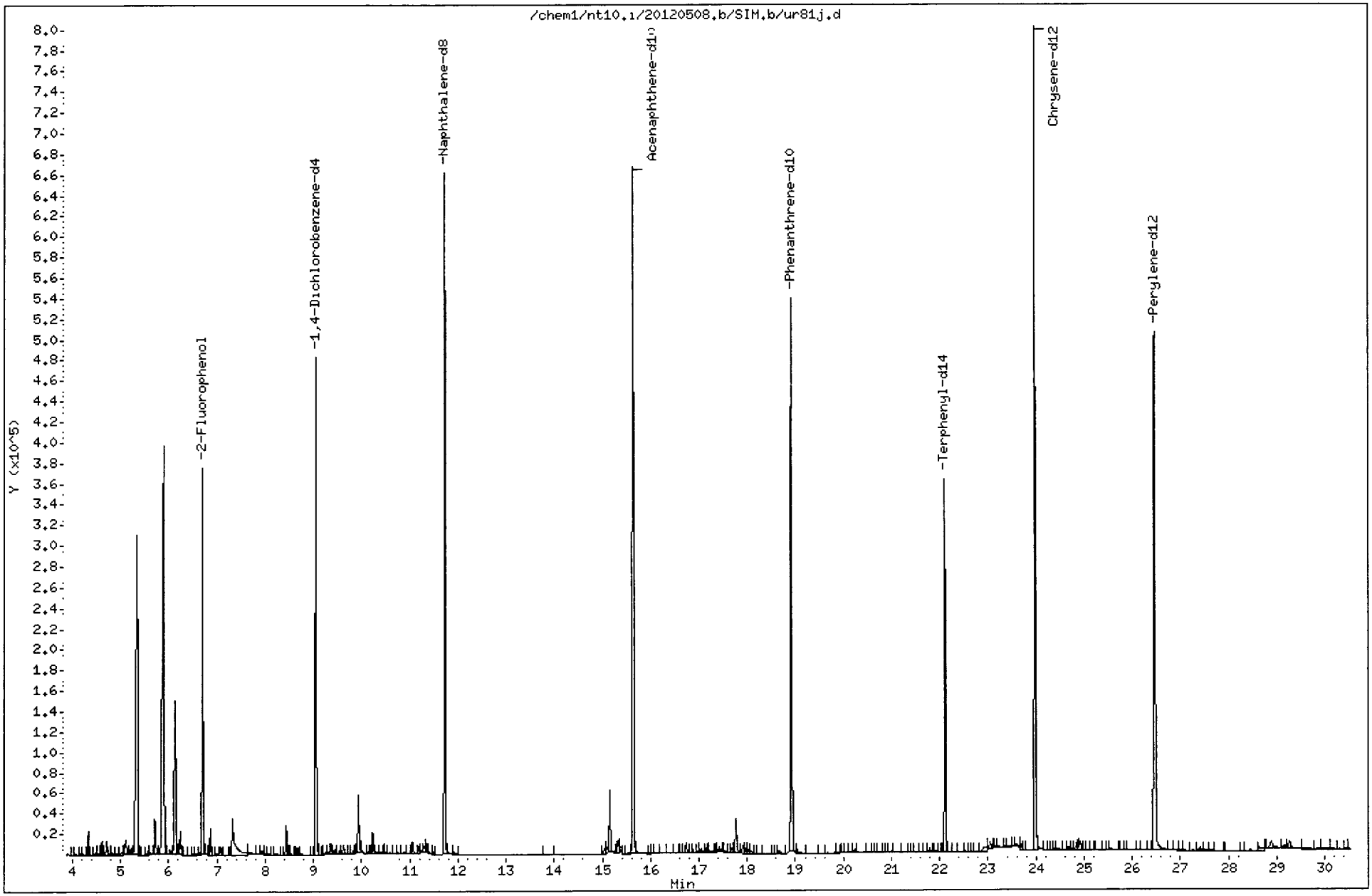
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UR81J
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7401

Client SDG: UR81
Fraction: SV
Client Smp ID: IJ12-08A
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	722.6	364.3	50.42	30-160
$ 66 Terphenyl-d14	481.7	285.9	59.35	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d
Date : 09-MAY-2012 00:38
Client ID: IJ12-08A
Sample Info: UR81J
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

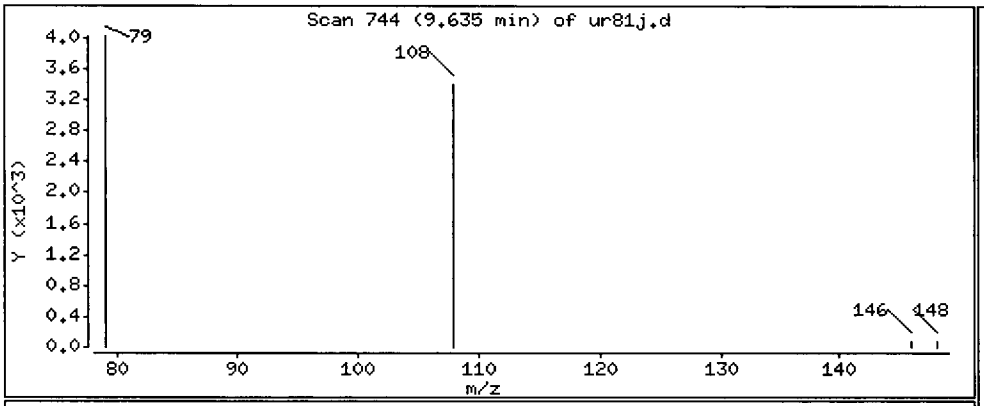
Operator: YZ

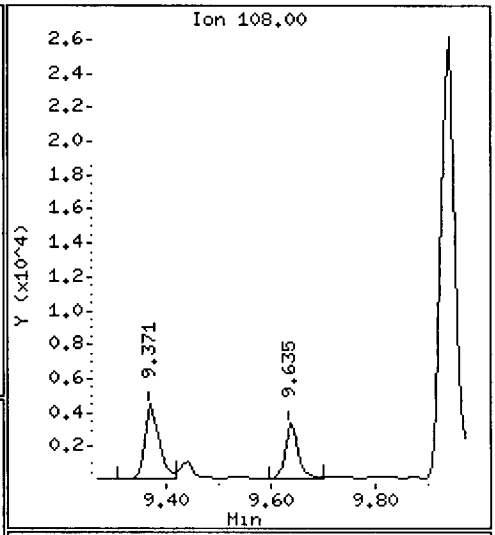
Column phase: ZB-5msi

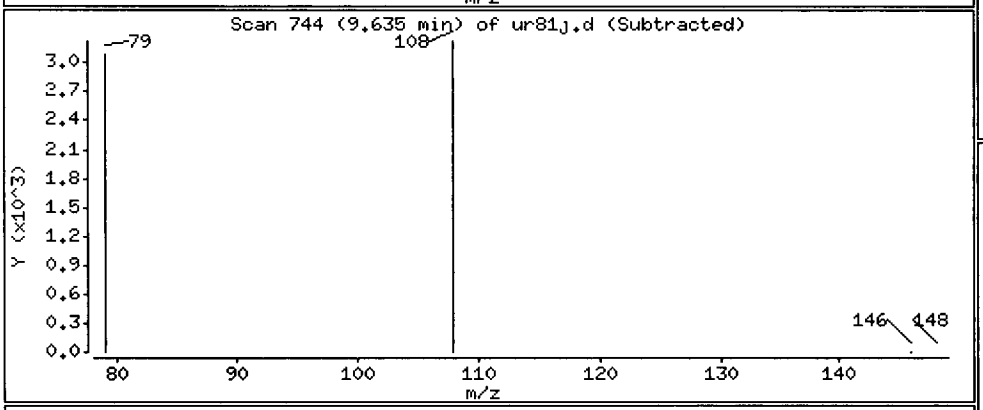
Column diameter: 0.25

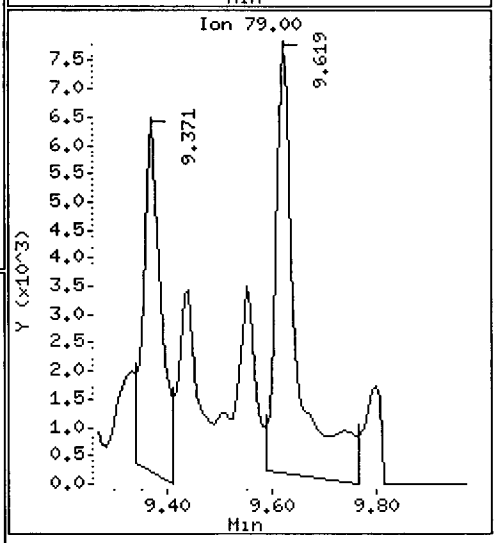
13 2-Methylphenol

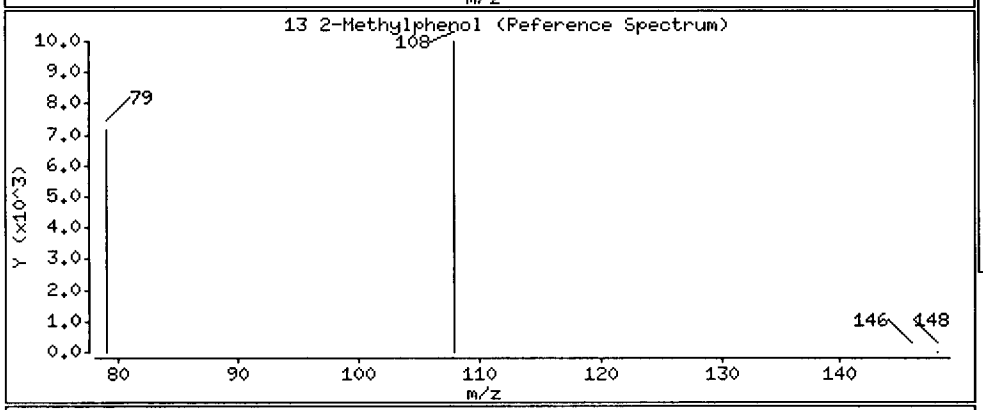
Concentration: 5.251 ug/kg

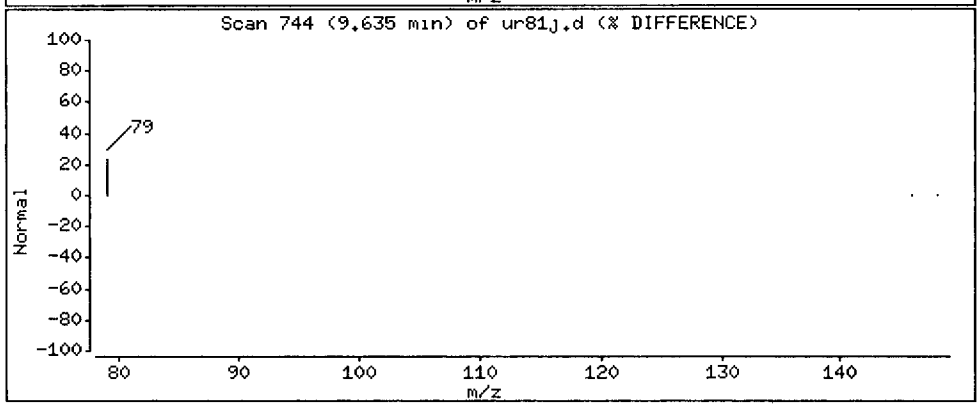












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

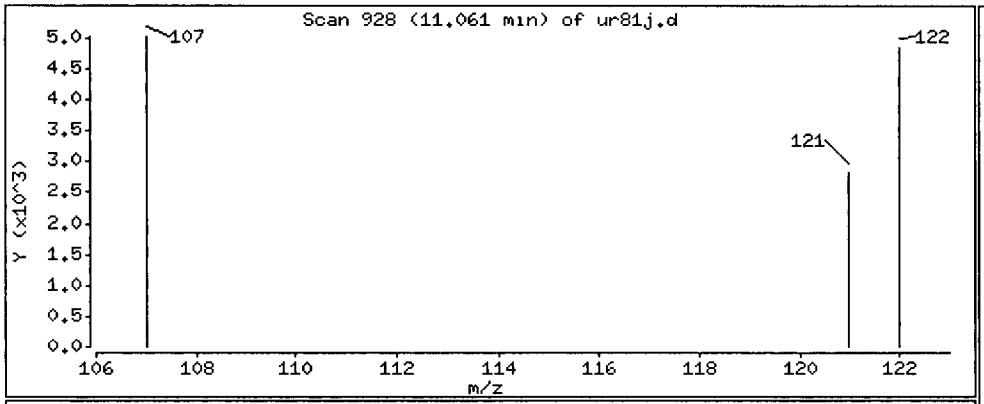
Operator: YZ

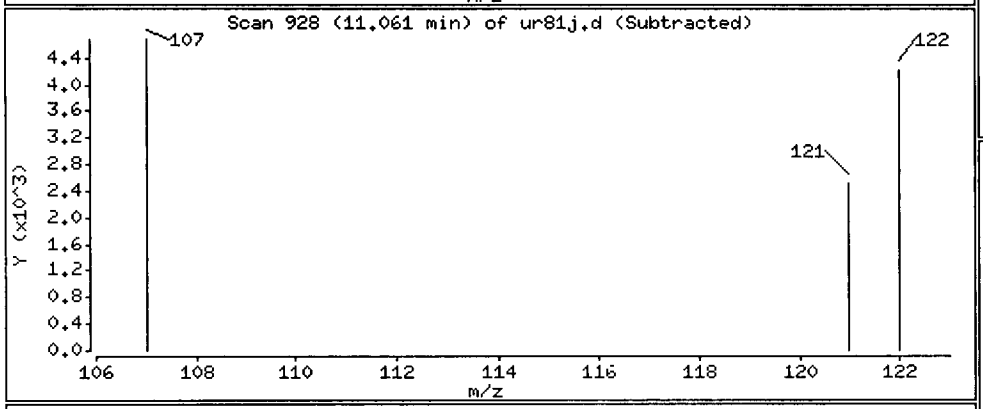
Column phase: ZB-5msi

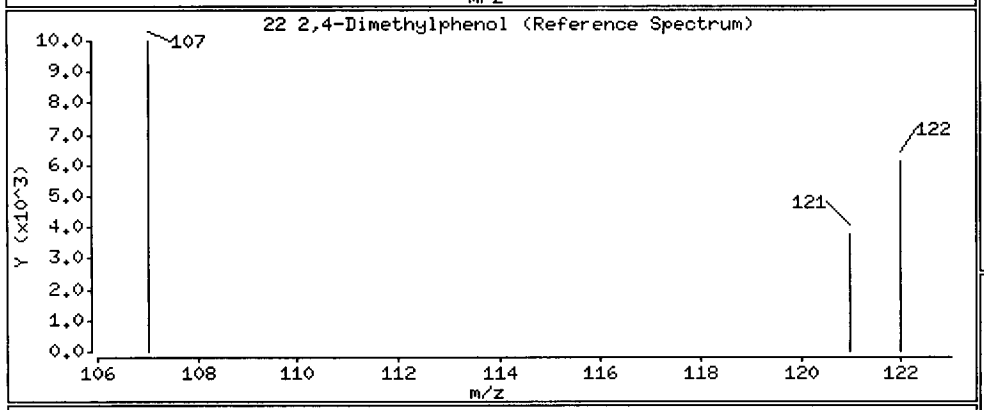
Column diameter: 0.25

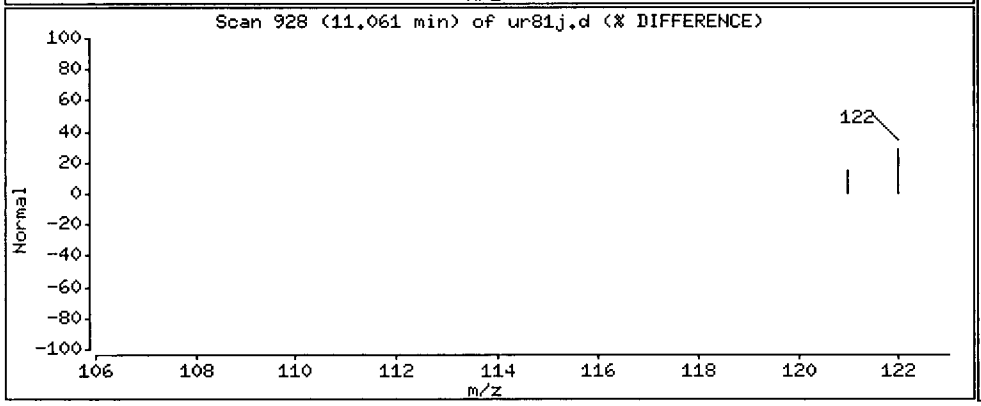
22 2,4-Dimethylphenol

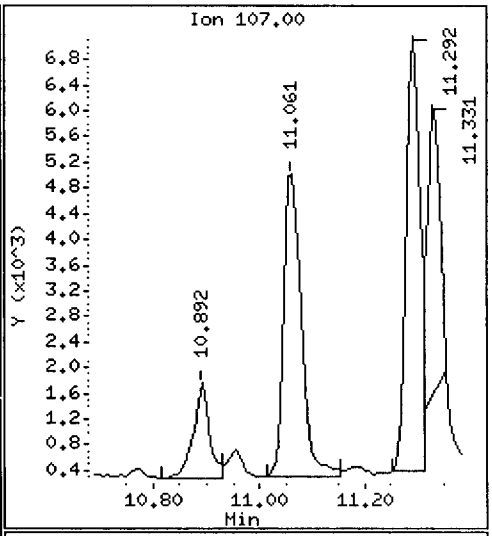
Concentration: 11.63 ug/kg

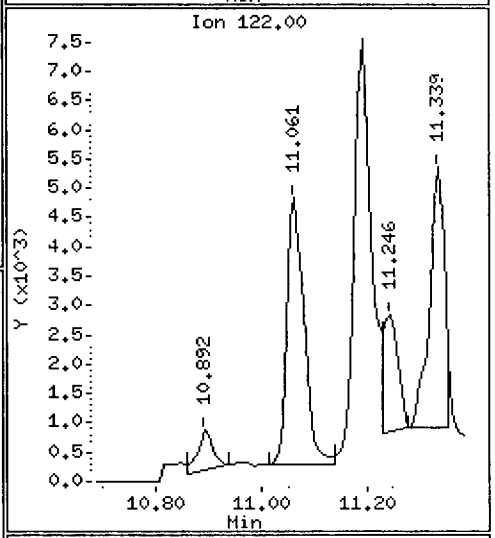


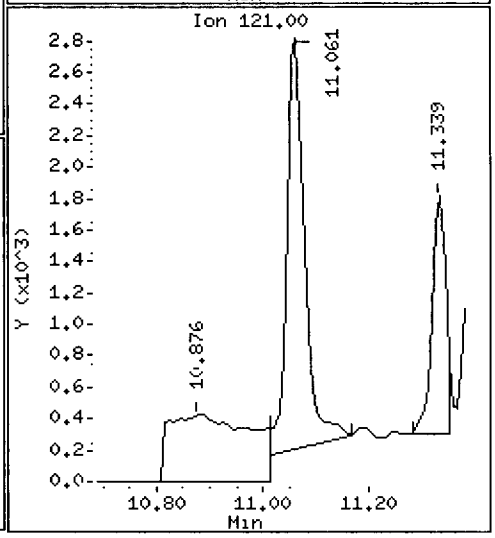












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

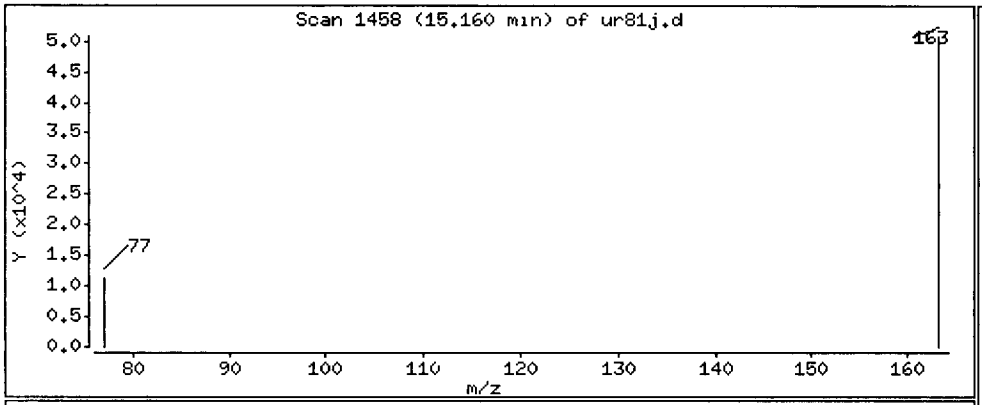
Operator: YZ

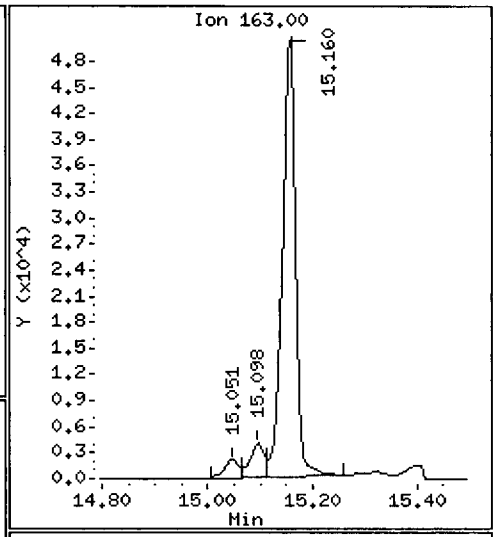
Column phase: ZB-5msi

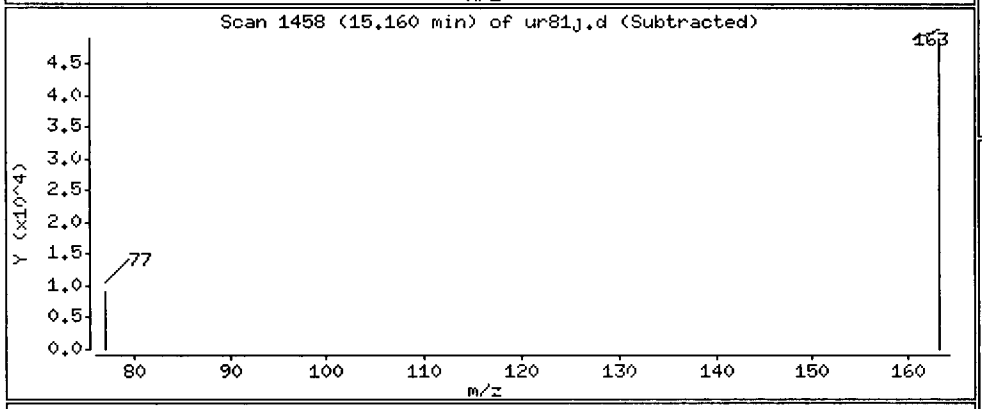
Column diameter: 0.25

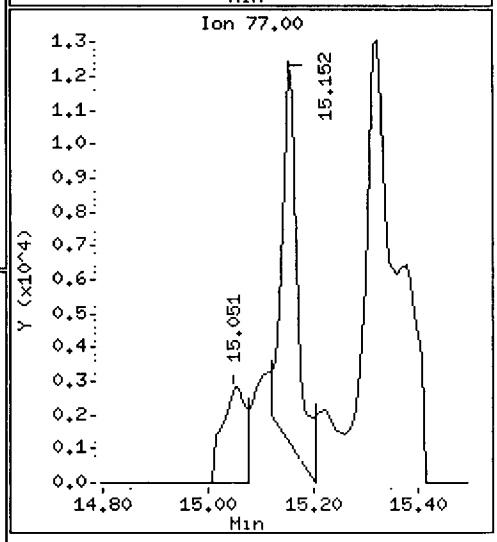
39 Dimethylphthalate

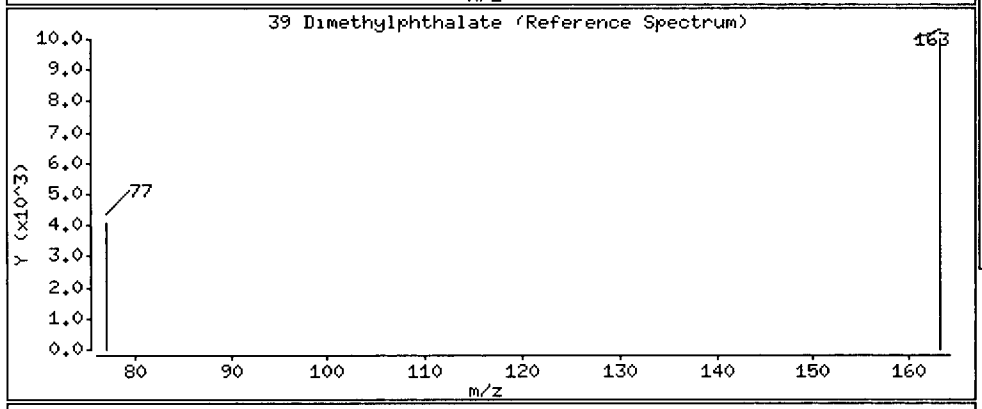
Concentration: 51.88 ug/kg

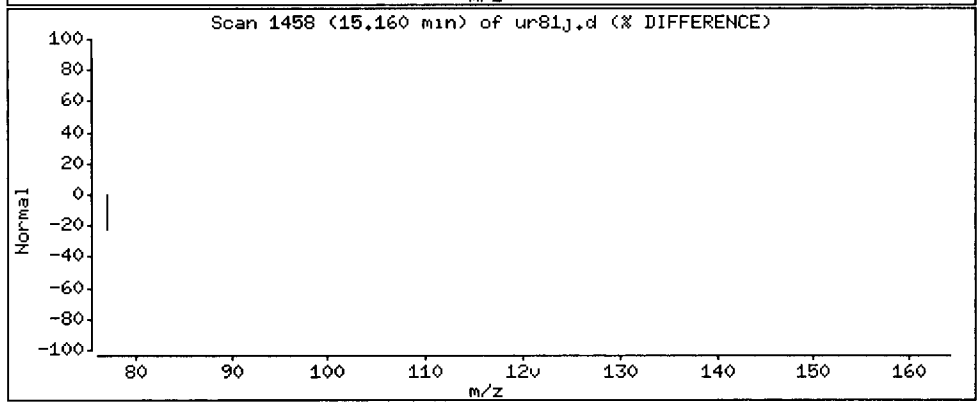












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

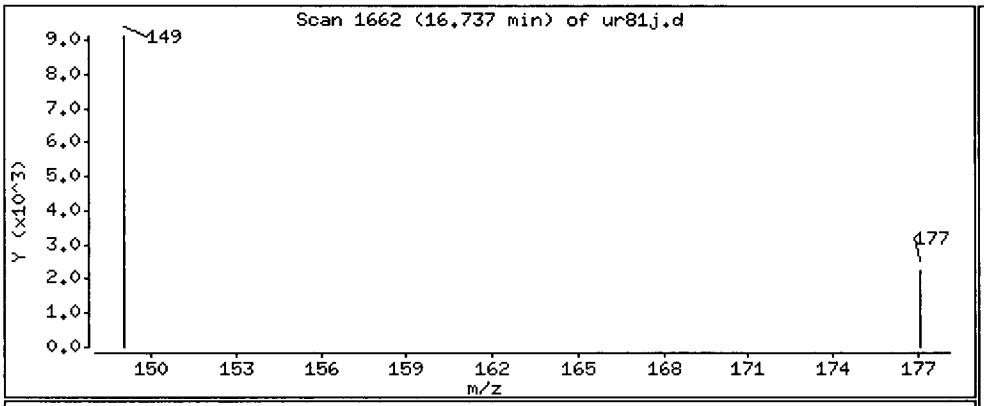
Operator: YZ

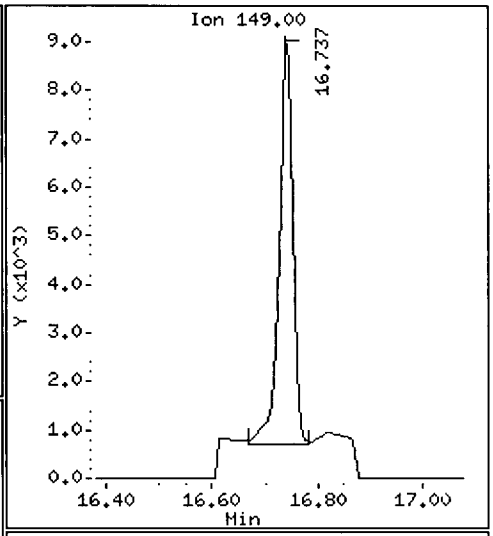
Column phase: ZB-5msi

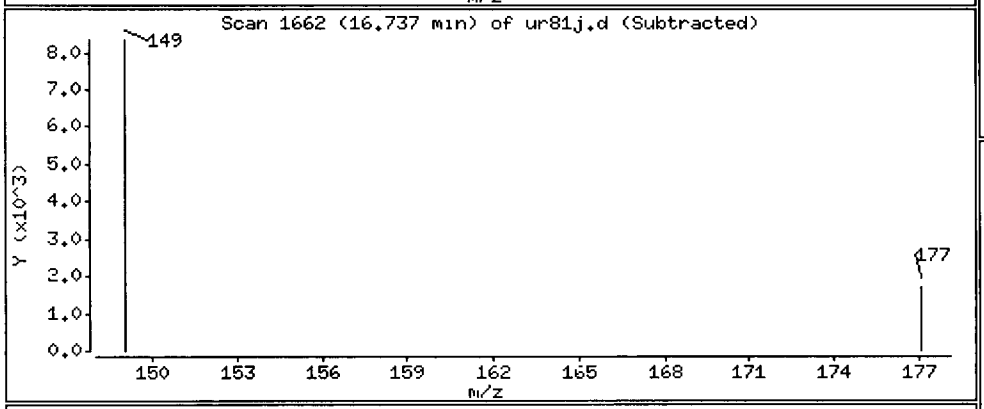
Column diameter: 0.25

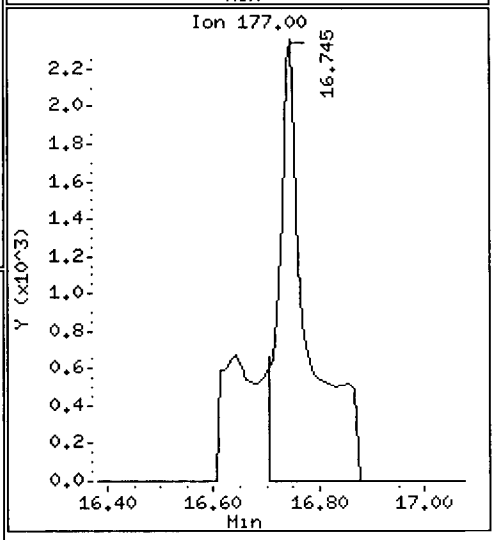
50 Diethylphthalate

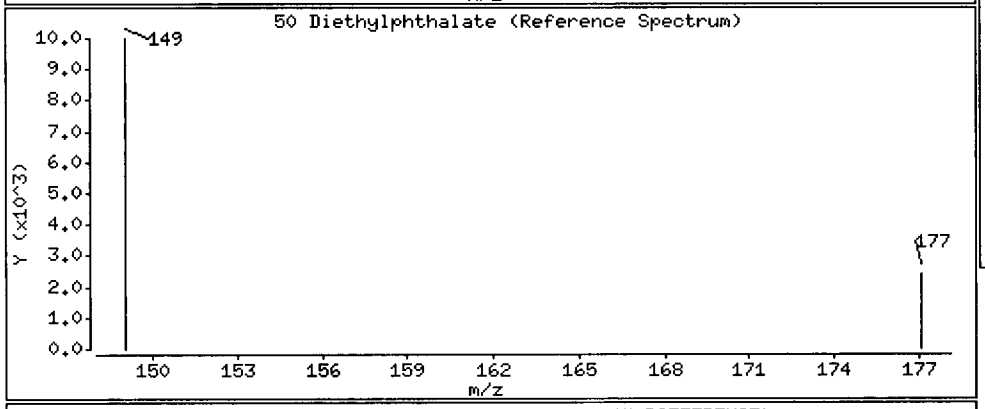
Concentration: 8.015 ug/kg

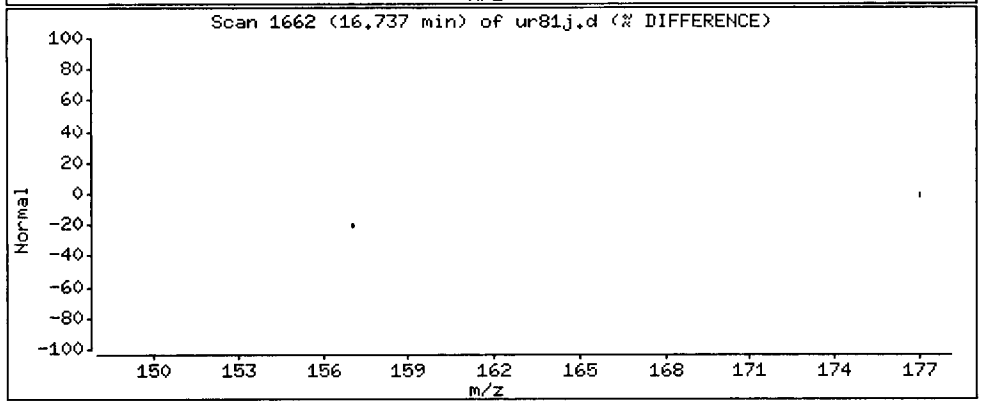












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

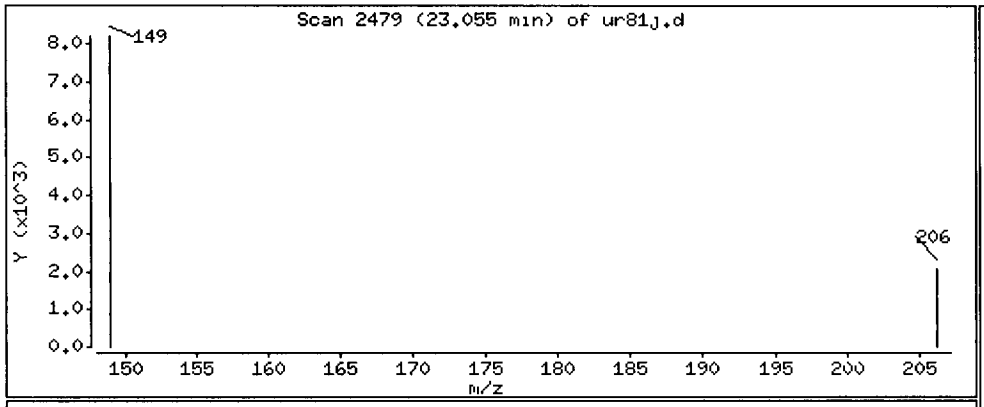
Operator: YZ

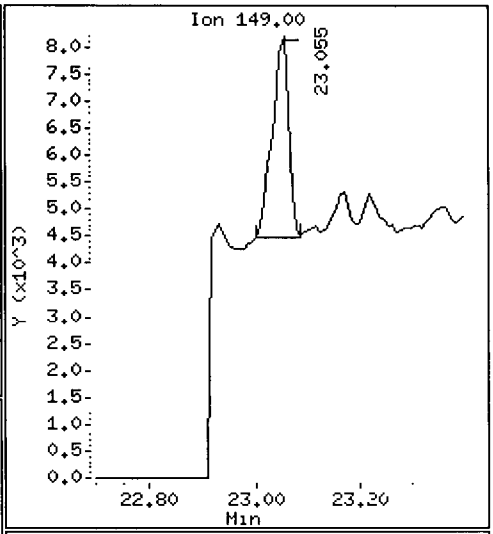
Column phase: ZB-5ms1

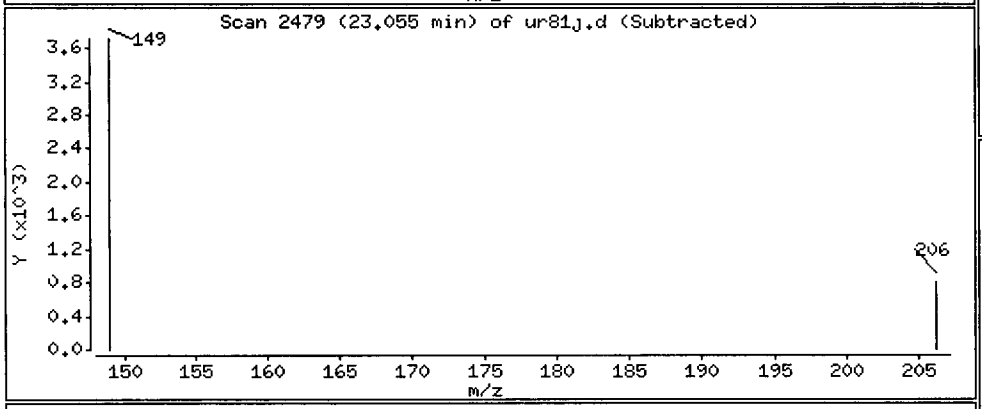
Column diameter: 0.25

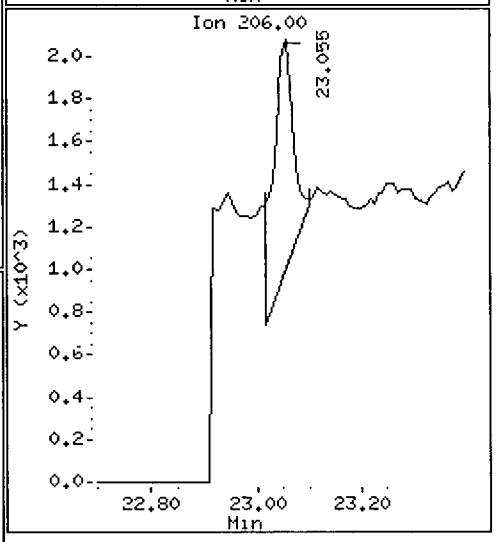
67 Butylbenzylphthalate

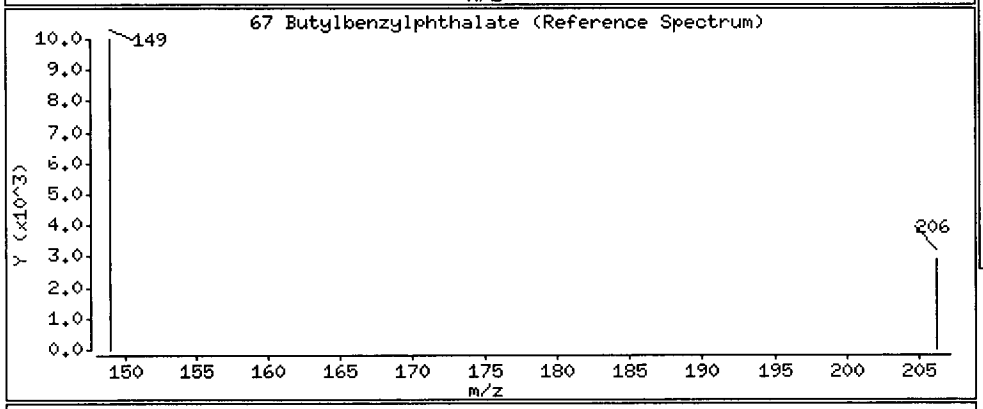
Concentration: 6.090 ug/kg

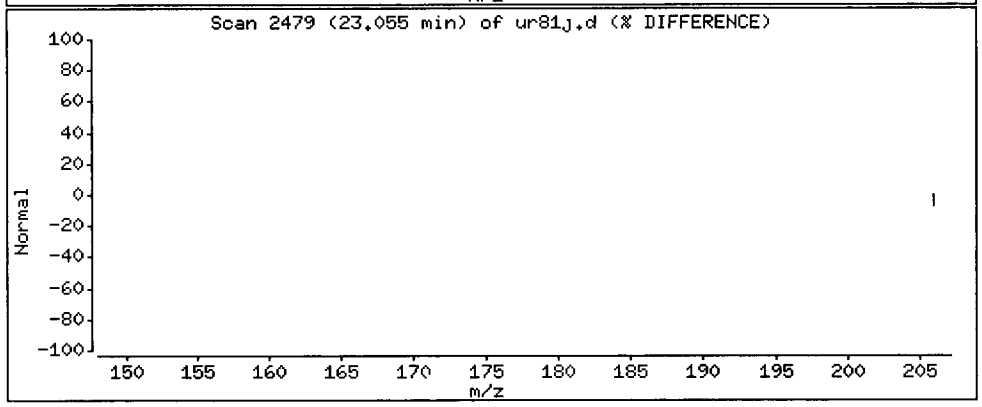












Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Date : 09-MAY-2012 00:38

Client ID: IJ12-08A

Instrument: nt10.i

Sample Info: UR81J

Volume Injected (uL): 1.0

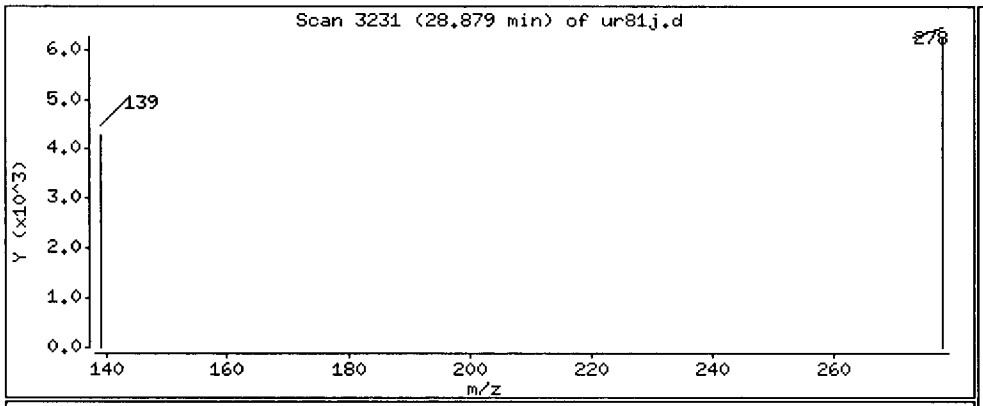
Operator: YZ

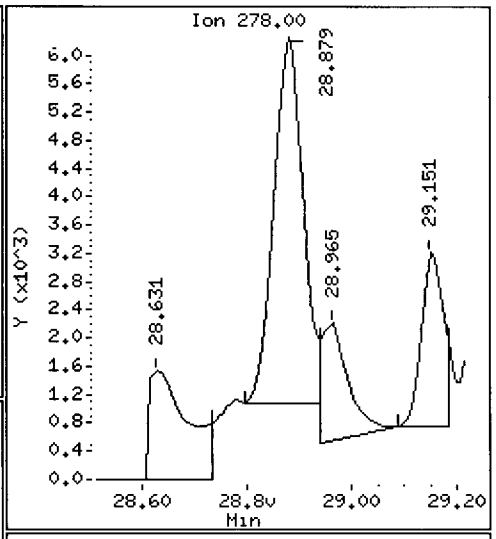
Column phase: ZB-5ms1

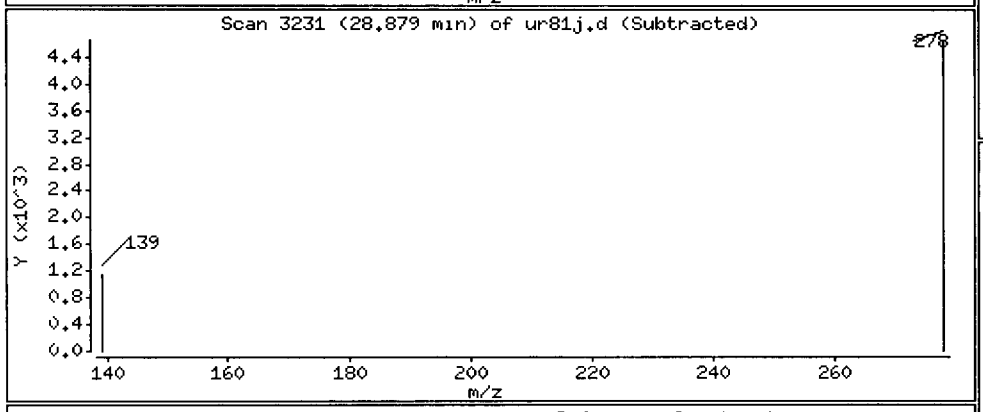
Column diameter: 0.25

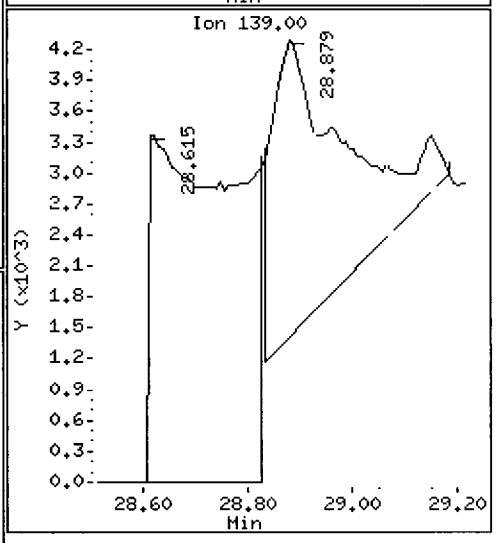
79 Dibenzo(a,h)anthracene

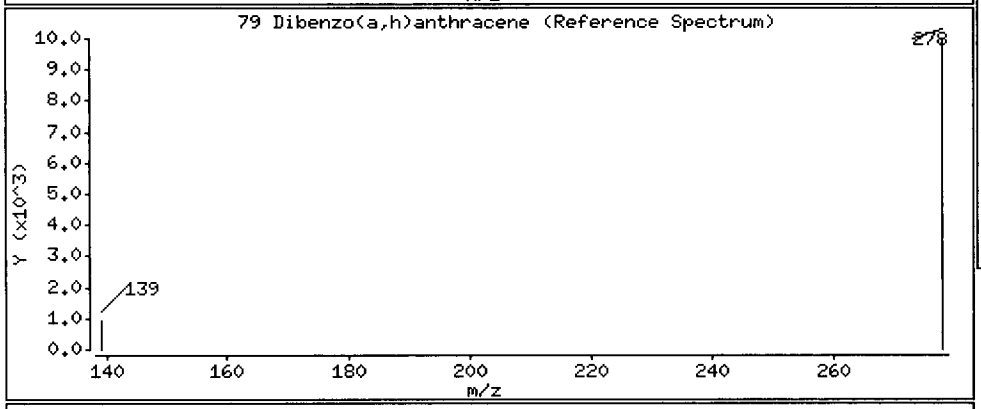
Concentration: 9.600 ug/kg

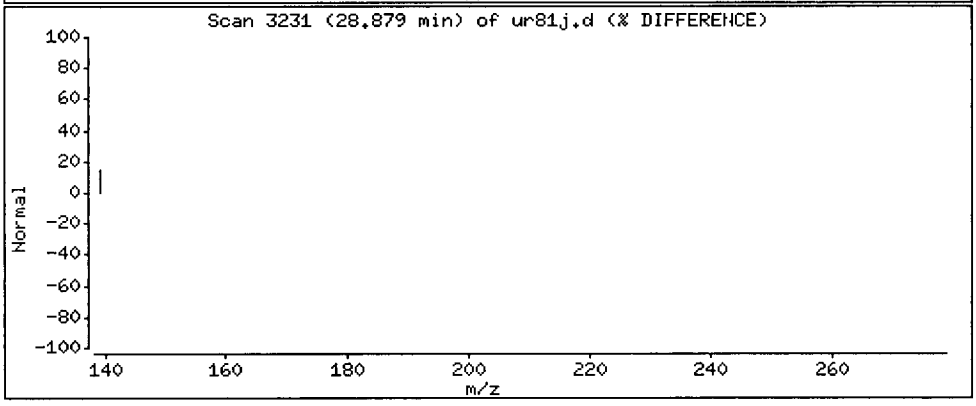






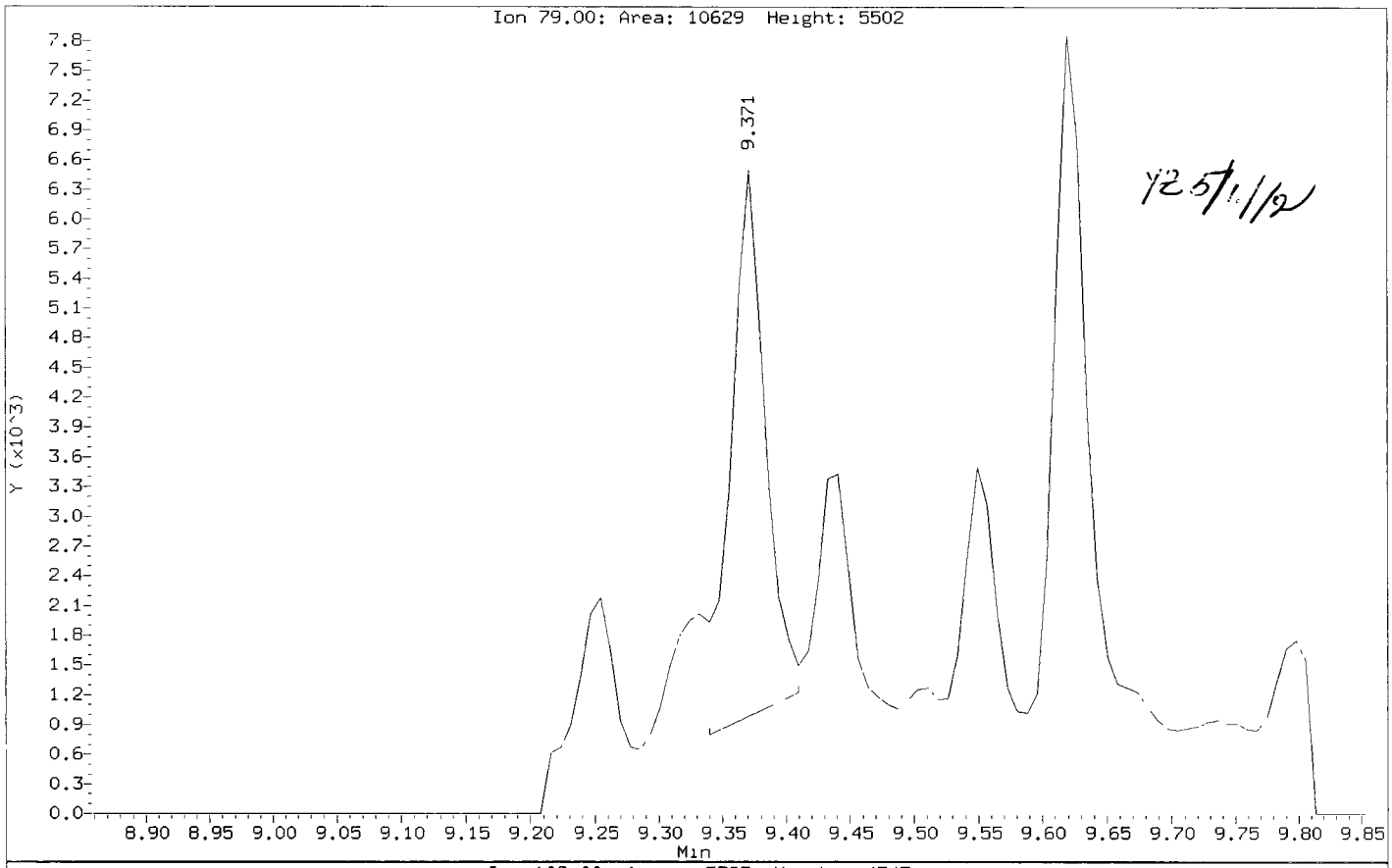


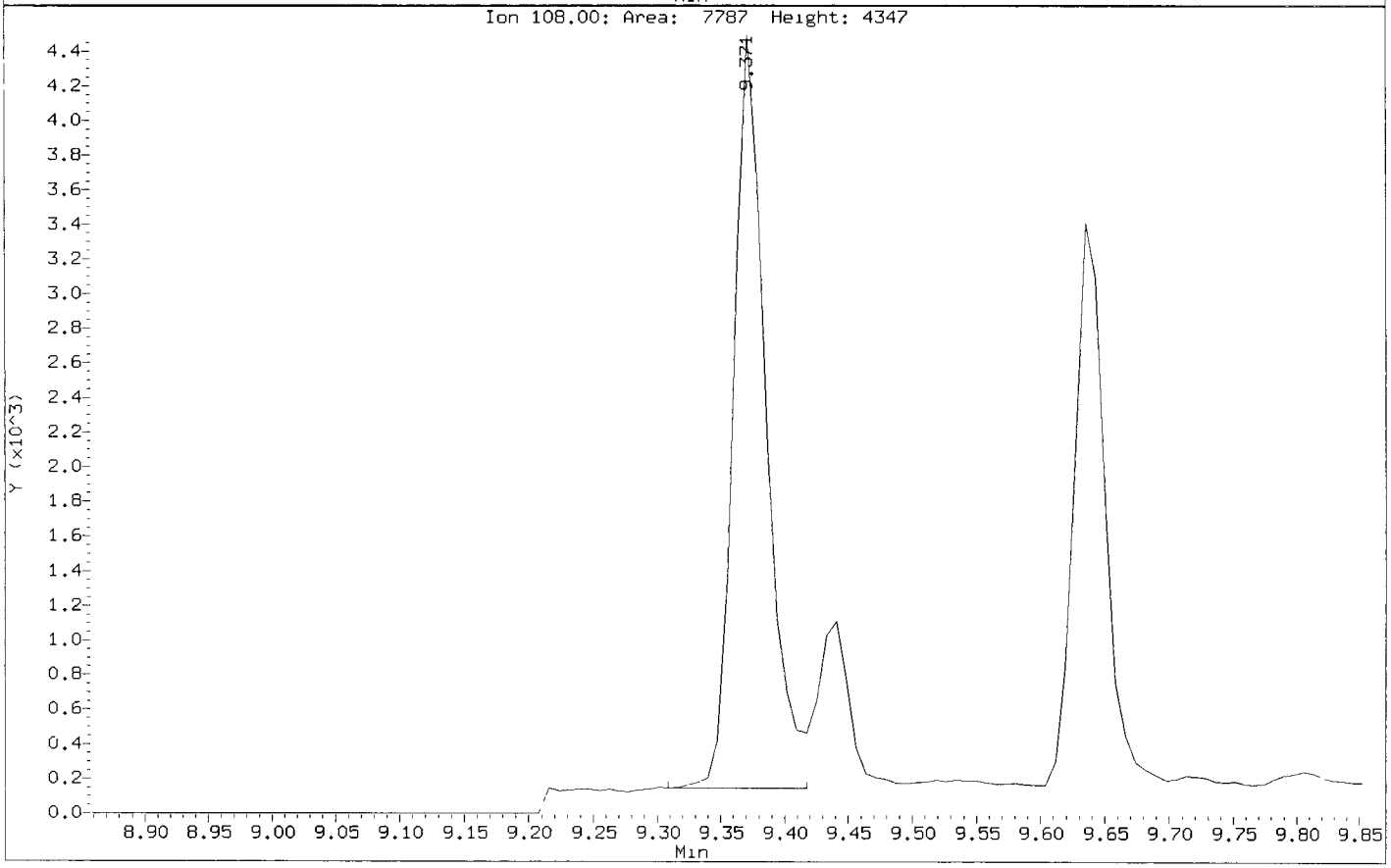




Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81j.d
Injection Date: 09-MAY-2012 00:38
Instrument: nt10.i
Client Sample ID: IJ12-08A

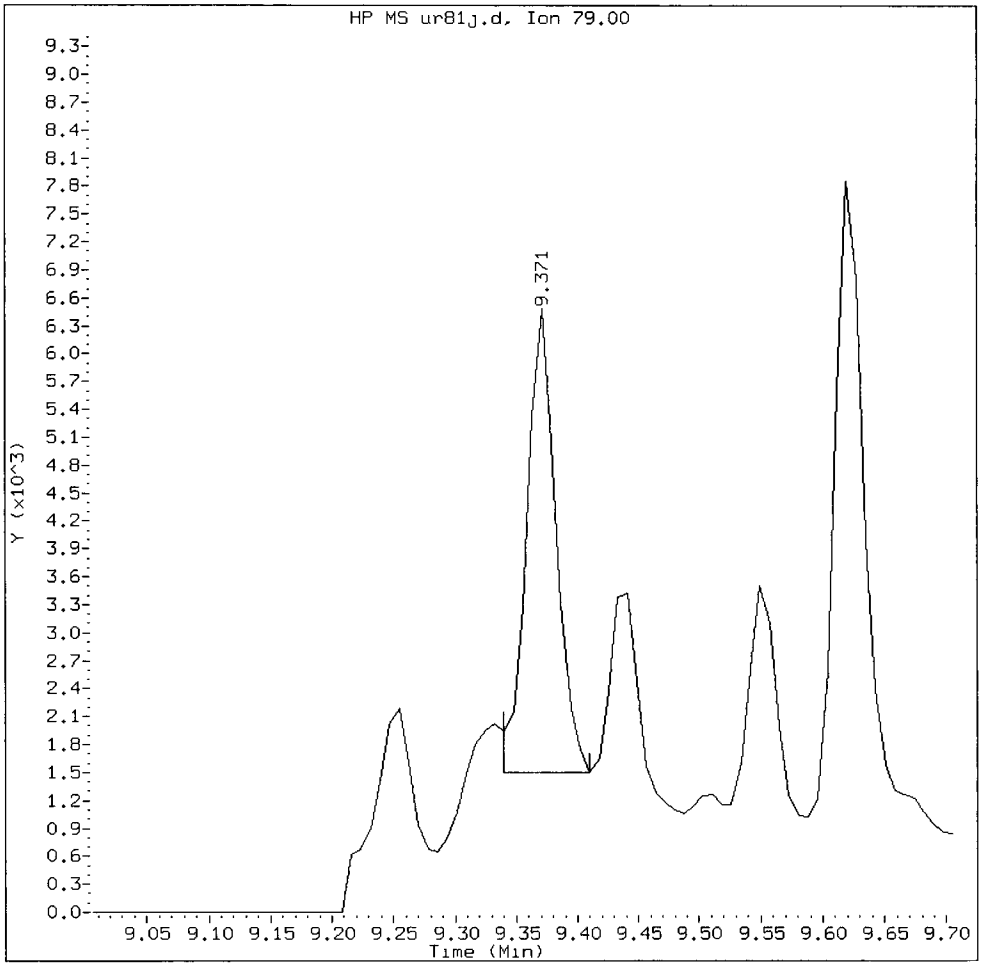
Compound: Benzyl alcohol
CAS Number: 100-51-6





UR81J, /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Benzyl alcohol Amount: 0.13 Area: 8368



MANUAL INTEGRATION for Benzyl alcohol

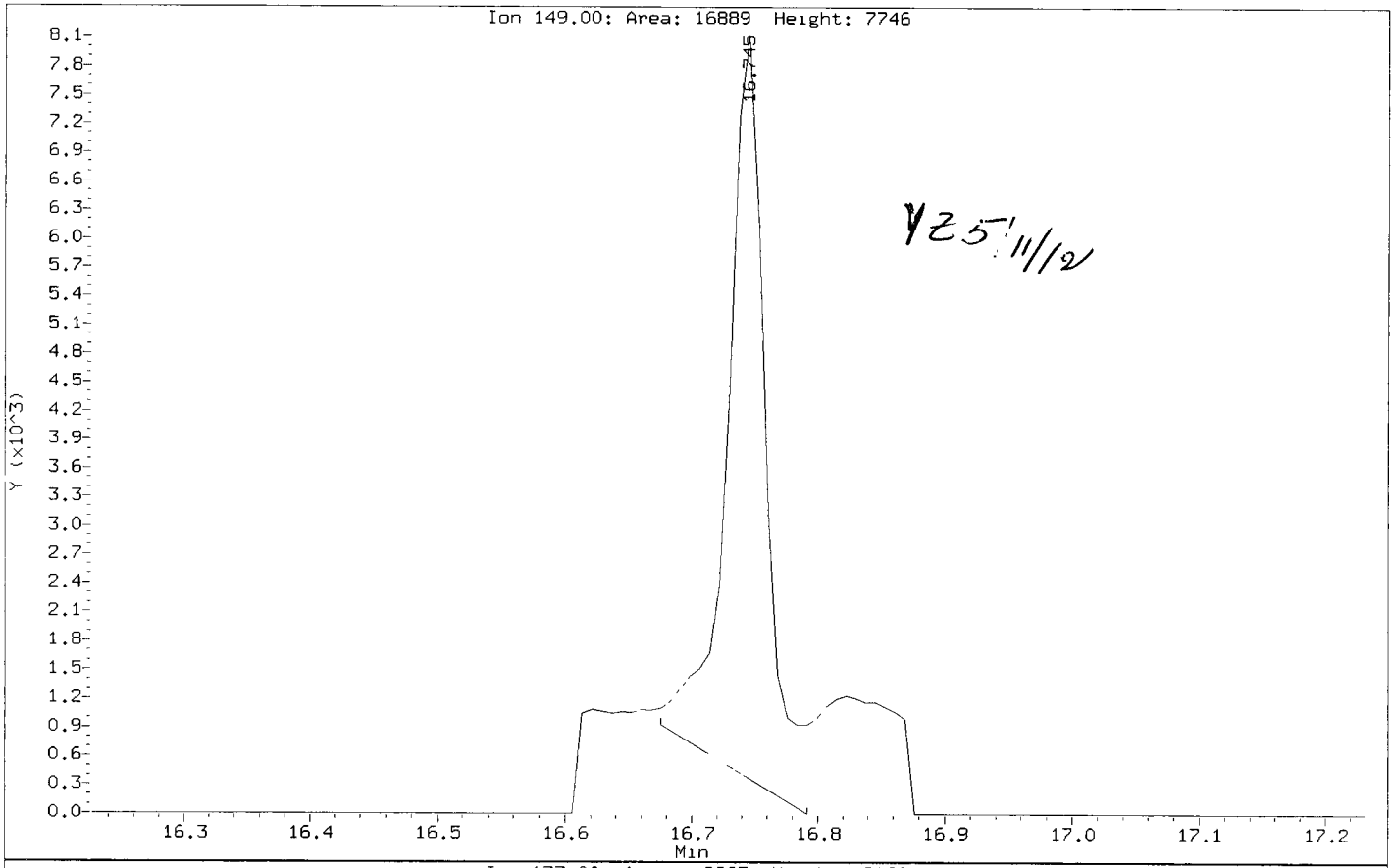
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

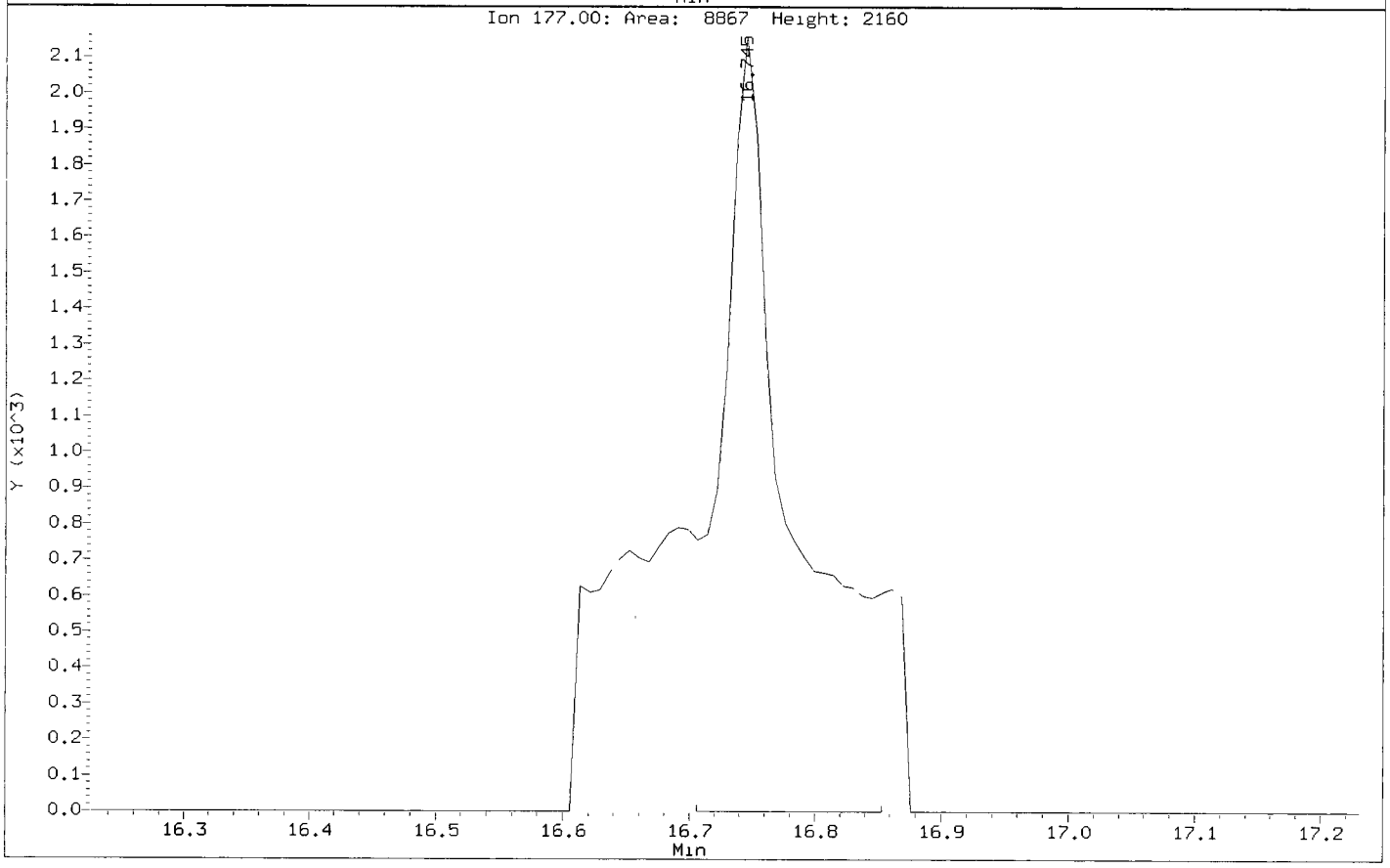
Analyst: VZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/ur81i.d
Injection Date: 09-MAY-2012 00:01
Instrument: nt10.i
Client Sample ID: IJ12-11

Compound: Diethylphthalate
CAS Number: 84-66-2

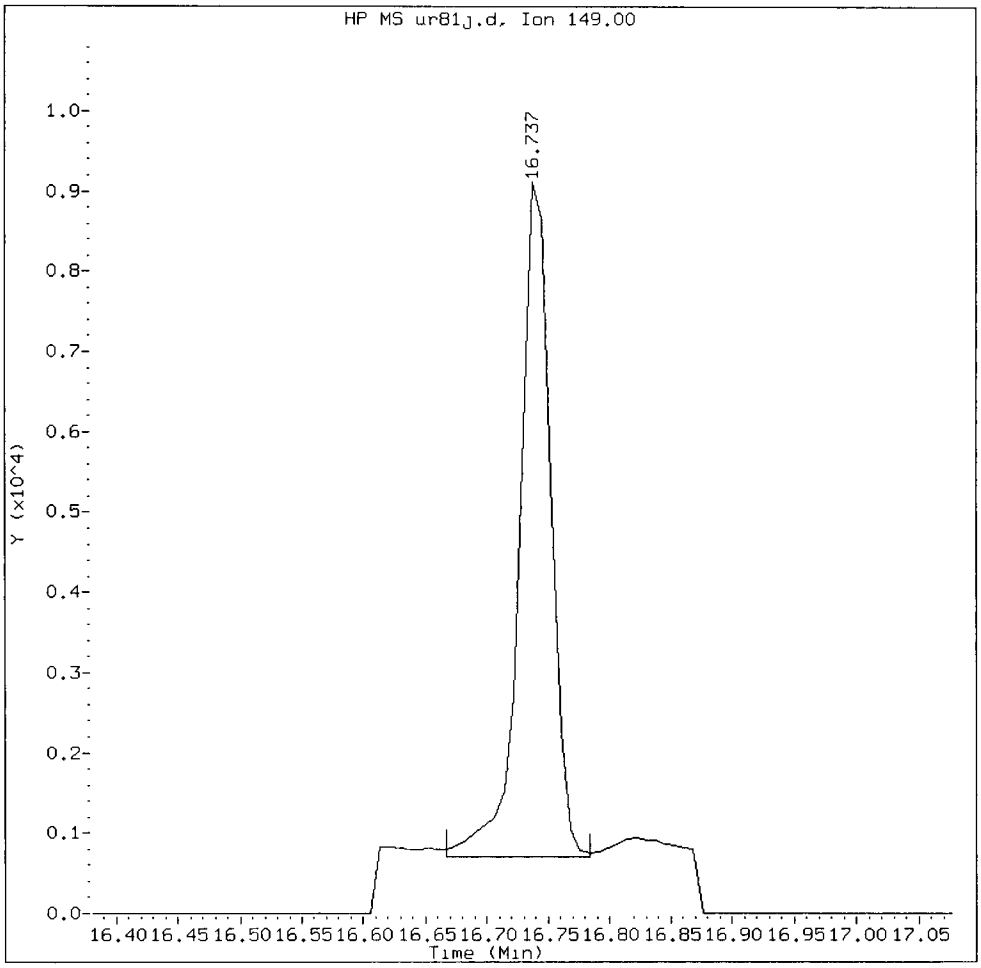


YZ5 11/12



UR81J, /chem1/nt10.i/20120508.b/SIM.b/ur81j.d

Diethylphthalate Amount: 0.08 Area: 15021



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/11/12

CO-ELUTION SUMMARY FOR FILE - ur81j.d

Lab ID: UR81J, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/11/12

Data file : /chem1/nt10.i/20120508.b/SIM.b/us18a.d
Lab Smp Id: US18A Client Smp ID: I-1-Z
Inj Date : 09-MAY-2012 01:14
Operator : YZ Inst ID: nt10.i
Smp Info : US18A
Misc Info : 12-7643
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	17.18000	Weight of sample extracted (g)
M	40.50000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6 703	6 680	(0.740)	357882	4 39972	430.4
3 Phenol	94	8 442	8 418	(0.932)	126546	1.17544	115.0
~~7 1,3-Dichlorobenzene~~	~~146~~	~~9.084~~	~~8.975~~	~~(1.003)~~	~~2789~~	~~0.02725~~	~~2.666~~
* 8 1,4-Dichlorobenzene-d4	152	9 053	9.045	(1.000)	236940	4.00000	
9 1,4-Dichlorobenzene	146	9.084	9.076	(1.003)	2785	0.02826	2.764
11 Benzyl alcohol	79	9.363	9.355	(1.034)	6721	0.12195	11.93 (MH)
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	9.635	9.619	(1 064)	102451	1.18473	115.9
15 4-Methylphenol	108	9.938	9.914	(1 098)	402115	4 43158	433.5
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	11.061	11.038	(0.943)	213812	2 57405	251 8
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.732	11.724	(1.000)	906203	4 00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.098	15.144	(0.965)	233905	1.62338	158.8(H)
*	42 Acenaphthene-d10	162	15.647	15 632	(1.000)	471204	4 00000	
	50 Diethylphthalate	149	16.745	16.729	(1.070)	18700	0 11856	11.60(M)
	54 N-Nitrosodiphenylamine	169	17.139	17.123	(0.906)	41277	0 37036	36.23
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	18.668	18.644	(0.986)	5365	0.15374	15.04(M)
*	59 Phenanthrene-d10	188	18.923	18.908	(1.000)	829505	4.00000	
$	66 Terphenyl-d14	244	22.126	22 095	(0.922)	483285	3.34691	327.4
	67 Butylbenzylphthalate	149	23.040	23.047	(0.960)	53845	0.49273	48 20
*	69 Chrysene-d12	240	24.000	23.969	(1.000)	907068	4.00000	
*	77 Perylene-d12	264	26.485	26.446	(1.000)	889039	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.918	28.864	(1.092)	17743	0.09321	9.118(M)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

LOD=24

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: us18a.d
Lab Smp Id: US18A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7643

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: I-1-Z
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	236940	-23.87
27 Naphthalene-d8	1166872	583436	2333744	906203	-22.34
42 Acenaphthene-d10	603218	301609	1206436	471204	-21.88
59 Phenanthrene-d10	1096026	548013	2192052	829505	-24.32
69 Chrysene-d12	1131082	565541	2262164	907068	-19.81
77 Perylene-d12	1082499	541250	2164998	889039	-17.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.92	0.08
69 Chrysene-d12	23.97	23.47	24.47	24.00	0.13
77 Perylene-d12	26.45	25.95	26.95	26.49	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

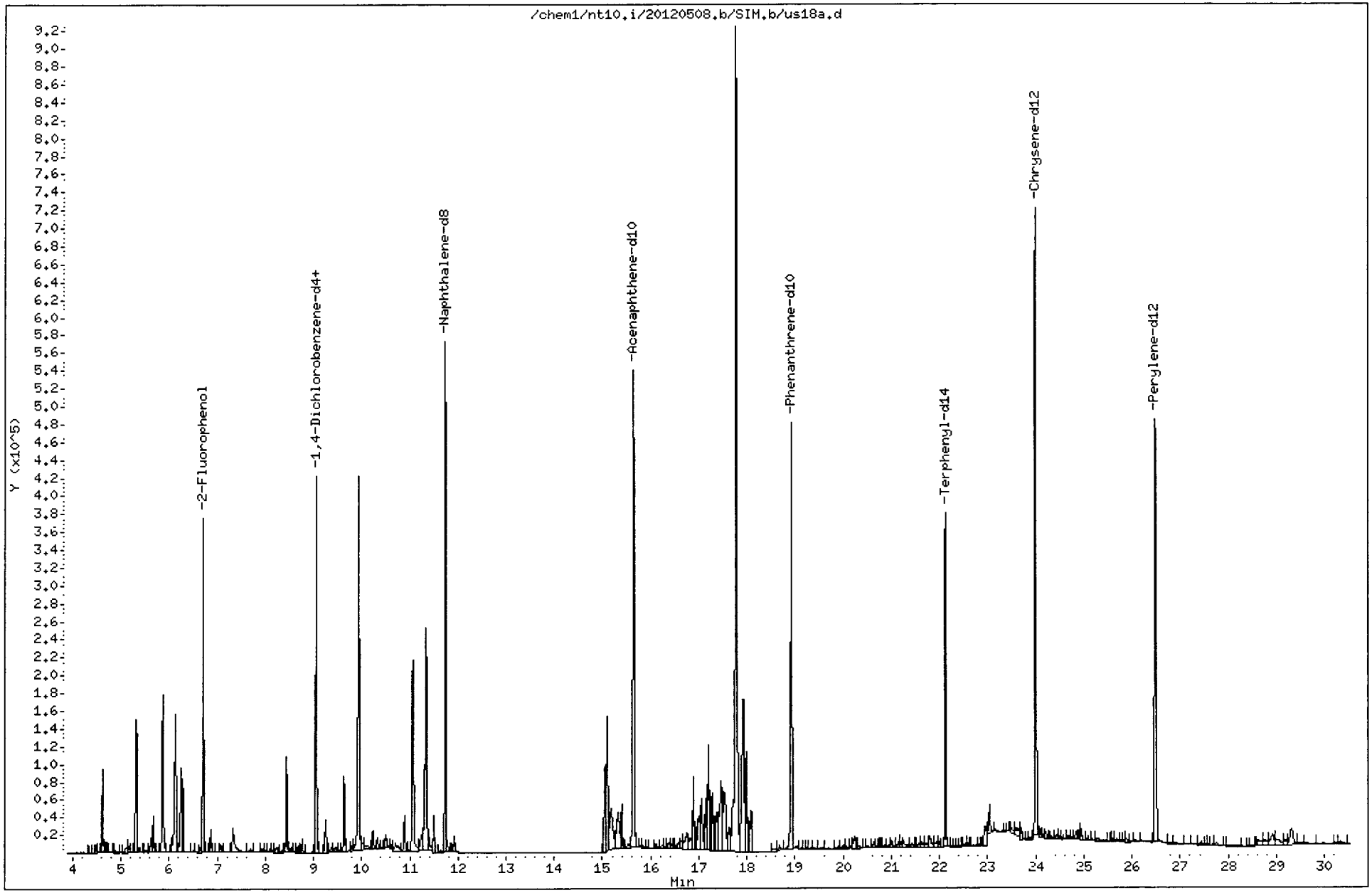
Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: US18A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7643

Client SDG: US18
Fraction: SV
Client Smp ID: I-1-Z
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	733.7	430.4	58.66	30-160
$ 66 Terphenyl-d14	489.1	327.4	66.94	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d
Date : 09-MAY-2012 01:14
Client ID: I-1-Z
Sample Info: US18A
Volume Injected (uL): 1.0
Column phase: ZB-5ms1

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

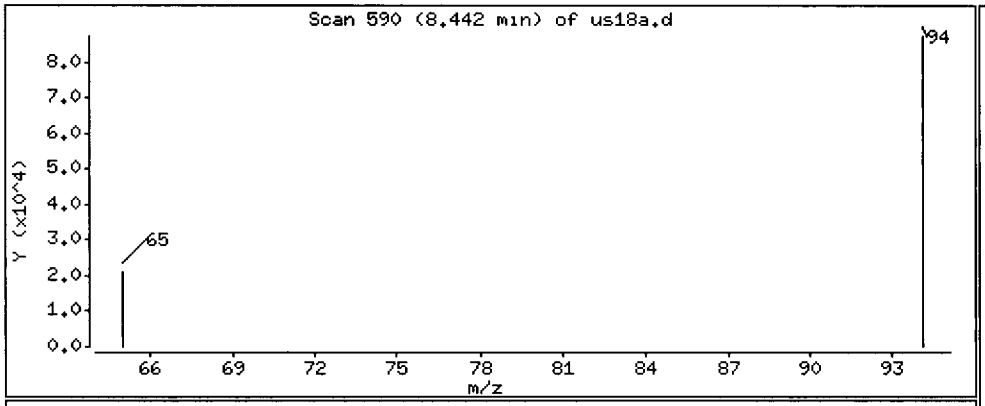
Operator: YZ

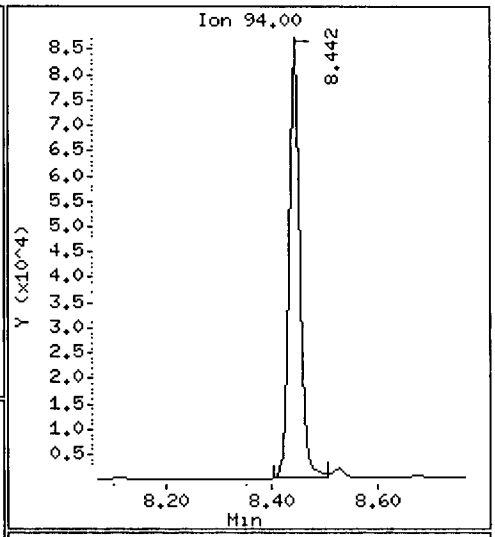
Column phase: ZB-5msi

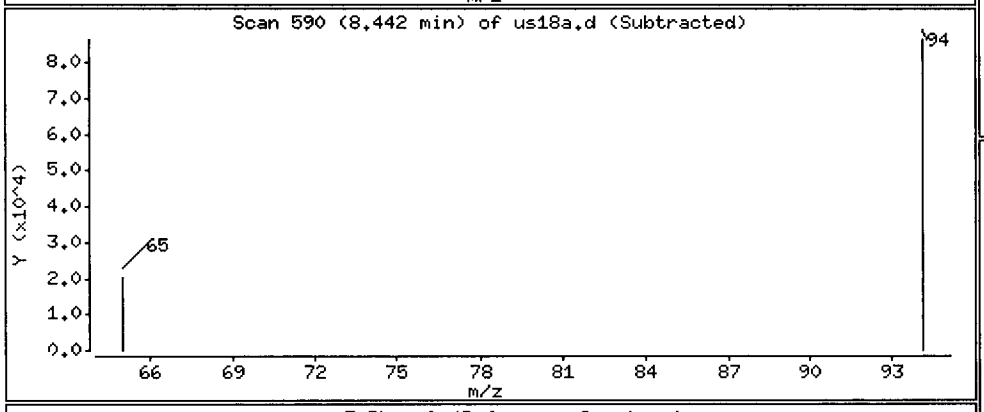
Column diameter: 0.25

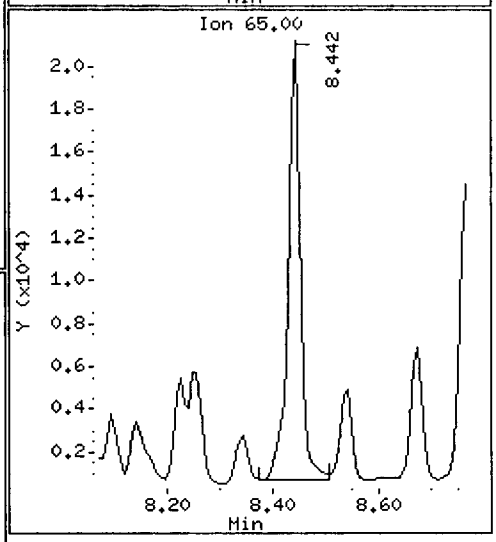
3 Phenol

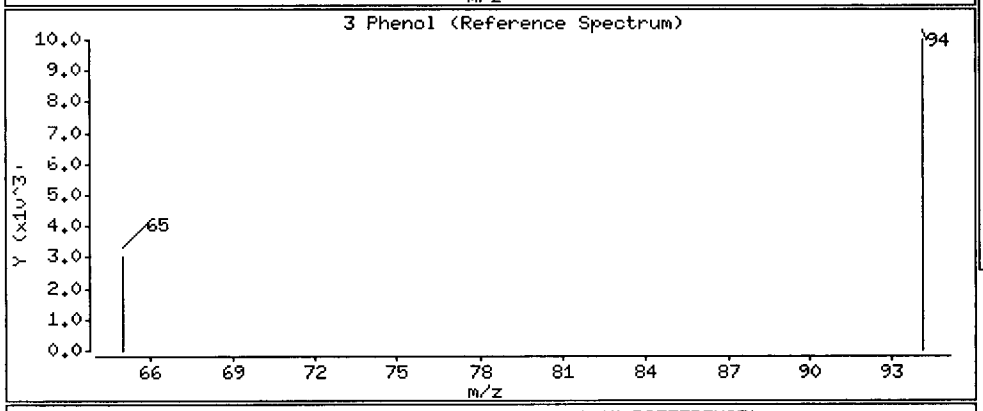
Concentration: 115.0 ug/kg

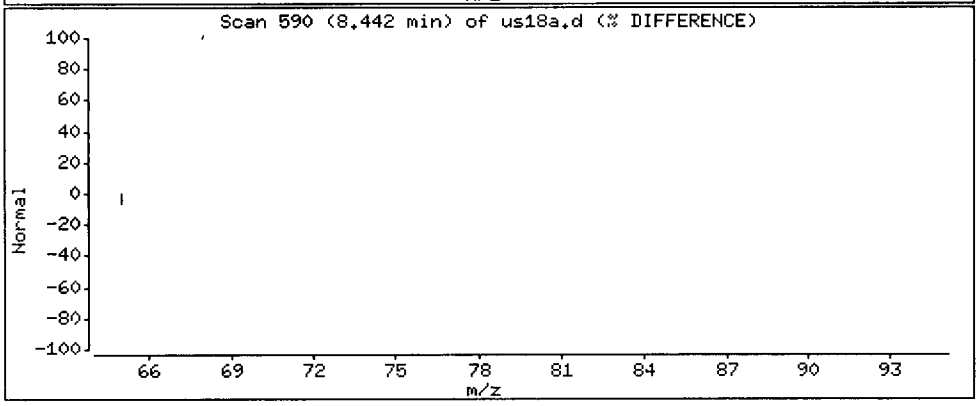












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

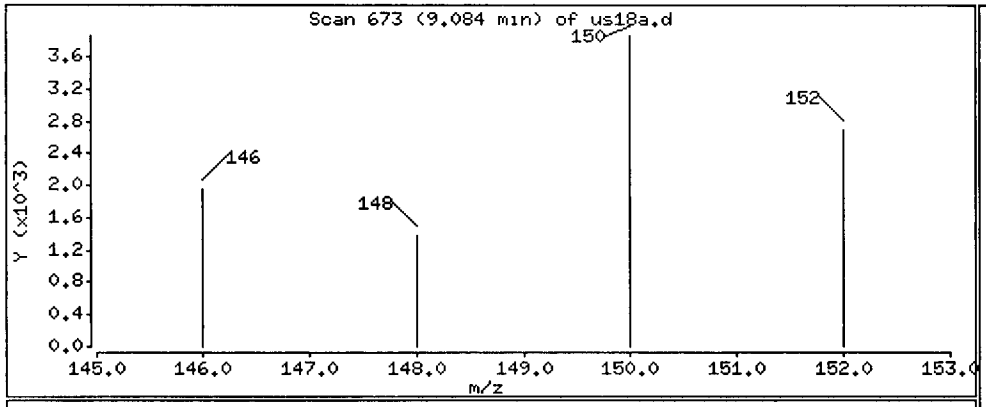
Operator: YZ

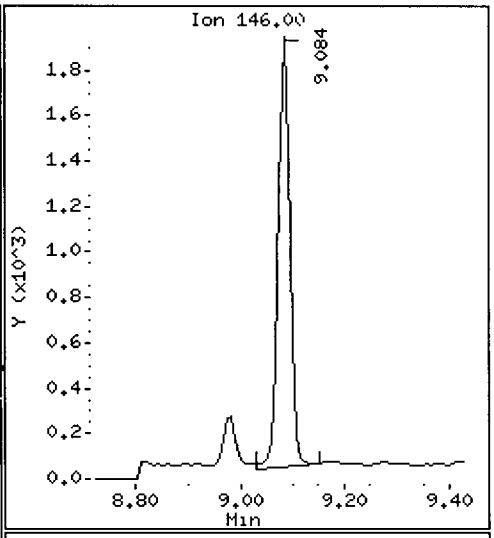
Column phase: ZB-5msi

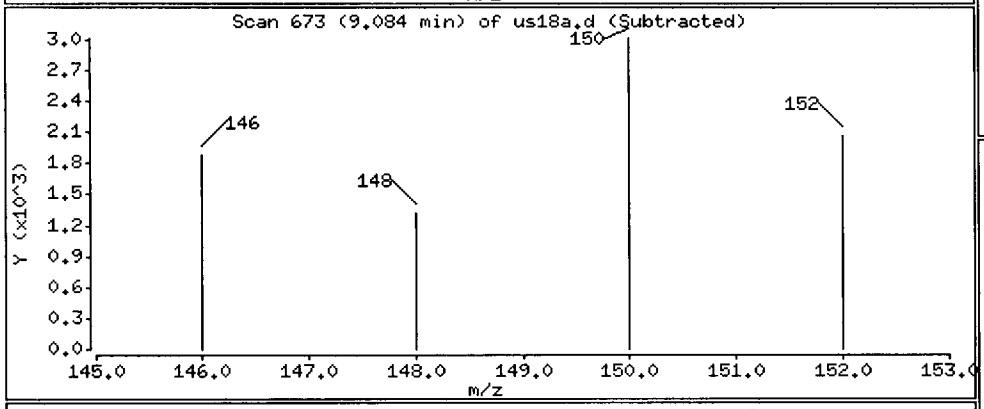
Column diameter: 0.25

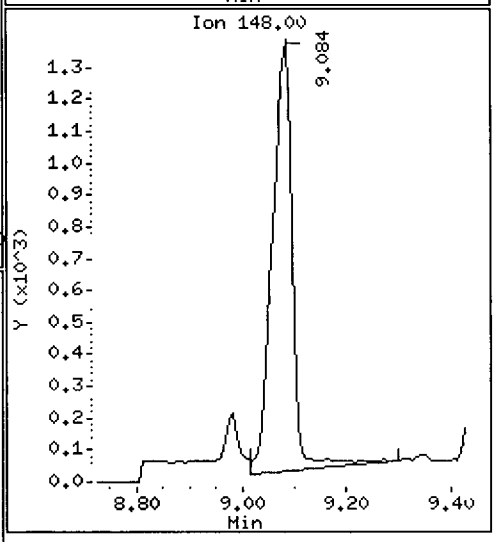
9 1,4-Dichlorobenzene

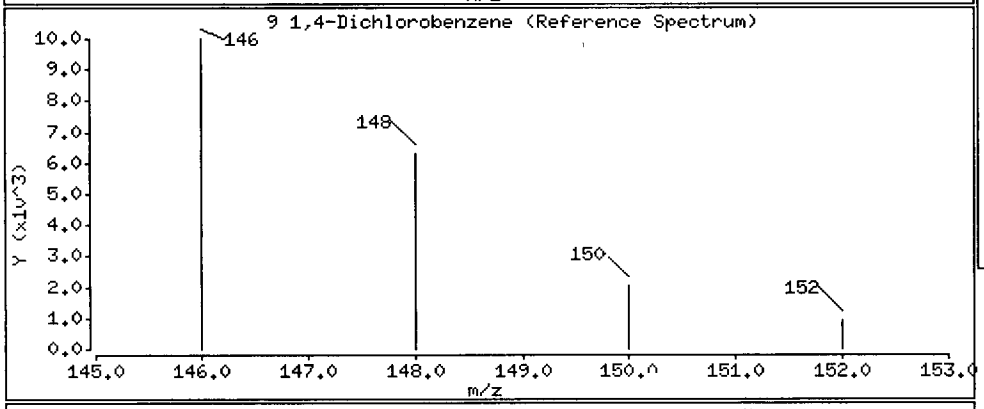
Concentration: 2.764 ug/kg

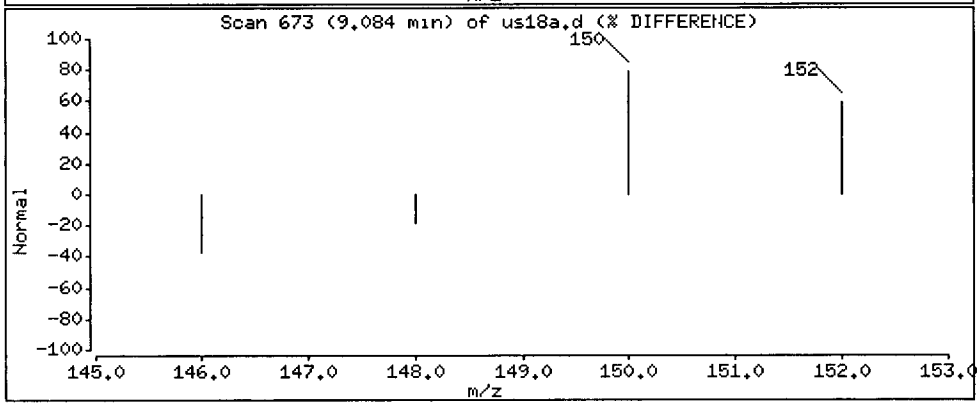












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

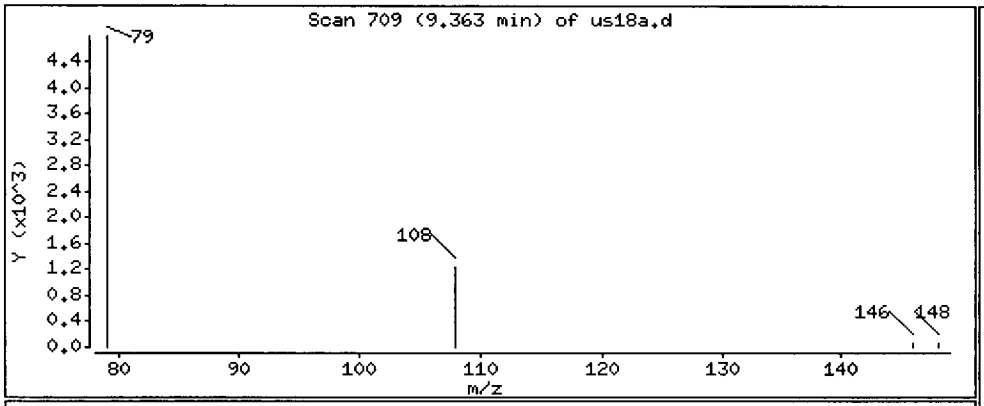
Operator: YZ

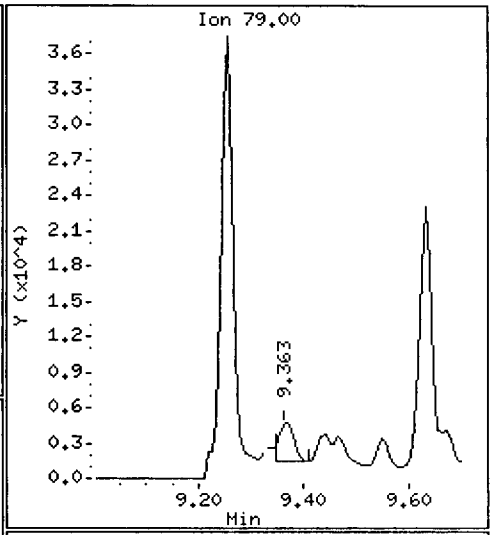
Column phase: ZB-5msi

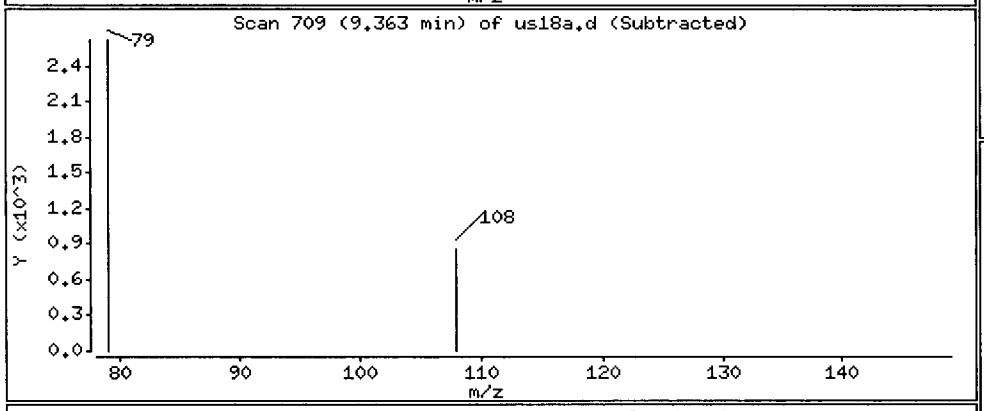
Column diameter: 0.25

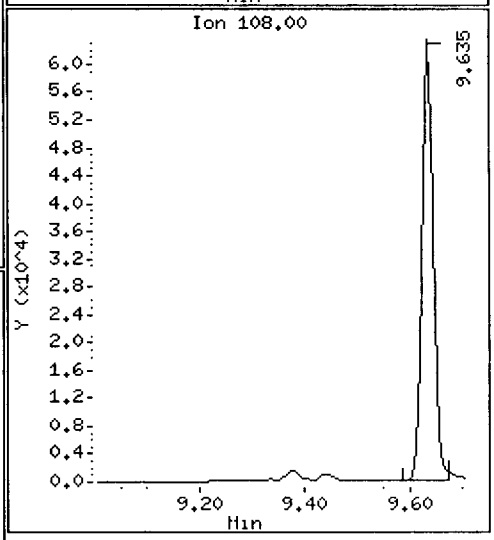
11 Benzyl alcohol

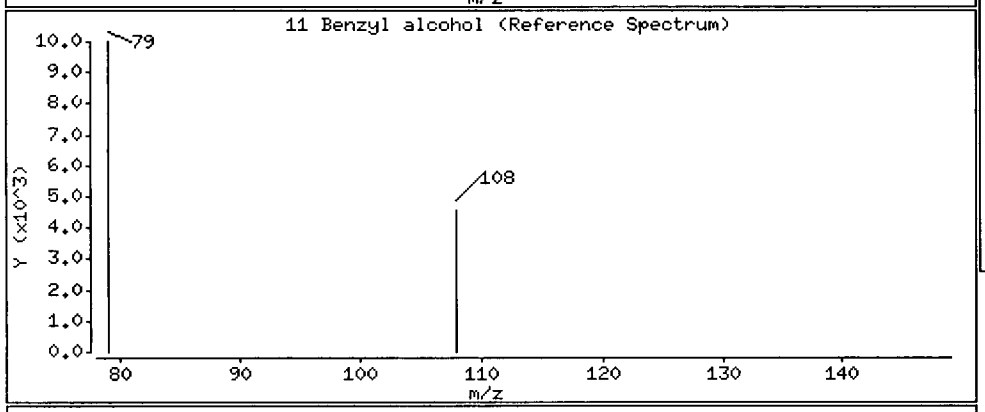
Concentration: 11.93 ug/kg

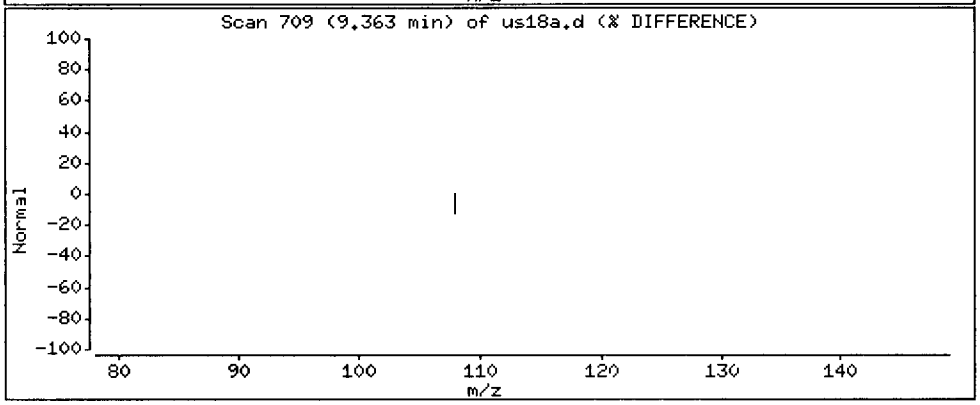












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

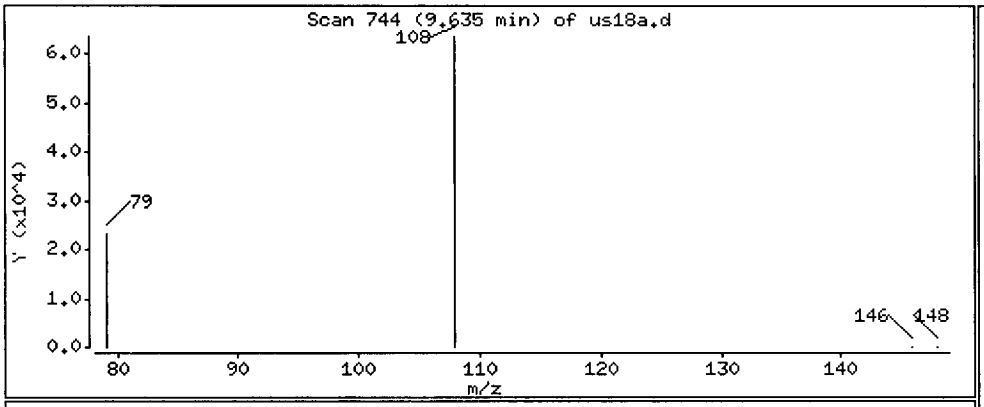
Operator: YZ

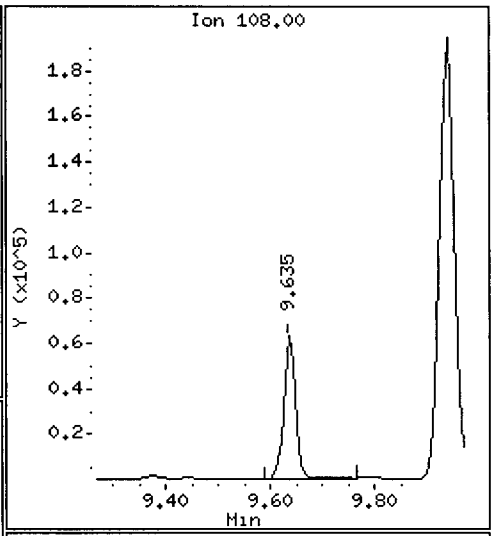
Column phase: ZB-5ms1

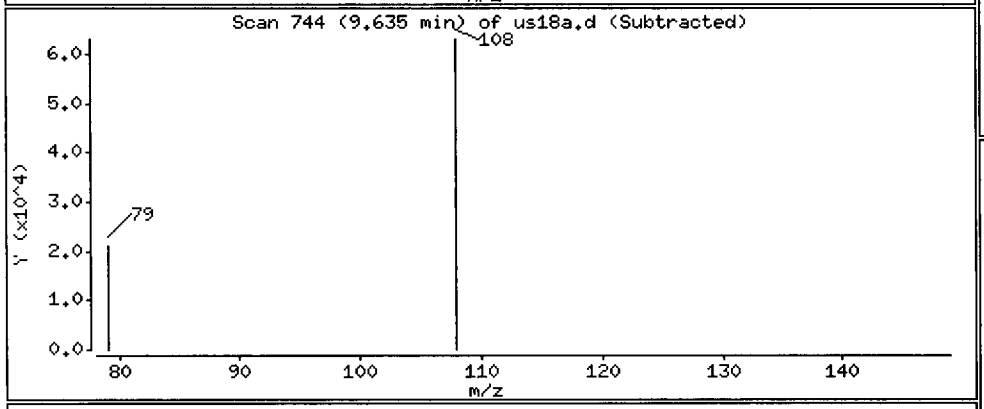
Column diameter: 0.25

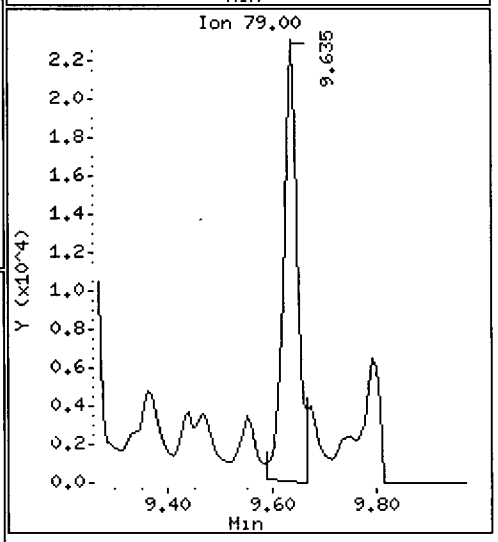
13 2-Methylphenol

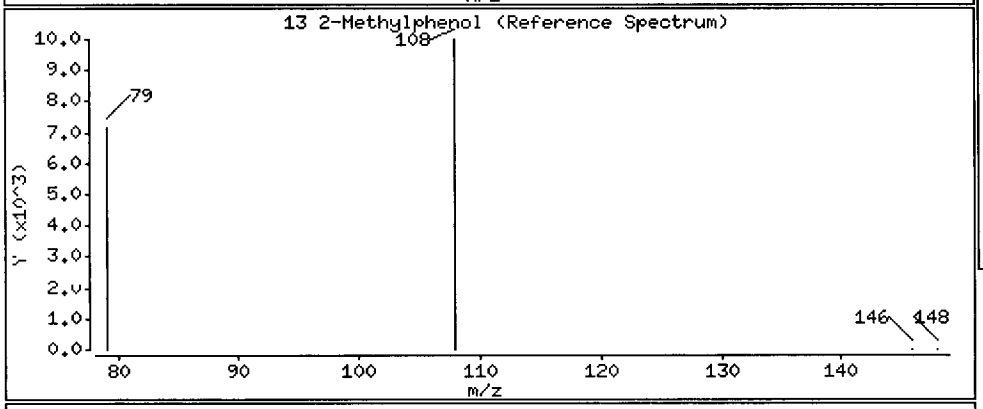
Concentration: 115.9 ug/kg

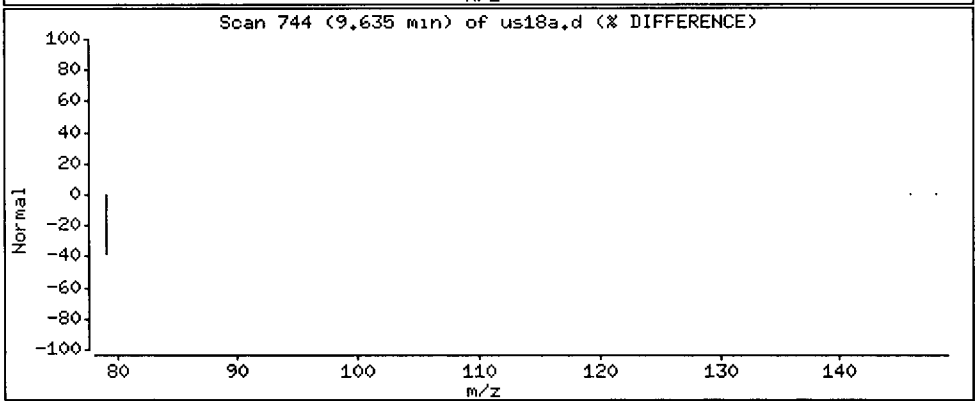












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

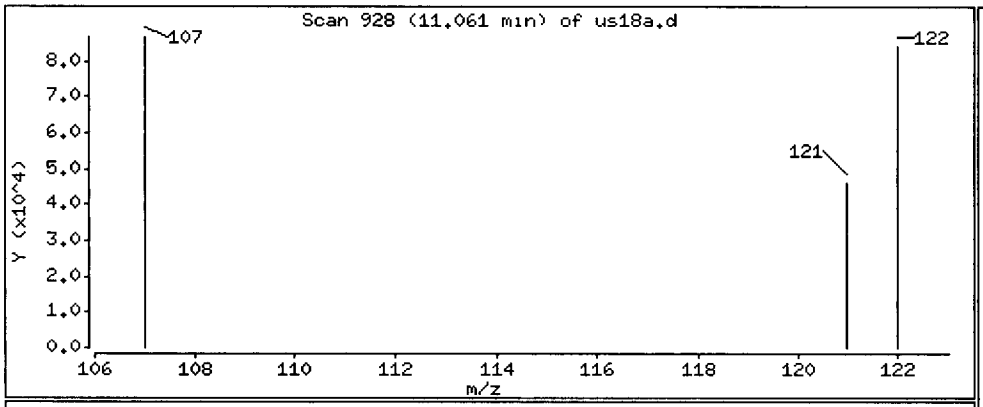
Operator: YZ

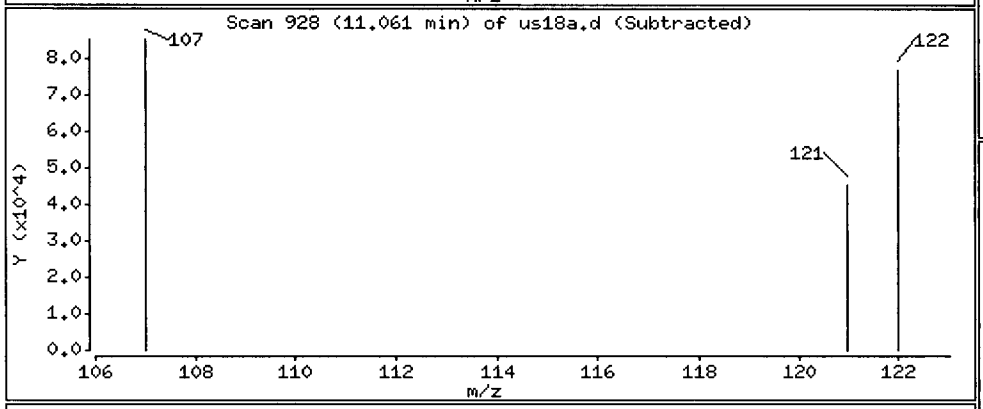
Column phase: ZB-5msi

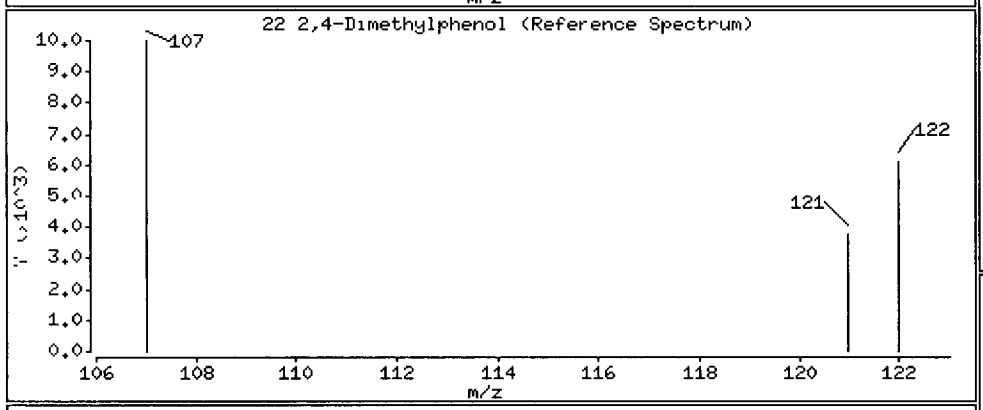
Column diameter: 0.25

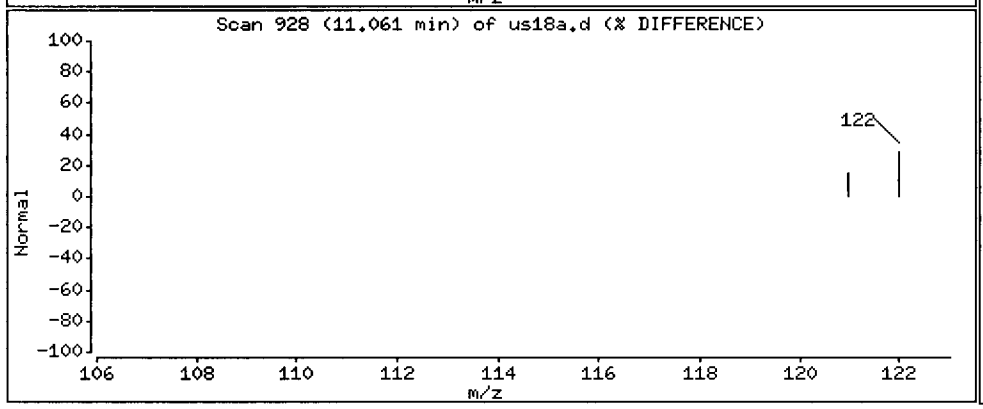
22 2,4-Dimethylphenol

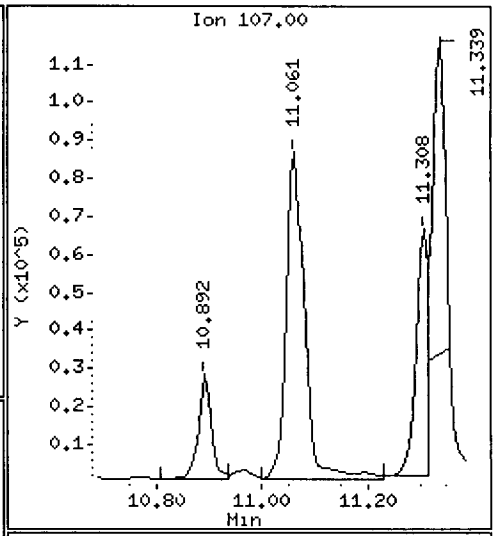
Concentration: 251.8 ug/kg

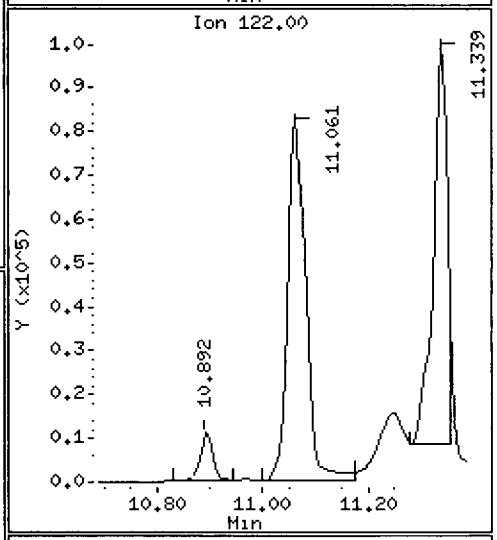


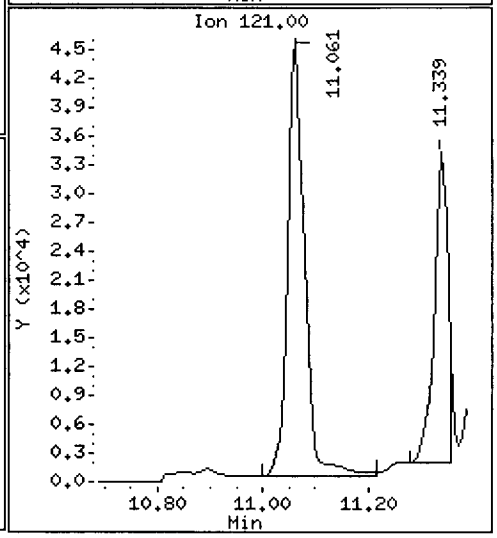












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

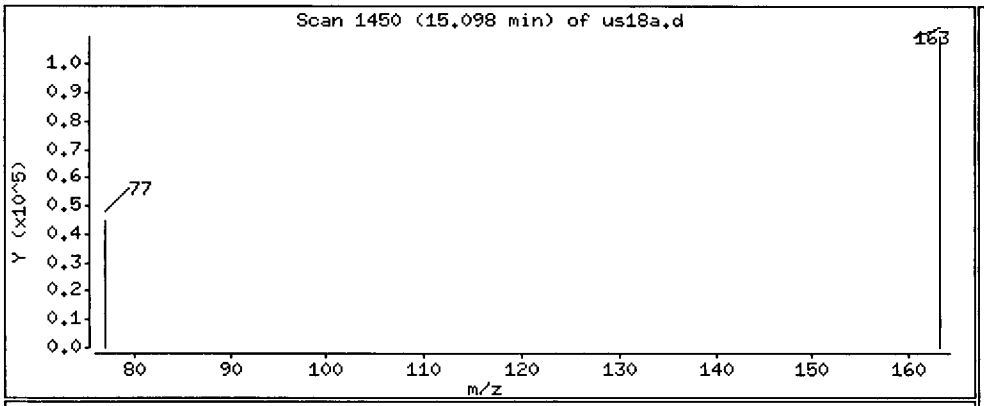
Operator: YZ

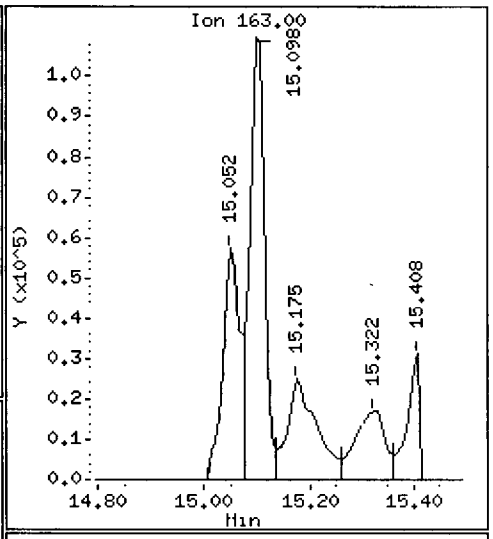
Column phase: ZB-5msi

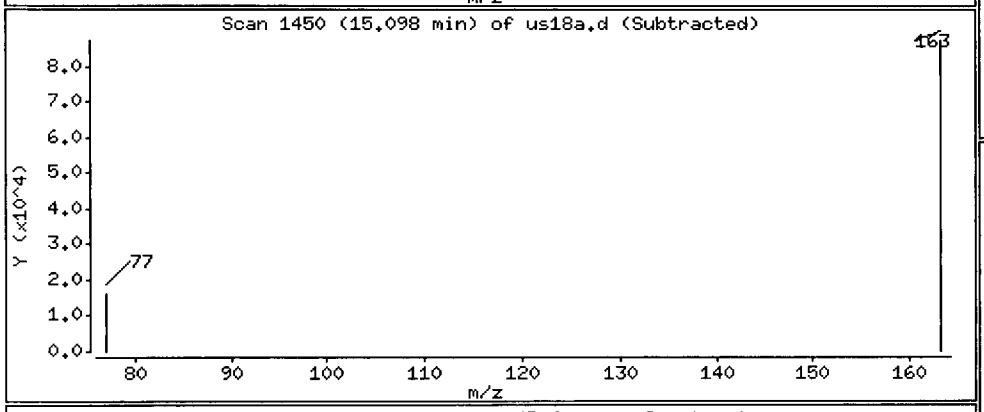
Column diameter: 0.25

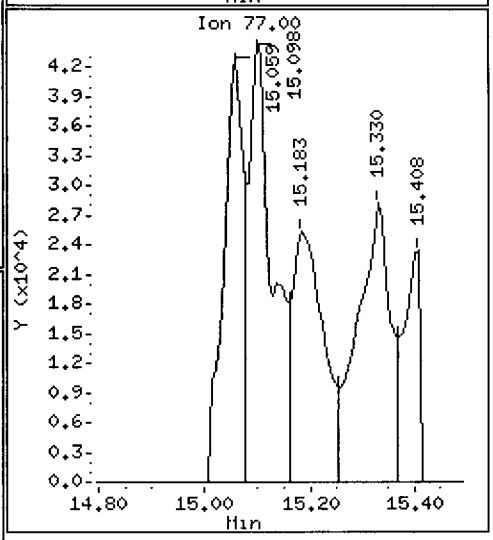
39 Dimethylphthalate

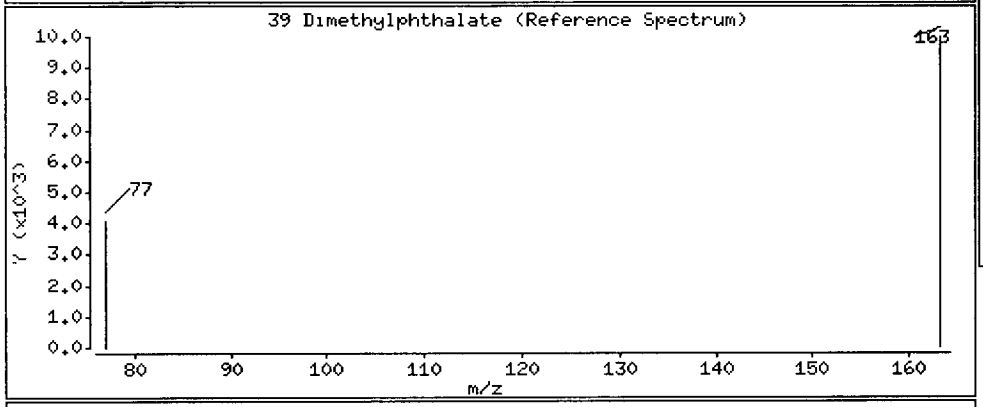
Concentration: 158.8 ug/kg

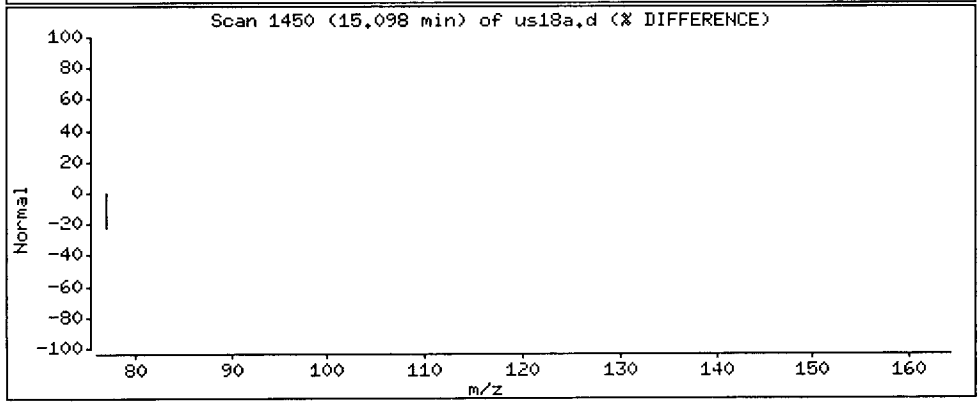












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

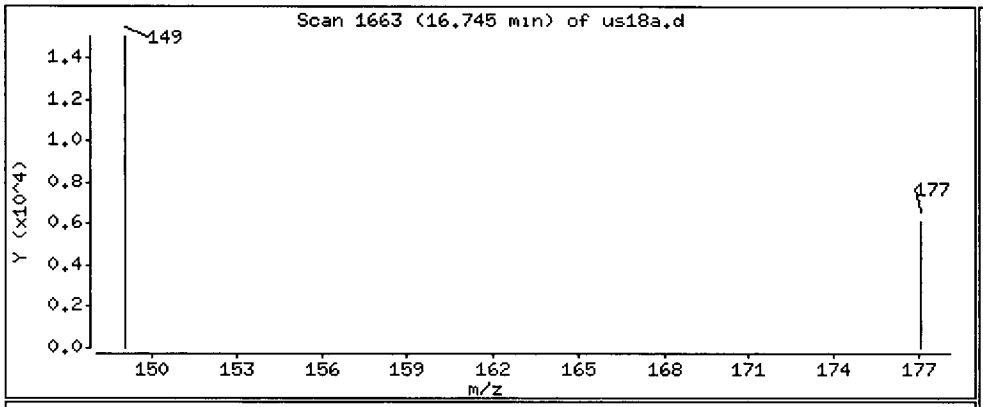
Operator: YZ

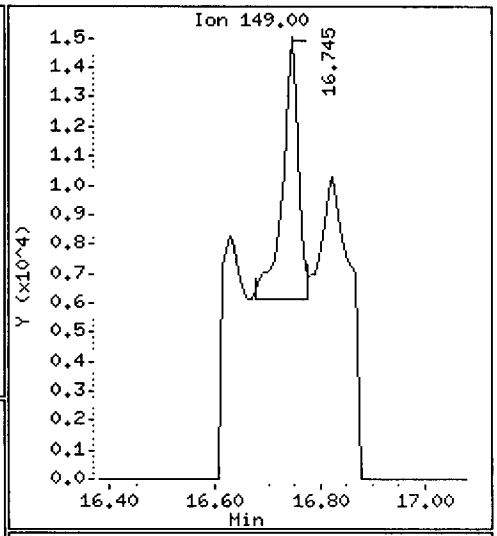
Column phase: ZB-5msi

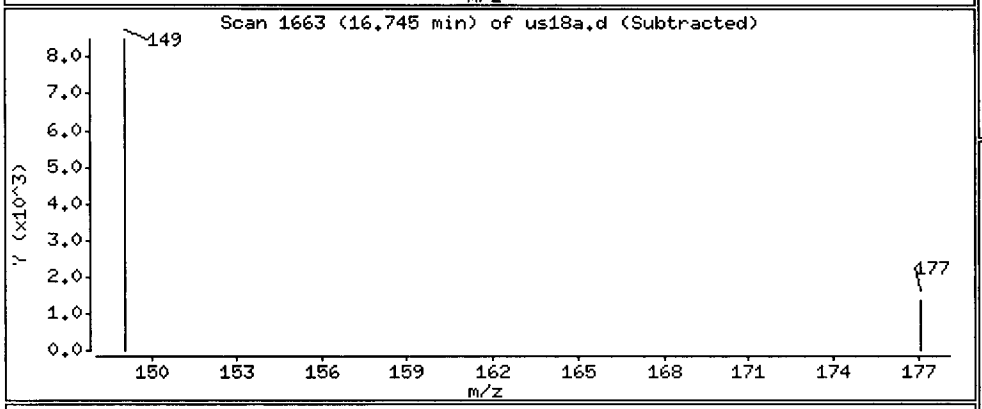
Column diameter: 0.25

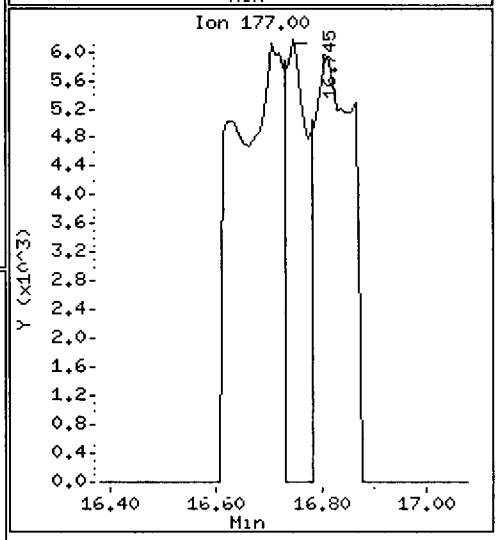
50 Diethylphthalate

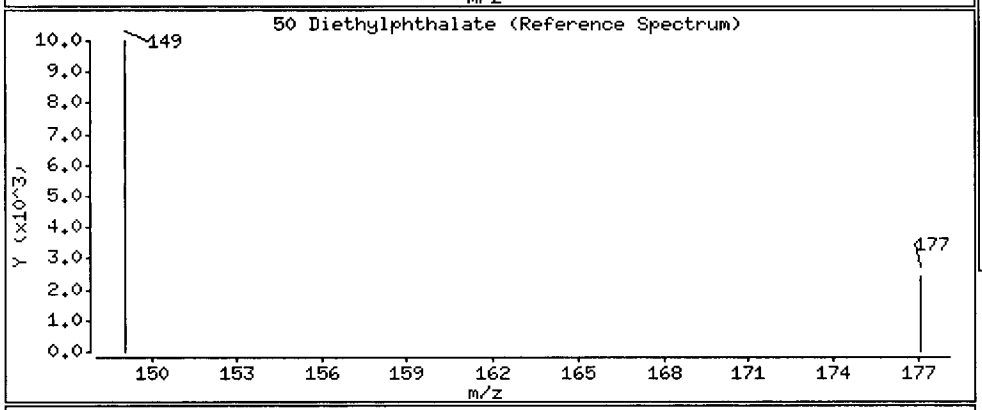
Concentration: 11.60 ug/kg

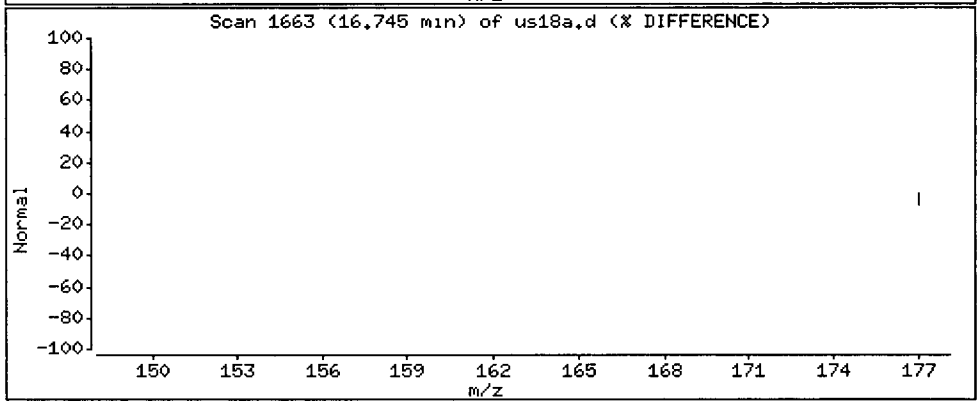












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

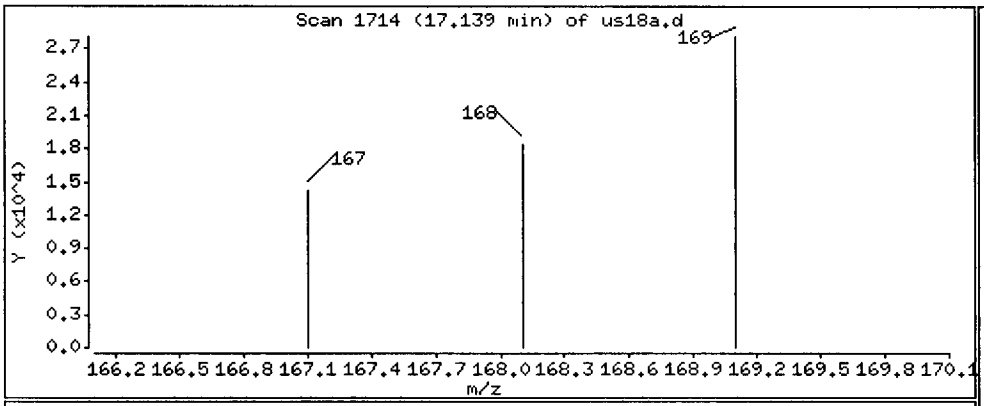
Operator: YZ

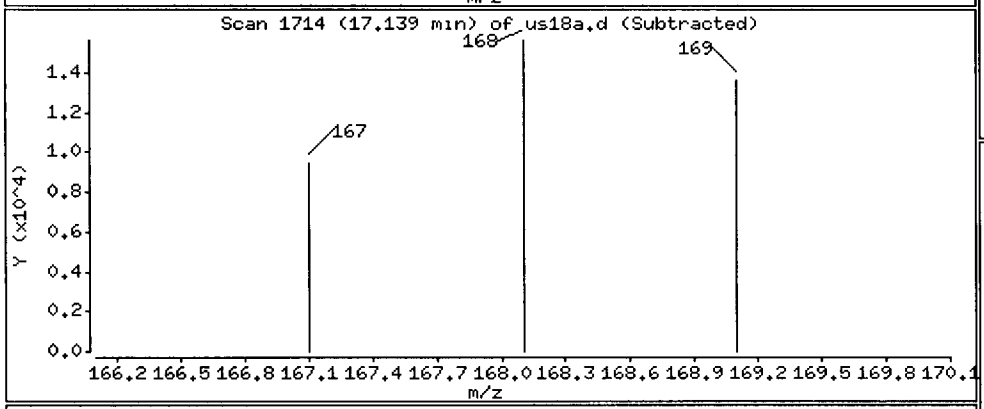
Column phase: ZB-5msi

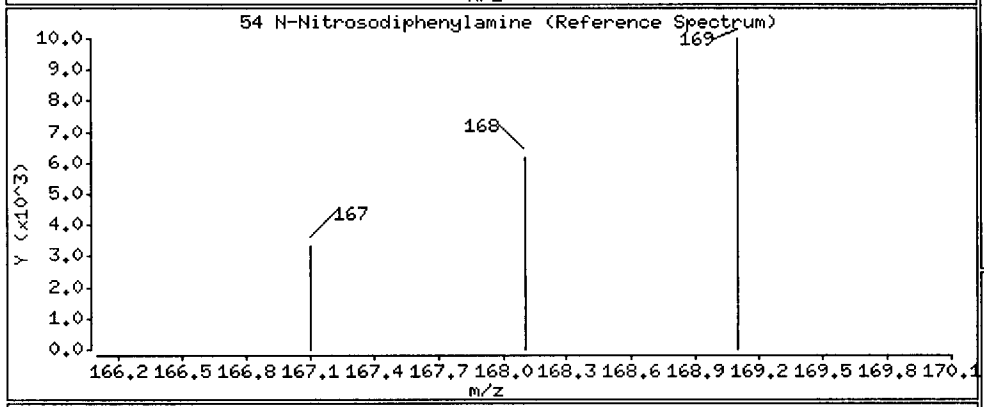
Column diameter: 0.25

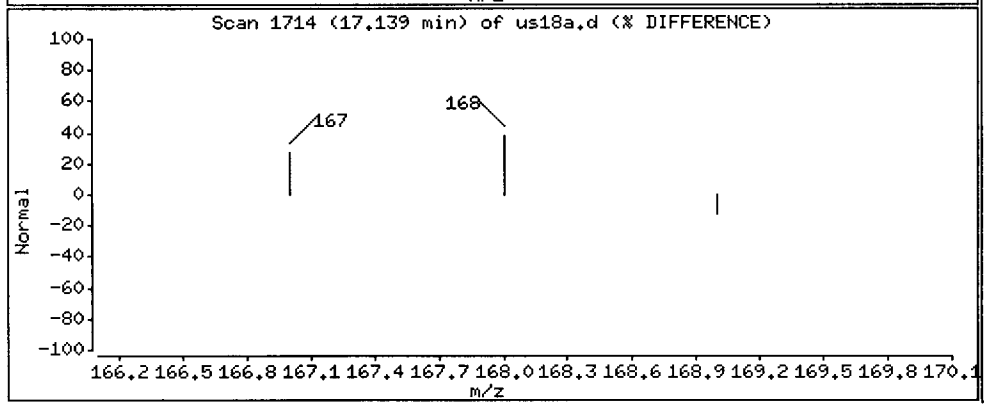
54 N-Nitrosodiphenylamine

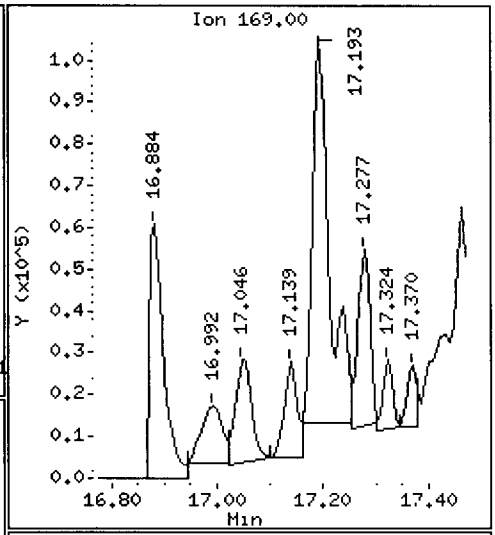
Concentration: 36.23 ug/kg

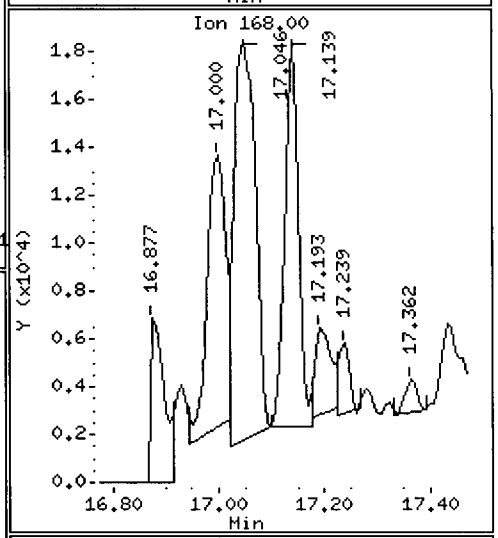


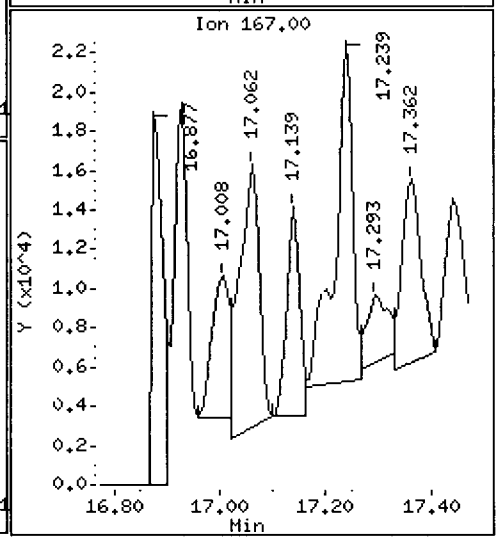












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

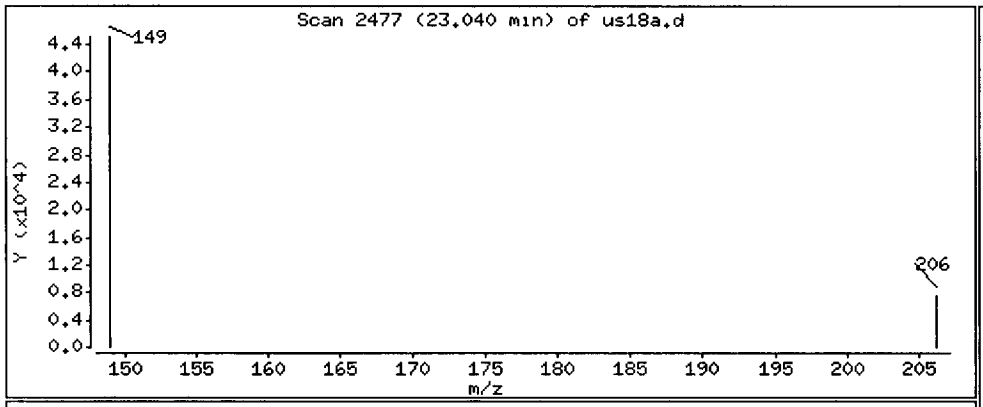
Operator: YZ

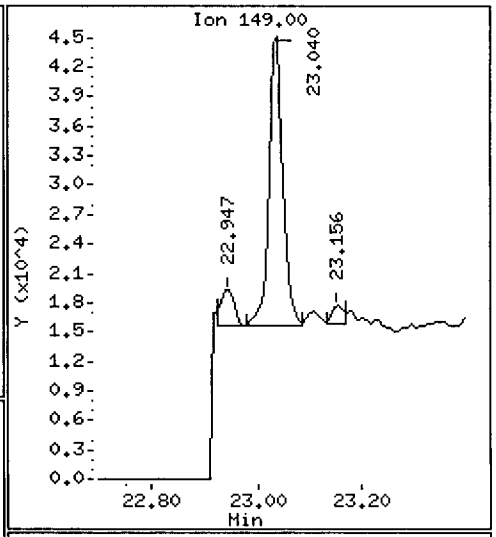
Column phase: ZB-5msi

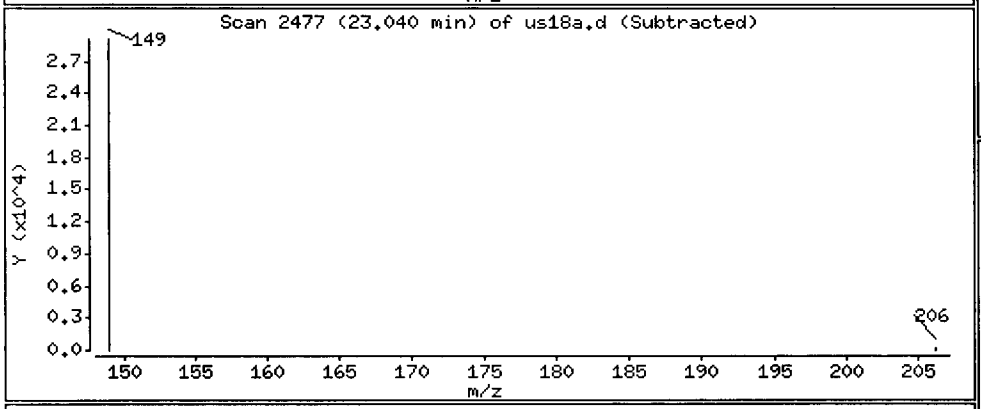
Column diameter: 0.25

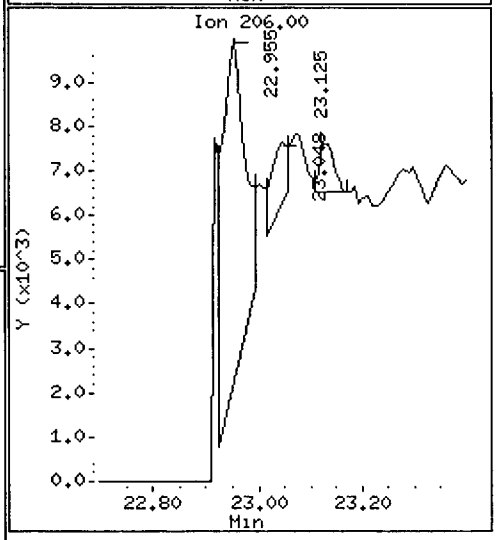
67 Butylbenzylphthalate

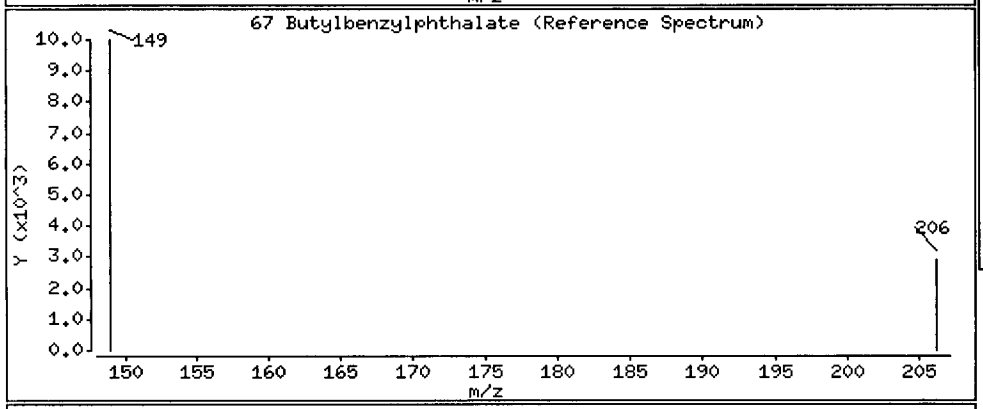
Concentration: 48.20 ug/kg

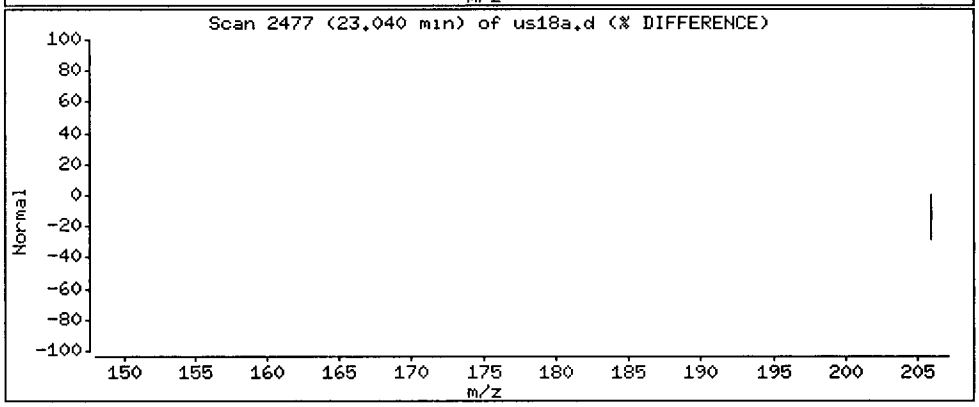












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Date : 09-MAY-2012 01:14

Client ID: I-1-Z

Instrument: nt10.i

Sample Info: US18A

Volume Injected (uL): 1.0

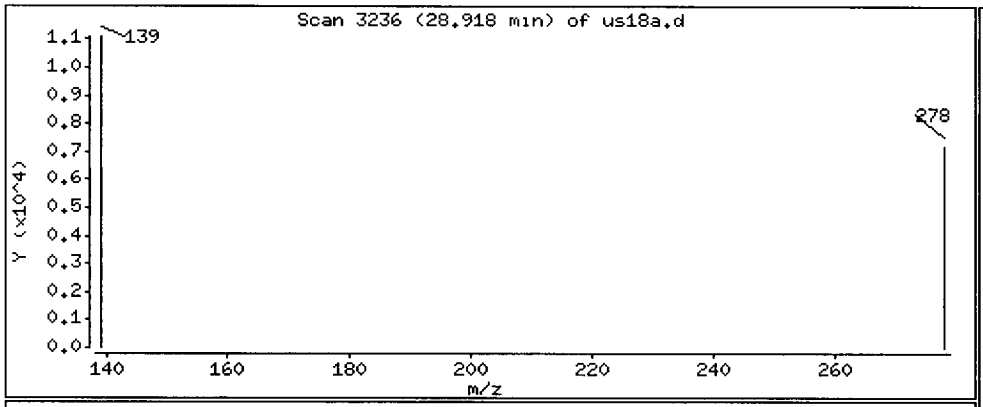
Operator: YZ

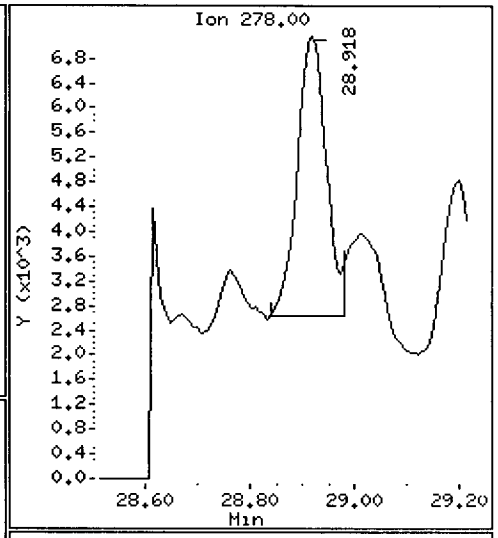
Column phase: ZB-5msi

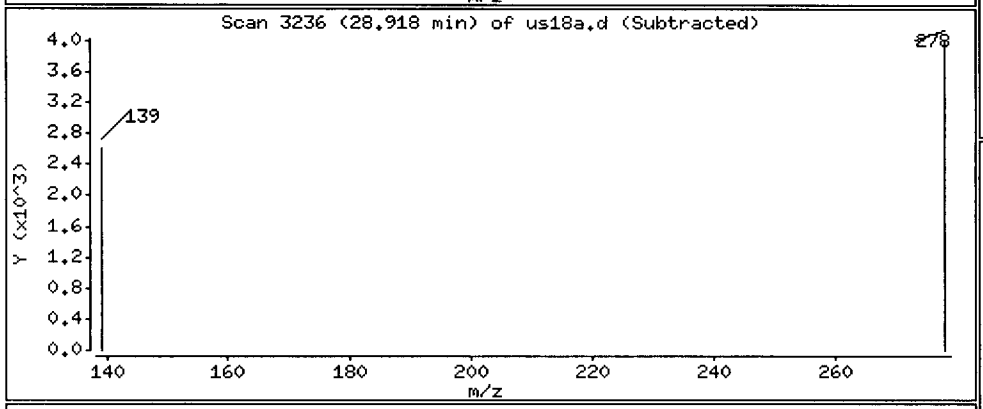
Column diameter: 0.25

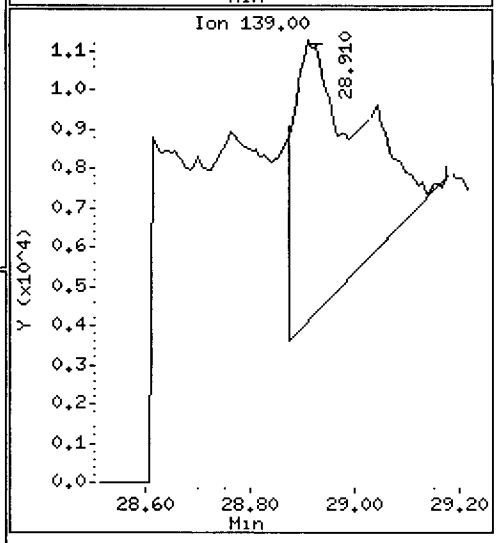
79 Dibenzo(a,h)anthracene

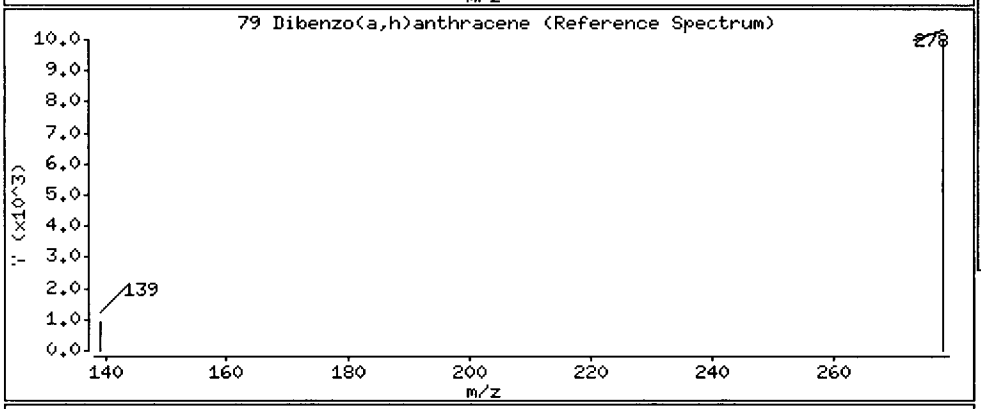
Concentration: 9.118 ug/kg

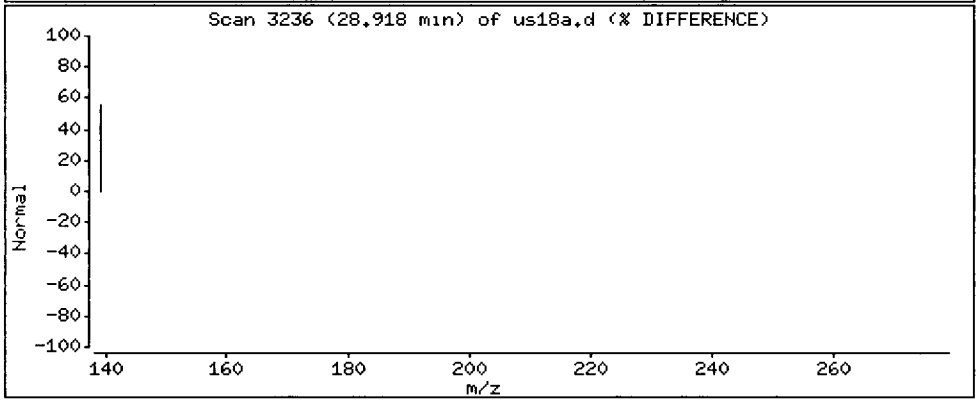






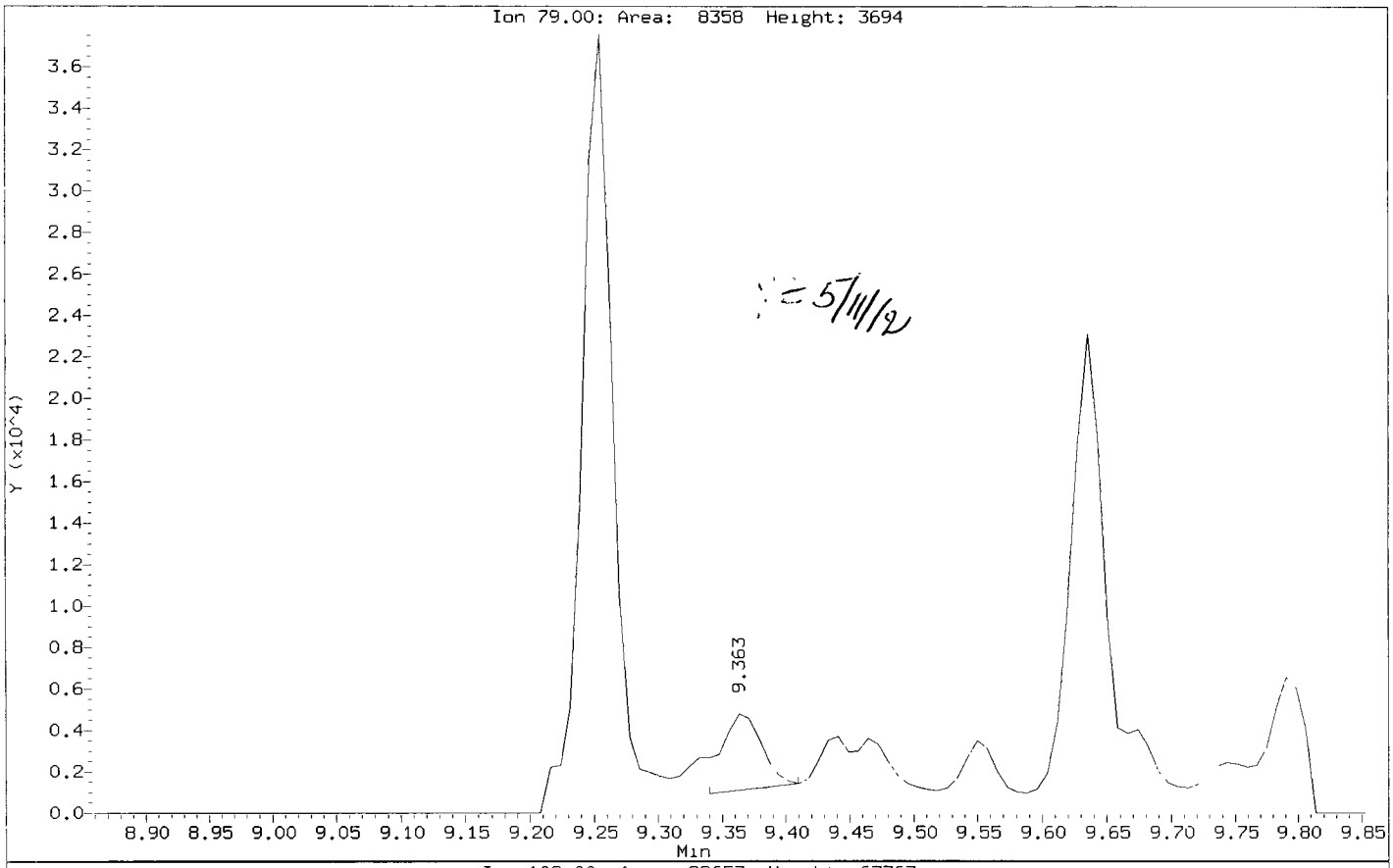


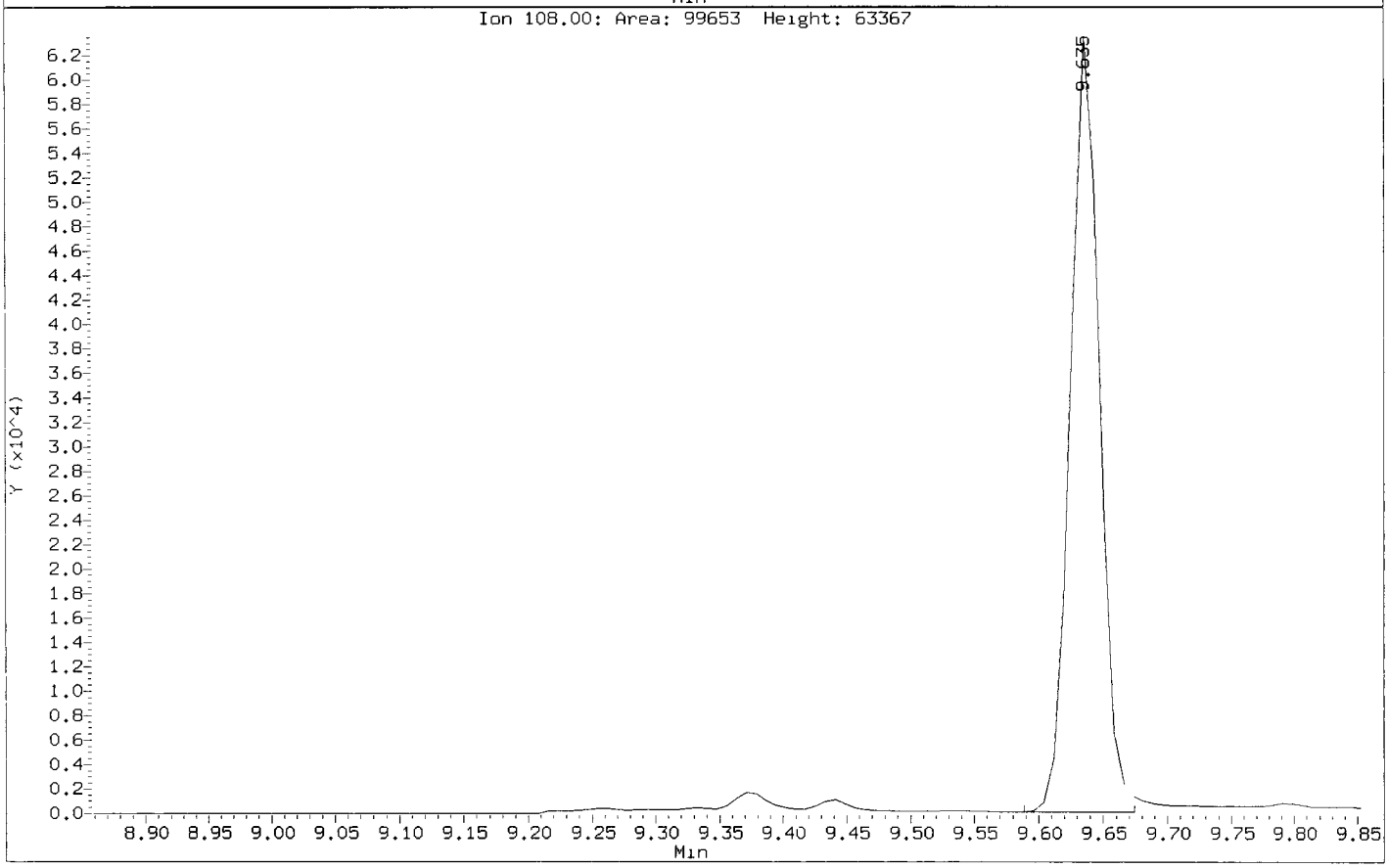




Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d
Injection Date: 09-MAY-2012 01:14
Instrument: nt10.i
Client Sample ID: I-1-Z

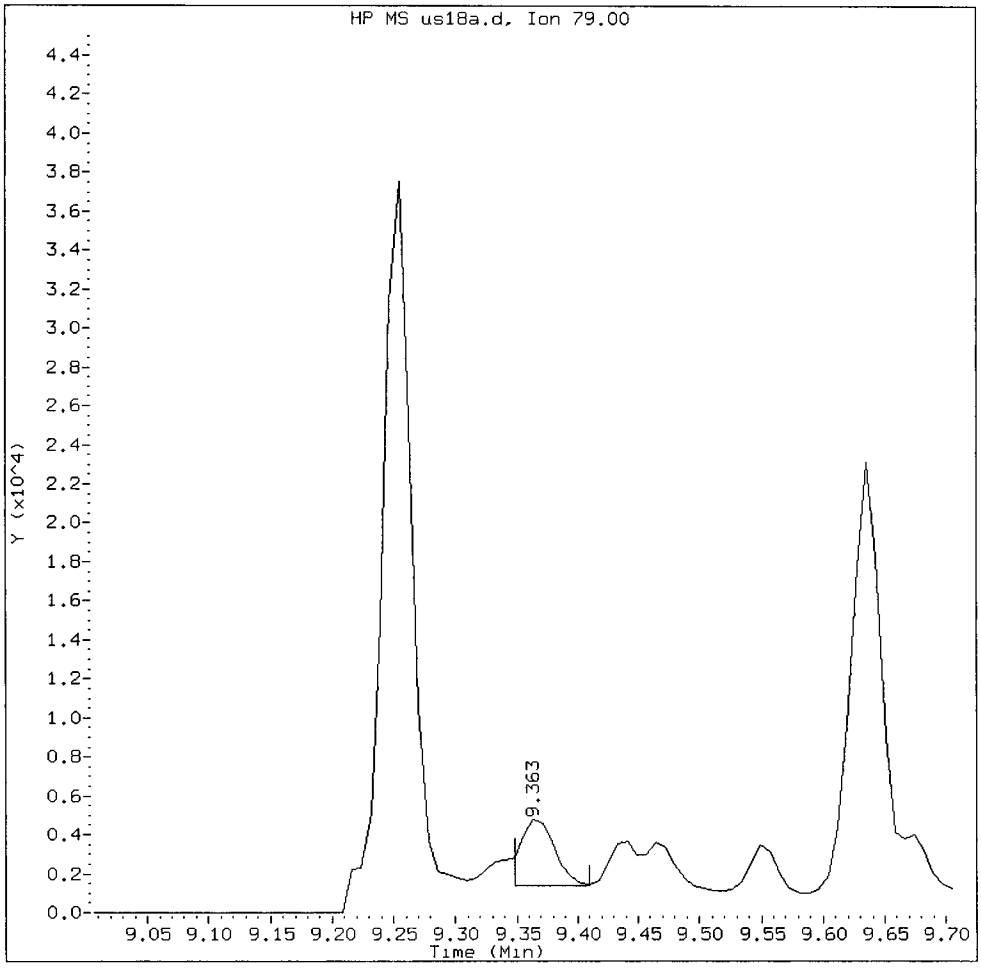
Compound: Benzyl alcohol
CAS Number: 100-51-6





US18A, /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Benzyl alcohol Amount: 0.12 Area: 6721



MANUAL INTEGRATION for Benzyl alcohol

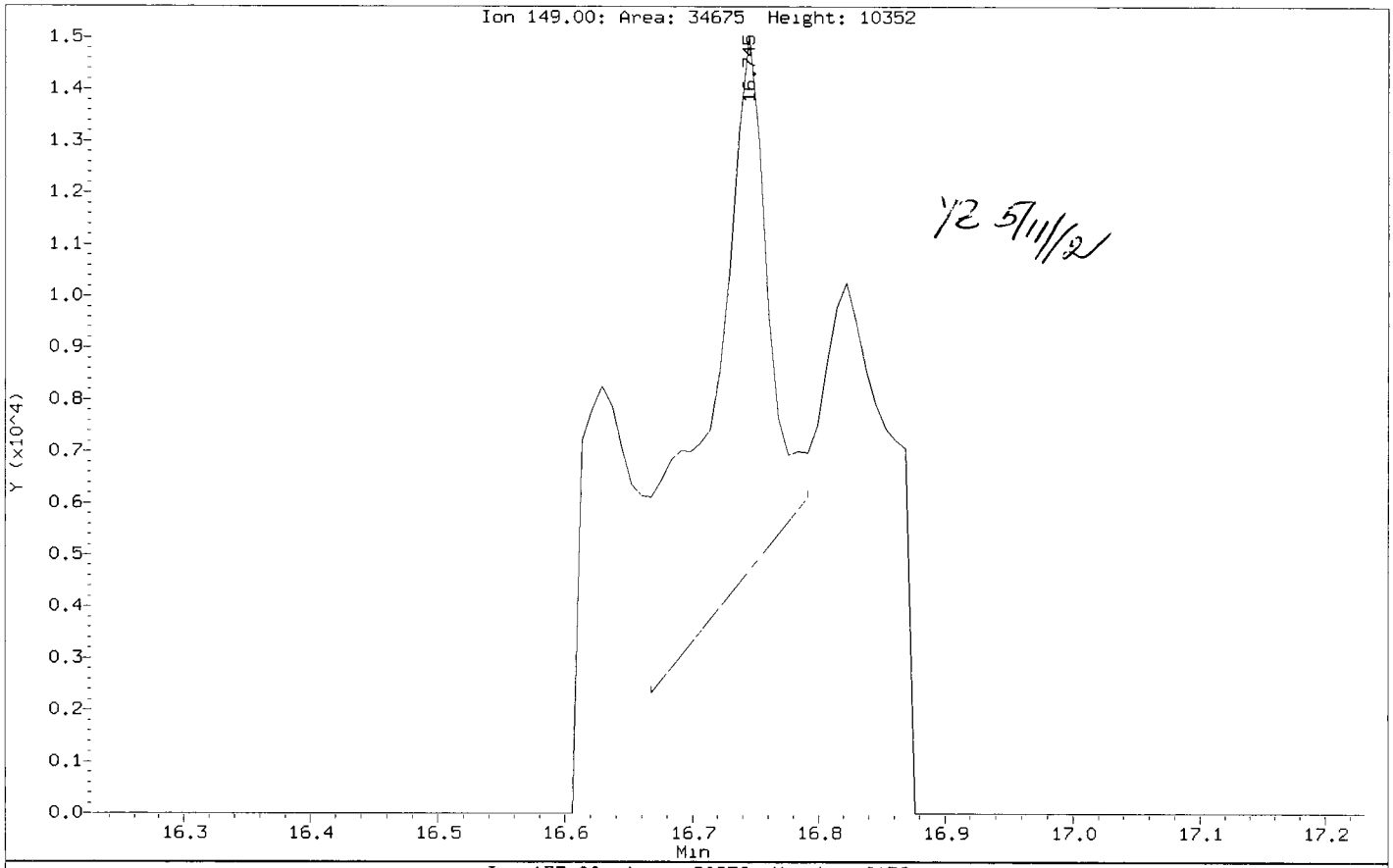
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

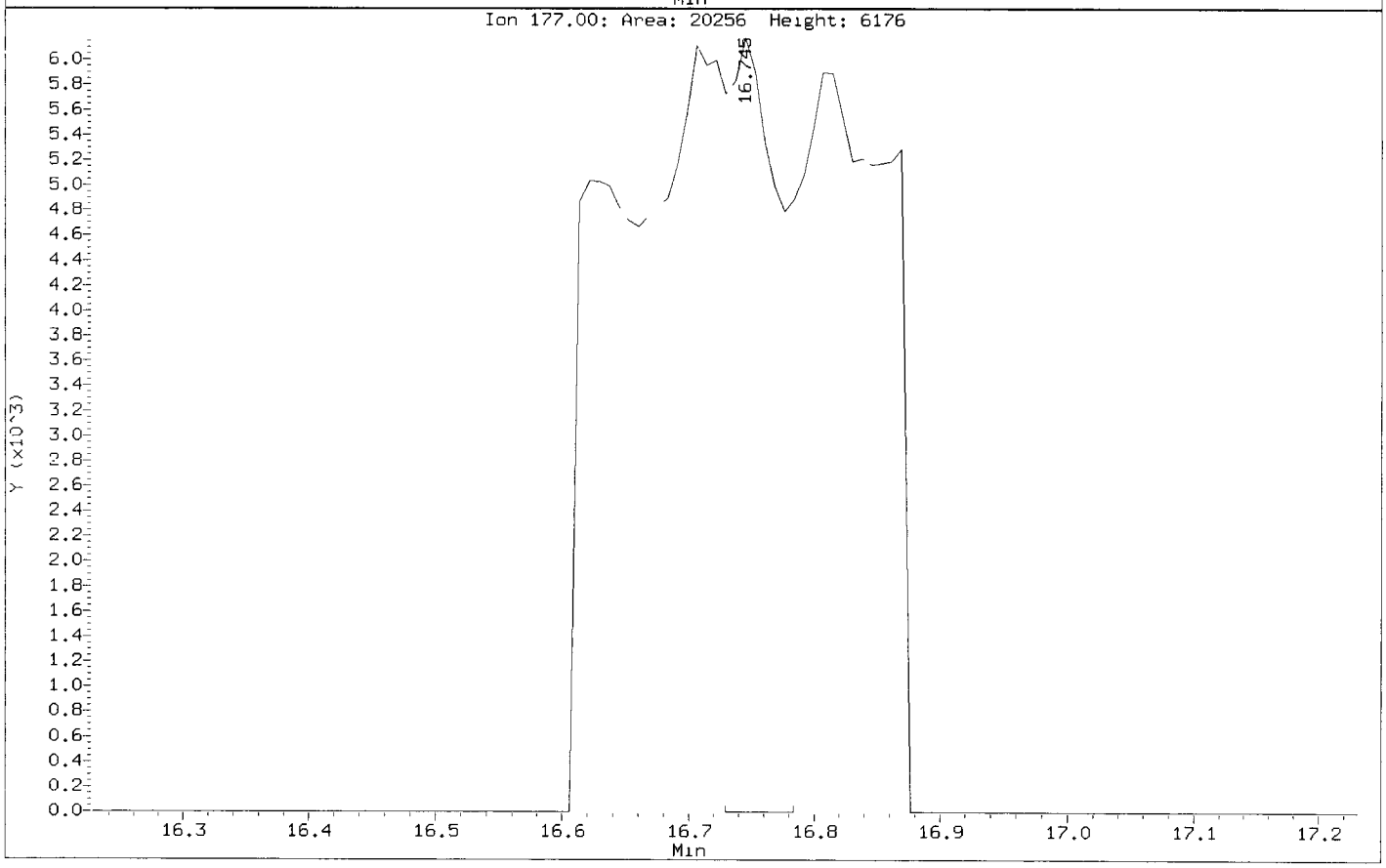
5. Other _____

Analyst: VZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d
Injection Date: 09-MAY-2012 01:14
Instrument: nt10.i
Client Sample ID: I-1-Z

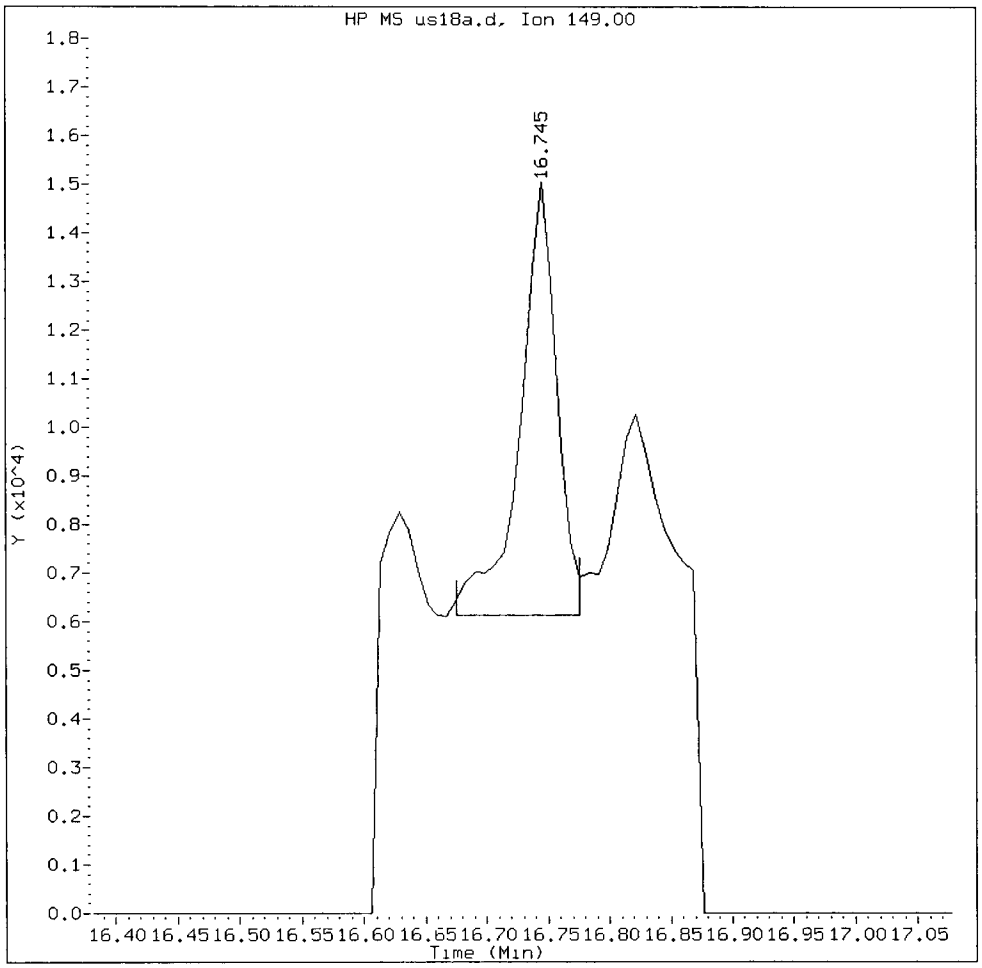
Compound: Diethylphthalate
CAS Number: 84-66-2





US18A, /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Diethylphthalate Amount: 0.12 Area: 18700



MANUAL INTEGRATION for Diethylphthalate

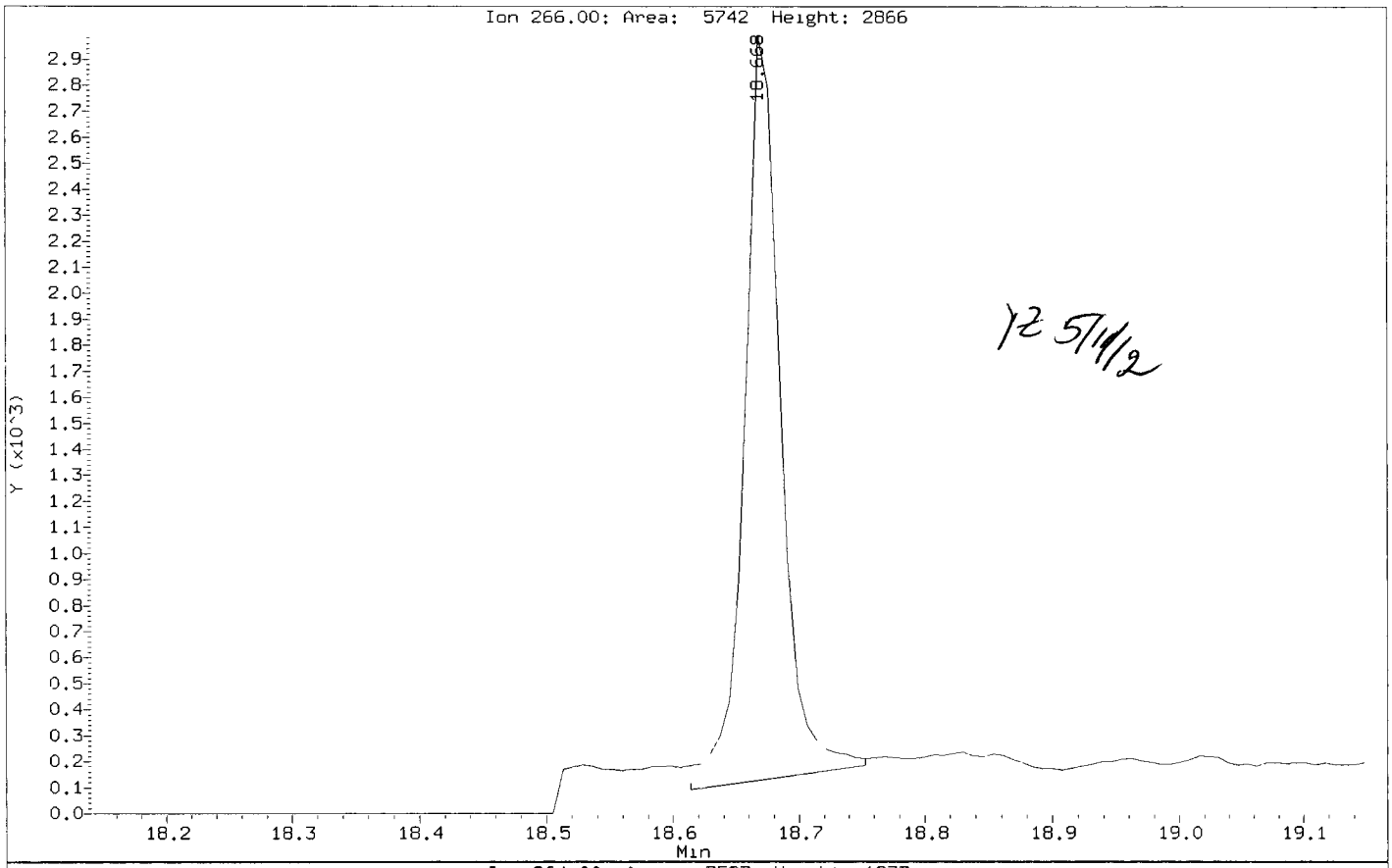
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

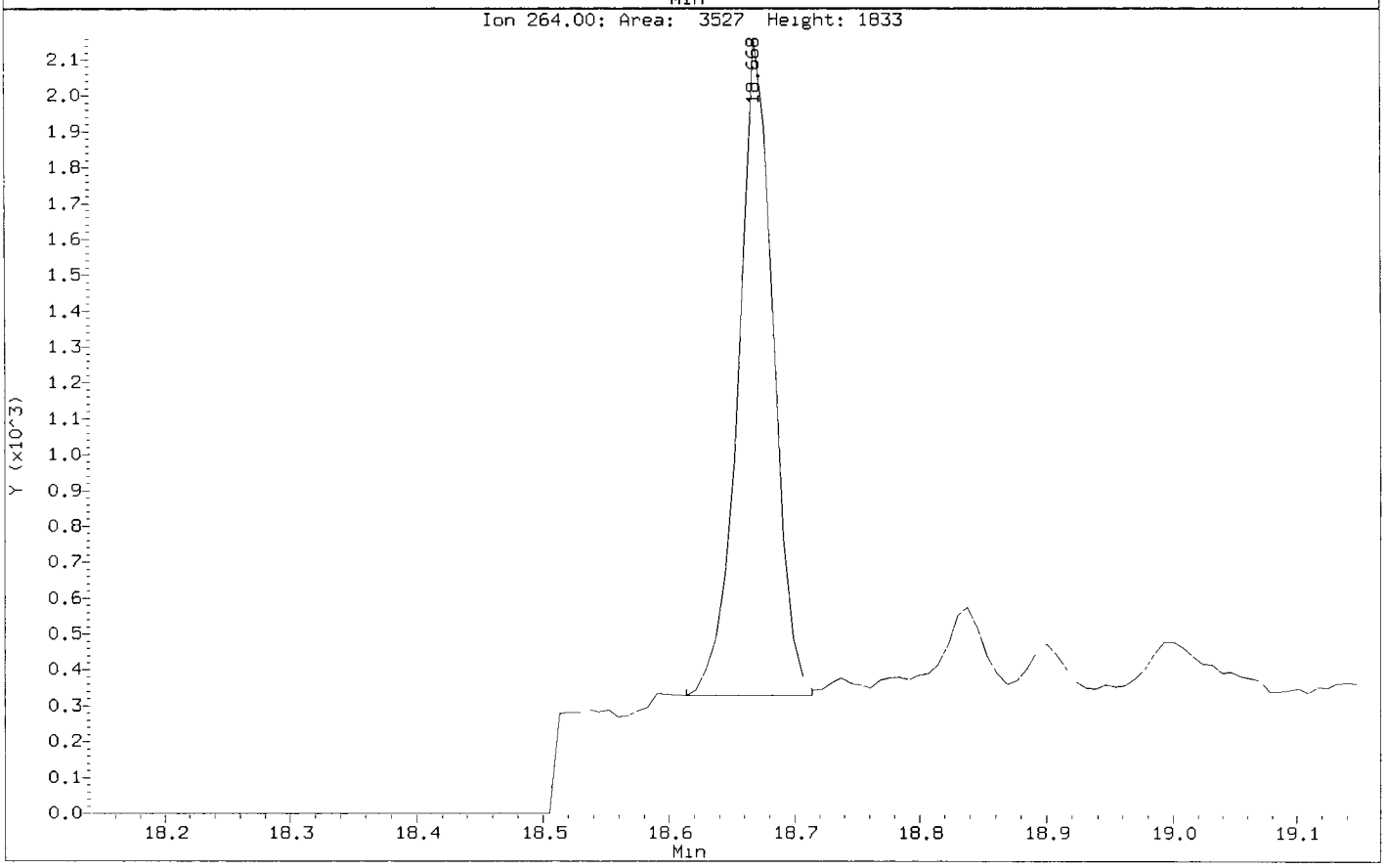
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d
Injection Date: 09-MAY-2012 01:14
Instrument: nt10.i
Client Sample ID: I-1-Z

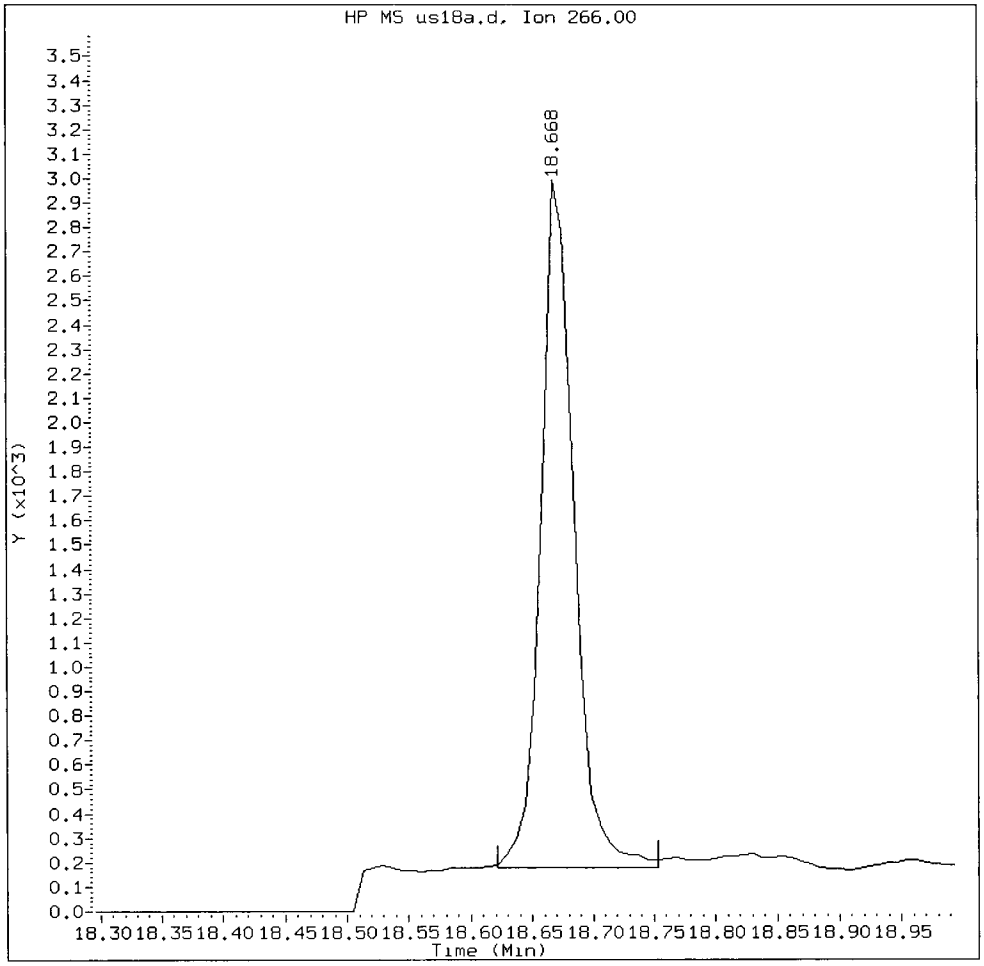
Compound: Pentachlorophenol
CAS Number: 87-86-5





US18A, /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Pentachlorophenol Amount: 0.15 Area: 5365



MANUAL INTEGRATION for Pentachlorophenol

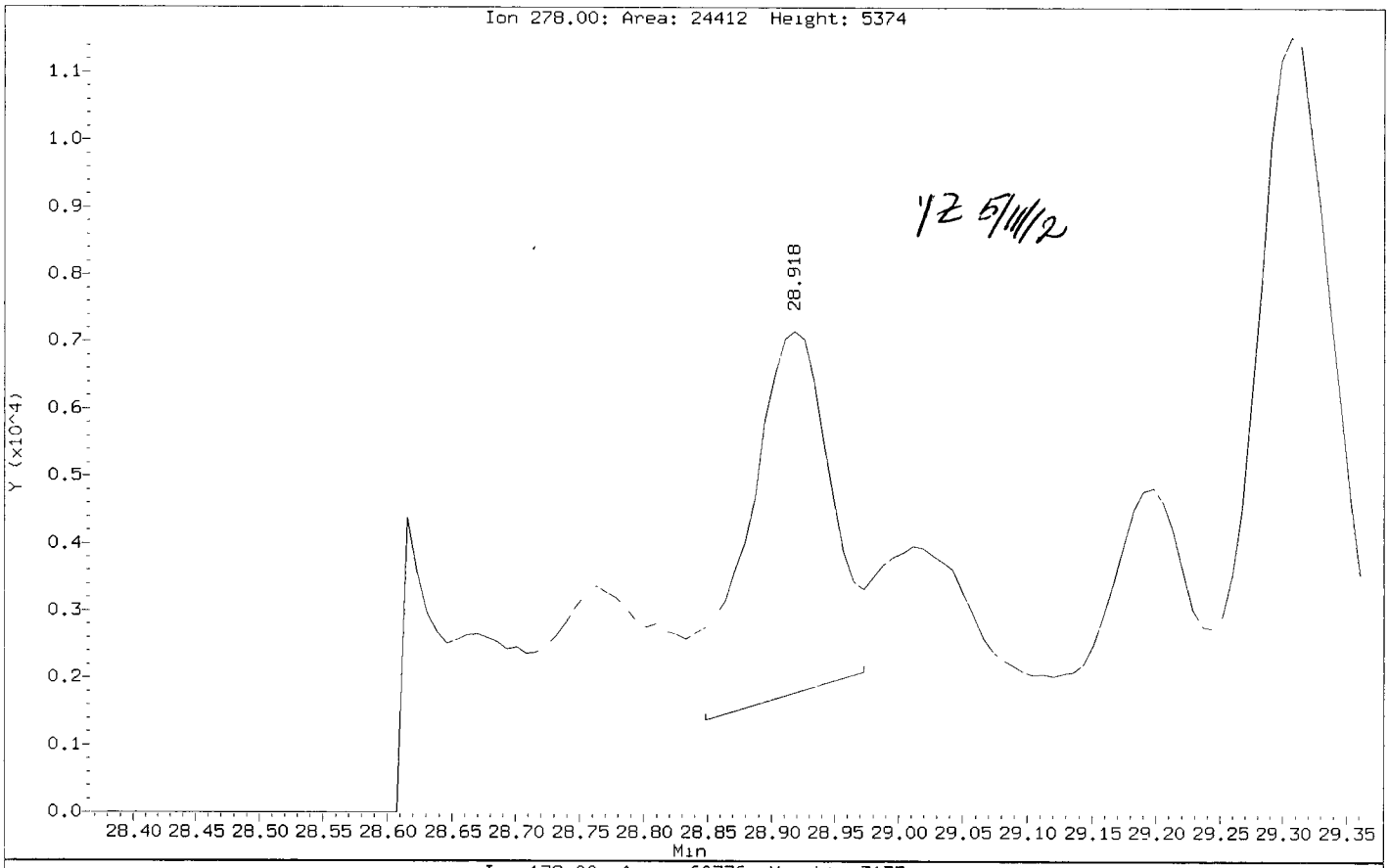
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

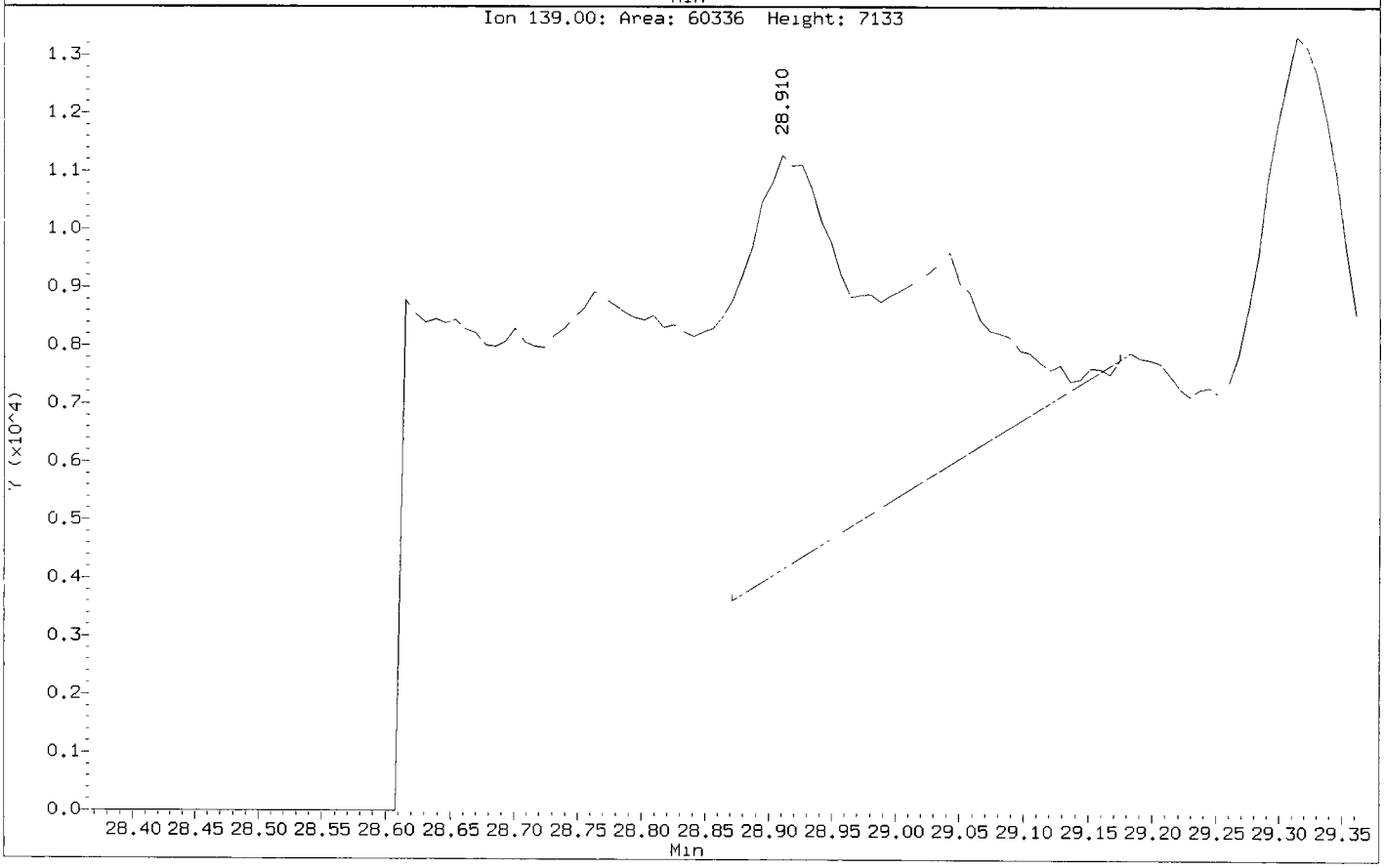
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d
Injection Date: 09-MAY-2012 01:14
Instrument: nt10.i
Client Sample ID: I-1-Z

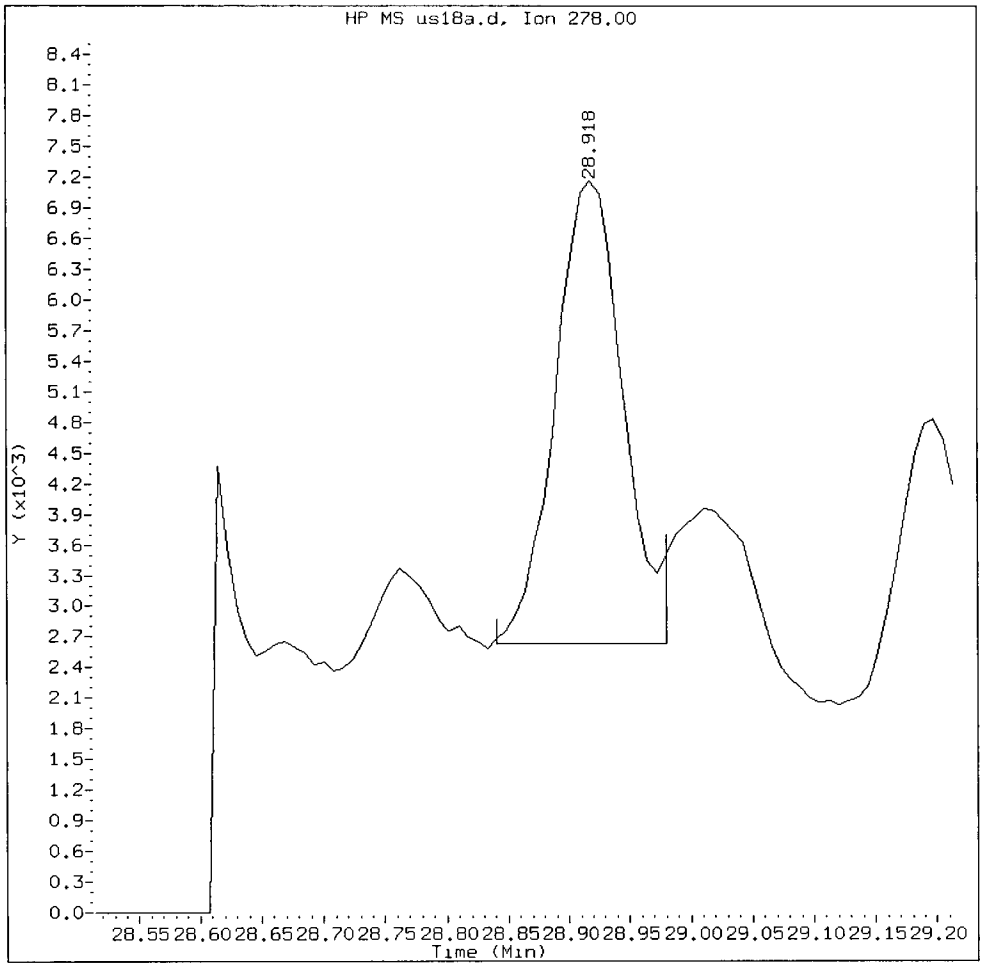
Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





US18A, /chem1/nt10.i/20120508.b/SIM.b/us18a.d

Dibenzo(a,h)anthracene Amount: 0.09 Area: 17743



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/11/12

CO-ELUTION SUMMARY FOR FILE - us18a.d

Lab ID: US18A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS
9.084	1,4-Dichlorobenzene and ~~1,3-Dichlorobenzene~~

Analytical Resources, Inc. YZ 5/11/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Lab Smp Id: US18B Client Smp ID: I-2-A-Z
Inj Date : 09-MAY-2012 01:51
Operator : YZ Inst ID: nt10.i
Smp Info : US18B
Misc Info : 12-7644
Comment :
Method : /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2012 15:15 yev Quant Type: ISTD
Cal Date : 07-MAY-2012 19:19 Cal File: ic0507i.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	20.33000	Weight of sample extracted (g)
M	48.80000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.703	6.680	(0.740)	361585	4 15190	398 9
3 Phenol	94	8.449	8.418	(0.933)	66442	0 57643	55 38
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	9.053	9.045	(1.000)	253680	4.00000	
9 1,4-Dichlorobenzene	146	9.084	9.076	(1.003)	5727	0.05427	5 214
11 Benzyl alcohol	79	9.371	9.355	(1.035)	7202	0.12205	11.73(M)
12 1,2-Dichlorobenzene	146	9.472	9.464	(1.046)	3321	0.03235 J	3.108
13 2-Methylphenol	108	9.643	9.619	(1.065)	40028	0 43233	41 53
15 4-Methylphenol	108	9 938	9.914	(1.098)	226533	2.33180	224.0
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected					
22 2,4-Dimethylphenol	107	11 061	11.038	(0.943)	98090	1.09915	105.6
26 1,2,4-Trichlorobenzene	180	11.647	11.639	(0.993)	2730	0.03158 J	3 034(M)
* 27 Naphthalene-d8	136	11 732	11.724	(1.000)	973593	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.175	15.144	(0.970)	16011	0.10507	10.09(M)
*	42 Acenaphthene-d10	162	15.647	15 632	(1.000)	498345	4.00000	
	50 Diethylphthalate	149	16.753	16 729	(1.071)	7300	0.04376	4.204(M)
	54 N-Nitrosodiphenylamine	169	17.146	17 123	(0.906)	11765	0 09976	9.584
	57 Hexachlorobenzene	284	18.273	18.250	(0.965)	4113	0.06616	6 356(M)
	58 Pentachlorophenol	266	18.676	18.644	(0.986)	7161	0.19393	18.63(M) LOD=24
*	59 Phenanthrene-d10	188	18.931	18.908	(1.000)	877752	4.00000	
$	66 Terphenyl-d14	244	22.119	22.095	(0.922)	476233	3.09625	297 5
	67 Butylbenzylphthalate	149	23.040	23.047	(0.960)	16235	0.13947	13.40(M)
*	69 Chrysene-d12	240	23.992	23.969	(1.000)	966194	4.00000	
*	77 Perylene-d12	264	26.477	26.446	(1.000)	927301	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.903	28.864	(1 092)	12376	0.06233	5.988(M)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: us18b.d
Lab Smp Id: US18B
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7644

Calibration Date: 08-MAY-2012
Calibration Time: 14:47
Client Smp ID: I-2-A-Z
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	311248	155624	622496	253680	-18.50
27 Naphthalene-d8	1166872	583436	2333744	973593	-16.56
42 Acenaphthene-d10	603218	301609	1206436	498345	-17.39
59 Phenanthrene-d10	1096026	548013	2192052	877752	-19.92
69 Chrysene-d12	1131082	565541	2262164	966194	-14.58
77 Perylene-d12	1082499	541250	2164998	927301	-14.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.04	8.54	9.54	9.05	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.63	15.13	16.13	15.65	0.10
59 Phenanthrene-d10	18.91	18.41	19.41	18.93	0.12
69 Chrysene-d12	23.97	23.47	24.47	23.99	0.10
77 Perylene-d12	26.45	25.95	26.95	26.48	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: US18B
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120508.b/SIM.b/SIMABN2.m
Misc Info: 12-7644

Client SDG: US18
Fraction: SV
Client Smp ID: I-2-A-Z
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	720.5	398.9	55.36	30-160
$ 66 Terphenyl-d14	480.4	297.5	61.92	30-160

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Sample Info: US18B

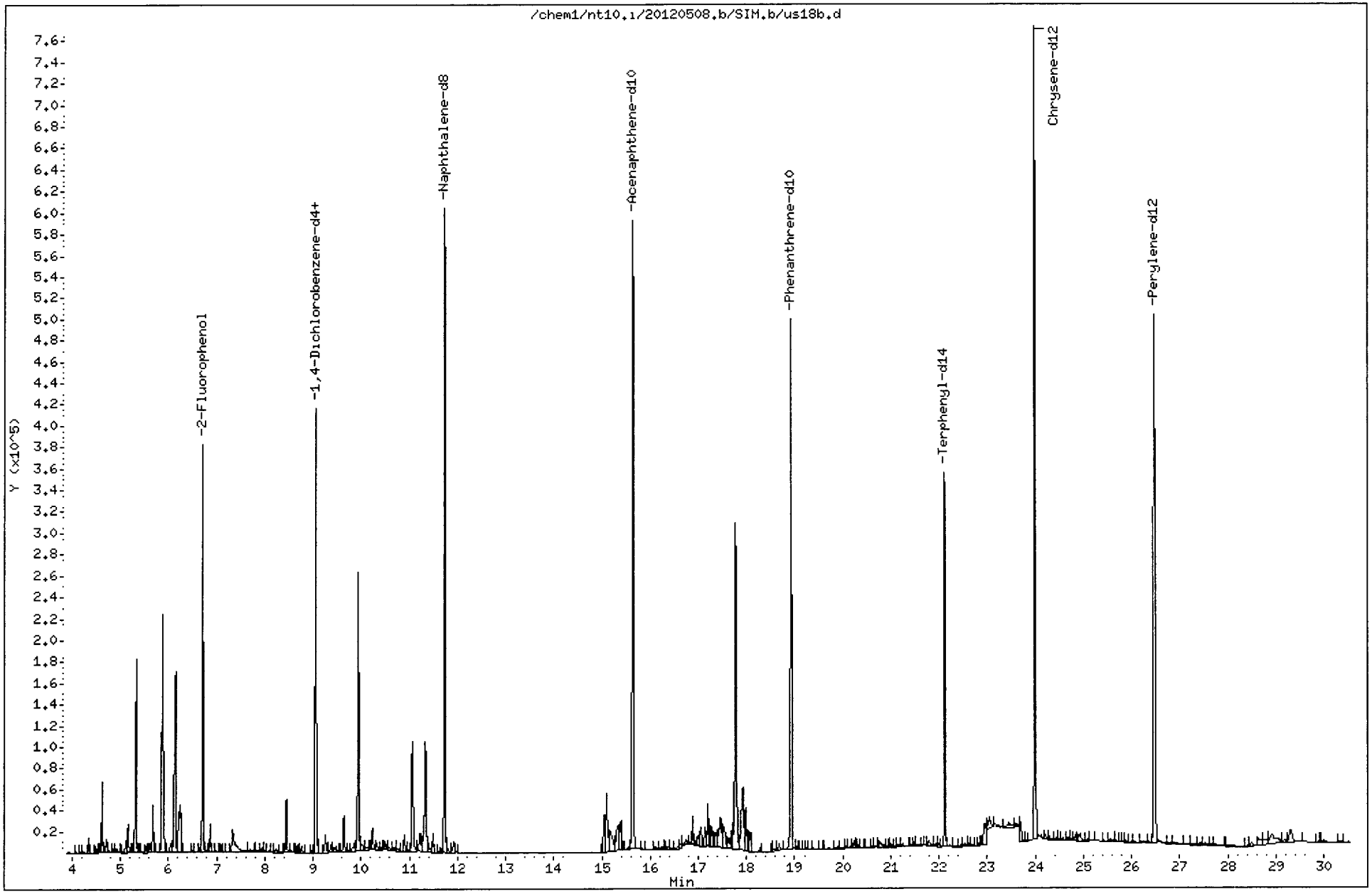
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

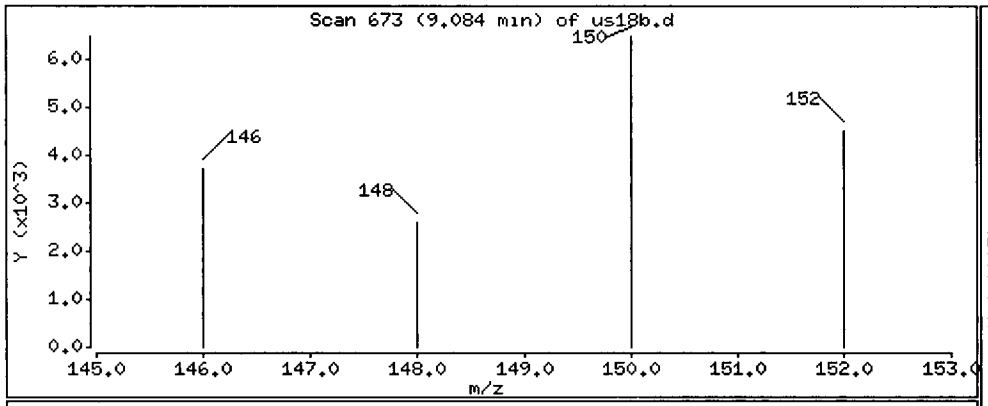
Operator: YZ

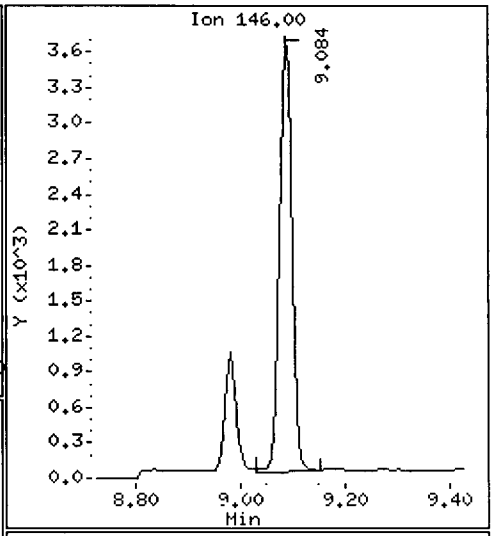
Column phase: ZB-5msi

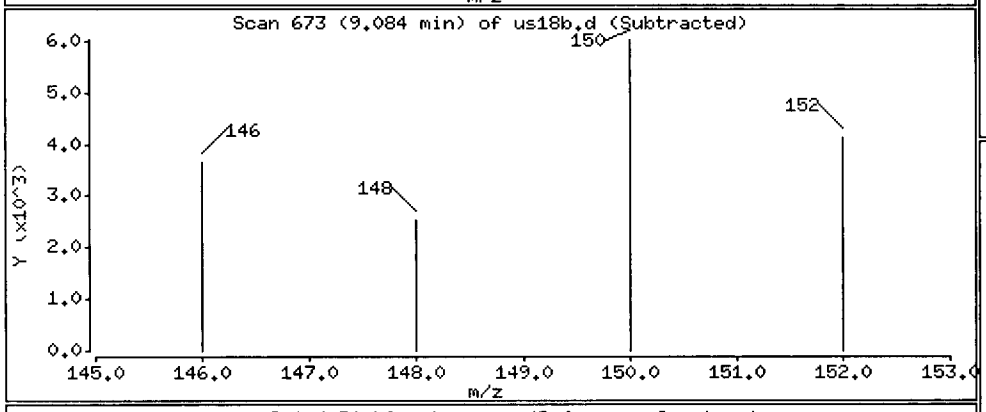
Column diameter: 0.25

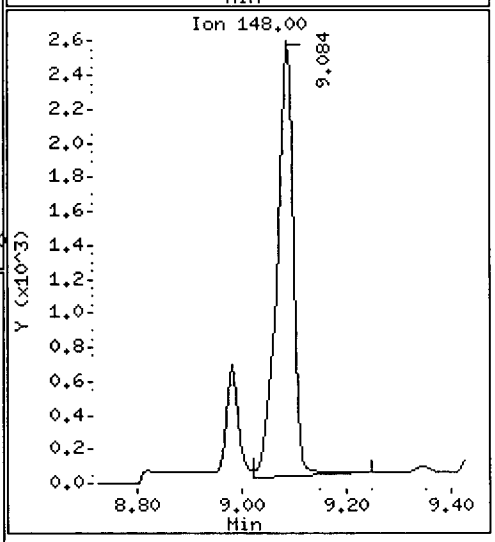
9 1,4-Dichlorobenzene

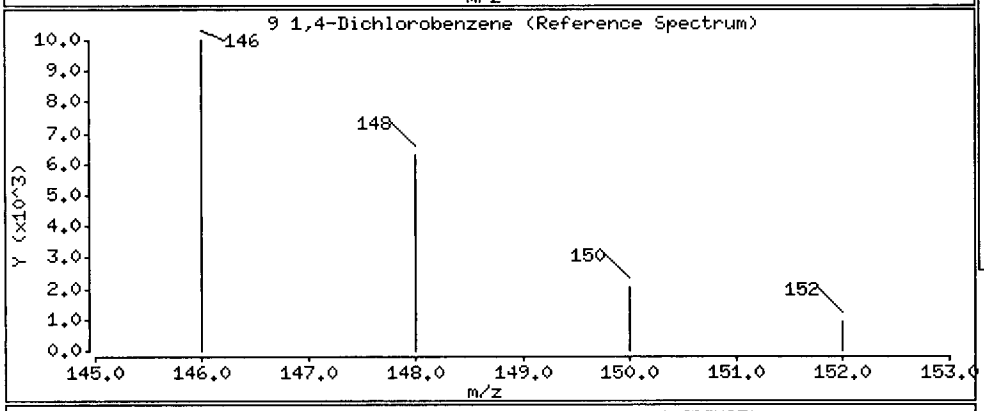
Concentration: 5.214 ug/kg

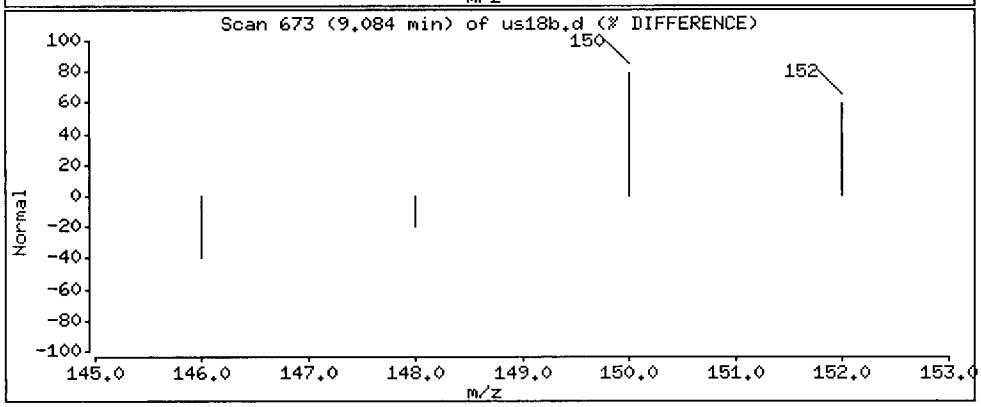












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

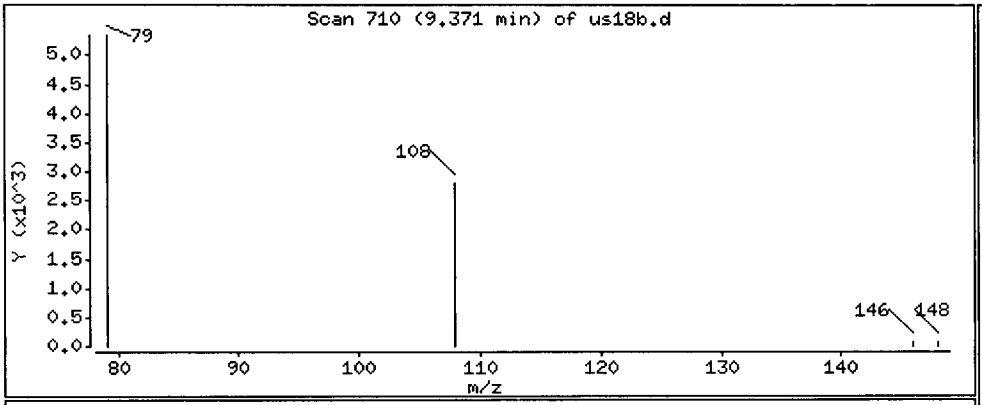
Operator: YZ

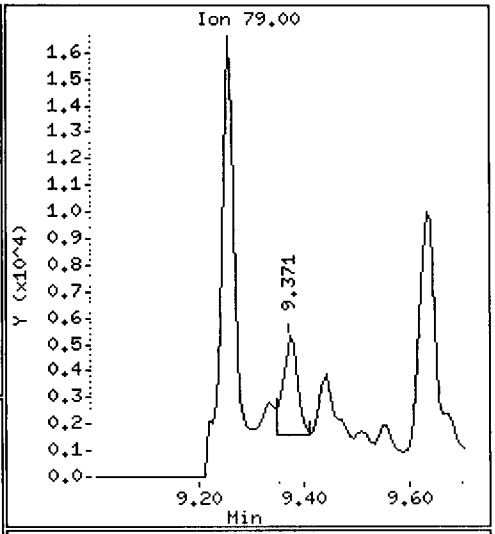
Column phase: ZB-5ms1

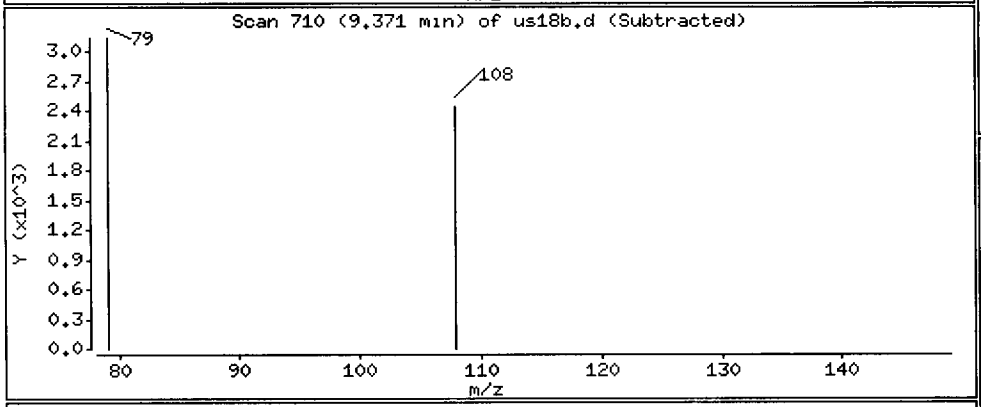
Column diameter: 0.25

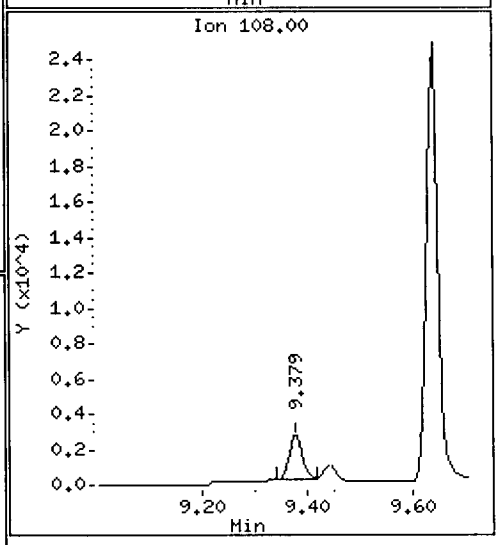
11 Benzyl alcohol

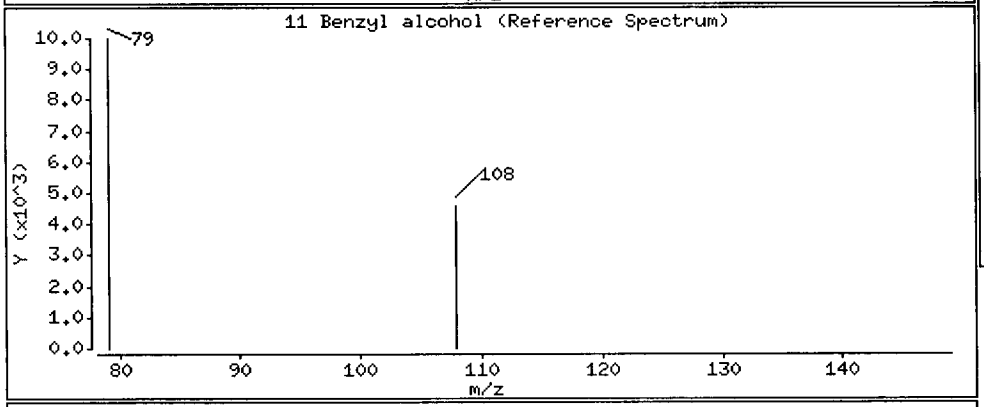
Concentration: 11.73 ug/kg

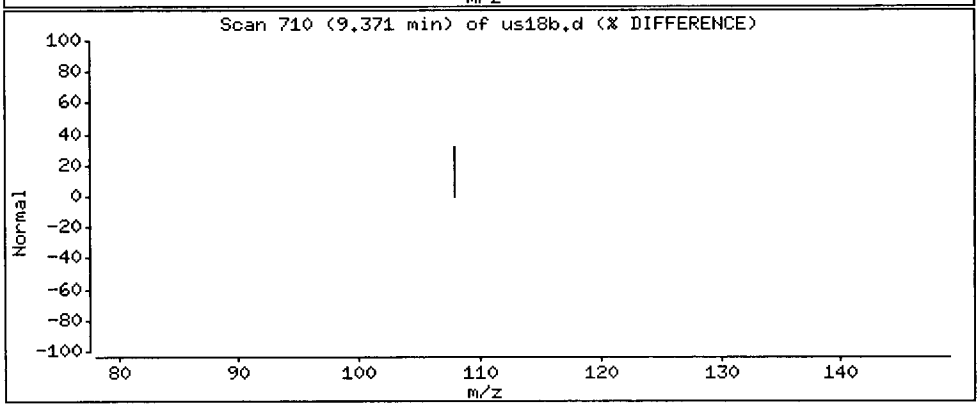












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

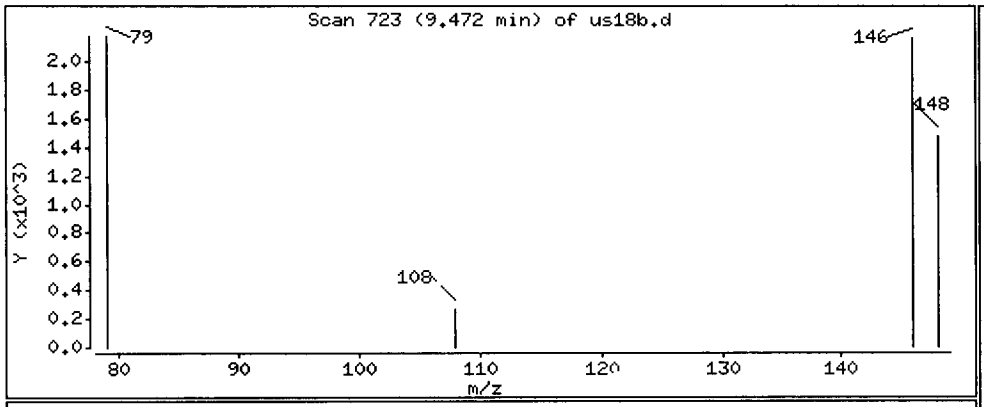
Operator: YZ

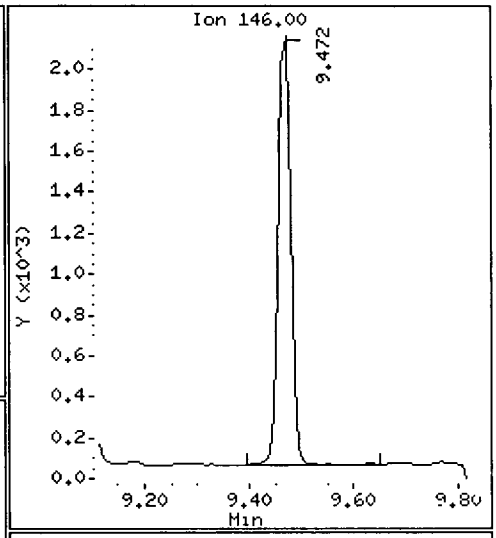
Column phase: ZB-5msi

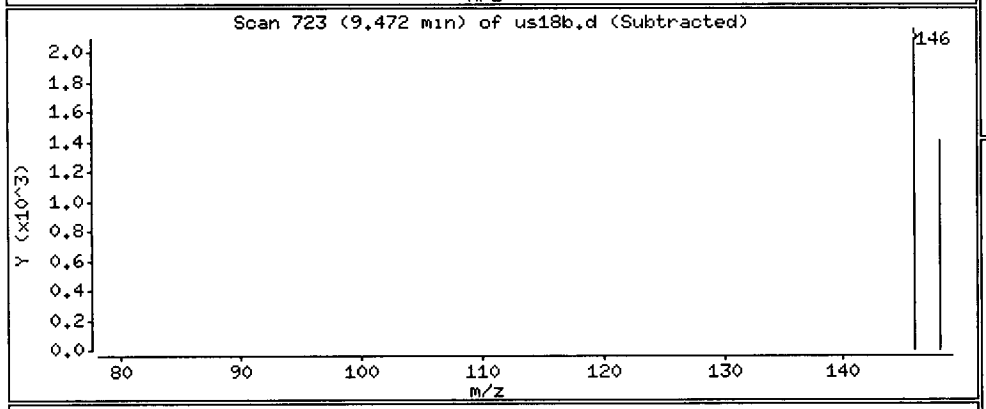
Column diameter: 0.25

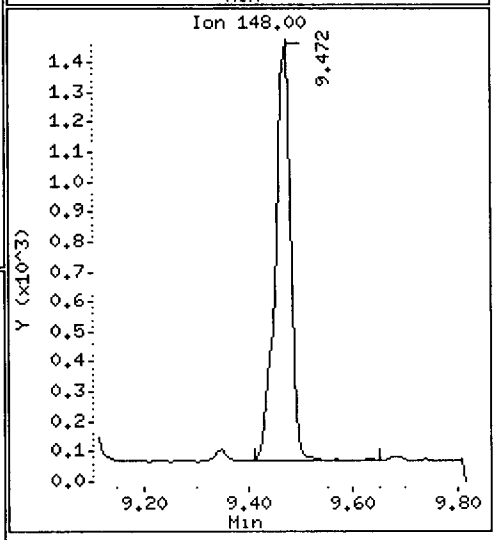
12 1,2-Dichlorobenzene

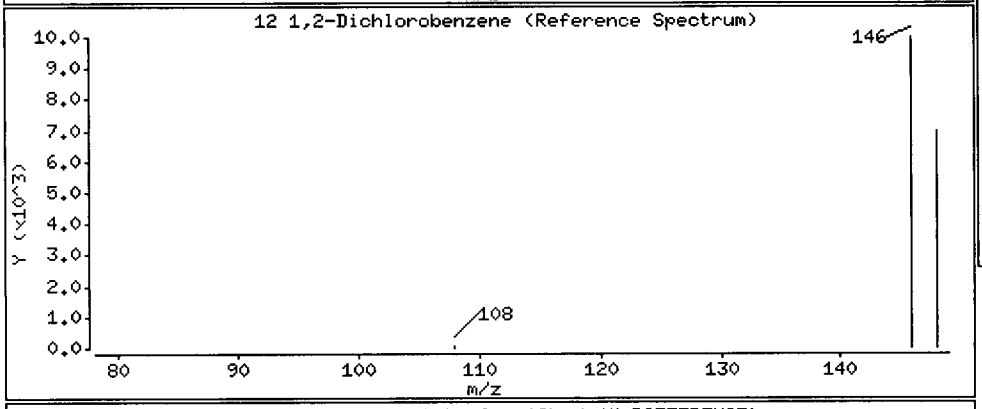
Concentration: 3.108 ug/kg

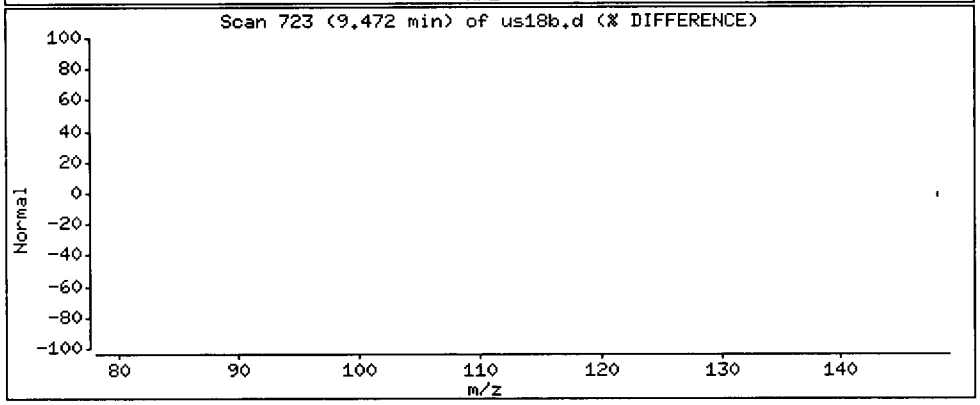












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

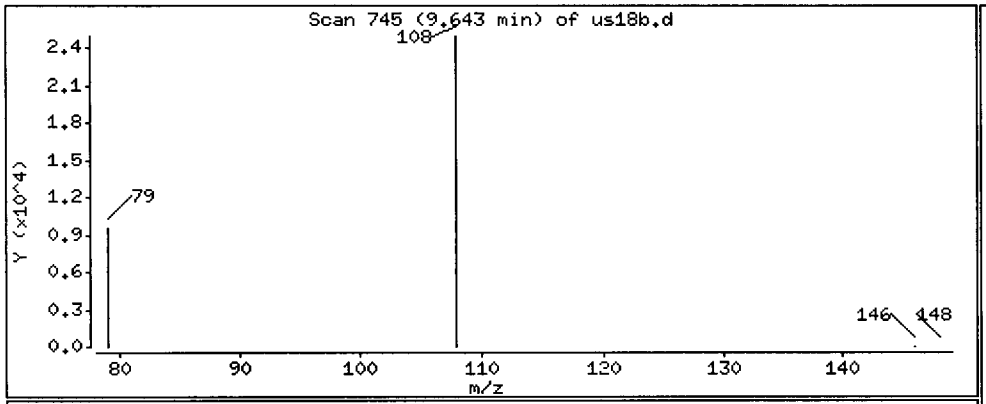
Operator: YZ

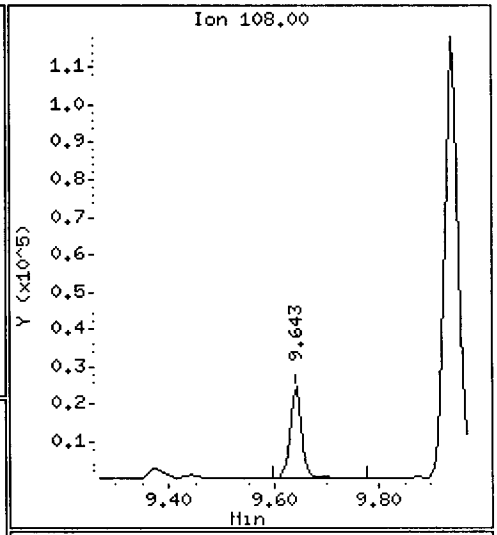
Column phase: ZB-5msi

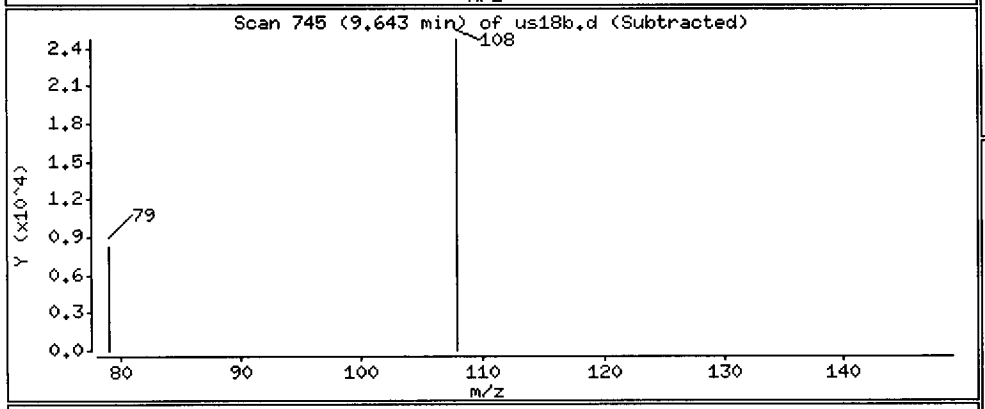
Column diameter: 0.25

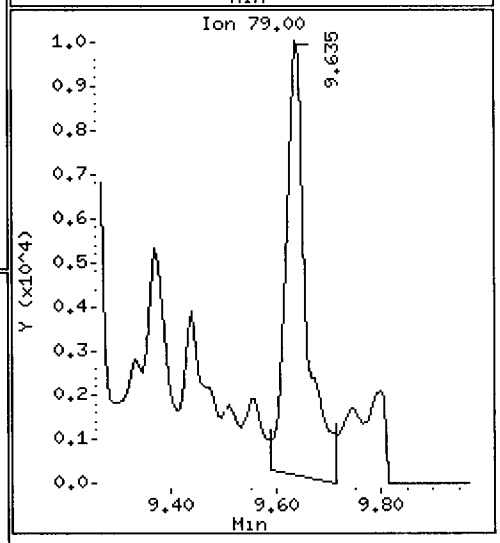
13 2-Methylphenol

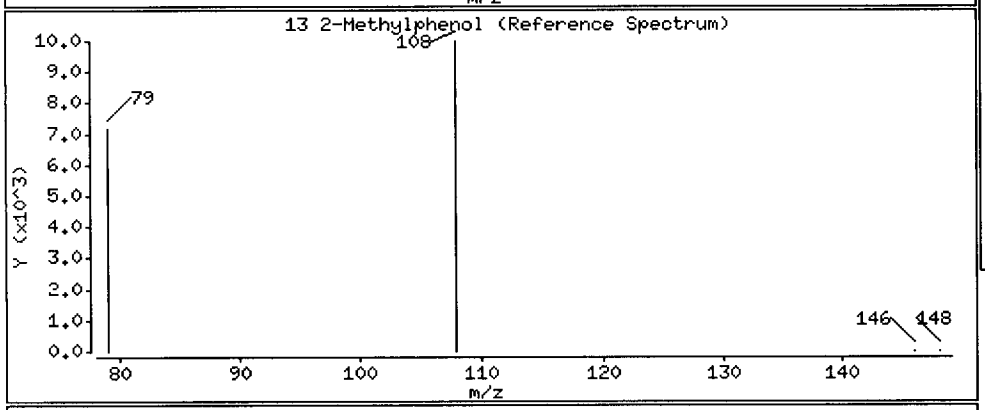
Concentration: 41.53 ug/kg

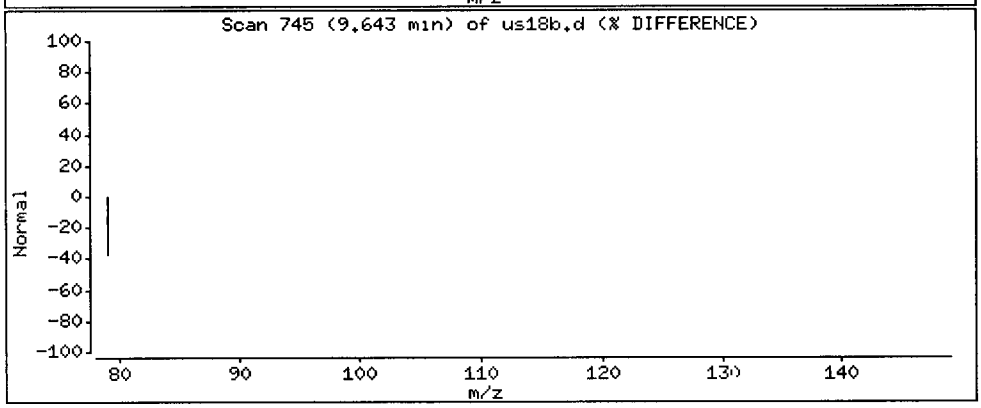












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

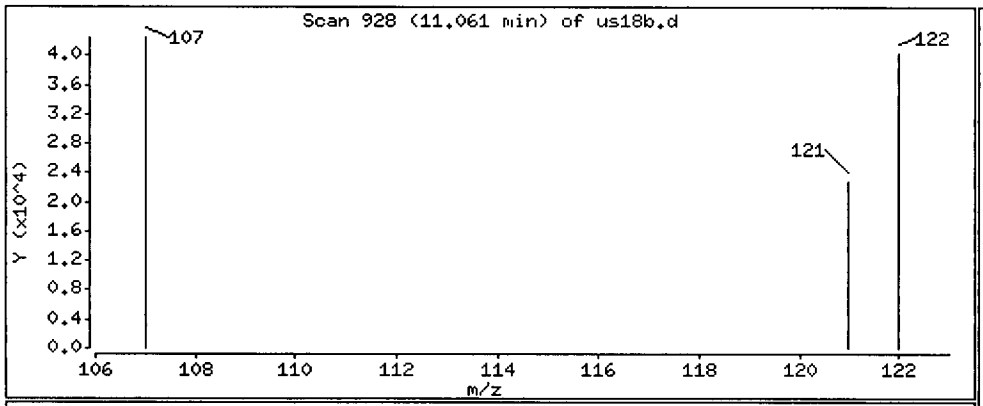
Operator: YZ

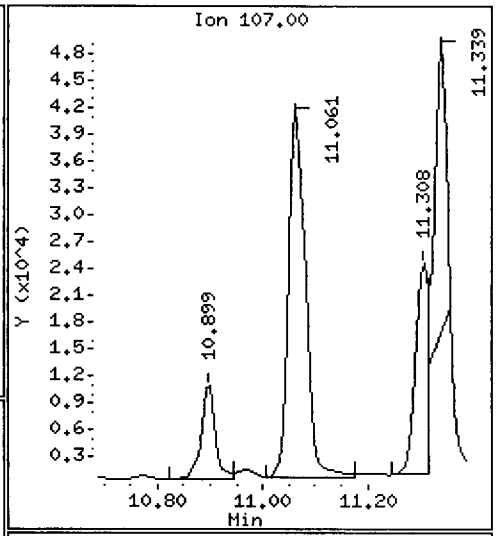
Column phase: ZB-5msi

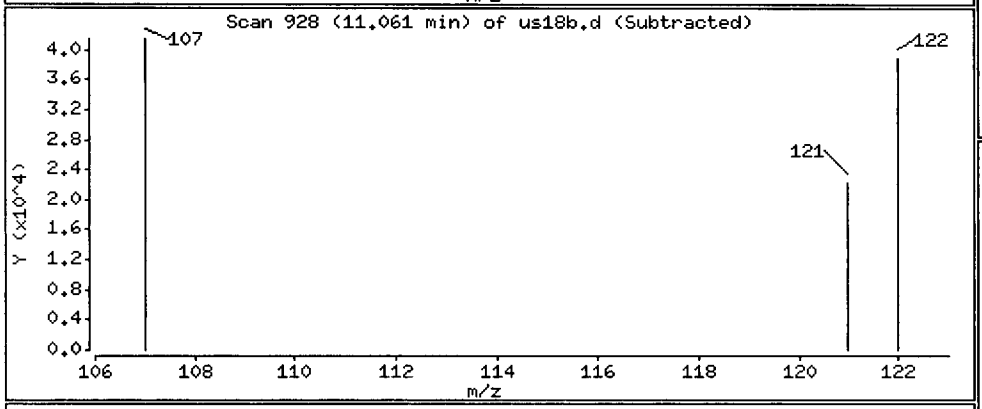
Column diameter: 0.25

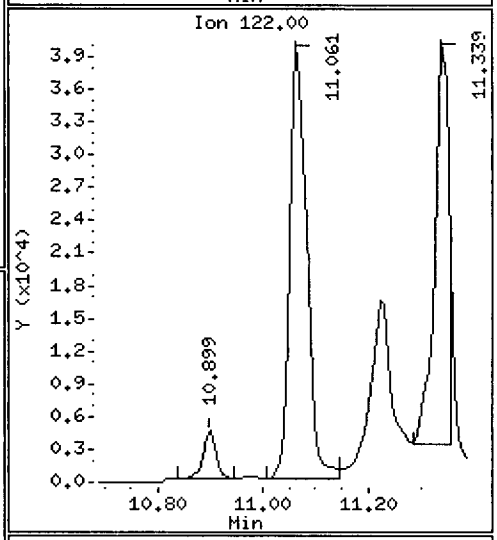
22 2,4-Dimethylphenol

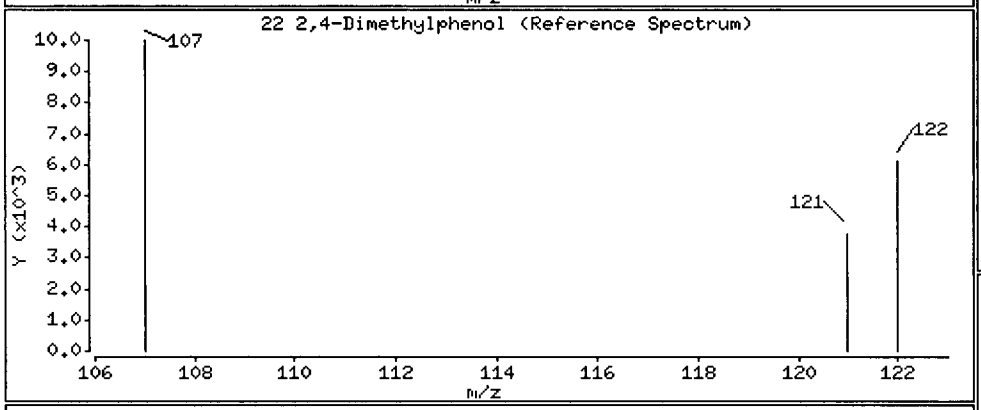
Concentration: 105.6 ug/kg

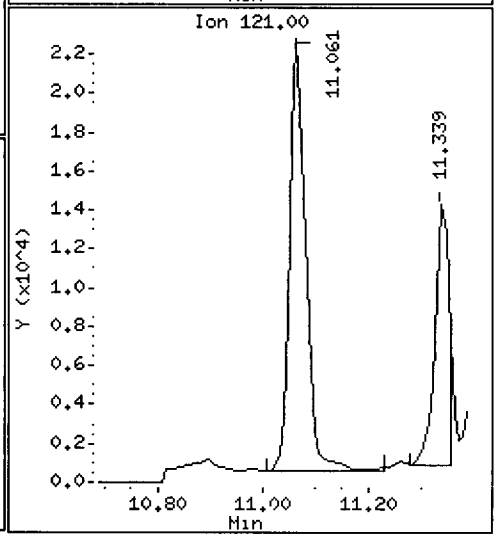


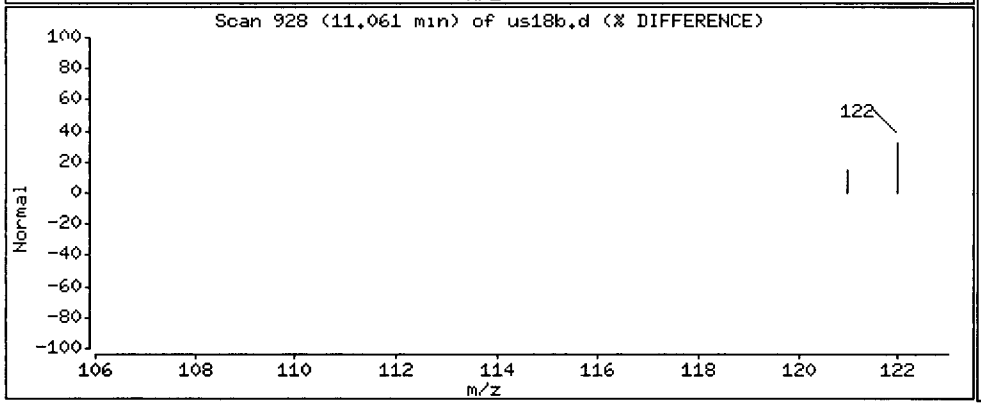












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

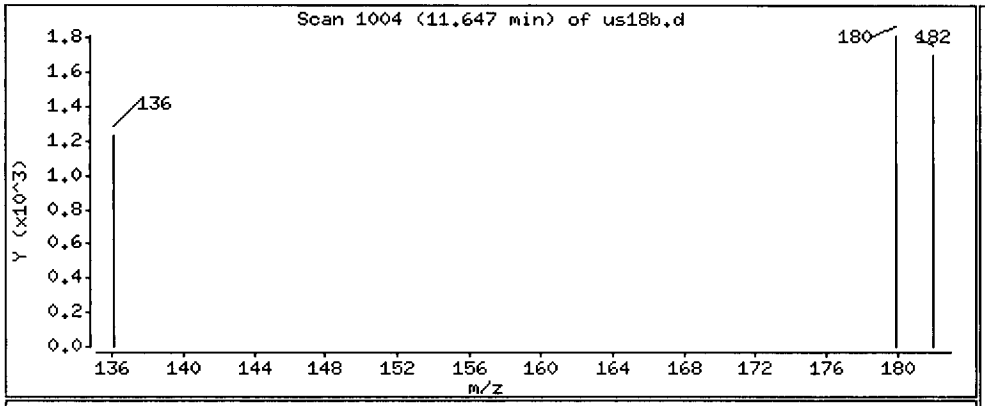
Operator: YZ

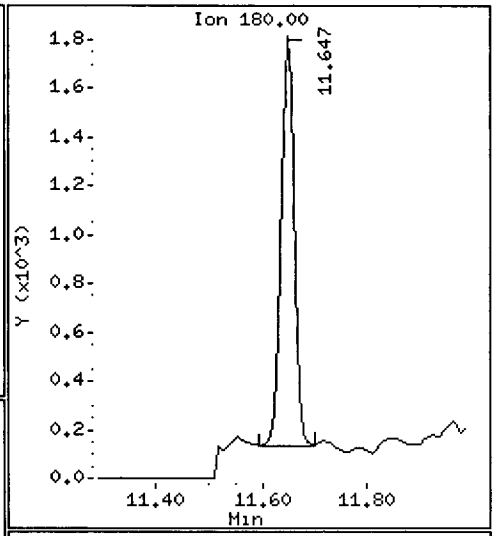
Column phase: ZB-5msi

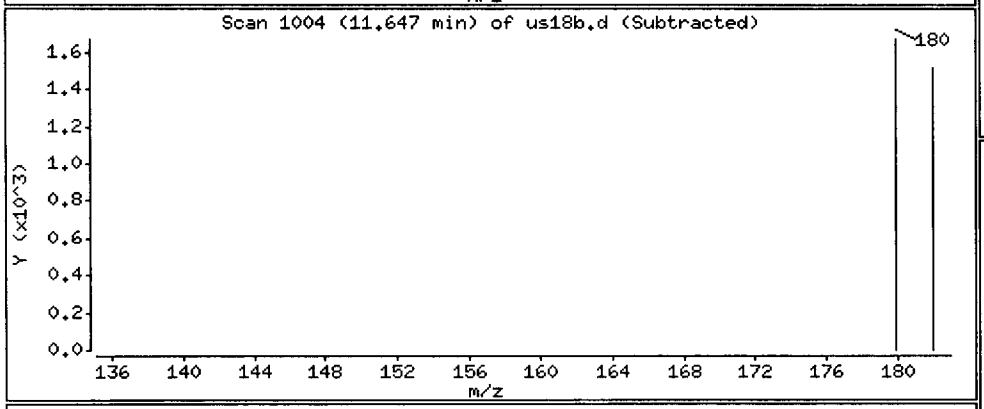
Column diameter: 0.25

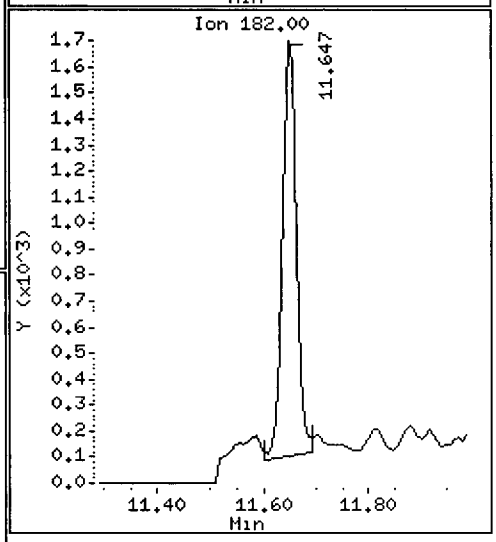
26 1,2,4-Trichlorobenzene

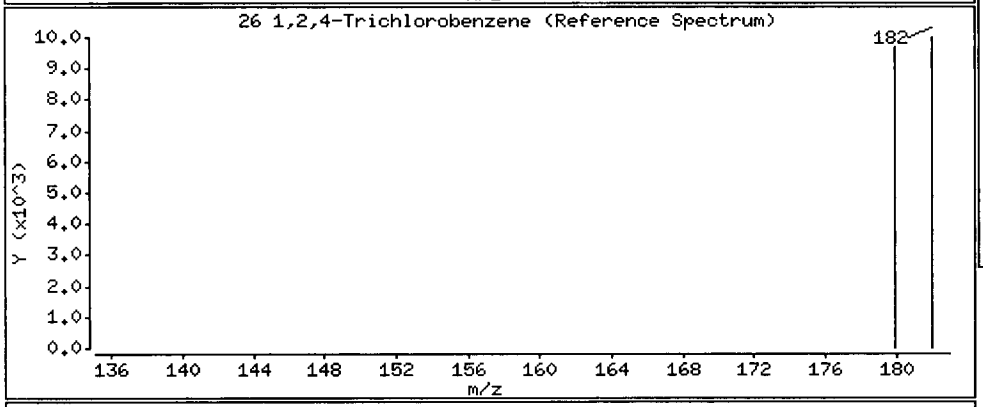
Concentration: 3.034 ug/kg

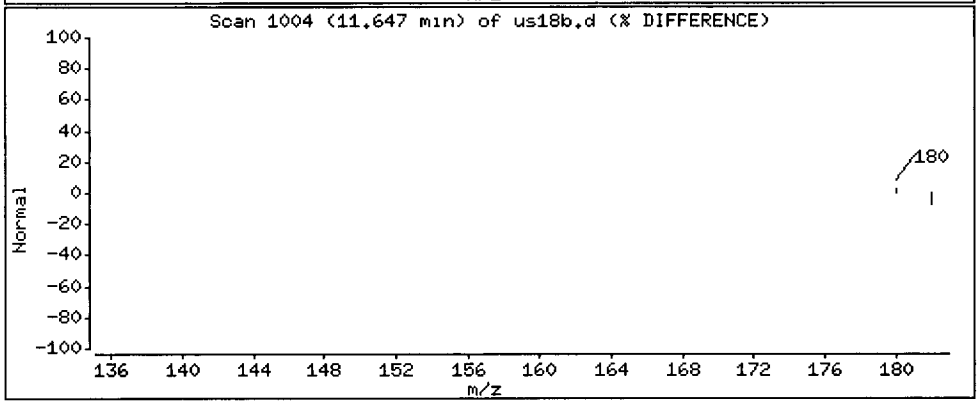












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

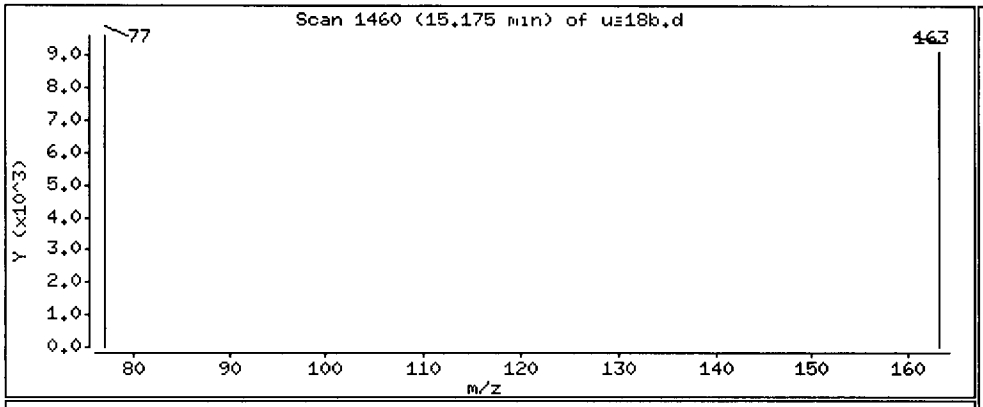
Operator: YZ

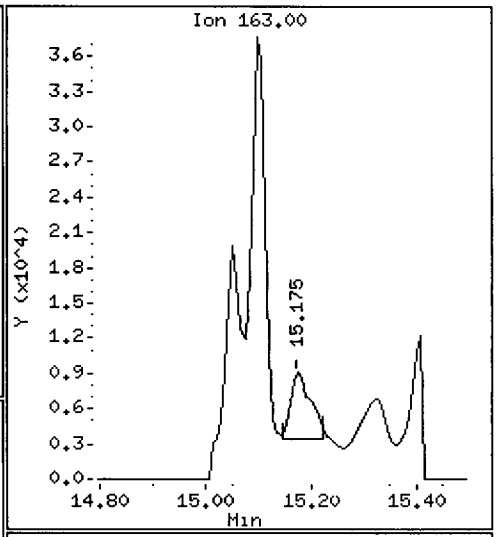
Column phase: ZB-5msi

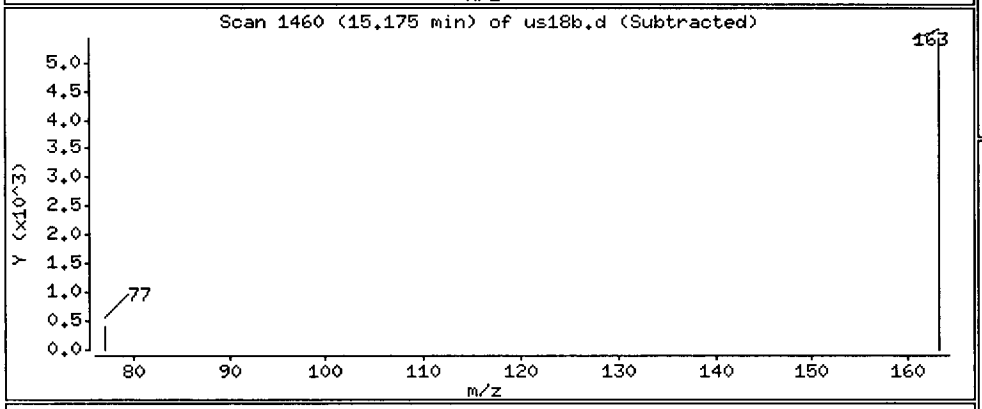
Column diameter: 0.25

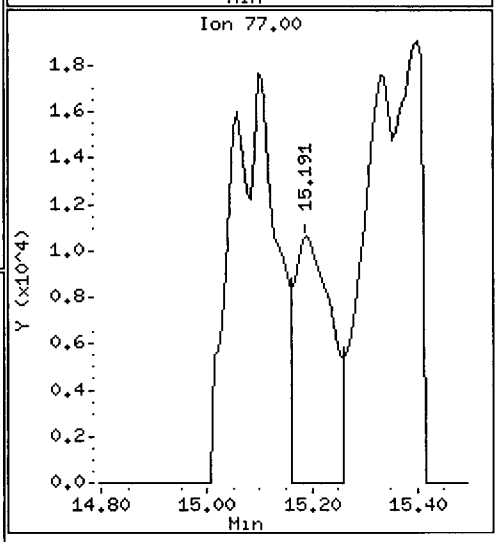
39 Dimethylphthalate

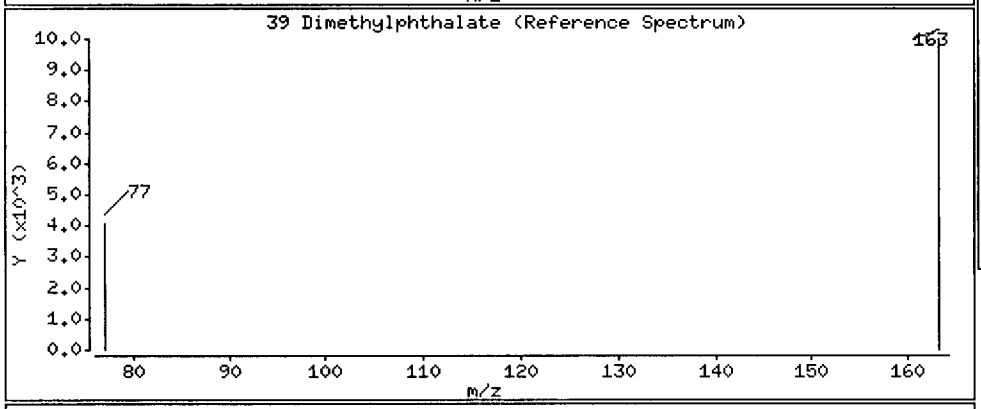
Concentration: 10.09 ug/kg

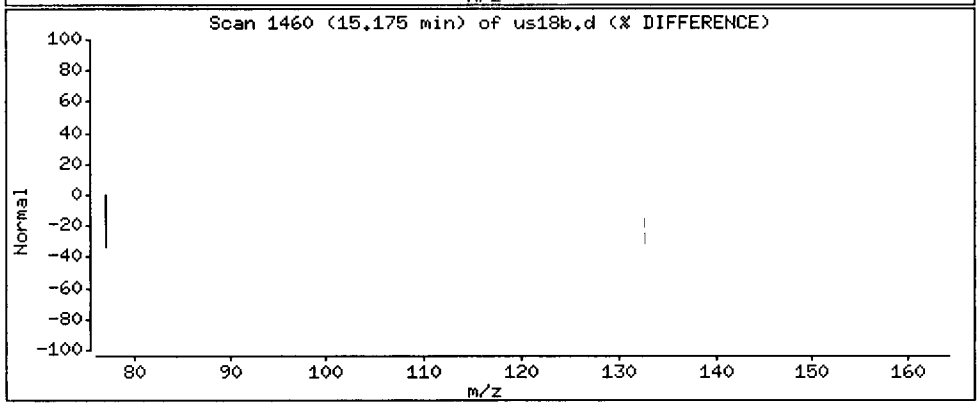












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

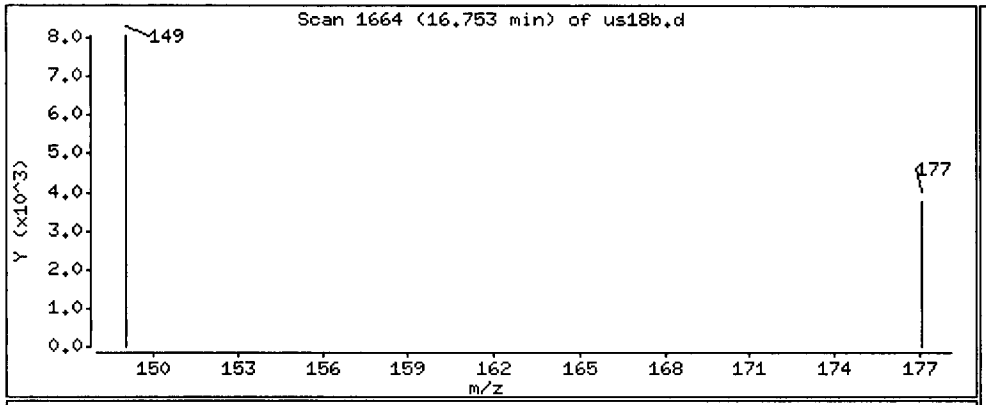
Operator: YZ

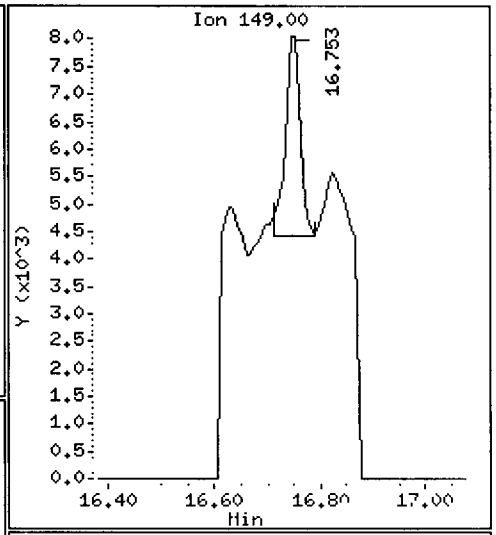
Column phase: ZB-5msi

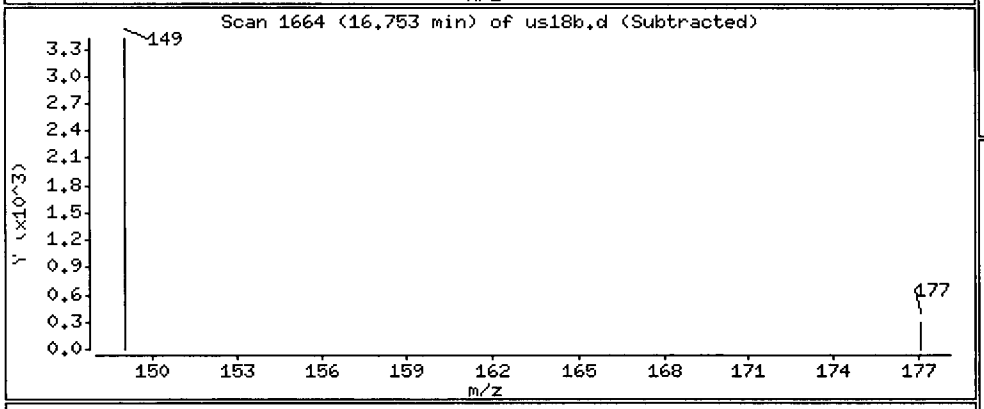
Column diameter: 0.25

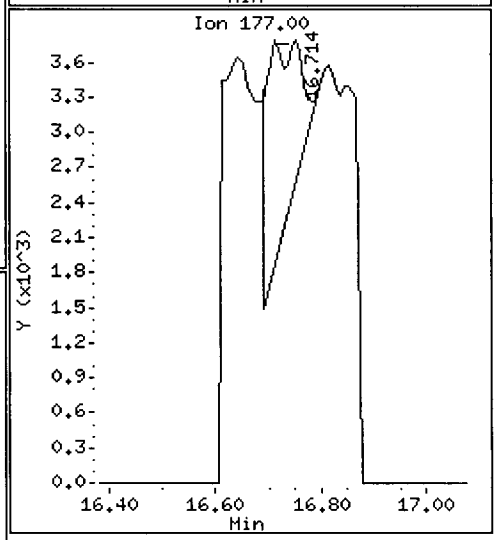
50 Diethylphthalate

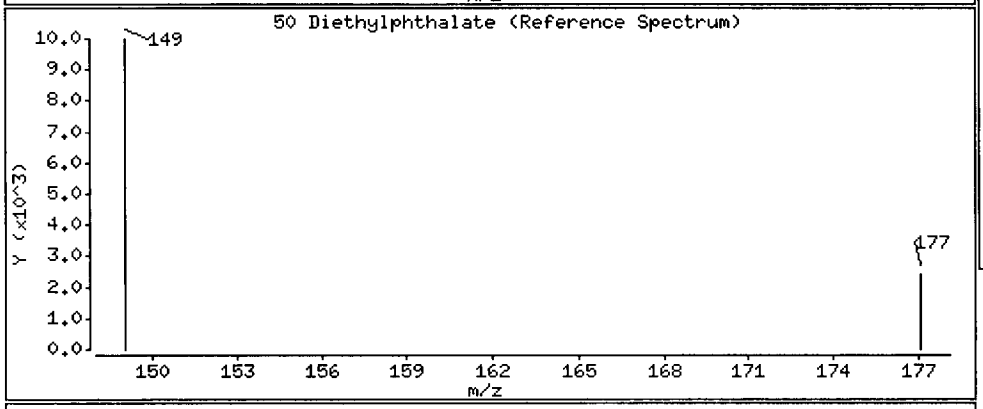
Concentration: 4.204 ug/kg

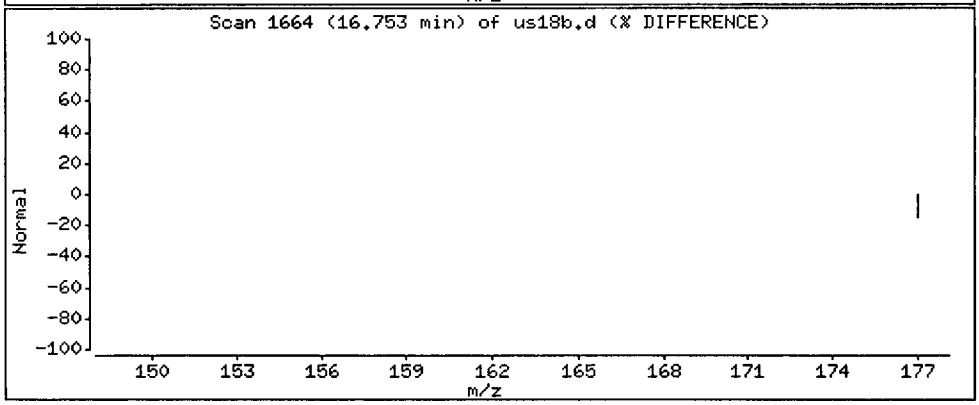












Data File: /chem1/nt10.1/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.1

Sample Info: US18B

Volume Injected (uL): 1.0

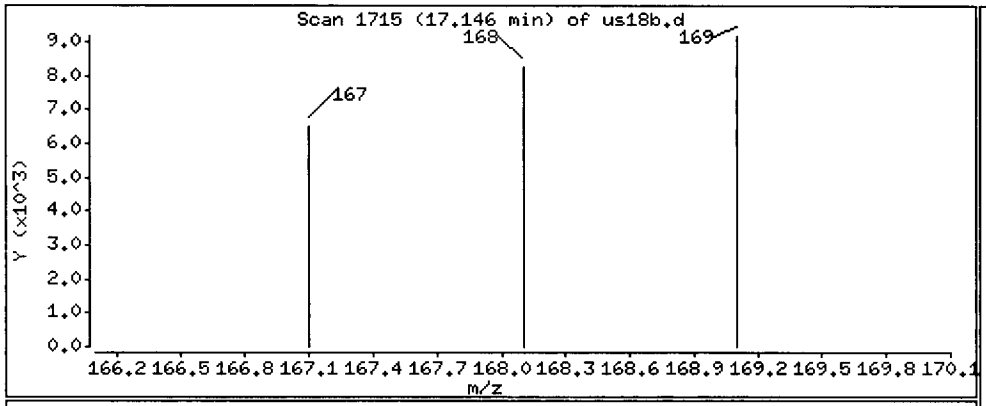
Operator: YZ

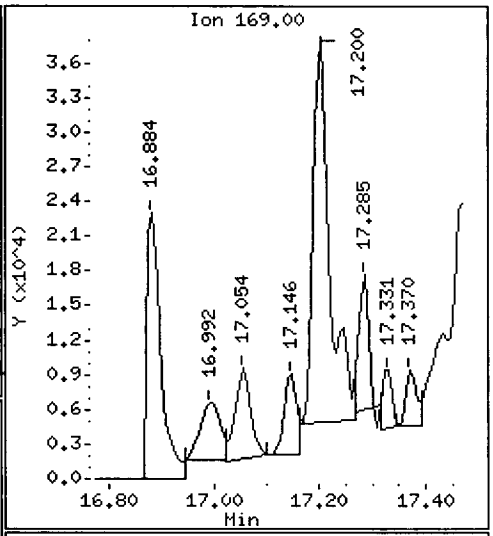
Column phase: ZB-5ms1

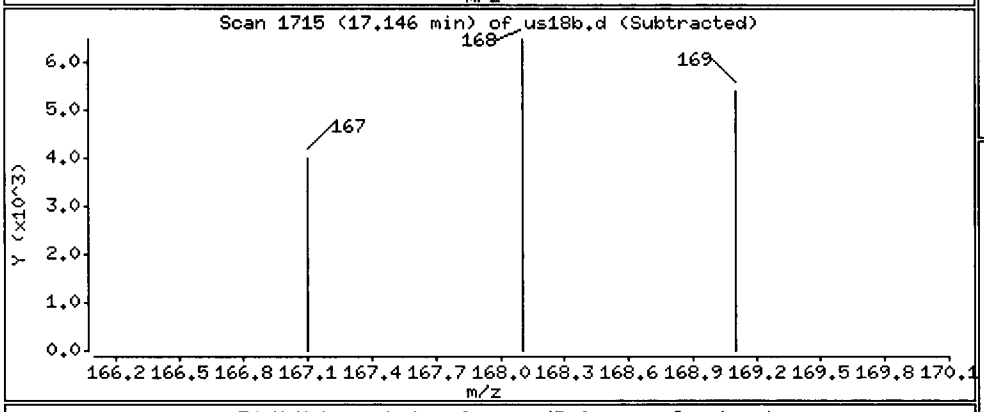
Column diameter: 0.25

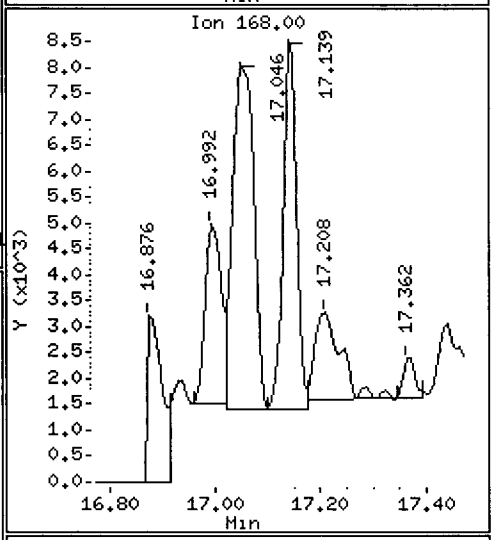
54 N-Nitrosodiphenylamine

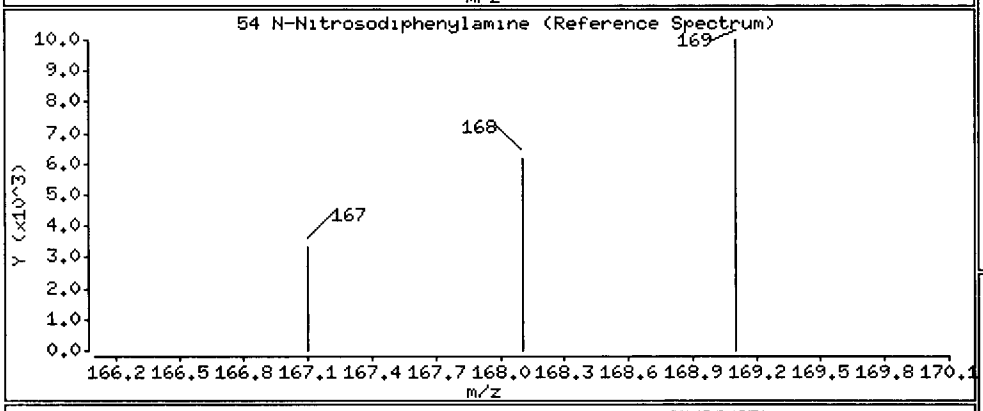
Concentration: 9.584 ug/kg

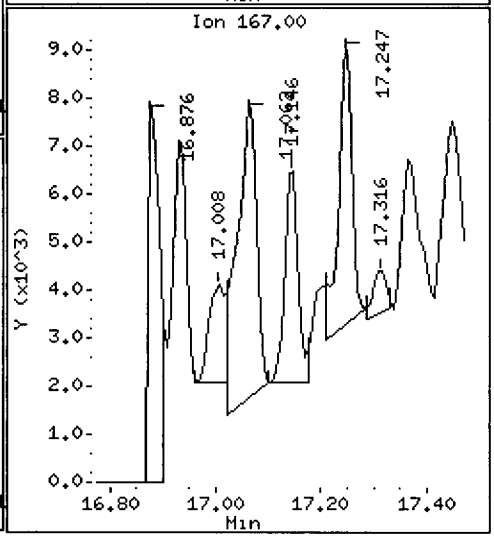


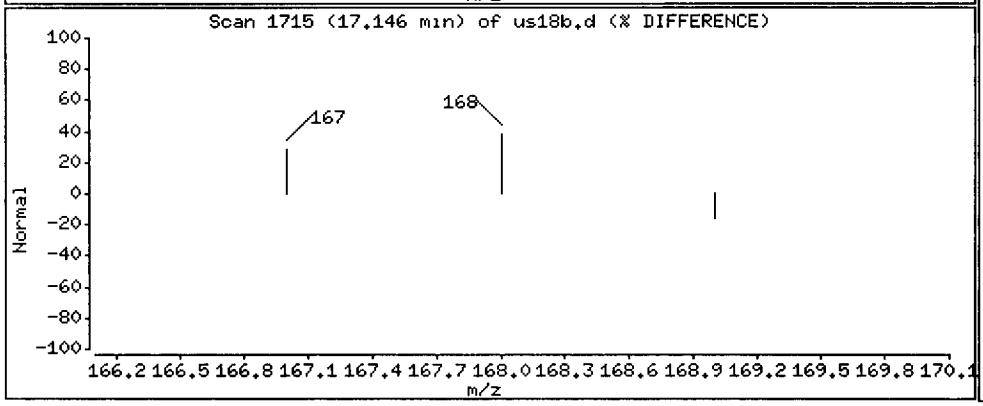












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

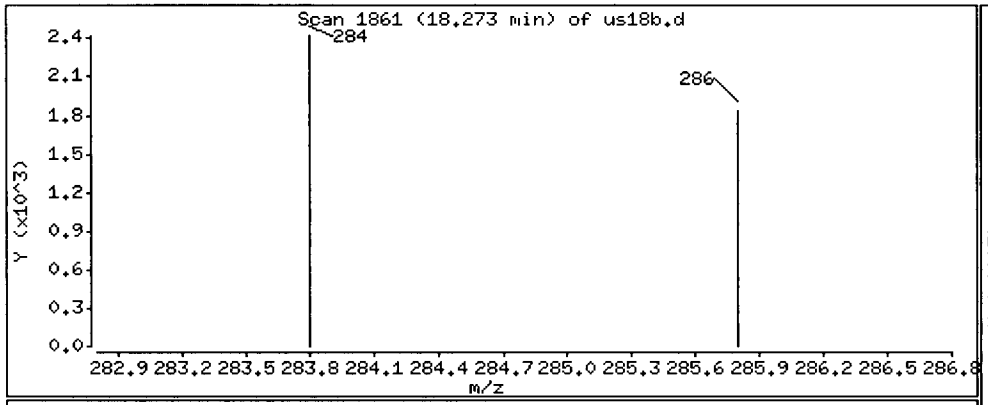
Operator: YZ

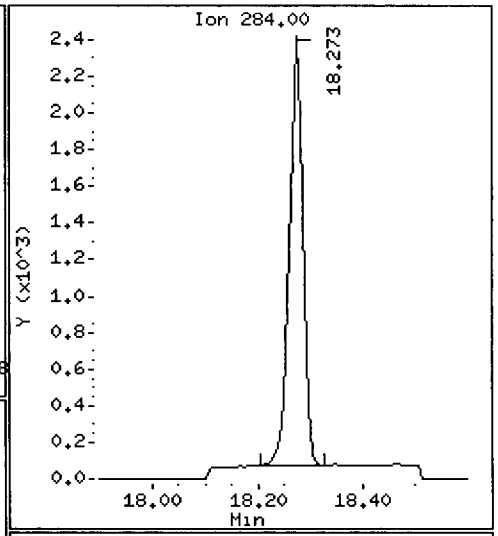
Column phase: ZB-5msi

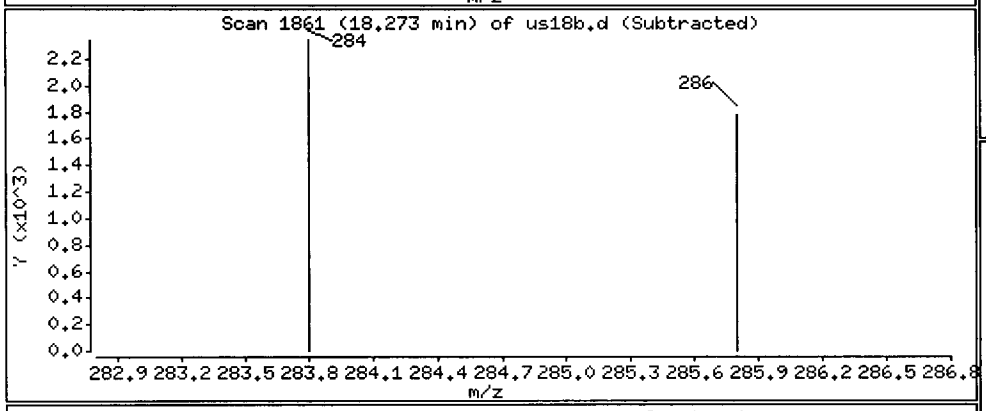
Column diameter: 0.25

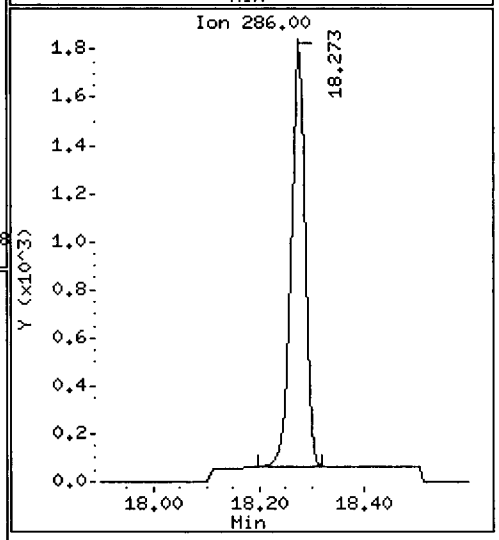
57 Hexachlorobenzene

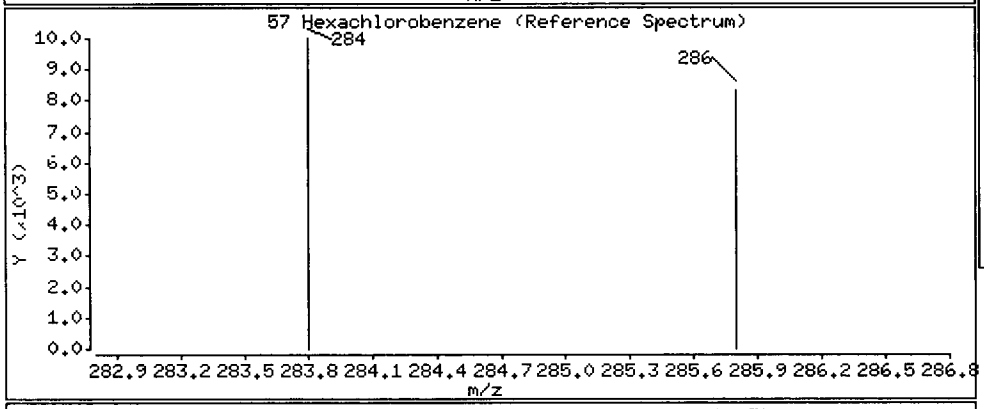
Concentration: 6.356 ug/kg

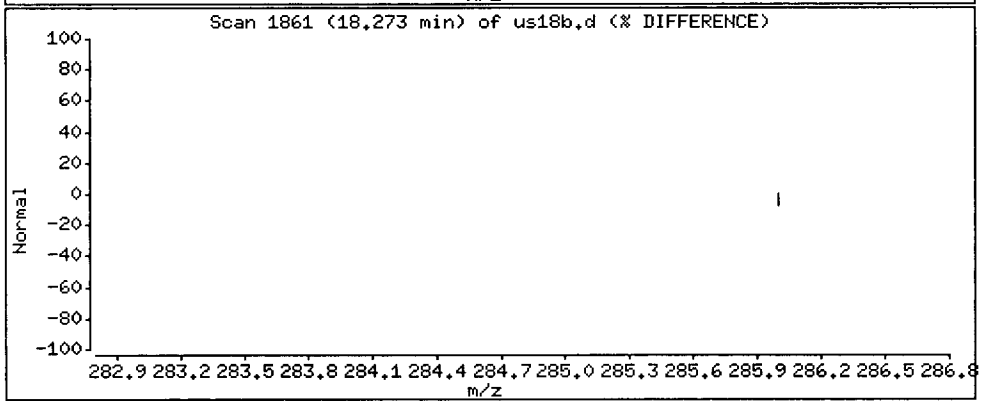












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

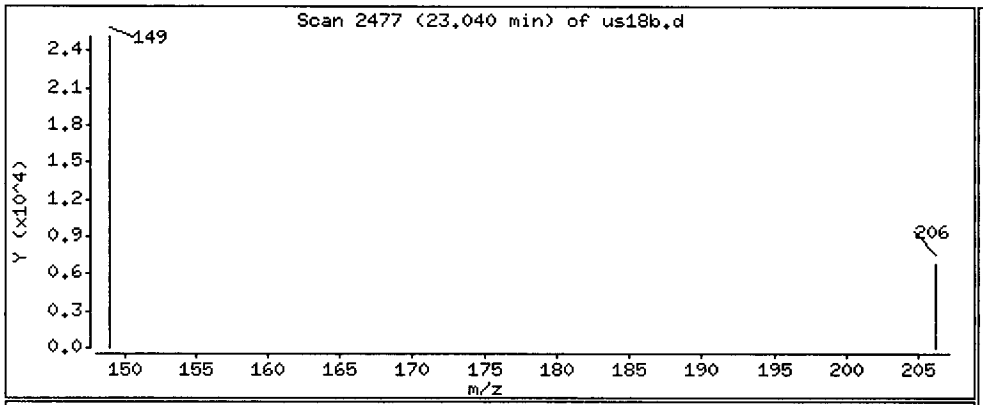
Operator: YZ

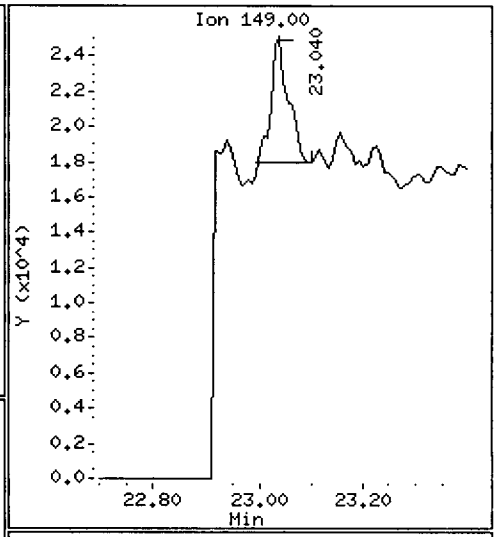
Column phase: ZB-5msi

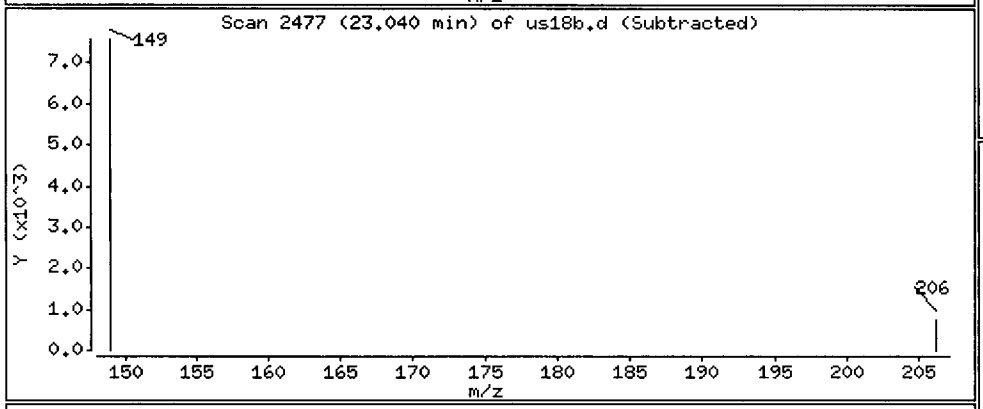
Column diameter: 0.25

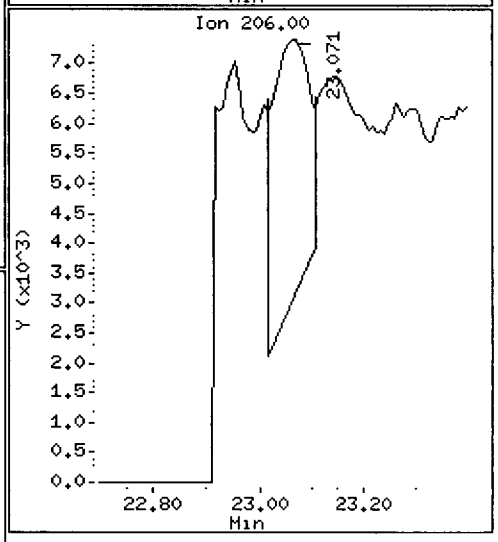
67 Butylbenzylphthalate

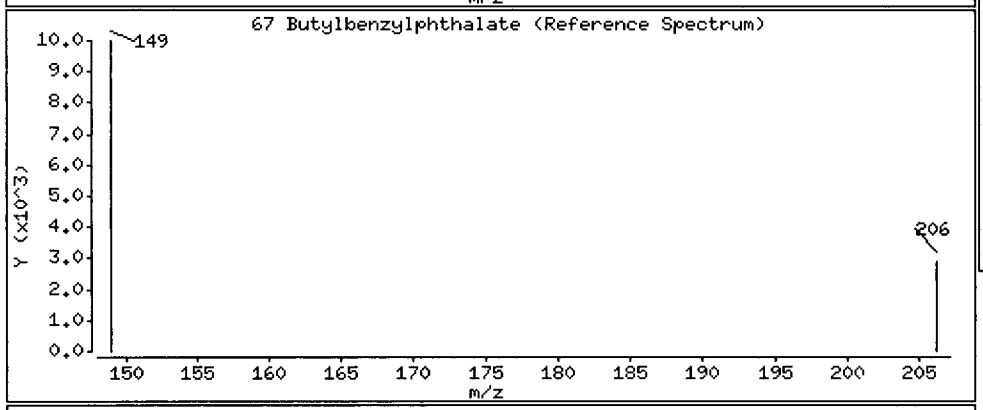
Concentration: 13.40 ug/kg

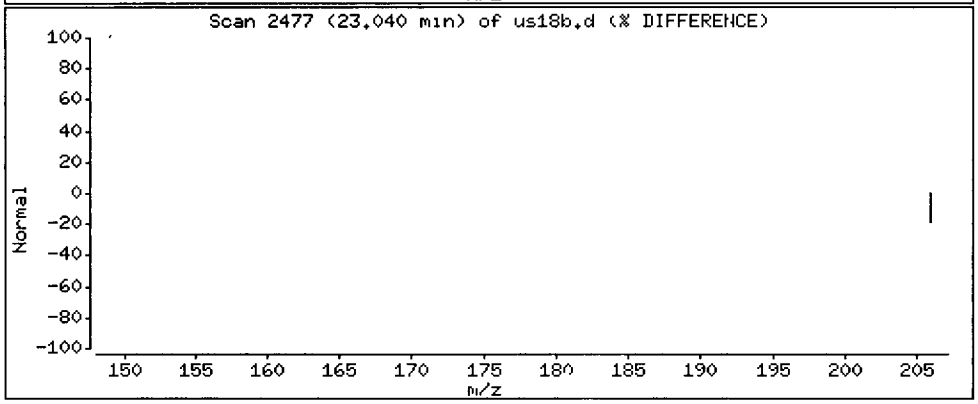












Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Date : 09-MAY-2012 01:51

Client ID: I-2-A-Z

Instrument: nt10.i

Sample Info: US18B

Volume Injected (uL): 1.0

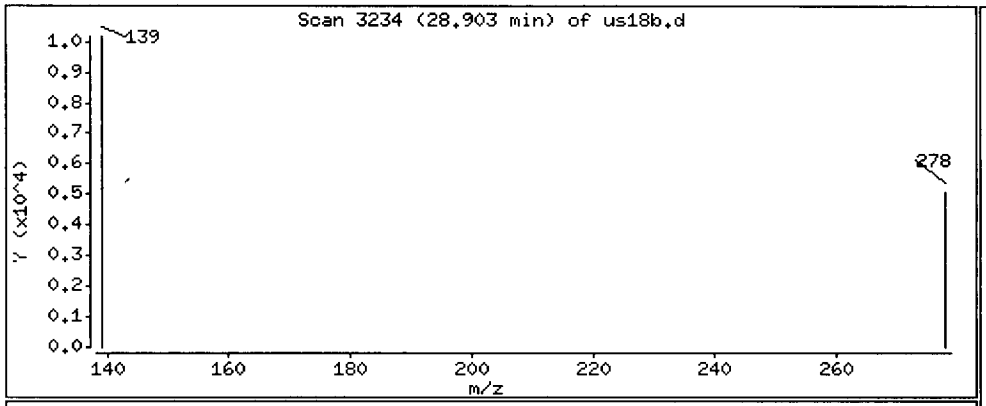
Operator: YZ

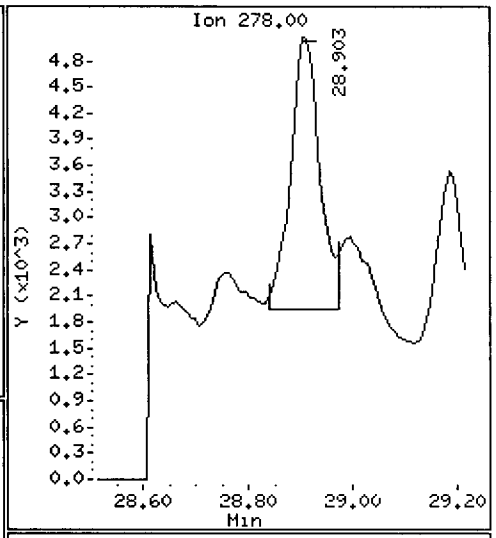
Column phase: ZB-5msi

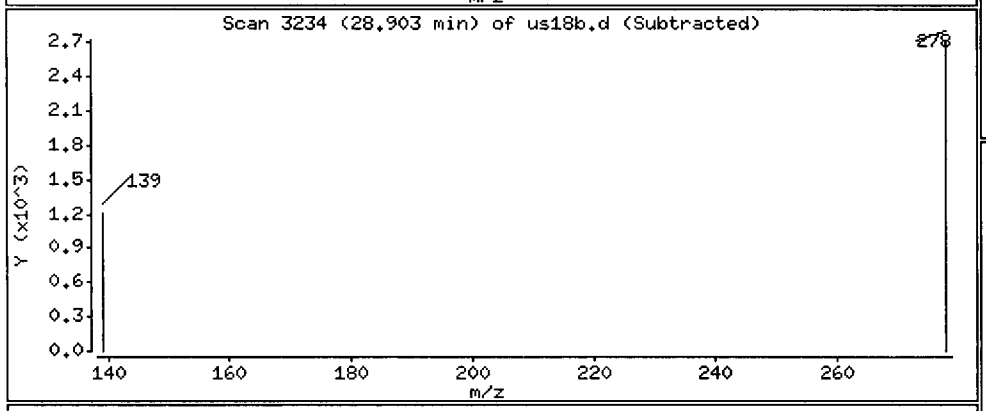
Column diameter: 0.25

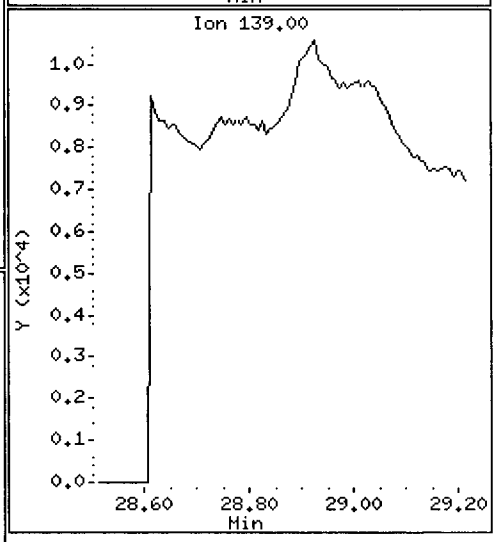
79 Dibenzo(a,h)anthracene

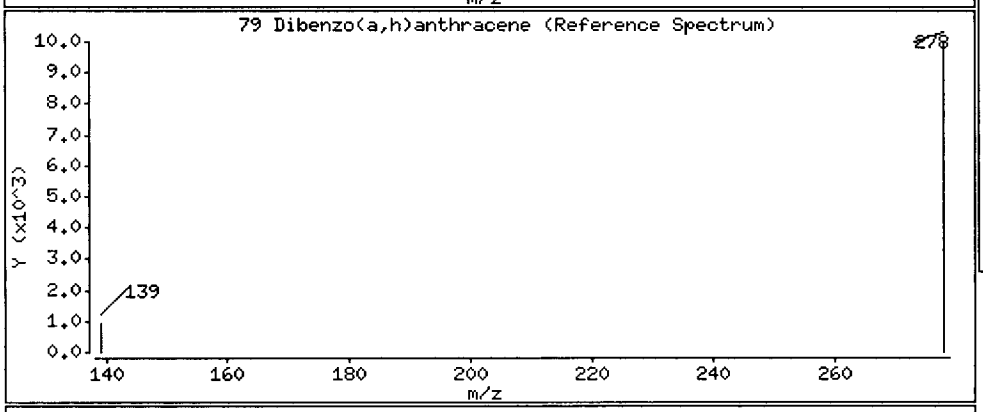
Concentration: 5.988 ug/kg

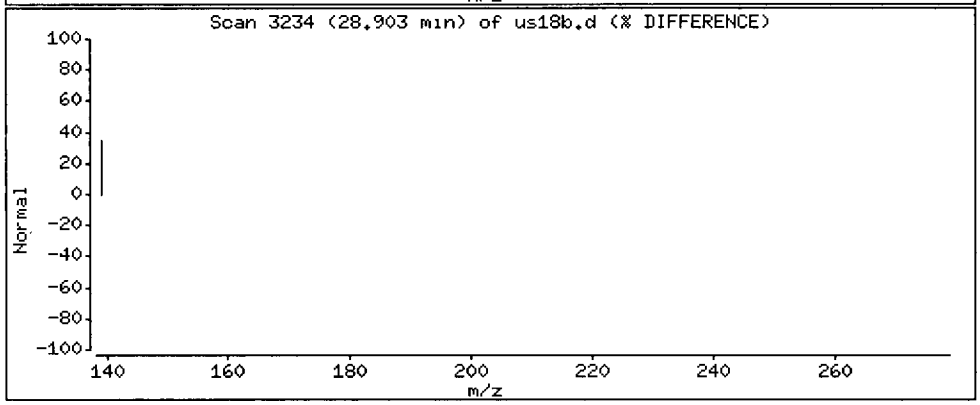






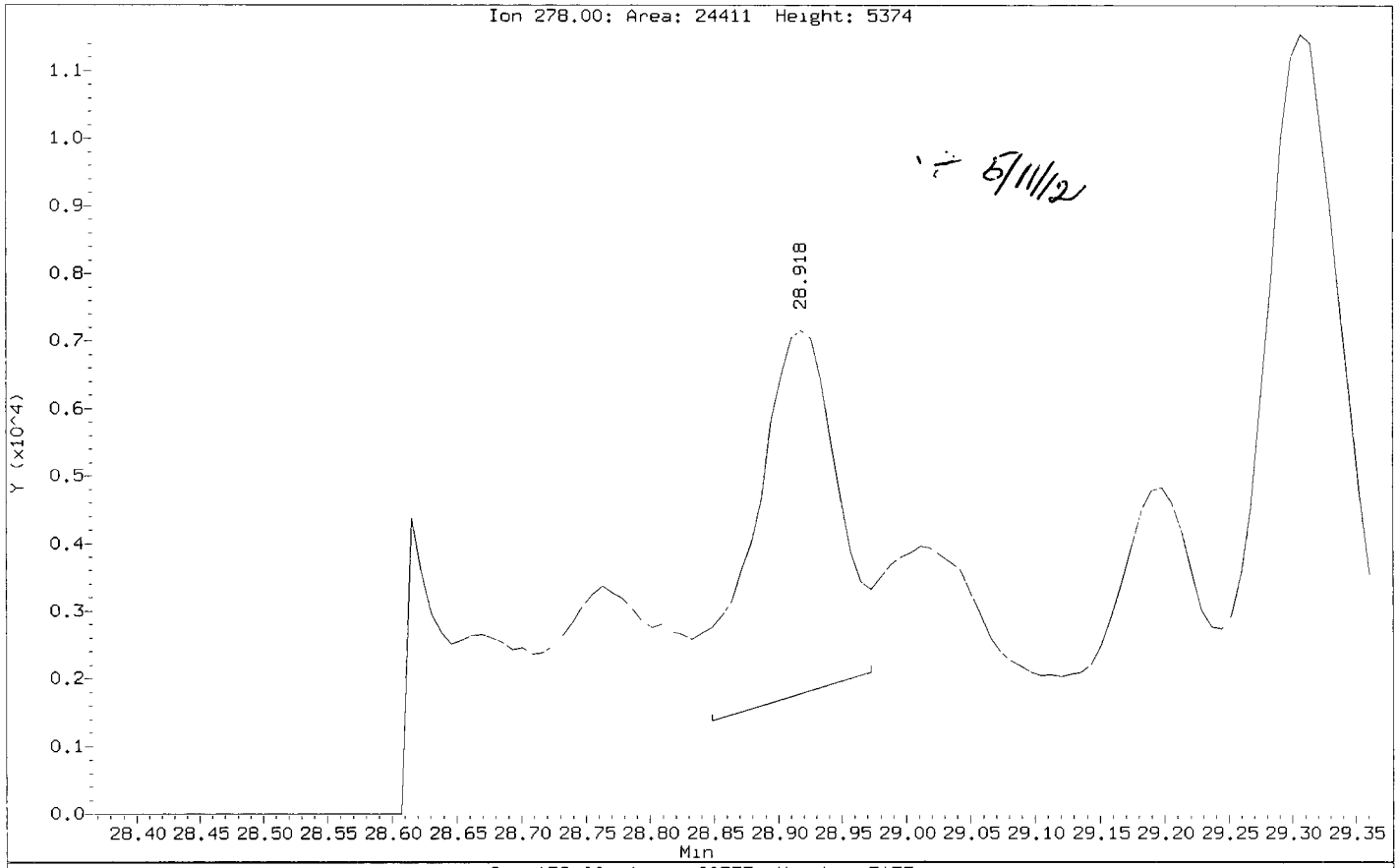


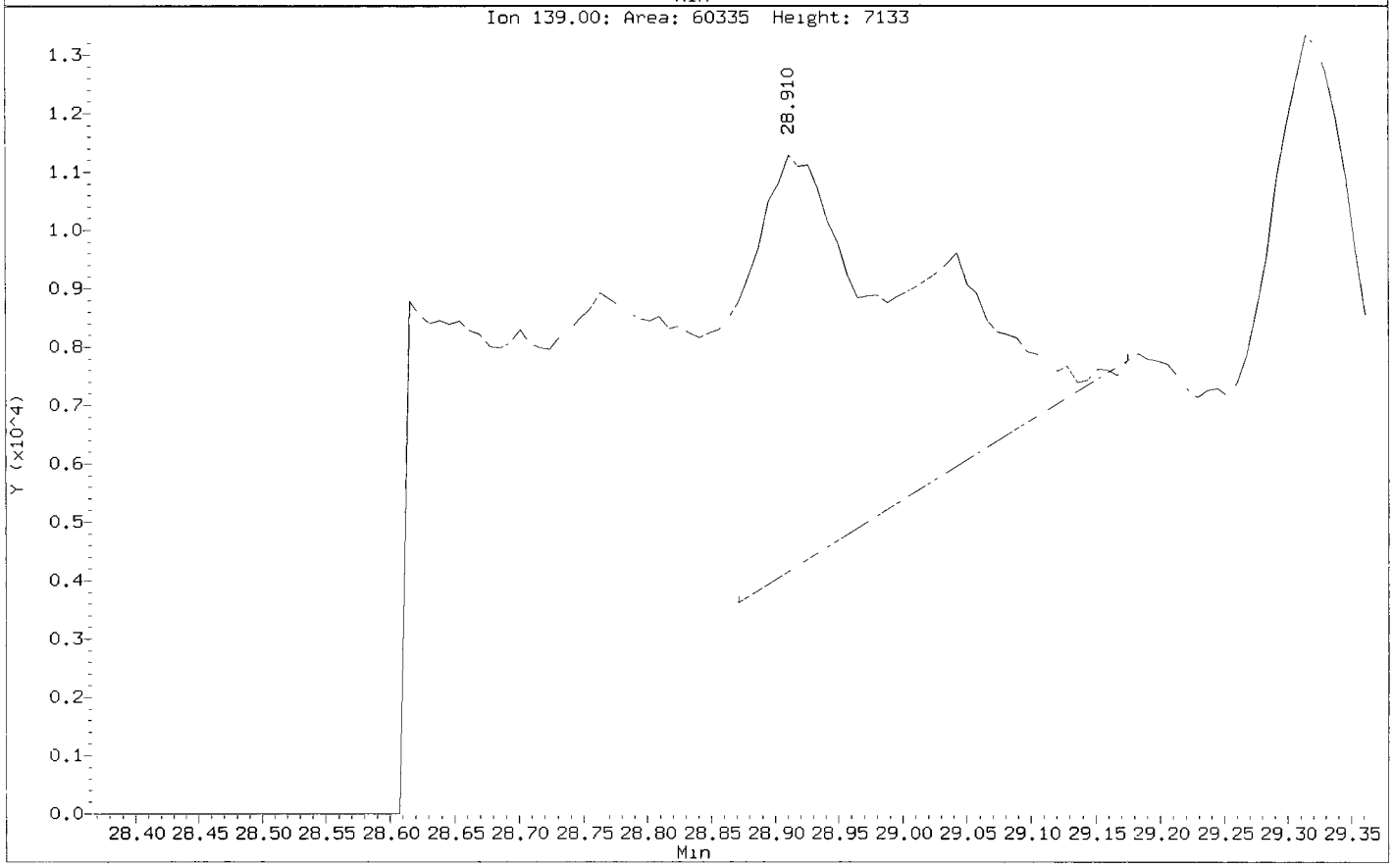




Data File: /chem1/nt10.i/20120508.b/SIM.b/us18a.d
Injection Date: 09-MAY-2012 01:14
Instrument: nt10.i
Client Sample ID: I-1-Z

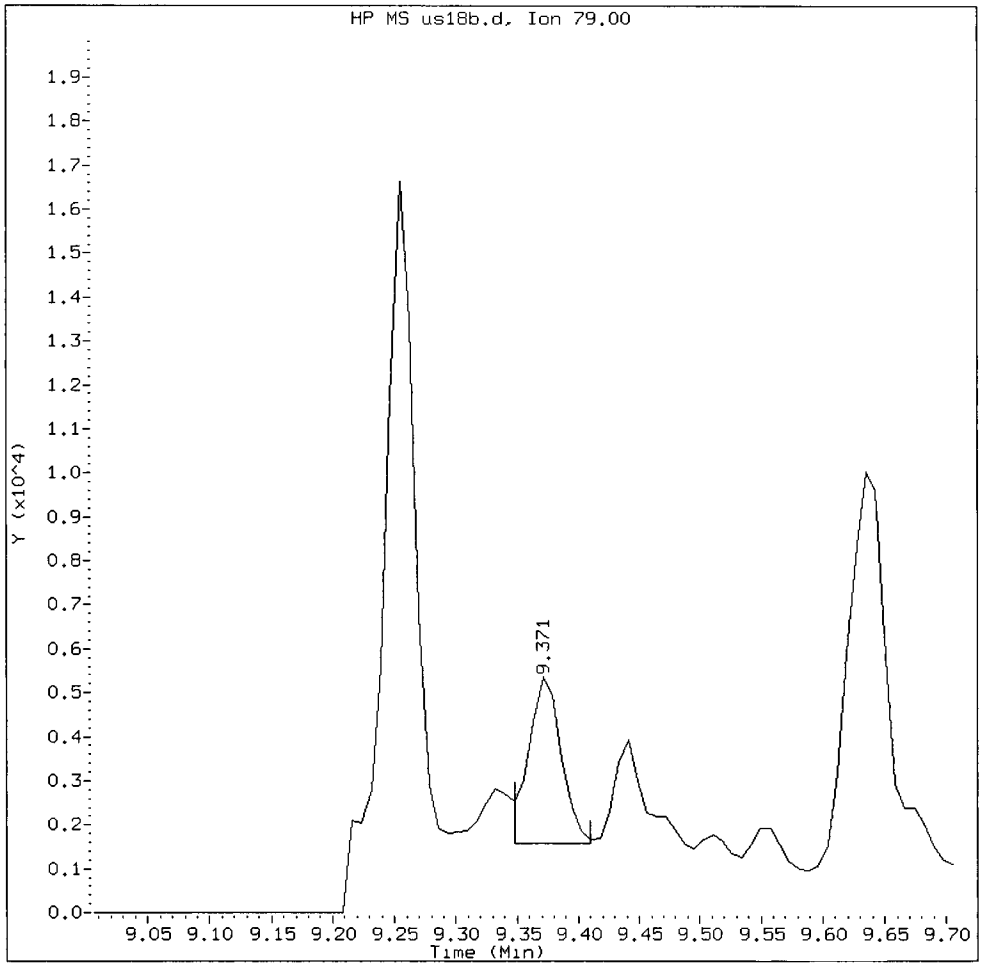
Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Benzyl alcohol Amount: 0.12 Area: 7202



MANUAL INTEGRATION for Benzyl alcohol

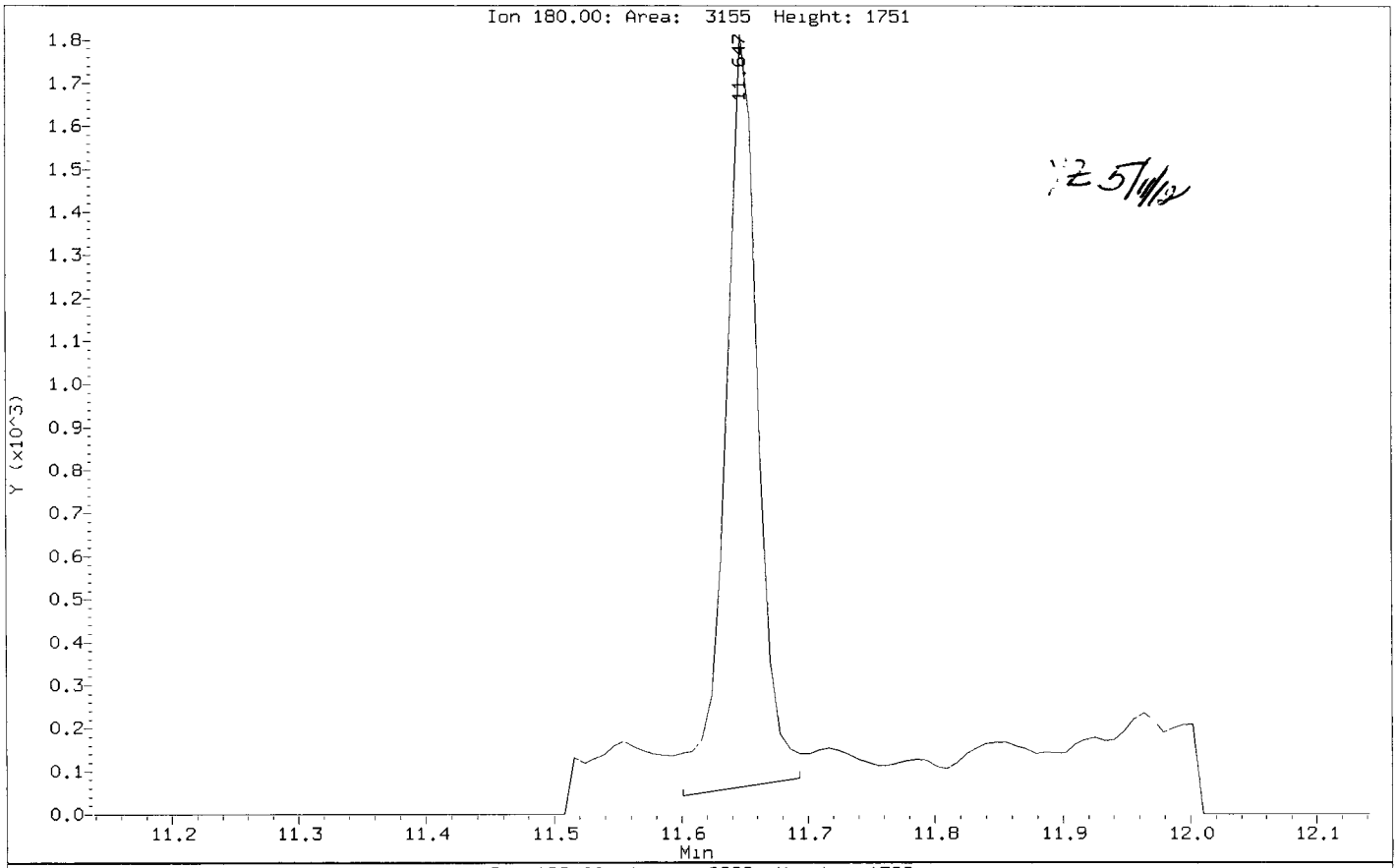
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

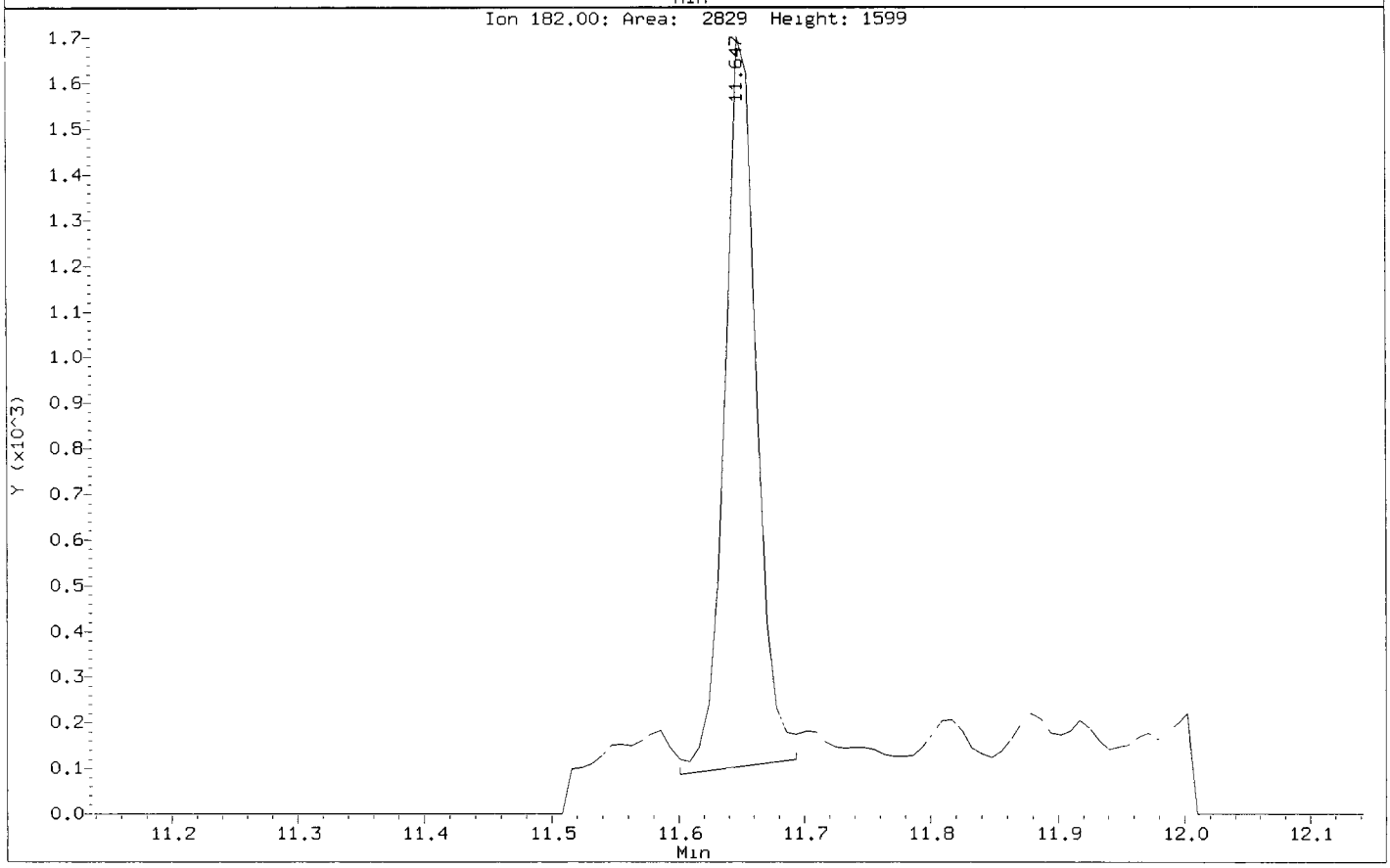
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Injection Date: 09-MAY-2012 01:51
Instrument: nt10.i
Client Sample ID: I-2-A-Z

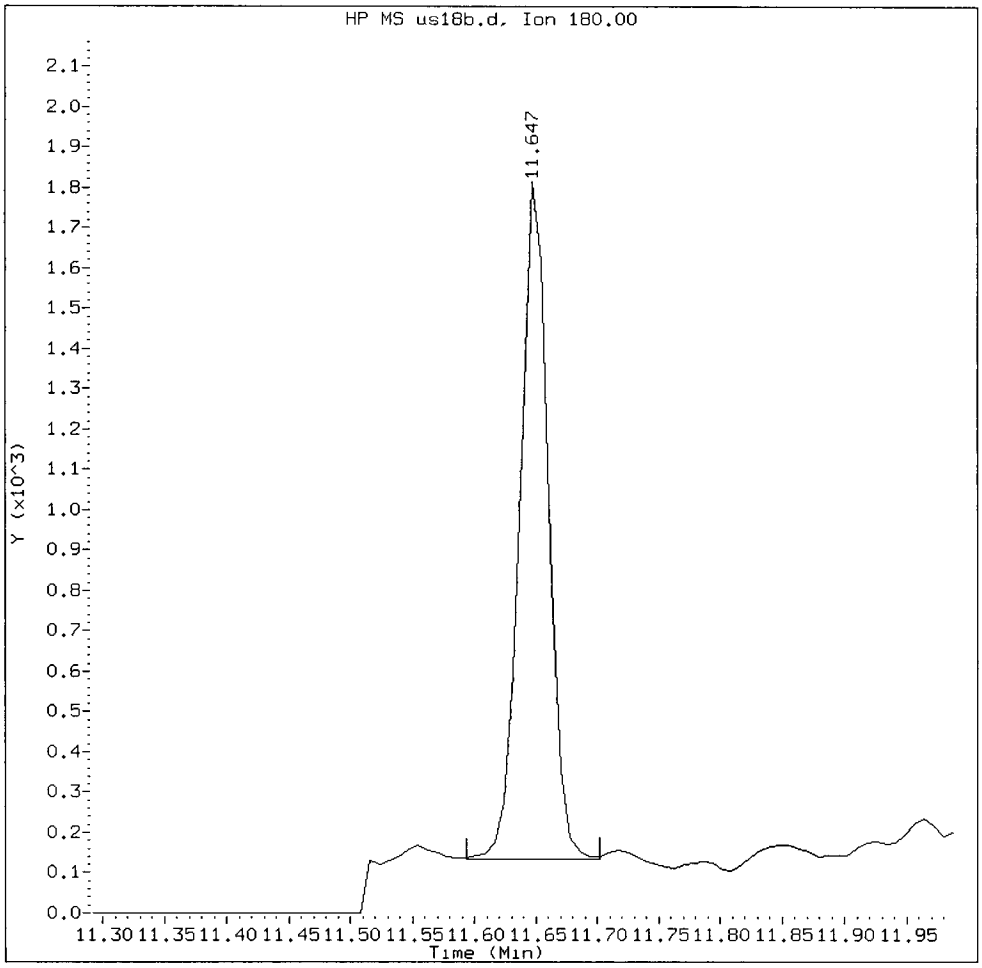
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

1,2,4-Trichlorobenzene Amount: 0.03 Area: 2730



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

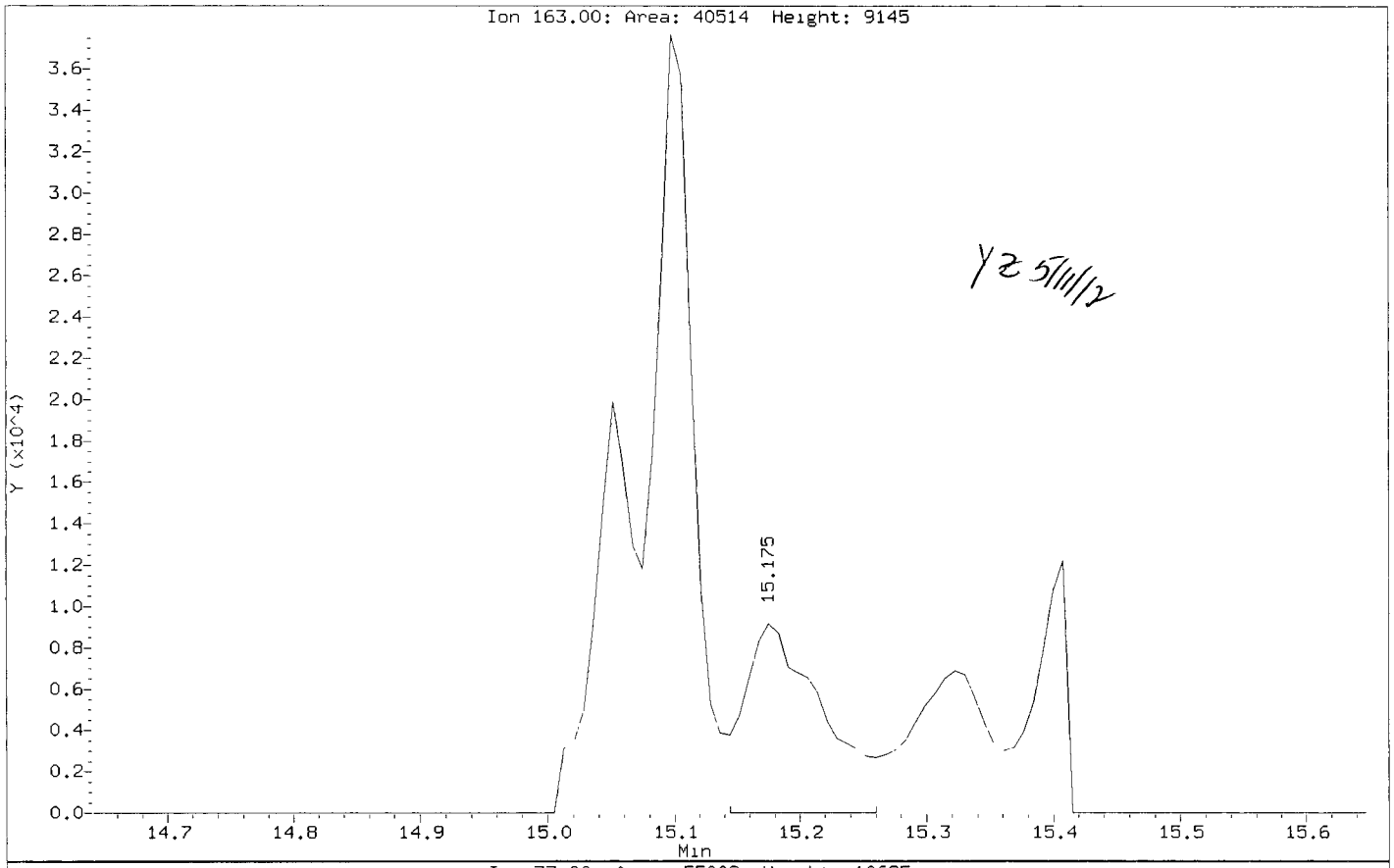
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

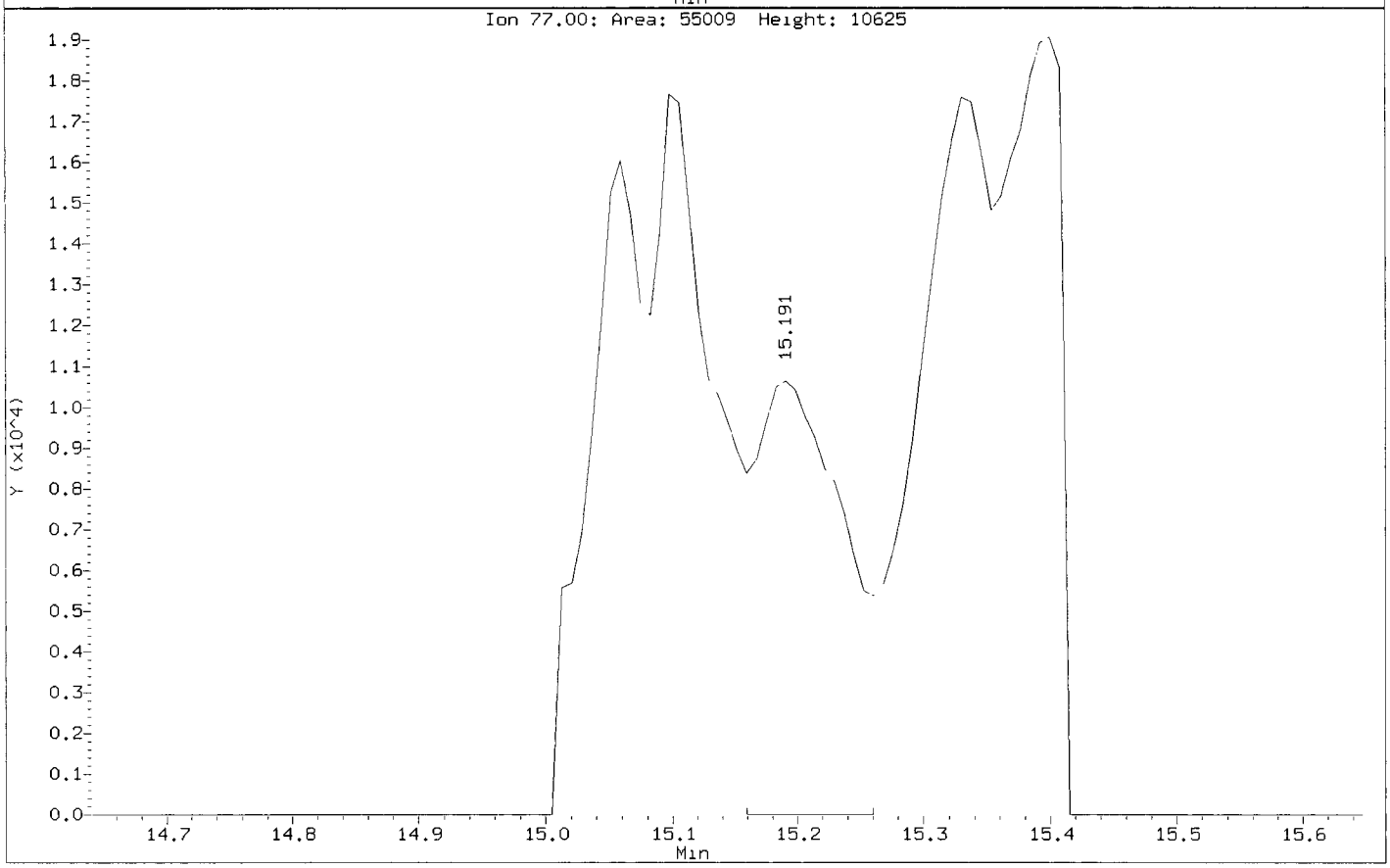
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Injection Date: 09-MAY-2012 01:51
Instrument: nt10.i
Client Sample ID: I-2-A-Z

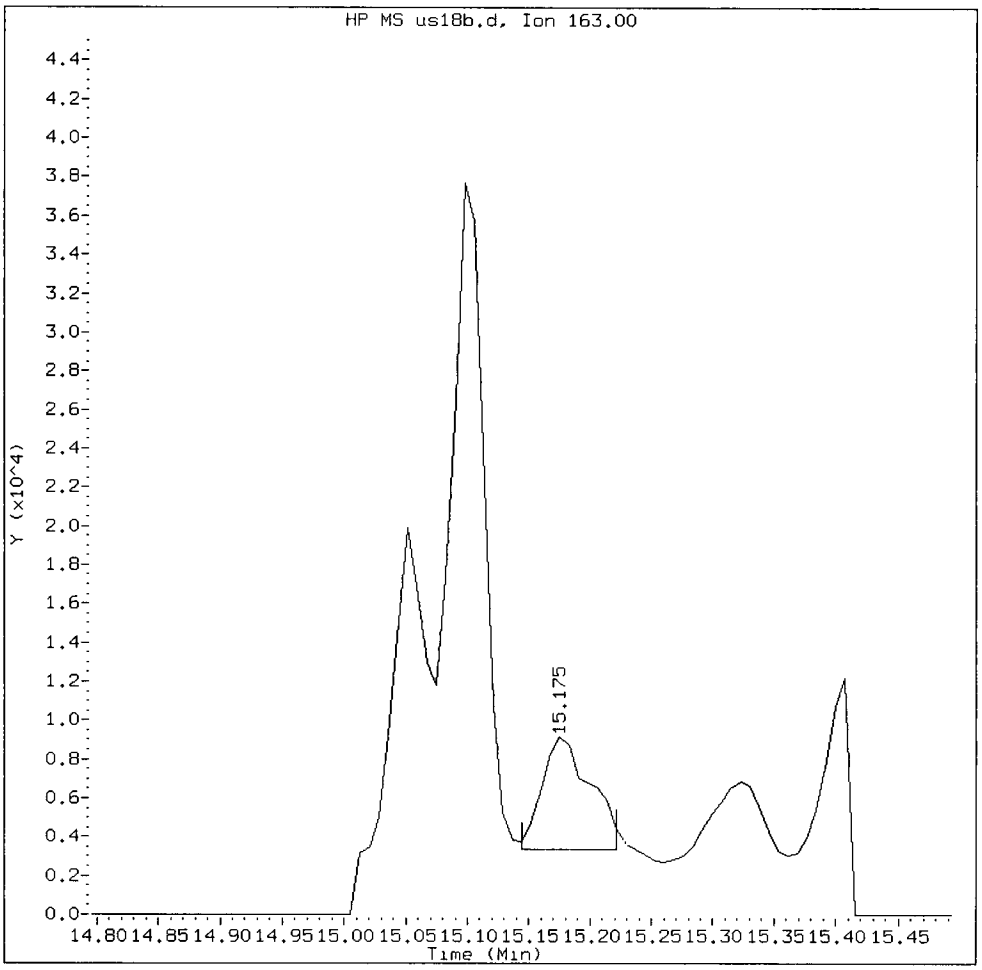
Compound: Dimethylphthalate
CAS Number: 131-11-3





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Dimethylphthalate Amount: 0.11 Area: 16011



MANUAL INTEGRATION for Dimethylphthalate

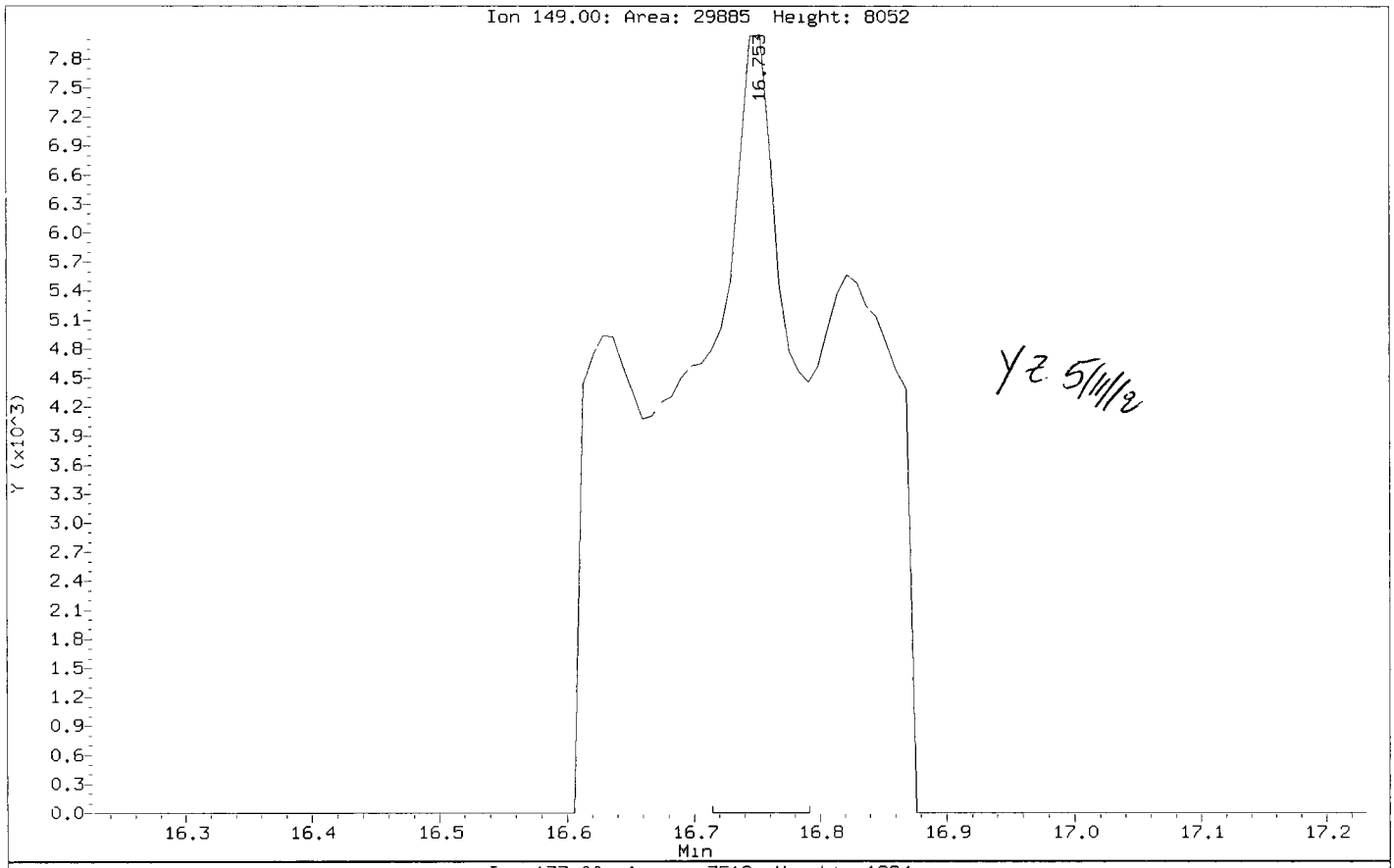
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

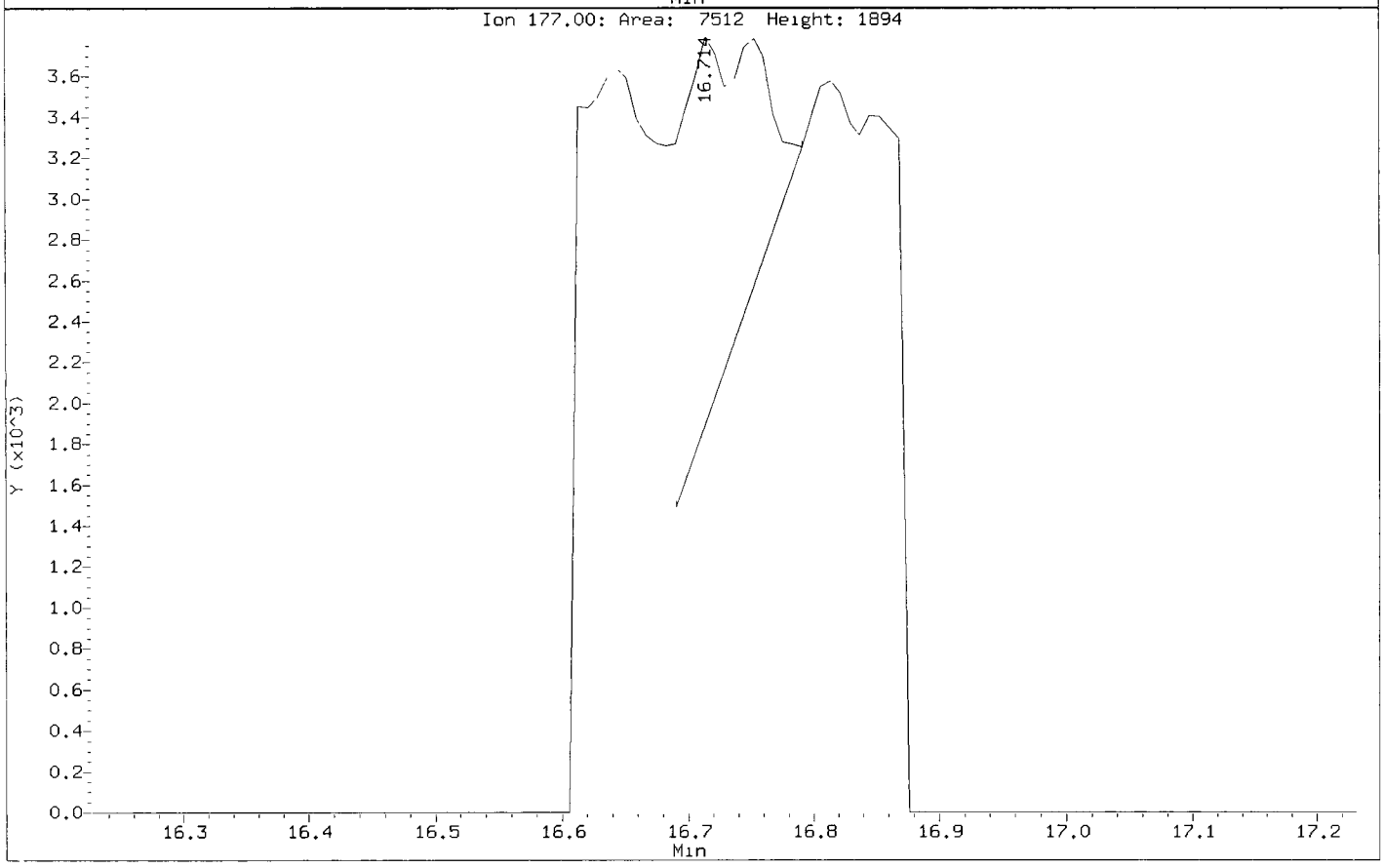
5. Other _____

Analyst: VZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Injection Date: 09-MAY-2012 01:51
Instrument: nt10.i
Client Sample ID: I-2-A-Z

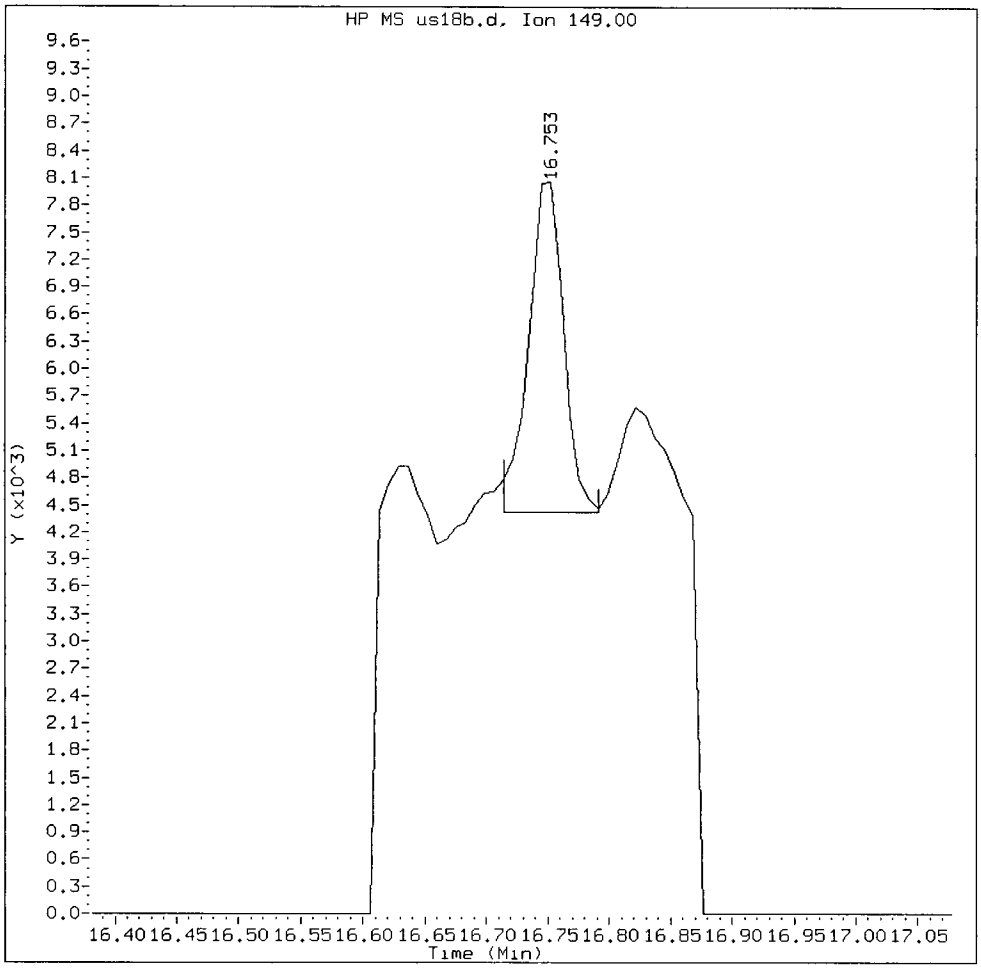
Compound: Diethylphthalate
CAS Number: 84-66-2





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Diethylphthalate Amount: 0.04 Area: 7300



MANUAL INTEGRATION for Diethylphthalate

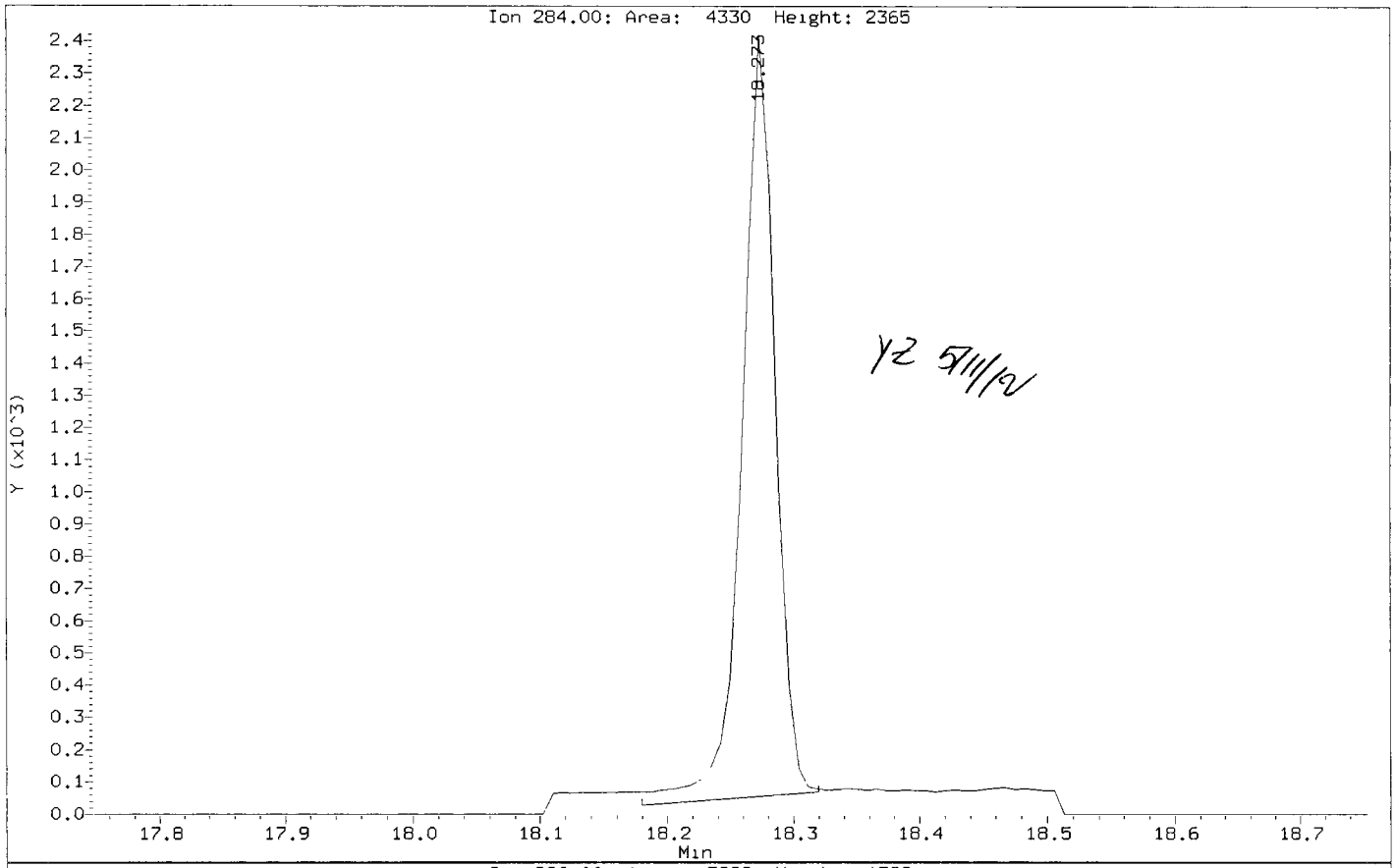
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

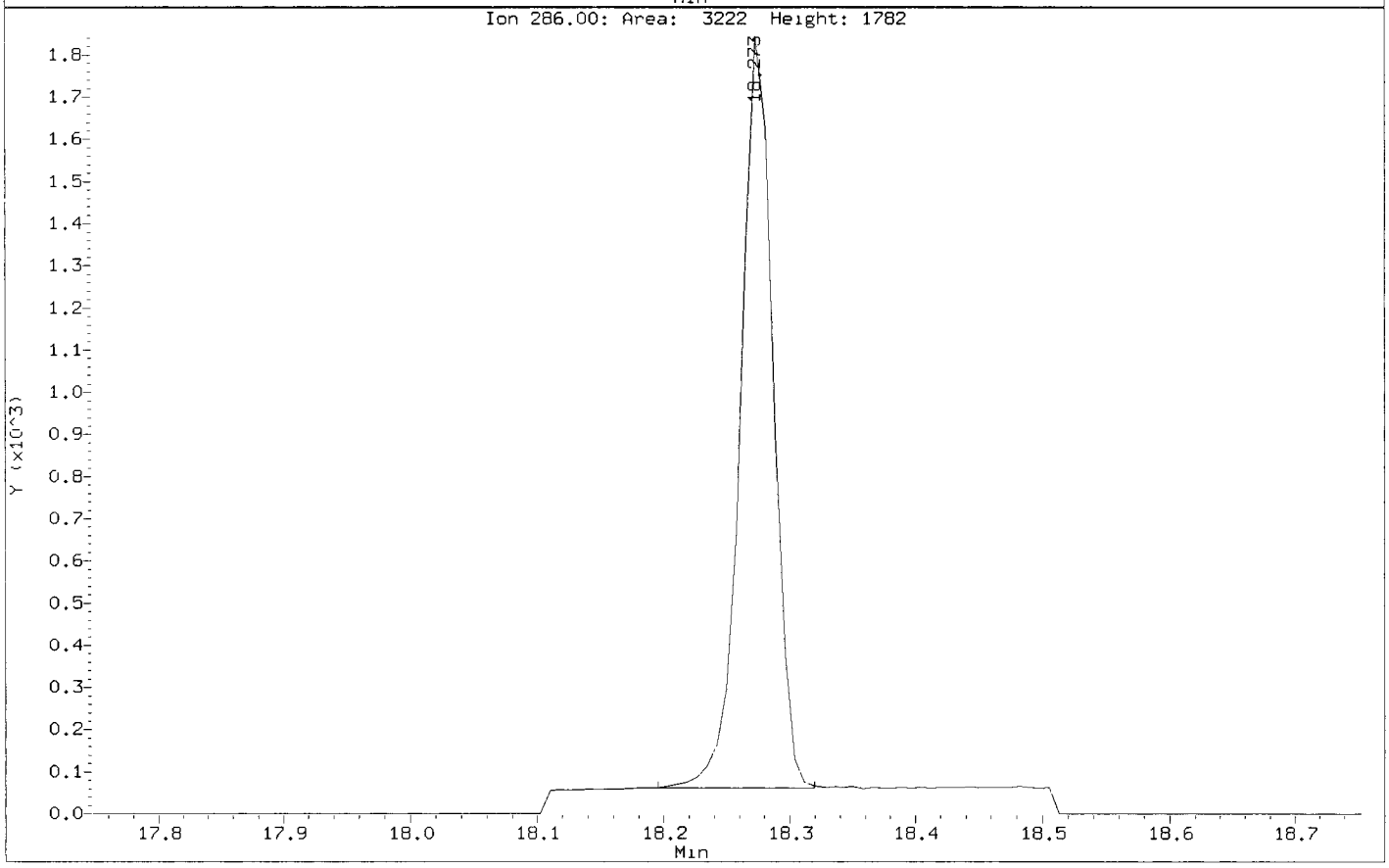
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Injection Date: 09-MAY-2012 01:51
Instrument: nt10.i
Client Sample ID: I-2-A-Z

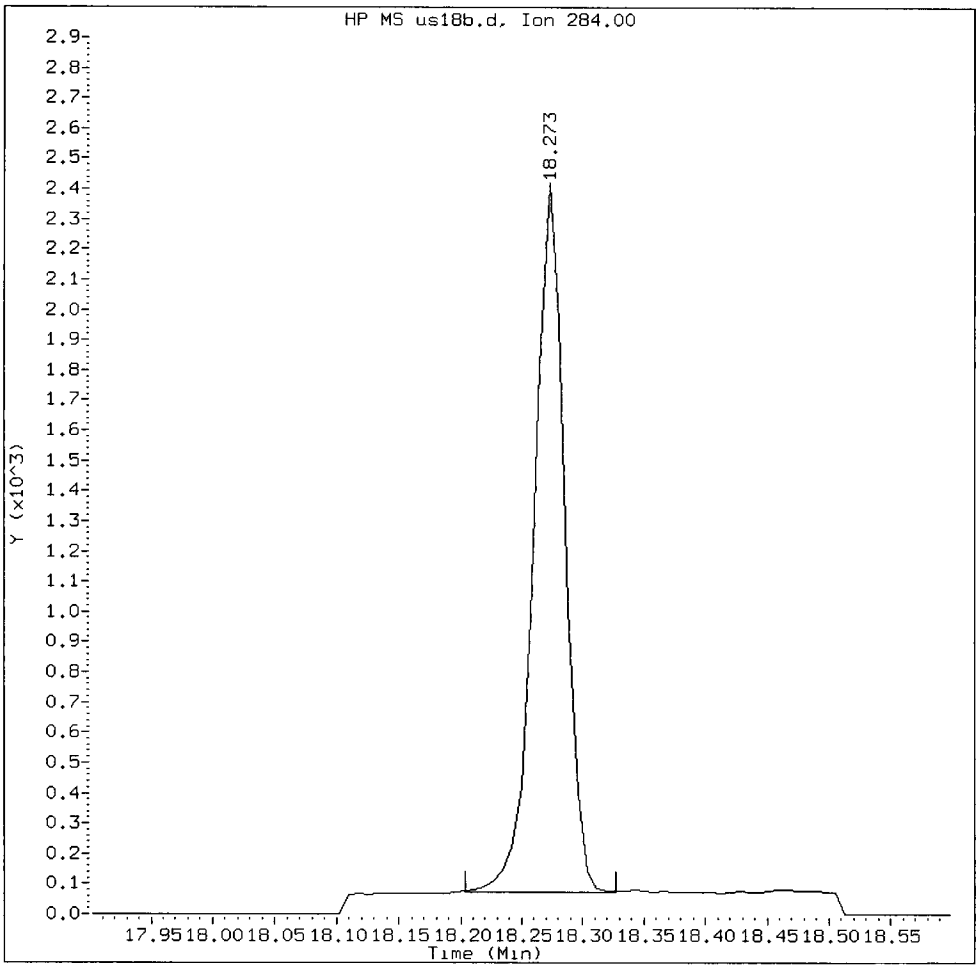
Compound: Hexachlorobenzene
CAS Number: 118-74-1





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Hexachlorobenzene Amount: 0.07 Area: 4113



MANUAL INTEGRATION for Hexachlorobenzene

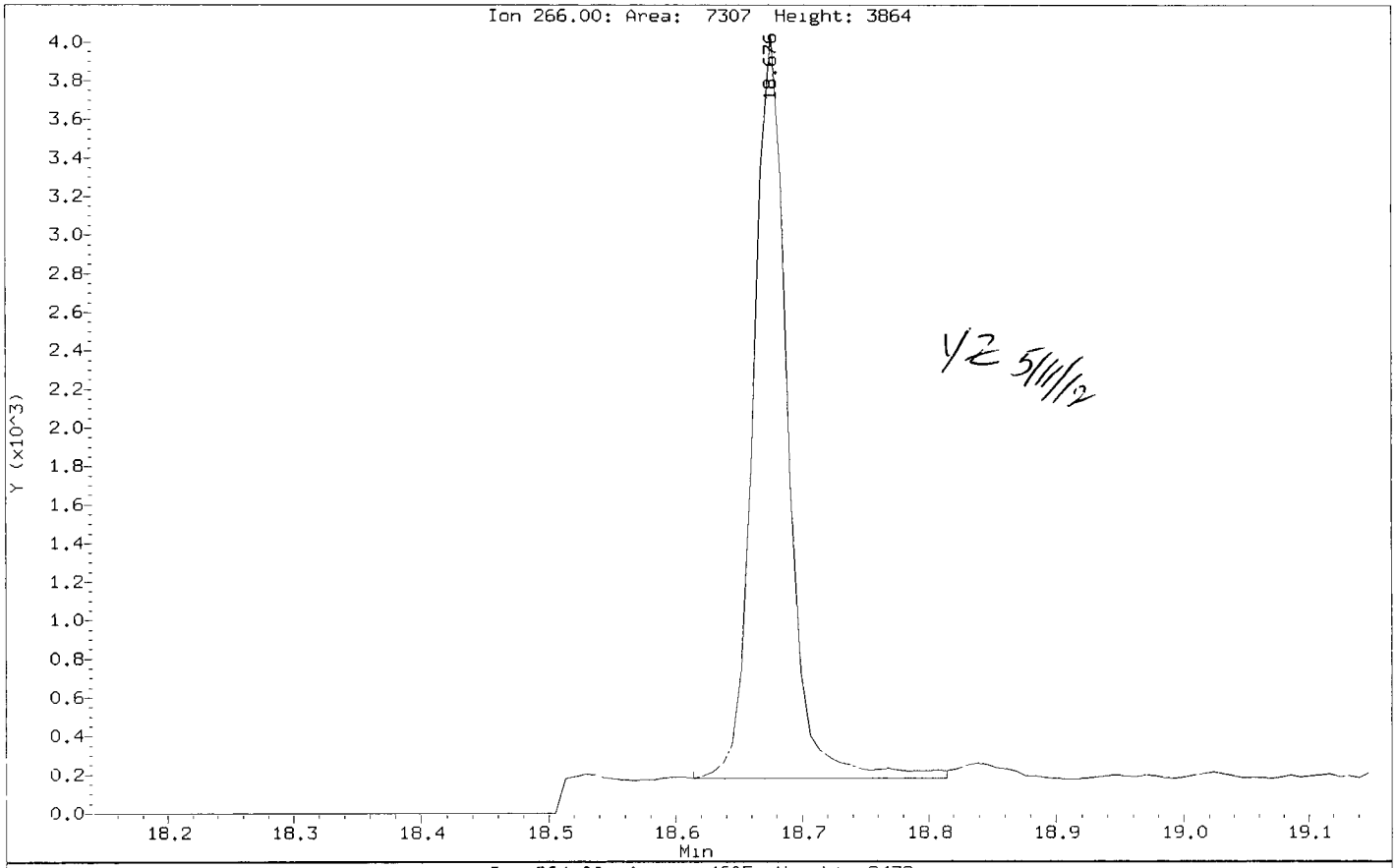
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

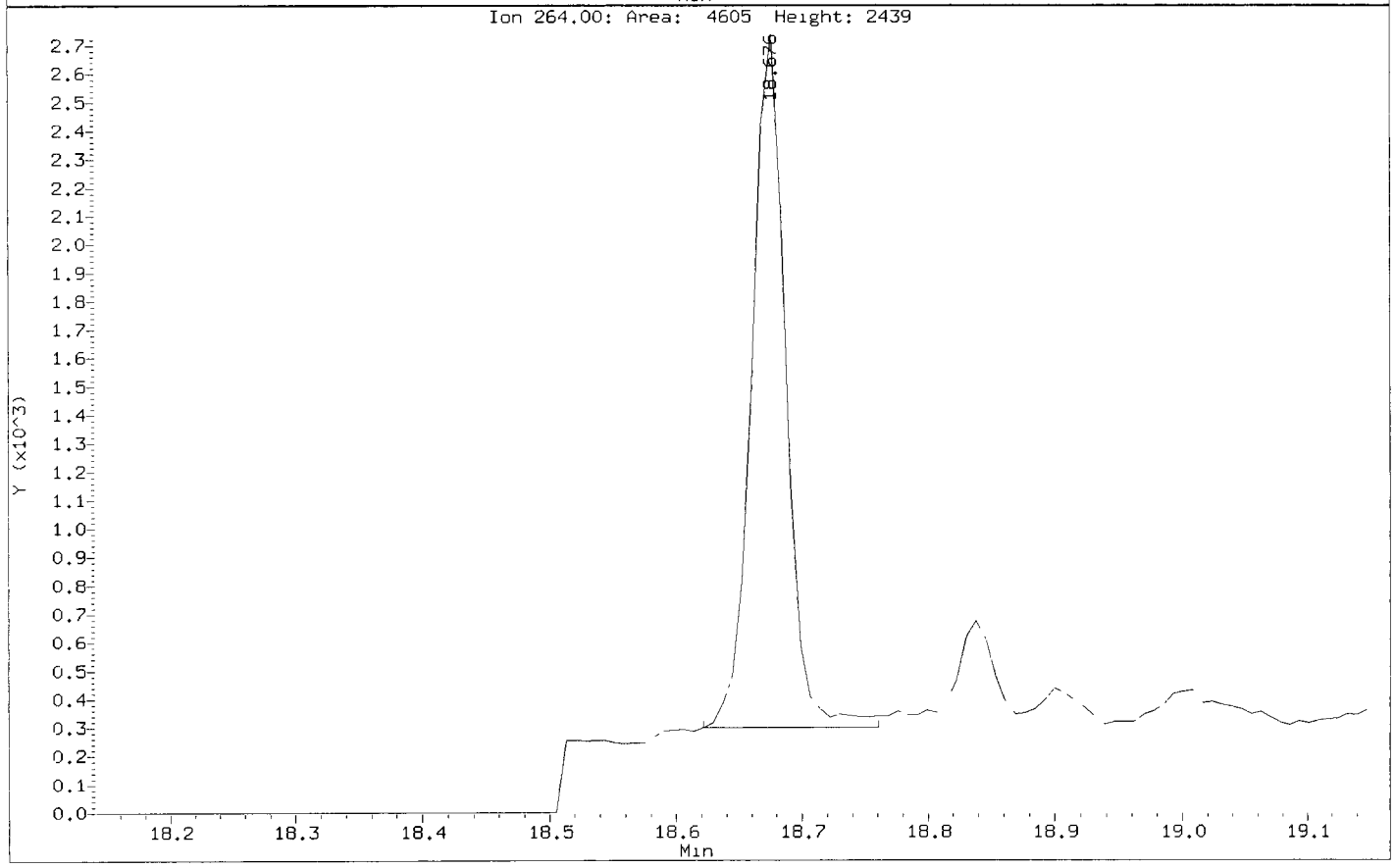
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Injection Date: 09-MAY-2012 01:51
Instrument: nt10.i
Client Sample ID: I-2-A-Z

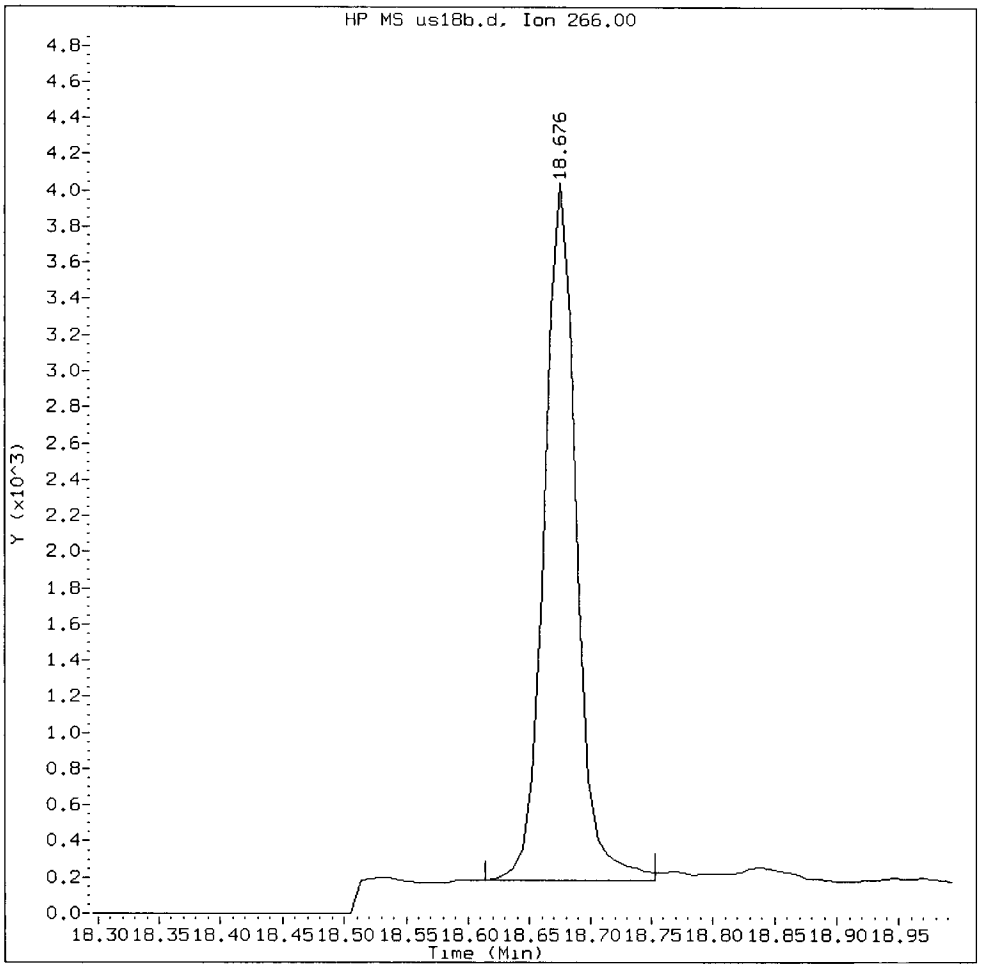
Compound: Pentachlorophenol
CAS Number: 87-86-5





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Pentachlorophenol Amount: 0.19 Area: 7161



MANUAL INTEGRATION for Pentachlorophenol

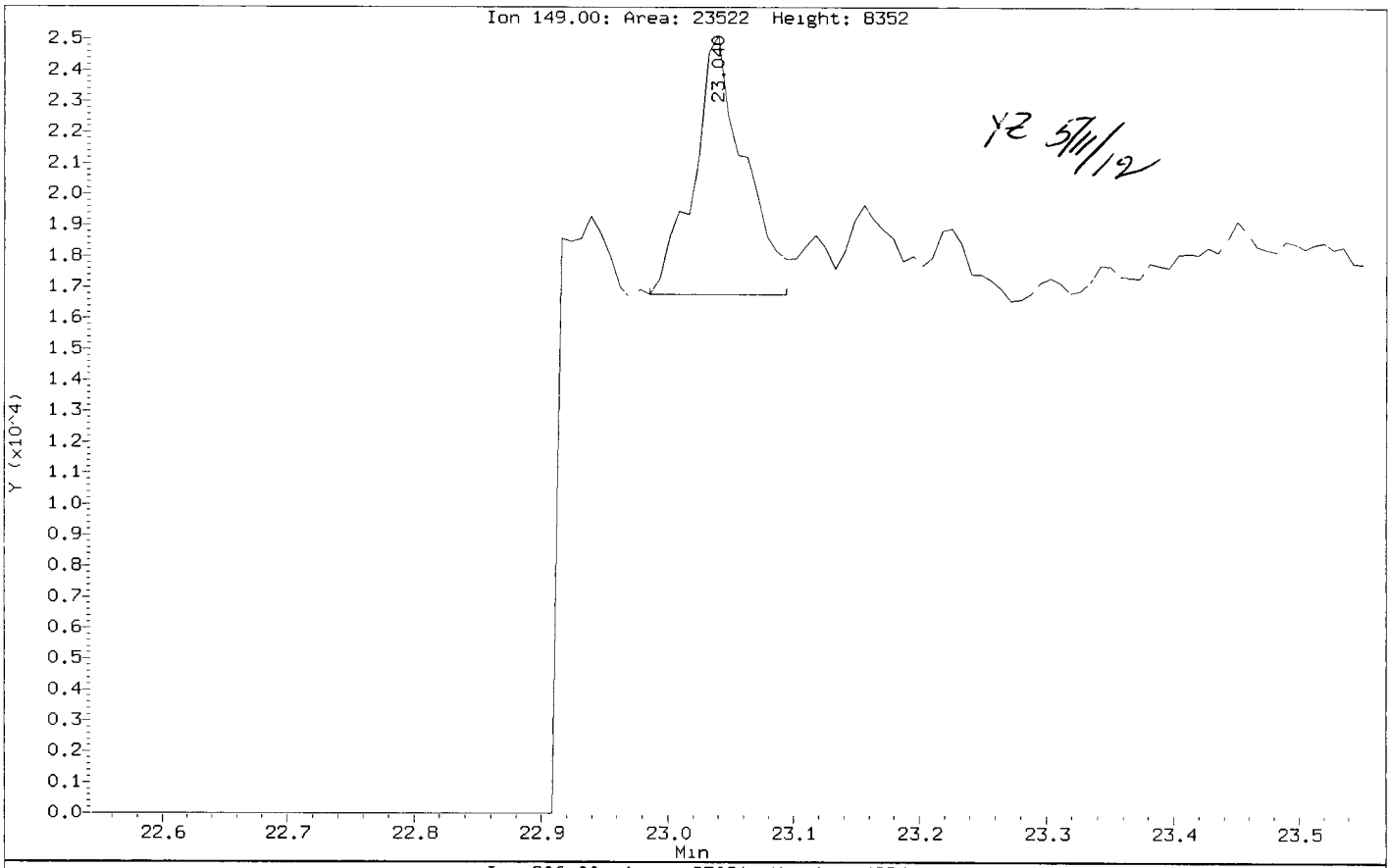
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

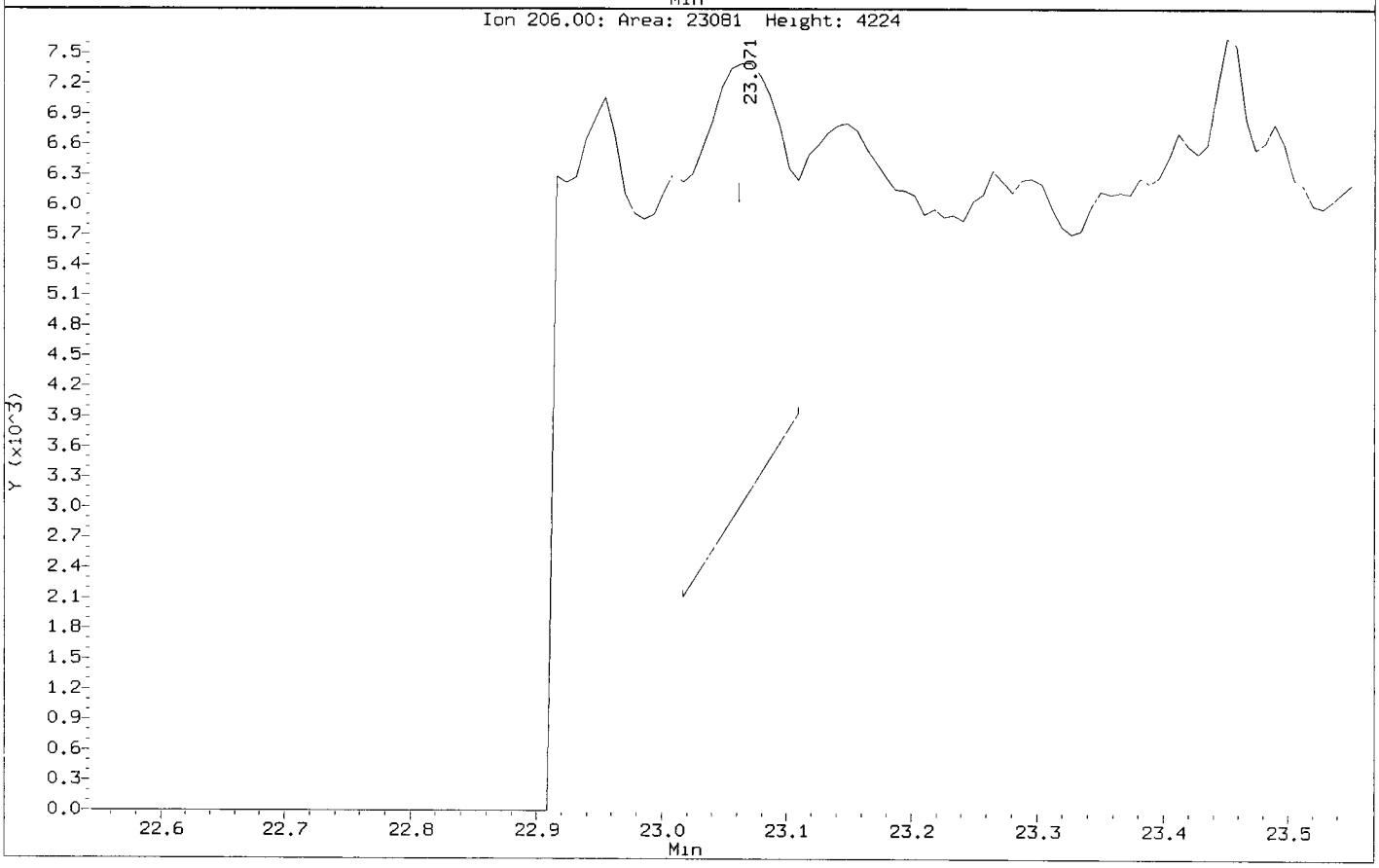
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Injection Date: 09-MAY-2012 01:51
Instrument: nt10.i
Client Sample ID: I-2-A-Z

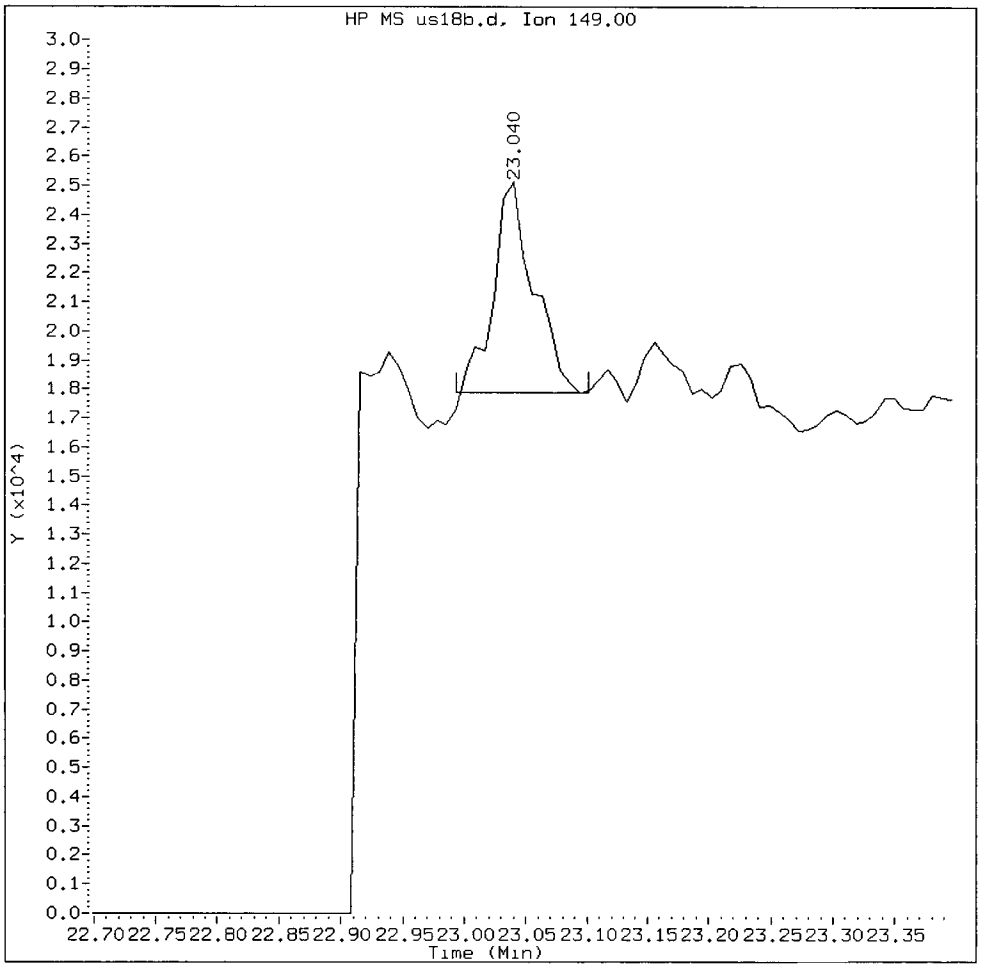
Compound: Butylbenzylphthalate
CAS Number: 85-68-7





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Butylbenzylphthalate Amount: 0.14 Area: 16235



MANUAL INTEGRATION for Butylbenzylphthalate

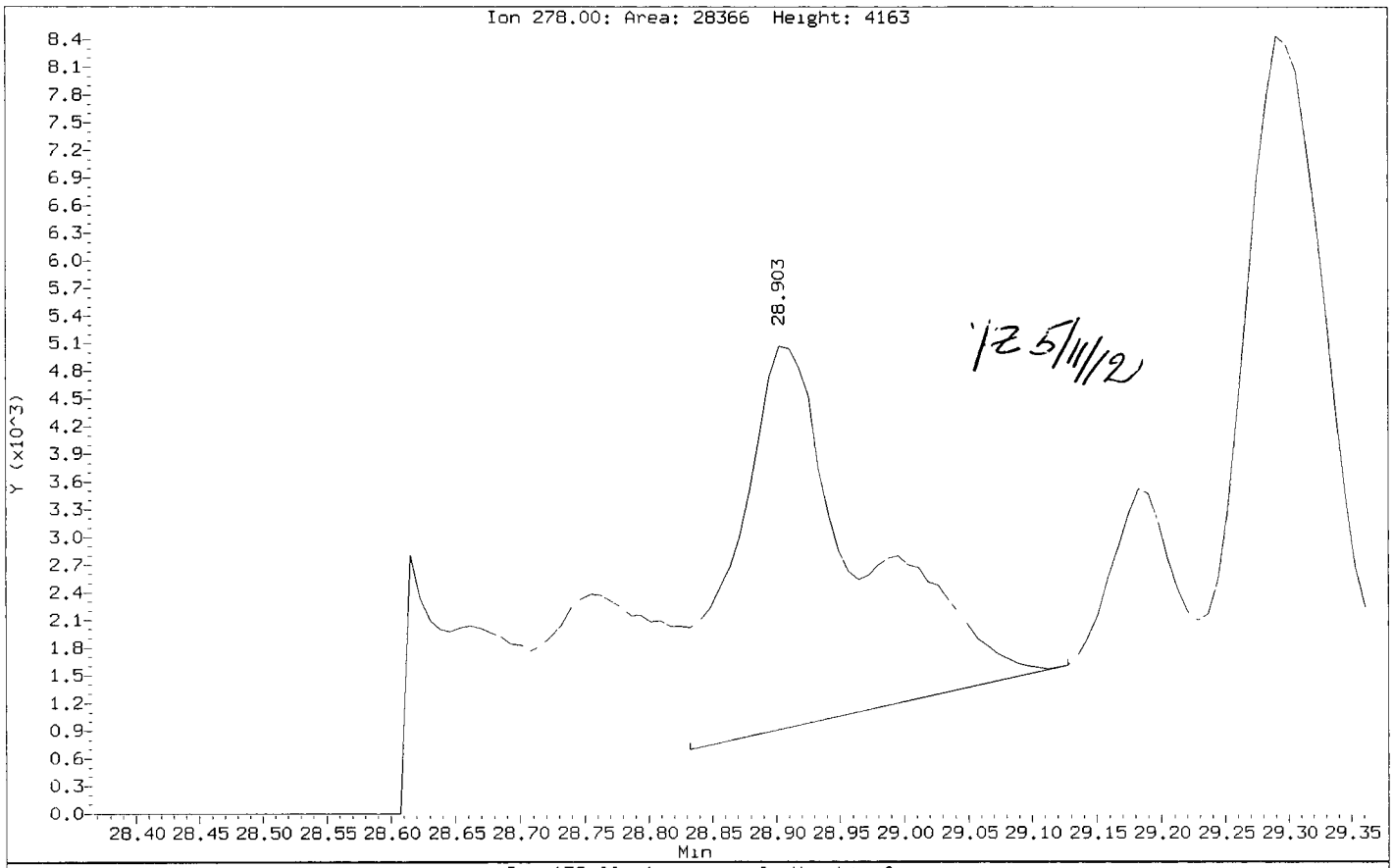
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

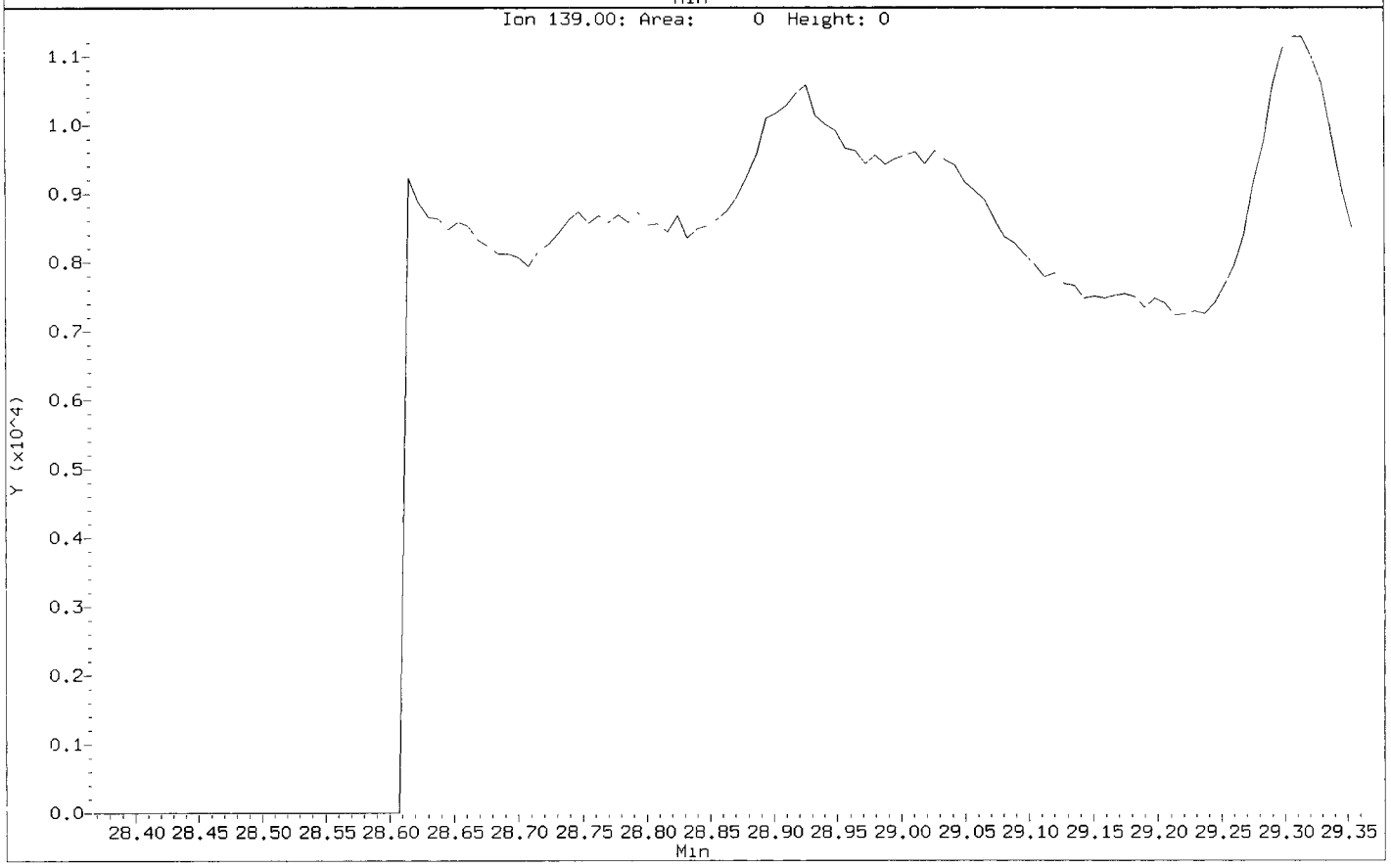
5. Other _____

Analyst: YZ Date: 5/11/12

Data File: /chem1/nt10.i/20120508.b/SIM.b/us18b.d
Injection Date: 09-MAY-2012 01:51
Instrument: nt10.i
Client Sample ID: I-2-A-Z

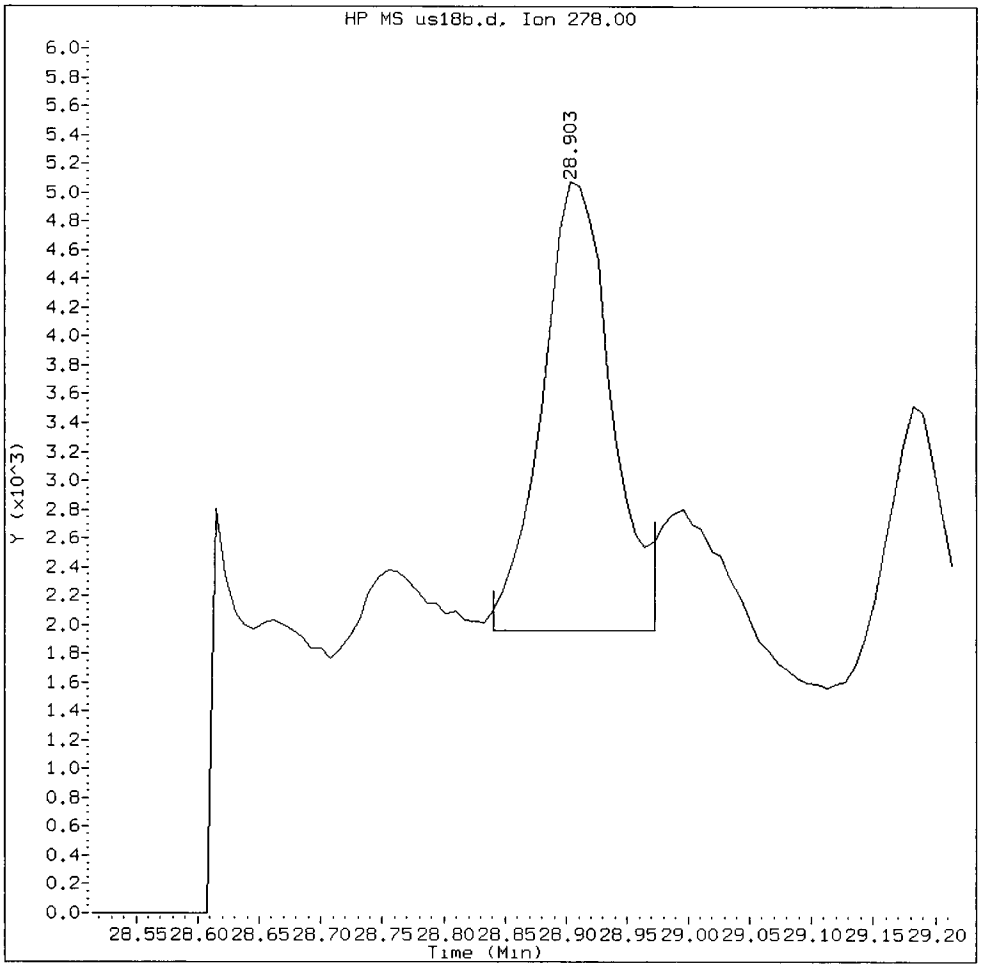
Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





US18B, /chem1/nt10.i/20120508.b/SIM.b/us18b.d

Dibenzo(a,h)anthracene Amount: 0.06 Area: 12376



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/11/12

CO-ELUTION SUMMARY FOR FILE - us18b.d

Lab ID: US18B, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 09-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290 & 1613B
Solid Samples

ARI Job No(s) UR81, U518		
Matrix (circle one)	Soil Sediment Oil Tissue	
Extraction Method	Start Time/Date:	End Time/Date:
Microwave		
Soxhlet	13:01 5/2/12	06:05 5/3/12

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	PD	5/2/12
Purified Sand		7/29/11	PD	5/2/12
Acetone	/			
Toluene		I7461	PD	5/2/12
CH_2Cl_2		I7397	PD	5/9/12
EtOH	/			
MeOH	/			
Hexane		I7437	PD	5/3/12
H_2SO_4		I7381	WP	05/03/12
Na_2SO_4		3/19/12	PD	5/9/12
Glasswool		4/29/10	PD	5/9/12
10 % $AgNO_3$	/			
Basic Silica		G933	PD	5/9/12
Acid Silica		G960	PD	5/9/12
0% Silica		I7104	PD	~~5/9/12~~ 5/9/12 PD
Activated Florisil		G953	PD	5/9/12
Dual Carbon Column	/			
Other ( )				
Nonane		I5167	WP	5/10/12

Reagent / Standard	Vol	ID / Lot Number	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	1963-1	3/26/13	PD	05/02/12	WP
Ongoing Precision /Recovery	20 µL	1954-3	2/27/13	PD	05/02/12	WP
~~QLS Standard~~	~~20 µL~~	~~211~~				
Clean-up Standard	1.0 mL	1963-2	3/26/13	PD	5/9/12	WP
Internal Standard	10 µL					

Bottle ID	ARI Sample ID	Sample Weight (dry wt)	Acid Clean	Silica-Florisil	Silica-Carbon	Final Vol.	Comments
5/2/12	UR81 MB	10.00g			/	10µl	0.5 mL H_2O
	OPR	↓			/		0.5 ↓
	~~QLS~~						
5	UR81 A	24.72			/	10µl	10.8 mL H_2O
	B	25.01					15.5
	C	22.79					12.5
	D	23.37					13.8
	E	~~17.09~~ 16.18					7.0
	F	22.79					10.6
	G	16.78					5.4
	H	24.98					10.2
	I	18.99					9.7
	J	24.36					15.2
1	U518 B	19.57			/		5.6
Prep Analyst/Date		PD 5/2/12	WP 05/03/12	PD 5/9/12	/	WP 5/10/12	

Comments: UR81 A-E, G = Double Acid Silica PD 5/9/12
H, BLUE RESIDUE AT 15-20 µl. WP 5/10/12
CONCENTRATED TO 10 µl PER. MARK W. WP 5/10/12

Form 3083F
Revision 008
03/15/2011

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: UR81

Client ID: Anchor QEA, LLC

Parameter: Dioxin 1613B

Client Project: I & J Waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B, C, D, F, G, H, I, J	SR 4/26/12
☒ Standing Water Decanted (Not shared)= A, B, C, D, F, H, I, J	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? (E = 90% wet sed + 10% 1/2" rocks)	
☒ Organics (Leaves/sticks/grass)= (G = 2% Stick)	
☒ Oily, obvious fuel/sulfur odors= J	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: US18

Client ID: Anchor QEA

Parameter: Dioxin 1613B

Client Project: I+J WATERWAY RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B.	YL 05/01/12
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= A	YL 05/01/12
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

Dioxin Raw Data
Initial Calibration

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HR-GC/MS Analyst Notes / Corrective Action Log

ARI Project ID: _____ Client ID: _____

ARI SOP: **806S** (Dioxins)

Parameter(s): Dioxin Curve 5/3/12

Instrument: **AutoSpec01**

Curve Date: 5/3/12 Analysis Start Date: _____

Internal Standard Meets Criteria?	YES / NO	Method Blank in Control?	YES / NO
Extraction Std Recovery in Control?	YES / NO	IPR / OPR Recovery in Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes /NO
Special Analysis Criteria Met?	YES / NO / NA		

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

- All cmpds 6 pts: CS1 → CS5. All < 30% RSD.
- Man Int for HxCD and OCDD in CS1.

Additional Details on Reverse: Yes / No

Analyst: [signature] **Date:** 5/4/12

Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 5/3/12 Analysis: Diggins Analyst: pk

GC Program: 8290C Column No: 985165 Column Type: RTXDIGIN2

Inj Vol: 1ul Instrument Tune (IPR): 10K8290B Detector Voltage: 350

Resolution Check Files: 10:40, 20:46 Curve Date: 5/3/12

IS/SS	Ical/Ccal	LCS/ICV
I7436	I7333 - I7337	I7383
	I7214	
	1929-2	

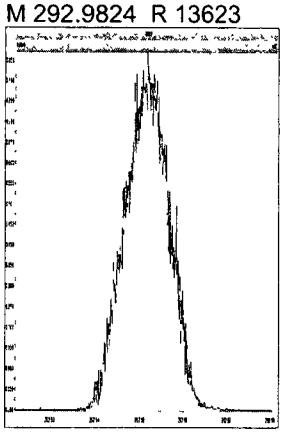
#	Acq Date	Acq.Time	Name	ID	Pre.	RT	IS AREA	Comments
1	03-May-12	10 42.17	12050302	CS3	26 3	26 3	3856988	
2	03-May-12	11 37 23	12050303	TETRA RES	26 3			
3	03-May-12	12 27 37	12050304	CSL	26 3	26 3	3051040	
4	03-May-12	15 26 24	12050305	CS1	26 3	26 3	2983027	
5	03-May-12	16 19 31	12050306	CS2	26 3	26 3	3059147	
6	03-May-12	17 09 55	12050307	CS3	26 3	26 3	2994466	
7	03-May-12	18 02 13	12050308	CS4	26 3	26 3	3085134	
8	03-May-12	18 54 20	12050309	CS5	26 3	26 3	3297841	
9	03-May-12	19 46 34	12050310	ICV	26 3	26 3	3008147	

pk 5/4/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Printed: Thursday, May 03, 2012 10:40:13 Pacific Daylight Time

M 292.9824 R 13623



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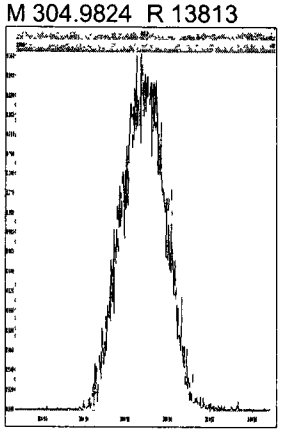

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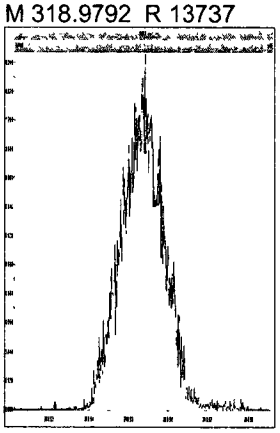

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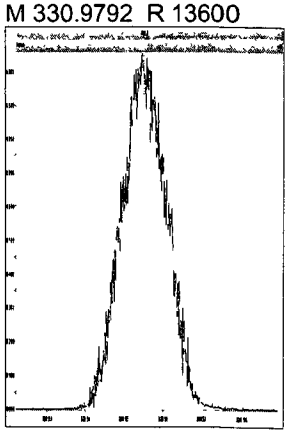

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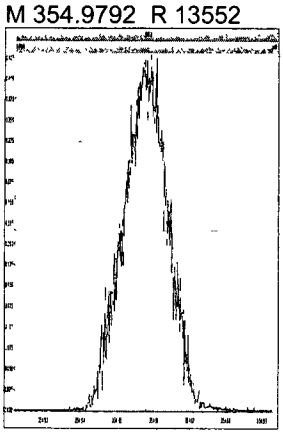

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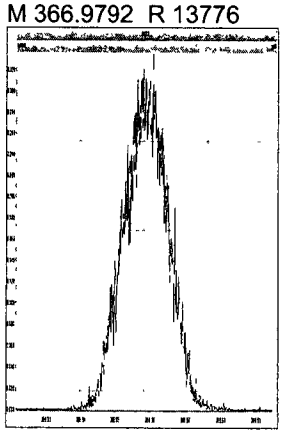

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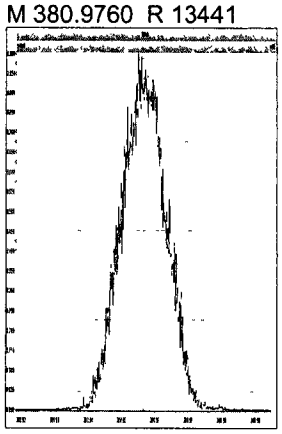

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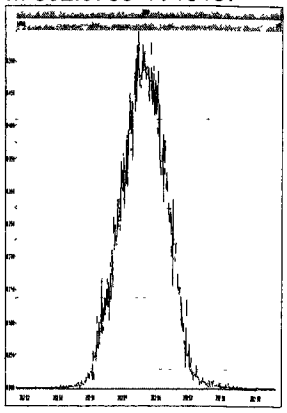

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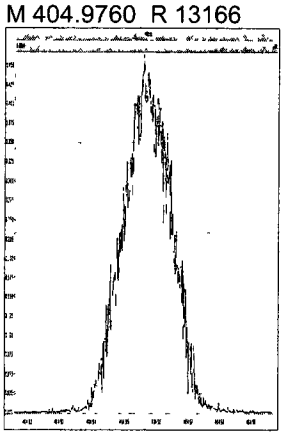

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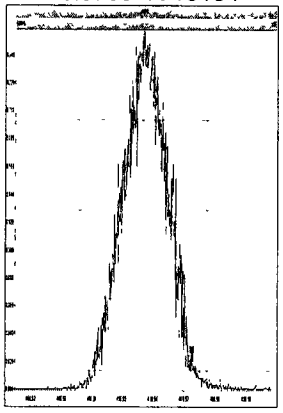

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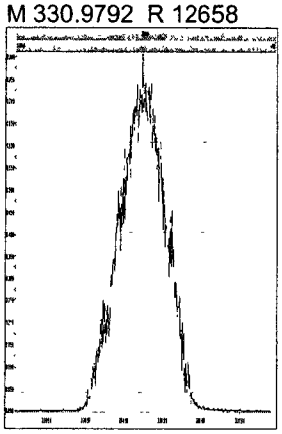

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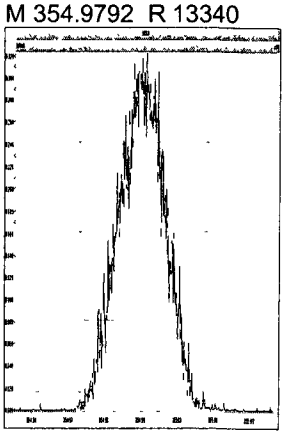

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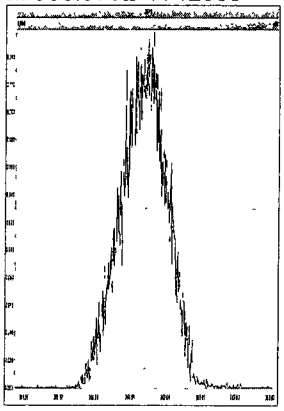

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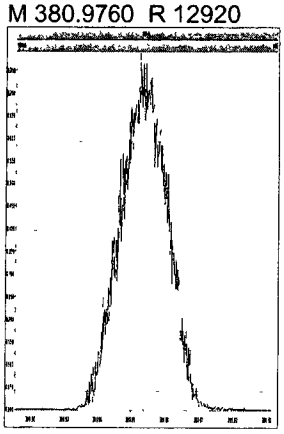

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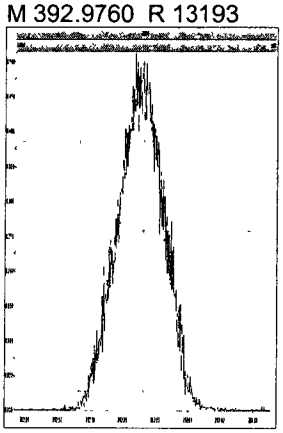

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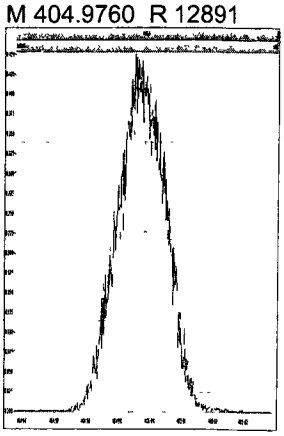

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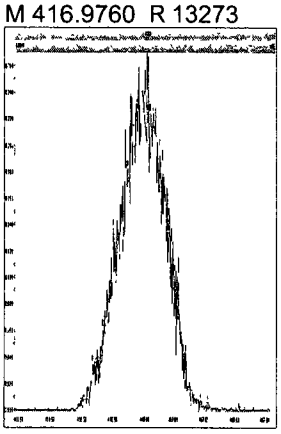

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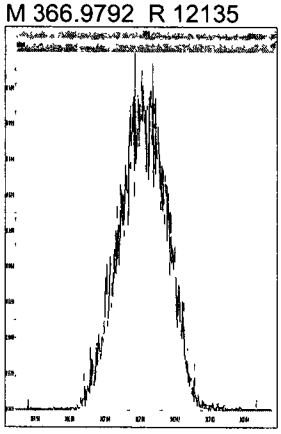

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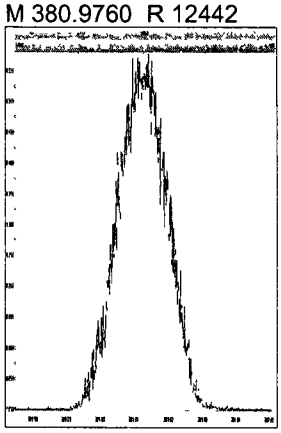

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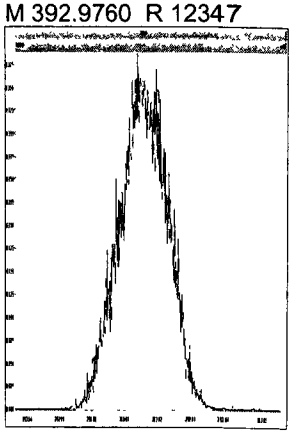

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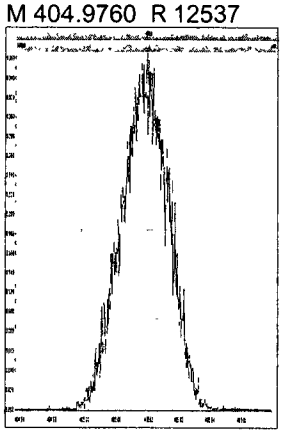

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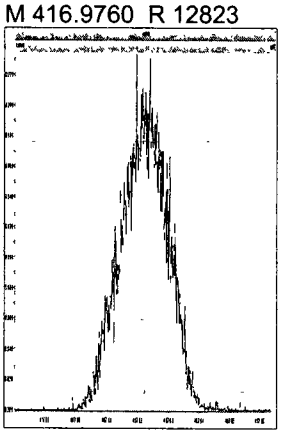

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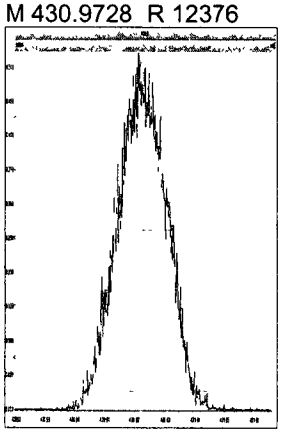

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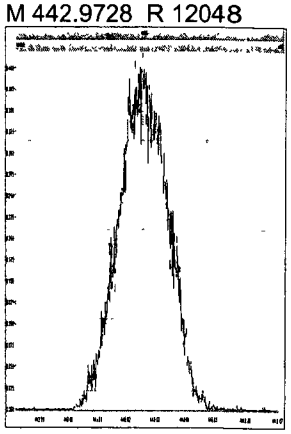
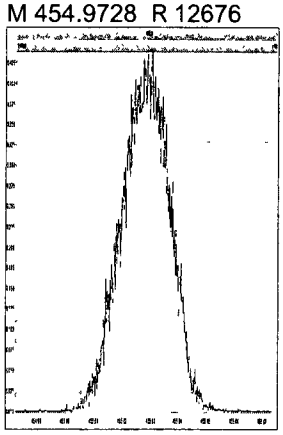
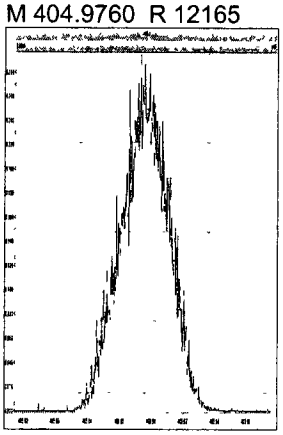


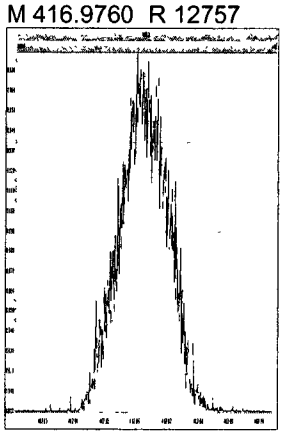
M 454.9728 R 12676



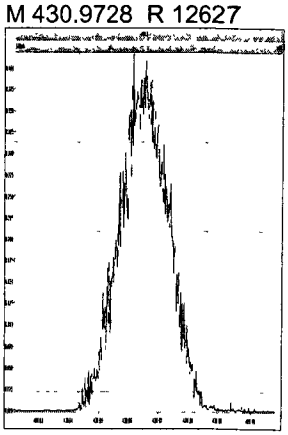
M 404.9760 R 12165



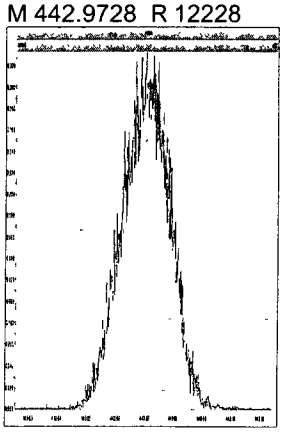
M 416.9760 R 12757



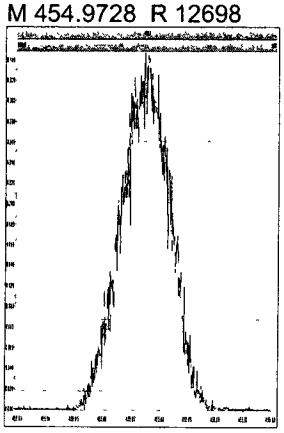
M 430.9728 R 12627



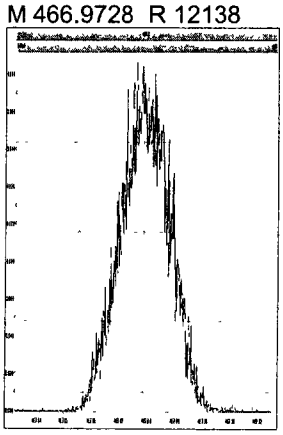
M 442.9728 R 12228



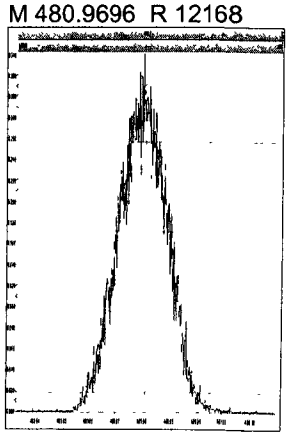
M 454.9728 R 12698



M 466.9728 R 12138



M 480.9696 R 12168



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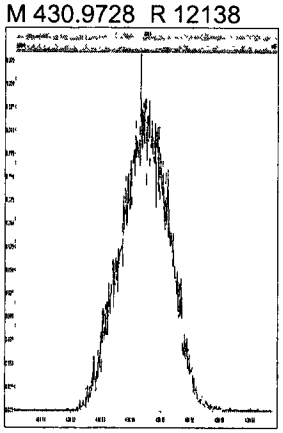
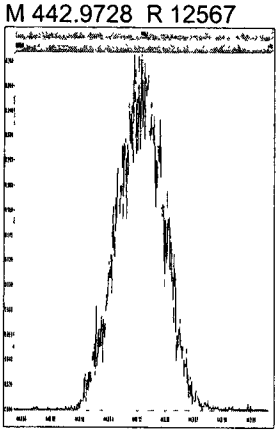


M 442.9728 R 12567



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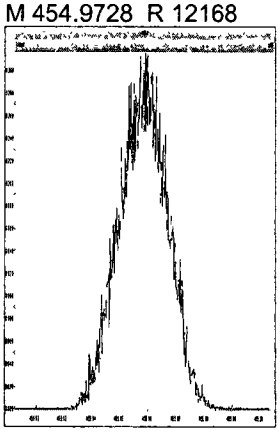
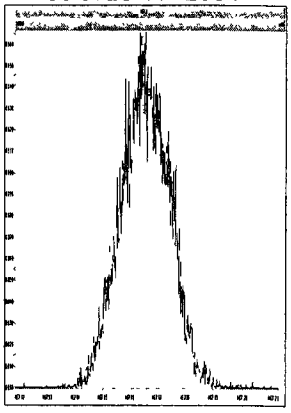
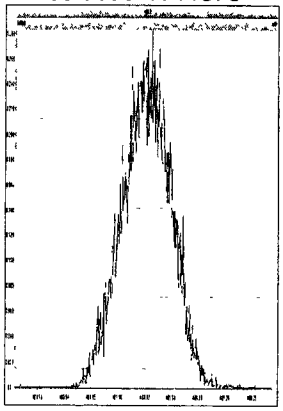


M 466.9728 R 12501



M 480.9696 R 11878



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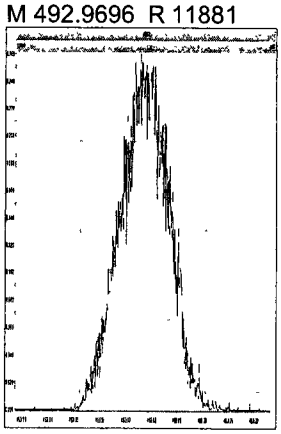
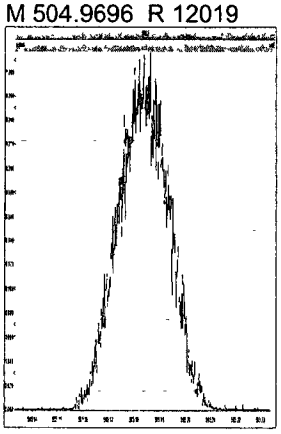


M 504.9696 R 12019



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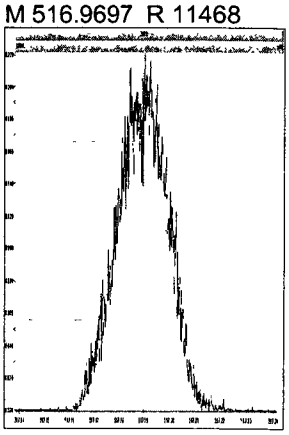

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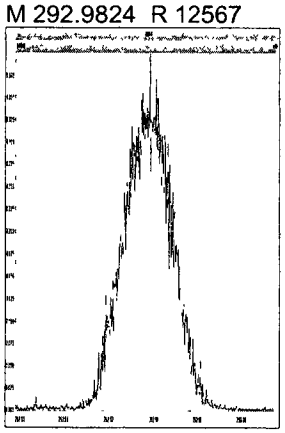
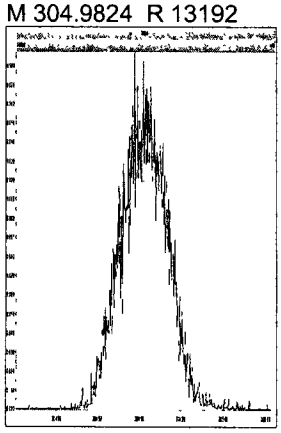
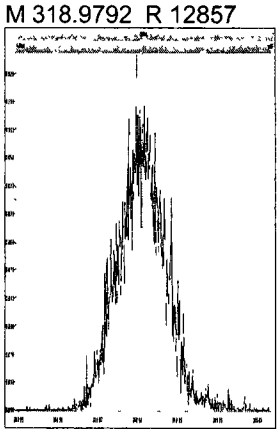


M 304.9824 R 13192



M 318.9792 R 12857



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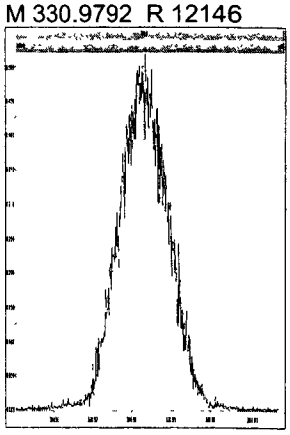

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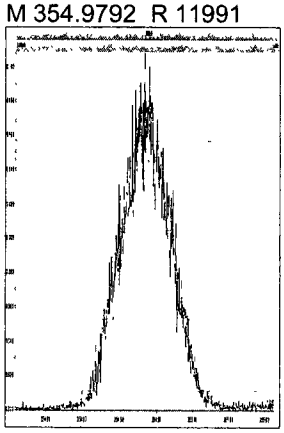
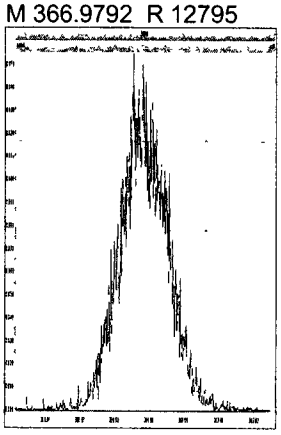
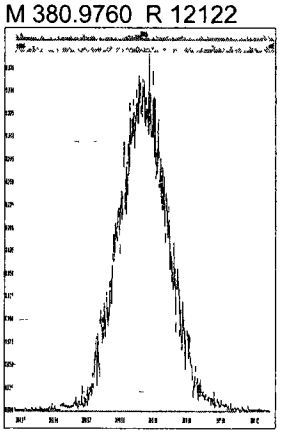


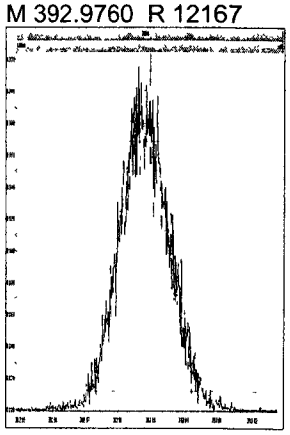
M 366.9792 R 12795



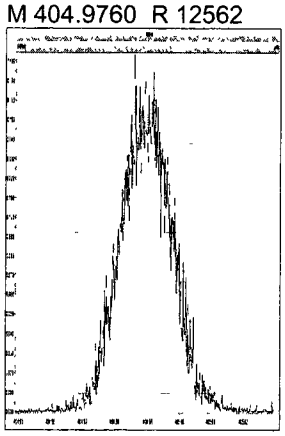
M 380.9760 R 12122



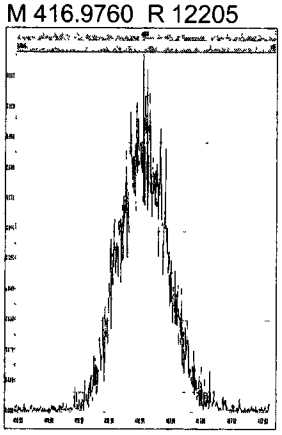
M 392.9760 R 12167



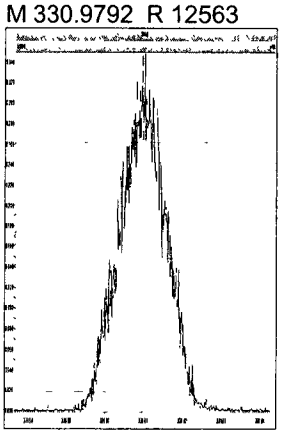
M 404.9760 R 12562



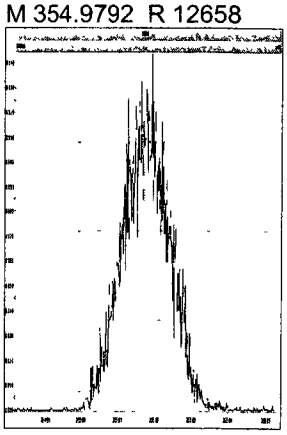
M 416.9760 R 12205



M 330.9792 R 12563



M 354.9792 R 12658



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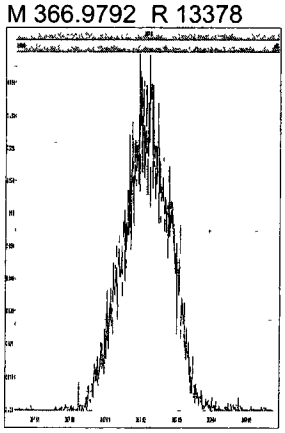

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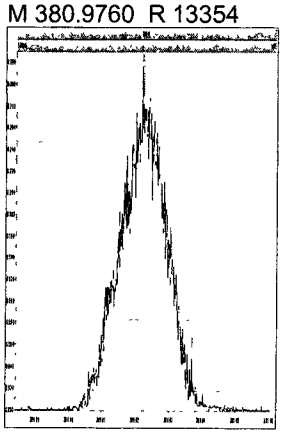
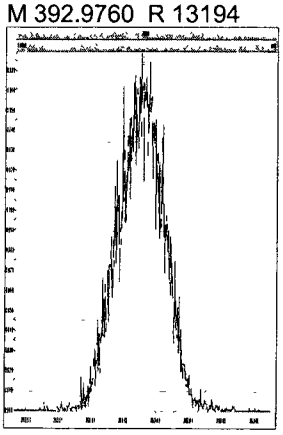
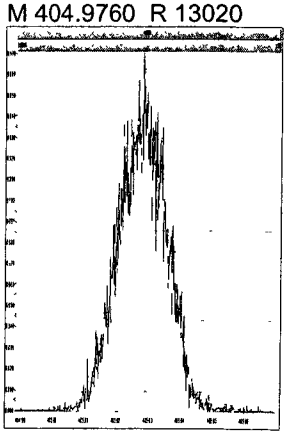


M 392.9760 R 13194



M 404.9760 R 13020



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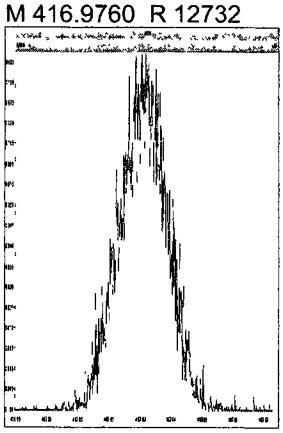
M 416.9760 R 12732



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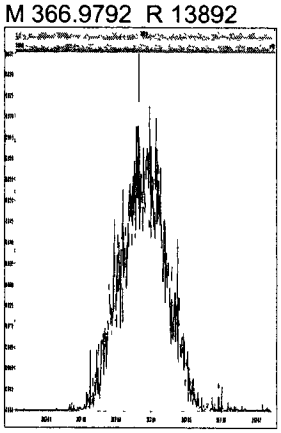
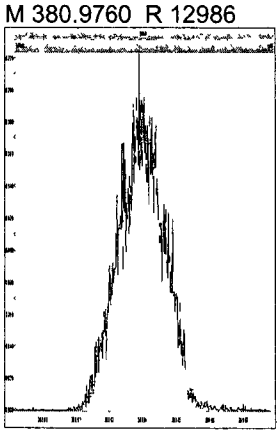
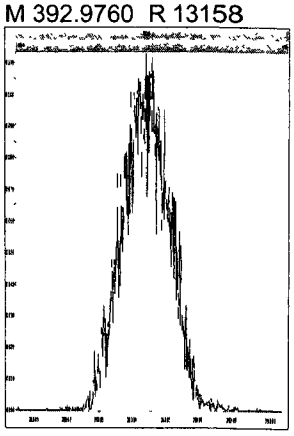


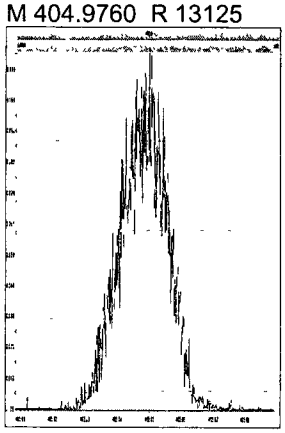
M 380.9760 R 12986



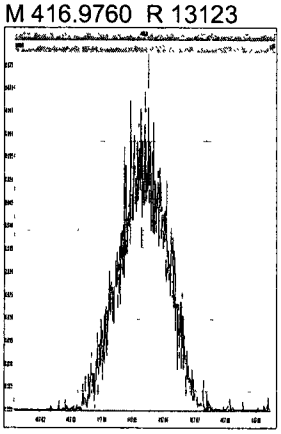
M 392.9760 R 13158



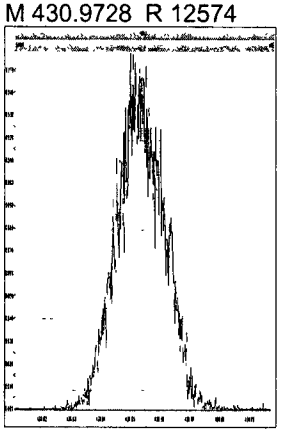
M 404.9760 R 13125



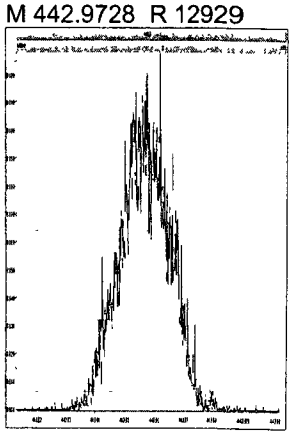
M 416.9760 R 13123



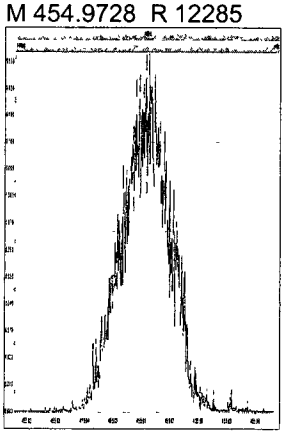
M 430.9728 R 12574



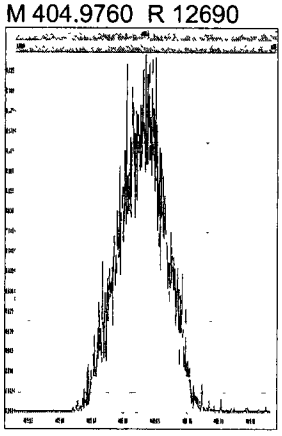
M 442.9728 R 12929



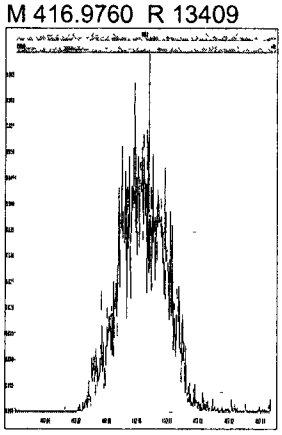
M 454.9728 R 12285



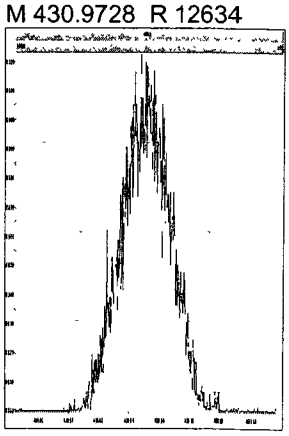
M 404.9760 R 12690



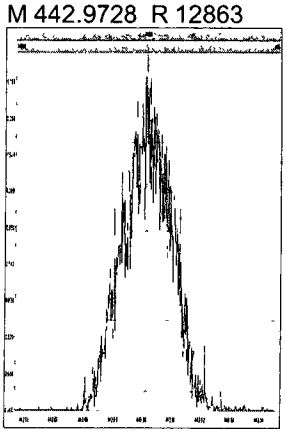
M 416.9760 R 13409



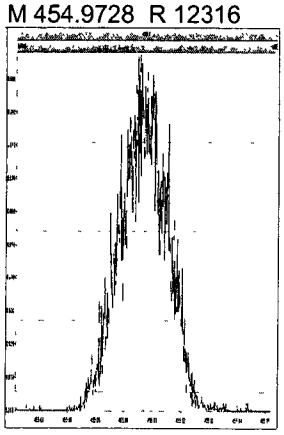
M 430.9728 R 12634



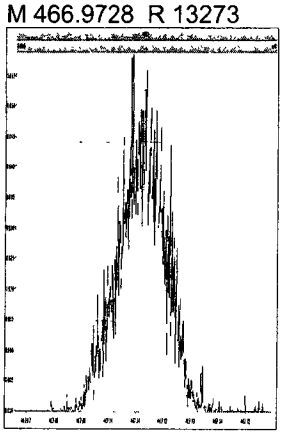
M 442.9728 R 12863



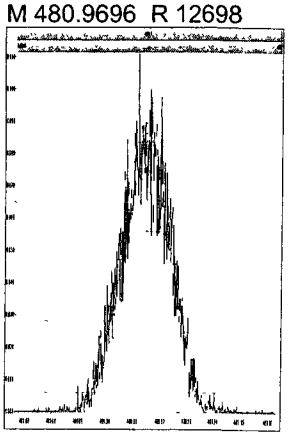
M 454.9728 R 12316



M 466.9728 R 13273



M 480.9696 R 12698



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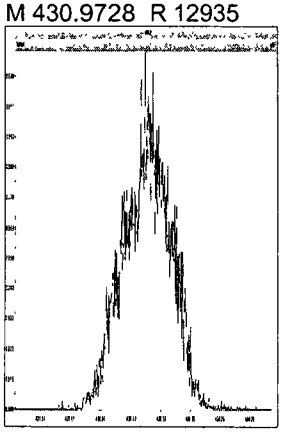
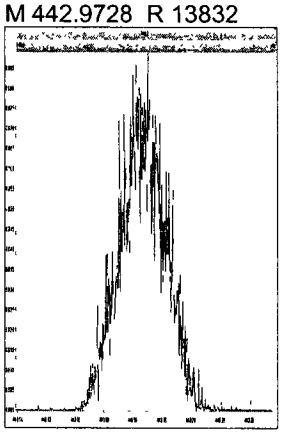


M 442.9728 R 13832



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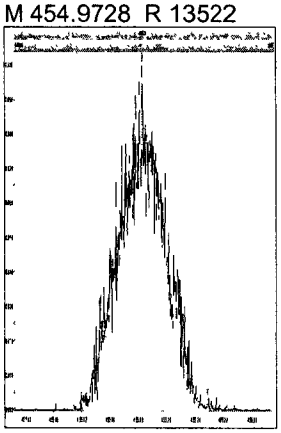
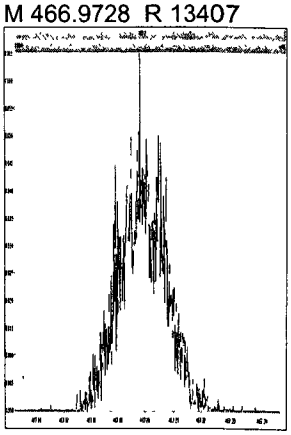
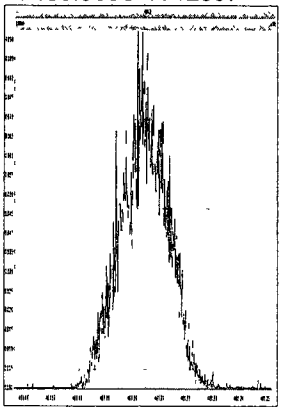


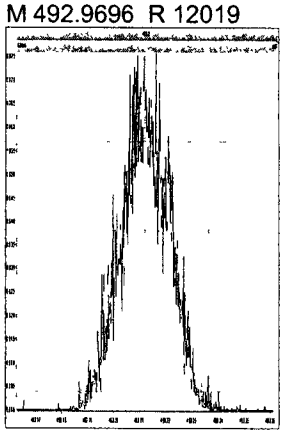
M 466.9728 R 13407



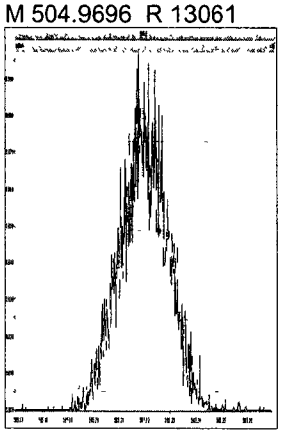
M 480.9696 R 12507



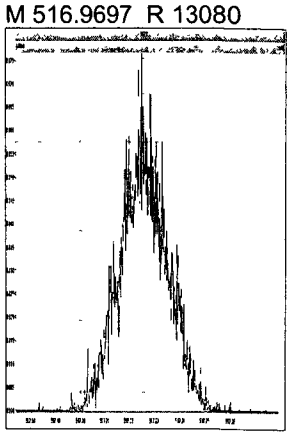
M 492.9696 R 12019

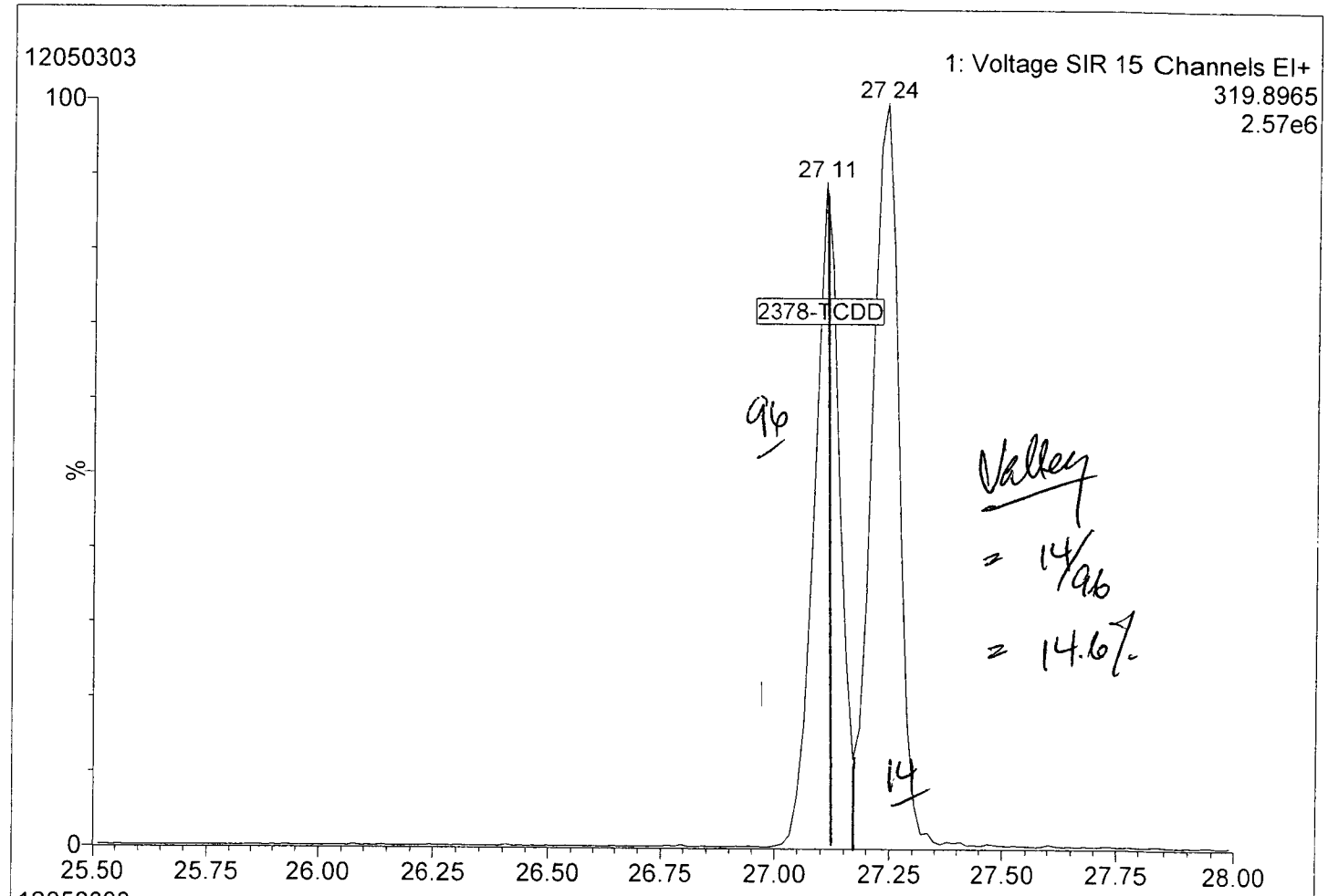


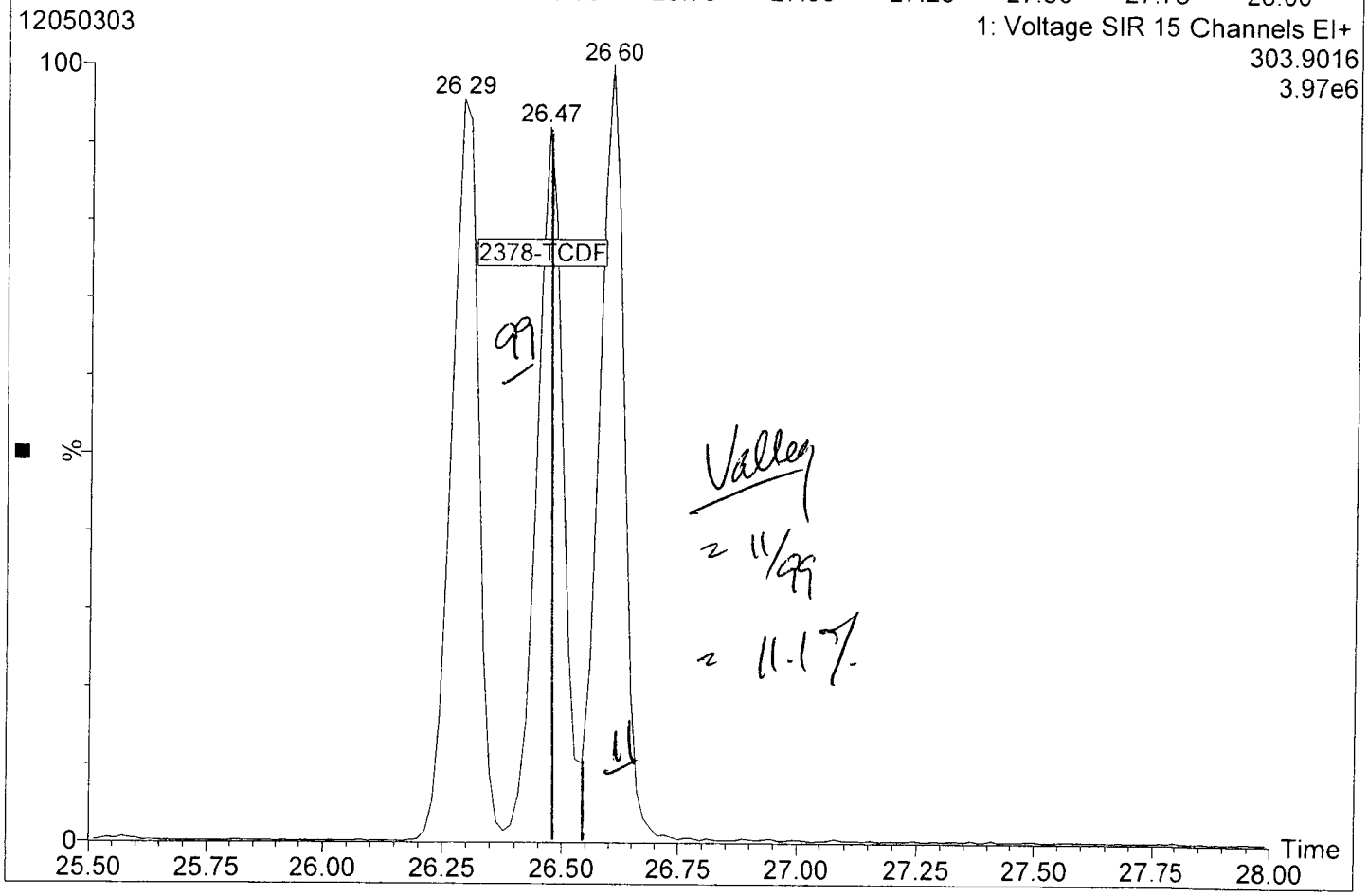
M 504.9696 R 13061

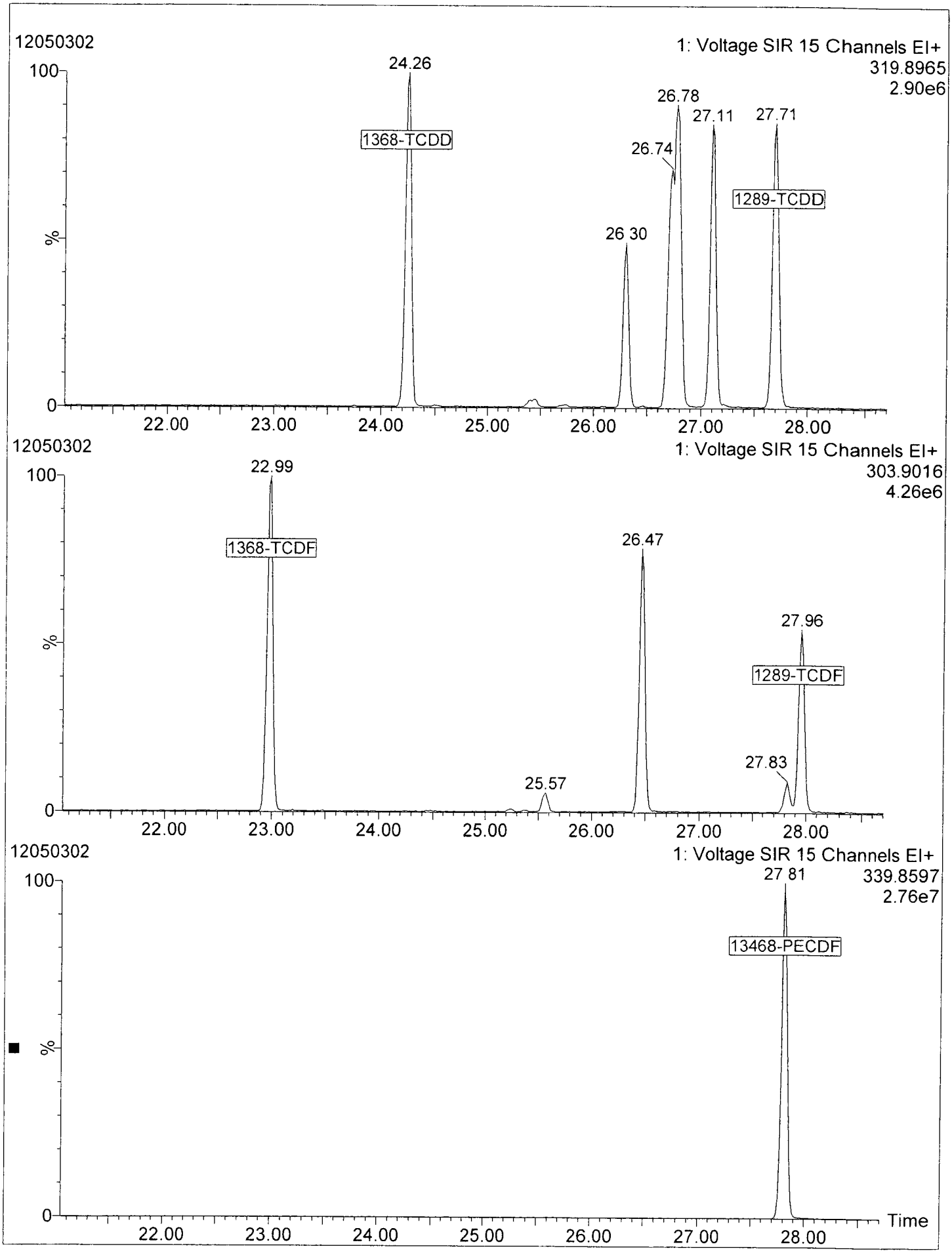


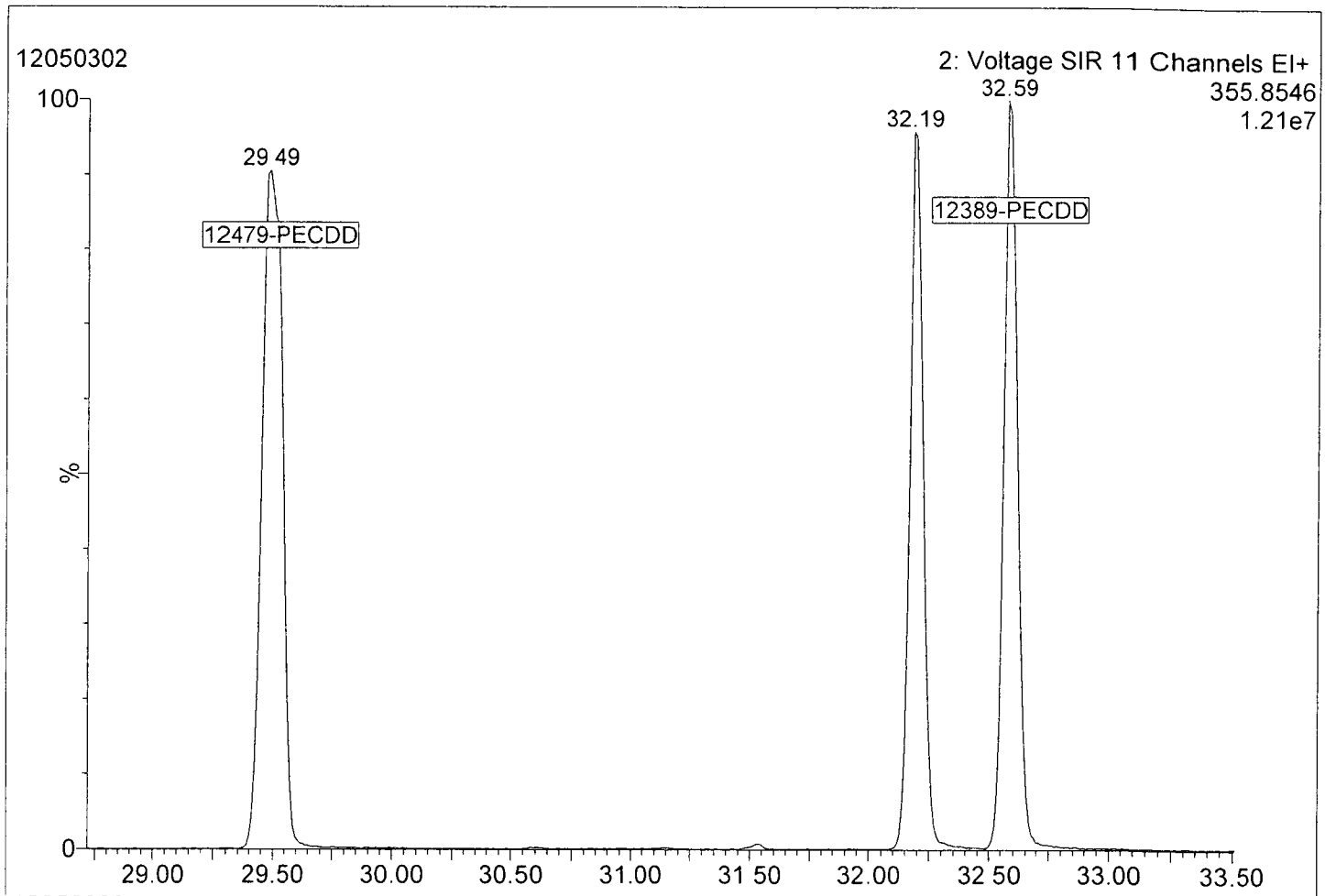
M 516.9697 R 13080

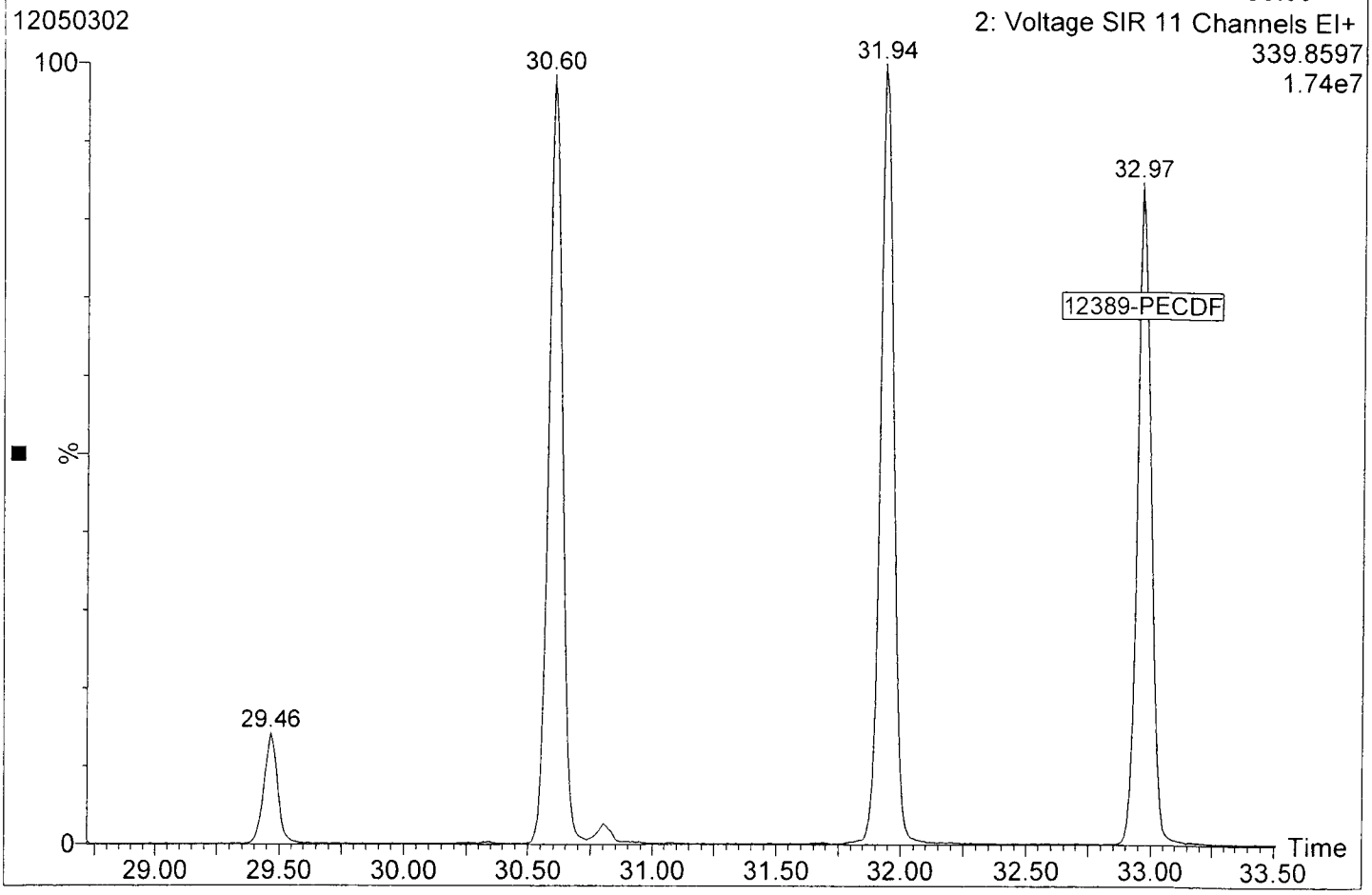


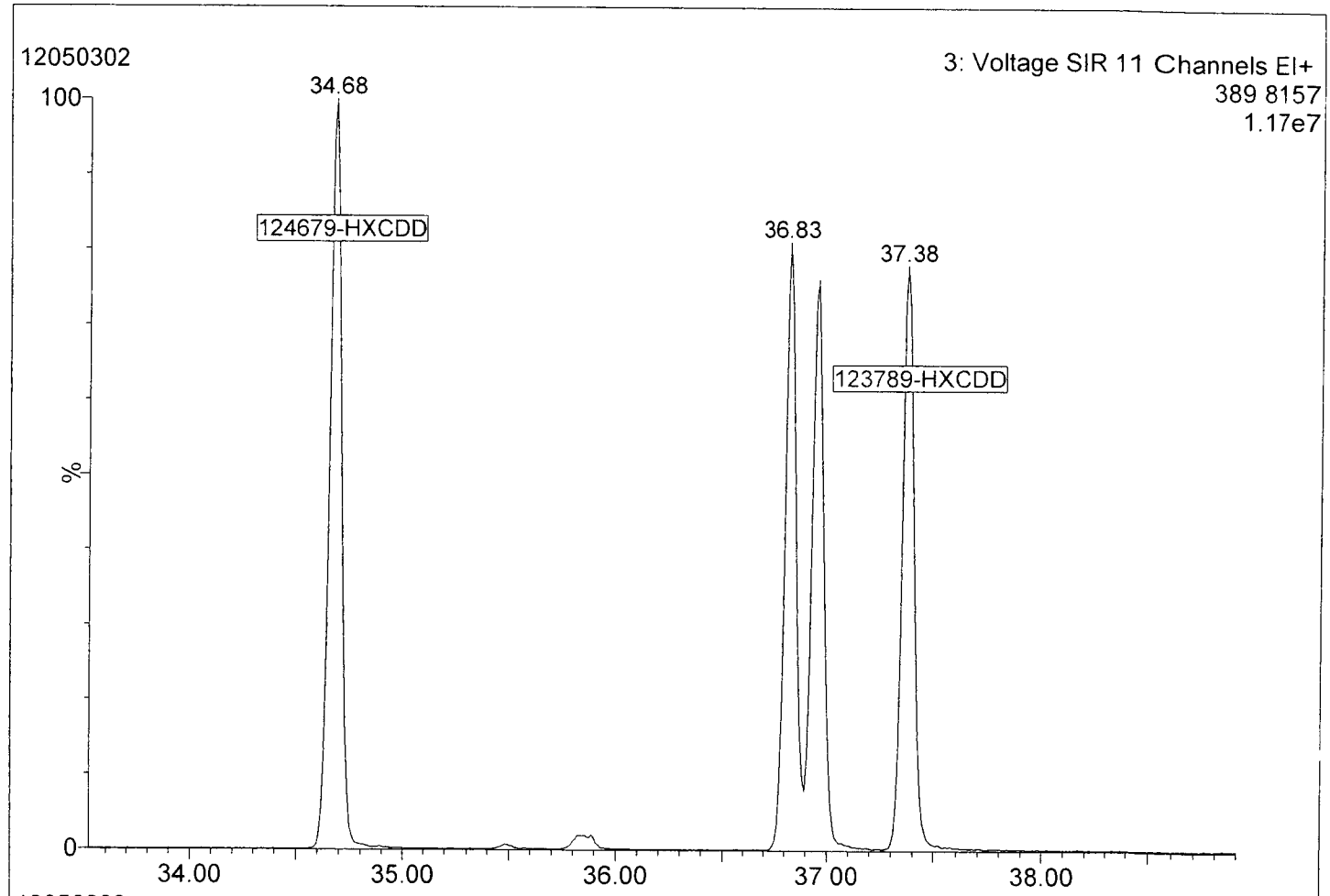

12050303
1: Voltage SIR 15 Channels EI+
319.8965
2.57e6
27 24
27 11
2378-TCDD
96
14
Valley
= 14/96
= 14.6%
100
%
0
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00

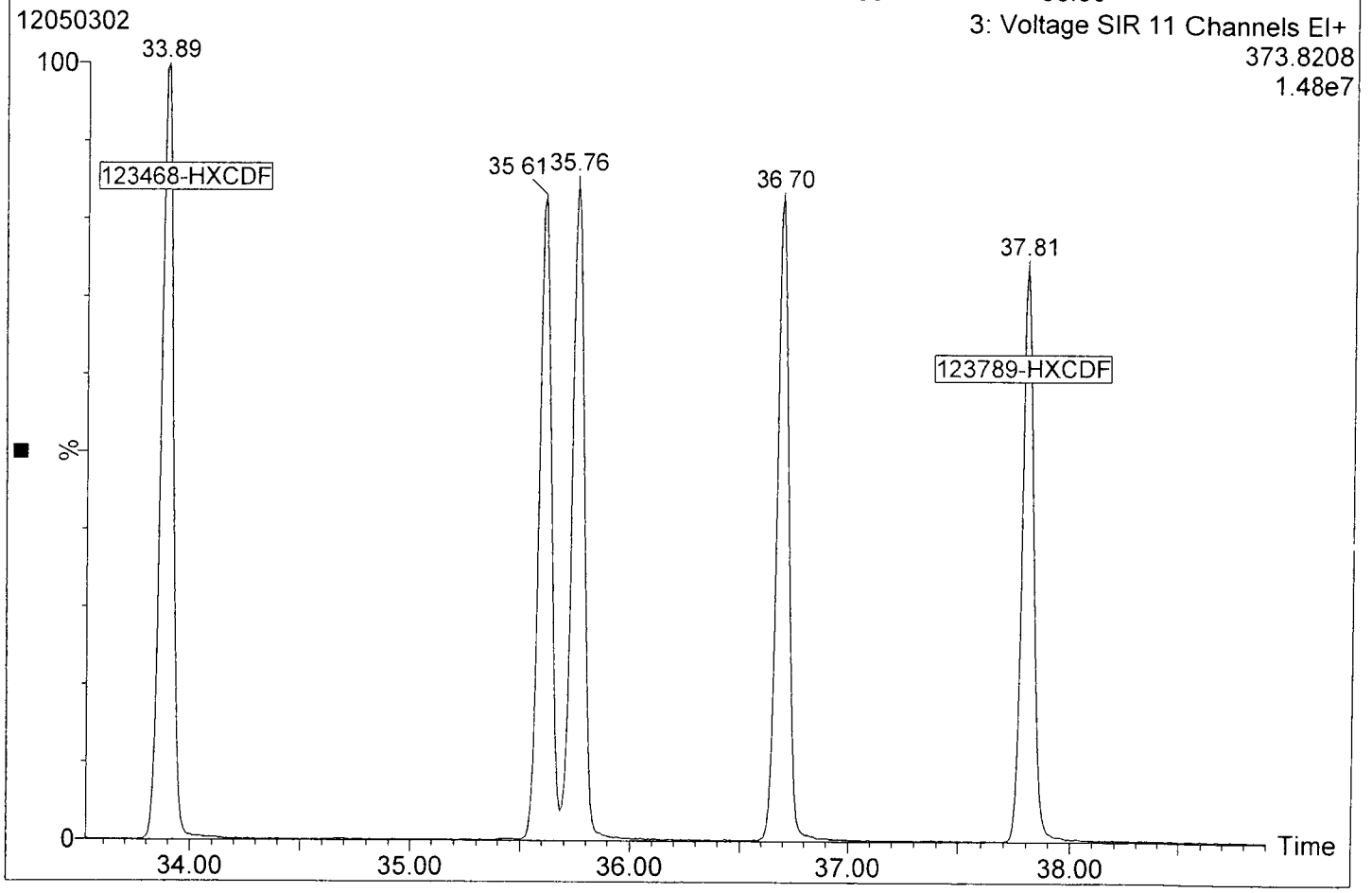

12050303
1: Voltage SIR 15 Channels EI+
303.9016
3.97e6
26 60
26 29
26.47
2378-TCDF
99
11
Valley
= 11/99
= 11.1%
100
%
0
Time
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00

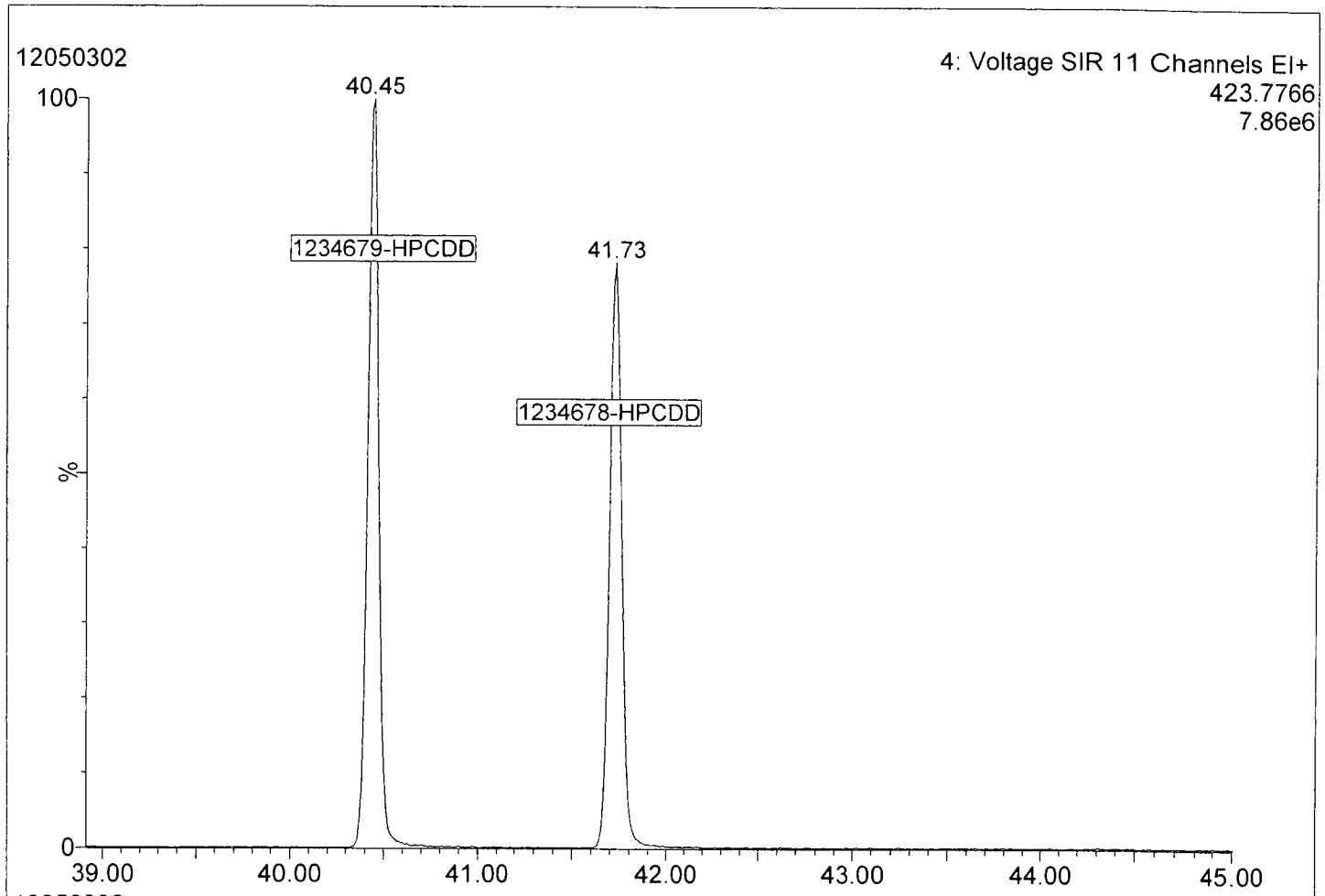

12050302
1: Voltage SIR 15 Channels EI+
319.8965
2.90e6
24.26
1368-TCDD
26.78
27.11
27.71
26.74
1289-TCDD
26.30
100
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
12050302
1: Voltage SIR 15 Channels EI+
303.9016
4.26e6
22.99
1368-TCDF
26.47
27.96
1289-TCDF
27.83
25.57
100
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
12050302
1: Voltage SIR 15 Channels EI+
339.8597
2.76e7
27.81
13468-PECDF
100
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00

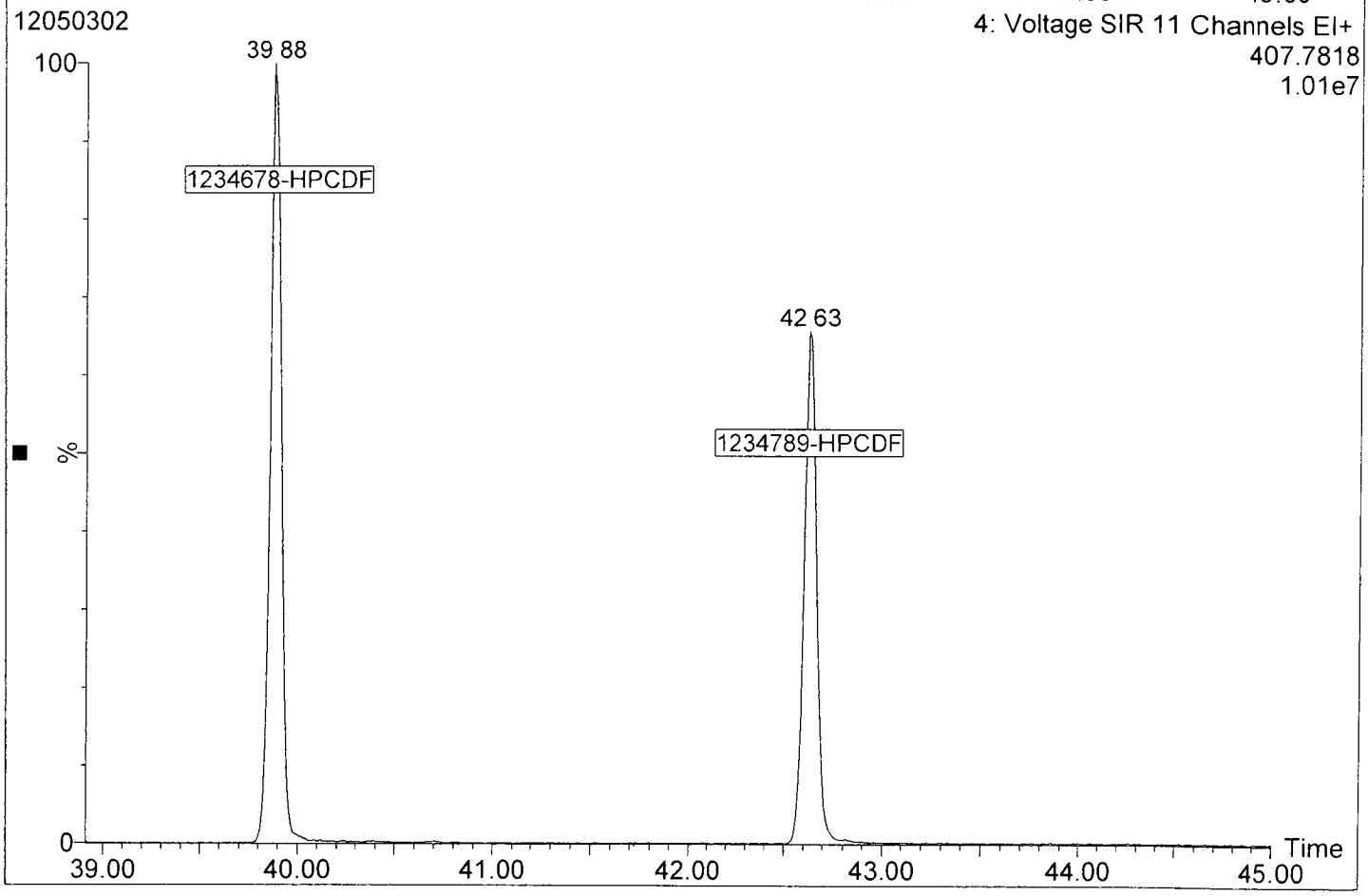

12050302
2: Voltage SIR 11 Channels EI+
355.8546
1.21e7
100
%
0
29.49
12479-PECDD
32.19
32.59
12389-PECDD
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


12050302
2: Voltage SIR 11 Channels EI+
339.8597
1.74e7
100
%
0
29.46
30.60
31.94
32.97
12389-PECDF
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


12050302
3: Voltage SIR 11 Channels EI+
389 8157
1.17e7
100
%
0
34.68
124679-HXCDD
36.83
37.38
123789-HXCDD
34.00
35.00
36.00
37 00
38.00


12050302
3: Voltage SIR 11 Channels EI+
373.8208
1.48e7
100
%
0
33.89
123468-HXCDF
35 61
35.76
36 70
37.81
123789-HXCDF
34.00
35.00
36.00
37.00
38.00
Time


12050302
4: Voltage SIR 11 Channels EI+
423.7766
7.86e6
100
%
0
40.45
1234679-HPCDD
41.73
1234678-HPCDD
39.00
40.00
41.00
42.00
43.00
44.00
45.00


12050302
4: Voltage SIR 11 Channels EI+
407.7818
1.01e7
100
%
0
39 88
1234678-HPCDF
42 63
1234789-HPCDF
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290 PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08.31:18 Pacific Daylight Time
Printed Friday, May 04, 2012 08 32 15 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

	# Name	Trace	RT	Pred RT	Abs.Resp	Abs Corr .	RRF M.	1° Det . .	%Rec	1° Ratio. .	1° Rati..	S/N	1° .	pg	EMPC
1	1 2378-TCDF	303 9016	26 466	26 468	4156	4156	0.866	bb	107 4	0 73	0 77	22 1	NO	0 107	0 107
2	2 12378-PeCDF	339 8597	30.615	30 615	13131	13131	0 907	bb	98 1	1 73	1 55	96 5	NO	0 491	0 491
3	3 23478-PeCDF	339 8597	31 952	31 953	13091	13091	0 936	bb	98 7	1 62	1 55	103 5	NO	0 494	0 494
4	4 123478-HxCDF	373 8208	35 613	35 602	10268	10268	1 082	bd	98.2	1.23	1 24	82.9	NO	0 491	0 491
5	5 234678-HxCDF	373.8208	36 698	36 709	10548	10548	1 070	bd	98 3	1 24	1 24	82 0	NO	0 491	0.491
6	6 123678-HxCDF	373 8208	35 756	35 766	10657	10657	1 048	db	96 5	1.21	1.24	94 4	NO	0 482	0 482
7	7 123789-HxCDF	373.8208	37 806	37 806	9105	9105	1 020	bb	103 4	1 24	1 24	75 5	NO	0 517	0 517
8	8 1234678-HpCDF	407 7818	39 888	39 897	9449	9449	1 214	bb	94 2	0 92	1 05	131 9	NO	0 471	0 471
9	9 1234789-HpCDF	407 7818	42 650	42 641	8126	8126	1 254	bb	106 5	1 19	1 05	92 3	NO	0 533	0.533
10	10 OCDF	441 7428	48 040	48 030	12627	12627	1 105	bb	99 5	0 81	0 89	84.4	NO	0 995	0.995
11	11 2378-TCDD	319 8965	27 124	27 108	3383	3383	1 046	bd	113 9	0.72	0 77	18 3	NO	0.114	0.114
12	12 12378-PeCDD	355 8546	32 204	32 192	9327	9327	0 973	bb	102 3	1.60	1 55	88 4	NO	0 511	0 511
13	13 123478-HxCDD	389.8157	36 830	36 841	7574	7574	0 935	bd	96 5	1 11	1 24	89 2	NO	0.482	0.482
14	14 123678-HxCDD	389 8157	36 961	36 962	7437	7437	0.878	db	94 4	1.15	1 24	76 9	NO	0 472	0 472
15	15 123789-HxCDD	389 8157	37 378	37 357	6932	6932	0 839	MM	95 2	1 41	1 24	87 0	NO	0 476	0 476
16	16 1234678-HpCDD	423 7766	41 729	41 731	6310	6310	0 974	bb	96 2	0 99	1.05	113 7	NO	0 481	0 481
17	17 OCDD	457 7377	47 770	47 758	10594	10594	0 950	bb	97 1	0 89	0 89	185 0	NO	0 971	0 971
18	18 13C-2378-TCDF	315 9419	26 452	26 467	4467983		1 484	bb	98 7	0 77	0 77	9988 1	NO	98 652	
19	19 13C-12378-PeCDF	351 9000	30 593	30 608	2950887		1 048	bb	92 3	1 55	1 55	6795.8	NO	92 281	
20	20 13C-23478-PeCDF	351.9000	31 930	31 945	2833219		1 003	bb	92 5	1 56	1 55	6546 7	NO	92 548	
21	21 13C-123478-HxCDF	383 8639	35 591	35 591	1933351		1 186	bd	100 0	0 52	0 51	2426 1	NO	100 026	
22	22 13C-123678-HxCDF	383 8639	35 745	35 745	2107068		1 315	db	98 3	0 52	0 51	2606 8	NO	98 283	
23	23 13C-234678-HxCDF	383 8639	36 687	36 676	2006640		1 223	bb	100 6	0 53	0 51	2495 3	NO	100 621	
24	24 13C-123789-HxCDF	383 8639	37 794	37 784	1726146		1 056	bb	100 2	0 53	0 51	2259 4	NO	100 222	
25	25 13C-1234678-HpCDF	417 8253	39 877	39 866	1651323		1 011	bb	100 2	0 45	0 44	2803 8	NO	100 150	
26	26 13C-1234789-HpCDF	417 8253	42 628	42.617	1216771		0 741	bd	100 8	0 45	0 44	1788 2	NO	100 787	
27	27 13C-1234-TCDD	331.9368	26.287	26 272	3051040		1 000	bb	100.0	0 77	0.77	5925.3	NO	100.000	
28	28 13C-2378-TCDD	331.9368	27 094	27 109	2840475		0 956	bb	97 3	0 77	0 77	5300 2	NO	97 345	
29	29 13C-12378-PeCDD	367 8949	32 182	32 198	1874461		0 663	bb	92 6	1 61	1 55	8507 5	NO	92 602	
30	30 13C-123478-HxCDD	401 8559	36 819	36 808	1678314		1.024	bd	100 5	1 26	1 24	4678 1	NO	100 545	
31	31 13C-123678-HxCDD	401 8559	36 951	36 939	1795151		1 113	db	99 0	1 26	1 24	4804 7	NO	98 970	
32	32 13C-1234678-HpCDD	435 8169	41 718	41 719	1346930		0 815	bd	101 4	1 04	1 05	3595 6	NO	101 361	
33	33 13C-OCDD	469 7779	47 743	47 735	2295902		0 717	bb	98 2	0 90	0 89	3009 1	NO	196 397	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120503IC.qld
Last Altered. Friday, May 04, 2012 08:31.18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08.32 15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

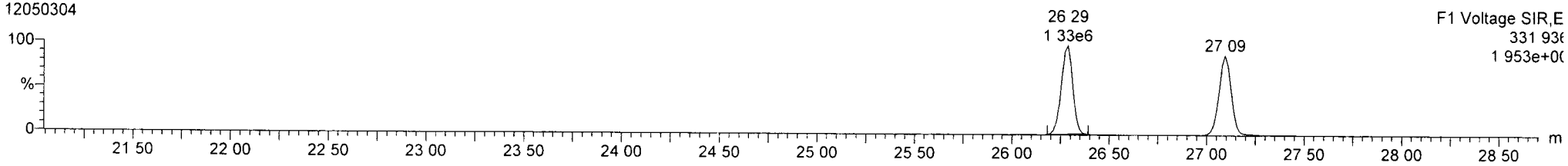
	#	Name	Trace	RT	Pred RT	Abs Resp	Abs Corr	RRF M	1° Det.	%Rec	1° Ratio	1° Rati	S/N	1°	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 367	37 368	1630243		1 000	bb	100 0	1 23	1 24	4620 3	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 490			0 866							0.107	0 107
36	36	Total-penta1	339.8597		28 270											
37	37	Total-pentafurans	339 8597		30 840			0 921							0 984	0 995
38	38	Total-hexafurans	373 8208		35 860			1 055							1 982	1 982
39	39	Total-heptafurans	407 7818		41 270			1.234							1 004	1 004
40	40	Total-Furans	303 9016		0 000			1.050							5 072	5 083
41	41	Total-tetradioxins	319 8965		26 000			1.046							0 114	0 129
42	42	Total-pentadioxins	355 8546		31 040			0 973							0 511	0.511
43	43	Total-hexadioxins	389.8157		36 030			0 884							1 430	1 430
44	44	Total-heptadioxins	423 7766		41 090			0 974							0.481	0 481
45	45	Total-Dioxins	319 8965		0 000			0.942							3 508	3 522
46	46	Total-TEQ	319 8965		0.000										8 580	8 606
47	47	37CL-2378-TCDD	327 8847	27 109	27 102	3250		1 037		102 7			23 8		0 103	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000										0 000	
50	50	FUNCTION3 PFK	380 9760		0 000										0 000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000											
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445 7555		0.000											
57	57	FUNCTION4 NCDPE	479 7165		0 000											
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08.31 18 Pacific Daylight Time
Printed Friday, May 04, 2012 08:32 15 Pacific Daylight Time

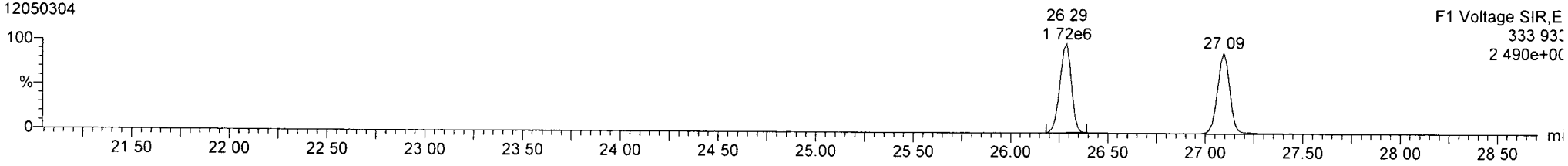
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD
12050304



13C-1234-TCDD
12050304



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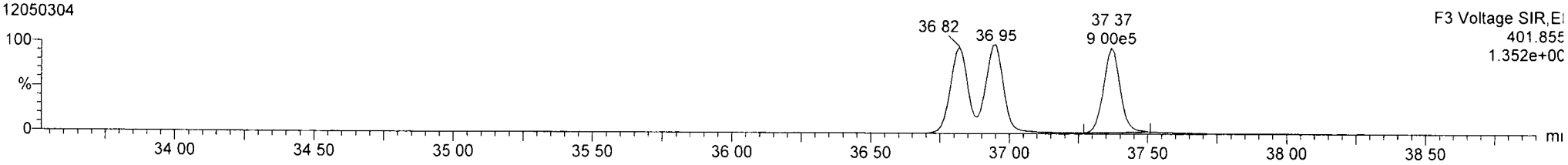
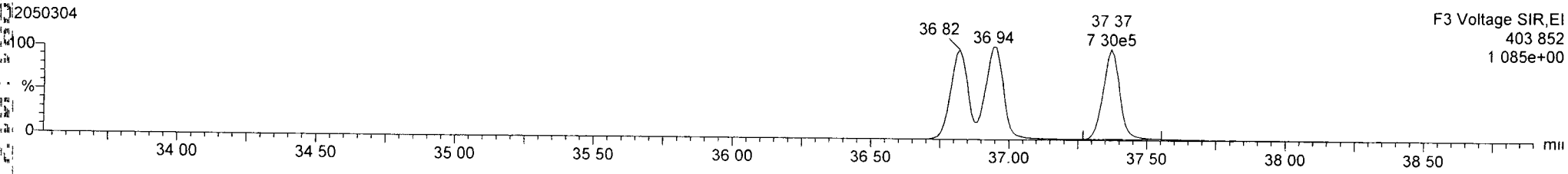
12050304



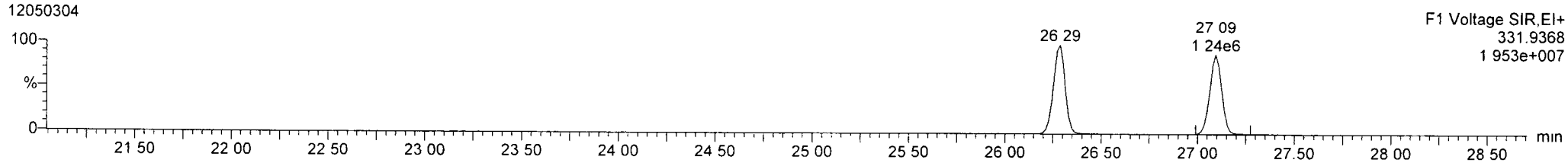
13C-123789-HxCDD
12050304



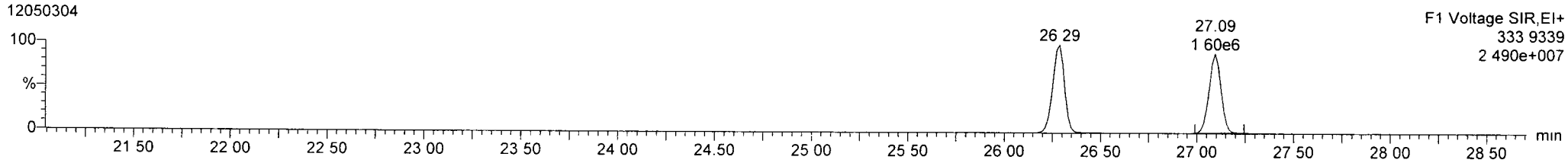
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290 PRO\120503IC qld
Last Altered. Friday, May 04, 2012 08:31 18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08 32 15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

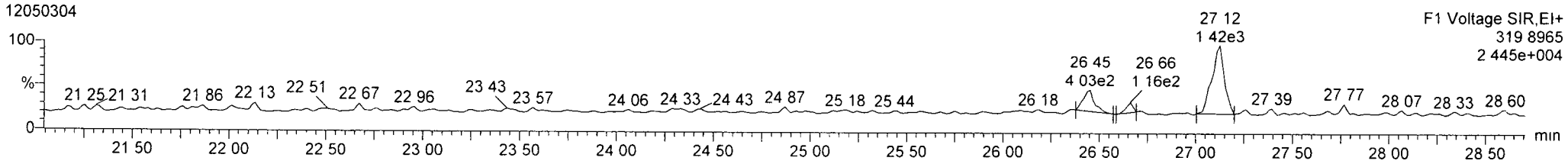
13C-2378-TCDD



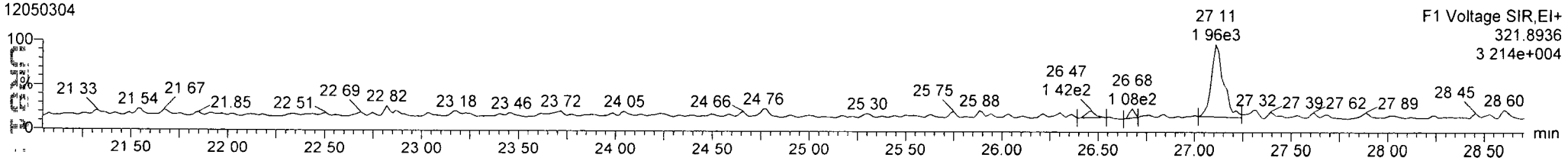
13C-2378-TCDD



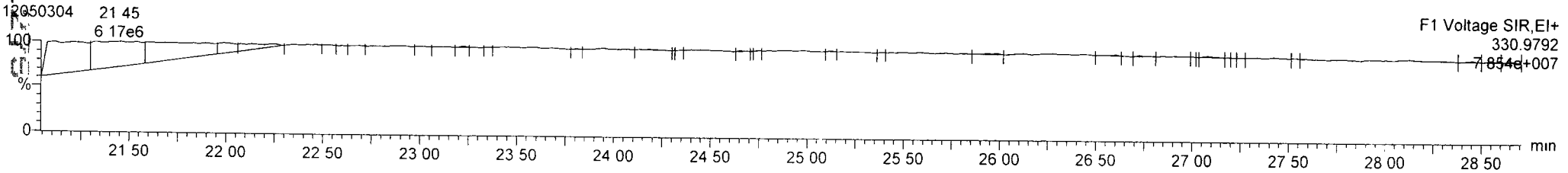
Total-tetradioxins



Total-tetradioxins



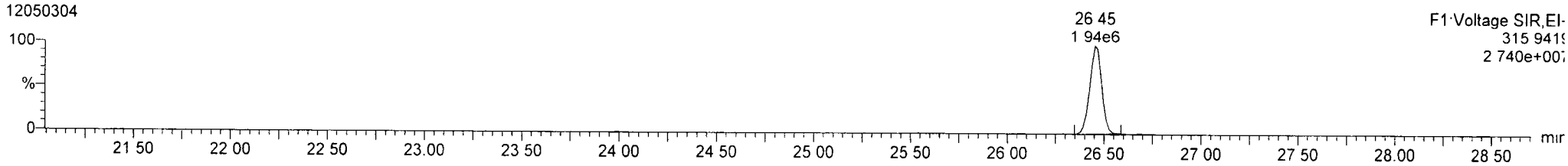
FUNCTION1 PFK



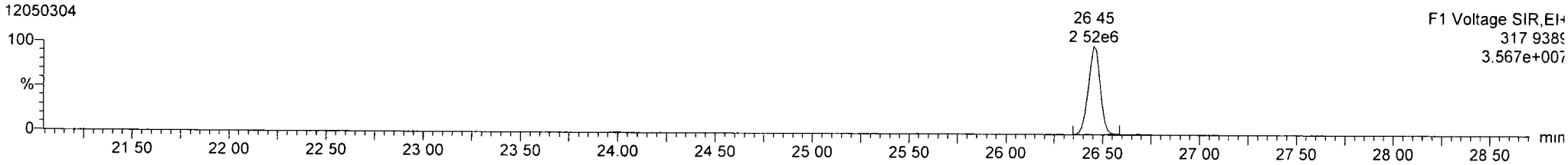
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08.32.15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

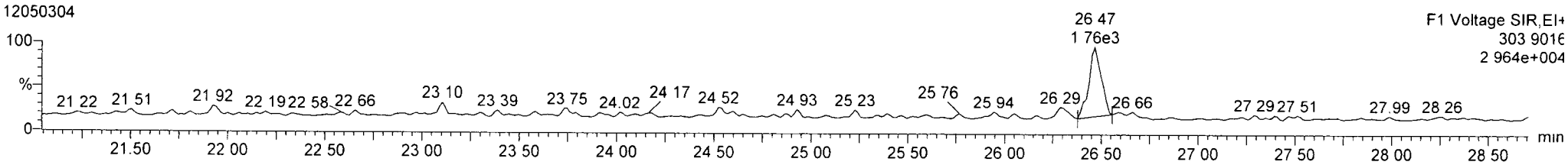
13C-2378-TCDF



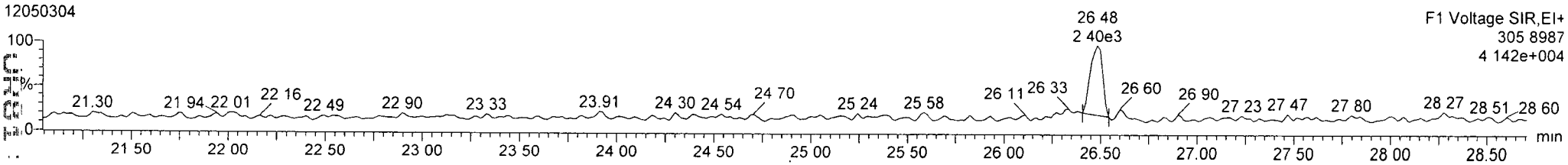
13C-2378-TCDF



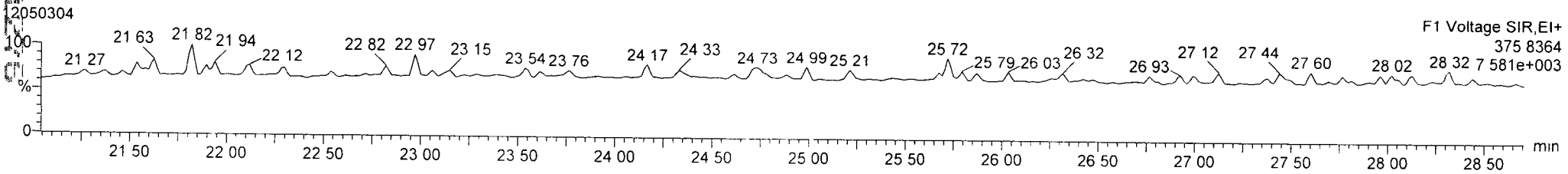
Total-tetrafurans



Total-tetrafurans

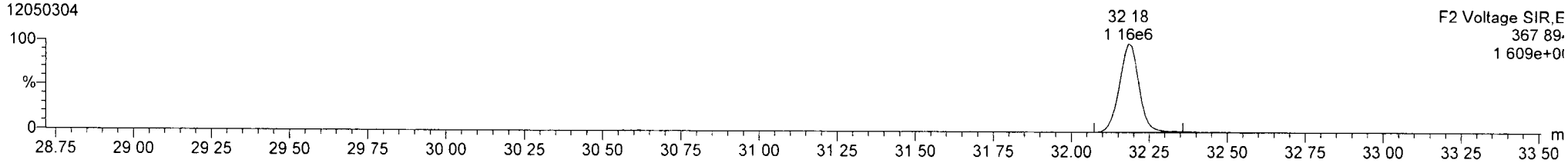


FUNCTION1 HXCDPE



Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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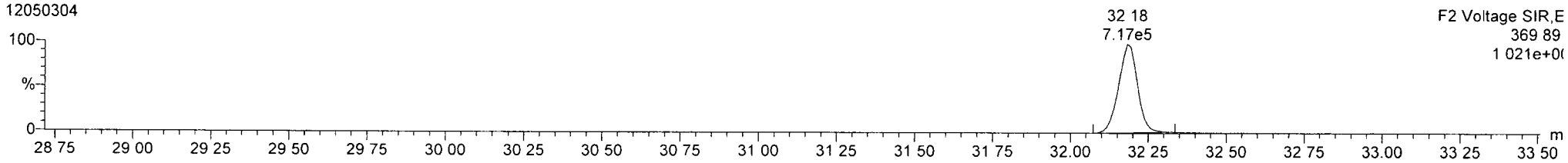
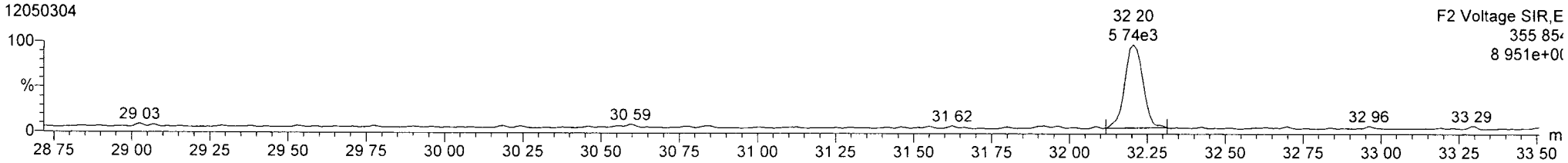
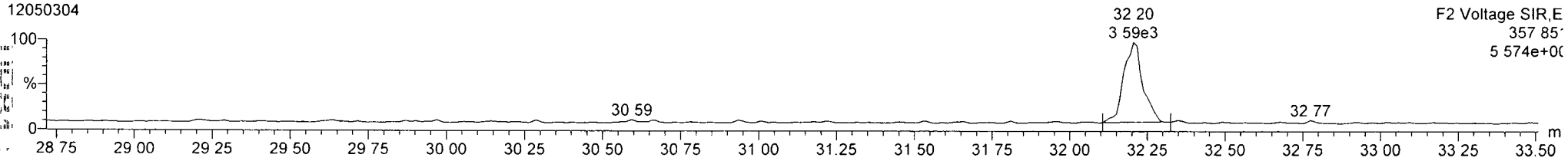


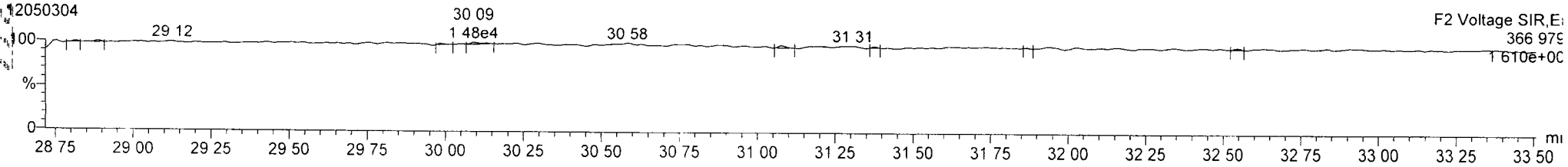
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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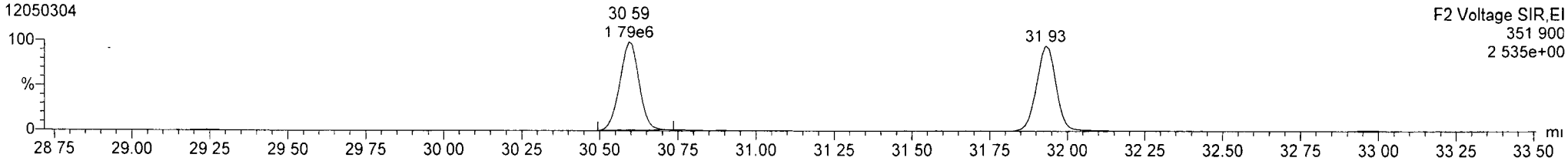
Last Altered: Friday, May 04, 2012 08.31 18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08 32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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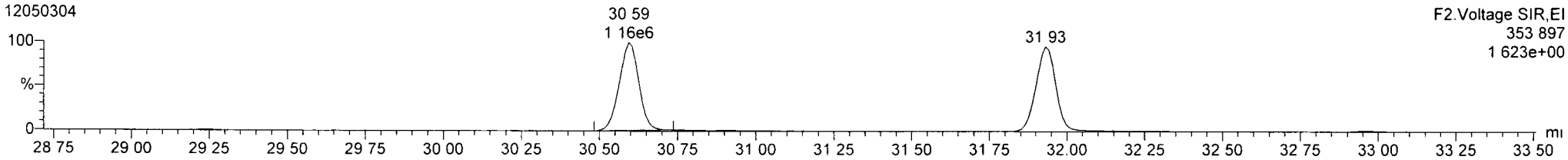
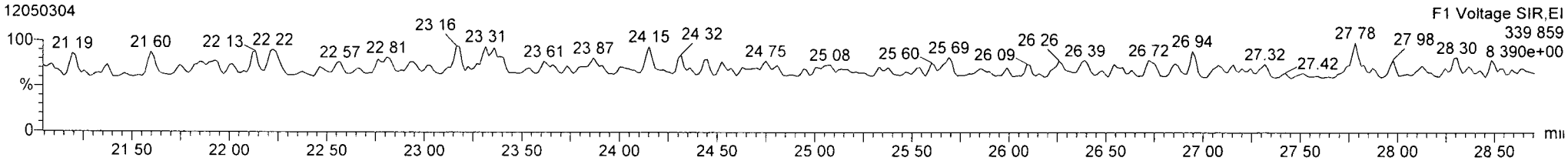
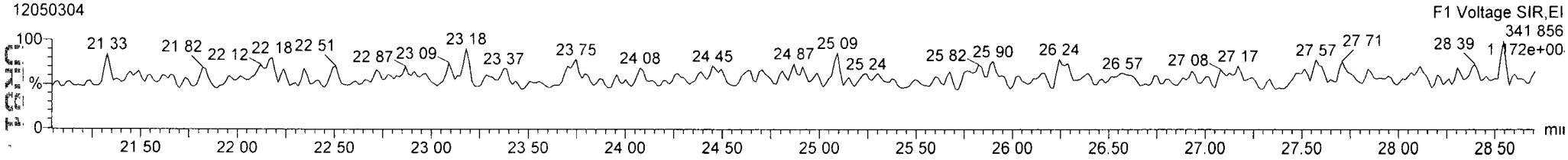


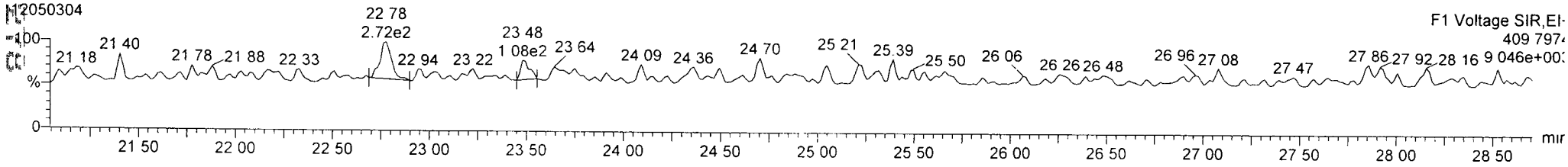
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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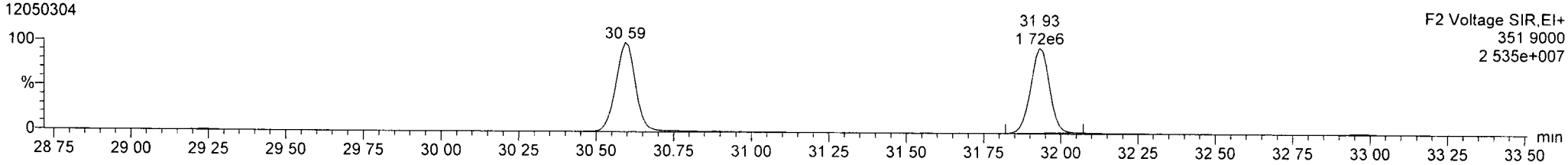
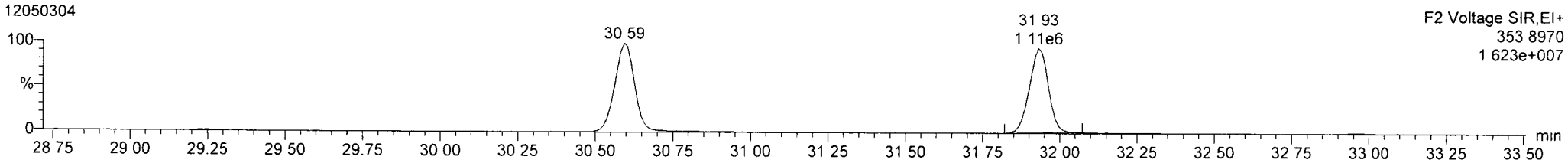
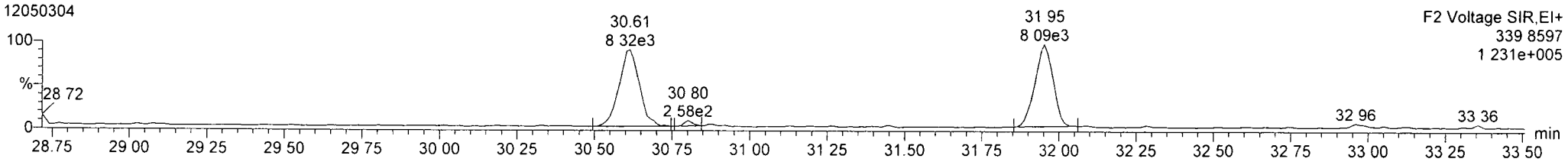
13C-23478-PeCDF



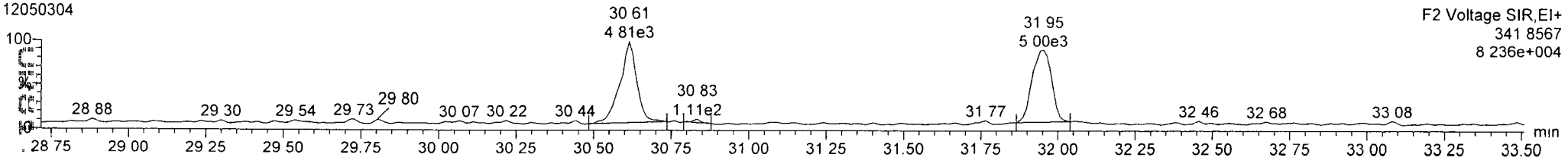
13C-23478-PeCDF



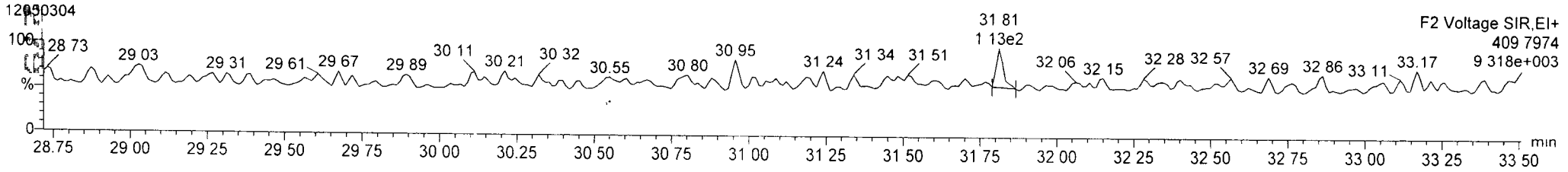
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

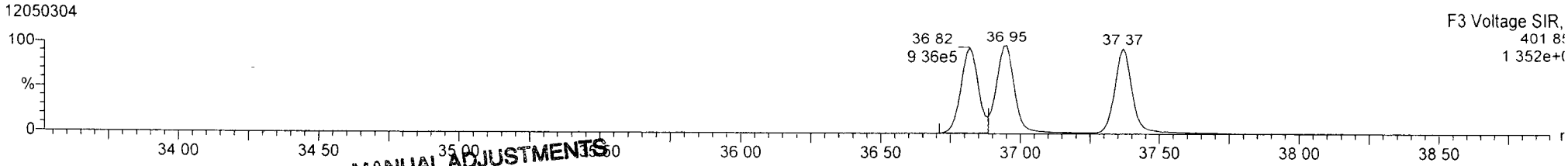


Dataset P:\DIOXIN8290 PRO\120503IC qld
Last Altered Friday, May 04, 2012 08:31 18 Pacific Daylight Time
Printed Friday, May 04, 2012 08 32 15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

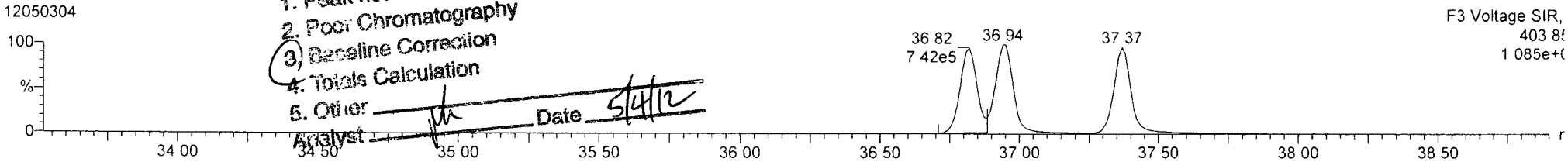
12050304



MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst Date 5/4/12

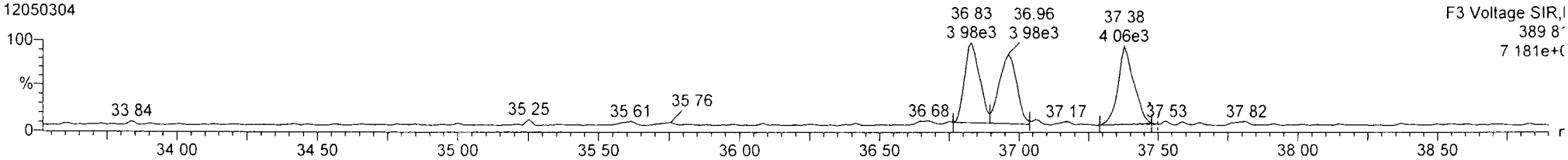
13C-123478-HxCDD

12050304



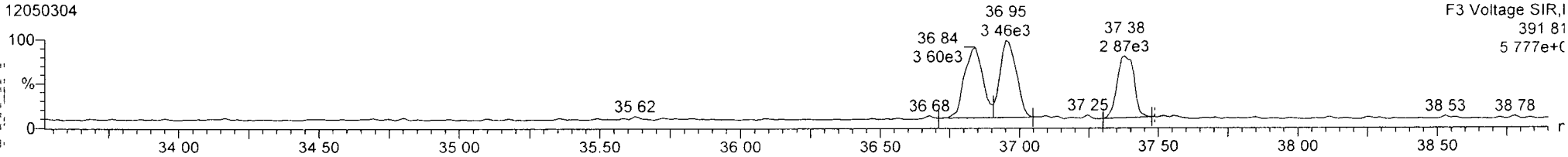
Total-hexadioxins

12050304



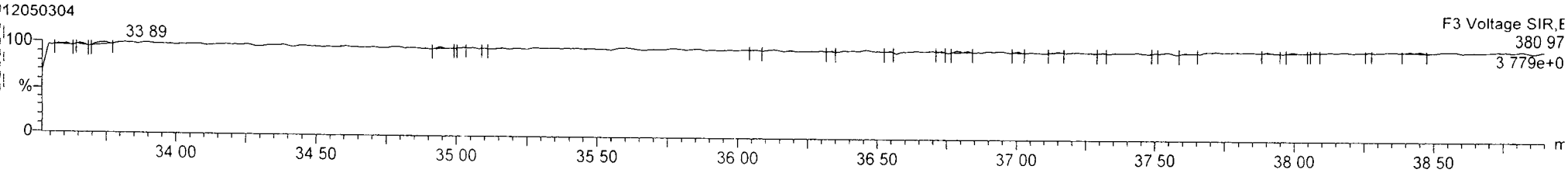
Total-hexadioxins

12050304



FUNCTION3 PFK

12050304



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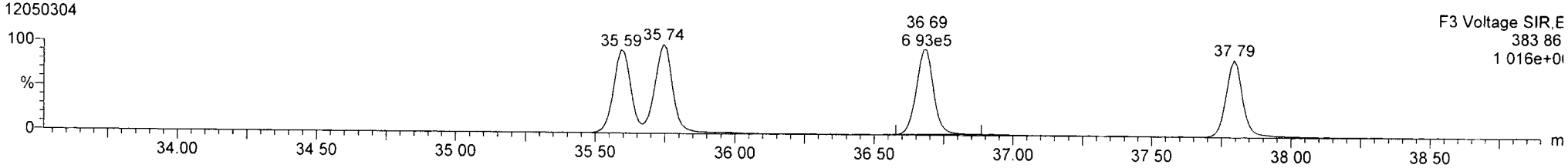
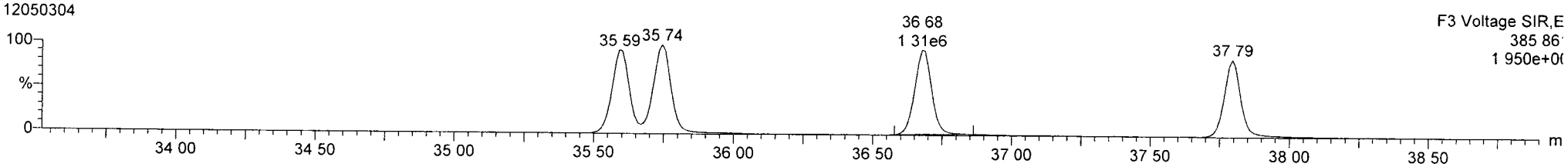
13C-234678-HxCDF

12050304



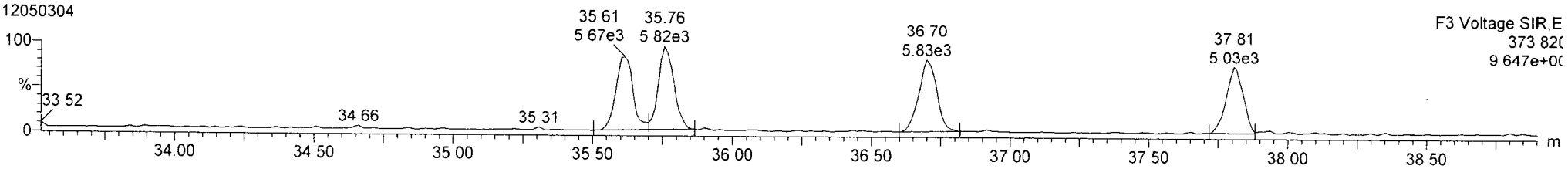
13C-234678-HxCDF

12050304



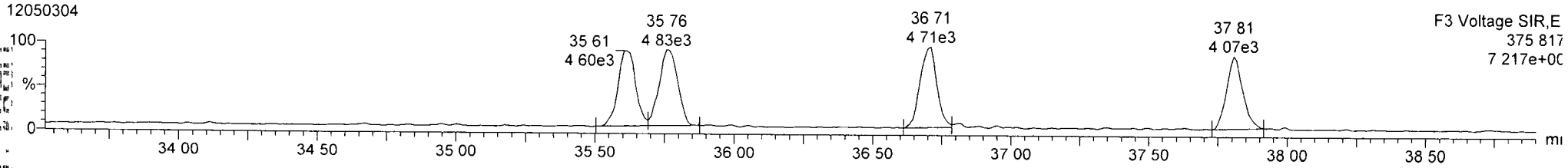
Total-hexafurans

12050304



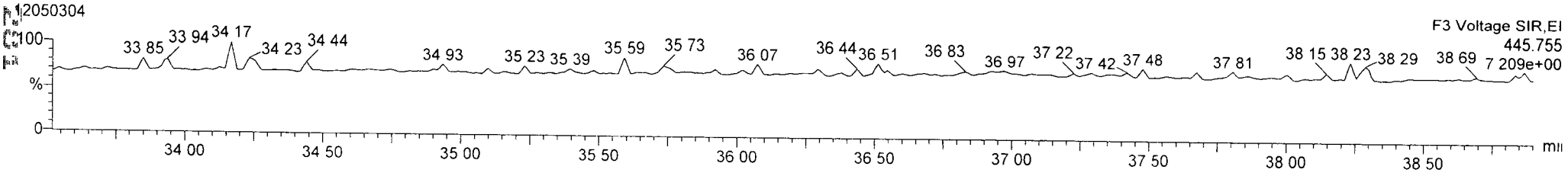
Total-hexafurans

12050304



FUNCTION3 OCDPE

12050304



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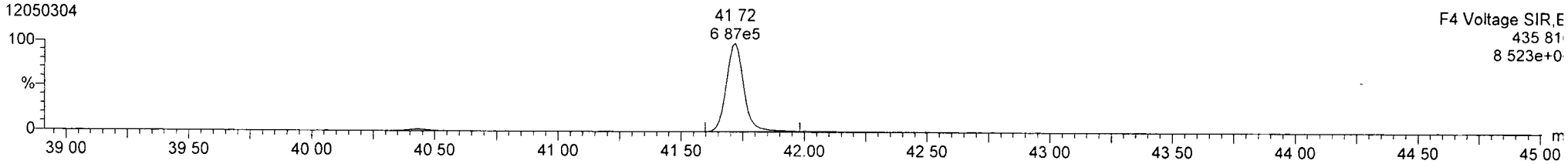
13C-1234678-HpCDD



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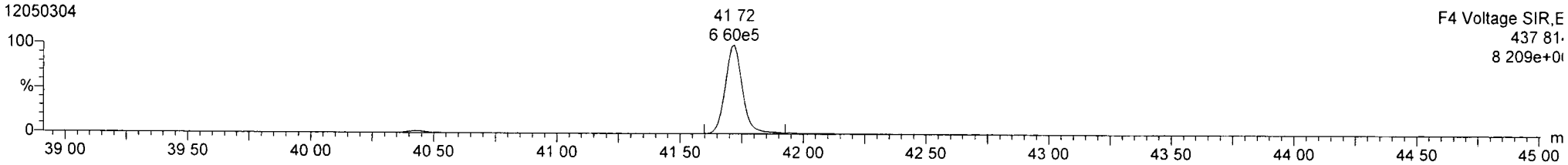
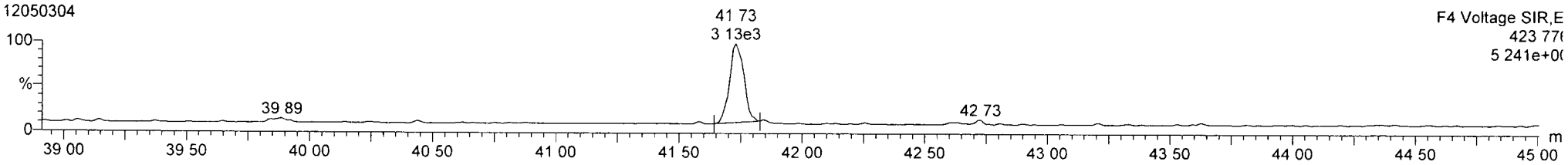
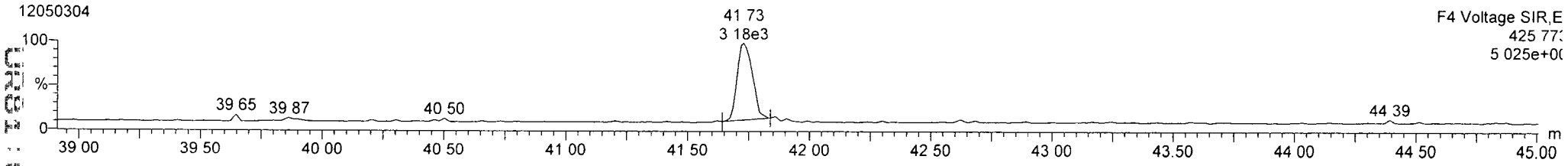


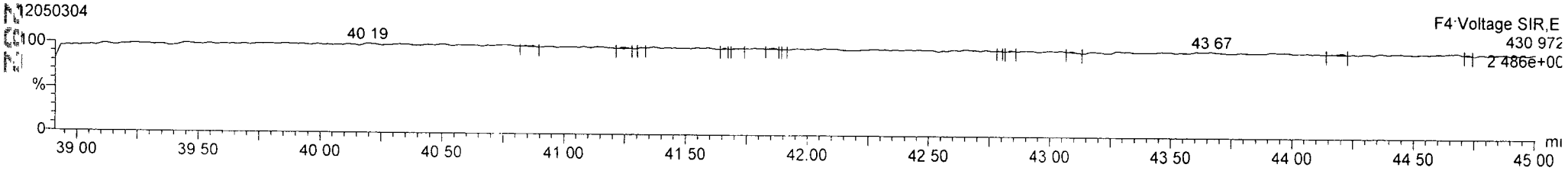
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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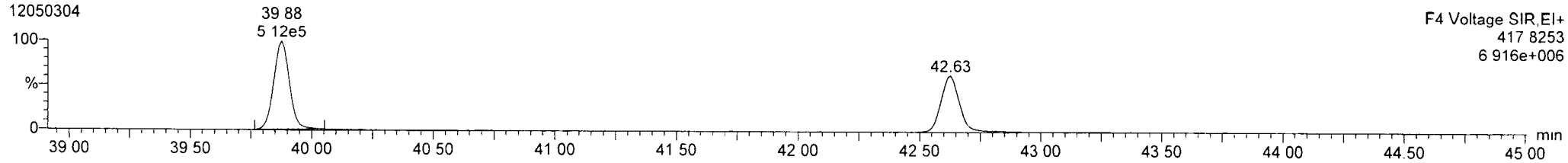
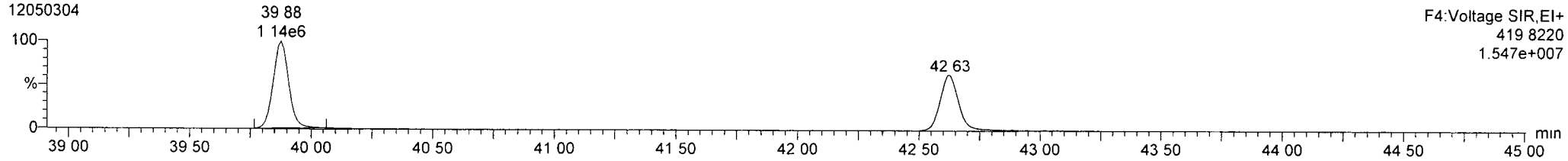
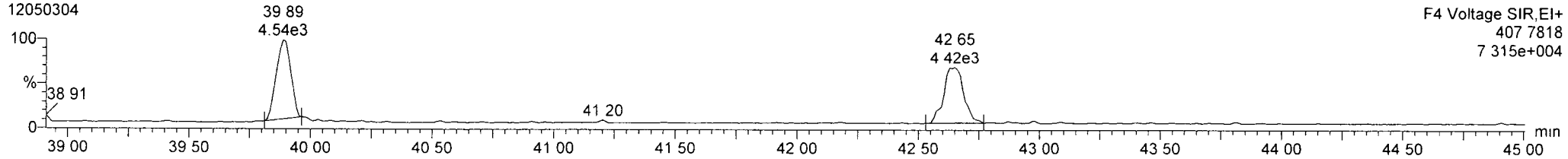
13C-1234678-HpCDF



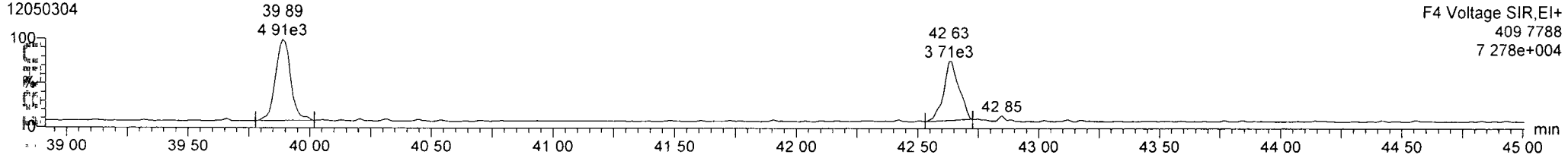
13C-1234678-HpCDF



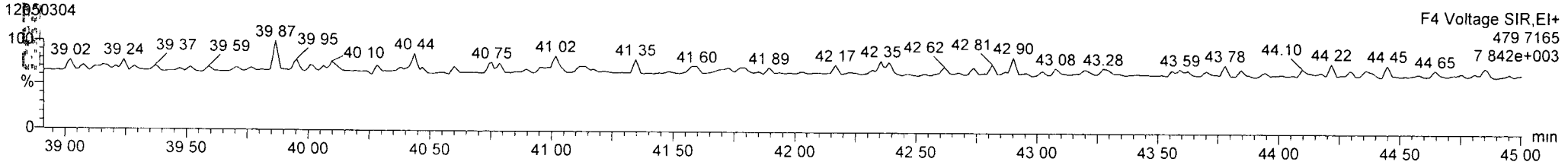
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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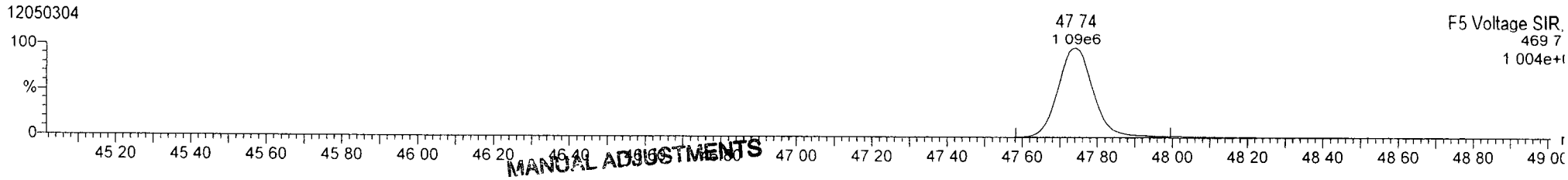
Printed Friday, May 04, 2012 08 32 15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-OCDD



MANUAL ADJUSTMENTS
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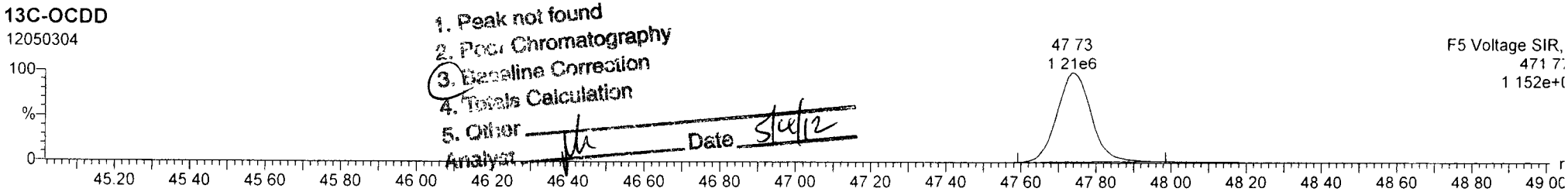
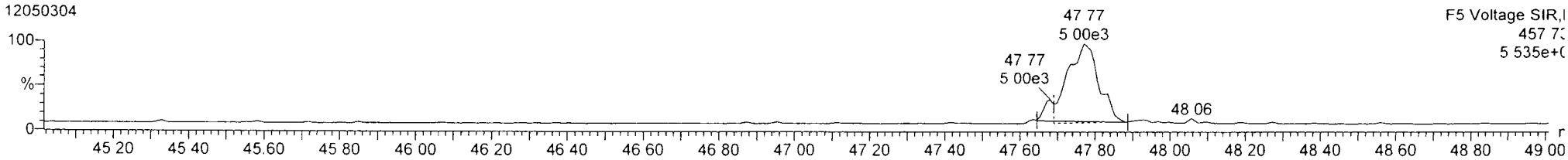
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst Date 5/4/12

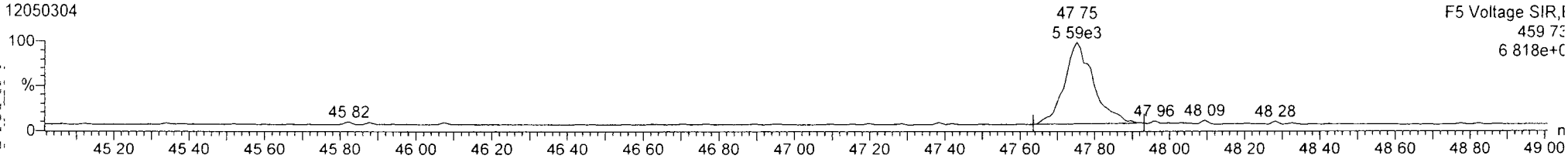
13C-OCDD



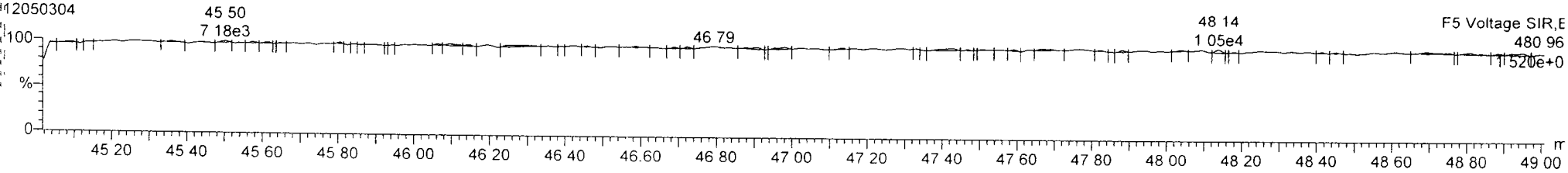
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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Last Altered: Friday, May 04, 2012 08 31 18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08 32.15 Pacific Daylight Time

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37CL-2378-TCDD
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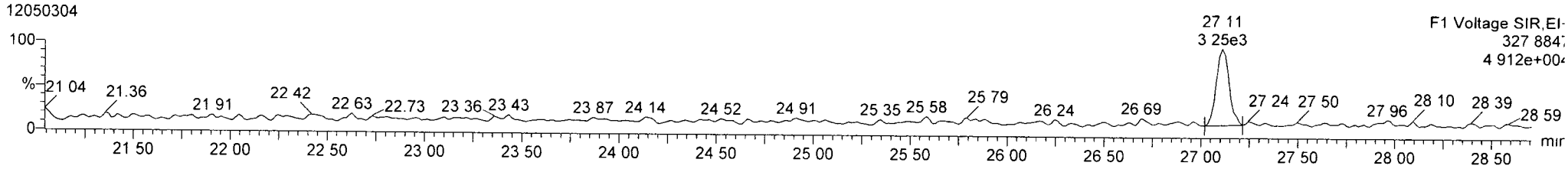
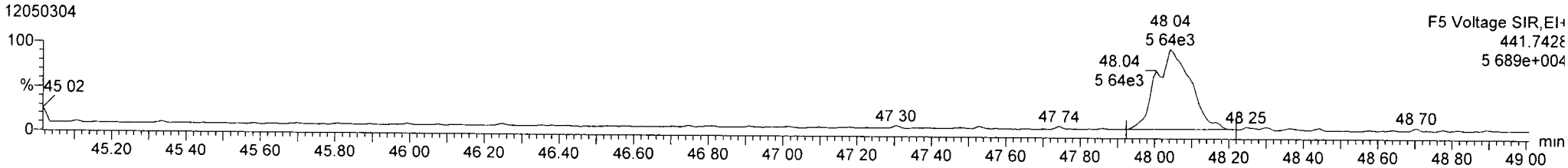
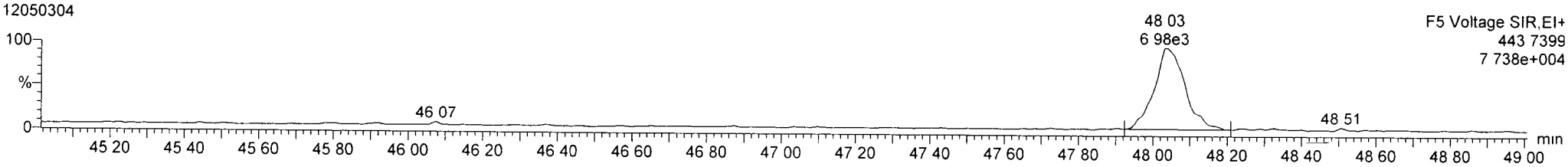


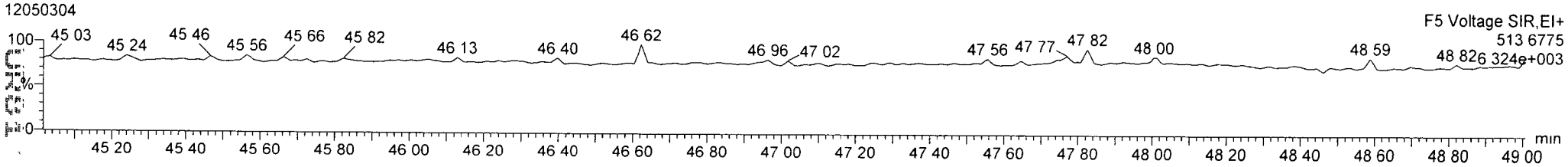
OCDF
12050304



OCDF
12050304



FUNCTION5 DCDPE
12050304



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset P \DIOXIN8290 PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08.31 18 Pacific Daylight Time
Printed Friday, May 04, 2012 08 32 19 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred RT	Abs Resp	Abs Corr. . .	RRF M.	1° Det	%Rec	1° Ratio .	1° Rati .	S/N	1° .	pg	EMPC
1	1	2378-TCDF	303 9016	26 467	26 468	18058	18058	0 866	bb	97 0	0 77	0 77	138 4	NO	0 485	0 485
2	2	12378-PeCDF	339 8597	30 604	30.604	62468	62468	0 907	bd	98 3	1 58	1 55	446 7	NO	2 457	2 457
3	3	23478-PeCDF	339.8597	31 941	31 942	62682	62682	0 936	bb	100 7	1 56	1 55	421 6	NO	2 519	2.519
4	4	123478-HxCDF	373 8208	35 602	35 591	46740	46740	1 082	bd	96 2	1 14	1 24	203.8	NO	2.405	2 405
5	5	234678-HxCDF	373 8208	36 688	36 688	49332	49332	1 070	bd	100 4	1 20	1 24	224 2	NO	2 511	2 511
6	6	123678-HxCDF	373 8208	35 756	35 755	50131	50131	1 048	dd	96 5	1 15	1 24	212 0	NO	2 412	2 412
7	7	123789-HxCDF	373 8208	37 806	37 795	38709	38709	1 020	bb	99 4	1 23	1 24	175 6	NO	2 485	2.485
8	8	1234678-HpCDF	407 7818	39 877	39 886	45343	45343	1.214	bd	100 4	1 06	1.05	450 5	NO	2.511	2 511
9	9	1234789-HpCDF	407 7818	42 618	42 630	32734	32734	1 254	bd	98.0	0 93	1 05	262 0	NO	2 451	2 451
10	10	OCDF	441.7428	48 031	48 012	51862	51862	1 105	bb	92 6	0 90	0 89	305 8	NO	4 629	4 629
11	11	2378-TCDD	319 8965	27 094	27 093	14122	14122	1 046	bd	98 2	0 73	0 77	61 0	NO	0 491	0 491
12	12	12378-PeCDD	355 8546	32 194	32.181	41682	41682	0 973	bb	98 7	1 57	1 55	273 6	NO	2 467	2 467
13	13	123478-HxCDD	389 8157	36.819	36 830	35375	35375	0 935	bd	101 1	1 17	1 24	206 2	NO	2 528	2 528
14	14	123678-HxCDD	389 8157	36 951	36 940	36378	36378	0 878	db	98 9	1 25	1 24	213 8	NO	2 472	2 472
15	15	123789-HxCDD	389 8157	37 367	37 335	31809	31809	0 839	bb	95 6	1 33	1 24	191 9	NO	2 391	2 391
16	16	1234678-HpCDD	423 7766	41 719	41 720	28482	28482	0 974	bd	96 9	1 07	1 05	259 3	NO	2 422	2 422
17	17	OCDD	457 7377	47 744	47 740	46148	46148	0 950	bd	95 8	0 89	0 89	383 7	NO	4 792	4 792
18	18	13C-2378-TCDF	315 9419	26 452	26 452	4299686		1.484	bb	97 1	0 78	0 77	9533 4	NO	97 101	
19	19	13C-12378-PeCDF	351 9000	30 582	30 593	2803498		1 048	bb	89 7	1 56	1 55	9714 3	NO	89 671	
20	20	13C-23478-PeCDF	351 9000	31 919	31 931	2659223		1 003	bb	88 8	1 55	1 55	9234 2	NO	88 845	
21	21	13C-123478-HxCDF	383 8639	35 581	35 580	1796079		1 186	bd	103 2	0 51	0 51	2512 3	NO	103 198	
22	22	13C-123678-HxCDF	383 8639	35 734	35 734	1982156		1 315	dd	102 7	0 50	0 51	2722 7	NO	102 679	
23	23	13C-234678-HxCDF	383 8639	36 666	36 666	1836384		1 223	bb	102 3	0 53	0 51	2592 4	NO	102 265	
24	24	13C-123789-HxCDF	383 8639	37 784	37 773	1526845		1 056	bb	98 5	0 52	0 51	2268 1	NO	98 452	
25	25	13C-1234678-HpCDF	417 8253	39 866	39 855	1487165		1 011	bb	100 2	0 46	0 44	2757 0	NO	100 167	
26	26	13C-1234789-HpCDF	417 8253	42 618	42 607	1064951		0.741	bb	98 0	0 46	0 44	1647 4	NO	97.965	
27	27	13C-1234-TCDD	331 9368	26 272	26 272	2983027		1 000	bb	100 0	0 78	0 77	6010.2	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27.079	27 094	2751507		0 956	bb	96 4	0 77	0 77	5313 2	NO	96 446	
29	29	13C-12378-PeCDD	367 8949	32 172	32 183	1736168		0 663	bb	87 7	1 57	1 55	8775 3	NO	87 725	
30	30	13C-123478-HxCDD	401 8559	36 808	36 797	1495775		1 024	bd	99 5	1 27	1 24	3136 3	NO	99 517	
31	31	13C-123678-HxCDD	401 8559	36 929	36 929	1676334		1 113	db	102 6	1 25	1 24	3203 7	NO	102 638	
32	32	13C-1234678-HpCDD	435 8169	41 708	41 708	1207177		0 815	bd	100 9	1 04	1 05	3147 7	NO	100 888	
33	33	13C-OCDD	469 7779	47 726	47 724	2027179		0 717	bd	96 3	0 88	0 89	3609 1	NO	192 583	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC qld
Last Altered. Friday, May 04, 2012 08.31.18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08 32·19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

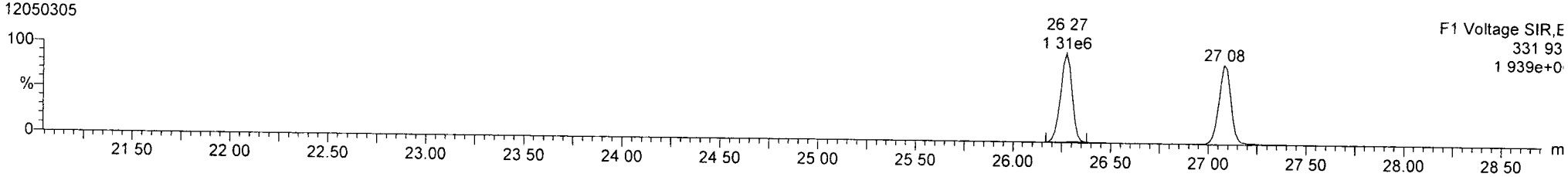
	#	Name	Trace	RT	Pred RT	Abs Resp	Abs Corr	RRF M	1° Det .	%Rec	1° Ratio	1° Rati .	S/N	1° .	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37 356	37 368	1467937		1 000	bb	100 0	1 25	1 24	3043 1	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 490			0 866							0 485	0 485
36	36	Total-penta1	339 8597		28 270										0 011	0 011
37	37	Total-pentafurans	339 8597		30 840			0 921							4 976	5 013
38	38	Total-hexafurans	373 8208		35 860			1 055							9 814	9 882
39	39	Total-heptafurans	407 7818		41 270			1 234							4 962	4 977
40	40	Total-Furans	303 9016		0.000			1 050							24 876	24 996
41	41	Total-tetradioxins	319 8965		26 000			1 046							0 491	0 491
42	42	Total-pentadioxins	355.8546		31 040			0 973							2.467	2 467
43	43	Total-hexadioxins	389.8157		36 030			0 884							7 392	7 392
44	44	Total-heptadioxins	423 7766		41.090			0 974							2.422	2 422
45	45	Total-Dioxins	319 8965		0 000			0 942							18.740	19 744
46	46	Total-TEQ	319 8965		0 000										43 616	44 740
47	47	37CL-2378-TCDD	327 8847	27 094	27 087	13346		1 037		86.3			84 2		0.431	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000										0 000	
50	50	FUNCTION3 PFK	380 9760		0.000										0 000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445 7555		0 000										0 000	
57	57	FUNCTION4 NCDPE	479 7165		0 000											
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Dataset P:\DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08 31.18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08:32 19 Pacific Daylight Time

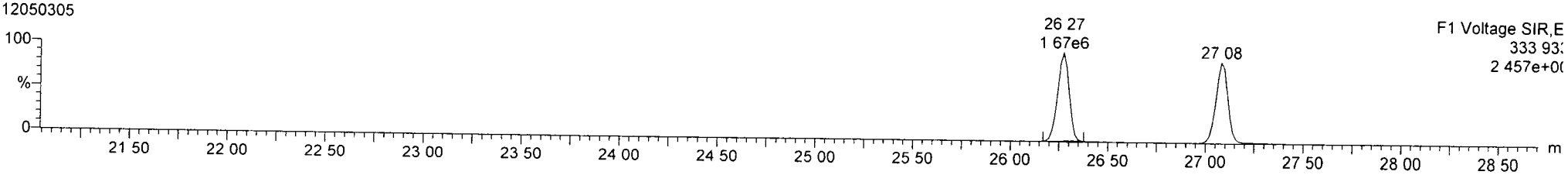
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD
12050305



13C-1234-TCDD
12050305



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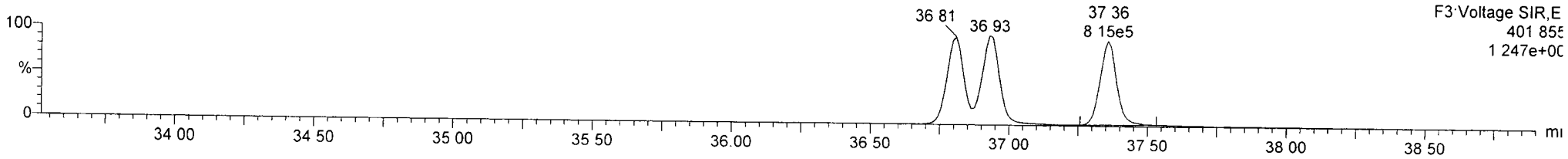
12050305



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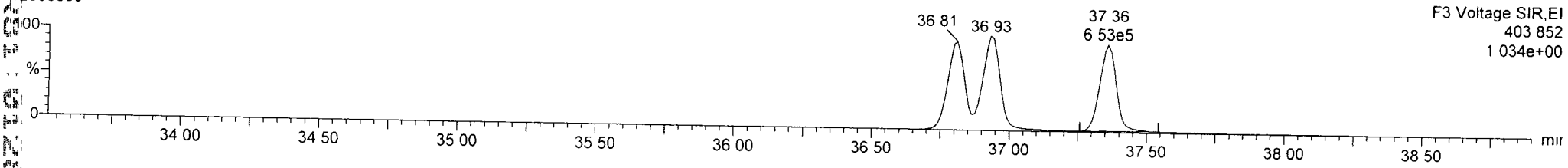
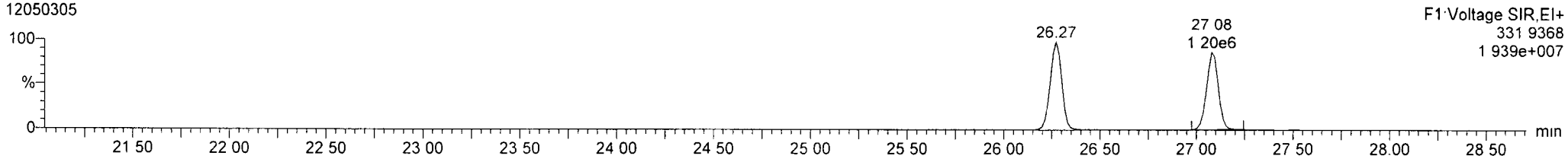
12050305



Dataset P:\DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32.19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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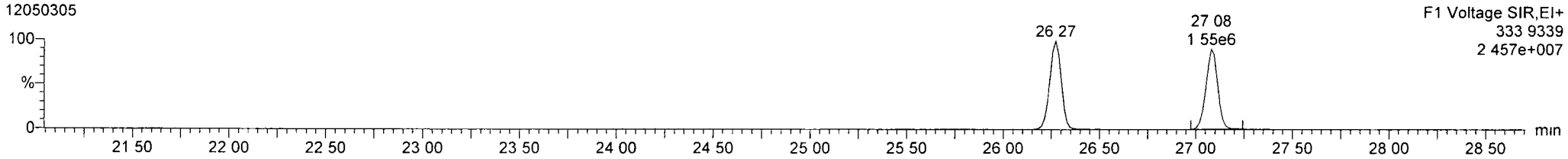
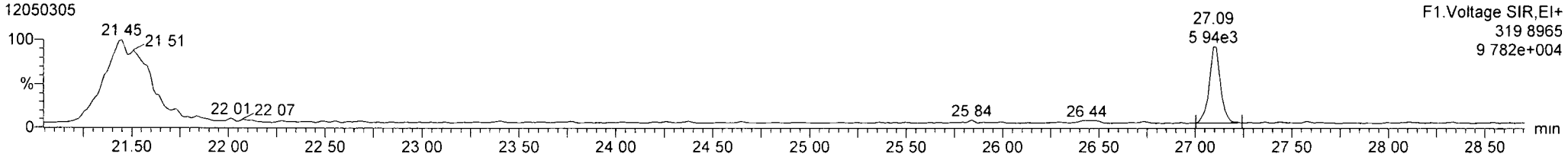
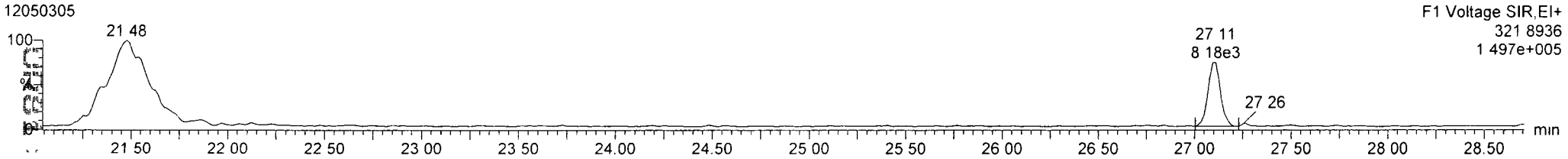


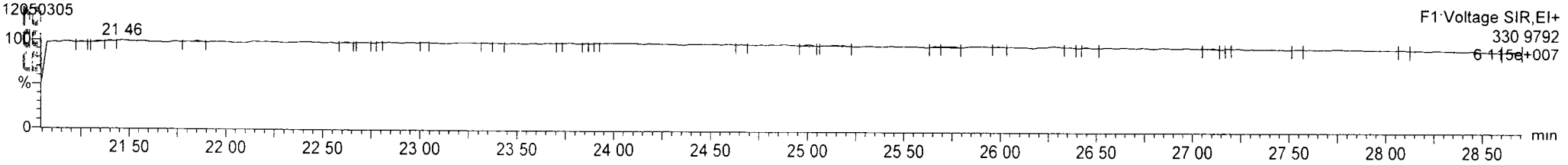
Total-tetradioxins



Total-tetradioxins

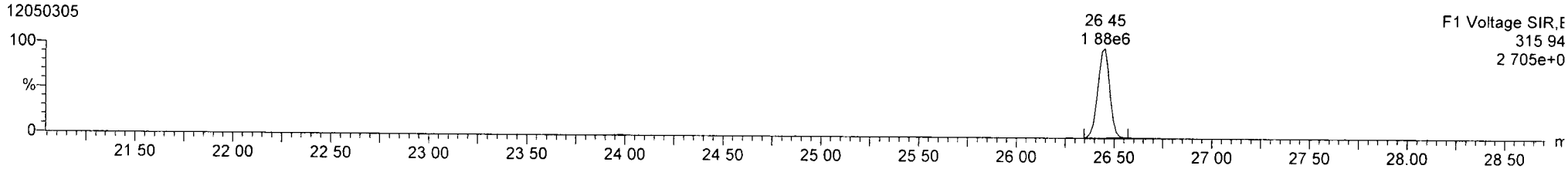


FUNCTION1 PFK

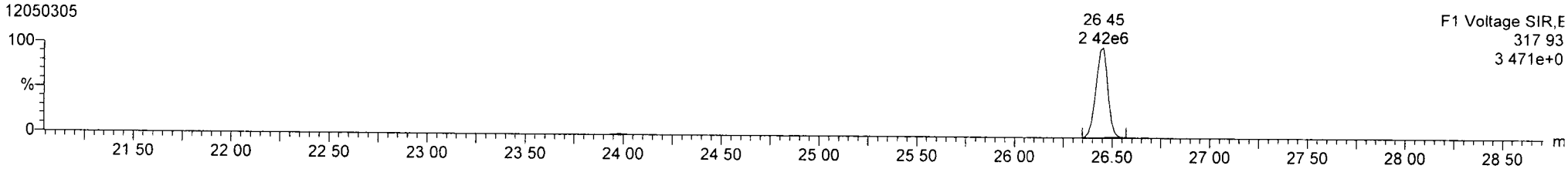


Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

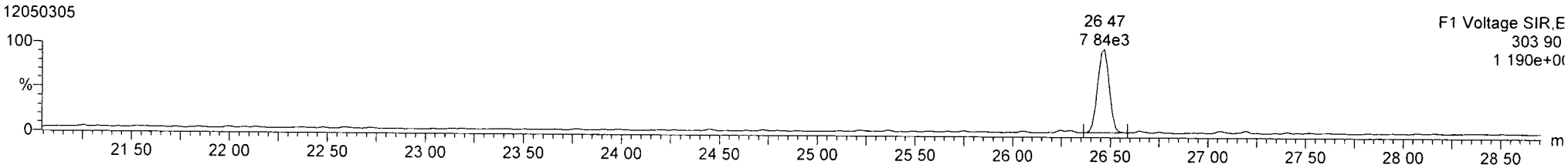
13C-2378-TCDF



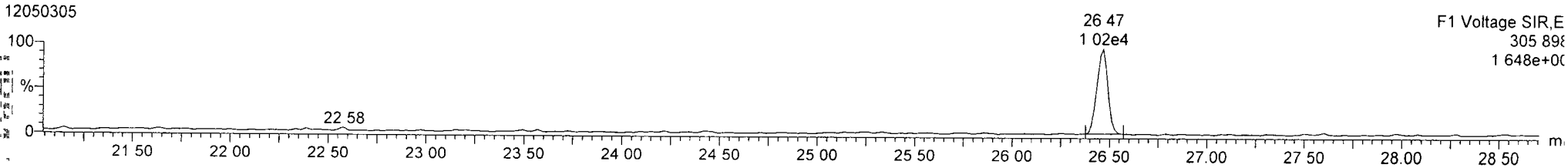
13C-2378-TCDF



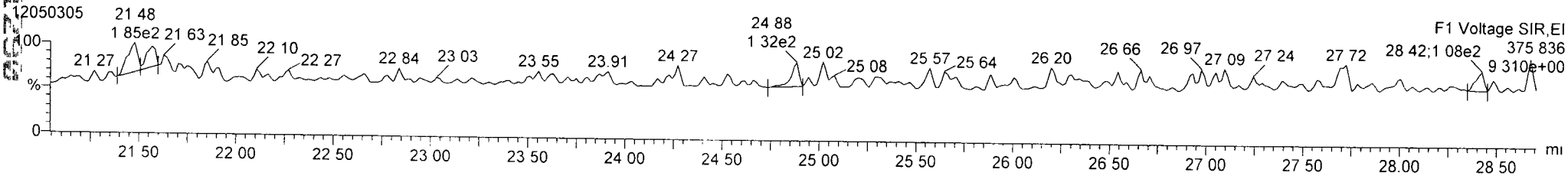
Total-tetrafurans



Total-tetrafurans



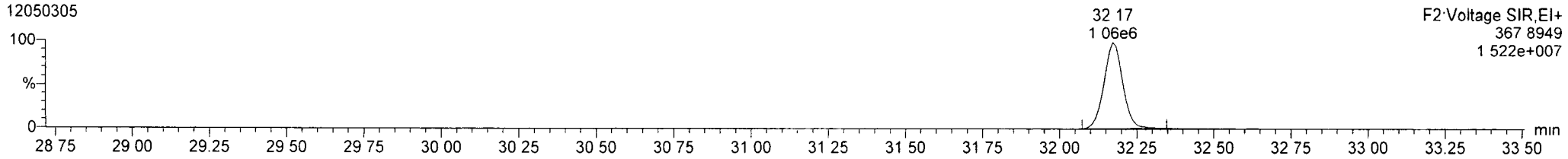
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08 31 18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08.32 19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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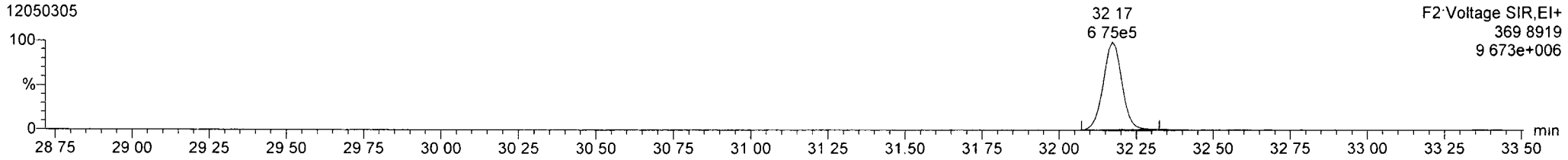
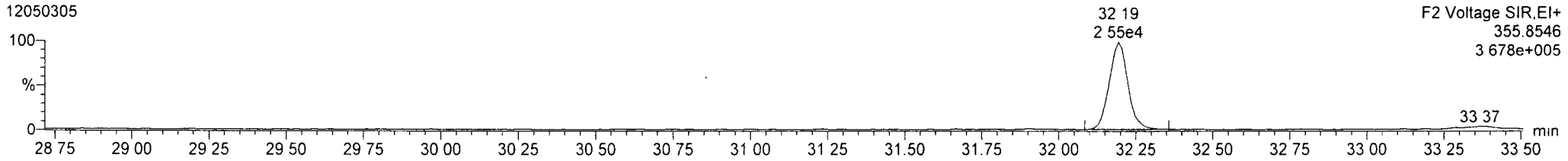
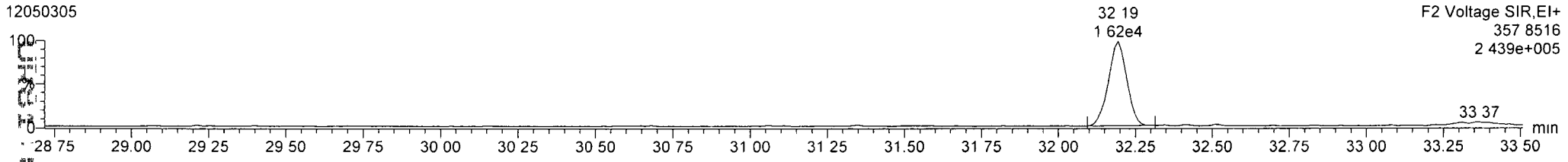


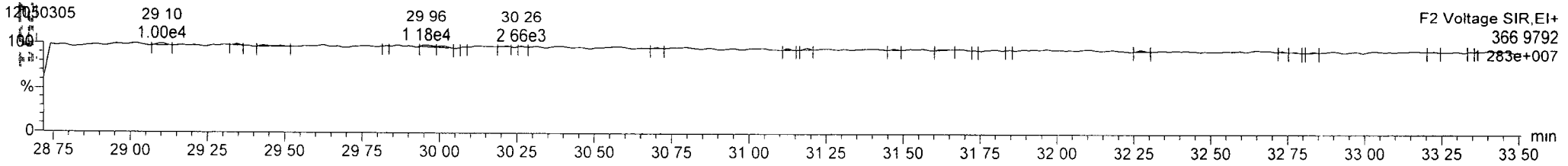
Total-pentadioxins



Total-pentadioxins

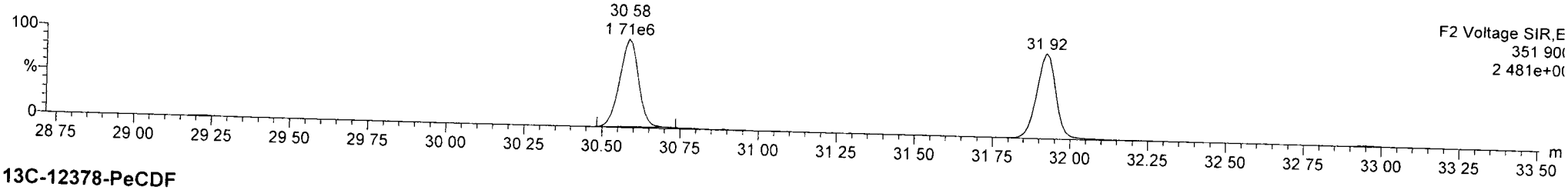


FUNCTION2 PFK

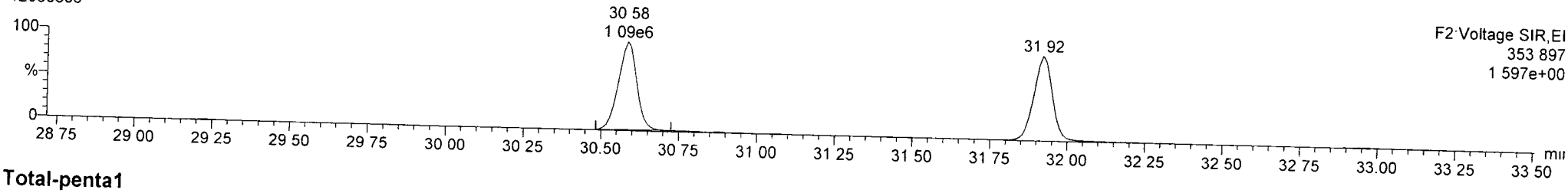


Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

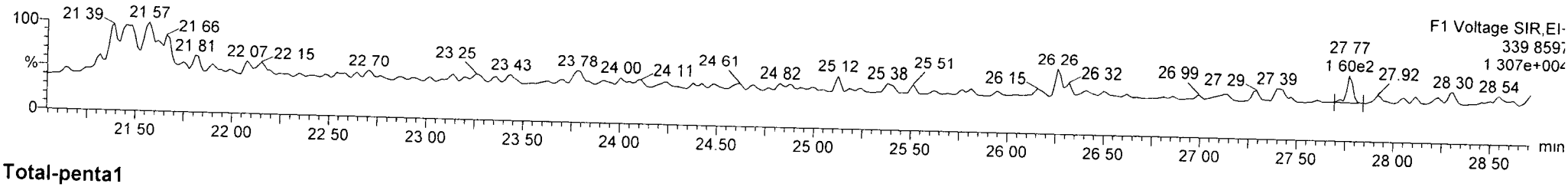
13C-12378-PeCDF
12050305



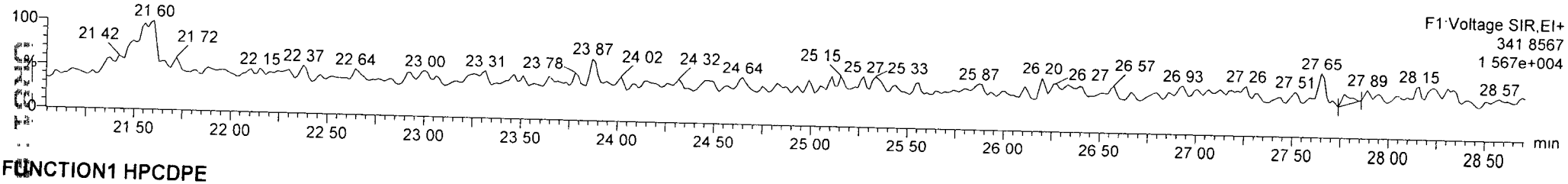
13C-12378-PeCDF
12050305



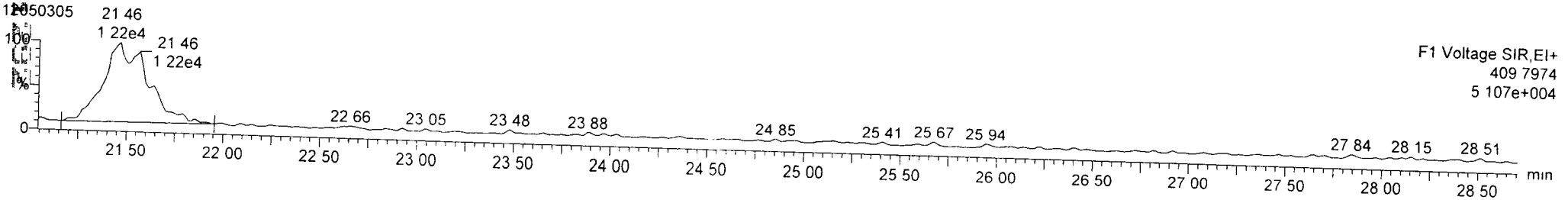
Total-penta1
12050305



Total-penta1
12050305

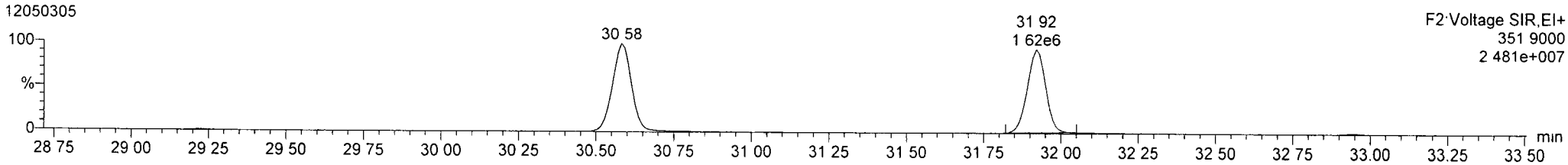


FUNCTION1 HPCDPE
12050305



Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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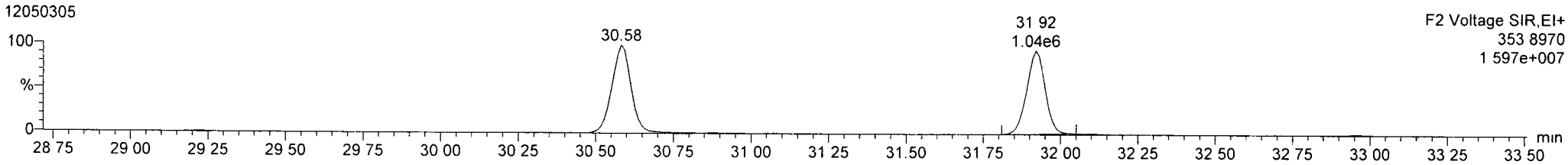
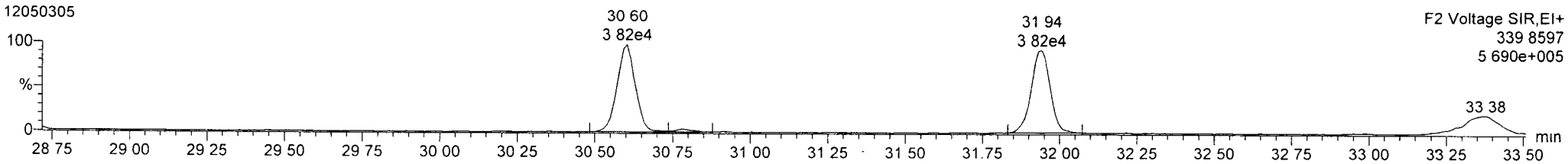
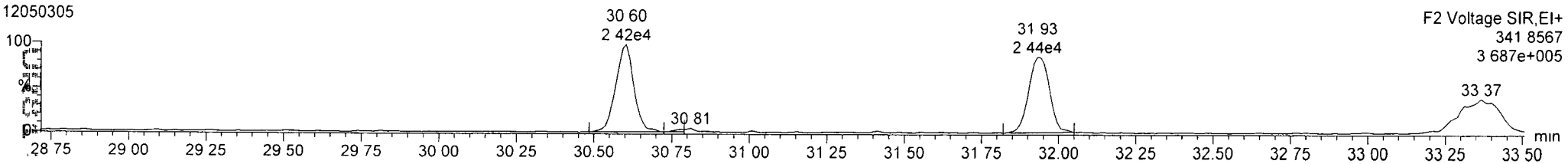


Total-pentafurans



Total-pentafurans



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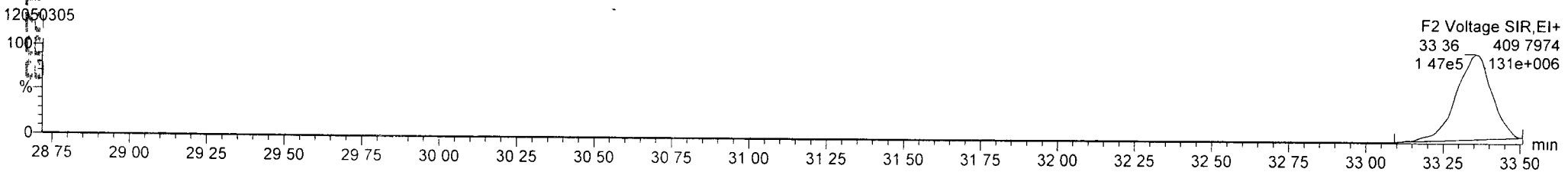
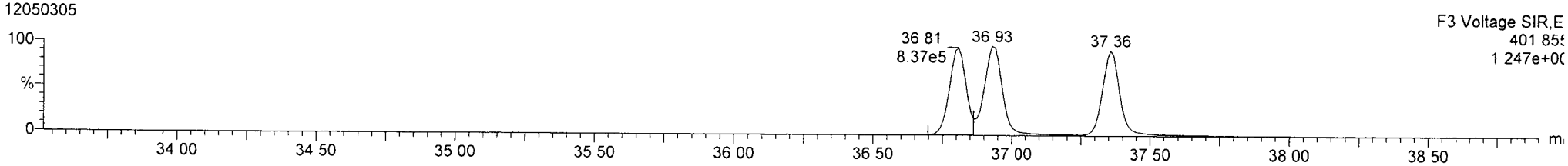


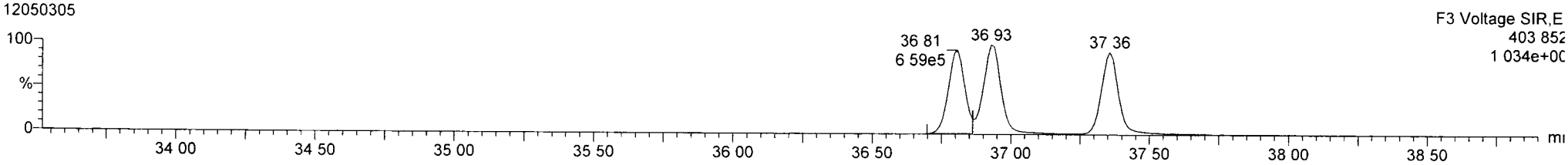
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC qld
Last Altered Friday, May 04, 2012 08.31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32 19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

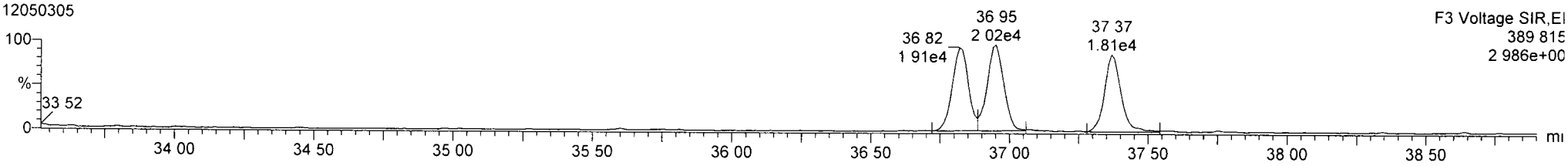
13C-123478-HxCDD
12050305



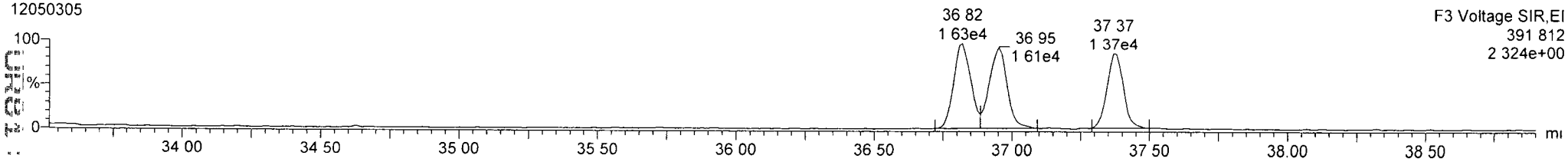
13C-123478-HxCDD
12050305



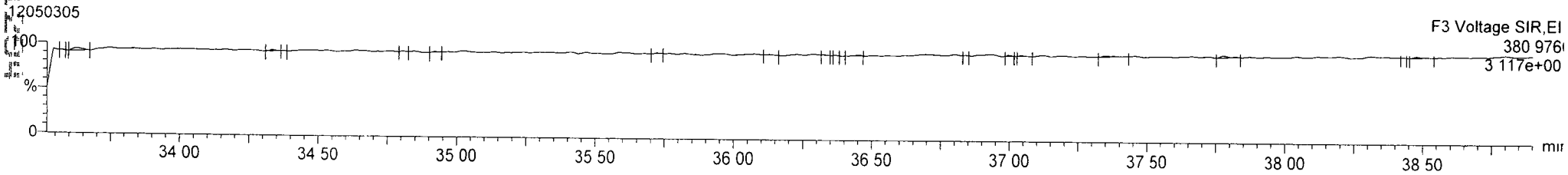
Total-hexadioxins
12050305



Total-hexadioxins
12050305



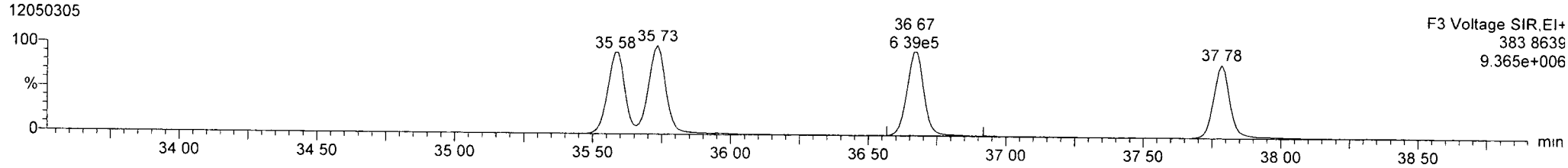
FUNCTION3 PFK
12050305



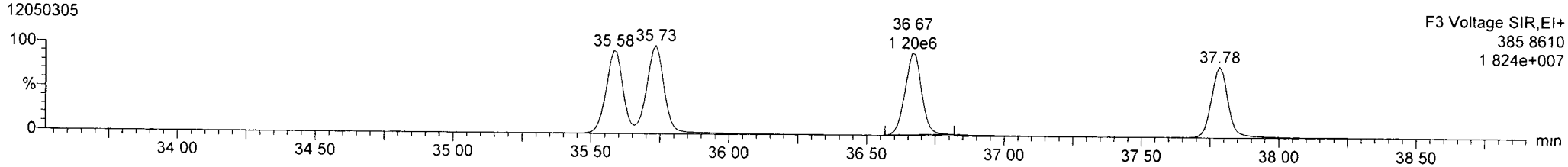
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120503IC qld
Last Altered. Friday, May 04, 2012 08 31 18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08 32 19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

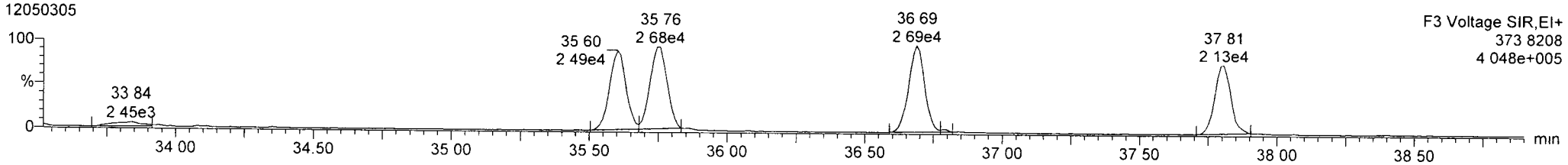
13C-234678-HxCDF



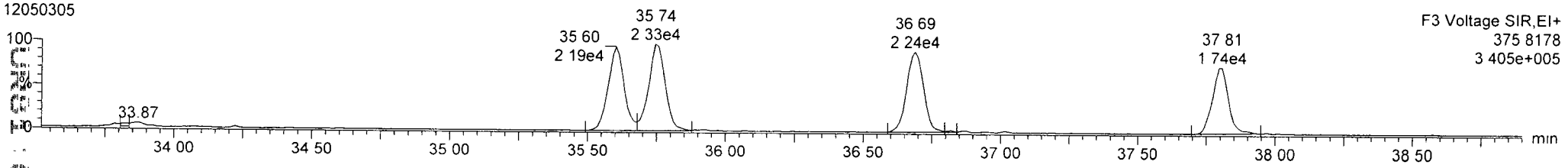
13C-234678-HxCDF



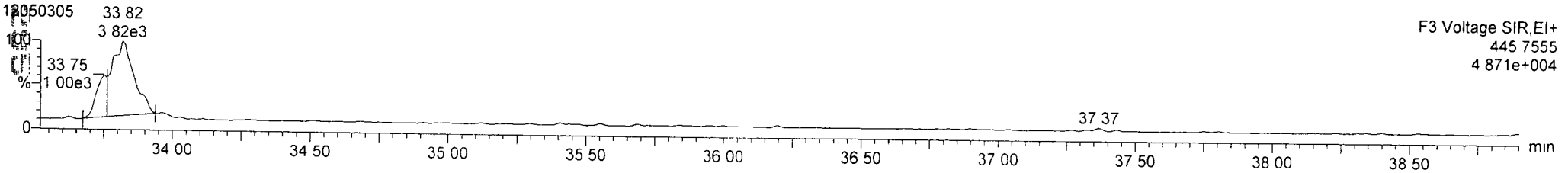
Total-hexafurans



Total-hexafurans



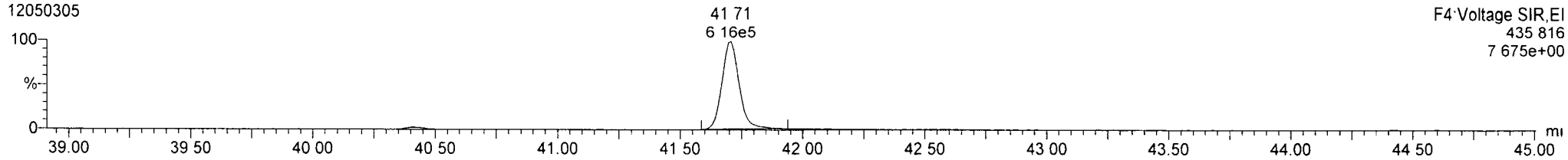
FUNCTION3 OCDPE



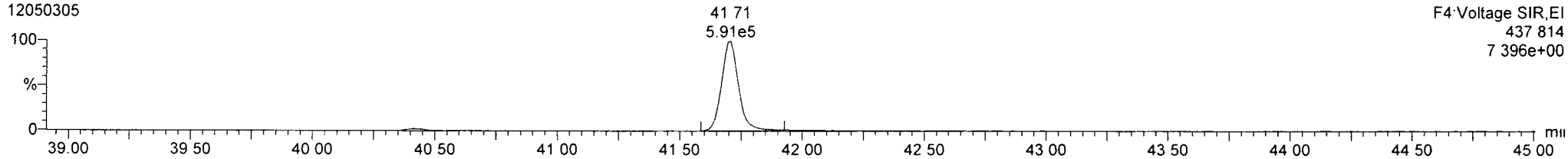
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08 31.18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08.32.19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

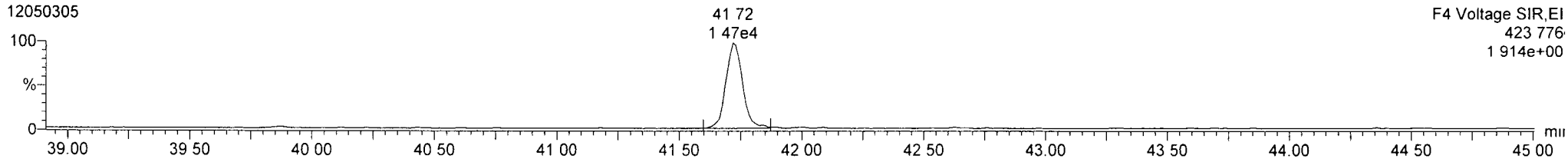
13C-1234678-HpCDD



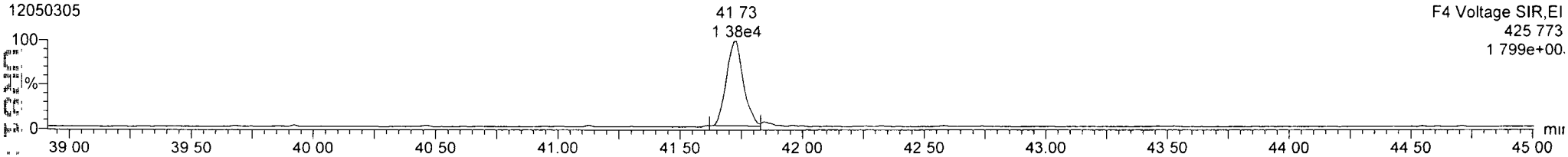
13C-1234678-HpCDD



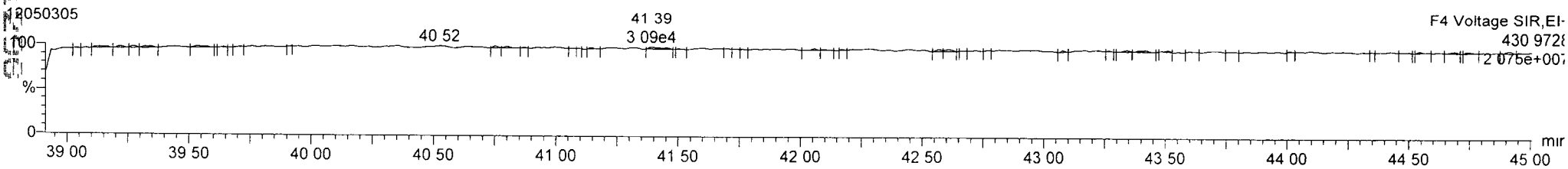
Total-heptadioxins



Total-heptadioxins

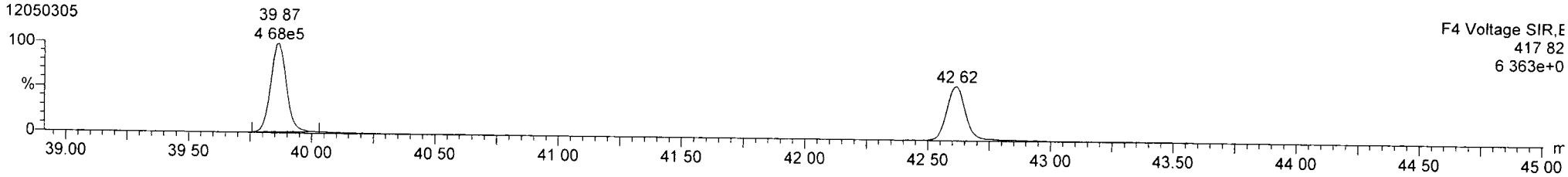


FUNCTION4 PFK

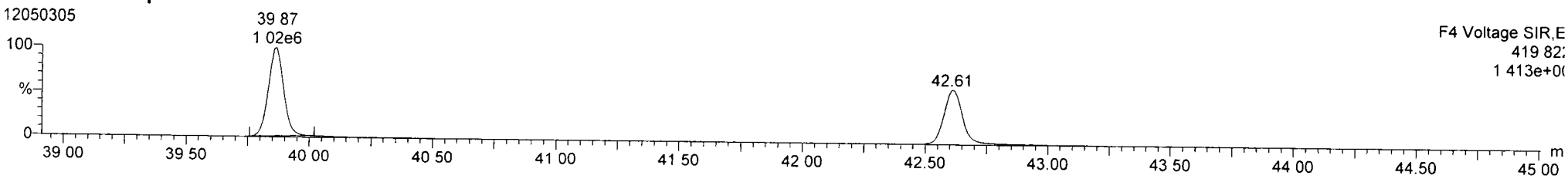


Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

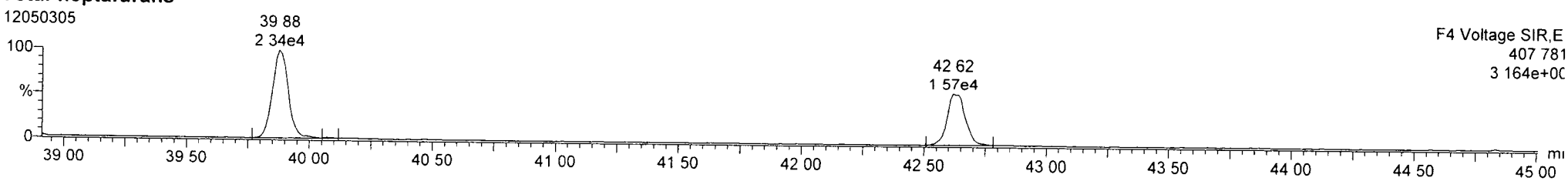
13C-1234678-HpCDF



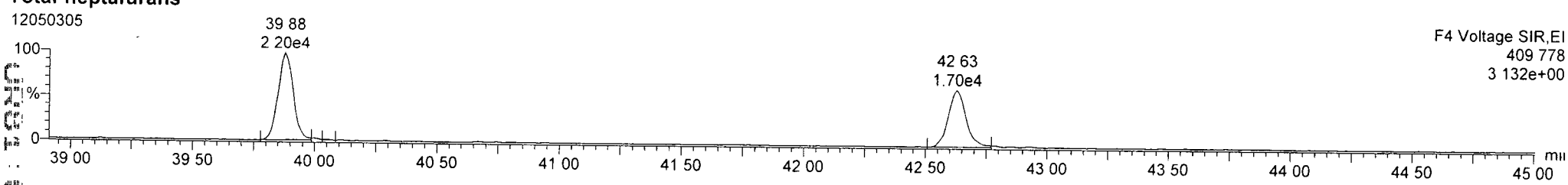
13C-1234678-HpCDF



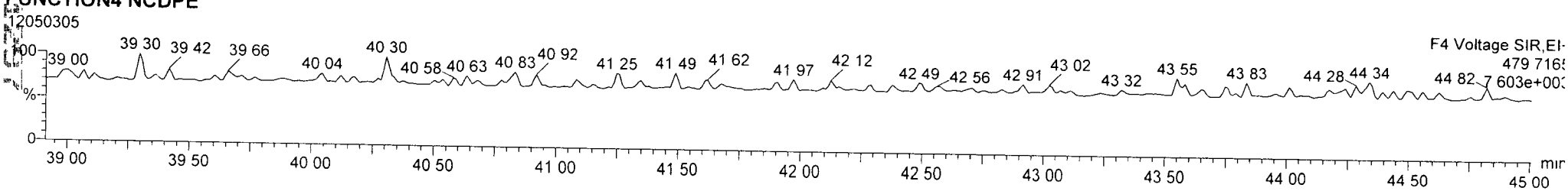
Total-heptafurans



Total-heptafurans



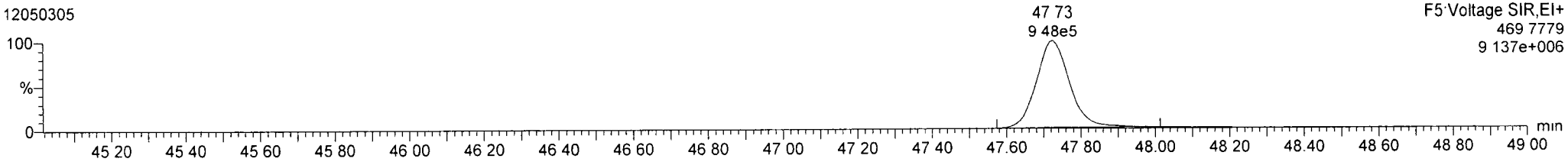
FUNCTION4 NCDPE



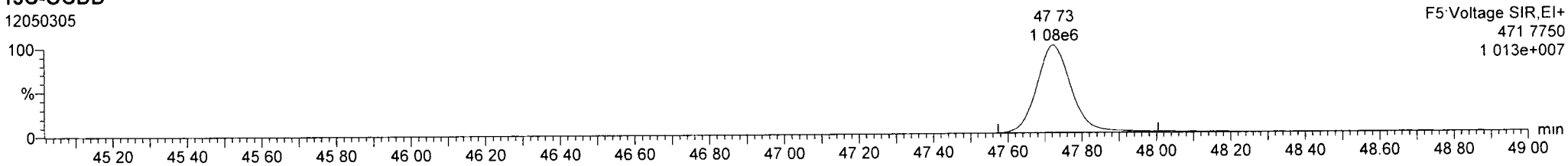
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31 18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08.32.19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

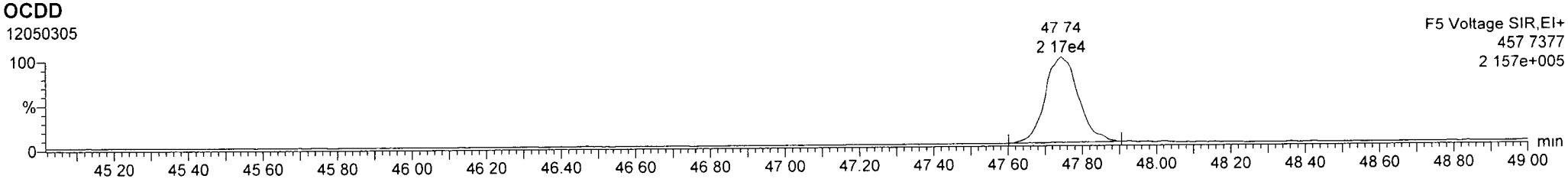
13C-OCDD
12050305



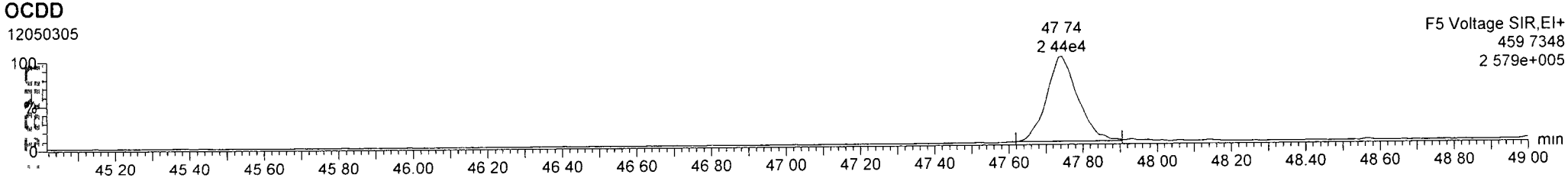
13C-OCDD
12050305



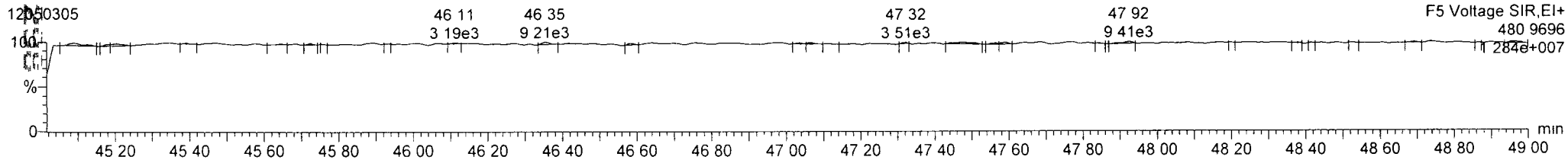
OCDD
12050305



OCDD
12050305



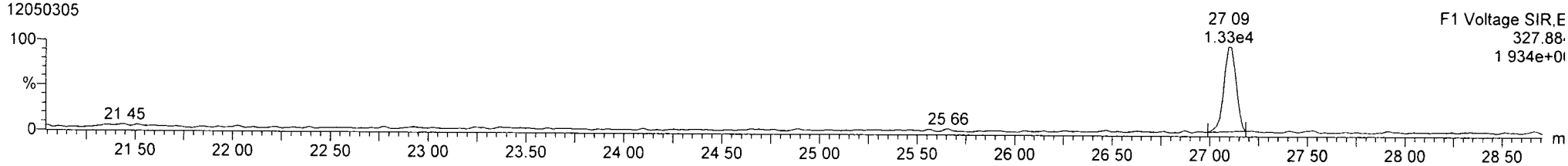
FUNCTION5 PFK
12050305



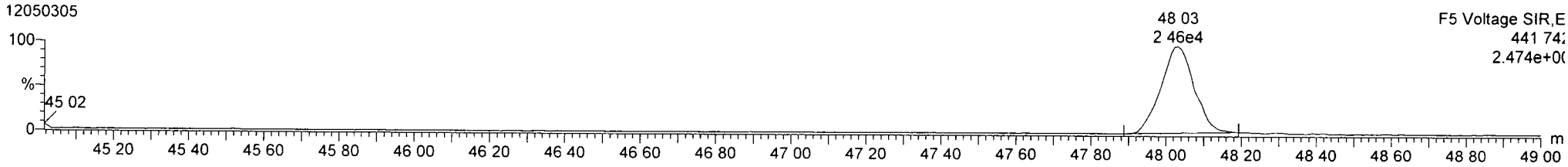
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P \DIOXIN8290 PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08 31.18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08.32.19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

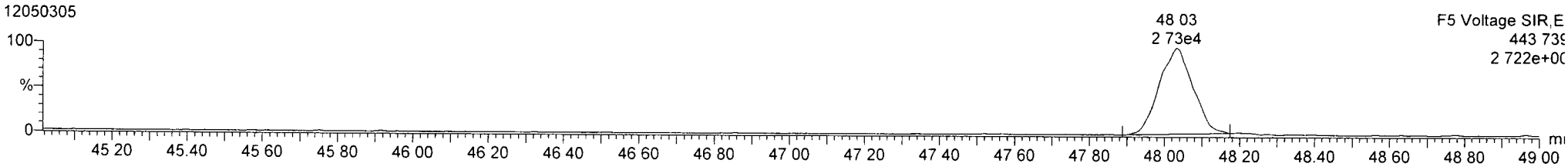
37CL-2378-TCDD



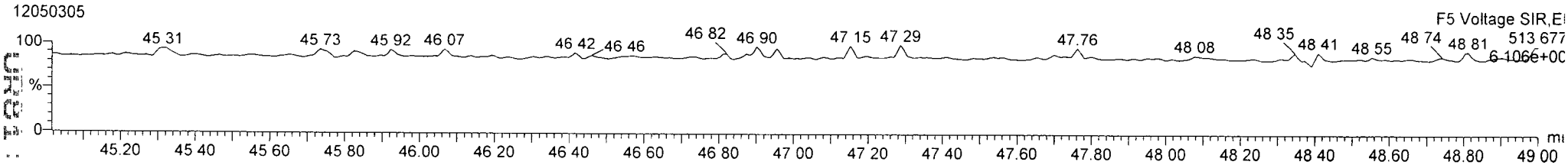
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC qld
Last Altered. Friday, May 04, 2012 08 31.18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

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2	2	12378-PeCDF	339 8597	30 604	30 604	261022	261022	0 907	bd	98.4	1.51	1 55	1686 7	NO	9 839	9.839
3	3	23478-PeCDF	339 8597	31 942	31 942	257867	257867	0 936	bb	97 8	1 53	1 55	1678 5	NO	9 778	9.778
4	4	123478-HxCDF	373 8208	35 603	35 602	206356	206356	1 082	bd	100 2	1.21	1.24	843 6	NO	10 015	10.015
5	5	234678-HxCDF	373 8208	36.688	36 699	206912	206912	1.070	bb	97 7	1 21	1.24	818 3	NO	9 768	9 768
6	6	123678-HxCDF	373.8208	35.756	35 756	222357	222357	1 048	db	99.9	1 28	1 24	903 1	NO	9.989	9 989
7	7	123789-HxCDF	373 8208	37 806	37.795	169387	169387	1 020	bd	96 7	1 19	1 24	705 4	NO	9 666	9 666
8	8	1234678-HpCDF	407 7818	39 877	39 886	200987	200987	1 214	bd	100 2	1 05	1 05	1289 5	NO	10 019	10 019
9	9	1234789-HpCDF	407 7818	42 629	42 619	148417	148417	1.254	bd	98 9	0 97	1.05	771 3	NO	9 889	9 889
10	10	OCDF	441 7428	48 022	48 012	240471	240471	1 105	bd	93 7	0 87	0.89	538 3	NO	18 745	18 745
11	11	2378-TCDD	319 8965	27 109	27 093	56331	56331	1 046	bb	95 2	0 80	0 77	546 6	NO	1 904	1 904
12	12	12378-PeCDD	355 8546	32 194	32 181	175628	175628	0 973	bd	97 9	1.50	1 55	1017 7	NO	9 788	9 788
13	13	123478-HxCDD	389 8157	36 819	36 830	150830	150830	0 935	bd	98 2	1 25	1 24	1351 4	NO	9.821	9 821
14	14	123678-HxCDD	389 8157	36 951	36.951	160788	160788	0 878	dd	102 5	1 24	1 24	1320 0	NO	10 255	10 255
15	15	123789-HxCDD	389 8157	37 378	37 346	146183	146183	0 839	bd	101 7	1 24	1 24	1273 0	NO	10 168	10 168
16	16	1234678-HpCDD	423 7766	41 719	41 720	130583	130583	0 974	bd	100 6	1 08	1 05	874 0	NO	10 060	10 060
17	17	OCDD	457 7377	47 752	47 740	217599	217599	0 950	bd	98 7	0 86	0 89	553 8	NO	19 732	19 732
18	18	13C-2378-TCDF	315 9419	26.452	26 452	4462724		1 484	bb	98 3	0 77	0 77	10410 2	NO	98 275	
19	19	13C-12378-PeCDF	351 9000	30 583	30 594	2925192		1 048	bb	91 2	1 55	1 55	9567 4	NO	91 235	
20	20	13C-23478-PeCDF	351 9000	31 920	31.931	2817940		1 003	bb	91 8	1 55	1 55	9355 1	NO	91 805	
21	21	13C-123478-HxCDF	383 8639	35 592	35 581	1904491		1 186	bd	99.0	0 52	0 51	2439 5	NO	99 006	
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23	23	13C-234678-HxCDF	383 8639	36 677	36 666	1980027		1 223	bb	99 8	0.52	0 51	2451 3	NO	99.763	
24	24	13C-123789-HxCDF	383 8639	37 784	37 773	1717883		1.056	bb	100 2	0 53	0 51	2247.0	NO	100 221	
25	25	13C-1234678-HpCDF	417 8253	39 867	39 856	1651791		1 011	bb	100 7	0 46	0.44	2340 6	NO	100 660	
26	26	13C-1234789-HpCDF	417 8253	42 607	42 607	1196814		0 741	bb	99.6	0.45	0.44	1444.6	NO	99.610	
27	27	13C-1234-TCDD	331 9368	26 273	26 272	3059147		1 000	bb	100 0	0 78	0 77	6901 5	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27 080	27 094	2829444		0 956	bb	96 7	0 77	0 77	5900 4	NO	96 710	
29	29	13C-12378-PeCDD	367 8949	32 172	32 183	1843519		0.663	bb	90 8	1 58	1 55	9595.3	NO	90 832	
30	30	13C-123478-HxCDD	401 8559	36 808	36 797	1641893		1 024	bd	98 8	1 25	1 24	3307 9	NO	98 836	
31	31	13C-123678-HxCDD	401 8559	36 940	36 929	1786305		1 113	dd	99 0	1 25	1 24	3408 7	NO	98 955	
32	32	13C-1234678-HpCDD	435 8169	41 708	41 708	1332277		0 815	bb	100 7	1 07	1 05	3488 1	NO	100 740	
33	33	13C-OCDD	469 7779	47 726	47 724	2321409		0 717	bd	99 8	0 89	0 89	2919 3	NO	199.533	

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

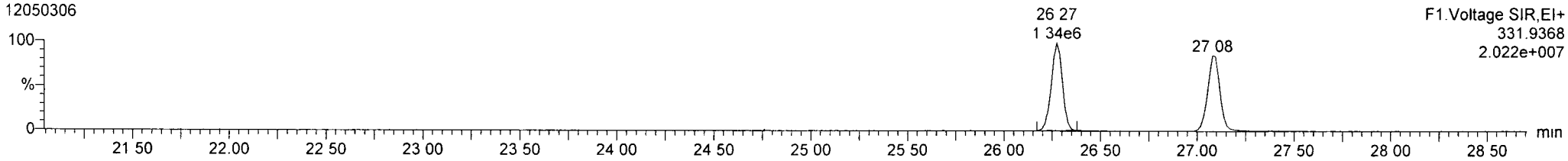
	#	Name	Trace	RT	Pred RT	Abs.Resp	Abs. Corr	RRF M .	1° Det.	%Rec	1° Ratio.	1° Rati .	S/N	1° ..	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 356	37 368	1622447		1 000	bb	100 0	1 27	1 24	3175 8	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 490			0 866							1 960	1 960
36	36	Total-penta1	339 8597		28 270											
37	37	Total-pentafurans	339 8597		30 840			0 921							19 617	19 872
38	38	Total-hexafurans	373 8208		35 860			1 055							39 438	39 503
39	39	Total-heptafurans	407 7818		41 270			1 234							19 908	19 965
40	40	Total-Furans	303 9016		0 000			1 050							99 667	100 045
41	41	Total-tetradioxins	319 8965		26.000			1 046							1 953	1 953
42	42	Total-pentadioxins	355 8546		31 040			0.973							9 788	9 788
43	43	Total-hexadioxins	389 8157		36.030			0.884							30 243	30 296
44	44	Total-heptadioxins	423 7766		41 090			0 974							10 060	10.087
45	45	Total-Dioxins	319 8965		0 000			0 942							71 776	71 857
46	46	Total-TEQ	319 8965		0 000										171 444	171 902
47	47	37CL-2378-TCDD	327 8847	27 109	27 087	60069		1 037		94 7			400 6		1 893	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000										0 000	
50	50	FUNCTION3 PFK	380 9760		0 000										0 000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445 7555		0 000											
57	57	FUNCTION4 NCDPE	479 7165		0 000											
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290 PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08 31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08.32 23 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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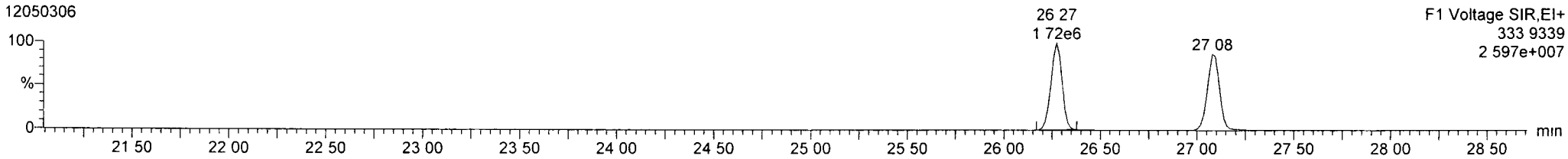

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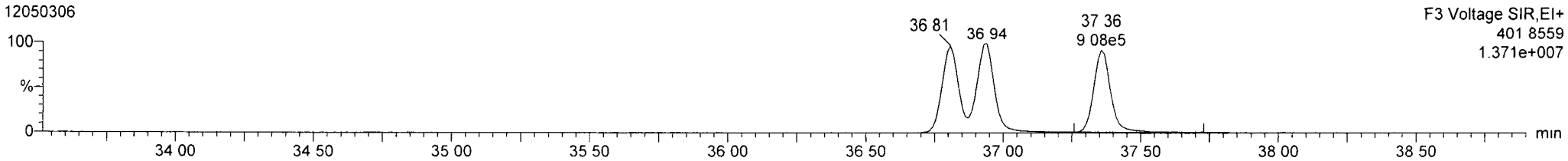

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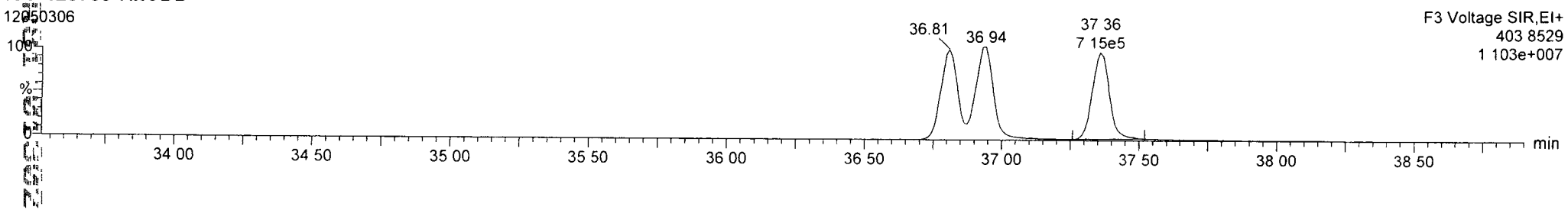

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P.\DIOXIN8290.PRO\120503IC qld
Last Altered Friday, May 04, 2012 08 31:18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08 32 23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

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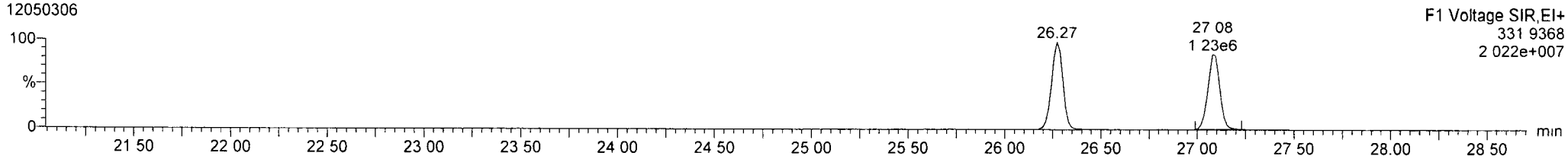

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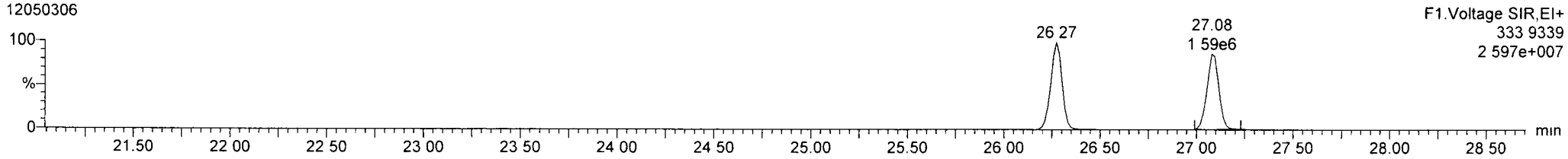

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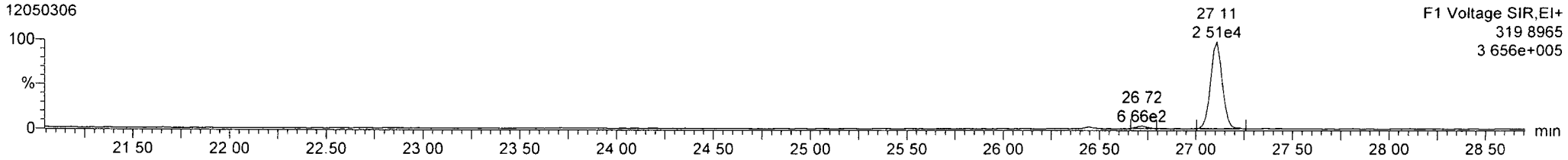
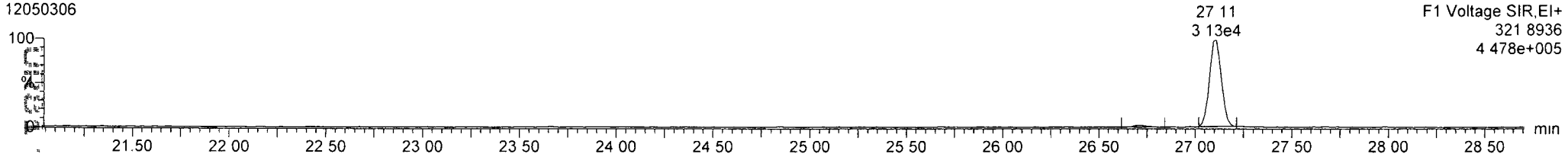


Total-tetradioxins



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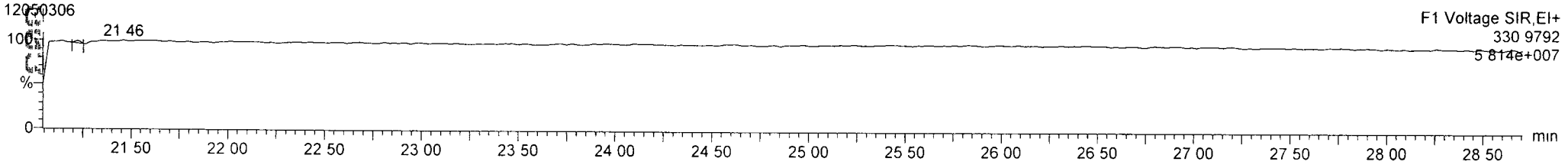
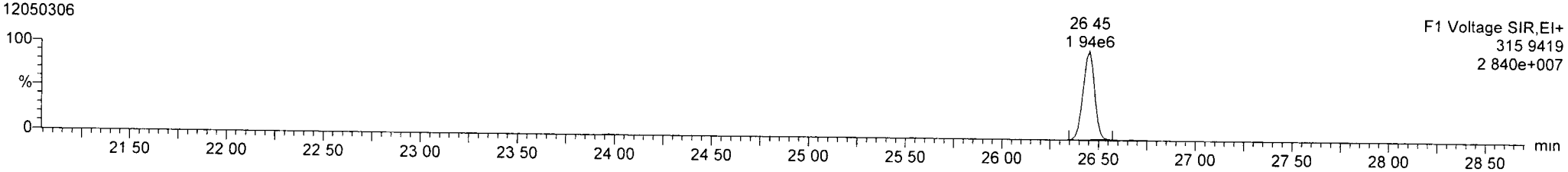


Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

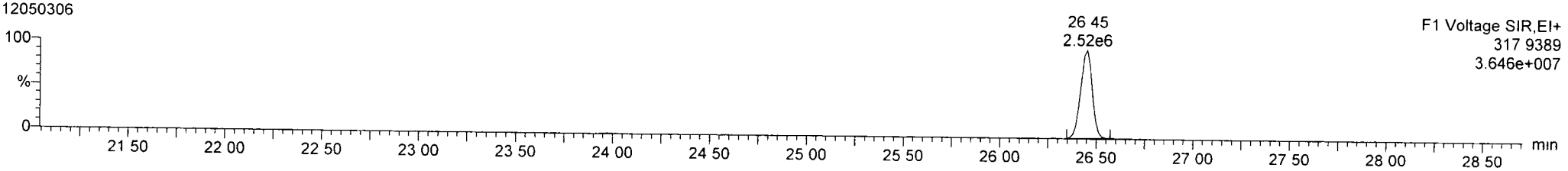
13C-2378-TCDF

12050306



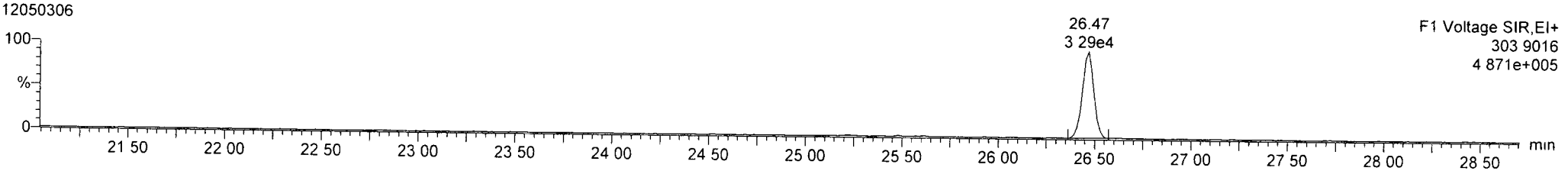
13C-2378-TCDF

12050306



Total-tetrafurans

12050306



Total-tetrafurans

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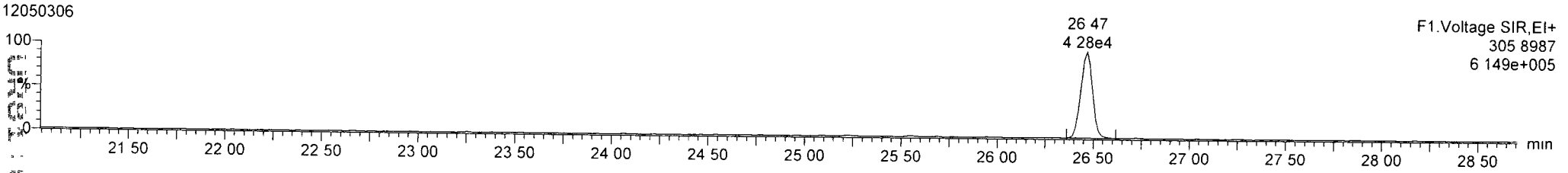
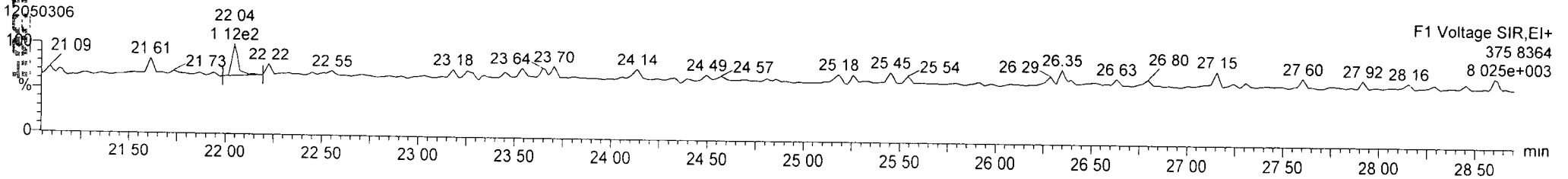


FUNCTION1 HXCDPE

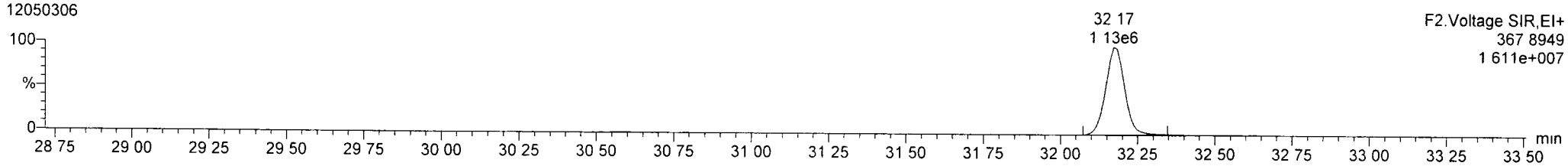
12050306



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P.\DIOXIN8290.PRO\120503IC.qld
Last Altered. Friday, May 04, 2012 08.31:18 Pacific Daylight Time
Printed Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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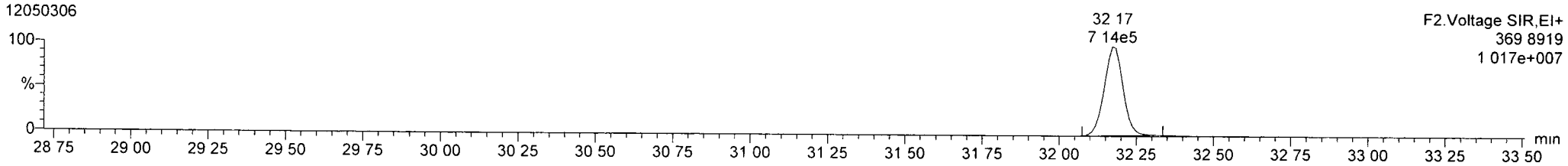
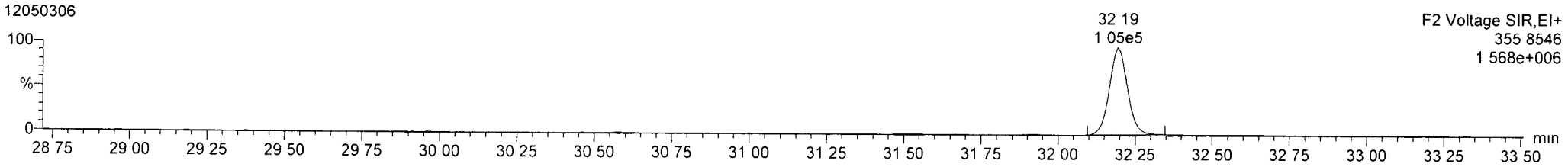


Total-pentadioxins



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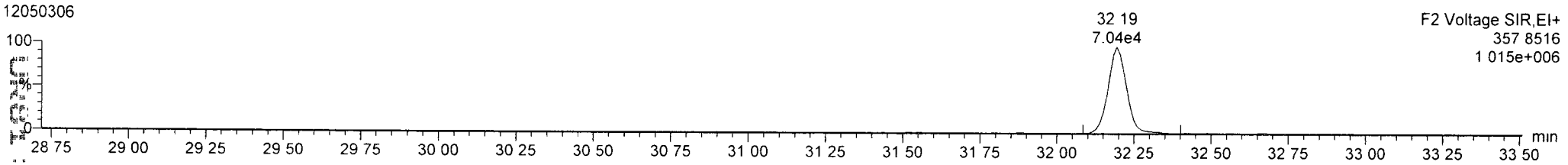
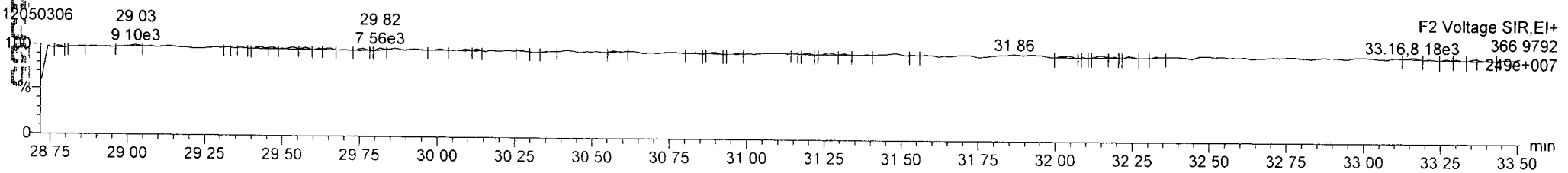


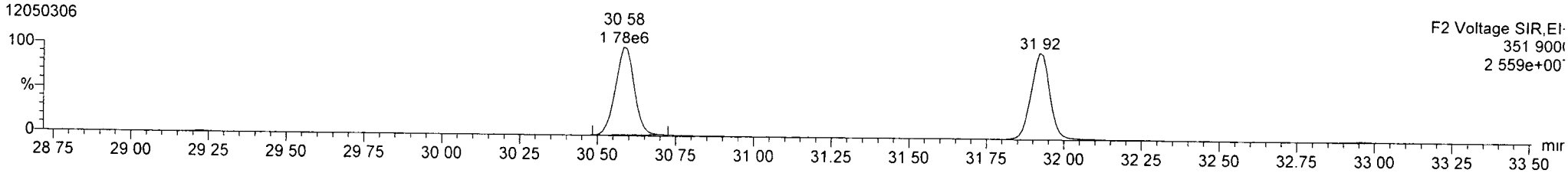
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P.\DIOXIN8290.PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08.31:18 Pacific Daylight Time
Printed Friday, May 04, 2012 08.32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF
12050306



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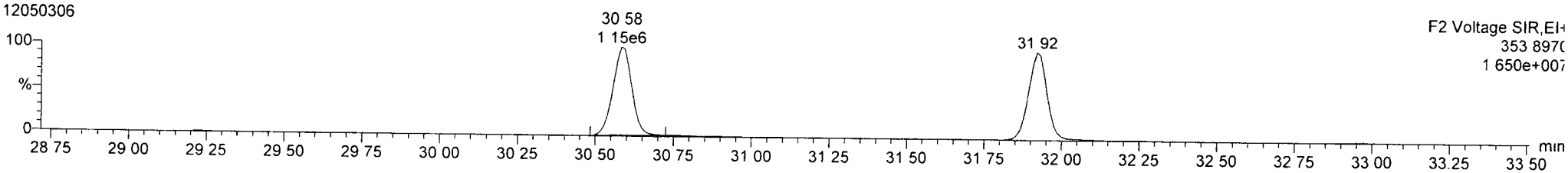
12050306



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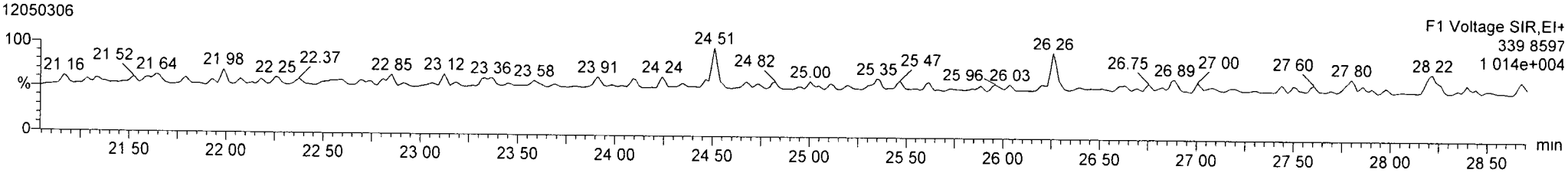

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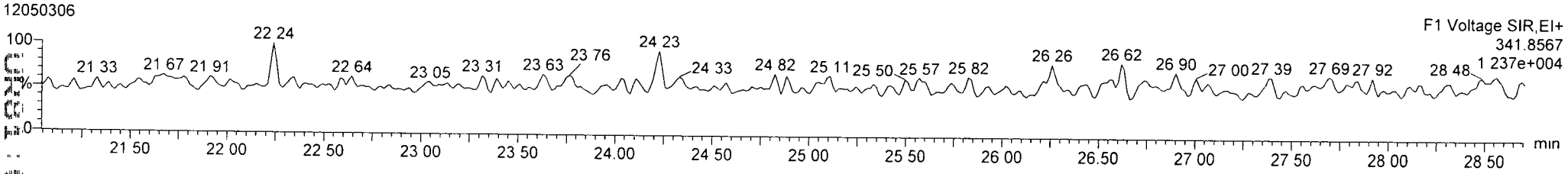
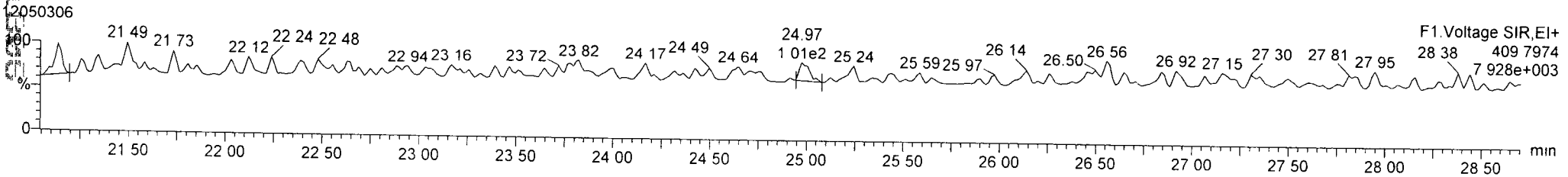


FUNCTION1 HPCDPE
12050306



Dataset P.\DIOXIN8290.PRO\120503IC.qld
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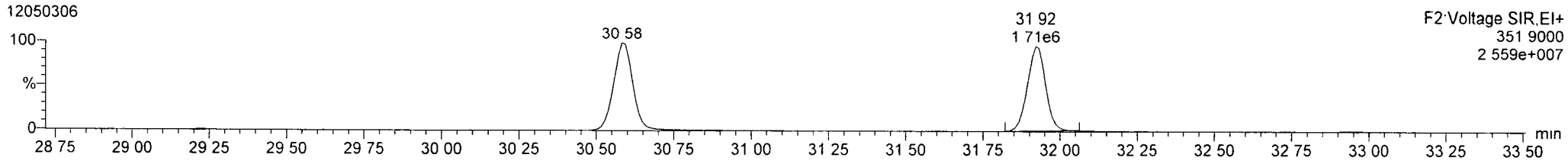
Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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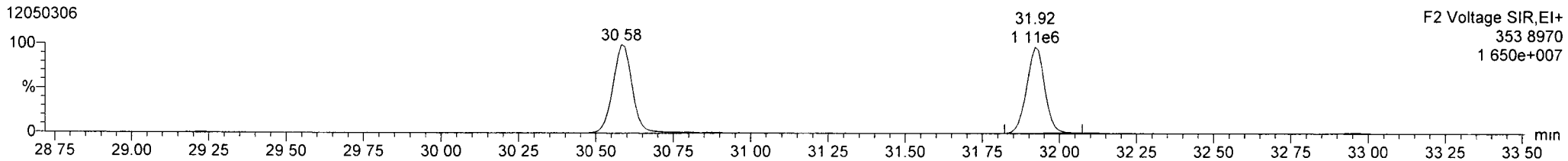
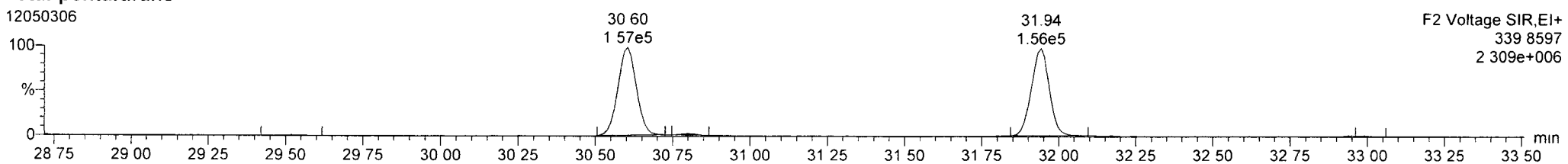


Total-pentafurans



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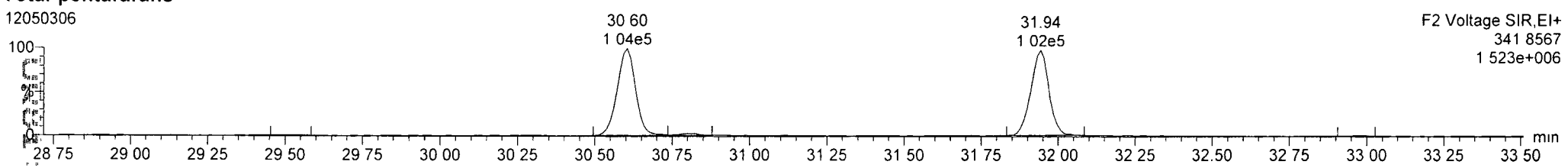

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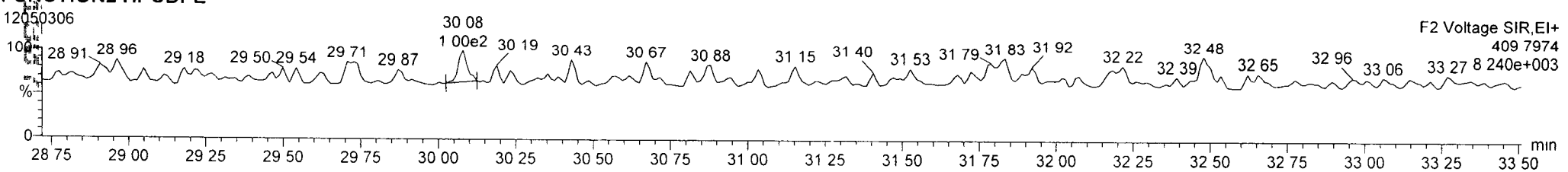

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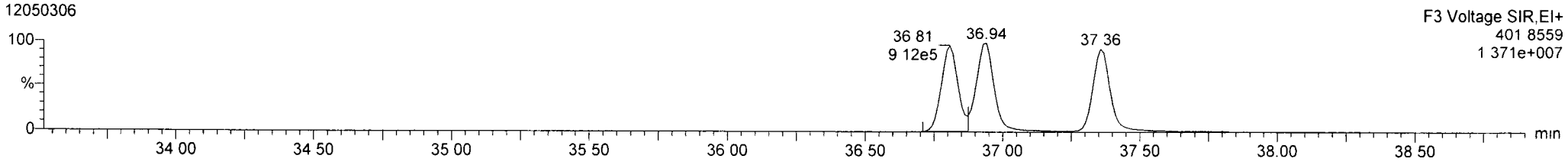
Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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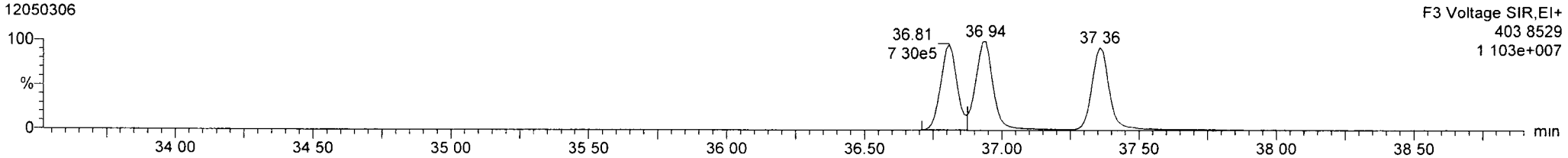

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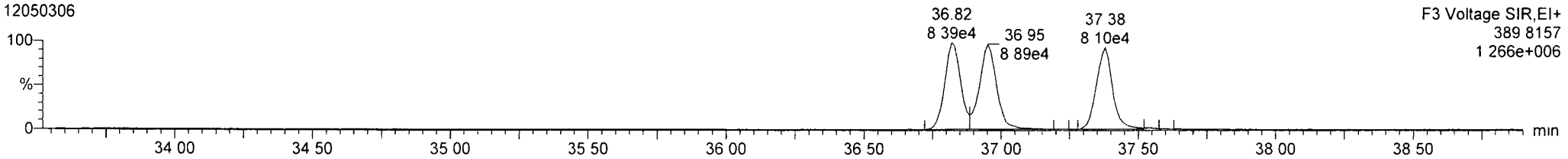
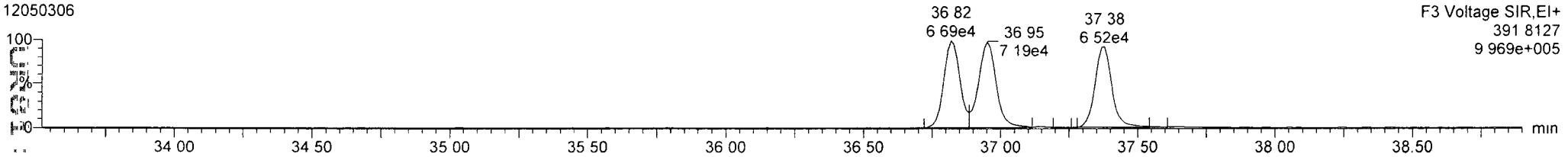


Total-hexadioxins



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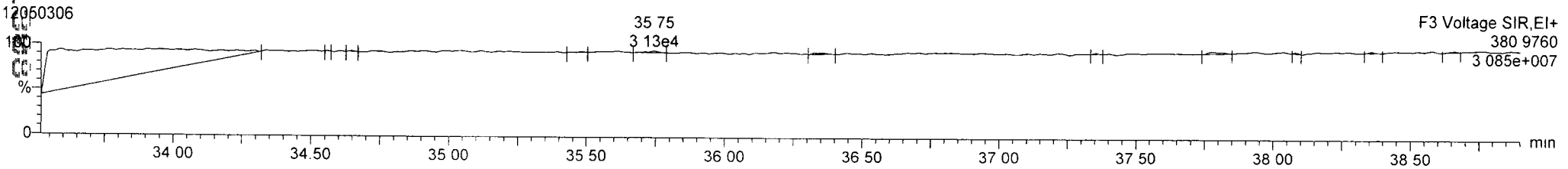

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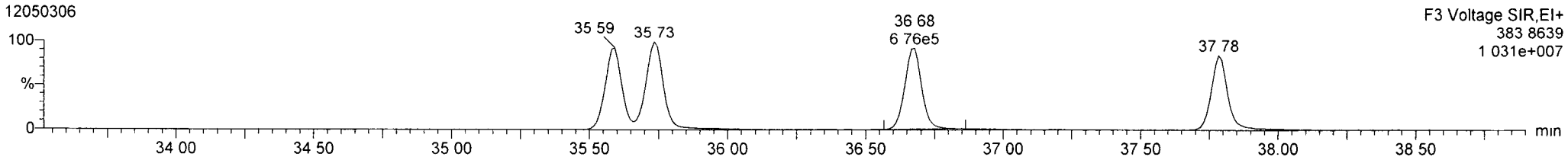
13C-234678-HxCDF



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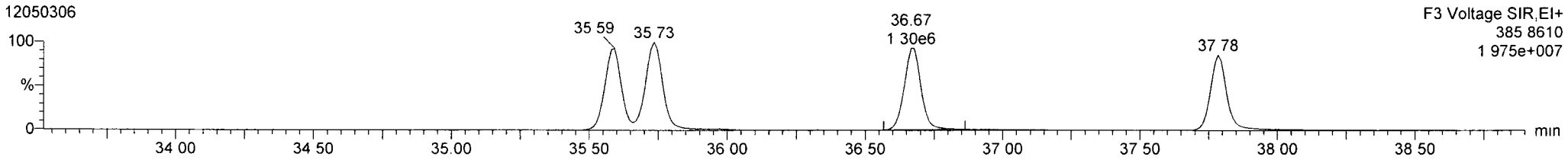
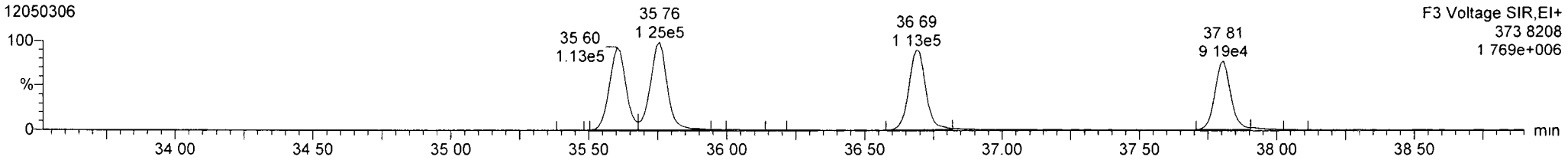


Total-hexafurans



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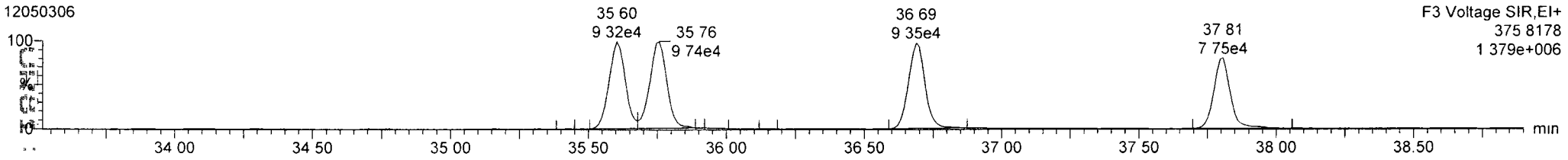
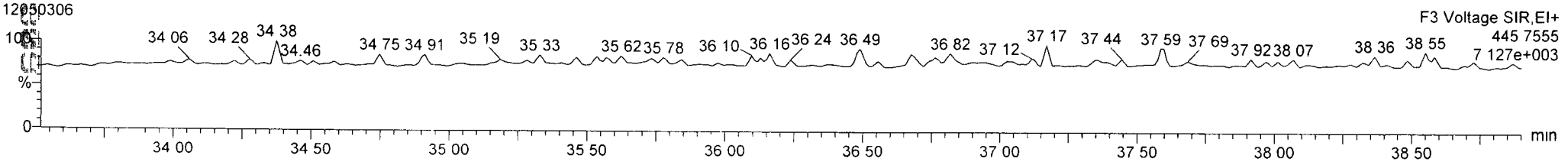


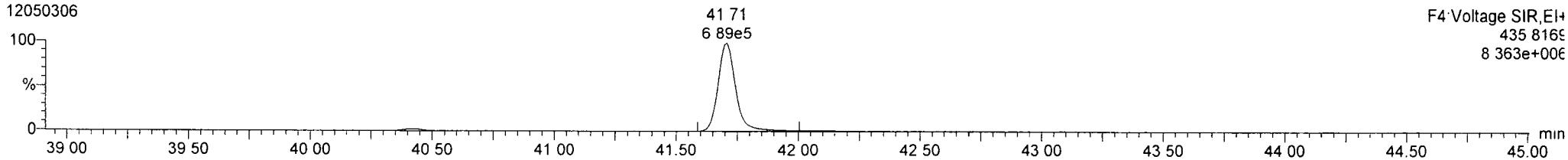
FUNCTION3 OCDPE



Dataset. P.\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08 31 18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32 23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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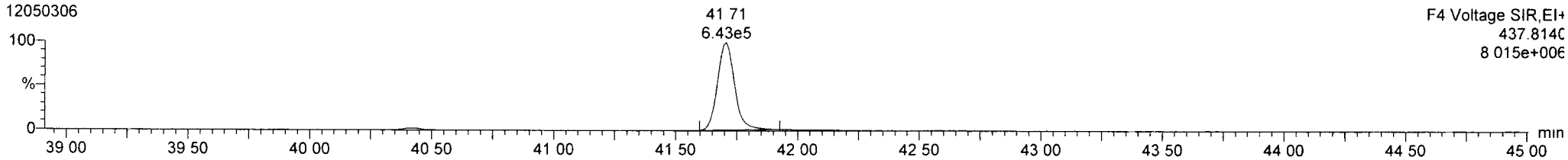
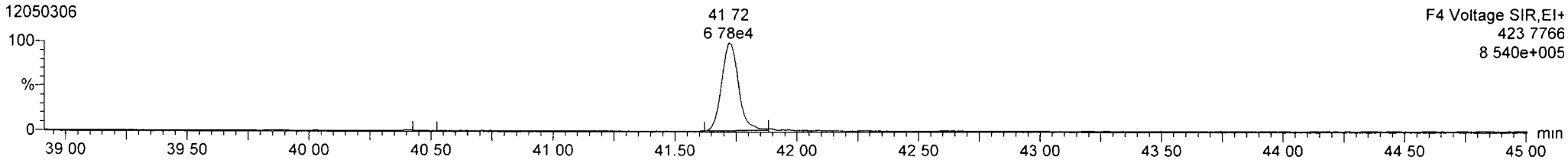
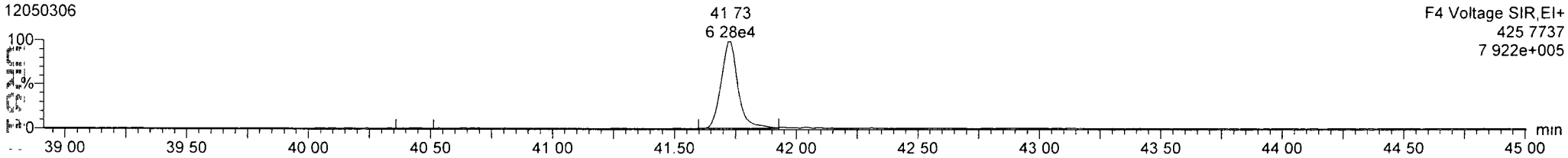


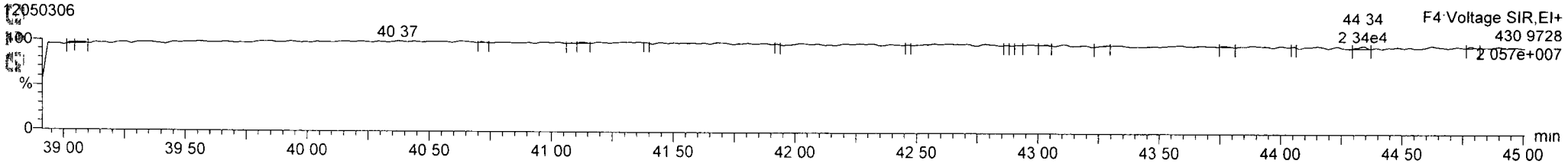
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Dataset: P.\DIOXIN8290.PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08 31:18 Pacific Daylight Time
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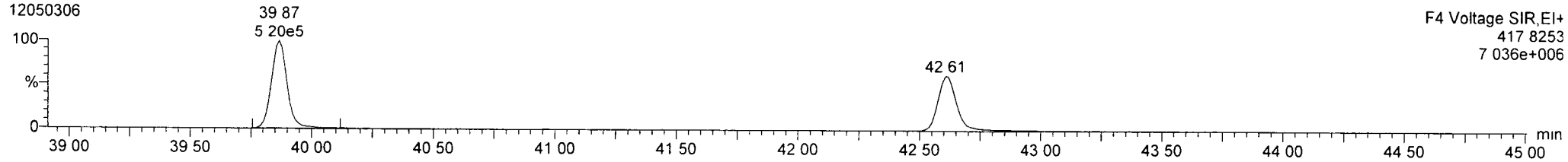

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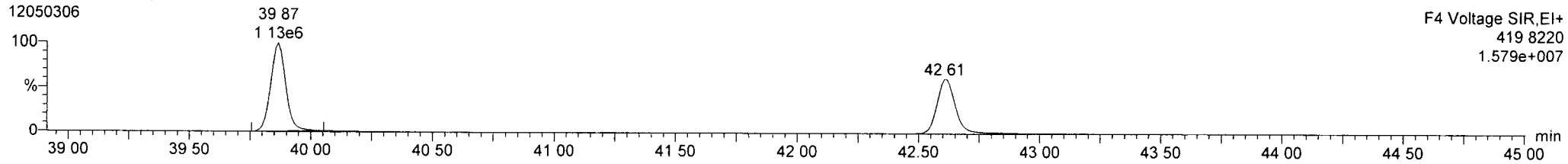
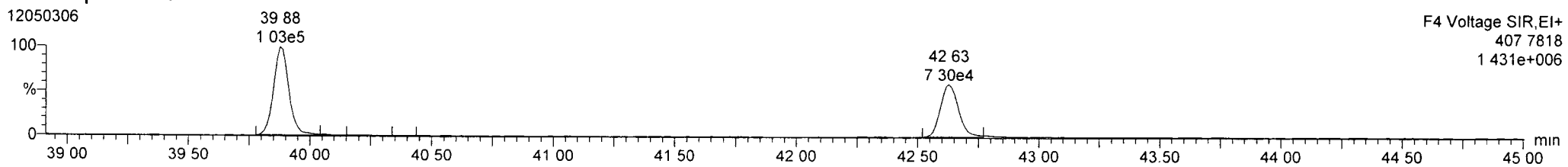
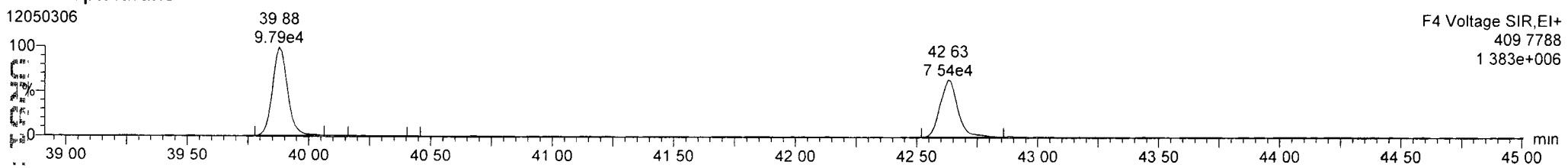


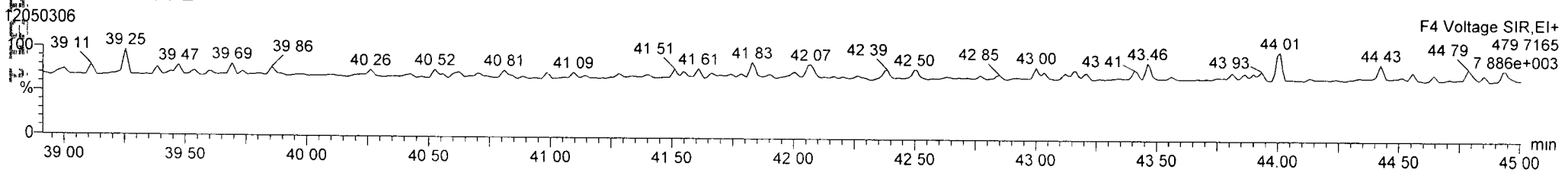
Total-heptafurans



Total-heptafurans



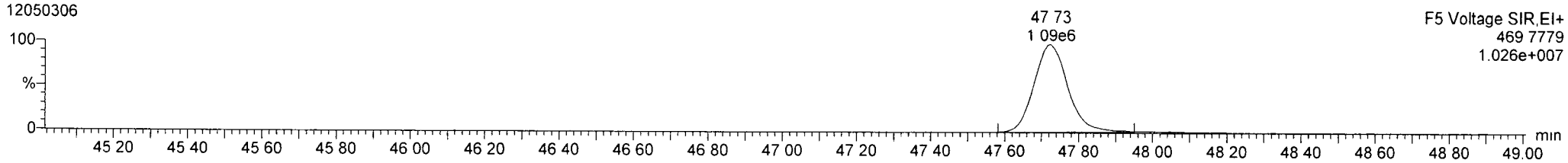
FUNCTION4 NCDPE



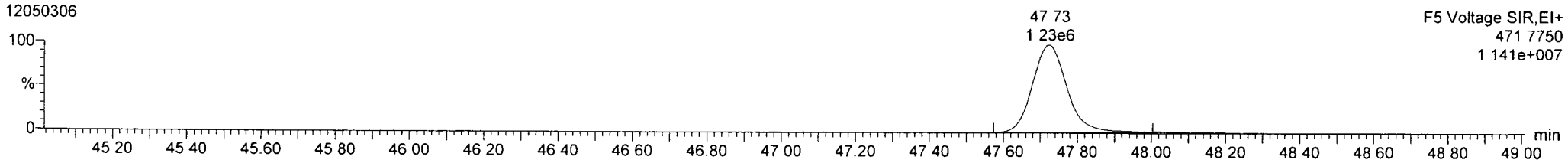
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed Friday, May 04, 2012 08 32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

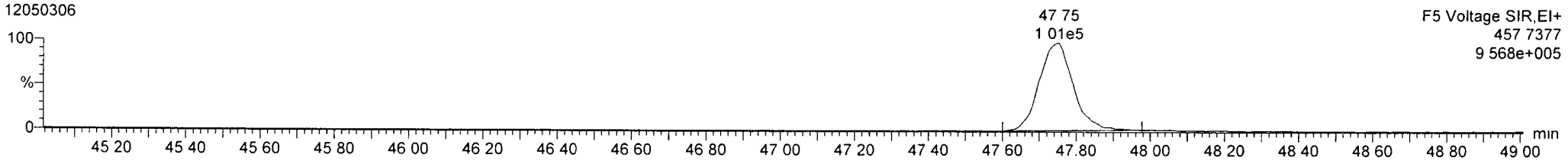
13C-OCDD



13C-OCDD



OCDD



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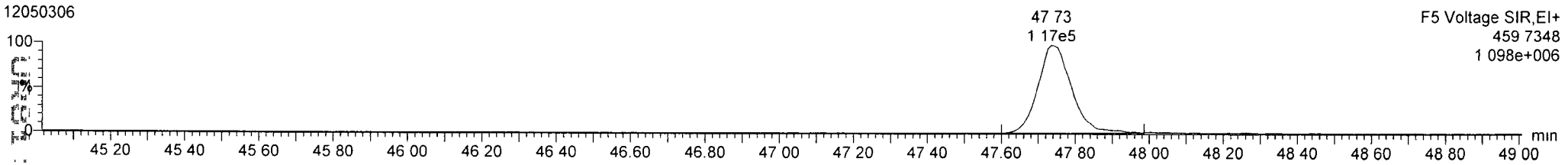
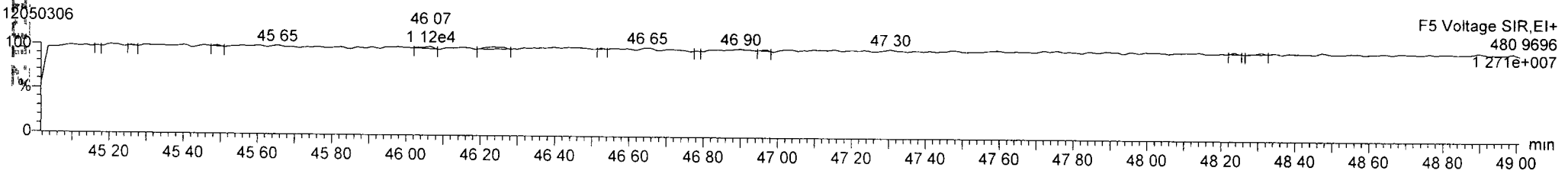


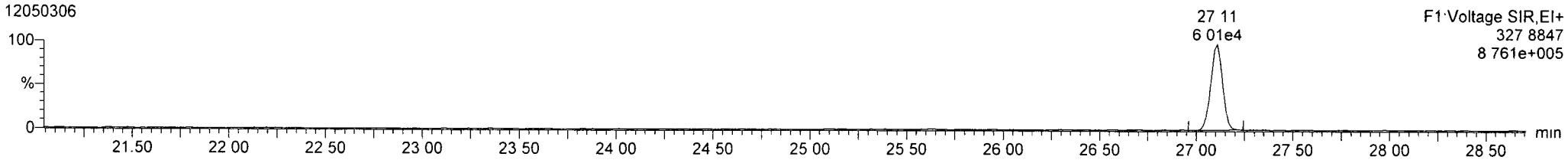
FUNCTION5 PFK



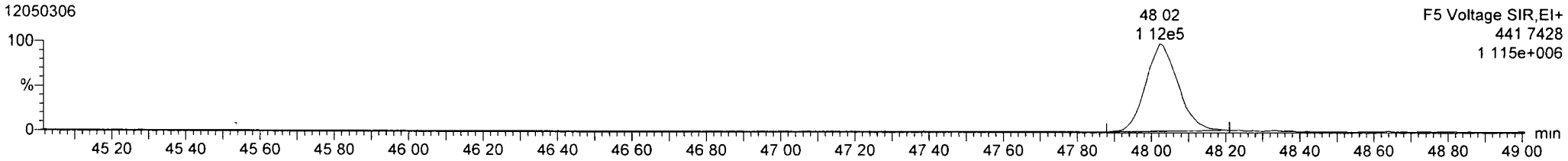
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered. Friday, May 04, 2012 08.31 18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08:32.23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

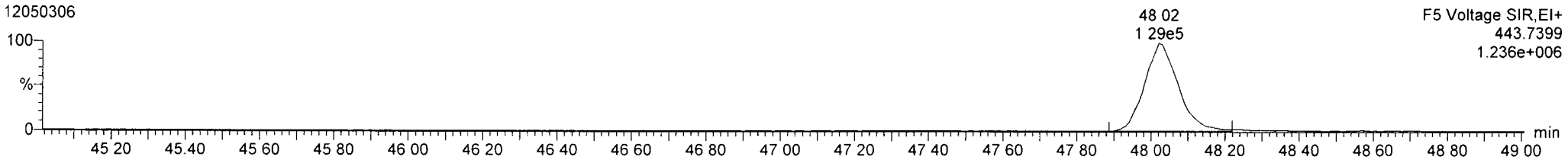
37CL-2378-TCDD



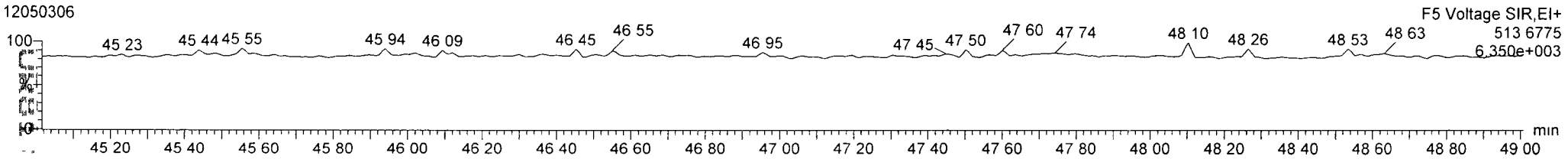
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120503IC qld
Last Altered Friday, May 04, 2012 08 31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32.27 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred RT	Abs.Resp	Abs. Corr . .	RRF M ..	1° Det. .	%Rec	1° Ratio	1° Rati .	S/N	1° .	pg	EMPC
1	1	2378-TCDF	303 9016	26.452	26.453	371811	371811	0 866	bb	98 0	0 73	0 77	1449 2	NO	9 804	9 804
2	2	12378-PeCDF	339 8597	30 593	30 604	1380859	1380859	0.907	bd	100 1	1.56	1 55	3690 0	NO	50 044	50 044
3	3	23478-PeCDF	339 8597	31 930	31 942	1335891	1335891	0 936	bb	99 4	1 55	1 55	3644 1	NO	49 684	49 684
4	4	123478-HxCDF	373 8208	35 602	35.591	1041312	1041312	1 082	bd	100 4	1.23	1 24	2159 5	NO	50 214	50 214
5	5	234678-HxCDF	373 8208	36 687	36.687	1040946	1040946	1 070	bb	98 3	1 25	1 24	2145 7	NO	49 139	49 139
6	6	123678-HxCDF	373 8208	35 744	35 755	1131094	1131094	1 048	db	99.6	1 24	1 24	2255 4	NO	49.800	49 800
7	7	123789-HxCDF	373 8208	37 794	37 794	845472	845472	1 020	bb	98 0	1 22	1 24	1827 4	NO	49.015	49.015
8	8	1234678-HpCDF	407 7818	39 877	39.875	986779	986779	1 214	bb	100 1	1 01	1 05	2484 9	NO	50 060	50 060
9	9	1234789-HpCDF	407 7818	42 628	42.619	728549	728549	1.254	bd	96 7	1 02	1 05	1571 0	NO	48 335	48 335
10	10	OCDF	441.7428	48 012	48.003	1223078	1223078	1.105	bd	97 4	0 89	0 89	2383 7	NO	97 442	97.442
11	11	2378-TCDD	319 8965	27 094	27.093	279788	279788	1 046	bd	95 6	0 79	0 77	977 1	NO	9.560	9 560
12	12	12378-PeCDD	355 8546	32.182	32 181	915126	915126	0 973	bb	100 0	1.57	1 55	2413 7	NO	49 999	49 999
13	13	123478-HxCDD	389 8157	36 819	36 819	764837	764837	0 935	bd	100 7	1 23	1 24	1838 0	NO	50 334	50 334
14	14	123678-HxCDD	389 8157	36 939	36 939	781628	781628	0 878	db	99 3	1 24	1 24	1749 0	NO	49 635	49 635
15	15	123789-HxCDD	389 8157	37 367	37 334	718919	718919	0.839	bb	100 3	1 24	1 24	1733 7	NO	50 145	50 145
16	16	1234678-HpCDD	423 7766	41 718	41 709	635024	635024	0 974	bb	99 0	1 05	1 05	1181 1	NO	49 494	49 494
17	17	OCDD	457 7377	47 743	47 731	1067039	1067039	0 950	bd	98 9	0 87	0 89	1170 6	NO	98 894	98 894
18	18	13C-2378-TCDF	315 9419	26 437	26.452	4378575		1 484	bb	98.5	0 77	0 77	8699 9	NO	98 505	
19	19	13C-12378-PeCDF	351 9000	30 582	30.593	3042396		1.048	bb	96 9	1 55	1 55	3470 5	NO	96 940	
20	20	13C-23478-PeCDF	351 9000	31.919	31 931	2873049		1.003	bb	95 6	1 56	1 55	3307 3	NO	95 622	
21	21	13C-123478-HxCDF	383 8639	35 580	35 580	1916769		1 186	bd	100 4	0 52	0 51	2139 3	NO	100 356	
22	22	13C-123678-HxCDF	383 8639	35 734	35 733	2166531		1 315	dd	102 3	0 50	0 51	2272 3	NO	102 267	
23	23	13C-234678-HxCDF	383 8639	36 665	36 665	1980140		1 223	bb	100 5	0 52	0 51	2194 0	NO	100 481	
24	24	13C-123789-HxCDF	383 8639	37 783	37 772	1690949		1 056	bb	99 4	0 52	0 51	1940 9	NO	99 354	
25	25	13C-1234678-HpCDF	417 8253	39.855	39 855	1623099		1 011	bb	99 6	0 46	0 44	2052 8	NO	99 617	
26	26	13C-1234789-HpCDF	417 8253	42 606	42 606	1201918		0 741	bd	100 7	0.45	0 44	1314.4	NO	100 749	
27	27	13C-1234-TCDD	331 9368	26 272	26.272	2994466		1.000	bb	100.0	0 78	0 77	6042 1	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27 079	27 094	2798287		0 956	bb	97 7	0 77	0 77	5658 4	NO	97 711	
29	29	13C-12378-PeCDD	367 8949	32 172	32 183	1880523		0 663	bb	94 7	1.56	1 55	10280 8	NO	94 656	
30	30	13C-123478-HxCDD	401 8559	36 797	36 796	1624450		1 024	bd	98 5	1 25	1 24	5119 4	NO	98 484	
31	31	13C-123678-HxCDD	401 8559	36 928	36 928	1794025		1 113	db	100 1	1 25	1 24	5392 2	NO	100 092	
32	32	13C-1234678-HpCDD	435 8169	41 696	41 707	1316887		0 815	bd	100 3	1 04	1 05	2509 2	NO	100 287	
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Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31 18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08.32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

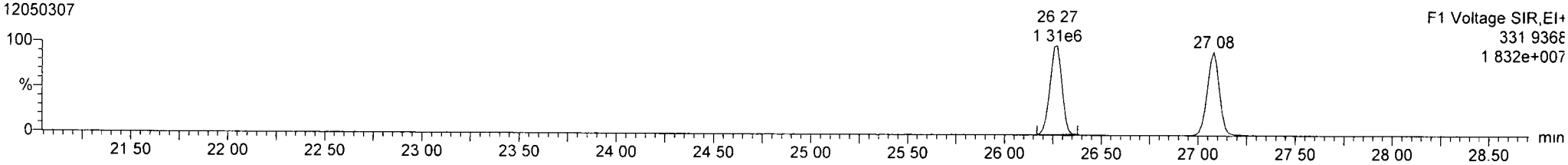
	#	Name	Trace	RT	Pred RT	Abs Resp	Abs Corr.	RRF M.	1° Det.	%Rec	1° Ratio	1° Rati	S/N	1°	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 355	37 368	1610949		1.000	bb	100 0	1 22	1 24	5115 0	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 490			0 866							31 674	31 795
36	36	Total-penta1	339 8597		28 270										80 413	80 413
37	37	Total-pentafurans	339 8597		30 840			0 921							148 369	148 430
38	38	Total-hexafurans	373 8208		35 860			1 055							259 776	259 776
39	39	Total-heptafurans	407 7818		41 270			1 234							98 455	98 586
40	40	Total-Furans	303 9016		0 000			1.050							716 130	716 443
41	41	Total-tetradioxins	319 8965		26 000			1 046							53 831	54 158
42	42	Total-pentadioxins	355 8546		31 040			0 973							176.567	176 843
43	43	Total-hexadioxins	389 8157		36 030			0 884							218.166	218 453
44	44	Total-heptadioxins	423 7766		41 090			0 974							109 368	109 390
45	45	Total-Dioxins	319 8965		0 000			0 942							656 826	657 739
46	46	Total-TEQ	319 8965		0 000										1372 956	1374 1.
47	47	37CL-2378-TCDD	327.8847	27 094	27 087	307386		1 037		99 0			1200 0		9 897	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000										0 000	
50	50	FUNCTION3 PFK	380 9760		0 000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445 7555		0 000											
57	57	FUNCTION4 NCDPE	479.7165		0 000											
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC qld
Last Altered Friday, May 04, 2012 08:31 18 Pacific Daylight Time
Printed Friday, May 04, 2012 08 32.27 Pacific Daylight Time

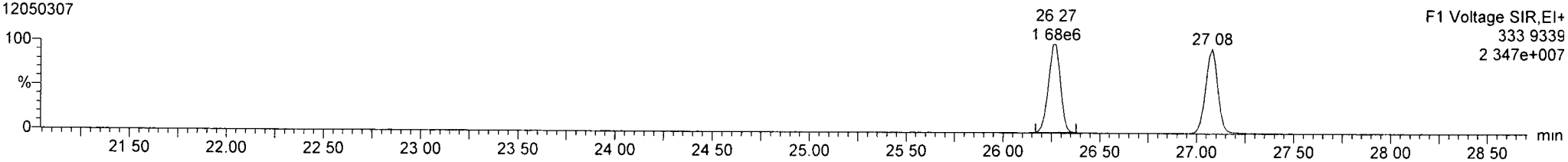
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

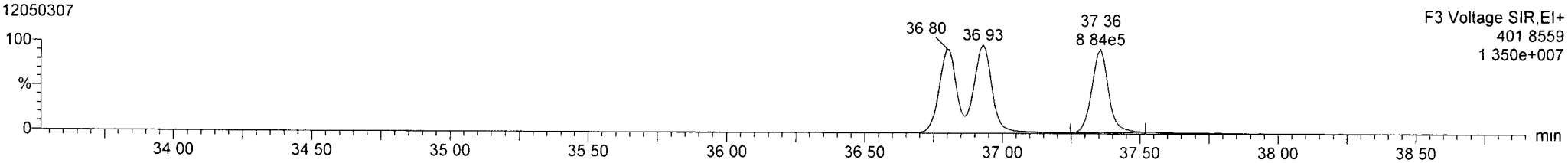
13C-1234-TCDD
12050307



13C-1234-TCDD
12050307



13C-123789-HxCDD
12050307



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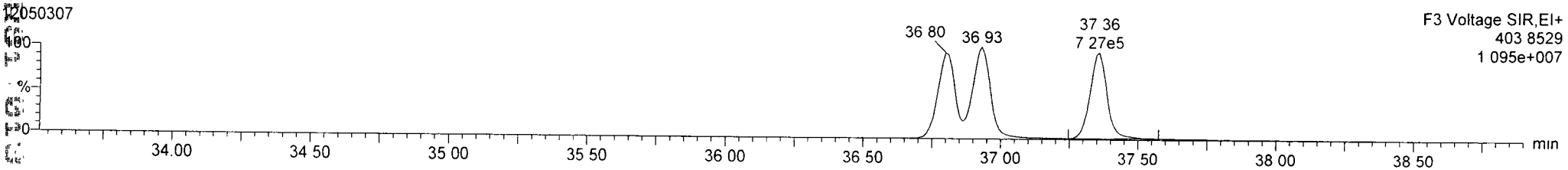
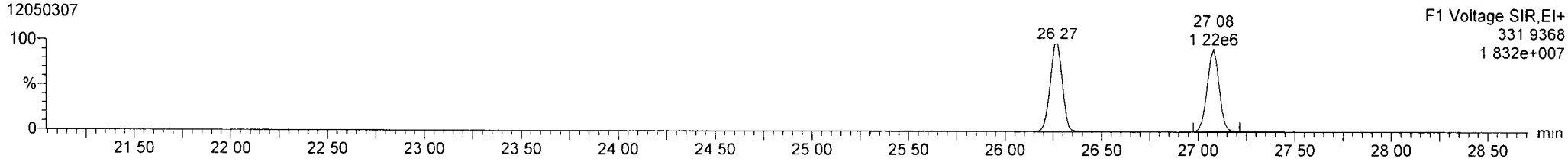


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC qld
Last Altered Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08 32 27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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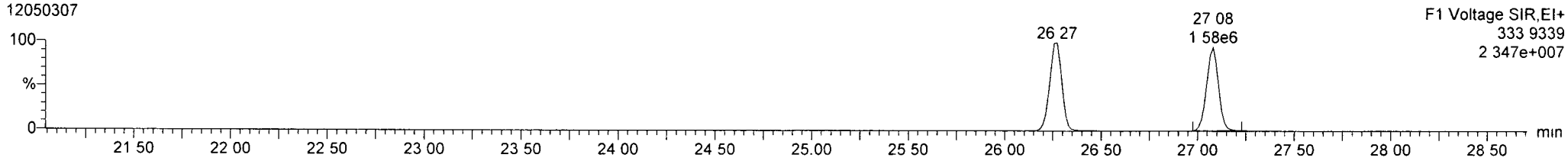
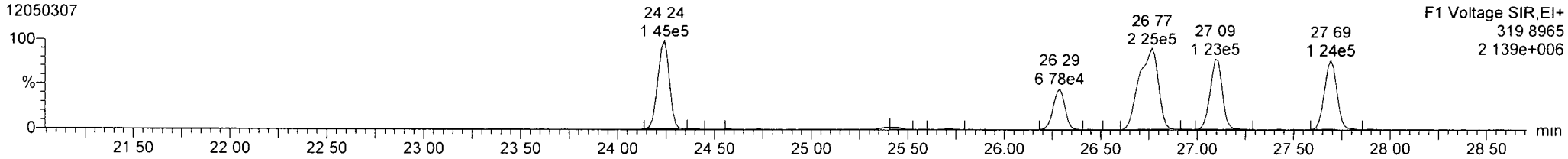
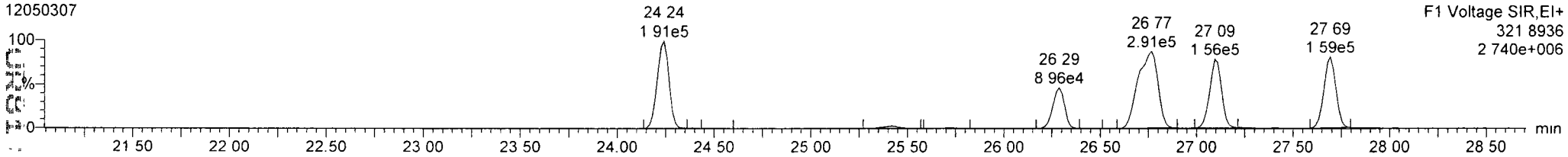


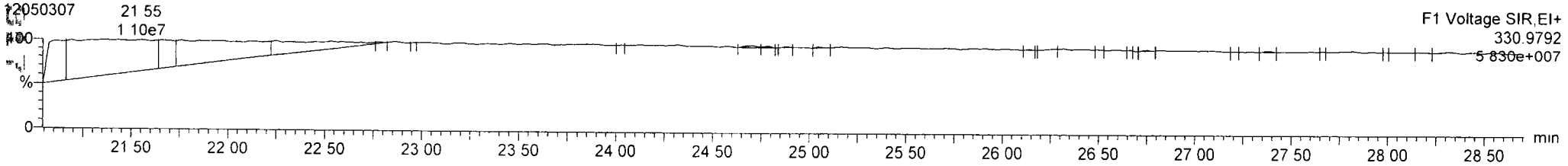
Total-tetradioxins



Total-tetradioxins



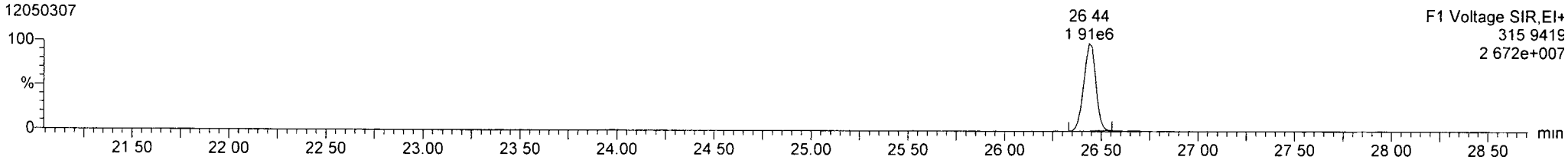
FUNCTION1 PFK



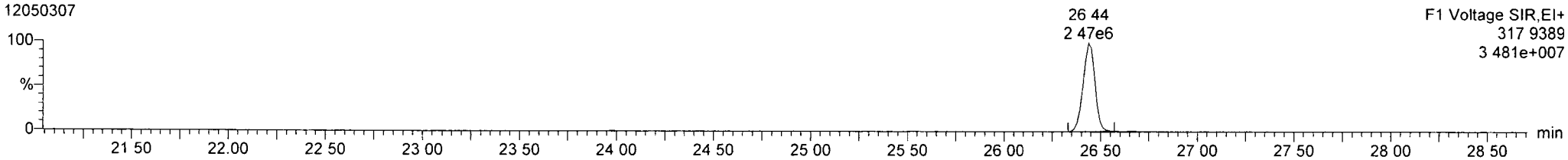
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08.31.18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08.32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

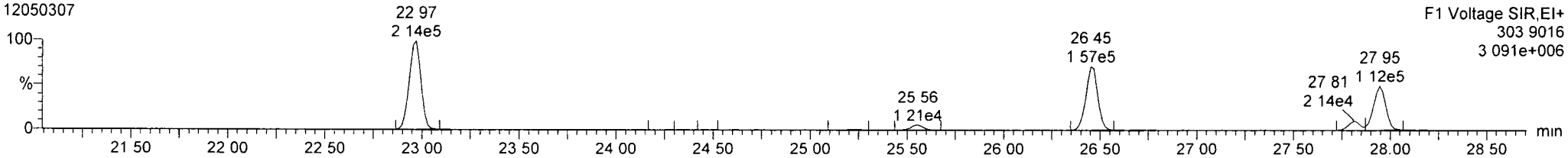
13C-2378-TCDF



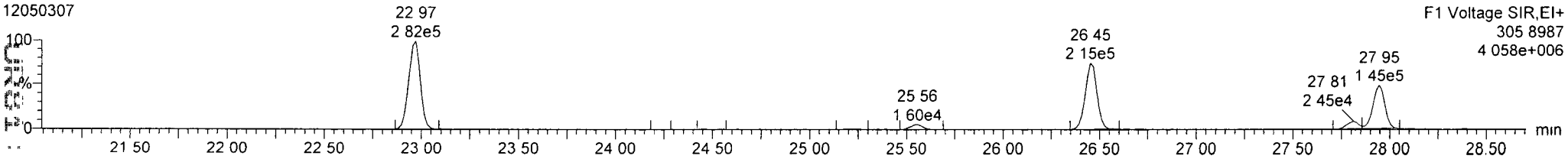
13C-2378-TCDF



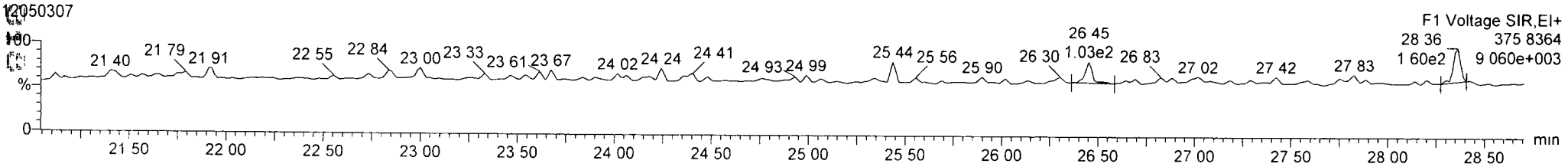
Total-tetrafurans



Total-tetrafurans



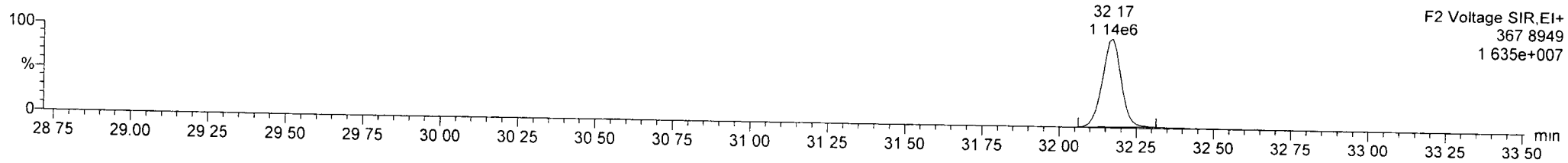
FUNCTION1 HXCDPE



Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

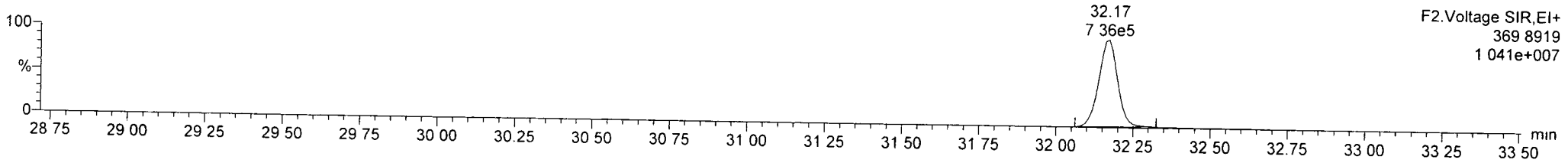
13C-12378-PeCDD

12050307



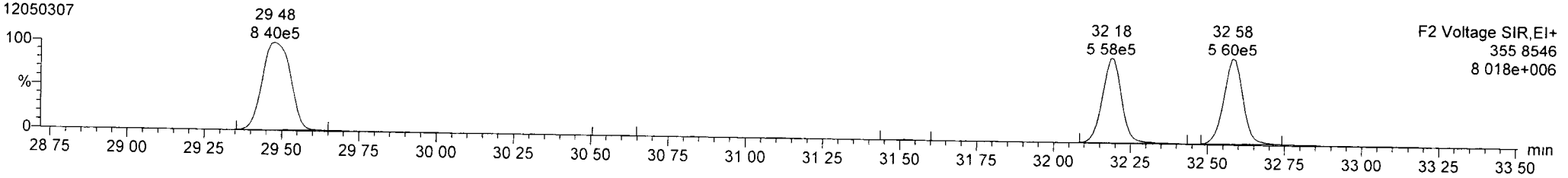
13C-12378-PeCDD

12050307



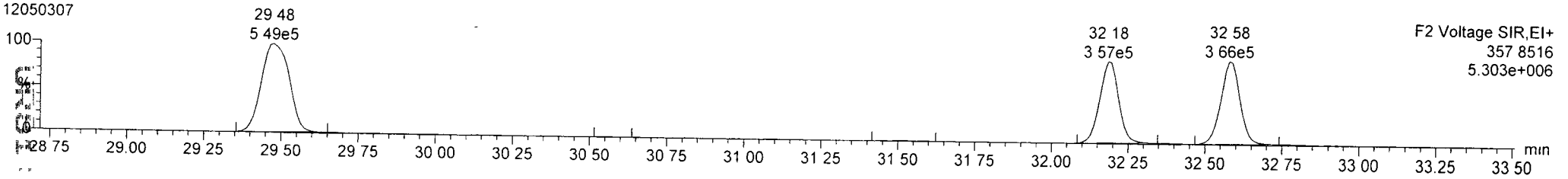
Total-pentadioxins

12050307



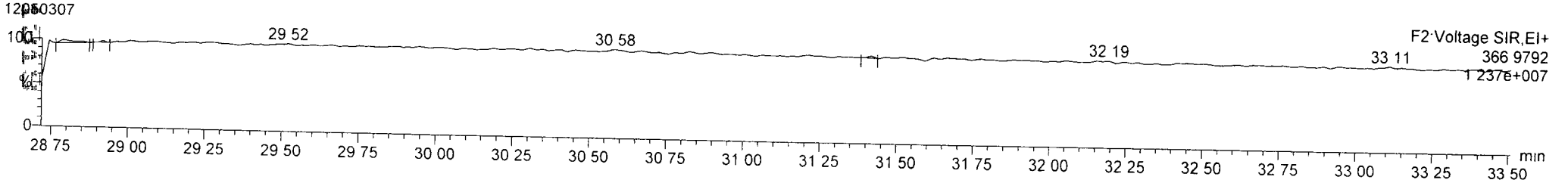
Total-pentadioxins

12050307



FUNCTION2 PFK

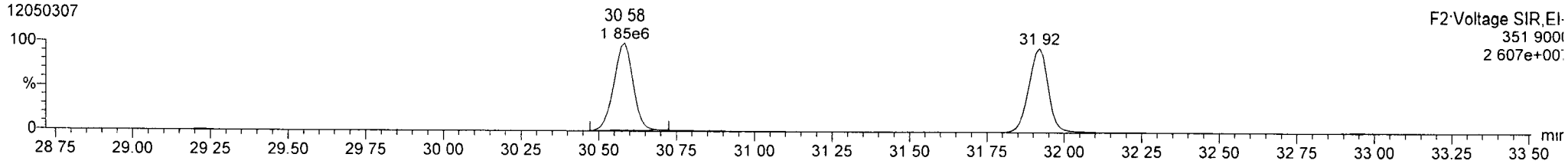
12050307



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08 31.18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08.32.27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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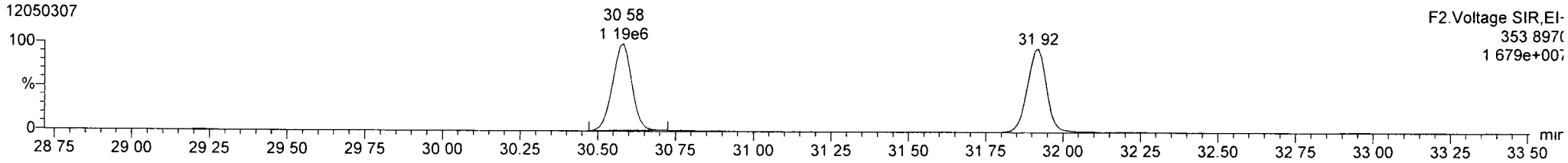

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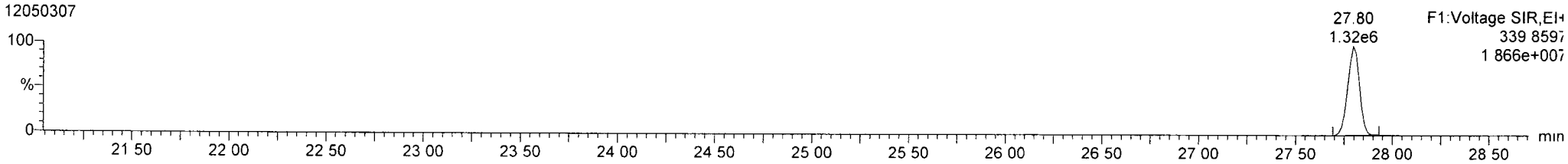
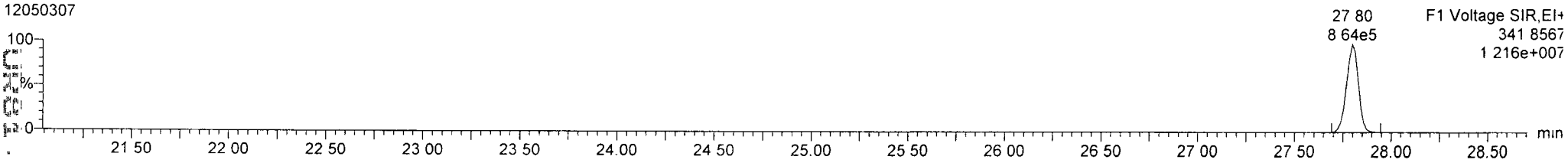
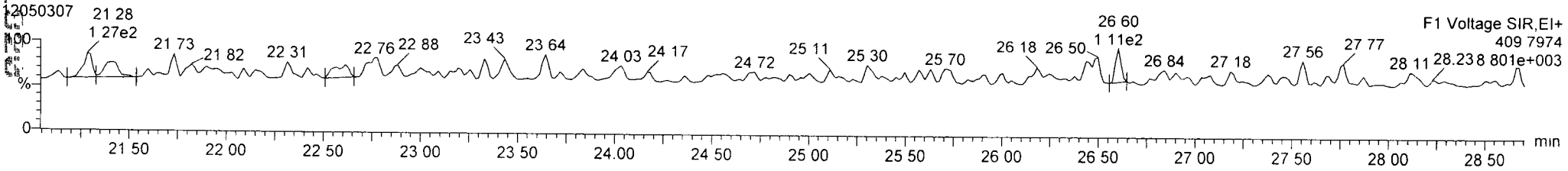


Total-penta1



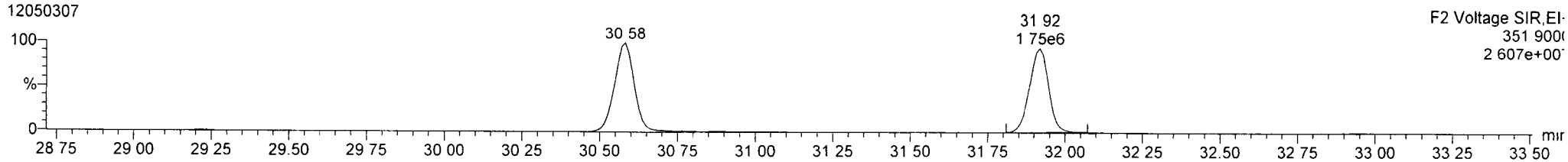
FUNCTION1 HPCDPE



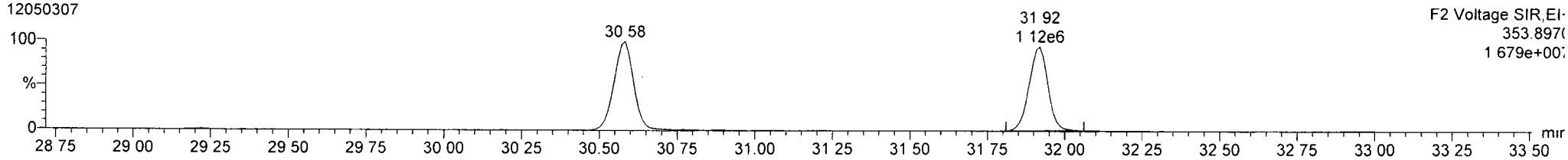
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered. Friday, May 04, 2012 08 31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08 32 27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

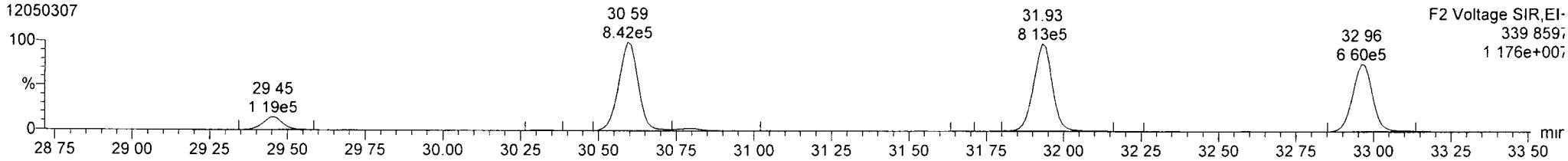
13C-23478-PeCDF



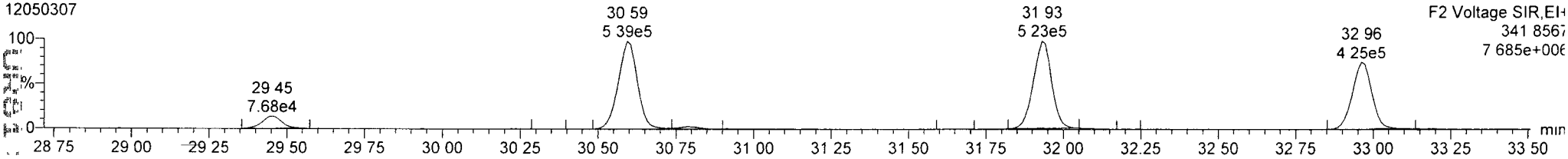
13C-23478-PeCDF



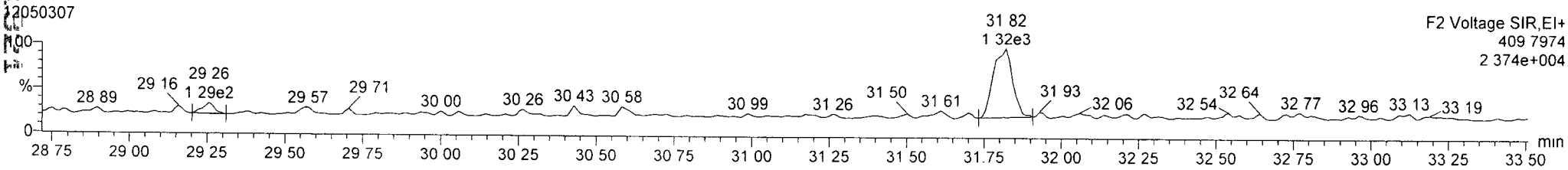
Total-pentafurans



Total-pentafurans



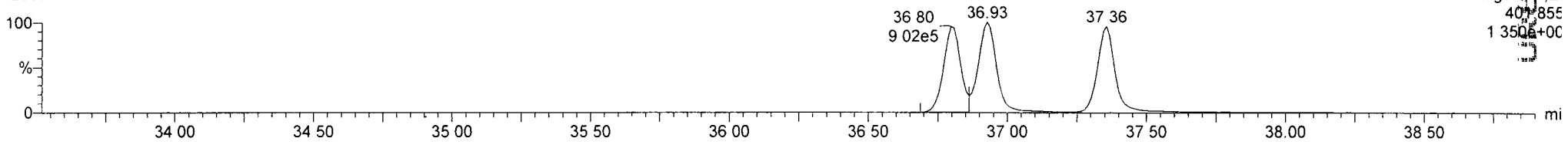
FUNCTION2 HPCDPE



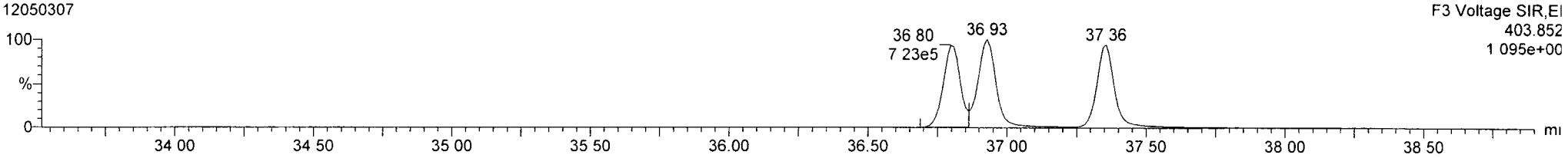
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P.\DIOXIN8290 PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08 32.27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

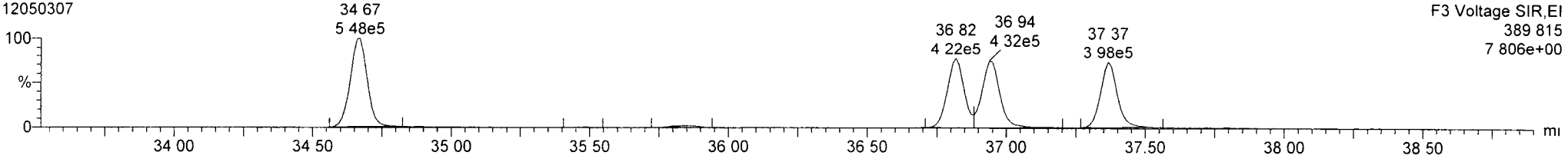
13C-123478-HxCDD
12050307



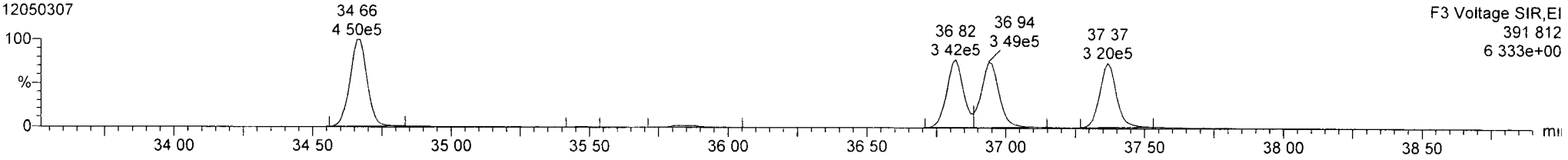
13C-123478-HxCDD
12050307



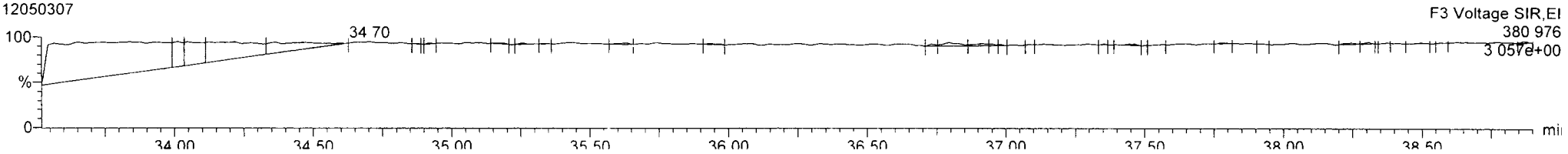
Total-hexadioxins
12050307



Total-hexadioxins
12050307

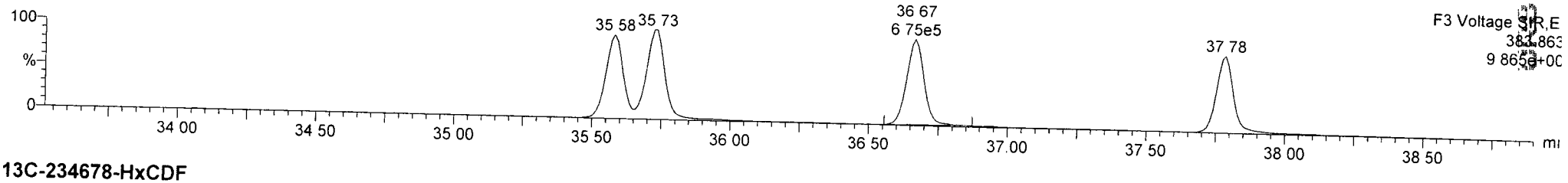


FUNCTION3 PFK
12050307

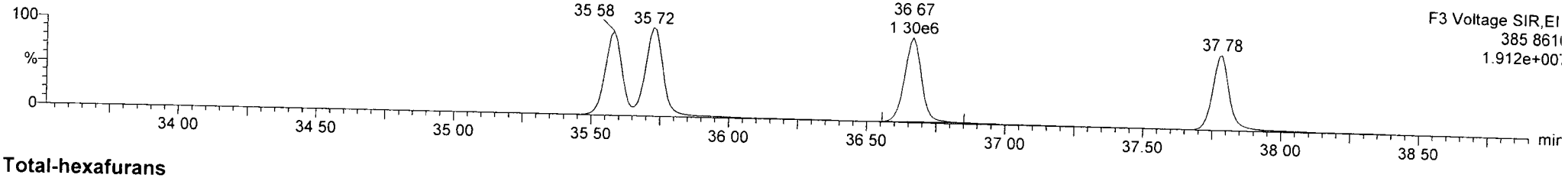


Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

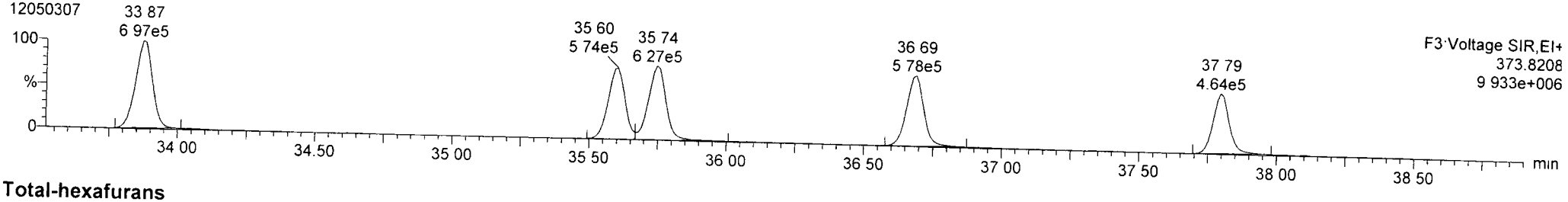
13C-234678-HxCDF
12050307



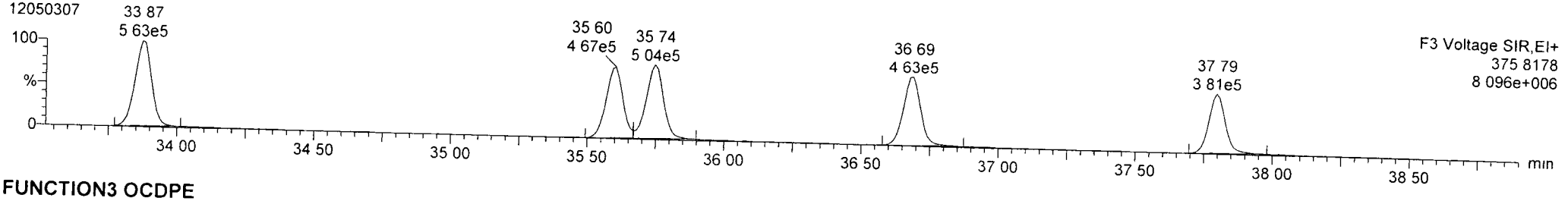
13C-234678-HxCDF
12050307



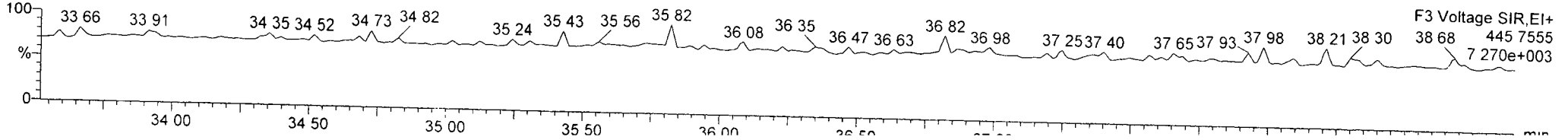
Total-hexafurans
12050307



Total-hexafurans
12050307

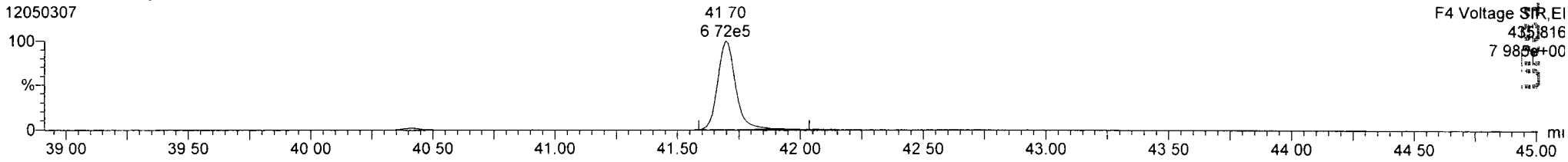


FUNCTION3 OCDPE
12050307



Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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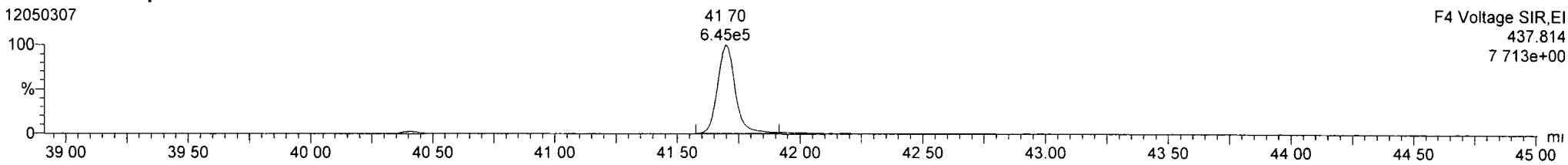
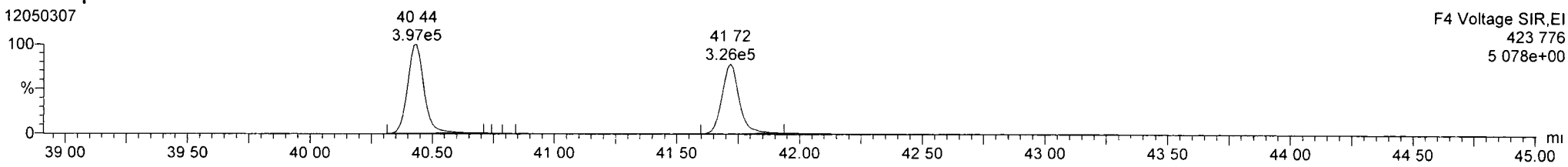
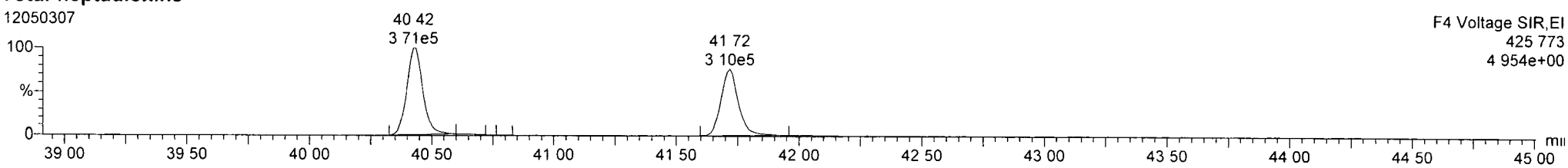


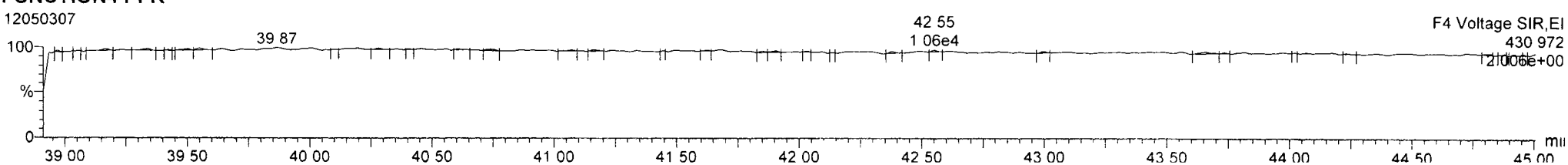
Total-heptadioxins



Total-heptadioxins



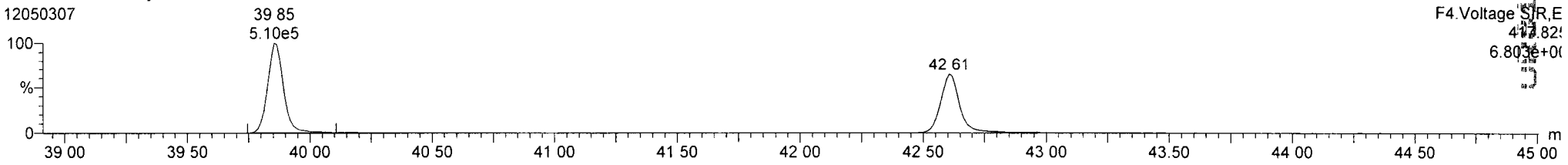
FUNCTION4 PFK



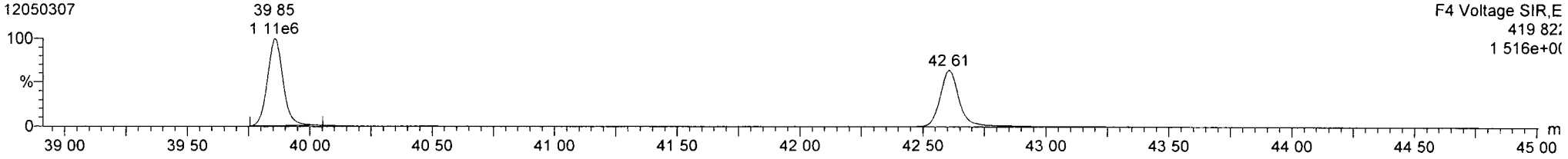
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08.31.18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08.32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

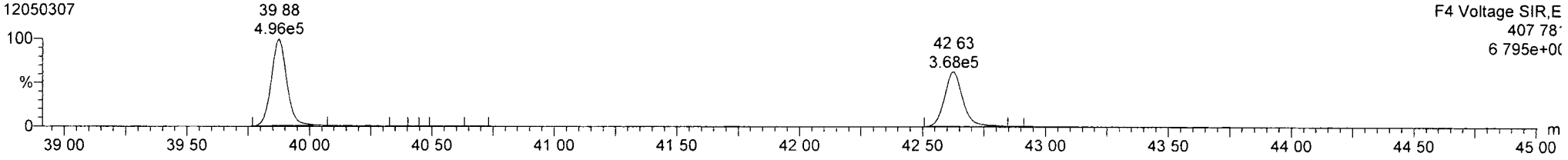
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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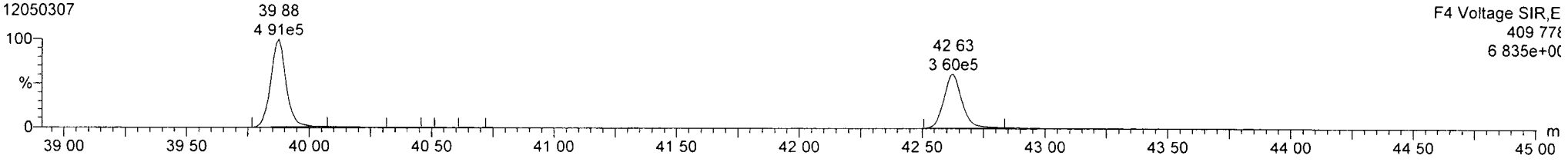
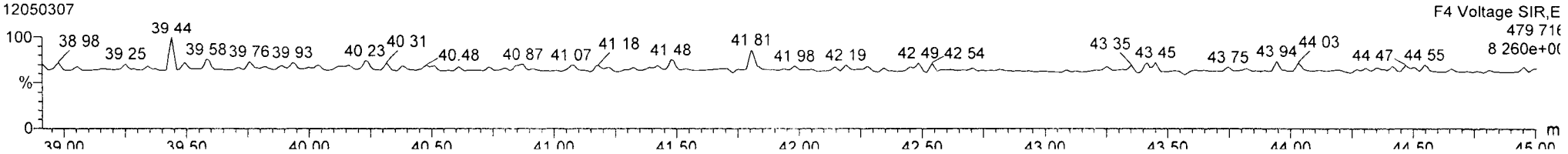


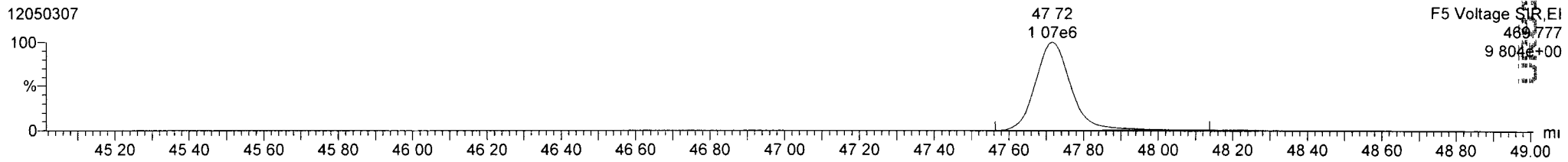
FUNCTION4 NCDPE



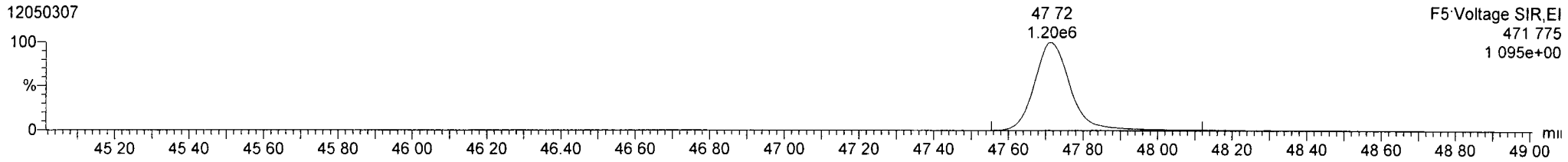
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08:31.18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

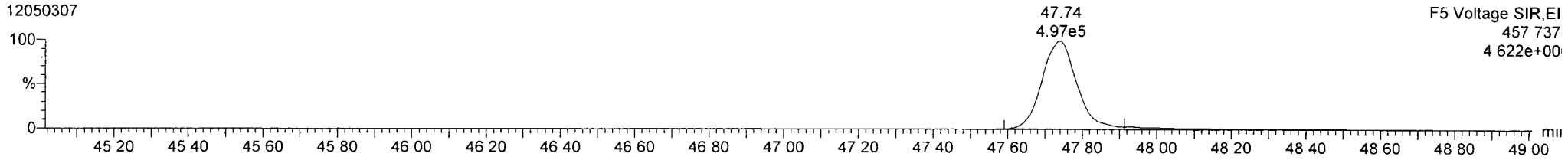
13C-OCDD



13C-OCDD



OCDD



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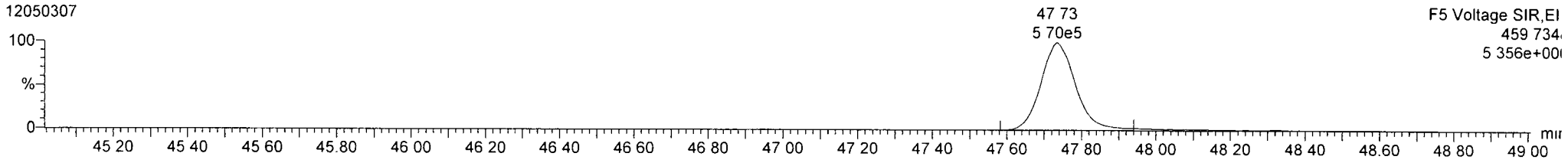
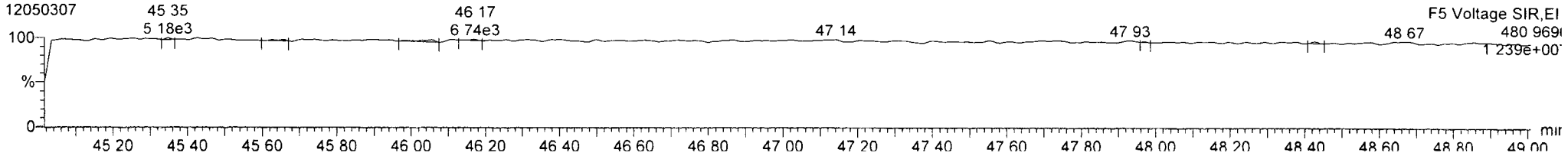


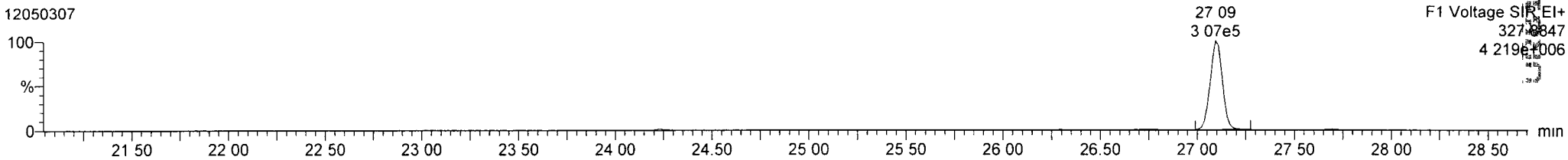
FUNCTION5 PFK



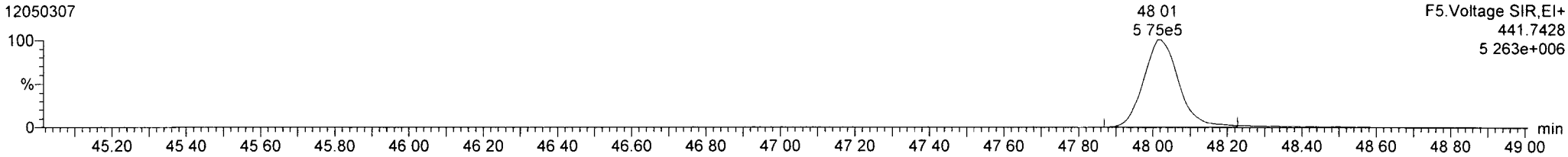
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290 PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

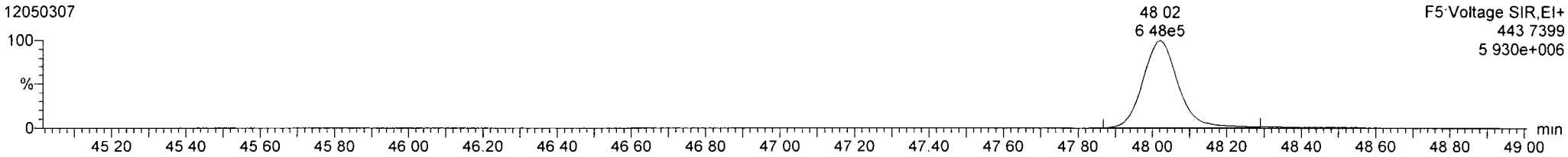
37CL-2378-TCDD



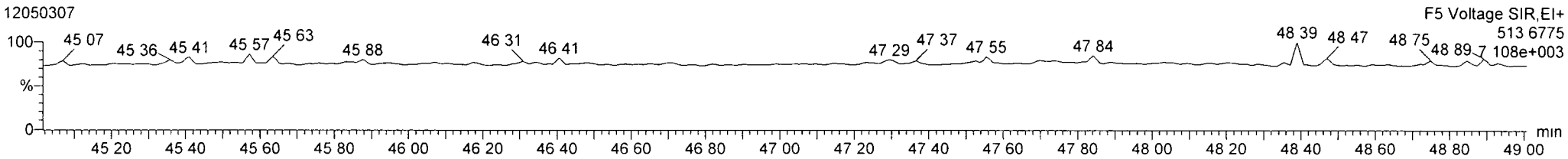
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290 PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08.31 18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

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2	2	12378-PeCDF	339 8597	30 582	30 592	6145369	6145369	0 907	bd	102 3	1 54	1 55	10198 2	NO	204 550	204 550
3	3	23478-PeCDF	339 8597	31 919	31 931	6006118	6006118	0 936	bb	100 4	1 55	1 55	10007 6	NO	200 869	200 869
4	4	123478-HxCDF	373 8208	35.591	35 580	4662868	4662868	1 082	bd	100 1	1 23	1 24	7874.8	NO	200.235	200 235
5	5	234678-HxCDF	373 8208	36 676	36 676	4777468	4777468	1 070	bb	102 1	1 23	1 24	7999 8	NO	204 107	204 107
6	6	123678-HxCDF	373 8208	35 734	35 733	5111293	5111293	1 048	db	103 1	1 22	1 24	8122 2	NO	206 170	206 170
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8	8	1234678-HpCDF	407 7818	39 866	39 864	4521778	4521778	1.214	bb	100.7	1.01	1 05	7347.2	NO	201 471	201 471
9	9	1234789-HpCDF	407 7818	42 617	42.608	3327592	3327592	1 254	bb	98.4	1 02	1 05	4527 7	NO	196 832	196 832
10	10	OCDF	441 7428	48 013	47.994	5942271	5942271	1 105	bb	104 6	0 90	0 89	8750 0	NO	418 472	418 472
11	11	2378-TCDD	319 8965	27 094	27.078	1212805	1212805	1 046	bb	97 6	0 77	0 77	5562 2	NO	39.048	39 048
12	12	12378-PeCDD	355 8546	32 182	32 170	4116391	4116391	0 973	bb	99 9	1 53	1.55	13432 4	NO	199 712	199 712
13	13	123478-HxCDD	389.8157	36.808	36 808	3508716	3508716	0 935	bd	101.4	1 27	1 24	9034 0	NO	202.890	202 890
14	14	123678-HxCDD	389 8157	36 929	36 929	3585418	3585418	0 878	db	101.3	1 19	1 24	8859 5	NO	202 583	202 583
15	15	123789-HxCDD	389 8157	37 356	37.324	3344494	3344494	0.839	bd	103 2	1 21	1 24	8394 3	NO	206 327	206 327
16	16	1234678-HpCDD	423 7766	41.708	41 698	2913208	2913208	0.974	bb	102 5	1 07	1 05	6235 3	NO	205 048	205 048
17	17	OCDD	457 7377	47 725	47 722	5116185	5116185	0 950	bd	104 8	0 89	0 89	6205.9	NO	419 139	419 139
18	18	13C-2378-TCDF	315 9419	26 437	26 437	4582607		1 484	bb	100 1	0 78	0 77	10399 9	NO	100 065	
19	19	13C-12378-PeCDF	351 9000	30 571	30 578	3312575		1 048	bb	102 4	1 55	1 55	7237 1	NO	102 447	
20	20	13C-23478-PeCDF	351 9000	31 908	31 915	3194971		1 003	bb	103 2	1 55	1 55	7007 4	NO	103 211	
21	21	13C-123478-HxCDF	383 8639	35 569	35 569	2152418		1 186	bd	100 8	0 51	0 51	2683 1	NO	100 823	
22	22	13C-123678-HxCDF	383 8639	35 712	35 723	2364855		1 315	db	99 9	0 52	0 51	2879 5	NO	99 870	
23	23	13C-234678-HxCDF	383 8639	36 654	36 655	2187948		1 223	bb	99 3	0 52	0 51	2812 6	NO	99 331	
24	24	13C-123789-HxCDF	383 8639	37 773	37 762	1921294		1 056	bb	101 0	0 52	0 51	2504 0	NO	100 997	
25	25	13C-1234678-HpCDF	417 8253	39 844	39 844	1848066		1 011	bd	101 5	0 45	0 44	3085 3	NO	101 477	
26	26	13C-1234789-HpCDF	417 8253	42 596	42 596	1348075		0 741	bd	101 1	0 45	0 44	1924 4	NO	101 098	
27	27	13C-1234-TCDD	331 9368	26 257	26 272	3085134		1 000	bb	100 0	0 78	0 77	7059 5	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27 064	27 079	2969865		0 956	bb	100 7	0 77	0 77	6506 6	NO	100 655	
29	29	13C-12378-PeCDD	367 8949	32.160	32 167	2117754		0 663	bb	103 5	1 59	1 55	9956 3	NO	103 465	
30	30	13C-123478-HxCDD	401 8559	36 786	36 786	1848772		1 024	bd	100 3	1 26	1 24	3841 9	NO	100 277	
31	31	13C-123678-HxCDD	401 8559	36 918	36 918	2016303		1 113	db	100 6	1 25	1 24	4088 2	NO	100 644	
32	32	13C-1234678-HpCDD	435 8169	41 686	41 697	1458224		0 815	bb	99 4	1 06	1 05	3460 4	NO	99.353	
33	33	13C-OCDD	469 7779	47 708	47.713	2569573		0 717	bb	99 5	0 91	0.89	3719 1	NO	199 009	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08:31 18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32 31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

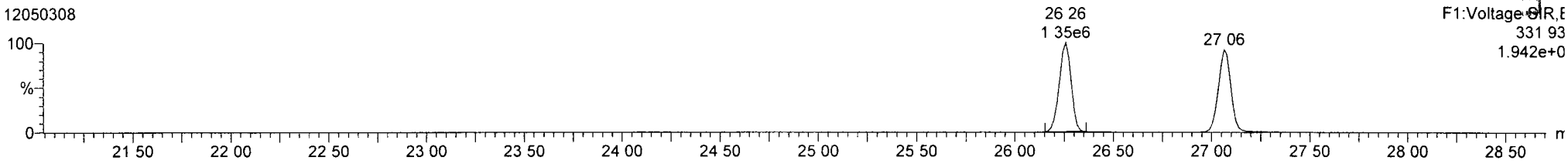
	#	Name	Trace	RT	Pred.RT	Abs Resp	Abs. Corr.	RRF	M .	1° Det .	%Rec	1° Ratio ..	1° Rati .	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 345	37 368	1800616		1 000		bb	100 0	1 24	1 24	3667 2	NO	100 000	
35	35	Total-tetrafurans	303 9016		25.490			0 866								40 027	40 072
36	36	Total-penta1	339 8597		28 270											0 000	0 014
37	37	Total-pentafurans	339 8597		30 840			0 921								413 360	413 569
38	38	Total-hexafurans	373 8208		35.860			1 055								809 597	809 806
39	39	Total-heptafurans	407 7818		41 270			1 234								398 398	398 430
40	40	Total-Furans	303 9016		0 000			1 050								2079 855	2080.3
41	41	Total-tetradioxins	319 8965		26.000			1 046								40 010	40 036
42	42	Total-pentadioxins	355 8546		31 040			0 973								199 998	200.133
43	43	Total-hexadioxins	389 8157		36 030			0 884								611 822	611 848
44	44	Total-heptadioxins	423 7766		41 090			0 974								205 894	205 894
45	45	Total-Dioxins	319 8965		0 000			0 942								1476 864	1477 0
46	46	Total-TEQ	319 8965		0 000											3556 719	3557 4
47	47	37CL-2378-TCDD	327 8847	27 094	27 071	1304450		1 037			101 9			6958 8		40 767	
48	48	FUNCTION1 PFK	330 9792		0 000												
49	49	FUNCTION2 PFK	366 9792		0 000											0 000	
50	50	FUNCTION3 PFK	380.9760		0 000											0 000	
51	51	FUNCTION4 PFK	430 9728		0 000												
52	52	FUNCTION5 PFK	480 9696		0 000												
53	53	FUNCTION1 HXCDPE	375.8364		0 000												
54	54	FUNCTION1 HPCDPE	409 7974		0 000											0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0 000											0.000	
56	56	FUNCTION3 OCDPE	445 7555		0 000												
57	57	FUNCTION4 NCDPE	479 7165		0 000												
58	58	FUNCTION5 DCDPE	513 6775		0 000												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

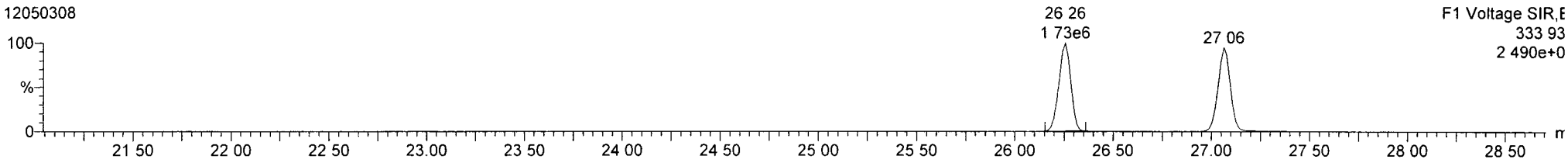
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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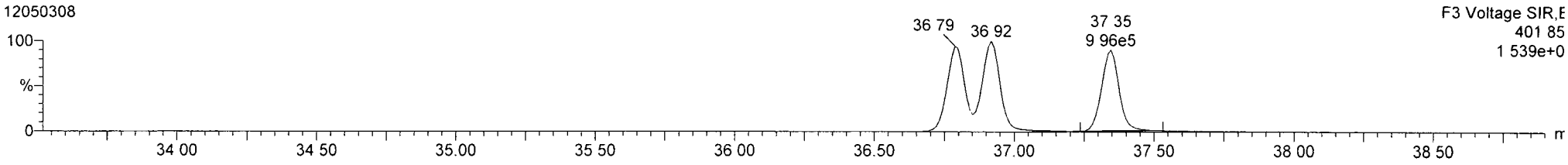

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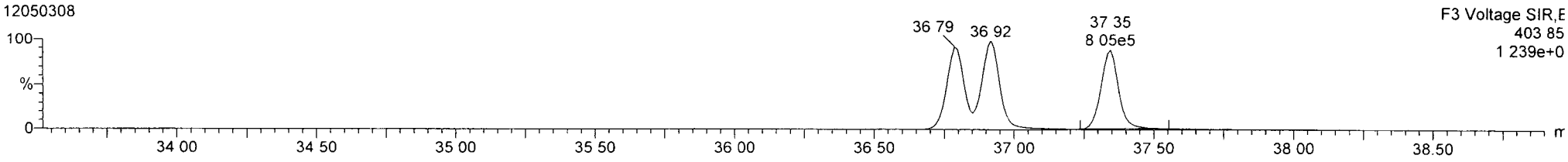
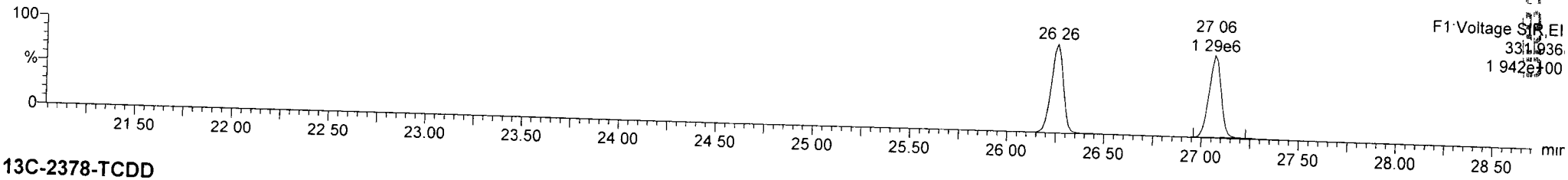
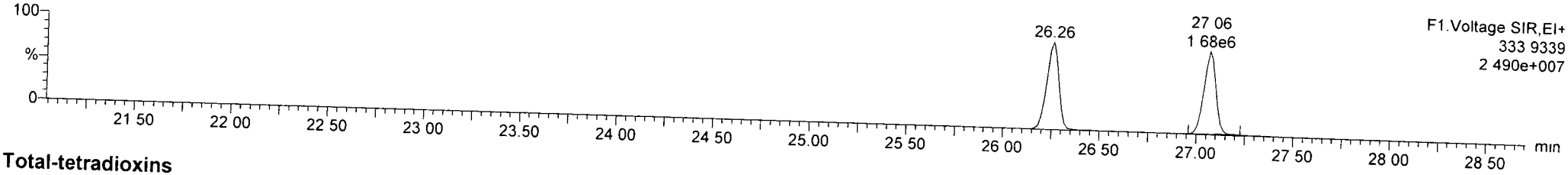


Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

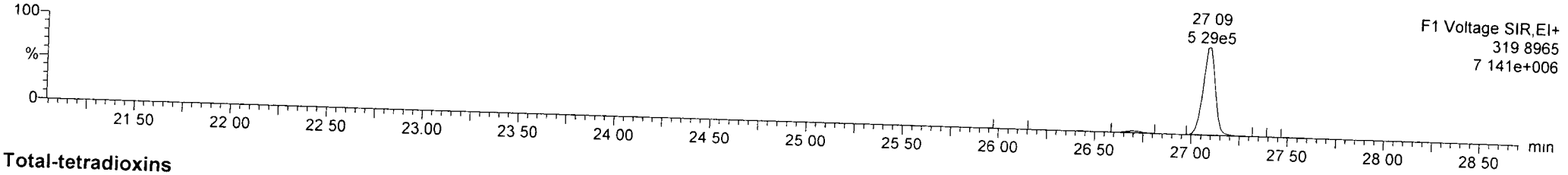
13C-2378-TCDD
12050308



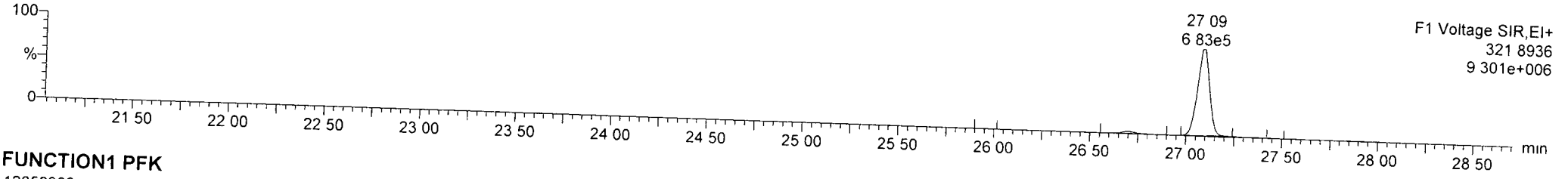
13C-2378-TCDD
12050308



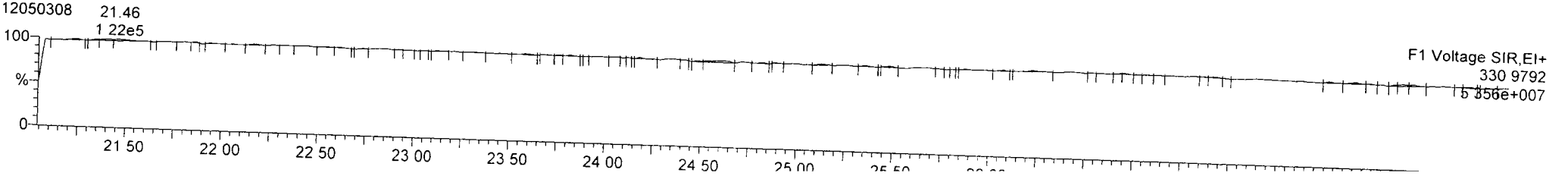
Total-tetradioxins
12050308



Total-tetradioxins
12050308



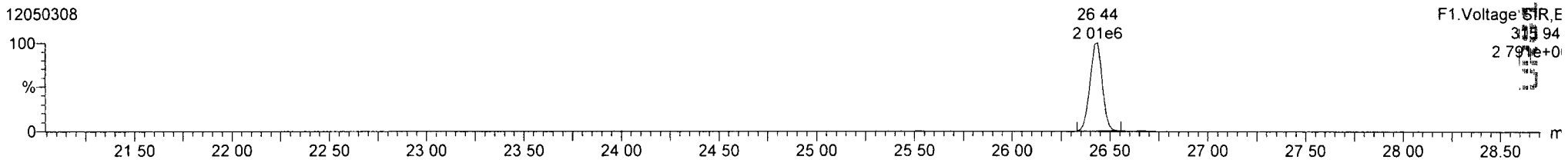
FUNCTION1 PFK
12050308



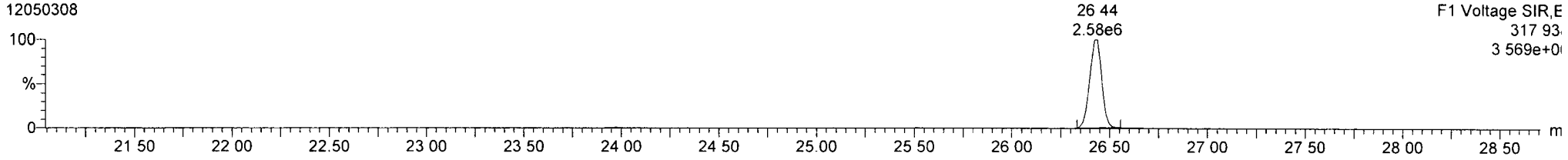
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120503IC qld
Last Altered. Friday, May 04, 2012 08 31.18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

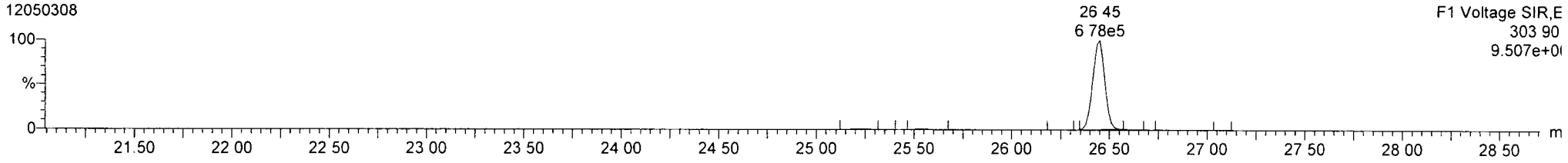
13C-2378-TCDF



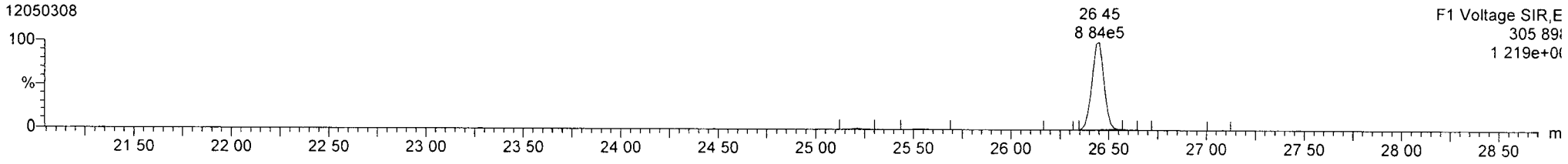
13C-2378-TCDF



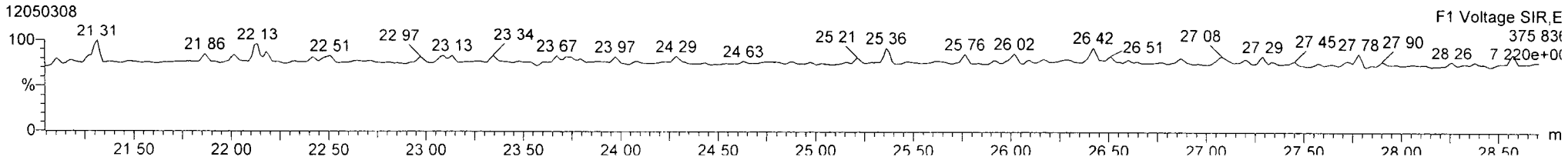
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
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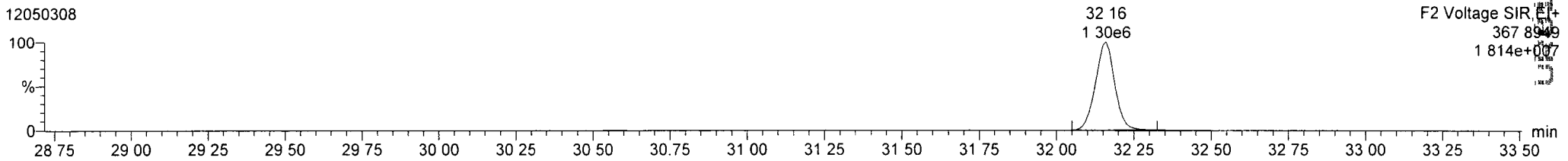
Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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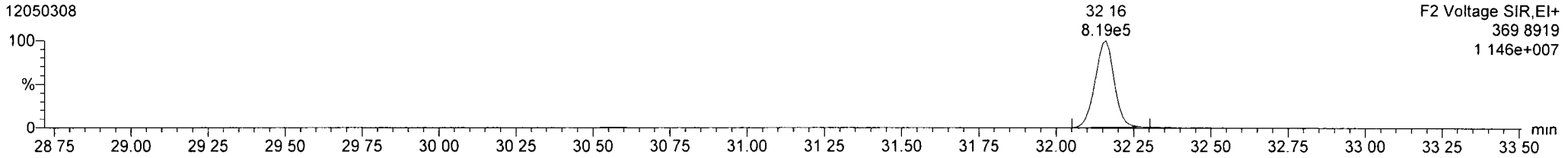
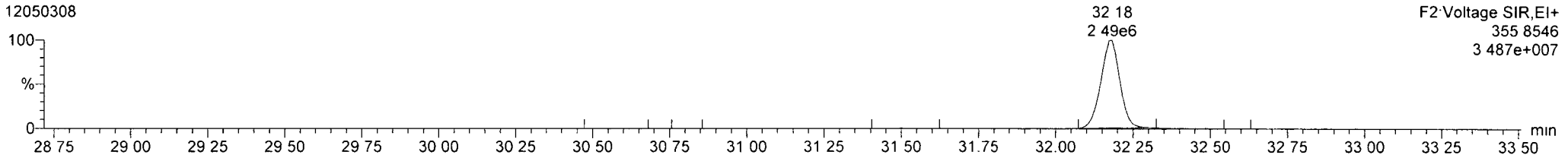
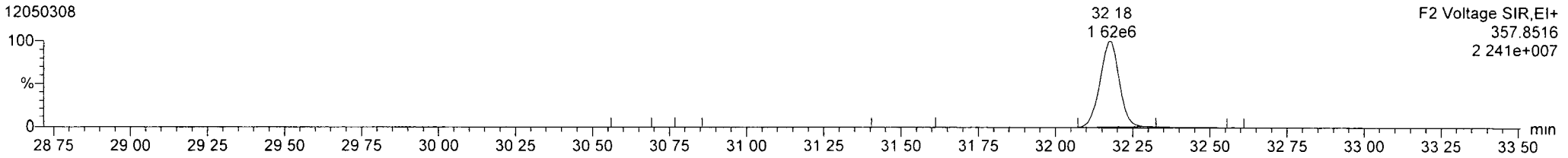


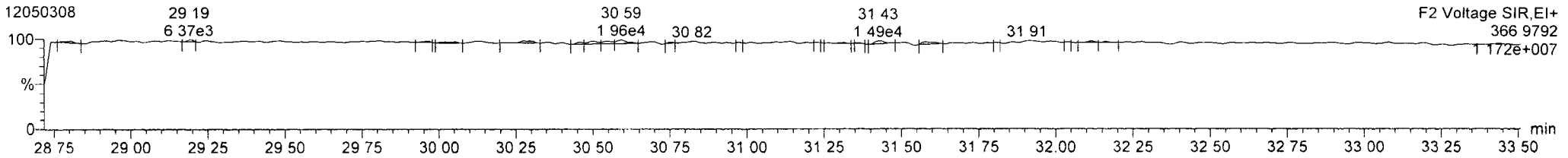
Total-pentadioxins



Total-pentadioxins



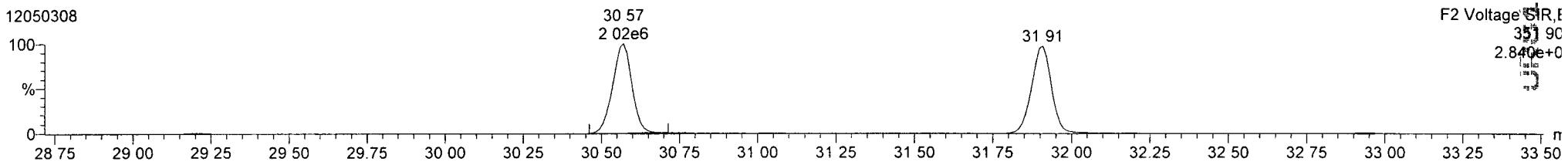
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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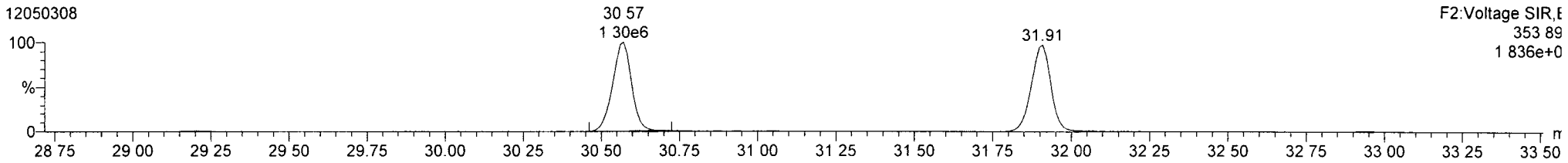
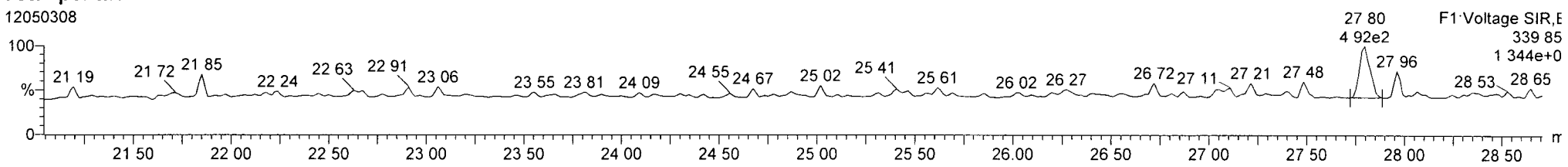
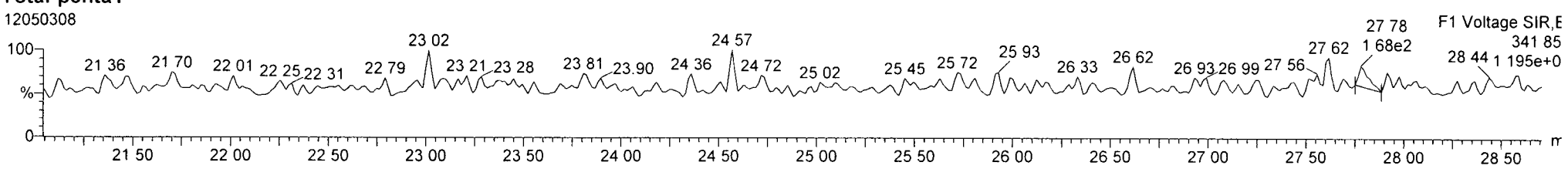


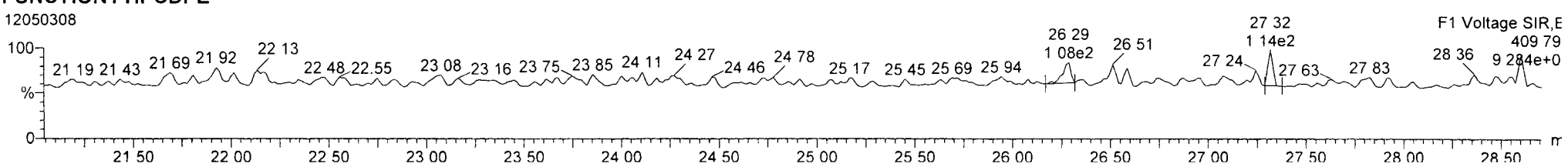
Total-penta1



Total-penta1



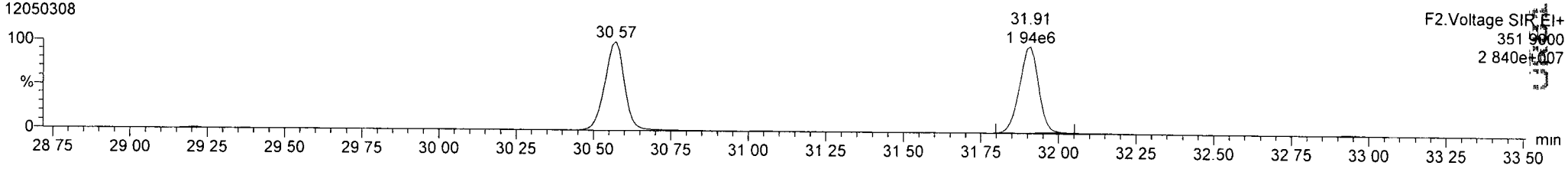
FUNCTION1 HPCDPE



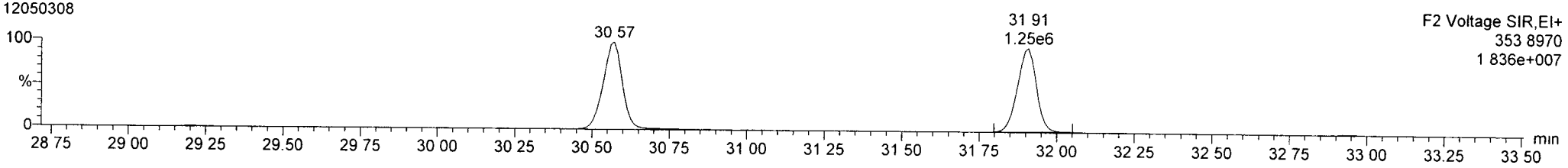
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120503IC qld
Last Altered Friday, May 04, 2012 08 31 18 Pacific Daylight Time
Printed Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

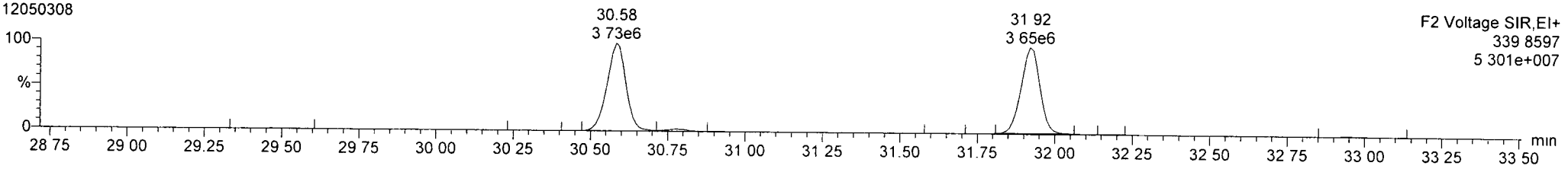
13C-23478-PeCDF
12050308



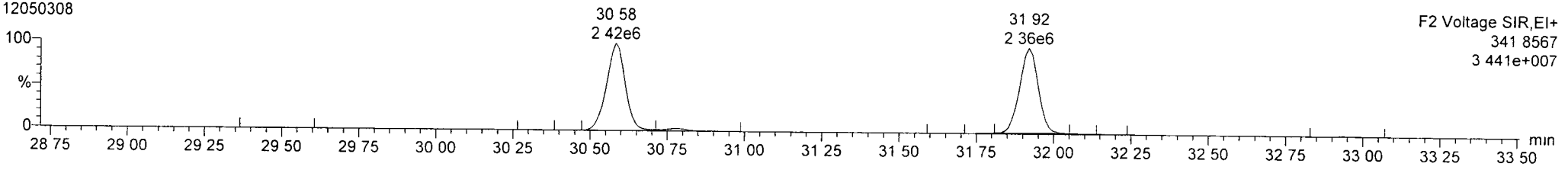
13C-23478-PeCDF
12050308



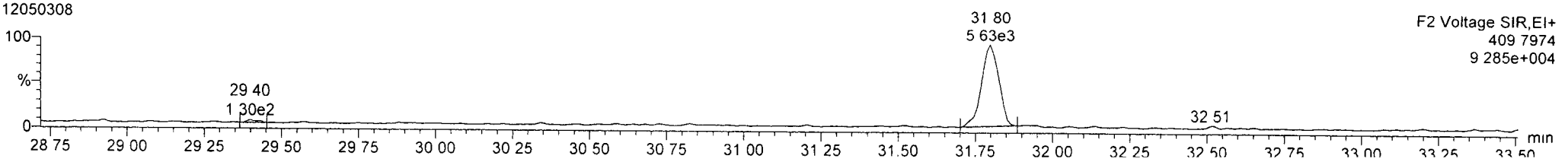
Total-pentafurans
12050308



Total-pentafurans
12050308



FUNCTION2 HPCDPE
12050308



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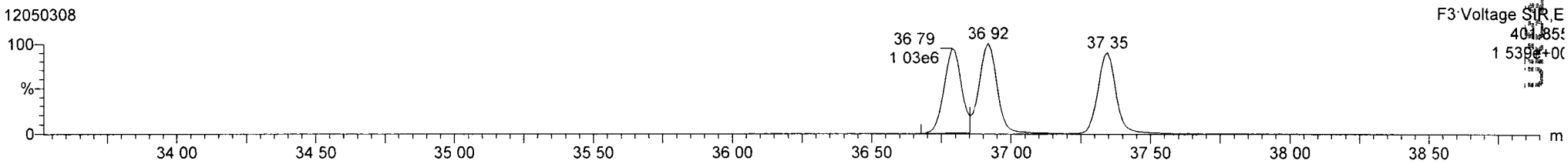
13C-123478-HxCDD



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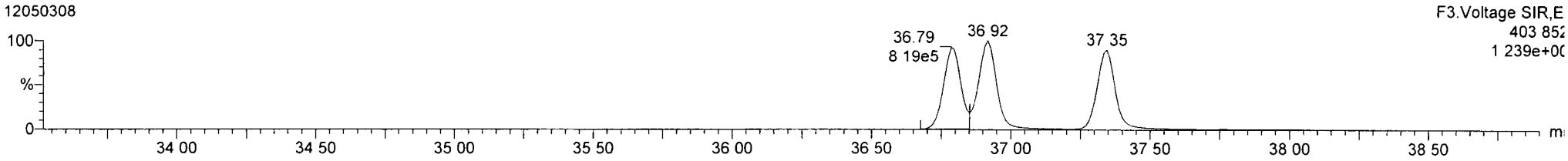
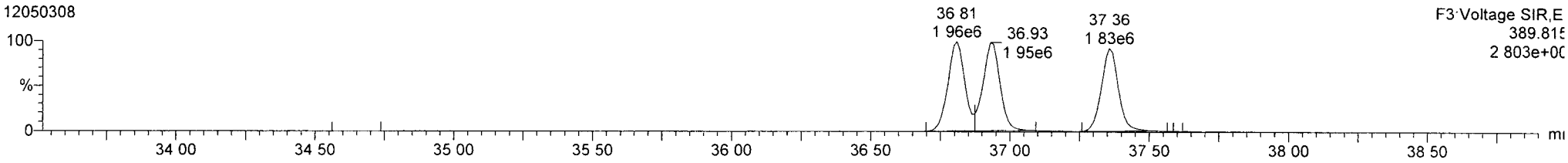
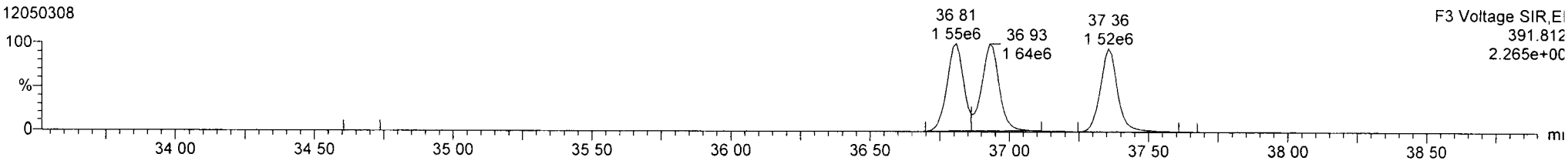


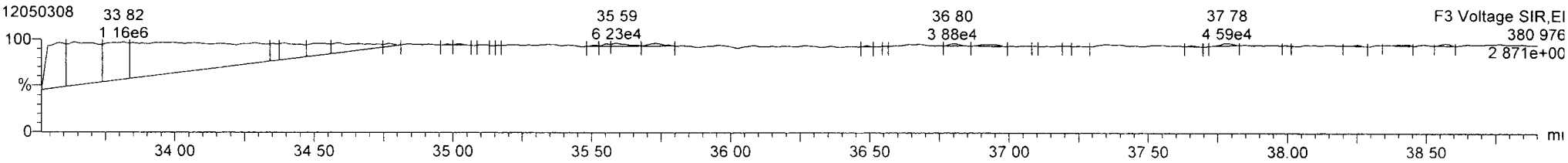
Total-hexadioxins



Total-hexadioxins

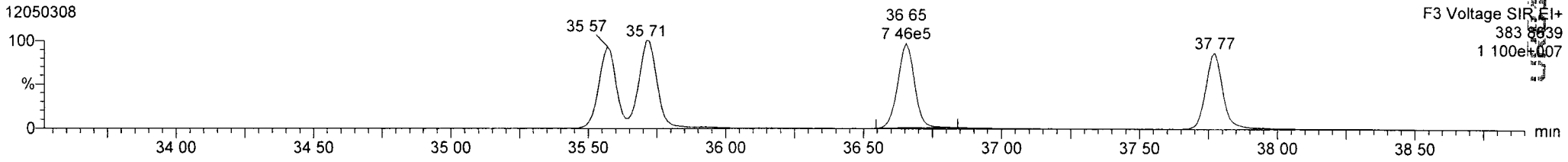


FUNCTION3 PFK

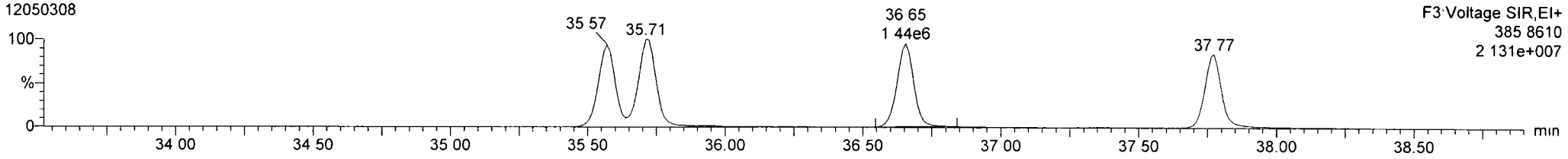


Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

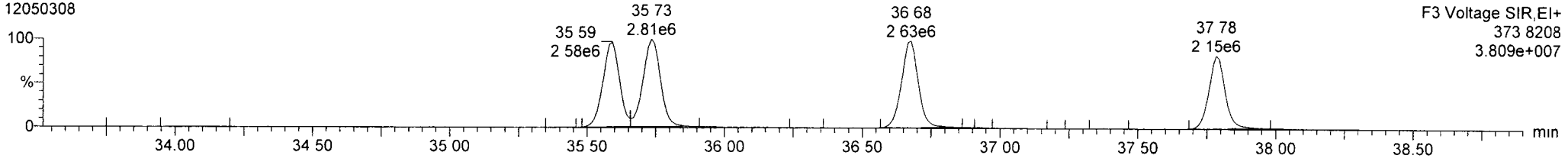
13C-234678-HxCDF



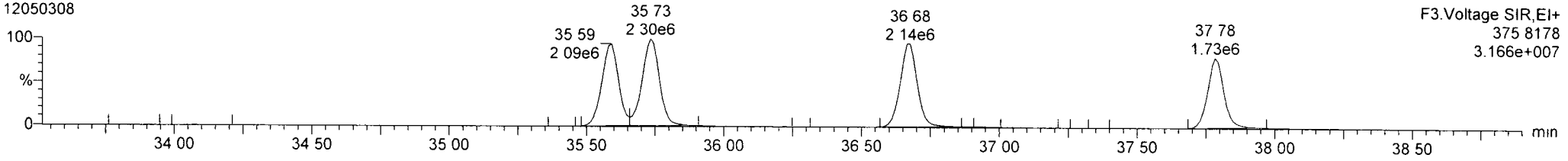
13C-234678-HxCDF



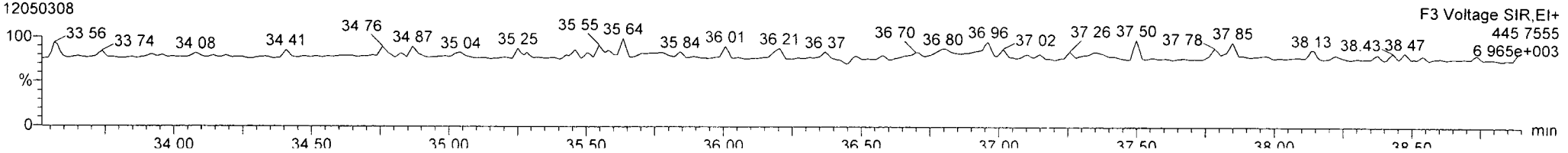
Total-hexafurans



Total-hexafurans



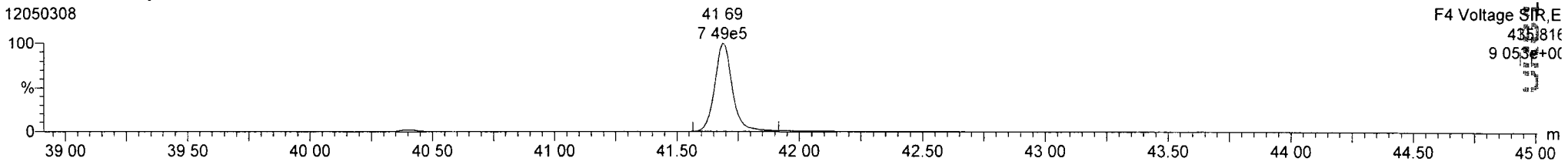
FUNCTION3 OCDPE



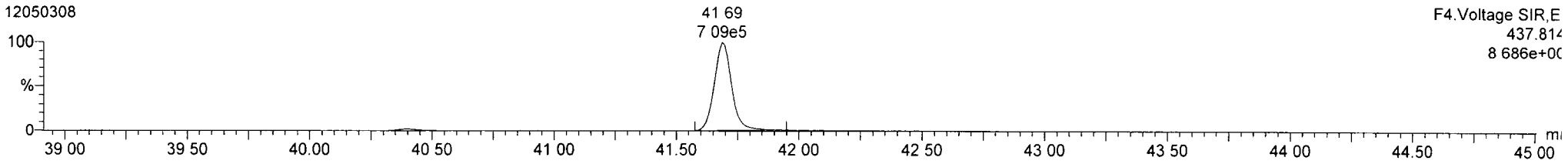
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P.\DIOXIN8290.PRO\120503IC qld
Last Altered. Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed. Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

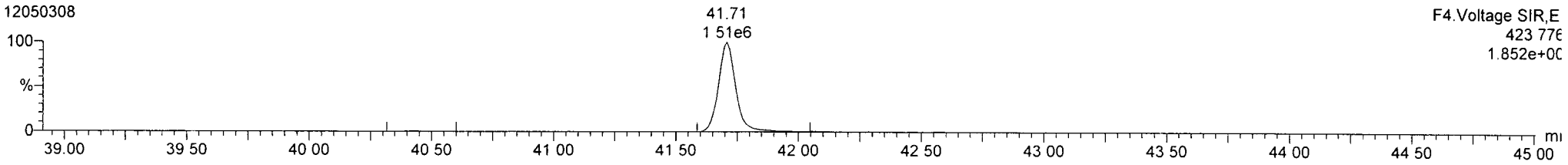
13C-1234678-HpCDD



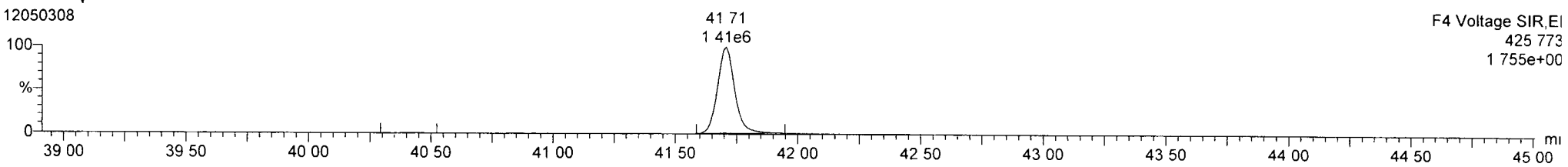
13C-1234678-HpCDD



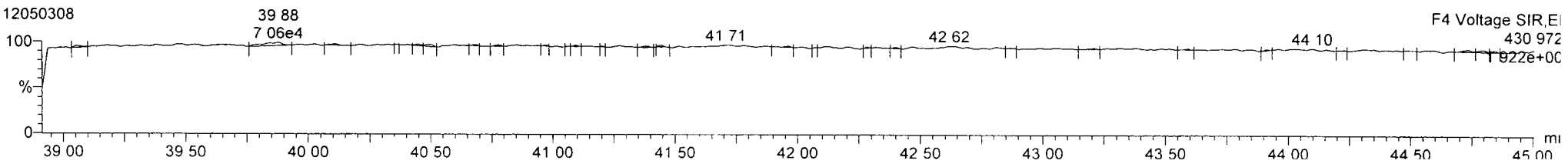
Total-heptadioxins



Total-heptadioxins



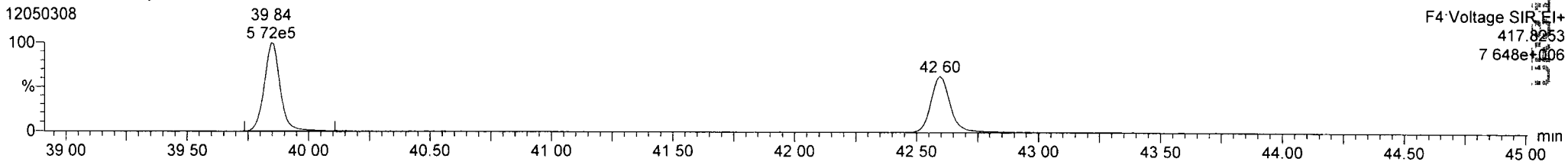
FUNCTION4 PFK



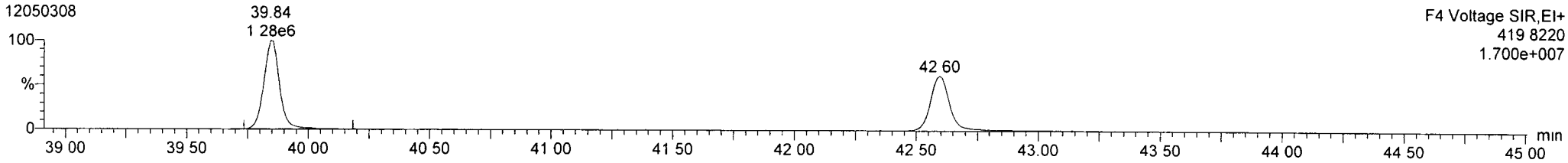
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

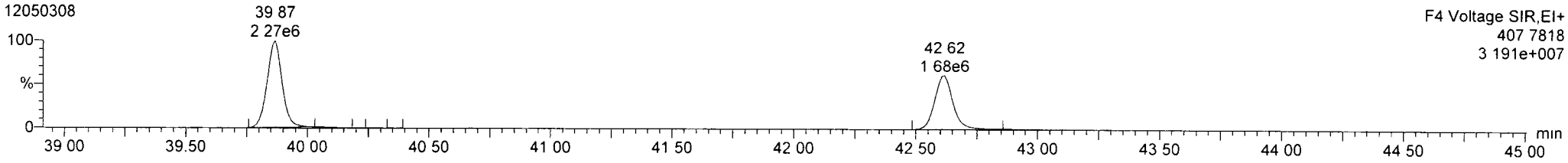
13C-1234678-HpCDF



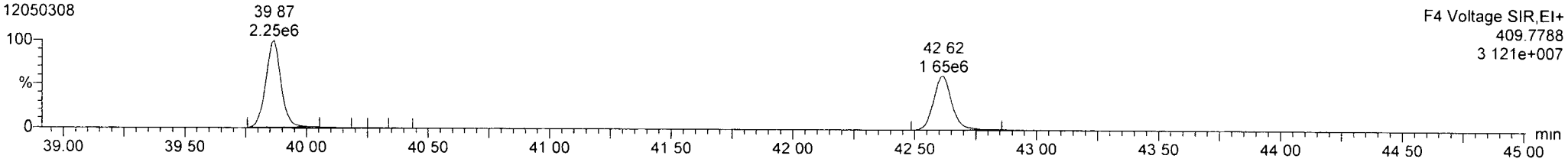
13C-1234678-HpCDF



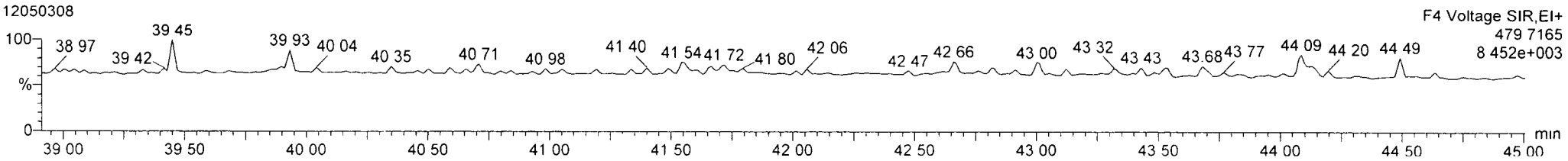
Total-heptafurans



Total-heptafurans

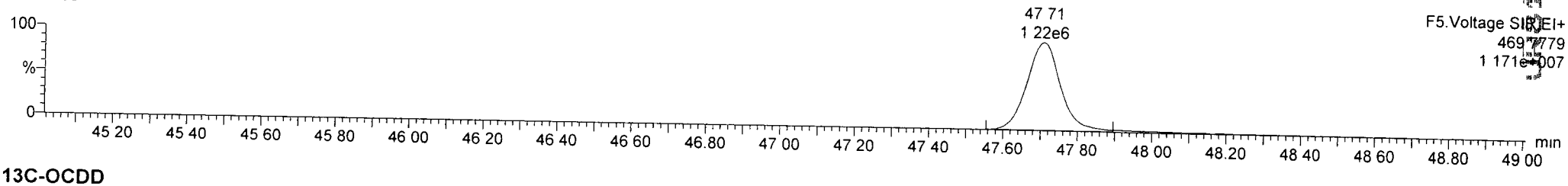


FUNCTION4 NCDPE

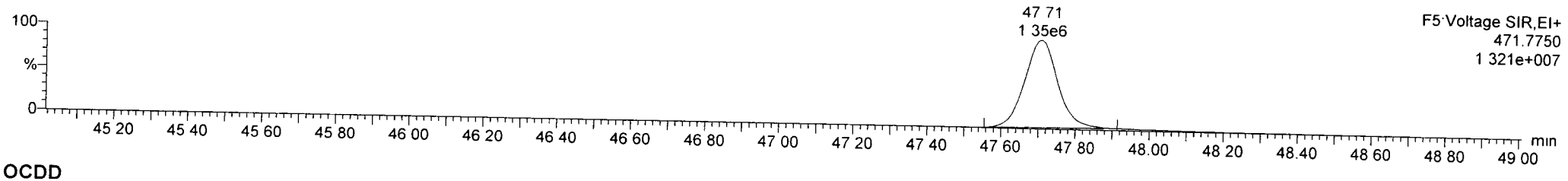


Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

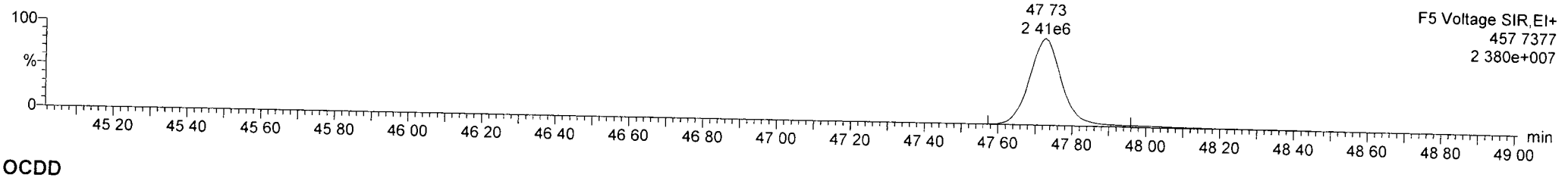
13C-OCDD
12050308



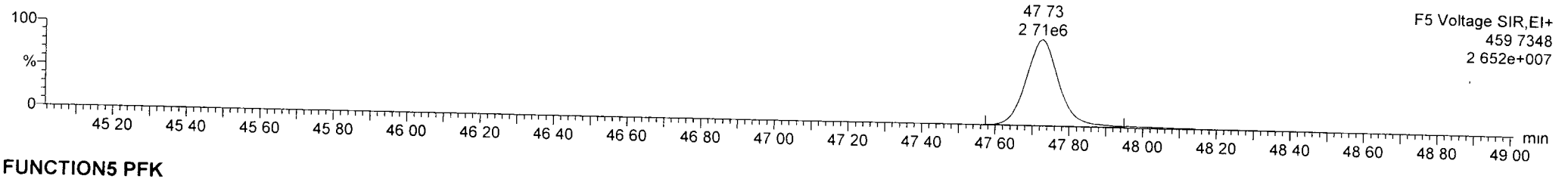
13C-OCDD
12050308



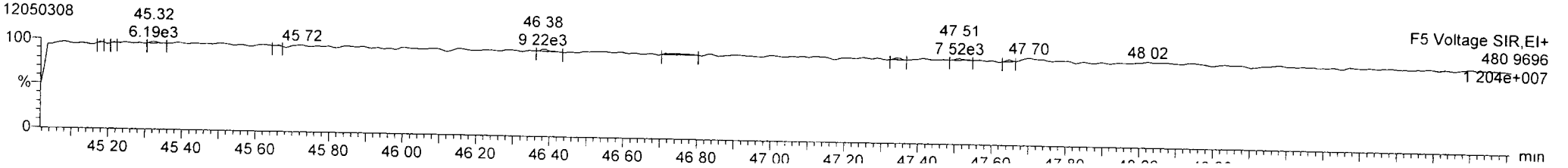
OCDD
12050308



OCDD
12050308



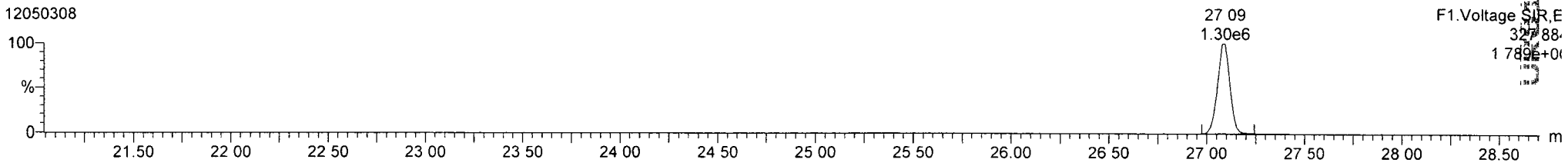
FUNCTION5 PFK
12050308



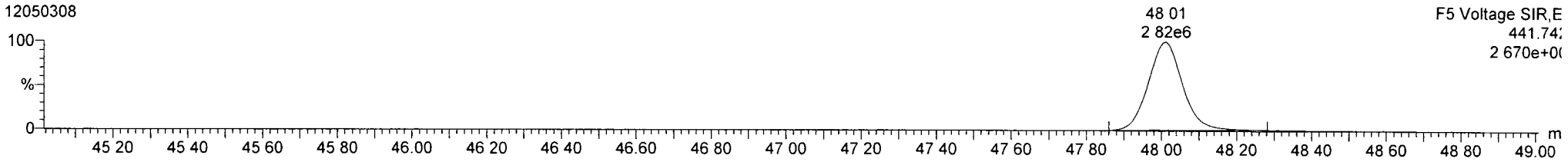
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290 PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed Friday, May 04, 2012 08.32 31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

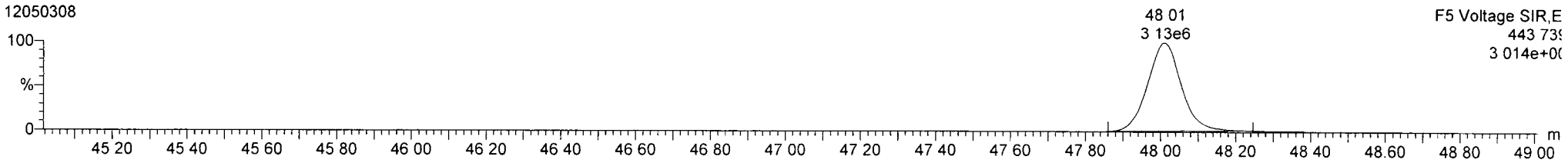
37CL-2378-TCDD



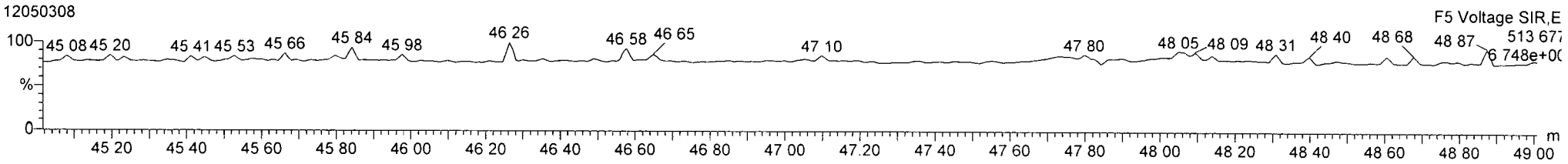
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset P.\DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08 31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

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1	1	2378-TCDF	303 9016	26 451	26 452	9213031	9213031	0.866	bb	101 2	0.78	0 77	35839 3	NO	202 318	202 318
2	2	12378-PeCDF	339 8597	30 593	30 592	41082319	41082319	0 907	bb	102 8	1 56	1 55	48470 7	NO	1028 475	1028 4.
3	3	23478-PeCDF	339 8597	31 930	31 931	40789533	40789533	0 936	bb	102 9	1 56	1 55	48354.6	NO	1029 284	1029 2 .
4	4	123478-HxCDF	373 8208	35 591	35.591	34351327	34351327	1 082	bd	104 9	1 23	1 24	33621 8	NO	1049 149	1049 1
5	5	234678-HxCDF	373 8208	36 676	36 687	34833722	34833722	1 070	bb	103 3	1 24	1 24	33683 6	NO	1032 659	1032 6
6	6	123678-HxCDF	373 8208	35.744	35.744	37052644	37052644	1 048	db	104 4	1.23	1 24	35576 5	NO	1044 434	1044 4. .
7	7	123789-HxCDF	373 8208	37 794	37 784	29640604	29640604	1 020	bb	103.3	1 24	1 24	30238 5	NO	1032 956	1032 9
8	8	1234678-HpCDF	407 7818	39 866	39 875	33153844	33153844	1.214	bb	104 3	1 02	1 05	35693 0	NO	1042.977	1042 9 .
9	9	1234789-HpCDF	407 7818	42 617	42 619	24852733	24852733	1 254	bb	101 5	1 03	1 05	23156 0	NO	1014 787	1014 7 .
10	10	OCDF	441.7428	48 021	48 002	50681174	50681174	1 105	bb	112 1	0 89	0 89	11740 .	NO	2242 093	2242 0
11	11	2378-TCDD	319 8965	27 094	27 093	7299959	7299959	1 046	bb	99.6	0 77	0.77	27161.0	NO	199 142	199.142
12	12	12378-PeCDD	355.8546	32 182	32 170	28210558	28210558	0 973	bb	101 3	1 52	1 55	63443 4	NO	1013.420	1013 4
13	13	123478-HxCDD	389.8157	36 808	36 819	26438152	26438152	0 935	bd	102 1	1 23	1 24	38356 2	NO	1020 666	1020 6 .
14	14	123678-HxCDD	389 8157	36 939	36 939	26391455	26391455	0 878	db	103 6	1 23	1 24	38514 5	NO	1036.039	1036.0
15	15	123789-HxCDD	389 8157	37 367	37 335	24749680	24749680	0 839	bb	104 1	1 23	1 24	36902.8	NO	1040 586	1040 5 .
16	16	1234678-HpCDD	423 7766	41 707	41 709	21427887	21427887	0 974	bb	104 9	1 04	1 05	28364.8	NO	1048 570	1048 5.
17	17	OCDD	457 7377	47 734	47 730	40682312	40682312	0 950	bb	104 7	0 88	0 89	60678 9	NO	2093 680	2093 6
18	18	13C-2378-TCDF	315 9419	26 437	26 437	5257728		1 484	bb	107 4	0 77	0 77	12103 7	NO	107 402	
19	19	13C-12378-PeCDF	351 9000	30 571	30 578	4404304		1 048	bb	127 4	1 54	1.55	12148 3	NO	127 425	
20	20	13C-23478-PeCDF	351 9000	31 908	31 915	4234472		1 003	bb	128 0	1 54	1 55	11626 7	NO	127 969	
21	21	13C-123478-HxCDF	383 8639	35 580	35 569	3026358		1 186	bd	96 6	0 52	0 51	4054 8	NO	96 591	
22	22	13C-123678-HxCDF	383 8639	35 723	35 722	3384047		1 315	db	97 4	0 52	0 51	4528 7	NO	97 376	
23	23	13C-234678-HxCDF	383 8639	36 665	36 654	3153122		1 223	bd	97 5	0 52	0.51	4197 7	NO	97 538	
24	24	13C-123789-HxCDF	383 8639	37 772	37 761	2812971		1 056	bb	100 8	0 52	0 51	3938 5	NO	100 754	
25	25	13C-1234678-HpCDF	417 8253	39 855	39 844	2617457		1 011	bb	97 9	0 45	0.44	2953 4	NO	97 929	
26	26	13C-1234789-HpCDF	417 8253	42 606	42 595	1952899		0 741	bb	99 8	0 46	0 44	1891 6	NO	99 791	
27	27	13C-1234-TCDD	331 9368	26 257	26 272	3297841		1 000	bb	100 0	0 78	0 77	7500 0	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27 079	27 079	3505072		0 956	bb	111 1	0 77	0 77	7612 0	NO	111 132	
29	29	13C-12378-PeCDD	367 8949	32 160	32 167	2860123		0 663	bd	130 7	1 56	1 55	13320 5	NO	130 721	
30	30	13C-123478-HxCDD	401 8559	36 797	36 786	2769135		1 024	bd	102 3	1 27	1 24	7779 1	NO	102 340	
31	31	13C-123678-HxCDD	401 8559	36 928	36 917	2902057		1 113	db	98 7	1 26	1 24	8126 2	NO	98 701	
32	32	13C-1234678-HpCDD	435 8169	41 696	41 696	2097439		0 815	bb	97 4	1 04	1 05	5992 1	NO	97 371	
33	33	13C-OCDD	469 7779	47.716	47 712	4090423		0 717	bb	107 9	0 89	0 89	7043 1	NO	215 856	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290 PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08.31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32 35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

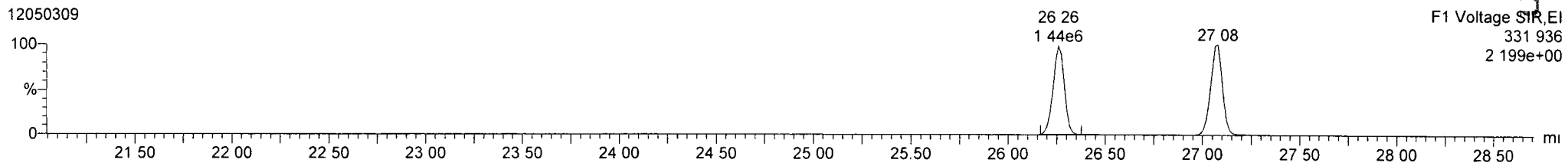
	#	Name	Trace	RT	Pred RT	Abs.Resp	Abs Corr	RRF	M .	1° Det . .	%Rec	1° Ratio...	1° Rati	S/N	1° . .	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 345	37 368	2642640		1 000		bb	100 0	1 25	1 24	7416 4	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 490			0 866								205 356	205.740
36	36	Total-penta1	339.8597		28.270											0 000	0.005
37	37	Total-pentafurans	339.8597		30 840			0 921								2085 745	2086 0. .
38	38	Total-hexafurans	373 8208		35 860			1 055								4162 975	4163 6.
39	39	Total-heptafurans	407 7818		41 270			1 234								2058 972	2058 9
40	40	Total-Furans	303.9016		0 000			1 050								10755 141	10756
41	41	Total-tetradioxins	319.8965		26 000			1 046								203 897	203.978
42	42	Total-pentadioxins	355 8546		31 040			0 973								1015.210	1015.2
43	43	Total-hexadioxins	389 8157		36.030			0 884								3097 290	3097.4 .
44	44	Total-heptadioxins	423 7766		41.090			0.974								1051 841	1051 8 .
45	45	Total-Dioxins	319 8965		0 000			0 942								7461 918	7462 2. .
46	46	Total-TEQ	319 8965		0 000											18217 059	18218
47	47	37CL-2378-TCDD	327 8847	27.094	27 071	7899803		1 037			115 5			47865 3		230 962	
48	48	FUNCTION1 PFK	330.9792		0 000												
49	49	FUNCTION2 PFK	366 9792		0 000											0 000	
50	50	FUNCTION3 PFK	380 9760		0 000											0 000	
51	51	FUNCTION4 PFK	430 9728		0 000												
52	52	FUNCTION5 PFK	480 9696		0 000												
53	53	FUNCTION1 HXCDPE	375 8364		0 000											0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000											0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0 000											0 000	
56	56	FUNCTION3 OCDPE	445 7555		0 000											0 000	
57	57	FUNCTION4 NCDPE	479 7165		0 000												
58	58	FUNCTION5 DCDPE	513 6775		0 000											0 000	

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

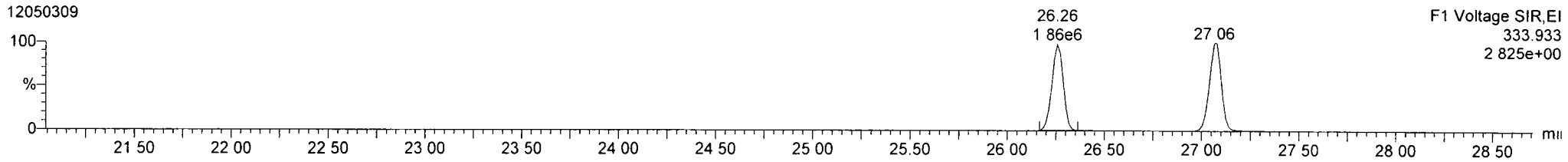
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

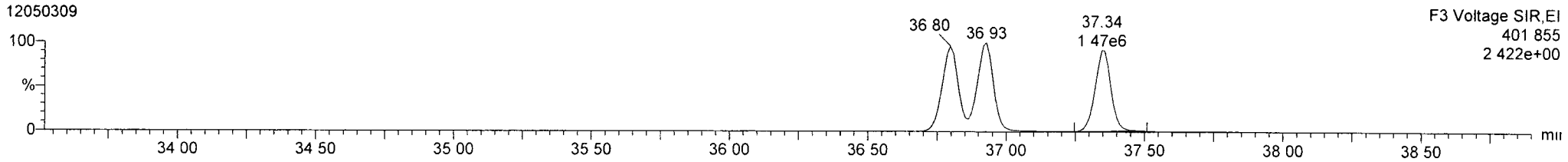
13C-1234-TCDD



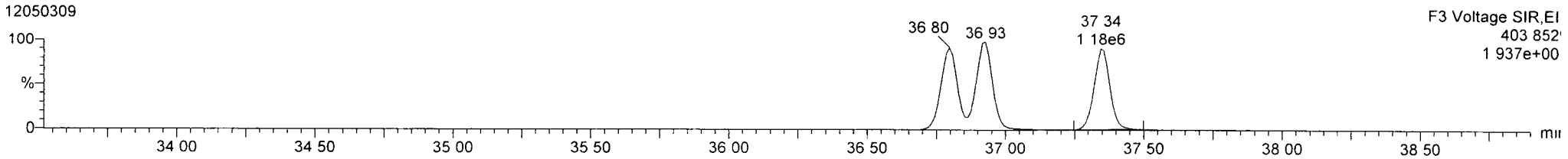
13C-1234-TCDD



13C-123789-HxCDD



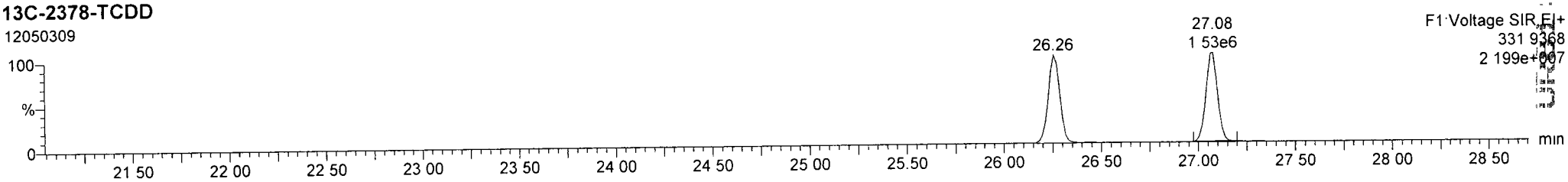
13C-123789-HxCDD



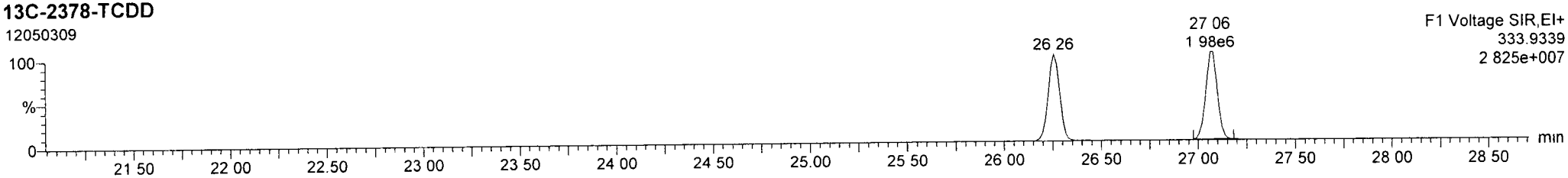
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered Friday, May 04, 2012 08 31:18 Pacific Daylight Time
Printed Friday, May 04, 2012 08.32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

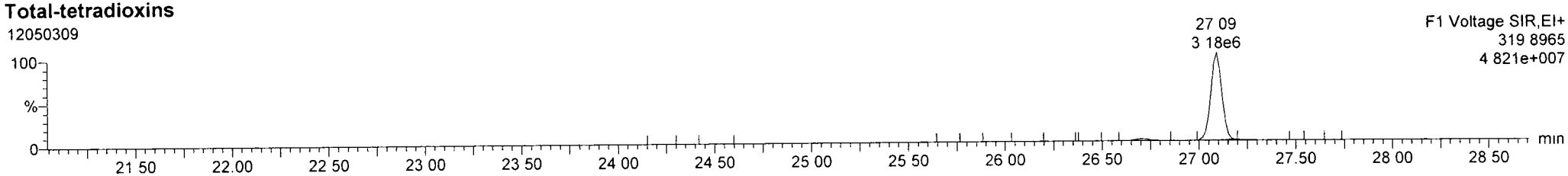
13C-2378-TCDD
12050309



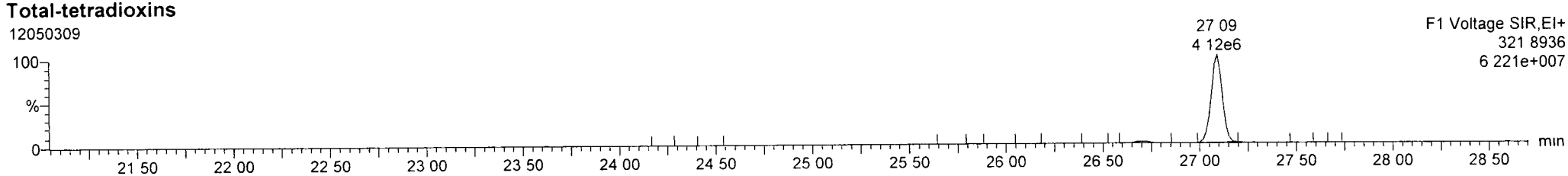
13C-2378-TCDD
12050309



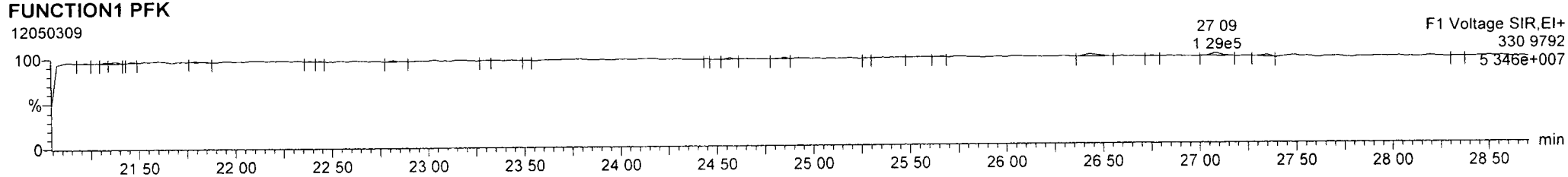
Total-tetradioxins
12050309



Total-tetradioxins
12050309



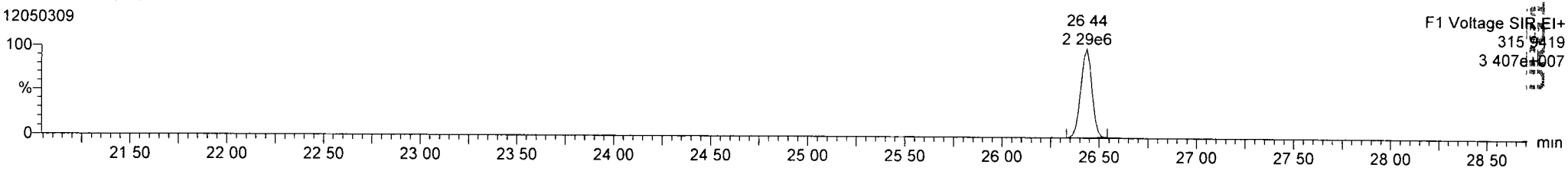
FUNCTION1 PFK
12050309



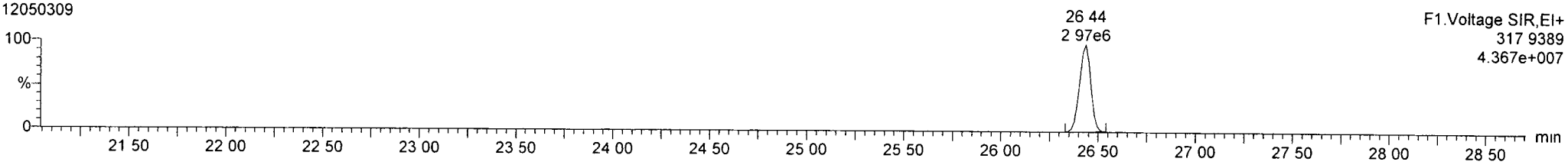
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120503IC qld
Last Altered: Friday, May 04, 2012 08 31.18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF
12050309



13C-2378-TCDF
12050309



Total-tetrafurans
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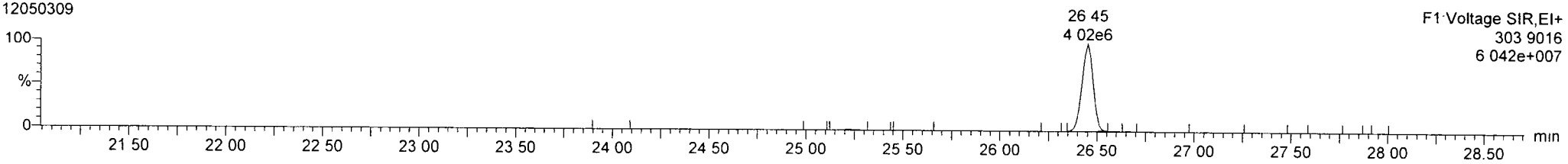
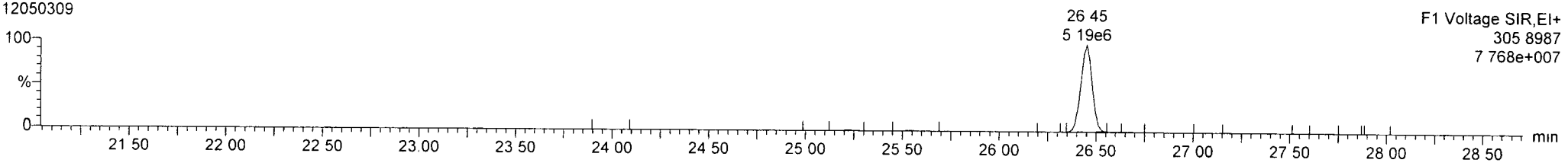
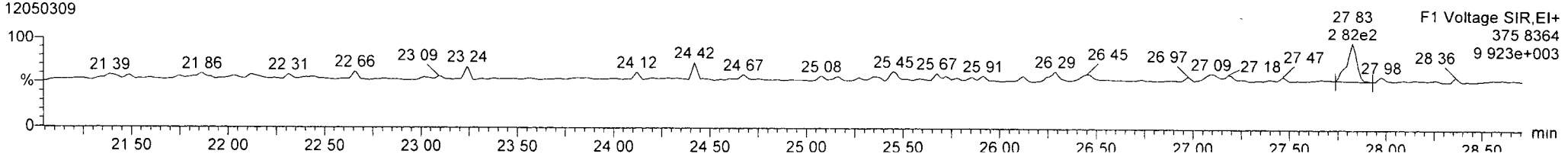


Total-tetrafurans
12050309

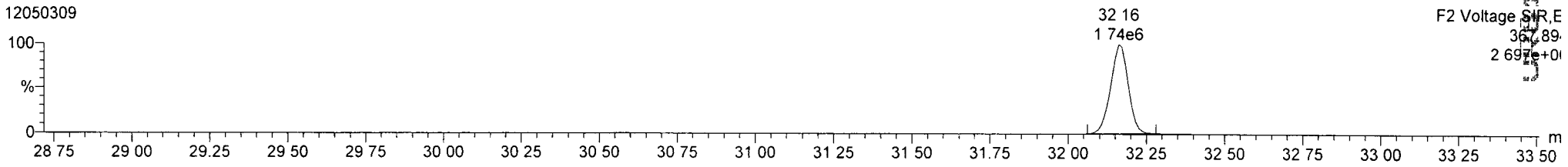


FUNCTION1 HXCDPE
12050309

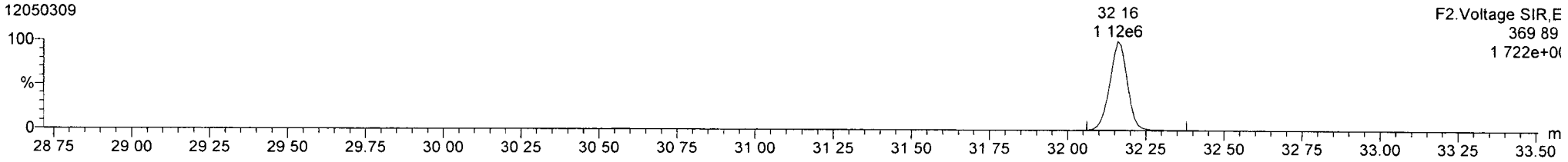


Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

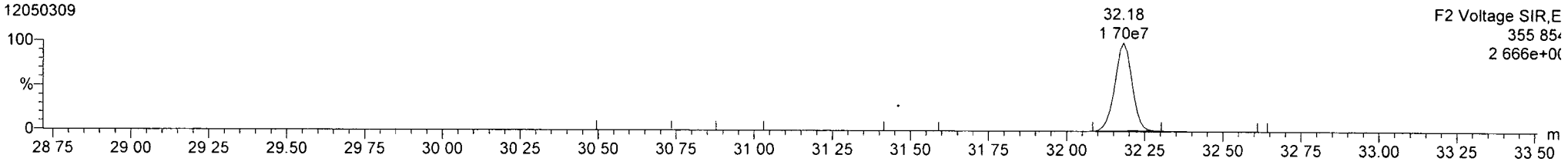
13C-12378-PeCDD



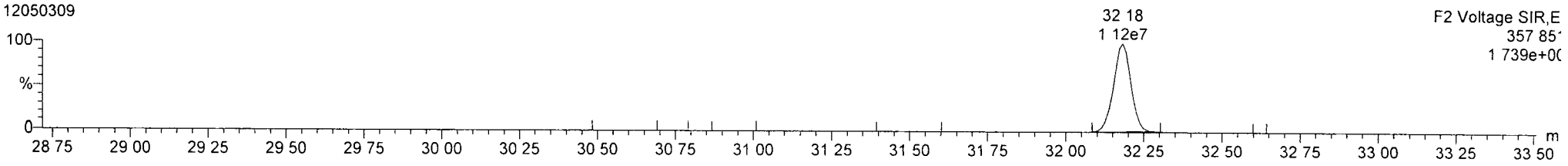
13C-12378-PeCDD



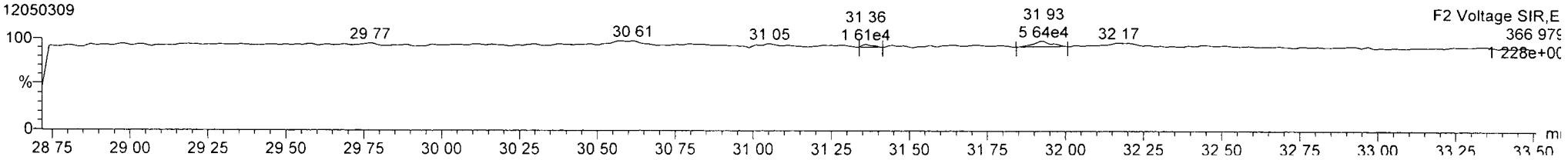
Total-pentadioxins



Total-pentadioxins



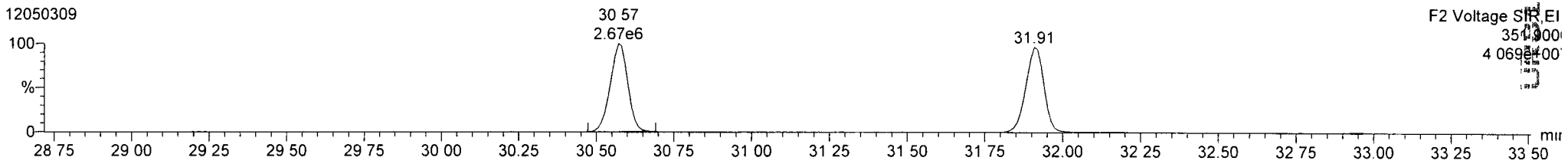
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120503IC qld
Last Altered Friday, May 04, 2012 08:31.18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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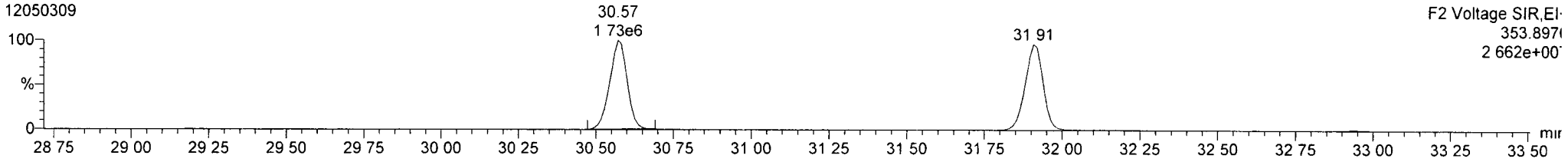
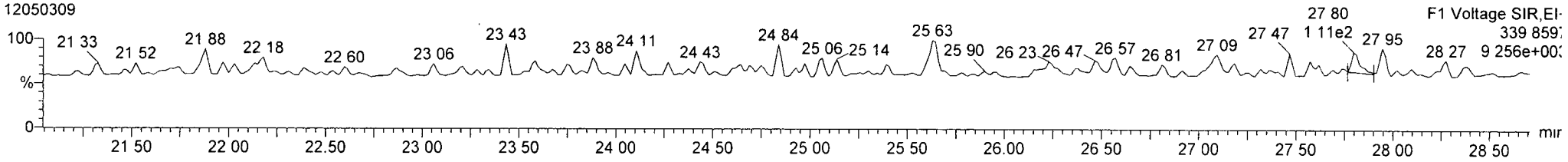
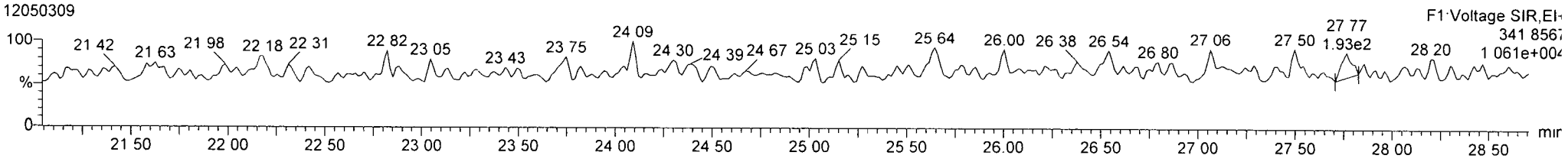


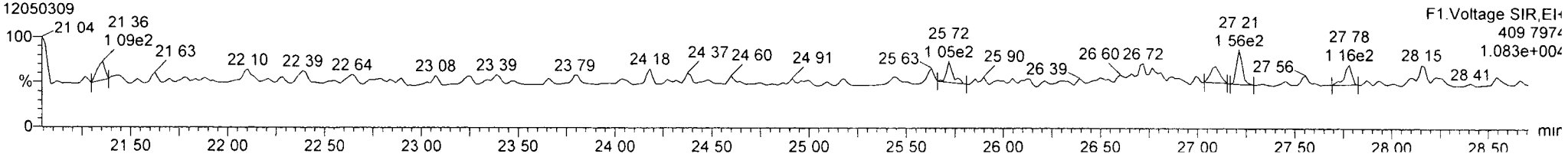
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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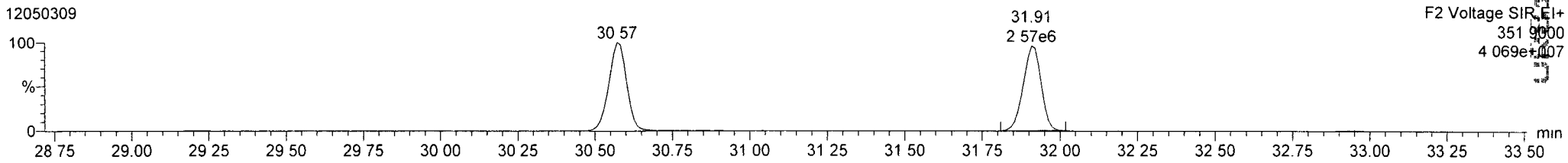
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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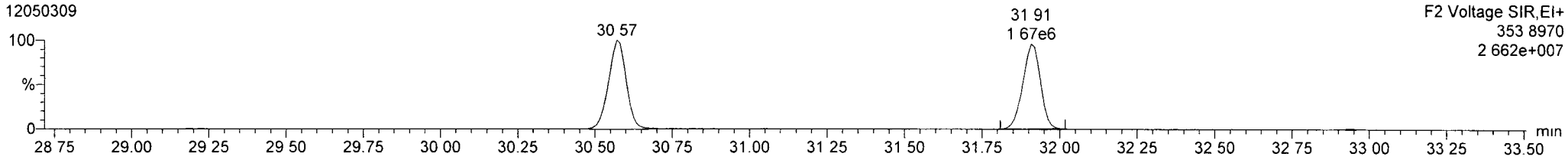
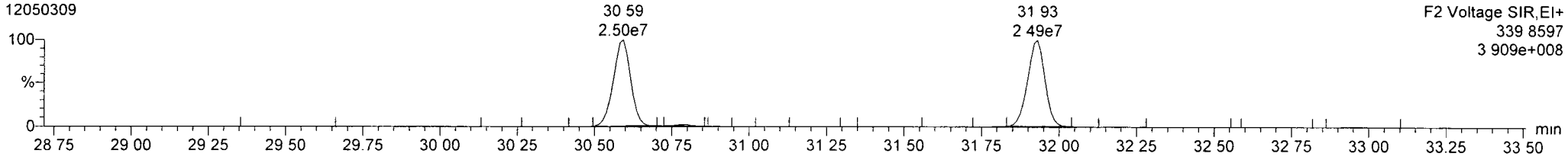
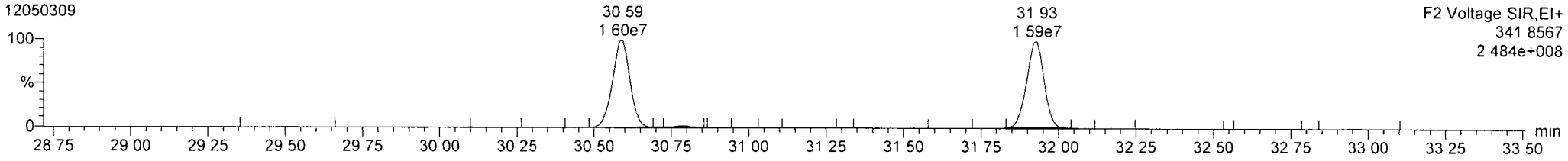


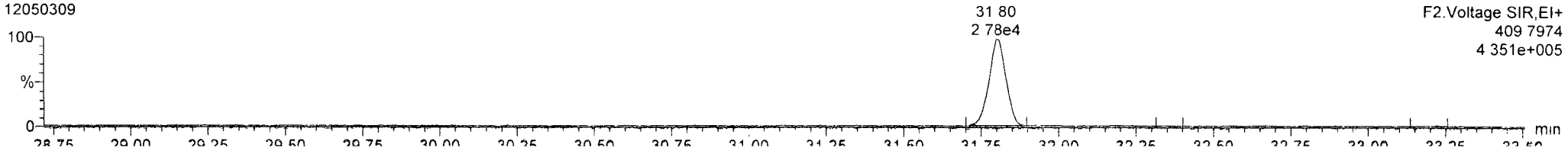
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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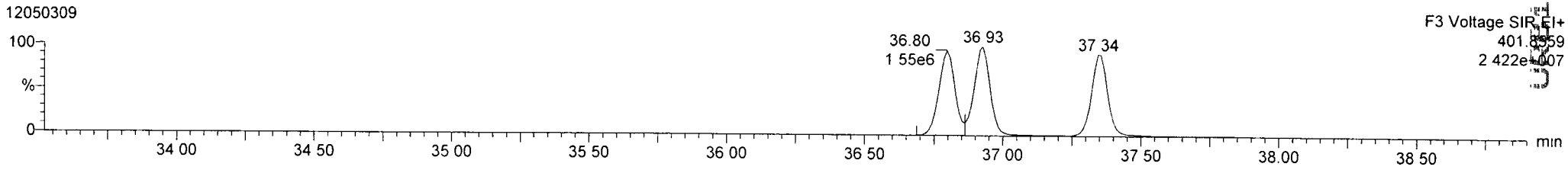
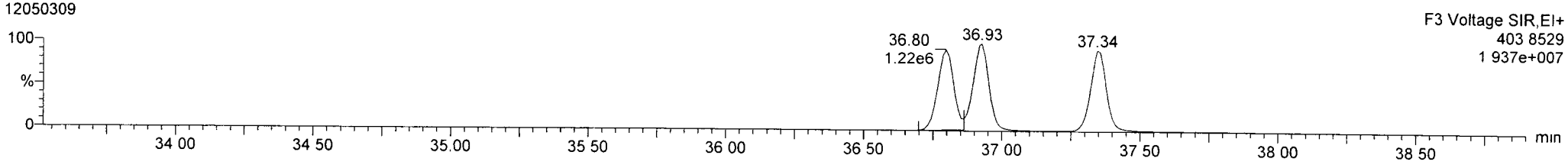
13C-123478-HxCDD
12050309



13C-123478-HxCDD
12050309



Total-hexadioxins
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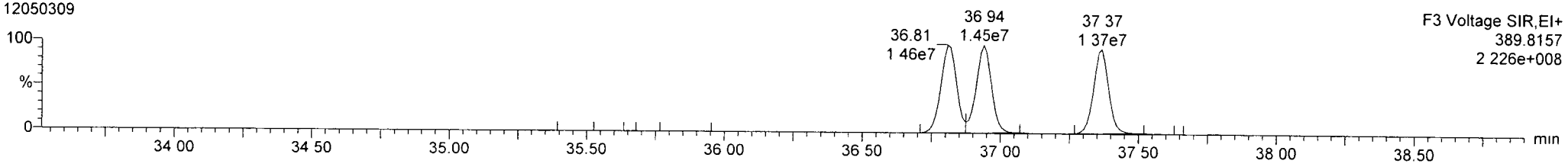
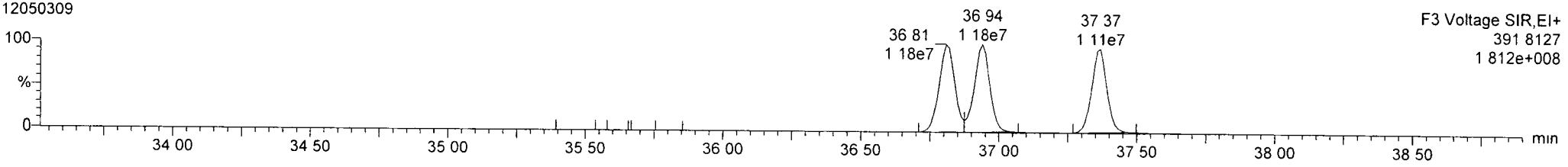
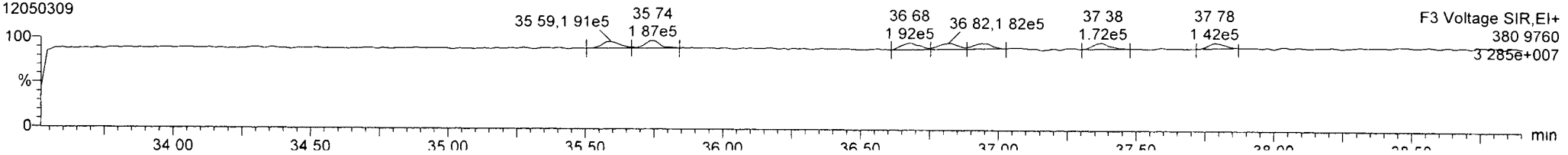


Total-hexadioxins
12050309



FUNCTION3 PFK
12050309



Quantify Sample Report **MassLynx 4.1 SCN 714**
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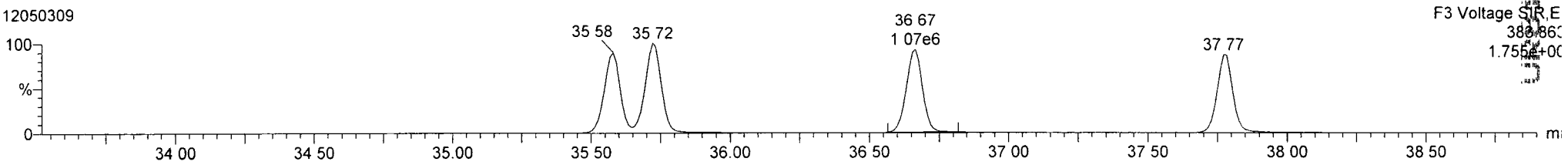
Printed Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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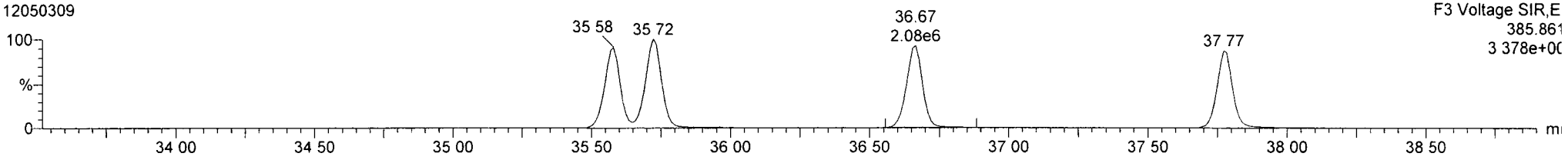
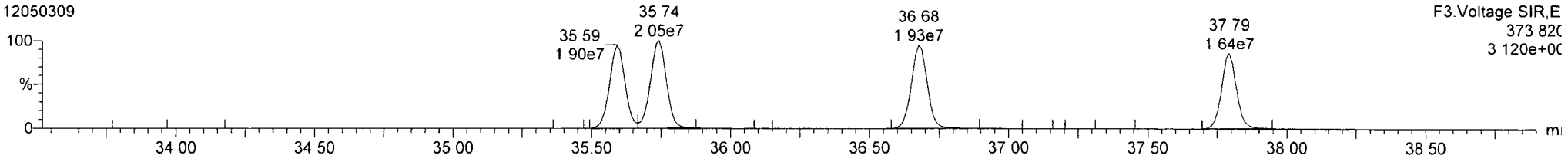
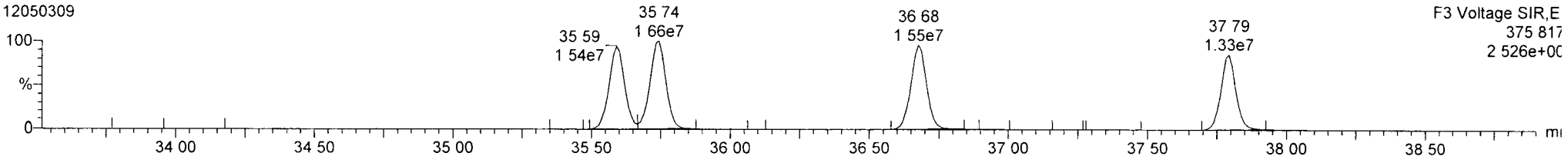


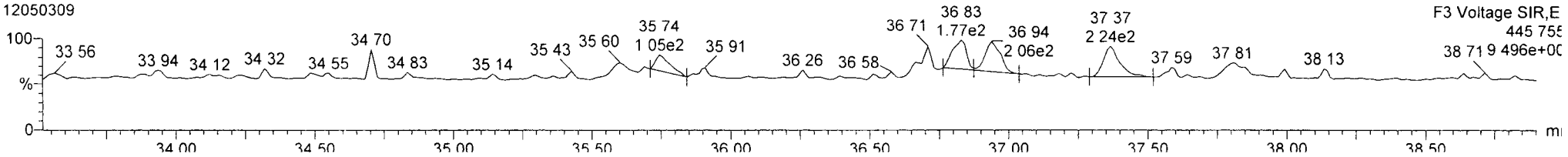
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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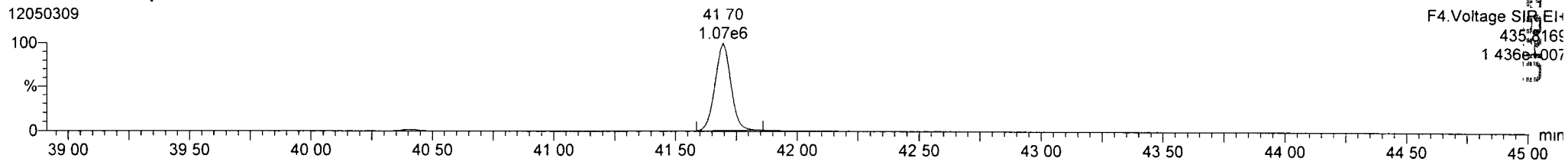
Printed: Friday, May 04, 2012 08:32 35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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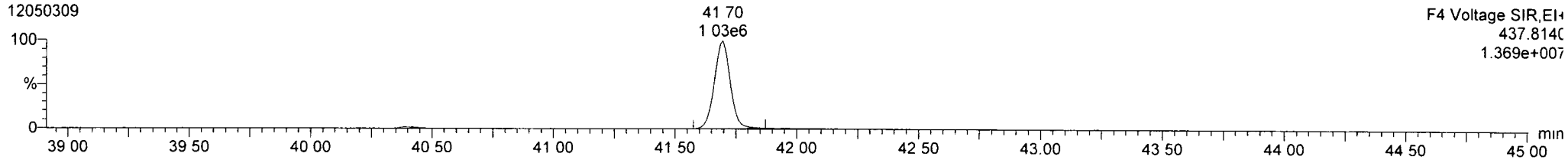
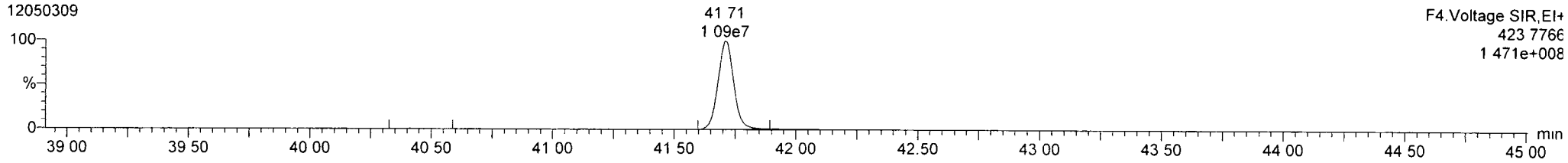
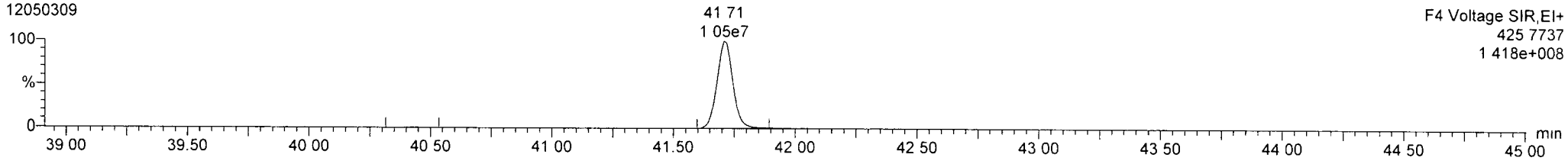


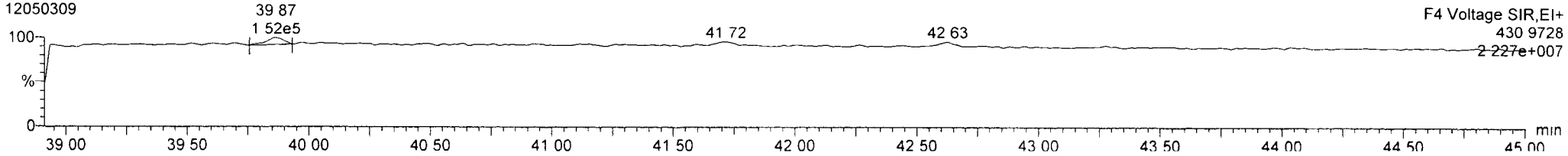
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120503IC.qld
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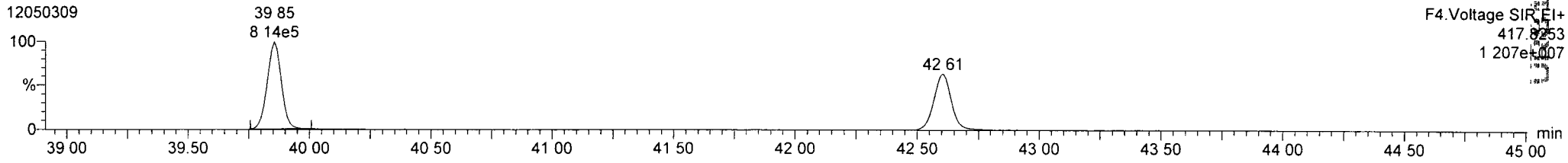
Printed Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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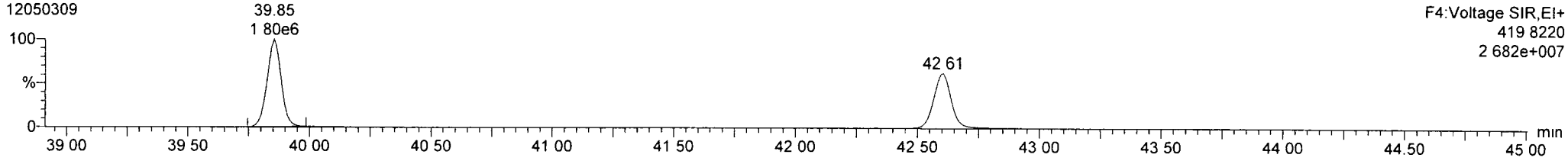
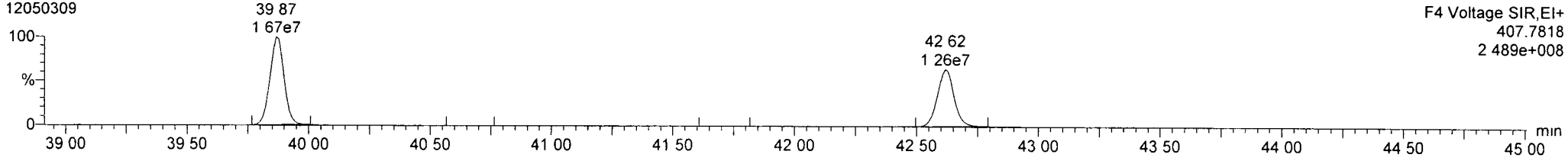
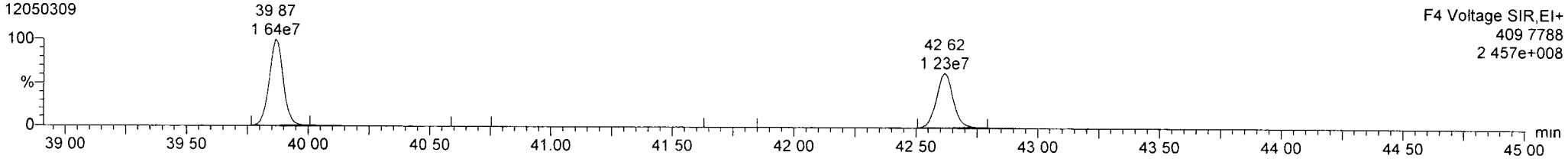


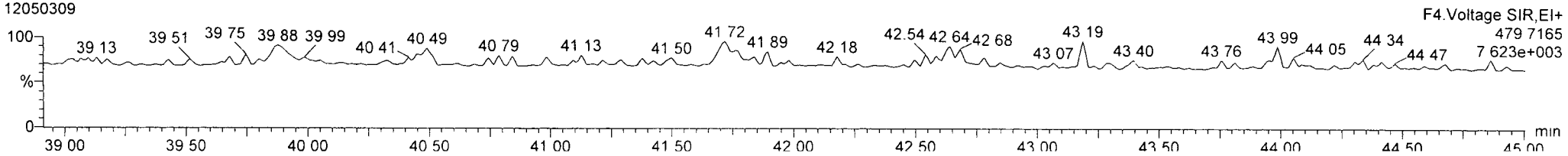
Total-heptafurans



Total-heptafurans



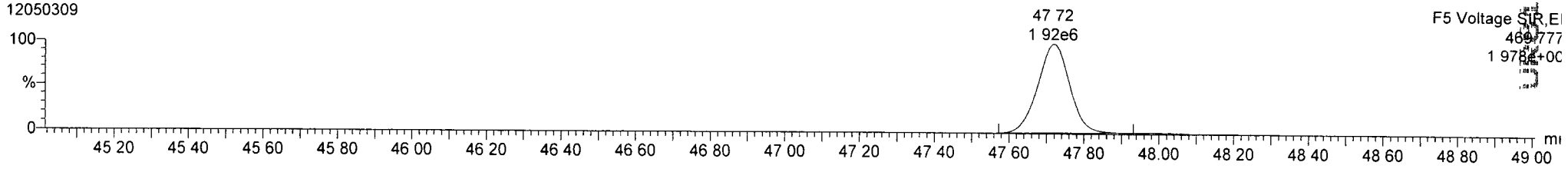
FUNCTION4 NCDPE



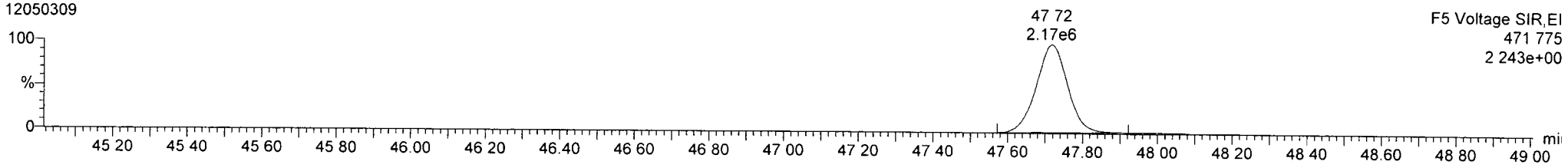
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered. Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32.35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

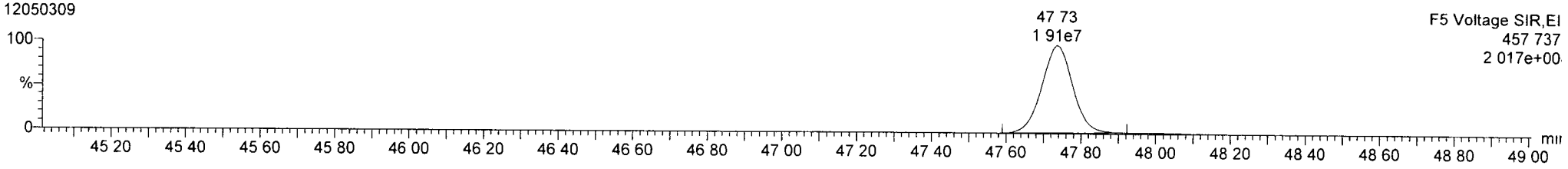
13C-OCDD
12050309



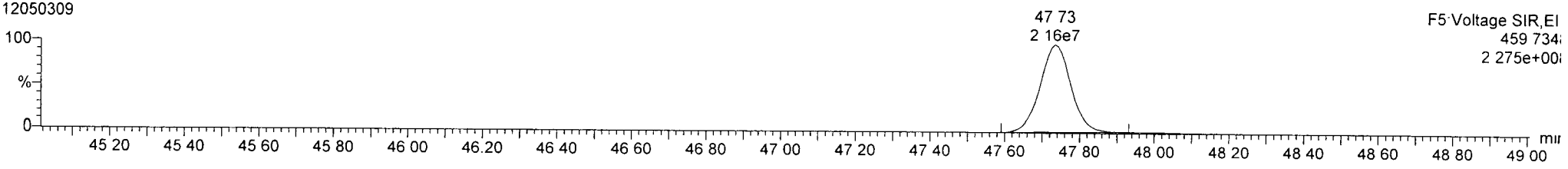
13C-OCDD
12050309



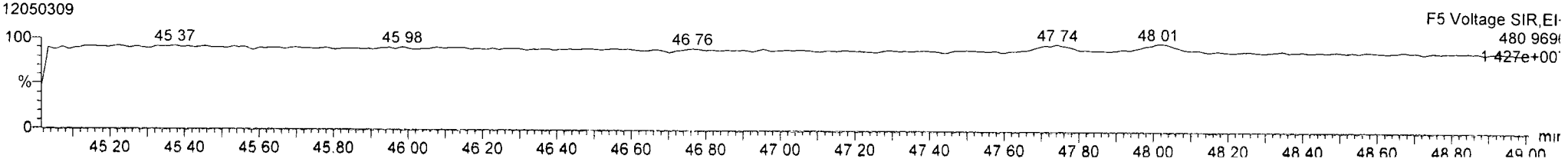
OCDD
12050309



OCDD
12050309



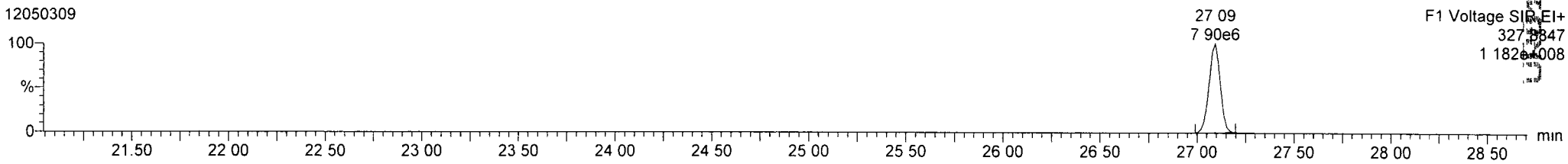
FUNCTION5 PFK
12050309



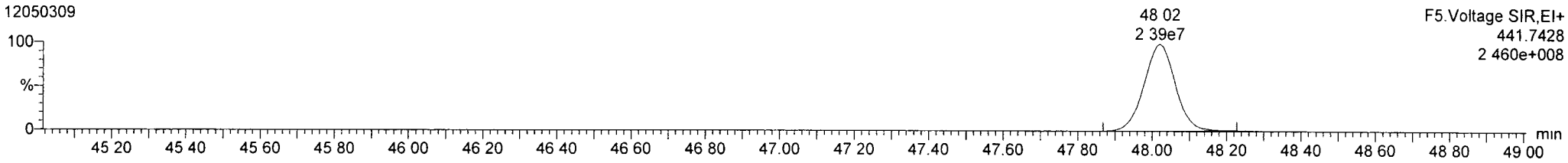
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120503IC qld
Last Altered Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

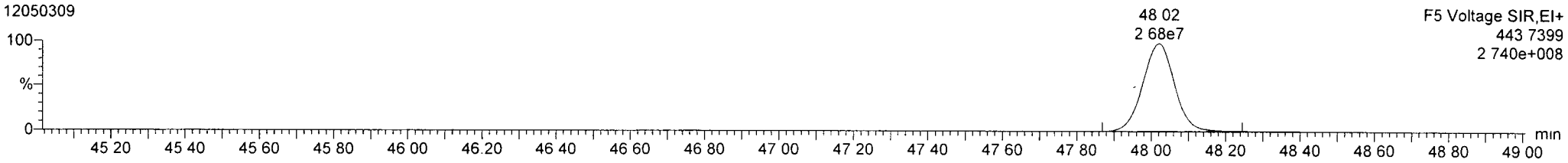
37CL-2378-TCDD



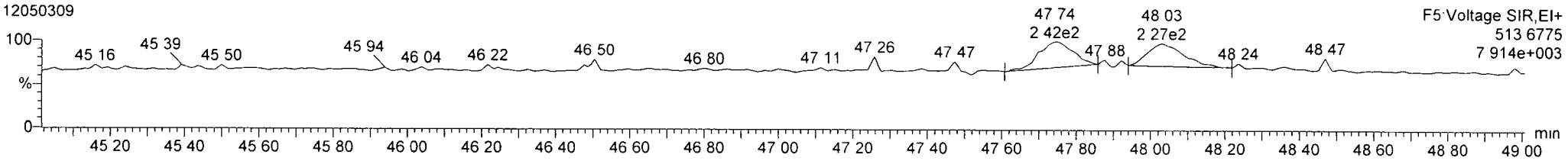
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**

Dataset Untitled
Last Altered. Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs Corr ..	RRF M .	1° Det.. .	%Rec	1° Ratio...	1° Rati	S/N	1° .	pg	EMPC
1	1	2378-TCDF	303.9016	26.452	26.438	351705	351705	0 866	bb		0 79	0 77	1637 8	NO	10 384	10 384
2	2	12378-PeCDF	339 8597	30.582	30.581	1364643	1364643	0.907	bd		1 54	1 55	3295 2	NO	54 462	54 462
3	3	23478-PeCDF	339 8597	31 919	31 920	1264819	1264819	0 936	bb		1 52	1.55	3044.8	NO	50.696	50.696
4	4	123478-HxCDF	373 8208	35.580	35 579	1079541	1079541	1 082	bd		1 24	1.24	2745.1	NO	55 376	55 376
5	5	234678-HxCDF	373 8208	36 665	36 676	1084818	1084818	1 070	bb		1 24	1 24	2751 7	NO	52.329	52.329
6	6	123678-HxCDF	373 8208	35 733	35 733	1182650	1182650	1 048	dd		1.18	1 24	2896.4	NO	53 316	53 316
7	7	123789-HxCDF	373.8208	37.783	37.772	909606	909606	1 020	bd		1 19	1 24	2270.5	NO	55 996	55.996
8	8	1234678-HpCDF	407.7818	39 865	39 863	1009666	1009666	1.214	bd		0 99	1 05	2334 7	NO	54 576	54 576
9	9	1234789-HpCDF	407.7818	42 606	42 596	743681	743681	1 254	bb		1 05	1 05	1509 8	NO	48 437	48.437
10	10	OCDF	441 7428	48.003	47 984	1318603	1318603	1 105	bd		0 89	0 89	3544 4	NO	110 557	110 557
11	11	2378-TCDD	319 8965	27.079	27 078	282352	282352	1.046	bd		0 76	0 77	1609.8	NO	9 581	9 581
12	12	12378-PeCDD	355 8546	32.171	32 159	897726	897726	0 973	bb		1 54	1 55	3841 2	NO	46.840	46 840
13	13	123478-HxCDD	389 8157	36 807	36 807	767624	767624	0 935	bd		1 25	1 24	5356.2	NO	51 548	51 548
14	14	123678-HxCDD	389 8157	36 928	36.928	787244	787244	0 878	dd		1 23	1 24	5173 8	NO	55.632	55 632
15	15	123789-HxCDD	389.8157	37.355	37 323	803272	803272	0 839	bd		1.22	1 24	5304 6	NO	59 778	59 778
16	16	1234678-HpCDD	423 7766	41 696	41 697	684473	684473	0 974	bd		1 02	1 05	2083 5	NO	50 394	50 394
17	17	OCDD	457 7377	47 716	47 712	1140129	1140129	0 950	bd		0 86	0 89	2626 4	NO	111 205	111.205
18	18	13C-2378-TCDF	315 9419	26 422	26 437	3910521		1 484	bb	87 6	0 78	0 77	8495 2	NO	87 575	
19	19	13C-12378-PeCDF	351 9000	30.560	30 578	2762733		1 048	bd	87 6	1 55	1.55	4771.1	NO	87 629	
20	20	13C-23478-PeCDF	351 9000	31 897	31 915	2665902		1 003	bb	88 3	1 56	1 55	4717 1	NO	88 324	
21	21	13C-123478-HxCDF	383 8639	35 569	35 569	1801902		1 186	bd	93 1	0 51	0 51	2357 7	NO	93.073	
22	22	13C-123678-HxCDF	383 8639	35 711	35 722	2115917		1 315	db	98 5	0 52	0 51	2654 2	NO	98 535	
23	23	13C-234678-HxCDF	383 8639	36 654	36 654	1937824		1 223	bb	97 0	0 51	0 51	2518 2	NO	97 012	
24	24	13C-123789-HxCDF	383 8639	37 761	37 761	1592415		1 056	bb	92 3	0.52	0 51	2110 3	NO	92 306	
25	25	13C-1234678-HpCDF	417 8253	39 843	39 843	1523335		1 011	bb	92 2	0 45	0 44	2436 0	NO	92 237	
26	26	13C-1234789-HpCDF	417 8253	42 584	42 595	1224318		0 741	bb	101 2	0 46	0 44	1689 5	NO	101 247	
27	27	13C-1234-TCDD	331 9368	26 257	26 272	3008147		1 000	bb	100 0	0 79	0 77	6176 7	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27.064	27 079	2817897		0 956	bb	97 9	0 79	0 77	5754 2	NO	97 949	
29	29	13C-12378-PeCDD	367 8949	32 149	32 168	1969208		0 663	bb	98 7	1 58	1 55	8761 3	NO	98 669	
30	30	13C-123478-HxCDD	401 8559	36 785	36 785	1591970		1 024	bd	95 2	1 28	1 24	4835 4	NO	95 217	
31	31	13C-123678-HxCDD	401 8559	36 917	36 917	1612141		1 113	db	88 7	1 28	1 24	4650 9	NO	88 735	
32	32	13C-1234678-HpCDD	435 8169	41 685	41 696	1394074		0 815	bd	104.7	1 04	1 05	4243.8	NO	104 737	
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Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset. Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

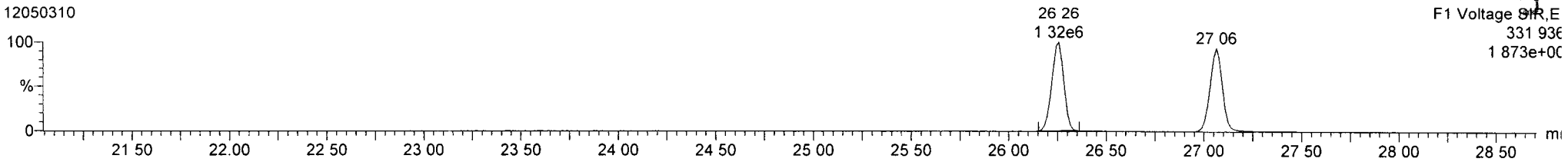
	#	Name	Trace	RT	Pred RT	Abs.Resp	Abs Corr . .	RRF M ..	1° Det .	%Rec	1° Ratio.	1° Rati	S/N	1° .	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37 344	37 368	1632908		1 000	bb	100 0	1 27	1 24	4738.9	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 490			0.866							10 490	10.490
36	36	Total-penta1	339 8597		28 270											
37	37	Total-pentafurans	339 8597		30 840			0 921							105 369	105 854
38	38	Total-hexafurans	373 8208		35 860			1.055							217 017	217 049
39	39	Total-heptafurans	407 7818		41 270			1.234							103 013	103 060
40	40	Total-Furans	303 9016		0 000			1 050							546 445	547 009
41	41	Total-tetradioxins	319 8965		26 000			1 046							9 581	9 581
42	42	Total-pentadioxins	355 8546		31 040			0 973							46 840	46.840
43	43	Total-hexadioxins	389 8157		36 030			0 884							166.957	167 129
44	44	Total-heptadioxins	423 7766		41 090			0 974							50 394	50 750
45	45	Total-Dioxins	319 8965		0 000			0 942							384 977	385 504
46	46	Total-TEQ	319 8965		0 000										931 422	932 514
47	47	37CL-2378-TCDD	327 8847	27 079	27 071	296093		1 037					1816 6		9.490	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000											
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375.8364		0 000											
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445 7555		0.000											
57	57	FUNCTION4 NCDPE	479 7165		0 000											
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08 43 30 Pacific Daylight Time

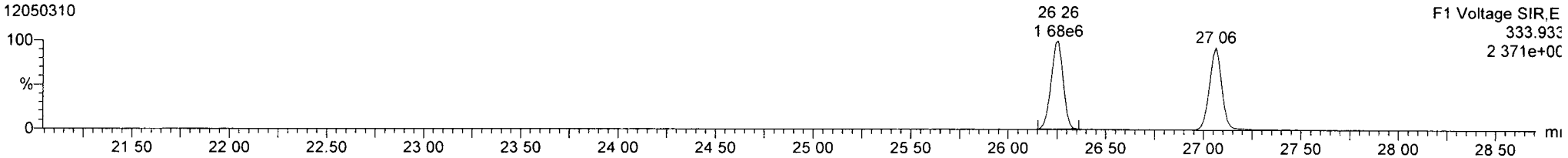
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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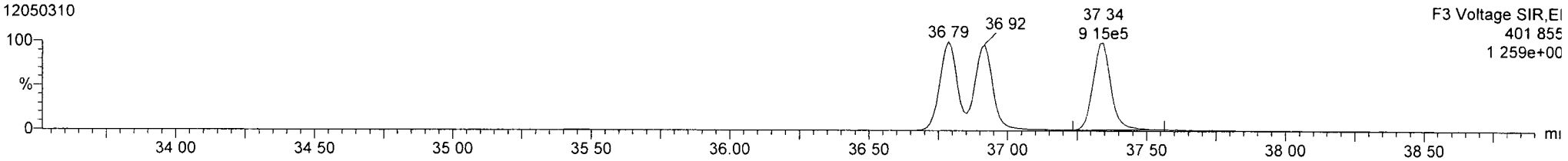

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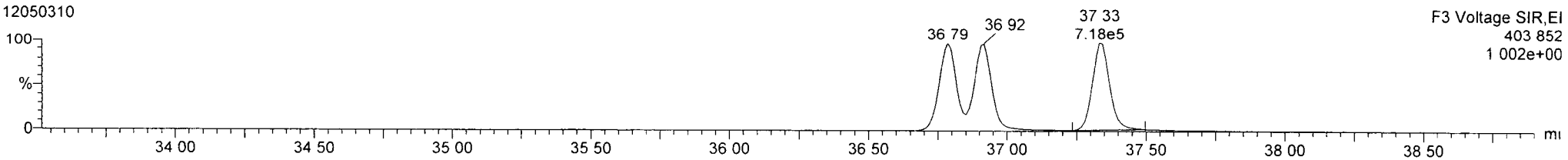
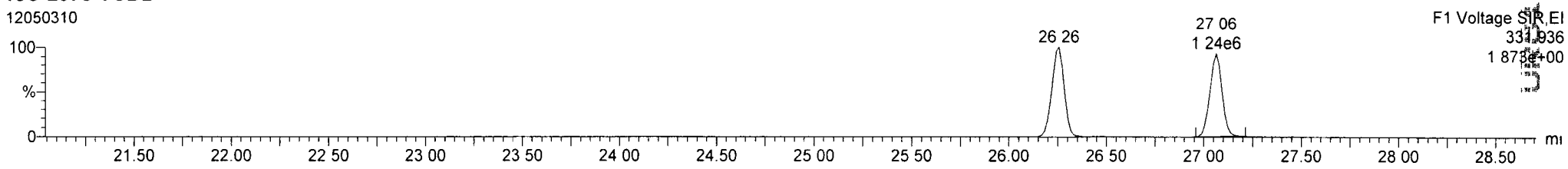


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered. Friday, May 04, 2012 08:42.24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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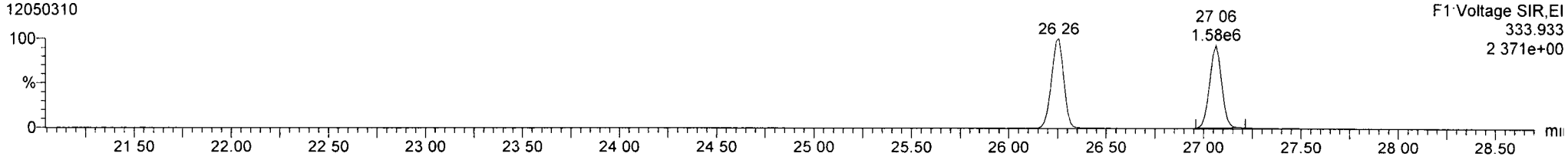
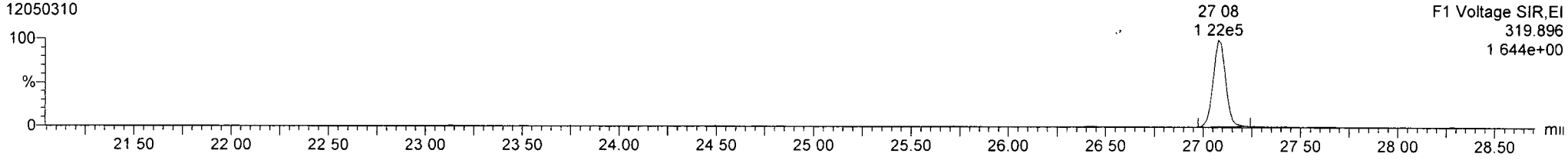
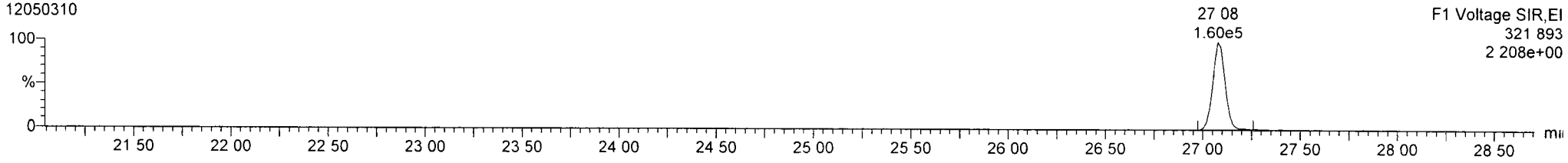


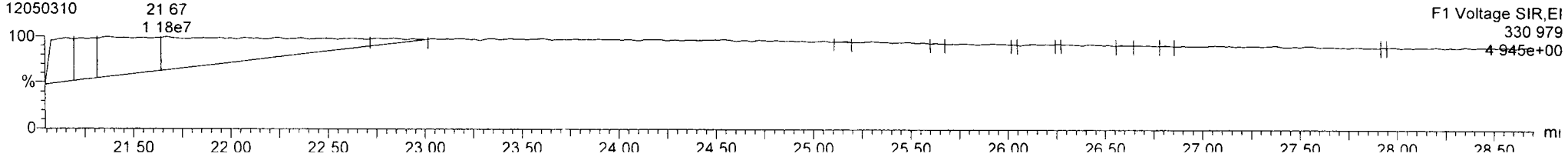
Total-tetradioxins



Total-tetradioxins



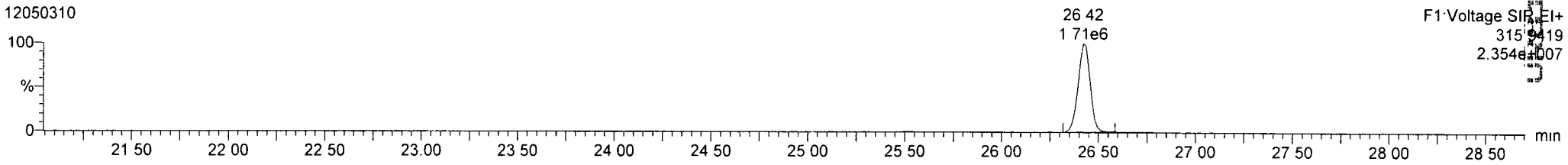
FUNCTION1 PFK



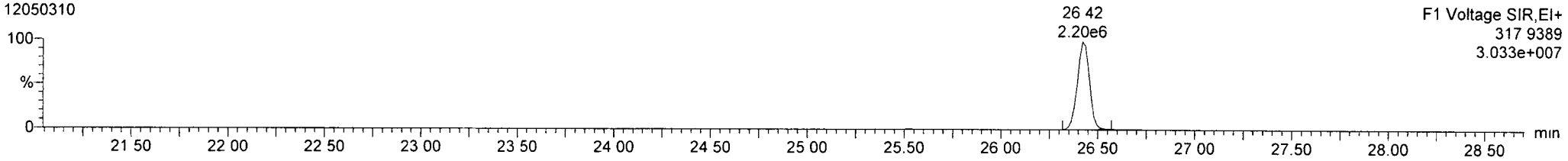
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42 24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

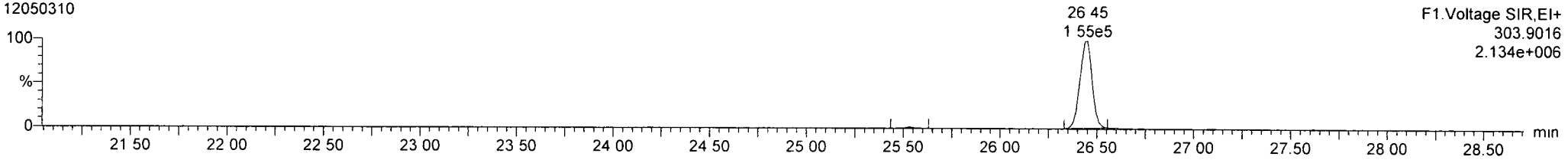
13C-2378-TCDF



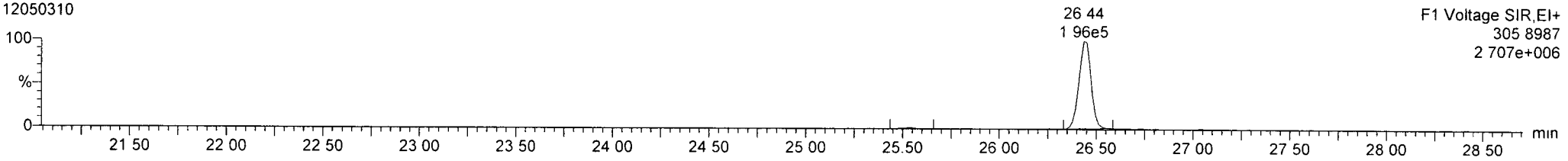
13C-2378-TCDF



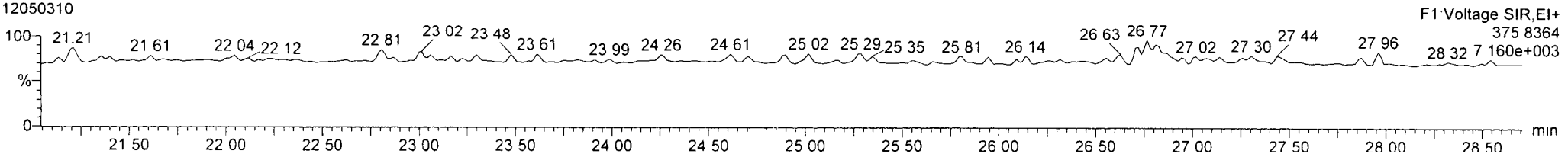
Total-tetrafurans



Total-tetrafurans



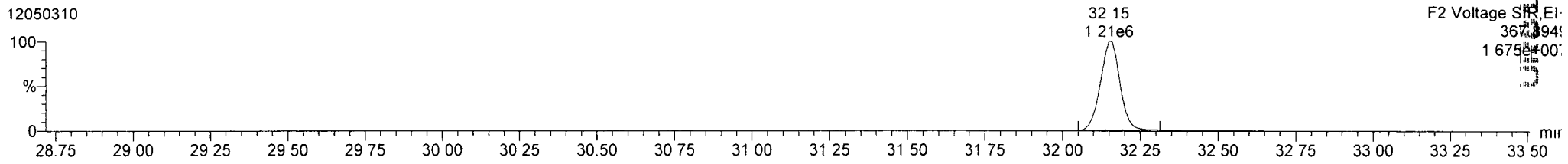
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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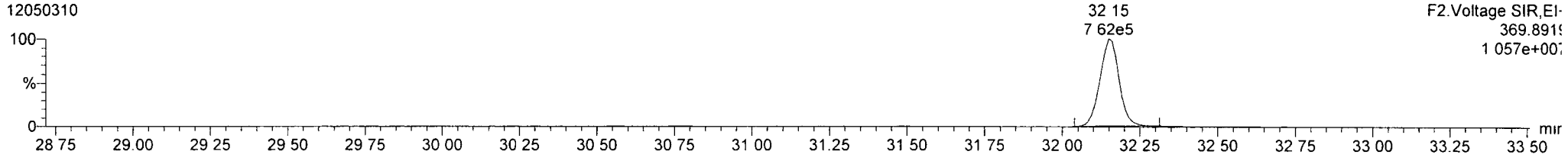
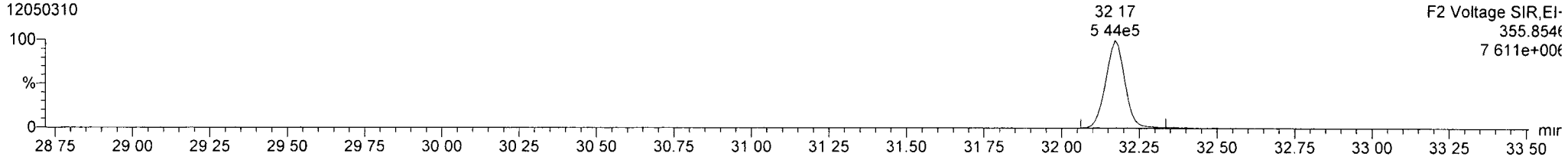
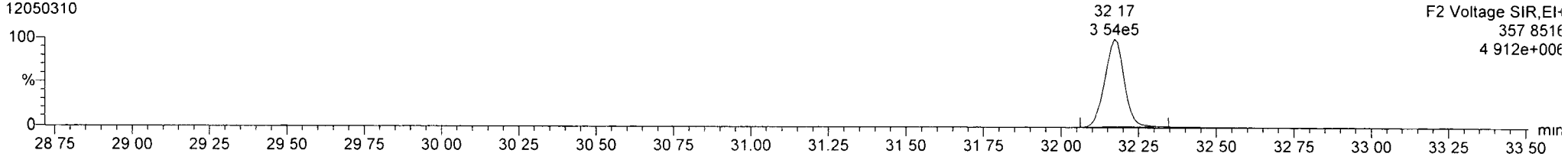


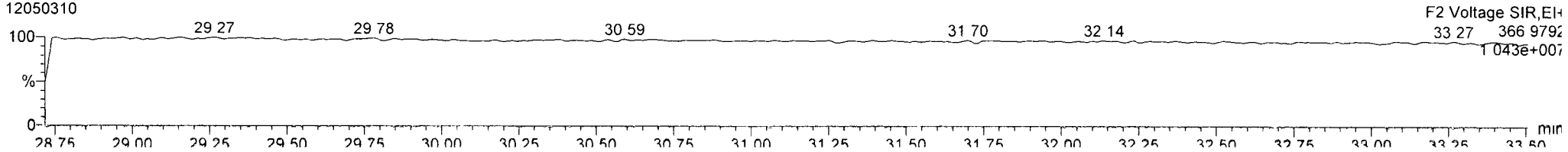
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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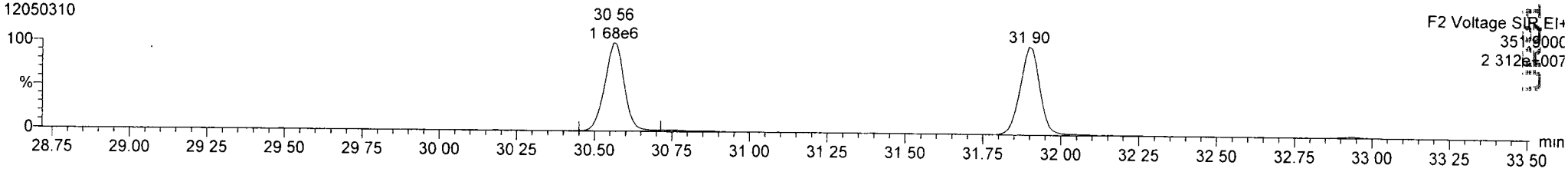
Printed. Friday, May 04, 2012 08 43 30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF
12050310



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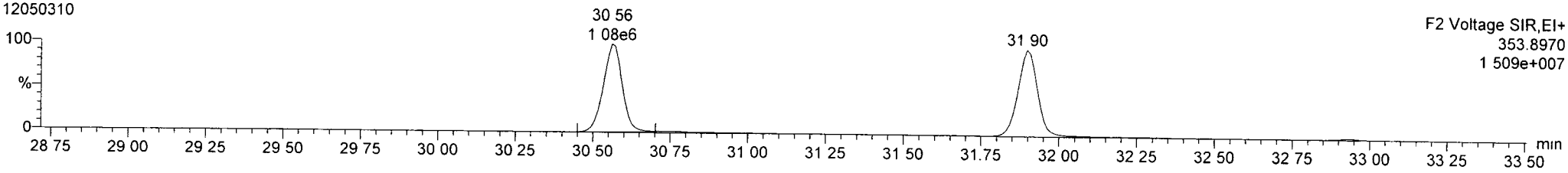

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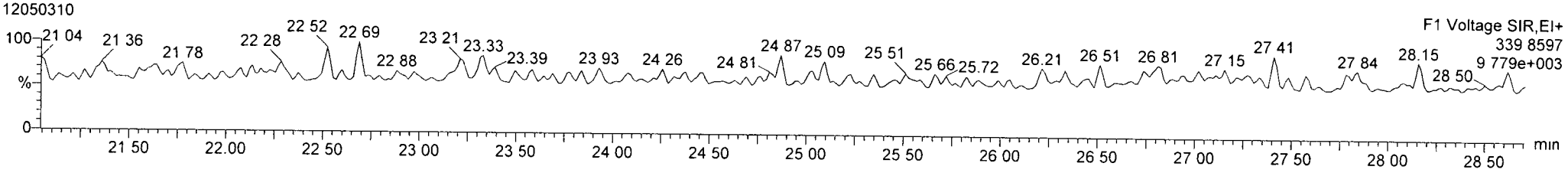

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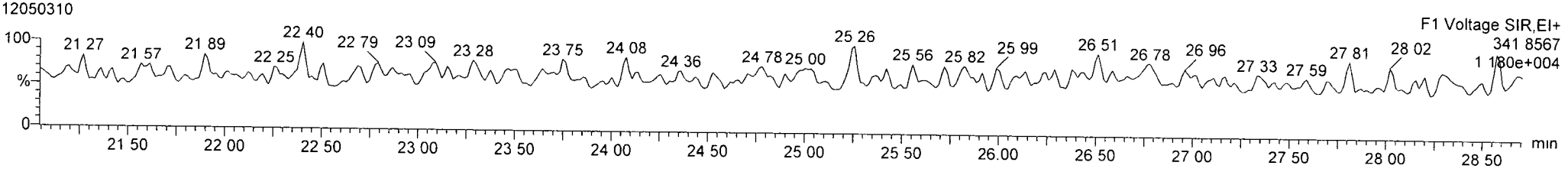

FUNCTION1 HPCDPE
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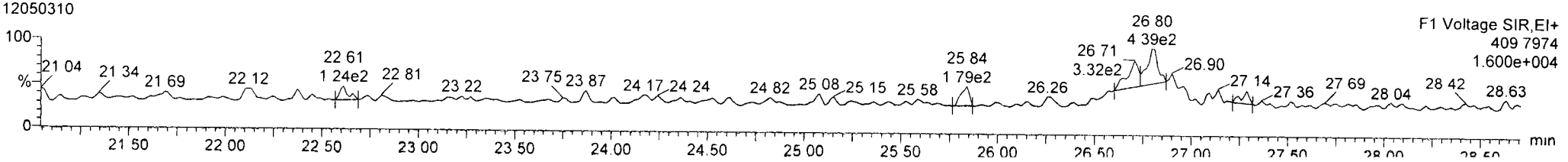

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13C-23478-PeCDF
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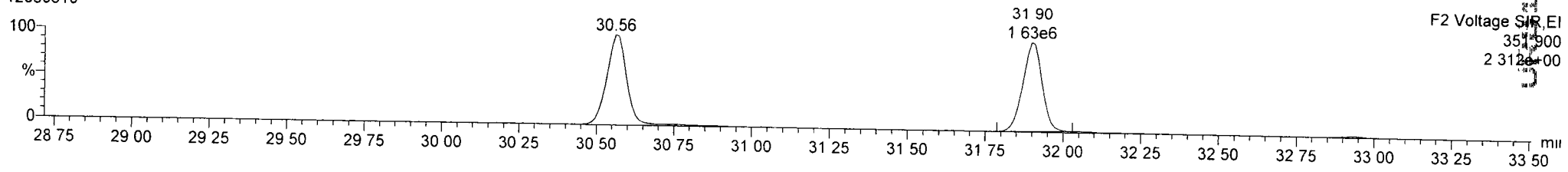

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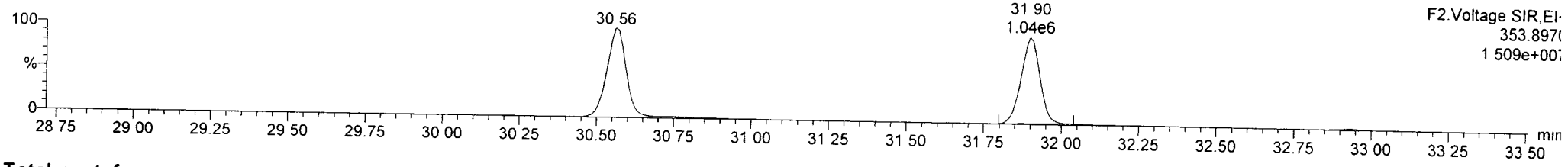

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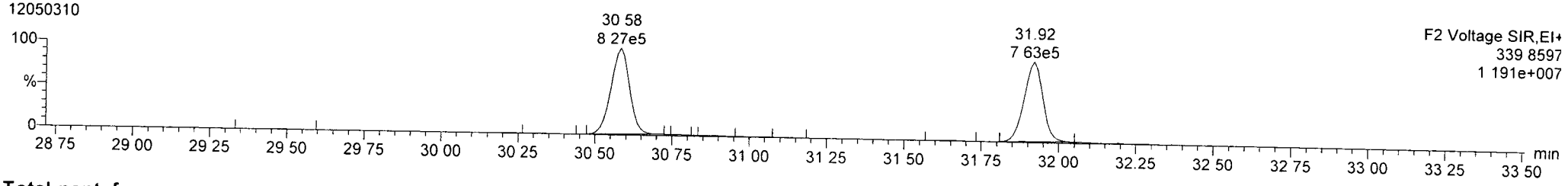

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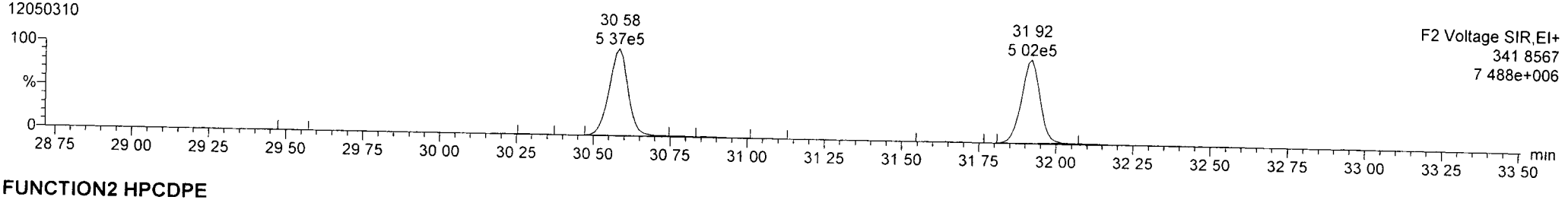

FUNCTION2 HPCDPE
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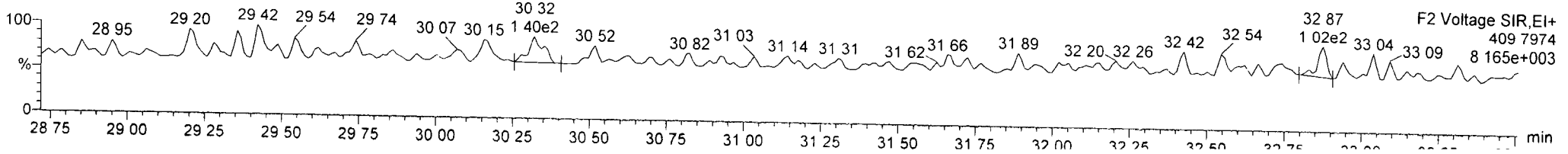

Quantify Sample Report **MassLynx 4.1 SCN 714**
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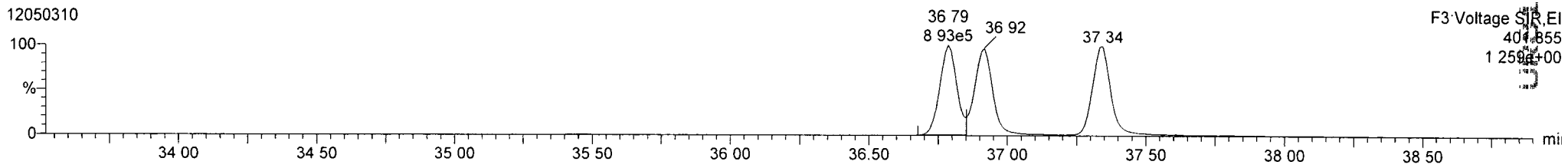
Printed: Friday, May 04, 2012 08:43.30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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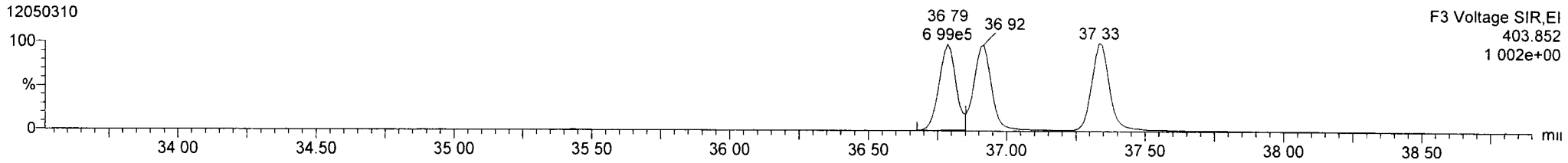

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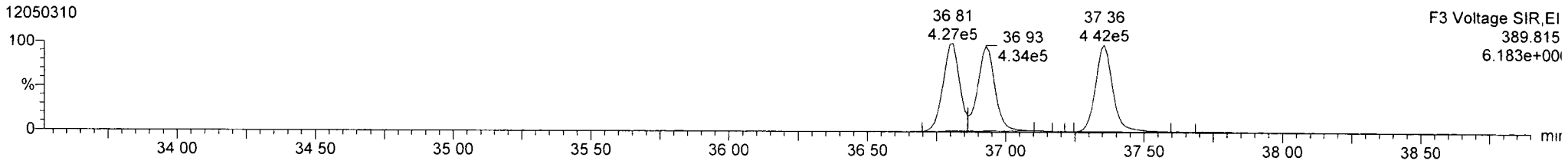
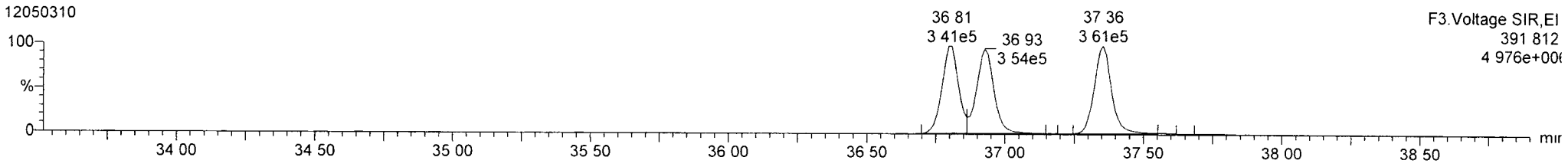
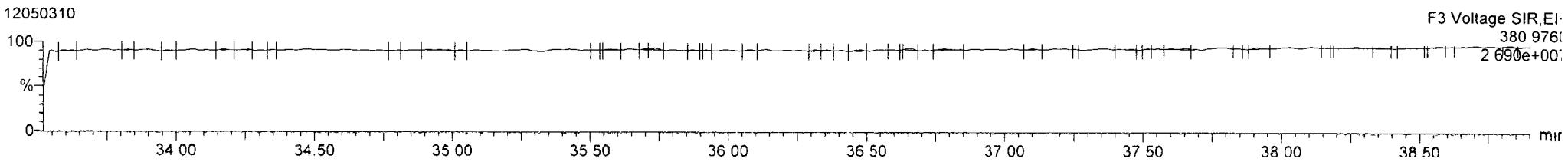


Total-hexadioxins



FUNCTION3 PFK



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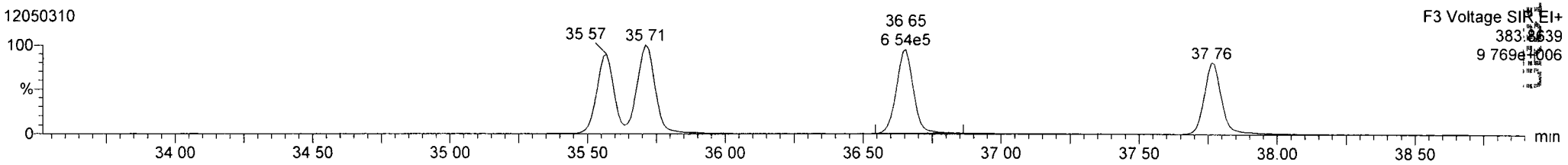
Last Altered: Friday, May 04, 2012 08:42 24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43.30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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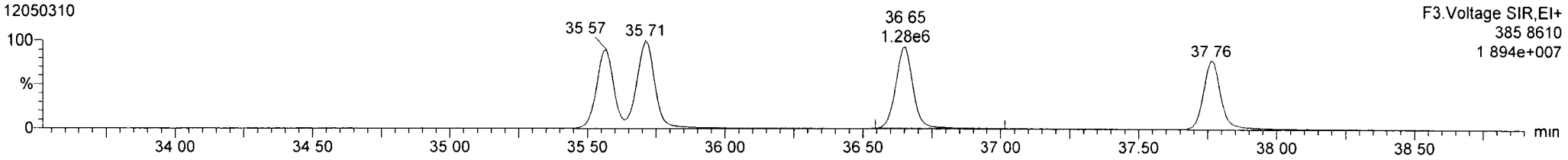

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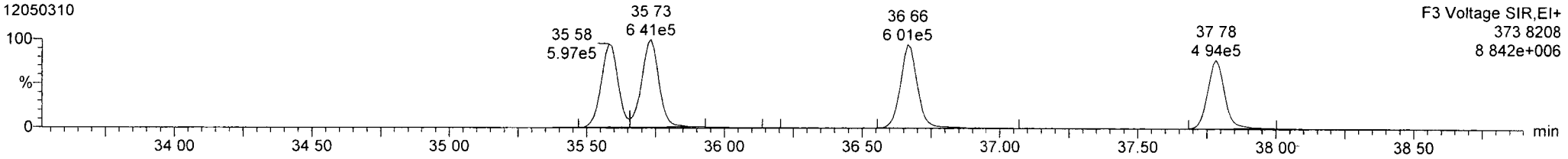

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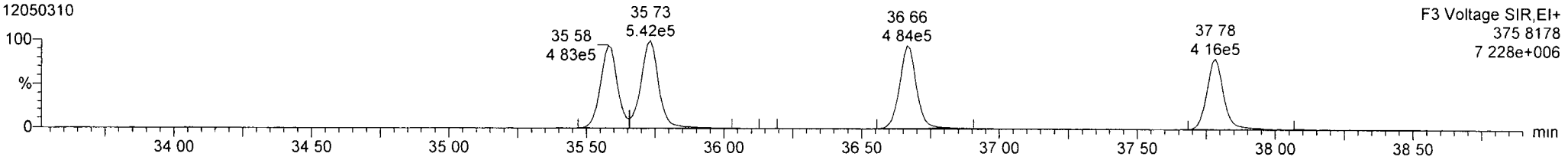

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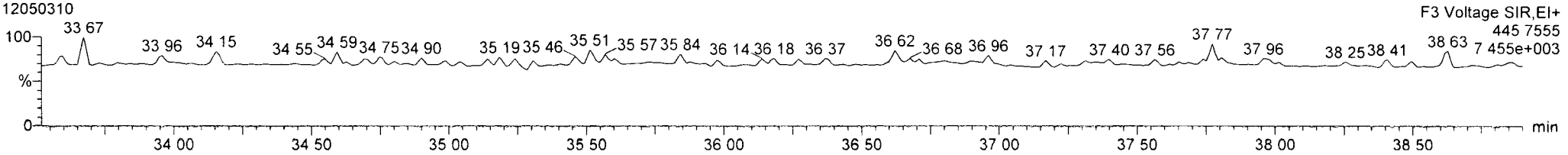

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13C-1234678-HpCDD
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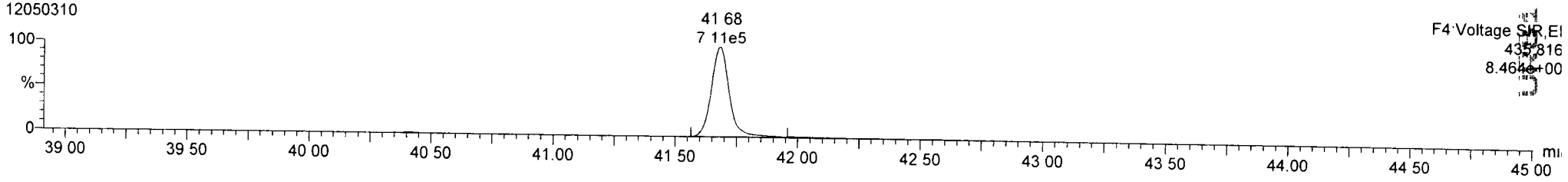

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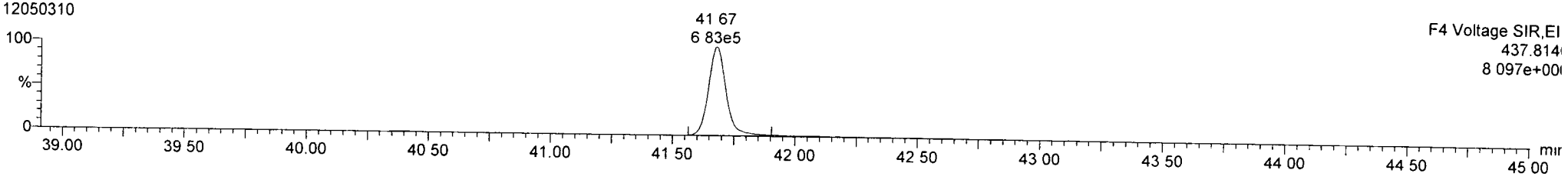

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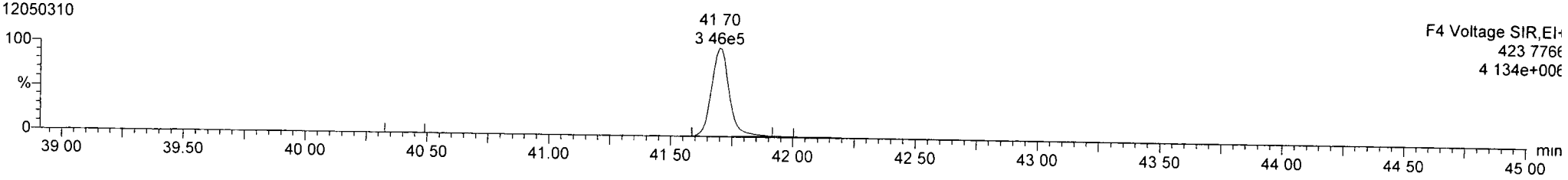

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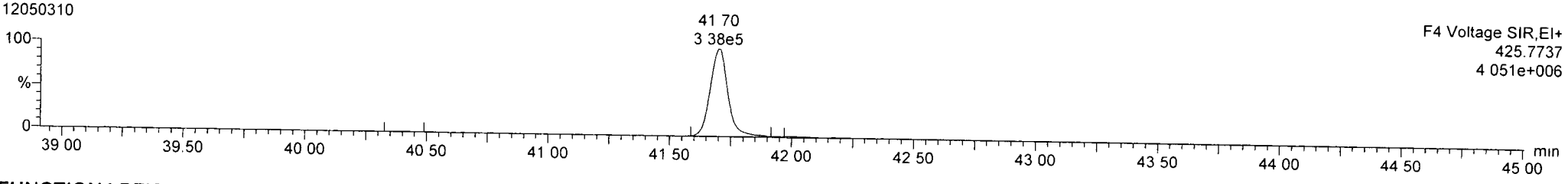

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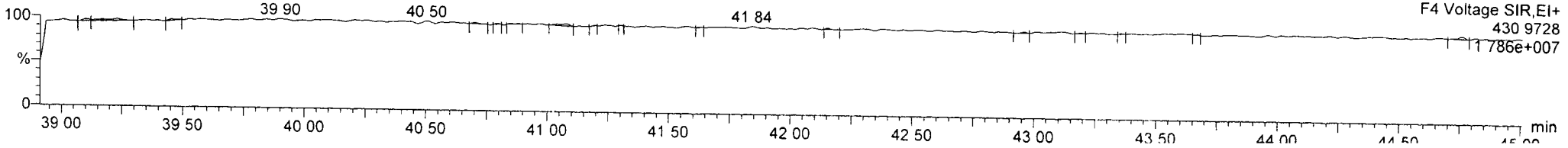

Quantify Sample Report **MassLynx 4.1 SCN 714**
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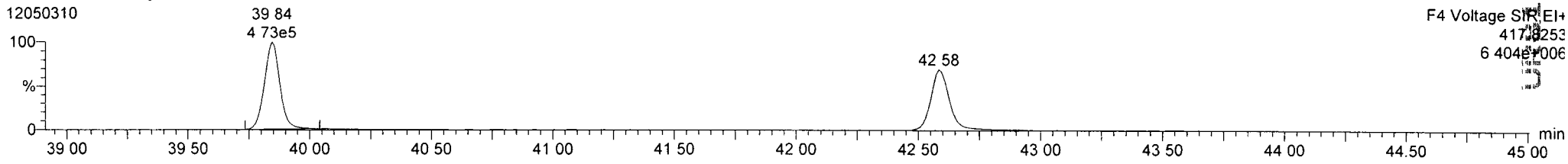
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08.43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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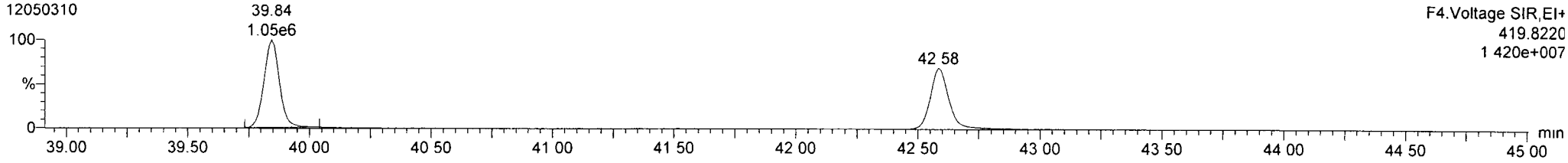
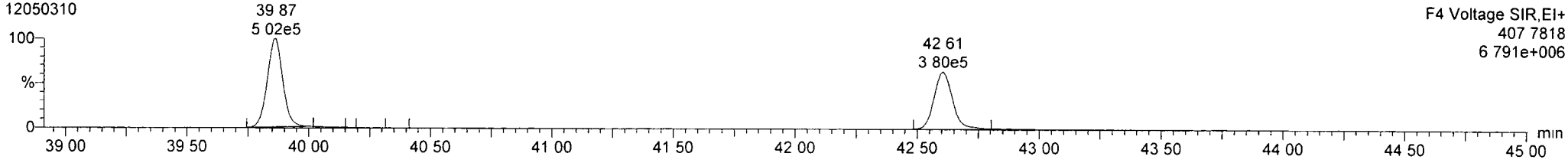


Total-heptafurans



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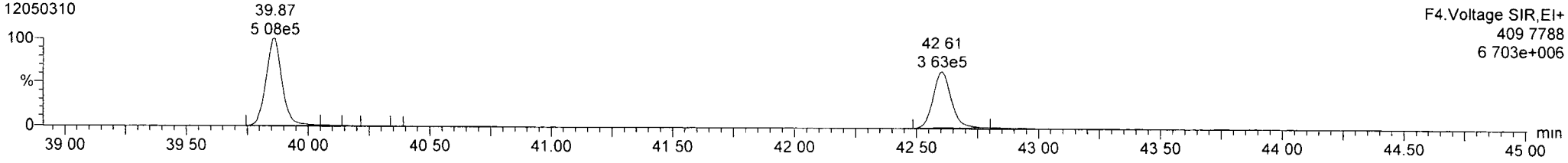
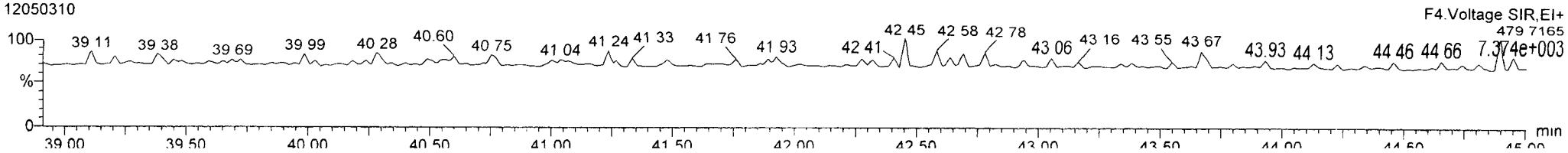


FUNCTION4 NCDPE



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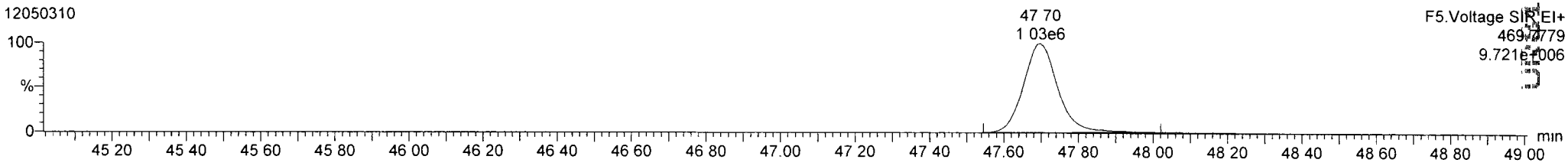
13C-OCDD



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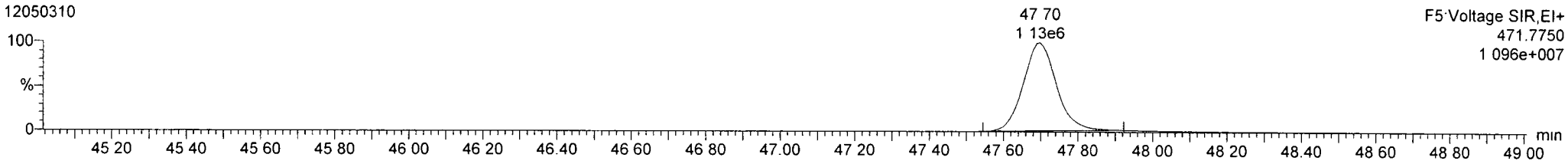

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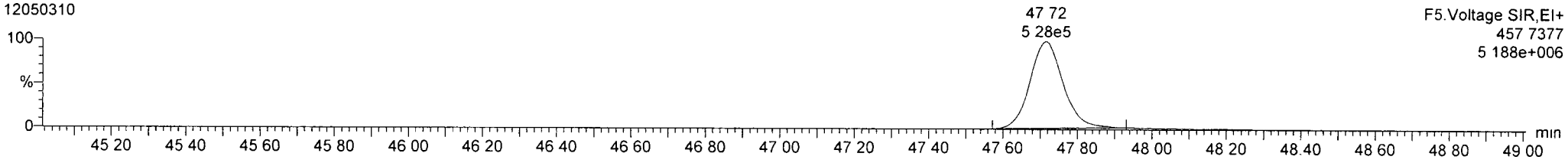

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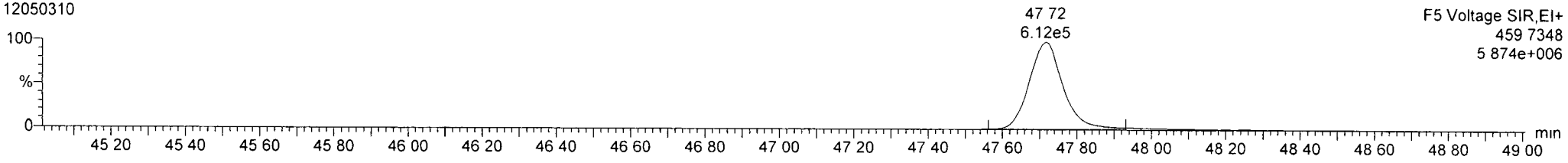

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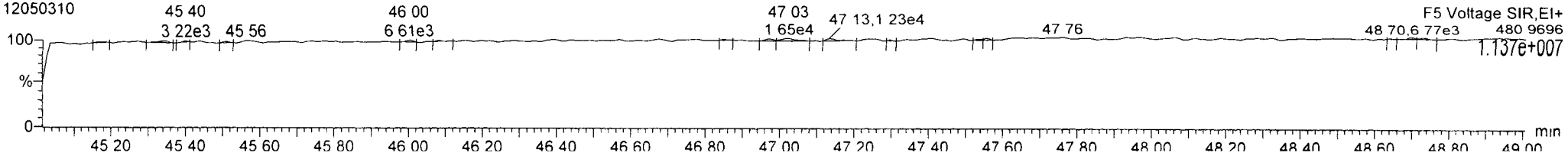

Quantify Sample Report **MassLynx 4.1 SCN 714**
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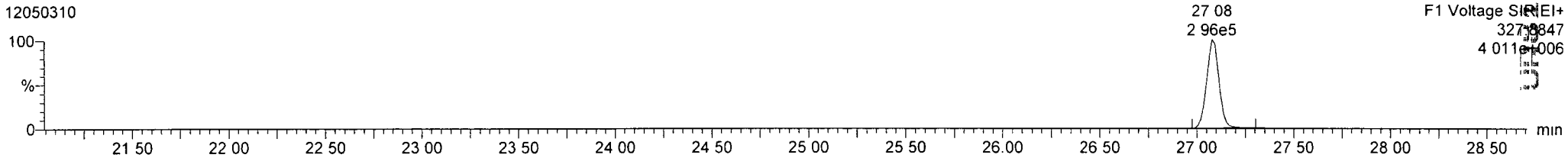
Printed: Friday, May 04, 2012 08 43.30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



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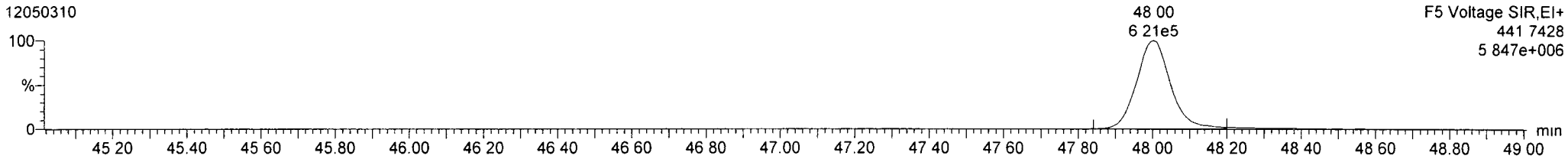

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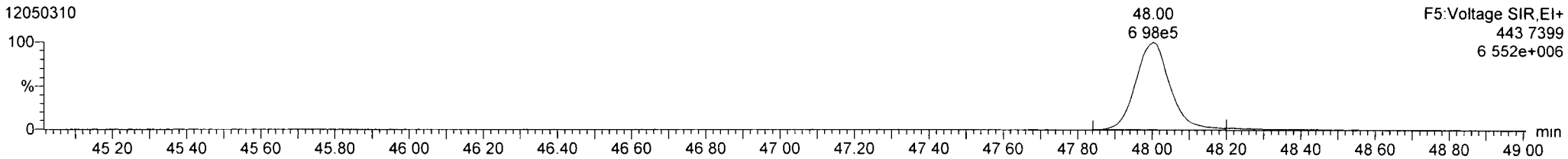
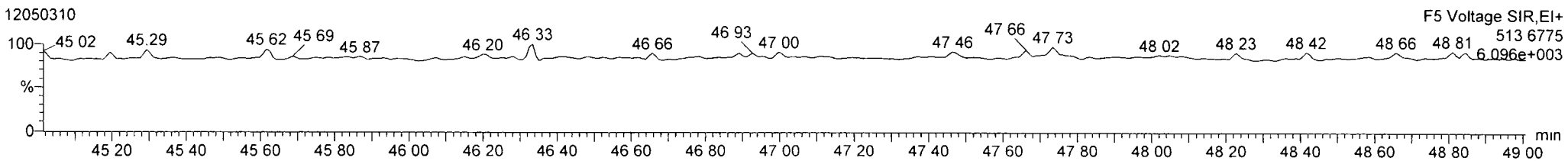


FUNCTION5 DCDPE



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HR-GC/MS Analyst Notes / Corrective Action Log

ARI Project ID: UR81, U318 Client ID: Anchor

ARI SOP: **806S** (Dioxins)

Parameter(s): 1613

Instrument: **AutoSpec01**

Curve Date: 5/3/12 Analysis Start Date: 5/10/12

Internal Standard Meets Criteria?	YES / NO	Method Blank in Control?	YES / NO
Extraction Std Recovery in Control?	YES / NO	IPR / OPR Recovery in Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes /NO
Special Analysis Criteria Met?	YES / NO / NA		

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: [illegible] **Date:** 5/14/12

Reviewer: [illegible] **Date:** 5/14

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 5/10/12 Analysis: Dioxins Analyst: JH

GC Program: 8290C Column No: 985165 Column Type: RTX-Dioxin2

Inj Vol: 1 ul Instrument Tune (IPR): 10K8290B Detector Voltage: 350

Resolution Check Files: 10:06, 17:33, 01:34 Curve Date: 5/3/12

IS/SS	Ical/Ccal	LCS/ICV
I7436	I7214	
	1929-2	

#	Acq Date	Acq Time	Name	ID	Pre ..	RT	IS AREA	Comments
1	10-May-12	10 15.31	12051002	CS3	26 3	26 2	2556670	
2	10-May-12	11 06 05	12051003	TETRA RES	26.3			
3	10-May-12	12 10 06	12051004	UR81MBS	26 3	26 2	2937926	
4	10-May-12	13 00 28	12051005	UR81OPR	26.3	26 2	4168255	
5	10-May-12	13 58 35	12051006	UR81A	26 3	26 2	4706893	
6	10-May-12	14.48 55	12051007	UR81B	26 3	26 2	6283150	
7	10-May-12	15 41 01	12051008	UR81C	26 3	26 2	5062340	
8	10-May-12	16:33 15	12051009	CS3	26 3	26.2	2885178	
9	10-May-12	17 33:33	12051010	UR81D	26 3	26.2	5427586	
10	10-May-12	18 29 00	12051011	UR81E	26 3	26 2	6071244	
11	10-May-12	19 20:10	12051012	UR81F	26 3	26 2	5852962	
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JH 5/11/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN.qld
Last Altered: Thursday, May 10, 2012 11:11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M ..	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303 9016	26 377	26.378	309475	309475	0 866	bb	97.8	0 79	0 77	1116 4	NO	9.778	9 778
2	2	12378-PeCDF	339.8597	30 517	30 516	1132411	1132411	0 907	bd	98.6	1 54	1 55	2029 3	NO	49.286	49 286
3	3	23478-PeCDF	339.8597	31.854	31 854	1113134	1113134	0 936	bd	100.9	1 53	1.55	2016 5	NO	50.459	50 459
4	4	123478-HxCDF	373 8208	35.515	35.504	815943	815943	1 082	bd	100.8	1 21	1.24	995 4	NO	50.390	50.390
5	5	234678-HxCDF	373.8208	36 600	36.600	852181	852181	1.070	bd	99.3	1.23	1.24	969.2	NO	49.664	49 664
6	6	123678-HxCDF	373.8208	35 658	35.668	1008985	1008985	1.048	dd	97.6	1.20	1.24	1051.2	NO	48.813	48.813
7	7	123789-HxCDF	373.8208	37 718	37.719	655466	655466	1.020	bb	100.6	1.27	1 24	697.3	NO	50.314	50.314
8	8	1234678-HpCDF	407.7818	39.790	39.788	841612	841612	1 214	bd	100.0	0.99	1.05	1038.6	NO	50.005	50.005
9	9	1234789-HpCDF	407.7818	42.530	42.521	605468	605468	1 254	bd	99.7	1 04	1.05	608.4	NO	49.844	49.844
10	10	OCDF	441.7428	47 888	47.868	1092795	1092795	1.105	bd	105.3	0.91	0.89	389.3	NO	105.271	105.271
11	11	2378-TCDD	319.8965	27.020	27.003	226993	226993	1.046	dd	98.3	0 74	0 77	745 0	NO	9.834	9.834
12	12	12378-PeCDD	355.8546	32.106	32.094	704308	704308	0.973	bb	97 1	1 54	1.55	1572.2	NO	48 531	48 531
13	13	123478-HxCDD	389.8157	36.732	36 743	550886	550886	0.935	bd	102 2	1 24	1 24	1012 9	NO	51 085	51.085
14	14	123678-HxCDD	389 8157	36.863	36 853	680614	680614	0.878	dd	102.1	1.20	1 24	996.6	NO	51.034	51.034
15	15	123789-HxCDD	389 8157	37 291	37.247	541201	541201	0 839	dd	96.6	1.15	1.24	817.1	NO	48.292	48.292
16	16	1234678-HpCDD	423.7766	41 621	41 611	525579	525579	0 974	bd	102.6	0.99	1.05	613.7	NO	51.309	51.309
17	17	OCDD	457 7377	47.601	47 597	915743	915743	0 950	bd	102.6	0 89	0 89	936.8	NO	102.622	102 622
18	18	13C-2378-TCDF	315 9419	26 362	26.362	3654481		1 484	bd	96.3	0 76	0 77	7017.5	NO	96 293	
19	19	13C-12378-PeCDF	351 9000	30 495	30.504	2533363		1.048	bd	94.5	1 57	1.55	2658.7	NO	94 543	
20	20	13C-23478-PeCDF	351.9000	31 832	31.841	2357211		1 003	bb	91 9	1 56	1.55	2659.9	NO	91 888	
21	21	13C-123478-HxCDF	383.8639	35.493	35.493	1496679		1.186	bd	110.4	0.52	0.51	877.1	NO	110.423	
22	22	13C-123678-HxCDF	383.8639	35.647	35.647	1971719		1 315	db	131 2	0.52	0.51	960.1	NO	131.152	
23	23	13C-234678-HxCDF	383.8639	36.578	36.578	1603939		1 223	bb	114.7	0 54	0.51	868.3	NO	114.693	
24	24	13C-123789-HxCDF	383.8639	37.708	37 686	1277088		1 056	bb	105.7	0 50	0 51	658 5	NO	105.739	
25	25	13C-1234678-HpCDF	417.8253	39.768	39 768	1385849		1 011	bb	119.9	0.43	0 44	1144 8	NO	119 857	
26	26	13C-1234789-HpCDF	417 8253	42.508	42.519	968625		0 741	bb	114 4	0 46	0.44	706.1	NO	114 414	
27	27	13C-1234-TCDD	331.9368	26 183	26.272	2556670		1.000	bb	100 0	0 79	0.77	3780.3	NO	100 000	
28	28	13C-2378-TCDD	331.9368	26 990	27.005	2207160		0.956	bb	90 3	0 78	0.77	2876.0	NO	90 267	
29	29	13C-12378-PeCDD	367.8949	32.084	32 093	1491109		0 663	bd	87.9	1.63	1 55	2398.0	NO	87.907	
30	30	13C-123478-HxCDD	401.8559	36.721	36.710	1152829		1 024	bd	98 5	1 24	1 24	2009.2	NO	98 488	
31	31	13C-123678-HxCDD	401.8559	36.841	36 841	1519361		1 113	db	119.5	1.23	1 24	2151 8	NO	119.451	
32	32	13C-1234678-HpCDD	435 8169	41.599	41 621	1051368		0 815	bd	112 8	1 03	1 05	1338 4	NO	112 826	
33	33	13C-OCDD	469 7779	47.583	47 637	1878478		0 717	bb	114.6	0 90	0 89	1056.2	NO	229 148	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN qld
Last Altered: Thursday, May 10, 2012 11.11.01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

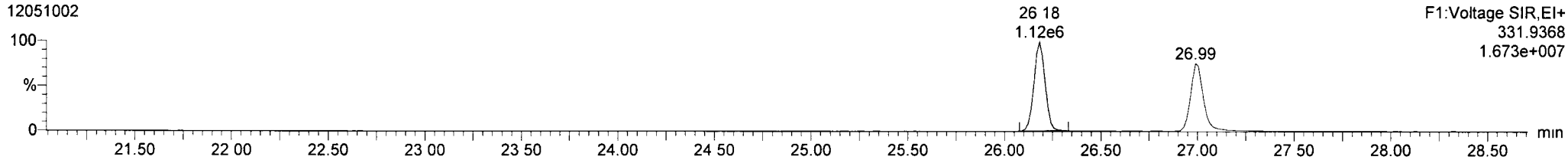
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.269	37 368	1143203		1 000	bb	100.0	1 18	1 24	1728 9	NO	100.000	
35	35	Total-tetrafurans	303 9016		25 420			0.866							32.857	32 857
36	36	Total-penta1	339.8597		28 230										80 060	80.085
37	37	Total-pentafurans	339 8597		30 810			0.921							148 744	151.356
38	38	Total-hexafurans	373 8208		35.800			1 055							265 085	265.085
39	39	Total-heptafurans	407.7818		41 200			1 234							99 850	99.884
40	40	Total-Furans	303.9016		0 000			1 050							731 867	734.539
41	41	Total-tetradioxins	319 8965		25 930			1.046							57 550	57.629
42	42	Total-pentadioxins	355.8546		30 980			0.973							180.550	180.640
43	43	Total-hexadioxins	389 8157		35 980			0 884							222.403	223.943
44	44	Total-heptadioxins	423 7766		41 030			0 974							114.810	115.264
45	45	Total-Dioxins	319.8965		0.000			0 942							677.936	680.098
46	46	Total-TEQ	319.8965		0.000										1409.803	1414 6 .
47	47	37CL-2378-TCDD	327.8847	27.020	26.995	238424		1 037		89.9			1052 0		8.991	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0 000										0 000	
51	51	FUNCTION4 PFK	430.9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0 000											
57	57	FUNCTION4 NCDPE	479 7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN.qld
Last Altered: Thursday, May 10, 2012 11:11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14.07:22 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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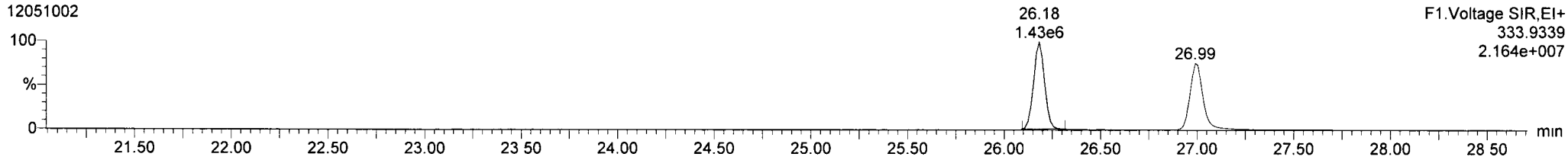
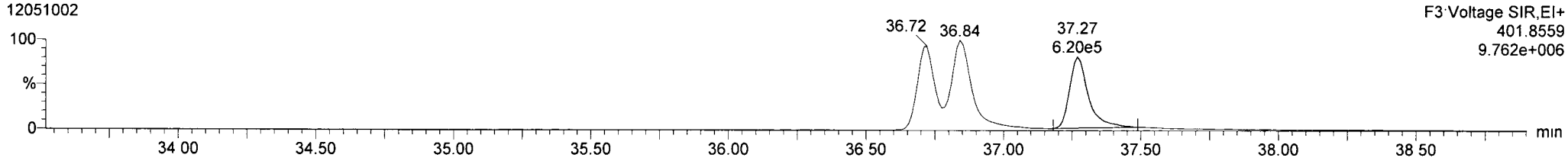


13C-123789-HxCDD



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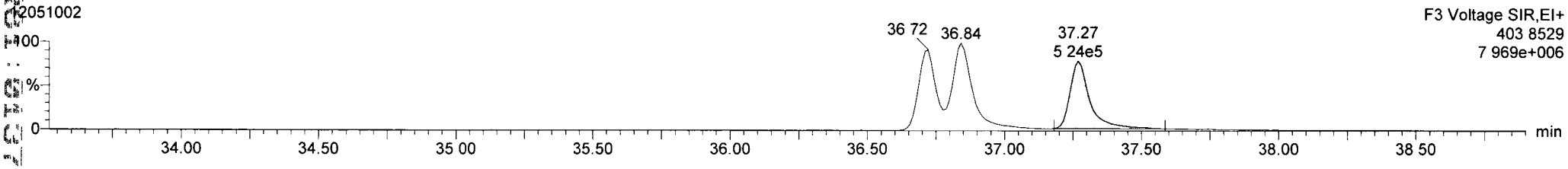
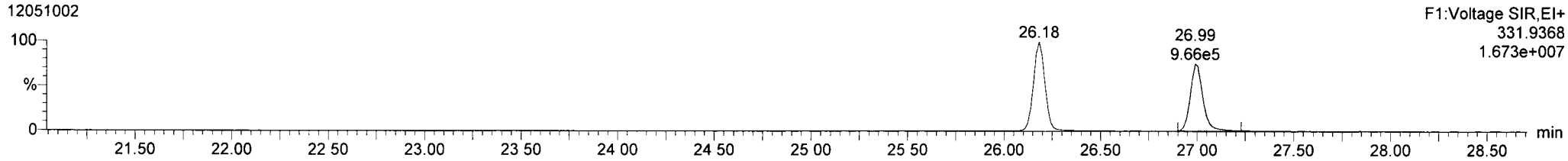


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN.qld
Last Altered: Thursday, May 10, 2012 11:11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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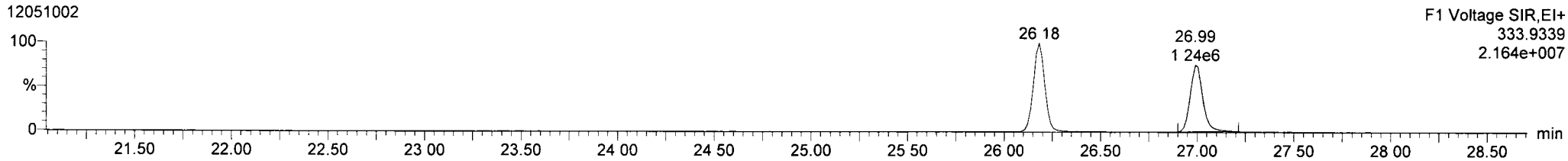
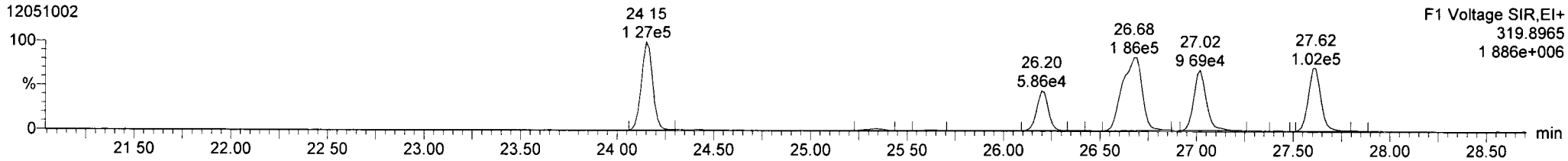
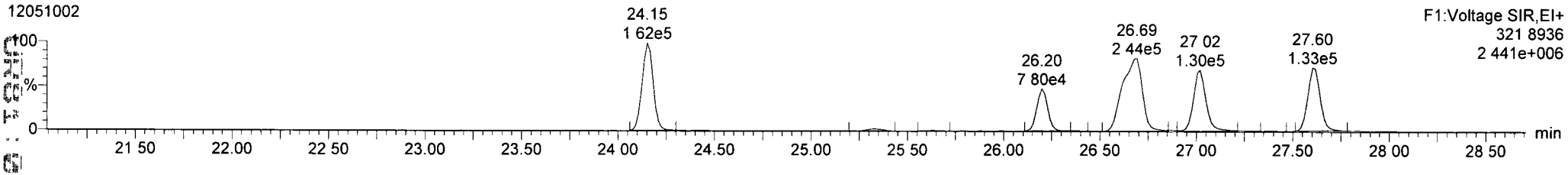


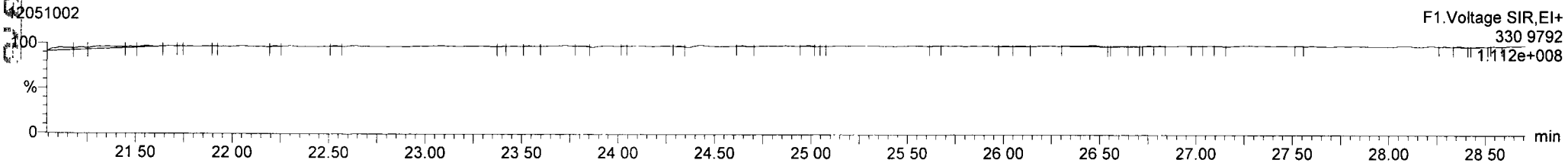
Total-tetradioxins



Total-tetradioxins



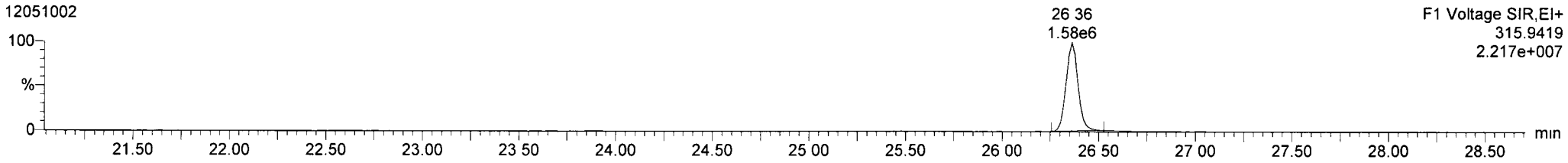
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN qld
Last Altered: Thursday, May 10, 2012 11.11.01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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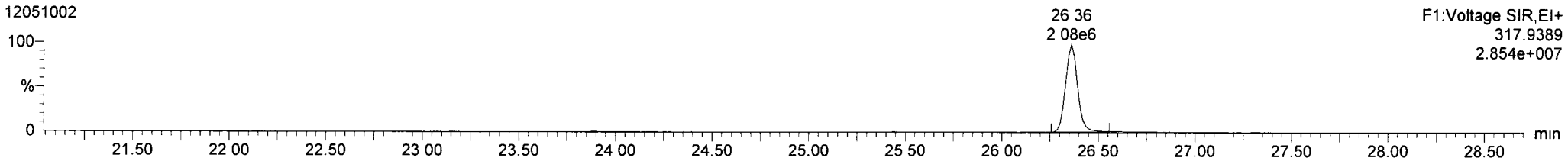
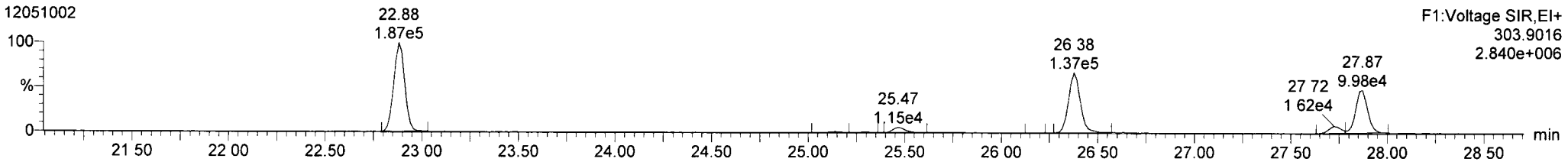
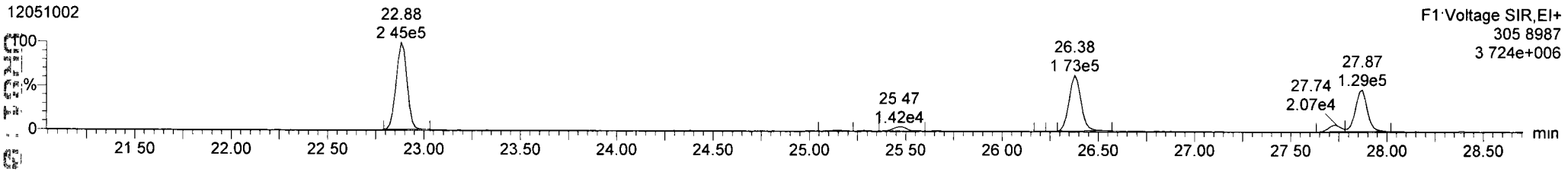


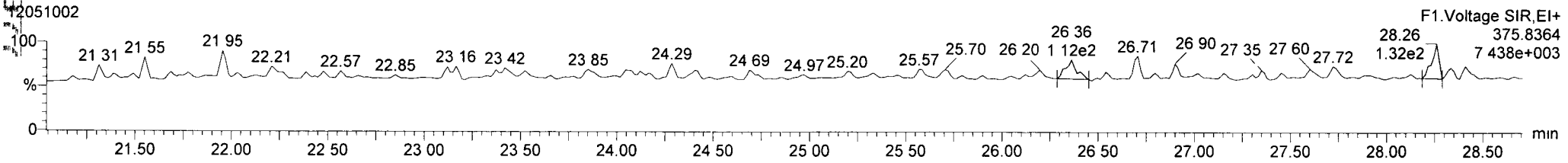
Total-tetrafurans



Total-tetrafurans



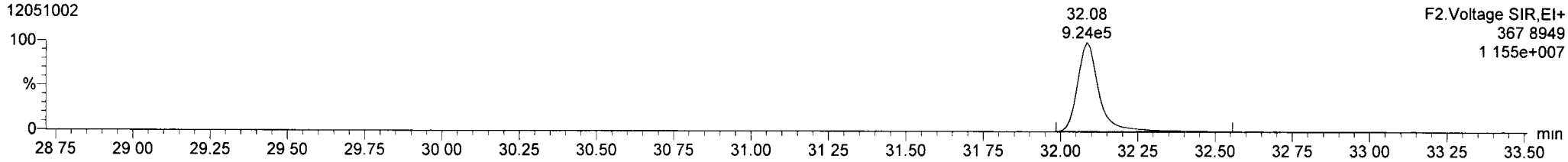
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN qld
Last Altered: Thursday, May 10, 2012 11.11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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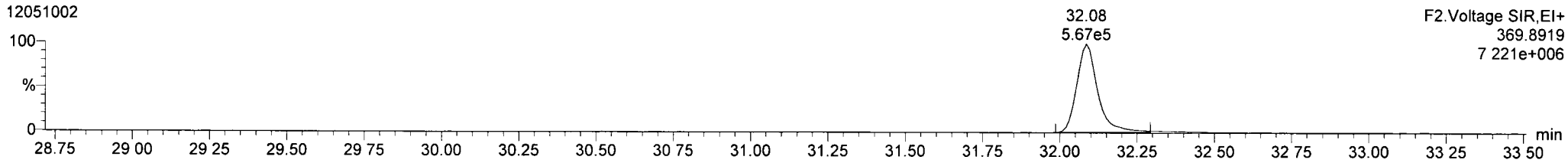
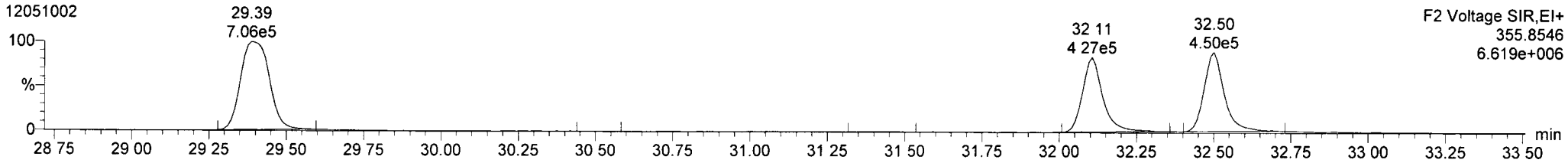
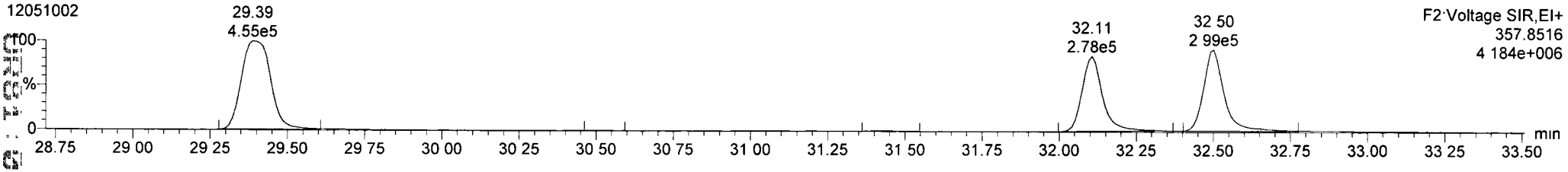


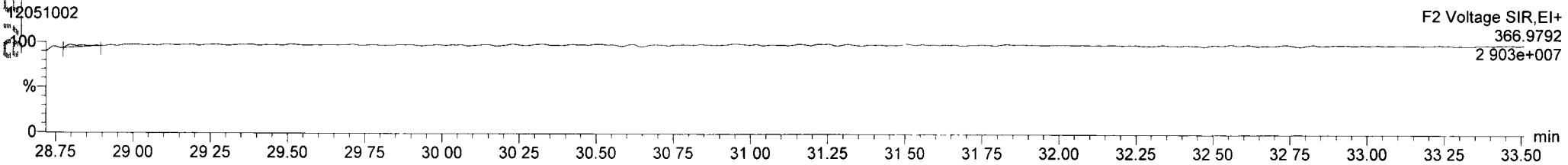
Total-pentadioxins



Total-pentadioxins



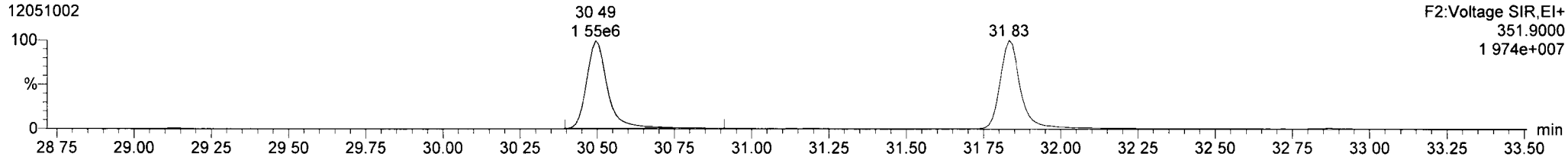
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN.qld
Last Altered: Thursday, May 10, 2012 11:11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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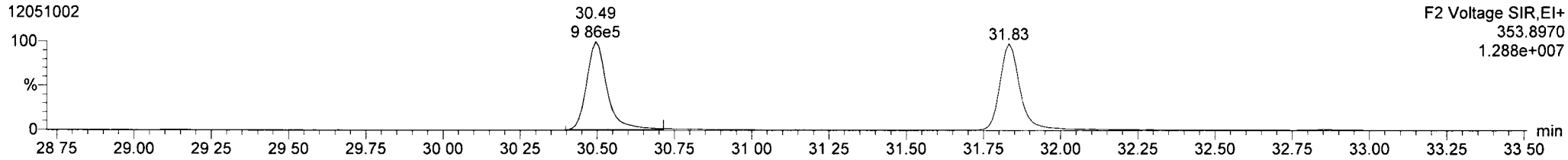
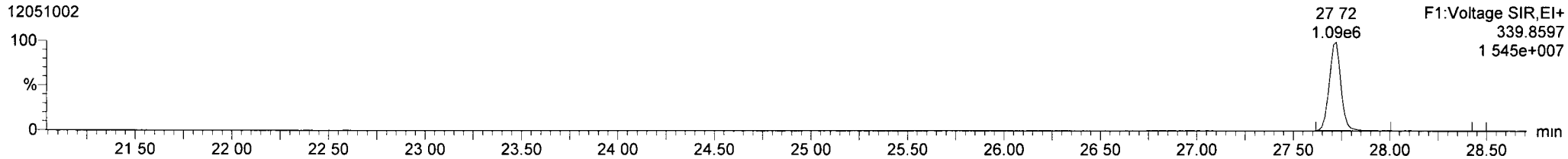
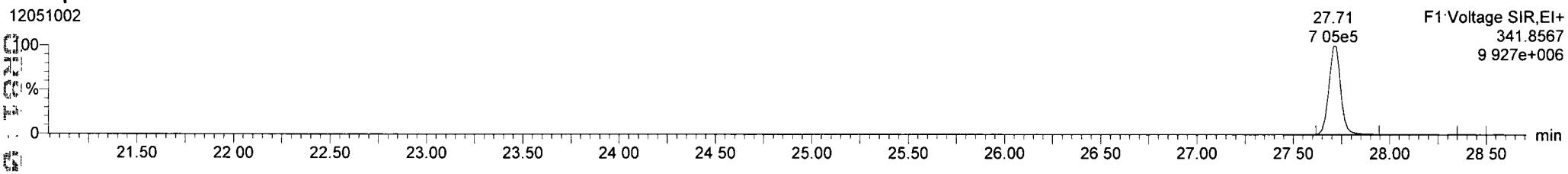


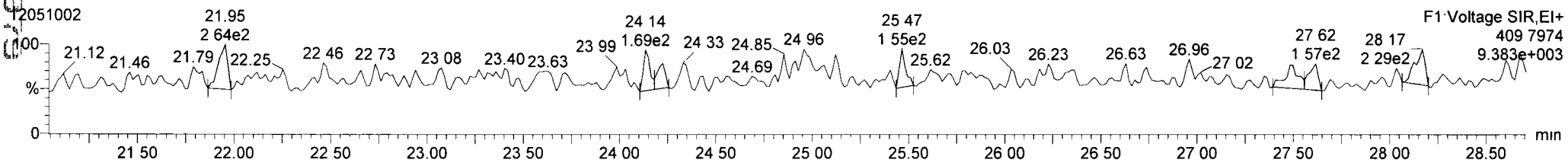
Total-penta1



Total-penta1



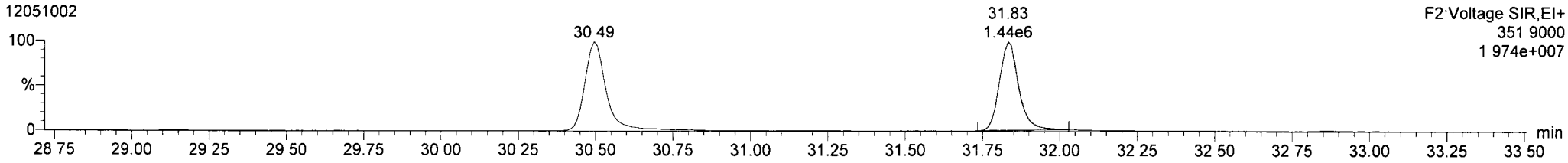
FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN qld
Last Altered: Thursday, May 10, 2012 11 11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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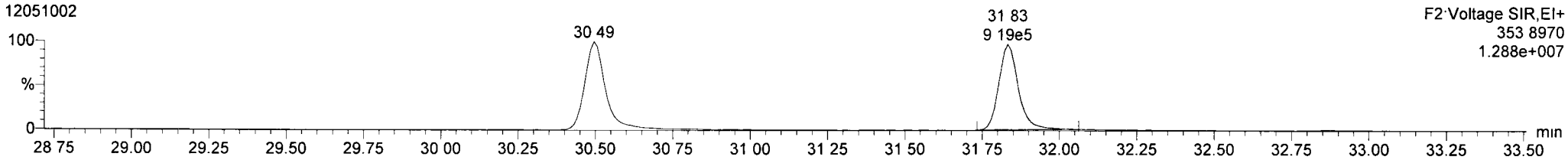
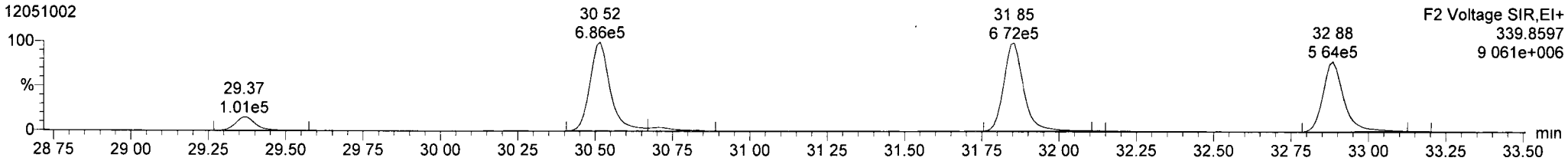
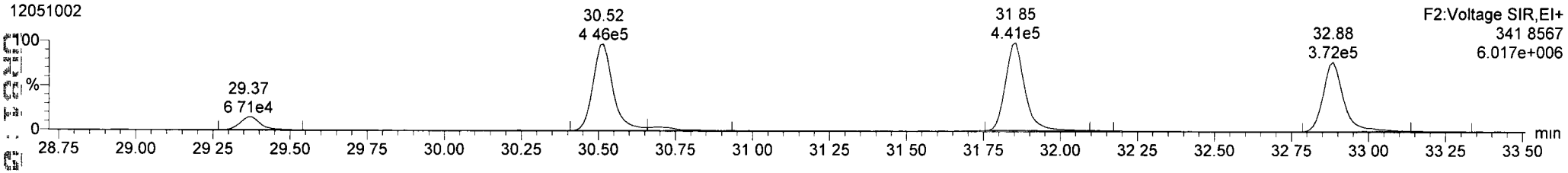


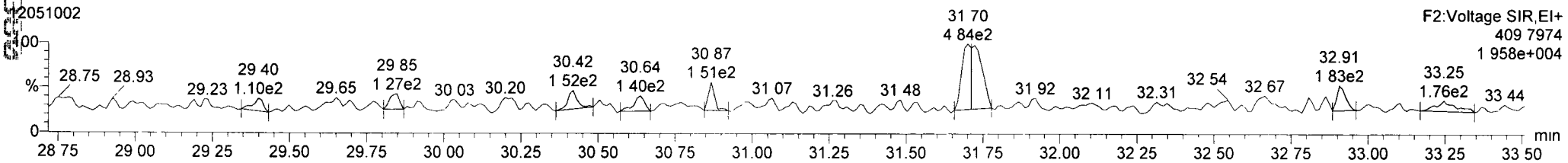
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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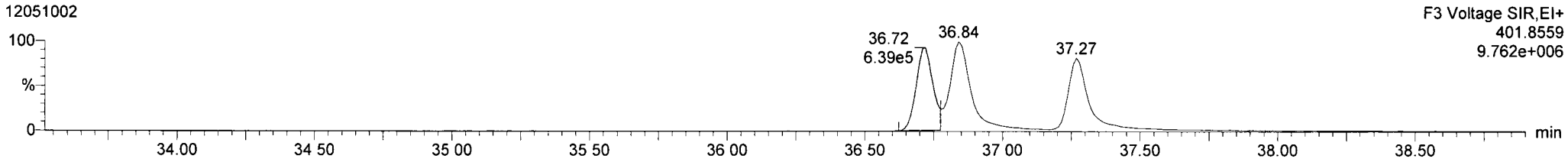
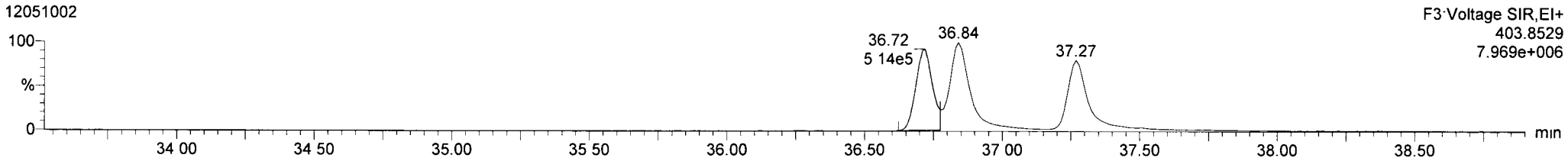
Last Altered: Thursday, May 10, 2012 11:11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



13C-123478-HxCDD



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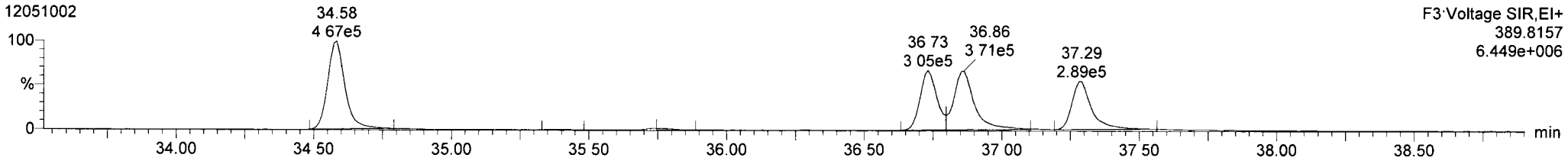
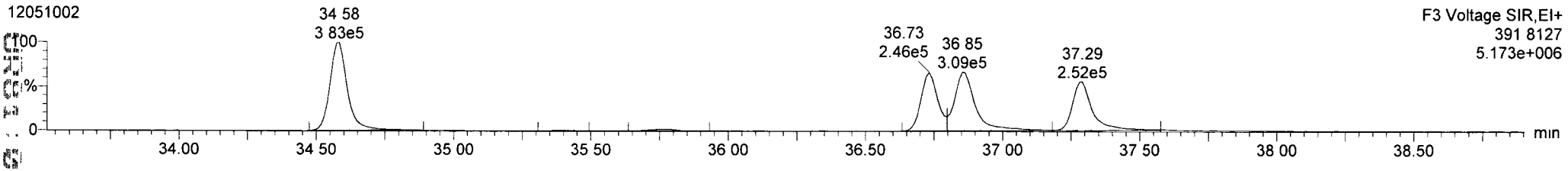
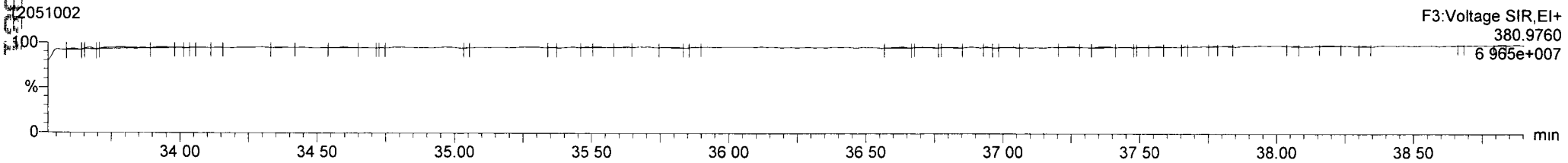


Total-hexadioxins



FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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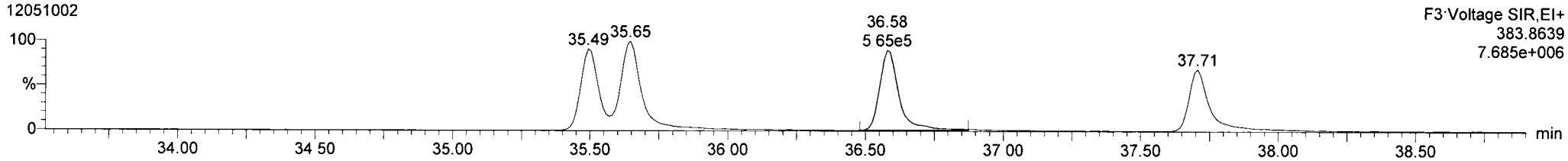
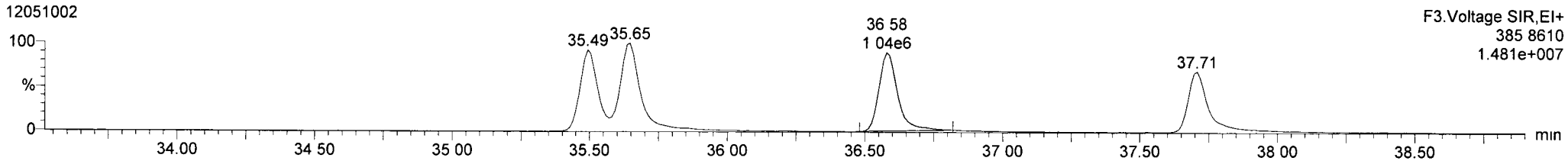
Printed: Friday, May 11, 2012 14:07 22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

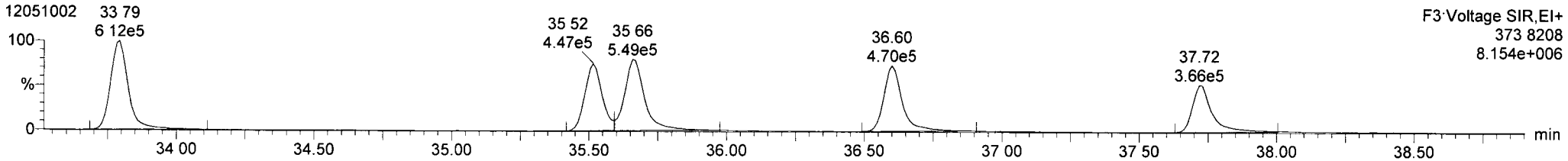
13C-234678-HxCDF



13C-234678-HxCDF



Total-hexafurans



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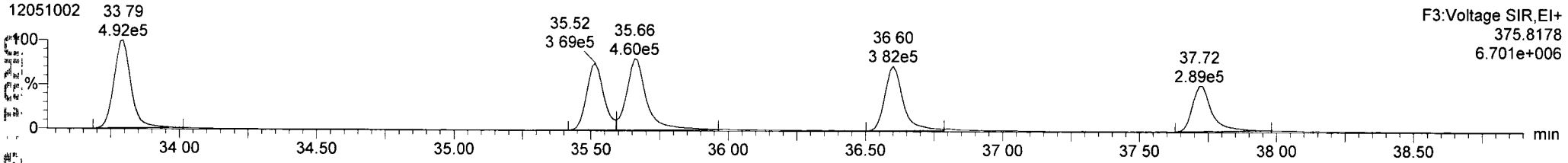
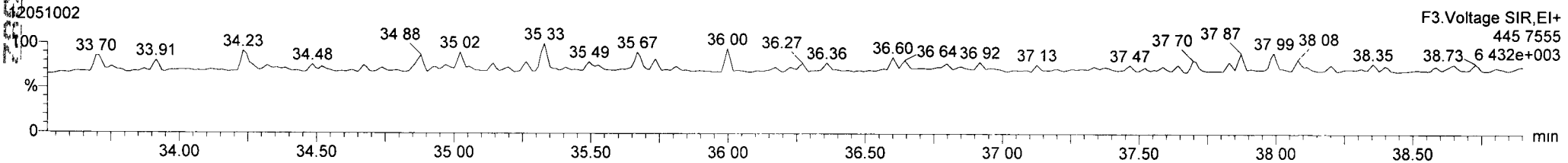


FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510OPEN.qld
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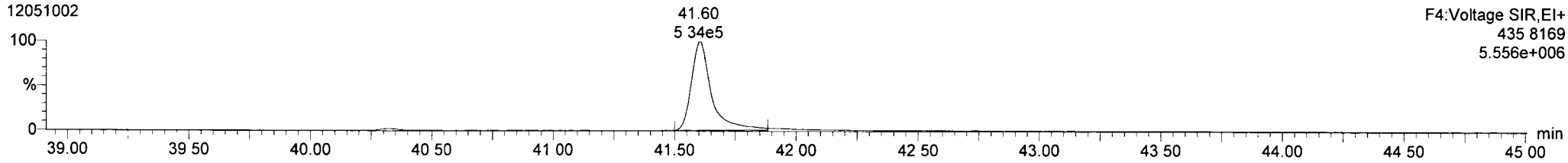
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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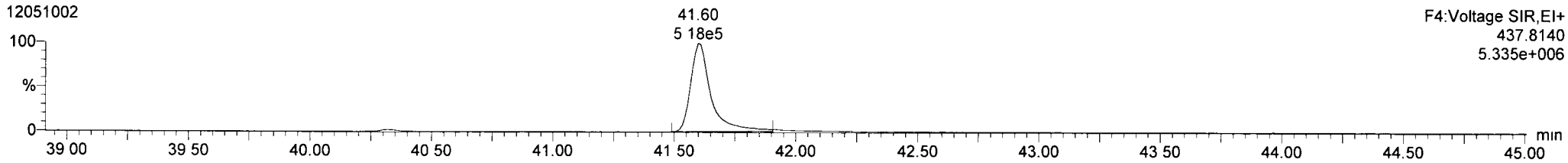

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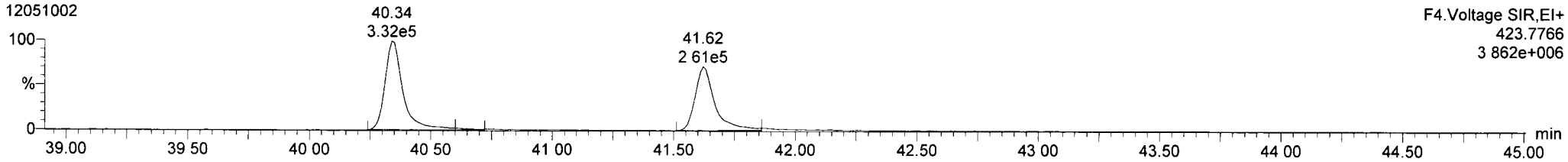
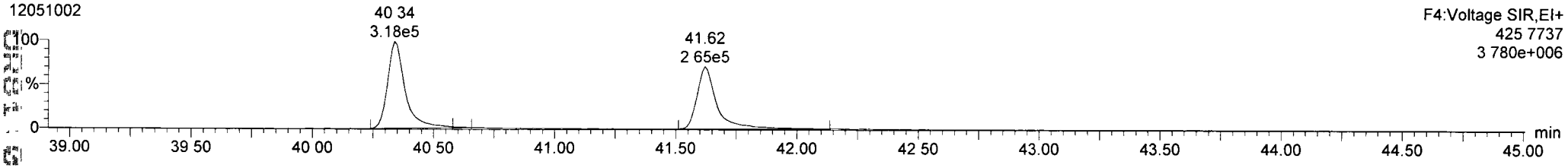
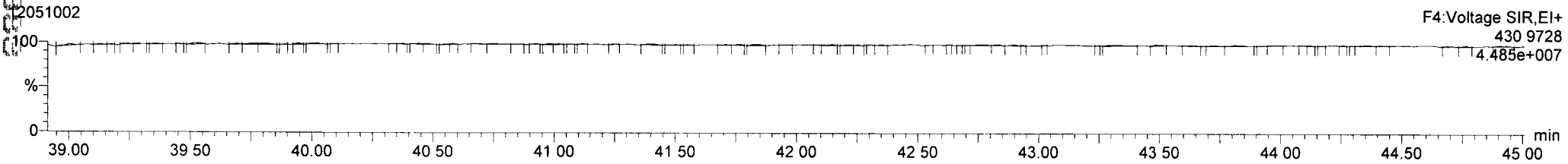


Total-heptadioxins



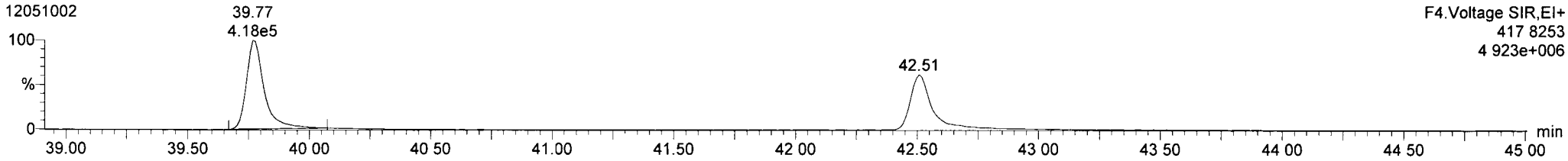
FUNCTION4 PFK



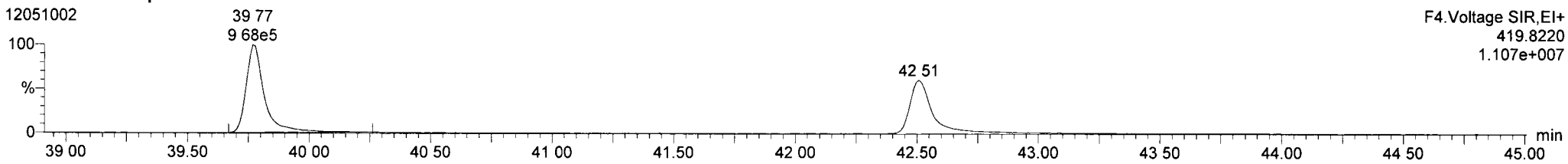
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN.qld
Last Altered: Thursday, May 10, 2012 11 11:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

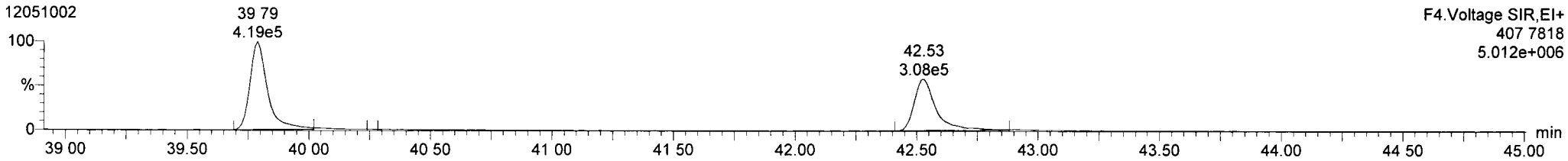
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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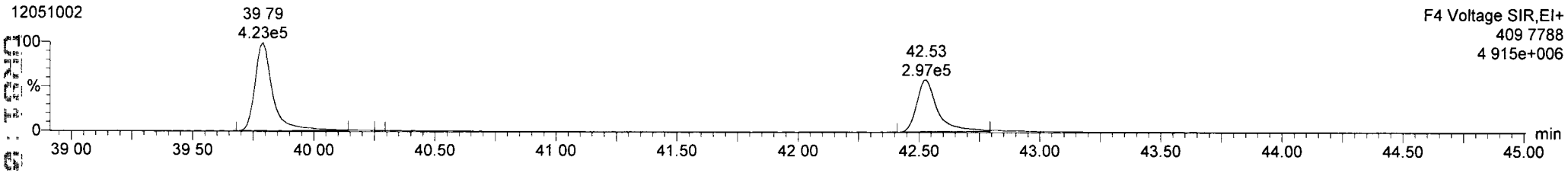
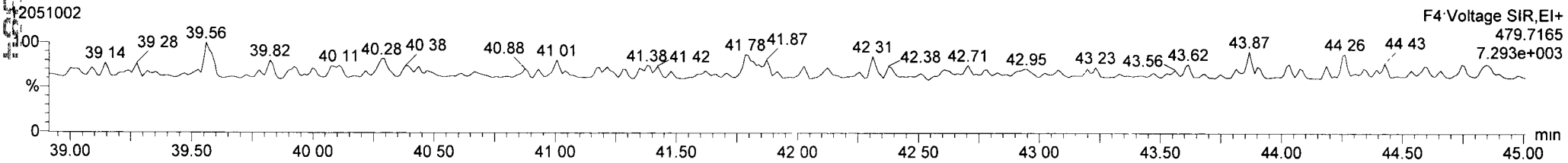


FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510OPEN.qld
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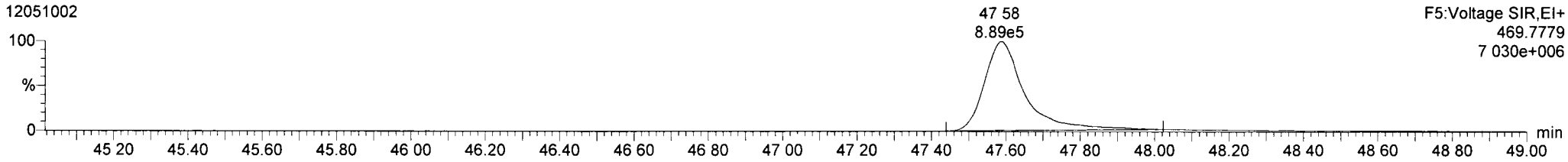
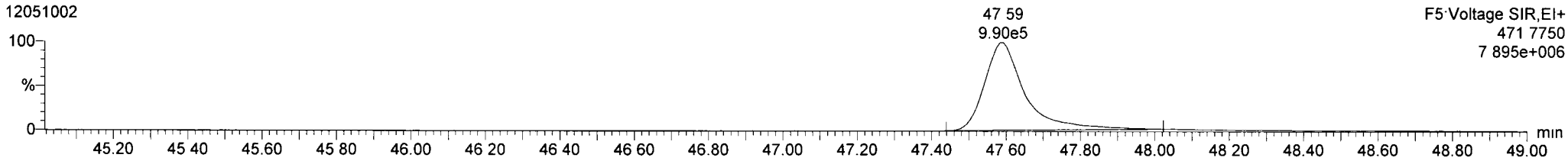
Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

Name: 12051002, Date: 10-May-2012, Time: 10:15:31, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-OCDD



13C-OCDD



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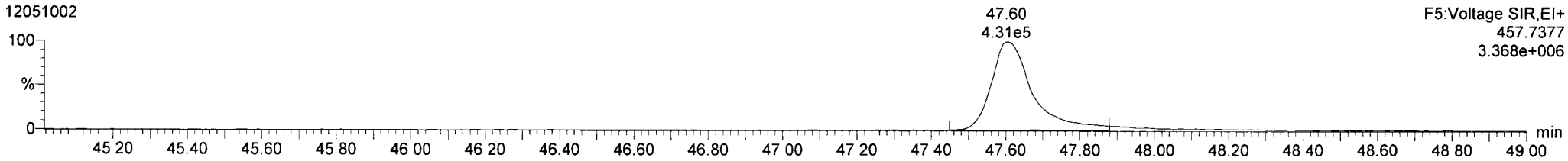
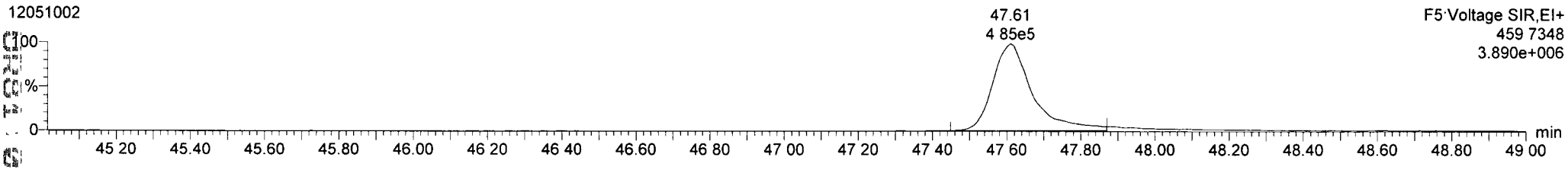
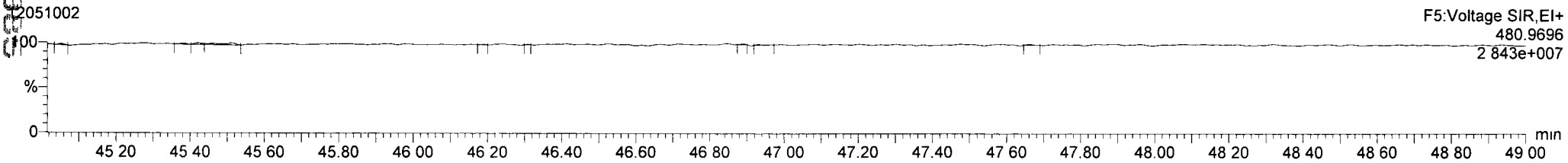


OCDD



FUNCTION5 PFK



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Printed: Friday, May 11, 2012 14:07:22 Pacific Daylight Time

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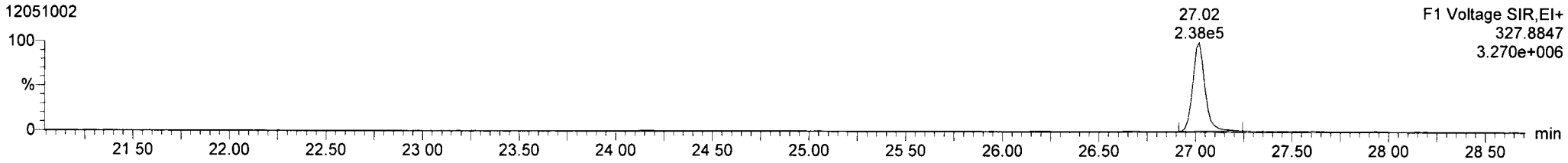
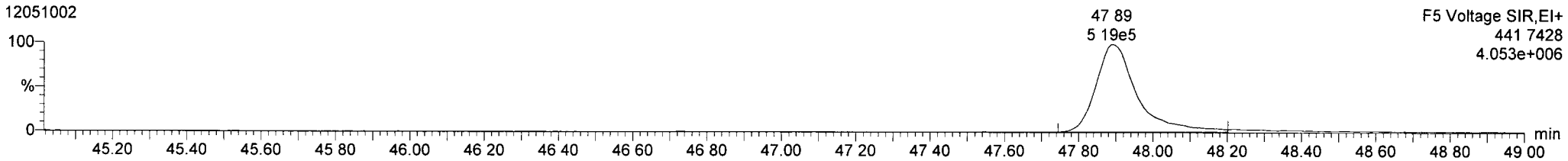
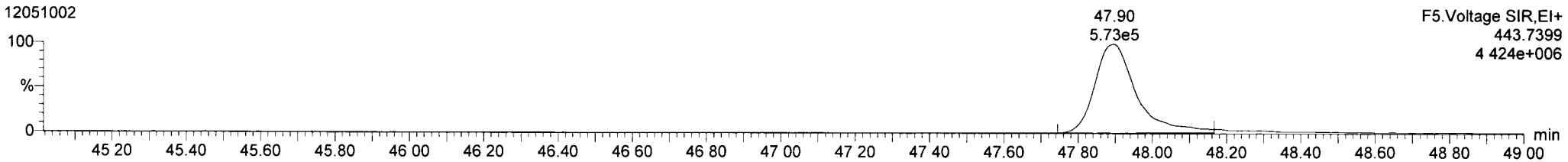
37CL-2378-TCDD



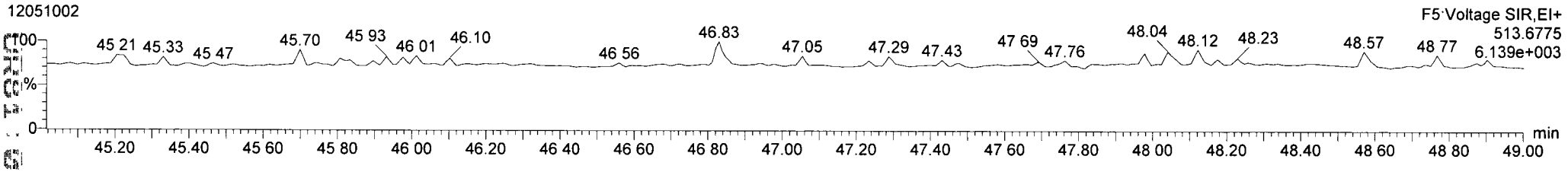
OCDF



OCDF



FUNCTION5 DCDPE



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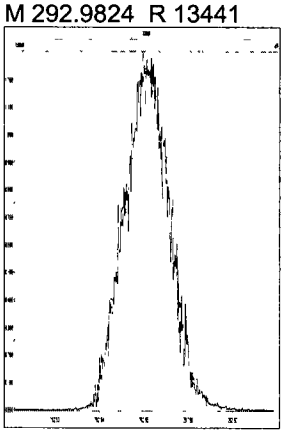
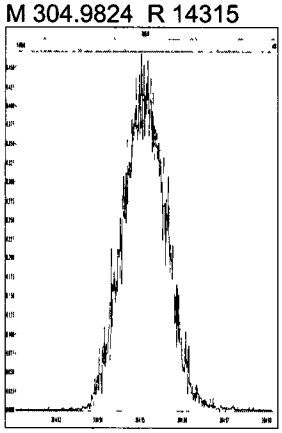
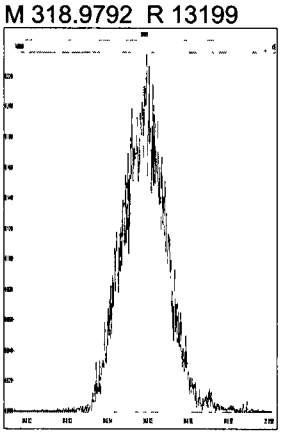
M 292.9824 R 13441



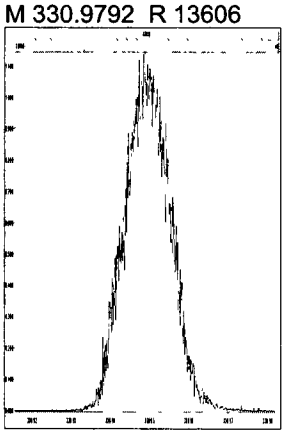
M 304.9824 R 14315



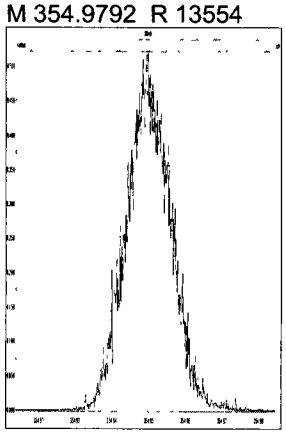
M 318.9792 R 13199



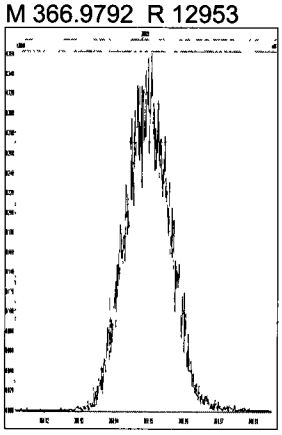
M 330.9792 R 13606



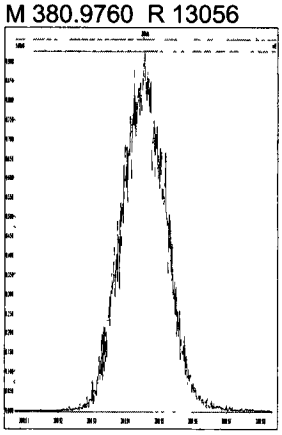
M 354.9792 R 13554



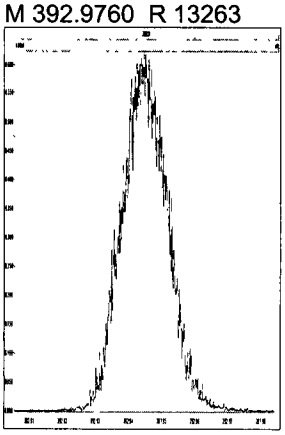
M 366.9792 R 12953



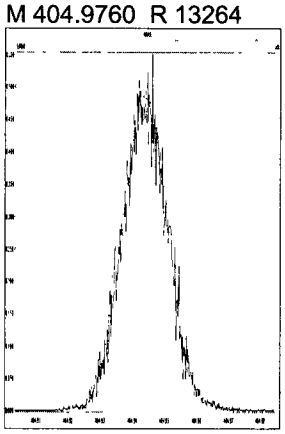
M 380.9760 R 13056



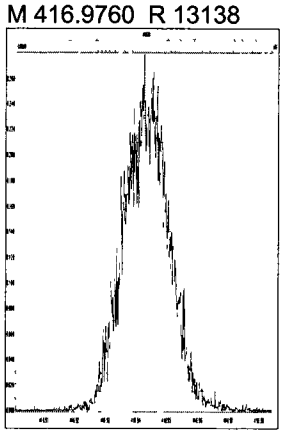
M 392.9760 R 13263



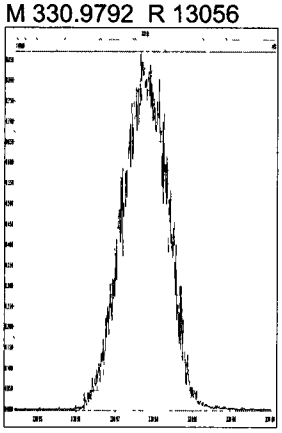
M 404.9760 R 13264



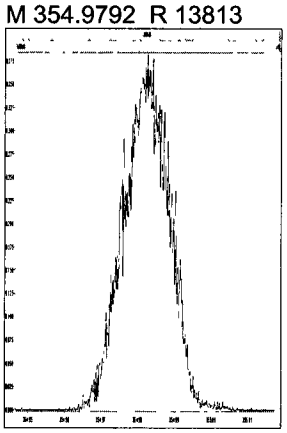
M 416.9760 R 13138



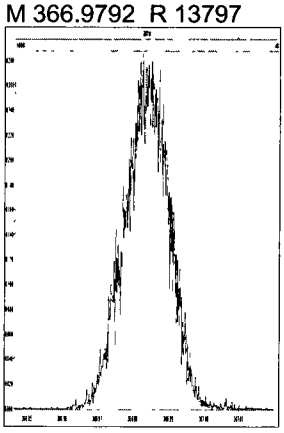
M 330.9792 R 13056



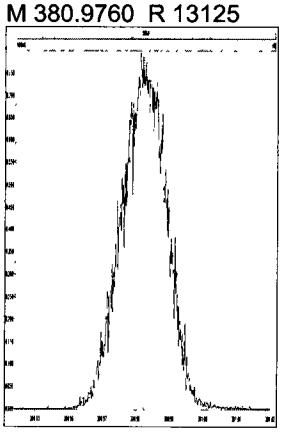
M 354.9792 R 13813



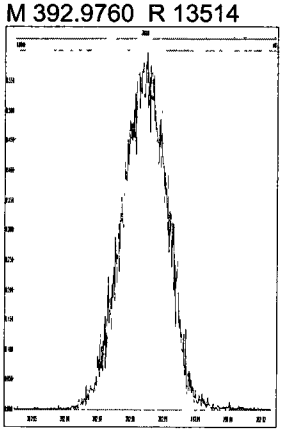
M 366.9792 R 13797



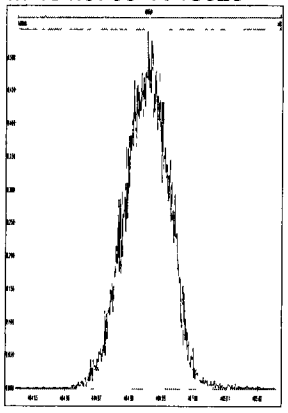
M 380.9760 R 13125



M 392.9760 R 13514



M 404.9760 R 13623



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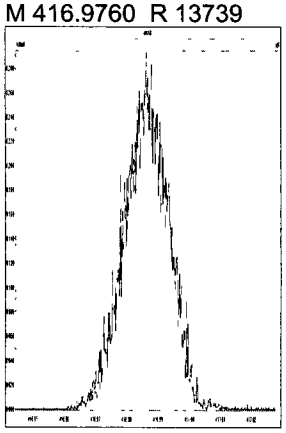
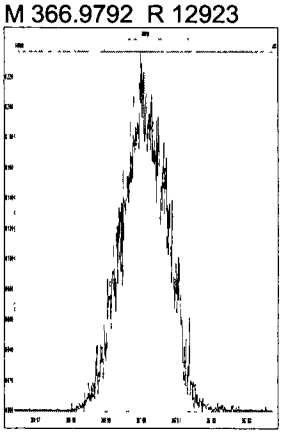
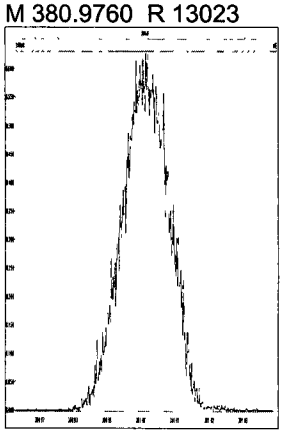
M 416.9760 R 13739



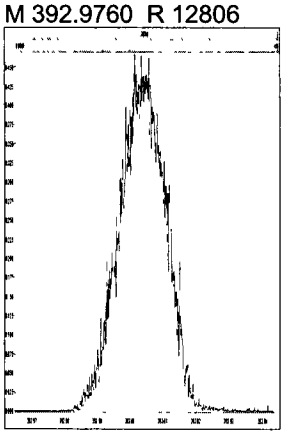
M 366.9792 R 12923



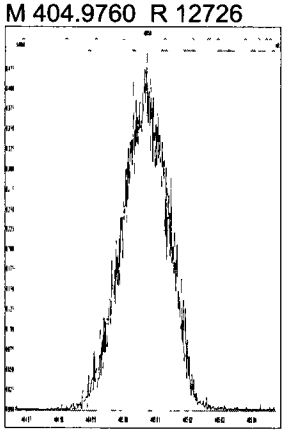
M 380.9760 R 13023



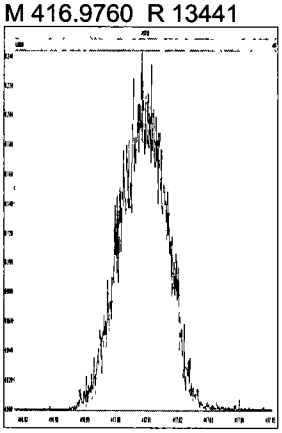
M 392.9760 R 12806



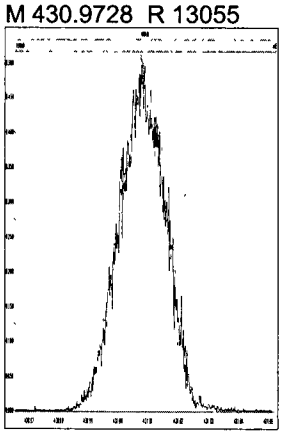
M 404.9760 R 12726



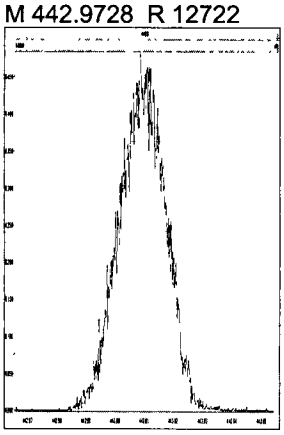
M 416.9760 R 13441



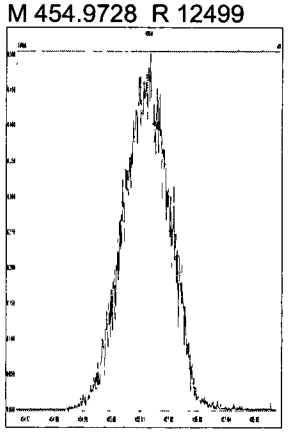
M 430.9728 R 13055



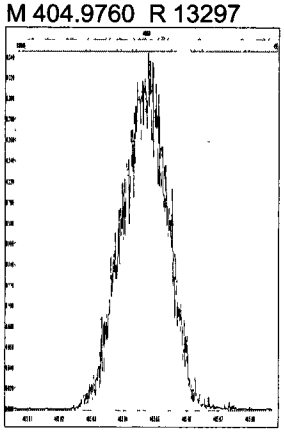
M 442.9728 R 12722



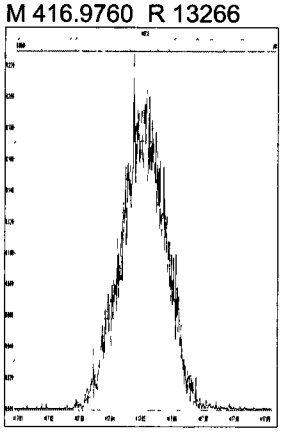
M 454.9728 R 12499



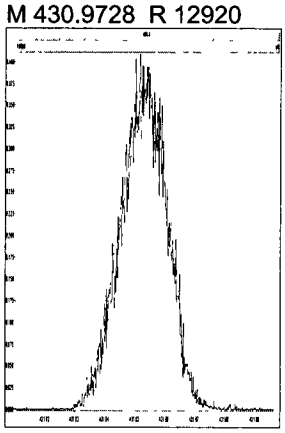
M 404.9760 R 13297



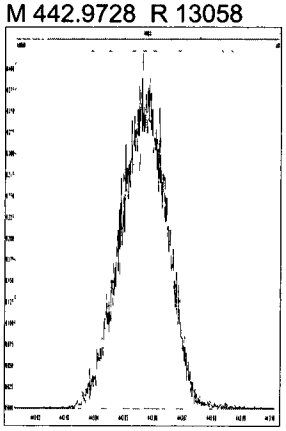
M 416.9760 R 13266



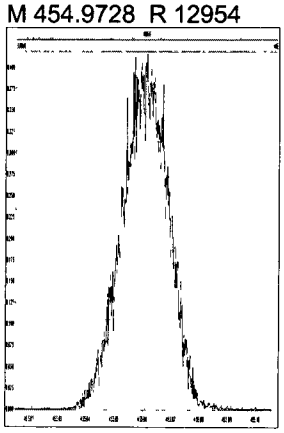
M 430.9728 R 12920



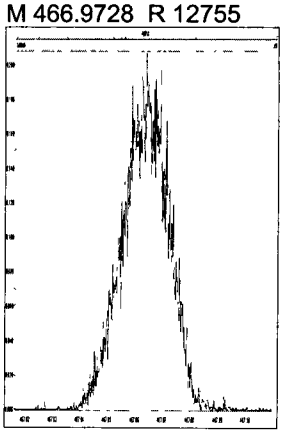
M 442.9728 R 13058



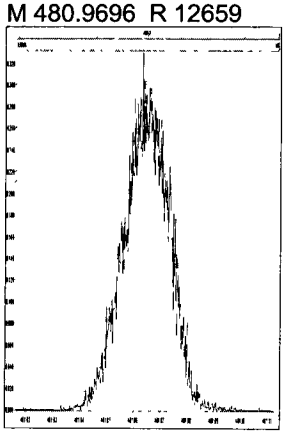
M 454.9728 R 12954



M 466.9728 R 12755



M 480.9696 R 12659



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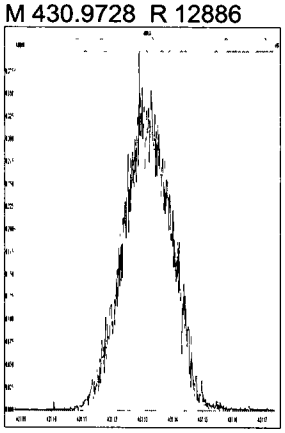
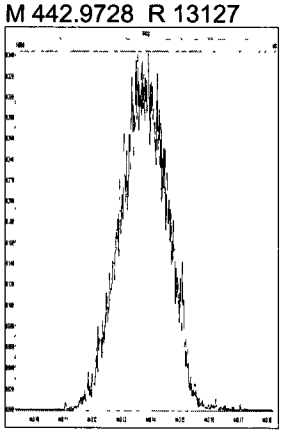
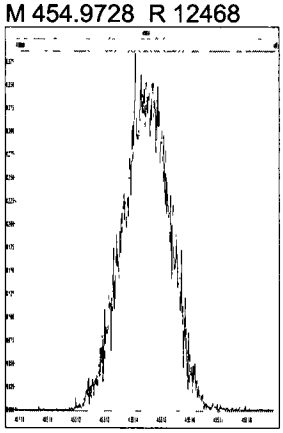
M 430.9728 R 12886



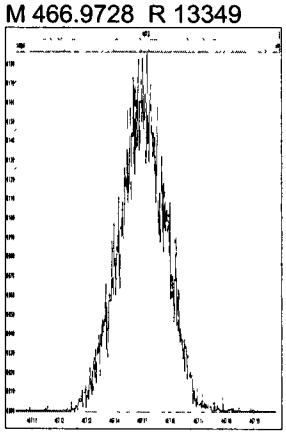
M 442.9728 R 13127



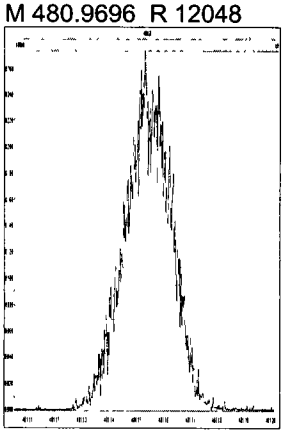
M 454.9728 R 12468



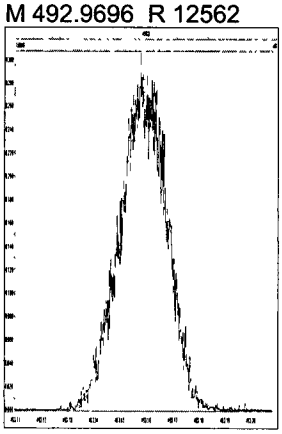
M 466.9728 R 13349



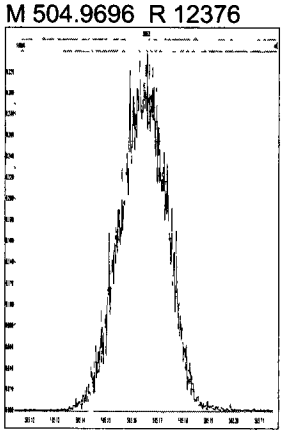
M 480.9696 R 12048



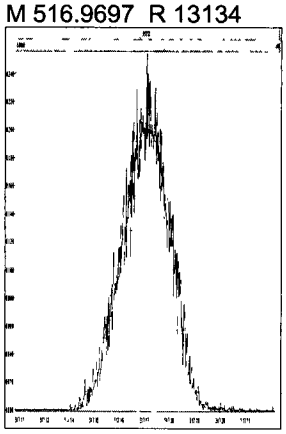
M 492.9696 R 12562

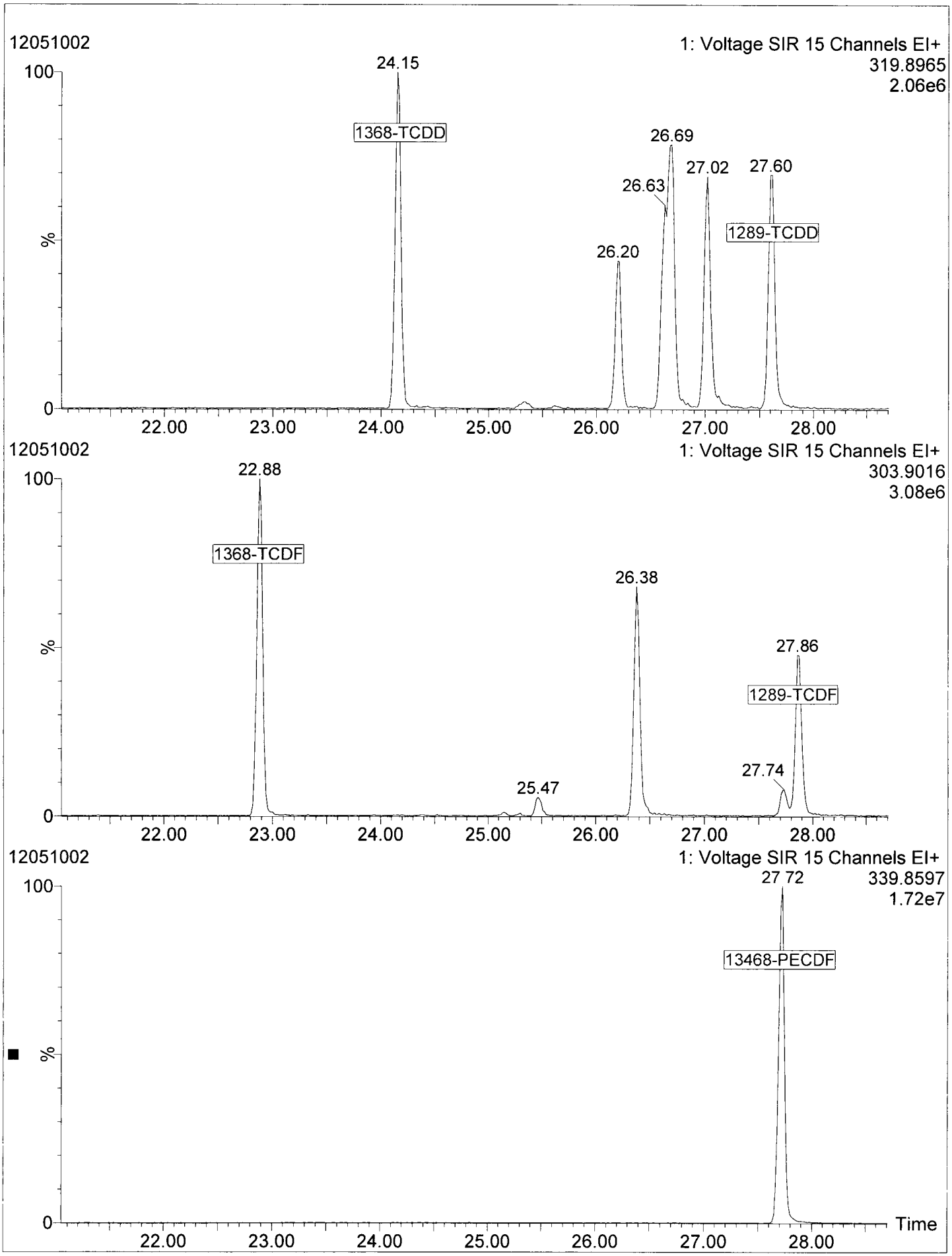


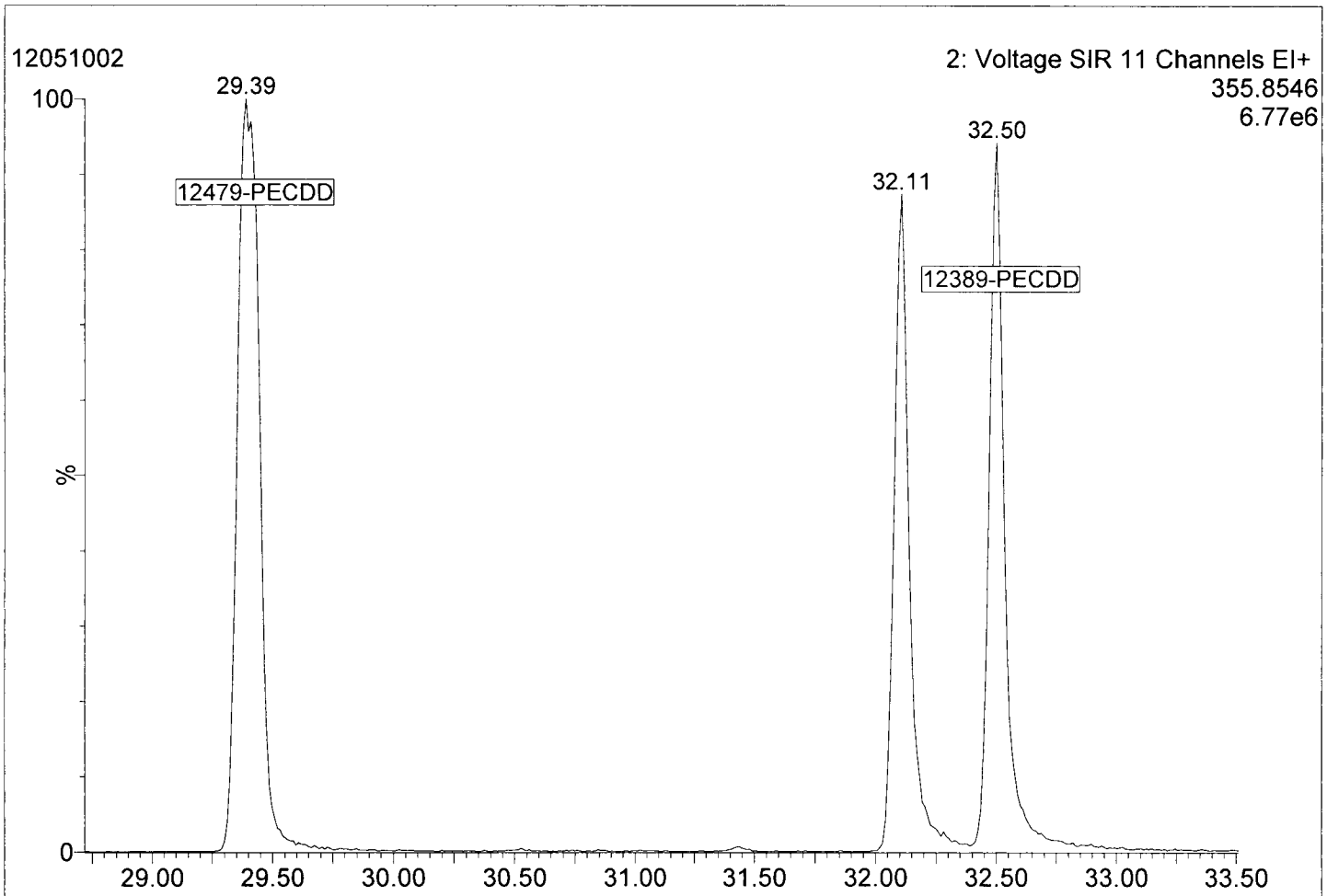
M 504.9696 R 12376

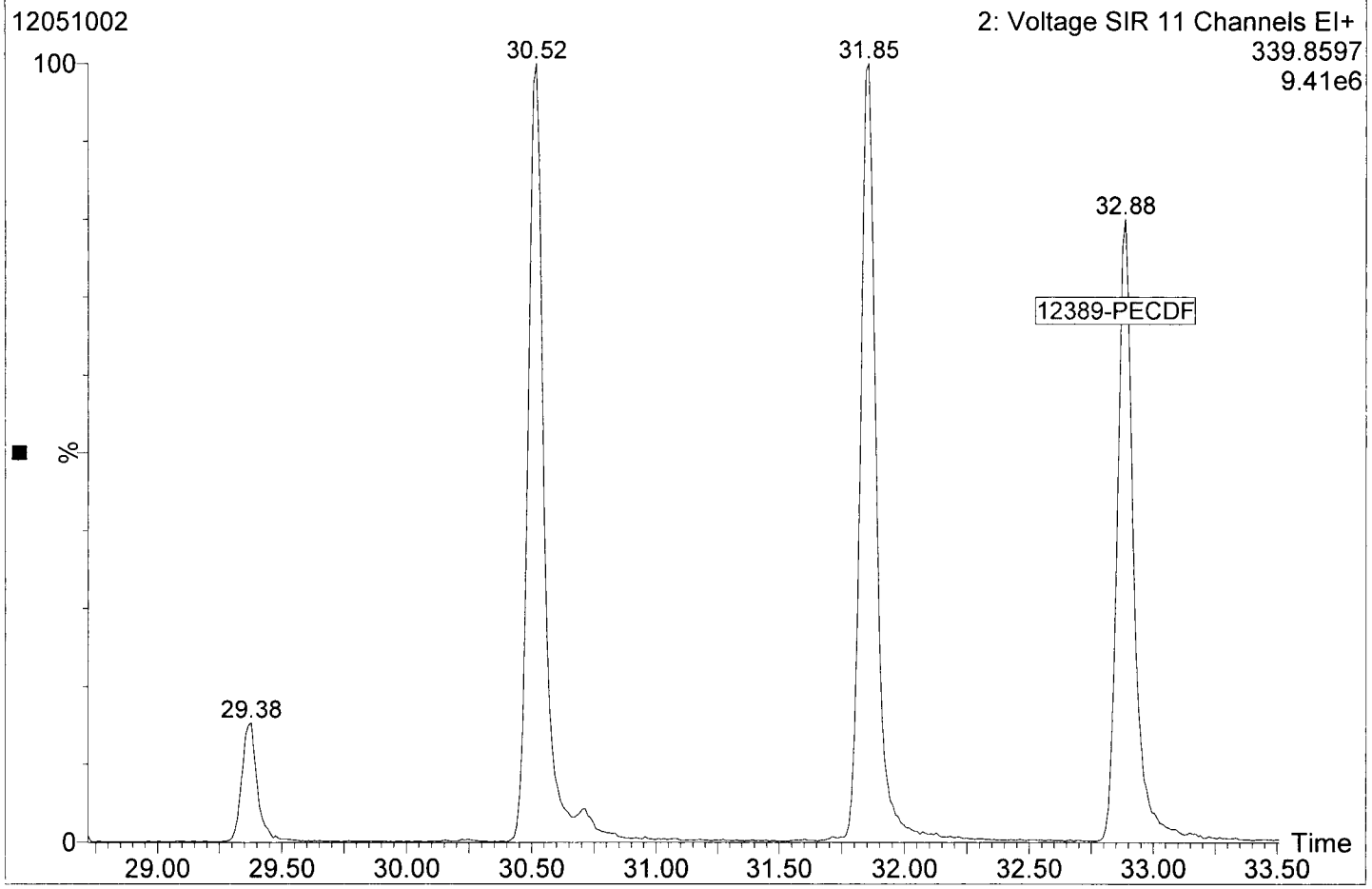


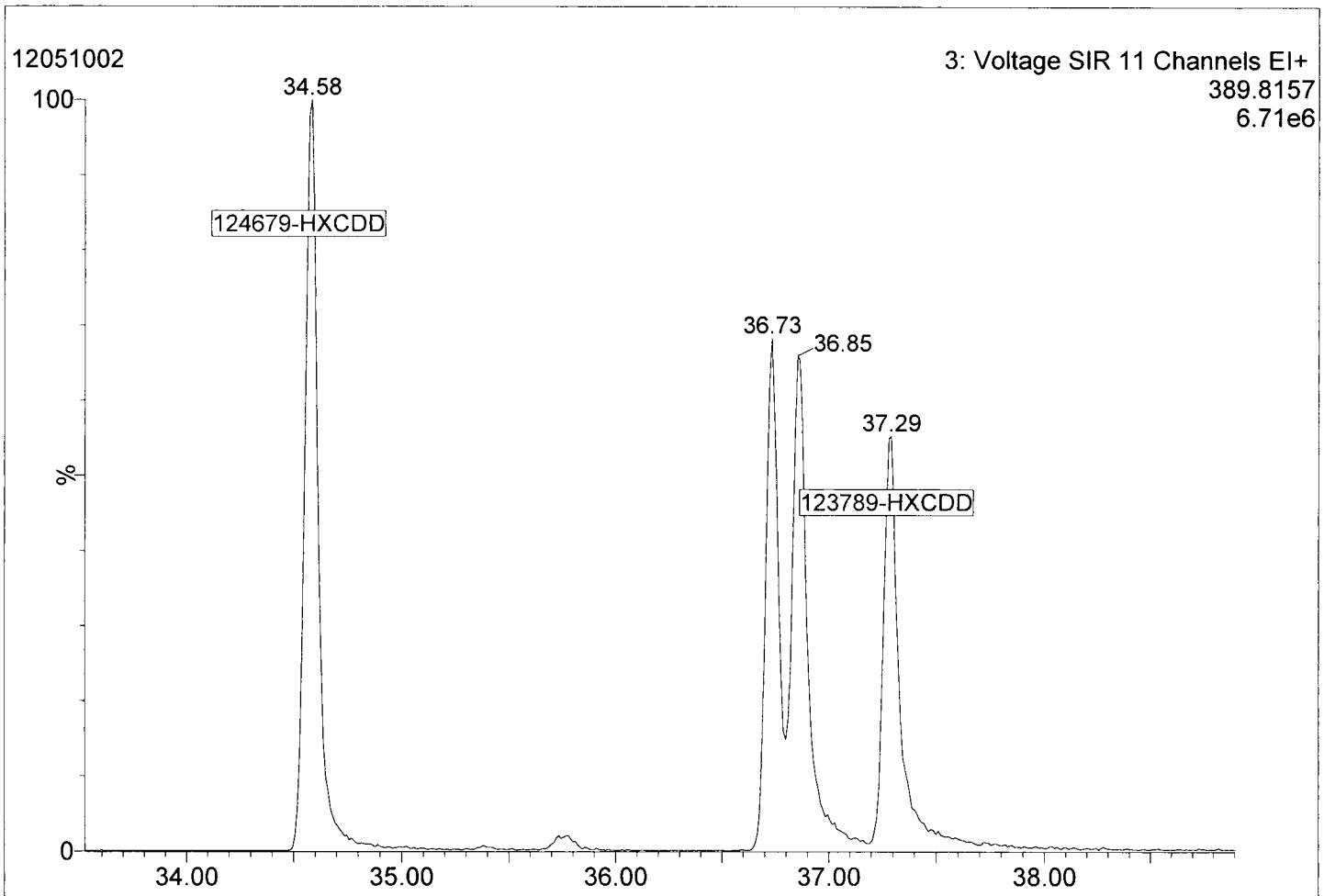
M 516.9697 R 13134

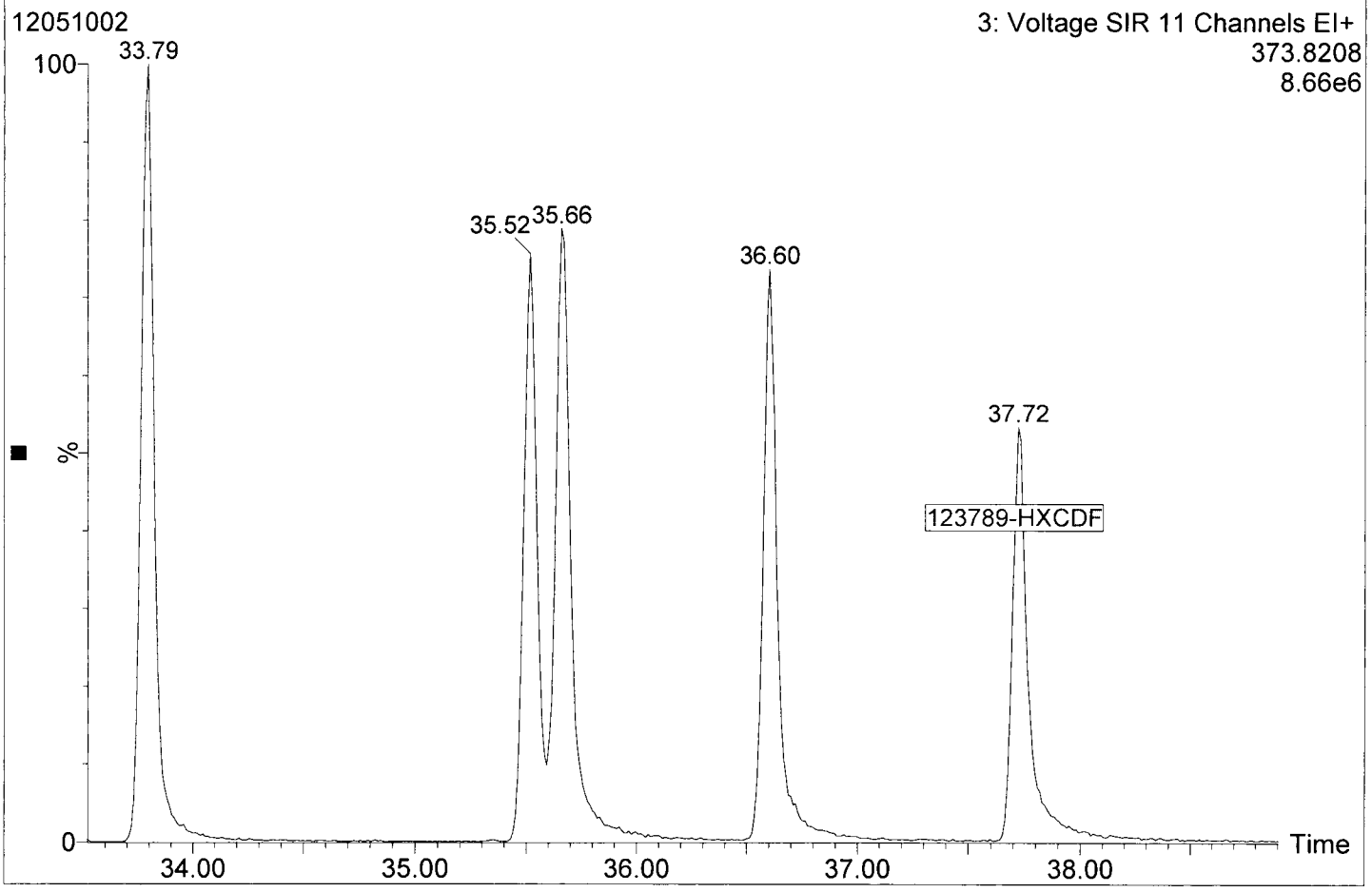


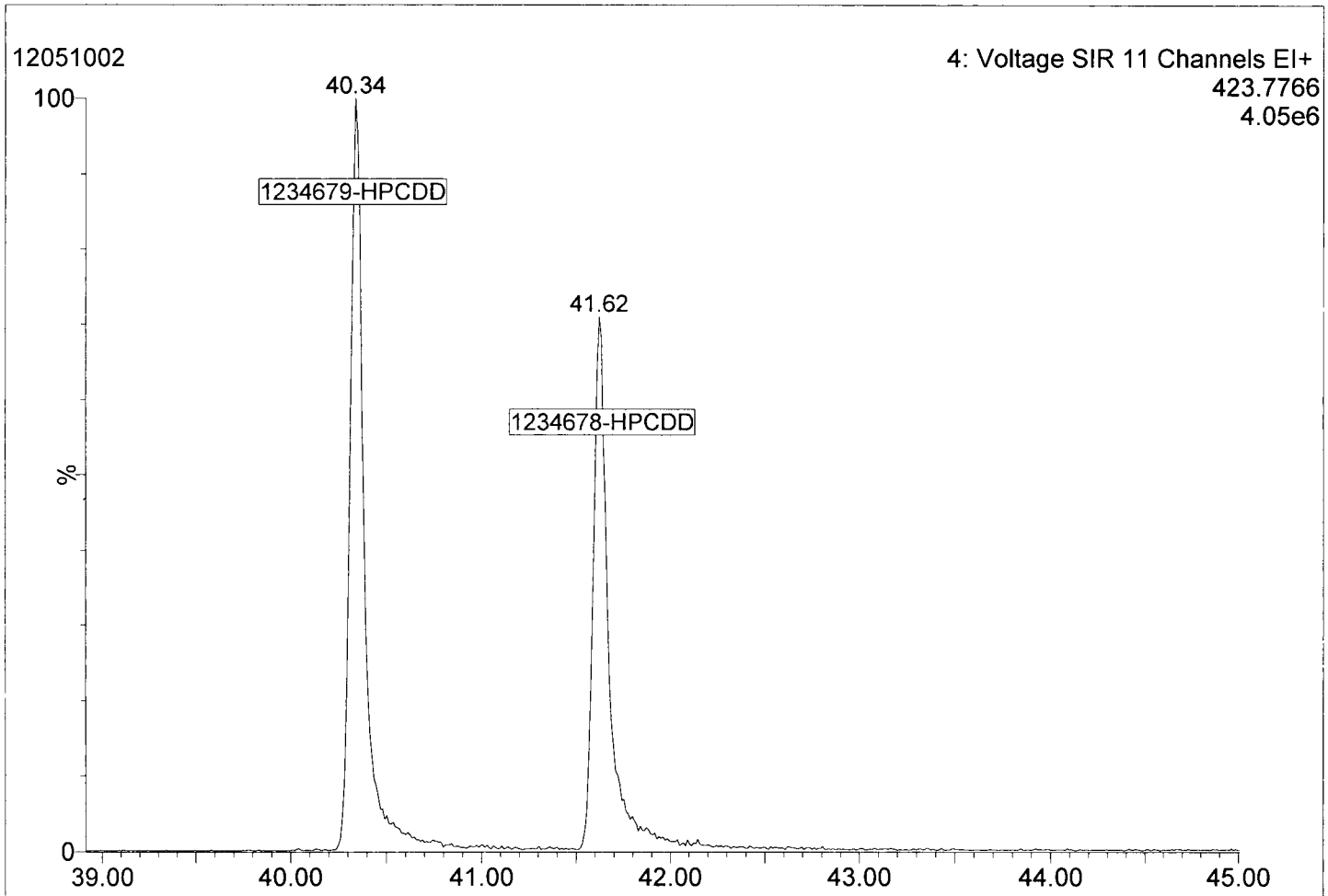

12051002
1: Voltage SIR 15 Channels EI+
319.8965
2.06e6
24.15
1368-TCDD
26.69
27.02
27.60
26.63
1289-TCDD
26.20
100
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
12051002
1: Voltage SIR 15 Channels EI+
303.9016
3.08e6
22.88
1368-TCDF
26.38
27.86
1289-TCDF
27.74
25.47
100
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
12051002
1: Voltage SIR 15 Channels EI+
339.8597
1.72e7
27.72
13468-PECDF
100
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00

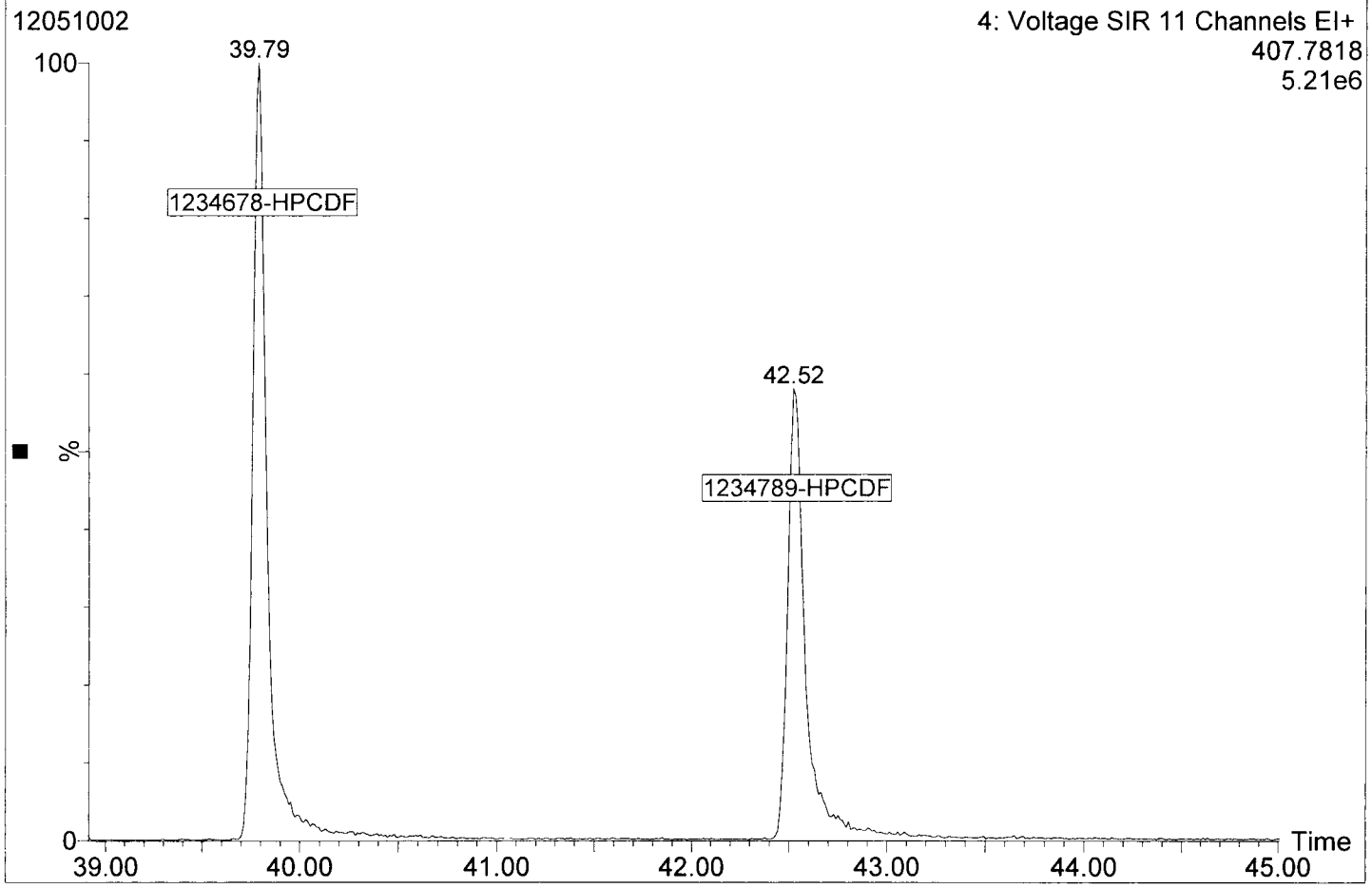

12051002
2: Voltage SIR 11 Channels EI+
355.8546
6.77e6
100
%
0
29.39
12479-PECDD
32.11
32.50
12389-PECDD
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50

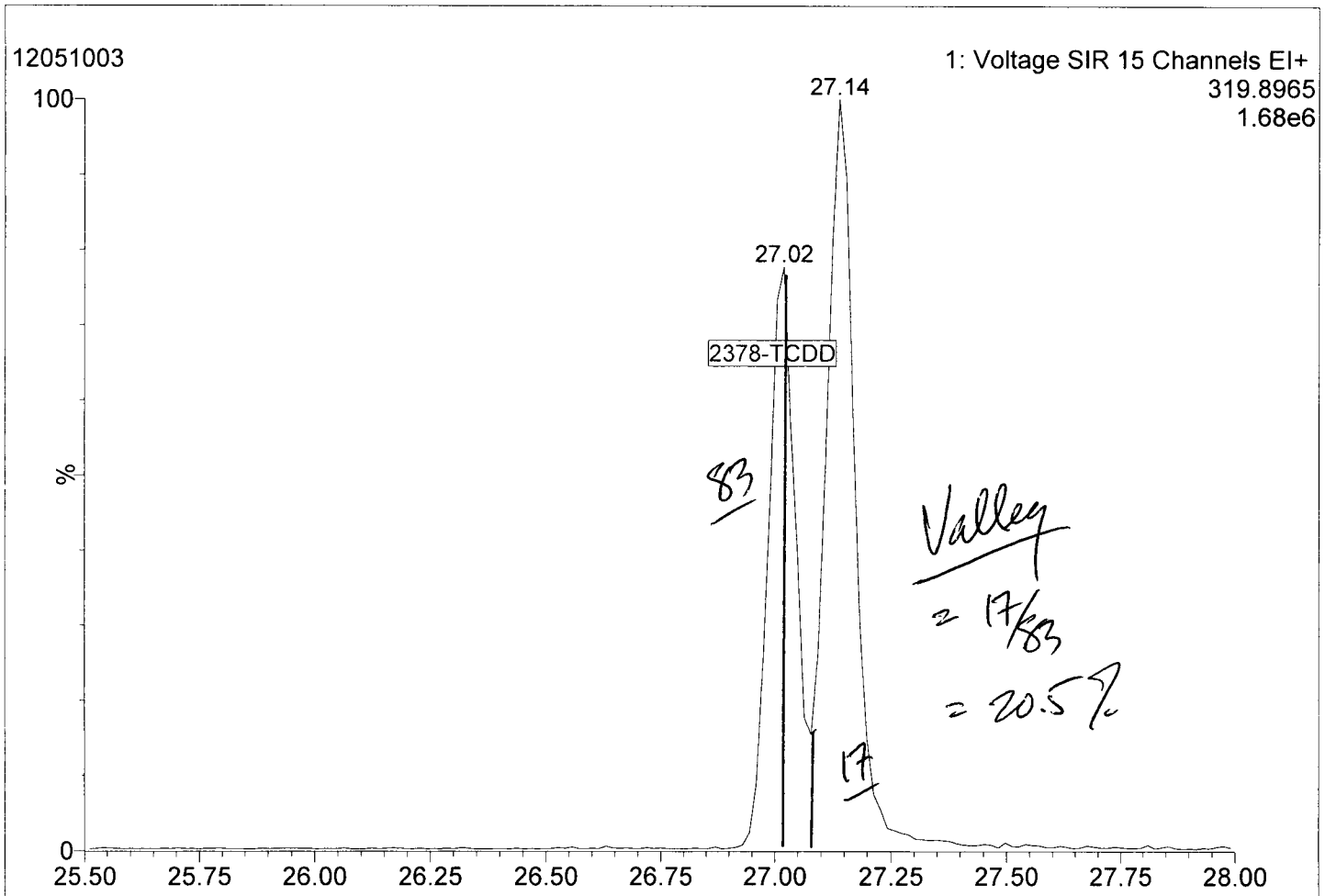

12051002
2: Voltage SIR 11 Channels EI+
339.8597
9.41e6
100
%
0
29.38
30.52
31.85
32.88
12389-PECDF
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50

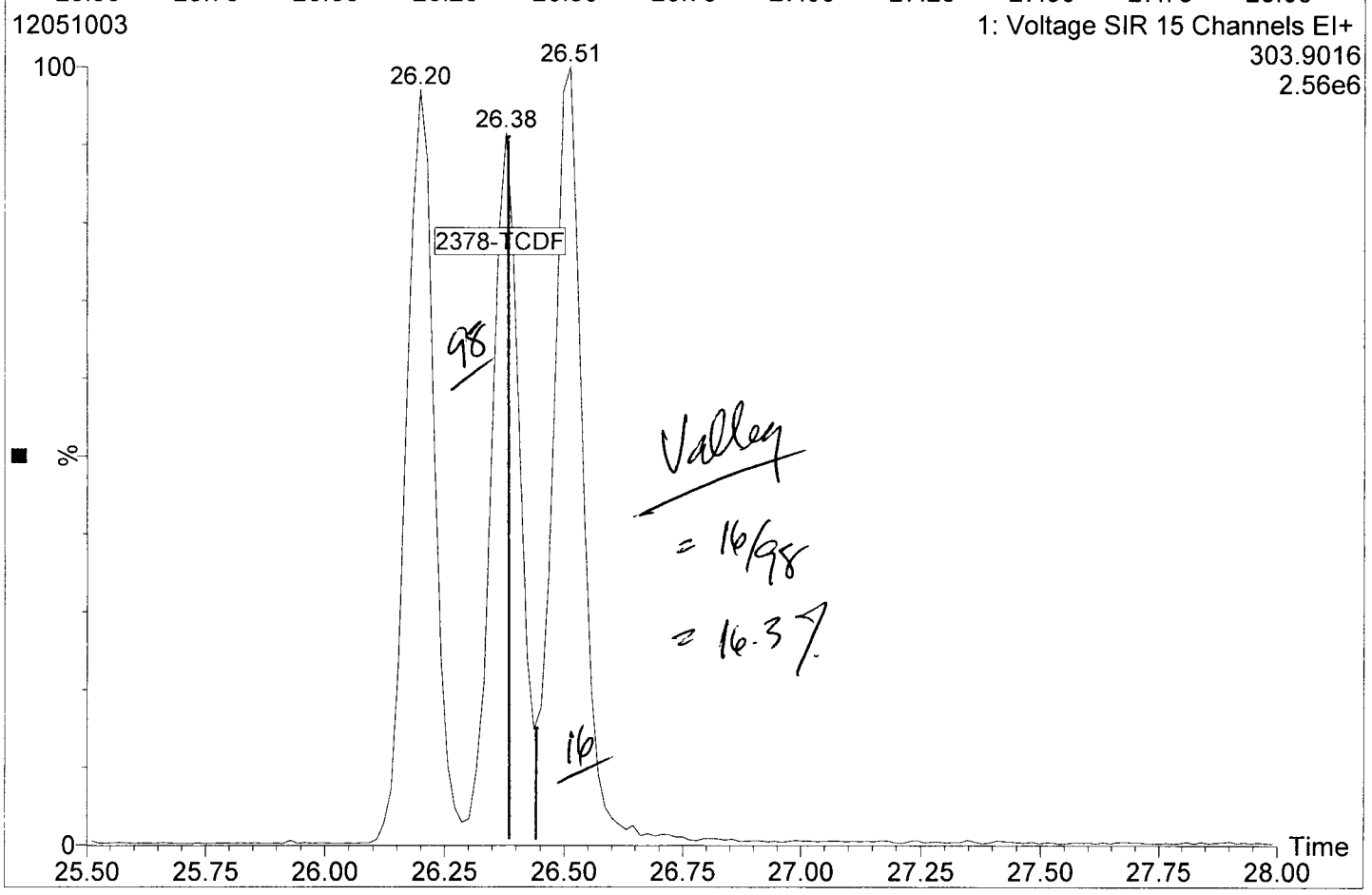

12051002
3: Voltage SIR 11 Channels EI+
389.8157
6.71e6
100
%
0
34.58
124679-HXCDD
36.73
36.85
37.29
123789-HXCDD
34.00
35.00
36.00
37.00
38.00


12051002
3: Voltage SIR 11 Channels EI+
373.8208
8.66e6
100
%
0
33.79
35.52
35.66
36.60
37.72
123789-HXCDF
Time
34.00
35.00
36.00
37.00
38.00


12051002
4: Voltage SIR 11 Channels EI+
423.7766
4.05e6
100
%
0
40.34
1234679-HPCDD
41.62
1234678-HPCDD
39.00
40.00
41.00
42.00
43.00
44.00
45.00


12051002
4: Voltage SIR 11 Channels EI+
407.7818
5.21e6
100
%
0
39.79
1234678-HPCDF
42.52
1234789-HPCDF
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00


12051003
1: Voltage SIR 15 Channels EI+
319.8965
1.68e6
27.14
27.02
2378-TCDD
83
17
Valley
= 17/83
= 20.5%
100
%
0
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00


12051003
1: Voltage SIR 15 Channels EI+
303.9016
2.56e6
26.20
26.38
26.51
2378-TCDF
98
16
Valley
= 16/98
= 16.3%
100
%
0
Time
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

pk 5/10/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

9622

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303 9016		26 378			0 866				0 77				
2	2	12378-PeCDF	339 8597		30.527			0.907				1.55				
3	3	23478-PeCDF	339 8597		31 865			0 936				1.55				
4	4	123478-HxCDF	373 8208		35 514			1 082				1.24				
5	5	234678-HxCDF	373 8208		36 610			1 070				1.24				
6	6	123678-HxCDF	373 8208		35 667			1.048				1.24				
7	7	123789-HxCDF	373.8208		37 718			1 020				1 24				
8	8	1234678-HpCDF	407 7818	39.778	39 798	570	570	1 214	MM		0 99	1 05	4.9	NO	0.050	0 050
9	9	1234789-HpCDF	407.7818		42 520			1 254				1 05				
10	10	OCDF	441.7428		47 876			1.105				0 89				
11	11	2378-TCDD	319.8965	27.004	27 018	0	433	1.046	MM		0 14	0.77	3.1	YES	0 000	0 019
12	12	12378-PeCDD	355.8546		32 093			0.973				1.55				
13	13	123478-HxCDD	389.8157		36.742			0 935				1.24				
14	14	123678-HxCDD	389.8157		36.852			0 878				1.24				
15	15	123789-HxCDD	389.8157		37.246			0 839				1.24				
16	16	1234678-HpCDD	423.7766		41.621			0.974				1 05				
17	17	OCDD	457 7377	47.582	47.605	0	774	0.950	MM		0.72	0 89	7.4	YES	0.000	0 195
18	18	13C-2378-TCDF	315 9419	26.362	26 362	3675522		1 484	bb	84 3	0.76	0.77	5949 9	NO	84 279	
19	19	13C-12378-PeCDF	351 9000	30.505	30 503	2409123		1 048	bb	78.2	1 60	1 55	3115.5	NO	78 240	
20	20	13C-23478-PeCDF	351.9000	31 842	31 841	2266377		1 003	bb	76 9	1 55	1.55	3048 0	NO	76 882	
21	21	13C-123478-HxCDF	383 8639	35 503	35 503	1383798		1.186	bd	89.1	0 52	0 51	1243.5	NO	89 121	
22	22	13C-123678-HxCDF	383 8639	35.646	35 657	1983273		1.315	db	115.2	0 52	0 51	1548 3	NO	115.157	
23	23	13C-234678-HxCDF	383.8639	36 589	36.589	1427699		1 223	bb	89.1	0.53	0 51	1236 9	NO	89.117	
24	24	13C-123789-HxCDF	383.8639	37.707	37 696	1148943		1.056	bb	83 0	0.49	0.51	931 7	NO	83 040	
25	25	13C-1234678-HpCDF	417.8253	39.778	39 778	934562		1.011	bb	70 6	0 45	0.44	777.8	NO	70 556	
26	26	13C-1234789-HpCDF	417.8253	42.508	42.530	619432		0 741	bb	63 9	0.45	0.44	448.6	NO	63.870	
27	27	13C-1234-TCDD	331 9368	26.183	26.272	2937926		1 000	bb	100.0	0.79	0.77	4352.8	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27.004	27.004	2213664		0 956	bb	78.8	0.76	0.77	3008.4	NO	78.785	
29	29	13C-12378-PeCDD	367 8949	32.084	32.093	1377829		0 663	bb	70.7	1 66	1.55	4002.3	NO	70.688	
30	30	13C-123478-HxCDD	401.8559	36.720	36 720	1190706		1 024	bd	88.8	1 25	1.24	2407 7	NO	88 797	
31	31	13C-123678-HxCDD	401 8559	36.841	36.852	1431835		1.113	db	98.3	1 24	1.24	2339.6	NO	98 265	
32	32	13C-1234678-HpCDD	435 8169	41.609	41 631	698594		0.815	bb	65.4	1 01	1 05	758.8	NO	65 442	
33	33	13C-OCDD	469.7779	47.591	47 647	837133		0 717	bb	44 6	0.83	0.89	740.7	NO	89 142	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.279	37.368	1309624		1 000	bb	100.0	1 24	1.24	2038.8	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.420			0.866								
36	36	Total-penta1	339.8597		28.230											
37	37	Total-pentafurans	339.8597		30.810			0.921								
38	38	Total-hexafurans	373.8208		35.800			1.055								
39	39	Total-heptafurans	407.7818		41.200			1.234							0.050	0.050
40	40	Total-Furans	303.9016		0.000			1 050							0.050	0.050
41	41	Total-tetradıoxıns	319.8965		25.930			1 046							0.000	0.019
42	42	Total-pentadıoxins	355.8546		30.980			0.973								
43	43	Total-hexadioxıns	389.8157		35.980			0.884							0.025	0 025
44	44	Total-heptadioxins	423.7766		41.030			0 974							0.059	0.059
45	45	Total-Dıoxins	319 8965		0.000			0 942							0.084	0.297
46	46	Total-TEQ	319 8965		0.000										0 134	0.348
47	47	37CL-2378-TCDD	327 8847	27.020	26.994	999875		1.037					5017.2		32 814	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000										0.000	
50	50	FUNCTION3 PFK	380 9760		0 000										0 000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480.9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445 7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1													

PP

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1													

PF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1													

HF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1													

HPF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	8	1234678-HpCDF	407 7818	39 78	570.343	1.214		0.050	0 050	0 99	1.05	NO	4.9

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	8	1234678-HpCDF	407.7818	39 78	570.343	1.214		0.050	0 050	0 99	1.05	NO	4.9

TD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	27 00	0.000	1.046		0 000	0.019	0.14	0 77	YES	3.1

PD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1													

HD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389.8157	36 15	291.145	0.884		0 025	0.025	1 41	1.24	NO	5.1

HPD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	44	Total-heptadioxins	423.7766	40.35	401.664	0.974		0.059	0 059	0 98	1 05	NO	3 0

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
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Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R..	S/N
1	11	2378-TCDD	319.8965	27.00	0.000	1 046	0.000	0 019	0 14	0.77	YES	3 1
2	43	Total-hexadioxins	389 8157	36.15	291.145	0 884	0 025	0 025	1.41	1.24	NO	5 1
3	17	OCDD	457 7377	47.58	0.000	0.950	0 000	0 195	0 72	0.89	YES	7 4
4	44	Total-heptadioxins	423.7766	40.35	401 664	0.974	0.059	0 059	0.98	1.05	NO	3.0

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	8	1234678-HpCDF	407.7818	39 78	570.343	1.214	0 050	0 050	0.99	1 05	NO	4.9
2	11	2378-TCDD	319.8965	27.00	0 000	1.046	0 000	0.019	0.14	0 77	YES	3.1
3	43	Total-hexadioxins	389.8157	36.15	291 145	0.884	0.025	0.025	1.41	1.24	NO	5.1
4	17	OCDD	457.7377	47.58	0.000	0.950	0.000	0.195	0.72	0 89	YES	7.4
5	44	Total-heptadioxins	423.7766	40.35	401 664	0.974	0.059	0.059	0.98	1 05	NO	3.0

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330 9792	24 69	0 000							3 4
2	48	FUNCTION1 PFK	330.9792	24.57	0 000							14 4
3	48	FUNCTION1 PFK	330.9792	23.42	0.000							66 4
4	48	FUNCTION1 PFK	330.9792	21.75	0.000							91 3

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
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Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	29 27	0.000		0 000					4 1
2	49	FUNCTION2 PFK	366.9792	29.14	0.000		0 000					6 1
3	49	FUNCTION2 PFK	366.9792	29.00	0.000		0.000					8 4
4	49	FUNCTION2 PFK	366 9792	28.94	0 000		0.000					8.5
5	49	FUNCTION2 PFK	366 9792	28 76	0.000		0 000					9.8
6	49	FUNCTION2 PFK	366.9792	30.88	0.000		0.000					0.9
7	49	FUNCTION2 PFK	366.9792	30 82	0.000		0 000					0 9
8	49	FUNCTION2 PFK	366.9792	30 76	0.000		0.000					0.9
9	49	FUNCTION2 PFK	366.9792	30.72	0 000		0.000					1 4
10	49	FUNCTION2 PFK	366.9792	30.64	0 000		0.000					0 6
11	49	FUNCTION2 PFK	366 9792	30.57	0 000		0 000					0.7
12	49	FUNCTION2 PFK	366.9792	30.48	0 000		0.000					1 1
13	49	FUNCTION2 PFK	366 9792	30 43	0.000		0 000					2 3
14	49	FUNCTION2 PFK	366 9792	30 37	0 000		0 000					0.8
15	49	FUNCTION2 PFK	366.9792	30.29	0.000		0 000					1.4
16	49	FUNCTION2 PFK	366 9792	30 18	0 000		0.000					1.5
17	49	FUNCTION2 PFK	366.9792	30.12	0 000		0 000					1.0
18	49	FUNCTION2 PFK	366.9792	29.81	0 000		0.000					1 0
19	49	FUNCTION2 PFK	366 9792	29.69	0 000		0.000					0.5
20	49	FUNCTION2 PFK	366.9792	29.45	0.000		0.000					1.7
21	49	FUNCTION2 PFK	366.9792	29.30	0 000		0.000					3 5
22	49	FUNCTION2 PFK	366 9792	31.88	0 000		0 000					0 8
23	49	FUNCTION2 PFK	366.9792	31.83	0 000		0 000					0.8
24	49	FUNCTION2 PFK	366 9792	31 73	0.000		0 000					1.3
25	49	FUNCTION2 PFK	366.9792	31 67	0 000		0 000					2.4
26	49	FUNCTION2 PFK	366 9792	31 61	0.000		0 000					1.0
27	49	FUNCTION2 PFK	366 9792	31 56	0.000		0 000					0 8
28	49	FUNCTION2 PFK	366.9792	31.51	0.000		0.000					1.1
29	49	FUNCTION2 PFK	366.9792	31.47	0 000		0 000					1 4
30	49	FUNCTION2 PFK	366.9792	31.40	0 000		0.000					0 4
31	49	FUNCTION2 PFK	366 9792	31 32	0 000		0.000					1.3
32	49	FUNCTION2 PFK	366 9792	31 15	0 000		0.000					1 2
33	49	FUNCTION2 PFK	366.9792	31.10	0.000		0 000					1 2
34	49	FUNCTION2 PFK	366 9792	31.04	0 000		0.000					0 5
35	49	FUNCTION2 PFK	366.9792	31.00	0.000		0 000					0.3
36	49	FUNCTION2 PFK	366.9792	30 95	0 000		0.000					0.5
37	49	FUNCTION2 PFK	366.9792	30.92	0 000		0 000					0.7
38	49	FUNCTION2 PFK	366.9792	33.42	0.000		0 000					1.0
39	49	FUNCTION2 PFK	366.9792	33.36	0.000		0 000					1.0
40	49	FUNCTION2 PFK	366.9792	33.27	0.000		0 000					2 3
41	49	FUNCTION2 PFK	366 9792	33.21	0 000		0.000					1 0
42	49	FUNCTION2 PFK	366.9792	33.07	0 000		0.000					1 3
43	49	FUNCTION2 PFK	366 9792	32.98	0 000		0.000					2 5
44	49	FUNCTION2 PFK	366.9792	32 89	0 000		0.000					1 3
45	49	FUNCTION2 PFK	366 9792	32 85	0.000		0 000					0.4
46	49	FUNCTION2 PFK	366 9792	32 60	0.000		0 000					0.7
47	49	FUNCTION2 PFK	366.9792	32.55	0 000		0 000					0.6
48	49	FUNCTION2 PFK	366.9792	32.39	0 000		0.000					0 9
49	49	FUNCTION2 PFK	366 9792	32 32	0.000		0.000					2.4

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Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	49	FUNCTION2 PFK	366.9792	32 19	0.000		0.000					0 8
51	49	FUNCTION2 PFK	366.9792	32 15	0 000		0.000					1.2
52	49	FUNCTION2 PFK	366.9792	31 97	0 000		0.000					1.0
53	49	FUNCTION2 PFK	366.9792	31.94	0 000		0.000					1 5
54	49	FUNCTION2 PFK	366.9792	33.46	0.000		0.000					0 8

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	36.27	0 000		0.000					7.2
2	50	FUNCTION3 PFK	380.9760	35.72	0 000		0.000					7.0
3	50	FUNCTION3 PFK	380 9760	34 40	0.000		0.000					3 5
4	50	FUNCTION3 PFK	380 9760	33 80	0.000		0.000					3 0

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	40.28	0 000							0 9
2	51	FUNCTION4 PFK	430.9728	40.05	0 000							2 8
3	51	FUNCTION4 PFK	430 9728	40.00	0 000							1.3
4	51	FUNCTION4 PFK	430.9728	39 94	0 000							1.6
5	51	FUNCTION4 PFK	430.9728	39.90	0 000							1.5
6	51	FUNCTION4 PFK	430 9728	39 76	0 000							1.2
7	51	FUNCTION4 PFK	430 9728	39.25	0 000							0 7
8	51	FUNCTION4 PFK	430 9728	39 06	0 000							0 8
9	51	FUNCTION4 PFK	430 9728	39 01	0 000							2 2
10	51	FUNCTION4 PFK	430 9728	44.72	0 000							1 5
11	51	FUNCTION4 PFK	430 9728	43.85	0.000							0 7
12	51	FUNCTION4 PFK	430.9728	43 52	0 000							0.6
13	51	FUNCTION4 PFK	430.9728	43 30	0.000							1.4
14	51	FUNCTION4 PFK	430.9728	43.06	0.000							0.7
15	51	FUNCTION4 PFK	430.9728	42.77	0.000							0.5
16	51	FUNCTION4 PFK	430.9728	42.40	0.000							1 7
17	51	FUNCTION4 PFK	430.9728	42 32	0.000							1.8
18	51	FUNCTION4 PFK	430.9728	42.28	0.000							2.1
19	51	FUNCTION4 PFK	430 9728	42 19	0.000							2.3
20	51	FUNCTION4 PFK	430 9728	41 97	0.000							0 8
21	51	FUNCTION4 PFK	430 9728	41 86	0 000							1 8
22	51	FUNCTION4 PFK	430 9728	41 65	0 000							1 6
23	51	FUNCTION4 PFK	430.9728	40.85	0.000							1.1
24	51	FUNCTION4 PFK	430.9728	40.71	0.000							2.0
25	51	FUNCTION4 PFK	430.9728	40.44	0 000							1.5

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480 9696	46 39	0 000							1.0
2	52	FUNCTION5 PFK	480 9696	46 30	0 000							0.6
3	52	FUNCTION5 PFK	480.9696	46 09	0 000							0.6
4	52	FUNCTION5 PFK	480 9696	46.06	0 000							1.2
5	52	FUNCTION5 PFK	480.9696	45 92	0 000							0.7
6	52	FUNCTION5 PFK	480.9696	45.88	0.000							0.7
7	52	FUNCTION5 PFK	480.9696	45.78	0.000							0.4
8	52	FUNCTION5 PFK	480.9696	45.74	0 000							0.9
9	52	FUNCTION5 PFK	480.9696	45 57	0 000							0.5
10	52	FUNCTION5 PFK	480 9696	45 41	0 000							0.9
11	52	FUNCTION5 PFK	480.9696	45.34	0 000							1.5
12	52	FUNCTION5 PFK	480.9696	45.23	0 000							1.2
13	52	FUNCTION5 PFK	480.9696	45 18	0 000							1 1
14	52	FUNCTION5 PFK	480.9696	45 12	0 000							1.2
15	52	FUNCTION5 PFK	480.9696	45 08	0 000							1 5
16	52	FUNCTION5 PFK	480.9696	48.37	0.000							1.3
17	52	FUNCTION5 PFK	480.9696	48 33	0 000							2.1
18	52	FUNCTION5 PFK	480.9696	48 24	0 000							0.6
19	52	FUNCTION5 PFK	480.9696	48 16	0.000							0 8
20	52	FUNCTION5 PFK	480.9696	48 06	0 000							1 3
21	52	FUNCTION5 PFK	480.9696	47 98	0 000							1 7
22	52	FUNCTION5 PFK	480.9696	47 91	0 000							0 7
23	52	FUNCTION5 PFK	480 9696	47 81	0 000							1 6
24	52	FUNCTION5 PFK	480.9696	47 74	0 000							1 8
25	52	FUNCTION5 PFK	480 9696	47 48	0 000							1 4
26	52	FUNCTION5 PFK	480 9696	47.27	0 000							2 5
27	52	FUNCTION5 PFK	480.9696	47 20	0 000							2.1
28	52	FUNCTION5 PFK	480.9696	47.08	0 000							0.4
29	52	FUNCTION5 PFK	480 9696	47.02	0.000							0.8
30	52	FUNCTION5 PFK	480 9696	46 91	0.000							1 4
31	52	FUNCTION5 PFK	480 9696	46 62	0.000							1.3
32	52	FUNCTION5 PFK	480.9696	48 77	0.000							1.4
33	52	FUNCTION5 PFK	480.9696	48 69	0.000							1.4
34	52	FUNCTION5 PFK	480.9696	48 59	0.000							0 5
35	52	FUNCTION5 PFK	480.9696	48 51	0.000							1.1

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD .	375 8364	26.48	0.000		0.000					6 1

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Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD .	409 7974	28.04	0.000		0 000					2 0
2	54	FUNCTION1 HPCD	409.7974	25.05	0 000		0 000					2 1
3	54	FUNCTION1 HPCD	409 7974	24.30	0 000		0 000					2.7
4	54	FUNCTION1 HPCD	409 7974	23 85	0 000		0.000					3.2
5	54	FUNCTION1 HPCD...	409.7974	23.48	0.000		0.000					2 5
6	54	FUNCTION1 HPCD...	409.7974	22 75	0 000		0.000					2.2
7	54	FUNCTION1 HPCD .	409.7974	22.33	0.000		0.000					2.4

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD ..	409.7974	32.85	0 000		0.000					2.4
2	55	FUNCTION2 HPCD .	409.7974	32 93	0 000		0.000					3.1

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati...	1° R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08.21 Pacific Daylight Time
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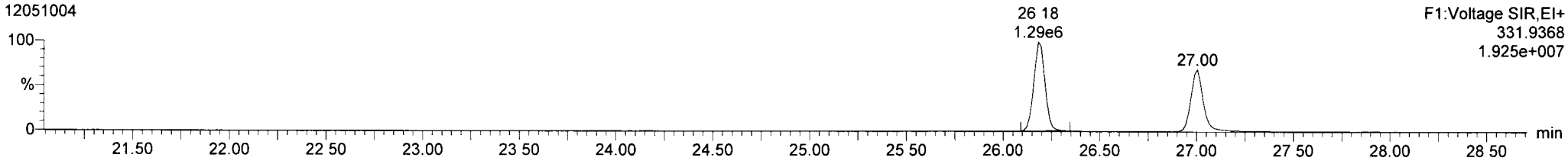
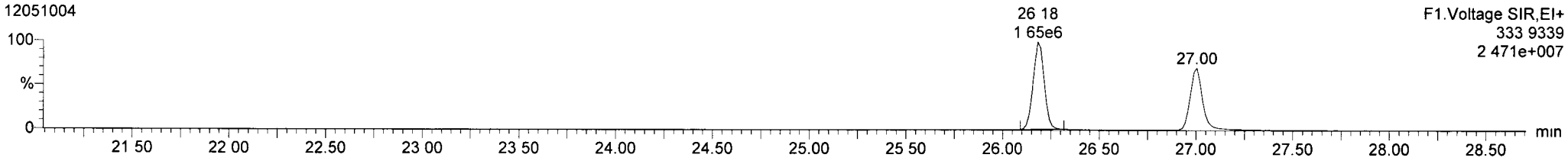
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

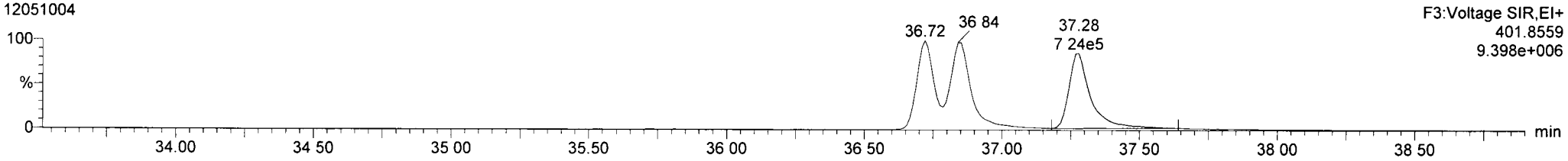
13C-1234-TCDD



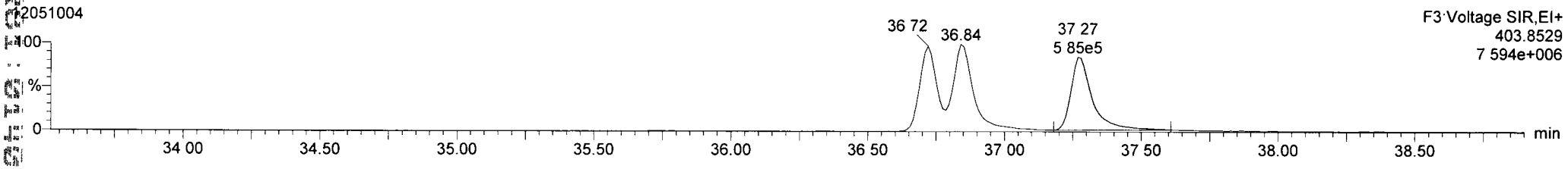
13C-1234-TCDD



13C-123789-HxCDD



13C-123789-HxCDD



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14 08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
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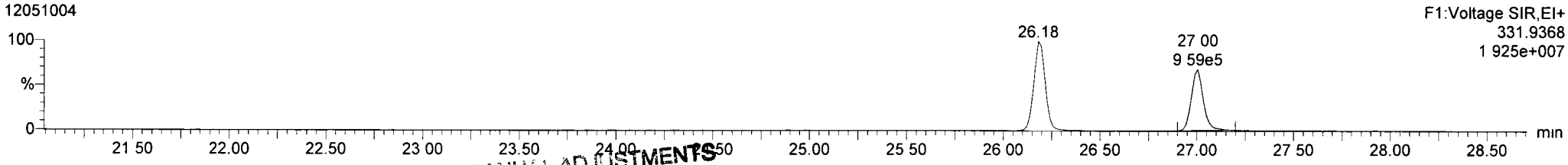
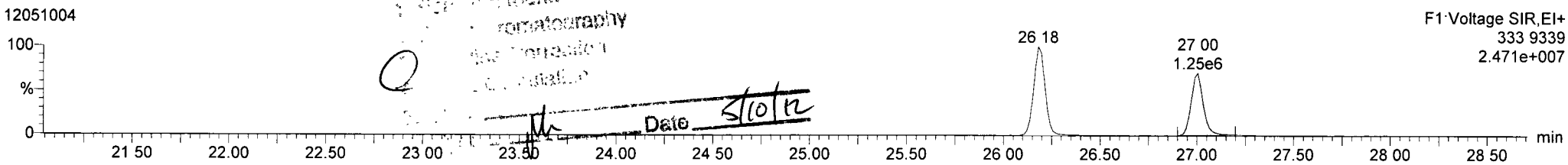


MANUAL ADJUSTMENTS

13C-2378-TCDD
12051004



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chromatography
Date 5/10/12

Total-tetradioxins
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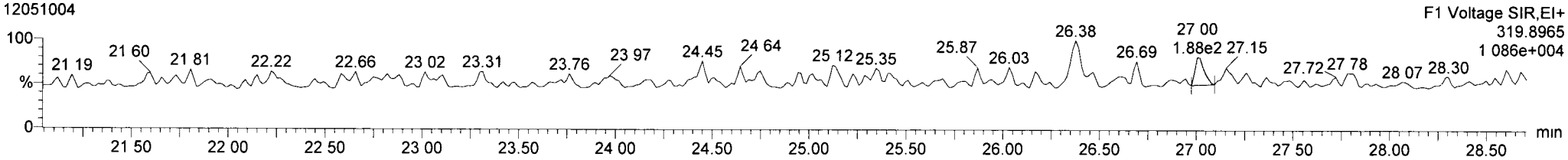

Total-tetradioxins
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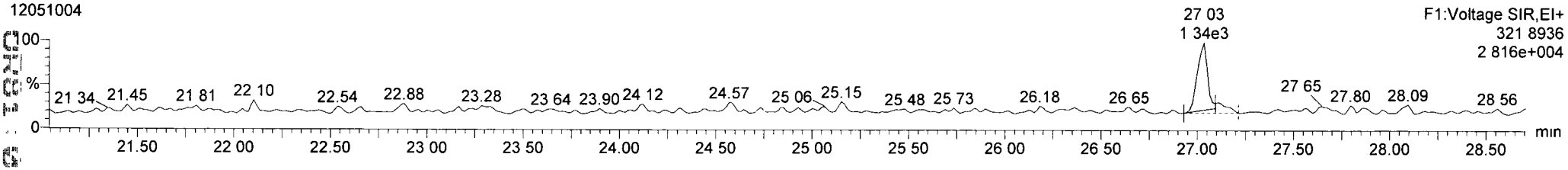

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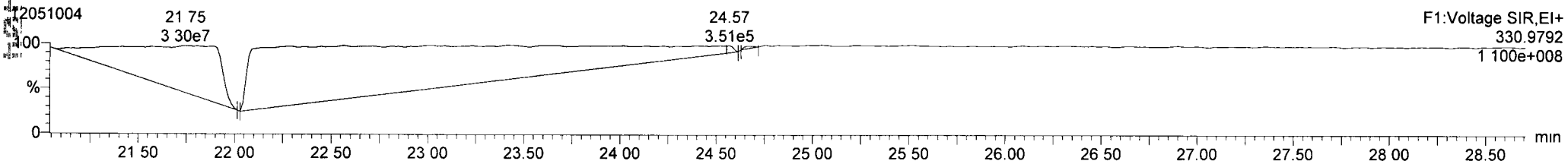
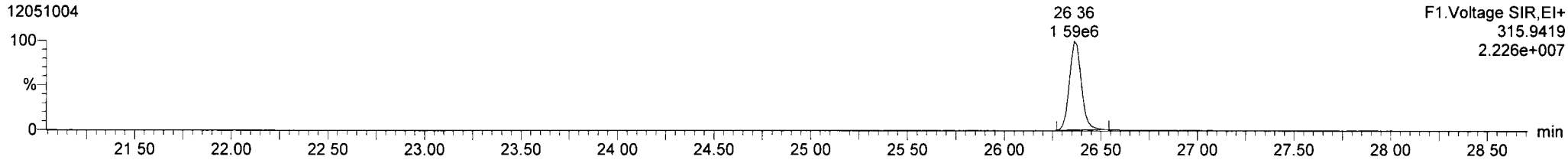


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC qld
Last Altered. Thursday, May 10, 2012 14.08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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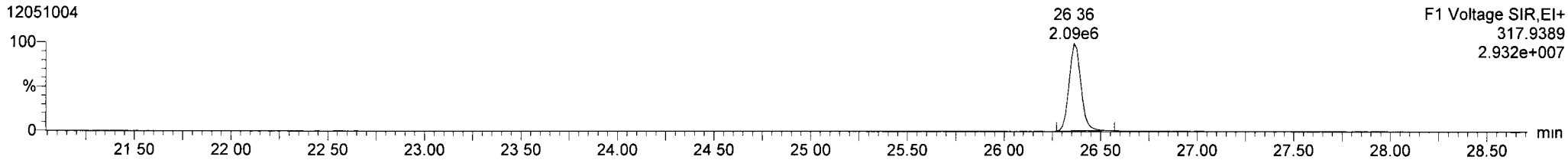
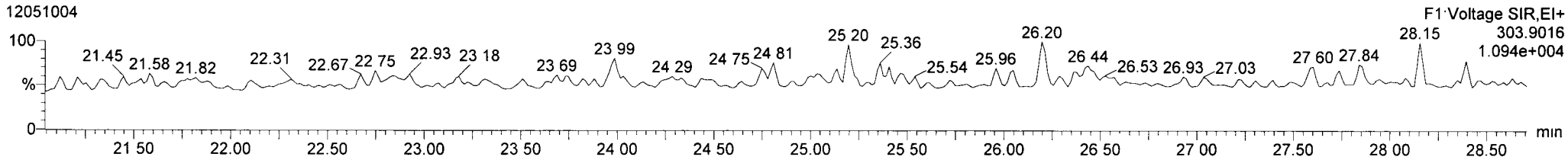


Total-tetrafurans



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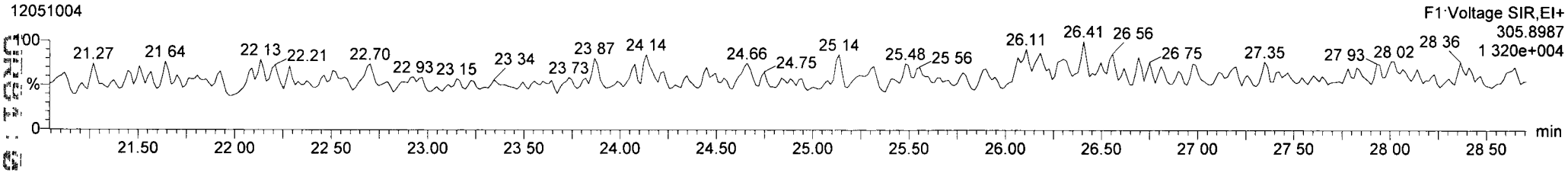
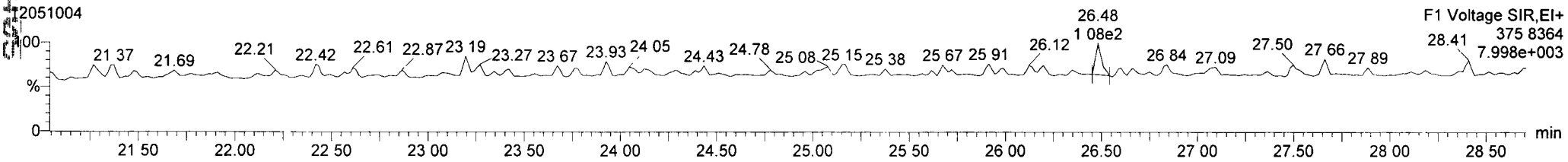


FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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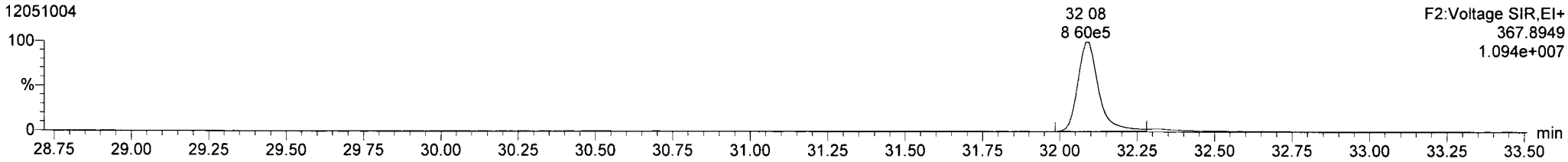
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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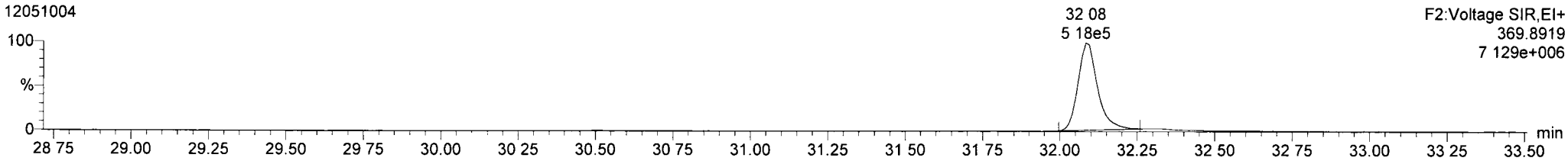
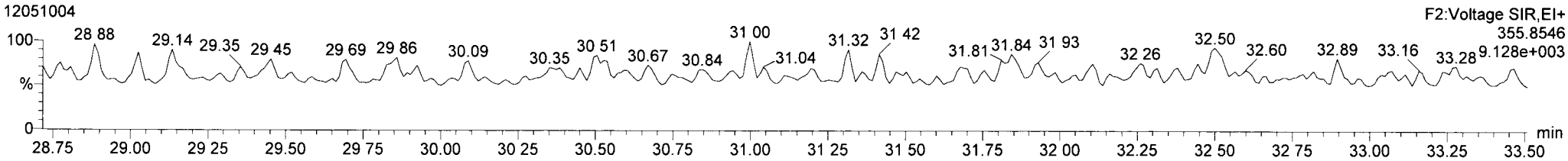
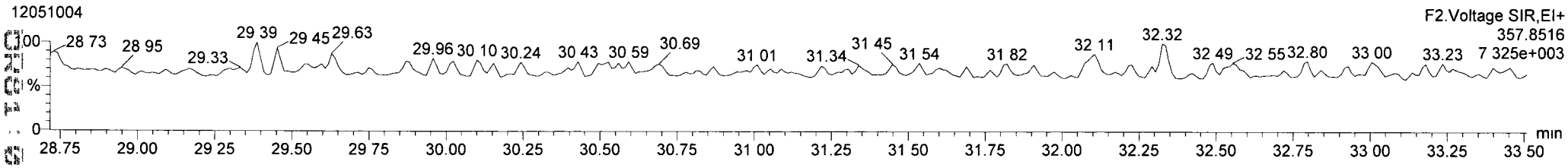


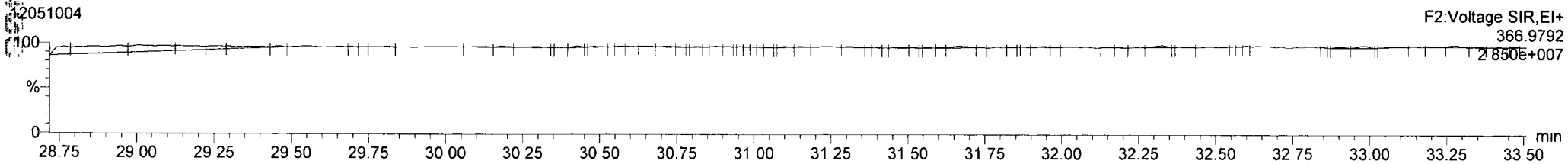
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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Last Altered: Thursday, May 10, 2012 14.08:21 Pacific Daylight Time
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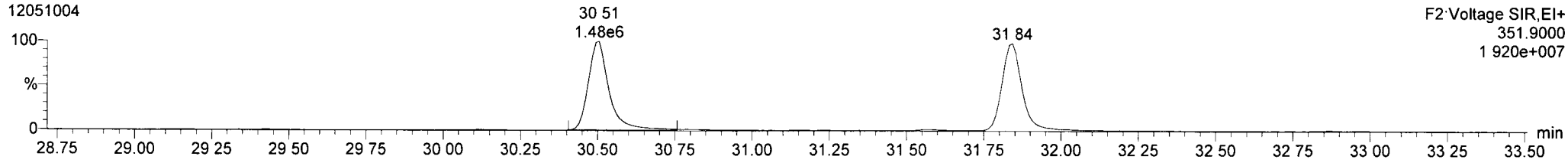
Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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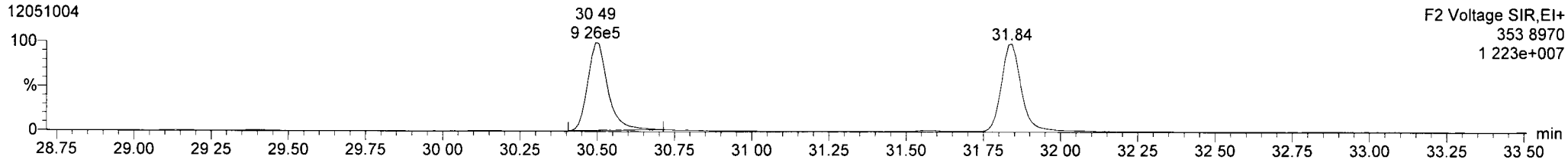

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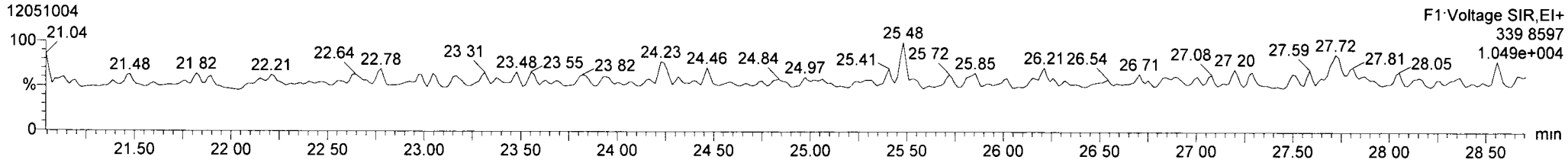

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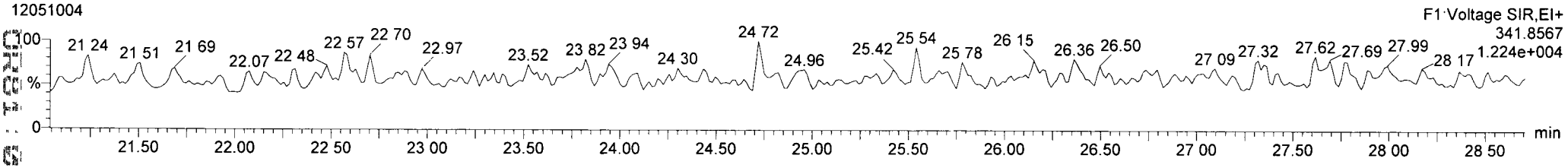

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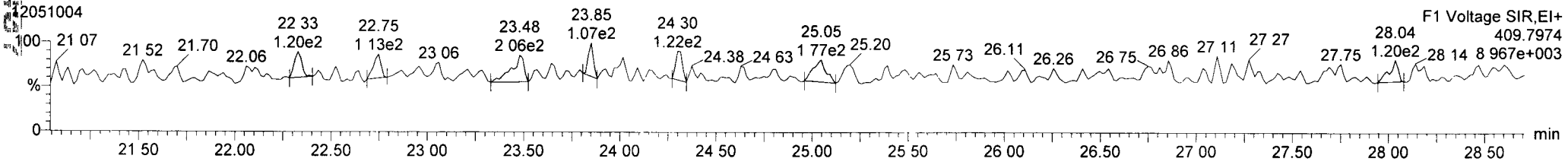
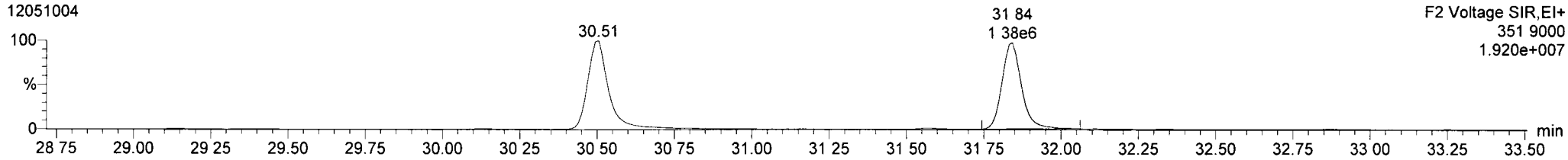


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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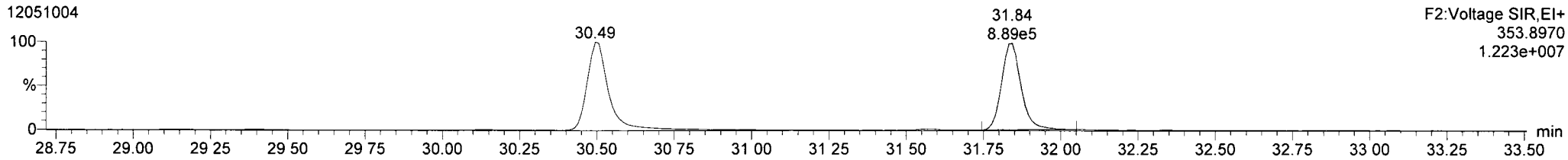
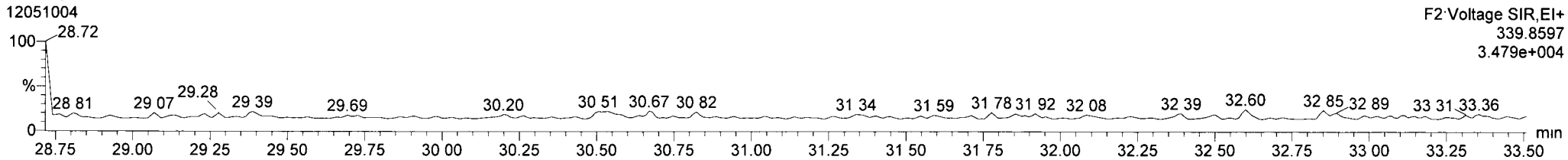
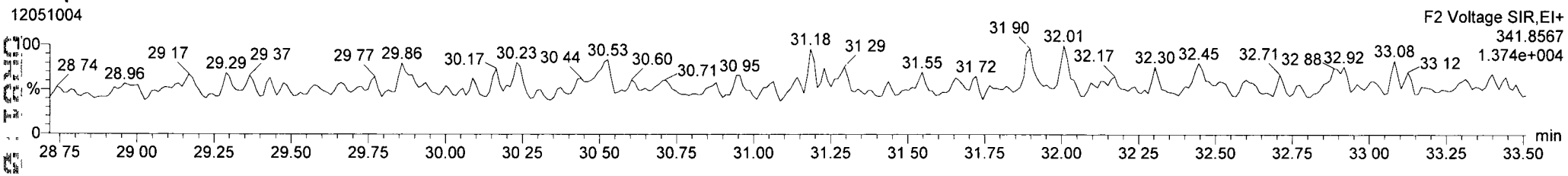


Total-pentafurans



Total-pentafurans



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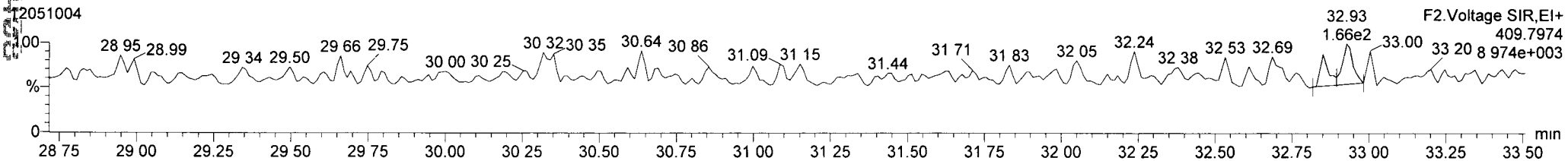

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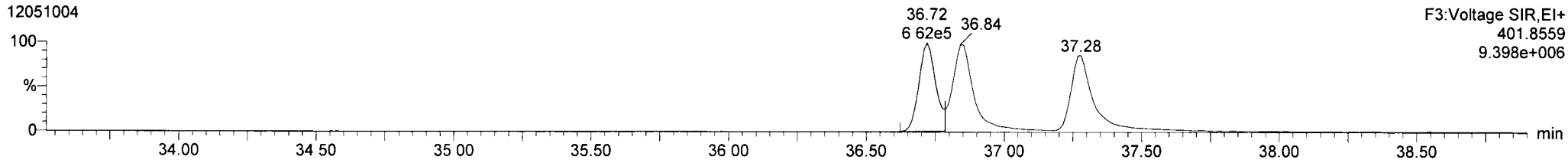
13C-123478-HxCDD



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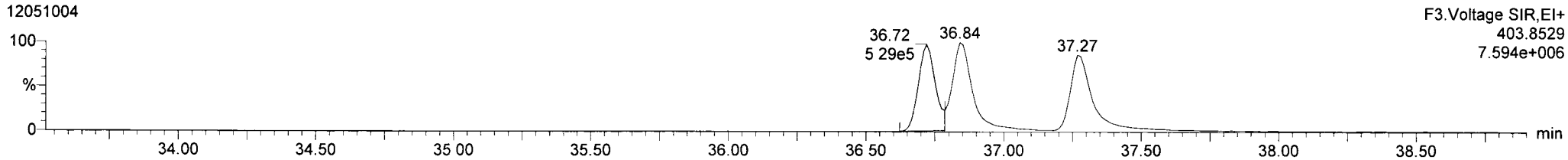

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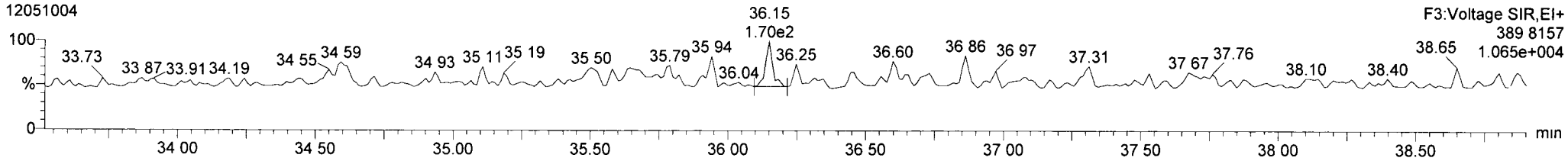
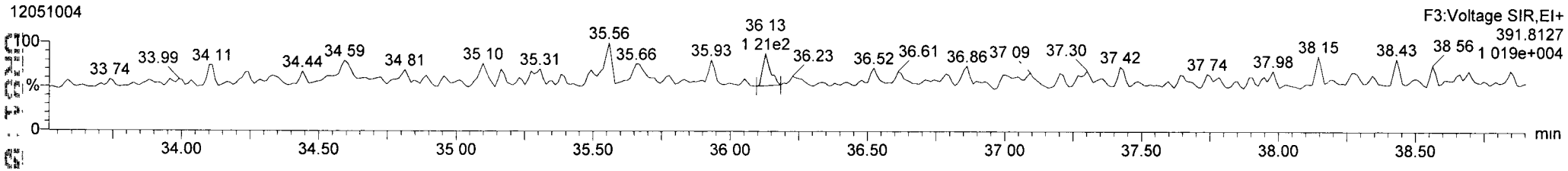


Total-hexadioxins



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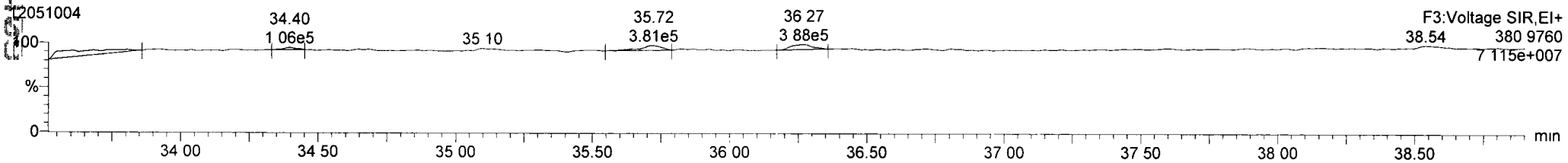

Quantify Sample Report **MassLynx 4.1 SCN 714**
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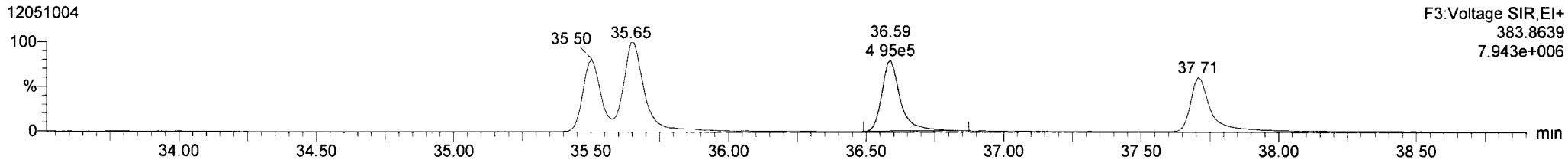
13C-234678-HxCDF



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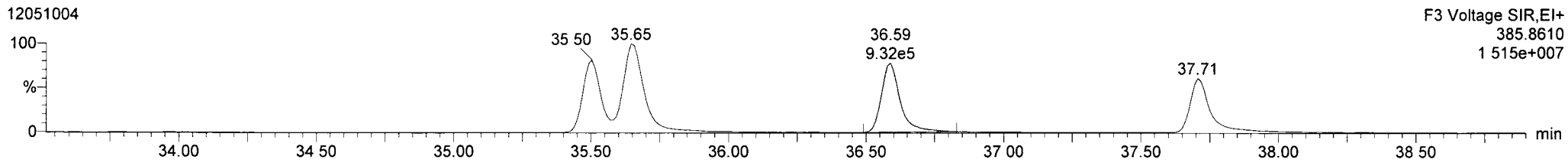
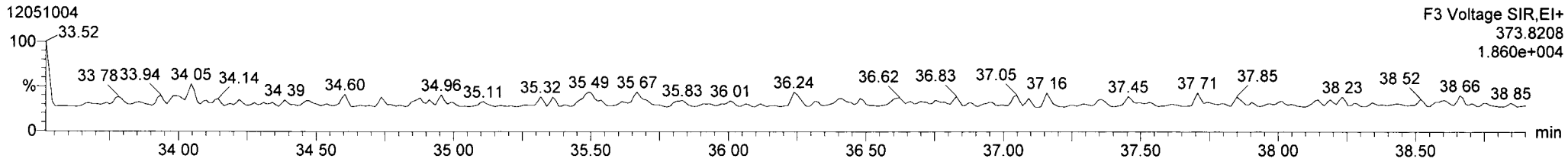


Total-hexafurans



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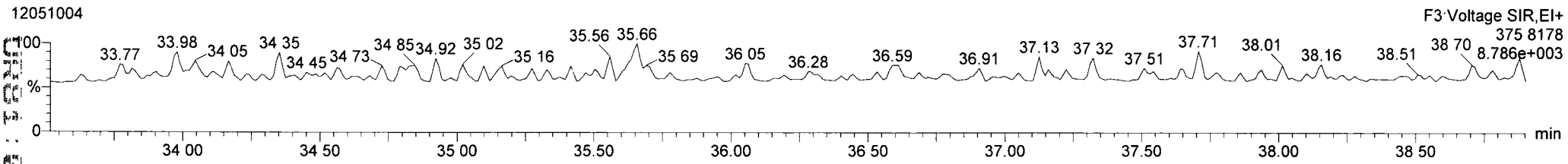
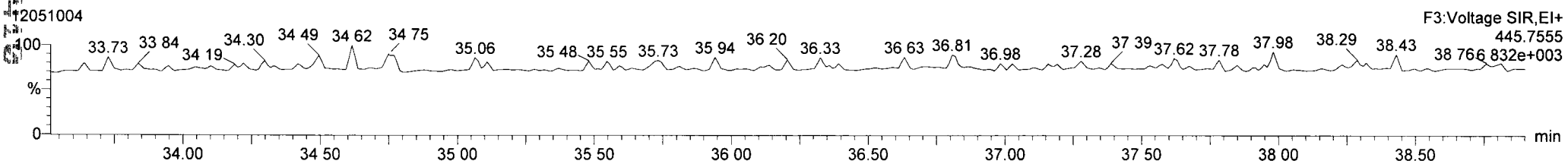


FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
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Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

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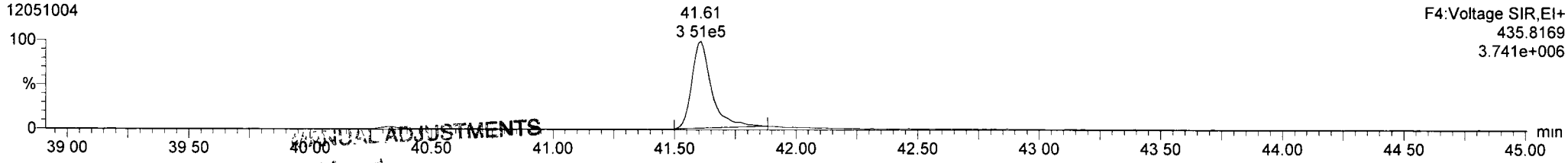
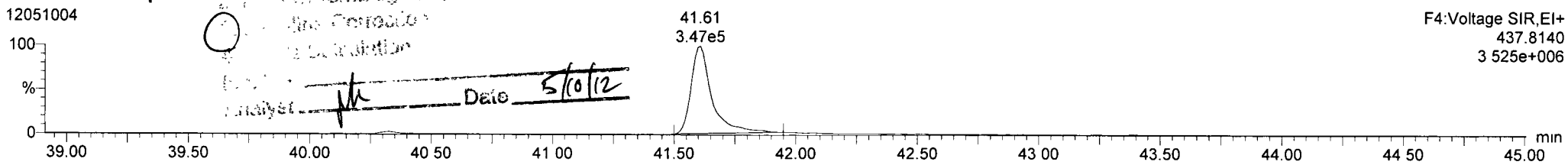
13C-1234678-HpCDD



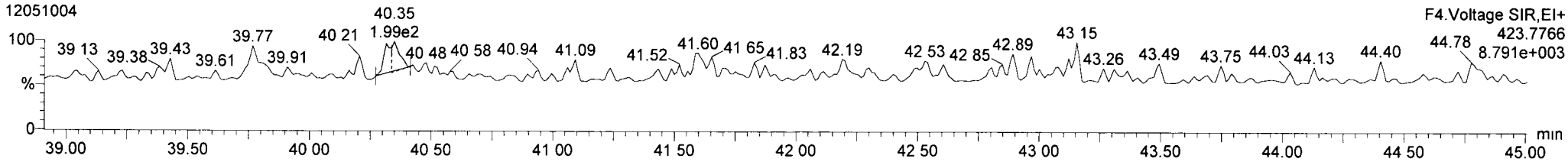
MANUAL ADJUSTMENTS

found
chromatography
Date 5/10/12

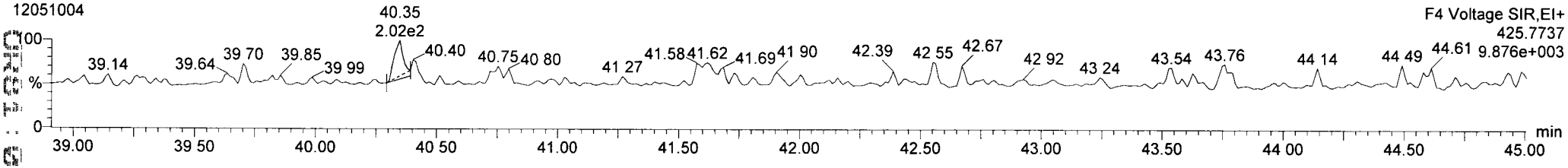
13C-1234678-HpCDD



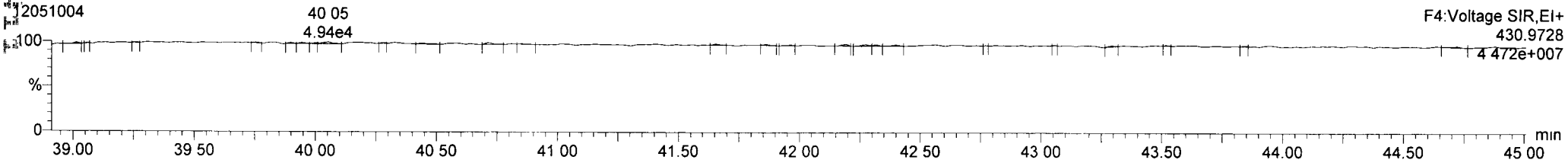
Total-heptadioxins



Total-heptadioxins



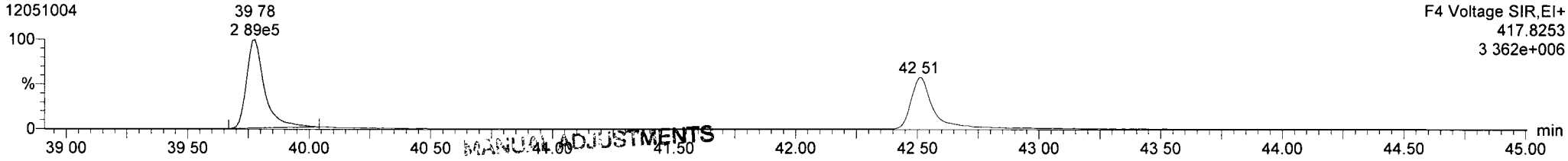
FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

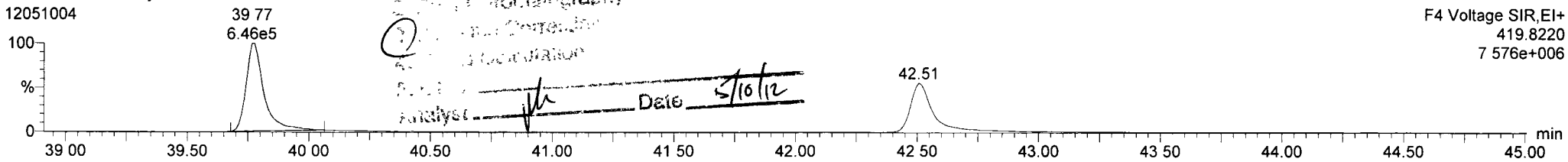
Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



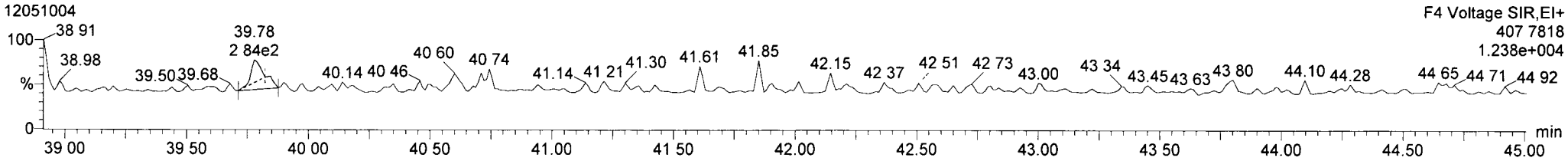
MANUAL ADJUSTMENTS

13C-1234678-HpCDF



Analyst Date 5/10/12

Total-heptafurans



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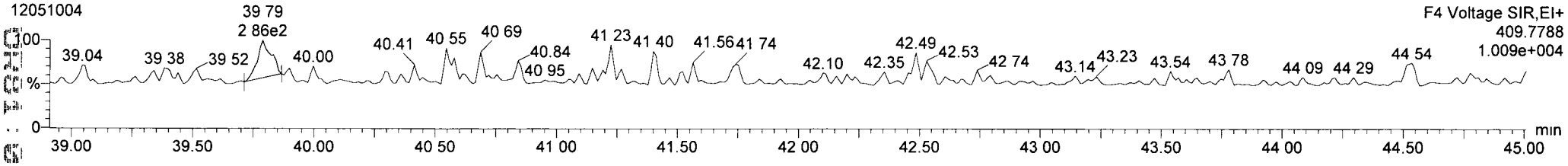

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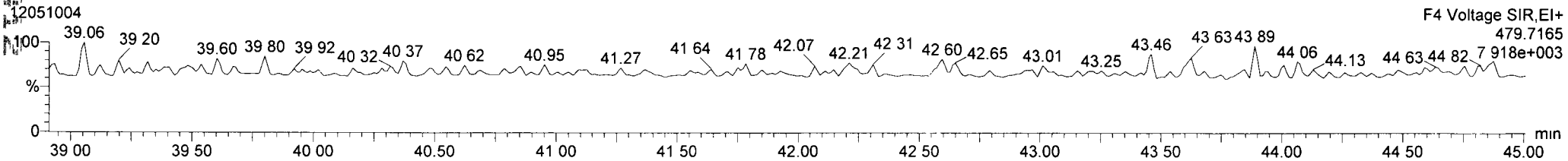
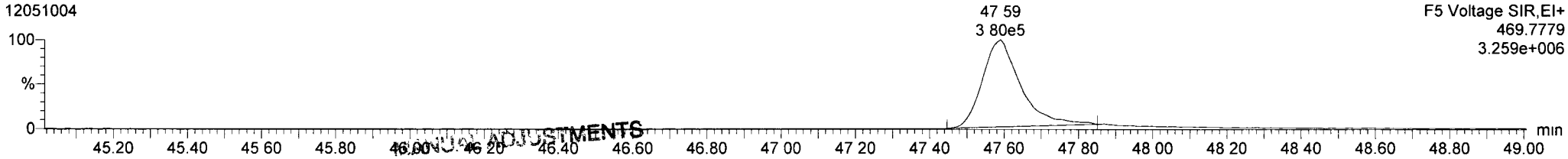


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC qld
Last Altered: Thursday, May 10, 2012 14.08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

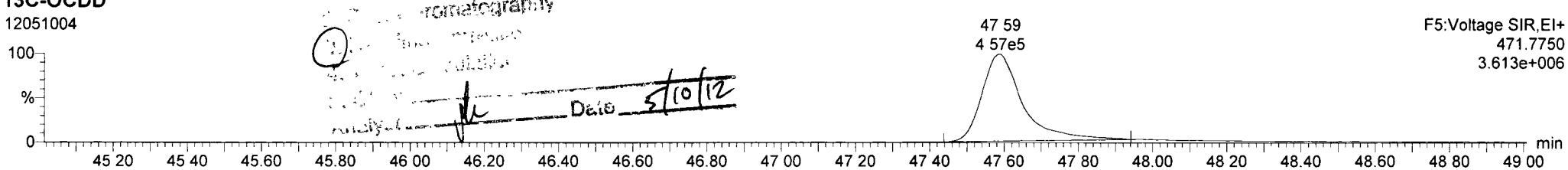
Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

13C-OCDD



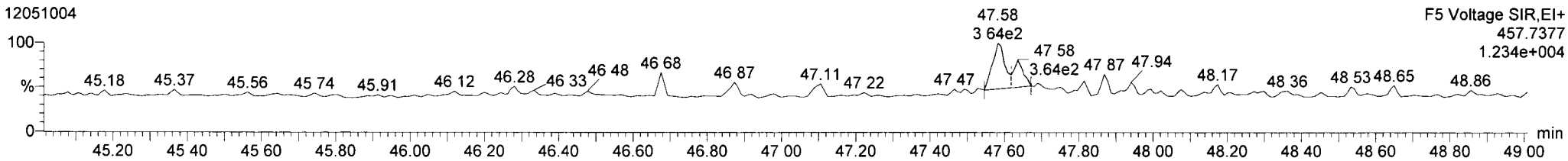
MANUAL ADJUSTMENTS

13C-OCDD

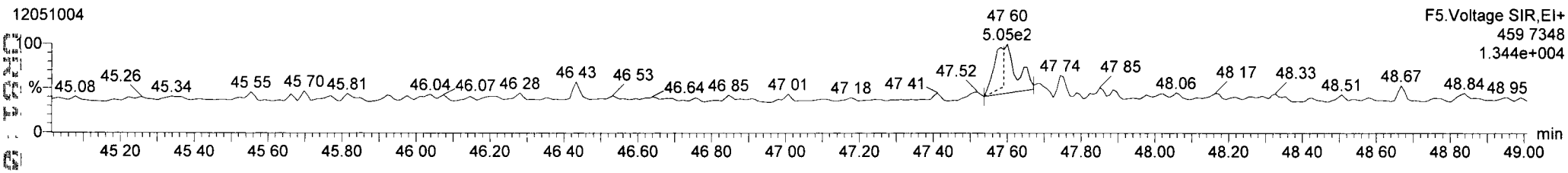


Data not found
Chromatography
Date 5/10/12

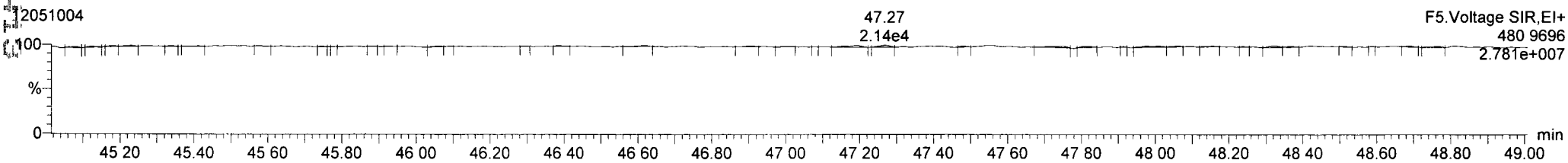
OCDD



OCDD



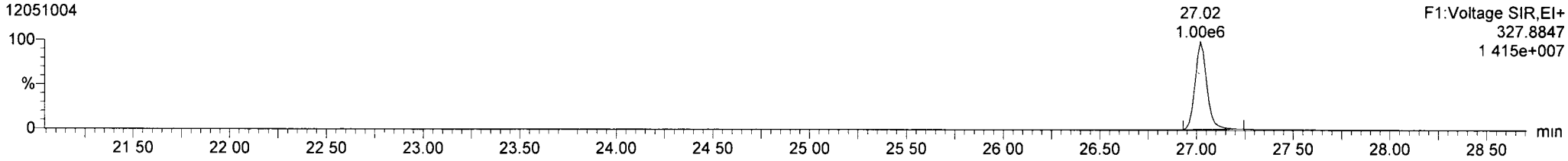
FUNCTION5 PFK



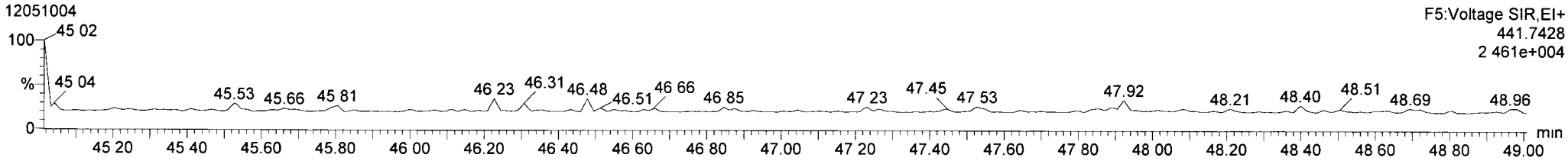
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:00 Pacific Daylight Time

Name: 12051004, Date: 10-May-2012, Time: 12:10:06, ID: UR81MBS, Conditions: AUTOSPEC01, User: pk

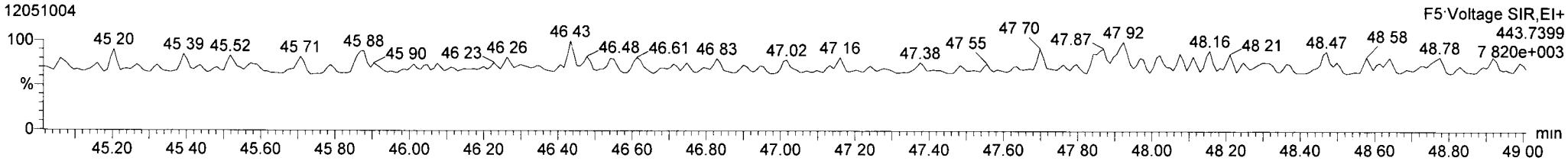
37CL-2378-TCDD



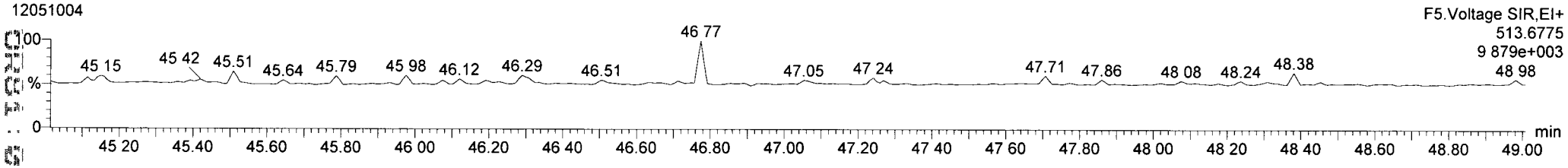
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset P.\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

mk 5/10/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M ..	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26 392	26.378	489872	489872	0 866	bb		0 78	0.77	2173 2	NO	10.743	10 743
2	2	12378-PeCDF	339.8597	30 517	30.527	1599346	1599346	0 907	bd		1 55	1 55	2660 1	NO	51 160	51 160
3	3	23478-PeCDF	339.8597	31 854	31.865	1552370	1552370	0.936	bb		1 53	1 55	2734.8	NO	52.796	52.796
4	4	123478-HxCDF	373 8208	35 515	35 515	1048568	1048568	1.082	bd		1 18	1.24	1076 2	NO	51.689	51 689
5	5	234678-HxCDF	373 8208	36 611	36.611	1120251	1120251	1 070	bd		1 22	1.24	1068 7	NO	55 664	55 664
6	6	123678-HxCDF	373 8208	35 668	35.679	1464808	1464808	1.048	db		1.27	1.24	1321.8	NO	54 199	54 199
7	7	123789-HxCDF	373 8208	37 729	37 730	815049	815049	1.020	bb		1.18	1.24	744.1	NO	51 307	51.307
8	8	1234678-HpCDF	407.7818	39 801	39.799	912245	912245	1.214	bb		1.02	1.05	1333.2	NO	57 046	57.046
9	9	1234789-HpCDF	407.7818	42.530	42 532	536769	536769	1 254	bd		1.02	1 05	667.6	NO	51 590	51.590
10	10	OCDF	441.7428	47.896	47 877	621045	621045	1.105	bd		0.85	0 89	779.8	NO	102.729	102.729
11	11	2378-TCDD	319.8965	27.020	27 018	330910	330910	1 046	bd		0 81	0.77	1097 8	NO	10.117	10 117
12	12	12378-PeCDD	355.8546	32 106	32.105	1017445	1017445	0 973	bd		1 56	1.55	3042 6	NO	52.867	52 867
13	13	123478-HxCDD	389 8157	36 743	36 743	768170	768170	0.935	bd		1 29	1.24	2194.4	NO	52 919	52 919
14	14	123678-HxCDD	389.8157	36 863	36.863	922736	922736	0 878	dd		1.19	1.24	2114.6	NO	54 185	54.185
15	15	123789-HxCDD	389 8157	37 291	37.258	784073	784073	0 839	dd		1 17	1.24	1663.9	NO	53 540	53 540
16	16	1234678-HpCDD	423.7766	41.631	41.622	508726	508726	0.974	bd		1 06	1.05	678 8	NO	54.903	54 903
17	17	OCDD	457.7377	47 618	47 605	572059	572059	0 950	bd		0 87	0.89	593 6	NO	110.080	110 080
18	18	13C-2378-TCDF	315.9419	26.362	26 362	5264799		1.484	bb	85 1	0.77	0.77	11609.9	NO	85 089	
19	19	13C-12378-PeCDF	351.9000	30 506	30 504	3446913		1 048	bb	78.9	1.60	1.55	3387.4	NO	78.901	
20	20	13C-23478-PeCDF	351 9000	31 843	31.841	3141833		1 003	bb	75.1	1.56	1.55	3305.5	NO	75.121	
21	21	13C-123478-HxCDF	383 8639	35 504	35.504	1875042		1 186	bd	83.3	0 52	0.51	894 9	NO	83.343	
22	22	13C-123678-HxCDF	383 8639	35.658	35.658	2578037		1 315	db	103 3	0 53	0.51	1076 7	NO	103.310	
23	23	13C-234678-HxCDF	383 8639	36 589	36.589	1881219		1.223	bb	81 0	0 51	0 51	847 6	NO	81.042	
24	24	13C-123789-HxCDF	383 8639	37 718	37.696	1557274		1.056	bb	77 7	0 53	0.51	648.7	NO	77 679	
25	25	13C-1234678-HpCDF	417.8253	39.779	39 779	1316762		1 011	bd	68 6	0.45	0.44	998.0	NO	68.609	
26	26	13C-1234789-HpCDF	417.8253	42.519	42 530	829671		0.741	bb	59.0	0.42	0.44	530 1	NO	59.041	
27	27	13C-1234-TCDD	331.9368	26.183	26.272	4168255		1 000	bb	100 0	0 77	0 77	7166.7	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27 005	27.005	3127526		0 956	bb	78 5	0 78	0 77	5167.6	NO	78 455	
29	29	13C-12378-PeCDD	367.8949	32 095	32.093	1977372		0.663	bb	71 5	1 65	1.55	5368.4	NO	71 503	
30	30	13C-123478-HxCDD	401 8559	36 721	36.721	1551826		1.024	bd	79 9	1 28	1.24	3743.0	NO	79.870	
31	31	13C-123678-HxCDD	401 8559	36 852	36.852	1940075		1 113	db	91 9	1 24	1.24	3897.9	NO	91.891	
32	32	13C-1234678-HpCDD	435 8169	41 610	41 632	951028		0.815	bb	61 5	1 06	1.05	1051 8	NO	61 485	
33	33	13C-OCDD	469 7779	47.591	47.647	1093972		0.717	bb	40 2	0 87	0.89	629 6	NO	80 397	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14 08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det.. .	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.280	37.368	1897573		1 000	bb	100.0	1 23	1.24	3600 9	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 420			0 866							11 190	11 215
36	36	Total-penta1	339 8597		28 230											
37	37	Total-pentafurans	339.8597		30 810			0 921							108 244	108.336
38	38	Total-hexafurans	373 8208		35 800			1 055							213.273	213.508
39	39	Total-heptafurans	407 7818		41 200			1.234							108 636	108.729
40	40	Total-Furans	303.9016		0 000			1.050							544.072	544.516
41	41	Total-tetradioxins	319 8965		25 930			1.046							10.402	10.402
42	42	Total-pentadioxins	355.8546		30 980			0.973							53.480	53.545
43	43	Total-hexadioxins	389.8157		35.980			0.884							160 644	160.644
44	44	Total-heptadioxins	423.7766		41 030			0.974							55 463	55.463
45	45	Total-Dioxins	319.8965		0.000			0.942							390.068	390 133
46	46	Total-TEQ	319.8965		0.000										934 140	934 649
47	47	37CL-2378-TCDD	327.8847	27 020	26.994	1433305		1 037					8785.8		33.154	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0 000											
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0.000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000											
54	54	FUNCTION1 HPCDPE	409.7974		0 000										0.000	
55	55	FUNCTION2 HPCDPE	409 7974		0.000											
56	56	FUNCTION3 OCDPE	445.7555		0 000											
57	57	FUNCTION4 NCDPE	479.7165		0 000											
58	58	FUNCTION5 DCDPE	513.6775		0 000											

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	26.84	0.000	0.866	0.000	0.006	0.56	0 77	YES	2.4
2	35	Total-tetrafurans	303.9016	26 75	0.000	0.866	0 000	0.009	1 72	0.77	YES	4.4
3	35	Total-tetrafurans	303.9016	26 63	0.000	0.866	0 000	0.009	3 71	0.77	YES	10 2
4	1	2378-TCDF	303 9016	26 39	489871 515	0.866	10.743	10 743	0 78	0 77	NO	2173 2
5	35	Total-tetrafurans	303.9016	25 48	4821 041	0 866	0.106	0 106	0.66	0 77	NO	19.5
6	35	Total-tetrafurans	303.9016	25 30	10283.015	0 866	0 226	0.226	0 81	0.77	NO	48 6
7	35	Total-tetrafurans	303 9016	25.15	5287.141	0 866	0 116	0.116	0.77	0.77	NO	24.1

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	3	23478-PeCDF	339 8597	31.85	1552369.563	0 936	52 796	52.796	1 53	1 55	NO	2734 8
2	37	Total-pentafurans	339.8597	31.59	0 000	0 921	0.000	0.038	1 85	1.55	YES	3 7
3	37	Total-pentafurans	339.8597	30.71	89084 984	0.921	2.935	2 935	1 59	1.55	NO	102 1
4	2	12378-PeCDF	339.8597	30.52	1599345.751	0 907	51 160	51.160	1 55	1 55	NO	2660.1
5	37	Total-pentafurans	339.8597	30.24	0 000	0.921	0.000	0.053	2 24	1.55	YES	5 4
6	37	Total-pentafurans	339 8597	30.15	9728.622	0.921	0 320	0.320	1.62	1 55	NO	19 6
7	37	Total-pentafurans	339.8597	29.44	21926.108	0 921	0 722	0 722	1.37	1 55	NO	27.5
8	37	Total-pentafurans	339 8597	32.88	9455 182	0 921	0.311	0 311	1 65	1.55	NO	17 7

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	6	123678-HxCDF	373 8208	35 67	1464807.813	1 048	54 199	54 199	1 27	1 24	NO	1321.8
2	4	123478-HxCDF	373.8208	35 52	1048567.938	1 082	51 689	51.689	1 18	1 24	NO	1076 2
3	38	Total-hexafurans	373 8208	35.35	0.000	1 055	0.000	0.076	0 88	1.24	YES	2 5
4	38	Total-hexafurans	373.8208	34.00	8614.502	1 055	0 414	0.414	1 32	1.24	NO	8 6
5	38	Total-hexafurans	373.8208	33.81	0.000	1 055	0 000	0.159	1.48	1.24	YES	4.2
6	7	123789-HxCDF	373.8208	37.73	815048 688	1.020	51.307	51 307	1.18	1 24	NO	744 1
7	5	234678-HxCDF	373 8208	36 61	1120251 188	1.070	55 664	55 664	1 22	1 24	NO	1068 7

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42.53	536768 876	1.254	51 590	51.590	1 02	1 05	NO	667.6
2	39	Total-heptafurans	407.7818	40 27	0.000	1.234	0 000	0.029	13 48	1.05	YES	9 2
3	39	Total-heptafurans	407.7818	40.22	0.000	1 234	0.000	0.065	2 90	1 05	YES	8.3
4	8	1234678-HpCDF	407.7818	39.80	912245 219	1.214	57.046	57.046	1.02	1 05	NO	1333 2

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	26.84	0.000	0 866	0.000	0.006	0 56	0.77	YES	2.4
2	35	Total-tetrafurans	303.9016	26.75	0.000	0 866	0.000	0.009	1 72	0.77	YES	4.4
3	35	Total-tetrafurans	303.9016	26.63	0.000	0 866	0.000	0.009	3 71	0.77	YES	10.2
4	1	2378-TCDF	303.9016	26.39	489871.515	0 866	10.743	10.743	0.78	0 77	NO	2173.2
5	35	Total-tetrafurans	303.9016	25 48	4821.041	0.866	0 106	0 106	0 66	0 77	NO	19.5
6	35	Total-tetrafurans	303.9016	25.30	10283.015	0 866	0 226	0.226	0.81	0 77	NO	48 6
7	35	Total-tetrafurans	303 9016	25 15	5287.141	0.866	0 116	0 116	0 77	0 77	NO	24 1
8	3	23478-PeCDF	339.8597	31 85	1552369 563	0.936	52.796	52.796	1 53	1 55	NO	2734 8
9	37	Total-pentafurans	339 8597	31.59	0.000	0 921	0.000	0.038	1 85	1 55	YES	3 7
10	37	Total-pentafurans	339 8597	30.71	89084.984	0 921	2.935	2 935	1.59	1.55	NO	102 1
11	2	12378-PeCDF	339 8597	30 52	1599345.751	0 907	51.160	51 160	1 55	1.55	NO	2660 1
12	37	Total-pentafurans	339.8597	30.24	0.000	0 921	0 000	0.053	2.24	1 55	YES	5.4
13	37	Total-pentafurans	339.8597	30.15	9728.622	0 921	0 320	0 320	1.62	1.55	NO	19 6
14	37	Total-pentafurans	339.8597	29.44	21926.108	0 921	0 722	0 722	1 37	1.55	NO	27 5
15	37	Total-pentafurans	339.8597	32.88	9455 182	0 921	0 311	0 311	1.65	1.55	NO	17 7
16	6	123678-HxCDF	373 8208	35 67	1464807.813	1.048	54.199	54.199	1 27	1 24	NO	1321.8
17	4	123478-HxCDF	373.8208	35 52	1048567.938	1 082	51 689	51 689	1 18	1.24	NO	1076 2
18	38	Total-hexafurans	373 8208	35 35	0.000	1 055	0 000	0 076	0 88	1 24	YES	2 5
19	38	Total-hexafurans	373 8208	34 00	8614 502	1 055	0.414	0.414	1 32	1.24	NO	8.6
20	38	Total-hexafurans	373.8208	33 81	0.000	1.055	0 000	0 159	1 48	1.24	YES	4 2
21	7	123789-HxCDF	373 8208	37 73	815048.688	1 020	51 307	51 307	1.18	1.24	NO	744 1
22	5	234678-HxCDF	373 8208	36 61	1120251.188	1 070	55 664	55.664	1.22	1 24	NO	1068.7
23	9	1234789-HpCDF	407 7818	42.53	536768.876	1.254	51.590	51 590	1 02	1.05	NO	667 6
24	39	Total-heptafurans	407.7818	40 27	0.000	1.234	0.000	0.029	13.48	1 05	YES	9.2
25	39	Total-heptafurans	407 7818	40.22	0.000	1.234	0.000	0.065	2 90	1.05	YES	8.3
26	8	1234678-HpCDF	407.7818	39 80	912245.219	1.214	57.046	57 046	1 02	1.05	NO	1333 2
27	10	OCDF	441 7428	47 90	621045 125	1.105	102 729	102 .	0.85	0 89	NO	779 8

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati...	1° R..	S/N
1	11	2378-TCDD	319 8965	27 02	330909.625	1 046	10 117	10 117	0 81	0.77	NO	1097 8
2	41	Total-tetradioxins	319 8965	26.65	9317.361	1 046	0.285	0 285	0.81	0.77	NO	23 3

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	32.39	11797.100	0 973	0 613	0.613	1.56	1.55	NO	34.1
2	12	12378-PeCDD	355.8546	32.11	1017444 844	0.973	52.867	52 867	1.56	1 55	NO	3042 6
3	42	Total-pentadioxins	355.8546	31.43	0.000	0.973	0 000	0.065	2.62	1 55	YES	9 1

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	15	123789-HxCDD	389.8157	37 29	784073.344	0.839	53.540	53.540	1 17	1.24	NO	1663.9
2	14	123678-HxCDD	389.8157	36.86	922736.219	0.878	54.185	54.185	1.19	1 24	NO	2114.6
3	13	123478-HxCDD	389.8157	36.74	768169.750	0 935	52.919	52.919	1 29	1.24	NO	2194 4

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HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423 7766	41.63	508726.281	0.974	54 903	54 903	1 06	1 05	NO	678 8
2	44	Total-heptadioxins	423.7766	40.36	5183 199	0.974	0.559	0 559	1 19	1 05	NO	9 0

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati.	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	27.02	330909 625	1 046	10.117	10 117	0.81	0.77	NO	1097 8
2	41	Total-tetradioxins	319.8965	26.65	9317 361	1.046	0.285	0.285	0.81	0 77	NO	23.3
3	42	Total-pentadioxins	355 8546	32 39	11797.100	0 973	0 613	0.613	1.56	1.55	NO	34.1
4	12	12378-PeCDD	355 8546	32 11	1017444.844	0.973	52.867	52.867	1 56	1 55	NO	3042.6
5	42	Total-pentadioxins	355 8546	31 43	0.000	0.973	0.000	0 065	2 62	1 55	YES	9.1
6	15	123789-HxCDD	389 8157	37 29	784073.344	0.839	53 540	53 540	1 17	1 24	NO	1663 9
7	14	123678-HxCDD	389.8157	36 86	922736.219	0.878	54.185	54 185	1 19	1.24	NO	2114.6
8	13	123478-HxCDD	389.8157	36 74	768169.750	0 935	52 919	52.919	1.29	1 24	NO	2194 4
9	16	1234678-HpCDD	423.7766	41.63	508726 281	0 974	54.903	54 903	1 06	1 05	NO	678 8
10	44	Total-heptadioxins	423.7766	40.36	5183 199	0 974	0.559	0.559	1.19	1 05	NO	9 0
11	17	OCDD	457.7377	47 62	572059.000	0.950	110.080	110. .	0.87	0 89	NO	593.6

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	26 84	0.000	0.866	0 000	0.006	0 56	0 77	YES	2.4
2	35	Total-tetrafurans	303.9016	26 75	0.000	0 866	0 000	0 009	1 72	0 77	YES	4.4
3	35	Total-tetrafurans	303.9016	26 63	0.000	0.866	0 000	0 009	3 71	0 77	YES	10 2
4	1	2378-TCDF	303.9016	26.39	489871 515	0.866	10.743	10.743	0 78	0.77	NO	2173 2
5	35	Total-tetrafurans	303.9016	25 48	4821.041	0.866	0 106	0 106	0.66	0.77	NO	19 5
6	35	Total-tetrafurans	303.9016	25.30	10283.015	0.866	0 226	0.226	0.81	0.77	NO	48.6
7	35	Total-tetrafurans	303.9016	25 15	5287.141	0.866	0 116	0 116	0 77	0.77	NO	24.1
8	3	23478-PeCDF	339.8597	31 85	1552369.563	0.936	52.796	52.796	1 53	1.55	NO	2734 8
9	37	Total-pentafurans	339.8597	31.59	0.000	0.921	0 000	0.038	1.85	1.55	YES	3.7
10	37	Total-pentafurans	339 8597	30.71	89084.984	0.921	2.935	2.935	1.59	1 55	NO	102.1
11	2	12378-PeCDF	339 8597	30 52	1599345 751	0.907	51.160	51 160	1 55	1 55	NO	2660 1
12	37	Total-pentafurans	339.8597	30.24	0 000	0 921	0.000	0.053	2 24	1 55	YES	5 4
13	37	Total-pentafurans	339.8597	30 15	9728.622	0 921	0.320	0.320	1.62	1 55	NO	19.6
14	37	Total-pentafurans	339 8597	29 44	21926 108	0 921	0.722	0 722	1.37	1 55	NO	27.5
15	37	Total-pentafurans	339 8597	32 88	9455 182	0 921	0.311	0.311	1 65	1.55	NO	17 7
16	6	123678-HxCDF	373.8208	35.67	1464807.813	1.048	54.199	54.199	1 27	1.24	NO	1321.8
17	4	123478-HxCDF	373 8208	35.52	1048567 938	1 082	51 689	51.689	1.18	1 24	NO	1076.2
18	38	Total-hexafurans	373.8208	35.35	0 000	1.055	0.000	0.076	0.88	1.24	YES	2.5
19	38	Total-hexafurans	373.8208	34.00	8614.502	1.055	0 414	0 414	1.32	1 24	NO	8.6
20	38	Total-hexafurans	373.8208	33 81	0.000	1 055	0 000	0 159	1.48	1 24	YES	4.2
21	7	123789-HxCDF	373.8208	37.73	815048.688	1.020	51.307	51 307	1.18	1 24	NO	744.1
22	5	234678-HxCDF	373.8208	36.61	1120251 188	1.070	55.664	55 664	1 22	1 24	NO	1068.7
23	9	1234789-HpCDF	407.7818	42 53	536768.876	1 254	51.590	51 590	1 02	1 05	NO	667.6
24	39	Total-heptafurans	407.7818	40 27	0 000	1.234	0 000	0 029	13 48	1 05	YES	9 2
25	39	Total-heptafurans	407 7818	40 22	0 000	1.234	0 000	0 065	2 90	1 05	YES	8 3
26	8	1234678-HpCDF	407.7818	39.80	912245 219	1.214	57.046	57 046	1.02	1.05	NO	1333.2
27	10	OCDF	441.7428	47.90	621045.125	1 105	102 729	102 .	0.85	0.89	NO	779.8
28	11	2378-TCDD	319.8965	27 02	330909 625	1 046	10.117	10 117	0.81	0.77	NO	1097.8
29	41	Total-tetradioxins	319.8965	26 65	9317.361	1.046	0.285	0 285	0.81	0.77	NO	23 3
30	42	Total-pentadioxins	355 8546	32 39	11797.100	0.973	0.613	0 613	1.56	1.55	NO	34 1
31	12	12378-PeCDD	355.8546	32.11	1017444.844	0 973	52.867	52 867	1.56	1.55	NO	3042.6
32	42	Total-pentadioxins	355.8546	31.43	0.000	0 973	0.000	0 065	2.62	1.55	YES	9.1
33	15	123789-HxCDD	389.8157	37 29	784073 344	0.839	53 540	53 540	1 17	1 24	NO	1663 9
34	14	123678-HxCDD	389.8157	36 86	922736 219	0 878	54 185	54.185	1 19	1 24	NO	2114 6
35	13	123478-HxCDD	389 8157	36.74	768169 750	0 935	52.919	52.919	1 29	1 24	NO	2194 4
36	16	1234678-HpCDD	423 7766	41 63	508726 281	0 974	54.903	54 903	1 06	1 05	NO	678 8
37	44	Total-heptadioxins	423 7766	40 36	5183 199	0 974	0 559	0 559	1.19	1 05	NO	9.0
38	17	OCDD	457 7377	47 62	572059 000	0 950	110.080	110....	0 87	0.89	NO	593 6

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati..	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	23.03	0.000							99 9
2	48	FUNCTION1 PFK	330.9792	21 88	0 000							110 6
3	48	FUNCTION1 PFK	330 9792	25 05	0.000							35 2
4	48	FUNCTION1 PFK	330.9792	24 55	0.000							49 4
5	48	FUNCTION1 PFK	330.9792	23 79	0 000							75 4

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PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366 9792	30.49	0 000		0 000					1 0
2	49	FUNCTION2 PFK	366 9792	30 15	0.000		0 000					1.0
3	49	FUNCTION2 PFK	366 9792	30.11	0.000		0 000					1.0
4	49	FUNCTION2 PFK	366.9792	29 90	0.000		0.000					0.7
5	49	FUNCTION2 PFK	366.9792	29 76	0.000		0.000					0.8
6	49	FUNCTION2 PFK	366.9792	29.40	0.000		0.000					0.8
7	49	FUNCTION2 PFK	366.9792	29.35	0 000		0.000					0.5
8	49	FUNCTION2 PFK	366.9792	29.12	0 000		0.000					0 5
9	49	FUNCTION2 PFK	366 9792	29 08	0 000		0.000					1 3
10	49	FUNCTION2 PFK	366 9792	29 03	0.000		0.000					1 0
11	49	FUNCTION2 PFK	366 9792	28 86	0.000		0.000					0.8
12	49	FUNCTION2 PFK	366.9792	28 81	0.000		0.000					0.6
13	49	FUNCTION2 PFK	366.9792	32.46	0 000		0.000					1 3
14	49	FUNCTION2 PFK	366.9792	32 30	0 000		0 000					2 2
15	49	FUNCTION2 PFK	366.9792	32 00	0 000		0 000					1 4
16	49	FUNCTION2 PFK	366 9792	31 95	0 000		0.000					0.9
17	49	FUNCTION2 PFK	366 9792	31 92	0.000		0 000					1 5
18	49	FUNCTION2 PFK	366 9792	31.88	0.000		0.000					2.0
19	49	FUNCTION2 PFK	366 9792	31 83	0 000		0.000					2.3
20	49	FUNCTION2 PFK	366.9792	31 73	0.000		0.000					1 2
21	49	FUNCTION2 PFK	366.9792	31.67	0.000		0.000					1 8
22	49	FUNCTION2 PFK	366 9792	31.57	0 000		0.000					0.8
23	49	FUNCTION2 PFK	366.9792	31.17	0.000		0 000					1 9
24	49	FUNCTION2 PFK	366.9792	30.98	0 000		0.000					1 1
25	49	FUNCTION2 PFK	366.9792	30.94	0.000		0 000					1 5
26	49	FUNCTION2 PFK	366 9792	30.87	0 000		0.000					0 8
27	49	FUNCTION2 PFK	366 9792	30.82	0 000		0.000					1 0
28	49	FUNCTION2 PFK	366.9792	30.76	0 000		0 000					1.3
29	49	FUNCTION2 PFK	366.9792	33.11	0.000		0.000					0.4
30	49	FUNCTION2 PFK	366.9792	32 98	0 000		0.000					1 3
31	49	FUNCTION2 PFK	366 9792	32.57	0 000		0.000					0.6

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	51	FUNCTION4 PFK	430 9728	41.38	0.000							1.1
2	51	FUNCTION4 PFK	430.9728	41.31	0 000							1.0
3	51	FUNCTION4 PFK	430.9728	41.07	0 000							1 5
4	51	FUNCTION4 PFK	430.9728	40 43	0.000							1.8
5	51	FUNCTION4 PFK	430 9728	40 07	0.000							0 4
6	51	FUNCTION4 PFK	430.9728	39.90	0.000							1.3
7	51	FUNCTION4 PFK	430 9728	39.84	0 000							1.4
8	51	FUNCTION4 PFK	430.9728	39.76	0.000							0.7
9	51	FUNCTION4 PFK	430.9728	39.42	0.000							1.2
10	51	FUNCTION4 PFK	430.9728	39.00	0.000							0.9
11	51	FUNCTION4 PFK	430.9728	38 96	0.000							1 4
12	51	FUNCTION4 PFK	430 9728	44.42	0 000							0.7
13	51	FUNCTION4 PFK	430 9728	44.11	0 000							0.5
14	51	FUNCTION4 PFK	430 9728	44.06	0.000							0.7
15	51	FUNCTION4 PFK	430.9728	44.00	0.000							1 1
16	51	FUNCTION4 PFK	430 9728	43 88	0.000							0.7
17	51	FUNCTION4 PFK	430.9728	43 83	0.000							1 1
18	51	FUNCTION4 PFK	430.9728	43 63	0.000							1 2
19	51	FUNCTION4 PFK	430 9728	43 29	0 000							1.2
20	51	FUNCTION4 PFK	430.9728	43 06	0 000							1.5
21	51	FUNCTION4 PFK	430 9728	42 96	0 000							1.2
22	51	FUNCTION4 PFK	430 9728	42.82	0 000							0 4
23	51	FUNCTION4 PFK	430.9728	42 18	0 000							0 6
24	51	FUNCTION4 PFK	430.9728	42 06	0 000							1 5
25	51	FUNCTION4 PFK	430.9728	41 63	0 000							0 6
26	51	FUNCTION4 PFK	430.9728	41 59	0 000							0.7
27	51	FUNCTION4 PFK	430.9728	41.52	0 000							1.3
28	51	FUNCTION4 PFK	430.9728	44.95	0.000							1.6

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati...	1° R..	S/N
1	52	FUNCTION5 PFK	480 9696	48 42	0 000							1.0
2	52	FUNCTION5 PFK	480.9696	48 27	0.000							1 5
3	52	FUNCTION5 PFK	480.9696	47 49	0.000							0 7
4	52	FUNCTION5 PFK	480 9696	47 47	0 000							0.9
5	52	FUNCTION5 PFK	480.9696	46.63	0 000							1.1
6	52	FUNCTION5 PFK	480.9696	46.50	0 000							0.6
7	52	FUNCTION5 PFK	480 9696	46.42	0 000							0.5
8	52	FUNCTION5 PFK	480 9696	45 70	0.000							1 4
9	52	FUNCTION5 PFK	480.9696	45 26	0 000							1 1
10	52	FUNCTION5 PFK	480.9696	45.20	0 000							1.0

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
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Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD. .	409 7974	23.63	0.000		0 000					3.8
2	54	FUNCTION1 HPCD .	409.7974	21.66	0.000		0.000					4 8
3	54	FUNCTION1 HPCD...	409.7974	27.09	0.000		0 000					2.3
4	54	FUNCTION1 HPCD .	409 7974	26.65	0 000		0.000					2.1
5	54	FUNCTION1 HPCD...	409.7974	26 17	0.000		0 000					2.4
6	54	FUNCTION1 HPCD.	409.7974	25 23	0 000		0.000					1.9
7	54	FUNCTION1 HPCD..	409.7974	24 30	0.000		0 000					2 3

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati...	1° R...	S/N
1												

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS6

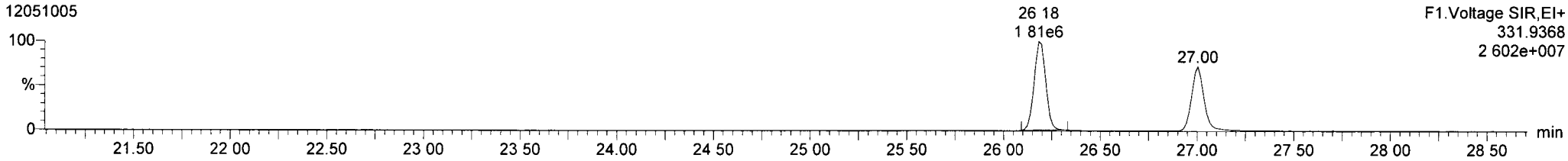
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

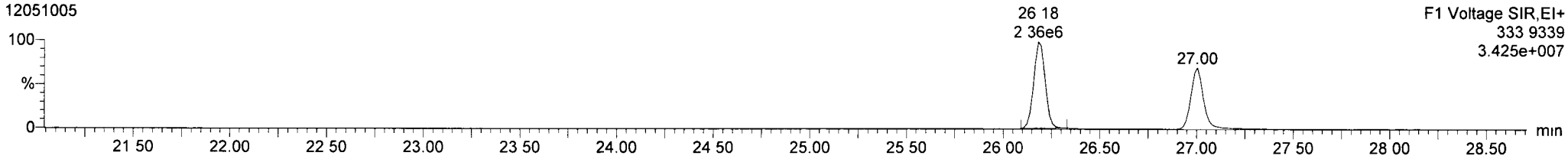
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

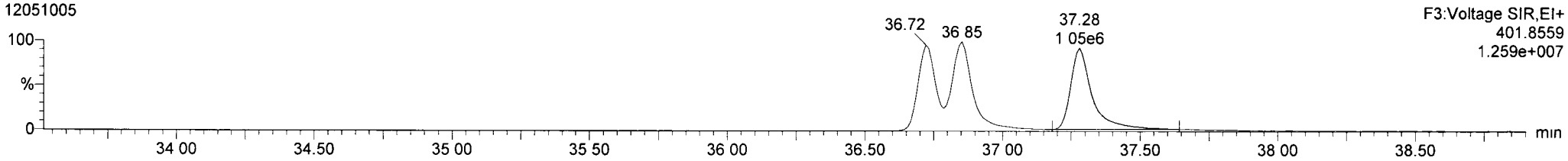
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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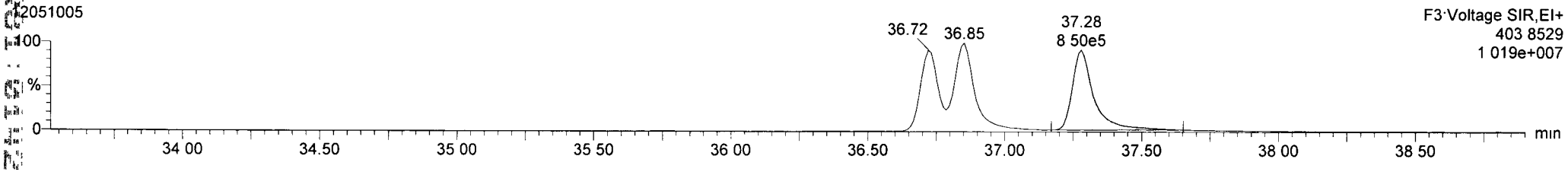

Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

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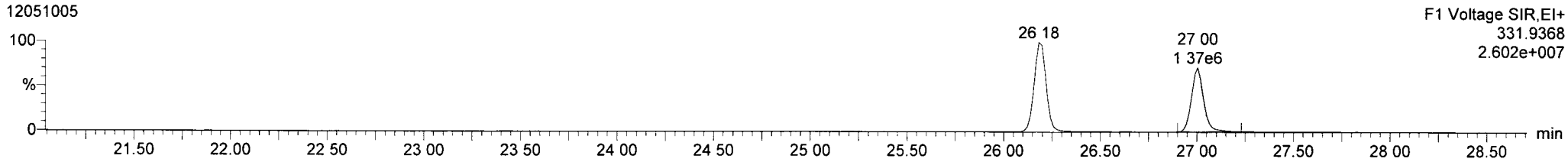
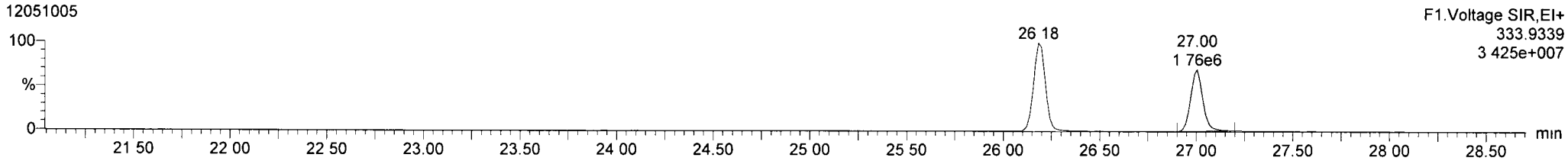
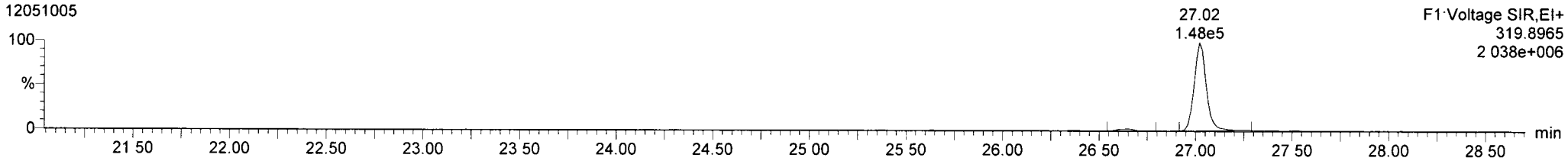
13C-2378-TCDD



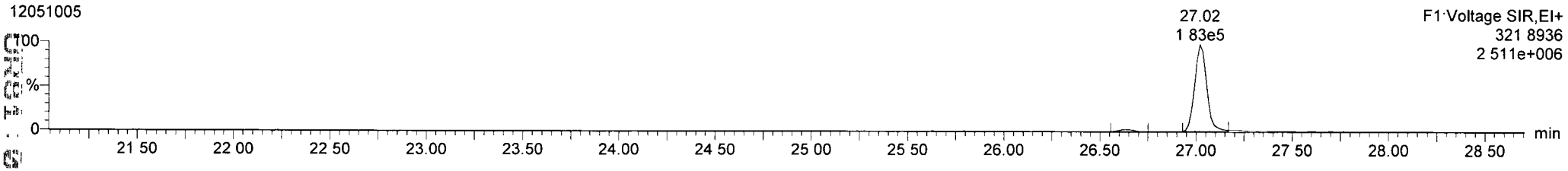
13C-2378-TCDD



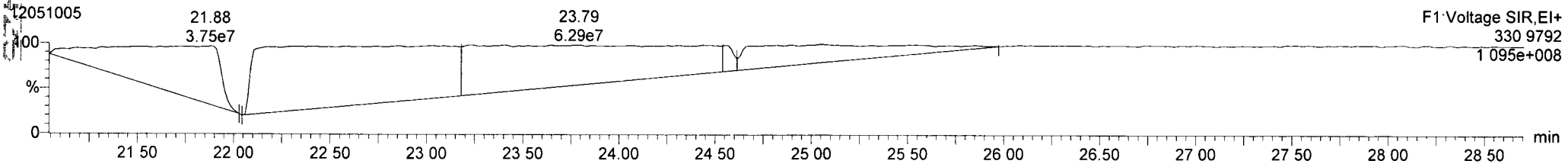
Total-tetradioxins



Total-tetradioxins



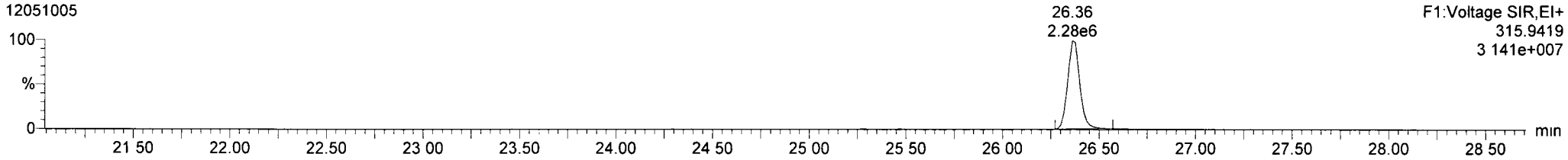
FUNCTION1 PFK



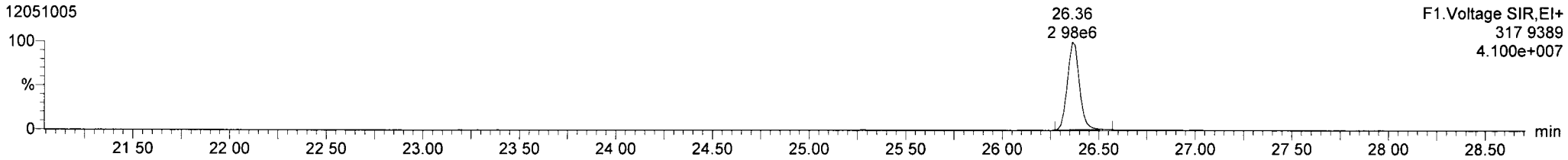
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

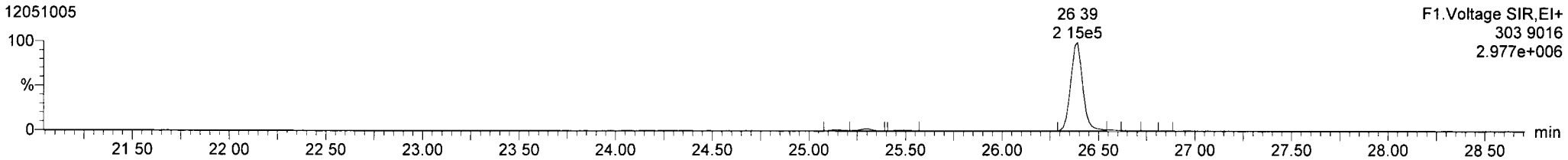
13C-2378-TCDF



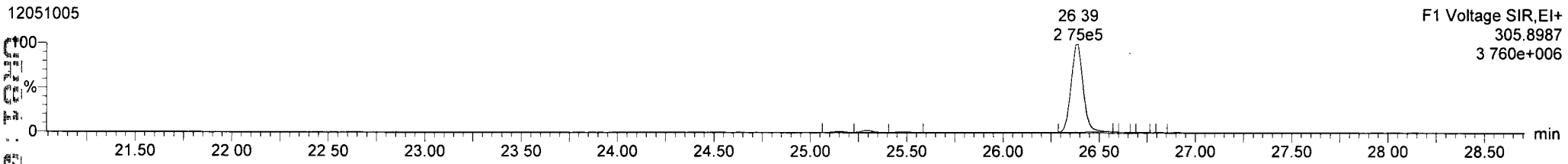
13C-2378-TCDF



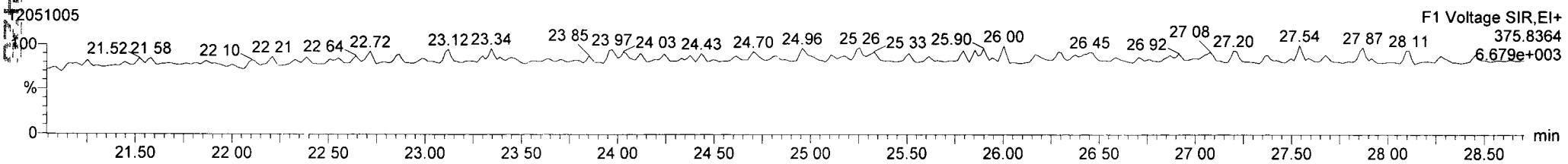
Total-tetrafurans



Total-tetrafurans



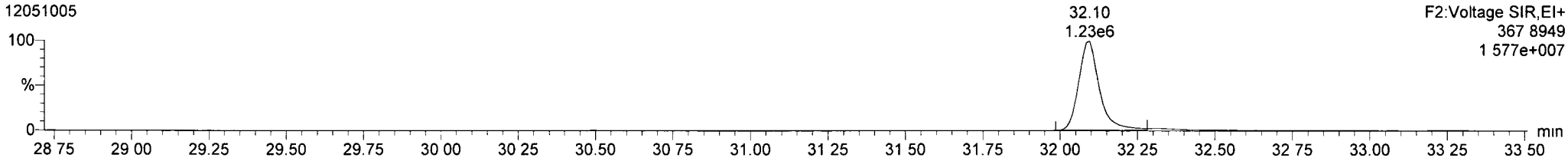
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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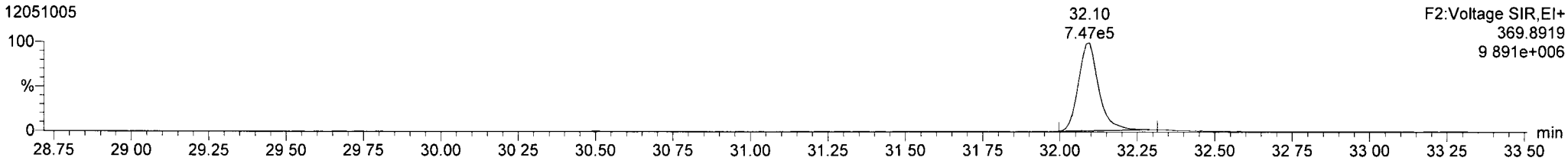
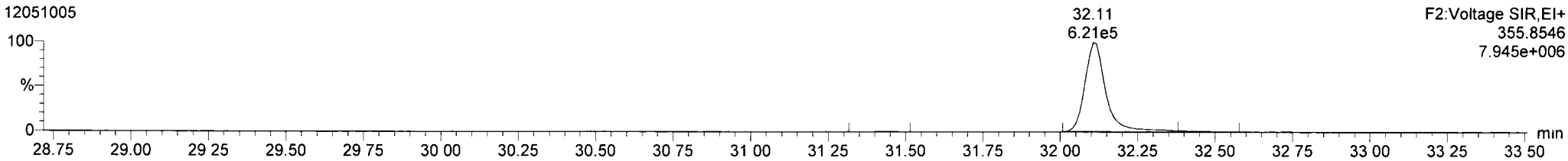


Total-pentadioxins



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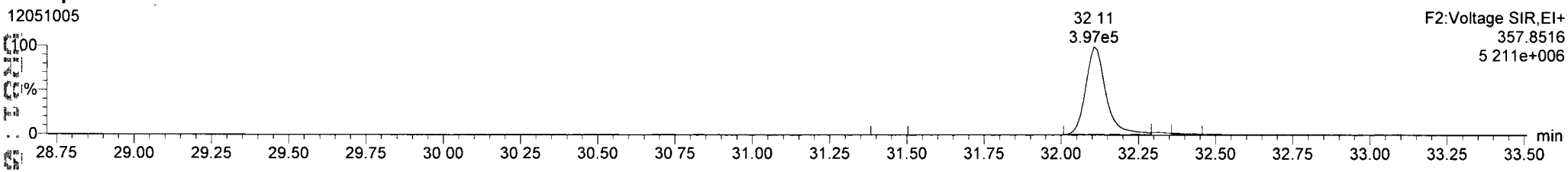
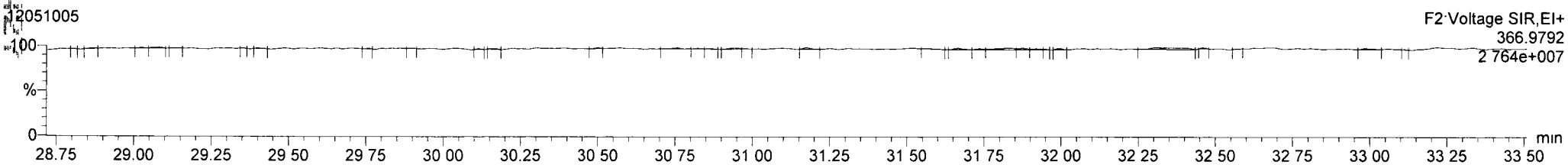


FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
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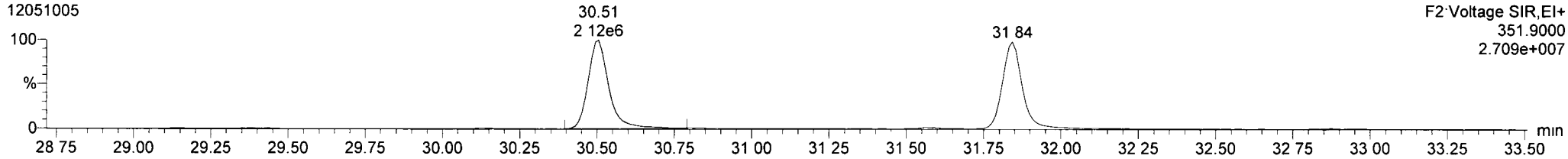
Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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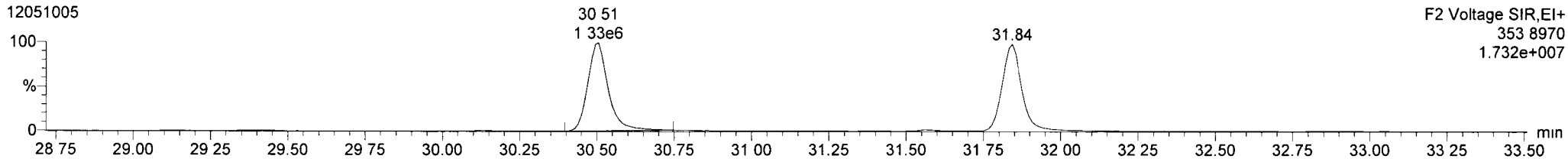

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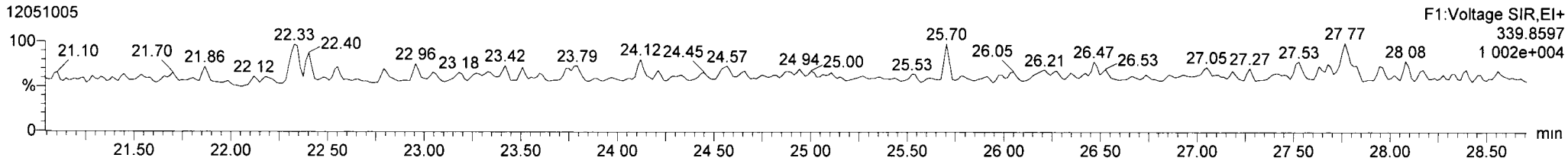

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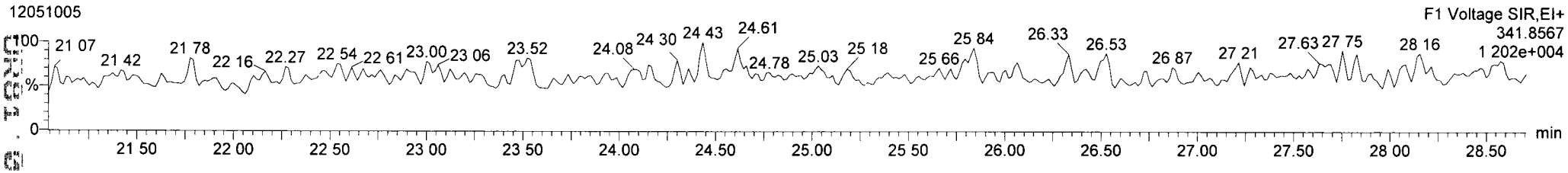
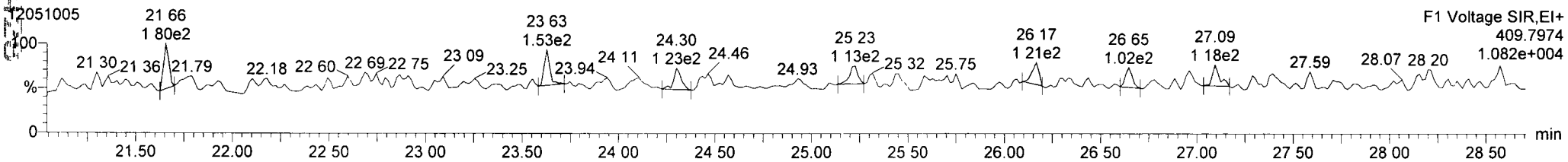


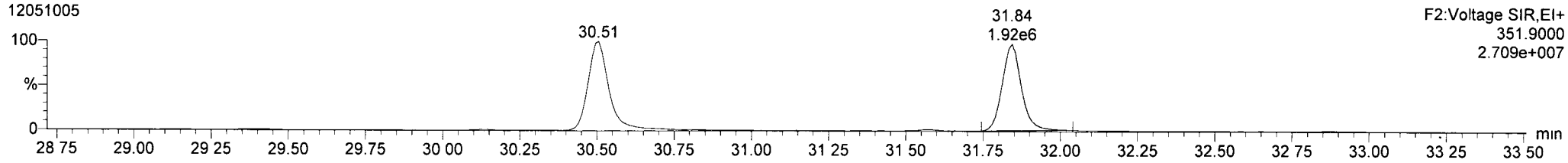
FUNCTION1 HPCDPE



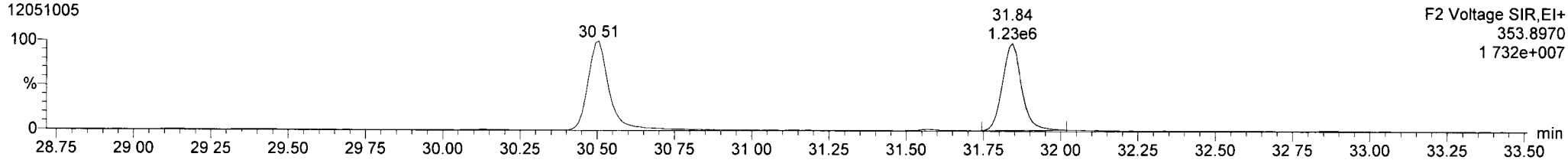
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

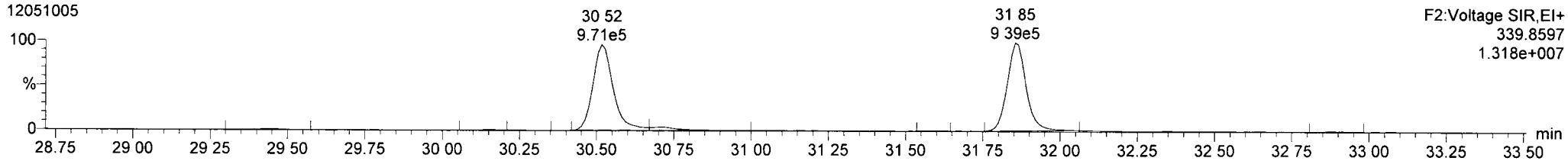
13C-23478-PeCDF



13C-23478-PeCDF



Total-pentafurans



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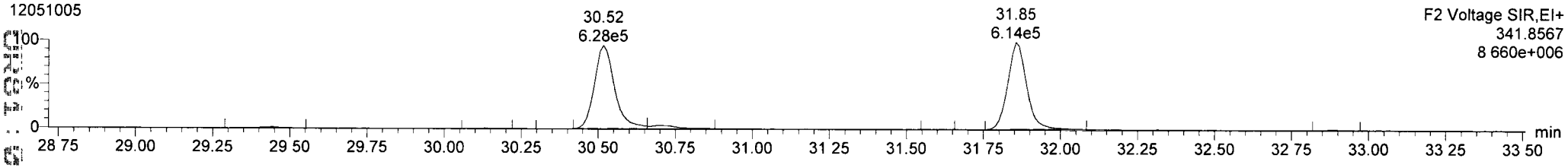

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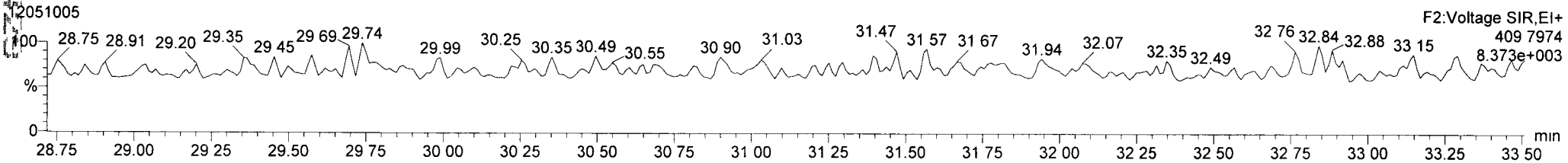

Quantify Sample Report **MassLynx 4.1 SCN 714**
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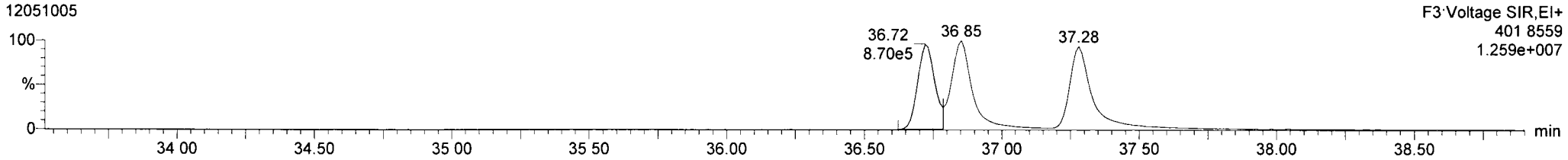
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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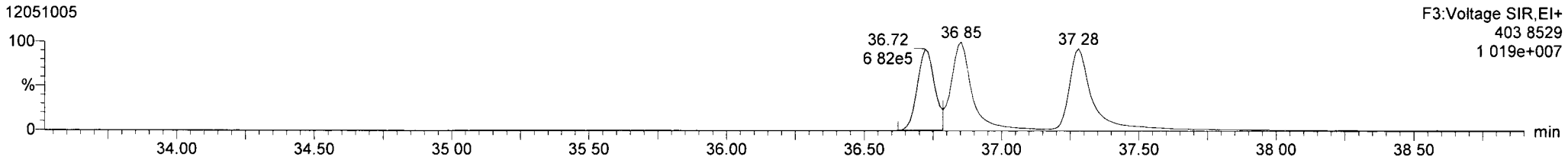
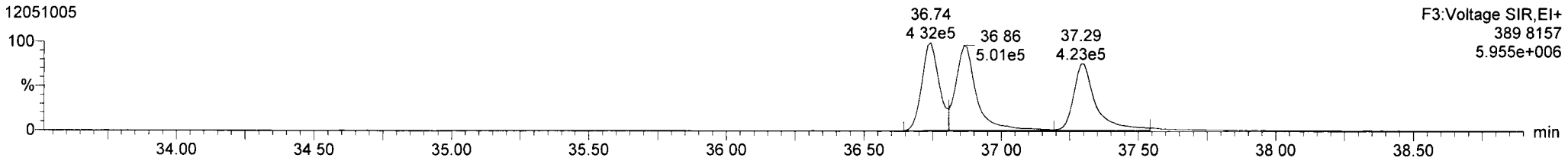
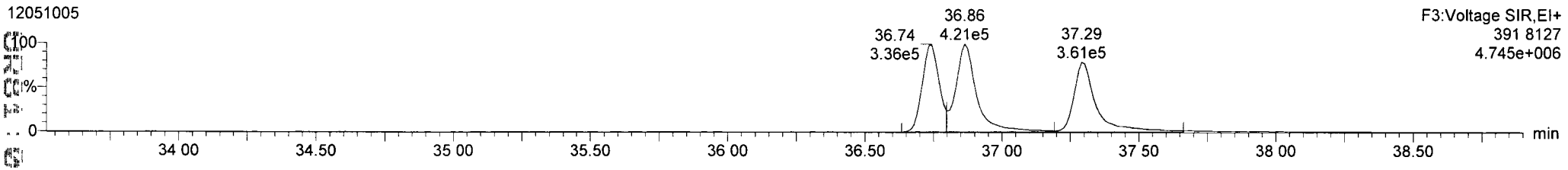


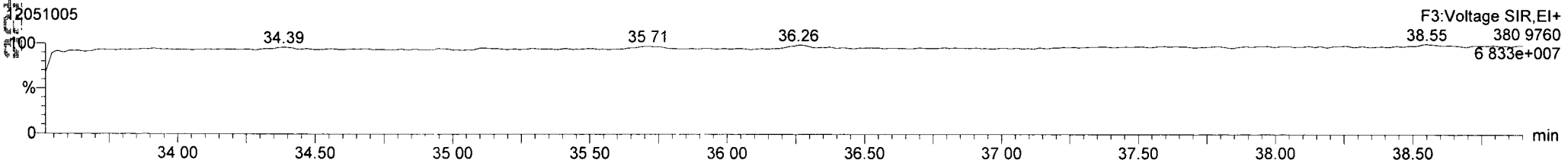
Total-hexadioxins



Total-hexadioxins



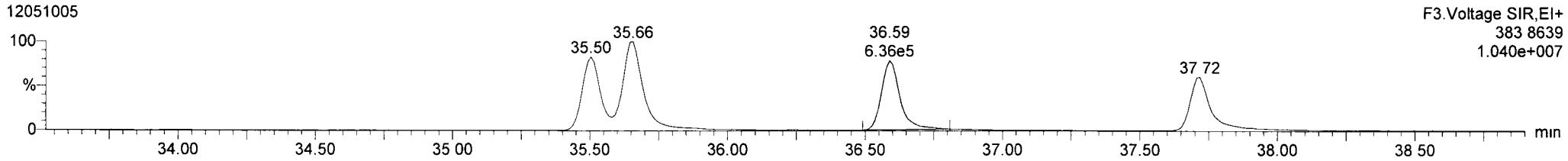
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed. Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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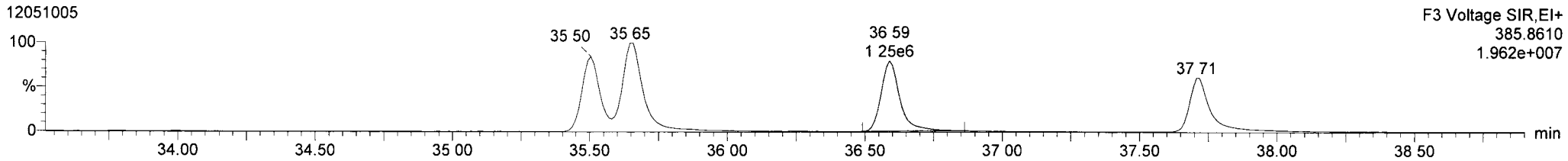
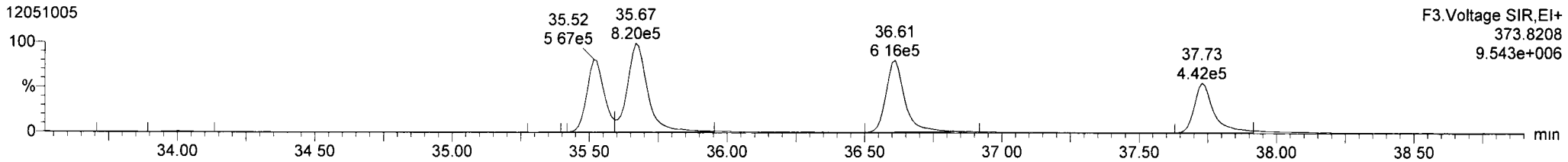


Total-hexafurans



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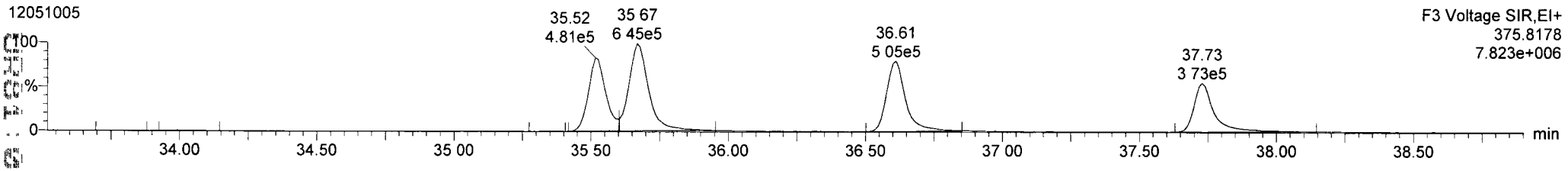
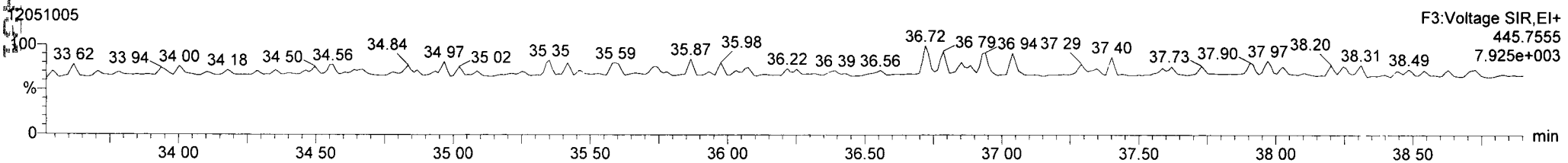


FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
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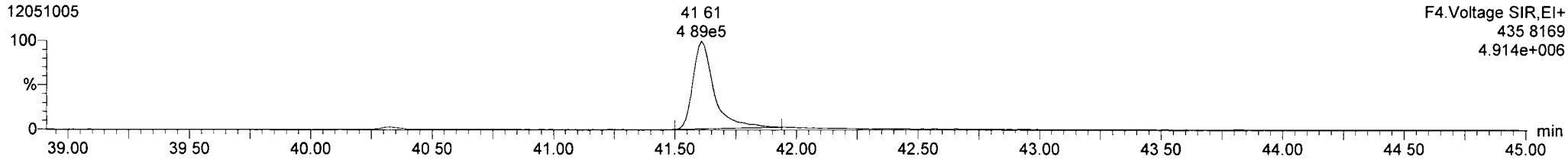
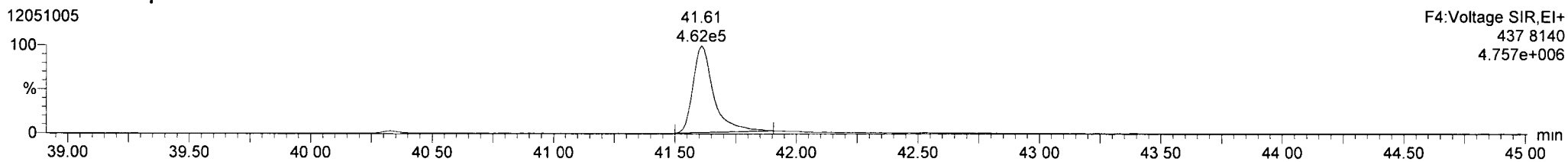
Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

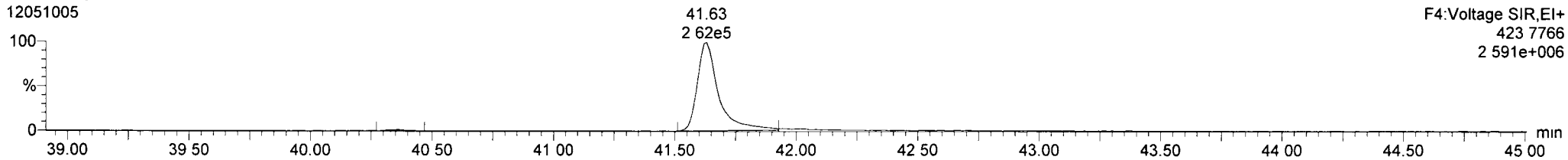
13C-1234678-HpCDD



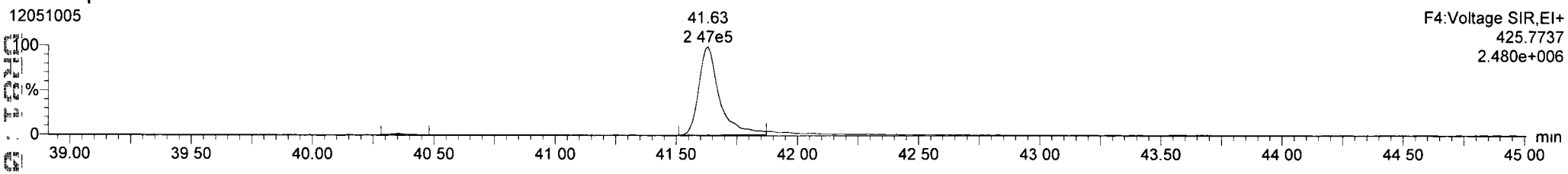
13C-1234678-HpCDD



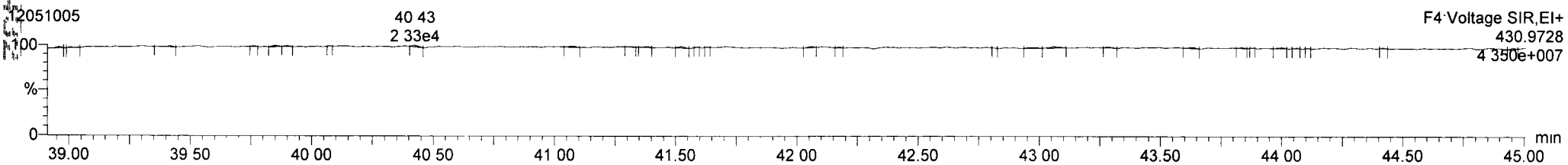
Total-heptadioxins



Total-heptadioxins



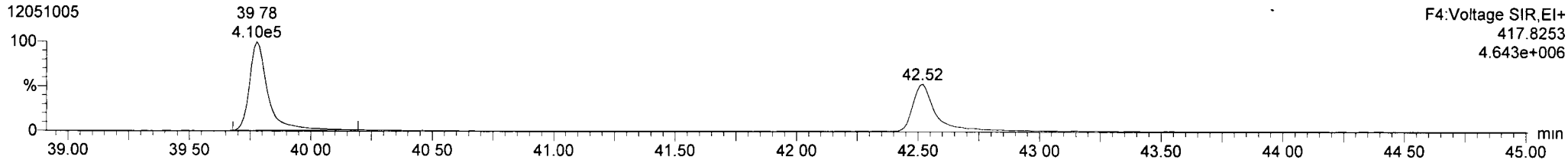
FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120510QC qld
Last Altered: Thursday, May 10, 2012 14.08.21 Pacific Daylight Time
Printed. Thursday, May 10, 2012 14.09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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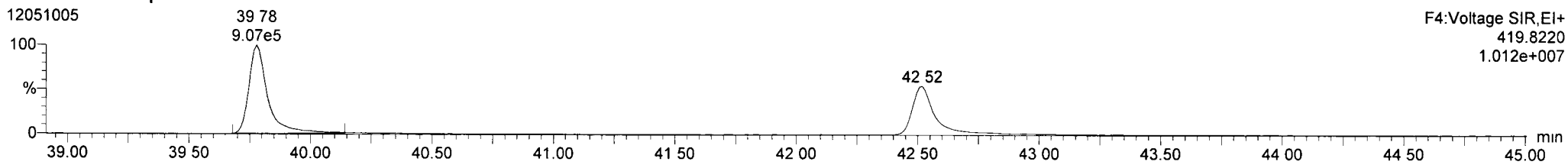

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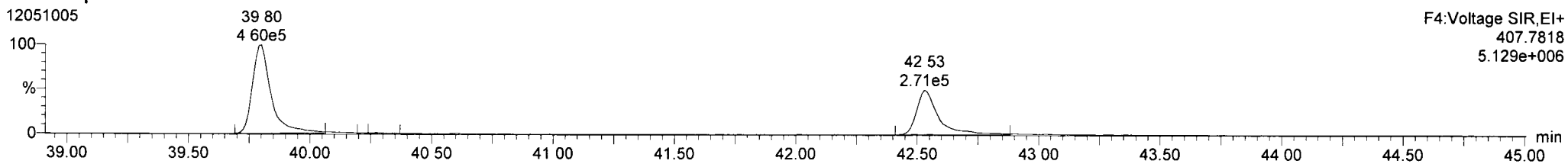

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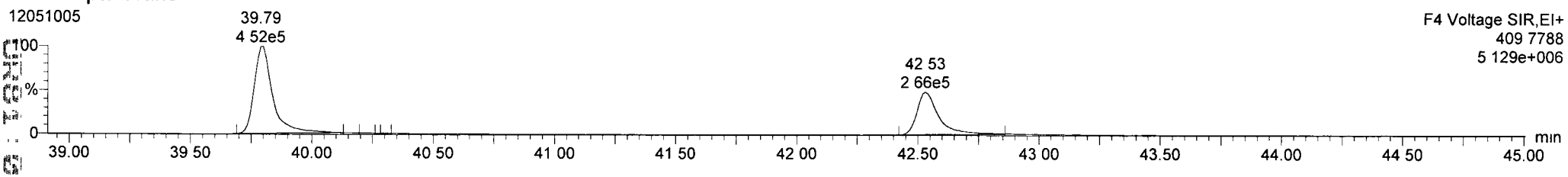
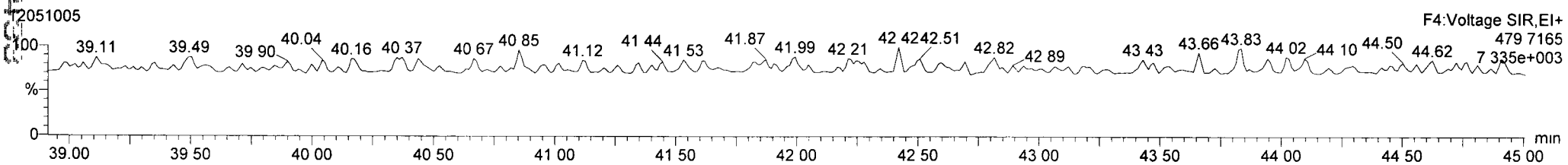


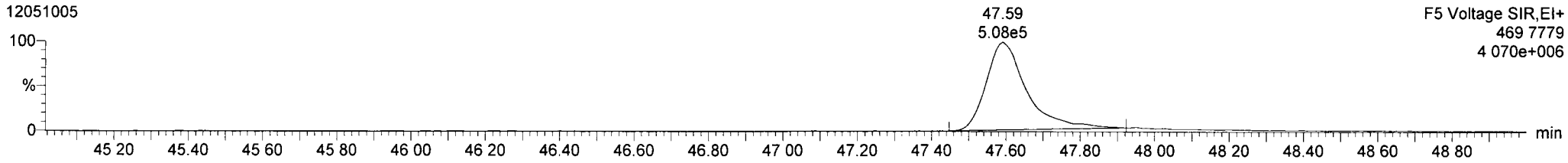
FUNCTION4 NCDPE



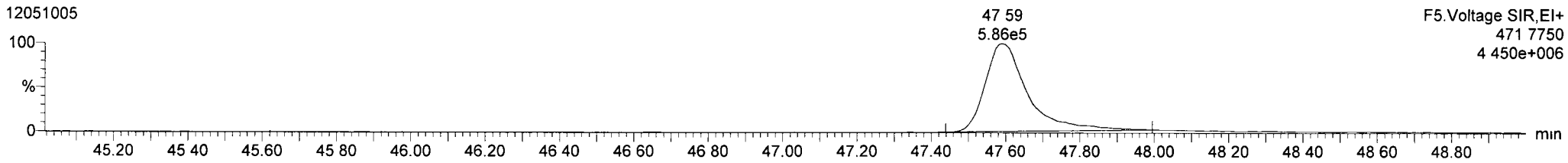
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:09:08 Pacific Daylight Time

Name: 12051005, Date: 10-May-2012, Time: 13:00:28, ID: UR81OPR, Conditions: AUTOSPEC01, User: pk

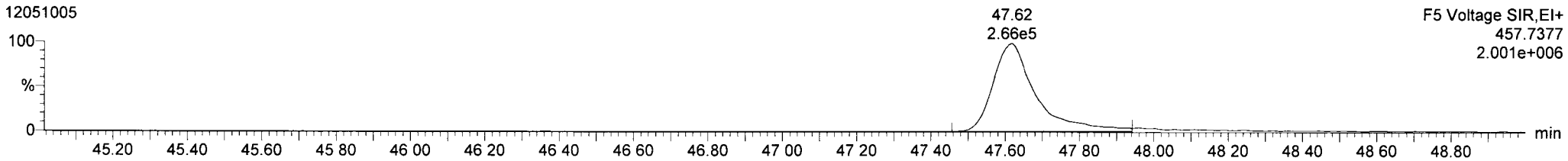
13C-OCDD



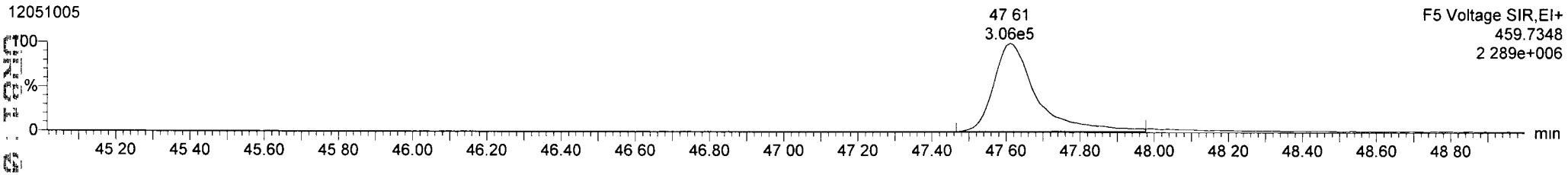
13C-OCDD



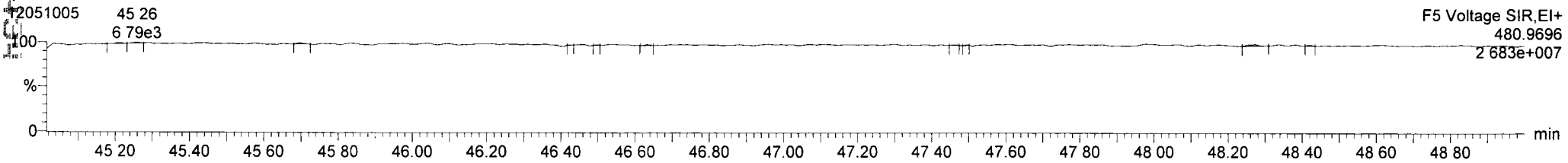
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered. Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
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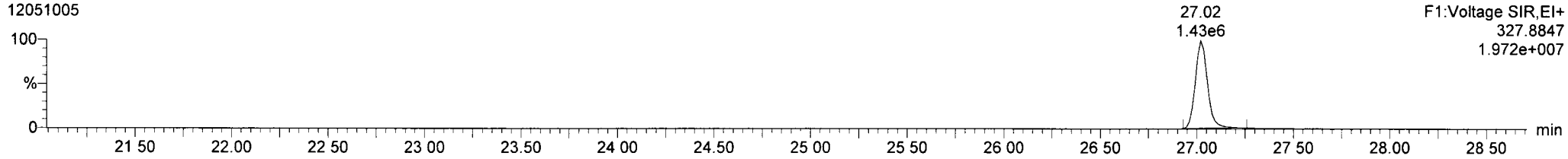
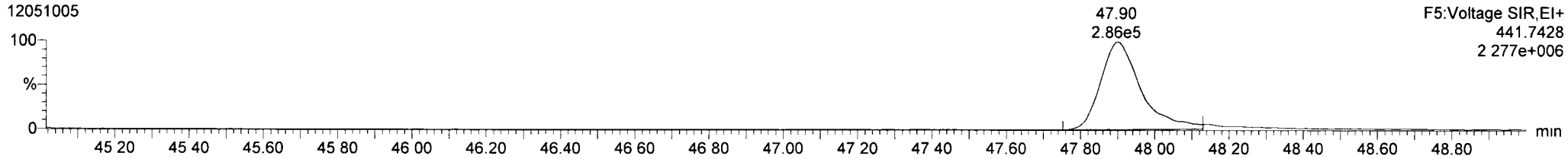
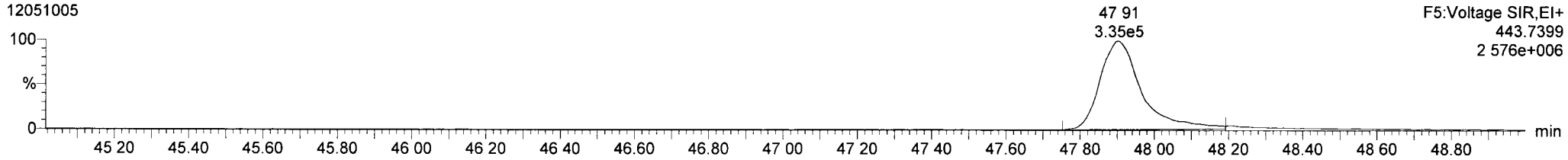
37CL-2378-TCDD



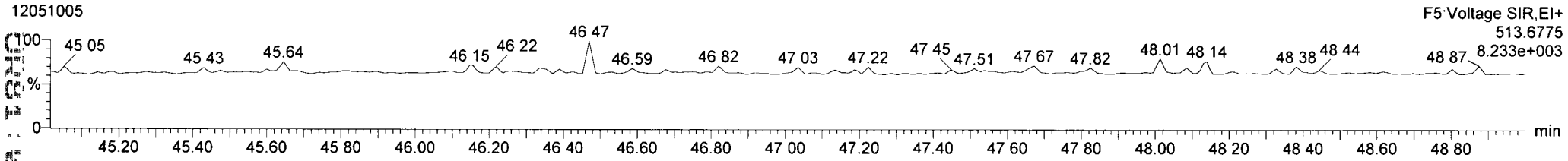
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed. Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Mk 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ..	pg	EMPC	
1	1	2378-TCDF	303.9016	26 392	26.393	39500	39500	0.866	bd		0.79	0 77	76.3	NO	1 146	1 146	
2	2	12378-PeCDF	339.8597	30 527	30.538	9097	9097	0.907	bb		1.63	1 55	17 3	NO	0 371	0 371	
3	3	23478-PeCDF	339 8597	31 853	31.876	10838	10838	0.936	bb		1 56	1 55	17 0	NO	0.454	0 454	
4	4	123478-HxCDF	373.8208	35 547	35.536	22111	22111	1.082	dd		1 33	1 24	53 2	NO	1 344	1 344	
5	5	234678-HxCDF	373 8208	36.643	36.654	11435	11435	1 070	MM		1.06	1 24	26 7	NO	0 680	0.680	
6	6	123678-HxCDF	373 8208	35 701	35.700	16316	16316	1 048	db		1.40	1 24	33 3	NO	0.841	0.841	
7	7	123789-HxCDF	373 8208	37 717	37 740	9169	9169	1.020	bd		1.28	1.24	23 9	NO	0.595	0 595	
8	8	1234678-HpCDF	407 7818	39 811	39.820	266555	266555	1.214	bd		0.99	1 05	481 1	NO	21 789	21.789	
9	9	1234789-HpCDF	407.7818	42 573	42 542	11849	11849	1.254	bb		1 13	1 05	19 9	NO	1.424	1 424	
10	10	OCDF	441.7428	47 940	47.912	373352	373352	1.105	bd		0 85	0 89	221.9	NO	86 847	86.847	
11	11	2378-TCDD	319.8965	27.034	27.018	0	3473	1.046	bd		0 39	0 77	8 4	YES	0 000	0.133	B
12	12	12378-PeCDD	355.8546	32.127	32 115	15416	15416	0 973	bb		1 77	1.55	36 9	NO	1.007	1.007	
13	13	123478-HxCDD	389 8157	36.785	36 797	22353	22353	0 935	bd		1.31	1.24	49 3	NO	1 943	1 943	
14	14	123678-HxCDD	389 8157	36 917	36 906	83331	83331	0 878	dd		1.16	1 24	146 3	NO	5 962	5 962	
15	15	123789-HxCDD	389 8157	37 334	37 301	39985	39985	0 839	bd		1 36	1 24	73 3	NO	3 378	3.378	
16	16	1234678-HpCDD	423 7766	41 641	41 632	1323180	1323180	0.974	bd		1.05	1.05	942.1	NO	168 216	168.216	
17	17	OCDD	457.7377	47 644	47.640	5453859	5453859	0 950	bd		0.88	0 89	4403 5	NO	1475.833	1475 8	
18	18	13C-2378-TCDF	315 9419	26.377	26 377	3980164		1 484	bb	57 0	0 77	0.77	7267 3	NO	56 965		
19	19	13C-12378-PeCDF	351 9000	30 516	30 519	2704489		1 048	bd	54 8	1.53	1.55	3036 3	NO	54.823		
20	20	13C-23478-PeCDF	351.9000	31 853	31 856	2548796		1 003	bb	54 0	1 56	1 55	3026 3	NO	53 968		
21	21	13C-123478-HxCDF	383 8639	35 525	35 547	1520113		1.186	bd	61 5	0.51	0 51	999 9	NO	61.474		
22	22	13C-123678-HxCDF	383 8639	35 679	35 700	1851667		1.315	db	67 5	0 52	0 51	1047 6	NO	67.512		
23	23	13C-234678-HxCDF	383 8639	36 632	36.632	1570898		1.223	bb	61 6	0 51	0 51	959.1	NO	61 572		
24	24	13C-123789-HxCDF	383 8639	37.728	37.739	1509426		1 056	bb	68 5	0.53	0 51	1098.8	NO	68 503		
25	25	13C-1234678-HpCDF	417.8253	39 800	39.822	1007319		1 011	bb	47.8	0 45	0 44	829 2	NO	47.753		
26	26	13C-1234789-HpCDF	417 8253	42 529	42 573	663271		0 741	bd	42 9	0.44	0 44	452 5	NO	42.944		
27	27	13C-1234-TCDD	331 9368	26 198	26.272	4706893		1.000	bb	100 0	0.77	0 77	8341.2	NO	100 000		
28	28	13C-2378-TCDD	331 9368	27 004	27.020	2491622		0 956	bb	55 4	0.77	0 77	3793 1	NO	55 350		
29	29	13C-12378-PeCDD	367 8949	32 105	32.108	1572650		0 663	bb	50 4	1.57	1 55	5281.6	NO	50.360		
30	30	13C-123478-HxCDD	401 8559	36 775	36.764	1229702		1 024	bd	57.6	1 24	1.24	3872 7	NO	57.584		
31	31	13C-123678-HxCDD	401 8559	36 895	36 895	1592411		1 113	db	68 6	1.25	1 24	4193 7	NO	68.624		
32	32	13C-1234678-HpCDD	435 8169	41 619	41 674	807344		0.815	bb	47 5	1.03	1 05	1703 7	NO	47.490		
33	33	13C-OCDD	469 7779	47 626	47 690	777928		0 717	bb	26 0	0 85	0 89	949 8	NO	52 016		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 323	37.368	2085623		1.000	bd	100 0	1 18	1 24	5518.5	NO	100 000	
35	35	Total-tetrafurans	303.9016		25.370			0 866							6.301	8.254
36	36	Total-penta1	339.8597		28 210										8 657	8.657
37	37	Total-pentafurans	339 8597		30 790			0.921						14170	5 513	5 754
38	38	Total-hexafurans	373.8208		35 760			1.055							35.523	35 686
39	39	Total-heptafurans	407.7818		41.160			1.234							78 369	78 664
40	40	Total-Furans	303.9016		0 000			1.050							221 932	224 585
41	41	Total-tetradioxins	319.8965		25 880			1 046							25 447	25 906
42	42	Total-pentadioxins	355.8546		30 950			0 973							26 696	28.410
43	43	Total-hexadioxins	389 8157		35 940			0 884							70.113	70.113
44	44	Total-heptadioxins	423 7766		40.980			0 974							437.166	437 166
45	45	Total-Dioxins	319 8965		0.000			0.942							2035 255	2037 4
46	46	Total-TEQ	319 8965		0.000										2257 187	2262 0.
47	47	37CL-2378-TCDD	327.8847	27.034	27.010	1593810		1.037					5941.3		32 648	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366 9792		0 000										0.000	
50	50	FUNCTION3 PFK	380 9760		0.000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0 000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445 7555		0 000										0.000	
57	57	FUNCTION4 NCDPE	479 7165		0 000										0 000	
58	58	FUNCTION5 DCDPE	513 6775		0 000											

14.411

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati .	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25 05	0.000	0.866	0 000	0 322	0 64	0 77	YES	16 7
2	35	Total-tetrafurans	303.9016	24.64	0 000	0.866	0.000	0.171	0.89	0 77	YES	13.9
3	35	Total-tetrafurans	303.9016	24 51	0.000	0.866	0.000	0.118	0.91	0 77	YES	7.8
4	35	Total-tetrafurans	303.9016	24 39	21258.316	0.866	0.617	0.617	0.77	0 77	NO	40.0
5	35	Total-tetrafurans	303 9016	24 23	0.000	0 866	0 000	0.095	1.18	0.77	YES	9.3
6	35	Total-tetrafurans	303 9016	24.15	16212 357	0.866	0.470	0 470	0.68	0 77	NO	28.0
7	35	Total-tetrafurans	303.9016	24.05	0 000	0.866	0 000	0 174	1.15	0 77	YES	13.0
8	35	Total-tetrafurans	303.9016	23.91	13570 958	0.866	0 394	0 394	0.70	0 77	NO	12.3
9	35	Total-tetrafurans	303.9016	23 73	48979.536	0.866	1 421	1 421	0 88	0 77	NO	94 6
10	35	Total-tetrafurans	303 9016	23 16	0 000	0 866	0.000	0 182	0 91	0 77	YES	13 9
11	35	Total-tetrafurans	303 9016	22 90	5524 735	0.866	0.160	0 160	0 83	0 77	NO	10 8
12	35	Total-tetrafurans	303 9016	27 89	0.000	0 866	0.000	0.138	1 06	0 77	YES	10 8
13	35	Total-tetrafurans	303.9016	27 78	0.000	0.866	0.000	0 260	1.11	0 77	YES	19.2
14	35	Total-tetrafurans	303.9016	26 62	0 000	0 866	0.000	0.260	1 01	0.77	YES	19 5
15	35	Total-tetrafurans	303.9016	26 53	2877 522	0.866	0.083	0.083	0 71	0.77	NO	6 3
16	1	2378-TCDF	303.9016	26.39	39500 137	0 866	1.146	1 146	0 79	0 77	NO	76.3
17	35	Total-tetrafurans	303.9016	26 21	10883.299	0.866	0 316	0 316	0 72	0 77	NO	12.1
18	35	Total-tetrafurans	303 9016	25 88	0.000	0.866	0 000	0.108	0 57	0 77	YES	7 4
19	35	Total-tetrafurans	303.9016	25 70	0 000	0 866	0.000	0.125	0.58	0 77	YES	9 5
20	35	Total-tetrafurans	303 9016	25 48	26330 331	0.866	0.764	0.764	0.76	0.77	NO	46.2
21	35	Total-tetrafurans	303 9016	25 30	21268.269	0.866	0 617	0 617	0.81	0 77	NO	39.2
22	35	Total-tetrafurans	303 9016	25 15	10816.619	0 866	0.314	0 314	0 83	0 77	NO	18 5

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27.80	208515 258		8.657	8 657	1.61	1 55	NO	1442 8

PF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati .	1° R...	S/N
1	37	Total-pentafurans	339 8597	29 47	60943 889	0 921	2 518	2.518	1.58	1 55	NO	78 2
2	37	Total-pentafurans	339 8597	29 28	0.000	0.921	0 000	0 183	2 38	1 55	YES	10 7
3	3	23478-PeCDF	339.8597	31.85	10838.412	0.936	0.454	0.454	1 56	1.55	NO	17.0
4	37	Total-pentafurans	339 8597	31.71	13482 074	0.921	0 557	0 557	1.44	1 55	NO	23 4
5	37	Total-pentafurans	339 8597	31.61	3125.199	0.921	0.129	0 129	1 68	1.55	NO	5 8
6	37	Total-pentafurans	339 8597	30 82	1710.702	0 921	0.071	0 071	1.53	1.55	NO	5 2
7	37	Total-pentafurans	339.8597	30.74	9575 195	0.921	0.396	0.396	1.46	1.55	NO	17 1
8	2	12378-PeCDF	339.8597	30.53	9097 023	0 907	0 371	0 371	1 63	1 55	NO	17 3
9	37	Total-pentafurans	339.8597	30.17	21996.594	0.921	0 909	0 909	1 64	1.55	NO	31.9
10	37	Total-pentafurans	339 8597	30.07	2613.705	0.921	0 108	0 108	1 77	1.55	NO	6.2
11	37	Total-pentafurans	339 8597	29 97	0 000	0 921	0.000	0 031	0 69	1 55	YES	2 9
12	37	Total-pentafurans	339 8597	32 80	0 000	0 921	0 000	0 027	1.82	1 55	YES	1.7

Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
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Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38	Total-hexafurans	373.8208	36.06	1314.309	1 055	0.077	0 077	1 20	1 24	NO	3.6
2	6	123678-HxCDF	373.8208	35 70	16315.875	1.048	0.841	0 841	1 40	1 24	NO	33.3
3	4	123478-HxCDF	373.8208	35 55	22110.524	1 082	1.344	1 344	1 33	1 24	NO	53.2
4	38	Total-hexafurans	373 8208	35 37	0.000	1.055	0 000	0 163	0 77	1.24	YES	5.9
5	38	Total-hexafurans	373 8208	34.89	233628.492	1.055	13.728	13 728	1.22	1.24	NO	543 0
6	38	Total-hexafurans	373.8208	34 57	4051 847	1 055	0.238	0.238	1.30	1 24	NO	9 6
7	38	Total-hexafurans	373.8208	34 02	231425.820	1 055	13.599	13.599	1 22	1 24	NO	509 0
8	38	Total-hexafurans	373.8208	33.82	75206.031	1 055	4.419	4.419	1 21	1.24	NO	177 9
9	7	123789-HxCDF	373.8208	37.72	9168.877	1.020	0 595	0.595	1 28	1 24	NO	23.9
10	5	234678-HxCDF	373 8208	36 64	11435.366	1.070	0 680	0.680	1.06	1 24	NO	26.7

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39	Total-heptafurans	407.7818	40.61	562765 688	1.234	54.586	54 586	1.05	1 05	NO	1085 8
2	39	Total-heptafurans	407 7818	40 31	5866 928	1.234	0.569	0 569	1 04	1 05	NO	11 7
3	39	Total-heptafurans	407 7818	40 02	0.000	1 234	0 000	0 236	2 47	1.05	YES	15.6
4	8	1234678-HpCDF	407.7818	39 81	266554.969	1.214	21.789	21 789	0.99	1 05	NO	481 1
5	9	1234789-HpCDF	407 7818	42 57	11848.701	1 254	1 424	1.424	1 13	1.05	NO	19 9
6	39	Total-heptafurans	407 7818	40.98	0.000	1 234	0 000	0 059	3 20	1 05	YES	7 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset. P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
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Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.05	0.000	0 866	0.000	0 322	0.64	0 77	YES	16.7
2	35	Total-tetrafurans	303.9016	24.64	0.000	0 866	0 000	0 171	0 89	0 77	YES	13.9
3	35	Total-tetrafurans	303.9016	24.51	0 000	0 866	0 000	0 118	0.91	0.77	YES	7.8
4	35	Total-tetrafurans	303.9016	24 39	21258.316	0.866	0.617	0 617	0.77	0.77	NO	40 0
5	35	Total-tetrafurans	303.9016	24 23	0 000	0.866	0.000	0 095	1.18	0.77	YES	9 3
6	35	Total-tetrafurans	303.9016	24.15	16212.357	0 866	0 470	0 470	0.68	0.77	NO	28 0
7	35	Total-tetrafurans	303.9016	24 05	0 000	0.866	0.000	0 174	1 15	0.77	YES	13 0
8	35	Total-tetrafurans	303 9016	23 91	13570 958	0 866	0 394	0 394	0.70	0.77	NO	12 3
9	35	Total-tetrafurans	303 9016	23 73	48979 536	0.866	1 421	1 421	0 88	0.77	NO	94 6
10	35	Total-tetrafurans	303 9016	23.16	0 000	0.866	0 000	0 182	0.91	0.77	YES	13 9
11	35	Total-tetrafurans	303.9016	22 90	5524 735	0 866	0 160	0 160	0.83	0 77	NO	10.8
12	40	Total-Furans	303 9016	21 31	30225.907	1 050	0 723	0 723	0 73	0.77	NO	60.6
13	35	Total-tetrafurans	303.9016	27.89	0.000	0 866	0 000	0 138	1 06	0 77	YES	10.8
14	35	Total-tetrafurans	303 9016	27.78	0.000	0.866	0.000	0.260	1 11	0 77	YES	19.2
15	35	Total-tetrafurans	303.9016	26.62	0.000	0.866	0.000	0.260	1 01	0 77	YES	19.5
16	35	Total-tetrafurans	303.9016	26.53	2877.522	0.866	0.083	0 083	0.71	0 77	NO	6 3
17	1	2378-TCDF	303 9016	26 39	39500.137	0.866	1 146	1.146	0 79	0 77	NO	76.3
18	35	Total-tetrafurans	303 9016	26.21	10883.299	0 866	0 316	0.316	0 72	0 77	NO	12 1
19	35	Total-tetrafurans	303 9016	25.88	0.000	0 866	0.000	0 108	0 57	0 77	YES	7 4
20	35	Total-tetrafurans	303 9016	25.70	0.000	0.866	0.000	0.125	0 58	0 77	YES	9 5
21	35	Total-tetrafurans	303 9016	25 48	26330 331	0.866	0 764	0.764	0 76	0 77	NO	46 2
22	35	Total-tetrafurans	303.9016	25.30	21268 269	0.866	0.617	0.617	0 81	0 77	NO	39 2
23	35	Total-tetrafurans	303 9016	25.15	10816.619	0.866	0 314	0 314	0 83	0 77	NO	18 5
24	37	Total-pentafurans	339.8597	29.47	60943.889	0.921	2 518	2 518	1 58	1 55	NO	78 2
25	37	Total-pentafurans	339 8597	29 28	0.000	0.921	0.000	0.183	2.38	1 55	YES	10.7
26	3	23478-PeCDF	339.8597	31 85	10838.412	0.936	0.454	0.454	1.56	1 55	NO	17 0
27	37	Total-pentafurans	339.8597	31.71	13482.074	0.921	0.557	0.557	1.44	1 55	NO	23 4
28	37	Total-pentafurans	339.8597	31.61	3125 199	0 921	0 129	0.129	1 68	1 55	NO	5 8
29	37	Total-pentafurans	339.8597	30 82	1710 702	0 921	0 071	0 071	1.53	1 55	NO	5 2
30	37	Total-pentafurans	339 8597	30 74	9575 195	0 921	0 396	0.396	1 46	1 55	NO	17 1
31	2	12378-PeCDF	339 8597	30 53	9097 023	0.907	0 371	0 371	1.63	1 55	NO	17 3
32	37	Total-pentafurans	339.8597	30 17	21996 594	0.921	0.909	0.909	1 64	1 55	NO	31.9
33	37	Total-pentafurans	339 8597	30 07	2613 705	0 921	0 108	0.108	1.77	1.55	NO	6 2
34	37	Total-pentafurans	339.8597	29.97	0 000	0 921	0.000	0 031	0.69	1 55	YES	2.9
35	37	Total-pentafurans	339 8597	32.80	0.000	0.921	0.000	0 027	1.82	1 55	YES	1 7
36	38	Total-hexafurans	373 8208	36.06	1314.309	1 055	0.077	0 077	1 20	1.24	NO	3.6
37	6	123678-HxCDF	373.8208	35.70	16315 875	1.048	0.841	0 841	1 40	1.24	NO	33 3
38	4	123478-HxCDF	373.8208	35.55	22110 524	1.082	1 344	1 344	1 33	1.24	NO	53.2
39	38	Total-hexafurans	373.8208	35 37	0 000	1 055	0.000	0 163	0.77	1 24	YES	5 9
40	38	Total-hexafurans	373 8208	34 89	233628 492	1 055	13 728	13 728	1 22	1 24	NO	543.0
41	38	Total-hexafurans	373 8208	34 57	4051 847	1.055	0 238	0 238	1 30	1 24	NO	9 6
42	38	Total-hexafurans	373 8208	34 02	231425 820	1 055	13.599	13.599	1 22	1 24	NO	509 0
43	38	Total-hexafurans	373 8208	33.82	75206 031	1 055	4.419	4.419	1 21	1 24	NO	177 9
44	7	123789-HxCDF	373 8208	37 72	9168 877	1 020	0.595	0 595	1 28	1 24	NO	23 9
45	39	Total-heptafurans	407 7818	40 61	562765 688	1.234	54 586	54 586	1.05	1 05	NO	1085 8
46	39	Total-heptafurans	407.7818	40.31	5866 928	1 234	0.569	0 569	1.04	1 05	NO	11.7
47	39	Total-heptafurans	407 7818	40 02	0.000	1.234	0 000	0.236	2.47	1.05	YES	15.6
48	8	1234678-HpCDF	407.7818	39.81	266554 969	1 214	21.789	21 789	0 99	1.05	NO	481.1
49	9	1234789-HpCDF	407.7818	42.57	11848 701	1.254	1 424	1 424	1 13	1.05	NO	19.9

UR81 : 9L TTS

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset. P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	39	Total-heptafurans	407.7818	40.98	0 000	1.234	0 000	0 059	3 20	1 05	YES	7 8
51	10	OCDF	441.7428	47.94	373351.516	1 105	86 847	86 847	0 85	0 89	NO	221.9
52	36	Total-penta1	339.8597	27.80	208515 258		8 657	8 657	1 61	1 55	NO	1442.8
53	5	234678-HxCDF	373.8208	36.64	11435.366	1 070	0.680	0.680	1.06	1.24	NO	26.7

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	24 64	0.000	1.046	0.000	0 102	1 39	0 77	YES	11.3
2	41	Total-tetradioxins	319 8965	24 43	197941.336	1 046	7 596	7.596	0 78	0 77	NO	526 9
3	41	Total-tetradioxins	319 8965	24 17	309617.719	1 046	11 882	11 882	0 75	0.77	NO	830 4
4	41	Total-tetradioxins	319 8965	27 56	5806 292	1 046	0 223	0 223	0 88	0 77	NO	13 5
5	41	Total-tetradioxins	319 8965	27 17	0 000	1.046	0 000	0 155	0.63	0 77	YES	9 3
6	11	2378-TCDD	319 8965	27 03	0.000	1.046	0 000	0 133	0.39	0 77	YES	8 4
7	41	Total-tetradioxins	319.8965	26.65	21700 084	1.046	0 833	0.833	0 83	0 77	NO	48.0
8	41	Total-tetradioxins	319 8965	26 35	0 000	1.046	0 000	0.046	1 17	0.77	YES	5.2
9	41	Total-tetradioxins	319.8965	26 21	88943.672	1.046	3 413	3 413	0 76	0 77	NO	231.9
10	41	Total-tetradioxins	319.8965	26 00	2277 562	1.046	0 087	0.087	0 75	0 77	NO	5.5
11	41	Total-tetradioxins	319 8965	25 90	0 000	1.046	0.000	0.023	1 14	0 77	YES	3 8
12	41	Total-tetradioxins	319 8965	25 64	22996 057	1.046	0 882	0 882	0 67	0.77	NO	54 4
13	41	Total-tetradioxins	319 8965	25 36	11189 651	1.046	0 429	0.429	0 87	0 77	NO	31 1
14	41	Total-tetradioxins	319 8965	25 15	2629 298	1.046	0 101	0.101	0 84	0 77	NO	5 4

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355 8546	32.51	0 000	0.973	0.000	0.049	3.36	1 55	YES	5 4
2	12	12378-PeCDD	355 8546	32 13	15415.735	0.973	1.007	1 007	1.77	1.55	NO	36 9
3	42	Total-pentadioxins	355 8546	31 45	35028 527	0 973	2 289	2.289	1 48	1 55	NO	84 3
4	42	Total-pentadioxins	355.8546	30 88	124615 122	0.973	8.141	8.141	1 56	1.55	NO	297 1
5	42	Total-pentadioxins	355.8546	30 74	0.000	0.973	0.000	1 119	1 86	1 55	YES	36 1
6	42	Total-pentadioxins	355 8546	30.53	131700.657	0 973	8 604	8 604	1.53	1 55	NO	343 9
7	42	Total-pentadioxins	355 8546	29 91	0 000	0 973	0 000	0 546	1 80	1 55	YES	27 8
8	42	Total-pentadioxins	355 8546	29 45	101848 867	0 973	6.654	6.654	1.53	1.55	NO	171 0

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389.8157	34 60	187138 086	0.884	15 003	15.003	1 23	1 24	NO	367.4
2	43	Total-hexadioxins	389.8157	34.34	14796.487	0.884	1 186	1 186	1 29	1 24	NO	34.6
3	15	123789-HxCDD	389.8157	37.33	39984.901	0 839	3.378	3.378	1 36	1.24	NO	73 3
4	43	Total-hexadioxins	389 8157	37 09	9262 845	0 884	0 743	0 743	1 12	1 24	NO	16.7
5	14	123678-HxCDD	389 8157	36 92	83331 465	0.878	5 962	5 962	1.16	1.24	NO	146 3
6	13	123478-HxCDD	389.8157	36.79	22353 110	0.935	1.943	1 943	1 31	1 24	NO	49 3
7	43	Total-hexadioxins	389 8157	35 81	215443.672	0.884	17 272	17.272	1 11	1.24	NO	274 5
8	43	Total-hexadioxins	389 8157	35 43	307171 078	0 884	24 626	24 626	1 26	1 24	NO	577 7

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423 7766	41.64	1323180 376	0 974	168 216	168	1 05	1 05	NO	942 1
2	44	Total-heptadioxins	423 7766	40 37	2115547 563	0 974	268 950	268 .	1.04	1.05	NO	1693 1

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	24.64	0.000	1 046	0.000	0 102	1.39	0 77	YES	11 3
2	41	Total-tetradioxins	319.8965	24.43	197941 336	1 046	7 596	7 596	0.78	0 77	NO	526 9
3	41	Total-tetradioxins	319.8965	24 17	309617 719	1 046	11 882	11 882	0.75	0.77	NO	830 4
4	41	Total-tetradioxins	319 8965	27 56	5806 292	1.046	0 223	0 223	0 88	0 77	NO	13.5
5	41	Total-tetradioxins	319.8965	27.17	0 000	1 046	0 000	0.155	0 63	0 77	YES	9 3
6	11	2378-TCDD	319 8965	27.03	0 000	1 046	0.000	0 133	0 39	0 77	YES	8 4
7	41	Total-tetradioxins	319.8965	26 65	21700 084	1 046	0.833	0.833	0 83	0.77	NO	48.0
8	41	Total-tetradioxins	319 8965	26.35	0 000	1.046	0.000	0 046	1.17	0.77	YES	5.2
9	41	Total-tetradioxins	319 8965	26.21	88943.672	1.046	3.413	3 413	0 76	0 77	NO	231 9
10	41	Total-tetradioxins	319 8965	26.00	2277.562	1 046	0.087	0 087	0 75	0.77	NO	5.5
11	41	Total-tetradioxins	319 8965	25 90	0.000	1 046	0.000	0 023	1.14	0.77	YES	3 8
12	41	Total-tetradioxins	319 8965	25 64	22996 057	1 046	0.882	0.882	0 67	0.77	NO	54 4
13	41	Total-tetradioxins	319.8965	25 36	11189.651	1 046	0.429	0.429	0 87	0 77	NO	31.1
14	41	Total-tetradioxins	319 8965	25.15	2629.298	1.046	0 101	0.101	0 84	0.77	NO	5.4
15	42	Total-pentadioxins	355 8546	32.51	0.000	0.973	0.000	0 049	3 36	1 55	YES	5 4
16	12	12378-PeCDD	355 8546	32 13	15415.735	0.973	1.007	1.007	1 77	1 55	NO	36 9
17	42	Total-pentadioxins	355 8546	31 45	35028.527	0.973	2.289	2 289	1 48	1 55	NO	84 3
18	42	Total-pentadioxins	355 8546	30 88	124615.122	0 973	8.141	8.141	1 56	1.55	NO	297 1
19	42	Total-pentadioxins	355.8546	30.74	0.000	0 973	0.000	1 119	1.86	1 55	YES	36.1
20	42	Total-pentadioxins	355 8546	30 53	131700.657	0 973	8.604	8.604	1 53	1 55	NO	343.9
21	42	Total-pentadioxins	355.8546	29 91	0 000	0 973	0.000	0 546	1.80	1 55	YES	27.8
22	42	Total-pentadioxins	355.8546	29.45	101848 867	0 973	6.654	6 654	1.53	1 55	NO	171 0
23	43	Total-hexadioxins	389 8157	34.60	187138 086	0 884	15 003	15.003	1 23	1 24	NO	367 4
24	43	Total-hexadioxins	389 8157	34 34	14796.487	0 884	1.186	1.186	1 29	1 24	NO	34 6
25	15	123789-HxCDD	389 8157	37 33	39984 901	0.839	3 378	3 378	1 36	1 24	NO	73.3
26	43	Total-hexadioxins	389 8157	37.09	9262 845	0 884	0.743	0 743	1 12	1.24	NO	16.7
27	14	123678-HxCDD	389.8157	36.92	83331.465	0 878	5.962	5 962	1.16	1.24	NO	146 3
28	13	123478-HxCDD	389.8157	36.79	22353 110	0.935	1.943	1 943	1.31	1.24	NO	49.3
29	43	Total-hexadioxins	389 8157	35.81	215443.672	0.884	17.272	17.272	1 11	1.24	NO	274 5
30	43	Total-hexadioxins	389 8157	35.43	307171.078	0.884	24.626	24.626	1 26	1 24	NO	577.7
31	17	OCDD	457.7377	47 64	5453858.750	0.950	1475.8..	1475..	0.88	0 89	NO	4403.5
32	16	1234678-HpCDD	423 7766	41 64	1323180 376	0.974	168 216	168 .	1 05	1 05	NO	942.1
33	44	Total-heptadioxins	423 7766	40 37	2115547 563	0.974	268.950	268	1 04	1 05	NO	1693 1

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
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Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati..	1° Rati...	1° R .	S/N
1	35	Total-tetrafurans	303.9016	25.05	0.000	0 866	0 000	0 322	0 64	0 77	YES	16 7
2	35	Total-tetrafurans	303.9016	24.64	0.000	0 866	0 000	0.171	0 89	0.77	YES	13 9
3	35	Total-tetrafurans	303 9016	24 51	0 000	0.866	0 000	0.118	0 91	0.77	YES	7.8
4	35	Total-tetrafurans	303.9016	24.39	21258 316	0.866	0 617	0.617	0 77	0.77	NO	40.0
5	35	Total-tetrafurans	303.9016	24 23	0.000	0.866	0.000	0 095	1.18	0.77	YES	9.3
6	35	Total-tetrafurans	303 9016	24.15	16212.357	0.866	0.470	0 470	0.68	0.77	NO	28.0
7	35	Total-tetrafurans	303 9016	24 05	0.000	0 866	0.000	0 174	1.15	0.77	YES	13 0
8	35	Total-tetrafurans	303 9016	23 91	13570.958	0.866	0 394	0.394	0.70	0 77	NO	12 3
9	35	Total-tetrafurans	303 9016	23.73	48979.536	0 866	1 421	1 421	0 88	0 77	NO	94 6
10	35	Total-tetrafurans	303 9016	23.16	0 000	0.866	0 000	0 182	0 91	0 77	YES	13 9
11	35	Total-tetrafurans	303 9016	22.90	5524.735	0 866	0.160	0 160	0 83	0 77	NO	10 8
12	40	Total-Furans	303.9016	21 31	30225.907	1.050	0 723	0.723	0 73	0.77	NO	60.6
13	35	Total-tetrafurans	303.9016	27.89	0 000	0.866	0 000	0.138	1.06	0.77	YES	10.8
14	35	Total-tetrafurans	303.9016	27 78	0 000	0.866	0 000	0.260	1.11	0.77	YES	19.2
15	35	Total-tetrafurans	303 9016	26 62	0 000	0.866	0 000	0 260	1 01	0.77	YES	19.5
16	35	Total-tetrafurans	303.9016	26 53	2877.522	0 866	0 083	0.083	0 71	0.77	NO	6.3
17	1	2378-TCDF	303.9016	26 39	39500 137	0.866	1 146	1 146	0.79	0 77	NO	76 3
18	35	Total-tetrafurans	303 9016	26 21	10883.299	0.866	0.316	0 316	0 72	0 77	NO	12 1
19	35	Total-tetrafurans	303.9016	25 88	0 000	0 866	0.000	0 108	0 57	0 77	YES	7 4
20	35	Total-tetrafurans	303.9016	25 70	0 000	0.866	0.000	0 125	0.58	0 77	YES	9.5
21	35	Total-tetrafurans	303 9016	25.48	26330.331	0 866	0 764	0 764	0 76	0 77	NO	46 2
22	35	Total-tetrafurans	303.9016	25.30	21268 269	0 866	0.617	0.617	0 81	0 77	NO	39.2
23	35	Total-tetrafurans	303.9016	25 15	10816 619	0.866	0 314	0 314	0.83	0.77	NO	18.5
24	37	Total-pentafurans	339.8597	29 47	60943 889	0.921	2 518	2.518	1.58	1.55	NO	78.2
25	37	Total-pentafurans	339.8597	29 28	0 000	0.921	0.000	0 183	2.38	1 55	YES	10.7
26	3	23478-PeCDF	339.8597	31 85	10838 412	0.936	0.454	0 454	1.56	1 55	NO	17 0
27	37	Total-pentafurans	339.8597	31.71	13482 074	0.921	0.557	0 557	1 44	1 55	NO	23 4
28	37	Total-pentafurans	339.8597	31 61	3125.199	0 921	0 129	0.129	1 68	1 55	NO	5 8
29	37	Total-pentafurans	339 8597	30 82	1710.702	0 921	0.071	0.071	1.53	1 55	NO	5 2
30	37	Total-pentafurans	339 8597	30.74	9575 195	0 921	0 396	0.396	1.46	1 55	NO	17 1
31	2	12378-PeCDF	339.8597	30 53	9097 023	0.907	0 371	0 371	1.63	1.55	NO	17 3
32	37	Total-pentafurans	339.8597	30 17	21996 594	0.921	0 909	0 909	1.64	1 55	NO	31.9
33	37	Total-pentafurans	339 8597	30.07	2613.705	0 921	0 108	0 108	1 77	1.55	NO	6 2
34	37	Total-pentafurans	339 8597	29.97	0 000	0.921	0.000	0 031	0.69	1.55	YES	2.9
35	37	Total-pentafurans	339 8597	32.80	0 000	0.921	0.000	0 027	1.82	1 55	YES	1.7
36	38	Total-hexafurans	373 8208	36.06	1314 309	1.055	0.077	0 077	1.20	1 24	NO	3.6
37	6	123678-HxCDF	373.8208	35 70	16315 875	1.048	0 841	0.841	1.40	1 24	NO	33.3
38	4	123478-HxCDF	373 8208	35.55	22110 524	1 082	1 344	1.344	1.33	1 24	NO	53 2
39	38	Total-hexafurans	373.8208	35.37	0.000	1.055	0 000	0.163	0 77	1 24	YES	5.9
40	38	Total-hexafurans	373.8208	34.89	233628 492	1.055	13.728	13 728	1.22	1.24	NO	543.0
41	38	Total-hexafurans	373 8208	34 57	4051 847	1 055	0.238	0 238	1 30	1 24	NO	9 6
42	38	Total-hexafurans	373 8208	34 02	231425.820	1 055	13 599	13.599	1 22	1 24	NO	509 0
43	38	Total-hexafurans	373 8208	33 82	75206.031	1 055	4 419	4 419	1 21	1 24	NO	177 9
44	7	123789-HxCDF	373.8208	37.72	9168.877	1.020	0.595	0 595	1.28	1 24	NO	23 9
45	39	Total-heptafurans	407 7818	40.61	562765 688	1 234	54.586	54 586	1 05	1 05	NO	1085 8
46	39	Total-heptafurans	407 7818	40 31	5866.928	1 234	0.569	0 569	1 04	1.05	NO	11 7
47	39	Total-heptafurans	407 7818	40 02	0 000	1 234	0.000	0 236	2.47	1 05	YES	15.6
48	8	1234678-HpCDF	407 7818	39.81	266554 969	1.214	21.789	21 789	0.99	1.05	NO	481.1
49	9	1234789-HpCDF	407 7818	42 57	11848.701	1 254	1 424	1 424	1 13	1 05	NO	19.9

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	39	Total-heptafurans	407 7818	40.98	0.000	1.234	0.000	0 059	3 20	1.05	YES	7 8
51	10	OCDF	441 7428	47 94	373351 516	1.105	86 847	86 847	0 85	0.89	NO	221 9
52	36	Total-penta1	339 8597	27 80	208515 258		8.657	8 657	1 61	1.55	NO	1442 8
53	5	234678-HxCDF	373.8208	36.64	11435 366	1 070	0 680	0.680	1 06	1 24	NO	26.7
54	41	Total-tetradioxins	319 8965	24 64	0 000	1.046	0 000	0 102	1.39	0 77	YES	11 3
55	41	Total-tetradioxins	319.8965	24.43	197941.336	1 046	7 596	7.596	0.78	0 77	NO	526.9
56	41	Total-tetradioxins	319.8965	24 17	309617 719	1.046	11.882	11 882	0 75	0 77	NO	830.4
57	41	Total-tetradioxins	319.8965	27 56	5806 292	1 046	0.223	0.223	0 88	0 77	NO	13.5
58	41	Total-tetradioxins	319.8965	27.17	0.000	1 046	0 000	0.155	0 63	0 77	YES	9.3
59	11	2378-TCDD	319.8965	27 03	0.000	1 046	0 000	0.133	0.39	0 77	YES	8.4
60	41	Total-tetradioxins	319.8965	26 65	21700 084	1.046	0 833	0 833	0 83	0.77	NO	48 0
61	41	Total-tetradioxins	319.8965	26 35	0 000	1 046	0 000	0.046	1.17	0 77	YES	5.2
62	41	Total-tetradioxins	319.8965	26.21	88943.672	1.046	3 413	3 413	0 76	0.77	NO	231 9
63	41	Total-tetradioxins	319.8965	26.00	2277 562	1 046	0.087	0.087	0 75	0 77	NO	5 5
64	41	Total-tetradioxins	319 8965	25 90	0 000	1 046	0.000	0.023	1.14	0.77	YES	3 8
65	41	Total-tetradioxins	319.8965	25 64	22996 057	1.046	0.882	0.882	0 67	0 77	NO	54 4
66	41	Total-tetradioxins	319.8965	25 36	11189 651	1 046	0.429	0.429	0.87	0 77	NO	31.1
67	41	Total-tetradioxins	319.8965	25 15	2629.298	1 046	0.101	0.101	0 84	0.77	NO	5.4
68	42	Total-pentadioxins	355.8546	32 51	0.000	0.973	0.000	0.049	3 36	1 55	YES	5.4
69	12	12378-PeCDD	355.8546	32.13	15415.735	0 973	1 007	1 007	1 77	1.55	NO	36.9
70	42	Total-pentadioxins	355 8546	31 45	35028.527	0.973	2.289	2.289	1 48	1 55	NO	84 3
71	42	Total-pentadioxins	355.8546	30.88	124615.122	0.973	8 141	8 141	1 56	1 55	NO	297 1
72	42	Total-pentadioxins	355 8546	30 74	0.000	0.973	0 000	1 119	1 86	1.55	YES	36 1
73	42	Total-pentadioxins	355 8546	30 53	131700 657	0.973	8 604	8 604	1 53	1 55	NO	343 9
74	42	Total-pentadioxins	355 8546	29.91	0.000	0.973	0 000	0 546	1 80	1 55	YES	27 8
75	42	Total-pentadioxins	355 8546	29 45	101848.867	0 973	6 654	6 654	1 53	1 55	NO	171 0
76	43	Total-hexadioxins	389 8157	34 60	187138.086	0 884	15.003	15 003	1 23	1.24	NO	367 4
77	43	Total-hexadioxins	389 8157	34.34	14796 487	0.884	1 186	1 186	1 29	1 24	NO	34 6
78	15	123789-HxCDD	389 8157	37.33	39984.901	0.839	3.378	3.378	1 36	1 24	NO	73 3
79	43	Total-hexadioxins	389 8157	37 09	9262.845	0.884	0.743	0.743	1 12	1 24	NO	16 7
80	14	123678-HxCDD	389.8157	36.92	83331.465	0.878	5.962	5 962	1 16	1 24	NO	146 3
81	13	123478-HxCDD	389.8157	36.79	22353.110	0.935	1 943	1 943	1 31	1.24	NO	49 3
82	43	Total-hexadioxins	389.8157	35 81	215443 672	0 884	17.272	17.272	1 11	1 24	NO	274 5
83	43	Total-hexadioxins	389 8157	35 43	307171.078	0.884	24 626	24 626	1 26	1 24	NO	577 7
84	17	OCDD	457.7377	47 64	5453858 750	0.950	1475.8.	1475.	0 88	0 89	NO	4403.5
85	16	1234678-HpCDD	423 7766	41 64	1323180 376	0.974	168.216	168 .	1 05	1 05	NO	942 1
86	44	Total-heptadioxins	423.7766	40.37	2115547.563	0 974	268 950	268. .	1.04	1.05	NO	1693 1

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Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M ..	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	48	FUNCTION1 PFK	330 9792	22.66	0 000							0 8
2	48	FUNCTION1 PFK	330 9792	22.57	0 000							2 7
3	48	FUNCTION1 PFK	330 9792	22 46	0 000							3 2
4	48	FUNCTION1 PFK	330.9792	22 15	0.000							3.8
5	48	FUNCTION1 PFK	330.9792	22.03	0.000							3.9
6	48	FUNCTION1 PFK	330.9792	21 89	0 000							4.4
7	48	FUNCTION1 PFK	330 9792	21 79	0 000							4 4
8	48	FUNCTION1 PFK	330 9792	21 63	0 000							4 3
9	48	FUNCTION1 PFK	330.9792	21 49	0.000							3 9
10	48	FUNCTION1 PFK	330.9792	21 34	0.000							3 6
11	48	FUNCTION1 PFK	330.9792	21 25	0.000							2.9
12	48	FUNCTION1 PFK	330.9792	21 15	0.000							2 5
13	48	FUNCTION1 PFK	330.9792	26.45	0.000							1.5
14	48	FUNCTION1 PFK	330.9792	26.38	0.000							1 4
15	48	FUNCTION1 PFK	330 9792	26.32	0 000							0.8
16	48	FUNCTION1 PFK	330.9792	25 94	0.000							1 2
17	48	FUNCTION1 PFK	330.9792	25 66	0 000							1 3
18	48	FUNCTION1 PFK	330.9792	25.59	0.000							0 5
19	48	FUNCTION1 PFK	330 9792	25.53	0 000							0 4
20	48	FUNCTION1 PFK	330 9792	25.33	0 000							1 3
21	48	FUNCTION1 PFK	330 9792	24.97	0 000							0 8
22	48	FUNCTION1 PFK	330 9792	24 81	0 000							1.5
23	48	FUNCTION1 PFK	330 9792	23 85	0.000							2.4
24	48	FUNCTION1 PFK	330 9792	23 76	0.000							2 5
25	48	FUNCTION1 PFK	330 9792	23 58	0 000							3 0
26	48	FUNCTION1 PFK	330 9792	23.33	0 000							1 8
27	48	FUNCTION1 PFK	330 9792	23.22	0.000							1 5
28	48	FUNCTION1 PFK	330 9792	22 81	0 000							1 3
29	48	FUNCTION1 PFK	330.9792	28.18	0 000							1 2
30	48	FUNCTION1 PFK	330.9792	27 93	0.000							0 4
31	48	FUNCTION1 PFK	330 9792	27 47	0.000							0 3
32	48	FUNCTION1 PFK	330 9792	27 23	0.000							1 4
33	48	FUNCTION1 PFK	330 9792	27.08	0.000							1 7
34	48	FUNCTION1 PFK	330 9792	26 90	0.000							0 6
35	48	FUNCTION1 PFK	330.9792	26.53	0 000							0 7

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	33.16	0 000		0 000					2.0
2	49	FUNCTION2 PFK	366 9792	30 69	0.000		0.000					13 2
3	49	FUNCTION2 PFK	366 9792	29.38	0 000		0.000					22.3

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	50	FUNCTION3 PFK	380 9760	38.42	0 000		0.000					4 9
2	50	FUNCTION3 PFK	380.9760	37 62	0 000		0 000					40.1

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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati .	1° R...	S/N
1	51	FUNCTION4 PFK	430 9728	38 97	0 000							1.3
2	51	FUNCTION4 PFK	430.9728	40.76	0.000							1 3
3	51	FUNCTION4 PFK	430 9728	40.69	0.000							1.8
4	51	FUNCTION4 PFK	430.9728	40 63	0.000							2 6
5	51	FUNCTION4 PFK	430.9728	40 53	0.000							1.7
6	51	FUNCTION4 PFK	430.9728	40 38	0.000							2 3
7	51	FUNCTION4 PFK	430.9728	40.34	0.000							1.6
8	51	FUNCTION4 PFK	430.9728	40.30	0.000							1 5
9	51	FUNCTION4 PFK	430.9728	40 14	0.000							1.0
10	51	FUNCTION4 PFK	430.9728	40 08	0 000							1 9
11	51	FUNCTION4 PFK	430.9728	39.98	0.000							0 6
12	51	FUNCTION4 PFK	430.9728	39 61	0.000							1.5
13	51	FUNCTION4 PFK	430.9728	39.53	0 000							2.9
14	51	FUNCTION4 PFK	430 9728	39.36	0.000							1 1
15	51	FUNCTION4 PFK	430.9728	39.18	0 000							0.4
16	51	FUNCTION4 PFK	430 9728	39.13	0 000							1.6
17	51	FUNCTION4 PFK	430.9728	39.03	0 000							1 4
18	51	FUNCTION4 PFK	430 9728	42.09	0 000							1 3
19	51	FUNCTION4 PFK	430 9728	42 02	0 000							1.5
20	51	FUNCTION4 PFK	430 9728	41 98	0 000							2 0
21	51	FUNCTION4 PFK	430 9728	41 93	0 000							1 4
22	51	FUNCTION4 PFK	430 9728	41 87	0 000							0.3
23	51	FUNCTION4 PFK	430 9728	41 69	0.000							1 3
24	51	FUNCTION4 PFK	430.9728	41.59	0.000							1 0
25	51	FUNCTION4 PFK	430 9728	41 40	0.000							1 8
26	51	FUNCTION4 PFK	430.9728	41 38	0.000							1.7
27	51	FUNCTION4 PFK	430 9728	41 32	0.000							1.7
28	51	FUNCTION4 PFK	430.9728	41 28	0.000							2 4
29	51	FUNCTION4 PFK	430.9728	41 22	0.000							1.5
30	51	FUNCTION4 PFK	430.9728	41 12	0.000							2 1
31	51	FUNCTION4 PFK	430.9728	41 01	0.000							0 5
32	51	FUNCTION4 PFK	430 9728	40 96	0 000							0 9
33	51	FUNCTION4 PFK	430 9728	40.80	0.000							1 1
34	51	FUNCTION4 PFK	430 9728	43 69	0.000							1 3
35	51	FUNCTION4 PFK	430 9728	43 65	0 000							2.2
36	51	FUNCTION4 PFK	430.9728	43.57	0 000							1 2
37	51	FUNCTION4 PFK	430.9728	43.48	0.000							1 7
38	51	FUNCTION4 PFK	430.9728	43.45	0.000							1 2
39	51	FUNCTION4 PFK	430 9728	43.23	0 000							0.5
40	51	FUNCTION4 PFK	430.9728	43.19	0 000							1 0
41	51	FUNCTION4 PFK	430.9728	43.12	0.000							1.0
42	51	FUNCTION4 PFK	430 9728	43 03	0.000							2 0
43	51	FUNCTION4 PFK	430 9728	42 78	0.000							2 3
44	51	FUNCTION4 PFK	430.9728	42.75	0 000							0 6
45	51	FUNCTION4 PFK	430.9728	42.66	0 000							1.1
46	51	FUNCTION4 PFK	430.9728	42.53	0 000							0.4
47	51	FUNCTION4 PFK	430.9728	42.27	0.000							1.7
48	51	FUNCTION4 PFK	430.9728	42.20	0.000							2.5
49	51	FUNCTION4 PFK	430.9728	42 15	0.000							1 0

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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
50	51	FUNCTION4 PFK	430.9728	44.98	0.000							0 7
51	51	FUNCTION4 PFK	430.9728	44.93	0.000							1 4
52	51	FUNCTION4 PFK	430 9728	44.87	0.000							2 7
53	51	FUNCTION4 PFK	430 9728	44 82	0 000							2 4
54	51	FUNCTION4 PFK	430 9728	44 74	0 000							0.4
55	51	FUNCTION4 PFK	430 9728	44.59	0 000							1.6
56	51	FUNCTION4 PFK	430.9728	44.52	0 000							0 9
57	51	FUNCTION4 PFK	430.9728	44.43	0.000							1 1
58	51	FUNCTION4 PFK	430.9728	44.35	0 000							0.7
59	51	FUNCTION4 PFK	430.9728	44.29	0.000							0.9
60	51	FUNCTION4 PFK	430.9728	44.25	0 000							1 1
61	51	FUNCTION4 PFK	430 9728	44.13	0 000							1 5
62	51	FUNCTION4 PFK	430 9728	43 98	0 000							1 0
63	51	FUNCTION4 PFK	430 9728	43 93	0 000							0 7
64	51	FUNCTION4 PFK	430 9728	43 90	0.000							1.0

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
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PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480 9696	46.91	0.000							1.3
2	52	FUNCTION5 PFK	480.9696	46 87	0 000							1.4
3	52	FUNCTION5 PFK	480.9696	46.80	0 000							0.8
4	52	FUNCTION5 PFK	480.9696	46.77	0 000							0.4
5	52	FUNCTION5 PFK	480.9696	46.74	0.000							1.1
6	52	FUNCTION5 PFK	480 9696	46.57	0.000							1.5
7	52	FUNCTION5 PFK	480.9696	46 50	0.000							1 4
8	52	FUNCTION5 PFK	480.9696	46 20	0 000							0.4
9	52	FUNCTION5 PFK	480 9696	46.16	0 000							1.4
10	52	FUNCTION5 PFK	480.9696	46.13	0 000							1.3
11	52	FUNCTION5 PFK	480 9696	45.82	0 000							1.2
12	52	FUNCTION5 PFK	480 9696	45 73	0.000							1.7
13	52	FUNCTION5 PFK	480 9696	45 69	0.000							1.6
14	52	FUNCTION5 PFK	480 9696	45 19	0.000							1.6
15	52	FUNCTION5 PFK	480 9696	45 11	0 000							2.2
16	52	FUNCTION5 PFK	480 9696	45 09	0.000							1 7
17	52	FUNCTION5 PFK	480.9696	48.84	0 000							0 8
18	52	FUNCTION5 PFK	480 9696	48.59	0 000							0.7
19	52	FUNCTION5 PFK	480 9696	48 41	0.000							1.0
20	52	FUNCTION5 PFK	480 9696	48.22	0.000							0.6
21	52	FUNCTION5 PFK	480 9696	47.89	0 000							1.3
22	52	FUNCTION5 PFK	480 9696	47.85	0 000							1.1
23	52	FUNCTION5 PFK	480 9696	47.81	0.000							0.9
24	52	FUNCTION5 PFK	480 9696	47.76	0 000							0.8
25	52	FUNCTION5 PFK	480 9696	47 68	0 000							0.8
26	52	FUNCTION5 PFK	480 9696	47 64	0 000							1 7
27	52	FUNCTION5 PFK	480.9696	47.55	0 000							1 6
28	52	FUNCTION5 PFK	480.9696	47 48	0.000							1 6
29	52	FUNCTION5 PFK	480 9696	47 38	0.000							1.2
30	52	FUNCTION5 PFK	480 9696	47 24	0.000							2 1
31	52	FUNCTION5 PFK	480.9696	47.21	0 000							1 5
32	52	FUNCTION5 PFK	480.9696	47 18	0 000							1.0
33	52	FUNCTION5 PFK	480.9696	48.86	0 000							0.6

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD	375 8364	28 44	0 000		0.000					3 5
2	53	FUNCTION1 HXCD	375.8364	27.95	0 000		0 000					2 0
3	53	FUNCTION1 HXCD .	375 8364	26.47	0 000		0.000					45 5
4	53	FUNCTION1 HXCD .	375 8364	26.18	0.000		0 000					14 1
5	53	FUNCTION1 HXCD .	375 8364	25.26	0 000		0 000					3 7
6	53	FUNCTION1 HXCD .	375 8364	24 24	0.000		0 000					9.0

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ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD...	409 7974	27.00	0.000		0 000					2 5
2	54	FUNCTION1 HPCD .	409.7974	26.36	0.000		0 000					3 1
3	54	FUNCTION1 HPCD	409 7974	23.57	0 000		0 000					1 8
4	54	FUNCTION1 HPCD...	409.7974	23.09	0 000		0.000					2.7
5	54	FUNCTION1 HPCD .	409.7974	21 30	0.000		0.000					2 4
6	54	FUNCTION1 HPCD..	409.7974	21 22	0 000		0 000					2 5

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD.	409.7974	33.15	0 000		0.000					5.0
2	55	FUNCTION2 HPCD...	409.7974	33.03	0.000		0.000					3 1
3	55	FUNCTION2 HPCD.	409.7974	32.52	0 000		0.000					2.6
4	55	FUNCTION2 HPCD	409 7974	30.57	0 000		0 000					3.1
5	55	FUNCTION2 HPCD	409 7974	30 48	0 000		0 000					12 4
6	55	FUNCTION2 HPCD .	409 7974	30.15	0 000		0 000					17 9
7	55	FUNCTION2 HPCD .	409 7974	29 88	0.000		0.000					3 3
8	55	FUNCTION2 HPCD...	409.7974	29 60	0.000		0 000					2 8
9	55	FUNCTION2 HPCD...	409 7974	28.93	0.000		0.000					2.8

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati..	1° Rati...	1° R. .	S/N
1	56	FUNCTION3 OCDPE	445 7555	36 61	0.000		0 000					3.1
2	56	FUNCTION3 OCDPE	445 7555	35.53	0.000		0 000					5 3
3	56	FUNCTION3 OCDPE	445.7555	35.45	0.000		0.000					2 2
4	56	FUNCTION3 OCDPE	445.7555	35 34	0.000		0 000					3 7
5	56	FUNCTION3 OCDPE	445.7555	35 26	0.000		0 000					4.7
6	56	FUNCTION3 OCDPE	445 7555	35 20	0 000		0.000					3.8
7	56	FUNCTION3 OCDPE	445 7555	37 38	0 000		0.000					4.0
8	56	FUNCTION3 OCDPE	445.7555	37.16	0.000		0.000					3.2
9	56	FUNCTION3 OCDPE	445.7555	37.08	0.000		0.000					2.7
10	56	FUNCTION3 OCDPE	445.7555	37.00	0 000		0.000					5.6
11	56	FUNCTION3 OCDPE	445 7555	36.96	0 000		0.000					3 3
12	56	FUNCTION3 OCDPE	445 7555	36.71	0.000		0 000					3 5
13	56	FUNCTION3 OCDPE	445 7555	36 67	0.000		0.000					2 9

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati.	1° Rati...	1° R. .	S/N
1	57	FUNCTION4 NCDPE	479.7165	41 64	0.000		0.000					15 8
2	57	FUNCTION4 NCDPE	479 7165	41.61	0 000		0 000					11.8
3	57	FUNCTION4 NCDPE	479.7165	41 38	0 000		0.000					2.2
4	57	FUNCTION4 NCDPE	479.7165	41 28	0.000		0 000					4 4
5	57	FUNCTION4 NCDPE	479 7165	41.25	0 000		0 000					4 2
6	57	FUNCTION4 NCDPE	479 7165	41.16	0 000		0 000					1 9
7	57	FUNCTION4 NCDPE	479.7165	39 58	0 000		0.000					2 3
8	57	FUNCTION4 NCDPE	479 7165	39 39	0 000		0 000					251 3
9	57	FUNCTION4 NCDPE	479.7165	41.88	0 000		0 000					3.4

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ETHERS6

#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
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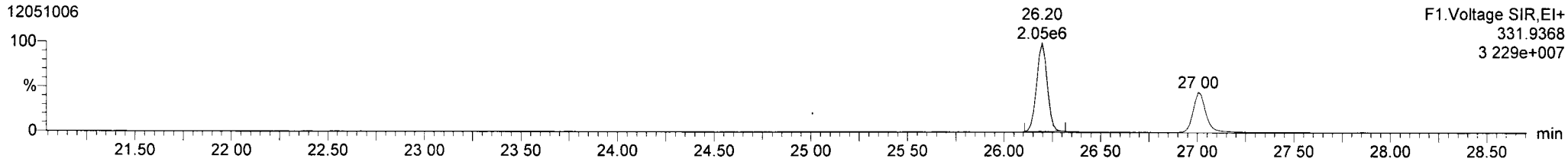
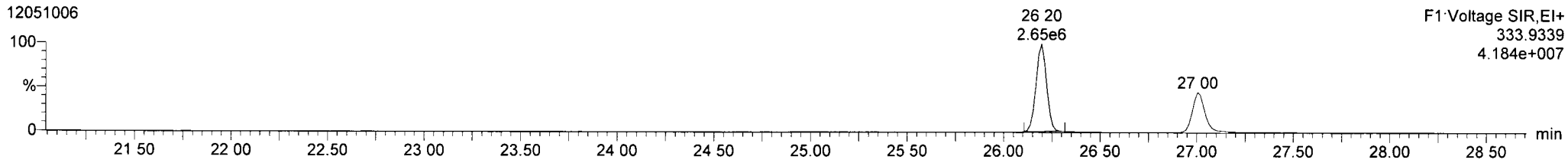
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

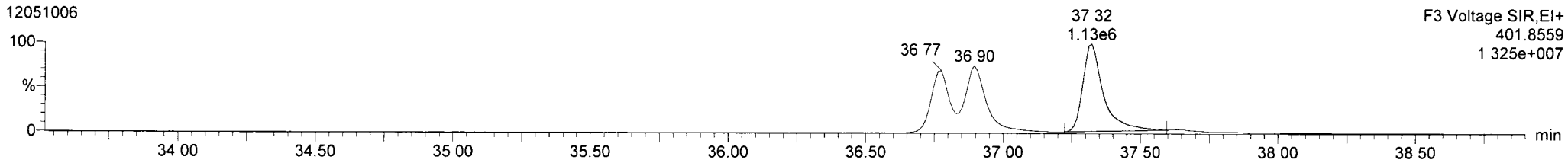
13C-1234-TCDD



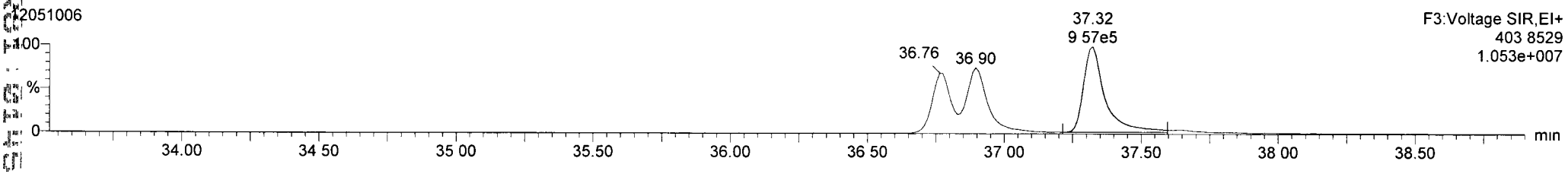
13C-1234-TCDD



13C-123789-HxCDD



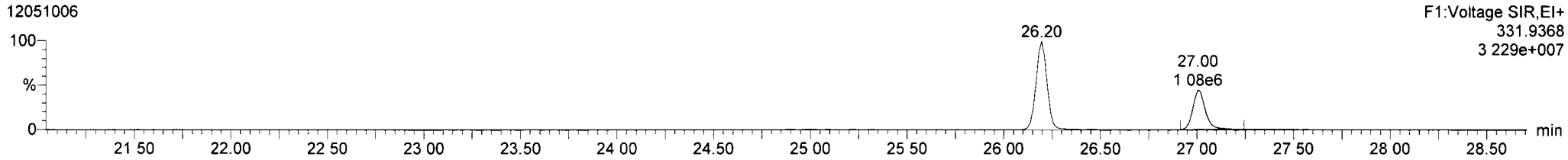
13C-123789-HxCDD



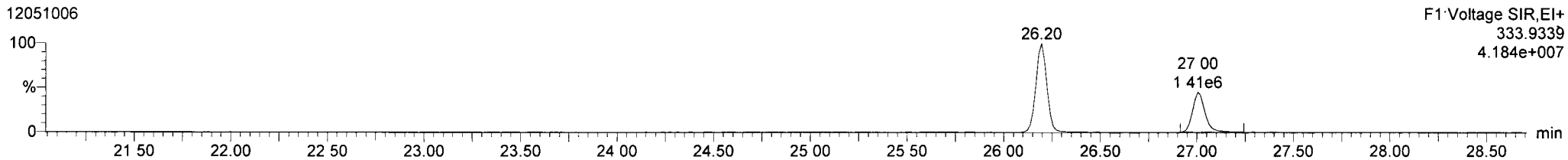
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

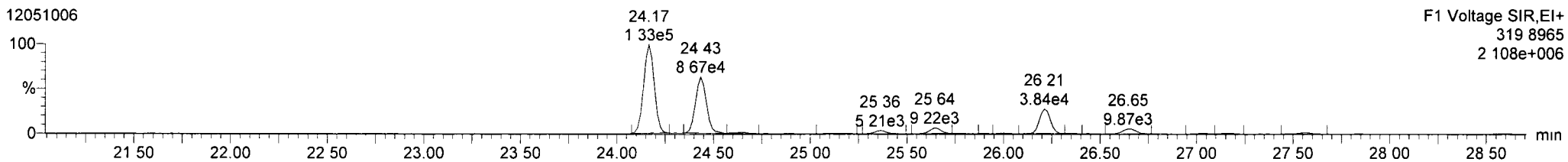
13C-2378-TCDD



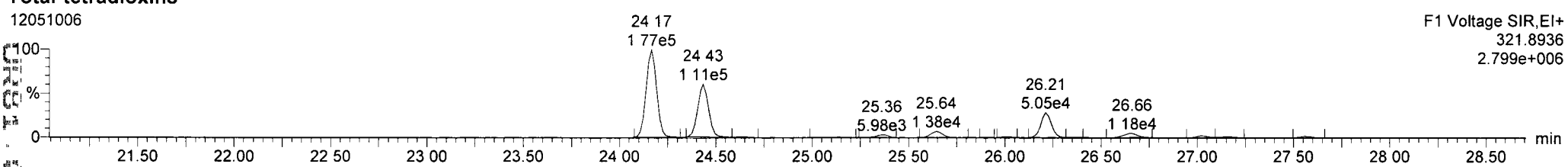
13C-2378-TCDD



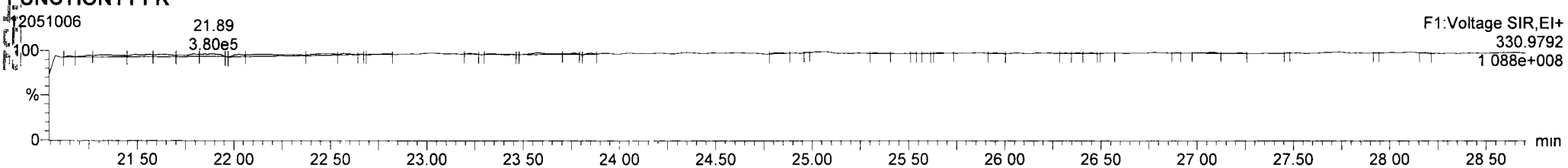
Total-tetradioxins



Total-tetradioxins



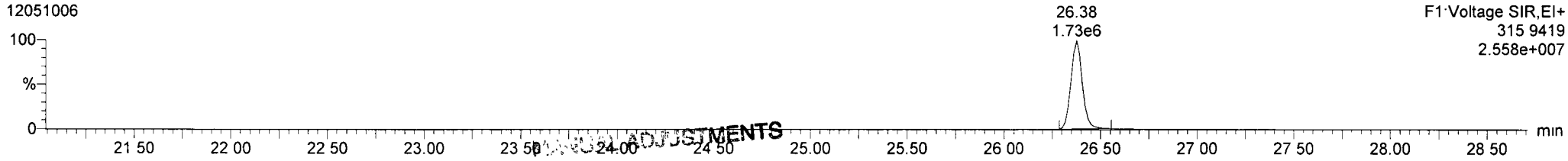
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

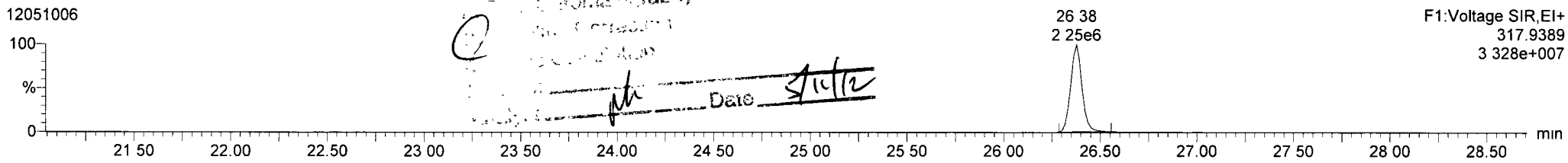
Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



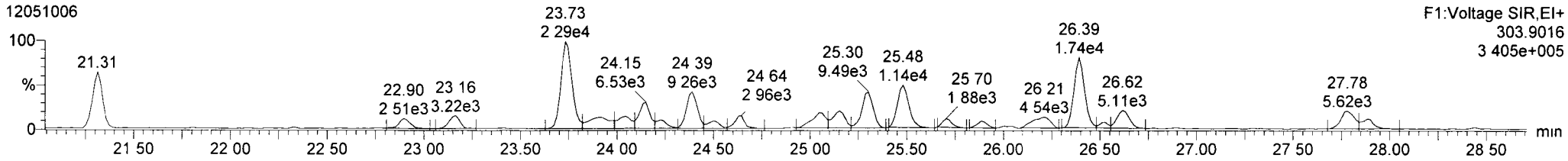
MANUAL ADJUSTMENTS

13C-2378-TCDF

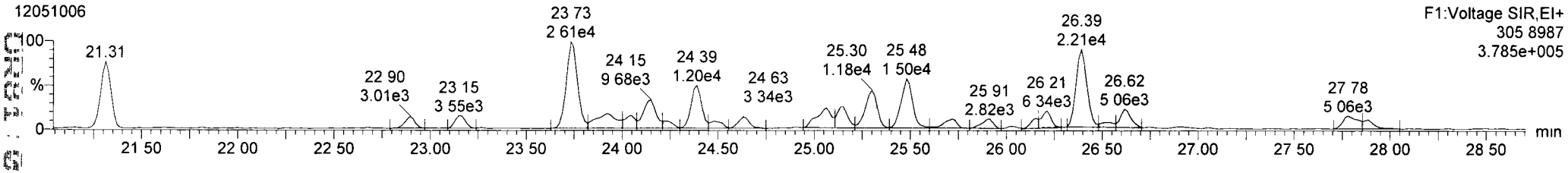


Date 5/11/12

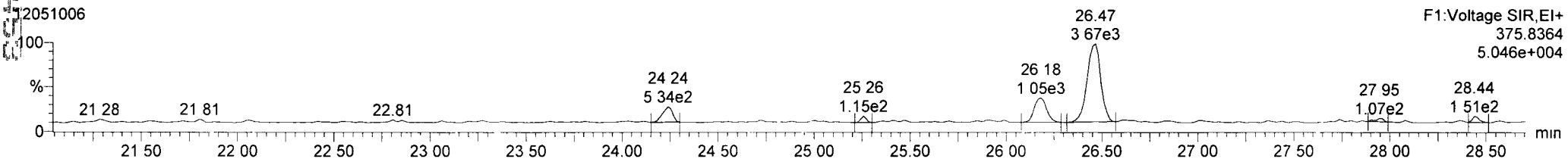
Total-tetrafurans



Total-tetrafurans



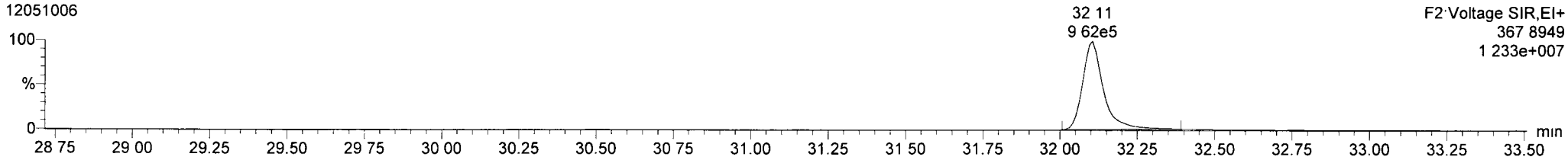
FUNCTION1 HXCDPE



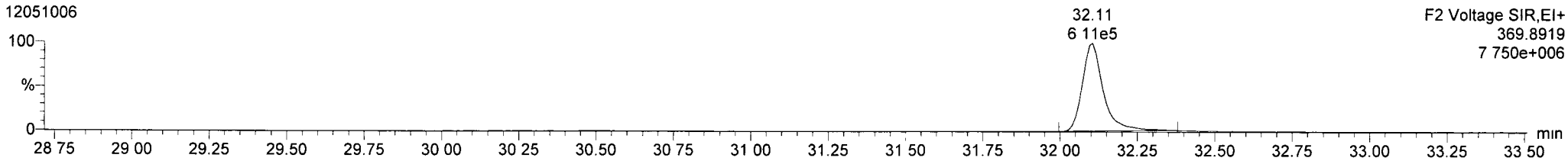
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09.37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

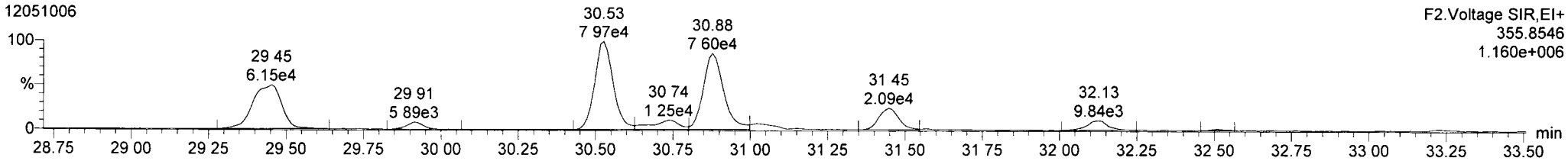
13C-12378-PeCDD



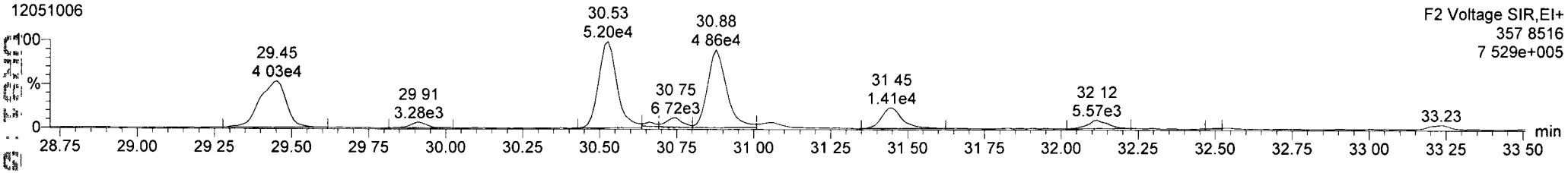
13C-12378-PeCDD



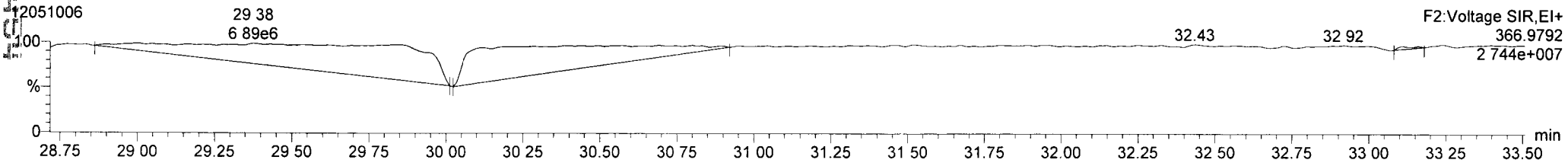
Total-pentadioxins



Total-pentadioxins



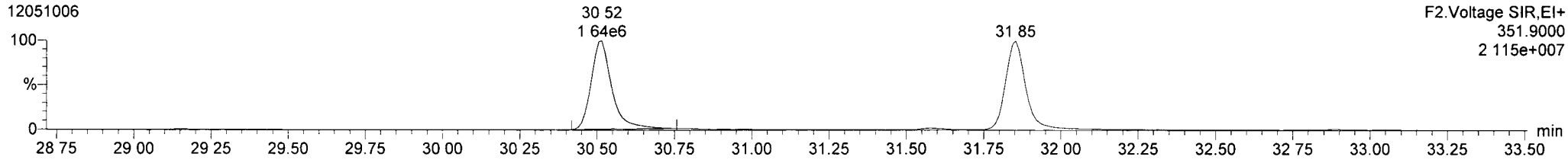
FUNCTION2 PFK



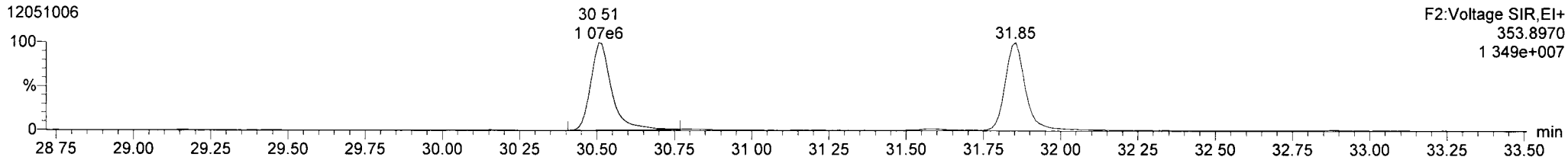
Dataset. P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

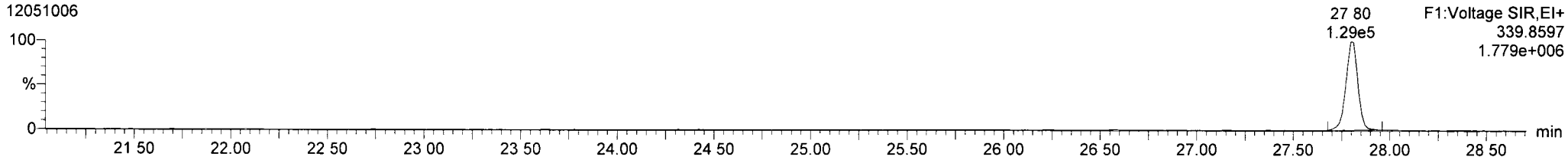
13C-12378-PeCDF



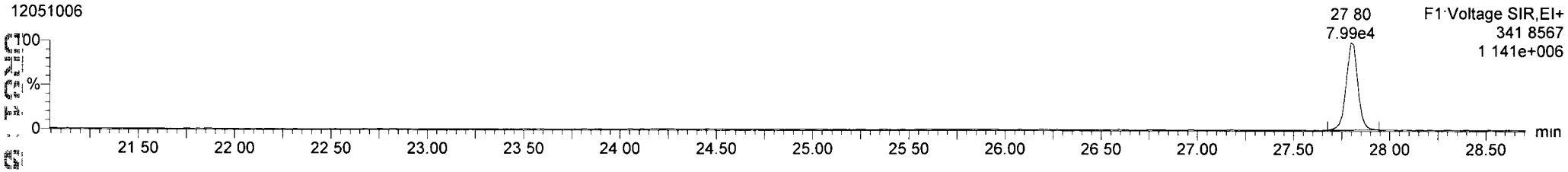
13C-12378-PeCDF



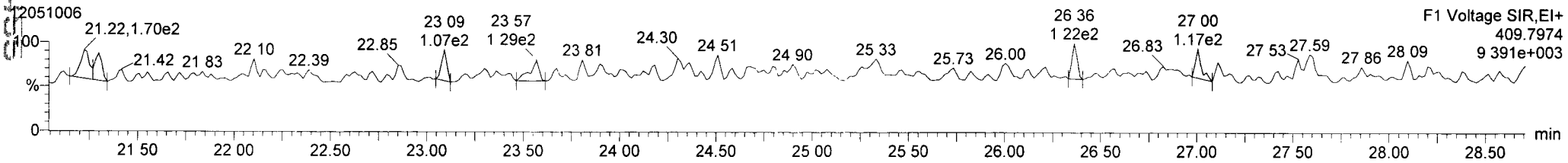
Total-penta1



Total-penta1



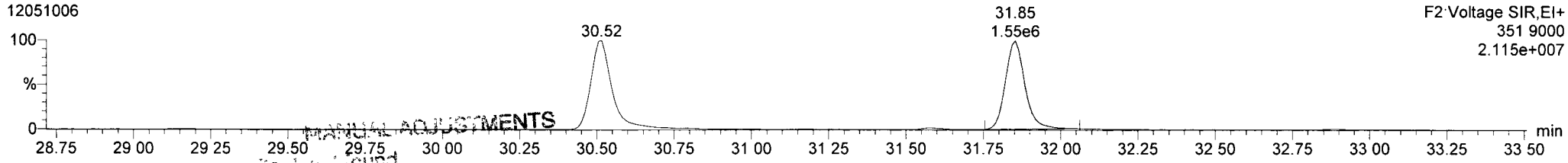
FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

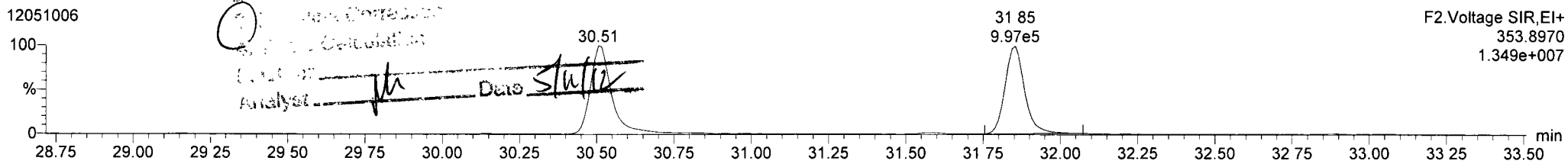
Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



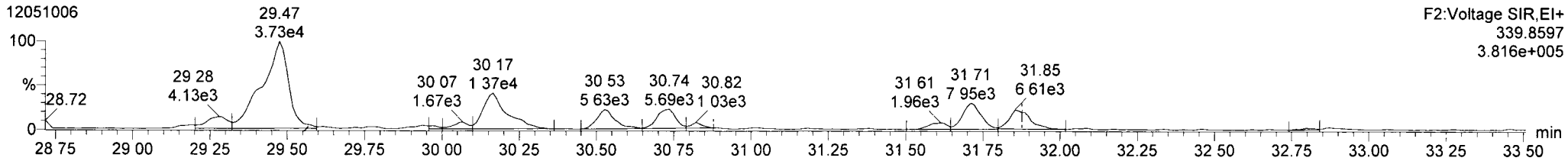
MANUAL ADJUSTMENTS

13C-23478-PeCDF

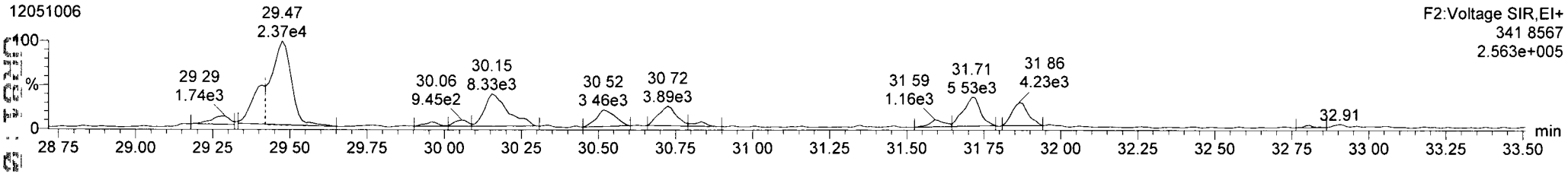


Analyst Date 5/11/12

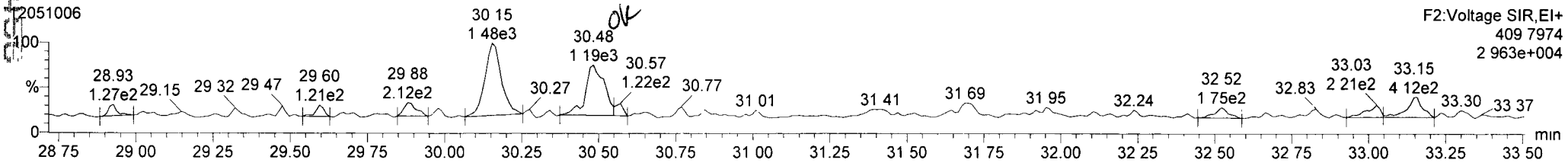
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

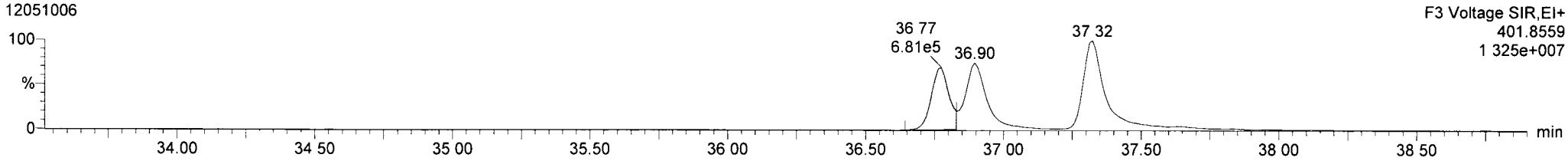


OK

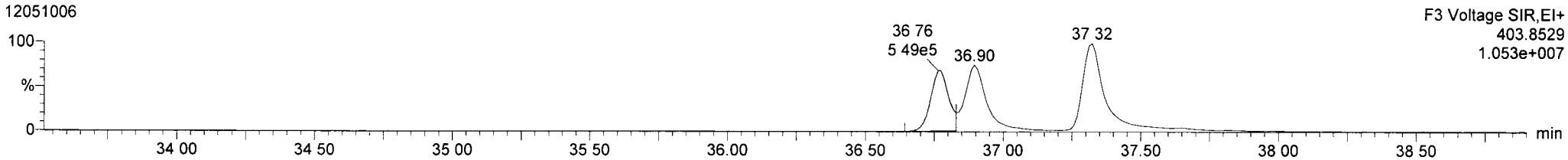
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered. Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09.39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

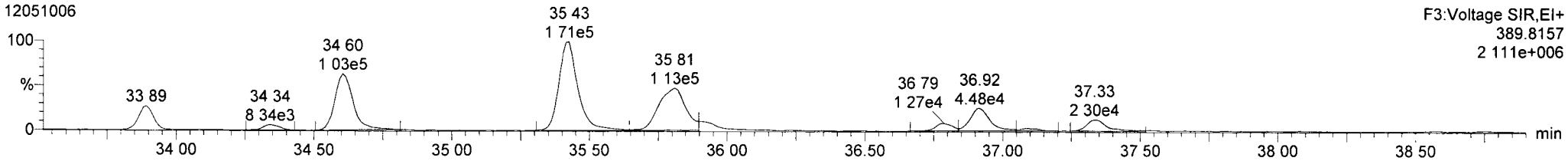
13C-123478-HxCDD



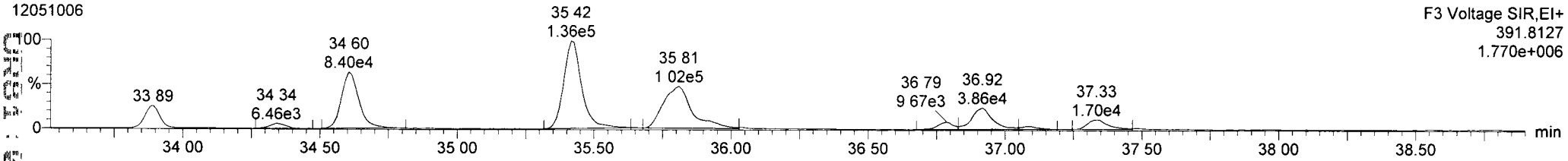
13C-123478-HxCDD



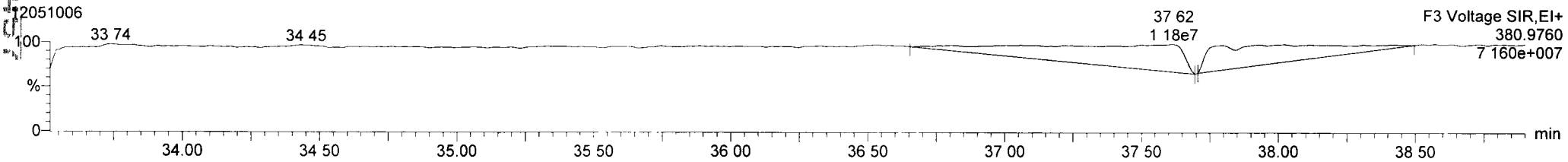
Total-hexadioxins



Total-hexadioxins



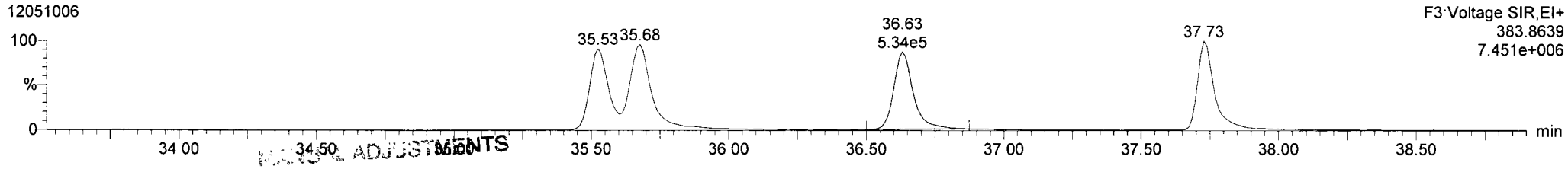
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

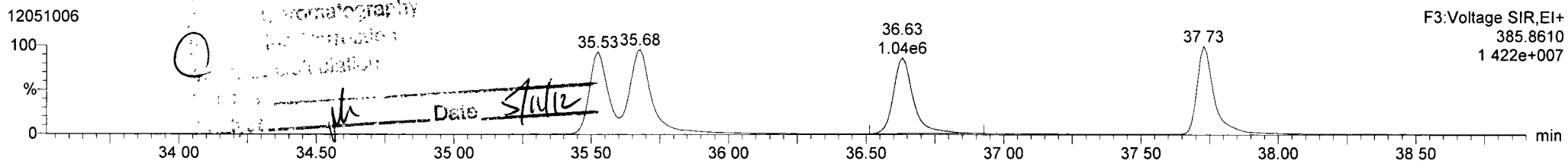
Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



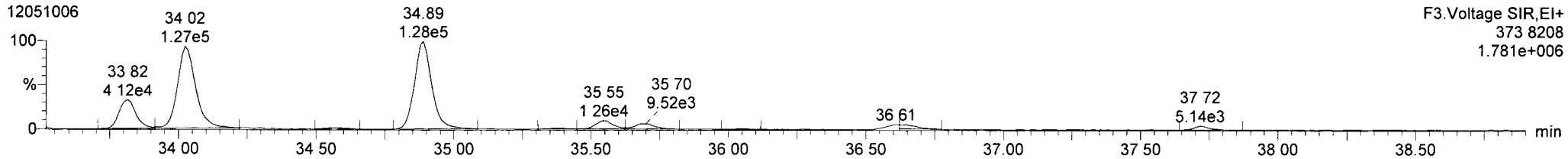
MANUAL ADJUSTMENTS

13C-234678-HxCDF

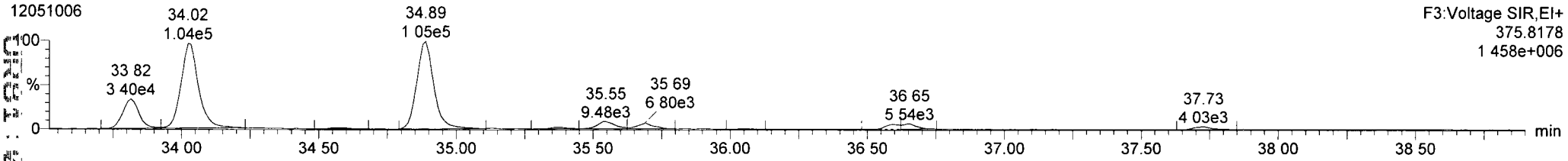


Date 5/11/12

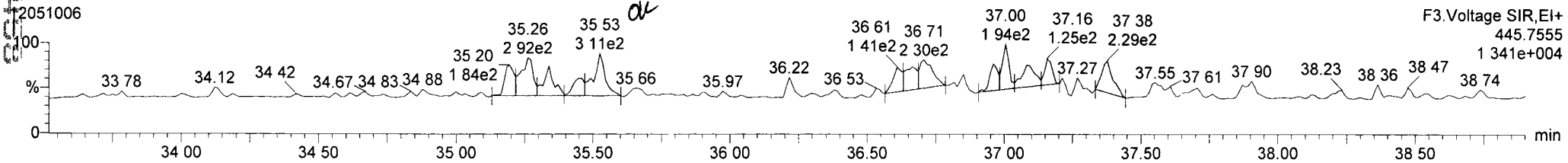
Total-hexafurans



Total-hexafurans



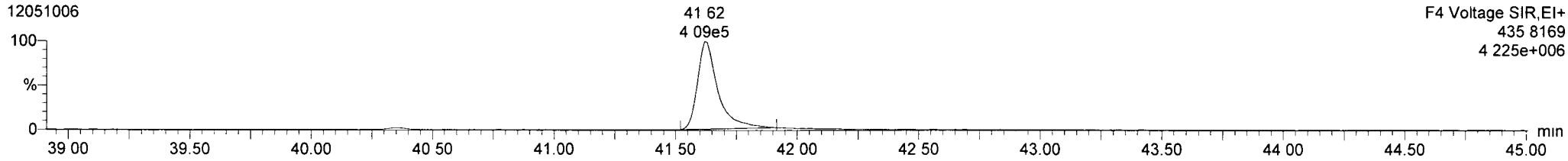
FUNCTION3 OCDPE



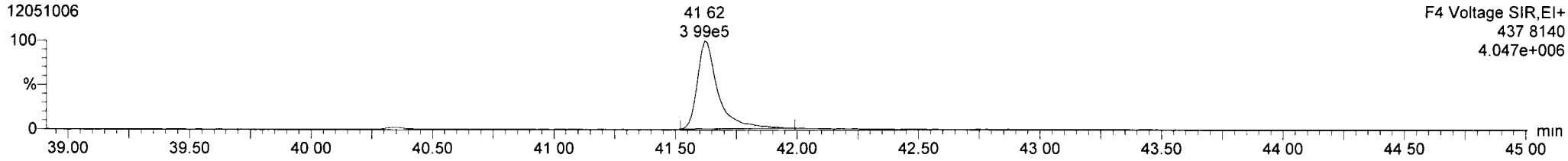
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37.31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

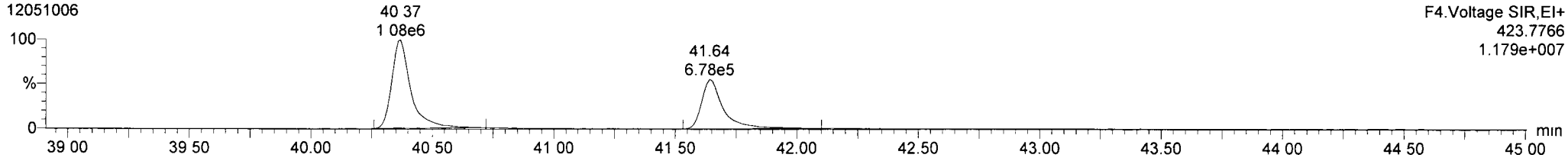
13C-1234678-HpCDD



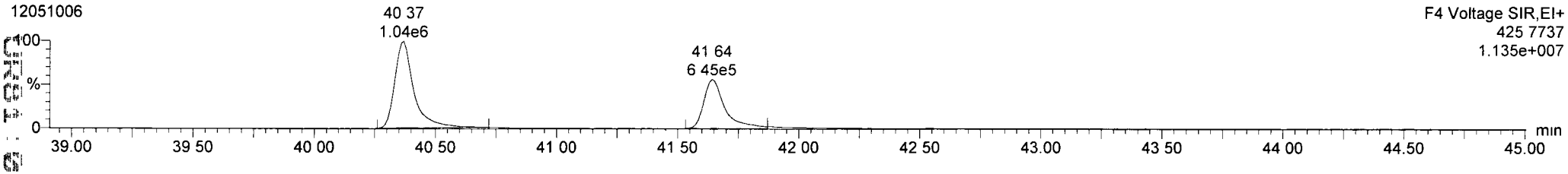
13C-1234678-HpCDD



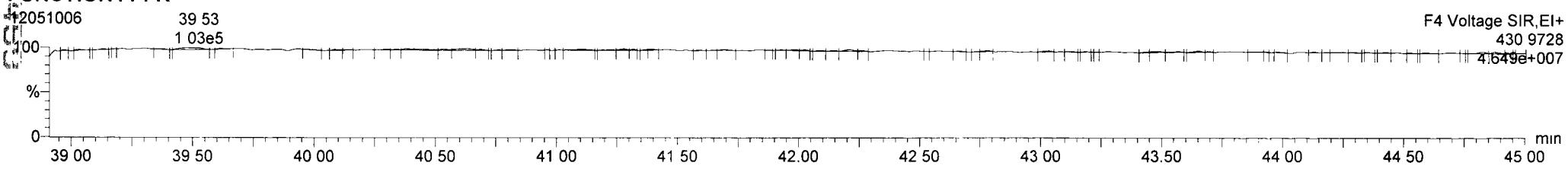
Total-heptadioxins



Total-heptadioxins



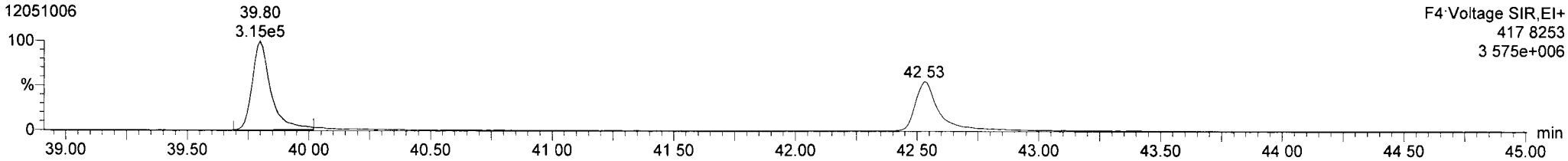
FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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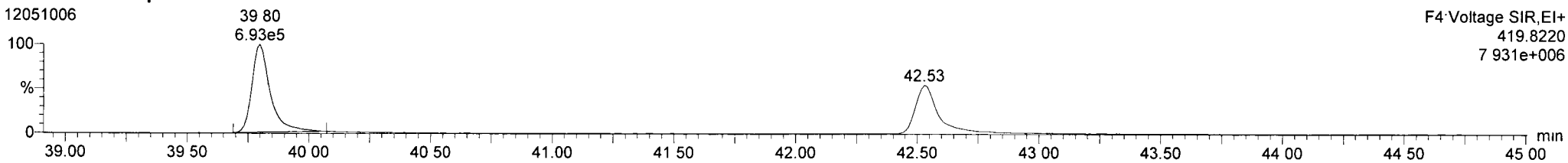
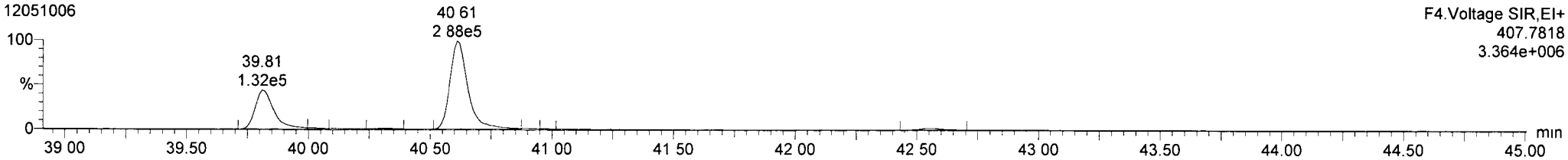
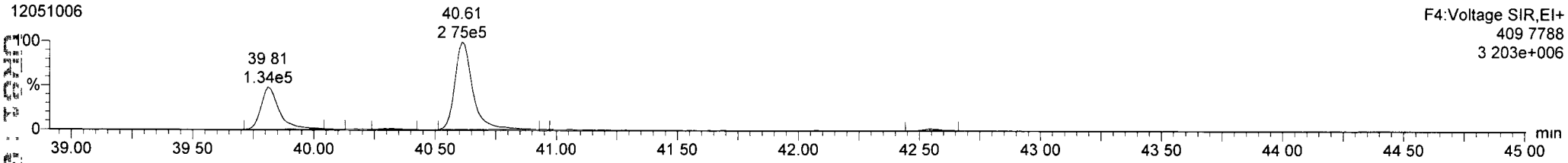


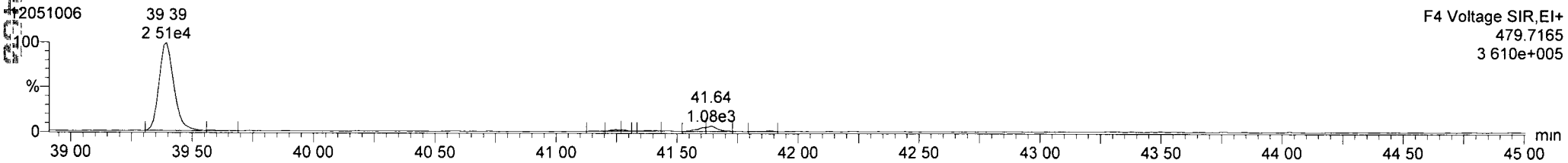
Total-heptafurans



Total-heptafurans



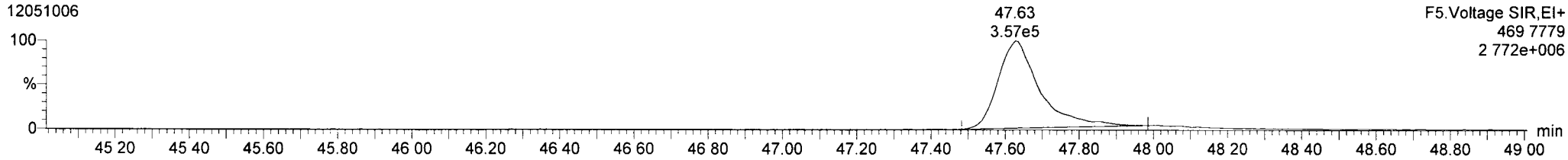
FUNCTION4 NCDPE



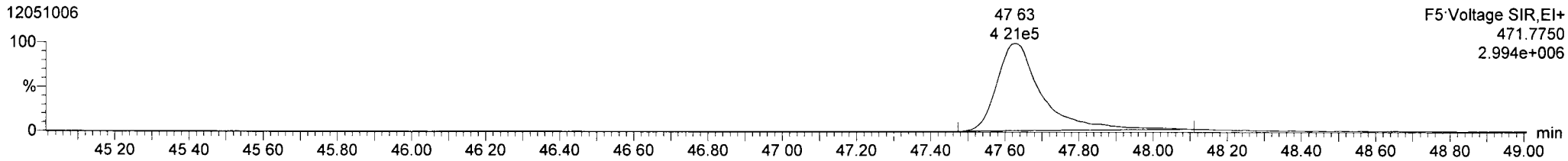
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

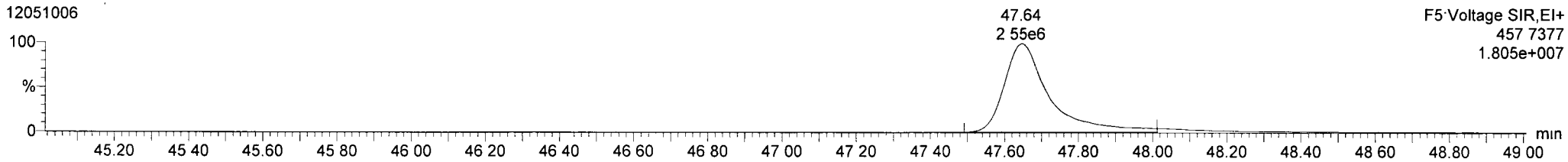
13C-OCDD



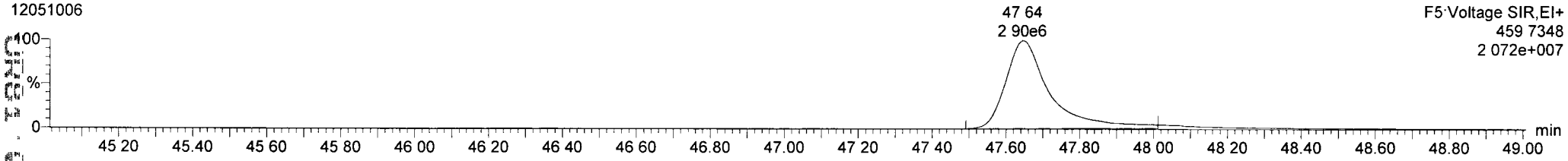
13C-OCDD



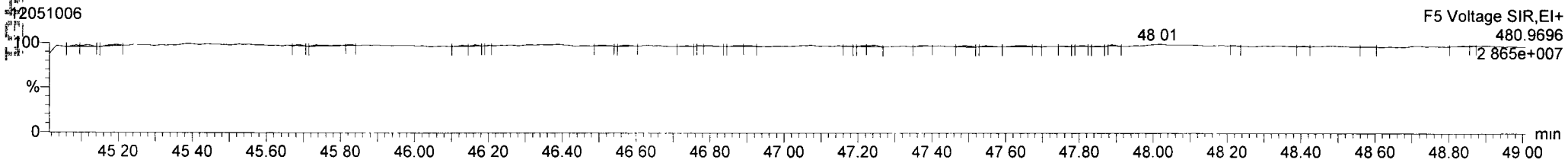
OCDD



OCDD



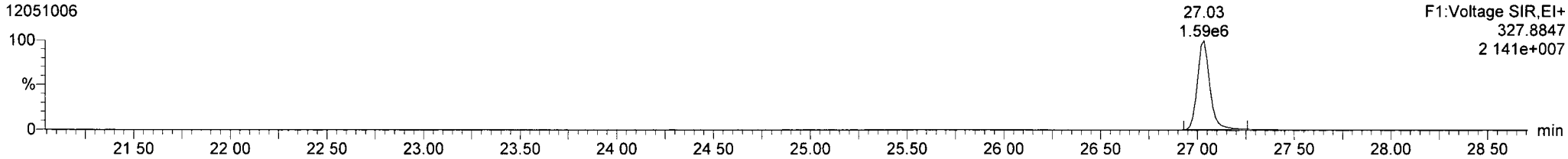
FUNCTION5 PFK



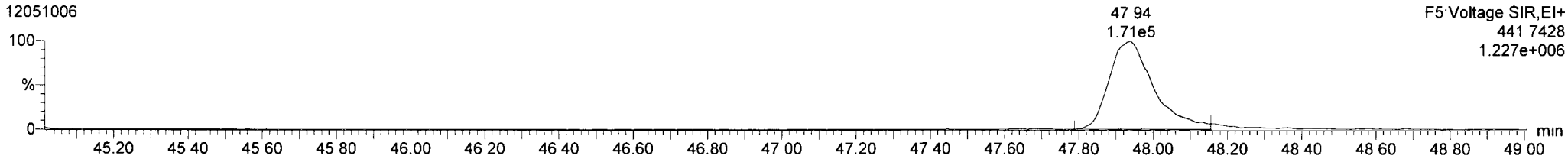
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:51 Pacific Daylight Time

Name: 12051006, Date: 10-May-2012, Time: 13:58:35, ID: UR81A, Conditions: AUTOSPEC01, User: pk

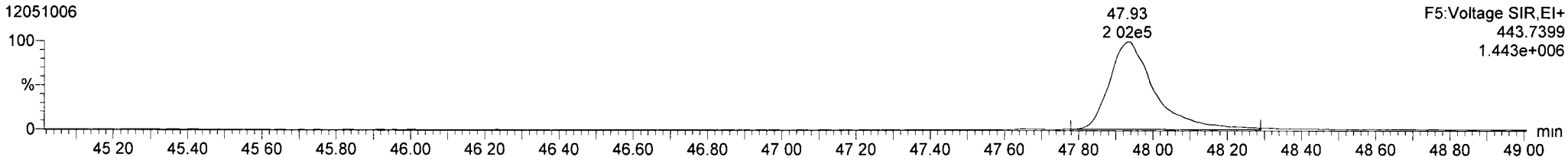
37CL-2378-TCDD



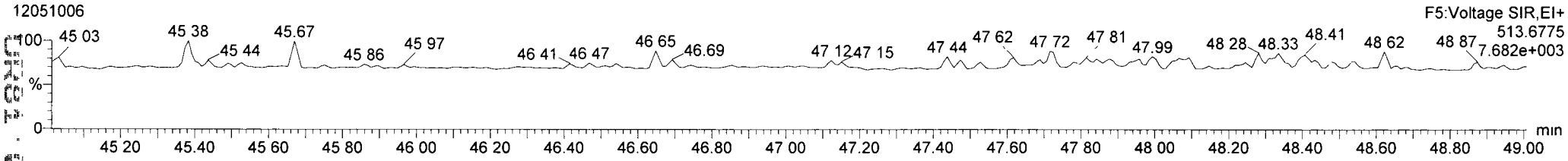
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

pk 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC	
1	1	2378-TCDF	303 9016	26 392	26.393	143360	143360	0 866	dd		0.76	0.77	445.4	NO	2.304	2 304	
2	2	12378-PeCDF	339 8597	30 538	30.538	32397	32397	0 907	bd		1 57	1.55	57 2	NO	0.698	0.698	
3	3	23478-PeCDF	339 8597	31 875	31.887	37395	37395	0 936	db		1 52	1 55	67.0	NO	0 805	0 805	
4	4	123478-HxCDF	373 8208	35 580	35.569	97763	97763	1.082	dd		1 16	1.24	122.2	NO	2.701	2.701	
5	5	234678-HxCDF	373 8208	36 687	36.698	83327	83327	1 070	bb		1.26	1 24	62 6	NO	2.511	2.511	
6	6	123678-HxCDF	373.8208	35 734	35.733	54009	54009	1.048	db		1.12	1 24	63.2	NO	1 410	1.410	
7	7	123789-HxCDF	373.8208	37.750	37.773	18193	18193	1 020	bb		1.20	1 24	31 5	NO	0 771	0 771	
8	8	1234678-HpCDF	407.7818	39.844	39 842	1070624	1070624	1 214	bb		1.00	1 05	1154 8	NO	40.322	40 322	
9	9	1234789-HpCDF	407 7818	42.563	42.564	48966	48966	1.254	bb		1.02	1.05	45 7	NO	2.551	2.551	
10	10	OCDF	441 7428	47.986	47 958	1794349	1794349	1.105	bb		0 88	0.89	1706.4	NO	153.985	153.985	
11	11	2378-TCDD	319 8965	27 035	27 018	0	12194	1 046	bd		0 62	0 77	31.6	YES	0 000	0 251	
12	12	12378-PeCDD	355 8546	32 138	32.126	60287	60287	0 973	bb		1.52	1 55	94.6	NO	1 924	1 924	
13	13	123478-HxCDD	389.8157	36 829	36 830	99628	99628	0 935	bd		1 18	1 24	116 7	NO	3 815	3.815	
14	14	123678-HxCDD	389 8157	36.950	36.950	315013	315013	0 878	dd		1 21	1 24	349 4	NO	11.636	11.636	
15	15	123789-HxCDD	389.8157	37 377	37.345	171589	171589	0.839	bb		1.26	1 24	187 4	NO	6.963	6.963	
16	16	1234678-HpCDD	423 7766	41 664	41.665	5950447	5950447	0.974	bb		1.08	1.05	2440 9	NO	324.063	324 063	
17	17	OCDD	457.7377	47.690	47 686	28890791	28890791	0.950	bd		0.89	0.89	14656 7	NO	2884.218	2884 2	E
18	18	13C-2378-TCDF	315 9419	26 377	26 377	7184040		1.484	bb	77.0	0.77	0 77	7213 2	NO	77 026		
19	19	13C-12378-PeCDF	351 9000	30 516	30 519	5114401		1.048	bb	77 7	1.54	1 55	4458 9	NO	77.665		
20	20	13C-23478-PeCDF	351 9000	31.864	31.856	4964932		1 003	bb	78 8	1.55	1 55	4387.4	NO	78 754		
21	21	13C-123478-HxCDF	383 8639	35 558	35 591	3344911		1 186	bd	86 0	0 51	0 51	2243 9	NO	85.989		
22	22	13C-123678-HxCDF	383 8639	35 711	35 744	3655039		1.315	db	84 7	0 53	0 51	2426 8	NO	84.712		
23	23	13C-234678-HxCDF	383.8639	36.676	36.676	3101353		1 223	bb	77 3	0.52	0 51	2011 7	NO	77 272		
24	24	13C-123789-HxCDF	383 8639	37 761	37 783	2313426		1 056	bb	66 7	0.51	0 51	2012 7	NO	66 741		
25	25	13C-1234678-HpCDF	417 8253	39.822	39.866	2186324		1.011	bd	65 9	0 44	0 44	1442 4	NO	65 885		
26	26	13C-1234789-HpCDF	417 8253	42.552	42.617	1530639		0 741	bb	63.0	0 46	0 44	853 9	NO	62.998		
27	27	13C-1234-TCDD	331 9368	26.198	26.272	6283150		1 000	bb	100 0	0 78	0 77	8920 1	NO	100.000		
28	28	13C-2378-TCDD	331 9368	27 004	27 020	4638051		0 956	bb	77.2	0.78	0 77	5794 3	NO	77.184		
29	29	13C-12378-PeCDD	367 8949	32 117	32 108	3220108		0.663	bb	77.2	1.65	1 55	5356 4	NO	77 247		
30	30	13C-123478-HxCDD	401 8559	36 807	36 808	2791614		1 024	bd	83.1	1.27	1 24	4395.5	NO	83 099		
31	31	13C-123678-HxCDD	401 8559	36.939	36 939	3084108		1 113	db	84.5	1 27	1 24	4545 4	NO	84.486		
32	32	13C-1234678-HpCDD	435 8169	41 653	41.718	1884636		0 815	bb	70 5	1 08	1 05	2102 1	NO	70.471		
33	33	13C-OCDD	469 7779	47 672	47.734	2108649		0 717	bb	44 8	0 84	0 89	1584 3	NO	89.627		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M. .	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 367	37 368	3280936		1.000	bb	100 0	1.24	1.24	4581.9	NO	100 000	
35	35	Total-tetrafurans	303 9016		25.370			0 866							12 618	13 622
36	36	Total-penta1	339 8597		28 210										13.280	13 280
37	37	Total-pentafurans	339 8597		30.790			0.921							8.702	10 167
38	38	Total-hexafurans	373 8208		35 760			1.055							70.957	71 654
39	39	Total-heptafurans	407 7818		41.160			1.234							144 221	144 221
40	40	Total-Furans	303 9016		0 000			1.050							403.764	407 778
41	41	Total-tetradioxins	319 8965		25 880			1 046							59.664	60 090
42	42	Total-pentadioxins	355 8546		30.950			0 973							69 714	70.844
43	43	Total-hexadioxins	389 8157		35.940			0 884							161 890	161 890
44	44	Total-heptadioxins	423.7766		40.980			0 974							806 460	806.460
45	45	Total-Dioxins	319.8965		0 000			0 942							3981.945	3983.5 .
46	46	Total-TEQ	319 8965		0.000										4385.709	4391 2
47	47	37CL-2378-TCDD	327 8847	27.035	27.010	2146672		1.037					7181 6		32 941	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0.000										0 000	
50	50	FUNCTION3 PFK	380 9760		0 000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409 7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0 000										0.000	
57	57	FUNCTION4 NCDPE	479 7165		0 000										0.000	
58	58	FUNCTION5 DCDPE	513 6775		0 000										0.000	

21.982 23.447

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 06	0.000	0.866	0.000	0 526	0 93	0 77	YES	96.9
2	35	Total-tetrafurans	303.9016	24 63	20404.621	0.866	0.328	0 328	0 76	0.77	NO	74 1
3	35	Total-tetrafurans	303 9016	24 49	11748.328	0.866	0.189	0.189	0 76	0.77	NO	39.5
4	35	Total-tetrafurans	303 9016	24.39	52095.269	0 866	0.837	0.837	0 83	0.77	NO	171.1
5	35	Total-tetrafurans	303.9016	24.23	12403.056	0 866	0.199	0.199	0.77	0.77	NO	40.1
6	35	Total-tetrafurans	303 9016	24.14	36959 346	0.866	0.594	0.594	0 76	0.77	NO	120 8
7	35	Total-tetrafurans	303.9016	24.03	24323.647	0 866	0.391	0 391	0.77	0.77	NO	70 5
8	35	Total-tetrafurans	303 9016	23.93	40448 691	0 866	0.650	0 650	0.83	0.77	NO	92 6
9	35	Total-tetrafurans	303.9016	23.73	123784 629	0 866	1 989	1 989	0.73	0.77	NO	380 3
10	35	Total-tetrafurans	303.9016	23.16	18509 782	0.866	0 297	0 297	0 77	0.77	NO	57 8
11	35	Total-tetrafurans	303.9016	22 90	17158 462	0.866	0 276	0 276	0 81	0 77	NO	60 1
12	35	Total-tetrafurans	303 9016	26 91	0 000	0 866	0.000	0.027	0.50	0 77	YES	7 9
13	35	Total-tetrafurans	303 9016	26 63	37791 136	0.866	0.607	0.607	0 78	0 77	NO	99 6
14	35	Total-tetrafurans	303 9016	26 53	11876 867	0 866	0.191	0 191	0.80	0 77	NO	42 3
15	1	2378-TCDF	303 9016	26.39	143359 957	0 866	2.304	2 304	0 76	0.77	NO	445 4
16	35	Total-tetrafurans	303.9016	26.20	34031.677	0.866	0.547	0 547	0 82	0 77	NO	69.5
17	35	Total-tetrafurans	303.9016	26.05	0.000	0.866	0.000	0.031	1 00	0.77	YES	7 6
18	35	Total-tetrafurans	303 9016	25 91	12293.544	0 866	0 198	0.198	0.77	0.77	NO	36.2
19	35	Total-tetrafurans	303 9016	25 70	15842.428	0 866	0 255	0.255	0.72	0 77	NO	45 0
20	35	Total-tetrafurans	303 9016	25 48	83142.864	0 866	1 336	1 336	0 78	0.77	NO	258.1
21	35	Total-tetrafurans	303.9016	25 30	55515.588	0 866	0.892	0.892	0 77	0.77	NO	162 7
22	35	Total-tetrafurans	303.9016	25 15	33447.719	0.866	0 538	0.538	0 75	0 77	NO	106 7
23	35	Total-tetrafurans	303.9016	27 87	0.000	0.866	0.000	0.420	0 92	0.77	YES	50 4

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27 81	613722 922		13.280	13.280	1.51	1 55	NO	3012 5

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339 8597	29.29	31329.450	0.921	0.675	0 675	1 40	1 55	NO	35.5
2	3	23478-PeCDF	339 8597	31.88	37395.272	0.936	0.805	0 805	1.52	1 55	NO	67.0
3	37	Total-pentafurans	339.8597	31.72	41597.023	0 921	0.896	0 896	1.54	1 55	NO	76.4
4	37	Total-pentafurans	339 8597	31.61	12951.506	0 921	0.279	0.279	1.56	1.55	NO	24 3
5	37	Total-pentafurans	339 8597	30.84	6707.850	0.921	0.144	0 144	1.62	1 55	NO	14.4
6	37	Total-pentafurans	339.8597	30.74	35825.947	0 921	0.772	0 772	1.59	1 55	NO	62.3
7	2	12378-PeCDF	339 8597	30.54	32397.034	0 907	0 698	0.698	1.57	1 55	NO	57 2
8	37	Total-pentafurans	339.8597	30.25	11930 730	0 921	0.257	0.257	1.63	1.55	NO	35 5
9	37	Total-pentafurans	339.8597	30 17	60663.732	0 921	1.306	1 306	1.57	1 55	NO	98 6
10	37	Total-pentafurans	339 8597	30 08	0 000	0 921	0 000	0 129	1 96	1 55	YES	17 1
11	37	Total-pentafurans	339 8597	29 98	0 000	0.921	0 000	0 079	0 89	1.55	YES	9 7
12	37	Total-pentafurans	339 8597	29 78	0.000	0.921	0.000	0 019	7 48	1.55	YES	5 6
13	37	Total-pentafurans	339.8597	29.49	133280 464	0.921	2 870	2.870	1 76	1.55	NO	228.4
14	37	Total-pentafurans	339 8597	29 42	0 000	0.921	0 000	1.186	1.31	1 55	YES	137.2
15	37	Total-pentafurans	339 8597	32 92	0 000	0.921	0 000	0 052	2.73	1.55	YES	7.9

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	4	123478-HxCDF	373 8208	35 58	97762 914	1.082	2.701	2 701	1.16	1 24	NO	122 2
2	38	Total-hexafurans	373 8208	35 40	0 000	1 055	0.000	0 311	0 92	1 24	YES	16 6
3	38	Total-hexafurans	373.8208	34 91	971845 625	1 055	29.679	29 679	1 22	1 24	NO	1311.6
4	38	Total-hexafurans	373.8208	34.59	0.000	1 055	0.000	0 385	1.51	1 24	YES	21.8
5	38	Total-hexafurans	373.8208	34.05	836741.563	1 055	25 553	25.553	1.22	1.24	NO	1082 4
6	38	Total-hexafurans	373 8208	33 84	268639 071	1 055	8.204	8.204	1.21	1 24	NO	380.5
7	7	123789-HxCDF	373 8208	37 75	18192 628	1 020	0.771	0.771	1.20	1 24	NO	31 5
8	5	234678-HxCDF	373.8208	36.69	83326 528	1.070	2 511	2.511	1.26	1 24	NO	62.6
9	38	Total-hexafurans	373 8208	36 08	4163 678	1.055	0 127	0.127	1 22	1 24	NO	6.5
10	6	123678-HxCDF	373 8208	35 73	54008 895	1.048	1 410	1.410	1 12	1 24	NO	63.2

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M .	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42.56	48966.369	1 254	2.551	2.551	1.02	1 05	NO	45 7
2	39	Total-heptafurans	407.7818	40 64	2304329.375	1 234	100 457	100....	1 04	1 05	NO	2525.4
3	39	Total-heptafurans	407 7818	40.34	20442.075	1.234	0.891	0 891	0 93	1.05	NO	24 6
4	8	1234678-HpCDF	407.7818	39.84	1070624 126	1.214	40.322	40 322	1 00	1.05	NO	1154 8

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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M..	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25 06	0 000	0.866	0.000	0.526	0 93	0.77	YES	96 9
2	35	Total-tetrafurans	303 9016	24.63	20404.621	0 866	0 328	0.328	0.76	0 77	NO	74.1
3	35	Total-tetrafurans	303 9016	24 49	11748 328	0.866	0 189	0 189	0.76	0.77	NO	39.5
4	35	Total-tetrafurans	303.9016	24 39	52095 269	0.866	0.837	0.837	0.83	0 77	NO	171.1
5	35	Total-tetrafurans	303.9016	24 23	12403 056	0.866	0.199	0.199	0.77	0 77	NO	40 1
6	35	Total-tetrafurans	303.9016	24 14	36959 346	0.866	0.594	0 594	0 76	0 77	NO	120.8
7	35	Total-tetrafurans	303 9016	24.03	24323.647	0.866	0.391	0 391	0 77	0 77	NO	70 5
8	35	Total-tetrafurans	303.9016	23 93	40448 691	0 866	0 650	0 650	0 83	0.77	NO	92 6
9	35	Total-tetrafurans	303.9016	23.73	123784 629	0.866	1.989	1.989	0 73	0 77	NO	380 3
10	35	Total-tetrafurans	303.9016	23 16	18509 782	0 866	0 297	0 297	0.77	0.77	NO	57.8
11	35	Total-tetrafurans	303 9016	22 90	17158 462	0.866	0.276	0 276	0 81	0.77	NO	60 1
12	40	Total-Furans	303.9016	21.31	0.000	1.050	0.000	0.830	0.65	0 77	YES	208.1
13	35	Total-tetrafurans	303.9016	26.91	0.000	0.866	0.000	0.027	0 50	0 77	YES	7 9
14	35	Total-tetrafurans	303 9016	26.63	37791.136	0.866	0.607	0 607	0.78	0 77	NO	99.6
15	35	Total-tetrafurans	303.9016	26 53	11876.867	0.866	0 191	0 191	0 80	0 77	NO	42 3
16	1	2378-TCDF	303 9016	26 39	143359.957	0.866	2.304	2 304	0 76	0.77	NO	445 4
17	35	Total-tetrafurans	303.9016	26.20	34031.677	0 866	0.547	0.547	0.82	0 77	NO	69 5
18	35	Total-tetrafurans	303 9016	26 05	0.000	0 866	0 000	0 031	1 00	0 77	YES	7 6
19	35	Total-tetrafurans	303.9016	25.91	12293.544	0 866	0 198	0.198	0 77	0 77	NO	36 2
20	35	Total-tetrafurans	303 9016	25 70	15842.428	0.866	0 255	0.255	0 72	0 77	NO	45 0
21	35	Total-tetrafurans	303.9016	25 48	83142 864	0.866	1 336	1 336	0.78	0.77	NO	258 1
22	35	Total-tetrafurans	303.9016	25 30	55515.588	0.866	0 892	0 892	0.77	0.77	NO	162.7
23	35	Total-tetrafurans	303.9016	25 15	33447.719	0.866	0.538	0 538	0.75	0 77	NO	106 7
24	40	Total-Furans	303 9016	28 48	0.000	1.050	0 000	0 018	0.90	0.77	YES	3 7
25	35	Total-tetrafurans	303 9016	27.87	0.000	0.866	0.000	0.420	0.92	0 77	YES	50 4
26	37	Total-pentafurans	339 8597	29 29	31329 450	0.921	0.675	0.675	1.40	1 55	NO	35 5
27	3	23478-PeCDF	339 8597	31 88	37395 272	0 936	0.805	0.805	1 52	1 55	NO	67.0
28	37	Total-pentafurans	339.8597	31 72	41597.023	0 921	0.896	0 896	1 54	1.55	NO	76 4
29	37	Total-pentafurans	339 8597	31 61	12951 506	0 921	0 279	0 279	1 56	1.55	NO	24 3
30	37	Total-pentafurans	339.8597	30 84	6707 850	0 921	0 144	0 144	1 62	1 55	NO	14 4
31	37	Total-pentafurans	339.8597	30.74	35825 947	0.921	0.772	0.772	1 59	1.55	NO	62.3
32	2	12378-PeCDF	339.8597	30.54	32397 034	0 907	0.698	0.698	1 57	1 55	NO	57 2
33	37	Total-pentafurans	339 8597	30.25	11930 730	0.921	0 257	0 257	1 63	1 55	NO	35 5
34	37	Total-pentafurans	339 8597	30 17	60663 732	0.921	1.306	1.306	1 57	1.55	NO	98.6
35	37	Total-pentafurans	339.8597	30.08	0 000	0.921	0.000	0.129	1.96	1 55	YES	17 1
36	37	Total-pentafurans	339.8597	29 98	0 000	0.921	0.000	0.079	0 89	1 55	YES	9.7
37	37	Total-pentafurans	339 8597	29 78	0.000	0 921	0 000	0 019	7 48	1.55	YES	5 6
38	37	Total-pentafurans	339.8597	29 49	133280 464	0.921	2.870	2 870	1 76	1 55	NO	228 4
39	37	Total-pentafurans	339 8597	29 42	0 000	0.921	0 000	1 186	1 31	1 55	YES	137 2
40	37	Total-pentafurans	339 8597	32 92	0 000	0.921	0.000	0.052	2 73	1 55	YES	7 9
41	4	123478-HxCDF	373 8208	35.58	97762 914	1.082	2.701	2.701	1 16	1 24	NO	122 2
42	38	Total-hexafurans	373 8208	35 40	0.000	1.055	0 000	0.311	0 92	1 24	YES	16 6
43	38	Total-hexafurans	373 8208	34 91	971845 625	1.055	29 679	29 679	1.22	1 24	NO	1311.6
44	38	Total-hexafurans	373 8208	34.59	0 000	1.055	0 000	0.385	1 51	1.24	YES	21 8
45	38	Total-hexafurans	373 8208	34.05	836741.563	1.055	25.553	25.553	1.22	1 24	NO	1082.4
46	38	Total-hexafurans	373.8208	33.84	268639.071	1.055	8 204	8 204	1 21	1.24	NO	380.5
47	7	123789-HxCDF	373 8208	37 75	18192.628	1.020	0.771	0.771	1.20	1 24	NO	31 5
48	5	234678-HxCDF	373.8208	36.69	83326 528	1 070	2 511	2 511	1 26	1.24	NO	62 6
49	38	Total-hexafurans	373 8208	36 08	4163.678	1 055	0 127	0 127	1.22	1 24	NO	6.5

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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati..	1° R...	S/N
50	6	123678-HxCDF	373 8208	35 73	54008 895	1.048	1.410	1.410	1 12	1.24	NO	63 2
51	9	1234789-HpCDF	407 7818	42 56	48966 369	1.254	2 551	2 551	1 02	1 05	NO	45 7
52	39	Total-heptafurans	407.7818	40.64	2304329.375	1 234	100.457	100...	1.04	1.05	NO	2525 4
53	39	Total-heptafurans	407.7818	40.34	20442.075	1 234	0.891	0 891	0.93	1.05	NO	24.6
54	8	1234678-HpCDF	407 7818	39 84	1070624.126	1.214	40.322	40.322	1.00	1.05	NO	1154.8
55	10	OCDF	441.7428	47.99	1794348 501	1 105	153.985	153 .	0.88	0 89	NO	1706 4
56	36	Total-penta1	339 8597	27.81	613722.922		13.280	13.280	1 51	1 55	NO	3012.5

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	24.17	1319020.313	1 046	27.193	27.193	0.77	0 77	NO	4061.1
2	41	Total-tetradioxins	319.8965	27 56	17449 591	1.046	0 360	0.360	0 81	0 77	NO	46.9
3	41	Total-tetradioxins	319.8965	27.15	16718.500	1 046	0.345	0.345	0.77	0 77	NO	48.1
4	11	2378-TCDD	319.8965	27.03	0 000	1 046	0 000	0 251	0 62	0.77	YES	31.6
5	41	Total-tetradioxins	319 8965	26.66	96663.687	1 046	1 993	1.993	0 78	0.77	NO	222 0
6	41	Total-tetradioxins	319.8965	26.33	0 000	1 046	0 000	0.088	1 20	0 77	YES	16 6
7	41	Total-tetradioxins	319.8965	26.21	375397.797	1 046	7.739	7.739	0.76	0 77	NO	1091 7
8	41	Total-tetradioxins	319.8965	26 00	12039 779	1.046	0 248	0 248	0 71	0 77	NO	31 7
9	41	Total-tetradioxins	319 8965	25.91	4531 961	1.046	0 093	0 093	0 66	0.77	NO	14 9
10	41	Total-tetradioxins	319.8965	25 64	101874.316	1.046	2.100	2 100	0.74	0 77	NO	260.0
11	41	Total-tetradioxins	319 8965	25.36	43603.738	1.046	0.899	0.899	0 80	0.77	NO	131.6
12	41	Total-tetradioxins	319.8965	25.17	0 000	1.046	0 000	0.077	0 65	0 77	YES	11 2
13	41	Total-tetradioxins	319.8965	24.78	0 000	1 046	0.000	0.011	0 50	0.77	YES	3 6
14	41	Total-tetradioxins	319 8965	24.64	12451.853	1.046	0.257	0 257	0.66	0.77	NO	30.7
15	41	Total-tetradioxins	319 8965	24 43	894284.188	1 046	18.437	18 437	0 76	0 77	NO	2564.7

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355 8546	30 75	57647.133	0 973	1.839	1 839	1.52	1.55	NO	102.5
2	42	Total-pentadioxins	355 8546	30.66	18103.054	0.973	0 578	0.578	1 45	1 55	NO	45 6
3	42	Total-pentadioxins	355 8546	30 53	685359.594	0 973	21.868	21.868	1 55	1 55	NO	1253 8
4	42	Total-pentadioxins	355 8546	29.92	26555 147	0.973	0.847	0.847	1 48	1.55	NO	55.9
5	42	Total-pentadioxins	355 8546	29 46	497294.078	0.973	15.867	15 867	1 52	1 55	NO	571 8
6	42	Total-pentadioxins	355.8546	32 53	0 000	0.973	0.000	0 270	1 19	1 55	YES	18 5
7	12	12378-PeCDD	355.8546	32.14	60287.157	0.973	1.924	1 924	1.52	1.55	NO	94.6
8	42	Total-pentadioxins	355.8546	31 46	180930 352	0.973	5 773	5 773	1 54	1 55	NO	307 7
9	42	Total-pentadioxins	355.8546	31 05	0.000	0 973	0.000	0.860	1 55	1.55	NO	48 3
10	42	Total-pentadioxins	355.8546	30 89	658690.797	0 973	21.017	21 017	1 53	1 55	NO	1120 9

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered. Friday, May 11, 2012 09:37.31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

HD

	#	Name	Trace	RT	Abs.Resp	RRF M..	pg	EMPC	1° Rati...	1° Rati...	1° R..	S/N
1	43	Total-hexadioxins	389.8157	35.95	82570 551	0.884	3 179	3 179	1.23	1 24	NO	104 4
2	43	Total-hexadioxins	389.8157	35 84	866103 594	0.884	33.350	33 350	1.17	1 24	NO	648 1
3	43	Total-hexadioxins	389.8157	35 45	1828719 001	0.884	70.416	70 416	1.22	1 24	NO	2020.5
4	43	Total-hexadioxins	389 8157	34.64	774972 376	0.884	29.841	29 841	1.22	1 24	NO	886.9
5	43	Total-hexadioxins	389 8157	34 35	40084.082	0.884	1 543	1.543	1.26	1.24	NO	58.4
6	15	123789-HxCDD	389 8157	37.38	171589.398	0.839	6.963	6.963	1.26	1.24	NO	187.4
7	43	Total-hexadioxins	389 8157	37 14	29757.800	0.884	1 146	1.146	1.29	1.24	NO	32.1
8	14	123678-HxCDD	389.8157	36 95	315012 609	0.878	11.636	11.636	1 21	1.24	NO	349.4
9	13	123478-HxCDD	389.8157	36 83	99628.195	0.935	3.815	3.815	1 18	1.24	NO	116 7

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41.66	5950446 750	0 974	324 063	324. ..	1 08	1.05	NO	2440 9
2	44	Total-heptadioxins	423.7766	40.39	8857766 000	0 974	482 397	482....	1.04	1.05	NO	4089.5

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	24.17	1319020.313	1.046	27 193	27 193	0 77	0 77	NO	4061 1
2	41	Total-tetradioxins	319 8965	27 56	17449 591	1.046	0.360	0 360	0.81	0 77	NO	46 9
3	41	Total-tetradioxins	319.8965	27.15	16718 500	1.046	0.345	0 345	0.77	0 77	NO	48.1
4	11	2378-TCDD	319.8965	27.03	0 000	1.046	0.000	0.251	0 62	0.77	YES	31.6
5	41	Total-tetradioxins	319.8965	26 66	96663.687	1.046	1.993	1.993	0.78	0 77	NO	222.0
6	41	Total-tetradioxins	319.8965	26 33	0.000	1.046	0 000	0.088	1.20	0 77	YES	16.6
7	41	Total-tetradioxins	319.8965	26 21	375397.797	1.046	7.739	7.739	0.76	0 77	NO	1091.7
8	41	Total-tetradioxins	319 8965	26.00	12039 779	1 046	0 248	0 248	0.71	0.77	NO	31 7
9	41	Total-tetradioxins	319 8965	25.91	4531.961	1 046	0 093	0 093	0 66	0 77	NO	14 9
10	41	Total-tetradioxins	319 8965	25 64	101874 316	1 046	2.100	2 100	0 74	0.77	NO	260 0
11	41	Total-tetradioxins	319 8965	25.36	43603.738	1.046	0.899	0 899	0.80	0 77	NO	131.6
12	41	Total-tetradioxins	319.8965	25.17	0 000	1.046	0.000	0 077	0 65	0 77	YES	11 2
13	41	Total-tetradioxins	319.8965	24.78	0.000	1.046	0.000	0.011	0.50	0 77	YES	3.6
14	41	Total-tetradioxins	319.8965	24 64	12451 853	1.046	0 257	0.257	0.66	0 77	NO	30.7
15	41	Total-tetradioxins	319.8965	24 43	894284 188	1 046	18.437	18 437	0 76	0.77	NO	2564 7
16	45	Total-Dioxins	319 8965	27 89	0 000	0.942	0.000	0.008	1 00	0.77	YES	2.4
17	42	Total-pentadioxins	355 8546	30 75	57647.133	0.973	1 839	1.839	1.52	1 55	NO	102.5
18	42	Total-pentadioxins	355 8546	30 66	18103 054	0 973	0 578	0.578	1.45	1 55	NO	45 6
19	42	Total-pentadioxins	355 8546	30 53	685359 594	0 973	21.868	21 868	1.55	1 55	NO	1253 8
20	42	Total-pentadioxins	355 8546	29.92	26555.147	0.973	0 847	0.847	1 48	1.55	NO	55 9
21	42	Total-pentadioxins	355 8546	29.46	497294.078	0.973	15.867	15.867	1.52	1 55	NO	571.8
22	42	Total-pentadioxins	355 8546	32 53	0.000	0.973	0.000	0.270	1.19	1 55	YES	18.5
23	12	12378-PeCDD	355.8546	32.14	60287.157	0.973	1 924	1 924	1.52	1.55	NO	94 6
24	42	Total-pentadioxins	355.8546	31.46	180930 352	0.973	5 773	5.773	1.54	1 55	NO	307.7
25	42	Total-pentadioxins	355 8546	31.05	0.000	0.973	0.000	0 860	1.55	1 55	NO	48.3
26	42	Total-pentadioxins	355.8546	30.89	658690.797	0.973	21.017	21.017	1 53	1 55	NO	1120.9
27	43	Total-hexadioxins	389.8157	35 95	82570.551	0.884	3 179	3 179	1.23	1.24	NO	104 4
28	43	Total-hexadioxins	389 8157	35.84	866103 594	0.884	33.350	33 350	1 17	1 24	NO	648.1
29	43	Total-hexadioxins	389 8157	35.45	1828719.001	0.884	70 416	70 416	1 22	1 24	NO	2020 5
30	43	Total-hexadioxins	389.8157	34 64	774972.376	0 884	29 841	29 841	1 22	1 24	NO	886 9
31	43	Total-hexadioxins	389 8157	34 35	40084 082	0 884	1 543	1 543	1 26	1.24	NO	58 4
32	15	123789-HxCDD	389 8157	37 38	171589.398	0 839	6 963	6.963	1 26	1 24	NO	187.4
33	43	Total-hexadioxins	389.8157	37.14	29757.800	0.884	1 146	1.146	1 29	1 24	NO	32.1
34	14	123678-HxCDD	389 8157	36 95	315012 609	0 878	11 636	11.636	1 21	1 24	NO	349.4
35	13	123478-HxCDD	389.8157	36.83	99628 195	0 935	3 815	3.815	1.18	1.24	NO	116 7
36	16	1234678-HpCDD	423.7766	41 66	5950446 750	0.974	324 063	324.. .	1.08	1 05	NO	2440.9
37	44	Total-heptadioxins	423 7766	40 39	8857766 000	0 974	482 397	482. .	1.04	1 05	NO	4089.5
38	17	OCDD	457.7377	47 69	28890791	0 950	2884 2 .	2884...	0 89	0 89	NO	14656 7

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R.	S/N
1	35	Total-tetrafurans	303.9016	25.06	0 000	0 866	0.000	0.526	0 93	0.77	YES	96 9
2	35	Total-tetrafurans	303 9016	24 63	20404 621	0.866	0 328	0 328	0 76	0.77	NO	74 1
3	35	Total-tetrafurans	303 9016	24 49	11748 328	0.866	0.189	0 189	0 76	0.77	NO	39.5
4	35	Total-tetrafurans	303.9016	24.39	52095.269	0 866	0 837	0.837	0.83	0.77	NO	171 1
5	35	Total-tetrafurans	303 9016	24 23	12403.056	0.866	0.199	0.199	0 77	0.77	NO	40.1
6	35	Total-tetrafurans	303.9016	24.14	36959.346	0.866	0.594	0 594	0.76	0 77	NO	120.8
7	35	Total-tetrafurans	303 9016	24.03	24323.647	0.866	0.391	0 391	0 77	0.77	NO	70 5
8	35	Total-tetrafurans	303 9016	23.93	40448.691	0 866	0.650	0.650	0.83	0 77	NO	92 6
9	35	Total-tetrafurans	303.9016	23.73	123784 629	0.866	1 989	1 989	0 73	0 77	NO	380.3
10	35	Total-tetrafurans	303.9016	23 16	18509.782	0 866	0 297	0 297	0.77	0 77	NO	57.8
11	35	Total-tetrafurans	303.9016	22 90	17158 462	0 866	0 276	0 276	0 81	0 77	NO	60 1
12	40	Total-Furans	303.9016	21.31	0.000	1.050	0 000	0.830	0.65	0 77	YES	208.1
13	35	Total-tetrafurans	303.9016	26.91	0.000	0.866	0 000	0 027	0 50	0.77	YES	7 9
14	35	Total-tetrafurans	303.9016	26.63	37791.136	0.866	0.607	0 607	0 78	0 77	NO	99.6
15	35	Total-tetrafurans	303.9016	26.53	11876.867	0.866	0 191	0 191	0.80	0 77	NO	42 3
16	1	2378-TCDF	303 9016	26.39	143359 957	0.866	2.304	2.304	0.76	0 77	NO	445.4
17	35	Total-tetrafurans	303 9016	26.20	34031 677	0.866	0 547	0 547	0.82	0.77	NO	69.5
18	35	Total-tetrafurans	303 9016	26.05	0.000	0 866	0 000	0 031	1 00	0.77	YES	7 6
19	35	Total-tetrafurans	303 9016	25.91	12293.544	0 866	0 198	0 198	0 77	0 77	NO	36 2
20	35	Total-tetrafurans	303.9016	25 70	15842.428	0.866	0.255	0.255	0 72	0 77	NO	45.0
21	35	Total-tetrafurans	303 9016	25.48	83142.864	0 866	1 336	1 336	0.78	0.77	NO	258.1
22	35	Total-tetrafurans	303 9016	25.30	55515 588	0.866	0 892	0 892	0.77	0 77	NO	162 7
23	35	Total-tetrafurans	303.9016	25.15	33447.719	0.866	0.538	0 538	0 75	0 77	NO	106.7
24	40	Total-Furans	303.9016	28 48	0.000	1 050	0.000	0.018	0 90	0.77	YES	3 7
25	35	Total-tetrafurans	303 9016	27.87	0.000	0.866	0.000	0.420	0.92	0.77	YES	50 4
26	37	Total-pentafurans	339 8597	29.29	31329.450	0.921	0.675	0.675	1 40	1.55	NO	35 5
27	3	23478-PeCDF	339 8597	31 88	37395.272	0.936	0.805	0 805	1 52	1 55	NO	67.0
28	37	Total-pentafurans	339.8597	31 72	41597.023	0 921	0 896	0 896	1 54	1 55	NO	76 4
29	37	Total-pentafurans	339 8597	31 61	12951 506	0.921	0.279	0 279	1 56	1 55	NO	24 3
30	37	Total-pentafurans	339 8597	30 84	6707.850	0 921	0.144	0 144	1 62	1 55	NO	14.4
31	37	Total-pentafurans	339 8597	30.74	35825.947	0 921	0 772	0.772	1 59	1 55	NO	62 3
32	2	12378-PeCDF	339 8597	30 54	32397.034	0 907	0 698	0 698	1 57	1 55	NO	57 2
33	37	Total-pentafurans	339 8597	30 25	11930.730	0 921	0.257	0 257	1 63	1 55	NO	35 5
34	37	Total-pentafurans	339 8597	30.17	60663.732	0.921	1 306	1 306	1 57	1 55	NO	98.6
35	37	Total-pentafurans	339.8597	30.08	0.000	0.921	0.000	0 129	1.96	1 55	YES	17 1
36	37	Total-pentafurans	339.8597	29.98	0 000	0 921	0.000	0 079	0.89	1 55	YES	9 7
37	37	Total-pentafurans	339 8597	29.78	0 000	0 921	0.000	0 019	7.48	1 55	YES	5.6
38	37	Total-pentafurans	339 8597	29.49	133280.464	0 921	2.870	2 870	1 76	1.55	NO	228 4
39	37	Total-pentafurans	339 8597	29.42	0 000	0 921	0.000	1 186	1 31	1.55	YES	137 2
40	37	Total-pentafurans	339 8597	32 92	0 000	0 921	0 000	0 052	2 73	1 55	YES	7 9
41	4	123478-HxCDF	373 8208	35 58	97762 914	1.082	2 701	2 701	1.16	1 24	NO	122 2
42	38	Total-hexafurans	373.8208	35.40	0.000	1 055	0 000	0.311	0 92	1 24	YES	16 6
43	38	Total-hexafurans	373 8208	34 91	971845 625	1 055	29.679	29 679	1 22	1 24	NO	1311 6
44	38	Total-hexafurans	373.8208	34 59	0.000	1 055	0 000	0 385	1.51	1 24	YES	21.8
45	38	Total-hexafurans	373.8208	34 05	836741.563	1.055	25 553	25 553	1 22	1 24	NO	1082.4
46	38	Total-hexafurans	373 8208	33.84	268639 071	1 055	8 204	8 204	1 21	1.24	NO	380.5
47	7	123789-HxCDF	373 8208	37.75	18192.628	1.020	0 771	0 771	1.20	1.24	NO	31.5
48	5	234678-HxCDF	373 8208	36 69	83326 528	1.070	2.511	2.511	1 26	1 24	NO	62 6
49	38	Total-hexafurans	373 8208	36 08	4163 678	1 055	0.127	0.127	1.22	1 24	NO	6.5

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	6	123678-HxCDF	373.8208	35 73	54008.895	1 048	1 410	1.410	1.12	1 24	NO	63 2
51	9	1234789-HpCDF	407.7818	42.56	48966 369	1.254	2 551	2.551	1.02	1 05	NO	45 7
52	39	Total-heptafurans	407.7818	40.64	2304329.375	1.234	100.457	100...	1 04	1 05	NO	2525.4
53	39	Total-heptafurans	407 7818	40 34	20442.075	1.234	0 891	0.891	0.93	1.05	NO	24.6
54	8	1234678-HpCDF	407.7818	39 84	1070624.126	1 214	40.322	40 322	1 00	1.05	NO	1154.8
55	10	OCDF	441.7428	47 99	1794348 501	1 105	153.985	153 .	0 88	0 89	NO	1706 4
56	36	Total-penta1	339 8597	27.81	613722 922		13 280	13.280	1 51	1 55	NO	3012 5
57	41	Total-tetradioxins	319 8965	24 17	1319020.313	1.046	27 193	27 193	0.77	0 77	NO	4061.1
58	41	Total-tetradioxins	319.8965	27 56	17449 591	1.046	0.360	0 360	0.81	0.77	NO	46 9
59	41	Total-tetradioxins	319 8965	27 15	16718 500	1.046	0 345	0 345	0.77	0.77	NO	48.1
60	11	2378-TCDD	319 8965	27.03	0 000	1.046	0 000	0.251	0 62	0 77	YES	31 6
61	41	Total-tetradioxins	319.8965	26 66	96663.687	1.046	1 993	1 993	0.78	0 77	NO	222.0
62	41	Total-tetradioxins	319.8965	26 33	0 000	1.046	0.000	0 088	1 20	0.77	YES	16.6
63	41	Total-tetradioxins	319.8965	26 21	375397 797	1.046	7.739	7 739	0 76	0 77	NO	1091.7
64	41	Total-tetradioxins	319 8965	26 00	12039.779	1 046	0 248	0 248	0.71	0 77	NO	31 7
65	41	Total-tetradioxins	319.8965	25.91	4531.961	1 046	0 093	0 093	0 66	0 77	NO	14.9
66	41	Total-tetradioxins	319.8965	25 64	101874.316	1 046	2 100	2 100	0 74	0.77	NO	260 0
67	41	Total-tetradioxins	319.8965	25 36	43603 738	1 046	0 899	0 899	0 80	0 77	NO	131 6
68	41	Total-tetradioxins	319 8965	25 17	0 000	1.046	0 000	0 077	0 65	0 77	YES	11 2
69	41	Total-tetradioxins	319 8965	24.78	0.000	1.046	0.000	0.011	0 50	0 77	YES	3 6
70	41	Total-tetradioxins	319 8965	24 64	12451 853	1.046	0 257	0 257	0 66	0.77	NO	30.7
71	41	Total-tetradioxins	319 8965	24.43	894284 188	1 046	18.437	18.437	0 76	0.77	NO	2564.7
72	45	Total-Dioxins	319 8965	27 89	0.000	0.942	0.000	0 008	1 00	0.77	YES	2 4
73	42	Total-pentadioxins	355 8546	30.75	57647 133	0.973	1.839	1 839	1.52	1.55	NO	102 5
74	42	Total-pentadioxins	355.8546	30 66	18103 054	0.973	0.578	0 578	1.45	1 55	NO	45 6
75	42	Total-pentadioxins	355.8546	30 53	685359 594	0.973	21.868	21 868	1 55	1 55	NO	1253 8
76	42	Total-pentadioxins	355.8546	29 92	26555.147	0 973	0.847	0 847	1 48	1 55	NO	55 9
77	42	Total-pentadioxins	355 8546	29 46	497294 078	0.973	15 867	15 867	1 52	1 55	NO	571 8
78	42	Total-pentadioxins	355 8546	32.53	0 000	0 973	0 000	0 270	1 19	1 55	YES	18 5
79	12	12378-PeCDD	355.8546	32.14	60287 157	0 973	1 924	1 924	1 52	1 55	NO	94 6
80	42	Total-pentadioxins	355 8546	31.46	180930 352	0 973	5.773	5.773	1 54	1 55	NO	307 7
81	42	Total-pentadioxins	355.8546	31 05	0 000	0 973	0 000	0.860	1 55	1 55	NO	48.3
82	42	Total-pentadioxins	355 8546	30 89	658690.797	0 973	21 017	21 017	1.53	1 55	NO	1120.9
83	43	Total-hexadioxins	389.8157	35.95	82570.551	0 884	3 179	3 179	1 23	1.24	NO	104.4
84	43	Total-hexadioxins	389.8157	35.84	866103.594	0 884	33.350	33.350	1.17	1.24	NO	648 1
85	43	Total-hexadioxins	389.8157	35.45	1828719 001	0.884	70.416	70 416	1.22	1.24	NO	2020 5
86	43	Total-hexadioxins	389.8157	34.64	774972 376	0.884	29 841	29 841	1 22	1 24	NO	886 9
87	43	Total-hexadioxins	389 8157	34.35	40084 082	0.884	1 543	1 543	1.26	1 24	NO	58 4
88	15	123789-HxCDD	389.8157	37 38	171589 398	0 839	6 963	6 963	1 26	1 24	NO	187 4
89	43	Total-hexadioxins	389.8157	37.14	29757 800	0 884	1.146	1 146	1 29	1.24	NO	32.1
90	14	123678-HxCDD	389 8157	36 95	315012 609	0.878	11.636	11 636	1 21	1 24	NO	349.4
91	13	123478-HxCDD	389.8157	36.83	99628 195	0 935	3 815	3.815	1.18	1.24	NO	116.7
92	16	1234678-HpCDD	423.7766	41.66	5950446.750	0 974	324.063	324 .	1.08	1 05	NO	2440 9
93	44	Total-heptadioxins	423.7766	40 39	8857766 000	0.974	482 397	482	1.04	1 05	NO	4089 5
94	17	OCDD	457 7377	47 69	28890791....	0.950	2884 2	2884. .	0 89	0 89	NO	14656.7

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	23 75	0.000							6.1
2	48	FUNCTION1 PFK	330 9792	23.60	0.000							3.3
3	48	FUNCTION1 PFK	330.9792	23.48	0.000							2 4
4	48	FUNCTION1 PFK	330.9792	23 30	0.000							4.0
5	48	FUNCTION1 PFK	330 9792	22.87	0.000							0.7
6	48	FUNCTION1 PFK	330 9792	22.79	0.000							1.5
7	48	FUNCTION1 PFK	330.9792	22.42	0.000							2 2
8	48	FUNCTION1 PFK	330.9792	21.89	0.000							13.1
9	48	FUNCTION1 PFK	330 9792	21.82	0.000							11.0
10	48	FUNCTION1 PFK	330 9792	21.43	0 000							0.4
11	48	FUNCTION1 PFK	330 9792	21 25	0.000							2 6
12	48	FUNCTION1 PFK	330.9792	26.89	0.000							1 7
13	48	FUNCTION1 PFK	330 9792	26 66	0 000							0.9
14	48	FUNCTION1 PFK	330 9792	25 94	0 000							1.3
15	48	FUNCTION1 PFK	330.9792	25.81	0 000							2 8
16	48	FUNCTION1 PFK	330 9792	25.72	0.000							1.8
17	48	FUNCTION1 PFK	330 9792	25 44	0 000							0.5
18	48	FUNCTION1 PFK	330.9792	25 38	0 000							0.8
19	48	FUNCTION1 PFK	330 9792	25.29	0.000							2 5
20	48	FUNCTION1 PFK	330 9792	25 18	0 000							1.9
21	48	FUNCTION1 PFK	330 9792	25.08	0 000							1 3
22	48	FUNCTION1 PFK	330.9792	24.87	0 000							0 4
23	48	FUNCTION1 PFK	330.9792	24.81	0.000							0 5
24	48	FUNCTION1 PFK	330 9792	24.63	0 000							1.6
25	48	FUNCTION1 PFK	330 9792	24.38	0.000							1 8
26	48	FUNCTION1 PFK	330 9792	23 96	0.000							1 9
27	48	FUNCTION1 PFK	330 9792	23 90	0.000							1 8
28	48	FUNCTION1 PFK	330 9792	28 51	0 000							1 4
29	48	FUNCTION1 PFK	330 9792	27 50	0.000							1 7

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366 9792	33.28	0 000		0.000					5.8
2	49	FUNCTION2 PFK	366 9792	32.98	0.000		0.000					12 5
3	49	FUNCTION2 PFK	366.9792	32.94	0.000		0.000					13.0
4	49	FUNCTION2 PFK	366 9792	32.73	0.000		0.000					5 5
5	49	FUNCTION2 PFK	366 9792	31.08	0 000		0 000					12.6
6	49	FUNCTION2 PFK	366 9792	29 21	0.000		0.000					6 5

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	38.74	0 000		0 000					10.5
2	50	FUNCTION3 PFK	380 9760	37.81	0.000		0.000					51 3
3	50	FUNCTION3 PFK	380 9760	37 03	0 000		0 000					31 3

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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430 9728	42.73	0.000							1.7

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	48.87	0 000							1 6
2	52	FUNCTION5 PFK	480.9696	48 67	0.000							1 9
3	52	FUNCTION5 PFK	480 9696	48.45	0 000							1 2
4	52	FUNCTION5 PFK	480.9696	48.38	0 000							1.4
5	52	FUNCTION5 PFK	480.9696	48 16	0.000							2.1
6	52	FUNCTION5 PFK	480 9696	48 12	0.000							2.1
7	52	FUNCTION5 PFK	480 9696	47 84	0.000							1 6
8	52	FUNCTION5 PFK	480 9696	46.93	0.000							1 5
9	52	FUNCTION5 PFK	480.9696	46 77	0 000							1.8
10	52	FUNCTION5 PFK	480.9696	46 68	0 000							1 3
11	52	FUNCTION5 PFK	480 9696	46 58	0.000							1 2
12	52	FUNCTION5 PFK	480.9696	46.45	0 000							1 1
13	52	FUNCTION5 PFK	480.9696	46 33	0.000							0 6
14	52	FUNCTION5 PFK	480.9696	46 21	0.000							1.0
15	52	FUNCTION5 PFK	480.9696	45 70	0.000							2.1
16	52	FUNCTION5 PFK	480.9696	45 08	0.000							1.2

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati .	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD...	375 8364	28.41	0.000		0 000					4 5
2	53	FUNCTION1 HXCD ..	375 8364	27.77	0 000		0.000					7 1
3	53	FUNCTION1 HXCD...	375.8364	26.47	0.000		0.000					170.3
4	53	FUNCTION1 HXCD...	375.8364	26.18	0 000		0.000					54.2
5	53	FUNCTION1 HXCD.	375 8364	24 24	0.000		0.000					23 0
6	53	FUNCTION1 HXCD.	375.8364	22.84	0.000		0.000					4.5
7	53	FUNCTION1 HXCD...	375.8364	21.30	0 000		0.000					4.3

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD .	409 7974	27 21	0 000		0.000					2 2
2	54	FUNCTION1 HPCD.	409 7974	25 03	0 000		0.000					3 6
3	54	FUNCTION1 HPCD.	409 7974	24 14	0 000		0 000					5.1
4	54	FUNCTION1 HPCD...	409.7974	21.31	0 000		0.000					5 8

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ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD	409 7974	29.57	0.000		0 000					2 2
2	55	FUNCTION2 HPCD	409.7974	29.24	0 000		0.000					3 0
3	55	FUNCTION2 HPCD	409.7974	33.16	0 000		0.000					9.7
4	55	FUNCTION2 HPCD..	409.7974	32 80	0.000		0 000					3.3
5	55	FUNCTION2 HPCD. .	409.7974	32.52	0 000		0 000					7 6
6	55	FUNCTION2 HPCD...	409 7974	32 12	0.000		0.000					2.0
7	55	FUNCTION2 HPCD.	409.7974	31.93	0.000		0 000					4.9
8	55	FUNCTION2 HPCD .	409 7974	31.71	0.000		0.000					5 3
9	55	FUNCTION2 HPCD	409.7974	31 39	0.000		0 000					4.2
10	55	FUNCTION2 HPCD .	409.7974	30 49	0.000		0 000					39 3
11	55	FUNCTION2 HPCD .	409 7974	30.25	0 000		0.000					7 3
12	55	FUNCTION2 HPCD	409 7974	30.17	0.000		0 000					48 1
13	55	FUNCTION2 HPCD. .	409 7974	29.89	0 000		0 000					9 1

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445.7555	35 54	0 000		0 000					6.5
2	56	FUNCTION3 OCDPE	445.7555	35.49	0.000		0 000					9 0
3	56	FUNCTION3 OCDPE	445.7555	35.31	0 000		0.000					5 2
4	56	FUNCTION3 OCDPE	445.7555	35 23	0.000		0.000					7 6
5	56	FUNCTION3 OCDPE	445.7555	37.62	0.000		0.000					7.8
6	56	FUNCTION3 OCDPE	445.7555	37.40	0.000		0.000					7.8
7	56	FUNCTION3 OCDPE	445 7555	37 31	0 000		0 000					1 5
8	56	FUNCTION3 OCDPE	445.7555	37 24	0 000		0 000					8 0
9	56	FUNCTION3 OCDPE	445 7555	37 17	0 000		0.000					7 9
10	56	FUNCTION3 OCDPE	445 7555	37 13	0 000		0.000					13 1
11	56	FUNCTION3 OCDPE	445 7555	37 08	0 000		0.000					7 1
12	56	FUNCTION3 OCDPE	445.7555	37.03	0.000		0 000					11.8
13	56	FUNCTION3 OCDPE	445.7555	36.91	0.000		0.000					6.4
14	56	FUNCTION3 OCDPE	445 7555	36.80	0.000		0 000					7.8
15	56	FUNCTION3 OCDPE	445.7555	36 76	0 000		0 000					9.3
16	56	FUNCTION3 OCDPE	445 7555	36 72	0 000		0 000					6 9
17	56	FUNCTION3 OCDPE	445.7555	36 65	0 000		0.000					9 6
18	56	FUNCTION3 OCDPE	445.7555	36 53	0 000		0 000					1 1
19	56	FUNCTION3 OCDPE	445.7555	35.69	0 000		0 000					1 1
20	56	FUNCTION3 OCDPE	445.7555	35 57	0 000		0.000					6 8
21	56	FUNCTION3 OCDPE	445.7555	37.91	0 000		0 000					4.8
22	56	FUNCTION3 OCDPE	445.7555	37.70	0 000		0 000					1.2

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ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479 7165	43.15	0.000		0.000					3.7
2	57	FUNCTION4 NCDPE	479.7165	42.01	0 000		0.000					4.7
3	57	FUNCTION4 NCDPE	479 7165	41.95	0 000		0.000					5 0
4	57	FUNCTION4 NCDPE	479 7165	41.88	0.000		0.000					5.0
5	57	FUNCTION4 NCDPE	479.7165	41.82	0 000		0.000					4 9
6	57	FUNCTION4 NCDPE	479 7165	41.65	0 000		0.000					54.6
7	57	FUNCTION4 NCDPE	479.7165	41.52	0 000		0.000					8 1
8	57	FUNCTION4 NCDPE	479 7165	41 42	0 000		0 000					15.2
9	57	FUNCTION4 NCDPE	479.7165	41.28	0 000		0.000					16 5
10	57	FUNCTION4 NCDPE	479 7165	40.41	0.000		0 000					3 0
11	57	FUNCTION4 NCDPE	479 7165	40.37	0.000		0.000					3.3
12	57	FUNCTION4 NCDPE	479 7165	39.59	0.000		0.000					2 9
13	57	FUNCTION4 NCDPE	479 7165	39 41	0 000		0.000					591.2
14	57	FUNCTION4 NCDPE	479 7165	44 90	0 000		0.000					1.7
15	57	FUNCTION4 NCDPE	479 7165	43 70	0.000		0.000					2 5

ETHERS6

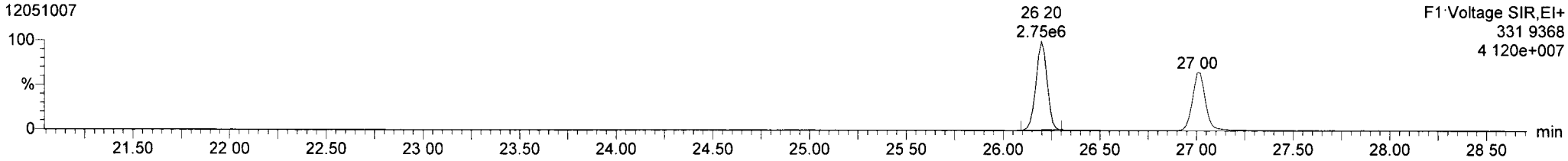
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati...	1° R..	S/N
1	58	FUNCTION5 DCDPE	513.6775	48 38	0 000		0.000					3 9
2	58	FUNCTION5 DCDPE	513 6775	47 90	0 000		0.000					3.0

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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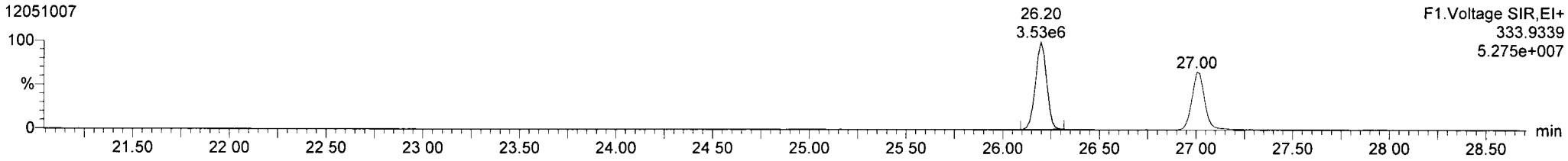
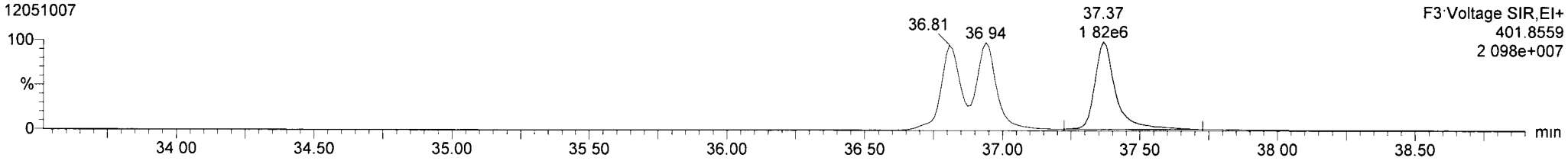


13C-123789-HxCDD



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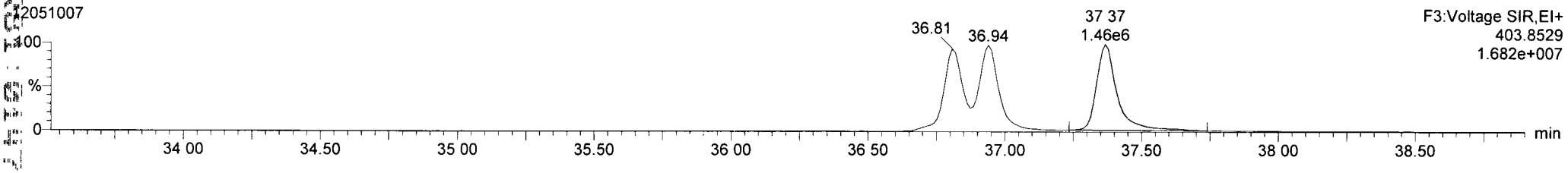
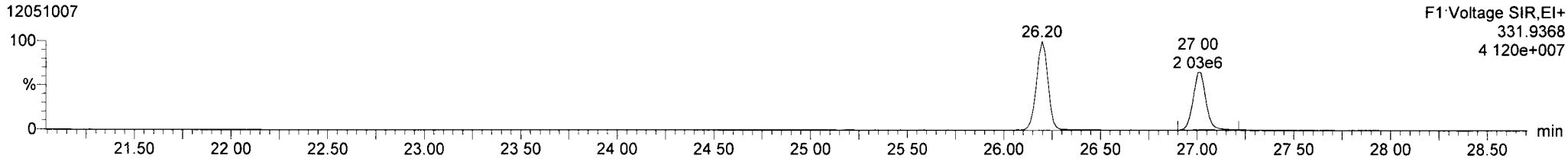


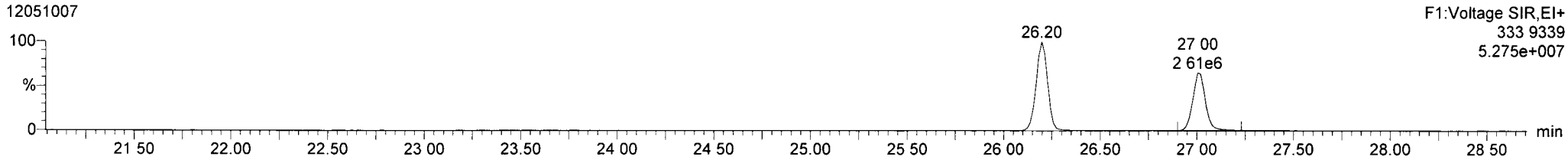
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed. Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

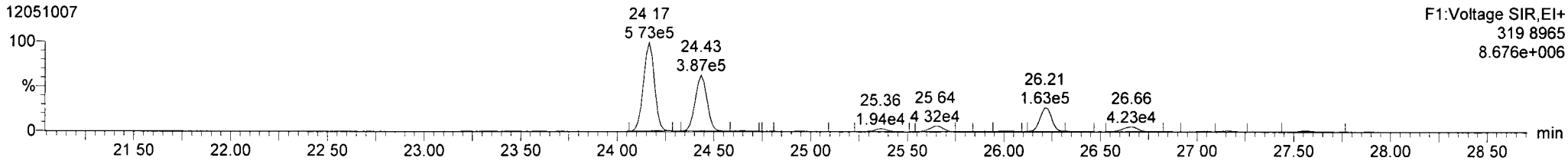
13C-2378-TCDD



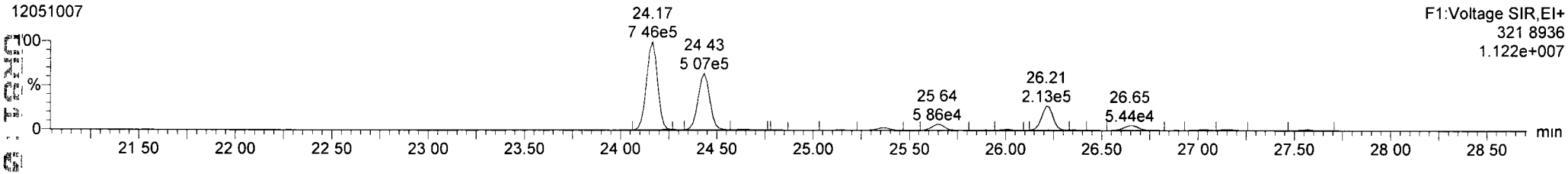
13C-2378-TCDD



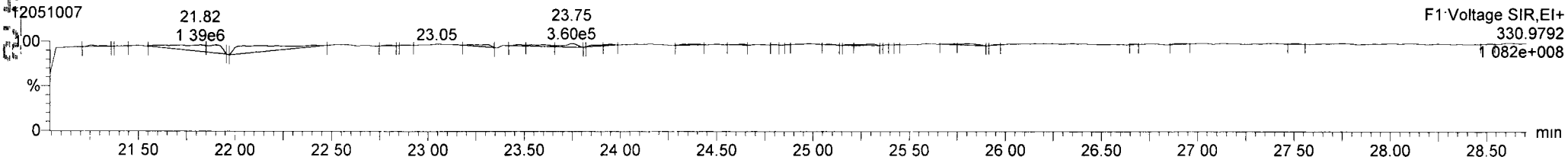
Total-tetradioxins



Total-tetradioxins

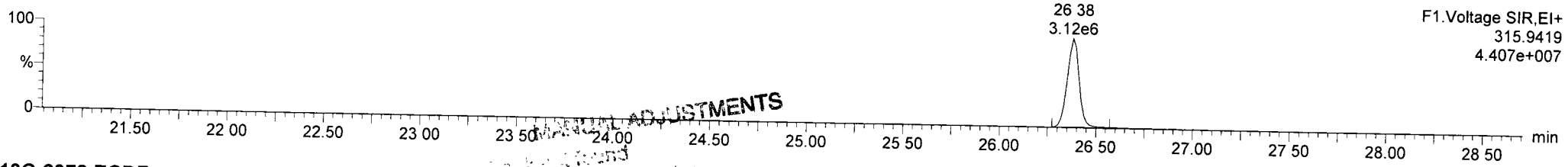


FUNCTION1 PFK



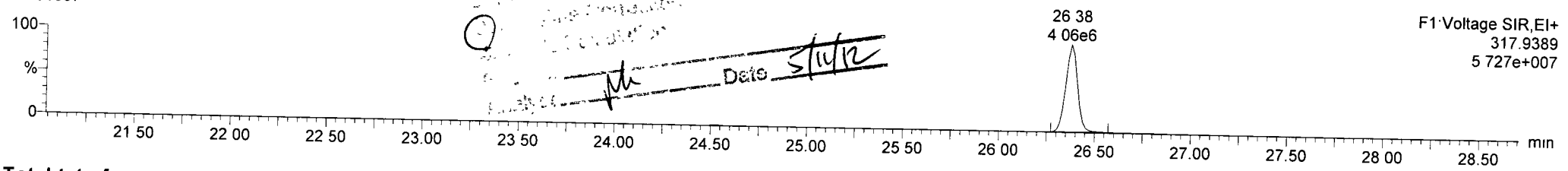
Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF
12051007



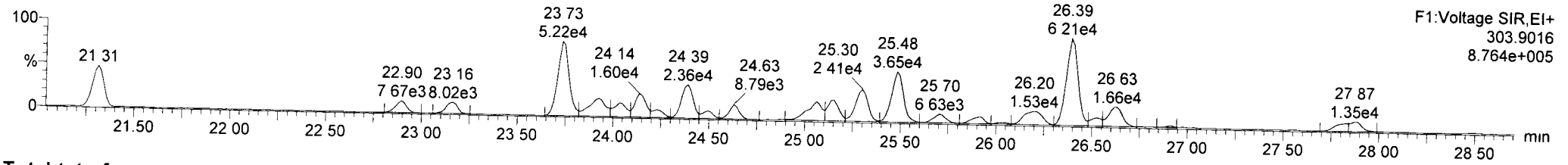
MANUAL ADJUSTMENTS

13C-2378-TCDF
12051007

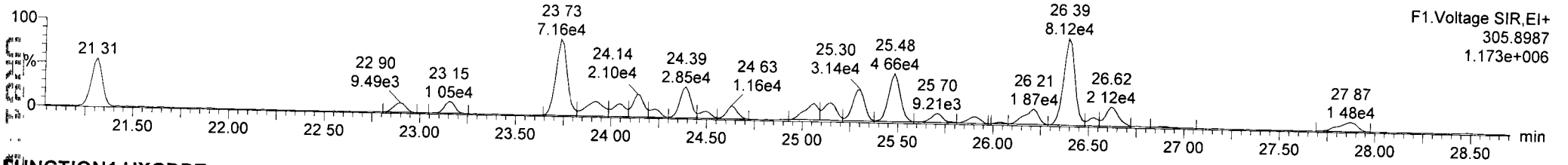


Date 5/11/12

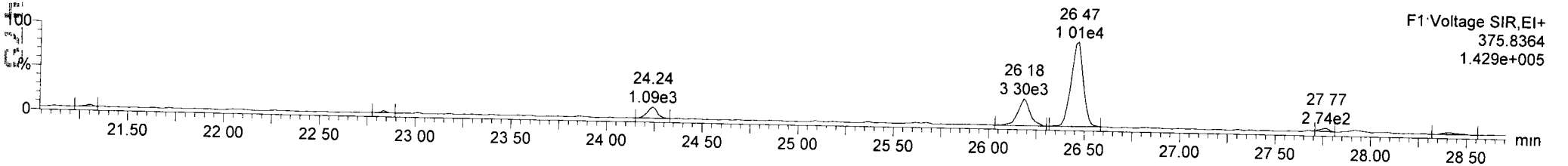
Total-tetrafurans
12051007



Total-tetrafurans
12051007



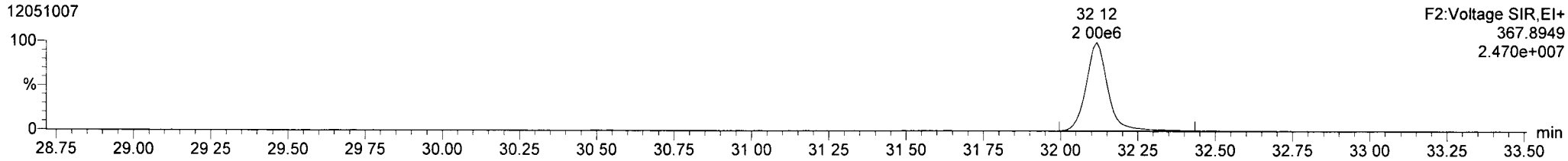
FUNCTION1 HXCDPE
12051007



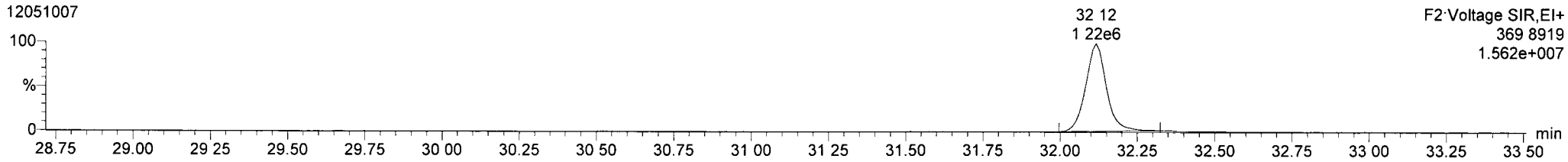
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

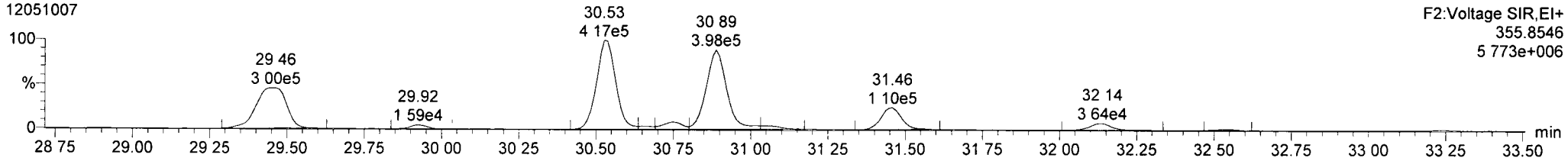
13C-12378-PeCDD



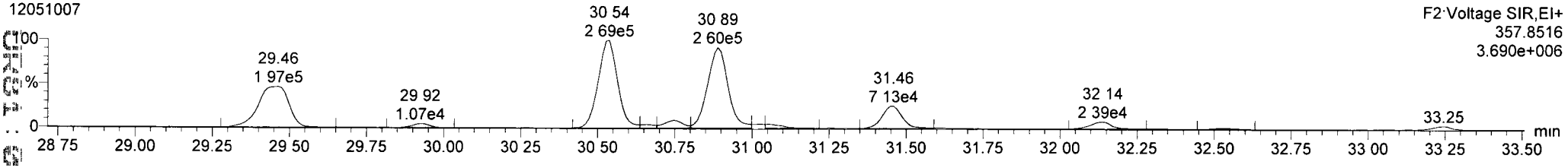
13C-12378-PeCDD



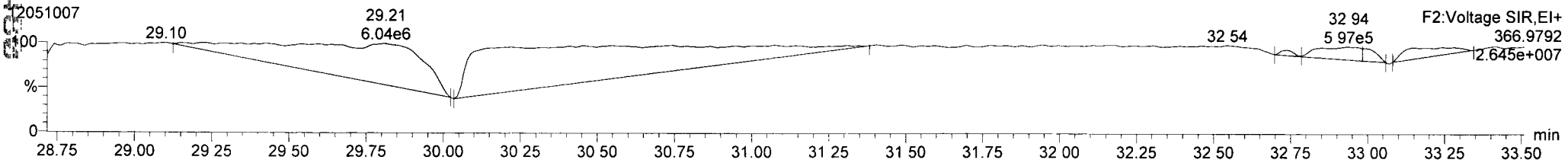
Total-pentadioxins



Total-pentadioxins



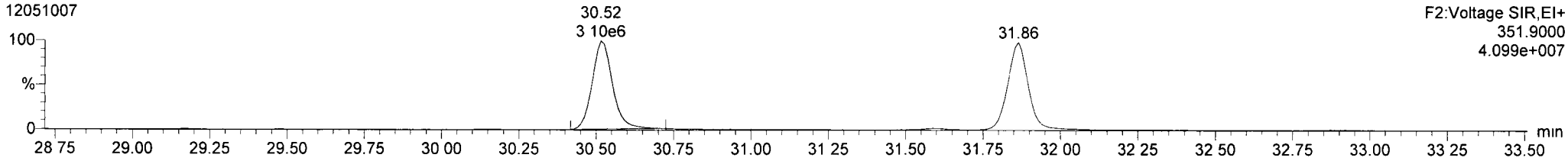
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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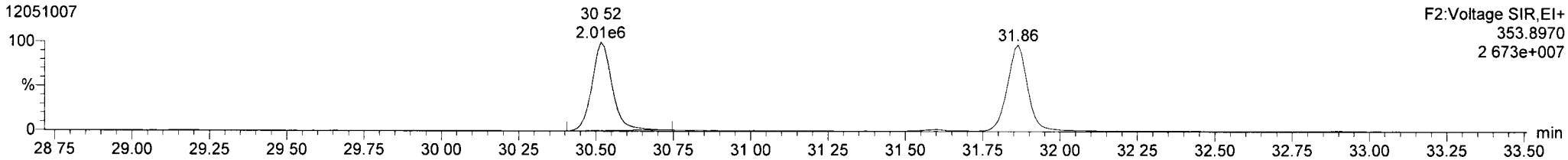

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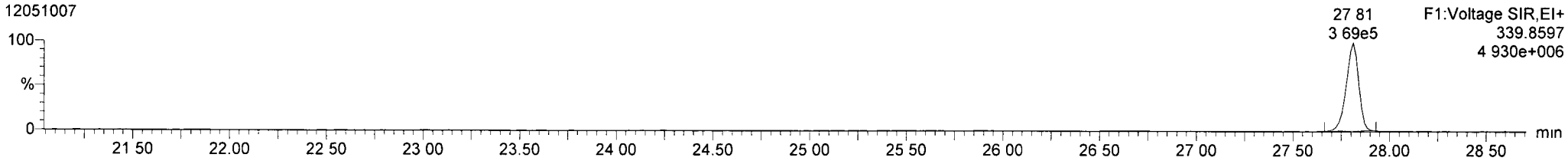

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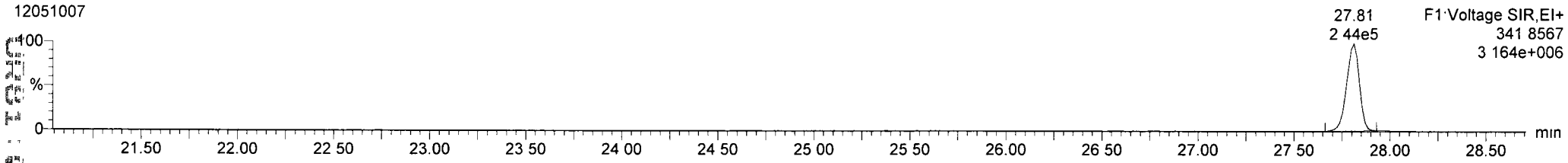
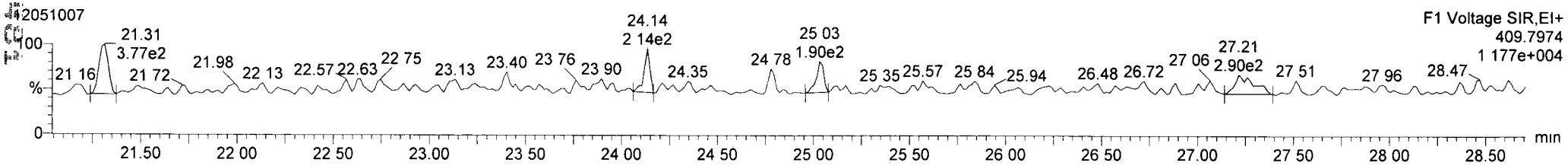


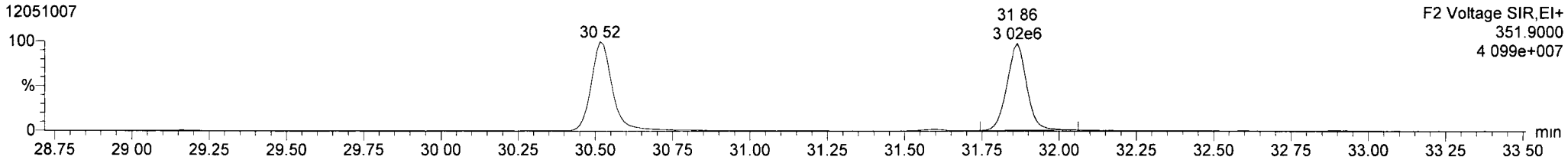
FUNCTION1 HPCDPE



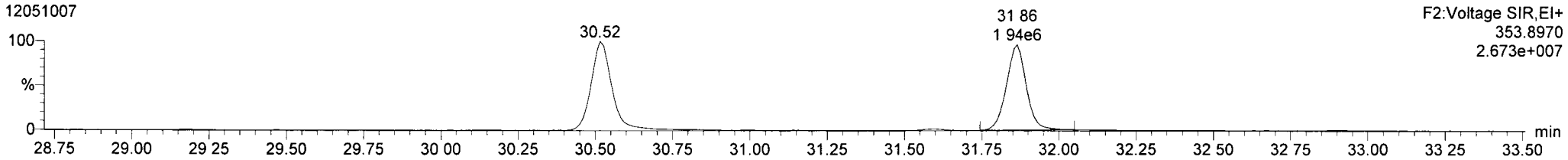
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

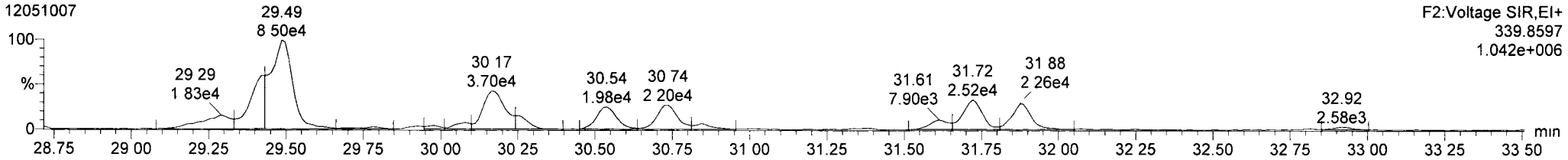
13C-23478-PeCDF



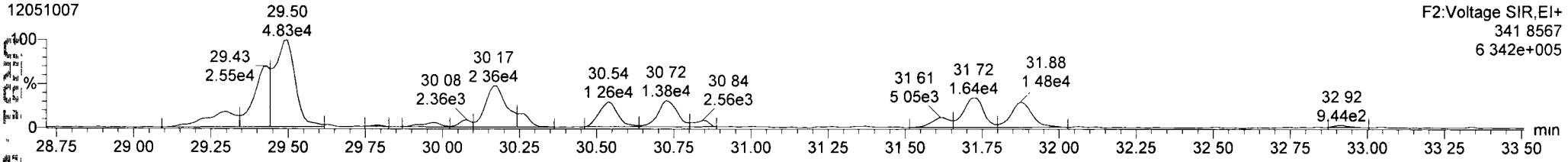
13C-23478-PeCDF



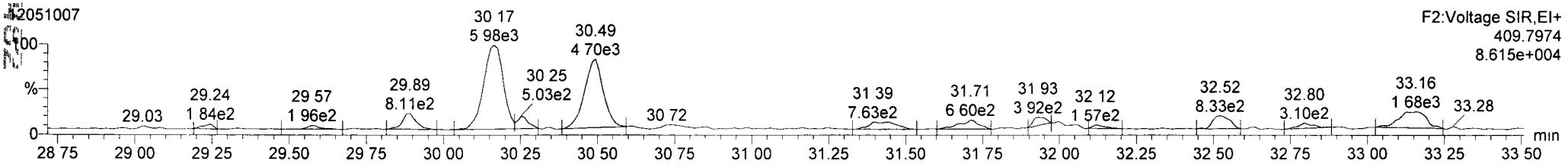
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA1.qld
Last Altered. Friday, May 11, 2012 09:37.31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

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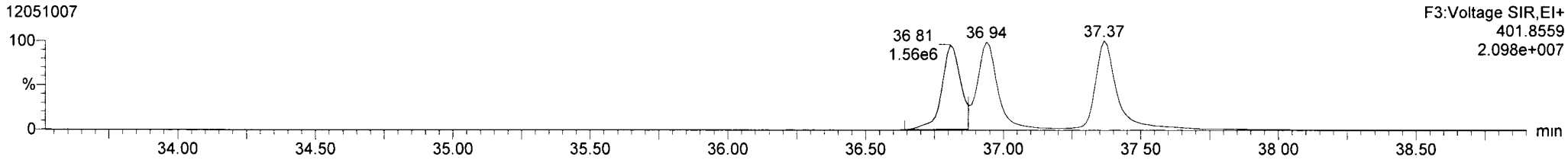
13C-123478-HxCDD



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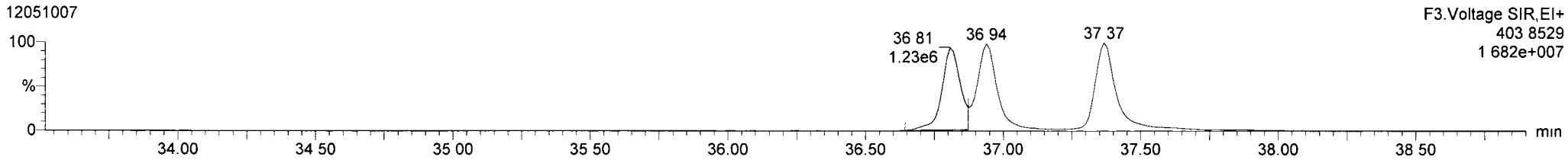
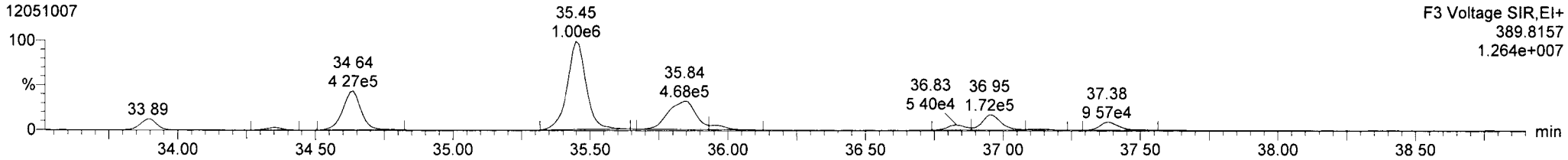
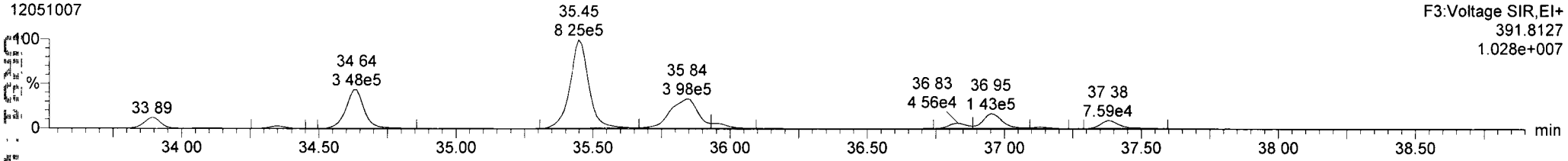


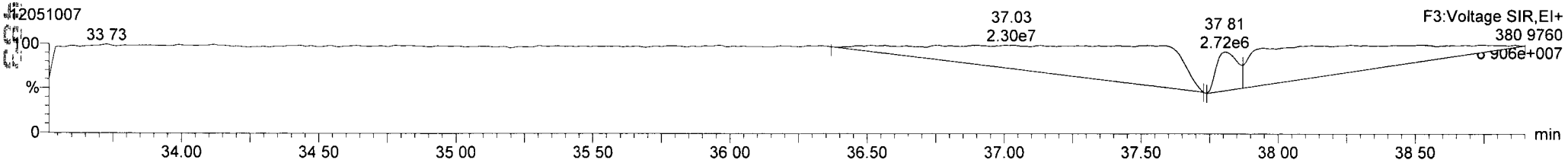
Total-hexadioxins



Total-hexadioxins



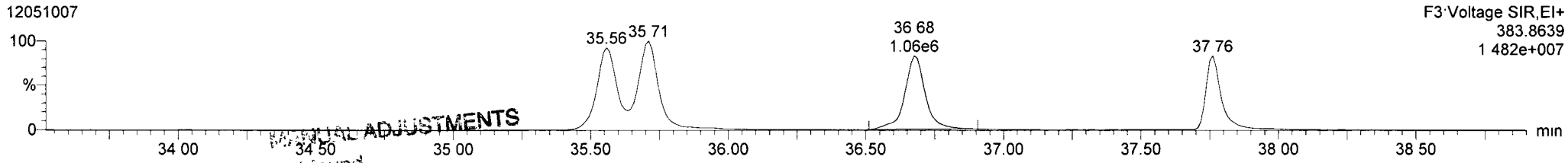
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09.37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

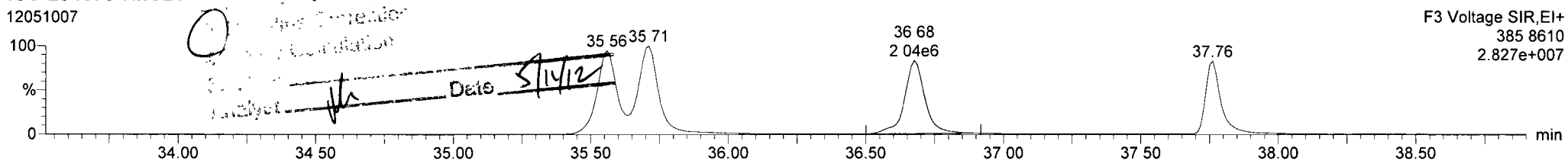
Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



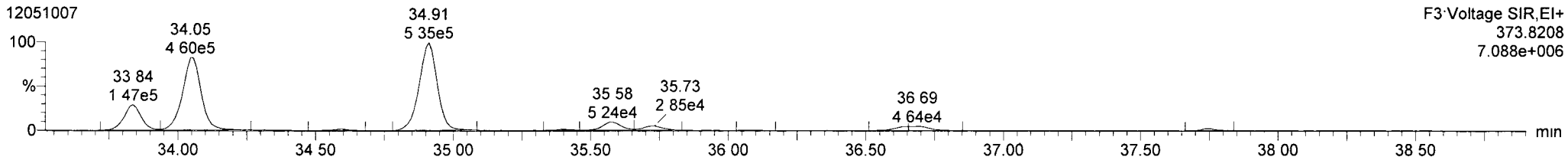
MATERIAL ADJUSTMENTS

13C-234678-HxCDF

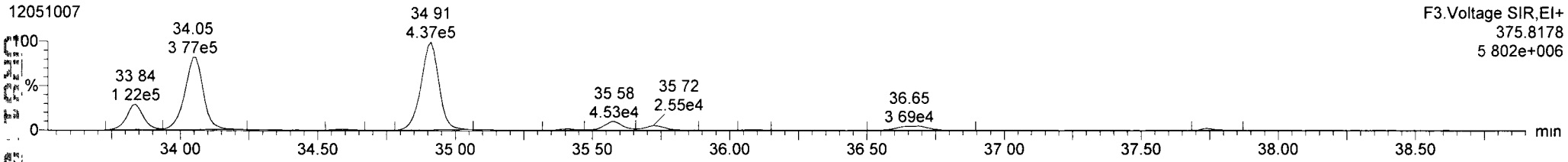


Date 5/14/12

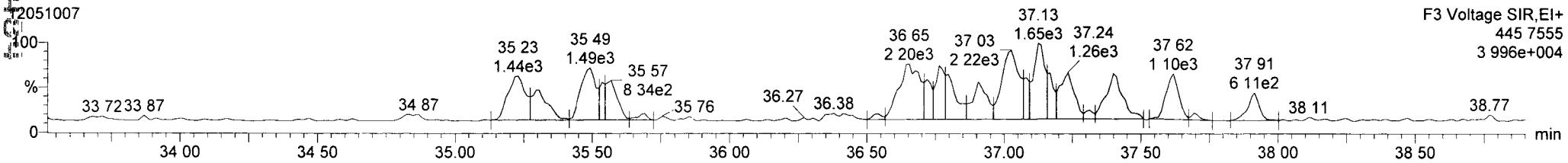
Total-hexafurans



Total-hexafurans



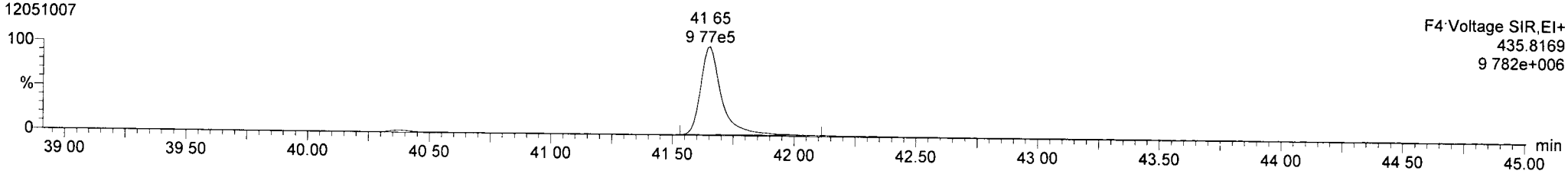
FUNCTION3 OCDPE



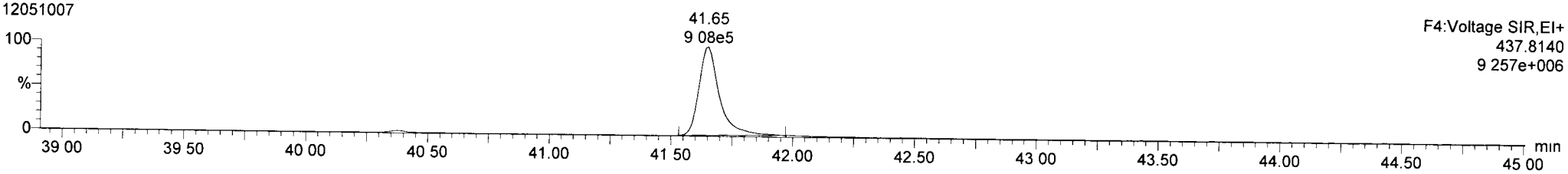
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

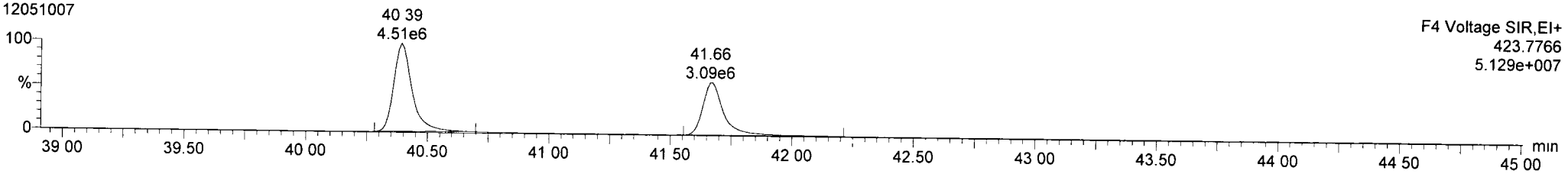
13C-1234678-HpCDD
12051007



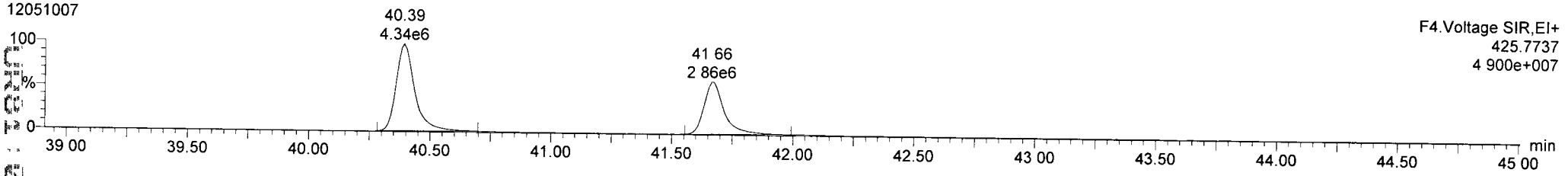
13C-1234678-HpCDD
12051007



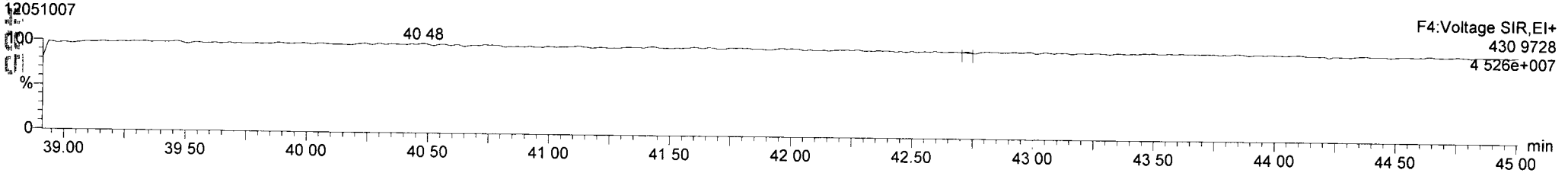
Total-heptadioxins
12051007



Total-heptadioxins
12051007



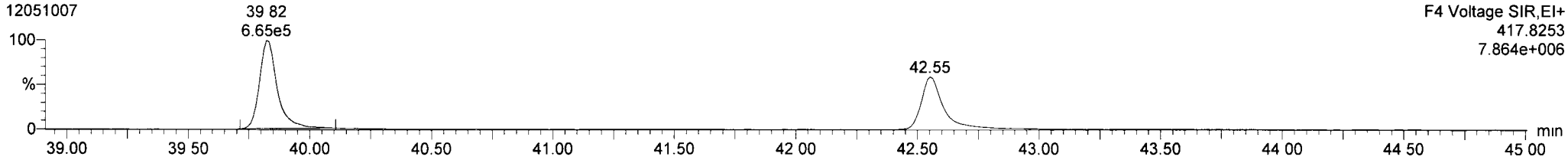
FUNCTION4 PFK
12051007



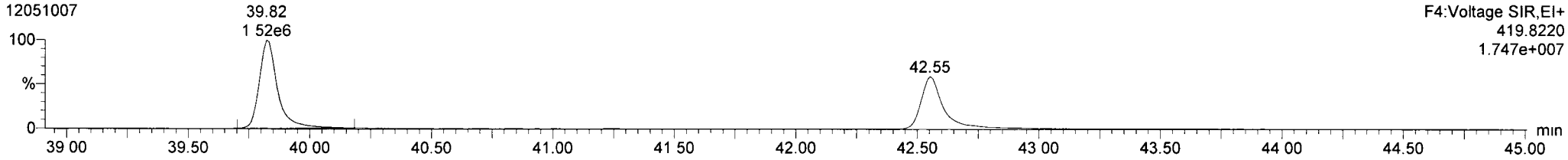
Dataset. P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed. Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

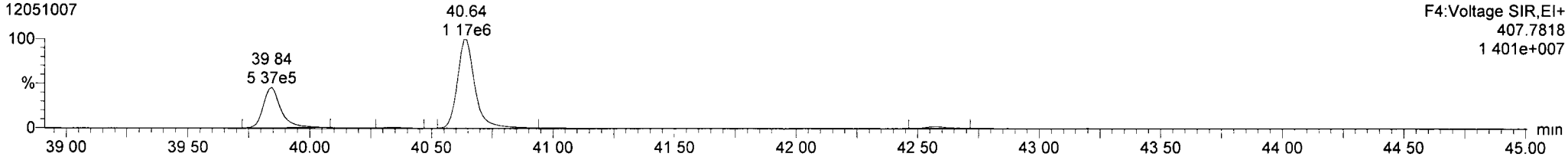
13C-1234678-HpCDF



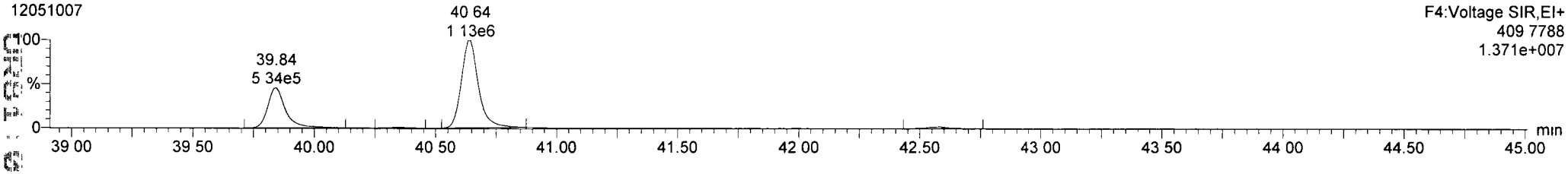
13C-1234678-HpCDF



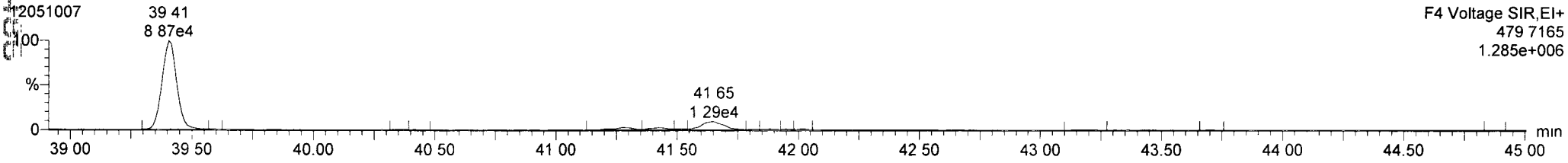
Total-heptafurans



Total-heptafurans



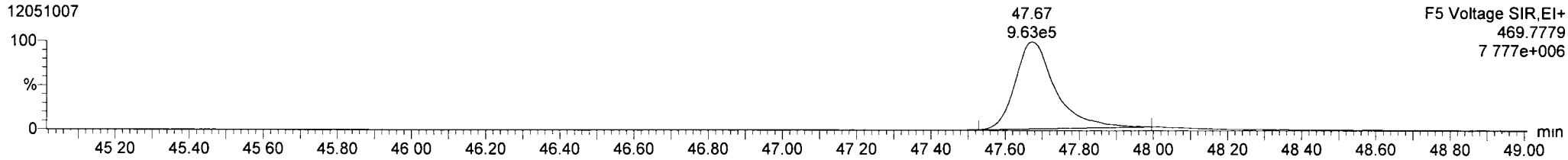
FUNCTION4 NCDPE



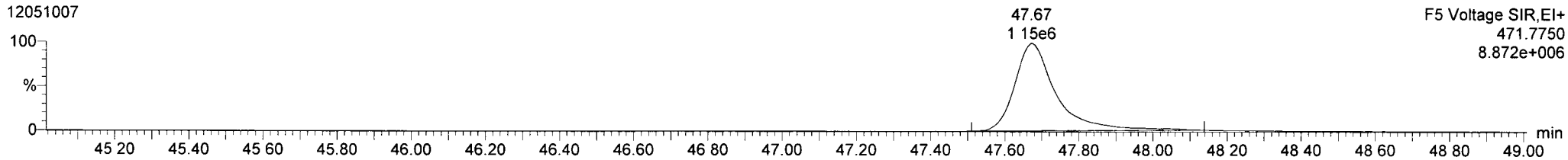
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

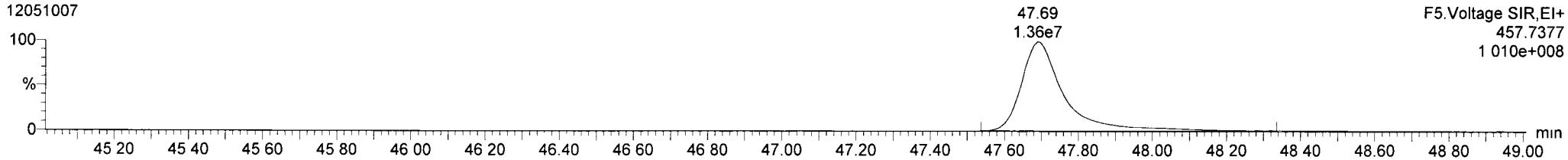
13C-OCDD



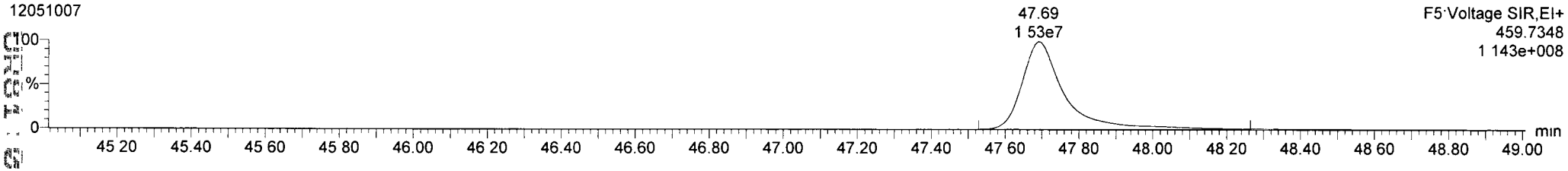
13C-OCDD



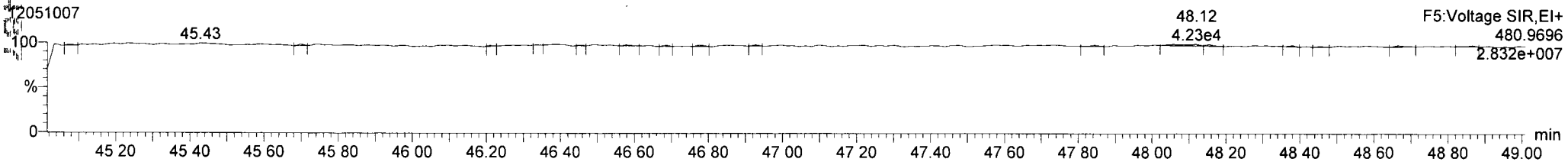
OCDD



OCDD



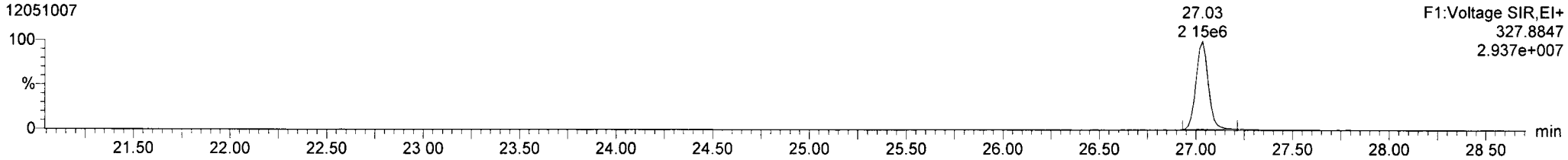
FUNCTION5 PFK



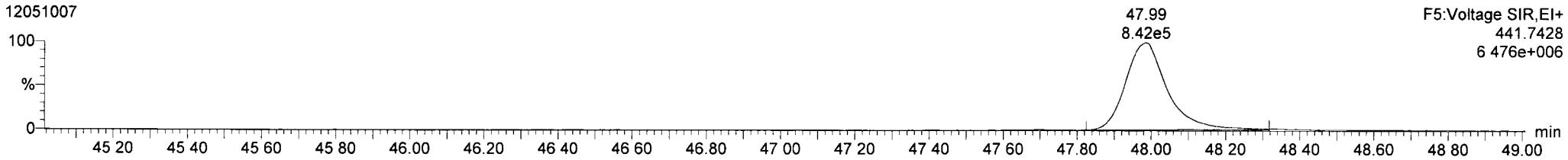
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:03 Pacific Daylight Time

Name: 12051007, Date: 10-May-2012, Time: 14:48:55, ID: UR81B, Conditions: AUTOSPEC01, User: pk

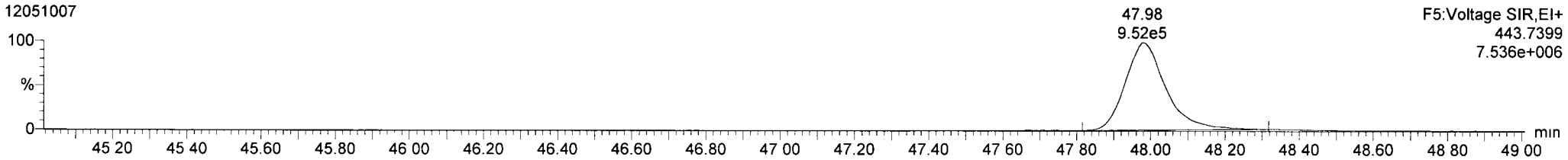
37CL-2378-TCDD



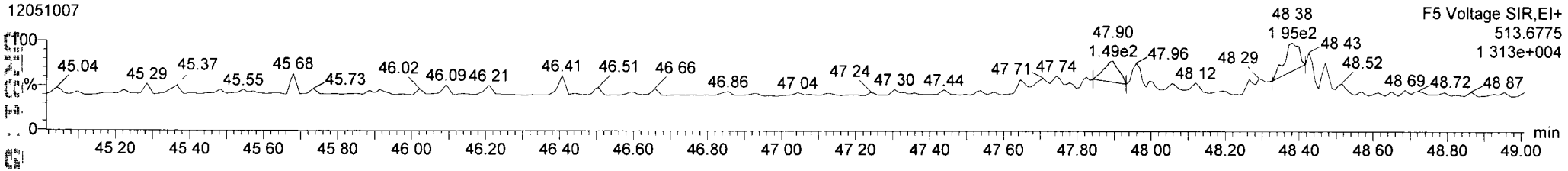
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA1.qld
Last Altered Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

pk 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26 392	26 393	116866	116866	0.866	bd		0 76	0 77	355 7	NO	2.213	2 213
2	2	12378-PeCDF	339 8597	30 538	30 538	23800	23800	0 907	bd		1.43	1 55	63 1	NO	0 610	0.610
3	3	23478-PeCDF	339 8597	31 875	31 876	23257	23257	0 936	db		1 36	1 55	57 5	NO	0 610	0.610
4	4	123478-HxCDF	373 8208	35 547	35 547	66248	66248	1.082	dd		1 15	1 24	129.2	NO	2 170	2 170
5	5	234678-HxCDF	373 8208	36 654	36 665	52823	52823	1 070	bb		1.21	1 24	70.9	NO	1 847	1 847
6	6	123678-HxCDF	373 8208	35.690	35 711	37452	37452	1 048	db		1.25	1.24	63.0	NO	1 153	1.153
7	7	123789-HxCDF	373 8208	37.729	37.751	0	13660	1 020	bb		1.63	1 24	47.7	YES	0 000	0.604
8	8	1234678-HpCDF	407 7818	39 822	39 831	652056	652056	1 214	bd		0.98	1 05	1122.8	NO	29 729	29 729
9	9	1234789-HpCDF	407.7818	42.562	42.553	29490	29490	1 254	bb		1.06	1 05	48.8	NO	1.918	1 918
10	10	OCDF	441 7428	47.950	47.930	886847	886847	1 105	bd		0.88	0 89	1054 4	NO	98.498	98 498
11	11	2378-TCDD	319.8965	27 034	27.018	0	9304	1 046	bd		0.62	0 77	29 9	YES	0.000	0 231
12	12	12378-PeCDD	355.8546	32.128	32.115	38684	38684	0.973	bb		1.59	1 55	83 7	NO	1.482	1 482
13	13	123478-HxCDD	389.8157	36.797	36.808	65927	65927	0.935	bd		1.21	1 24	102 6	NO	2.958	2 958
14	14	123678-HxCDD	389.8157	36.929	36.918	207071	207071	0.878	dd		1 23	1 24	298 3	NO	9 381	9 381
15	15	123789-HxCDD	389.8157	37.345	37.312	108510	108510	0.839	bb		1 22	1 24	159 7	NO	5.283	5 283
16	16	1234678-HpCDD	423 7766	41.653	41.654	3268169	3268169	0.974	bd		1.04	1 05	1811 5	NO	224 295	224 295
17	17	OCDD	457 7377	47.662	47 659	14889341	14889341	0 950	bd		0.88	0 89	6257.3	NO	1923 767	1923 7
18	18	13C-2378-TCDF	315 9419	26 377	26 377	6098412		1 484	bb	81.2	0.77	0 77	7165 5	NO	81.154	
19	19	13C-12378-PeCDF	351 9000	30.516	30 519	4305154		1 048	bd	81.1	1.52	1 55	5084 6	NO	81.142	
20	20	13C-23478-PeCDF	351 9000	31 854	31 856	4071441		1 003	bb	80 2	1.56	1 55	4742 0	NO	80 155	
21	21	13C-123478-HxCDF	383 8639	35 536	35 558	2822090		1 186	bd	85 7	0 51	0 51	2931 9	NO	85.672	
22	22	13C-123678-HxCDF	383 8639	35 690	35.712	3098424		1 315	db	84.8	0 49	0 51	2927 2	NO	84 802	
23	23	13C-234678-HxCDF	383 8639	36 644	36.643	2672858		1 223	bb	78.6	0 51	0 51	2626.5	NO	78 643	
24	24	13C-123789-HxCDF	383 8639	37 739	37.750	2216366		1 056	bb	75.5	0 53	0 51	2655.1	NO	75 508	
25	25	13C-1234678-HpCDF	417 8253	39 811	39.833	1806048		1 011	bb	64 3	0.46	0.44	2170.0	NO	64.271	
26	26	13C-1234789-HpCDF	417 8253	42.541	42 584	1226110		0 741	bb	59 6	0.44	0 44	1203 7	NO	59.593	
27	27	13C-1234-TCDD	331.9368	26.198	26.272	5062340		1 000	bb	100.0	0.78	0 77	7118 3	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27.004	27 020	3853069		0 956	bb	79.6	0 77	0 77	4929 2	NO	79 584	
29	29	13C-12378-PeCDD	367 8949	32.106	32.108	2682554		0 663	bb	79.9	1 60	1 55	4653 1	NO	79 871	
30	30	13C-123478-HxCDD	401 8559	36.786	36 775	2382825		1 024	bd	83.8	1 26	1 24	3714.9	NO	83.762	
31	31	13C-123678-HxCDD	401 8559	36.907	36 906	2514623		1 113	db	81 3	1.25	1 24	3770.0	NO	81 347	
32	32	13C-1234678-HpCDD	435 8169	41.642	41 686	1495520		0 815	bb	66.0	1 05	1 05	1996 2	NO	66 037	
33	33	13C-OCDD	469 7779	47.645	47 702	1629281		0 717	bb	40 9	0 91	0 89	2005 6	NO	81 779	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.334	37.368	2778338		1 000	bd	100 0	1.24	1.24	4122.9	NO	100 000	
35	35	Total-tetrafurans	303 9016		25.370			0 866							11 936	12.716
36	36	Total-penta1	339.8597		28.210										10.225	10.225
37	37	Total-pentafurans	339.8597		30.790			0 921							7.041	7.829
38	38	Total-hexafurans	373.8208		35.760			1 055							53.617	54.570
39	39	Total-heptafurans	407.7818		41 160			1.234							106 131	106 796
40	40	Total-Furans	303 9016		0.000			1.050							288 422	291 608
41	41	Total-tetradioxins	319 8965		25 880			1.046							60 914	61.396
42	42	Total-pentadioxins	355 8546		30 950			0 973							67 916	67.916
43	43	Total-hexadioxins	389 8157		35 940			0.884							140 278	140.278
44	44	Total-heptadioxins	423 7766		40 980			0 974							577.462	577.462
45	45	Total-Dioxins	319 8965		0 000			0.942							2770.337	2770.8.
46	46	Total-TEQ	319 8965		0 000										3058.760	3062.4
47	47	37CL-2378-TCDD	327.8847	27.034	27 010	1834819		1 037					7922 2		34 946	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0 000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479 7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513 6775		0 000										0.000	

17.266

18.054

Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 15	26974.290	0.866	0.511	0.511	0.78	0 77	NO	83 4
2	35	Total-tetrafurans	303.9016	25.05	30923.547	0.866	0 585	0 585	0 81	0.77	NO	71.6
3	35	Total-tetrafurans	303.9016	24.64	0 000	0.866	0.000	0 248	0 64	0.77	YES	40.3
4	35	Total-tetrafurans	303 9016	24.49	8645.574	0 866	0.164	0.164	0 82	0 77	NO	30 8
5	35	Total-tetrafurans	303.9016	24.39	39322.181	0 866	0 744	0.744	0 76	0 77	NO	125.3
6	35	Total-tetrafurans	303 9016	24.23	0 000	0 866	0 000	0.182	0 91	0.77	YES	38 0
7	35	Total-tetrafurans	303 9016	24 15	32876 485	0 866	0 622	0 622	0 71	0.77	NO	94.1
8	35	Total-tetrafurans	303.9016	24 05	0.000	0 866	0.000	0.350	0 91	0 77	YES	58.4
9	35	Total-tetrafurans	303.9016	23 93	34630.193	0 866	0.656	0.656	0 77	0 77	NO	65.5
10	35	Total-tetrafurans	303.9016	23.73	89367.898	0.866	1 692	1 692	0 77	0.77	NO	264.2
11	35	Total-tetrafurans	303 9016	23.40	707.291	0 866	0.013	0.013	0 79	0.77	NO	3.4
12	35	Total-tetrafurans	303.9016	23.16	13956.754	0.866	0.264	0 264	0.81	0.77	NO	42 4
13	35	Total-tetrafurans	303.9016	22.90	13698.790	0 866	0.259	0 259	0.82	0 77	NO	47 7
14	35	Total-tetrafurans	303.9016	27.89	23977 407	0 866	0 454	0 454	0 79	0 77	NO	39.2
15	35	Total-tetrafurans	303.9016	26.62	29537 830	0.866	0.559	0 559	0 78	0.77	NO	81 2
16	35	Total-tetrafurans	303.9016	26.53	8160.713	0 866	0.155	0.155	0 82	0 77	NO	28 4
17	1	2378-TCDF	303 9016	26 39	116865.820	0 866	2 213	2 213	0 76	0.77	NO	355 7
18	35	Total-tetrafurans	303.9016	26.20	28635 905	0 866	0.542	0.542	0 82	0 77	NO	58.8
19	35	Total-tetrafurans	303 9016	26.03	1367 957	0.866	0 026	0.026	0.80	0 77	NO	7.6
20	35	Total-tetrafurans	303.9016	25.90	7561.520	0.866	0 143	0 143	0.74	0 77	NO	24.4
21	35	Total-tetrafurans	303 9016	25.70	12255 800	0.866	0.232	0 232	0.78	0 77	NO	36.9
22	35	Total-tetrafurans	303 9016	25 48	70542.430	0.866	1.336	1.336	0 76	0.77	NO	216.8
23	35	Total-tetrafurans	303 9016	25 30	40413.195	0 866	0.765	0 765	0 79	0 77	NO	119 7

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	36	Total-penta1	339 8597	27.81	392721 672		10 225	10 225	1.55	1.55	NO	2081.4

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset. P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339 8597	29 98	0 000	0.921	0.000	0 121	1.23	1.55	YES	10.6
2	37	Total-pentafurans	339.8597	29 80	1375 464	0.921	0 036	0 036	1.35	1.55	NO	3.4
3	37	Total-pentafurans	339 8597	29 48	119510 496	0.921	3 097	3 097	1 67	1.55	NO	198 4
4	37	Total-pentafurans	339 8597	29.29	0 000	0.921	0.000	0 159	3.24	1 55	YES	32.5
5	37	Total-pentafurans	339.8597	29 23	0.000	0 921	0 000	0.110	0 50	1.55	YES	21 3
6	37	Total-pentafurans	339 8597	29 19	0.000	0 921	0 000	0.057	2 78	1.55	YES	14 4
7	37	Total-pentafurans	339.8597	32 91	0.000	0 921	0 000	0.037	2 46	1 55	YES	8 6
8	3	23478-PeCDF	339.8597	31 88	23256.799	0.936	0 610	0.610	1.36	1 55	NO	57.5
9	37	Total-pentafurans	339.8597	31.72	27331 537	0.921	0.708	0 708	1.67	1 55	NO	73.1
10	37	Total-pentafurans	339 8597	31 60	0 000	0.921	0.000	0 193	1.13	1.55	YES	19.1
11	37	Total-pentafurans	339 8597	30 85	0 000	0 921	0.000	0 110	1.13	1 55	YES	11 4
12	37	Total-pentafurans	339 8597	30 74	23601.655	0 921	0 612	0 612	1 47	1 55	NO	58 5
13	2	12378-PeCDF	339 8597	30 54	23800 356	0 907	0.610	0.610	1 43	1 55	NO	63 1
14	37	Total-pentafurans	339 8597	30 17	47414.973	0 921	1 229	1.229	1.41	1 55	NO	85.0
15	37	Total-pentafurans	339 8597	30.07	5417.093	0 921	0 140	0.140	1.59	1 55	NO	17 6

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	7	123789-HxCDF	373 8208	37.73	0 000	1 020	0 000	0.604	1 63	1 24	YES	47 7
2	5	234678-HxCDF	373.8208	36 65	52823.227	1 070	1.847	1.847	1 21	1 24	NO	70 9
3	38	Total-hexafurans	373.8208	36 29	0.000	1 055	0.000	0.034	0 91	1 24	YES	3 3
4	38	Total-hexafurans	373 8208	36.05	4013.145	1 055	0.141	0 141	1.30	1 24	NO	9.6
5	6	123678-HxCDF	373.8208	35 69	37452.176	1 048	1.153	1 153	1 25	1 24	NO	63 0
6	4	123478-HxCDF	373.8208	35.55	66248.047	1.082	2.170	2 170	1 15	1 24	NO	129.2
7	38	Total-hexafurans	373.8208	35 39	10234.289	1.055	0.359	0 359	1.25	1.24	NO	19.6
8	38	Total-hexafurans	373.8208	34.89	699063.625	1 055	24 519	24 519	1.20	1 24	NO	1540.5
9	38	Total-hexafurans	373.8208	34.57	0.000	1 055	0.000	0.314	0.96	1 24	YES	21 7
10	38	Total-hexafurans	373.8208	34.03	495890 750	1.055	17.393	17 393	1 22	1.24	NO	1070 0
11	38	Total-hexafurans	373 8208	33.83	172086 015	1.055	6 036	6 036	1 26	1.24	NO	404.5

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42 56	29489.767	1 254	1.918	1 918	1.06	1 05	NO	48 8
2	39	Total-heptafurans	407 7818	41 08	0 000	1 234	0.000	0 037	0 88	1.05	YES	2 9
3	39	Total-heptafurans	407 7818	40.62	1393774.876	1.234	74 484	74 484	0.99	1.05	NO	2365 7
4	39	Total-heptafurans	407 7818	40.32	0 000	1.234	0.000	0 627	0 87	1.05	YES	24.2
5	8	1234678-HpCDF	407.7818	39.82	652055 875	1.214	29.729	29 729	0 98	1.05	NO	1122.8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 15	26974.290	0 866	0.511	0 511	0.78	0.77	NO	83 4
2	35	Total-tetrafurans	303 9016	25 05	30923 547	0.866	0.585	0 585	0.81	0.77	NO	71 6
3	35	Total-tetrafurans	303 9016	24 64	0 000	0.866	0 000	0 248	0.64	0 77	YES	40 3
4	35	Total-tetrafurans	303.9016	24 49	8645 574	0.866	0.164	0.164	0 82	0 77	NO	30.8
5	35	Total-tetrafurans	303 9016	24.39	39322 181	0.866	0 744	0.744	0.76	0 77	NO	125 3
6	35	Total-tetrafurans	303 9016	24.23	0.000	0.866	0 000	0.182	0.91	0.77	YES	38 0
7	35	Total-tetrafurans	303 9016	24.15	32876 485	0.866	0.622	0.622	0.71	0.77	NO	94 1
8	35	Total-tetrafurans	303.9016	24.05	0.000	0 866	0.000	0.350	0 91	0 77	YES	58.4
9	35	Total-tetrafurans	303.9016	23 93	34630.193	0.866	0.656	0 656	0 77	0.77	NO	65 5
10	35	Total-tetrafurans	303.9016	23.73	89367 898	0.866	1 692	1 692	0.77	0.77	NO	264.2
11	35	Total-tetrafurans	303.9016	23.40	707.291	0 866	0.013	0 013	0 79	0.77	NO	3.4
12	35	Total-tetrafurans	303.9016	23 16	13956 754	0.866	0 264	0 264	0.81	0 77	NO	42 4
13	35	Total-tetrafurans	303.9016	22.90	13698 790	0.866	0 259	0 259	0.82	0 77	NO	47 7
14	40	Total-Furans	303.9016	21.31	61734.610	1.050	0 964	0.964	0.69	0 77	NO	195 6
15	40	Total-Furans	303 9016	28.48	661.642	1 050	0.010	0 010	0 84	0 77	NO	2 6
16	35	Total-tetrafurans	303 9016	27 89	23977 407	0 866	0.454	0.454	0 79	0.77	NO	39 2
17	35	Total-tetrafurans	303.9016	26 62	29537.830	0.866	0 559	0 559	0.78	0 77	NO	81 2
18	35	Total-tetrafurans	303.9016	26 53	8160.713	0 866	0 155	0 155	0.82	0 77	NO	28 4
19	1	2378-TCDF	303 9016	26 39	116865.820	0 866	2 213	2 213	0 76	0 77	NO	355 7
20	35	Total-tetrafurans	303.9016	26.20	28635 905	0.866	0.542	0 542	0.82	0.77	NO	58.8
21	35	Total-tetrafurans	303.9016	26.03	1367 957	0.866	0 026	0.026	0.80	0.77	NO	7 6
22	35	Total-tetrafurans	303.9016	25.90	7561 520	0.866	0.143	0.143	0.74	0.77	NO	24.4
23	35	Total-tetrafurans	303.9016	25.70	12255 800	0.866	0.232	0.232	0.78	0.77	NO	36 9
24	35	Total-tetrafurans	303 9016	25 48	70542.430	0.866	1.336	1.336	0 76	0 77	NO	216.8
25	35	Total-tetrafurans	303.9016	25 30	40413 195	0 866	0 765	0 765	0 79	0 77	NO	119.7
26	37	Total-pentafurans	339.8597	29.98	0 000	0.921	0.000	0 121	1 23	1 55	YES	10.6
27	37	Total-pentafurans	339.8597	29 80	1375.464	0 921	0 036	0 036	1.35	1 55	NO	3 4
28	37	Total-pentafurans	339 8597	29 48	119510.496	0.921	3 097	3 097	1.67	1 55	NO	198 4
29	37	Total-pentafurans	339 8597	29 29	0 000	0 921	0.000	0 159	3 24	1 55	YES	32.5
30	37	Total-pentafurans	339 8597	29.23	0.000	0 921	0.000	0.110	0.50	1 55	YES	21 3
31	37	Total-pentafurans	339.8597	29.19	0.000	0.921	0.000	0 057	2.78	1 55	YES	14.4
32	37	Total-pentafurans	339.8597	32.91	0 000	0.921	0 000	0 037	2.46	1.55	YES	8 6
33	3	23478-PeCDF	339 8597	31.88	23256.799	0.936	0.610	0.610	1.36	1.55	NO	57 5
34	37	Total-pentafurans	339.8597	31.72	27331 537	0.921	0.708	0 708	1.67	1.55	NO	73 1
35	37	Total-pentafurans	339.8597	31.60	0 000	0.921	0.000	0.193	1 13	1 55	YES	19 1
36	37	Total-pentafurans	339 8597	30 85	0.000	0 921	0.000	0.110	1 13	1.55	YES	11 4
37	37	Total-pentafurans	339 8597	30 74	23601.655	0 921	0 612	0 612	1 47	1.55	NO	58 5
38	2	12378-PeCDF	339 8597	30 54	23800.356	0 907	0 610	0 610	1 43	1.55	NO	63 1
39	37	Total-pentafurans	339 8597	30 17	47414.973	0 921	1.229	1.229	1 41	1.55	NO	85.0
40	37	Total-pentafurans	339.8597	30 07	5417 093	0 921	0 140	0 140	1 59	1 55	NO	17.6
41	7	123789-HxCDF	373 8208	37.73	0 000	1 020	0 000	0 604	1.63	1 24	YES	47.7
42	5	234678-HxCDF	373 8208	36 65	52823.227	1 070	1 847	1 847	1.21	1.24	NO	70.9
43	38	Total-hexafurans	373 8208	36 29	0.000	1.055	0.000	0 034	0 91	1.24	YES	3 3
44	38	Total-hexafurans	373 8208	36 05	4013 145	1.055	0.141	0 141	1 30	1.24	NO	9 6
45	6	123678-HxCDF	373.8208	35.69	37452 176	1.048	1 153	1.153	1 25	1.24	NO	63 0
46	4	123478-HxCDF	373 8208	35 55	66248 047	1 082	2 170	2 170	1 15	1 24	NO	129 2
47	38	Total-hexafurans	373.8208	35 39	10234.289	1 055	0 359	0.359	1 25	1 24	NO	19 6
48	38	Total-hexafurans	373.8208	34 89	699063.625	1 055	24 519	24 519	1 20	1.24	NO	1540.5
49	38	Total-hexafurans	373 8208	34 57	0 000	1.055	0.000	0 314	0 96	1 24	YES	21 7

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	38	Total-hexafurans	373.8208	34.03	495890 750	1 055	17 393	17.393	1.22	1 24	NO	1070 0
51	38	Total-hexafurans	373 8208	33 83	172086 015	1 055	6.036	6.036	1 26	1 24	NO	404 5
52	9	1234789-HpCDF	407 7818	42 56	29489 767	1 254	1 918~	1.918	1 06	1 05	NO	48 8
53	39	Total-heptafurans	407.7818	41.08	0.000	1.234	0.000	0 037	0.88	1.05	YES	2.9
54	39	Total-heptafurans	407.7818	40 62	1393774.876	1.234	74.484	74 484	0 99	1.05	NO	2365 7
55	39	Total-heptafurans	407.7818	40.32	0.000	1.234	0.000	0 627	0 87	1.05	YES	24.2
56	8	1234678-HpCDF	407.7818	39 82	652055 875	1.214	29.729	29.729	0 98	1 05	NO	1122.8
57	10	OCDF	441.7428	47 95	886846 938	1 105	98 498	98 498	0.88	0.89	NO	1054.4
58	36	Total-penta1	339.8597	27.81	392721.672		10.225	10 225	1 55	1 55	NO	2081.4

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	24.64	0 000	1 046	0 000	0 106	1 20	0.77	YES	22 3
2	41	Total-tetradioxins	319 8965	24.43	735121 094	1 046	18 243	18 243	0 78	0.77	NO	2759.4
3	41	Total-tetradioxins	319.8965	24.17	1160187 876	1 046	28.791	28 791	0 78	0 77	NO	4520.2
4	41	Total-tetradioxins	319.8965	27 57	16748 190	1.046	0 416	0 416	0 87	0 77	NO	61.5
5	41	Total-tetradioxins	319.8965	27 15	12660 393	1.046	0 314	0 314	0 83	0 77	NO	43.9
6	11	2378-TCDD	319.8965	27.03	0.000	1.046	0.000	0 231	0.62	0.77	YES	29.9
7	41	Total-tetradioxins	319.8965	26 65	77047 312	1.046	1 912	1 912	0.77	0 77	NO	215 7
8	41	Total-tetradioxins	319.8965	26.36	0.000	1.046	0.000	0.064	1.69	0.77	YES	19 0
9	41	Total-tetradioxins	319.8965	26.21	323700.781	1.046	8.033	8.033	0.75	0.77	NO	1162.9
10	41	Total-tetradioxins	319.8965	26 02	7854.409	1.046	0.195	0.195	0 79	0 77	NO	26 5
11	41	Total-tetradioxins	319.8965	25 90	2543 428	1 046	0 063	0 063	0 69	0 77	NO	9 4
12	41	Total-tetradioxins	319.8965	25.65	80237.605	1.046	1.991	1 991	0 78	0 77	NO	290.8
13	41	Total-tetradioxins	319.8965	25 36	38518.205	1 046	0 956	0 956	0 82	0 77	NO	131.2
14	41	Total-tetradioxins	319.8965	25.17	0 000	1 046	0 000	0 081	1 10	0 77	YES	13.4

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati ..	1° R...	S/N
1	42	Total-pentadioxins	355 8546	31 45	144079 504	0 973	5 518	5 518	1 50	1 55	NO	345 0
2	42	Total-pentadioxins	355.8546	31.03	31102.815	0.973	1.191	1 191	1 54	1 55	NO	53 0
3	42	Total-pentadioxins	355.8546	30 89	530071 859	0.973	20 302	20.302	1.51	1 55	NO	1256 6
4	42	Total-pentadioxins	355 8546	30 75	37438 941	0.973	1 434	1.434	1.66	1.55	NO	89 5
5	42	Total-pentadioxins	355 8546	30.65	15831 229	0.973	0.606	0 606	1.39	1.55	NO	42 7
6	42	Total-pentadioxins	355.8546	30.53	560427.782	0.973	21.465	21.465	1 56	1 55	NO	1439.9
7	42	Total-pentadioxins	355 8546	29 92	19355.144	0.973	0.741	0.741	1 49	1 55	NO	55.3
8	42	Total-pentadioxins	355 8546	29 44	388605 031	0 973	14.884	14.884	1.54	1.55	NO	598.4
9	42	Total-pentadioxins	355 8546	32 53	7613 650	0 973	0 292	0 292	1 50	1 55	NO	18 2
10	12	12378-PeCDD	355.8546	32.13	38683.626	0 973	1 482	1 482	1.59	1.55	NO	83 7

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HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	15	123789-HxCDD	389 8157	37 35	108509.937	0 839	5.283	5 283	1.22	1.24	NO	159.7
2	43	Total-hexadioxins	389.8157	37.11	22103.000	0 884	1.021	1 021	1.42	1 24	NO	31 3
3	14	123678-HxCDD	389.8157	36.93	207071.422	0 878	9 381	9 381	1 23	1.24	NO	298.3
4	13	123478-HxCDD	389.8157	36 80	65926.631	0.935	2 958	2.958	1.21	1.24	NO	102 6
5	43	Total-hexadioxins	389.8157	35 93	50141 384	0.884	2.316	2.316	1 16	1.24	NO	86.2
6	43	Total-hexadioxins	389 8157	35.82	574620.891	0.884	26.546	26.546	1 19	1 24	NO	580.0
7	43	Total-hexadioxins	389.8157	35.43	1482225 626	0.884	68.474	68.474	1 19	1 24	NO	2108.7
8	43	Total-hexadioxins	389.8157	34.62	485628.735	0.884	22.435	22 435	1 23	1.24	NO	737 6
9	43	Total-hexadioxins	389 8157	34.35	40350.772	0.884	1 864	1 864	1 25	1 24	NO	67.9

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati.	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423 7766	41 65	3268169.375	0 974	224.295	224 .	1 04	1 05	NO	1811 5
2	44	Total-heptadioxins	423 7766	40 38	5145930.500	0 974	353 166	353	1 01	1 05	NO	3100 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
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Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	24 64	0.000	1 046	0 000	0 106	1 20	0 77	YES	22.3
2	41	Total-tetradioxins	319.8965	24 43	735121.094	1.046	18.243	18 243	0.78	0 77	NO	2759 4
3	41	Total-tetradioxins	319.8965	24 17	1160187 876	1.046	28.791	28 791	0 78	0 77	NO	4520 2
4	41	Total-tetradioxins	319.8965	27.57	16748 190	1 046	0.416	0.416	0 87	0.77	NO	61.5
5	41	Total-tetradioxins	319 8965	27 15	12660.393	1.046	0 314	0.314	0 83	0.77	NO	43 9
6	11	2378-TCDD	319 8965	27 03	0.000	1.046	0.000	0.231	0.62	0.77	YES	29 9
7	41	Total-tetradioxins	319.8965	26.65	77047.312	1.046	1 912	1 912	0.77	0 77	NO	215.7
8	41	Total-tetradioxins	319 8965	26.36	0 000	1.046	0.000	0.064	1.69	0 77	YES	19.0
9	41	Total-tetradioxins	319 8965	26.21	323700 781	1 046	8 033	8.033	0 75	0.77	NO	1162 9
10	41	Total-tetradioxins	319.8965	26 02	7854.409	1.046	0.195	0 195	0 79	0.77	NO	26 5
11	41	Total-tetradioxins	319.8965	25.90	2543.428	1 046	0 063	0 063	0.69	0 77	NO	9.4
12	41	Total-tetradioxins	319.8965	25 65	80237 605	1.046	1.991	1 991	0 78	0.77	NO	290 8
13	41	Total-tetradioxins	319.8965	25 36	38518 205	1.046	0.956	0.956	0 82	0 77	NO	131 2
14	41	Total-tetradioxins	319 8965	25 17	0 000	1.046	0.000	0.081	1.10	0 77	YES	13 4
15	42	Total-pentadioxins	355.8546	31 45	144079.504	0.973	5.518	5.518	1 50	1 55	NO	345 0
16	42	Total-pentadioxins	355.8546	31.03	31102.815	0.973	1 191	1 191	1 54	1 55	NO	53.0
17	42	Total-pentadioxins	355 8546	30 89	530071.859	0.973	20 302	20.302	1 51	1.55	NO	1256 6
18	42	Total-pentadioxins	355 8546	30 75	37438 941	0 973	1.434	1 434	1.66	1.55	NO	89 5
19	42	Total-pentadioxins	355.8546	30.65	15831 229	0.973	0 606	0 606	1.39	1 55	NO	42 7
20	42	Total-pentadioxins	355 8546	30 53	560427 782	0.973	21.465	21 465	1 56	1 55	NO	1439 9
21	42	Total-pentadioxins	355.8546	29 92	19355 144	0.973	0 741	0.741	1.49	1 55	NO	55 3
22	42	Total-pentadioxins	355.8546	29.44	388605.031	0.973	14 884	14.884	1.54	1 55	NO	598.4
23	42	Total-pentadioxins	355 8546	32.53	7613 650	0.973	0.292	0.292	1.50	1.55	NO	18.2
24	12	12378-PeCDD	355.8546	32.13	38683.626	0.973	1.482	1.482	1 59	1.55	NO	83.7
25	15	123789-HxCDD	389.8157	37.35	108509 937	0.839	5.283	5.283	1 22	1.24	NO	159.7
26	43	Total-hexadioxins	389.8157	37 11	22103 000	0.884	1.021	1.021	1 42	1 24	NO	31.3
27	14	123678-HxCDD	389.8157	36 93	207071 422	0.878	9.381	9.381	1 23	1 24	NO	298 3
28	13	123478-HxCDD	389.8157	36 80	65926 631	0.935	2.958	2 958	1 21	1.24	NO	102.6
29	43	Total-hexadioxins	389.8157	35 93	50141 384	0.884	2 316	2 316	1 16	1 24	NO	86 2
30	43	Total-hexadioxins	389 8157	35.82	574620.891	0 884	26.546	26.546	1 19	1 24	NO	580 0
31	43	Total-hexadioxins	389 8157	35.43	1482225.626	0.884	68.474	68 474	1 19	1 24	NO	2108 7
32	43	Total-hexadioxins	389 8157	34.62	485628.735	0 884	22 435	22 435	1.23	1.24	NO	737 6
33	43	Total-hexadioxins	389 8157	34.35	40350 772	0 884	1 864	1.864	1 25	1 24	NO	67 9
34	16	1234678-HpCDD	423 7766	41.65	3268169 375	0.974	224 295	224	1 04	1.05	NO	1811 5
35	44	Total-heptadioxins	423 7766	40 38	5145930 500	0.974	353.166	353 . .	1.01	1.05	NO	3100 8
36	17	OCDD	457 7377	47 66	14889341 ...	0.950	1923.7.	1923 .	0 88	0 89	NO	6257 3

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25 15	26974 290	0 866	0 511	0.511	0.78	0 77	NO	83 4
2	35	Total-tetrafurans	303.9016	25.05	30923 547	0 866	0.585	0 585	0 81	0.77	NO	71.6
3	35	Total-tetrafurans	303.9016	24 64	0 000	0 866	0.000	0.248	0 64	0 77	YES	40 3
4	35	Total-tetrafurans	303.9016	24.49	8645.574	0.866	0.164	0 164	0.82	0.77	NO	30.8
5	35	Total-tetrafurans	303.9016	24.39	39322.181	0.866	0 744	0.744	0.76	0.77	NO	125 3
6	35	Total-tetrafurans	303.9016	24.23	0.000	0.866	0.000	0 182	0.91	0.77	YES	38 0
7	35	Total-tetrafurans	303.9016	24.15	32876.485	0 866	0 622	0.622	0.71	0 77	NO	94 1
8	35	Total-tetrafurans	303 9016	24 05	0.000	0.866	0.000	0 350	0 91	0 77	YES	58 4
9	35	Total-tetrafurans	303 9016	23.93	34630.193	0 866	0 656	0 656	0 77	0 77	NO	65 5
10	35	Total-tetrafurans	303 9016	23 73	89367.898	0 866	1.692	1 692	0 77	0 77	NO	264 2
11	35	Total-tetrafurans	303 9016	23 40	707.291	0 866	0.013	0.013	0 79	0 77	NO	3.4
12	35	Total-tetrafurans	303 9016	23 16	13956.754	0.866	0 264	0 264	0 81	0.77	NO	42.4
13	35	Total-tetrafurans	303 9016	22.90	13698.790	0.866	0.259	0 259	0 82	0.77	NO	47.7
14	40	Total-Furans	303.9016	21 31	61734.610	1.050	0 964	0.964	0 69	0.77	NO	195.6
15	40	Total-Furans	303.9016	28 48	661.642	1.050	0.010	0 010	0.84	0.77	NO	2.6
16	35	Total-tetrafurans	303.9016	27.89	23977.407	0.866	0.454	0.454	0.79	0.77	NO	39.2
17	35	Total-tetrafurans	303.9016	26 62	29537.830	0.866	0 559	0 559	0.78	0.77	NO	81 2
18	35	Total-tetrafurans	303.9016	26 53	8160 713	0.866	0.155	0.155	0.82	0.77	NO	28 4
19	1	2378-TCDF	303 9016	26.39	116865 820	0.866	2 213	2.213	0 76	0.77	NO	355.7
20	35	Total-tetrafurans	303 9016	26.20	28635.905	0 866	0 542	0.542	0 82	0 77	NO	58 8
21	35	Total-tetrafurans	303 9016	26 03	1367.957	0.866	0.026	0 026	0.80	0 77	NO	7 6
22	35	Total-tetrafurans	303.9016	25 90	7561 520	0.866	0 143	0 143	0 74	0.77	NO	24 4
23	35	Total-tetrafurans	303.9016	25.70	12255.800	0 866	0.232	0 232	0 78	0 77	NO	36.9
24	35	Total-tetrafurans	303 9016	25.48	70542.430	0 866	1.336	1.336	0 76	0.77	NO	216 8
25	35	Total-tetrafurans	303.9016	25.30	40413.195	0 866	0.765	0 765	0.79	0 77	NO	119.7
26	37	Total-pentafurans	339 8597	29 98	0.000	0.921	0.000	0.121	1.23	1.55	YES	10.6
27	37	Total-pentafurans	339.8597	29 80	1375 464	0.921	0.036	0 036	1.35	1 55	NO	3.4
28	37	Total-pentafurans	339.8597	29.48	119510.496	0 921	3.097	3.097	1 67	1.55	NO	198 4
29	37	Total-pentafurans	339 8597	29 29	0 000	0 921	0 000	0 159	3 24	1.55	YES	32 5
30	37	Total-pentafurans	339 8597	29 23	0 000	0 921	0.000	0 110	0.50	1 55	YES	21.3
31	37	Total-pentafurans	339.8597	29.19	0 000	0 921	0 000	0 057	2 78	1.55	YES	14 4
32	37	Total-pentafurans	339 8597	32 91	0.000	0.921	0 000	0 037	2 46	1 55	YES	8 6
33	3	23478-PeCDF	339 8597	31.88	23256.799	0 936	0 610	0.610	1 36	1 55	NO	57 5
34	37	Total-pentafurans	339 8597	31 72	27331 537	0.921	0.708	0 708	1 67	1.55	NO	73.1
35	37	Total-pentafurans	339.8597	31.60	0.000	0.921	0.000	0 193	1.13	1.55	YES	19 1
36	37	Total-pentafurans	339.8597	30 85	0 000	0.921	0.000	0 110	1 13	1.55	YES	11.4
37	37	Total-pentafurans	339.8597	30 74	23601.655	0.921	0.612	0.612	1 47	1.55	NO	58 5
38	2	12378-PeCDF	339 8597	30 54	23800 356	0.907	0 610	0.610	1 43	1.55	NO	63.1
39	37	Total-pentafurans	339.8597	30.17	47414.973	0.921	1 229	1 229	1 41	1.55	NO	85.0
40	37	Total-pentafurans	339 8597	30 07	5417 093	0 921	0 140	0 140	1 59	1 55	NO	17 6
41	7	123789-HxCDF	373 8208	37 73	0 000	1 020	0.000	0 604	1 63	1 24	YES	47 7
42	5	234678-HxCDF	373 8208	36.65	52823 227	1.070	1 847	1 847	1.21	1 24	NO	70 9
43	38	Total-hexafurans	373.8208	36 29	0.000	1.055	0 000	0 034	0 91	1 24	YES	3 3
44	38	Total-hexafurans	373 8208	36 05	4013 145	1.055	0 141	0.141	1 30	1 24	NO	9.6
45	6	123678-HxCDF	373 8208	35.69	37452 176	1 048	1.153	1 153	1 25	1.24	NO	63.0
46	4	123478-HxCDF	373.8208	35.55	66248.047	1 082	2 170	2 170	1 15	1.24	NO	129.2
47	38	Total-hexafurans	373.8208	35 39	10234 289	1.055	0.359	0 359	1 25	1 24	NO	19.6
48	38	Total-hexafurans	373.8208	34 89	699063 625	1 055	24.519	24.519	1 20	1.24	NO	1540 5
49	38	Total-hexafurans	373.8208	34.57	0.000	1 055	0.000	0 314	0 96	1.24	YES	21 7

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	38	Total-hexafurans	373.8208	34 03	495890 750	1.055	17.393	17.393	1 22	1.24	NO	1070 0
51	38	Total-hexafurans	373 8208	33.83	172086 015	1 055	6.036	6.036	1 26	1 24	NO	404 5
52	9	1234789-HpCDF	407.7818	42 56	29489 767	1 254	1.918	1.918	1 06	1 05	NO	48 8
53	39	Total-heptafurans	407.7818	41 08	0.000	1 234	0 000	0 037	0.88	1 05	YES	2.9
54	39	Total-heptafurans	407 7818	40 62	1393774 876	1.234	74 484	74.484	0 99	1 05	NO	2365 7
55	39	Total-heptafurans	407.7818	40 32	0.000	1.234	0 000	0 627	0 87	1.05	YES	24 2
56	8	1234678-HpCDF	407.7818	39 82	652055 875	1 214	29.729	29.729	0.98	1 05	NO	1122 8
57	10	OCDF	441.7428	47.95	886846.938	1.105	98 498	98.498	0.88	0.89	NO	1054.4
58	36	Total-penta1	339.8597	27 81	392721 672		10 225	10 225	1 55	1 55	NO	2081.4
59	41	Total-tetradioxins	319.8965	24.64	0.000	1 046	0.000	0 106	1 20	0.77	YES	22.3
60	41	Total-tetradioxins	319.8965	24 43	735121.094	1.046	18.243	18 243	0 78	0 77	NO	2759.4
61	41	Total-tetradioxins	319.8965	24 17	1160187.876	1 046	28 791	28 791	0 78	0 77	NO	4520.2
62	41	Total-tetradioxins	319.8965	27.57	16748.190	1.046	0.416	0 416	0 87	0.77	NO	61.5
63	41	Total-tetradioxins	319.8965	27.15	12660 393	1 046	0 314	0 314	0 83	0.77	NO	43 9
64	11	2378-TCDD	319.8965	27.03	0 000	1 046	0 000	0 231	0 62	0 77	YES	29.9
65	41	Total-tetradioxins	319 8965	26.65	77047.312	1 046	1 912	1 912	0 77	0 77	NO	215 7
66	41	Total-tetradioxins	319 8965	26.36	0.000	1 046	0 000	0 064	1 69	0.77	YES	19 0
67	41	Total-tetradioxins	319 8965	26.21	323700.781	1 046	8 033	8 033	0 75	0.77	NO	1162 9
68	41	Total-tetradioxins	319 8965	26.02	7854.409	1 046	0.195	0 195	0.79	0.77	NO	26 5
69	41	Total-tetradioxins	319.8965	25.90	2543.428	1.046	0.063	0 063	0 69	0 77	NO	9.4
70	41	Total-tetradioxins	319.8965	25.65	80237 605	1 046	1.991	1 991	0.78	0 77	NO	290.8
71	41	Total-tetradioxins	319.8965	25 36	38518 205	1.046	0.956	0.956	0.82	0 77	NO	131.2
72	41	Total-tetradioxins	319.8965	25.17	0.000	1.046	0.000	0 081	1 10	0 77	YES	13.4
73	42	Total-pentadioxins	355 8546	31.45	144079 504	0.973	5.518	5.518	1.50	1 55	NO	345 0
74	42	Total-pentadioxins	355.8546	31 03	31102 815	0 973	1.191	1.191	1 54	1 55	NO	53 0
75	42	Total-pentadioxins	355 8546	30.89	530071.859	0.973	20 302	20 302	1 51	1 55	NO	1256 6
76	42	Total-pentadioxins	355 8546	30 75	37438.941	0 973	1 434	1 434	1 66	1 55	NO	89 5
77	42	Total-pentadioxins	355 8546	30 65	15831 229	0.973	0.606	0 606	1 39	1 55	NO	42.7
78	42	Total-pentadioxins	355 8546	30.53	560427.782	0.973	21.465	21.465	1 56	1 55	NO	1439.9
79	42	Total-pentadioxins	355 8546	29 92	19355 144	0.973	0.741	0 741	1.49	1 55	NO	55.3
80	42	Total-pentadioxins	355 8546	29 44	388605 031	0.973	14 884	14 884	1 54	1 55	NO	598.4
81	42	Total-pentadioxins	355 8546	32 53	7613.650	0.973	0.292	0 292	1 50	1.55	NO	18.2
82	12	12378-PeCDD	355.8546	32 13	38683 626	0.973	1.482	1.482	1 59	1 55	NO	83.7
83	15	123789-HxCDD	389 8157	37 35	108509 937	0.839	5.283	5 283	1 22	1 24	NO	159 7
84	43	Total-hexadioxins	389 8157	37.11	22103.000	0 884	1 021	1 021	1 42	1.24	NO	31.3
85	14	123678-HxCDD	389.8157	36.93	207071.422	0 878	9 381	9 381	1 23	1 24	NO	298.3
86	13	123478-HxCDD	389 8157	36.80	65926.631	0 935	2 958	2 958	1 21	1.24	NO	102.6
87	43	Total-hexadioxins	389.8157	35.93	50141.384	0 884	2 316	2 316	1 16	1 24	NO	86 2
88	43	Total-hexadioxins	389.8157	35.82	574620 891	0 884	26 546	26 546	1 19	1.24	NO	580 0
89	43	Total-hexadioxins	389.8157	35.43	1482225.626	0 884	68 474	68.474	1.19	1.24	NO	2108 7
90	43	Total-hexadioxins	389.8157	34.62	485628.735	0 884	22.435	22.435	1.23	1 24	NO	737.6
91	43	Total-hexadioxins	389.8157	34 35	40350.772	0 884	1 864	1 864	1 25	1.24	NO	67 9
92	16	1234678-HpCDD	423.7766	41 65	3268169.375	0.974	224 295	224.	1.04	1.05	NO	1811.5
93	44	Total-heptadioxins	423 7766	40.38	5145930.500	0.974	353.166	353 .	1 01	1.05	NO	3100.8
94	17	OCDD	457.7377	47 66	14889341 .	0.950	1923.7. .	1923	0.88	0 89	NO	6257 3

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330 9792	21.18	0.000							0 7
2	48	FUNCTION1 PFK	330.9792	21 12	0.000							0 8
3	48	FUNCTION1 PFK	330 9792	22.52	0.000							2.1
4	48	FUNCTION1 PFK	330 9792	22 48	0 000							1.8
5	48	FUNCTION1 PFK	330 9792	22 36	0 000							0 5
6	48	FUNCTION1 PFK	330.9792	22 18	0.000							1 6
7	48	FUNCTION1 PFK	330 9792	22.12	0 000							1 3
8	48	FUNCTION1 PFK	330.9792	22 04	0.000							1.8
9	48	FUNCTION1 PFK	330.9792	21 98	0 000							2 9
10	48	FUNCTION1 PFK	330.9792	21 94	0.000							2.8
11	48	FUNCTION1 PFK	330.9792	21 85	0 000							3.6
12	48	FUNCTION1 PFK	330.9792	21.78	0.000							2.2
13	48	FUNCTION1 PFK	330 9792	21.70	0.000							2 4
14	48	FUNCTION1 PFK	330 9792	21.64	0.000							2 7
15	48	FUNCTION1 PFK	330 9792	21.54	0.000							1 6
16	48	FUNCTION1 PFK	330 9792	21.46	0.000							0.6
17	48	FUNCTION1 PFK	330.9792	21 34	0 000							3 2
18	48	FUNCTION1 PFK	330 9792	21 28	0.000							2 4
19	48	FUNCTION1 PFK	330.9792	24 40	0 000							2.6
20	48	FUNCTION1 PFK	330.9792	24.36	0.000							3.0
21	48	FUNCTION1 PFK	330.9792	24 33	0 000							2 9
22	48	FUNCTION1 PFK	330.9792	24 24	0.000							1 7
23	48	FUNCTION1 PFK	330.9792	24.12	0.000							3.0
24	48	FUNCTION1 PFK	330 9792	24.00	0.000							1 7
25	48	FUNCTION1 PFK	330 9792	23.87	0.000							3 1
26	48	FUNCTION1 PFK	330 9792	23 76	0.000							2 7
27	48	FUNCTION1 PFK	330 9792	23.66	0 000							1 8
28	48	FUNCTION1 PFK	330 9792	23.55	0 000							3 0
29	48	FUNCTION1 PFK	330.9792	23.39	0 000							1 6
30	48	FUNCTION1 PFK	330 9792	23.31	0 000							0.5
31	48	FUNCTION1 PFK	330 9792	23.13	0.000							1.2
32	48	FUNCTION1 PFK	330 9792	22.99	0.000							1.6
33	48	FUNCTION1 PFK	330 9792	22.69	0 000							0 3
34	48	FUNCTION1 PFK	330 9792	22.63	0.000							1.2
35	48	FUNCTION1 PFK	330 9792	26.09	0.000							2.5
36	48	FUNCTION1 PFK	330.9792	26 03	0.000							2.7
37	48	FUNCTION1 PFK	330.9792	25 90	0.000							1 6
38	48	FUNCTION1 PFK	330.9792	25 84	0 000							1.6
39	48	FUNCTION1 PFK	330 9792	25 76	0.000							1 9
40	48	FUNCTION1 PFK	330 9792	25 67	0 000							2 8
41	48	FUNCTION1 PFK	330 9792	25.50	0 000							2.3
42	48	FUNCTION1 PFK	330 9792	25 38	0.000							1.8
43	48	FUNCTION1 PFK	330.9792	25 29	0.000							2.0
44	48	FUNCTION1 PFK	330 9792	25.24	0.000							1.7
45	48	FUNCTION1 PFK	330.9792	25.06	0 000							2 5
46	48	FUNCTION1 PFK	330 9792	24.99	0 000							3.1
47	48	FUNCTION1 PFK	330 9792	24.88	0 000							1 8
48	48	FUNCTION1 PFK	330 9792	24 81	0 000							1 4
49	48	FUNCTION1 PFK	330.9792	24 64	0 000							1 7

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	48	FUNCTION1 PFK	330.9792	24.49	0.000							3.1
51	48	FUNCTION1 PFK	330.9792	28.13	0 000							1 9
52	48	FUNCTION1 PFK	330 9792	28.07	0 000							2 4
53	48	FUNCTION1 PFK	330 9792	27.95	0.000							0 4
54	48	FUNCTION1 PFK	330.9792	27.89	0.000							1.0
55	48	FUNCTION1 PFK	330 9792	27.77	0 000							2.2
56	48	FUNCTION1 PFK	330.9792	27.56	0.000							1.5
57	48	FUNCTION1 PFK	330.9792	27.47	0.000							0.9
58	48	FUNCTION1 PFK	330 9792	27 41	0 000							1.5
59	48	FUNCTION1 PFK	330.9792	27 32	0.000							1 4
60	48	FUNCTION1 PFK	330 9792	27 15	0 000							1 3
61	48	FUNCTION1 PFK	330.9792	27.06	0.000							1 1
62	48	FUNCTION1 PFK	330 9792	26 84	0 000							1 6
63	48	FUNCTION1 PFK	330 9792	26 69	0 000							0.9
64	48	FUNCTION1 PFK	330.9792	26.42	0.000							2 5
65	48	FUNCTION1 PFK	330 9792	26 36	0 000							2.4
66	48	FUNCTION1 PFK	330.9792	26.18	0.000							2.3
67	48	FUNCTION1 PFK	330.9792	28.63	0.000							2.0
68	48	FUNCTION1 PFK	330.9792	28.51	0.000							0.5
69	48	FUNCTION1 PFK	330.9792	28 39	0 000							0 9
70	48	FUNCTION1 PFK	330.9792	28.32	0.000							0 6

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	32.92	0.000		0 000					10 5
2	49	FUNCTION2 PFK	366.9792	32.73	0.000		0 000					5 7
3	49	FUNCTION2 PFK	366.9792	30.47	0 000		0.000					45 0
4	49	FUNCTION2 PFK	366.9792	29 28	0 000		0.000					20 8

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	38.52	0 000		0.000					17 5
2	50	FUNCTION3 PFK	380 9760	37.79	0.000		0.000					46.3
3	50	FUNCTION3 PFK	380 9760	37.60	0.000		0.000					47 3

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430 9728	39.00	0 000								14.1
2	51	FUNCTION4 PFK	430.9728	38 96	0 000								13.8
3	51	FUNCTION4 PFK	430.9728	40 39	0 000								1.1
4	51	FUNCTION4 PFK	430 9728	40.24	0 000								0 3
5	51	FUNCTION4 PFK	430 9728	40 14	0.000								0.8
6	51	FUNCTION4 PFK	430 9728	40 09	0.000								0 7
7	51	FUNCTION4 PFK	430 9728	39.95	0 000								0.4
8	51	FUNCTION4 PFK	430.9728	39.91	0 000								1 4
9	51	FUNCTION4 PFK	430 9728	39.85	0.000								1.5
10	51	FUNCTION4 PFK	430 9728	39 81	0.000								1 8
11	51	FUNCTION4 PFK	430 9728	39 75	0.000								1 0
12	51	FUNCTION4 PFK	430.9728	39.69	0 000								1.7
13	51	FUNCTION4 PFK	430 9728	39.54	0.000								0.8
14	51	FUNCTION4 PFK	430.9728	39 39	0 000								2.5
15	51	FUNCTION4 PFK	430.9728	39 30	0 000								5.0
16	51	FUNCTION4 PFK	430 9728	39 20	0 000								7 9
17	51	FUNCTION4 PFK	430.9728	39 14	0 000								10.0
18	51	FUNCTION4 PFK	430.9728	39 12	0 000								9.8
19	51	FUNCTION4 PFK	430.9728	42 24	0 000								1 0
20	51	FUNCTION4 PFK	430 9728	42 03	0.000								1.3
21	51	FUNCTION4 PFK	430 9728	41 90	0 000								1.0
22	51	FUNCTION4 PFK	430 9728	41 86	0 000								1.5
23	51	FUNCTION4 PFK	430 9728	41 81	0.000								1.2
24	51	FUNCTION4 PFK	430 9728	41 77	0.000								0.9
25	51	FUNCTION4 PFK	430 9728	41 43	0 000								0.5
26	51	FUNCTION4 PFK	430 9728	41 30	0 000								1.9
27	51	FUNCTION4 PFK	430 9728	41 26	0 000								1 6
28	51	FUNCTION4 PFK	430 9728	41 18	0.000								0 8
29	51	FUNCTION4 PFK	430 9728	41.15	0 000								0.8
30	51	FUNCTION4 PFK	430 9728	41.06	0.000								0.6
31	51	FUNCTION4 PFK	430.9728	40 93	0.000								0.9
32	51	FUNCTION4 PFK	430.9728	40.75	0.000								0.7
33	51	FUNCTION4 PFK	430 9728	40 60	0.000								0.7
34	51	FUNCTION4 PFK	430.9728	40.52	0.000								1 3
35	51	FUNCTION4 PFK	430 9728	44.33	0 000								0.9
36	51	FUNCTION4 PFK	430.9728	44.27	0 000								0.5
37	51	FUNCTION4 PFK	430.9728	43.70	0 000								1 0
38	51	FUNCTION4 PFK	430 9728	43.65	0 000								1 0
39	51	FUNCTION4 PFK	430 9728	43.59	0 000								1 0
40	51	FUNCTION4 PFK	430 9728	43.55	0 000								0.4
41	51	FUNCTION4 PFK	430.9728	43.36	0.000								0 7
42	51	FUNCTION4 PFK	430.9728	43.26	0.000								0.6
43	51	FUNCTION4 PFK	430.9728	43 11	0.000								0 9
44	51	FUNCTION4 PFK	430.9728	43 07	0 000								0 9
45	51	FUNCTION4 PFK	430.9728	42.97	0 000								0 5
46	51	FUNCTION4 PFK	430.9728	42.77	0 000								0.5
47	51	FUNCTION4 PFK	430 9728	42 61	0.000								0 6
48	51	FUNCTION4 PFK	430 9728	42 55	0 000								1 9
49	51	FUNCTION4 PFK	430 9728	42.50	0.000								1.4

Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati.	1° Rati...	1° R...	S/N
50	51	FUNCTION4 PFK	430 9728	42 43	0 000							1 1
51	51	FUNCTION4 PFK	430.9728	44 81	0 000							0 3
52	51	FUNCTION4 PFK	430.9728	44.75	0 000							0 8
53	51	FUNCTION4 PFK	430.9728	44 71	0.000							1.2
54	51	FUNCTION4 PFK	430 9728	44.66	0.000							1.1
55	51	FUNCTION4 PFK	430 9728	44 59	0.000							0.4
56	51	FUNCTION4 PFK	430 9728	44.46	0.000							0 3

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480 9696	48.65	0.000							1 1
2	52	FUNCTION5 PFK	480 9696	47.28	0.000							2 4

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	27.72	0.000		0.000					5.6
2	53	FUNCTION1 HXCD...	375 8364	26.87	0.000		0.000					6.3
3	53	FUNCTION1 HXCD	375.8364	26 45	0 000		0 000					116 9
4	53	FUNCTION1 HXCD...	375.8364	26.18	0 000		0 000					34 8
5	53	FUNCTION1 HXCD...	375.8364	24 24	0 000		0 000					11.3
6	53	FUNCTION1 HXCD	375 8364	21 30	0 000		0 000					2 3
7	53	FUNCTION1 HXCD .	375 8364	28.41	0.000		0.000					3 6
8	53	FUNCTION1 HXCD .	375 8364	27.95	0.000		0 000					3.3
9	53	FUNCTION1 HXCD	375.8364	27.89	0.000		0.000					4.3

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M .	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	54	FUNCTION1 HPCD ..	409 7974	22 85	0.000		0.000					1.9
2	54	FUNCTION1 HPCD .	409.7974	21 30	0.000		0.000					2 0

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	33.11	0 000		0 000					6.6
2	55	FUNCTION2 HPCD...	409.7974	32.49	0 000		0 000					4.1
3	55	FUNCTION2 HPCD .	409 7974	31.94	0.000		0 000					7.4
4	55	FUNCTION2 HPCD .	409.7974	31.72	0 000		0.000					5.4
5	55	FUNCTION2 HPCD .	409 7974	31.68	0 000		0 000					5 9
6	55	FUNCTION2 HPCD .	409.7974	30 77	0 000		0.000					4.2
7	55	FUNCTION2 HPCD .	409 7974	30 49	0 000		0 000					39 4
8	55	FUNCTION2 HPCD. .	409.7974	30 17	0.000		0 000					48 8
9	55	FUNCTION2 HPCD .	409 7974	29 89	0 000		0.000					10.9
10	55	FUNCTION2 HPCD ..	409.7974	33 17	0 000		0.000					10 3

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56 FUNCTION3 OCDPE	445 7555	36.87	0.000		0 000					5.9
2	56 FUNCTION3 OCDPE	445 7555	36.78	0 000		0.000					7.4
3	56 FUNCTION3 OCDPE	445.7555	36.71	0 000		0 000					15.1
4	56 FUNCTION3 OCDPE	445.7555	36 65	0.000		0.000					14 1
5	56 FUNCTION3 OCDPE	445.7555	36.58	0 000		0.000					9 3
6	56 FUNCTION3 OCDPE	445.7555	36 38	0 000		0.000					2 4
7	56 FUNCTION3 OCDPE	445 7555	35.58	0.000		0.000					7.7
8	56 FUNCTION3 OCDPE	445.7555	35 54	0.000		0 000					7.2
9	56 FUNCTION3 OCDPE	445.7555	35.47	0.000		0.000					15.4
10	56 FUNCTION3 OCDPE	445.7555	35.33	0 000		0.000					6.6
11	56 FUNCTION3 OCDPE	445 7555	35 26	0.000		0.000					8.1
12	56 FUNCTION3 OCDPE	445 7555	35 21	0.000		0 000					9 9
13	56 FUNCTION3 OCDPE	445.7555	34 83	0 000		0.000					2 5
14	56 FUNCTION3 OCDPE	445.7555	33.68	0 000		0.000					2.1
15	56 FUNCTION3 OCDPE	445.7555	37 89	0 000		0 000					4 5
16	56 FUNCTION3 OCDPE	445.7555	37.87	0.000		0.000					4.7
17	56 FUNCTION3 OCDPE	445 7555	37 60	0.000		0 000					6.8
18	56 FUNCTION3 OCDPE	445.7555	37.37	0.000		0 000					11 9
19	56 FUNCTION3 OCDPE	445.7555	37.31	0.000		0.000					6.0
20	56 FUNCTION3 OCDPE	445 7555	37 18	0.000		0.000					12.3
21	56 FUNCTION3 OCDPE	445.7555	37.14	0.000		0.000					13.1
22	56 FUNCTION3 OCDPE	445 7555	37 10	0 000		0 000					13.3
23	56 FUNCTION3 OCDPE	445.7555	37 07	0 000		0.000					12 6
24	56 FUNCTION3 OCDPE	445.7555	37.02	0.000		0 000					20 6
25	56 FUNCTION3 OCDPE	445 7555	36 98	0 000		0.000					16 1

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	41.39	0 000		0 000					13.1
2	57 FUNCTION4 NCDPE	479 7165	41 27	0 000		0.000					14 7
3	57 FUNCTION4 NCDPE	479 7165	39 81	0 000		0.000					3 2
4	57 FUNCTION4 NCDPE	479.7165	39.41	0.000		0 000					482 6
5	57 FUNCTION4 NCDPE	479 7165	44.24	0 000		0 000					2 1
6	57 FUNCTION4 NCDPE	479 7165	43 63	0.000		0 000					2 4
7	57 FUNCTION4 NCDPE	479.7165	43 14	0 000		0.000					3.1
8	57 FUNCTION4 NCDPE	479 7165	42.01	0 000		0 000					6.5
9	57 FUNCTION4 NCDPE	479 7165	41 88	0.000		0 000					6.0
10	57 FUNCTION4 NCDPE	479 7165	41 66	0.000		0.000					38.3
11	57 FUNCTION4 NCDPE	479 7165	41 63	0 000		0.000					42 0
12	57 FUNCTION4 NCDPE	479.7165	41.42	0.000		0 000					16.3

ETHERS6

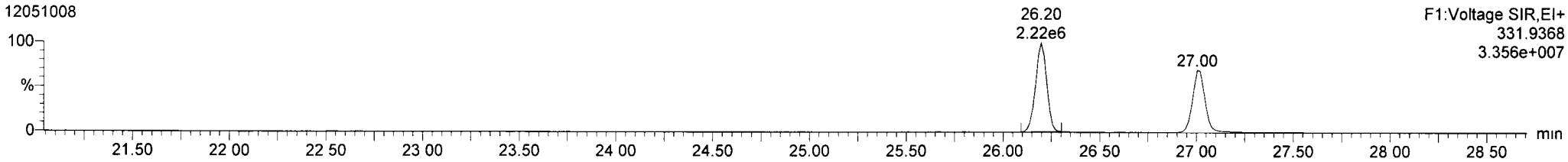
	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	58 FUNCTION5 DCDPE	513.6775	47 87	0.000		0 000					4 9

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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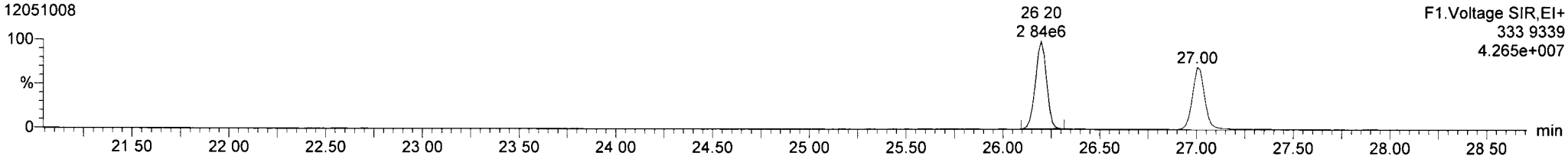

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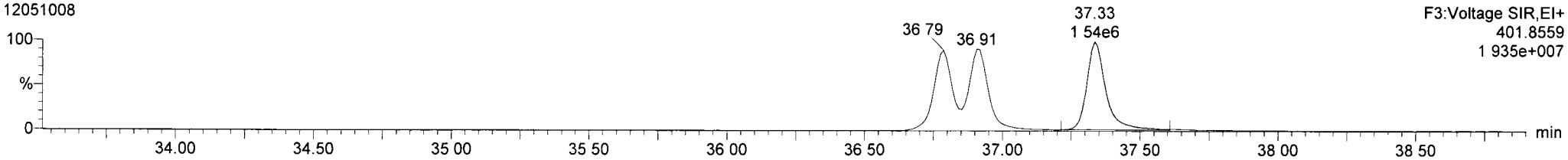

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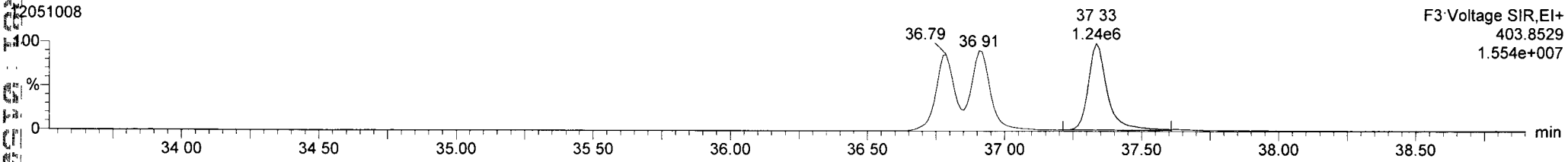

Quantify Sample Report **MassLynx 4.1 SCN 714**
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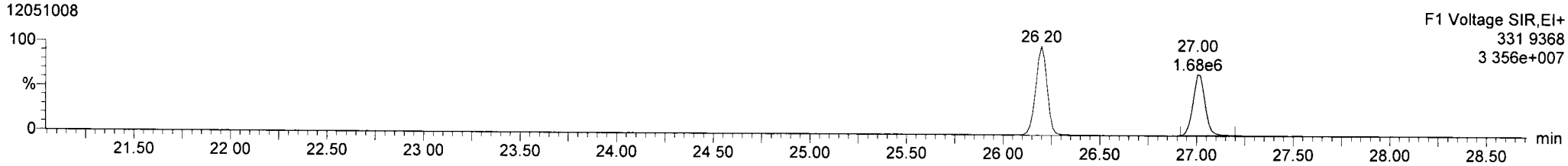
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09.40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
12051008



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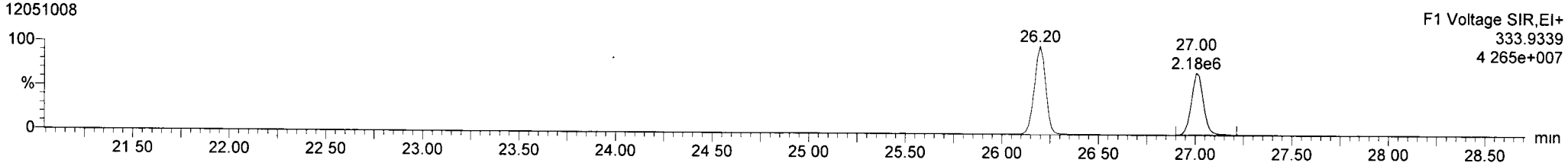

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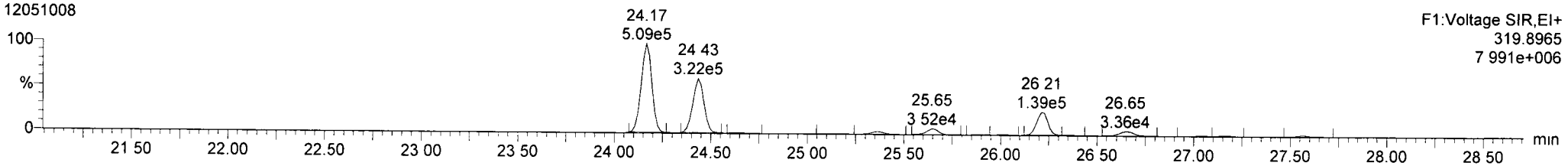

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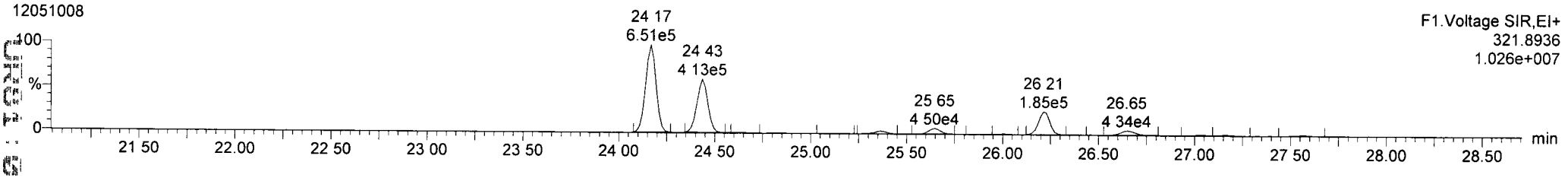

FUNCTION1 PFK
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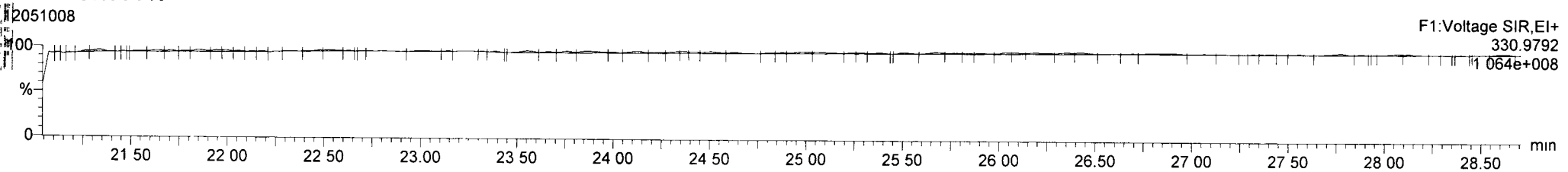

Quantify Sample Report **MassLynx 4.1 SCN 714**
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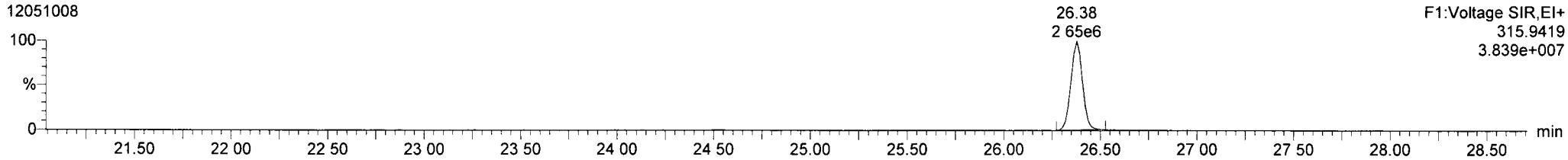
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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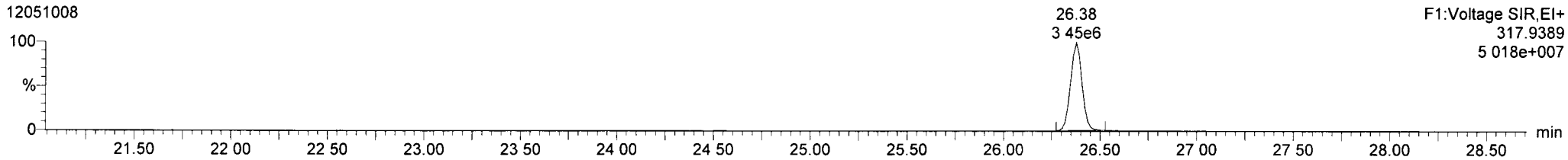
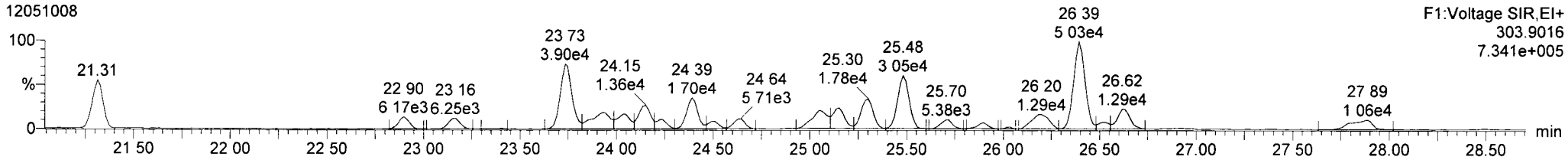


Total-tetrafurans



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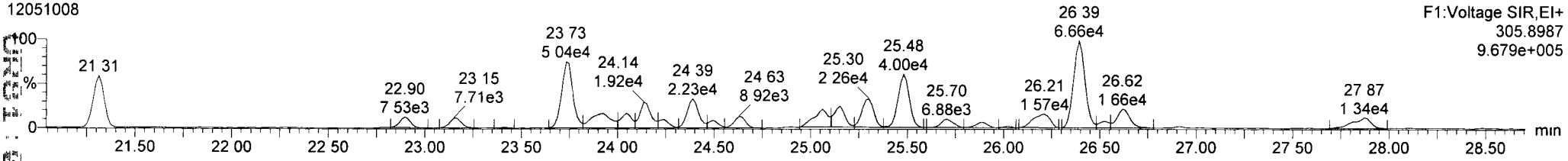
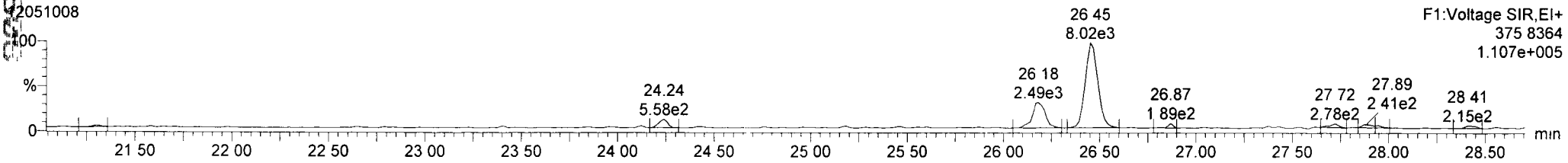


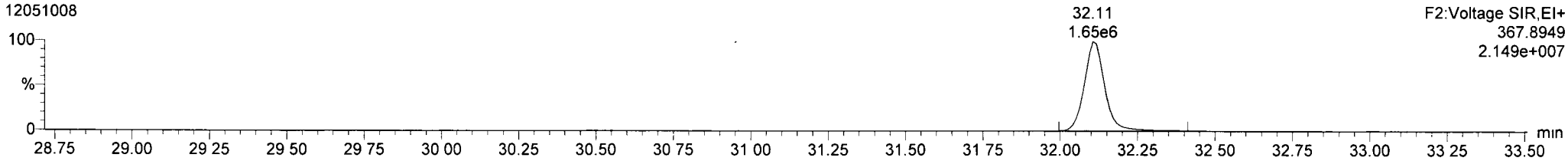
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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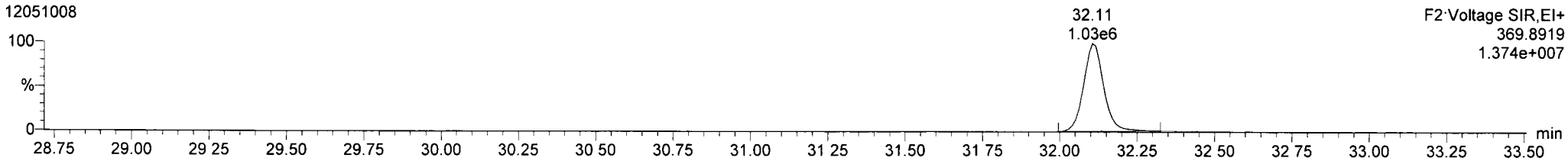

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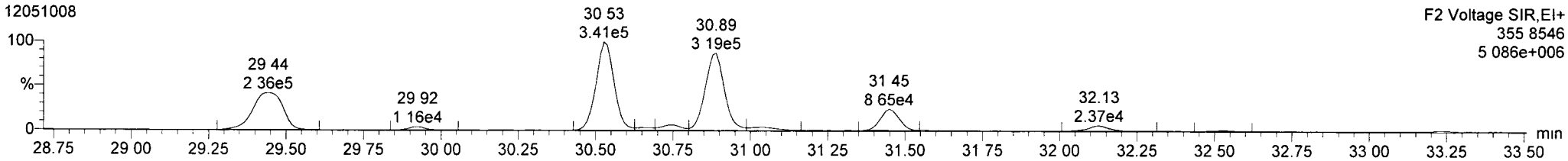

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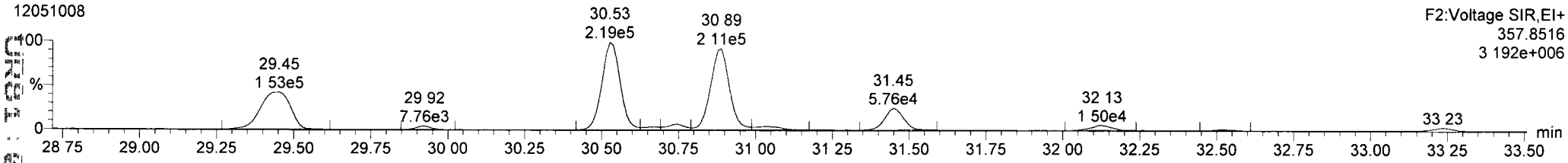
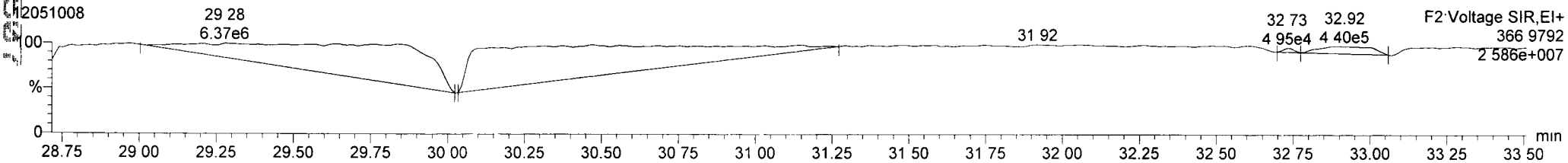


FUNCTION2 PFK



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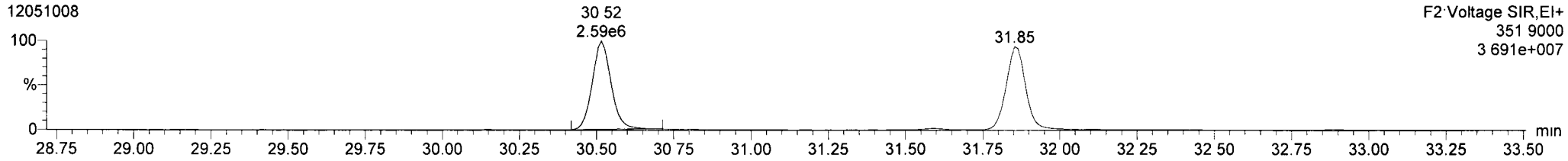
13C-12378-PeCDF



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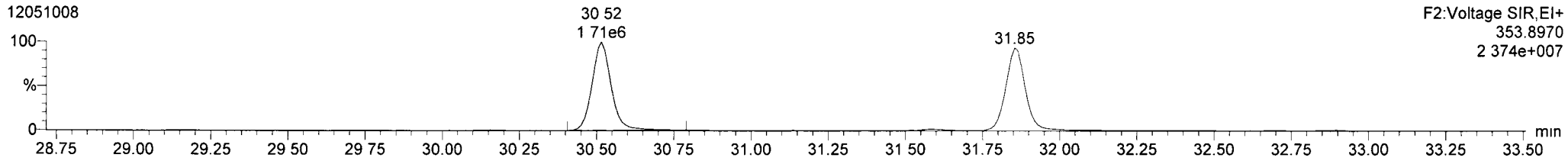
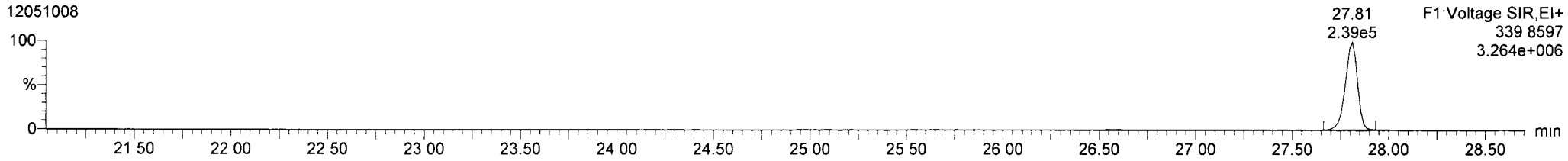


Total-penta1



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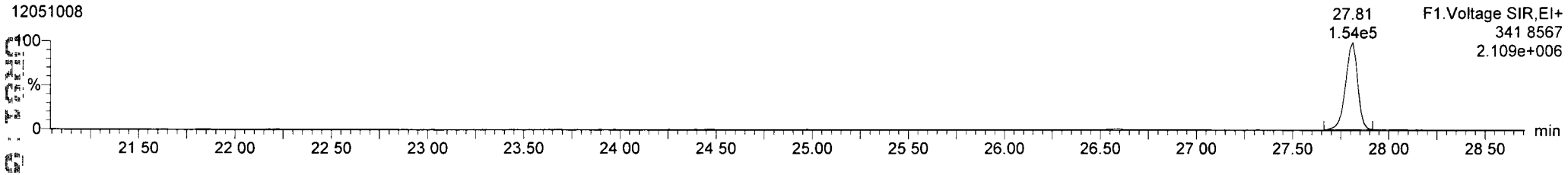
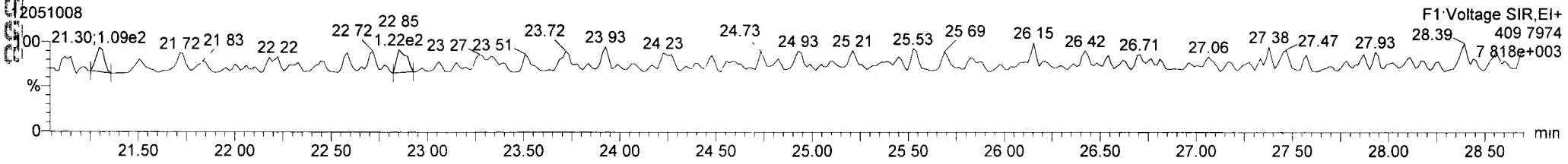


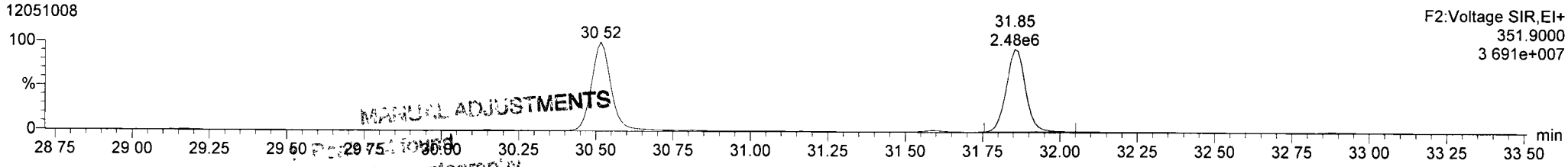
FUNCTION1 HPCDPE



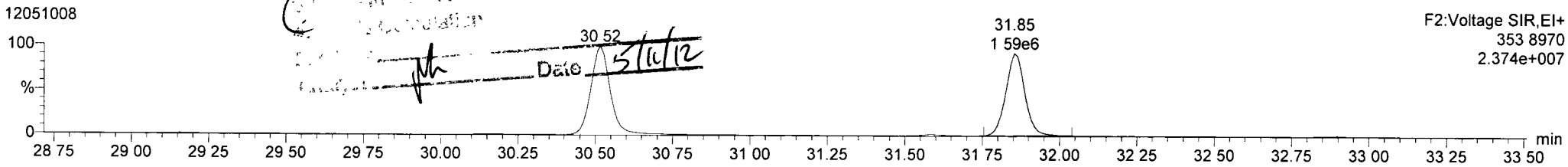
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

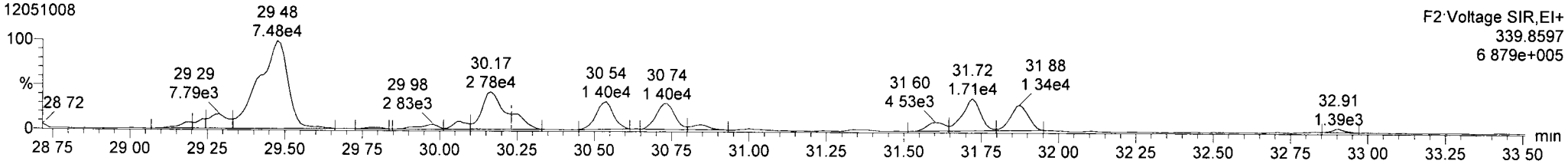
13C-23478-PeCDF



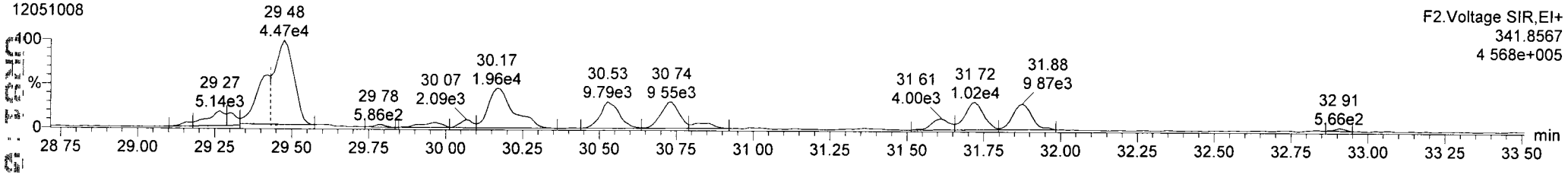
13C-23478-PeCDF



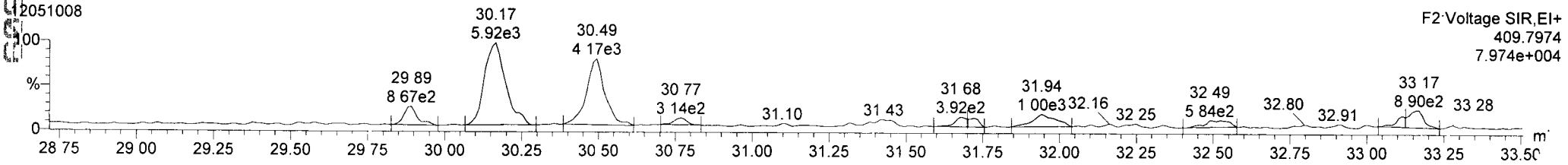
Total-pentafurans



Total-pentafurans



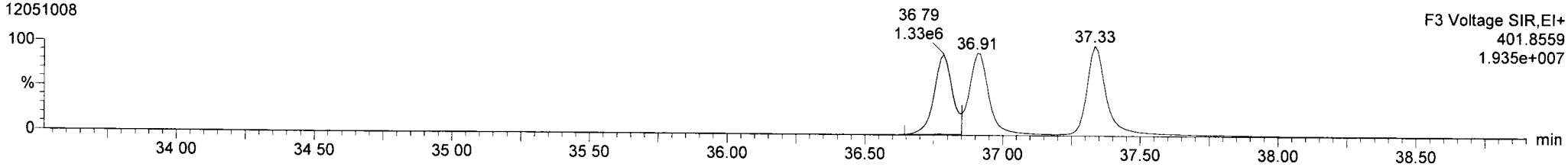
FUNCTION2 HPCDPE



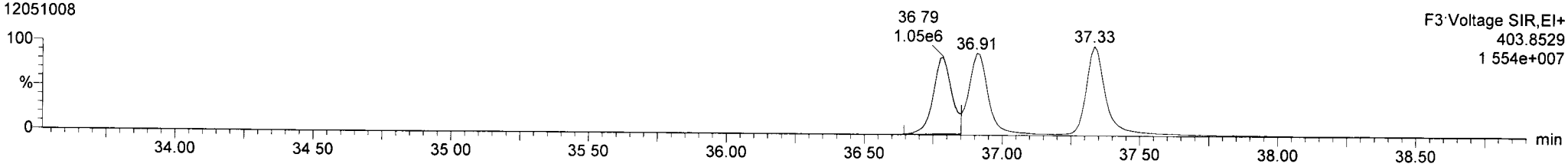
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

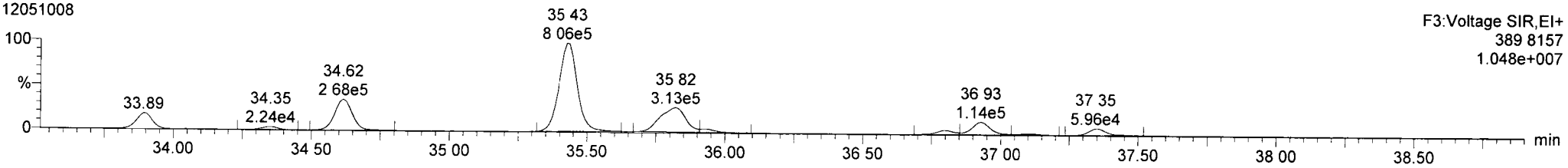
13C-123478-HxCDD
12051008



13C-123478-HxCDD
12051008



Total-hexadioxins
12051008



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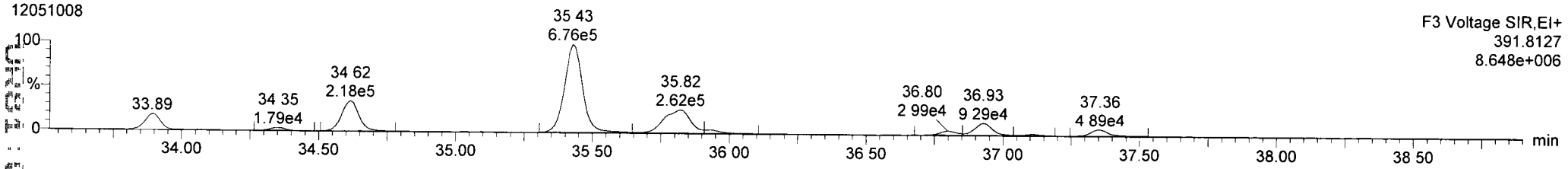
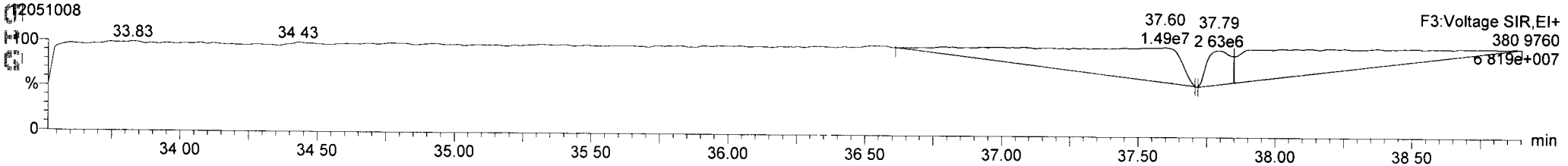


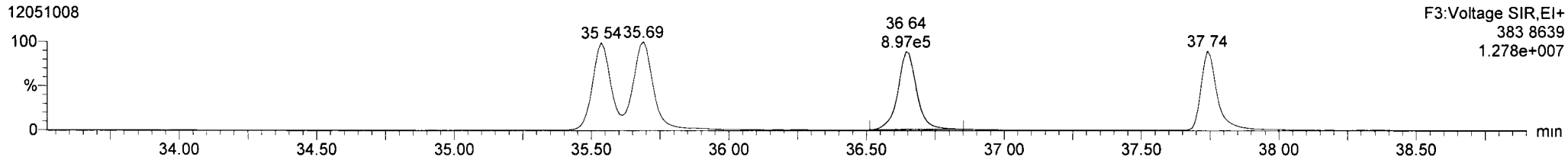
FUNCTION3 PFK
12051008



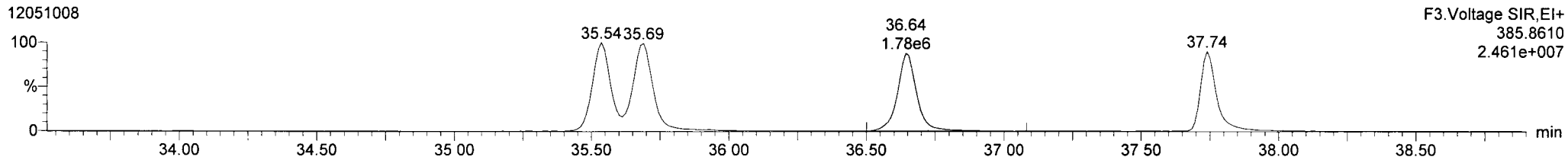
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

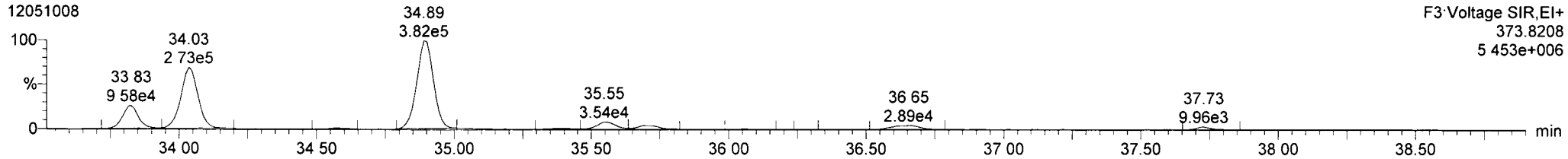
13C-234678-HxCDF



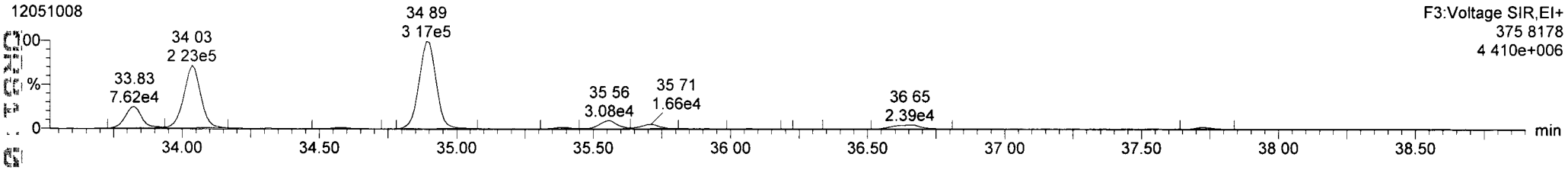
13C-234678-HxCDF



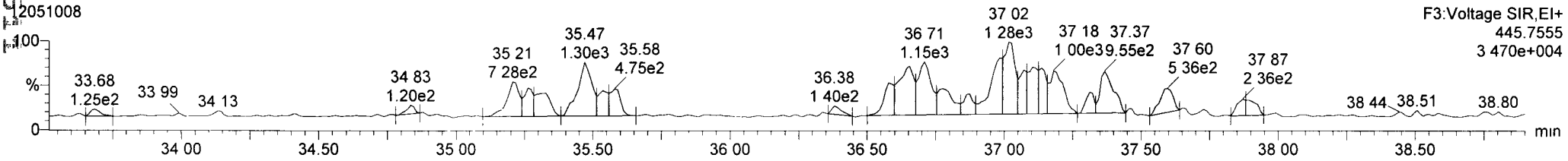
Total-hexafurans



Total-hexafurans



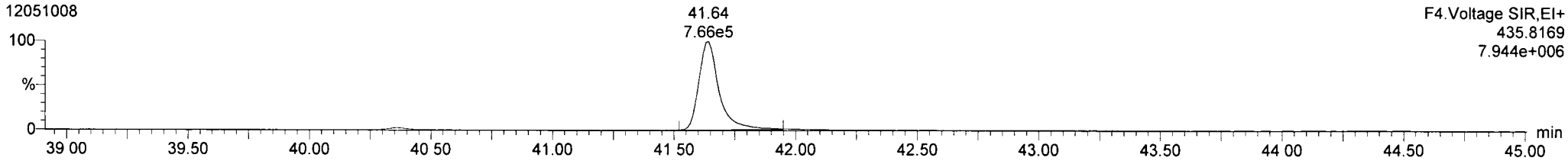
FUNCTION3 OCDPE



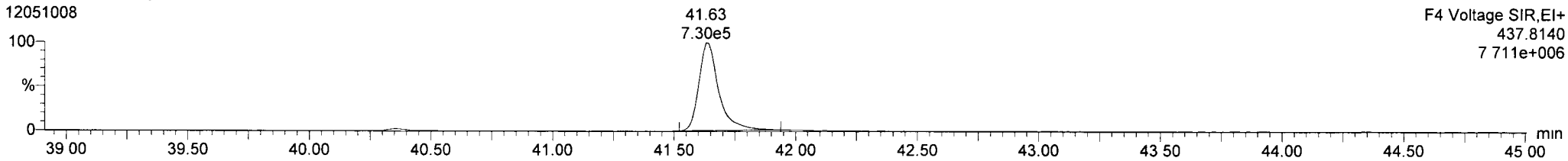
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

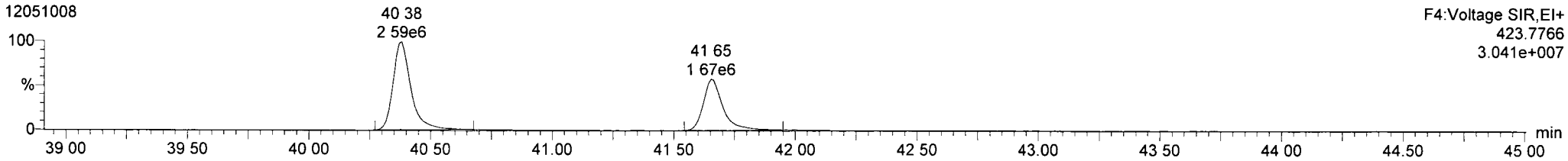
13C-1234678-HpCDD



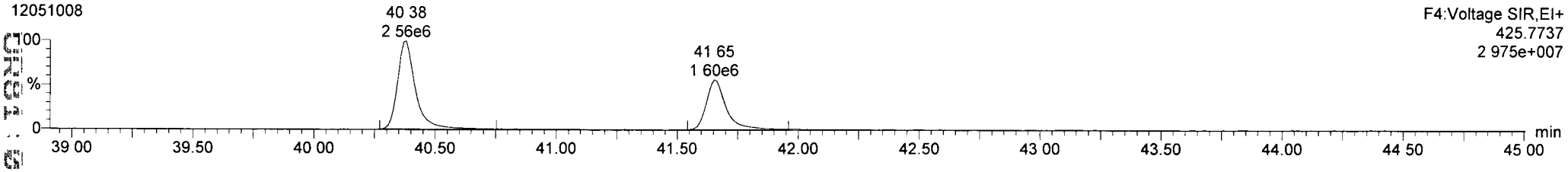
13C-1234678-HpCDD



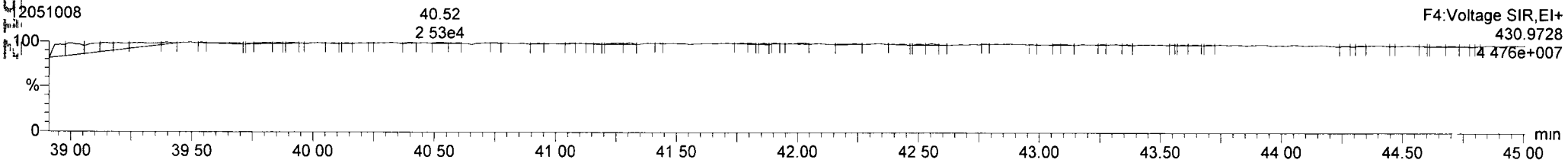
Total-heptadioxins



Total-heptadioxins



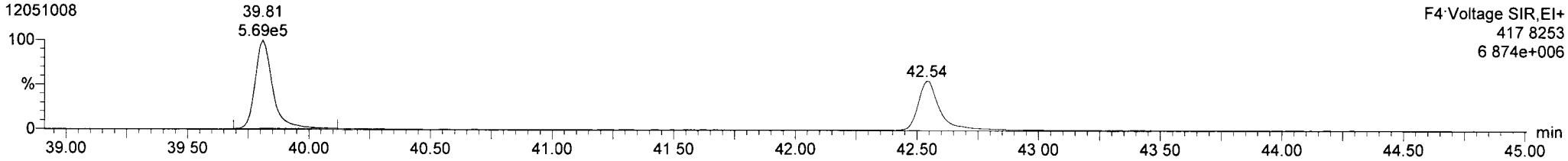
FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered. Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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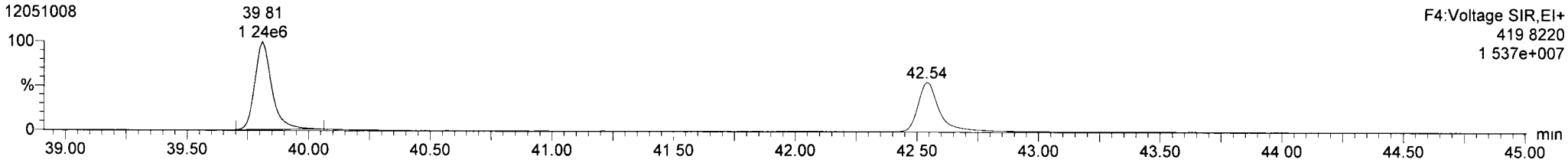
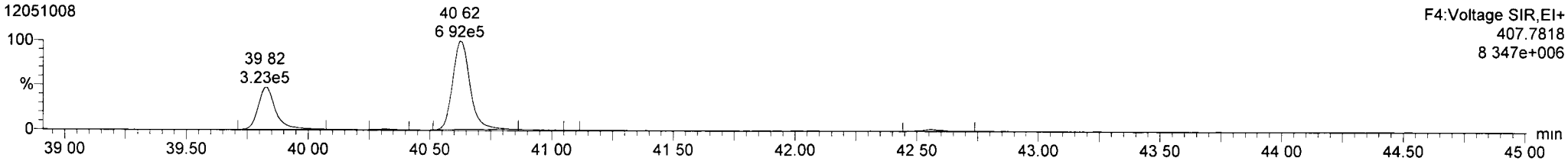


Total-heptafurans



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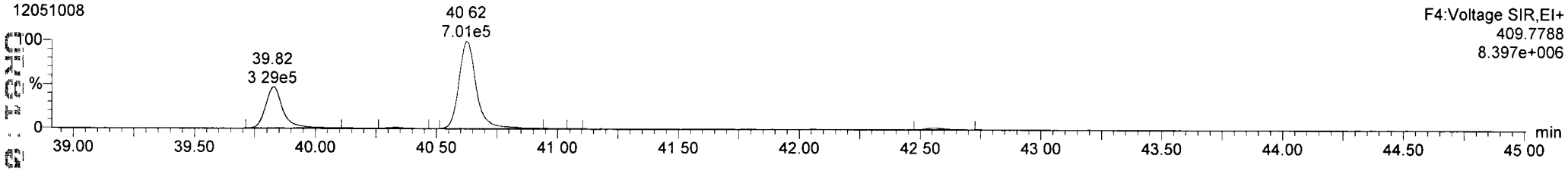
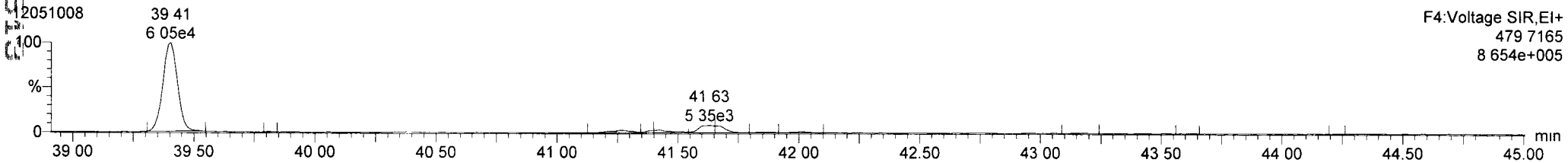


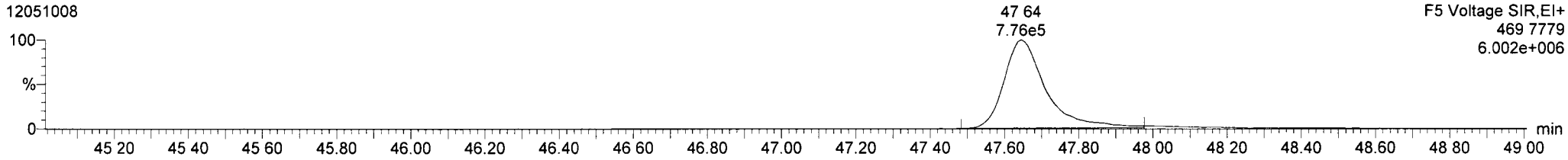
FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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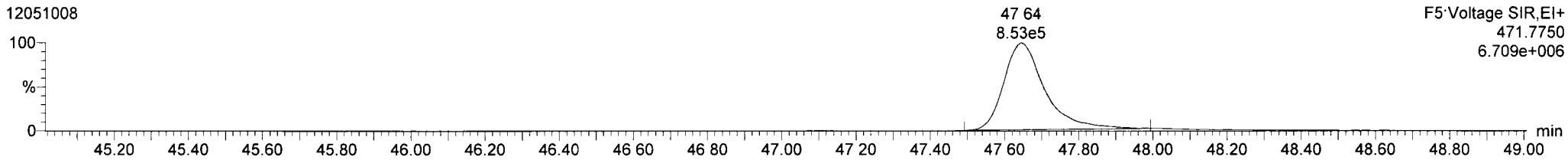

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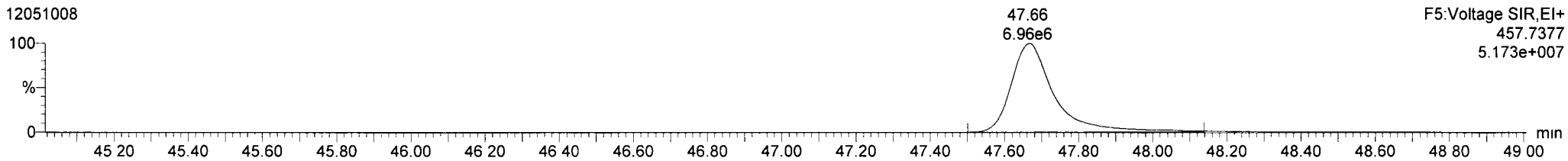

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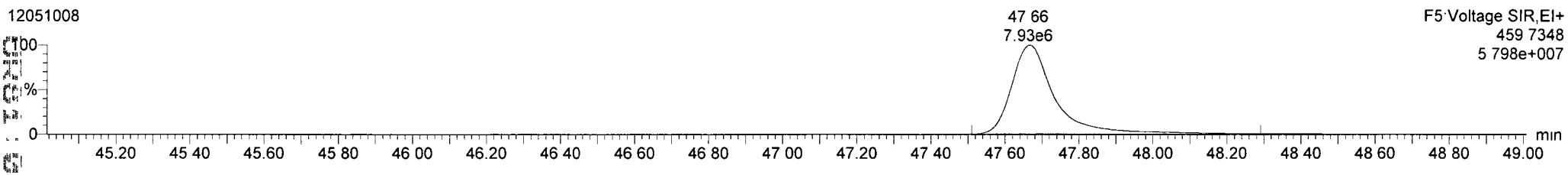
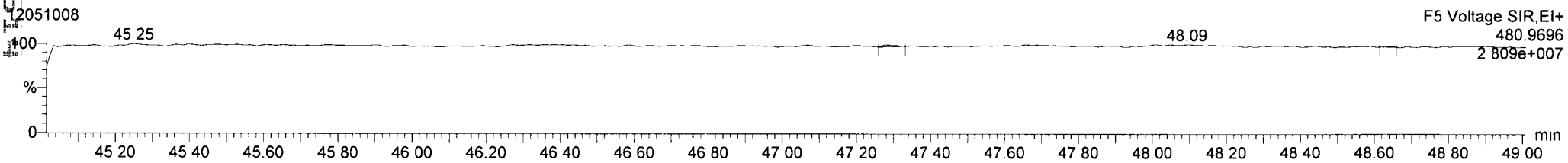


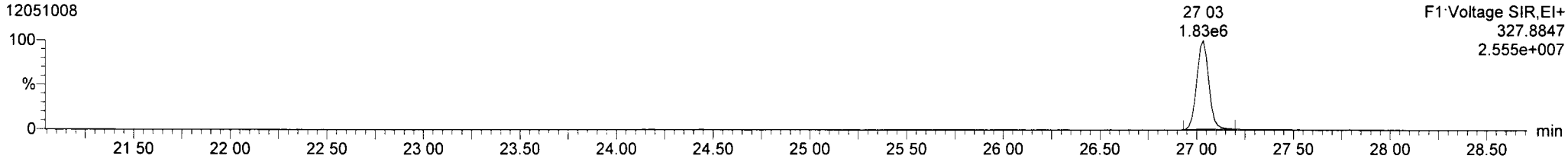
FUNCTION5 PFK



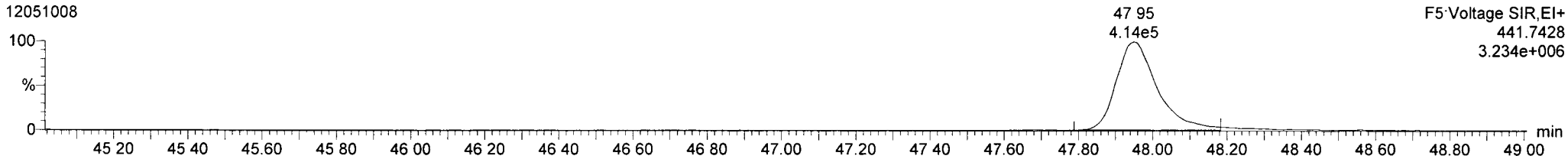
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:40:15 Pacific Daylight Time

Name: 12051008, Date: 10-May-2012, Time: 15:41:01, ID: UR81C, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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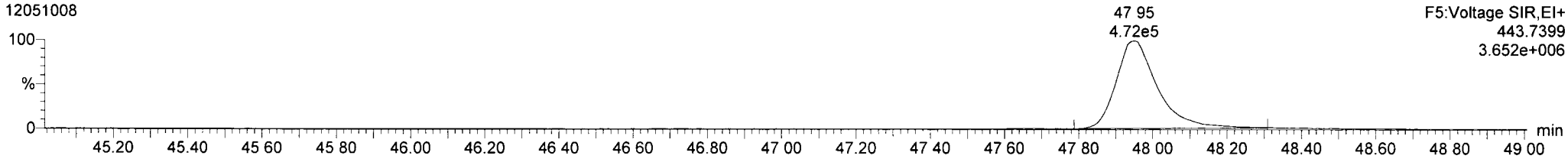
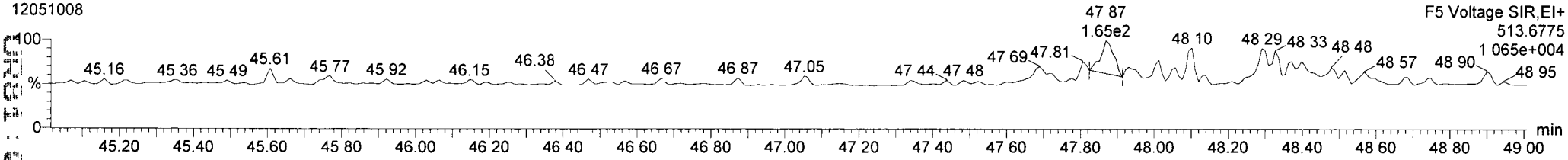


FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:31 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051009, Date: 10-May-2012, Time: 16:33:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

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2	2	12378-PeCDF	339 8597	30.516	30.527	1446211	1446211	0.907	bd	99.3	1.55	1.55	2475.9	NO	49.650	49.650
3	3	23478-PeCDF	339.8597	31.853	31.865	1424176	1424176	0 936	db	99.2	1.54	1.55	2505.6	NO	49.583	49.583
4	4	123478-HxCDF	373.8208	35.525	35.514	1353682	1353682	1 082	bd	99.8	1.26	1.24	1764.9	NO	49.898	49.898
5	5	234678-HxCDF	373.8208	36.610	36.611	1326506	1326506	1.070	bb	99.6	1.22	1.24	1644.6	NO	49.777	49.777
6	6	123678-HxCDF	373.8208	35.668	35.678	1462023	1462023	1 048	db	102.8	1.20	1 24	1772 2	NO	51.397	51.397
7	7	123789-HxCDF	373.8208	37.729	37.729	1051072	1051072	1 020	bd	99 3	1.22	1 24	1273 4	NO	49.667	49.667
8	8	1234678-HpCDF	407.7818	39.800	39.798	1218901	1218901	1.214	bb	101 5	1.03	1 05	1987 0	NO	50.742	50.742
9	9	1234789-HpCDF	407 7818	42.540	42.531	869013	869013	1 254	bd	95 2	0 98	1.05	1175.4	NO	47 603	47 603
10	10	OCDF	441.7428	47.914	47.894	1423298	1423298	1.105	bd	101 4	0 86	0.89	1969.9	NO	101 356	101 356
11	11	2378-TCDD	319 8965	27 019	27.018	269651	269651	1.046	bb	98 1	0.77	0.77	661.3	NO	9 810	9.810
12	12	12378-PeCDD	355 8546	32.116	32.104	992974	992974	0.973	bd	101 2	1.53	1.55	1957.4	NO	50.588	50.588
13	13	123478-HxCDD	389.8157	36.742	36.742	945091	945091	0.935	bd	103.6	1.25	1.24	1749.6	NO	51.815	51.815
14	14	123678-HxCDD	389.8157	36.874	36 863	963735	963735	0.878	db	99.0	1.23	1.24	1679.9	NO	49.510	49.510
15	15	123789-HxCDD	389.8157	37 301	37 257	912839	912839	0 839	bd	104.5	1.24	1.24	1488.2	NO	52.228	52.228
16	16	1234678-HpCDD	423 7766	41 631	41 621	771426	771426	0.974	bb	99.4	1.04	1.05	1224 7	NO	49 717	49.717
17	17	OCDD	457 7377	47 626	47 623	1258963	1258963	0.950	bd	104.3	0 89	0 89	1415.6	NO	104.295	104.295
18	18	13C-2378-TCDF	315 9419	26 362	26 362	4113962		1.484	bb	96.1	0 77	0 77	8233 3	NO	96.058	
19	19	13C-12378-PeCDF	351 9000	30 505	30 503	3211679		1.048	bb	106 2	1.59	1 55	5712.8	NO	106 211	
20	20	13C-23478-PeCDF	351 9000	31 842	31 841	3069132		1 003	bb	106 0	1.55	1 55	5583.3	NO	106 018	
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22	22	13C-123678-HxCDF	383 8639	35.657	35.657	2713414		1 315	db	105 2	0 52	0.51	2570 8	NO	105 200	
23	23	13C-234678-HxCDF	383.8639	36.589	36.589	2491035		1 223	bb	103 8	0 52	0 51	2385 5	NO	103.824	
24	24	13C-123789-HxCDF	383 8639	37.717	37.695	2074570		1 056	bb	100.1	0 53	0 51	1938 5	NO	100 118	
25	25	13C-1234678-HpCDF	417 8253	39.778	39 778	1977969		1 011	bb	99 7	0.45	0 44	2117.8	NO	99.710	
26	26	13C-1234789-HpCDF	417 8253	42 518	42 529	1455711		0.741	bd	100.2	0.43	0.44	1301.2	NO	100 224	
27	27	13C-1234-TCDD	331 9368	26 183	26 272	2885178		1 000	bb	100 0	0.77	0.77	4663 9	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27 004	27 004	2628281		0 956	bb	95 3	0 78	0.77	4209 7	NO	95 251	
29	29	13C-12378-PeCDD	367.8949	32.094	32 093	2016754		0.663	bb	105 4	1.60	1.55	6468.4	NO	105.359	
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33	33	13C-OCDD	469 7779	47 609	47.647	2541101		0.717	bb	90 3	0.93	0.89	2060.3	NO	180 677	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:31 Pacific Daylight Time

Name: 12051009, Date: 10-May-2012, Time: 16:33:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

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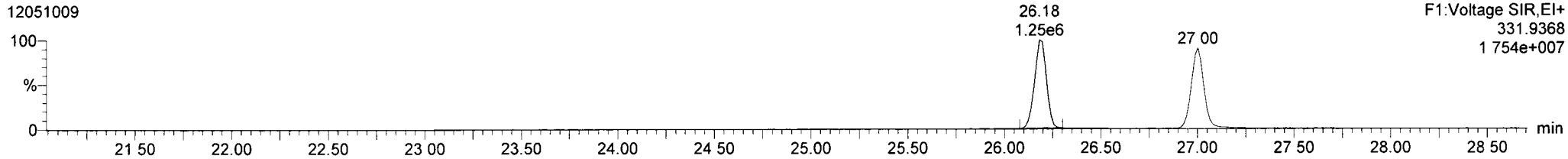
35	35	Total-tetrafurans	303.9016		25 370			0.866							32.886	32 886
36	36	Total-penta1	339.8597		28 210										71.591	71 591
37	37	Total-pentafurans	339.8597		30 790			0.921							151.994	152 180
38	38	Total-hexafurans	373.8208		35 760			1 055							259.468	259.468
39	39	Total-heptafurans	407.7818		41.160			1 234							98.345	98.389
40	40	Total-Furans	303 9016		0 000			1 050							715.640	715 870
41	41	Total-tetradioxins	319.8965		25.880			1 046							56.377	56 508
42	42	Total-pentadioxins	355 8546		30.950			0 973							181.511	181.713
43	43	Total-hexadioxins	389 8157		35.940			0 884							221.411	222.805
44	44	Total-heptadioxins	423 7766		40.980			0 974							112.413	112 413
45	45	Total-Dioxins	319 8965		0.000			0 942							676.007	677.735
46	46	Total-TEQ	319.8965		0.000										1391.647	1393.6
47	47	37CL-2378-TCDD	327 8847	27.019	26 994	288547		1 037		96.4			1167 5		9.643	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366 9792		0.000										0 000	
50	50	FUNCTION3 PFK	380.9760		0 000										0.000	
51	51	FUNCTION4 PFK	430.9728		0 000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0.000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0.000	
56	56	FUNCTION3 OCDPE	445 7555		0 000											
57	57	FUNCTION4 NCDPE	479.7165		0.000										0 000	
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:31 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051009, Date: 10-May-2012, Time: 16:33:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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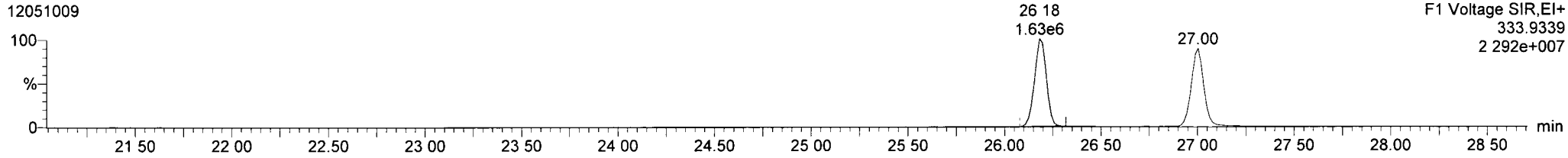

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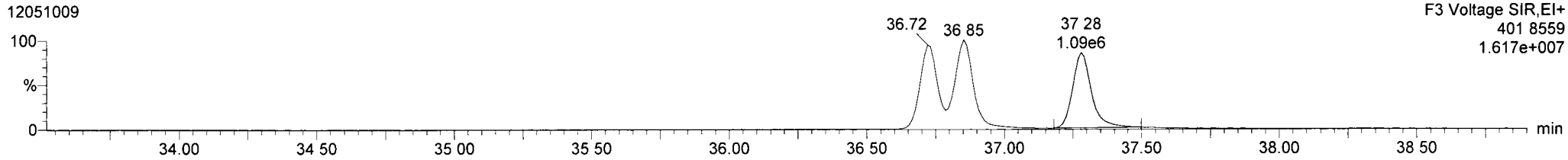

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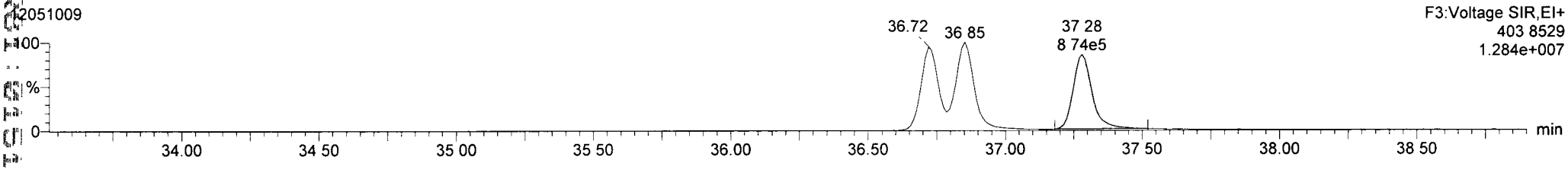

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Name: 12051009, Date: 10-May-2012, Time: 16:33:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

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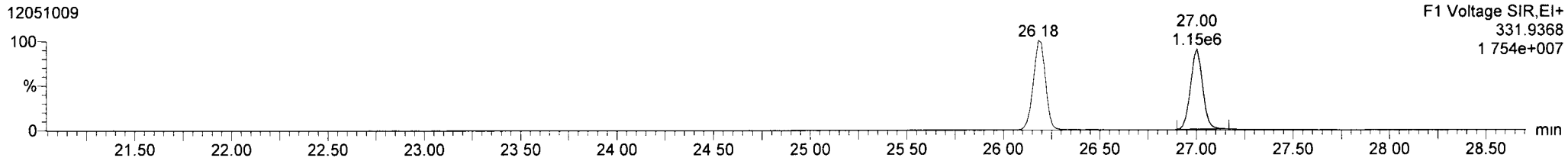

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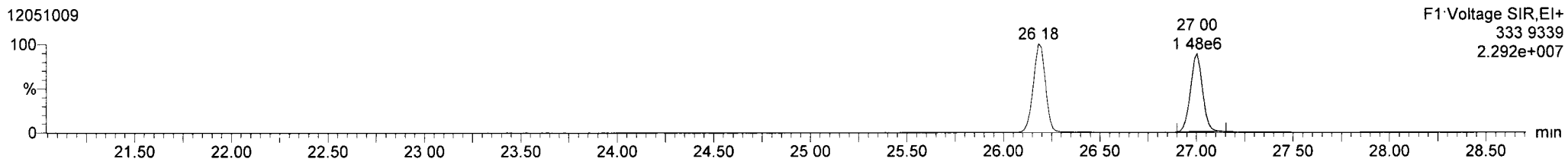

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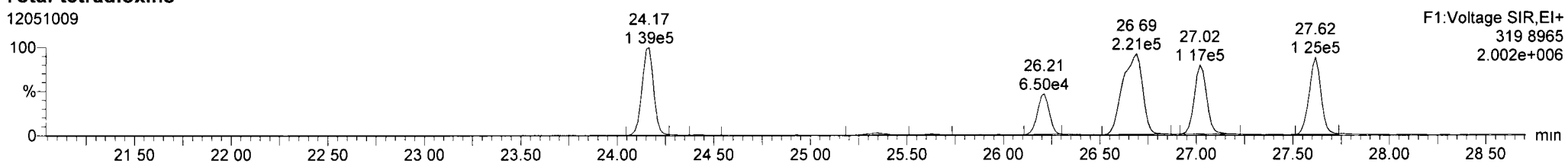
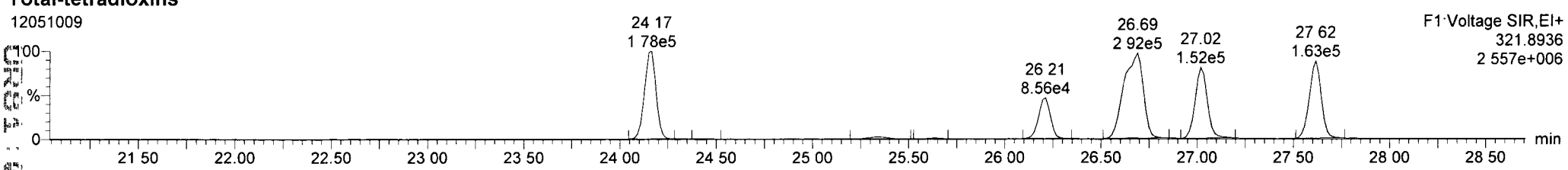
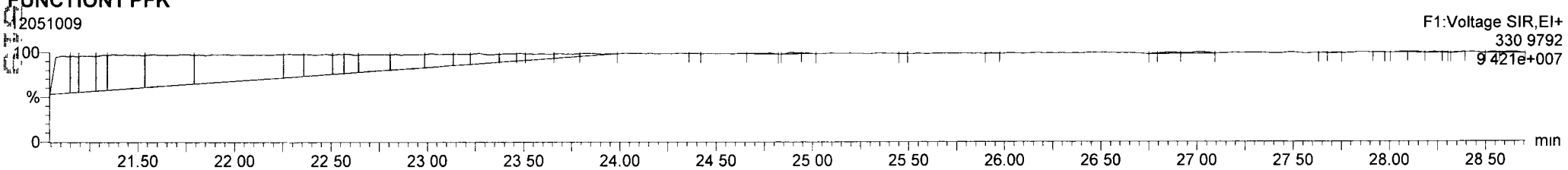


Total-tetradioxins



FUNCTION1 PFK



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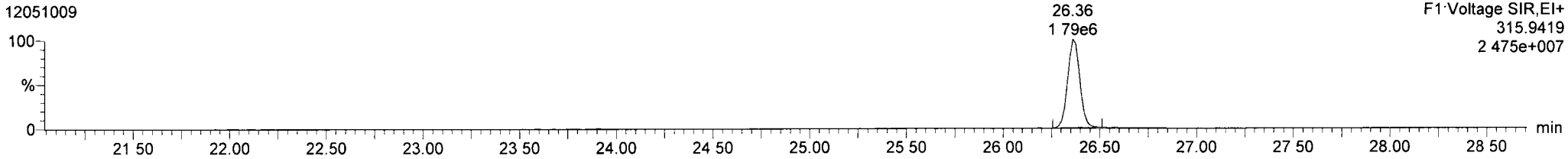
13C-2378-TCDF



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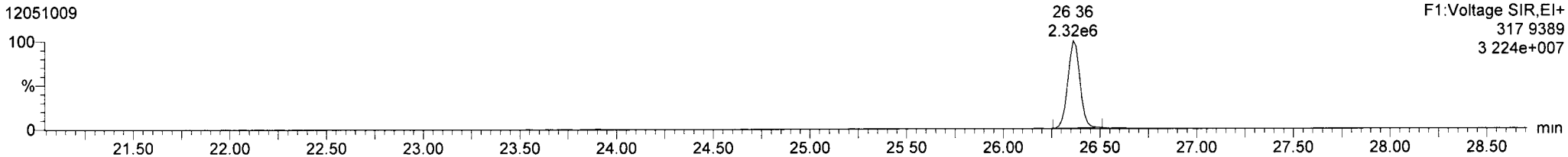
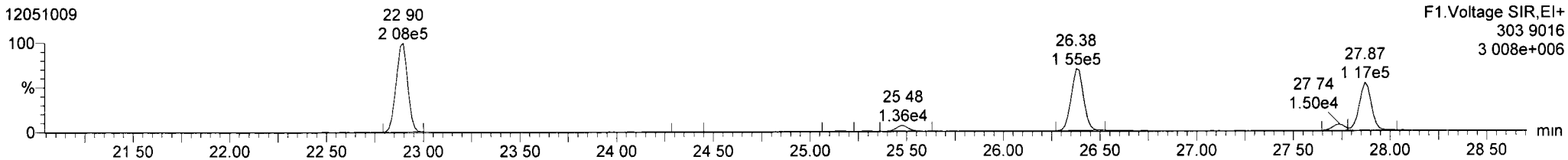
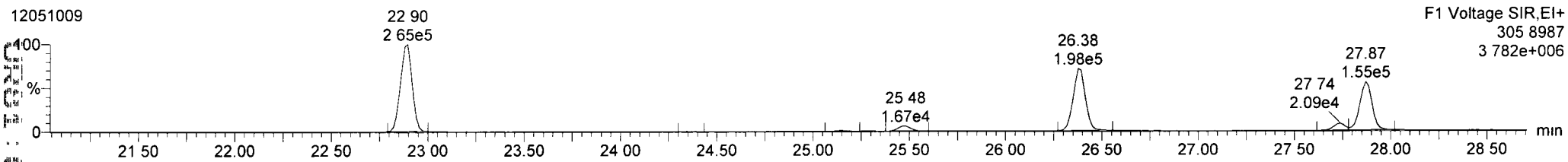


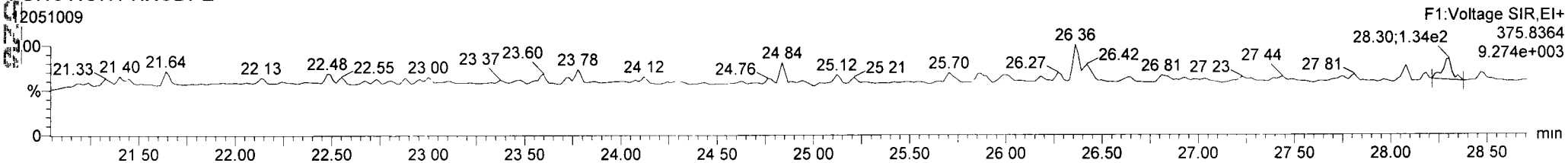
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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Last Altered: Friday, May 11, 2012 09.37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:31 Pacific Daylight Time

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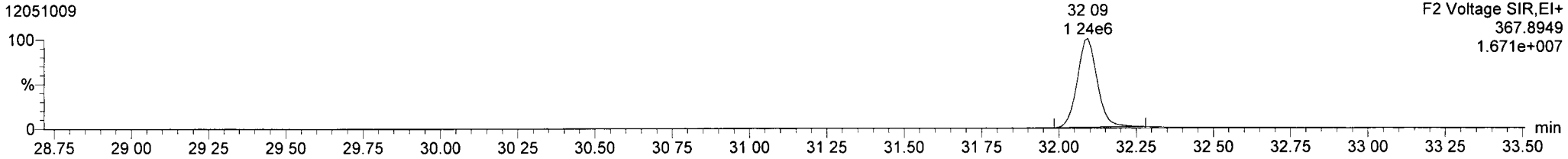
13C-12378-PeCDD



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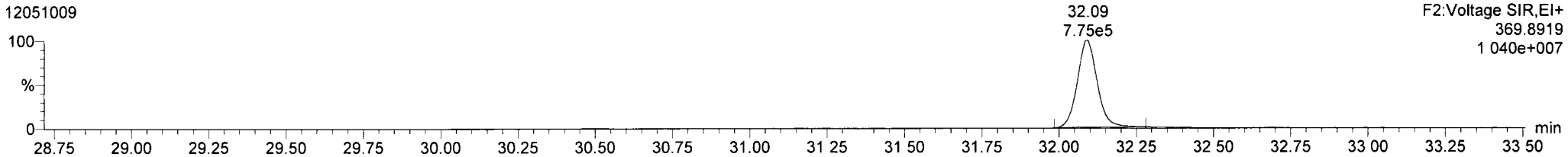

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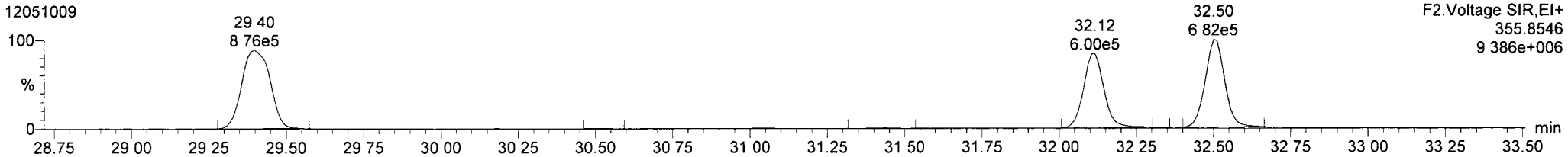

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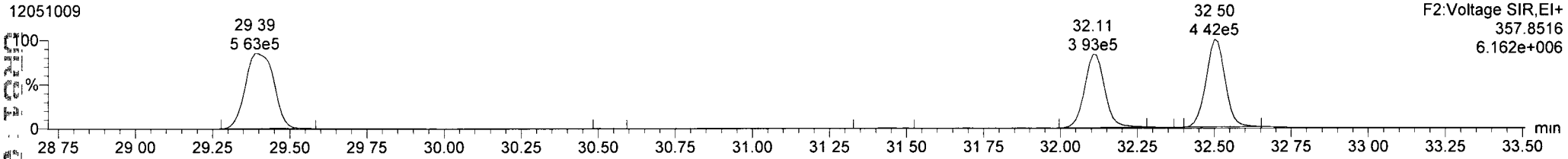

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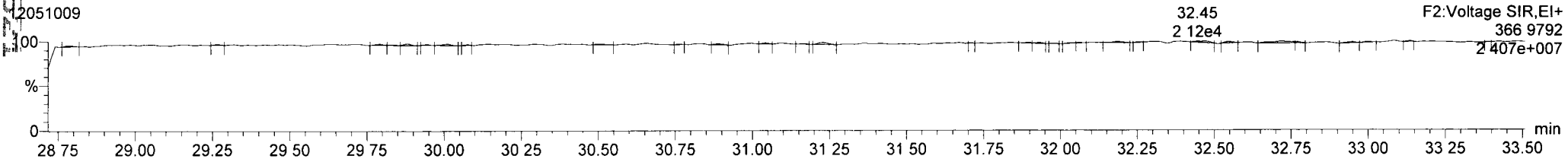

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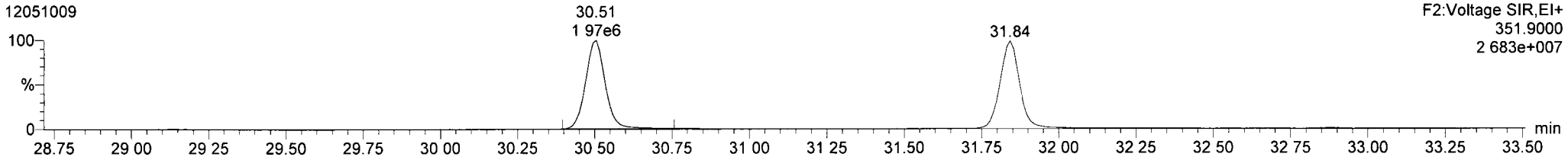
13C-12378-PeCDF



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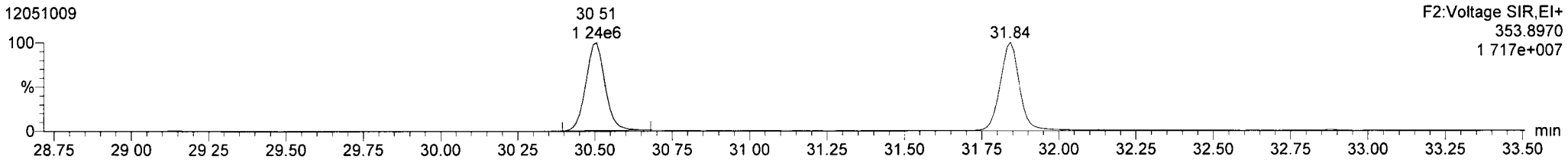

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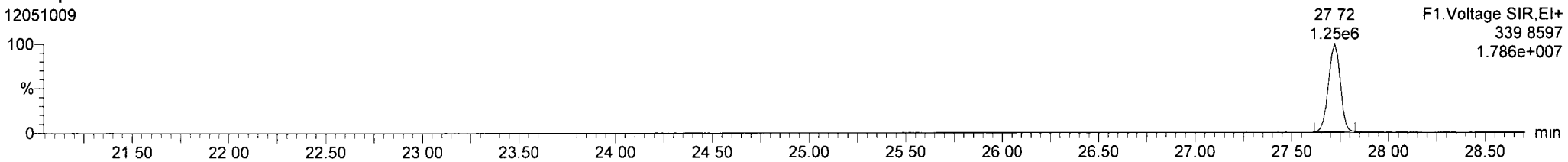
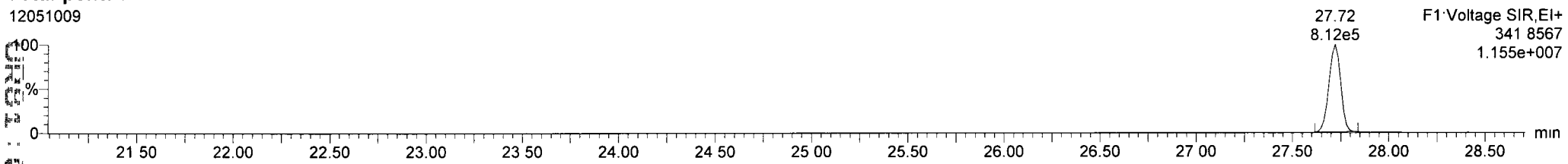
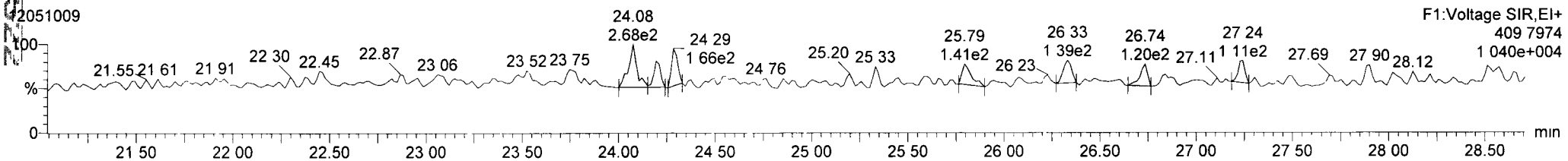


Total-penta1



FUNCTION1 HPCDPE



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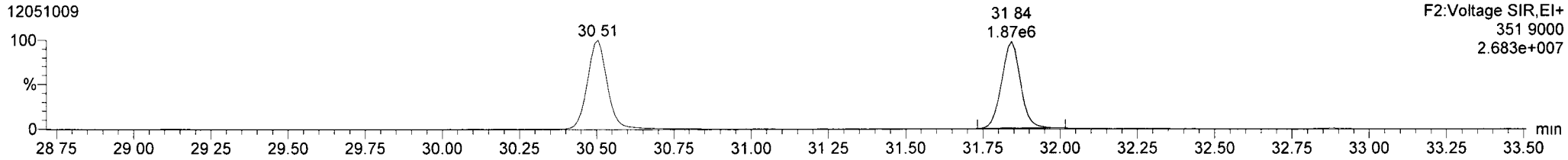
13C-23478-PeCDF



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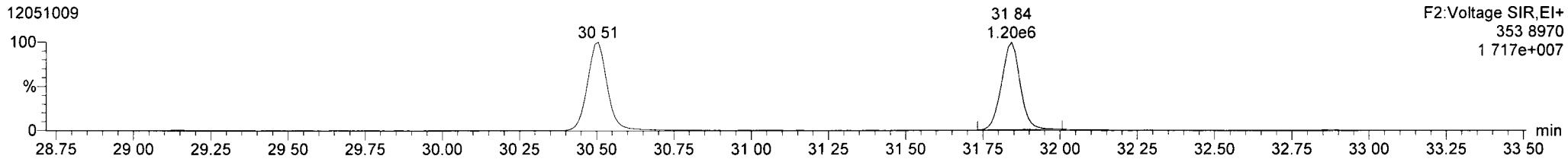
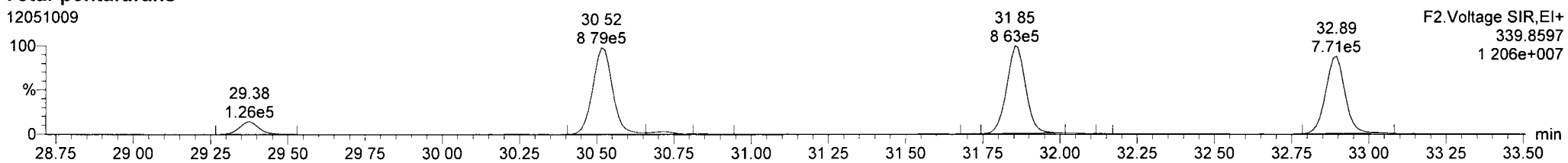


Total-pentafurans



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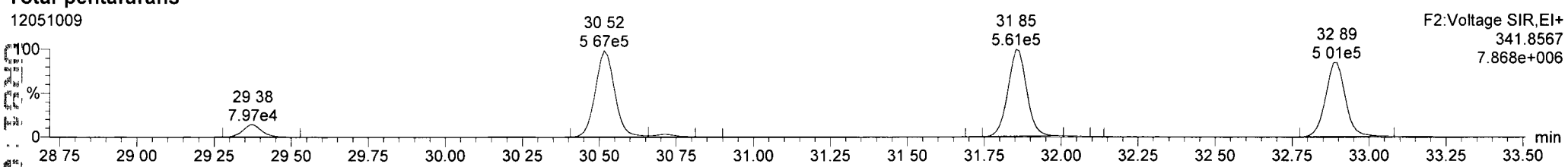

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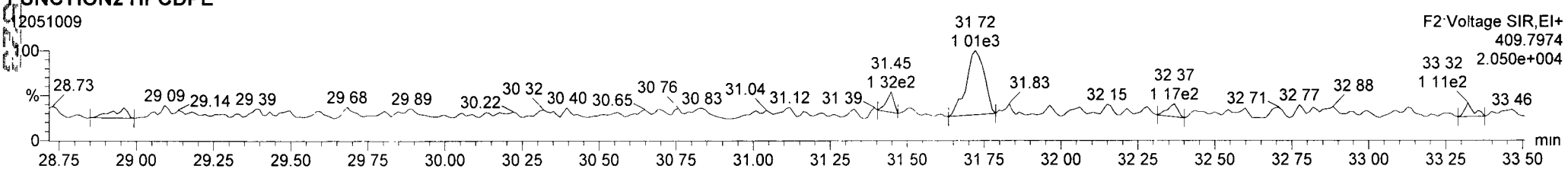

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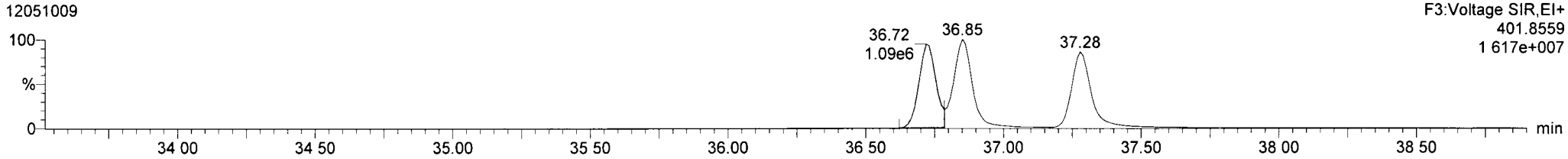
13C-123478-HxCDD



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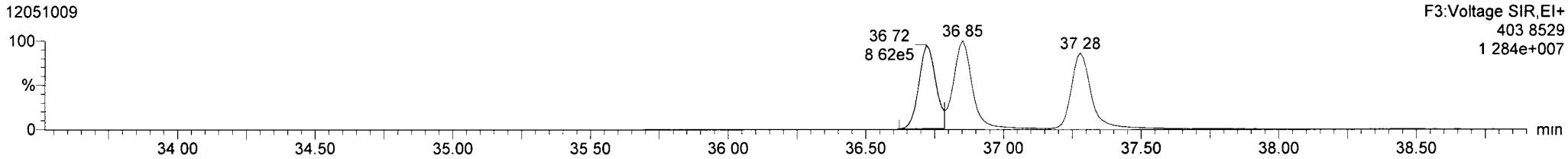
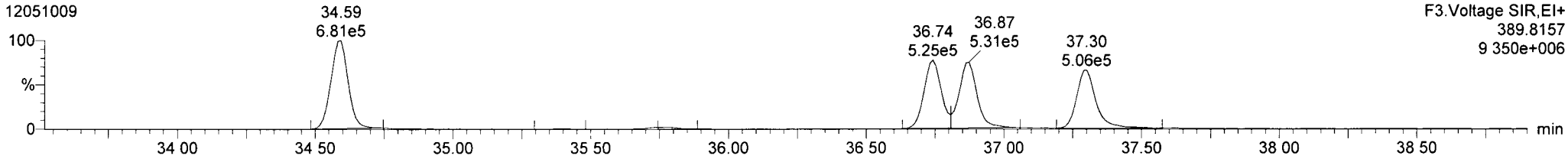
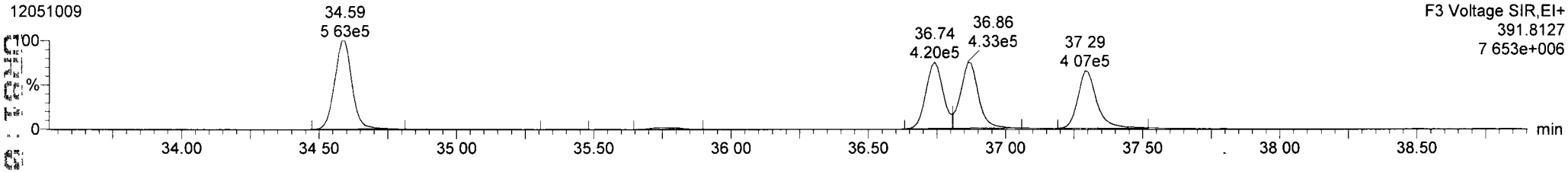


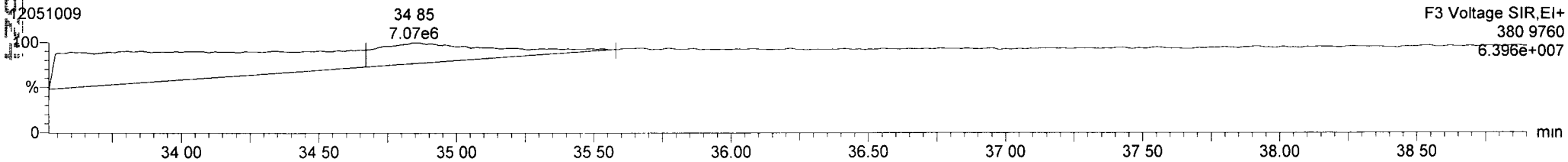
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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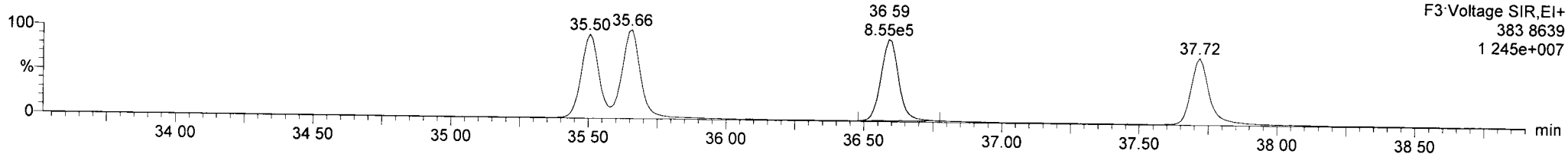
13C-234678-HxCDF

12051009



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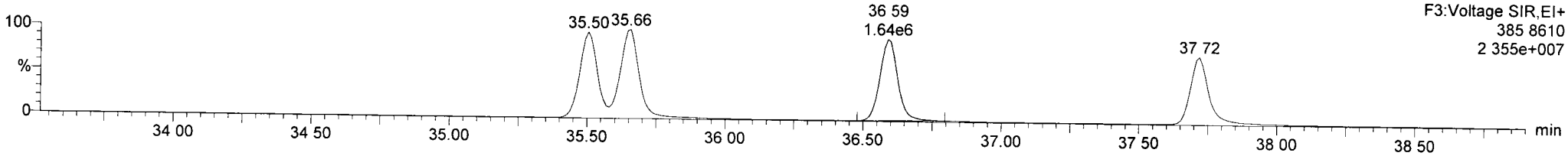
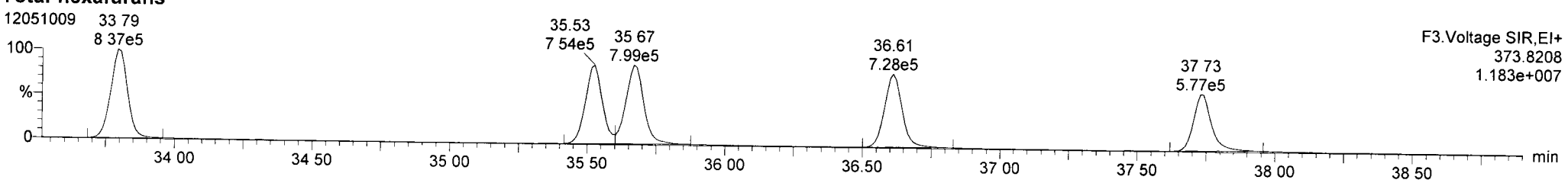


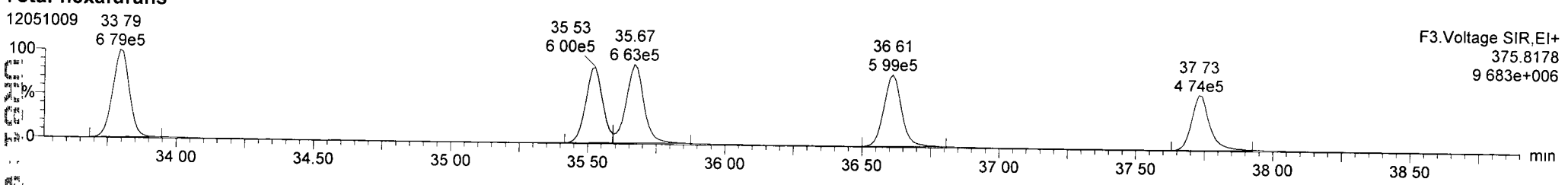
Total-hexafurans

12051009



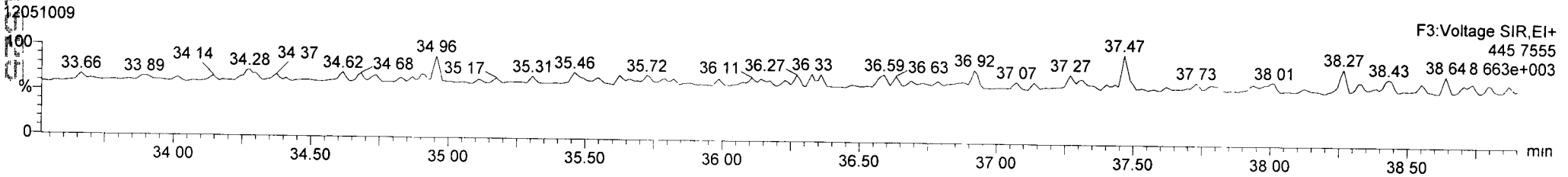
Total-hexafurans

12051009



FUNCTION3 OCDPE

12051009



Quantify Sample Report **MassLynx 4.1 SCN 714**
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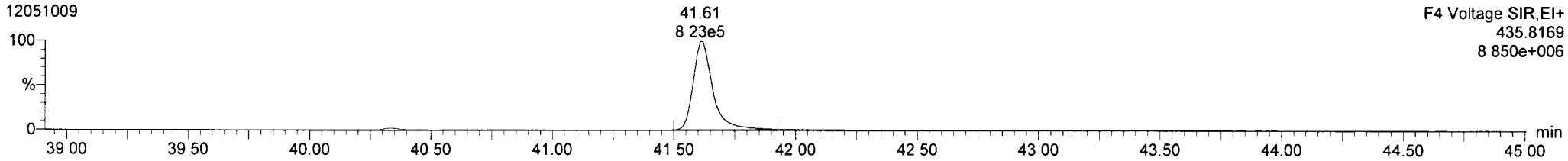
13C-1234678-HpCDD



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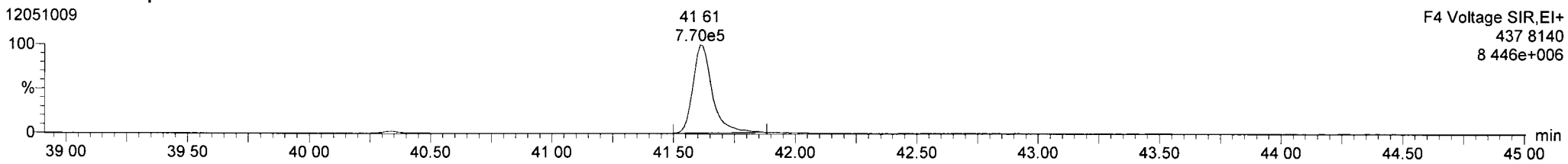
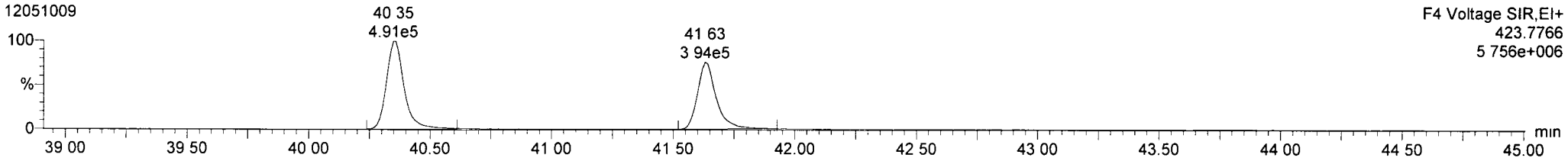
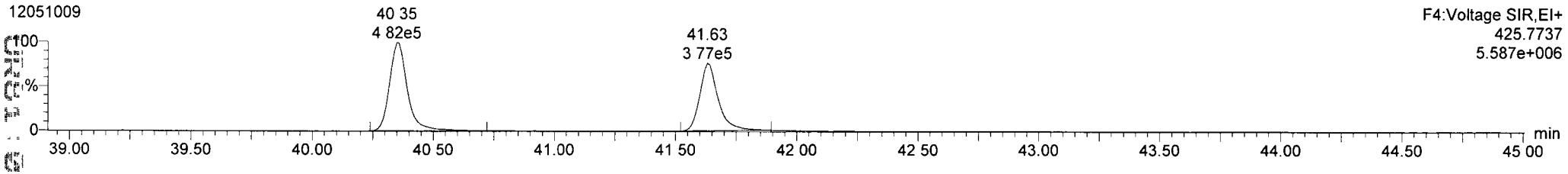


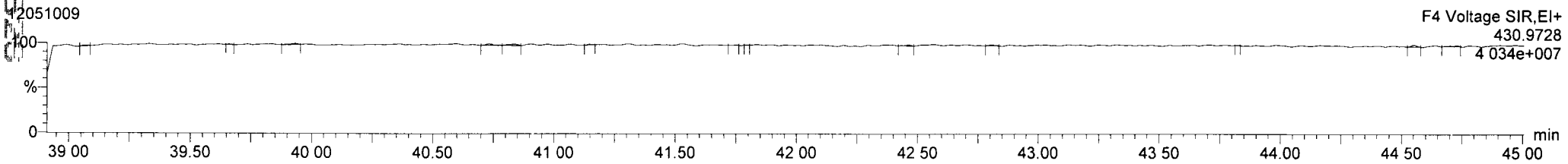
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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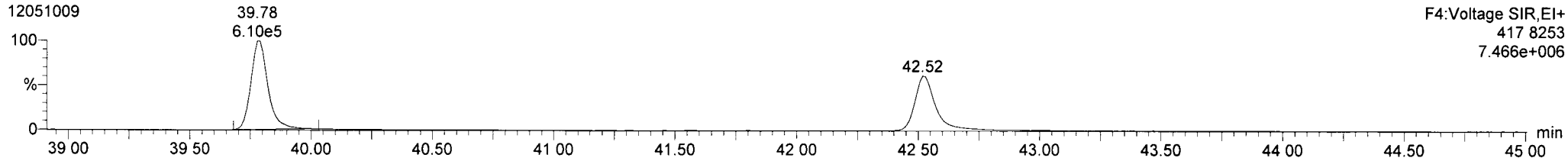
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:31 Pacific Daylight Time

Name: 12051009, Date: 10-May-2012, Time: 16:33:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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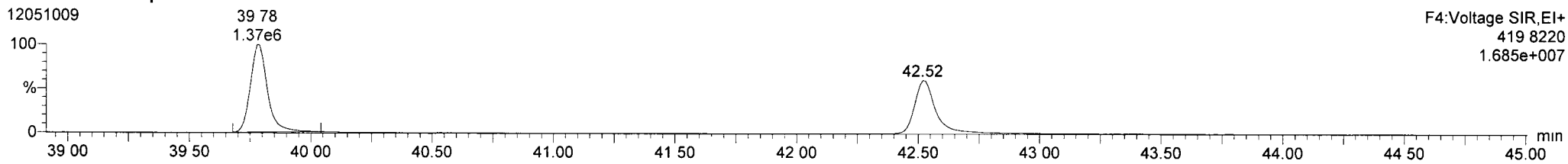

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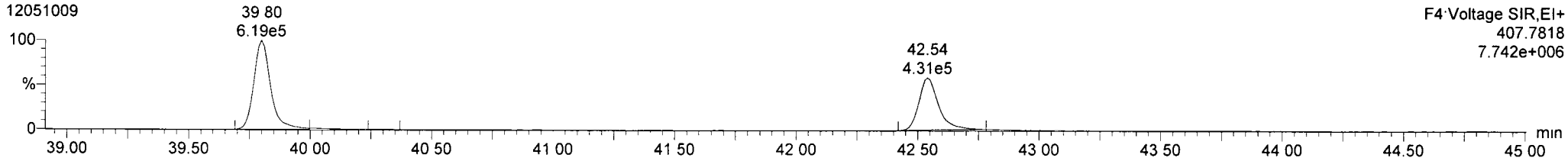

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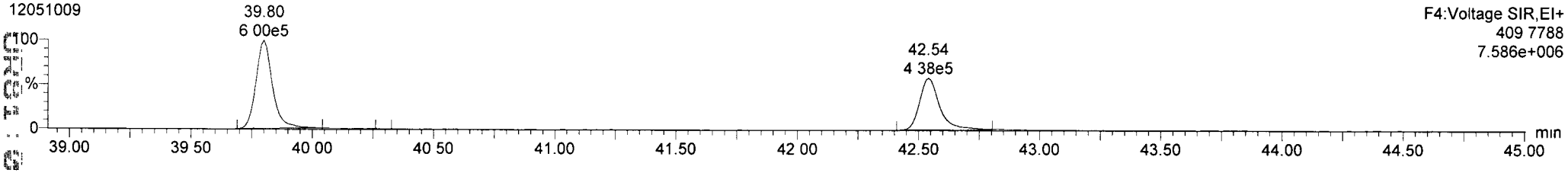
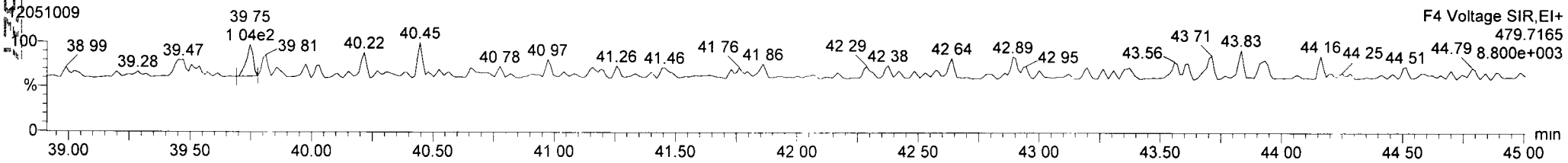


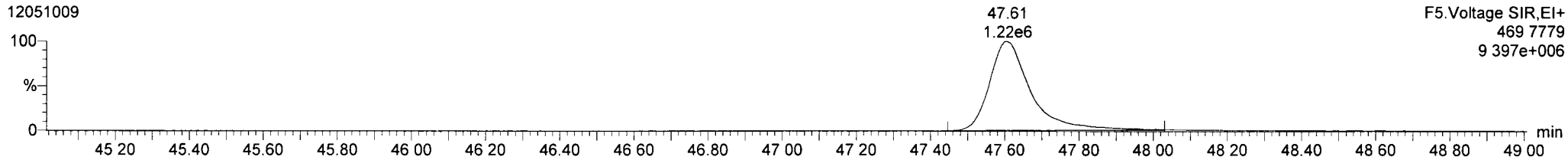
FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1 qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed: Friday, May 11, 2012 09:39:31 Pacific Daylight Time

Name: 12051009, Date: 10-May-2012, Time: 16:33:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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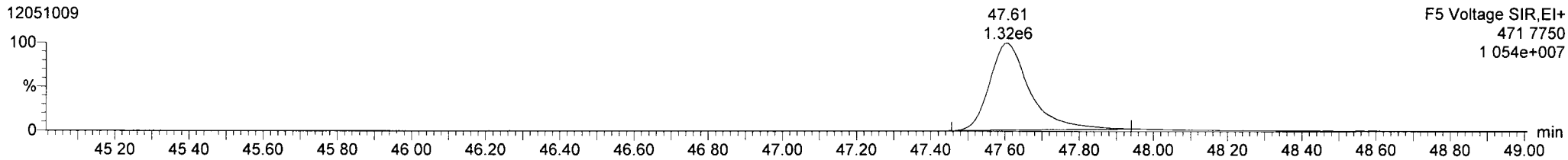

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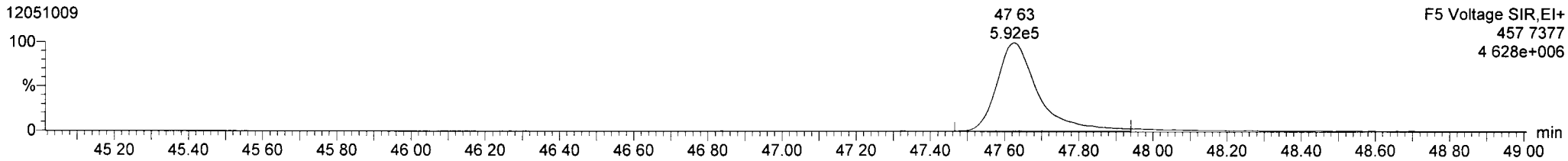

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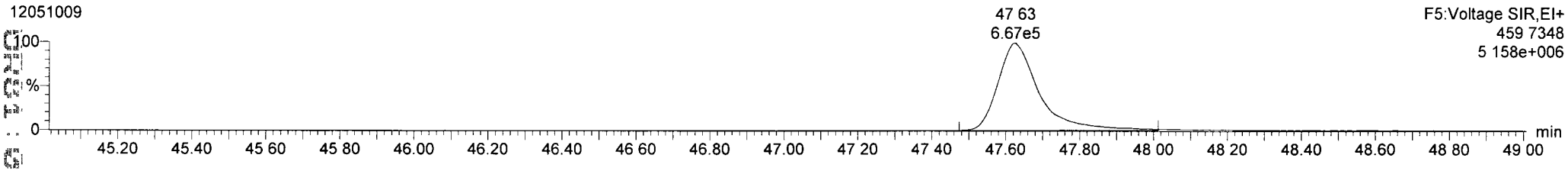
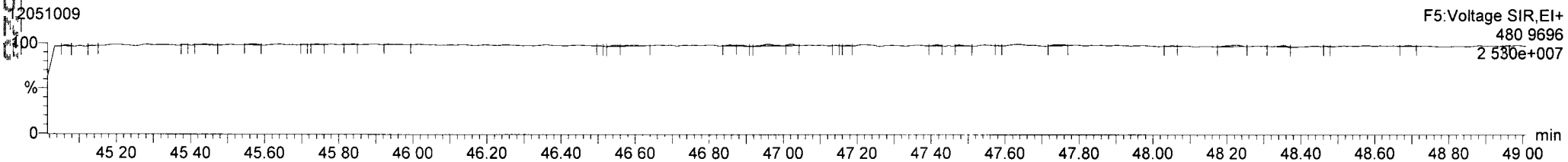


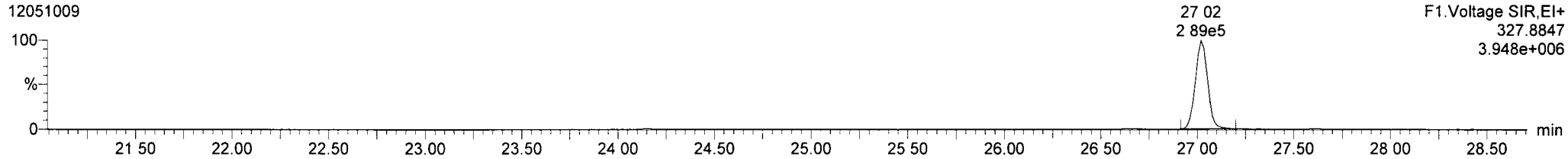
FUNCTION5 PFK



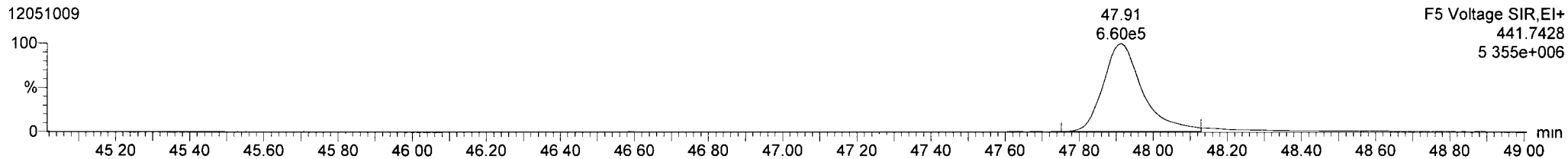
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA1.qld
Last Altered: Friday, May 11, 2012 09:37:31 Pacific Daylight Time
Printed. Friday, May 11, 2012 09:39:31 Pacific Daylight Time

Name: 12051009, Date: 10-May-2012, Time: 16:33:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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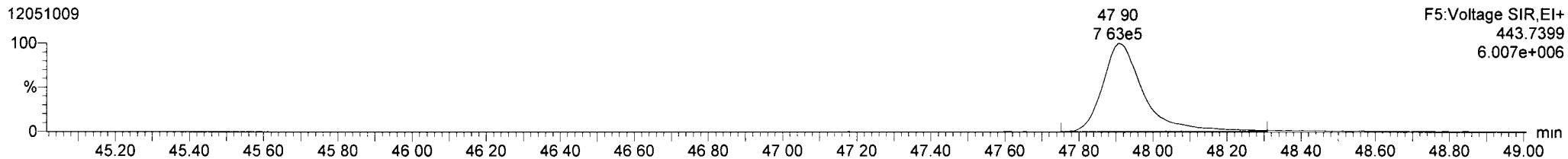
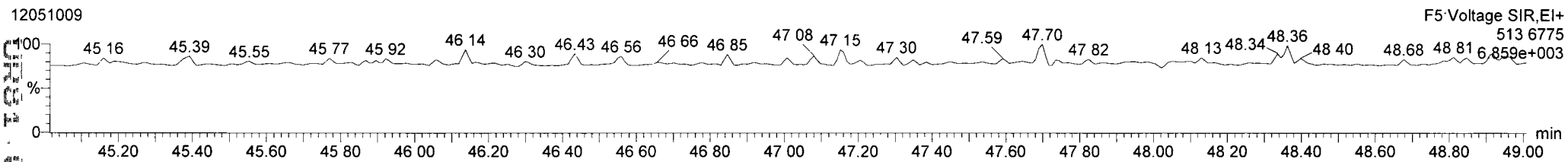


FUNCTION5 DCDPE



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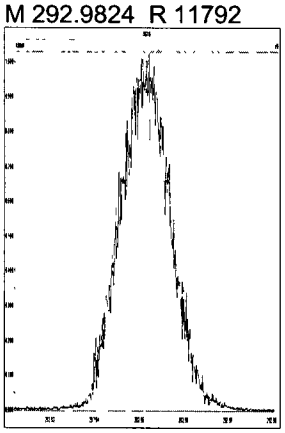
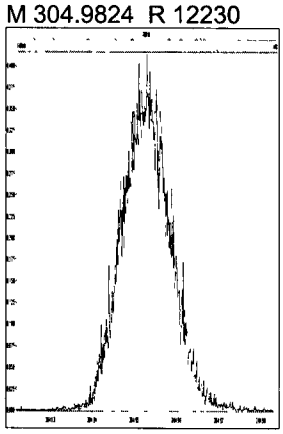
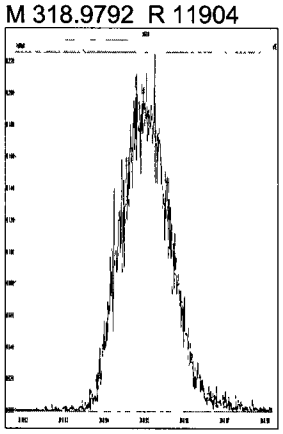
M 292.9824 R 11792



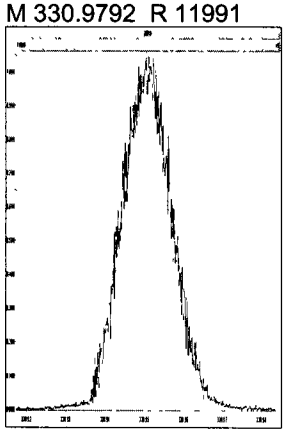
M 304.9824 R 12230



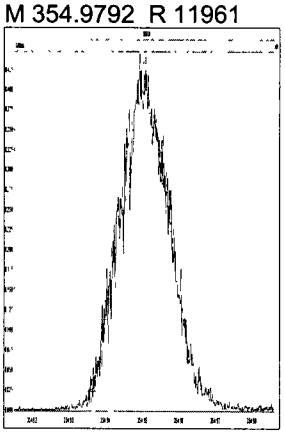
M 318.9792 R 11904



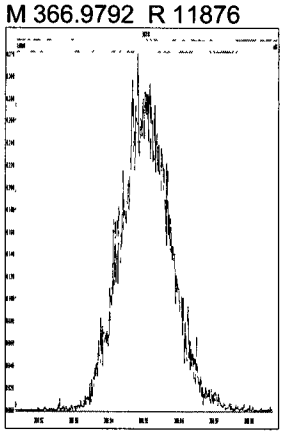
M 330.9792 R 11991



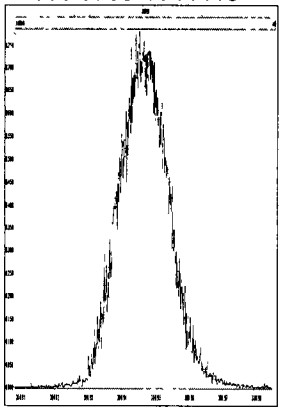
M 354.9792 R 11961



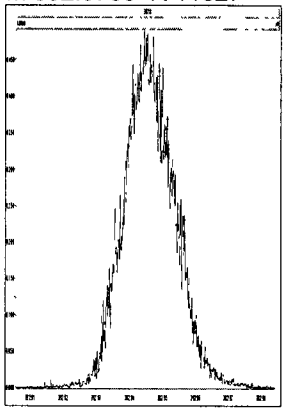
M 366.9792 R 11876



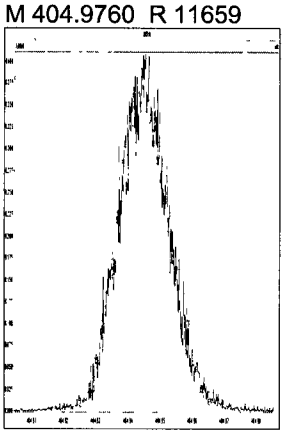
M 380.9760 R 11415



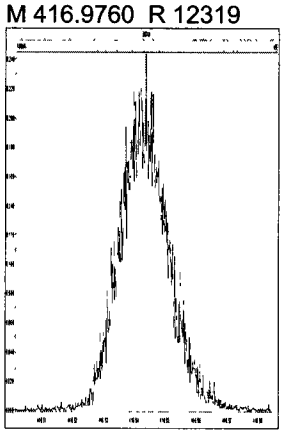
M 392.9760 R 11627



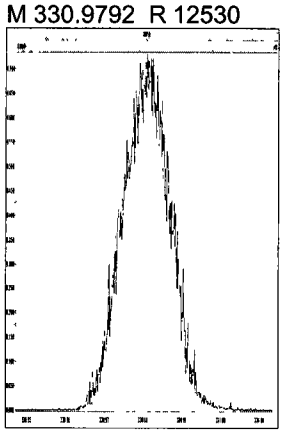
M 404.9760 R 11659



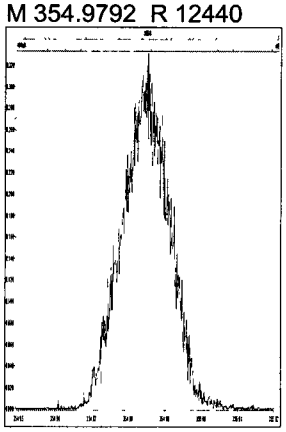
M 416.9760 R 12319



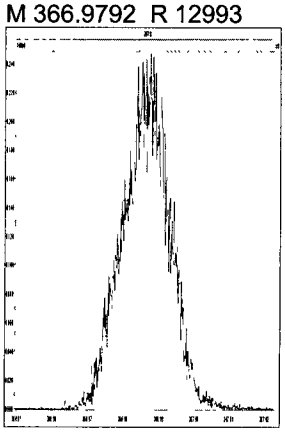
M 330.9792 R 12530



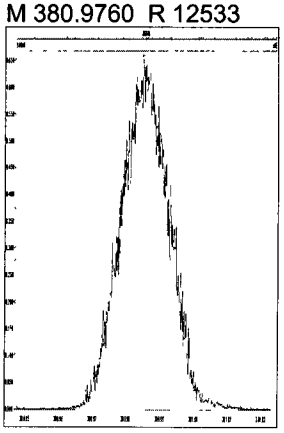
M 354.9792 R 12440



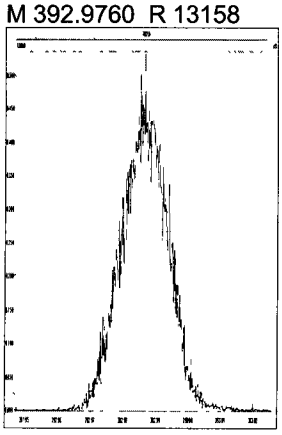
M 366.9792 R 12993



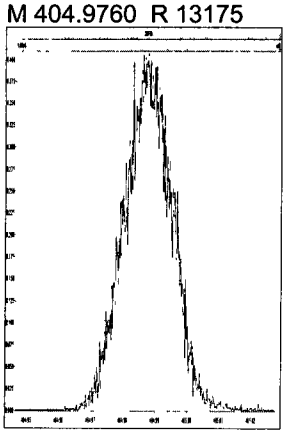
M 380.9760 R 12533



M 392.9760 R 13158



M 404.9760 R 13175



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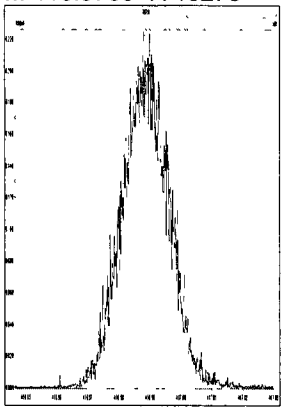
M 416.9760 R 13273



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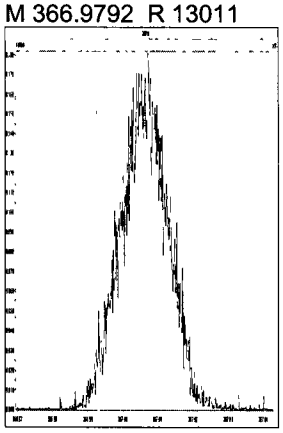
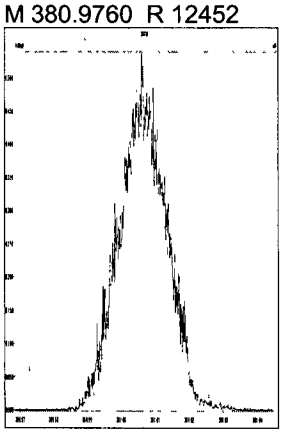
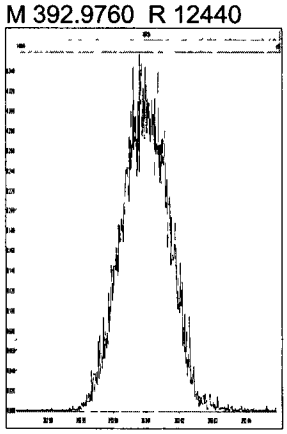


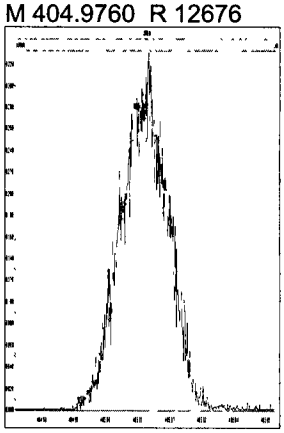
M 380.9760 R 12452



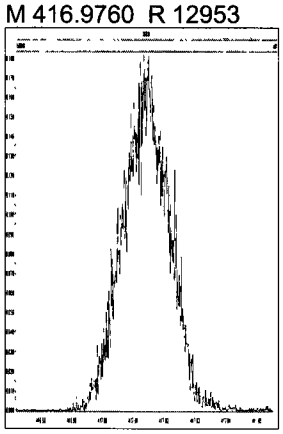
M 392.9760 R 12440



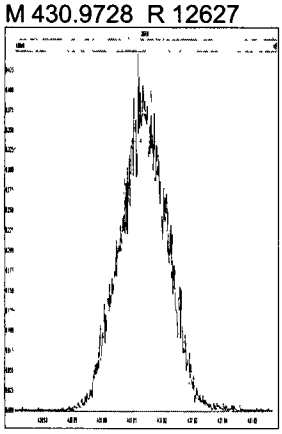
M 404.9760 R 12676



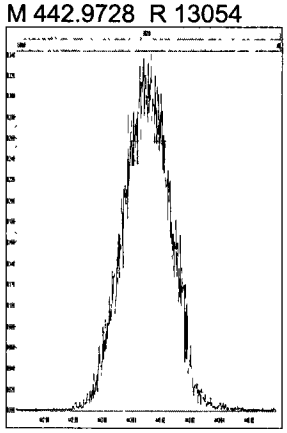
M 416.9760 R 12953



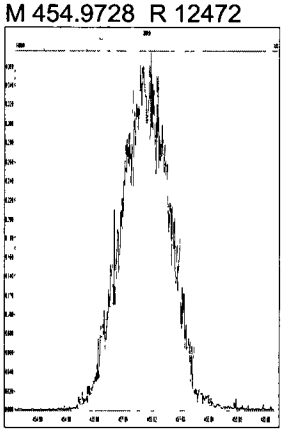
M 430.9728 R 12627



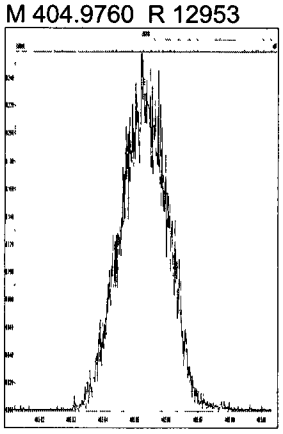
M 442.9728 R 13054



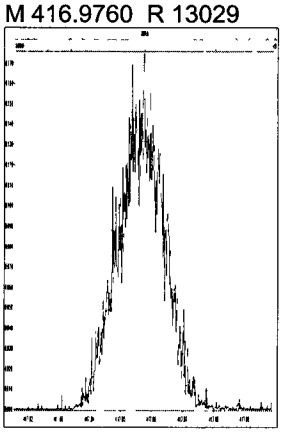
M 454.9728 R 12472



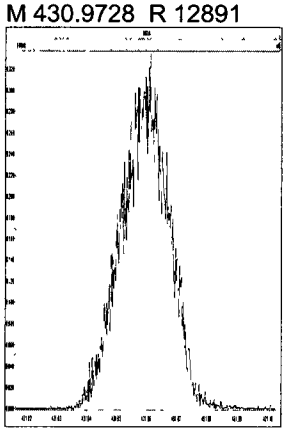
M 404.9760 R 12953



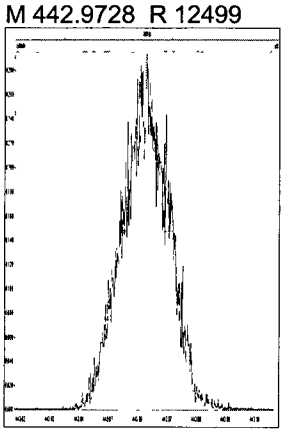
M 416.9760 R 13029



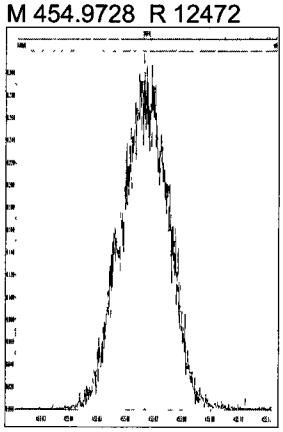
M 430.9728 R 12891



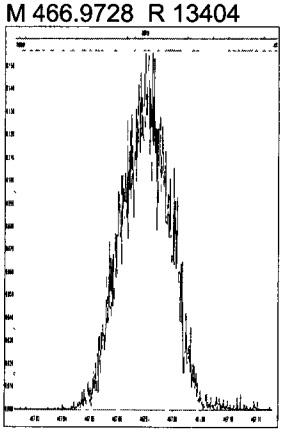
M 442.9728 R 12499



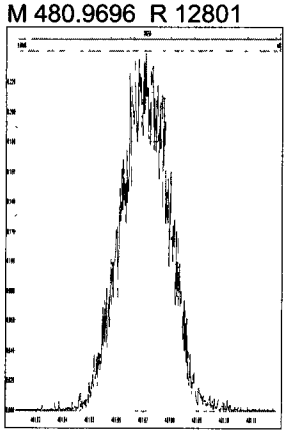
M 454.9728 R 12472



M 466.9728 R 13404



M 480.9696 R 12801



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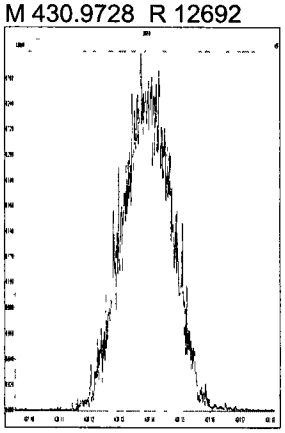
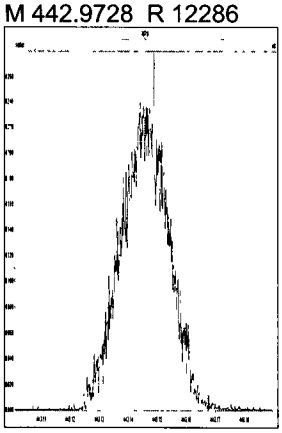
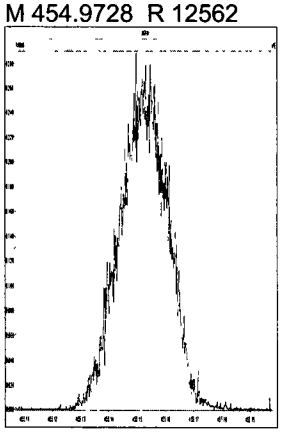
M 430.9728 R 12692



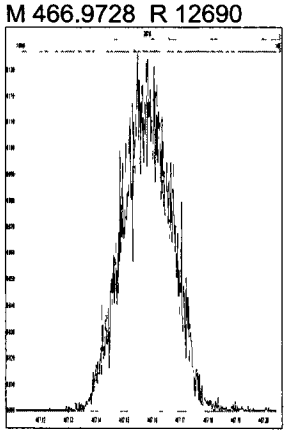
M 442.9728 R 12286



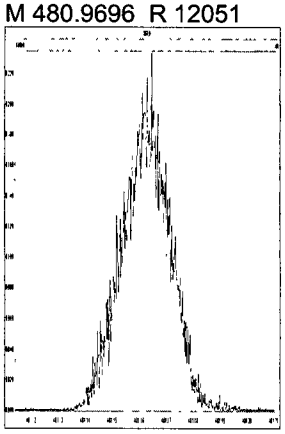
M 454.9728 R 12562



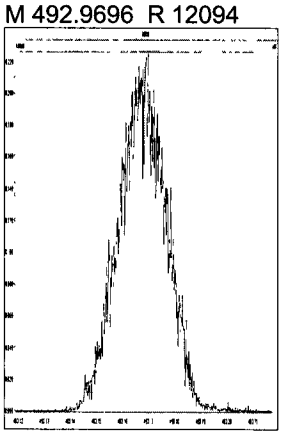
M 466.9728 R 12690



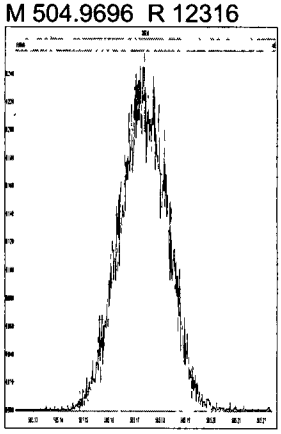
M 480.9696 R 12051



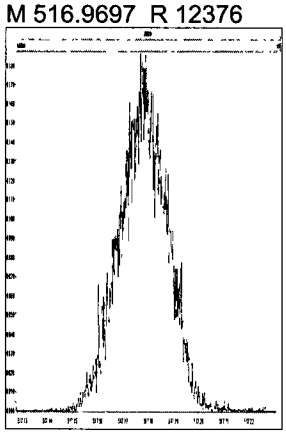
M 492.9696 R 12094



M 504.9696 R 12316



M 516.9697 R 12376



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered. Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

pk 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M ..	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303 9016	26.392	26 393	122935	122935	0 866	dd		0.77	0 77	211.2	NO	2 259	2.259
2	2	12378-PeCDF	339.8597	30.538	30.538	27079	27079	0 907	bb		1.74	1.55	63.1	NO	0.675	0.675
3	3	23478-PeCDF	339.8597	31.875	31.887	33051	33051	0.936	db		1.62	1 55	65.7	NO	0.831	0.831
4	4	123478-HxCDF	373.8208	35.558	35 547	77712	77712	1.082	dd		1.18	1.24	144 7	NO	2.675	2.675
5	5	234678-HxCDF	373.8208	36 622	36.666	70628	70628	1.070	bb		1.29	1.24	85.0	NO	2.515	2.515
6	6	123678-HxCDF	373 8208	35 712	35.712	47221	47221	1 048	db		1.26	1.24	87 7	NO	1.439	1.439
7	7	123789-HxCDF	373 8208	37 729	37 751	22659	22659	1.020	bb		1.22	1 24	42.7	NO	0.952	0.952
8	8	1234678-HpCDF	407 7818	39 833	39 831	923905	923905	1 214	bd		1 00	1 05	1213.1	NO	42.311	42.311
9	9	1234789-HpCDF	407.7818	42 563	42.553	41321	41321	1 254	bd		1 03	1 05	51.0	NO	2.689	2.689
10	10	OCDF	441.7428	47 959	47.949	1493501	1493501	1.105	bd		0 89	0 89	1357 4	NO	150.695	150.695
11	11	2378-TCDD	319.8965	27.034	27 033	0	10516	1 046	bd		0 62	0.77	38 3	YES	0.000	0.250
12	12	12378-PeCDD	355 8546	32 128	32 126	52738	52738	0 973	bb		1 70	1.55	66.0	NO	1.986	1.986
13	13	123478-HxCDD	389.8157	36 797	36 797	82360	82360	0.935	bd		1 24	1.24	65 9	NO	4.025	4.025
14	14	123678-HxCDD	389 8157	36 929	36 918	277498	277498	0.878	dd		1 22	1 24	198 3	NO	11.751	11.751
15	15	123789-HxCDD	389 8157	37.345	37.313	155805	155805	0 839	dd		1.16	1 24	106.8	NO	7.616	7.616
16	16	1234678-HpCDD	423 7766	41.664	41.654	4560715	4560715	0 974	bd		0.99	1 05	2028 6	NO	314.335	314.335
17	17	OCDD	457 7377	47.681	47.677	23509764	23509764	0 950	bd		0 89	0 89	10648.7	NO	2759.563	2759 5 .
18	18	13C-2378-TCDF	315.9419	26 377	26.377	6284640		1 484	bb	78 0	0 77	0 77	6193.4	NO	78.004	
19	19	13C-12378-PeCDF	351.9000	30.516	30.519	4426552		1 048	bb	77 8	1 56	1 55	5566 6	NO	77.816	
20	20	13C-23478-PeCDF	351.9000	31 865	31.856	4249753		1 003	bb	78.0	1.55	1 55	5421 0	NO	78.035	
21	21	13C-123478-HxCDF	383.8639	35.537	35.558	2684799		1.186	bd	84.4	0.51	0 51	1799 7	NO	84.376	
22	22	13C-123678-HxCDF	383.8639	35.690	35.712	3131284		1 315	db	88 7	0 52	0.51	1906.3	NO	88.722	
23	23	13C-234678-HxCDF	383 8639	36.644	36.644	2625104		1 223	bb	80 0	0 51	0.51	1686.7	NO	79.960	
24	24	13C-123789-HxCDF	383 8639	37 740	37.751	2334181		1 056	bb	82 3	0 52	0.51	1739.2	NO	82 324	
25	25	13C-1234678-HpCDF	417.8253	39 811	39.833	1798002		1 011	bd	66 2	0.44	0 44	1631.8	NO	66.239	
26	26	13C-1234789-HpCDF	417 8253	42.541	42.585	1225496		0 741	bd	61 7	0.44	0.44	948.1	NO	61 662	
27	27	13C-1234-TCDD	331 9368	26.198	26.272	5427586		1 000	bb	100 0	0 79	0 77	9278.7	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27.020	27 020	4022959		0 956	bb	77 5	0 79	0.77	6266.5	NO	77 502	
29	29	13C-12378-PeCDD	367 8949	32.117	32.108	2728966		0 663	bd	75.8	1.57	1 55	6470.3	NO	75 785	
30	30	13C-123478-HxCDD	401.8559	36.775	36 775	2187731		1 024	bd	79.6	1.26	1 24	4509.0	NO	79 614	
31	31	13C-123678-HxCDD	401.8559	36 907	36 907	2690309		1 113	db	90 1	1.22	1.24	4747.0	NO	90.097	
32	32	13C-1234678-HpCDD	435.8169	41 642	41 686	1489180		0 815	bb	68 1	1.02	1 05	2236 1	NO	68 074	
33	33	13C-OCDD	469.7779	47 663	47 702	1793416		0 717	bd	46.6	0.89	0 89	2128.6	NO	93 190	

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Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37 334	37 368	2683766		1.000	bd	100 0	1.23	1.24	4691 4	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 370			0.866							12 888	14.088
36	36	Total-penta1	339 8597		28 210										14.327	14.327 24.715
37	37	Total-pentafurans	339 8597		30 790			0.921						23.189	9.312	10 388
38	38	Total-hexafurans	373 8208		35 760			1.055							68.584	68 941
39	39	Total-heptafurans	407 7818		41.160			1.234							143.533	143.917
40	40	Total-Furans	303 9016		0 000			1.050							399.776	402.837
41	41	Total-tetradioxins	319.8965		25 880			1.046							54.182	54.432
42	42	Total-pentadioxins	355.8546		30 950			0.973							62.550	63.799
43	43	Total-hexadioxins	389 8157		35.940			0.884							152.380	153.925
44	44	Total-heptadioxins	423.7766		40 980			0 974							823 845	823 845
45	45	Total-Dioxins	319 8965		0.000			0 942							3852 520	3855.5. .
46	46	Total-TEQ	319 8965		0.000										4252 296	4258 4. .
47	47	37CL-2378-TCDD	327 8847	27 034	27.010	1852535		1 037					8269 5		32.909	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0 000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0 000	
57	57	FUNCTION4 NCDPE	479.7165		0.000										0 000	
58	58	FUNCTION5 DCDPE	513.6775		0.000											

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	24.90	1579.296	0.866	0.029	0.029	0.65	0 77	NO	3.6
2	35	Total-tetrafurans	303.9016	24.64	0 000	0.866	0.000	0.272	0 89	0 77	YES	29.9
3	35	Total-tetrafurans	303.9016	24.51	0.000	0.866	0.000	0.165	0 89	0 77	YES	19.3
4	35	Total-tetrafurans	303.9016	24.39	49529.806	0.866	0.910	0.910	0.78	0.77	NO	92.2
5	35	Total-tetrafurans	303.9016	24.24	10318.496	0.866	0.190	0.190	0.76	0.77	NO	21 1
6	35	Total-tetrafurans	303 9016	24 15	37847.568	0 866	0.695	0.695	0 73	0 77	NO	63.2
7	35	Total-tetrafurans	303 9016	24.05	0.000	0 866	0.000	0.377	0.89	0 77	YES	36.3
8	35	Total-tetrafurans	303 9016	23 93	39449.828	0 866	0.725	0.725	0.71	0.77	NO	41.4
9	35	Total-tetrafurans	303.9016	23.75	114732.359	0.866	2.108	2.108	0 75	0.77	NO	186 9
10	35	Total-tetrafurans	303.9016	23 16	17533.974	0 866	0.322	0.322	0 82	0.77	NO	32 7
11	35	Total-tetrafurans	303 9016	22 90	15173.983	0.866	0.279	0 279	0.77	0.77	NO	26 2
12	35	Total-tetrafurans	303.9016	27.89	25098.208	0 866	0.461	0 461	0 81	0.77	NO	21 0
13	35	Total-tetrafurans	303 9016	26.63	30909.507	0 866	0 568	0 568	0.75	0.77	NO	45 8
14	35	Total-tetrafurans	303 9016	26 53	0.000	0.866	0.000	0 174	0.59	0.77	YES	18 3
15	1	2378-TCDF	303.9016	26.39	122934.976	0.866	2.259	2.259	0.77	0.77	NO	211.2
16	35	Total-tetrafurans	303.9016	26 21	28921.287	0.866	0.531	0.531	0.68	0.77	NO	33 4
17	35	Total-tetrafurans	303.9016	26 03	0.000	0 866	0.000	0.050	0.56	0 77	YES	6.7
18	35	Total-tetrafurans	303 9016	25 90	0 000	0 866	0 000	0 161	0 59	0.77	YES	14 8
19	35	Total-tetrafurans	303 9016	25.70	12515 231	0 866	0 230	0 230	0 68	0 77	NO	20.2
20	35	Total-tetrafurans	303 9016	25 48	75851.645	0.866	1 394	1 394	0 80	0 77	NO	125 9
21	35	Total-tetrafurans	303.9016	25.30	53414.399	0.866	0 981	0 981	0 79	0 77	NO	85.0
22	35	Total-tetrafurans	303.9016	25 15	29869 433	0.866	0 549	0.549	0 71	0.77	NO	45.8
23	35	Total-tetrafurans	303.9016	25 06	35859 386	0.866	0 659	0.659	0.77	0.77	NO	47 4

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27.81	569937.578		14.327	14.327	1 57	1.55	NO	3248.6

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	37	Total-pentafurans	339.8597	30.72	0.000	0.921	0.000	0.884	1 80	1 55	YES	67.5
2	2	12378-PeCDF	339.8597	30 54	27079.329	0.907	0.675	0.675	1 74	1 55	NO	63 1
3	37	Total-pentafurans	339 8597	30 17	64176.102	0 921	1 606	1.606	1 47	1.55	NO	105 7
4	37	Total-pentafurans	339 8597	30.07	6490.054	0.921	0.162	0 162	1 51	1.55	NO	18.3
5	37	Total-pentafurans	339 8597	29.97	0 000	0.921	0.000	0.105	1 12	1.55	YES	13.1
6	37	Total-pentafurans	339.8597	29.79	2411.041	0.921	0.060	0.060	1 77	1 55	NO	5.5
7	37	Total-pentafurans	339.8597	29 49	166083 285	0.921	4 155	4.155	1 62	1.55	NO	245.8
8	37	Total-pentafurans	339.8597	29.29	23180 708	0.921	0.580	0.580	1 39	1.55	NO	40 3
9	37	Total-pentafurans	339.8597	29 19	0 000	0 921	0 000	0.087	2.29	1.55	YES	15 6
10	37	Total-pentafurans	339 8597	32 92	2792 059	0.921	0.070	0 070	1 59	1 55	NO	8.4
11	3	23478-PeCDF	339.8597	31 88	33051 077	0.936	0.831	0.831	1 62	1 55	NO	65.7
12	37	Total-pentafurans	339.8597	31.72	37494.645	0.921	0 938	0.938	1 55	1.55	NO	80.3
13	37	Total-pentafurans	339.8597	31.62	9431.162	0.921	0.236	0.236	1.73	1.55	NO	19 5

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	4	123478-HxCDF	373.8208	35 56	77712.016	1.082	2 675	2.675	1.18	1.24	NO	144.7
2	38	Total-hexafurans	373.8208	35.40	0 000	1.055	0.000	0.335	0 99	1 24	YES	18.7
3	38	Total-hexafurans	373.8208	34.90	759891 657	1.055	26.737	26.737	1 24	1 24	NO	1473.2
4	38	Total-hexafurans	373.8208	34.58	12130.852	1.055	0 427	0.427	1.33	1.24	NO	24 6
5	38	Total-hexafurans	373 8208	34.31	0.000	1 055	0 000	0.022	12.86	1.24	YES	9 1
6	38	Total-hexafurans	373 8208	34 03	726052.719	1.055	25 546	25.546	1.23	1 24	NO	1399 7
7	38	Total-hexafurans	373.8208	33.83	231561 032	1.055	8.148	8.148	1.22	1 24	NO	487 4
8	7	123789-HxCDF	373.8208	37 73	22658.653	1 020	0 952	0 952	1.22	1 24	NO	42.7
9	5	234678-HxCDF	373.8208	36 62	70627.897	1 070	2 515	2 515	1 29	1 24	NO	85.0
10	38	Total-hexafurans	373.8208	36.06	4148.082	1 055	0 146	0.146	1 41	1 24	NO	9.2
11	6	123678-HxCDF	373.8208	35 71	47220.916	1.048	1.439	1.439	1.26	1.24	NO	87 7

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39	Total-heptafurans	407.7818	40 16	0.000	1 234	0.000	0.201	0.67	1.05	YES	8.4
2	8	1234678-HpCDF	407.7818	39 83	923904 657	1.214	42 311	42.311	1 00	1 05	NO	1213 1
3	39	Total-heptafurans	407.7818	42 73	0 000	1.234	0 000	0.087	1 39	1.05	YES	5 9
4	9	1234789-HpCDF	407 7818	42.56	41321.289	1.254	2 689	2.689	1.03	1.05	NO	51 0
5	39	Total-heptafurans	407 7818	40.63	1818112 000	1.234	97 440	97 440	1.02	1 05	NO	2596 4
6	39	Total-heptafurans	407 7818	40.33	20405.299	1 234	1.094	1 094	0.91	1 05	NO	27.5
7	39	Total-heptafurans	407 7818	40.23	0.000	1 234	0.000	0 097	0.75	1 05	YES	6.0

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	24.90	1579.296	0.866	0.029	0.029	0.65	0 77	NO	3 6
2	35	Total-tetrafurans	303 9016	24.64	0.000	0.866	0.000	0 272	0 89	0.77	YES	29 9
3	35	Total-tetrafurans	303 9016	24.51	0.000	0.866	0 000	0 165	0 89	0 77	YES	19 3
4	35	Total-tetrafurans	303 9016	24.39	49529 806	0.866	0.910	0 910	0 78	0.77	NO	92.2
5	35	Total-tetrafurans	303.9016	24 24	10318.496	0 866	0 190	0.190	0 76	0.77	NO	21.1
6	35	Total-tetrafurans	303.9016	24 15	37847.568	0 866	0 695	0.695	0 73	0.77	NO	63.2
7	35	Total-tetrafurans	303.9016	24 05	0 000	0.866	0 000	0.377	0 89	0 77	YES	36.3
8	35	Total-tetrafurans	303.9016	23 93	39449 828	0.866	0 725	0.725	0.71	0 77	NO	41 4
9	35	Total-tetrafurans	303 9016	23.75	114732 359	0.866	2.108	2.108	0 75	0 77	NO	186.9
10	35	Total-tetrafurans	303 9016	23.16	17533 974	0 866	0.322	0.322	0 82	0 77	NO	32.7
11	35	Total-tetrafurans	303 9016	22.90	15173.983	0.866	0.279	0.279	0 77	0 77	NO	26 2
12	40	Total-Furans	303.9016	21 31	28729.523	1 050	0.435	0.435	0 69	0 77	NO	48 9
13	40	Total-Furans	303.9016	28 17	0.000	1.050	0 000	0.004	1.52	0.77	YES	0 9
14	35	Total-tetrafurans	303 9016	27.89	25098.208	0.866	0.461	0.461	0.81	0.77	NO	21.0
15	35	Total-tetrafurans	303.9016	26.63	30909.507	0.866	0.568	0 568	0.75	0.77	NO	45 8
16	35	Total-tetrafurans	303.9016	26.53	0 000	0.866	0.000	0 174	0.59	0.77	YES	18.3
17	1	2378-TCDF	303 9016	26.39	122934.976	0.866	2.259	2.259	0.77	0 77	NO	211 2
18	35	Total-tetrafurans	303.9016	26.21	28921 287	0.866	0.531	0.531	0.68	0 77	NO	33 4
19	35	Total-tetrafurans	303.9016	26.03	0.000	0.866	0.000	0 050	0.56	0.77	YES	6 7
20	35	Total-tetrafurans	303 9016	25.90	0 000	0.866	0 000	0.161	0.59	0.77	YES	14.8
21	35	Total-tetrafurans	303 9016	25 70	12515 231	0.866	0.230	0.230	0 68	0.77	NO	20 2
22	35	Total-tetrafurans	303 9016	25.48	75851.645	0.866	1 394	1 394	0 80	0.77	NO	125.9
23	35	Total-tetrafurans	303 9016	25 30	53414 399	0.866	0 981	0 981	0.79	0 77	NO	85.0
24	35	Total-tetrafurans	303.9016	25 15	29869.433	0 866	0 549	0 549	0 71	0 77	NO	45.8
25	35	Total-tetrafurans	303.9016	25 06	35859.386	0 866	0 659	0 659	0.77	0 77	NO	47 4
26	40	Total-Furans	303.9016	28 48	0.000	1 050	0 000	0 042	1.06	0 77	YES	6 0
27	37	Total-pentafurans	339.8597	30.72	0.000	0 921	0 000	0.884	1 80	1 55	YES	67 5
28	2	12378-PeCDF	339.8597	30.54	27079 329	0.907	0.675	0.675	1 74	1.55	NO	63 1
29	37	Total-pentafurans	339 8597	30.17	64176 102	0.921	1.606	1 606	1 47	1.55	NO	105.7
30	37	Total-pentafurans	339 8597	30.07	6490.054	0.921	0 162	0 162	1 51	1.55	NO	18 3
31	37	Total-pentafurans	339 8597	29 97	0.000	0.921	0.000	0 105	1 12	1 55	YES	13.1
32	37	Total-pentafurans	339 8597	29.79	2411.041	0.921	0 060	0 060	1 77	1 55	NO	5.5
33	37	Total-pentafurans	339 8597	29.49	166083.285	0 921	4 155	4 155	1 62	1.55	NO	245.8
34	37	Total-pentafurans	339 8597	29 29	23180.708	0.921	0 580	0 580	1.39	1 55	NO	40.3
35	37	Total-pentafurans	339 8597	29 19	0.000	0 921	0 000	0 087	2.29	1 55	YES	15 6
36	37	Total-pentafurans	339 8597	32 92	2792.059	0 921	0.070	0 070	1.59	1 55	NO	8 4
37	3	23478-PeCDF	339.8597	31.88	33051 077	0 936	0.831	0.831	1 62	1.55	NO	65 7
38	37	Total-pentafurans	339 8597	31 72	37494.645	0 921	0 938	0.938	1 55	1 55	NO	80 3
39	37	Total-pentafurans	339 8597	31 62	9431.162	0 921	0 236	0 236	1 73	1.55	NO	19 5
40	4	123478-HxCDF	373.8208	35.56	77712 016	1.082	2.675	2 675	1 18	1.24	NO	144.7
41	38	Total-hexafurans	373.8208	35.40	0 000	1.055	0.000	0 335	0 99	1.24	YES	18.7
42	38	Total-hexafurans	373 8208	34 90	759891.657	1 055	26.737	26 737	1 24	1 24	NO	1473 2
43	38	Total-hexafurans	373.8208	34.58	12130.852	1.055	0.427	0 427	1 33	1 24	NO	24 6
44	38	Total-hexafurans	373 8208	34 31	0 000	1.055	0 000	0.022	12.86	1 24	YES	9 1
45	38	Total-hexafurans	373 8208	34.03	726052 719	1.055	25 546	25.546	1.23	1.24	NO	1399 7
46	38	Total-hexafurans	373.8208	33.83	231561 032	1.055	8.148	8 148	1 22	1.24	NO	487.4
47	7	123789-HxCDF	373.8208	37 73	22658.653	1.020	0 952	0 952	1.22	1 24	NO	42 7
48	5	234678-HxCDF	373 8208	36 62	70627.897	1.070	2 515	2 515	1.29	1 24	NO	85 0
49	38	Total-hexafurans	373 8208	36 06	4148 082	1 055	0 146	0 146	1.41	1.24	NO	9 2

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	6	123678-HxCDF	373.8208	35 71	47220.916	1.048	1 439	1.439	1 26	1 24	NO	87.7
51	39	Total-heptafurans	407.7818	40 16	0.000	1.234	0 000	0.201	0 67	1 05	YES	8 4
52	8	1234678-HpCDF	407.7818	39 83	923904.657	1 214	42.311	42 311	1 00	1.05	NO	1213 1
53	39	Total-heptafurans	407 7818	42.73	0.000	1 234	0.000	0.087	1.39	1 05	YES	5 9
54	9	1234789-HpCDF	407 7818	42 56	41321.289	1.254	2.689	2 689	1.03	1.05	NO	51 0
55	39	Total-heptafurans	407 7818	40.63	1818112 000	1.234	97.440	97.440	1 02	1 05	NO	2596 4
56	39	Total-heptafurans	407 7818	40.33	20405 299	1.234	1 094	1.094	0 91	1.05	NO	27.5
57	39	Total-heptafurans	407.7818	40 23	0.000	1 234	0 000	0 097	0.75	1.05	YES	6.0
58	10	OCDF	441.7428	47.96	1493500.813	1 105	150.695	150 .	0 89	0.89	NO	1357 4
59	36	Total-penta1	339.8597	27.81	569937.578		14.327	14.327	1.57	1 55	NO	3248 6

TD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati...	1° R. .	S/N
1	41	Total-tetradioxins	319.8965	25.38	36865.433	1.046	0 876	0.876	0 74	0.77	NO	130.4
2	41	Total-tetradioxins	319.8965	25 15	2828 618	1.046	0 067	0 067	0.71	0.77	NO	11 7
3	41	Total-tetradioxins	319.8965	24.64	7332.136	1 046	0 174	0.174	0 84	0.77	NO	30 6
4	41	Total-tetradioxins	319 8965	24.43	688836.406	1.046	16 372	16.372	0.77	0.77	NO	2528 3
5	41	Total-tetradioxins	319.8965	24.17	1048614.688	1 046	24 924	24.924	0.77	0.77	NO	4013.9
6	41	Total-tetradioxins	319.8965	27 57	17229.781	1.046	0.410	0 410	0.76	0.77	NO	56 4
7	41	Total-tetradioxins	319.8965	27.17	13546.985	1.046	0.322	0 322	0.78	0 77	NO	42 1
8	11	2378-TCDD	319.8965	27 03	0.000	1 046	0.000	0.250	0.62	0.77	YES	38 3
9	41	Total-tetradioxins	319.8965	26 66	71333.240	1.046	1 695	1.695	0 76	0.77	NO	201.6
10	41	Total-tetradioxins	319 8965	26 36	5757.836	1.046	0.137	0 137	0 82	0 77	NO	20.8
11	41	Total-tetradioxins	319 8965	26 23	292250 211	1.046	6.946	6 946	0.76	0.77	NO	1053 3
12	41	Total-tetradioxins	319 8965	26 02	9350.562	1.046	0 222	0.222	0 75	0.77	NO	32.7
13	41	Total-tetradioxins	319 8965	25.91	4083 133	1 046	0.097	0.097	0.81	0.77	NO	18 4
14	41	Total-tetradioxins	319.8965	25 66	81586.660	1.046	1 939	1.939	0 76	0.77	NO	275.9

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	12	12378-PeCDD	355 8546	32.13	52737 734	0.973	1.986	1 986	1.70	1 55	NO	66 0
2	42	Total-pentadioxins	355 8546	31 46	136547.594	0 973	5.141	5 141	1 58	1 55	NO	187 0
3	42	Total-pentadioxins	355.8546	31.05	0.000	0 973	0.000	1 001	1 11	1 55	YES	33 6
4	42	Total-pentadioxins	355.8546	30 89	502493 172	0.973	18 919	18.919	1 55	1 55	NO	673 3
5	42	Total-pentadioxins	355 8546	30.75	49452 463	0.973	1 862	1 862	1.45	1.55	NO	66 2
6	42	Total-pentadioxins	355 8546	30 54	528089 766	0.973	19.883	19.883	1.55	1.55	NO	740 9
7	42	Total-pentadioxins	355 8546	29 92	24013 289	0 973	0 904	0.904	1.39	1.55	NO	37 2
8	42	Total-pentadioxins	355.8546	29.45	368031.735	0 973	13 856	13.856	1.51	1.55	NO	340.4
9	42	Total-pentadioxins	355 8546	32.53	0.000	0 973	0.000	0 248	1.27	1 55	YES	8.6

Quantify Totals Report MassLynx 4.1 SCN 714
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HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	15	123789-HxCDD	389.8157	37.35	155804.703	0.839	7.616	7 616	1 16	1.24	NO	106.8
2	43	Total-hexadioxins	389 8157	37.09	0.000	0.884	0.000	1 545	0 95	1.24	YES	22.6
3	14	123678-HxCDD	389 8157	36.93	277498 008	0.878	11 751	11.751	1.22	1.24	NO	198.3
4	13	123478-HxCDD	389.8157	36 80	82359.926	0.935	4.025	4.025	1 24	1.24	NO	65.9
5	43	Total-hexadioxins	389.8157	35.93	74690.691	0 884	3.464	3 464	1 32	1.24	NO	69.6
6	43	Total-hexadioxins	389.8157	35.82	713856.188	0 884	33.109	33.109	1.25	1.24	NO	387 2
7	43	Total-hexadioxins	389 8157	35.43	1330644 500	0.884	61.716	61.716	1.24	1 24	NO	1018 4
8	43	Total-hexadioxins	389.8157	34.62	619662 188	0.884	28.740	28 740	1.25	1 24	NO	509 5
9	43	Total-hexadioxins	389.8157	34 35	42227.537	0.884	1.959	1 959	1 17	1.24	NO	37 8

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R. .	S/N
1	16	1234678-HpCDD	423.7766	41.66	4560714.500	0.974	314.335	314.	0 99	1.05	NO	2028.6
2	44	Total-heptadioxins	423.7766	40.38	7392505.750	0.974	509.509	509...	1.01	1.05	NO	3705.7

Quantify Totals Report MassLynx 4.1 SCN 714
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Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati .	1° R...	S/N
1	41	Total-tetradioxins	319 8965	25 38	36865 433	1.046	0 876	0.876	0 74	0.77	NO	130 4
2	41	Total-tetradioxins	319 8965	25 15	2828 618	1 046	0 067	0.067	0 71	0.77	NO	11.7
3	41	Total-tetradioxins	319 8965	24 64	7332 136	1 046	0.174	0.174	0 84	0.77	NO	30.6
4	41	Total-tetradioxins	319.8965	24 43	688836.406	1.046	16 372	16 372	0.77	0 77	NO	2528.3
5	41	Total-tetradioxins	319.8965	24 17	1048614.688	1.046	24.924	24 924	0.77	0 77	NO	4013.9
6	45	Total-Dioxins	319.8965	28 63	0.000	0.942	0.000	0.015	0.24	0.77	YES	3.2
7	45	Total-Dioxins	319.8965	28.32	0.000	0 942	0.000	0.008	0.59	0.77	YES	2.4
8	45	Total-Dioxins	319.8965	27 87	0.000	0 942	0.000	0 011	1.79	0 77	YES	4 0
9	41	Total-tetradioxins	319.8965	27 57	17229 781	1.046	0.410	0.410	0.76	0 77	NO	56.4
10	41	Total-tetradioxins	319.8965	27 17	13546 985	1.046	0.322	0.322	0.78	0 77	NO	42 1
11	11	2378-TCDD	319.8965	27.03	0 000	1 046	0.000	0 250	0 62	0 77	YES	38 3
12	41	Total-tetradioxins	319 8965	26 66	71333 240	1.046	1.695	1.695	0.76	0 77	NO	201 6
13	41	Total-tetradioxins	319.8965	26 36	5757 836	1 046	0.137	0.137	0 82	0.77	NO	20 8
14	41	Total-tetradioxins	319 8965	26 23	292250 211	1.046	6.946	6 946	0.76	0.77	NO	1053 3
15	41	Total-tetradioxins	319.8965	26 02	9350.562	1.046	0 222	0 222	0.75	0.77	NO	32 7
16	41	Total-tetradioxins	319.8965	25.91	4083 133	1.046	0 097	0.097	0 81	0 77	NO	18.4
17	41	Total-tetradioxins	319.8965	25.66	81586.660	1.046	1 939	1.939	0 76	0 77	NO	275.9
18	12	12378-PeCDD	355 8546	32.13	52737 734	0.973	1 986	1.986	1 70	1 55	NO	66 0
19	42	Total-pentadioxins	355 8546	31.46	136547 594	0.973	5.141	5 141	1 58	1.55	NO	187 0
20	42	Total-pentadioxins	355.8546	31.05	0.000	0.973	0 000	1 001	1.11	1 55	YES	33 6
21	42	Total-pentadioxins	355 8546	30.89	502493 172	0.973	18.919	18 919	1 55	1 55	NO	673 3
22	42	Total-pentadioxins	355 8546	30.75	49452 463	0.973	1 862	1 862	1 45	1 55	NO	66 2
23	42	Total-pentadioxins	355 8546	30 54	528089.766	0.973	19 883	19 883	1 55	1 55	NO	740 9
24	42	Total-pentadioxins	355 8546	29.92	24013 289	0 973	0.904	0.904	1 39	1.55	NO	37.2
25	42	Total-pentadioxins	355 8546	29 45	368031.735	0 973	13 856	13.856	1.51	1.55	NO	340.4
26	42	Total-pentadioxins	355 8546	32 53	0 000	0 973	0.000	0.248	1 27	1.55	YES	8.6
27	15	123789-HxCDD	389 8157	37.35	155804 703	0 839	7.616	7 616	1 16	1.24	NO	106.8
28	43	Total-hexadioxins	389.8157	37 09	0 000	0.884	0.000	1.545	0 95	1.24	YES	22.6
29	14	123678-HxCDD	389.8157	36 93	277498 008	0.878	11 751	11 751	1 22	1.24	NO	198 3
30	13	123478-HxCDD	389.8157	36 80	82359.926	0.935	4 025	4 025	1 24	1.24	NO	65 9
31	43	Total-hexadioxins	389.8157	35 93	74690.691	0.884	3 464	3 464	1.32	1 24	NO	69 6
32	43	Total-hexadioxins	389.8157	35 82	713856.188	0.884	33.109	33 109	1 25	1 24	NO	387 2
33	43	Total-hexadioxins	389 8157	35 43	1330644 500	0.884	61 716	61 716	1 24	1 24	NO	1018 4
34	43	Total-hexadioxins	389 8157	34 62	619662 188	0.884	28 740	28 740	1 25	1.24	NO	509 5
35	43	Total-hexadioxins	389.8157	34 35	42227 537	0.884	1 959	1 959	1.17	1.24	NO	37 8
36	16	1234678-HpCDD	423 7766	41.66	4560714.500	0.974	314 335	314 .	0 99	1.05	NO	2028.6
37	44	Total-heptadioxins	423 7766	40.38	7392505.750	0.974	509 509	509 . .	1.01	1.05	NO	3705.7
38	17	OCDD	457.7377	47.68	23509764....	0 950	2759 5.	2759. .	0.89	0.89	NO	10648.7

Quantify Totals Report MassLynx 4.1 SCN 714
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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	35	Total-tetrafurans	303.9016	24 90	1579 296	0 866	0 029	0 029	0.65	0 77	NO	3 6
2	35	Total-tetrafurans	303.9016	24 64	0.000	0 866	0 000	0.272	0.89	0 77	YES	29 9
3	35	Total-tetrafurans	303.9016	24 51	0.000	0 866	0 000	0 165	0.89	0.77	YES	19 3
4	35	Total-tetrafurans	303.9016	24.39	49529.806	0.866	0.910	0 910	0 78	0.77	NO	92.2
5	35	Total-tetrafurans	303 9016	24 24	10318.496	0.866	0 190	0 190	0 76	0 77	NO	21.1
6	35	Total-tetrafurans	303.9016	24 15	37847.568	0 866	0 695	0 695	0 73	0.77	NO	63.2
7	35	Total-tetrafurans	303 9016	24 05	0.000	0.866	0.000	0.377	0 89	0 77	YES	36.3
8	35	Total-tetrafurans	303 9016	23.93	39449.828	0.866	0.725	0.725	0.71	0.77	NO	41 4
9	35	Total-tetrafurans	303.9016	23 75	114732.359	0 866	2 108	2 108	0 75	0 77	NO	186.9
10	35	Total-tetrafurans	303.9016	23.16	17533.974	0 866	0 322	0 322	0.82	0 77	NO	32 7
11	35	Total-tetrafurans	303.9016	22 90	15173.983	0.866	0 279	0 279	0 77	0 77	NO	26 2
12	40	Total-Furans	303.9016	21.31	28729.523	1.050	0.435	0.435	0.69	0.77	NO	48 9
13	40	Total-Furans	303 9016	28.17	0.000	1.050	0.000	0.004	1.52	0.77	YES	0 9
14	35	Total-tetrafurans	303 9016	27 89	25098.208	0.866	0.461	0.461	0.81	0.77	NO	21 0
15	35	Total-tetrafurans	303 9016	26 63	30909.507	0.866	0.568	0.568	0.75	0 77	NO	45.8
16	35	Total-tetrafurans	303 9016	26.53	0 000	0 866	0.000	0 174	0.59	0 77	YES	18 3
17	1	2378-TCDF	303 9016	26.39	122934.976	0.866	2.259	2.259	0.77	0 77	NO	211 2
18	35	Total-tetrafurans	303.9016	26 21	28921.287	0.866	0 531	0.531	0 68	0.77	NO	33 4
19	35	Total-tetrafurans	303.9016	26 03	0 000	0.866	0.000	0 050	0.56	0.77	YES	6 7
20	35	Total-tetrafurans	303.9016	25 90	0.000	0 866	0.000	0 161	0 59	0 77	YES	14.8
21	35	Total-tetrafurans	303 9016	25 70	12515 231	0.866	0.230	0.230	0.68	0.77	NO	20 2
22	35	Total-tetrafurans	303.9016	25 48	75851 645	0 866	1.394	1 394	0 80	0 77	NO	125.9
23	35	Total-tetrafurans	303.9016	25.30	53414 399	0 866	0.981	0 981	0 79	0 77	NO	85.0
24	35	Total-tetrafurans	303.9016	25.15	29869 433	0 866	0.549	0 549	0 71	0 77	NO	45.8
25	35	Total-tetrafurans	303.9016	25.06	35859 386	0 866	0.659	0.659	0 77	0 77	NO	47.4
26	40	Total-Furans	303.9016	28 48	0 000	1 050	0.000	0 042	1 06	0 77	YES	6.0
27	37	Total-pentafurans	339.8597	30.72	0 000	0.921	0 000	0.884	1 80	1 55	YES	67.5
28	2	12378-PeCDF	339.8597	30 54	27079.329	0.907	0.675	0.675	1.74	1 55	NO	63.1
29	37	Total-pentafurans	339.8597	30 17	64176 102	0 921	1 606	1.606	1 47	1 55	NO	105 7
30	37	Total-pentafurans	339.8597	30 07	6490 054	0.921	0 162	0.162	1 51	1 55	NO	18 3
31	37	Total-pentafurans	339.8597	29.97	0 000	0 921	0 000	0.105	1.12	1 55	YES	13 1
32	37	Total-pentafurans	339.8597	29 79	2411 041	0 921	0.060	0.060	1.77	1 55	NO	5.5
33	37	Total-pentafurans	339.8597	29 49	166083.285	0.921	4 155	4.155	1.62	1.55	NO	245 8
34	37	Total-pentafurans	339 8597	29.29	23180 708	0.921	0.580	0.580	1.39	1 55	NO	40 3
35	37	Total-pentafurans	339.8597	29.19	0.000	0 921	0.000	0.087	2.29	1.55	YES	15.6
36	37	Total-pentafurans	339.8597	32.92	2792.059	0.921	0.070	0.070	1.59	1.55	NO	8 4
37	3	23478-PeCDF	339 8597	31 88	33051.077	0.936	0.831	0.831	1.62	1.55	NO	65 7
38	37	Total-pentafurans	339 8597	31.72	37494.645	0.921	0 938	0 938	1.55	1 55	NO	80 3
39	37	Total-pentafurans	339 8597	31.62	9431.162	0.921	0.236	0.236	1.73	1.55	NO	19 5
40	4	123478-HxCDF	373 8208	35 56	77712.016	1.082	2 675	2.675	1 18	1 24	NO	144 7
41	38	Total-hexafurans	373 8208	35 40	0.000	1.055	0 000	0.335	0.99	1 24	YES	18 7
42	38	Total-hexafurans	373 8208	34.90	759891.657	1.055	26.737	26 737	1 24	1 24	NO	1473 2
43	38	Total-hexafurans	373 8208	34.58	12130.852	1.055	0.427	0.427	1 33	1 24	NO	24 6
44	38	Total-hexafurans	373 8208	34.31	0.000	1.055	0.000	0 022	12 86	1 24	YES	9 1
45	38	Total-hexafurans	373 8208	34 03	726052.719	1.055	25.546	25.546	1.23	1.24	NO	1399.7
46	38	Total-hexafurans	373 8208	33.83	231561.032	1.055	8 148	8.148	1.22	1 24	NO	487.4
47	7	123789-HxCDF	373 8208	37 73	22658.653	1.020	0 952	0.952	1 22	1 24	NO	42.7
48	5	234678-HxCDF	373.8208	36 62	70627.897	1.070	2.515	2.515	1.29	1.24	NO	85 0
49	38	Total-hexafurans	373.8208	36.06	4148 082	1 055	0.146	0.146	1 41	1 24	NO	9 2

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
50	6	123678-HxCDF	373 8208	35.71	47220.916	1 048	1.439	1.439	1.26	1 24	NO	87 7
51	39	Total-heptafurans	407 7818	40.16	0 000	1.234	0 000	0 201	0 67	1.05	YES	8.4
52	8	1234678-HpCDF	407 7818	39.83	923904 657	1.214	42.311	42 311	1.00	1.05	NO	1213.1
53	39	Total-heptafurans	407.7818	42.73	0.000	1.234	0.000	0.087	1 39	1.05	YES	5.9
54	9	1234789-HpCDF	407 7818	42.56	41321 289	1.254	2 689	2.689	1 03	1.05	NO	51.0
55	39	Total-heptafurans	407 7818	40.63	1818112.000	1.234	97 440	97 440	1.02	1.05	NO	2596.4
56	39	Total-heptafurans	407 7818	40 33	20405.299	1.234	1.094	1 094	0.91	1 05	NO	27.5
57	39	Total-heptafurans	407.7818	40.23	0.000	1 234	0.000	0.097	0.75	1 05	YES	6.0
58	10	OCDF	441 7428	47 96	1493500.813	1.105	150.695	150 ...	0 89	0.89	NO	1357 4
59	36	Total-penta1	339.8597	27 81	569937 578		14 327	14.327	1 57	1.55	NO	3248 6
60	41	Total-tetradioxins	319.8965	25.38	36865.433	1 046	0 876	0 876	0.74	0 77	NO	130 4
61	41	Total-tetradioxins	319.8965	25 15	2828.618	1 046	0 067	0.067	0 71	0 77	NO	11.7
62	41	Total-tetradioxins	319.8965	24 64	7332.136	1.046	0 174	0.174	0 84	0.77	NO	30 6
63	41	Total-tetradioxins	319.8965	24.43	688836.406	1 046	16.372	16.372	0 77	0.77	NO	2528 3
64	41	Total-tetradioxins	319.8965	24 17	1048614.688	1.046	24.924	24.924	0 77	0.77	NO	4013.9
65	45	Total-Dioxins	319.8965	28 63	0 000	0.942	0.000	0 015	0 24	0.77	YES	3 2
66	45	Total-Dioxins	319 8965	28.32	0 000	0.942	0 000	0.008	0 59	0.77	YES	2 4
67	45	Total-Dioxins	319 8965	27 87	0 000	0 942	0.000	0 011	1 79	0 77	YES	4.0
68	41	Total-tetradioxins	319 8965	27 57	17229.781	1.046	0 410	0.410	0.76	0 77	NO	56.4
69	41	Total-tetradioxins	319 8965	27 17	13546.985	1 046	0.322	0 322	0 78	0 77	NO	42.1
70	11	2378-TCDD	319 8965	27 03	0 000	1.046	0 000	0 250	0 62	0 77	YES	38 3
71	41	Total-tetradioxins	319 8965	26 66	71333 240	1.046	1 695	1 695	0.76	0.77	NO	201 6
72	41	Total-tetradioxins	319 8965	26 36	5757.836	1 046	0 137	0 137	0.82	0.77	NO	20 8
73	41	Total-tetradioxins	319.8965	26.23	292250.211	1 046	6 946	6.946	0 76	0 77	NO	1053.3
74	41	Total-tetradioxins	319 8965	26.02	9350.562	1.046	0 222	0 222	0.75	0 77	NO	32.7
75	41	Total-tetradioxins	319 8965	25 91	4083.133	1.046	0 097	0 097	0.81	0 77	NO	18.4
76	41	Total-tetradioxins	319 8965	25.66	81586.660	1.046	1 939	1 939	0 76	0 77	NO	275.9
77	12	12378-PeCDD	355.8546	32.13	52737.734	0.973	1 986	1.986	1 70	1.55	NO	66 0
78	42	Total-pentadioxins	355.8546	31 46	136547.594	0.973	5.141	5 141	1 58	1 55	NO	187.0
79	42	Total-pentadioxins	355 8546	31 05	0.000	0.973	0.000	1 001	1 11	1 55	YES	33.6
80	42	Total-pentadioxins	355 8546	30 89	502493.172	0 973	18 919	18 919	1 55	1 55	NO	673 3
81	42	Total-pentadioxins	355 8546	30 75	49452.463	0 973	1 862	1.862	1 45	1.55	NO	66 2
82	42	Total-pentadioxins	355 8546	30 54	528089.766	0 973	19 883	19 883	1 55	1.55	NO	740.9
83	42	Total-pentadioxins	355 8546	29 92	24013 289	0.973	0 904	0 904	1 39	1.55	NO	37.2
84	42	Total-pentadioxins	355 8546	29 45	368031.735	0.973	13.856	13 856	1.51	1 55	NO	340.4
85	42	Total-pentadioxins	355 8546	32 53	0.000	0.973	0 000	0 248	1.27	1 55	YES	8 6
86	15	123789-HxCDD	389.8157	37 35	155804.703	0.839	7.616	7.616	1.16	1 24	NO	106 8
87	43	Total-hexadioxins	389.8157	37.09	0.000	0.884	0 000	1.545	0 95	1 24	YES	22 6
88	14	123678-HxCDD	389.8157	36.93	277498.008	0 878	11 751	11.751	1 22	1.24	NO	198.3
89	13	123478-HxCDD	389 8157	36.80	82359 926	0 935	4.025	4 025	1 24	1.24	NO	65.9
90	43	Total-hexadioxins	389.8157	35.93	74690 691	0 884	3.464	3 464	1 32	1 24	NO	69.6
91	43	Total-hexadioxins	389 8157	35.82	713856 188	0.884	33.109	33.109	1 25	1.24	NO	387 2
92	43	Total-hexadioxins	389 8157	35.43	1330644 500	0 884	61.716	61.716	1 24	1.24	NO	1018.4
93	43	Total-hexadioxins	389.8157	34 62	619662 188	0.884	28 740	28 740	1 25	1 24	NO	509.5
94	43	Total-hexadioxins	389.8157	34 35	42227 537	0.884	1 959	1 959	1.17	1 24	NO	37 8
95	16	1234678-HpCDD	423.7766	41 66	4560714.500	0.974	314 335	314 ..	0.99	1 05	NO	2028 6
96	44	Total-heptadioxins	423.7766	40 38	7392505 750	0.974	509 509	509 ..	1 01	1 05	NO	3705.7
97	17	OCDD	457.7377	47.68	23509764. .	0.950	2759 5.	2759.	0.89	0 89	NO	10648 7

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330 9792	28 13	0.000							2.2
2	48	FUNCTION1 PFK	330.9792	23 33	0 000							1 3
3	48	FUNCTION1 PFK	330.9792	22 19	0.000							1.6

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	32 74	0.000		0.000					3.5
2	49	FUNCTION2 PFK	366.9792	30.82	0.000		0.000					21.0
3	49	FUNCTION2 PFK	366 9792	28.95	0.000		0 000					11 0

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380 9760	37 60	0 000		0 000					53.0
2	50	FUNCTION3 PFK	380.9760	34 44	0.000		0.000					4 6
3	50	FUNCTION3 PFK	380.9760	38.76	0 000		0.000					7 4

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430 9728	43.68	0 000							1.8
2	51	FUNCTION4 PFK	430.9728	42 46	0 000							1 6
3	51	FUNCTION4 PFK	430.9728	42 07	0.000							0 7
4	51	FUNCTION4 PFK	430 9728	39.46	0.000							2 0

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	53	FUNCTION1 HXCD...	375 8364	28.41	0 000		0 000					3 3
2	53	FUNCTION1 HXCD.	375 8364	27 99	0.000		0.000					3 4
3	53	FUNCTION1 HXCD.	375 8364	27.92	0.000		0.000					6 9
4	53	FUNCTION1 HXCD .	375 8364	26.47	0.000		0.000					110 8
5	53	FUNCTION1 HXCD.	375 8364	26 20	0.000		0.000					45.0
6	53	FUNCTION1 HXCD...	375 8364	25.48	0 000		0.000					4.1
7	53	FUNCTION1 HXCD .	375.8364	24.24	0.000		0 000					30.8
8	53	FUNCTION1 HXCD .	375.8364	21.30	0.000		0.000					8.1

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD.	409 7974	27.72	0 000		0 000					2.6
2	54	FUNCTION1 HPCD	409 7974	26 57	0 000		0.000					2 5
3	54	FUNCTION1 HPCD.	409 7974	26.45	0 000		0.000					2.1
4	54	FUNCTION1 HPCD	409 7974	26 30	0.000		0 000					2 9
5	54	FUNCTION1 HPCD	409 7974	22 94	0 000		0 000					2.8
6	54	FUNCTION1 HPCD...	409.7974	21 30	0 000		0.000					8.4

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD	409 7974	32.53	0.000		0.000					2.2
2	55	FUNCTION2 HPCD. .	409 7974	31 97	0.000		0.000					4 1
3	55	FUNCTION2 HPCD...	409.7974	31 46	0.000		0.000					2 9
4	55	FUNCTION2 HPCD	409.7974	31.42	0.000		0 000					3 6
5	55	FUNCTION2 HPCD...	409.7974	30.49	0.000		0.000					18 7
6	55	FUNCTION2 HPCD .	409.7974	30.29	0.000		0 000					2 2
7	55	FUNCTION2 HPCD ..	409.7974	30.18	0.000		0 000					29 1
8	55	FUNCTION2 HPCD .	409.7974	29.89	0 000		0.000					3.9
9	55	FUNCTION2 HPCD .	409.7974	33.17	0.000		0.000					6.2

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445 7555	37.35	0 000		0 000					3 8
2	56	FUNCTION3 OCDPE	445 7555	37.19	0 000		0.000					7 2
3	56	FUNCTION3 OCDPE	445 7555	37 10	0.000		0.000					13 5
4	56	FUNCTION3 OCDPE	445 7555	36.99	0.000		0 000					15.9
5	56	FUNCTION3 OCDPE	445.7555	36.85	0 000		0 000					4.2
6	56	FUNCTION3 OCDPE	445 7555	36 75	0.000		0 000					9 5
7	56	FUNCTION3 OCDPE	445.7555	36.70	0 000		0 000					8.8
8	56	FUNCTION3 OCDPE	445.7555	36 65	0 000		0.000					11.3
9	56	FUNCTION3 OCDPE	445.7555	36.61	0.000		0 000					11 3
10	56	FUNCTION3 OCDPE	445.7555	35 56	0 000		0.000					6.3
11	56	FUNCTION3 OCDPE	445.7555	35 48	0.000		0.000					13 3
12	56	FUNCTION3 OCDPE	445.7555	35 32	0 000		0.000					4 3
13	56	FUNCTION3 OCDPE	445.7555	35.27	0.000		0 000					5.4
14	56	FUNCTION3 OCDPE	445 7555	35 22	0 000		0.000					6 4
15	56	FUNCTION3 OCDPE	445.7555	37 94	0.000		0.000					3 2
16	56	FUNCTION3 OCDPE	445 7555	37.90	0.000		0 000					5.1
17	56	FUNCTION3 OCDPE	445.7555	37.63	0 000		0 000					2.8
18	56	FUNCTION3 OCDPE	445.7555	37.59	0.000		0.000					4.5
19	56	FUNCTION3 OCDPE	445.7555	37.37	0.000		0.000					4.7

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	41 99	0.000		0 000					3.8
2	57	FUNCTION4 NCDPE	479.7165	41 88	0 000		0.000					4 9
3	57	FUNCTION4 NCDPE	479.7165	41 85	0.000		0 000					5 2
4	57	FUNCTION4 NCDPE	479 7165	41.63	0 000		0.000					24 5
5	57	FUNCTION4 NCDPE	479 7165	41 48	0 000		0 000					7.1
6	57	FUNCTION4 NCDPE	479.7165	41.43	0 000		0.000					11 7
7	57	FUNCTION4 NCDPE	479.7165	41 27	0 000		0.000					9.2
8	57	FUNCTION4 NCDPE	479.7165	41 23	0.000		0.000					6 4
9	57	FUNCTION4 NCDPE	479 7165	40.39	0.000		0 000					1.4
10	57	FUNCTION4 NCDPE	479.7165	39 41	0.000		0 000					392.3
11	57	FUNCTION4 NCDPE	479.7165	44.27	0.000		0.000					1 4
12	57	FUNCTION4 NCDPE	479.7165	42 23	0.000		0.000					1.5
13	57	FUNCTION4 NCDPE	479 7165	42.04	0 000		0.000					3.6

ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered. Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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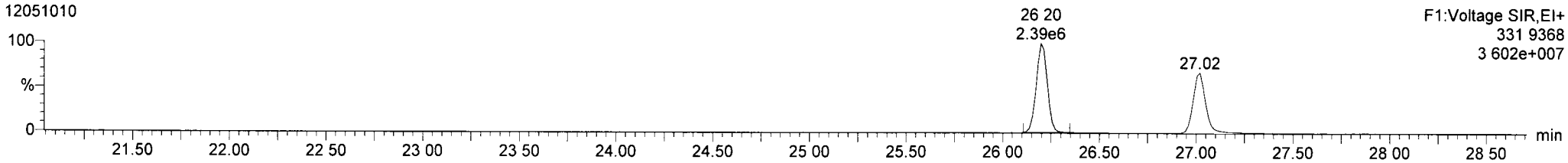
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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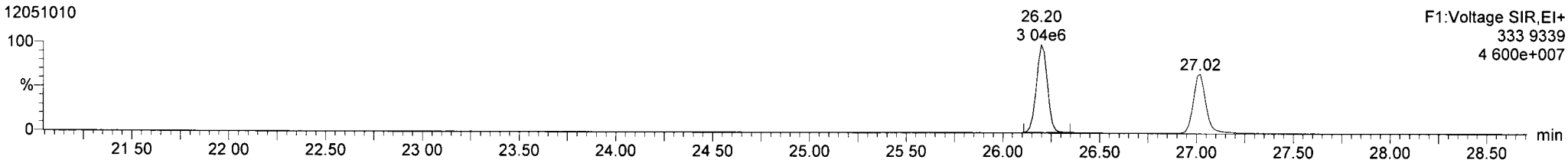

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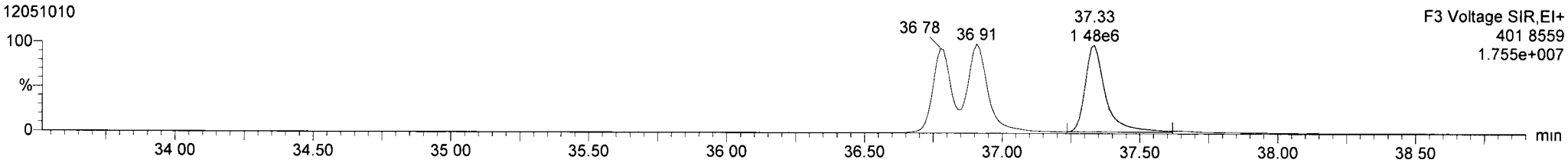

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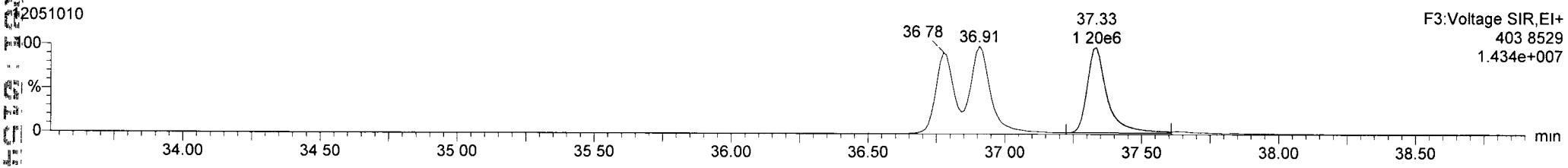

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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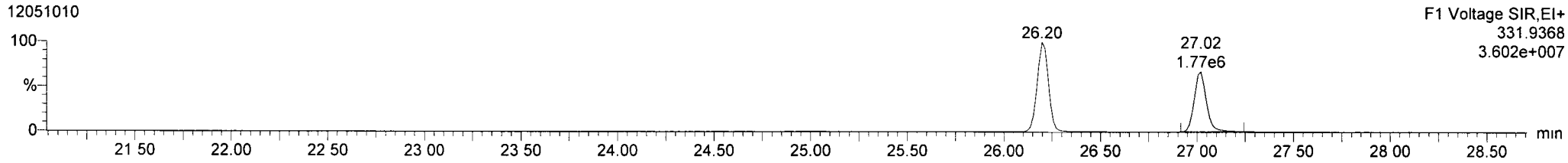
13C-2378-TCDD



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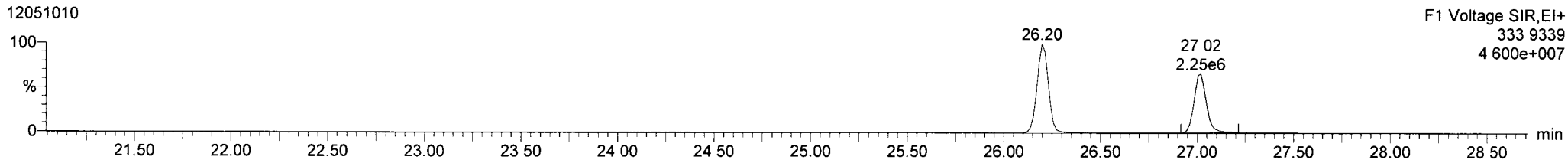
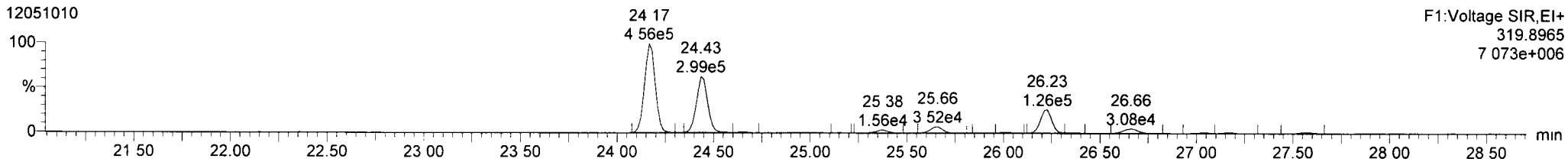
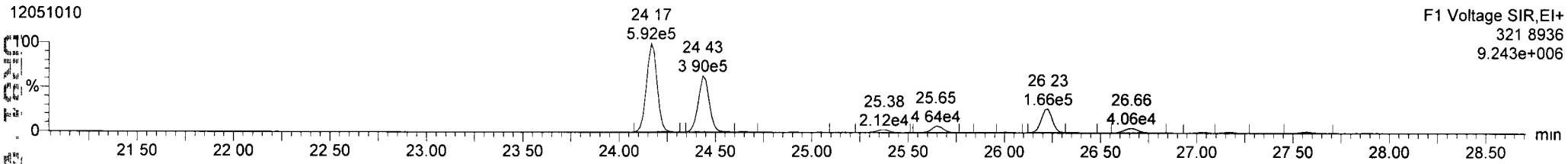


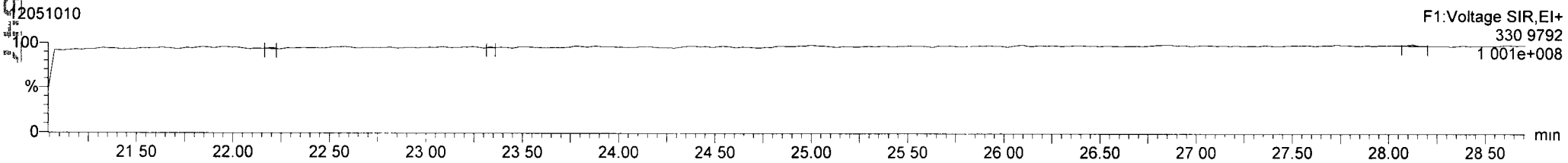
Total-tetradioxins



Total-tetradioxins



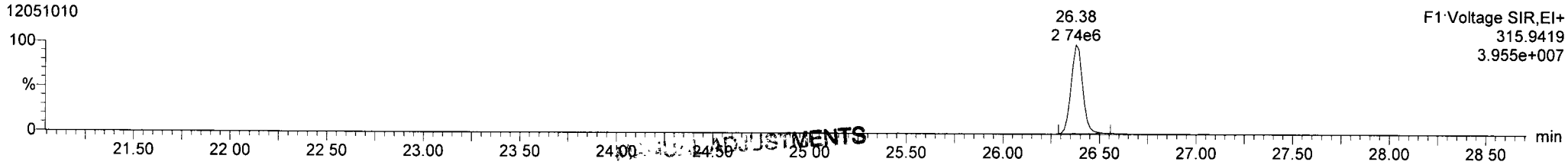
FUNCTION1 PFK



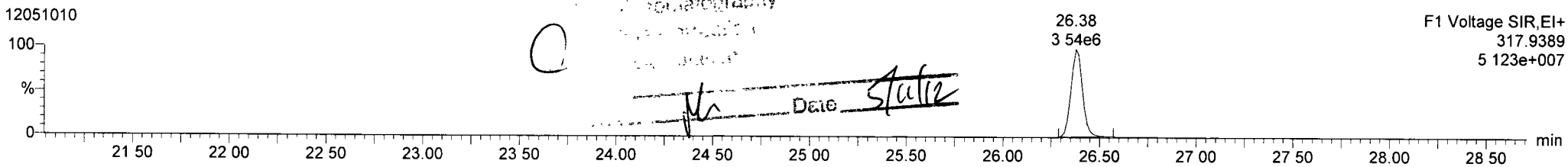
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26.52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

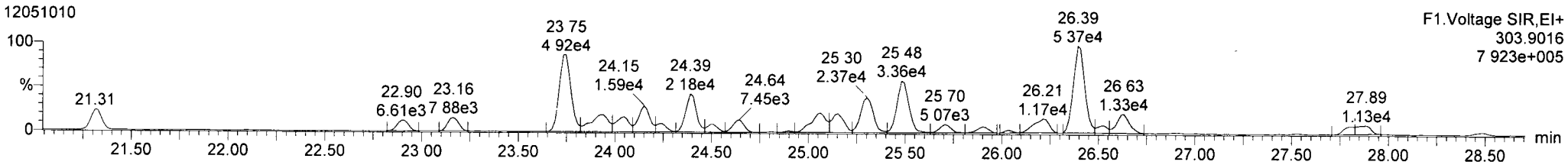
13C-2378-TCDF



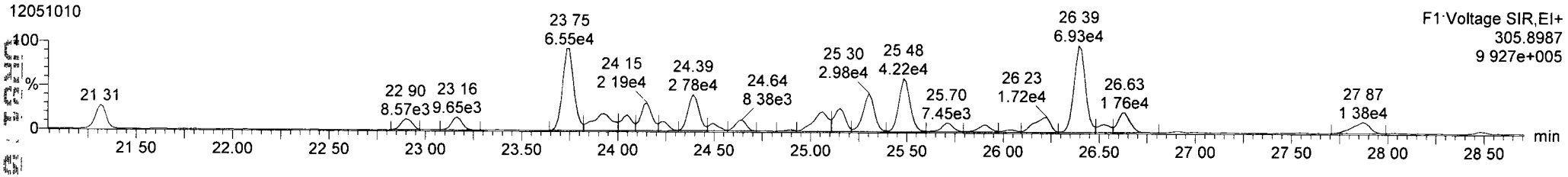
13C-2378-TCDF



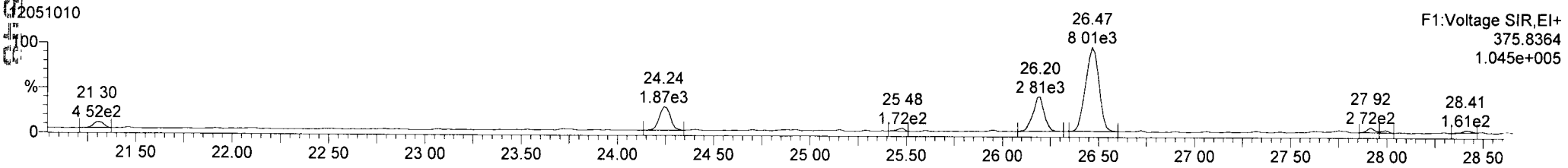
Total-tetrafurans



Total-tetrafurans



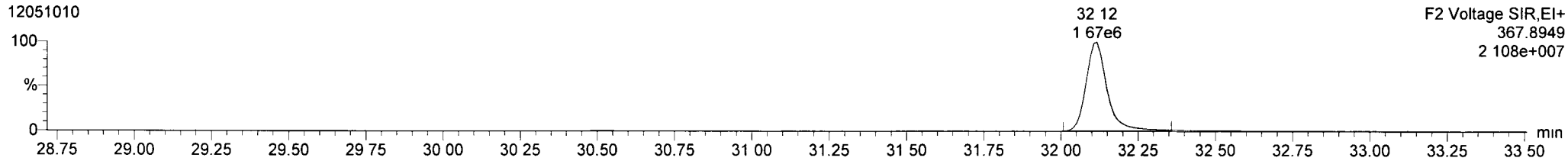
PUNCTION1 HXCDPE



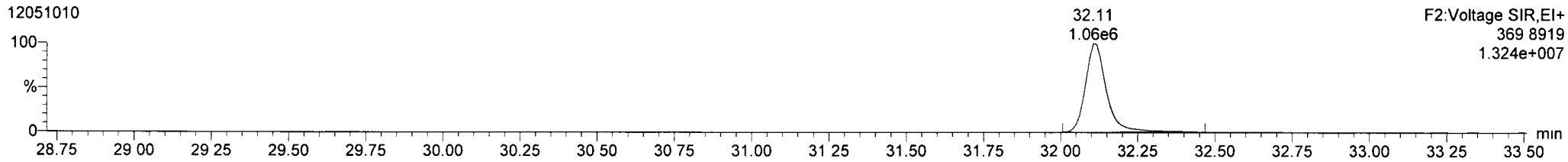
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10.25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

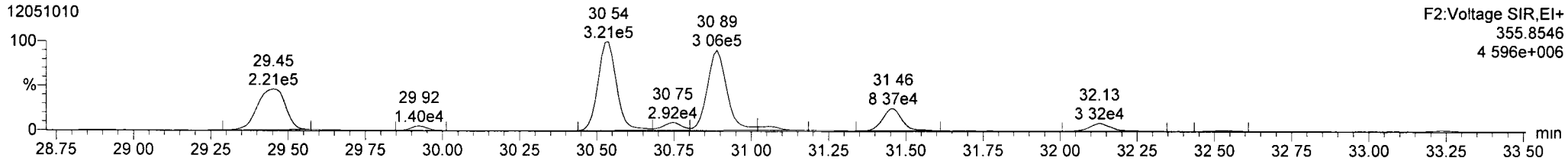
13C-12378-PeCDD



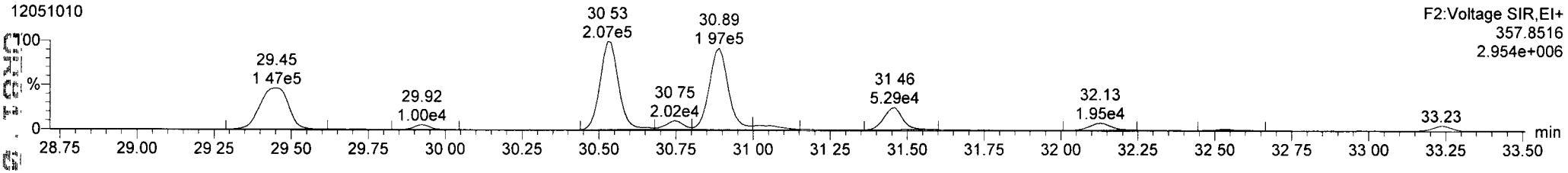
13C-12378-PeCDD



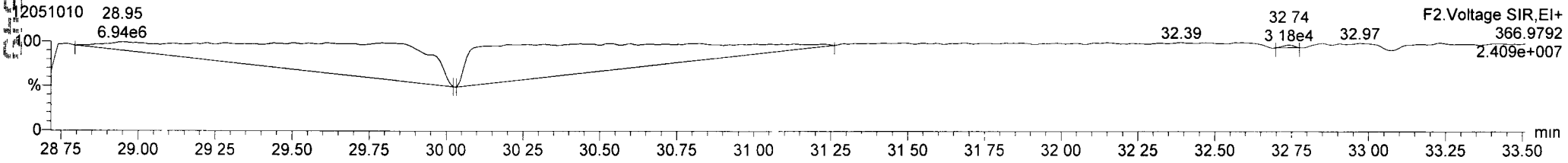
Total-pentadioxins



Total-pentadioxins



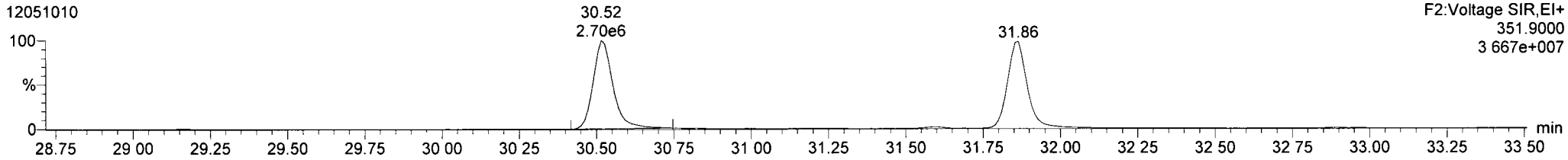
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25.01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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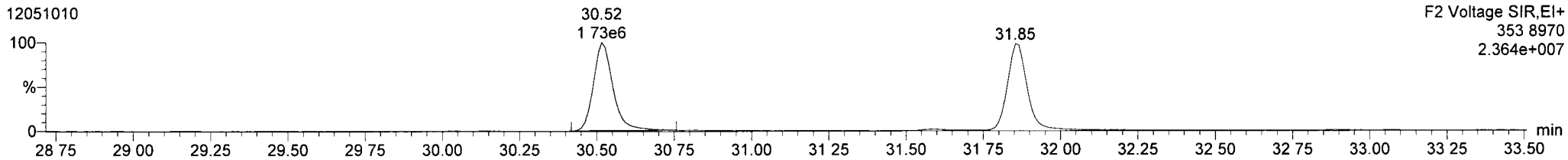

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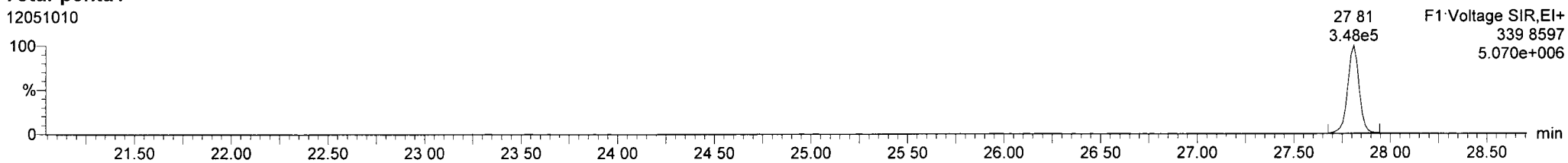

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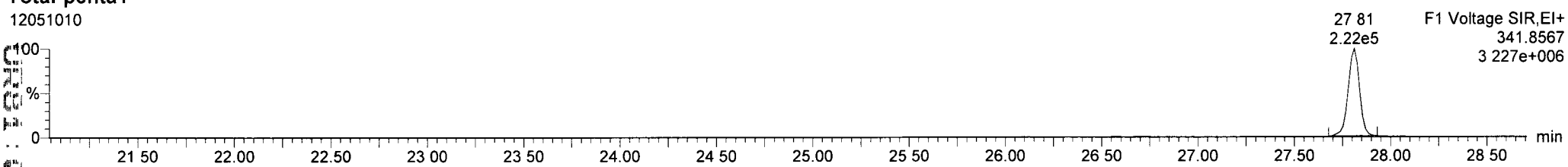
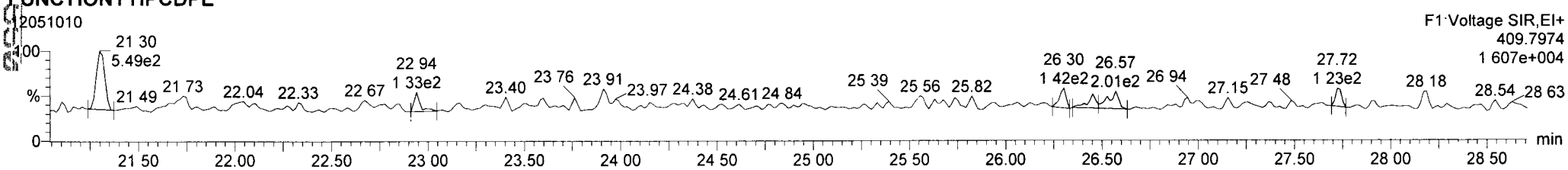


FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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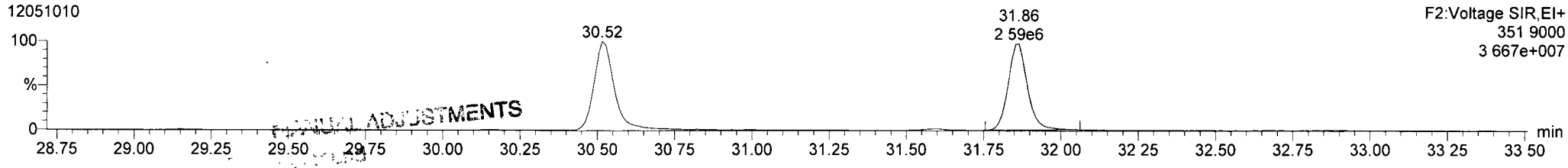
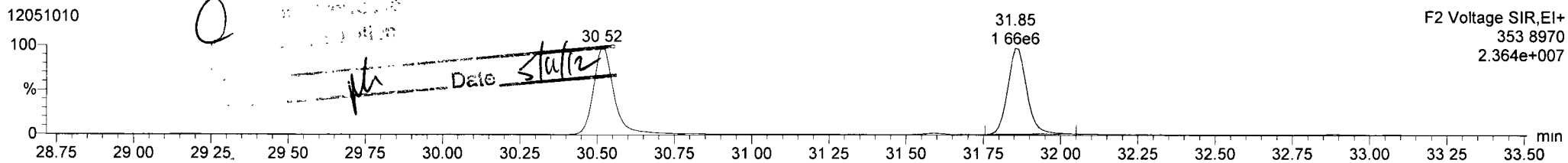
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

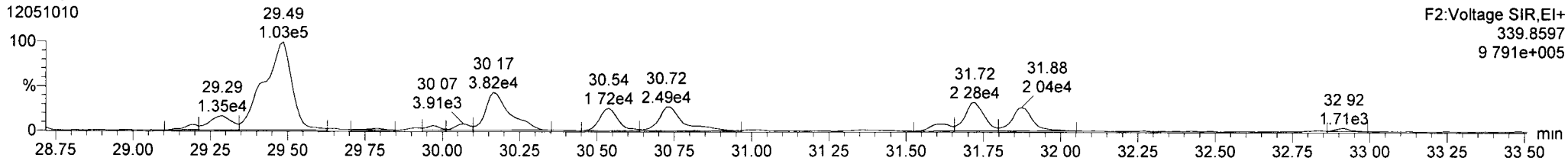
13C-23478-PeCDF



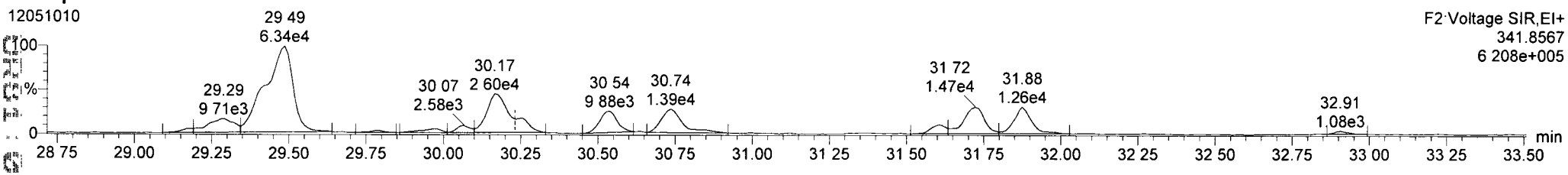
13C-23478-PeCDF



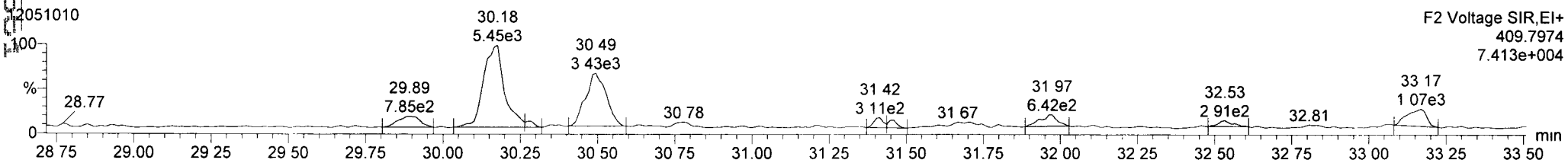
Total-pentafurans



Total-pentafurans



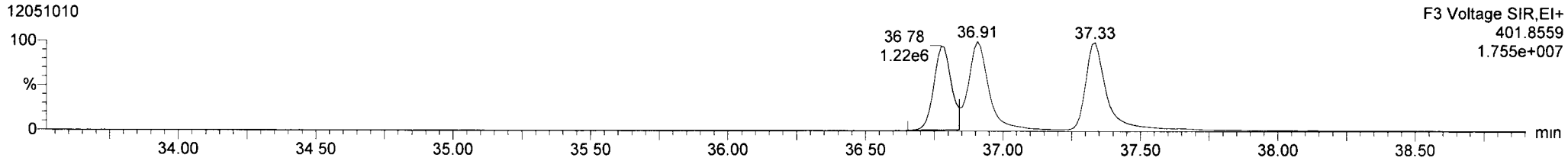
FUNCTION2 HPCDPE



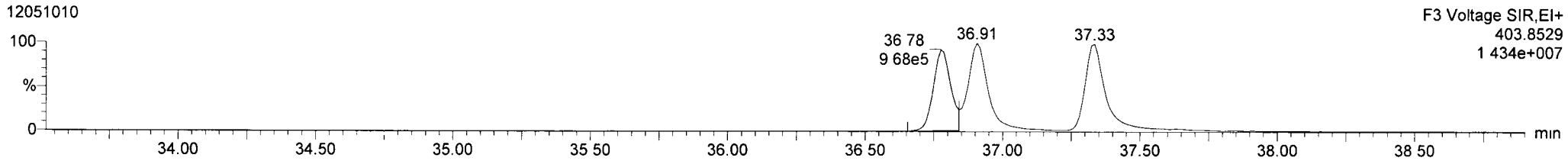
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

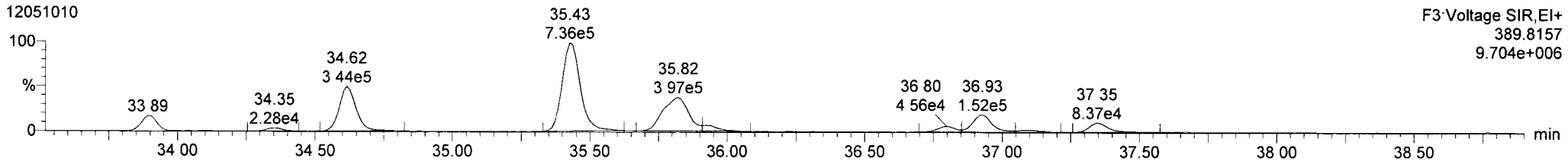
13C-123478-HxCDD



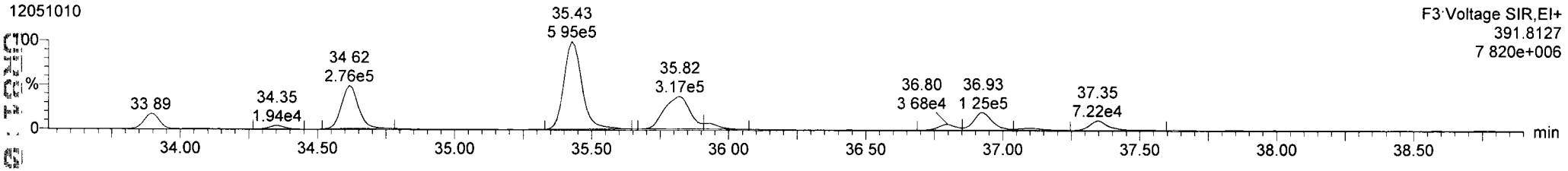
13C-123478-HxCDD



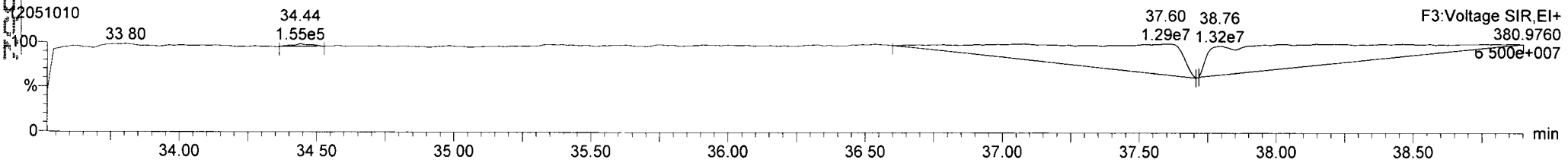
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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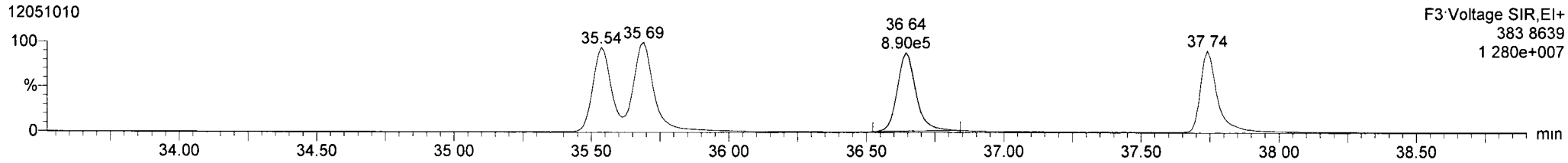
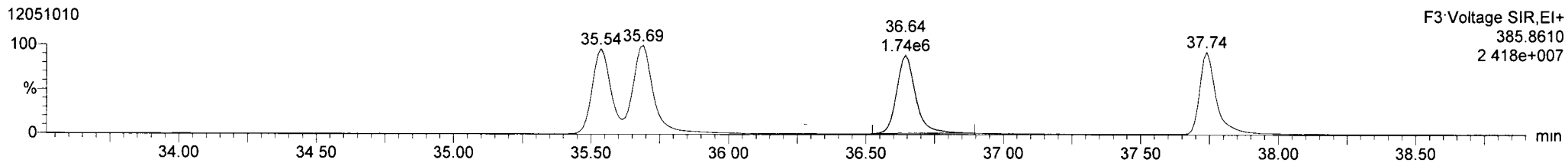
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

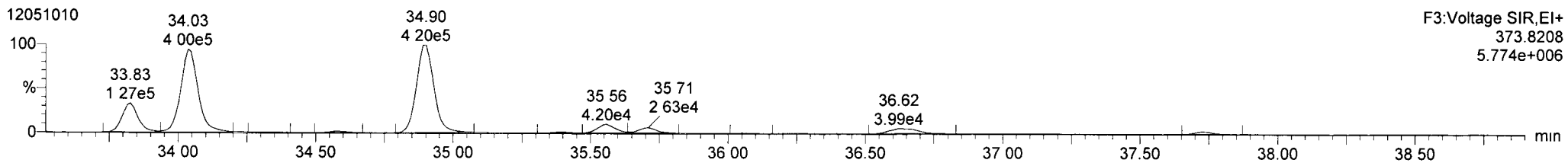
13C-234678-HxCDF



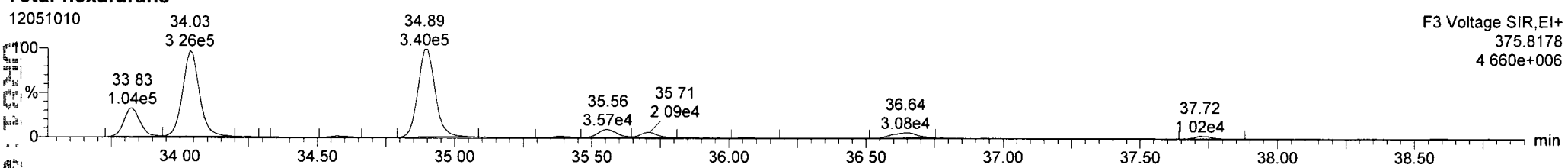
13C-234678-HxCDF



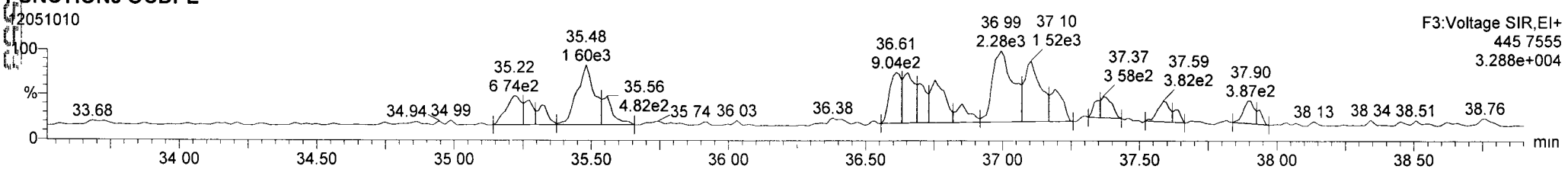
Total-hexafurans



Total-hexafurans

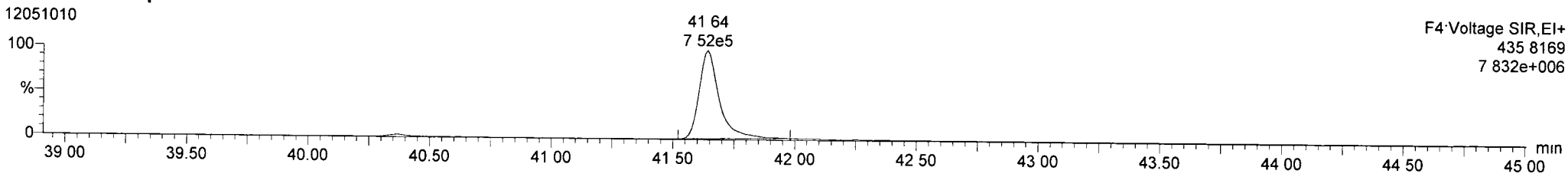


FUNCTION3 OCDPE

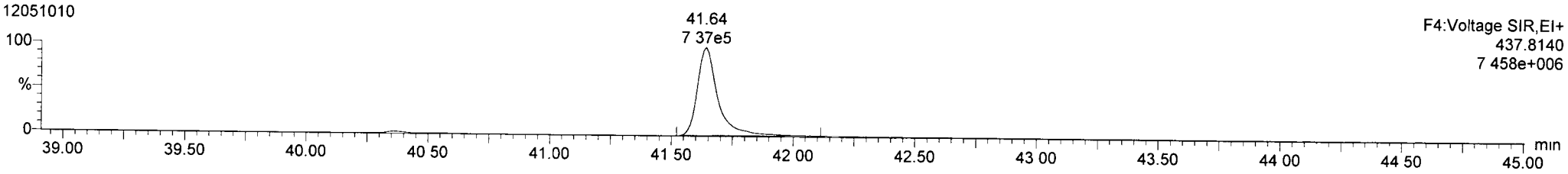


Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

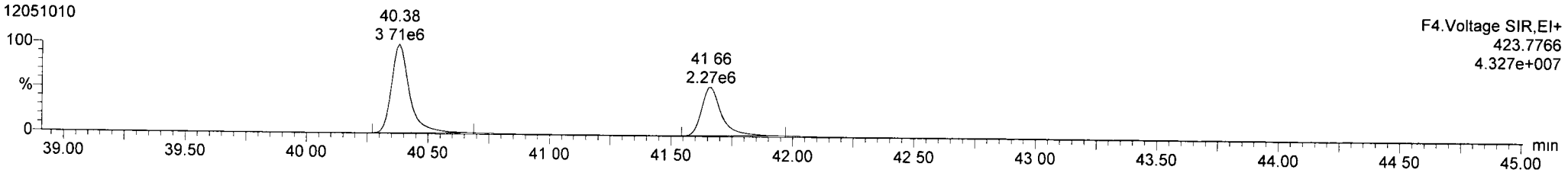
13C-1234678-HpCDD



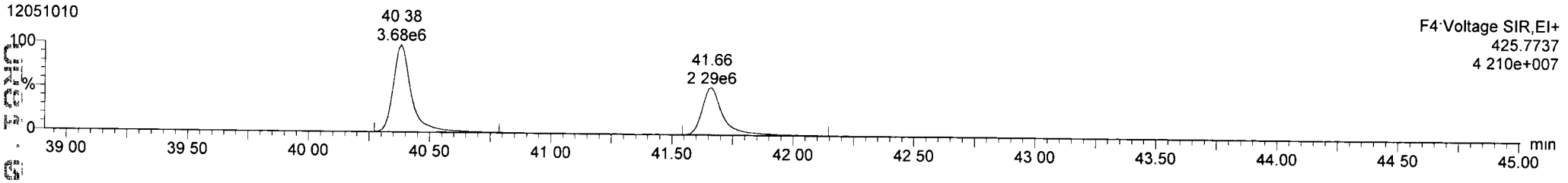
13C-1234678-HpCDD



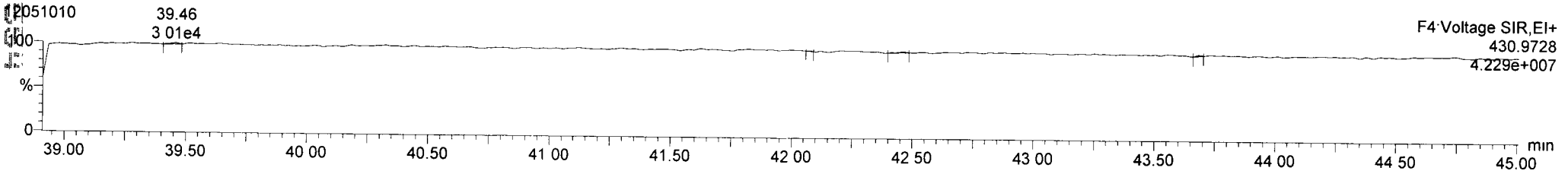
Total-heptadioxins



Total-heptadioxins



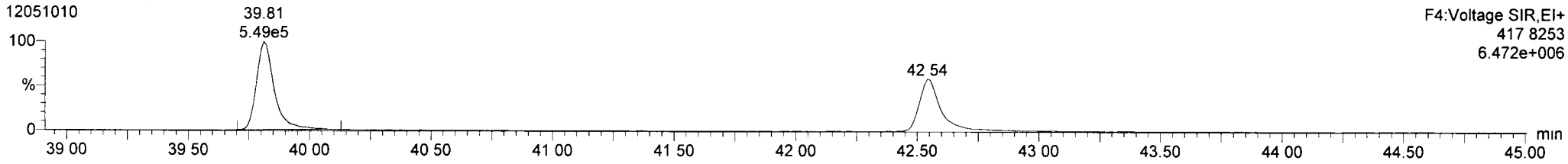
FUNCTION4 PFK



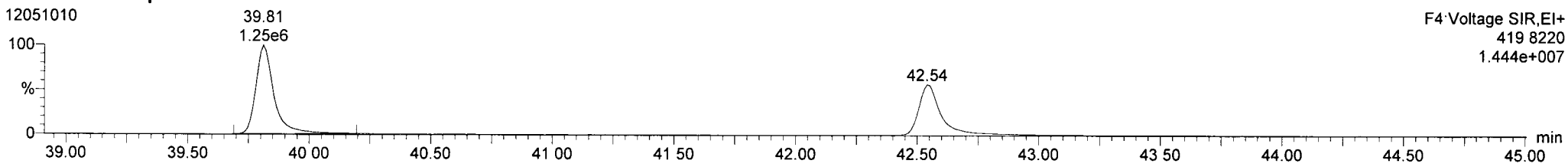
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

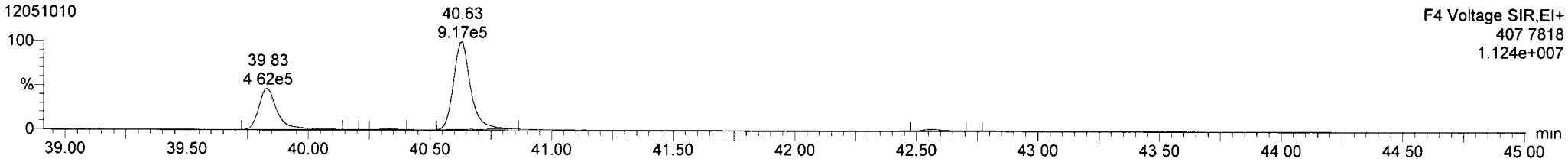
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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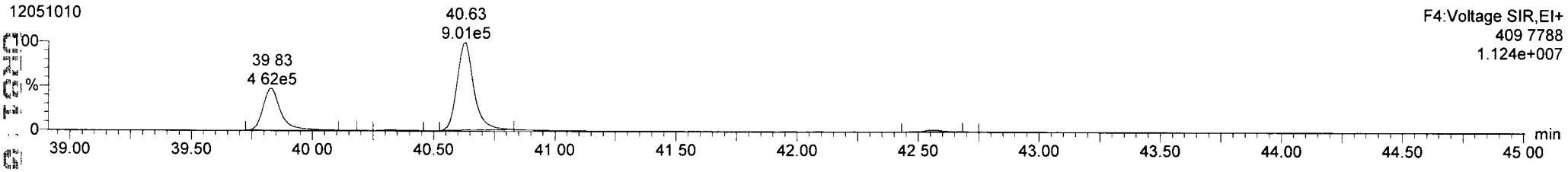
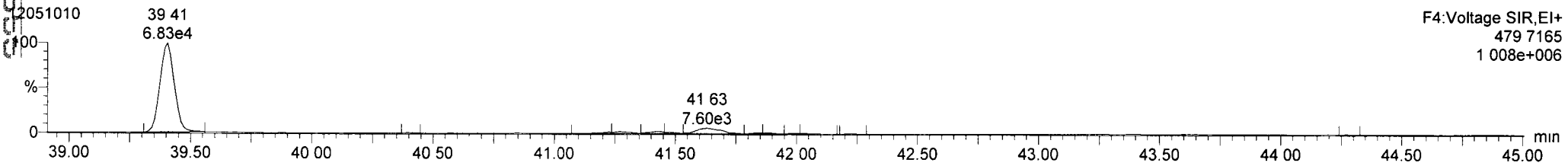


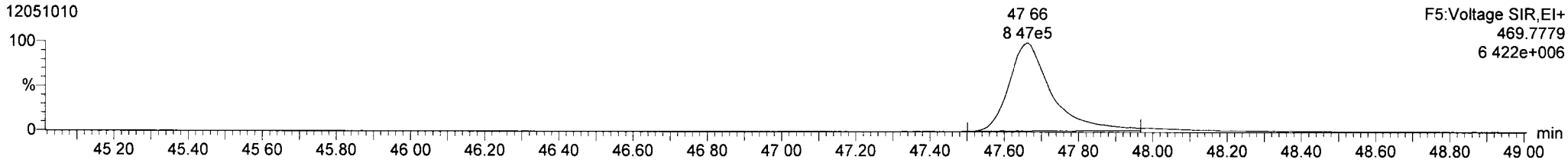
FUNCTION4 NCDPE



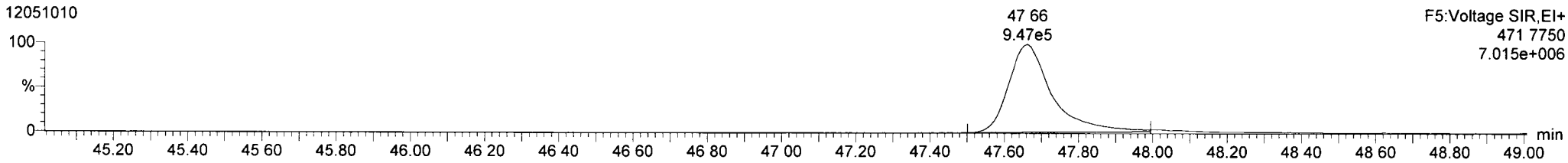
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

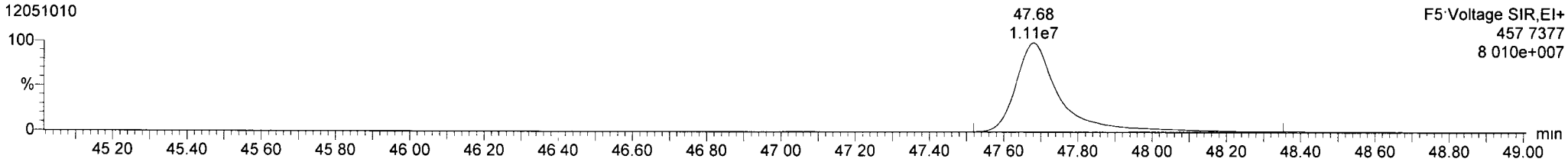
13C-OCDD



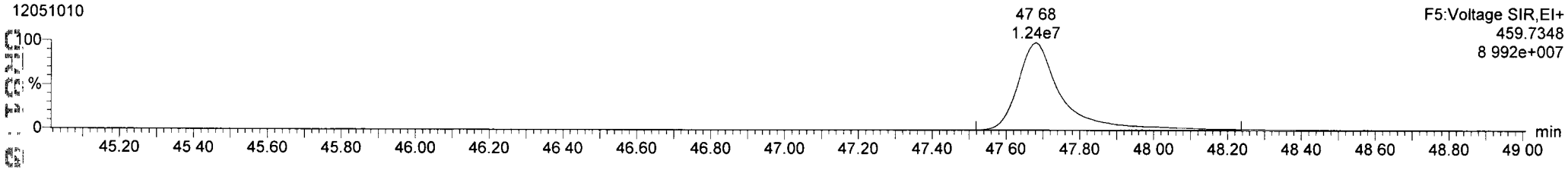
13C-OCDD



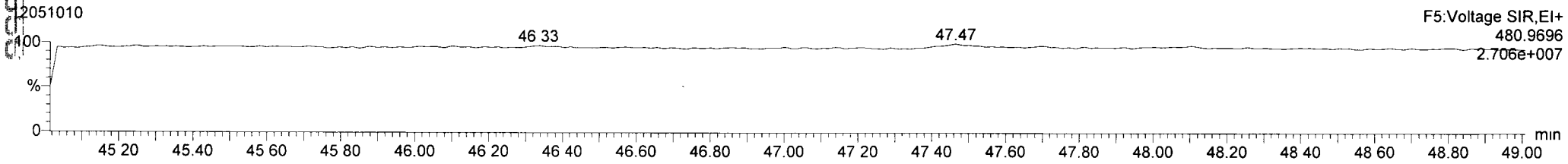
OCDD



OCDD



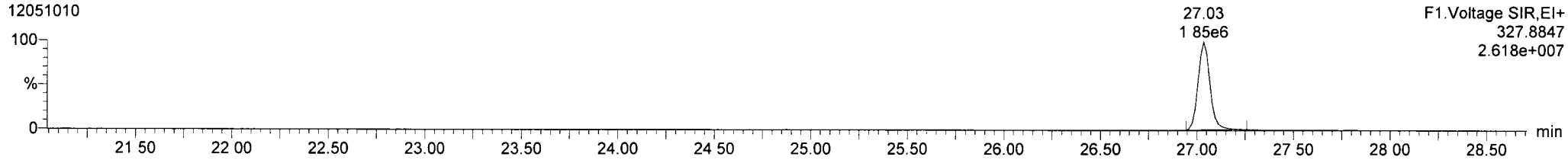
FUNCTION5 PFK



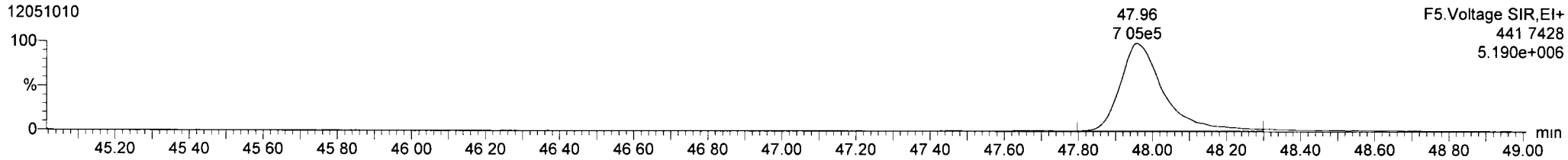
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered. Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:52 Pacific Daylight Time

Name: 12051010, Date: 10-May-2012, Time: 17:33:33, ID: UR81D, Conditions: AUTOSPEC01, User: pk

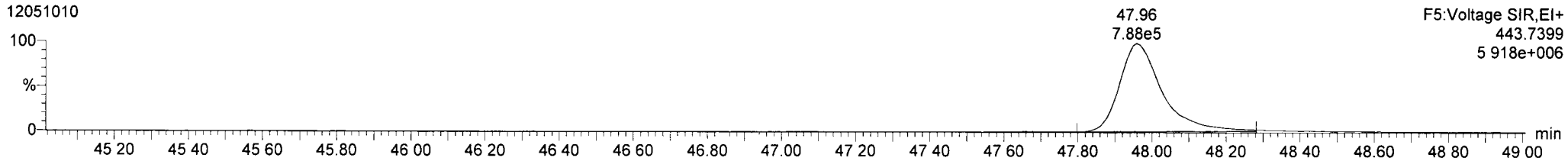
37CL-2378-TCDD



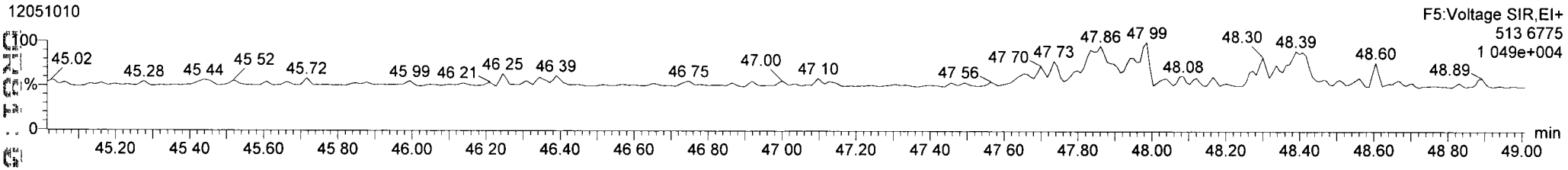
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Mc 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ..	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC	
1	1	2378-TCDF	303 9016	26.407	26 408	58171	58171	0.866	dd		0 78	0 77	124 4	NO	1 095	1.095	
2	2	12378-PeCDF	339 8597	30 560	30 560	65899	65899	0 907	bd		1.58	1 55	103 1	NO	1 441	1.441	
3	3	23478-PeCDF	339 8597	31 909	31 909	72987	72987	0.936	db		1 59	1.55	119.8	NO	1 609	1.609	
4	4	123478-HxCDF	373.8208	35.657	35 646	172539	172539	1.082	dd		1 28	1.24	297.8	NO	5.243	5.243	
5	5	234678-HxCDF	373.8208	36 797	36.808	106258	106258	1 070	bb		1 22	1.24	115.5	NO	3.542	3.542	
6	6	123678-HxCDF	373 8208	35.800	35.810	83764	83764	1.048	db		1.31	1.24	135.6	NO	2.409	2.409	
7	7	123789-HxCDF	373.8208	37.828	37.850	23863	23863	1 020	bb		1.25	1.24	72.1	NO	1.998	1 998	
8	8	1234678-HpCDF	407.7818	39.866	39.875	1249241	1249241	1 214	bd		1.00	1.05	1867.2	NO	55 246	55.246	
9	9	1234789-HpCDF	407.7818	42 585	42.587	48765	48765	1 254	bb		1.02	1.05	67.2	NO	2 815	2 815	
10	10	OCDF	441 7428	48.004	47 985	1361246	1361246	1.105	dd		0.86	0 89	1359 9	NO	132 688	132.688	
11	11	2378-TCDD	319.8965	27 049	27.033	0	11316	1.046	bd		0.58	0.77	32.0	YES	0.000	0 253	
12	12	12378-PeCDD	355.8546	32 161	32 159	66755	66755	0.973	bb		1 46	1.55	120 9	NO	2.191	2.191	
13	13	123478-HxCDD	389.8157	36.929	36 940	108987	108987	0.935	bd		1.28	1.24	108.1	NO	4.763	4.763	
14	14	123678-HxCDD	389.8157	37.060	37 060	553940	553940	0 878	dd		1.22	1.24	537.4	NO	22.916	22.916	
15	15	123789-HxCDD	389.8157	37.499	37.457	207618	207618	0 839	bb		1.16	1.24	189.1	NO	9 520	9 520	
16	16	1234678-HpCDD	423 7766	41.697	41 688	12886007	12886007	0 974	bb		1.04	1 05	4564.3	NO	785 296	785.296	
17	17	OCDD	457 7377	47 726	47.714	65881168	65881168	0 950	bd		0.87	0 89	20387 3	NO	7470 601	7470.6...	E
18	18	13C-2378-TCDF	315 9419	26 392	26 392	6133642		1.484	bb	68 1	0.78	0 77	9450 8	NO	68 059		
19	19	13C-12378-PeCDF	351 9000	30 538	30.534	5042429		1 048	bb	79 2	1.60	1 55	4932 0	NO	79 245		
20	20	13C-23478-PeCDF	351 9000	31 887	31 871	4847164		1.003	bb	79 6	1 58	1 55	4898 9	NO	79 569		
21	21	13C-123478-HxCDF	383.8639	35 635	35.712	3041719		1 186	dd	89 9	0 52	0.51	2335.2	NO	89.904		
22	22	13C-123678-HxCDF	383.8639	35.789	35.865	3317409		1 315	dd	88.4	0.50	0.51	2436.2	NO	88 401		
23	23	13C-234678-HxCDF	383 8639	36.786	36.797	2804452		1 223	db	80.3	0.53	0 51	2062.5	NO	80.339		
24	24	13C-123789-HxCDF	383 8639	37 839	37.904	1170714		1 056	bb	38 8	0.54	0 51	1547 2	NO	38 832		
25	25	13C-1234678-HpCDF	417 8253	39 855	39 987	1861950		1 011	bb	64 5	0 46	0.44	1382 3	NO	64 513		
26	26	13C-1234789-HpCDF	417.8253	42 574	42.738	1381209		0 741	bb	65 4	0 45	0.44	822 2	NO	65 360		
27	27	13C-1234-TCDD	331.9368	26.213	26 272	6071244		1 000	bb	100.0	0 78	0.77	11740.7	NO	100.000		
28	28	13C-2378-TCDD	331.9368	27.020	27 035	4279371		0 956	bb	73 7	0.78	0.77	7447.5	NO	73 701		
29	29	13C-12378-PeCDD	367.8949	32.150	32 123	3130466		0 663	bb	77.7	1 56	1.55	5938.4	NO	77 718		
30	30	13C-123478-HxCDD	401.8559	36.918	36.929	2445939		1 024	dd	83.7	1 26	1.24	4263.7	NO	83 713		
31	31	13C-123678-HxCDD	401 8559	37 049	37 060	2753915		1 113	db	86 7	1 24	1 24	4686 7	NO	86 738		
32	32	13C-1234678-HpCDD	435 8169	41 675	41 839	1684195		0 815	bd	72 4	1 05	1.05	3340.1	NO	72 406		
33	33	13C-OCDD	469 7779	47 699	47.855	1856431		0 717	bd	45.4	0 89	0 89	2099.2	NO	90 723		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ..	RRF M ..	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 488	37 368	2853610		1 000	bb	100.0	1.22	1.24	4640.3	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 370			0 866							9.639	9.812
36	36	Total-penta1	339.8597		28.210										22.531	22 531 38.258
37	37	Total-pentafurans	339.8597		30.790			0.921						37.760	15 229	15 757
38	38	Total-hexafurans	373.8208		35 760			1.055							134.591	135.840
39	39	Total-heptafurans	407.7818		41 160			1.234							176 782	177.600
40	40	Total-Furans	303 9016		0 000			1.050							491.515	494.309
41	41	Total-tetradioxins	319 8965		25 880			1 046							9.927	10 301
42	42	Total-pentadioxins	355.8546		30 950			0 973							21.004	21 241
43	43	Total-hexadioxins	389 8157		35.940			0 884							240 967	240.967
44	44	Total-heptadioxins	423.7766		40.980			0.974							2566 921	2566 9. .
45	45	Total-Dioxins	319.8965		0.000			0.942							10309.419	10310....
46	46	Total-TEQ	319 8965		0.000										10800.934	10804. ..
47	47	37CL-2378-TCDD	327.8847	27.049	27 025	1969324		1 037					13830 1		31.275	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0 000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430 9728		0.000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375.8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0.000	
56	56	FUNCTION3 OCDPE	445 7555		0.000										0 000	
57	57	FUNCTION4 NCDPE	479.7165		0 000										0 000	
58	58	FUNCTION5 DCDPE	513.6775		0.000											

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati..	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.08	30652 816	0 866	0.577	0.577	0.68	0 77	NO	42.5
2	35	Total-tetrafurans	303 9016	24 91	713 459	0.866	0 013	0.013	0.79	0.77	NO	2 5
3	35	Total-tetrafurans	303.9016	24 64	15594 107	0.866	0 294	0.294	0.68	0.77	NO	30 8
4	35	Total-tetrafurans	303 9016	24.51	9467 672	0.866	0.178	0 178	0.69	0.77	NO	18.8
5	35	Total-tetrafurans	303.9016	24.39	35709.052	0 866	0.672	0 672	0.82	0.77	NO	75 8
6	35	Total-tetrafurans	303.9016	24.24	7264 351	0 866	0 137	0 137	0.69	0.77	NO	15.9
7	35	Total-tetrafurans	303 9016	24.15	26901.505	0 866	0.506	0.506	0 77	0.77	NO	57.7
8	35	Total-tetrafurans	303.9016	24 05	14010 628	0.866	0 264	0.264	0.74	0.77	NO	28.5
9	35	Total-tetrafurans	303 9016	23 94	26365.469	0.866	0.496	0 496	0 77	0.77	NO	30 1
10	35	Total-tetrafurans	303.9016	23.75	78063 731	0 866	1 469	1 469	0.76	0 77	NO	153.9
11	35	Total-tetrafurans	303 9016	23 16	13420.332	0 866	0.253	0 253	0 68	0 77	NO	27 4
12	35	Total-tetrafurans	303.9016	22.91	9601 598	0.866	0 181	0.181	0 75	0.77	NO	21 0
13	35	Total-tetrafurans	303.9016	27.86	24468 347	0 866	0 461	0.461	0 78	0.77	NO	35 1
14	35	Total-tetrafurans	303 9016	26 65	24691.804	0.866	0.465	0 465	0 72	0.77	NO	43.6
15	35	Total-tetrafurans	303.9016	26 53	0 000	0.866	0.000	0 173	0.65	0.77	YES	19 3
16	1	2378-TCDF	303.9016	26 41	58170.811	0 866	1.095	1.095	0.78	0.77	NO	124.4
17	35	Total-tetrafurans	303.9016	26 23	24662.352	0 866	0.464	0.464	0 81	0 77	NO	37 1
18	35	Total-tetrafurans	303 9016	26.05	1717 539	0.866	0 032	0.032	0 81	0 77	NO	4.7
19	35	Total-tetrafurans	303 9016	25.91	11180 462	0.866	0 210	0.210	0 79	0 77	NO	22 6
20	35	Total-tetrafurans	303 9016	25.72	9150.838	0 866	0.172	0 172	0 80	0 77	NO	16 8
21	35	Total-tetrafurans	303.9016	25.50	35714 716	0.866	0 672	0 672	0 69	0.77	NO	68 3
22	35	Total-tetrafurans	303 9016	25.30	39585 404	0.866	0 745	0.745	0.74	0 77	NO	75 2
23	35	Total-tetrafurans	303 9016	25.17	14973 405	0.866	0 282	0.282	0.71	0 77	NO	29 9

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27.84	1021658 125		22 531	22 531	1 56	1.55	NO	4786.1

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339 8597	29.48	84244 942	0.921	1 849	1.849	1.55	1 55	NO	147 7
2	37	Total-pentafurans	339.8597	29 35	33949.881	0 921	0.745	0 745	1 73	1.55	NO	44.9
3	37	Total-pentafurans	339.8597	29 25	0.000	0.921	0.000	0 181	1 84	1.55	YES	18.9
4	37	Total-pentafurans	339.8597	32 94	9679.844	0 921	0.212	0 212	1.61	1.55	NO	13.8
5	3	23478-PeCDF	339.8597	31.91	72986.567	0.936	1.609	1 609	1 59	1.55	NO	119 8
6	37	Total-pentafurans	339 8597	31 74	76016.121	0.921	1.668	1 668	1.55	1 55	NO	122.4
7	37	Total-pentafurans	339 8597	31 65	16777.983	0 921	0.368	0.368	1 75	1 55	NO	29.6
8	37	Total-pentafurans	339 8597	30 86	0.000	0 921	0 000	0 133	2 06	1 55	YES	17 5
9	37	Total-pentafurans	339.8597	30 75	67317.184	0.921	1 477	1 477	1 59	1 55	NO	108 7
10	2	12378-PeCDF	339.8597	30.56	65898 892	0.907	1 441	1.441	1 58	1 55	NO	103 1
11	37	Total-pentafurans	339 8597	30.19	98731 778	0 921	2.167	2.167	1 58	1.55	NO	106.4
12	37	Total-pentafurans	339 8597	30 09	0.000	0 921	0 000	0 124	1.30	1.55	YES	15 6
13	37	Total-pentafurans	339 8597	30 03	0.000	0.921	0 000	0.090	1.83	1 55	YES	8 6
14	37	Total-pentafurans	339.8597	29.54	168186 719	0.921	3 691	3 691	1 63	1.55	NO	268 6

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38	Total-hexafurans	373.8208	36 16	0.000	1.055	0.000	0.226	1.64	1.24	YES	13.6
2	6	123678-HxCDF	373.8208	35.80	83763.594	1.048	2.409	2.409	1 31	1 24	NO	135 6
3	4	123478-HxCDF	373.8208	35.66	172538.899	1.082	5.243	5.243	1.28	1 24	NO	297 8
4	38	Total-hexafurans	373 8208	35.48	0.000	1 055	0.000	0 964	1 49	1.24	YES	43.5
5	38	Total-hexafurans	373.8208	34 97	1591741.000	1 055	58.396	58.396	1 22	1 24	NO	2680 5
6	38	Total-hexafurans	373.8208	34.64	14737.433	1.055	0.541	0.541	1 27	1 24	NO	27 7
7	38	Total-hexafurans	373.8208	34.36	0.000	1 055	0.000	0 058	0.63	1.24	YES	5.8
8	38	Total-hexafurans	373.8208	34 11	1232265.938	1.055	45.208	45.208	1 24	1 24	NO	2054 8
9	38	Total-hexafurans	373 8208	33.89	470320.594	1.055	17.255	17 255	1.19	1 24	NO	814 8
10	7	123789-HxCDF	373 8208	37 83	23863.098	1.020	1.998	1 998	1 25	1.24	NO	72.1
11	5	234678-HxCDF	373.8208	36.80	106257.754	1 070	3 542	3 542	1 22	1 24	NO	115 5

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M ..	pg	EMPC	1° Rati...	1° Rati...	1° R..	S/N
1	39	Total-heptafurans	407 7818	40.40	0 000	1.234	0.000	0.691	0 48	1.05	YES	28 5
2	39	Total-heptafurans	407 7818	40 27	0.000	1.234	0 000	0 057	0 49	1.05	YES	3.5
3	8	1234678-HpCDF	407.7818	39.87	1249241.438	1.214	55.246	55 246	1.00	1 05	NO	1867.2
4	9	1234789-HpCDF	407 7818	42 58	48765.201	1.254	2 815	2 815	1 02	1 05	NO	67.2
5	39	Total-heptafurans	407.7818	41.70	5237.328	1.234	0 262	0.262	0 93	1 05	NO	8 8
6	39	Total-heptafurans	407.7818	41.15	0 000	1 234	0 000	0.069	0.66	1.05	YES	3.7
7	39	Total-heptafurans	407.7818	40 67	2370901.875	1 234	118 459	118 .	1 01	1 05	NO	3670 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.08	30652.816	0 866	0 577	0 577	0.68	0 77	NO	42 5
2	35	Total-tetrafurans	303.9016	24.91	713.459	0.866	0.013	0.013	0 79	0 77	NO	2.5
3	35	Total-tetrafurans	303.9016	24.64	15594.107	0.866	0 294	0.294	0 68	0.77	NO	30.8
4	35	Total-tetrafurans	303.9016	24 51	9467.672	0.866	0 178	0.178	0.69	0.77	NO	18 8
5	35	Total-tetrafurans	303 9016	24 39	35709.052	0 866	0 672	0 672	0.82	0.77	NO	75.8
6	35	Total-tetrafurans	303.9016	24 24	7264.351	0 866	0 137	0.137	0.69	0.77	NO	15.9
7	35	Total-tetrafurans	303 9016	24.15	26901.505	0 866	0 506	0.506	0 77	0.77	NO	57.7
8	35	Total-tetrafurans	303.9016	24.05	14010.628	0.866	0.264	0.264	0 74	0 77	NO	28 5
9	35	Total-tetrafurans	303 9016	23 94	26365 469	0 866	0 496	0 496	0 77	0.77	NO	30 1
10	35	Total-tetrafurans	303 9016	23 75	78063 731	0 866	1 469	1.469	0.76	0.77	NO	153 9
11	35	Total-tetrafurans	303 9016	23.16	13420.332	0.866	0.253	0.253	0 68	0.77	NO	27 4
12	35	Total-tetrafurans	303.9016	22.91	9601.598	0 866	0 181	0.181	0.75	0.77	NO	21.0
13	40	Total-Furans	303.9016	21.31	3383 383	1 050	0 053	0.053	0 83	0.77	NO	6.2
14	40	Total-Furans	303.9016	28.48	0 000	1.050	0.000	0 027	1 14	0.77	YES	5.2
15	35	Total-tetrafurans	303 9016	27 86	24468.347	0.866	0.461	0 461	0 78	0.77	NO	35 1
16	35	Total-tetrafurans	303.9016	26.65	24691.804	0 866	0 465	0 465	0.72	0.77	NO	43.6
17	35	Total-tetrafurans	303 9016	26 53	0.000	0 866	0 000	0 173	0 65	0 77	YES	19 3
18	1	2378-TCDF	303.9016	26 41	58170 811	0 866	1 095	1 095	0 78	0 77	NO	124 4
19	35	Total-tetrafurans	303.9016	26.23	24662 352	0 866	0 464	0 464	0 81	0 77	NO	37 1
20	35	Total-tetrafurans	303.9016	26.05	1717 539	0.866	0.032	0.032	0 81	0 77	NO	4 7
21	35	Total-tetrafurans	303.9016	25.91	11180.462	0 866	0 210	0.210	0.79	0 77	NO	22 6
22	35	Total-tetrafurans	303.9016	25.72	9150 838	0.866	0.172	0.172	0.80	0.77	NO	16 8
23	35	Total-tetrafurans	303.9016	25.50	35714 716	0 866	0 672	0.672	0 69	0 77	NO	68.3
24	35	Total-tetrafurans	303.9016	25.30	39585 404	0 866	0.745	0.745	0 74	0.77	NO	75.2
25	35	Total-tetrafurans	303.9016	25.17	14973 405	0.866	0.282	0.282	0 71	0.77	NO	29.9
26	37	Total-pentafurans	339.8597	29.48	84244 942	0 921	1 849	1.849	1 55	1 55	NO	147 7
27	37	Total-pentafurans	339 8597	29.35	33949 881	0 921	0 745	0.745	1 73	1 55	NO	44 9
28	37	Total-pentafurans	339.8597	29 25	0 000	0.921	0.000	0.181	1 84	1.55	YES	18.9
29	37	Total-pentafurans	339 8597	32 94	9679 844	0 921	0 212	0 212	1 61	1 55	NO	13.8
30	3	23478-PeCDF	339 8597	31 91	72986 567	0.936	1 609	1 609	1 59	1.55	NO	119 8
31	37	Total-pentafurans	339 8597	31 74	76016 121	0.921	1 668	1 668	1 55	1.55	NO	122 4
32	37	Total-pentafurans	339 8597	31 65	16777 983	0.921	0 368	0 368	1 75	1.55	NO	29.6
33	37	Total-pentafurans	339 8597	30 86	0.000	0.921	0.000	0.133	2 06	1.55	YES	17 5
34	37	Total-pentafurans	339.8597	30 75	67317.184	0 921	1 477	1 477	1 59	1.55	NO	108 7
35	2	12378-PeCDF	339 8597	30.56	65898.892	0.907	1.441	1 441	1 58	1.55	NO	103.1
36	37	Total-pentafurans	339.8597	30 19	98731.778	0 921	2 167	2 167	1 58	1.55	NO	106.4
37	37	Total-pentafurans	339.8597	30.09	0.000	0 921	0 000	0 124	1 30	1.55	YES	15.6
38	37	Total-pentafurans	339.8597	30.03	0 000	0 921	0 000	0 090	1 83	1.55	YES	8.6
39	37	Total-pentafurans	339.8597	29.54	168186 719	0 921	3 691	3 691	1 63	1.55	NO	268.6
40	38	Total-hexafurans	373.8208	36 16	0 000	1 055	0 000	0 226	1 64	1.24	YES	13 6
41	6	123678-HxCDF	373.8208	35 80	83763.594	1 048	2 409	2 409	1.31	1 24	NO	135 6
42	4	123478-HxCDF	373.8208	35 66	172538.899	1 082	5 243	5 243	1.28	1.24	NO	297.8
43	38	Total-hexafurans	373.8208	35.48	0 000	1.055	0.000	0.964	1 49	1 24	YES	43.5
44	38	Total-hexafurans	373.8208	34.97	1591741.000	1.055	58 396	58.396	1.22	1 24	NO	2680.5
45	38	Total-hexafurans	373 8208	34.64	14737.433	1.055	0.541	0 541	1.27	1 24	NO	27.7
46	38	Total-hexafurans	373.8208	34 36	0 000	1.055	0 000	0.058	0.63	1.24	YES	5.8
47	38	Total-hexafurans	373.8208	34.11	1232265.938	1.055	45 208	45.208	1 24	1 24	NO	2054 8
48	38	Total-hexafurans	373.8208	33 89	470320.594	1.055	17 255	17.255	1.19	1 24	NO	814.8
49	7	123789-HxCDF	373 8208	37 83	23863 098	1 020	1 998	1.998	1.25	1.24	NO	72 1

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	5	234678-HxCDF	373 8208	36.80	106257.754	1.070	3 542	3 542	1 22	1.24	NO	115 5
51	39	Total-heptafurans	407 7818	40.40	0.000	1.234	0 000	0 691	0.48	1.05	YES	28 5
52	39	Total-heptafurans	407 7818	40.27	0.000	1 234	0 000	0 057	0 49	1.05	YES	3 5
53	8	1234678-HpCDF	407.7818	39 87	1249241.438	1 214	55.246	55 246	1.00	1 05	NO	1867.2
54	9	1234789-HpCDF	407 7818	42 58	48765.201	1.254	2 815	2.815	1 02	1.05	NO	67.2
55	39	Total-heptafurans	407.7818	41.70	5237.328	1.234	0.262	0.262	0.93	1.05	NO	8.8
56	39	Total-heptafurans	407.7818	41.15	0.000	1.234	0 000	0 069	0.66	1.05	YES	3 7
57	39	Total-heptafurans	407.7818	40.67	2370901.875	1.234	118.459	118	1.01	1.05	NO	3670.8
58	10	OCDF	441 7428	48 00	1361245.938	1 105	132.688	132 ..	0 86	0.89	NO	1359 9
59	36	Total-penta1	339 8597	27 84	1021658.125		22 531	22.531	1 56	1.55	NO	4786.1

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	24 45	122737.297	1 046	2 742	2.742	0.78	0.77	NO	382 8
2	41	Total-tetradioxins	319.8965	24.18	171902 266	1.046	3 841	3 841	0 76	0 77	NO	545 7
3	41	Total-tetradioxins	319.8965	27.56	11866.640	1.046	0.265	0 265	0.79	0 77	NO	34.3
4	41	Total-tetradioxins	319.8965	27.17	9743.292	1 046	0 218	0.218	0.74	0.77	NO	28 5
5	11	2378-TCDD	319.8965	27.05	0.000	1 046	0.000	0 253	0 58	0.77	YES	32.0
6	41	Total-tetradioxins	319.8965	26.66	25966.338	1 046	0.580	0.580	0 70	0 77	NO	60 9
7	41	Total-tetradioxins	319.8965	26.39	0.000	1.046	0 000	0.040	0.50	0.77	YES	5 9
8	41	Total-tetradioxins	319.8965	26 23	41320.057	1.046	0.923	0 923	0 74	0.77	NO	127.6
9	41	Total-tetradioxins	319.8965	26 02	7703.477	1.046	0.172	0 172	0.83	0.77	NO	23.3
10	41	Total-tetradioxins	319.8965	25.91	0.000	1.046	0 000	0.056	0.91	0 77	YES	10.0
11	41	Total-tetradioxins	319 8965	25.66	30275 451	1 046	0 676	0 676	0 72	0 77	NO	81.2
12	41	Total-tetradioxins	319.8965	25 38	16476.456	1.046	0.368	0.368	0.76	0 77	NO	45.8
13	41	Total-tetradioxins	319 8965	25.17	0.000	1 046	0.000	0.025	0 38	0 77	YES	3.8
14	41	Total-tetradioxins	319 8965	24.66	6283.069	1.046	0 140	0.140	0 66	0 77	NO	16 7

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355 8546	32 57	11047 047	0 973	0.363	0.363	1.37	1 55	NO	21.1
2	12	12378-PeCDD	355.8546	32.16	66755 227	0 973	2.191	2 191	1.46	1 55	NO	120.9
3	42	Total-pentadioxins	355.8546	31.48	35112 446	0 973	1.152	1 152	1.59	1 55	NO	67.7
4	42	Total-pentadioxins	355 8546	31 09	47217 879	0.973	1 550	1 550	1 60	1 55	NO	71 1
5	42	Total-pentadioxins	355.8546	30.91	113761.328	0.973	3.734	3 734	1 52	1 55	NO	234 3
6	42	Total-pentadioxins	355 8546	30.77	63375.129	0.973	2.080	2 080	1 45	1 55	NO	126 9
7	42	Total-pentadioxins	355 8546	30.55	122782.063	0 973	4.030	4.030	1.46	1.55	NO	249.6
8	42	Total-pentadioxins	355.8546	29.97	34833.351	0 973	1 143	1.143	1 46	1.55	NO	88.1
9	42	Total-pentadioxins	355.8546	29.52	145056 527	0.973	4.761	4.761	1.54	1 55	NO	214 1
10	42	Total-pentadioxins	355.8546	29 37	0 000	0.973	0 000	0 238	1 95	1.55	YES	21 0

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HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389 8157	34 35	84302.438	0 884	3 668	3.668	1 23	1.24	NO	103.6
2	15	123789-HxCDD	389 8157	37.50	207618.070	0 839	9.520	9.520	1.16	1.24	NO	189.1
3	43	Total-hexadioxins	389 8157	37.26	81529 992	0 884	3.547	3.547	1.17	1.24	NO	72.6
4	14	123678-HxCDD	389.8157	37.06	553939.922	0.878	22.916	22 916	1.22	1.24	NO	537.4
5	13	123478-HxCDD	389 8157	36.93	108986.574	0.935	4.763	4 763	1.28	1.24	NO	108.1
6	43	Total-hexadioxins	389 8157	36 04	364023.937	0.884	15.839	15.839	1 27	1.24	NO	386.3
7	43	Total-hexadioxins	389 8157	35.93	1701267.126	0.884	74 023	74 023	1.23	1.24	NO	1133 9
8	43	Total-hexadioxins	389.8157	35.53	395345.704	0.884	17 202	17 202	1 25	1.24	NO	400.7
9	43	Total-hexadioxins	389.8157	35.41	17164.902	0.884	0.747	0.747	1 27	1 24	NO	22 8
10	43	Total-hexadioxins	389.8157	34 69	2039564 938	0.884	88 742	88 742	1.19	1 24	NO	2064.8

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423 7766	41.70	12886006...	0.974	785.296	785...	1.04	1.05	NO	4564 3
2	44	Total-heptadioxins	423.7766	40.43	29234843.	0.974	1781.6 ..	1781...	1 03	1 05	NO	11214 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2 qld
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Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	24.45	122737.297	1.046	2 742	2.742	0 78	0.77	NO	382 8
2	41	Total-tetradioxins	319.8965	24.18	171902.266	1.046	3.841	3 841	0 76	0.77	NO	545 7
3	45	Total-Dioxins	319.8965	28 63	0 000	0 942	0 000	0 014	1 04	0.77	YES	3 0
4	41	Total-tetradioxins	319.8965	27.56	11866.640	1.046	0.265	0.265	0 79	0.77	NO	34 3
5	41	Total-tetradioxins	319.8965	27 17	9743.292	1.046	0.218	0.218	0 74	0.77	NO	28 5
6	11	2378-TCDD	319.8965	27 05	0.000	1.046	0 000	0.253	0.58	0.77	YES	32.0
7	41	Total-tetradioxins	319 8965	26 66	25966.338	1 046	0 580	0 580	0.70	0.77	NO	60.9
8	41	Total-tetradioxins	319.8965	26.39	0.000	1.046	0.000	0.040	0 50	0 77	YES	5.9
9	41	Total-tetradioxins	319.8965	26.23	41320.057	1 046	0.923	0.923	0.74	0.77	NO	127.6
10	41	Total-tetradioxins	319.8965	26.02	7703 477	1.046	0 172	0 172	0.83	0.77	NO	23.3
11	41	Total-tetradioxins	319 8965	25.91	0 000	1 046	0.000	0 056	0 91	0 77	YES	10 0
12	41	Total-tetradioxins	319.8965	25.66	30275.451	1.046	0.676	0.676	0.72	0 77	NO	81 2
13	41	Total-tetradioxins	319.8965	25.38	16476 456	1 046	0.368	0 368	0.76	0 77	NO	45 8
14	41	Total-tetradioxins	319.8965	25 17	0 000	1.046	0.000	0 025	0 38	0 77	YES	3.8
15	41	Total-tetradioxins	319.8965	24 66	6283 069	1 046	0.140	0 140	0 66	0 77	NO	16.7
16	42	Total-pentadioxins	355 8546	32.57	11047.047	0.973	0.363	0.363	1.37	1 55	NO	21 1
17	12	12378-PeCDD	355.8546	32.16	66755.227	0.973	2.191	2 191	1.46	1.55	NO	120 9
18	42	Total-pentadioxins	355 8546	31.48	35112.446	0.973	1.152	1 152	1.59	1.55	NO	67 7
19	42	Total-pentadioxins	355 8546	31 09	47217 879	0.973	1.550	1.550	1.60	1.55	NO	71 1
20	42	Total-pentadioxins	355.8546	30 91	113761.328	0 973	3 734	3.734	1 52	1.55	NO	234 3
21	42	Total-pentadioxins	355 8546	30 77	63375 129	0.973	2.080	2.080	1 45	1.55	NO	126.9
22	42	Total-pentadioxins	355 8546	30 55	122782 063	0 973	4 030	4.030	1 46	1.55	NO	249 6
23	42	Total-pentadioxins	355.8546	29.97	34833.351	0 973	1 143	1.143	1 46	1.55	NO	88 1
24	42	Total-pentadioxins	355 8546	29 52	145056.527	0 973	4 761	4.761	1 54	1 55	NO	214 1
25	42	Total-pentadioxins	355 8546	29 37	0.000	0 973	0 000	0 238	1 95	1.55	YES	21 0
26	43	Total-hexadioxins	389 8157	34 35	84302.438	0 884	3 668	3 668	1 23	1.24	NO	103 6
27	15	123789-HxCDD	389.8157	37.50	207618.070	0 839	9 520	9 520	1 16	1 24	NO	189 1
28	43	Total-hexadioxins	389.8157	37.26	81529 992	0.884	3 547	3 547	1 17	1.24	NO	72.6
29	14	123678-HxCDD	389.8157	37 06	553939 922	0 878	22.916	22 916	1 22	1 24	NO	537 4
30	13	123478-HxCDD	389.8157	36 93	108986 574	0 935	4.763	4 763	1 28	1 24	NO	108 1
31	43	Total-hexadioxins	389 8157	36 04	364023 937	0.884	15 839	15 839	1 27	1 24	NO	386.3
32	43	Total-hexadioxins	389 8157	35 93	1701267 126	0.884	74 023	74 023	1 23	1 24	NO	1133.9
33	43	Total-hexadioxins	389 8157	35 53	395345.704	0.884	17.202	17.202	1 25	1 24	NO	400 7
34	43	Total-hexadioxins	389.8157	35.41	17164.902	0.884	0 747	0.747	1.27	1 24	NO	22.8
35	43	Total-hexadioxins	389.8157	34.69	2039564.938	0.884	88 742	88 742	1.19	1.24	NO	2064.8
36	17	OCDD	457.7377	47.73	65881168 . .	0.950	7470.6 .	7470 .	0.87	0.89	NO	20387 3
37	16	1234678-HpCDD	423 7766	41.70	12886006 ...	0.974	785.296	785....	1 04	1 05	NO	4564 3
38	44	Total-heptadioxins	423.7766	40.43	29234843....	0 974	1781.6...	1781. .	1.03	1 05	NO	11214 8

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.08	30652.816	0 866	0.577	0.577	0 68	0.77	NO	42 5
2	35	Total-tetrafurans	303 9016	24.91	713.459	0 866	0 013	0.013	0 79	0.77	NO	2 5
3	35	Total-tetrafurans	303.9016	24.64	15594.107	0 866	0.294	0 294	0 68	0.77	NO	30.8
4	35	Total-tetrafurans	303.9016	24.51	9467 672	0.866	0 178	0.178	0.69	0 77	NO	18 8
5	35	Total-tetrafurans	303 9016	24.39	35709.052	0 866	0 672	0 672	0 82	0 77	NO	75 8
6	35	Total-tetrafurans	303 9016	24 24	7264.351	0 866	0 137	0 137	0 69	0 77	NO	15 9
7	35	Total-tetrafurans	303.9016	24 15	26901 505	0 866	0.506	0 506	0.77	0.77	NO	57 7
8	35	Total-tetrafurans	303.9016	24.05	14010.628	0.866	0.264	0 264	0.74	0 77	NO	28.5
9	35	Total-tetrafurans	303 9016	23 94	26365 469	0.866	0.496	0.496	0.77	0.77	NO	30 1
10	35	Total-tetrafurans	303 9016	23 75	78063 731	0 866	1.469	1.469	0 76	0 77	NO	153 9
11	35	Total-tetrafurans	303.9016	23 16	13420 332	0 866	0.253	0 253	0 68	0.77	NO	27 4
12	35	Total-tetrafurans	303.9016	22 91	9601.598	0.866	0 181	0.181	0 75	0 77	NO	21.0
13	40	Total-Furans	303.9016	21.31	3383.383	1.050	0.053	0 053	0 83	0.77	NO	6 2
14	40	Total-Furans	303.9016	28 48	0 000	1 050	0.000	0 027	1 14	0 77	YES	5 2
15	35	Total-tetrafurans	303 9016	27 86	24468.347	0 866	0.461	0 461	0 78	0 77	NO	35 1
16	35	Total-tetrafurans	303.9016	26 65	24691 804	0.866	0 465	0 465	0 72	0.77	NO	43 6
17	35	Total-tetrafurans	303 9016	26 53	0.000	0 866	0 000	0 173	0 65	0.77	YES	19 3
18	1	2378-TCDF	303 9016	26 41	58170.811	0 866	1.095	1 095	0.78	0.77	NO	124 4
19	35	Total-tetrafurans	303.9016	26.23	24662.352	0.866	0 464	0 464	0.81	0.77	NO	37 1
20	35	Total-tetrafurans	303.9016	26.05	1717.539	0.866	0 032	0.032	0.81	0.77	NO	4.7
21	35	Total-tetrafurans	303.9016	25.91	11180 462	0.866	0.210	0.210	0 79	0 77	NO	22 6
22	35	Total-tetrafurans	303.9016	25.72	9150 838	0 866	0.172	0.172	0 80	0 77	NO	16.8
23	35	Total-tetrafurans	303 9016	25 50	35714.716	0 866	0.672	0 672	0 69	0.77	NO	68 3
24	35	Total-tetrafurans	303 9016	25 30	39585.404	0 866	0 745	0 745	0 74	0 77	NO	75.2
25	35	Total-tetrafurans	303 9016	25.17	14973.405	0.866	0 282	0.282	0 71	0.77	NO	29 9
26	37	Total-pentafurans	339 8597	29 48	84244 942	0 921	1.849	1 849	1 55	1.55	NO	147 7
27	37	Total-pentafurans	339 8597	29 35	33949 881	0 921	0 745	0 745	1 73	1 55	NO	44 9
28	37	Total-pentafurans	339 8597	29 25	0 000	0 921	0 000	0.181	1 84	1 55	YES	18 9
29	37	Total-pentafurans	339.8597	32.94	9679 844	0 921	0 212	0 212	1.61	1 55	NO	13 8
30	3	23478-PeCDF	339.8597	31 91	72986.567	0 936	1.609	1.609	1.59	1.55	NO	119.8
31	37	Total-pentafurans	339.8597	31 74	76016.121	0 921	1 668	1.668	1 55	1 55	NO	122.4
32	37	Total-pentafurans	339.8597	31 65	16777 983	0.921	0 368	0.368	1 75	1 55	NO	29 6
33	37	Total-pentafurans	339 8597	30.86	0 000	0.921	0.000	0 133	2 06	1 55	YES	17.5
34	37	Total-pentafurans	339 8597	30 75	67317.184	0.921	1 477	1 477	1.59	1.55	NO	108.7
35	2	12378-PeCDF	339.8597	30.56	65898 892	0.907	1 441	1.441	1 58	1 55	NO	103 1
36	37	Total-pentafurans	339.8597	30 19	98731.778	0.921	2.167	2.167	1 58	1 55	NO	106 4
37	37	Total-pentafurans	339 8597	30 09	0 000	0 921	0 000	0.124	1 30	1 55	YES	15 6
38	37	Total-pentafurans	339 8597	30 03	0.000	0.921	0 000	0 090	1 83	1 55	YES	8 6
39	37	Total-pentafurans	339 8597	29.54	168186 719	0 921	3 691	3.691	1.63	1 55	NO	268.6
40	38	Total-hexafurans	373 8208	36 16	0 000	1.055	0.000	0 226	1.64	1.24	YES	13 6
41	6	123678-HxCDF	373.8208	35 80	83763 594	1.048	2.409	2 409	1.31	1.24	NO	135 6
42	4	123478-HxCDF	373 8208	35.66	172538 899	1.082	5 243	5.243	1.28	1.24	NO	297.8
43	38	Total-hexafurans	373 8208	35 48	0 000	1.055	0.000	0 964	1 49	1 24	YES	43.5
44	38	Total-hexafurans	373.8208	34 97	1591741 000	1 055	58 396	58.396	1 22	1 24	NO	2680.5
45	38	Total-hexafurans	373.8208	34.64	14737.433	1.055	0 541	0.541	1 27	1 24	NO	27.7
46	38	Total-hexafurans	373.8208	34 36	0 000	1 055	0.000	0 058	0 63	1 24	YES	5.8
47	38	Total-hexafurans	373 8208	34 11	1232265 938	1 055	45.208	45 208	1 24	1 24	NO	2054 8
48	38	Total-hexafurans	373.8208	33.89	470320 594	1 055	17.255	17 255	1 19	1 24	NO	814 8
49	7	123789-HxCDF	373 8208	37 83	23863 098	1 020	1 998	1 998	1.25	1.24	NO	72 1

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	5	234678-HxCDF	373 8208	36.80	106257 754	1.070	3.542	3 542	1 22	1.24	NO	115.5
51	39	Total-heptafurans	407 7818	40.40	0.000	1.234	0.000	0.691	0 48	1 05	YES	28 5
52	39	Total-heptafurans	407.7818	40.27	0 000	1.234	0 000	0.057	0.49	1 05	YES	3.5
53	8	1234678-HpCDF	407 7818	39.87	1249241.438	1.214	55 246	55.246	1 00	1 05	NO	1867 2
54	9	1234789-HpCDF	407 7818	42.58	48765 201	1 254	2.815	2.815	1 02	1.05	NO	67 2
55	39	Total-heptafurans	407 7818	41.70	5237.328	1 234	0.262	0 262	0.93	1.05	NO	8 8
56	39	Total-heptafurans	407.7818	41.15	0.000	1.234	0.000	0 069	0.66	1.05	YES	3.7
57	39	Total-heptafurans	407.7818	40.67	2370901.875	1.234	118.459	118....	1 01	1.05	NO	3670.8
58	10	OCDF	441.7428	48 00	1361245.938	1 105	132.688	132 ..	0 86	0.89	NO	1359.9
59	36	Total-penta1	339 8597	27 84	1021658.125		22.531	22 531	1 56	1.55	NO	4786.1
60	41	Total-tetradioxins	319.8965	24.45	122737 297	1 046	2 742	2 742	0 78	0 77	NO	382.8
61	41	Total-tetradioxins	319 8965	24 18	171902.266	1.046	3 841	3.841	0 76	0 77	NO	545 7
62	45	Total-Dioxins	319 8965	28 63	0.000	0 942	0.000	0 014	1 04	0 77	YES	3.0
63	41	Total-tetradioxins	319.8965	27 56	11866 640	1 046	0.265	0.265	0 79	0 77	NO	34.3
64	41	Total-tetradioxins	319 8965	27 17	9743 292	1.046	0.218	0.218	0 74	0 77	NO	28.5
65	11	2378-TCDD	319 8965	27.05	0 000	1.046	0 000	0 253	0.58	0.77	YES	32 0
66	41	Total-tetradioxins	319.8965	26 66	25966.338	1 046	0 580	0 580	0.70	0.77	NO	60.9
67	41	Total-tetradioxins	319 8965	26.39	0.000	1.046	0 000	0 040	0.50	0.77	YES	5.9
68	41	Total-tetradioxins	319.8965	26 23	41320 057	1 046	0 923	0.923	0 74	0.77	NO	127.6
69	41	Total-tetradioxins	319.8965	26.02	7703 477	1 046	0.172	0 172	0.83	0.77	NO	23.3
70	41	Total-tetradioxins	319.8965	25 91	0.000	1 046	0.000	0.056	0 91	0.77	YES	10 0
71	41	Total-tetradioxins	319.8965	25 66	30275.451	1 046	0.676	0.676	0.72	0 77	NO	81.2
72	41	Total-tetradioxins	319.8965	25 38	16476.456	1.046	0 368	0 368	0 76	0 77	NO	45 8
73	41	Total-tetradioxins	319.8965	25 17	0 000	1.046	0 000	0 025	0 38	0 77	YES	3 8
74	41	Total-tetradioxins	319.8965	24.66	6283.069	1.046	0.140	0 140	0.66	0 77	NO	16 7
75	42	Total-pentadioxins	355.8546	32 57	11047.047	0 973	0.363	0 363	1.37	1 55	NO	21 1
76	12	12378-PeCDD	355.8546	32.16	66755.227	0 973	2.191	2 191	1 46	1 55	NO	120 9
77	42	Total-pentadioxins	355 8546	31 48	35112 446	0.973	1.152	1 152	1 59	1.55	NO	67 7
78	42	Total-pentadioxins	355 8546	31 09	47217 879	0.973	1 550	1.550	1 60	1 55	NO	71 1
79	42	Total-pentadioxins	355.8546	30 91	113761.328	0 973	3 734	3 734	1.52	1 55	NO	234 3
80	42	Total-pentadioxins	355.8546	30.77	63375.129	0.973	2.080	2 080	1.45	1 55	NO	126.9
81	42	Total-pentadioxins	355.8546	30.55	122782 063	0 973	4.030	4 030	1 46	1.55	NO	249.6
82	42	Total-pentadioxins	355.8546	29 97	34833 351	0.973	1.143	1 143	1 46	1.55	NO	88 1
83	42	Total-pentadioxins	355.8546	29 52	145056.527	0 973	4 761	4 761	1 54	1.55	NO	214 1
84	42	Total-pentadioxins	355 8546	29 37	0 000	0 973	0.000	0 238	1 95	1 55	YES	21.0
85	43	Total-hexadioxins	389 8157	34 35	84302.438	0.884	3.668	3 668	1.23	1 24	NO	103.6
86	15	123789-HxCDD	389 8157	37.50	207618 070	0 839	9.520	9 520	1 16	1 24	NO	189.1
87	43	Total-hexadioxins	389 8157	37 26	81529.992	0 884	3 547	3.547	1 17	1.24	NO	72.6
88	14	123678-HxCDD	389 8157	37.06	553939 922	0 878	22.916	22.916	1 22	1.24	NO	537 4
89	13	123478-HxCDD	389.8157	36.93	108986 574	0.935	4 763	4 763	1.28	1 24	NO	108 1
90	43	Total-hexadioxins	389 8157	36.04	364023 937	0.884	15.839	15 839	1.27	1 24	NO	386.3
91	43	Total-hexadioxins	389 8157	35.93	1701267.126	0.884	74 023	74.023	1 23	1 24	NO	1133 9
92	43	Total-hexadioxins	389 8157	35.53	395345.704	0.884	17 202	17.202	1 25	1 24	NO	400 7
93	43	Total-hexadioxins	389 8157	35.41	17164 902	0.884	0 747	0.747	1.27	1 24	NO	22 8
94	43	Total-hexadioxins	389.8157	34 69	2039564 938	0.884	88 742	88 742	1.19	1 24	NO	2064 8
95	17	OCDD	457.7377	47.73	65881168. .	0.950	7470.6	7470.	0 87	0 89	NO	20387 3
96	16	1234678-HpCDD	423.7766	41 70	12886006 .	0 974	785.296	785.	1 04	1.05	NO	4564 3
97	44	Total-heptadioxins	423.7766	40 43	29234843 .	0.974	1781 6	1781 .	1.03	1 05	NO	11214.8

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	24.76	0.000							0 0
2	48	FUNCTION1 PFK	330.9792	24.57	0.000							6 1
3	48	FUNCTION1 PFK	330.9792	23.76	0.000							7 2
4	48	FUNCTION1 PFK	330.9792	23.42	0 000							22.7
5	48	FUNCTION1 PFK	330.9792	23 25	0.000							33 1
6	48	FUNCTION1 PFK	330.9792	22 52	0.000							70.9
7	48	FUNCTION1 PFK	330 9792	22.42	0.000							74.5
8	48	FUNCTION1 PFK	330 9792	21.82	0.000							88.8

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	32 95	0.000		0 000					39.4
2	49	FUNCTION2 PFK	366 9792	32 75	0 000		0.000					13.7
3	49	FUNCTION2 PFK	366.9792	32.53	0.000		0.000					17 7
4	49	FUNCTION2 PFK	366.9792	31 47	0.000		0.000					13 3
5	49	FUNCTION2 PFK	366 9792	31.11	0.000		0.000					29 1
6	49	FUNCTION2 PFK	366.9792	31 05	0 000		0.000					31 4
7	49	FUNCTION2 PFK	366.9792	29 61	0 000		0 000					36 1
8	49	FUNCTION2 PFK	366.9792	33.44	0 000		0 000					10 9
9	49	FUNCTION2 PFK	366.9792	33 28	0 000		0 000					26.9
10	49	FUNCTION2 PFK	366.9792	32 99	0.000		0.000					41.0

PFK3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380 9760	38.89	0 000		0 000					1 6
2	50	FUNCTION3 PFK	380.9760	38 69	0.000		0 000					26 7
3	50	FUNCTION3 PFK	380 9760	38 36	0 000		0.000					46 5
4	50	FUNCTION3 PFK	380.9760	37.99	0 000		0.000					55.2
5	50	FUNCTION3 PFK	380 9760	37.88	0 000		0.000					46.6
6	50	FUNCTION3 PFK	380.9760	37.31	0 000		0 000					50.0
7	50	FUNCTION3 PFK	380.9760	34 80	0.000		0 000					9.0
8	50	FUNCTION3 PFK	380 9760	34 37	0.000		0.000					13.6
9	50	FUNCTION3 PFK	380.9760	33.91	0.000		0 000					7 3
10	50	FUNCTION3 PFK	380.9760	33 64	0.000		0 000					1 7

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430 9728	38 97	0 000								52 9
2	51	FUNCTION4 PFK	430 9728	40.47	0 000								3 3
3	51	FUNCTION4 PFK	430 9728	40.43	0.000								4 5
4	51	FUNCTION4 PFK	430.9728	40 37	0 000								5 4
5	51	FUNCTION4 PFK	430.9728	40 30	0.000								9 6
6	51	FUNCTION4 PFK	430.9728	40.22	0.000								12.5
7	51	FUNCTION4 PFK	430.9728	39 99	0.000								20.7
8	51	FUNCTION4 PFK	430.9728	39.91	0.000								23.7
9	51	FUNCTION4 PFK	430 9728	39.89	0 000								23 6
10	51	FUNCTION4 PFK	430.9728	39.71	0 000								29.4
11	51	FUNCTION4 PFK	430.9728	39 60	0.000								33.0
12	51	FUNCTION4 PFK	430.9728	39 46	0.000								36.9
13	51	FUNCTION4 PFK	430.9728	39.29	0 000								45 4
14	51	FUNCTION4 PFK	430.9728	39 24	0.000								46 9
15	51	FUNCTION4 PFK	430 9728	39 13	0 000								51 0
16	51	FUNCTION4 PFK	430 9728	39.07	0.000								53.1
17	51	FUNCTION4 PFK	430 9728	39.01	0.000								53 5
18	51	FUNCTION4 PFK	430 9728	43.46	0.000								1 0
19	51	FUNCTION4 PFK	430.9728	43 32	0 000								1.6
20	51	FUNCTION4 PFK	430.9728	43 26	0.000								1.5
21	51	FUNCTION4 PFK	430.9728	43 15	0 000								1 1
22	51	FUNCTION4 PFK	430.9728	42.88	0 000								1.4
23	51	FUNCTION4 PFK	430.9728	42.75	0.000								1 6
24	51	FUNCTION4 PFK	430 9728	42 68	0 000								1 6
25	51	FUNCTION4 PFK	430.9728	42 62	0 000								0 9
26	51	FUNCTION4 PFK	430 9728	42.46	0 000								0 6
27	51	FUNCTION4 PFK	430.9728	41 98	0 000								1 3
28	51	FUNCTION4 PFK	430 9728	41 85	0 000								1 0
29	51	FUNCTION4 PFK	430.9728	41.81	0.000								1.2
30	51	FUNCTION4 PFK	430.9728	41.76	0 000								1.9
31	51	FUNCTION4 PFK	430.9728	41.52	0 000								1.8
32	51	FUNCTION4 PFK	430.9728	41 19	0 000								1 4
33	51	FUNCTION4 PFK	430.9728	40.92	0.000								1.5
34	51	FUNCTION4 PFK	430 9728	44.85	0 000								1 1
35	51	FUNCTION4 PFK	430.9728	44 38	0 000								0 8
36	51	FUNCTION4 PFK	430.9728	44 34	0 000								0.3
37	51	FUNCTION4 PFK	430.9728	44 26	0 000								1 2
38	51	FUNCTION4 PFK	430.9728	44 22	0 000								1 0
39	51	FUNCTION4 PFK	430.9728	44 17	0.000								1 3
40	51	FUNCTION4 PFK	430.9728	44 05	0.000								0 9
41	51	FUNCTION4 PFK	430 9728	44 02	0.000								0.6
42	51	FUNCTION4 PFK	430.9728	43.86	0.000								1.4
43	51	FUNCTION4 PFK	430 9728	43 77	0.000								1 7
44	51	FUNCTION4 PFK	430 9728	43 71	0.000								1 9
45	51	FUNCTION4 PFK	430.9728	43.59	0.000								0 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	45.20	0 000								37 1
2	52	FUNCTION5 PFK	480.9696	45 14	0 000								37.7
3	52	FUNCTION5 PFK	480 9696	45.07	0 000								40 9
4	52	FUNCTION5 PFK	480.9696	46 86	0.000								1 2
5	52	FUNCTION5 PFK	480.9696	46 81	0.000								0.6
6	52	FUNCTION5 PFK	480.9696	46.73	0.000								0.3
7	52	FUNCTION5 PFK	480.9696	46.69	0.000								0 6
8	52	FUNCTION5 PFK	480 9696	46.59	0.000								1.7
9	52	FUNCTION5 PFK	480.9696	46.54	0.000								1 2
10	52	FUNCTION5 PFK	480 9696	46 43	0.000								0.7
11	52	FUNCTION5 PFK	480 9696	46.37	0.000								0.7
12	52	FUNCTION5 PFK	480 9696	46 22	0.000								0.9
13	52	FUNCTION5 PFK	480.9696	46.18	0 000								0.3
14	52	FUNCTION5 PFK	480 9696	46 08	0 000								3 2
15	52	FUNCTION5 PFK	480 9696	45 96	0.000								7 3
16	52	FUNCTION5 PFK	480.9696	45.64	0 000								19 9
17	52	FUNCTION5 PFK	480.9696	45 53	0.000								24.6
18	52	FUNCTION5 PFK	480.9696	45.48	0.000								27 0
19	52	FUNCTION5 PFK	480.9696	45.41	0 000								29 8
20	52	FUNCTION5 PFK	480 9696	48 85	0 000								0 6
21	52	FUNCTION5 PFK	480.9696	48.69	0 000								1 2
22	52	FUNCTION5 PFK	480.9696	48 62	0.000								0 8
23	52	FUNCTION5 PFK	480.9696	48 49	0.000								1 7
24	52	FUNCTION5 PFK	480 9696	48 29	0 000								0 9
25	52	FUNCTION5 PFK	480.9696	48 06	0.000								1 4
26	52	FUNCTION5 PFK	480 9696	48 04	0 000								1 4
27	52	FUNCTION5 PFK	480.9696	47.74	0 000								1 7
28	52	FUNCTION5 PFK	480 9696	47.69	0 000								1 2
29	52	FUNCTION5 PFK	480.9696	47.66	0.000								1.8
30	52	FUNCTION5 PFK	480.9696	47.51	0.000								1.0
31	52	FUNCTION5 PFK	480 9696	47.43	0 000								1 6
32	52	FUNCTION5 PFK	480 9696	47.26	0 000								0.4
33	52	FUNCTION5 PFK	480 9696	47.08	0 000								2.0
34	52	FUNCTION5 PFK	480 9696	47.03	0.000								1 8

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD	375 8364	28.44	0 000		0 000					12.4
2	53 FUNCTION1 HXCD .	375.8364	27 92	0.000		0.000					3 0
3	53 FUNCTION1 HXCD .	375.8364	27 86	0.000		0.000					2.8
4	53 FUNCTION1 HXCD...	375.8364	27 60	0.000		0.000					2 5
5	53 FUNCTION1 HXCD. .	375.8364	26.47	0.000		0 000					31.4
6	53 FUNCTION1 HXCD...	375.8364	26 21	0.000		0.000					13.7
7	53 FUNCTION1 HXCD .	375 8364	25.57	0.000		0 000					2.6
8	53 FUNCTION1 HXCD .	375.8364	25 36	0 000		0.000					2 1
9	53 FUNCTION1 HXCD .	375 8364	24 42	0.000		0 000					2 1
10	53 FUNCTION1 HXCD ..	375.8364	24.26	0.000		0 000					24.9
11	53 FUNCTION1 HXCD .	375 8364	21.34	0.000		0.000					3 1
12	53 FUNCTION1 HXCD. .	375.8364	21 28	0 000		0.000					2.3

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	54 FUNCTION1 HPCD	409.7974	26 21	0.000		0.000					4 1
2	54 FUNCTION1 HPCD .	409 7974	23 93	0 000		0 000					6 6
3	54 FUNCTION1 HPCD...	409.7974	21.31	0 000		0.000					5 8
4	54 FUNCTION1 HPCD	409.7974	27 96	0.000		0 000					1 4
5	54 FUNCTION1 HPCD .	409.7974	27.81	0.000		0 000					2.2

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD	409.7974	33 41	0.000		0 000					3 0
2	55 FUNCTION2 HPCD .	409 7974	33 19	0 000		0 000					4.8
3	55 FUNCTION2 HPCD .	409 7974	32.86	0 000		0.000					3 8
4	55 FUNCTION2 HPCD ..	409 7974	32 00	0.000		0 000					3 9
5	55 FUNCTION2 HPCD .	409.7974	30.81	0 000		0 000					2.3
6	55 FUNCTION2 HPCD .	409 7974	30.52	0.000		0 000					13.3
7	55 FUNCTION2 HPCD.	409.7974	30.45	0.000		0.000					4 6
8	55 FUNCTION2 HPCD..	409 7974	30.24	0 000		0.000					3.5
9	55 FUNCTION2 HPCD .	409.7974	30 18	0 000		0.000					16 3

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445.7555	35.36	0.000		0 000					6.5
2	56	FUNCTION3 OCDPE	445.7555	35.30	0.000		0.000					7.5
3	56	FUNCTION3 OCDPE	445 7555	35 23	0 000		0 000					2.3
4	56	FUNCTION3 OCDPE	445.7555	37.25	0.000		0 000					4.3
5	56	FUNCTION3 OCDPE	445.7555	37 20	0.000		0.000					3 2
6	56	FUNCTION3 OCDPE	445.7555	37 15	0.000		0.000					4 8
7	56	FUNCTION3 OCDPE	445.7555	37 05	0 000		0.000					11 2
8	56	FUNCTION3 OCDPE	445.7555	36.99	0 000		0 000					7 9
9	56	FUNCTION3 OCDPE	445.7555	36 96	0.000		0.000					3.9
10	56	FUNCTION3 OCDPE	445.7555	36.91	0.000		0.000					3.3
11	56	FUNCTION3 OCDPE	445.7555	36.85	0 000		0.000					3 8
12	56	FUNCTION3 OCDPE	445.7555	36.79	0 000		0 000					3.6
13	56	FUNCTION3 OCDPE	445.7555	36.72	0.000		0.000					2 4
14	56	FUNCTION3 OCDPE	445 7555	35 87	0 000		0.000					2 9
15	56	FUNCTION3 OCDPE	445 7555	35 82	0.000		0 000					2.5
16	56	FUNCTION3 OCDPE	445.7555	35.76	0.000		0.000					2.6
17	56	FUNCTION3 OCDPE	445.7555	35.64	0.000		0.000					8.4
18	56	FUNCTION3 OCDPE	445.7555	35.55	0.000		0 000					11 7
19	56	FUNCTION3 OCDPE	445 7555	35.38	0.000		0 000					6.8
20	56	FUNCTION3 OCDPE	445.7555	37.50	0.000		0.000					1.7
21	56	FUNCTION3 OCDPE	445 7555	37.39	0 000		0 000					2.3
22	56	FUNCTION3 OCDPE	445.7555	37.30	0.000		0 000					4.0

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479 7165	41.80	0.000		0.000					4 0
2	57	FUNCTION4 NCDPE	479 7165	41.72	0.000		0.000					6.7
3	57	FUNCTION4 NCDPE	479 7165	41.67	0.000		0.000					11 1
4	57	FUNCTION4 NCDPE	479 7165	41.62	0.000		0 000					9 5
5	57	FUNCTION4 NCDPE	479.7165	41.48	0 000		0 000					3 6
6	57	FUNCTION4 NCDPE	479.7165	41.43	0.000		0.000					3.8
7	57	FUNCTION4 NCDPE	479.7165	41.27	0.000		0.000					5.7
8	57	FUNCTION4 NCDPE	479.7165	40.41	0.000		0.000					4.3
9	57	FUNCTION4 NCDPE	479.7165	39.43	0.000		0 000					431.5

ETHERS6

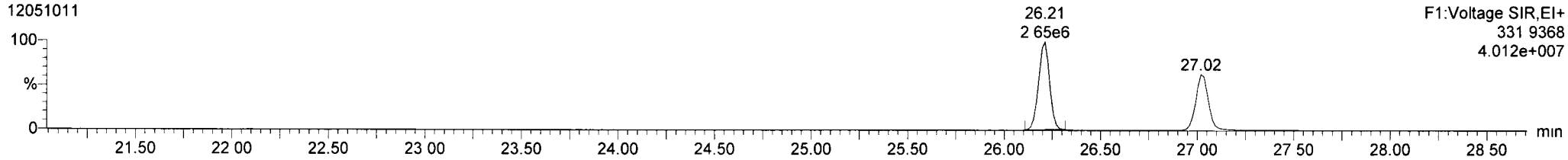
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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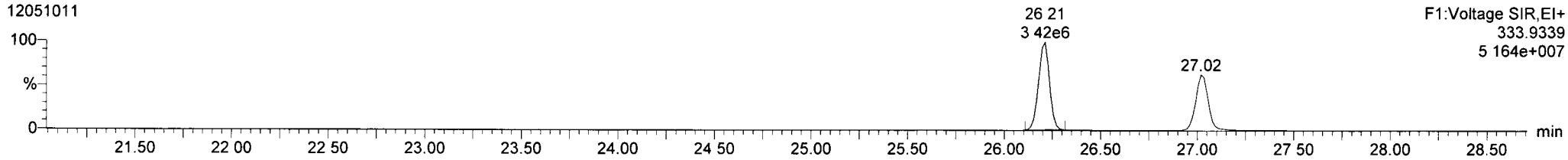
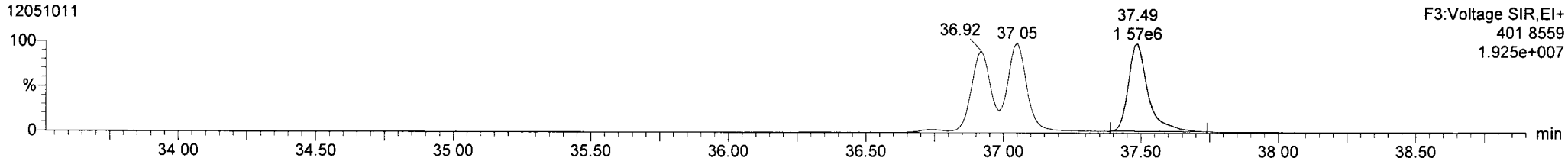


13C-123789-HxCDD



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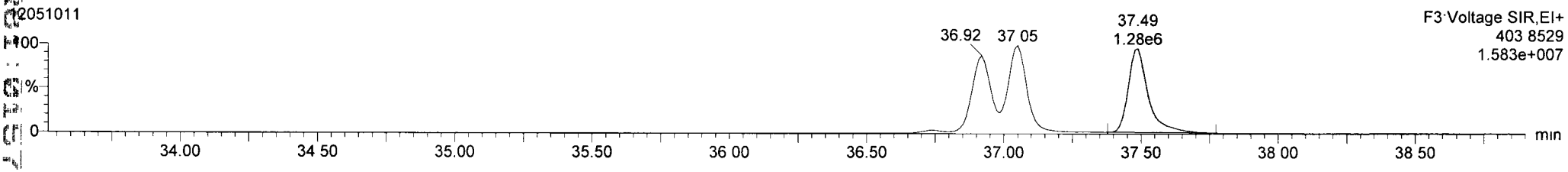
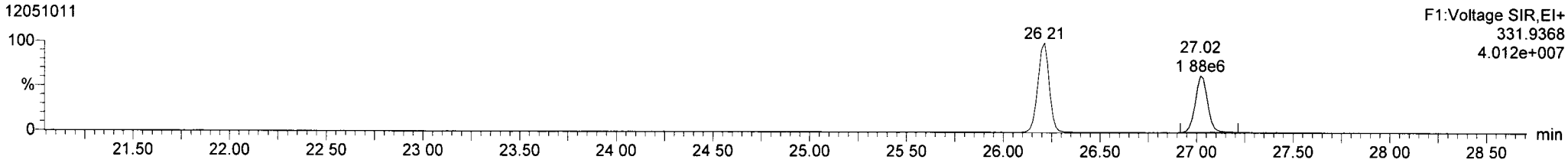


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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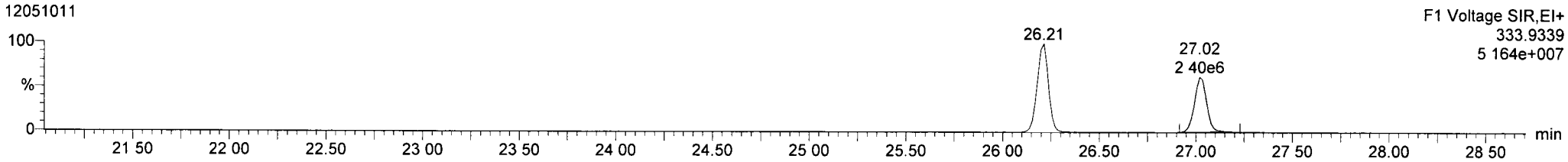
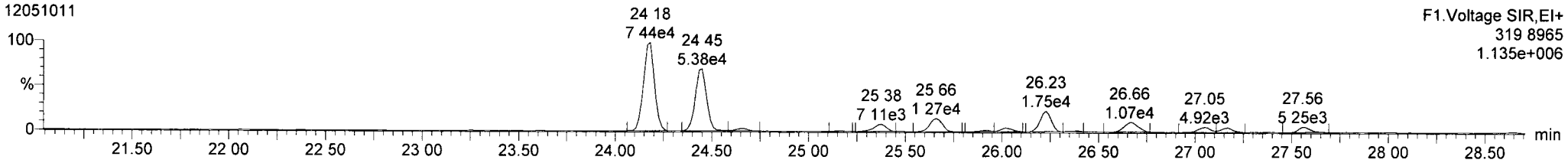
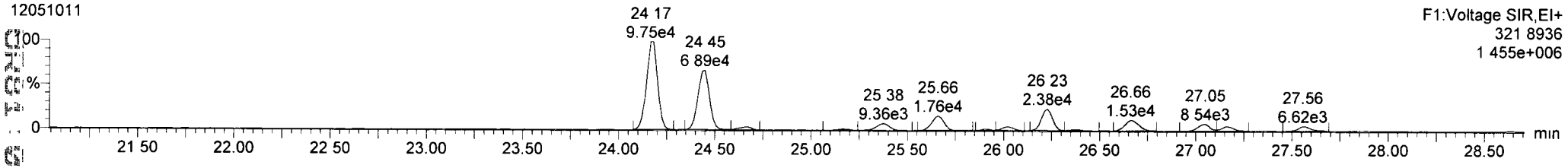


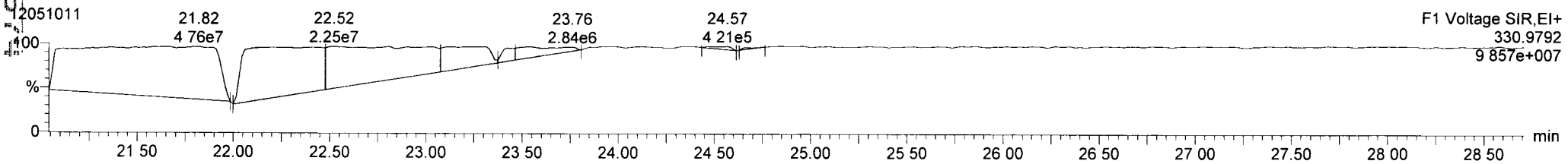
Total-tetradioxins



Total-tetradioxins



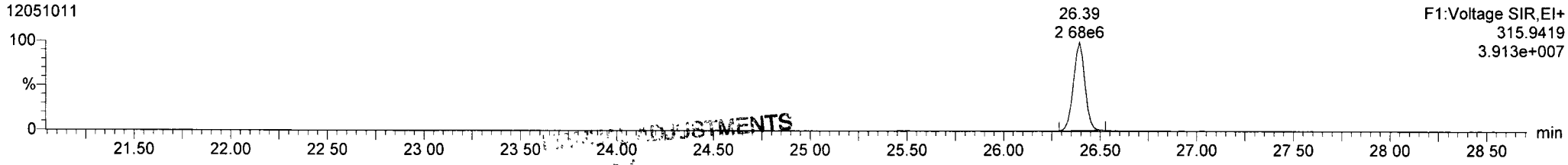
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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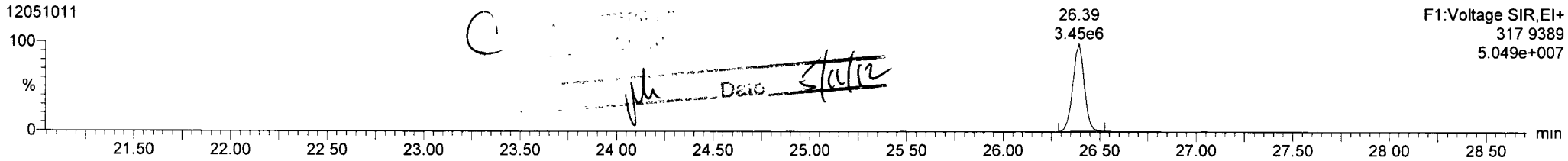
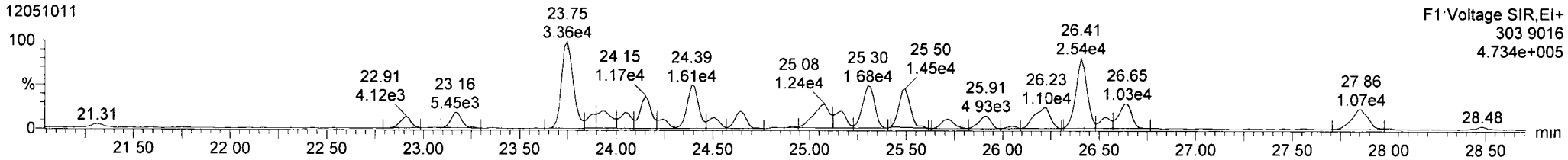
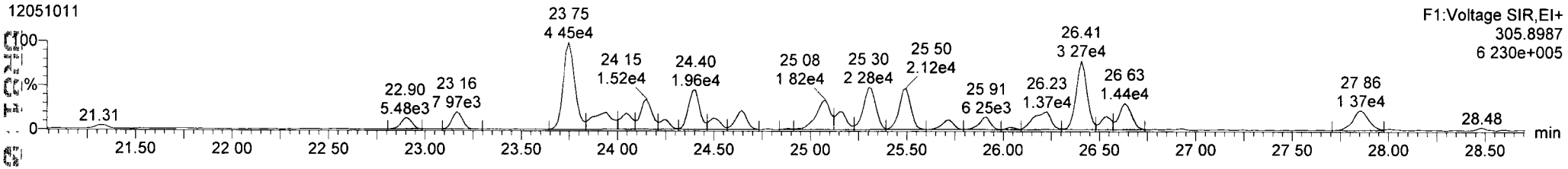


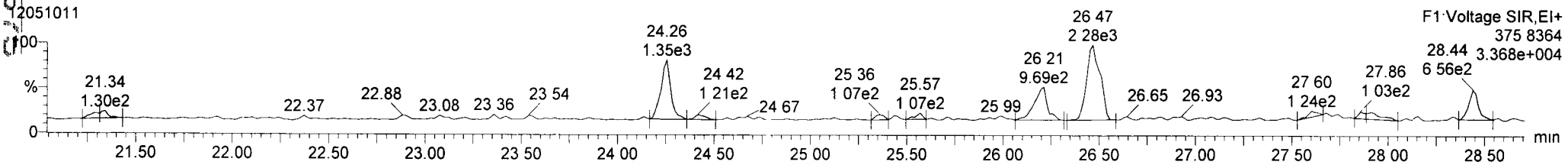
Total-tetrafurans



Total-tetrafurans



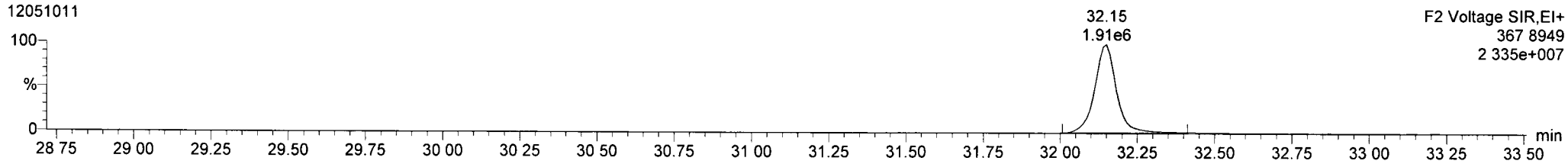
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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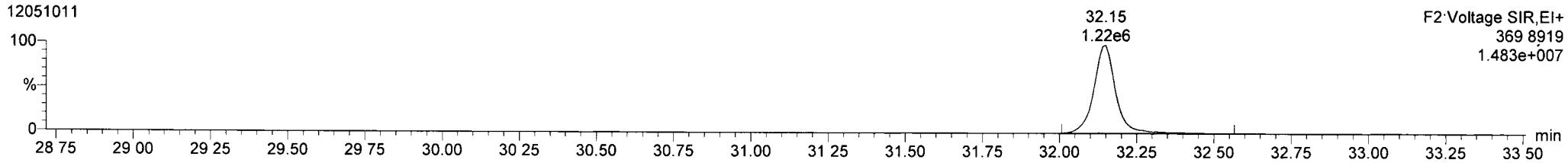
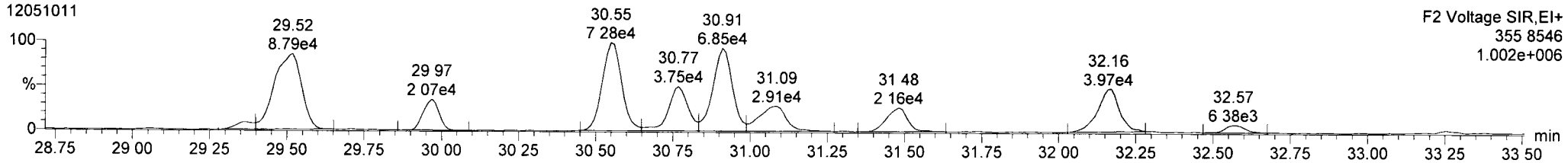
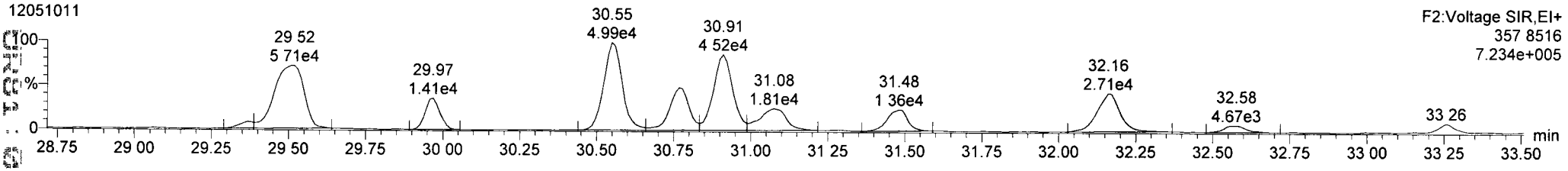


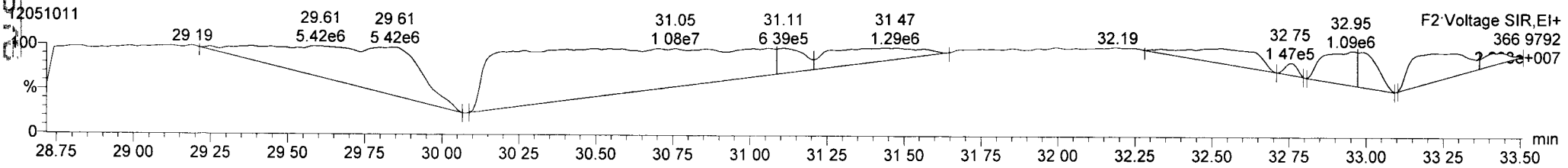
Total-pentadioxins



Total-pentadioxins



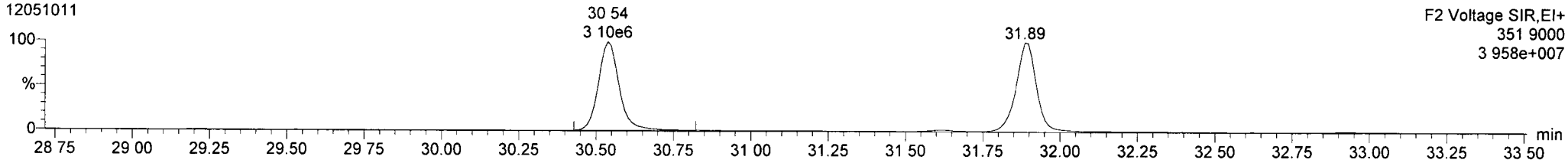
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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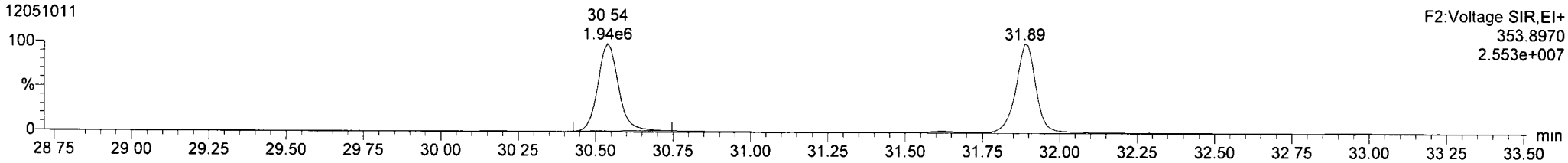

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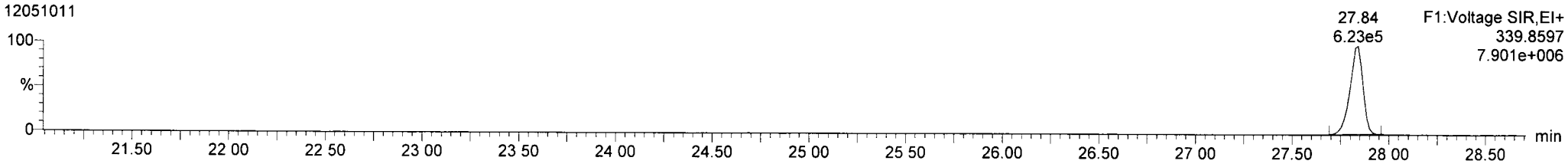
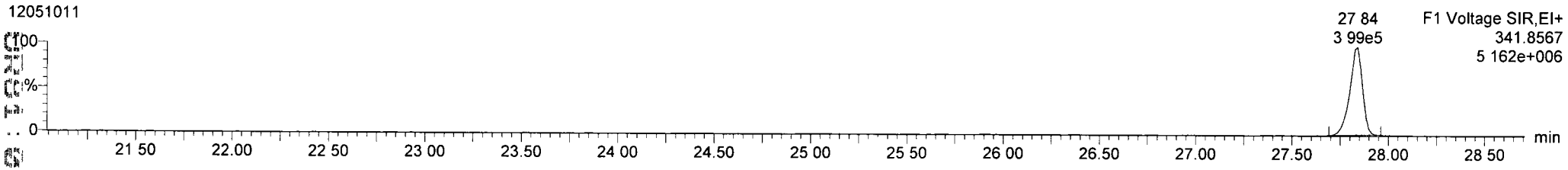
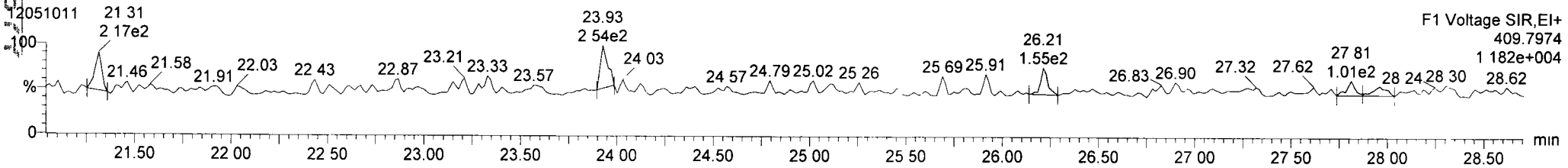


Total-penta1



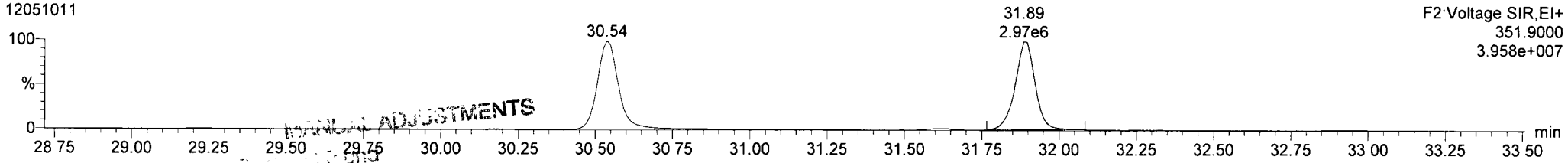
FUNCTION1 HPCDPE



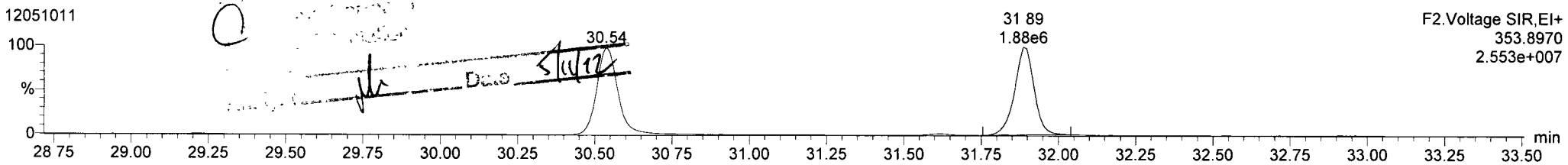
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

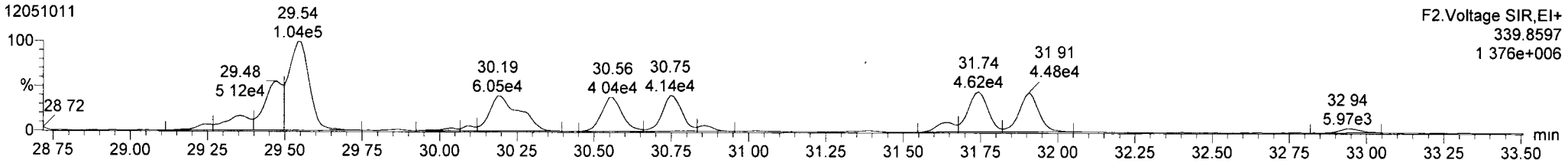
13C-23478-PeCDF



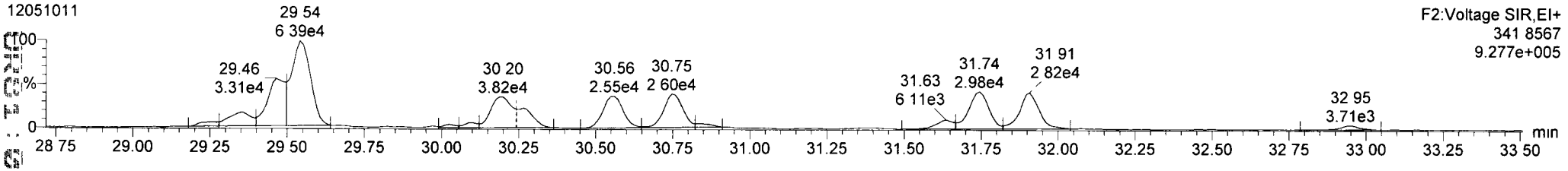
13C-23478-PeCDF



Total-pentafurans



Total-pentafurans



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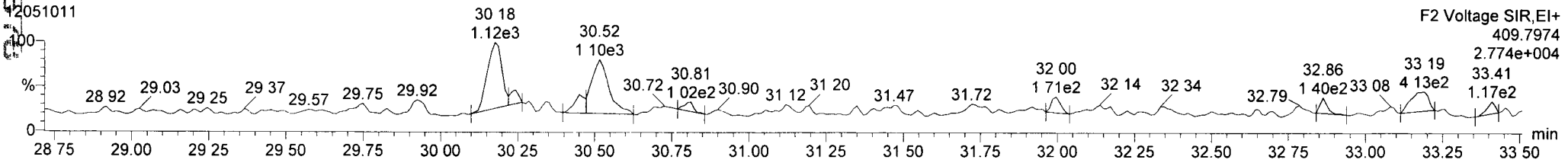
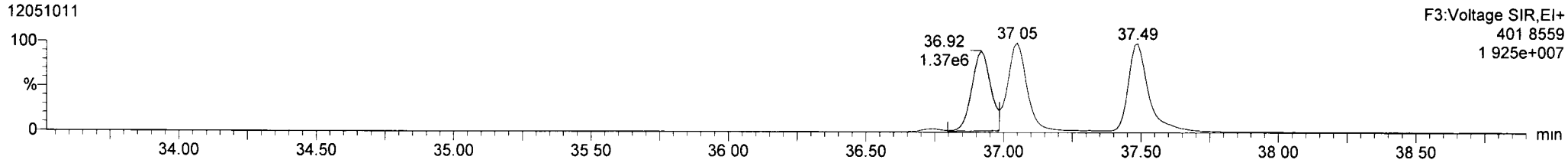


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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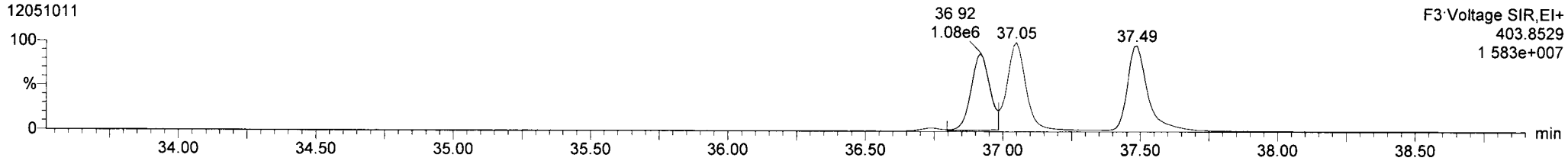
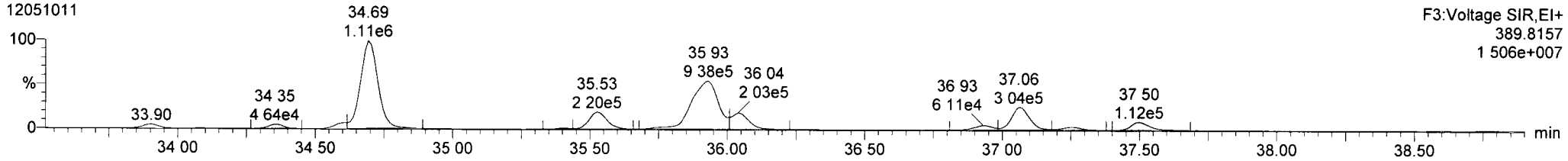
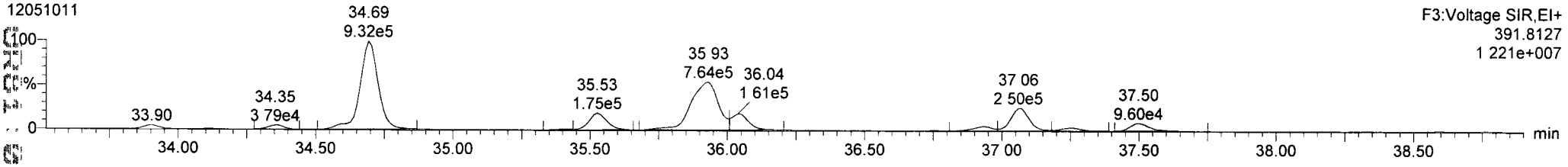


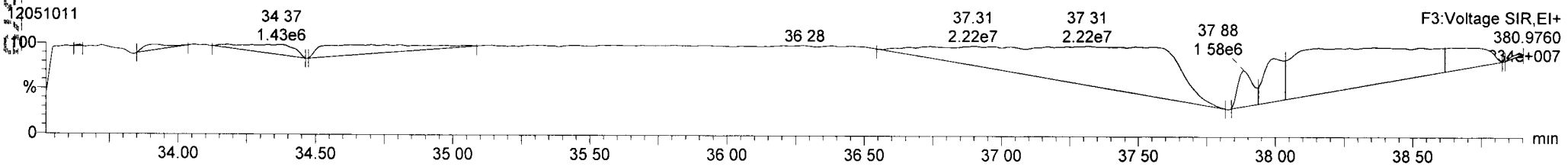
Total-hexadioxins



Total-hexadioxins



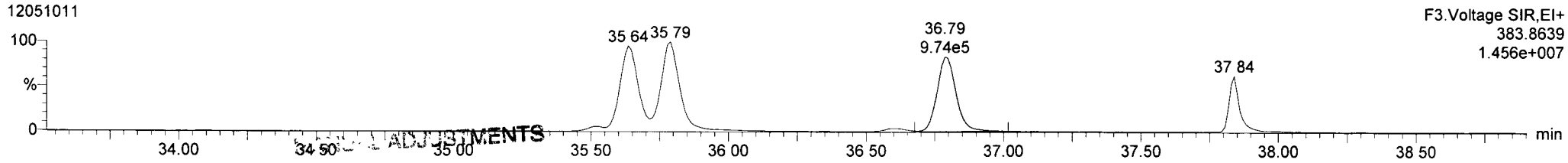
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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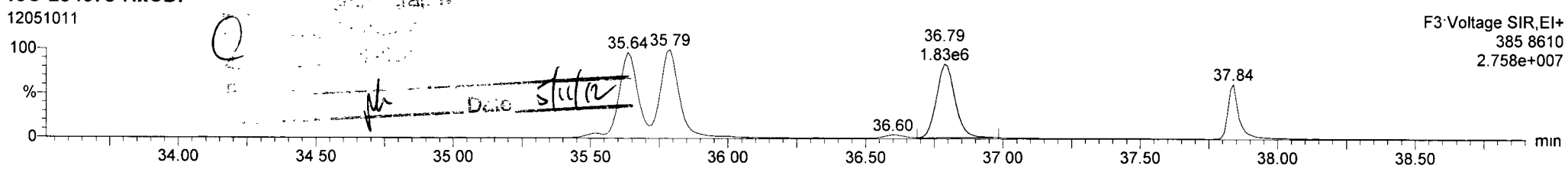
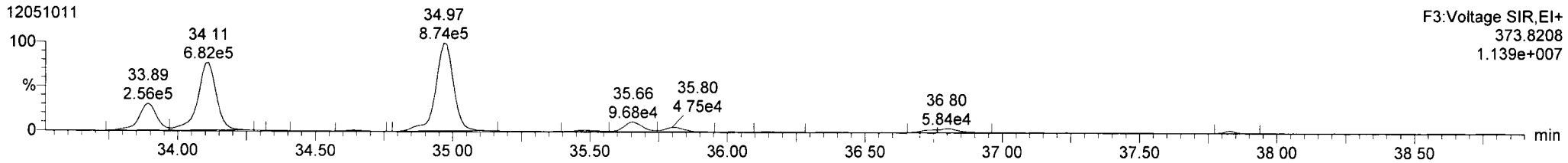
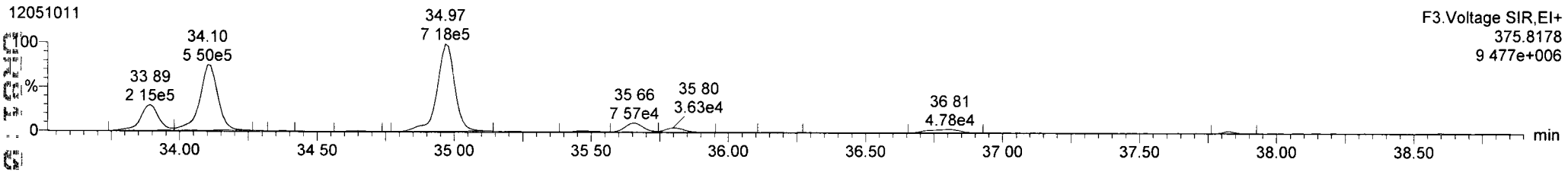


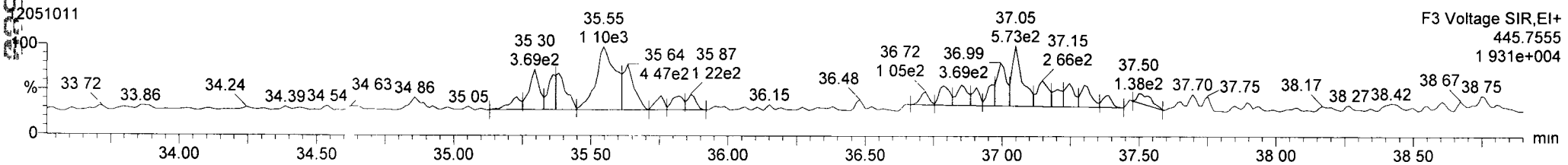
Total-hexafurans



Total-hexafurans



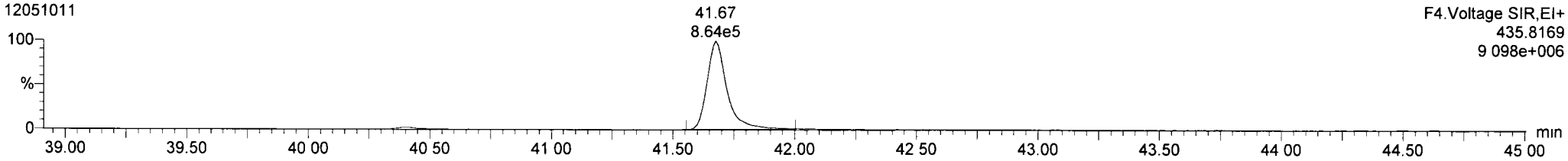
FUNCTION3 OCDPE



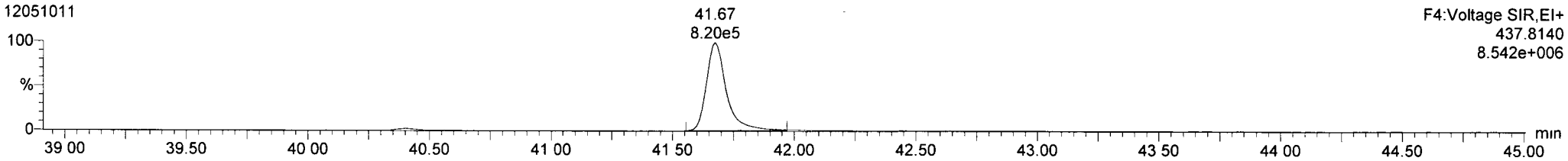
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

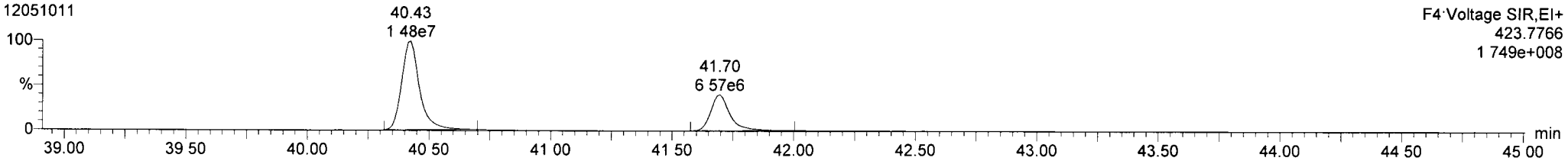
13C-1234678-HpCDD



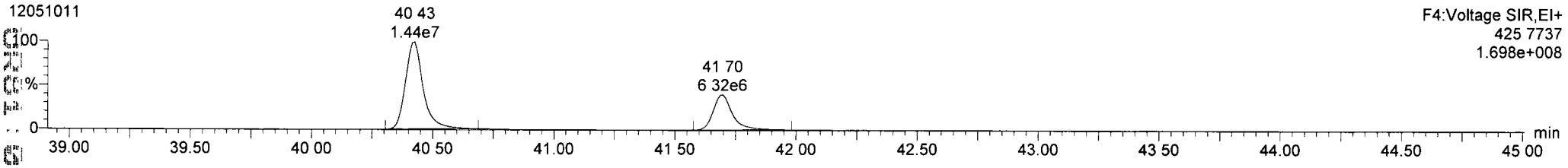
13C-1234678-HpCDD



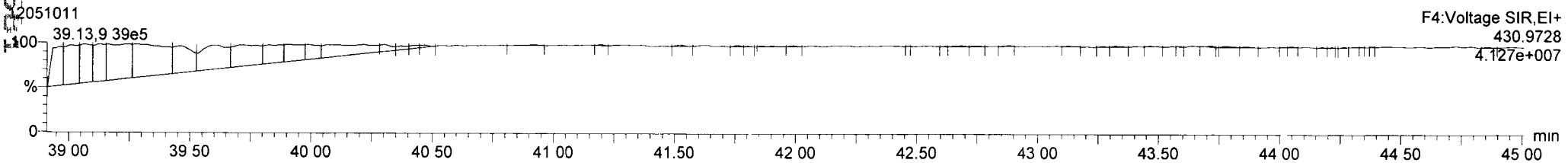
Total-heptadioxins



Total-heptadioxins

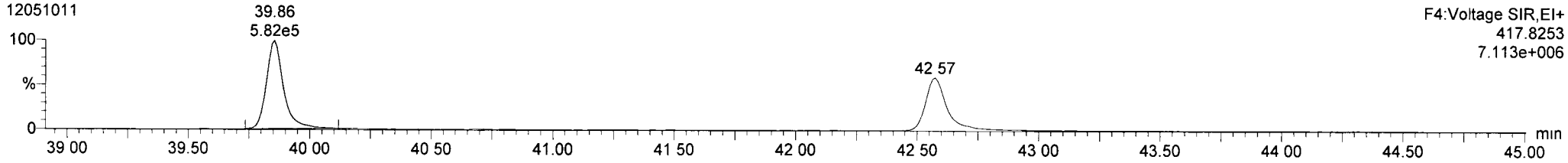


FUNCTION4 PFK

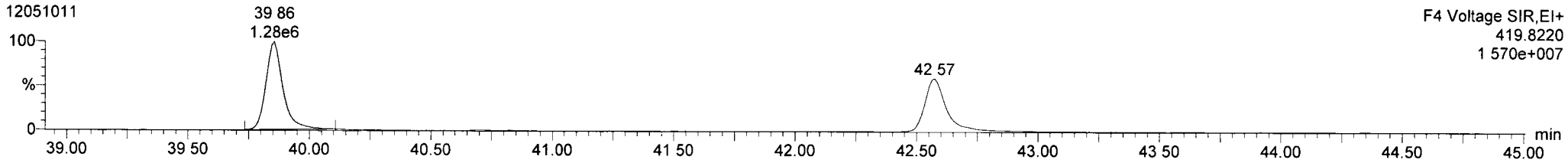


Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

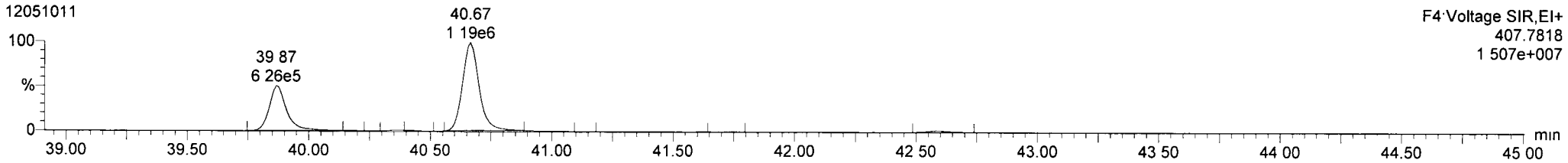
13C-1234678-HpCDF



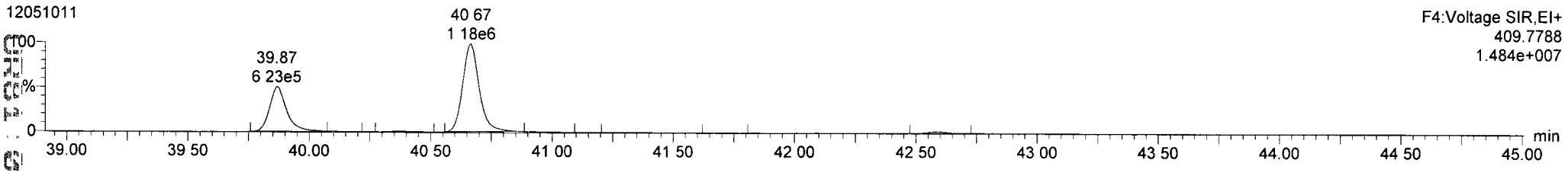
13C-1234678-HpCDF



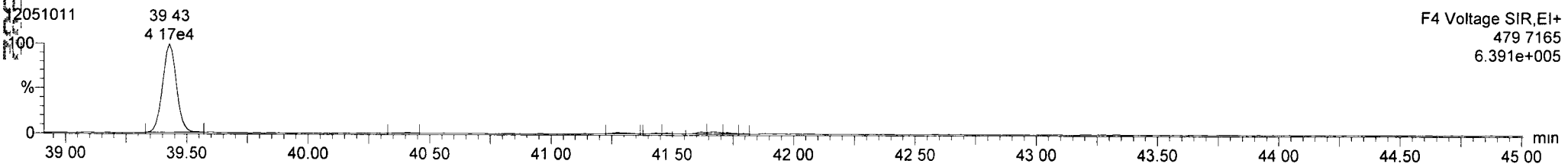
Total-heptafurans



Total-heptafurans



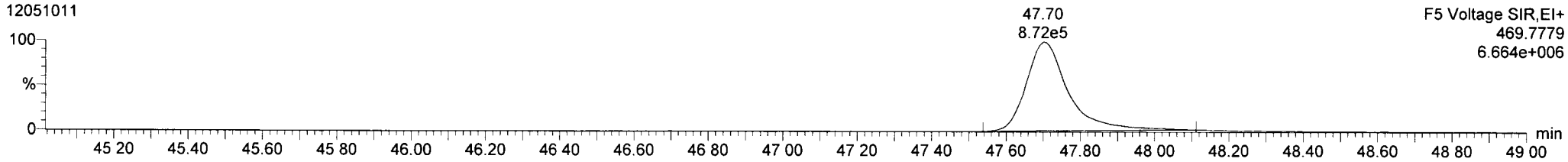
FUNCTION4 NCDPE



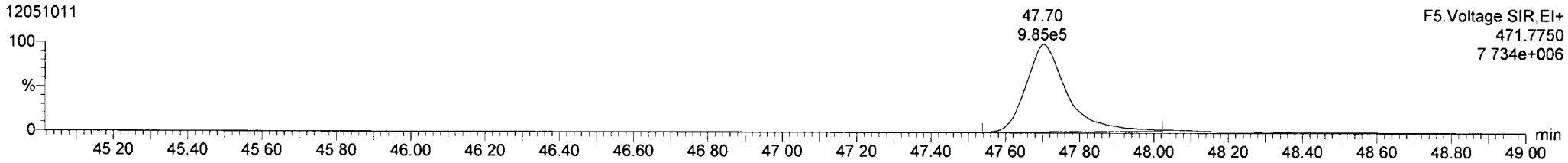
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

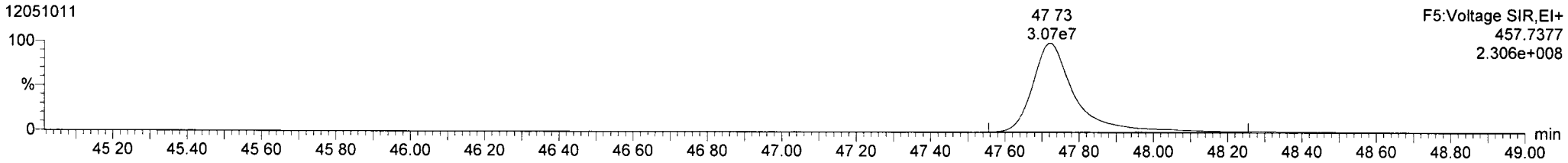
13C-OCDD



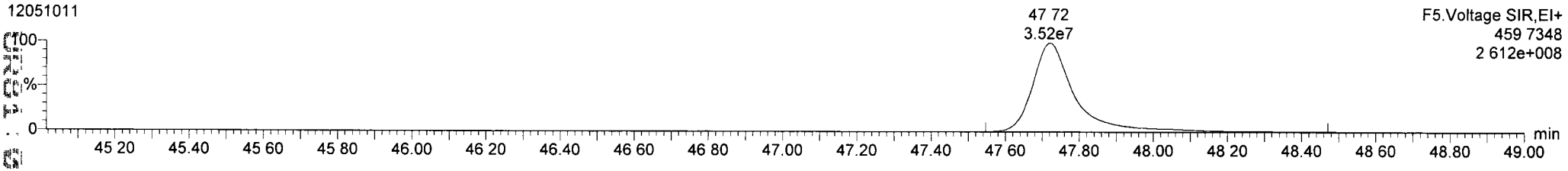
13C-OCDD



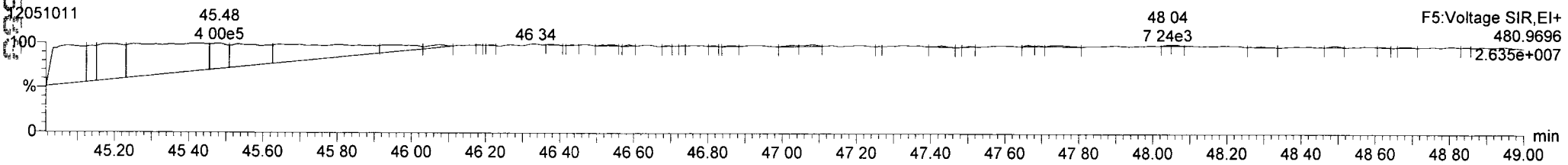
OCDD



OCDD



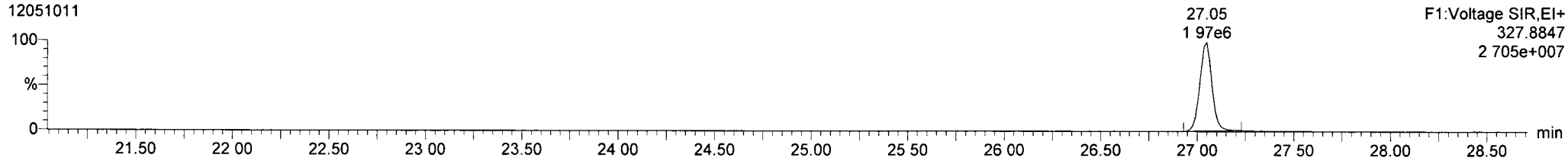
FUNCTION5 PFK



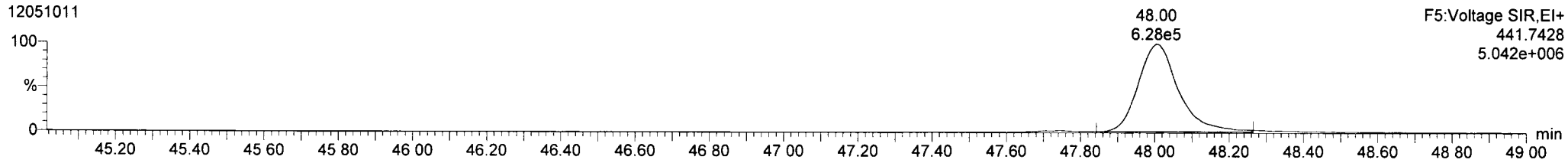
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:04 Pacific Daylight Time

Name: 12051011, Date: 10-May-2012, Time: 18:29:00, ID: UR81E, Conditions: AUTOSPEC01, User: pk

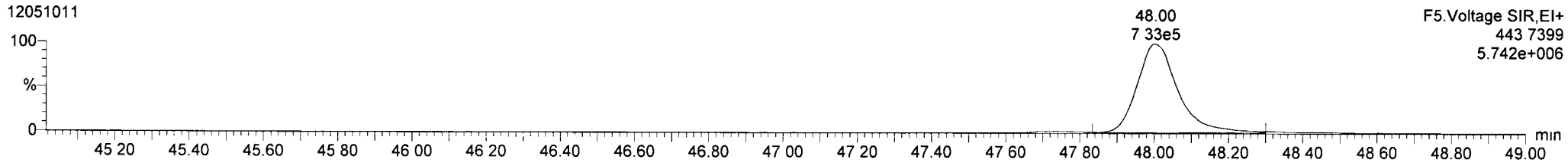
37CL-2378-TCDD



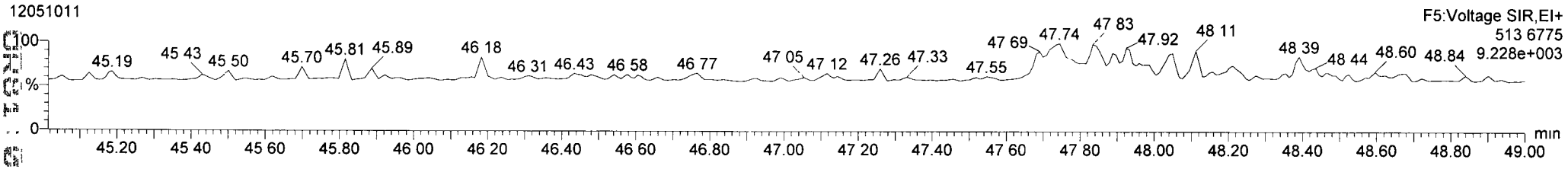
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25.01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

MK 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC	
1	1	2378-TCDF	303.9016	26.392	26.393	111615	111615	0.866	dd		0.78	0 77	276 2	NO	1 796	1.796	
2	2	12378-PeCDF	339 8597	30.538	30.538	21539	21539	0.907	bb		1.62	1 55	74 8	NO	0 486	0 486	
3	3	23478-PeCDF	339.8597	31.875	31.876	21894	21894	0 936	db		1 51	1 55	69.2	NO	0 502	0.502	
4	4	123478-HxCDF	373.8208	35 558	35 547	59120	59120	1 082	dd		1 14	1 24	85 5	NO	1.686	1 686	
5	5	234678-HxCDF	373 8208	36.666	36.676	25411	25411	1 070	MM		1 35	1 24	39.2	NO	0 781	0.781	
6	6	123678-HxCDF	373 8208	35 701	35 711	29415	29415	1 048	db		1 15	1 24	38.7	NO	0 767	0.767	
7	7	123789-HxCDF	373.8208	37 729	37 762	14481	14481	1 020	bb		1.26	1 24	26.4	NO	0 557	0.557	
8	8	1234678-HpCDF	407.7818	39.833	39 831	575231	575231	1 214	bb		0.99	1.05	1069 6	NO	22 292	22 292	
9	9	1234789-HpCDF	407.7818	42.563	42 553	25937	25937	1 254	bd		1.01	1 05	39 5	NO	1.367	1 367	
10	10	OCDF	441.7428	47.959	47.931	797154	797154	1 105	bd		0.88	0.89	1081.1	NO	75 040	75 040	
11	11	2378-TCDD	319.8965	27.034	27.018	0	8734	1 046	bd		0.58	0.77	19.5	YES	0.000	0.187	B
12	12	12378-PeCDD	355 8546	32.128	32.115	0	32967	0 973	bb		1.29	1.55	73 7	YES	0.000	1 123	
13	13	123478-HxCDD	389 8157	36.808	36.808	54846	54846	0.935	bd		1.15	1.24	87 8	NO	2.152	2.152	
14	14	123678-HxCDD	389 8157	36.929	36.929	181026	181026	0 878	dd		1.20	1.24	308 7	NO	7.126	7 126	
15	15	123789-HxCDD	389 8157	37 356	37.324	86078	86078	0.839	bb		1.24	1.24	150 9	NO	3 653	3 653	
16	16	1234678-HpCDD	423 7766	41 653	41 654	3064633	3064633	0.974	bb		1.03	1.05	2227 7	NO	178 142	178 142	
17	17	OCDD	457 7377	47.663	47.659	14406495	14406495	0 950	bd		0.89	0.89	9024 8	NO	1577 628	1577.6	
18	18	13C-2378-TCDF	315 9419	26 377	26.377	7175448		1.484	bb	82.6	0.77	0.77	11373 8	NO	82.588		
19	19	13C-12378-PeCDF	351 9000	30 516	30.518	4889469		1 048	bd	79.7	1.52	1 55	5552.4	NO	79 707		
20	20	13C-23478-PeCDF	351 9000	31.854	31 856	4662974		1 003	bb	79.4	1.56	1 55	5271 9	NO	79 400		
21	21	13C-123478-HxCDF	383 8639	35.536	35.569	3240254		1.186	bd	83.9	0.51	0 51	2259.9	NO	83 864		
22	22	13C-123678-HxCDF	383 8639	35 690	35 723	3659320		1.315	dd	85.4	0.52	0.51	2385 9	NO	85 387		
23	23	13C-234678-HxCDF	383 8639	36.654	36 655	3042996		1 223	bb	76 3	0.52	0.51	2015 5	NO	76 333		
24	24	13C-123789-HxCDF	383 8639	37.751	37 762	2550628		1.056	bd	74.1	0.50	0.51	2061 5	NO	74.084		
25	25	13C-1234678-HpCDF	417.8253	39.811	39 844	2124772		1.011	bb	64.5	0.45	0.44	1739 9	NO	64.465		
26	26	13C-1234789-HpCDF	417 8253	42.541	42 596	1513049		0.741	bd	62.7	0.44	0.44	1039 8	NO	62.696		
27	27	13C-1234-TCDD	331 9368	26.198	26.272	5852962		1 000	bb	100.0	0.78	0 77	8880.1	NO	100 000		
28	28	13C-2378-TCDD	331.9368	27.004	27 019	4477468		0 956	bb	80 0	0.77	0 77	6076 1	NO	79 989		
29	29	13C-12378-PeCDD	367.8949	32.106	32 108	3016825		0 663	bb	77 7	1.57	1 55	7143.8	NO	77 690		
30	30	13C-123478-HxCDD	401 8559	36 786	36 786	2724017		1 024	bd	81 6	1.24	1 24	5413.2	NO	81 638		
31	31	13C-123678-HxCDD	401 8559	36 917	36.918	2894231		1 113	db	79 8	1.23	1 24	5493 8	NO	79.823		
32	32	13C-1234678-HpCDD	435 8169	41 642	41.697	1765715		0 815	bd	66 5	1.00	1 05	2918 1	NO	66 472		
33	33	13C-OCDD	469.7779	47 645	47 713	1922324		0 717	bb	41 1	0.89	0.89	2096.1	NO	82.262		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.345	37.368	3258818		1 000	bb	100.0	1.20	1 24	6154.0	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.370			0 866							9.083	9 738
36	36	Total-penta1	339.8597		28.210										7 655	7 655
37	37	Total-pentafurans	339 8597		30.790			0 921							5.627	6 086
38	38	Total-hexafurans	373.8208		35.760			1.055							41 834	41 887
39	39	Total-heptafurans	407.7818		41.160			1.234							80 513	80 962
40	40	Total-Furans	303.9016		0 000			1 050							220 736	222 352
41	41	Total-tetradioxins	319.8965		25 880			1 046							40 726	41.258
42	42	Total-pentadioxins	355.8546		30.950			0 973							45.221	46 344
43	43	Total-hexadioxins	389.8157		35.940			0 884							94.937	96 459
44	44	Total-heptadioxins	423 7766		40.980			0 974							481 322	481 322
45	45	Total-Dioxins	319 8965		0 000			0.942							2239.844	2243 0
46	46	Total-TEQ	319.8965		0 000										2460 580	2465 3 .
47	47	37CL-2378-TCDD	327.8847	27.034	27 010	2116082		1.037					9204.3		34.859	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0 000	
50	50	FUNCTION3 PFK	380.9760		0 000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445 7555		0 000										0.000	
57	57	FUNCTION4 NCDPE	479 7165		0 000										0.000	
58	58	FUNCTION5 DCDPE	513 6775		0 000											

13.282 13.741

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.14	0.000	0.866	0 000	0.377	0 93	0.77	YES	58.7
2	35	Total-tetrafurans	303.9016	25.05	29131.044	0.866	0.469	0.469	0.71	0.77	NO	50.8
3	35	Total-tetrafurans	303 9016	24.90	0.000	0.866	0.000	0.021	1 08	0.77	YES	6.1
4	35	Total-tetrafurans	303.9016	24.64	15072.605	0.866	0.243	0.243	0 79	0.77	NO	36.2
5	35	Total-tetrafurans	303.9016	24.49	8174.348	0 866	0.132	0.132	0 82	0.77	NO	22.9
6	35	Total-tetrafurans	303.9016	24 39	31565 009	0 866	0.508	0.508	0 76	0.77	NO	74.8
7	35	Total-tetrafurans	303.9016	24 23	8764 992	0 866	0 141	0.141	0 85	0.77	NO	23 7
8	35	Total-tetrafurans	303.9016	24 15	28749 451	0.866	0.463	0.463	0 81	0 77	NO	73 2
9	35	Total-tetrafurans	303 9016	24.05	18647.478	0.866	0.300	0.300	0.81	0.77	NO	43.1
10	35	Total-tetrafurans	303.9016	23.93	28262 772	0.866	0 455	0 455	0.77	0 77	NO	45 0
11	35	Total-tetrafurans	303.9016	23 73	75559.793	0 866	1 216	1.216	0 81	0.77	NO	168.2
12	35	Total-tetrafurans	303.9016	23.15	11670.557	0 866	0 188	0 188	0.67	0.77	NO	26.1
13	35	Total-tetrafurans	303 9016	22.90	11997 927	0 866	0.193	0 193	0 78	0.77	NO	32.1
14	35	Total-tetrafurans	303 9016	27 87	18071.716	0 866	0 291	0.291	0 80	0.77	NO	32 7
15	35	Total-tetrafurans	303.9016	26 90	0.000	0 866	0 000	0.021	0 90	0.77	YES	4 1
16	35	Total-tetrafurans	303.9016	26.62	25942.683	0.866	0.417	0.417	0.75	0 77	NO	51.7
17	35	Total-tetrafurans	303.9016	26.51	0.000	0 866	0.000	0.099	0.90	0 77	YES	19.1
18	1	2378-TCDF	303 9016	26.39	111614 648	0 866	1.796	1.796	0 78	0.77	NO	276.2
19	35	Total-tetrafurans	303.9016	26 21	27210 840	0 866	0.438	0 438	0.84	0 77	NO	46.0
20	35	Total-tetrafurans	303 9016	26.02	0 000	0.866	0.000	0.025	1.23	0.77	YES	5 4
21	35	Total-tetrafurans	303.9016	25.88	0 000	0 866	0 000	0.112	0.94	0 77	YES	19 0
22	35	Total-tetrafurans	303.9016	25 70	11488.299	0.866	0 185	0 185	0.71	0.77	NO	27 3
23	35	Total-tetrafurans	303.9016	25 48	65573 680	0.866	1 055	1 055	0.77	0 77	NO	151 7
24	35	Total-tetrafurans	303.9016	25.30	37010 655	0 866	0.596	0 596	0.78	0.77	NO	80.3

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339 8597	27.81	335263 032		7.655	7.655	1 52	1.55	NO	1699.5

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339 8597	29 48	104941.793	0 921	2 385	2.385	1 50	1.55	NO	239 5
2	37	Total-pentafurans	339 8597	29 29	15926.655	0 921	0 362	0.362	1 38	1.55	NO	39 3
3	37	Total-pentafurans	339 8597	29 19	0.000	0 921	0 000	0.053	2 12	1.55	YES	15 1
4	37	Total-pentafurans	339.8597	32.91	2695 451	0.921	0.061	0 061	1.46	1 55	NO	9.3
5	3	23478-PeCDF	339.8597	31.88	21893.676	0.936	0.502	0 502	1 51	1 55	NO	69.2
6	37	Total-pentafurans	339.8597	31 71	24108 295	0.921	0 548	0 548	1.58	1 55	NO	83 1
7	37	Total-pentafurans	339 8597	31.61	7629 208	0 921	0 173	0 173	1.76	1.55	NO	27 3
8	37	Total-pentafurans	339 8597	30.72	0.000	0 921	0.000	0 406	1 92	1.55	YES	77.3
9	2	12378-PeCDF	339.8597	30.54	21538 669	0.907	0 486	0 486	1 62	1.55	NO	74 8
10	37	Total-pentafurans	339.8597	30.17	39941.115	0.921	0 908	0.908	1 56	1.55	NO	109.9
11	37	Total-pentafurans	339.8597	30.07	4575 282	0.921	0 104	0 104	1 48	1 55	NO	20 2
12	37	Total-pentafurans	339.8597	29 97	4345.250	0 921	0.099	0 099	1.44	1 55	NO	13 0

Quantify Totals Report MassLynx 4.1 SCN 714
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HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati..	1° Rati..	1° R...	S/N
1	7	123789-HxCDF	373 8208	37 73	14480 794	1.020	0.557	0 557	1 26	1.24	NO	26.4
2	5	234678-HxCDF	373 8208	36.67	25410.967	1.070	0 781	0.781	1.35	1 24	NO	39 2
3	38	Total-hexafurans	373 8208	36.06	0.000	1.055	0 000	0.053	2.67	1 24	YES	6.9
4	6	123678-HxCDF	373.8208	35.70	29415.003	1 048	0.767	0.767	1.15	1 24	NO	38 7
5	4	123478-HxCDF	373.8208	35.56	59120.307	1.082	1.686	1 686	1.14	1.24	NO	85.5
6	38	Total-hexafurans	373 8208	35.39	8101.457	1 055	0.246	0 246	1 11	1.24	NO	13.0
7	38	Total-hexafurans	373.8208	34.89	659931.781	1.055	20.027	20.027	1.21	1.24	NO	1000.2
8	38	Total-hexafurans	373 8208	34.58	9181.319	1.055	0 279	0.279	1 26	1 24	NO	13 9
9	38	Total-hexafurans	373 8208	34.31	1953.665	1 055	0 059	0 059	1 23	1.24	NO	3 1
10	38	Total-hexafurans	373.8208	34.03	426176.797	1 055	12.933	12.933	1 25	1 24	NO	644 6
11	38	Total-hexafurans	373 8208	33 83	148273 367	1 055	4 500	4.500	1 23	1 24	NO	237 5

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407 7818	42.56	25936.813	1 254	1.367	1 367	1.01	1 05	NO	39.5
2	39	Total-heptafurans	407 7818	40.62	1276363.063	1.234	56.854	56.854	1.04	1 05	NO	2394 8
3	39	Total-heptafurans	407 7818	40.33	0.000	1 234	0 000	0.450	0.80	1 05	YES	19 4
4	8	1234678-HpCDF	407 7818	39 83	575230 500	1 214	22.292	22.292	0.99	1 05	NO	1069 6

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 14	0.000	0.866	0.000	0.377	0.93	0.77	YES	58.7
2	35	Total-tetrafurans	303.9016	25 05	29131.044	0 866	0.469	0.469	0.71	0 77	NO	50.8
3	35	Total-tetrafurans	303 9016	24 90	0 000	0.866	0.000	0 021	1 08	0.77	YES	6.1
4	35	Total-tetrafurans	303.9016	24.64	15072.605	0.866	0 243	0.243	0 79	0.77	NO	36 2
5	35	Total-tetrafurans	303 9016	24.49	8174 348	0.866	0 132	0 132	0 82	0 77	NO	22 9
6	35	Total-tetrafurans	303.9016	24.39	31565.009	0.866	0.508	0.508	0.76	0 77	NO	74 8
7	35	Total-tetrafurans	303.9016	24.23	8764.992	0.866	0.141	0 141	0.85	0 77	NO	23 7
8	35	Total-tetrafurans	303 9016	24.15	28749.451	0 866	0.463	0.463	0.81	0.77	NO	73 2
9	35	Total-tetrafurans	303.9016	24 05	18647.478	0.866	0.300	0 300	0 81	0 77	NO	43 1
10	35	Total-tetrafurans	303.9016	23 93	28262.772	0 866	0 455	0.455	0 77	0.77	NO	45.0
11	35	Total-tetrafurans	303.9016	23 73	75559.793	0.866	1.216	1 216	0.81	0.77	NO	168.2
12	35	Total-tetrafurans	303 9016	23.15	11670.557	0.866	0 188	0.188	0 67	0.77	NO	26 1
13	35	Total-tetrafurans	303.9016	22 90	11997.927	0.866	0 193	0.193	0 78	0.77	NO	32 1
14	40	Total-Furans	303.9016	21 31	74185 578	1.050	0 984	0.984	0.69	0 77	NO	177 5
15	35	Total-tetrafurans	303 9016	27 87	18071 716	0 866	0.291	0 291	0 80	0.77	NO	32 7
16	35	Total-tetrafurans	303.9016	26.90	0.000	0.866	0 000	0.021	0 90	0 77	YES	4 1
17	35	Total-tetrafurans	303.9016	26 62	25942.683	0.866	0 417	0 417	0.75	0.77	NO	51.7
18	35	Total-tetrafurans	303.9016	26.51	0.000	0.866	0 000	0 099	0 90	0.77	YES	19.1
19	1	2378-TCDF	303.9016	26.39	111614 648	0 866	1 796	1.796	0 78	0.77	NO	276.2
20	35	Total-tetrafurans	303 9016	26 21	27210.840	0.866	0.438	0 438	0 84	0.77	NO	46 0
21	35	Total-tetrafurans	303.9016	26.02	0.000	0.866	0 000	0.025	1.23	0 77	YES	5.4
22	35	Total-tetrafurans	303.9016	25.88	0 000	0.866	0 000	0 112	0 94	0.77	YES	19 0
23	35	Total-tetrafurans	303 9016	25 70	11488 299	0.866	0.185	0 185	0 71	0.77	NO	27.3
24	35	Total-tetrafurans	303.9016	25 48	65573 680	0.866	1.055	1.055	0 77	0 77	NO	151 7
25	35	Total-tetrafurans	303.9016	25 30	37010 655	0.866	0.596	0 596	0 78	0.77	NO	80 3
26	37	Total-pentafurans	339.8597	29 48	104941.793	0.921	2 385	2 385	1 50	1.55	NO	239 5
27	37	Total-pentafurans	339.8597	29 29	15926 655	0 921	0 362	0 362	1 38	1 55	NO	39.3
28	37	Total-pentafurans	339 8597	29.19	0 000	0 921	0.000	0 053	2.12	1 55	YES	15.1
29	37	Total-pentafurans	339 8597	32.91	2695.451	0.921	0 061	0 061	1 46	1.55	NO	9 3
30	3	23478-PeCDF	339.8597	31.88	21893.676	0 936	0.502	0 502	1.51	1 55	NO	69 2
31	37	Total-pentafurans	339.8597	31.71	24108.295	0 921	0.548	0.548	1 58	1 55	NO	83.1
32	37	Total-pentafurans	339.8597	31.61	7629.208	0 921	0.173	0.173	1 76	1 55	NO	27.3
33	37	Total-pentafurans	339 8597	30 72	0.000	0.921	0 000	0 406	1.92	1 55	YES	77 3
34	2	12378-PeCDF	339 8597	30 54	21538.669	0.907	0.486	0 486	1.62	1 55	NO	74 8
35	37	Total-pentafurans	339 8597	30.17	39941.115	0 921	0.908	0 908	1.56	1 55	NO	109.9
36	37	Total-pentafurans	339 8597	30 07	4575.282	0 921	0 104	0 104	1.48	1.55	NO	20 2
37	37	Total-pentafurans	339 8597	29 97	4345.250	0.921	0.099	0 099	1 44	1.55	NO	13 0
38	7	123789-HxCDF	373 8208	37 73	14480.794	1.020	0 557	0 557	1.26	1.24	NO	26.4
39	5	234678-HxCDF	373 8208	36.67	25410.967	1.070	0 781	0.781	1 35	1.24	NO	39.2
40	38	Total-hexafurans	373 8208	36.06	0.000	1.055	0 000	0.053	2.67	1 24	YES	6.9
41	6	123678-HxCDF	373.8208	35.70	29415 003	1.048	0.767	0.767	1.15	1.24	NO	38.7
42	4	123478-HxCDF	373 8208	35 56	59120.307	1.082	1 686	1.686	1 14	1 24	NO	85 5
43	38	Total-hexafurans	373.8208	35.39	8101.457	1 055	0 246	0.246	1 11	1 24	NO	13 0
44	38	Total-hexafurans	373.8208	34.89	659931 781	1 055	20.027	20.027	1 21	1.24	NO	1000 2
45	38	Total-hexafurans	373 8208	34.58	9181.319	1 055	0.279	0.279	1 26	1 24	NO	13.9
46	38	Total-hexafurans	373.8208	34 31	1953.665	1.055	0 059	0.059	1 23	1 24	NO	3 1
47	38	Total-hexafurans	373 8208	34 03	426176 797	1.055	12.933	12 933	1.25	1.24	NO	644.6
48	38	Total-hexafurans	373.8208	33 83	148273 367	1.055	4 500	4 500	1.23	1 24	NO	237 5
49	9	1234789-HpCDF	407 7818	42 56	25936 813	1.254	1 367	1 367	1 01	1 05	NO	39 5

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	39	Total-heptafurans	407 7818	40.62	1276363 063	1.234	56.854	56 854	1.04	1.05	NO	2394 8
51	39	Total-heptafurans	407.7818	40.33	0 000	1.234	0.000	0 450	0.80	1 05	YES	19.4
52	8	1234678-HpCDF	407.7818	39.83	575230 500	1 214	22.292	22 292	0 99	1.05	NO	1069 6
53	10	OCDF	441.7428	47.96	797154 438	1.105	75 040	75.040	0.88	0.89	NO	1081.1
54	36	Total-penta1	339 8597	27 81	335263.032		7.655	7.655	1.52	1.55	NO	1699.5

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	24.64	5345 981	1 046	0.114	0.114	0.83	0 77	NO	15.8
2	41	Total-tetradioxins	319 8965	24 43	549342.047	1 046	11.731	11 731	0 77	0 77	NO	1411.6
3	41	Total-tetradioxins	319 8965	24.17	907234.219	1.046	19.374	19.374	0 77	0 77	NO	2388 6
4	41	Total-tetradioxins	319.8965	27.57	0 000	1.046	0.000	0 218	0.62	0.77	YES	23 3
5	41	Total-tetradioxins	319.8965	27 17	10990.652	1 046	0.235	0 235	0.73	0.77	NO	26.8
6	11	2378-TCDD	319.8965	27 03	0.000	1 046	0.000	0 187	0.58	0.77	YES	19.5
7	41	Total-tetradioxins	319.8965	26.66	60404.578	1 046	1.290	1.290	0.78	0.77	NO	118.9
8	41	Total-tetradioxins	319.8965	26.35	5144 759	1 046	0.110	0.110	0 78	0.77	NO	11.5
9	41	Total-tetradioxins	319 8965	26.21	269481 078	1.046	5 755	5.755	0 78	0 77	NO	687 3
10	41	Total-tetradioxins	319 8965	26.02	0 000	1.046	0 000	0.127	0 65	0 77	YES	12 2
11	41	Total-tetradioxins	319 8965	25.90	2424.803	1.046	0 052	0.052	0 87	0 77	NO	5.8
12	41	Total-tetradioxins	319 8965	25.64	63251.129	1 046	1.351	1 351	0 80	0 77	NO	156 0
13	41	Total-tetradioxins	319.8965	25.38	30026.564	1.046	0.641	0 641	0.71	0 77	NO	62 3
14	41	Total-tetradioxins	319.8965	25.17	3415.628	1.046	0.073	0 073	0.76	0 77	NO	9 0

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	30.89	377010.391	0.973	12.840	12.840	1 54	1 55	NO	968 5
2	42	Total-pentadioxins	355 8546	30 66	88664 820	0 973	3 020	3 020	1.55	1.55	NO	183 1
3	42	Total-pentadioxins	355 8546	30 53	400516 531	0.973	13 641	13 641	1 55	1.55	NO	1108 1
4	42	Total-pentadioxins	355 8546	29.92	20887 948	0.973	0 711	0.711	1.49	1 55	NO	63.8
5	42	Total-pentadioxins	355.8546	29.43	298099 899	0.973	10 153	10.153	1 53	1.55	NO	494.4
6	42	Total-pentadioxins	355.8546	32 53	7044.965	0 973	0.240	0 240	1 59	1 55	NO	16 8
7	12	12378-PeCDD	355.8546	32.13	0.000	0.973	0 000	1.123	1 29	1.55	YES	73 7
8	42	Total-pentadioxins	355 8546	31.45	106994.453	0 973	3.644	3 644	1.54	1.55	NO	269.9
9	42	Total-pentadioxins	355 8546	31.04	28563.907	0.973	0.973	0.973	1.50	1.55	NO	51.7

HD

	#	Name	Trace	RT	Abs.Resp	RRF M ..	pg	EMPC	1° Rati...	1° Rati...	1° R..	S/N
1	15	123789-HxCDD	389 8157	37 36	86078 055	0.839	3.653	3 653	1.24	1 24	NO	150 9
2	43	Total-hexadioxins	389 8157	37 11	20696 636	0.884	0 833	0.833	1 20	1 24	NO	37 2
3	14	123678-HxCDD	389.8157	36.93	181025 828	0.878	7 126	7.126	1 20	1.24	NO	308 7
4	13	123478-HxCDD	389.8157	36.81	54846.012	0 935	2.152	2 152	1 15	1 24	NO	87.8
5	43	Total-hexadioxins	389.8157	35.94	0.000	0.884	0.000	1.522	1.01	1.24	YES	90 9
6	43	Total-hexadioxins	389 8157	35 82	513777.688	0.884	20.690	20.690	1.27	1.24	NO	634.8
7	43	Total-hexadioxins	389 8157	35.44	1001471 781	0.884	40.329	40 329	1 23	1.24	NO	1744 9
8	43	Total-hexadioxins	389.8157	34 62	467511.219	0 884	18.827	18 827	1.24	1.24	NO	851.3
9	43	Total-hexadioxins	389 8157	34.35	32929.164	0 884	1.326	1 326	1.18	1 24	NO	68 3

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HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41 65	3064633.250	0 974	178.142	178. .	1 03	1 05	NO	2227.7
2	44	Total-heptadioxins	423.7766	40 38	5215710 250	0.974	303.180	303. .	1 02	1.05	NO	4198.5

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	24.64	5345.981	1 046	0.114	0 114	0.83	0.77	NO	15.8
2	41	Total-tetradioxins	319.8965	24.43	549342.047	1 046	11 731	11 731	0.77	0 77	NO	1411.6
3	41	Total-tetradioxins	319.8965	24.17	907234.219	1.046	19 374	19 374	0.77	0.77	NO	2388.6
4	45	Total-Dioxins	319 8965	23.52	0 000	0.942	0.000	0.023	0 56	0 77	YES	2 5
5	45	Total-Dioxins	319.8965	28.14	436.713	0 942	0 010	0 010	0.79	0.77	NO	1 6
6	41	Total-tetradioxins	319 8965	27 57	0.000	1 046	0.000	0 218	0.62	0 77	YES	23.3
7	41	Total-tetradioxins	319.8965	27.17	10990.652	1 046	0.235	0 235	0.73	0.77	NO	26.8
8	11	2378-TCDD	319.8965	27.03	0.000	1.046	0.000	0 187	0 58	0 77	YES	19.5
9	41	Total-tetradioxins	319.8965	26.66	60404.578	1 046	1.290	1 290	0 78	0 77	NO	118.9
10	41	Total-tetradioxins	319.8965	26.35	5144.759	1.046	0.110	0.110	0.78	0 77	NO	11 5
11	41	Total-tetradioxins	319 8965	26 21	269481.078	1.046	5.755	5 755	0 78	0.77	NO	687 3
12	41	Total-tetradioxins	319 8965	26.02	0.000	1 046	0.000	0 127	0 65	0 77	YES	12.2
13	41	Total-tetradioxins	319 8965	25 90	2424.803	1 046	0.052	0 052	0 87	0 77	NO	5 8
14	41	Total-tetradioxins	319 8965	25 64	63251.129	1 046	1.351	1 351	0.80	0 77	NO	156.0
15	41	Total-tetradioxins	319.8965	25 38	30026.564	1.046	0 641	0.641	0 71	0 77	NO	62 3
16	41	Total-tetradioxins	319 8965	25 17	3415.628	1 046	0.073	0 073	0.76	0 77	NO	9 0
17	42	Total-pentadioxins	355 8546	30 89	377010.391	0 973	12 840	12 840	1.54	1 55	NO	968.5
18	42	Total-pentadioxins	355.8546	30 66	88664.820	0 973	3.020	3 020	1.55	1.55	NO	183 1
19	42	Total-pentadioxins	355.8546	30.53	400516.531	0.973	13.641	13.641	1.55	1 55	NO	1108 1
20	42	Total-pentadioxins	355 8546	29.92	20887.948	0 973	0.711	0 711	1.49	1.55	NO	63 8
21	42	Total-pentadioxins	355.8546	29.43	298099.899	0 973	10 153	10 153	1 53	1.55	NO	494 4
22	42	Total-pentadioxins	355.8546	32.53	7044.965	0.973	0.240	0.240	1.59	1 55	NO	16.8
23	12	12378-PeCDD	355.8546	32.13	0 000	0 973	0.000	1 123	1.29	1 55	YES	73 7
24	42	Total-pentadioxins	355.8546	31 45	106994 453	0 973	3 644	3 644	1.54	1 55	NO	269.9
25	42	Total-pentadioxins	355.8546	31.04	28563 907	0 973	0 973	0 973	1.50	1.55	NO	51.7
26	15	123789-HxCDD	389.8157	37.36	86078 055	0 839	3.653	3 653	1.24	1.24	NO	150.9
27	43	Total-hexadioxins	389.8157	37.11	20696 636	0.884	0 833	0 833	1.20	1.24	NO	37.2
28	14	123678-HxCDD	389.8157	36.93	181025 828	0 878	7 126	7 126	1.20	1.24	NO	308.7
29	13	123478-HxCDD	389.8157	36.81	54846 012	0 935	2.152	2.152	1.15	1.24	NO	87 8
30	43	Total-hexadioxins	389.8157	35.94	0.000	0.884	0.000	1.522	1.01	1 24	YES	90.9
31	43	Total-hexadioxins	389 8157	35 82	513777.688	0 884	20 690	20 690	1 27	1.24	NO	634.8
32	43	Total-hexadioxins	389.8157	35 44	1001471.781	0.884	40.329	40.329	1 23	1.24	NO	1744.9
33	43	Total-hexadioxins	389.8157	34.62	467511.219	0.884	18.827	18.827	1.24	1.24	NO	851 3
34	43	Total-hexadioxins	389 8157	34 35	32929 164	0.884	1 326	1.326	1 18	1 24	NO	68.3
35	16	1234678-HpCDD	423.7766	41 65	3064633 250	0.974	178.142	178....	1 03	1 05	NO	2227 7
36	44	Total-heptadioxins	423.7766	40.38	5215710.250	0.974	303.180	303	1 02	1 05	NO	4198.5
37	17	OCDD	457.7377	47.66	14406495.. .	0 950	1577.6..	1577 .	0 89	0 89	NO	9024 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25 14	0.000	0 866	0.000	0 377	0.93	0.77	YES	58.7
2	35	Total-tetrafurans	303 9016	25.05	29131.044	0.866	0.469	0 469	0.71	0 77	NO	50.8
3	35	Total-tetrafurans	303 9016	24 90	0 000	0.866	0.000	0 021	1 08	0.77	YES	6 1
4	35	Total-tetrafurans	303 9016	24.64	15072.605	0 866	0 243	0.243	0.79	0 77	NO	36.2
5	35	Total-tetrafurans	303.9016	24.49	8174 348	0.866	0.132	0.132	0.82	0 77	NO	22 9
6	35	Total-tetrafurans	303.9016	24.39	31565 009	0.866	0.508	0.508	0.76	0.77	NO	74 8
7	35	Total-tetrafurans	303.9016	24.23	8764 992	0 866	0.141	0.141	0 85	0.77	NO	23.7
8	35	Total-tetrafurans	303.9016	24.15	28749.451	0 866	0 463	0 463	0.81	0.77	NO	73 2
9	35	Total-tetrafurans	303.9016	24.05	18647 478	0.866	0 300	0.300	0.81	0.77	NO	43.1
10	35	Total-tetrafurans	303 9016	23.93	28262 772	0.866	0 455	0.455	0.77	0 77	NO	45 0
11	35	Total-tetrafurans	303 9016	23 73	75559.793	0.866	1.216	1.216	0.81	0 77	NO	168.2
12	35	Total-tetrafurans	303 9016	23.15	11670 557	0.866	0 188	0.188	0 67	0 77	NO	26 1
13	35	Total-tetrafurans	303.9016	22 90	11997.927	0.866	0 193	0.193	0 78	0.77	NO	32.1
14	40	Total-Furans	303.9016	21 31	74185 578	1 050	0 984	0 984	0 69	0 77	NO	177.5
15	35	Total-tetrafurans	303 9016	27 87	18071.716	0.866	0.291	0 291	0 80	0.77	NO	32 7
16	35	Total-tetrafurans	303 9016	26.90	0.000	0 866	0.000	0 021	0 90	0.77	YES	4 1
17	35	Total-tetrafurans	303 9016	26.62	25942 683	0.866	0 417	0 417	0 75	0.77	NO	51 7
18	35	Total-tetrafurans	303.9016	26.51	0.000	0 866	0 000	0 099	0 90	0 77	YES	19 1
19	1	2378-TCDF	303.9016	26 39	111614.648	0.866	1.796	1.796	0.78	0 77	NO	276 2
20	35	Total-tetrafurans	303 9016	26.21	27210 840	0.866	0 438	0.438	0 84	0.77	NO	46.0
21	35	Total-tetrafurans	303.9016	26 02	0.000	0.866	0.000	0.025	1.23	0 77	YES	5.4
22	35	Total-tetrafurans	303.9016	25.88	0.000	0 866	0.000	0 112	0.94	0 77	YES	19 0
23	35	Total-tetrafurans	303 9016	25.70	11488 299	0 866	0.185	0 185	0 71	0.77	NO	27.3
24	35	Total-tetrafurans	303 9016	25.48	65573 680	0 866	1.055	1 055	0 77	0 77	NO	151 7
25	35	Total-tetrafurans	303 9016	25.30	37010 655	0 866	0 596	0 596	0 78	0.77	NO	80.3
26	37	Total-pentafurans	339 8597	29 48	104941 793	0.921	2 385	2.385	1 50	1.55	NO	239 5
27	37	Total-pentafurans	339 8597	29.29	15926 655	0.921	0 362	0.362	1 38	1.55	NO	39.3
28	37	Total-pentafurans	339 8597	29.19	0 000	0.921	0 000	0.053	2 12	1 55	YES	15 1
29	37	Total-pentafurans	339.8597	32 91	2695.451	0 921	0.061	0 061	1.46	1 55	NO	9 3
30	3	23478-PeCDF	339.8597	31 88	21893.676	0 936	0.502	0 502	1.51	1.55	NO	69 2
31	37	Total-pentafurans	339 8597	31 71	24108.295	0 921	0.548	0 548	1.58	1.55	NO	83.1
32	37	Total-pentafurans	339 8597	31 61	7629 208	0.921	0 173	0 173	1.76	1.55	NO	27.3
33	37	Total-pentafurans	339.8597	30 72	0.000	0 921	0.000	0 406	1.92	1 55	YES	77 3
34	2	12378-PeCDF	339.8597	30.54	21538.669	0 907	0 486	0 486	1.62	1 55	NO	74 8
35	37	Total-pentafurans	339.8597	30.17	39941 115	0.921	0 908	0.908	1 56	1.55	NO	109.9
36	37	Total-pentafurans	339.8597	30 07	4575.282	0.921	0 104	0.104	1 48	1 55	NO	20.2
37	37	Total-pentafurans	339 8597	29 97	4345.250	0 921	0 099	0.099	1 44	1 55	NO	13.0
38	7	123789-HxCDF	373 8208	37.73	14480.794	1.020	0.557	0 557	1 26	1 24	NO	26 4
39	5	234678-HxCDF	373 8208	36.67	25410 967	1 070	0 781	0 781	1 35	1 24	NO	39 2
40	38	Total-hexafurans	373 8208	36.06	0.000	1.055	0.000	0.053	2.67	1 24	YES	6.9
41	6	123678-HxCDF	373.8208	35 70	29415.003	1 048	0.767	0 767	1 15	1.24	NO	38.7
42	4	123478-HxCDF	373.8208	35 56	59120.307	1 082	1.686	1 686	1.14	1 24	NO	85 5
43	38	Total-hexafurans	373.8208	35 39	8101.457	1 055	0.246	0 246	1 11	1.24	NO	13.0
44	38	Total-hexafurans	373 8208	34.89	659931.781	1.055	20.027	20.027	1 21	1.24	NO	1000.2
45	38	Total-hexafurans	373.8208	34 58	9181 319	1 055	0 279	0 279	1 26	1 24	NO	13 9
46	38	Total-hexafurans	373.8208	34.31	1953.665	1 055	0.059	0 059	1 23	1.24	NO	3.1
47	38	Total-hexafurans	373 8208	34 03	426176 797	1 055	12.933	12 933	1.25	1.24	NO	644.6
48	38	Total-hexafurans	373.8208	33.83	148273 367	1.055	4 500	4.500	1 23	1 24	NO	237.5
49	9	1234789-HpCDF	407.7818	42.56	25936 813	1 254	1 367	1.367	1 01	1 05	NO	39 5

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	39	Total-heptafurans	407 7818	40.62	1276363.063	1.234	56 854	56 854	1 04	1 05	NO	2394 8
51	39	Total-heptafurans	407.7818	40.33	0.000	1 234	0 000	0.450	0.80	1 05	YES	19 4
52	8	1234678-HpCDF	407.7818	39.83	575230 500	1 214	22.292	22 292	0.99	1 05	NO	1069.6
53	10	OCDF	441 7428	47.96	797154.438	1.105	75.040	75 040	0 88	0.89	NO	1081.1
54	36	Total-penta1	339 8597	27 81	335263 032		7.655	7.655	1 52	1.55	NO	1699 5
55	41	Total-tetradioxins	319 8965	24 64	5345 981	1.046	0 114	0.114	0 83	0.77	NO	15 8
56	41	Total-tetradioxins	319.8965	24 43	549342 047	1.046	11.731	11.731	0 77	0 77	NO	1411.6
57	41	Total-tetradioxins	319.8965	24.17	907234.219	1 046	19 374	19.374	0 77	0 77	NO	2388 6
58	45	Total-Dioxins	319.8965	23 52	0 000	0.942	0 000	0.023	0.56	0.77	YES	2 5
59	45	Total-Dioxins	319.8965	28.14	436.713	0.942	0.010	0.010	0.79	0 77	NO	1.6
60	41	Total-tetradioxins	319.8965	27.57	0 000	1.046	0.000	0.218	0.62	0 77	YES	23.3
61	41	Total-tetradioxins	319.8965	27.17	10990 652	1.046	0.235	0.235	0.73	0.77	NO	26.8
62	11	2378-TCDD	319.8965	27.03	0.000	1.046	0.000	0.187	0.58	0.77	YES	19.5
63	41	Total-tetradioxins	319.8965	26.66	60404.578	1.046	1.290	1.290	0.78	0 77	NO	118.9
64	41	Total-tetradioxins	319.8965	26.35	5144.759	1.046	0 110	0.110	0 78	0.77	NO	11.5
65	41	Total-tetradioxins	319 8965	26 21	269481 078	1 046	5.755	5.755	0.78	0 77	NO	687 3
66	41	Total-tetradioxins	319.8965	26.02	0.000	1 046	0 000	0 127	0 65	0 77	YES	12 2
67	41	Total-tetradioxins	319 8965	25.90	2424.803	1 046	0 052	0.052	0 87	0 77	NO	5 8
68	41	Total-tetradioxins	319.8965	25.64	63251 129	1 046	1 351	1.351	0 80	0.77	NO	156.0
69	41	Total-tetradioxins	319 8965	25 38	30026 564	1.046	0.641	0.641	0.71	0 77	NO	62 3
70	41	Total-tetradioxins	319 8965	25.17	3415 628	1 046	0 073	0.073	0 76	0.77	NO	9.0
71	42	Total-pentadioxins	355 8546	30 89	377010 391	0 973	12.840	12.840	1.54	1.55	NO	968 5
72	42	Total-pentadioxins	355.8546	30 66	88664.820	0.973	3.020	3.020	1.55	1 55	NO	183 1
73	42	Total-pentadioxins	355.8546	30.53	400516.531	0.973	13.641	13.641	1 55	1 55	NO	1108 1
74	42	Total-pentadioxins	355 8546	29 92	20887 948	0.973	0.711	0.711	1 49	1 55	NO	63 8
75	42	Total-pentadioxins	355.8546	29.43	298099 899	0.973	10 153	10.153	1 53	1 55	NO	494.4
76	42	Total-pentadioxins	355.8546	32 53	7044 965	0.973	0.240	0.240	1 59	1 55	NO	16 8
77	12	12378-PeCDD	355.8546	32.13	0 000	0.973	0 000	1 123	1 29	1 55	YES	73.7
78	42	Total-pentadioxins	355 8546	31 45	106994.453	0 973	3.644	3 644	1 54	1 55	NO	269 9
79	42	Total-pentadioxins	355.8546	31.04	28563 907	0 973	0.973	0 973	1.50	1 55	NO	51 7
80	15	123789-HxCDD	389.8157	37.36	86078 055	0 839	3.653	3.653	1.24	1.24	NO	150.9
81	43	Total-hexadioxins	389.8157	37.11	20696.636	0 884	0.833	0.833	1.20	1.24	NO	37.2
82	14	123678-HxCDD	389.8157	36.93	181025 828	0 878	7.126	7 126	1 20	1.24	NO	308 7
83	13	123478-HxCDD	389.8157	36.81	54846 012	0 935	2.152	2.152	1.15	1.24	NO	87.8
84	43	Total-hexadioxins	389.8157	35.94	0.000	0 884	0.000	1.522	1.01	1 24	YES	90.9
85	43	Total-hexadioxins	389.8157	35 82	513777.688	0 884	20.690	20.690	1.27	1 24	NO	634.8
86	43	Total-hexadioxins	389.8157	35 44	1001471.781	0.884	40.329	40.329	1 23	1 24	NO	1744.9
87	43	Total-hexadioxins	389.8157	34.62	467511 219	0 884	18.827	18.827	1 24	1 24	NO	851 3
88	43	Total-hexadioxins	389.8157	34 35	32929.164	0.884	1 326	1.326	1 18	1.24	NO	68 3
89	16	1234678-HpCDD	423.7766	41 65	3064633 250	0 974	178 142	178 .	1 03	1 05	NO	2227 7
90	44	Total-heptadioxins	423 7766	40.38	5215710.250	0.974	303 180	303.	1 02	1.05	NO	4198.5
91	17	OCDD	457 7377	47 66	14406495 ..	0.950	1577 6..	1577 .	0 89	0.89	NO	9024.8

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	22.58	0.000							2 5
2	48	FUNCTION1 PFK	330 9792	22 43	0.000							2 5
3	48	FUNCTION1 PFK	330.9792	22.18	0.000							1 4
4	48	FUNCTION1 PFK	330.9792	21 85	0 000							3.0
5	48	FUNCTION1 PFK	330.9792	21.64	0 000							2.2
6	48	FUNCTION1 PFK	330.9792	21.33	0.000							3.1
7	48	FUNCTION1 PFK	330.9792	21.27	0.000							2.2
8	48	FUNCTION1 PFK	330 9792	28.11	0 000							2.0
9	48	FUNCTION1 PFK	330.9792	27 75	0 000							1 1
10	48	FUNCTION1 PFK	330 9792	26 91	0 000							2.0
11	48	FUNCTION1 PFK	330.9792	26.69	0.000							0 6
12	48	FUNCTION1 PFK	330.9792	26.20	0.000							1 8
13	48	FUNCTION1 PFK	330.9792	25.93	0 000							1.0
14	48	FUNCTION1 PFK	330 9792	25.30	0.000							1.9
15	48	FUNCTION1 PFK	330 9792	24.54	0.000							2 1
16	48	FUNCTION1 PFK	330.9792	24 39	0 000							2 3
17	48	FUNCTION1 PFK	330.9792	24 14	0 000							3 1
18	48	FUNCTION1 PFK	330.9792	23.96	0 000							4 6
19	48	FUNCTION1 PFK	330.9792	23 85	0 000							5 8
20	48	FUNCTION1 PFK	330 9792	23 76	0 000							5 6
21	48	FUNCTION1 PFK	330 9792	23.52	0 000							3 2
22	48	FUNCTION1 PFK	330 9792	23.33	0.000							3 8
23	48	FUNCTION1 PFK	330 9792	23 22	0.000							3.7
24	48	FUNCTION1 PFK	330 9792	28.65	0.000							1.2
25	48	FUNCTION1 PFK	330.9792	28 57	0.000							0 7
26	48	FUNCTION1 PFK	330.9792	28.53	0.000							0.8
27	48	FUNCTION1 PFK	330.9792	28.41	0.000							1.8
28	48	FUNCTION1 PFK	330 9792	28.29	0.000							0 5

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366 9792	32 56	0.000		0.000					2.5
2	49	FUNCTION2 PFK	366.9792	30 70	0 000		0.000					4.7
3	49	FUNCTION2 PFK	366.9792	29 26	0 000		0.000					9.5

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati ..	1° Rati...	1° R..	S/N
1	50	FUNCTION3 PFK	380.9760	38.73	0 000		0.000					8 8
2	50	FUNCTION3 PFK	380.9760	37 79	0 000		0.000					56 9
3	50	FUNCTION3 PFK	380.9760	37 51	0.000		0 000					52 8

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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	39 19	0 000							2.2
2	51	FUNCTION4 PFK	430.9728	38 98	0.000							1.7
3	51	FUNCTION4 PFK	430 9728	42 94	0.000							1.3
4	51	FUNCTION4 PFK	430.9728	42.86	0 000							0 9
5	51	FUNCTION4 PFK	430 9728	42 81	0 000							1.2
6	51	FUNCTION4 PFK	430 9728	42.75	0.000							1.0
7	51	FUNCTION4 PFK	430 9728	42.72	0.000							1.1
8	51	FUNCTION4 PFK	430.9728	42 52	0 000							0.6
9	51	FUNCTION4 PFK	430.9728	42 32	0 000							1.2
10	51	FUNCTION4 PFK	430.9728	42 26	0 000							1.5
11	51	FUNCTION4 PFK	430.9728	41.71	0 000							2.2
12	51	FUNCTION4 PFK	430.9728	41 21	0 000							0.8
13	51	FUNCTION4 PFK	430 9728	40 93	0 000							1.4
14	51	FUNCTION4 PFK	430.9728	40.58	0 000							1 6
15	51	FUNCTION4 PFK	430.9728	40 48	0 000							1.4
16	51	FUNCTION4 PFK	430.9728	40.19	0 000							2 0
17	51	FUNCTION4 PFK	430 9728	39 54	0.000							1 4
18	51	FUNCTION4 PFK	430 9728	39.26	0.000							2.3
19	51	FUNCTION4 PFK	430 9728	44.78	0.000							1.7
20	51	FUNCTION4 PFK	430 9728	44.65	0.000							2.0
21	51	FUNCTION4 PFK	430.9728	43.89	0 000							1.6
22	51	FUNCTION4 PFK	430 9728	43 07	0 000							0.5

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PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480 9696	47.18	0.000							1.3
2	52	FUNCTION5 PFK	480.9696	46.98	0.000							2.0
3	52	FUNCTION5 PFK	480.9696	46.71	0.000							0 8
4	52	FUNCTION5 PFK	480.9696	46.60	0.000							0 8
5	52	FUNCTION5 PFK	480.9696	46 55	0 000							1 4
6	52	FUNCTION5 PFK	480 9696	46.28	0 000							1.0
7	52	FUNCTION5 PFK	480.9696	46.02	0.000							1.6
8	52	FUNCTION5 PFK	480.9696	45.89	0.000							0 8
9	52	FUNCTION5 PFK	480.9696	45.69	0.000							1 7
10	52	FUNCTION5 PFK	480 9696	45 64	0 000							0.6
11	52	FUNCTION5 PFK	480.9696	45 08	0 000							0.9
12	52	FUNCTION5 PFK	480.9696	48.91	0.000							0 4
13	52	FUNCTION5 PFK	480.9696	48.87	0.000							0 7
14	52	FUNCTION5 PFK	480.9696	48.69	0.000							0 9
15	52	FUNCTION5 PFK	480 9696	48 66	0.000							1 5
16	52	FUNCTION5 PFK	480.9696	48 56	0.000							1 2
17	52	FUNCTION5 PFK	480.9696	48 37	0.000							0.8
18	52	FUNCTION5 PFK	480.9696	48 25	0.000							0 6
19	52	FUNCTION5 PFK	480 9696	48.17	0 000							0 8
20	52	FUNCTION5 PFK	480.9696	47 94	0 000							0.6
21	52	FUNCTION5 PFK	480 9696	47 90	0.000							0.8
22	52	FUNCTION5 PFK	480 9696	47.47	0 000							1.0
23	52	FUNCTION5 PFK	480.9696	47.43	0 000							0 9
24	52	FUNCTION5 PFK	480.9696	47.32	0.000							0 6

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD. .	375 8364	26 18	0 000		0.000					44.4
2	53	FUNCTION1 HXCD .	375 8364	24.24	0 000		0.000					5 4
3	53	FUNCTION1 HXCD .	375 8364	28.45	0.000		0.000					5 1
4	53	FUNCTION1 HXCD...	375 8364	28 17	0.000		0.000					3.8
5	53	FUNCTION1 HXCD..	375.8364	27.92	0 000		0 000					3 4
6	53	FUNCTION1 HXCD.	375.8364	26.45	0.000		0 000					118.3

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	54	FUNCTION1 HPCD ..	409.7974	24 33	0.000		0.000					2 0
2	54	FUNCTION1 HPCD...	409.7974	21 27	0.000		0.000					2 2
3	54	FUNCTION1 HPCD.	409 7974	21.16	0 000		0.000					2 6

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD.	409.7974	31.44	0.000		0.000					5.1
2	55 FUNCTION2 HPCD	409 7974	31.40	0 000		0.000					3.7
3	55 FUNCTION2 HPCD	409.7974	30.79	0 000		0.000					4 1
4	55 FUNCTION2 HPCD. .	409.7974	30.49	0 000		0.000					27.8
5	55 FUNCTION2 HPCD .	409.7974	30.26	0.000		0.000					3 2
6	55 FUNCTION2 HPCD...	409.7974	30 15	0.000		0.000					41.7
7	55 FUNCTION2 HPCD .	409.7974	29 89	0.000		0 000					6.1
8	55 FUNCTION2 HPCD .	409.7974	33 17	0.000		0 000					8.6
9	55 FUNCTION2 HPCD.	409 7974	33.13	0 000		0.000					10 1
10	55 FUNCTION2 HPCD .	409 7974	32 51	0 000		0 000					4 0
11	55 FUNCTION2 HPCD .	409.7974	31 94	0 000		0.000					5.7
12	55 FUNCTION2 HPCD...	409.7974	31 69	0 000		0 000					3.9

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56 FUNCTION3 OCDPE	445 7555	36.70	0.000		0.000					6 6
2	56 FUNCTION3 OCDPE	445 7555	36.60	0.000		0.000					3 0
3	56 FUNCTION3 OCDPE	445 7555	36 40	0.000		0 000					2 8
4	56 FUNCTION3 OCDPE	445.7555	35 57	0 000		0.000					7.2
5	56 FUNCTION3 OCDPE	445 7555	35.51	0.000		0 000					9.1
6	56 FUNCTION3 OCDPE	445 7555	35.47	0.000		0.000					12 7
7	56 FUNCTION3 OCDPE	445 7555	35.34	0.000		0.000					4 1
8	56 FUNCTION3 OCDPE	445 7555	35 31	0.000		0 000					5 7
9	56 FUNCTION3 OCDPE	445 7555	35.26	0.000		0.000					6.3
10	56 FUNCTION3 OCDPE	445 7555	35 21	0.000		0.000					7 2
11	56 FUNCTION3 OCDPE	445 7555	37.88	0 000		0.000					8.2
12	56 FUNCTION3 OCDPE	445 7555	37 68	0.000		0.000					2 7
13	56 FUNCTION3 OCDPE	445.7555	37 59	0.000		0.000					7 1
14	56 FUNCTION3 OCDPE	445 7555	37.38	0 000		0 000					6 1
15	56 FUNCTION3 OCDPE	445.7555	37.19	0.000		0 000					5.8
16	56 FUNCTION3 OCDPE	445 7555	37.14	0.000		0.000					12.4
17	56 FUNCTION3 OCDPE	445.7555	37 09	0.000		0.000					11.0
18	56 FUNCTION3 OCDPE	445 7555	37.03	0 000		0.000					12.5
19	56 FUNCTION3 OCDPE	445 7555	37 01	0 000		0.000					11 9
20	56 FUNCTION3 OCDPE	445 7555	36.75	0.000		0.000					8.6

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479 7165	41.40	0.000		0.000					11.6
2	57 FUNCTION4 NCDPE	479 7165	41 30	0.000		0.000					8.9
3	57 FUNCTION4 NCDPE	479 7165	41.27	0 000		0.000					9 2
4	57 FUNCTION4 NCDPE	479.7165	41.18	0 000		0 000					3.9
5	57 FUNCTION4 NCDPE	479.7165	39.41	0.000		0.000					616.4
6	57 FUNCTION4 NCDPE	479 7165	41 86	0.000		0 000					3 5
7	57 FUNCTION4 NCDPE	479 7165	41.64	0 000		0 000					42.3
8	57 FUNCTION4 NCDPE	479.7165	41 61	0 000		0 000					36.8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

ETHERS6

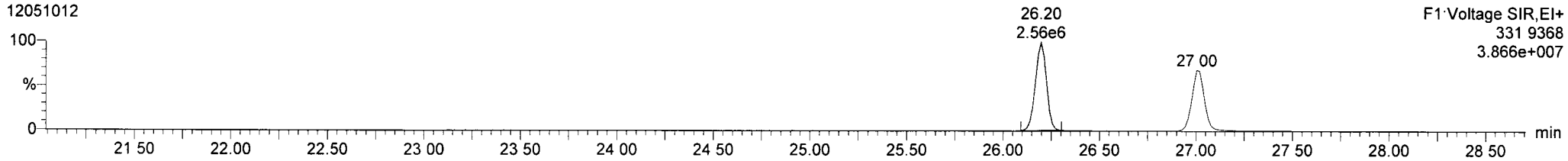
	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1													

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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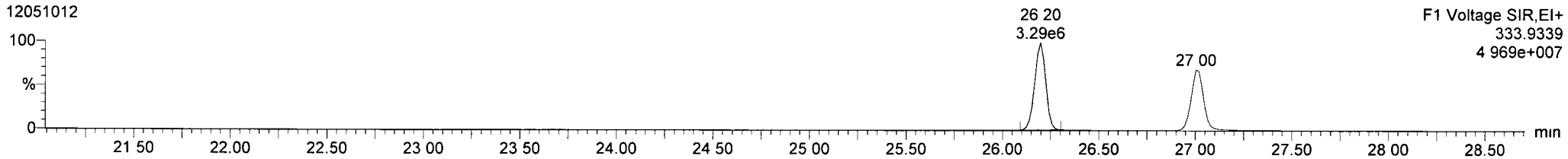

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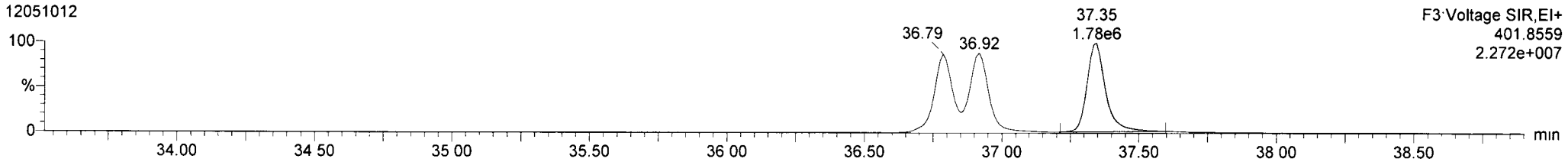

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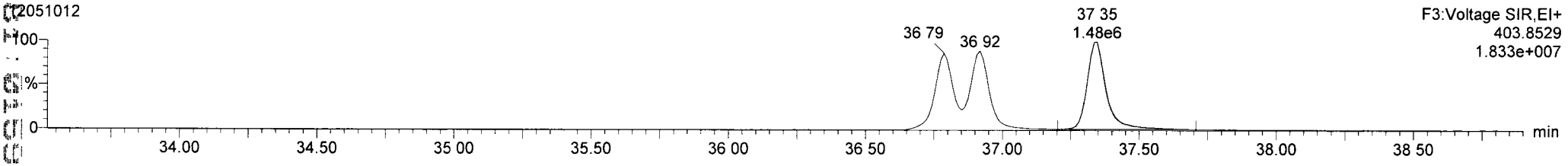

Quantify Sample Report **MassLynx 4.1 SCN 714**
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Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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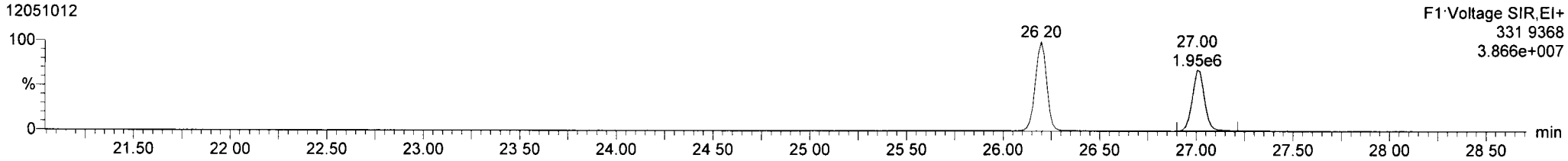
Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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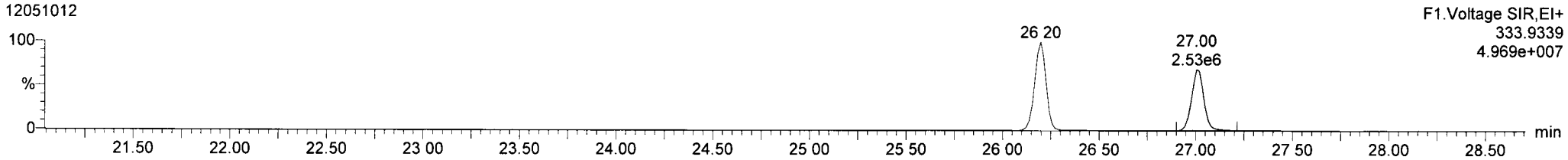

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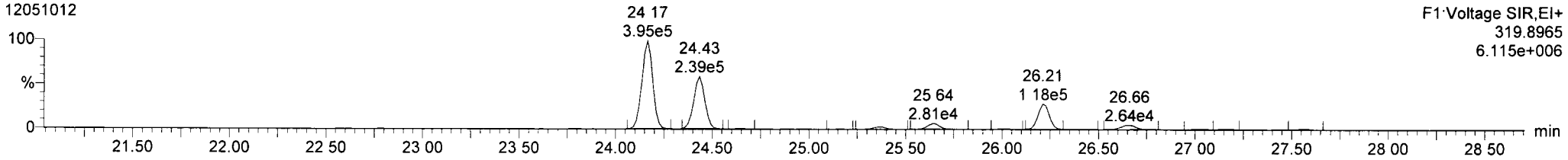

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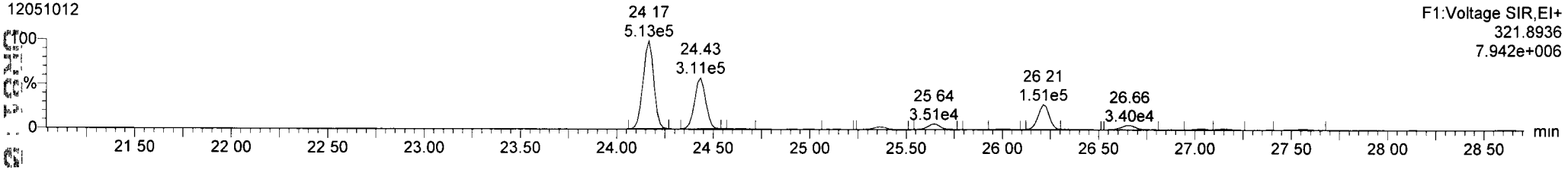

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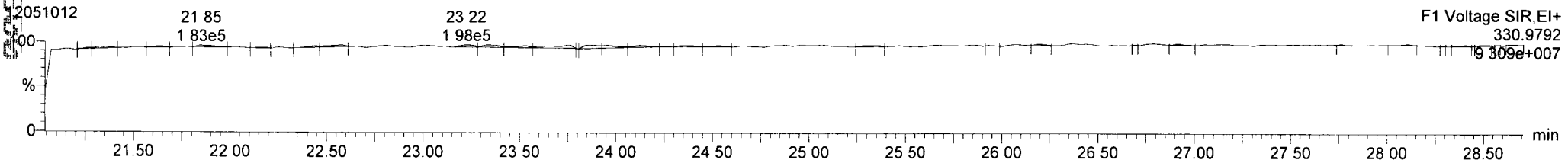

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Last Altered. Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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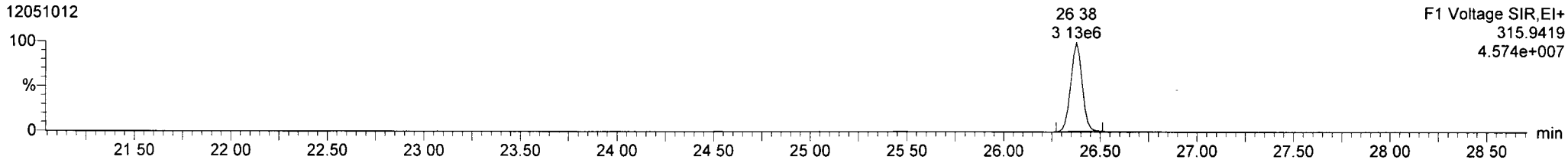
Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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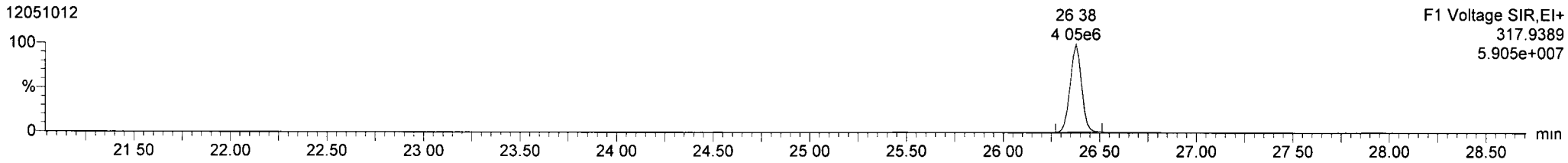
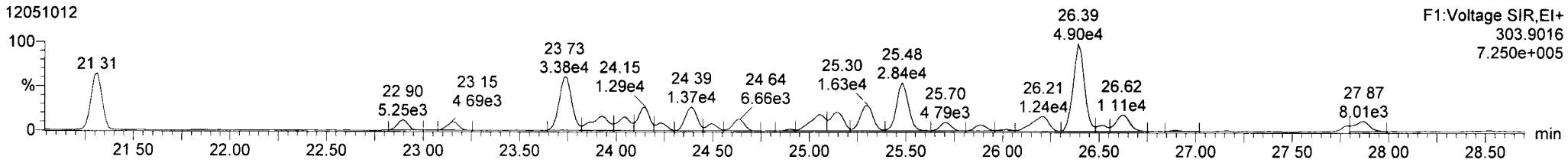
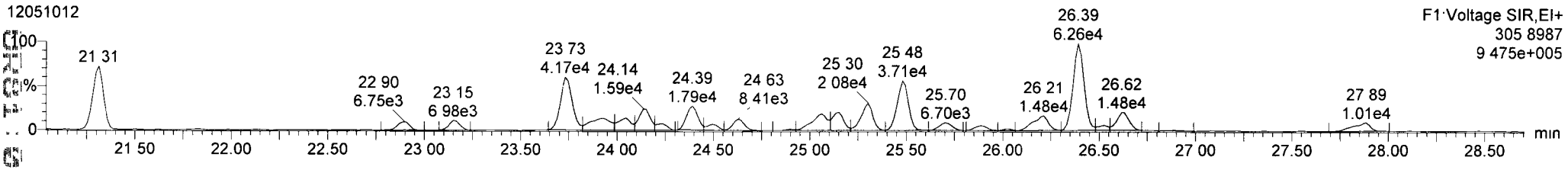


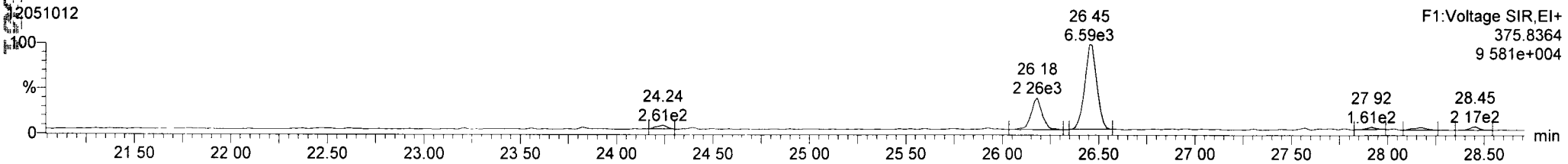
Total-tetrafurans



Total-tetrafurans



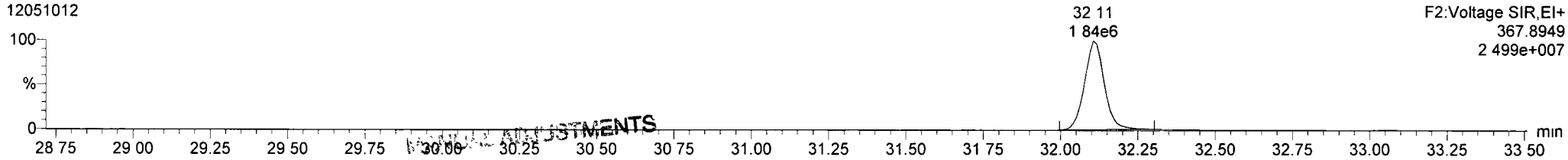
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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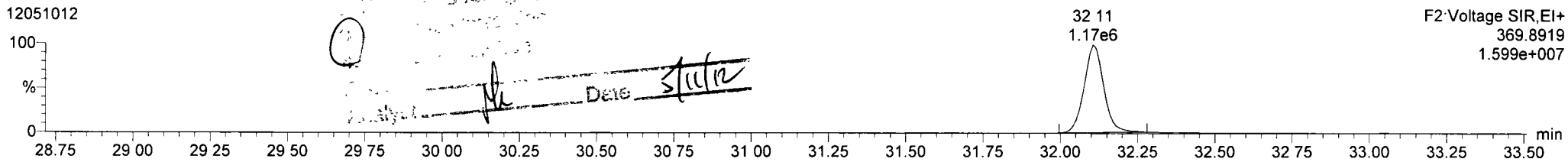
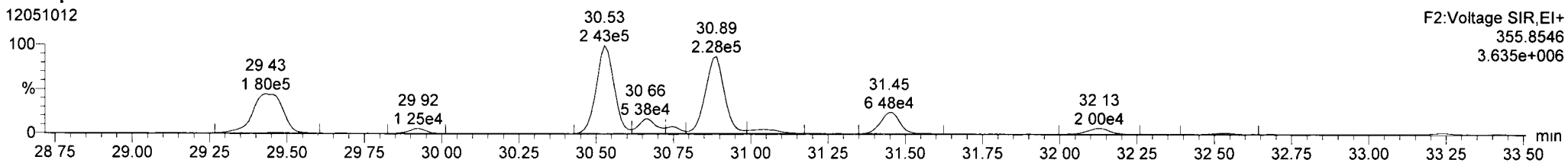
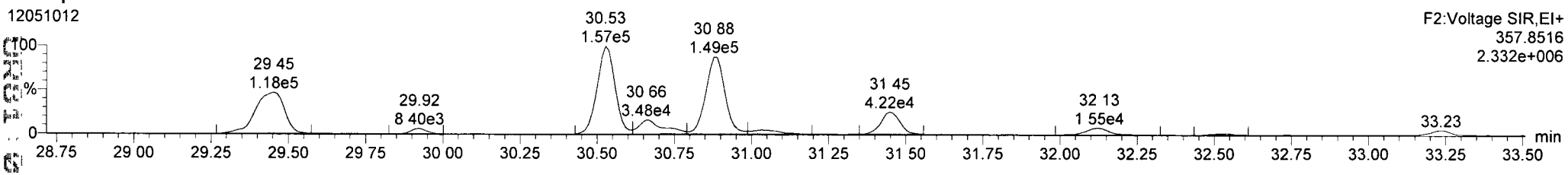


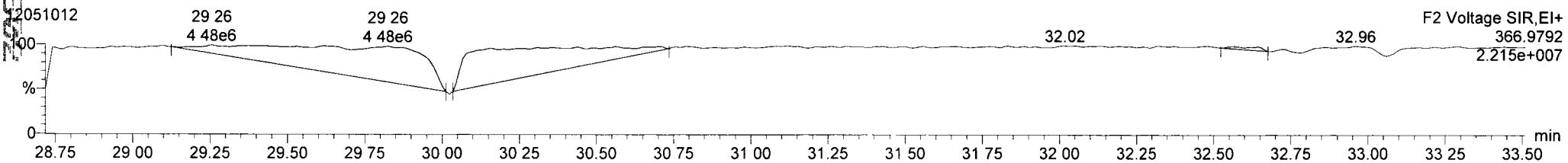
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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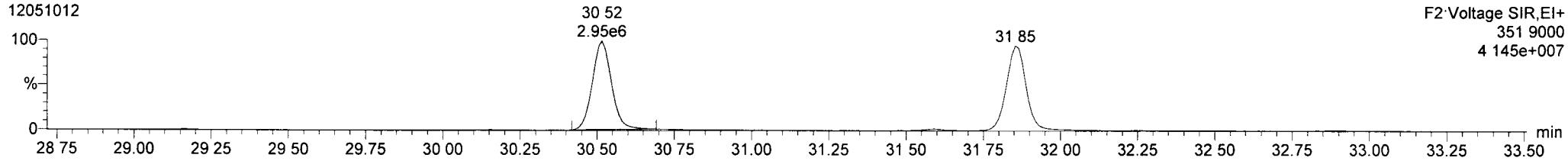
Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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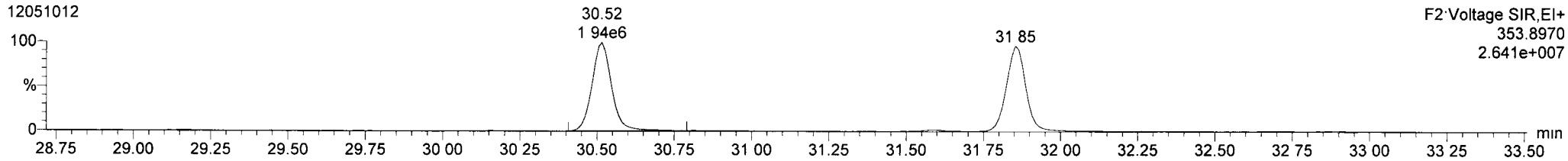
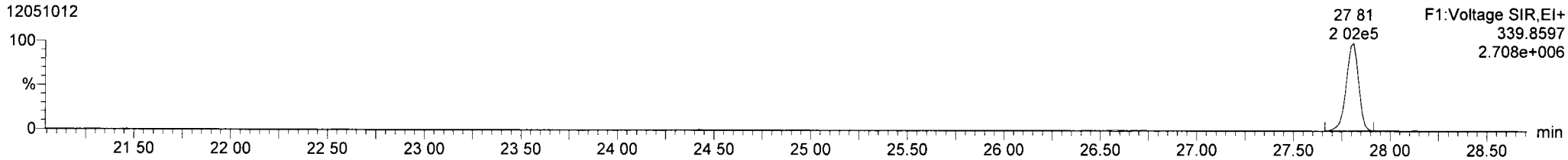
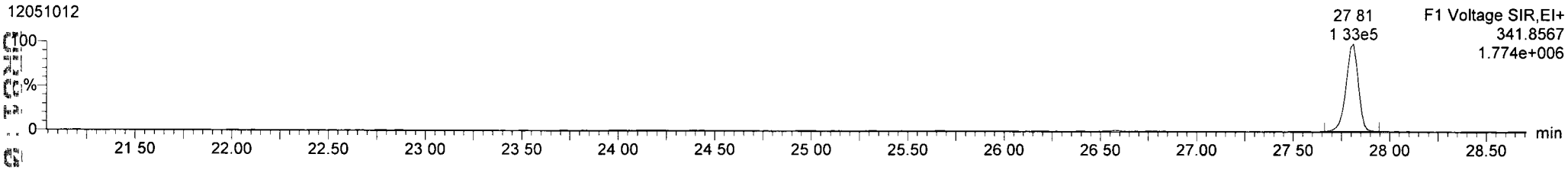


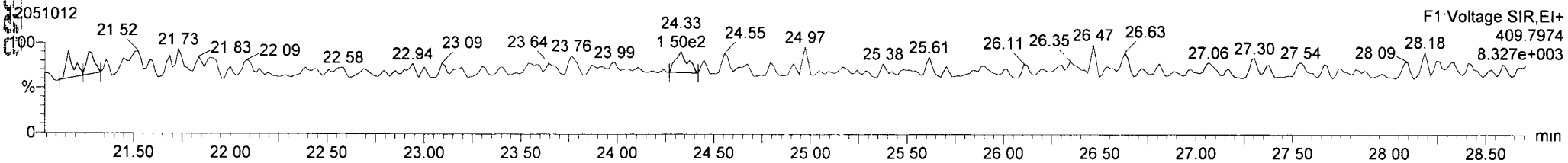
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10.27:17 Pacific Daylight Time

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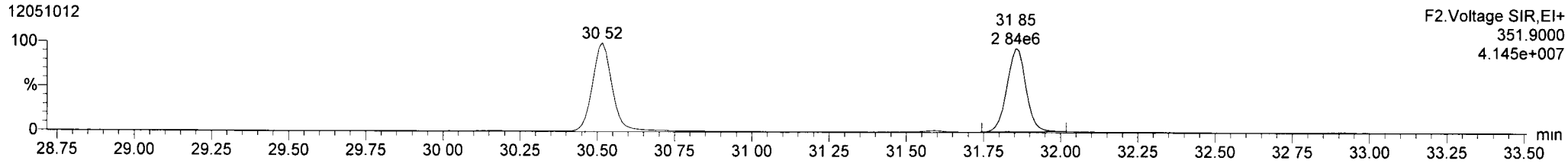
13C-23478-PeCDF



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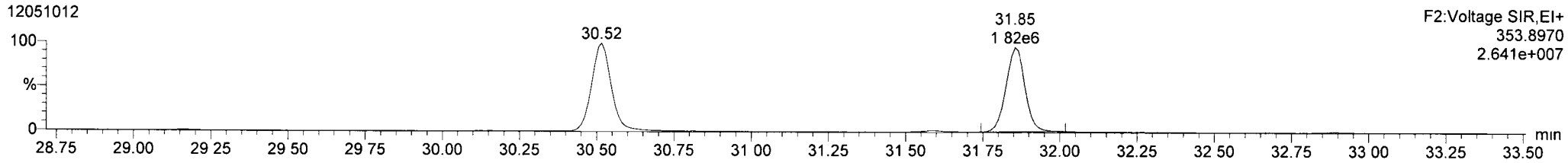
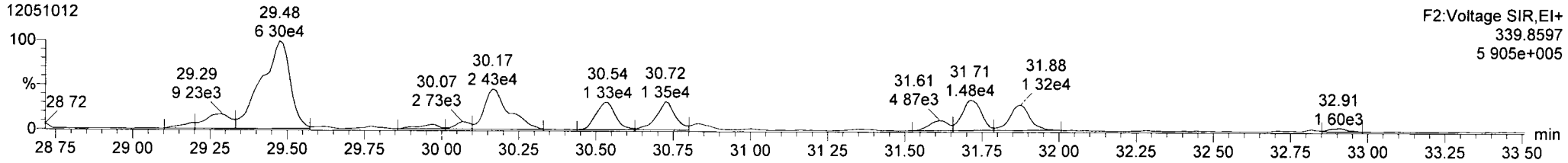
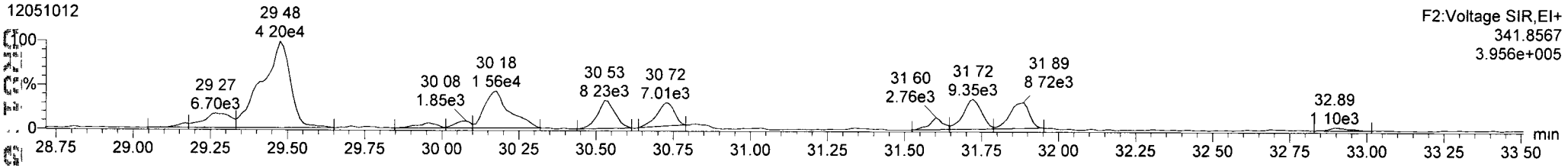


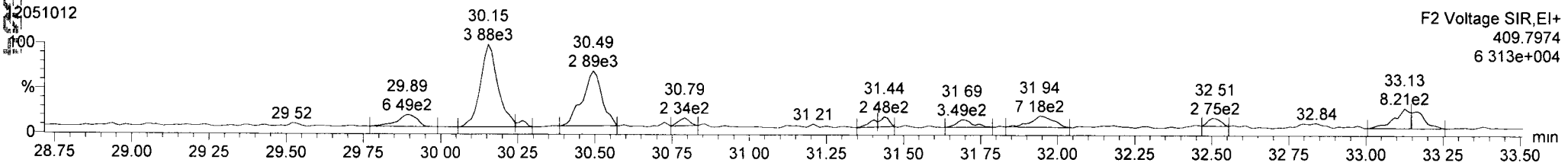
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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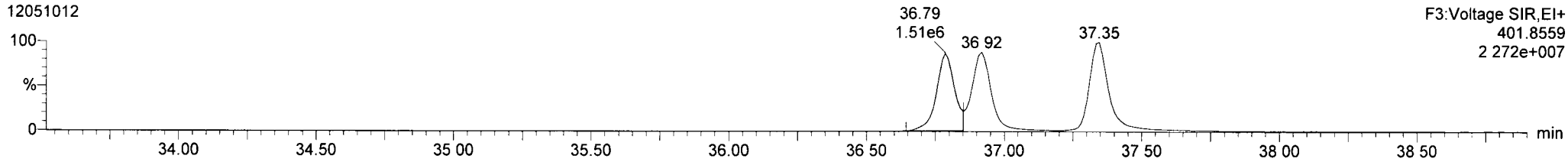
13C-123478-HxCDD



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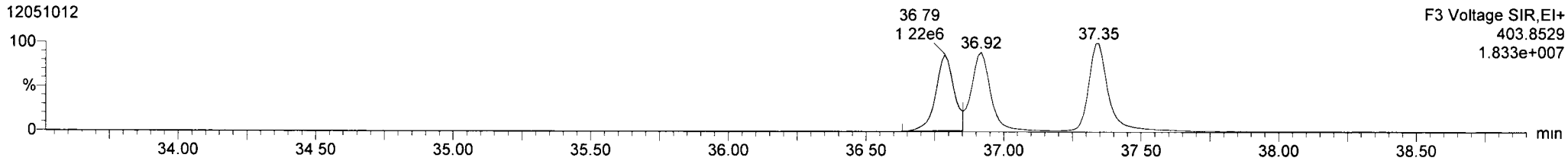
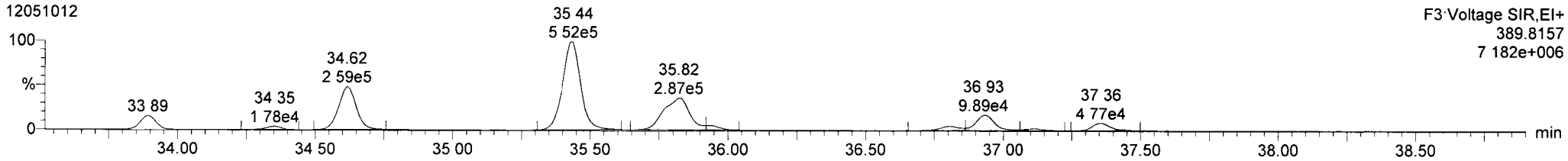
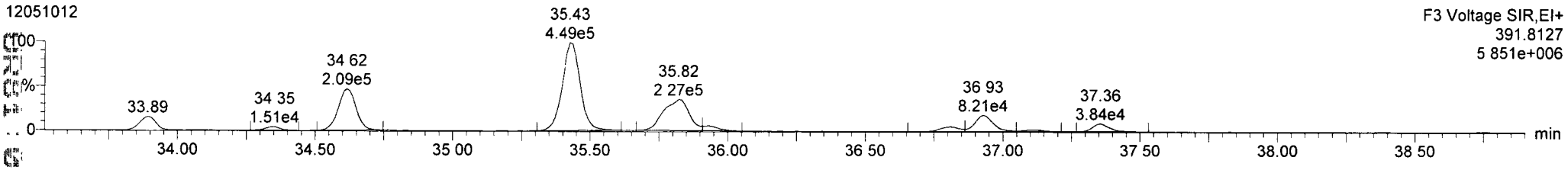


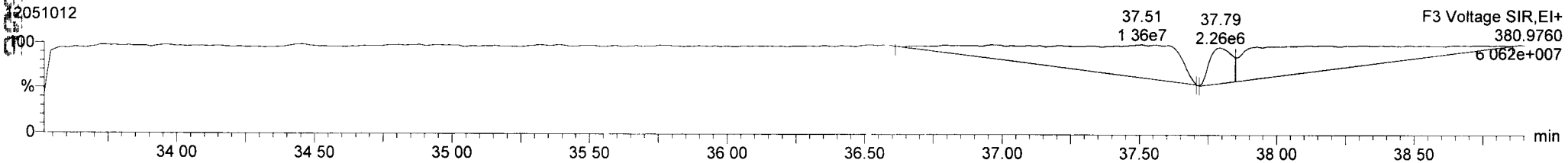
Total-hexadioxins



Total-hexadioxins



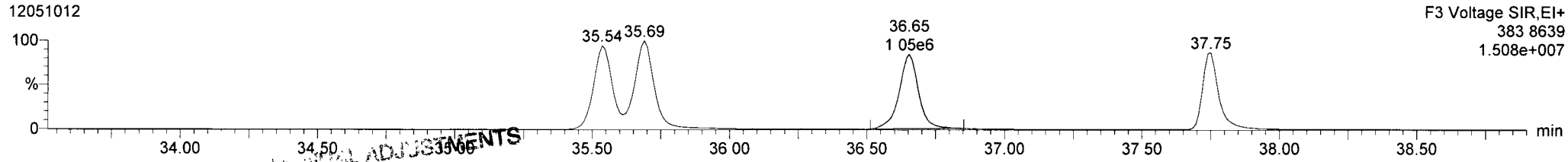
FUNCTION3 PFK



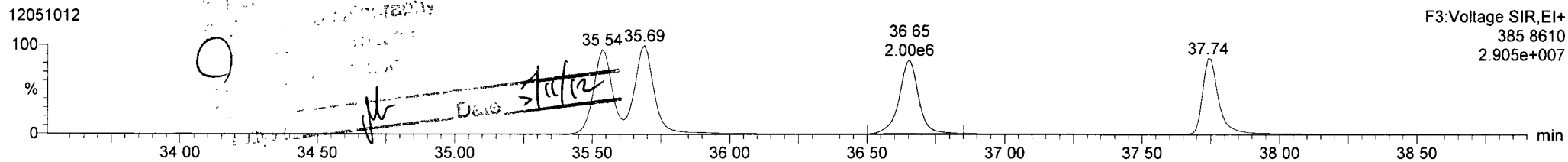
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

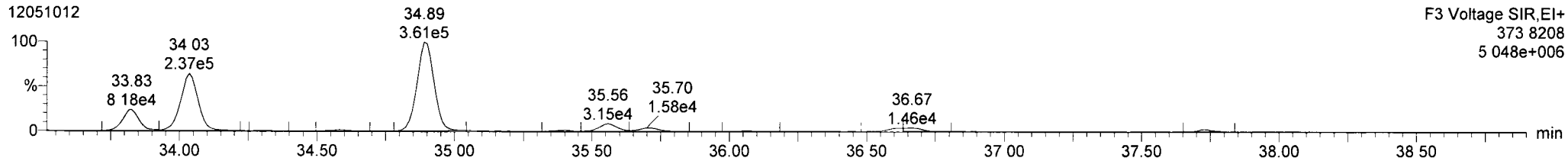
13C-234678-HxCDF



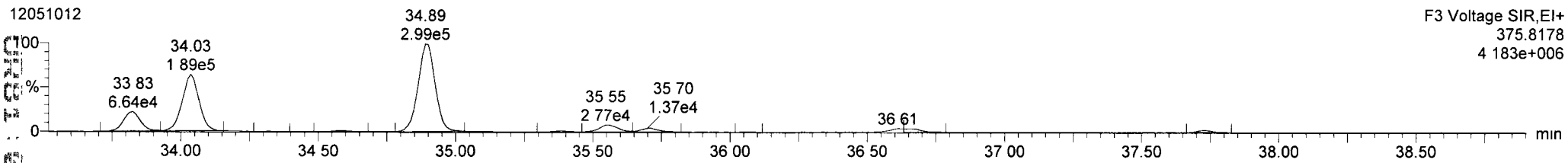
13C-234678-HxCDF



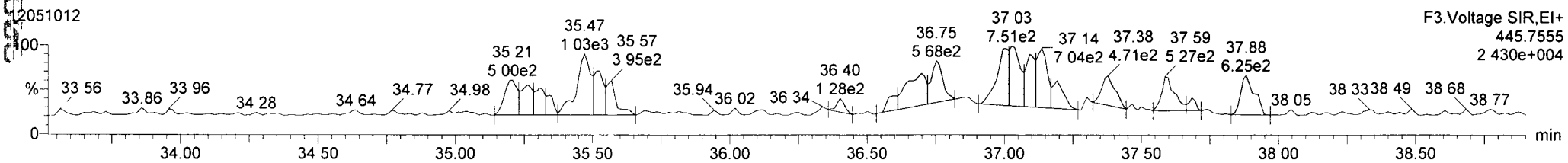
Total-hexafurans



Total-hexafurans



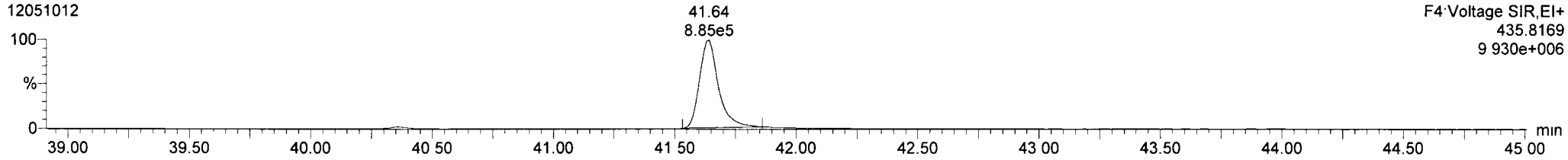
FUNCTION3 OCDPE



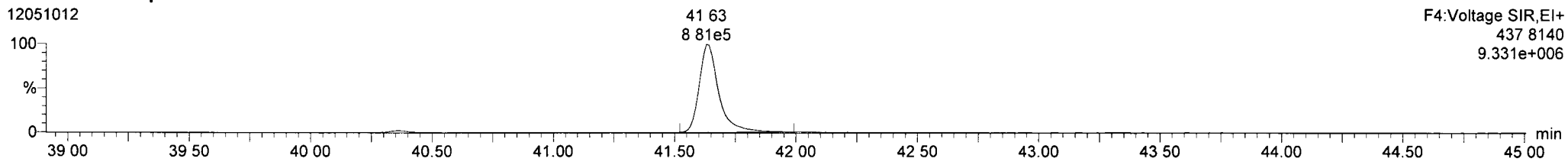
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

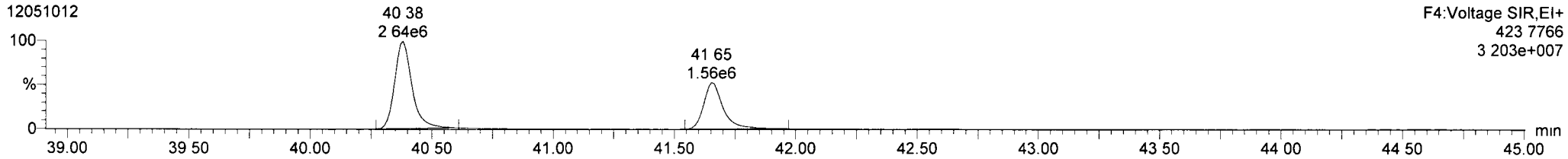
13C-1234678-HpCDD



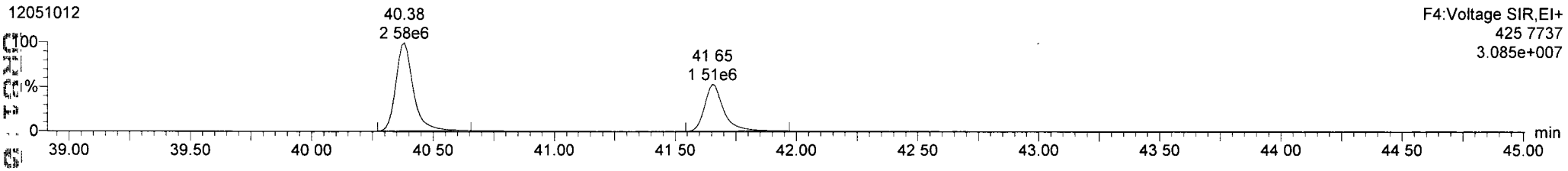
13C-1234678-HpCDD



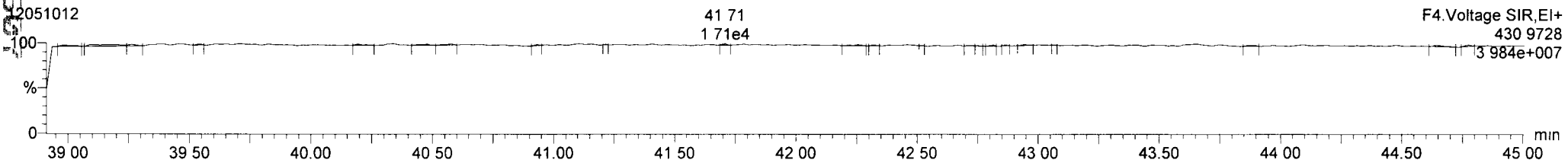
Total-heptadioxins



Total-heptadioxins



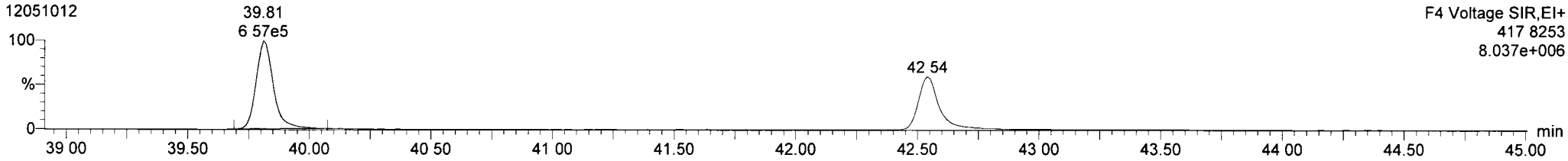
FUNCTION4 PFK



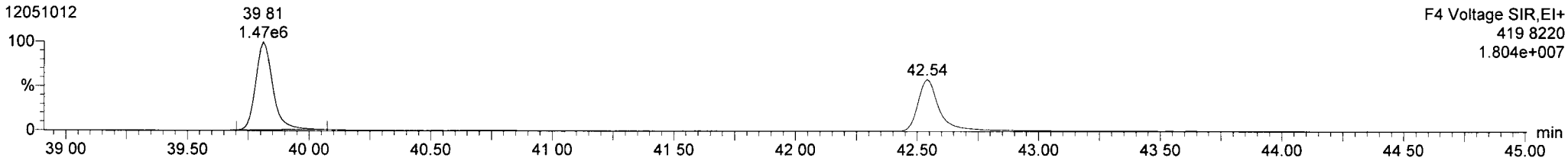
Dataset: P:\DIOXIN8290 PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

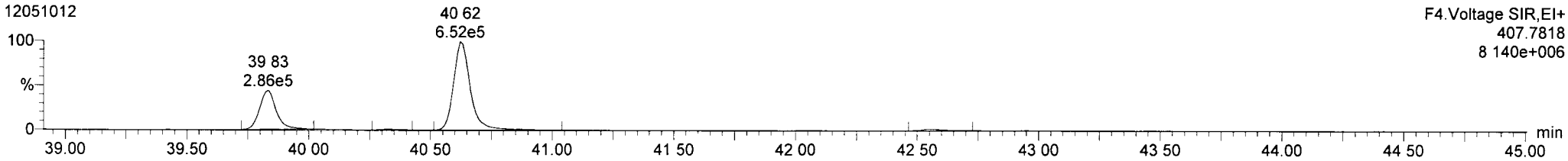
13C-1234678-HpCDF



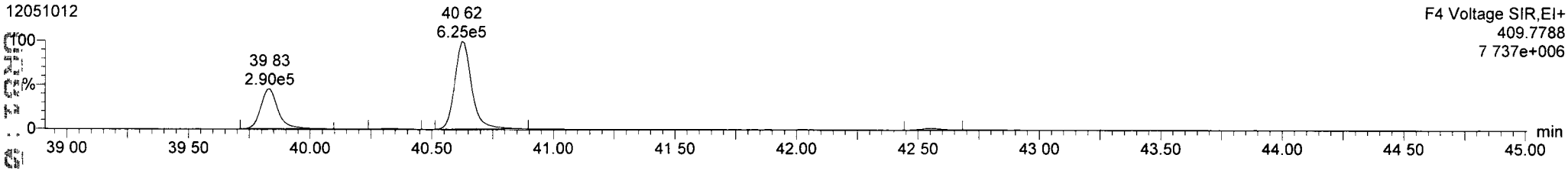
13C-1234678-HpCDF



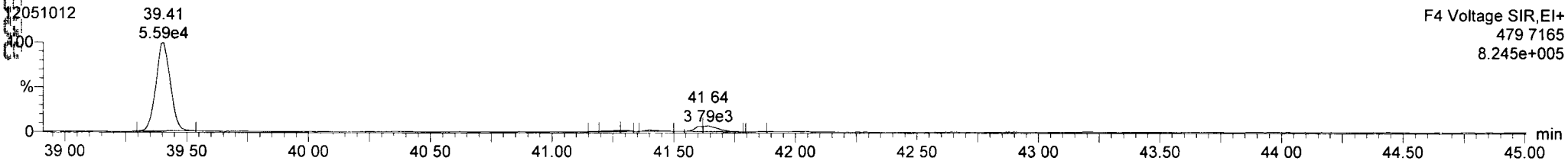
Total-heptafurans



Total-heptafurans



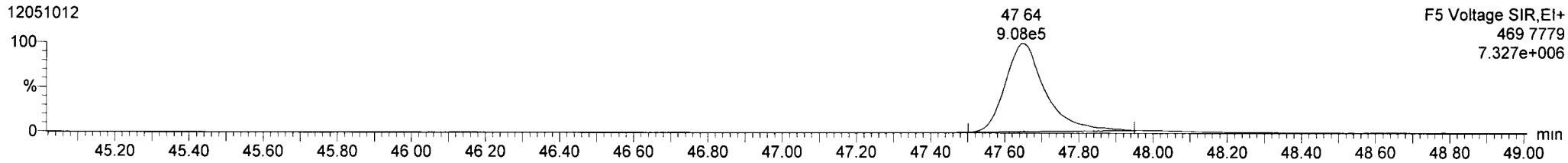
FUNCTION4 NCDPE



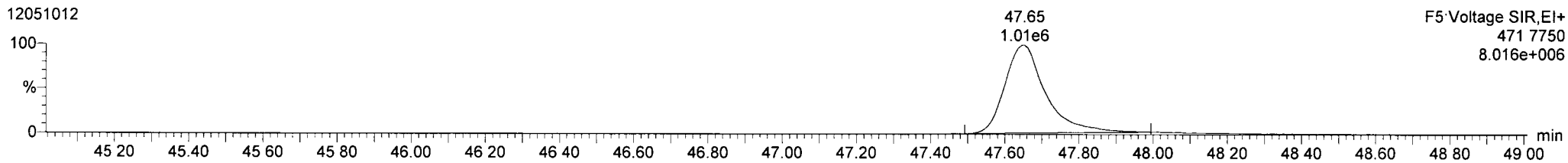
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

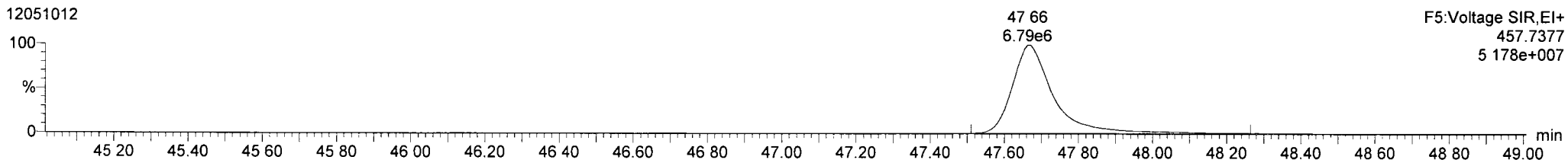
13C-OCDD



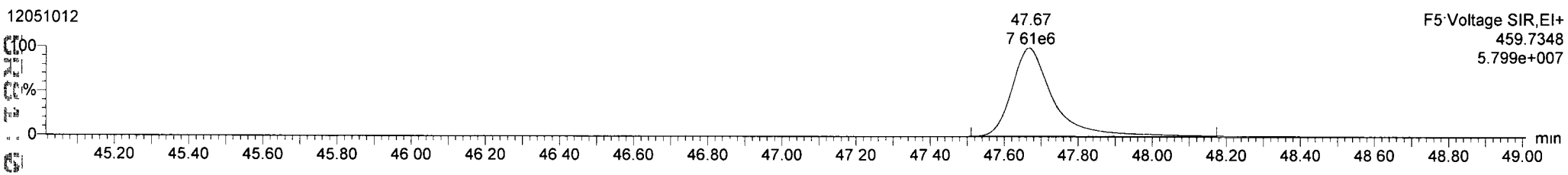
13C-OCDD



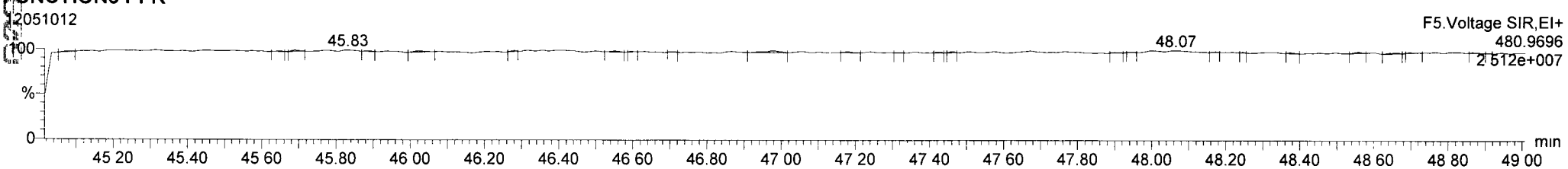
OCDD



OCDD



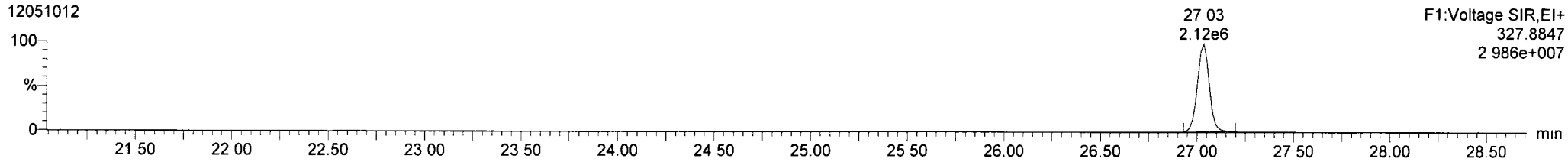
FUNCTION5 PFK



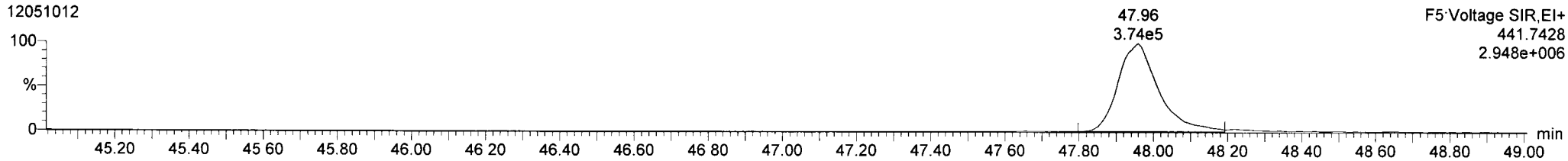
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:17 Pacific Daylight Time

Name: 12051012, Date: 10-May-2012, Time: 19:20:10, ID: UR81F, Conditions: AUTOSPEC01, User: pk

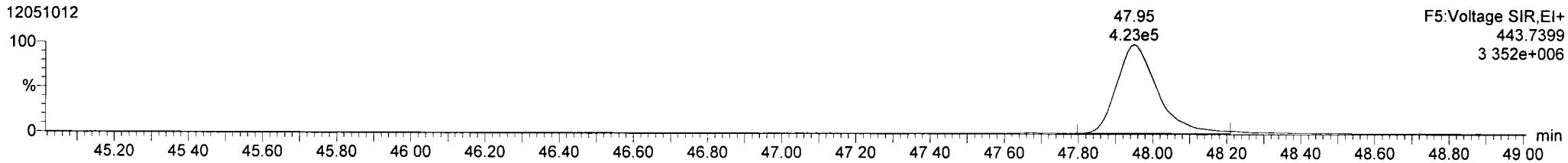
37CL-2378-TCDD



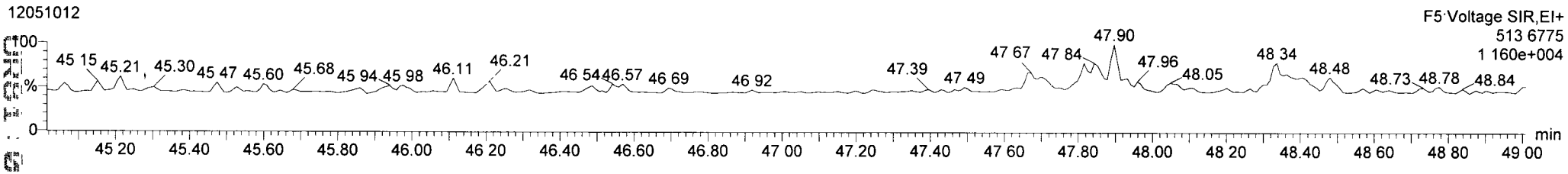
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

pk 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC	
1	1	2378-TCDF	303.9016	26.392	26.393	36478	36478	0.866	dd		0.84	0 77	117.0	NO	0 690	0 690	
2	2	12378-PeCDF	339 8597	30.527	30 538	46224	46224	0.907	bd		1.52	1.55	130 5	NO	1 099	1.099	
3	3	23478-PeCDF	339 8597	31.875	31.876	48507	48507	0.936	db		1.58	1 55	142 4	NO	1 175	1 175	
4	4	123478-HxCDF	373 8208	35.548	35.547	110456	110456	1.082	dd		1.26	1.24	92 0	NO	3.432	3.432	
5	5	234678-HxCDF	373 8208	36.633	36 655	93123	93123	1.070	bb		1.22	1 24	50 7	NO	3.056	3 056	
6	6	123678-HxCDF	373 8208	35.701	35 701	65498	65498	1.048	db		1.36	1 24	57.8	NO	1.908	1 908	
7	7	123789-HxCDF	373 8208	37.729	37 751	35569	35569	1 020	bb		1.19	1 24	32 5	NO	1.344	1 344	
8	8	1234678-HpCDF	407 7818	39.833	39 831	1114968	1114968	1.214	bb		1.01	1 05	1717.9	NO	46.298	46 298	
9	9	1234789-HpCDF	407 7818	42.563	42 564	42963	42963	1 254	bb		1.04	1 05	58 6	NO	2.483	2 483	
10	10	OCDF	441.7428	47.959	47.940	1242741	1242741	1.105	bd		0.88	0.89	1014.9	NO	121.052	121 052	
11	11	2378-TCDD	319 8965	27.034	27 018	0	8994	1.046	bd		0.57	0.77	19 9	YES	0.000	0.221	
12	12	12378-PeCDD	355 8546	32.128	32.115	56990	56990	0.973	bb		1.55	1.55	195 5	NO	2.028	2.028	
13	13	123478-HxCDD	389 8157	36.786	36 797	84691	84691	0.935	bd		1.26	1 24	94 5	NO	3 667	3 667	
14	14	123678-HxCDD	389.8157	36.918	36.907	450131	450131	0 878	dd		1.26	1 24	498.3	NO	18 985	18.985	
15	15	123789-HxCDD	389.8157	37.334	37 302	171240	171240	0.839	bb		1.38	1 24	194 8	NO	7 897	7 897	
16	16	1234678-HpCDD	423 7766	41.664	41 654	7211800	7211800	0 974	bb		1.03	1 05	2923.4	NO	459 104	459.104	
17	17	OCDD	457.7377	47.672	47 668	42930750	42930750	0.950	bd		0.88	0 89	29910.8	NO	4864 721	4864 7	E
18	18	13C-2378-TCDF	315.9419	26.377	26 377	6102530		1.484	bb	84.9	0.77	0 77	10546.9	NO	84.918		
19	19	13C-12378-PeCDF	351 9000	30.516	30 518	4639218		1 048	bb	91.4	1.57	1 55	5422.4	NO	91.432		
20	20	13C-23478-PeCDF	351 9000	31.854	31 856	4409379		1 003	bb	90.8	1.56	1 55	5290 7	NO	90.773		
21	21	13C-123478-HxCDF	383 8639	35.537	35 548	2974769		1 186	bd	87 9	0.52	0.51	2220.3	NO	87.870		
22	22	13C-123678-HxCDF	383 8639	35.679	35.701	3274363		1 315	db	87 2	0 52	0.51	2290 0	NO	87 200		
23	23	13C-234678-HxCDF	383 8639	36.633	36 633	2848544		1 223	bb	81 6	0 53	0.51	1982 6	NO	81 551		
24	24	13C-123789-HxCDF	383.8639	37.740	37 740	2594098		1 056	bb	86 0	0 51	0.51	2050.3	NO	85.992		
25	25	13C-1234678-HpCDF	417.8253	39.812	39 822	1982969		1 011	bd	68.7	0.44	0 44	1786 0	NO	68 663		
26	26	13C-1234789-HpCDF	417.8253	42.552	42 574	1379826		0 741	bb	65 3	0.44	0 44	1082 4	NO	65 254		
27	27	13C-1234-TCDD	331.9368	26 198	26 272	4841203		1.000	bb	100.0	0.78	0.77	9067.1	NO	100 000		
28	28	13C-2378-TCDD	331.9368	27.004	27.019	3885099		0 956	bb	83.9	0.77	0 77	6775.1	NO	83 911		
29	29	13C-12378-PeCDD	367.8949	32.106	32.108	2887508		0.663	bb	89.9	1.62	1 55	5441.3	NO	89.900		
30	30	13C-123478-HxCDD	401 8559	36 775	36.764	2468999		1.024	bd	84.4	1.28	1.24	3607.2	NO	84.449		
31	31	13C-123678-HxCDD	401 8559	36 896	36.896	2701156		1 113	db	85.0	1 25	1 24	3570 0	NO	85.023		
32	32	13C-1234678-HpCDD	435 8169	41.642	41.675	1612279		0 815	bb	69.3	1 06	1 05	2628 5	NO	69 271		
33	33	13C-OCDD	469 7779	47 654	47.691	1857734		0 717	bb	45.4	0.91	0 89	1332.1	NO	90.730		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.323	37.368	2855390		1 000	bb	100 0	1.29	1 24	3917 6	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 370			0 866							11.204	11.578
36	36	Total-penta1	339.8597		28 210										23 379	23 379
37	37	Total-pentafurans	339 8597		30.790			0 921							18 157	18 824
38	38	Total-hexafurans	373 8208		35 760			1 055							103.325	104 027
39	39	Total-heptafurans	407.7818		41 160			1.234							142.969	142 969
40	40	Total-Furans	303 9016		0 000			1.050							420.167	421 910
41	41	Total-tetradioxins	319 8965		25 880			1.046							6.931	7 559
42	42	Total-pentadioxins	355 8546		30 950			0 973							13 357	13 357
43	43	Total-hexadioxins	389 8157		35 940			0 884							116.497	116 497
44	44	Total-heptadioxins	423 7766		40.980			0.974							1166 910	1166.9 .
45	45	Total-Dioxins	319 8965		0.000			0 942							6168.485	6169.1 .
46	46	Total-TEQ	319.8965		0.000										6588.653	6591 0
47	47	37CL-2378-TCDD	327.8847	27.034	27.010	1756851		1 037					7841 5		34 989	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0 000										0.000	
50	50	FUNCTION3 PFK	380 9760		0 000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409 7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409 7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000										0 000	
58	58	FUNCTION5 DCDPE	513.6775		0 000											

41.5%

42.203

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.05	22177.033	0 866	0.420	0.420	0 77	0.77	NO	49 6
2	35	Total-tetrafurans	303 9016	24.63	10037 989	0.866	0.190	0.190	0.75	0 77	NO	34 2
3	35	Total-tetrafurans	303 9016	24.49	5765 957	0.866	0.109	0.109	0 87	0 77	NO	22 2
4	35	Total-tetrafurans	303.9016	24.39	51410.071	0.866	0.973	0.973	0 79	0 77	NO	174.3
5	35	Total-tetrafurans	303.9016	24.23	12677.245	0 866	0.240	0.240	0 72	0.77	NO	39.6
6	35	Total-tetrafurans	303 9016	24 14	32457.659	0 866	0.614	0.614	0 81	0 77	NO	115.7
7	35	Total-tetrafurans	303 9016	24 05	15742 627	0 866	0.298	0.298	0 81	0 77	NO	55.4
8	35	Total-tetrafurans	303 9016	23 93	40283 285	0 866	0.762	0 762	0 82	0 77	NO	91.5
9	35	Total-tetrafurans	303.9016	23.73	102868 199	0 866	1.946	1 946	0 82	0 77	NO	341.9
10	35	Total-tetrafurans	303 9016	23.16	15643 282	0.866	0 296	0 296	0 73	0 77	NO	52 3
11	35	Total-tetrafurans	303 9016	22.90	98924.621	0 866	1.872	1 872	0 78	0.77	NO	339 5
12	35	Total-tetrafurans	303 9016	27.81	18906.192	0.866	0.358	0.358	0.87	0.77	NO	46 3
13	35	Total-tetrafurans	303.9016	26 62	17818.461	0.866	0.337	0.337	0.83	0.77	NO	47.3
14	35	Total-tetrafurans	303 9016	26 51	0 000	0 866	0 000	0 079	0 53	0 77	YES	14.9
15	1	2378-TCDF	303.9016	26 39	36477.992	0 866	0 690	0 690	0.84	0.77	NO	117.0
16	35	Total-tetrafurans	303.9016	26 18	0.000	0 866	0 000	0 295	0.77	0 77	NO	29.6
17	35	Total-tetrafurans	303 9016	26 03	3478.638	0.866	0.066	0.066	0.80	0.77	NO	14 1
18	35	Total-tetrafurans	303.9016	25.90	5331.119	0.866	0.101	0 101	0 79	0 77	NO	16 7
19	35	Total-tetrafurans	303 9016	25.70	9321.905	0.866	0 176	0 176	0 69	0.77	NO	27 0
20	35	Total-tetrafurans	303.9016	25.48	25420 681	0.866	0.481	0 481	0 83	0.77	NO	88 2
21	35	Total-tetrafurans	303 9016	25 30	52834 839	0.866	1.000	1 000	0 79	0.77	NO	171 2
22	35	Total-tetrafurans	303 9016	25 15	14589 245	0 866	0 276	0 276	0 80	0 77	NO	48 3

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339 8597	27 81	969955.469		23.379	23.379	1.57	1 55	NO	4094.3

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339.8597	31.72	51711.037	0.921	1 240	1 240	1.48	1.55	NO	143.7
2	37	Total-pentafurans	339.8597	31.61	7419.067	0.921	0 178	0 178	1.41	1.55	NO	20.2
3	37	Total-pentafurans	339 8597	31 00	5308.169	0.921	0.127	0.127	1 49	1 55	NO	14.7
4	37	Total-pentafurans	339.8597	30.83	0.000	0.921	0 000	0 098	1.11	1.55	YES	14 6
5	37	Total-pentafurans	339 8597	30.72	48946.642	0.921	1 174	1 174	1 62	1 55	NO	141.2
6	2	12378-PeCDF	339.8597	30.53	46223.560	0 907	1 099	1 099	1 52	1 55	NO	130 5
7	37	Total-pentafurans	339.8597	30 25	0.000	0.921	0.000	0.382	2 16	1 55	YES	84 3
8	37	Total-pentafurans	339.8597	30.17	70304.992	0 921	1 686	1 686	1 42	1.55	NO	170.9
9	37	Total-pentafurans	339.8597	30.07	9819.488	0.921	0.236	0 236	1 63	1 55	NO	38.9
10	37	Total-pentafurans	339.8597	29.91	14102.899	0.921	0 338	0 338	1 35	1 55	NO	36.9
11	37	Total-pentafurans	339 8597	29 79	1770.134	0.921	0 042	0.042	1.52	1.55	NO	5 1
12	37	Total-pentafurans	339 8597	29 62	0.000	0.921	0 000	0 187	2.32	1.55	YES	29.1
13	37	Total-pentafurans	339 8597	29 47	214007.687	0.921	5 134	5 134	1 46	1 55	NO	382.7
14	37	Total-pentafurans	339 8597	29 29	10903.140	0.921	0 262	0 262	1 50	1 55	NO	57.7
15	37	Total-pentafurans	339.8597	29.18	220792 117	0 921	5 296	5 296	1 61	1.55	NO	562 9
16	37	Total-pentafurans	339.8597	32.91	7041.938	0 921	0 169	0 169	1.39	1.55	NO	19.9
17	3	23478-PeCDF	339.8597	31 88	48507 408	0 936	1 175	1 175	1 58	1.55	NO	142 4

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	6	123678-HxCDF	373.8208	35 70	65498 049	1 048	1.908	1 908	1 36	1 24	NO	57 8
2	4	123478-HxCDF	373.8208	35 55	110455 910	1 082	3.432	3 432	1 26	1 24	NO	92 0
3	38	Total-hexafurans	373 8208	35 38	13623 934	1 055	0 442	0 442	1 08	1 24	NO	12.3
4	38	Total-hexafurans	373.8208	34 89	1343121 251	1 055	43 554	43.554	1 23	1 24	NO	1192.9
5	38	Total-hexafurans	373 8208	34 58	12633.035	1 055	0 410	0.410	1.23	1 24	NO	10.6
6	38	Total-hexafurans	373 8208	34 03	1067941 313	1 055	34.631	34 631	1.20	1 24	NO	950.3
7	38	Total-hexafurans	373.8208	33 82	444789.251	1 055	14.423	14.423	1.20	1 24	NO	408.3
8	7	123789-HxCDF	373.8208	37.73	35569.010	1.020	1.344	1.344	1.19	1 24	NO	32.5
9	5	234678-HxCDF	373.8208	36 63	93123.161	1.070	3.056	3.056	1 22	1 24	NO	50.7
10	38	Total-hexafurans	373.8208	36 05	3859.828	1.055	0 125	0 125	1 33	1 24	NO	3 7
11	38	Total-hexafurans	373.8208	35.91	0.000	1.055	0 000	0.702	1 49	1 24	YES	21 7

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R..	S/N
1	9	1234789-HpCDF	407 7818	42.56	42962.572	1.254	2.483	2.483	1.04	1.05	NO	58.6
2	39	Total-heptafurans	407 7818	40.63	1936074.813	1 234	93.292	93.292	1.00	1.05	NO	3006.5
3	39	Total-heptafurans	407 7818	40.33	18580.109	1.234	0.895	0.895	1 02	1.05	NO	22.3
4	8	1234678-HpCDF	407 7818	39.83	1114967.626	1.214	46.298	46.298	1 01	1.05	NO	1717 9

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 05	22177.033	0.866	0.420	0.420	0 77	0.77	NO	49.6
2	35	Total-tetrafurans	303.9016	24 63	10037.989	0.866	0 190	0.190	0 75	0.77	NO	34 2
3	35	Total-tetrafurans	303.9016	24.49	5765.957	0.866	0 109	0.109	0 87	0.77	NO	22.2
4	35	Total-tetrafurans	303 9016	24.39	51410.071	0.866	0 973	0.973	0.79	0 77	NO	174.3
5	35	Total-tetrafurans	303 9016	24 23	12677 245	0 866	0.240	0 240	0 72	0 77	NO	39.6
6	35	Total-tetrafurans	303 9016	24.14	32457 659	0.866	0.614	0 614	0.81	0 77	NO	115 7
7	35	Total-tetrafurans	303 9016	24.05	15742 627	0 866	0.298	0 298	0.81	0.77	NO	55.4
8	35	Total-tetrafurans	303 9016	23 93	40283.285	0 866	0 762	0.762	0.82	0 77	NO	91 5
9	35	Total-tetrafurans	303.9016	23 73	102868.199	0.866	1 946	1 946	0.82	0 77	NO	341 9
10	35	Total-tetrafurans	303.9016	23.16	15643.282	0.866	0 296	0.296	0.73	0 77	NO	52 3
11	35	Total-tetrafurans	303.9016	22.90	98924 621	0 866	1.872	1 872	0 78	0.77	NO	339.5
12	35	Total-tetrafurans	303.9016	27 81	18906.192	0.866	0 358	0.358	0.87	0 77	NO	46 3
13	35	Total-tetrafurans	303.9016	26 62	17818 461	0.866	0 337	0.337	0.83	0 77	NO	47 3
14	35	Total-tetrafurans	303.9016	26 51	0 000	0.866	0 000	0.079	0 53	0 77	YES	14 9
15	1	2378-TCDF	303.9016	26 39	36477 992	0.866	0 690	0 690	0.84	0 77	NO	117 0
16	35	Total-tetrafurans	303 9016	26.18	0 000	0 866	0.000	0.295	0 77	0.77	NO	29 6
17	35	Total-tetrafurans	303.9016	26.03	3478 638	0.866	0 066	0.066	0 80	0.77	NO	14 1
18	35	Total-tetrafurans	303.9016	25.90	5331.119	0 866	0 101	0.101	0.79	0.77	NO	16.7
19	35	Total-tetrafurans	303.9016	25.70	9321 905	0.866	0.176	0.176	0 69	0.77	NO	27.0
20	35	Total-tetrafurans	303.9016	25 48	25420 681	0.866	0.481	0.481	0 83	0.77	NO	88.2
21	35	Total-tetrafurans	303.9016	25 30	52834.839	0.866	1.000	1.000	0 79	0.77	NO	171.2
22	35	Total-tetrafurans	303 9016	25.15	14589.245	0.866	0 276	0.276	0 80	0.77	NO	48.3
23	40	Total-Furans	303.9016	28.48	5178.183	1.050	0 081	0 081	0 67	0 77	NO	16 0
24	37	Total-pentafurans	339 8597	31.72	51711.037	0.921	1 240	1 240	1 48	1.55	NO	143 7
25	37	Total-pentafurans	339 8597	31 61	7419.067	0.921	0.178	0 178	1.41	1 55	NO	20 2
26	37	Total-pentafurans	339 8597	31 00	5308 169	0.921	0 127	0 127	1.49	1.55	NO	14 7
27	37	Total-pentafurans	339 8597	30 83	0.000	0 921	0 000	0 098	1 11	1 55	YES	14.6
28	37	Total-pentafurans	339 8597	30.72	48946 642	0 921	1 174	1.174	1.62	1 55	NO	141.2
29	2	12378-PeCDF	339 8597	30 53	46223 560	0.907	1 099	1.099	1 52	1 55	NO	130.5
30	37	Total-pentafurans	339 8597	30 25	0 000	0.921	0 000	0.382	2 16	1.55	YES	84 3
31	37	Total-pentafurans	339 8597	30 17	70304.992	0.921	1 686	1.686	1.42	1 55	NO	170.9
32	37	Total-pentafurans	339 8597	30 07	9819.488	0.921	0 236	0.236	1.63	1.55	NO	38.9
33	37	Total-pentafurans	339 8597	29.91	14102 899	0 921	0 338	0.338	1 35	1 55	NO	36 9
34	37	Total-pentafurans	339.8597	29 79	1770 134	0.921	0.042	0.042	1.52	1.55	NO	5 1
35	37	Total-pentafurans	339 8597	29 62	0.000	0.921	0 000	0.187	2 32	1.55	YES	29.1
36	37	Total-pentafurans	339.8597	29.47	214007.687	0.921	5 134	5 134	1 46	1 55	NO	382.7
37	37	Total-pentafurans	339 8597	29.29	10903.140	0.921	0.262	0 262	1 50	1.55	NO	57.7
38	37	Total-pentafurans	339 8597	29.18	220792.117	0.921	5.296	5 296	1 61	1 55	NO	562.9
39	37	Total-pentafurans	339.8597	32.91	7041.938	0 921	0.169	0 169	1.39	1 55	NO	19.9
40	3	23478-PeCDF	339.8597	31 88	48507.408	0 936	1 175	1.175	1.58	1.55	NO	142 4
41	6	123678-HxCDF	373.8208	35.70	65498 049	1 048	1.908	1.908	1 36	1.24	NO	57.8
42	4	123478-HxCDF	373 8208	35.55	110455.910	1 082	3 432	3.432	1 26	1.24	NO	92.0
43	38	Total-hexafurans	373.8208	35.38	13623.934	1 055	0.442	0 442	1.08	1 24	NO	12.3
44	38	Total-hexafurans	373.8208	34.89	1343121.251	1.055	43 554	43 554	1 23	1 24	NO	1192.9
45	38	Total-hexafurans	373.8208	34.58	12633 035	1.055	0 410	0 410	1.23	1 24	NO	10 6
46	38	Total-hexafurans	373.8208	34 03	1067941.313	1 055	34.631	34 631	1.20	1 24	NO	950.3
47	38	Total-hexafurans	373.8208	33.82	444789 251	1 055	14.423	14.423	1.20	1.24	NO	408 3
48	7	123789-HxCDF	373.8208	37 73	35569.010	1 020	1 344	1.344	1 19	1.24	NO	32.5
49	5	234678-HxCDF	373 8208	36.63	93123.161	1 070	3.056	3.056	1 22	1.24	NO	50.7

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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	38	Total-hexafurans	373.8208	36.05	3859 828	1.055	0 125	0.125	1 33	1.24	NO	3.7
51	38	Total-hexafurans	373 8208	35.91	0.000	1 055	0 000	0.702	1 49	1.24	YES	21.7
52	9	1234789-HpCDF	407.7818	42 56	42962.572	1.254	2 483	2.483	1 04	1 05	NO	58 6
53	39	Total-heptafurans	407 7818	40.63	1936074.813	1 234	93 292	93 292	1 00	1 05	NO	3006 5
54	39	Total-heptafurans	407.7818	40 33	18580.109	1 234	0 895	0.895	1 02	1 05	NO	22 3
55	8	1234678-HpCDF	407.7818	39.83	1114967.626	1 214	46 298	46.298	1.01	1 05	NO	1717 9
56	10	OCDF	441.7428	47 96	1242741.376	1.105	121.052	121....	0.88	0.89	NO	1014.9
57	36	Total-penta1	339.8597	27.81	969955.469		23 379	23 379	1.57	1.55	NO	4094 3

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	41	Total-tetradioxins	319.8965	25.91	2708 275	1.046	0 067	0 067	0.82	0 77	NO	7 0
2	41	Total-tetradioxins	319.8965	25.64	20498 319	1.046	0 504	0 504	0 71	0 77	NO	47 3
3	41	Total-tetradioxins	319 8965	25 36	11520.344	1 046	0 284	0 284	0 78	0 77	NO	25 9
4	41	Total-tetradioxins	319.8965	25 17	2352 468	1 046	0.058	0 058	0 84	0 77	NO	5 6
5	41	Total-tetradioxins	319 8965	24.64	0 000	1 046	0.000	0 107	0 50	0.77	YES	10.4
6	41	Total-tetradioxins	319 8965	24.43	58236 014	1 046	1 433	1 433	0 73	0.77	NO	137.3
7	41	Total-tetradioxins	319 8965	24.17	95795.805	1.046	2 358	2 358	0 78	0.77	NO	251.1
8	41	Total-tetradioxins	319.8965	27 56	54836.156	1.046	1 350	1.350	0 79	0.77	NO	142.0
9	41	Total-tetradioxins	319.8965	27.17	0.000	1 046	0 000	0.144	1.07	0.77	YES	18.5
10	11	2378-TCDD	319 8965	27.03	0.000	1 046	0.000	0.221	0.57	0.77	YES	19.9
11	41	Total-tetradioxins	319.8965	26 66	14275.457	1.046	0.351	0 351	0 81	0 77	NO	28 4
12	41	Total-tetradioxins	319 8965	26.36	0 000	1 046	0.000	0 042	1.10	0.77	YES	6.5
13	41	Total-tetradioxins	319.8965	26 21	21403.503	1.046	0 527	0.527	0.72	0 77	NO	48 6
14	41	Total-tetradioxins	319 8965	26 00	0.000	1.046	0 000	0 113	0 56	0 77	YES	10 7

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	32.52	7650 634	0.973	0.272	0.272	1.61	1 55	NO	28.6
2	12	12378-PeCDD	355.8546	32.13	56990 311	0.973	2 028	2 028	1.55	1 55	NO	195 5
3	42	Total-pentadioxins	355 8546	31.57	499.730	0 973	0.018	0 018	1 77	1 55	NO	4 0
4	42	Total-pentadioxins	355 8546	31.45	16471 254	0 973	0.586	0.586	1.68	1 55	NO	57.4
5	42	Total-pentadioxins	355.8546	31.05	27822 365	0.973	0.990	0.990	1.45	1.55	NO	73 4
6	42	Total-pentadioxins	355.8546	30 89	51700 164	0.973	1.840	1.840	1 59	1 55	NO	194 5
7	42	Total-pentadioxins	355 8546	30 75	49729 361	0 973	1.770	1 770	1 64	1 55	NO	190 5
8	42	Total-pentadioxins	355.8546	30.53	56326 480	0.973	2 004	2.004	1 52	1 55	NO	219.8
9	42	Total-pentadioxins	355.8546	29.92	22761 579	0.973	0 810	0.810	1.63	1.55	NO	99.0
10	42	Total-pentadioxins	355.8546	29 45	85438 075	0 973	3 040	3 040	1.62	1 55	NO	197.5

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HD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389.8157	34.62	692419 250	0 884		30.300	30 300	1.23	1 24	NO	832.5
2	43	Total-hexadioxins	389 8157	34.35	84407 246	0 884		3.694	3 694	1.22	1 24	NO	119.6
3	15	123789-HxCDD	389.8157	37.33	171240 172	0.839		7.897	7 897	1.38	1.24	NO	194.8
4	43	Total-hexadioxins	389 8157	37.09	40098.907	0 884		1.755	1.755	1.26	1 24	NO	42 9
5	14	123678-HxCDD	389.8157	36 92	450131.328	0.878		18 985	18 985	1.26	1.24	NO	498.3
6	13	123478-HxCDD	389.8157	36.79	84691.472	0.935		3.667	3 667	1.26	1.24	NO	94 5
7	43	Total-hexadioxins	389.8157	35.82	987021.001	0.884		43.192	43 192	1.21	1.24	NO	778.0
8	43	Total-hexadioxins	389.8157	35.43	160114.008	0.884		7.007	7.007	1.19	1.24	NO	186 3

HPD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41 66	7211799.500	0 974		459.104	459 .	1 03	1 05	NO	2923.4
2	44	Total-heptadioxins	423 7766	40 38	11118522 ...	0.974		707 806	707. .	1 06	1.05	NO	5034.6

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Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	25 91	2708.275	1 046	0.067	0 067	0 82	0.77	NO	7 0
2	41	Total-tetradioxins	319 8965	25.64	20498 319	1 046	0 504	0.504	0.71	0 77	NO	47.3
3	41	Total-tetradioxins	319.8965	25.36	11520 344	1.046	0.284	0.284	0.78	0 77	NO	25.9
4	41	Total-tetradioxins	319.8965	25.17	2352.468	1.046	0.058	0 058	0 84	0.77	NO	5.6
5	41	Total-tetradioxins	319 8965	24.64	0.000	1.046	0.000	0.107	0.50	0 77	YES	10.4
6	41	Total-tetradioxins	319.8965	24.43	58236.014	1.046	1.433	1.433	0.73	0.77	NO	137.3
7	41	Total-tetradioxins	319.8965	24.17	95795 805	1.046	2.358	2.358	0.78	0 77	NO	251.1
8	45	Total-Dioxins	319.8965	28.63	1018.393	0.942	0.028	0 028	0.85	0.77	NO	2 5
9	45	Total-Dioxins	319.8965	27.87	1467.513	0.942	0.040	0 040	0.85	0 77	NO	3 8
10	41	Total-tetradioxins	319 8965	27 56	54836.156	1.046	1.350	1 350	0 79	0 77	NO	142 0
11	41	Total-tetradioxins	319.8965	27.17	0 000	1 046	0.000	0 144	1.07	0 77	YES	18 5
12	11	2378-TCDD	319 8965	27 03	0 000	1 046	0 000	0.221	0 57	0.77	YES	19 9
13	41	Total-tetradioxins	319.8965	26.66	14275.457	1 046	0.351	0.351	0 81	0 77	NO	28.4
14	41	Total-tetradioxins	319 8965	26 36	0 000	1 046	0 000	0.042	1 10	0 77	YES	6.5
15	41	Total-tetradioxins	319 8965	26 21	21403 503	1 046	0.527	0.527	0 72	0 77	NO	48 6
16	41	Total-tetradioxins	319.8965	26.00	0.000	1.046	0.000	0.113	0.56	0.77	YES	10 7
17	42	Total-pentadioxins	355.8546	32.52	7650 634	0.973	0.272	0.272	1.61	1 55	NO	28 6
18	12	12378-PeCDD	355 8546	32.13	56990 311	0.973	2.028	2.028	1.55	1.55	NO	195.5
19	42	Total-pentadioxins	355.8546	31.57	499 730	0 973	0.018	0.018	1.77	1.55	NO	4 0
20	42	Total-pentadioxins	355.8546	31.45	16471.254	0.973	0.586	0 586	1 68	1 55	NO	57 4
21	42	Total-pentadioxins	355.8546	31 05	27822 365	0.973	0 990	0 990	1 45	1 55	NO	73 4
22	42	Total-pentadioxins	355 8546	30 89	51700 164	0.973	1 840	1 840	1 59	1.55	NO	194 5
23	42	Total-pentadioxins	355.8546	30 75	49729 361	0.973	1 770	1.770	1.64	1.55	NO	190.5
24	42	Total-pentadioxins	355 8546	30 53	56326.480	0.973	2 004	2 004	1.52	1 55	NO	219.8
25	42	Total-pentadioxins	355.8546	29 92	22761 579	0.973	0 810	0 810	1 63	1 55	NO	99.0
26	42	Total-pentadioxins	355.8546	29 45	85438.075	0 973	3 040	3 040	1 62	1.55	NO	197.5
27	43	Total-hexadioxins	389 8157	34.62	692419.250	0.884	30.300	30.300	1 23	1 24	NO	832 5
28	43	Total-hexadioxins	389 8157	34 35	84407.246	0.884	3 694	3 694	1 22	1 24	NO	119.6
29	15	123789-HxCDD	389.8157	37.33	171240.172	0.839	7.897	7 897	1.38	1.24	NO	194.8
30	43	Total-hexadioxins	389.8157	37.09	40098.907	0 884	1.755	1 755	1 26	1 24	NO	42.9
31	14	123678-HxCDD	389 8157	36 92	450131.328	0.878	18.985	18.985	1 26	1 24	NO	498.3
32	13	123478-HxCDD	389 8157	36 79	84691 472	0 935	3 667	3 667	1 26	1 24	NO	94.5
33	43	Total-hexadioxins	389.8157	35 82	987021.001	0.884	43.192	43 192	1.21	1 24	NO	778.0
34	43	Total-hexadioxins	389 8157	35 43	160114.008	0 884	7 007	7 007	1 19	1 24	NO	186.3
35	16	1234678-HpCDD	423 7766	41 66	7211799.500	0 974	459 104	459	1.03	1 05	NO	2923.4
36	44	Total-heptadioxins	423.7766	40 38	11118522 .	0.974	707.806	707	1.06	1 05	NO	5034.6
37	17	OCDD	457.7377	47 67	42930750 .	0.950	4864 7 .	4864	0 88	0 89	NO	29910 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25 05	22177 033	0.866	0.420	0 420	0.77	0.77	NO	49.6
2	35	Total-tetrafurans	303 9016	24 63	10037 989	0 866	0.190	0.190	0 75	0.77	NO	34.2
3	35	Total-tetrafurans	303.9016	24.49	5765.957	0.866	0.109	0.109	0 87	0.77	NO	22 2
4	35	Total-tetrafurans	303.9016	24.39	51410.071	0.866	0.973	0.973	0.79	0.77	NO	174.3
5	35	Total-tetrafurans	303 9016	24 23	12677 245	0.866	0 240	0 240	0 72	0.77	NO	39 6
6	35	Total-tetrafurans	303.9016	24.14	32457.659	0.866	0 614	0.614	0 81	0.77	NO	115.7
7	35	Total-tetrafurans	303.9016	24.05	15742 627	0.866	0 298	0.298	0 81	0.77	NO	55 4
8	35	Total-tetrafurans	303 9016	23 93	40283.285	0.866	0.762	0.762	0.82	0.77	NO	91.5
9	35	Total-tetrafurans	303.9016	23 73	102868 199	0.866	1 946	1.946	0 82	0.77	NO	341 9
10	35	Total-tetrafurans	303 9016	23 16	15643.282	0.866	0 296	0.296	0 73	0.77	NO	52.3
11	35	Total-tetrafurans	303 9016	22 90	98924 621	0 866	1 872	1 872	0 78	0 77	NO	339 5
12	35	Total-tetrafurans	303 9016	27.81	18906.192	0.866	0.358	0 358	0 87	0.77	NO	46.3
13	35	Total-tetrafurans	303 9016	26.62	17818.461	0 866	0 337	0 337	0 83	0 77	NO	47 3
14	35	Total-tetrafurans	303.9016	26.51	0.000	0 866	0.000	0 079	0.53	0 77	YES	14 9
15	1	2378-TCDF	303.9016	26 39	36477 992	0 866	0.690	0 690	0 84	0.77	NO	117 0
16	35	Total-tetrafurans	303.9016	26 18	0 000	0.866	0.000	0.295	0.77	0.77	NO	29.6
17	35	Total-tetrafurans	303 9016	26.03	3478.638	0.866	0.066	0.066	0 80	0.77	NO	14 1
18	35	Total-tetrafurans	303.9016	25 90	5331 119	0.866	0.101	0.101	0 79	0.77	NO	16 7
19	35	Total-tetrafurans	303.9016	25 70	9321 905	0.866	0 176	0.176	0.69	0.77	NO	27 0
20	35	Total-tetrafurans	303 9016	25.48	25420.681	0.866	0.481	0 481	0.83	0 77	NO	88 2
21	35	Total-tetrafurans	303.9016	25.30	52834 839	0.866	1.000	1 000	0.79	0 77	NO	171 2
22	35	Total-tetrafurans	303 9016	25 15	14589 245	0 866	0.276	0.276	0.80	0 77	NO	48 3
23	40	Total-Furans	303 9016	28.48	5178 183	1 050	0.081	0 081	0.67	0 77	NO	16.0
24	37	Total-pentafurans	339 8597	31.72	51711 037	0 921	1 240	1 240	1.48	1 55	NO	143.7
25	37	Total-pentafurans	339 8597	31 61	7419.067	0.921	0 178	0 178	1 41	1 55	NO	20.2
26	37	Total-pentafurans	339.8597	31 00	5308.169	0.921	0.127	0 127	1 49	1 55	NO	14.7
27	37	Total-pentafurans	339 8597	30.83	0 000	0 921	0.000	0.098	1.11	1.55	YES	14.6
28	37	Total-pentafurans	339 8597	30 72	48946 642	0 921	1.174	1.174	1.62	1 55	NO	141.2
29	2	12378-PeCDF	339.8597	30 53	46223.560	0.907	1.099	1 099	1 52	1 55	NO	130 5
30	37	Total-pentafurans	339 8597	30 25	0 000	0.921	0 000	0 382	2 16	1 55	YES	84 3
31	37	Total-pentafurans	339.8597	30 17	70304 992	0.921	1.686	1.686	1 42	1 55	NO	170 9
32	37	Total-pentafurans	339.8597	30 07	9819 488	0.921	0.236	0.236	1 63	1.55	NO	38.9
33	37	Total-pentafurans	339.8597	29 91	14102.899	0.921	0 338	0.338	1 35	1.55	NO	36 9
34	37	Total-pentafurans	339.8597	29 79	1770 134	0.921	0.042	0 042	1 52	1.55	NO	5 1
35	37	Total-pentafurans	339 8597	29 62	0 000	0.921	0 000	0.187	2 32	1.55	YES	29 1
36	37	Total-pentafurans	339 8597	29.47	214007.687	0.921	5.134	5.134	1.46	1.55	NO	382 7
37	37	Total-pentafurans	339.8597	29.29	10903.140	0.921	0.262	0 262	1 50	1.55	NO	57 7
38	37	Total-pentafurans	339.8597	29.18	220792.117	0.921	5.296	5.296	1 61	1.55	NO	562.9
39	37	Total-pentafurans	339 8597	32.91	7041.938	0 921	0 169	0.169	1.39	1.55	NO	19.9
40	3	23478-PeCDF	339 8597	31.88	48507.408	0 936	1 175	1.175	1 58	1.55	NO	142 4
41	6	123678-HxCDF	373 8208	35.70	65498.049	1 048	1 908	1 908	1 36	1 24	NO	57 8
42	4	123478-HxCDF	373 8208	35.55	110455.910	1 082	3 432	3.432	1 26	1.24	NO	92.0
43	38	Total-hexafurans	373 8208	35.38	13623 934	1 055	0 442	0 442	1 08	1.24	NO	12 3
44	38	Total-hexafurans	373 8208	34.89	1343121.251	1.055	43 554	43 554	1 23	1 24	NO	1192 9
45	38	Total-hexafurans	373 8208	34.58	12633.035	1 055	0.410	0 410	1 23	1 24	NO	10 6
46	38	Total-hexafurans	373 8208	34.03	1067941.313	1.055	34.631	34 631	1 20	1 24	NO	950 3
47	38	Total-hexafurans	373 8208	33.82	444789.251	1.055	14.423	14.423	1 20	1 24	NO	408 3
48	7	123789-HxCDF	373 8208	37.73	35569 010	1 020	1 344	1.344	1.19	1 24	NO	32.5
49	5	234678-HxCDF	373.8208	36.63	93123.161	1.070	3 056	3.056	1.22	1.24	NO	50.7

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	38	Total-hexafurans	373.8208	36.05	3859.828	1.055	0.125	0 125	1.33	1 24	NO	3.7
51	38	Total-hexafurans	373.8208	35.91	0 000	1.055	0 000	0.702	1 49	1 24	YES	21.7
52	9	1234789-HpCDF	407.7818	42 56	42962.572	1.254	2.483	2.483	1.04	1.05	NO	58 6
53	39	Total-heptafurans	407.7818	40.63	1936074 813	1.234	93.292	93.292	1 00	1 05	NO	3006.5
54	39	Total-heptafurans	407 7818	40 33	18580 109	1.234	0.895	0 895	1.02	1.05	NO	22.3
55	8	1234678-HpCDF	407.7818	39.83	1114967 626	1.214	46.298	46 298	1.01	1 05	NO	1717.9
56	10	OCDF	441.7428	47 96	1242741.376	1 105	121.052	121 .	0.88	0 89	NO	1014 9
57	36	Total-penta1	339.8597	27.81	969955.469		23 379	23.379	1 57	1 55	NO	4094.3
58	41	Total-tetradioxins	319 8965	25 91	2708 275	1.046	0 067	0 067	0 82	0.77	NO	7 0
59	41	Total-tetradioxins	319 8965	25.64	20498 319	1 046	0 504	0 504	0 71	0.77	NO	47.3
60	41	Total-tetradioxins	319 8965	25 36	11520 344	1 046	0.284	0.284	0.78	0.77	NO	25 9
61	41	Total-tetradioxins	319.8965	25 17	2352.468	1 046	0 058	0.058	0.84	0.77	NO	5.6
62	41	Total-tetradioxins	319.8965	24 64	0.000	1 046	0.000	0.107	0.50	0.77	YES	10.4
63	41	Total-tetradioxins	319.8965	24 43	58236.014	1 046	1.433	1.433	0.73	0.77	NO	137.3
64	41	Total-tetradioxins	319 8965	24 17	95795 805	1 046	2 358	2.358	0 78	0.77	NO	251 1
65	45	Total-Dioxins	319.8965	28 63	1018 393	0.942	0 028	0 028	0.85	0 77	NO	2 5
66	45	Total-Dioxins	319 8965	27.87	1467 513	0 942	0 040	0 040	0 85	0 77	NO	3 8
67	41	Total-tetradioxins	319 8965	27 56	54836 156	1 046	1.350	1 350	0 79	0 77	NO	142 0
68	41	Total-tetradioxins	319 8965	27 17	0 000	1.046	0 000	0 144	1.07	0 77	YES	18 5
69	11	2378-TCDD	319 8965	27.03	0.000	1 046	0.000	0.221	0 57	0.77	YES	19 9
70	41	Total-tetradioxins	319.8965	26 66	14275.457	1.046	0 351	0 351	0.81	0 77	NO	28 4
71	41	Total-tetradioxins	319 8965	26.36	0.000	1.046	0 000	0 042	1 10	0 77	YES	6 5
72	41	Total-tetradioxins	319.8965	26.21	21403.503	1.046	0.527	0.527	0 72	0.77	NO	48 6
73	41	Total-tetradioxins	319.8965	26.00	0.000	1.046	0 000	0.113	0.56	0.77	YES	10 7
74	42	Total-pentadioxins	355 8546	32.52	7650.634	0 973	0 272	0.272	1.61	1 55	NO	28.6
75	12	12378-PeCDD	355 8546	32 13	56990.311	0 973	2.028	2 028	1 55	1.55	NO	195 5
76	42	Total-pentadioxins	355 8546	31 57	499 730	0 973	0.018	0 018	1 77	1 55	NO	4.0
77	42	Total-pentadioxins	355 8546	31 45	16471 254	0 973	0 586	0.586	1 68	1.55	NO	57.4
78	42	Total-pentadioxins	355.8546	31 05	27822.365	0.973	0 990	0 990	1 45	1.55	NO	73 4
79	42	Total-pentadioxins	355.8546	30.89	51700.164	0.973	1 840	1 840	1 59	1.55	NO	194.5
80	42	Total-pentadioxins	355.8546	30.75	49729.361	0.973	1.770	1 770	1.64	1 55	NO	190.5
81	42	Total-pentadioxins	355.8546	30.53	56326 480	0 973	2 004	2 004	1 52	1 55	NO	219.8
82	42	Total-pentadioxins	355.8546	29.92	22761 579	0.973	0 810	0 810	1.63	1.55	NO	99.0
83	42	Total-pentadioxins	355.8546	29 45	85438.075	0 973	3.040	3.040	1.62	1.55	NO	197.5
84	43	Total-hexadioxins	389.8157	34 62	692419.250	0 884	30 300	30.300	1 23	1 24	NO	832.5
85	43	Total-hexadioxins	389 8157	34 35	84407.246	0 884	3.694	3 694	1 22	1.24	NO	119.6
86	15	123789-HxCDD	389 8157	37 33	171240.172	0 839	7 897	7.897	1 38	1.24	NO	194.8
87	43	Total-hexadioxins	389 8157	37 09	40098.907	0 884	1 755	1.755	1 26	1.24	NO	42.9
88	14	123678-HxCDD	389 8157	36 92	450131.328	0.878	18.985	18.985	1.26	1 24	NO	498 3
89	13	123478-HxCDD	389 8157	36.79	84691 472	0 935	3.667	3 667	1.26	1 24	NO	94 5
90	43	Total-hexadioxins	389.8157	35.82	987021 001	0.884	43.192	43 192	1 21	1 24	NO	778.0
91	43	Total-hexadioxins	389.8157	35 43	160114 008	0 884	7.007	7 007	1.19	1 24	NO	186.3
92	16	1234678-HpCDD	423 7766	41.66	7211799.500	0.974	459 104	459. .	1.03	1.05	NO	2923 4
93	44	Total-heptadioxins	423.7766	40 38	11118522 .	0.974	707 806	707	1 06	1.05	NO	5034.6
94	17	OCDD	457 7377	47.67	42930750....	0.950	4864.7..	4864...	0 88	0 89	NO	29910.8

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Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330 9792	21.43	0.000							1.2
2	48 FUNCTION1 PFK	330 9792	21.27	0.000							0.7
3	48 FUNCTION1 PFK	330.9792	21.13	0.000							1.5
4	48 FUNCTION1 PFK	330 9792	24.99	0 000							3 5
5	48 FUNCTION1 PFK	330.9792	24 70	0.000							1 2
6	48 FUNCTION1 PFK	330.9792	24.66	0.000							1 0
7	48 FUNCTION1 PFK	330.9792	24.52	0.000							1.1
8	48 FUNCTION1 PFK	330.9792	23 67	0 000							0.6
9	48 FUNCTION1 PFK	330.9792	23.54	0 000							2.6
10	48 FUNCTION1 PFK	330 9792	23.34	0 000							2.0
11	48 FUNCTION1 PFK	330.9792	23 27	0.000							2 4
12	48 FUNCTION1 PFK	330.9792	23 22	0 000							2.7
13	48 FUNCTION1 PFK	330.9792	22 58	0 000							4.2
14	48 FUNCTION1 PFK	330.9792	22 54	0 000							3.8
15	48 FUNCTION1 PFK	330.9792	22 43	0 000							2 8
16	48 FUNCTION1 PFK	330 9792	22.33	0.000							1 0
17	48 FUNCTION1 PFK	330.9792	22 18	0 000							2 3
18	48 FUNCTION1 PFK	330.9792	21 95	0 000							3 9
19	48 FUNCTION1 PFK	330.9792	21 83	0 000							3.3
20	48 FUNCTION1 PFK	330.9792	28.32	0.000							0.7
21	48 FUNCTION1 PFK	330.9792	27.92	0 000							1.8
22	48 FUNCTION1 PFK	330.9792	27.48	0.000							1.6
23	48 FUNCTION1 PFK	330 9792	27.18	0.000							1 7
24	48 FUNCTION1 PFK	330 9792	26.74	0.000							0 5
25	48 FUNCTION1 PFK	330.9792	26 65	0 000							2 0
26	48 FUNCTION1 PFK	330 9792	26 56	0.000							1 6
27	48 FUNCTION1 PFK	330 9792	26.21	0.000							0 8
28	48 FUNCTION1 PFK	330.9792	26.11	0.000							2 2
29	48 FUNCTION1 PFK	330.9792	25 76	0 000							1 0
30	48 FUNCTION1 PFK	330.9792	25 67	0 000							2 7
31	48 FUNCTION1 PFK	330.9792	25.48	0.000							1 5
32	48 FUNCTION1 PFK	330 9792	25.30	0.000							2 4

PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49 FUNCTION2 PFK	366 9792	30 45	0 000		0 000					15 3
2	49 FUNCTION2 PFK	366 9792	29 84	0 000		0 000					33 1

PFK3

	# Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	38.10	0 000		0.000					22.2
2	50 FUNCTION3 PFK	380.9760	37.06	0.000		0.000					15 6
3	50 FUNCTION3 PFK	380.9760	34 85	0 000		0.000					15.2
4	50 FUNCTION3 PFK	380.9760	33 59	0.000		0 000					50 0

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	40 47	0 000								0.7
2	51	FUNCTION4 PFK	430 9728	40 40	0 000								1.4
3	51	FUNCTION4 PFK	430 9728	40 33	0 000								1 0
4	51	FUNCTION4 PFK	430.9728	39.91	0.000								1 3
5	51	FUNCTION4 PFK	430 9728	39 88	0 000								2.2
6	51	FUNCTION4 PFK	430.9728	39.71	0.000								0.6
7	51	FUNCTION4 PFK	430.9728	39.36	0 000								1 1
8	51	FUNCTION4 PFK	430.9728	39.24	0.000								1.5
9	51	FUNCTION4 PFK	430.9728	39.13	0 000								2 2
10	51	FUNCTION4 PFK	430.9728	38.97	0 000								1 1
11	51	FUNCTION4 PFK	430.9728	43 04	0.000								1 6
12	51	FUNCTION4 PFK	430.9728	42.89	0 000								0 8
13	51	FUNCTION4 PFK	430.9728	42.75	0 000								1.9
14	51	FUNCTION4 PFK	430.9728	42.47	0.000								2 1
15	51	FUNCTION4 PFK	430.9728	42.41	0.000								1.4
16	51	FUNCTION4 PFK	430.9728	42.21	0.000								3.2
17	51	FUNCTION4 PFK	430 9728	42.15	0.000								2.2
18	51	FUNCTION4 PFK	430 9728	42 00	0.000								1.5
19	51	FUNCTION4 PFK	430.9728	41 87	0.000								0 8
20	51	FUNCTION4 PFK	430 9728	41.57	0.000								0 9
21	51	FUNCTION4 PFK	430.9728	41 49	0.000								1.6
22	51	FUNCTION4 PFK	430.9728	41 39	0 000								1.5
23	51	FUNCTION4 PFK	430.9728	40 94	0 000								2 0
24	51	FUNCTION4 PFK	430.9728	40 86	0 000								1 3
25	51	FUNCTION4 PFK	430.9728	40 76	0 000								1 8
26	51	FUNCTION4 PFK	430.9728	40.60	0 000								1.1
27	51	FUNCTION4 PFK	430.9728	44.73	0 000								0 8
28	51	FUNCTION4 PFK	430 9728	44.69	0 000								0 4
29	51	FUNCTION4 PFK	430 9728	44.58	0.000								1 2
30	51	FUNCTION4 PFK	430 9728	44.42	0.000								0 9
31	51	FUNCTION4 PFK	430.9728	43.95	0 000								1 3
32	51	FUNCTION4 PFK	430.9728	43.82	0 000								0 6
33	51	FUNCTION4 PFK	430 9728	43 78	0.000								1 5
34	51	FUNCTION4 PFK	430.9728	43.20	0 000								0 4

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480 9696	45.56	0.000							1.0
2	52	FUNCTION5 PFK	480 9696	45.46	0.000							0.9
3	52	FUNCTION5 PFK	480 9696	45 40	0.000							1 3
4	52	FUNCTION5 PFK	480 9696	45 32	0 000							0.9
5	52	FUNCTION5 PFK	480.9696	45.29	0.000							0 6
6	52	FUNCTION5 PFK	480.9696	45.24	0.000							0.5
7	52	FUNCTION5 PFK	480.9696	45.21	0 000							0.5
8	52	FUNCTION5 PFK	480.9696	47.37	0.000							0.5
9	52	FUNCTION5 PFK	480.9696	47.13	0 000							1 0
10	52	FUNCTION5 PFK	480.9696	47.06	0.000							1.7
11	52	FUNCTION5 PFK	480 9696	46.83	0 000							0 9
12	52	FUNCTION5 PFK	480 9696	46.69	0.000							1.3
13	52	FUNCTION5 PFK	480.9696	46.65	0.000							0 8
14	52	FUNCTION5 PFK	480.9696	46.52	0.000							0 8
15	52	FUNCTION5 PFK	480.9696	46.44	0 000							1 0
16	52	FUNCTION5 PFK	480.9696	46 42	0 000							1 5
17	52	FUNCTION5 PFK	480.9696	46 37	0.000							1 3
18	52	FUNCTION5 PFK	480.9696	46.13	0.000							0.8
19	52	FUNCTION5 PFK	480.9696	45.95	0 000							0.6
20	52	FUNCTION5 PFK	480 9696	45.78	0.000							0 6
21	52	FUNCTION5 PFK	480 9696	45.73	0 000							1.0
22	52	FUNCTION5 PFK	480 9696	45.67	0 000							1 0
23	52	FUNCTION5 PFK	480 9696	45 59	0.000							0 9
24	52	FUNCTION5 PFK	480 9696	48 92	0.000							0 6
25	52	FUNCTION5 PFK	480 9696	48 80	0 000							0 4
26	52	FUNCTION5 PFK	480 9696	48 72	0.000							0 9
27	52	FUNCTION5 PFK	480 9696	48 68	0.000							0 3
28	52	FUNCTION5 PFK	480.9696	48 54	0.000							0 5
29	52	FUNCTION5 PFK	480.9696	48.49	0.000							0 4
30	52	FUNCTION5 PFK	480.9696	48.29	0.000							1 4
31	52	FUNCTION5 PFK	480 9696	48.07	0.000							1.5
32	52	FUNCTION5 PFK	480 9696	48.03	0.000							1 1
33	52	FUNCTION5 PFK	480 9696	47.95	0 000							0.5
34	52	FUNCTION5 PFK	480 9696	47.91	0 000							0.4
35	52	FUNCTION5 PFK	480 9696	47.84	0 000							0.6
36	52	FUNCTION5 PFK	480 9696	47.71	0 000							0.3
37	52	FUNCTION5 PFK	480 9696	47.54	0 000							0 6
38	52	FUNCTION5 PFK	480 9696	47 49	0.000							1.3
39	52	FUNCTION5 PFK	480 9696	47 42	0.000							1.0
40	52	FUNCTION5 PFK	480.9696	48.99	0 000							0.5
41	52	FUNCTION5 PFK	480 9696	48.95	0 000							0 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD.	375.8364	28 42	0 000		0 000					29 5
2	53	FUNCTION1 HXCD.	375 8364	27.93	0 000		0.000					4 8
3	53	FUNCTION1 HXCD	375.8364	27.74	0 000		0.000					4.9
4	53	FUNCTION1 HXCD..	375 8364	26 45	0.000		0 000					50 3
5	53	FUNCTION1 HXCD...	375.8364	26.17	0.000		0 000					15.1
6	53	FUNCTION1 HXCD...	375.8364	25.44	0.000		0 000					3.1
7	53	FUNCTION1 HXCD...	375.8364	25.39	0.000		0.000					3.3
8	53	FUNCTION1 HXCD. .	375.8364	24.24	0 000		0.000					52 3
9	53	FUNCTION1 HXCD .	375.8364	21.31	0 000		0 000					2 9

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD.	409.7974	28 27	0.000		0.000					2 2
2	54	FUNCTION1 HPCD.	409 7974	23 06	0.000		0.000					2 5

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	33.16	0 000		0.000					34 7
2	55	FUNCTION2 HPCD	409 7974	30 49	0.000		0.000					7 3
3	55	FUNCTION2 HPCD .	409 7974	30 46	0.000		0.000					3 9
4	55	FUNCTION2 HPCD..	409.7974	30.17	0.000		0.000					7 8

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445 7555	38.76	0.000		0.000					5 0
2	56	FUNCTION3 OCDPE	445 7555	36 99	0.000		0 000					6 0
3	56	FUNCTION3 OCDPE	445.7555	36.96	0.000		0 000					3 0
4	56	FUNCTION3 OCDPE	445 7555	36 91	0 000		0.000					3.7
5	56	FUNCTION3 OCDPE	445.7555	36 68	0 000		0.000					3.9
6	56	FUNCTION3 OCDPE	445.7555	35.47	0 000		0 000					3 3

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	41.63	0.000		0 000					10.2
2	57	FUNCTION4 NCDPE	479 7165	40.20	0.000		0.000					2.9
3	57	FUNCTION4 NCDPE	479.7165	39.84	0.000		0.000					2 9
4	57	FUNCTION4 NCDPE	479.7165	39.41	0.000		0.000					2215.9
5	57	FUNCTION4 NCDPE	479.7165	41 70	0 000		0.000					5.0

ETHERS6

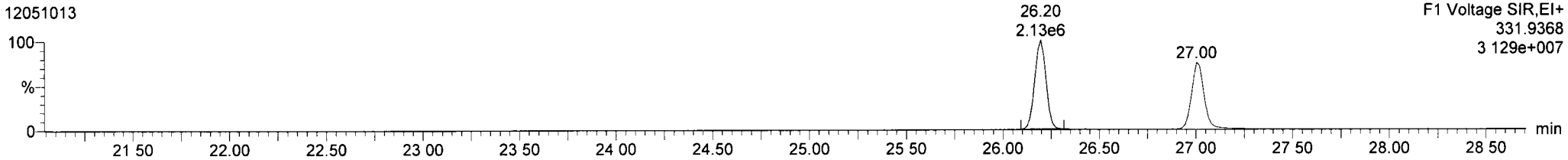
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed. Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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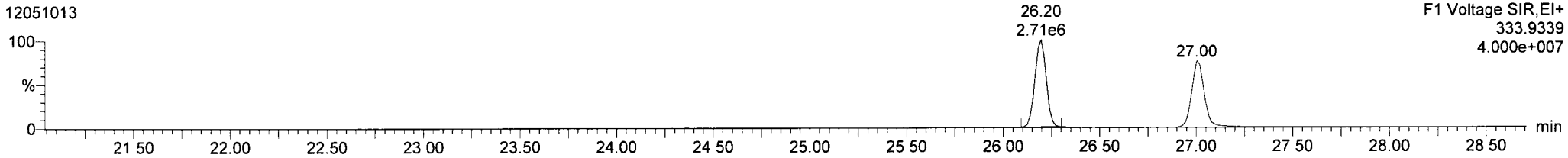
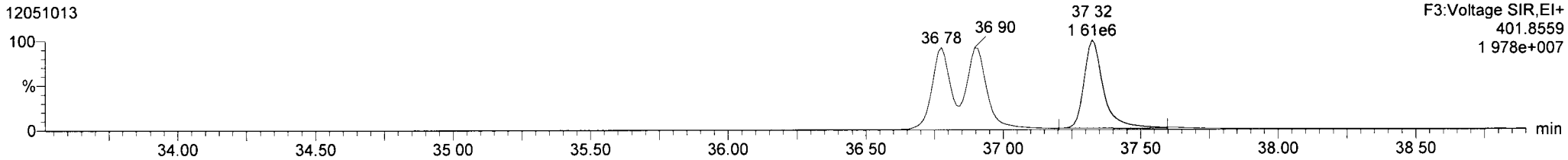


13C-123789-HxCDD



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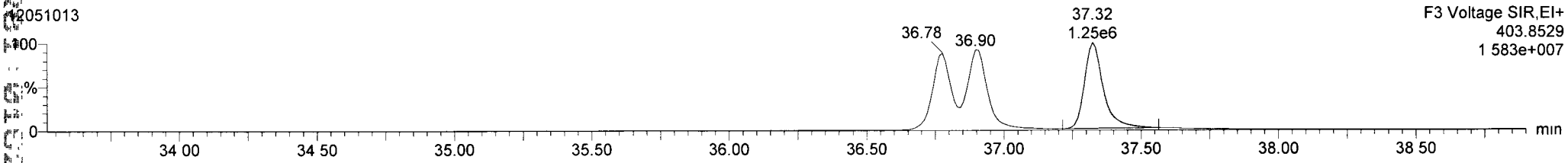
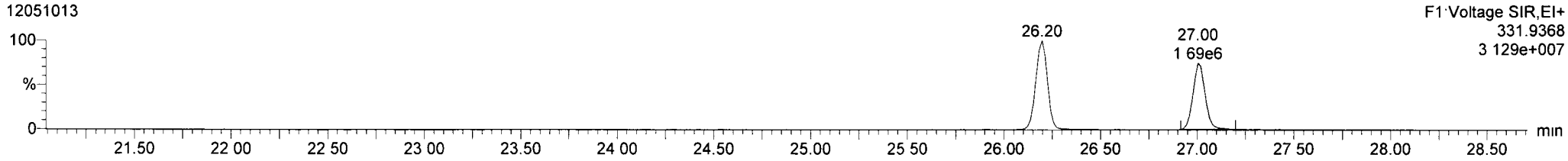


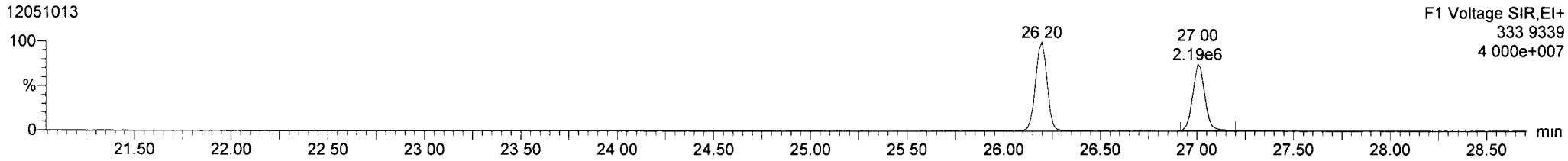
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

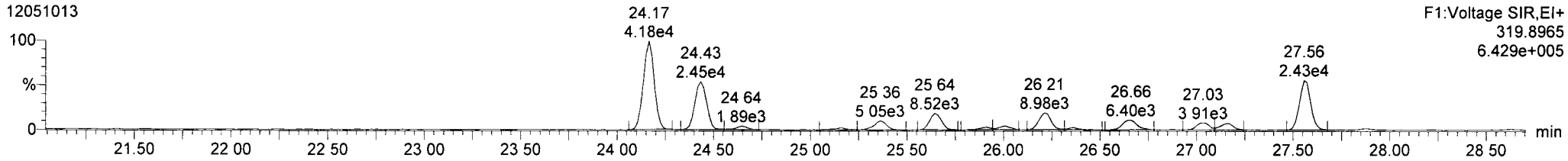
13C-2378-TCDD



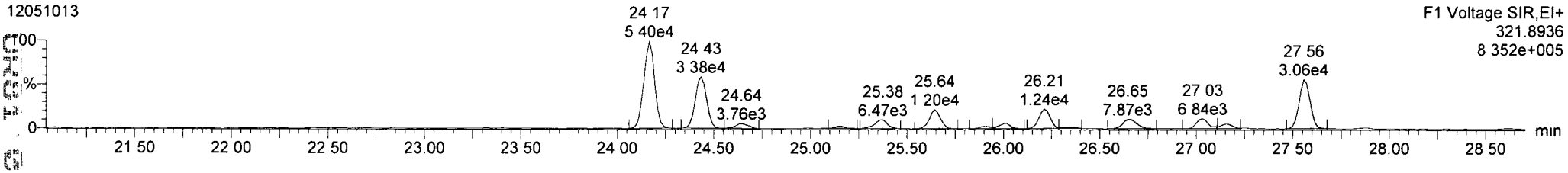
13C-2378-TCDD



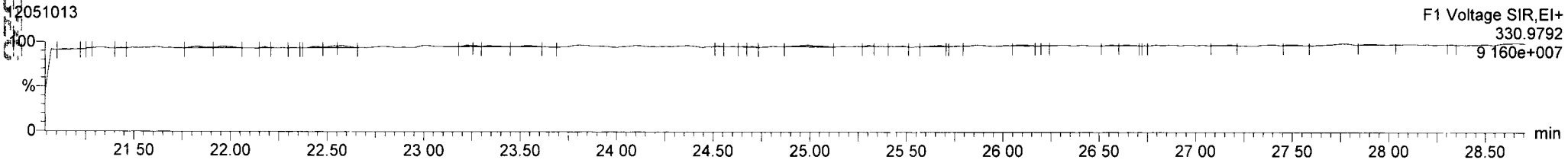
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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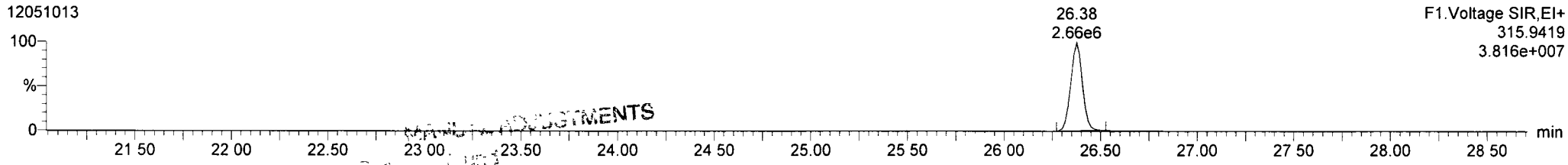
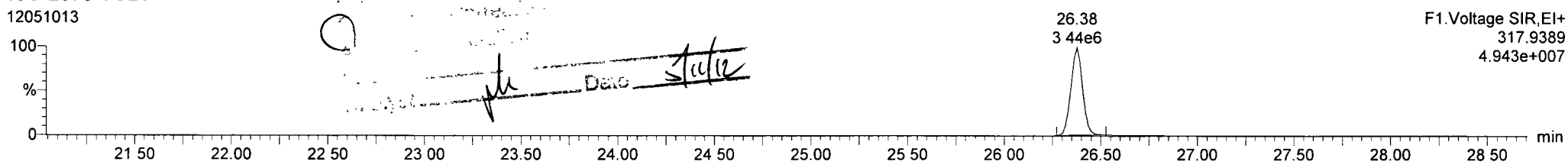
Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

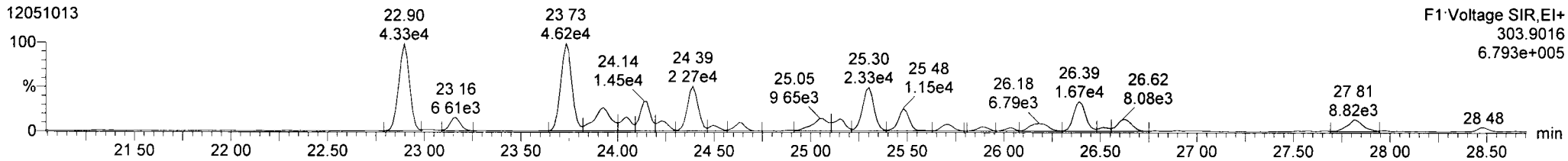
13C-2378-TCDF



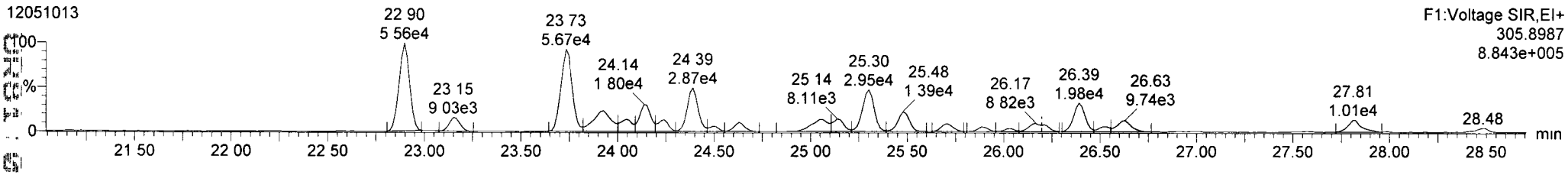
13C-2378-TCDF



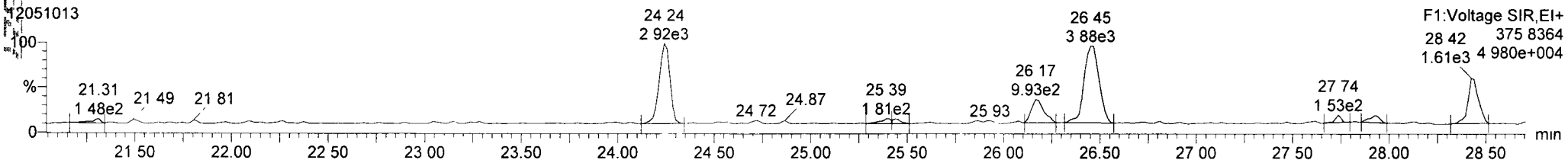
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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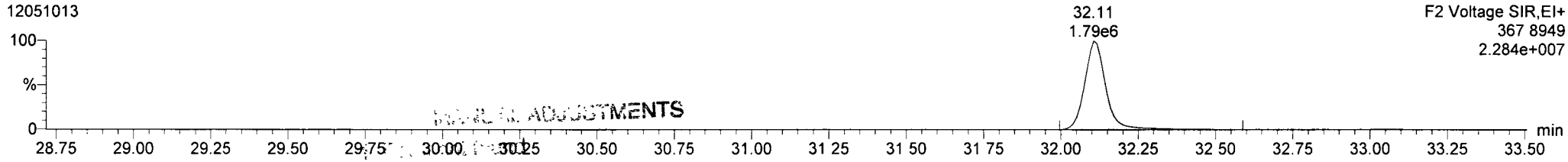
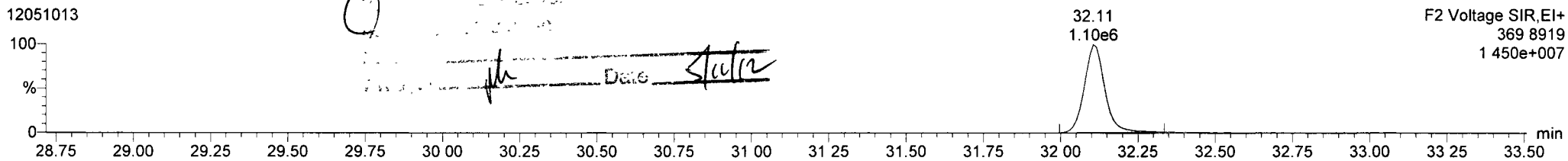
Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

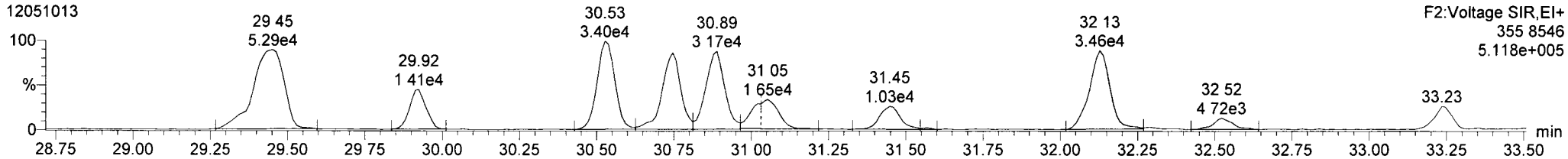
13C-12378-PeCDD



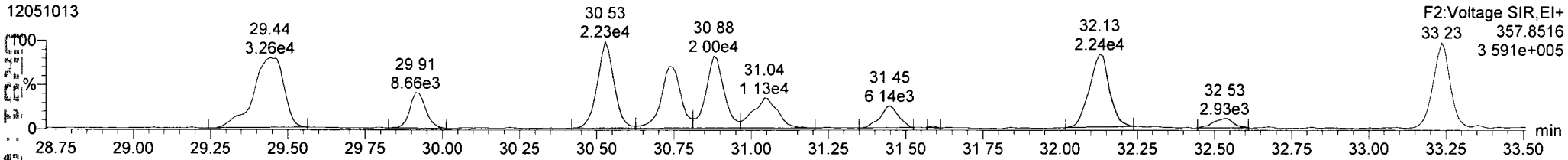
13C-12378-PeCDD



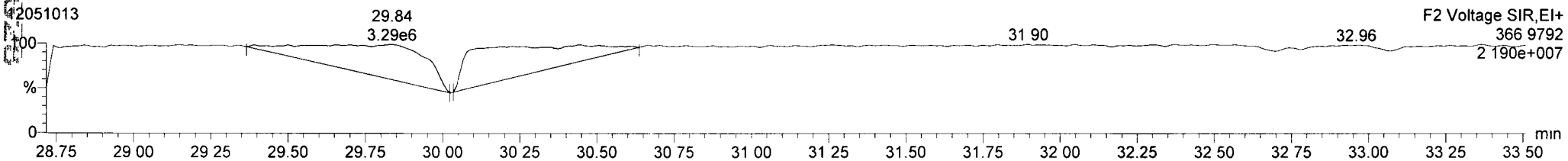
Total-pentadioxins



Total-pentadioxins



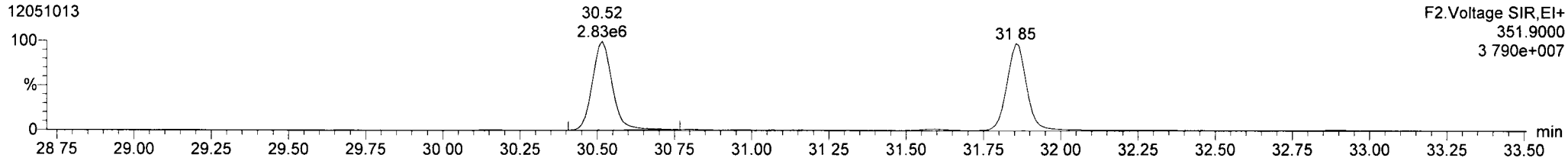
FUNCTION2 PFK



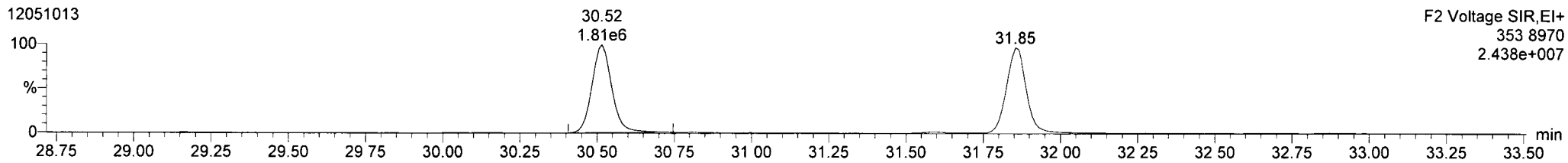
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

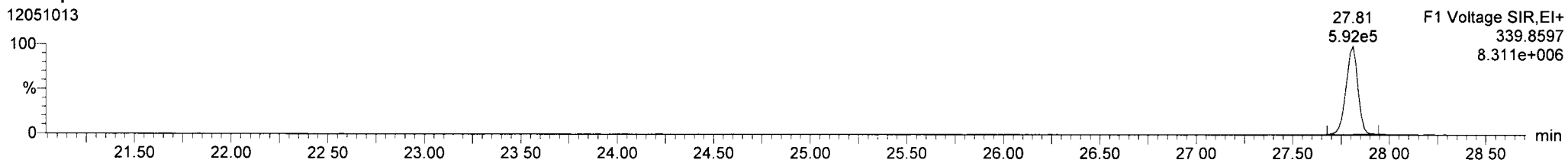
13C-12378-PeCDF



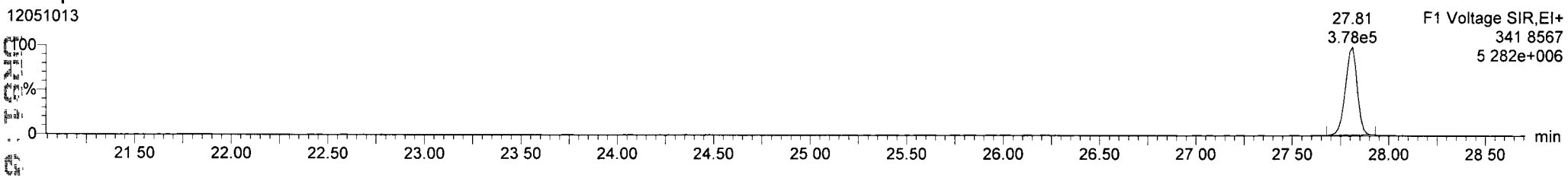
13C-12378-PeCDF



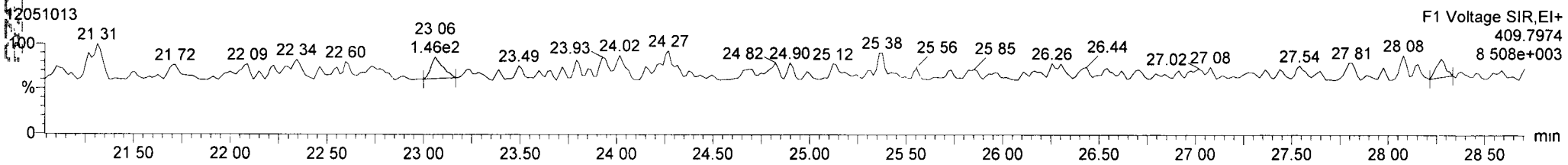
Total-penta1



Total-penta1



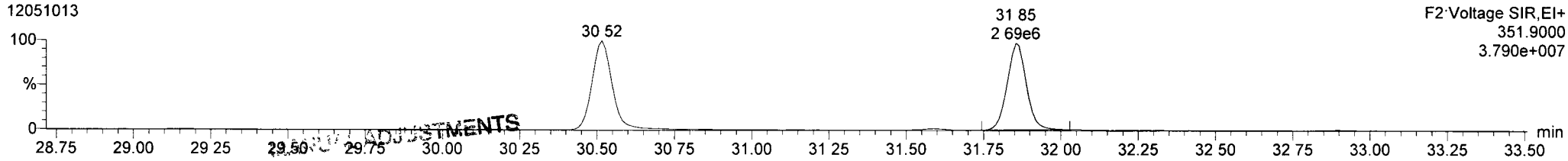
FUNCTION1 HPCDPE



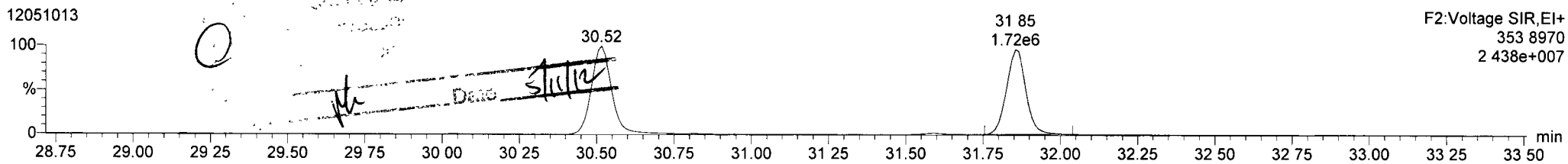
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

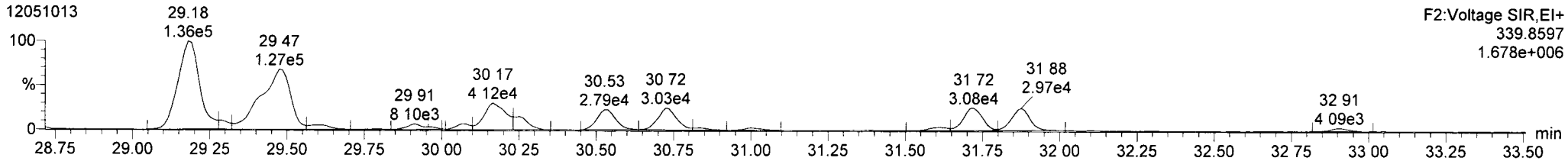
13C-23478-PeCDF



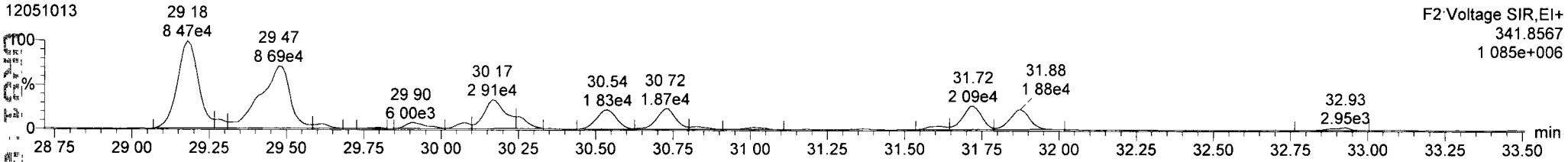
13C-23478-PeCDF



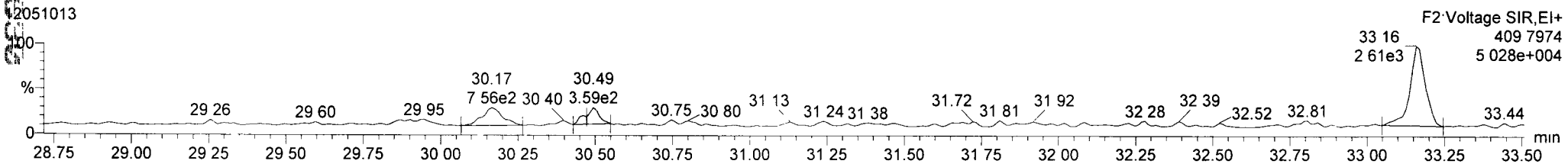
Total-pentafurans



Total-pentafurans



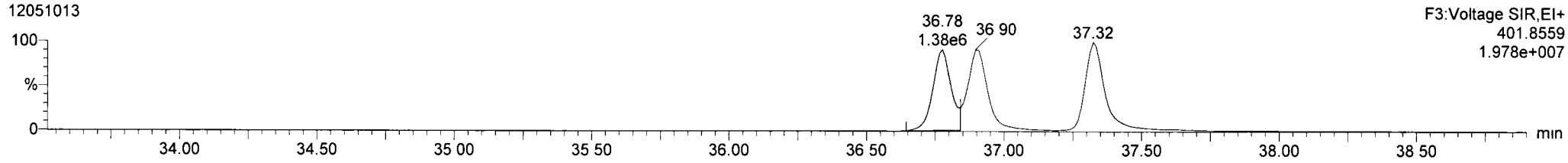
FUNCTION2 HPCDPE



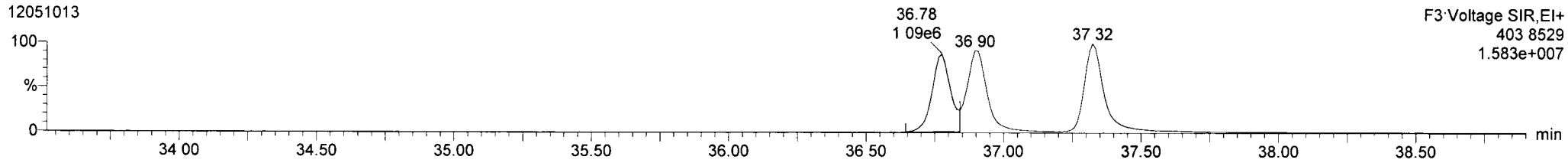
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25.01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

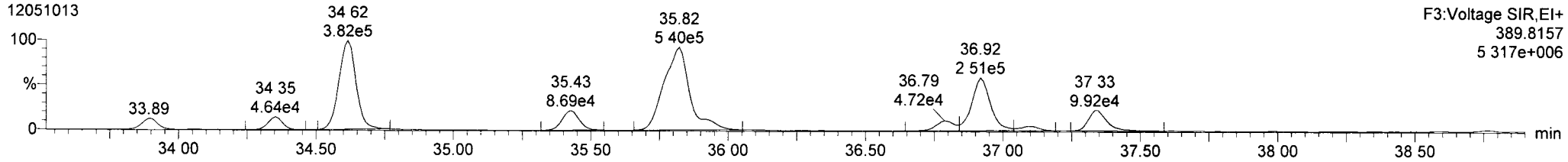
13C-123478-HxCDD



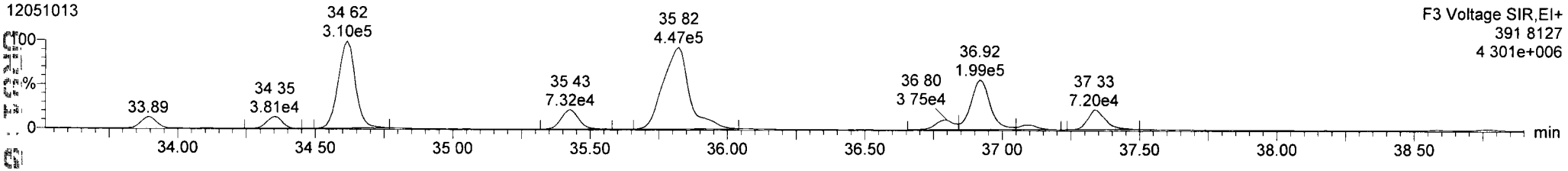
13C-123478-HxCDD



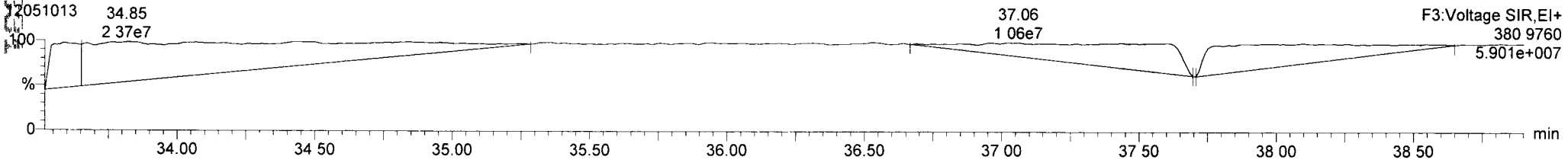
Total-hexadioxins



Total-hexadioxins



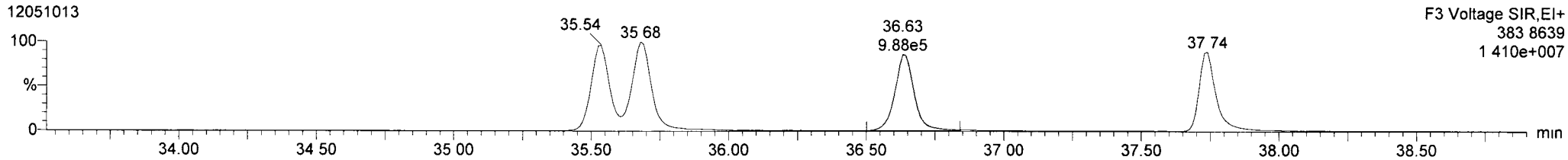
FUNCTION3 PFK



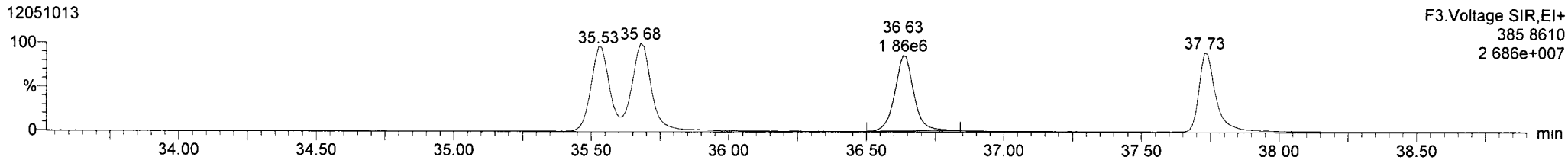
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

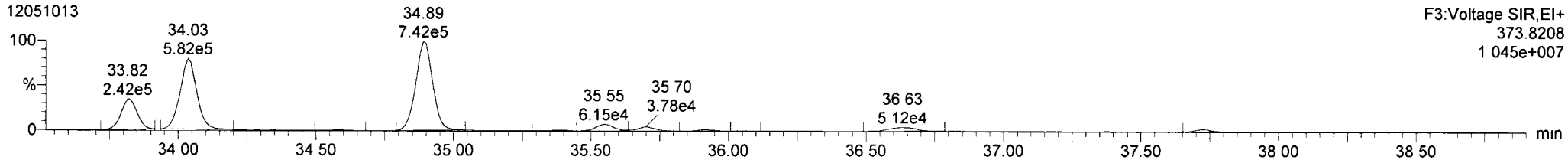
13C-234678-HxCDF



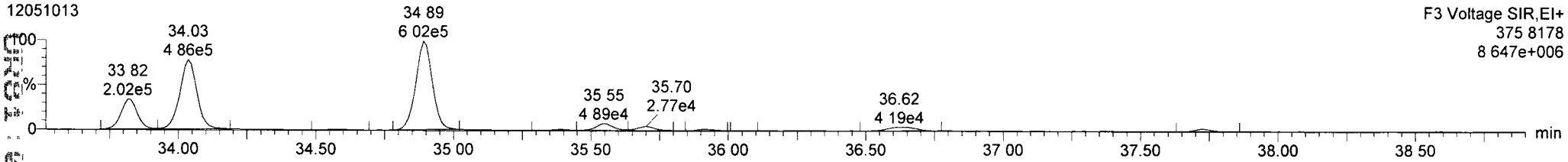
13C-234678-HxCDF



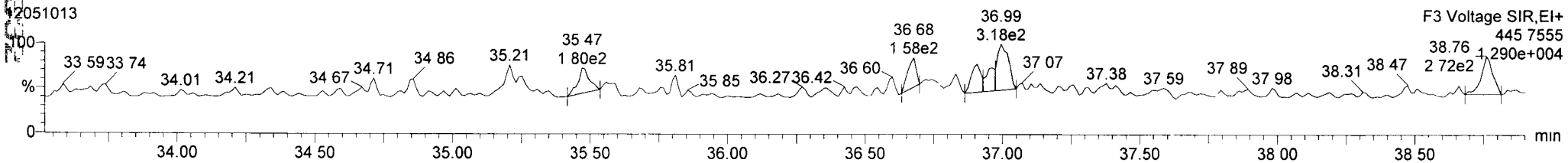
Total-hexafurans



Total-hexafurans



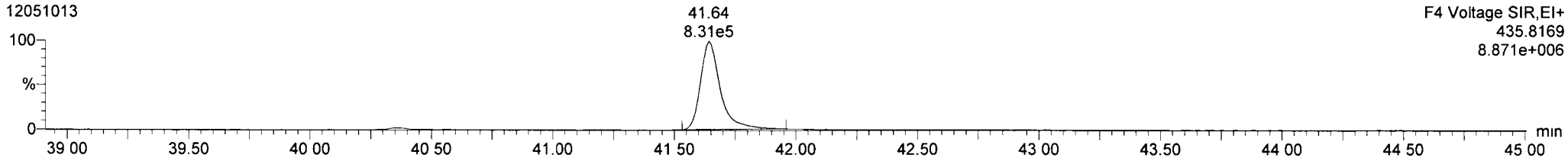
FUNCTION3 OCDPE



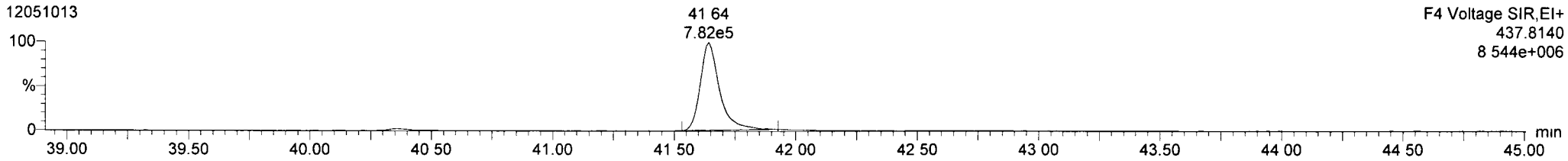
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

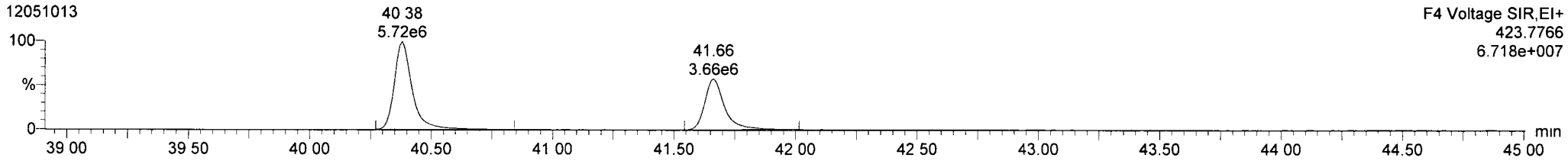
13C-1234678-HpCDD



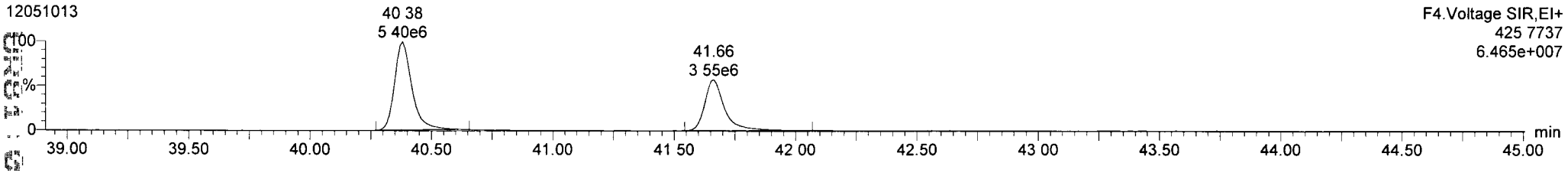
13C-1234678-HpCDD



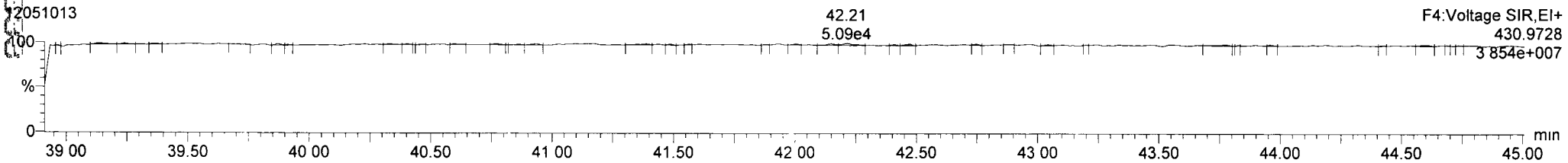
Total-heptadioxins



Total-heptadioxins



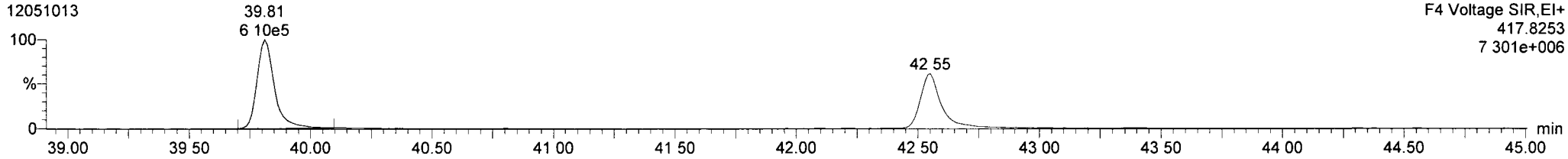
FUNCTION4 PFK



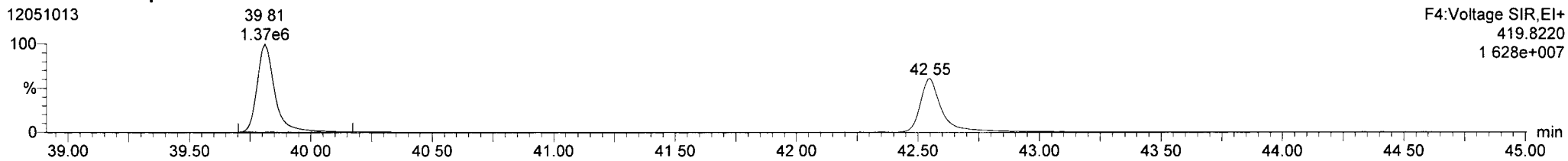
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

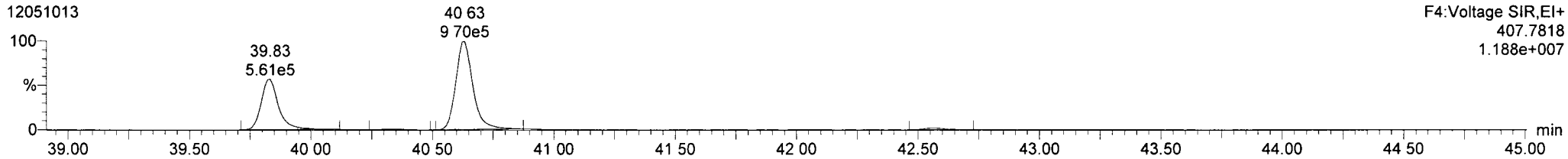
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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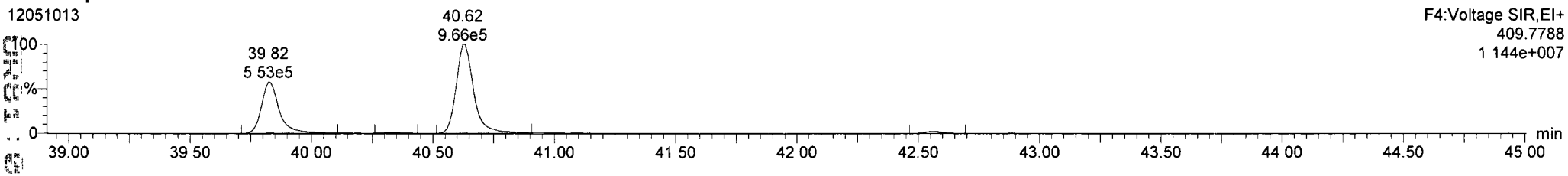
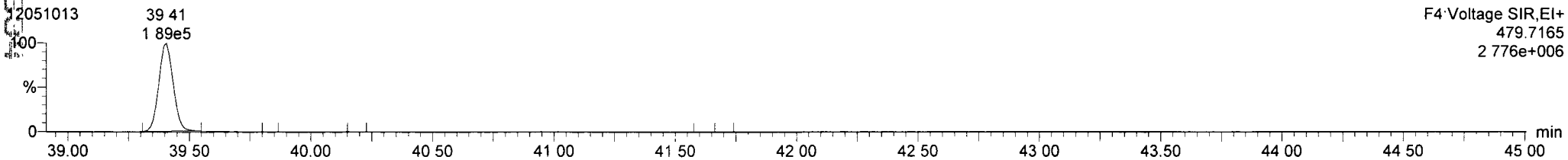


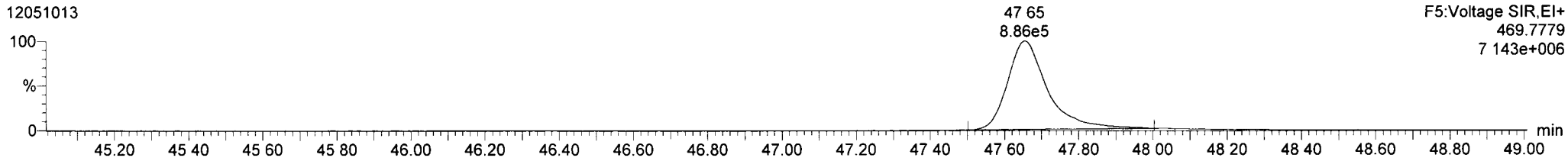
FUNCTION4 NCDPE



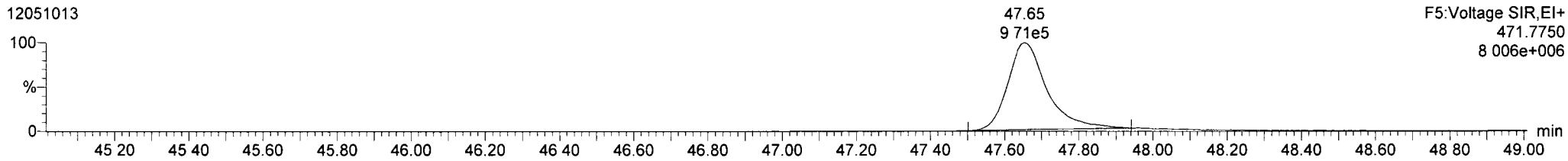
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27:29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

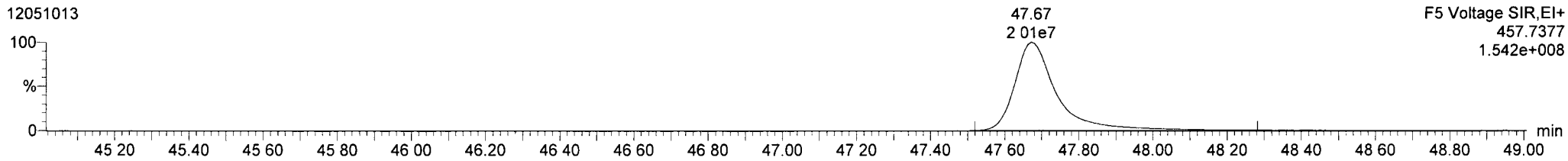
13C-OCDD



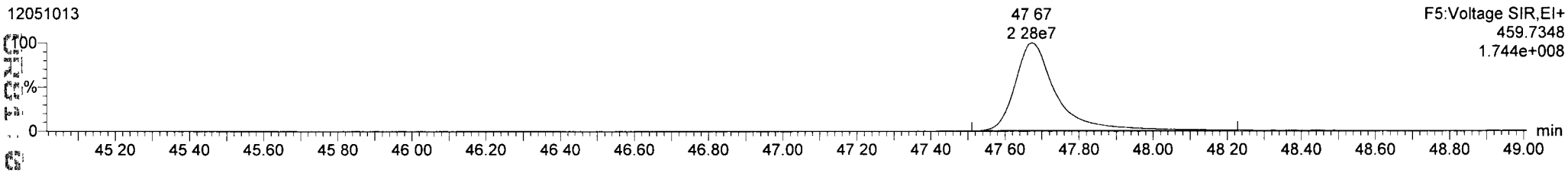
13C-OCDD



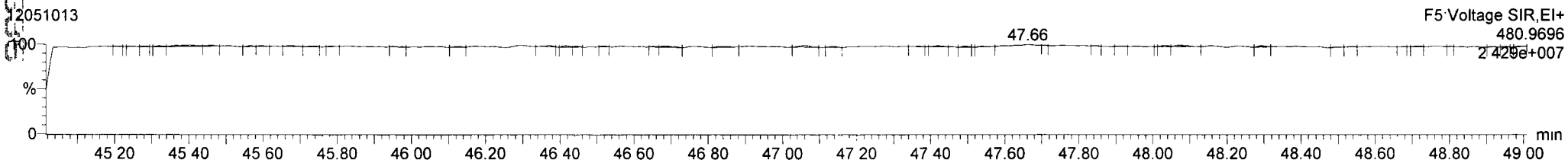
OCDD



OCDD



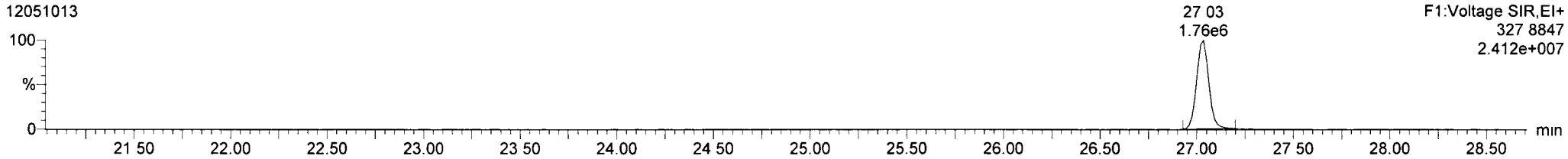
FUNCTION5 PFK



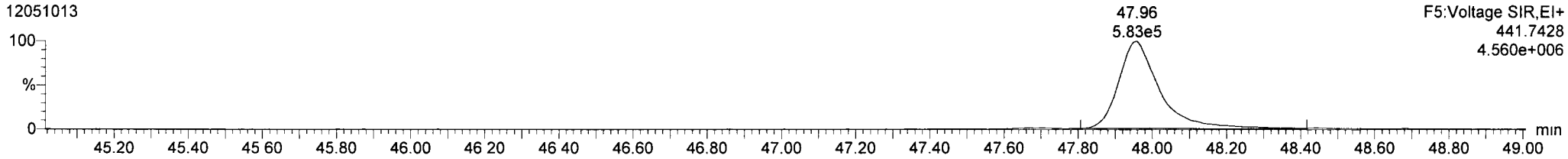
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:27.29 Pacific Daylight Time

Name: 12051013, Date: 10-May-2012, Time: 20:12:24, ID: UR81G, Conditions: AUTOSPEC01, User: pk

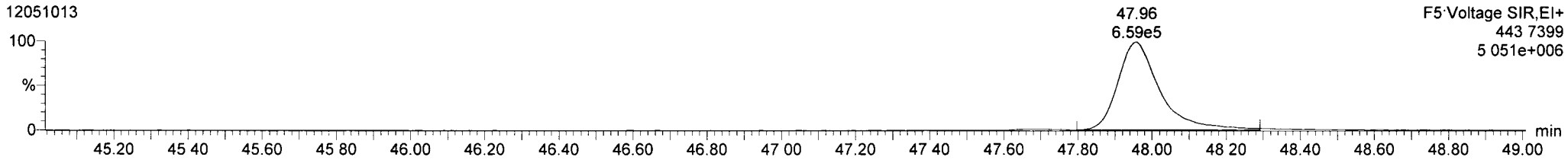
37CL-2378-TCDD



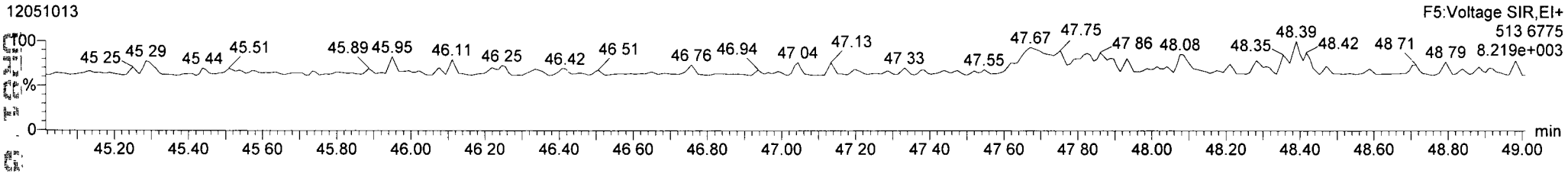
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed. Friday, May 11, 2012 10:44:05 Pacific Daylight Time

pk 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC	
1	1	2378-TCDF	303.9016	26 407	26.408	20633	20633	0.866	bd		0.82	0.77	22.6	NO	1.147	1.147	
2	2	12378-PeCDF	339.8597	30.549	30 560	6336	6336	0.907	bb		1 66	1 55	12.5	NO	0.448	0.448	X
3	3	23478-PeCDF	339 8597	31 909	31.898	8857	8857	0.936	db		1.45	1.55	17.1	NO	0.628	0.628	
4	4	123478-HxCDF	373.8208	35 569	35.558	27103	27103	1.082	dd		1.21	1 24	66.3	NO	2.538	2.538	
5	5	234678-HxCDF	373.8208	36.633	36 655	6247	6247	1.070	MM		1.35	1.24	19.3	NO	0.749	0.749	
6	6	123678-HxCDF	373.8208	35 712	35.712	13307	13307	1.048	db		1.19	1.24	29 4	NO	1 200	1 200	
7	7	123789-HxCDF	373.8208	37 740	37.762	6389	6389	1.020	bb		1.09	1.24	15.4	NO	0.801	0.801	
8	8	1234678-HpCDF	407 7818	39 833	39.842	238397	238397	1.214	bd		1.01	1.05	520.8	NO	28 110	28.110	
9	9	1234789-HpCDF	407 7818	42 574	42.575	11764	11764	1.254	bb		1.09	1.05	22.6	NO	1.635	1.635	
10	10	OCDF	441.7428	47.950	47.931	481844	481844	1.105	bd		0.86	0.89	665.2	NO	99.413	99.413	
11	11	2378-TCDD	319.8965	27.064	27.048	0	2005	1.046	bd		0.35	0 77	5.6	YES	0.000	0.134	B
12	12	12378-PeCDD	355.8546	32 150	32.137	0	10111	0 973	bb		1.84	1.55	27.5	YES	0.000	1.021	
13	13	123478-HxCDD	389.8157	36.797	36.797	15951	15951	0 935	bd		1.24	1.24	34.7	NO	2 184	2 184	
14	14	123678-HxCDD	389.8157	36.918	36 918	77359	77359	0.878	dd		1.21	1 24	156 6	NO	9 734	9.734	
15	15	123789-HxCDD	389.8157	37.334	37 313	32668	32668	0 839	bb		1.21	1.24	66 9	NO	4 619	4.619	
16	16	1234678-HpCDD	423.7766	41.675	41.665	1769361	1769361	0.974	bb		1.03	1.05	1344 1	NO	289 753	289.753	
17	17	OCDD	457.7377	47.672	47 659	10436330	10436330	0.950	bd		0.89	0.89	3659.4	NO	2504.863	2504 8...	E
18	18	13C-2378-TCDF	315 9419	26 392	26 392	2076817		1.484	bb	69.7	0.77	0 77	2659.0	NO	69.741		
19	19	13C-12378-PeCDF	351.9000	30.538	30 534	1558247		1.048	bd	74 1	1.53	1 55	3464 1	NO	74.112		
20	20	13C-23478-PeCDF	351.9000	31 875	31.871	1506839		1.003	bb	74 9	1.56	1.55	3589.5	NO	74.859		
21	21	13C-123478-HxCDF	383 8639	35 548	35 548	986943		1.186	bd	76 9	0.51	0 51	947.7	NO	76.942		
22	22	13C-123678-HxCDF	383.8639	35 690	35 701	1057513		1 315	dd	74 3	0.49	0.51	969 8	NO	74 329		
23	23	13C-234678-HxCDF	383.8639	36 633	36.633	779088		1.223	bb	58 9	0.51	0.51	700 0	NO	58 868		
24	24	13C-123789-HxCDF	383 8639	37.751	37.740	781734		1 056	bb	68 4	0.52	0.51	740.2	NO	68.394		
25	25	13C-1234678-HpCDF	417.8253	39.822	39.822	698335		1.011	bd	63.8	0.44	0.44	748.8	NO	63.820		
26	26	13C-1234789-HpCDF	417.8253	42.563	42.574	573730		0.741	bd	71.6	0.43	0.44	513.5	NO	71.610		
27	27	13C-1234-TCDD	331.9368	26.213	26.272	2006115		1.000	bb	100 0	0.78	0.77	3416.3	NO	100 000		
28	28	13C-2378-TCDD	331.9368	27 034	27 035	1426017		0.956	bb	74 3	0.77	0.77	2299.8	NO	74 326		
29	29	13C-12378-PeCDD	367 8949	32 128	32 123	1017561		0.663	bd	76 5	1 61	1.55	2744.0	NO	76 453		
30	30	13C-123478-HxCDD	401.8559	36 775	36.764	780952		1.024	bd	70 5	1.27	1 24	1097 0	NO	70 499		
31	31	13C-123678-HxCDD	401.8559	36 907	36 896	905367		1.113	db	75 2	1.27	1.24	1161.2	NO	75 214		
32	32	13C-1234678-HpCDD	435.8169	41 653	41 675	626753		0.815	bd	71 1	1.04	1 05	1129 0	NO	71 071		
33	33	13C-OCDD	469.7779	47 645	47 691	877075		0.717	bd	56 5	0.88	0.89	672 0	NO	113.055		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.323	37 368	1081884		1.000	bb	100 0	1.26	1.24	1460.0	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 370			0 866							5 844	7.736
36	36	Total-penta1	339 8597		28.210										7.689	7.689 12.708
37	37	Total-pentafurans	339.8597		30.790			0 921						11.223	3 534	5.019
38	38	Total-hexafurans	373.8208		35.760			1.055							46.527	46 860
39	39	Total-heptafurans	407 7818		41 160			1.234							98 234	98 234
40	40	Total-Furans	303 9016		0 000			1 050							261.683	265.394
41	41	Total-tetradioxins	319 8965		25.880			1.046							21 709	22.712
42	42	Total-pentadioxins	355 8546		30.950			0 973							25.055	26.268
43	43	Total-hexadioxins	389.8157		35.940			0.884							95.461	95.461
44	44	Total-heptadioxins	423.7766		40.980			0 974							764.971	764.971
45	45	Total-Dioxins	319.8965		0.000			0 942							3412.060	3414.2. .
46	46	Total-TEQ	319.8965		0.000										3673.743	3679.6 .
47	47	37CL-2378-TCDD	327.8847	27.049	27.025	753820		1 037					4123 5		36.230	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0 000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0 000	
57	57	FUNCTION4 NCDPE	479.7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0.000										0.000	

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 17	6170.508	0.866	0 343	0 343	0.75	0.77	NO	6.6
2	35	Total-tetrafurans	303.9016	25 08	5399 316	0.866	0.300	0.300	0 68	0.77	NO	3 9
3	35	Total-tetrafurans	303.9016	24 82	0 000	0.866	0.000	0.150	2 83	0 77	YES	11.7
4	35	Total-tetrafurans	303.9016	24 63	0.000	0.866	0.000	0 157	0.99	0.77	YES	4 0
5	35	Total-tetrafurans	303.9016	24.42	10170.232	0.866	0.565	0 565	0 77	0.77	NO	11.9
6	35	Total-tetrafurans	303.9016	24 26	2316.578	0.866	0.129	0.129	0 69	0 77	NO	2.6
7	35	Total-tetrafurans	303.9016	24.17	8048.433	0 866	0 447	0 447	0 78	0.77	NO	9.3
8	35	Total-tetrafurans	303.9016	24.06	0.000	0 866	0 000	0 229	1.12	0.77	YES	5.8
9	35	Total-tetrafurans	303.9016	23 94	0.000	0 866	0 000	0 343	0 64	0.77	YES	5.1
10	35	Total-tetrafurans	303.9016	23.75	21361.442	0 866	1 188	1 188	0 72	0.77	NO	23.4
11	35	Total-tetrafurans	303.9016	23.18	0 000	0 866	0 000	0 173	0 96	0.77	YES	4.2
12	35	Total-tetrafurans	303.9016	22 93	3746 851	0 866	0.208	0.208	0.82	0 77	NO	3 4
13	35	Total-tetrafurans	303.9016	27 90	0 000	0 866	0 000	0 146	0.95	0.77	YES	3 4
14	35	Total-tetrafurans	303.9016	27.83	0 000	0 866	0 000	0 088	1 45	0 77	YES	3 1
15	35	Total-tetrafurans	303.9016	26 63	0 000	0 866	0 000	0 329	0 90	0 77	YES	5 3
16	1	2378-TCDF	303.9016	26.41	20632.694	0 866	1 147	1 147	0 82	0 77	NO	22.6
17	35	Total-tetrafurans	303.9016	26 23	0.000	0.866	0.000	0 172	0 96	0 77	YES	4.2
18	35	Total-tetrafurans	303.9016	26.18	0.000	0.866	0.000	0 106	0 53	0.77	YES	3.1
19	35	Total-tetrafurans	303.9016	25.70	2678.514	0.866	0.149	0.149	0 77	0 77	NO	3 2
20	35	Total-tetrafurans	303.9016	25.50	14575.371	0.866	0.810	0.810	0 71	0.77	NO	16.2
21	35	Total-tetrafurans	303 9016	25 32	10013.558	0.866	0 557	0 557	0 82	0 77	NO	11 1

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339 8597	27.83	108061.606		7.689	7.689	1.54	1 55	NO	425 2

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339.8597	30 08	1074.199	0.921	0 076	0 076	1 57	1 55	NO	3.0
2	37	Total-pentafurans	339.8597	29 49	26224.751	0 921	1 857	1 857	1 57	1 55	NO	50.7
3	37	Total-pentafurans	339.8597	29 42	0.000	0 921	0 000	0 513	0 96	1 55	YES	22.9
4	37	Total-pentafurans	339.8597	29 29	0 000	0 921	0 000	0 175	0 84	1 55	YES	6 3
5	3	23478-PeCDF	339.8597	31 91	8857 174	0 936	0 628	0 628	1 45	1 55	NO	17 1
6	37	Total-pentafurans	339 8597	31.74	0 000	0 921	0 000	0 455	1 22	1.55	YES	12.6
7	37	Total-pentafurans	339.8597	30.76	7400.001	0.921	0.524	0.524	1.57	1.55	NO	16 6
8	2	12378-PeCDF	339.8597	30.55	6335.982	0.907	0.448	0.448	1.66	1.55	NO	12 5
9	37	Total-pentafurans	339.8597	30.19	0 000	0.921	0.000	0.343	2.24	1.55	YES	15 0

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Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	7	123789-HxCDF	373.8208	37 74	6388.744	1.020	0 801	0.801	1 09	1.24	NO	15.4
2	6	123678-HxCDF	373 8208	35 71	13307.326	1.048	1.200	1.200	1 19	1.24	NO	29 4
3	4	123478-HxCDF	373 8208	35 57	27103.123	1.082	2.538	2.538	1 21	1.24	NO	66.3
4	38	Total-hexafurans	373.8208	35.38	0.000	1.055	0 000	0 333	0.96	1.24	YES	6 8
5	38	Total-hexafurans	373.8208	34.91	200800 953	1.055	21.116	21 116	1.21	1 24	NO	488.5
6	38	Total-hexafurans	373.8208	34.60	2994.117	1.055	0.315	0.315	1.12	1.24	NO	8.3
7	38	Total-hexafurans	373.8208	34 05	141843.953	1.055	14.916	14.916	1.17	1.24	NO	337.9
8	38	Total-hexafurans	373.8208	33.84	46500 252	1.055	4.890	4 890	1.10	1 24	NO	115.1
9	5	234678-HxCDF	373.8208	36 63	6246.515	1.070	0.749	0.749	1.35	1.24	NO	19 3

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42 57	11763.704	1.254	1.635	1.635	1.09	1.05	NO	22 6
2	39	Total-heptafurans	407.7818	40.64	533297.000	1.234	67 934	67.934	1.00	1 05	NO	1101.0
3	39	Total-heptafurans	407.7818	40 35	4360.384	1 234	0 555	0 555	1.03	1 05	NO	8 0
4	8	1234678-HpCDF	407.7818	39.83	238397.086	1 214	28 110	28.110	1 01	1 05	NO	520 8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 17	6170.508	0.866	0.343	0.343	0.75	0.77	NO	6.6
2	35	Total-tetrafurans	303.9016	25.08	5399.316	0.866	0 300	0 300	0.68	0 77	NO	3 9
3	35	Total-tetrafurans	303.9016	24.82	0.000	0 866	0 000	0 150	2.83	0 77	YES	11 7
4	35	Total-tetrafurans	303.9016	24.63	0.000	0.866	0 000	0 157	0.99	0 77	YES	4 0
5	35	Total-tetrafurans	303 9016	24.42	10170 232	0 866	0.565	0 565	0.77	0.77	NO	11.9
6	35	Total-tetrafurans	303.9016	24.26	2316.578	0.866	0.129	0 129	0.69	0.77	NO	2.6
7	35	Total-tetrafurans	303.9016	24.17	8048 433	0.866	0.447	0 447	0.78	0.77	NO	9.3
8	35	Total-tetrafurans	303.9016	24.06	0 000	0.866	0.000	0.229	1 12	0.77	YES	5.8
9	35	Total-tetrafurans	303.9016	23 94	0.000	0.866	0 000	0 343	0.64	0.77	YES	5.1
10	35	Total-tetrafurans	303 9016	23.75	21361.442	0.866	1 188	1.188	0 72	0.77	NO	23.4
11	35	Total-tetrafurans	303 9016	23 18	0 000	0.866	0 000	0 173	0.96	0.77	YES	4.2
12	35	Total-tetrafurans	303.9016	22.93	3746.851	0.866	0 208	0.208	0 82	0.77	NO	3.4
13	40	Total-Furans	303 9016	21 34	9649 141	1.050	0.442	0 442	0.73	0.77	NO	11 9
14	35	Total-tetrafurans	303.9016	27.90	0.000	0.866	0 000	0 146	0.95	0.77	YES	3.4
15	35	Total-tetrafurans	303 9016	27.83	0.000	0.866	0 000	0 088	1 45	0.77	YES	3 1
16	35	Total-tetrafurans	303 9016	26 63	0 000	0 866	0.000	0 329	0 90	0.77	YES	5 3
17	1	2378-TCDF	303.9016	26.41	20632.694	0 866	1 147	1 147	0.82	0.77	NO	22.6
18	35	Total-tetrafurans	303.9016	26.23	0.000	0 866	0 000	0.172	0.96	0.77	YES	4.2
19	35	Total-tetrafurans	303.9016	26.18	0 000	0 866	0 000	0.106	0.53	0.77	YES	3.1
20	35	Total-tetrafurans	303.9016	25.70	2678.514	0.866	0 149	0 149	0.77	0.77	NO	3 2
21	35	Total-tetrafurans	303.9016	25.50	14575 371	0.866	0.810	0.810	0 71	0.77	NO	16.2
22	35	Total-tetrafurans	303.9016	25.32	10013.558	0.866	0 557	0 557	0 82	0 77	NO	11 1
23	37	Total-pentafurans	339.8597	30.08	1074.199	0.921	0 076	0 076	1 57	1.55	NO	3 0
24	37	Total-pentafurans	339.8597	29.49	26224 751	0.921	1.857	1 857	1 57	1.55	NO	50.7
25	37	Total-pentafurans	339 8597	29.42	0.000	0.921	0.000	0.513	0 96	1 55	YES	22 9
26	37	Total-pentafurans	339.8597	29 29	0.000	0.921	0.000	0.175	0 84	1 55	YES	6 3
27	3	23478-PeCDF	339.8597	31.91	8857.174	0 936	0.628	0.628	1 45	1.55	NO	17 1
28	37	Total-pentafurans	339 8597	31 74	0.000	0 921	0 000	0 455	1 22	1 55	YES	12 6
29	37	Total-pentafurans	339 8597	30 76	7400.001	0.921	0.524	0 524	1.57	1.55	NO	16 6
30	2	12378-PeCDF	339 8597	30 55	6335.982	0.907	0 448	0 448	1.66	1 55	NO	12 5
31	37	Total-pentafurans	339.8597	30 19	0.000	0 921	0 000	0 343	2.24	1.55	YES	15 0
32	7	123789-HxCDF	373 8208	37.74	6388.744	1 020	0.801	0 801	1.09	1.24	NO	15 4
33	6	123678-HxCDF	373.8208	35.71	13307.326	1 048	1.200	1.200	1.19	1 24	NO	29.4
34	4	123478-HxCDF	373 8208	35 57	27103.123	1 082	2.538	2 538	1.21	1 24	NO	66 3
35	38	Total-hexafurans	373 8208	35 38	0.000	1.055	0 000	0 333	0 96	1.24	YES	6 8
36	38	Total-hexafurans	373 8208	34 91	200800.953	1.055	21 116	21 116	1 21	1.24	NO	488.5
37	38	Total-hexafurans	373 8208	34 60	2994 117	1 055	0.315	0 315	1 12	1.24	NO	8 3
38	38	Total-hexafurans	373 8208	34 05	141843 953	1.055	14.916	14 916	1 17	1.24	NO	337.9
39	38	Total-hexafurans	373 8208	33 84	46500 252	1.055	4 890	4.890	1.10	1.24	NO	115.1
40	9	1234789-HpCDF	407 7818	42 57	11763.704	1.254	1 635	1.635	1.09	1.05	NO	22.6
41	39	Total-heptafurans	407.7818	40.64	533297 000	1.234	67.934	67.934	1.00	1 05	NO	1101 0
42	39	Total-heptafurans	407 7818	40.35	4360.384	1.234	0.555	0 555	1.03	1 05	NO	8 0
43	8	1234678-HpCDF	407.7818	39.83	238397 086	1 214	28.110	28 110	1.01	1.05	NO	520 8
44	10	OCDF	441 7428	47.95	481844 063	1 105	99 413	99 413	0.86	0 89	NO	665 2
45	36	Total-penta1	339.8597	27 83	108061 606		7 689	7 689	1 54	1.55	NO	425.2
46	5	234678-HxCDF	373.8208	36.63	6246 515	1 070	0.749	0.749	1 35	1.24	NO	19 3

Quantify Totals Report MassLynx 4.1 SCN 714
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TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	24.46	99777 551	1.046	6.690	6.690	0 78	0 77	NO	242.1
2	41	Total-tetradioxins	319.8965	24.18	162017.086	1.046	10 864	10.864	0 79	0 77	NO	416.2
3	41	Total-tetradioxins	319 8965	27.60	2187 532	1.046	0.147	0.147	0 86	0 77	NO	5.2
4	11	2378-TCDD	319.8965	27.06	0 000	1.046	0 000	0.134	0 35	0 77	YES	5.6
5	41	Total-tetradioxins	319 8965	26 68	0.000	1 046	0 000	0.733	0.90	0 77	YES	24 0
6	41	Total-tetradioxins	319 8965	26.24	39707.777	1.046	2 663	2.663	0.77	0.77	NO	96.1
7	41	Total-tetradioxins	319.8965	26 02	0.000	1.046	0.000	0.136	0 95	0.77	YES	6 6
8	41	Total-tetradioxins	319.8965	25 67	13932.657	1 046	0.934	0.934	0 72	0 77	NO	32.6
9	41	Total-tetradioxins	319.8965	25.38	6143.440	1 046	0 412	0 412	0.80	0.77	NO	13 6

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	31.47	18207.834	0.973	1.838	1 838	1.41	1 55	NO	48.5
2	42	Total-pentadioxins	355.8546	31.08	7347.348	0.973	0.742	0 742	1 35	1 55	NO	15.2
3	42	Total-pentadioxins	355 8546	30 92	62929.780	0.973	6.354	6.354	1.56	1 55	NO	157 8
4	42	Total-pentadioxins	355 8546	30 77	7692.267	0 973	0.777	0.777	1 60	1 55	NO	24 6
5	42	Total-pentadioxins	355.8546	30 70	20297.168	0.973	2.049	2.049	1.68	1 55	NO	56 0
6	42	Total-pentadioxins	355.8546	30.56	68336.623	0.973	6.900	6.900	1 59	1 55	NO	182.4
7	42	Total-pentadioxins	355.8546	29.94	4831.030	0.973	0 488	0.488	1 52	1 55	NO	14 8
8	42	Total-pentadioxins	355.8546	29.46	58496.034	0.973	5.906	5.906	1 57	1.55	NO	94 4
9	42	Total-pentadioxins	355 8546	32 54	0 000	0.973	0 000	0.192	1 19	1 55	YES	5.3
10	12	12378-PeCDD	355 8546	32 15	0.000	0.973	0 000	1.021	1.84	1.55	YES	27 5

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	15	123789-HxCDD	389 8157	37 33	32668.364	0 839	4 619	4 619	1 21	1 24	NO	66.9
2	43	Total-hexadioxins	389 8157	37 09	9160.229	0 884	1.229	1 229	1.41	1.24	NO	19 4
3	14	123678-HxCDD	389 8157	36.92	77359 481	0 878	9.734	9.734	1.21	1.24	NO	156.6
4	13	123478-HxCDD	389.8157	36.80	15951.403	0.935	2.184	2 184	1.24	1 24	NO	34.7
5	43	Total-hexadioxins	389 8157	35.93	27791 113	0 884	3 729	3.729	1 25	1.24	NO	61.3
6	43	Total-hexadioxins	389.8157	35.82	178221.657	0 884	23 911	23.911	1 22	1.24	NO	278.9
7	43	Total-hexadioxins	389.8157	35.44	176682.305	0.884	23.705	23 705	1 20	1 24	NO	389.7
8	43	Total-hexadioxins	389 8157	34.63	188783 484	0 884	25 328	25.328	1.20	1 24	NO	431 6
9	43	Total-hexadioxins	389 8157	34.37	7613 269	0.884	1.021	1.021	1 20	1.24	NO	20 3

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423 7766	41 67	1769360 813	0.974	289.753	289. .	1 03	1.05	NO	1344.1
2	44	Total-heptadioxins	423.7766	40.39	2901899.875	0.974	475.218	475 .	1.04	1.05	NO	2552.7

Quantify Totals Report MassLynx 4.1 SCN 714
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Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	24.46	99777.551	1 046	6 690	6 690	0.78	0.77	NO	242.1
2	41	Total-tetradioxins	319 8965	24.18	162017.086	1.046	10.864	10 864	0 79	0.77	NO	416 2
3	41	Total-tetradioxins	319.8965	27.60	2187 532	1.046	0.147	0 147	0 86	0.77	NO	5.2
4	11	2378-TCDD	319.8965	27.06	0.000	1 046	0.000	0.134	0 35	0.77	YES	5.6
5	41	Total-tetradioxins	319.8965	26 68	0.000	1 046	0 000	0 733	0.90	0.77	YES	24.0
6	41	Total-tetradioxins	319.8965	26.24	39707.777	1.046	2.663	2 663	0.77	0.77	NO	96.1
7	41	Total-tetradioxins	319.8965	26 02	0.000	1.046	0.000	0.136	0.95	0.77	YES	6.6
8	41	Total-tetradioxins	319.8965	25 67	13932 657	1.046	0.934	0.934	0.72	0.77	NO	32 6
9	41	Total-tetradioxins	319.8965	25.38	6143.440	1 046	0 412	0 412	0 80	0.77	NO	13 6
10	42	Total-pentadioxins	355.8546	31.47	18207.834	0 973	1.838	1 838	1 41	1 55	NO	48.5
11	42	Total-pentadioxins	355.8546	31.08	7347.348	0.973	0 742	0 742	1 35	1 55	NO	15.2
12	42	Total-pentadioxins	355 8546	30.92	62929.780	0.973	6.354	6.354	1.56	1 55	NO	157.8
13	42	Total-pentadioxins	355 8546	30.77	7692 267	0.973	0 777	0.777	1 60	1 55	NO	24.6
14	42	Total-pentadioxins	355.8546	30.70	20297 168	0.973	2 049	2 049	1.68	1.55	NO	56 0
15	42	Total-pentadioxins	355.8546	30.56	68336 623	0.973	6 900	6 900	1 59	1.55	NO	182.4
16	42	Total-pentadioxins	355.8546	29.94	4831.030	0.973	0.488	0.488	1.52	1.55	NO	14.8
17	42	Total-pentadioxins	355.8546	29.46	58496.034	0.973	5.906	5 906	1 57	1.55	NO	94.4
18	42	Total-pentadioxins	355.8546	32.54	0.000	0.973	0.000	0.192	1.19	1.55	YES	5 3
19	12	12378-PeCDD	355.8546	32 15	0.000	0.973	0.000	1.021	1.84	1.55	YES	27.5
20	15	123789-HxCDD	389 8157	37.33	32668 364	0 839	4 619	4 619	1.21	1 24	NO	66.9
21	43	Total-hexadioxins	389.8157	37.09	9160 229	0.884	1.229	1.229	1.41	1 24	NO	19 4
22	14	123678-HxCDD	389 8157	36 92	77359 481	0 878	9 734	9.734	1 21	1 24	NO	156 6
23	13	123478-HxCDD	389 8157	36.80	15951 403	0 935	2 184	2 184	1.24	1 24	NO	34 7
24	43	Total-hexadioxins	389 8157	35 93	27791.113	0.884	3 729	3 729	1 25	1 24	NO	61 3
25	43	Total-hexadioxins	389 8157	35.82	178221 657	0 884	23 911	23 911	1.22	1 24	NO	278 9
26	43	Total-hexadioxins	389 8157	35 44	176682 305	0.884	23 705	23.705	1.20	1 24	NO	389 7
27	43	Total-hexadioxins	389 8157	34.63	188783 484	0.884	25 328	25.328	1 20	1 24	NO	431 6
28	43	Total-hexadioxins	389.8157	34 37	7613 269	0.884	1.021	1.021	1.20	1 24	NO	20 3
29	16	1234678-HpCDD	423 7766	41.67	1769360.813	0.974	289.753	289.	1 03	1 05	NO	1344 1
30	44	Total-heptadioxins	423 7766	40.39	2901899.875	0.974	475 218	475 .	1 04	1 05	NO	2552 7
31	17	OCDD	457 7377	47 67	10436329. .	0 950	2504 8	2504	0 89	0 89	NO	3659.4

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25.01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 17	6170.508	0.866	0.343	0 343	0 75	0.77	NO	6.6
2	35	Total-tetrafurans	303.9016	25 08	5399 316	0 866	0 300	0.300	0 68	0 77	NO	3.9
3	35	Total-tetrafurans	303 9016	24 82	0.000	0.866	0.000	0 150	2 83	0 77	YES	11 7
4	35	Total-tetrafurans	303.9016	24.63	0 000	0 866	0.000	0.157	0 99	0 77	YES	4.0
5	35	Total-tetrafurans	303.9016	24.42	10170 232	0.866	0.565	0.565	0.77	0 77	NO	11.9
6	35	Total-tetrafurans	303.9016	24.26	2316 578	0.866	0.129	0.129	0.69	0.77	NO	2.6
7	35	Total-tetrafurans	303.9016	24.17	8048.433	0.866	0 447	0.447	0.78	0.77	NO	9.3
8	35	Total-tetrafurans	303.9016	24.06	0.000	0.866	0.000	0.229	1 12	0 77	YES	5.8
9	35	Total-tetrafurans	303 9016	23 94	0 000	0.866	0.000	0.343	0 64	0 77	YES	5.1
10	35	Total-tetrafurans	303 9016	23 75	21361 442	0.866	1.188	1 188	0 72	0.77	NO	23 4
11	35	Total-tetrafurans	303 9016	23 18	0.000	0.866	0.000	0 173	0.96	0.77	YES	4 2
12	35	Total-tetrafurans	303.9016	22.93	3746.851	0.866	0.208	0 208	0 82	0.77	NO	3.4
13	40	Total-Furans	303 9016	21.34	9649 141	1.050	0.442	0.442	0 73	0 77	NO	11 9
14	35	Total-tetrafurans	303.9016	27 90	0.000	0.866	0.000	0.146	0.95	0.77	YES	3 4
15	35	Total-tetrafurans	303.9016	27.83	0.000	0.866	0.000	0 088	1 45	0.77	YES	3 1
16	35	Total-tetrafurans	303 9016	26.63	0 000	0.866	0.000	0.329	0 90	0 77	YES	5.3
17	1	2378-TCDF	303.9016	26.41	20632.694	0.866	1.147	1.147	0 82	0.77	NO	22 6
18	35	Total-tetrafurans	303 9016	26 23	0.000	0.866	0.000	0.172	0 96	0.77	YES	4 2
19	35	Total-tetrafurans	303 9016	26.18	0.000	0.866	0.000	0.106	0 53	0.77	YES	3 1
20	35	Total-tetrafurans	303.9016	25 70	2678.514	0 866	0.149	0 149	0.77	0.77	NO	3.2
21	35	Total-tetrafurans	303.9016	25.50	14575.371	0.866	0.810	0.810	0 71	0 77	NO	16 2
22	35	Total-tetrafurans	303.9016	25 32	10013.558	0 866	0 557	0 557	0 82	0 77	NO	11 1
23	37	Total-pentafurans	339.8597	30.08	1074.199	0 921	0 076	0.076	1 57	1 55	NO	3 0
24	37	Total-pentafurans	339.8597	29.49	26224.751	0 921	1.857	1.857	1 57	1 55	NO	50 7
25	37	Total-pentafurans	339.8597	29.42	0.000	0.921	0.000	0.513	0 96	1 55	YES	22 9
26	37	Total-pentafurans	339.8597	29.29	0.000	0.921	0.000	0.175	0.84	1.55	YES	6.3
27	3	23478-PeCDF	339.8597	31 91	8857.174	0.936	0.628	0.628	1.45	1.55	NO	17.1
28	37	Total-pentafurans	339.8597	31.74	0.000	0.921	0.000	0.455	1.22	1.55	YES	12 6
29	37	Total-pentafurans	339 8597	30 76	7400 001	0.921	0 524	0 524	1.57	1.55	NO	16.6
30	2	12378-PeCDF	339 8597	30 55	6335 982	0 907	0 448	0 448	1 66	1 55	NO	12.5
31	37	Total-pentafurans	339 8597	30 19	0 000	0.921	0 000	0 343	2.24	1 55	YES	15.0
32	7	123789-HxCDF	373.8208	37.74	6388 744	1 020	0 801	0 801	1 09	1.24	NO	15 4
33	6	123678-HxCDF	373 8208	35 71	13307 326	1.048	1 200	1 200	1 19	1 24	NO	29 4
34	4	123478-HxCDF	373 8208	35 57	27103 123	1 082	2 538	2 538	1 21	1 24	NO	66.3
35	38	Total-hexafurans	373 8208	35 38	0 000	1 055	0 000	0 333	0.96	1.24	YES	6.8
36	38	Total-hexafurans	373.8208	34 91	200800 953	1 055	21.116	21 116	1 21	1.24	NO	488 5
37	38	Total-hexafurans	373 8208	34 60	2994 117	1 055	0 315	0 315	1 12	1 24	NO	8.3
38	38	Total-hexafurans	373 8208	34 05	141843 953	1 055	14.916	14 916	1 17	1.24	NO	337.9
39	38	Total-hexafurans	373 8208	33 84	46500 252	1.055	4 890	4 890	1.10	1.24	NO	115.1
40	9	1234789-HpCDF	407.7818	42 57	11763 704	1.254	1.635	1 635	1.09	1.05	NO	22 6
41	39	Total-heptafurans	407.7818	40 64	533297.000	1.234	67 934	67.934	1 00	1 05	NO	1101 0
42	39	Total-heptafurans	407 7818	40 35	4360.384	1 234	0.555	0 555	1 03	1.05	NO	8 0
43	8	1234678-HpCDF	407.7818	39 83	238397.086	1.214	28 110	28 110	1.01	1 05	NO	520.8
44	10	OCDF	441.7428	47 95	481844 063	1.105	99 413	99.413	0.86	0 89	NO	665 2
45	36	Total-penta1	339.8597	27.83	108061.606		7.689	7 689	1 54	1 55	NO	425.2
46	5	234678-HxCDF	373.8208	36.63	6246 515	1 070	0 749	0.749	1 35	1 24	NO	19 3
47	41	Total-tetradioxins	319.8965	24.46	99777 551	1.046	6.690	6 690	0 78	0 77	NO	242.1
48	41	Total-tetradioxins	319.8965	24.18	162017.086	1.046	10.864	10 864	0 79	0.77	NO	416 2
49	41	Total-tetradioxins	319 8965	27.60	2187 532	1 046	0.147	0 147	0.86	0.77	NO	5 2

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	11	2378-TCDD	319 8965	27.06	0.000	1.046	0 000	0.134	0 35	0.77	YES	5.6
51	41	Total-tetradioxins	319 8965	26.68	0.000	1.046	0.000	0.733	0.90	0 77	YES	24.0
52	41	Total-tetradioxins	319 8965	26.24	39707 777	1.046	2.663	2 663	0 77	0 77	NO	96.1
53	41	Total-tetradioxins	319.8965	26.02	0.000	1.046	0.000	0.136	0.95	0 77	YES	6.6
54	41	Total-tetradioxins	319.8965	25.67	13932.657	1 046	0 934	0 934	0.72	0.77	NO	32.6
55	41	Total-tetradioxins	319.8965	25.38	6143.440	1.046	0 412	0 412	0 80	0.77	NO	13.6
56	42	Total-pentadioxins	355.8546	31.47	18207.834	0.973	1 838	1 838	1 41	1.55	NO	48.5
57	42	Total-pentadioxins	355 8546	31.08	7347.348	0.973	0.742	0 742	1 35	1 55	NO	15.2
58	42	Total-pentadioxins	355 8546	30 92	62929 780	0.973	6 354	6 354	1 56	1.55	NO	157 8
59	42	Total-pentadioxins	355 8546	30 77	7692.267	0.973	0 777	0.777	1 60	1 55	NO	24 6
60	42	Total-pentadioxins	355.8546	30.70	20297.168	0.973	2 049	2 049	1 68	1.55	NO	56 0
61	42	Total-pentadioxins	355.8546	30.56	68336.623	0.973	6 900	6 900	1.59	1 55	NO	182.4
62	42	Total-pentadioxins	355.8546	29 94	4831.030	0.973	0.488	0 488	1.52	1 55	NO	14 8
63	42	Total-pentadioxins	355.8546	29.46	58496.034	0.973	5.906	5 906	1 57	1 55	NO	94.4
64	42	Total-pentadioxins	355 8546	32.54	0 000	0.973	0.000	0.192	1.19	1.55	YES	5.3
65	12	12378-PeCDD	355 8546	32.15	0 000	0 973	0.000	1.021	1 84	1.55	YES	27.5
66	15	123789-HxCDD	389.8157	37.33	32668.364	0.839	4.619	4.619	1 21	1.24	NO	66 9
67	43	Total-hexadioxins	389 8157	37 09	9160.229	0 884	1.229	1 229	1 41	1.24	NO	19 4
68	14	123678-HxCDD	389.8157	36 92	77359.481	0 878	9.734	9.734	1 21	1 24	NO	156 6
69	13	123478-HxCDD	389.8157	36.80	15951 403	0.935	2.184	2.184	1 24	1.24	NO	34 7
70	43	Total-hexadioxins	389 8157	35 93	27791.113	0 884	3 729	3 729	1 25	1 24	NO	61 3
71	43	Total-hexadioxins	389 8157	35 82	178221.657	0 884	23 911	23 911	1 22	1 24	NO	278 9
72	43	Total-hexadioxins	389.8157	35 44	176682.305	0.884	23 705	23 705	1.20	1 24	NO	389.7
73	43	Total-hexadioxins	389 8157	34 63	188783.484	0.884	25 328	25 328	1 20	1 24	NO	431.6
74	43	Total-hexadioxins	389.8157	34.37	7613 269	0.884	1.021	1 021	1.20	1 24	NO	20.3
75	16	1234678-HpCDD	423 7766	41.67	1769360.813	0.974	289.753	289....	1.03	1.05	NO	1344 1
76	44	Total-heptadioxins	423 7766	40.39	2901899.875	0.974	475.218	475..	1.04	1.05	NO	2552 7
77	17	OCDD	457 7377	47 67	10436329	0 950	2504 8 .	2504.	0 89	0 89	NO	3659.4

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330 9792	27.36	0.000							19.7
2	48	FUNCTION1 PFK	330 9792	23 87	0.000							3.0
3	48	FUNCTION1 PFK	330.9792	23 70	0.000							3.9
4	48	FUNCTION1 PFK	330 9792	23.30	0.000							2.3
5	48	FUNCTION1 PFK	330 9792	21 94	0.000							2.7
6	48	FUNCTION1 PFK	330 9792	21 79	0.000							3 5
7	48	FUNCTION1 PFK	330 9792	28 27	0.000							11 1

Quantify Totals Report MassLynx 4.1 SCN 714
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PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	33 48	0.000		0.000					3 9
2	49	FUNCTION2 PFK	366.9792	32 60	0.000		0.000					11 1
3	49	FUNCTION2 PFK	366.9792	31 50	0.000		0.000					10 8
4	49	FUNCTION2 PFK	366.9792	31 05	0.000		0 000					24 5
5	49	FUNCTION2 PFK	366 9792	31.01	0 000		0.000					25 5
6	49	FUNCTION2 PFK	366.9792	30.76	0.000		0 000					30.9
7	49	FUNCTION2 PFK	366 9792	30.49	0.000		0.000					33.5
8	49	FUNCTION2 PFK	366 9792	30.38	0.000		0.000					31 3
9	49	FUNCTION2 PFK	366.9792	30.13	0.000		0.000					24 3
10	49	FUNCTION2 PFK	366.9792	29.92	0.000		0.000					8 9
11	49	FUNCTION2 PFK	366.9792	29.83	0.000		0.000					8 7

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380 9760	37.15	0 000		0 000					28.2
2	50	FUNCTION3 PFK	380 9760	36 21	0 000		0.000					11.0
3	50	FUNCTION3 PFK	380 9760	37 90	0 000		0 000					9 3
4	50	FUNCTION3 PFK	380.9760	37.81	0.000		0.000					15.1
5	50	FUNCTION3 PFK	380.9760	37.63	0 000		0.000					20 6

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	42.43	0.000							4 4

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	48.29	0.000							1 2
2	52	FUNCTION5 PFK	480.9696	46.64	0.000							1 6
3	52	FUNCTION5 PFK	480.9696	46.60	0 000							1.6
4	52	FUNCTION5 PFK	480 9696	46.43	0 000							0.5
5	52	FUNCTION5 PFK	480.9696	45.66	0.000							5.5

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati..	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD	375 8364	26 23	0 000		0.000					3 4
2	53	FUNCTION1 HXCD.	375 8364	24 42	0 000		0.000					2 3
3	53	FUNCTION1 HXCD...	375.8364	24.27	0.000		0.000					2 1
4	53	FUNCTION1 HXCD...	375.8364	22.48	0.000		0 000					2.7
5	53	FUNCTION1 HXCD..	375.8364	27.18	0.000		0 000					2.1
6	53	FUNCTION1 HXCD...	375.8364	26.48	0.000		0.000					12 8

Quantify Totals Report MassLynx 4.1 SCN 714
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ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	54	FUNCTION1 HPCD	409 7974	27.92	0 000		0.000					1.9
2	54	FUNCTION1 HPCD .	409.7974	27.75	0 000		0.000					4.9
3	54	FUNCTION1 HPCD.	409.7974	27.18	0 000		0.000					2.3
4	54	FUNCTION1 HPCD..	409 7974	25 72	0.000		0.000					1.7
5	54	FUNCTION1 HPCD...	409.7974	23.96	0 000		0.000					31.9
6	54	FUNCTION1 HPCD...	409.7974	22.87	0.000		0.000					2.2
7	54	FUNCTION1 HPCD..	409 7974	22.72	0.000		0.000					10.7
8	54	FUNCTION1 HPCD..	409 7974	21 98	0.000		0.000					2 3
9	54	FUNCTION1 HPCD	409 7974	21 61	0.000		0.000					4 1

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD ..	409 7974	30.53	0 000		0.000					19.2
2	55	FUNCTION2 HPCD .	409 7974	30.19	0 000		0.000					9.9
3	55	FUNCTION2 HPCD	409 7974	29 61	0 000		0.000					3.5
4	55	FUNCTION2 HPCD...	409.7974	33.05	0.000		0.000					3 2
5	55	FUNCTION2 HPCD .	409.7974	32.82	0 000		0.000					2 1

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445 7555	36.71	0.000		0 000					2 7
2	56	FUNCTION3 OCDPE	445 7555	36.67	0.000		0 000					2 5
3	56	FUNCTION3 OCDPE	445.7555	35.83	0.000		0 000					0 9
4	56	FUNCTION3 OCDPE	445 7555	35.49	0.000		0 000					1.5
5	56	FUNCTION3 OCDPE	445 7555	34.86	0.000		0 000					2 4
6	56	FUNCTION3 OCDPE	445 7555	33.74	0.000		0 000					1 8

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R ..	S/N
1	57	FUNCTION4 NCDPE	479.7165	43 26	0.000		0.000					1 7
2	57	FUNCTION4 NCDPE	479.7165	42 96	0.000		0.000					2.1
3	57	FUNCTION4 NCDPE	479.7165	42.81	0.000		0.000					2.4
4	57	FUNCTION4 NCDPE	479.7165	41 64	0 000		0.000					4.6
5	57	FUNCTION4 NCDPE	479.7165	41 28	0 000		0 000					2 2
6	57	FUNCTION4 NCDPE	479 7165	39.43	0 000		0 000					67 4
7	57	FUNCTION4 NCDPE	479 7165	44 97	0 000		0 000					2.7

ETHERS6

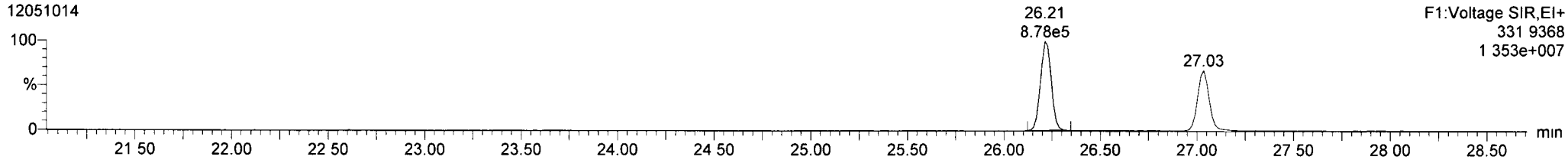
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
1	58	FUNCTION5 DCDPE	513 6775	48 05	0 000		0.000					3 8
2	58	FUNCTION5 DCDPE	513.6775	47.89	0 000		0 000					3 7
3	58	FUNCTION5 DCDPE	513.6775	47 55	0.000		0.000					3.1

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

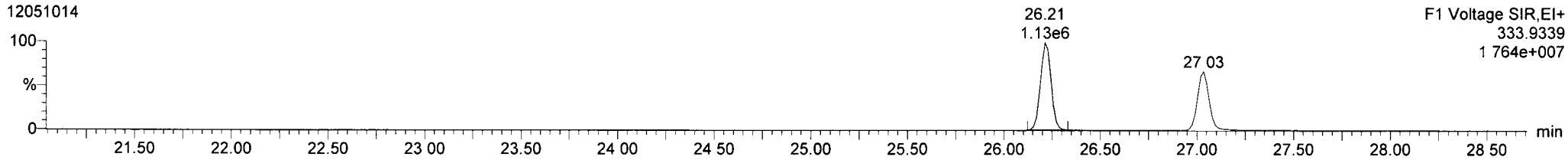
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

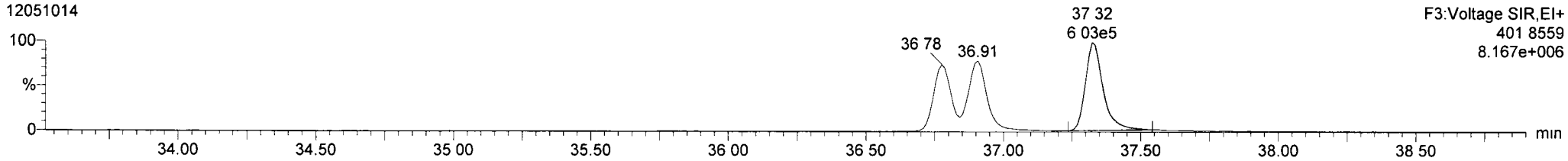
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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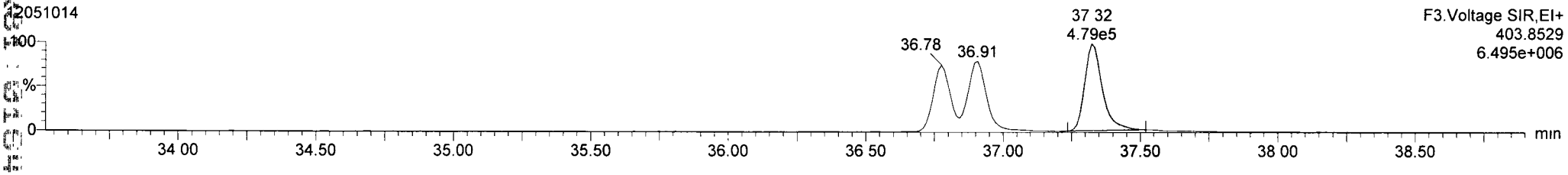
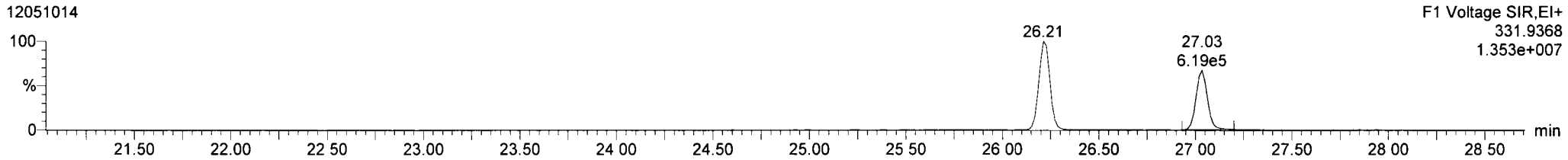


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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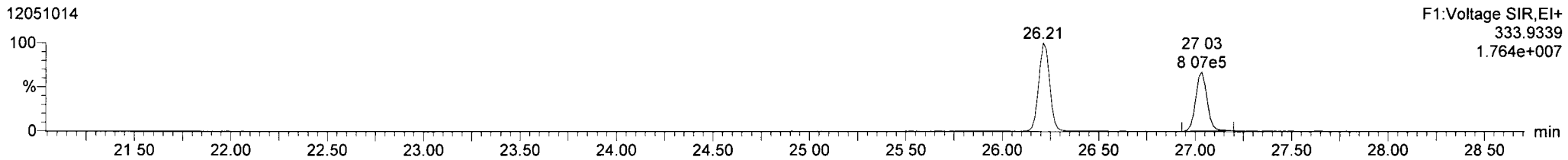
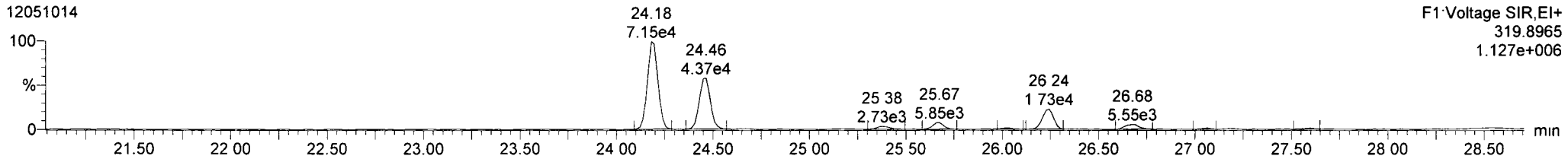
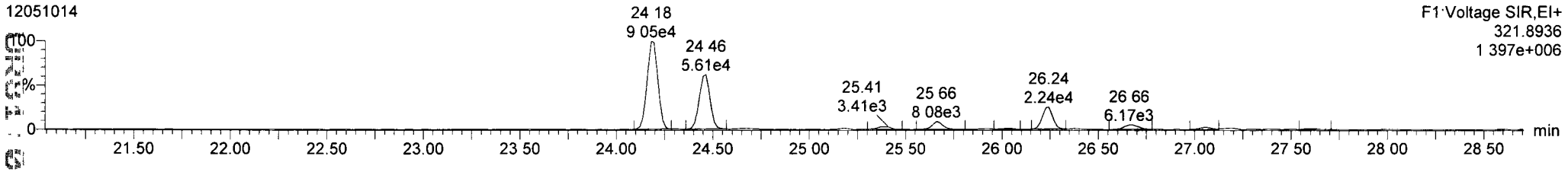


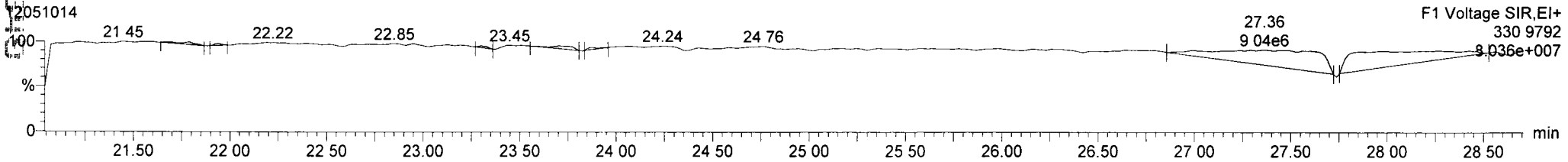
Total-tetradioxins



Total-tetradioxins



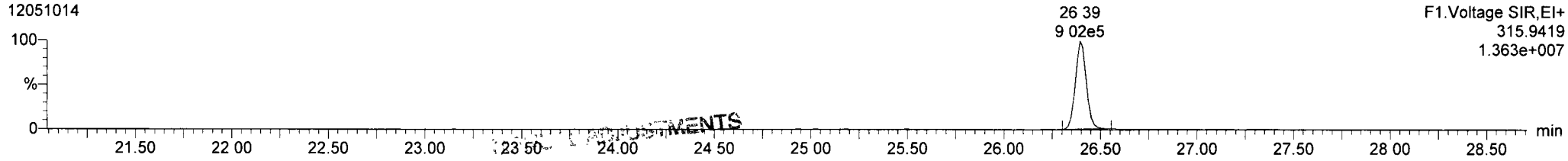
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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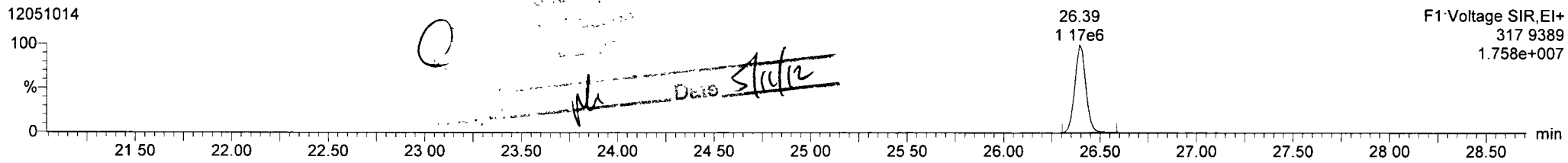
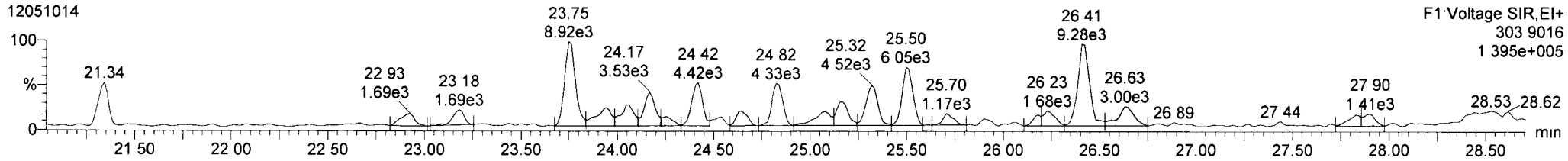
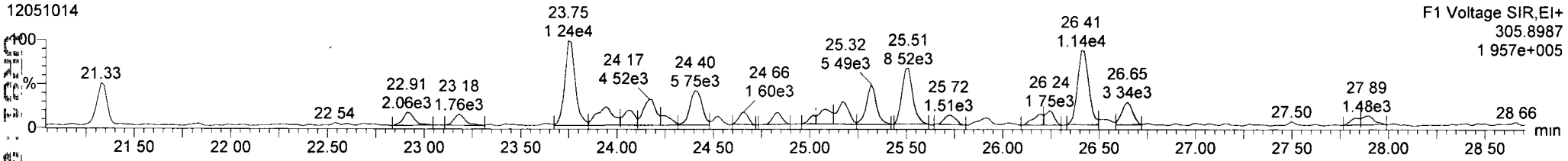


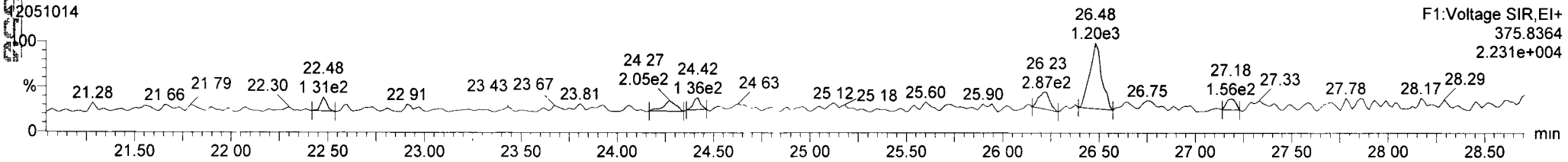
Total-tetrafurans



Total-tetrafurans



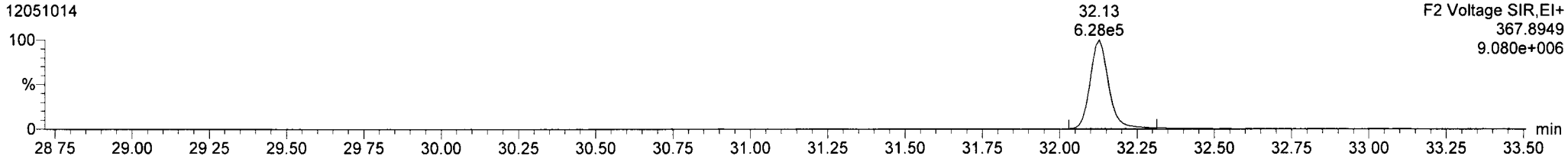
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed. Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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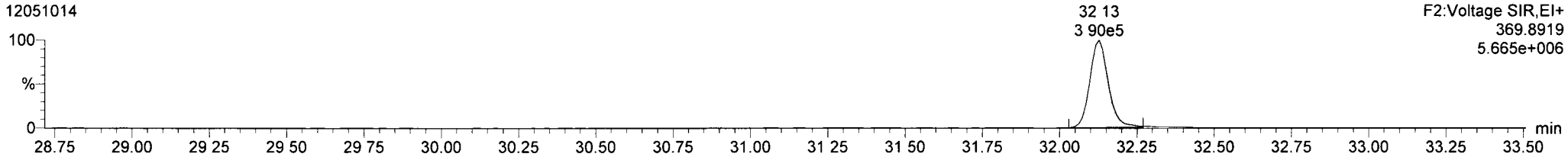

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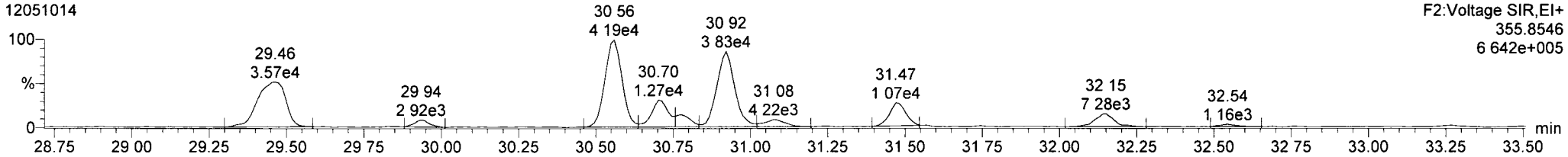
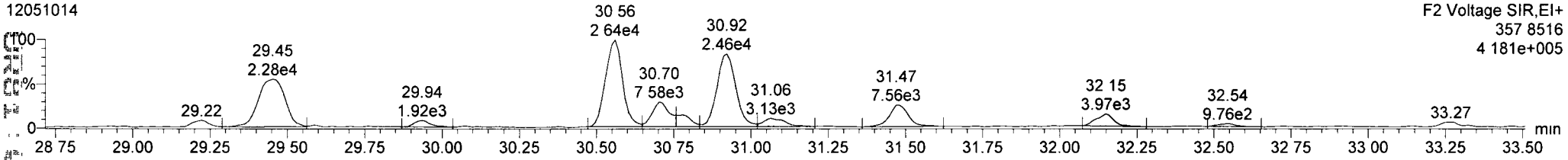
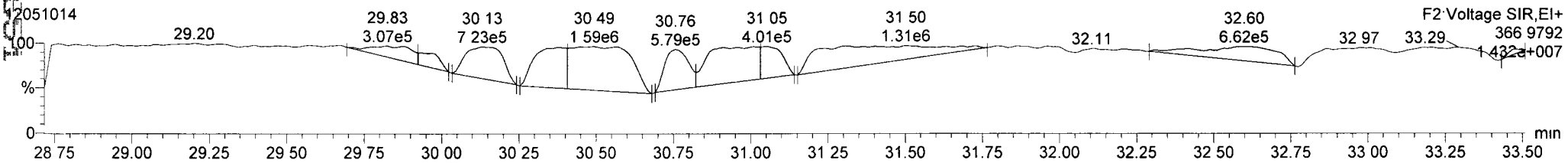


Total-pentadioxins



FUNCTION2 PFK



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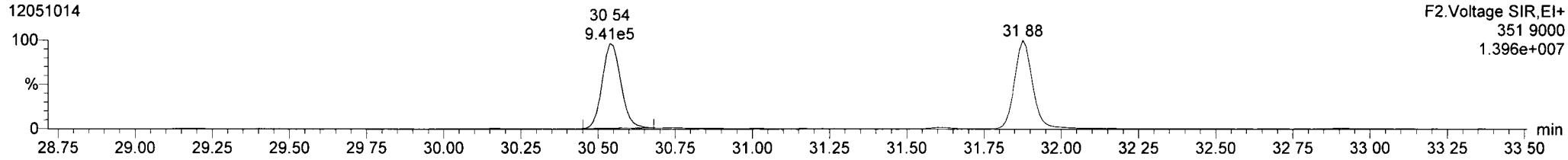
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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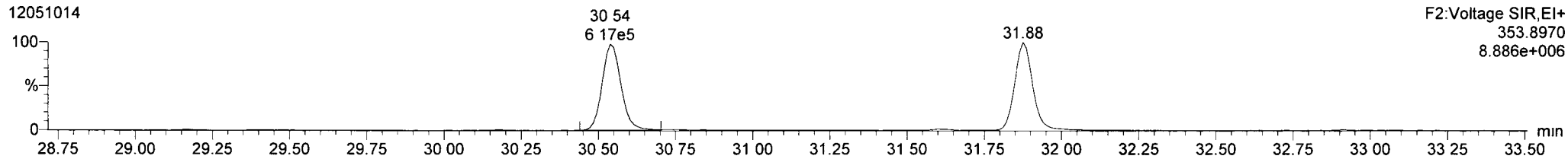

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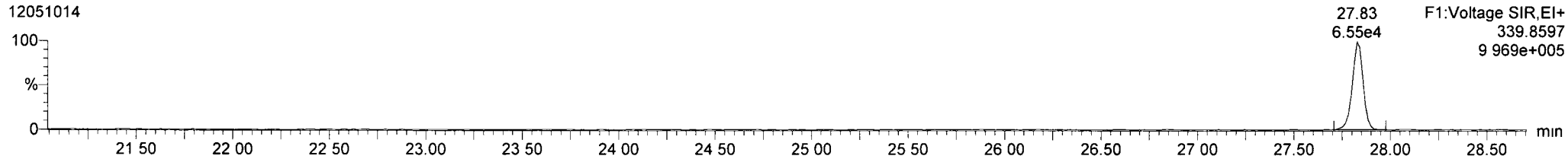

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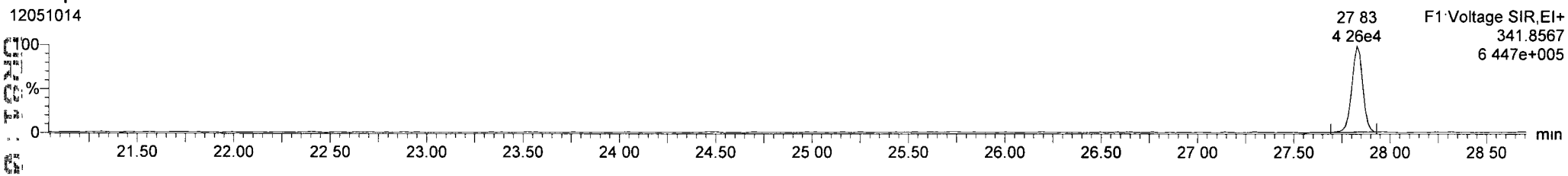
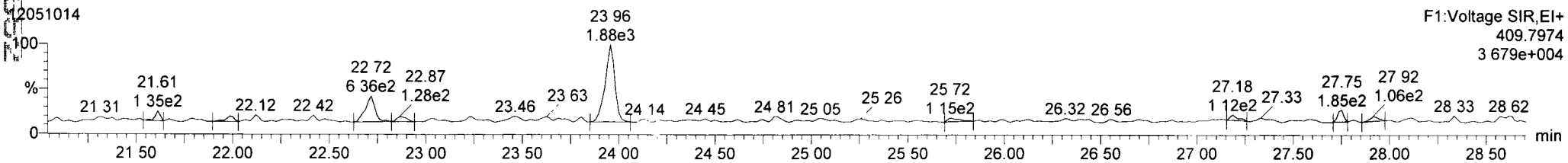


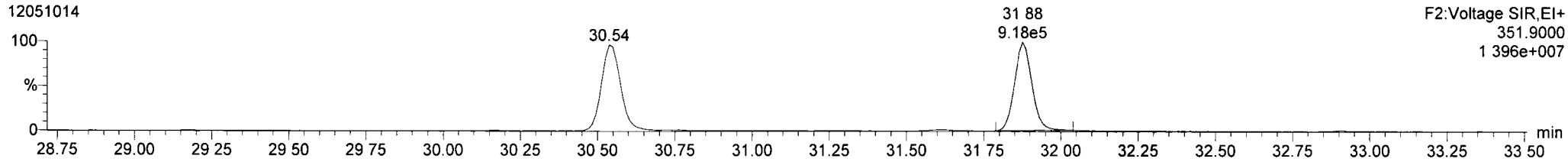
FUNCTION1 HPCDPE



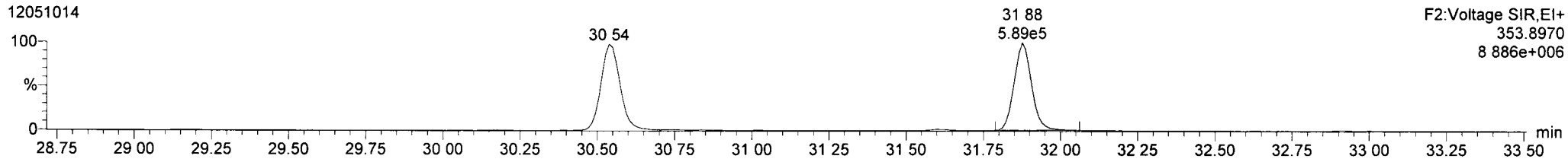
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

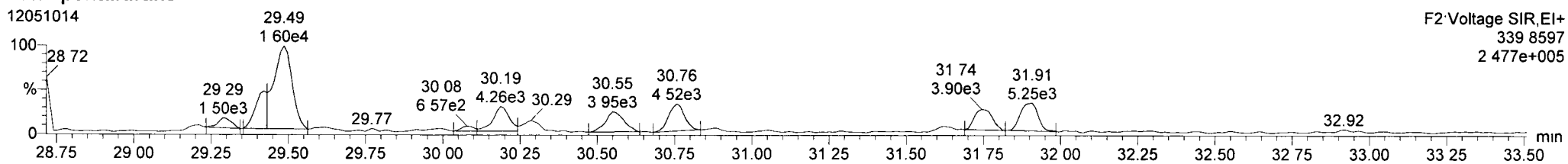
13C-23478-PeCDF



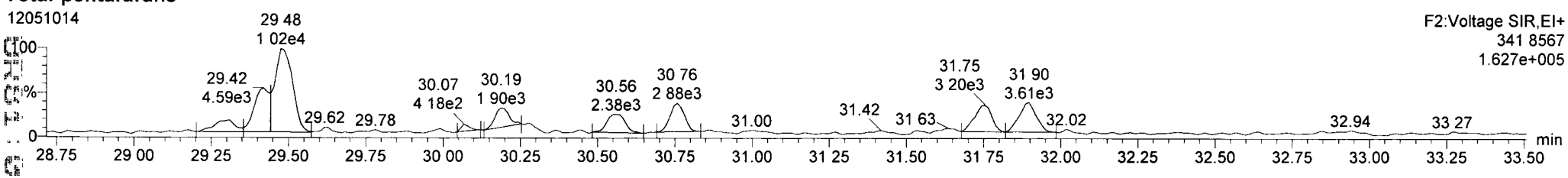
13C-23478-PeCDF



Total-pentafurans



Total-pentafurans



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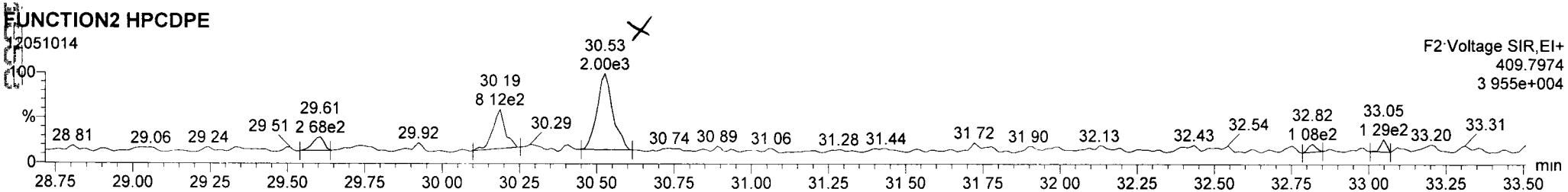

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

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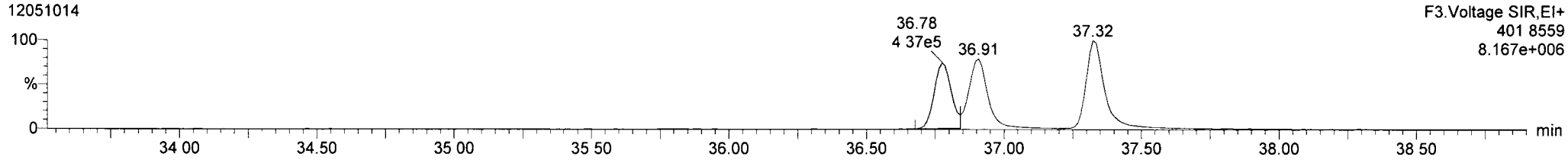
13C-123478-HxCDD



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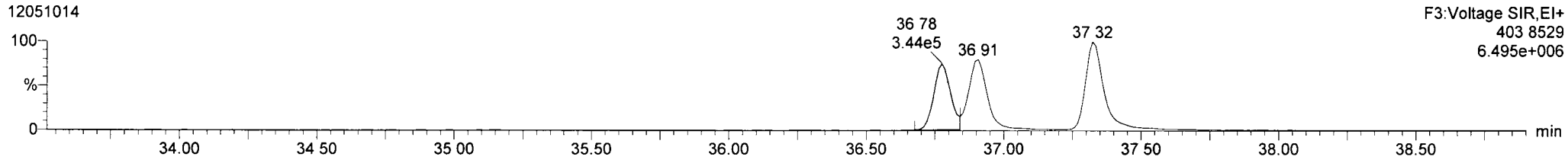
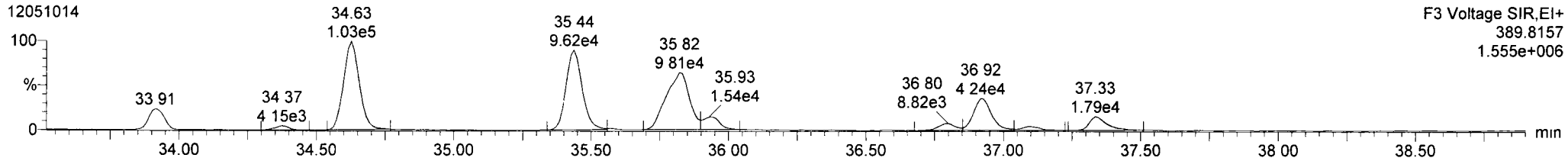
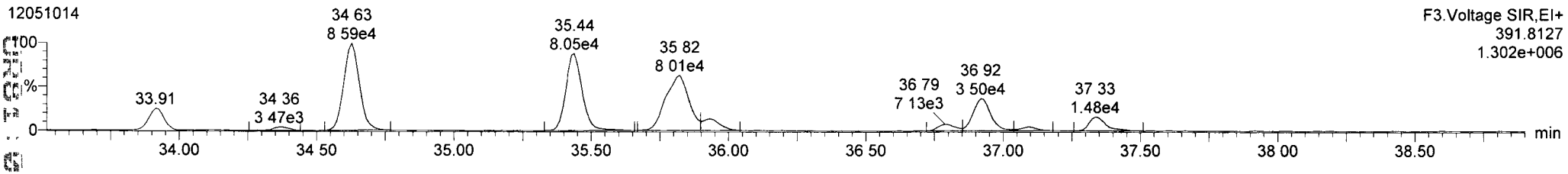


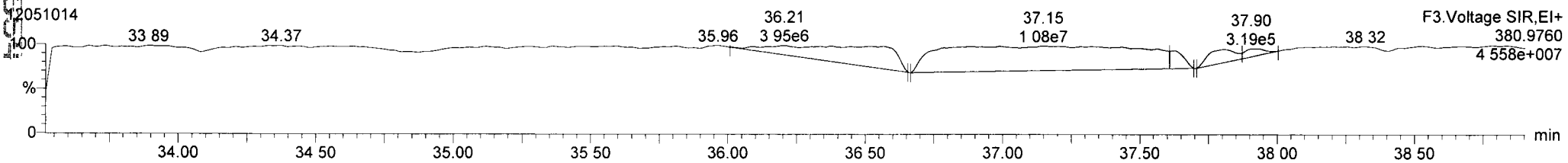
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

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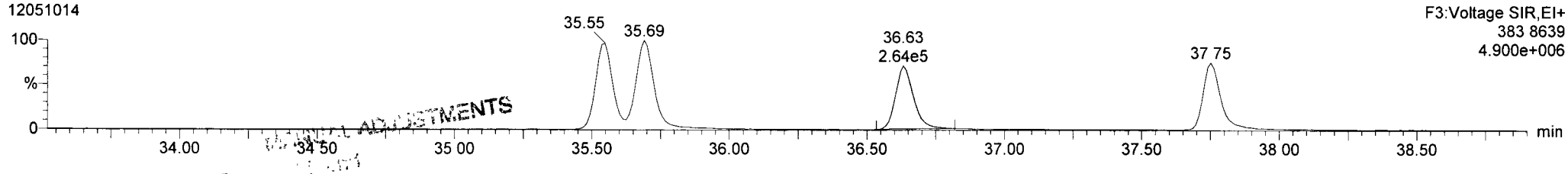
13C-234678-HxCDF



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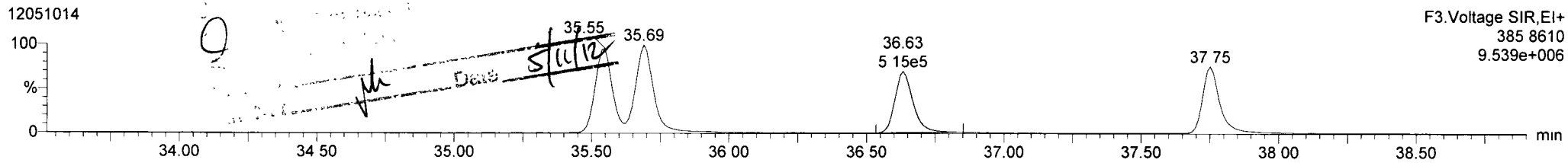
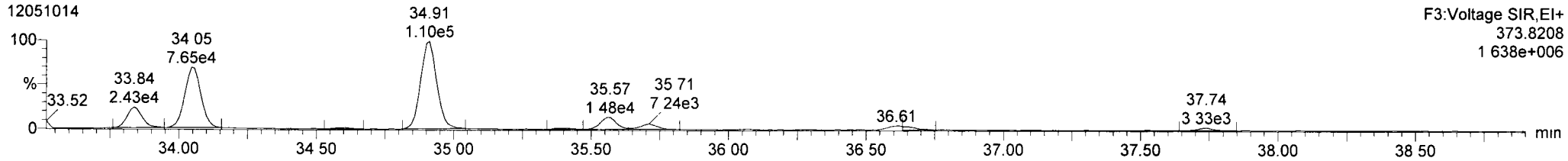


Total-hexafurans



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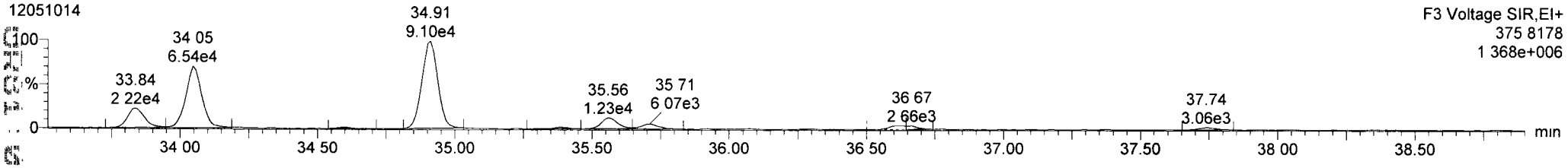
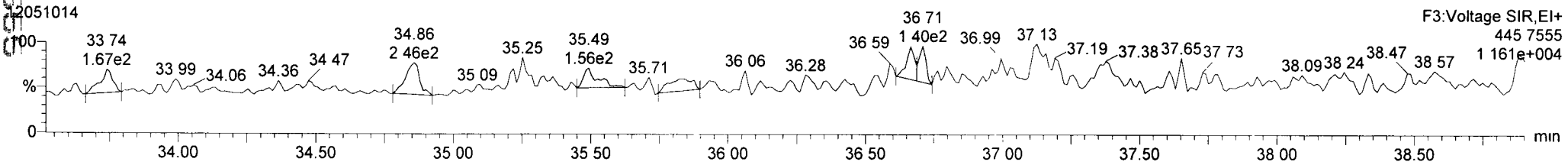


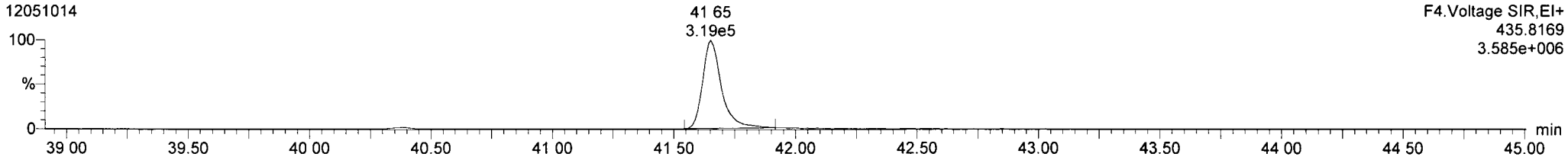
FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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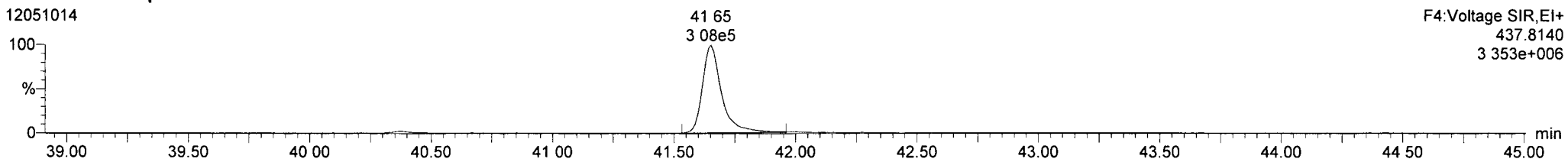
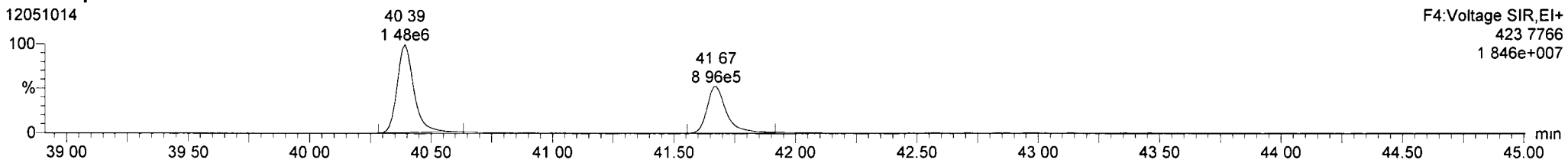
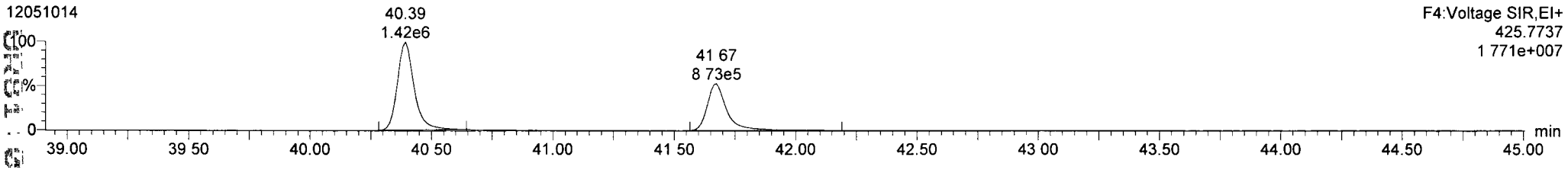


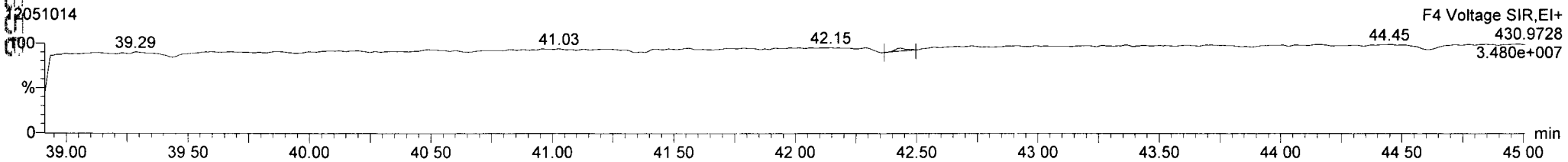
Total-heptadioxins



Total-heptadioxins



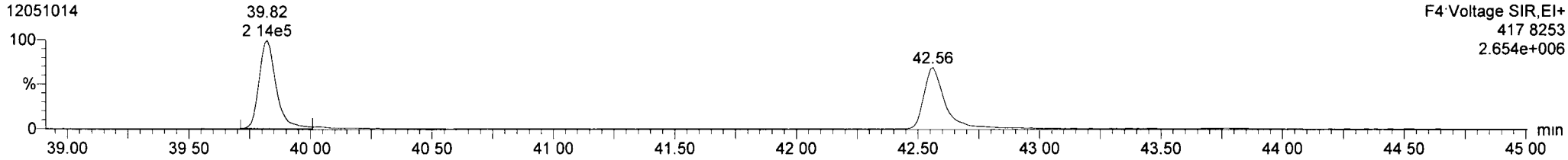
FUNCTION4 PFK



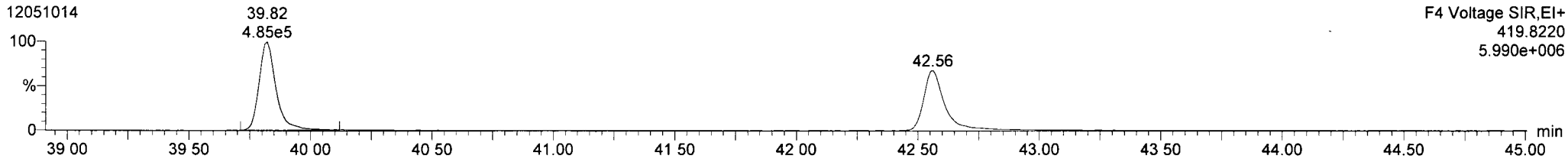
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

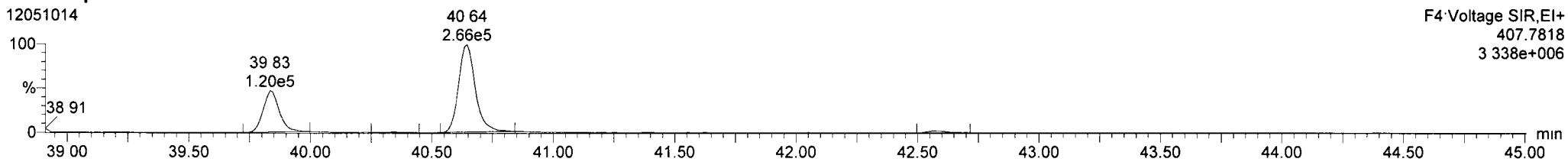
13C-1234678-HpCDF



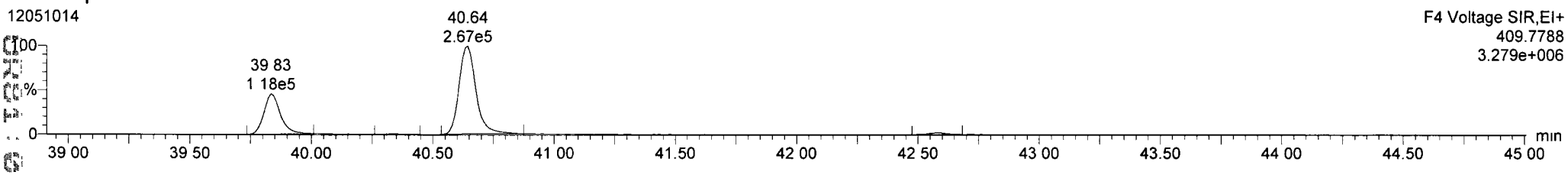
13C-1234678-HpCDF



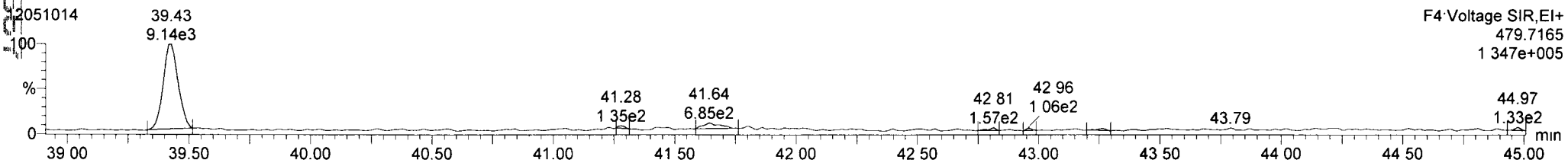
Total-heptafurans



Total-heptafurans



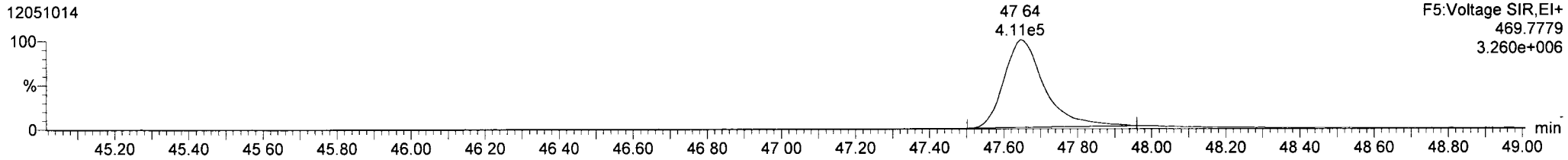
FUNCTION4 NCDPE



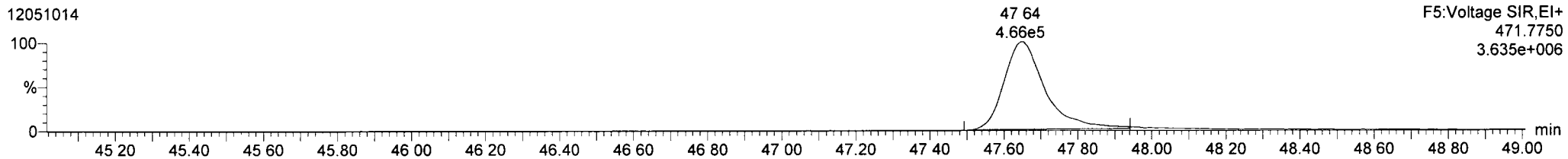
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered. Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

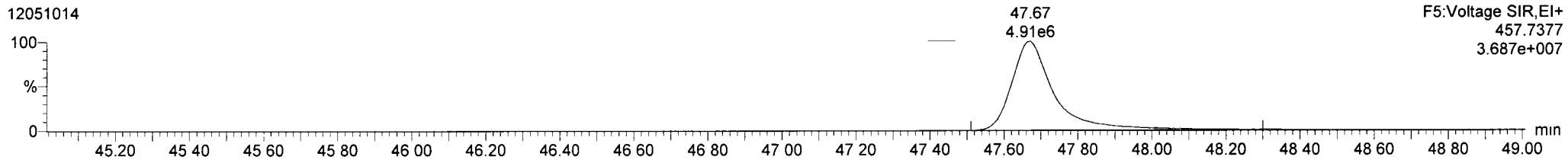
13C-OCDD



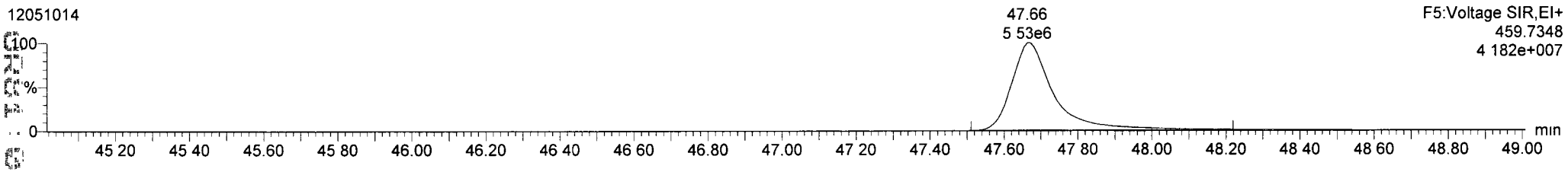
13C-OCDD



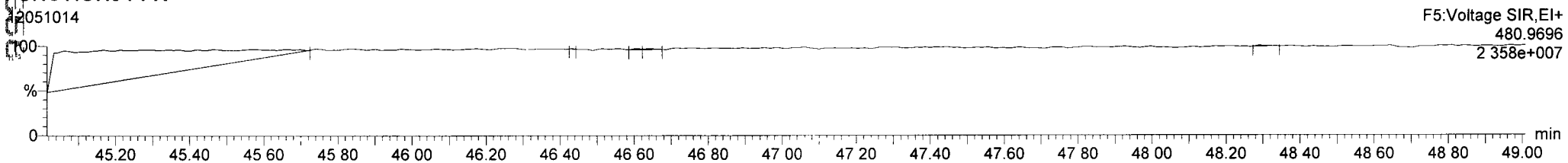
OCDD



OCDD



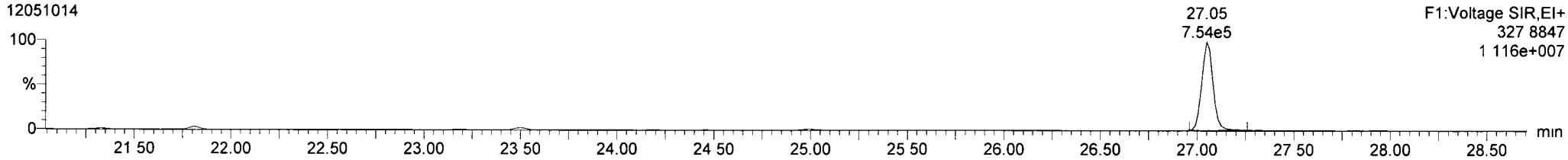
FUNCTION5 PFK



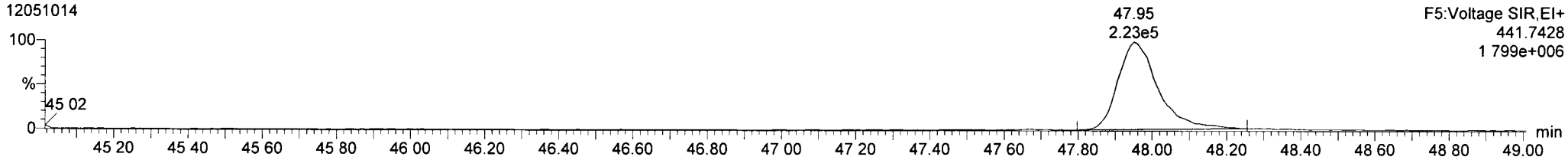
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:05 Pacific Daylight Time

Name: 12051014, Date: 10-May-2012, Time: 21:04:31, ID: UR81H, Conditions: AUTOSPEC01, User: pk

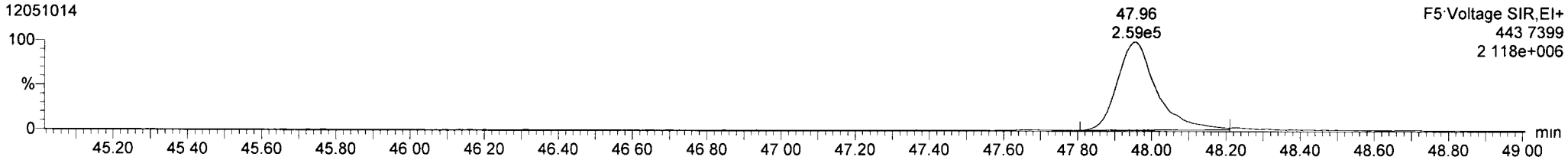
37CL-2378-TCDD



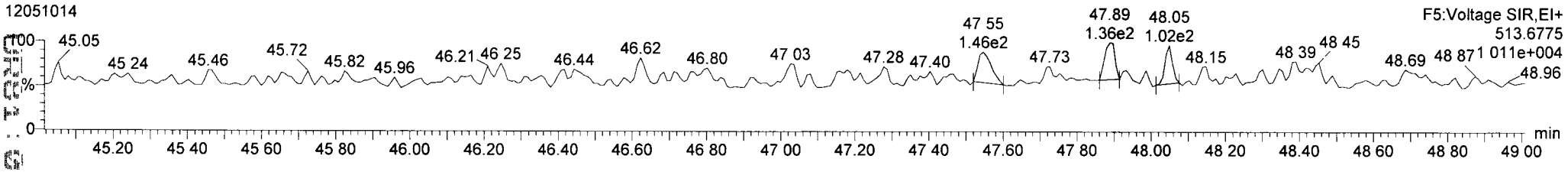
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA2.qld
Last Altered Friday, May 11, 2012 10 25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

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1	1	2378-TCDF	303 9016	26 392	26.378	136185	136185	0.866	dd		0.81	0 77	442 8	NO	2.162	2.162	
2	2	12378-PeCDF	339 8597	30.527	30.527	25455	25455	0.907	bd		1.43	1 55	68 8	NO	0.500	0 500	
3	3	23478-PeCDF	339 8597	31.853	31.865	26369	26369	0.936	db		1.52	1 55	72 1	NO	0.527	0.527	
4	4	123478-HxCDF	373.8208	35 526	35 525	55253	55253	1.082	dd		1.21	1.24	105.2	NO	1.458	1 458	
5	5	234678-HxCDF	373.8208	36 589	36 633	39534	39534	1.070	bb		1.28	1.24	49 8	NO	1 118	1 118	
6	6	123678-HxCDF	373.8208	35.679	35.679	28378	28378	1.048	db		1.28	1.24	50.5	NO	0.711	0 711	
7	7	123789-HxCDF	373.8208	37.707	37 729	17321	17321	1.020	bb		1.26	1 24	31 8	NO	0.547	0 547	
8	8	1234678-HpCDF	407 7818	39.811	39.809	492636	492636	1.214	bb		1.03	1 05	981 5	NO	17 489	17 489	
9	9	1234789-HpCDF	407.7818	42.552	42 532	22699	22699	1 254	bb		1 10	1 05	37 7	NO	1.129	1 129	
10	10	OCDF	441 7428	47.923	47 904	679016	679016	1.105	bd		0.88	0.89	1051.8	NO	57 059	57 059	
11	11	2378-TCDD	319.8965	27.019	27 018	0	7452	1.046	bd		0.43	0 77	26.1	YES	0.000	0 151	B
12	12	12378-PeCDD	355.8546	32.117	32 104	33081	33081	0.973	bb		1.64	1 55	42.5	NO	0 966	0.966	
13	13	123478-HxCDD	389.8157	36.764	36.764	55363	55363	0.935	bd		1.22	1.24	93.3	NO	2.084	2.084	
14	14	123678-HxCDD	389.8157	36.885	36 885	166508	166508	0.878	dd		1.25	1.24	269.2	NO	5.931	5.931	
15	15	123789-HxCDD	389 8157	37.312	37 279	81551	81551	0.839	bb		1.25	1 24	143 8	NO	3.220	3.220	
16	16	1234678-HpCDD	423.7766	41.642	41 632	2364694	2364694	0 974	bd		1.03	1.05	2074 5	NO	126.640	126.640	
17	17	OCDD	457.7377	47 636	47 632	10728061	10728061	0.950	bd		0.88	0 89	7349 2	NO	1048.732	1048.7	.
18	18	13C-2378-TCDF	315.9419	26.362	26.362	7271311		1 484	bb	85.5	0.77	0 77	8546 5	NO	85.481		
19	19	13C-12378-PeCDF	351.9000	30.505	30.504	5615958		1 048	bd	93.5	1.53	1 55	6575.2	NO	93.508		
20	20	13C-23478-PeCDF	351 9000	31.843	31 841	5348650		1 003	bb	93.0	1.55	1 55	6306 6	NO	93.024		
21	21	13C-123478-HxCDF	383 8639	35.515	35 526	3503087		1.186	bd	86 2	0.52	0 51	2185 6	NO	86.167		
22	22	13C-123678-HxCDF	383.8639	35 657	35 679	3806294		1 315	db	84.4	0.54	0 51	2361 4	NO	84.409		
23	23	13C-234678-HxCDF	383 8639	36 611	36 611	3304596		1.223	bb	78 8	0 52	0 51	2015 1	NO	78.782		
24	24	13C-123789-HxCDF	383 8639	37 718	37.718	3103395		1.056	bd	85 7	0.52	0 51	1933 9	NO	85.666		
25	25	13C-1234678-HpCDF	417 8253	39 789	39.800	2319411		1 011	bd	66 9	0.44	0 44	2114 9	NO	66 878		
26	26	13C-1234789-HpCDF	417 8253	42.519	42.552	1603594		0 741	bb	63 2	0.44	0.44	1208.6	NO	63 151		
27	27	13C-1234-TCDD	331 9368	26.183	26.272	5730408		1.000	bb	100.0	0.78	0.77	9284.6	NO	100 000		
28	28	13C-2378-TCDD	331 9368	27.004	27.005	4728191		0.956	bb	86 3	0.78	0.77	7488.2	NO	86.274		
29	29	13C-12378-PeCDD	367 8949	32 095	32.093	3518818		0 663	bb	92 6	1.56	1 55	9620.3	NO	92.555		
30	30	13C-123478-HxCDD	401 8559	36 742	36.742	2839962		1.024	bd	80.9	1.26	1 24	4792 7	NO	80.889		
31	31	13C-123678-HxCDD	401 8559	36 874	36.874	3198479		1 113	db	83 8	1.26	1 24	5315.1	NO	83.836		
32	32	13C-1234678-HpCDD	435 8169	41 620	41.653	1916513		0 815	bb	68 6	1.05	1 05	3350 9	NO	68 569		
33	33	13C-OCDD	469 7779	47.618	47.669	2153425		0 717	bb	43.8	0.88	0 89	2024.2	NO	87 579		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37.301	37.368	3428975		1.000	bb	100 0	1.27	1 24	5607 1	NO	100 000	
35	35	Total-tetrafurans	303 9016		25.370			0.866							10 792	11.490
36	36	Total-penta1	339 8597		28 210										6 518	6.518 12.149
37	37	Total-pentafurans	339 8597		30.790			0.921						11.581	5 063	5.631
38	38	Total-hexafurans	373.8208		35 760			1.055							32 908	32 984
39	39	Total-heptafurans	407 7818		41.160			1.234							66 137	66 147
40	40	Total-Furans	303 9016		0.000			1.050							179 148	180 500
41	41	Total-tetradioxins	319.8965		25 880			1.046							59 408	59 838
42	42	Total-pentadioxins	355.8546		30 950			0.973							65 259	65.960
43	43	Total-hexadioxins	389.8157		35.940			0.884							113 795	113 795
44	44	Total-heptadioxins	423.7766		40.980			0.974							309 177	309 177
45	45	Total-Dioxins	319.8965		0 000			0.942							1596.371	1597.5. .
46	46	Total-TEQ	319.8965		0 000										1775 519	1778 0. .
47	47	37CL-2378-TCDD	327.8847	27.019	26.994	2178666		1.037					9994.3		36 657	
48	48	FUNCTION1 PFK	330.9792		0 000											
49	49	FUNCTION2 PFK	366.9792		0 000										0.000	
50	50	FUNCTION3 PFK	380.9760		0 000										0.000	
51	51	FUNCTION4 PFK	430.9728		0 000											
52	52	FUNCTION5 PFK	480.9696		0 000											
53	53	FUNCTION1 HXCDPE	375.8364		0 000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0 000										0 000	
57	57	FUNCTION4 NCDPE	479.7165		0 000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0 000										0.000	

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.05	33072.783	0.866	0.525	0 525	0.79	0.77	NO	85 0
2	35	Total-tetrafurans	303.9016	24.88	0.000	0.866	0.000	0.036	0.91	0.77	YES	10.3
3	35	Total-tetrafurans	303.9016	24.63	18479.371	0.866	0.293	0.293	0.72	0.77	NO	60.7
4	35	Total-tetrafurans	303.9016	24.48	0.000	0.866	0.000	0.134	0.65	0.77	YES	30.7
5	35	Total-tetrafurans	303.9016	24.39	34725 082	0.866	0.551	0.551	0.73	0 77	NO	111.8
6	35	Total-tetrafurans	303.9016	24 23	11250.361	0.866	0.179	0.179	0 79	0.77	NO	44.5
7	35	Total-tetrafurans	303 9016	24 14	35411 143	0 866	0.562	0 562	0 73	0 77	NO	107 6
8	35	Total-tetrafurans	303 9016	24.03	19689 050	0 866	0.313	0 313	0.66	0 77	NO	59.7
9	35	Total-tetrafurans	303 9016	23.93	33208.065	0.866	0.527	0 527	0 86	0 77	NO	77.2
10	35	Total-tetrafurans	303.9016	23.73	89266 598	0.866	1 417	1.417	0.74	0.77	NO	283 2
11	35	Total-tetrafurans	303.9016	23.15	13639 111	0.866	0.217	0 217	0.79	0 77	NO	47 0
12	35	Total-tetrafurans	303.9016	22.90	16440 014	0.866	0 261	0.261	0.86	0 77	NO	55 4
13	35	Total-tetrafurans	303.9016	27.87	0 000	0.866	0 000	0.240	0.65	0 77	YES	46.7
14	35	Total-tetrafurans	303.9016	27.80	0 000	0.866	0.000	0.078	1 55	0.77	YES	26 8
15	35	Total-tetrafurans	303.9016	26.89	0 000	0.866	0.000	0.019	1 22	0 77	YES	7.8
16	35	Total-tetrafurans	303.9016	26.62	31719.348	0 866	0 504	0.504	0 71	0.77	NO	88 7
17	35	Total-tetrafurans	303 9016	26 51	11013.315	0 866	0.175	0 175	0.69	0 77	NO	34 7
18	1	2378-TCDF	303 9016	26 39	136184 848	0.866	2 162	2.162	0 81	0 77	NO	442 8
19	35	Total-tetrafurans	303.9016	26 20	30157 238	0.866	0.479	0 479	0.78	0 77	NO	69 8
20	35	Total-tetrafurans	303.9016	26.02	2308 643	0 866	0.037	0.037	0 78	0.77	NO	9 0
21	35	Total-tetrafurans	303 9016	25 88	9555 782	0 866	0.152	0.152	0 81	0.77	NO	27 6
22	35	Total-tetrafurans	303 9016	25 70	0.000	0 866	0 000	0 191	0.89	0.77	YES	40.7
23	35	Total-tetrafurans	303 9016	25 48	80271.266	0.866	1 275	1 275	0.80	0 77	NO	261.4
24	35	Total-tetrafurans	303 9016	25 29	41591 986	0.866	0.660	0 660	0 78	0.77	NO	124.0
25	35	Total-tetrafurans	303 9016	25 14	31677.719	0.866	0 503	0 503	0 76	0 77	NO	93 2

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27.80	327668 063		6.518	6.518	1 53	1 55	NO	1833 4

PF

	#	Name	Trace	RT	Abs.Resp	RRF M ..	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	3	23478-PeCDF	339.8597	31.85	26369.186	0 936	0 527	0 527	1 52	1 55	NO	72 1
2	37	Total-pentafurans	339.8597	31 71	23537.579	0.921	0.466	0.466	1 62	1 55	NO	75 3
3	37	Total-pentafurans	339 8597	31.59	0 000	0.921	0.000	0.190	1 29	1.55	YES	28 0
4	37	Total-pentafurans	339 8597	30 82	5398 781	0.921	0.107	0 107	1 45	1 55	NO	15 2
5	37	Total-pentafurans	339 8597	30 71	22634 853	0.921	0 448	0 448	1.44	1 55	NO	61 7
6	2	12378-PeCDF	339.8597	30.53	25454 639	0 907	0.500	0.500	1 43	1.55	NO	68 8
7	37	Total-pentafurans	339 8597	30 15	41878.997	0 921	0.829	0 829	1 66	1 55	NO	91 4
8	37	Total-pentafurans	339 8597	30 06	0.000	0.921	0.000	0 069	2.37	1.55	YES	19 0
9	37	Total-pentafurans	339.8597	29 95	0.000	0.921	0 000	0.024	4.63	1 55	YES	12.7
10	37	Total-pentafurans	339 8597	29.45	105399 269	0 921	2.087	2 087	1 61	1.55	NO	214.0
11	37	Total-pentafurans	339.8597	29.27	0 000	0.921	0.000	0 285	1.84	1.55	YES	39.9
12	37	Total-pentafurans	339.8597	29.17	5034.491	0 921	0 100	0.100	1.67	1 55	NO	21 2

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed. Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38	Total-hexafurans	373.8208	36 04	0 000	1.055	0 000	0.076	1.56	1 24	YES	6 6
2	6	123678-HxCDF	373.8208	35.68	28378 444	1.048	0.711	0.711	1.28	1 24	NO	50 5
3	4	123478-HxCDF	373.8208	35 53	55253 157	1 082	1.458	1.458	1 21	1 24	NO	105 2
4	38	Total-hexafurans	373 8208	35.36	8702 219	1 055	0 241	0 241	1 18	1.24	NO	16 7
5	38	Total-hexafurans	373.8208	34.88	547474.797	1.055	15.132	15.132	1 20	1.24	NO	1040.5
6	38	Total-hexafurans	373.8208	34.56	9297.126	1.055	0 257	0.257	1.36	1.24	NO	18.6
7	38	Total-hexafurans	373.8208	34.02	360221.016	1.055	9.956	9.956	1.22	1.24	NO	638.2
8	38	Total-hexafurans	373.8208	33 80	126201.512	1.055	3.488	3 488	1.23	1.24	NO	241.3
9	7	123789-HxCDF	373.8208	37.71	17321.417	1.020	0.547	0.547	1 26	1 24	NO	31 8
10	5	234678-HxCDF	373 8208	36.59	39534.065	1.070	1.118	1.118	1 28	1.24	NO	49 8

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M ..	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39	Total-heptafurans	407 7818	40.30	12327 741	1 234	0 509	0 509	1.06	1 05	NO	24 8
2	39	Total-heptafurans	407.7818	40 13	0.000	1.234	0.000	0 010	11 99	1 05	YES	6 7
3	8	1234678-HpCDF	407.7818	39.81	492636 328	1 214	17 489	17 489	1 03	1 05	NO	981 5
4	9	1234789-HpCDF	407.7818	42.55	22698.953	1.254	1.129	1.129	1.10	1.05	NO	37.7
5	39	Total-heptafurans	407.7818	40.60	1138113.688	1.234	47.010	47.010	1.00	1 05	NO	2307.7

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25.05	33072 783	0.866	0 525	0 525	0.79	0.77	NO	85 0
2	35	Total-tetrafurans	303 9016	24 88	0.000	0.866	0.000	0 036	0.91	0.77	YES	10 3
3	35	Total-tetrafurans	303.9016	24 63	18479 371	0.866	0 293	0 293	0 72	0.77	NO	60 7
4	35	Total-tetrafurans	303.9016	24 48	0.000	0 866	0.000	0 134	0.65	0 77	YES	30 7
5	35	Total-tetrafurans	303 9016	24.39	34725.082	0.866	0.551	0.551	0 73	0.77	NO	111.8
6	35	Total-tetrafurans	303.9016	24.23	11250.361	0.866	0.179	0.179	0 79	0.77	NO	44.5
7	35	Total-tetrafurans	303 9016	24.14	35411.143	0.866	0.562	0.562	0.73	0 77	NO	107.6
8	35	Total-tetrafurans	303.9016	24.03	19689.050	0.866	0.313	0 313	0.66	0 77	NO	59 7
9	35	Total-tetrafurans	303.9016	23 93	33208 065	0 866	0 527	0.527	0.86	0.77	NO	77 2
10	35	Total-tetrafurans	303 9016	23 73	89266 598	0.866	1 417	1.417	0 74	0.77	NO	283 2
11	35	Total-tetrafurans	303.9016	23.15	13639 111	0.866	0 217	0 217	0.79	0.77	NO	47 0
12	35	Total-tetrafurans	303.9016	22 90	16440.014	0 866	0.261	0.261	0 86	0.77	NO	55.4
13	40	Total-Furans	303.9016	21.31	51231 659	1.050	0 671	0 671	0.72	0.77	NO	173 5
14	35	Total-tetrafurans	303.9016	27 87	0.000	0.866	0 000	0 240	0.65	0.77	YES	46 7
15	35	Total-tetrafurans	303.9016	27 80	0.000	0 866	0 000	0 078	1 55	0.77	YES	26 8
16	35	Total-tetrafurans	303.9016	26.89	0 000	0 866	0.000	0 019	1 22	0.77	YES	7.8
17	35	Total-tetrafurans	303.9016	26 62	31719.348	0 866	0 504	0 504	0 71	0 77	NO	88 7
18	35	Total-tetrafurans	303.9016	26.51	11013.315	0 866	0.175	0.175	0 69	0.77	NO	34 7
19	1	2378-TCDF	303.9016	26.39	136184 848	0 866	2.162	2.162	0 81	0.77	NO	442.8
20	35	Total-tetrafurans	303.9016	26 20	30157 238	0.866	0.479	0.479	0.78	0 77	NO	69.8
21	35	Total-tetrafurans	303.9016	26 02	2308.643	0.866	0 037	0.037	0 78	0 77	NO	9.0
22	35	Total-tetrafurans	303 9016	25.88	9555.782	0.866	0.152	0.152	0.81	0 77	NO	27.6
23	35	Total-tetrafurans	303.9016	25.70	0.000	0.866	0.000	0.191	0 89	0.77	YES	40 7
24	35	Total-tetrafurans	303.9016	25.48	80271.266	0.866	1.275	1.275	0.80	0.77	NO	261 4
25	35	Total-tetrafurans	303.9016	25.29	41591 986	0 866	0.660	0.660	0.78	0 77	NO	124 0
26	35	Total-tetrafurans	303.9016	25.14	31677 719	0 866	0.503	0 503	0 76	0.77	NO	93 2
27	3	23478-PeCDF	339 8597	31 85	26369 186	0 936	0.527	0 527	1 52	1 55	NO	72 1
28	37	Total-pentafurans	339.8597	31 71	23537 579	0.921	0 466	0 466	1 62	1 55	NO	75.3
29	37	Total-pentafurans	339.8597	31 59	0 000	0 921	0 000	0.190	1 29	1 55	YES	28.0
30	37	Total-pentafurans	339 8597	30.82	5398 781	0.921	0.107	0.107	1 45	1 55	NO	15 2
31	37	Total-pentafurans	339.8597	30.71	22634.853	0.921	0.448	0.448	1 44	1.55	NO	61.7
32	2	12378-PeCDF	339.8597	30.53	25454.639	0.907	0.500	0 500	1 43	1.55	NO	68 8
33	37	Total-pentafurans	339 8597	30.15	41878.997	0.921	0.829	0.829	1.66	1 55	NO	91.4
34	37	Total-pentafurans	339.8597	30.06	0.000	0.921	0.000	0.069	2 37	1.55	YES	19 0
35	37	Total-pentafurans	339.8597	29.95	0 000	0.921	0.000	0.024	4.63	1.55	YES	12 7
36	37	Total-pentafurans	339.8597	29.45	105399.269	0.921	2.087	2 087	1.61	1.55	NO	214 0
37	37	Total-pentafurans	339.8597	29.27	0 000	0 921	0 000	0.285	1.84	1.55	YES	39 9
38	37	Total-pentafurans	339 8597	29 17	5034 491	0 921	0.100	0 100	1 67	1 55	NO	21 2
39	38	Total-hexafurans	373 8208	36 04	0 000	1 055	0.000	0 076	1 56	1.24	YES	6 6
40	6	123678-HxCDF	373 8208	35.68	28378 444	1 048	0.711	0.711	1 28	1.24	NO	50 5
41	4	123478-HxCDF	373.8208	35.53	55253.157	1.082	1 458	1 458	1 21	1.24	NO	105.2
42	38	Total-hexafurans	373.8208	35.36	8702 219	1.055	0 241	0 241	1 18	1.24	NO	16.7
43	38	Total-hexafurans	373 8208	34.88	547474 797	1.055	15.132	15 132	1.20	1 24	NO	1040.5
44	38	Total-hexafurans	373 8208	34 56	9297.126	1 055	0 257	0.257	1.36	1 24	NO	18 6
45	38	Total-hexafurans	373 8208	34.02	360221.016	1.055	9.956	9.956	1 22	1.24	NO	638 2
46	38	Total-hexafurans	373.8208	33.80	126201.512	1.055	3 488	3 488	1.23	1.24	NO	241 3
47	7	123789-HxCDF	373 8208	37.71	17321.417	1 020	0.547	0.547	1.26	1.24	NO	31.8
48	5	234678-HxCDF	373 8208	36 59	39534.065	1 070	1.118	1 118	1 28	1.24	NO	49.8
49	39	Total-heptafurans	407 7818	40.30	12327.741	1 234	0.509	0.509	1.06	1.05	NO	24.8

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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	39	Total-heptafurans	407.7818	40.13	0.000	1 234	0 000	0.010	11 99	1 05	YES	6 7
51	8	1234678-HpCDF	407.7818	39 81	492636 328	1.214	17.489	17 489	1 03	1 05	NO	981 5
52	9	1234789-HpCDF	407 7818	42 55	22698 953	1 254	1.129	1 129	1 10	1 05	NO	37 7
53	39	Total-heptafurans	407.7818	40 60	1138113.688	1.234	47.010	47.010	1.00	1.05	NO	2307.7
54	10	OCDF	441.7428	47.92	679016.344	1.105	57.059	57 059	0.88	0 89	NO	1051.8
55	36	Total-penta1	339.8597	27.80	327668.063		6 518	6.518	1.53	1.55	NO	1833.4

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	26 21	369124 375	1 046	7.465	7.465	0 78	0 77	NO	1206.8
2	41	Total-tetradioxins	319.8965	25 99	0 000	1 046	0.000	0.190	0.63	0 77	YES	31.2
3	41	Total-tetradioxins	319 8965	25.90	0.000	1.046	0 000	0 044	0 65	0.77	YES	8 8
4	41	Total-tetradioxins	319 8965	25.64	99104.868	1 046	2 004	2 004	0.79	0 77	NO	310 0
5	41	Total-tetradioxins	319.8965	25.36	47098.718	1.046	0 952	0 952	0.82	0.77	NO	151 1
6	41	Total-tetradioxins	319 8965	25.14	0 000	1.046	0.000	0.046	0.54	0.77	YES	8.1
7	41	Total-tetradioxins	319.8965	24 63	7487 753	1 046	0 151	0.151	0.72	0 77	NO	25.7
8	41	Total-tetradioxins	319 8965	24.43	884399.406	1.046	17.885	17 885	0.77	0 77	NO	2863.8
9	41	Total-tetradioxins	319.8965	24.17	1399142 313	1.046	28.295	28 295	0.76	0 77	NO	4613.3
10	41	Total-tetradioxins	319 8965	27.56	15347 743	1.046	0.310	0.310	0.86	0.77	NO	41.6
11	41	Total-tetradioxins	319.8965	27 15	13288.179	1 046	0 269	0.269	0.72	0 77	NO	44 6
12	11	2378-TCDD	319 8965	27.02	0.000	1.046	0.000	0 151	0 43	0 77	YES	26 1
13	41	Total-tetradioxins	319.8965	26.65	96793 015	1.046	1.957	1 957	0.79	0 77	NO	250 8
14	41	Total-tetradioxins	319 8965	26.35	5848 141	1.046	0.118	0 118	0 73	0 77	NO	18 1

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	32.51	7606.693	0 973	0.222	0.222	1.34	1.55	NO	9.1
2	12	12378-PeCDD	355 8546	32.12	33081.451	0.973	0 966	0.966	1 64	1 55	NO	42.5
3	42	Total-pentadioxins	355.8546	31 44	200442 851	0.973	5 853	5 853	1.52	1 55	NO	266 2
4	42	Total-pentadioxins	355 8546	30 88	679013 062	0.973	19.826	19.826	1 54	1.55	NO	924 9
5	42	Total-pentadioxins	355 8546	30 74	0 000	0 973	0.000	0 701	1 19	1 55	YES	48.3
6	42	Total-pentadioxins	355 8546	30 66	83112.926	0 973	2 427	2.427	1 66	1 55	NO	113 1
7	42	Total-pentadioxins	355 8546	30 52	722680.219	0 973	21 101	21.101	1 55	1 55	NO	1052 5
8	42	Total-pentadioxins	355.8546	29 90	18753 393	0 973	0.548	0.548	1 44	1.55	NO	27 6
9	42	Total-pentadioxins	355.8546	29.43	490290.125	0.973	14.316	14.316	1.53	1.55	NO	440 6

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	15	123789-HxCDD	389.8157	37 31	81550 801	0 839	3 220	3 220	1.25	1 24	NO	143 8
2	43	Total-hexadioxins	389 8157	37 07	21330 429	0 884	0 799	0.799	1.26	1 24	NO	33 9
3	14	123678-HxCDD	389 8157	36.88	166508.406	0.878	5 931	5.931	1.25	1 24	NO	269 2
4	13	123478-HxCDD	389 8157	36 76	55362.797	0 935	2 084	2 084	1 22	1.24	NO	93 3
5	43	Total-hexadioxins	389 8157	35.79	506289.344	0.884	18.970	18 970	1.22	1 24	NO	570 2
6	43	Total-hexadioxins	389.8157	35 40	1775823.938	0.884	66 536	66.536	1.23	1.24	NO	3028.0
7	43	Total-hexadioxins	389.8157	34 59	404233.172	0.884	15.146	15 146	1.20	1.24	NO	701.9
8	43	Total-hexadioxins	389.8157	34 34	29609 500	0.884	1.109	1.109	1.23	1.24	NO	54.8

Quantify Totals Report MassLynx 4.1 SCN 714
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HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	44	Total-heptadioxins	423.7766	40 36	3408438.125	0 974	182.537	182.	1 07	1 05	NO	3494.4
2	16	1234678-HpCDD	423 7766	41 64	2364694.000	0 974	126.640	126.. .	1 03	1.05	NO	2074.5

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	26.21	369124 375	1.046	7.465	7.465	0.78	0 77	NO	1206.8
2	41	Total-tetradioxins	319.8965	25.99	0 000	1.046	0.000	0 190	0.63	0 77	YES	31 2
3	41	Total-tetradioxins	319 8965	25.90	0 000	1.046	0.000	0 044	0 65	0.77	YES	8.8
4	41	Total-tetradioxins	319.8965	25 64	99104.868	1.046	2 004	2 004	0 79	0 77	NO	310 0
5	41	Total-tetradioxins	319 8965	25.36	47098 718	1.046	0.952	0.952	0 82	0.77	NO	151 1
6	41	Total-tetradioxins	319 8965	25 14	0 000	1 046	0.000	0.046	0 54	0.77	YES	8 1
7	41	Total-tetradioxins	319.8965	24 63	7487.753	1.046	0.151	0.151	0.72	0 77	NO	25 7
8	41	Total-tetradioxins	319 8965	24.43	884399 406	1.046	17.885	17 885	0 77	0 77	NO	2863.8
9	41	Total-tetradioxins	319.8965	24 17	1399142 313	1.046	28.295	28 295	0 76	0 77	NO	4613.3
10	45	Total-Dioxins	319.8965	23 52	0 000	0.942	0.000	0 029	0 90	0 77	YES	5 1
11	45	Total-Dioxins	319 8965	28.35	0.000	0 942	0 000	0.006	2.94	0.77	YES	3 7
12	45	Total-Dioxins	319 8965	27 78	0.000	0.942	0 000	0 004	3.26	0 77	YES	2.2
13	41	Total-tetradioxins	319 8965	27.56	15347.743	1.046	0 310	0 310	0.86	0.77	NO	41.6
14	41	Total-tetradioxins	319 8965	27 15	13288.179	1 046	0 269	0 269	0 72	0 77	NO	44.6
15	11	2378-TCDD	319 8965	27 02	0.000	1.046	0.000	0.151	0 43	0.77	YES	26.1
16	41	Total-tetradioxins	319.8965	26.65	96793.015	1 046	1 957	1.957	0 79	0.77	NO	250.8
17	41	Total-tetradioxins	319.8965	26.35	5848.141	1 046	0.118	0.118	0 73	0.77	NO	18.1
18	42	Total-pentadioxins	355 8546	32 51	7606 693	0.973	0 222	0 222	1.34	1 55	NO	9.1
19	12	12378-PeCDD	355.8546	32 12	33081.451	0.973	0.966	0 966	1 64	1.55	NO	42 5
20	42	Total-pentadioxins	355.8546	31 44	200442 851	0.973	5.853	5.853	1 52	1 55	NO	266 2
21	42	Total-pentadioxins	355.8546	30 88	679013 062	0.973	19.826	19 826	1 54	1 55	NO	924 9
22	42	Total-pentadioxins	355.8546	30 74	0.000	0.973	0 000	0 701	1 19	1.55	YES	48.3
23	42	Total-pentadioxins	355 8546	30 66	83112.926	0.973	2.427	2 427	1 66	1.55	NO	113.1
24	42	Total-pentadioxins	355 8546	30 52	722680 219	0 973	21.101	21.101	1 55	1 55	NO	1052.5
25	42	Total-pentadioxins	355 8546	29 90	18753 393	0.973	0.548	0 548	1 44	1 55	NO	27.6
26	42	Total-pentadioxins	355 8546	29 43	490290.125	0.973	14.316	14 316	1 53	1.55	NO	440 6
27	15	123789-HxCDD	389 8157	37 31	81550 801	0 839	3.220	3 220	1 25	1.24	NO	143.8
28	43	Total-hexadioxins	389.8157	37.07	21330 429	0 884	0 799	0.799	1 26	1.24	NO	33 9
29	14	123678-HxCDD	389.8157	36 88	166508 406	0.878	5.931	5.931	1.25	1.24	NO	269 2
30	13	123478-HxCDD	389.8157	36.76	55362.797	0.935	2.084	2.084	1.22	1.24	NO	93 3
31	43	Total-hexadioxins	389.8157	35.79	506289.344	0.884	18 970	18 970	1.22	1.24	NO	570 2
32	43	Total-hexadioxins	389.8157	35 40	1775823.938	0.884	66.536	66.536	1 23	1.24	NO	3028 0
33	43	Total-hexadioxins	389 8157	34.59	404233.172	0.884	15.146	15 146	1 20	1 24	NO	701.9
34	43	Total-hexadioxins	389 8157	34 34	29609.500	0.884	1 109	1 109	1.23	1.24	NO	54.8
35	44	Total-heptadioxins	423 7766	40 36	3408438 125	0.974	182 537	182..	1.07	1 05	NO	3494.4
36	16	1234678-HpCDD	423 7766	41 64	2364694.000	0 974	126 640	126. .	1 03	1.05	NO	2074 5
37	17	OCDD	457.7377	47 64	10728061...	0 950	1048.7 .	1048...	0 88	0 89	NO	7349 2

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25.05	33072 783	0.866	0.525	0 525	0.79	0 77	NO	85.0
2	35	Total-tetrafurans	303.9016	24.88	0 000	0.866	0.000	0 036	0 91	0.77	YES	10 3
3	35	Total-tetrafurans	303 9016	24 63	18479 371	0.866	0.293	0.293	0 72	0.77	NO	60 7
4	35	Total-tetrafurans	303.9016	24.48	0 000	0.866	0.000	0.134	0 65	0 77	YES	30 7
5	35	Total-tetrafurans	303.9016	24 39	34725.082	0.866	0 551	0 551	0 73	0 77	NO	111 8
6	35	Total-tetrafurans	303.9016	24.23	11250.361	0.866	0.179	0.179	0.79	0 77	NO	44.5
7	35	Total-tetrafurans	303.9016	24 14	35411.143	0.866	0.562	0.562	0.73	0.77	NO	107.6
8	35	Total-tetrafurans	303.9016	24.03	19689 050	0.866	0.313	0 313	0 66	0.77	NO	59.7
9	35	Total-tetrafurans	303 9016	23.93	33208 065	0.866	0.527	0 527	0 86	0 77	NO	77.2
10	35	Total-tetrafurans	303.9016	23.73	89266.598	0.866	1.417	1 417	0.74	0 77	NO	283.2
11	35	Total-tetrafurans	303.9016	23.15	13639 111	0.866	0.217	0 217	0.79	0 77	NO	47.0
12	35	Total-tetrafurans	303.9016	22 90	16440.014	0.866	0.261	0 261	0.86	0.77	NO	55 4
13	40	Total-Furans	303.9016	21 31	51231 659	1 050	0.671	0.671	0.72	0 77	NO	173.5
14	35	Total-tetrafurans	303.9016	27.87	0.000	0.866	0.000	0.240	0 65	0.77	YES	46.7
15	35	Total-tetrafurans	303 9016	27.80	0.000	0.866	0.000	0.078	1 55	0 77	YES	26.8
16	35	Total-tetrafurans	303.9016	26.89	0.000	0 866	0.000	0 019	1.22	0 77	YES	7.8
17	35	Total-tetrafurans	303.9016	26.62	31719.348	0.866	0 504	0 504	0 71	0 77	NO	88.7
18	35	Total-tetrafurans	303.9016	26.51	11013.315	0.866	0.175	0.175	0 69	0 77	NO	34.7
19	1	2378-TCDF	303.9016	26.39	136184.848	0 866	2 162	2.162	0 81	0 77	NO	442.8
20	35	Total-tetrafurans	303.9016	26 20	30157 238	0.866	0 479	0.479	0 78	0 77	NO	69 8
21	35	Total-tetrafurans	303.9016	26 02	2308.643	0.866	0 037	0 037	0.78	0 77	NO	9 0
22	35	Total-tetrafurans	303.9016	25.88	9555.782	0.866	0.152	0 152	0.81	0.77	NO	27 6
23	35	Total-tetrafurans	303.9016	25.70	0.000	0.866	0.000	0 191	0.89	0.77	YES	40 7
24	35	Total-tetrafurans	303 9016	25 48	80271 266	0.866	1.275	1.275	0 80	0 77	NO	261.4
25	35	Total-tetrafurans	303.9016	25.29	41591.986	0 866	0.660	0.660	0 78	0.77	NO	124 0
26	35	Total-tetrafurans	303.9016	25.14	31677.719	0.866	0 503	0.503	0 76	0.77	NO	93.2
27	3	23478-PeCDF	339 8597	31.85	26369 186	0 936	0.527	0.527	1.52	1.55	NO	72.1
28	37	Total-pentafurans	339 8597	31 71	23537.579	0 921	0 466	0.466	1.62	1.55	NO	75.3
29	37	Total-pentafurans	339.8597	31.59	0.000	0.921	0 000	0.190	1 29	1.55	YES	28 0
30	37	Total-pentafurans	339.8597	30.82	5398.781	0.921	0.107	0.107	1 45	1 55	NO	15.2
31	37	Total-pentafurans	339.8597	30 71	22634.853	0 921	0 448	0 448	1 44	1 55	NO	61 7
32	2	12378-PeCDF	339 8597	30.53	25454 639	0 907	0 500	0 500	1.43	1.55	NO	68 8
33	37	Total-pentafurans	339.8597	30.15	41878.997	0.921	0 829	0 829	1 66	1.55	NO	91 4
34	37	Total-pentafurans	339.8597	30.06	0 000	0 921	0 000	0 069	2 37	1.55	YES	19 0
35	37	Total-pentafurans	339 8597	29 95	0 000	0.921	0 000	0 024	4.63	1.55	YES	12.7
36	37	Total-pentafurans	339 8597	29 45	105399 269	0.921	2 087	2.087	1.61	1 55	NO	214.0
37	37	Total-pentafurans	339 8597	29 27	0 000	0.921	0.000	0.285	1.84	1 55	YES	39.9
38	37	Total-pentafurans	339 8597	29 17	5034 491	0.921	0 100	0.100	1.67	1 55	NO	21.2
39	38	Total-hexafurans	373 8208	36 04	0 000	1.055	0 000	0.076	1 56	1 24	YES	6 6
40	6	123678-HxCDF	373.8208	35 68	28378 444	1 048	0.711	0.711	1 28	1 24	NO	50 5
41	4	123478-HxCDF	373.8208	35 53	55253.157	1.082	1 458	1 458	1 21	1.24	NO	105 2
42	38	Total-hexafurans	373 8208	35 36	8702 219	1 055	0.241	0.241	1 18	1 24	NO	16 7
43	38	Total-hexafurans	373 8208	34 88	547474 797	1 055	15 132	15.132	1 20	1 24	NO	1040 5
44	38	Total-hexafurans	373 8208	34.56	9297.126	1 055	0 257	0.257	1.36	1 24	NO	18 6
45	38	Total-hexafurans	373.8208	34.02	360221.016	1 055	9.956	9.956	1.22	1 24	NO	638 2
46	38	Total-hexafurans	373.8208	33.80	126201 512	1 055	3 488	3.488	1.23	1 24	NO	241 3
47	7	123789-HxCDF	373.8208	37.71	17321 417	1.020	0.547	0.547	1 26	1 24	NO	31.8
48	5	234678-HxCDF	373.8208	36.59	39534.065	1.070	1 118	1.118	1.28	1.24	NO	49.8
49	39	Total-heptafurans	407.7818	40 30	12327.741	1.234	0.509	0.509	1.06	1.05	NO	24.8

Quantify Totals Report MassLynx 4.1 SCN 714
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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
50	39	Total-heptafurans	407.7818	40 13	0 000	1.234	0.000	0.010	11 99	1.05	YES	6 7
51	8	1234678-HpCDF	407.7818	39.81	492636 328	1.214	17.489	17.489	1 03	1 05	NO	981 5
52	9	1234789-HpCDF	407.7818	42.55	22698 953	1.254	1.129	1.129	1.10	1.05	NO	37 7
53	39	Total-heptafurans	407.7818	40.60	1138113 688	1.234	47.010	47.010	1 00	1 05	NO	2307 7
54	10	OCDF	441 7428	47.92	679016.344	1 105	57.059	57 059	0.88	0 89	NO	1051 8
55	36	Total-penta1	339.8597	27.80	327668.063		6.518	6.518	1 53	1.55	NO	1833.4
56	41	Total-tetradioxins	319 8965	26 21	369124.375	1.046	7.465	7.465	0.78	0.77	NO	1206.8
57	41	Total-tetradioxins	319.8965	25.99	0.000	1 046	0.000	0.190	0.63	0.77	YES	31.2
58	41	Total-tetradioxins	319 8965	25.90	0.000	1 046	0 000	0 044	0.65	0.77	YES	8 8
59	41	Total-tetradioxins	319.8965	25 64	99104.868	1.046	2 004	2 004	0.79	0.77	NO	310 0
60	41	Total-tetradioxins	319 8965	25 36	47098.718	1.046	0.952	0.952	0 82	0 77	NO	151 1
61	41	Total-tetradioxins	319.8965	25.14	0.000	1.046	0 000	0.046	0 54	0.77	YES	8 1
62	41	Total-tetradioxins	319.8965	24.63	7487.753	1.046	0.151	0.151	0 72	0 77	NO	25 7
63	41	Total-tetradioxins	319.8965	24 43	884399.406	1.046	17.885	17 885	0.77	0.77	NO	2863.8
64	41	Total-tetradioxins	319.8965	24 17	1399142.313	1 046	28 295	28.295	0.76	0.77	NO	4613 3
65	45	Total-Dioxins	319 8965	23 52	0 000	0 942	0.000	0 029	0.90	0.77	YES	5.1
66	45	Total-Dioxins	319.8965	28 35	0.000	0 942	0.000	0 006	2.94	0.77	YES	3.7
67	45	Total-Dioxins	319.8965	27 78	0.000	0 942	0 000	0 004	3 26	0.77	YES	2.2
68	41	Total-tetradioxins	319.8965	27 56	15347.743	1.046	0 310	0 310	0.86	0.77	NO	41.6
69	41	Total-tetradioxins	319 8965	27 15	13288.179	1 046	0.269	0 269	0.72	0.77	NO	44.6
70	11	2378-TCDD	319.8965	27.02	0 000	1 046	0.000	0 151	0 43	0.77	YES	26.1
71	41	Total-tetradioxins	319.8965	26.65	96793.015	1.046	1.957	1 957	0.79	0.77	NO	250.8
72	41	Total-tetradioxins	319.8965	26.35	5848.141	1.046	0.118	0 118	0.73	0.77	NO	18.1
73	42	Total-pentadioxins	355.8546	32.51	7606.693	0.973	0.222	0.222	1 34	1.55	NO	9 1
74	12	12378-PeCDD	355.8546	32.12	33081.451	0.973	0.966	0.966	1.64	1.55	NO	42 5
75	42	Total-pentadioxins	355.8546	31.44	200442.851	0.973	5.853	5 853	1.52	1 55	NO	266 2
76	42	Total-pentadioxins	355 8546	30 88	679013 062	0 973	19 826	19 826	1.54	1 55	NO	924 9
77	42	Total-pentadioxins	355 8546	30.74	0 000	0 973	0.000	0 701	1.19	1 55	YES	48 3
78	42	Total-pentadioxins	355 8546	30.66	83112.926	0.973	2.427	2.427	1 66	1.55	NO	113.1
79	42	Total-pentadioxins	355.8546	30.52	722680 219	0.973	21 101	21.101	1 55	1.55	NO	1052.5
80	42	Total-pentadioxins	355 8546	29.90	18753 393	0 973	0.548	0 548	1 44	1.55	NO	27.6
81	42	Total-pentadioxins	355 8546	29.43	490290 125	0 973	14 316	14 316	1 53	1.55	NO	440.6
82	15	123789-HxCDD	389 8157	37.31	81550.801	0.839	3.220	3 220	1 25	1 24	NO	143 8
83	43	Total-hexadioxins	389 8157	37 07	21330 429	0 884	0.799	0 799	1.26	1.24	NO	33.9
84	14	123678-HxCDD	389 8157	36.88	166508.406	0 878	5.931	5 931	1 25	1.24	NO	269 2
85	13	123478-HxCDD	389.8157	36.76	55362.797	0.935	2.084	2 084	1 22	1 24	NO	93 3
86	43	Total-hexadioxins	389 8157	35.79	506289.344	0.884	18.970	18 970	1 22	1 24	NO	570.2
87	43	Total-hexadioxins	389 8157	35.40	1775823 938	0.884	66 536	66 536	1.23	1.24	NO	3028.0
88	43	Total-hexadioxins	389.8157	34.59	404233.172	0.884	15.146	15.146	1.20	1.24	NO	701 9
89	43	Total-hexadioxins	389.8157	34 34	29609.500	0.884	1 109	1.109	1.23	1.24	NO	54 8
90	44	Total-heptadioxins	423.7766	40.36	3408438.125	0.974	182.537	182	1 07	1 05	NO	3494.4
91	16	1234678-HpCDD	423.7766	41.64	2364694.000	0.974	126 640	126 ..	1.03	1.05	NO	2074 5
92	17	OCDD	457.7377	47.64	10728061. .	0.950	1048.7. .	1048.	0 88	0.89	NO	7349 2

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330 9792	23 45	0.000							10.2
2	48	FUNCTION1 PFK	330 9792	23 43	0.000							10 2
3	48	FUNCTION1 PFK	330.9792	22 55	0.000							34 6
4	48	FUNCTION1 PFK	330 9792	22 07	0.000							44 9
5	48	FUNCTION1 PFK	330.9792	21.27	0.000							0 7
6	48	FUNCTION1 PFK	330.9792	27.89	0 000							1.2
7	48	FUNCTION1 PFK	330.9792	27.60	0.000							0.8
8	48	FUNCTION1 PFK	330.9792	26.81	0.000							1 4
9	48	FUNCTION1 PFK	330 9792	26.59	0.000							2.1
10	48	FUNCTION1 PFK	330 9792	26.23	0.000							1.3
11	48	FUNCTION1 PFK	330 9792	26.06	0 000							1.9
12	48	FUNCTION1 PFK	330.9792	25.93	0 000							1 2
13	48	FUNCTION1 PFK	330.9792	25.32	0.000							0.4
14	48	FUNCTION1 PFK	330.9792	24.64	0.000							1 9
15	48	FUNCTION1 PFK	330 9792	24.58	0 000							1 6
16	48	FUNCTION1 PFK	330 9792	24.52	0 000							1 4
17	48	FUNCTION1 PFK	330 9792	24.32	0 000							0 5
18	48	FUNCTION1 PFK	330 9792	24.18	0 000							0.5
19	48	FUNCTION1 PFK	330.9792	23.94	0.000							0.7
20	48	FUNCTION1 PFK	330.9792	23.88	0 000							0.5
21	48	FUNCTION1 PFK	330.9792	23.73	0.000							1.1
22	48	FUNCTION1 PFK	330.9792	28 27	0 000							1.1
23	48	FUNCTION1 PFK	330 9792	28 17	0.000							1.0
24	48	FUNCTION1 PFK	330.9792	28 10	0.000							1 0

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	33.02	0 000		0.000					2 4
2	49	FUNCTION2 PFK	366.9792	30.46	0 000		0 000					8 4
3	49	FUNCTION2 PFK	366.9792	29 49	0.000		0.000					8.4

PFK3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	38.11	0.000		0 000					16 0
2	50	FUNCTION3 PFK	380.9760	37.62	0 000		0 000					16 0
3	50	FUNCTION3 PFK	380 9760	36.98	0 000		0 000					5 3

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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	39 24	0.000								1.4
2	51	FUNCTION4 PFK	430 9728	39 20	0 000								1 9
3	51	FUNCTION4 PFK	430 9728	39 03	0 000								1.2
4	51	FUNCTION4 PFK	430.9728	38.97	0 000								1.5
5	51	FUNCTION4 PFK	430.9728	41.63	0.000								1.6
6	51	FUNCTION4 PFK	430.9728	41.57	0.000								1.4
7	51	FUNCTION4 PFK	430.9728	41.41	0.000								1.4
8	51	FUNCTION4 PFK	430 9728	41 24	0.000								0.7
9	51	FUNCTION4 PFK	430 9728	41 08	0 000								1.7
10	51	FUNCTION4 PFK	430.9728	41 02	0.000								1 7
11	51	FUNCTION4 PFK	430.9728	40 74	0 000								0 7
12	51	FUNCTION4 PFK	430.9728	40 34	0.000								0.5
13	51	FUNCTION4 PFK	430.9728	40 15	0 000								1 9
14	51	FUNCTION4 PFK	430.9728	40 12	0.000								1.3
15	51	FUNCTION4 PFK	430 9728	40 02	0 000								2.0
16	51	FUNCTION4 PFK	430 9728	39.91	0 000								0.6
17	51	FUNCTION4 PFK	430.9728	39.53	0.000								0.5
18	51	FUNCTION4 PFK	430.9728	39.48	0.000								1.1
19	51	FUNCTION4 PFK	430 9728	39 41	0.000								1 4
20	51	FUNCTION4 PFK	430.9728	39.37	0.000								1.5
21	51	FUNCTION4 PFK	430.9728	44.26	0 000								1 4
22	51	FUNCTION4 PFK	430.9728	43.86	0 000								1.6
23	51	FUNCTION4 PFK	430 9728	43.74	0 000								0 5
24	51	FUNCTION4 PFK	430.9728	43.54	0 000								0 8
25	51	FUNCTION4 PFK	430.9728	43 48	0 000								0 8
26	51	FUNCTION4 PFK	430.9728	43 17	0 000								0.7
27	51	FUNCTION4 PFK	430.9728	43.03	0.000								0 9
28	51	FUNCTION4 PFK	430.9728	42 78	0 000								2.0
29	51	FUNCTION4 PFK	430.9728	42.74	0.000								0.7
30	51	FUNCTION4 PFK	430.9728	42.58	0.000								1.8
31	51	FUNCTION4 PFK	430.9728	42.43	0 000								0 8
32	51	FUNCTION4 PFK	430 9728	42.18	0 000								1.2
33	51	FUNCTION4 PFK	430.9728	42 07	0.000								1 5
34	51	FUNCTION4 PFK	430.9728	41 88	0 000								1 4
35	51	FUNCTION4 PFK	430.9728	41 77	0.000								1 6
36	51	FUNCTION4 PFK	430 9728	41 67	0.000								2.2
37	51	FUNCTION4 PFK	430 9728	44 93	0.000								2.4
38	51	FUNCTION4 PFK	430.9728	44 49	0.000								2.0
39	51	FUNCTION4 PFK	430.9728	44 32	0.000								1.1

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PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	52	FUNCTION5 PFK	480.9696	45 84	0.000							0.9
2	52	FUNCTION5 PFK	480.9696	45 72	0.000							0 9
3	52	FUNCTION5 PFK	480.9696	45 64	0.000							1 5
4	52	FUNCTION5 PFK	480.9696	45.61	0.000							1 7
5	52	FUNCTION5 PFK	480.9696	45 51	0 000							1.5
6	52	FUNCTION5 PFK	480 9696	45.39	0.000							0.7
7	52	FUNCTION5 PFK	480.9696	45.35	0.000							1.2
8	52	FUNCTION5 PFK	480.9696	45 29	0.000							0 5
9	52	FUNCTION5 PFK	480.9696	45.26	0 000							0.8
10	52	FUNCTION5 PFK	480.9696	45.19	0.000							0.5
11	52	FUNCTION5 PFK	480.9696	45 11	0.000							1 6
12	52	FUNCTION5 PFK	480.9696	45.09	0.000							1.4
13	52	FUNCTION5 PFK	480.9696	47.00	0.000							1 8
14	52	FUNCTION5 PFK	480.9696	46 91	0.000							1 2
15	52	FUNCTION5 PFK	480 9696	46.81	0.000							0.4
16	52	FUNCTION5 PFK	480 9696	46.72	0 000							1 1
17	52	FUNCTION5 PFK	480 9696	46 65	0.000							1 3
18	52	FUNCTION5 PFK	480 9696	46.62	0.000							1 2
19	52	FUNCTION5 PFK	480 9696	46.45	0.000							1 0
20	52	FUNCTION5 PFK	480.9696	46 42	0 000							0.8
21	52	FUNCTION5 PFK	480.9696	46 40	0 000							0.8
22	52	FUNCTION5 PFK	480.9696	46 26	0 000							1.0
23	52	FUNCTION5 PFK	480.9696	46.16	0.000							1 0
24	52	FUNCTION5 PFK	480.9696	46 11	0 000							0.4
25	52	FUNCTION5 PFK	480.9696	46 04	0 000							0 3
26	52	FUNCTION5 PFK	480.9696	46.00	0 000							0.6
27	52	FUNCTION5 PFK	480.9696	45.96	0 000							0 6
28	52	FUNCTION5 PFK	480.9696	45 90	0.000							1.4
29	52	FUNCTION5 PFK	480.9696	48.33	0 000							0.7
30	52	FUNCTION5 PFK	480.9696	48 27	0 000							0.8
31	52	FUNCTION5 PFK	480 9696	48.23	0.000							0.3
32	52	FUNCTION5 PFK	480.9696	48.06	0.000							1.5
33	52	FUNCTION5 PFK	480.9696	47 94	0.000							0 4
34	52	FUNCTION5 PFK	480.9696	47 90	0.000							0 9
35	52	FUNCTION5 PFK	480.9696	47 75	0 000							0 8
36	52	FUNCTION5 PFK	480.9696	47 66	0.000							2.0
37	52	FUNCTION5 PFK	480.9696	47 63	0.000							1.5
38	52	FUNCTION5 PFK	480.9696	47 51	0.000							0 9
39	52	FUNCTION5 PFK	480 9696	47.43	0.000							1.2
40	52	FUNCTION5 PFK	480.9696	47.32	0.000							2.6
41	52	FUNCTION5 PFK	480 9696	47.27	0.000							2 2
42	52	FUNCTION5 PFK	480 9696	47.23	0.000							2 4
43	52	FUNCTION5 PFK	480 9696	47.12	0.000							2 8
44	52	FUNCTION5 PFK	480 9696	47 05	0.000							1 9
45	52	FUNCTION5 PFK	480 9696	48 97	0 000							0 7
46	52	FUNCTION5 PFK	480 9696	48 87	0 000							1 2
47	52	FUNCTION5 PFK	480.9696	48 80	0 000							1 2
48	52	FUNCTION5 PFK	480 9696	48.77	0.000							0.6
49	52	FUNCTION5 PFK	480.9696	48.65	0 000							1.6

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	52 FUNCTION5 PFK	480 9696	48 55	0.000							0 8
51	52 FUNCTION5 PFK	480 9696	48 52	0.000							1 0
52	52 FUNCTION5 PFK	480 9696	48 48	0 000							0 6
53	52 FUNCTION5 PFK	480.9696	48.41	0 000							0.5
54	52 FUNCTION5 PFK	480.9696	48.37	0 000							1 1

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	26.72	0.000		0.000					4.1
2	53 FUNCTION1 HXCD	375 8364	26 45	0.000		0.000					173 8
3	53 FUNCTION1 HXCD ..	375 8364	26 18	0.000		0.000					46 7
4	53 FUNCTION1 HXCD...	375.8364	24.23	0.000		0.000					4 1
5	53 FUNCTION1 HXCD	375 8364	21.30	0.000		0 000					3 5
6	53 FUNCTION1 HXCD	375 8364	27.90	0 000		0 000					11 1
7	53 FUNCTION1 HXCD.	375.8364	27.74	0.000		0.000					5 9
8	53 FUNCTION1 HXCD	375.8364	27.57	0.000		0.000					2 9

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	25 72	0.000		0.000					3 0
2	54 FUNCTION1 HPCD...	409.7974	24 78	0 000		0 000					3 5
3	54 FUNCTION1 HPCD	409 7974	21 31	0 000		0 000					2 3

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD.	409 7974	31.94	0.000		0 000					7.9
2	55 FUNCTION2 HPCD.	409 7974	31.69	0.000		0.000					5 8
3	55 FUNCTION2 HPCD	409 7974	31.42	0.000		0.000					6 5
4	55 FUNCTION2 HPCD	409.7974	30 48	0.000		0.000					41 9
5	55 FUNCTION2 HPCD.	409 7974	30 23	0.000		0.000					7 6
6	55 FUNCTION2 HPCD.	409.7974	30 15	0.000		0.000					50.0
7	55 FUNCTION2 HPCD .	409 7974	30.06	0.000		0.000					2 7
8	55 FUNCTION2 HPCD .	409.7974	29 89	0.000		0.000					8.1
9	55 FUNCTION2 HPCD..	409 7974	33.15	0.000		0.000					7 0
10	55 FUNCTION2 HPCD	409.7974	33.11	0.000		0.000					7 3
11	55 FUNCTION2 HPCD .	409.7974	32.88	0.000		0.000					3 1
12	55 FUNCTION2 HPCD ..	409.7974	32.80	0.000		0.000					3 8
13	55 FUNCTION2 HPCD...	409.7974	32.50	0.000		0.000					7 4

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445 7555	37.07	0.000		0.000					20 3
2	56	FUNCTION3 OCDPE	445 7555	36.96	0.000		0.000					16 8
3	56	FUNCTION3 OCDPE	445 7555	36.83	0.000		0 000					5 1
4	56	FUNCTION3 OCDPE	445.7555	36.69	0 000		0.000					13 0
5	56	FUNCTION3 OCDPE	445.7555	36 64	0 000		0.000					14.1
6	56	FUNCTION3 OCDPE	445.7555	35 56	0.000		0.000					5 3
7	56	FUNCTION3 OCDPE	445.7555	35.46	0.000		0 000					12 8
8	56	FUNCTION3 OCDPE	445 7555	35.26	0.000		0.000					7.1
9	56	FUNCTION3 OCDPE	445.7555	35 23	0.000		0.000					8 7
10	56	FUNCTION3 OCDPE	445 7555	35.20	0.000		0.000					9.0
11	56	FUNCTION3 OCDPE	445.7555	37 88	0.000		0 000					7 0
12	56	FUNCTION3 OCDPE	445.7555	37.70	0.000		0.000					2.9
13	56	FUNCTION3 OCDPE	445 7555	37 56	0.000		0 000					7 6
14	56	FUNCTION3 OCDPE	445 7555	37 36	0.000		0 000					11 2
15	56	FUNCTION3 OCDPE	445 7555	37 15	0 000		0 000					10 5

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	42.04	0 000		0.000					4.7
2	57	FUNCTION4 NCDPE	479.7165	41 99	0.000		0.000					5 9
3	57	FUNCTION4 NCDPE	479 7165	41 88	0 000		0.000					9 9
4	57	FUNCTION4 NCDPE	479 7165	41 84	0 000		0.000					7 9
5	57	FUNCTION4 NCDPE	479.7165	41 63	0 000		0 000					58 8
6	57	FUNCTION4 NCDPE	479.7165	41 40	0 000		0.000					21.0
7	57	FUNCTION4 NCDPE	479.7165	41 26	0 000		0 000					19.6
8	57	FUNCTION4 NCDPE	479 7165	39.56	0.000		0 000					3 3
9	57	FUNCTION4 NCDPE	479.7165	39.39	0 000		0 000					413.2

ETHERS6

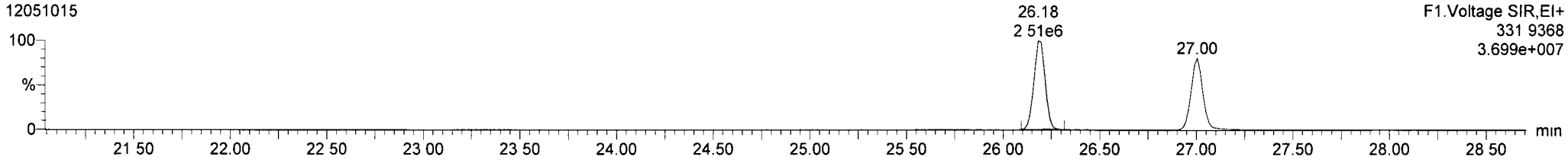
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	58	FUNCTION5 DCDPE	513.6775	47.89	0 000		0 000					3.5
2	58	FUNCTION5 DCDPE	513.6775	47 84	0 000		0 000					4.6

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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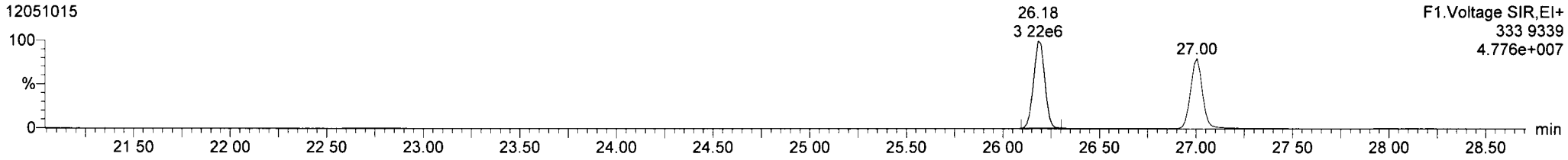

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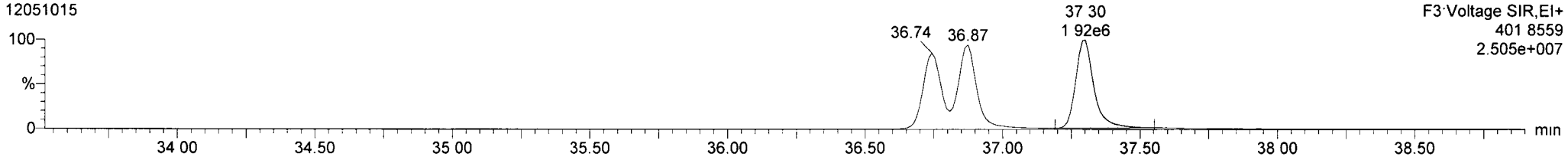

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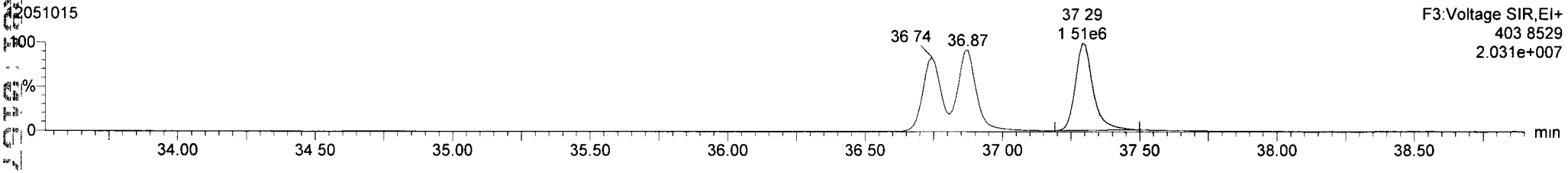
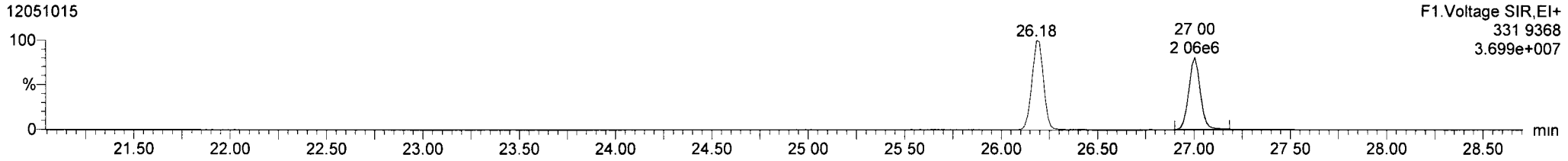


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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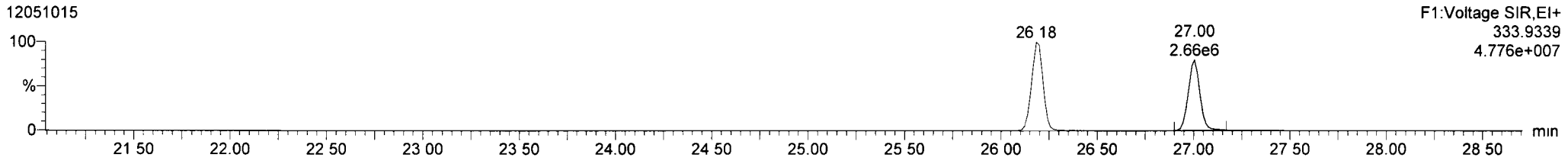

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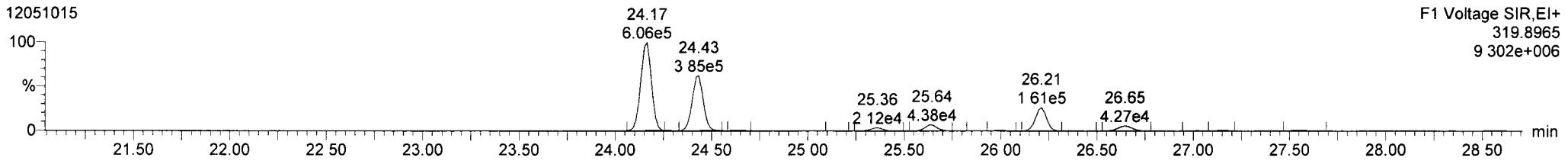

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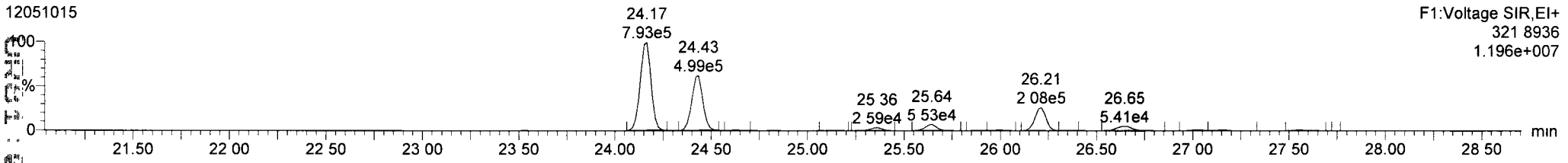
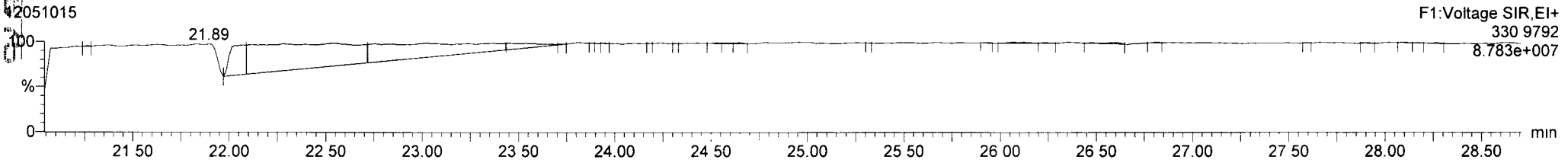


FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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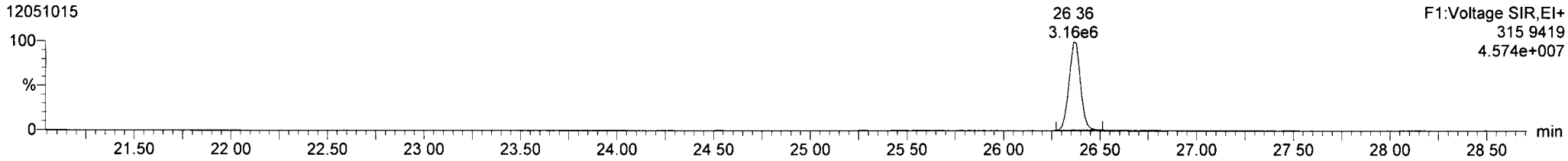
Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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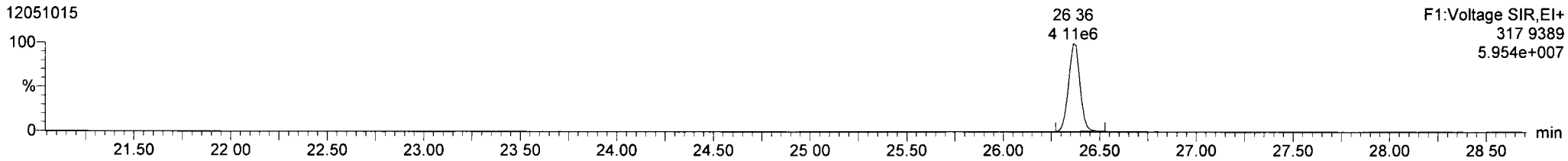
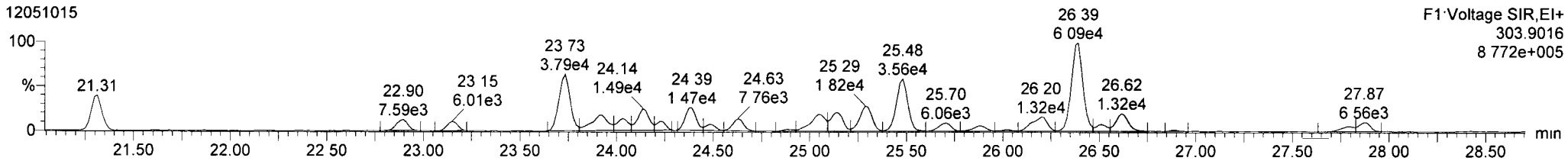


Total-tetrafurans



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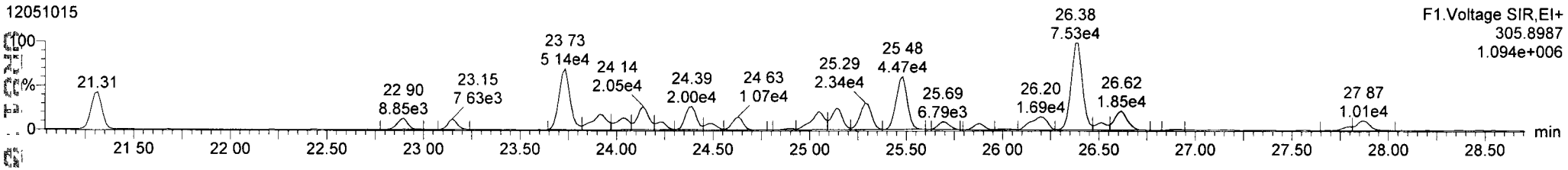
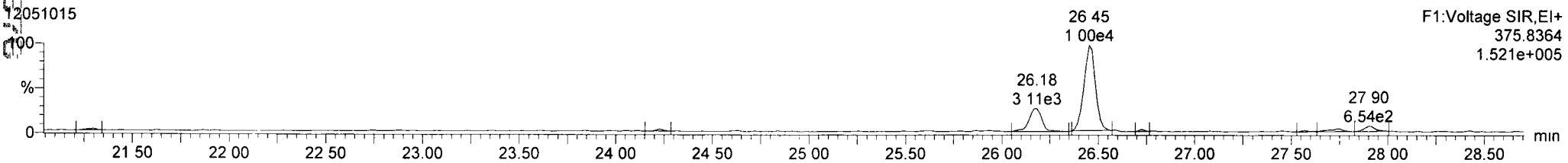


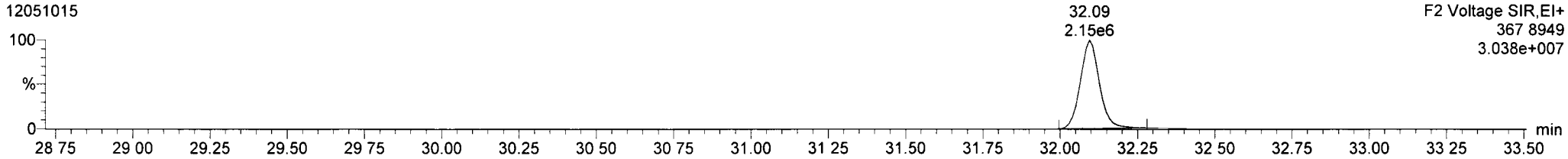
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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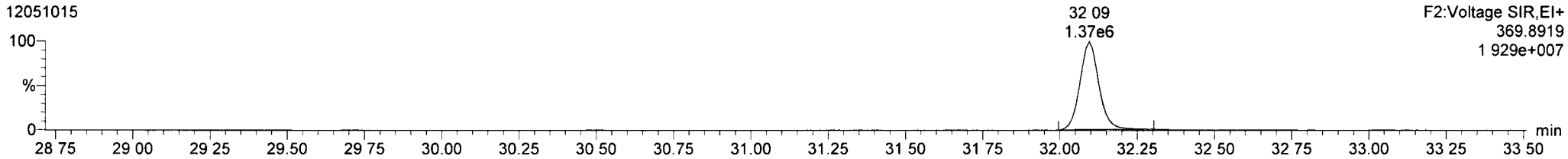
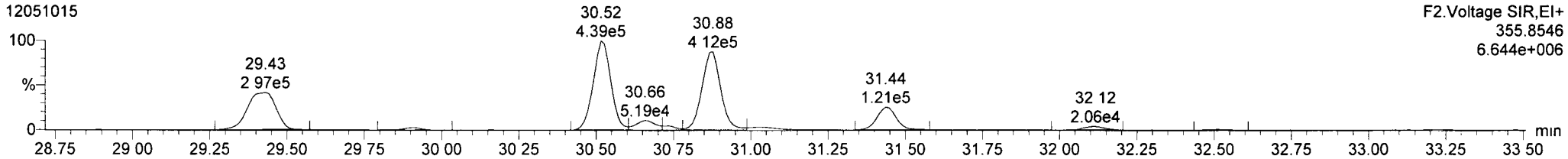


Total-pentadioxins



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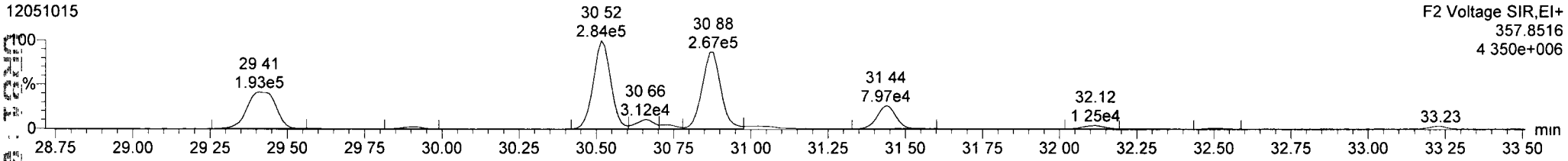
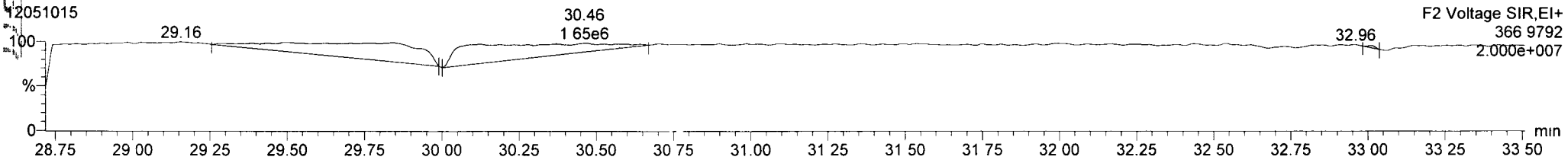


FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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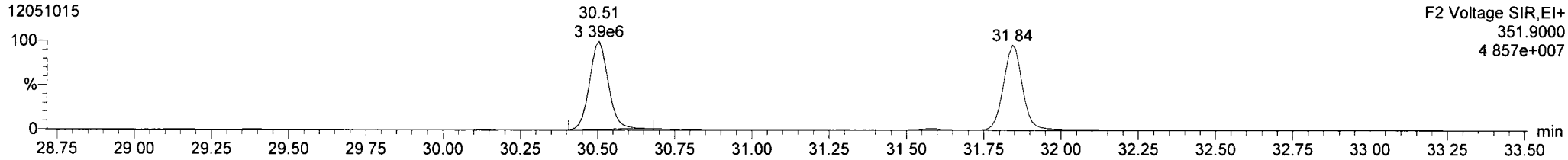
Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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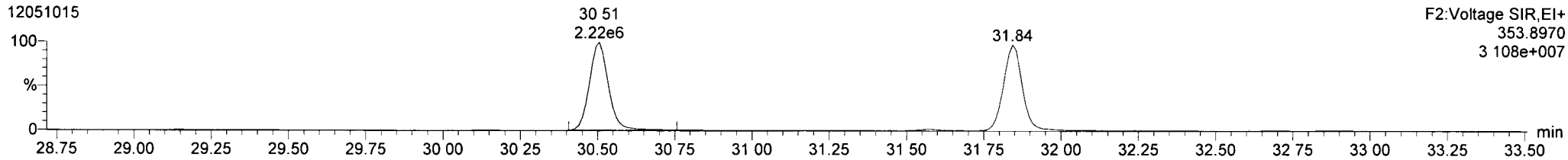

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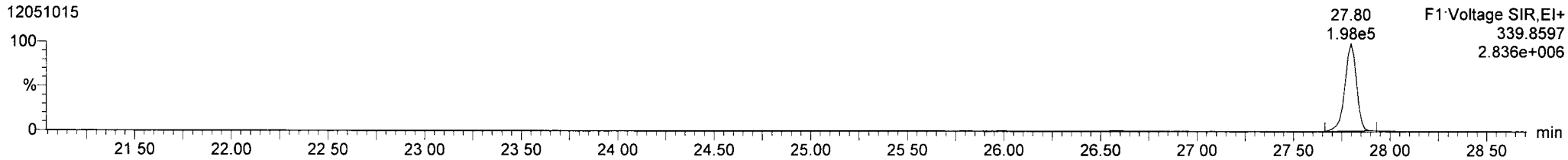

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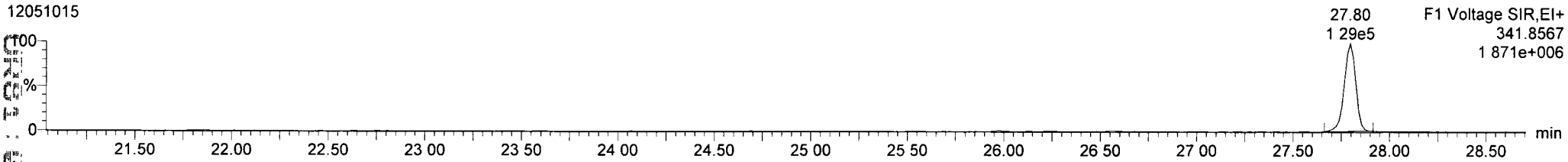
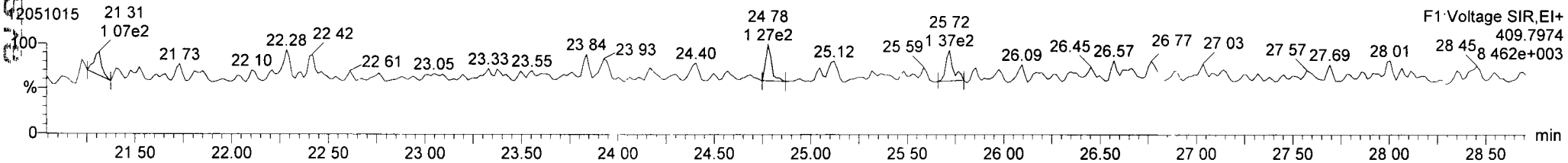


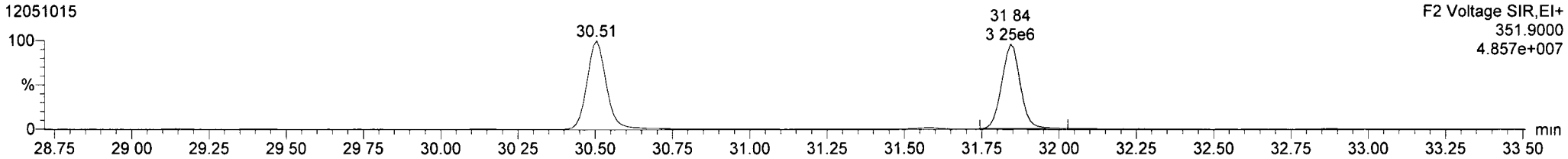
FUNCTION1 HPCDPE



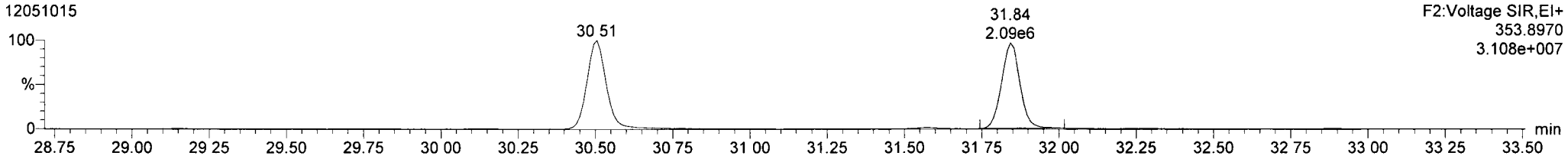
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

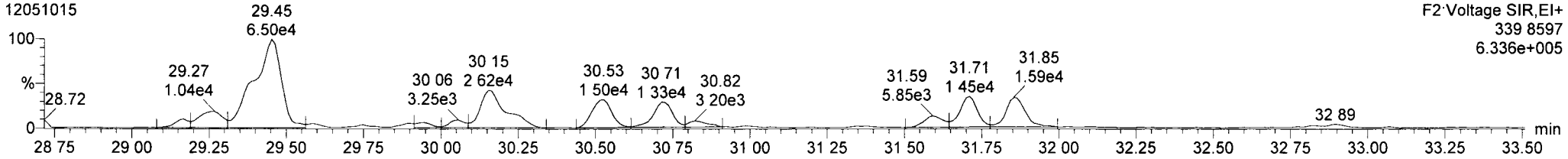
13C-23478-PeCDF



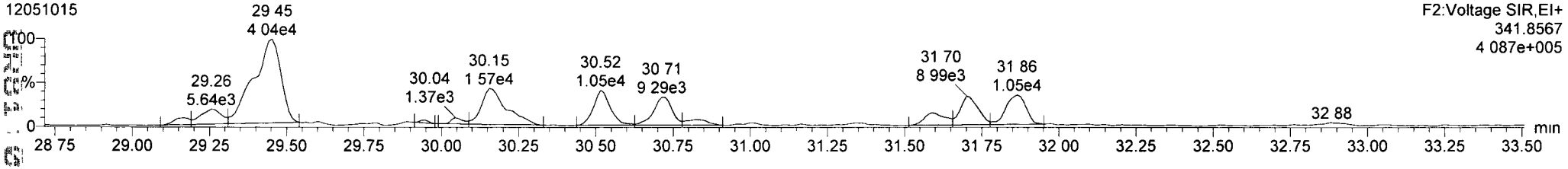
13C-23478-PeCDF



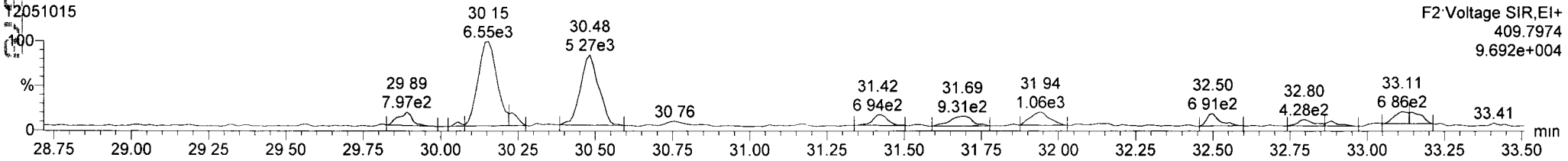
Total-pentafurans



Total-pentafurans



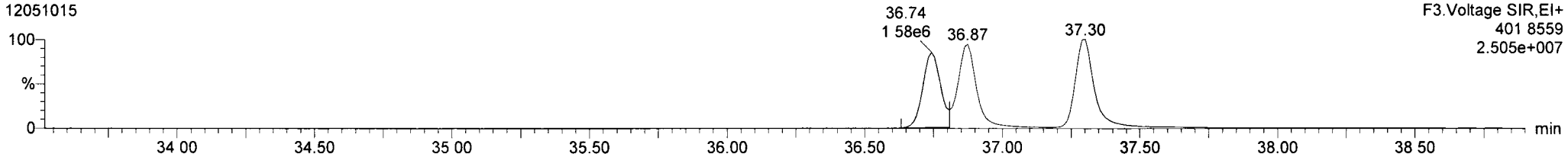
FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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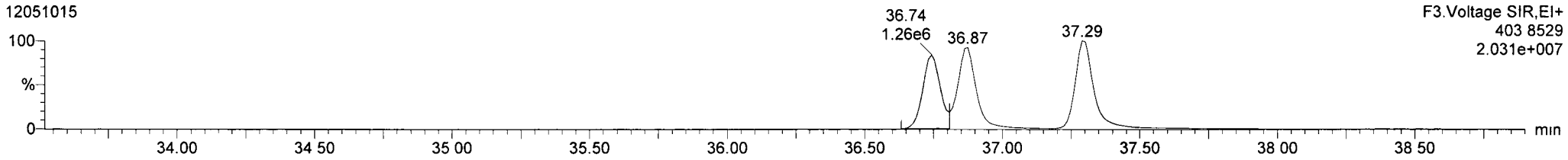
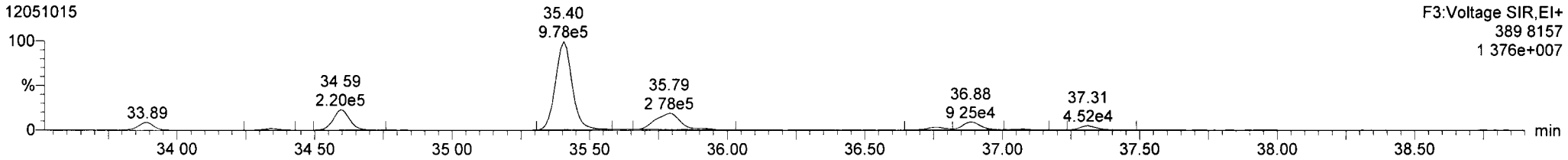
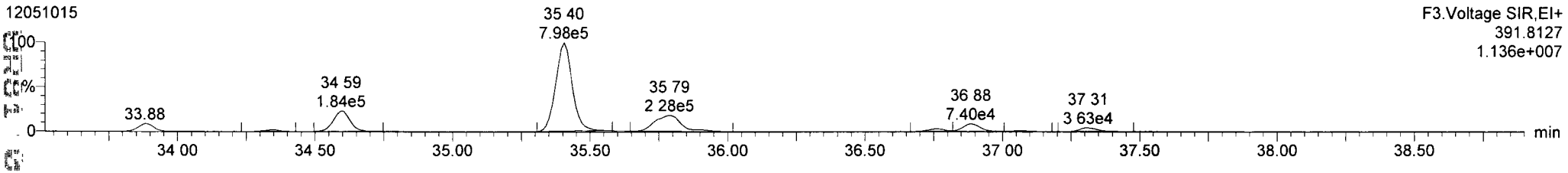


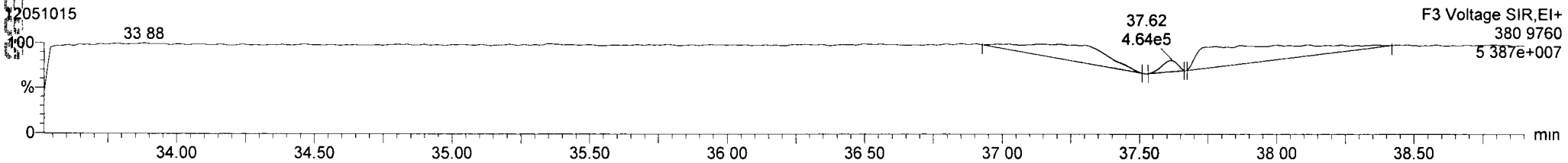
Total-hexadioxins



Total-hexadioxins



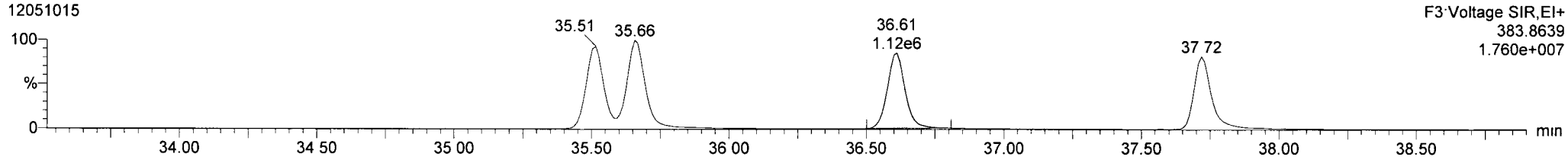
FUNCTION3 PFK



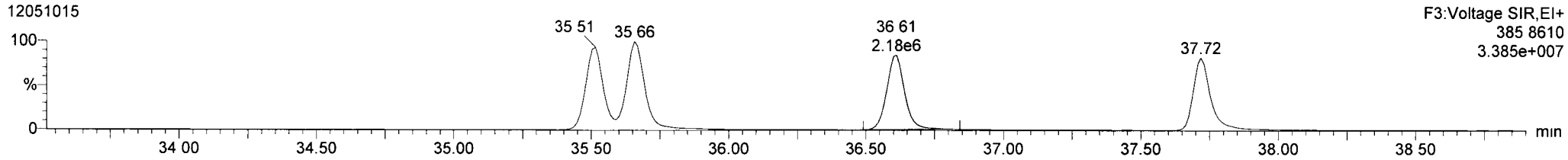
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

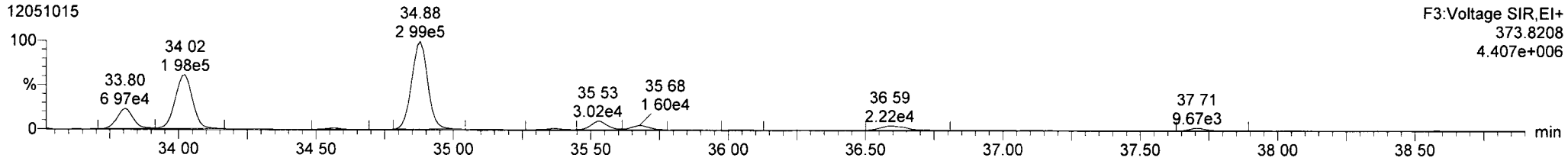
13C-234678-HxCDF



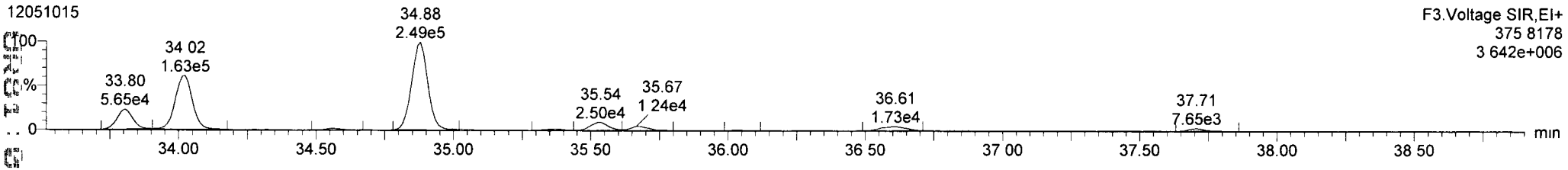
13C-234678-HxCDF



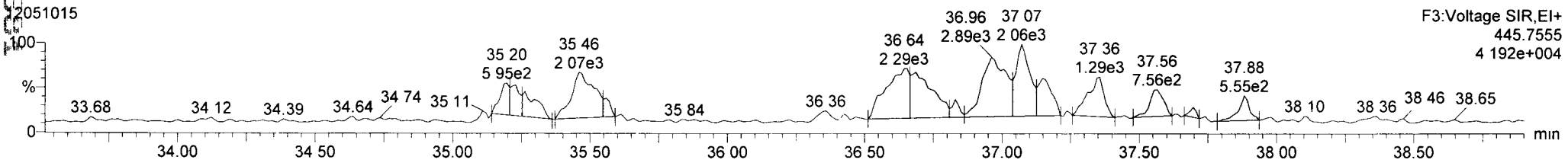
Total-hexafurans



Total-hexafurans



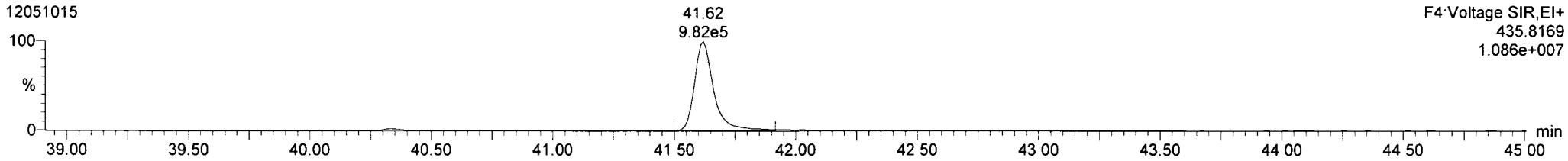
FUNCTION3 OCDPE



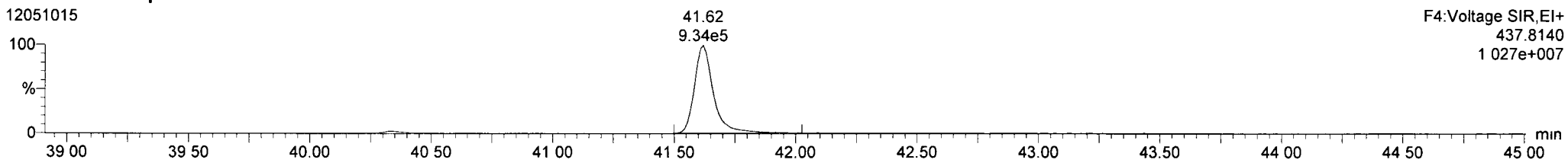
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

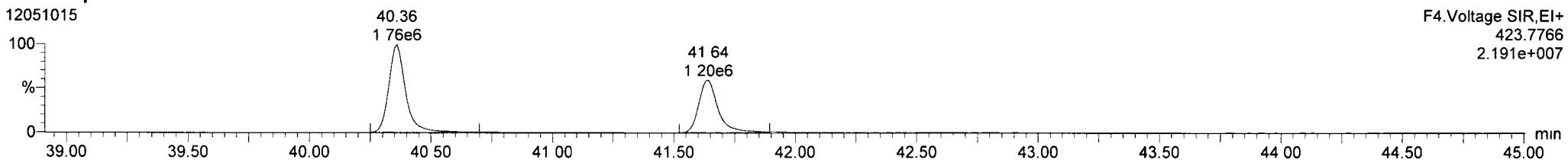
13C-1234678-HpCDD



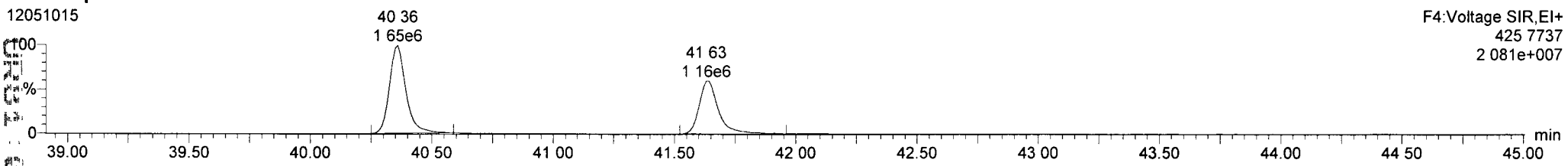
13C-1234678-HpCDD



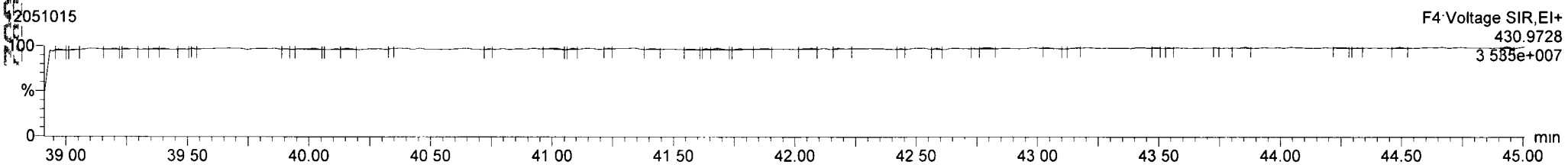
Total-heptadioxins



Total-heptadioxins



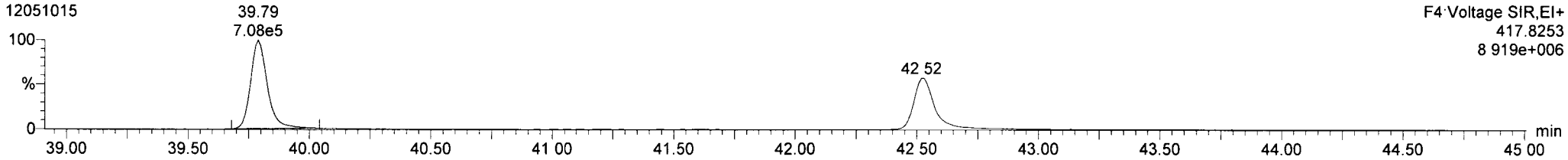
FUNCTION4 PFK



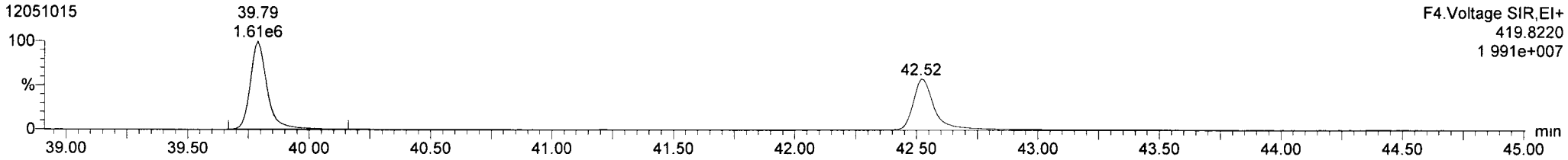
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

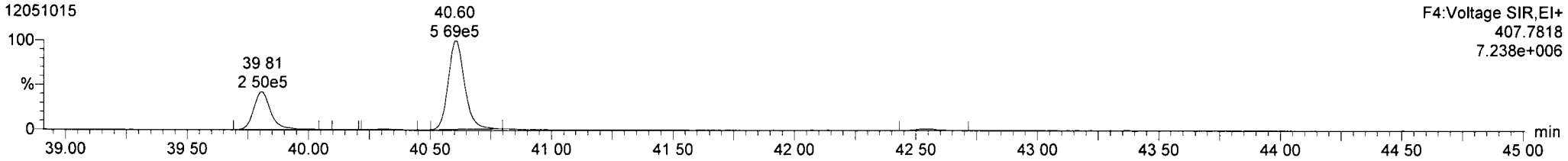
13C-1234678-HpCDF



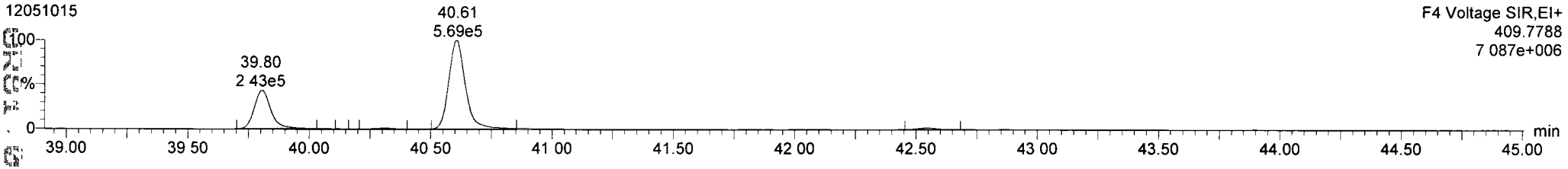
13C-1234678-HpCDF



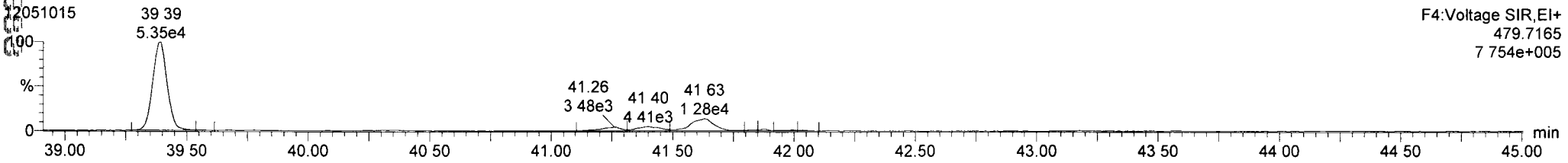
Total-heptafurans



Total-heptafurans



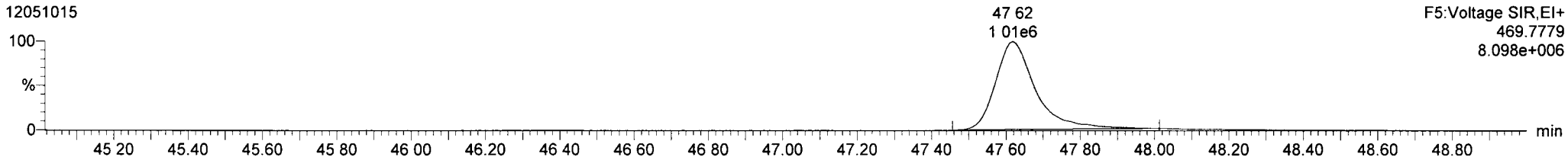
FUNCTION4 NCDPE



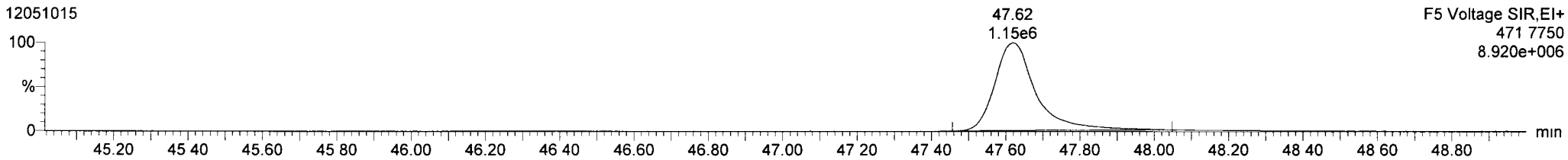
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

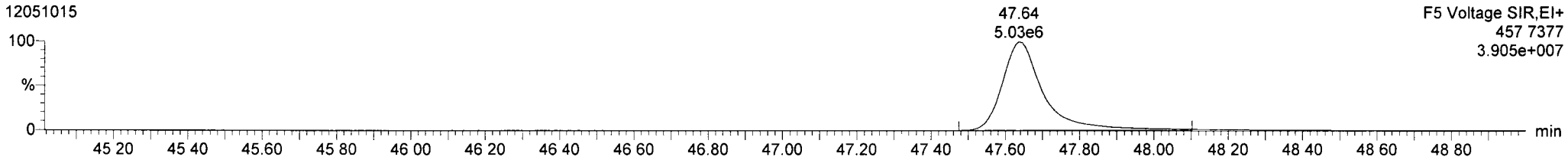
13C-OCDD



13C-OCDD



OCDD



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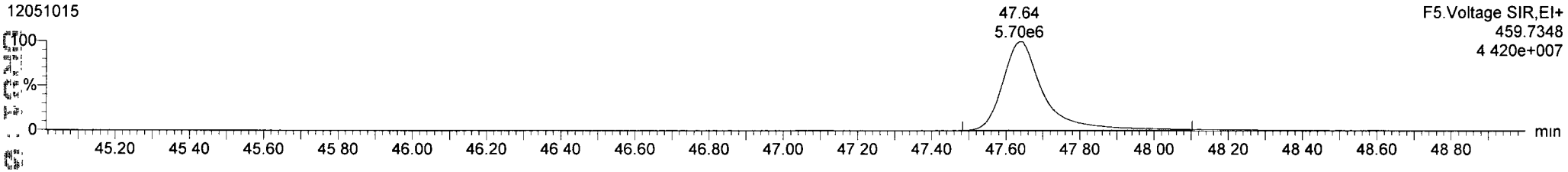
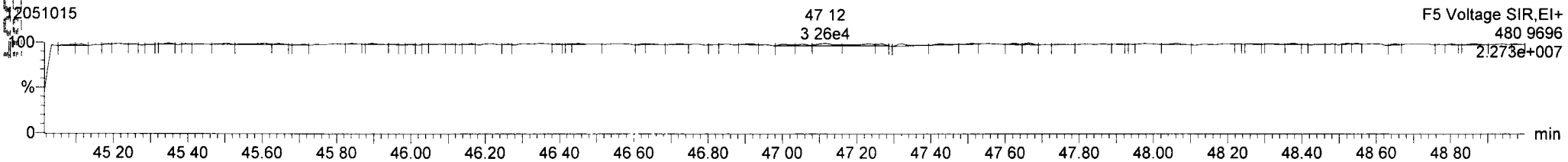


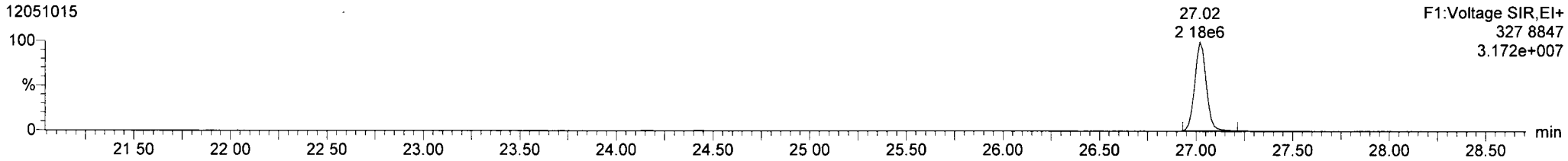
FUNCTION5 PFK



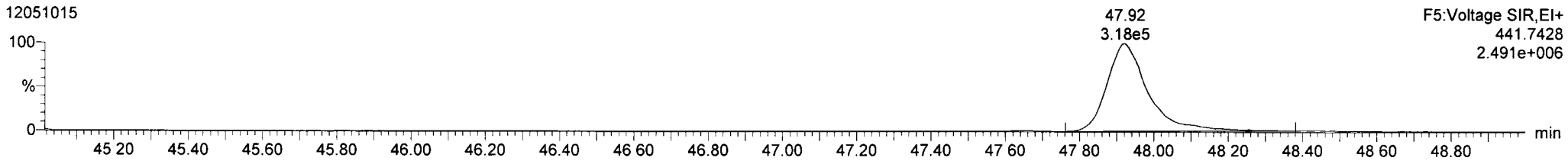
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:15 Pacific Daylight Time

Name: 12051015, Date: 10-May-2012, Time: 21:56:46, ID: UR81I, Conditions: AUTOSPEC01, User: pk

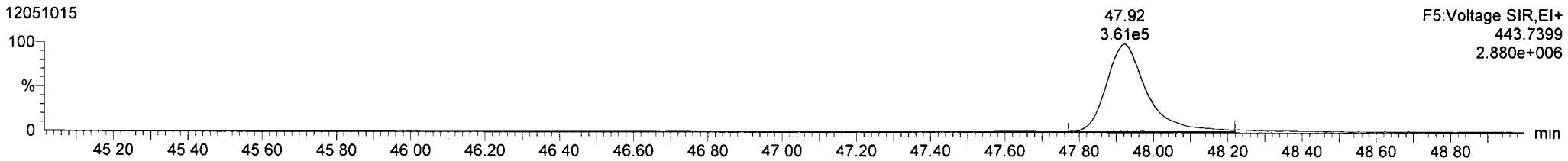
37CL-2378-TCDD



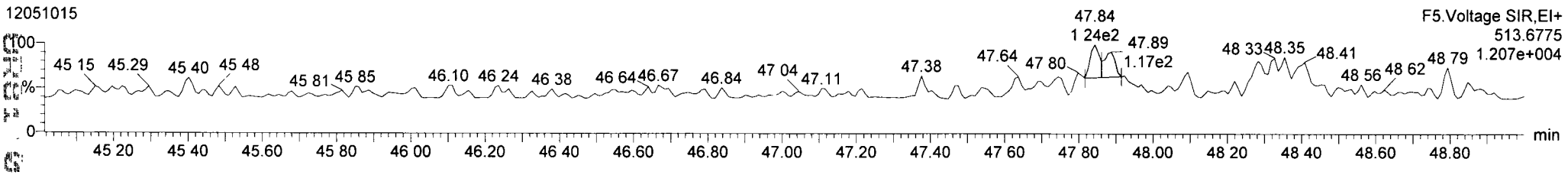
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10.25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

pk 5/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

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1	1	2378-TCDF	303.9016	26 392	26.393	161007	161007	0.866	dd		0.80	0.77	313.7	NO	2.658	2.658	
2	2	12378-PeCDF	339 8597	30 538	30.538	49301	49301	0.907	bb		1.69	1 55	154 1	NO	1.086	1.086	X
3	3	23478-PeCDF	339 8597	31 875	31 887	57843	57843	0.936	db		1.45	1 55	170 3	NO	1 291	1.291	
4	4	123478-HxCDF	373.8208	35 558	35.547	160188	160188	1.082	dd		1.21	1.24	253.8	NO	4.681	4.681	
5	5	234678-HxCDF	373 8208	36.666	36 676	0	114361	1.070	MM		1.25	1 24	104 2	NO	0.000	3.553	
6	6	123678-HxCDF	373.8208	35.712	35 711	78131	78131	1.048	db		1.30	1.24	119.6	NO	2.072	2.072	
7	7	123789-HxCDF	373.8208	37.729	37 751	38118	38118	1.020	bb		1.24	1.24	66 0	NO	1 483	1.483	
8	8	1234678-HpCDF	407.7818	39.833	39 831	1520788	1520788	1 214	bd		1.00	1.05	1958 3	NO	59 426	59.426	
9	9	1234789-HpCDF	407.7818	42.563	42 553	72262	72262	1.254	bb		1.02	1.05	80 3	NO	3 896	3 896	
10	10	OCDF	441.7428	47.950	47 940	2104922	2104922	1.105	bd		0.86	0 89	2053 7	NO	183 072	183 072	
11	11	2378-TCDD	319.8965	27.034	27.018	0	14506	1 046	bd		0 58	0 77	40.7	YES	0 000	0.318	
12	12	12378-PeCDD	355.8546	32.127	32 126	83049	83049	0 973	bd		1.61	1 55	189 7	NO	2 699	2.699	
13	13	123478-HxCDD	389.8157	36.808	36 808	126952	126952	0.935	bd		1.24	1 24	132 6	NO	5 161	5 161	
14	14	123678-HxCDD	389.8157	36.929	36 929	530630	530630	0 878	dd		1.20	1 24	523 0	NO	20 791	20 791	
15	15	123789-HxCDD	389.8157	37.356	37 324	0	219546	0.839	dd		1.05	1.24	220 6	YES	0.000	9 454	
16	16	1234678-HpCDD	423 7766	41.664	41 654	10635330	10635330	0.974	bb		1.08	1.05	3840.0	NO	608.887	608.887	
17	17	OCDD	457.7377	47.672	47.668	54722052	54722052	0.950	bd		0.88	0.89	19649 4	NO	5536.621	5536.6. .	F2
18	18	13C-2378-TCDF	315.9419	26.377	26.377	6993958		1 484	bb	88 8	0 78	0 77	11798 3	NO	88 812		
19	19	13C-12378-PeCDF	351.9000	30.516	30.519	5006760		1 048	bd	90 0	1 54	1 55	5791 5	NO	90 047		
20	20	13C-23478-PeCDF	351.9000	31.865	31 856	4787044		1 003	bb	89 9	1.56	1.55	5477 7	NO	89 931		
21	21	13C-123478-HxCDF	383.8639	35.536	35 558	3163350		1 186	bd	87.5	0 52	0 51	2388.8	NO	87 530		
22	22	13C-123678-HxCDF	383.8639	35.690	35 712	3596168		1.315	dd	89 7	0.53	0.51	2528 2	NO	89.712		
23	23	13C-234678-HxCDF	383 8639	36.654	36 644	3008588		1 223	bb	80 7	0.52	0.51	2117.1	NO	80.684		
24	24	13C-123789-HxCDF	383.8639	37 740	37 751	2519606		1.056	bb	78 2	0.51	0.51	2180.7	NO	78.239		
25	25	13C-1234678-HpCDF	417.8253	39 812	39 833	2107218		1 011	bb	68 3	0.45	0.44	2004.9	NO	68.350		
26	26	13C-1234789-HpCDF	417 8253	42 541	42.585	1478848		0 741	bb	65 5	0.43	0.44	1165 3	NO	65.513		
27	27	13C-1234-TCDD	331.9368	26 198	26 272	5305102		1.000	bb	100 0	0.78	0.77	7613.0	NO	100.000		
28	28	13C-2378-TCDD	331 9368	27 004	27 020	4358029		0 956	bb	85 9	0.78	0.77	5564 7	NO	85 895		
29	29	13C-12378-PeCDD	367 8949	32 117	32 108	3161336		0.663	bb	89 8	1.61	1.55	9587 4	NO	89 819		
30	30	13C-123478-HxCDD	401.8559	36 786	36 775	2629458		1 024	bd	84 2	1.27	1.24	4417.4	NO	84.249		
31	31	13C-123678-HxCDD	401.8559	36 917	36 907	2907621		1 113	db	85 7	1.25	1.24	4553 2	NO	85.733		
32	32	13C-1234678-HpCDD	435 8169	41.642	41 686	1792758		0 815	bd	72 2	1.05	1.05	3386 0	NO	72 153		
33	33	13C-OCDD	469.7779	47 654	47.702	2080609		0.717	bb	47 6	0.90	0.89	1798.3	NO	95.187		

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.334	37.368	3048206		1 000	bd	100 0	1.25	1 24	4787.9	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 370			0 866							14.827	15 762
36	36	Total-penta1	339.8597		28.210										18.263	18 263
37	37	Total-pentafurans	339 8597		30.790			0 921						30.224	11.961	13.167 31.430
38	38	Total-hexafurans	373.8208		35.760			1.055							107.178	110 731
39	39	Total-heptafurans	407 7818		41.160			1 234							213 762	213 878
40	40	Total-Furans	303 9016		0.000			1.050							549 312	555.121
41	41	Total-tetradioxins	319 8965		25.880			1 046							64.764	65 492
42	42	Total-pentadioxins	355 8546		30.950			0 973							80.321	81 912
43	43	Total-hexadioxins	389.8157		35.940			0.884							242 665	254 761
44	44	Total-heptadioxins	423.7766		40.980			0.974							1836.774	1836.7...
45	45	Total-Dioxins	319.8965		0.000			0.942							7761 164	7775 6. .
46	46	Total-TEQ	319.8965		0 000										8310.476	8330.7. .
47	47	37CL-2378-TCDD	327.8847	27.034	27.010	2013238		1.037					12234.5		36.589	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0 000										0.000	
50	50	FUNCTION3 PFK	380 9760		0.000										0.000	
51	51	FUNCTION4 PFK	430 9728		0.000											
52	52	FUNCTION5 PFK	480 9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0 000	
57	57	FUNCTION4 NCDPE	479 7165		0.000										0 000	
58	58	FUNCTION5 DCDPE	513.6775		0.000										0 000	

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25 15	38197.127	0 866	0.631	0.631	0.76	0.77	NO	68 2
2	35	Total-tetrafurans	303.9016	25 06	47394 668	0.866	0.782	0 782	0.69	0 77	NO	63 1
3	35	Total-tetrafurans	303 9016	24.90	0.000	0.866	0.000	0.037	0.91	0.77	YES	5 0
4	35	Total-tetrafurans	303.9016	24.63	23091.619	0.866	0.381	0.381	0.77	0.77	NO	45 4
5	35	Total-tetrafurans	303 9016	24.49	11245 823	0.866	0.186	0.186	0 70	0.77	NO	22 7
6	35	Total-tetrafurans	303.9016	24 39	61173 809	0.866	1 010	1 010	0.78	0 77	NO	118 6
7	35	Total-tetrafurans	303.9016	24 24	13184 837	0.866	0 218	0 218	0.84	0 77	NO	31.8
8	35	Total-tetrafurans	303 9016	24 15	50525.525	0.866	0 834	0 834	0.76	0.77	NO	90.7
9	35	Total-tetrafurans	303.9016	24 05	0.000	0.866	0 000	0.399	0.63	0 77	YES	46.1
10	35	Total-tetrafurans	303.9016	23 93	47042 994	0.866	0 777	0 777	0 82	0.77	NO	56.4
11	35	Total-tetrafurans	303 9016	23 73	128331.465	0.866	2 119	2 119	0.76	0.77	NO	231.6
12	35	Total-tetrafurans	303.9016	23 16	21680 200	0.866	0.358	0.358	0.76	0 77	NO	45.3
13	35	Total-tetrafurans	303.9016	22.90	21312.774	0.866	0 352	0 352	0.75	0.77	NO	41.8
14	35	Total-tetrafurans	303 9016	27 81	0 000	0.866	0.000	0.184	1 40	0 77	YES	33 4
15	35	Total-tetrafurans	303.9016	26 90	0.000	0.866	0 000	0 031	0 39	0.77	YES	3 6
16	35	Total-tetrafurans	303 9016	26 62	40772 967	0.866	0.673	0.673	0 74	0 77	NO	66 5
17	35	Total-tetrafurans	303 9016	26 53	10904.755	0.866	0.180	0.180	0 85	0 77	NO	26 3
18	1	2378-TCDF	303.9016	26.39	161006 953	0.866	2 658	2.658	0.80	0 77	NO	313 7
19	35	Total-tetrafurans	303 9016	26 21	37135 330	0.866	0.613	0.613	0.68	0 77	NO	41.6
20	35	Total-tetrafurans	303.9016	26.03	0.000	0 866	0.000	0.036	0.45	0.77	YES	5.4
21	35	Total-tetrafurans	303.9016	25.90	12455.205	0 866	0.206	0 206	0 88	0.77	NO	21 8
22	35	Total-tetrafurans	303 9016	25 70	17457 346	0 866	0.288	0.288	0 66	0 77	NO	30.4
23	35	Total-tetrafurans	303 9016	25 48	91849.886	0.866	1.516	1.516	0 74	0.77	NO	164 9
24	35	Total-tetrafurans	303 9016	25 30	63393.541	0 866	1.047	1 047	0 76	0 77	NO	113.0
25	35	Total-tetrafurans	303.9016	27.87	0 000	0 866	0 000	0.249	0.77	0 77	NO	32.5

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339 8597	27 81	820085.094		18.263	18.263	1 53	1.55	NO	4743 5

Quantify Totals Report MassLynx 4.1 SCN 714
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PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339 8597	30 74	0.000	0.921	0 000	0.988	1 99	1.55	YES	165 0
2	2	12378-PeCDF	339 8597	30 54	49301.010	0.907	1.086	1 086	1 69	1.55	NO	154 1
3	37	Total-pentafurans	339 8597	30 18	88019.696	0.921	1 951	1.951	1 55	1 55	NO	187.9
4	37	Total-pentafurans	339.8597	30.07	10406.699	0.921	0.231	0.231	1.48	1.55	NO	45.9
5	37	Total-pentafurans	339 8597	29 98	8064 146	0.921	0 179	0 179	1 65	1.55	NO	19 3
6	37	Total-pentafurans	339.8597	29.77	0 000	0.921	0.000	0.040	1.80	1.55	YES	8.9
7	37	Total-pentafurans	339.8597	29.49	224381.914	0.921	4.973	4.973	1.59	1.55	NO	466.4
8	37	Total-pentafurans	339.8597	29.29	24298.713	0.921	0 539	0.539	1.49	1.55	NO	61.3
9	37	Total-pentafurans	339.8597	29.19	0.000	0.921	0.000	0.153	1.17	1.55	YES	26.4
10	37	Total-pentafurans	339.8597	32.91	4977.124	0 921	0.110	0 110	1.62	1 55	NO	17.7
11	3	23478-PeCDF	339 8597	31.88	57843 275	0.936	1.291	1 291	1 45	1.55	NO	170 3
12	37	Total-pentafurans	339 8597	31.72	59006.709	0 921	1 308	1.308	1 48	1 55	NO	183.4
13	37	Total-pentafurans	339.8597	31.60	13299.502	0 921	0.295	0 295	1 59	1 55	NO	43 7
14	37	Total-pentafurans	339.8597	31.02	0.000	0 921	0 000	0 024	2.59	1 55	YES	7 7

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38	Total-hexafurans	373 8208	36 06	6684.564	1 055	0.206	0 206	1.18	1 24	NO	10.6
2	6	123678-HxCDF	373 8208	35 71	78130 523	1 048	2.072	2 072	1.30	1.24	NO	119.6
3	4	123478-HxCDF	373.8208	35.56	160187.844	1.082	4.681	4 681	1 21	1.24	NO	253 8
4	38	Total-hexafurans	373.8208	35.39	16165 335	1.055	0.499	0.499	1 21	1 24	NO	25.7
5	38	Total-hexafurans	373 8208	34.90	1664165 063	1.055	51.348	51.348	1 23	1 24	NO	2747 2
6	38	Total-hexafurans	373.8208	34.57	18500 413	1.055	0.571	0.571	1 20	1 24	NO	29 7
7	38	Total-hexafurans	373.8208	34.03	1105866.094	1.055	34 121	34 121	1 23	1.24	NO	1778.6
8	38	Total-hexafurans	373 8208	33.83	395313 188	1 055	12.197	12.197	1 25	1 24	NO	667 1
9	7	123789-HxCDF	373.8208	37 73	38117.518	1.020	1 483	1 483	1 24	1 24	NO	66 0
10	5	234678-HxCDF	373.8208	36.67	0.000	1 070	0 000	3 553	1 25	1.24	NO	104 2

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42.56	72262.390	1.254	3 896	3 896	1 02	1.05	NO	80 3
2	39	Total-heptafurans	407 7818	41 67	0 000	1.234	0.000	0.116	1 54	1.05	YES	6 8
3	39	Total-heptafurans	407 7818	40 63	3294419.875	1.234	148.862	148	1 01	1.05	NO	4291 9
4	39	Total-heptafurans	407 7818	40 33	34902 478	1.234	1.577	1 577	0.97	1 05	NO	35 3
5	8	1234678-HpCDF	407 7818	39.83	1520787.626	1 214	59 426	59 426	1 00	1 05	NO	1958.3

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25 15	38197.127	0.866	0.631	0 631	0 76	0 77	NO	68.2
2	35	Total-tetrafurans	303 9016	25.06	47394.668	0 866	0.782	0 782	0.69	0 77	NO	63 1
3	35	Total-tetrafurans	303.9016	24 90	0.000	0 866	0.000	0 037	0.91	0 77	YES	5 0
4	35	Total-tetrafurans	303 9016	24.63	23091.619	0.866	0.381	0.381	0 77	0 77	NO	45 4
5	35	Total-tetrafurans	303.9016	24.49	11245 823	0.866	0.186	0.186	0 70	0.77	NO	22.7
6	35	Total-tetrafurans	303.9016	24.39	61173 809	0.866	1 010	1.010	0.78	0.77	NO	118.6
7	35	Total-tetrafurans	303.9016	24.24	13184.837	0.866	0.218	0.218	0.84	0.77	NO	31.8
8	35	Total-tetrafurans	303 9016	24.15	50525.525	0.866	0 834	0.834	0.76	0.77	NO	90.7
9	35	Total-tetrafurans	303.9016	24.05	0 000	0.866	0 000	0 399	0.63	0.77	YES	46 1
10	35	Total-tetrafurans	303 9016	23.93	47042 994	0.866	0 777	0.777	0 82	0.77	NO	56 4
11	35	Total-tetrafurans	303.9016	23 73	128331.465	0.866	2.119	2.119	0.76	0 77	NO	231 6
12	35	Total-tetrafurans	303 9016	23.16	21680 200	0.866	0 358	0.358	0 76	0.77	NO	45.3
13	35	Total-tetrafurans	303.9016	22 90	21312 774	0 866	0 352	0 352	0.75	0 77	NO	41 8
14	40	Total-Furans	303 9016	21 31	17754.114	1 050	0.242	0.242	0 74	0 77	NO	35 0
15	40	Total-Furans	303.9016	28.50	507.103	1 050	0.007	0.007	0 67	0 77	NO	1 4
16	35	Total-tetrafurans	303.9016	27.81	0.000	0.866	0.000	0.184	1 40	0 77	YES	33 4
17	35	Total-tetrafurans	303.9016	26.90	0.000	0.866	0.000	0.031	0.39	0 77	YES	3 6
18	35	Total-tetrafurans	303.9016	26.62	40772.967	0.866	0 673	0.673	0.74	0.77	NO	66 5
19	35	Total-tetrafurans	303 9016	26 53	10904.755	0.866	0.180	0.180	0 85	0.77	NO	26 3
20	1	2378-TCDF	303.9016	26 39	161006.953	0.866	2 658	2.658	0.80	0.77	NO	313 7
21	35	Total-tetrafurans	303 9016	26.21	37135 330	0.866	0.613	0 613	0 68	0.77	NO	41.6
22	35	Total-tetrafurans	303 9016	26.03	0 000	0 866	0 000	0 036	0.45	0 77	YES	5 4
23	35	Total-tetrafurans	303 9016	25 90	12455 205	0.866	0 206	0.206	0 88	0 77	NO	21.8
24	35	Total-tetrafurans	303 9016	25.70	17457.346	0 866	0.288	0 288	0 66	0 77	NO	30.4
25	35	Total-tetrafurans	303.9016	25 48	91849 886	0 866	1.516	1 516	0.74	0 77	NO	164 9
26	35	Total-tetrafurans	303.9016	25 30	63393 541	0.866	1 047	1 047	0.76	0.77	NO	113 0
27	37	Total-pentafurans	339 8597	30 74	0 000	0 921	0 000	0 988	1 99	1.55	YES	165 0
28	2	12378-PeCDF	339.8597	30 54	49301 010	0.907	1 086	1 086	1 69	1 55	NO	154 1
29	37	Total-pentafurans	339 8597	30.18	88019.696	0 921	1.951	1.951	1 55	1.55	NO	187.9
30	37	Total-pentafurans	339 8597	30.07	10406.699	0 921	0 231	0.231	1 48	1.55	NO	45.9
31	37	Total-pentafurans	339 8597	29.98	8064 146	0 921	0.179	0.179	1.65	1 55	NO	19 3
32	37	Total-pentafurans	339 8597	29 77	0.000	0 921	0.000	0.040	1.80	1 55	YES	8 9
33	37	Total-pentafurans	339 8597	29.49	224381.914	0 921	4.973	4.973	1.59	1.55	NO	466 4
34	37	Total-pentafurans	339 8597	29.29	24298.713	0 921	0.539	0.539	1 49	1 55	NO	61.3
35	37	Total-pentafurans	339 8597	29.19	0.000	0.921	0 000	0 153	1 17	1.55	YES	26 4
36	37	Total-pentafurans	339 8597	32 91	4977.124	0.921	0.110	0.110	1 62	1.55	NO	17.7
37	3	23478-PeCDF	339.8597	31 88	57843.275	0 936	1 291	1.291	1 45	1.55	NO	170.3
38	37	Total-pentafurans	339.8597	31.72	59006.709	0 921	1 308	1.308	1.48	1.55	NO	183 4
39	37	Total-pentafurans	339.8597	31.60	13299.502	0 921	0.295	0 295	1.59	1.55	NO	43.7
40	37	Total-pentafurans	339.8597	31.02	0 000	0 921	0.000	0 024	2.59	1 55	YES	7 7
41	38	Total-hexafurans	373 8208	36.06	6684 564	1.055	0 206	0.206	1 18	1 24	NO	10.6
42	6	123678-HxCDF	373.8208	35.71	78130 523	1.048	2.072	2.072	1 30	1 24	NO	119.6
43	4	123478-HxCDF	373.8208	35.56	160187 844	1 082	4 681	4 681	1.21	1 24	NO	253 8
44	38	Total-hexafurans	373 8208	35.39	16165.335	1 055	0.499	0 499	1.21	1.24	NO	25 7
45	38	Total-hexafurans	373 8208	34 90	1664165 063	1.055	51 348	51 348	1 23	1 24	NO	2747 2
46	38	Total-hexafurans	373 8208	34.57	18500 413	1 055	0.571	0.571	1.20	1 24	NO	29 7
47	38	Total-hexafurans	373.8208	34 03	1105866 094	1 055	34 121	34 121	1.23	1 24	NO	1778 6
48	38	Total-hexafurans	373.8208	33 83	395313.188	1 055	12 197	12 197	1 25	1.24	NO	667.1
49	7	123789-HxCDF	373.8208	37.73	38117.518	1.020	1.483	1.483	1 24	1.24	NO	66 0

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	5	234678-HxCDF	373 8208	36 67	0 000	1 070	0 000	3 553	1.25	1 24	NO	104.2
51	9	1234789-HpCDF	407 7818	42.56	72262.390	1.254	3 896	3 896	1 02	1.05	NO	80 3
52	39	Total-heptafurans	407 7818	41 67	0.000	1.234	0 000	0.116	1.54	1.05	YES	6 8
53	39	Total-heptafurans	407 7818	40.63	3294419.875	1.234	148.862	148. .	1.01	1.05	NO	4291 9
54	39	Total-heptafurans	407.7818	40.33	34902.478	1 234	1.577	1.577	0.97	1.05	NO	35.3
55	8	1234678-HpCDF	407.7818	39.83	1520787.626	1.214	59.426	59.426	1.00	1.05	NO	1958.3
56	10	OCDF	441.7428	47.95	2104921.875	1.105	183.072	183....	0.86	0.89	NO	2053.7
57	36	Total-penta1	339 8597	27.81	820085.094		18.263	18.263	1.53	1.55	NO	4743.5
58	35	Total-tetrafurans	303.9016	27.87	0 000	0 866	0 000	0.249	0.77	0.77	NO	32 5

TD

	#	Name	Trace	RT	Abs.Resp	RRF M ..	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319 8965	27.03	0.000	1 046	0.000	0.318	0 58	0 77	YES	40.7
2	41	Total-tetradioxins	319 8965	26.66	98670 766	1.046	2.165	2.165	0.78	0 77	NO	240 5
3	41	Total-tetradioxins	319.8965	26.36	0.000	1 046	0 000	0.115	1.40	0.77	YES	22 5
4	41	Total-tetradioxins	319.8965	26.21	363172.312	1.046	7.968	7.968	0.77	0 77	NO	1132 4
5	41	Total-tetradioxins	319.8965	26.00	12237.109	1.046	0 268	0.268	0 79	0 77	NO	35.4
6	41	Total-tetradioxins	319 8965	25.90	0 000	1 046	0 000	0 080	0.94	0.77	YES	14 6
7	41	Total-tetradioxins	319 8965	25.65	105202 902	1 046	2 308	2.308	0 79	0.77	NO	308 5
8	41	Total-tetradioxins	319 8965	25.36	48557 104	1 046	1 065	1 065	0 76	0.77	NO	138.3
9	41	Total-tetradioxins	319 8965	25.15	3670 725	1 046	0 081	0 081	0 80	0.77	NO	13 8
10	41	Total-tetradioxins	319 8965	24 64	0.000	1 046	0 000	0 215	1 08	0 77	YES	41 3
11	41	Total-tetradioxins	319 8965	24 43	866346.063	1.046	19 008	19 008	0 78	0.77	NO	2705 2
12	41	Total-tetradioxins	319 8965	24 17	1422131.000	1 046	31 203	31 203	0 78	0 77	NO	4607 9
13	41	Total-tetradioxins	319.8965	27 57	15251.992	1.046	0.335	0.335	0.69	0 77	NO	38.1
14	41	Total-tetradioxins	319.8965	27.15	16514.634	1.046	0.362	0 362	0.77	0 77	NO	45.4

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355 8546	32 53	12847.429	0.973	0.418	0.418	1 40	1.55	NO	30.3
2	12	12378-PeCDD	355.8546	32 13	83048.766	0.973	2 699	2.699	1.61	1 55	NO	189 7
3	42	Total-pentadioxins	355 8546	31 46	187759 406	0 973	6.102	6 102	1 61	1.55	NO	463 8
4	42	Total-pentadioxins	355 8546	31.05	0.000	0.973	0 000	1.592	1 92	1 55	YES	101.8
5	42	Total-pentadioxins	355 8546	30.89	678417.812	0.973	22.049	22.049	1 52	1 55	NO	1715.0
6	42	Total-pentadioxins	355.8546	30.75	58261 941	0 973	1 894	1 894	1.59	1.55	NO	193 2
7	42	Total-pentadioxins	355 8546	30.67	185708.594	0 973	6.036	6 036	1.45	1 55	NO	482 0
8	42	Total-pentadioxins	355 8546	30.53	697772 531	0 973	22 678	22 678	1 56	1.55	NO	1881.2
9	42	Total-pentadioxins	355.8546	29 92	45181.666	0 973	1.468	1 468	1.48	1.55	NO	127.4
10	42	Total-pentadioxins	355.8546	29.46	522364.078	0.973	16 977	16 977	1 55	1 55	NO	840.5

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HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389 8157	34 35	62961.461	0 884	2 573	2.573	1.21	1 24	NO	76.3
2	15	123789-HxCDD	389 8157	37 36	0 000	0.839	0.000	9.454	1.05	1.24	YES	220 6
3	43	Total-hexadioxins	389 8157	37.11	0 000	0.884	0.000	2.642	0 98	1 24	YES	66 1
4	14	123678-HxCDD	389.8157	36.93	530630.438	0.878	20.791	20.791	1 20	1 24	NO	523.0
5	13	123478-HxCDD	389 8157	36.81	126952 328	0.935	5.161	5.161	1 24	1 24	NO	132.6
6	43	Total-hexadioxins	389.8157	35.93	237406.508	0.884	9.701	9.701	1 18	1.24	NO	245.2
7	43	Total-hexadioxins	389.8157	35.82	1393278.000	0.884	56.930	56.930	1.21	1.24	NO	980.4
8	43	Total-hexadioxins	389 8157	35.44	1969784.438	0.884	80.486	80.486	1.24	1.24	NO	1976.5
9	43	Total-hexadioxins	389 8157	34.62	1640289.000	0.884	67.023	67 023	1 23	1 24	NO	1751 5

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41.66	10635330...	0 974	608.887	608.. .	1.08	1.05	NO	3840.0
2	44	Total-heptadioxins	423 7766	40.38	21447286 .	0.974	1227 8..	1227..	1.03	1.05	NO	8695 6

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	45	Total-Dioxins	319.8965	23.52	0.000	0.942	0 000	0.016	1.25	0.77	YES	3.3
2	11	2378-TCDD	319 8965	27.03	0.000	1.046	0 000	0.318	0.58	0 77	YES	40.7
3	41	Total-tetradioxins	319 8965	26.66	98670.766	1.046	2 165	2.165	0.78	0.77	NO	240.5
4	41	Total-tetradioxins	319.8965	26.36	0.000	1 046	0.000	0 115	1.40	0 77	YES	22.5
5	41	Total-tetradioxins	319 8965	26.21	363172.312	1 046	7.968	7.968	0.77	0.77	NO	1132.4
6	41	Total-tetradioxins	319 8965	26.00	12237.109	1.046	0.268	0.268	0.79	0.77	NO	35.4
7	41	Total-tetradioxins	319.8965	25.90	0.000	1.046	0.000	0 080	0.94	0 77	YES	14.6
8	41	Total-tetradioxins	319.8965	25.65	105202.902	1.046	2.308	2.308	0.79	0.77	NO	308 5
9	41	Total-tetradioxins	319 8965	25 36	48557 104	1.046	1.065	1.065	0 76	0.77	NO	138.3
10	41	Total-tetradioxins	319.8965	25 15	3670 725	1.046	0.081	0.081	0 80	0.77	NO	13 8
11	41	Total-tetradioxins	319 8965	24.64	0 000	1.046	0.000	0 215	1.08	0.77	YES	41 3
12	41	Total-tetradioxins	319.8965	24 43	866346.063	1 046	19.008	19.008	0 78	0.77	NO	2705.2
13	41	Total-tetradioxins	319 8965	24.17	1422131.000	1.046	31.203	31.203	0 78	0.77	NO	4607.9
14	45	Total-Dioxins	319.8965	28 63	816.182	0.942	0 020	0.020	0.78	0 77	NO	2.9
15	45	Total-Dioxins	319.8965	28 53	0 000	0 942	0 000	0.015	1 76	0 77	YES	3 5
16	45	Total-Dioxins	319 8965	28 36	0.000	0 942	0.000	0 006	1 11	0 77	YES	1 6
17	41	Total-tetradioxins	319 8965	27 57	15251.992	1 046	0 335	0.335	0 69	0.77	NO	38.1
18	41	Total-tetradioxins	319 8965	27.15	16514.634	1 046	0.362	0 362	0.77	0.77	NO	45 4
19	42	Total-pentadioxins	355.8546	32 53	12847 429	0 973	0.418	0 418	1 40	1 55	NO	30.3
20	12	12378-PeCDD	355 8546	32 13	83048.766	0.973	2 699	2 699	1.61	1 55	NO	189 7
21	42	Total-pentadioxins	355 8546	31.46	187759 406	0 973	6.102	6.102	1 61	1 55	NO	463 8
22	42	Total-pentadioxins	355.8546	31.05	0 000	0 973	0.000	1.592	1.92	1 55	YES	101.8
23	42	Total-pentadioxins	355 8546	30.89	678417.812	0.973	22 049	22.049	1 52	1.55	NO	1715 0
24	42	Total-pentadioxins	355.8546	30 75	58261.941	0.973	1 894	1.894	1.59	1.55	NO	193 2
25	42	Total-pentadioxins	355 8546	30 67	185708.594	0.973	6.036	6 036	1 45	1 55	NO	482.0
26	42	Total-pentadioxins	355 8546	30 53	697772 531	0.973	22.678	22 678	1 56	1 55	NO	1881 2
27	42	Total-pentadioxins	355 8546	29 92	45181.666	0 973	1 468	1 468	1 48	1 55	NO	127 4
28	42	Total-pentadioxins	355 8546	29 46	522364.078	0 973	16.977	16.977	1 55	1 55	NO	840.5
29	43	Total-hexadioxins	389.8157	34 35	62961.461	0.884	2 573	2 573	1.21	1 24	NO	76.3
30	15	123789-HxCDD	389.8157	37.36	0.000	0 839	0 000	9.454	1 05	1 24	YES	220.6
31	43	Total-hexadioxins	389 8157	37.11	0.000	0 884	0 000	2.642	0 98	1 24	YES	66 1
32	14	123678-HxCDD	389.8157	36.93	530630 438	0 878	20 791	20 791	1 20	1.24	NO	523 0
33	13	123478-HxCDD	389.8157	36 81	126952.328	0.935	5 161	5.161	1.24	1.24	NO	132.6
34	43	Total-hexadioxins	389.8157	35 93	237406.508	0.884	9.701	9 701	1.18	1.24	NO	245 2
35	43	Total-hexadioxins	389.8157	35.82	1393278.000	0.884	56 930	56.930	1 21	1 24	NO	980.4
36	43	Total-hexadioxins	389.8157	35.44	1969784.438	0.884	80 486	80.486	1.24	1.24	NO	1976.5
37	43	Total-hexadioxins	389 8157	34.62	1640289.000	0.884	67 023	67.023	1.23	1 24	NO	1751 5
38	16	1234678-HpCDD	423 7766	41.66	10635330...	0.974	608 887	608..	1.08	1 05	NO	3840.0
39	44	Total-heptadioxins	423.7766	40.38	21447286 .	0 974	1227.8...	1227.	1 03	1.05	NO	8695 6
40	17	OCDD	457.7377	47.67	54722052 .	0 950	5536.6...	5536	0 88	0.89	NO	19649.4

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.15	38197.127	0.866	0.631	0 631	0.76	0.77	NO	68 2
2	35	Total-tetrafurans	303 9016	25.06	47394.668	0.866	0 782	0 782	0.69	0.77	NO	63.1
3	35	Total-tetrafurans	303 9016	24.90	0.000	0.866	0.000	0 037	0.91	0 77	YES	5.0
4	35	Total-tetrafurans	303.9016	24.63	23091.619	0.866	0.381	0 381	0.77	0 77	NO	45.4
5	35	Total-tetrafurans	303 9016	24.49	11245 823	0.866	0.186	0.186	0 70	0 77	NO	22 7
6	35	Total-tetrafurans	303.9016	24.39	61173.809	0.866	1.010	1.010	0.78	0.77	NO	118 6
7	35	Total-tetrafurans	303.9016	24.24	13184 837	0.866	0 218	0.218	0 84	0.77	NO	31.8
8	35	Total-tetrafurans	303.9016	24 15	50525.525	0 866	0.834	0.834	0.76	0 77	NO	90 7
9	35	Total-tetrafurans	303.9016	24.05	0.000	0 866	0.000	0 399	0 63	0 77	YES	46 1
10	35	Total-tetrafurans	303.9016	23.93	47042.994	0.866	0 777	0 777	0.82	0 77	NO	56.4
11	35	Total-tetrafurans	303 9016	23 73	128331.465	0.866	2.119	2 119	0.76	0.77	NO	231.6
12	35	Total-tetrafurans	303 9016	23.16	21680.200	0 866	0.358	0 358	0.76	0 77	NO	45 3
13	35	Total-tetrafurans	303.9016	22 90	21312.774	0 866	0.352	0.352	0 75	0.77	NO	41.8
14	40	Total-Furans	303 9016	21.31	17754 114	1.050	0.242	0.242	0.74	0 77	NO	35 0
15	40	Total-Furans	303 9016	28.50	507 103	1 050	0.007	0.007	0 67	0.77	NO	1 4
16	35	Total-tetrafurans	303.9016	27 81	0 000	0.866	0 000	0.184	1 40	0.77	YES	33 4
17	35	Total-tetrafurans	303 9016	26.90	0 000	0.866	0 000	0.031	0.39	0.77	YES	3 6
18	35	Total-tetrafurans	303.9016	26.62	40772 967	0.866	0 673	0.673	0.74	0.77	NO	66 5
19	35	Total-tetrafurans	303.9016	26.53	10904.755	0 866	0 180	0 180	0 85	0 77	NO	26 3
20	1	2378-TCDF	303 9016	26.39	161006.953	0 866	2.658	2 658	0 80	0.77	NO	313 7
21	35	Total-tetrafurans	303 9016	26.21	37135.330	0 866	0 613	0 613	0 68	0 77	NO	41 6
22	35	Total-tetrafurans	303 9016	26.03	0.000	0.866	0.000	0.036	0 45	0 77	YES	5 4
23	35	Total-tetrafurans	303.9016	25.90	12455 205	0 866	0.206	0 206	0 88	0 77	NO	21.8
24	35	Total-tetrafurans	303.9016	25.70	17457.346	0.866	0.288	0.288	0 66	0 77	NO	30.4
25	35	Total-tetrafurans	303 9016	25.48	91849 886	0.866	1.516	1 516	0 74	0.77	NO	164.9
26	35	Total-tetrafurans	303 9016	25.30	63393.541	0.866	1.047	1.047	0 76	0.77	NO	113 0
27	37	Total-pentafurans	339 8597	30.74	0 000	0.921	0.000	0.988	1.99	1.55	YES	165.0
28	2	12378-PeCDF	339.8597	30 54	49301 010	0.907	1 086	1 086	1.69	1 55	NO	154.1
29	37	Total-pentafurans	339 8597	30 18	88019.696	0 921	1 951	1.951	1 55	1 55	NO	187 9
30	37	Total-pentafurans	339 8597	30.07	10406 699	0 921	0 231	0.231	1 48	1.55	NO	45 9
31	37	Total-pentafurans	339.8597	29 98	8064 146	0 921	0.179	0 179	1 65	1 55	NO	19.3
32	37	Total-pentafurans	339 8597	29.77	0 000	0.921	0.000	0 040	1.80	1 55	YES	8 9
33	37	Total-pentafurans	339 8597	29.49	224381.914	0.921	4.973	4 973	1 59	1 55	NO	466.4
34	37	Total-pentafurans	339.8597	29 29	24298.713	0.921	0 539	0 539	1.49	1.55	NO	61 3
35	37	Total-pentafurans	339.8597	29 19	0.000	0.921	0 000	0.153	1 17	1 55	YES	26.4
36	37	Total-pentafurans	339 8597	32 91	4977.124	0 921	0 110	0.110	1 62	1 55	NO	17.7
37	3	23478-PeCDF	339 8597	31 88	57843.275	0 936	1.291	1.291	1 45	1.55	NO	170.3
38	37	Total-pentafurans	339 8597	31.72	59006 709	0 921	1.308	1.308	1 48	1 55	NO	183.4
39	37	Total-pentafurans	339 8597	31.60	13299.502	0.921	0 295	0.295	1 59	1 55	NO	43.7
40	37	Total-pentafurans	339.8597	31 02	0.000	0.921	0.000	0 024	2.59	1.55	YES	7 7
41	38	Total-hexafurans	373.8208	36.06	6684 564	1 055	0.206	0.206	1 18	1.24	NO	10 6
42	6	123678-HxCDF	373.8208	35 71	78130.523	1 048	2 072	2 072	1 30	1 24	NO	119.6
43	4	123478-HxCDF	373.8208	35 56	160187.844	1 082	4.681	4.681	1 21	1.24	NO	253.8
44	38	Total-hexafurans	373 8208	35.39	16165.335	1 055	0.499	0.499	1.21	1 24	NO	25.7
45	38	Total-hexafurans	373 8208	34.90	1664165 063	1.055	51 348	51 348	1.23	1 24	NO	2747 2
46	38	Total-hexafurans	373 8208	34 57	18500 413	1.055	0.571	0 571	1 20	1.24	NO	29.7
47	38	Total-hexafurans	373.8208	34 03	1105866.094	1 055	34.121	34.121	1 23	1.24	NO	1778 6
48	38	Total-hexafurans	373 8208	33 83	395313.188	1 055	12.197	12 197	1.25	1 24	NO	667 1
49	7	123789-HxCDF	373.8208	37 73	38117 518	1 020	1.483	1 483	1 24	1.24	NO	66 0

UR81 : 01SOH

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati ..	1° R...	S/N
50	5	234678-HxCDF	373 8208	36.67	0.000	1.070	0.000	3.553	1.25	1.24	NO	104.2
51	9	1234789-HpCDF	407 7818	42.56	72262.390	1.254	3.896	3.896	1.02	1.05	NO	80.3
52	39	Total-heptafurans	407 7818	41.67	0.000	1.234	0.000	0.116	1.54	1.05	YES	6.8
53	39	Total-heptafurans	407.7818	40 63	3294419 875	1.234	148.862	148.	1.01	1.05	NO	4291.9
54	39	Total-heptafurans	407.7818	40 33	34902 478	1 234	1.577	1 577	0 97	1 05	NO	35 3
55	8	1234678-HpCDF	407.7818	39.83	1520787.626	1.214	59 426	59 426	1.00	1 05	NO	1958 3
56	10	OCDF	441.7428	47 95	2104921.875	1 105	183.072	183 ..	0 86	0 89	NO	2053.7
57	36	Total-penta1	339 8597	27.81	820085.094		18.263	18.263	1.53	1.55	NO	4743.5
58	35	Total-tetrafurans	303.9016	27.87	0.000	0 866	0.000	0 249	0 77	0.77	NO	32 5
59	45	Total-Dioxins	319.8965	23.52	0.000	0 942	0 000	0 016	1 25	0 77	YES	3 3
60	11	2378-TCDD	319 8965	27 03	0 000	1 046	0.000	0.318	0.58	0.77	YES	40.7
61	41	Total-tetradioxins	319.8965	26 66	98670.766	1.046	2.165	2.165	0.78	0 77	NO	240 5
62	41	Total-tetradioxins	319.8965	26.36	0 000	1.046	0 000	0 115	1.40	0 77	YES	22.5
63	41	Total-tetradioxins	319 8965	26.21	363172 312	1 046	7 968	7 968	0 77	0 77	NO	1132 4
64	41	Total-tetradioxins	319.8965	26.00	12237 109	1 046	0.268	0.268	0.79	0.77	NO	35 4
65	41	Total-tetradioxins	319 8965	25.90	0.000	1.046	0 000	0 080	0 94	0 77	YES	14 6
66	41	Total-tetradioxins	319 8965	25.65	105202 902	1 046	2 308	2 308	0 79	0 77	NO	308.5
67	41	Total-tetradioxins	319.8965	25.36	48557.104	1.046	1 065	1 065	0 76	0 77	NO	138.3
68	41	Total-tetradioxins	319.8965	25.15	3670.725	1.046	0.081	0.081	0.80	0.77	NO	13 8
69	41	Total-tetradioxins	319 8965	24.64	0.000	1.046	0 000	0.215	1.08	0.77	YES	41 3
70	41	Total-tetradioxins	319 8965	24 43	866346 063	1 046	19.008	19.008	0.78	0 77	NO	2705 2
71	41	Total-tetradioxins	319 8965	24.17	1422131 000	1 046	31.203	31.203	0 78	0 77	NO	4607 9
72	45	Total-Dioxins	319 8965	28.63	816.182	0 942	0 020	0.020	0 78	0.77	NO	2.9
73	45	Total-Dioxins	319 8965	28 53	0.000	0.942	0.000	0 015	1 76	0 77	YES	3.5
74	45	Total-Dioxins	319 8965	28 36	0.000	0 942	0.000	0.006	1 11	0 77	YES	1 6
75	41	Total-tetradioxins	319 8965	27.57	15251 992	1 046	0.335	0.335	0 69	0 77	NO	38 1
76	41	Total-tetradioxins	319 8965	27.15	16514.634	1 046	0 362	0 362	0 77	0.77	NO	45 4
77	42	Total-pentadioxins	355 8546	32.53	12847 429	0 973	0 418	0 418	1 40	1.55	NO	30.3
78	12	12378-PeCDD	355.8546	32.13	83048 766	0 973	2.699	2.699	1 61	1 55	NO	189 7
79	42	Total-pentadioxins	355.8546	31.46	187759 406	0 973	6.102	6.102	1.61	1.55	NO	463 8
80	42	Total-pentadioxins	355 8546	31.05	0 000	0.973	0.000	1.592	1.92	1 55	YES	101 8
81	42	Total-pentadioxins	355 8546	30.89	678417 812	0 973	22.049	22.049	1 52	1 55	NO	1715.0
82	42	Total-pentadioxins	355.8546	30.75	58261.941	0.973	1.894	1 894	1 59	1 55	NO	193.2
83	42	Total-pentadioxins	355.8546	30.67	185708.594	0.973	6.036	6 036	1.45	1 55	NO	482 0
84	42	Total-pentadioxins	355.8546	30.53	697772.531	0.973	22 678	22 678	1 56	1 55	NO	1881 2
85	42	Total-pentadioxins	355 8546	29 92	45181 666	0.973	1.468	1 468	1 48	1 55	NO	127 4
86	42	Total-pentadioxins	355.8546	29 46	522364.078	0.973	16.977	16 977	1 55	1.55	NO	840.5
87	43	Total-hexadioxins	389 8157	34 35	62961 461	0 884	2.573	2.573	1.21	1 24	NO	76 3
88	15	123789-HxCDD	389 8157	37.36	0 000	0 839	0 000	9.454	1.05	1.24	YES	220 6
89	43	Total-hexadioxins	389.8157	37.11	0.000	0 884	0 000	2.642	0.98	1.24	YES	66.1
90	14	123678-HxCDD	389 8157	36 93	530630.438	0.878	20 791	20 791	1 20	1 24	NO	523 0
91	13	123478-HxCDD	389.8157	36 81	126952.328	0 935	5.161	5 161	1 24	1.24	NO	132 6
92	43	Total-hexadioxins	389 8157	35 93	237406.508	0.884	9 701	9 701	1 18	1 24	NO	245 2
93	43	Total-hexadioxins	389.8157	35 82	1393278.000	0 884	56.930	56 930	1 21	1 24	NO	980 4
94	43	Total-hexadioxins	389 8157	35 44	1969784.438	0.884	80 486	80 486	1 24	1 24	NO	1976 5
95	43	Total-hexadioxins	389 8157	34 62	1640289 000	0 884	67 023	67.023	1 23	1.24	NO	1751 5
96	16	1234678-HpCDD	423.7766	41 66	10635330....	0.974	608 887	608.	1 08	1 05	NO	3840 0
97	44	Total-heptadioxins	423 7766	40.38	21447286 .	0 974	1227 8.	1227 ..	1 03	1.05	NO	8695 6
98	17	OCDD	457.7377	47.67	54722052 .	0 950	5536 6...	5536...	0.88	0.89	NO	19649 4

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	21.12	0.000							63 1
2	48	FUNCTION1 PFK	330.9792	23.66	0.000							1.7
3	48	FUNCTION1 PFK	330.9792	23.57	0.000							4.5
4	48	FUNCTION1 PFK	330.9792	23.36	0.000							11.0
5	48	FUNCTION1 PFK	330 9792	23.24	0.000							14.0
6	48	FUNCTION1 PFK	330 9792	23.15	0.000							14.8
7	48	FUNCTION1 PFK	330.9792	23.02	0.000							19.6
8	48	FUNCTION1 PFK	330.9792	22.84	0.000							21 5
9	48	FUNCTION1 PFK	330 9792	22.58	0 000							30 2
10	48	FUNCTION1 PFK	330 9792	22.49	0.000							31 2
11	48	FUNCTION1 PFK	330 9792	22.31	0.000							34 5
12	48	FUNCTION1 PFK	330 9792	22.03	0.000							43 6
13	48	FUNCTION1 PFK	330 9792	21.94	0.000							45.0
14	48	FUNCTION1 PFK	330.9792	21.81	0.000							48.3
15	48	FUNCTION1 PFK	330.9792	21.51	0.000							55 8
16	48	FUNCTION1 PFK	330 9792	21 34	0.000							60 5
17	48	FUNCTION1 PFK	330.9792	21 27	0.000							60 7
18	48	FUNCTION1 PFK	330.9792	25.72	0.000							1 7
19	48	FUNCTION1 PFK	330.9792	25 60	0 000							1.8
20	48	FUNCTION1 PFK	330.9792	25 53	0.000							1 0
21	48	FUNCTION1 PFK	330.9792	25 33	0 000							2.7
22	48	FUNCTION1 PFK	330.9792	25 20	0 000							1 6
23	48	FUNCTION1 PFK	330.9792	25 03	0 000							3 6
24	48	FUNCTION1 PFK	330.9792	24 99	0.000							4.1
25	48	FUNCTION1 PFK	330 9792	24 91	0 000							2.0
26	48	FUNCTION1 PFK	330.9792	24 81	0.000							1 6
27	48	FUNCTION1 PFK	330.9792	24.76	0.000							1 1
28	48	FUNCTION1 PFK	330 9792	24.45	0.000							0 3
29	48	FUNCTION1 PFK	330 9792	24 23	0.000							1 2
30	48	FUNCTION1 PFK	330 9792	24 12	0.000							2.6
31	48	FUNCTION1 PFK	330 9792	23 99	0.000							1 1
32	48	FUNCTION1 PFK	330.9792	23 93	0 000							1 2
33	48	FUNCTION1 PFK	330.9792	23 82	0.000							1.3
34	48	FUNCTION1 PFK	330.9792	27.78	0.000							2 7
35	48	FUNCTION1 PFK	330.9792	27.72	0.000							2 1
36	48	FUNCTION1 PFK	330 9792	27.62	0.000							0 9
37	48	FUNCTION1 PFK	330 9792	27.53	0.000							1 8
38	48	FUNCTION1 PFK	330 9792	27.47	0.000							2 1
39	48	FUNCTION1 PFK	330 9792	27.36	0.000							1 9
40	48	FUNCTION1 PFK	330 9792	27 20	0 000							2 0
41	48	FUNCTION1 PFK	330 9792	27 02	0 000							0.7
42	48	FUNCTION1 PFK	330 9792	26 80	0.000							2.8
43	48	FUNCTION1 PFK	330 9792	26.72	0.000							1 6
44	48	FUNCTION1 PFK	330 9792	26 62	0 000							2 0
45	48	FUNCTION1 PFK	330 9792	26 54	0.000							1 8
46	48	FUNCTION1 PFK	330 9792	26 42	0 000							3.1
47	48	FUNCTION1 PFK	330 9792	26 23	0.000							0 8
48	48	FUNCTION1 PFK	330 9792	26 03	0.000							0 3
49	48	FUNCTION1 PFK	330 9792	25.91	0 000							0 9

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed. Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati.	1° Rati...	1° R...	S/N
50	48	FUNCTION1 PFK	330 9792	28.60	0.000							2.6
51	48	FUNCTION1 PFK	330.9792	28.54	0 000							0.3
52	48	FUNCTION1 PFK	330.9792	28.38	0 000							1.5
53	48	FUNCTION1 PFK	330.9792	28.33	0 000							1 0
54	48	FUNCTION1 PFK	330.9792	28 11	0 000							1.8
55	48	FUNCTION1 PFK	330.9792	28.05	0.000							0.8
56	48	FUNCTION1 PFK	330.9792	27.98	0 000							0.7
57	48	FUNCTION1 PFK	330.9792	27.84	0.000							1 0

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati. .	1° Rati ..	1° R...	S/N
1	49	FUNCTION2 PFK	366 9792	32 74	0.000		0.000					4.2
2	49	FUNCTION2 PFK	366.9792	30 71	0.000		0 000					9.6
3	49	FUNCTION2 PFK	366 9792	29.84	0.000		0 000					33.0

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380 9760	38 52	0.000		0.000					13.4
2	50	FUNCTION3 PFK	380 9760	37.17	0.000		0 000					25 0

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati. .	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	41.99	0.000								1.5
2	51	FUNCTION4 PFK	430.9728	41.93	0.000								1 2
3	51	FUNCTION4 PFK	430.9728	41.88	0.000								0 7
4	51	FUNCTION4 PFK	430 9728	41 74	0.000								0.9
5	51	FUNCTION4 PFK	430.9728	41 55	0 000								1.0
6	51	FUNCTION4 PFK	430.9728	41 52	0.000								1.2
7	51	FUNCTION4 PFK	430.9728	41.32	0 000								1.0
8	51	FUNCTION4 PFK	430.9728	41.20	0.000								0.9
9	51	FUNCTION4 PFK	430.9728	40.41	0 000								1.1
10	51	FUNCTION4 PFK	430.9728	40.37	0.000								1.3
11	51	FUNCTION4 PFK	430 9728	39 90	0 000								16.7
12	51	FUNCTION4 PFK	430.9728	39.72	0.000								23 7
13	51	FUNCTION4 PFK	430 9728	39 52	0 000								33 0
14	51	FUNCTION4 PFK	430 9728	39 13	0 000								46 9
15	51	FUNCTION4 PFK	430 9728	38.99	0.000								52 3
16	51	FUNCTION4 PFK	430.9728	38.97	0.000								52 4
17	51	FUNCTION4 PFK	430.9728	44.61	0 000								0 9
18	51	FUNCTION4 PFK	430.9728	44.58	0.000								1 1
19	51	FUNCTION4 PFK	430 9728	44.43	0.000								1 3
20	51	FUNCTION4 PFK	430.9728	44.38	0 000								0 7
21	51	FUNCTION4 PFK	430 9728	44 33	0 000								1 3
22	51	FUNCTION4 PFK	430 9728	44 28	0 000								1.3
23	51	FUNCTION4 PFK	430 9728	44.12	0 000								0.7
24	51	FUNCTION4 PFK	430.9728	44 00	0 000								0 6
25	51	FUNCTION4 PFK	430 9728	43 46	0 000								1 5
26	51	FUNCTION4 PFK	430 9728	43 13	0 000								0 6
27	51	FUNCTION4 PFK	430 9728	43.03	0 000								0 4
28	51	FUNCTION4 PFK	430 9728	42.99	0 000								0.6
29	51	FUNCTION4 PFK	430.9728	42 83	0 000								1 3
30	51	FUNCTION4 PFK	430.9728	42 65	0 000								1 4
31	51	FUNCTION4 PFK	430.9728	42 56	0 000								0 8
32	51	FUNCTION4 PFK	430 9728	42 46	0 000								1 4
33	51	FUNCTION4 PFK	430 9728	44 92	0 000								1 2
34	51	FUNCTION4 PFK	430 9728	44 72	0 000								0.4

Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	46.07	0 000								1.6
2	52	FUNCTION5 PFK	480.9696	46.04	0 000								2.3
3	52	FUNCTION5 PFK	480.9696	45.97	0 000								2.5
4	52	FUNCTION5 PFK	480 9696	45 83	0.000								1 0
5	52	FUNCTION5 PFK	480.9696	45.79	0 000								2 2
6	52	FUNCTION5 PFK	480.9696	45.75	0 000								1.7
7	52	FUNCTION5 PFK	480.9696	45.64	0 000								1.3
8	52	FUNCTION5 PFK	480.9696	45.56	0.000								1 3
9	52	FUNCTION5 PFK	480 9696	45.55	0.000								1.3
10	52	FUNCTION5 PFK	480 9696	45.34	0.000								1.7
11	52	FUNCTION5 PFK	480.9696	45.29	0.000								1.2
12	52	FUNCTION5 PFK	480.9696	45 20	0.000								2 0
13	52	FUNCTION5 PFK	480.9696	45.16	0.000								1 6
14	52	FUNCTION5 PFK	480.9696	47 11	0.000								1 1
15	52	FUNCTION5 PFK	480.9696	47 04	0.000								1 0
16	52	FUNCTION5 PFK	480.9696	46.87	0 000								1 5
17	52	FUNCTION5 PFK	480 9696	46 85	0 000								1 1
18	52	FUNCTION5 PFK	480.9696	46.81	0 000								1 2
19	52	FUNCTION5 PFK	480.9696	46.77	0 000								1 9
20	52	FUNCTION5 PFK	480.9696	46 69	0.000								1.0
21	52	FUNCTION5 PFK	480.9696	46 66	0 000								1.3
22	52	FUNCTION5 PFK	480.9696	46 62	0.000								0.9
23	52	FUNCTION5 PFK	480.9696	46 60	0.000								0 9
24	52	FUNCTION5 PFK	480.9696	46.57	0.000								0 6
25	52	FUNCTION5 PFK	480.9696	46 52	0 000								2 5
26	52	FUNCTION5 PFK	480.9696	46 51	0.000								2 0
27	52	FUNCTION5 PFK	480.9696	46 32	0.000								1.1
28	52	FUNCTION5 PFK	480 9696	46 16	0 000								1 6
29	52	FUNCTION5 PFK	480.9696	46.11	0.000								1.7
30	52	FUNCTION5 PFK	480.9696	48.22	0 000								1 7
31	52	FUNCTION5 PFK	480.9696	48 12	0 000								1.0
32	52	FUNCTION5 PFK	480.9696	48 07	0 000								2.0
33	52	FUNCTION5 PFK	480.9696	48.04	0.000								2 1
34	52	FUNCTION5 PFK	480.9696	47.96	0.000								1.2
35	52	FUNCTION5 PFK	480.9696	47 91	0 000								1.4
36	52	FUNCTION5 PFK	480.9696	47.73	0.000								0 9
37	52	FUNCTION5 PFK	480.9696	47 69	0.000								2 0
38	52	FUNCTION5 PFK	480 9696	47.66	0.000								1 8
39	52	FUNCTION5 PFK	480 9696	47 62	0.000								1.4
40	52	FUNCTION5 PFK	480 9696	47.57	0.000								1 9
41	52	FUNCTION5 PFK	480 9696	47.42	0 000								1.2
42	52	FUNCTION5 PFK	480 9696	47 33	0.000								0.5
43	52	FUNCTION5 PFK	480 9696	47 21	0 000								1.2
44	52	FUNCTION5 PFK	480.9696	47 18	0.000								1 2
45	52	FUNCTION5 PFK	480.9696	47 14	0.000								1 0
46	52	FUNCTION5 PFK	480.9696	48 96	0.000								0 7
47	52	FUNCTION5 PFK	480 9696	48.80	0.000								0 8
48	52	FUNCTION5 PFK	480 9696	48 77	0 000								1 5
49	52	FUNCTION5 PFK	480 9696	48.72	0 000								1 6

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Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	52 FUNCTION5 PFK	480.9696	48 69	0 000							2 3
51	52 FUNCTION5 PFK	480.9696	48 65	0 000							2 1
52	52 FUNCTION5 PFK	480 9696	48 62	0.000							2 5
53	52 FUNCTION5 PFK	480.9696	48.54	0 000							2.1

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD	375 8364	28.42	0.000		0 000					4 4
2	53 FUNCTION1 HXCD.	375 8364	27 92	0.000		0 000					6 4
3	53 FUNCTION1 HXCD...	375.8364	27 72	0 000		0 000					5.2
4	53 FUNCTION1 HXCD .	375.8364	26.78	0.000		0 000					3 1
5	53 FUNCTION1 HXCD .	375.8364	26.45	0.000		0.000					124.4
6	53 FUNCTION1 HXCD .	375 8364	26.18	0.000		0.000					55.6
7	53 FUNCTION1 HXCD. .	375 8364	24.24	0.000		0.000					10.5

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	28.27	0 000		0 000					5 6
2	54 FUNCTION1 HPCD...	409 7974	25.82	0.000		0 000					2 0
3	54 FUNCTION1 HPCD ..	409 7974	23.91	0.000		0 000					2 1
4	54 FUNCTION1 HPCD	409 7974	22.70	0.000		0.000					5 2
5	54 FUNCTION1 HPCD..	409.7974	21.51	0.000		0 000					3 5

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD.	409 7974	31.45	0.000		0.000					5 6
2	55 FUNCTION2 HPCD. .	409 7974	31 42	0.000		0.000					4 9
3	55 FUNCTION2 HPCD ..	409.7974	30.78	0.000		0 000					3 1
4	55 FUNCTION2 HPCD .	409.7974	30 65	0 000		0.000					2 5
5	55 FUNCTION2 HPCD .	409.7974	30.51	0.000		0 000					47 5
6	55 FUNCTION2 HPCD	409.7974	30 33	0 000		0.000					1 6
7	55 FUNCTION2 HPCD .	409 7974	30 17	0 000		0.000					62 1
8	55 FUNCTION2 HPCD...	409.7974	29.89	0 000		0 000					10.6
9	55 FUNCTION2 HPCD...	409.7974	29.56	0.000		0 000					1 7
10	55 FUNCTION2 HPCD. .	409 7974	33 16	0.000		0.000					11 1
11	55 FUNCTION2 HPCD .	409.7974	33.10	0.000		0 000					6 3
12	55 FUNCTION2 HPCD .	409 7974	33 02	0 000		0.000					2 2
13	55 FUNCTION2 HPCD. .	409.7974	32.84	0.000		0.000					3.4
14	55 FUNCTION2 HPCD. .	409.7974	32 79	0 000		0.000					2 9
15	55 FUNCTION2 HPCD .	409.7974	32.56	0.000		0 000					5 6
16	55 FUNCTION2 HPCD	409.7974	32 50	0.000		0 000					3.7
17	55 FUNCTION2 HPCD. .	409.7974	31.95	0.000		0.000					6 0
18	55 FUNCTION2 HPCD. .	409 7974	31 72	0.000		0 000					6.5
19	55 FUNCTION2 HPCD...	409.7974	31.68	0 000		0.000					4 4

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445.7555	36.61	0.000		0.000					8 7
2	56	FUNCTION3 OCDPE	445.7555	35.54	0.000		0.000					8 6
3	56	FUNCTION3 OCDPE	445.7555	35.48	0.000		0.000					9 6
4	56	FUNCTION3 OCDPE	445.7555	35.32	0.000		0.000					5.1
5	56	FUNCTION3 OCDPE	445.7555	35.22	0 000		0.000					7 7
6	56	FUNCTION3 OCDPE	445.7555	37.90	0.000		0.000					4.0
7	56	FUNCTION3 OCDPE	445.7555	37.74	0.000		0.000					2.2
8	56	FUNCTION3 OCDPE	445.7555	37.62	0 000		0.000					5.2
9	56	FUNCTION3 OCDPE	445.7555	37 58	0 000		0.000					4 1
10	56	FUNCTION3 OCDPE	445.7555	37.40	0 000		0 000					8 8
11	56	FUNCTION3 OCDPE	445 7555	37.18	0.000		0.000					9 1
12	56	FUNCTION3 OCDPE	445.7555	37.14	0.000		0.000					11.8
13	56	FUNCTION3 OCDPE	445 7555	37 03	0.000		0 000					10.7
14	56	FUNCTION3 OCDPE	445 7555	36 92	0 000		0 000					3.6
15	56	FUNCTION3 OCDPE	445.7555	36.75	0 000		0.000					8.8
16	56	FUNCTION3 OCDPE	445.7555	36.68	0.000		0.000					9.3

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479 7165	41 28	0.000		0.000					17 9
2	57	FUNCTION4 NCDPE	479.7165	41.19	0 000		0 000					6.3
3	57	FUNCTION4 NCDPE	479.7165	40.60	0.000		0 000					2 3
4	57	FUNCTION4 NCDPE	479.7165	39.41	0 000		0.000					454 7
5	57	FUNCTION4 NCDPE	479.7165	42.28	0.000		0 000					2.0
6	57	FUNCTION4 NCDPE	479.7165	41.98	0.000		0 000					8 5
7	57	FUNCTION4 NCDPE	479.7165	41 92	0.000		0.000					7 2
8	57	FUNCTION4 NCDPE	479 7165	41 83	0 000		0.000					6.8
9	57	FUNCTION4 NCDPE	479.7165	41 63	0.000		0 000					56.7
10	57	FUNCTION4 NCDPE	479 7165	41 50	0.000		0.000					9 9
11	57	FUNCTION4 NCDPE	479 7165	41 41	0.000		0.000					18.7

ETHERS6

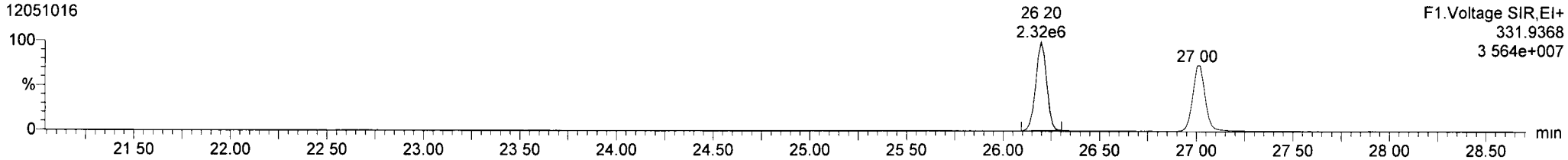
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	58	FUNCTION5 DCDPE	513.6775	48.37	0.000		0 000					4 5

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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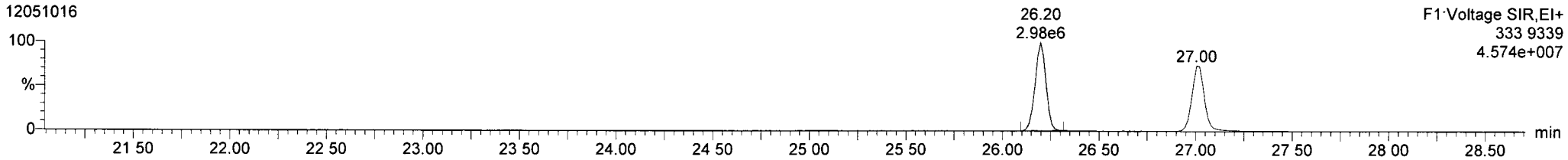
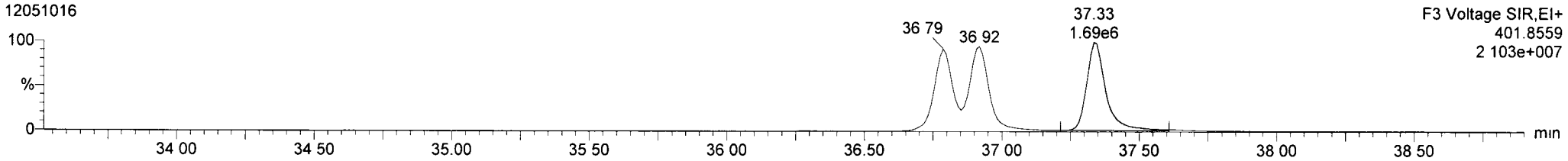


13C-123789-HxCDD



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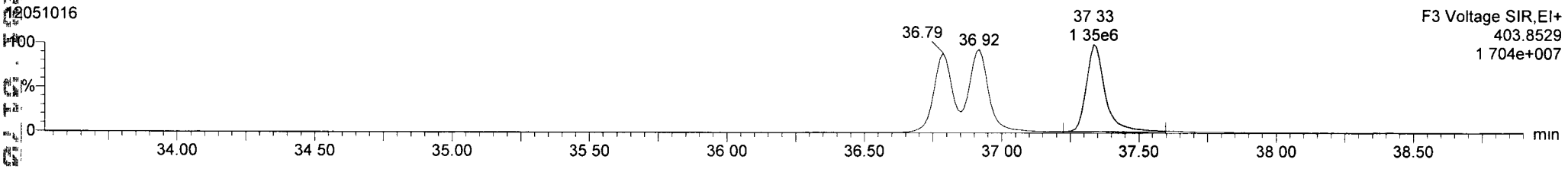
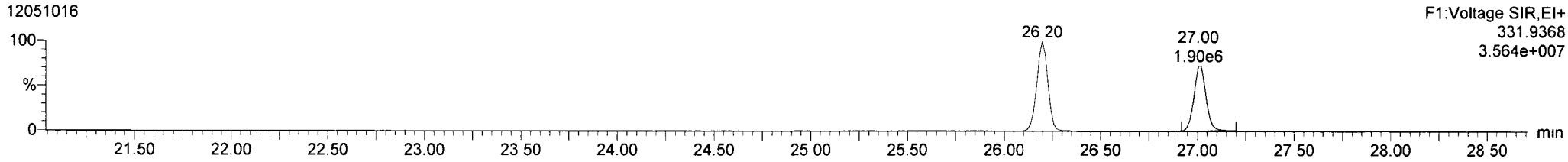


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290 PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
12051016



13C-2378-TCDD
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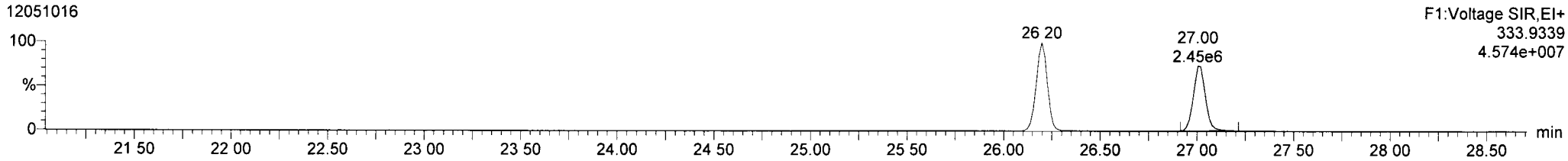
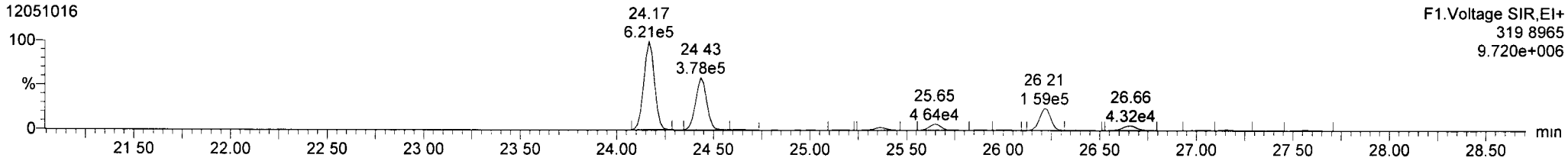
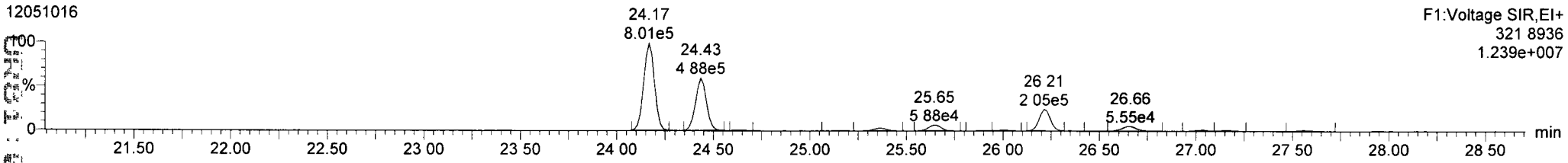


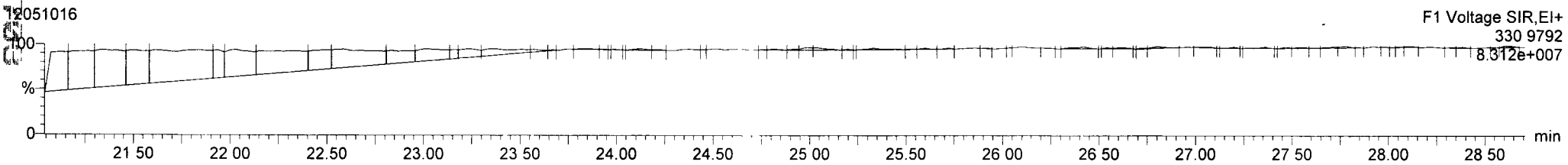
Total-tetradioxins
12051016



Total-tetradioxins
12051016



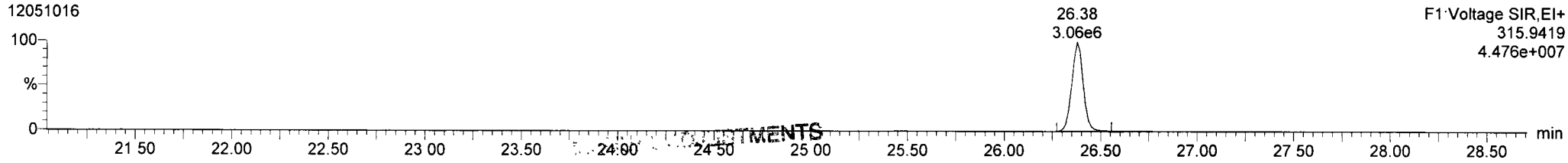
FUNCTION1 PFK
12051016



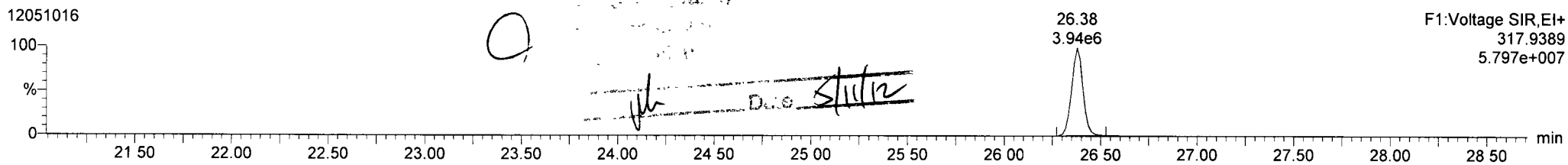
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

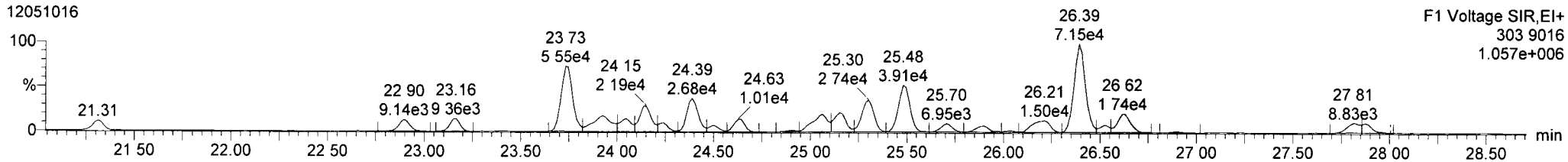
13C-2378-TCDF



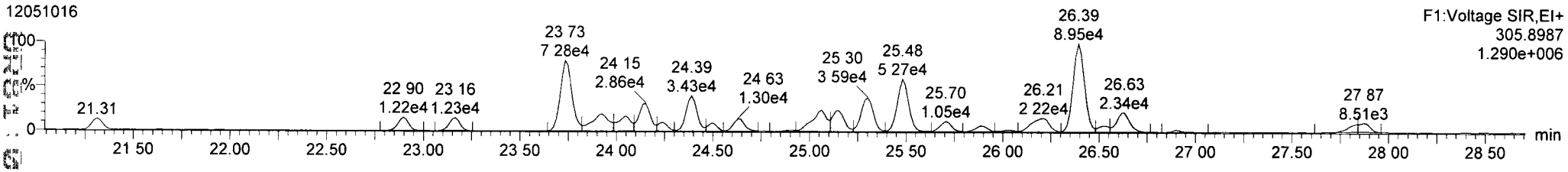
13C-2378-TCDF



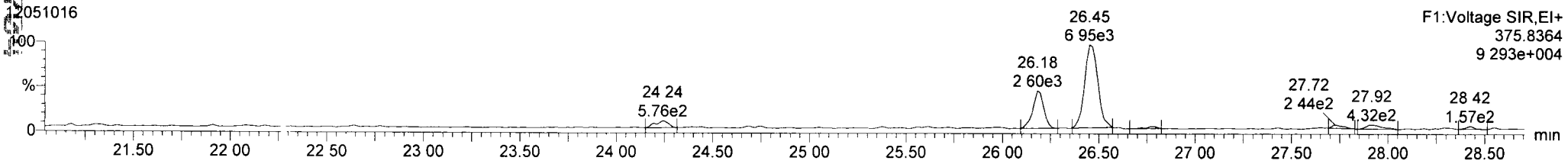
Total-tetrafurans



Total-tetrafurans



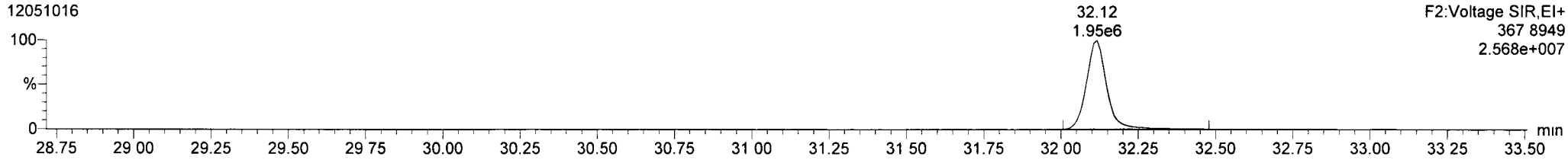
FUNCTION1 HXCDPE



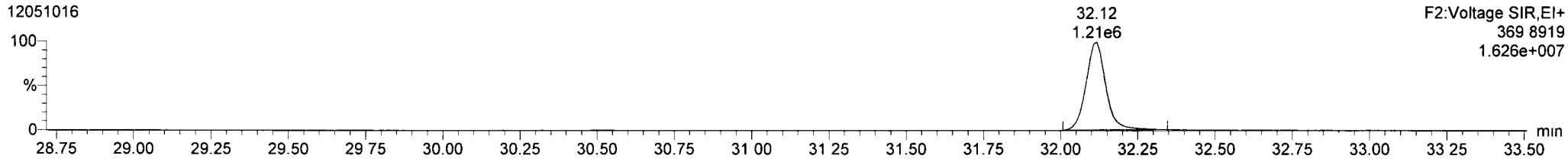
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

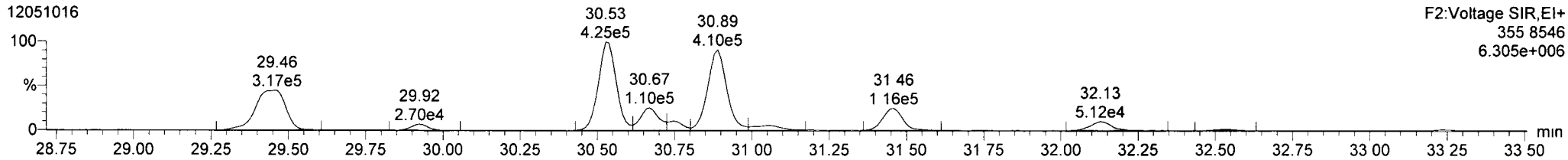
13C-12378-PeCDD



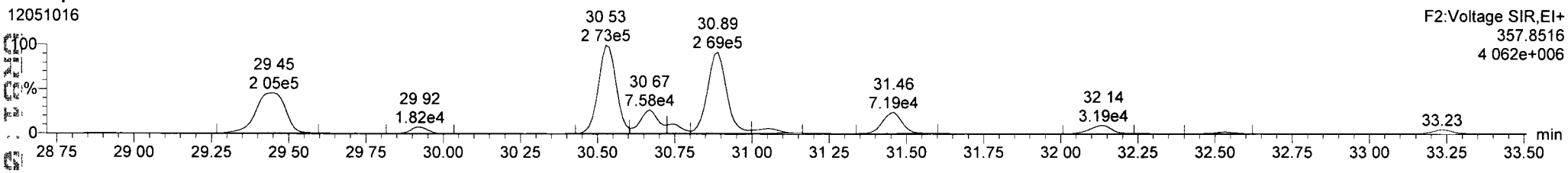
13C-12378-PeCDD



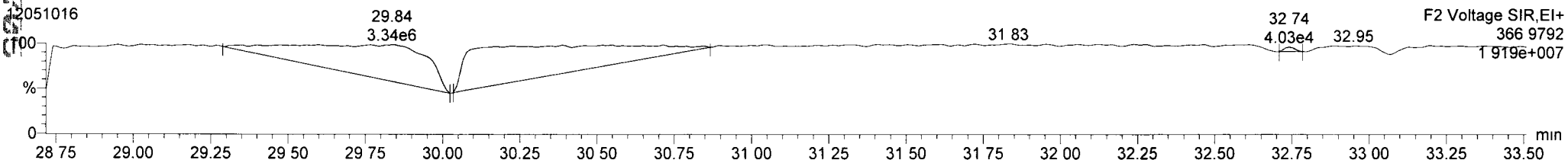
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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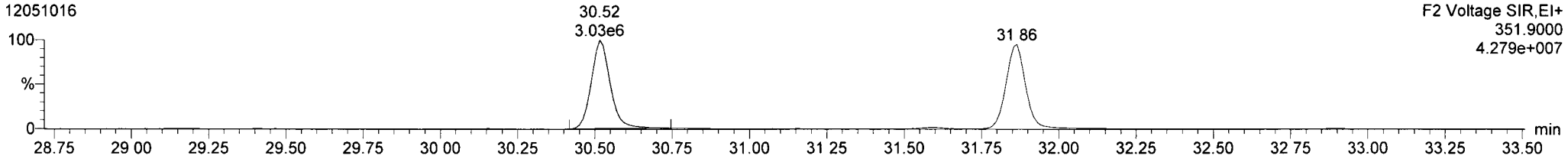
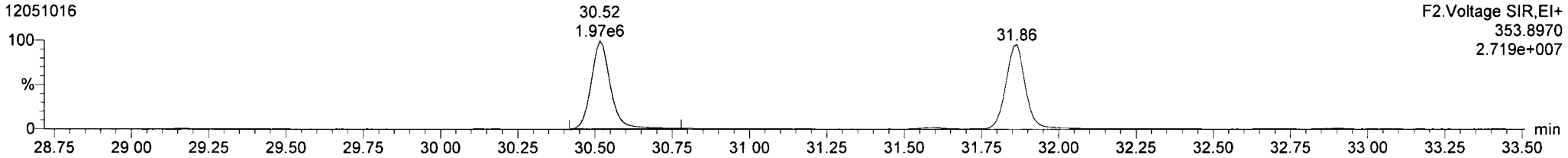
Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

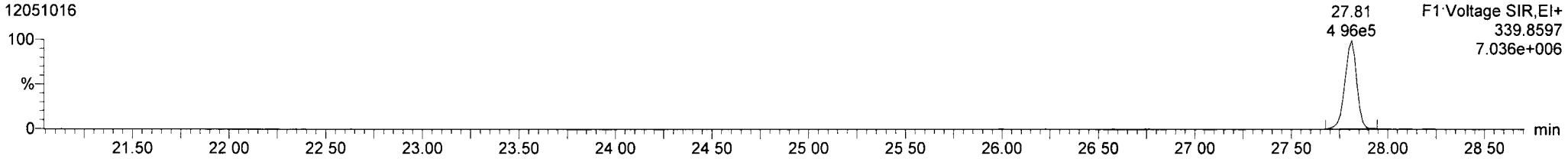
13C-12378-PeCDF



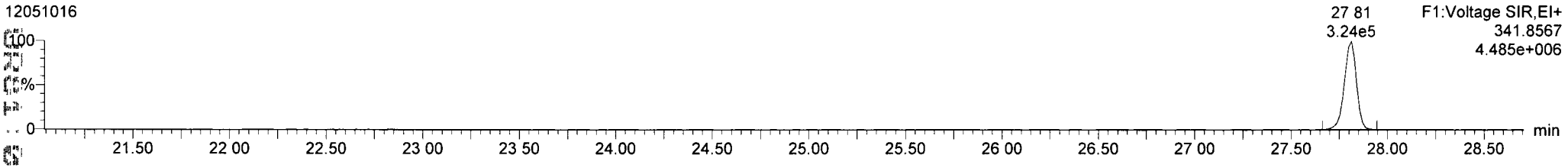
13C-12378-PeCDF



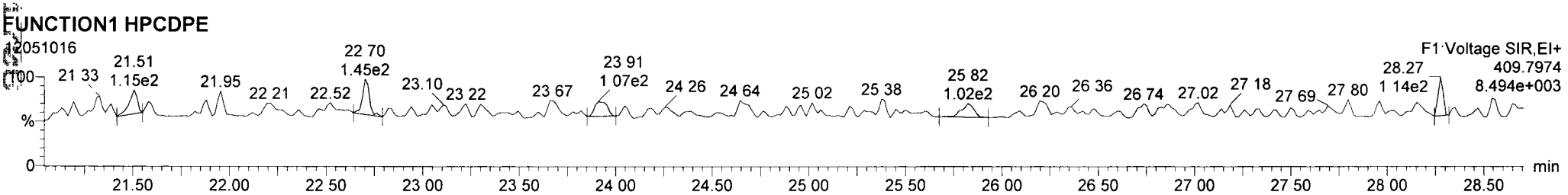
Total-penta1



Total-penta1



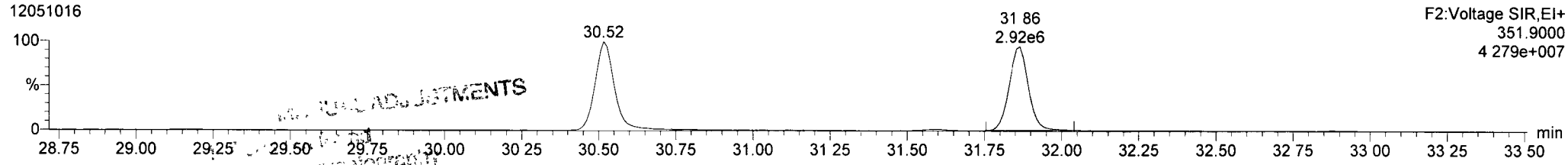
FUNCTION1 HPCDPE



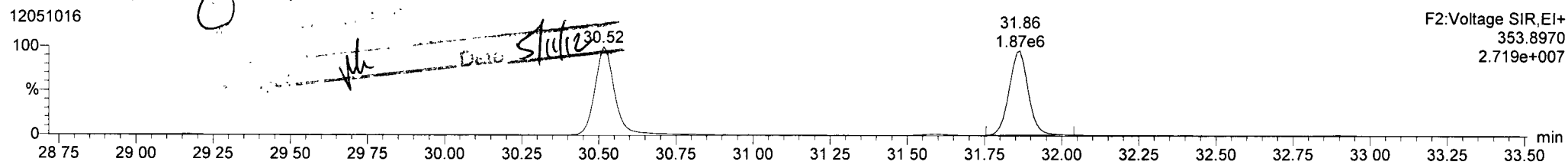
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed. Friday, May 11, 2012 10:44:29 Pacific Daylight Time

Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

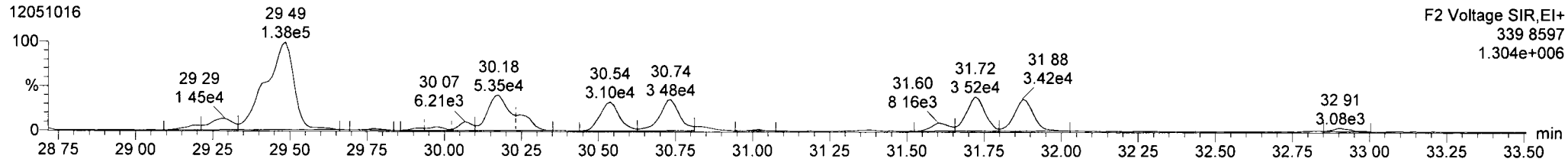
13C-23478-PeCDF



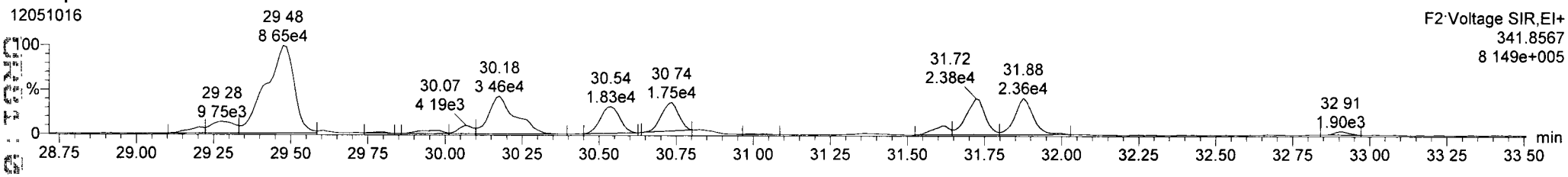
13C-23478-PeCDF



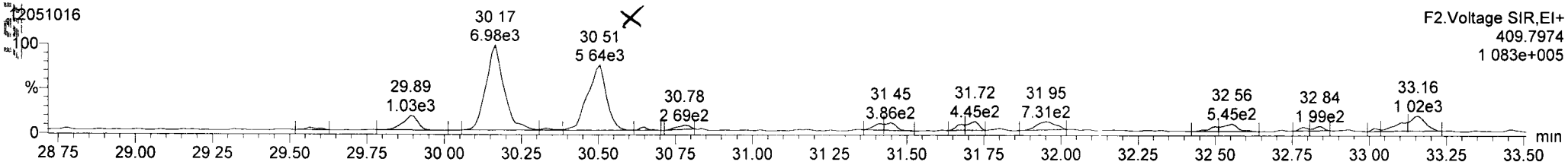
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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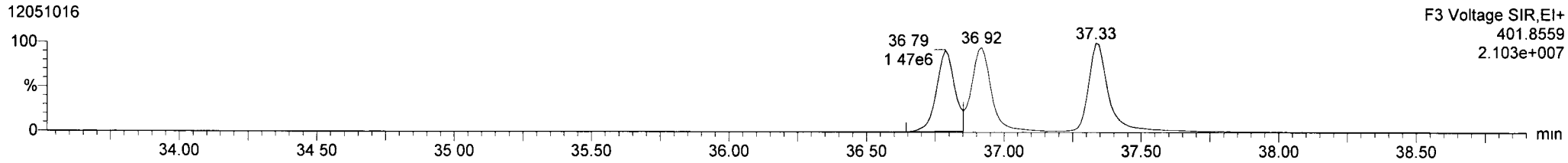
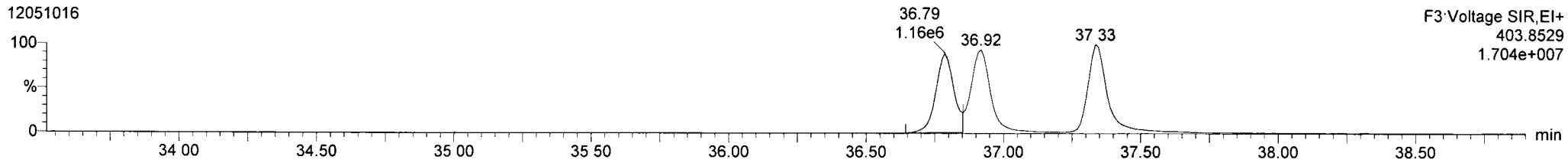
Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

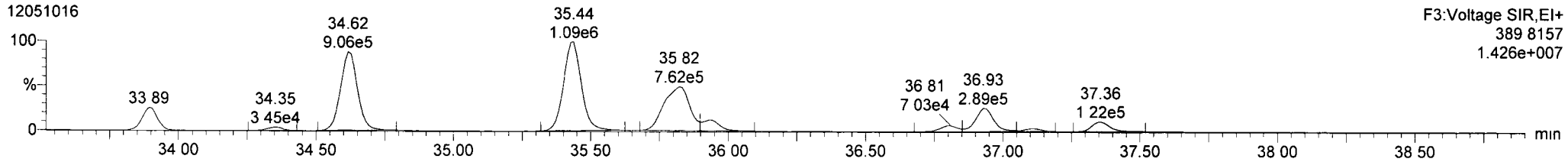
13C-123478-HxCDD



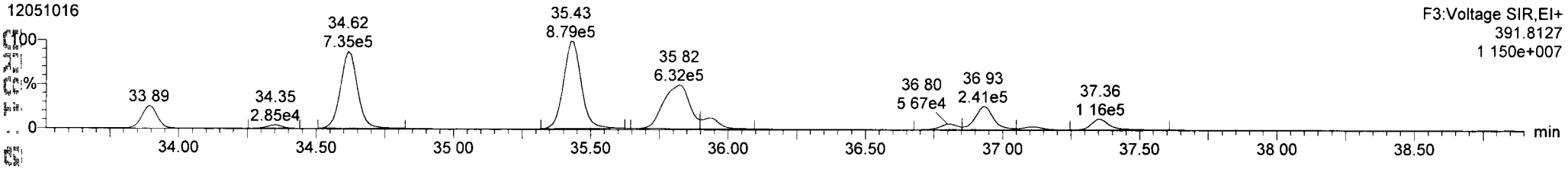
13C-123478-HxCDD



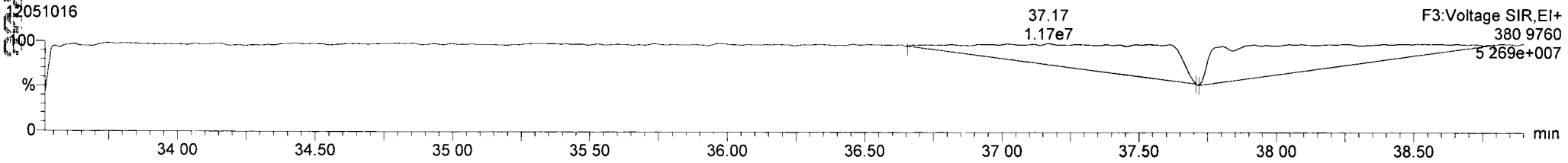
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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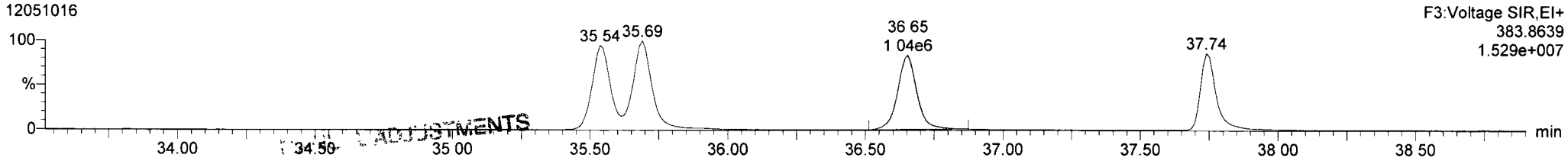
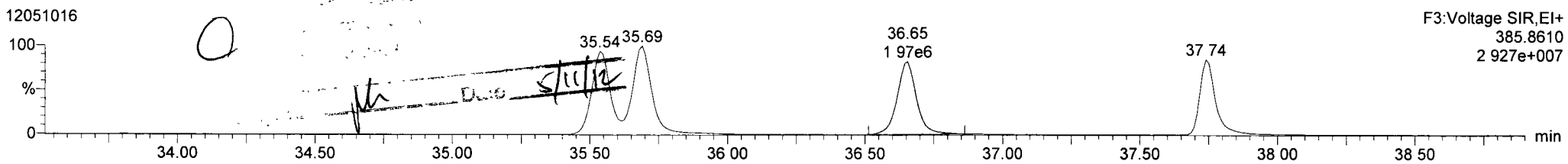
Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

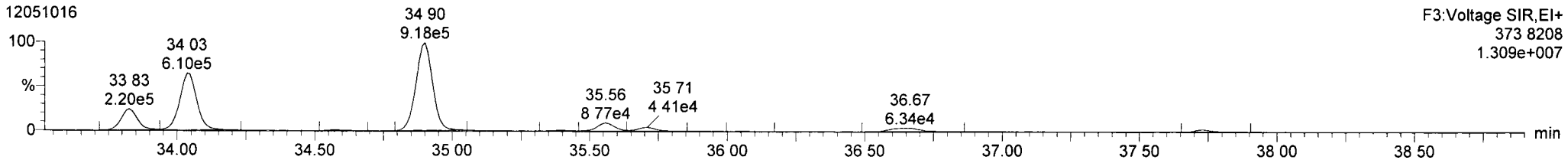
13C-234678-HxCDF



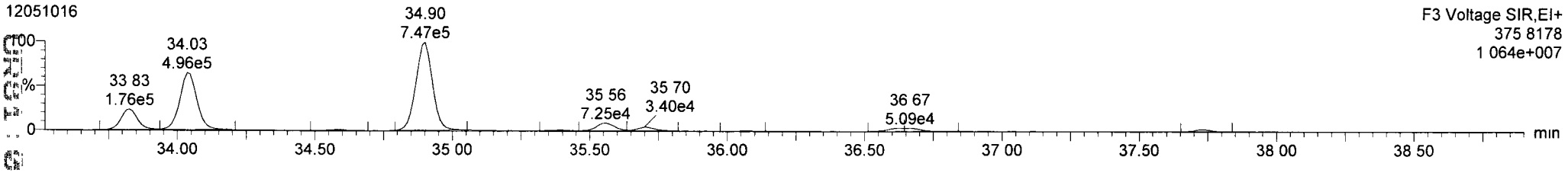
13C-234678-HxCDF



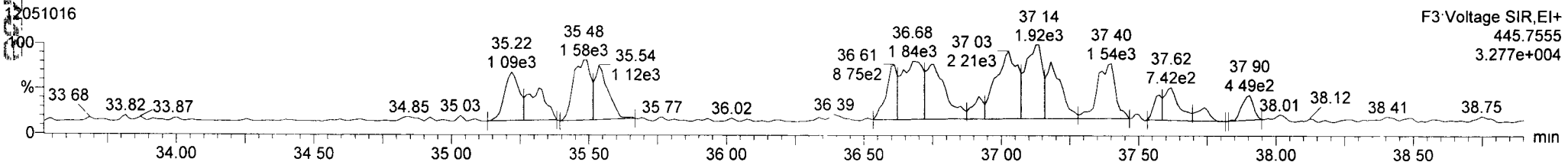
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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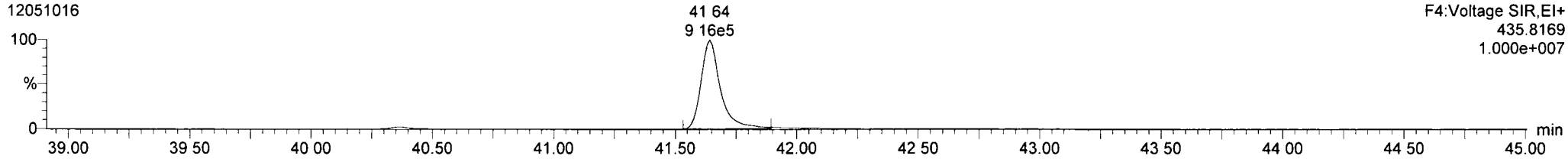
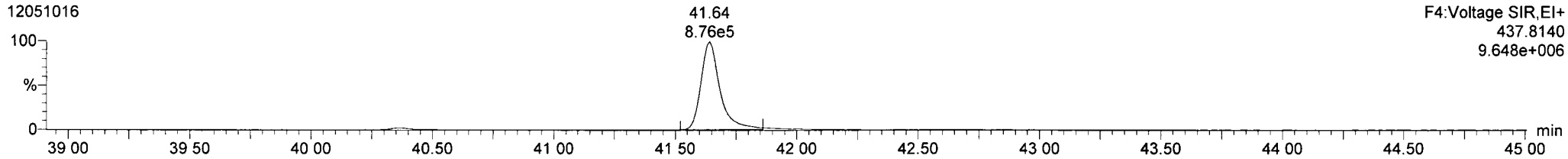
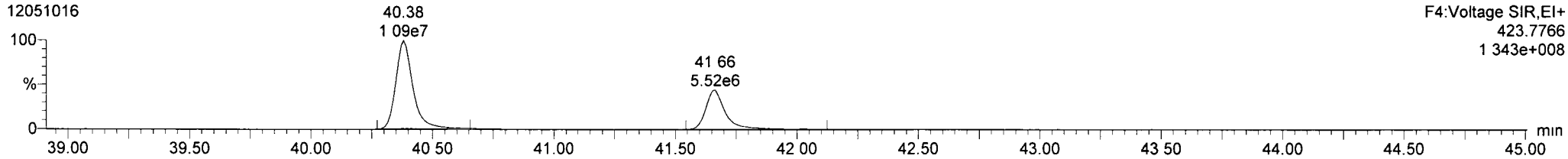
13C-1234678-HpCDD



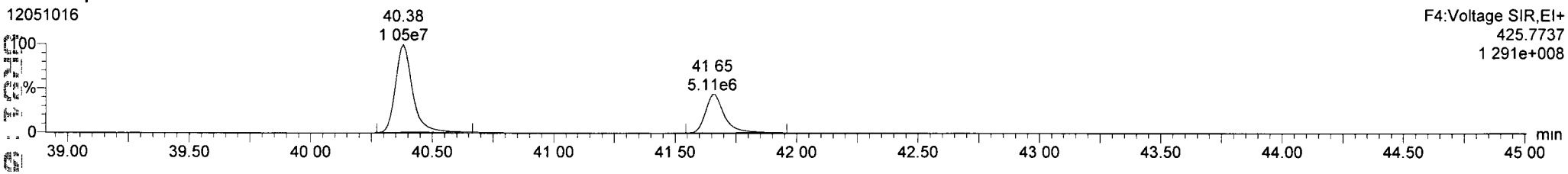
13C-1234678-HpCDD



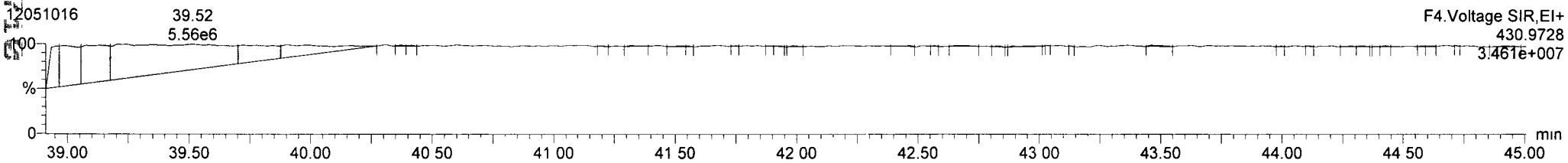
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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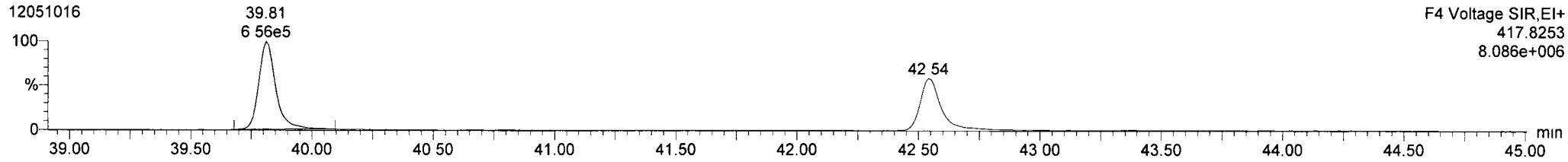
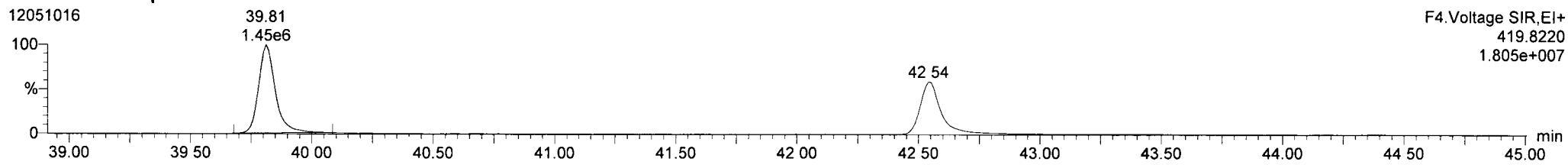
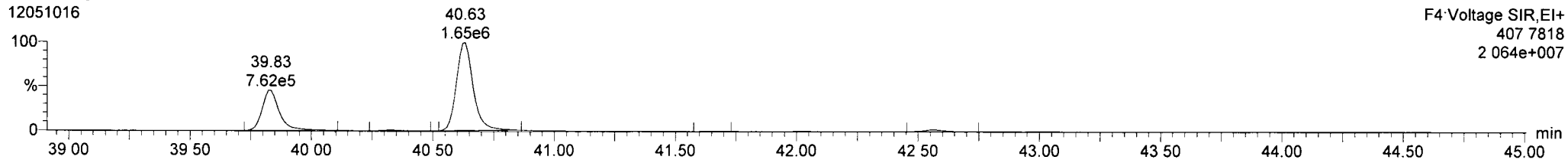
13C-1234678-HpCDF



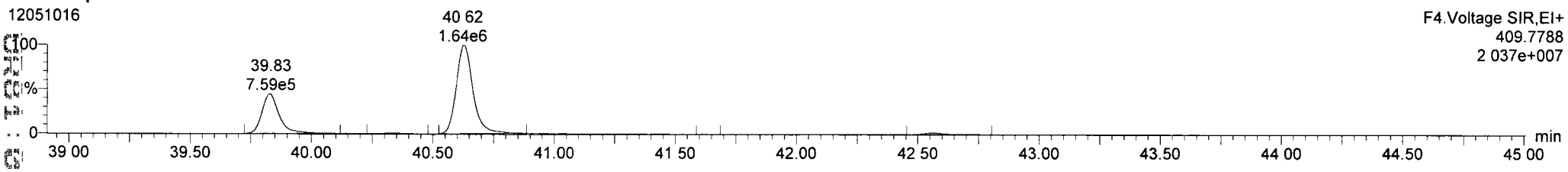
13C-1234678-HpCDF



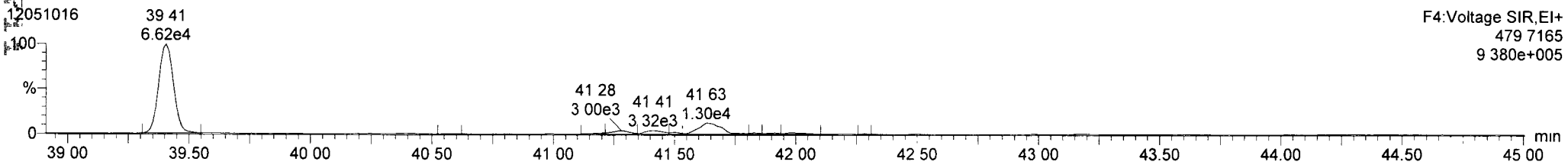
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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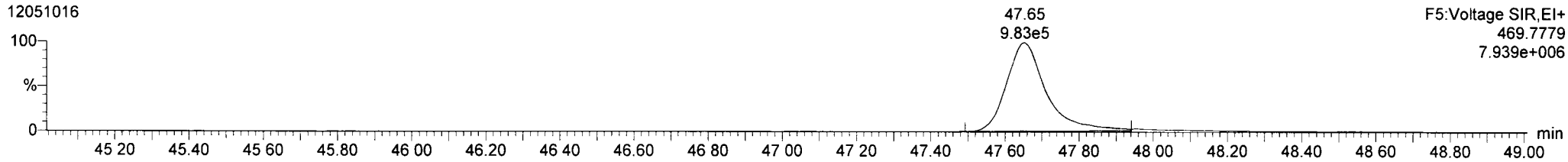
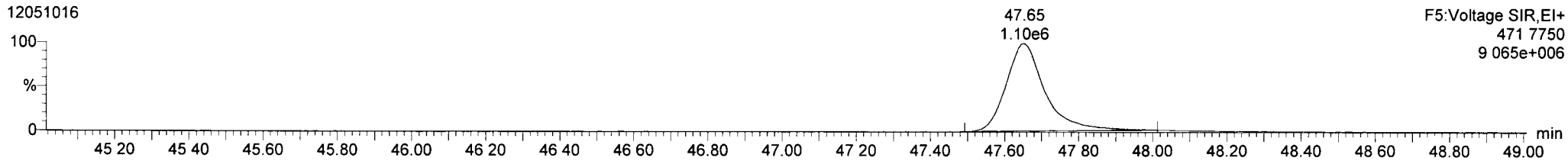
Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

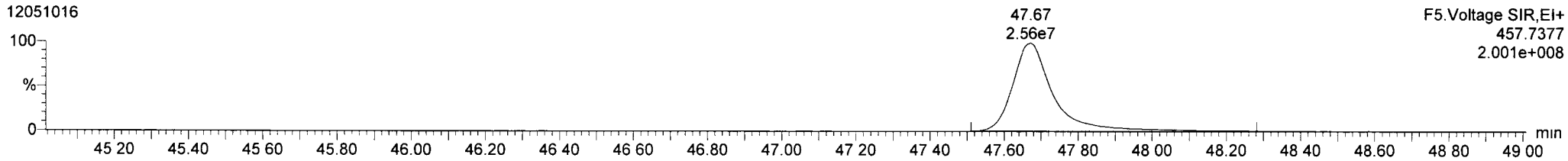
13C-OCDD



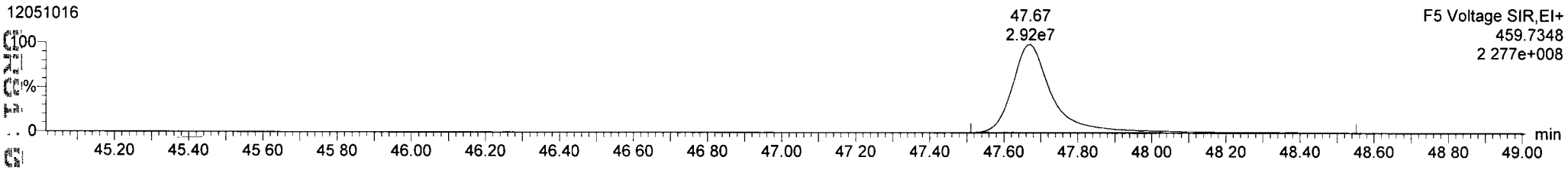
13C-OCDD



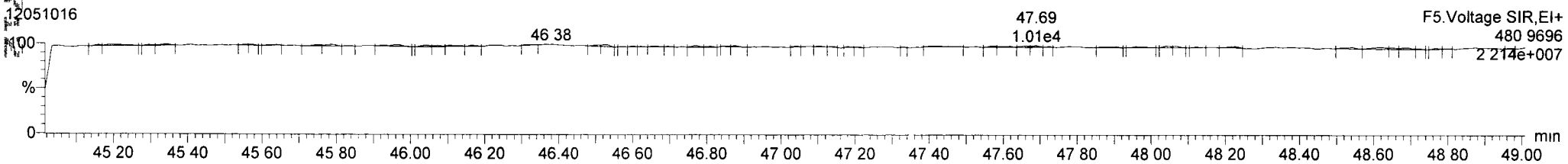
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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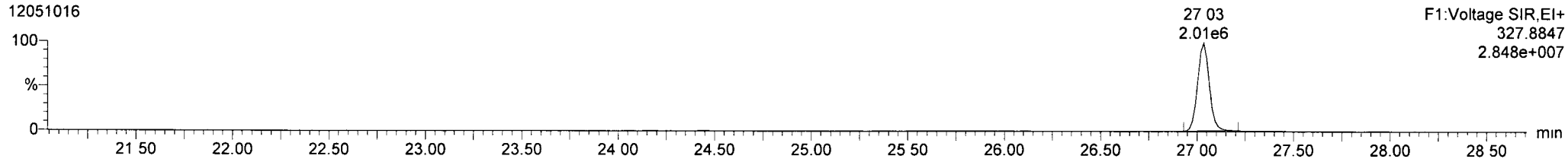
Name: 12051016, Date: 10-May-2012, Time: 22:48:54, ID: UR81J, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



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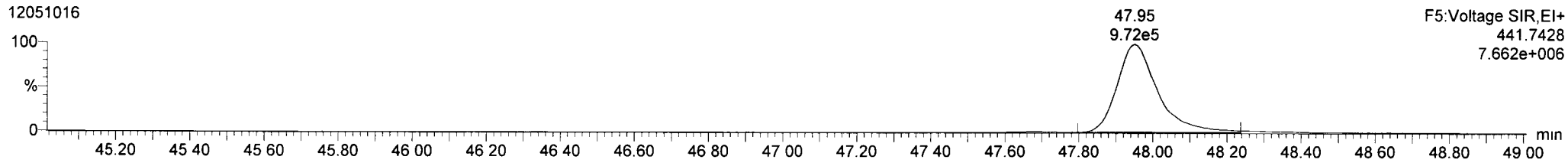

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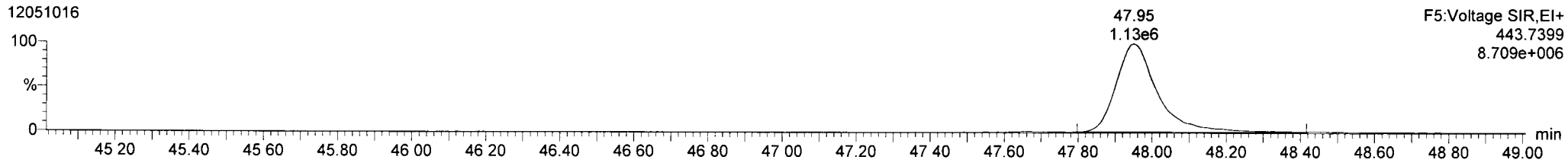
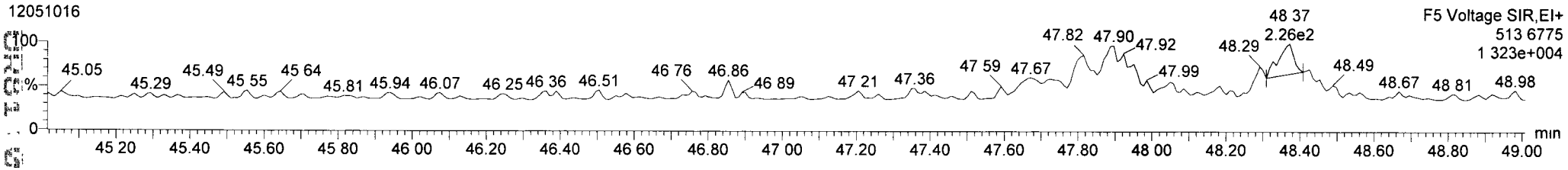


FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303 9016	26 406	26.407	263924	263924	0 866	dd		0.77	0.77	617.8	NO	3.876	3.876
2	2	12378-PeCDF	339.8597	30 549	30.548	168030	168030	0.907	bd		1 61	1 55	241 3	NO	3 090	3.090
3	3	23478-PeCDF	339.8597	31 886	31.898	160793	160793	0.936	db		1.58	1 55	233 5	NO	2.997	2 997
4	4	123478-HxCDF	373.8208	35 569	35 558	501955	501955	1.082	dd		1.24	1 24	690 9	NO	12.464	12 464
5	5	234678-HxCDF	373 8208	36 621	36 665	202993	202993	1 070	bb		1.24	1 24	174 2	NO	5 460	5 460
6	6	123678-HxCDF	373.8208	35 711	35 722	163566	163566	1.048	dd		1 28	1 24	220 1	NO	3.774	3 774
7	7	123789-HxCDF	373 8208	37.728	37 761	100253	100253	1 020	bb		1.23	1.24	152 1	NO	3.411	3 411
8	8	1234678-HpCDF	407 7818	39 844	39.842	3470107	3470107	1.214	bb		1.04	1 05	3142.9	NO	124 113	124.113
9	9	1234789-HpCDF	407.7818	42 573	42 564	143087	143087	1 254	bb		1.01	1 05	112 8	NO	7.281	7 281
10	10	OCDF	441 7428	47.976	47 957	5299166	5299166	1 105	bd		0.89	0 89	4731 8	NO	437 456	437.456
11	11	2378-TCDD	319.8965	27.034	27.033	25688	25688	1 046	bd		0.73	0.77	56 2	NO	0.465	0.465
12	12	12378-PeCDD	355.8546	32.138	32 137	84915	84915	0 973	bb		1.62	1.55	228 3	NO	2 220	2 220
13	13	123478-HxCDD	389 8157	36.796	36 807	78561	78561	0 935	bd		1.17	1 24	68 1	NO	2.747	2.747
14	14	123678-HxCDD	389.8157	36.928	36 917	763963	763963	0 878	dd		1.23	1.24	613 9	NO	25.364	25.364
15	15	123789-HxCDD	389 8157	37.355	37.312	188687	188687	0.839	bb		1 28	1 24	150 4	NO	6 934	6 934
16	16	1234678-HpCDD	423 7766	41.663	41 665	13019367	13019367	0.974	bb		1 01	1 05	4911 7	NO	705 622	705.622
17	17	OCDD	457 7377	47.689	47 685	74471092	74471092	0.950	bd		0 88	0.89	24393 5	NO	7151 741	7151 7. . E
18	18	13C-2378-TCDF	315 9419	26.392	26 392	7862879		1 484	bb	77 7	0 77	0 77	10544 1	NO	77.674	
19	19	13C-12378-PeCDF	351 9000	30.527	30.533	5995905		1.048	bd	83.9	1.53	1.55	6136.7	NO	83.891	
20	20	13C-23478-PeCDF	351 9000	31.875	31.870	5733592		1 003	bb	83.8	1.58	1.55	5888.6	NO	83.794	
21	21	13C-123478-HxCDF	383 8639	35.547	35.558	3722309		1.186	bd	82 6	0.52	0.51	2615 4	NO	82.578	
22	22	13C-123678-HxCDF	383.8639	35.701	35 711	4134352		1 315	db	82 7	0.49	0.51	2690.4	NO	82.691	
23	23	13C-234678-HxCDF	383 8639	36.643	36.643	3475162		1.223	bb	74.7	0.51	0.51	2346.4	NO	74.721	
24	24	13C-123789-HxCDF	383.8639	37.750	37.750	2881165		1 056	bb	71 7	0.52	0.51	2162.5	NO	71.730	
25	25	13C-1234678-HpCDF	417 8253	39.822	39.833	2302211		1.011	bb	59 9	0.46	0 44	1963.6	NO	59.871	
26	26	13C-1234789-HpCDF	417 8253	42.551	42.584	1567072		0 741	bb	55 7	0.46	0 44	1147.2	NO	55.659	
27	27	13C-1234-TCDD	331 9368	26.212	26 272	6819464		1 000	bb	100.0	0.78	0.77	12958 7	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27.019	27 034	5281041		0 956	bb	81.0	0.78	0 77	9426 6	NO	80.973	
29	29	13C-12378-PeCDD	367 8949	32.127	32.123	3930060		0.663	bb	86.9	1.61	1 55	7897 4	NO	86.864	
30	30	13C-123478-HxCDD	401 8559	36.785	36.774	3056857		1 024	bd	78.5	1.30	1 24	7731 7	NO	78.526	
31	31	13C-123678-HxCDD	401 8559	36.906	36.906	3431473		1.113	db	81.1	1.21	1 24	8177 5	NO	81.121	
32	32	13C-1234678-HpCDD	435 8169	41 652	41.685	1893763		0 815	bb	61 1	1 06	1 05	2071 6	NO	61.108	
33	33	13C-OCDD	469 7779	47.671	47.701	2192042		0.717	bb	40 2	0.93	0.89	1962 6	NO	80.404	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.333	37 368	3801919		1 000	bb	100.0	1.25	1.24	9242.7	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.370			0.866							29 887	31.045
36	36	Total-penta1	339 8597		28 210										36 655	36 655
37	37	Total-pentafurans	339 8597		30.790			0.921							28.877	30.134
38	38	Total-hexafurans	373 8208		35.760			1 055							201 438	201 630
39	39	Total-heptafurans	407.7818		41.160			1 234							491.775	493 439
40	40	Total-Furans	303.9016		0.000			1.050							1226.149	1230 4.
41	41	Total-tetradioxins	319 8965		25.880			1 046							20 565	20 719
42	42	Total-pentadioxins	355 8546		30 950			0.973							32.484	32 639
43	43	Total-hexadioxins	389 8157		35.940			0 884							170 333	170 333
44	44	Total-heptadioxins	423 7766		40.980			0 974							1462 284	1462 2. .
45	45	Total-Dioxins	319 8965		0.000			0 942							8837.406	8837 7. .
46	46	Total-TEQ	319 8965		0.000										10063.555	10068....
47	47	37CL-2378-TCDD	327.8847	27 049	27 025	2639768		1 037					14888.2		37.322	
48	48	FUNCTION1 PFK	330.9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000										0 000	
50	50	FUNCTION3 PFK	380 9760		0 000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0.000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000										0 000	
58	58	FUNCTION5 DCDPE	513.6775		0.000										0.000	

65.532

46.789

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset. P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.08	68271.024	0.866	1.003	1.003	0.78	0.77	NO	131 1
2	35	Total-tetrafurans	303 9016	24.90	0 000	0.866	0.000	0.037	0.55	0.77	YES	8.1
3	35	Total-tetrafurans	303.9016	24.64	47880.322	0.866	0.703	0.703	0.74	0.77	NO	116.3
4	35	Total-tetrafurans	303.9016	24.51	29867.834	0.866	0.439	0.439	0.82	0.77	NO	76.0
5	35	Total-tetrafurans	303.9016	24 40	172696.656	0.866	2.536	2.536	0.79	0 77	NO	425 2
6	35	Total-tetrafurans	303 9016	24 15	178844.055	0 866	2 626	2 626	0 79	0.77	NO	373 6
7	35	Total-tetrafurans	303 9016	24 06	52179.021	0.866	0 766	0.766	0 83	0 77	NO	110 9
8	35	Total-tetrafurans	303.9016	23 94	90823.922	0 866	1 334	1.334	0 69	0.77	NO	149.0
9	35	Total-tetrafurans	303.9016	23 75	372117.297	0 866	5.464	5.464	0 78	0.77	NO	929.8
10	35	Total-tetrafurans	303.9016	23.16	56321.713	0 866	0.827	0.827	0.78	0.77	NO	131.4
11	35	Total-tetrafurans	303.9016	22.91	39607 012	0.866	0.582	0.582	0.77	0.77	NO	91.1
12	35	Total-tetrafurans	303.9016	27.87	0.000	0.866	0.000	1.024	0.95	0 77	YES	103 2
13	35	Total-tetrafurans	303.9016	26.91	0.000	0.866	0.000	0.026	0.42	0.77	YES	5 3
14	35	Total-tetrafurans	303 9016	26 63	73412 782	0.866	1.078	1 078	0 74	0 77	NO	146.6
15	35	Total-tetrafurans	303.9016	26 53	25438 256	0.866	0.374	0 374	0 73	0 77	NO	56.8
16	1	2378-TCDF	303 9016	26 41	263924.414	0 866	3 876	3 876	0 77	0 77	NO	617 8
17	35	Total-tetrafurans	303 9016	26 23	58270.766	0 866	0 856	0.856	0 70	0 77	NO	94 2
18	35	Total-tetrafurans	303.9016	26 05	0 000	0.866	0 000	0 072	0.62	0 77	YES	12 7
19	35	Total-tetrafurans	303 9016	25 90	18733.180	0 866	0 275	0 275	0 75	0 77	NO	38.2
20	35	Total-tetrafurans	303.9016	25.72	31145 278	0.866	0 457	0 457	0.70	0.77	NO	65.8
21	35	Total-tetrafurans	303.9016	25 50	240203.532	0 866	3 527	3.527	0 77	0 77	NO	558.6
22	35	Total-tetrafurans	303.9016	25 32	163398 055	0.866	2.399	2.399	0.76	0.77	NO	362.2
23	35	Total-tetrafurans	303.9016	25 17	52198.316	0.866	0.766	0.766	0.79	0.77	NO	131.5

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27 83	1971303.813		36 655	36.655	1 53	1 55	NO	9481.0

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339.8597	29 91	9799.274	0.921	0.181	0 181	1 61	1.55	NO	18 3
2	37	Total-pentafurans	339.8597	29 78	0.000	0 921	0.000	0.038	0 93	1.55	YES	4.6
3	37	Total-pentafurans	339.8597	29 50	605303.547	0 921	11 201	11.201	1 52	1 55	NO	708.1
4	37	Total-pentafurans	339.8597	29.31	0.000	0.921	0.000	1.013	1.18	1.55	YES	68 3
5	37	Total-pentafurans	339.8597	32.92	23008.582	0 921	0.426	0.426	1.34	1.55	NO	30.2
6	3	23478-PeCDF	339.8597	31.89	160793.031	0.936	2.997	2.997	1.58	1 55	NO	233.5
7	37	Total-pentafurans	339.8597	31.73	201148.406	0.921	3.722	3.722	1.61	1 55	NO	299.4
8	37	Total-pentafurans	339 8597	31.61	18709 484	0.921	0.346	0.346	1.43	1.55	NO	32.5
9	37	Total-pentafurans	339.8597	31.36	0 000	0.921	0.000	0 088	1 20	1 55	YES	6.2
10	37	Total-pentafurans	339.8597	31 03	0.000	0.921	0 000	0 035	2 63	1 55	YES	6 0
11	37	Total-pentafurans	339 8597	30.95	0.000	0.921	0.000	0 016	1 18	1 55	YES	3 2
12	37	Total-pentafurans	339.8597	30 84	12703.103	0 921	0 235	0.235	1 67	1.55	NO	20 6
13	37	Total-pentafurans	339 8597	30.74	154141.910	0.921	2 852	2.852	1.52	1 55	NO	218 0
14	2	12378-PeCDF	339.8597	30.55	168030.269	0.907	3 090	3.090	1.61	1 55	NO	241 3
15	37	Total-pentafurans	339.8597	30.19	180938.860	0.921	3.348	3.348	1.53	1 55	NO	163.9
16	37	Total-pentafurans	339.8597	30.09	25811.000	0 921	0.478	0.478	1 71	1.55	NO	42 8
17	37	Total-pentafurans	339.8597	29 97	0.000	0.921	0 000	0.068	2.31	1 55	YES	14 1

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	6	123678-HxCDF	373.8208	35 71	163565.711	1.048	3 774	3.774	1.28	1.24	NO	220 1
2	4	123478-HxCDF	373.8208	35 57	501955.015	1 082	12 464	12.464	1 24	1.24	NO	690 9
3	38	Total-hexafurans	373 8208	35 40	34140.959	1.055	0 911	0.911	1 27	1 24	NO	49 8
4	38	Total-hexafurans	373 8208	34 91	3978050.375	1.055	106 116	106 .	1.22	1 24	NO	5921 3
5	38	Total-hexafurans	373 8208	34 58	48983.379	1 055	1 307	1.307	1.30	1 24	NO	68.5
6	38	Total-hexafurans	373 8208	34.05	1872174.751	1 055	49.941	49.941	1.19	1 24	NO	2692.6
7	38	Total-hexafurans	373.8208	33.84	676832.719	1.055	18 055	18.055	1.19	1 24	NO	1058.6
8	7	123789-HxCDF	373.8208	37.73	100252 875	1.020	3.411	3.411	1.23	1.24	NO	152 1
9	5	234678-HxCDF	373.8208	36.62	202993 359	1 070	5.460	5.460	1 24	1.24	NO	174 2
10	38	Total-hexafurans	373 8208	36 08	0 000	1.055	0.000	0 149	0 55	1.24	YES	14 3
11	38	Total-hexafurans	373.8208	35 86	0 000	1.055	0.000	0 044	0 88	1 24	YES	6 3

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39	Total-heptafurans	407.7818	40.63	8605322 500	1 234	360.381	360 .	1 04	1.05	NO	7806.3
2	39	Total-heptafurans	407.7818	40.34	0.000	1 234	0.000	1 565	1 32	1 05	YES	39.5
3	8	1234678-HpCDF	407.7818	39 84	3470107 125	1 214	124.113	124 .	1 04	1.05	NO	3142.9
4	9	1234789-HpCDF	407.7818	42.57	143087.407	1 254	7 281	7 281	1 01	1.05	NO	112 8
5	39	Total-heptafurans	407.7818	41.69	0 000	1.234	0 000	0 058	4.68	1 05	YES	5 0
6	39	Total-heptafurans	407 7818	41.25	0 000	1.234	0.000	0.041	3 12	1 05	YES	3 4

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303 9016	25 08	68271 024	0.866	1 003	1.003	0 78	0 77	NO	131.1
2	35	Total-tetrafurans	303 9016	24 90	0 000	0 866	0 000	0.037	0.55	0.77	YES	8 1
3	35	Total-tetrafurans	303.9016	24 64	47880 322	0 866	0 703	0.703	0 74	0 77	NO	116.3
4	35	Total-tetrafurans	303 9016	24.51	29867.834	0.866	0.439	0.439	0.82	0.77	NO	76.0
5	35	Total-tetrafurans	303 9016	24.40	172696.656	0.866	2.536	2 536	0 79	0 77	NO	425.2
6	35	Total-tetrafurans	303.9016	24.15	178844.055	0.866	2.626	2.626	0.79	0.77	NO	373.6
7	35	Total-tetrafurans	303.9016	24.06	52179.021	0.866	0.766	0.766	0.83	0.77	NO	110 9
8	35	Total-tetrafurans	303.9016	23.94	90823.922	0 866	1.334	1.334	0.69	0.77	NO	149.0
9	35	Total-tetrafurans	303 9016	23 75	372117.297	0.866	5.464	5.464	0.78	0 77	NO	929 8
10	35	Total-tetrafurans	303 9016	23 16	56321.713	0.866	0 827	0.827	0.78	0.77	NO	131 4
11	35	Total-tetrafurans	303.9016	22 91	39607 012	0.866	0 582	0.582	0 77	0.77	NO	91 1
12	40	Total-Furans	303 9016	21 33	5092.588	1.050	0.062	0 062	0 86	0 77	NO	10 9
13	35	Total-tetrafurans	303 9016	27 87	0.000	0.866	0.000	1 024	0 95	0 77	YES	103 2
14	35	Total-tetrafurans	303.9016	26.91	0.000	0.866	0.000	0 026	0 42	0 77	YES	5.3
15	35	Total-tetrafurans	303 9016	26.63	73412 782	0 866	1 078	1 078	0.74	0.77	NO	146.6
16	35	Total-tetrafurans	303.9016	26 53	25438 256	0.866	0.374	0.374	0.73	0 77	NO	56 8
17	1	2378-TCDF	303.9016	26 41	263924.414	0.866	3 876	3.876	0.77	0.77	NO	617.8
18	35	Total-tetrafurans	303.9016	26.23	58270 766	0.866	0.856	0.856	0.70	0.77	NO	94.2
19	35	Total-tetrafurans	303 9016	26.05	0 000	0 866	0.000	0 072	0 62	0.77	YES	12 7
20	35	Total-tetrafurans	303.9016	25.90	18733.180	0.866	0.275	0 275	0 75	0.77	NO	38.2
21	35	Total-tetrafurans	303 9016	25.72	31145.278	0 866	0.457	0.457	0.70	0.77	NO	65 8
22	35	Total-tetrafurans	303 9016	25.50	240203.532	0 866	3 527	3.527	0 77	0.77	NO	558 6
23	35	Total-tetrafurans	303.9016	25.32	163398.055	0 866	2.399	2 399	0 76	0.77	NO	362 2
24	35	Total-tetrafurans	303 9016	25.17	52198 316	0 866	0 766	0.766	0 79	0.77	NO	131 5
25	37	Total-pentafurans	339 8597	29.91	9799 274	0 921	0 181	0.181	1.61	1.55	NO	18 3
26	37	Total-pentafurans	339.8597	29 78	0.000	0 921	0 000	0.038	0.93	1.55	YES	4 6
27	37	Total-pentafurans	339 8597	29 50	605303 547	0.921	11.201	11.201	1.52	1 55	NO	708.1
28	37	Total-pentafurans	339.8597	29 31	0 000	0.921	0 000	1.013	1.18	1.55	YES	68 3
29	37	Total-pentafurans	339 8597	32 92	23008.582	0.921	0 426	0.426	1 34	1.55	NO	30.2
30	3	23478-PeCDF	339.8597	31.89	160793 031	0.936	2.997	2 997	1 58	1 55	NO	233.5
31	37	Total-pentafurans	339.8597	31.73	201148.406	0 921	3.722	3.722	1 61	1 55	NO	299 4
32	37	Total-pentafurans	339.8597	31 61	18709.484	0 921	0.346	0.346	1 43	1 55	NO	32 5
33	37	Total-pentafurans	339.8597	31 36	0.000	0.921	0.000	0 088	1 20	1 55	YES	6.2
34	37	Total-pentafurans	339 8597	31 03	0 000	0 921	0.000	0.035	2.63	1 55	YES	6 0
35	37	Total-pentafurans	339 8597	30 95	0 000	0 921	0.000	0.016	1 18	1 55	YES	3 2
36	37	Total-pentafurans	339 8597	30 84	12703 103	0 921	0.235	0.235	1 67	1 55	NO	20 6
37	37	Total-pentafurans	339.8597	30.74	154141 910	0.921	2.852	2.852	1.52	1 55	NO	218 0
38	2	12378-PeCDF	339.8597	30.55	168030 269	0.907	3.090	3.090	1.61	1.55	NO	241 3
39	37	Total-pentafurans	339.8597	30.19	180938 860	0.921	3.348	3.348	1.53	1.55	NO	163 9
40	37	Total-pentafurans	339.8597	30.09	25811 000	0.921	0 478	0.478	1.71	1.55	NO	42.8
41	37	Total-pentafurans	339.8597	29 97	0.000	0.921	0 000	0.068	2.31	1 55	YES	14 1
42	6	123678-HxCDF	373 8208	35.71	163565 711	1.048	3 774	3 774	1.28	1.24	NO	220.1
43	4	123478-HxCDF	373 8208	35.57	501955 015	1.082	12.464	12 464	1 24	1 24	NO	690 9
44	38	Total-hexafurans	373 8208	35.40	34140 959	1.055	0 911	0 911	1.27	1 24	NO	49.8
45	38	Total-hexafurans	373.8208	34 91	3978050.375	1.055	106 116	106 .	1.22	1 24	NO	5921 3
46	38	Total-hexafurans	373.8208	34 58	48983 379	1 055	1.307	1.307	1.30	1.24	NO	68 5
47	38	Total-hexafurans	373 8208	34.05	1872174 751	1.055	49.941	49.941	1.19	1 24	NO	2692.6
48	38	Total-hexafurans	373.8208	33.84	676832 719	1.055	18.055	18.055	1.19	1.24	NO	1058 6
49	7	123789-HxCDF	373.8208	37.73	100252 875	1.020	3.411	3.411	1.23	1.24	NO	152 1

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	5	234678-HxCDF	373.8208	36 62	202993.359	1.070	5 460	5 460	1 24	1.24	NO	174.2
51	38	Total-hexafurans	373.8208	36 08	0.000	1 055	0.000	0 149	0 55	1 24	YES	14.3
52	38	Total-hexafurans	373.8208	35 86	0 000	1.055	0 000	0.044	0.88	1.24	YES	6.3
53	39	Total-heptafurans	407.7818	40 63	8605322.500	1 234	360.381	360 ..	1.04	1.05	NO	7806.3
54	39	Total-heptafurans	407.7818	40.34	0.000	1.234	0.000	1.565	1 32	1.05	YES	39.5
55	8	1234678-HpCDF	407.7818	39.84	3470107.125	1.214	124.113	124....	1.04	1.05	NO	3142.9
56	9	1234789-HpCDF	407.7818	42.57	143087.407	1.254	7.281	7.281	1.01	1.05	NO	112.8
57	39	Total-heptafurans	407.7818	41.69	0.000	1.234	0.000	0.058	4.68	1 05	YES	5 0
58	39	Total-heptafurans	407 7818	41.25	0 000	1.234	0 000	0.041	3 12	1 05	YES	3.4
59	10	OCDF	441 7428	47.98	5299166 000	1.105	437 456	437....	0.89	0 89	NO	4731.8
60	36	Total-penta1	339.8597	27 83	1971303 813		36.655	36.655	1 53	1 55	NO	9481 0

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	25.17	6759.715	1.046	0 122	0.122	0 88	0.77	NO	17.4
2	41	Total-tetradioxins	319.8965	24 66	27461 341	1.046	0 497	0 497	0 80	0 77	NO	63 7
3	41	Total-tetradioxins	319.8965	24 45	281987.992	1 046	5 106	5.106	0 75	0.77	NO	649 1
4	41	Total-tetradioxins	319.8965	24 18	430323.812	1.046	7 791	7.791	0 76	0.77	NO	1076 9
5	41	Total-tetradioxins	319 8965	27 63	5237 606	1.046	0 095	0 095	0 75	0 77	NO	12 1
6	41	Total-tetradioxins	319 8965	27.17	20278.162	1 046	0.367	0.367	0 75	0 77	NO	49.8
7	11	2378-TCDD	319 8965	27.03	25687.869	1 046	0.465	0.465	0.73	0.77	NO	56 2
8	41	Total-tetradioxins	319 8965	26.66	48207.268	1 046	0.873	0.873	0.79	0.77	NO	91.7
9	41	Total-tetradioxins	319.8965	26.36	5134.791	1.046	0.093	0.093	0 88	0 77	NO	12.5
10	41	Total-tetradioxins	319.8965	26.23	118109 403	1.046	2.138	2 138	0.78	0 77	NO	298.1
11	41	Total-tetradioxins	319.8965	26.02	26399.341	1.046	0.478	0.478	0 66	0 77	NO	56.9
12	41	Total-tetradioxins	319.8965	25.91	9071 939	1.046	0.164	0 164	0.76	0.77	NO	19.9
13	41	Total-tetradioxins	319.8965	25.76	0 000	1.046	0.000	0 153	0.64	0 77	YES	24 0
14	41	Total-tetradioxins	319 8965	25 66	87598 418	1.046	1 586	1 586	0.74	0 77	NO	203 7
15	41	Total-tetradioxins	319.8965	25.38	43576 410	1.046	0 789	0.789	0.83	0.77	NO	104 6

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355 8546	31.57	0 000	0.973	0 000	0.135	1 20	1.55	YES	24 0
2	42	Total-pentadioxins	355.8546	31.46	65937.992	0.973	1 724	1.724	1.47	1.55	NO	186.8
3	42	Total-pentadioxins	355.8546	31.21	0.000	0 973	0.000	0 021	0.53	1 55	YES	4 7
4	42	Total-pentadioxins	355.8546	31 06	96280.535	0.973	2.517	2.517	1 49	1.55	NO	190.3
5	42	Total-pentadioxins	355 8546	30.90	207203.500	0 973	5.417	5.417	1 55	1.55	NO	637.7
6	42	Total-pentadioxins	355 8546	30.76	86401 609	0.973	2.259	2.259	1.54	1 55	NO	255 2
7	42	Total-pentadioxins	355.8546	30.54	235740.586	0 973	6 163	6.163	1 55	1 55	NO	734 4
8	42	Total-pentadioxins	355.8546	29.93	57470 128	0 973	1 502	1 502	1 42	1.55	NO	184 5
9	42	Total-pentadioxins	355 8546	29 47	383656.469	0 973	10 030	10 030	1 58	1 55	NO	798 5
10	42	Total-pentadioxins	355 8546	32 53	24909 578	0 973	0.651	0 651	1 53	1 55	NO	65 2
11	12	12378-PeCDD	355.8546	32.14	84915 168	0.973	2 220	2.220	1.62	1.55	NO	228.3

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HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	15	123789-HxCDD	389.8157	37.36	188686.977	0.839	6.934	6.934	1.28	1 24	NO	150 4
2	43	Total-hexadioxins	389.8157	37 10	42392 504	0.884	1.478	1 478	1 12	1 24	NO	32 1
3	14	123678-HxCDD	389.8157	36 93	763962 938	0.878	25 364	25 364	1 23	1 24	NO	613 9
4	13	123478-HxCDD	389.8157	36.80	78560.918	0 935	2.747	2.747	1 17	1.24	NO	68.1
5	43	Total-hexadioxins	389.8157	35.83	1627975 501	0.884	56.767	56.767	1 24	1.24	NO	972 6
6	43	Total-hexadioxins	389.8157	35.44	573254.001	0.884	19.989	19.989	1.29	1.24	NO	471.2
7	43	Total-hexadioxins	389.8157	34.63	1636156.688	0.884	57.053	57.053	1.24	1.24	NO	1407.6

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41 66	13019367 .	0 974	705 622	705 .	1 01	1.05	NO	4911.7
2	44	Total-heptadioxins	423.7766	40.39	13961108 ...	0 974	756 662	756 .	1 03	1.05	NO	5894 4

Quantify Totals Report MassLynx 4.1 SCN 714
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Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319 8965	25.17	6759.715	1 046	0.122	0.122	0 88	0 77	NO	17 4
2	41	Total-tetradioxins	319 8965	24.66	27461.341	1 046	0.497	0 497	0.80	0.77	NO	63 7
3	41	Total-tetradioxins	319 8965	24 45	281987.992	1.046	5 106	5.106	0.75	0.77	NO	649 1
4	41	Total-tetradioxins	319.8965	24.18	430323.812	1.046	7.791	7 791	0.76	0.77	NO	1076.9
5	41	Total-tetradioxins	319.8965	27.63	5237 606	1.046	0 095	0 095	0.75	0 77	NO	12.1
6	41	Total-tetradioxins	319.8965	27.17	20278.162	1.046	0.367	0.367	0.75	0 77	NO	49.8
7	11	2378-TCDD	319.8965	27.03	25687.869	1.046	0.465	0.465	0.73	0 77	NO	56 2
8	41	Total-tetradioxins	319 8965	26 66	48207.268	1.046	0 873	0 873	0.79	0.77	NO	91 7
9	41	Total-tetradioxins	319.8965	26.36	5134.791	1.046	0 093	0 093	0.88	0.77	NO	12.5
10	41	Total-tetradioxins	319.8965	26.23	118109 403	1 046	2 138	2.138	0.78	0.77	NO	298.1
11	41	Total-tetradioxins	319.8965	26.02	26399 341	1 046	0 478	0.478	0 66	0.77	NO	56.9
12	41	Total-tetradioxins	319.8965	25.91	9071.939	1 046	0.164	0.164	0.76	0.77	NO	19.9
13	41	Total-tetradioxins	319.8965	25.76	0.000	1 046	0.000	0.153	0.64	0 77	YES	24 0
14	41	Total-tetradioxins	319 8965	25.66	87598.418	1 046	1.586	1 586	0.74	0 77	NO	203 7
15	41	Total-tetradioxins	319 8965	25 38	43576 410	1.046	0.789	0.789	0 83	0 77	NO	104 6
16	42	Total-pentadioxins	355.8546	31 57	0 000	0.973	0.000	0 135	1 20	1.55	YES	24.0
17	42	Total-pentadioxins	355 8546	31.46	65937 992	0 973	1 724	1.724	1.47	1 55	NO	186 8
18	42	Total-pentadioxins	355 8546	31 21	0.000	0.973	0 000	0 021	0.53	1.55	YES	4.7
19	42	Total-pentadioxins	355.8546	31 06	96280.535	0 973	2.517	2 517	1.49	1 55	NO	190 3
20	42	Total-pentadioxins	355.8546	30.90	207203 500	0.973	5 417	5.417	1 55	1.55	NO	637.7
21	42	Total-pentadioxins	355.8546	30.76	86401.609	0.973	2.259	2 259	1 54	1 55	NO	255 2
22	42	Total-pentadioxins	355.8546	30.54	235740 586	0.973	6.163	6 163	1.55	1 55	NO	734.4
23	42	Total-pentadioxins	355.8546	29 93	57470.128	0.973	1.502	1.502	1.42	1 55	NO	184 5
24	42	Total-pentadioxins	355 8546	29.47	383656.469	0.973	10.030	10 030	1 58	1.55	NO	798.5
25	42	Total-pentadioxins	355 8546	32 53	24909.578	0.973	0 651	0.651	1 53	1.55	NO	65.2
26	12	12378-PeCDD	355.8546	32.14	84915.168	0 973	2 220	2 220	1 62	1 55	NO	228 3
27	15	123789-HxCDD	389.8157	37.36	188686.977	0 839	6.934	6 934	1.28	1 24	NO	150 4
28	43	Total-hexadioxins	389 8157	37 10	42392 504	0.884	1.478	1 478	1 12	1.24	NO	32.1
29	14	123678-HxCDD	389 8157	36 93	763962 938	0.878	25.364	25.364	1 23	1 24	NO	613.9
30	13	123478-HxCDD	389 8157	36.80	78560.918	0.935	2 747	2.747	1 17	1.24	NO	68 1
31	43	Total-hexadioxins	389 8157	35 83	1627975.501	0.884	56 767	56.767	1 24	1 24	NO	972 6
32	43	Total-hexadioxins	389 8157	35.44	573254.001	0.884	19 989	19.989	1 29	1.24	NO	471 2
33	43	Total-hexadioxins	389.8157	34 63	1636156.688	0.884	57.053	57.053	1.24	1.24	NO	1407.6
34	16	1234678-HpCDD	423 7766	41.66	13019367....	0.974	705 622	705....	1 01	1.05	NO	4911 7
35	44	Total-heptadioxins	423.7766	40.39	13961108....	0.974	756.662	756....	1.03	1.05	NO	5894.4
36	17	OCDD	457.7377	47.69	74471092. .	0.950	7151.7 ..	7151	0 88	0.89	NO	24393.5

Quantify Totals Report MassLynx 4.1 SCN 714
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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.08	68271.024	0.866	1.003	1.003	0 78	0.77	NO	131.1
2	35	Total-tetrafurans	303.9016	24.90	0 000	0.866	0.000	0.037	0 55	0.77	YES	8 1
3	35	Total-tetrafurans	303.9016	24.64	47880.322	0.866	0.703	0.703	0 74	0.77	NO	116 3
4	35	Total-tetrafurans	303.9016	24.51	29867 834	0 866	0.439	0.439	0.82	0 77	NO	76.0
5	35	Total-tetrafurans	303 9016	24 40	172696.656	0 866	2.536	2 536	0 79	0.77	NO	425 2
6	35	Total-tetrafurans	303.9016	24 15	178844.055	0.866	2.626	2.626	0.79	0.77	NO	373.6
7	35	Total-tetrafurans	303.9016	24 06	52179.021	0.866	0.766	0 766	0.83	0.77	NO	110.9
8	35	Total-tetrafurans	303.9016	23 94	90823.922	0 866	1 334	1.334	0.69	0 77	NO	149 0
9	35	Total-tetrafurans	303 9016	23 75	372117.297	0.866	5 464	5 464	0 78	0 77	NO	929 8
10	35	Total-tetrafurans	303.9016	23.16	56321.713	0.866	0.827	0 827	0 78	0 77	NO	131 4
11	35	Total-tetrafurans	303 9016	22 91	39607.012	0 866	0 582	0.582	0.77	0.77	NO	91 1
12	40	Total-Furans	303 9016	21 33	5092.588	1 050	0 062	0.062	0.86	0.77	NO	10 9
13	35	Total-tetrafurans	303.9016	27.87	0.000	0 866	0.000	1.024	0 95	0.77	YES	103.2
14	35	Total-tetrafurans	303 9016	26 91	0.000	0 866	0 000	0.026	0.42	0.77	YES	5 3
15	35	Total-tetrafurans	303 9016	26 63	73412.782	0 866	1 078	1 078	0 74	0 77	NO	146.6
16	35	Total-tetrafurans	303.9016	26.53	25438.256	0.866	0 374	0 374	0 73	0 77	NO	56 8
17	1	2378-TCDF	303.9016	26.41	263924 414	0 866	3.876	3.876	0.77	0 77	NO	617 8
18	35	Total-tetrafurans	303.9016	26.23	58270.766	0.866	0.856	0.856	0.70	0.77	NO	94 2
19	35	Total-tetrafurans	303.9016	26.05	0.000	0.866	0 000	0 072	0 62	0 77	YES	12 7
20	35	Total-tetrafurans	303 9016	25 90	18733 180	0 866	0.275	0.275	0.75	0.77	NO	38 2
21	35	Total-tetrafurans	303 9016	25 72	31145 278	0 866	0 457	0 457	0 70	0.77	NO	65 8
22	35	Total-tetrafurans	303 9016	25 50	240203 532	0 866	3 527	3 527	0 77	0.77	NO	558.6
23	35	Total-tetrafurans	303.9016	25 32	163398 055	0 866	2 399	2 399	0.76	0.77	NO	362.2
24	35	Total-tetrafurans	303 9016	25 17	52198.316	0.866	0 766	0 766	0.79	0.77	NO	131.5
25	37	Total-pentafurans	339.8597	29.91	9799.274	0.921	0 181	0 181	1.61	1.55	NO	18.3
26	37	Total-pentafurans	339.8597	29 78	0 000	0.921	0 000	0 038	0.93	1.55	YES	4.6
27	37	Total-pentafurans	339 8597	29.50	605303 547	0.921	11 201	11.201	1 52	1.55	NO	708.1
28	37	Total-pentafurans	339.8597	29.31	0 000	0.921	0.000	1 013	1 18	1 55	YES	68.3
29	37	Total-pentafurans	339.8597	32.92	23008 582	0.921	0.426	0.426	1.34	1.55	NO	30 2
30	3	23478-PeCDF	339.8597	31.89	160793 031	0.936	2 997	2.997	1.58	1.55	NO	233 5
31	37	Total-pentafurans	339.8597	31.73	201148.406	0.921	3 722	3.722	1.61	1.55	NO	299 4
32	37	Total-pentafurans	339 8597	31.61	18709.484	0.921	0 346	0 346	1.43	1 55	NO	32 5
33	37	Total-pentafurans	339.8597	31.36	0 000	0.921	0.000	0.088	1.20	1.55	YES	6 2
34	37	Total-pentafurans	339.8597	31.03	0.000	0.921	0 000	0 035	2 63	1.55	YES	6.0
35	37	Total-pentafurans	339.8597	30 95	0 000	0.921	0 000	0 016	1 18	1.55	YES	3.2
36	37	Total-pentafurans	339.8597	30 84	12703 103	0.921	0 235	0 235	1 67	1 55	NO	20.6
37	37	Total-pentafurans	339 8597	30 74	154141 910	0.921	2 852	2 852	1 52	1 55	NO	218 0
38	2	12378-PeCDF	339.8597	30 55	168030 269	0.907	3 090	3 090	1 61	1.55	NO	241 3
39	37	Total-pentafurans	339.8597	30 19	180938.860	0 921	3 348	3 348	1 53	1.55	NO	163 9
40	37	Total-pentafurans	339.8597	30 09	25811 000	0 921	0.478	0 478	1 71	1 55	NO	42 8
41	37	Total-pentafurans	339.8597	29.97	0.000	0.921	0.000	0.068	2 31	1 55	YES	14.1
42	6	123678-HxCDF	373 8208	35 71	163565 711	1 048	3 774	3.774	1.28	1 24	NO	220 1
43	4	123478-HxCDF	373.8208	35.57	501955 015	1.082	12.464	12.464	1 24	1 24	NO	690.9
44	38	Total-hexafurans	373 8208	35 40	34140 959	1 055	0.911	0.911	1 27	1 24	NO	49.8
45	38	Total-hexafurans	373.8208	34.91	3978050.375	1.055	106.116	106.. .	1.22	1 24	NO	5921.3
46	38	Total-hexafurans	373 8208	34 58	48983 379	1 055	1 307	1.307	1 30	1 24	NO	68.5
47	38	Total-hexafurans	373 8208	34 05	1872174.751	1.055	49 941	49 941	1.19	1 24	NO	2692.6
48	38	Total-hexafurans	373 8208	33.84	676832.719	1.055	18.055	18 055	1.19	1.24	NO	1058.6
49	7	123789-HxCDF	373 8208	37 73	100252 875	1.020	3.411	3 411	1.23	1.24	NO	152 1

URS1 : 61722

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	5	234678-HxCDF	373.8208	36.62	202993.359	1 070	5.460	5.460	1.24	1.24	NO	174 2
51	38	Total-hexafurans	373.8208	36 08	0.000	1.055	0.000	0.149	0.55	1.24	YES	14.3
52	38	Total-hexafurans	373.8208	35.86	0.000	1 055	0.000	0.044	0 88	1.24	YES	6 3
53	39	Total-heptafurans	407.7818	40 63	8605322.500	1.234	360.381	360 . .	1.04	1.05	NO	7806 3
54	39	Total-heptafurans	407.7818	40 34	0.000	1.234	0.000	1.565	1.32	1 05	YES	39.5
55	8	1234678-HpCDF	407.7818	39.84	3470107.125	1.214	124.113	124....	1.04	1.05	NO	3142.9
56	9	1234789-HpCDF	407.7818	42.57	143087.407	1.254	7.281	7.281	1.01	1.05	NO	112.8
57	39	Total-heptafurans	407.7818	41.69	0.000	1 234	0.000	0.058	4 68	1.05	YES	5 0
58	39	Total-heptafurans	407.7818	41 25	0.000	1 234	0.000	0.041	3 12	1 05	YES	3 4
59	10	OCDF	441.7428	47.98	5299166.000	1.105	437.456	437.	0.89	0 89	NO	4731 8
60	36	Total-penta1	339 8597	27 83	1971303.813		36 655	36.655	1.53	1 55	NO	9481 0
61	41	Total-tetradioxins	319.8965	25.17	6759.715	1 046	0.122	0.122	0.88	0 77	NO	17.4
62	41	Total-tetradioxins	319.8965	24.66	27461.341	1.046	0.497	0.497	0.80	0 77	NO	63.7
63	41	Total-tetradioxins	319.8965	24.45	281987.992	1.046	5.106	5.106	0.75	0 77	NO	649 1
64	41	Total-tetradioxins	319.8965	24.18	430323 812	1 046	7 791	7 791	0 76	0 77	NO	1076 9
65	41	Total-tetradioxins	319.8965	27.63	5237.606	1.046	0.095	0.095	0 75	0 77	NO	12 1
66	41	Total-tetradioxins	319 8965	27.17	20278 162	1.046	0 367	0 367	0 75	0.77	NO	49.8
67	11	2378-TCDD	319.8965	27.03	25687 869	1.046	0 465	0.465	0.73	0.77	NO	56 2
68	41	Total-tetradioxins	319 8965	26.66	48207.268	1.046	0.873	0.873	0 79	0.77	NO	91 7
69	41	Total-tetradioxins	319 8965	26.36	5134.791	1 046	0.093	0 093	0 88	0.77	NO	12 5
70	41	Total-tetradioxins	319 8965	26.23	118109.403	1.046	2.138	2.138	0.78	0.77	NO	298.1
71	41	Total-tetradioxins	319.8965	26.02	26399.341	1.046	0.478	0.478	0.66	0 77	NO	56 9
72	41	Total-tetradioxins	319.8965	25 91	9071.939	1 046	0.164	0.164	0.76	0.77	NO	19 9
73	41	Total-tetradioxins	319.8965	25 76	0 000	1 046	0.000	0.153	0.64	0.77	YES	24 0
74	41	Total-tetradioxins	319.8965	25.66	87598.418	1.046	1.586	1.586	0.74	0.77	NO	203.7
75	41	Total-tetradioxins	319.8965	25.38	43576.410	1.046	0.789	0.789	0.83	0 77	NO	104 6
76	42	Total-pentadioxins	355 8546	31 57	0 000	0 973	0.000	0.135	1.20	1 55	YES	24.0
77	42	Total-pentadioxins	355 8546	31 46	65937.992	0 973	1.724	1 724	1.47	1 55	NO	186 8
78	42	Total-pentadioxins	355.8546	31.21	0.000	0.973	0.000	0 021	0.53	1.55	YES	4 7
79	42	Total-pentadioxins	355.8546	31.06	96280.535	0.973	2 517	2 517	1.49	1.55	NO	190 3
80	42	Total-pentadioxins	355.8546	30 90	207203.500	0.973	5.417	5.417	1 55	1.55	NO	637 7
81	42	Total-pentadioxins	355.8546	30.76	86401.609	0 973	2.259	2 259	1 54	1.55	NO	255 2
82	42	Total-pentadioxins	355.8546	30.54	235740.586	0.973	6.163	6.163	1 55	1.55	NO	734 4
83	42	Total-pentadioxins	355.8546	29.93	57470.128	0.973	1.502	1.502	1 42	1.55	NO	184 5
84	42	Total-pentadioxins	355.8546	29 47	383656.469	0.973	10.030	10.030	1 58	1.55	NO	798 5
85	42	Total-pentadioxins	355 8546	32.53	24909.578	0.973	0.651	0.651	1.53	1.55	NO	65 2
86	12	12378-PeCDD	355.8546	32 14	84915 168	0 973	2.220	2.220	1.62	1.55	NO	228.3
87	15	123789-HxCDD	389.8157	37 36	188686 977	0.839	6.934	6.934	1.28	1 24	NO	150.4
88	43	Total-hexadioxins	389.8157	37 10	42392.504	0.884	1.478	1.478	1.12	1 24	NO	32 1
89	14	123678-HxCDD	389 8157	36.93	763962.938	0.878	25.364	25.364	1 23	1.24	NO	613 9
90	13	123478-HxCDD	389 8157	36.80	78560.918	0.935	2 747	2 747	1 17	1.24	NO	68.1
91	43	Total-hexadioxins	389.8157	35 83	1627975.501	0.884	56.767	56.767	1 24	1 24	NO	972 6
92	43	Total-hexadioxins	389 8157	35.44	573254.001	0.884	19.989	19.989	1 29	1 24	NO	471.2
93	43	Total-hexadioxins	389 8157	34.63	1636156.688	0.884	57.053	57.053	1 24	1 24	NO	1407.6
94	16	1234678-HpCDD	423 7766	41 66	13019367 . .	0.974	705 622	705	1.01	1.05	NO	4911 7
95	44	Total-heptadioxins	423 7766	40.39	13961108....	0.974	756.662	756..	1.03	1 05	NO	5894.4
96	17	OCDD	457 7377	47 69	74471092 .	0 950	7151 7 .	7151.	0.88	0.89	NO	24393 5

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330 9792	24 00	0.000							11.8
2	48	FUNCTION1 PFK	330 9792	23 72	0.000							22 3
3	48	FUNCTION1 PFK	330 9792	23 66	0.000							21.8
4	48	FUNCTION1 PFK	330 9792	23 49	0.000							19.4
5	48	FUNCTION1 PFK	330.9792	23.30	0.000							20.8
6	48	FUNCTION1 PFK	330.9792	22.96	0.000							14.9
7	48	FUNCTION1 PFK	330.9792	22.73	0.000							9.8
8	48	FUNCTION1 PFK	330 9792	22 61	0 000							6.8
9	48	FUNCTION1 PFK	330 9792	22 49	0.000							5 8
10	48	FUNCTION1 PFK	330 9792	21 97	0.000							7 3
11	48	FUNCTION1 PFK	330.9792	21.75	0.000							15 7
12	48	FUNCTION1 PFK	330.9792	21.69	0.000							15.5
13	48	FUNCTION1 PFK	330 9792	21 52	0 000							18 9
14	48	FUNCTION1 PFK	330.9792	21 42	0.000							19.1
15	48	FUNCTION1 PFK	330 9792	21.21	0 000							11.7
16	48	FUNCTION1 PFK	330.9792	26 99	0.000							8.3
17	48	FUNCTION1 PFK	330 9792	26 87	0.000							9.6
18	48	FUNCTION1 PFK	330 9792	26 68	0 000							11 9
19	48	FUNCTION1 PFK	330 9792	25 15	0 000							11 3
20	48	FUNCTION1 PFK	330.9792	24.72	0.000							11 9

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	32.85	0 000		0 000					4 6
2	49	FUNCTION2 PFK	366 9792	30.55	0 000		0 000					14 8
3	49	FUNCTION2 PFK	366.9792	29.85	0.000		0.000					24 0

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	38.33	0 000		0 000					7.6
2	50	FUNCTION3 PFK	380 9760	37.79	0 000		0 000					29.9
3	50	FUNCTION3 PFK	380 9760	37.45	0.000		0 000					29.7
4	50	FUNCTION3 PFK	380 9760	33 72	0 000		0 000					13 0

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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430 9728	39.26	0 000							2 9
2	51	FUNCTION4 PFK	430.9728	42.93	0 000							1 2
3	51	FUNCTION4 PFK	430 9728	42.80	0 000							1 7
4	51	FUNCTION4 PFK	430.9728	42.49	0 000							1.3
5	51	FUNCTION4 PFK	430.9728	42 33	0 000							1 5
6	51	FUNCTION4 PFK	430.9728	42.05	0 000							0.6
7	51	FUNCTION4 PFK	430.9728	41.85	0 000							0.6
8	51	FUNCTION4 PFK	430.9728	41.37	0.000							1.9
9	51	FUNCTION4 PFK	430.9728	41.19	0.000							1.2
10	51	FUNCTION4 PFK	430.9728	40.79	0.000							1.3
11	51	FUNCTION4 PFK	430.9728	40.73	0 000							1.9
12	51	FUNCTION4 PFK	430.9728	40.48	0.000							5 5
13	51	FUNCTION4 PFK	430.9728	40.41	0 000							8.4
14	51	FUNCTION4 PFK	430.9728	40.39	0 000							7.3
15	51	FUNCTION4 PFK	430.9728	40.24	0.000							7.7
16	51	FUNCTION4 PFK	430.9728	39 67	0 000							4.1
17	51	FUNCTION4 PFK	430 9728	39.66	0.000							3.9
18	51	FUNCTION4 PFK	430 9728	44.44	0.000							1.8
19	51	FUNCTION4 PFK	430 9728	44.09	0 000							1.6

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480 9696	47.90	0.000							0 6
2	52	FUNCTION5 PFK	480.9696	47 14	0.000							0 9
3	52	FUNCTION5 PFK	480.9696	46 93	0.000							1 6

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati..	1° R...	S/N
1	53	FUNCTION1 HXCD	375 8364	27.92	0.000		0.000					4 4
2	53	FUNCTION1 HXCD.	375.8364	26.77	0 000		0 000					2 3
3	53	FUNCTION1 HXCD.	375 8364	26.47	0 000		0.000					32.4
4	53	FUNCTION1 HXCD..	375.8364	26.18	0 000		0.000					8 9
5	53	FUNCTION1 HXCD..	375.8364	25.45	0 000		0.000					4 2
6	53	FUNCTION1 HXCD..	375.8364	24.40	0 000		0.000					2.5
7	53	FUNCTION1 HXCD...	375.8364	24.23	0.000		0.000					4.0
8	53	FUNCTION1 HXCD .	375.8364	21.33	0 000		0 000					10 1

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati. .	1° R..	S/N
1	54	FUNCTION1 HPCD .	409.7974	28.57	0.000		0.000					2 8
2	54	FUNCTION1 HPCD	409 7974	27 29	0 000		0.000					2.0
3	54	FUNCTION1 HPCD .	409.7974	25.45	0.000		0.000					2.1
4	54	FUNCTION1 HPCD...	409.7974	21.31	0 000		0.000					12.8

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ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R..	S/N
1	55	FUNCTION2 HPCD .	409.7974	33.12	0.000		0.000					2.6
2	55	FUNCTION2 HPCD .	409.7974	32.51	0 000		0.000					2.4
3	55	FUNCTION2 HPCD	409.7974	32.00	0.000		0.000					3.4
4	55	FUNCTION2 HPCD	409 7974	31.70	0 000		0.000					2.7
5	55	FUNCTION2 HPCD...	409.7974	30.77	0.000		0 000					3 3
6	55	FUNCTION2 HPCD. .	409.7974	30.50	0.000		0.000					16.7
7	55	FUNCTION2 HPCD...	409.7974	30.24	0.000		0.000					5.2
8	55	FUNCTION2 HPCD. .	409.7974	30.17	0.000		0.000					23.0
9	55	FUNCTION2 HPCD .	409.7974	29 90	0 000		0 000					3 3
10	55	FUNCTION2 HPCD .	409.7974	29.72	0 000		0.000					2 0
11	55	FUNCTION2 HPCD	409.7974	29.56	0 000		0 000					3.8

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445.7555	37 60	0 000		0 000					2 3
2	56	FUNCTION3 OCDPE	445.7555	37 37	0 000		0.000					3 0
3	56	FUNCTION3 OCDPE	445.7555	37.10	0 000		0.000					3 3
4	56	FUNCTION3 OCDPE	445 7555	37 03	0 000		0 000					3 2
5	56	FUNCTION3 OCDPE	445 7555	36 99	0 000		0.000					2 4
6	56	FUNCTION3 OCDPE	445.7555	36.85	0.000		0.000					1 7
7	56	FUNCTION3 OCDPE	445.7555	36.74	0.000		0.000					2 9
8	56	FUNCTION3 OCDPE	445.7555	36.71	0.000		0.000					3.9
9	56	FUNCTION3 OCDPE	445.7555	36.61	0.000		0.000					2.0
10	56	FUNCTION3 OCDPE	445.7555	36.57	0.000		0 000					1.1
11	56	FUNCTION3 OCDPE	445.7555	36.40	0 000		0 000					1 2
12	56	FUNCTION3 OCDPE	445.7555	35.55	0.000		0 000					2 5
13	56	FUNCTION3 OCDPE	445 7555	35.48	0.000		0.000					4 7
14	56	FUNCTION3 OCDPE	445 7555	35.32	0.000		0.000					1 1
15	56	FUNCTION3 OCDPE	445 7555	35.23	0 000		0 000					2.0
16	56	FUNCTION3 OCDPE	445 7555	37.94	0.000		0.000					1 8
17	56	FUNCTION3 OCDPE	445.7555	37.90	0 000		0.000					1 7

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479 7165	41.87	0.000		0.000					2 3
2	57	FUNCTION4 NCDPE	479 7165	41.65	0.000		0.000					23 4
3	57	FUNCTION4 NCDPE	479 7165	41.62	0.000		0 000					20.0
4	57	FUNCTION4 NCDPE	479.7165	41.47	0.000		0.000					10 0
5	57	FUNCTION4 NCDPE	479.7165	41.42	0 000		0 000					7.4
6	57	FUNCTION4 NCDPE	479 7165	41.28	0.000		0 000					8 8
7	57	FUNCTION4 NCDPE	479 7165	41.17	0.000		0 000					2.7
8	57	FUNCTION4 NCDPE	479.7165	40.23	0.000		0.000					2 4
9	57	FUNCTION4 NCDPE	479.7165	39.41	0.000		0 000					271 4

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	58	FUNCTION5 DCDPE	513.6775	48.37	0 000		0 000					2.4
2	58	FUNCTION5 DCDPE	513 6775	47 87	0.000		0 000					3.9
3	58	FUNCTION5 DCDPE	513 6775	47.73	0.000		0.000					2.9

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

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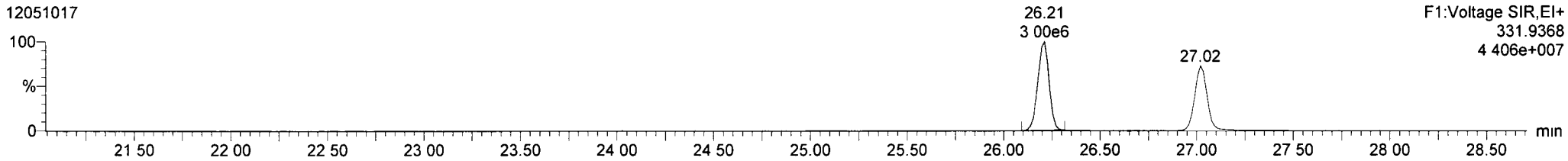
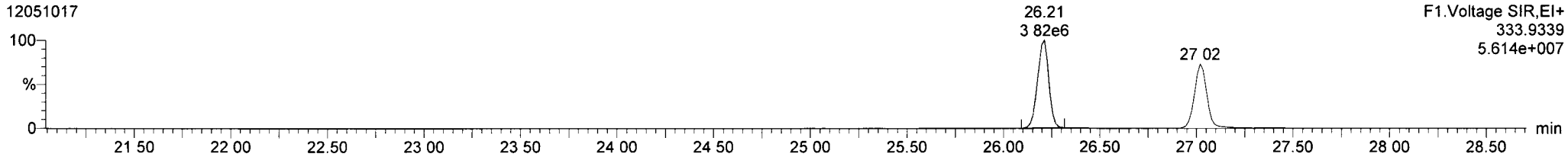
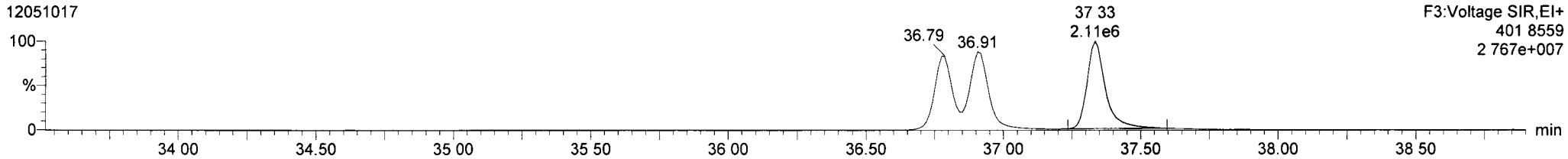
13C-1234-TCDD



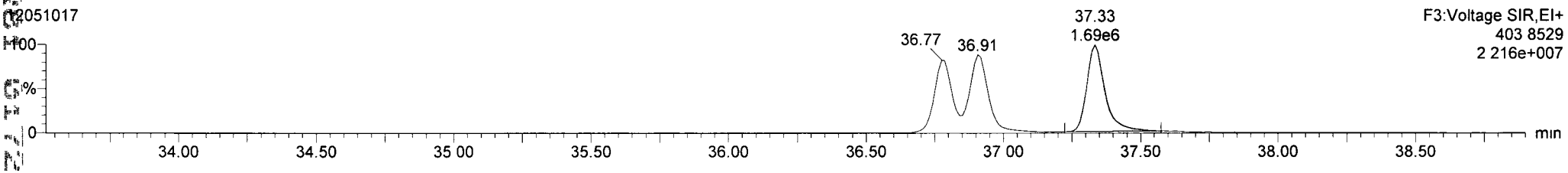
13C-1234-TCDD



13C-123789-HxCDD



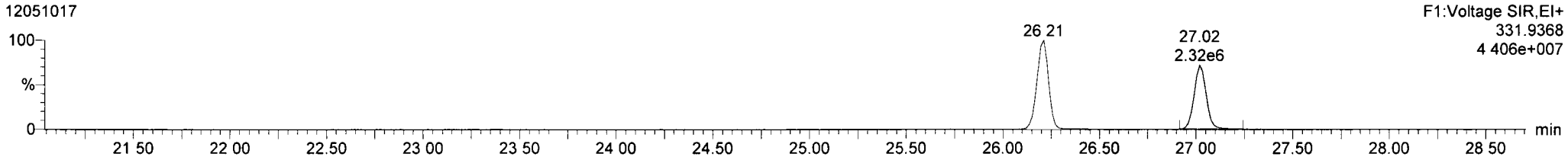
13C-123789-HxCDD



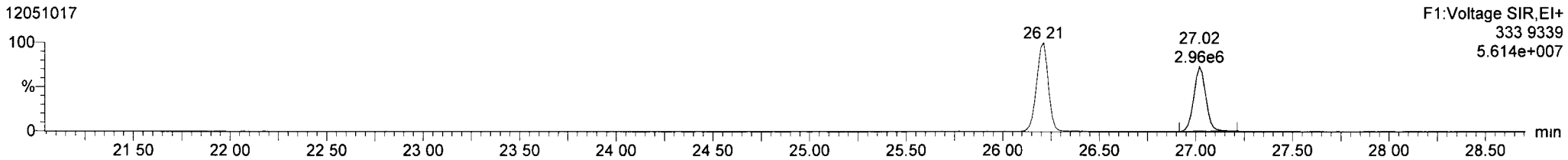
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered. Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

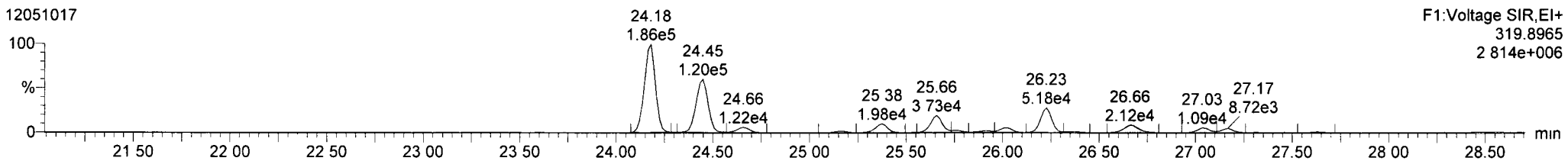
13C-2378-TCDD



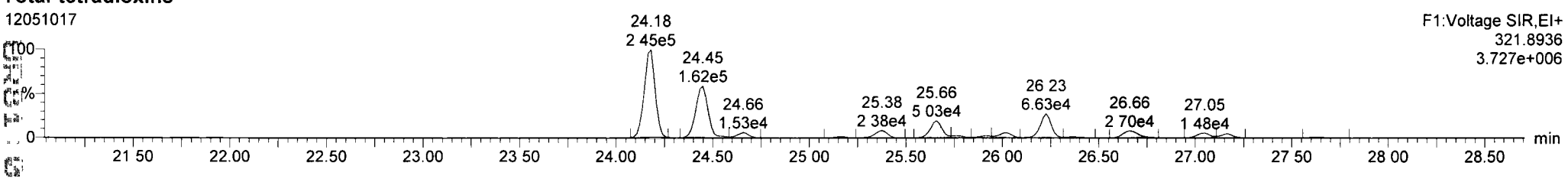
13C-2378-TCDD



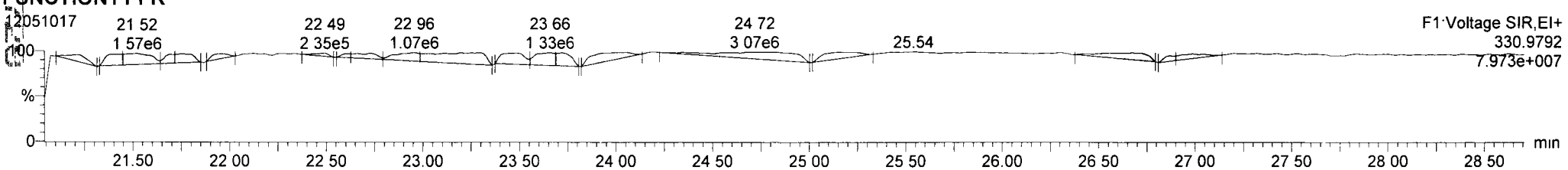
Total-tetradioxins



Total-tetradioxins



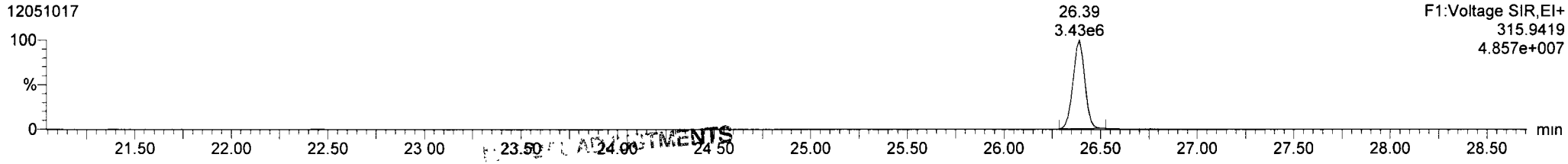
FUNCTION1 PFK



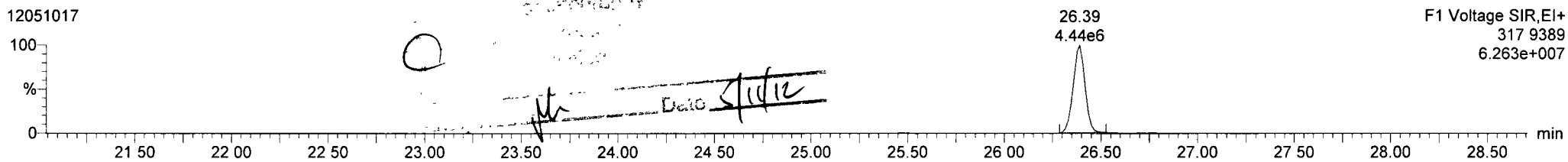
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

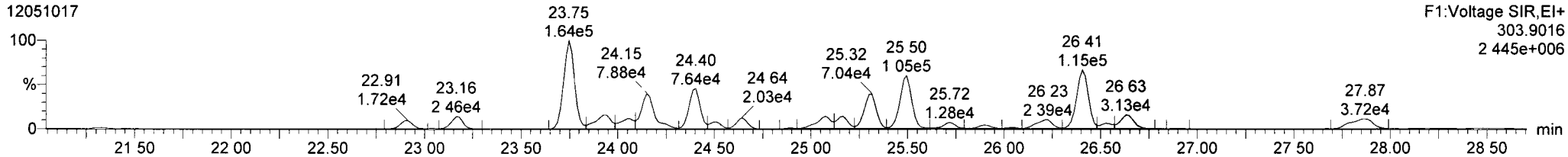
13C-2378-TCDF



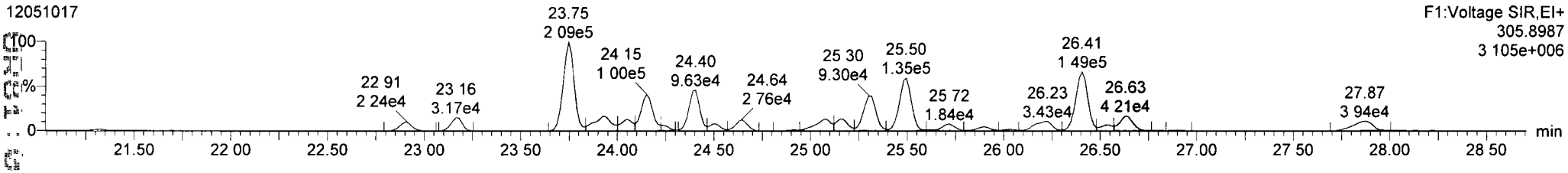
13C-2378-TCDF



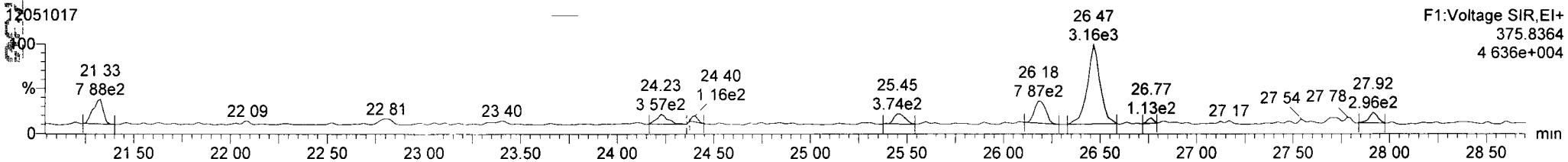
Total-tetrafurans



Total-tetrafurans



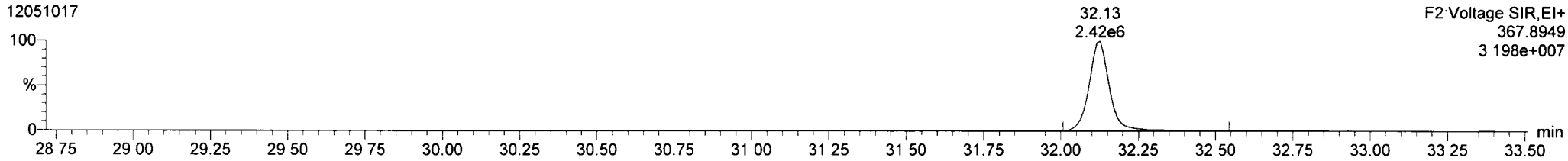
FUNCTION1 HXCDPE



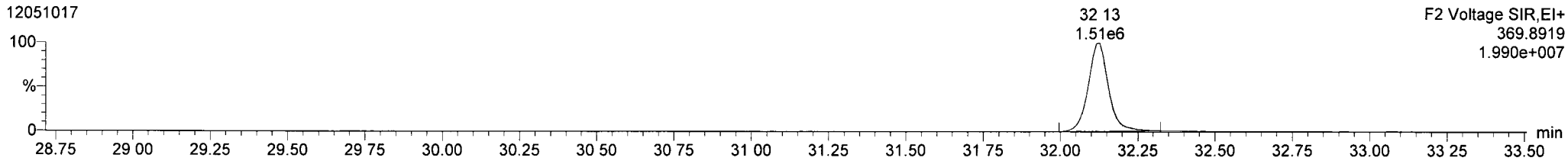
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

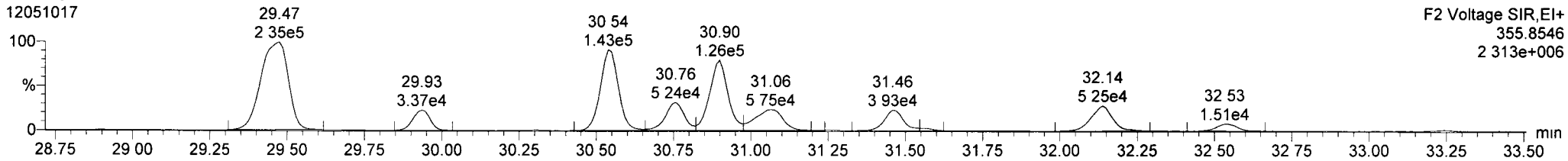
13C-12378-PeCDD



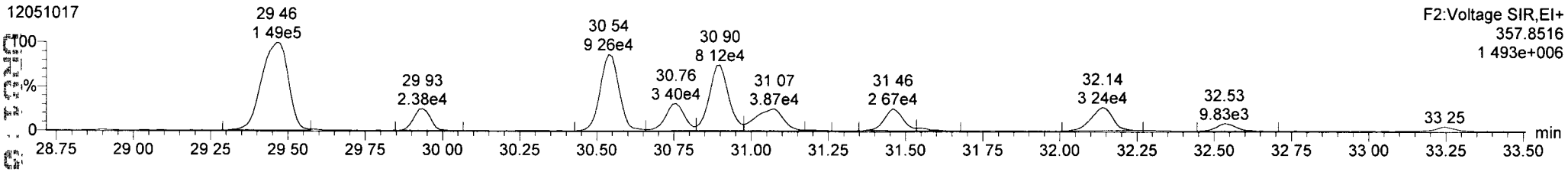
13C-12378-PeCDD



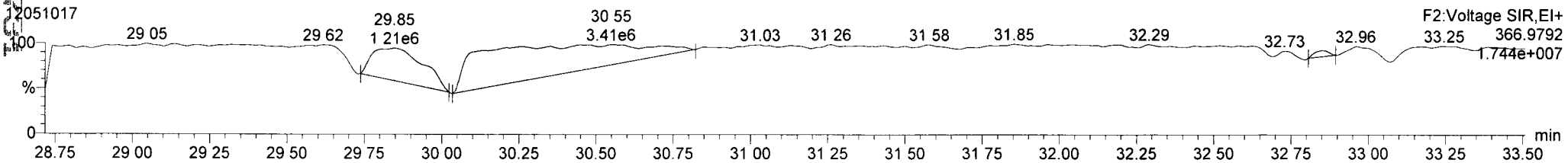
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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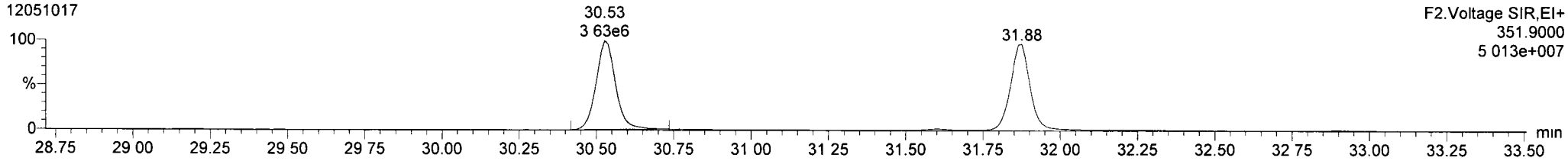
Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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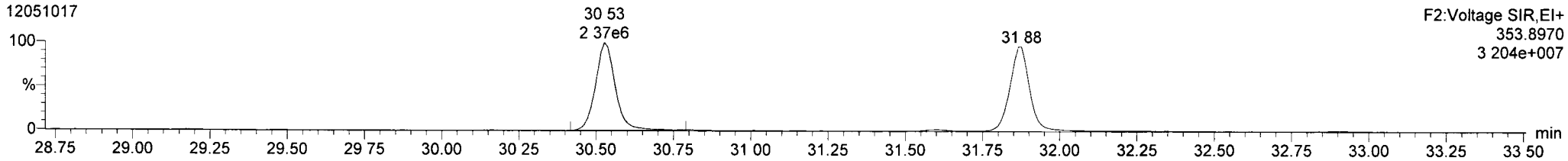
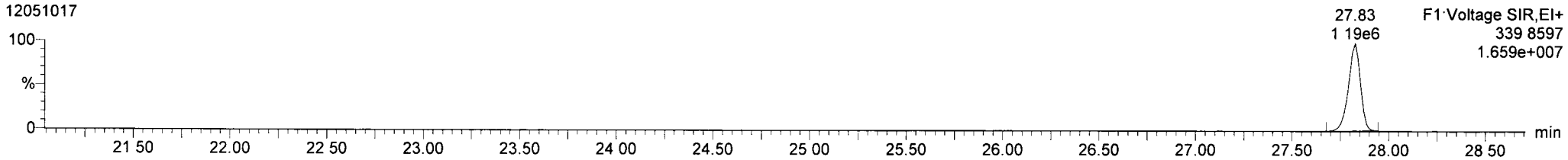
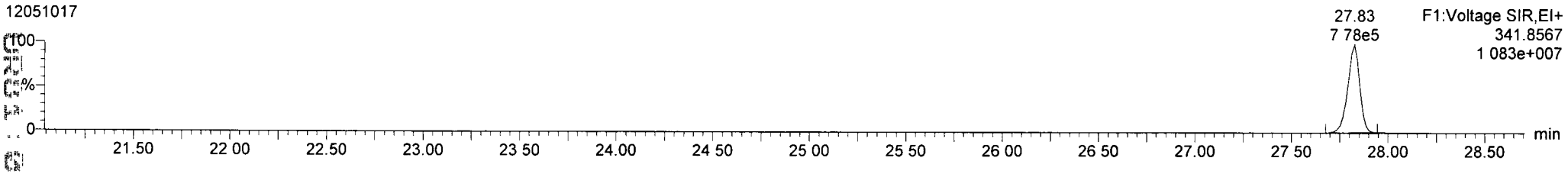


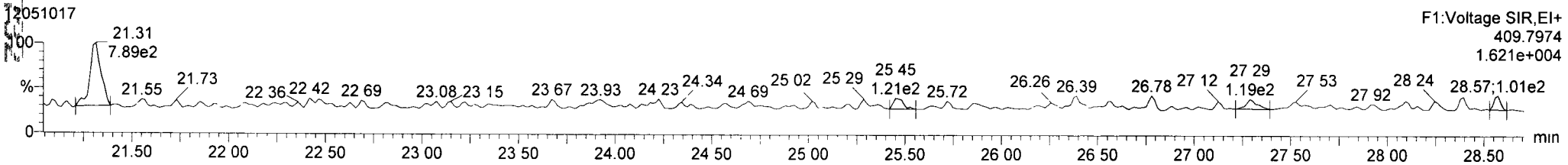
Total-penta1



Total-penta1



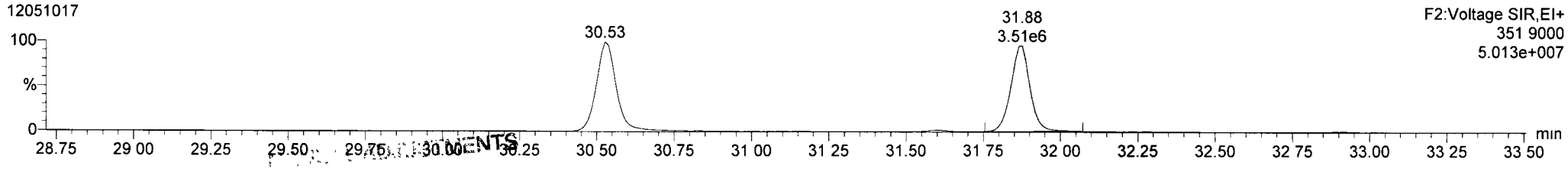
FUNCTION1 HPCDPE



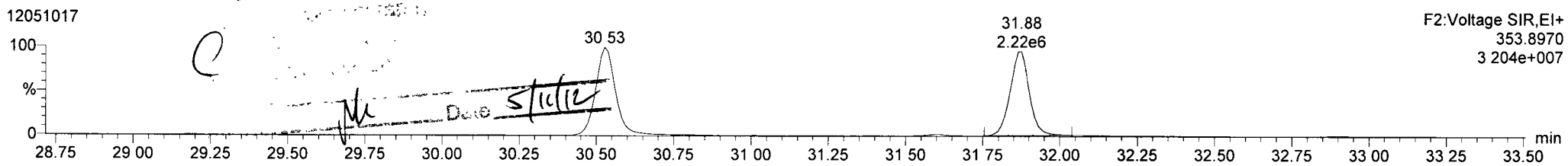
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

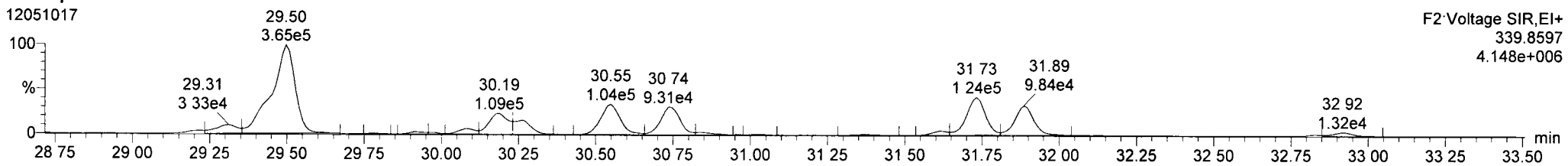
13C-23478-PeCDF



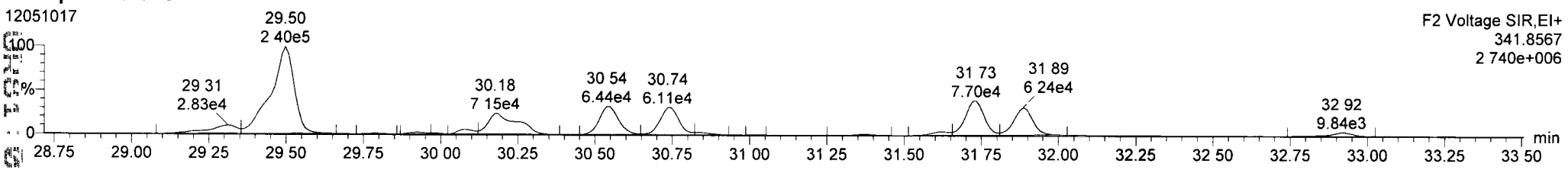
13C-23478-PeCDF



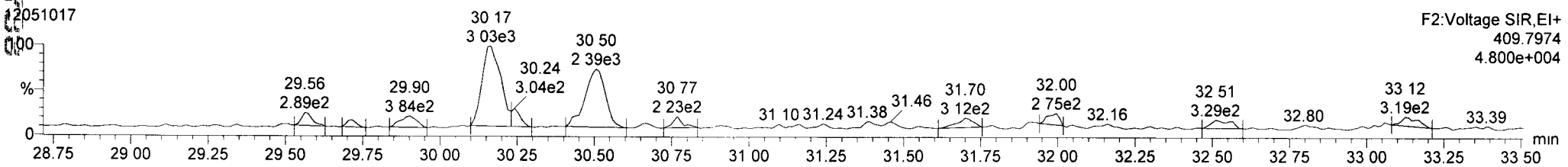
Total-pentafurans



Total-pentafurans



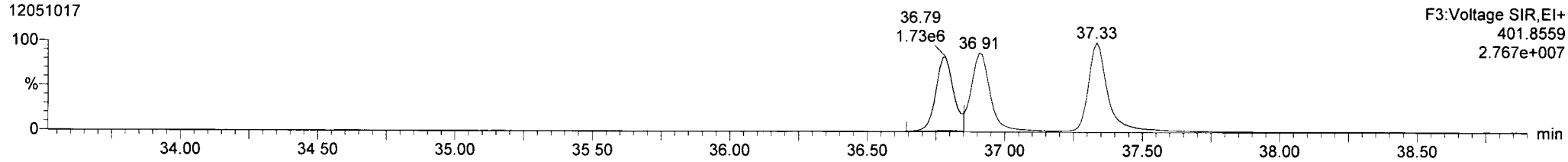
FUNCTION2 HPCDPE



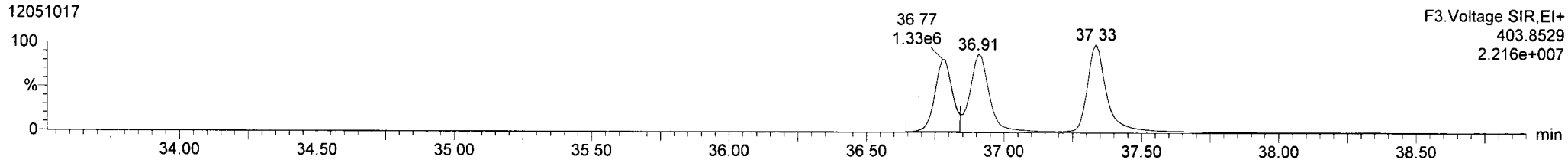
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

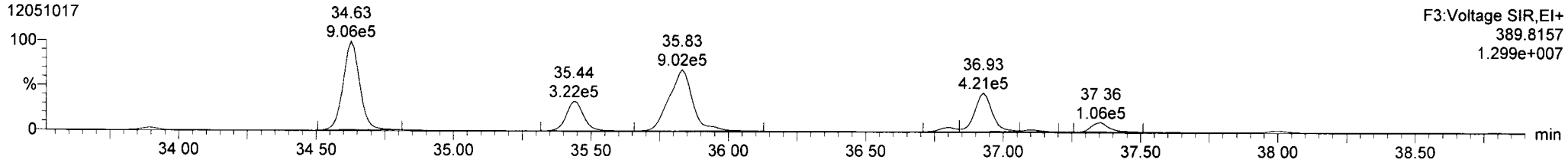
13C-123478-HxCDD



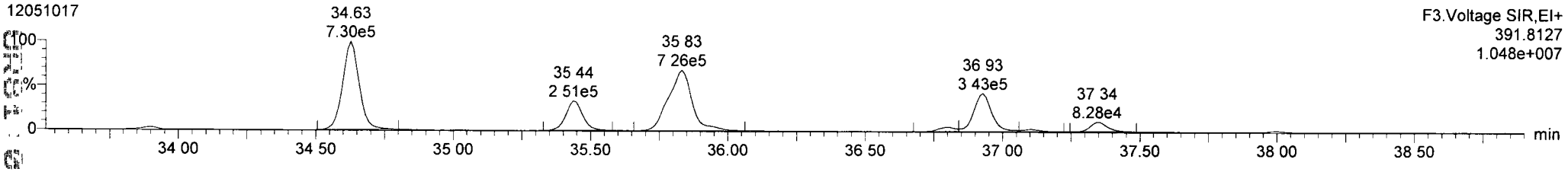
13C-123478-HxCDD



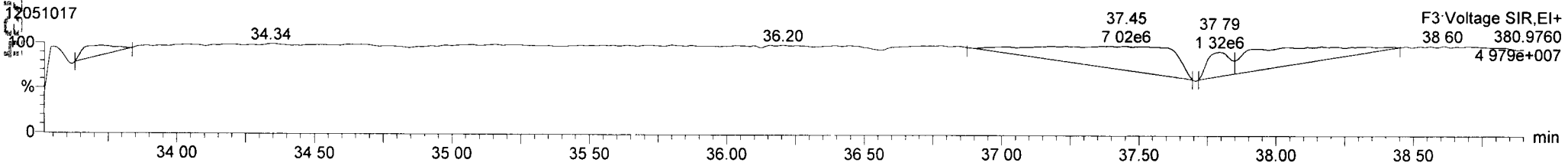
Total-hexadioxins



Total-hexadioxins

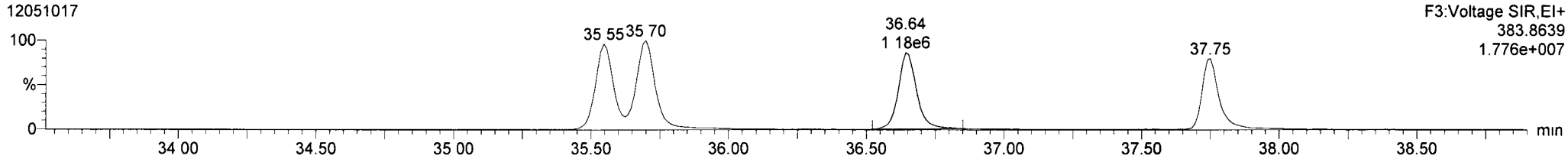


FUNCTION3 PFK

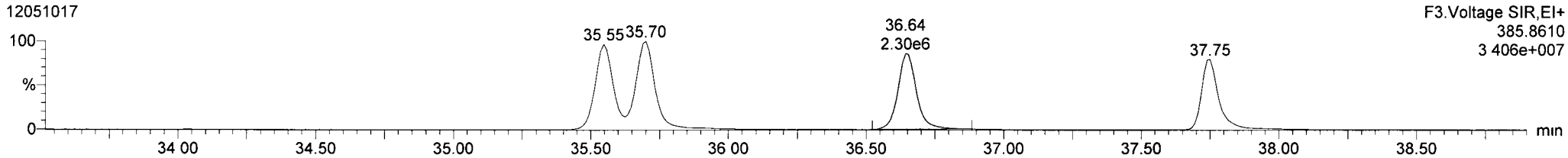


Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

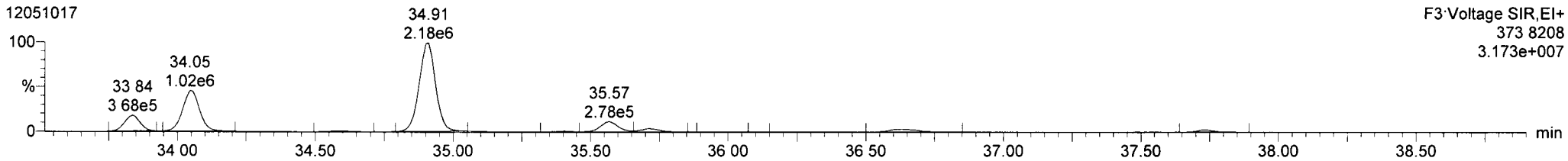
13C-234678-HxCDF



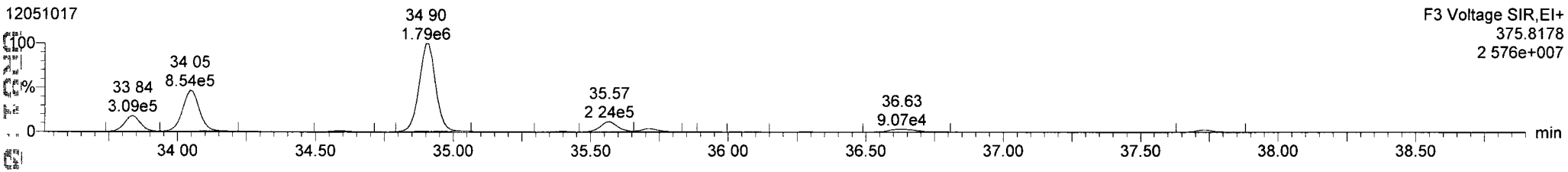
13C-234678-HxCDF



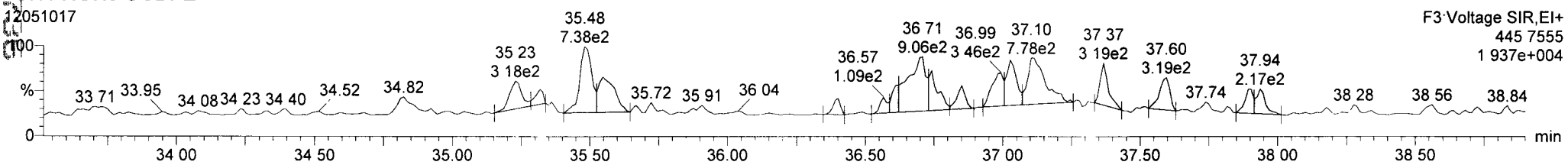
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered Friday, May 11, 2012 10:25:01 Pacific Daylight Time
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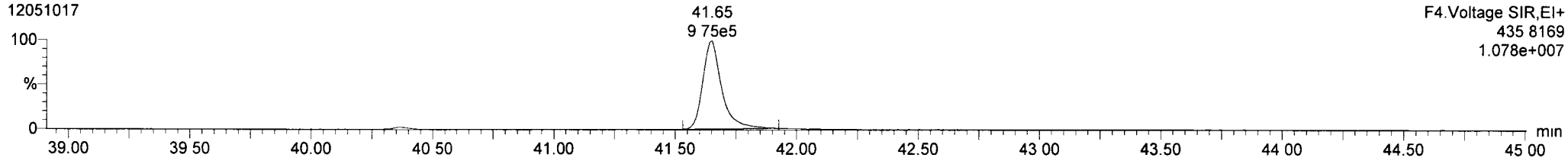
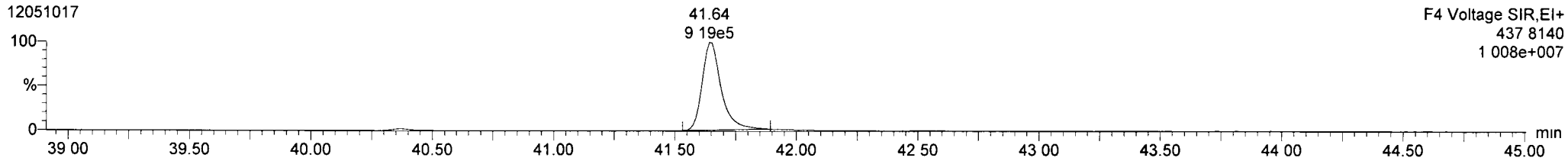
Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

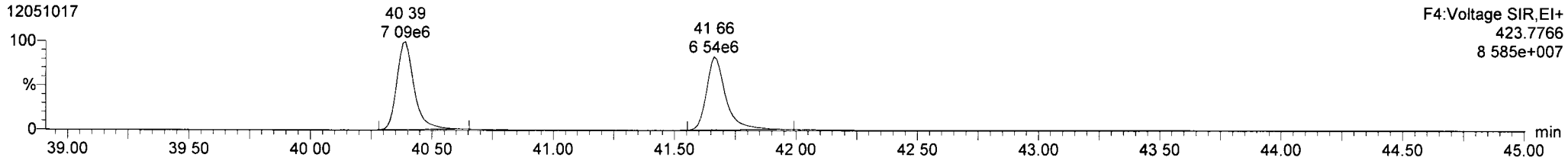
13C-1234678-HpCDD



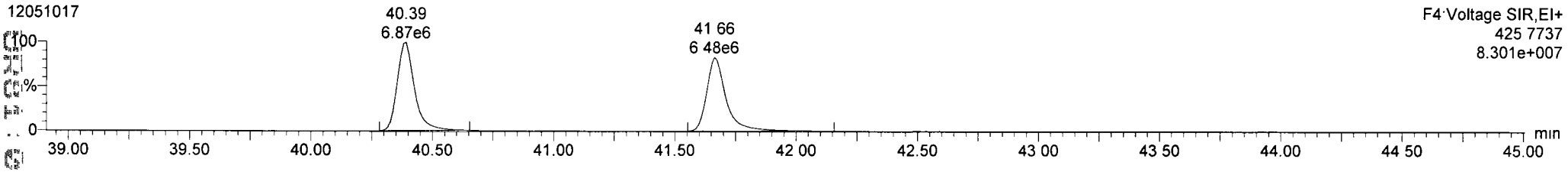
13C-1234678-HpCDD



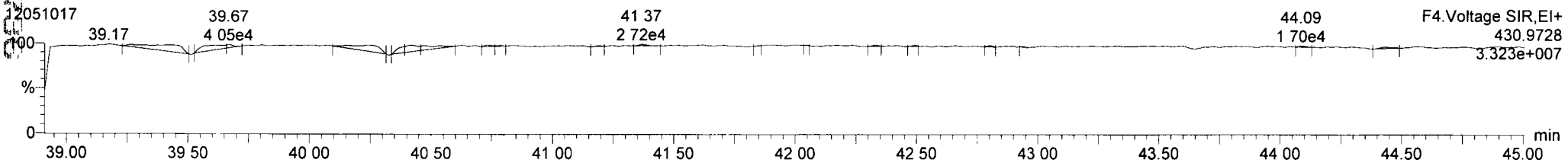
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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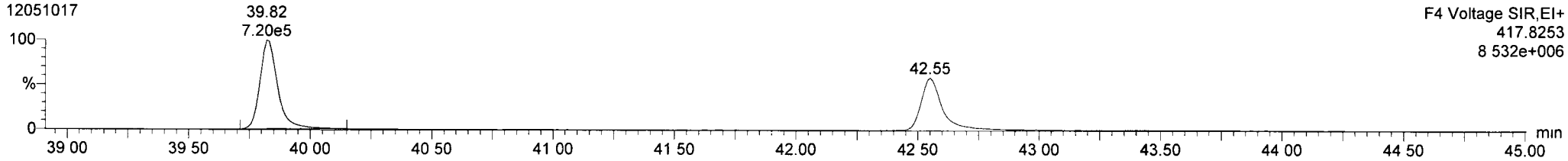
Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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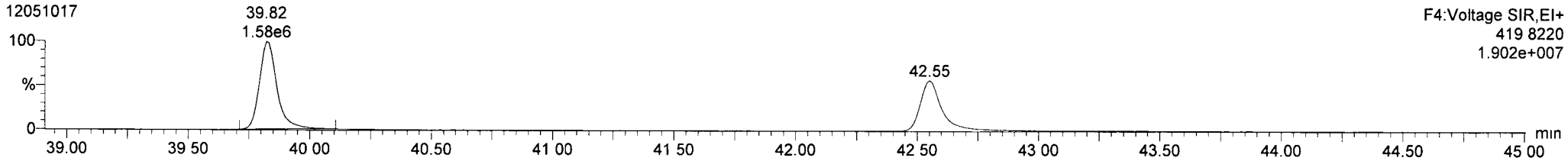
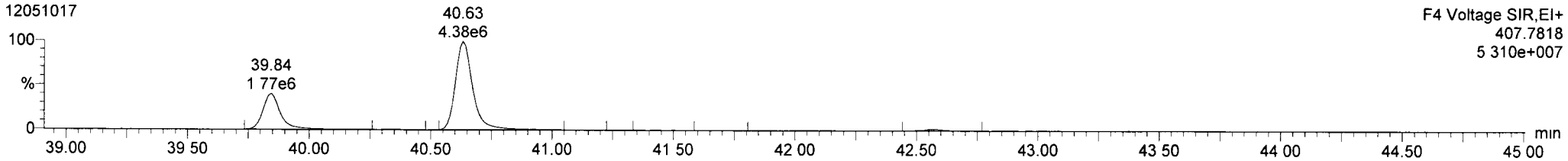
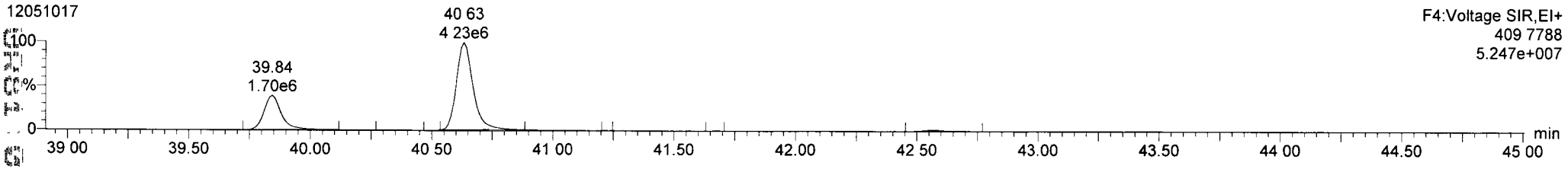


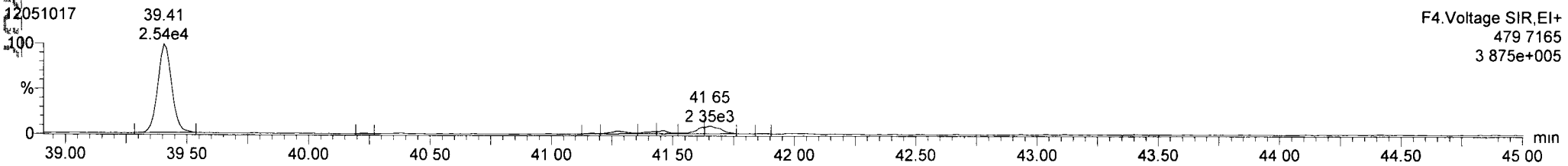
Total-heptafurans



Total-heptafurans



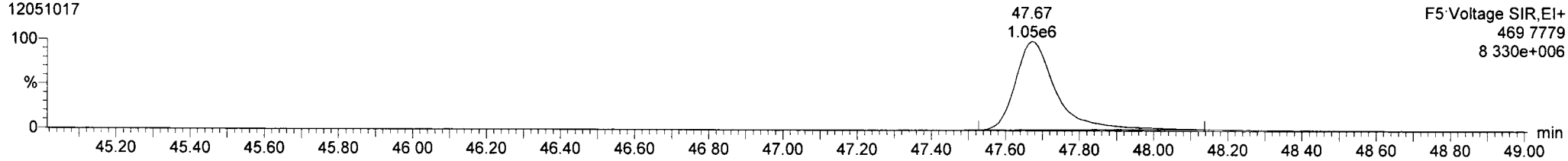
FUNCTION4 NCDPE



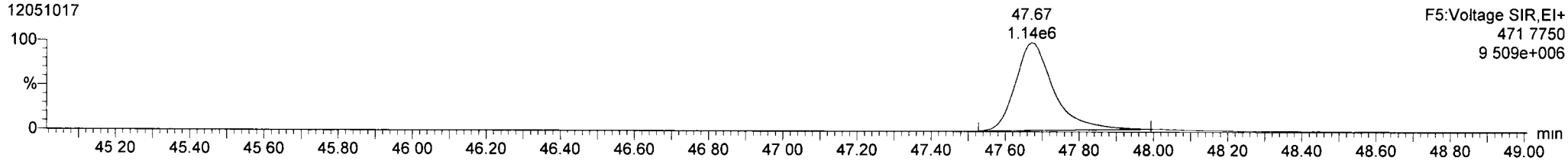
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

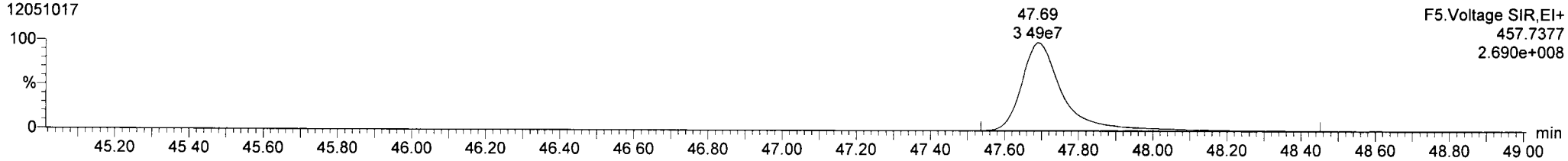
13C-OCDD
12051017



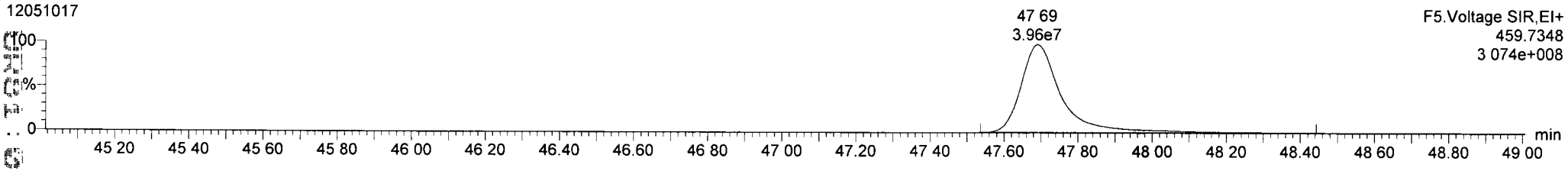
13C-OCDD
12051017



OCDD
12051017



OCDD
12051017



FUNCTION5 PFK
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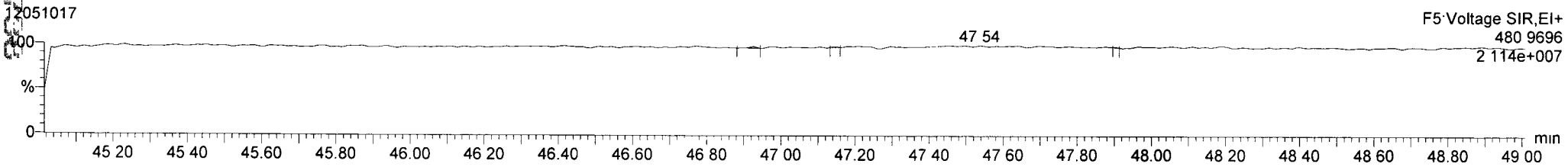
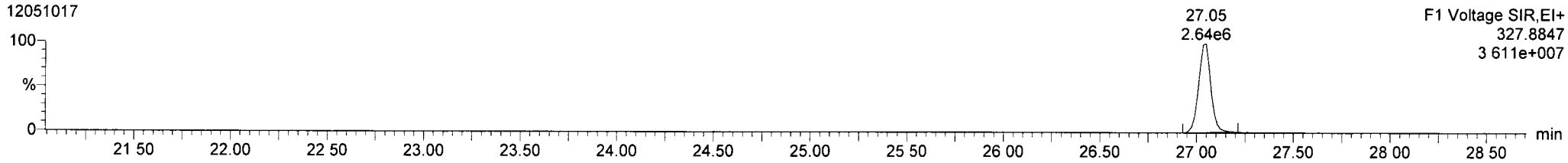


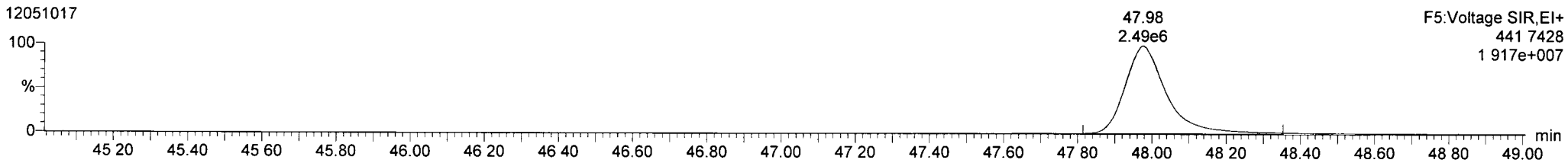
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:44:42 Pacific Daylight Time

Name: 12051017, Date: 10-May-2012, Time: 23:41:32, ID: US18B, Conditions: AUTOSPEC01, User: pk

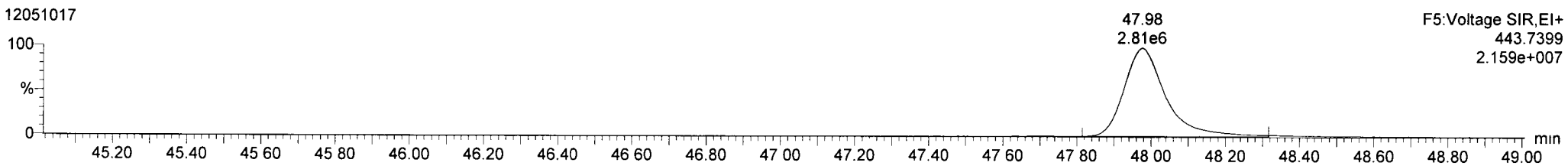
37CL-2378-TCDD



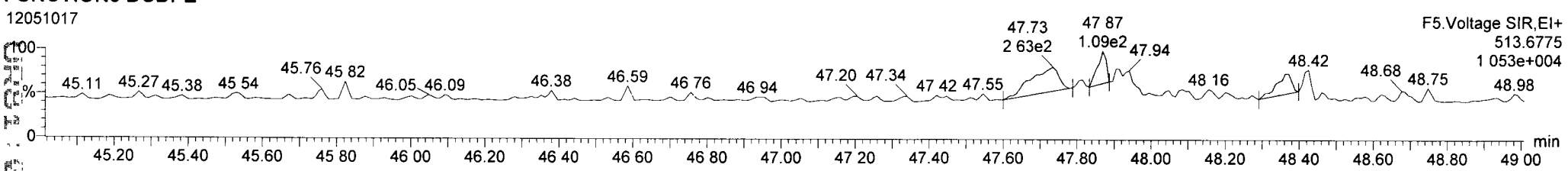
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.376	26.378	443453	443453	0.866	bb	100.1	0.77	0 77	1930.3	NO	10 007	10 007
2	2	12378-PeCDF	339.8597	30.516	30 515	1840693	1840693	0 907	bd	98 4	1.56	1 55	2530.6	NO	49 208	49 208
3	3	23478-PeCDF	339 8597	31.853	31 864	1831393	1831393	0 936	db	99 9	1.55	1 55	2565 3	NO	49.941	49.941
4	4	123478-HxCDF	373.8208	35.514	35 514	1984307	1984307	1 082	bd	99.1	1.24	1.24	2630.4	NO	49.548	49.548
5	5	234678-HxCDF	373 8208	36.610	36 610	1858369	1858369	1.070	bb	99.9	1.22	1.24	2370.8	NO	49.967	49.967
6	6	123678-HxCDF	373.8208	35.667	35.667	2184408	2184408	1 048	db	99 6	1.23	1.24	2676 3	NO	49.791	49 791
7	7	123789-HxCDF	373 8208	37.728	37 728	1420712	1420712	1.020	bb	96.1	1.21	1 24	1779.9	NO	48 038	48.038
8	8	1234678-HpCDF	407 7818	39.799	39.797	1635313	1635313	1.214	bd	104.0	1.04	1 05	1986.1	NO	52 022	52 022
9	9	1234789-HpCDF	407.7818	42.539	42.530	1148572	1148572	1.254	bd	97.2	1.00	1 05	1169.8	NO	48.588	48 588
10	10	OCDF	441 7428	47 903	47.884	1871050	1871050	1 105	bd	100.6	0.89	0 89	1660.8	NO	100.581	100.581
11	11	2378-TCDD	319.8965	27.019	27.017	354418	354418	1 046	db	97.3	0.78	0.77	1002 3	NO	9.729	9.729
12	12	12378-PeCDD	355.8546	32 105	32.093	1353915	1353915	0 973	bb	100.5	1.54	1.55	2768.6	NO	50.253	50.253
13	13	123478-HxCDD	389.8157	36.730	36.741	1271869	1271869	0 935	bd	101.8	1.25	1 24	1823.2	NO	50.892	50 892
14	14	123678-HxCDD	389.8157	36.862	36 862	1404728	1404728	0.878	db	105.8	1.23	1.24	1787.5	NO	52.920	52 920
15	15	123789-HxCDD	389 8157	37.289	37.256	1251305	1251305	0.839	bd	104.8	1 24	1.24	1576.5	NO	52.383	52.383
16	16	1234678-HpCDD	423 7766	41.630	41.620	1045468	1045468	0 974	bd	104 1	1.03	1 05	1283 0	NO	52.038	52.038
17	17	OCDD	457 7377	47 625	47 612	1636022	1636022	0.950	bd	102 3	0.91	0.89	1761 0	NO	102.310	102 310
18	18	13C-2378-TCDF	315 9419	26.362	26.362	5116631		1 484	bb	100 2	0.78	0 77	8339 7	NO	100 215	
19	19	13C-12378-PeCDF	351.9000	30.494	30 503	4124436		1 048	bb	114.4	1.59	1 55	7249.2	NO	114 413	
20	20	13C-23478-PeCDF	351 9000	31.842	31 840	3918444		1 003	bb	113.5	1.57	1 55	7134.2	NO	113 541	
21	21	13C-123478-HxCDF	383 8639	35.503	35 502	3701680		1.186	bd	117.1	0.52	0 51	3685.6	NO	117.064	
22	22	13C-123678-HxCDF	383.8639	35.645	35 656	4184876		1 315	db	119 3	0.51	0 51	3884.2	NO	119.318	
23	23	13C-234678-HxCDF	383 8639	36.588	36 588	3476537		1 223	bb	106 6	0.52	0.51	3473 8	NO	106 558	
24	24	13C-123789-HxCDF	383 8639	37 716	37 695	2899201		1 056	bd	102 9	0.50	0 51	2685 6	NO	102.892	
25	25	13C-1234678-HpCDF	417 8253	39.777	39 777	2588429		1 011	bb	96.0	0 44	0 44	1978.7	NO	95 957	
26	26	13C-1234789-HpCDF	417 8253	42.517	42 528	1884993		0.741	bb	95.4	0 46	0 44	1145.0	NO	95.439	
27	27	13C-1234-TCDD	331.9368	26.182	26 272	3439514		1.000	bb	100 0	0.78	0.77	6842 9	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.004	27 004	3483365		0 956	bb	105.9	0.78	0.77	6327 5	NO	105.895	
29	29	13C-12378-PeCDD	367 8949	32.083	32 092	2768183		0 663	bb	121 3	1.60	1 55	12608.5	NO	121 308	
30	30	13C-123478-HxCDD	401 8559	36.719	36 719	2671714		1 024	bd	97 8	1.27	1 24	6489 4	NO	97.836	
31	31	13C-123678-HxCDD	401 8559	36 851	36.851	3024081		1 113	db	101.9	1.27	1 24	6671.0	NO	101 910	
32	32	13C-1234678-HpCDD	435 8169	41 608	41.630	2062023		0 815	bb	94.9	1.04	1 05	2980.9	NO	94 851	
33	33	13C-OCDD	469 7779	47 598	47 646	3366239		0 717	bb	88.0	0.88	0 89	3513.5	NO	176 014	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

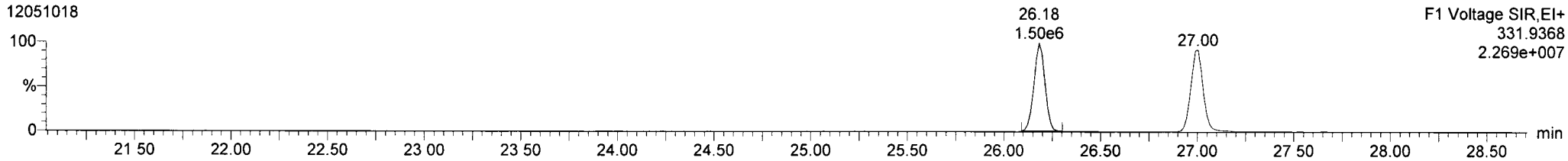
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37 278	37 368	2667049		1 000	bb	100.0	1.25	1.24	5705.2	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.370			0.866							31.997	32.083
36	36	Total-penta1	339.8597		28 210										69.098	69.098
37	37	Total-pentafurans	339.8597		30.790			0.921							155 397	155.690
38	38	Total-hexafurans	373.8208		35 760			1 055							249 734	249.800
39	39	Total-heptafurans	407 7818		41 160			1 234							100.610	100.635
40	40	Total-Furans	303.9016		0 000			1 050							707.417	707.900
41	41	Total-tetradioxins	319.8965		25.880			1.046							53.732	54.033
42	42	Total-pentadioxins	355.8546		30.950			0 973							181 698	182.059
43	43	Total-hexadioxins	389.8157		35 940			0 884							224.804	225.250
44	44	Total-heptadioxins	423 7766		40 980			0.974							114.976	115.032
45	45	Total-Dioxins	319 8965		0 000			0 942							677.521	678.684
46	46	Total-TEQ	319.8965		0.000										1384.938	1386 5...
47	47	37CL-2378-TCDD	327.8847	27.019	26 994	384093		1.037		107.7			1904.6		10 767	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0 000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375.8364		0 000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0 000										0.000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0.000	
56	56	FUNCTION3 OCDPE	445 7555		0 000											
57	57	FUNCTION4 NCDPE	479.7165		0 000											
58	58	FUNCTION5 DCDPE	513.6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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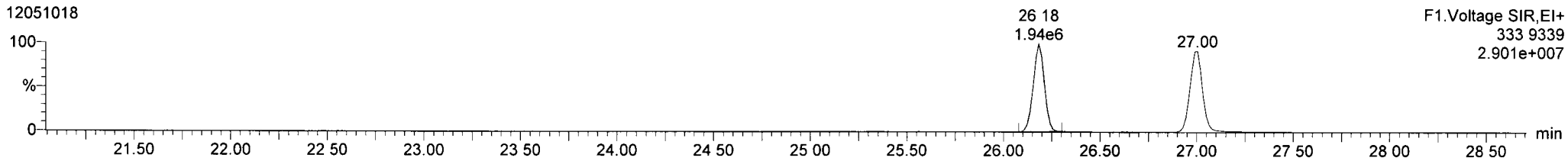
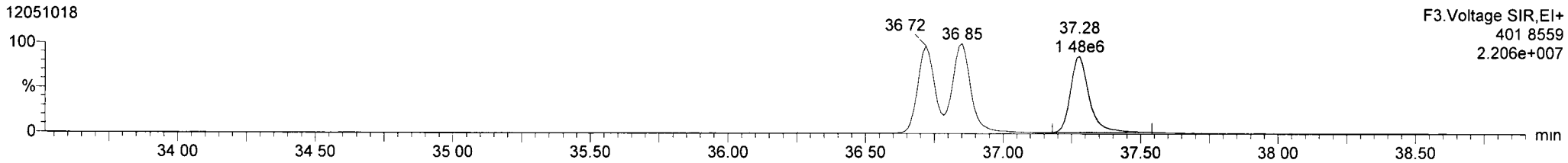


13C-123789-HxCDD



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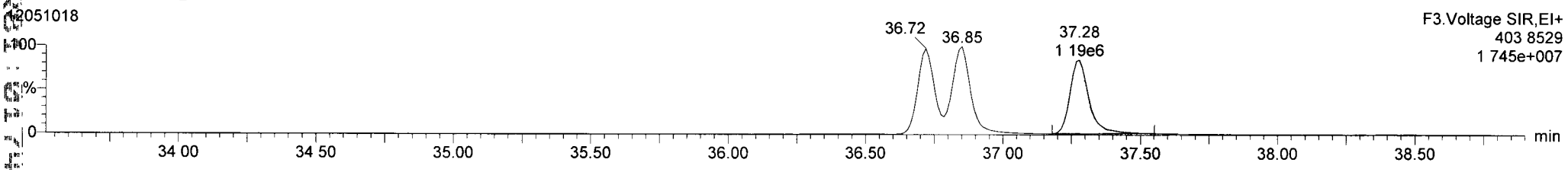
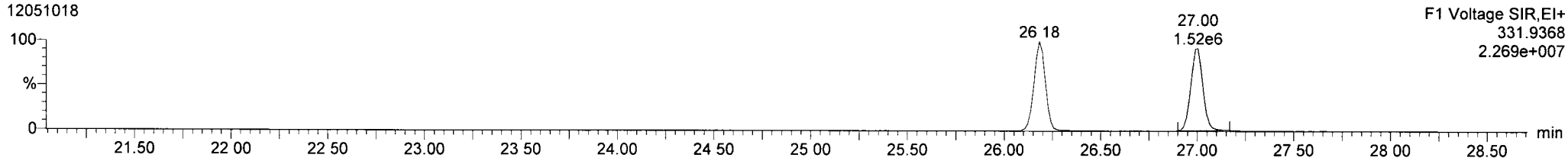


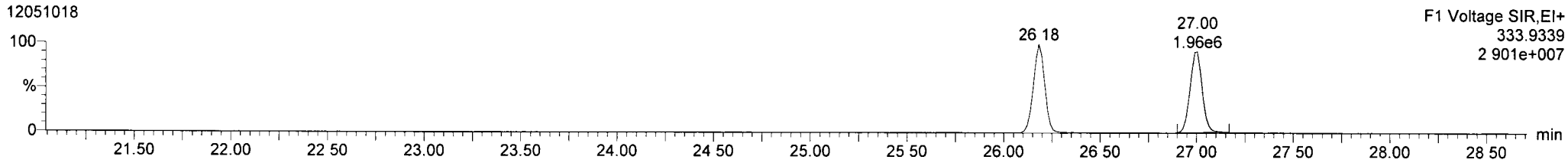
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

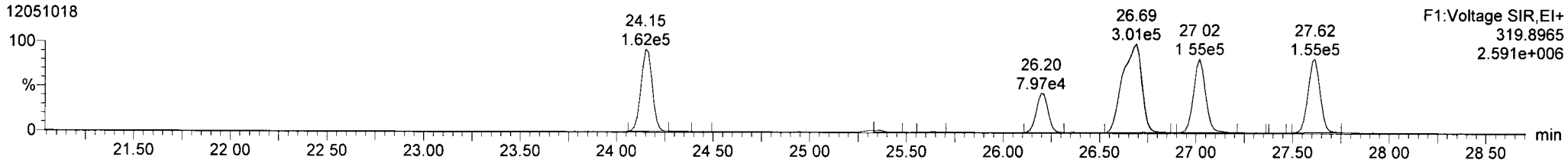
13C-2378-TCDD



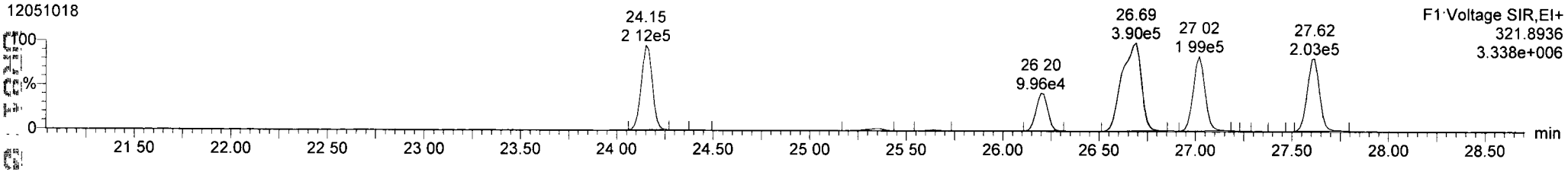
13C-2378-TCDD



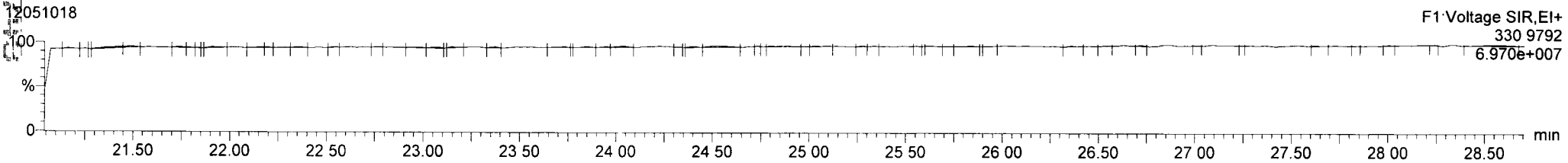
Total-tetradioxins



Total-tetradioxins



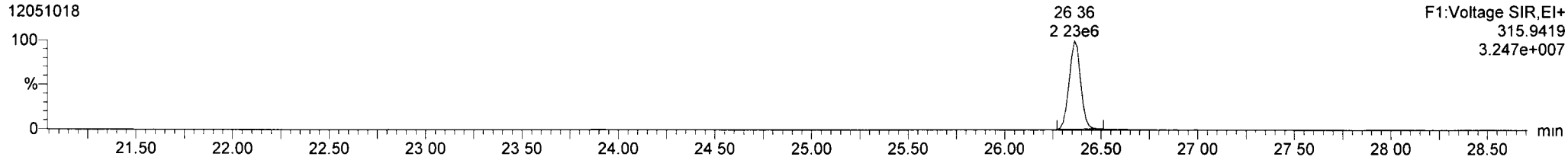
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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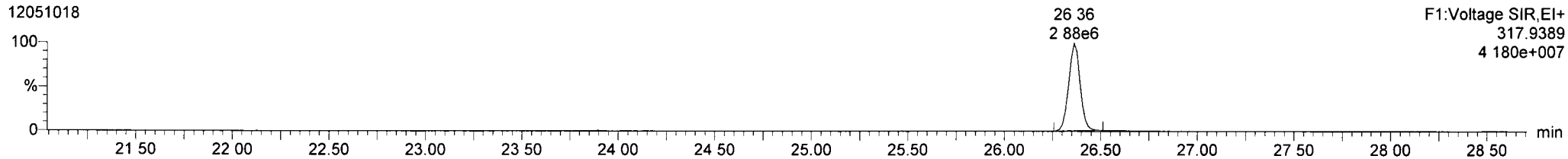
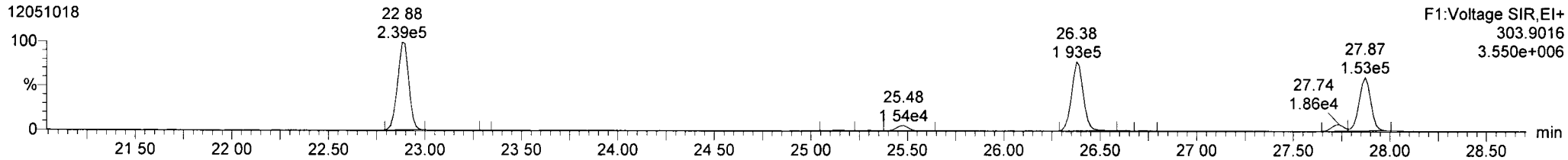
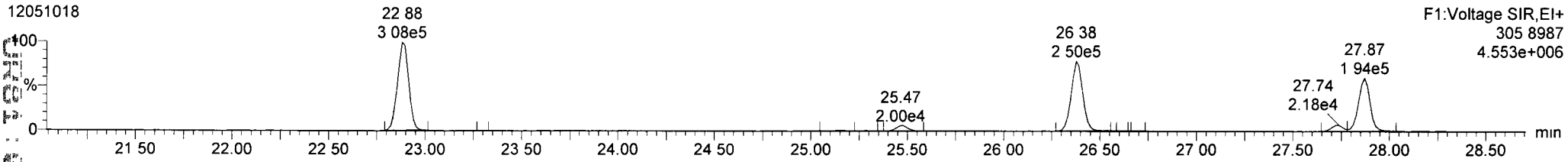


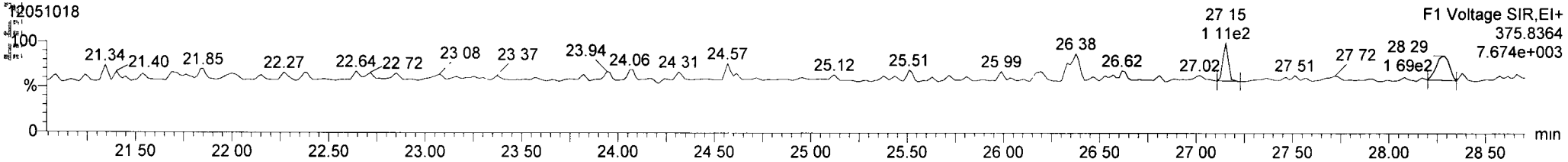
Total-tetrafurans



Total-tetrafurans

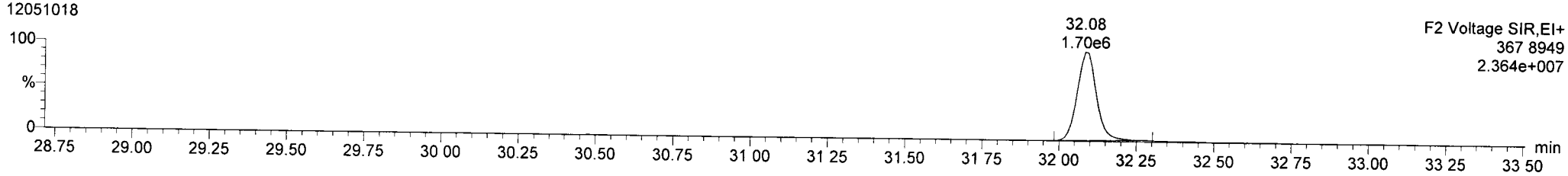


FUNCTION1 HXCDPE



Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD
12051018



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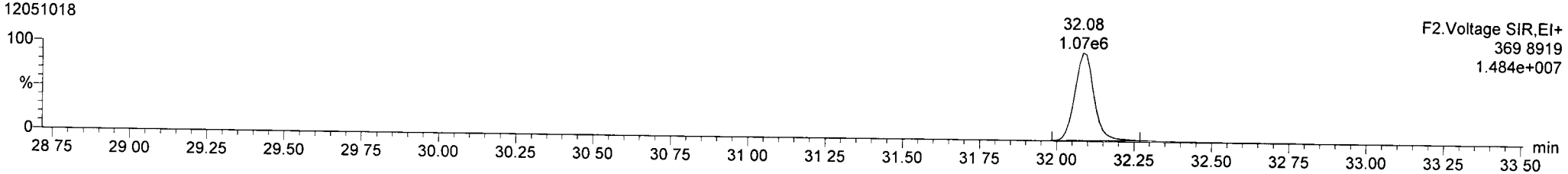
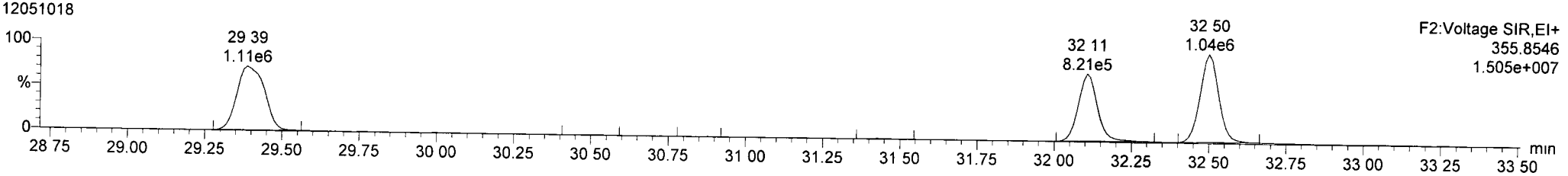
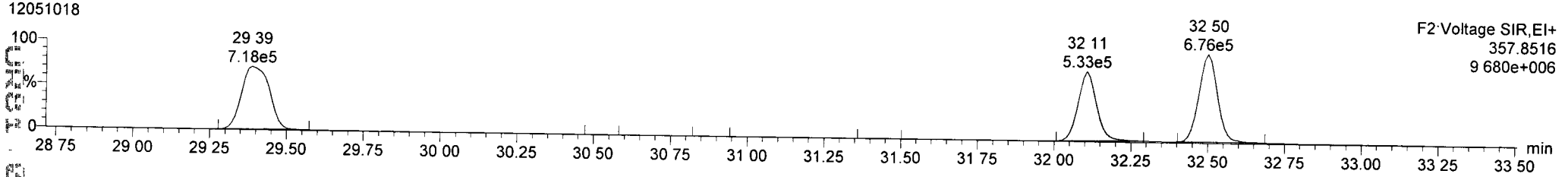


Total-pentadioxins
12051018



Total-pentadioxins
12051018



FUNCTION2 PFK
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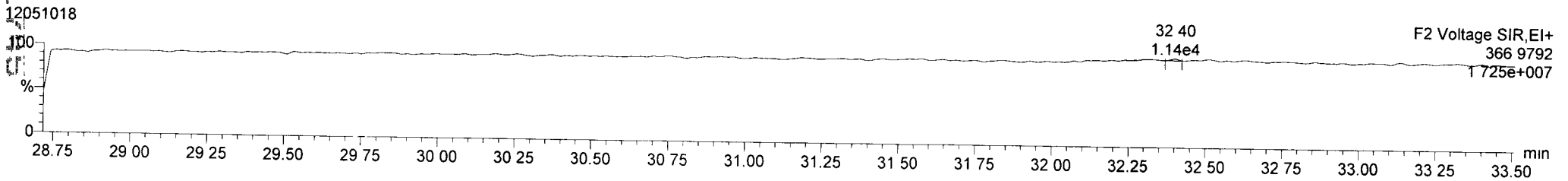
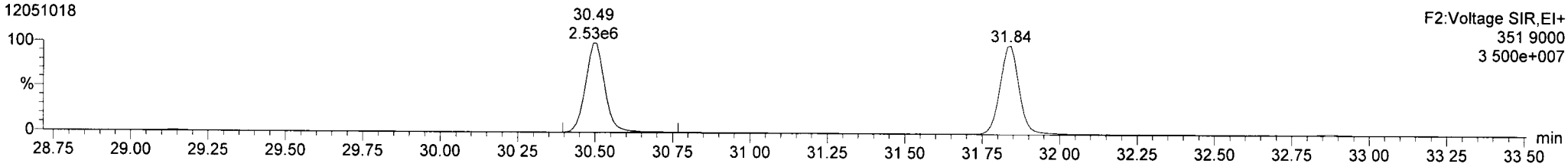


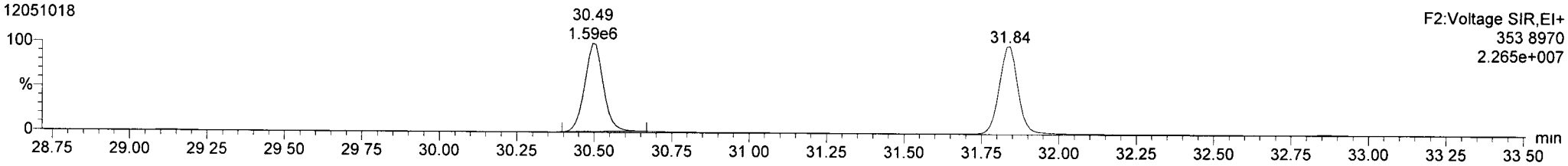
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF
12051018



13C-12378-PeCDF
12051018



Total-penta1
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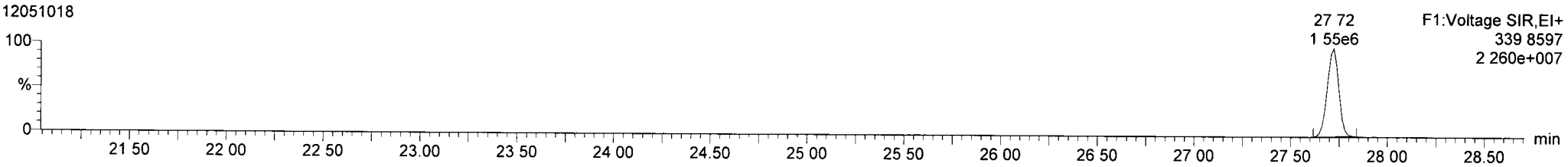

Total-penta1
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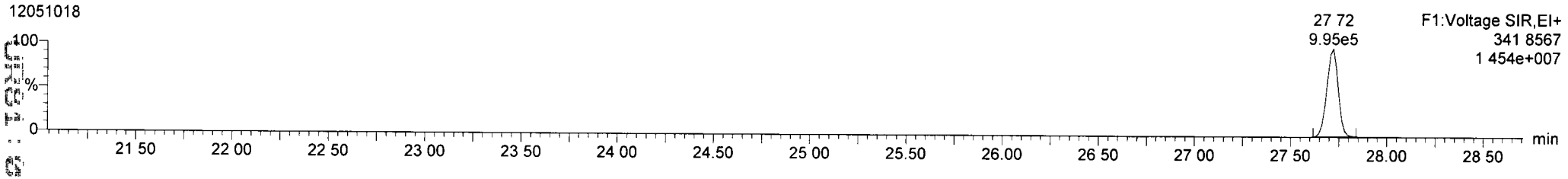
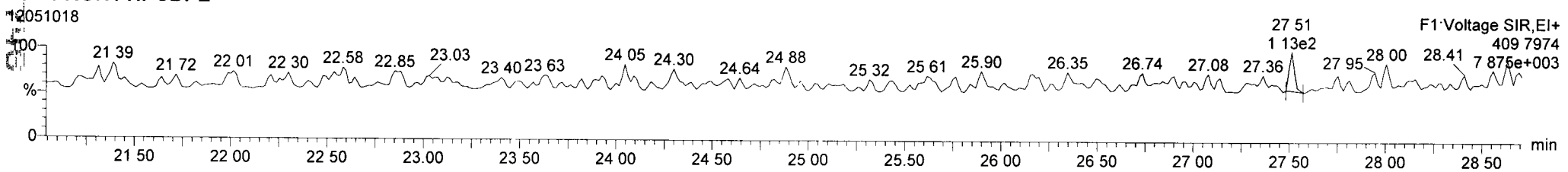


FUNCTION1 HPCDPE
12051018



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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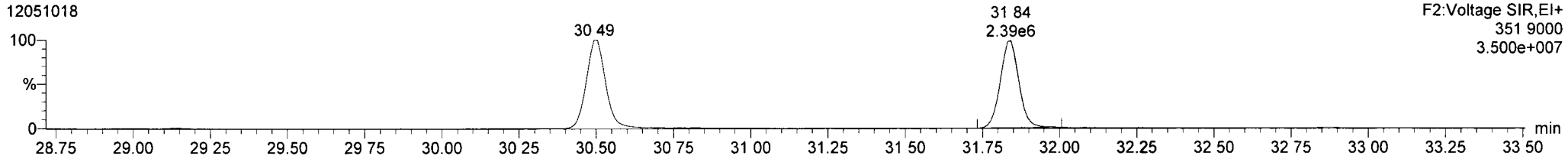
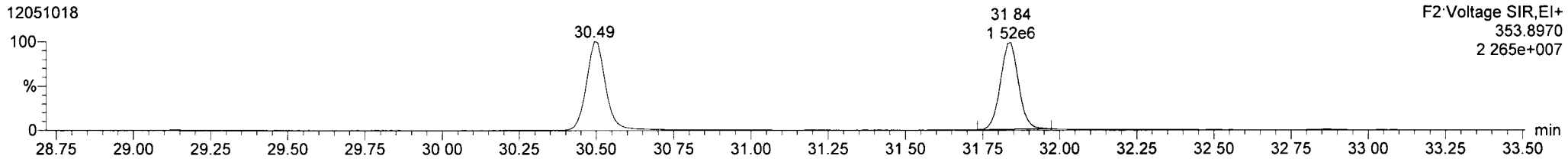
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

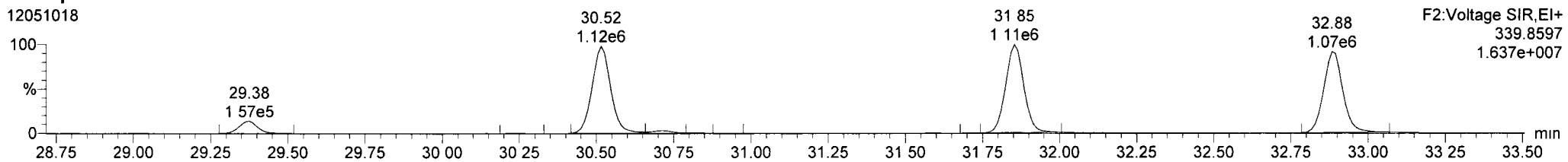
13C-23478-PeCDF



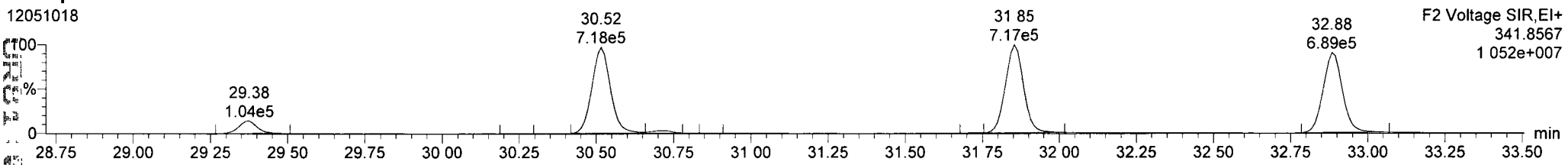
13C-23478-PeCDF



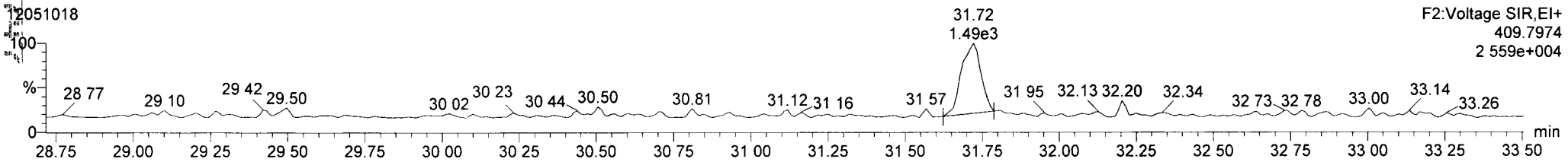
Total-pentafurans



Total-pentafurans



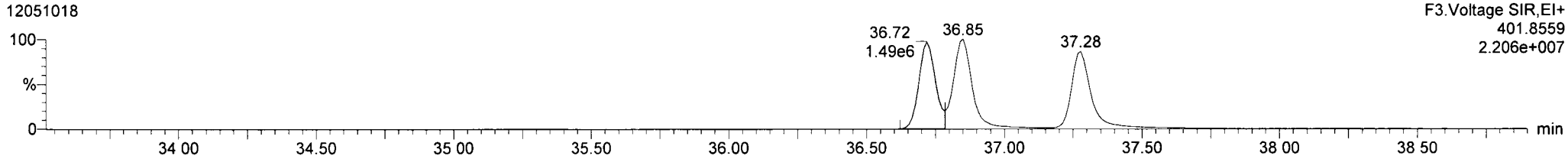
FUNCTION2 HPCDPE



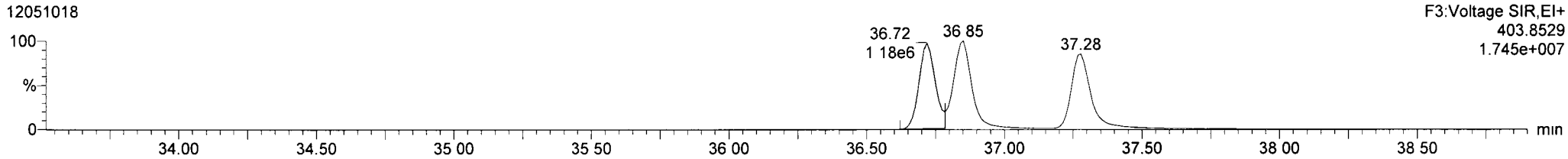
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

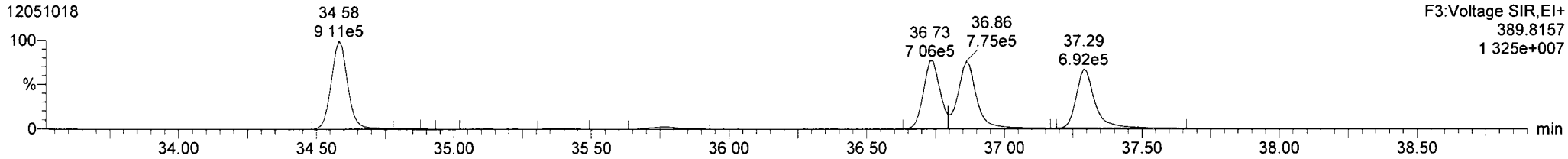
13C-123478-HxCDD



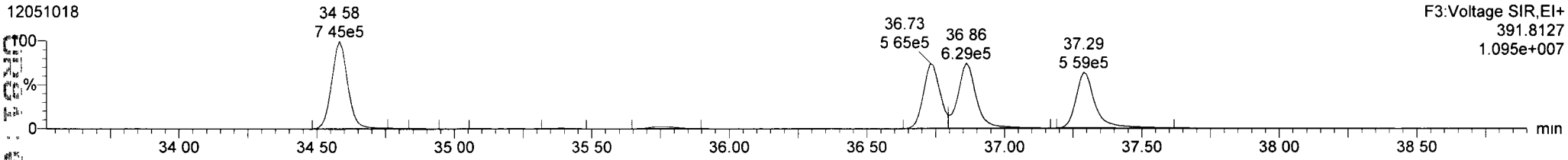
13C-123478-HxCDD



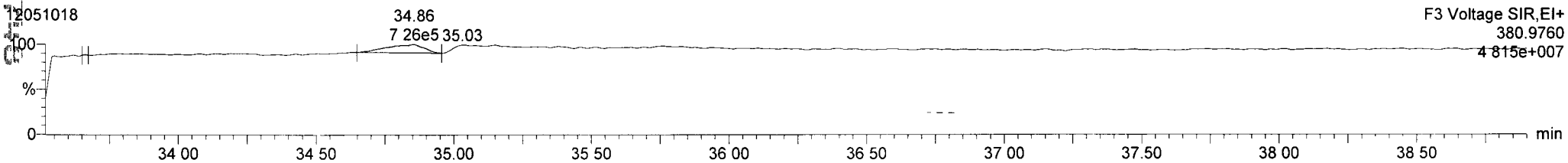
Total-hexadioxins



Total-hexadioxins



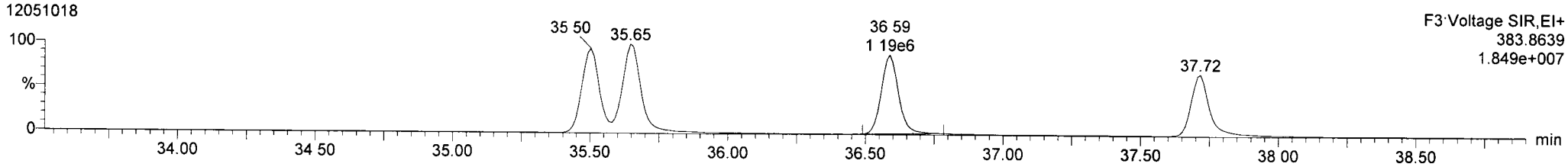
FUNCTION3 PFK



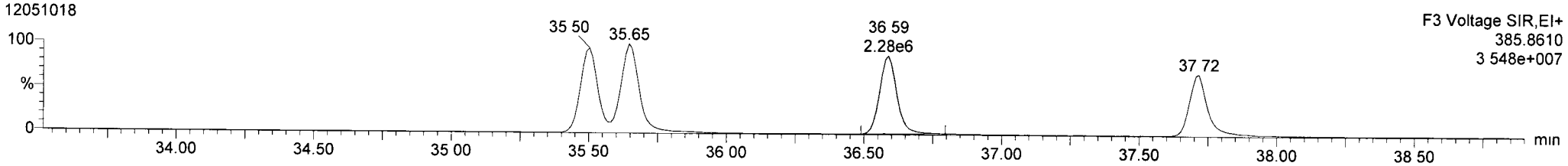
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510DATA2 qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF
12051018



13C-234678-HxCDF
12051018



Total-hexafurans
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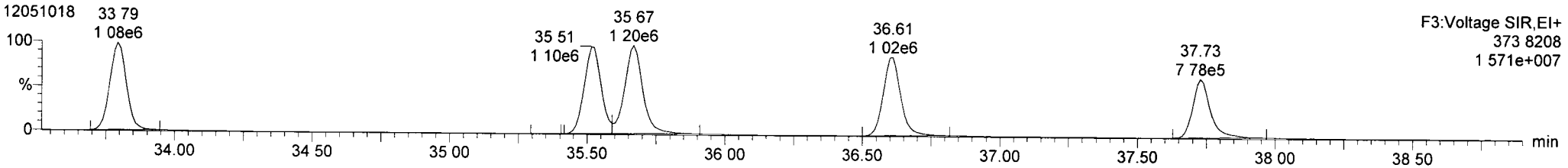

Total-hexafurans
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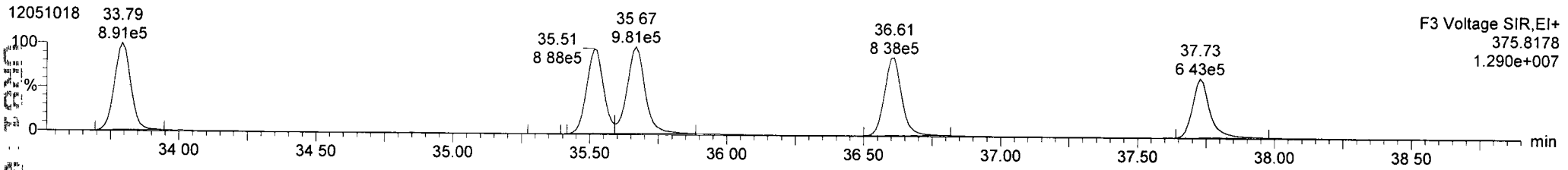
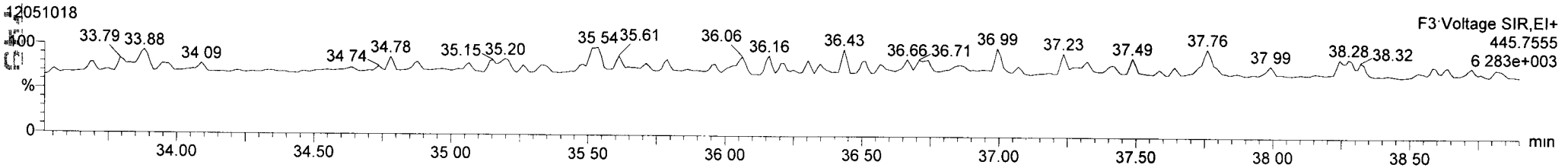


FUNCTION3 OCDPE
12051018



Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
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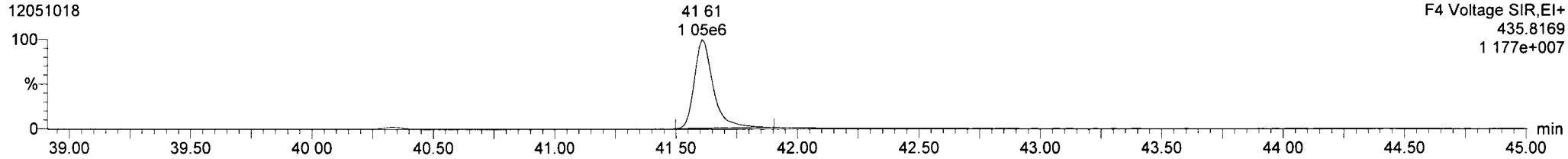
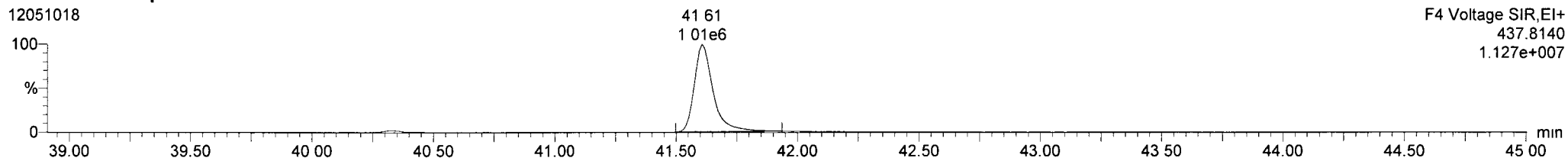
Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

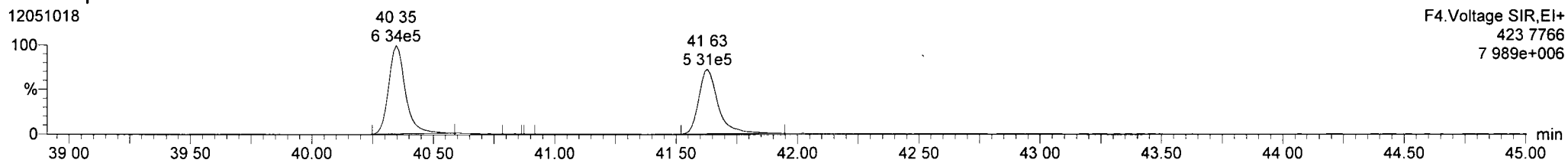
13C-1234678-HpCDD



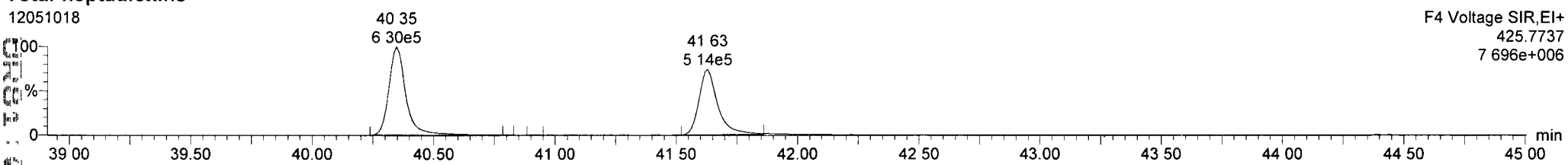
13C-1234678-HpCDD



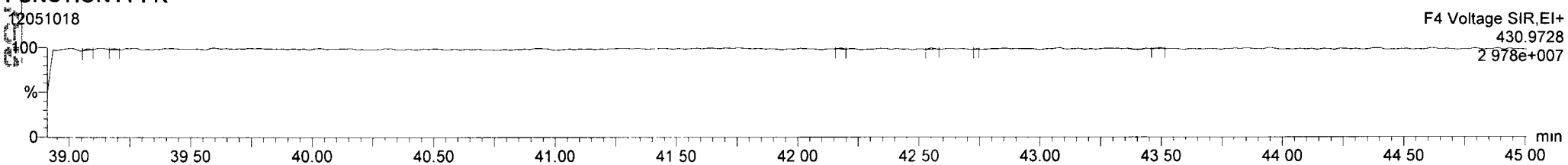
Total-heptadioxins



Total-heptadioxins

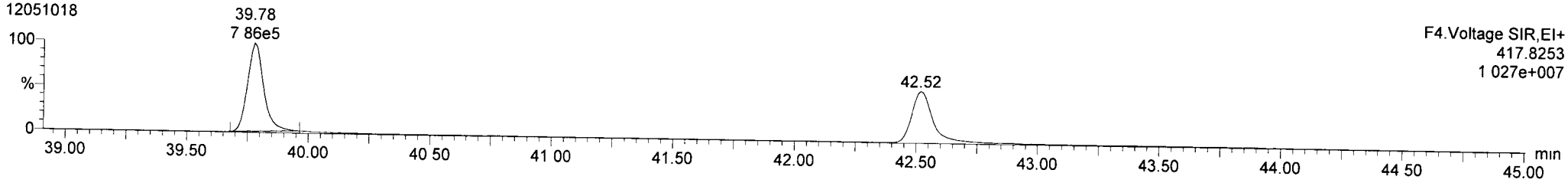


FUNCTION4 PFK

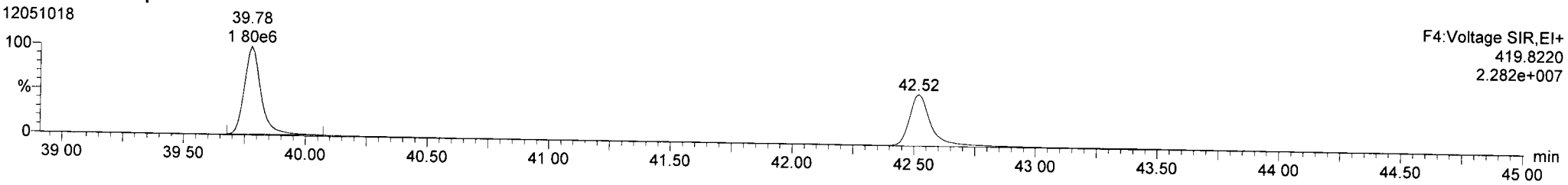


Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

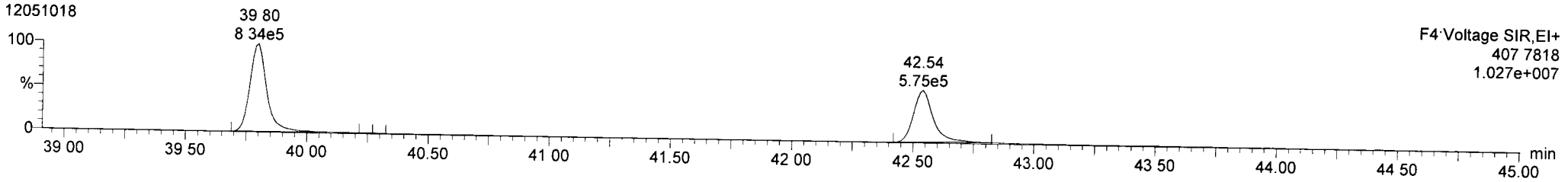
13C-1234678-HpCDF



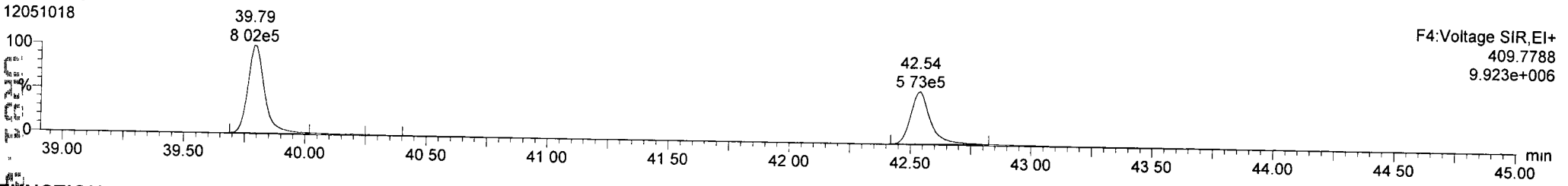
13C-1234678-HpCDF



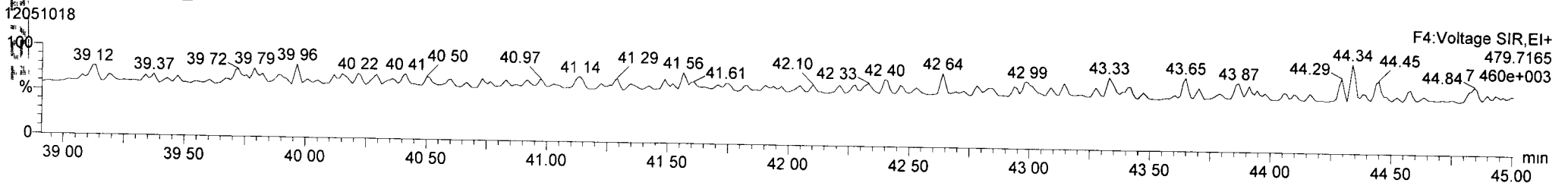
Total-heptafurans



Total-heptafurans



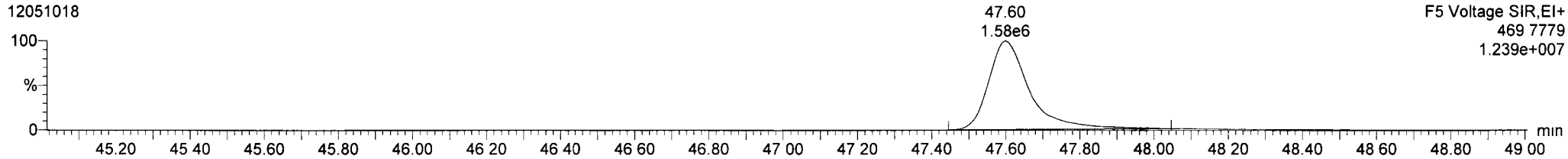
FUNCTION4 NCDPE



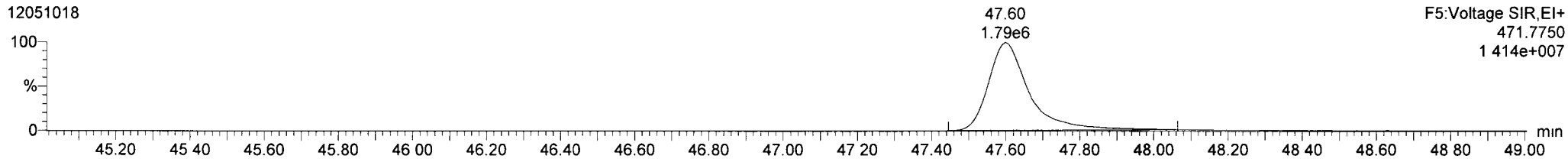
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

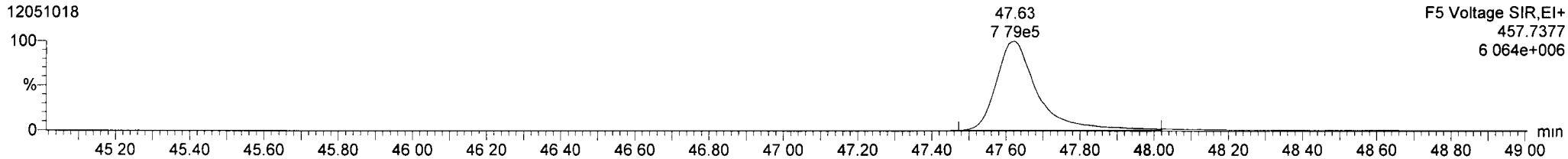
13C-OCDD



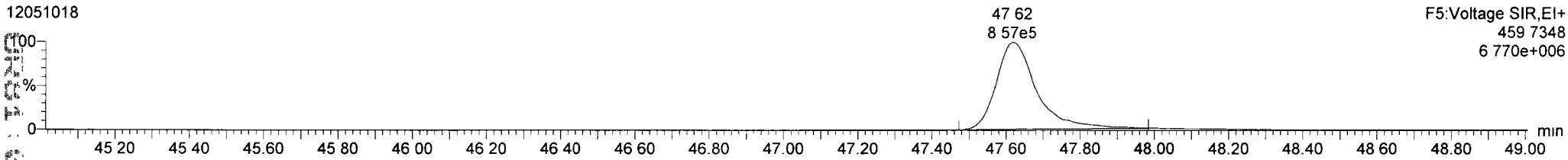
13C-OCDD



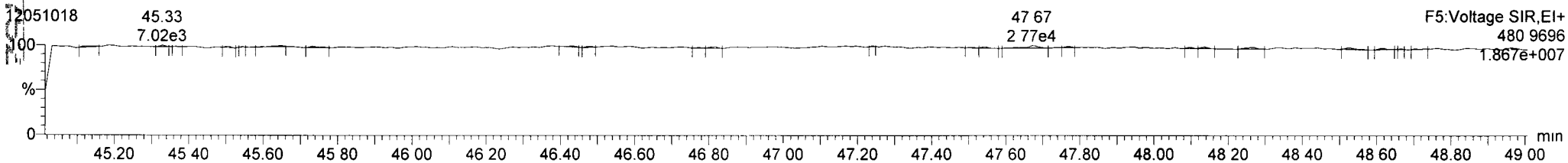
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510DATA2.qld
Last Altered: Friday, May 11, 2012 10:25:01 Pacific Daylight Time
Printed: Friday, May 11, 2012 10:26:21 Pacific Daylight Time

Name: 12051018, Date: 11-May-2012, Time: 00:33:45, ID: CS3, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD
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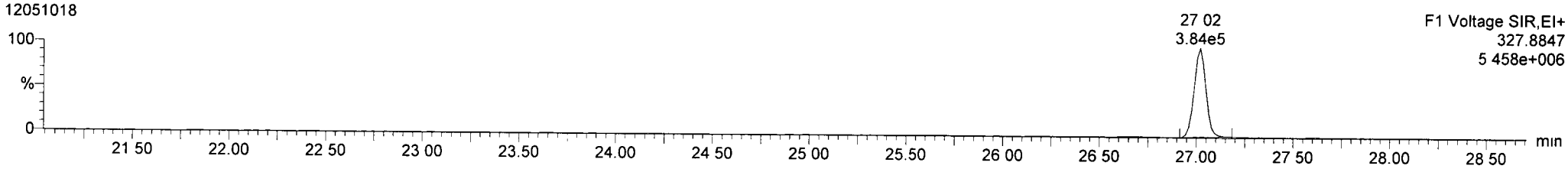

OCDF
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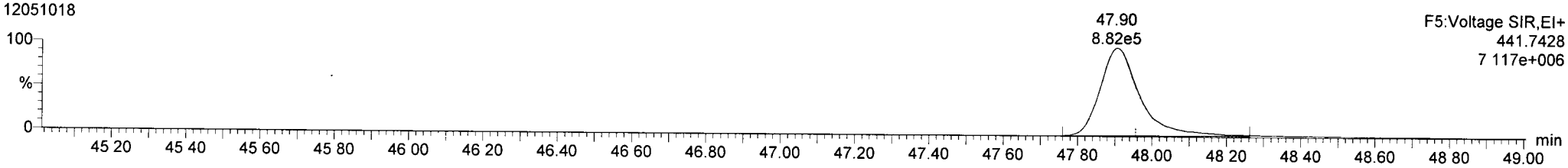
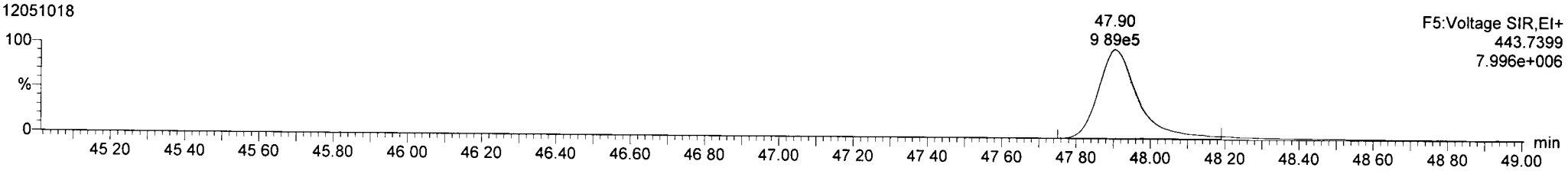


OCDF
12051018



FUNCTION5 DCDPE
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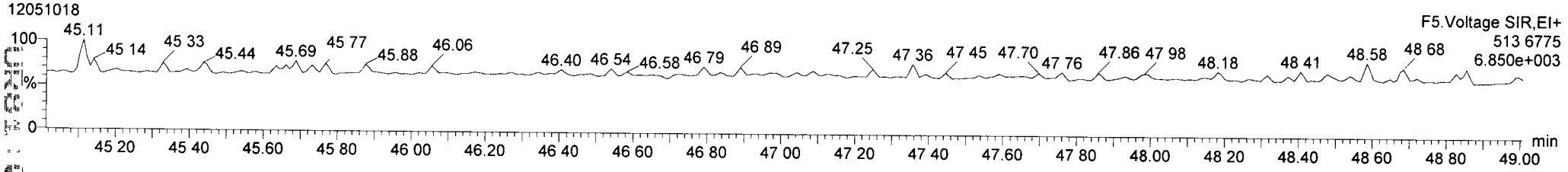
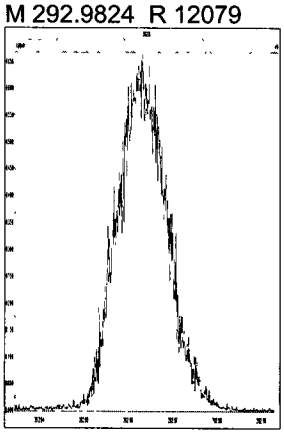
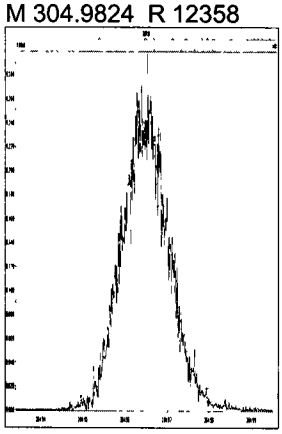


Printed: Friday, May 11, 2012 01:34:10 Pacific Daylight Time

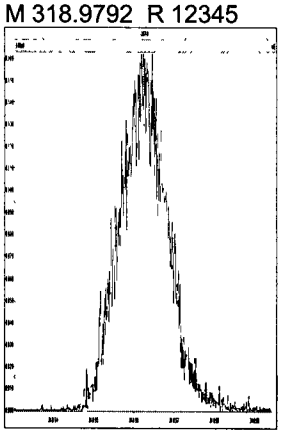
M 292.9824 R 12079



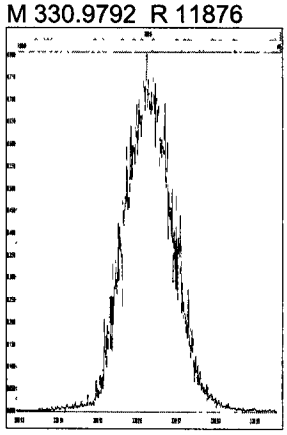
M 304.9824 R 12358



M 318.9792 R 12345



M 330.9792 R 11876



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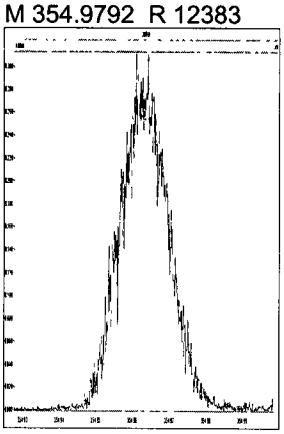
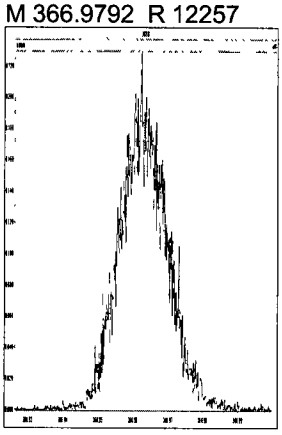


M 366.9792 R 12257



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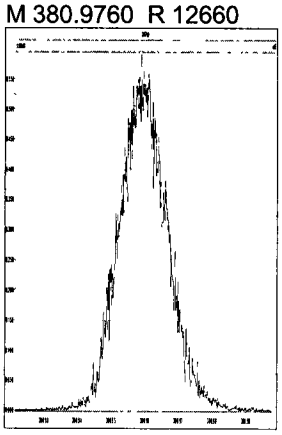

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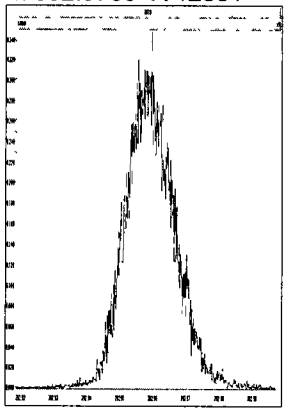

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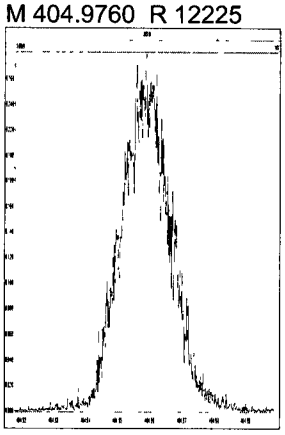

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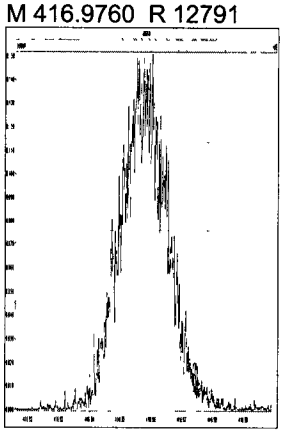

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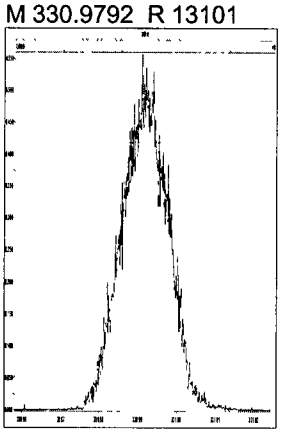

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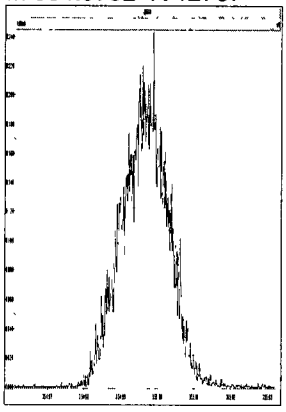

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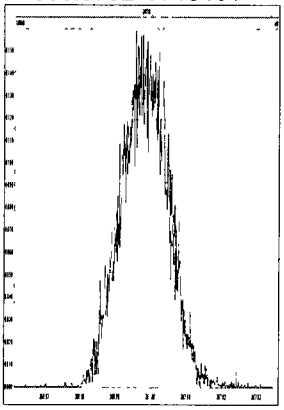

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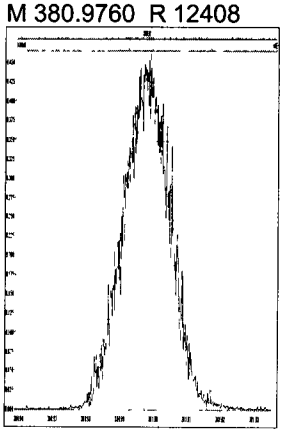

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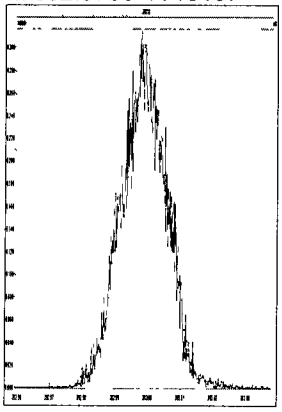
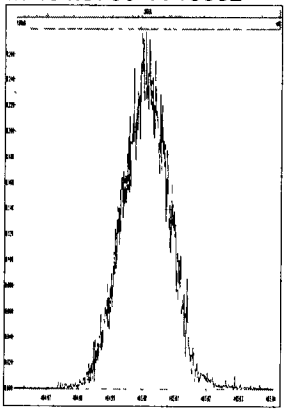


M 404.9760 R 13332



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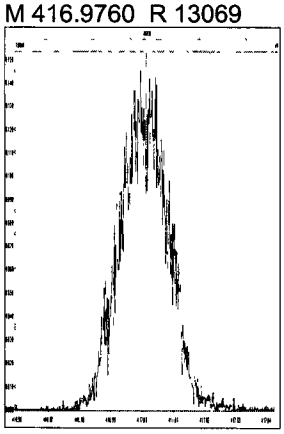

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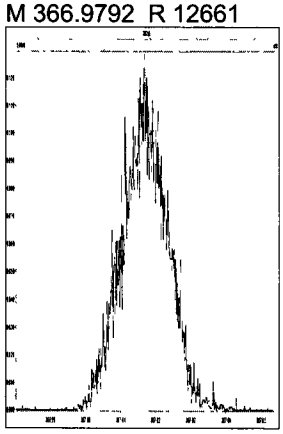

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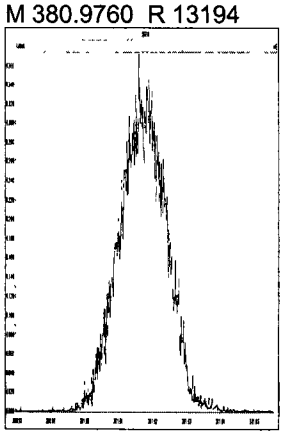

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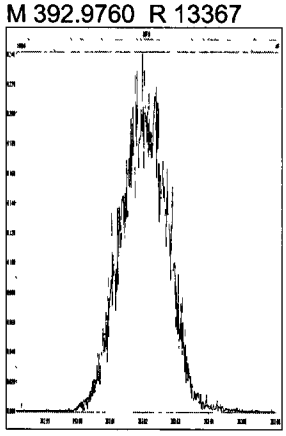

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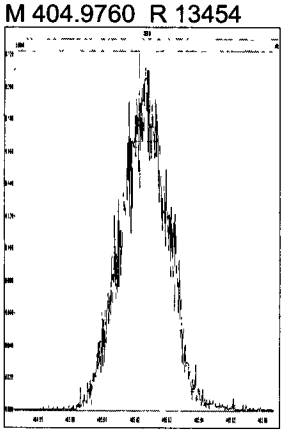

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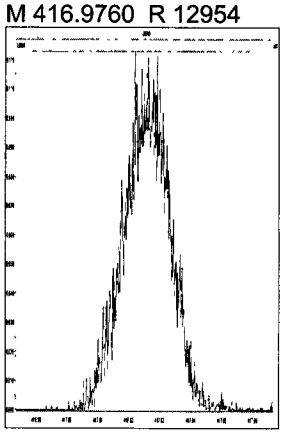

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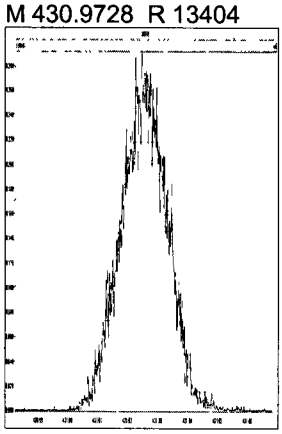

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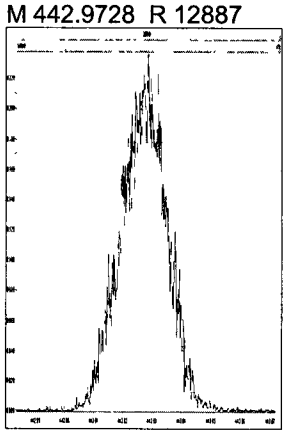

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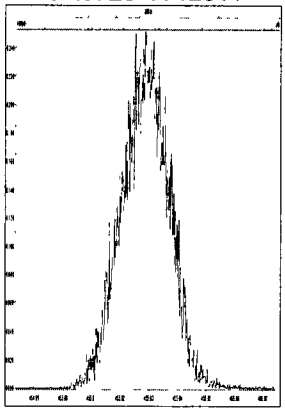

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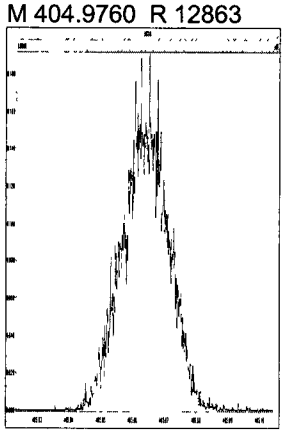

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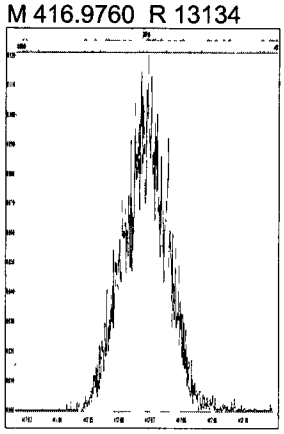

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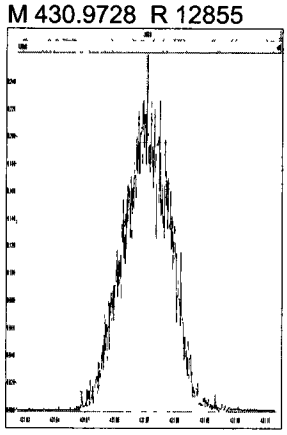

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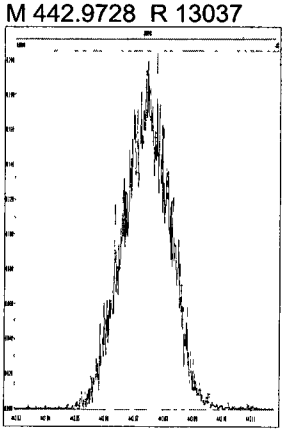

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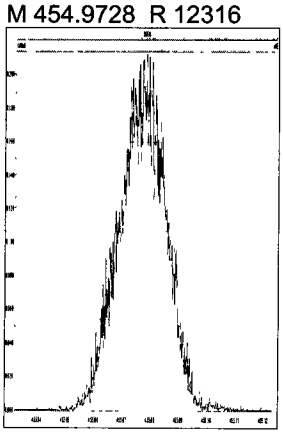

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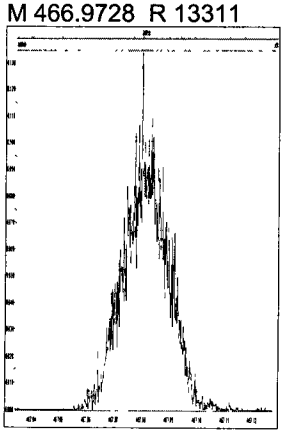

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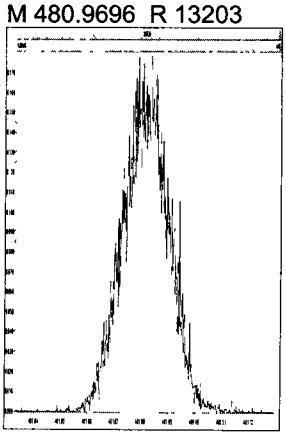

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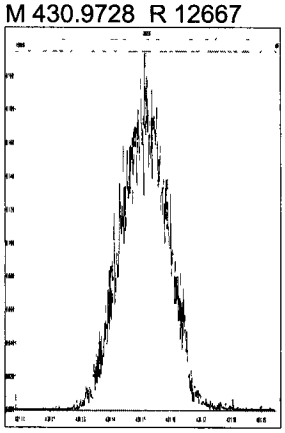

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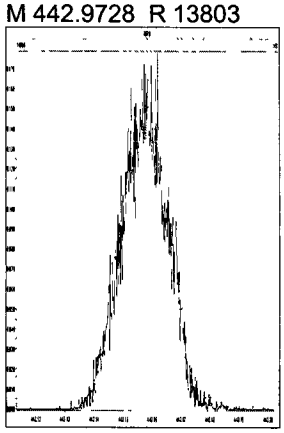

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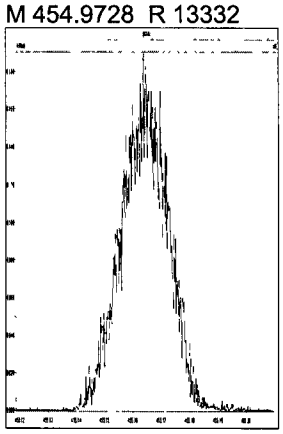

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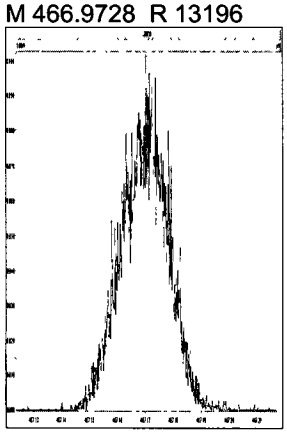

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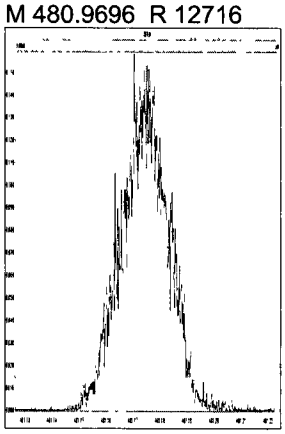

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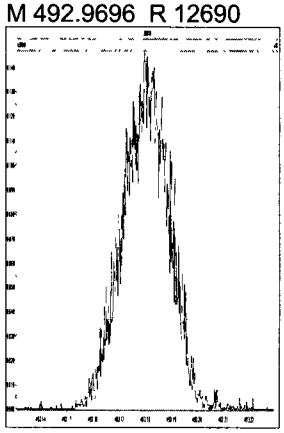
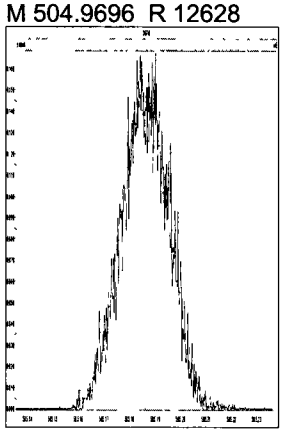


M 504.9696 R 12628



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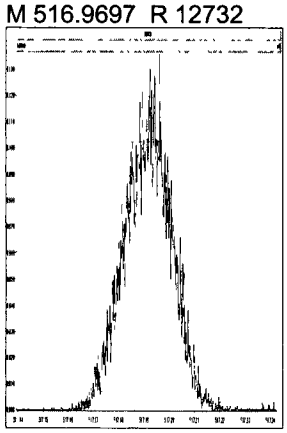


Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 5/11/12 Analysis: Dioxins Analyst: pk

GC Program: 8290C Column No: 985165 Column Type: RTX-Dioxin 2

Inj Vol: 1ul Instrument Tune (IPR): 10K8290B Detector Voltage: 350

Resolution Check Files: Curve Date: 5/3/12

IS/SS	Ical/Ccal	LCS/ICV
I7436	I7214	
	1929-2	

#	Acq Date	Acq Time	Name	ID	Pre..	RT	IS AREA	Comments
1	11-May-12	10 17 14	12051102	CS3	26 3	26 2	3086081	
2	11-May-12	11 07 35	12051103	TETRA RES	26 3			
3	11-May-12	12 08 41	12051104	UR81B 5X	26 3	26 2	4456383	
4	11-May-12	12 59 00	12051105	UR81D 5X	26.3	26 2	3876674	
5	11-May-12	13 51 09	12051106	UR81E 5X	26 3	26 2	4368789	
6	11-May-12	14 59.29	12051107	UR81G 5X	26 3	26 2	3879291	
7	11-May-12	15 49.49	12051108	UR81H 5X	26 3	26 2	6803866	
8	11-May-12	16 41 56	12051109	UR81J 5X	26 3	26 2	4822746	
9	11-May-12	17 34 10	12051110	US18B 5X	26 3	26 2	5191631	
10	11-May-12	18 26 18	12051111	CS3	26 3	26 2	3102961	

pk 5/14/12

Ion gauge tripped after CS3 @ #10

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.392	26.393	379442	379442	0 866	bb	98.1	0.79	0.77	702 5	NO	9 811	9 811
2	2	12378-PeCDF	339.8597	30.528	30.527	1382750	1382750	0 907	bd	99.6	1.52	1.55	1699.6	NO	49.819	49.819
3	3	23478-PeCDF	339.8597	31.865	31.865	1399749	1399749	0 936	dd	102.0	1.52	1.55	1748 3	NO	50 987	50 987
4	4	123478-HxCDF	373.8208	35.526	35.514	1103362	1103362	1.082	bd	99.1	1.23	1 24	1049 3	NO	49 552	49 552
5	5	234678-HxCDF	373.8208	36.611	36.611	1116369	1116369	1 070	bd	98.2	1.20	1.24	995 8	NO	49.109	49 109
6	6	123678-HxCDF	373.8208	35.668	35.668	1264916	1264916	1.048	db	103.8	1.22	1.24	1100.6	NO	51 880	51 880
7	7	123789-HxCDF	373.8208	37.729	37.718	859910	859910	1 020	bd	97.4	1.20	1.24	746.6	NO	48.679	48.679
8	8	1234678-HpCDF	407.7818	39.790	39.798	1073079	1073079	1 214	bb	102.0	1.03	1.05	1285.7	NO	51.004	51.004
9	9	1234789-HpCDF	407 7818	42.530	42.521	780775	780775	1 254	bd	96.3	1.01	1.05	764.1	NO	48.128	48.128
10	10	OCDF	441 7428	47.887	47.868	1330070	1330070	1.105	bd	103 1	0.89	0.89	1804 2	NO	103 136	103 136
11	11	2378-TCDD	319.8965	27 035	27 018	290556	290556	1 046	dd	99 1	0.71	0 77	841.4	NO	9.910	9.910
12	12	12378-PeCDD	355.8546	32 117	32 105	902110	902110	0 973	bb	98.5	1.55	1 55	1893.0	NO	49.257	49.257
13	13	123478-HxCDD	389 8157	36.742	36.743	743980	743980	0.935	bd	98.3	1.23	1 24	1126 0	NO	49 173	49 173
14	14	123678-HxCDD	389 8157	36 863	36 863	909786	909786	0.878	dd	105.0	1.18	1 24	1113 6	NO	52.517	52 517
15	15	123789-HxCDD	389.8157	37.291	37 257	744721	744721	0.839	dd	98 9	1.17	1.24	964.2	NO	49.449	49.449
16	16	1234678-HpCDD	423 7766	41 620	41.621	697175	697175	0.974	bd	98.4	1.10	1 05	1056 5	NO	49 202	49 202
17	17	OCDD	457 7377	47.600	47.596	1137291	1137291	0.950	bd	102.6	0.86	0.89	1262 8	NO	102 590	102.590
18	18	13C-2378-TCDF	315 9419	26.377	26.377	4465559		1.484	bd	97.5	0.78	0.77	5633.0	NO	97.479	
19	19	13C-12378-PeCDF	351 9000	30.506	30.519	3060310		1.048	bb	94.6	1.55	1.55	4542.4	NO	94.616	
20	20	13C-23478-PeCDF	351.9000	31.843	31.856	2933411		1.003	bb	94.7	1.56	1 55	4399.5	NO	94.733	
21	21	13C-123478-HxCDF	383.8639	35.504	35.504	2058134		1 186	bd	106.3	0.51	0 51	1380 5	NO	106 277	
22	22	13C-123678-HxCDF	383 8639	35.646	35.657	2325717		1 315	db	108 3	0.54	0 51	1412 7	NO	108 273	
23	23	13C-234678-HxCDF	383 8639	36.589	36.589	2124923		1 223	bb	106 3	0.52	0.51	1342.3	NO	106 347	
24	24	13C-123789-HxCDF	383 8639	37 707	37.696	1731682		1.056	bb	100 3	0.51	0 51	997 4	NO	100.350	
25	25	13C-1234678-HpCDF	417.8253	39 778	39 779	1732404		1.011	bb	104.9	0.45	0 44	1443.7	NO	104.865	
26	26	13C-1234789-HpCDF	417 8253	42.508	42 530	1293631		0.741	bd	106 9	0.42	0 44	886.1	NO	106.947	
27	27	13C-1234-TCDD	331 9368	26 198	26 272	3086081		1.000	bb	100.0	0.79	0.77	6428.8	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27 005	27.020	2803534		0 956	bb	95.0	0.78	0.77	5221.2	NO	94.988	
29	29	13C-12378-PeCDD	367 8949	32.095	32 108	1881708		0 663	bd	91.9	1.55	1.55	6359.6	NO	91.904	
30	30	13C-123478-HxCDD	401 8559	36 721	36 721	1617467		1 024	bd	96.7	1.25	1.24	2621.0	NO	96.713	
31	31	13C-123678-HxCDD	401 8559	36.852	36.852	1973578		1 113	db	108.6	1.21	1 24	2763.0	NO	108 597	
32	32	13C-1234678-HpCDD	435.8169	41.609	41 631	1454331		0 815	bb	109.2	1.04	1 05	1934 2	NO	109 232	
33	33	13C-OCDD	469 7779	47.582	47 647	2333661		0 717	bb	99.6	0.90	0 89	2857 4	NO	199.242	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

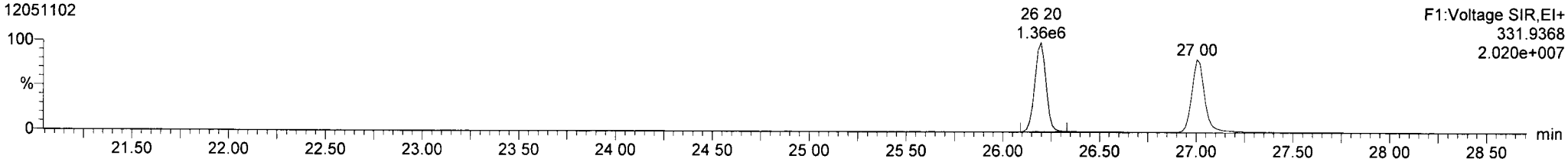
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.279	37.368	1633388		1.000	bb	100 0	1.27	1.24	2267.3	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 370			0 866							32.060	32.082
36	36	Total-penta1	339.8597		28 210										80 623	80.639
37	37	Total-pentafurans	339.8597		30 790			0.921							151.927	152.029
38	38	Total-hexafurans	373.8208		35.760			1.055							261.112	261 112
39	39	Total-heptafurans	407.7818		41 160			1.234							99.132	99 188
40	40	Total-Furans	303.9016		0.000			1.050							727 990	728 186
41	41	Total-tetradioxins	319 8965		25.880			1.046							56 532	56 689
42	42	Total-pentadioxins	355.8546		30.950			0.973							180 788	180 898
43	43	Total-hexadioxins	389 8157		35.940			0.884							219 382	220 735
44	44	Total-heptadioxins	423.7766		40.980			0 974							110.825	111.235
45	45	Total-Dioxins	319.8965		0.000			0.942							670.118	672.186
46	46	Total-TEQ	319.8965		0.000										1398 107	1400 3..
47	47	37CL-2378-TCDD	327.8847	27.035	27 010	313172		1 037		97 8			2454 6		9 784	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0 000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480 9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479 7165		0.000											
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

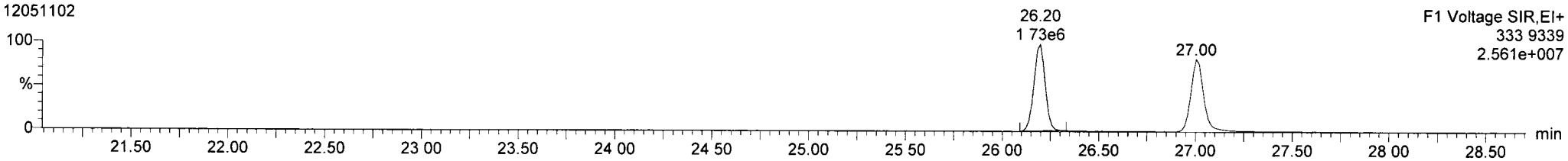
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

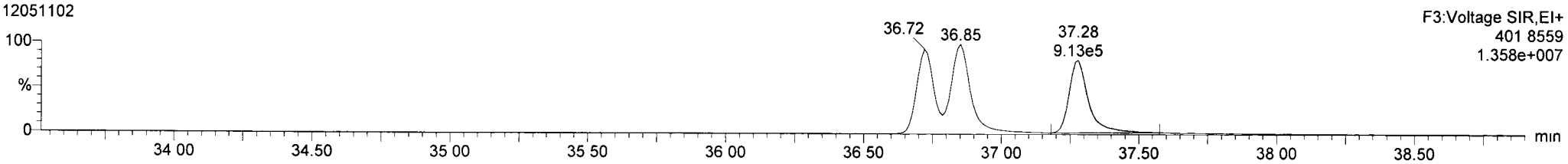
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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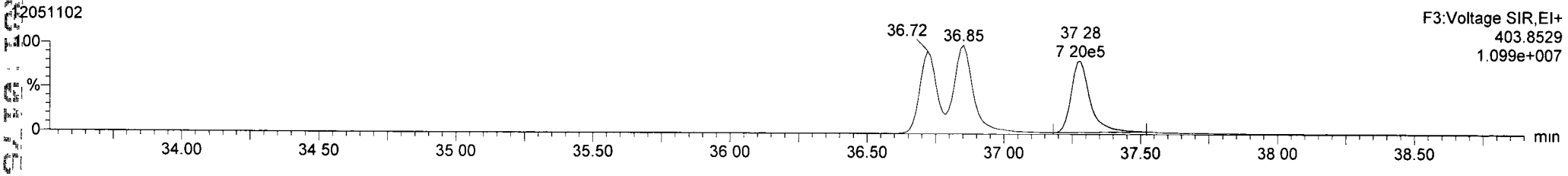
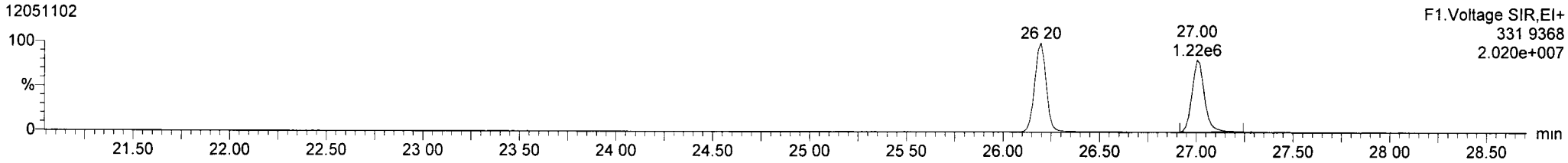


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN qld
Last Altered Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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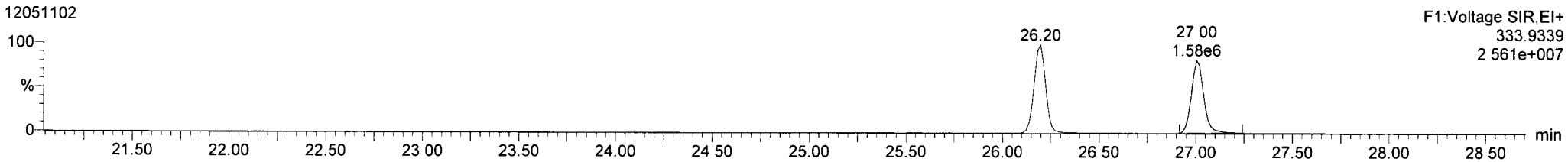
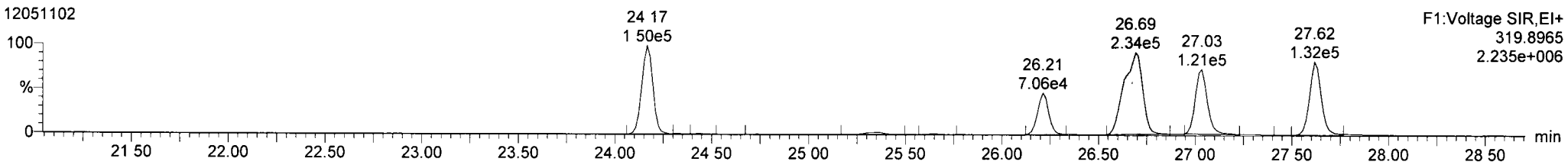
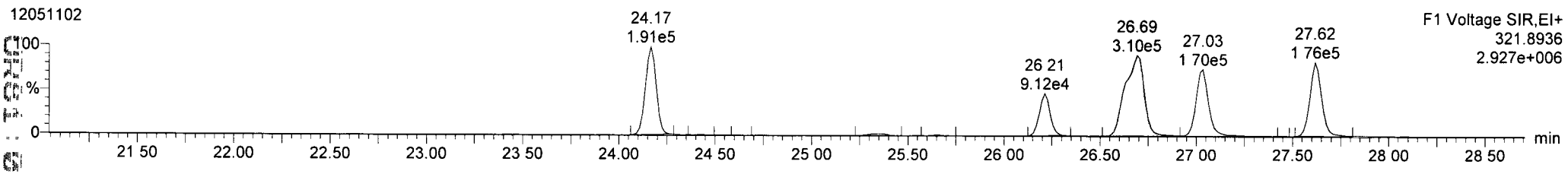


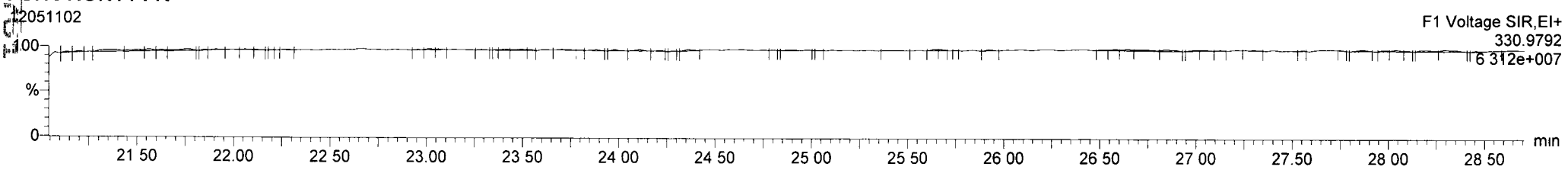
Total-tetradioxins



Total-tetradioxins



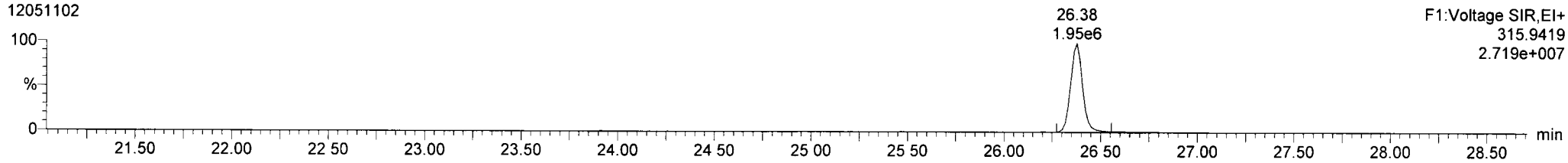
FUNCTION1 PFK



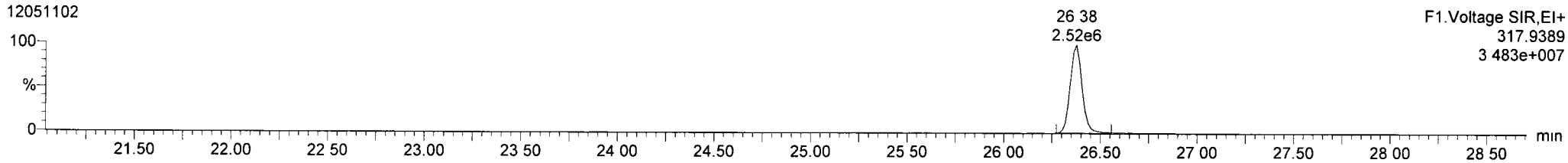
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11.47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

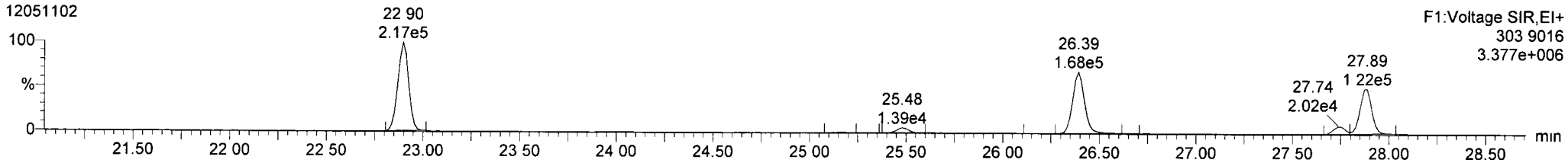
13C-2378-TCDF



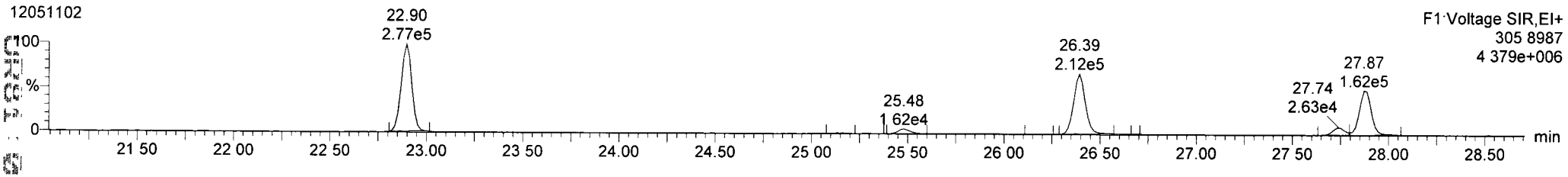
13C-2378-TCDF



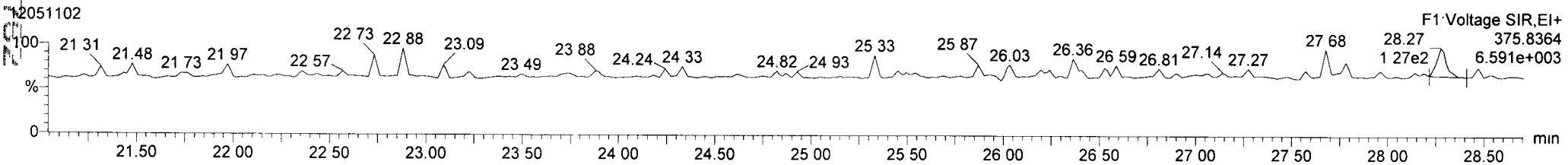
Total-tetrafurans



Total-tetrafurans



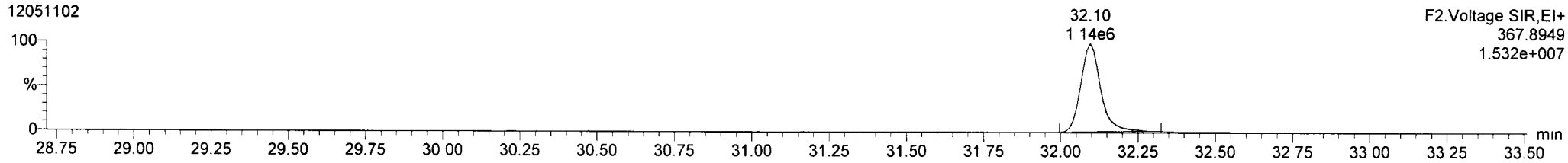
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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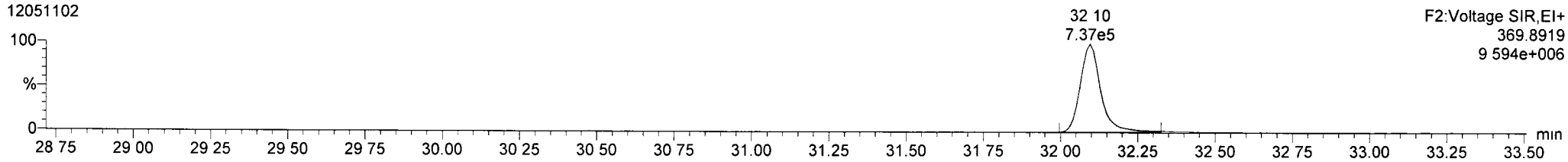
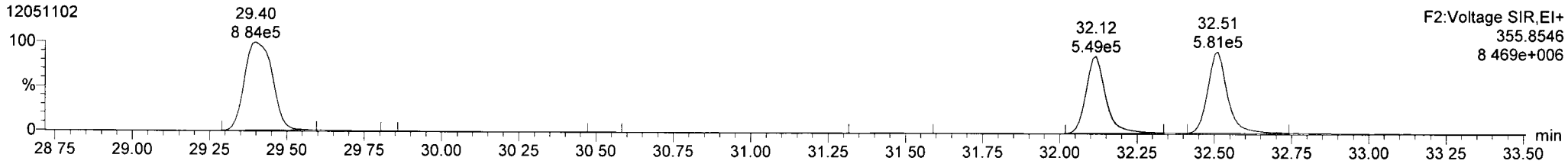
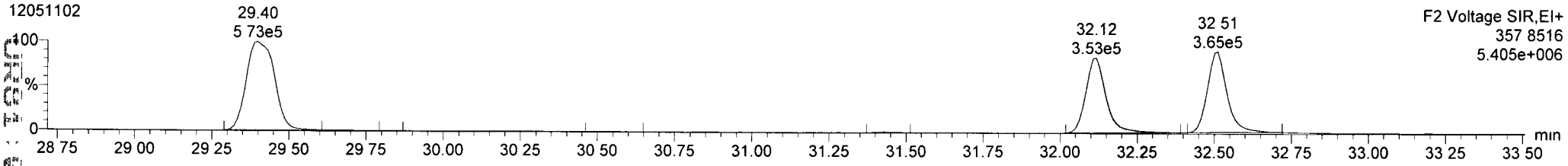


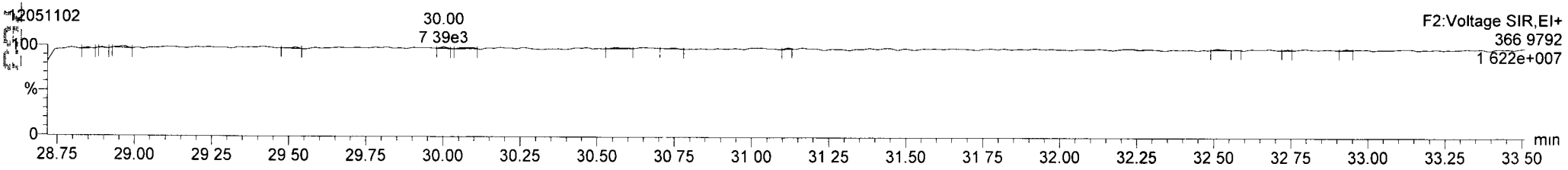
Total-pentadioxins



Total-pentadioxins



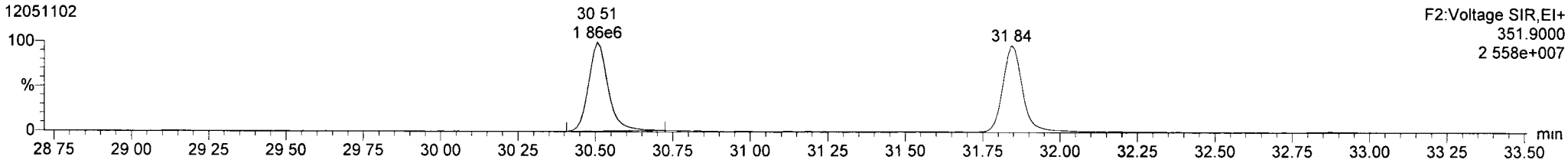
PUNCTION2 PFK



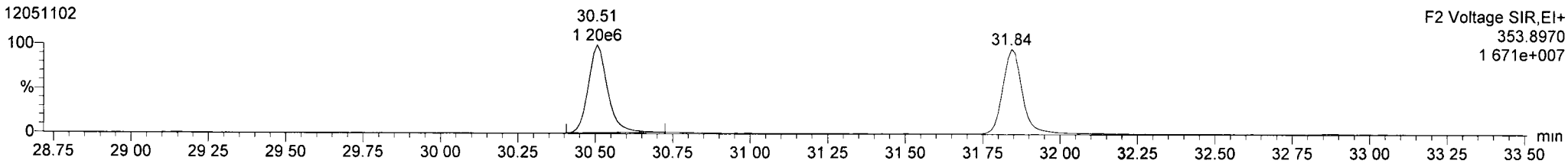
Dataset: P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

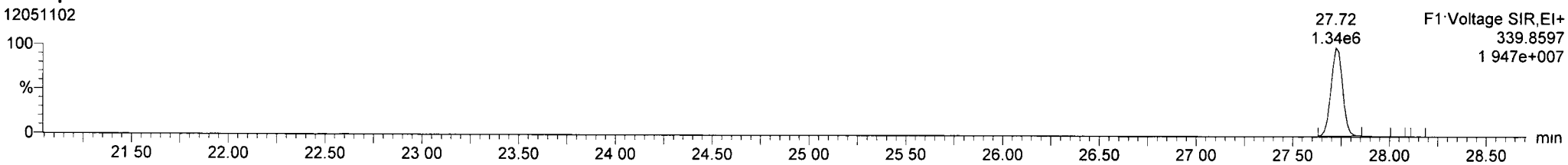
13C-12378-PeCDF



13C-12378-PeCDF



Total-penta1



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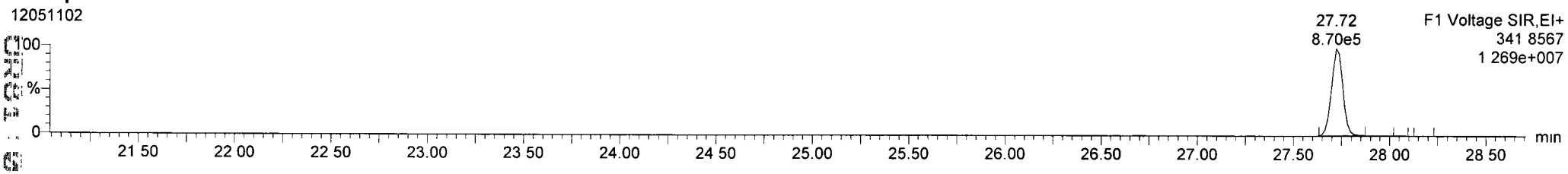
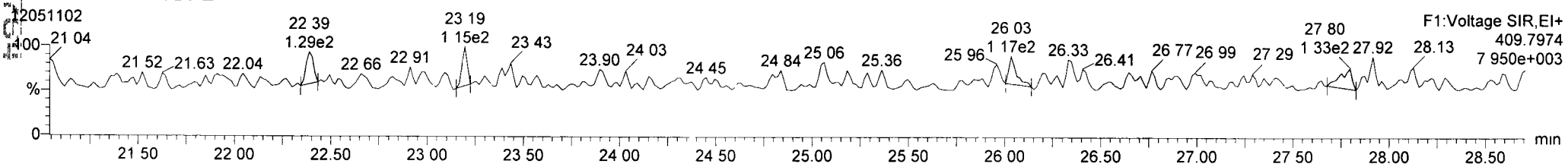


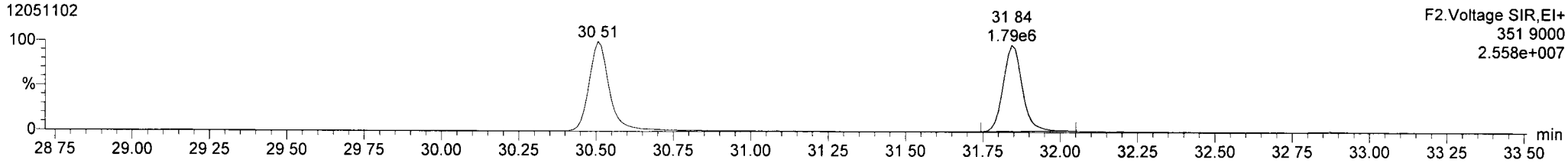
FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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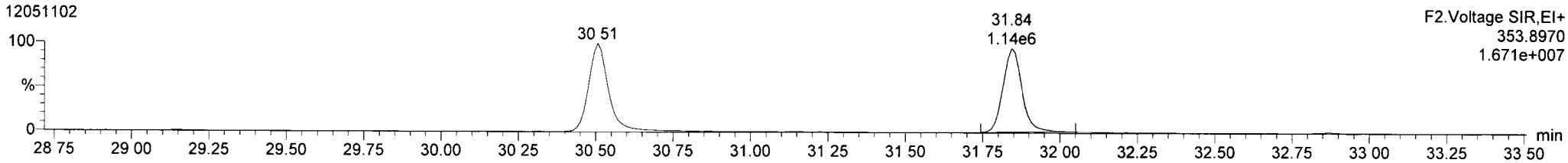
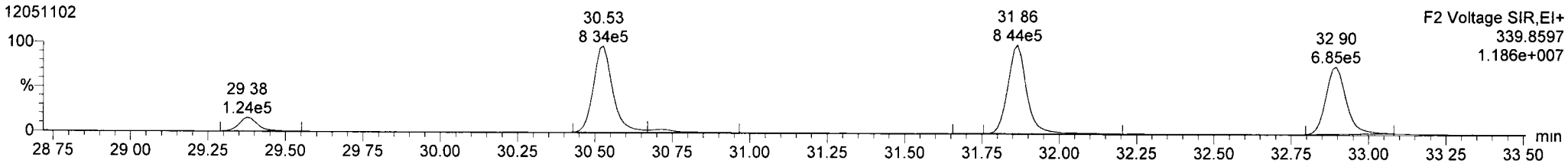


Total-pentafurans



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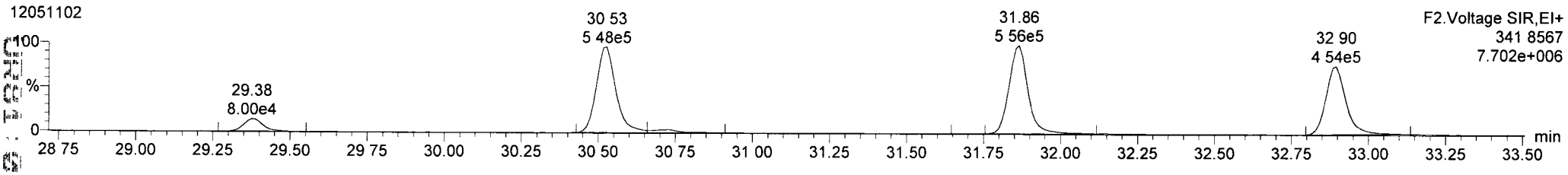

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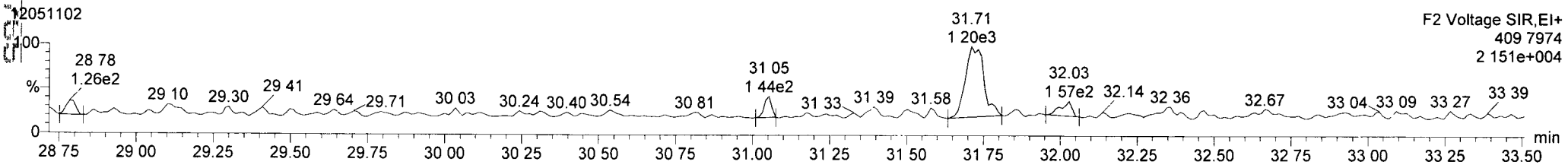

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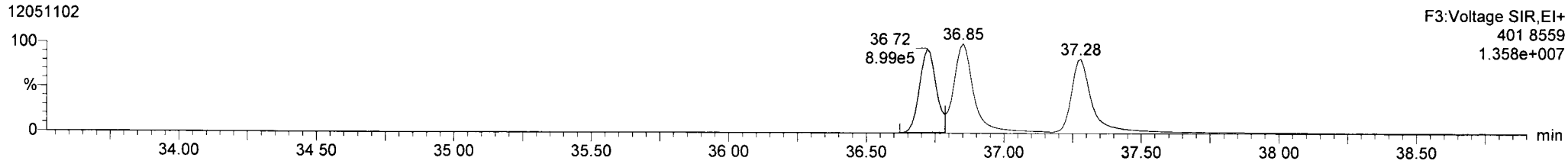
13C-123478-HxCDD



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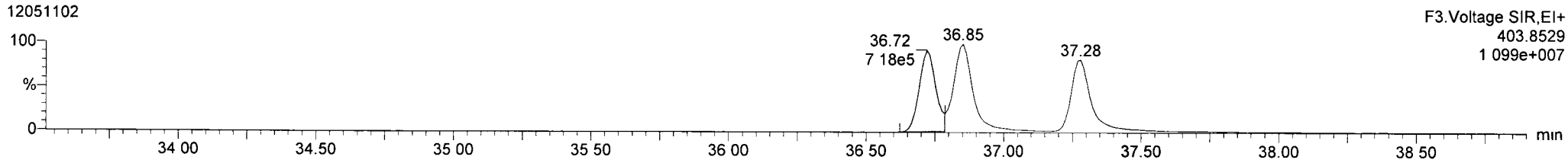
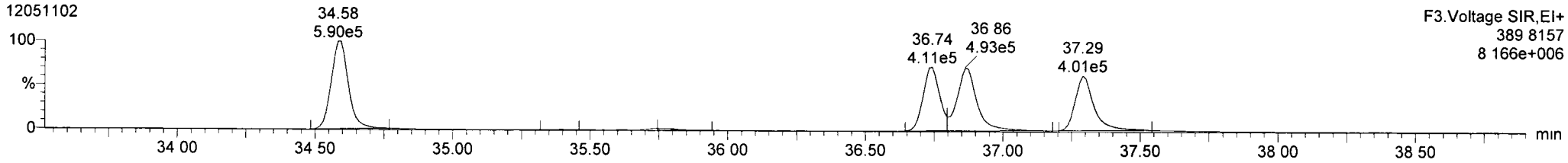
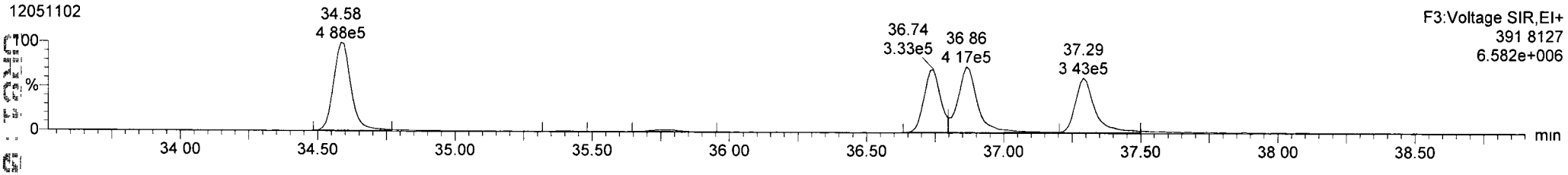


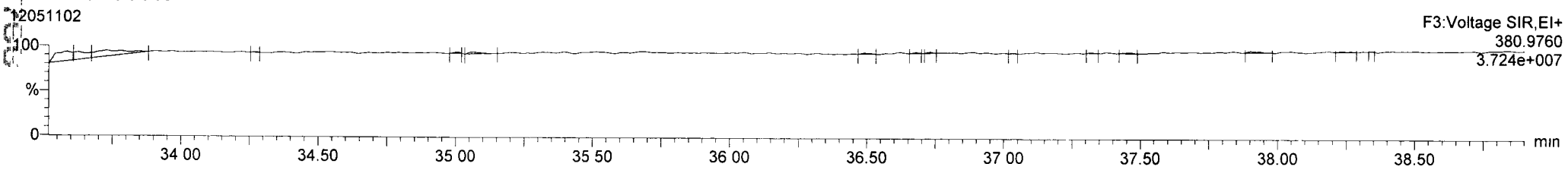
Total-hexadioxins



Total-hexadioxins



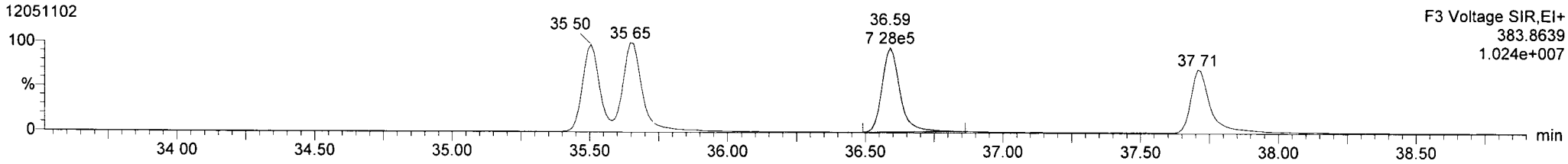
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290 PRO\120511OPEN qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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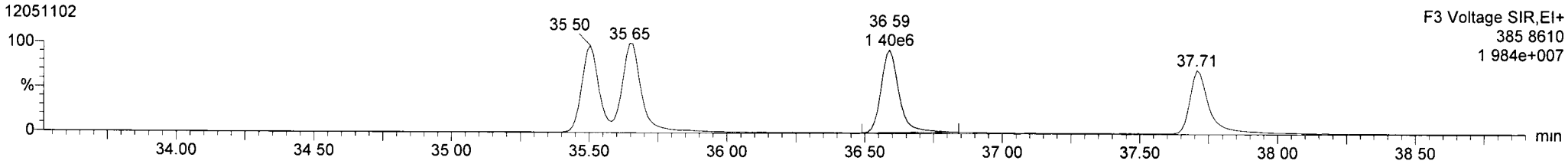
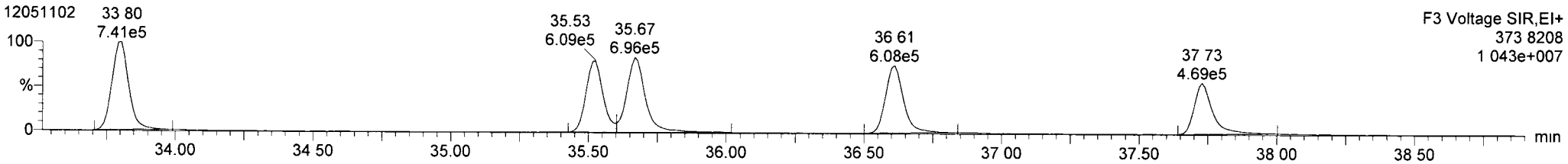
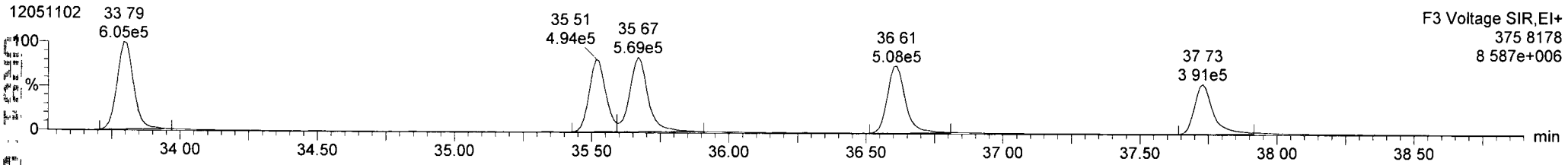


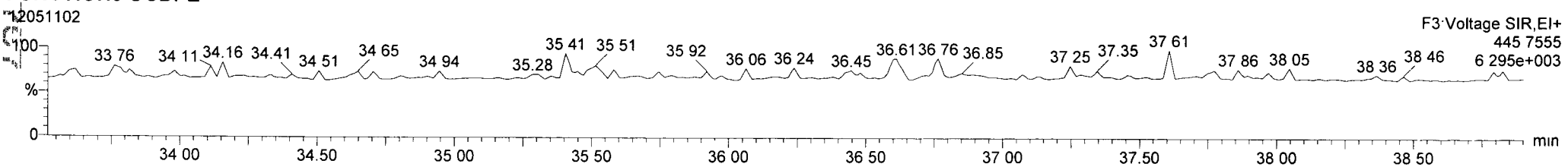
Total-hexafurans



Total-hexafurans



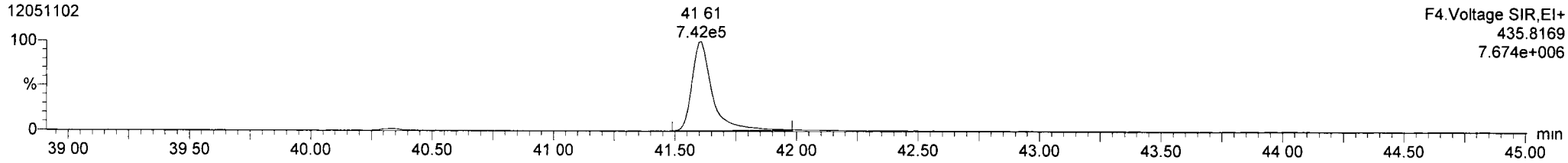
FUNCTION3 OCDPE



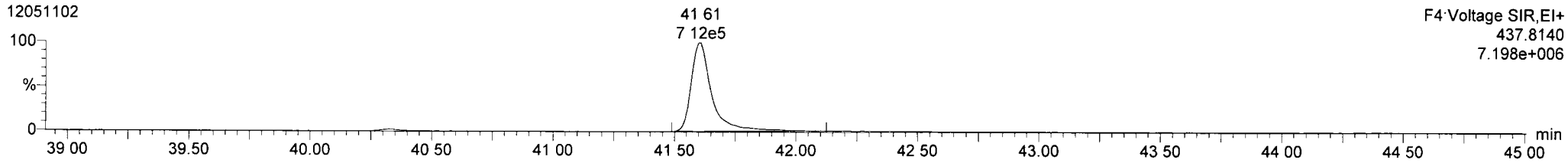
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

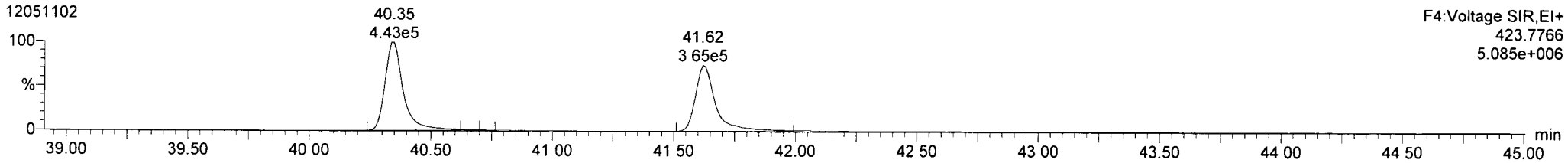
13C-1234678-HpCDD



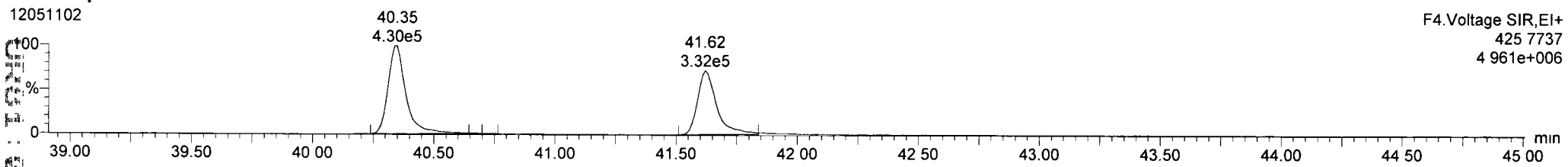
13C-1234678-HpCDD



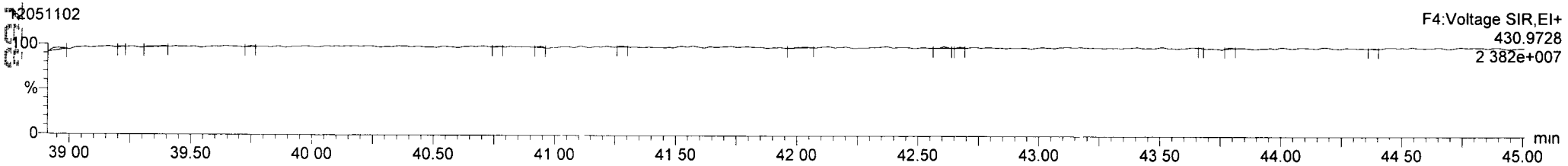
Total-heptadioxins



Total-heptadioxins



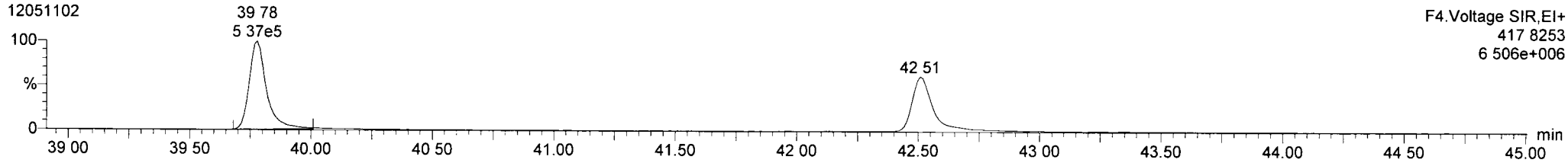
FUNCTION4 PFK



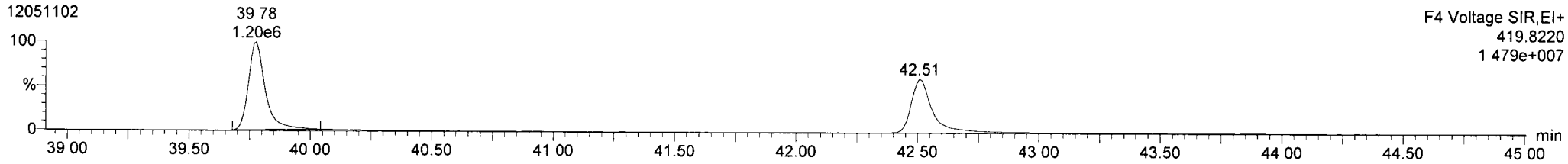
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47 00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04 14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



13C-1234678-HpCDF



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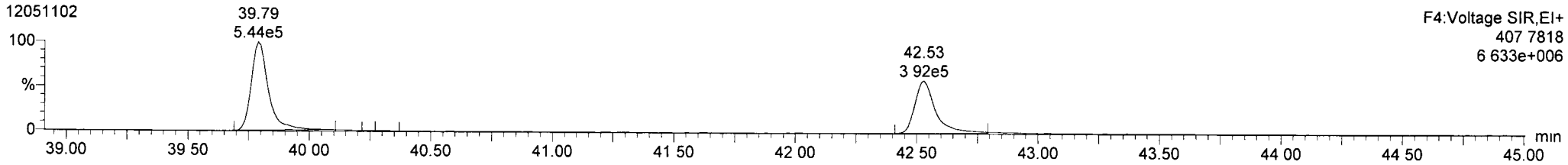

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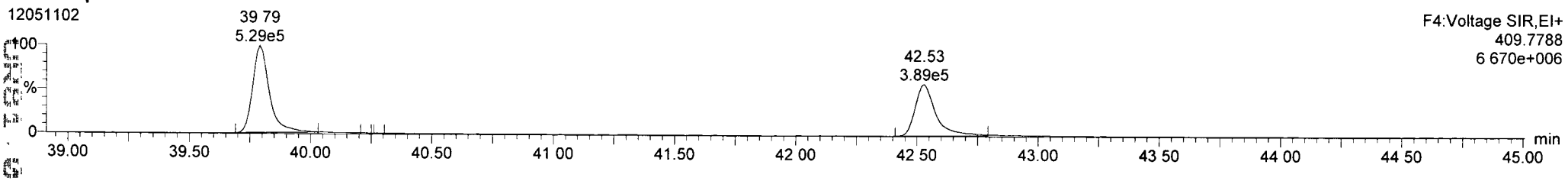
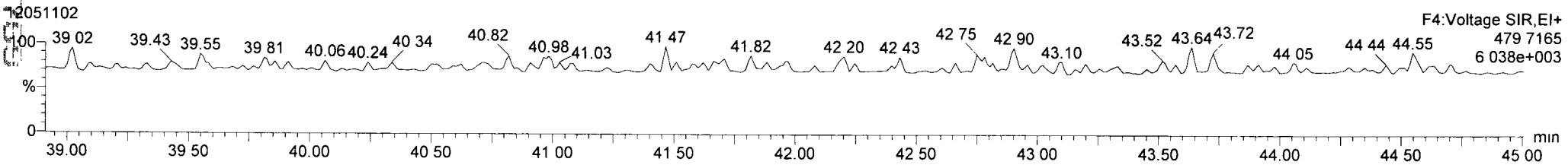


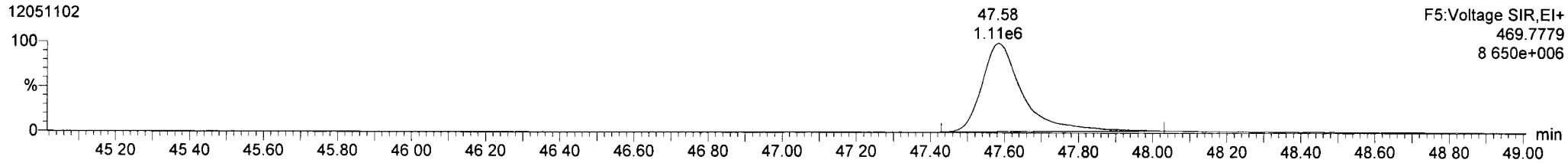
FUNCTION4 NCDPE



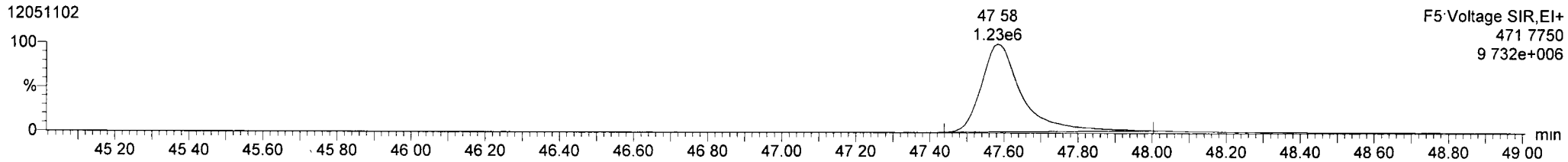
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10.04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-OCDD



13C-OCDD



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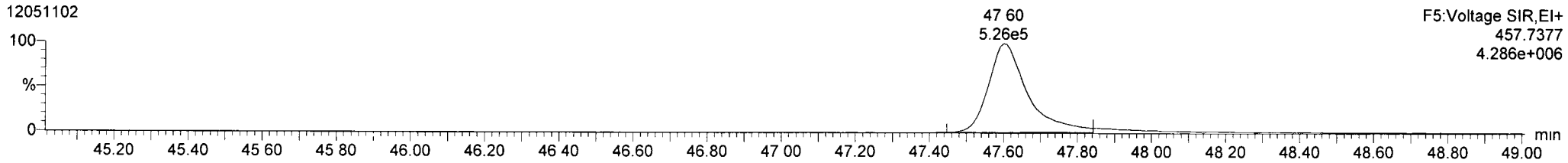
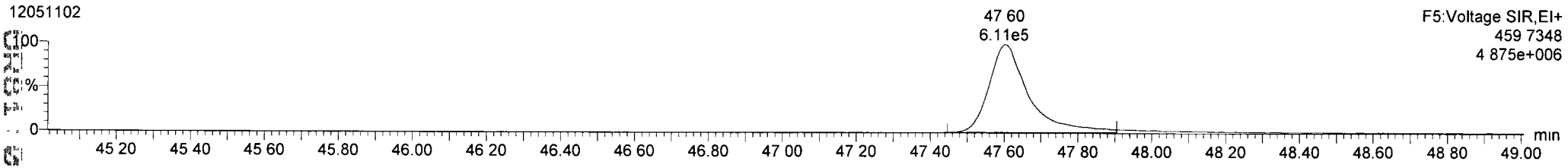
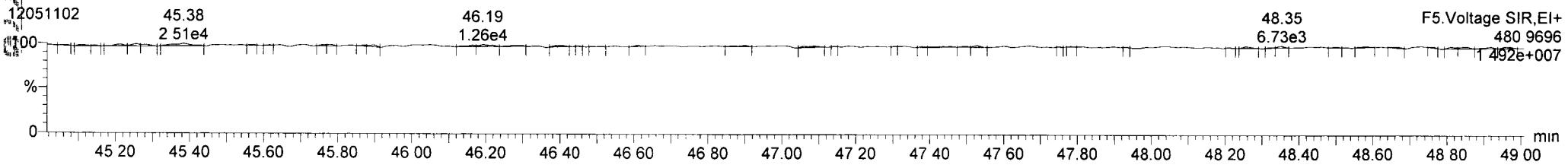


OCDD



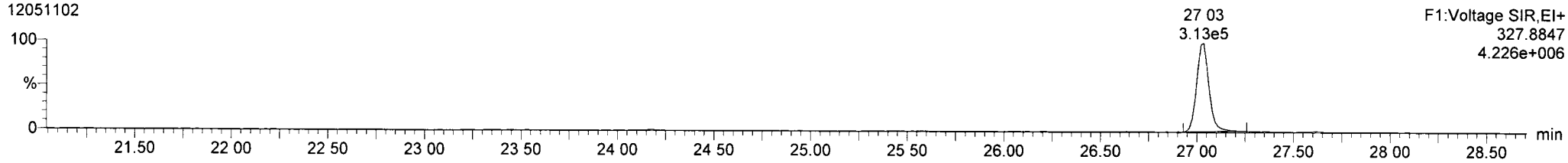
FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511OPEN.qld
Last Altered: Friday, May 11, 2012 11:47:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 10:04:14 Pacific Daylight Time

Name: 12051102, Date: 11-May-2012, Time: 10:17:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



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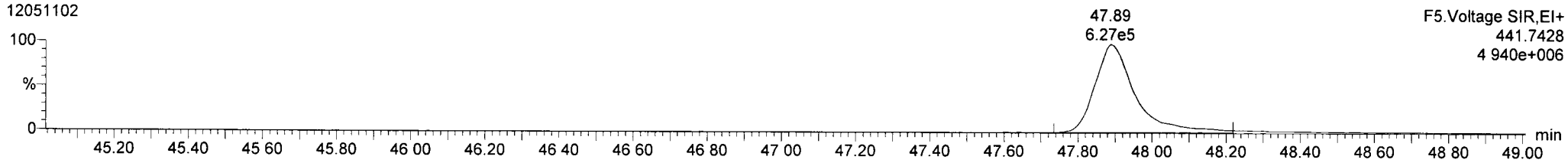

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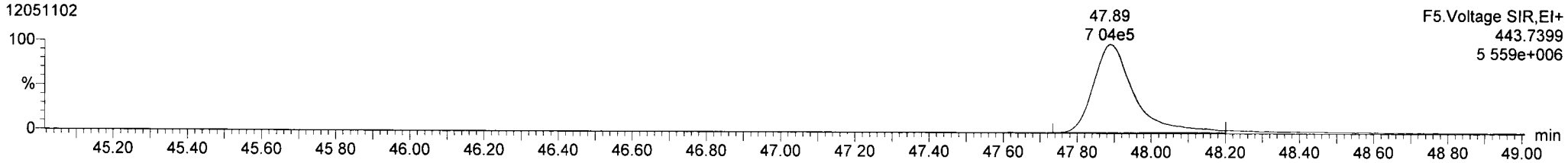
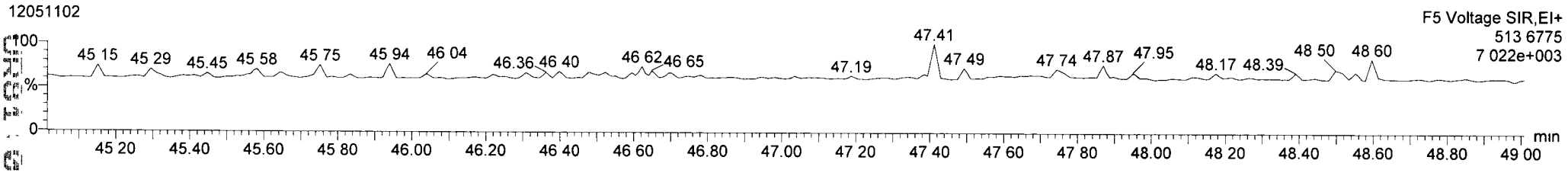


FUNCTION5 DCDPE



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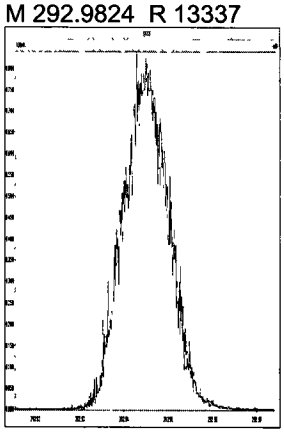
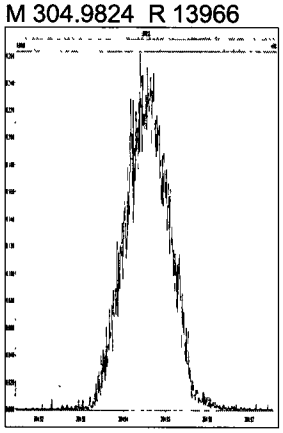
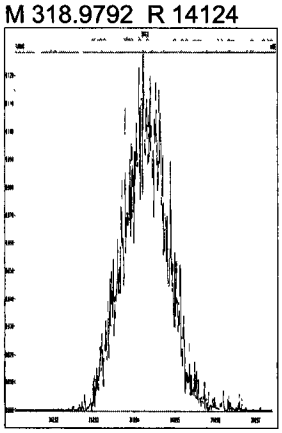
M 292.9824 R 13337



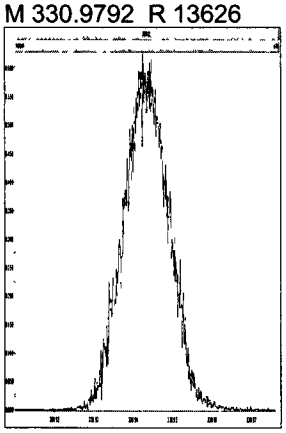
M 304.9824 R 13966



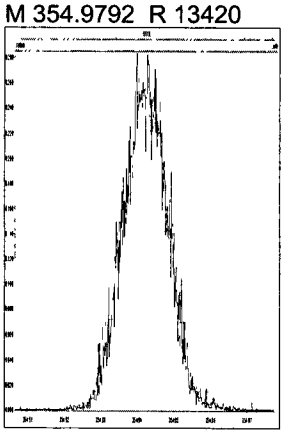
M 318.9792 R 14124



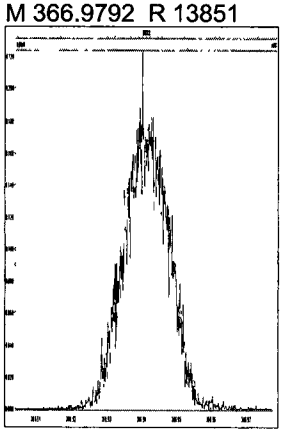
M 330.9792 R 13626



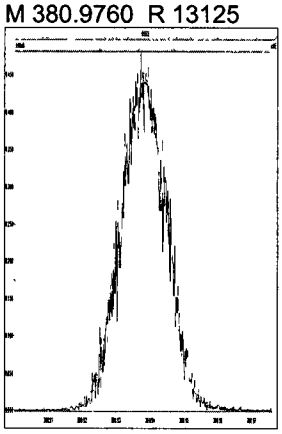
M 354.9792 R 13420



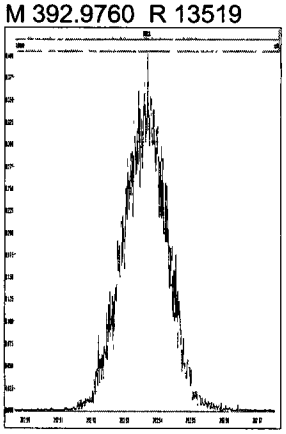
M 366.9792 R 13851



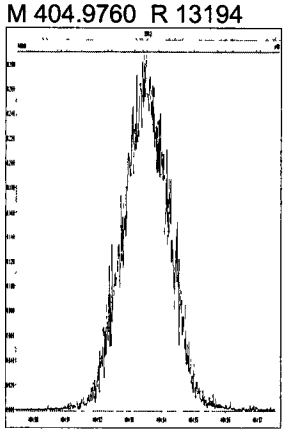
M 380.9760 R 13125



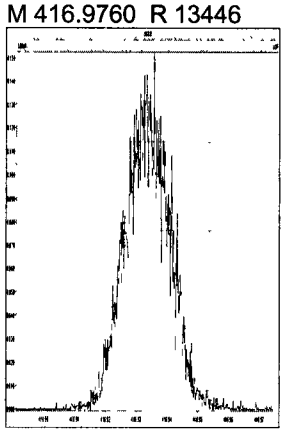
M 392.9760 R 13519



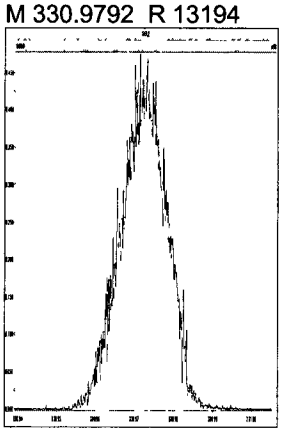
M 404.9760 R 13194



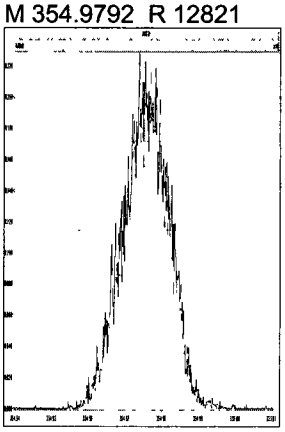
M 416.9760 R 13446



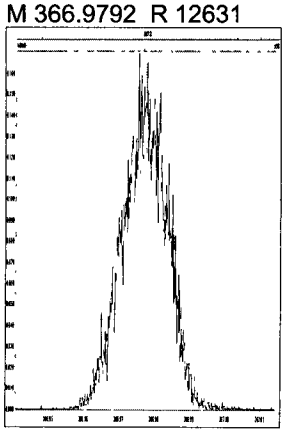
M 330.9792 R 13194



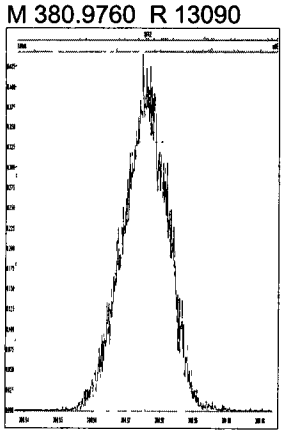
M 354.9792 R 12821



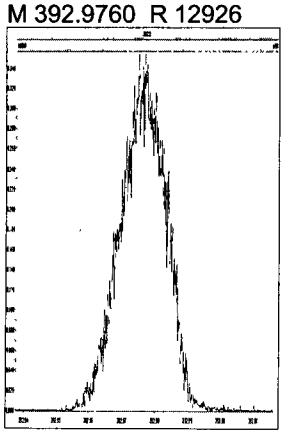
M 366.9792 R 12631



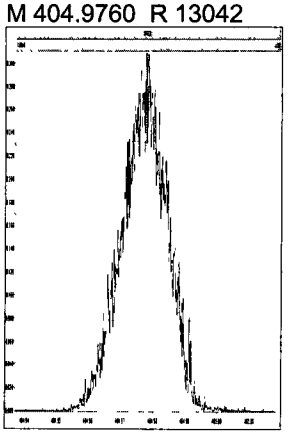
M 380.9760 R 13090



M 392.9760 R 12926



M 404.9760 R 13042



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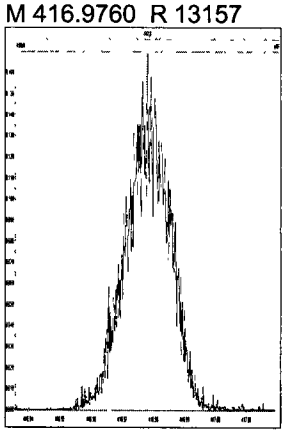
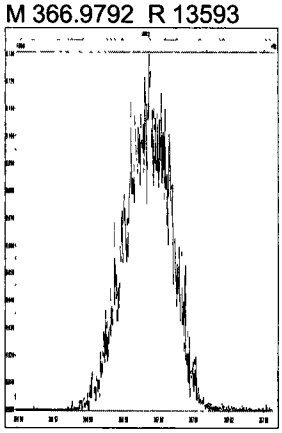
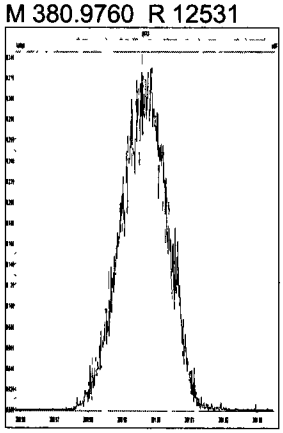
M 416.9760 R 13157



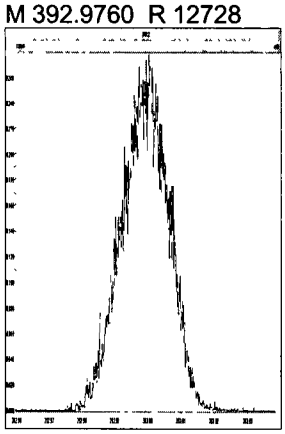
M 366.9792 R 13593



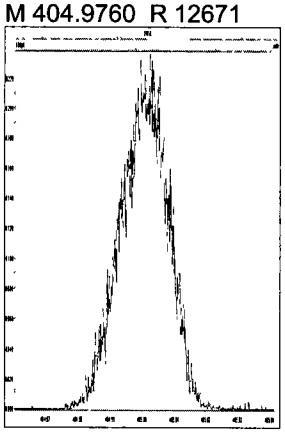
M 380.9760 R 12531



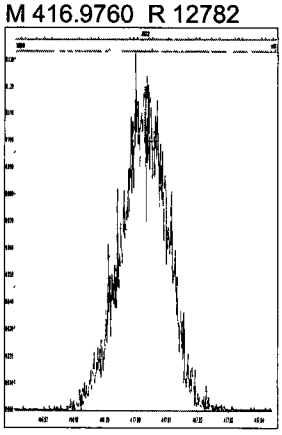
M 392.9760 R 12728



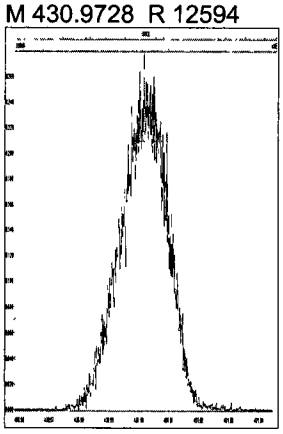
M 404.9760 R 12671



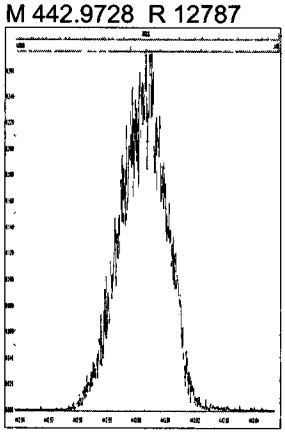
M 416.9760 R 12782



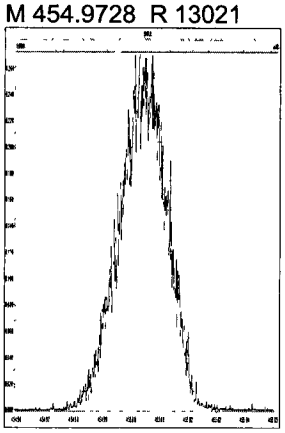
M 430.9728 R 12594



M 442.9728 R 12787



M 454.9728 R 13021



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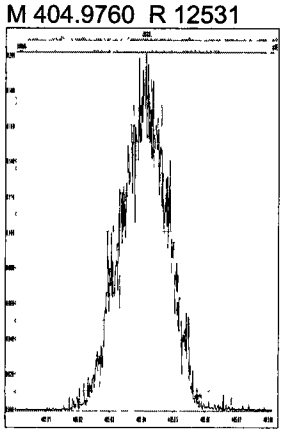
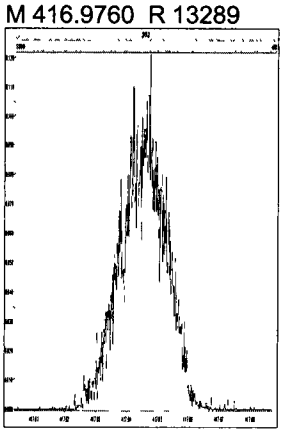


M 416.9760 R 13289



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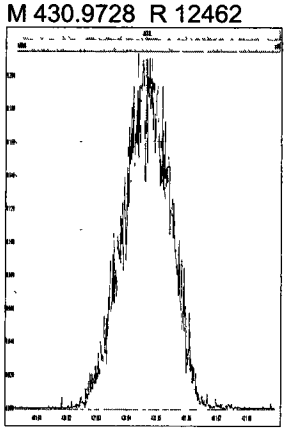
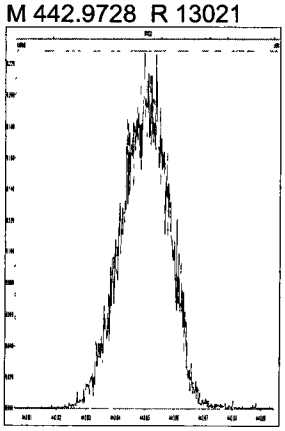
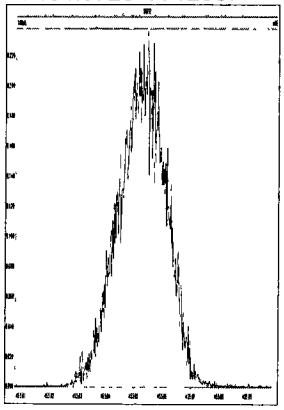


M 442.9728 R 13021



M 454.9728 R 12987



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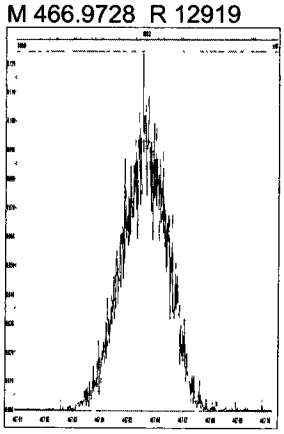
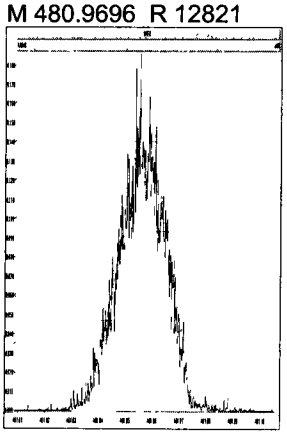


M 480.9696 R 12821



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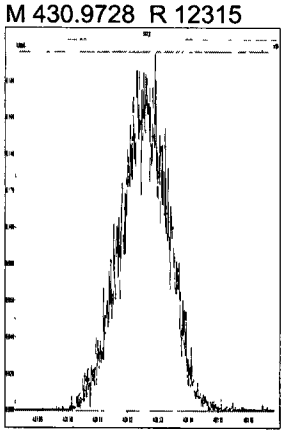

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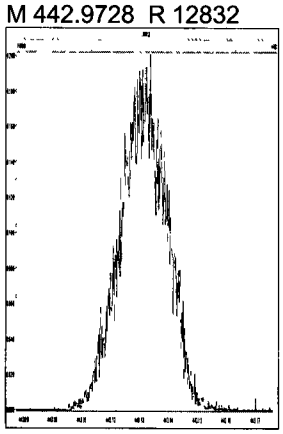

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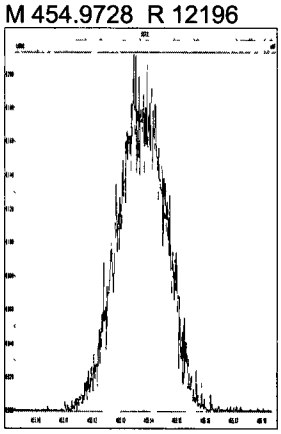

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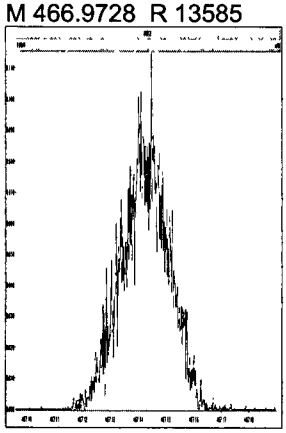
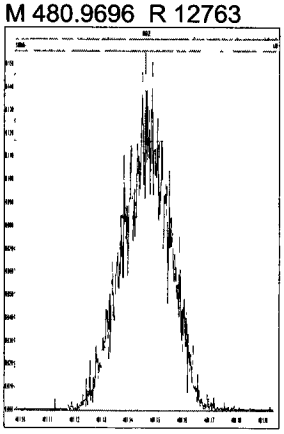


M 480.9696 R 12763



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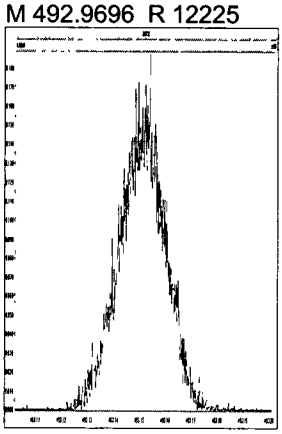
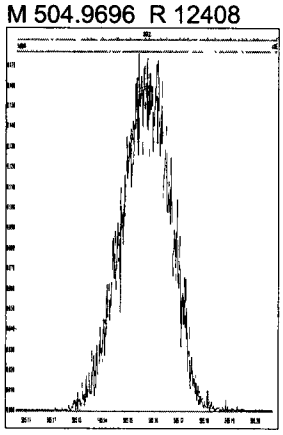


M 504.9696 R 12408



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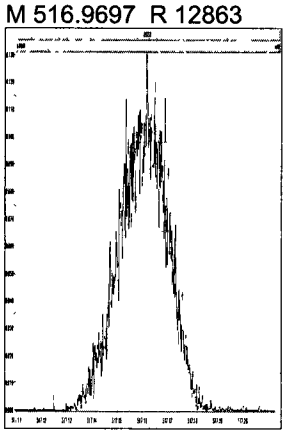
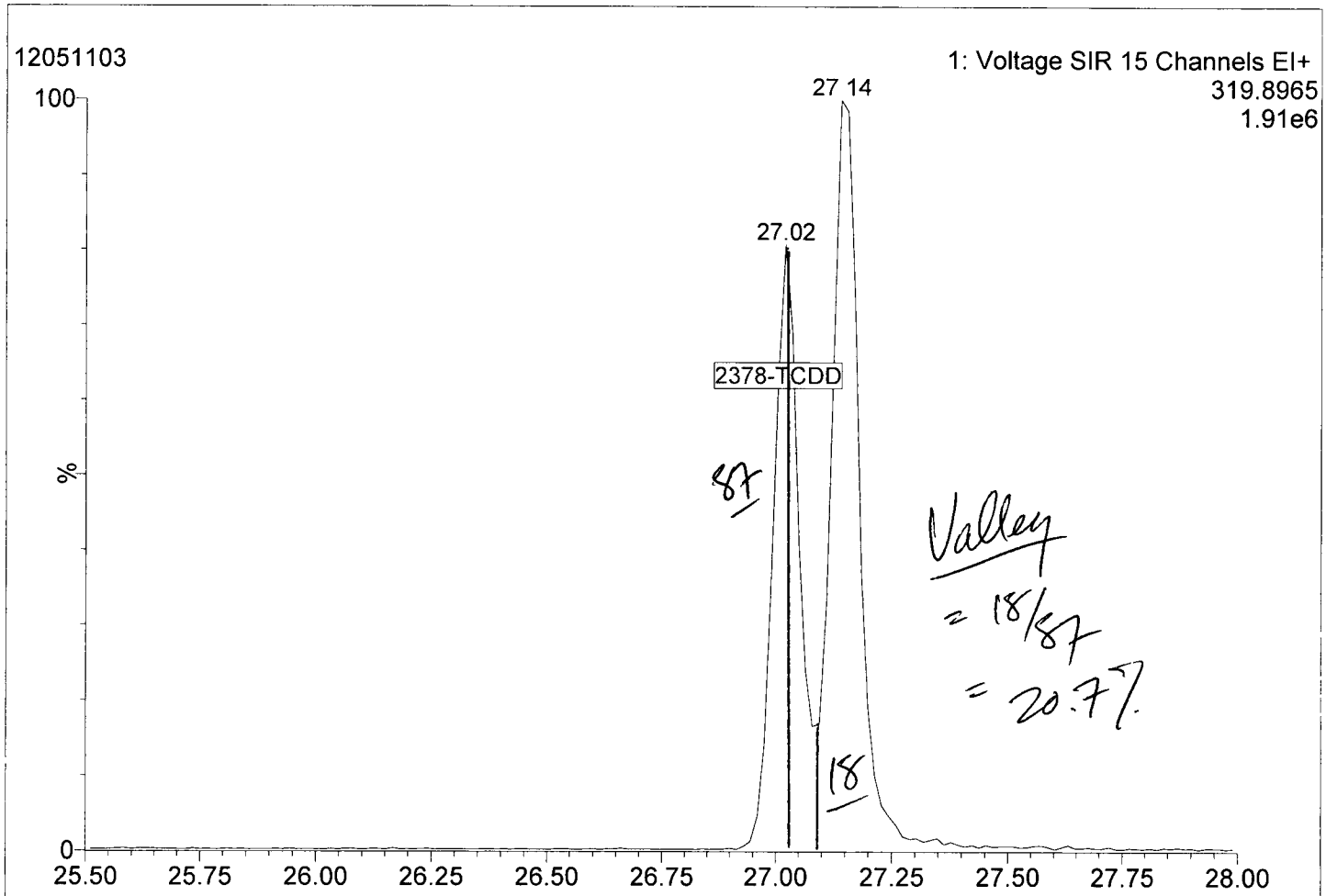
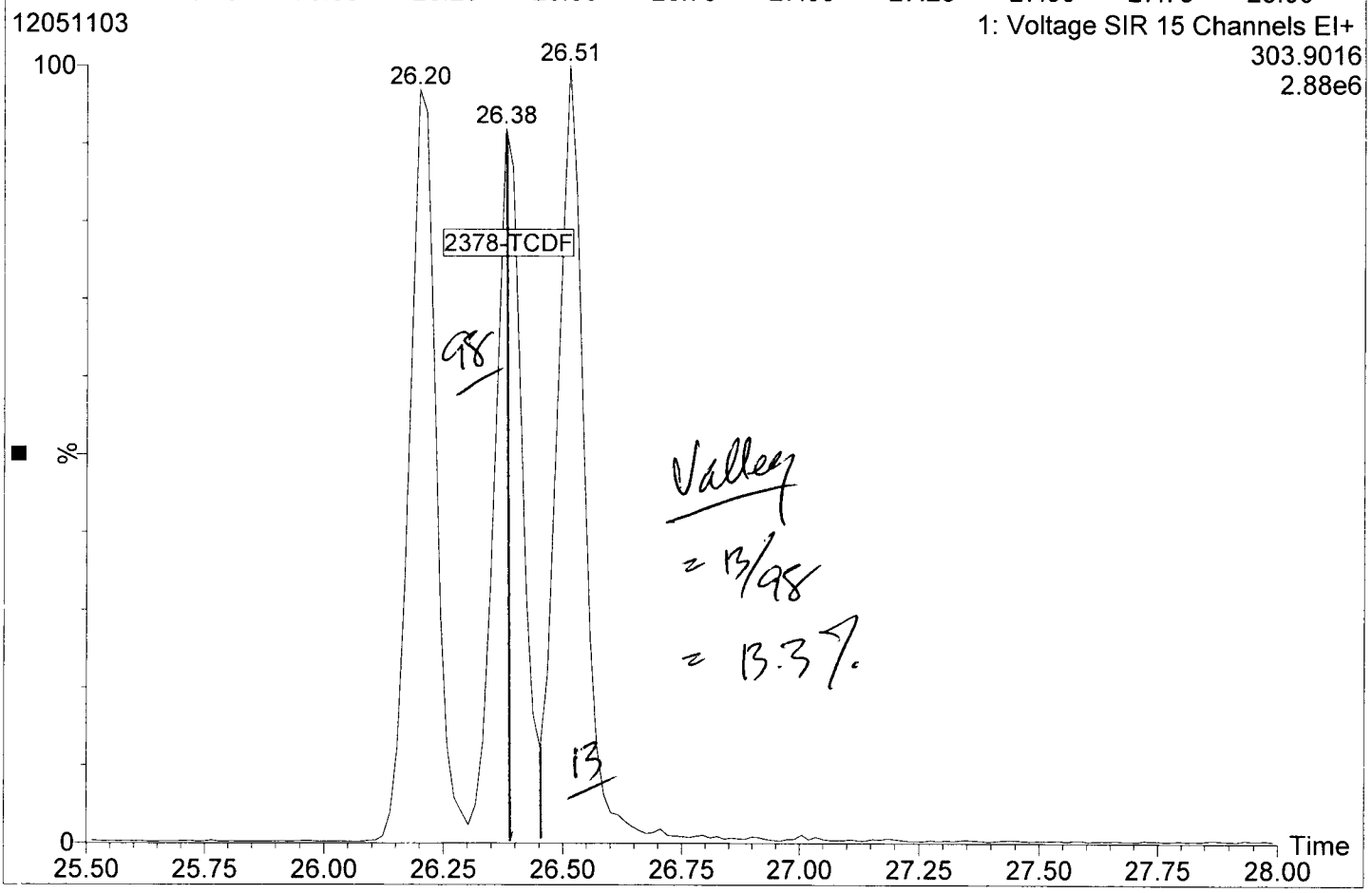



12051103
1: Voltage SIR 15 Channels EI+
319.8965
1.91e6
100
%
0
27.14
27.02
2378-TCDD
87
18
Valley
= 18/87
= 20.7%
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00


12051103
1: Voltage SIR 15 Channels EI+
303.9016
2.88e6
100
%
0
26.20
26.38
26.51
2378-TCDF
98
13
Valley
= 13/98
= 13.3%
Time
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Dilution

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303 9016	26.392	26.393	18959	18959	0.866	bd		0.79	0 77	82.1	NO	2.340	2.340
2	2	12378-PeCDF	339.8597	30 527	30.526	4697	4697	0.907	bb		1.48	1.55	18.3	NO	0.790	0.790
3	3	23478-PeCDF	339 8597	31 875	31.875	0	4103	0.936	bb		1 21	1.55	15 7	YES	0.000	0.692
4	4	123478-HxCDF	373 8208	35.525	35 525	12387	12387	1 082	dd		1.32	1 24	47.1	NO	2.639	2 639
5	5	234678-HxCDF	373.8208	36.621	36.632	0	5638	1 070	db		2.76	1.24	35.1	YES	0 000	1 172
6	6	123678-HxCDF	373.8208	35.679	35.689	8393	8393	1.048	db		1.14	1 24	29 9	NO	1.626	1.626
7	7	123789-HxCDF	373 8208	37.717	37.729	0	3576	1.020	bd		1.96	1.24	28 1	YES	0.000	0 647
8	8	1234678-HpCDF	407 7818	39 800	39.809	175028	175028	1.214	bd		1 02	1.05	408.6	NO	40 386	40 386
9	9	1234789-HpCDF	407.7818	42 529	42.531	8486	8486	1 254	bd		1.12	1.05	19 3	NO	2 547	2 547
10	10	OCDF	441.7428	47.913	47 894	332593	332593	1 105	bd		0.89	0 89	470.2	NO	156.913	156.913
11	11	2378-TCDD	319.8965	27.034	27.018	2362	2362	1 046	bd		0.75	0.77	14 9	NO	0.387	0.387
12	12	12378-PeCDD	355.8546	32.105	32.104	6801	6801	0 973	bb		1.54	1.55	41 5	NO	1 776	1 776
13	13	123478-HxCDD	389 8157	36 764	36.775	14091	14091	0.935	bd		1.26	1.24	30.5	NO	4.349	4 349
14	14	123678-HxCDD	389 8157	36.895	36.884	43290	43290	0.878	dd		1.20	1 24	76.4	NO	11 258	11 258
15	15	123789-HxCDD	389.8157	37.312	37 279	24674	24674	0.839	bb		1.14	1.24	47.0	NO	7.500	7.500
16	16	1234678-HpCDD	423.7766	41.630	41 621	943198	943198	0.974	bb		0.98	1.05	792 3	NO	315.838	315.838
17	17	OCDD	457.7377	47 626	47 622	5356605	5356605	0 950	bd		0 86	0 89	2768 5	NO	2939.911	2939.9...
18	18	13C-2378-TCDF	315 9419	26.377	26.377	935377		1.484	bb	14 1	0.78	0 77	2176.2	NO	14.140	
19	19	13C-12378-PeCDF	351 9000	30.505	30 518	655643		1.048	bd	14 0	1.54	1 55	1607.5	NO	14.038	
20	20	13C-23478-PeCDF	351.9000	31.853	31 856	633891		1 003	bb	14.2	1.57	1 55	1576.5	NO	14.176	
21	21	13C-123478-HxCDF	383 8639	35 514	35 525	433803		1 186	bd	14.7	0 52	0.51	696 8	NO	14 735	
22	22	13C-123678-HxCDF	383.8639	35 667	35.679	492496		1 315	db	15 1	0.54	0 51	708 8	NO	15.083	
23	23	13C-234678-HxCDF	383.8639	36 610	36.610	449585		1.223	bb	14.8	0.53	0 51	684 8	NO	14.801	
24	24	13C-123789-HxCDF	383.8639	37.717	37 717	541712		1 056	bd	20.7	0.50	0 51	843 9	NO	20.650	
25	25	13C-1234678-HpCDF	417 8253	39.789	39 800	356861		1 011	bd	14 2	0.42	0.44	634.3	NO	14.210	
26	26	13C-1234789-HpCDF	417.8253	42 518	42.551	265709		0 741	bb	14 5	0.46	0.44	415 0	NO	14 450	
27	27	13C-1234-TCDD	331.9368	26 198	26.272	4456383		1.000	bb	100.0	0.78	0 77	8472.5	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.004	27.019	583737		0 956	bb	13.7	0 76	0 77	1001 2	NO	13.696	
29	29	13C-12378-PeCDD	367 8949	32 094	32.108	393337		0.663	bb	13 3	1.62	1 55	1442 9	NO	13 304	
30	30	13C-123478-HxCDD	401.8559	36 753	36 742	346352		1 024	bd	13.6	1 23	1.24	492 4	NO	13 623	
31	31	13C-123678-HxCDD	401 8559	36 873	36.873	438058		1 113	db	15 9	1.27	1 24	531 9	NO	15 856	
32	32	13C-1234678-HpCDD	435 8169	41 609	41.653	306511		0.815	bb	15 1	1.10	1 05	708.5	NO	15.144	
33	33	13C-OCDD	469.7779	47 608	47 668	383556		0.717	bb	10 8	0 93	0 89	496.7	NO	21 542	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed. Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

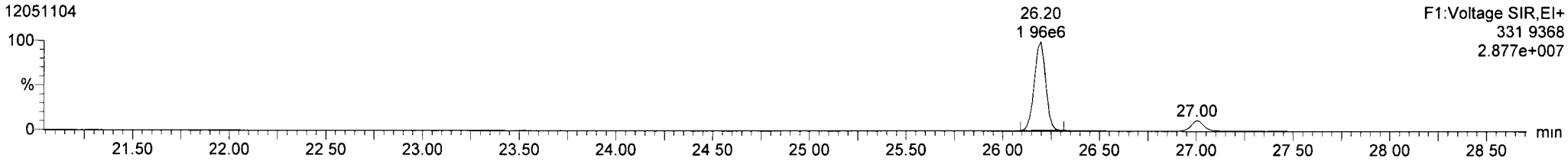
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 301	37.368	2483032		1.000	bd	100 0	1.24	1 24	3048.3	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.370			0.866							9 561	13 266
36	36	Total-penta1	339 8597		28.210										14.257	14.257
37	37	Total-pentafurans	339 8597		30 790			0.921							1.510	7.207
38	38	Total-hexafurans	373.8208		35.760			1.055							57.715	59.916
39	39	Total-heptafurans	407.7818		41.160			1.234							145.036	145.742
40	40	Total-Furans	303.9016		0.000			1.050							385.874	398.208
41	41	Total-tetradioxins	319.8965		25.880			1.046							61.146	61.277
42	42	Total-pentadioxins	355 8546		30.950			0.973							65.885	68 629
43	43	Total-hexadioxins	389.8157		35.940			0 884							158.903	159 969
44	44	Total-heptadioxins	423.7766		40.980			0 974							812.422	813 832
45	45	Total-Dioxins	319.8965		0.000			0 942							4038 267	4043.6
46	46	Total-TEQ	319.8965		0.000										4424 141	4441.8...
47	47	37CL-2378-TCDD	327.8847	27.034	27.010	268455		1 037					2102.2		5 808	
48	48	FUNCTION1 PFK	330 9792		0 000											
49	49	FUNCTION2 PFK	366 9792		0 000											
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430 9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0 000	
57	57	FUNCTION4 NCDPE	479 7165		0 000										0.000	
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09.42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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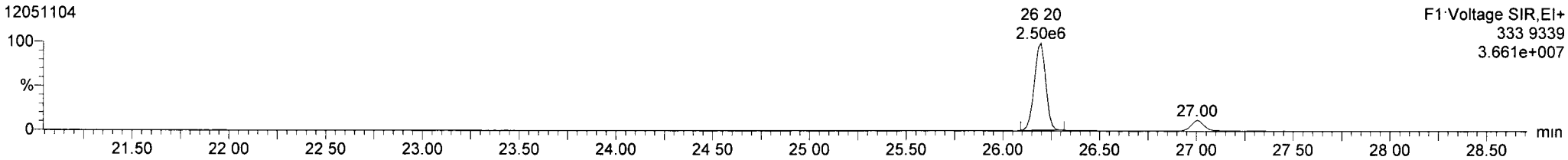

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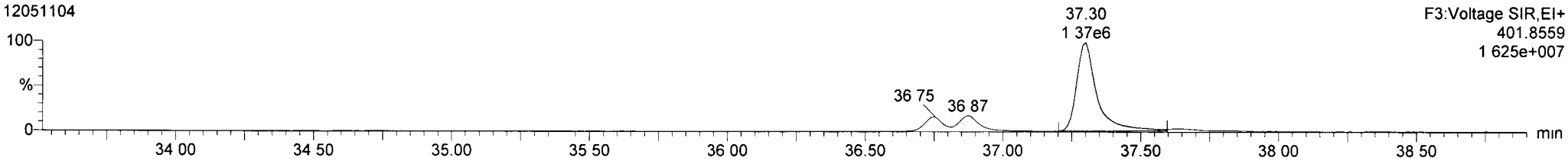

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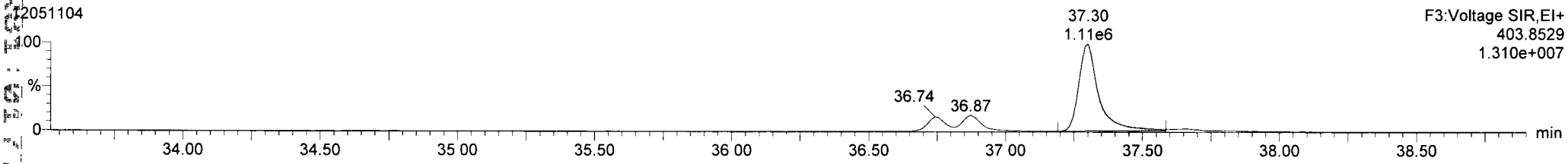

Quantify Sample Report **MassLynx 4.1 SCN 714**
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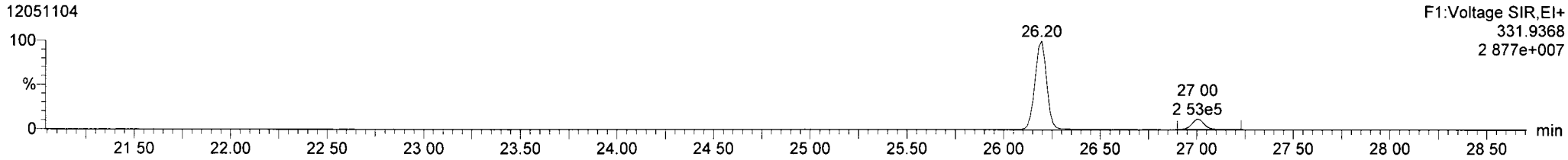
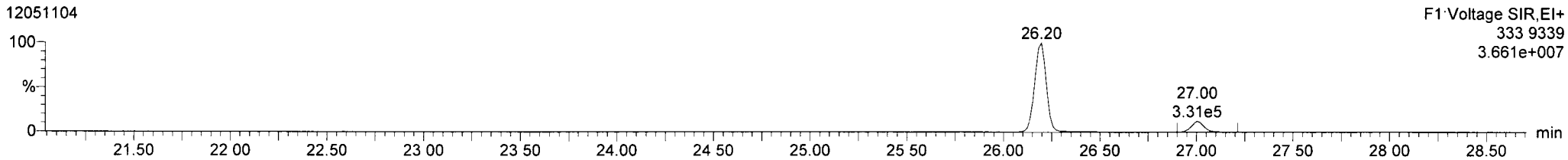
Last Altered: Monday, May 14, 2012 09.42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

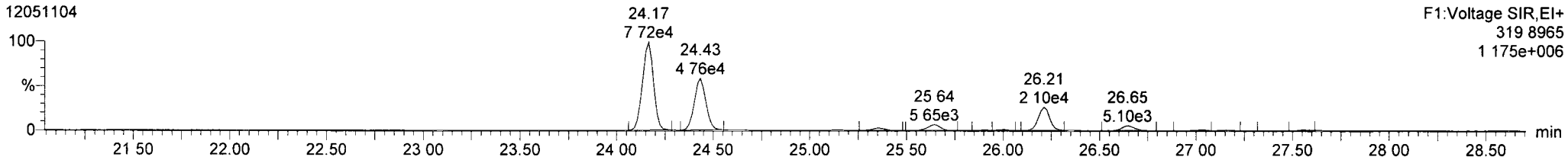
13C-2378-TCDD



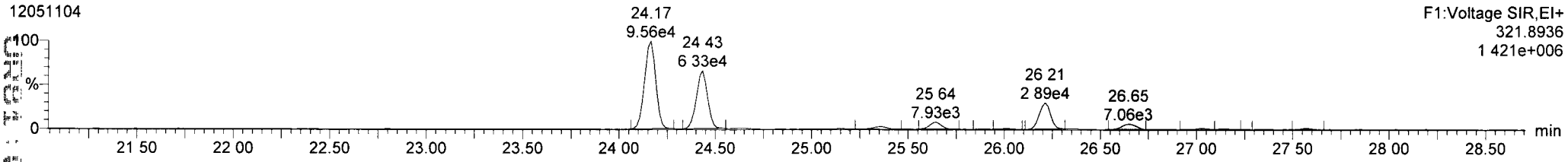
13C-2378-TCDD



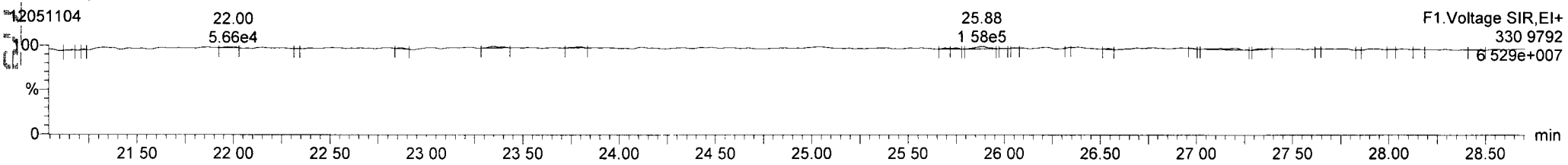
Total-tetradioxins



Total-tetradioxins



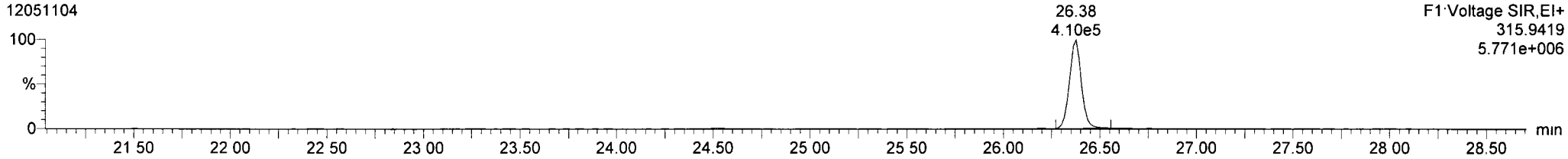
FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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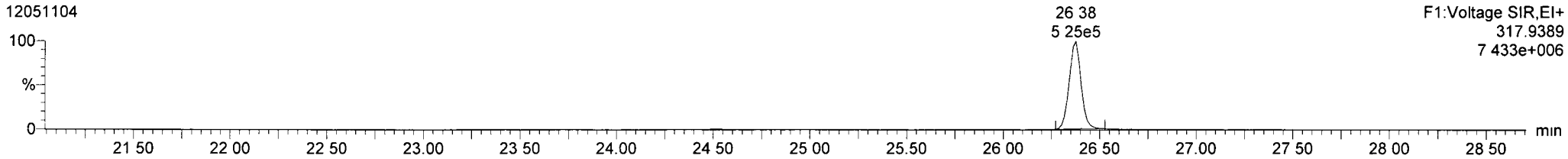
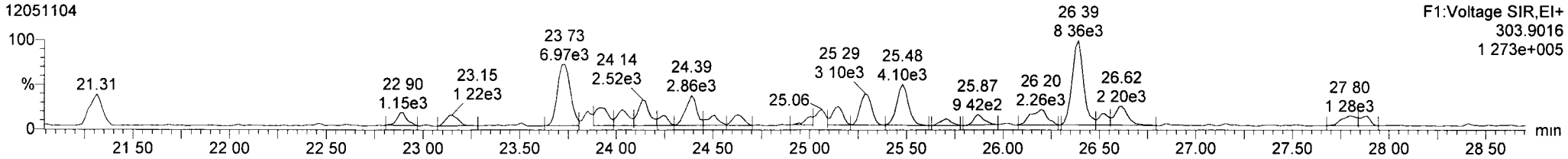
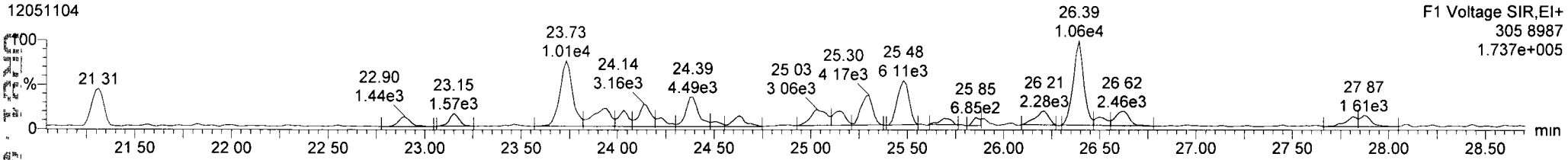


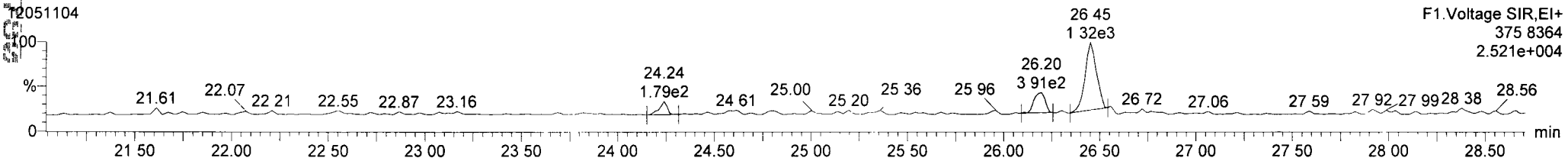
Total-tetrafurans



Total-tetrafurans



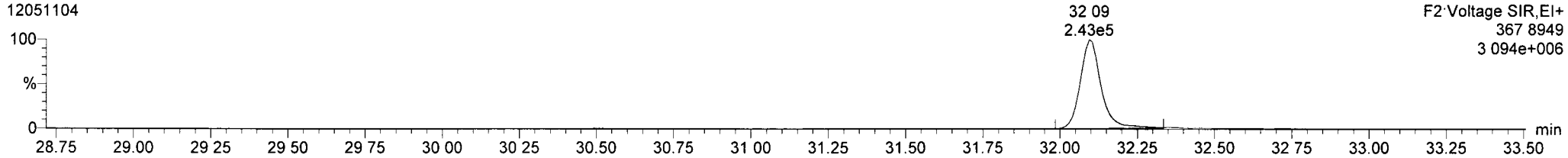
FUNCTION1 HXCDPE



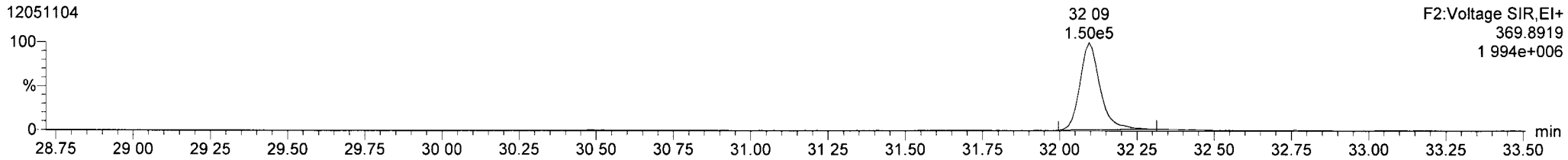
Dataset P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

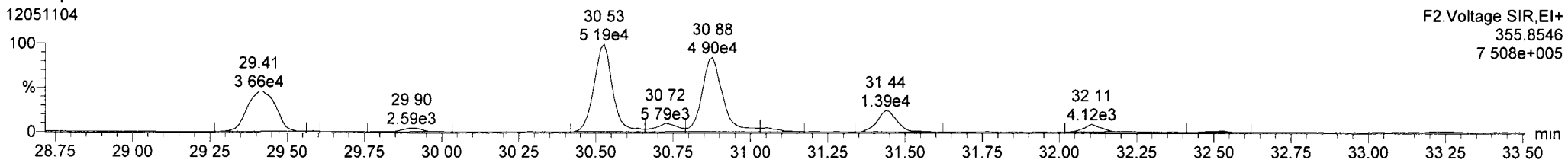
13C-12378-PeCDD



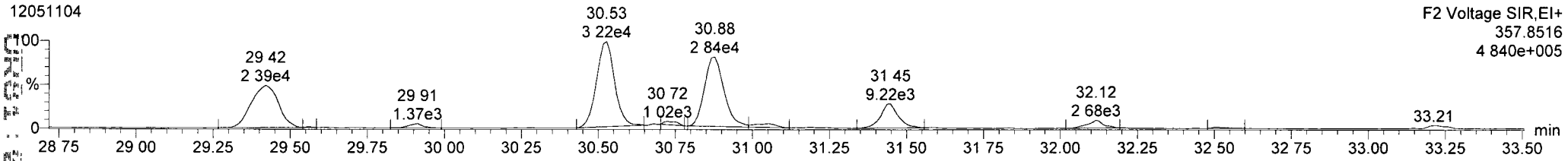
13C-12378-PeCDD



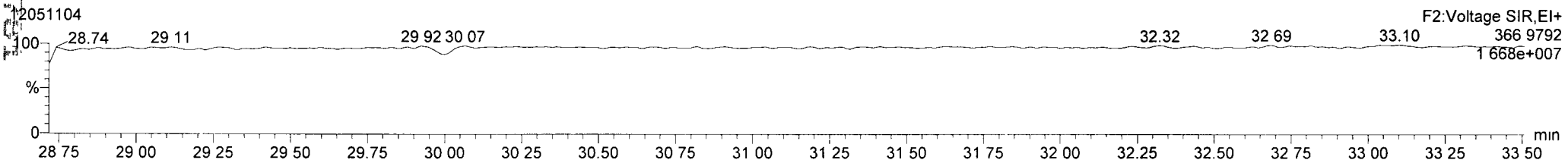
Total-pentadioxins



Total-pentadioxins



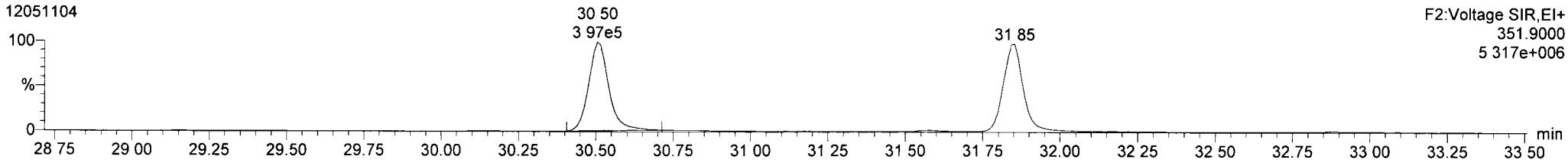
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42.00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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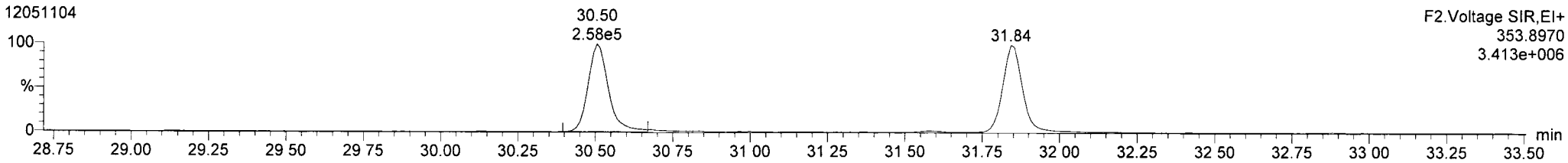
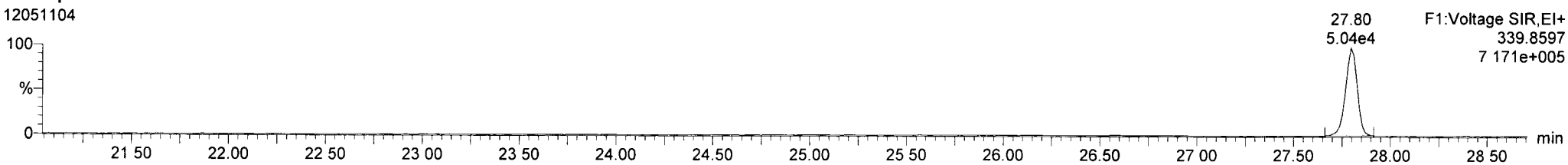


Total-penta1



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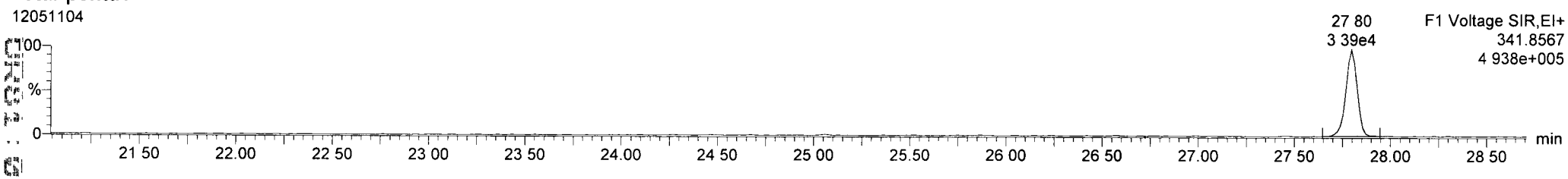
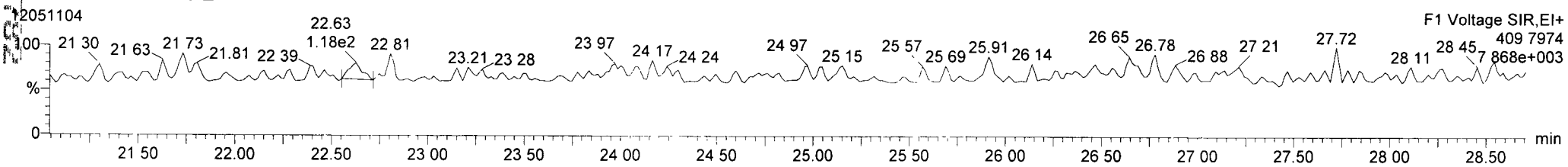


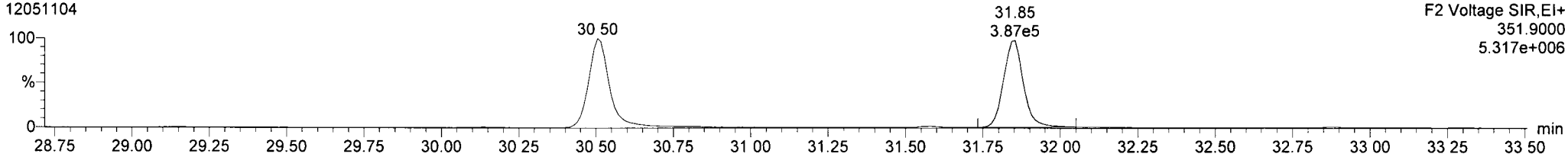
FUNCTION1 HPCDPE



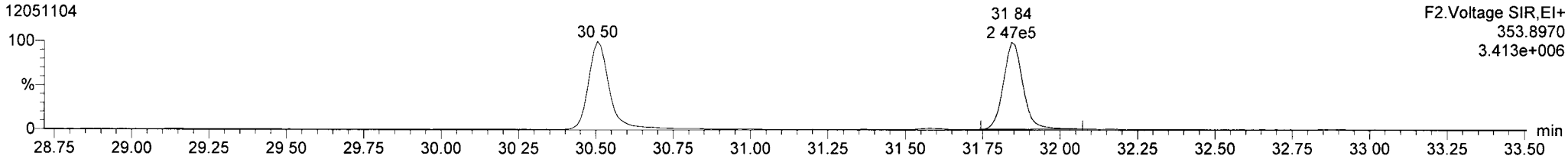
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42 00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

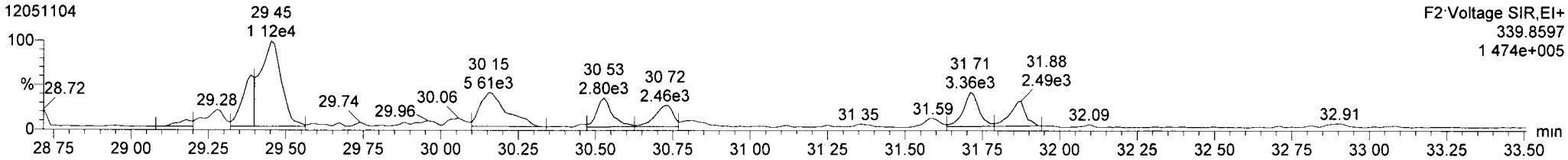
13C-23478-PeCDF



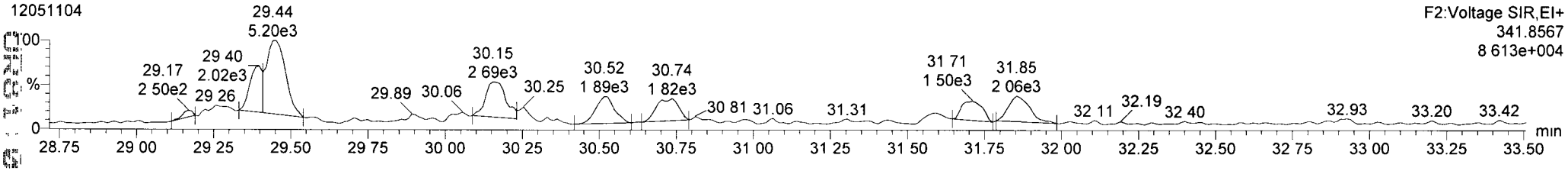
13C-23478-PeCDF



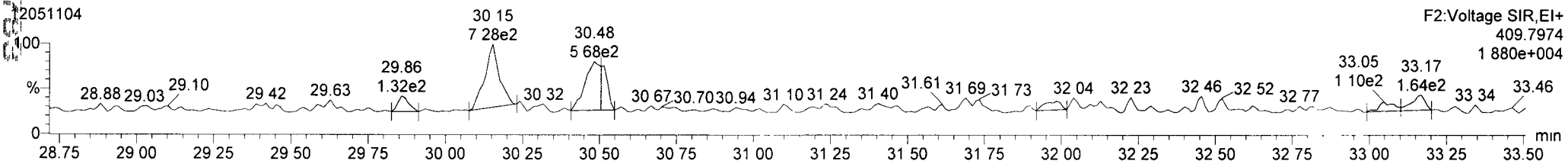
Total-pentafurans



Total-pentafurans

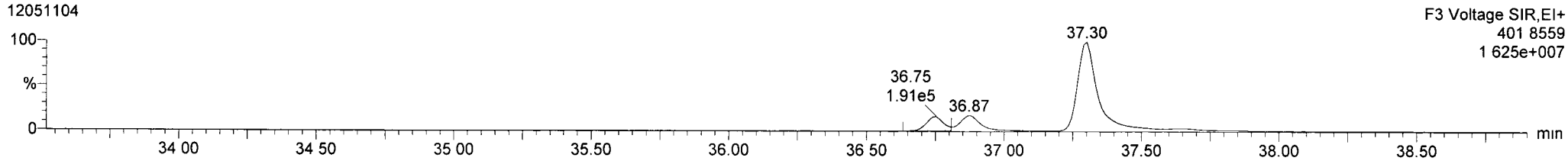


FUNCTION2 HPCDPE



Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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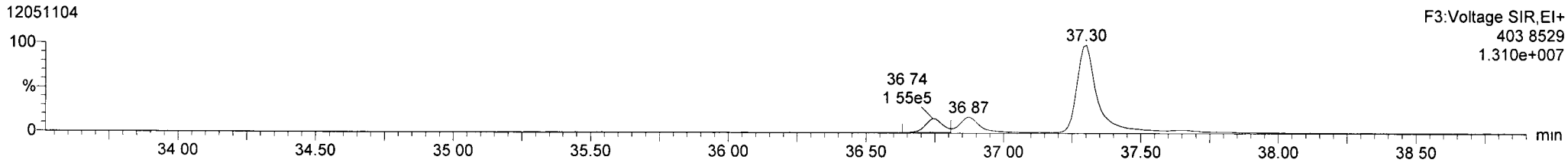
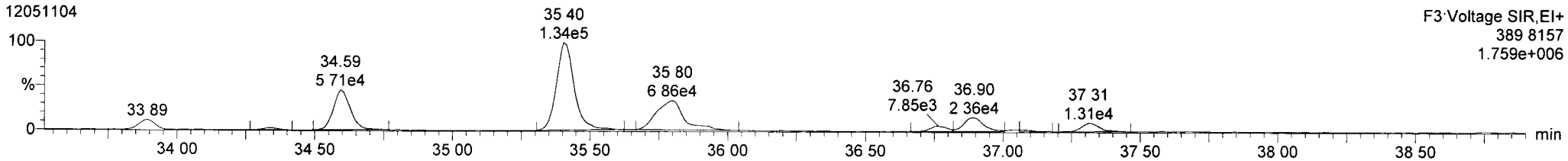
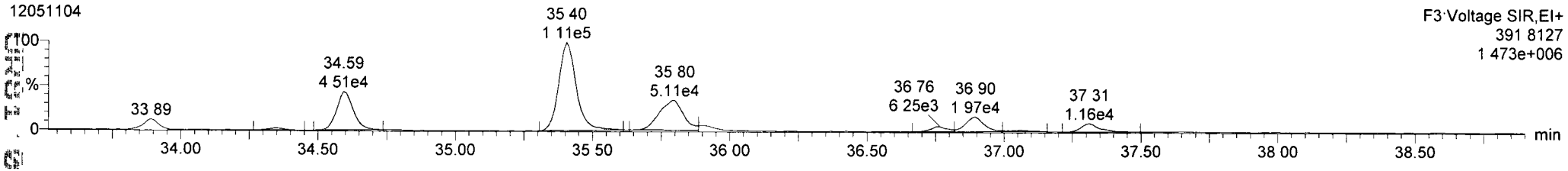


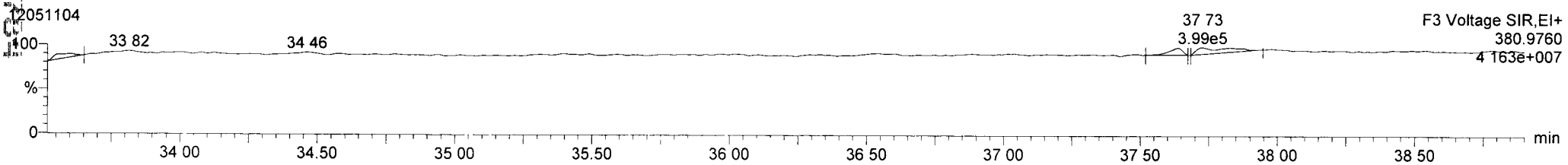
Total-hexadioxins



Total-hexadioxins



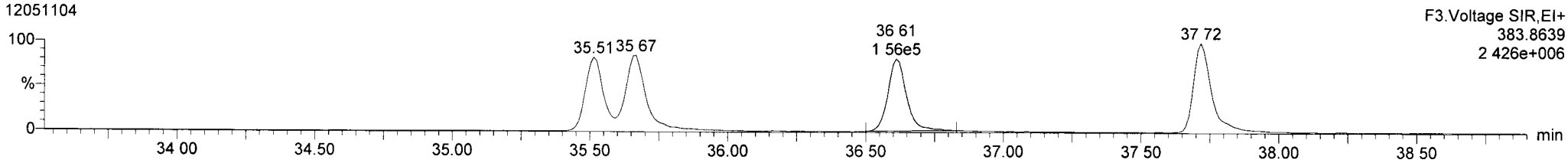
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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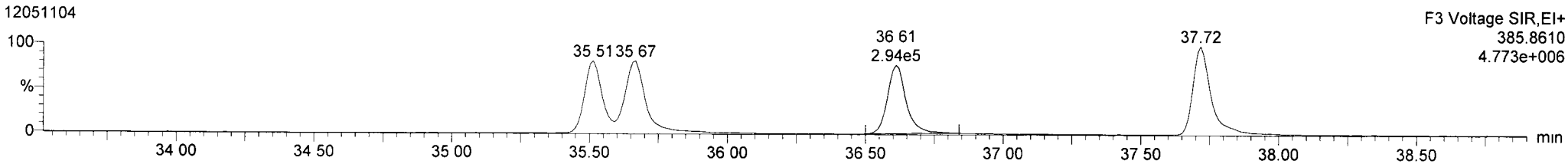
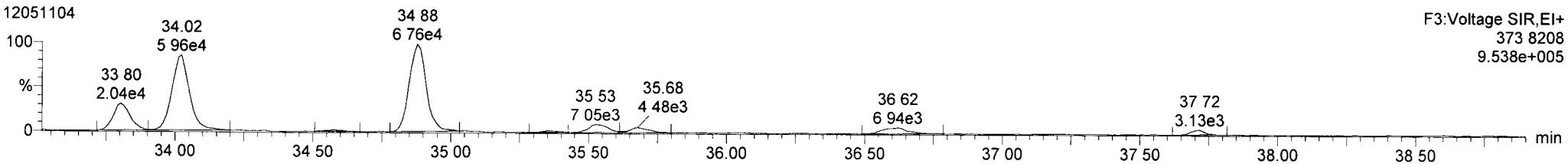


Total-hexafurans



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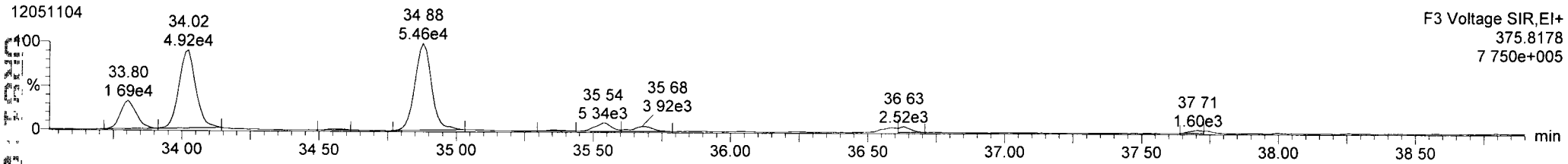
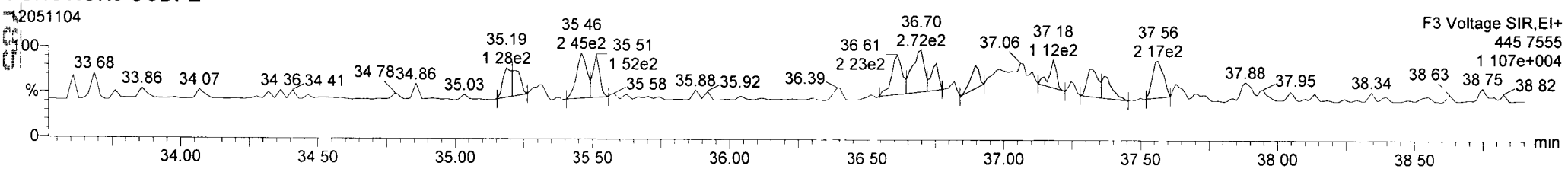


FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P \DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
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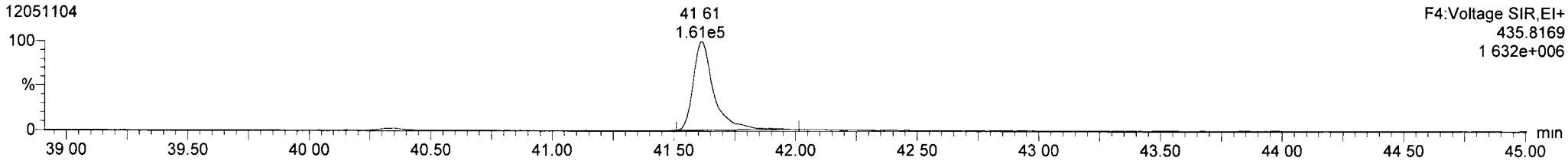
Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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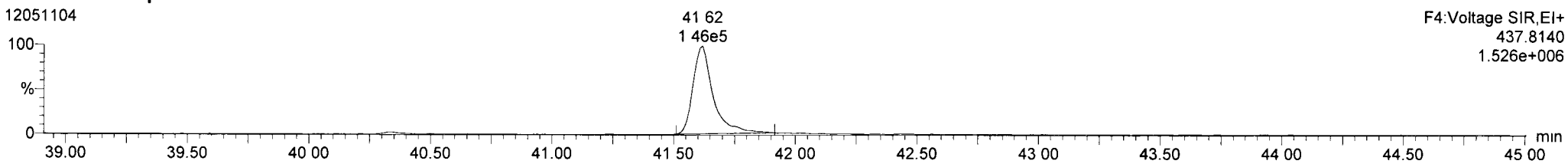
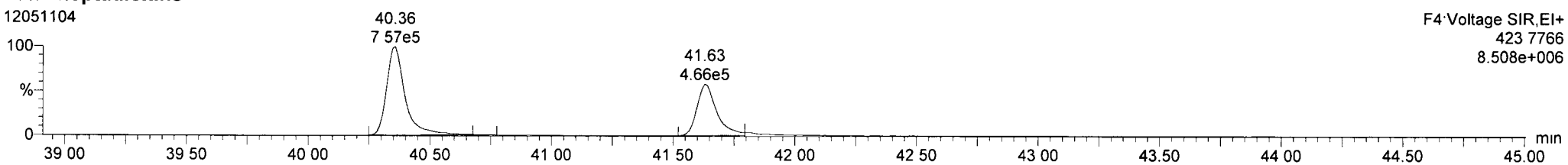


Total-heptadioxins



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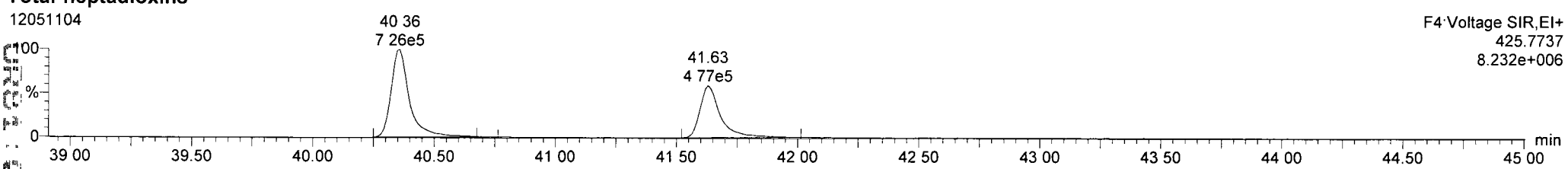

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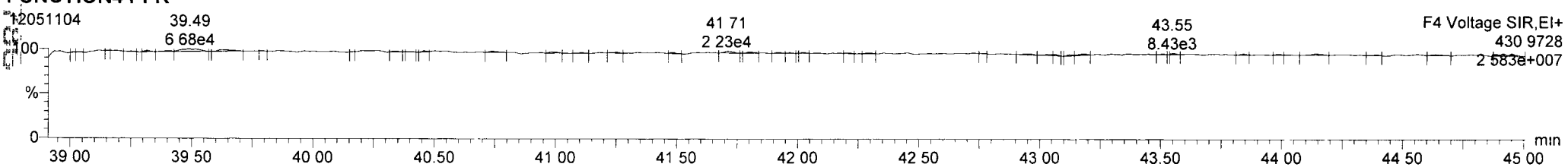
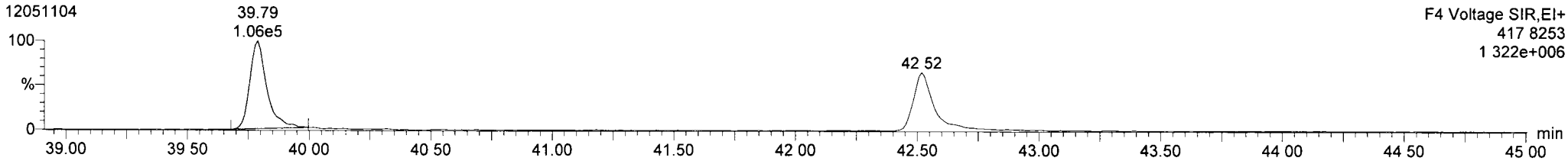


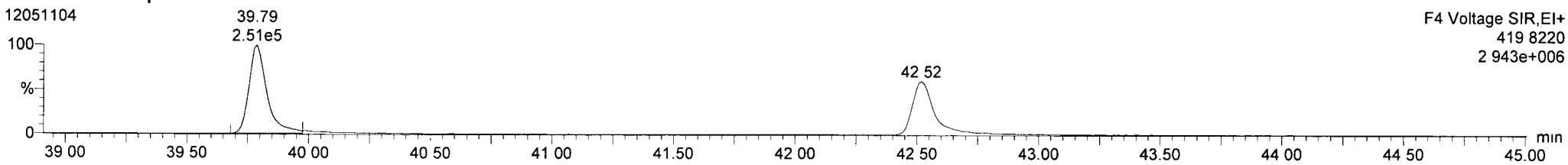
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

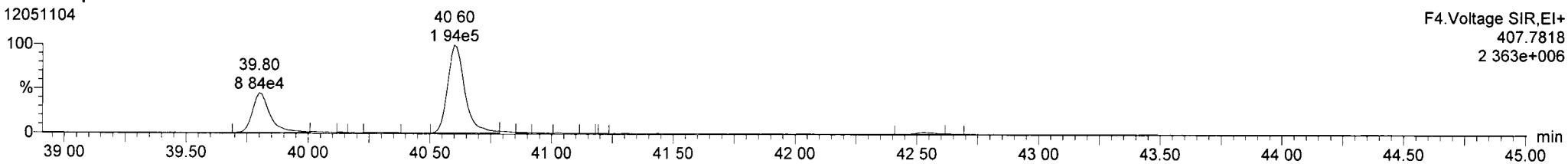
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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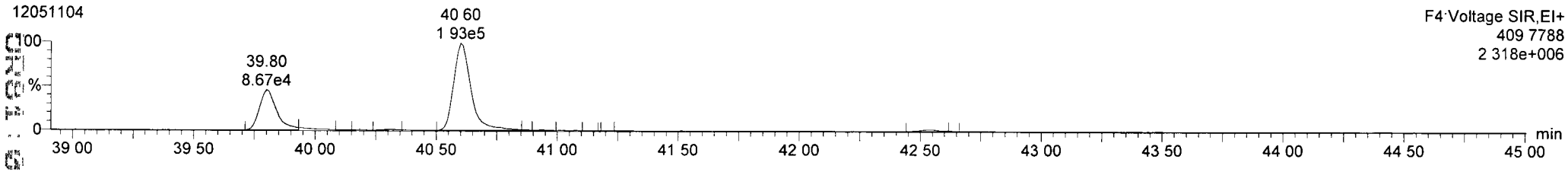
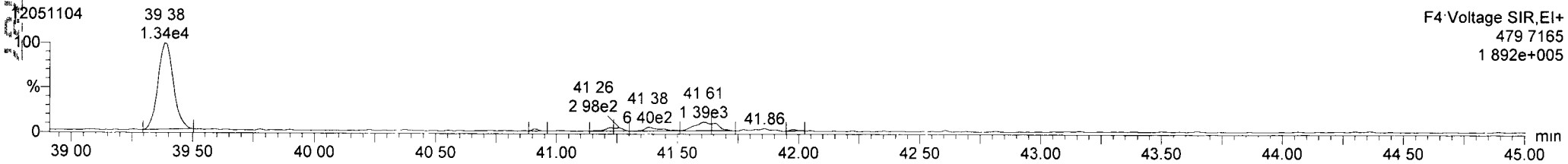


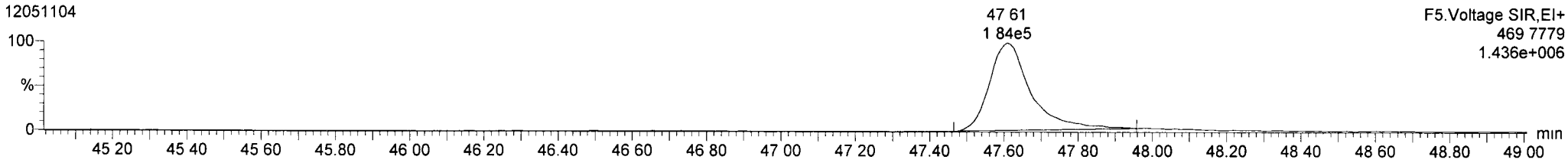
FUNCTION4 NCDPE



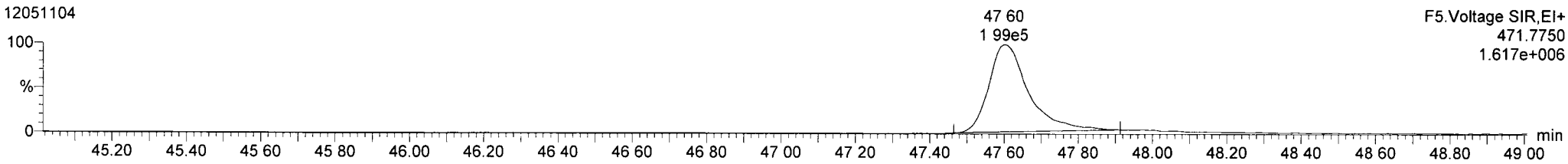
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P \DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

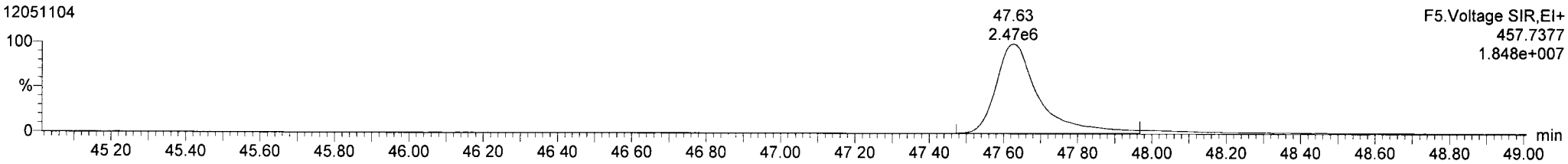
13C-OCDD



13C-OCDD



OCDD



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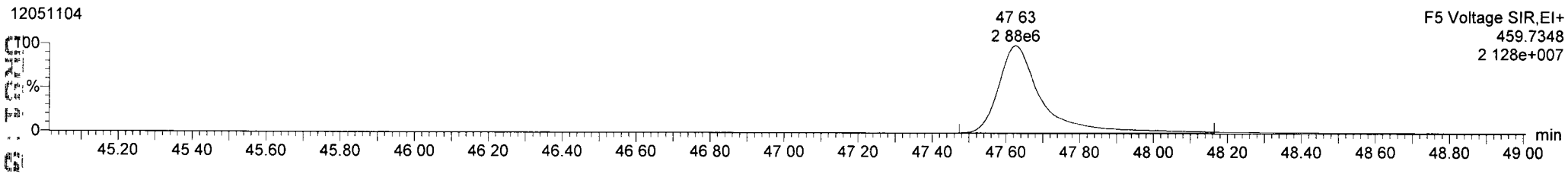
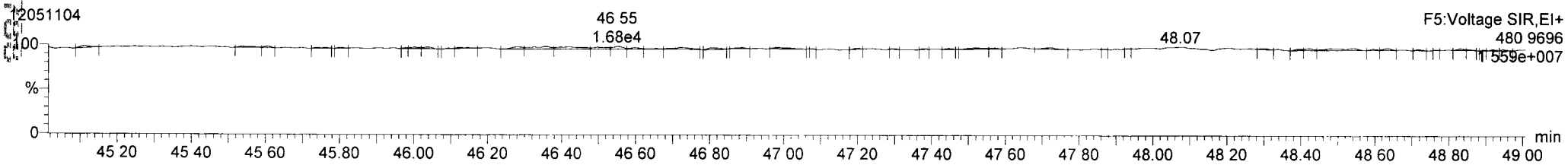


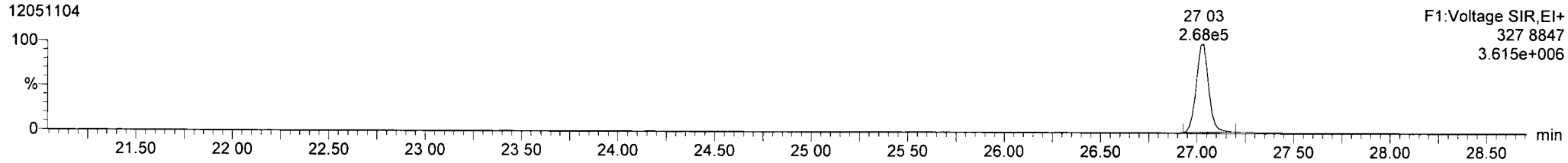
FUNCTION5 PFK



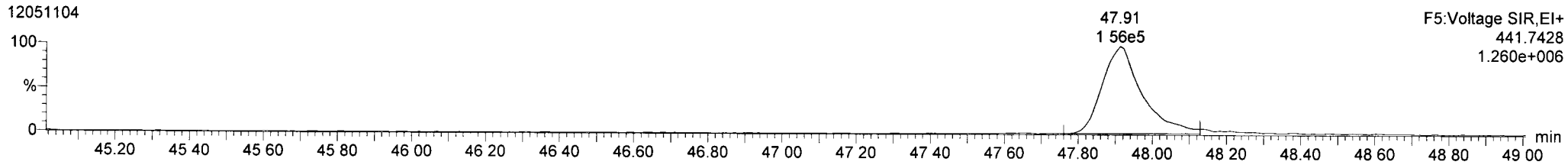
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46.39 Pacific Daylight Time

Name: 12051104, Date: 11-May-2012, Time: 12:08:41, ID: UR81B 5X, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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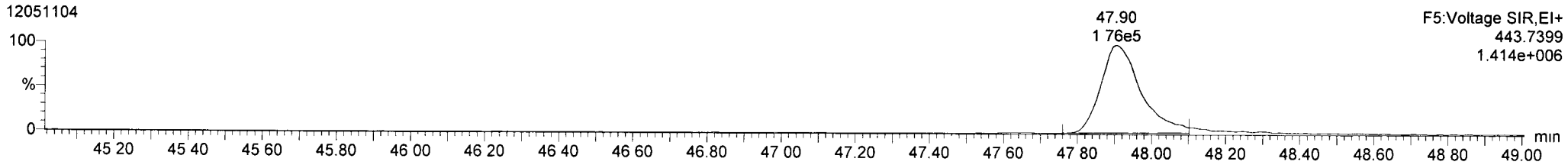
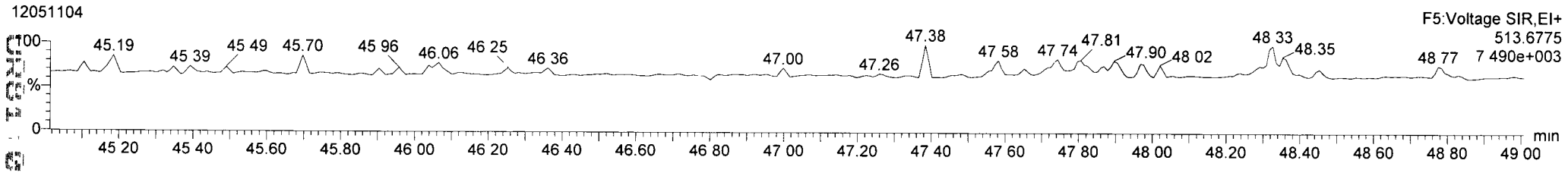


FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Dilution

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

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2	2	12378-PeCDF	339.8597	30 505	30 516	0	2991	0 907	bd		0.98	1.55	18 6	YES	0.000	0 508
3	3	23478-PeCDF	339 8597	31.831	31.854	0	3888	0 936	bb		1.93	1 55	21.0	YES	0 000	0 668
4	4	123478-HxCDF	373 8208	35.514	35.503	13513	13513	1 082	dd		1 13	1 24	25.7	NO	2 800	2.800
5	5	234678-HxCDF	373 8208	36.600	36.611	0	9598	1 070	bb		0.97	1 24	14.5	YES	0 000	1 988
6	6	123678-HxCDF	373 8208	35 657	35.667	0	7409	1 048	db		1 63	1.24	16 3	YES	0 000	1 422
7	7	123789-HxCDF	373.8208	37.674	37 707	0	5228	1 020	bd		0.99	1 24	8 8	YES	0 000	1.041
8	8	1234678-HpCDF	407.7818	39 790	39 788	175322	175322	1 214	bd		1.00	1 05	416 9	NO	41 687	41 687
9	9	1234789-HpCDF	407.7818	42 508	42.521	0	4364	1 254	bb		0.59	1 05	20 4	YES	0 000	1 389
10	10	OCDF	441 7428	47 897	47 886	375236	375236	1.105	bd		0 87	0 89	598.2	NO	153 401	153 401
11	11	2378-TCDD	319 8965	27.004	27 003	0	1754	1.046	bd		0 51	0 77	9 1	YES	0 000	0.289
12	12	12378-PeCDD	355.8546	32 095	32 093	7370	7370	0 973	bb		1.58	1.55	27.4	NO	1 904	1.904
13	13	123478-HxCDD	389 8157	36 720	36.742	13019	13019	0 935	bd		1.16	1.24	25.3	NO	3 792	3.792
14	14	123678-HxCDD	389 8157	36.874	36.863	45915	45915	0 878	dd		1.23	1 24	83.5	NO	12 053	12 053
15	15	123789-HxCDD	389 8157	37 301	37 257	26805	26805	0 839	bb		1 38	1 24	48.4	NO	7 979	7 979
16	16	1234678-HpCDD	423 7766	41 620	41.611	908843	908843	0 974	bd		1.05	1 05	773.7	NO	326 061	326 061
17	17	OCDD	457.7377	47 619	47 615	5916978	5916978	0 950	bd		0 89	0 89	5228 4	NO	2813.975	2813 9. .
18	18	13C-2378-TCDF	315 9419	26.362	26 362	881594		1 484	bb	15.3	0.77	0 77	2155 7	NO	15 320	
19	19	13C-12378-PeCDF	351 9000	30.494	30.503	649247		1 048	bb	16 0	1 53	1 55	1705 2	NO	15 979	
20	20	13C-23478-PeCDF	351 9000	31 831	31 841	621908		1 003	bb	16 0	1 57	1.55	1691.9	NO	15 988	
21	21	13C-123478-HxCDF	383 8639	35.493	35 504	446072		1 186	bd	15 8	0 50	0.51	838 9	NO	15.835	
22	22	13C-123678-HxCDF	383 8639	35.646	35.657	497090		1 315	db	15.9	0.51	0 51	879.0	NO	15 909	
23	23	13C-234678-HxCDF	383 8639	36.589	36 589	451301		1 223	bb	15 5	0.51	0 51	794.5	NO	15 527	
24	24	13C-123789-HxCDF	383.8639	37.696	37 696	492202		1.056	bd	19.6	0 52	0 51	922.1	NO	19 608	
25	25	13C-1234678-HpCDF	417 8253	39 768	39 778	346303		1 011	bb	14 4	0.45	0.44	508.3	NO	14.411	
26	26	13C-1234789-HpCDF	417.8253	42 508	42.530	250631		0 741	bd	14.2	0.45	0 44	337.9	NO	14 244	
27	27	13C-1234-TCDD	331.9368	26.183	26 272	3876674		1 000	bb	100.0	0.78	0 77	9096 2	NO	100 000	
28	28	13C-2378-TCDD	331.9368	26.990	27 004	579447		0 956	bd	15 6	0.76	0 77	1249.5	NO	15 629	
29	29	13C-12378-PeCDD	367 8949	32 084	32 093	397669		0 663	bb	15 5	1.57	1 55	1176 3	NO	15 462	
30	30	13C-123478-HxCDD	401.8559	36.720	36 720	367073		1 024	bd	15 1	1 23	1 24	1287.8	NO	15 088	
31	31	13C-123678-HxCDD	401.8559	36 852	36 852	433970		1 113	db	16.4	1.26	1 24	1344 2	NO	16 416	
32	32	13C-1234678-HpCDD	435.8169	41.598	41 631	286087		0 815	bb	14.8	1.00	1 05	1025 9	NO	14 772	
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Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09.46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

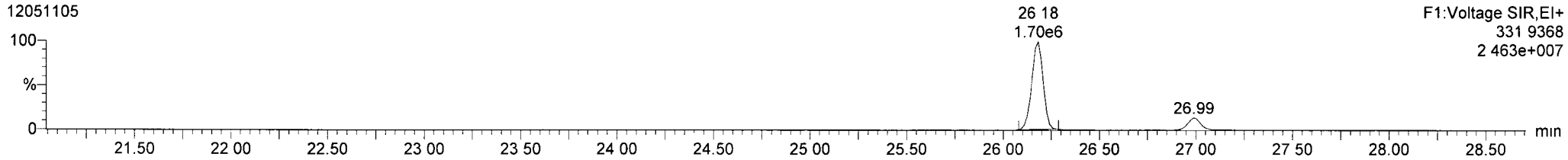
	# Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34 13C-123789-HxCDD	401 8559	37 279	37.368	2376003		1.000	bb	100.0	1.28	1.24	7441.4	NO	100 000	
35	35 Total-tetrafurans	303 9016		25.370			0 866							9.219	13.271
36	36 Total-penta1	339 8597		28.210										14.885	14 885
37	37 Total-pentafurans	339.8597		30.790			0.921							6 652	9.075
38	38 Total-hexafurans	373 8208		35 760			1.055							61 126	65 577
39	39 Total-heptafurans	407.7818		41 160			1 234							144.137	145 996
40	40 Total-Furans	303.9016		0 000			1.050							389 470	402.634
41	41 Total-tetradioxins	319.8965		25.880			1 046							53 456	55.171
42	42 Total-pentadioxins	355 8546		30 950			0 973							59 296	59.838
43	43 Total-hexadioxins	389 8157		35 940			0.884							150 713	153 625
44	44 Total-heptadioxins	423 7766		40 980			0.974							840 404	840 404
45	45 Total-Dioxins	319 8965		0.000			0.942							3917.844	3923.0. .
46	46 Total-TEQ	319.8965		0 000										4307 314	4325.6..
47	47 37CL-2378-TCDD	327.8847	27 004	26 994	264018		1 037					1845.3		6 566	
48	48 FUNCTION1 PFK	330.9792		0.000											
49	49 FUNCTION2 PFK	366.9792		0.000										0.000	
50	50 FUNCTION3 PFK	380 9760		0 000										0 000	
51	51 FUNCTION4 PFK	430.9728		0.000											
52	52 FUNCTION5 PFK	480 9696		0.000											
53	53 FUNCTION1 HXCDPE	375.8364		0 000										0.000	
54	54 FUNCTION1 HPCDPE	409.7974		0 000										0.000	
55	55 FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56 FUNCTION3 OCDPE	445.7555		0 000										0 000	
57	57 FUNCTION4 NCDPE	479 7165		0.000										0 000	
58	58 FUNCTION5 DCDPE	513.6775		0.000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

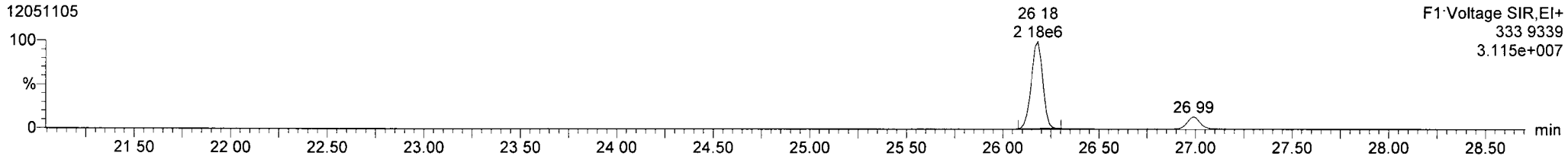
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

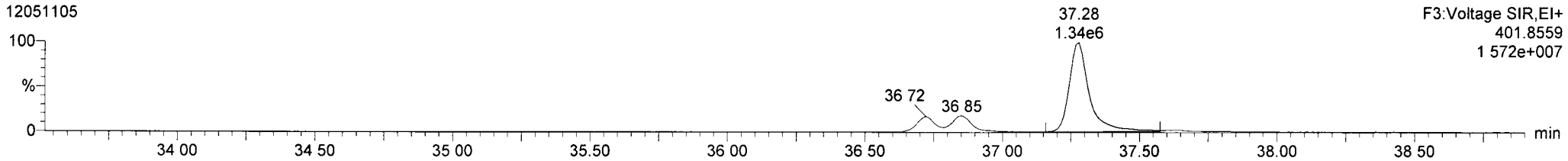
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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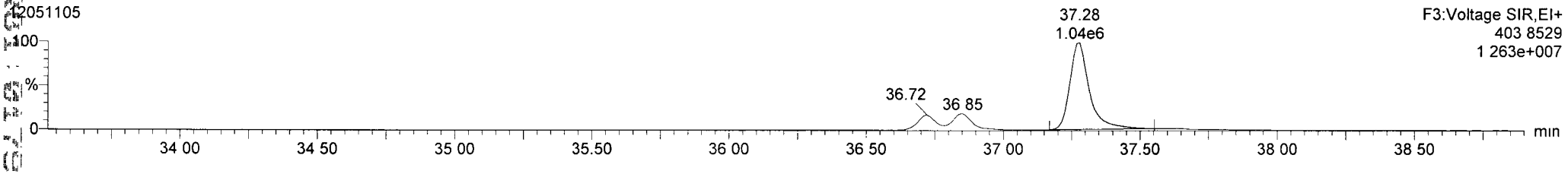
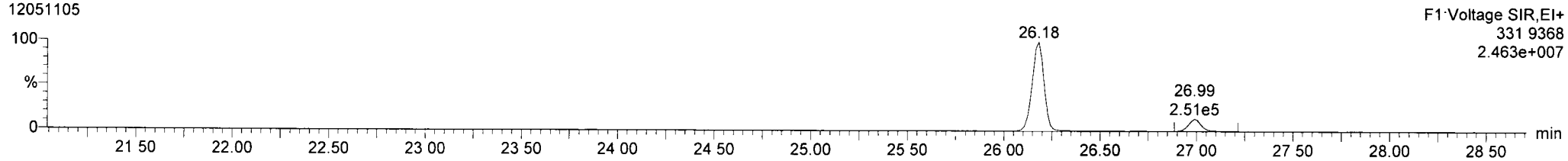


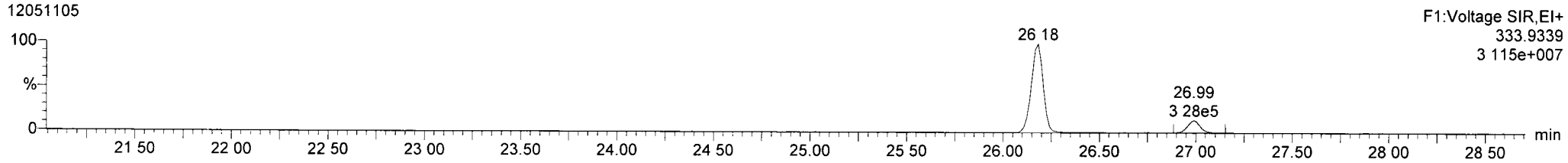
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
12051105



13C-2378-TCDD
12051105



Total-tetradioxins
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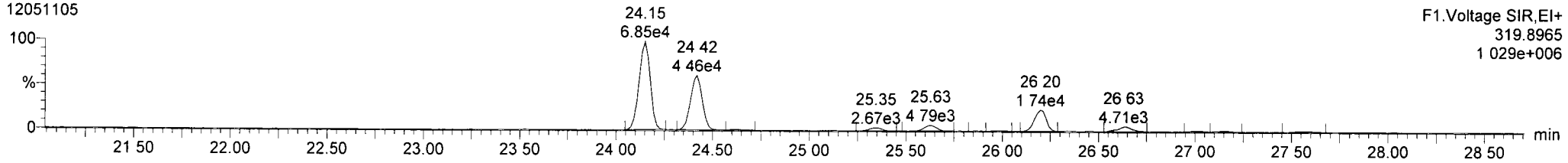
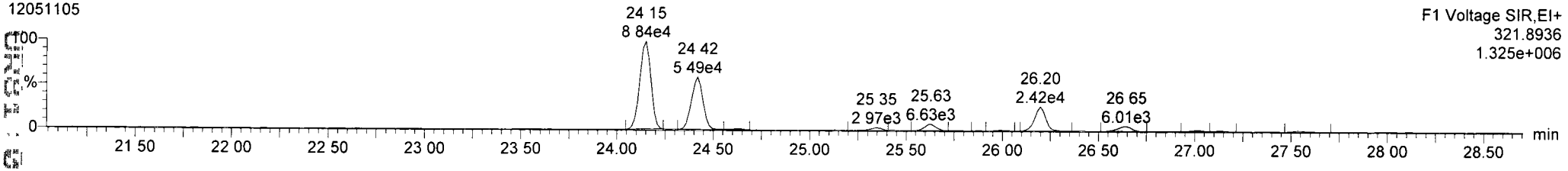
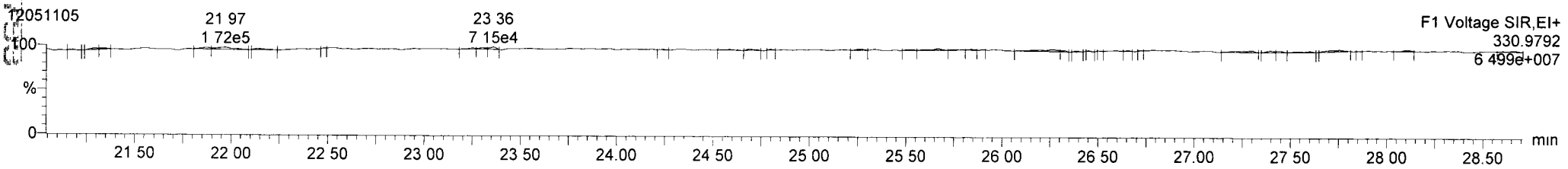


Total-tetradioxins
12051105



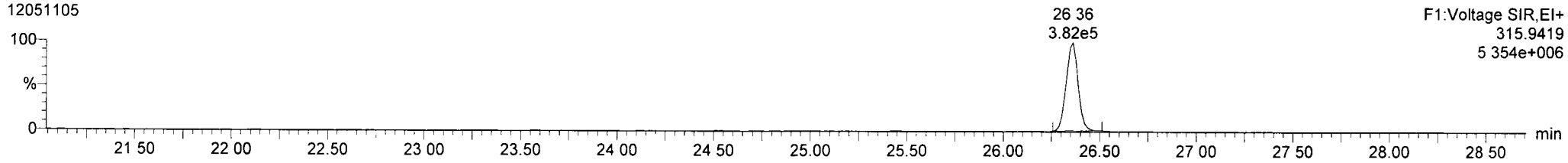
FUNCTION1 PFK
12051105



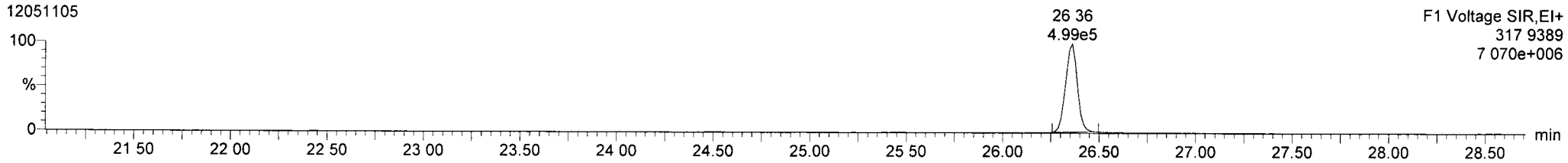
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

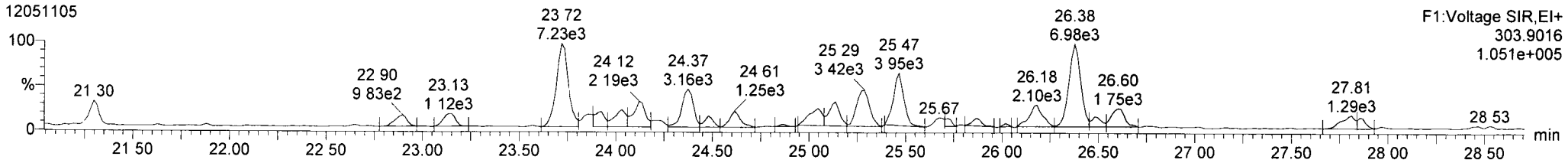
13C-2378-TCDF



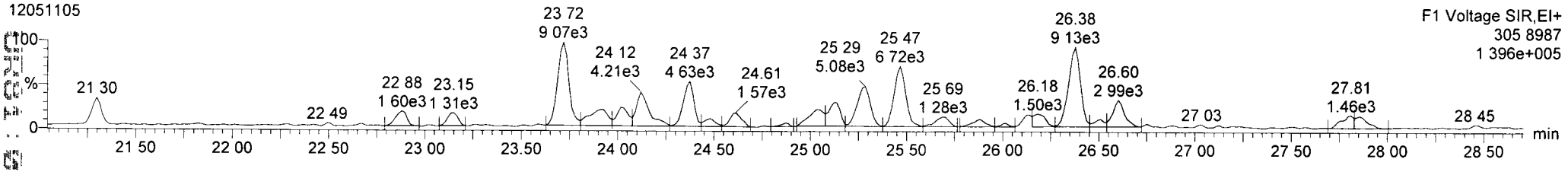
13C-2378-TCDF



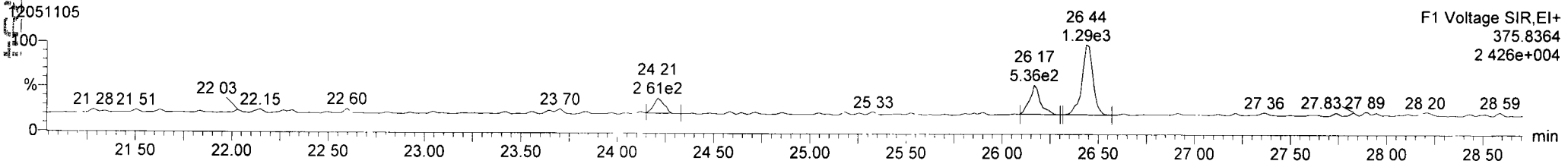
Total-tetrafurans



Total-tetrafurans



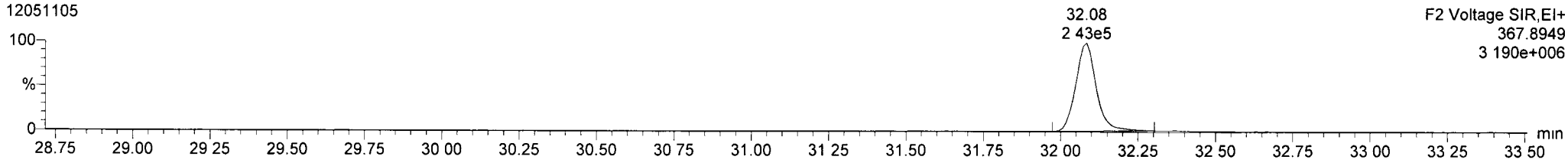
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P.\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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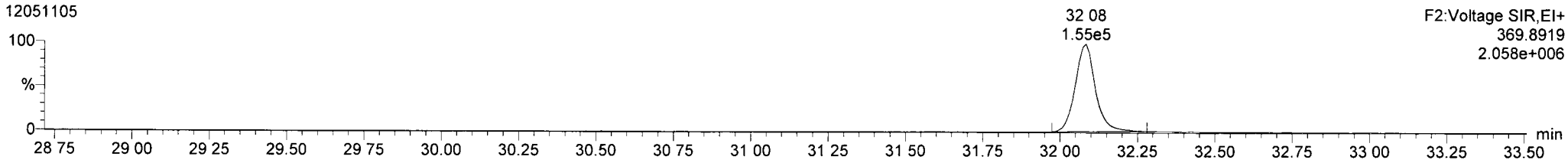
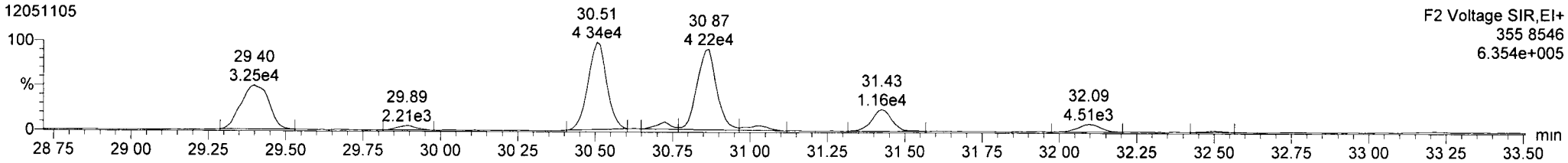
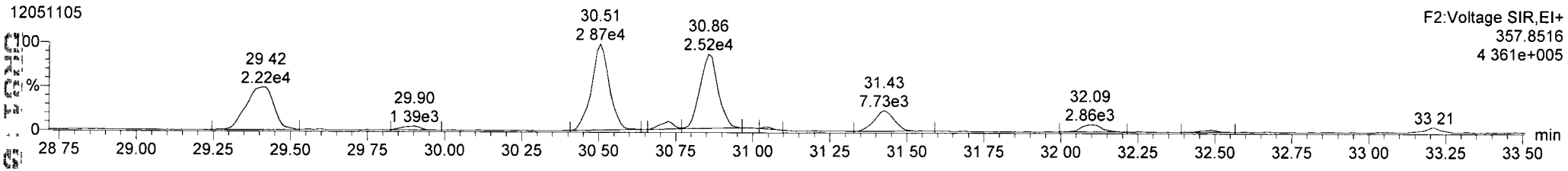


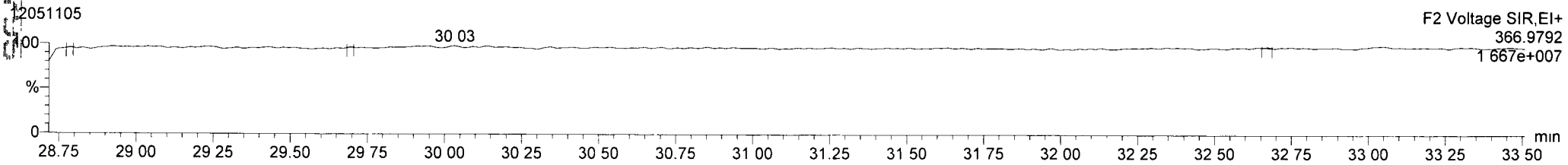
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P.\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09.42 00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

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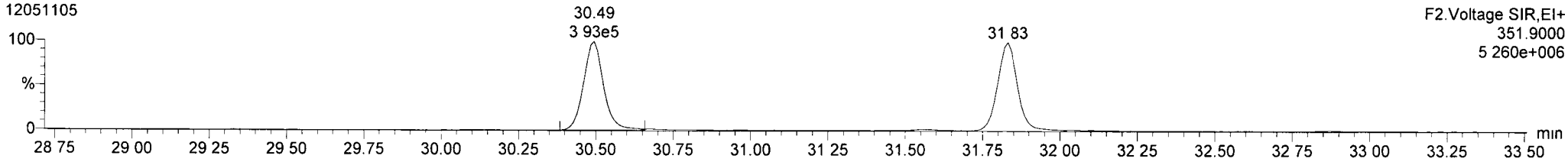
13C-12378-PeCDF



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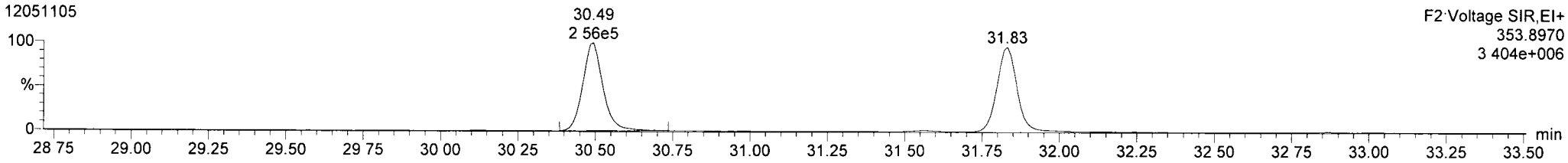
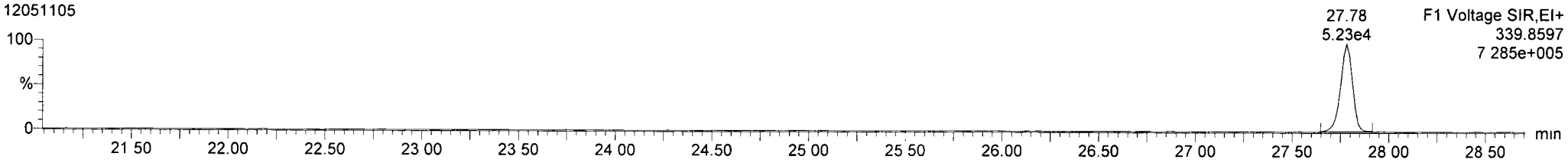
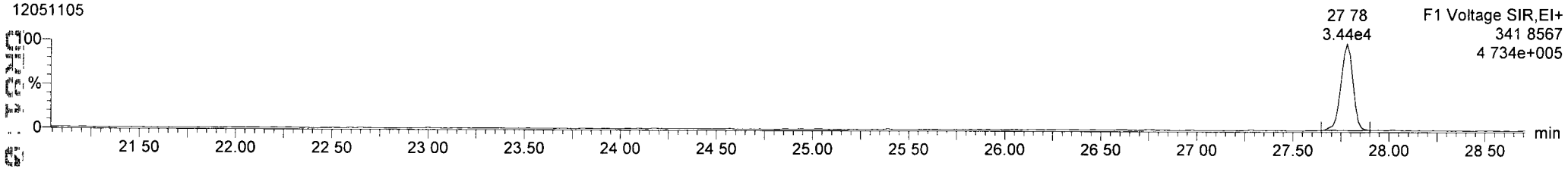


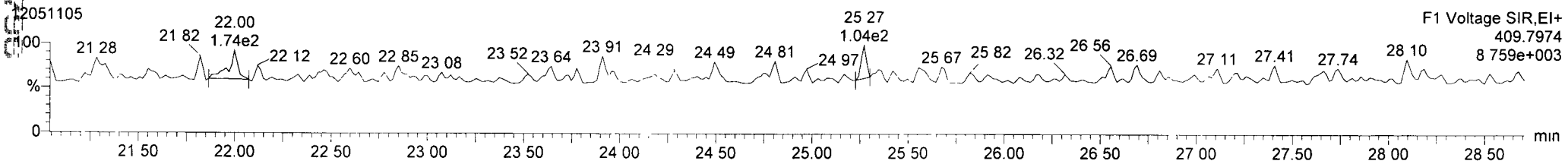
Total-penta1



Total-penta1



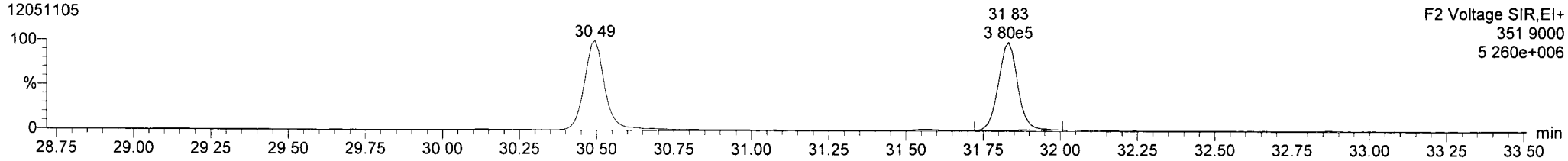
FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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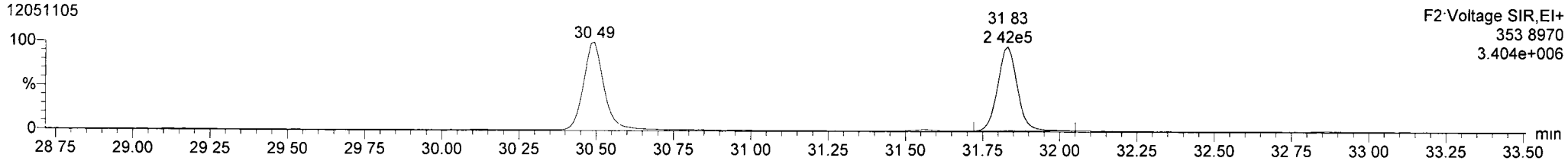
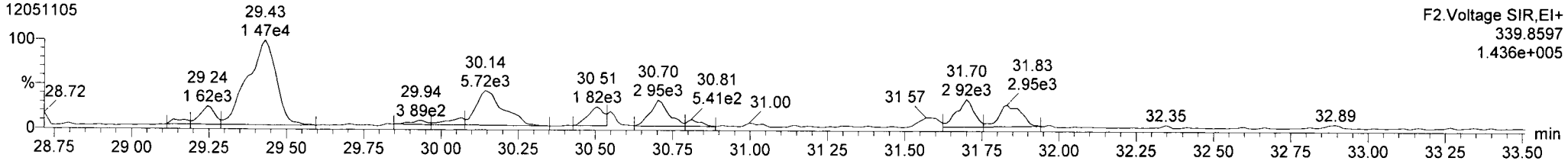
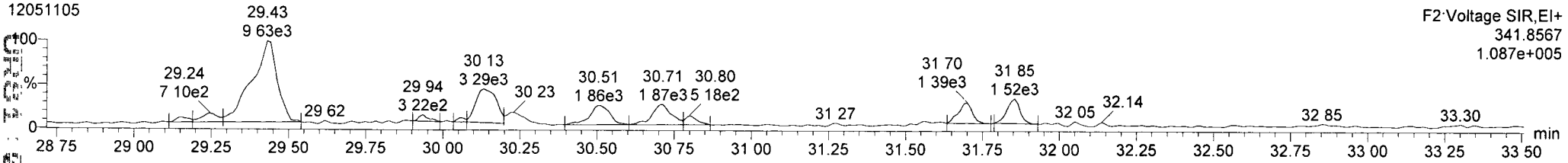


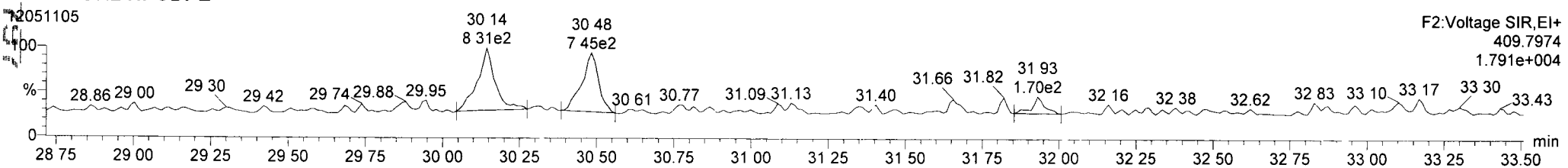
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120511DATA.qld
Last Altered Monday, May 14, 2012 09:42.00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

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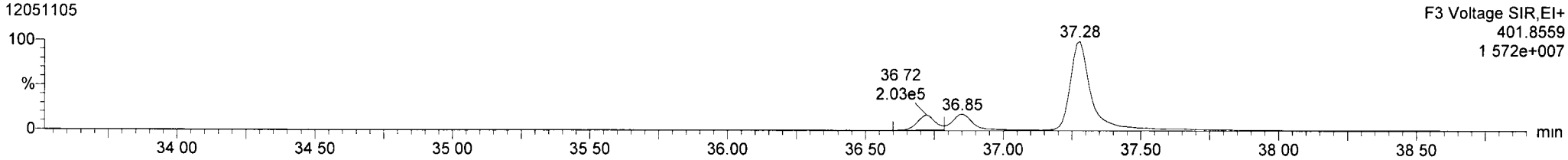
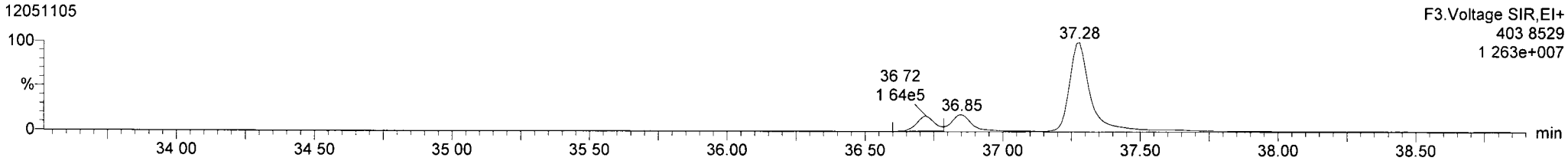
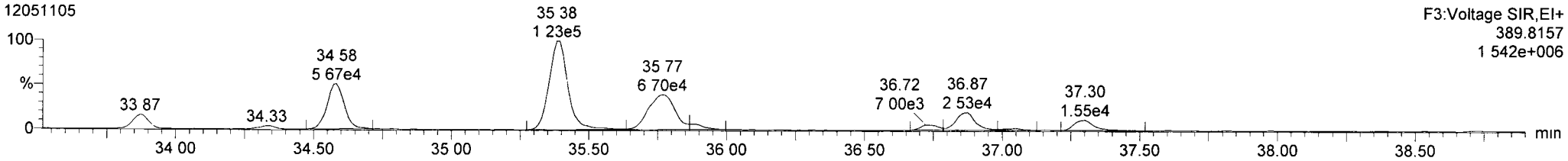
13C-123478-HxCDD



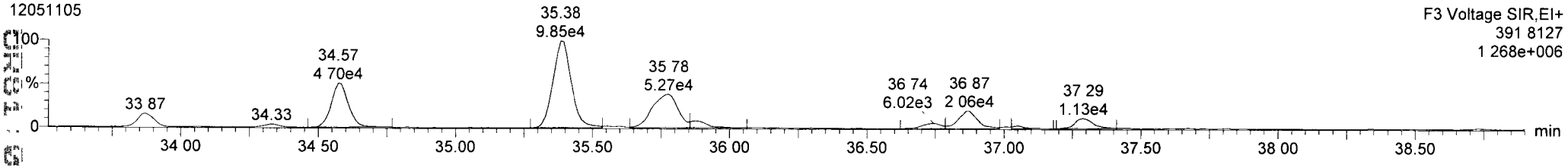
13C-123478-HxCDD



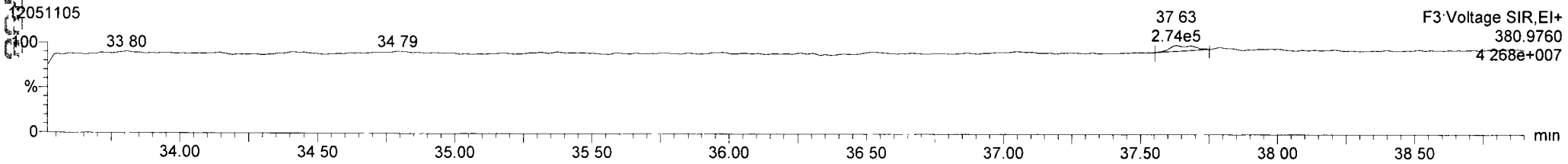
Total-hexadioxins



Total-hexadioxins



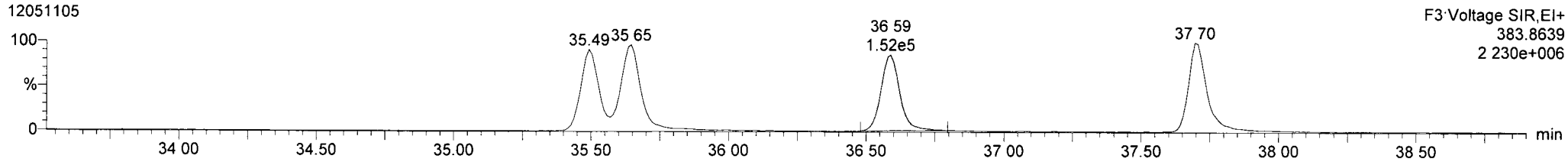
FUNCTION3 PFK



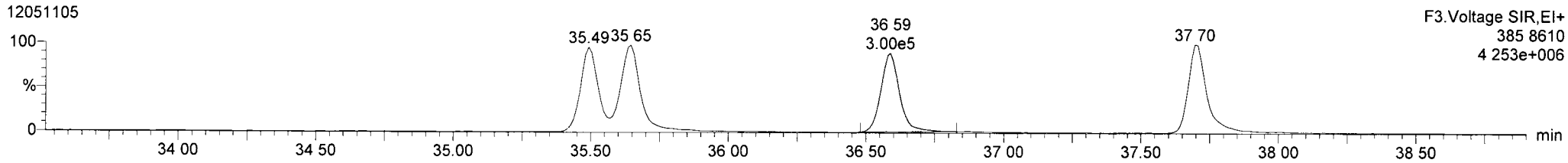
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

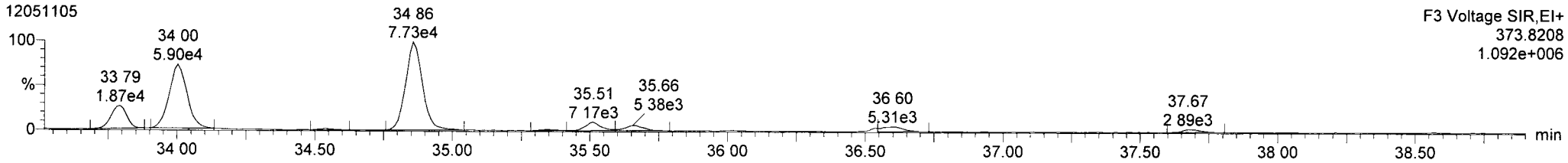
13C-234678-HxCDF



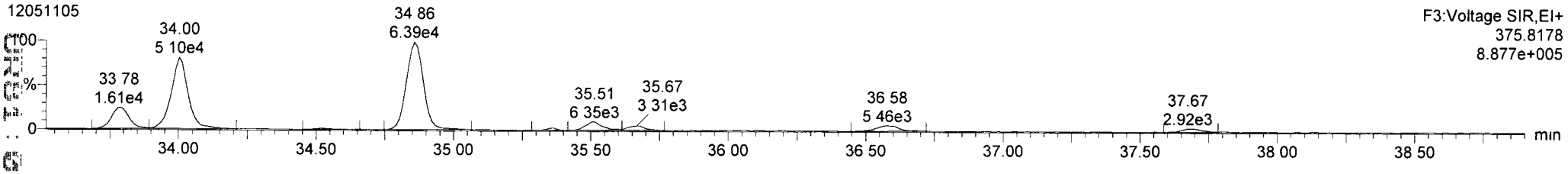
13C-234678-HxCDF



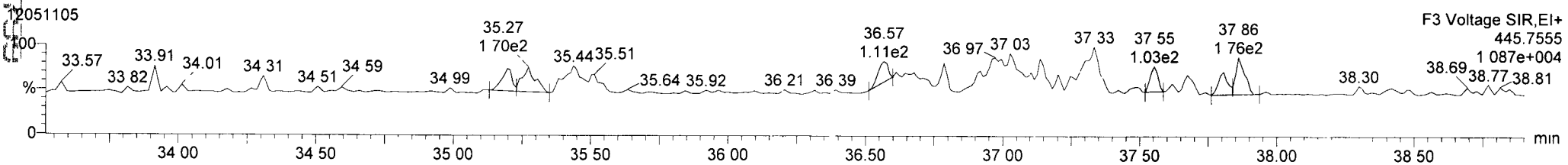
Total-hexafurans



Total-hexafurans



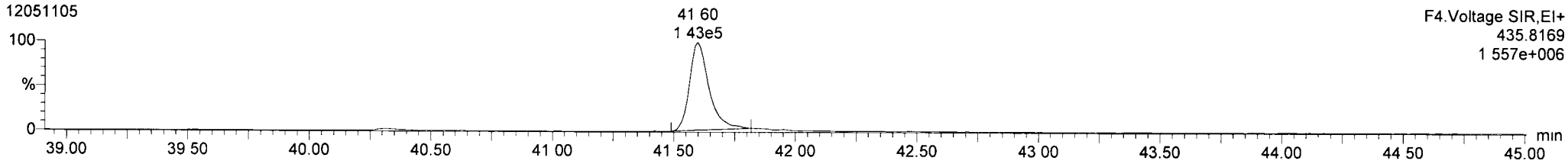
FUNCTION3 OCDPE



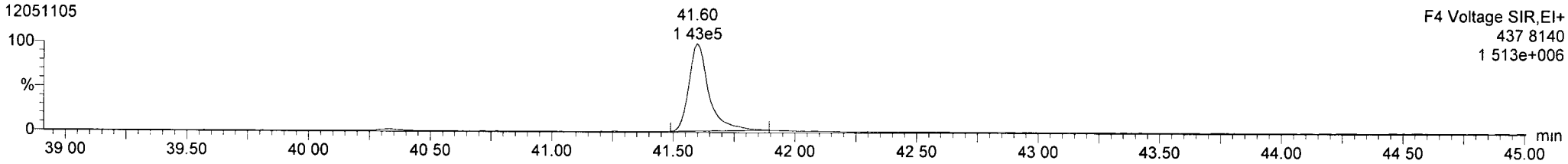
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

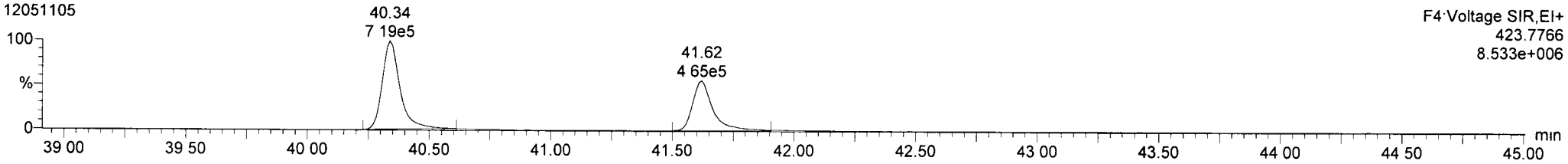
13C-1234678-HpCDD



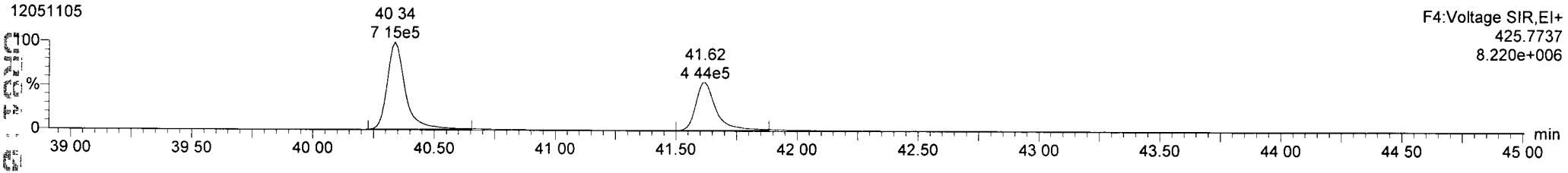
13C-1234678-HpCDD



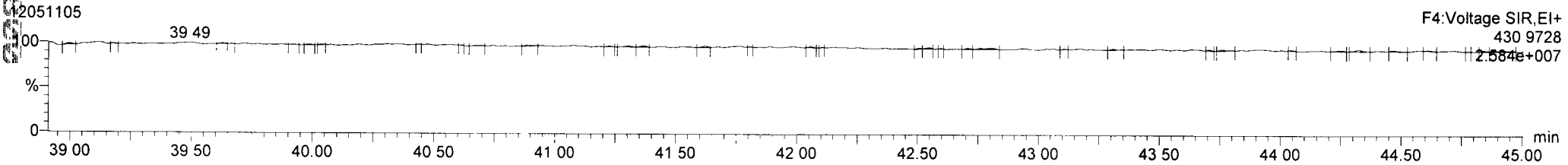
Total-heptadioxins



Total-heptadioxins



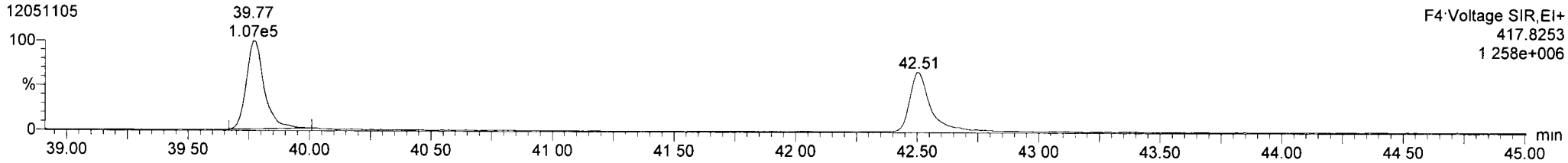
FUNCTION4 PFK



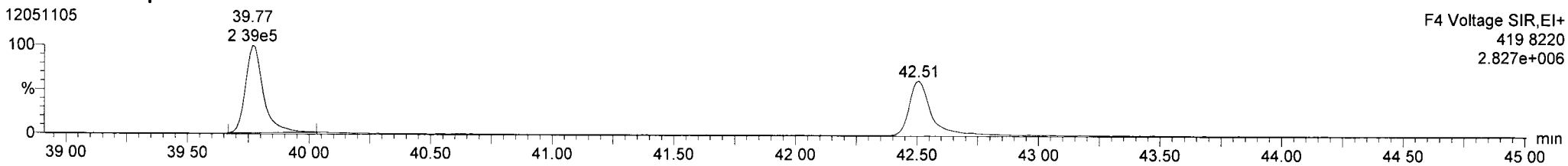
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42.00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

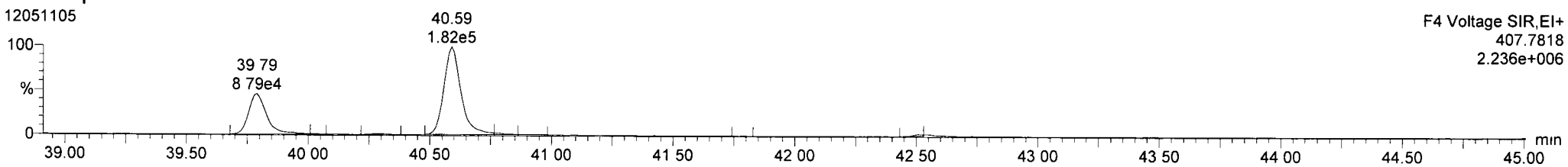
13C-1234678-HpCDF



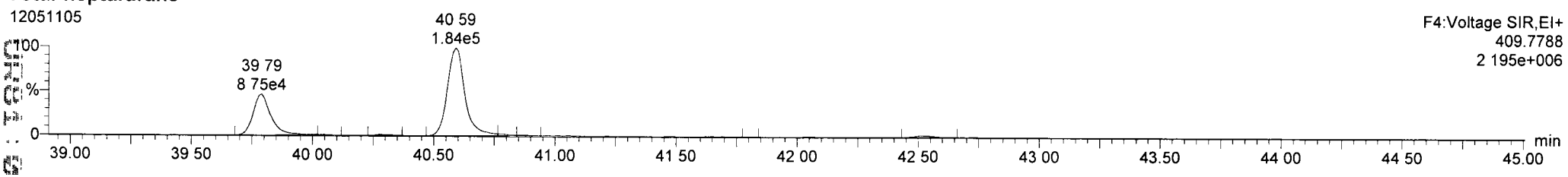
13C-1234678-HpCDF



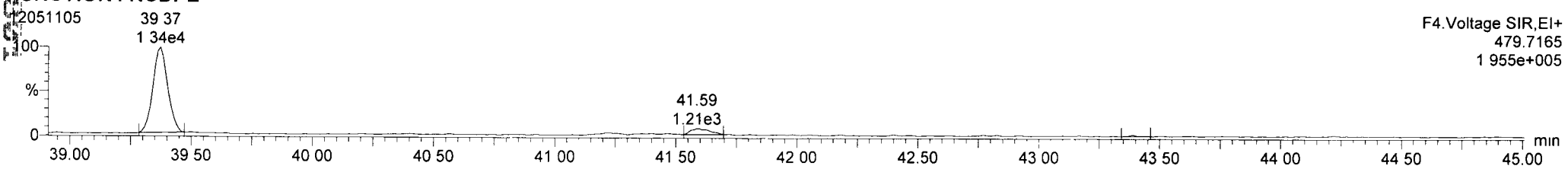
Total-heptafurans



Total-heptafurans



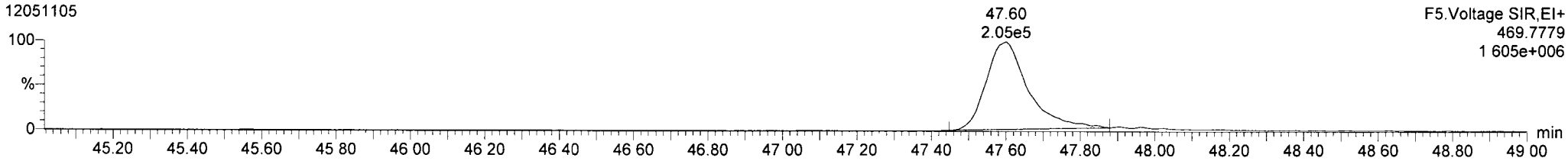
FUNCTION4 NCDPE



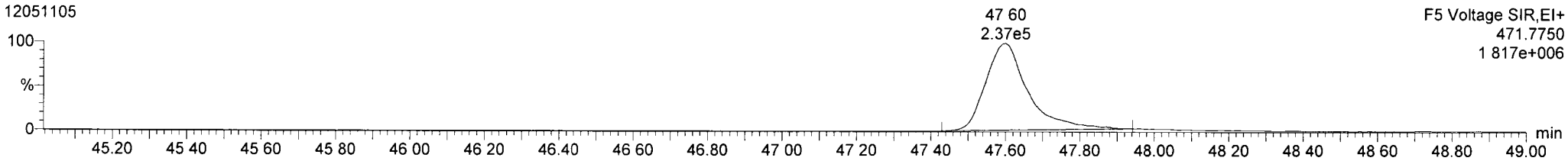
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09.42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

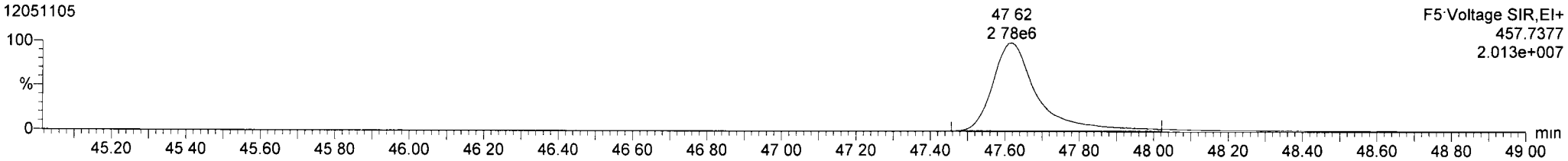
13C-OCDD



13C-OCDD



OCDD



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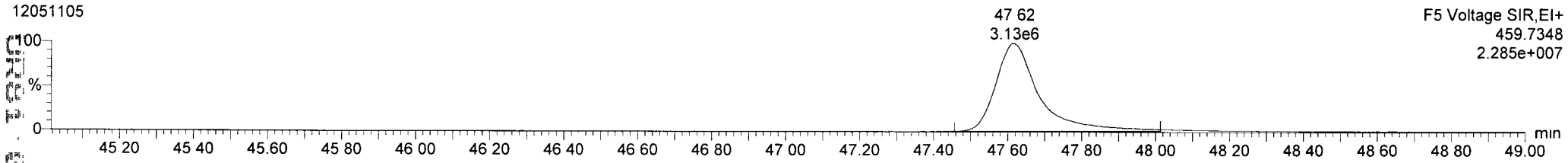
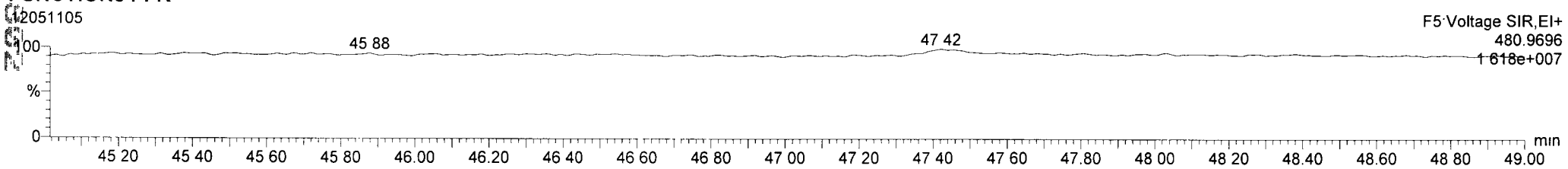


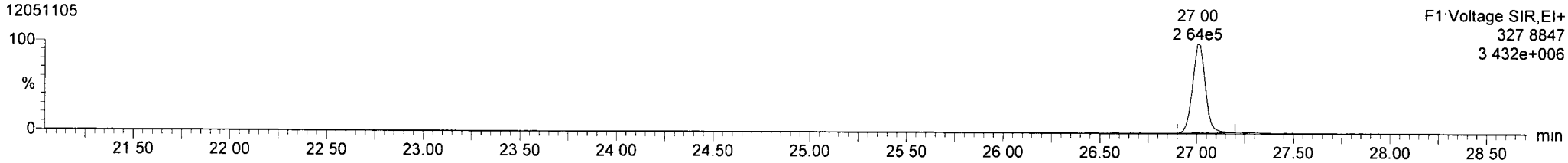
FUNCTION5 PFK



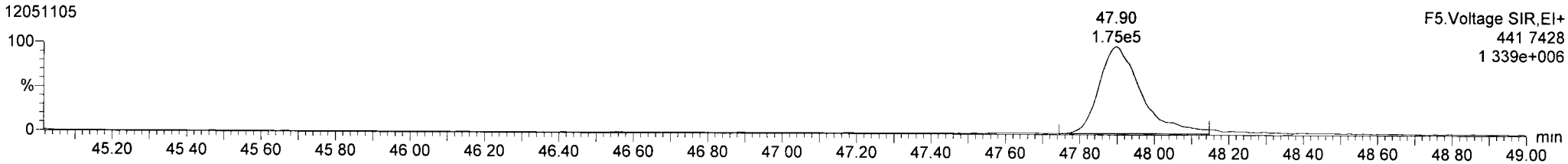
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:43 Pacific Daylight Time

Name: 12051105, Date: 11-May-2012, Time: 12:59:00, ID: UR81D 5X, Conditions: AUTOSPEC01, User: pk

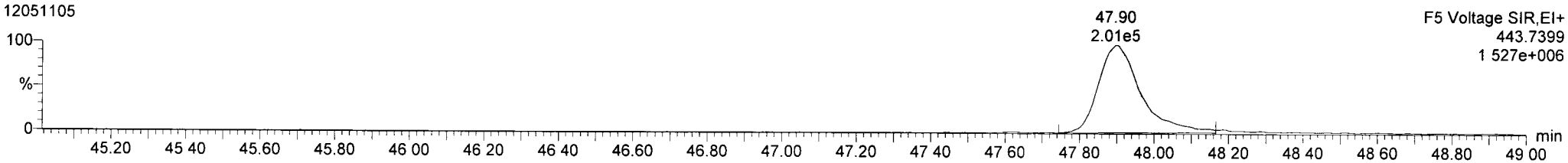
37CL-2378-TCDD



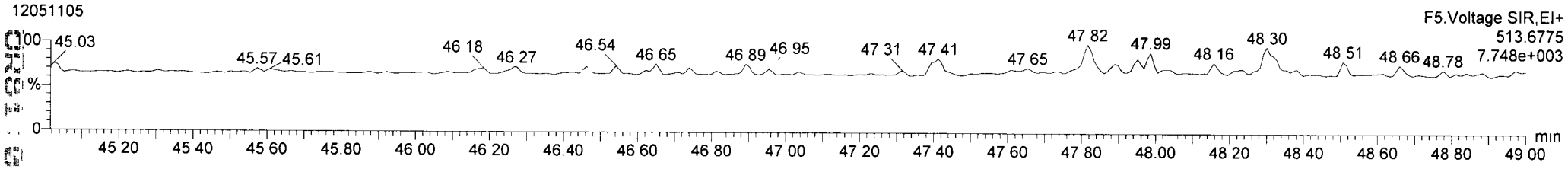
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09.46:47 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Dilution

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det ...	%Rec	1° Ratio...	1° Rati...	S/N	1° . .	pg	EMPC
1	1	2378-TCDF	303.9016	26 377	26.393	7900	7900	0.866	bd		0 80	0.77	21 7	NO	1.085	1 085
2	2	12378-PeCDF	339 8597	30 527	30 527	0	7428	0 907	bb		2.18	1.55	29 8	YES	0 000	1.139
3	3	23478-PeCDF	339 8597	31 875	31.876	0	8817	0.936	db		1.23	1.55	24 5	YES	0.000	1.366
4	4	123478-HxCDF	373.8208	35 548	35.536	28601	28601	1.082	bd		1.31	1 24	85 8	NO	5 270	5 270
5	5	234678-HxCDF	373.8208	36 644	36.665	0	18233	1 070	bb		1 03	1.24	37 7	YES	0.000	3 478
6	6	123678-HxCDF	373 8208	35 712	35 700	12562	12562	1 048	db		1.37	1.24	41 9	NO	2 101	2.101
7	7	123789-HxCDF	373 8208	37 718	37.740	9283	9283	1.020	bb		1.17	1.24	32 6	NO	1.912	1.912
8	8	1234678-HpCDF	407 7818	39 811	39.820	259322	259322	1.214	bd		0.99	1.05	487.3	NO	53.949	53.949
9	9	1234789-HpCDF	407 7818	42 541	42 542	0	9179	1.254	bb		0.79	1.05	17.8	YES	0.000	2 511
10	10	OCDF	441.7428	47 923	47.903	335728	335728	1.105	bd		0.88	0 89	570 4	NO	137 861	137 861
11	11	2378-TCDD	319.8965	27.034	27.018	2106	2106	1 046	dd		0.72	0 77	6 1	NO	0.360	0.360
12	12	12378-PeCDD	355.8546	32.117	32.104	0	7954	0 973	bb		1.90	1.55	39 7	YES	0 000	1.898
13	13	123478-HxCDD	389 8157	36 808	36.797	20303	20303	0 935	bd		1.23	1.24	27 3	NO	5.167	5.167
14	14	123678-HxCDD	389.8157	36 917	36 918	91173	91173	0.878	dd		1.26	1 24	129 0	NO	22 382	22 382
15	15	123789-HxCDD	389.8157	37.345	37.312	31560	31560	0.839	bb		1.26	1 24	48.5	NO	8 511	8.511
16	16	1234678-HpCDD	423.7766	41.642	41.632	2823647	2823647	0 974	bd		1.03	1 05	1941 7	NO	820.039	820.039
17	17	OCDD	457 7377	47 636	47.632	16532318	16532318	0 950	bd		0.88	0.89	6555.1	NO	7897.433	7897 4..
18	18	13C-2378-TCDF	315 9419	26 377	26 377	840559		1.484	bb	13.0	0.77	0.77	1707.4	NO	12.961	
19	19	13C-12378-PeCDF	351 9000	30 505	30 519	719341		1.048	bd	15 7	1.58	1 55	1885 7	NO	15.710	
20	20	13C-23478-PeCDF	351.9000	31.854	31 856	689532		1.003	bb	15 7	1 56	1.55	1788 0	NO	15 730	
21	21	13C-123478-HxCDF	383 8639	35.526	35.558	501604		1 186	bd	15 7	0.51	0.51	656 0	NO	15 742	
22	22	13C-123678-HxCDF	383 8639	35 679	35 712	570403		1 315	db	16 1	0.52	0.51	687 5	NO	16.139	
23	23	13C-234678-HxCDF	383.8639	36 644	36 643	489953		1 223	bb	14 9	0.52	0 51	603 2	NO	14 903	
24	24	13C-123789-HxCDF	383.8639	37 729	37 750	476040		1 056	bb	16.8	0.54	0.51	806 5	NO	16 765	
25	25	13C-1234678-HpCDF	417 8253	39 800	39.833	395798		1.011	bb	14 6	0 45	0 44	464 0	NO	14 561	
26	26	13C-1234789-HpCDF	417 8253	42 529	42.584	291471		0 741	bb	14 6	0.44	0.44	291.8	NO	14 645	
27	27	13C-1234-TCDD	331.9368	26 198	26.272	4368789		1.000	bb	100 0	0.78	0.77	8839 9	NO	100 000	
28	28	13C-2378-TCDD	331.9368	27 004	27 020	560083		0.956	bb	13 4	0 77	0.77	1081 4	NO	13 405	
29	29	13C-12378-PeCDD	367.8949	32 095	32.108	430495		0 663	bb	14 9	1 64	1.55	1821 8	NO	14 852	
30	30	13C-123478-HxCDD	401.8559	36 775	36.775	420081		1 024	bd	15 3	1 25	1.24	633 5	NO	15.265	
31	31	13C-123678-HxCDD	401 8559	36 907	36 906	464064		1 113	db	15 5	1.23	1.24	669 9	NO	15 519	
32	32	13C-1234678-HpCDD	435 8169	41 620	41 686	353414		0.815	bd	16 1	1.06	1.05	987 8	NO	16 132	
33	33	13C-OCDD	469 7779	47 618	47 702	440677		0.717	bb	11 4	0 88	0 89	467 0	NO	22.866	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42 00 Pacific Daylight Time
Printed. Monday, May 14, 2012 09:46:47 Pacific Daylight Time

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

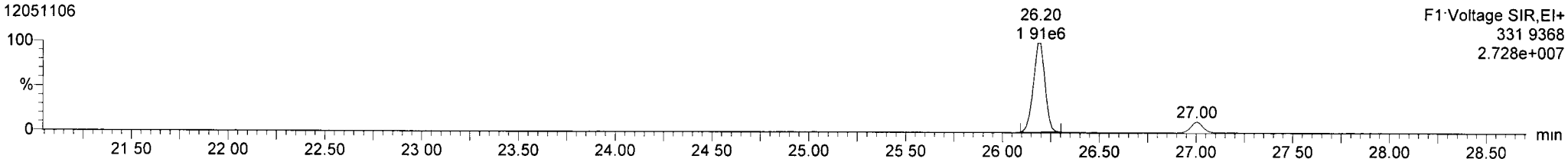
	#	Name	Trace	RT	Pred RT	Abs.Resp	Abs. Corr. ...	RRF M ..	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 334	37.368	2687599		1 000	bd	100 0	1.24	1 24	3829 4	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.370			0.866							6.153	8 453
36	36	Total-penta1	339.8597		28 210										23 176	23 176
37	37	Total-pentafurans	339.8597		30 790			0 921							6 950	13 575
38	38	Total-hexafurans	373.8208		35.760			1.055							115 025	119.556
39	39	Total-heptafurans	407.7818		41.160			1 234							177.233	180.666
40	40	Total-Furans	303.9016		0.000			1 050							466.398	483 288
41	41	Total-tetradioxins	319.8965		25 880			1 046							8.658	10 379
42	42	Total-pentadioxins	355 8546		30 950			0.973							13 444	19 217
43	43	Total-hexadioxins	389.8157		35 940			0 884							237 418	237 418
44	44	Total-heptadioxins	423 7766		40 980			0.974							2678.498	2679.4 ..
45	45	Total-Dioxins	319.8965		0 000			0 942							10835.450	10843.
46	46	Total-TEQ	319 8965		0.000										11301 847	11327 .
47	47	37CL-2378-TCDD	327 8847	27 019	27.010	259249		1.037					2385 5		5.722	
48	48	FUNCTION1 PFK	330 9792		0.000											
49	49	FUNCTION2 PFK	366 9792		0.000										0.000	
50	50	FUNCTION3 PFK	380 9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0 000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0.000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:47 Pacific Daylight Time

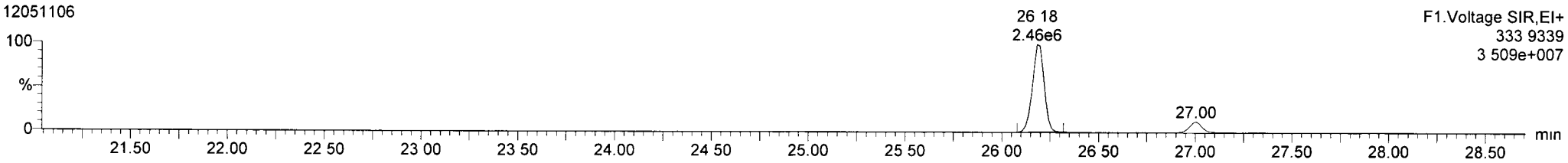
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

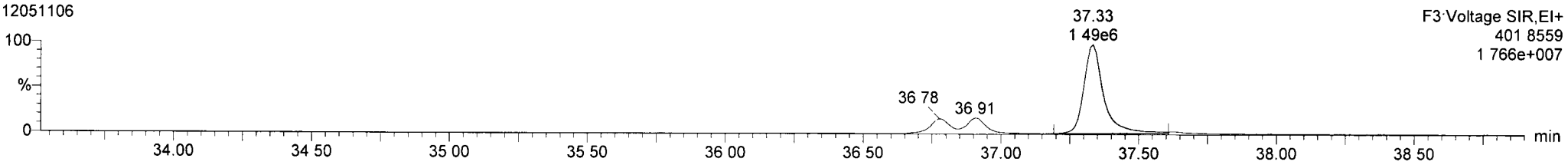
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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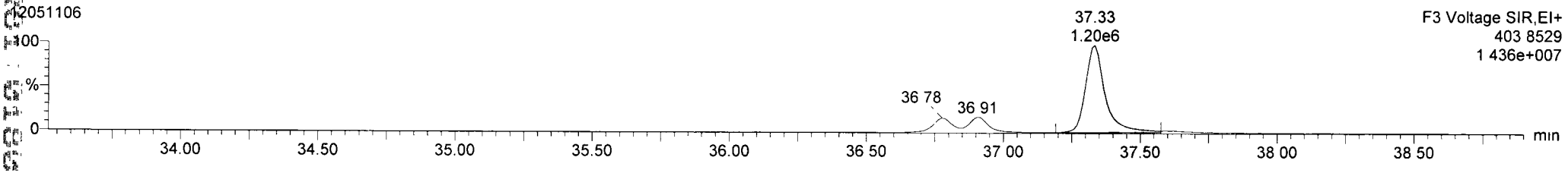
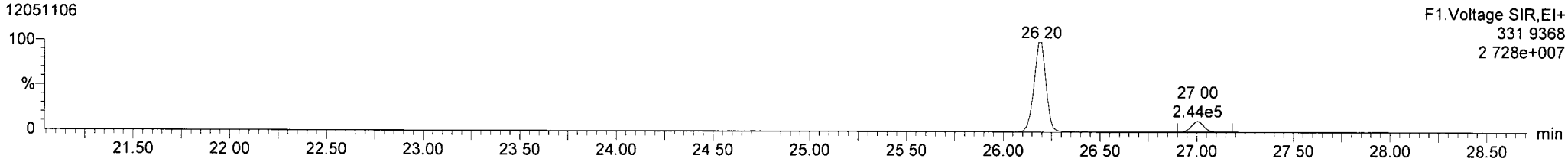


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:47 Pacific Daylight Time

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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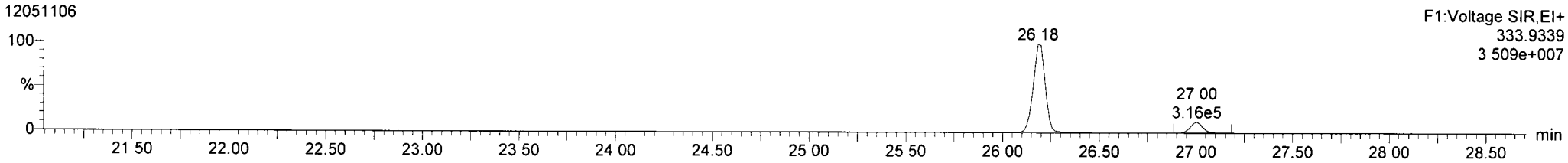
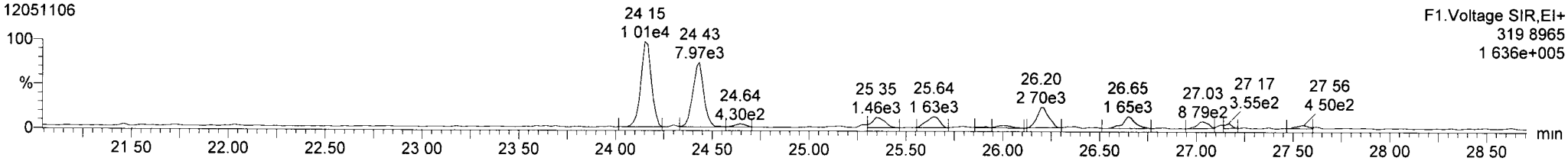
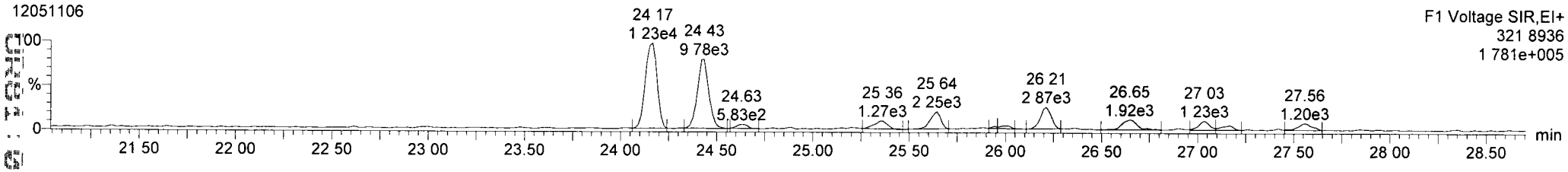


Total-tetradioxins



Total-tetradioxins



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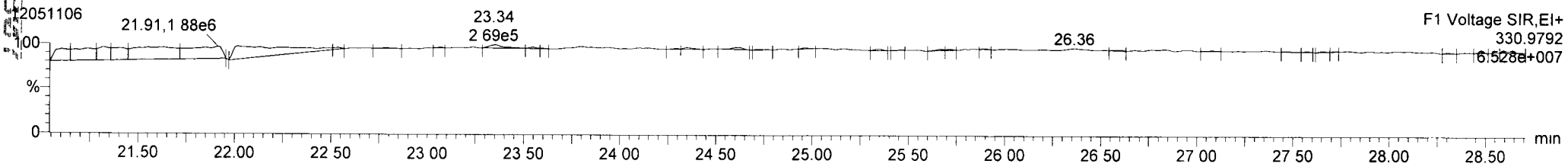
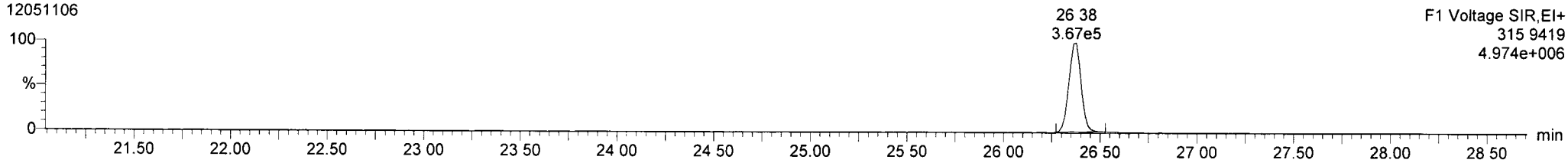


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:47 Pacific Daylight Time

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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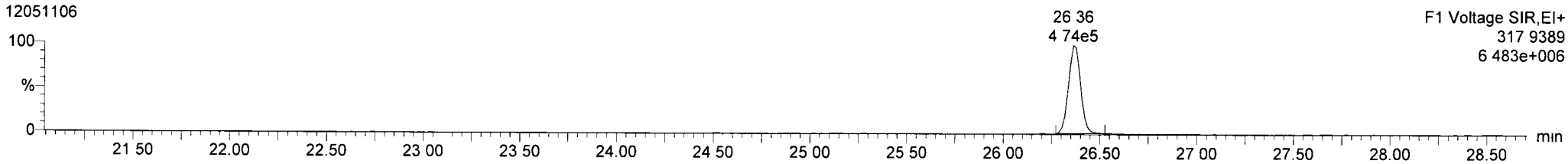
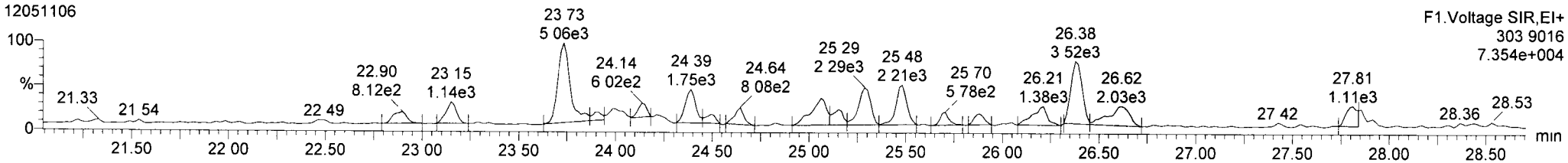
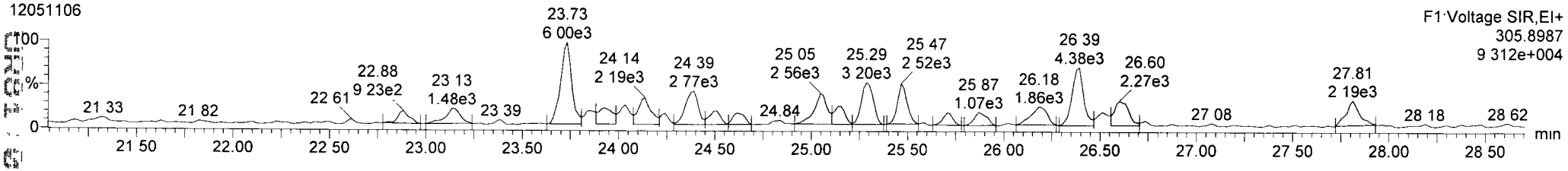


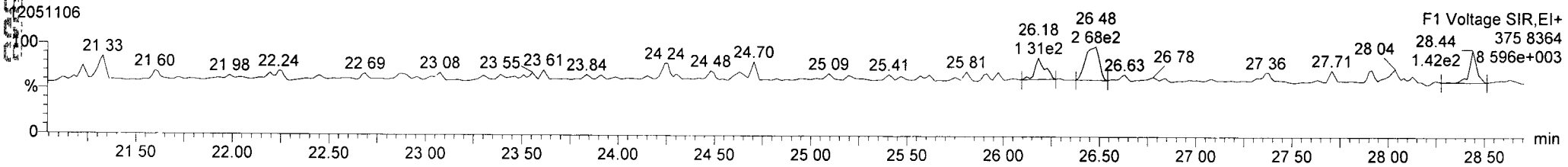
Total-tetrafurans



Total-tetrafurans



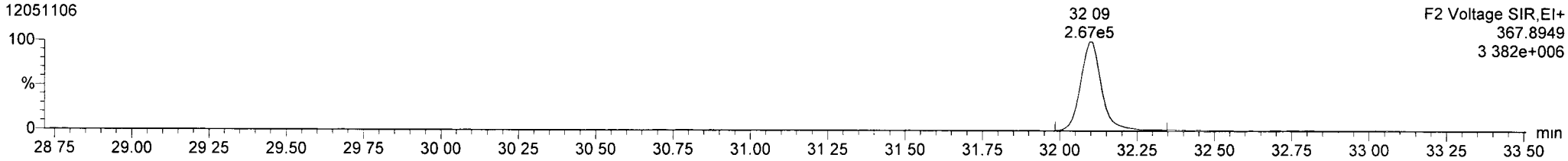
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:47 Pacific Daylight Time

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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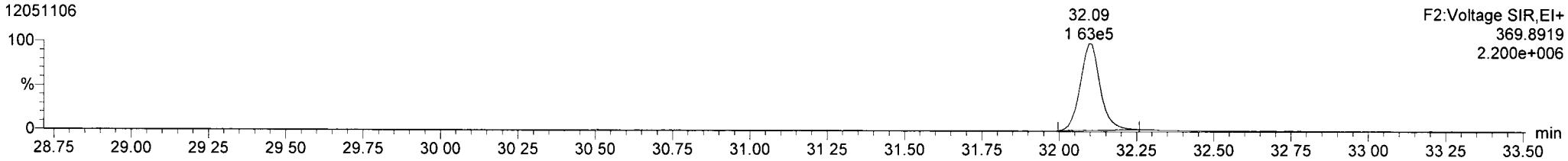
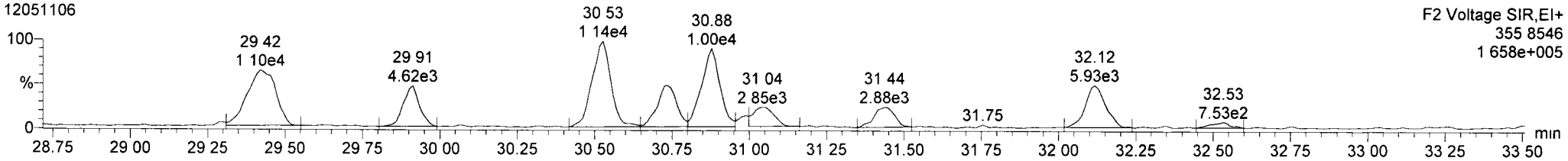
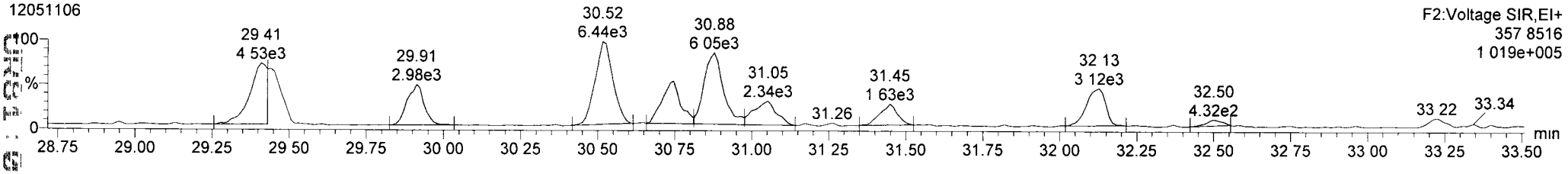


Total-pentadioxins



Total-pentadioxins



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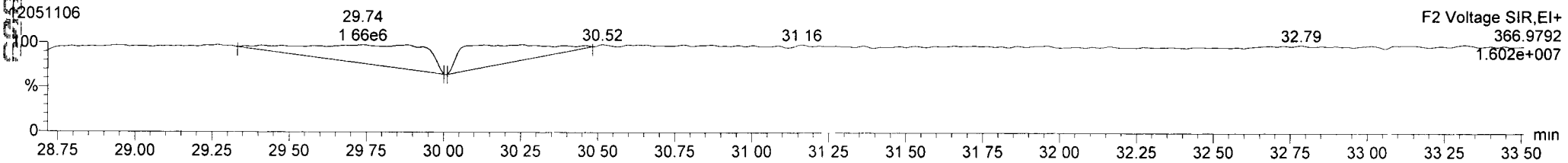
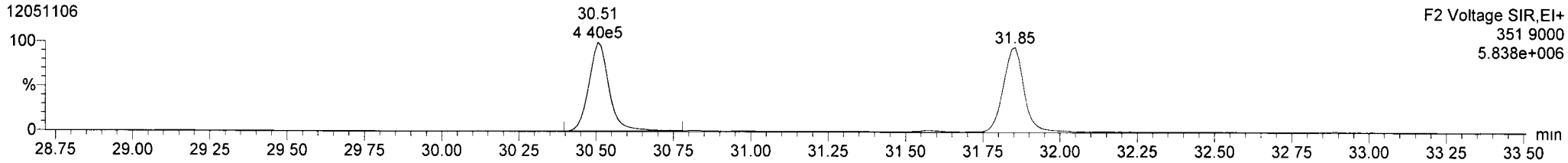


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed Monday, May 14, 2012 09:46:47 Pacific Daylight Time

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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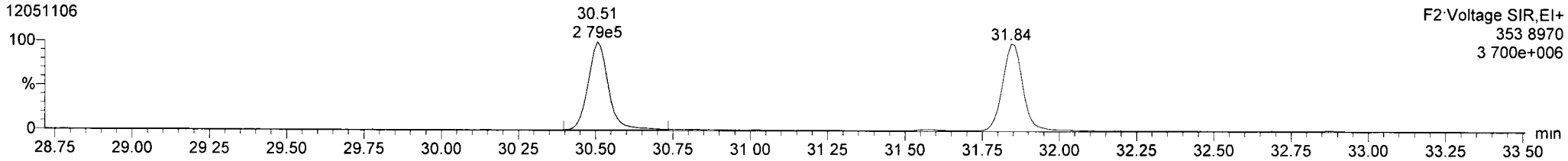

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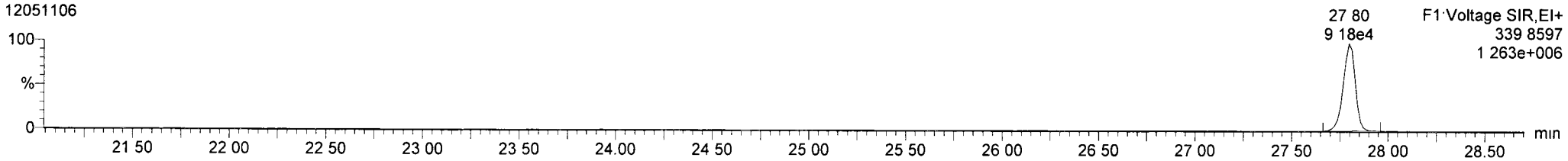
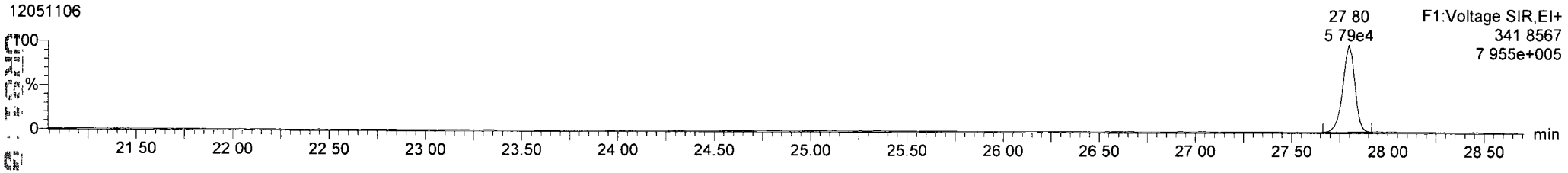
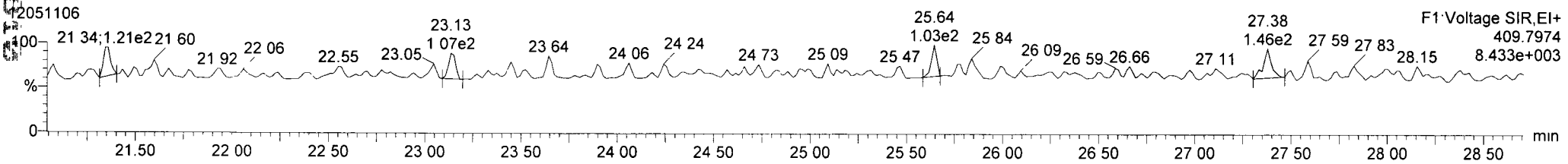


Total-penta1



FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
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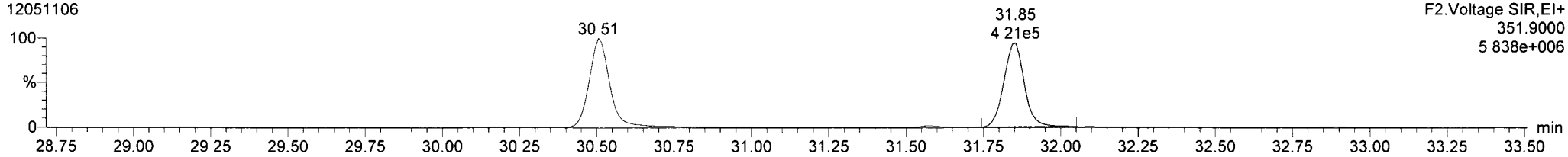
Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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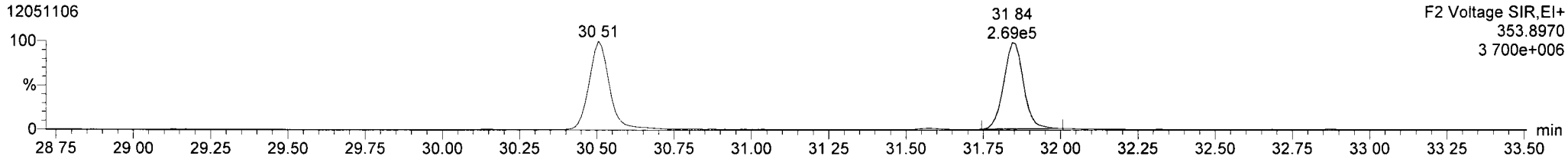
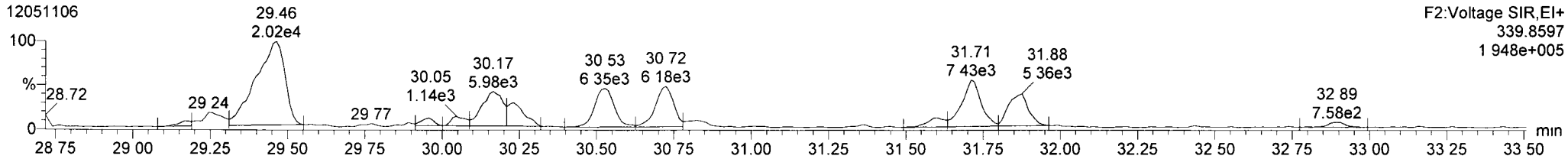


Total-pentafurans



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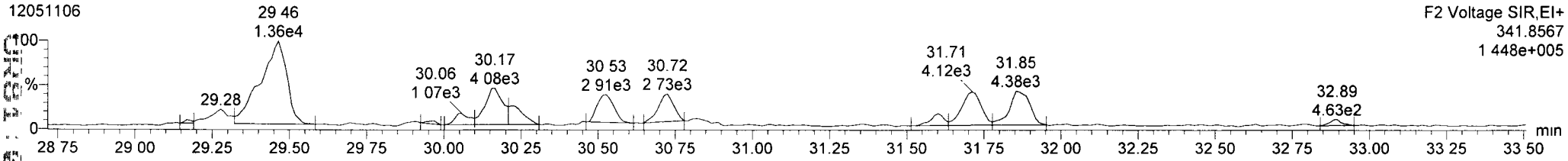

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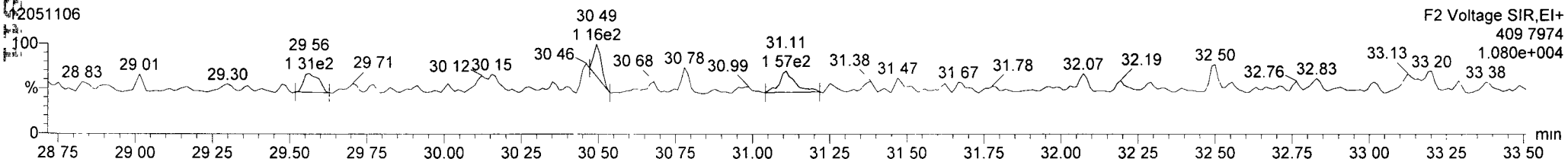

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
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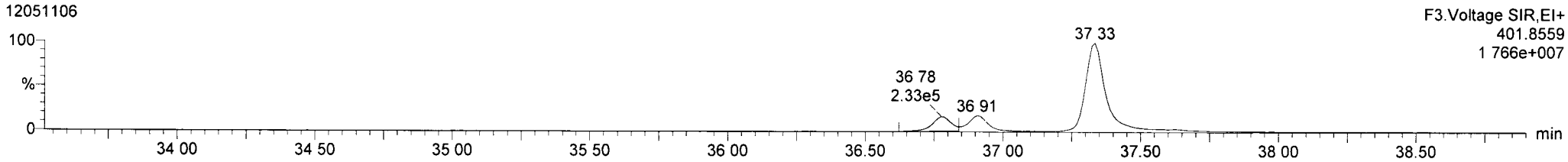
13C-123478-HxCDD



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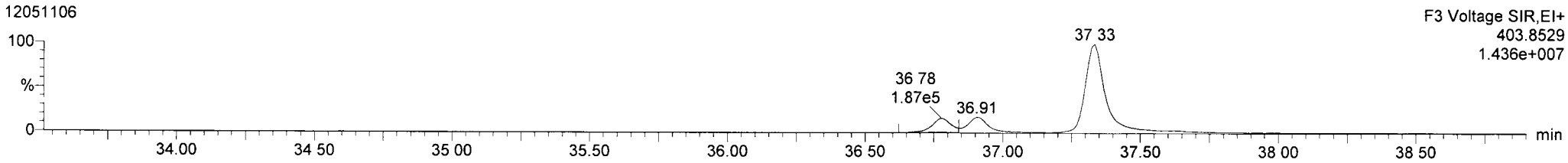
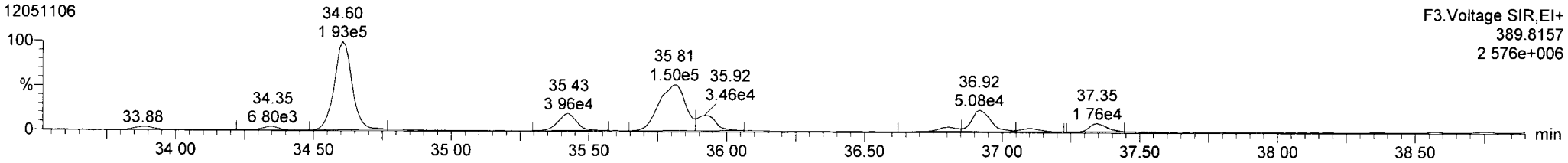


Total-hexadioxins



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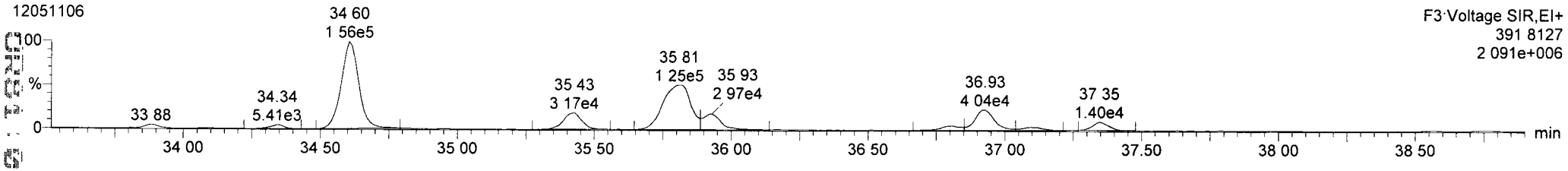
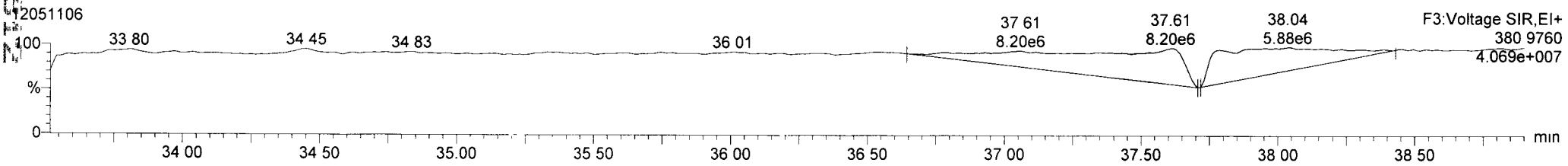


FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:47 Pacific Daylight Time

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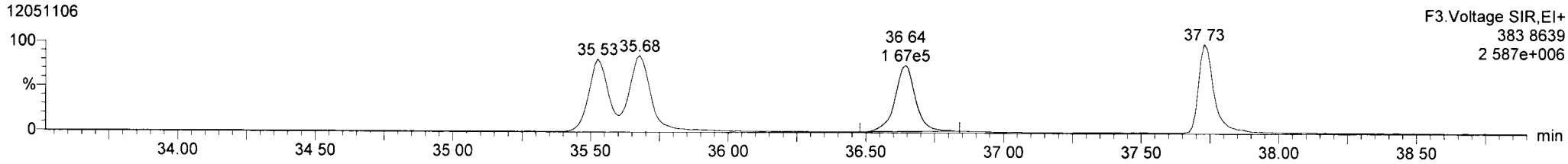
13C-234678-HxCDF



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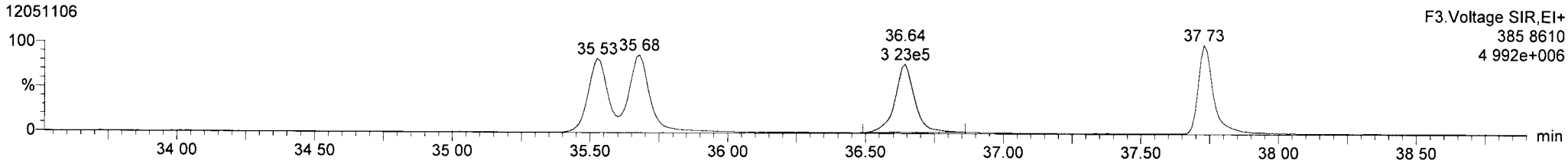
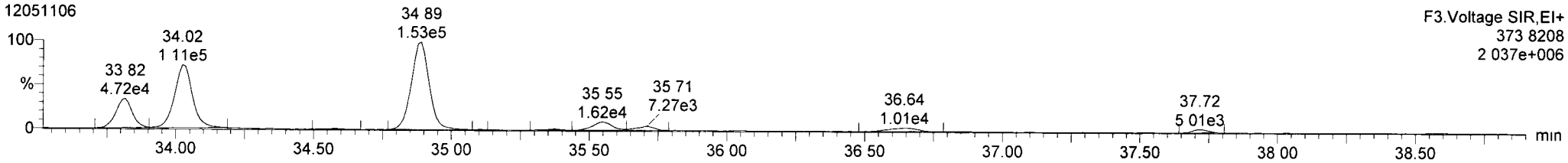


Total-hexafurans



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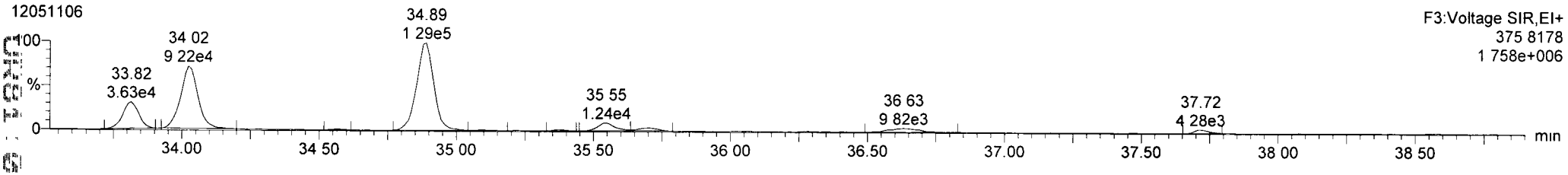

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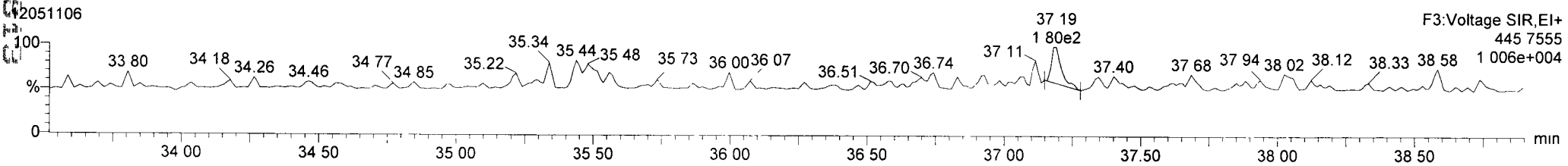
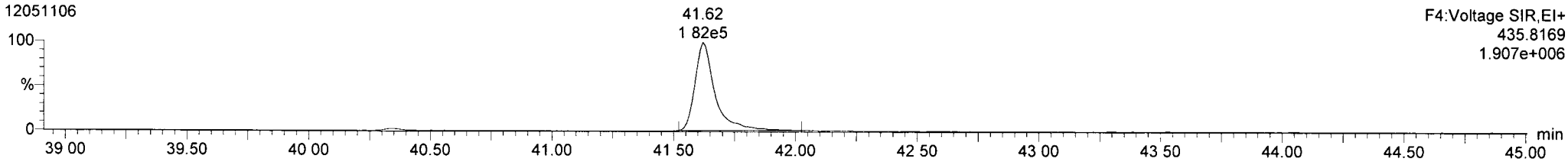


Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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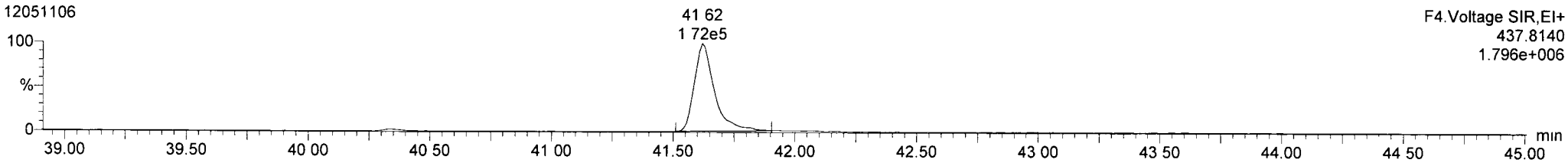
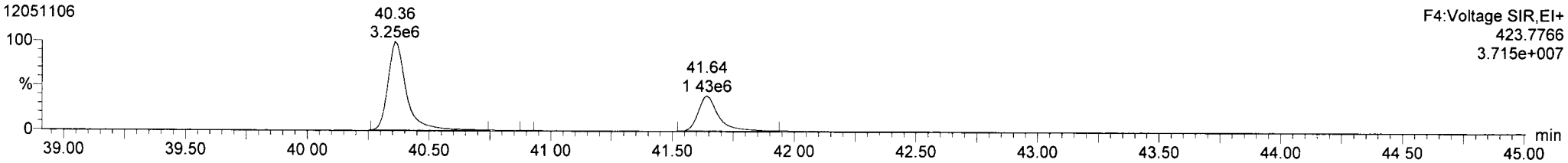
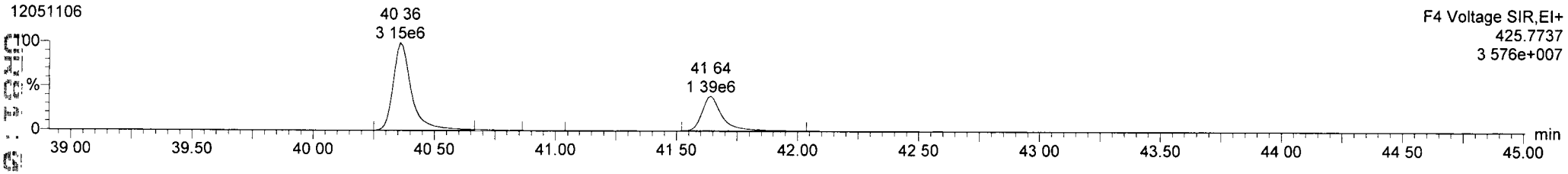


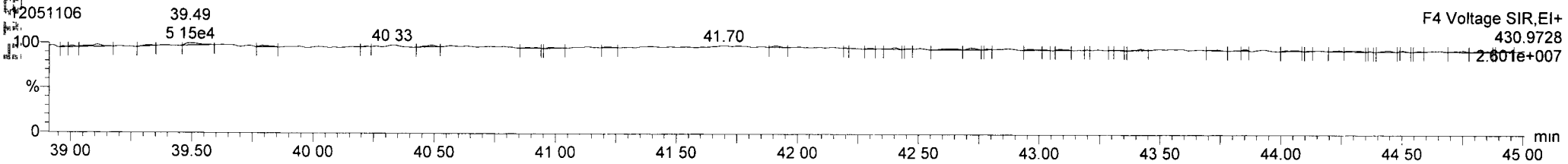
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
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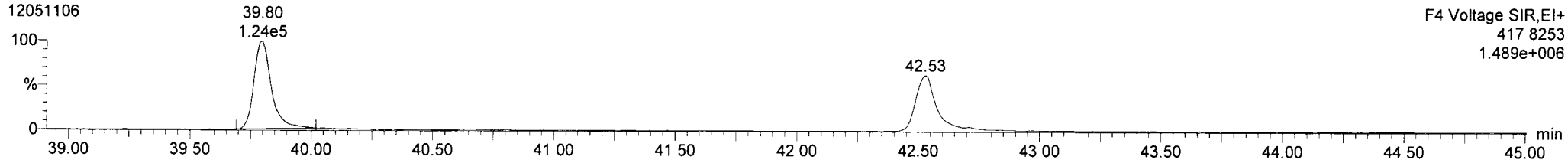
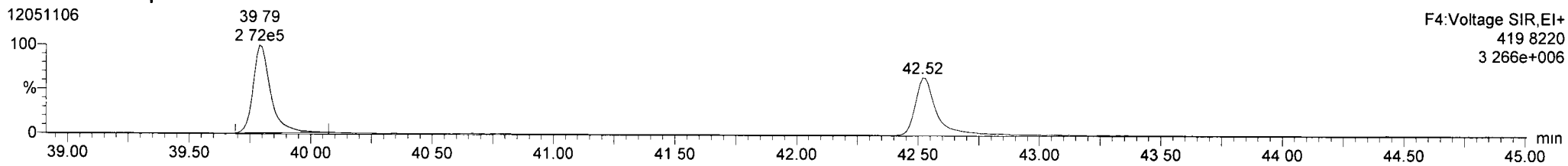
Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

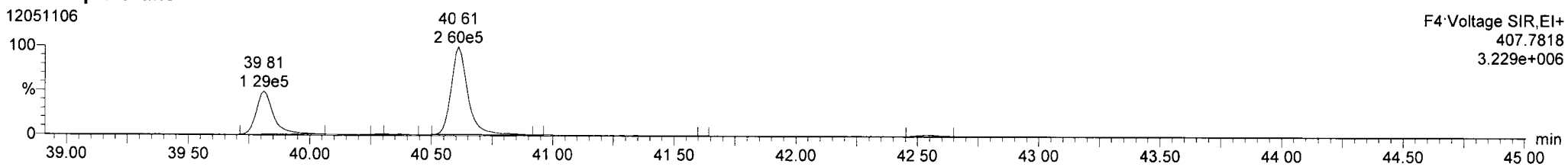
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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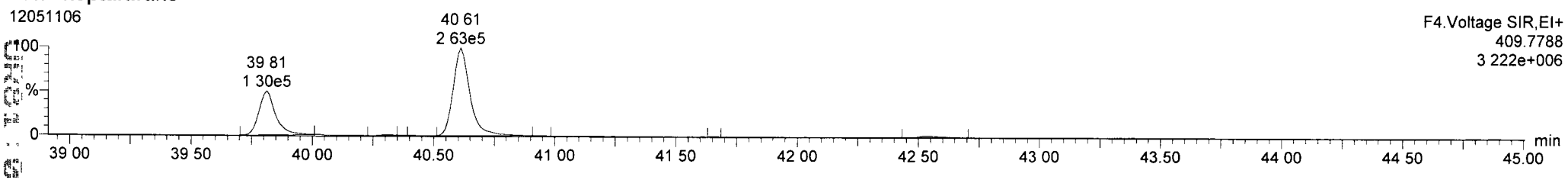
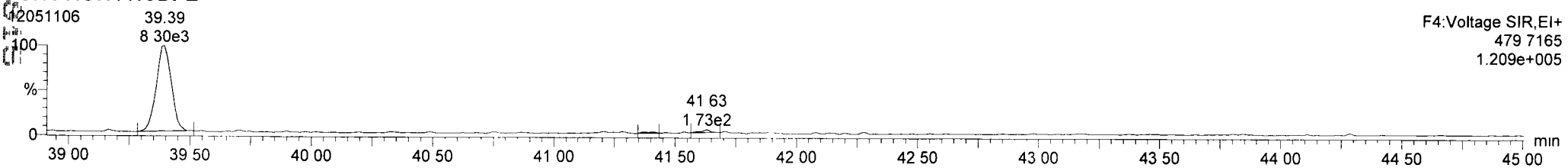


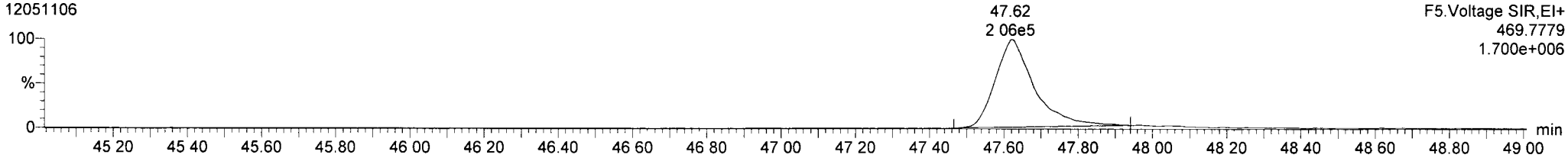
FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:47 Pacific Daylight Time

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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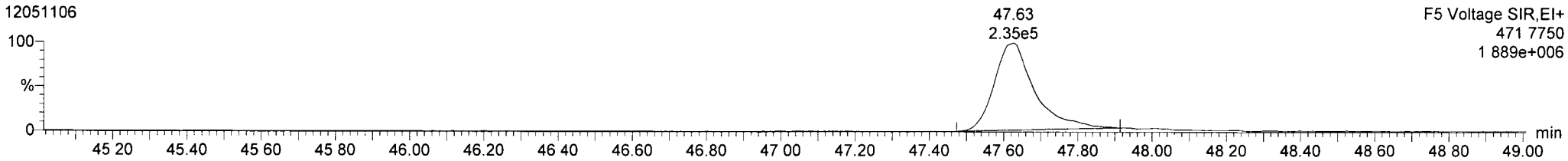

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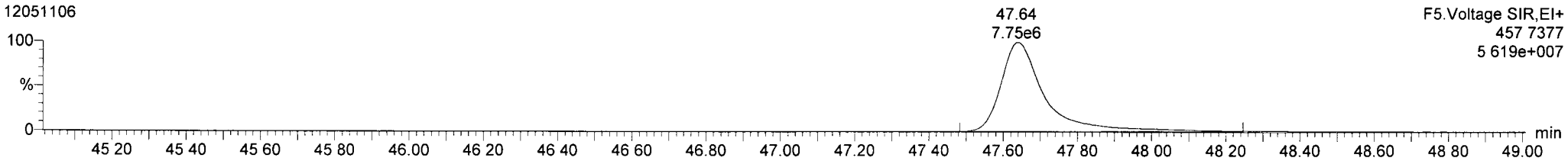

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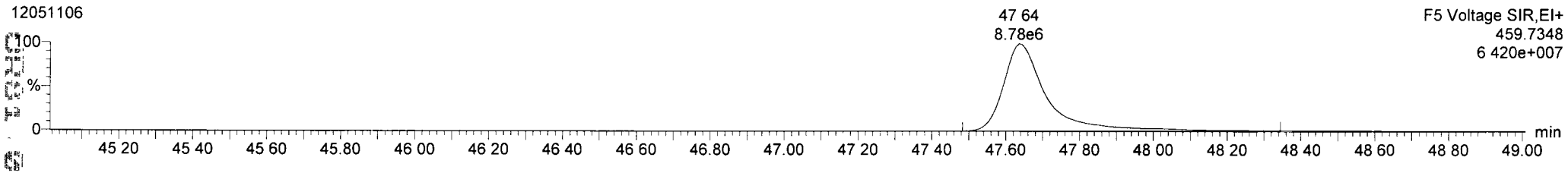
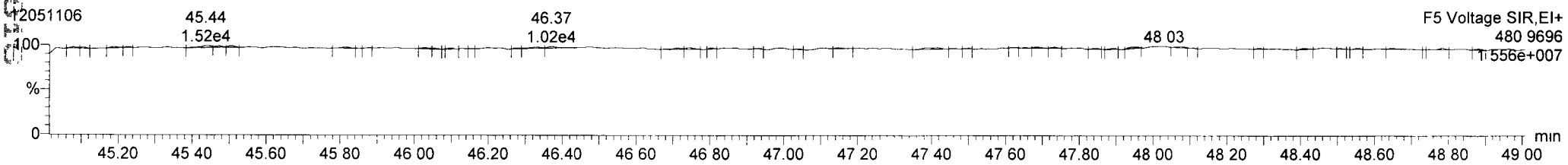


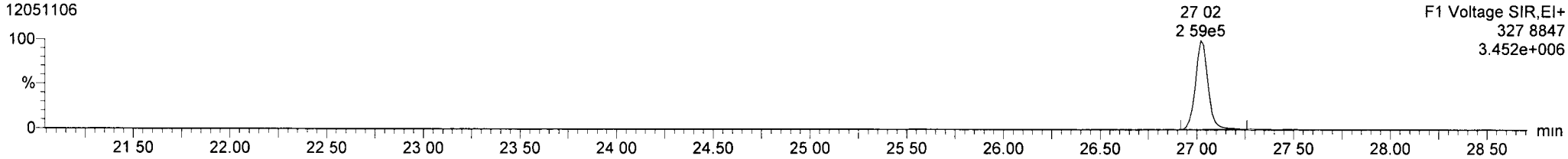
FUNCTION5 PFK



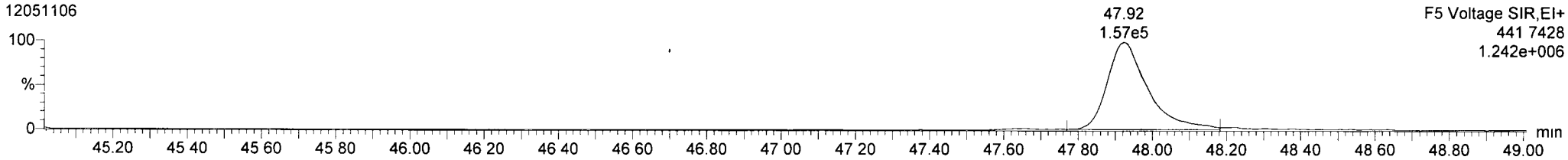
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09.42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:47 Pacific Daylight Time

Name: 12051106, Date: 11-May-2012, Time: 13:51:09, ID: UR81E 5X, Conditions: AUTOSPEC01, User: pk

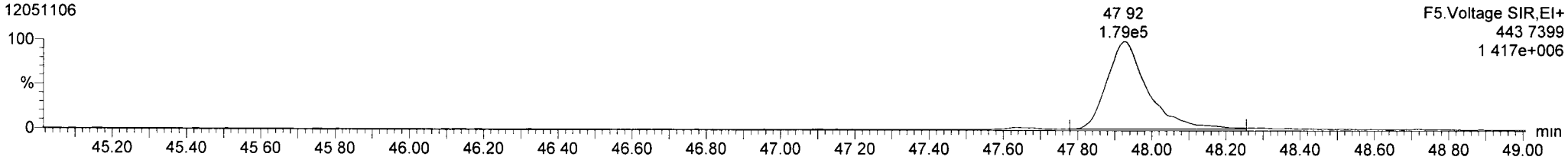
37CL-2378-TCDD



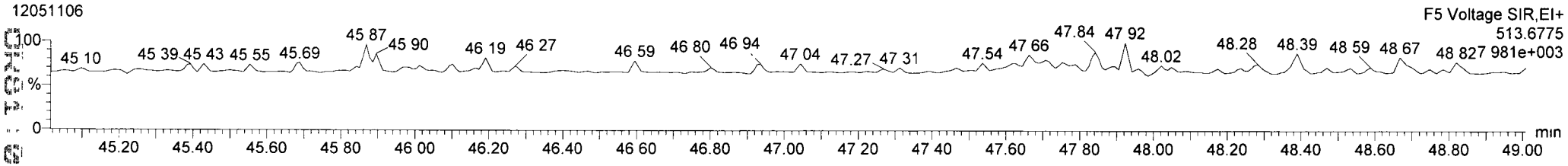
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

pk 5/24/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Dilution

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati. .	S/N	1° ..	pg	EMPC
1	1	2378-TCDF	303 9016	26 392	26 393	5442	5442	0 866	bb		0.80	0 77	19 7	NO	0.691	0 691
2	2	12378-PeCDF	339.8597	30.527	30.526	6713	6713	0.907	bb		1.65	1 55	23 8	NO	1.056	1 056
3	3	23478-PeCDF	339 8597	31.864	31.864	0	5204	0 936	dd		2.33	1 55	28 4	YES	0.000	0 837
4	4	123478-HxCDF	373 8208	35.525	35 525	19327	19327	1 082	bd		1 24	1 24	72 3	NO	3 602	3.602
5	5	234678-HxCDF	373.8208	36 610	36.621	16083	16083	1.070	bd		1.31	1.24	39 6	NO	3 091	3.091
6	6	123678-HxCDF	373.8208	35 667	35.678	10800	10800	1.048	db		1.42	1.24	42 0	NO	1 901	1 901
7	7	123789-HxCDF	373.8208	37 706	37.729	8473	8473	1 020	bb		1.41	1 24	33 1	NO	1.557	1.557
8	8	1234678-HpCDF	407.7818	39.800	39.809	221453	221453	1 214	bb		1.00	1 05	561 0	NO	46 605	46.605
9	9	1234789-HpCDF	407 7818	42 529	42 542	0	8143	1 254	bb		0.76	1 05	18 1	YES	0 000	2 326
10	10	OCDF	441 7428	47.914	47 894	295919	295919	1.105	bd		0.92	0 89	575 1	NO	126.125	126.125
11	11	2378-TCDD	319.8965	27.034	27.018	0	1066	1.046	bd		0.32	0 77	5 4	YES	0.000	0.173
12	12	12378-PeCDD	355 8546	32.127	32.104	8482	8482	0 973	bb		1 67	1.55	37 2	NO	2 003	2.003
13	13	123478-HxCDD	389 8157	36 742	36 764	12739	12739	0 935	bd		1 24	1.24	24 6	NO	3 465	3 465
14	14	123678-HxCDD	389 8157	36 884	36 873	76862	76862	0.878	dd		1.19	1 24	140.0	NO	17 891	17 891
15	15	123789-HxCDD	389.8157	37.312	37 268	32306	32306	0.839	bd		1.40	1 24	61 1	NO	8.729	8.729
16	16	1234678-HpCDD	423 7766	41.641	41.632	1437961	1437961	0.974	bd		1.02	1 05	1198 3	NO	468 035	468.035
17	17	OCDD	457 7377	47 626	47.623	10243680	10243680	0 950	bd		0.89	0.89	4815 6	NO	5079 049	5079 0
18	18	13C-2378-TCDF	315 9419	26 377	26 377	909016		1 484	bb	15.8	0.76	0.77	2148.5	NO	15 786	
19	19	13C-12378-PeCDF	351.9000	30.505	30 518	701096		1.048	bd	17.2	1.55	1 55	1525 8	NO	17.244	
20	20	13C-23478-PeCDF	351 9000	31.842	31.856	664610		1 003	bb	17 1	1.57	1 55	1441 0	NO	17 075	
21	21	13C-123478-HxCDF	383 8639	35 514	35.514	495941		1 186	bd	15 6	0.51	0.51	460 0	NO	15.633	
22	22	13C-123678-HxCDF	383.8639	35 657	35 667	541896		1 315	db	15 4	0.51	0 51	475 9	NO	15.400	
23	23	13C-234678-HxCDF	383.8639	36.599	36.599	486304		1.223	bb	14.9	0.52	0 51	437 3	NO	14.857	
24	24	13C-123789-HxCDF	383 8639	37 717	37.706	533601		1 056	bb	18 9	0 52	0.51	478 8	NO	18 876	
25	25	13C-1234678-HpCDF	417.8253	39 789	39.789	391264		1.011	bb	14 5	0.43	0 44	571 2	NO	14 458	
26	26	13C-1234789-HpCDF	417.8253	42.529	42 540	279208		0.741	bd	14 1	0.42	0 44	353 4	NO	14.091	
27	27	13C-1234-TCDD	331 9368	26 198	26.272	3879291		1.000	bb	100 0	0.78	0 77	8923 3	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27 004	27.019	588515		0 956	bb	15 9	0 77	0 77	1223 6	NO	15.863	
29	29	13C-12378-PeCDD	367.8949	32 094	32 108	435085		0 663	bb	16 9	1.54	1.55	2295 9	NO	16 905	
30	30	13C-123478-HxCDD	401 8559	36.742	36 731	393022		1 024	bd	14 3	1.28	1.24	875 8	NO	14 345	
31	31	13C-123678-HxCDD	401 8559	36 862	36 862	489445		1.113	db	16 4	1.26	1 24	956 4	NO	16.440	
32	32	13C-1234678-HpCDD	435 8169	41 619	41.641	315338		0 815	bd	14 5	1 05	1.05	715 7	NO	14.458	
33	33	13C-OCDD	469 7779	47 608	47.657	424567		0 717	bb	11 1	0 86	0.89	525 2	NO	22.128	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42.00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46.51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

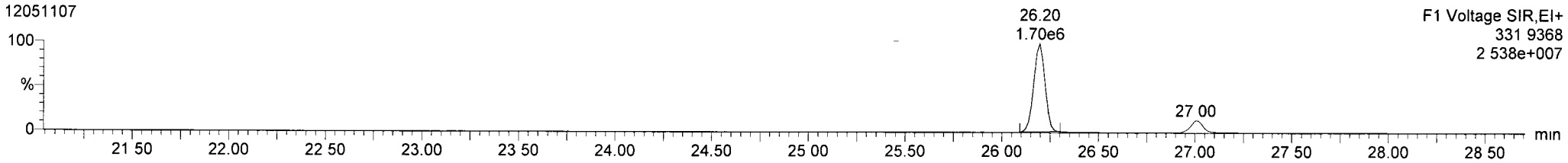
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 290	37.368	2675756		1.000	bd	100.0	1.21	1.24	5143 8	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.370			0 866							8 178	10.453
36	36	Total-penta1	339 8597		28 210										24.454	24.454
37	37	Total-pentafurans	339.8597		30.790			0.921							10.479	15 618
38	38	Total-hexafurans	373.8208		35 760			1 055							97 636	98 552
39	39	Total-heptafurans	407.7818		41.160			1.234							140 943	143 852
40	40	Total-Furans	303 9016		0 000			1 050							407 874	419 113
41	41	Total-tetradioxins	319.8965		25 880			1 046							6 294	7.181
42	42	Total-pentadioxins	355 8546		30.950			0.973							5.517	10.215
43	43	Total-hexadioxins	389.8157		35.940			0.884							111.310	112 272
44	44	Total-heptadioxins	423.7766		40 980			0 974							1179 075	1179 0
45	45	Total-Dioxins	319.8965		0 000			0 942							6381 244	6387.7.
46	46	Total-TEQ	319 8965		0.000										6789 119	6806 9
47	47	37CL-2378-TCDD	327 8847	27.034	27 010	268543		1 037					1886.6		6.674	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0 000	
50	50	FUNCTION3 PFK	380.9760		0.000										0 000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480 9696		0 000											
53	53	FUNCTION1 HXCDPE	375 8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409 7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409 7974		0 000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0 000										0.000	
57	57	FUNCTION4 NCDPE	479 7165		0 000										0.000	
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42.00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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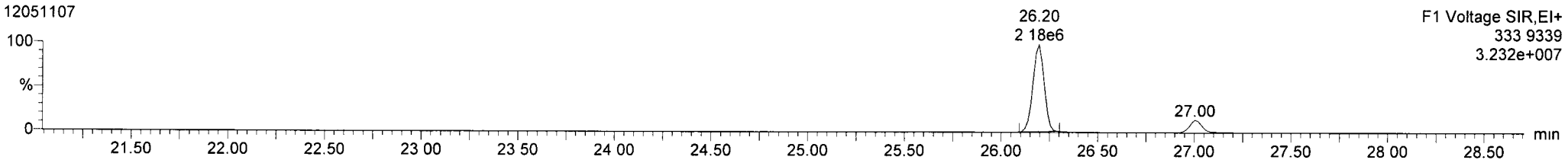

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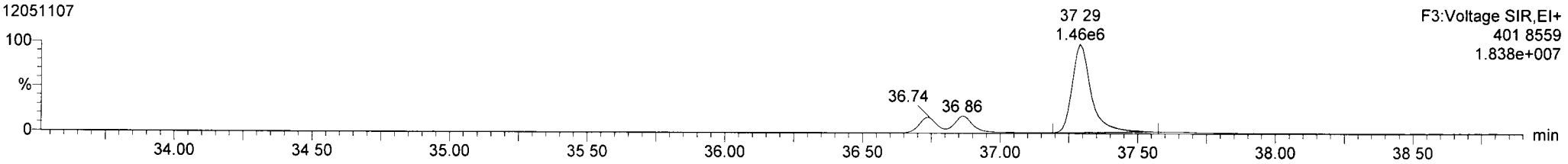

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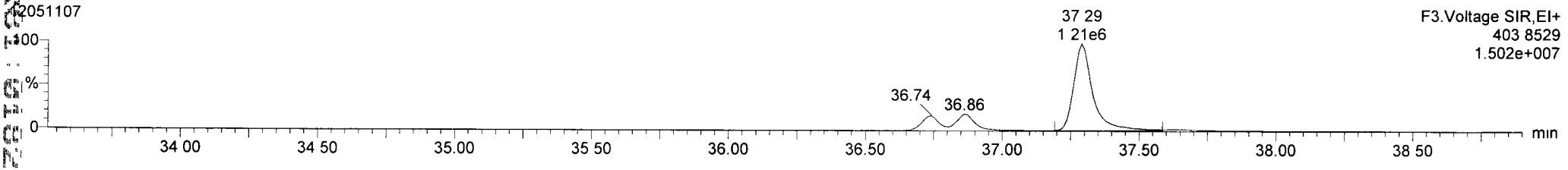
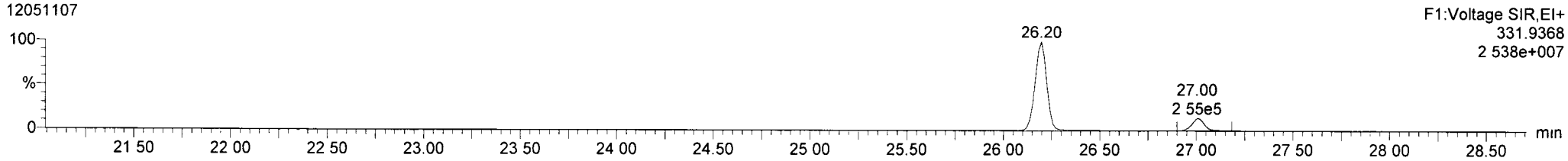


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed. Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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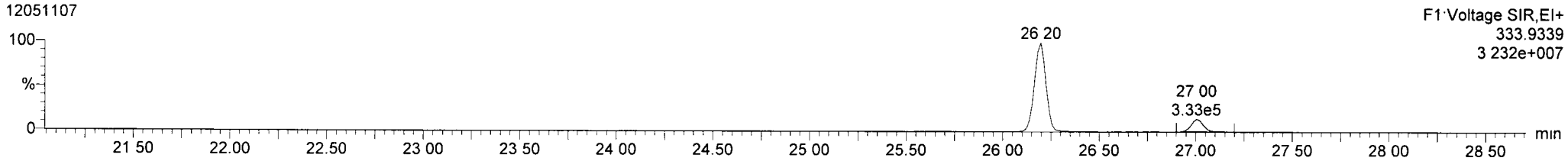
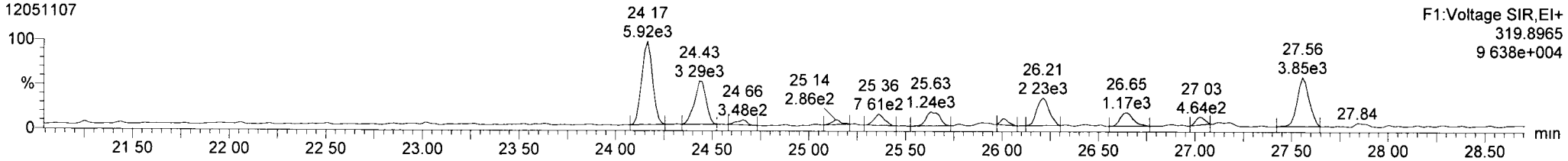
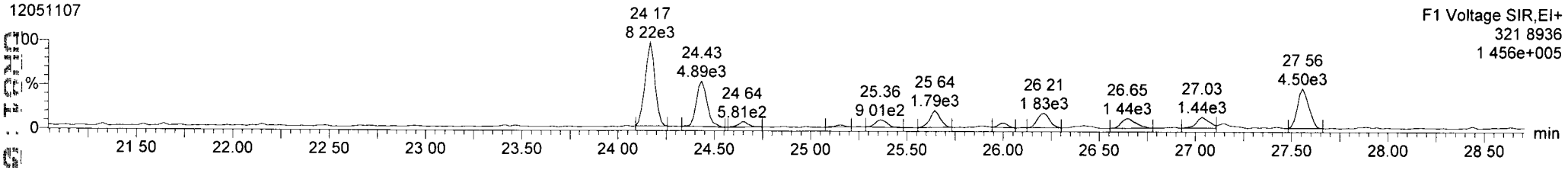


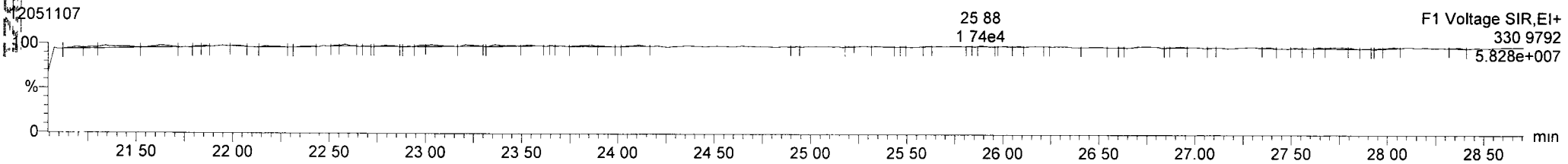
Total-tetradioxins



Total-tetradioxins



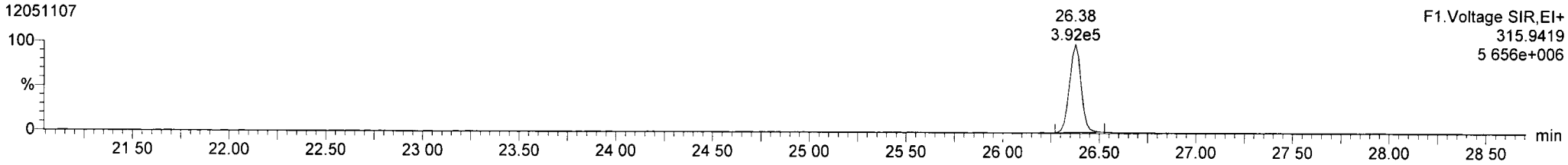
FUNCTION1 PFK



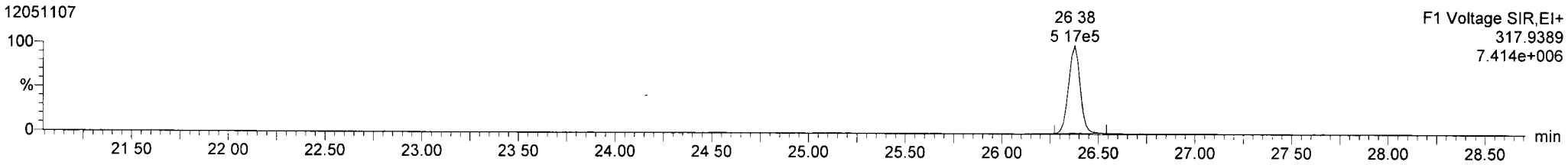
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

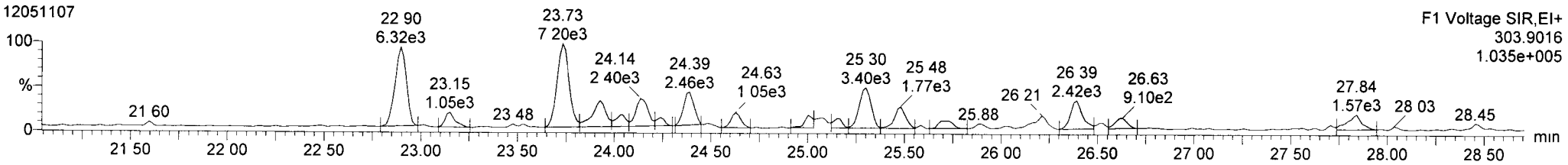
13C-2378-TCDF



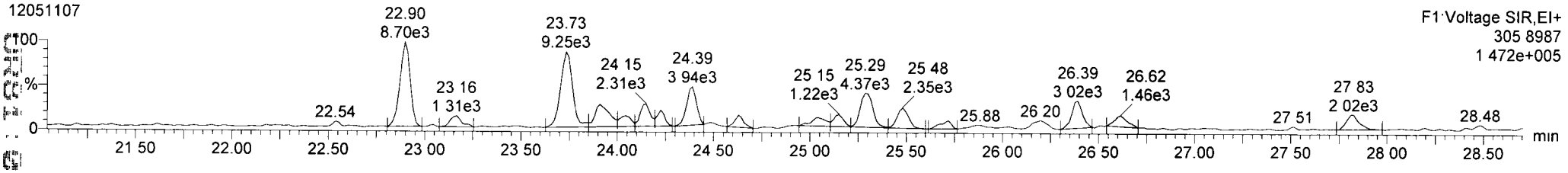
13C-2378-TCDF



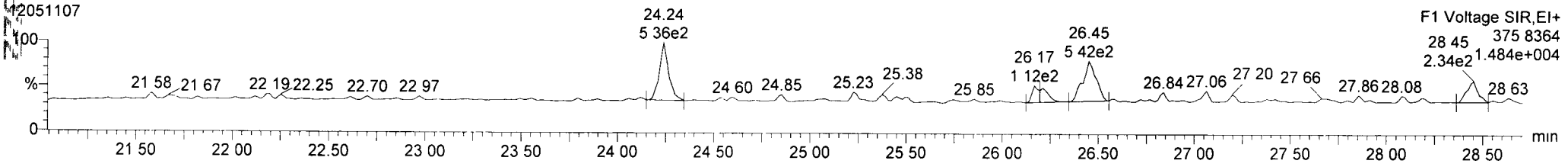
Total-tetrafurans



Total-tetrafurans



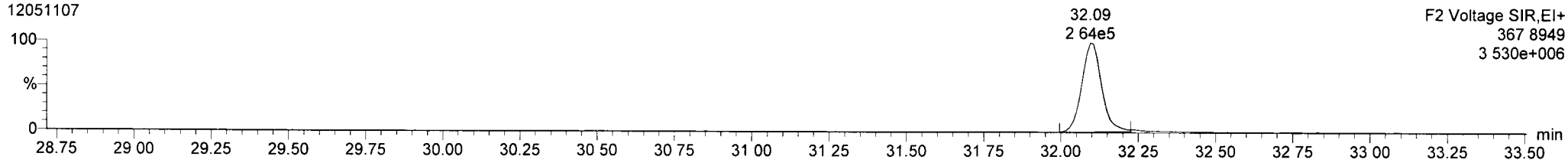
FUNCTION1 HXCDPE



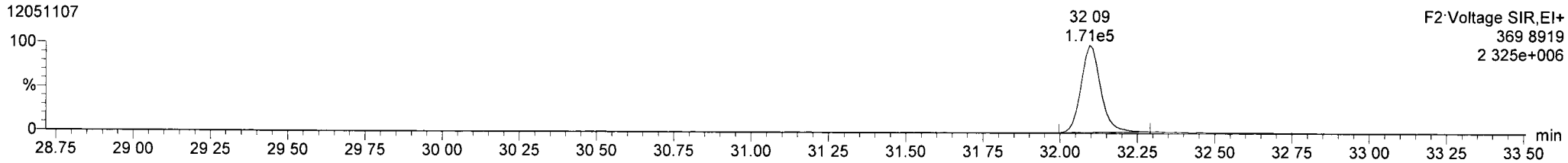
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09.42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46.51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

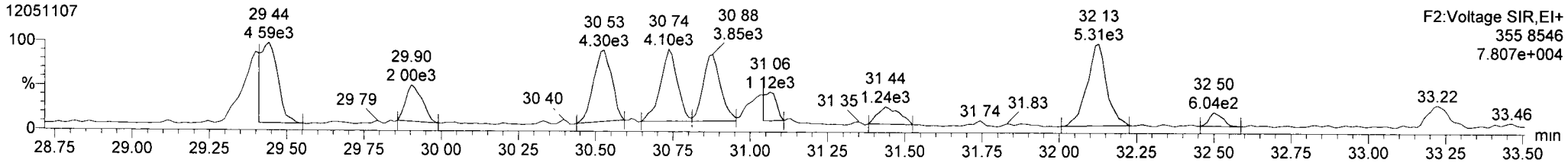
13C-12378-PeCDD



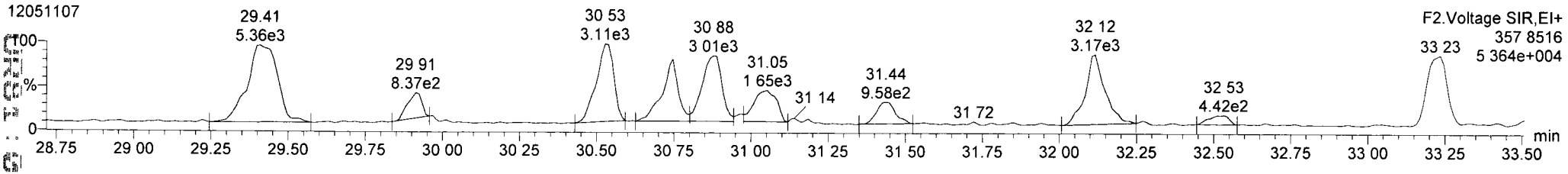
13C-12378-PeCDD



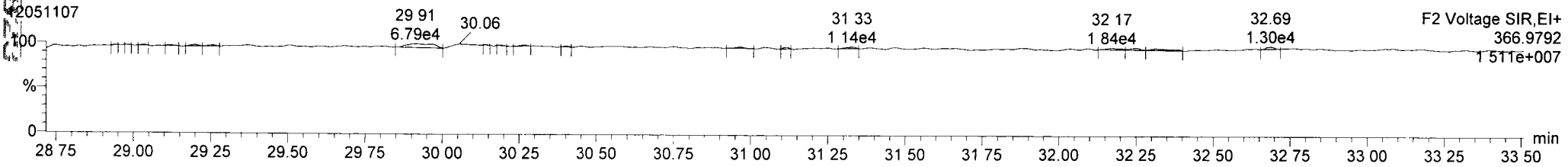
Total-pentadioxins



Total-pentadioxins



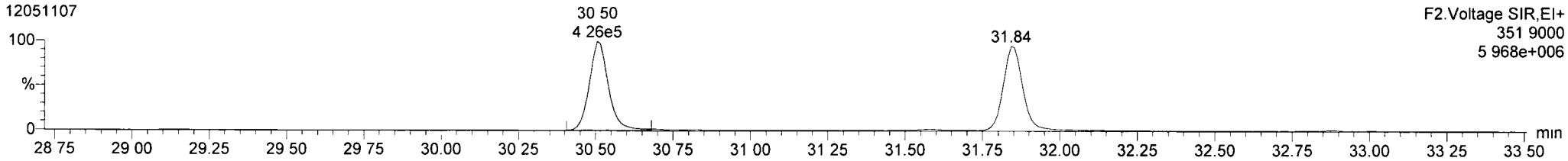
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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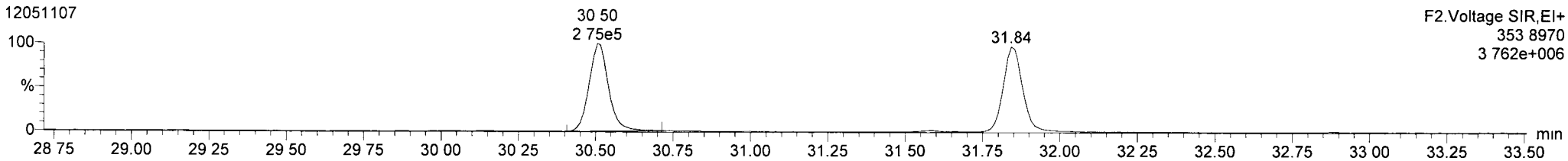

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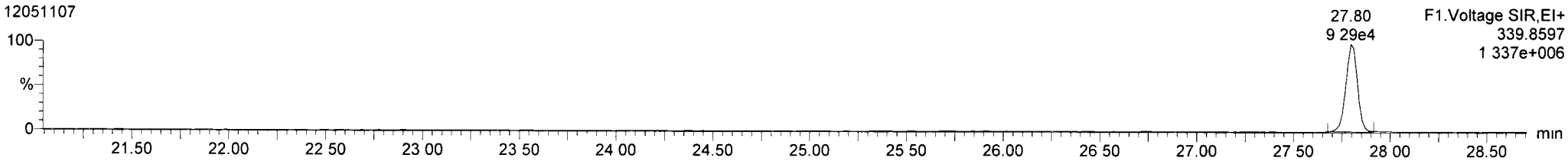

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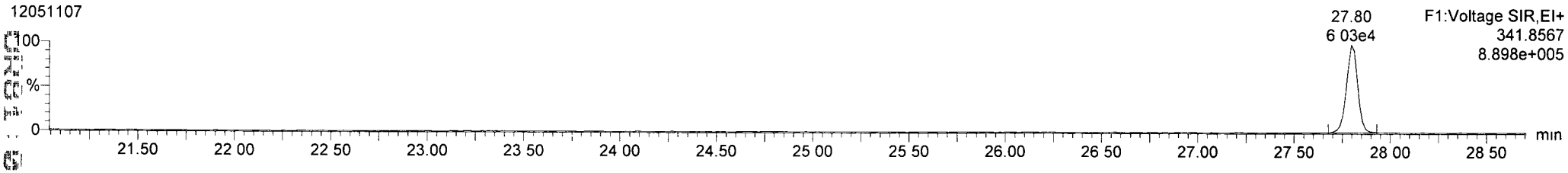
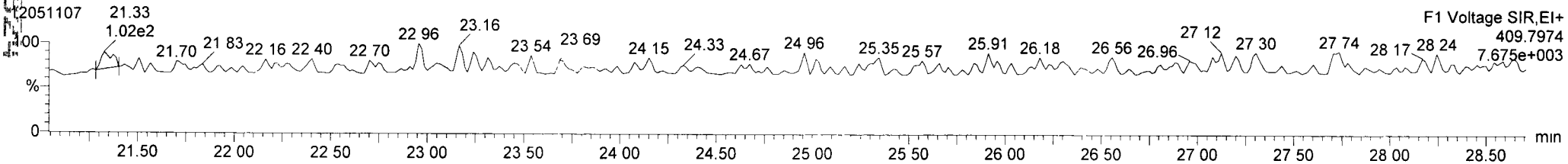


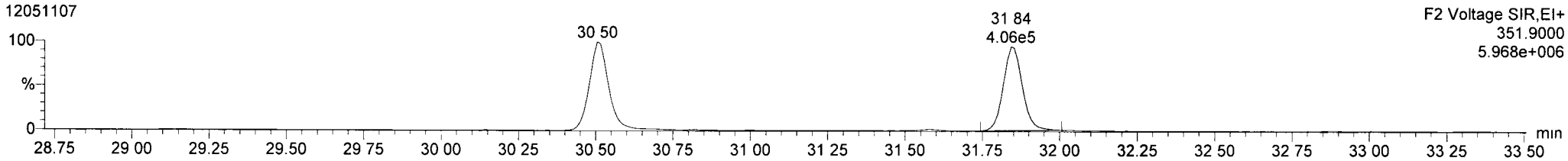
FUNCTION1 HPCDPE



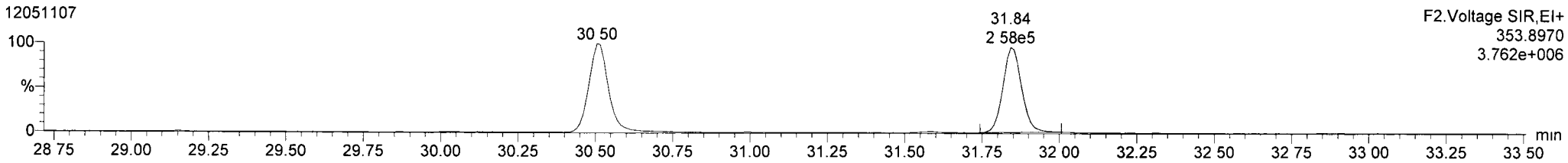
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42.00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

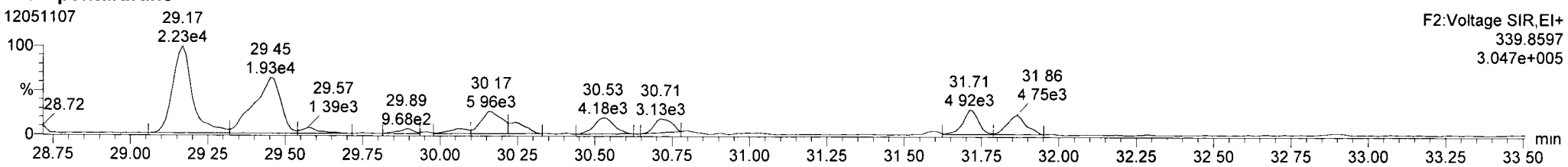
13C-23478-PeCDF



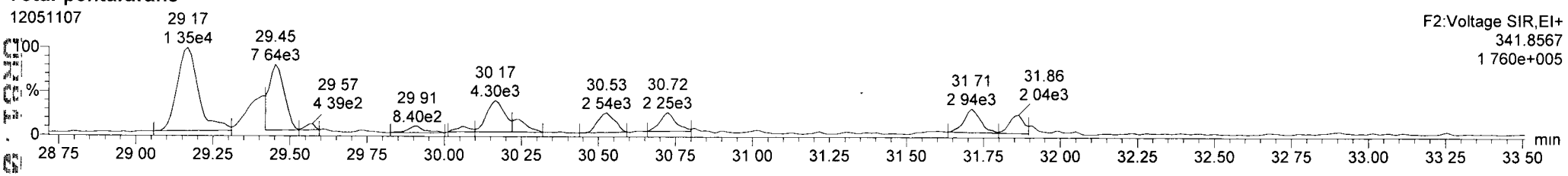
13C-23478-PeCDF



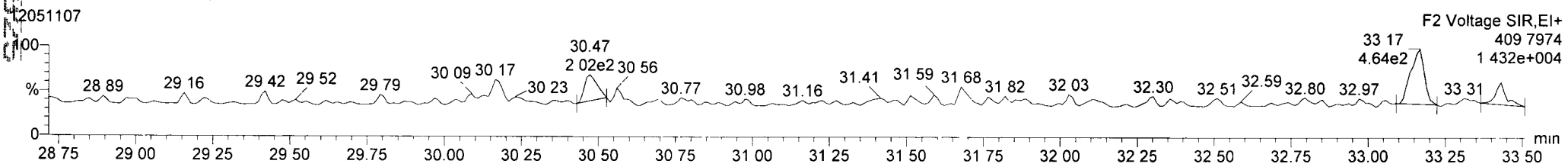
Total-pentafurans



Total-pentafurans



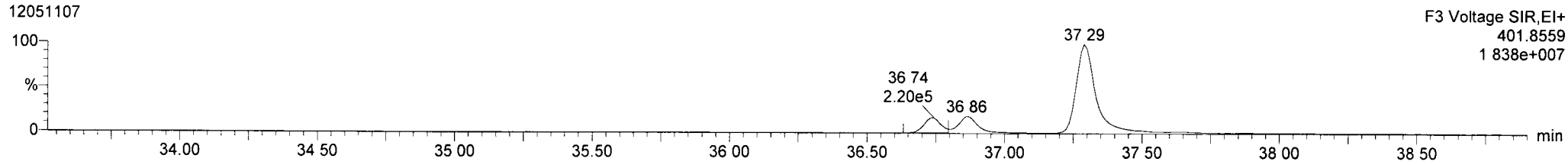
FUNCTION2 HPCDPE



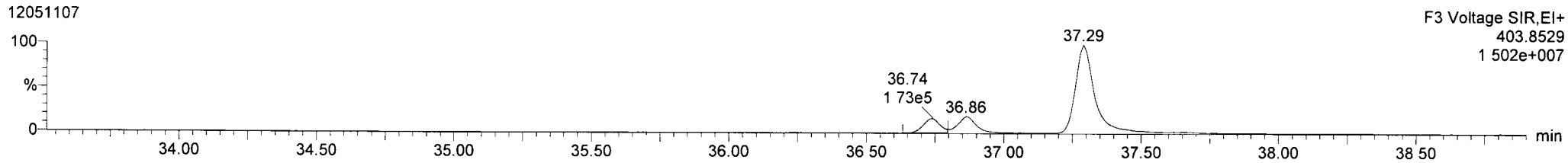
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

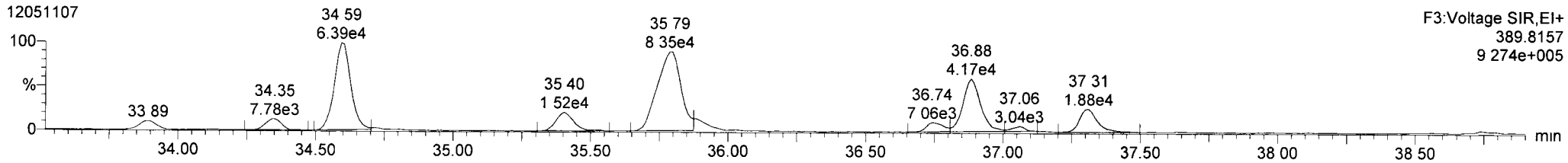
13C-123478-HxCDD



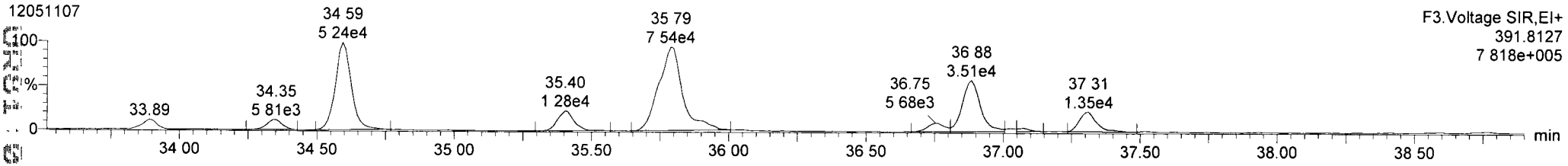
13C-123478-HxCDD



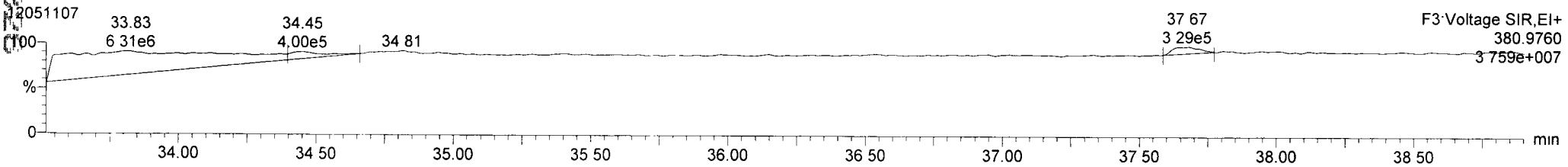
Total-hexadioxins



Total-hexadioxins



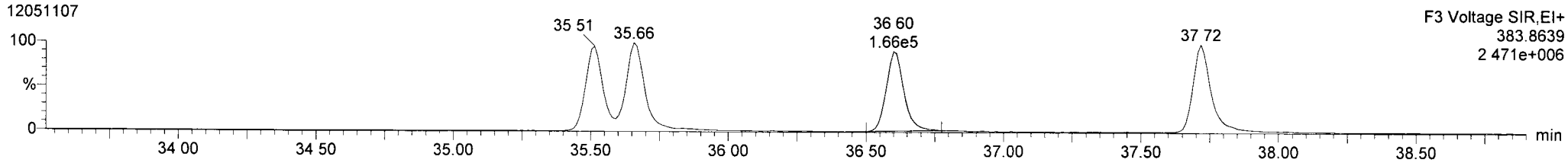
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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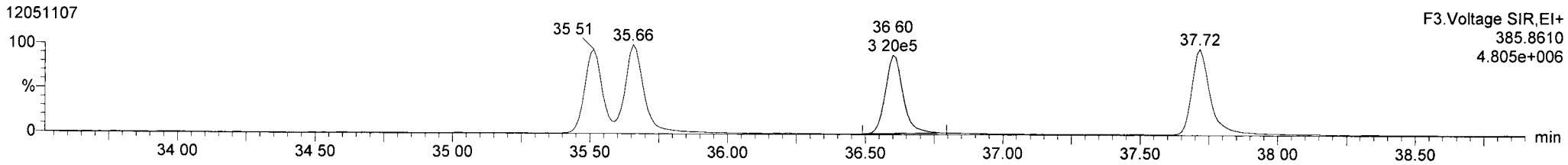
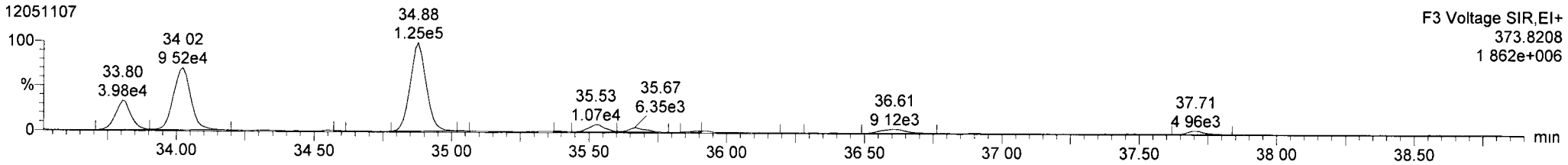


Total-hexafurans



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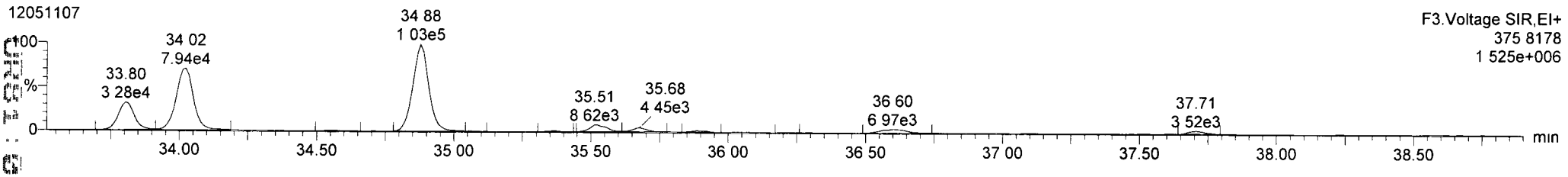
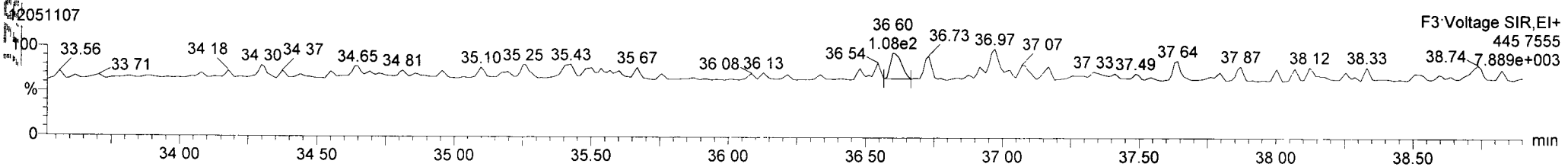


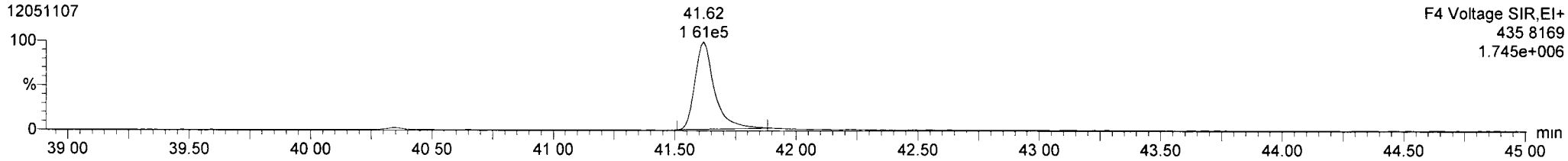
FUNCTION3 OCDPE



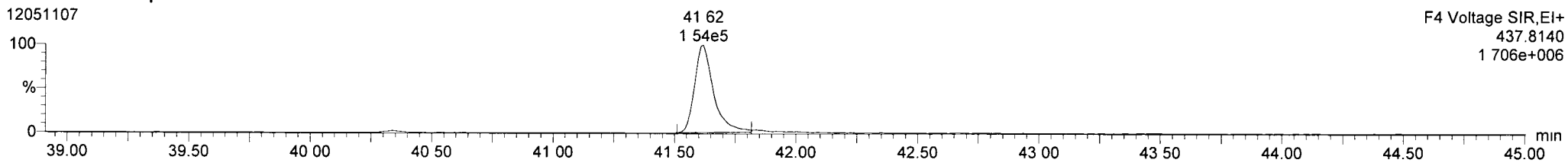
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P \DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09.46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

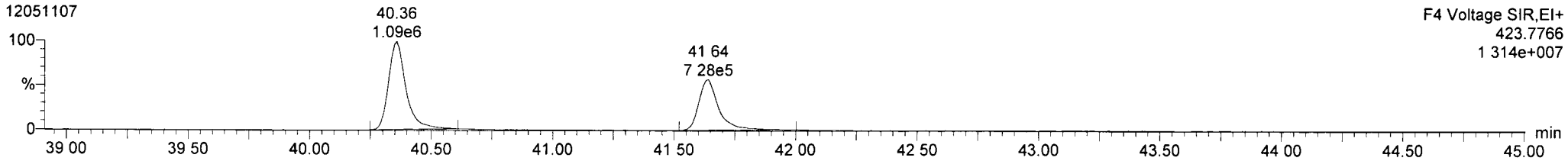
13C-1234678-HpCDD



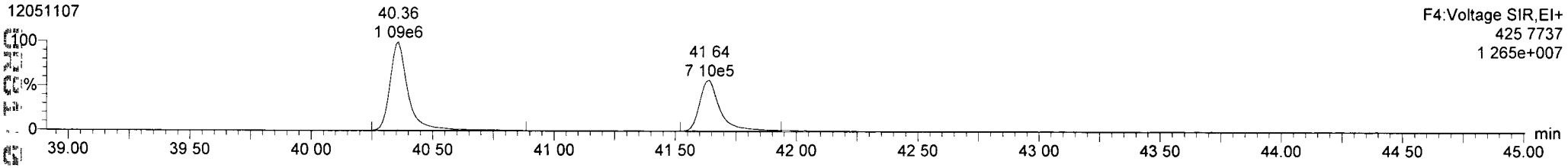
13C-1234678-HpCDD



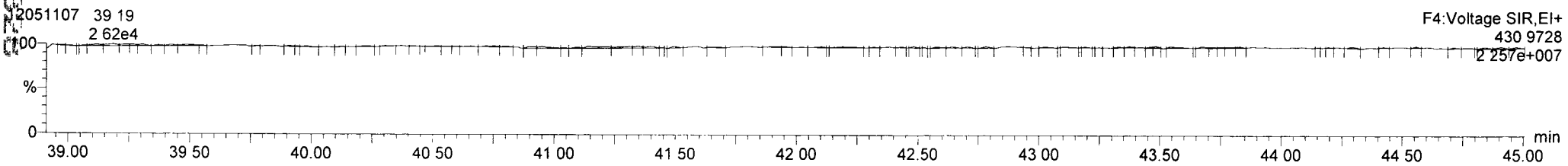
Total-heptadioxins



Total-heptadioxins



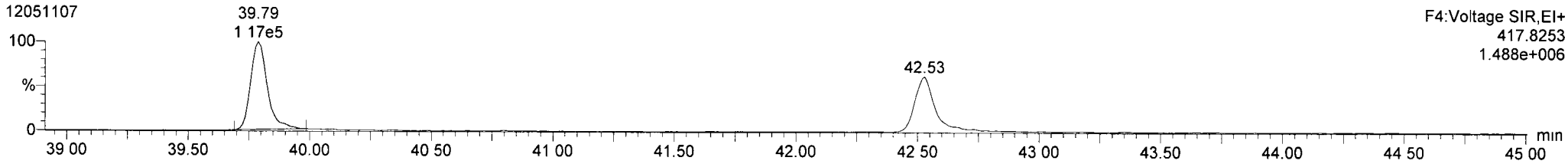
FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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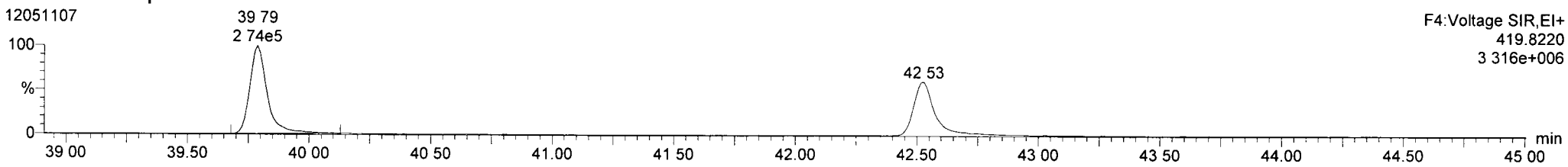
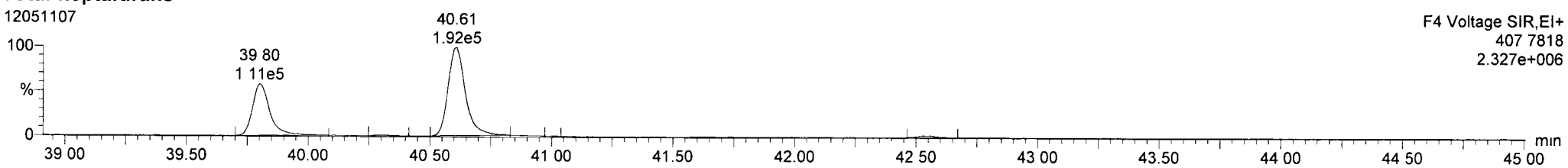


Total-heptafurans



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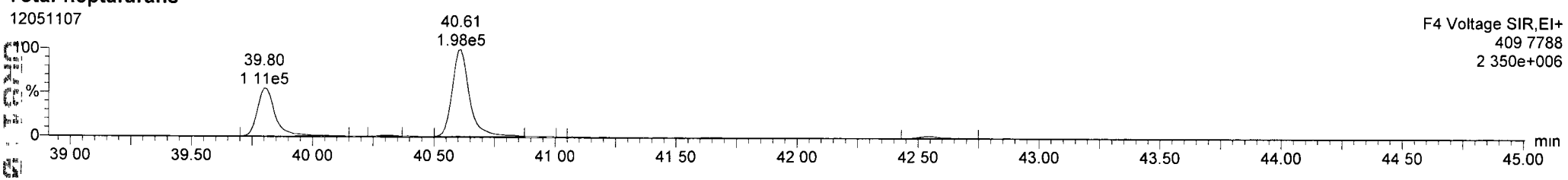
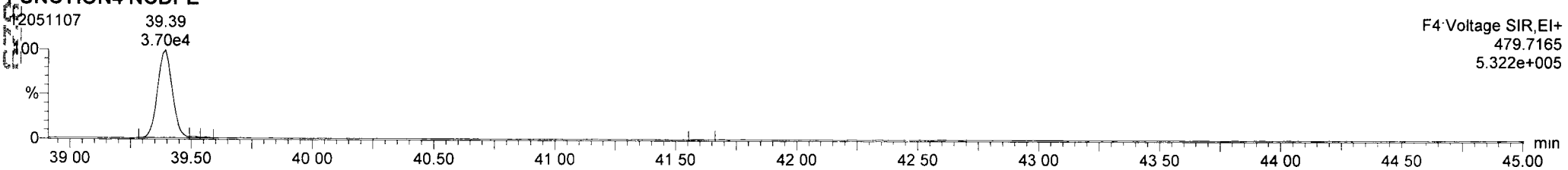


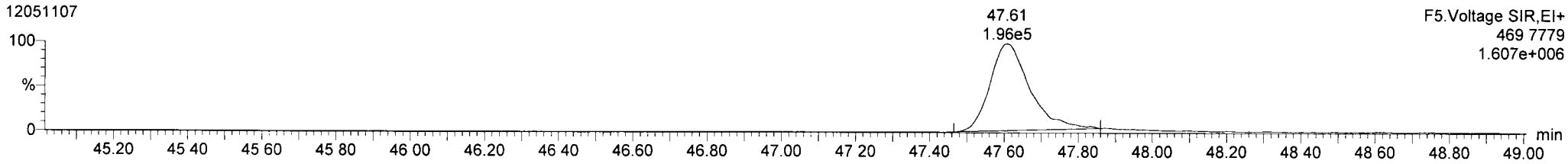
FUNCTION4 NCDPE



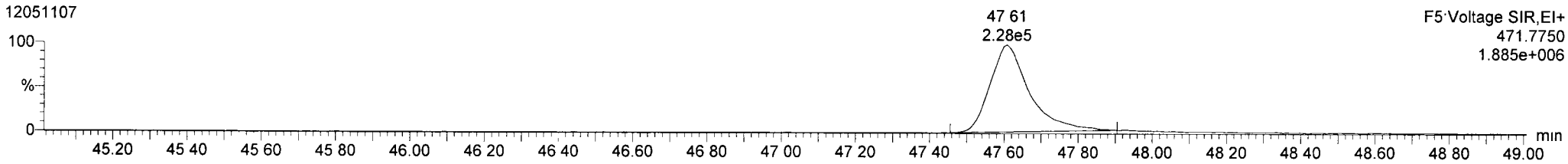
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

13C-OCDD



13C-OCDD



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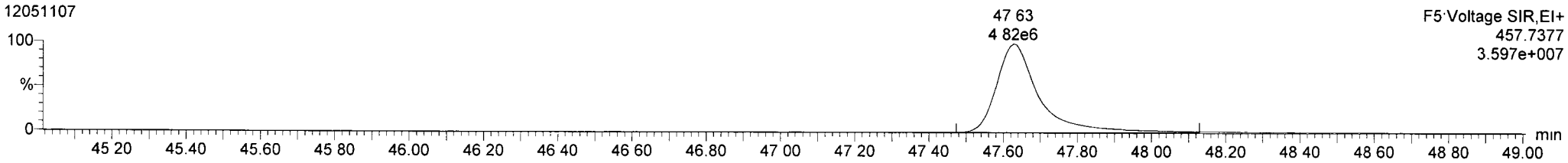
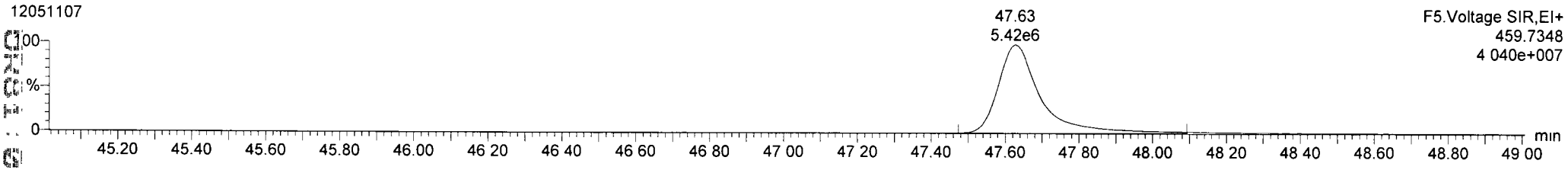
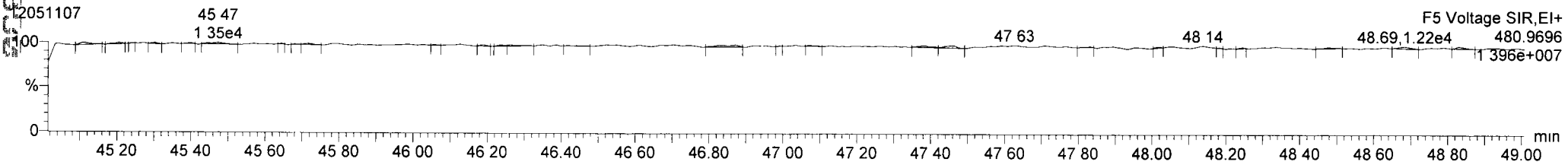


OCDD



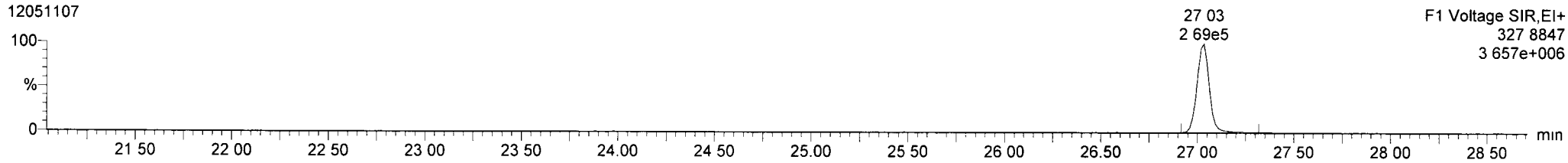
FUNCTION5 PFK



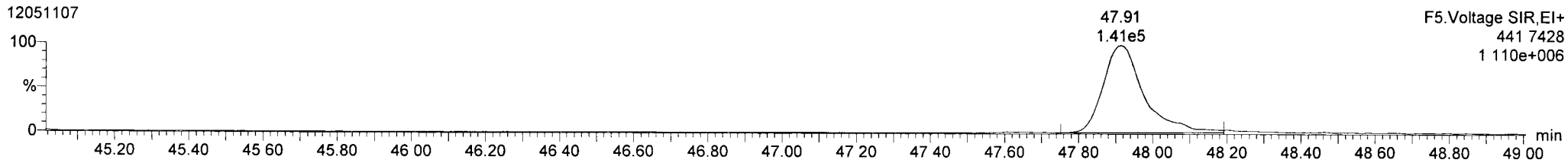
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed. Monday, May 14, 2012 09:46:51 Pacific Daylight Time

Name: 12051107, Date: 11-May-2012, Time: 14:59:29, ID: UR81G 5X, Conditions: AUTOSPEC01, User: pk

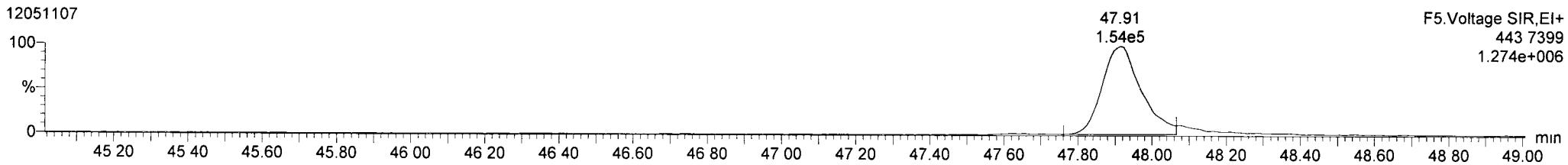
37CL-2378-TCDD



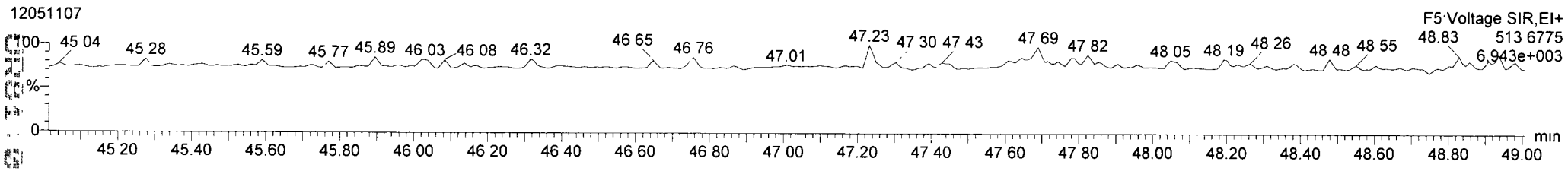
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Dilution

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

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2	2	12378-PeCDF	339 8597	30 549	30 549	4544	4544	0.907	bb		1 49	1 55	14.1	NO	0 499	0.499
3	3	23478-PeCDF	339.8597	31 875	31 876	5916	5916	0.936	db		1 64	1.55	19.5	NO	0 637	0.637
4	4	123478-HxCDF	373.8208	35 537	35.536	18551	18551	1 082	dd		1.31	1.24	56.9	NO	2 575	2.575
5	5	234678-HxCDF	373.8208	36.622	36 633	0	2808	1 070	db		2 46	1.24	21 3	YES	0.000	0.477
6	6	123678-HxCDF	373 8208	35.701	35 690	0	6055	1 048	db		1 86	1 24	23 0	YES	0.000	0 753
7	7	123789-HxCDF	373 8208	37 707	37 740	4495	4495	1.020	bb		1.06	1.24	12 9	NO	0 796	0 796
8	8	1234678-HpCDF	407.7818	39 812	39 821	158139	158139	1.214	bb		0.99	1.05	348.6	NO	27 920	27.920
9	9	1234789-HpCDF	407.7818	42 563	42 554	7189	7189	1 254	bb		1.21	1 05	13.2	NO	1 655	1.655
10	10	OCDF	441 7428	47 933	47 904	273413	273413	1 105	bd		0.88	0 89	438 7	NO	100.422	100 422
11	11	2378-TCDD	319.8965	27.034	27 033	0	1940	1 046	bb		0.90	0.77	4.7	YES	0 000	0.199
12	12	12378-PeCDD	355 8546	32 139	32 115	7087	7087	0.973	bb		1.48	1.55	20 7	NO	1 092	1.092
13	13	123478-HxCDD	389 8157	36.764	36 776	10638	10638	0 935	bd		1.06	1 24	23.0	NO	2.079	2.079
14	14	123678-HxCDD	389.8157	36.907	36.885	52459	52459	0 878	dd		1.20	1.24	114.4	NO	9 405	9.405
15	15	123789-HxCDD	389 8157	37.313	37 280	20231	20231	0 839	bb		1.36	1.24	43.8	NO	4.080	4 080
16	16	1234678-HpCDD	423 7766	41 653	41 644	1110528	1110528	0 974	bd		1 03	1.05	1066.8	NO	284 675	284.675
17	17	OCDD	457.7377	47 637	47.633	6169924	6169924	0.950	bd		0.87	0.89	3959.4	NO	2636.256	2636 2.
18	18	13C-2378-TCDF	315.9419	26.377	26.377	1360352		1 484	bb	13.5	0.77	0 77	1824 2	NO	13 469	
19	19	13C-12378-PeCDF	351 9000	30.527	30 519	1004298		1 048	bb	14.1	1.57	1 55	1238 3	NO	14 084	
20	20	13C-23478-PeCDF	351.9000	31 854	31 856	992528		1 003	bb	14 5	1 56	1.55	1286 5	NO	14 539	
21	21	13C-123478-HxCDF	383 8639	35 526	35.526	665824		1.186	bd	13 7	0 50	0.51	618.2	NO	13.745	
22	22	13C-123678-HxCDF	383 8639	35 668	35.679	766929		1 315	db	14 3	0.52	0 51	645 6	NO	14 274	
23	23	13C-234678-HxCDF	383.8639	36.611	36 611	549853		1 223	bb	11 0	0 51	0.51	475 2	NO	11 001	
24	24	13C-123789-HxCDF	383 8639	37 729	37 718	553326		1 056	bb	12 8	0 49	0 51	487 3	NO	12.819	
25	25	13C-1234678-HpCDF	417.8253	39 801	39 801	466381		1.011	bb	11 3	0.45	0 44	593.5	NO	11 286	
26	26	13C-1234789-HpCDF	417 8253	42.541	42.552	346437		0 741	bb	11.4	0.45	0.44	391 2	NO	11 450	
27	27	13C-1234-TCDD	331.9368	26 198	26.272	6803866		1 000	bb	100 0	0 79	0.77	11829.8	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27 020	27 020	930622		0.956	bb	14 3	0.76	0.77	1468.3	NO	14 302	
29	29	13C-12378-PeCDD	367 8949	32.106	32.108	666754		0 663	bb	14.8	1.56	1.55	1807 1	NO	14 771	
30	30	13C-123478-HxCDD	401 8559	36 754	36 743	546955		1 024	bd	13 1	1 25	1.24	930 1	NO	13 074	
31	31	13C-123678-HxCDD	401.8559	36 874	36 874	635457		1 113	db	14 0	1 25	1 24	985 2	NO	13 979	
32	32	13C-1234678-HpCDD	435 8169	41 631	41 653	400393		0 815	bd	12 0	1 06	1.05	902 4	NO	12.022	
33	33	13C-OCDD	469 7779	47 619	47 669	492680		0 717	bb	8 4	0 93	0 89	756.0	NO	16 816	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

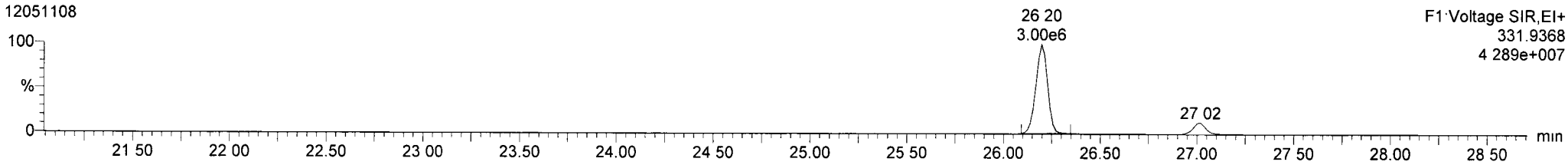
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37 302	37 368	4085786		1.000	bb	100 0	1.22	1 24	6253 0	NO	100 000	
35	35	Total-tetrafurans	303 9016		25 370			0.866							3 546	5.845
36	36	Total-penta1	339 8597		28 210										7.958	7.958
37	37	Total-pentafurans	339.8597		30 790			0.921							1 656	4.382
38	38	Total-hexafurans	373.8208		35.760			1.055							44.000	46.399
39	39	Total-heptafurans	407.7818		41.160			1.234							99.332	99 332
40	40	Total-Furans	303 9016		0.000			1.050							257.351	264 774
41	41	Total-tetradioxins	319 8965		25 880			1.046							20 271	21 600
42	42	Total-pentadioxins	355 8546		30 950			0.973							22 579	24 941
43	43	Total-hexadioxins	389.8157		35 940			0 884							89.180	92.385
44	44	Total-heptadioxins	423.7766		40 980			0.974							790.623	790.623
45	45	Total-Dioxins	319.8965		0.000			0.942							3558 911	3565 8 .
46	46	Total-TEQ	319 8965		0.000										3816 262	3830 5...
47	47	37CL-2378-TCDD	327 8847	27.034	27 010	489076		1 037					1996 9		6 931	
48	48	FUNCTION1 PFK	330 9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0 000	
50	50	FUNCTION3 PFK	380 9760		0.000										0 000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480 9696		0.000											
53	53	FUNCTION1 HXCDPE	375 8364		0 000										0.000	
54	54	FUNCTION1 HPCDPE	409 7974		0 000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0 000	
57	57	FUNCTION4 NCDPE	479.7165		0 000										0.000	
58	58	FUNCTION5 DCDPE	513 6775		0.000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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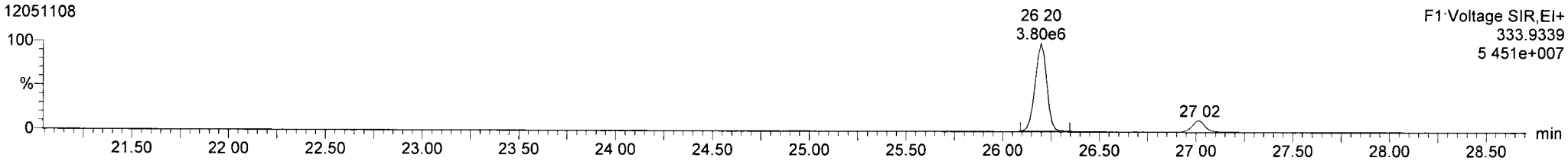
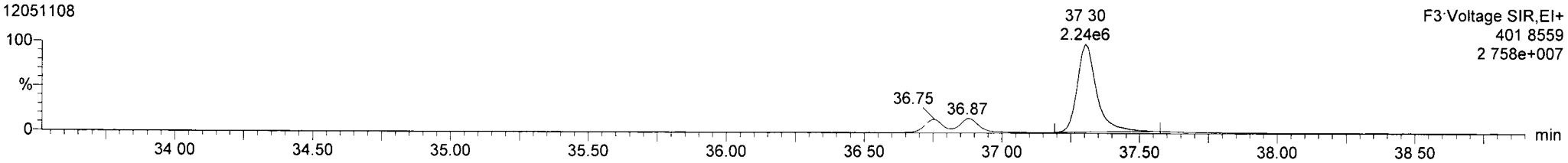


13C-123789-HxCDD



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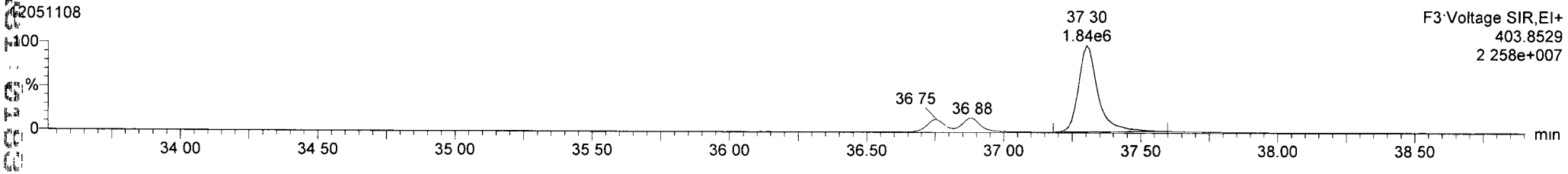
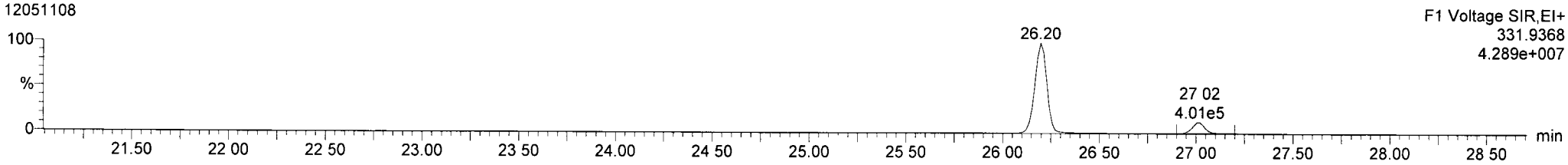


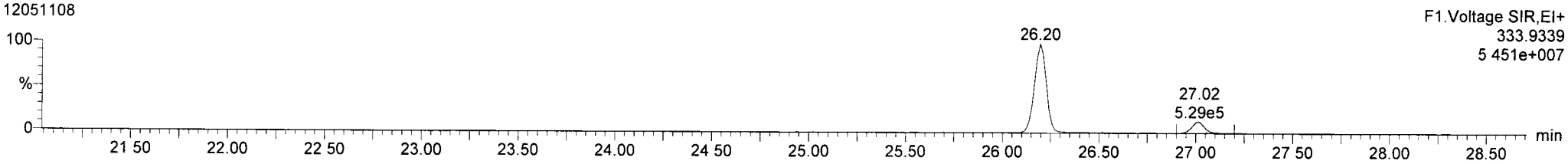
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed. Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
12051108



13C-2378-TCDD
12051108



Total-tetradioxins
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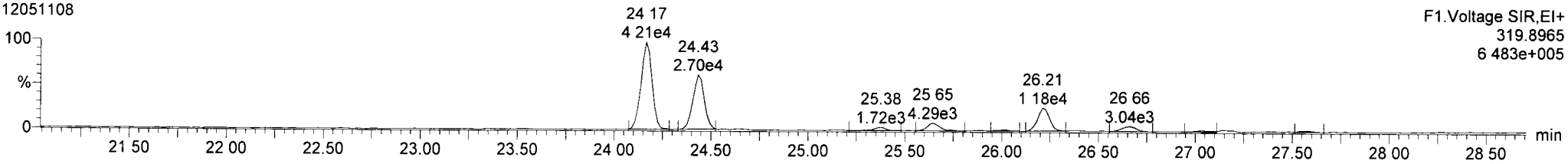
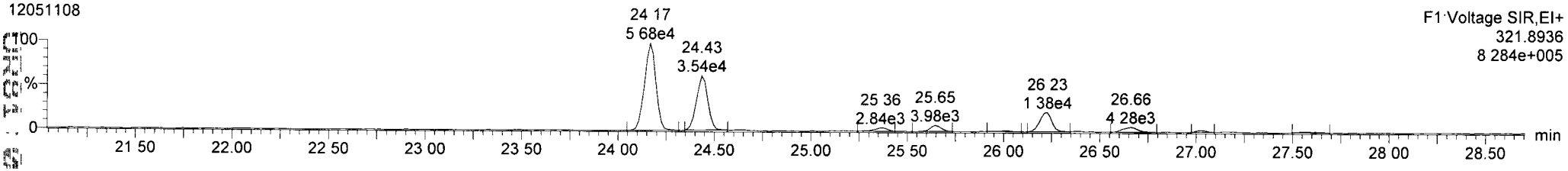
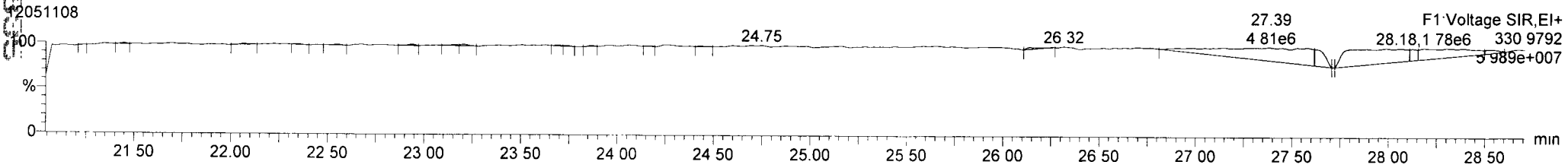


Total-tetradioxins
12051108



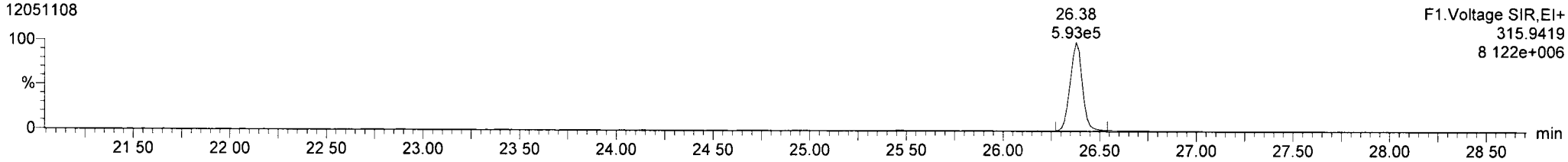
FUNCTION1 PFK
12051108



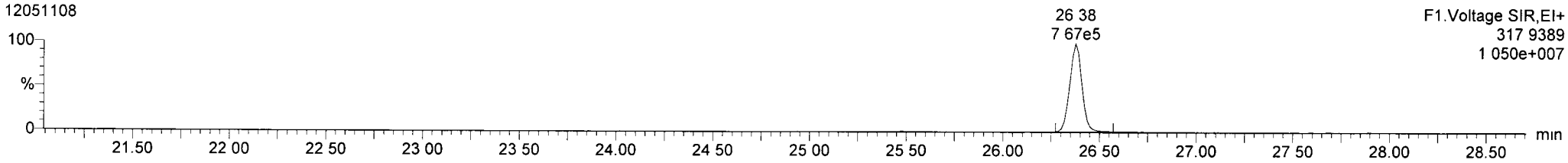
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

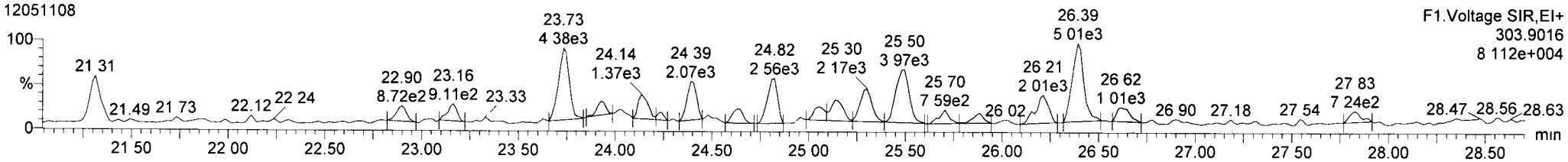
13C-2378-TCDF



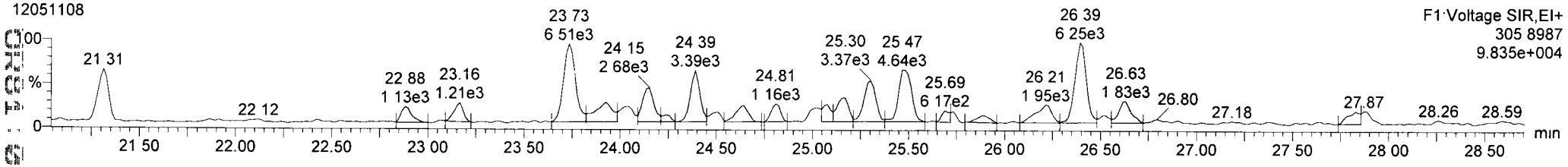
13C-2378-TCDF



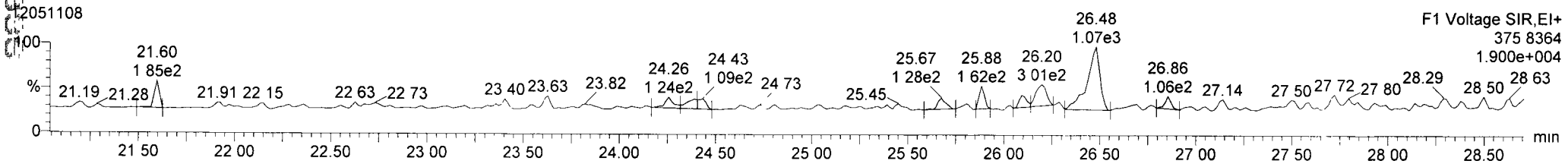
Total-tetrafurans



Total-tetrafurans



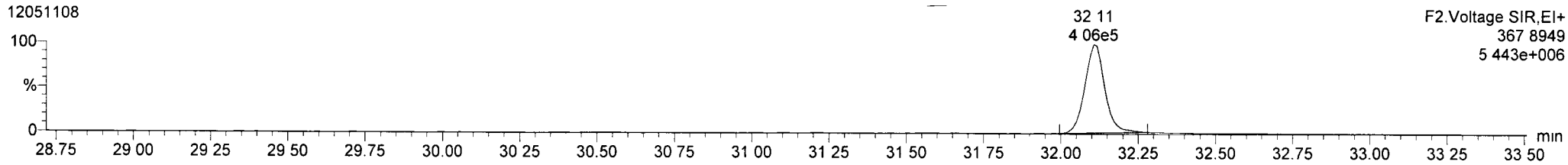
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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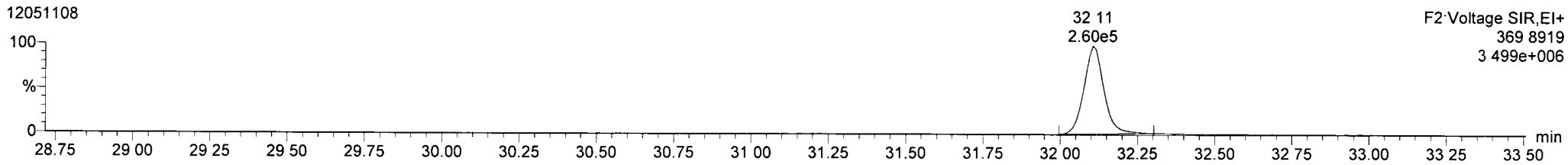
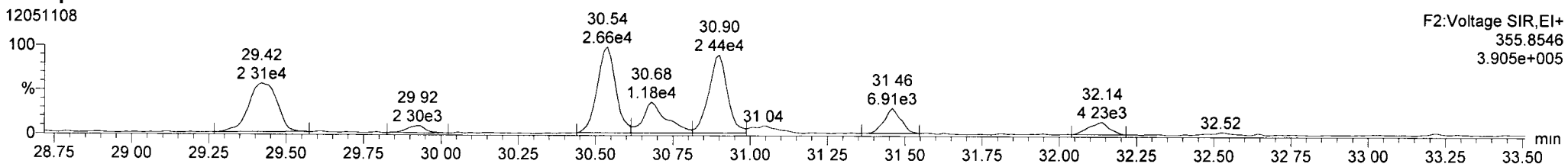
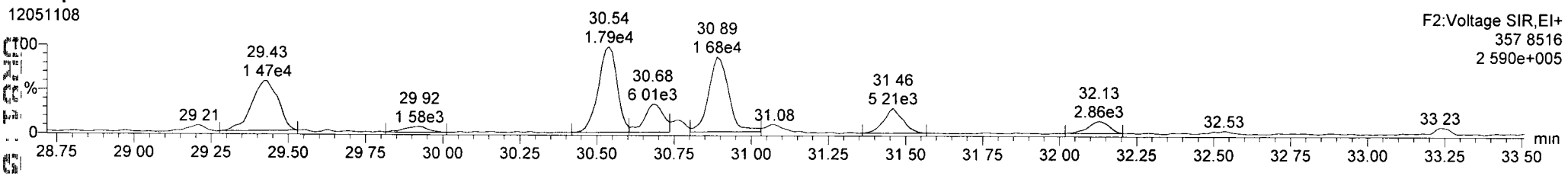


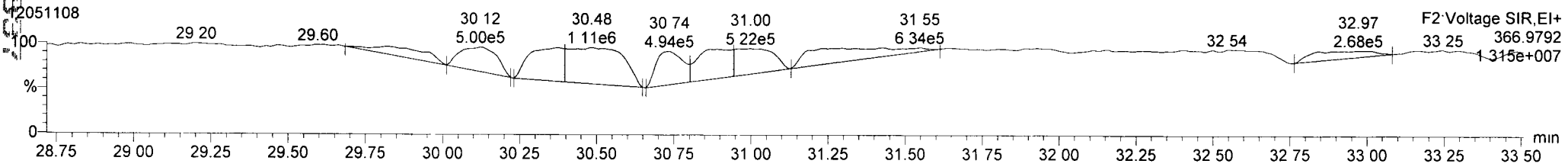
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\120511DATA qld
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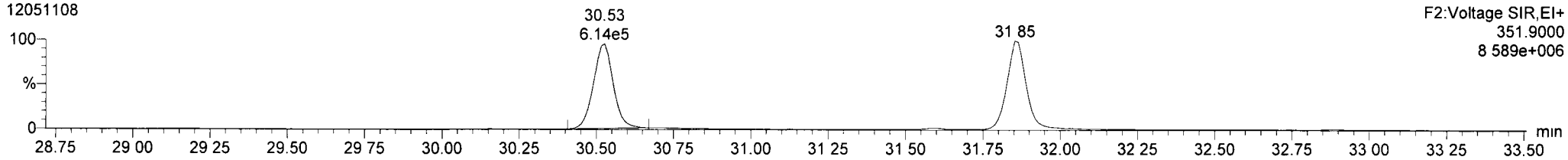
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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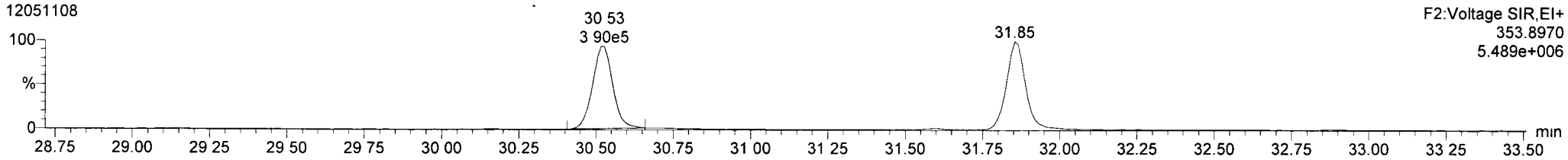
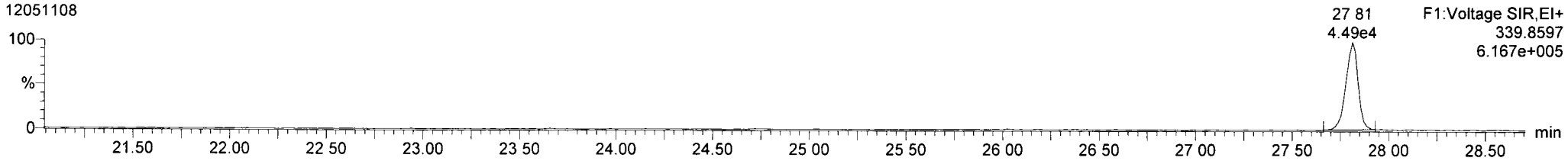
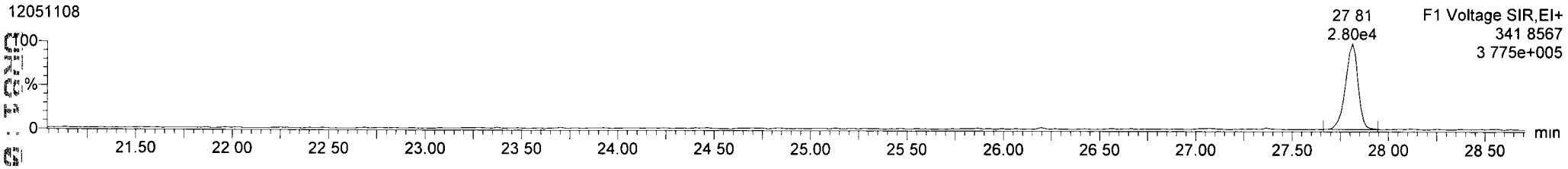


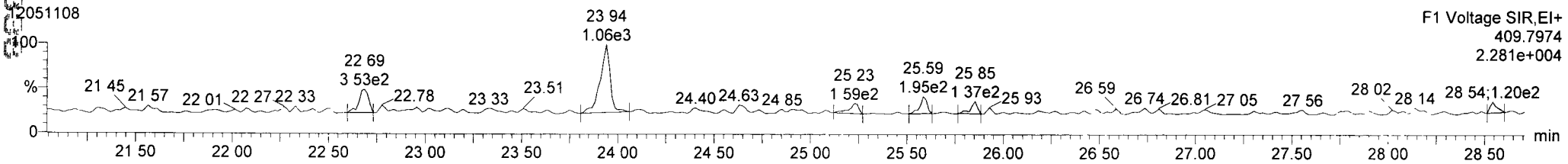
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
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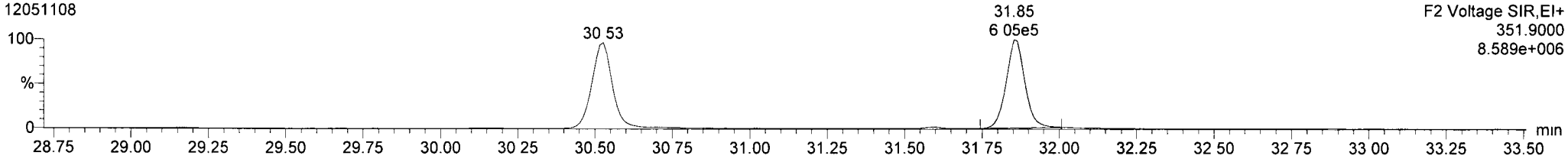
Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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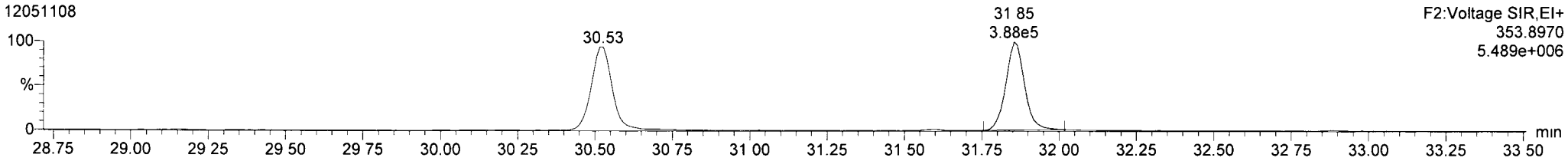
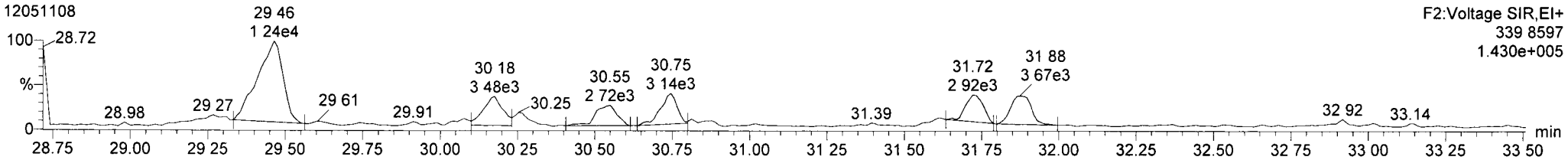
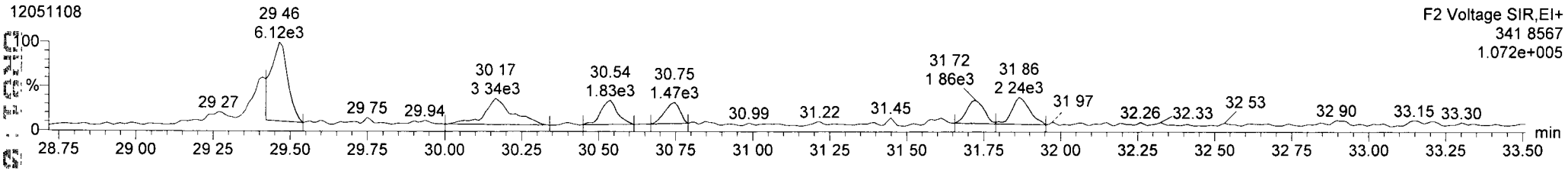


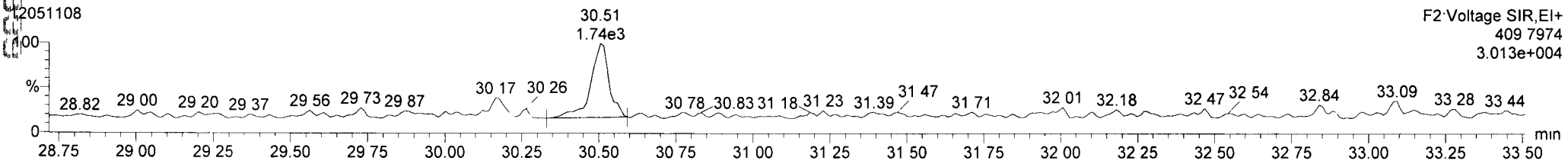
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
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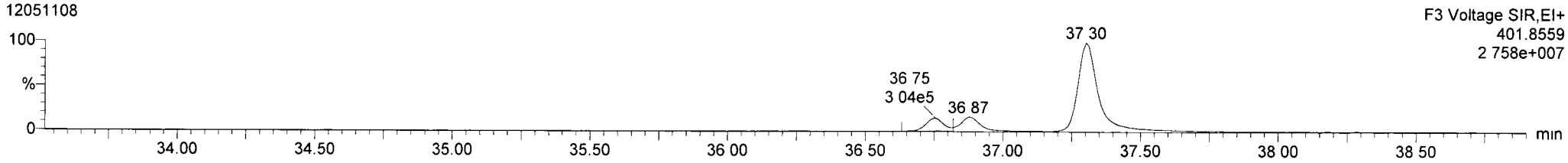
Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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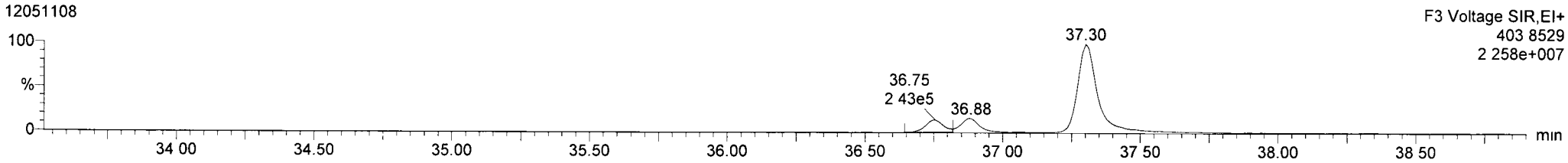
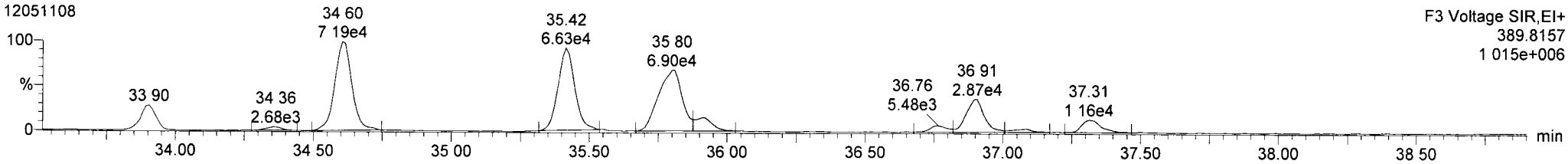
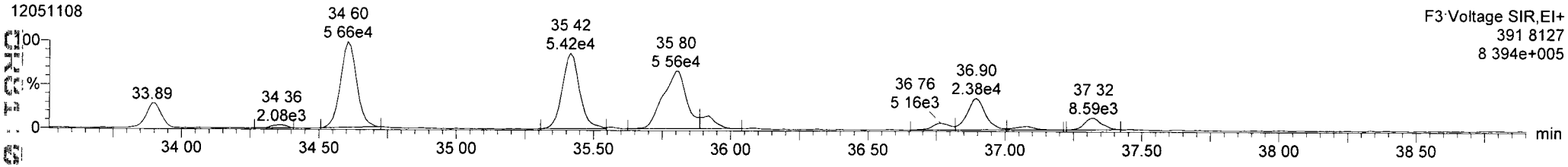


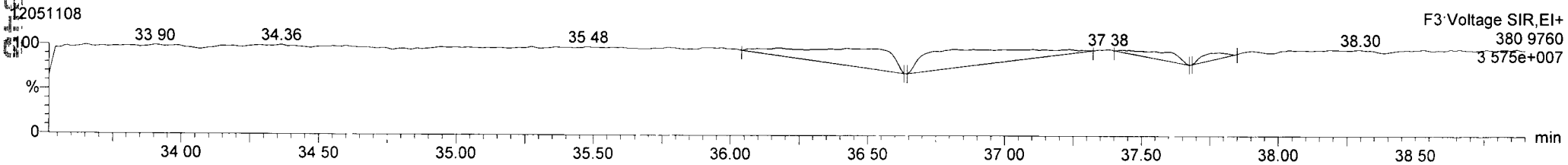
Total-hexadioxins



Total-hexadioxins



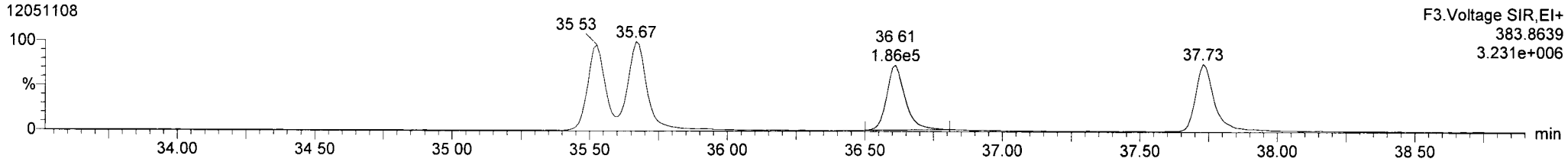
FUNCTION3 PFK



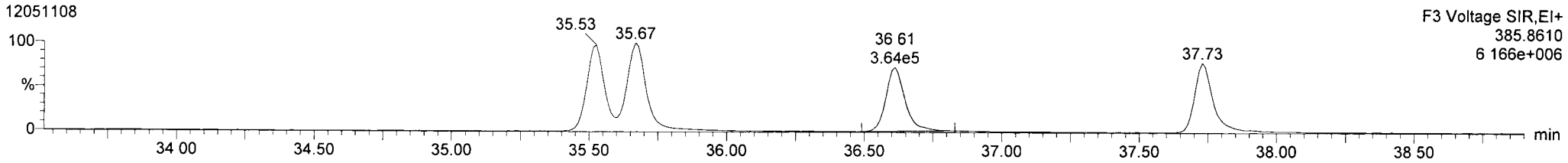
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

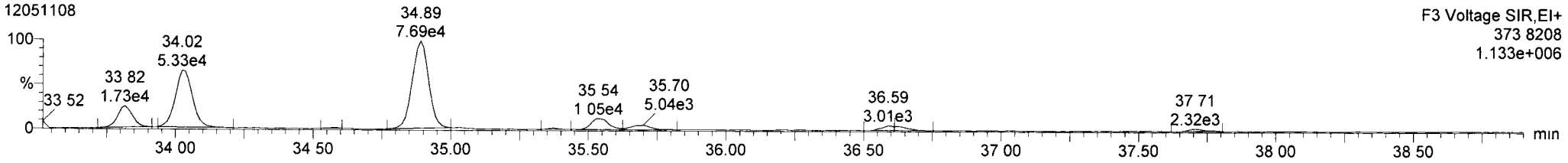
13C-234678-HxCDF



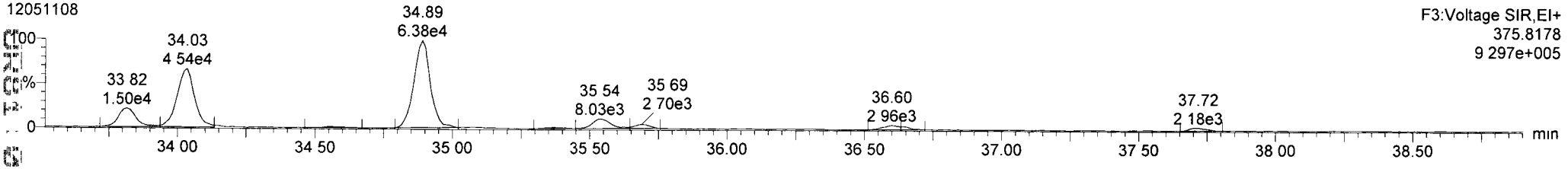
13C-234678-HxCDF



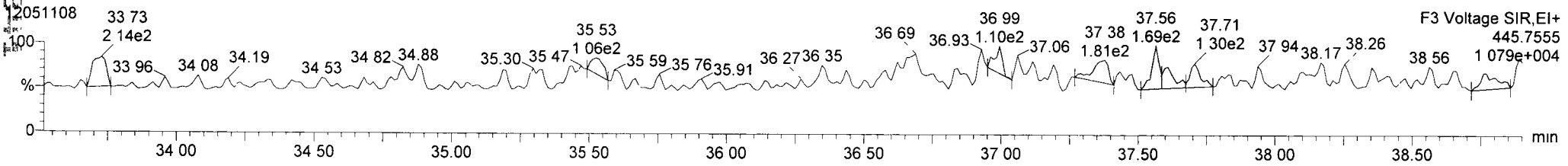
Total-hexafurans



Total-hexafurans



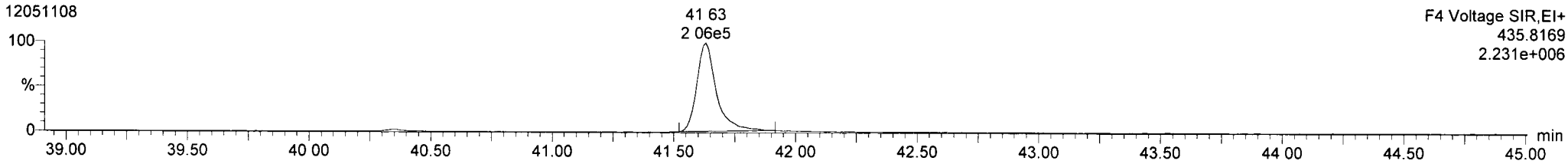
FUNCTION3 OCDPE



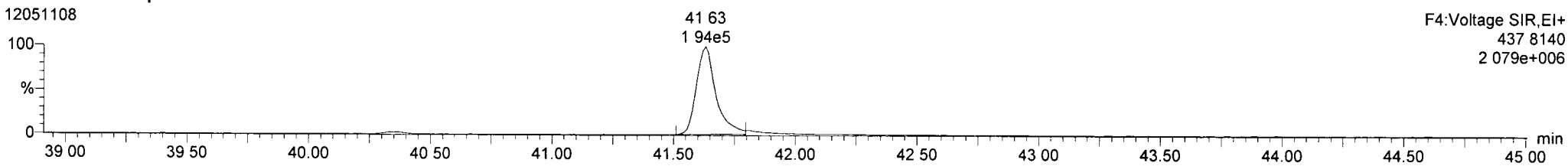
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

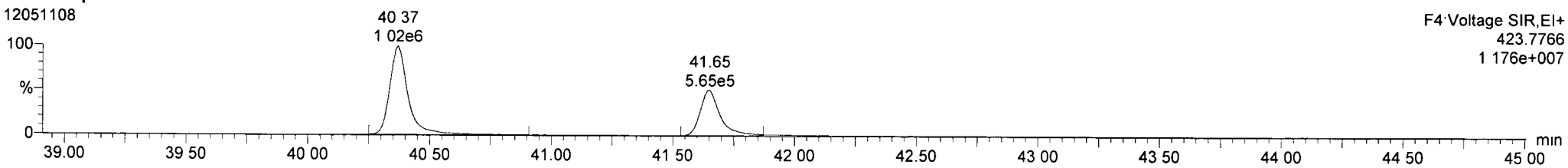
13C-1234678-HpCDD



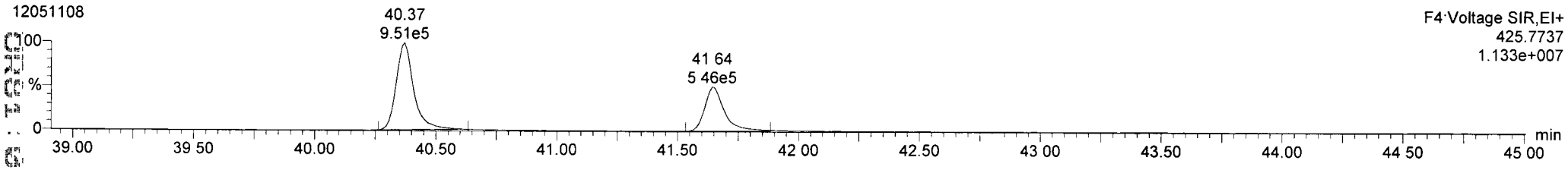
13C-1234678-HpCDD



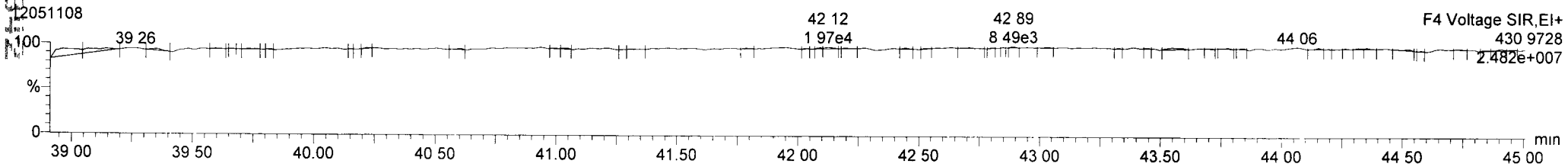
Total-heptadioxins



Total-heptadioxins



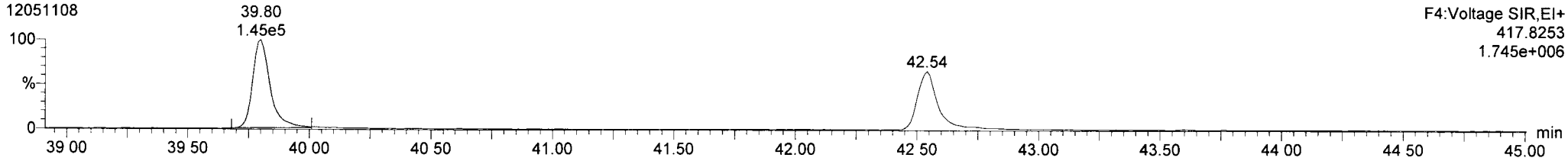
FUNCTION4 PFK



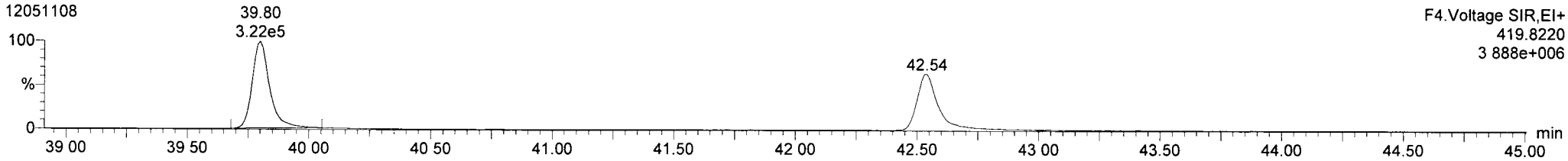
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



13C-1234678-HpCDF



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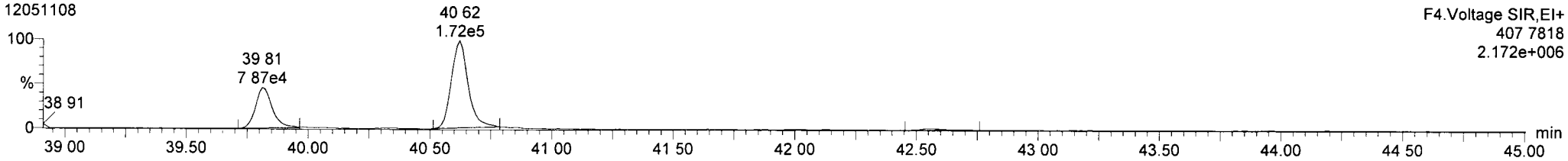

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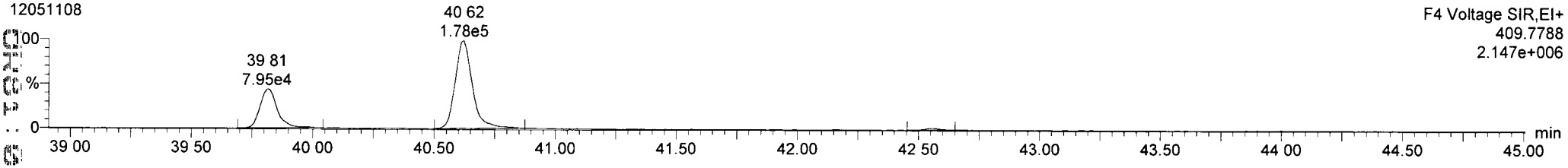
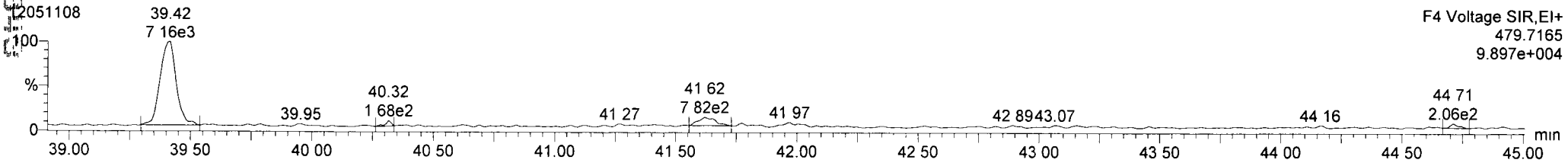


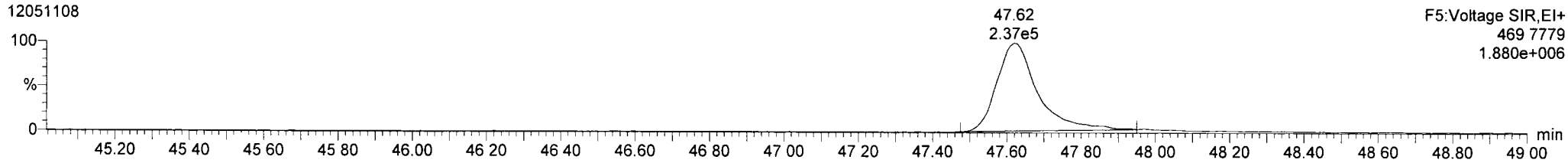
FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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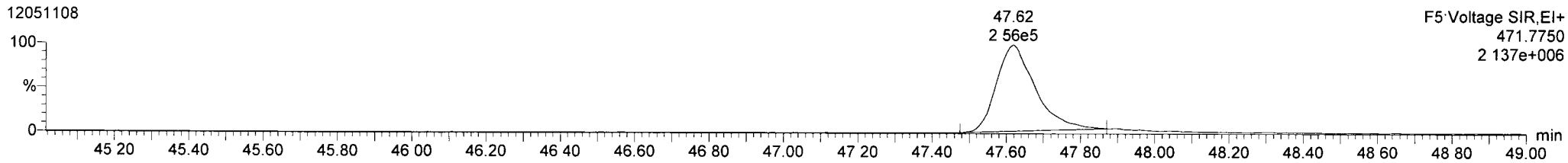

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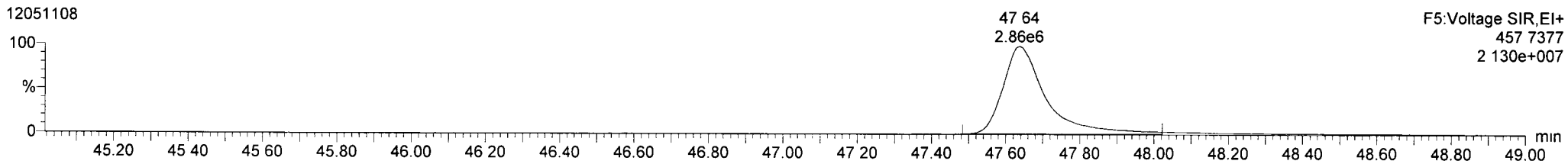

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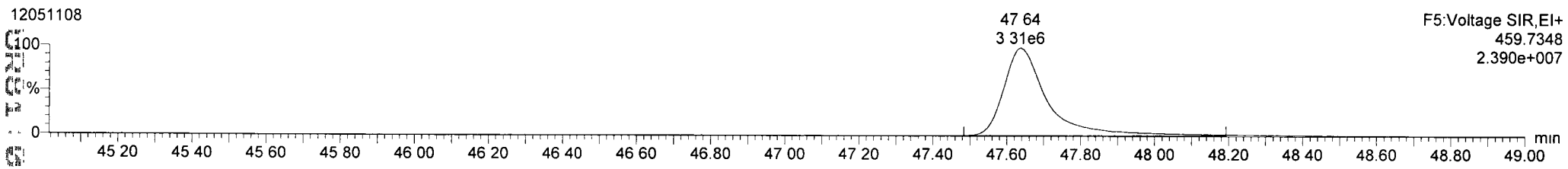
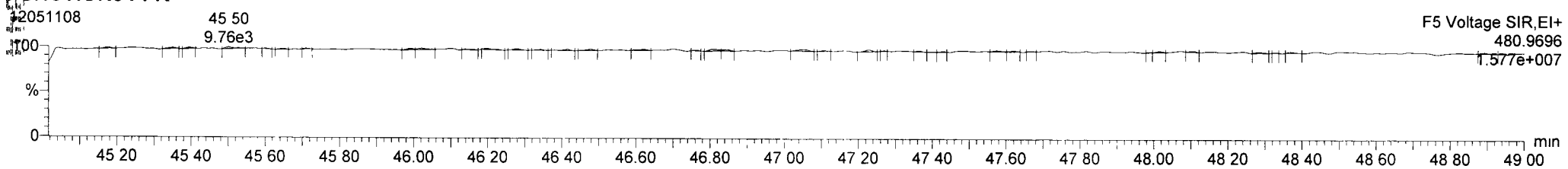


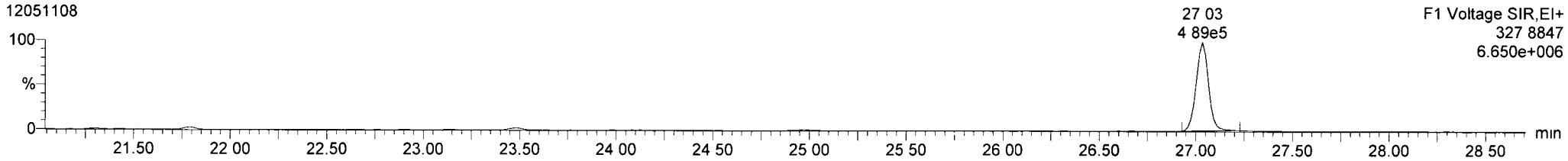
FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09.42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:46:56 Pacific Daylight Time

Name: 12051108, Date: 11-May-2012, Time: 15:49:49, ID: UR81H 5X, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



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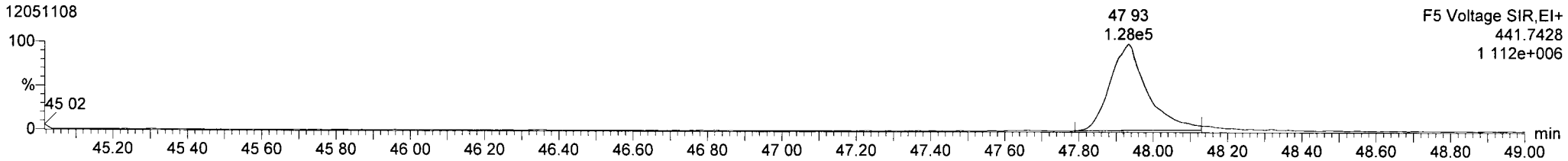

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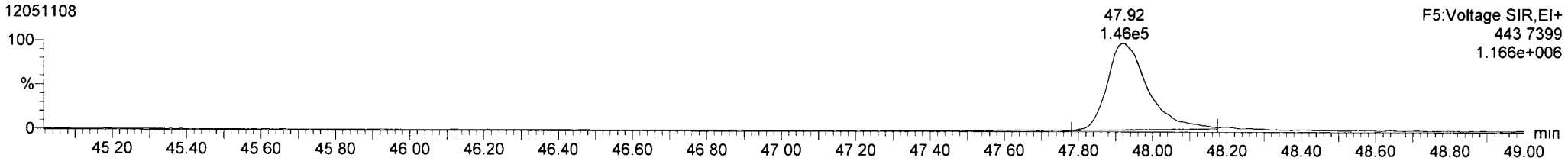
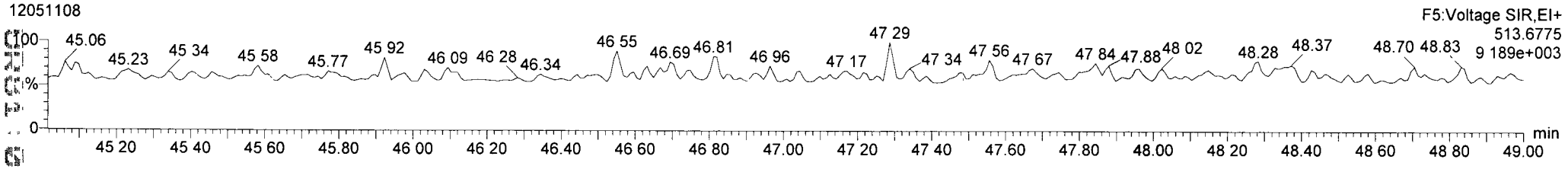


FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09.42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Dilution

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

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2	2	12378-PeCDF	339.8597	30.527	30 527	9324	9324	0.907	bb		1.73	1.55	47 7	NO	1 082	1 082
3	3	23478-PeCDF	339.8597	31.864	31 865	0	9245	0.936	db		1.90	1.55	52 5	YES	0 000	1 060
4	4	123478-HxCDF	373.8208	35 525	35 525	33796	33796	1 082	dd		1 30	1 24	89.2	NO	4 619	4 619
5	5	234678-HxCDF	373 8208	36.589	36 622	24550	24550	1 070	bb		1.12	1 24	46 0	NO	3 476	3.476
6	6	123678-HxCDF	373.8208	35 679	35 678	16040	16040	1 048	db		1.32	1.24	42 2	NO	2 012	2 012
7	7	123789-HxCDF	373.8208	37 707	37 729	0	10906	1 020	bb		1 46	1 24	33.2	YES	0 000	1 460
8	8	1234678-HpCDF	407.7818	39 800	39 809	373304	373304	1 214	bb		1 01	1 05	517.7	NO	58 727	58 727
9	9	1234789-HpCDF	407.7818	42 541	42 531	15778	15778	1 254	bb		1 05	1 05	21.6	NO	3 296	3.296
10	10	OCDF	441.7428	47.914	47 894	606819	606819	1 105	dd		0.86	0 89	806 0	NO	191.952	191 952
11	11	2378-TCDD	319.8965	27 020	27 018	0	2028	1 046	bd		0.41	0.77	6.7	YES	0 000	0 251
12	12	12378-PeCDD	355.8546	32.117	32.104	15444	15444	0 973	bb		1.61	1.55	51 7	NO	2 643	2.643
13	13	123478-HxCDD	389.8157	36 753	36 764	26577	26577	0 935	bd		1 24	1.24	42.5	NO	5 136	5.136
14	14	123678-HxCDD	389.8157	36.885	36 874	112190	112190	0 878	dd		1.24	1.24	165 7	NO	19 721	19 721
15	15	123789-HxCDD	389.8157	37.312	37 268	60838	60838	0 839	bb		1 18	1 24	90.1	NO	12 076	12.076
16	16	1234678-HpCDD	423.7766	41 631	41 632	2661615	2661615	0 974	bd		1 03	1 05	2057 1	NO	615 673	615.673
17	17	OCDD	457 7377	47 627	47 623	15171391	15171391	0 950	bd		0.86	0 89	8088 0	NO	5582 853	5582 8...
18	18	13C-2378-TCDF	315.9419	26 377	26.377	1185433		1 484	bb	16 6	0.77	0 77	2091.6	NO	16 559	
19	19	13C-12378-PeCDF	351.9000	30.505	30 519	950097		1 048	bb	18.8	1 59	1.55	2075 4	NO	18.797	
20	20	13C-23478-PeCDF	351 9000	31.843	31 856	931588		1 003	bb	19 3	1 55	1.55	2004.3	NO	19 251	
21	21	13C-123478-HxCDF	383.8639	35.514	35.514	676284		1 186	bd	13.9	0.51	0.51	647.3	NO	13 884	
22	22	13C-123678-HxCDF	383.8639	35.657	35 668	760611		1 315	dd	14.1	0.52	0 51	681.1	NO	14 078	
23	23	13C-234678-HxCDF	383.8639	36.600	36 600	660098		1 223	bb	13.1	0.53	0 51	632.7	NO	13 134	
24	24	13C-123789-HxCDF	383 8639	37.718	37 707	732224		1 056	bd	16.9	0.51	0.51	688.4	NO	16 870	
25	25	13C-1234678-HpCDF	417 8253	39 789	39 789	523417		1 011	bb	12 6	0.43	0 44	660.8	NO	12 596	
26	26	13C-1234789-HpCDF	417.8253	42 519	42 541	381717		0 741	bd	12.5	0.45	0 44	398 1	NO	12 546	
27	27	13C-1234-TCDD	331.9368	26.198	26 272	4822746		1 000	bb	100 0	0.78	0.77	8979.4	NO	100 000	
28	28	13C-2378-TCDD	331.9368	27 004	27 020	771731		0.956	bb	16.7	0.79	0 77	1393.1	NO	16 732	
29	29	13C-12378-PeCDD	367.8949	32 095	32 108	600381		0 663	bb	18 8	1.57	1 55	2367.0	NO	18 764	
30	30	13C-123478-HxCDD	401 8559	36 742	36 731	553195		1 024	bd	13 2	1.32	1 24	1134.0	NO	13 151	
31	31	13C-123678-HxCDD	401.8559	36.863	36 863	648089		1 113	db	14 2	1.20	1 24	1235.7	NO	14 178	
32	32	13C-1234678-HpCDD	435.8169	41 620	41 642	443714		0 815	bd	13.2	1.06	1 05	956 2	NO	13 250	
33	33	13C-OCDD	469 7779	47 609	47 658	572061		0 717	bb	9.7	0 91	0 89	872 1	NO	19 418	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

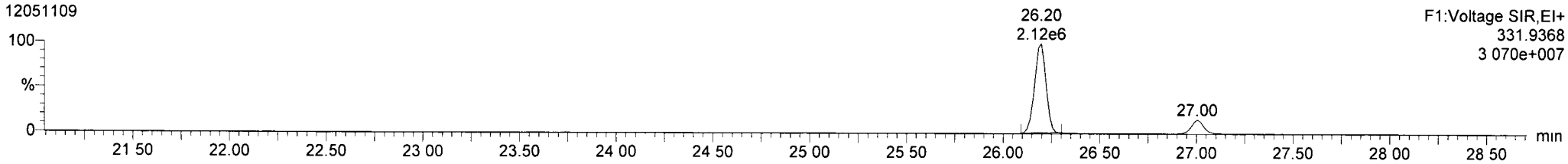
	# Name	Trace	RT	Pred.RT	Abs Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati..	S/N	1° ...	pg	EMPC
34	34 13C-123789-HxCDD	401 8559	37.290	37 368	4108419		1 000	bb	100 0	1 28	1 24	7578 6	NO	100.000	
35	35 Total-tetrafurans	303.9016		25.370			0 866							11.922	15.217
36	36 Total-penta1	339 8597		28.210										17.530	17 530
37	37 Total-pentafurans	339 8597		30.790			0.921							9.627	11 774
38	38 Total-hexafurans	373 8208		35.760			1.055							95 478	97.608
39	39 Total-heptafurans	407.7818		41 160			1 234							212.068	213.507
40	40 Total-Furans	303.9016		0 000			1 050							538.578	547.768
41	41 Total-tetradioxins	319 8965		25.880			1.046							63.040	64.161
42	42 Total-pentadioxins	355 8546		30.950			0 973							69.133	75.875
43	43 Total-hexadioxins	389 8157		35.940			0.884							251 231	251 231
44	44 Total-heptadioxins	423.7766		40.980			0.974							1862.094	1862 0. .
45	45 Total-Dioxins	319.8965		0 000			0 942							7828 351	7836.2...
46	46 Total-TEQ	319.8965		0.000										8366.928	8383 9 .
47	47 37CL-2378-TCDD	327 8847	27.020	27 010	351449		1 037					2276 9		7.026	
48	48 FUNCTION1 PFK	330 9792		0 000											
49	49 FUNCTION2 PFK	366 9792		0.000										0.000	
50	50 FUNCTION3 PFK	380 9760		0.000										0 000	
51	51 FUNCTION4 PFK	430 9728		0.000											
52	52 FUNCTION5 PFK	480.9696		0.000											
53	53 FUNCTION1 HXCDPE	375.8364		0 000										0.000	
54	54 FUNCTION1 HPCDPE	409 7974		0 000										0.000	
55	55 FUNCTION2 HPCDPE	409 7974		0 000										0.000	
56	56 FUNCTION3 OCDPE	445.7555		0 000										0 000	
57	57 FUNCTION4 NCDPE	479 7165		0.000										0.000	
58	58 FUNCTION5 DCDPE	513.6775		0 000										0.000	

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

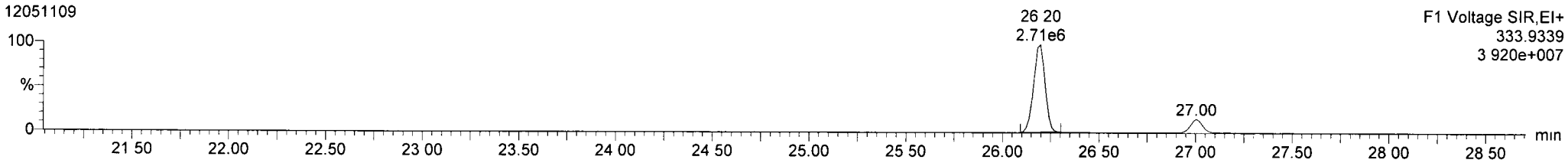
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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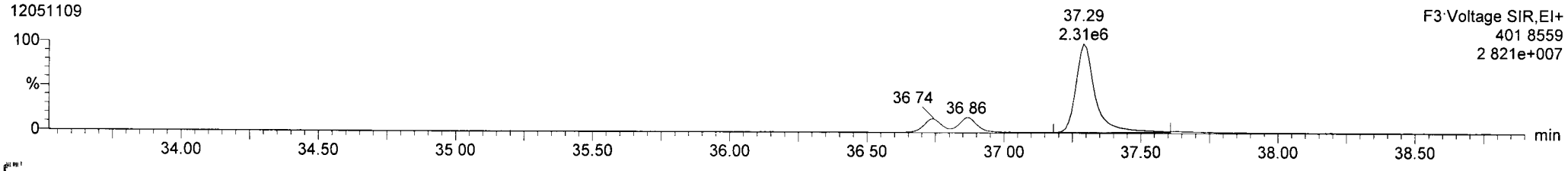

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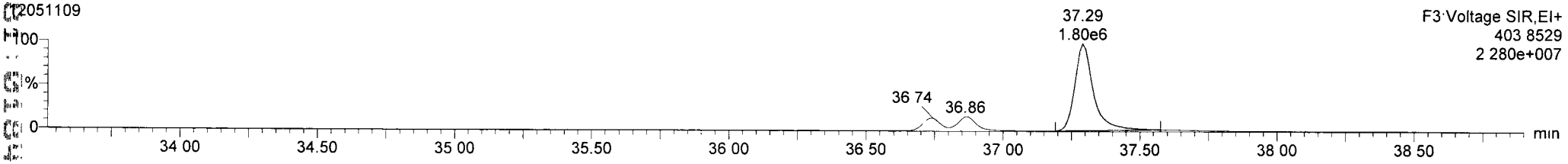
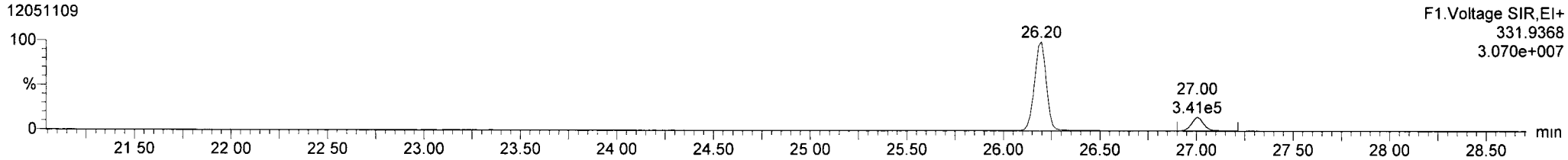


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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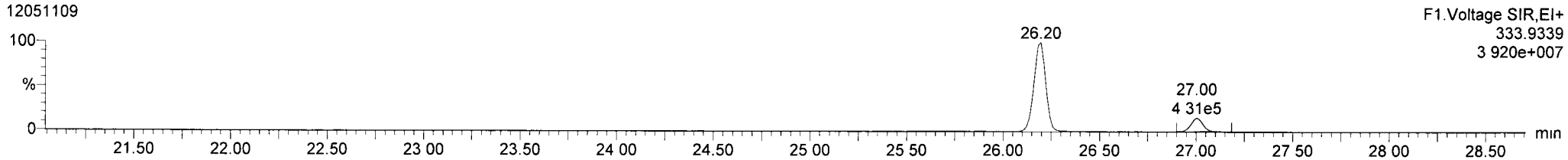
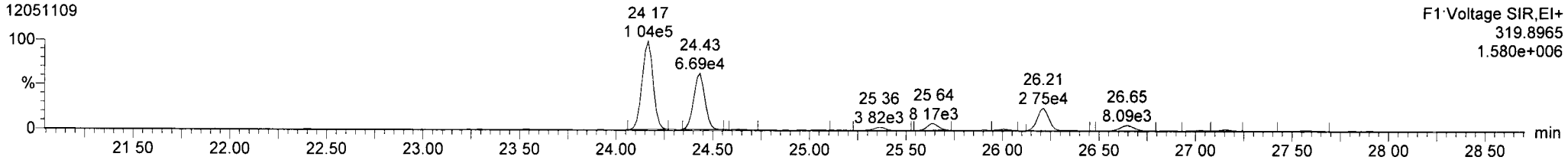
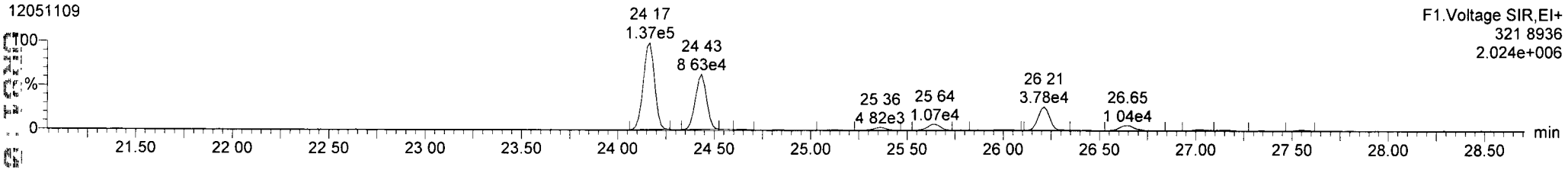


Total-tetradioxins



Total-tetradioxins



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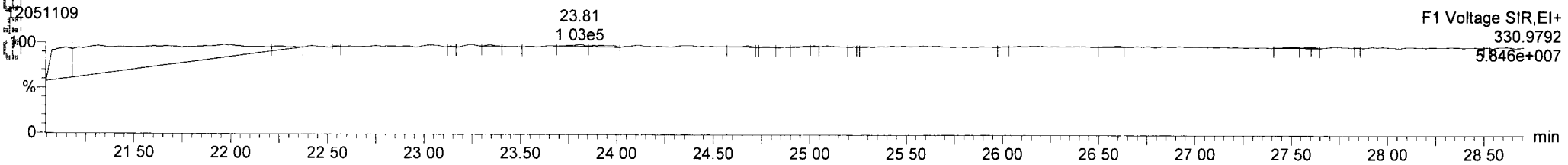

Quantify Sample Report **MassLynx 4.1 SCN 714**
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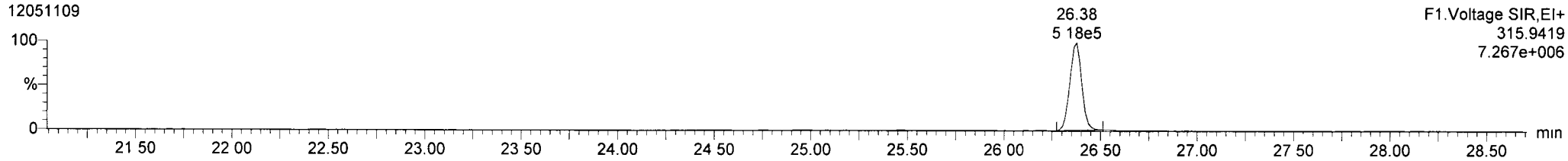
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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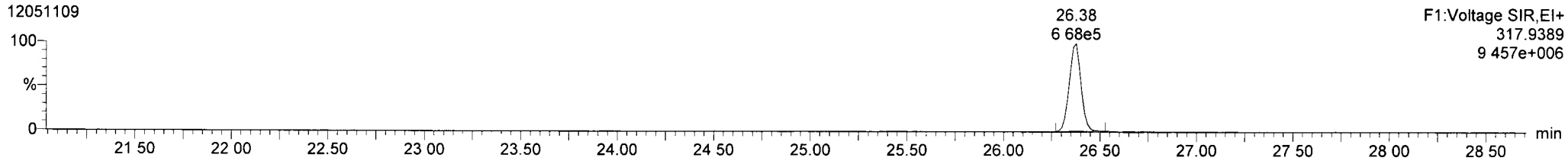
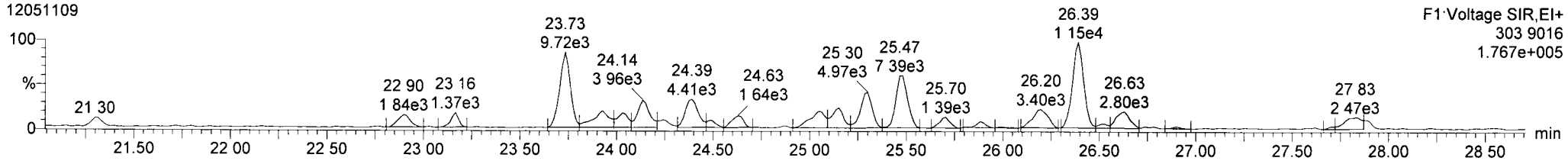
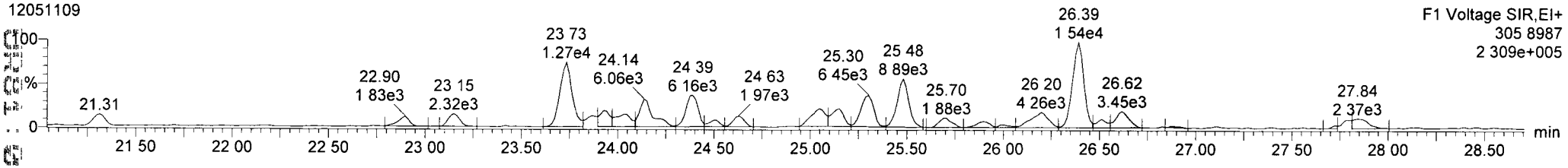


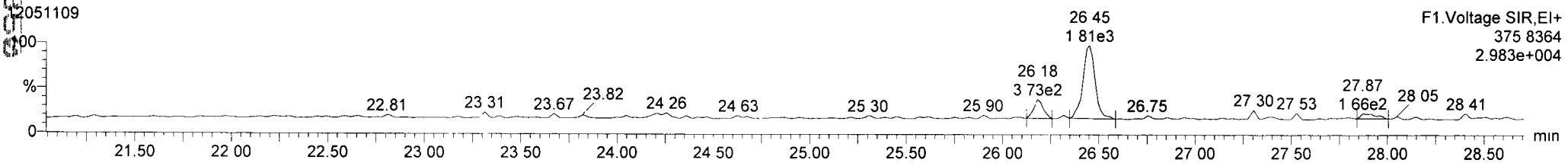
Total-tetrafurans



Total-tetrafurans



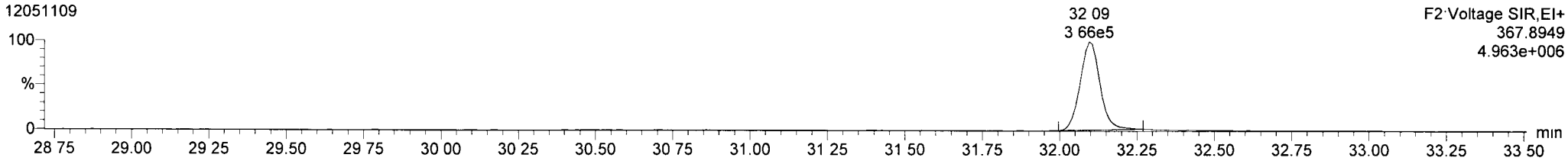
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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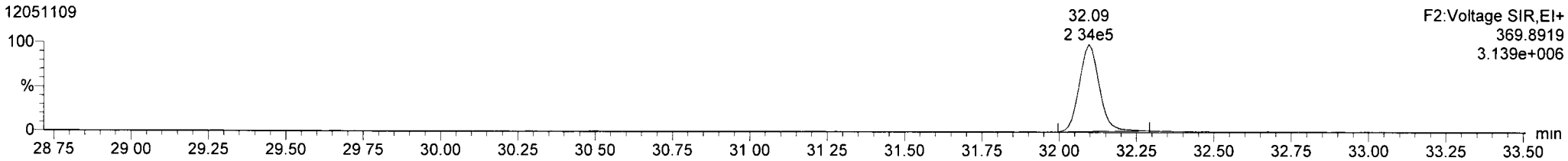
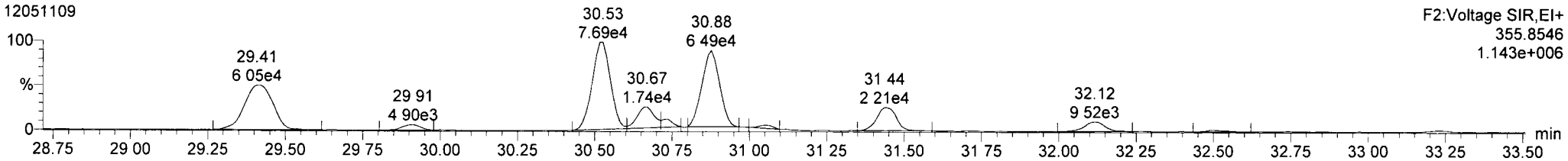


Total-pentadioxins



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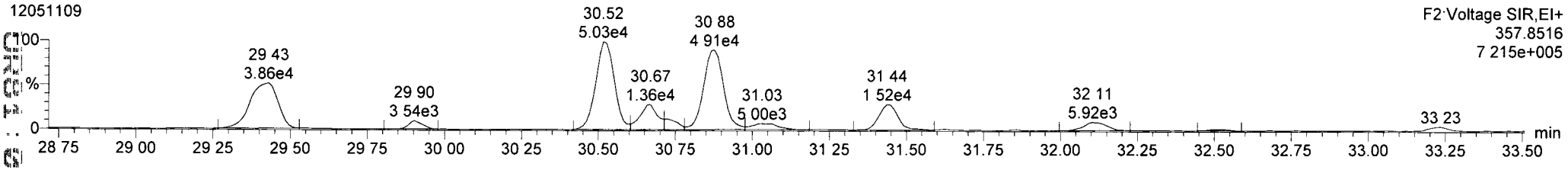

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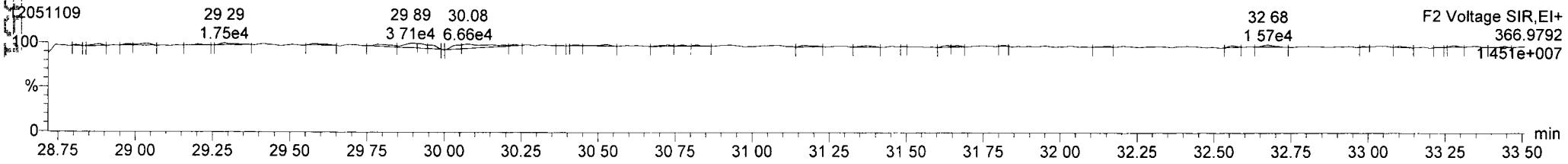
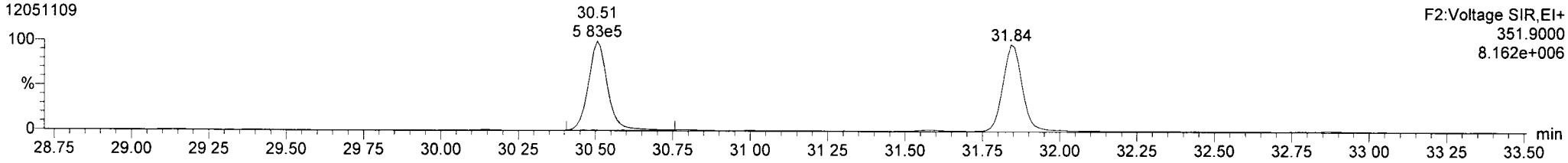


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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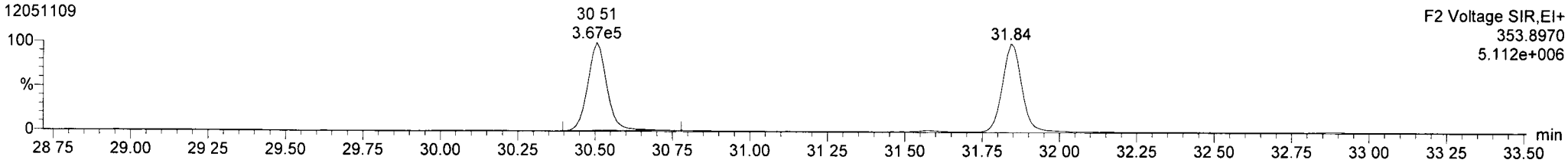

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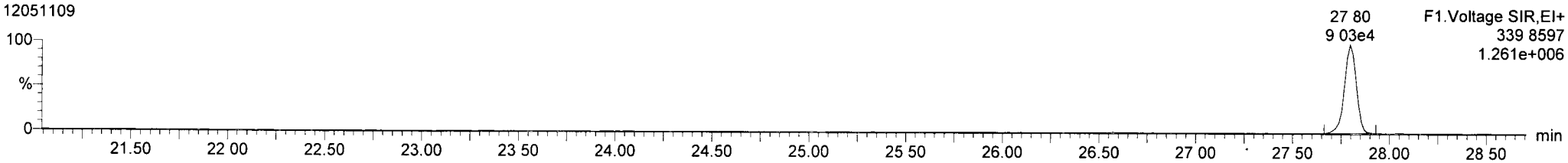
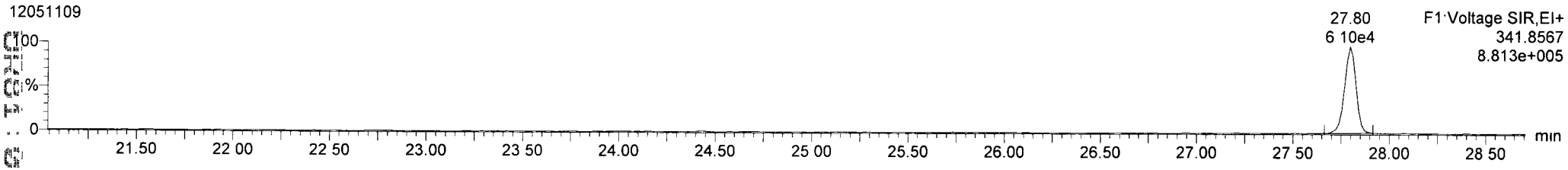


Total-penta1



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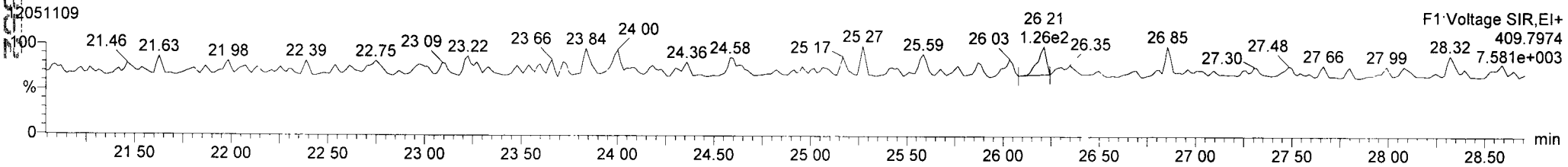

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
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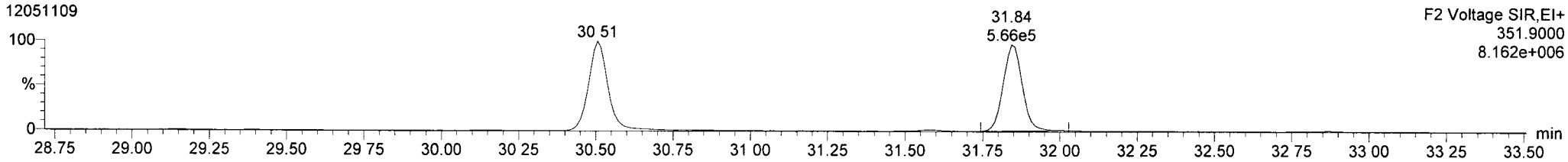
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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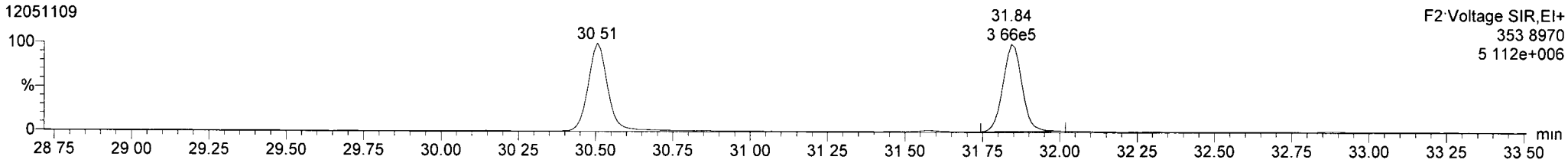
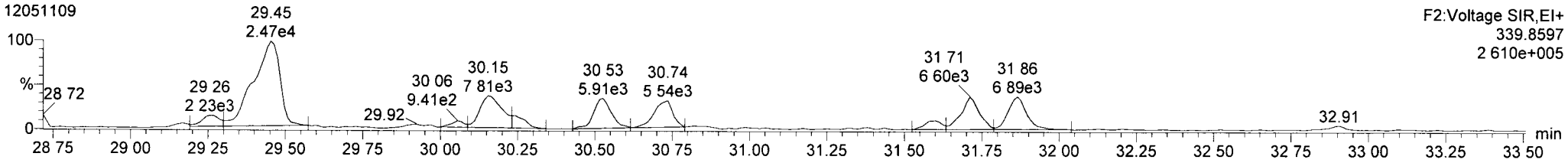


Total-pentafurans



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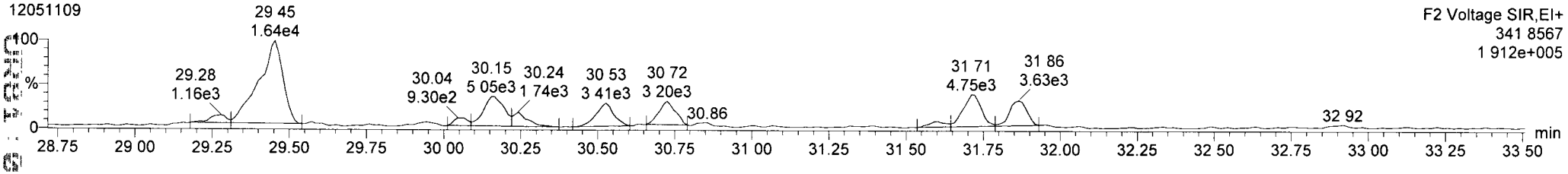

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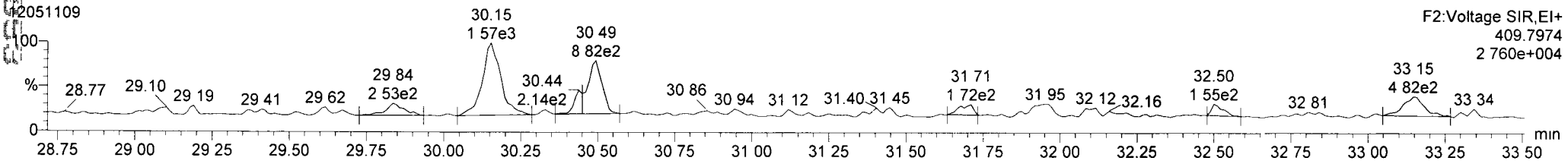

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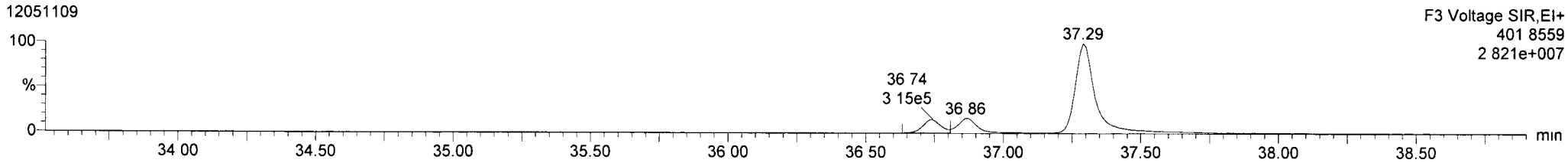
13C-123478-HxCDD



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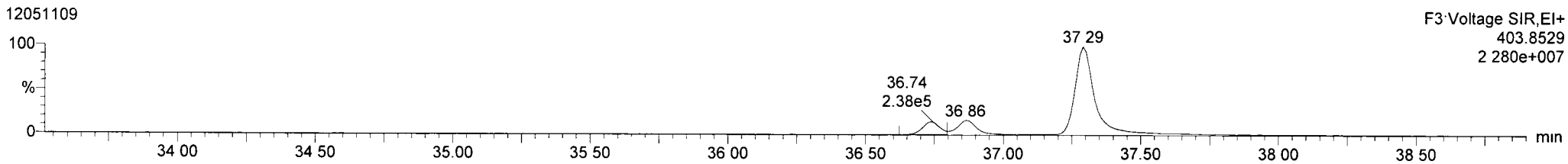
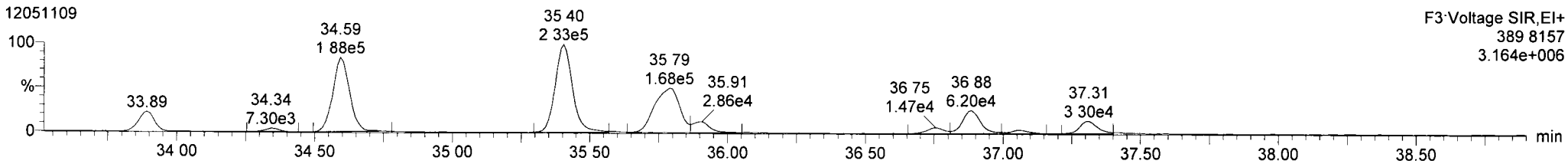


Total-hexadioxins



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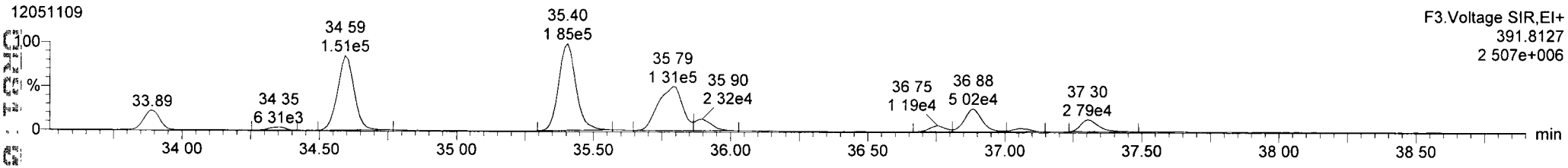

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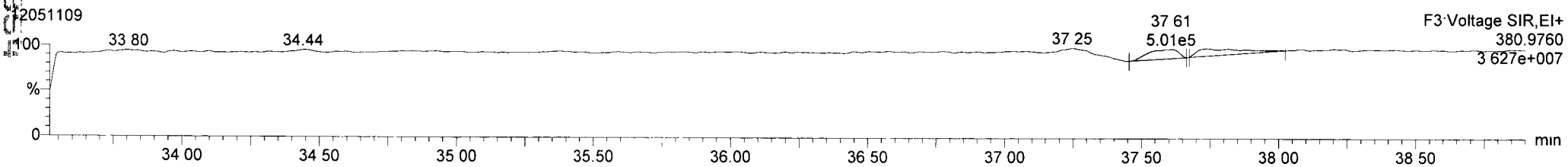

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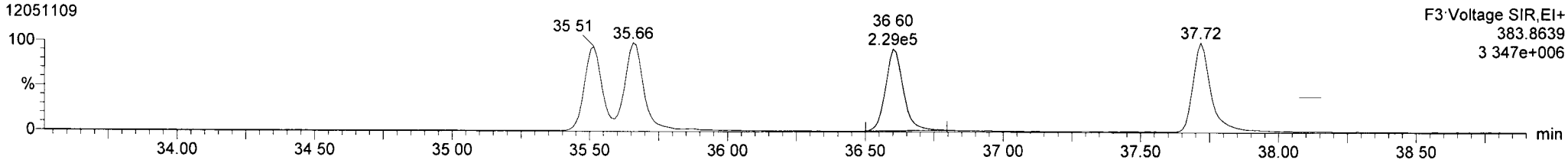
13C-234678-HxCDF



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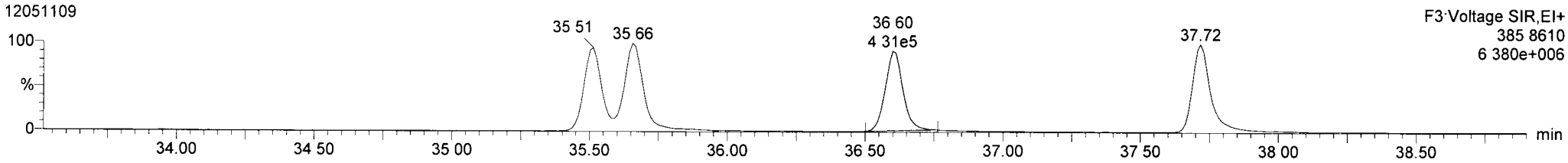
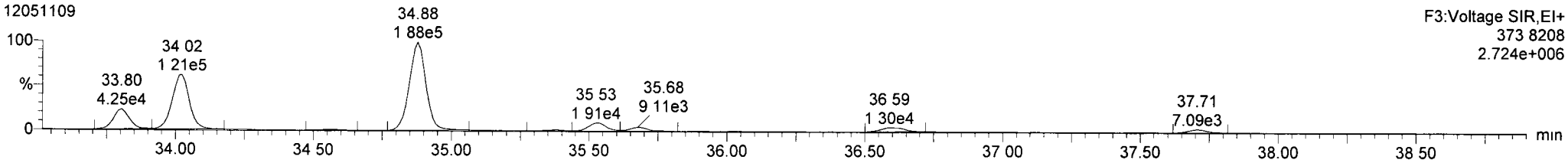


Total-hexafurans



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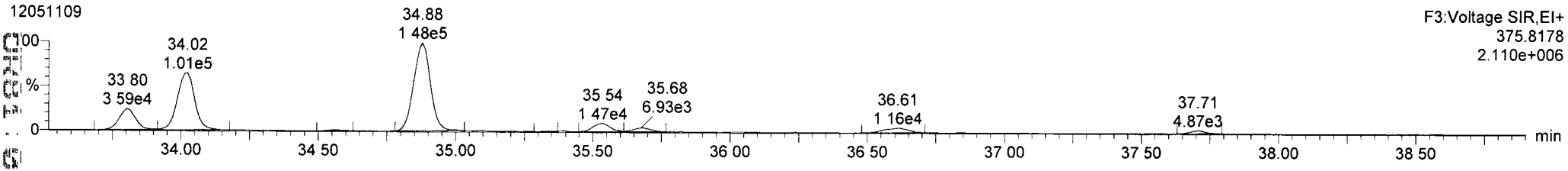
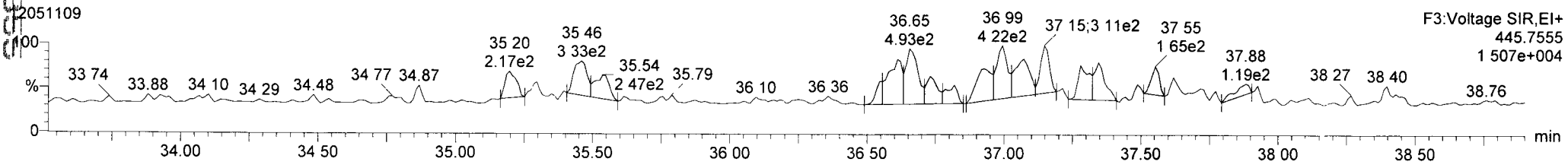


FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
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Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

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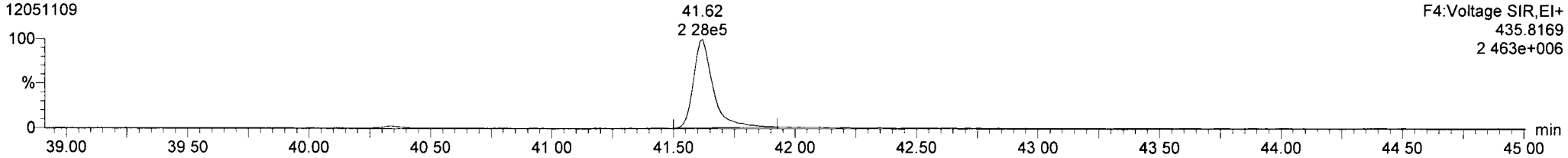
13C-1234678-HpCDD



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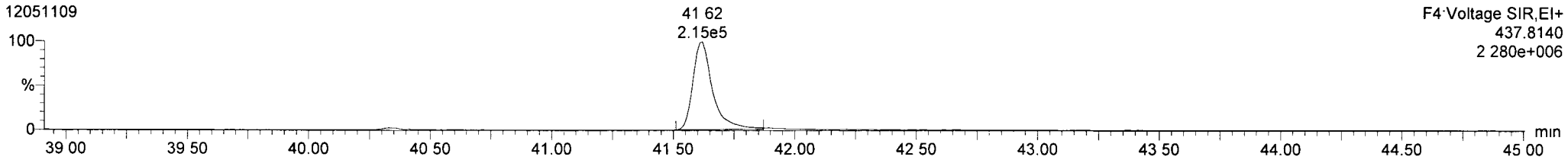
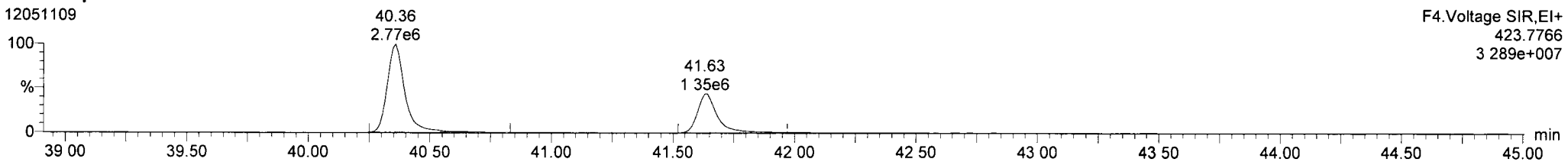
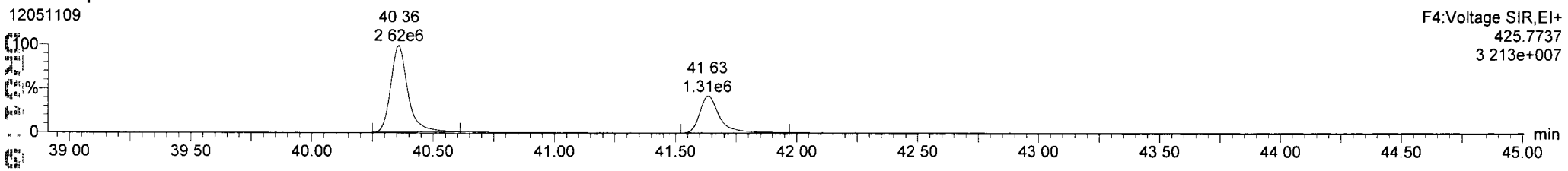


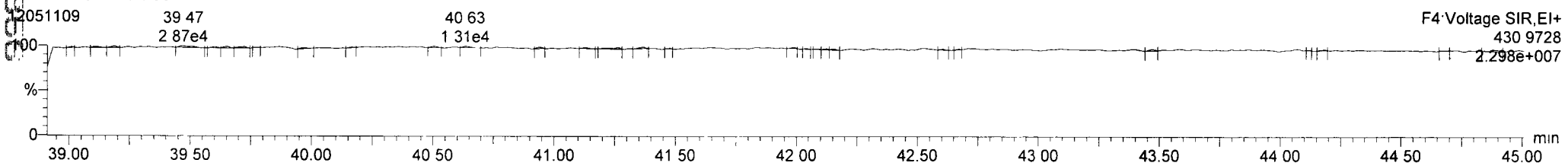
Total-heptadioxins



Total-heptadioxins



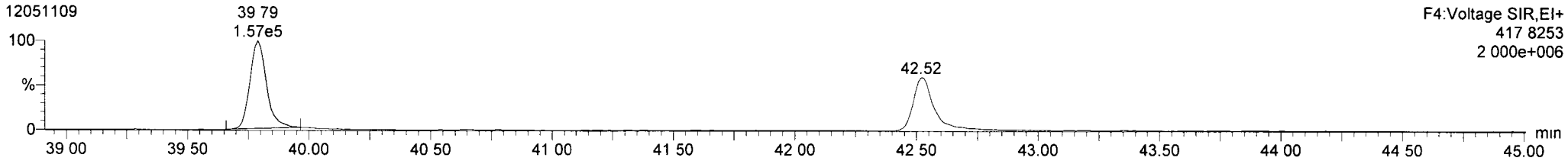
FUNCTION4 PFK



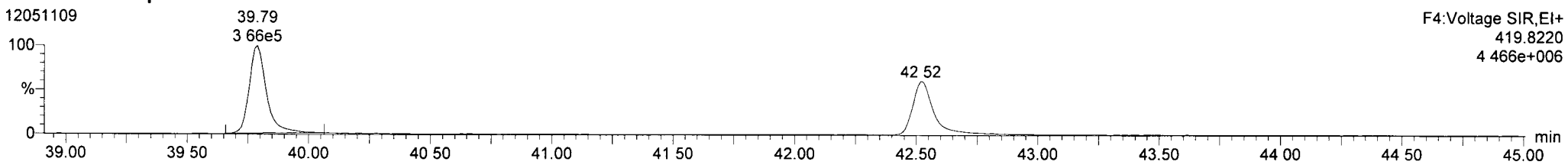
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09 42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09·47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

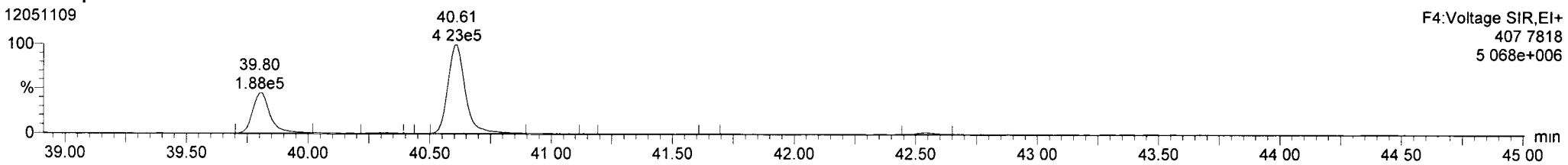
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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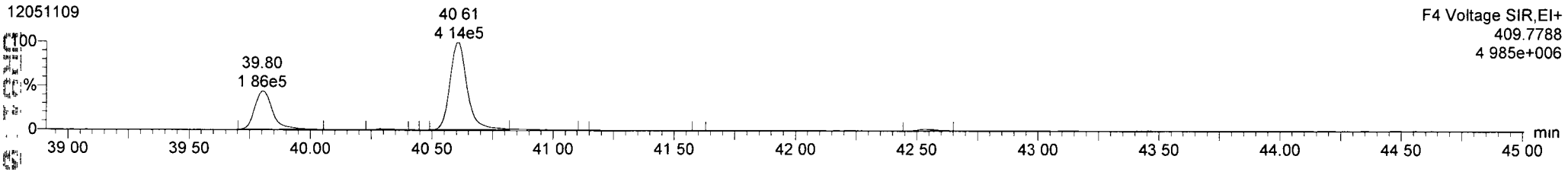
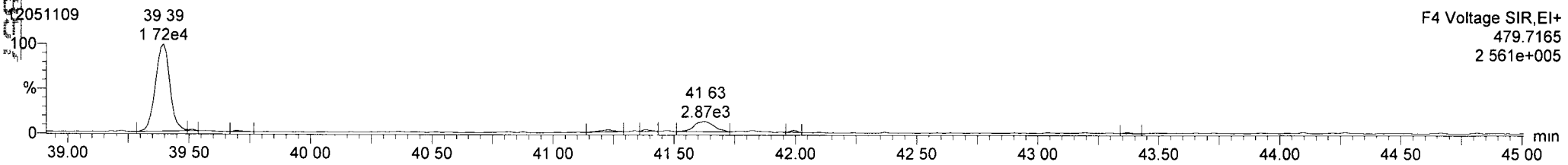


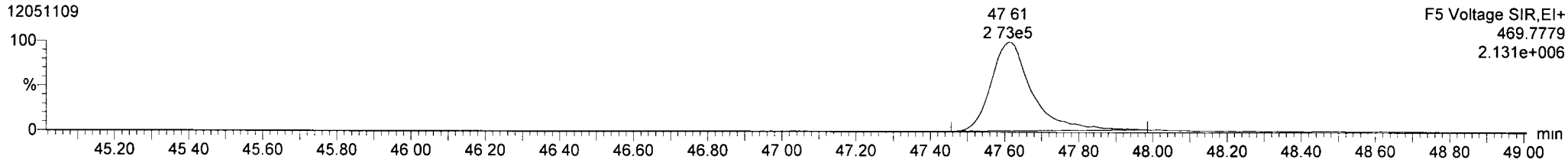
FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290 PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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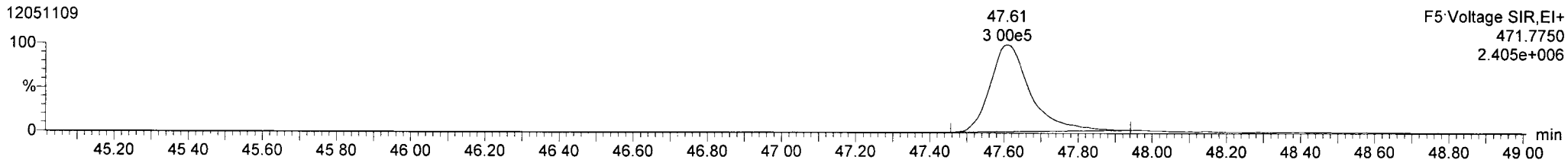

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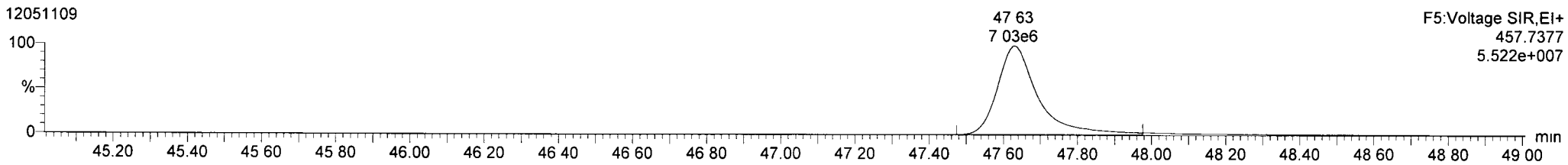

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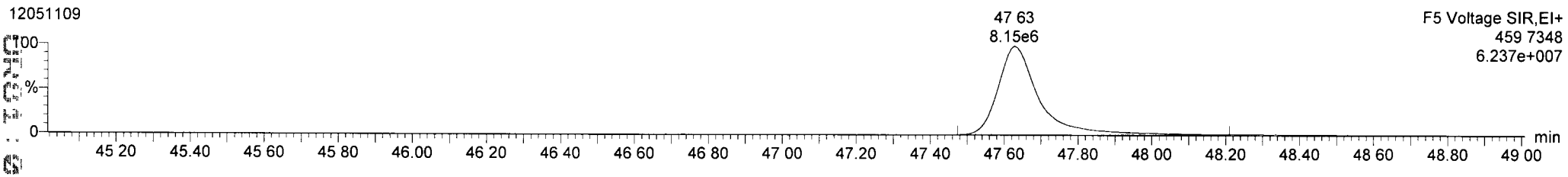
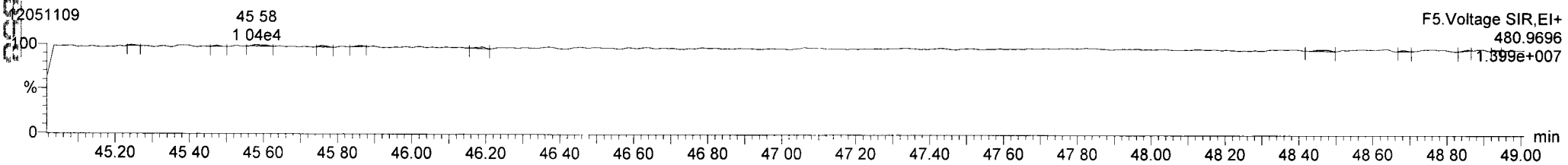


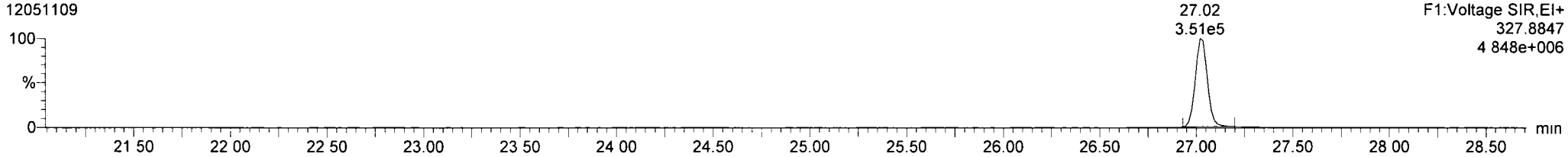
FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:00 Pacific Daylight Time

Name: 12051109, Date: 11-May-2012, Time: 16:41:56, ID: UR81J 5X, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



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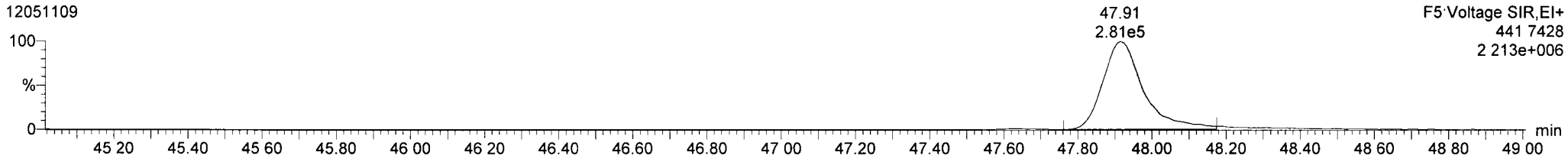

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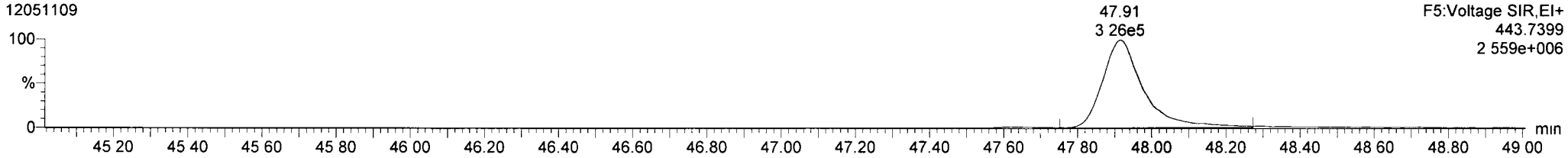
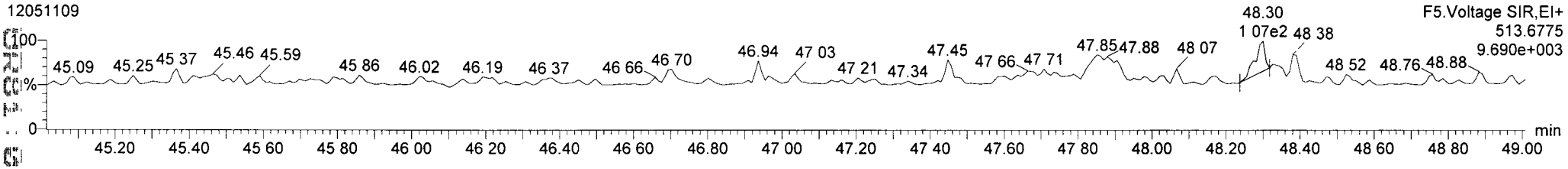


FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

pk 5/14/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Dilution

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

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1	1	2378-TCDF	303 9016	26 392	26.393	38410	38410	0.866	dd		0.71	0.77	152 5	NO	3.788	3.788
2	2	12378-PeCDF	339 8597	30 528	30 527	26139	26139	0.907	bd		1.52	1.55	60 1	NO	3.249	3 249
3	3	23478-PeCDF	339 8597	31 865	31.876	22237	22237	0 936	db		1.78	1 55	55 5	NO	2.766	2 766
4	4	123478-HxCDF	373 8208	35 526	35 525	79662	79662	1 082	bd		1.18	1.24	146.6	NO	11.968	11 968
5	5	234678-HxCDF	373 8208	36 578	36.622	0	23790	1.070	bb		0.78	1.24	52 7	YES	0 000	3 529
6	6	123678-HxCDF	373 8208	35.679	35.690	24183	24183	1 048	db		1.17	1.24	44 4	NO	3.370	3 370
7	7	123789-HxCDF	373.8208	37.696	37 729	24840	24840	1 020	bb		1.13	1 24	47.2	NO	3 791	3.791
8	8	1234678-HpCDF	407 7818	39.812	39.809	718115	718115	1 214	bd		1.02	1 05	888 7	NO	124.528	124.528
9	9	1234789-HpCDF	407 7818	42.541	42 532	30134	30134	1 254	bb		0.97	1.05	32 5	NO	7.100	7.100
10	10	OCDF	441.7428	47.923	47.913	1388385	1388385	1.105	bd		0.88	0 89	2131 3	NO	472 391	472 391
11	11	2378-TCDD	319 8965	27 049	27.018	0	2644	1.046	bd		0.56	0.77	12.0	YES	0.000	0 338
12	12	12378-PeCDD	355 8546	32 117	32.105	10970	10970	0.973	bb		1.53	1.55	39.0	NO	1.999	1 999
13	13	123478-HxCDD	389.8157	36 753	36.764	11371	11371	0 935	bd		1.37	1.24	34.2	NO	2.381	2 381
14	14	123678-HxCDD	389.8157	36.885	36 874	132140	132140	0 878	dd		1.23	1 24	306.4	NO	24.116	24 116
15	15	123789-HxCDD	389.8157	37.301	37 268	34390	34390	0.839	bb		1.26	1 24	75.8	NO	7 225	7.225
16	16	1234678-HpCDD	423.7766	41.642	41 633	2733939	2733939	0 974	bd		1.01	1.05	1599 1	NO	711.743	711 743
17	17	OCDD	457 7377	47.645	47.641	19695271	19695271	0.950	bd		0.87	0.89	14860 8	NO	7795.633	7795 6
18	18	13C-2378-TCDF	315 9419	26.377	26 377	1170742		1.484	bb	15.2	0.77	0 77	1988 4	NO	15.192	
19	19	13C-12378-PeCDF	351 9000	30 506	30 519	886960		1 048	bd	16 3	1.58	1 55	2246 5	NO	16.301	
20	20	13C-23478-PeCDF	351.9000	31.854	31.856	859166		1.003	bb	16 5	1.56	1.55	2216.0	NO	16 493	
21	21	13C-123478-HxCDF	383.8639	35.515	35.514	615243		1.186	bd	14 5	0.51	0.51	859.9	NO	14 456	
22	22	13C-123678-HxCDF	383.8639	35.668	35 668	684578		1 315	db	14.5	0.51	0 51	857 8	NO	14.502	
23	23	13C-234678-HxCDF	383 8639	36.600	36 600	630239		1 223	bb	14.4	0 51	0 51	829.9	NO	14.353	
24	24	13C-123789-HxCDF	383 8639	37 718	37.707	642368		1.056	bb	16 9	0 51	0 51	841 4	NO	16 939	
25	25	13C-1234678-HpCDF	417.8253	39 790	39 789	474842		1 011	bd	13 1	0.44	0 44	647 0	NO	13.079	
26	26	13C-1234789-HpCDF	417 8253	42 519	42.541	338427		0.741	bd	12.7	0.42	0.44	391 6	NO	12 731	
27	27	13C-1234-TCDD	331.9368	26.198	26.272	5191631		1.000	bb	100 0	0.78	0.77	11087.2	NO	100 000	
28	28	13C-2378-TCDD	331 9368	27.005	27.020	747844		0.956	bb	15 1	0.79	0 77	1460 4	NO	15.062	
29	29	13C-12378-PeCDD	367 8949	32.095	32 108	563808		0 663	bd	16.4	1.56	1 55	2467.0	NO	16.369	
30	30	13C-123478-HxCDD	401 8559	36.742	36.731	510662		1 024	bd	13.9	1.30	1 24	922 2	NO	13.894	
31	31	13C-123678-HxCDD	401 8559	36 863	36 863	624234		1 113	db	15.6	1.20	1 24	1013 0	NO	15.630	
32	32	13C-1234678-HpCDD	435 8169	41.620	41.642	394251		0 815	bd	13.5	0.98	1 05	872 0	NO	13.474	
33	33	13C-OCDD	469 7779	47 627	47 658	531843		0 717	bb	10 3	0.92	0.89	805 3	NO	20.662	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

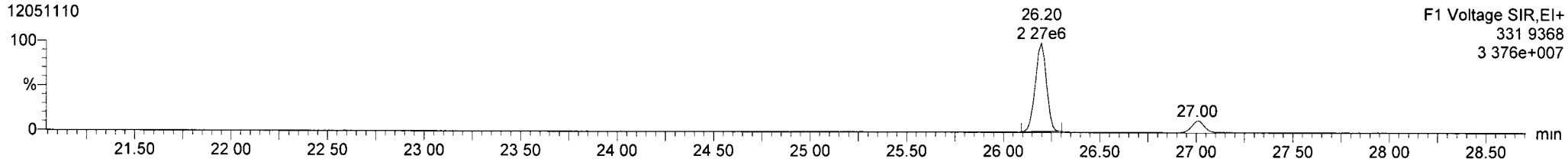
	#	Name	Trace	RT	Pred.RT	Abs Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati ..	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37 290	37.368	3589542		1.000	bd	100.0	1.21	1.24	6000.3	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 370			0.866							25.556	29 519
36	36	Total-penta1	339.8597		28.210										38.010	38 032
37	37	Total-pentafurans	339.8597		30.790			0 921							27.984	29 323
38	38	Total-hexafurans	373.8208		35 760			1 055							186.508	191 212
39	39	Total-heptafurans	407.7818		41.160			1 234							500.555	501.945
40	40	Total-Furans	303.9016		0.000			1 050							1251 004	1262.4 .
41	41	Total-tetradioxins	319 8965		25 880			1 046							18 853	20 538
42	42	Total-pentadioxins	355.8546		30 950			0.973							29.086	31 672
43	43	Total-hexadioxins	389.8157		35 940			0.884							157 569	158.043
44	44	Total-heptadioxins	423.7766		40 980			0.974							1506 453	1506 4. .
45	45	Total-Dioxins	319 8965		0 000			0 942							9507 594	9512 3...
46	46	Total-TEQ	319 8965		0 000										10758.598	10774. .
47	47	37CL-2378-TCDD	327 8847	27 035	27.010	373344		1 037					2869.4		6.934	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0 000	
50	50	FUNCTION3 PFK	380.9760		0.000											
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0 000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0 000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0 000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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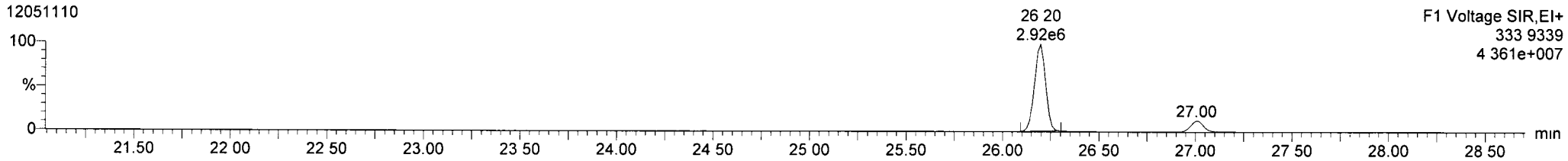

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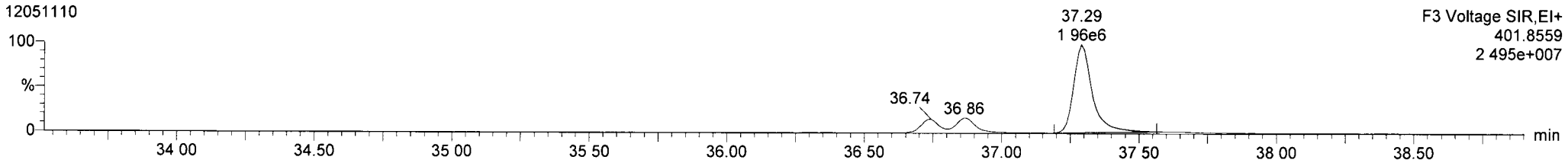

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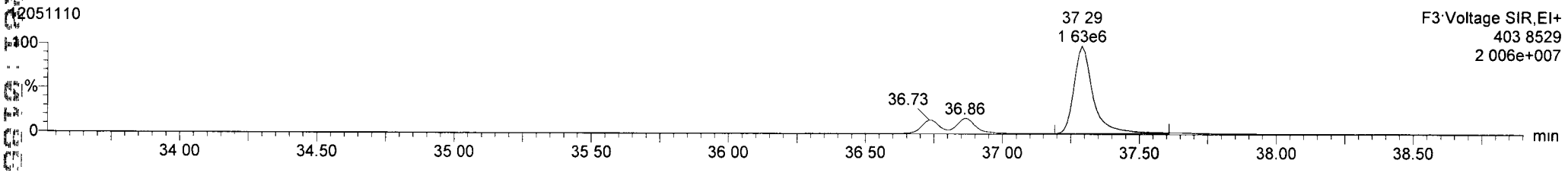
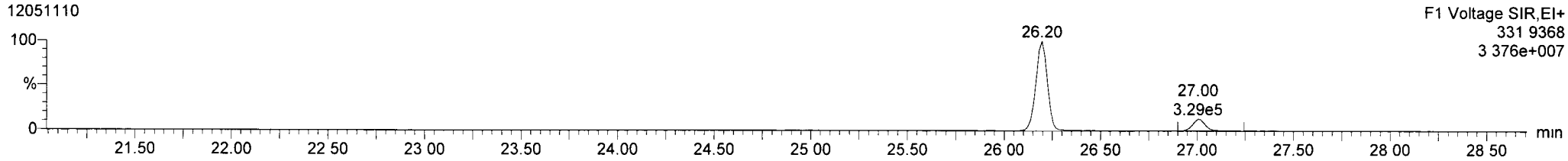


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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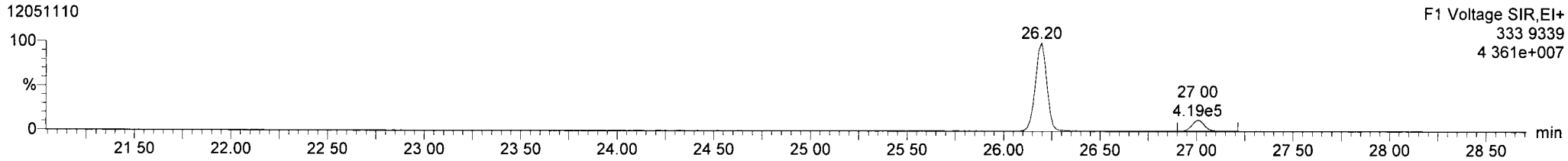
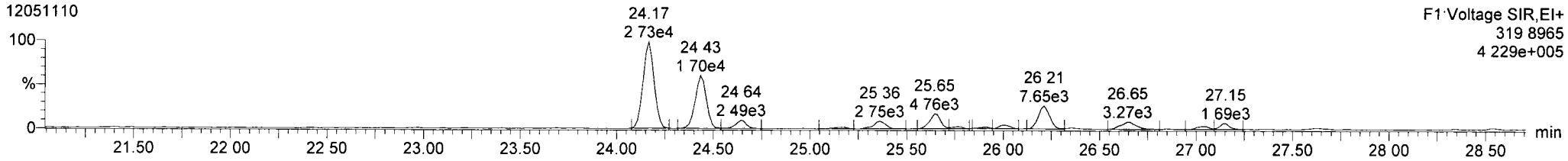
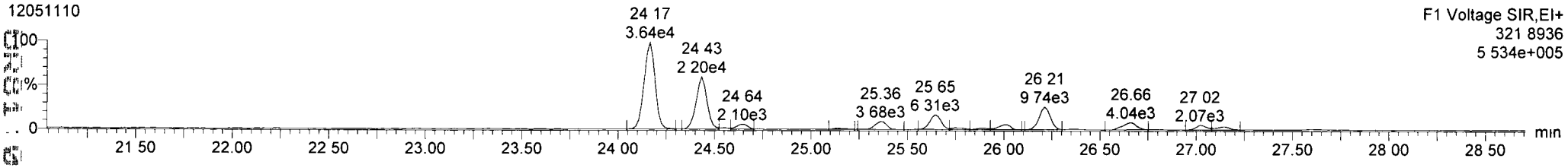


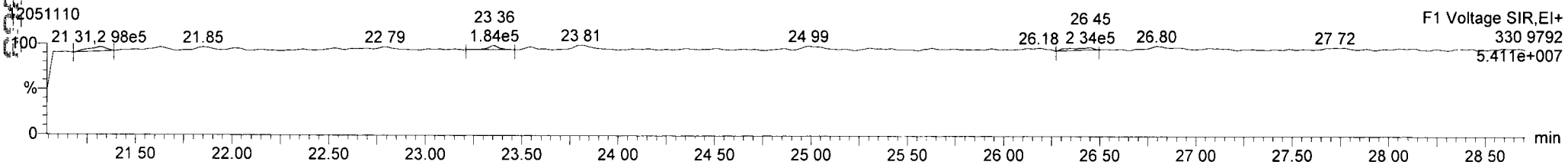
Total-tetradioxins



Total-tetradioxins



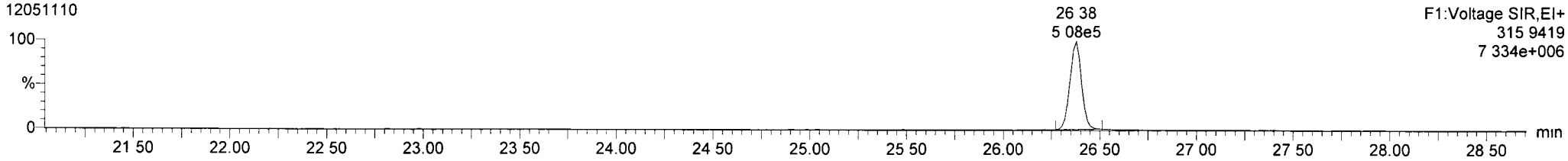
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered. Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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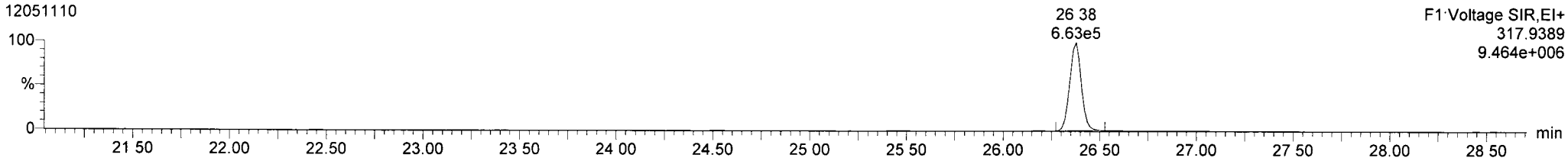
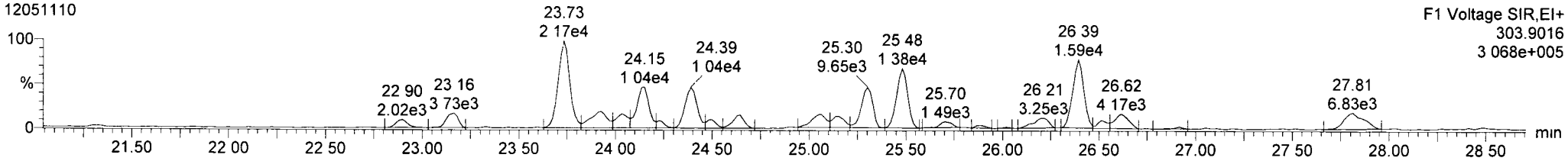
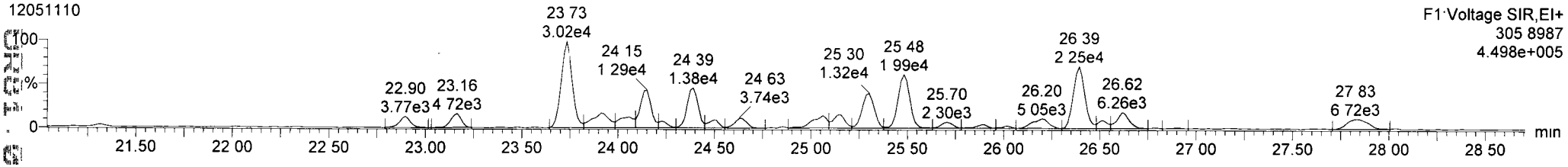


Total-tetrafurans



Total-tetrafurans



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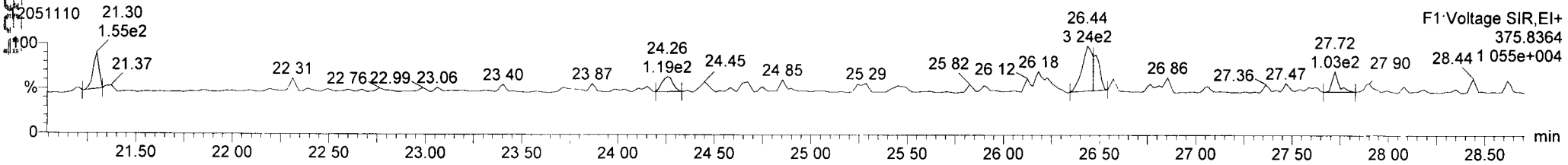
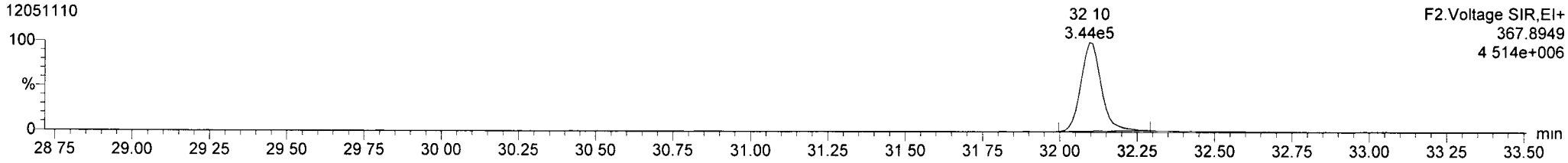


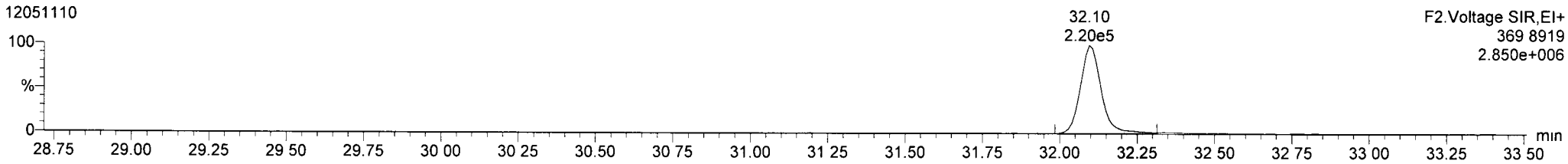
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

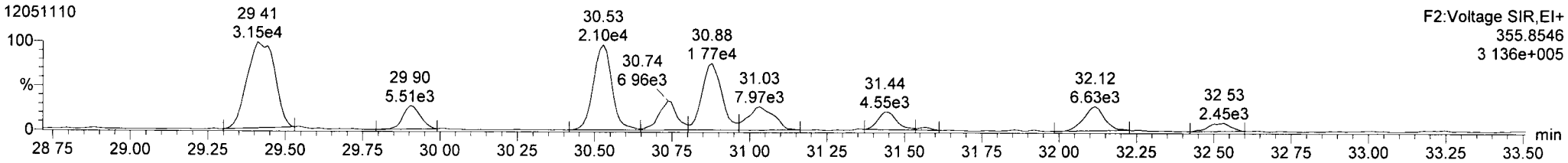
13C-12378-PeCDD



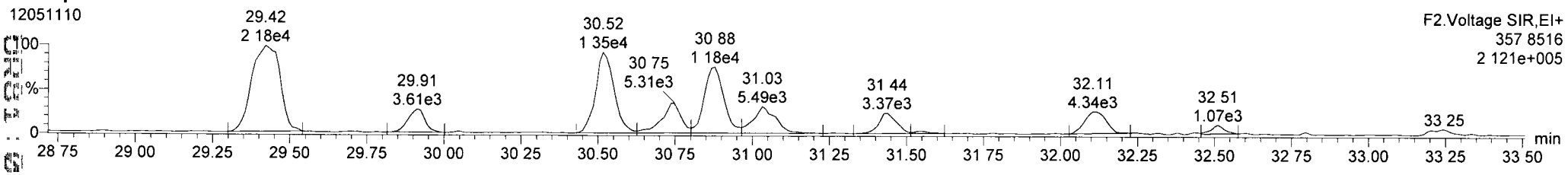
13C-12378-PeCDD



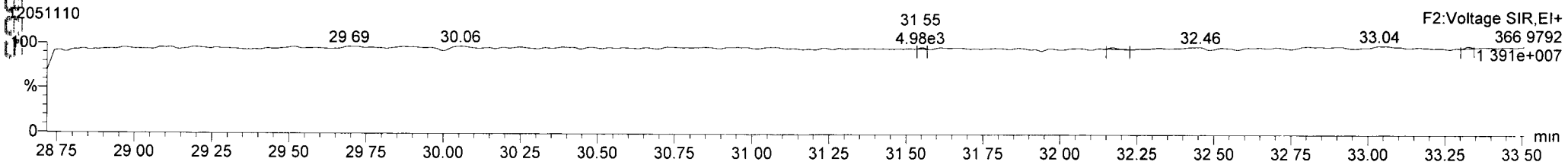
Total-pentadioxins



Total-pentadioxins



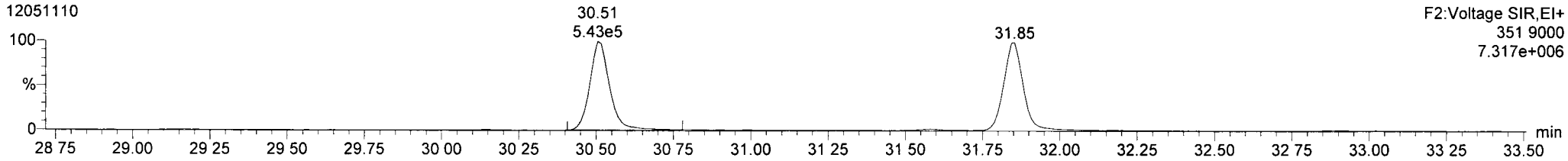
FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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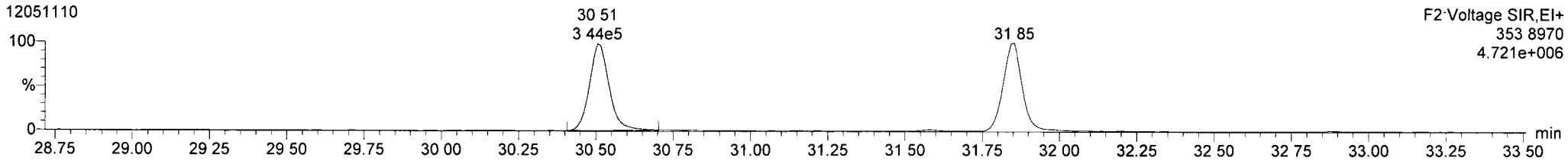

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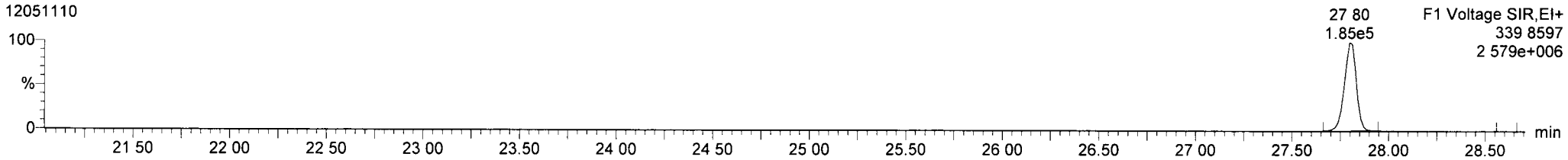

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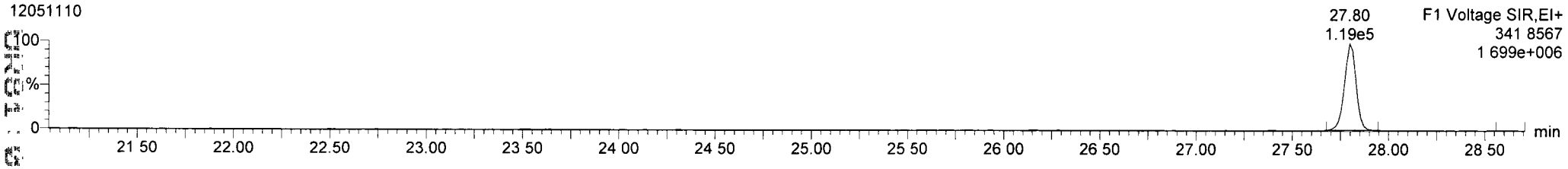
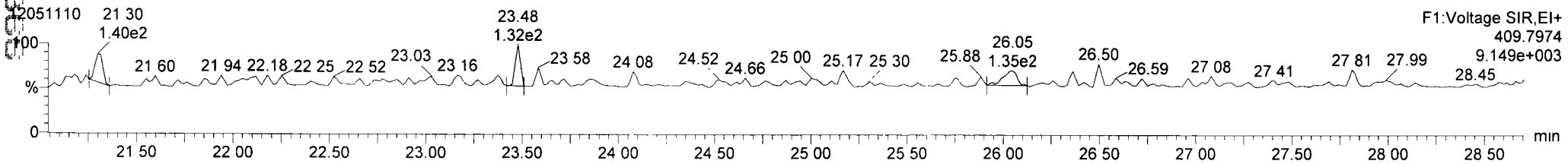
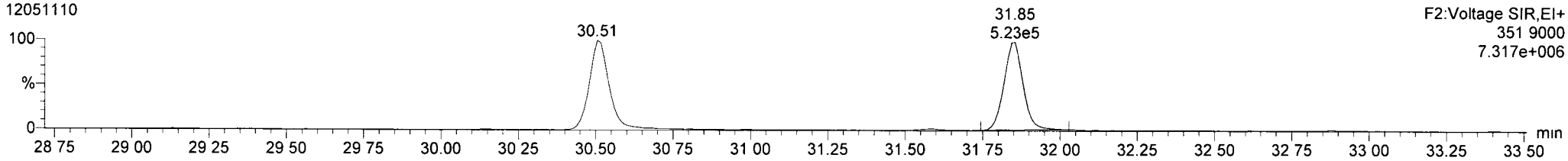


FUNCTION1 HPCDPE



Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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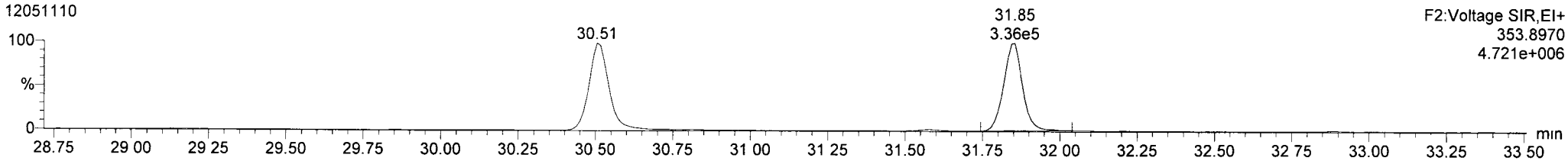
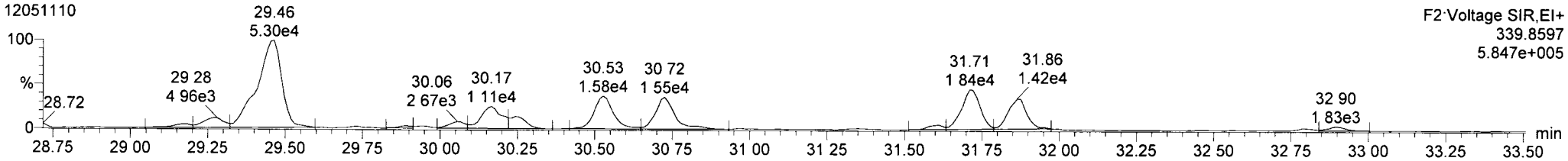
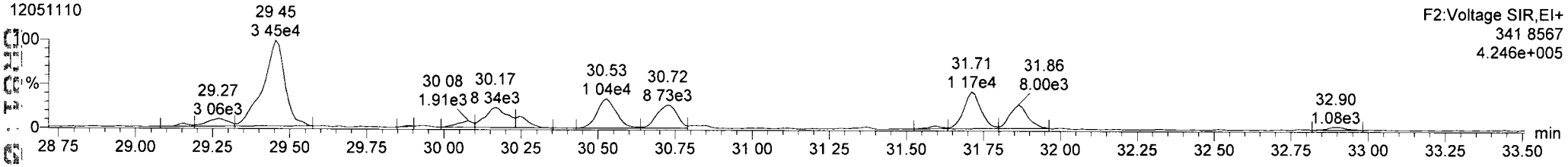


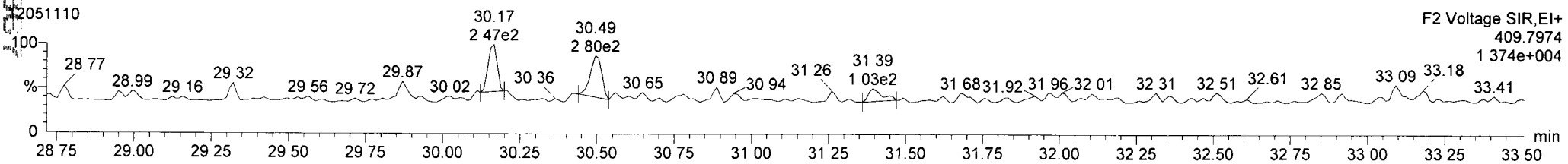
Total-pentafurans



Total-pentafurans



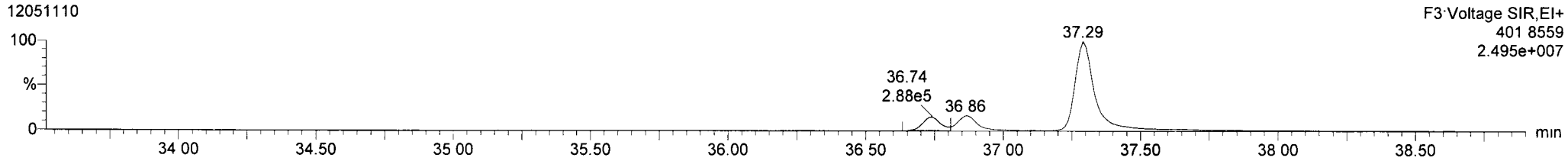
FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47.04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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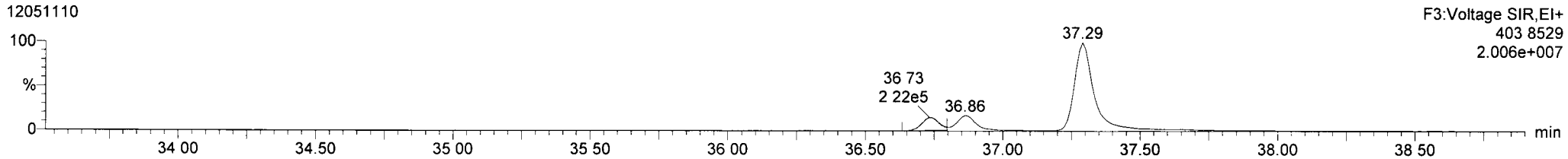

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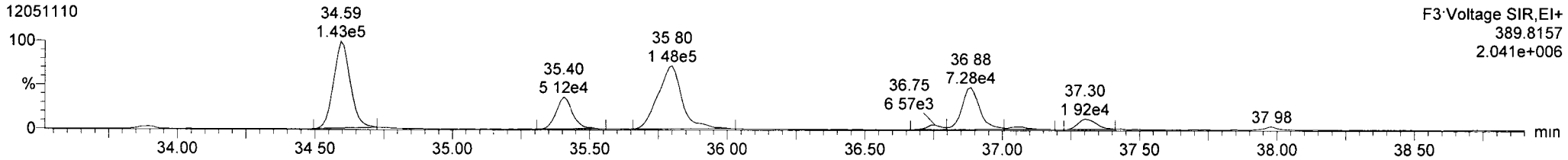
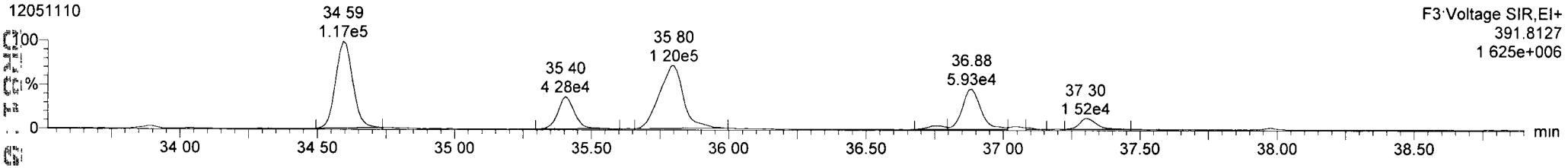
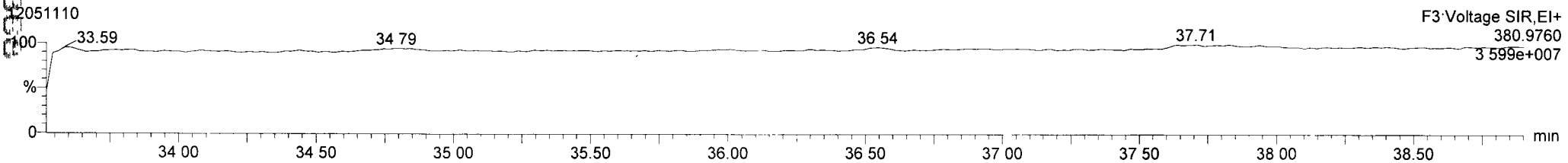


Total-hexadioxins



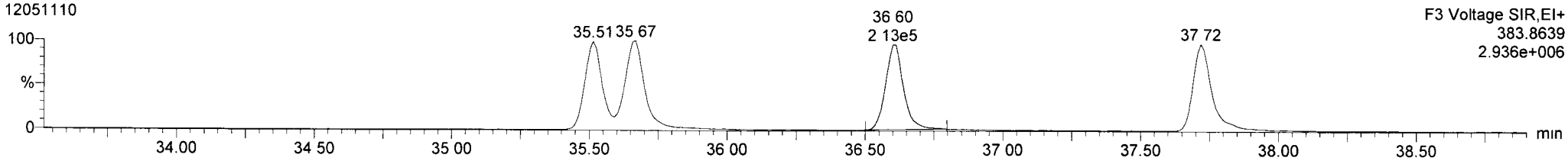
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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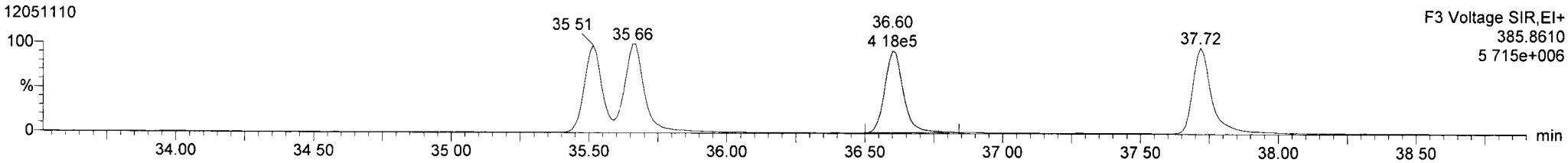

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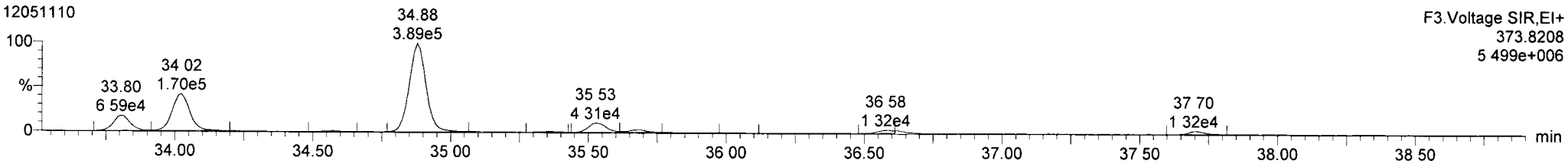

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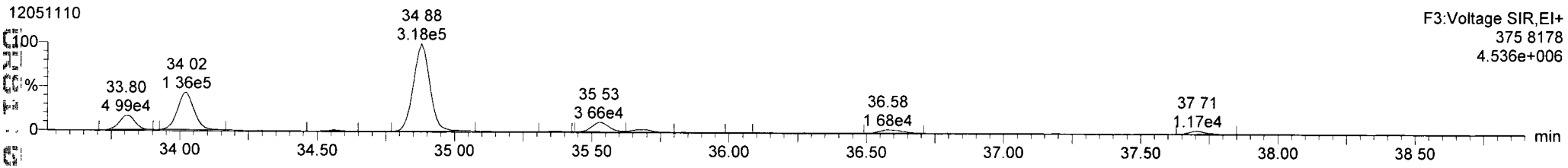
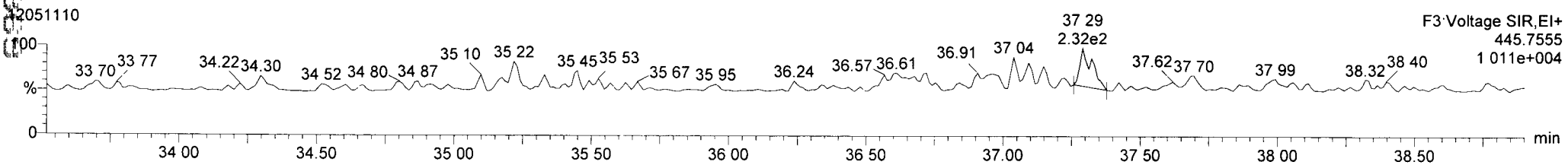
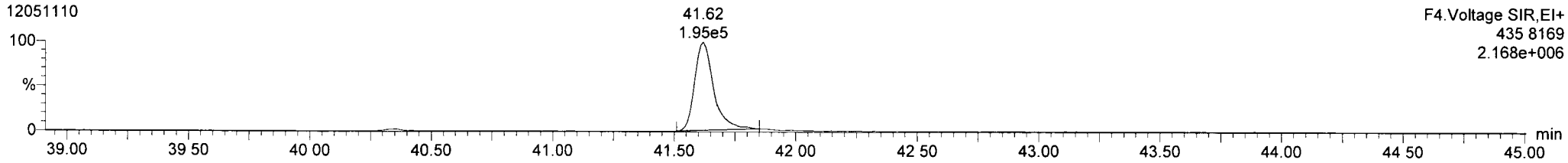


FUNCTION3 OCDPE



Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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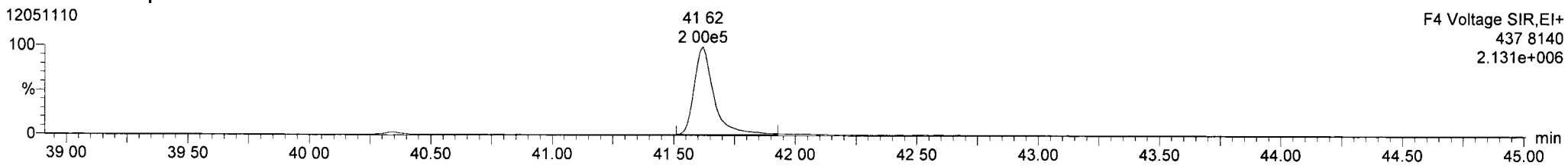
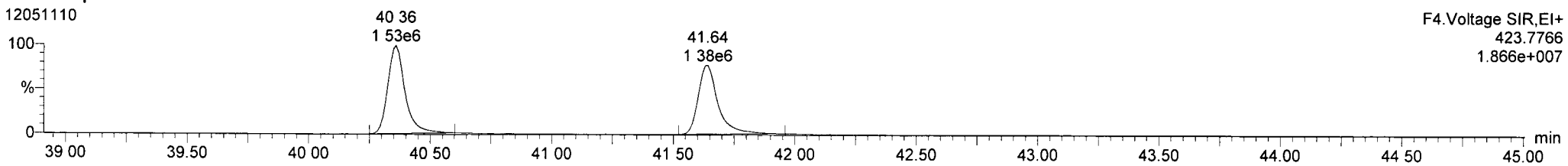


Total-heptadioxins



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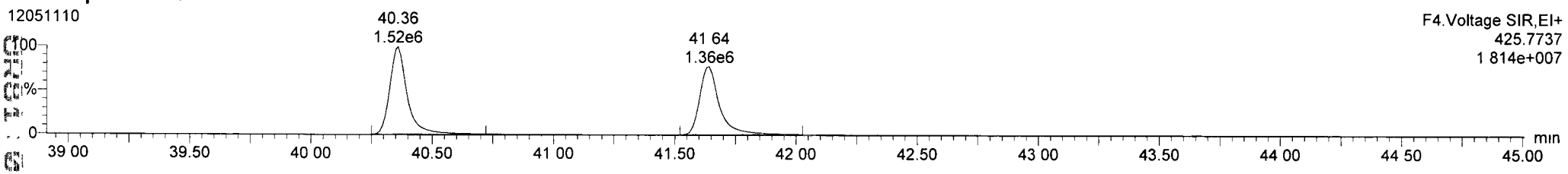
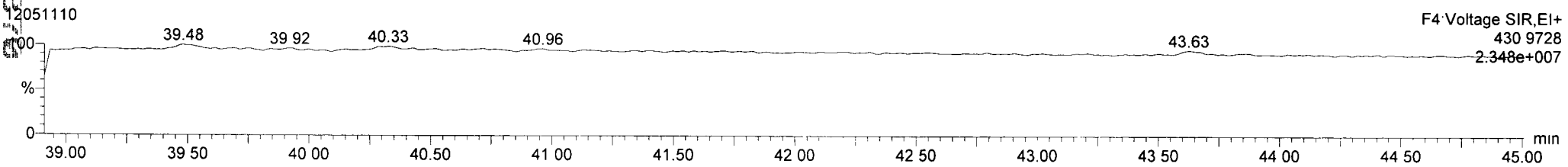


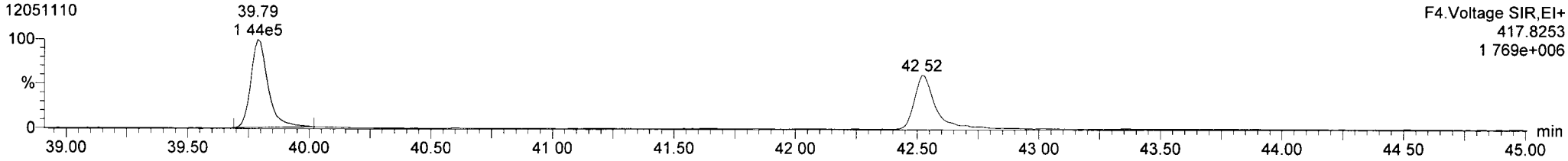
FUNCTION4 PFK



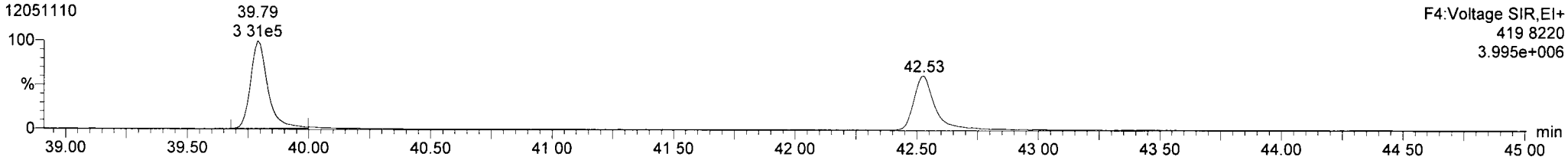
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

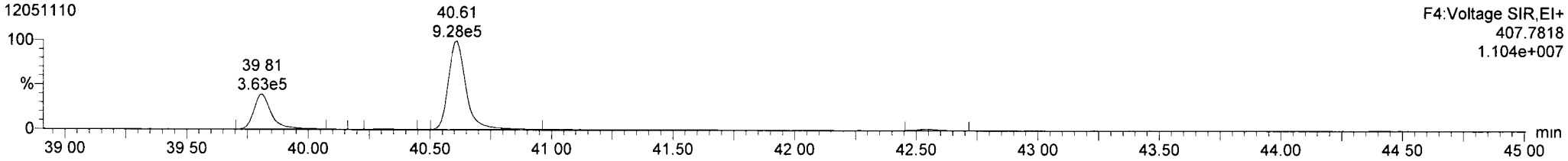
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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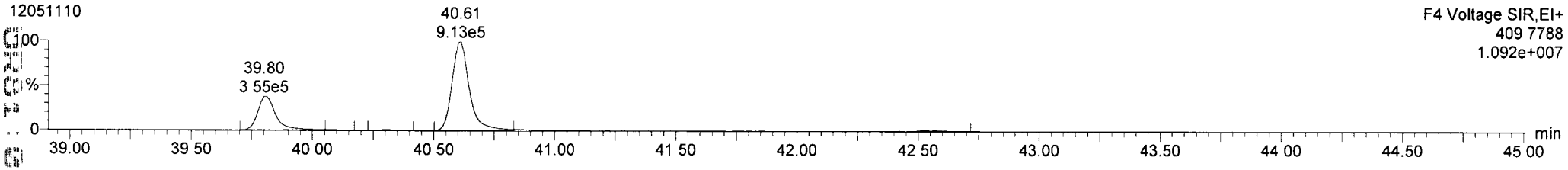
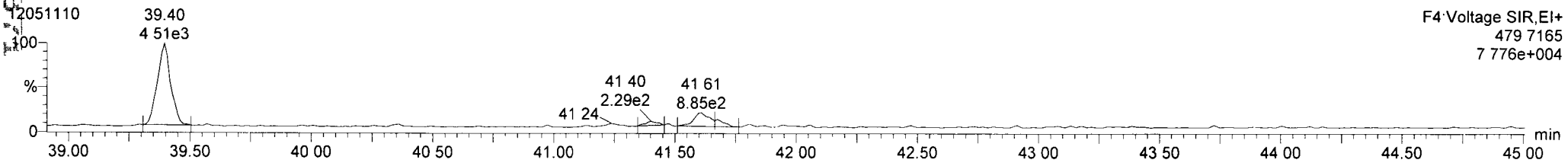


FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

13C-OCDD
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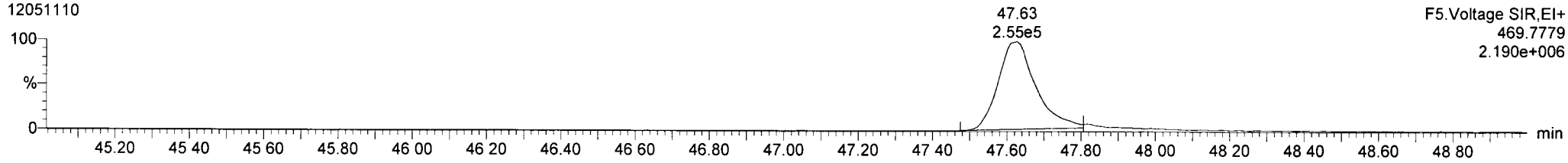
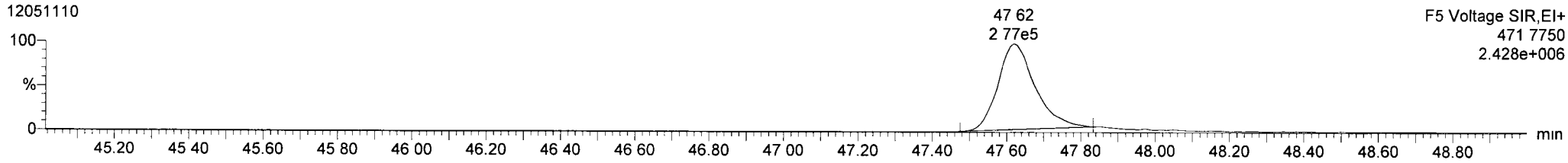


13C-OCDD
12051110



OCDD
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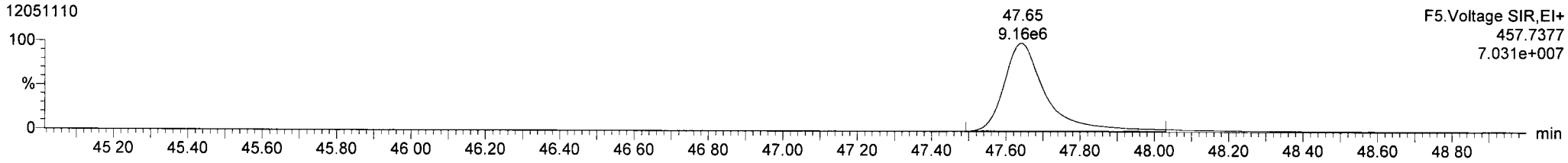

OCDD
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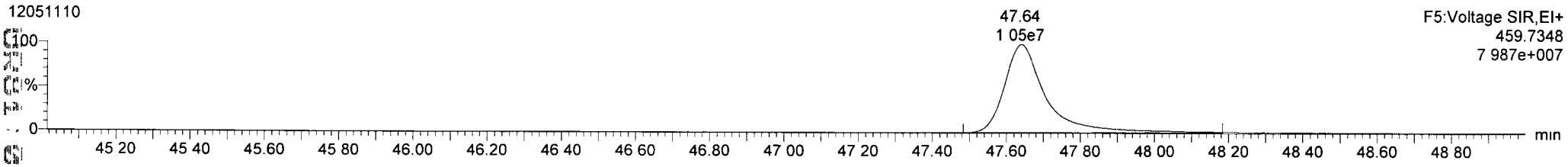

FUNCTION5 PFK
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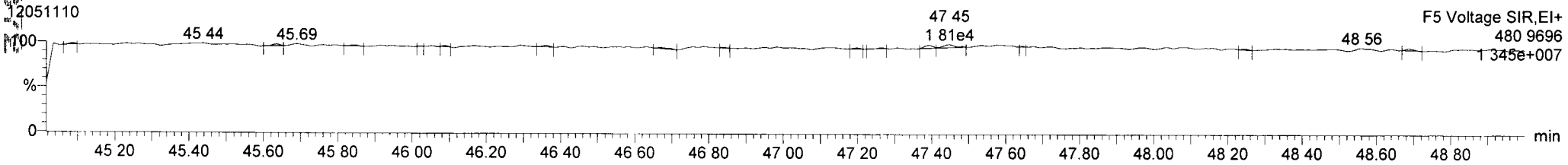
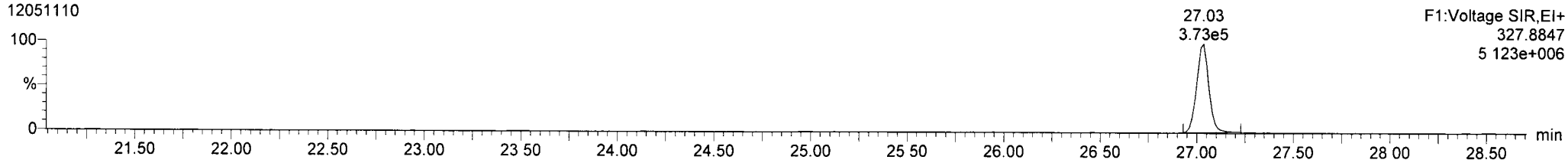


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:04 Pacific Daylight Time

Name: 12051110, Date: 11-May-2012, Time: 17:34:10, ID: US18B 5X, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



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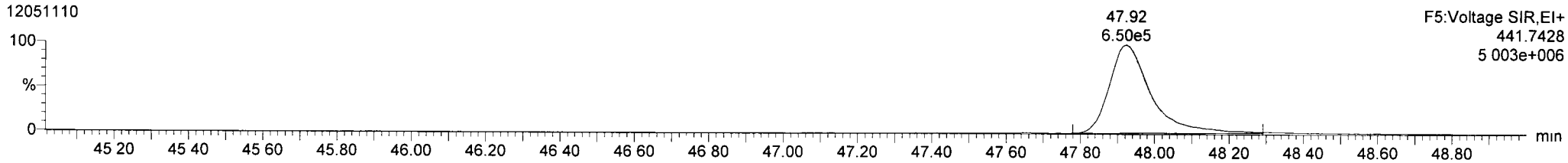
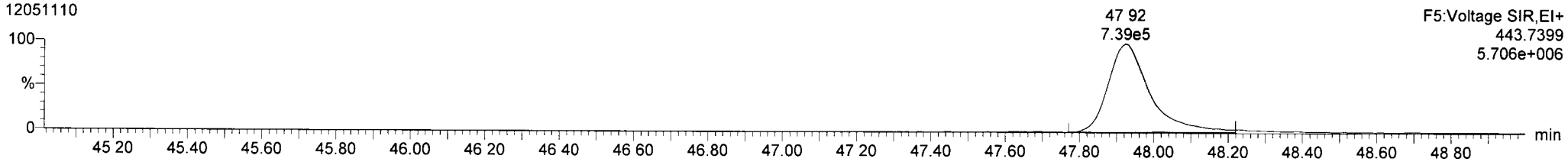
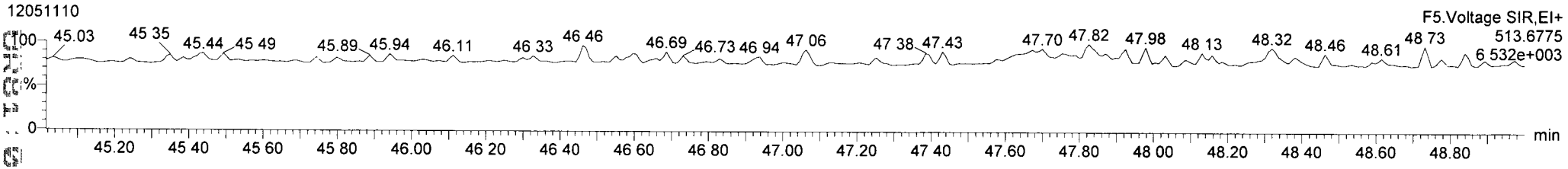


OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
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Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

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2	2	12378-PeCDF	339.8597	30 527	30.538	1521670	1521670	0.907	bd	98 1	1.54	1 55	2710 4	NO	49 036	49 036
3	3	23478-PeCDF	339.8597	31 865	31.876	1490151	1490151	0.936	bb	99 6	1.51	1 55	2678 8	NO	49.780	49.780
4	4	123478-HxCDF	373 8208	35.526	35.525	1495156	1495156	1.082	bd	99 9	1.20	1 24	1254.3	NO	49 944	49.944
5	5	234678-HxCDF	373 8208	36.611	36 622	1449321	1449321	1 070	bd	100.6	1.20	1.24	1132 3	NO	50.289	50.289
6	6	123678-HxCDF	373 8208	35.679	35 679	1690232	1690232	1.048	db	102.9	1.19	1.24	1322 8	NO	51.473	51 473
7	7	123789-HxCDF	373 8208	37.740	37 729	1103821	1103821	1 020	bb	99.2	1.24	1 24	855.1	NO	49 597	49 597
8	8	1234678-HpCDF	407 7818	39.801	39.810	1257134	1257134	1 214	bd	100 4	0.99	1 05	1735 4	NO	50 179	50.179
9	9	1234789-HpCDF	407 7818	42 541	42.532	890763	890763	1.254	bd	99 6	1.00	1 05	978.4	NO	49.796	49 796
10	10	OCDF	441.7428	47 906	47.886	1410009	1410009	1 105	bd	103 1	0.89	0.89	1591.1	NO	103.110	103 110
11	11	2378-TCDD	319 8965	27.034	27 018	299741	299741	1.046	bd	97.9	0.77	0 77	736 8	NO	9 790	9 790
12	12	12378-PeCDD	355 8546	32.117	32 115	1097047	1097047	0.973	bb	100.6	1.55	1 55	1991 4	NO	50.280	50.280
13	13	123478-HxCDD	389 8157	36.742	36.753	984166	984166	0 935	bd	99 0	1.25	1.24	1307.5	NO	49.499	49.499
14	14	123678-HxCDD	389 8157	36 874	36.863	1093946	1093946	0.878	db	102 6	1.24	1.24	1305 9	NO	51.284	51 284
15	15	123789-HxCDD	389.8157	37 301	37.257	944399	944399	0 839	bb	98.9	1.23	1.24	1124.2	NO	49 429	49 429
16	16	1234678-HpCDD	423 7766	41.631	41.633	797122	797122	0 974	bd	100.8	1.02	1 05	858 8	NO	50.391	50.391
17	17	OCDD	457 7377	47.618	47 615	1194640	1194640	0.950	bd	101.6	0.90	0 89	754 8	NO	101.628	101.628
18	18	13C-2378-TCDF	315 9419	26.377	26.377	4567822		1 484	bd	99.2	0.78	0.77	11375.5	NO	99.169	
19	19	13C-12378-PeCDF	351.9000	30.516	30.518	3421537		1 048	bd	105.2	1.56	1.55	5867 8	NO	105.209	
20	20	13C-23478-PeCDF	351 9000	31 854	31.856	3198586		1.003	bb	102.7	1.57	1.55	5742 2	NO	102.735	
21	21	13C-123478-HxCDF	383.8639	35 515	35.504	2767037		1.186	bd	113.2	0.53	0 51	2482 0	NO	113 241	
22	22	13C-123678-HxCDF	383 8639	35.657	35 657	3132332		1 315	db	115.6	0.50	0 51	2586.2	NO	115.573	
23	23	13C-234678-HxCDF	383 8639	36.600	36 589	2693935		1.223	bb	106 9	0.52	0.51	2321.5	NO	106.855	
24	24	13C-123789-HxCDF	383 8639	37 718	37.696	2181739		1.056	bb	100.2	0.53	0 51	1802 7	NO	100 202	
25	25	13C-1234678-HpCDF	417.8253	39.790	39.779	2062914		1 011	bd	99.0	0.43	0 44	1694 2	NO	98 966	
26	26	13C-1234789-HpCDF	417 8253	42.519	42 530	1426411		0 741	bd	93.5	0 45	0 44	969.8	NO	93.461	
27	27	13C-1234-TCDD	331 9368	26.198	26 272	3102961		1 000	bb	100 0	0.78	0.77	6800 7	NO	100.000	
28	28	13C-2378-TCDD	331 9368	27 004	27 019	2927667		0 956	bb	98 7	0.77	0 77	5805 2	NO	98 655	
29	29	13C-12378-PeCDD	367 8949	32 106	32 108	2241775		0.663	bd	108 9	1.54	1 55	4932 2	NO	108.894	
30	30	13C-123478-HxCDD	401 8559	36 731	36.720	2125549		1 024	bd	100.7	1.26	1 24	3559 6	NO	100.727	
31	31	13C-123678-HxCDD	401 8559	36.852	36.852	2430156		1 113	db	106.0	1 25	1.24	3721 6	NO	105.980	
32	32	13C-1234678-HpCDD	435 8169	41.620	41.631	1623609		0 815	bb	96 6	1.07	1 05	2232 2	NO	96 648	
33	33	13C-OCDD	469 7779	47.601	47 647	2474542		0 717	bb	83.7	0.94	0 89	2880 4	NO	167 442	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

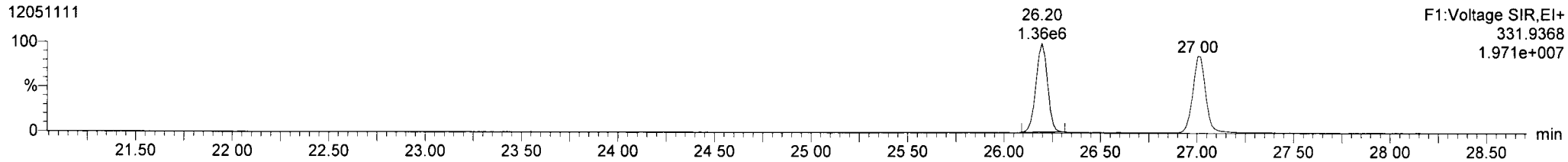
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401 8559	37.279	37 368	2060936		1.000	bb	100.0	1.26	1 24	3154 7	NO	100 000	
35	35	Total-tetrafurans	303.9016		25 370			0 866							32.105	32.105
36	36	Total-penta1	339 8597		28 210										74 023	74.035
37	37	Total-pentafurans	339 8597		30 790			0.921							151.387	153.042
38	38	Total-hexafurans	373 8208		35 760			1.055							258.306	258.306
39	39	Total-heptafurans	407.7818		41.160			1.234							99 975	100 077
40	40	Total-Furans	303.9016		0 000			1.050							718 906	720.675
41	41	Total-tetradioxins	319 8965		25 880			1.046							54.495	54 728
42	42	Total-pentadioxins	355 8546		30 950			0 973							177.336	177 444
43	43	Total-hexadioxins	389 8157		35.940			0 884							219.834	219.853
44	44	Total-heptadioxins	423 7766		40.980			0.974							113 175	113.175
45	45	Total-Dioxins	319.8965		0.000			0.942							666 468	666.828
46	46	Total-TEQ	319.8965		0 000										1385 374	1387 5 .
47	47	37CL-2378-TCDD	327.8847	27.034	27 010	315530		1 037		98.0			1956 3		9 804	
48	48	FUNCTION1 PFK	330.9792		0 000											
49	49	FUNCTION2 PFK	366.9792		0 000										0 000	
50	50	FUNCTION3 PFK	380.9760		0 000										0.000	
51	51	FUNCTION4 PFK	430.9728		0 000											
52	52	FUNCTION5 PFK	480 9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000											
54	54	FUNCTION1 HPCDPE	409.7974		0.000											
55	55	FUNCTION2 HPCDPE	409.7974		0 000										0 000	
56	56	FUNCTION3 OCDPE	445.7555		0 000											
57	57	FUNCTION4 NCDPE	479 7165		0 000											
58	58	FUNCTION5 DCDPE	513 6775		0 000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

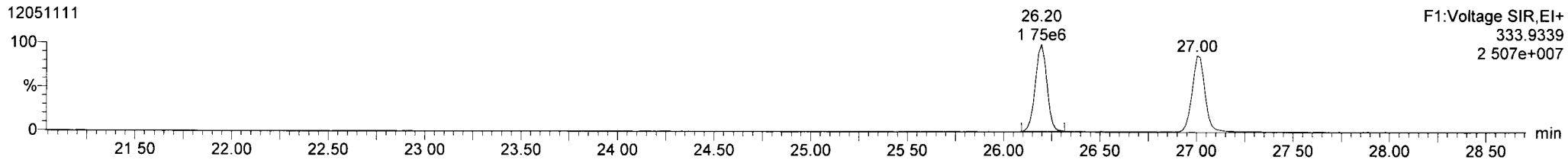
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 10 May 2012 14:10:29
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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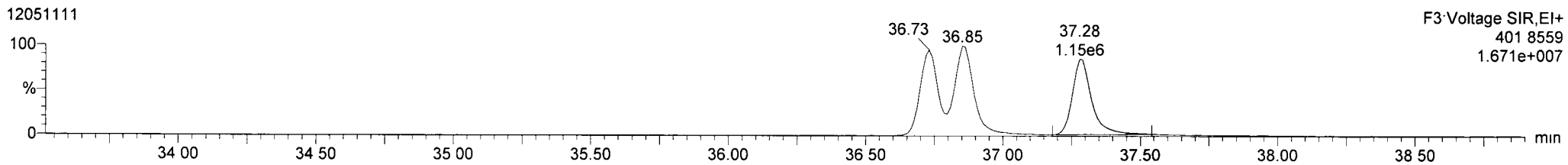

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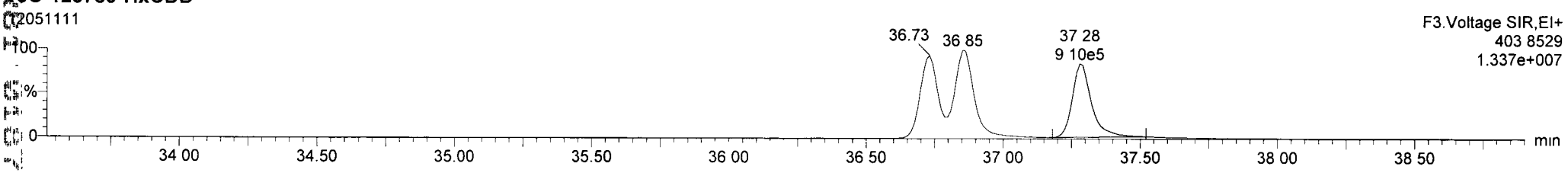
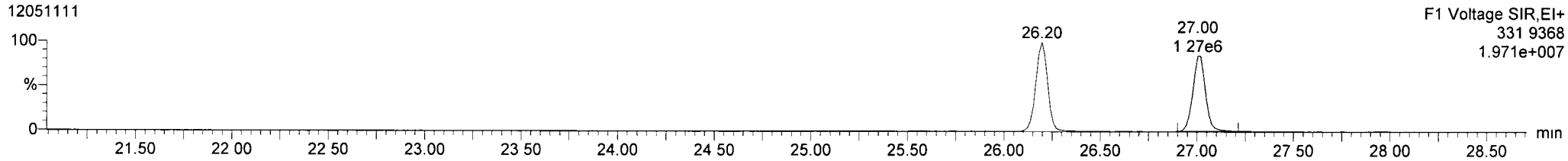


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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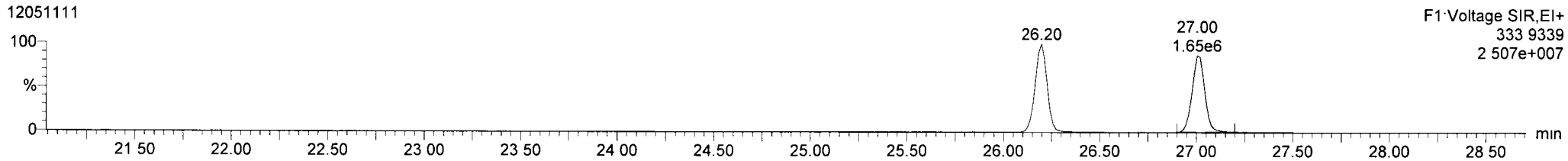
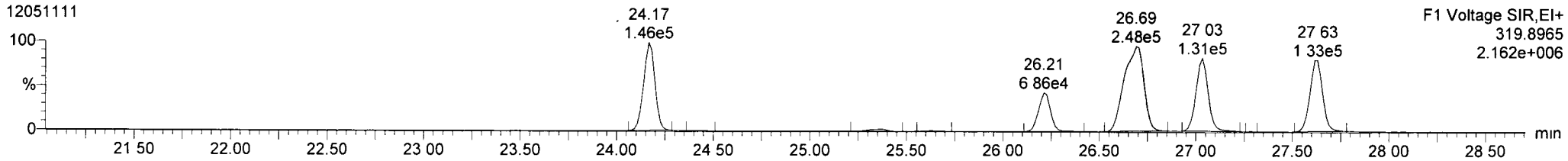
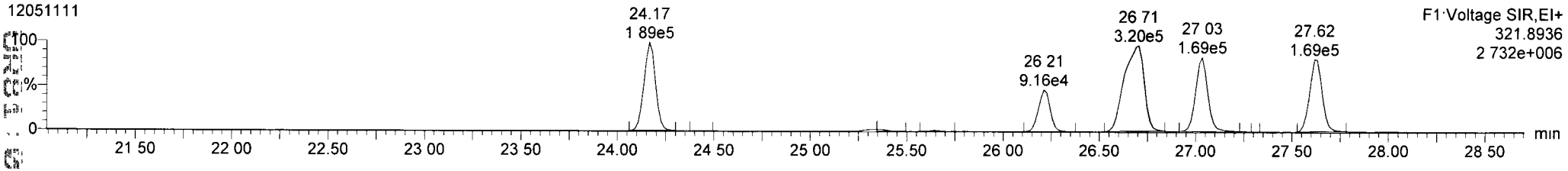


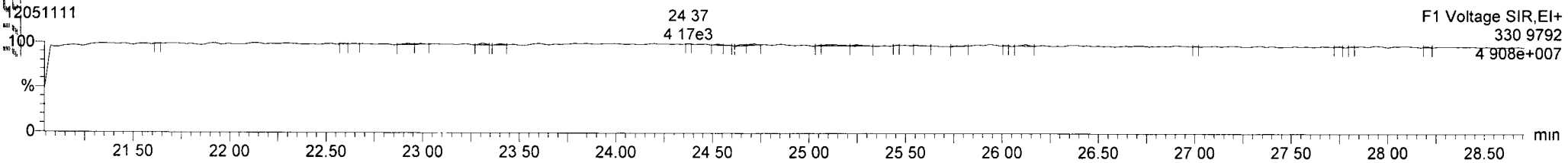
Total-tetradioxins



Total-tetradioxins



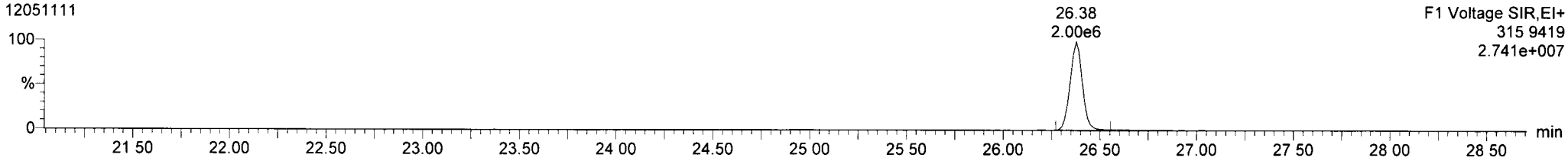
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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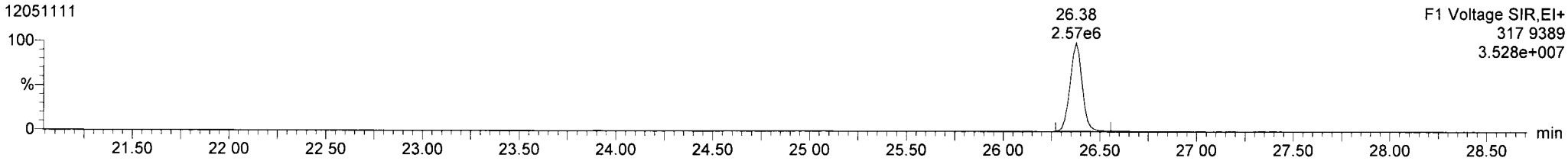
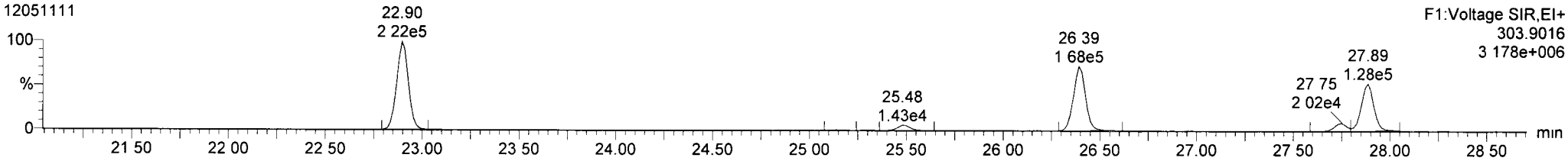
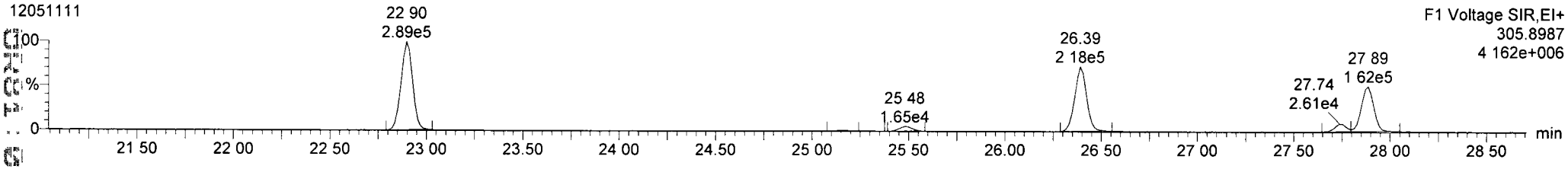


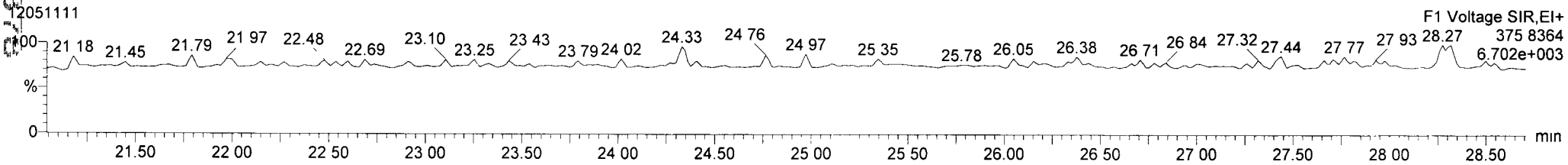
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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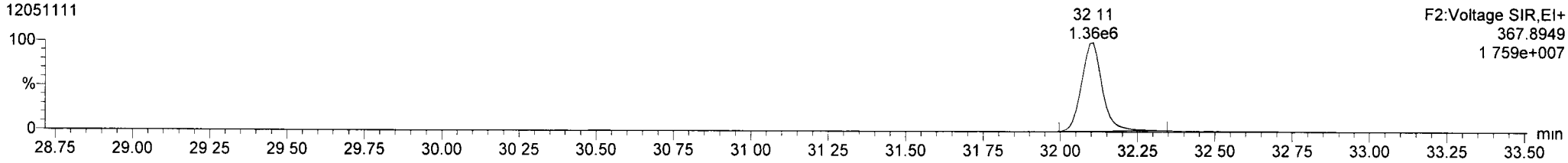
Last Altered Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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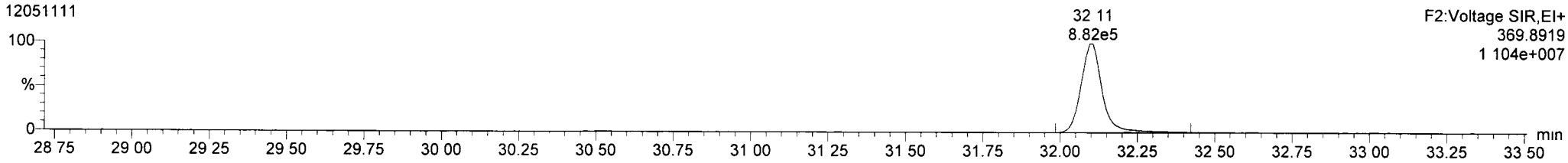
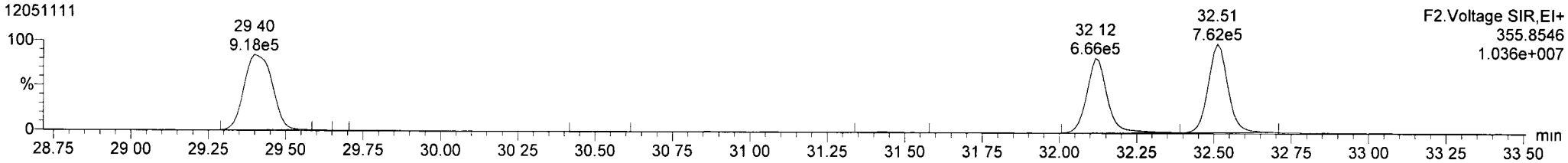
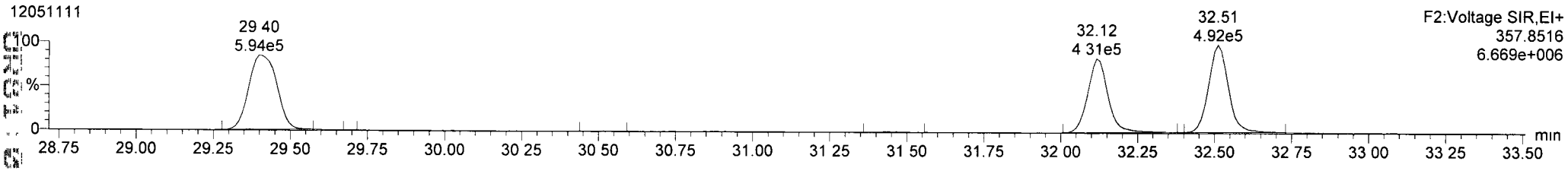


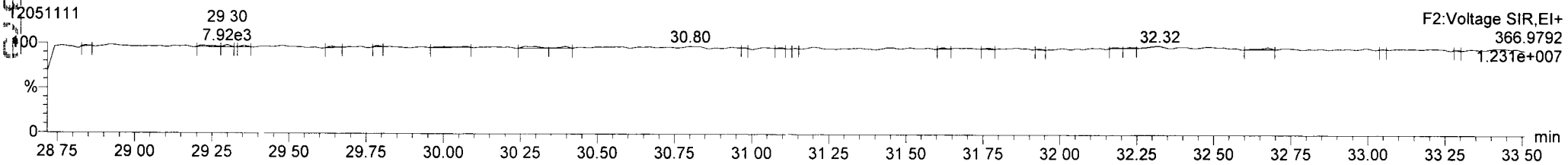
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\120511DATA qld
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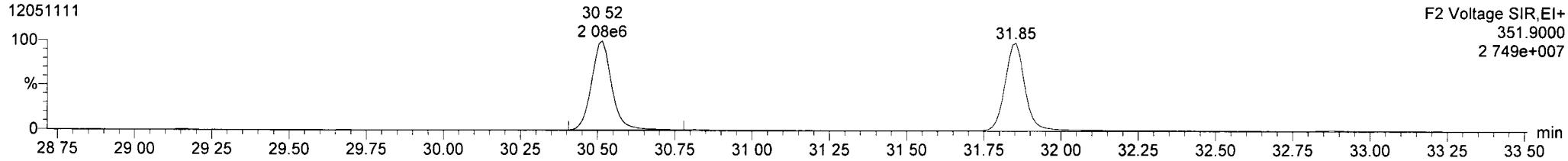
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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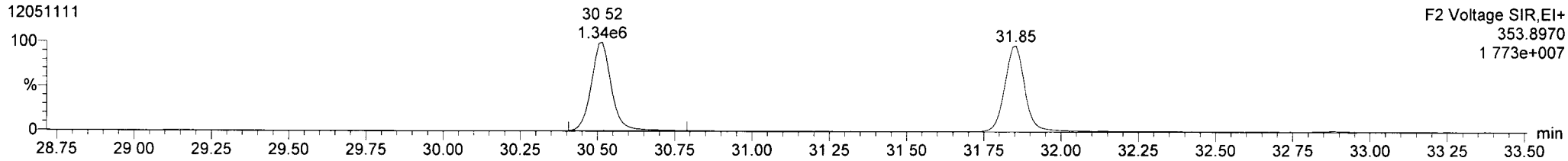
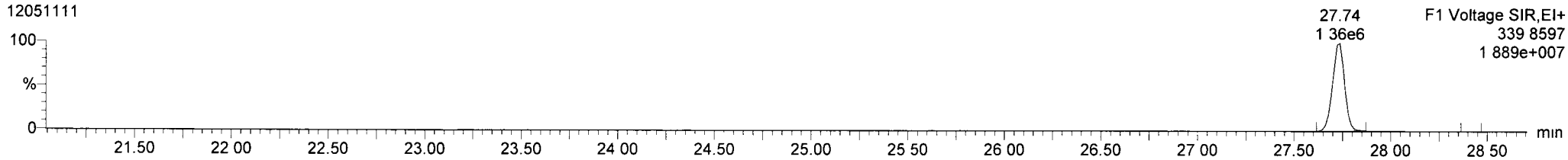
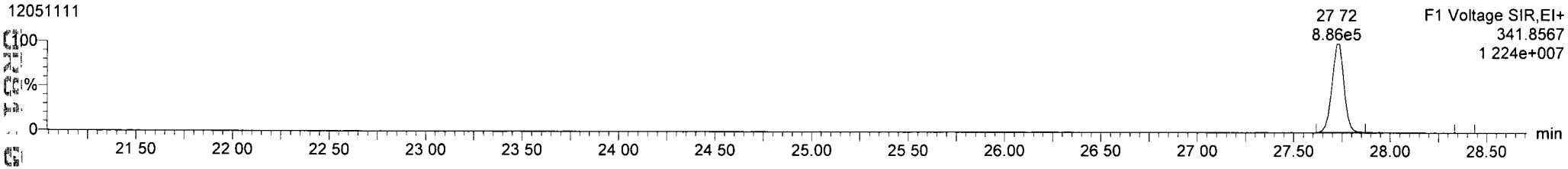


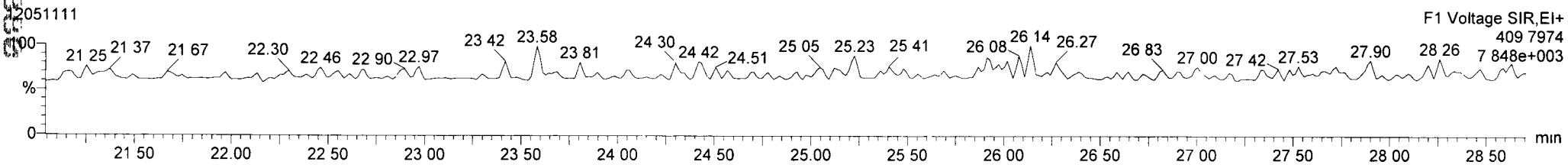
Total-penta1



Total-penta1



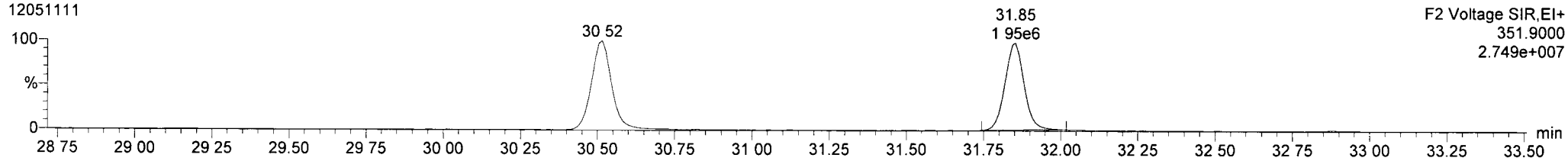
FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120511DATA qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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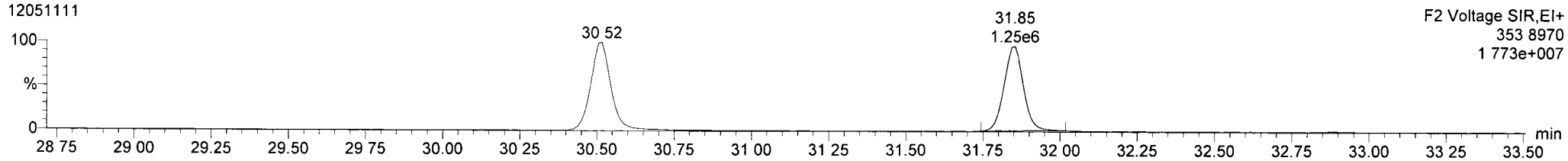
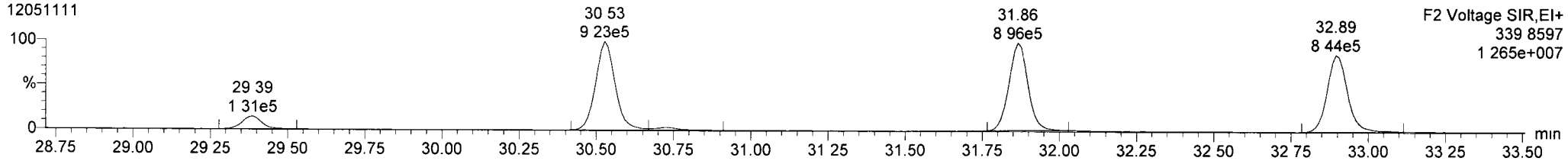
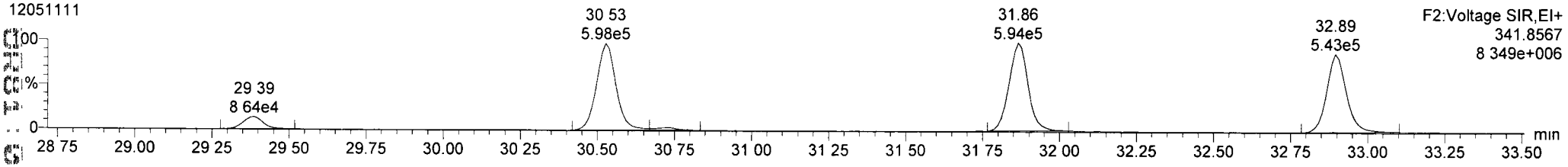


Total-pentafurans



Total-pentafurans



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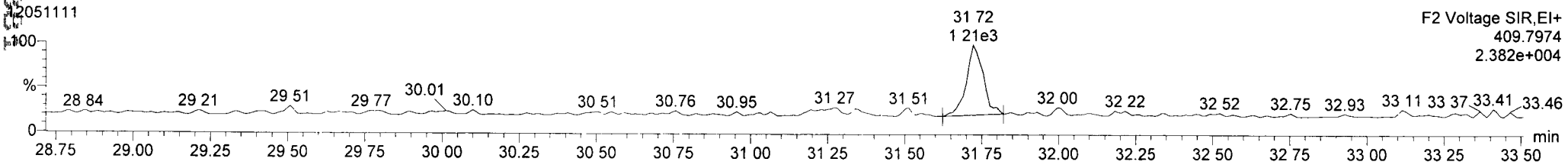

Quantify Sample Report **MassLynx 4.1 SCN 714**
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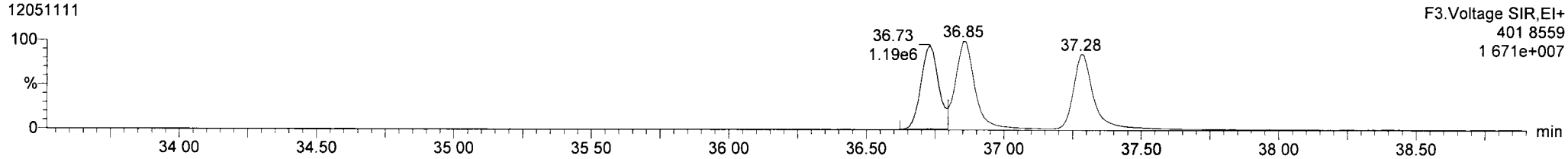
13C-123478-HxCDD



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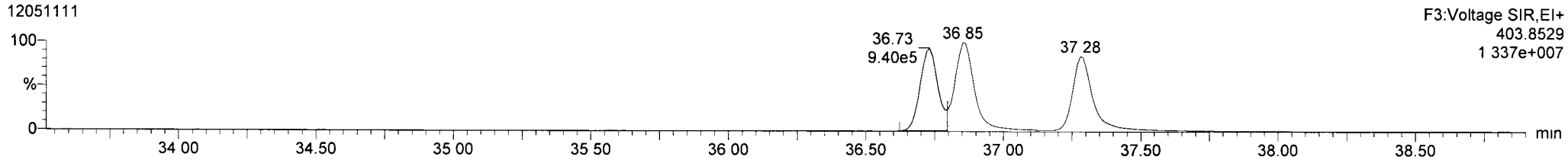
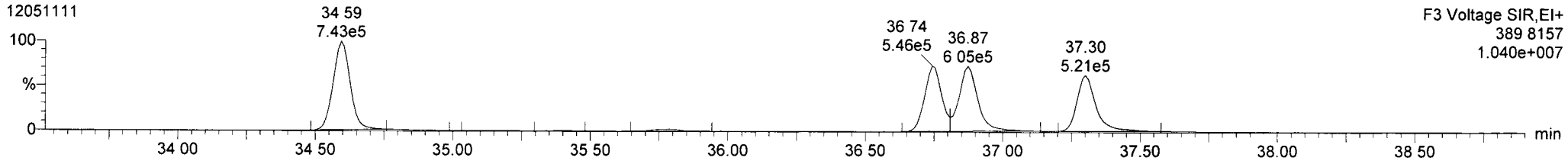
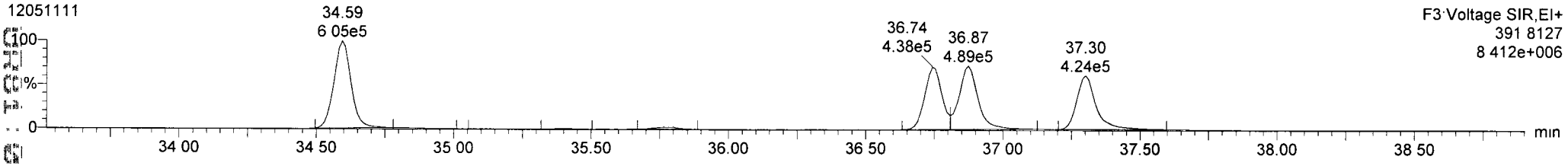


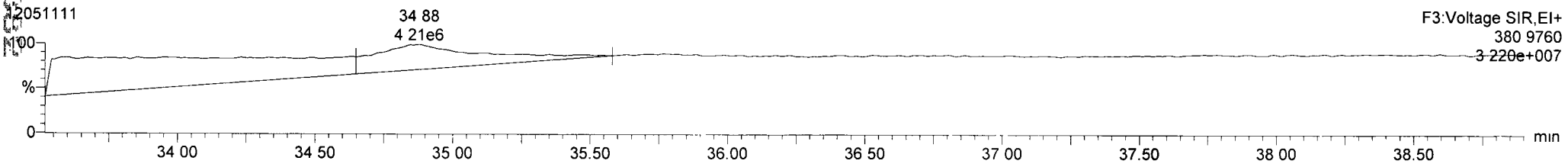
Total-hexadioxins



Total-hexadioxins



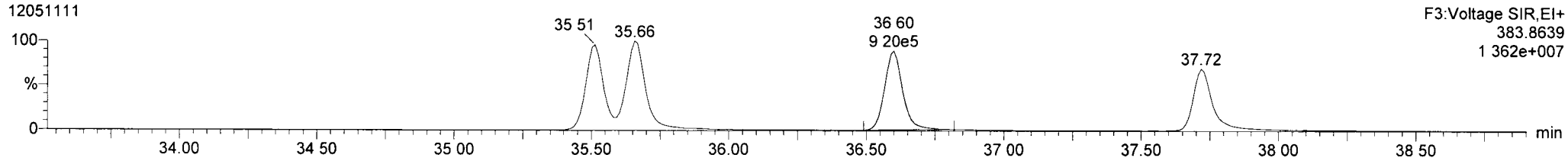
FUNCTION3 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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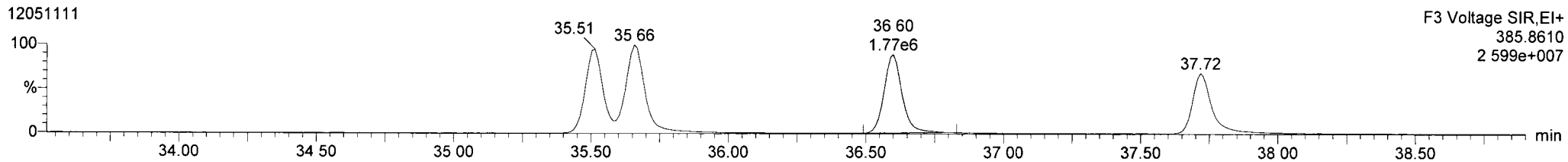
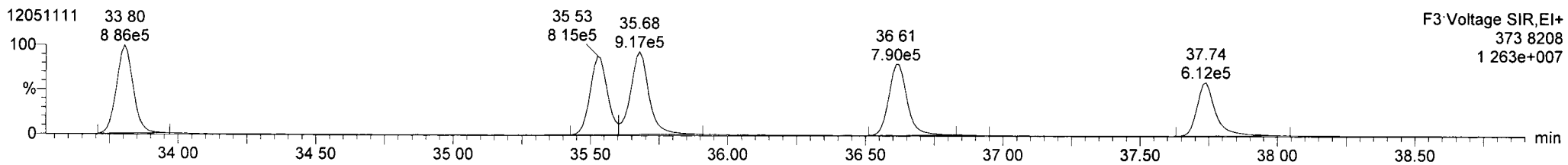
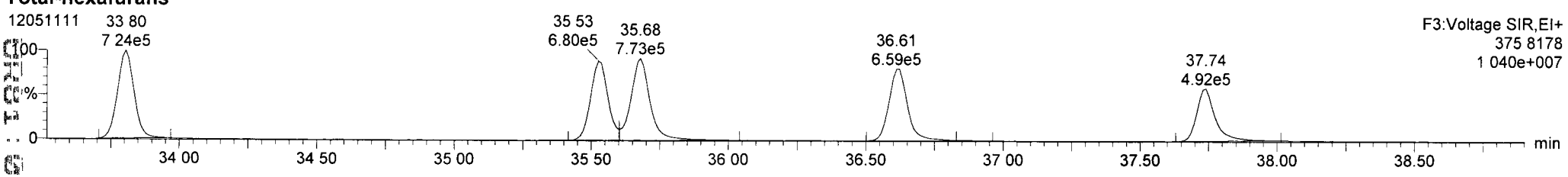


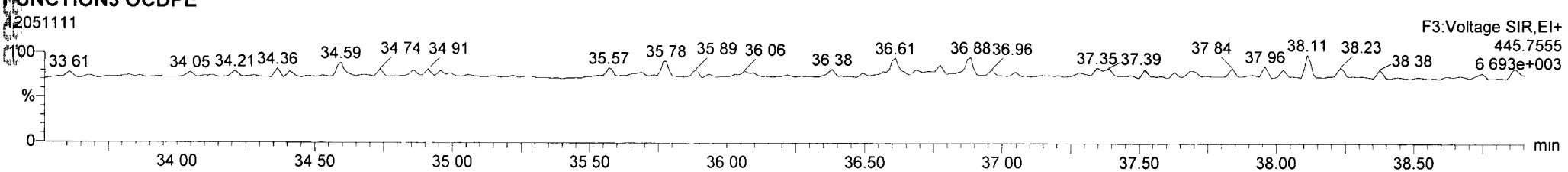
Total-hexafurans



Total-hexafurans



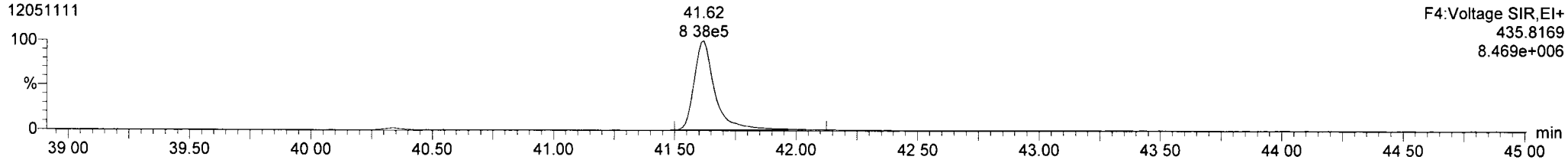
FUNCTION3 OCDPE



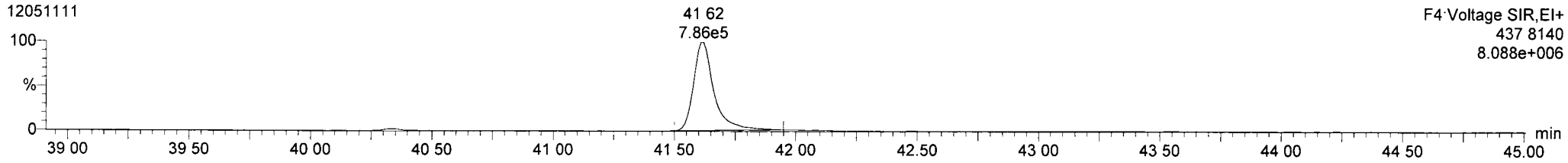
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

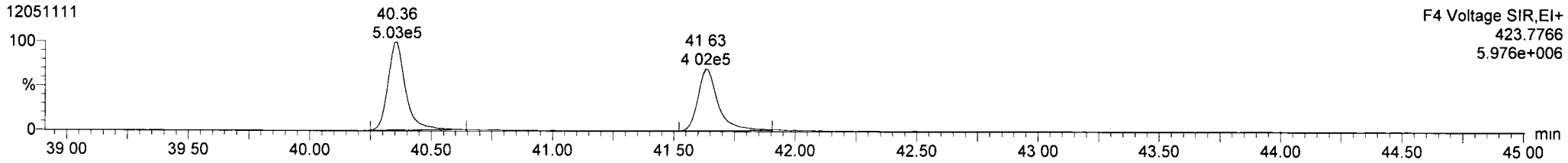
13C-1234678-HpCDD



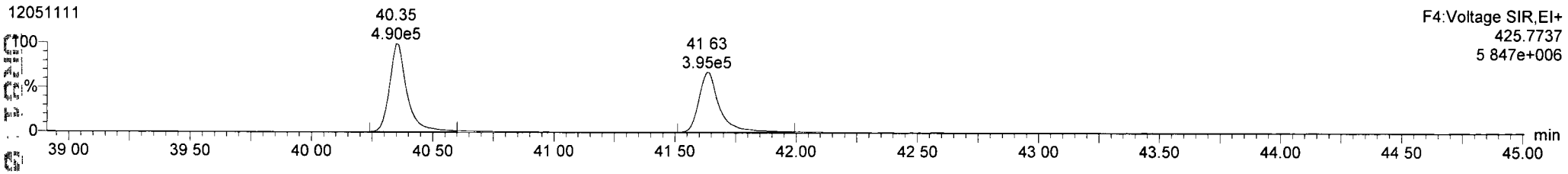
13C-1234678-HpCDD



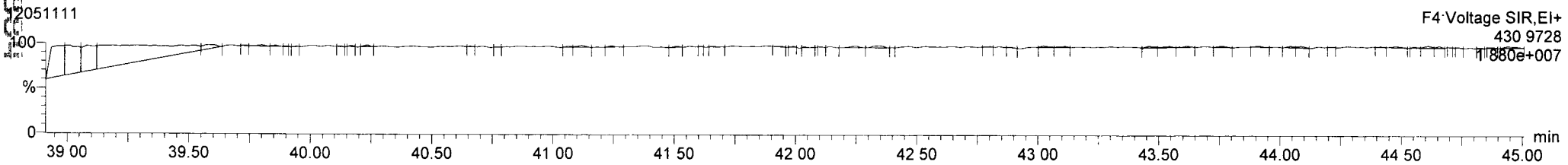
Total-heptadioxins



Total-heptadioxins



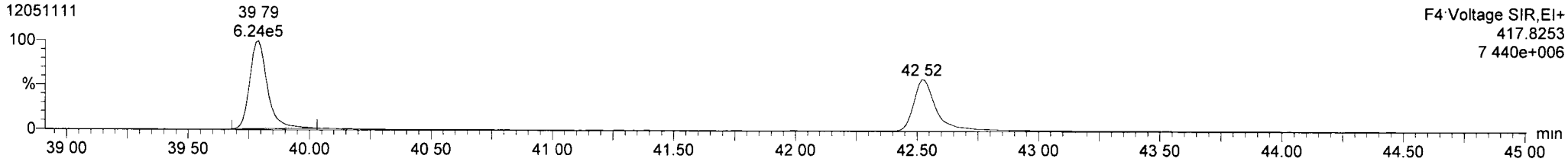
FUNCTION4 PFK



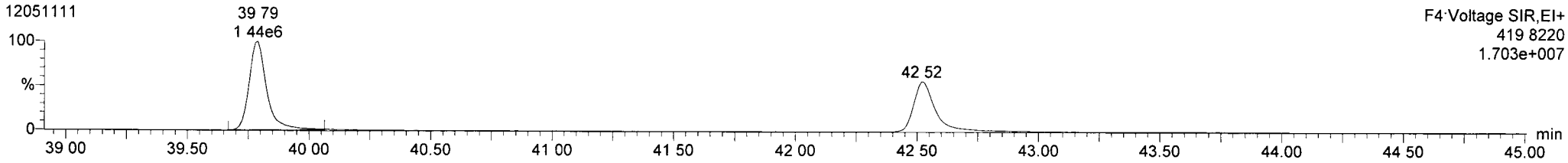
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

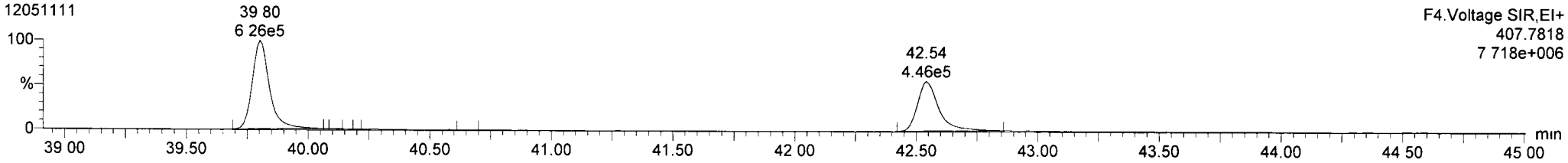
13C-1234678-HpCDF



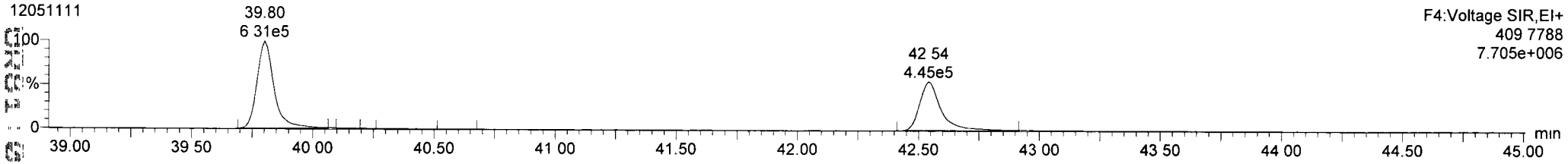
13C-1234678-HpCDF



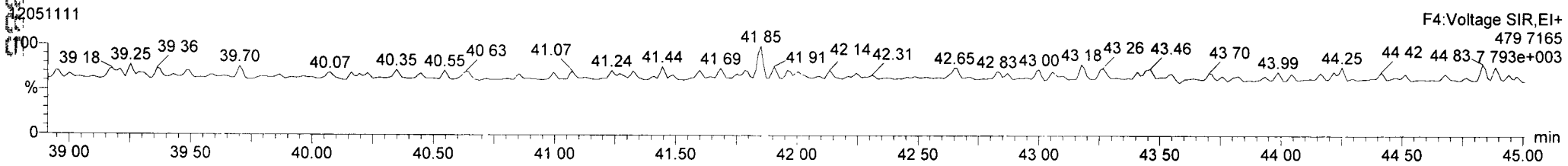
Total-heptafurans



Total-heptafurans



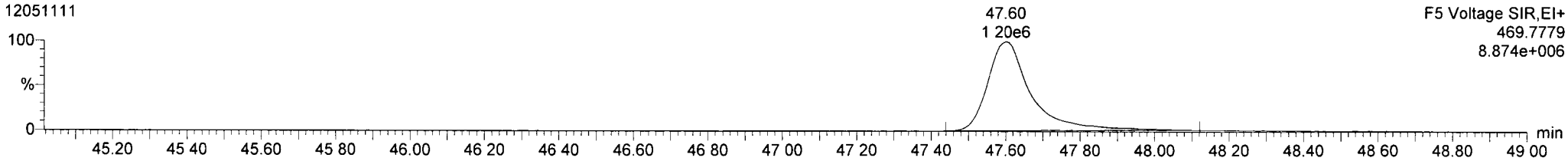
FUNCTION4 NCDPE



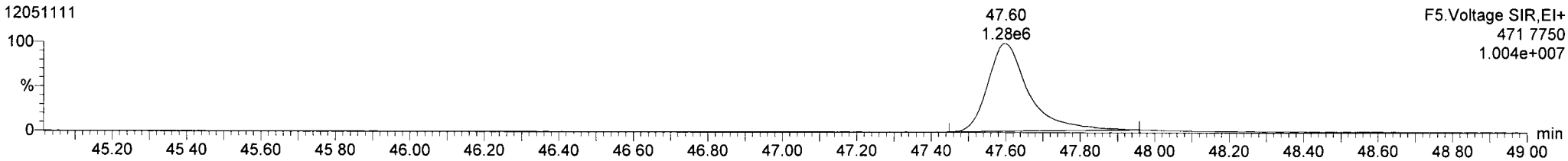
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120511DATA.qld
Last Altered: Monday, May 14, 2012 09:42:00 Pacific Daylight Time
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

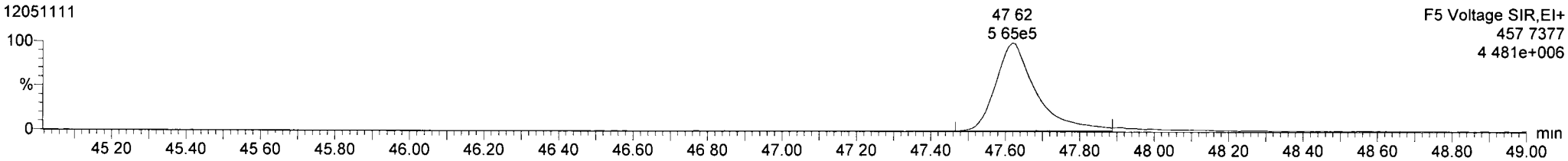
13C-OCDD



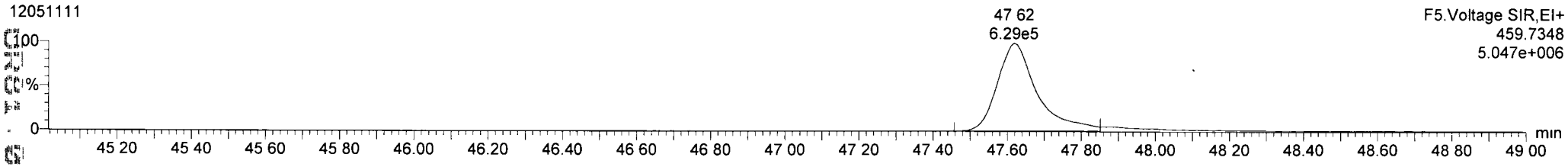
13C-OCDD



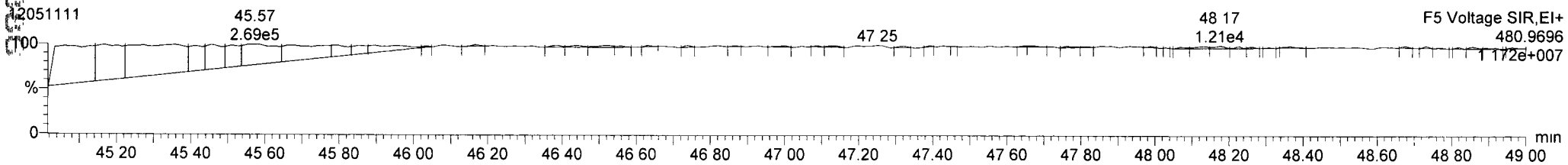
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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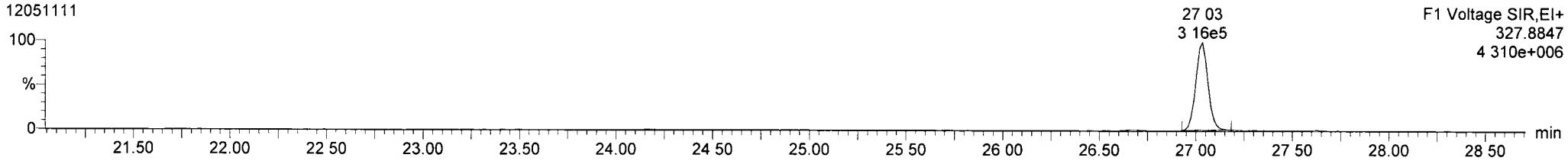
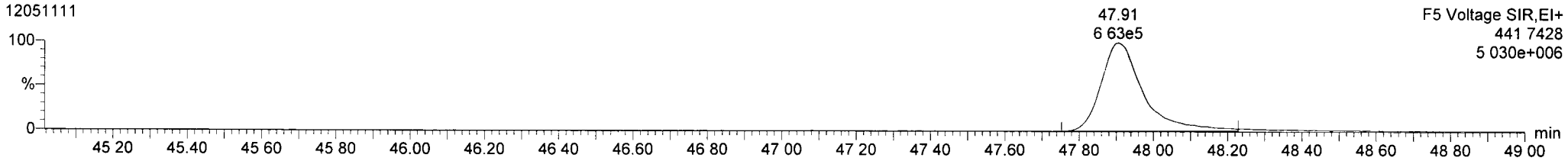
Printed: Monday, May 14, 2012 09:47:08 Pacific Daylight Time

Name: 12051111, Date: 11-May-2012, Time: 18:26:18, ID: CS3, Conditions: AUTOSPEC01, User: pk

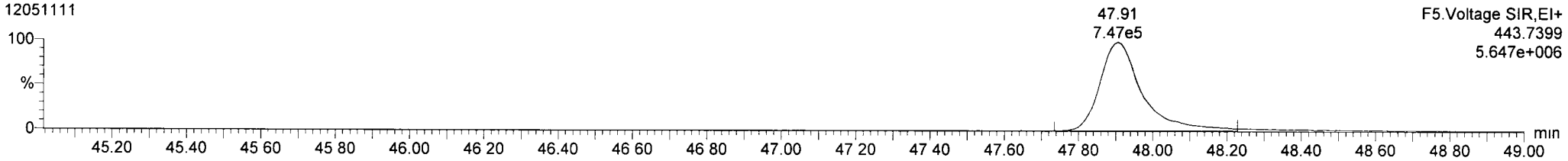
37CL-2378-TCDD



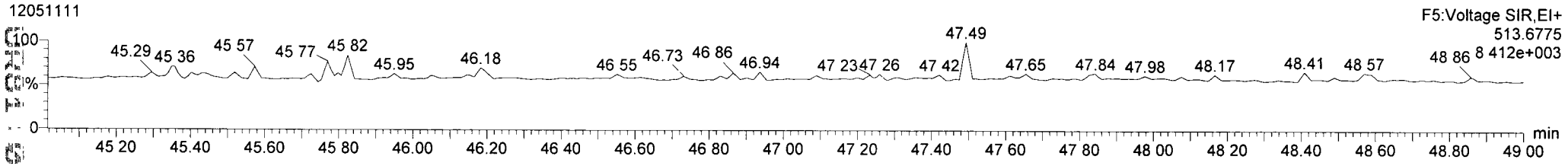
OCDF



OCDF

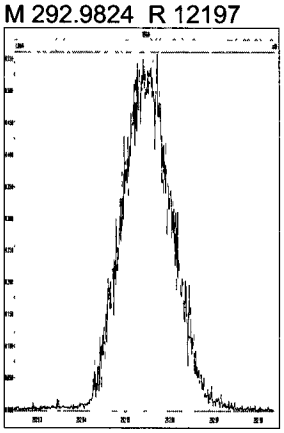


FUNCTION5 DCDPE

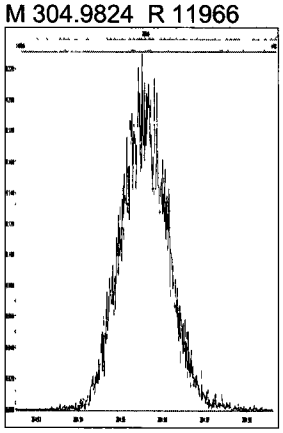


Printed: Friday, May 11, 2012 19:26:42 Pacific Daylight Time

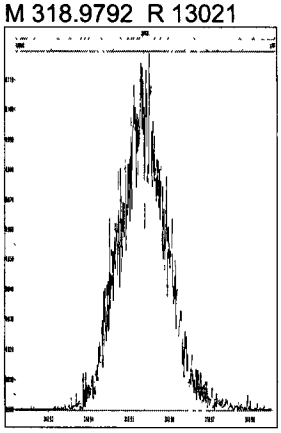
M 292.9824 R 12197



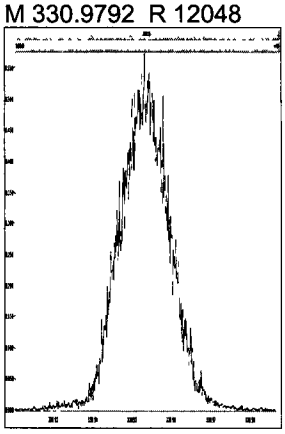
M 304.9824 R 11966



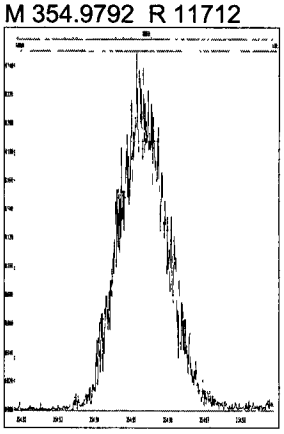
M 318.9792 R 13021



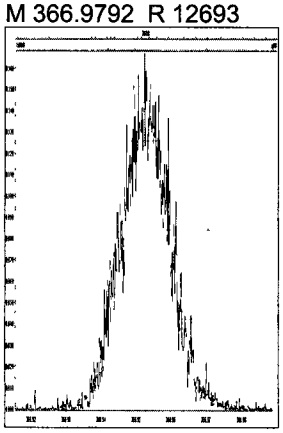
M 330.9792 R 12048



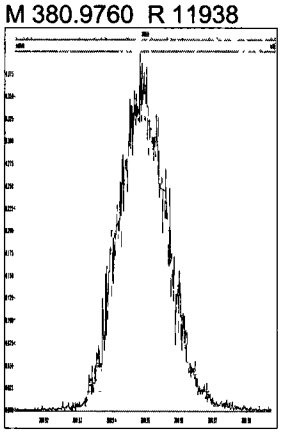
M 354.9792 R 11712



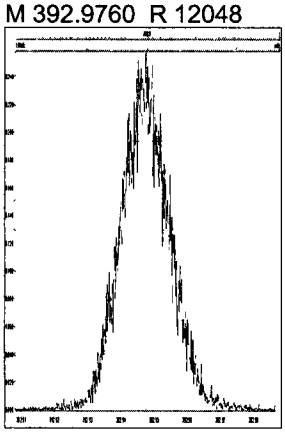
M 366.9792 R 12693



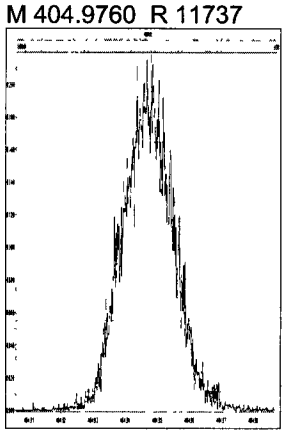
M 380.9760 R 11938



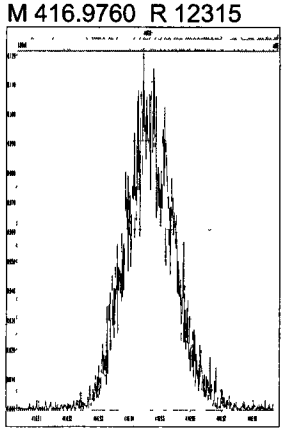
M 392.9760 R 12048



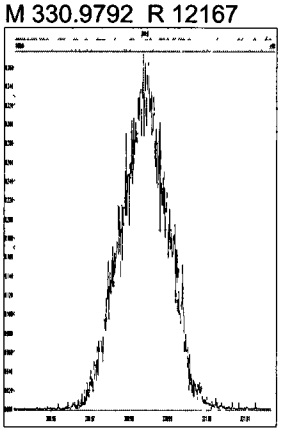
M 404.9760 R 11737



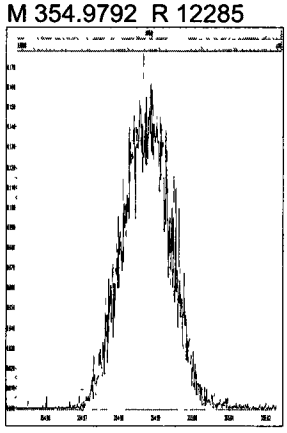
M 416.9760 R 12315



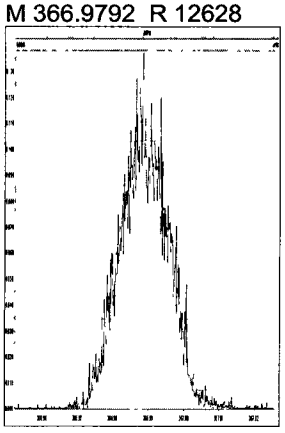
M 330.9792 R 12167



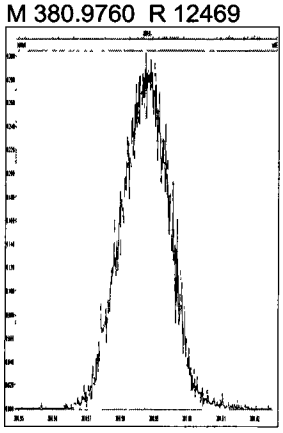
M 354.9792 R 12285



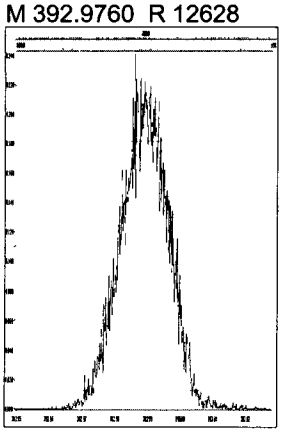
M 366.9792 R 12628



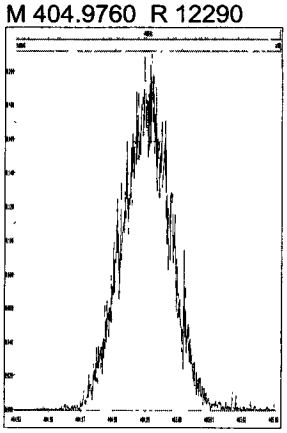
M 380.9760 R 12469



M 392.9760 R 12628

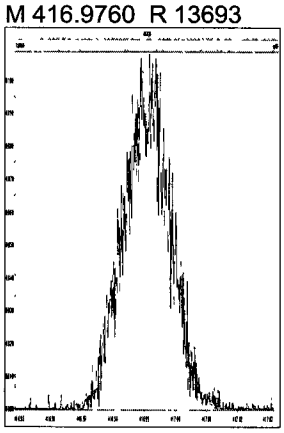


M 404.9760 R 12290

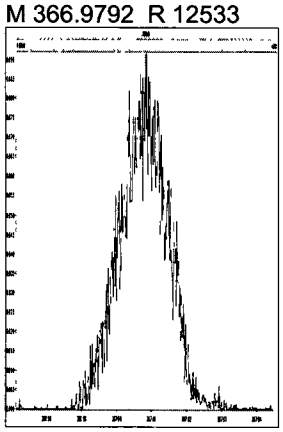


Printed: Friday, May 11, 2012 19:26:42 Pacific Daylight Time

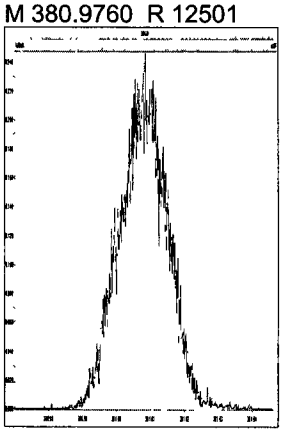
M 416.9760 R 13693



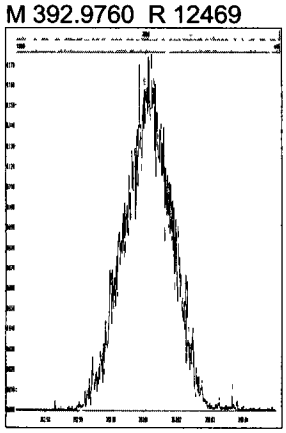
M 366.9792 R 12533



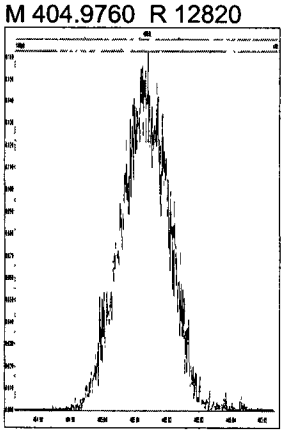
M 380.9760 R 12501



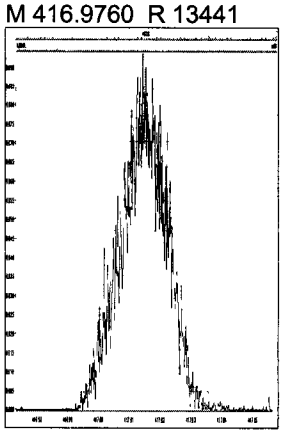
M 392.9760 R 12469



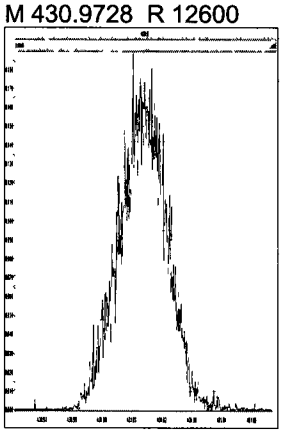
M 404.9760 R 12820



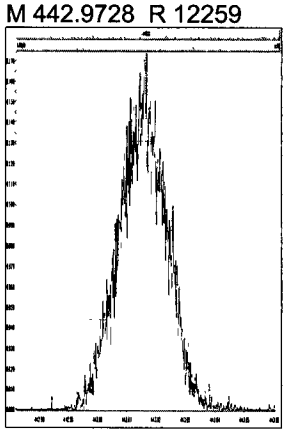
M 416.9760 R 13441



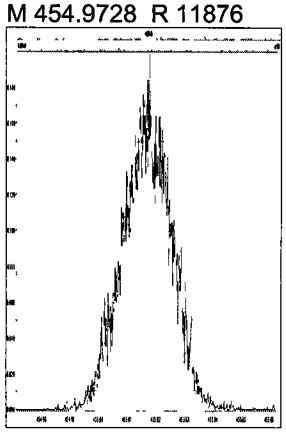
M 430.9728 R 12600



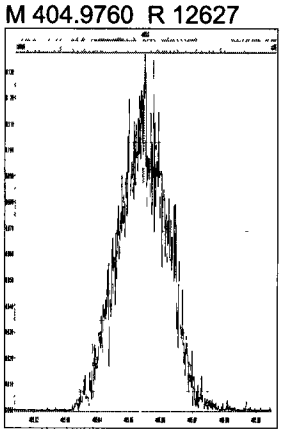
M 442.9728 R 12259



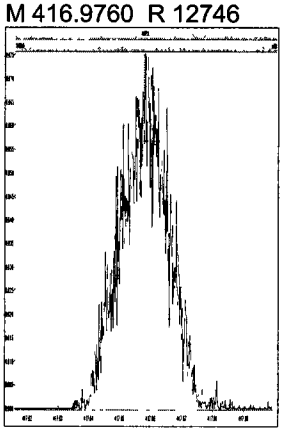
M 454.9728 R 11876



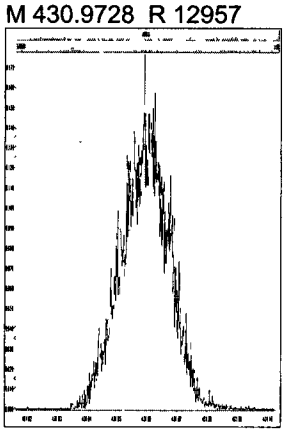
M 404.9760 R 12627



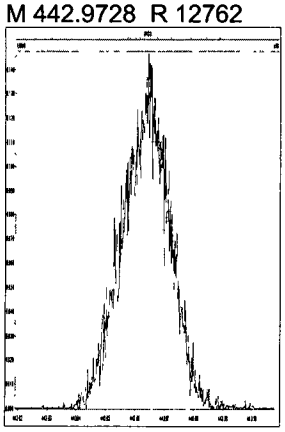
M 416.9760 R 12746



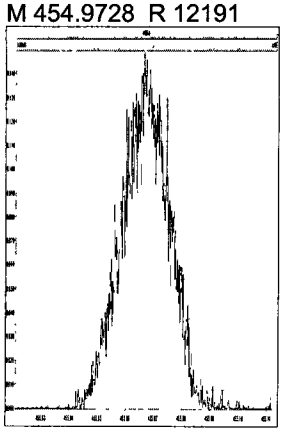
M 430.9728 R 12957



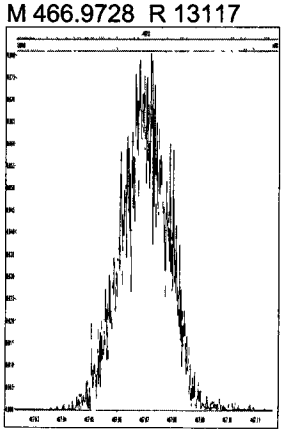
M 442.9728 R 12762



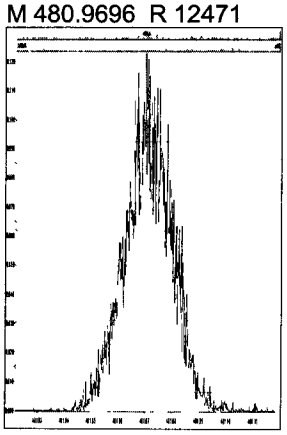
M 454.9728 R 12191



M 466.9728 R 13117



M 480.9696 R 12471



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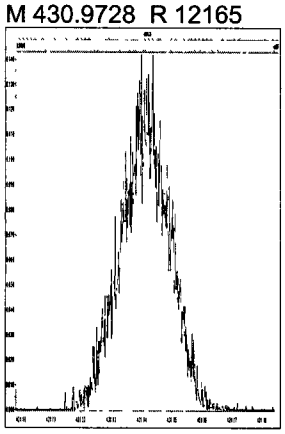
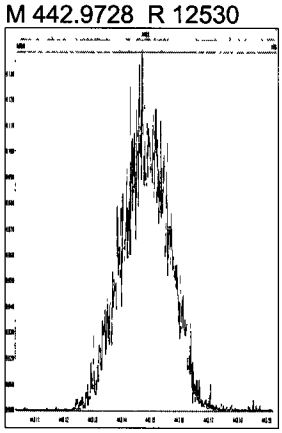
Printed: Friday, May 11, 2012 19:26:42 Pacific Daylight Time

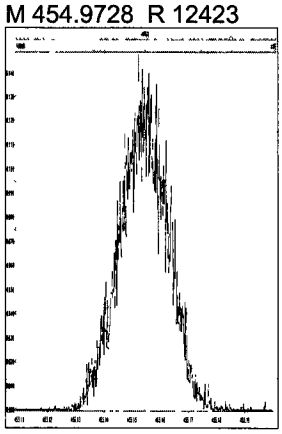
M 430.9728 R 12165



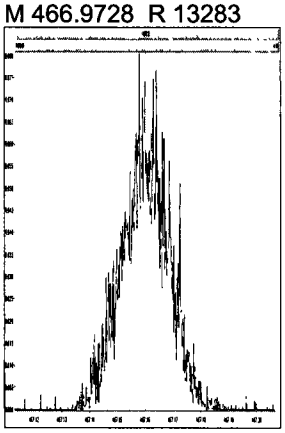
M 442.9728 R 12530



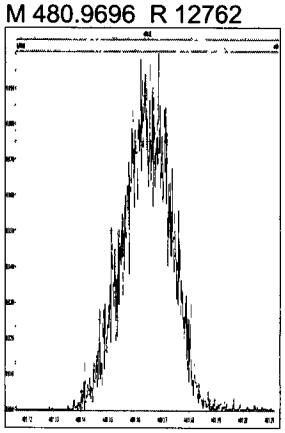
M 454.9728 R 12423



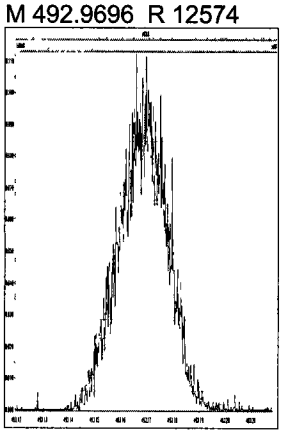
M 466.9728 R 13283



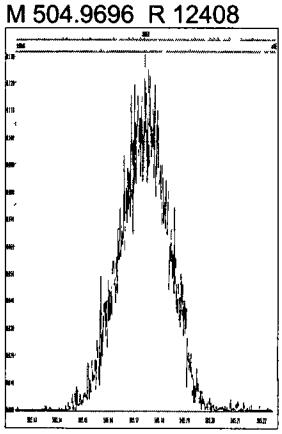
M 480.9696 R 12762



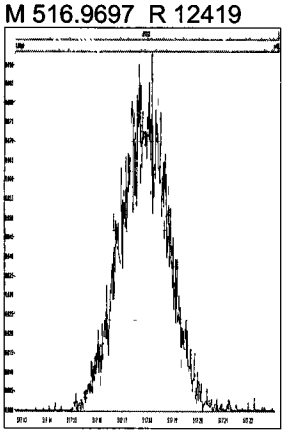
M 492.9696 R 12574



M 504.9696 R 12408



M 516.9697 R 12419



UR81MB 12051004

EDLs

Curve Date 5/3/2012

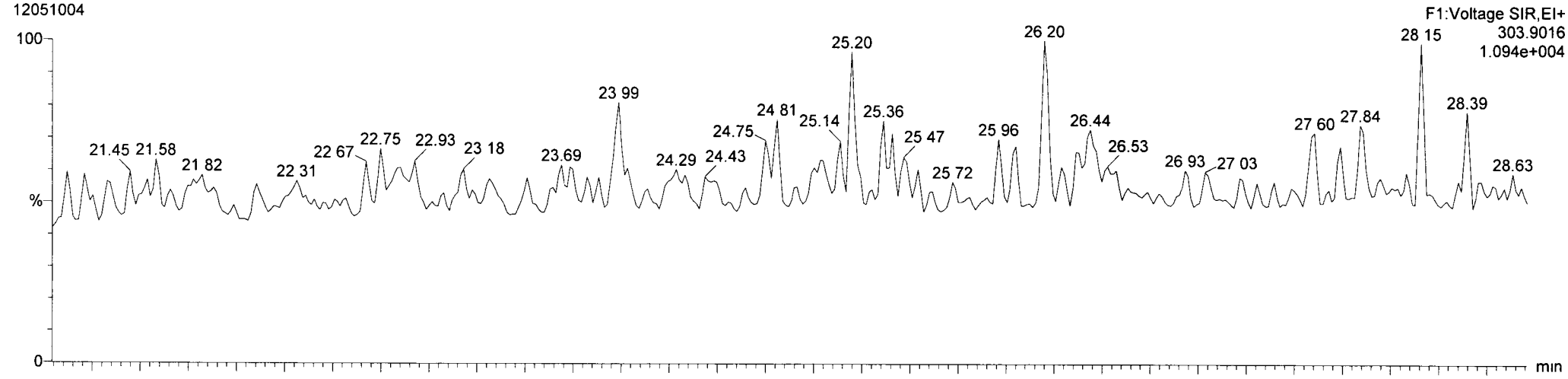
	Noise 1	Noise 2	RRF Mean	Ht 1	Ht 2	Calculated EDL
2378-TCDD			1.046			#DIV/0!
12378-PeCDD	9128	7325	0.973	10919673	7048265	0.235
123478-HxCDD	10650	10190	0.935	9353511	7363198	0.333
123678-HxCDD	10650	10190	0.878	9089133	7528201	0.357
123789-HxCDD	10650	10190	0.839	9353511	7363198	0.371
1234678-HpCDD	8791	9876	0.974	3692048	3489339	0.667
OCDD			0.950			#DIV/0!
2378-TCDF	10940	13200	0.866	22144900	29205684	0.136
12378-PeCDF	10440	13740	0.907	19150504	12153161	0.213
23478-PeCDF	10440	13740	0.936	18735854	12012034	0.210
123478-HxCDF	9300	8786	1.082	6358357	12279853	0.224
234678-HxCDF	9300	8786	1.070	6324504	11790941	0.233
123678-HxCDF	9300	8786	1.048	7916707	15042983	0.188
123789-HxCDF	9300	8786	1.020	4763892	9206244	0.317
1234678-HpCDF			1.214			#DIV/0!
1234789-HpCDF	6190	10090	1.254	1922325	4167888	0.533
OCDF	9844	7820	1.105	3187169	3569180	1.183

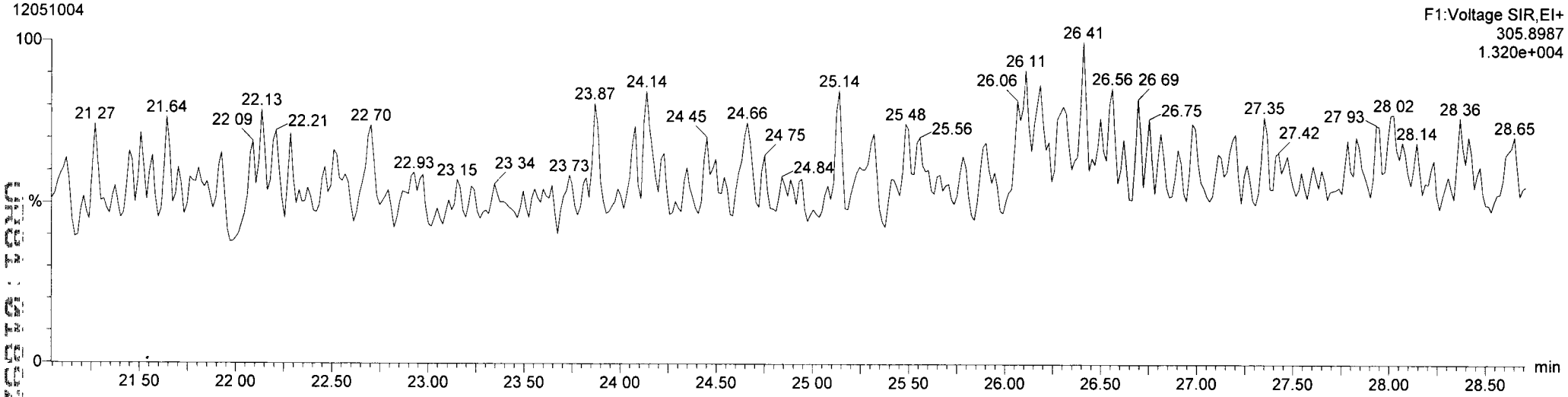
Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 08 May 2012 10:33:49
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Compound Name: 2378-TCDF UR81 MB

Sample Name: 12051004



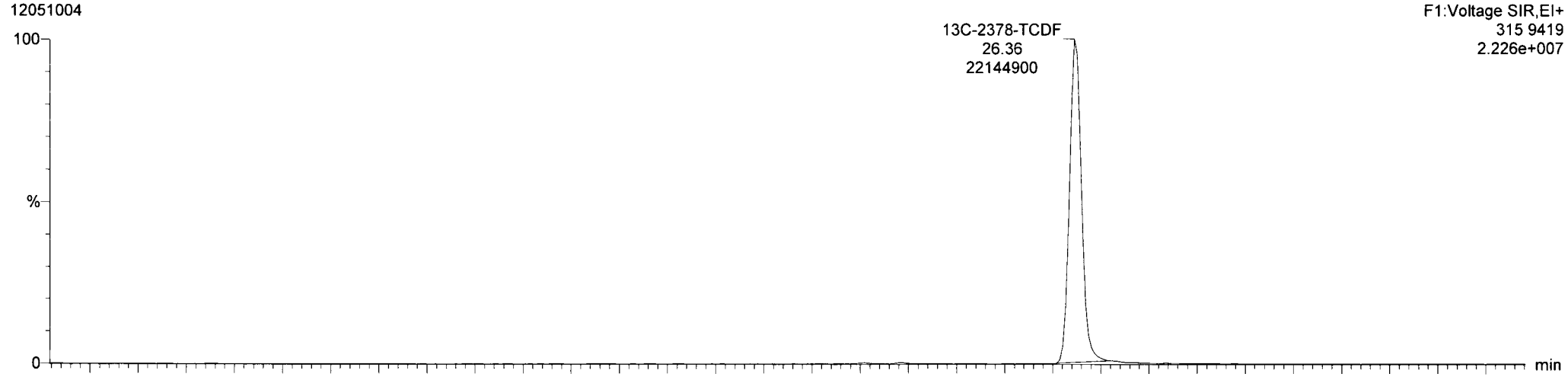


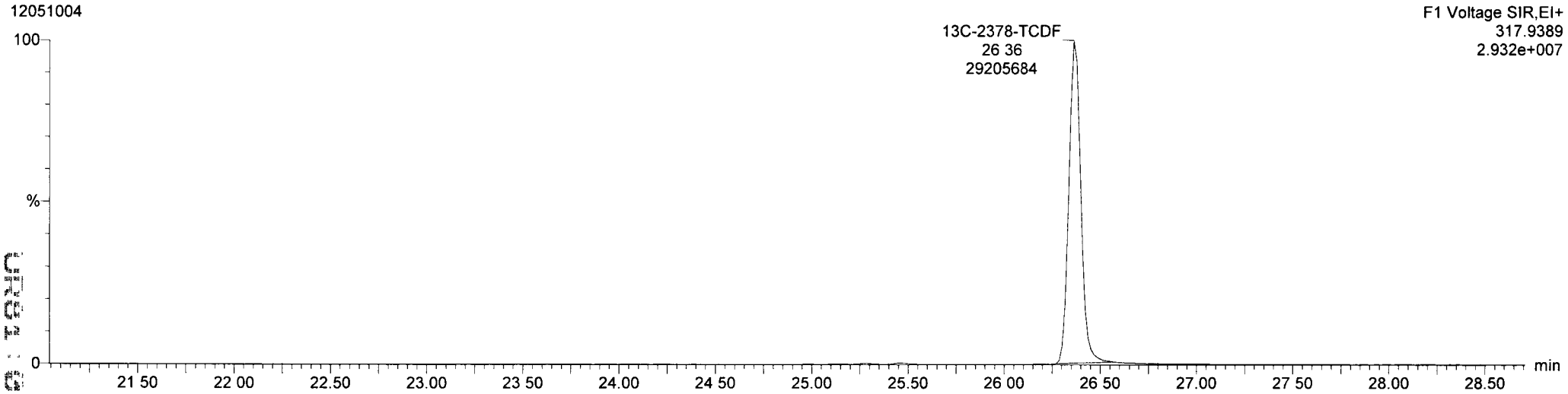
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
		0.866		26.38

Dataset: P:\DIOXIN8290 PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-2378-TCDF

Sample Name: 12051004



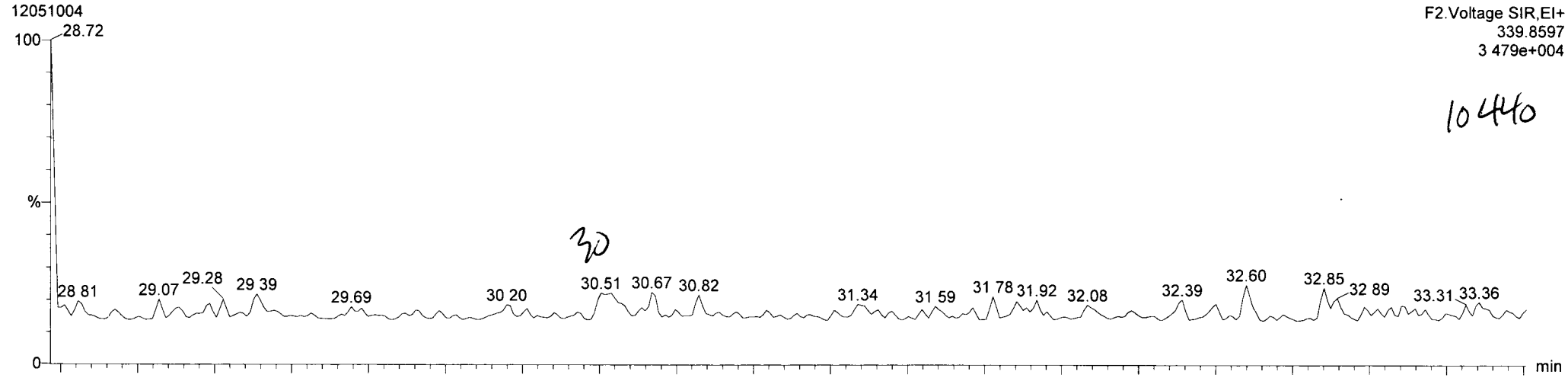


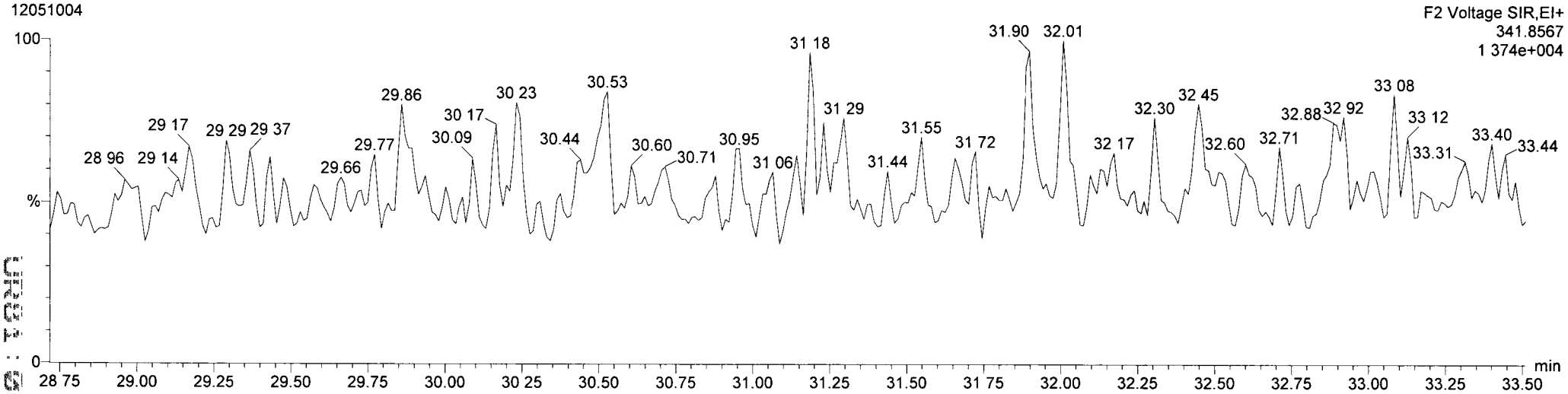
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
22144900	29205684	1 484	100	26 36

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 12378-PeCDF

Sample Name: 12051004



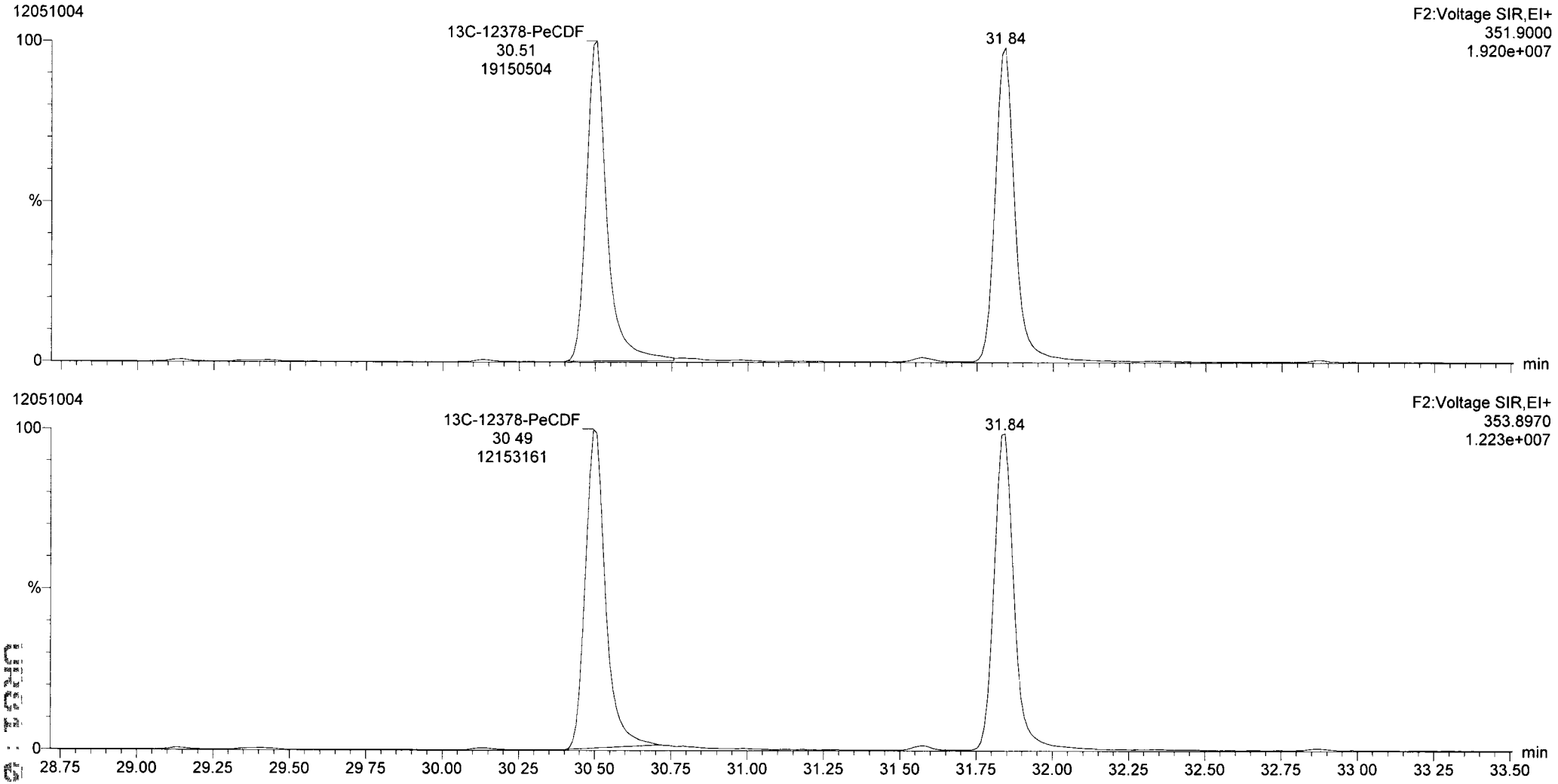


	Height	1° Ht	RRF Mean	Std. Conc	Pred RT
			0.907		30 53

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-12378-PeCDF

Sample Name: 12051004

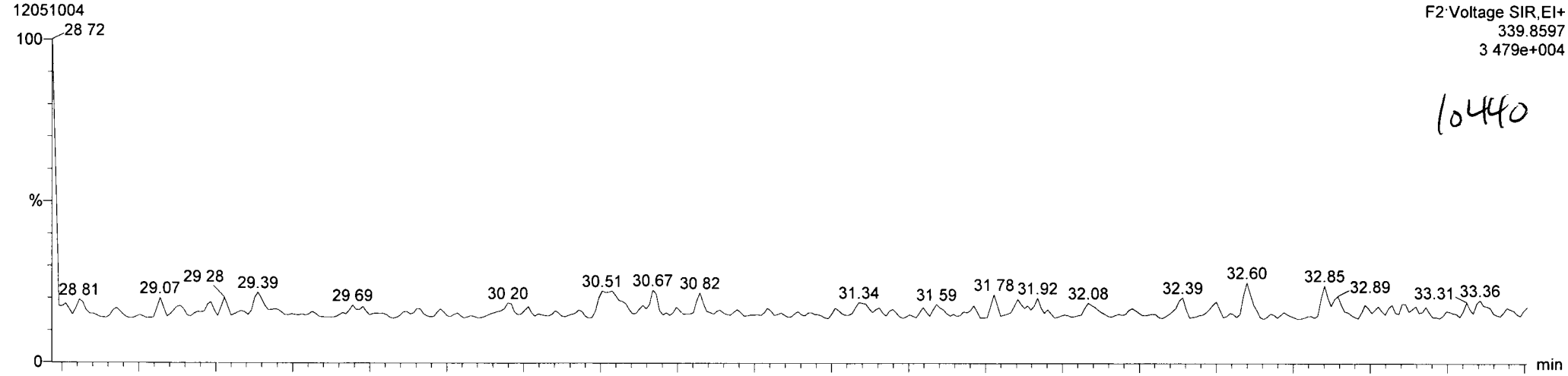


Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
19150504	12153161	1.048	100	30.50

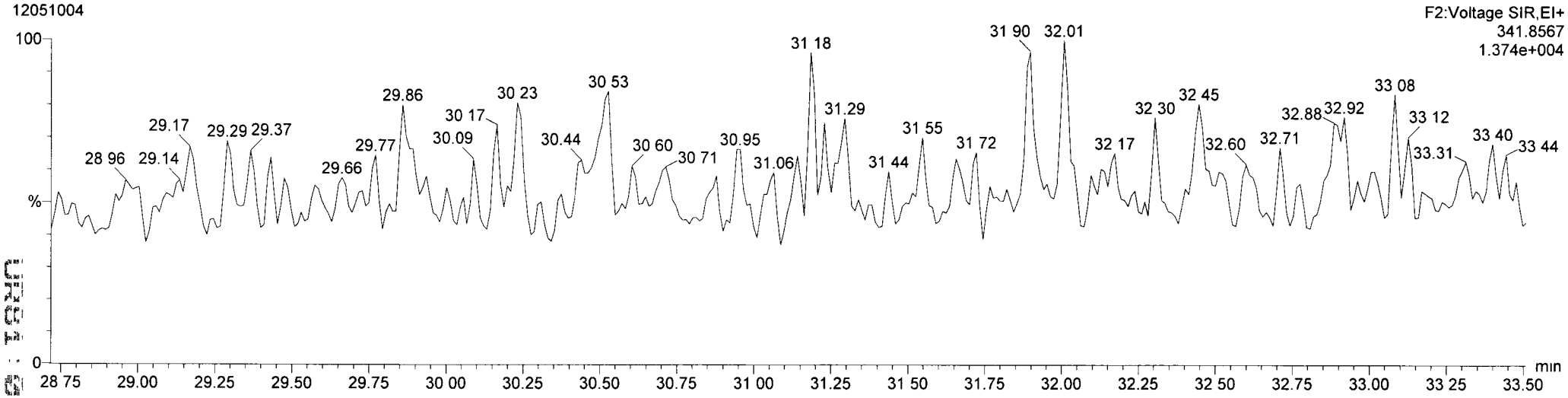
Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 23478-PeCDF

Sample Name: 12051004



10440

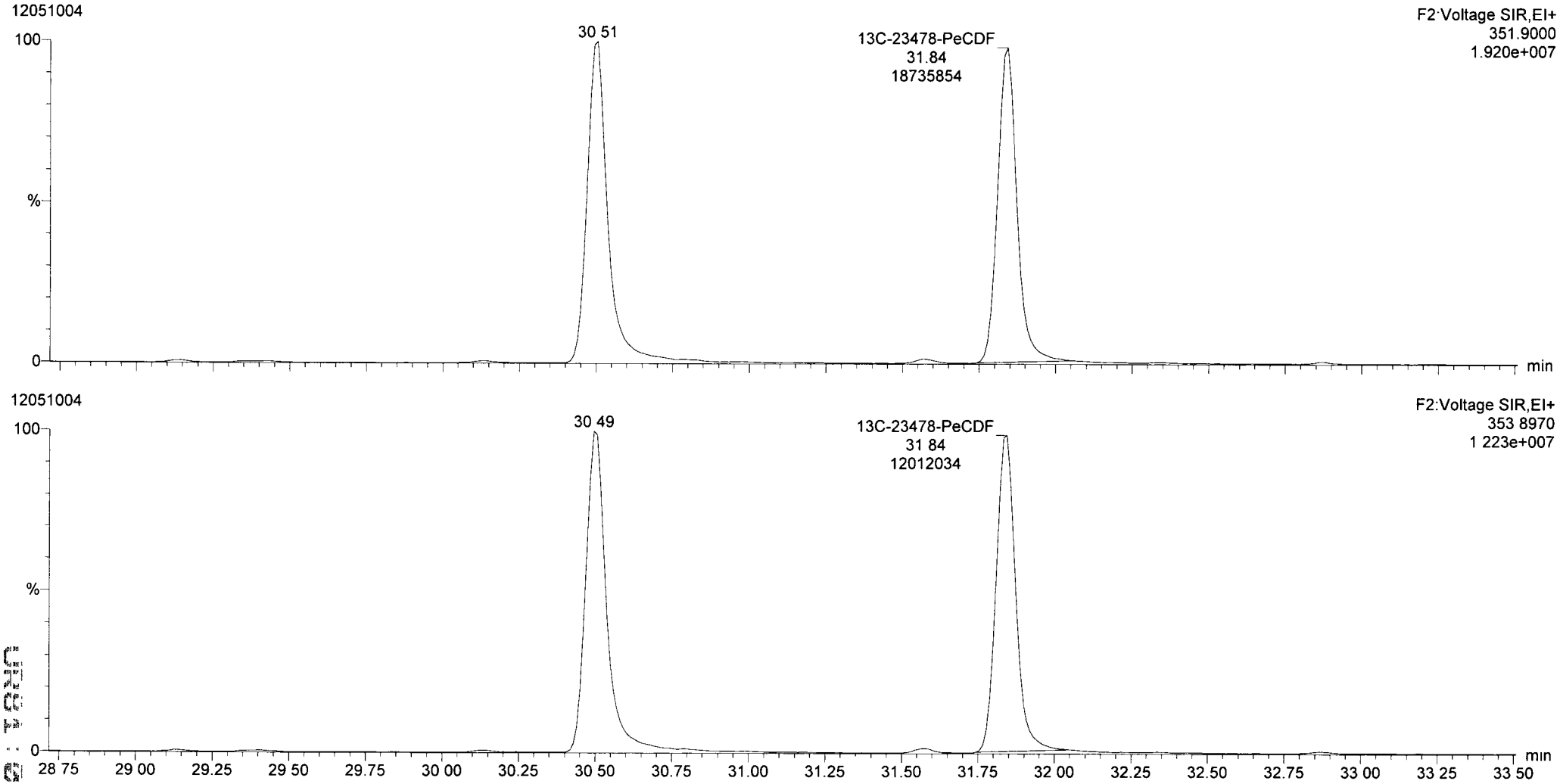


Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
		0.936		31 86

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-23478-PeCDF

Sample Name: 12051004

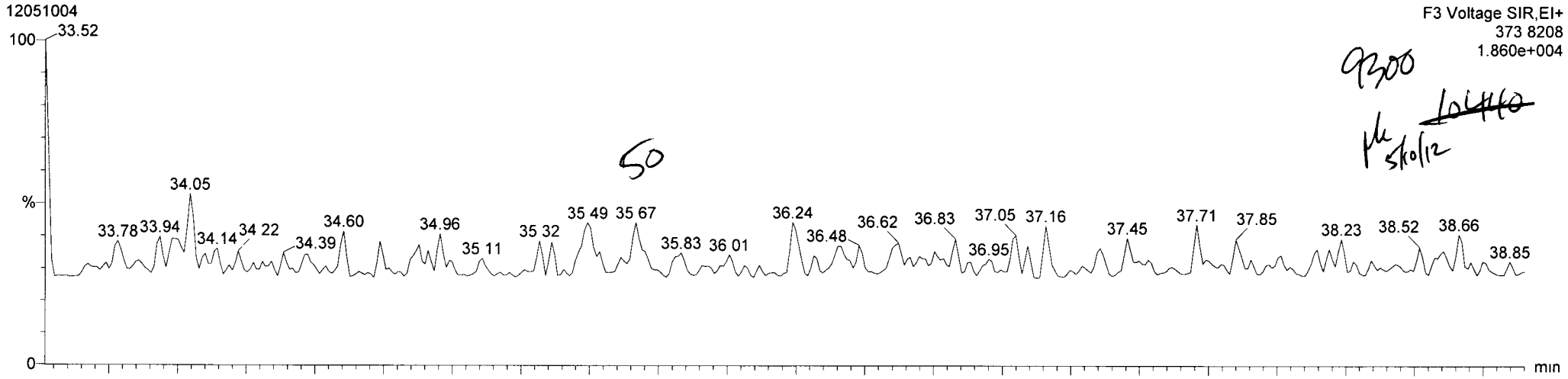


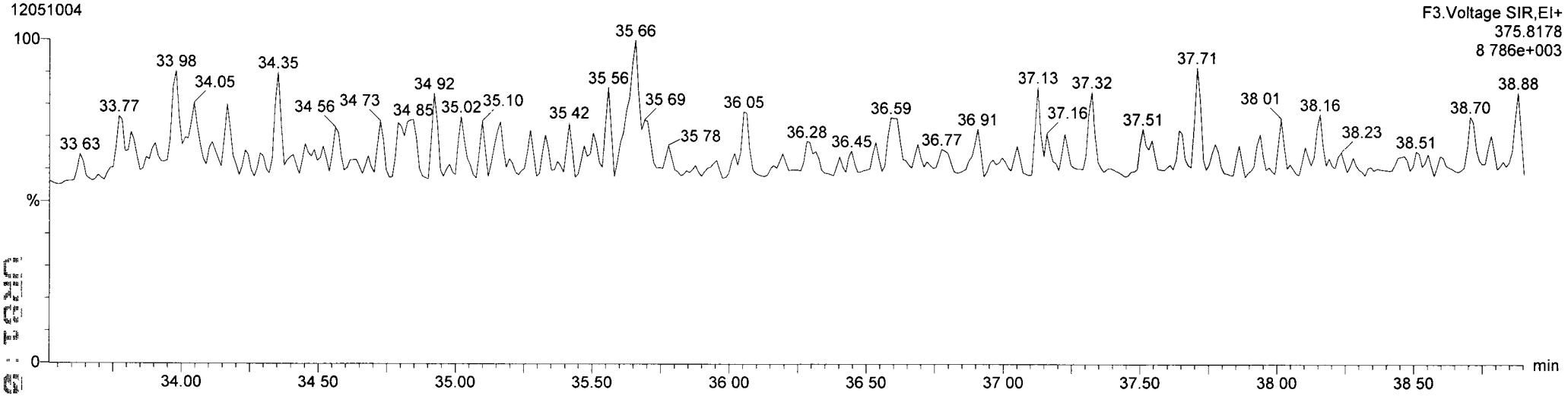
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
18735854	12012034	1.003	100	31.84

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 123478-HxCDF

Sample Name: 12051004



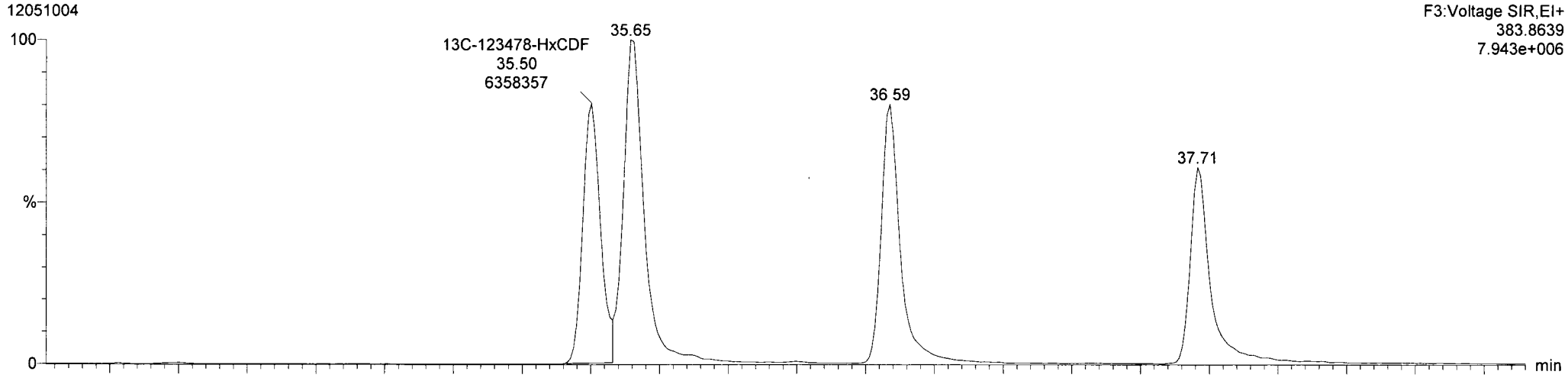


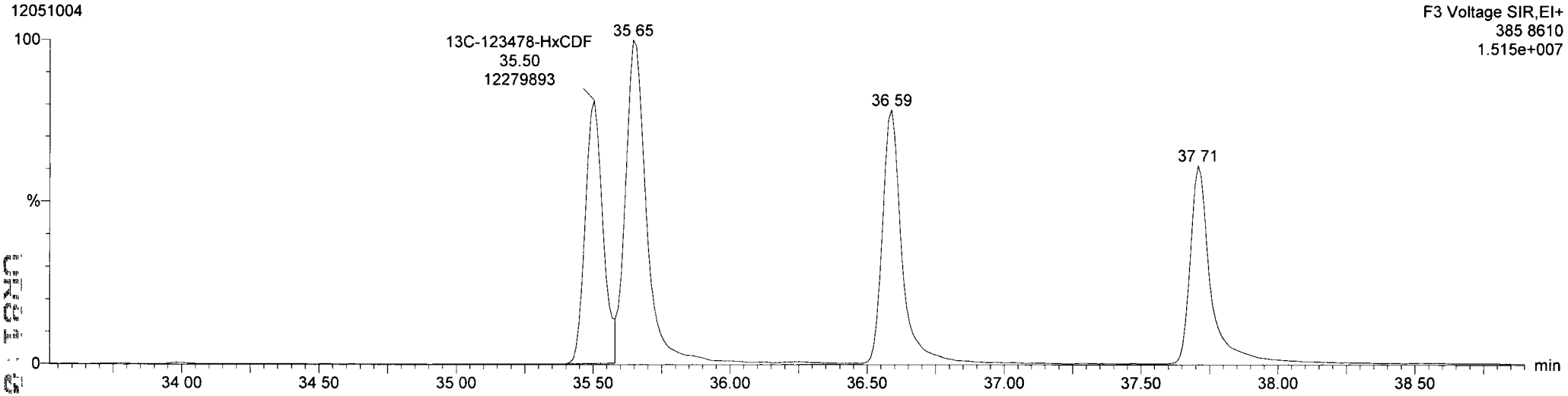
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
		1 082		35 51

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-123478-HxCDF

Sample Name: 12051004



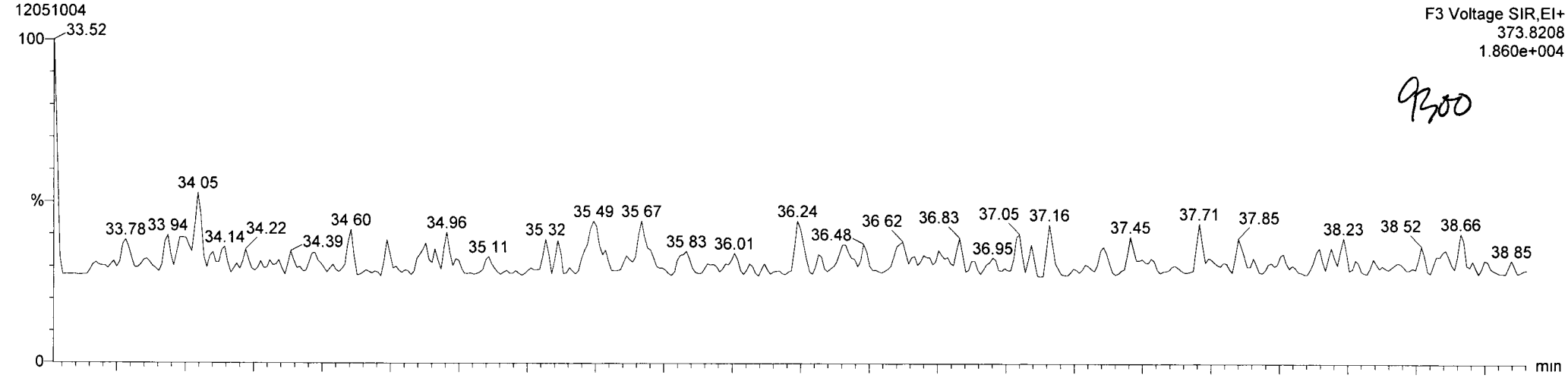


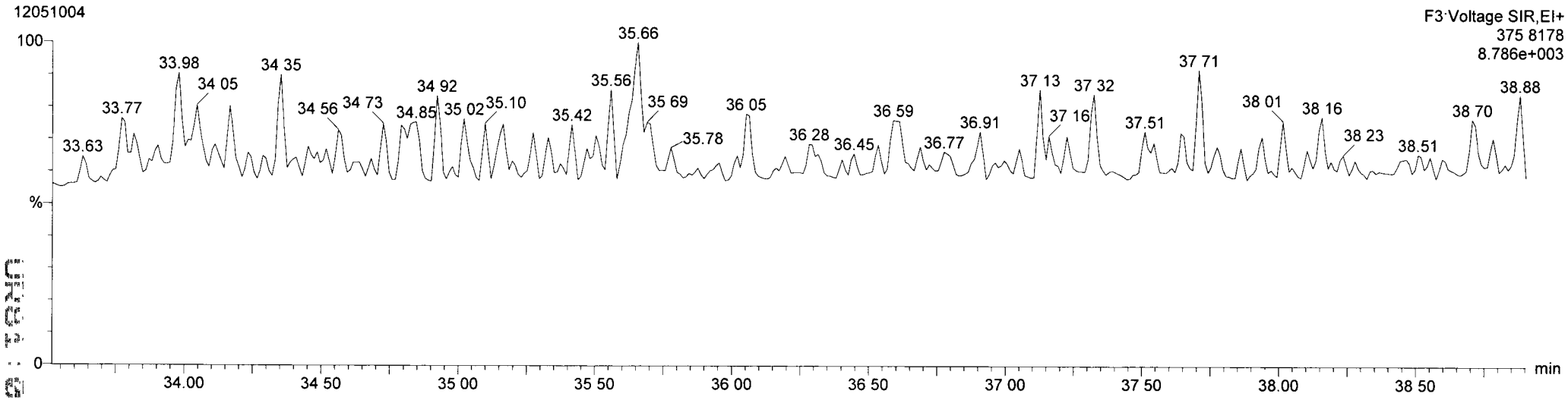
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
6358357	12279893	1 186	100	35 50

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 234678-HxCDF

Sample Name: 12051004



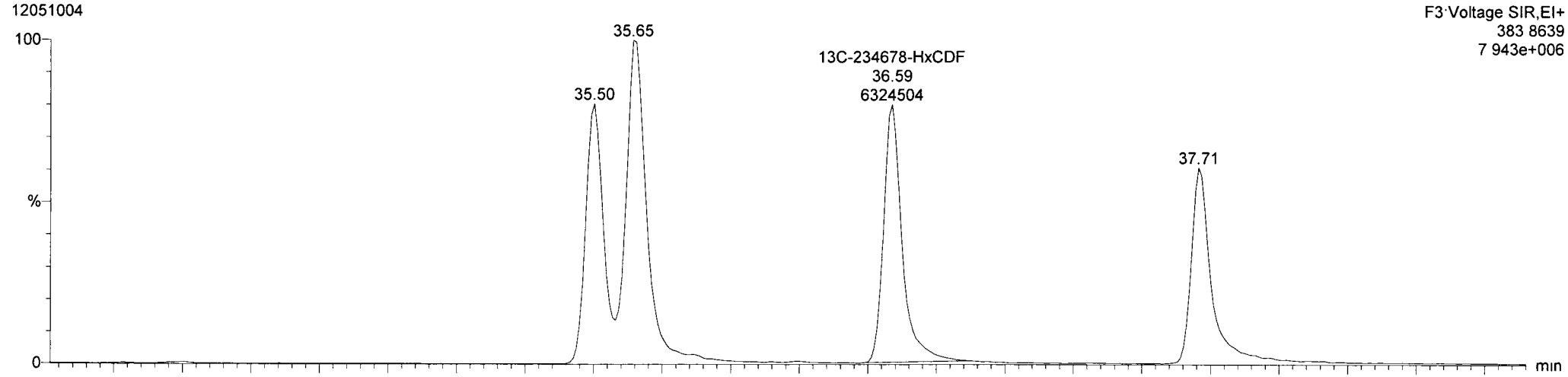


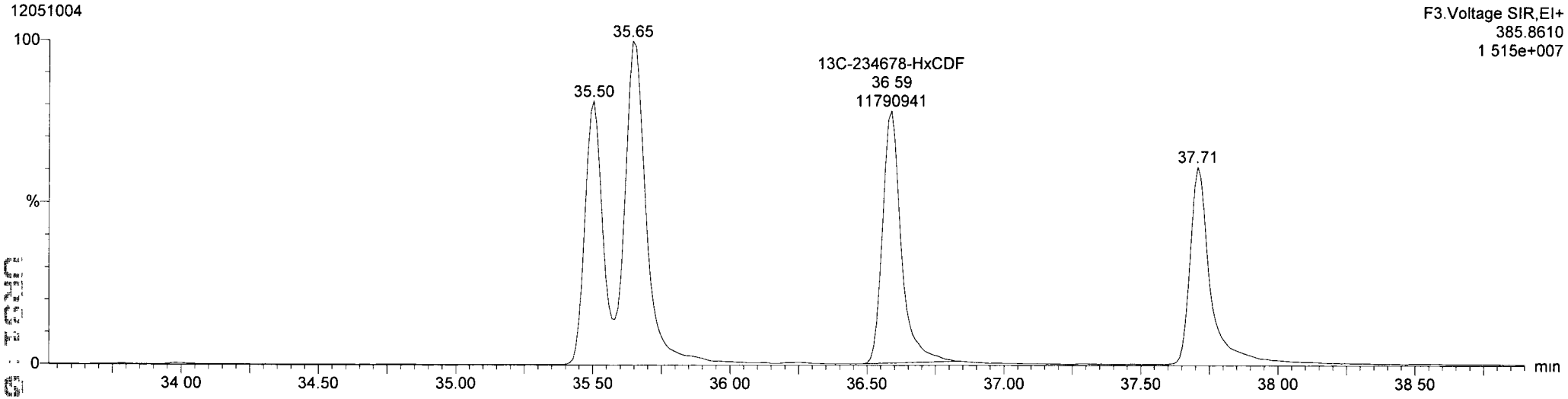
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
		1.070		36.61

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC qld
Last Altered Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24.26 Pacific Daylight Time

Compound Name: 13C-234678-HxCDF

Sample Name: 12051004



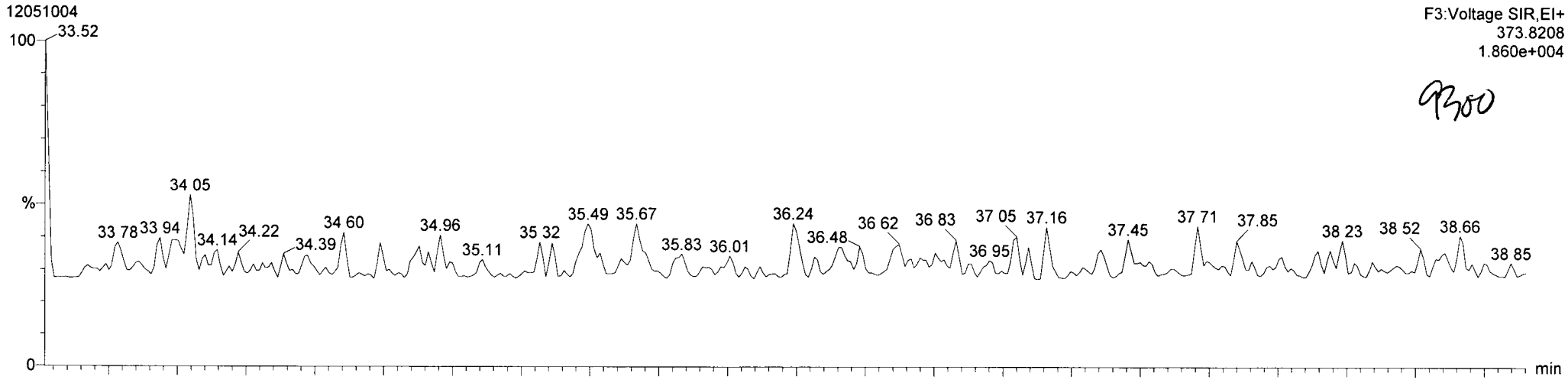


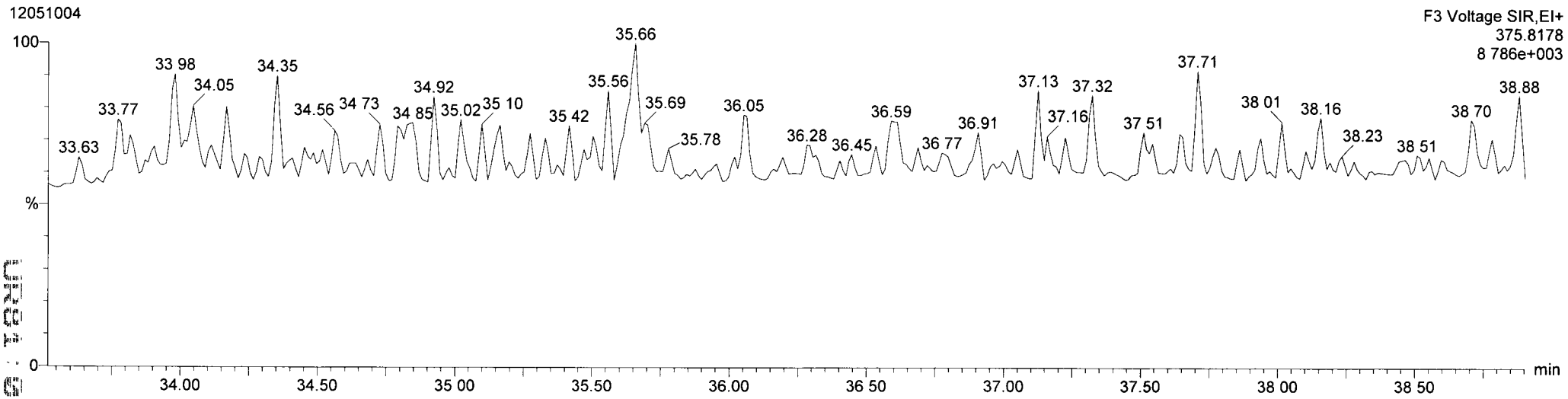
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
6324504	11790941	1 223	100	36 59

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 123678-HxCDF

Sample Name: 12051004



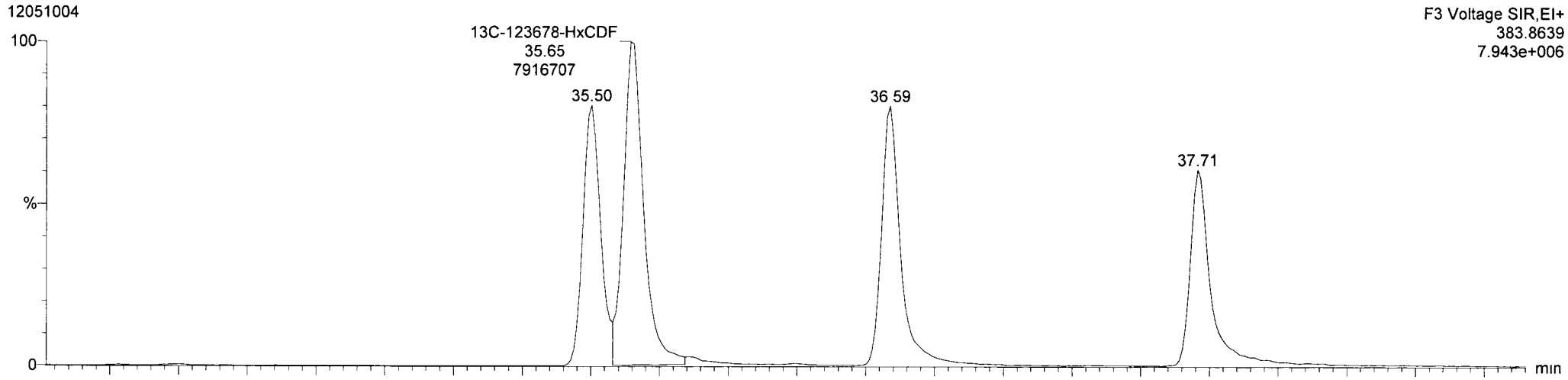


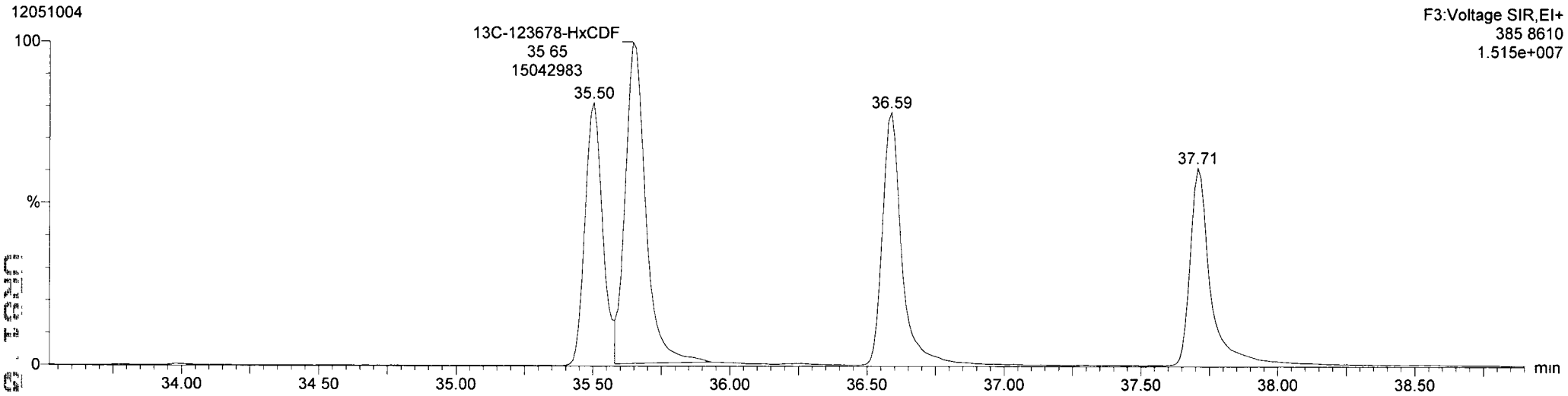
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
		1.048		35 67

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-123678-HxCDF

Sample Name: 12051004



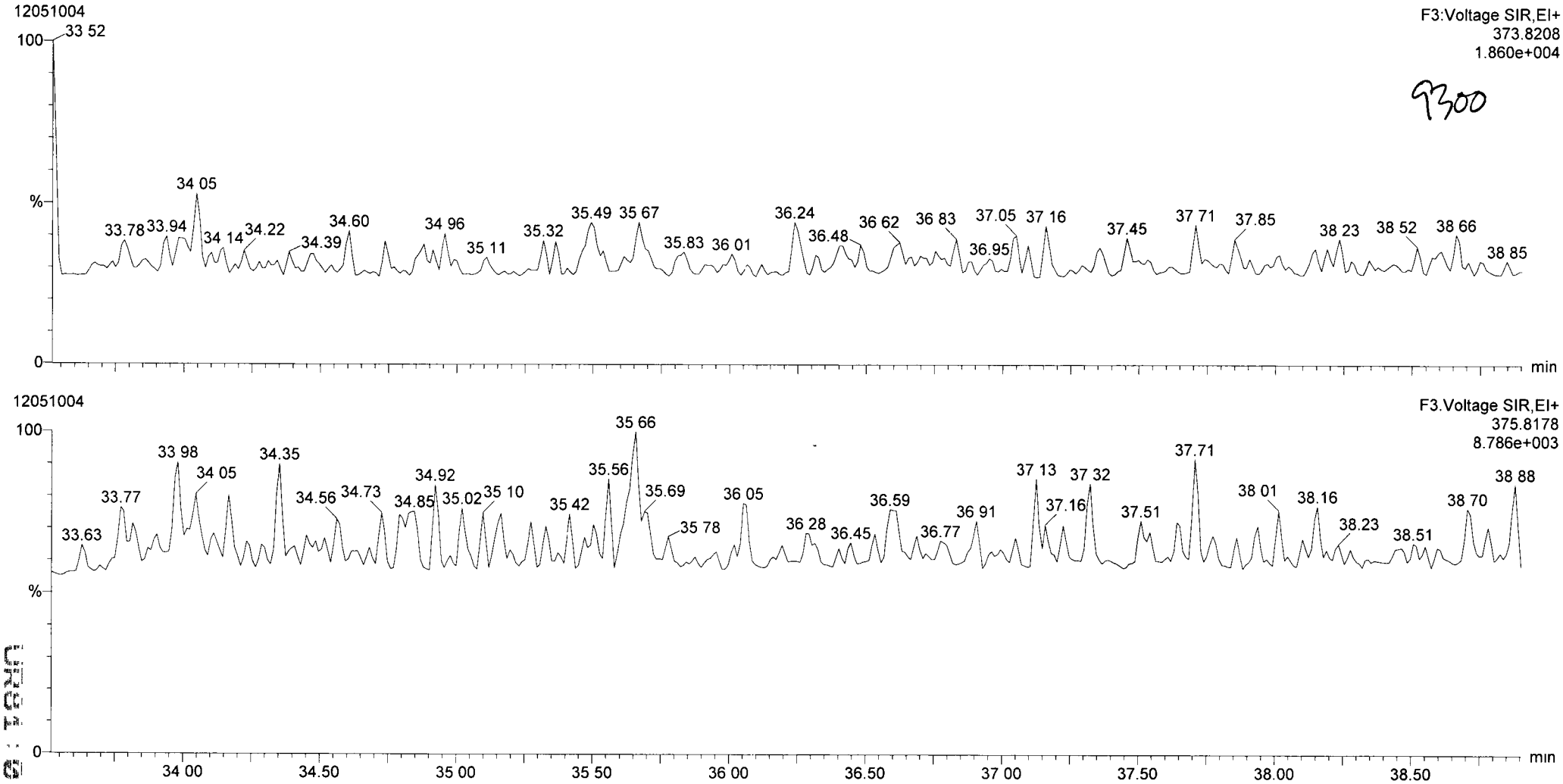


Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
7916707	15042983	1.315	100	35.66

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P.\DIOXIN8290.PRO\120510QC.qld
Last Altered. Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 123789-HxCDF

Sample Name: 12051004

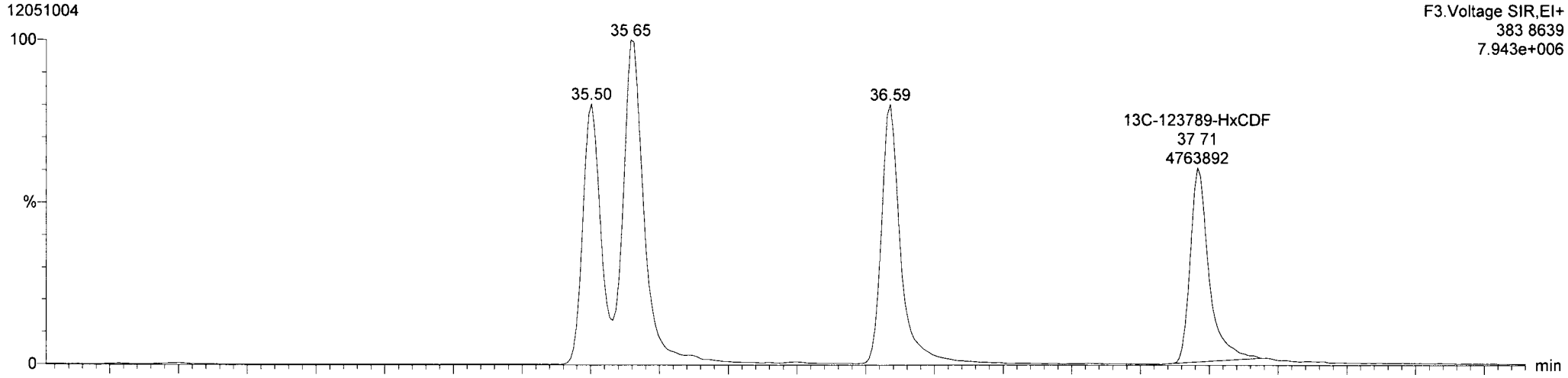


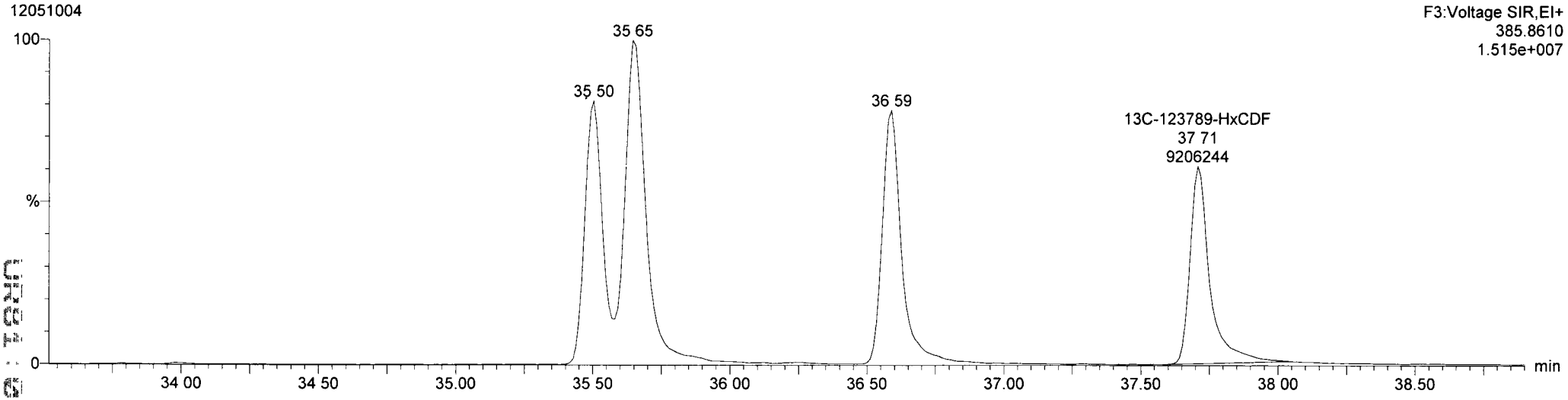
Height	1° Ht	RRF Mean	Std. Conc	Pred RT
		1 020		37 72

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-123789-HxCDF

Sample Name: 12051004



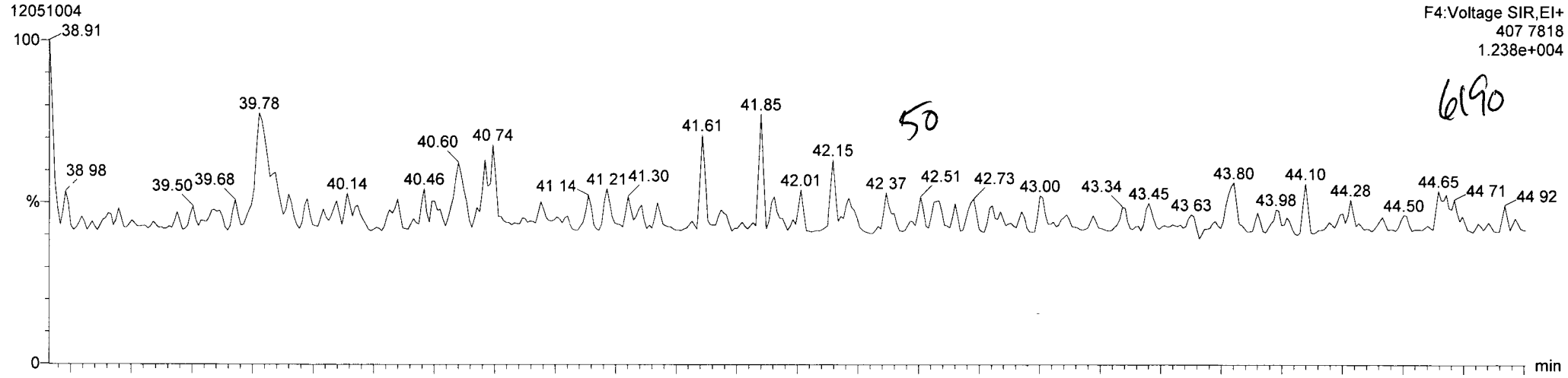


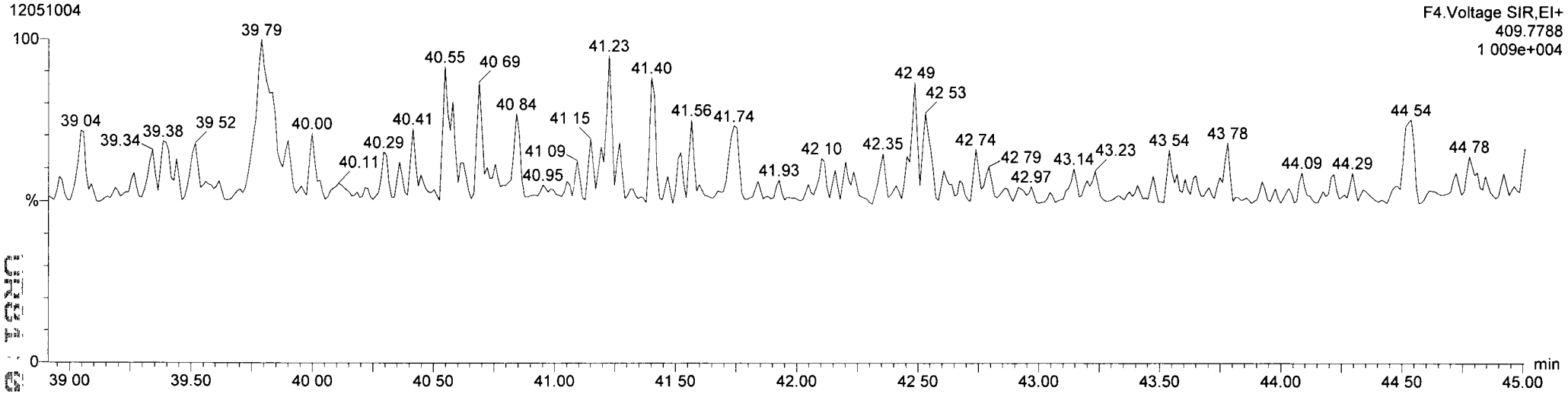
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
4763892	9206244	1 056	100	37 70

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 1234789-HpCDF

Sample Name: 12051004

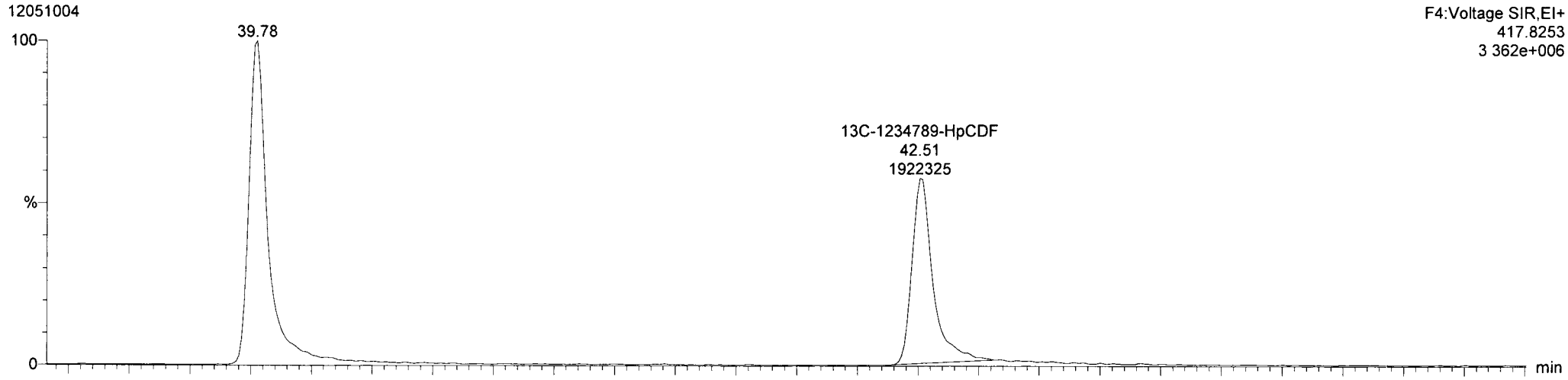


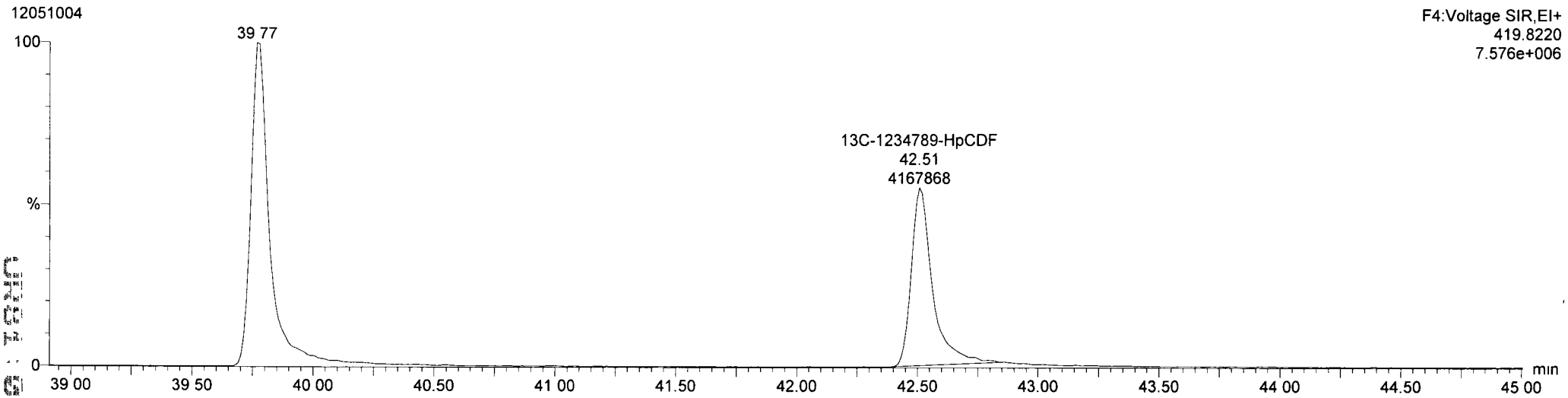


Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
		1.254		42 52

Compound Name: 13C-1234789-HpCDF

Sample Name: 12051004



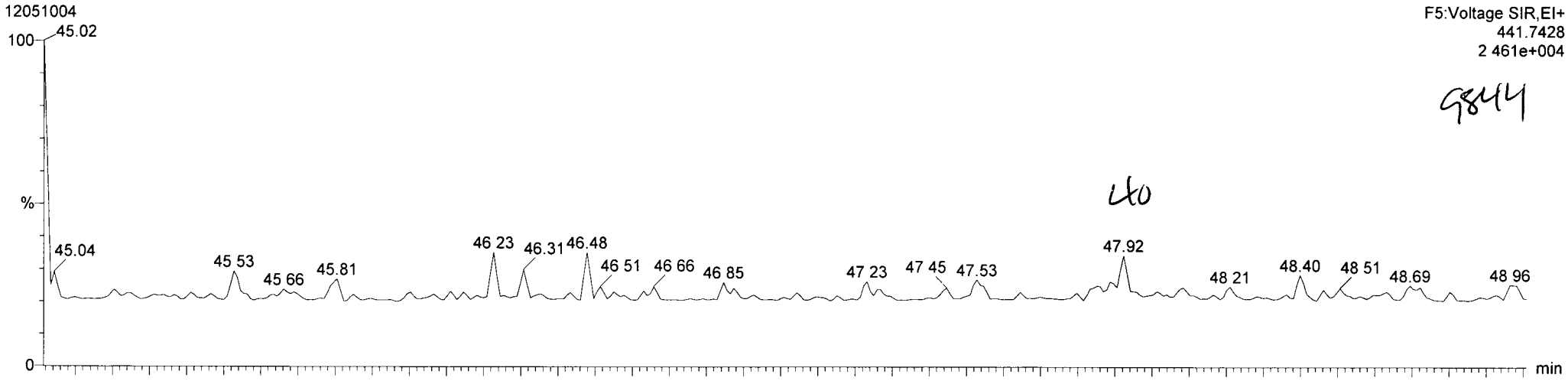


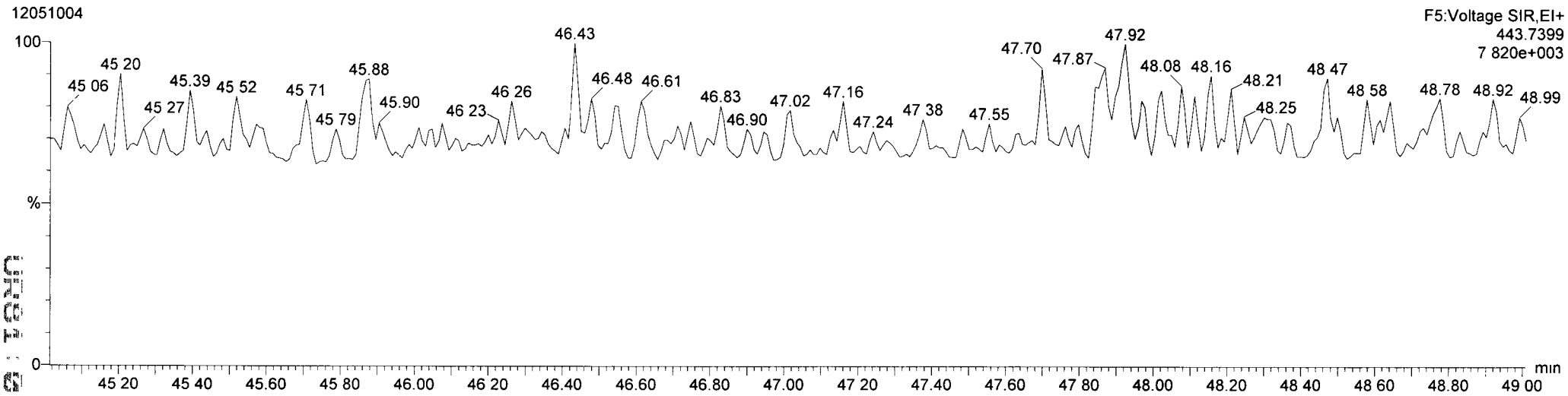
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
1922325	4167868	0 741	100	42 53

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: OCDF

Sample Name: 12051004



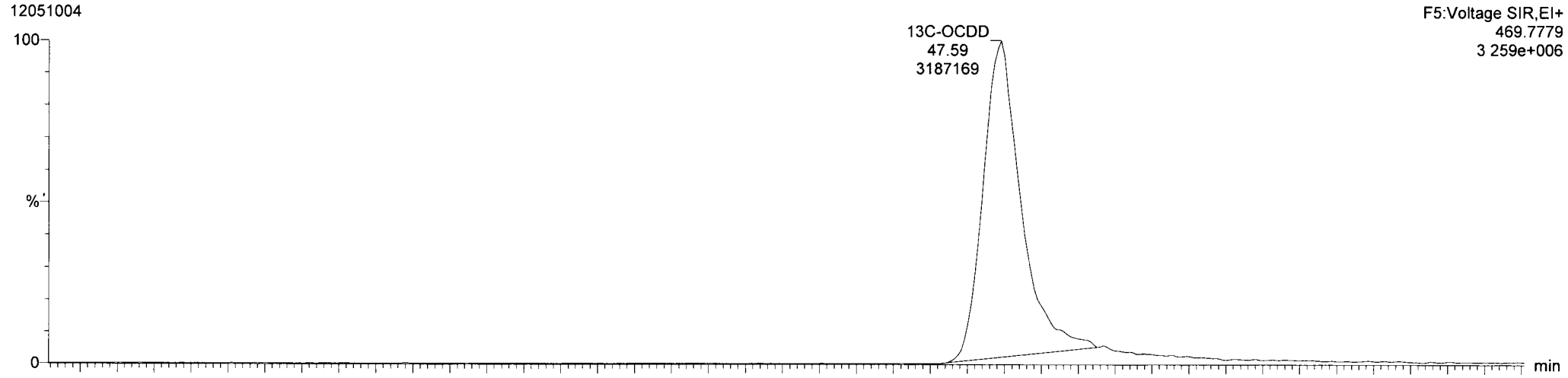


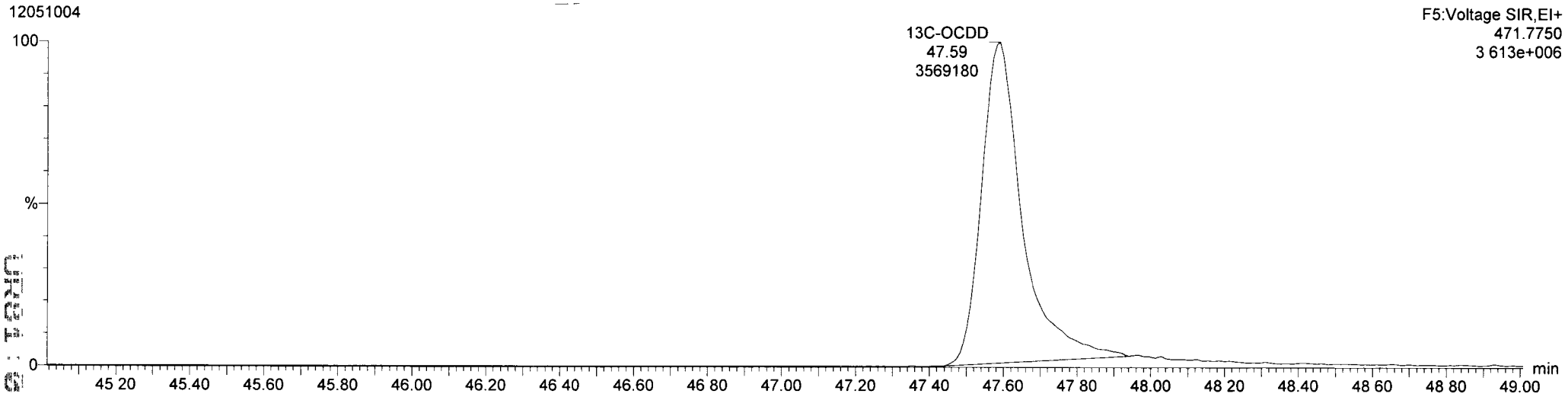
Height	1° Ht	RRF Mean	Std Conc	Pred.RT
		1 105		47 88

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-OCDD

Sample Name: 12051004



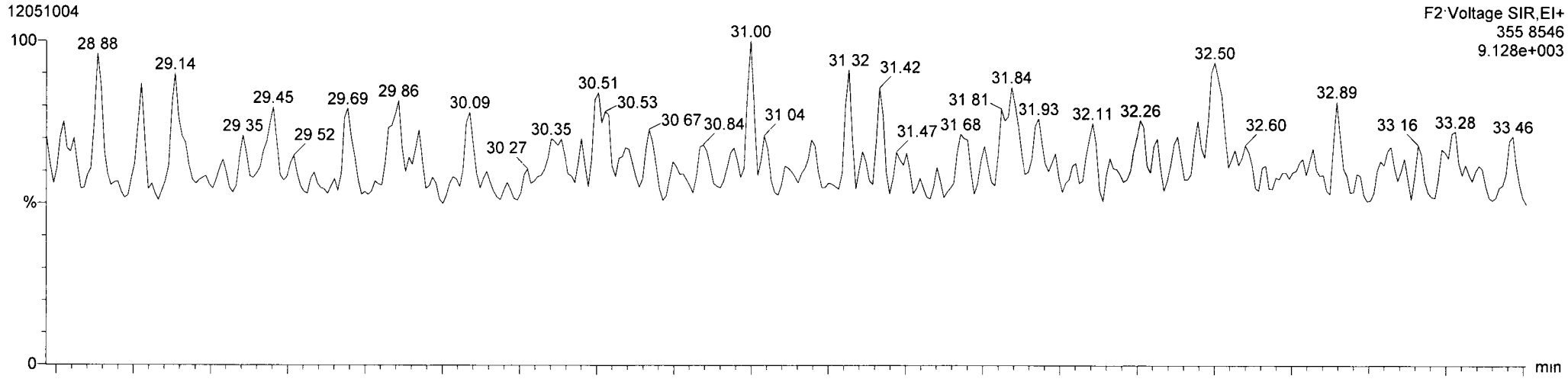


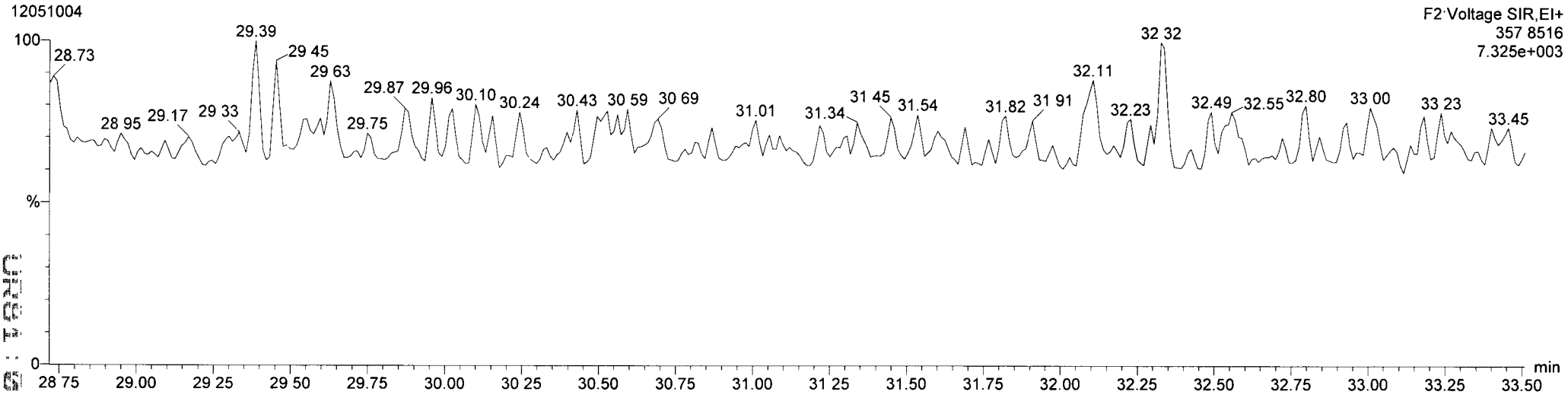
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
3187169	3569180	0.717	200	47 65

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 12378-PeCDD

Sample Name: 12051004



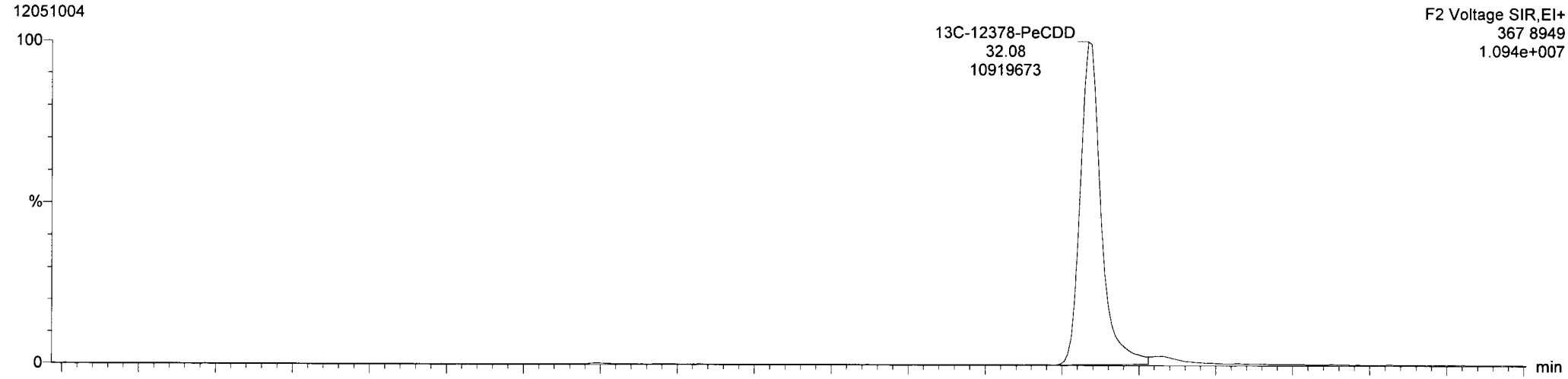


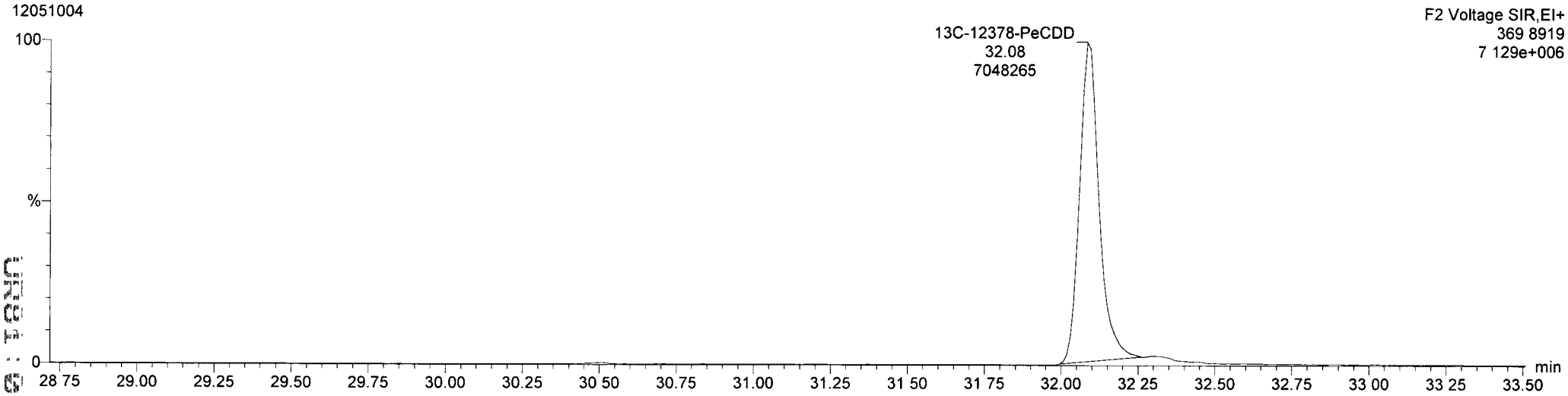
	Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
			0 973		32.09

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14.24:26 Pacific Daylight Time

Compound Name: 13C-12378-PeCDD

Sample Name: 12051004



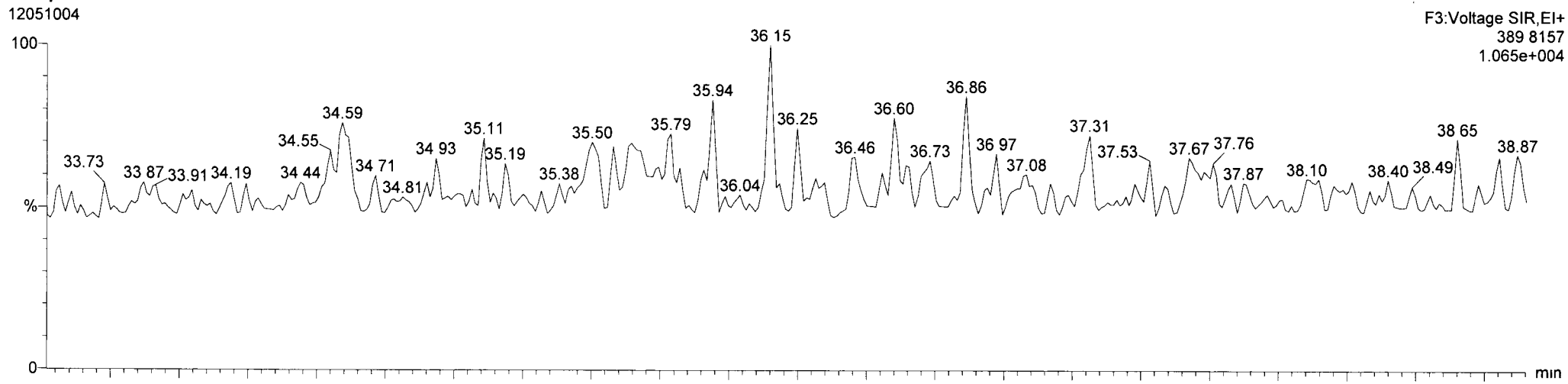


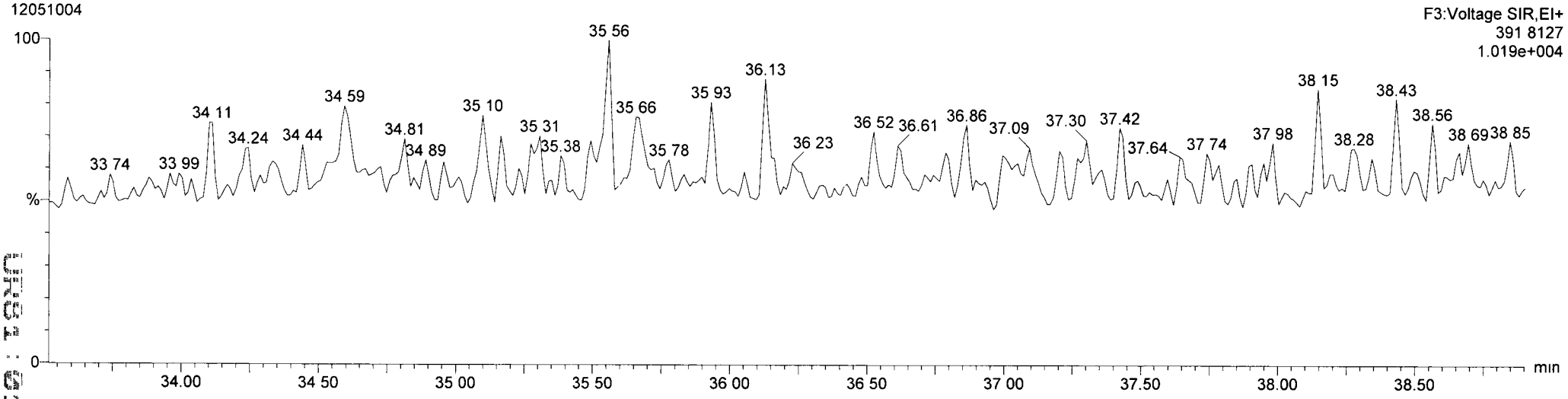
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
10919673	7048265	0 663	100	32 09

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset. P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 123478-HxCDD

Sample Name: 12051004



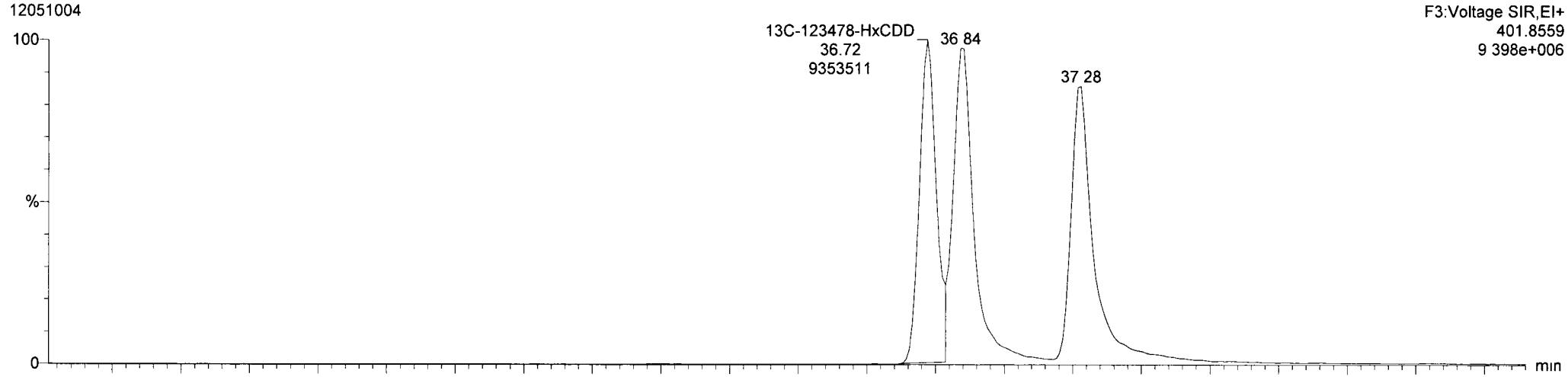


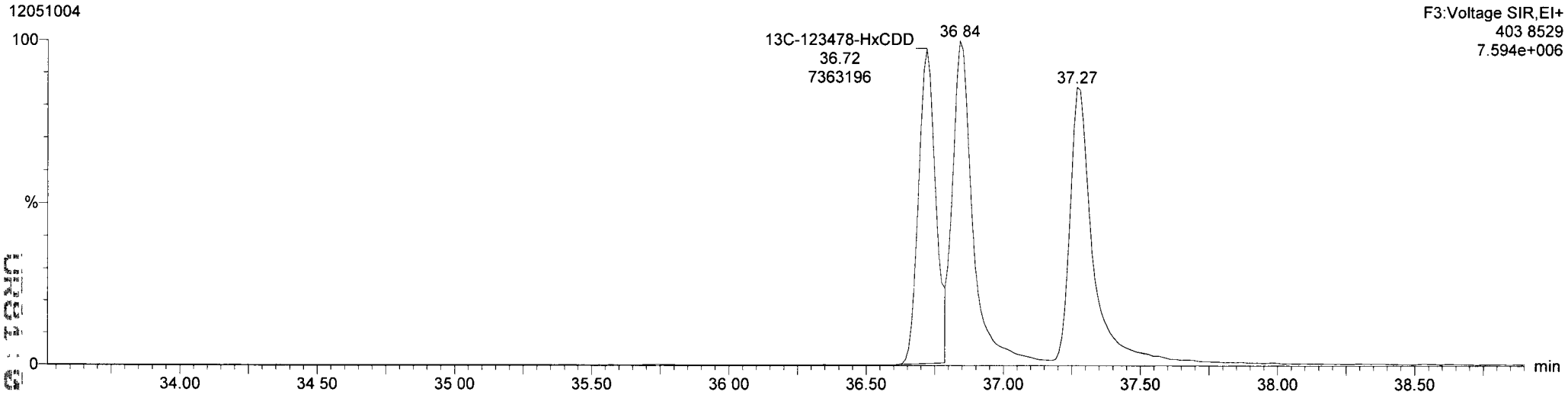
	Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
			0 935		36 74

Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14.24:26 Pacific Daylight Time

Compound Name: 13C-123478-HxCDD

Sample Name: 12051004



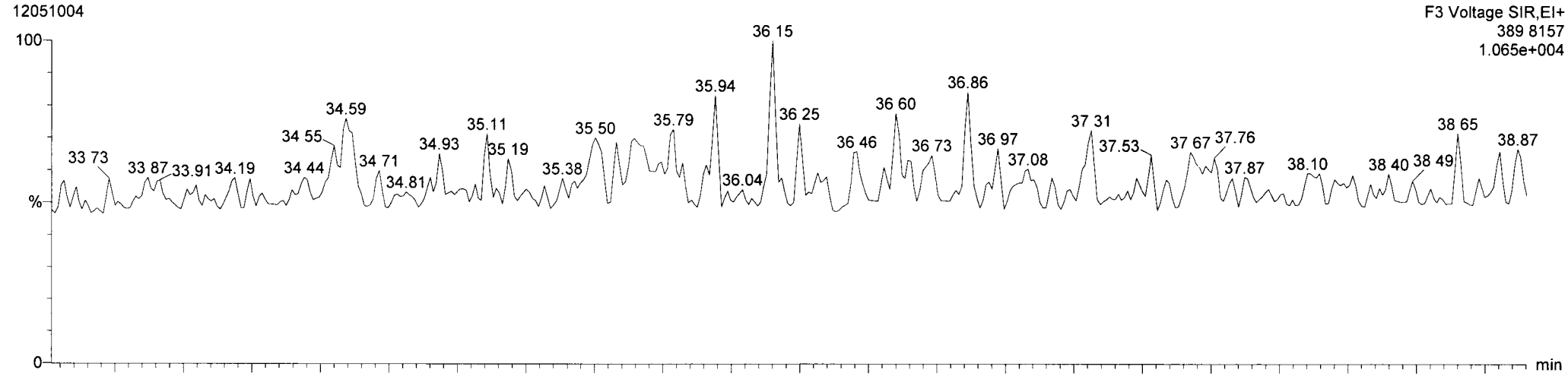


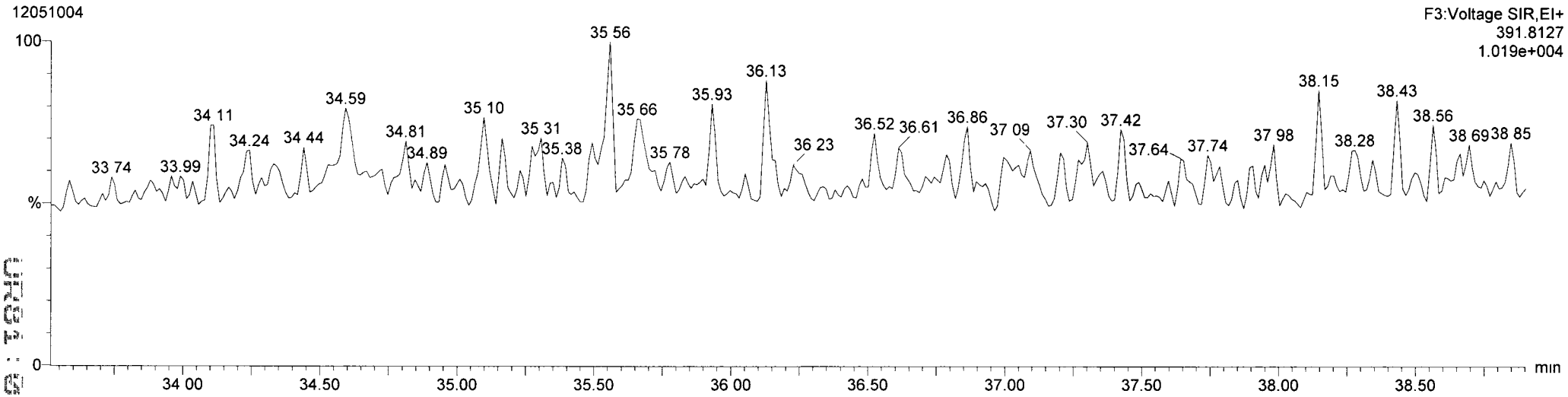
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
9353511	7363196	1 024	100	36.72

Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 123678-HxCDD

Sample Name: 12051004



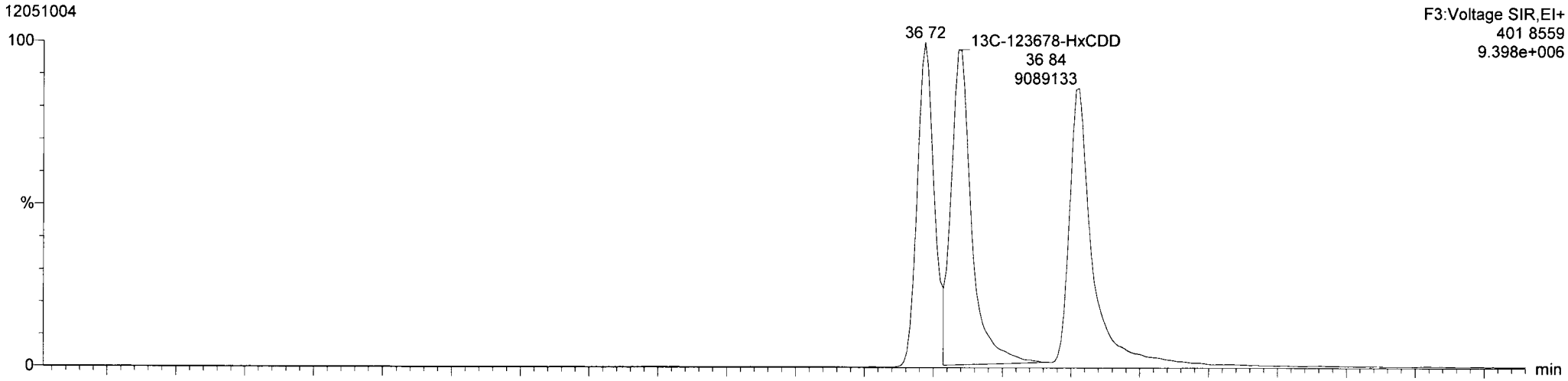


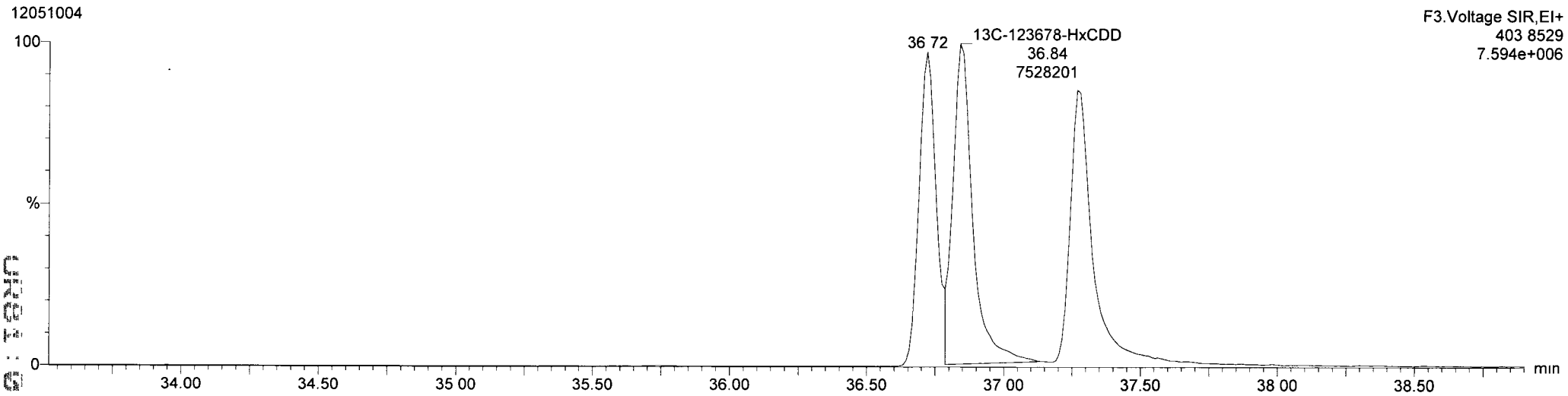
Height	1° Ht	RRF Mean	Std Conc	Pred.RT
		0.878		36.85

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-123678-HxCDD

Sample Name: 12051004



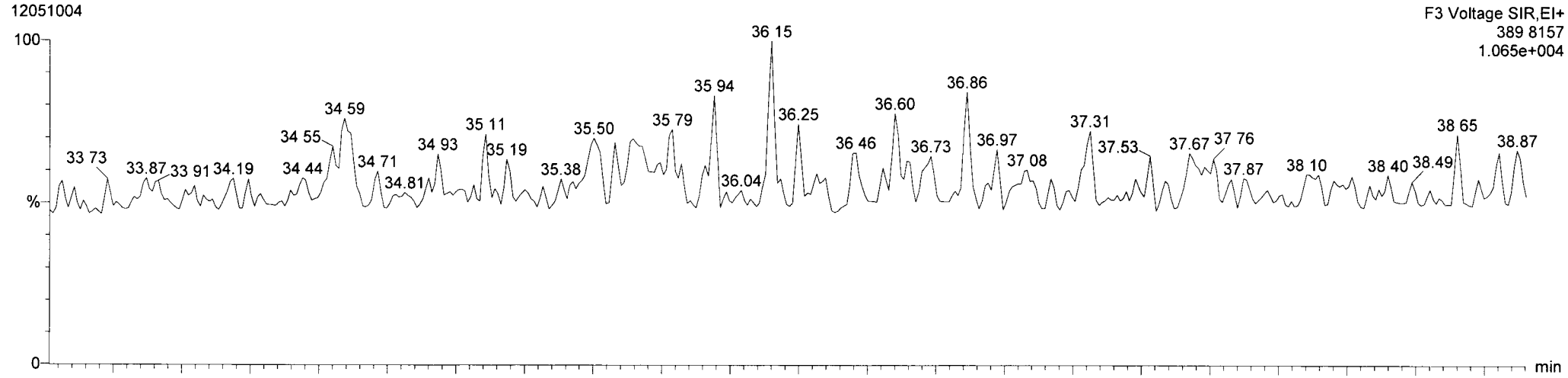


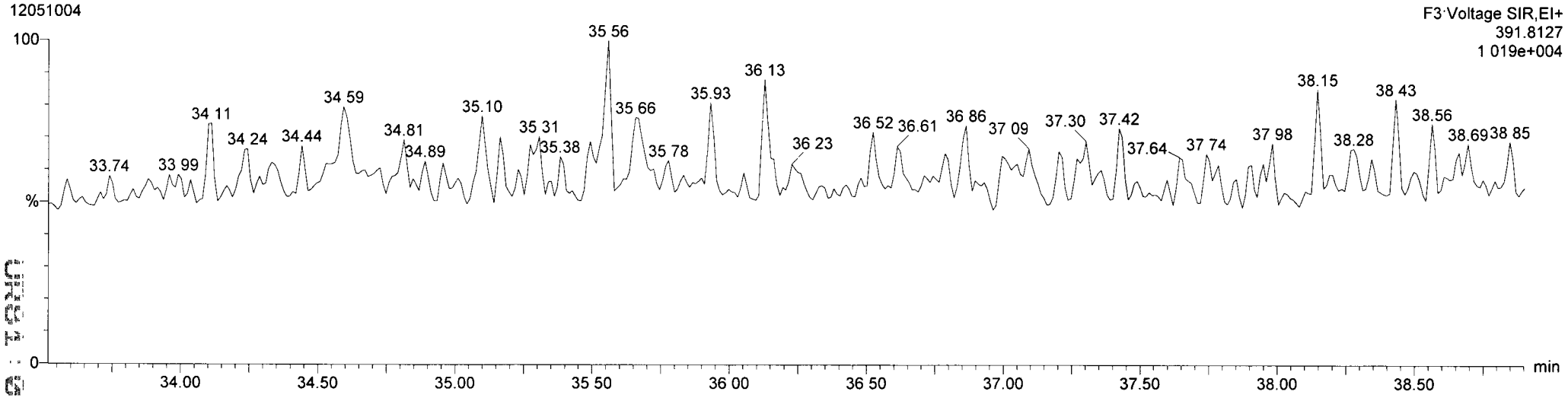
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
9089133	7528201	1.113	100	36 85

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 123789-HxCDD

Sample Name: 12051004



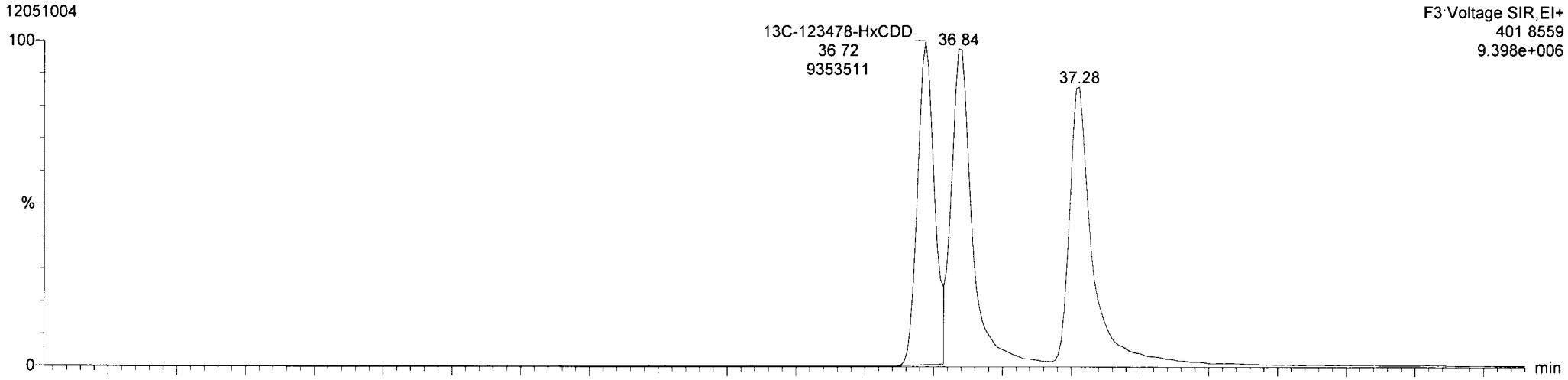


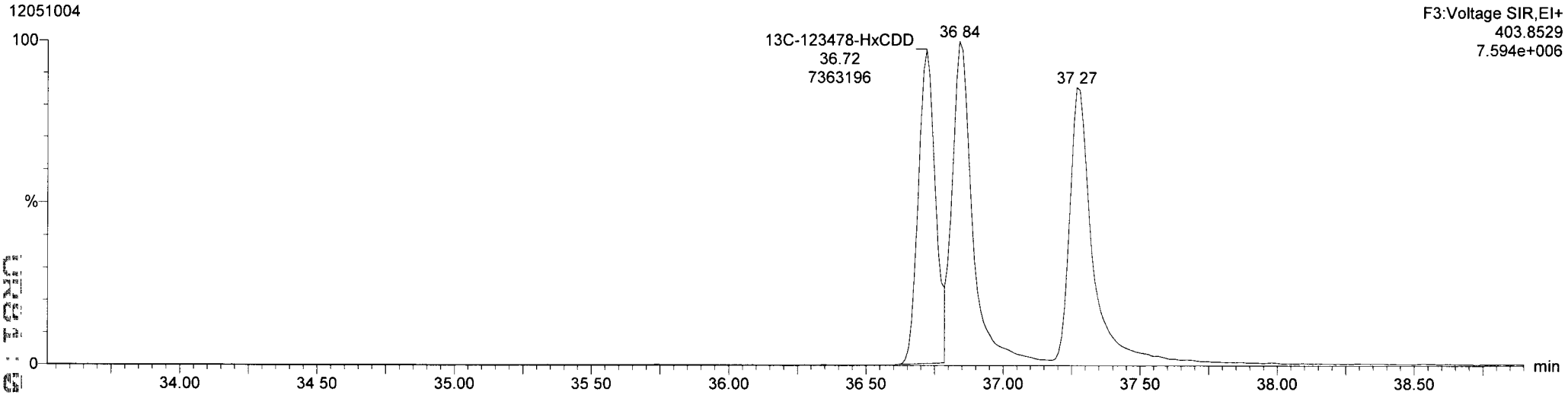
Height	1° Ht	RRF Mean	Std Conc	Pred RT
		0 839		37 25

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290 PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-123478-HxCDD

Sample Name: 12051004



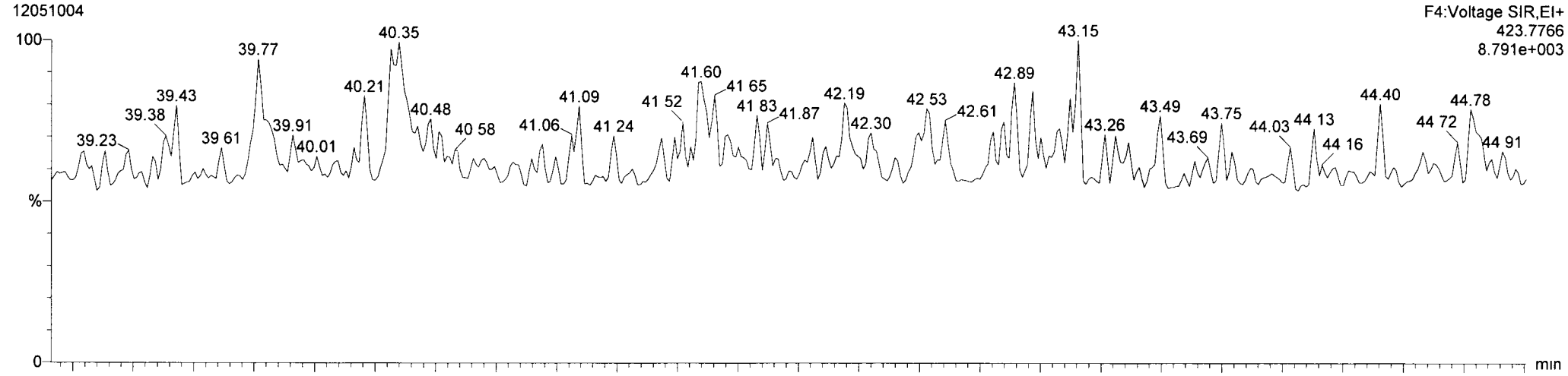


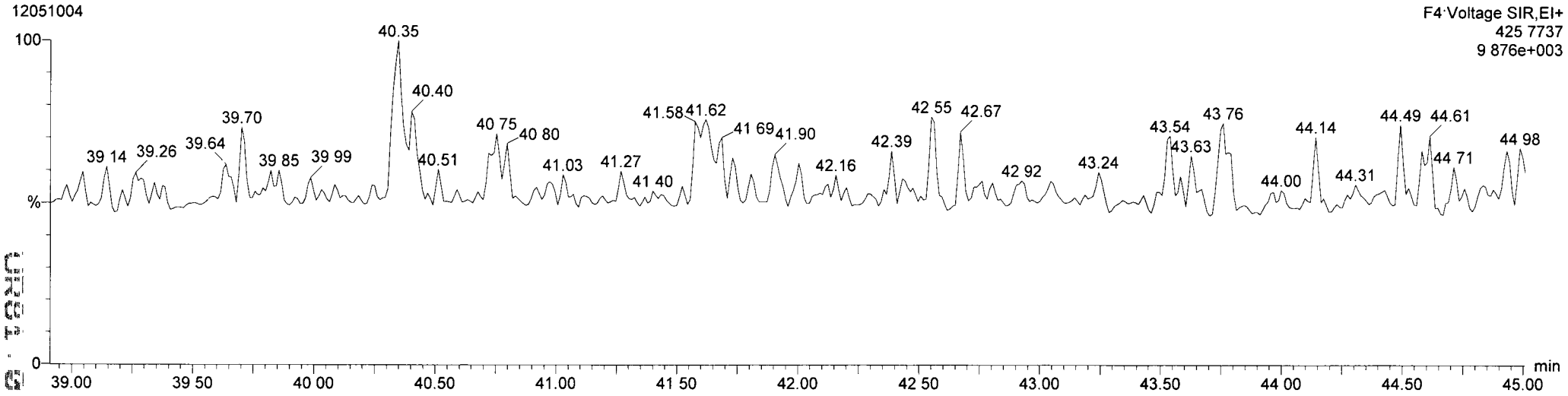
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
9353511	7363196	1.024	100	36 72

Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 1234678-HpCDD

Sample Name: 12051004



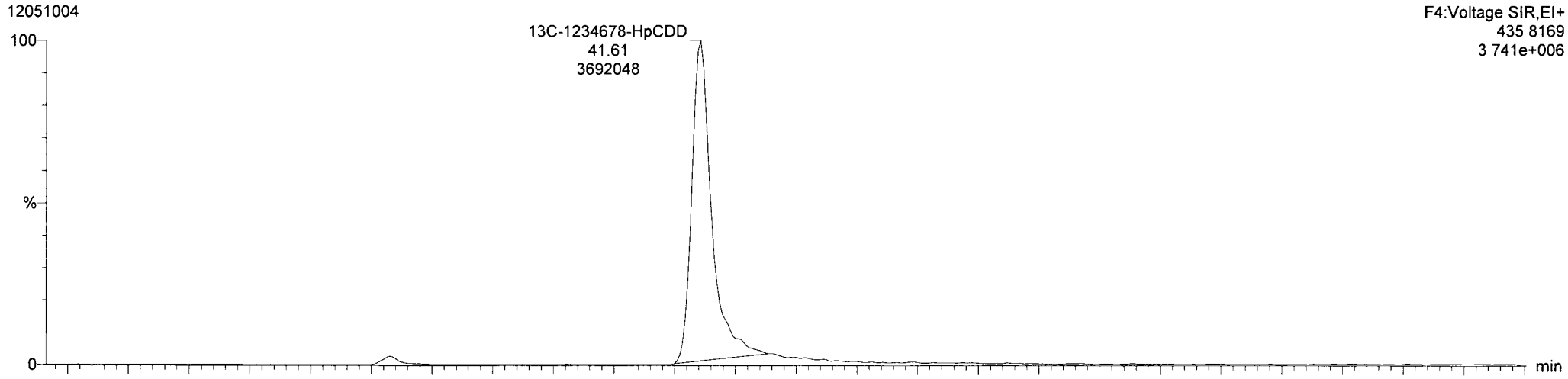


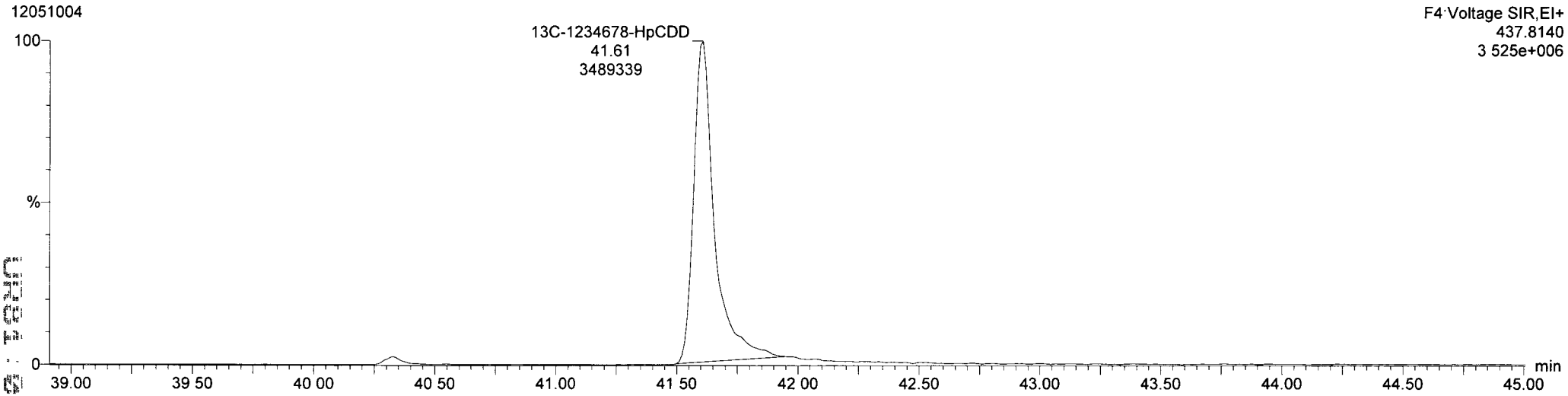
Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
		0 974		41 62

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120510QC.qld
Last Altered: Thursday, May 10, 2012 14:08:21 Pacific Daylight Time
Printed: Thursday, May 10, 2012 14:24:26 Pacific Daylight Time

Compound Name: 13C-1234678-HpCDD

Sample Name: 12051004





Height	1° Ht	RRF Mean	Std. Conc	Pred.RT
3692048	3489339	0.815	100	41.63

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 5 (PCBSDMP4)-(PCBSDMP10)-(PCBSDMP20)

PSDDA ~~(4-10~~ 20ppb)

ARI Job No(s) UR81 High Sulfur

Batch set up by: SP

ARI Sample I.D.	Verify Client ID	Volume Extracted (dry wt)	KD 100°C Hex X (X 2)	(REQ) Acid Clean	(REQ) Sulfur Clean 1 2 3	(REQ/Opt) Silica Gel Clean (1:2.5) Y / N	Extraction Final Volume	Volume to Lab	GC Dilution	GC Final Effective Volume	Comments
MBS UR81	Date 5-2-12	12.5g		2.5mL	2.5mL	1mL	2.5mL	1mL			10g Actual Weight
SBS		↓		↓	↓	↓	↓	↓			↓
SBSDup		↓		↓	↓	↓	↓	↓			↓
QLS		↓		↓	↓	↓	↓	↓			↓
UR81 A	verified	31.09									
B		31.06									
C		29.43									
D		30.22									
E		20.03									
F		29.51									
G		21.19									
GMS		21.36									
GMSD		21.18									
H		32.49									
I		24.11									
J		31.24									
						SP 5/7/12					
Analyst/Date		AC 5-2-12	RR 5/04/12	SP 5/7/12	SP 5/7/12		SP 5/7/12	SP 5/7/12			

~~Microwave~~ YL 5/2/12 Microwave.

5/4/12 Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	N	50µL	5/28/12	YL	AC
Spike	1	63µL	4/3/13	YL	AC
~~QLS Spike~~	5	~~125/62.5/25µL~~			
Extraction Time: 18:16			Balance ID: B139298002		

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave: cool vessels in cold water 15 minutes. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD ~~(Small~~ or Large Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate). 12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap (if Silica Clean). 16. Vial with Hexane.

A. Need Total Solids Y / N B. ~~Archive~~/Freeze Y / N

UR81 : 101021

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: LLR81

Client ID: Anchor QEA, LLC

Parameter: PSDDA PCB

Client Project: I + J waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B, C, D, F, G, H, I, J	SR 4/26/12
☒ Standing Water Decanted (Not shared)= A, B, C, D, F, H, I, J	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? (E = 90% wet sed + 10% 1/2" rocks)	
☒ Organics (Leaves/sticks/grass)= G = 2% Stick	
☒ Oily, obvious fuel/sulfur odors= J	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 5 (PCBSDMP4)-(PCBSDMP10)-(PCBSDMP20)

PSDDA (~~4~~ ~~10~~ 20ppb)

ARI Job No(s) U518

Batch set up by: JJ

Very High Sulfur Content

ARI Sample I.D.	Verify Client ID	Volume Extracted (dry wt)	KD 100°C ---------- Hex X (X 2)	(REQ) Acid Clean	(REQ) Sulfur Clean 1 2 3	(~~REQ~~ Opt) Silica Gel Clean (1:2.5) Y N	Extraction Final Volume	Volume to Lab	GC Dilution	GC Final Effective Volume	Comments
MBS U518	Date NL	12.5g		2.5mL	2.5mL	1mL	2.5mL	1mL			10g Actua Weight
SBS	5/3/12	↓	↓	↓	↓	↓	↓	↓			↓
SBSDup	↓	↓	↓	↓	↓	↓	↓	↓			↓
~~QLS~~		↓		↓	↓	↓	↓	↓			↓
U518 A		22.27									
↓ B	↓	25.05	↓	↓	↓	↓	↓	↓			
Analyst/Date	NL 5/3/12		YL 5/7/12	CJZ 5/8/12				SP 5/8/12			

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	N (1914-2)	50µL	5/28/12	M	JJ
Spike	1 (1964-2)	63µL	4/03/13	M	JJ
~~QLS Spike~~	~~5~~	~~125/62.5/25µL~~			
Extraction Time: 9:24			Balance ID:		

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave: cool vessels in cold water 15 minutes. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (~~Smaller~~ Large Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate). 12. Exchange (2 X with 20mL ~~Hexane~~). 13. ~~TurboVap~~. 14. Clean-ups. 15. TurboVap (if Silica Clean). 16. Vial with Hexane.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: US18

Client ID: Anchor QEA

Parameter: PCB PSDDA

Client Project: I+J WATERWAY RI/CS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B.	YL 05/01/12
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= A	YL 05/01/12
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GC analyst, Sample pre-screens indicate possible aroclor activity.	5/03/12

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Revision 008
11/02/11

PCB Raw Data
Initial Calibration

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 05/05/12 Internal Standard ID 1878-5 Expiration 08/01/12

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
AR1660	1920-3	05/28/12	AR1660	1928-2	05/28/12
AR1242	1920-4		AR1242	1923-1	
AR1248	1921-1		AR1248	1923-2	
AR1254	1921-2		AR1254	1923-3	
AR2162	1921-3		AR2162	1923-4	
AR3268	1921-4		AR3268	1923-5	
					05/07/12

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JK **Date:** 05/07/12

Reviewer: AB **Date:** 5/7/12

UR01 : 01025

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2012 14:43
End Cal Date : 05-MAY-2012 20:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120505.B/PCB1.m
Cal Date : 07-May-2012 11:48 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20120505.B/ical-1.b/0505A013.d
Level 2: /chem2/ecd7.i/20120505.B/ical-1.b/0505A014.d
Level 3: /chem2/ecd7.i/20120505.B/ical-1.b/0505A016.d
Level 4: /chem2/ecd7.i/20120505.B/ical-1.b/0505A012.d
Level 5: /chem2/ecd7.i/20120505.B/ical-1.b/0505A017.d
Level 6: /chem2/ecd7.i/20120505.B/ical-1.b/0505A015.d
Level 7: /chem2/ecd7.i/20120505.B/ical-1.b/0505A022.d
Level 8: /chem2/ecd7.i/20120505.B/ddts-1.b/0505A029.d

Compound	20 000 Level 1	50.000 Level 2	100.000 Level 3	250 000 Level 4	500 000 Level 5	1000 000 Level 6	RRF	% RSD
	250.000 Level 7	0 000e+00 Level 8						
2 Aroclor-1221(1)	++++++	++++++	++++++	++++++	++++++	++++++		
	0 00925	++++++					0.00925	0.000
(2)	++++++	++++++	++++++	++++++	++++++	++++++		
	0.00692	++++++					0.00692	0 000
(3)	++++++	++++++	++++++	++++++	++++++	++++++		
	0.02309	++++++					0.02309	0.000
3 Aroclor-1242(1)	++++++	++++++	++++++	++++++	++++++	++++++		
	0 01773	++++++					0 01773	0 000
(2)	++++++	++++++	++++++	++++++	++++++	++++++		
	0.06072	++++++					0 06072	0 000
(3)	++++++	++++++	++++++	++++++	++++++	++++++		
	0 02366	++++++					0 02366	0 000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Cal Date : 07-May-2012 11:48 jrains
Curve Type : Average

Compound	20 000 Level 1	50 000 Level 2	100 000 Level 3	250 000 Level 4	500.000 Level 5	1000 000 Level 6	RRF	% RSD
	250.000 Level 7	0 000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02161	+++++					0 02161	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 00924	+++++					0 00924	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03144	+++++					0 03144	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01240	+++++					0.01240	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01402	+++++					0 01402	0.000
7 Aroclor-1016(1)	0.02455	0 02337	0 02484	0.02312	0.02271	0 02174		
	+++++	+++++					0 02339	4 948
(2)	0 08257	0.07987	0 08515	0 07982	0 07866	0 07522		
	+++++	+++++					0 08021	4 231
(3)	0.03291	0.03169	0 03341	0.03094	0.03020	0 02881		
	+++++	+++++					0 03133	5 475
(4)	0 02272	0 02272	0.02275	0.02130	0.02082	0.02007		
	+++++	+++++					0 02173	5 350

Analytical Resources, Inc.

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Cal Date : 07-May-2012 11:48 jrains
Curve Type : Average

Compound	20 000 Level 1	50.000 Level 2	100 000 Level 3	250 000 Level 4	500 000 Level 5	1000 000 Level 6	___ RRF	% RSD
	250.000 Level 7	0 000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02432	+++++					0 02432	0 000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02973	+++++					0 02973	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 04424	+++++					0 04424	0 000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03425	+++++					0 03425	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03773	+++++					0 03773	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 05204	+++++					0.05204	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03280	+++++					0 03280	0 000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 06214	+++++					0 06214	0 000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04145	+++++					0 04145	0 000

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120505.B/PCB1.m
Cal Date : 07-May-2012 11:48 jrains
Curve Type : Average

Compound	20.000 Level 1	50 000 Level 2	100.000 Level 3	250 000 Level 4	500 000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0 000e+00 Level 8						
9 Aroclor-1260(1)	0 07659	0 07142	0 07400	0 06841	0.06610	0 06365		
	+++++	+++++					0 07003	6.981
(2)	0 04976	0.04672	0 04856	0.04412	0 04320	0.04125		
	+++++	+++++					0 04560	7 220
(3)	0 04856	0 04611	0 04827	0 04414	0 04361	0.04180		
	+++++	+++++					0 04542	5 948
(4)	0 06013	0 05728	0 06022	0 05565	0 05481	0 05328		
	+++++	+++++					0 05690	5 011
(5)	0.02453	0 02367	0 02459	0 02224	0 02135	0 02032		
	+++++	+++++					0 02278	7 734
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07165	+++++					0.07165	0 000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 05175	+++++					0.05175	0 000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 13578	+++++					0 13578	0 000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04564	+++++					0.04564	0 000

Analytical Resources, Inc.

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Origin : Disabled
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Method file : /chem2/ecd7.i/20120505.B/PCB1.m
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Curve Type : Average

Compound	20 000 Level 1	50 000 Level 2	100.000 Level 3	250 000 Level 4	500 000 Level 5	1000 000 Level 6	RRF	% RSD
	250.000 Level 7	0 000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04827	+++++					0 04827	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 14082	+++++					0 14082	0 000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12785	+++++					0 12785	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 10801	+++++					0 10801	0 000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.33215	+++++					0 33215	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	655					655	0 000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	559					559	0 000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	736					736	0 000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1069					1069	0 000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP Genie
Method file : /chem2/ecd7.i/20120505.B/PCB1.m
Cal Date : 07-May-2012 11:48 jrains
Curve Type : Average

Compound	20.000 Level 1	50 000 Level 2	100 000 Level 3	250.000 Level 4	500 000 Level 5	1000.000 Level 6	RRF	% RSD
	250 000 Level 7	0 000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	859					859	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	931					931	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	0 85507	0.88272	0 98438	0 97795	0 99298	0.97854		
	+++++	+++++					0.94527	6.353
$ 13 Decachlorobiphenyl	0.97677	0 98334	1 03224	0.96344	0 94764	0 93241		
	+++++	+++++					0 97264	3.565

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120505.B/PCB2.m
Cal Date : 07-May-2012 11:35 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20120505.B/ical-2.b/0505A013.d
Level 2: /chem2/ecd7.i/20120505.B/ical-2.b/0505A014.d
Level 3: /chem2/ecd7.i/20120505.B/ical-2.b/0505A016.d
Level 4: /chem2/ecd7.i/20120505.B/ical-2.b/0505A012.d
Level 5: /chem2/ecd7.i/20120505.B/ical-2.b/0505A017.d
Level 6: /chem2/ecd7.i/20120505.B/ical-2.b/0505A015.d
Level 7: /chem2/ecd7.i/20120505.B/ical-2.b/0505A022.d
Level 8: /chem2/ecd7.i/20120505.B/ddts-2.b/0505A029.d

Compound	20 000 Level 1	50 000 Level 2	100.000 Level 3	250 000 Level 4	500 000 Level 5	1000 000 Level 6	RRF	% RSD
	250 000 Level 7	0 000e+00 Level 8						
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 01150	+++++					0 01150	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00709	+++++					0 00709	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02115	+++++					0 02115	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 00403	+++++					0 00403	0 000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01741	+++++					0 01741	0 000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03242	+++++					0 03242	0 000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2012 14:43
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120505.B/PCB2.m
Cal Date : 07-May-2012 11:35 jrains
Curve Type : Average

Compound	20 000 Level 1	50 000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000 000 Level 6	RRF	% RSD
	250 000 Level 7	0 000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00873	+++++					0 00873	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 01310	+++++					0 01310	0 000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02970	+++++					0 02970	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06071	+++++					0 06071	0 000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 01605	+++++					0 01605	0 000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02494	+++++					0 02494	0 000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02817	+++++					0.02817	0 000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03101	+++++					0 03101	0 000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03150	+++++					0.03150	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250 000 Level 4	500 000 Level 5	1000.000 Level 6	RRF	% RSD
	250 000 Level 7	0 000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 04057	+++++					0.04057	0.000
7 Aroclor-1016(1)	0 04882	0 04363	0 04356	0 03765	0.03577	0 03355		
	+++++	+++++					0.04050	14.284
(2)	0 09670	0 08496	0 08708	0 07658	0.07501	0 07238		
	+++++	+++++					0 08212	11.179
(3)	0 02511	0 02274	0 02298	0 01983	0 01904	0 01802		
	+++++	+++++					0.02129	12 859
(4)	0.03078	0 02721	0 02687	0 02248	0 02114	0 01970		
	+++++	+++++					0 02470	17 222
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 02995	+++++					0.02995	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03823	+++++					0.03823	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03044	+++++					0 03044	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06468	+++++					0 06468	0.000

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP Genie
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Cal Date : 07-May-2012 11:35 jrains
Curve Type : Average

Compound	20 000 Level 1	50 000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250 000 Level 7	0 000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 03899	+++++					0.03899	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 06891	+++++					0.06891	0 000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05805	+++++					0 05805	0 000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 13025	+++++					0 13025	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04951	+++++					0.04951	0 000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0 07946	+++++					0 07946	0.000
9 Aroclor-1260(1)	0 08780	0.07642	0 07535	0.06638	0 06355	0 06105		
	+++++	+++++					0 07176	13 978
(2)	0 12771	0.11307	0 11494	0 10431	0.10212	0.10091		
	+++++	+++++					0.11051	9.255
(3)	0 08707	0.07678	0 07719	0 06855	0 06618	0 06433		
	+++++	+++++					0.07335	11 734

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Method file : /chem2/ecd7.i/20120505.B/PCB2.m
Cal Date : 07-May-2012 11:35 jrains
Curve Type : Average

Compound	20 000 Level 1	50 000 Level 2	100 000 Level 3	250 000 Level 4	500 000 Level 5	1000.000 Level 6	RRF	% RSD
	250 000 Level 7	0 000e+00 Level 8						
(4)	0 03171	0 02775	0 02833	0.02612	0.02444	0 02294		
	++++++	++++++					0.02688	11.553
11 Aroclor-1268(1)	++++++	++++++	++++++	++++++	++++++	++++++		
	0 13235	++++++					0.13235	0 000
(2)	++++++	++++++	++++++	++++++	++++++	++++++		
	0.12424	++++++					0 12424	0 000
(3)	++++++	++++++	++++++	++++++	++++++	++++++		
	0 09837	++++++					0 09837	0 000
(4)	++++++	++++++	++++++	++++++	++++++	++++++		
	0.30876	++++++					0 30876	0 000
41 2,4-DDE	++++++	++++++	++++++	++++++	++++++	++++++		
	++++++	610					610	0 000
42 2,4-DDD	++++++	++++++	++++++	++++++	++++++	++++++		
	++++++	518					518	0.000
44 4,4-DDE	++++++	++++++	++++++	++++++	++++++	++++++		
	++++++	991					991	0.000
45 4,4-DDD/2,4-DDT	++++++	++++++	++++++	++++++	++++++	++++++		
	++++++	742					742	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2012 14:43
End Cal Date : 05-MAY-2012 20:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120505.B/PCB2.m
Cal Date : 07-May-2012 11:35 jrains
Curve Type : Average

Compound	20 000 Level 1	50 000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250 000 Level 7	0 000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	861					861	0.000
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.04362	0 97600	1.04425	0 98131	0 98078	0 97327		
	+++++	+++++					0 99987	3.427
$ 13 Decachlorobiphenyl	1.00347	0 92483	0.96068	0 88299	0 87396	0 85780		
	+++++	+++++					0 91729	6 159

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120505.B/PCB1.m
Batch File: /chem2/ecd7.i/20120505.B/ical-1.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0505A012	0505A013	0505A014	0505A015	0505A016	0505A017
INJ.DATE·	05-MAY-2012	05-MAY-2012	05-MAY-2012	05-MAY-2012	05-MAY-2012	05-MAY-2012
INJ.TIME	14·43	15 04	15 25	15 46	16·07	16:28

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3 323	3 323	3 319	3 325	3.324	3.322	3 319	3.219-3.419	3 323	0.002
$ 1 Tetrachloro-m-xylene	6.295	6.293	6.294	6 294	6.294	6 295	6.292	6.192-6.392	6 294	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	6.743	6 643-6.843	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	8.297	8 197-8.397	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	8.298	8.198-8.398	+++++	+++++
7 Aroclor-1016	8 300	8.300	8.301	8.300	8 300	8 300	8.300	8.200-8 400	8.300	0.000
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	9 356	9.256-9 456	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10 336	10.236-10.436	+++++	+++++
9 Aroclor-1260	11.840	11 840	11.840	11.839	11.840	11.840	11 840	11 740-11.940	11.840	0 000
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12 443	12.343-12 543	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13.590	13 490-13.690	+++++	+++++
$ 13 Decachlorobiphenyl	14 871	14.870	14 871	14.871	14.871	14.871	14 869	14.769-14.969	14 871	0.000
* 12 IS-HBBP	15 125	15 125	15 125	15.125	15.125	15 124	15.124	15.024-15.224	15 125	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10 622	10.572-10 672	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.185	11 135-11.235	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11 696	11.646-11 746	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11 060	10.960-11.160	+++++	+++++

Reviewer 1 _____ Date: 05/07/12
Reviewer 2 _____ Date: 5/7/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120505.B/PCB1.m
Batch File: /chem2/ecd7.i/20120505.B/ical-1.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.639	11 539-11 739	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	12.152	12 052-12.252	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1 742-1 942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6 608-6.808	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120505.B/PCB2.m
Batch File: /chem2/ecd7.i/20120505.B/ical-2.b
Inst ID: ecd7.i

ID.	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME	0505A012	0505A013	0505A014	0505A015	0505A016	0505A017
INJ.DATE.	05-MAY-2012	05-MAY-2012	05-MAY-2012	05-MAY-2012	05-MAY-2012	05-MAY-2012
INJ.TIME:	14.43	15:04	15 25	15.46	16:07	16 28

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	4.174	4.174	4.173	4.175	4 174	4.175	4 174	4.074-4.274	4.174	0.001
$ 2 Tetrachloro-m-xylene	6.422	6 421	6 421	6.421	6.422	6.422	6 422	6.322-6.522	6.421	0.000
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	7 241	7.141-7.341	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	8 549	8 449-8 649	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	8 540	8 440-8 640	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	9 809	9 709-9 909	+++++	+++++
7 Aroclor-1016	8 549	8.548	8 551	8 549	8.549	8 550	8 549	8.449-8 649	8 549	0 001
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10.871	10 771-10 971	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12 829	12.729-12.929	+++++	+++++
9 Aroclor-1260	12.742	12 742	12 742	12.741	12.742	12 741	12 742	12.642-12 842	12 742	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13 955	13 855-14 055	+++++	+++++
$ 13 Decachlorobiphenyl	15.200	15.199	15 199	15 200	15 199	15.200	15.200	15.100-15 300	15.199	0 000
* 12 IS-HBBP	15 782	15 782	15 783	15.782	15 782	15.783	15 782	15 682-15.882	15 782	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11.133	11 083-11.183	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.823	11 773-11.873	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11.517	11.417-11.617	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	12 276	12.176-12.376	+++++	+++++

Reviewer 1 _____ Date: 05/07/12
Reviewer 2 _____ Date: 5/7/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120505.B/PCB2.m
Batch File: /chem2/ecd7.i/20120505.B/ical-2.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	12.717	12 617-12.817	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1 703	1 603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7 117	7 017-7 217	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20120505.B/ical-2.b

ARI Job No.: IB Method: PCB2.m Instrument: ecd7.i Date: 05-MAY-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1422	0505A011.d	IB		1	NO MANUAL INTEGRATION
1443	0505A012.d	0.25 PPM	AR1660	1	NO MANUAL INTEGRATION
1504	0505A013 d	0 02 PPM	AR1660	1	NO MANUAL INTEGRATION
1525	0505A014.d	0.05 PPM	AR1660	1	NO MANUAL INTEGRATION
1546	0505A015.d	1 PPM	AR1660	1	NO MANUAL INTEGRATION
1607	0505A016.d	0.1 PPM	AR1660	1	NO MANUAL INTEGRATION
1628	0505A017.d	0 5 PPM	AR1660	1	NO MANUAL INTEGRATION
1649	0505A018 d	AR1242		1	NO MANUAL INTEGRATION
1709	0505A019.d	AR1248		1	NO MANUAL INTEGRATION
1730	0505A020 d	AR1254		1	NO MANUAL INTEGRATION
1751	0505A021 d	AR2162		1	NO MANUAL INTEGRATION
1812	0505A022.d	AR3268		1	NO MANUAL INTEGRATION
1833	0505A023 d	AR1660	ICV	1	NO MANUAL INTEGRATION
1854	0505A024.d	AR1242	ICV	1	NO MANUAL INTEGRATION
1915	0505A025 d	AR1248	ICV	1	NO MANUAL INTEGRATION
1936	0505A026.d	AR1254	ICV	1	NO MANUAL INTEGRATION
1957	0505A027 d	AR2162	ICV	1	NO MANUAL INTEGRATION
2018	0505A028 d	AR3268	ICV	1	NO MANUAL INTEGRATION
1422	0505A011.d	IB		1	NO MANUAL INTEGRATION
1443	0505A012 d	0 25 PPM	AR1660	1	NO MANUAL INTEGRATION
1504	0505A013.d	0.02 PPM	AR1660	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20120505.B/ical-2.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1525	0505A014 d 0.05 PPM AR1660			1	NO MANUAL INTEGRATION
1546	0505A015.d 1 PPM AR1660			1	NO MANUAL INTEGRATION
1607	0505A016.d 0 1 PPM AR1660			1	NO MANUAL INTEGRATION
1628	0505A017.d 0 5 PPM AR1660			1	NO MANUAL INTEGRATION
1649	0505A018 d AR1242			1	NO MANUAL INTEGRATION
1709	0505A019.d AR1248			1	NO MANUAL INTEGRATION
1730	0505A020 d AR1254			1	NO MANUAL INTEGRATION
1751	0505A021.d AR2162			1	NO MANUAL INTEGRATION
1812	0505A022.d AR3268			1	NO MANUAL INTEGRATION
1833	0505A023.d AR1660 ICV			1	NO MANUAL INTEGRATION
1854	0505A024 d AR1242 ICV			1	NO MANUAL INTEGRATION
1915	0505A025 d AR1248 ICV			1	NO MANUAL INTEGRATION
1936	0505A026.d AR1254 ICV			1	NO MANUAL INTEGRATION
1957	0505A027.d AR2162 ICV			1	NO MANUAL INTEGRATION
2018	0505A028 d AR3268 ICV			1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A011.d
Data file 2: 20120505.B/ical-2.b/0505A011.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 05-MAY-2012 14:22
Report Date: 05/07/2012 11:30
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.293	0.001	2743260	6.421	0.002	4347821	40.9	40.3	1.5	Tetrachloro-m-xylen
14.871	0.002	2170377	15.200	0.002	2828187	37.4	38.6	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.4	100.8
Decachlorobiphenyl	93.4	96.6

JL 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5670267	-2.9
Hexabromobiphenyl	4847662	4775962	-1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8788529	-4.0
Hexabromobiphenyl	6845779	6633649	-3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

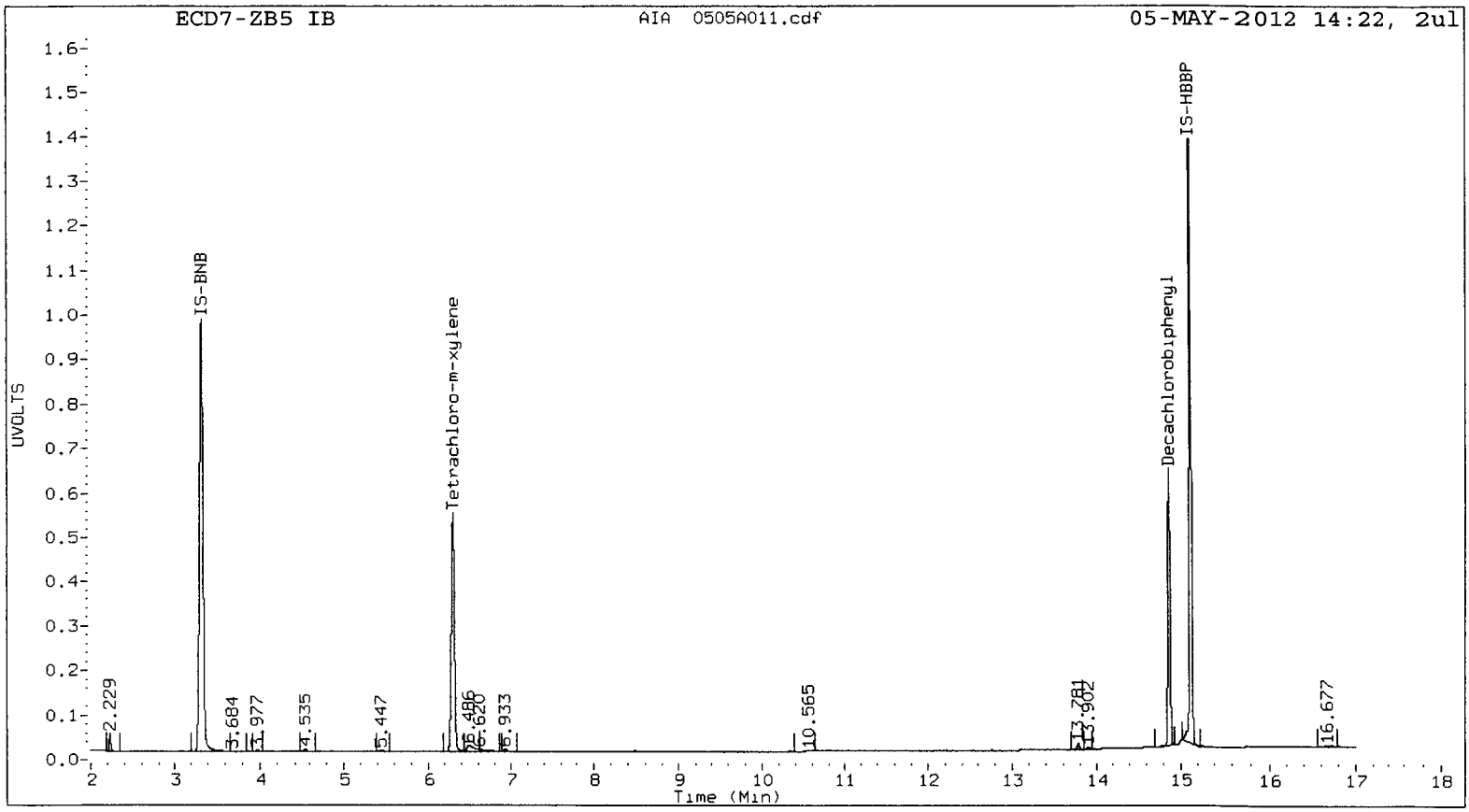
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	13.515	0.001	12336	1.4
Aroclor-1260	3	---			0.0	3	14.009	0.001	11162	2.0
Aroclor-1260	4	---			0.0	4	14.617	0.052	19912	9.2
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: 4.2				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (6.392 - 14.769) = 356576 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 335765 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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AIA 0505A011.cdf
05-MAY-2012 14:22, 2ul
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IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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6.620
6.933
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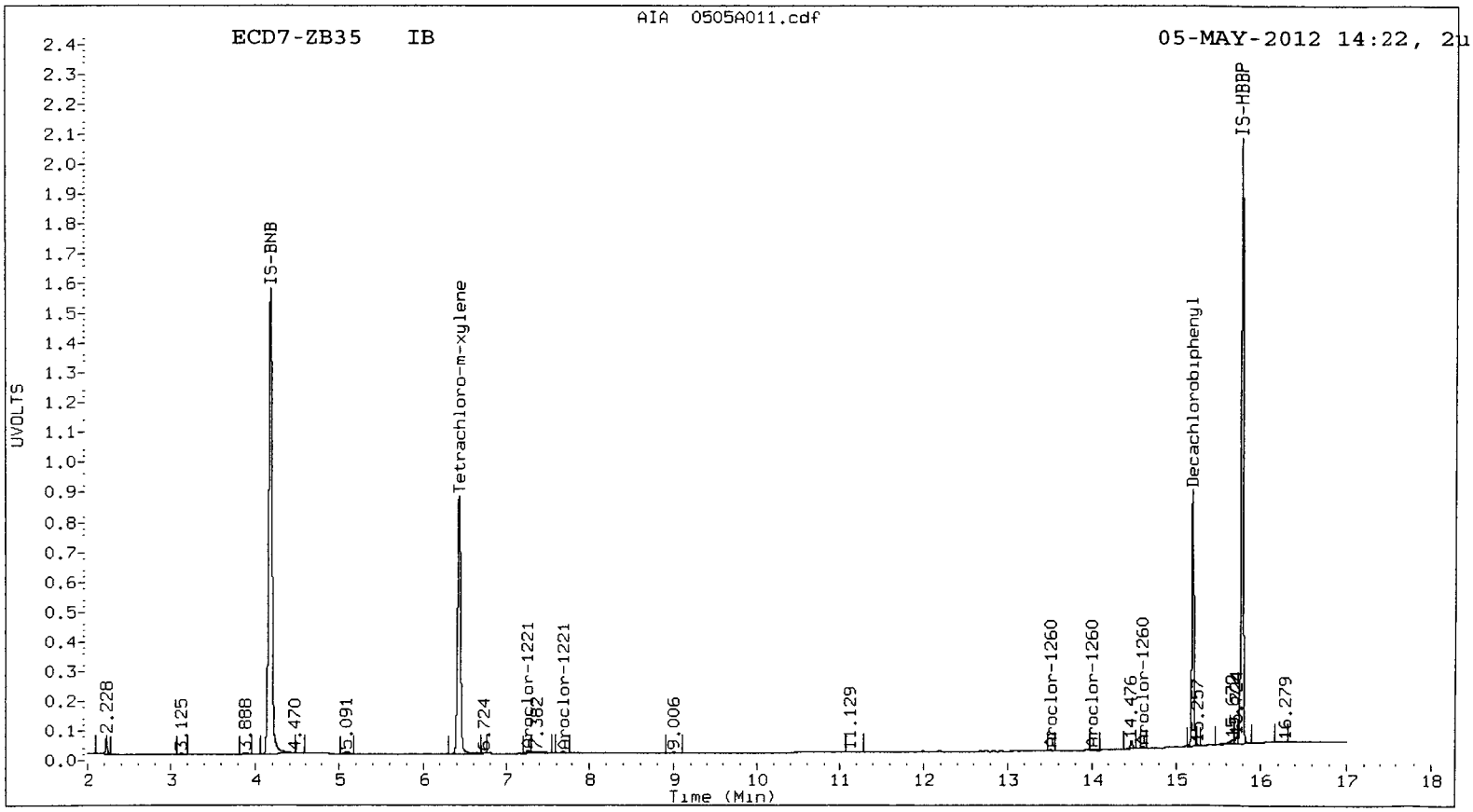
Time (Min)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05-MAY-2012 14:22, 2u
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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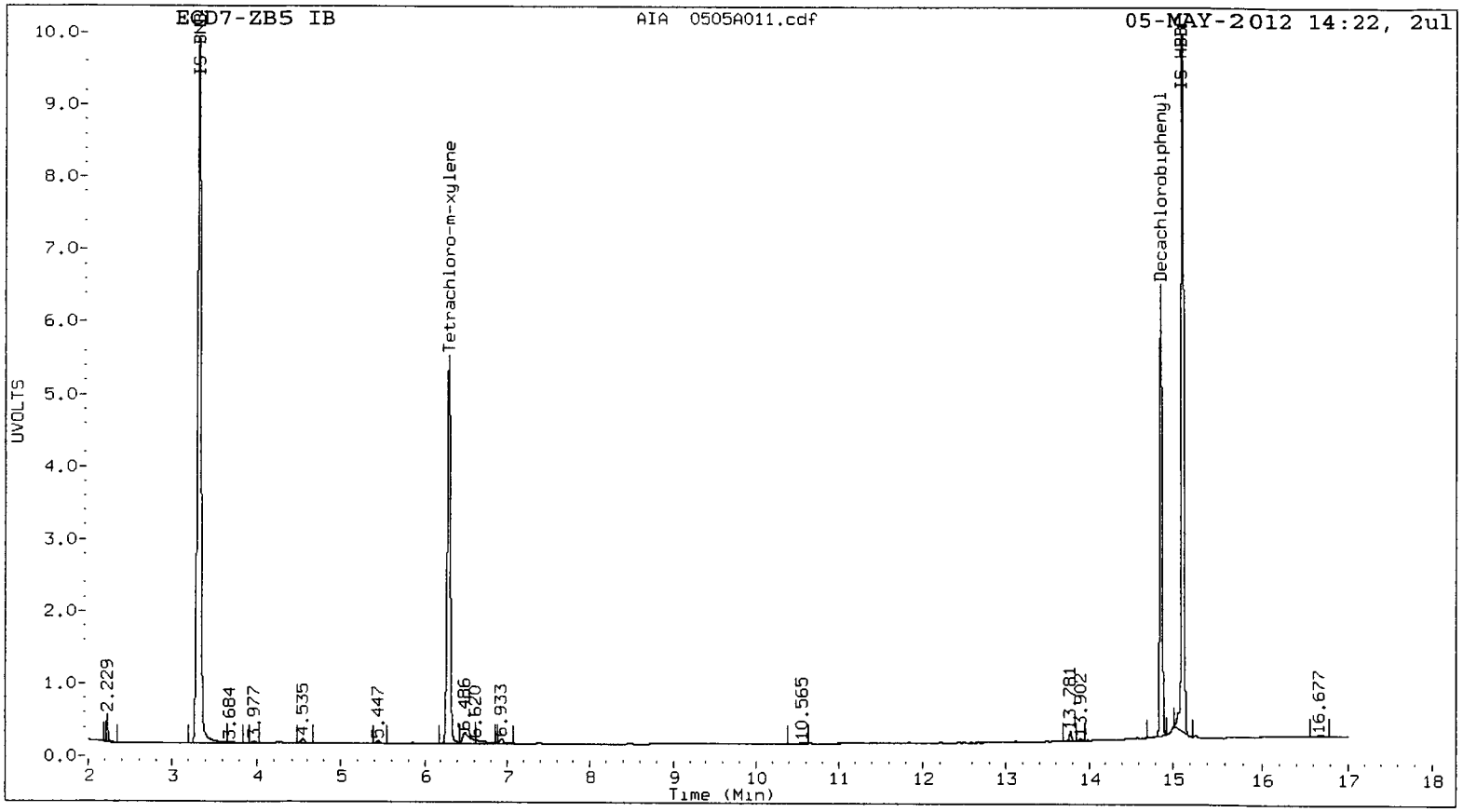
3.125
3.888
4.470
5.091
6.724
7.382
Aroclor-1221
Aroclor-1221
9.006
11.129
Aroclor-1260
Aroclor-1260
14.476
Aroclor-1260
15.257
16.279
Time (Min)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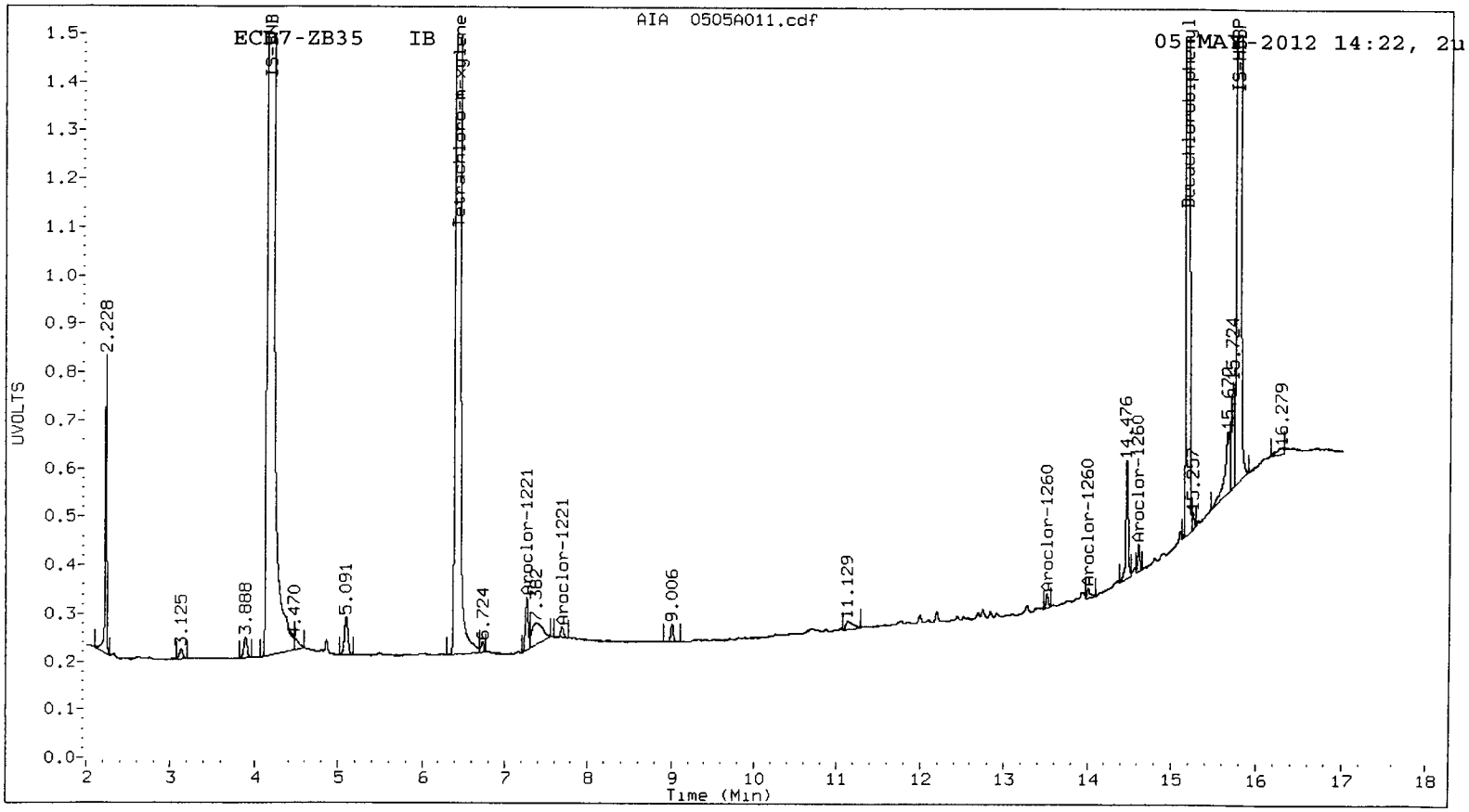
05-MAY-2012 14:22, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
2.229
3.684
3.977
4.535
5.447
6.933
10.565
16.677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05-MAY-2012 14:22, 2u
UVOLTS
Time (Min)
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3.888
4.470
5.091
6.724
Aroclor-1221
Aroclor-1221
9.006
11.129
Aroclor-1260
Aroclor-1260
Aroclor-1260
14.476
15.257
15.724
16.279

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A012.d
Data file 2: 20120505.B/ical-2.b/0505A012.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25 PPM AR1660
Client ID:
Injection Date: 05-MAY-2012 14:43
Report Date: 05/07/2012 11:30
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.295	0.002	1428239	6.422	0.003	2246355	20.7	20.0	3.4	Tetrachloro-m-xylen
14.871	0.002	1167609	15.200	0.002	1511184	19.8	20.0	1.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.7	50.0
Decachlorobiphenyl	49.5	50.0

JL 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5841740	0.0
Hexabromobiphenyl	4847662	4847662	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9156558	0.0
Hexabromobiphenyl	6845779	6845779	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

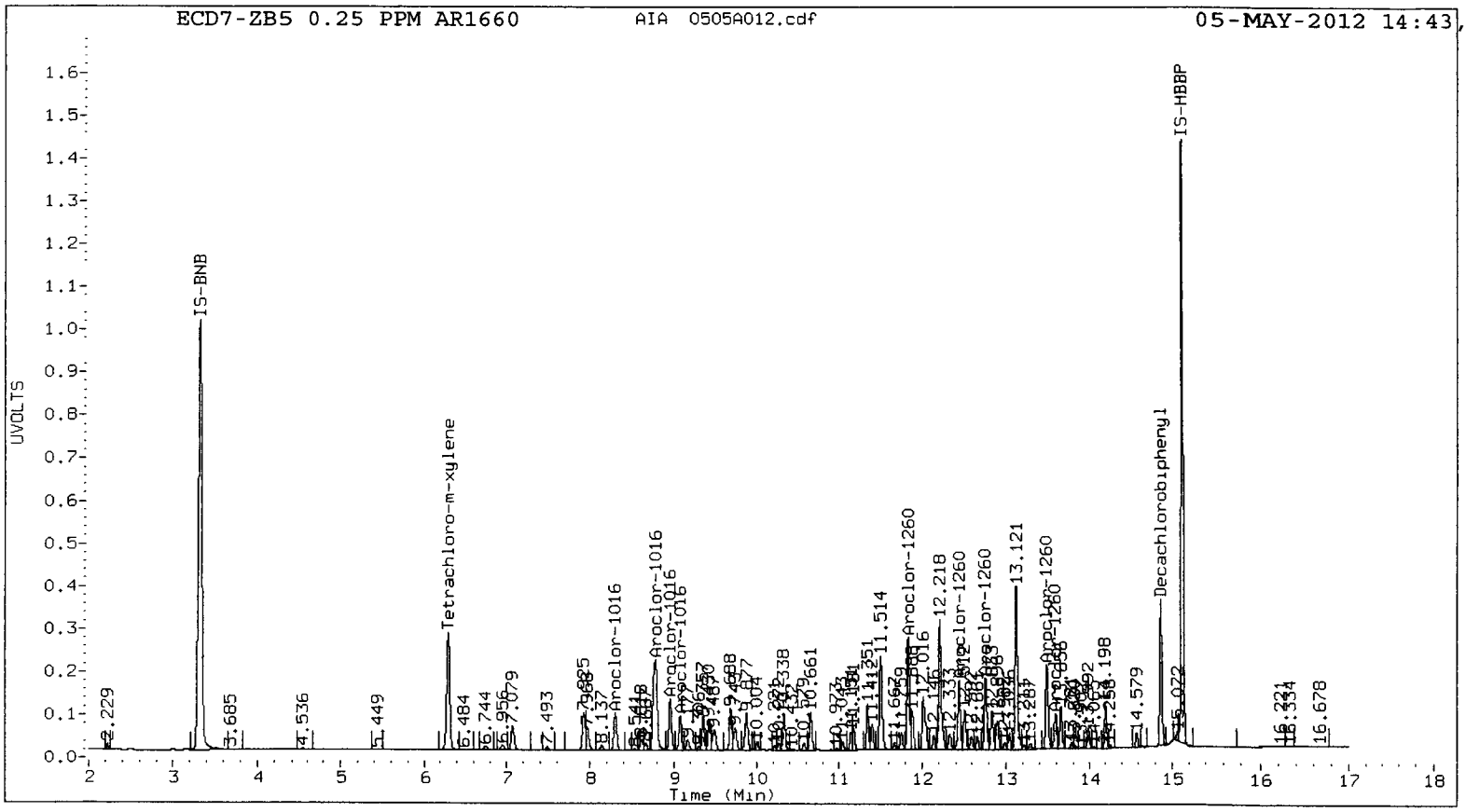
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.300	0.000	422094	247.1	1	8.549	0.000	1077317	250.0
Aroclor-1016	2	8.787	0.000	1457122	248.8	2	9.280	0.000	2191239	250.0
Aroclor-1016	3	8.960	0.000	564893	247.0	3	9.706	0.000	567350	250.0
Aroclor-1016	4	9.088	0.000	388926	245.1	4	9.814	-0.001	643296	250.0
Total Col1Ave (4 peaks):				247.0		Total Col2Ave (4 peaks):			250.0	RPD = 1
Corrected Ave (3 peaks):				246.4		Corrected Ave (3 peaks):			250.0	RPD = 1
Aroclor-1260	1	11.840	0.000	1036333	244.2	1	12.742	0.001	1419996	250.0
Aroclor-1260	2	12.444	0.000	668358	241.9	2	13.515	0.001	2231539	250.0
Aroclor-1260	3	12.759	0.000	668724	243.0	3	14.008	0.000	1466595	250.0
Aroclor-1260	4	13.493	0.000	843052	244.5	4	14.565	0.000	558867	250.0
Aroclor-1260	5	13.592	0.000	336889	244.0	NS	---			----
Total Col1Ave (5 peaks):				243.5		Total Col2Ave (4 peaks):			250.0	RPD = 3
Corrected Ave (4 peaks):				243.3		Corrected Ave (3 peaks):			250.0	RPD = 3

Total PCB Area Col1 (6.392 - 14.769) = 20288072 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 30518586 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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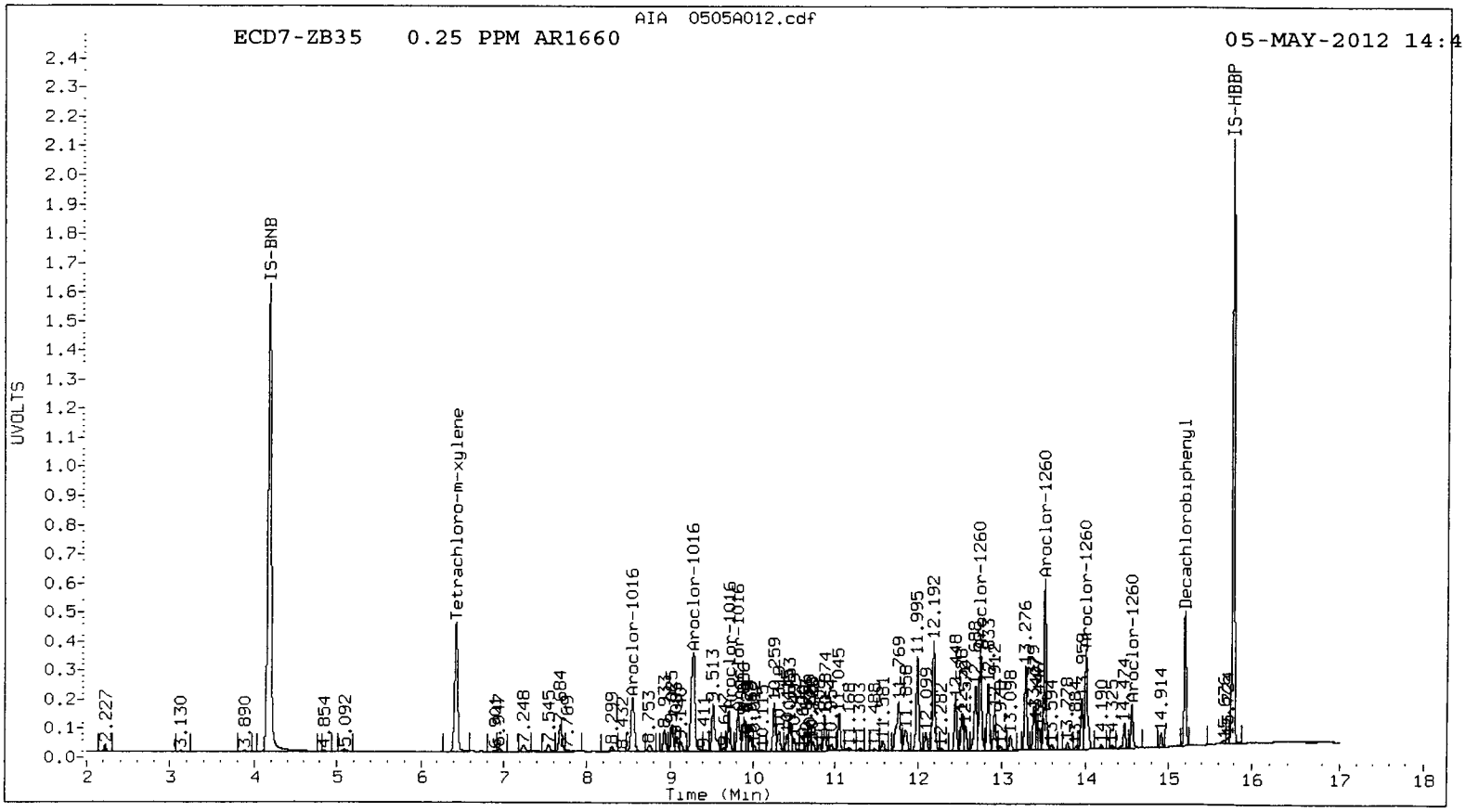
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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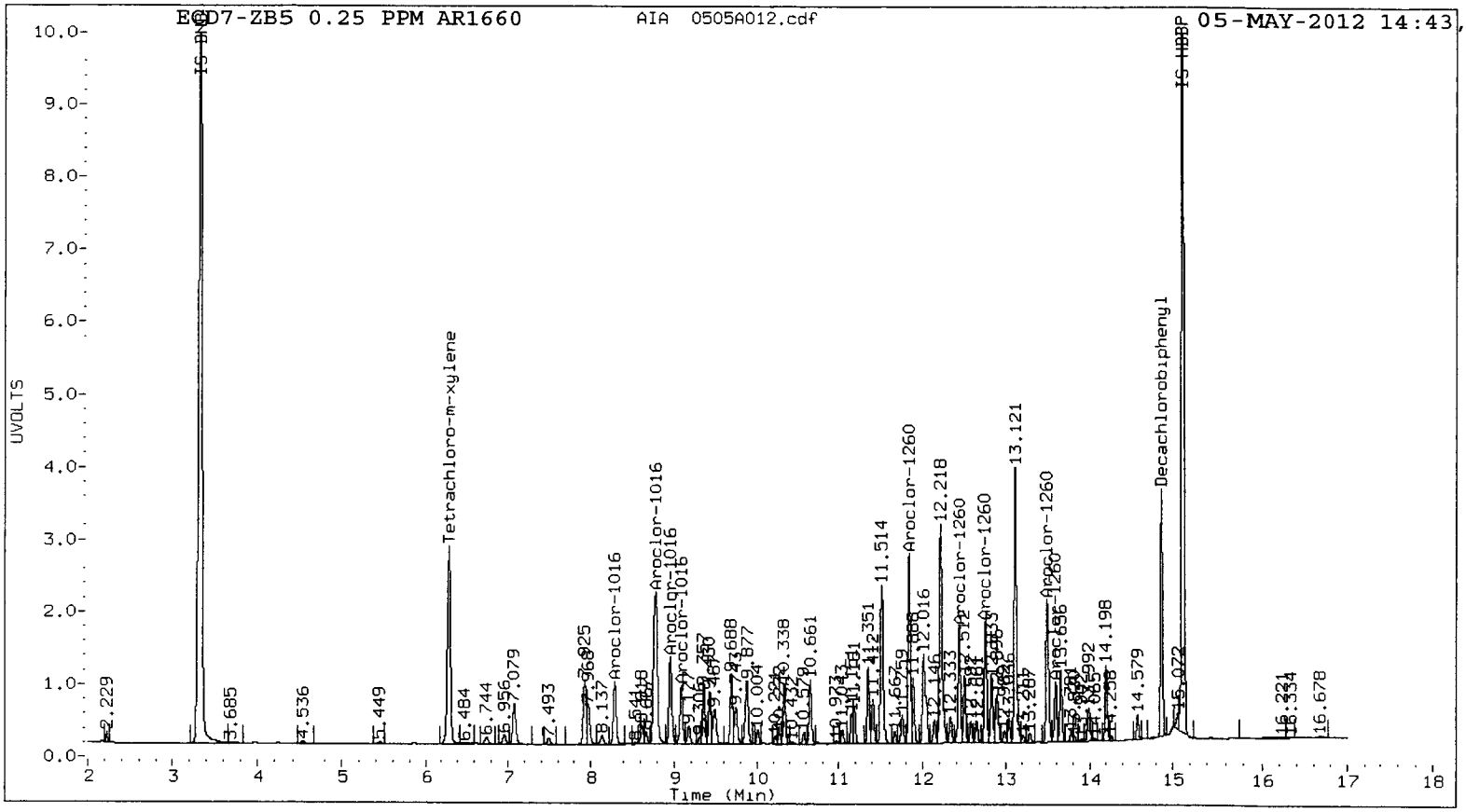
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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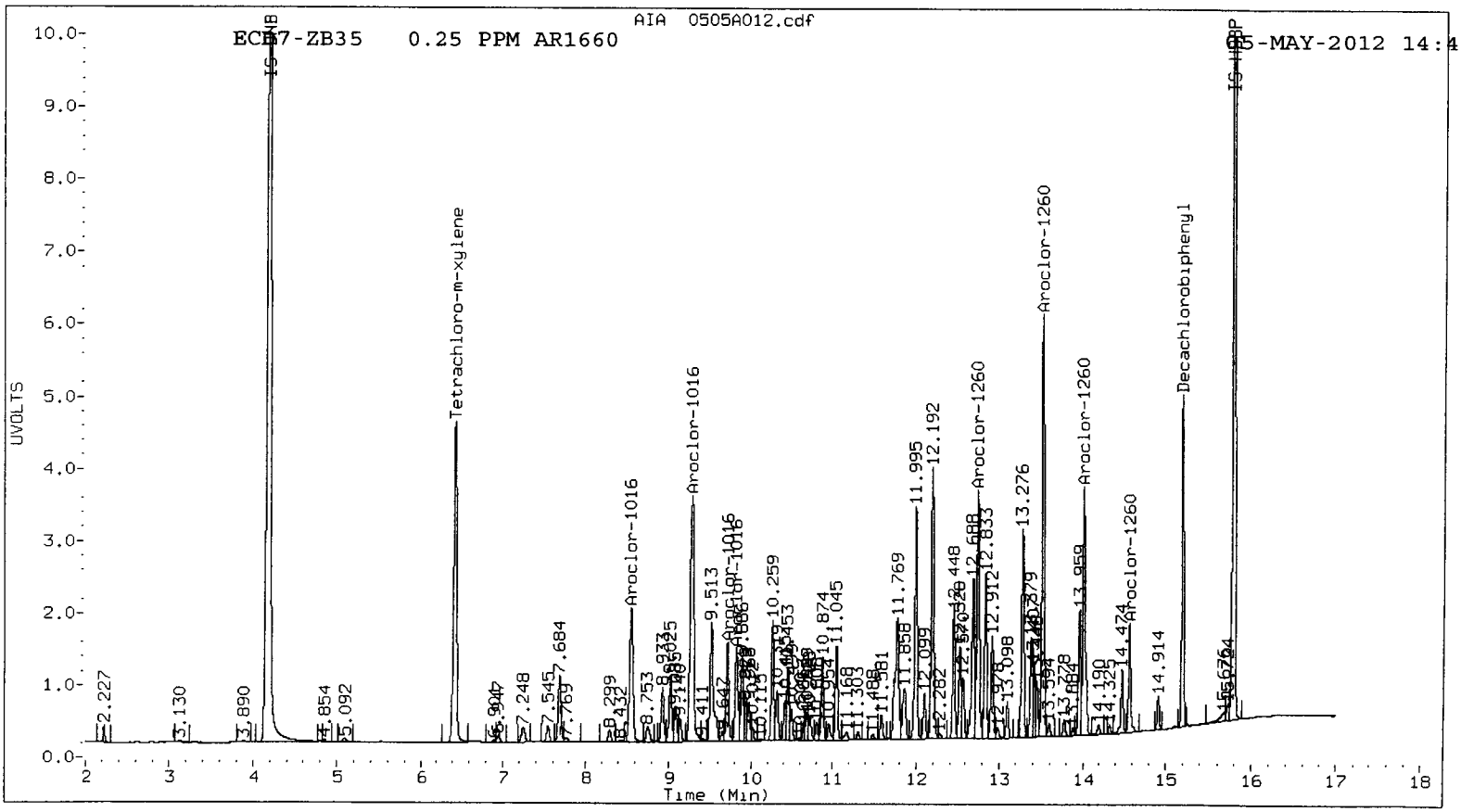
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260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05-MAY-2012 14:4
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A013.d
Data file 2: 20120505.B/ical-2.b/0505A013.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02 PPM AR1660
Client ID:
Injection Date: 05-MAY-2012 15:04
Report Date: 05/07/2012 11:30
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.293	0.001	99548	6.421	0.002	189746	1.4	1.6	13.0	Tetrachloro-m-xylen
14.870	0.001	93328	15.199	0.001	136661	1.6	1.7	5.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	3.6	4.1
Decachlorobiphenyl	4.0	4.3

A 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5821073	-0.4
Hexabromobiphenyl	4847662	4777383	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9090803	-0.7
Hexabromobiphenyl	6845779	6809435	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.300	-0.001	35725	21.0	1	8.548	-0.001	110964	22.6
Aroclor-1016	2	8.787	0.000	120157	20.6	2	9.278	-0.002	219762	22.3
Aroclor-1016	3	8.960	0.000	47891	21.0	3	9.706	0.000	57074	22.4
Aroclor-1016	4	9.087	-0.001	33067	20.9	4	9.813	-0.001	69943	23.1
Total Col1Ave (4 peaks):				20.9		Total Col2Ave (4 peaks):			22.6	RPD = 8
Corrected Ave (3 peaks):				20.8		Corrected Ave (3 peaks):			22.4	RPD = 7
Aroclor-1260	1	11.840	0.000	91473	21.9	1	12.742	0.001	149465	22.8
Aroclor-1260	2	12.444	0.000	59425	21.8	2	13.515	0.001	217400	22.0
Aroclor-1260	3	12.759	0.000	57994	21.4	3	14.008	0.000	148220	22.4
Aroclor-1260	4	13.492	0.000	71820	21.1	4	14.565	0.000	53983	21.9
Aroclor-1260	5	13.592	0.001	29300	21.5	NS	---			----
Total Col1Ave (5 peaks):				21.6		Total Col2Ave (4 peaks):			22.3	RPD = 3
Corrected Ave (4 peaks):				21.5		Corrected Ave (3 peaks):			22.1	RPD = 3

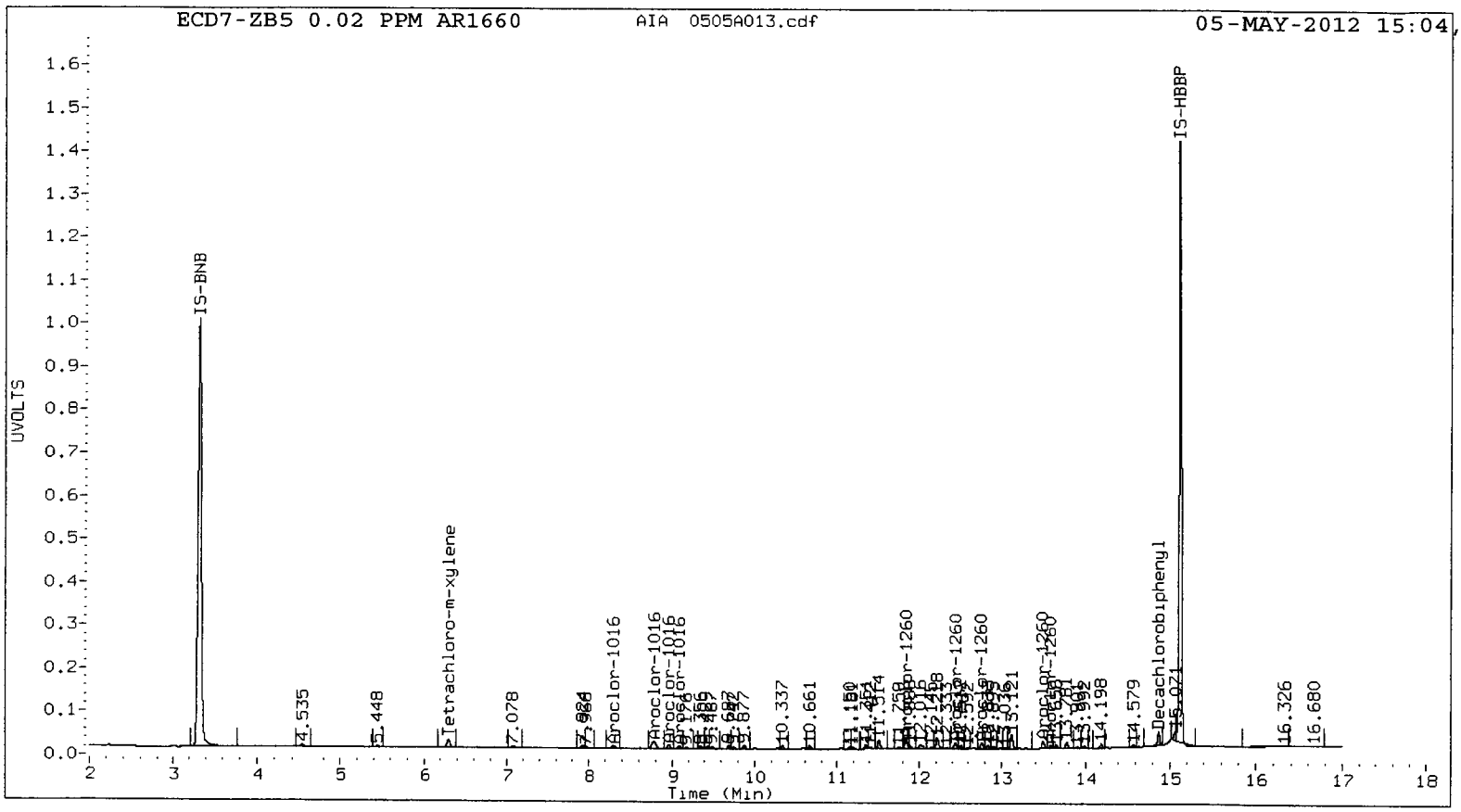
Total PCB Area Col1 (6.392 - 14.769) = 1706351 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 3164547 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR01.01057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Time (Min)
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IS-HBBP
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
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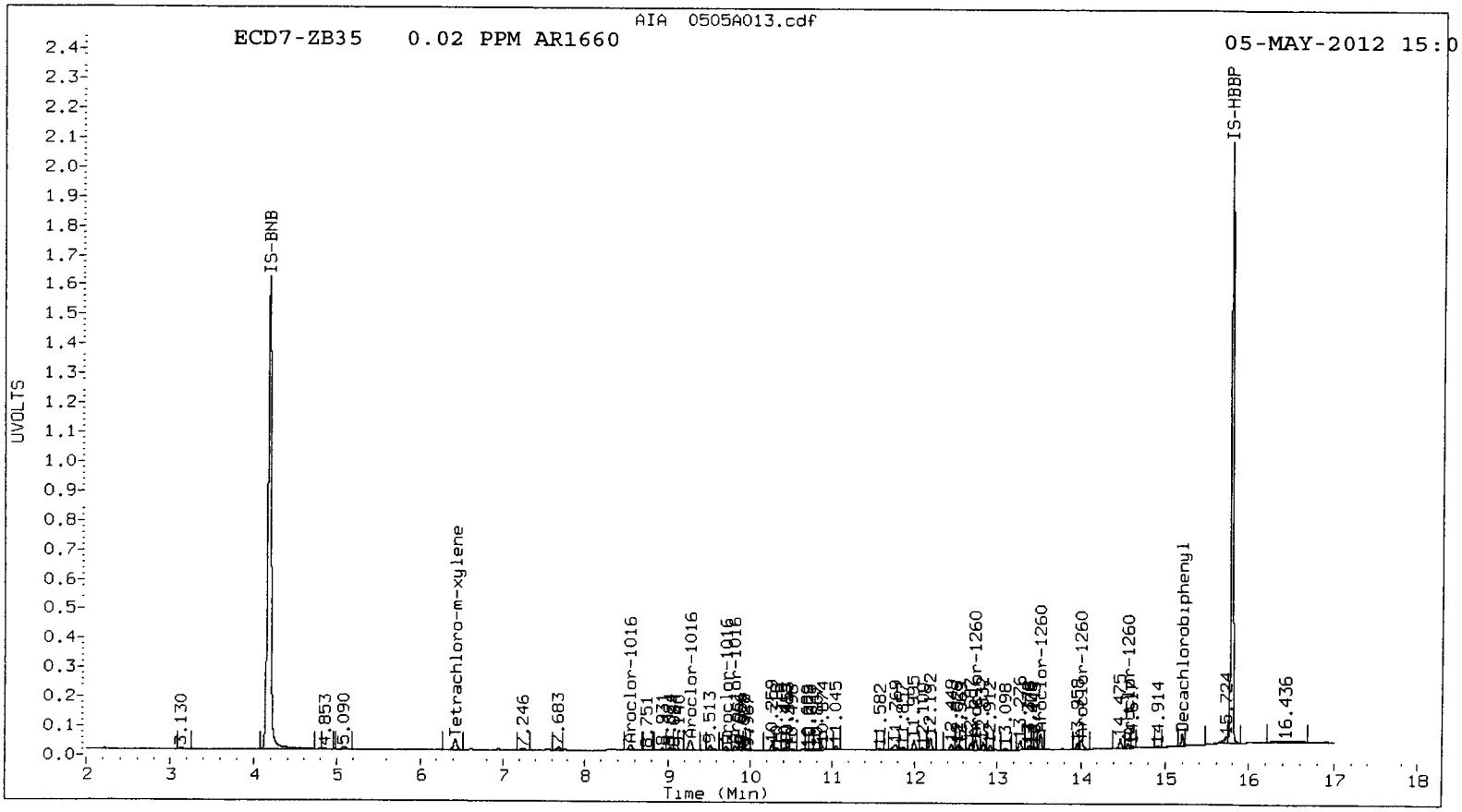
16.680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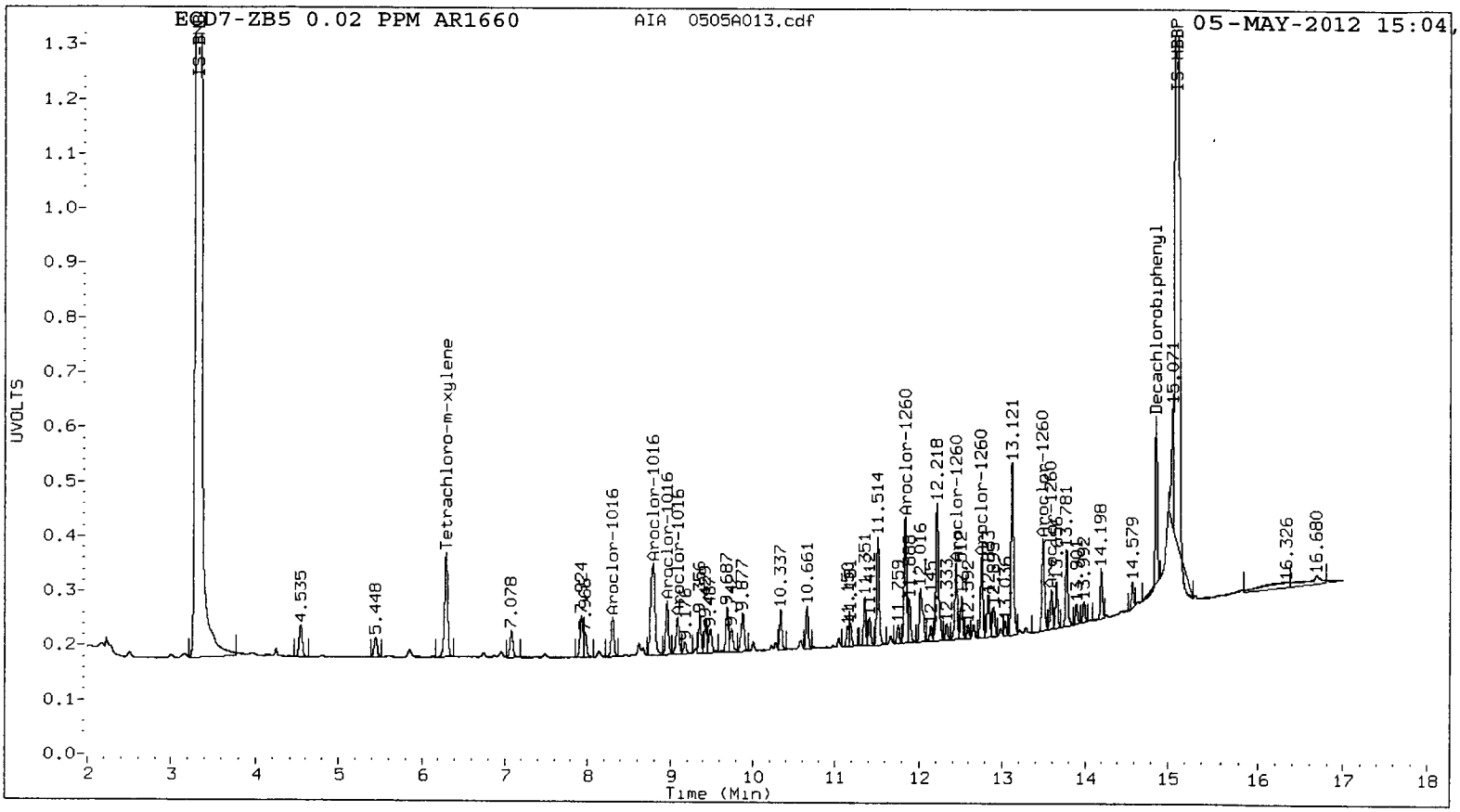
IS-HBBP
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
3.130
4.853
5.090
7.246
7.683
9.513
11.045
11.582
14.914
15.724
16.436

UR81 : 01958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AIA 0505A013.cdf
05-MAY-2012 15:04
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
4.535
5.448
7.078
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14.198
14.579
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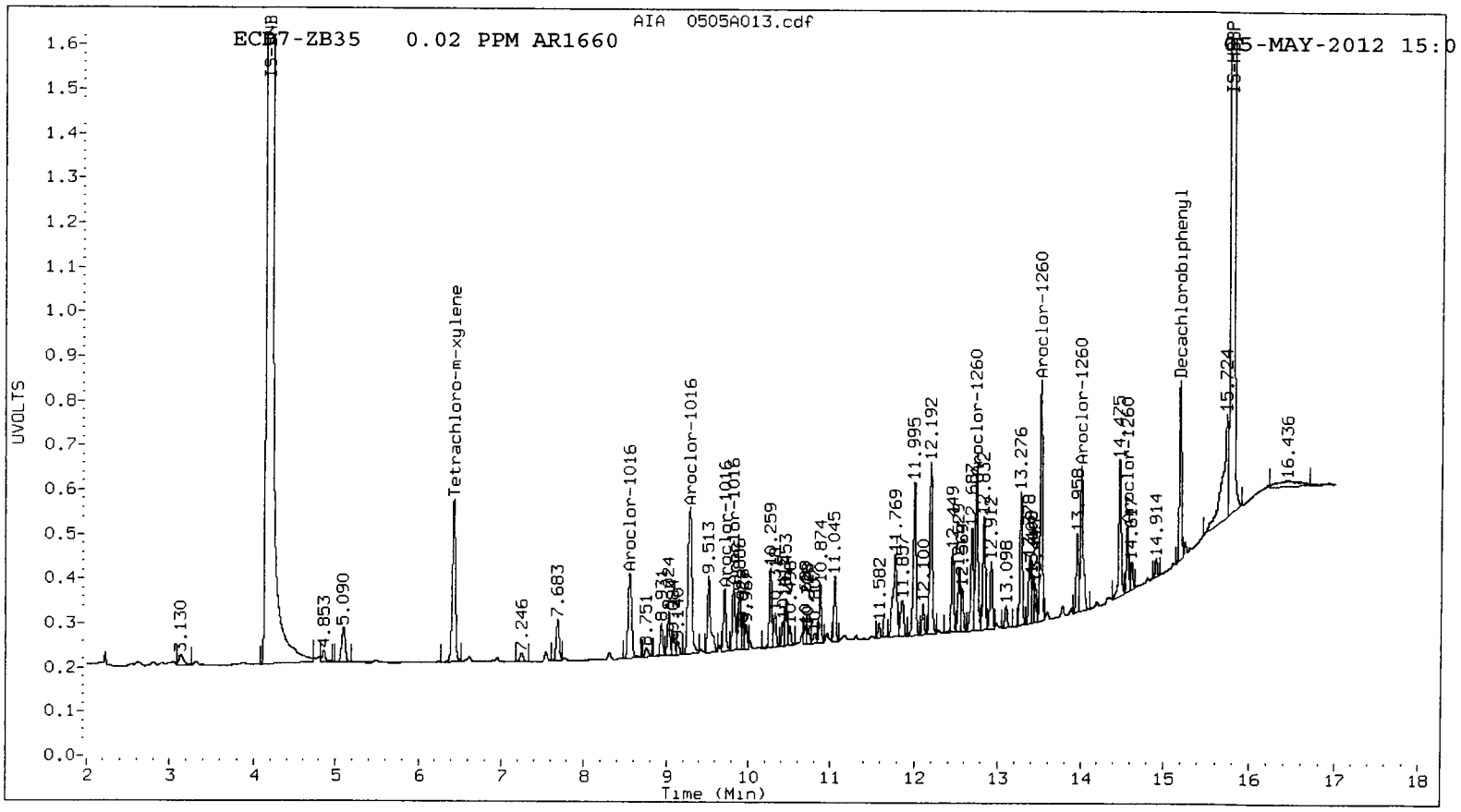
16.326
16.680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05-MAY-2012 15:0
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
3.130
4.853
5.090
7.246
7.683
9.513
11.045
11.582
11.769
11.996
12.192
13.098
13.276
13.958
14.914
15.724
16.436

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A014.d
Data file 2: 20120505.B/ical-2.b/0505A014.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05 PPM AR1660
Client ID:
Injection Date: 05-MAY-2012 15:25
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.294	0.001	253625	6.421	0.002	442069	3.7	3.9	4.4	Tetrachloro-m-xylen
14.871	0.002	233573	15.199	0.001	313718	4.0	3.9	2.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

JL 05/07/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	9.3	9.8
Decachlorobiphenyl	10.1	9.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5746462	-1.6
Hexabromobiphenyl	4847662	4750609	-2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9058816	-1.1
Hexabromobiphenyl	6845779	6784358	-0.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

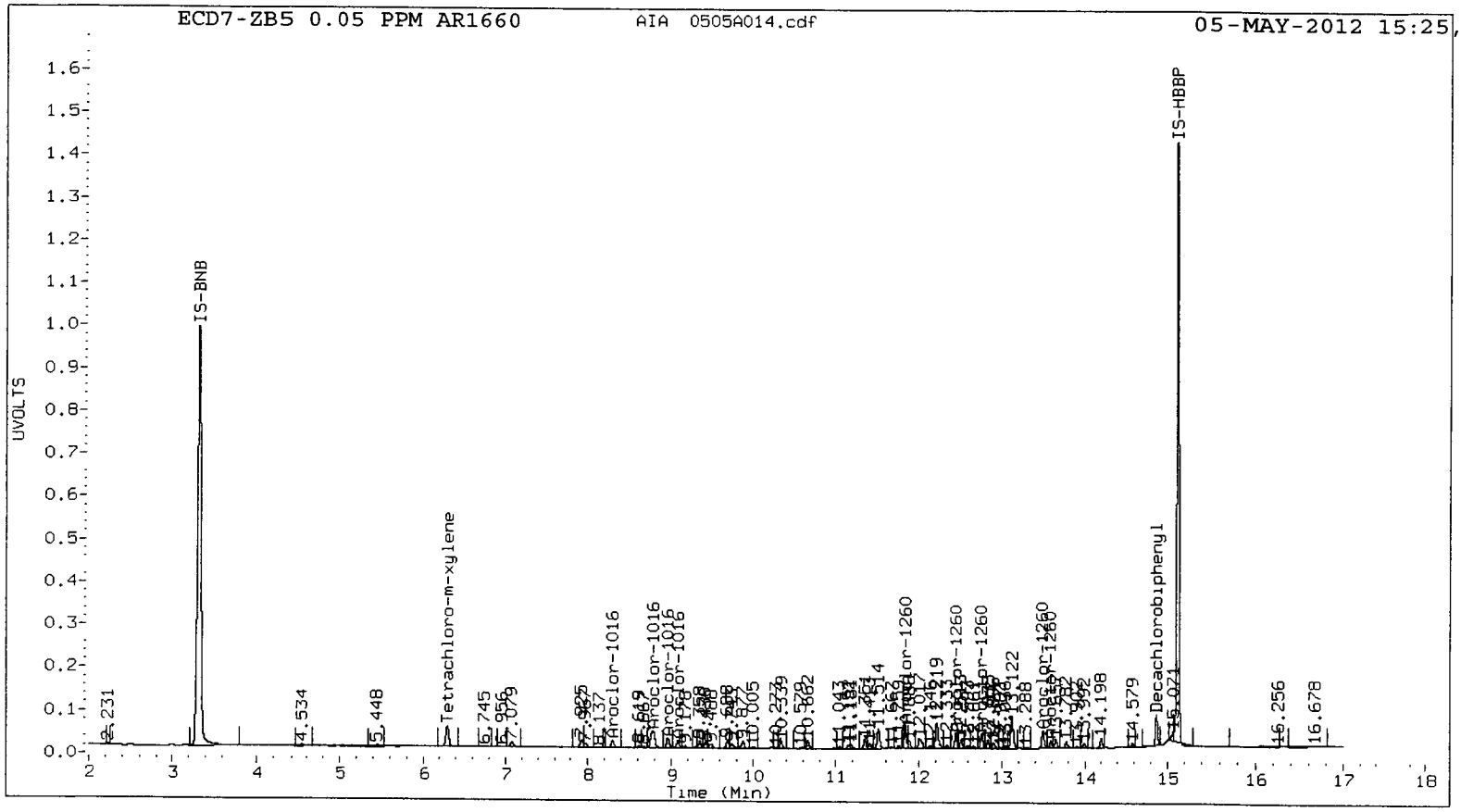
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.301	0.001	83943	50.0	1	8.551	0.001	247048	50.3
Aroclor-1016	2	8.788	0.001	286856	49.8	2	9.281	0.001	481018	49.4
Aroclor-1016	3	8.961	0.000	113804	50.6	3	9.706	0.000	128725	50.4
Aroclor-1016	4	9.088	0.000	81610	52.3	4	9.814	0.000	154040	50.7
Total Col1Ave (4 peaks):				50.7		Total Col2Ave (4 peaks):			50.2	RPD = 1
Corrected Ave (3 peaks):				50.1		Corrected Ave (3 peaks):			50.0	RPD = 0
Aroclor-1260	1	11.840	0.001	212065	51.0	1	12.742	0.001	324056	49.7
Aroclor-1260	2	12.445	0.000	138707	51.2	2	13.514	0.001	479456	49.1
Aroclor-1260	3	12.760	0.001	136920	50.8	3	14.009	0.000	325571	49.6
Aroclor-1260	4	13.493	0.000	170059	50.3	4	14.565	0.000	117648	48.6
Aroclor-1260	5	13.593	0.001	70265	51.9	NS	---			----
Total Col1Ave (5 peaks):				51.1		Total Col2Ave (4 peaks):			49.3	RPD = 4
Corrected Ave (4 peaks):				50.8		Corrected Ave (3 peaks):			49.1	RPD = 3

Total PCB Area Col1 (6.392 - 14.769) = 4112050 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 7018919 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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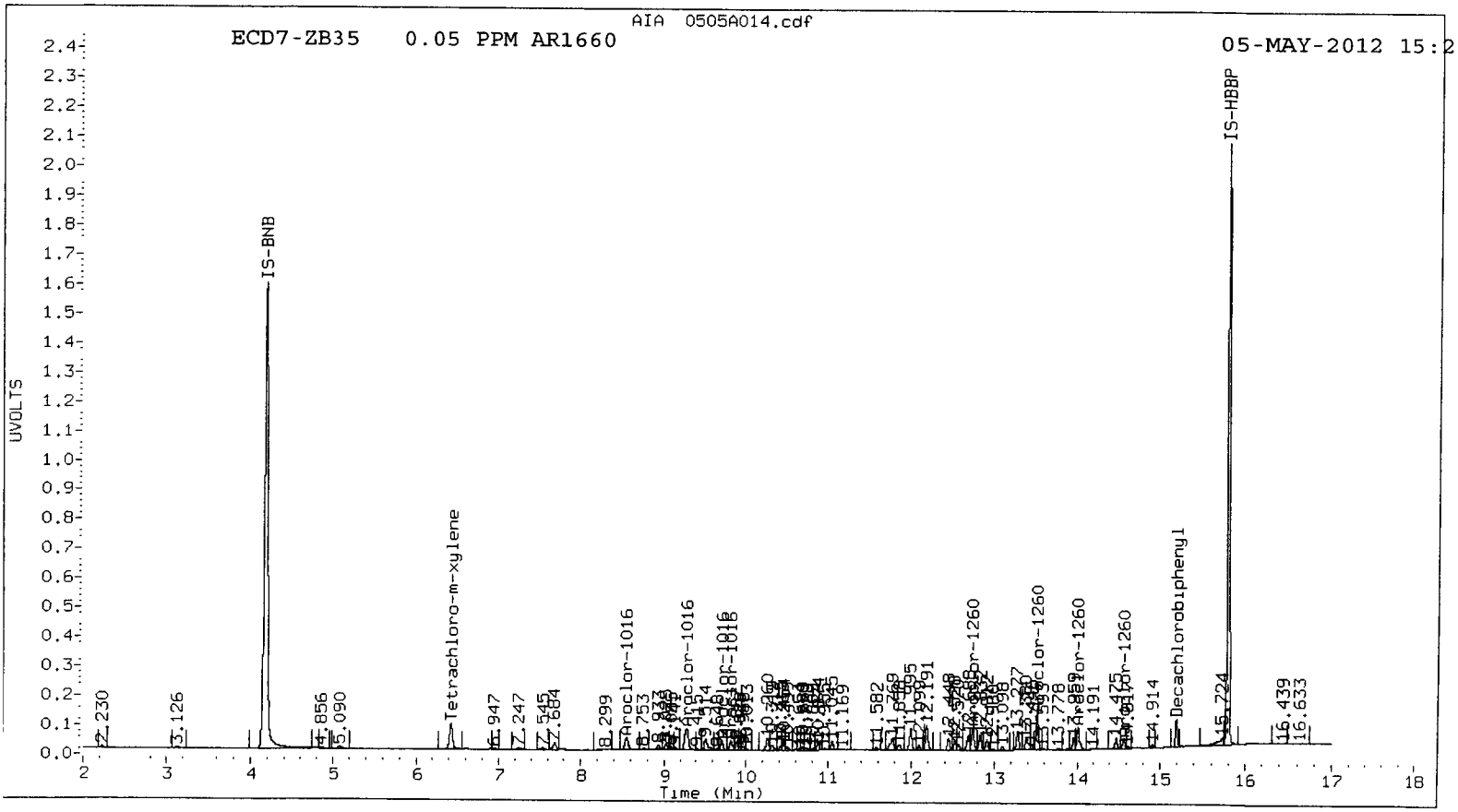
Decachlorobiphenyl
IS-HBBP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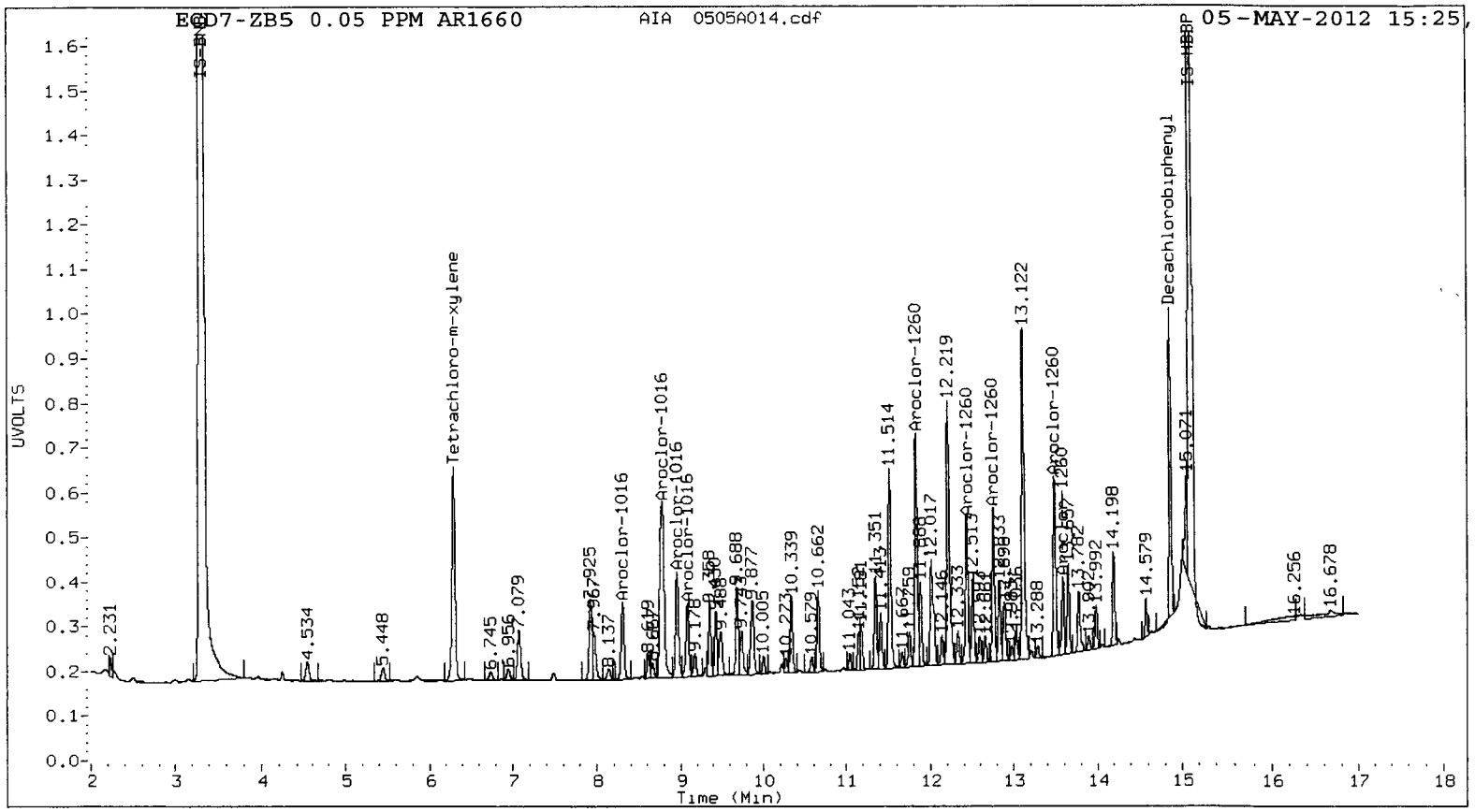
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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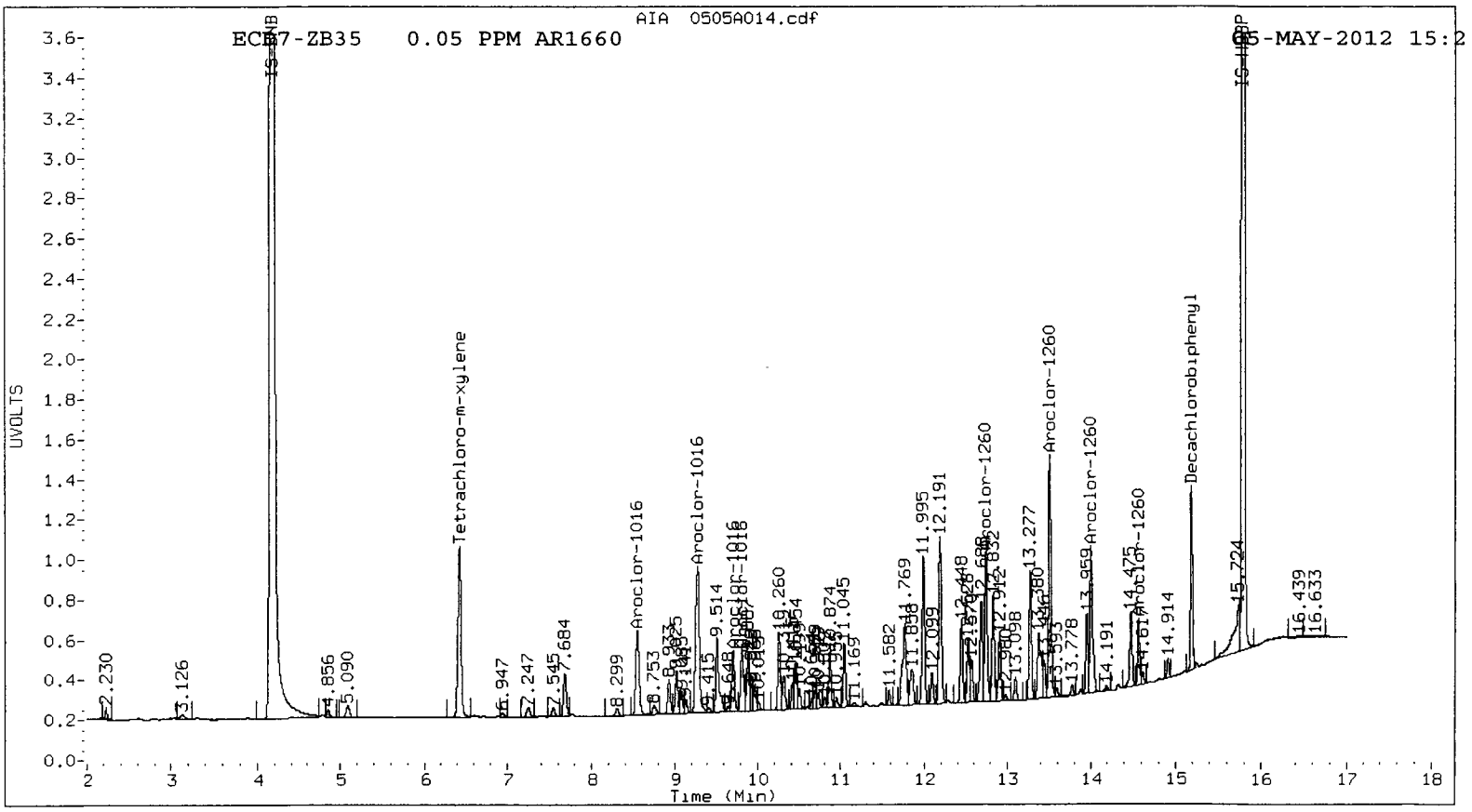
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
IS-HBBP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05-MAY-2012 15:2
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A015.d
Data file 2: 20120505.B/ical-2.b/0505A015.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1 PPM AR1660
Client ID:
Injection Date: 05-MAY-2012 15:46
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.294	0.002	5664825	6.421	0.002	8638170	82.8	78.4	5.5	Tetrachloro-m-xylen
14.871	0.002	4515226	15.200	0.002	5889740	76.7	74.8	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	207.0	195.9
Decachlorobiphenyl	191.7	187.0

05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5789041	-0.9
Hexabromobiphenyl	4847662	4842531	-0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8875438	-3.1
Hexabromobiphenyl	6845779	6866104	0.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.300	0.000	1573169	929.5	1	8.549	-0.001	3721615	819.9
Aroclor-1016	2	8.787	0.000	5442801	937.7	2	9.279	-0.001	8029877	875.7
Aroclor-1016	3	8.960	-0.001	2084676	919.6	3	9.705	-0.001	1999064	841.1
Aroclor-1016	4	9.088	0.000	1452612	923.6	4	9.814	-0.001	2186062	786.8
Total Col1Ave (4 peaks):				927.6		Total Col2Ave (4 peaks):			830.9	RPD = 11
Corrected Ave (3 peaks):				924.3		Corrected Ave (3 peaks):			815.9	RPD = 12
Aroclor-1260	1	11.839	0.000	3853021	908.9	1	12.741	0.000	5239532	837.3
Aroclor-1260	2	12.444	-0.001	2496741	904.6	2	13.514	0.000	8660357	905.0
Aroclor-1260	3	12.759	0.000	2530042	920.3	3	14.008	0.000	5521280	867.2
Aroclor-1260	4	13.492	-0.001	3225249	936.5	4	14.565	0.000	1968859	845.6
Aroclor-1260	5	13.592	0.000	1229863	891.9	NS	---			----
Total Col1Ave (5 peaks):				912.4		Total Col2Ave (4 peaks):			863.8	RPD = 5
Corrected Ave (4 peaks):				906.4		Corrected Ave (3 peaks):			850.0	RPD = 6

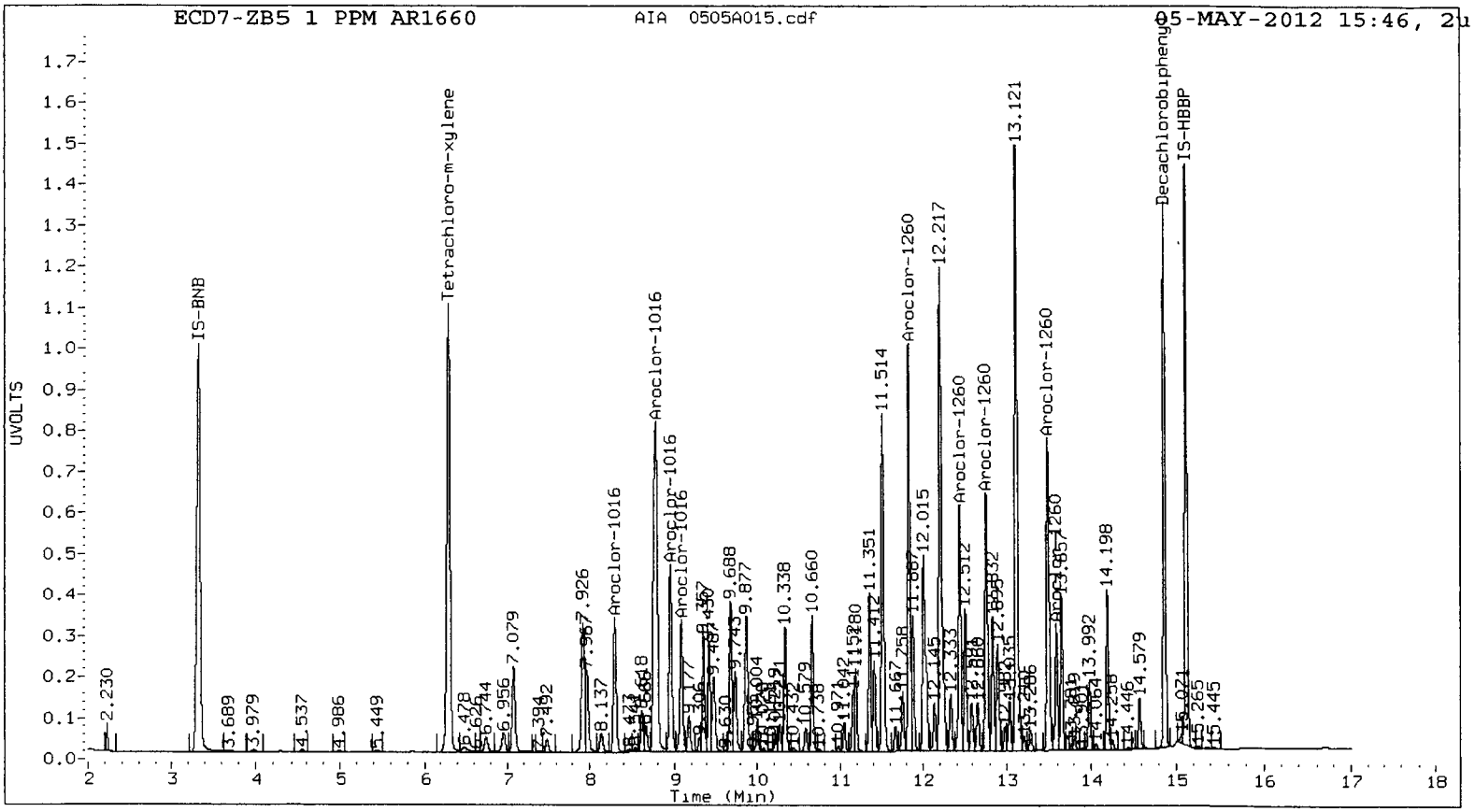
Total PCB Area Col1 (6.392 - 14.769) = 75698427 Col1 Total PCB = 1.9 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 107870047 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR61:81057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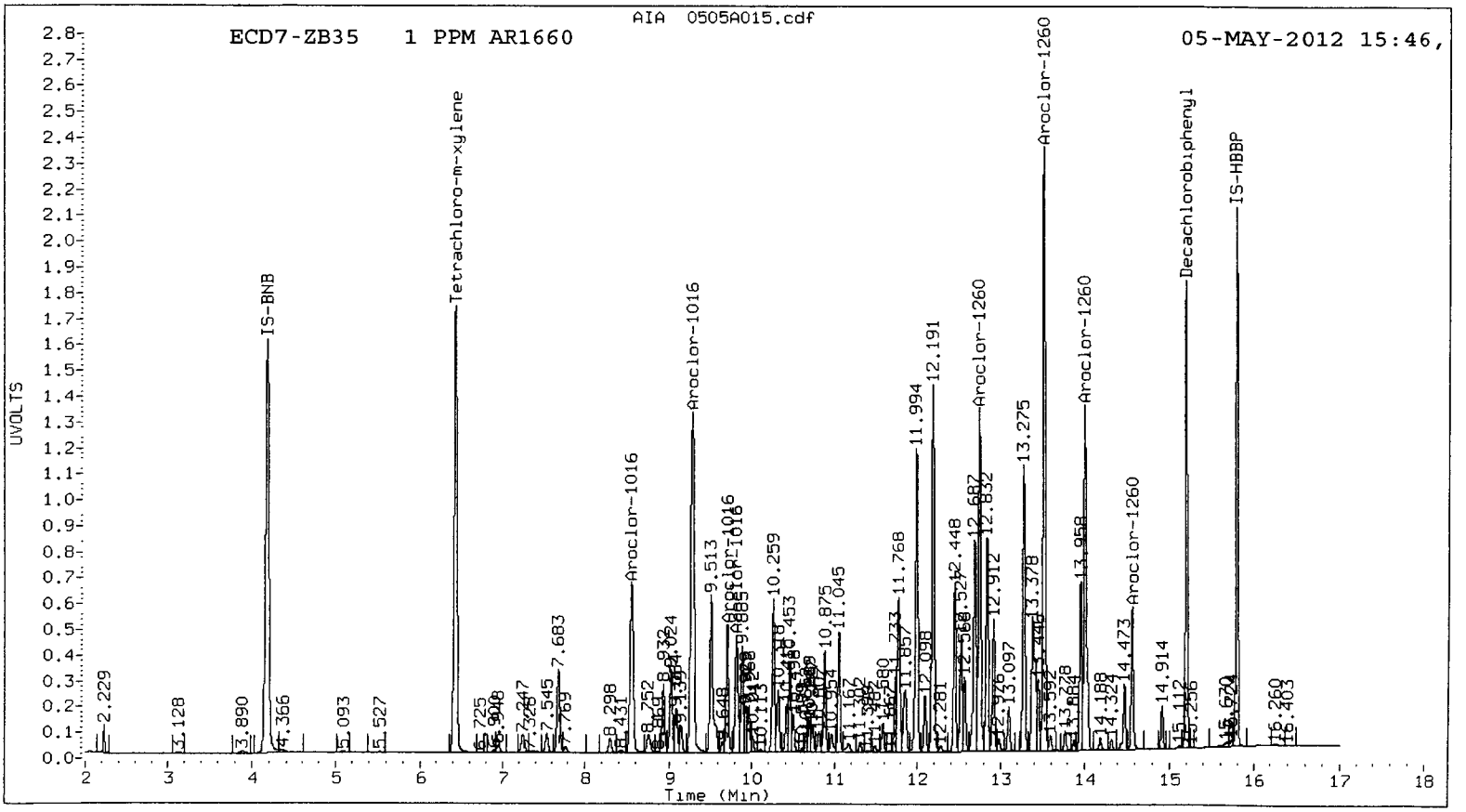
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
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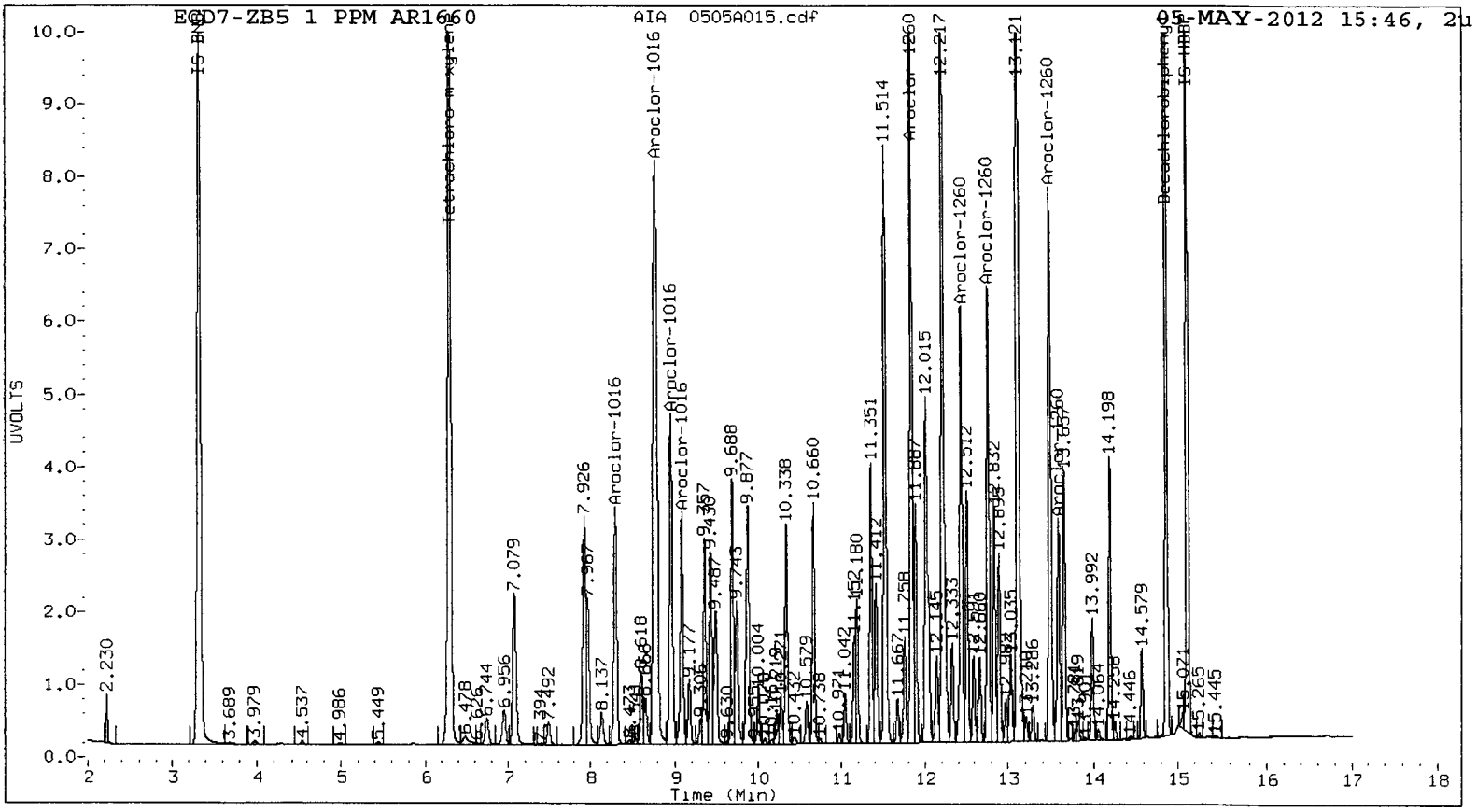
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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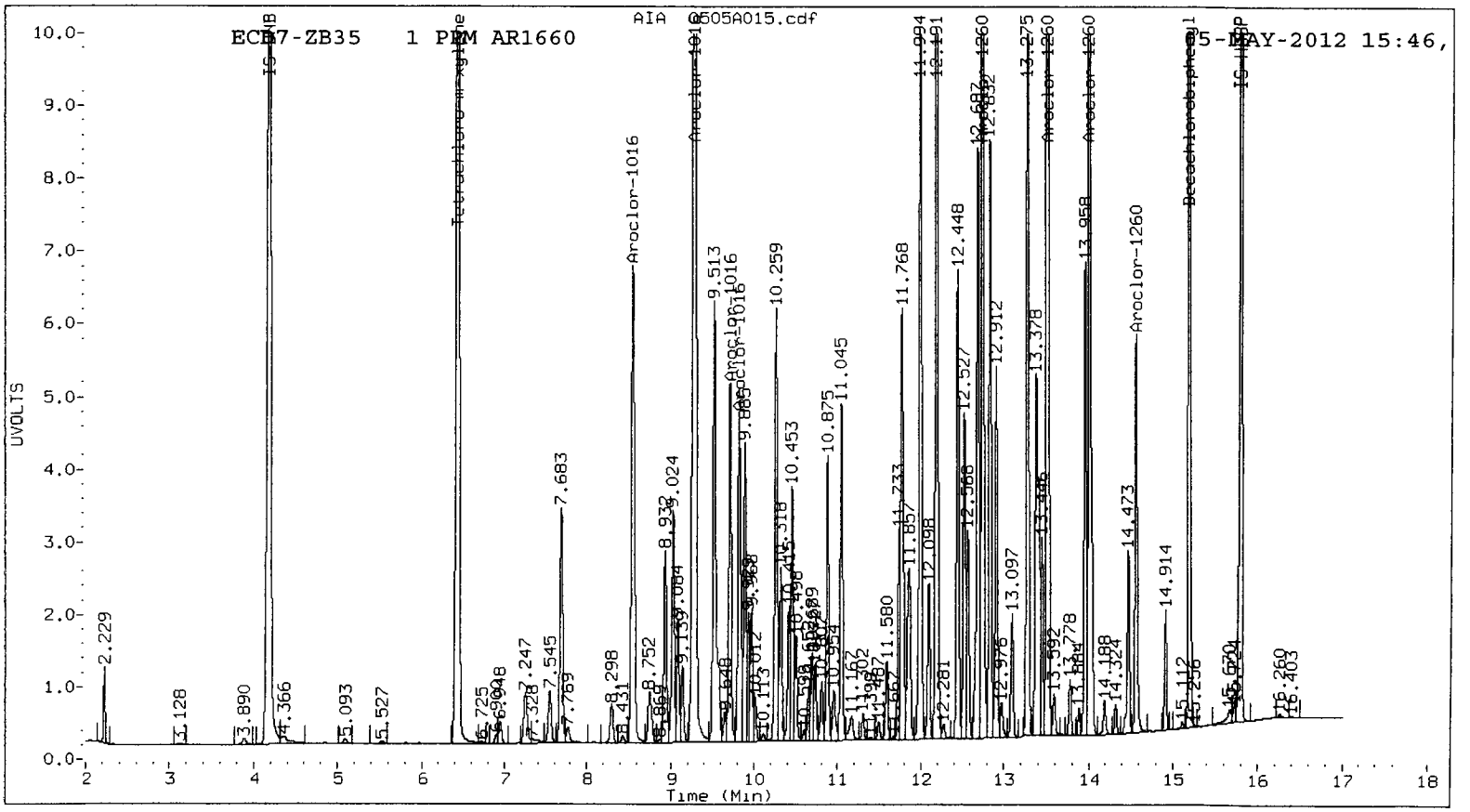
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Becachlorobiphenyl
IS HBBP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UVOLTS
Time (Min)
IS HBB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Becachlorobiphenyl
IS HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A016.d
Data file 2: 20120505.B/ical-2.b/0505A016.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1 PPM AR1660
Client ID:
Injection Date: 05-MAY-2012 16:07
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.294	0.002	573604	6.422	0.003	948069	8.3	8.3	0.1	Tetrachloro-m-xylen
14.871	0.002	501411	15.199	0.001	664919	8.5	8.3	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	20.8	20.8
Decachlorobiphenyl	21.2	20.8

05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5827040	-0.3
Hexabromobiphenyl	4847662	4857527	0.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9078945	-0.8
Hexabromobiphenyl	6845779	6921355	1.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.300	0.000	180914	106.2	1	8.549	-0.001	494318	105.1
Aroclor-1016	2	8.788	0.001	620220	106.2	2	9.280	0.000	988258	104.2
Aroclor-1016	3	8.961	0.000	243319	106.6	3	9.707	0.000	260816	105.7
Aroclor-1016	4	9.089	0.001	165727	104.7	4	9.814	0.000	304911	105.7
Total Col1Ave (4 peaks):					105.9	Total Col2Ave (4 peaks):				105.2 RPD = 1
Corrected Ave (3 peaks):					105.7	Corrected Ave (3 peaks):				105.0 RPD = 1
Aroclor-1260	1	11.840	0.000	449350	105.7	1	12.742	0.001	651908	102.7
Aroclor-1260	2	12.444	0.000	294861	106.5	2	13.514	0.001	994455	102.5
Aroclor-1260	3	12.759	0.000	293103	106.3	3	14.008	0.000	667796	103.2
Aroclor-1260	4	13.493	0.000	365673	105.8	4	14.564	-0.001	245107	103.5
Aroclor-1260	5	13.593	0.001	149280	107.9	NS	---			----
Total Col1Ave (5 peaks):					106.4	Total Col2Ave (4 peaks):				103.0 RPD = 3
Corrected Ave (4 peaks):					106.1	Corrected Ave (3 peaks):				102.8 RPD = 3

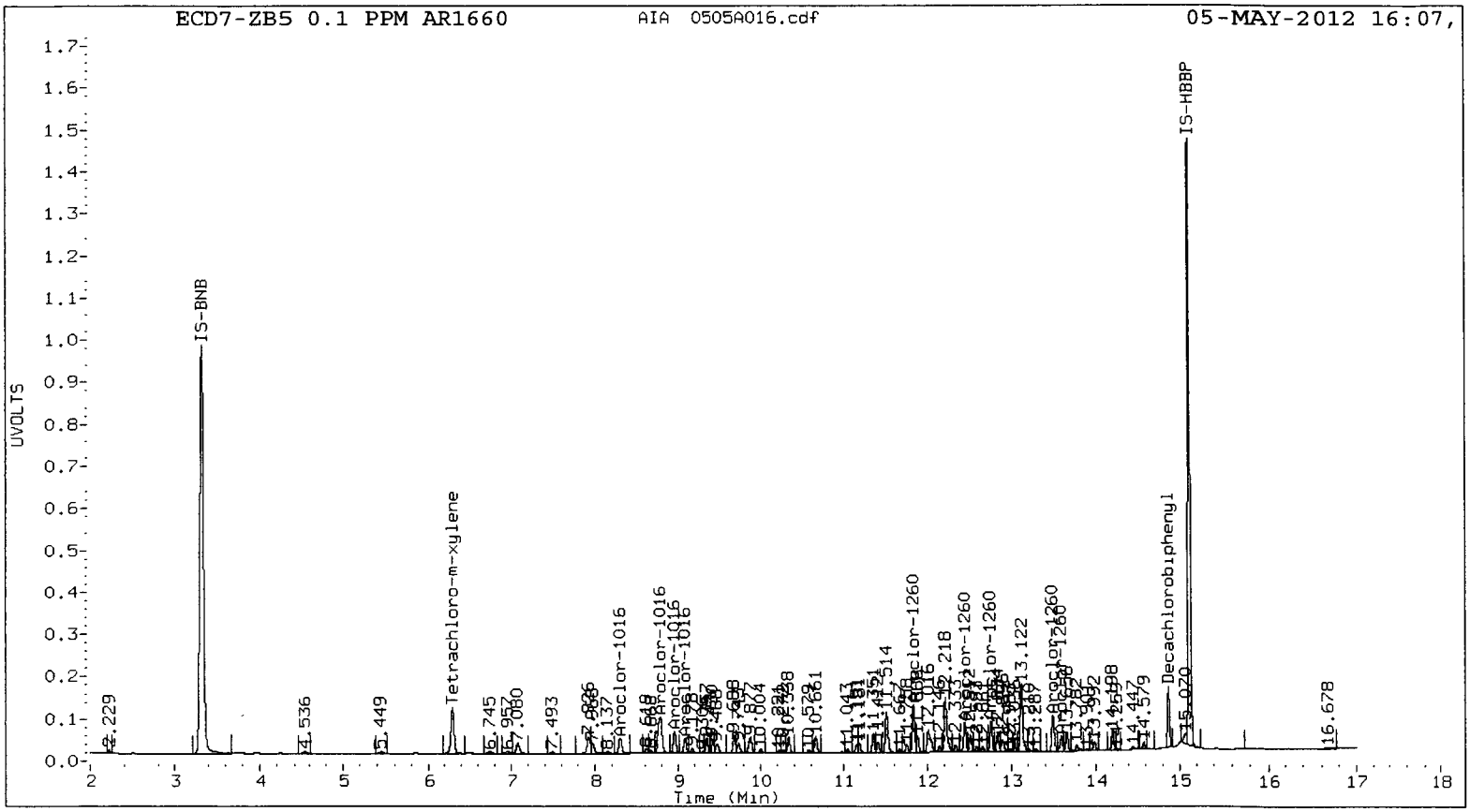
Total PCB Area Col1 (6.392 - 14.769) = 8852651 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 14194322 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR01:01972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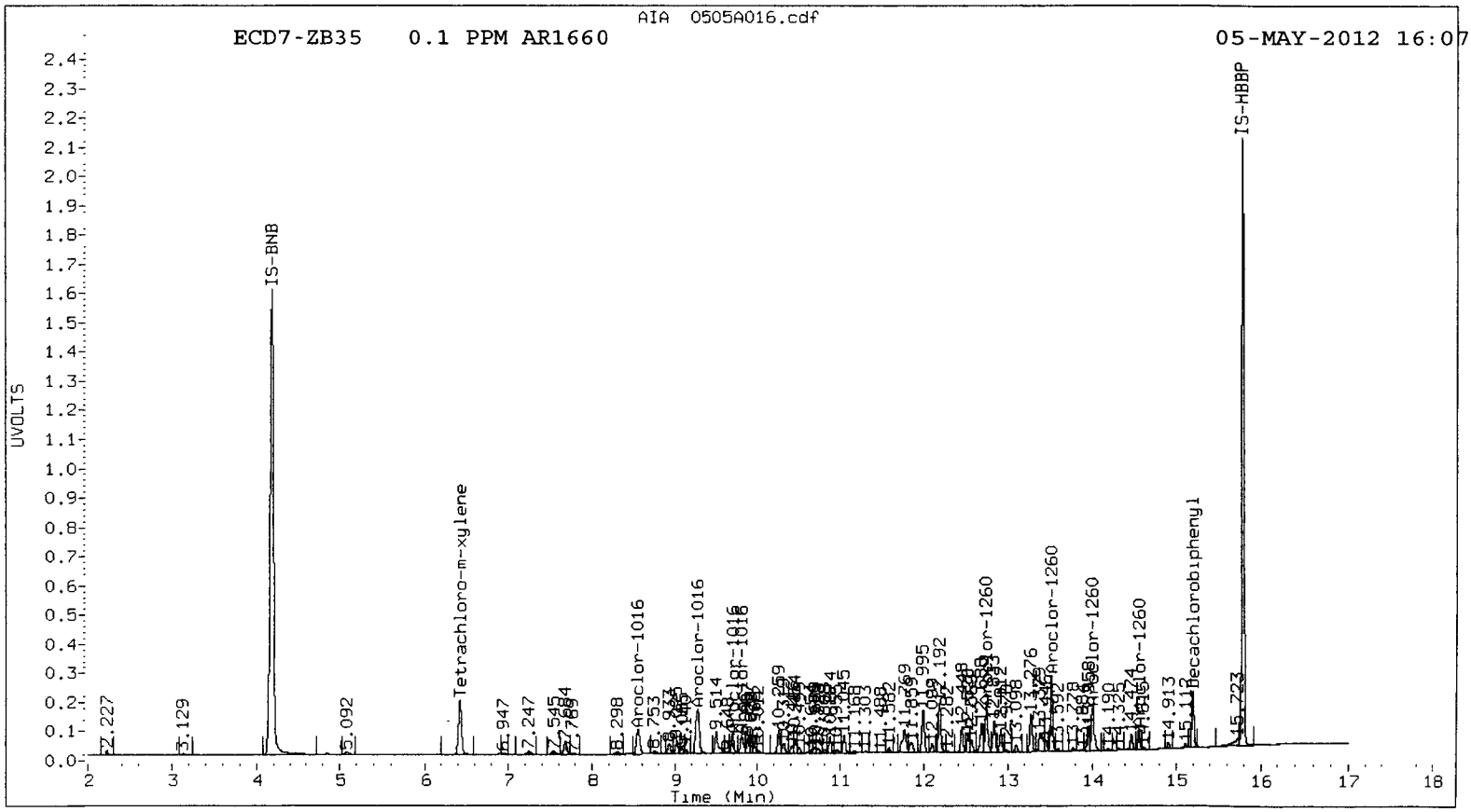
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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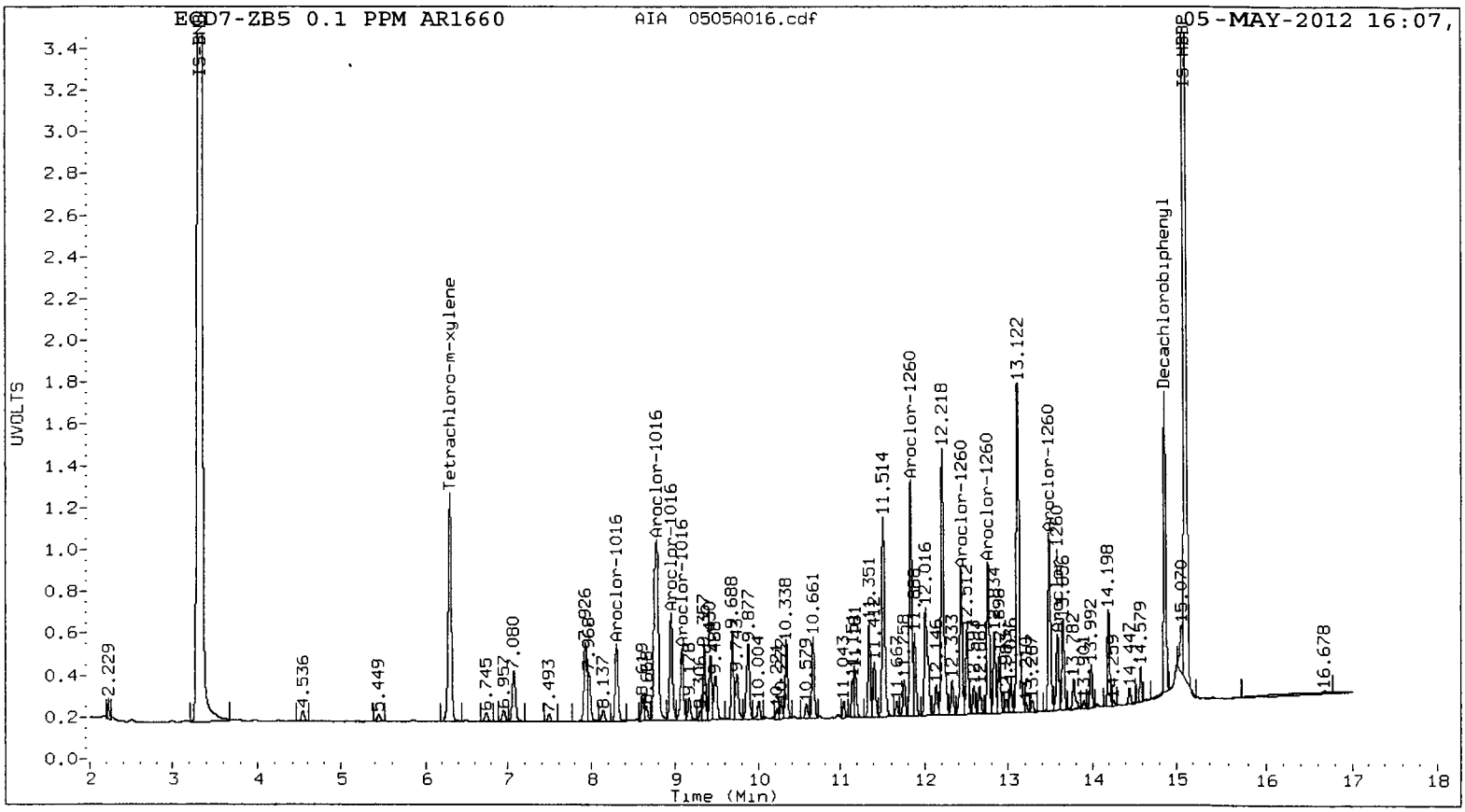
05-MAY-2012 16:07
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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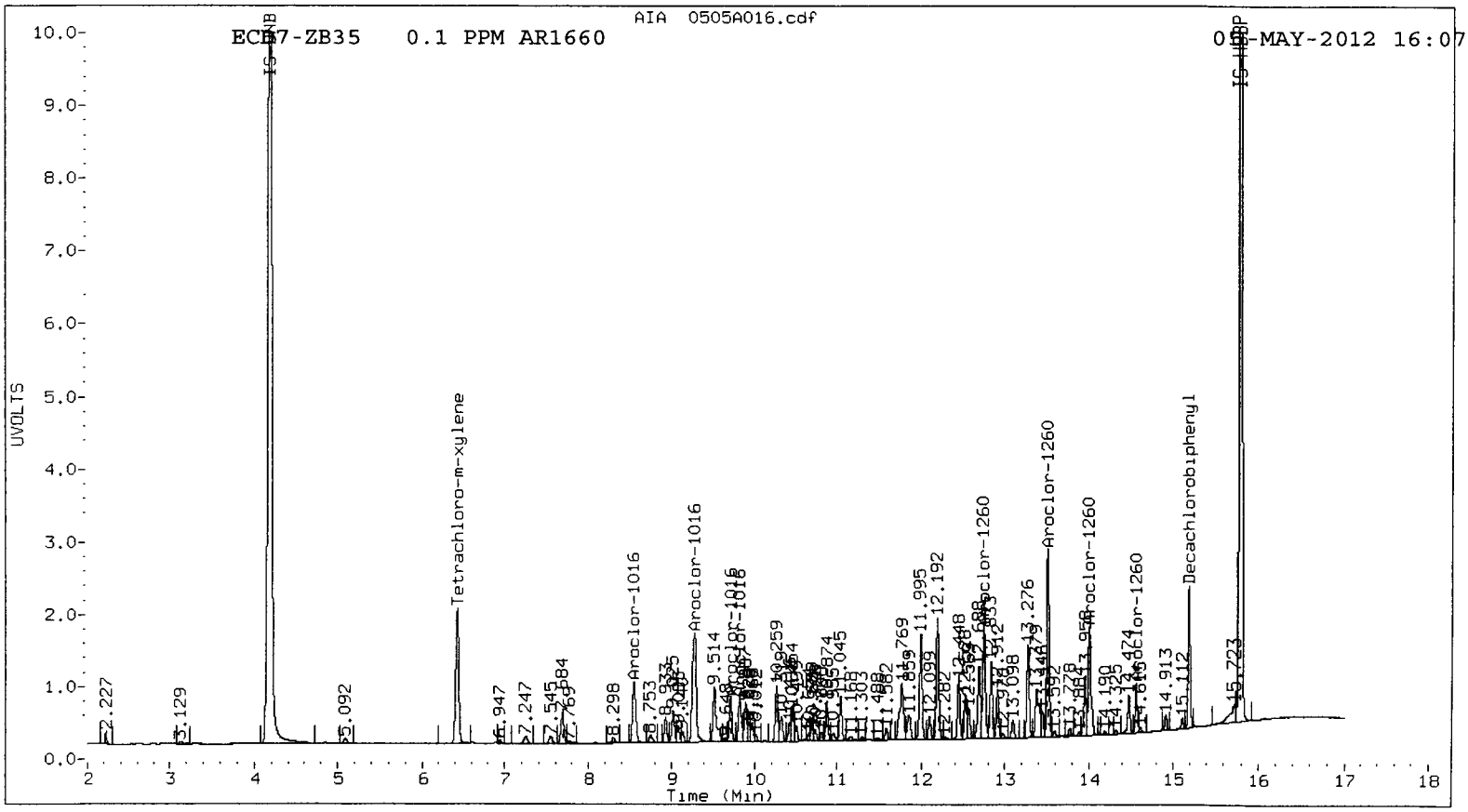
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260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ECD7-ZB35 0.1 PPM AR1660
05-MAY-2012 16:07
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A017.d
Data file 2: 20120505.B/ical-2.b/0505A017.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5 PPM AR1660
Client ID:
Injection Date: 05-MAY-2012 16:28
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.295	0.003	2841355	6.422	0.003	4386055	42.0	39.2	6.8	Tetrachloro-m-xylen
14.871	0.002	2277891	15.200	0.002	2981860	39.0	38.1	2.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.0	98.1
Decachlorobiphenyl	97.4	95.3

JL 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5722910	-2.0
Hexabromobiphenyl	4847662	4807520	-0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8943986	-2.3
Hexabromobiphenyl	6845779	6823780	-0.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.300	0.000	812324	485.5	1	8.550	0.000	1999750	441.7
Aroclor-1016	2	8.787	0.000	2813453	490.3	2	9.280	0.000	4192848	456.7
Aroclor-1016	3	8.961	0.000	1080260	482.1	3	9.706	0.000	1064410	447.3
Aroclor-1016	4	9.088	0.000	744870	479.1	4	9.814	0.000	1181698	428.0
Total Col1Ave (4 peaks):				484.2		Total Col2Ave (4 peaks):			443.4	RPD = 9
Corrected Ave (3 peaks):				482.2		Corrected Ave (3 peaks):			439.0	RPD = 9
Aroclor-1260	1	11.840	0.000	1986087	471.9	1	12.741	0.000	2710202	442.8
Aroclor-1260	2	12.444	0.000	1297935	473.7	2	13.514	0.000	4355245	462.0
Aroclor-1260	3	12.759	0.000	1310397	480.1	3	14.008	0.000	2822579	451.1
Aroclor-1260	4	13.492	0.000	1646995	481.7	4	14.565	0.000	1042429	454.6
Aroclor-1260	5	13.592	0.000	641438	468.5	NS	---			----
Total Col1Ave (5 peaks):				475.2		Total Col2Ave (4 peaks):			452.6	RPD = 5
Corrected Ave (4 peaks):				473.6		Corrected Ave (3 peaks):			449.5	RPD = 5

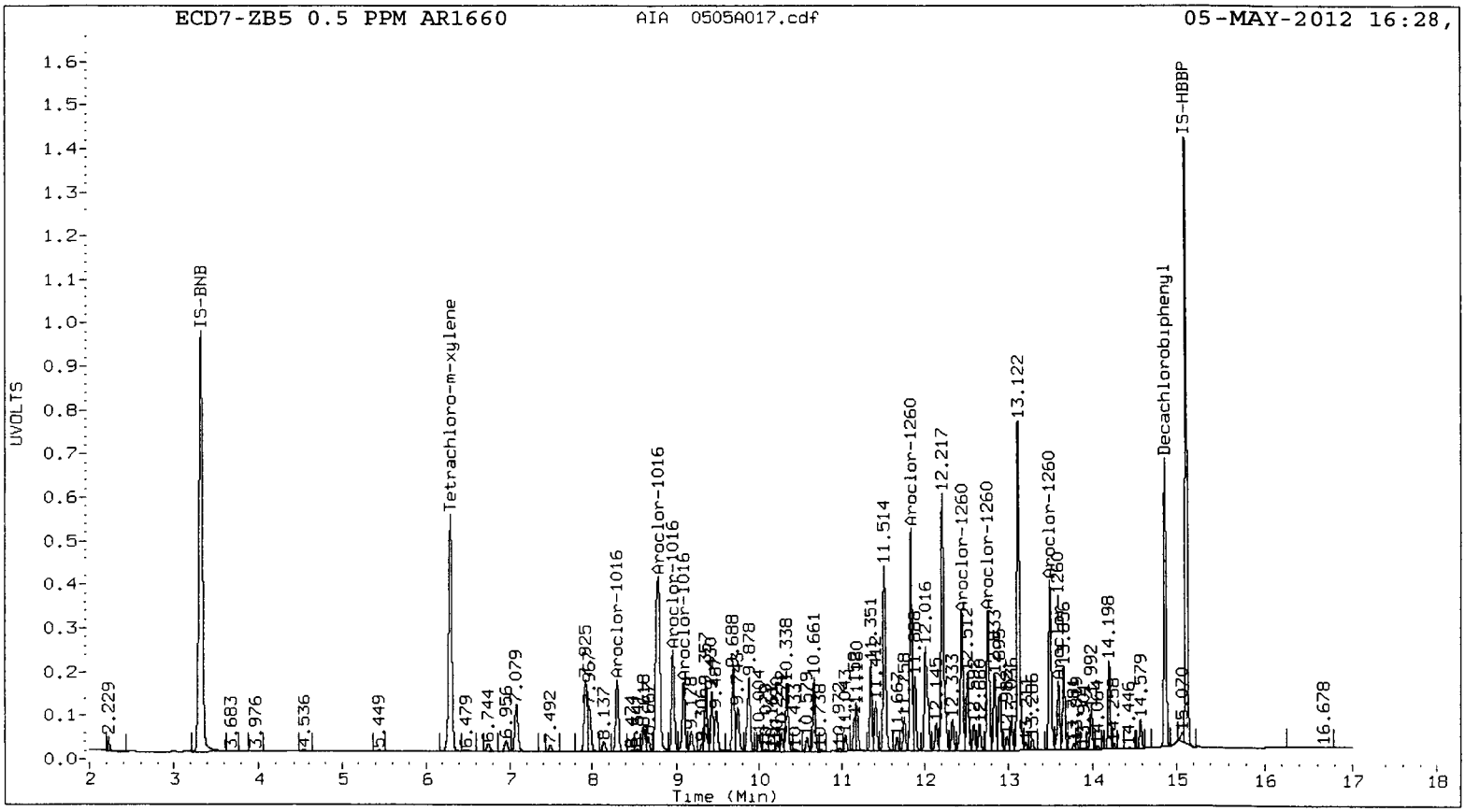
Total PCB Area Col1 (6.392 - 14.769) = 39155578 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 57007760 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR81:01977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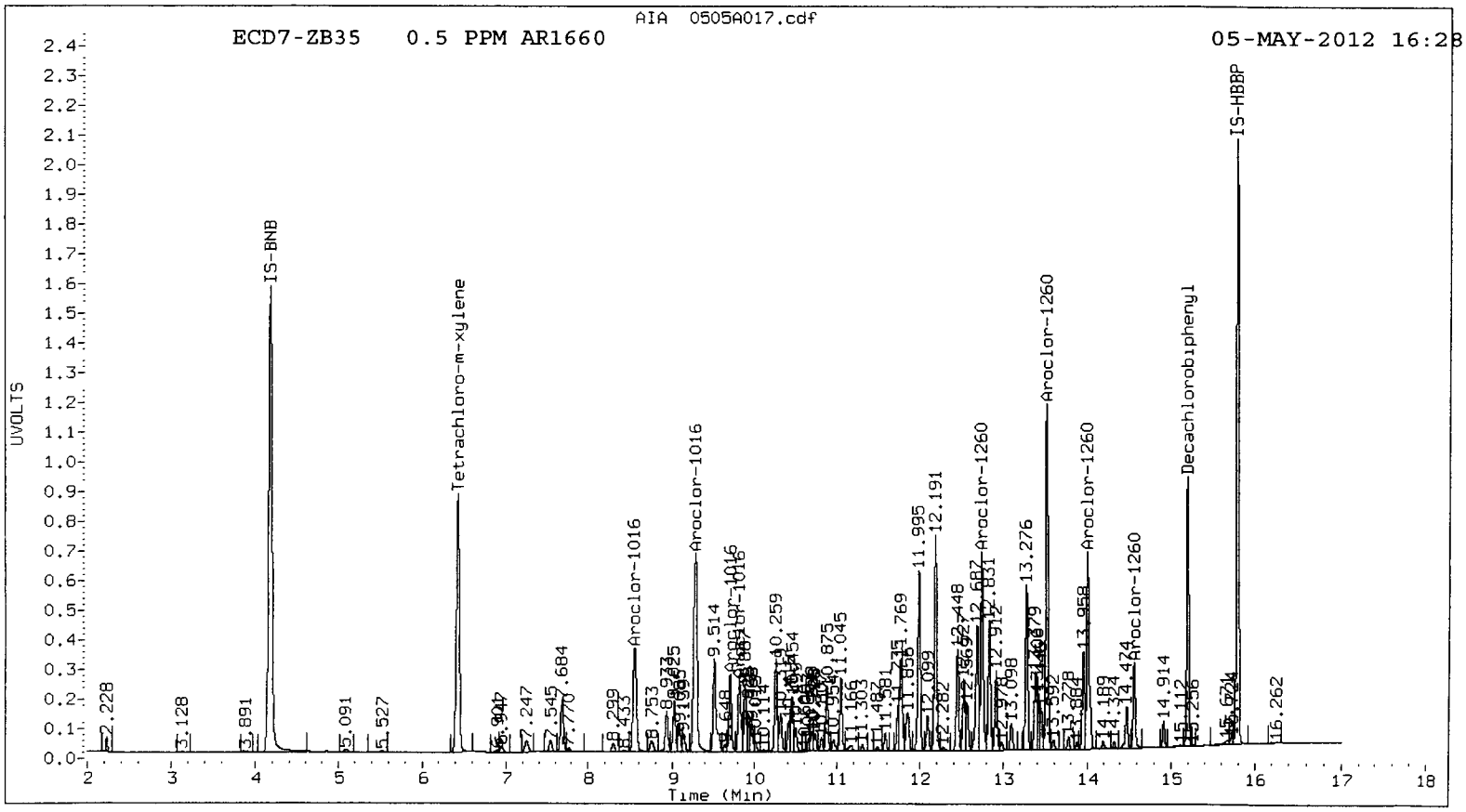
05-MAY-2012 16:28,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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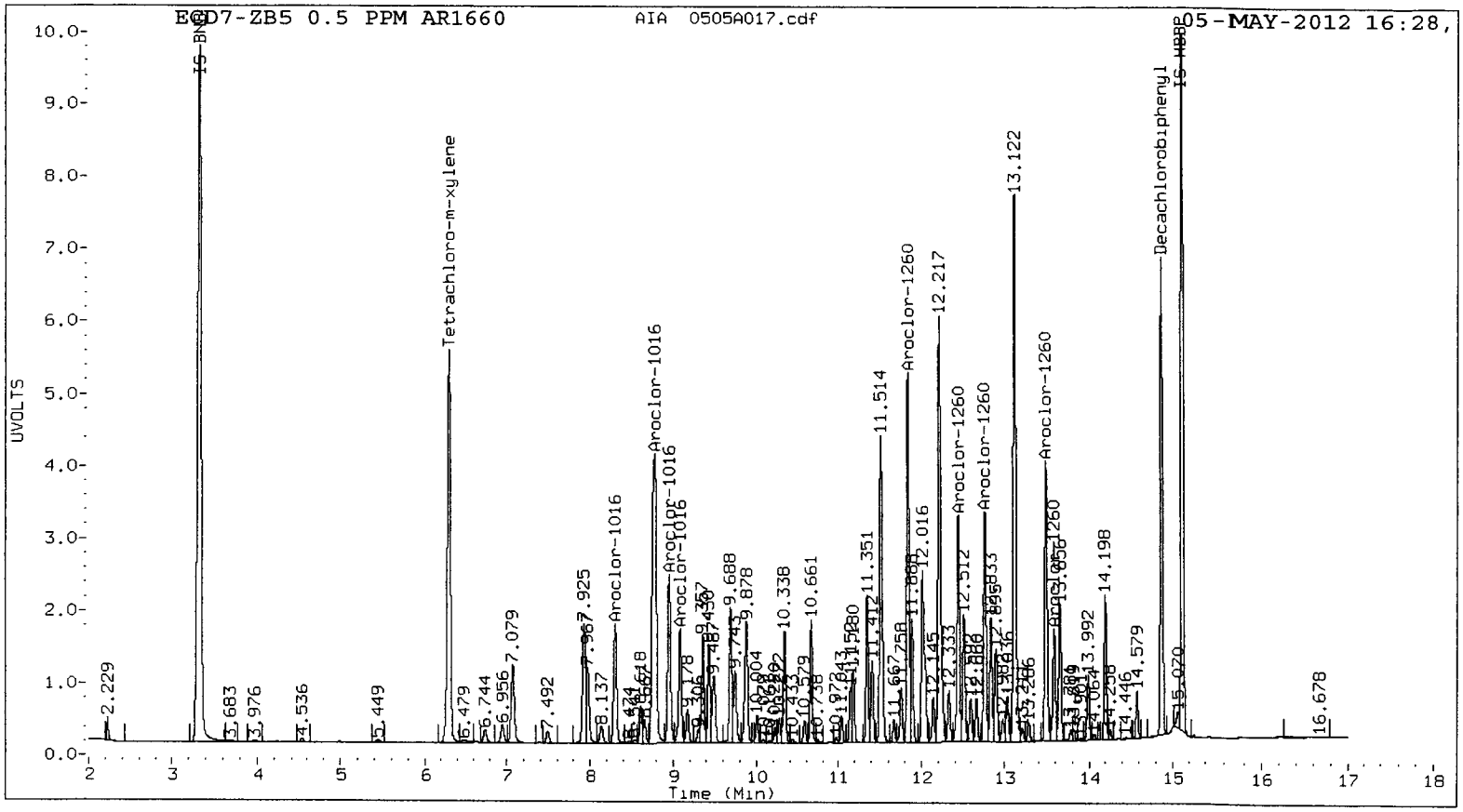
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

UR81 : 01978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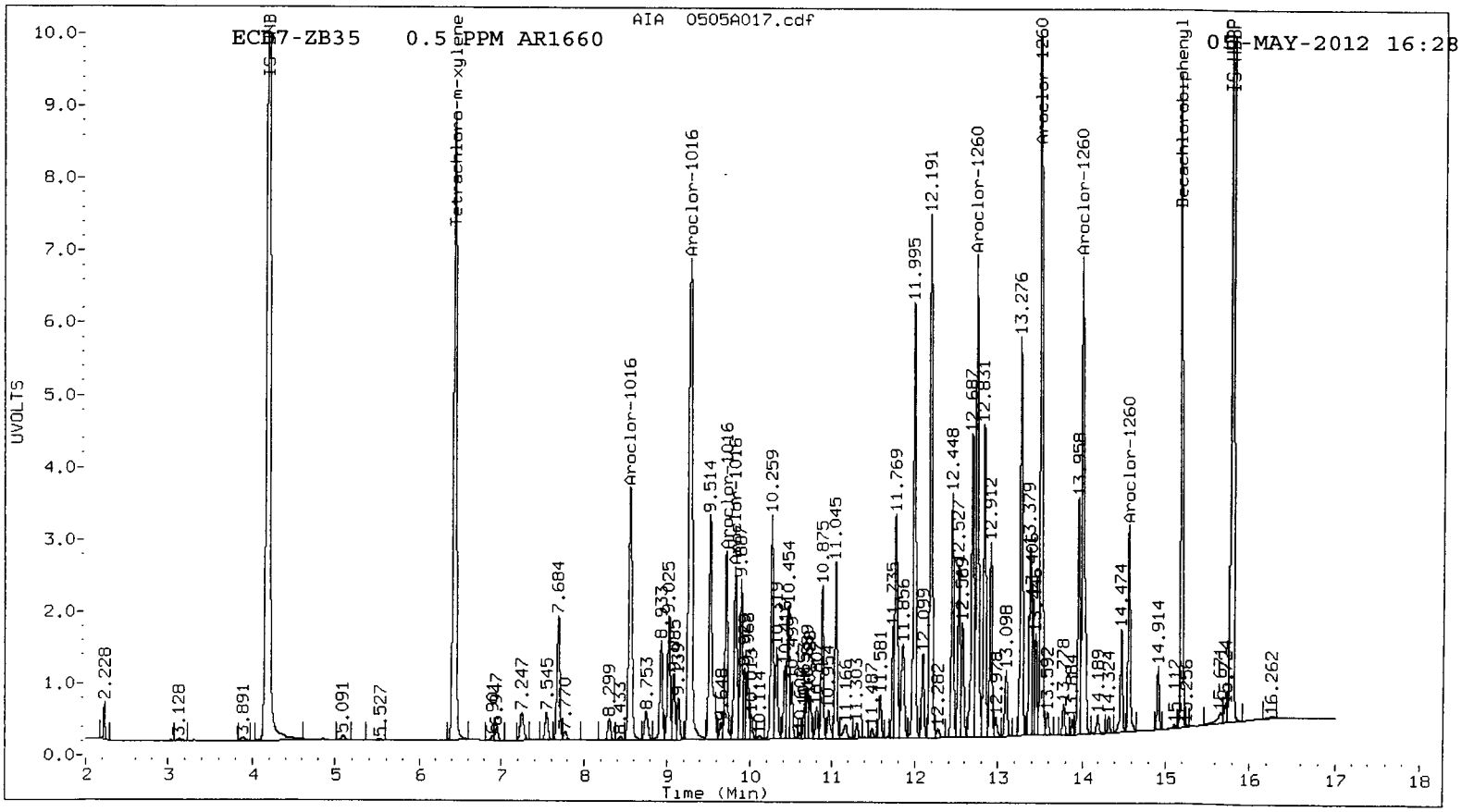
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260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05-MAY-2012 16:28
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A018.d
Data file 2: 20120505.B/ical-2.b/0505A018.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 05-MAY-2012 16:49
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.292	0.000	1365929	6.419	0.000	2172704	20.4	19.9	2.3	Tetrachloro-m-xylen
14.870	0.000	1130432	15.199	0.001	1462966	19.6	19.1	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.9	49.7
Decachlorobiphenyl	49.0	47.6

J 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5675100	-2.9
Hexabromobiphenyl	4847662	4740399	-2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8736979	-4.6
Hexabromobiphenyl	6845779	6696727	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1242	1	8.297	0.000	314437	250.0	1	8.548	0.000	810963	250.0
Aroclor-1242	2	8.784	0.000	1076782	250.0	2	9.277	0.000	1657552	250.0
Aroclor-1242	3	8.958	0.000	419632	250.0	3	9.704	0.000	438317	250.0
Aroclor-1242	4	10.575	0.000	383251	250.0	4	11.167	0.000	680935	250.0

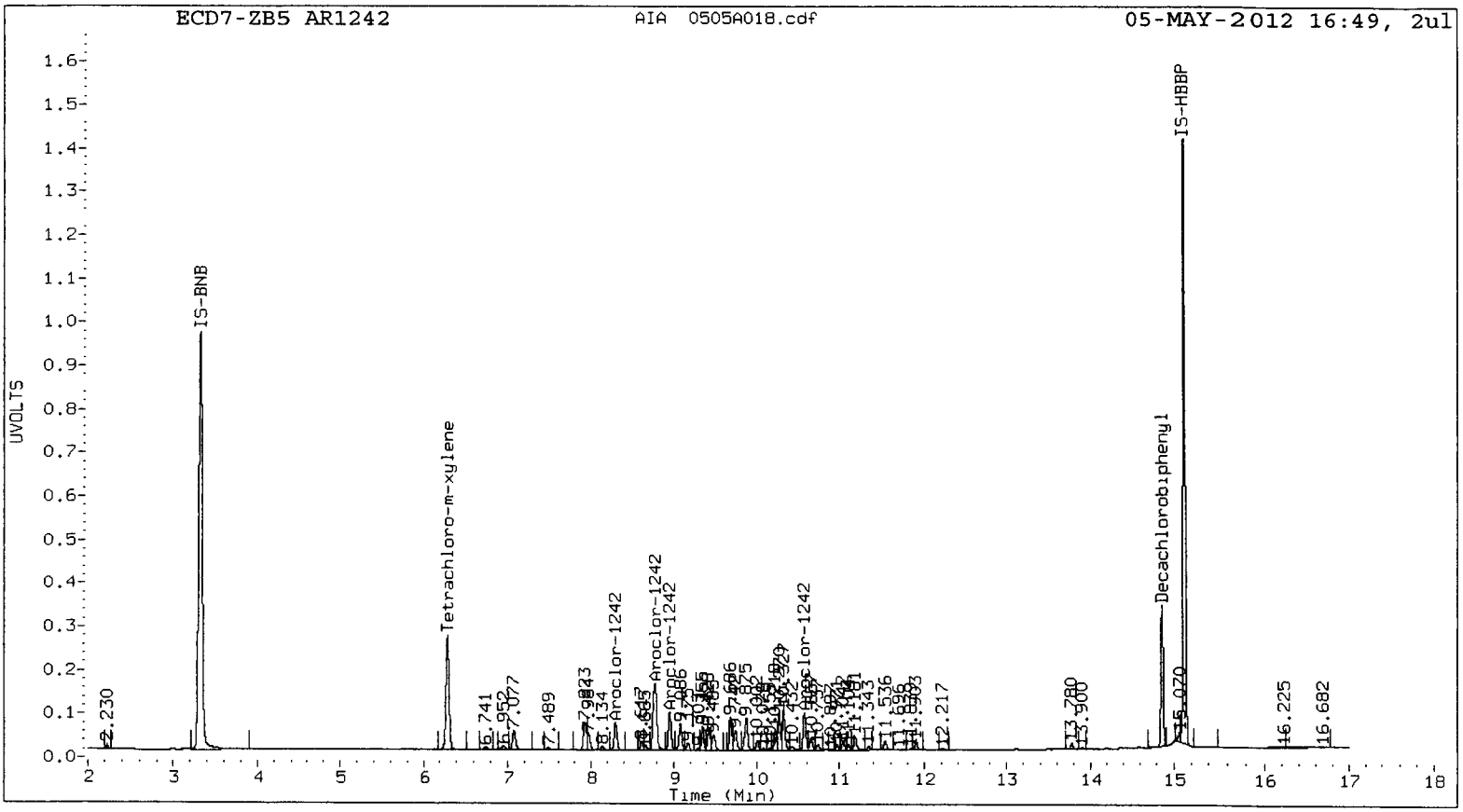
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (6.392 - 14.769) = 7303141 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 12310056 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR01:01991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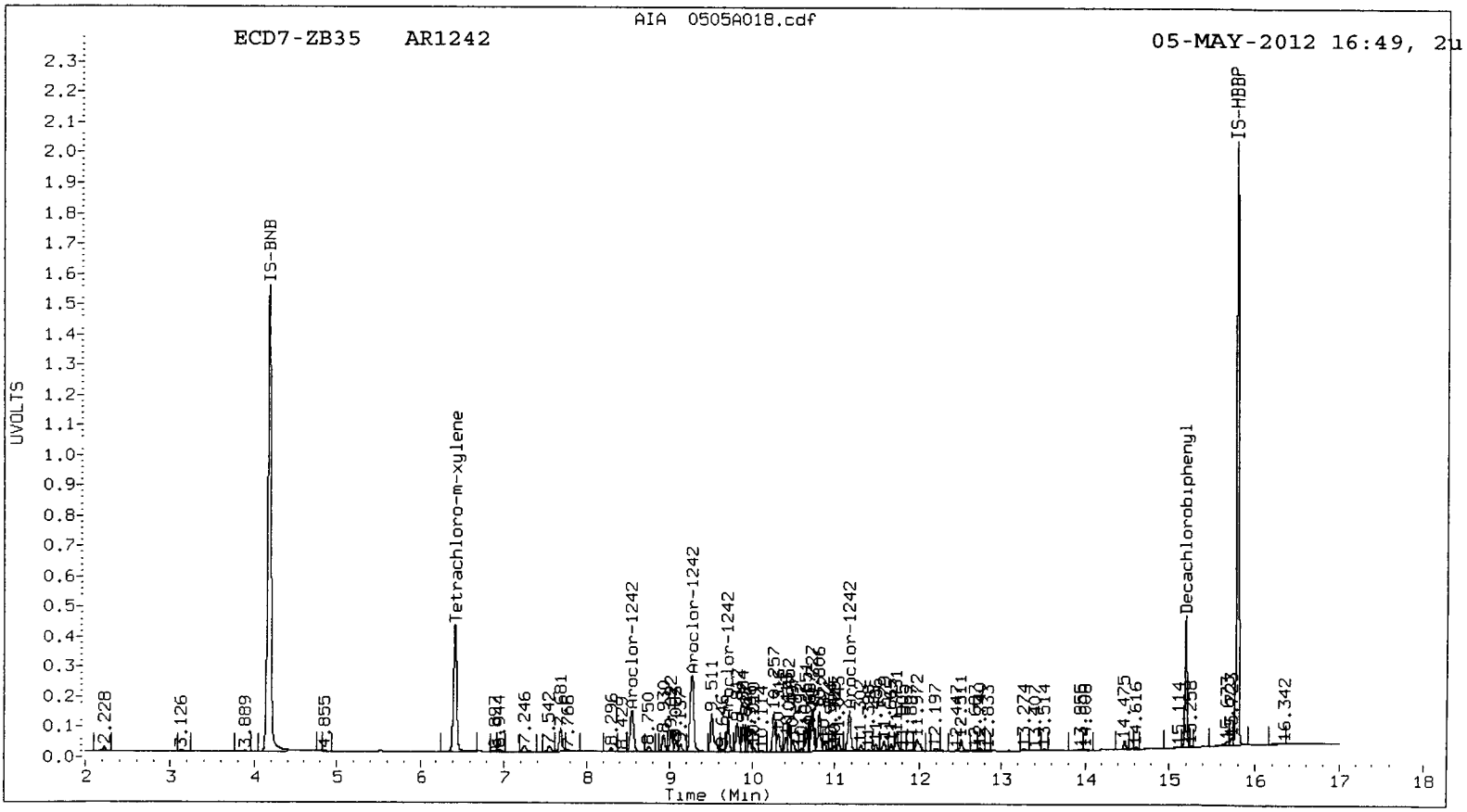
05-MAY-2012 16:49, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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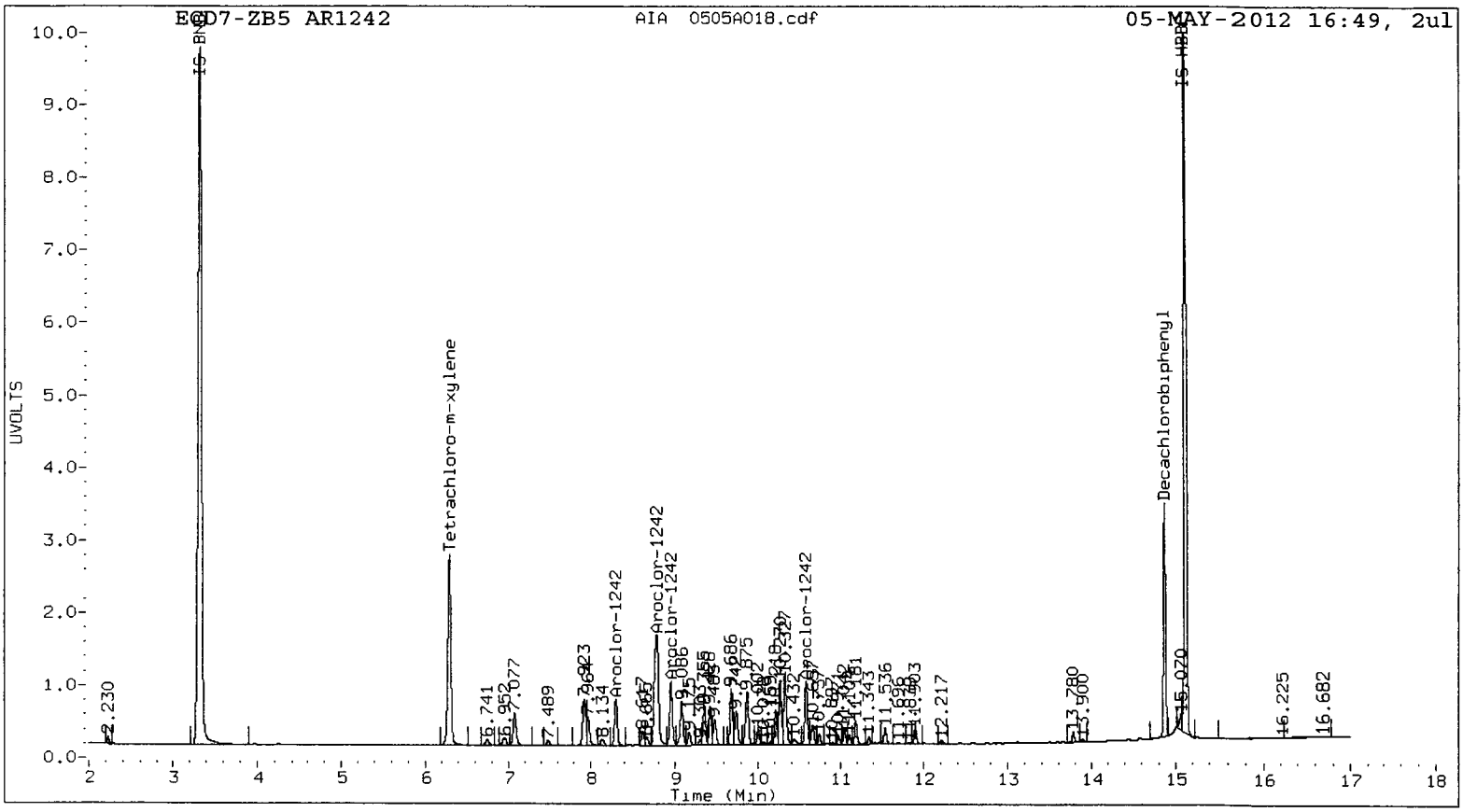
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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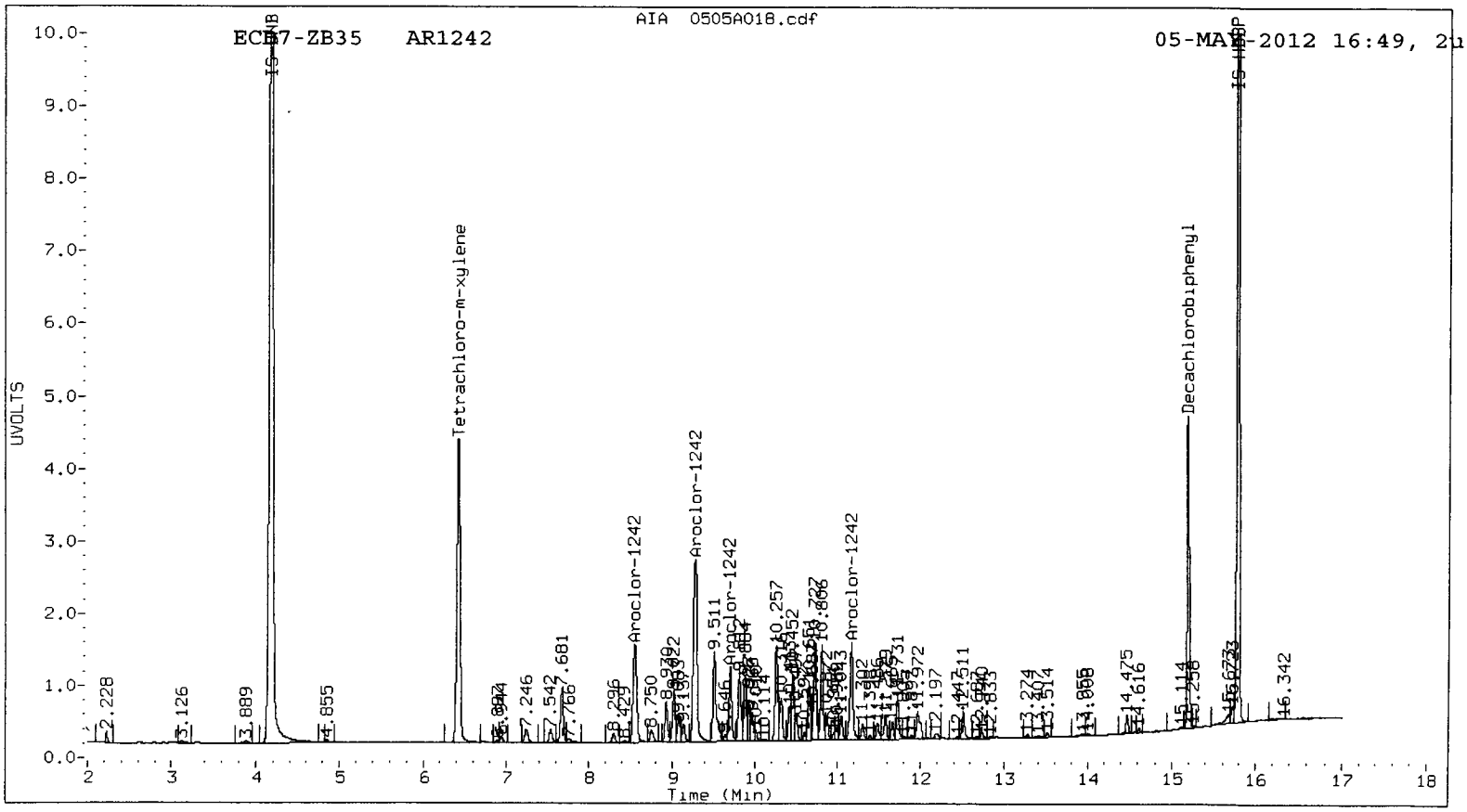
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A019.d
Data file 2: 20120505.B/ical-2.b/0505A019.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 05-MAY-2012 17:09
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.292	0.000	1400179	6.420	0.001	2248532	20.3	19.9	2.2	Tetrachloro-m-xylen
14.870	0.001	1180281	15.199	0.001	1525208	19.8	19.2	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.8	49.7
Decachlorobiphenyl	49.6	48.0

JL 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5828769	-0.2
Hexabromobiphenyl	4847662	4895491	1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9041877	-1.3
Hexabromobiphenyl	6845779	6930163	1.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	9.356	0.000	443025	250.0	1	9.812	0.000	796058	250.0
Aroclor-1248	2	9.686	0.000	541544	250.0	2	10.258	0.000	876276	250.0
Aroclor-1248	3	10.328	0.000	805752	250.0	3	10.806	0.000	890191	250.0
Aroclor-1248	4	10.575	0.000	623935	250.0	4	11.167	0.000	1146460	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

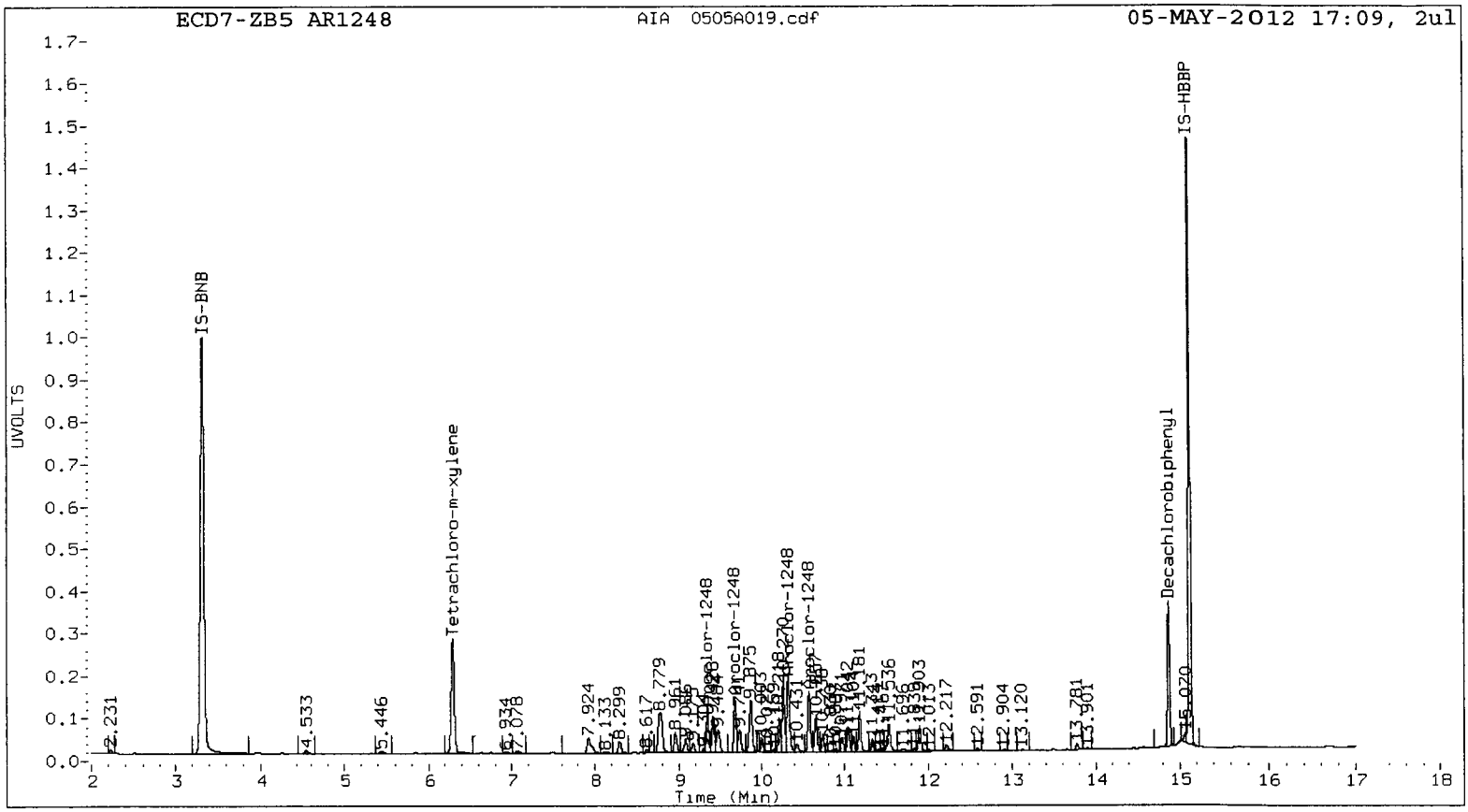
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

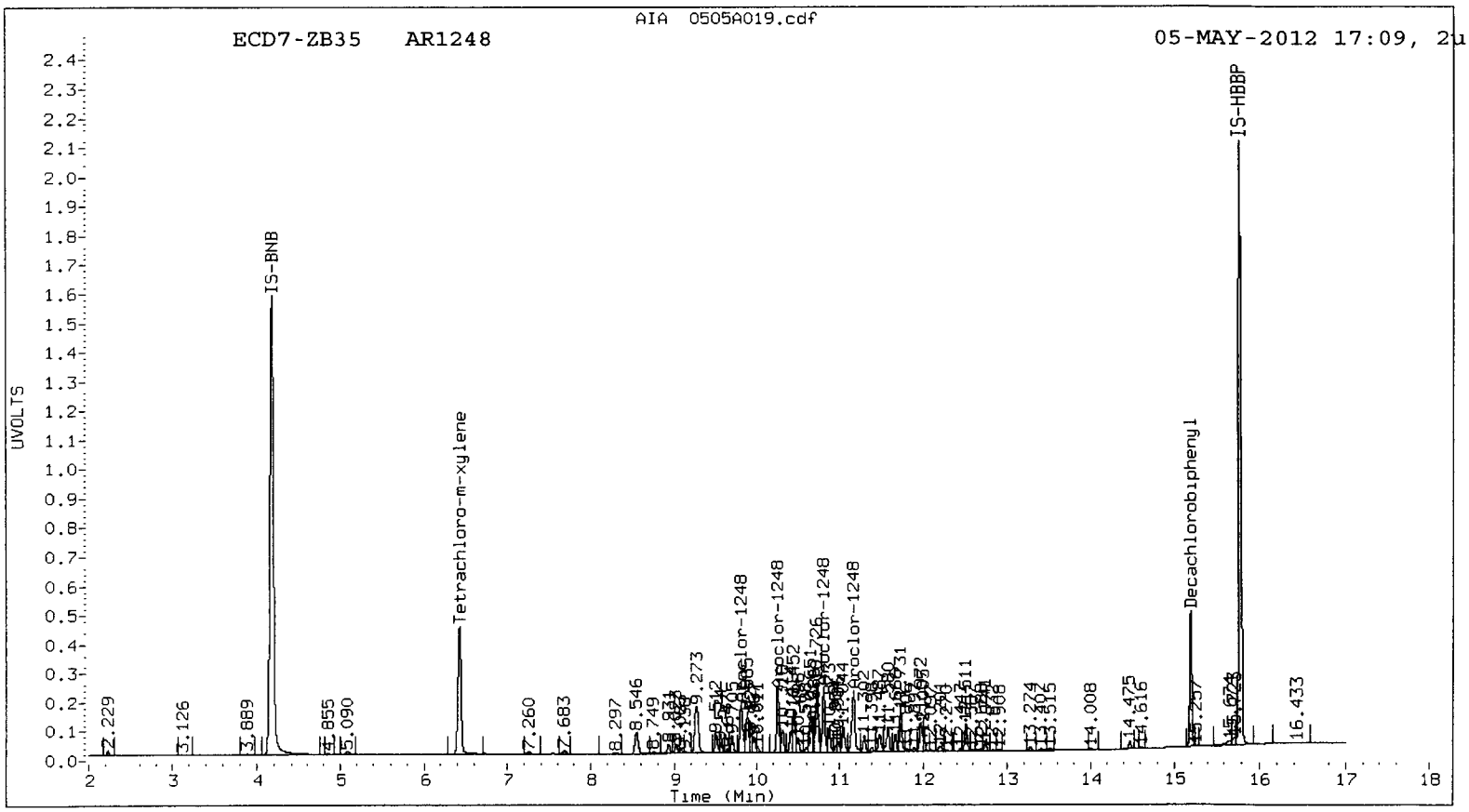
Total PCB Area Col1 (6.392 - 14.769) = 9408116 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 15219649 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR01:01905


ECD7-ZB5 AR1248
AIA 0505A019.cdf
05-MAY-2012 17:09, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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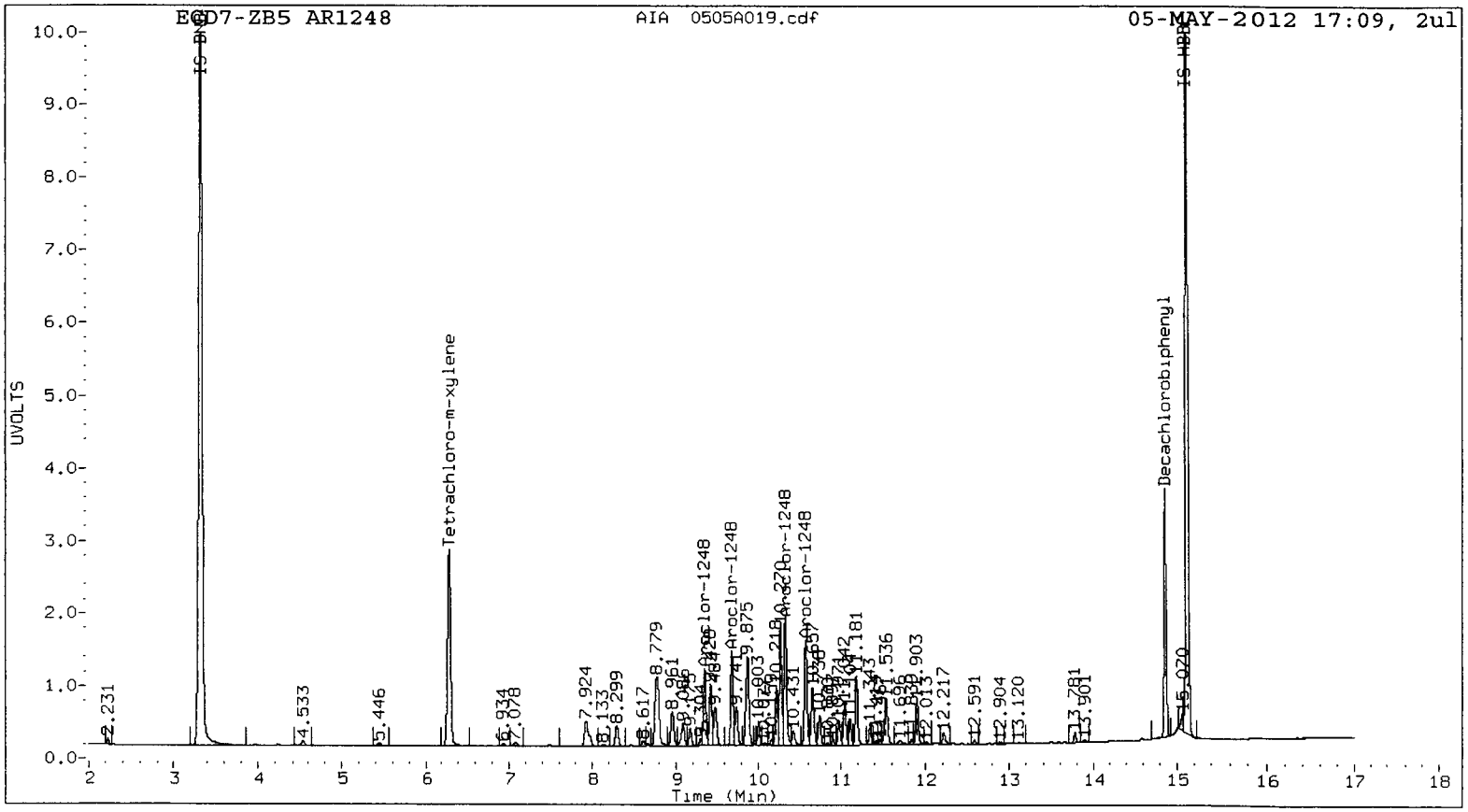
05-MAY-2012 17:09, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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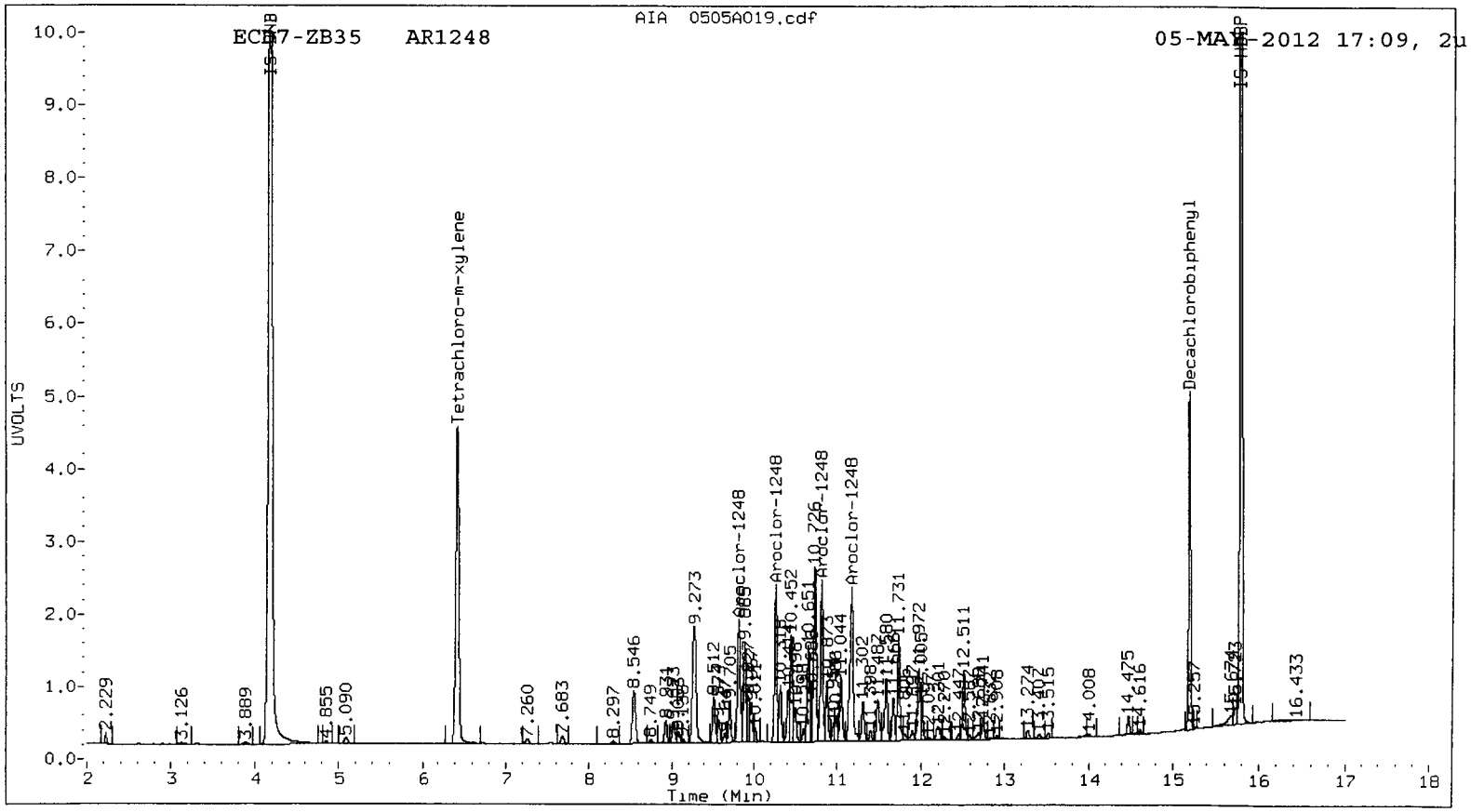
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248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AIA 0505A019.cdf
05-MAY-2012 17:09, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A020.d
Data file 2: 20120505.B/ical-2.b/0505A020.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 05-MAY-2012 17:30
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.292	0.000	1360986	6.420	0.001	2181642	19.8	19.5	1.7	Tetrachloro-m-xylen
14.870	0.001	1161692	15.199	0.001	1478482	19.5	18.6	4.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.5	48.7
Decachlorobiphenyl	48.7	46.5

JL 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5816856	-0.4
Hexabromobiphenyl	4847662	4905256	1.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8969858	-2.0
Hexabromobiphenyl	6845779	6933460	1.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1254	1	10.336	0.000	685920	250.0	1	10.873	0.000	839447	250.0
Aroclor-1254	2	10.657	0.000	945896	250.0	2	11.043	0.000	1071535	250.0
Aroclor-1254	3	11.041	0.000	596193	250.0	3	11.579	0.000	853145	250.0
Aroclor-1254	4	11.180	0.000	1129580	250.0	4	11.731	0.000	1812963	250.0
Aroclor-1254	5	11.897	0.000	753469	250.0	5	12.516	0.000	1093051	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

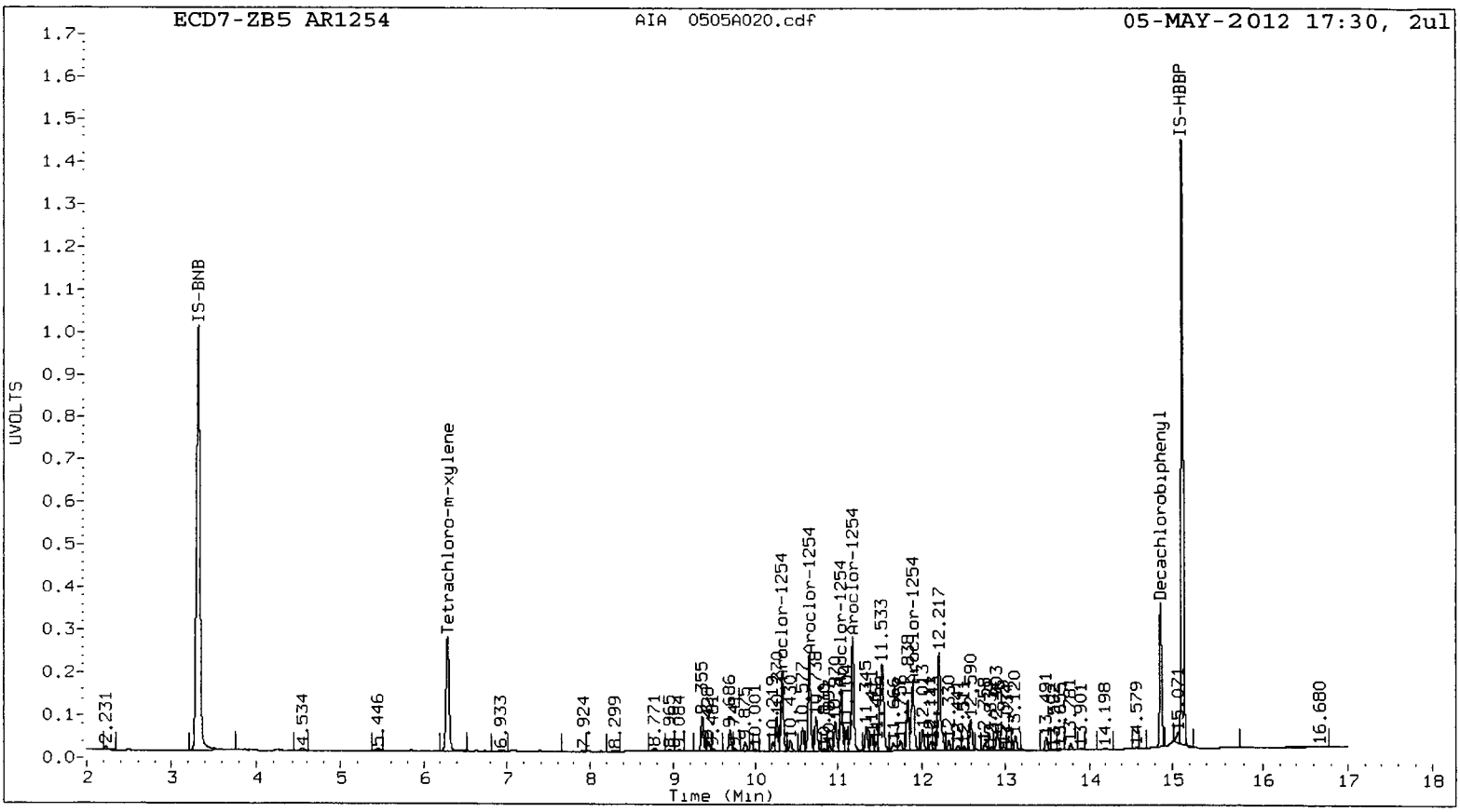
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

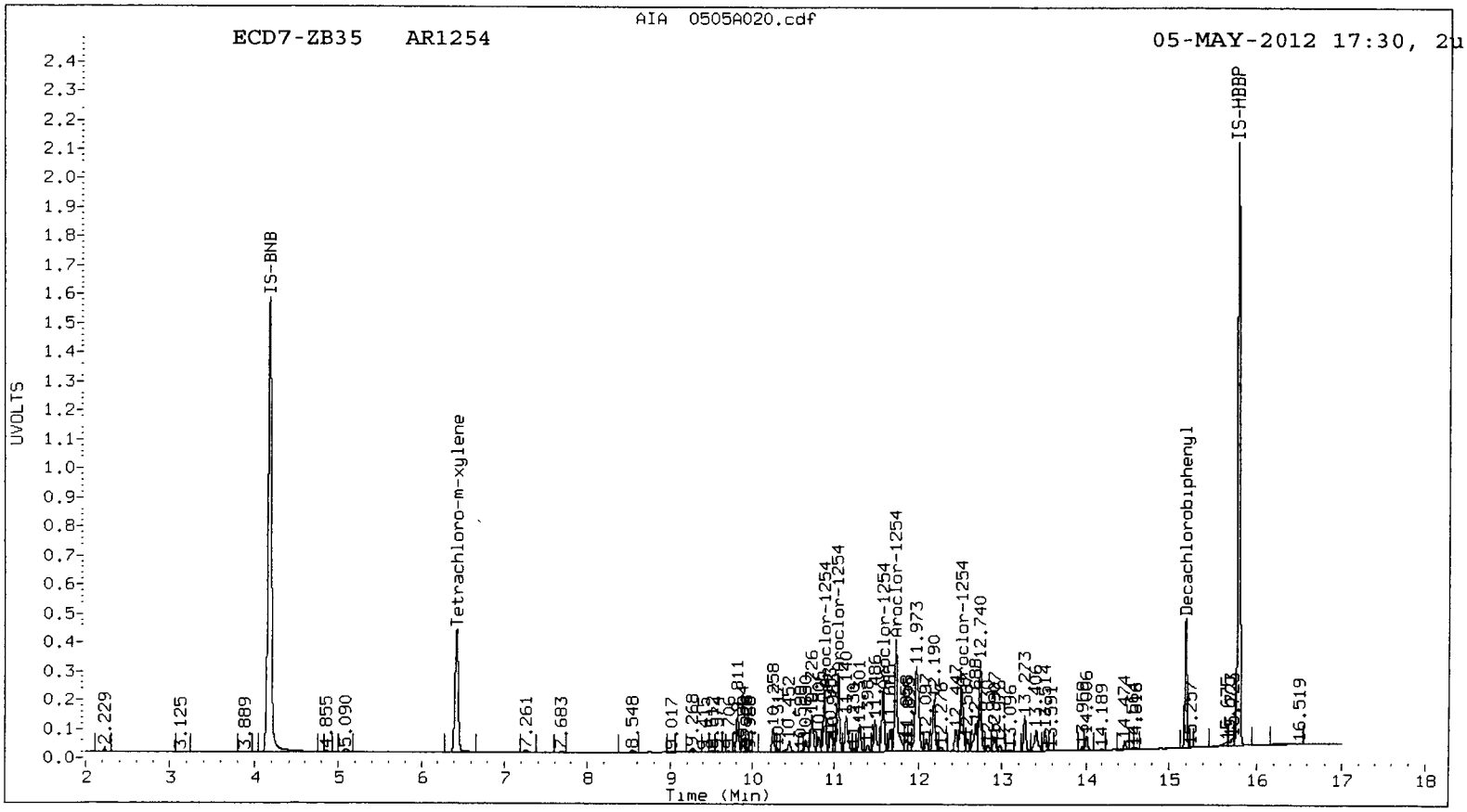
Total PCB Area Col1 (6.392 - 14.769) = 11703163 Col1 Total PCB = 0.3 ppm*

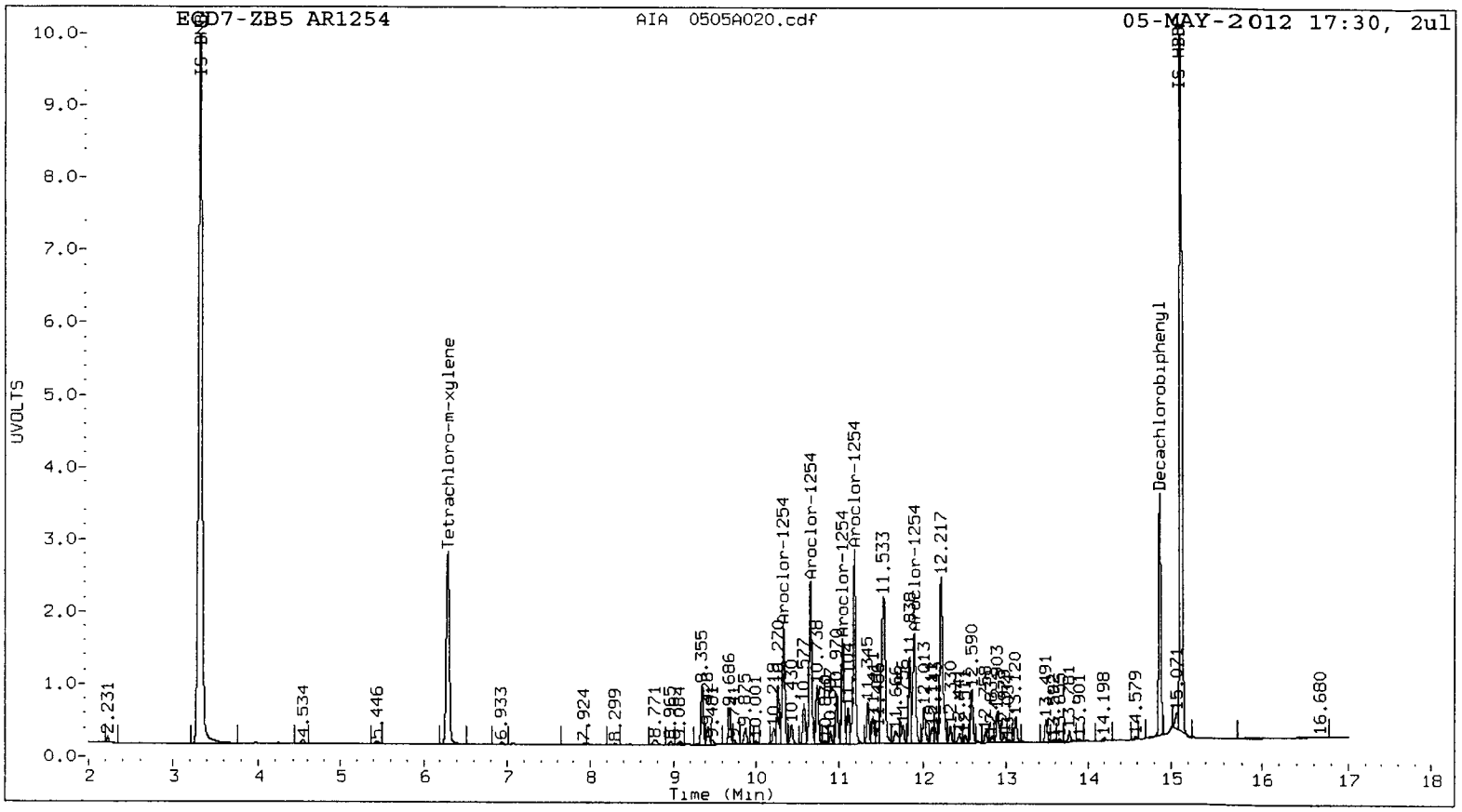
Total PCB Area Col2 (6.519 - 15.098) = 18064168 Col2 Total PCB = 0.3 ppm*

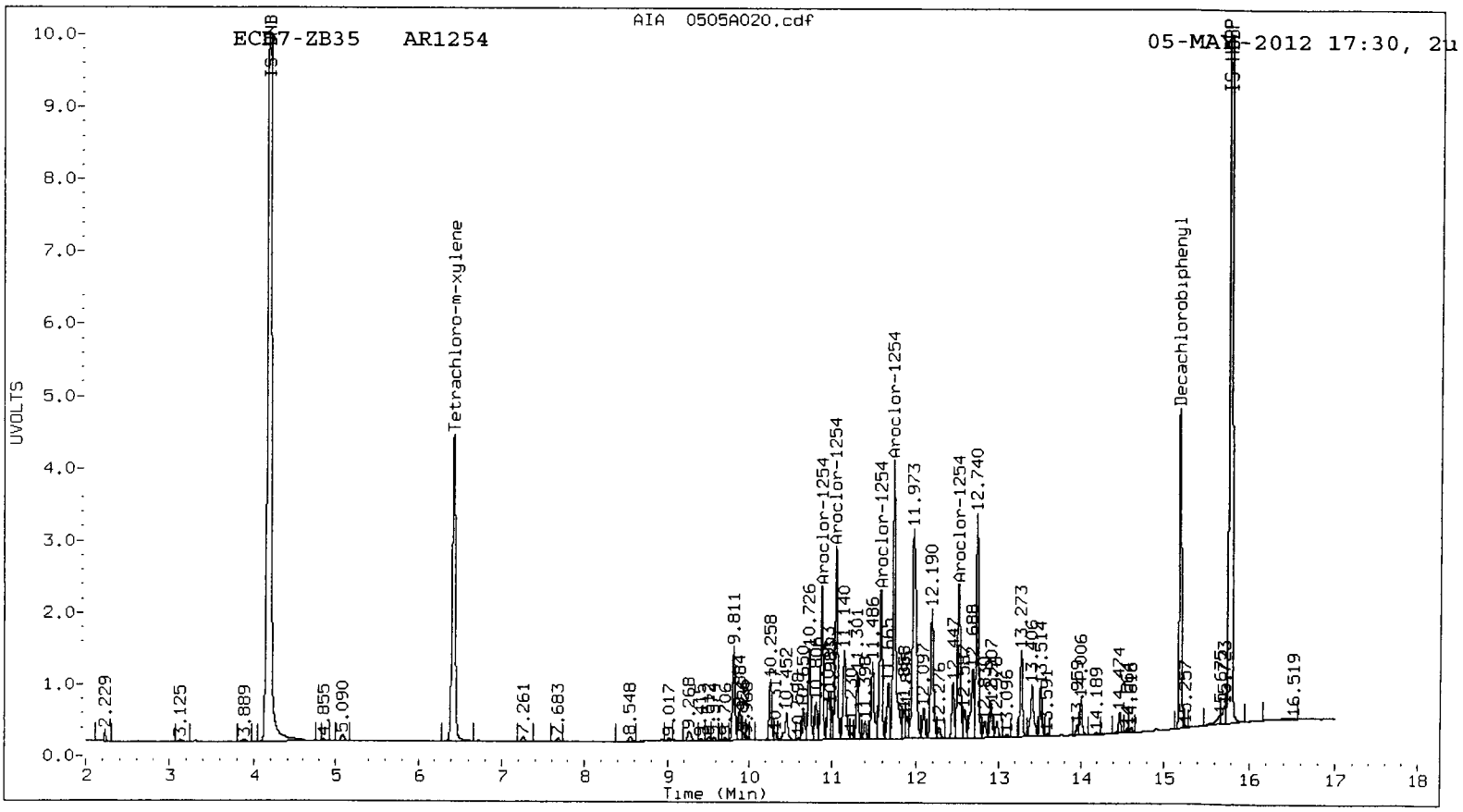
* Quantitated against AR1660 0.25ppm in Ical

UR81:01989


ECD7-ZB5 AR1254
AIA 0505A020.cdf
05-MAY-2012 17:30, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


AIA 0505A020.cdf
ECD7-ZB35 AR1254
05-MAY-2012 17:30, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD7-ZB5 AR1254
AIA 0505A020.cdf
05-MAY-2012 17:30, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254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AIA 0505A020.cdf
05-MAY-2012 17:30, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A021.d
Data file 2: 20120505.B/ical-2.b/0505A021.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 05-MAY-2012 17:51
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.291	-0.001	1431244	6.418	-0.001	2199707	20.6	19.6	4.9	Tetrachloro-m-xylen
14.870	0.001	1165126	15.198	0.000	1498349	19.4	18.6	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.5	49.1
Decachlorobiphenyl	48.5	46.6

µ 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5876832	0.6
Hexabromobiphenyl	4847662	4941004	1.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8970246	-2.0
Hexabromobiphenyl	6845779	7017153	2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1221	1	6.743	0.000	169789	250.0	1	7.241	0.000	322482	250.0
Aroclor-1221	2	6.954	0.000	127151	250.0	2	7.542	0.000	198804	250.0
Aroclor-1221	3	7.077	0.000	424114	250.0	3	7.680	0.000	592962	250.0
Aroclor-1221	NS	---			----	4	7.767	0.000	112869	250.0

Total Col1Ave (3 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave: < 3 Peaks Corrected Ave (3 peaks): 250.0

Aroclor-1262	1	12.443	0.000	1106254	250.0	1	12.831	0.000	1511176	250.0
Aroclor-1262	2	12.758	0.000	799115	250.0	2	13.274	0.000	1273057	250.0
Aroclor-1262	3	13.121	0.000	2096571	250.0	3	13.513	0.000	2856157	250.0
Aroclor-1262	4	13.591	0.000	704653	250.0	4	13.957	0.000	1085755	250.0
Aroclor-1262	5	13.655	0.000	745310	250.0	5	14.008	0.000	1742462	250.0

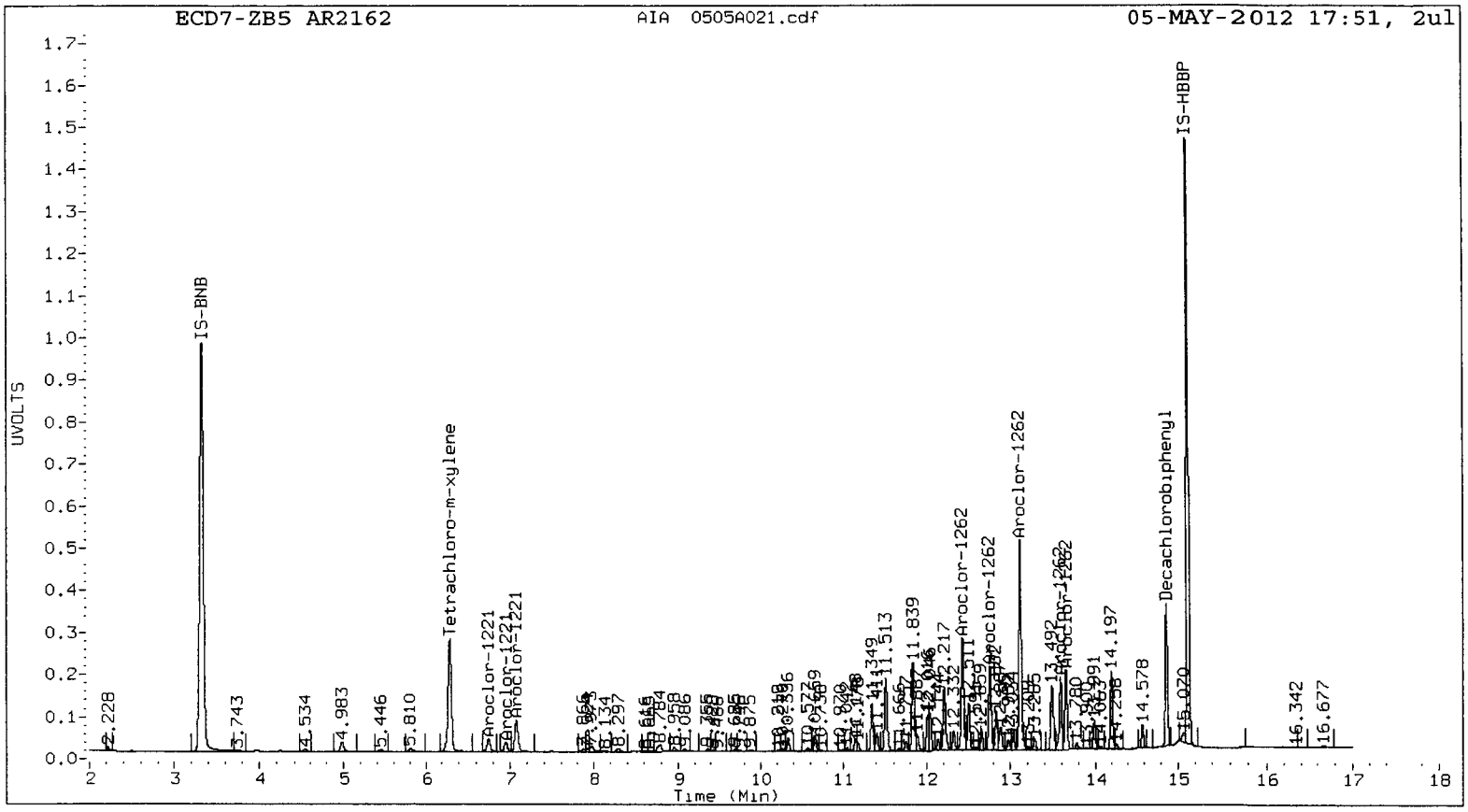
Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

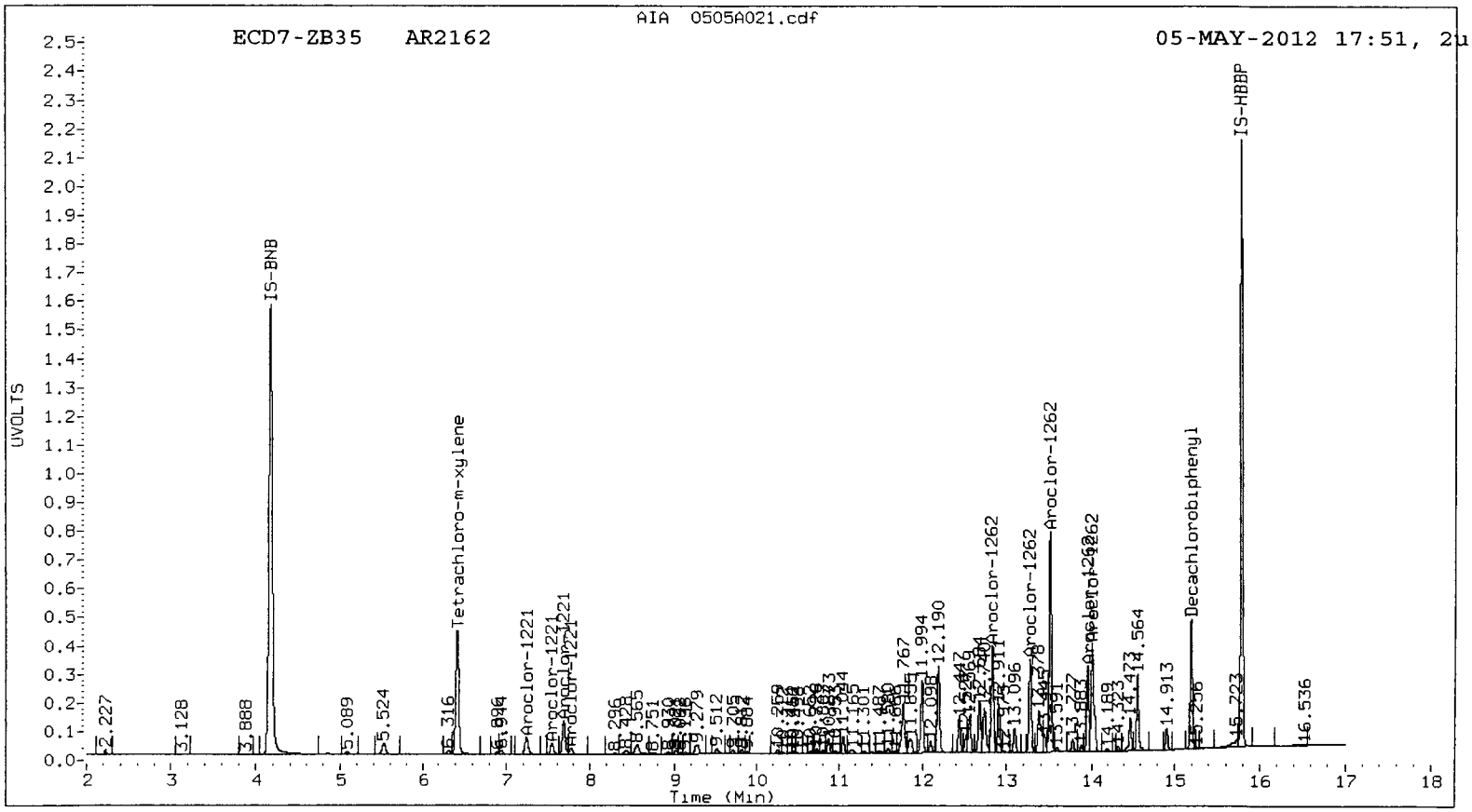
Total PCB Area Col1 (6.392 - 14.769) = 15048012 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 22229248 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 AR2162
AIA 0505A021.cdf
05-MAY-2012 17:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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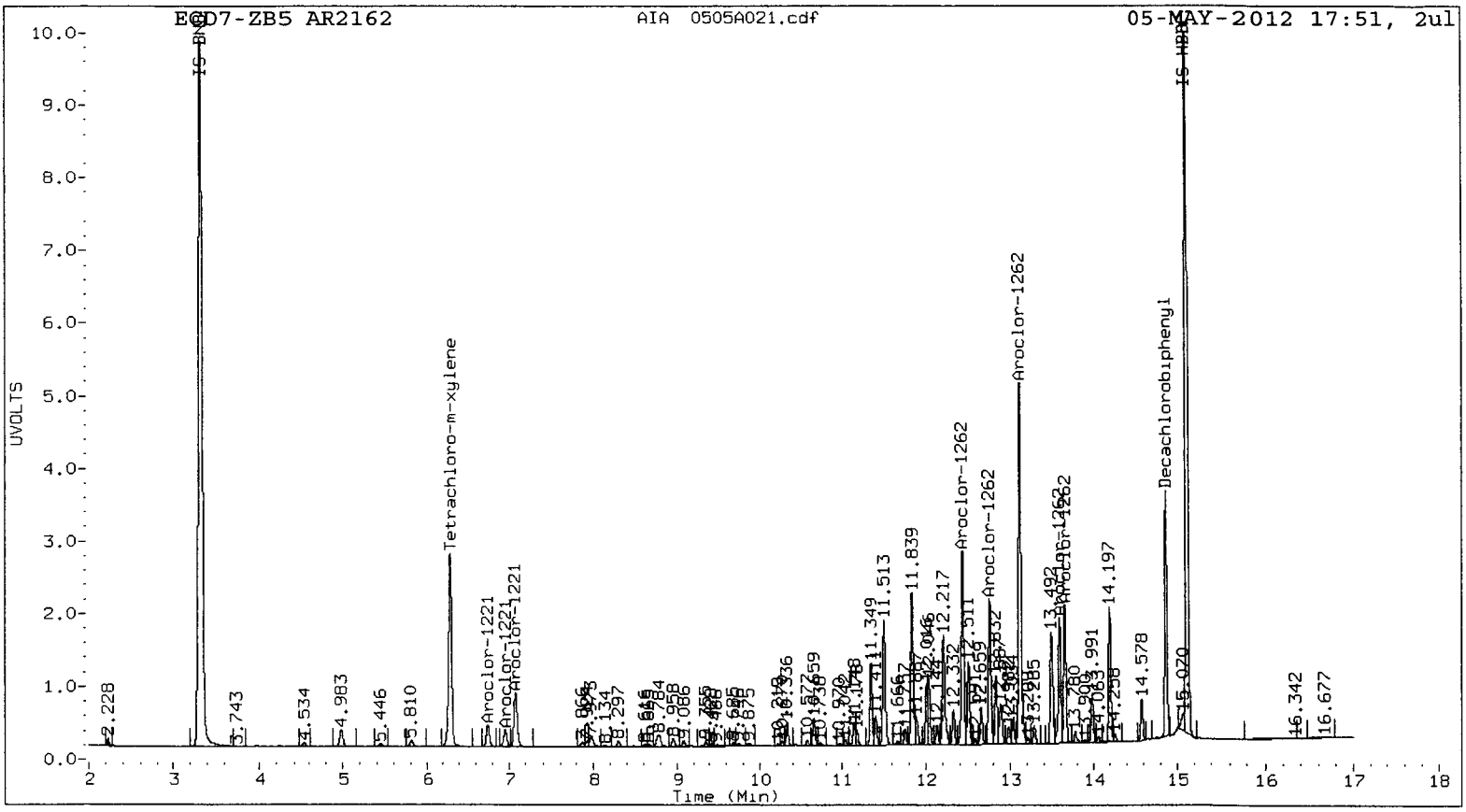
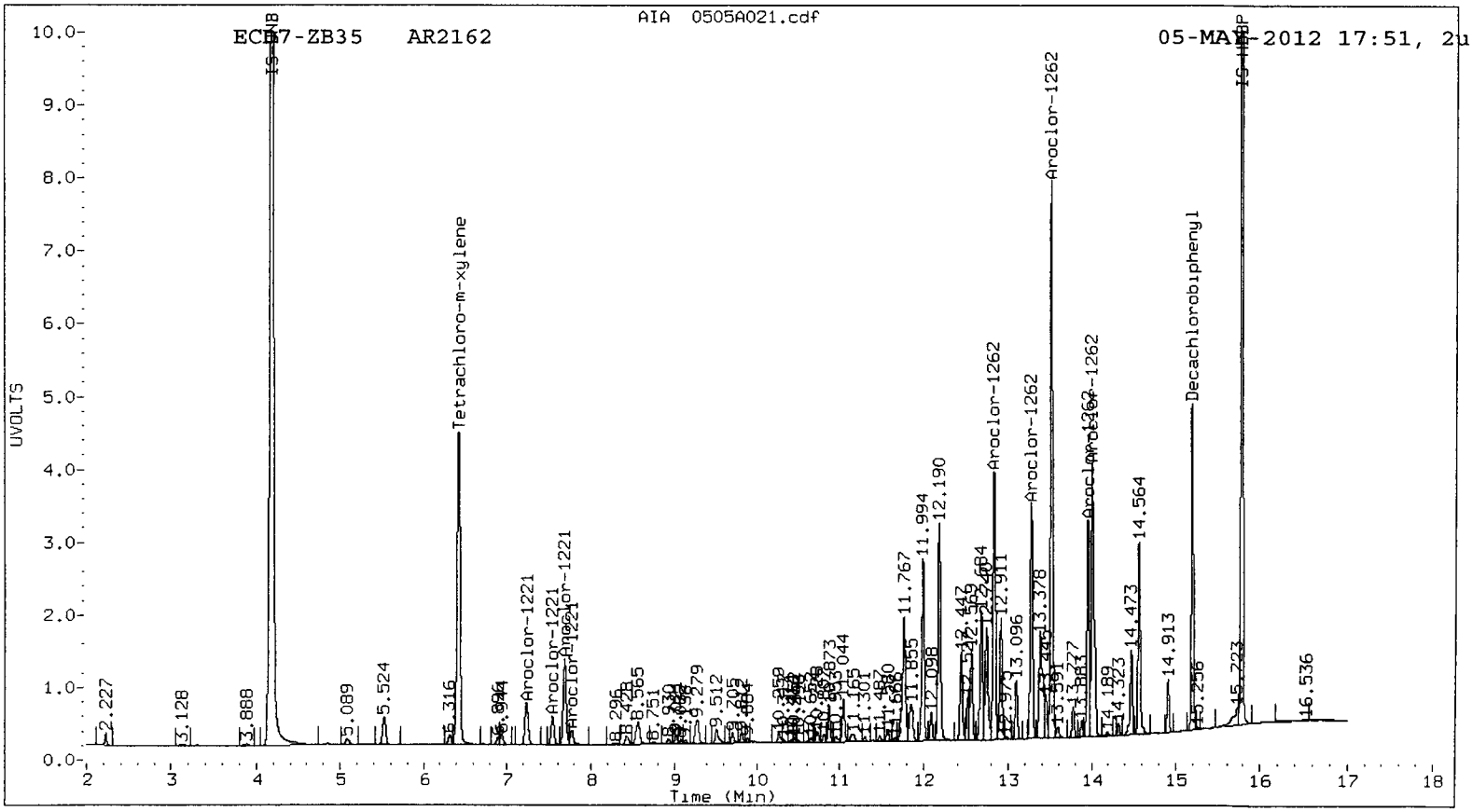
ECD7-ZB35 AR2162
05-MAY-2012 17:51, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD7-ZB5 AR2162
AIA 0505A021.cdf
05-MAY-2012 17:51, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1262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AIA 0505A021.cdf
05-MAY-2012 17:51, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1262

CR81 : 61996

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A022.d
Data file 2: 20120505.B/ical-2.b/0505A022.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 05-MAY-2012 18:12
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.292	0.000	1408363	6.419	0.000	2204205	20.4	19.4	4.9	Tetrachloro-m-xylen
14.869	0.000	2117184	15.198	0.000	2757590	35.3	34.5	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.0	48.6
Decachlorobiphenyl	88.3	86.3

JL 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5840399	0.0
Hexabromobiphenyl	4847662	4930920	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9076587	-0.9
Hexabromobiphenyl	6845779	6967699	1.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1232	1	8.298	0.000	168657	250.0	1	8.548	0.000	493745	250.0
Aroclor-1232	2	8.784	0.000	573908	250.0	2	9.278	0.000	919468	250.0
Aroclor-1232	3	8.959	0.000	226254	250.0	3	9.704	0.000	247568	250.0
Aroclor-1232	4	10.328	0.000	255828	250.0	4	10.257	0.000	371580	250.0
Total Col1Ave (4 peaks):				250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):			250.0	RPD = 0
Aroclor-1268	1	13.590	0.000	2169966	250.0	1	13.955	0.000	2881750	250.0
Aroclor-1268	2	13.652	0.000	1970026	250.0	2	14.010	0.000	2705180	250.0
Aroclor-1268	3	13.975	0.000	1664392	250.0	3	14.322	0.000	2141817	250.0
Aroclor-1268	4	14.577	0.000	5118106	250.0	4	14.912	0.000	6722907	250.0
Total Col1Ave (4 peaks):				250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):			250.0	RPD = 0

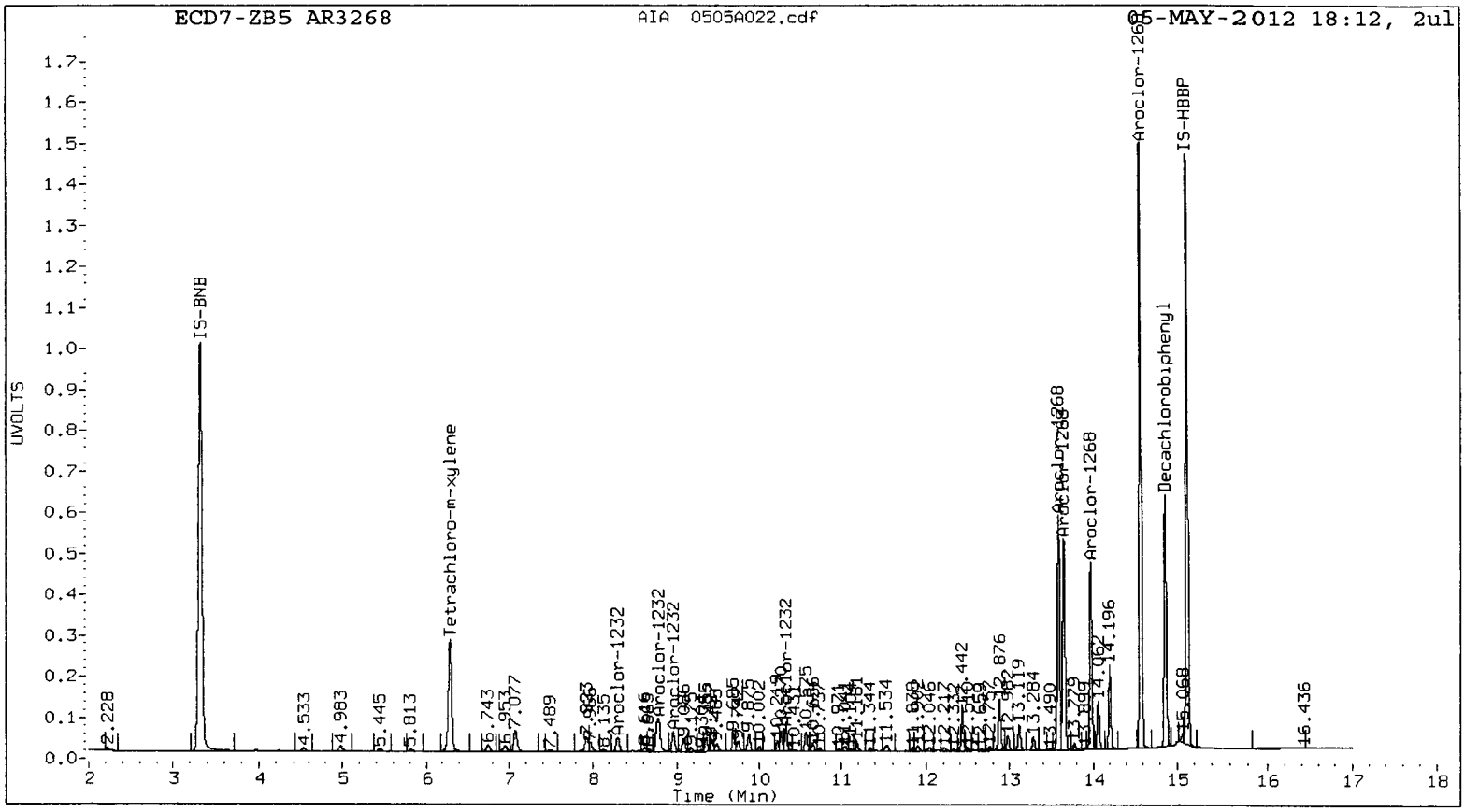
Total PCB Area Col1 (6.392 - 14.769) = 18229615 Col1 Total PCB = 0.4 ppm*

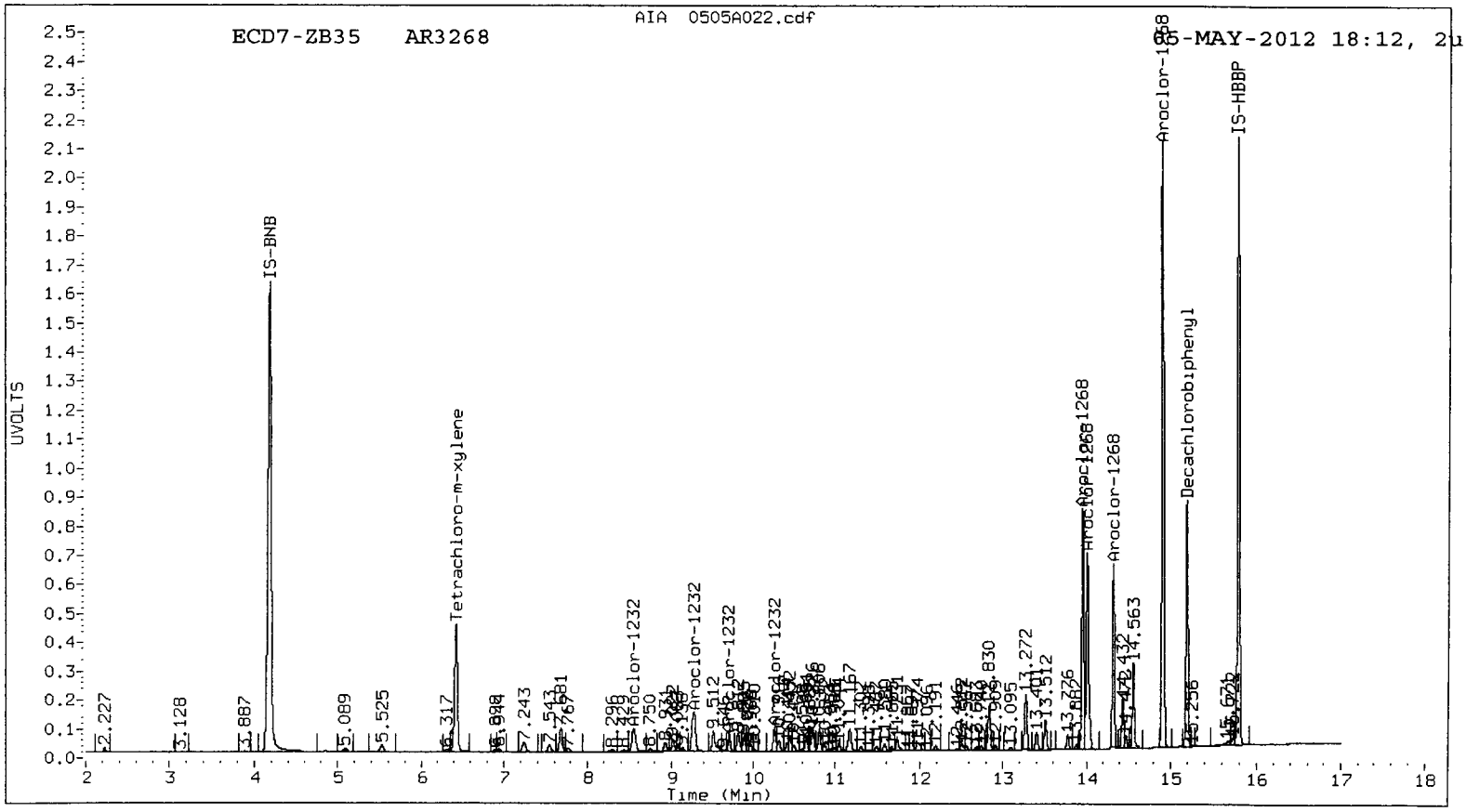
Total PCB Area Col2 (6.519 - 15.098) = 26643429 Col2 Total PCB = 0.4 ppm*

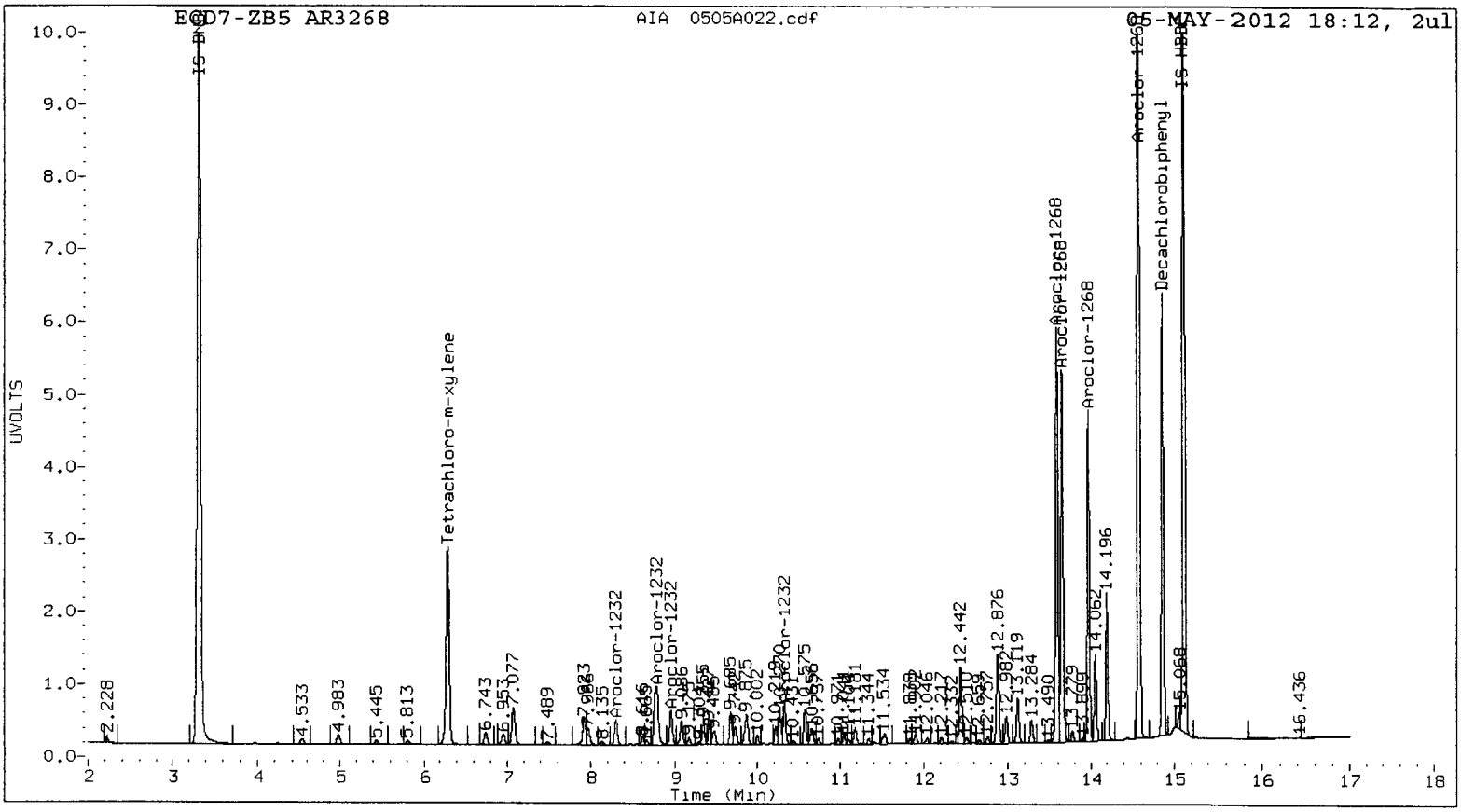
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR81:01999


ECD7-ZB5 AR3268
AIA 0505A022.cdf
05-MAY-2012 18:12, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR3268
AIA 0505A022.cdf
05-MAY-2012 18:12, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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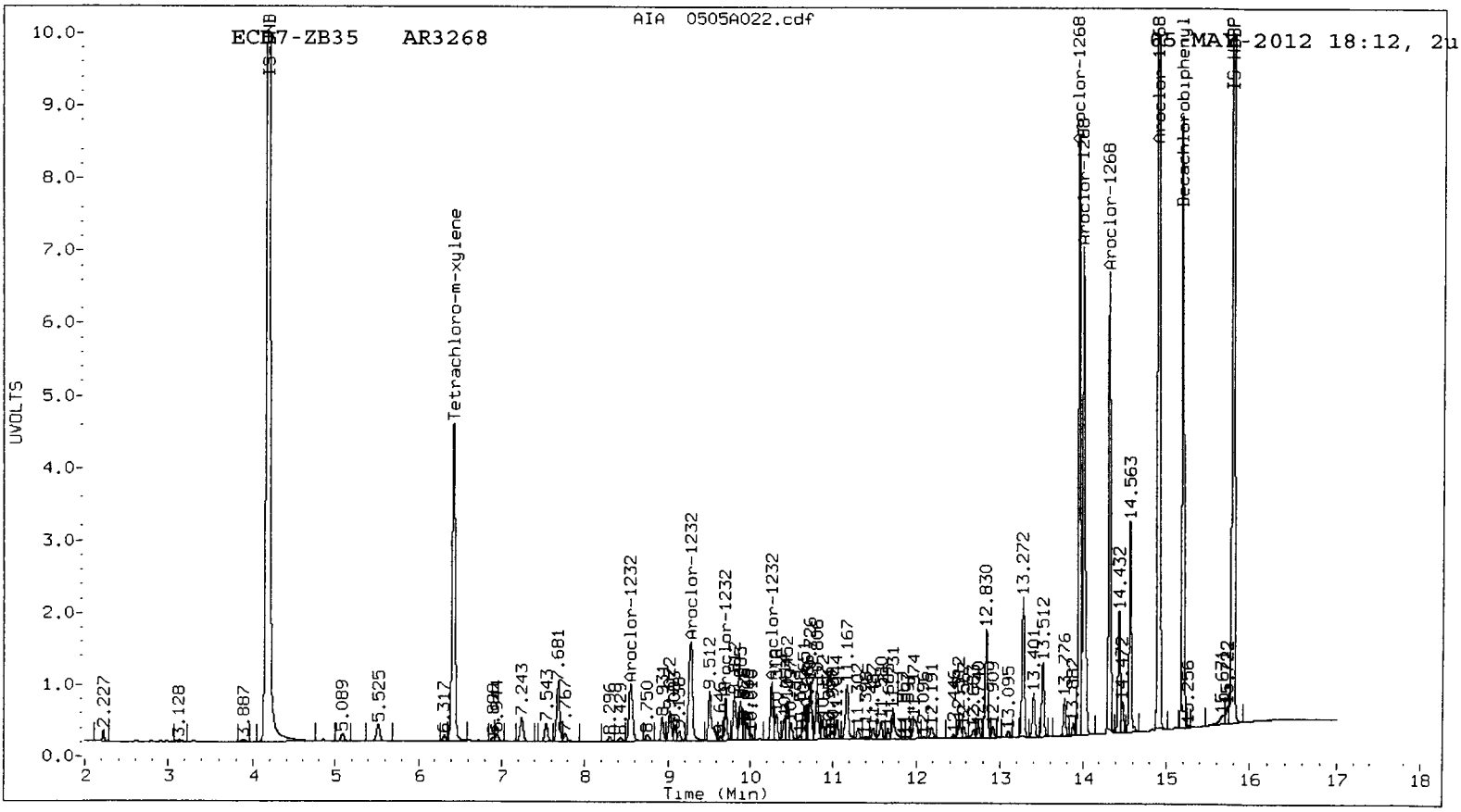
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1268
Aroclor-1232


ECD7-ZB35 AR3268
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05-MAY-2012 18:12, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1268
Aroclor-1232

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A023.d
Data file 2: 20120505.B/ical-2.b/0505A023.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 05-MAY-2012 18:33
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.290	-0.003	1391304	6.417	-0.002	2202814	20.3	19.5	4.2	Tetrachloro-m-xylen
14.870	0.001	1143928	15.199	0.001	1504613	19.3	18.8	2.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

05/07/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.8	48.7
Decachlorobiphenyl	48.1	47.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5792855	-0.8
Hexabromobiphenyl	4847662	4886943	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9038755	-1.3
Hexabromobiphenyl	6845779	6967518	1.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.296	-0.004	392593	231.8	1	8.547	-0.003	1017570	222.4
Aroclor-1016	2	8.784	-0.003	1341552	231.0	2	9.277	-0.003	2058586	221.9
Aroclor-1016	3	8.958	-0.003	524949	231.4	3	9.704	-0.003	534527	222.3
Aroclor-1016	4	9.085	-0.003	358833	228.0	4	9.812	-0.003	596992	214.0
Total Col1Ave (4 peaks):				230.6		Total Col2Ave (4 peaks):			220.1	RPD = 5
Corrected Ave (3 peaks):				230.1		Corrected Ave (3 peaks):			219.4	RPD = 5
Aroclor-1221	1	6.740	-0.002	55672	83.2	1	7.244	0.003	130252	100.2
Aroclor-1221	2	6.952	-0.002	74570	148.7	2	7.542	0.000	111561	139.2
Aroclor-1221	3	7.075	-0.002	307521	183.9	3	7.680	0.000	469068	196.3
Aroclor-1221	NS	---			----	4	7.765	-0.002	41245	90.7
Total Col1Ave (3 peaks):				138.6		Total Col2Ave (4 peaks):			131.6	RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			110.0	
Aroclor-1232	1	8.296	-0.002	392593	586.7	1	8.547	-0.001	1017570	517.4
Aroclor-1232	2	8.784	0.000	1341552	589.2	2	9.277	0.000	2058586	562.1
Aroclor-1232	3	8.958	-0.001	524949	584.8	3	9.704	-0.001	534527	542.0
Aroclor-1232	4	10.335	0.007	288161	283.9	4	10.257	-0.001	693594	468.6
Total Col1Ave (4 peaks):				511.2		Total Col2Ave (4 peaks):			522.5	RPD = 2
Corrected Ave (3 peaks):				485.1		Corrected Ave (3 peaks):			509.3	RPD = 5
Aroclor-1242	1	8.296	-0.001	392593	305.8	1	8.547	-0.001	1017570	303.2
Aroclor-1242	2	8.784	0.000	1341552	305.1	2	9.277	0.000	2058586	300.1
Aroclor-1242	3	8.958	0.000	524949	306.4	3	9.704	0.000	534527	294.7
Aroclor-1242	4	10.577	0.001	43559	27.8	4	11.166	-0.001	46024	16.3
Total Col1Ave (4 peaks):				236.3		Total Col2Ave (4 peaks):			228.6	RPD = 3
Corrected Ave (3 peaks):				212.9		Corrected Ave (3 peaks):			203.7	RPD = 4
Aroclor-1248	1	9.354	-0.001	296586	168.4	1	9.812	-0.001	596992	187.5
Aroclor-1248	2	9.685	0.000	387797	180.1	2	10.257	-0.001	693594	197.9
Aroclor-1248	3	10.335	0.007	288161	90.0	3	10.806	-0.001	105596	29.7
Aroclor-1248	4	10.577	0.002	43559	17.6	4	11.166	-0.001	46024	10.0
Total Col1Ave (4 peaks):				114.0		Total Col2Ave (4 peaks):			106.3	RPD = 7
Corrected Ave (3 peaks):				92.0		Corrected Ave (3 peaks):			75.8	RPD = 19
Aroclor-1254	1	10.335	-0.001	288161	105.5	1	10.873	0.000	381671	112.8
Aroclor-1254	2	10.659	0.002	261248	69.3	2	11.044	0.001	396740	91.9
Aroclor-1254	3	11.041	0.000	35984	15.2	3	11.579	0.001	71526	20.8
Aroclor-1254	4	11.177	-0.003	115087	25.6	4	11.767	0.036	982991	134.5
Aroclor-1254	5	11.886	-0.012	277787	92.6	5	12.527	0.011	428847	97.3
Total Col1Ave (5 peaks):				61.6		Total Col2Ave (5 peaks):			91.5	RPD = 39
Corrected Ave (4 peaks):				50.7		Corrected Ave (4 peaks):			80.7	RPD = 46*
Aroclor-1260	1	11.839	-0.001	981270	229.4	1	12.740	-0.001	1209723	193.6
Aroclor-1260	2	12.443	-0.001	763587	274.1	2	13.513	0.000	2469256	256.6
Aroclor-1260	3	12.757	-0.002	746190	269.0	3	14.007	-0.001	1598407	250.2
Aroclor-1260	4	13.491	-0.001	861943	248.0	4	14.564	-0.001	651163	278.1
Aroclor-1260	5	13.591	-0.001	391971	281.7	NS	---			----
Total Col1Ave (5 peaks):				260.4		Total Col2Ave (4 peaks):			244.6	RPD = 6
Corrected Ave (4 peaks):				255.1		Corrected Ave (3 peaks):			233.1	RPD = 9
Aroclor-1262	1	12.443	0.000	763587	174.5	1	12.831	0.000	1067838	177.9
Aroclor-1262	2	12.757	0.000	746190	236.0	2	13.274	0.001	1189880	235.3
Aroclor-1262	3	13.120	-0.001	1790239	215.8	3	13.513	0.000	2469256	217.7
Aroclor-1262	4	13.591	0.000	391971	140.6	4	13.957	0.000	715985	166.0
Aroclor-1262	5	13.655	0.000	457625	155.2	5	14.007	-0.001	1598407	231.0
Total Col1Ave (5 peaks):				184.4		Total Col2Ave (5 peaks):			205.6	RPD = 11
Corrected Ave (4 peaks):				171.5		Corrected Ave (4 peaks):			198.1	RPD = 14
Aroclor-1268	1	13.591	0.000	391971	45.6	1	13.957	0.002	715985	62.1

Aroclor-1268	2	13.655	0.003	457625	58.6	2	14.007	-0.003	1598407	147.7
Aroclor-1268	3	13.992	0.017	203199	30.8	3	14.324	0.001	29851	3.5
Aroclor-1268	4	14.578	0.002	102151	5.0	4	14.913	0.001	132580	4.9

Total Col1Ave (4 peaks): 35.0 Total Col2Ave (4 peaks): 54.6 RPD = 44*

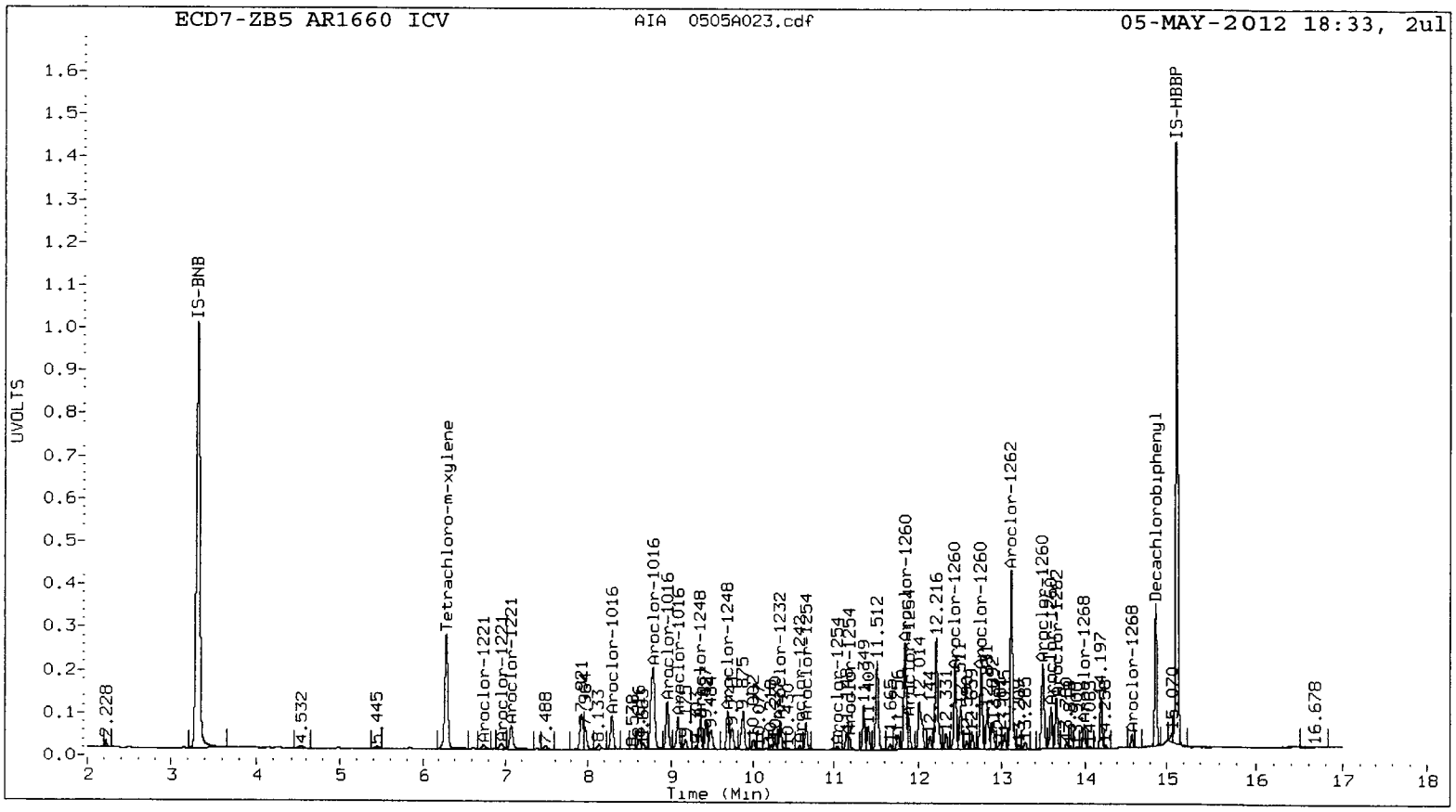
Corrected Ave (3 peaks): 27.1 Corrected Ave (3 peaks): 23.5 RPD = 14

Total PCB Area Col1 (6.392 - 14.769) = 19766269 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 30002836 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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AIA 0505A023.cdf
05-MAY-2012 18:33, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
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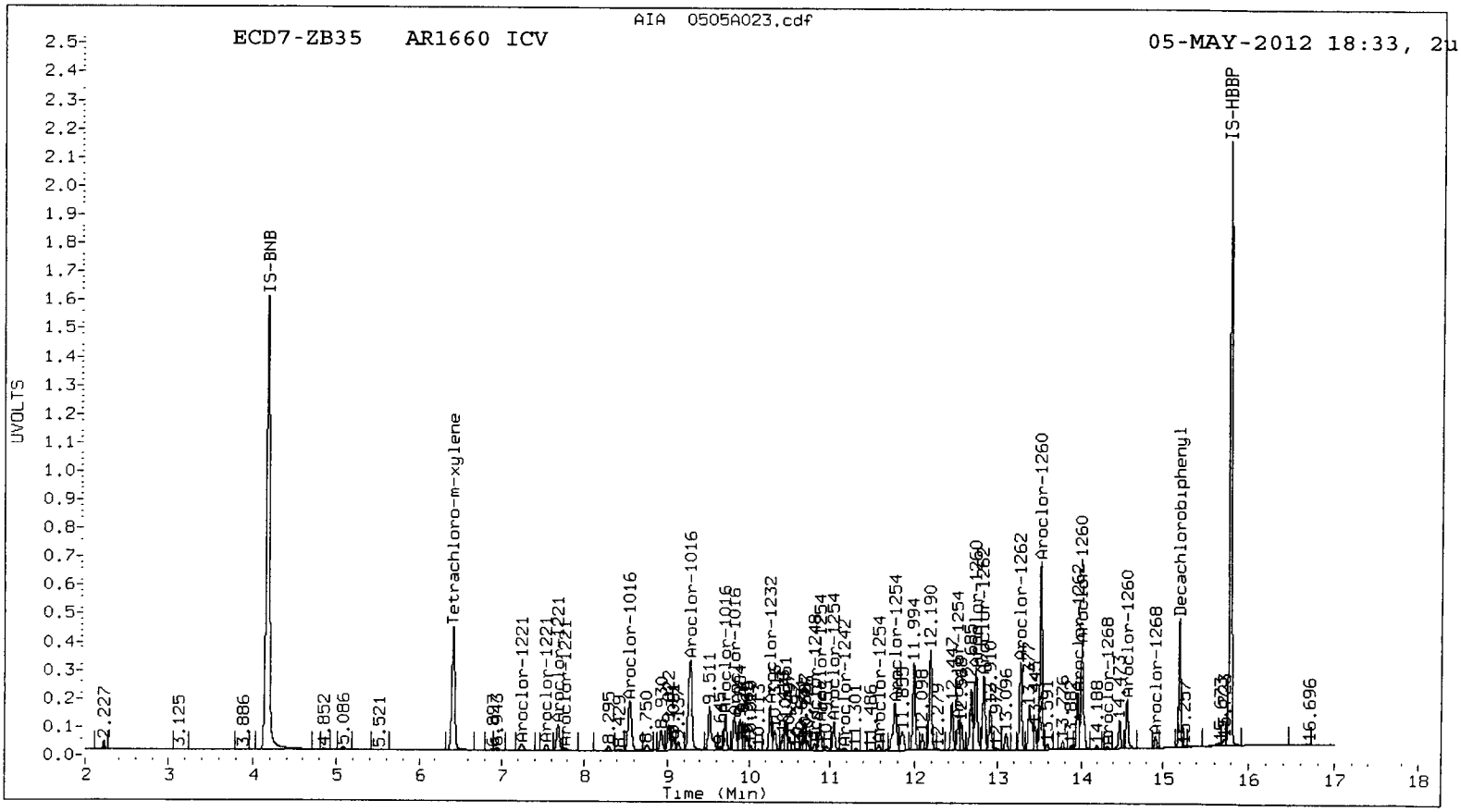
12.216
16.678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05-MAY-2012 18:33, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
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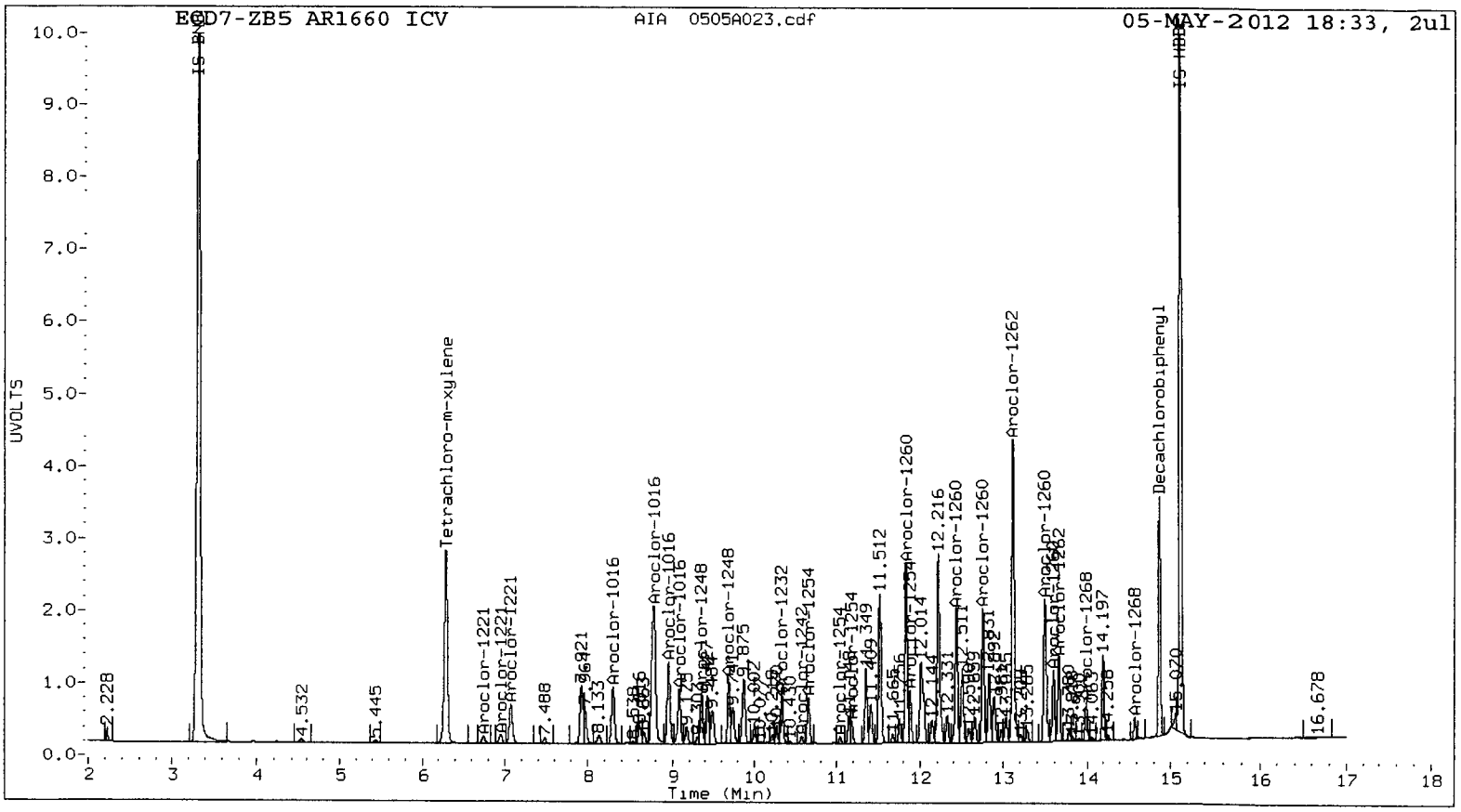
13.096
16.696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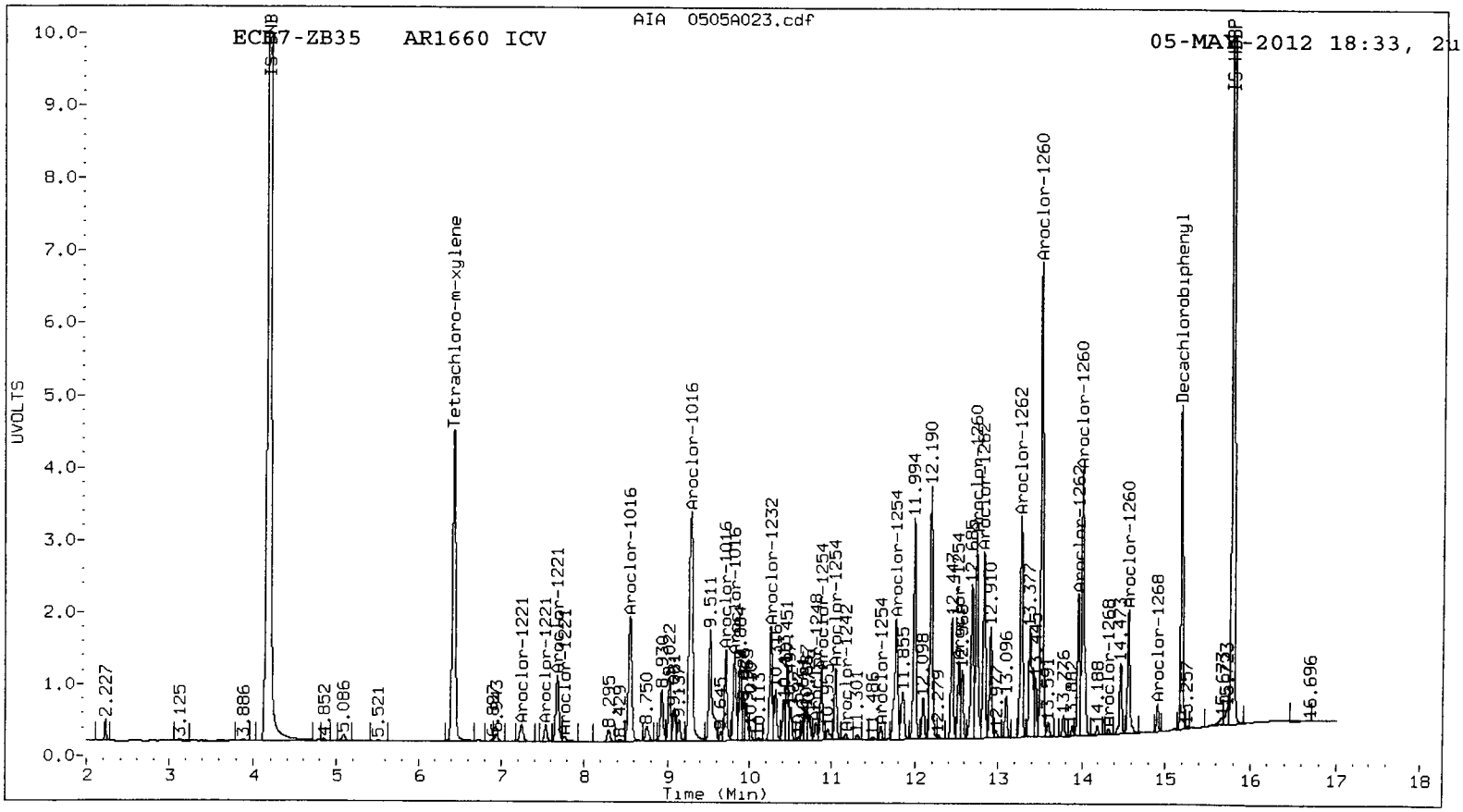
AIA 0505A023.cdf
05-MAY-2012 18:33, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD7-ZB35 AR1660 ICV
AIA 0505A023.cdf
05-MAY-2012 18:33, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A024.d
Data file 2: 20120505.B/ical-2.b/0505A024.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 05-MAY-2012 18:54
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.290	-0.003	1364752	6.417	-0.002	2173298	19.6	19.0	3.3	Tetrachloro-m-xylen
14.870	0.001	1135249	15.198	0.000	1481748	18.8	18.3	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.1	47.5
Decachlorobiphenyl	47.0	45.8

JL 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5881762	0.7
Hexabromobiphenyl	4847662	4969703	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9156078	0.0
Hexabromobiphenyl	6845779	7050442	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.297	-0.003	306886	178.5	1	8.546	-0.004	808329	174.4
Aroclor-1016	2	8.784	-0.003	1044867	177.2	2	9.277	-0.003	1624468	172.8
Aroclor-1016	3	8.957	-0.004	410079	178.1	3	9.704	-0.002	425718	174.7
Aroclor-1016	4	9.085	-0.003	278428	174.2	4	9.811	-0.003	496161	175.5
Total Col1Ave (4 peaks):				177.0		Total Col2Ave (4 peaks):			174.4	RPD = 1
Corrected Ave (3 peaks):				176.5		Corrected Ave (3 peaks):			174.0	RPD = 1
Aroclor-1221	1	6.740	-0.002	41502	61.1	1	7.245	0.003	108212	82.2
Aroclor-1221	2	6.951	-0.003	60361	118.6	2	7.541	-0.001	88528	109.1
Aroclor-1221	3	7.076	-0.001	233425	137.5	3	7.680	-0.001	371761	153.6
Aroclor-1221	NS	---			----	4	7.766	-0.002	31521	68.4
Total Col1Ave (3 peaks):				105.7		Total Col2Ave (4 peaks):			103.3	RPD = 2
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			86.6	
Aroclor-1232	1	8.297	-0.002	306886	451.7	1	8.546	-0.002	808329	405.7
Aroclor-1232	2	8.784	0.000	1044867	452.0	2	9.277	-0.001	1624468	437.9
Aroclor-1232	3	8.957	-0.001	410079	449.9	3	9.704	0.000	425718	426.2
Aroclor-1232	4	10.327	-0.001	432911	420.1	4	10.257	-0.001	597703	398.6
Total Col1Ave (4 peaks):				443.4		Total Col2Ave (4 peaks):			417.1	RPD = 6
Corrected Ave (3 peaks):				440.6		Corrected Ave (3 peaks):			410.2	RPD = 7
Aroclor-1242	1	8.297	-0.001	306886	235.4	1	8.546	-0.002	808329	237.8
Aroclor-1242	2	8.784	0.000	1044867	234.1	2	9.277	-0.001	1624468	233.8
Aroclor-1242	3	8.957	-0.001	410079	235.7	3	9.704	0.000	425718	231.7
Aroclor-1242	4	10.575	-0.001	348351	219.3	4	11.166	-0.001	651952	228.4
Total Col1Ave (4 peaks):				231.1		Total Col2Ave (4 peaks):			232.9	RPD = 1
Corrected Ave (3 peaks):				229.6		Corrected Ave (3 peaks):			231.3	RPD = 1
Aroclor-1248	1	9.354	-0.001	244722	136.9	1	9.811	-0.001	496161	153.9
Aroclor-1248	2	9.685	-0.001	311681	142.6	2	10.257	-0.002	597703	168.4
Aroclor-1248	3	10.327	-0.001	432911	133.1	3	10.805	-0.001	520091	144.2
Aroclor-1248	4	10.575	-0.001	348351	138.3	4	11.166	-0.001	651952	140.4
Total Col1Ave (4 peaks):				137.7		Total Col2Ave (4 peaks):			151.7	RPD = 10
Corrected Ave (3 peaks):				136.1		Corrected Ave (3 peaks):			146.2	RPD = 7
Aroclor-1254	1	10.327	-0.009	432911	156.0	1	10.871	-0.002	193562	56.5
Aroclor-1254	2	10.656	-0.001	176034	46.0	2	11.043	0.000	202990	46.4
Aroclor-1254	3	11.041	0.000	108576	45.0	3	11.579	0.001	193582	55.6
Aroclor-1254	4	11.180	0.000	182486	39.9	4	11.731	0.000	338381	45.7
Aroclor-1254	5	11.901	0.004	117511	38.6	5	12.512	-0.004	206811	46.3
Total Col1Ave (5 peaks):				65.1		Total Col2Ave (5 peaks):			50.1	RPD = 26
Corrected Ave (4 peaks):				42.4		Corrected Ave (4 peaks):			48.5	RPD = 13
Aroclor-1260	1	---			0.0	1	12.741	0.000	119463	18.9
Aroclor-1260	2	---			0.0	2	13.515	0.002	25404	2.6
Aroclor-1260	3	---			0.0	3	14.007	-0.001	18824	2.9
Aroclor-1260	4	---			0.0	4	14.616	0.051	25951	11.0
Aroclor-1260	5	---			0.0	NS	---			----
Col1Ave: <3 Quant Peaks						Col2Ave:			8.8	
Aroclor-1262	1	---			0.0	1	12.908	0.077	17767	2.9
Aroclor-1262	2	---			0.0	2	13.274	0.000	46386	9.1
Aroclor-1262	3	---			0.0	3	13.515	0.002	25404	2.2
Aroclor-1262	4	---			0.0	4	14.007	0.050	18824	4.3
Aroclor-1262	5	---			0.0	5	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave:			4.6	
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	13.901	-0.074	16412	2.4	3	---			0.0

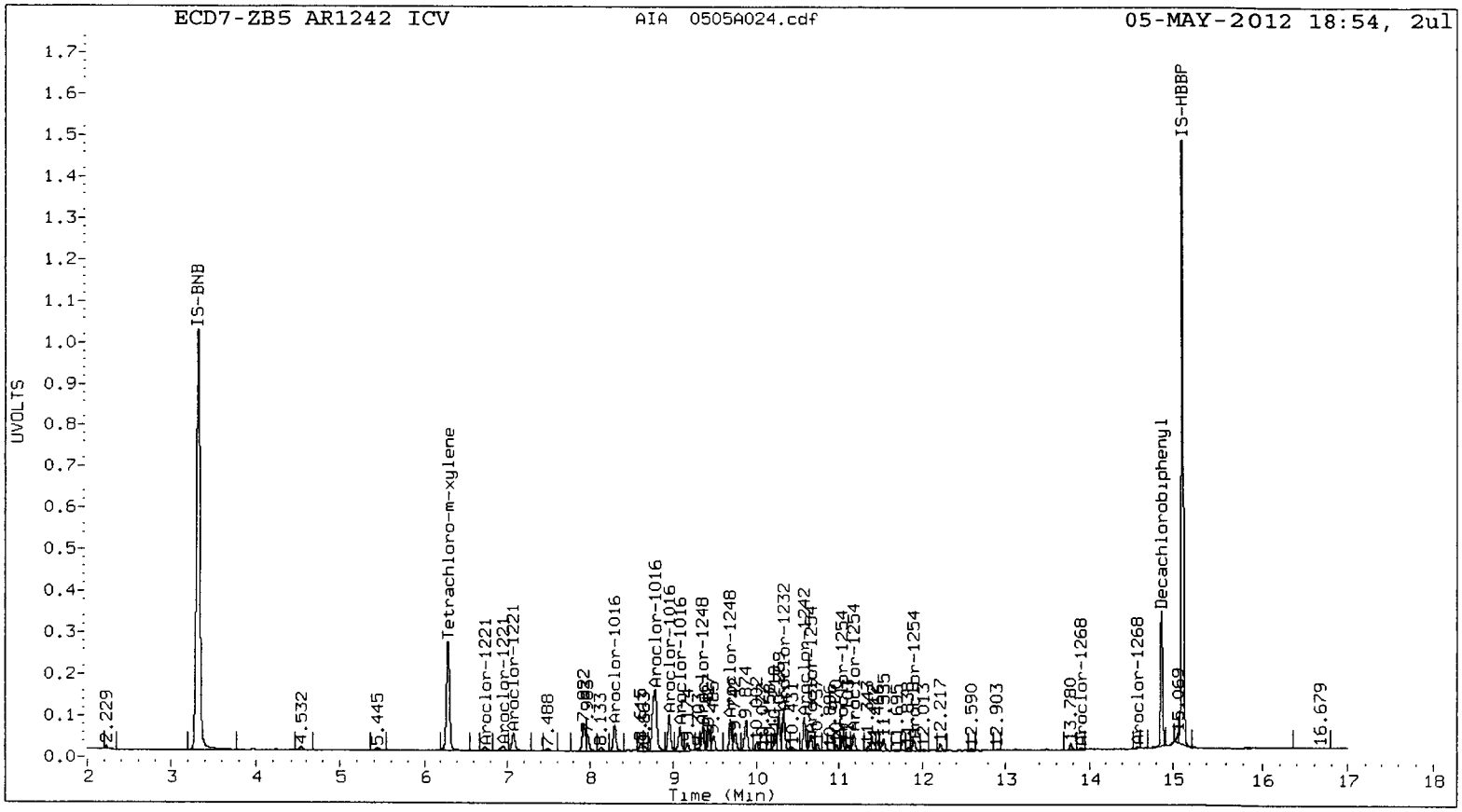
Aroclor-1268	4	14.579	0.002	11561	0.6	4	---	0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks		

Total PCB Area Col1 (6.392 - 14.769) = 7540422 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 12847355 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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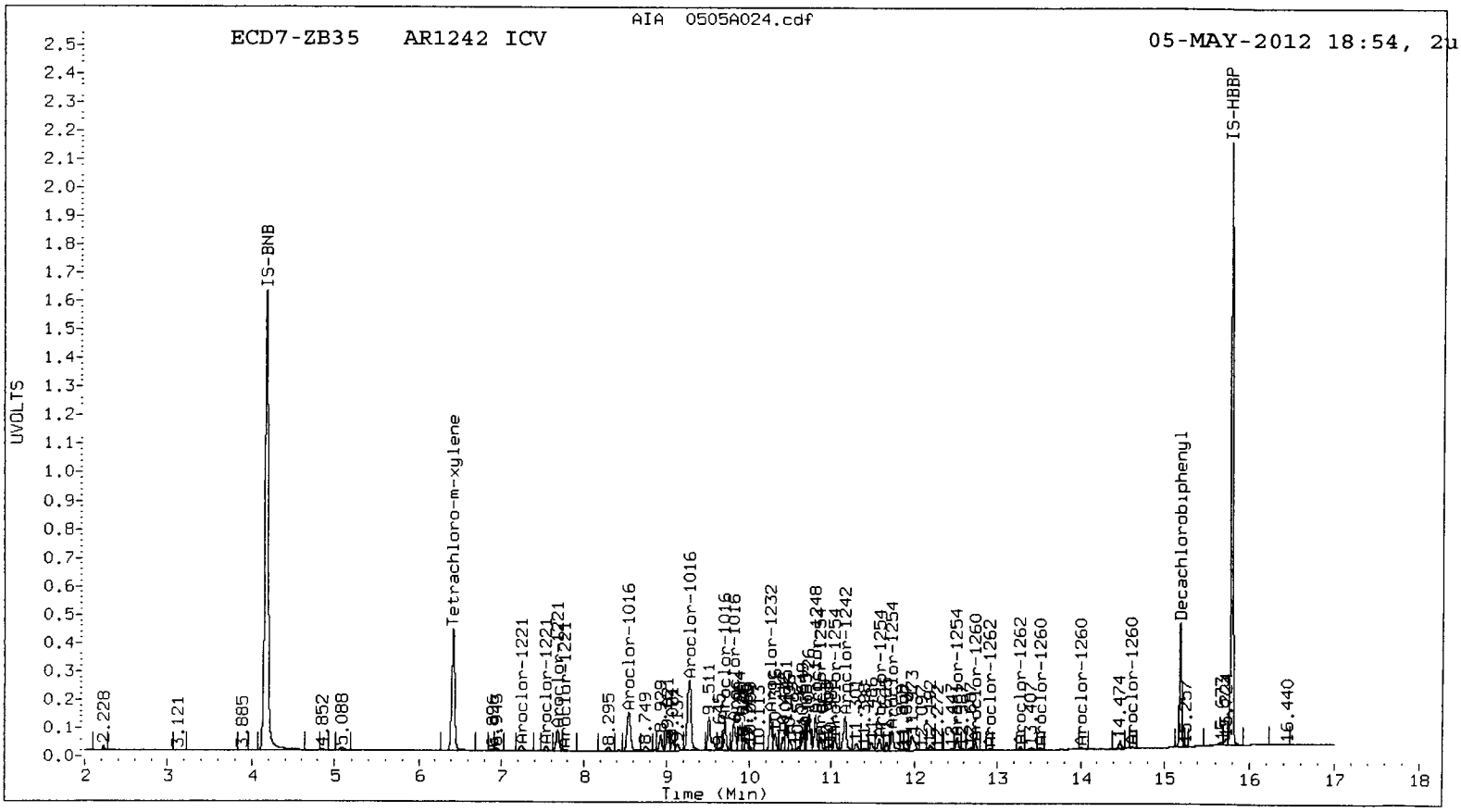
05-MAY-2012 18:54, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
2.229
4.532
5.445
7.488
12.217
12.590
12.903
13.780
15.069
16.679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ECD7-ZB35 AR1242 ICV
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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
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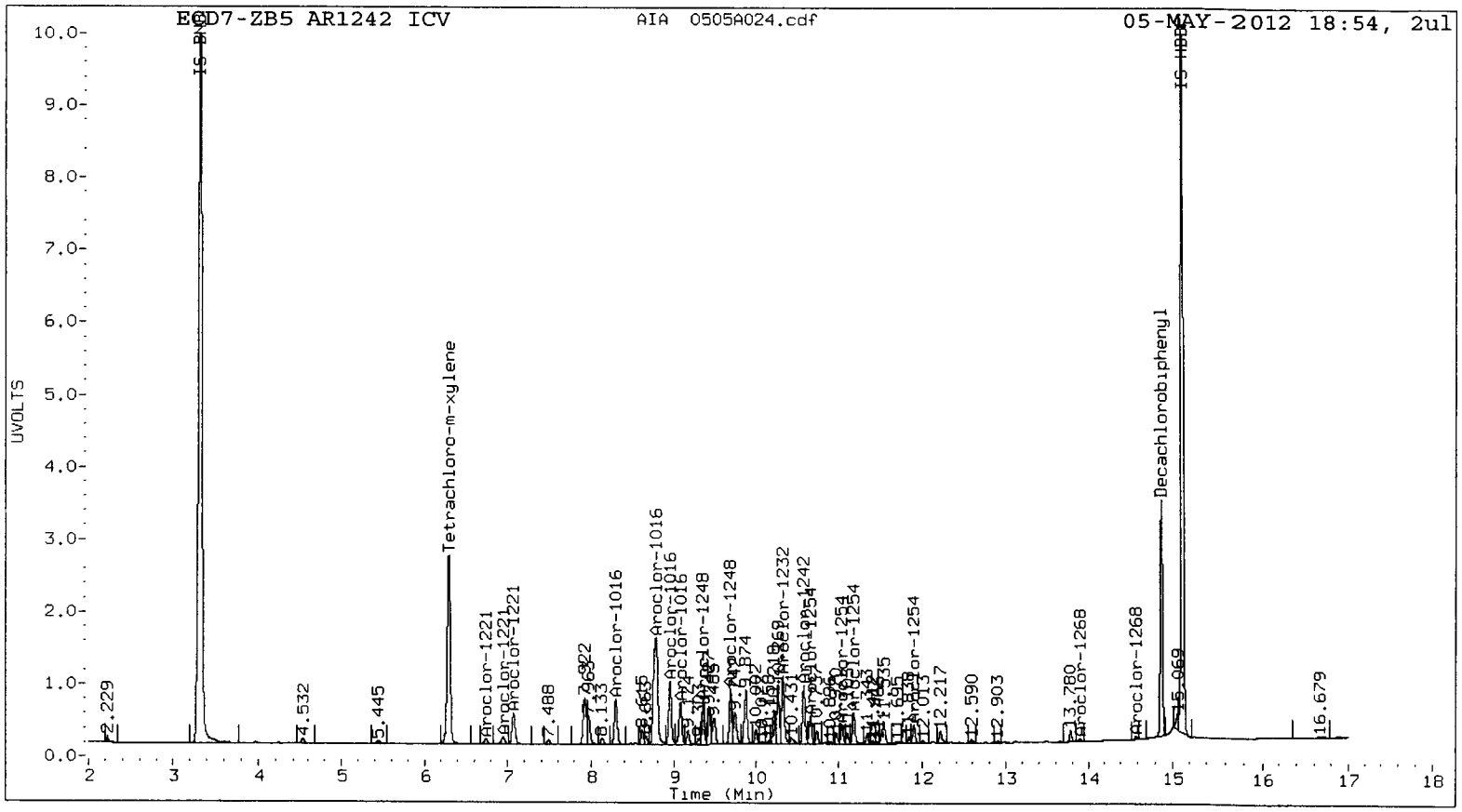
3.121
3.885
4.852
5.088
8.295
14.474
16.440

UR81 : 02010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05-MAY-2012 18:54, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1268
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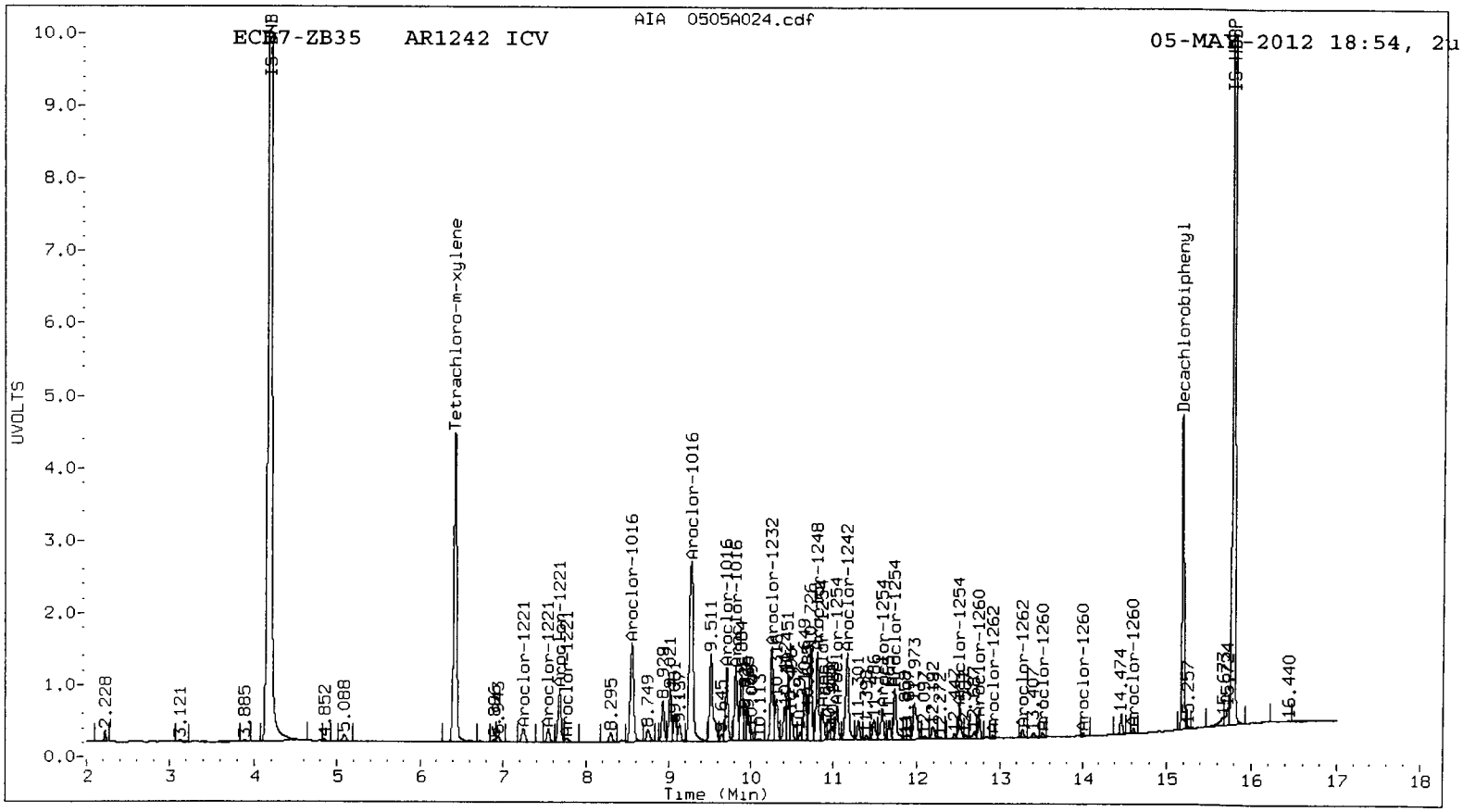
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
2.228
3.121
3.885
4.852
5.088
8.295
8.749
9.511
14.474
15.257
16.440

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A025.d
Data file 2: 20120505.B/ical-2.b/0505A025.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 05-MAY-2012 19:15
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.290	-0.002	1374474	6.417	-0.002	2202682	20.1	19.6	2.2	Tetrachloro-m-xylen
14.870	0.000	1162384	15.198	0.000	1520507	19.6	19.1	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.1	49.0
Decachlorobiphenyl	48.9	47.8

JK 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5801335	-0.7
Hexabromobiphenyl	4847662	4888022	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8986504	-1.9
Hexabromobiphenyl	6845779	6937342	1.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.296	-0.005	150886	89.0	1	8.544	-0.006	442193	97.2
Aroclor-1016	2	8.778	-0.009	697701	119.9	2	9.273	-0.007	1103975	119.7
Aroclor-1016	3	8.959	-0.002	245144	107.9	3	9.704	-0.003	249487	104.3
Aroclor-1016	4	9.085	-0.003	167552	106.3	4	9.810	-0.004	763108	275.1
Total Col1Ave (4 peaks):				105.8		Total Col2Ave (4 peaks):			149.1	RPD = 34
Corrected Ave (3 peaks):				101.1		Corrected Ave (3 peaks):			107.1	RPD = 6
Aroclor-1221	1	---			0.0	1	7.256	0.014	43414	33.6
Aroclor-1221	2	6.935	-0.019	22819	45.4	2	7.541	-0.001	16133	20.3
Aroclor-1221	3	7.075	-0.002	47847	28.6	3	7.680	0.000	90350	38.0
Aroclor-1221	NS	---			----	4	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave:			30.6	
Aroclor-1232	1	8.296	-0.003	150886	225.2	1	8.544	-0.004	442193	226.1
Aroclor-1232	2	8.778	-0.006	697701	306.0	2	9.273	-0.005	1103975	303.2
Aroclor-1232	3	8.959	0.000	245144	272.7	3	9.704	-0.001	249487	254.5
Aroclor-1232	4	10.328	-0.001	743207	731.2	4	10.256	-0.001	840197	571.0
Total Col1Ave (4 peaks):				383.7		Total Col2Ave (4 peaks):			338.7	RPD = 12
Corrected Ave (3 peaks):				267.9		Corrected Ave (3 peaks):			261.3	RPD = 3
Aroclor-1242	1	8.296	-0.002	150886	117.4	1	8.544	-0.004	442193	132.5
Aroclor-1242	2	8.778	-0.006	697701	158.5	2	9.273	-0.005	1103975	161.9
Aroclor-1242	3	8.959	0.001	245144	142.9	3	9.704	0.000	249487	138.3
Aroclor-1242	4	10.574	-0.001	565910	361.1	4	11.165	-0.002	1062121	379.1
Total Col1Ave (4 peaks):				195.0		Total Col2Ave (4 peaks):			203.0	RPD = 4
Corrected Ave (3 peaks):				139.6		Corrected Ave (3 peaks):			144.3	RPD = 3
Aroclor-1248	1	9.354	-0.002	422654	239.6	1	9.810	-0.002	763108	241.1
Aroclor-1248	2	9.684	-0.002	513155	238.0	2	10.256	-0.002	840197	241.2
Aroclor-1248	3	10.328	-0.001	743207	231.7	3	10.805	-0.002	825166	233.2
Aroclor-1248	4	10.574	-0.001	565910	227.8	4	11.165	-0.002	1062121	233.0
Total Col1Ave (4 peaks):				234.3		Total Col2Ave (4 peaks):			237.1	RPD = 1
Corrected Ave (3 peaks):				232.5		Corrected Ave (3 peaks):			235.8	RPD = 1
Aroclor-1254	1	10.328	-0.009	743207	271.6	1	10.871	-0.001	348740	103.7
Aroclor-1254	2	10.656	-0.002	348093	92.2	2	11.042	-0.001	357914	83.4
Aroclor-1254	3	11.041	0.000	223366	93.9	3	11.579	0.000	367114	107.4
Aroclor-1254	4	11.179	0.000	366777	81.4	4	11.730	-0.001	579947	79.8
Aroclor-1254	5	11.902	0.005	243014	80.8	5	12.510	-0.006	397743	90.8
Total Col1Ave (5 peaks):				124.0		Total Col2Ave (5 peaks):			93.0	RPD = 29
Corrected Ave (4 peaks):				87.1		Corrected Ave (4 peaks):			89.4	RPD = 3
Aroclor-1260	1	11.838	-0.002	32524	7.6	1	12.739	-0.002	116225	18.7
Aroclor-1260	2	12.442	-0.002	11520	4.1	2	13.514	0.001	45374	4.7
Aroclor-1260	3	---			0.0	3	14.008	0.000	30363	4.8
Aroclor-1260	4	---			0.0	4	14.565	0.000	12769	5.5
Aroclor-1260	5	---			0.0	NS	---			----
Col1Ave: <3 Quant Peaks						Col2Ave:			8.4	
Aroclor-1262	1	12.442	-0.001	11520	2.6	1	12.831	0.000	25354	4.2
Aroclor-1262	2	---			0.0	2	13.273	-0.001	56294	11.2
Aroclor-1262	3	13.120	0.000	21181	2.6	3	13.514	0.001	45374	4.0
Aroclor-1262	4	---			0.0	4	13.956	-0.001	20141	4.7
Aroclor-1262	5	---			0.0	5	14.008	0.000	30363	4.4
Col1Ave: <3 Quant Peaks						Col2Ave:			5.7	
Aroclor-1268	1	---			0.0	1	13.956	0.002	20141	1.8
Aroclor-1268	2	---			0.0	2	14.008	-0.002	30363	2.8
Aroclor-1268	3	13.901	-0.074	17508	2.7	3	---			0.0
Aroclor-1268	4	14.579	0.002	13264	0.7	4	---			0.0

Col1Ave: <3 Quant Peaks

Col2Ave: <3 Quant Peaks

Total PCB Area Col1 (6.392 - 14.769) = 8994054

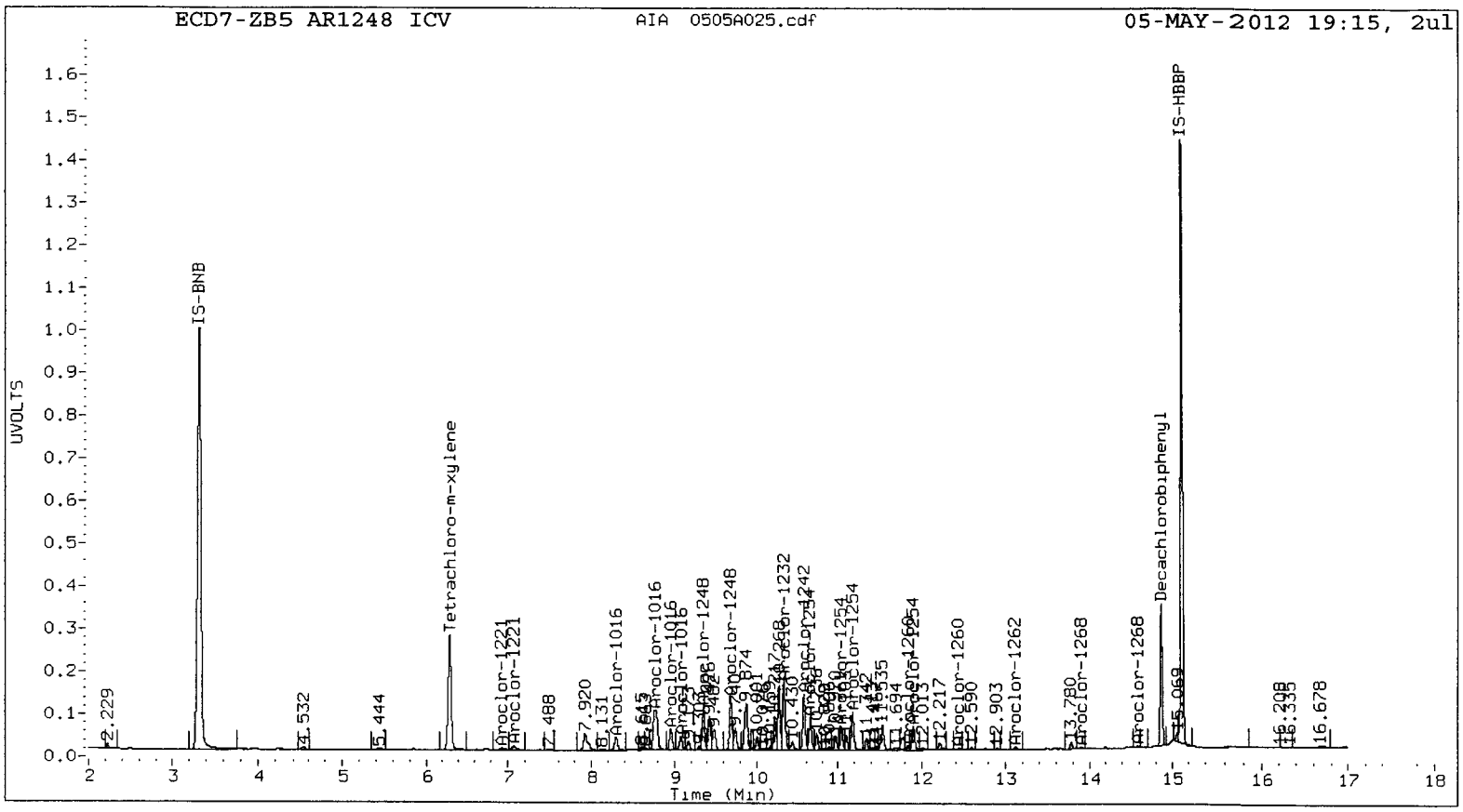
Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 14855117

Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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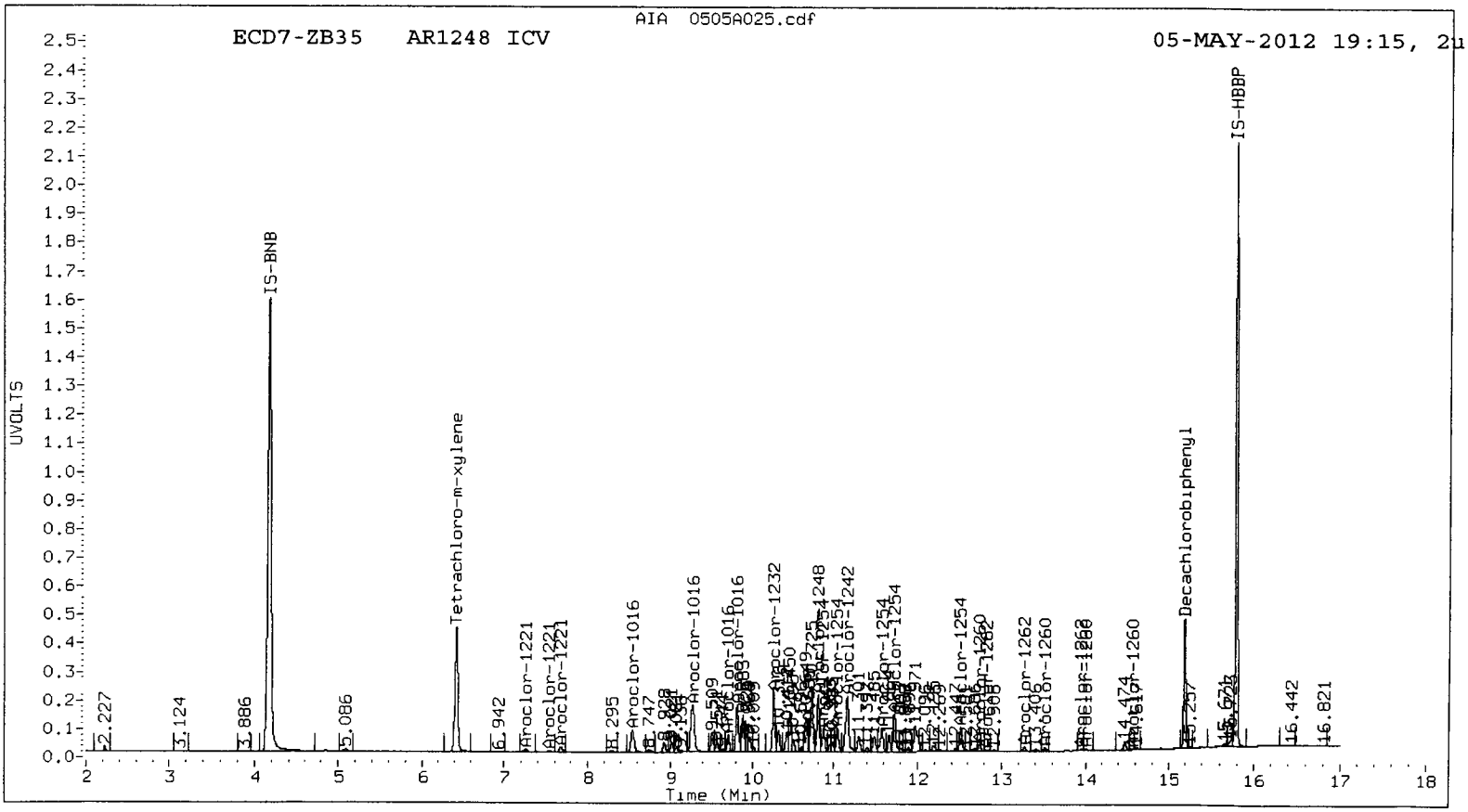
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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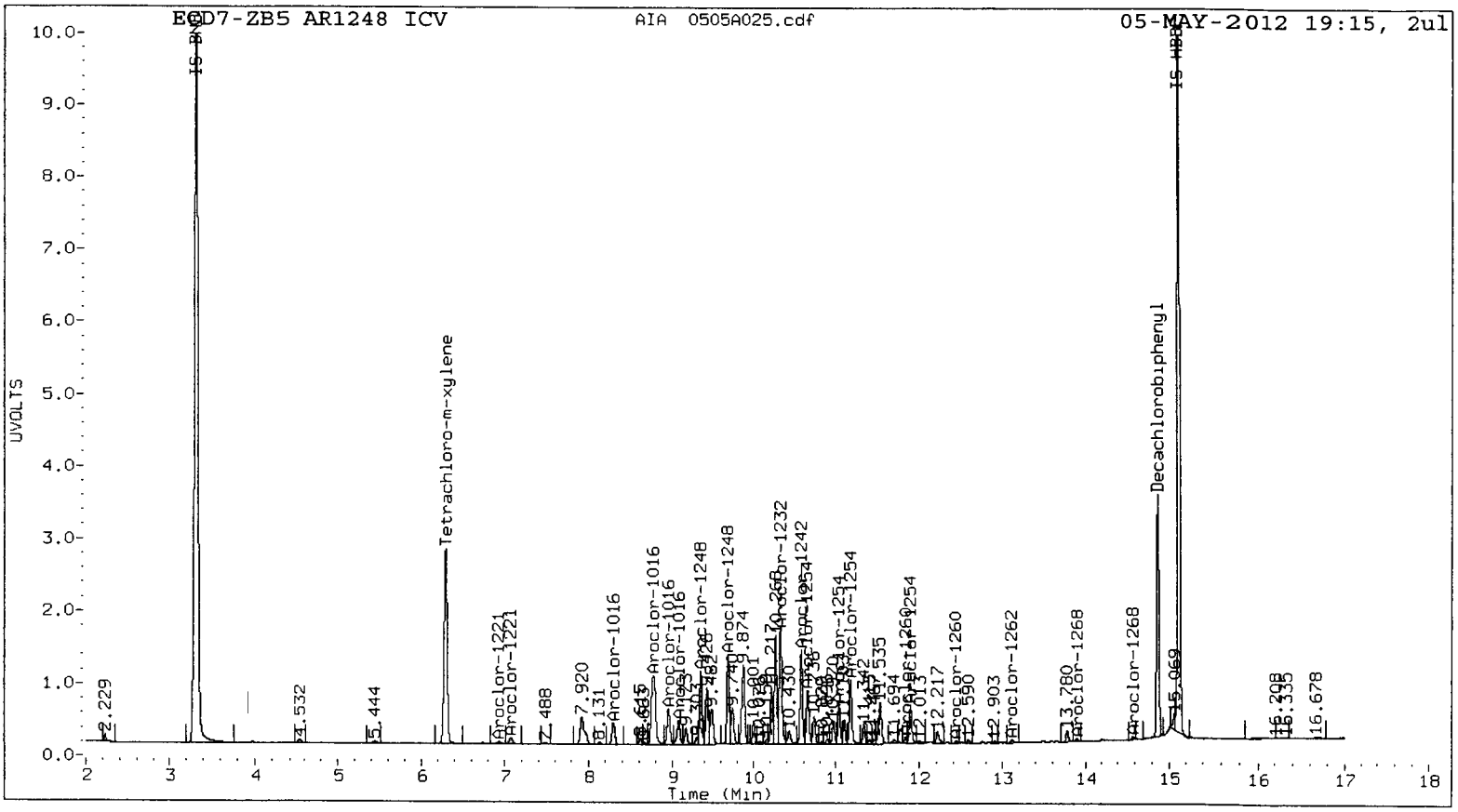
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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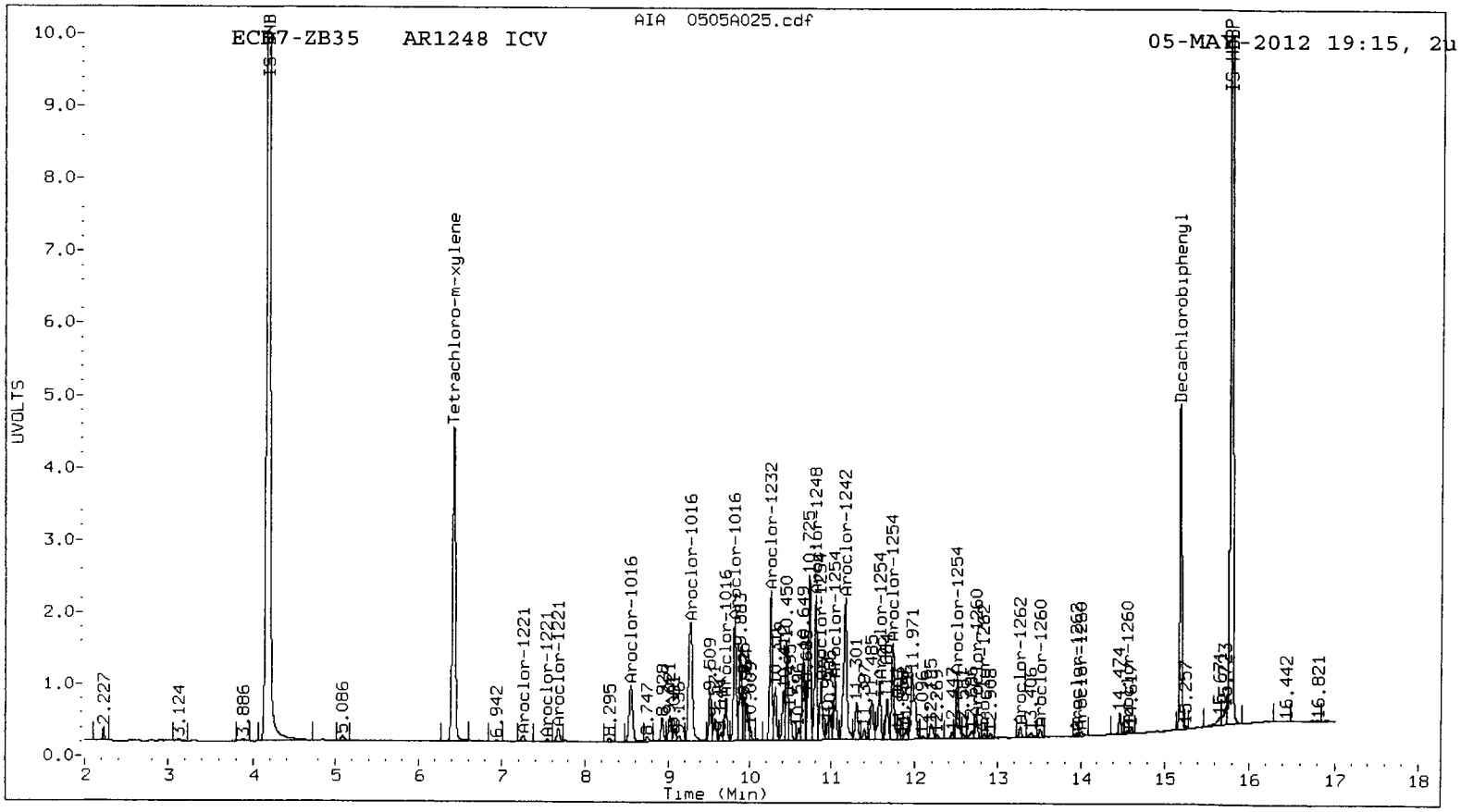
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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05-MAY-2012 19:15, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A026.d
Data file 2: 20120505.B/ical-2.b/0505A026.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 05-MAY-2012 19:36
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.292	0.000	1360538	6.418	0.000	2209691	19.5	19.2	1.5	Tetrachloro-m-xylen
14.871	0.002	1155968	15.199	0.001	1513757	19.1	18.8	2.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	48.9	48.1
Decachlorobiphenyl	47.8	46.9

JK 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5892179	0.9
Hexabromobiphenyl	4847662	4967896	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9187197	0.3
Hexabromobiphenyl	6845779	7034723	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	8.545	-0.004	16033	3.4
Aroclor-1016	2	8.770	-0.017	22003	3.7	2	9.265	-0.014	46216	4.9
Aroclor-1016	3	8.966	0.006	11879	5.1	3	---			0.0
Aroclor-1016	4	---			0.0	4	9.812	-0.003	519119	183.0
	Col1Ave: <3 Quant Peaks					Col2Ave: 63.8				
Aroclor-1221	1	---			0.0	1	7.261	0.020	30882	23.4
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	7.684	0.004	10963	4.5
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	8.545	-0.003	16033	8.0
Aroclor-1232	2	8.770	-0.014	22003	9.5	2	9.265	-0.012	46216	12.4
Aroclor-1232	3	8.966	0.008	11879	13.0	3	---			0.0
Aroclor-1232	4	10.336	0.008	678331	657.1	4	10.258	0.001	310214	206.2
	Total Col1Ave (3 peaks):			226.5		Total Col2Ave (3 peaks):			75.5	RPD = 100*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1242	1	---			0.0	1	8.545	-0.003	16033	4.7
Aroclor-1242	2	8.770	-0.014	22003	4.9	2	9.265	-0.012	46216	6.6
Aroclor-1242	3	8.966	0.008	11879	6.8	3	---			0.0
Aroclor-1242	4	10.578	0.002	209390	131.6	4	11.141	-0.026	596378	208.2
	Total Col1Ave (3 peaks):			47.8		Total Col2Ave (3 peaks):			73.2	RPD = 42*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1248	1	9.355	0.000	329538	184.0	1	9.812	-0.001	519119	160.4
Aroclor-1248	2	9.686	0.001	188682	86.2	2	10.258	0.000	310214	87.1
Aroclor-1248	3	10.336	0.008	678331	208.2	3	10.806	0.000	184236	50.9
Aroclor-1248	4	10.578	0.003	209390	83.0	4	11.141	-0.026	596378	128.0
	Total Col1Ave (4 peaks):			140.3		Total Col2Ave (4 peaks):			106.6	RPD = 27
	Corrected Ave (3 peaks):			117.7		Corrected Ave (3 peaks):			88.7	RPD = 28
Aroclor-1254	1	10.336	0.000	678331	244.1	1	10.873	0.001	873421	254.0
Aroclor-1254	2	10.658	0.001	967079	252.3	2	11.044	0.001	1117465	254.5
Aroclor-1254	3	11.041	0.000	612348	253.5	3	11.580	0.001	890322	254.7
Aroclor-1254	4	11.180	0.000	1145005	250.2	4	11.732	0.001	1867604	251.4
Aroclor-1254	5	11.897	-0.001	762416	249.7	5	12.516	0.001	1122249	250.6
	Total Col1Ave (5 peaks):			250.0		Total Col2Ave (5 peaks):			253.1	RPD = 1
	Corrected Ave (4 peaks):			249.1		Corrected Ave (4 peaks):			252.6	RPD = 1
Aroclor-1260	1	11.839	-0.001	468651	107.8	1	12.741	0.000	1347564	213.6
Aroclor-1260	2	12.442	-0.003	52934	18.7	2	13.514	0.000	281379	29.0
Aroclor-1260	3	12.758	-0.001	60828	21.6	3	14.007	-0.002	193647	30.0
Aroclor-1260	4	13.491	-0.001	131021	37.1	4	14.565	0.000	10438	4.4
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (4 peaks):			46.3		Total Col2Ave (4 peaks):			69.2	RPD = 40
	Corrected Ave (3 peaks):			25.8		Corrected Ave (3 peaks):			21.1	RPD = 20
Aroclor-1262	1	12.442	-0.001	52934	11.9	1	12.831	0.000	90891	15.0
Aroclor-1262	2	12.758	0.001	60828	18.9	2	13.274	0.000	498651	97.7
Aroclor-1262	3	13.121	0.000	134495	16.0	3	13.514	0.001	281379	24.6
Aroclor-1262	4	13.491	-0.100	131021	46.2	4	13.961	0.004	45267	10.4
Aroclor-1262	5	---			0.0	5	14.007	-0.002	193647	27.7
	Total Col1Ave (4 peaks):			23.3		Total Col2Ave (5 peaks):			35.1	RPD = 41*
	Corrected Ave (3 peaks):			15.6		Corrected Ave (4 peaks):			19.4	RPD = 22
Aroclor-1268	1	13.491	-0.100	131021	15.0	1	13.961	0.006	45267	3.9
Aroclor-1268	2	---			0.0	2	14.007	-0.003	193647	17.7
Aroclor-1268	3	13.901	-0.074	17014	2.5	3	---			0.0

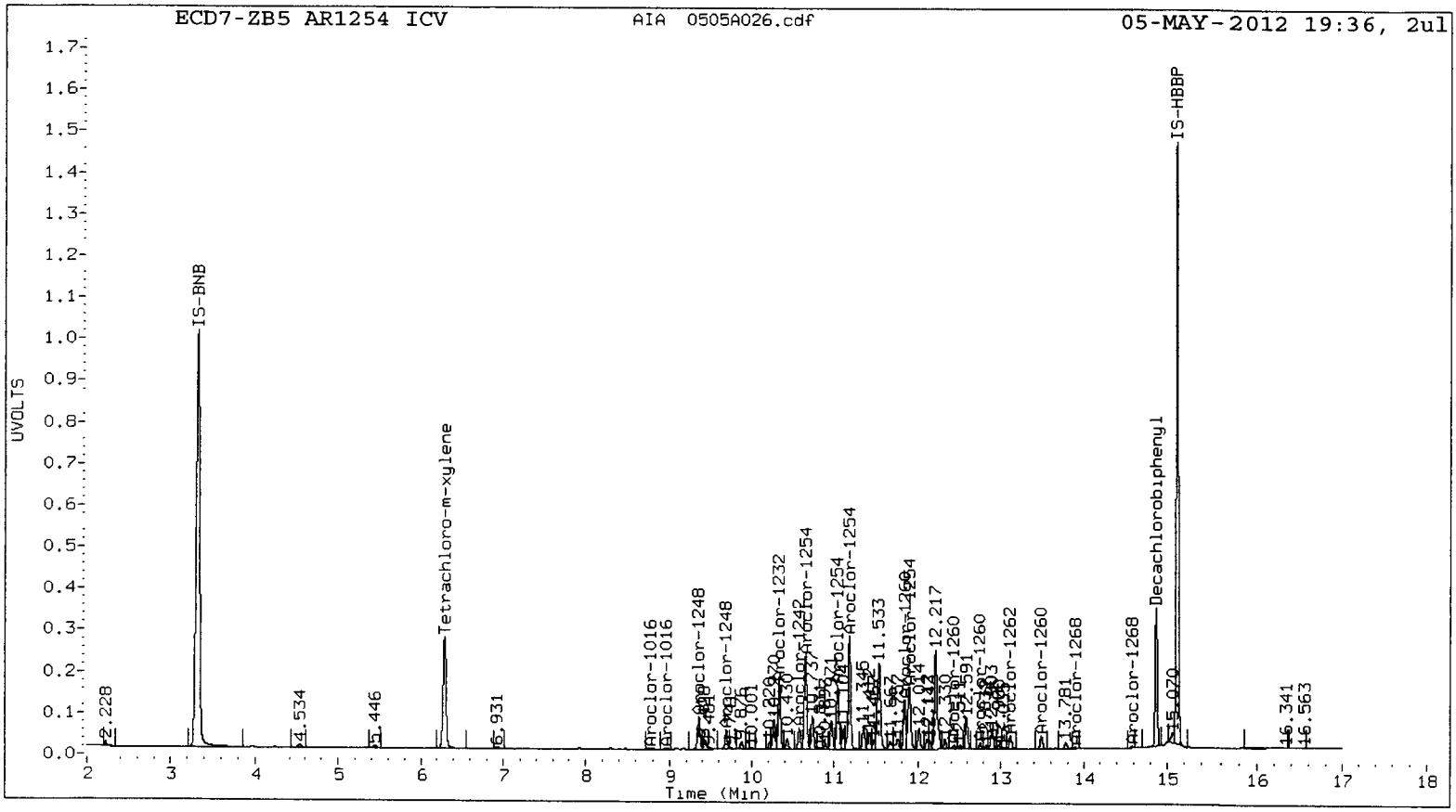
Aroclor-1268	4	14.579	0.003	10148	0.5	4	---	0.0
Total Col1Ave (3 peaks):				6.0		Col2Ave: <3 Quant Peaks		

Total PCB Area Col1 (6.392 - 14.769) = 11658931 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 18294503 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
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11.533
12.217
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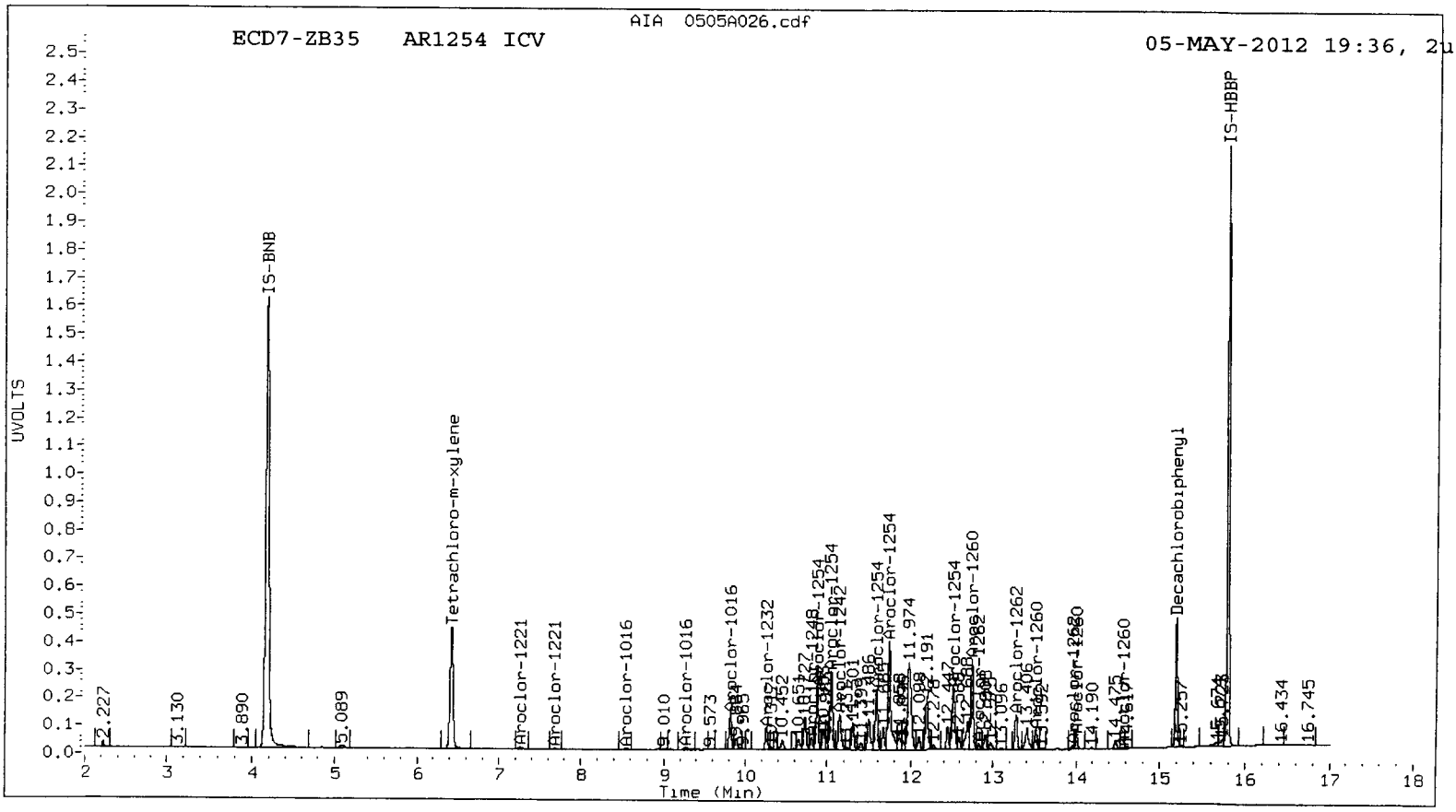
16.563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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
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9.010
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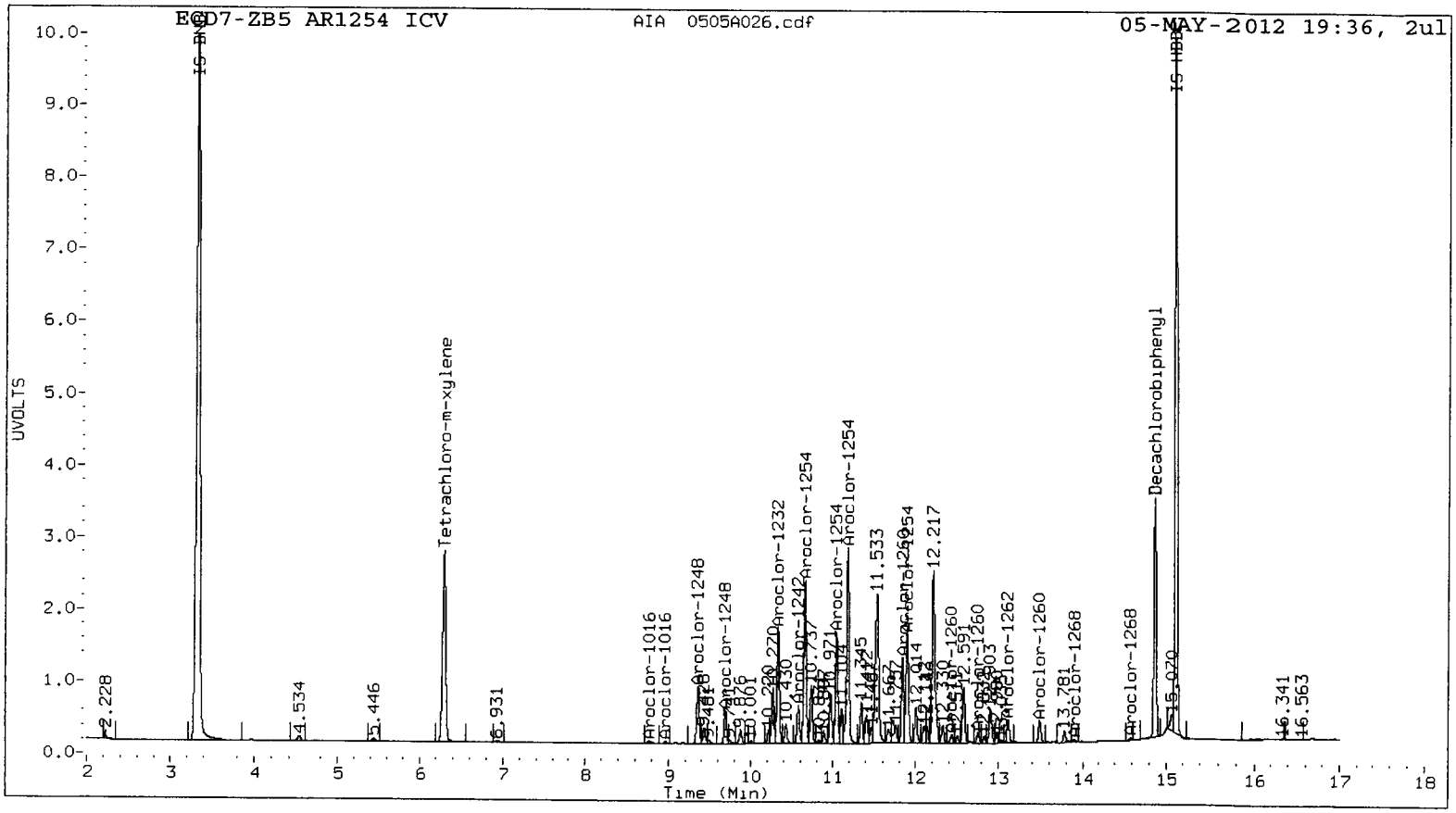
16.745

UR01 : 02020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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
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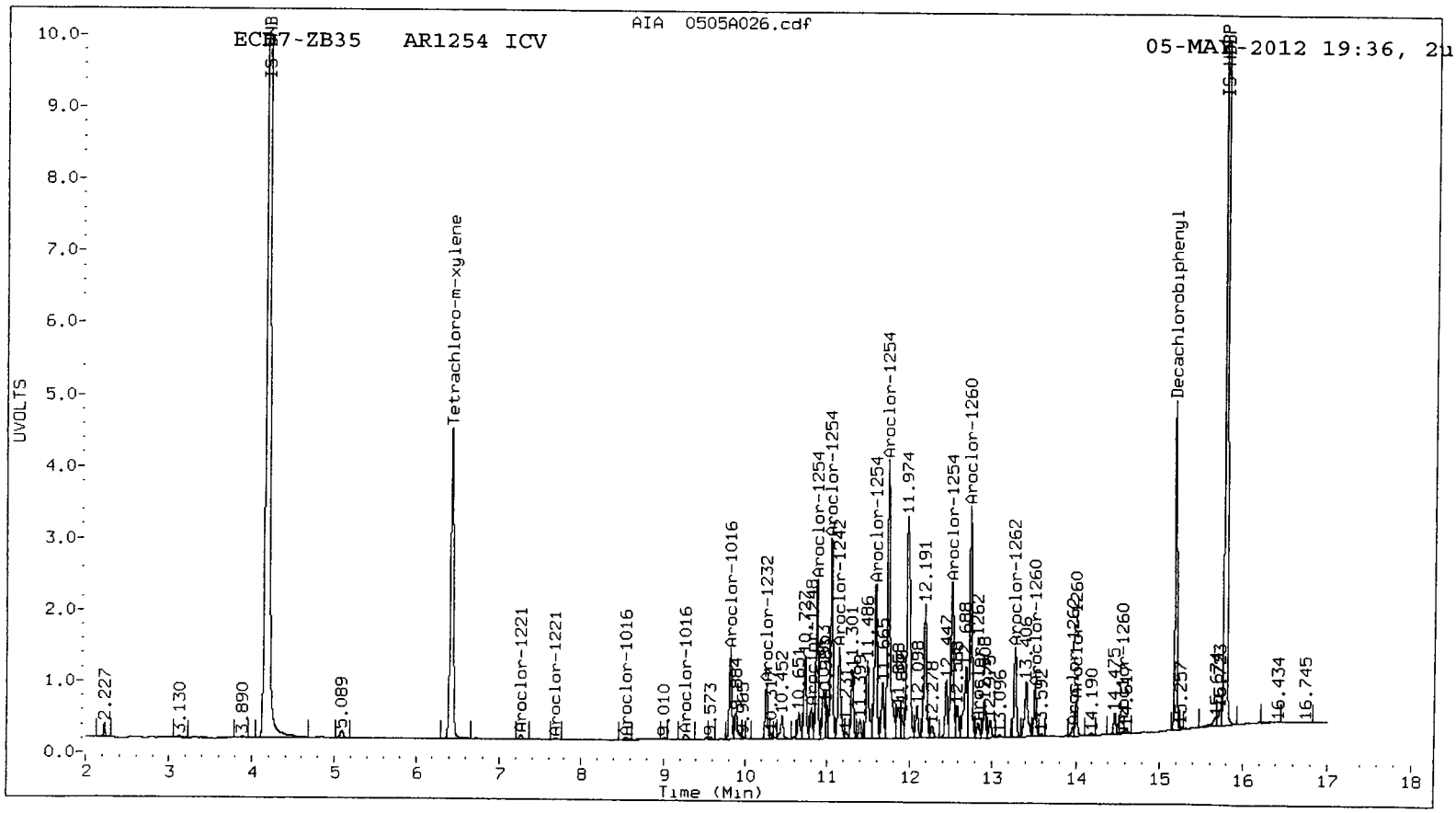
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1242
Aroclor-1260
Aroclor-1262

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A027.d
Data file 2: 20120505.B/ical-2.b/0505A027.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 05-MAY-2012 19:57
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.292	0.000	1413060	6.419	0.000	2196608	20.5	19.4	5.4	Tetrachloro-m-xylen
14.871	0.002	1154069	15.200	0.002	1506549	19.2	18.7	2.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.2	48.5
Decachlorobiphenyl	47.9	46.7

pc 05/07/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5836839	-0.1
Hexabromobiphenyl	4847662	4954937	2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9050043	-1.2
Hexabromobiphenyl	6845779	7038220	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.299	-0.001	32685	19.2	1	8.566	0.016	198776	43.4
Aroclor-1016	2	8.787	-0.001	91493	15.6	2	9.280	0.000	173896	18.7
Aroclor-1016	3	8.959	-0.001	41120	18.0	3	9.706	-0.001	47397	19.7
Aroclor-1016	4	9.087	-0.001	26658	16.8	4	9.813	-0.001	45933	16.4
Total Col1Ave (4 peaks):				17.4		Total Col2Ave (4 peaks):			24.6	RPD = 34
Corrected Ave (3 peaks):				16.8		Corrected Ave (3 peaks):			18.3	RPD = 8
Aroclor-1221	1	6.743	0.000	174725	259.0	1	7.242	0.001	331546	254.8
Aroclor-1221	2	6.955	0.001	130292	257.9	2	7.543	0.001	203947	254.2
Aroclor-1221	3	7.078	0.001	435821	258.7	3	7.681	0.001	602989	252.0
Aroclor-1221	NS	---			----	4	7.768	0.001	118830	260.9
Total Col1Ave (3 peaks):				258.5		Total Col2Ave (4 peaks):			255.5	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			253.7	
Aroclor-1232	1	8.299	0.000	32685	48.5	1	8.566	0.018	198776	100.9
Aroclor-1232	2	8.787	0.003	91493	39.9	2	9.280	0.002	173896	47.4
Aroclor-1232	3	8.959	0.001	41120	45.5	3	9.706	0.001	47397	48.0
Aroclor-1232	4	10.337	0.009	118563	115.9	4	10.259	0.002	48461	32.7
Total Col1Ave (4 peaks):				62.4		Total Col2Ave (4 peaks):			57.3	RPD = 9
Corrected Ave (3 peaks):				44.6		Corrected Ave (3 peaks):			42.7	RPD = 4
Aroclor-1242	1	8.299	0.001	32685	25.3	1	8.566	0.018	198776	59.2
Aroclor-1242	2	8.787	0.002	91493	20.7	2	9.280	0.003	173896	25.3
Aroclor-1242	3	8.959	0.001	41120	23.8	3	9.706	0.002	47397	26.1
Aroclor-1242	4	10.578	0.003	25568	16.2	4	11.165	-0.002	56929	20.2
Total Col1Ave (4 peaks):				21.5		Total Col2Ave (4 peaks):			32.7	RPD = 41*
Corrected Ave (3 peaks):				20.2		Corrected Ave (3 peaks):			23.9	RPD = 16
Aroclor-1248	1	9.356	0.001	20546	11.6	1	9.813	0.001	45933	14.4
Aroclor-1248	2	9.687	0.001	18921	8.7	2	10.259	0.001	48461	13.8
Aroclor-1248	3	10.337	0.009	118563	36.7	3	10.808	0.002	31296	8.8
Aroclor-1248	4	10.578	0.003	25568	10.2	4	11.165	-0.002	56929	12.4
Total Col1Ave (4 peaks):				16.8		Total Col2Ave (4 peaks):			12.4	RPD = 31
Corrected Ave (3 peaks):				10.2		Corrected Ave (3 peaks):			11.7	RPD = 14
Aroclor-1254	1	10.337	0.001	118563	43.1	1	10.874	0.001	182958	54.0
Aroclor-1254	2	10.660	0.003	131279	34.6	2	11.044	0.001	212126	49.1
Aroclor-1254	3	11.042	0.002	24083	10.1	3	11.581	0.002	47897	13.9
Aroclor-1254	4	11.149	-0.031	177970	39.3	4	11.768	0.037	859429	117.5
Aroclor-1254	5	11.887	-0.010	152373	50.4	5	12.528	0.012	226049	51.2
Total Col1Ave (5 peaks):				35.5		Total Col2Ave (5 peaks):			57.1	RPD = 47*
Corrected Ave (4 peaks):				31.7		Corrected Ave (4 peaks):			42.1	RPD = 28
Aroclor-1260	1	11.840	0.000	741082	170.9	1	12.741	0.000	638148	101.1
Aroclor-1260	2	12.443	-0.001	1094063	387.4	2	13.514	0.000	2676037	275.2
Aroclor-1260	3	12.758	-0.001	924674	328.7	3	14.009	0.001	1846534	286.1
Aroclor-1260	4	13.493	0.000	643684	182.7	4	14.564	-0.001	971765	410.9
Aroclor-1260	5	13.592	0.000	851601	603.5	NS	---			----
Total Col1Ave (5 peaks):				334.6		Total Col2Ave (4 peaks):			268.3	RPD = 22
Corrected Ave (4 peaks):				267.4		Corrected Ave (3 peaks):			220.8	RPD = 19
Aroclor-1262	1	12.443	0.001	1094063	246.5	1	12.832	0.001	1512933	249.5
Aroclor-1262	2	12.758	0.000	924674	288.5	2	13.275	0.001	1483049	290.4
Aroclor-1262	3	13.121	0.000	1949435	231.8	3	13.514	0.001	2676037	233.5
Aroclor-1262	4	13.592	0.001	851601	301.3	4	13.957	0.000	1263634	290.1
Aroclor-1262	5	13.655	0.001	839659	280.9	5	14.009	0.000	1846534	264.1
Total Col1Ave (5 peaks):				269.8		Total Col2Ave (5 peaks):			265.5	RPD = 2
Corrected Ave (4 peaks):				261.9		Corrected Ave (4 peaks):			259.3	RPD = 1
Aroclor-1268	1	13.592	0.002	851601	97.6	1	13.957	0.002	1263634	108.5

Aroclor-1268 2	13.655	0.003	839659	106.0	2	14.009	-0.001	1846534	168.9
Aroclor-1268 3	13.992	0.017	336938	50.4	3	14.324	0.001	96285	11.1
Aroclor-1268 4	14.578	0.001	264630	12.9	4	14.913	0.001	344811	12.7

Total Col1Ave (4 peaks): 66.7 Total Col2Ave (4 peaks): 75.3 RPD = 12

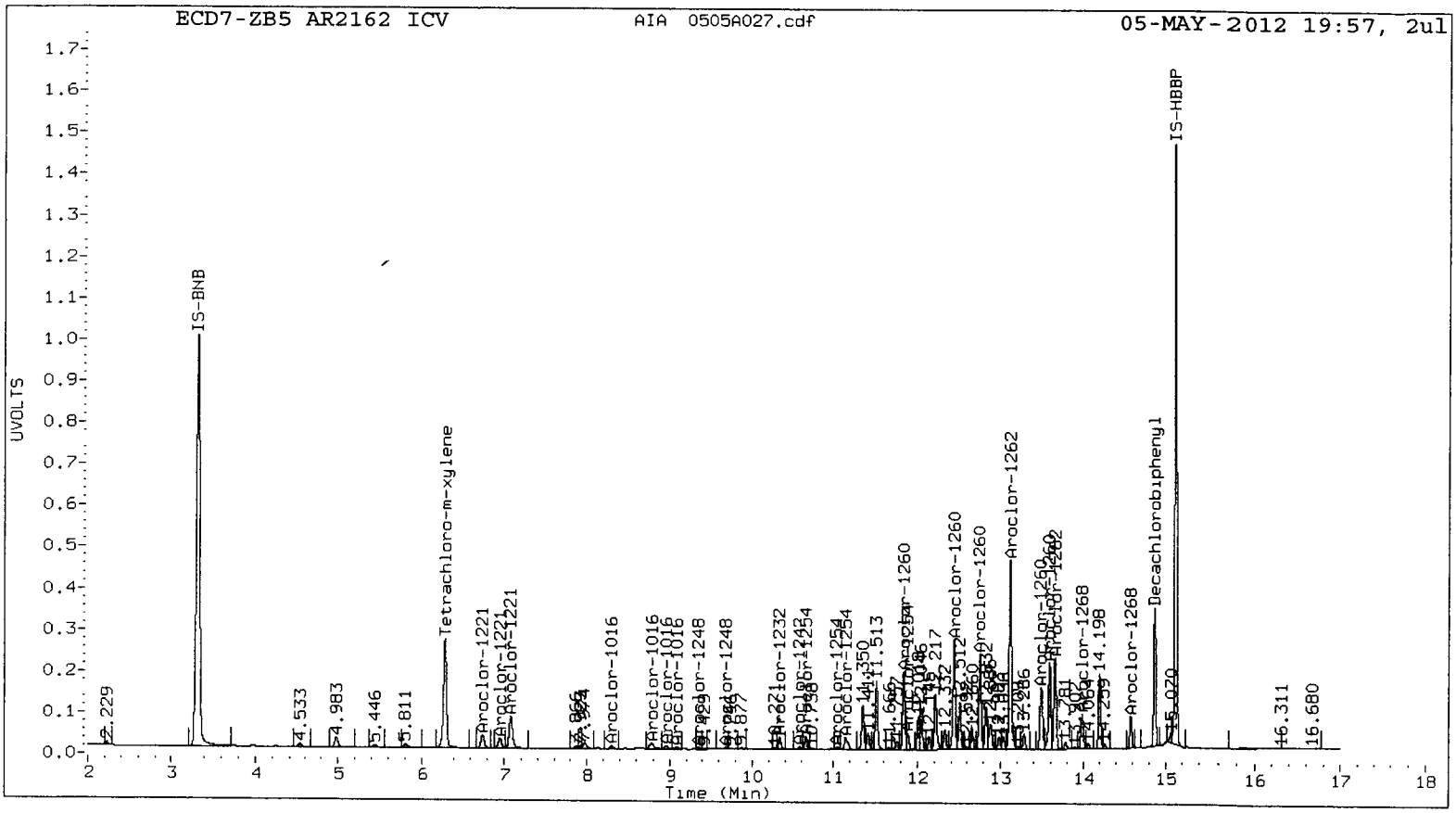
Corrected Ave (3 peaks): 53.6 Corrected Ave (3 peaks): 44.1 RPD = 19

Total PCB Area Col1 (6.392 - 14.769) = 15033513 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 22374822 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR01 : 02024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Aroclor-1016
Aroclor-1248
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Aroclor-1254
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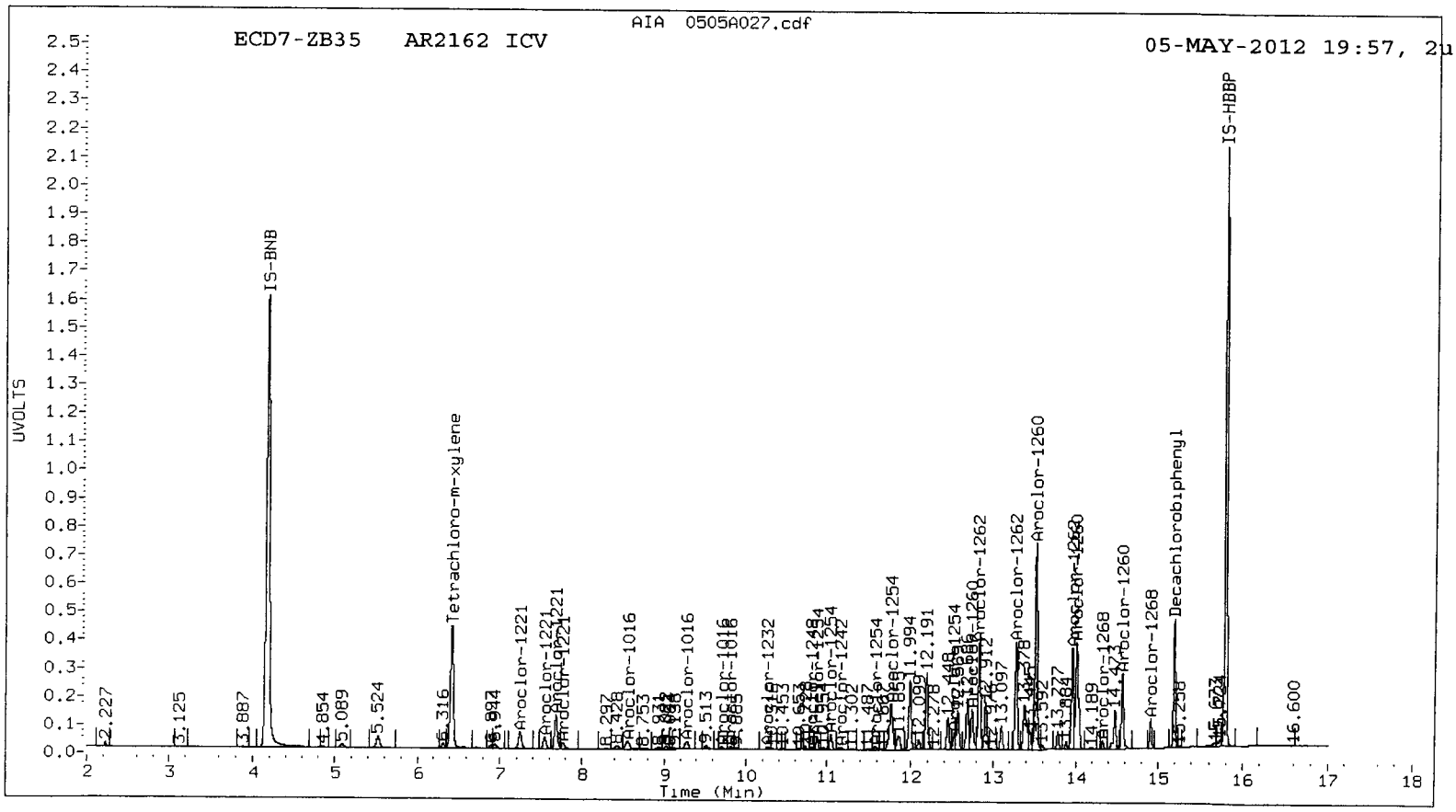
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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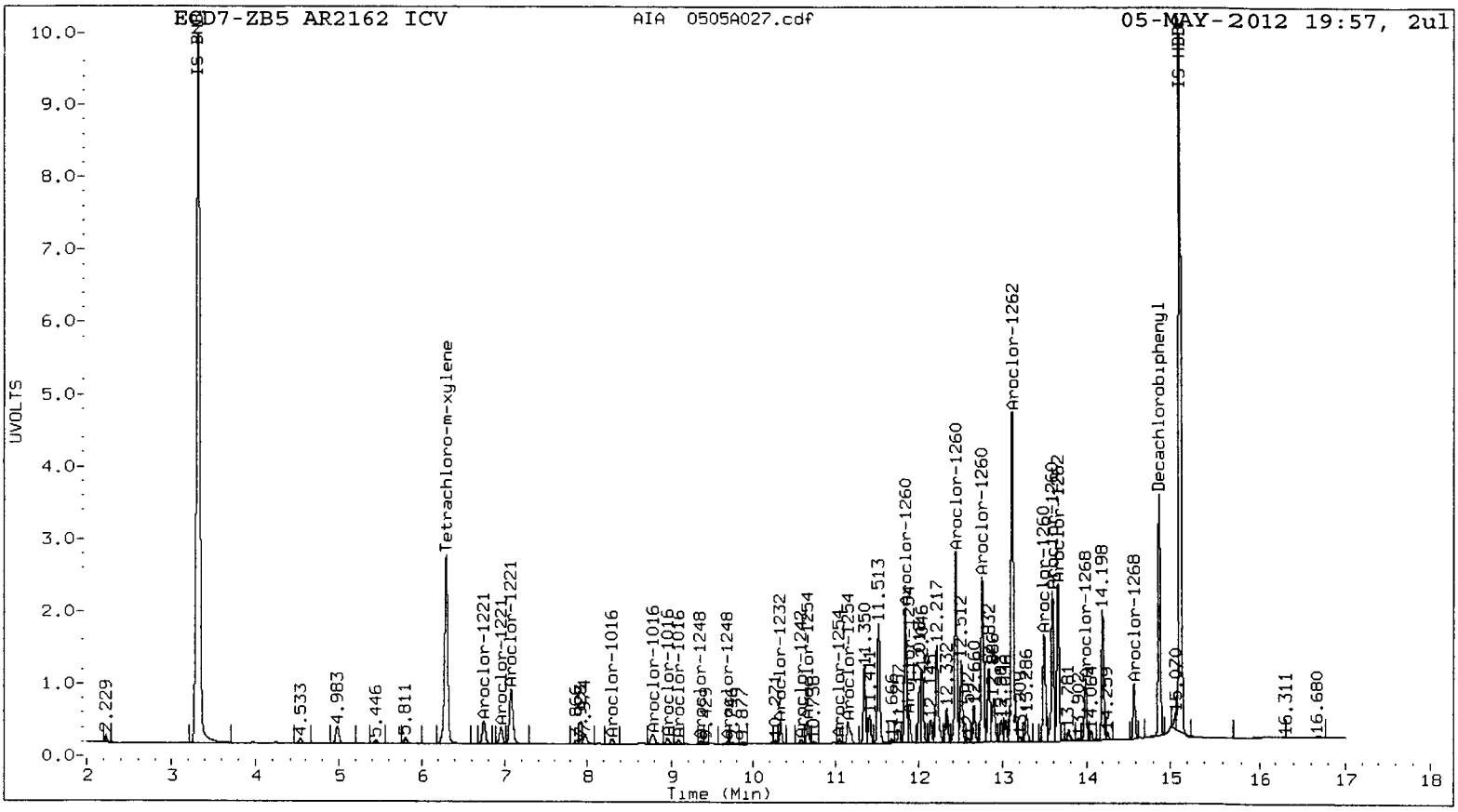
Decachlorobiphenyl
IS-HBBP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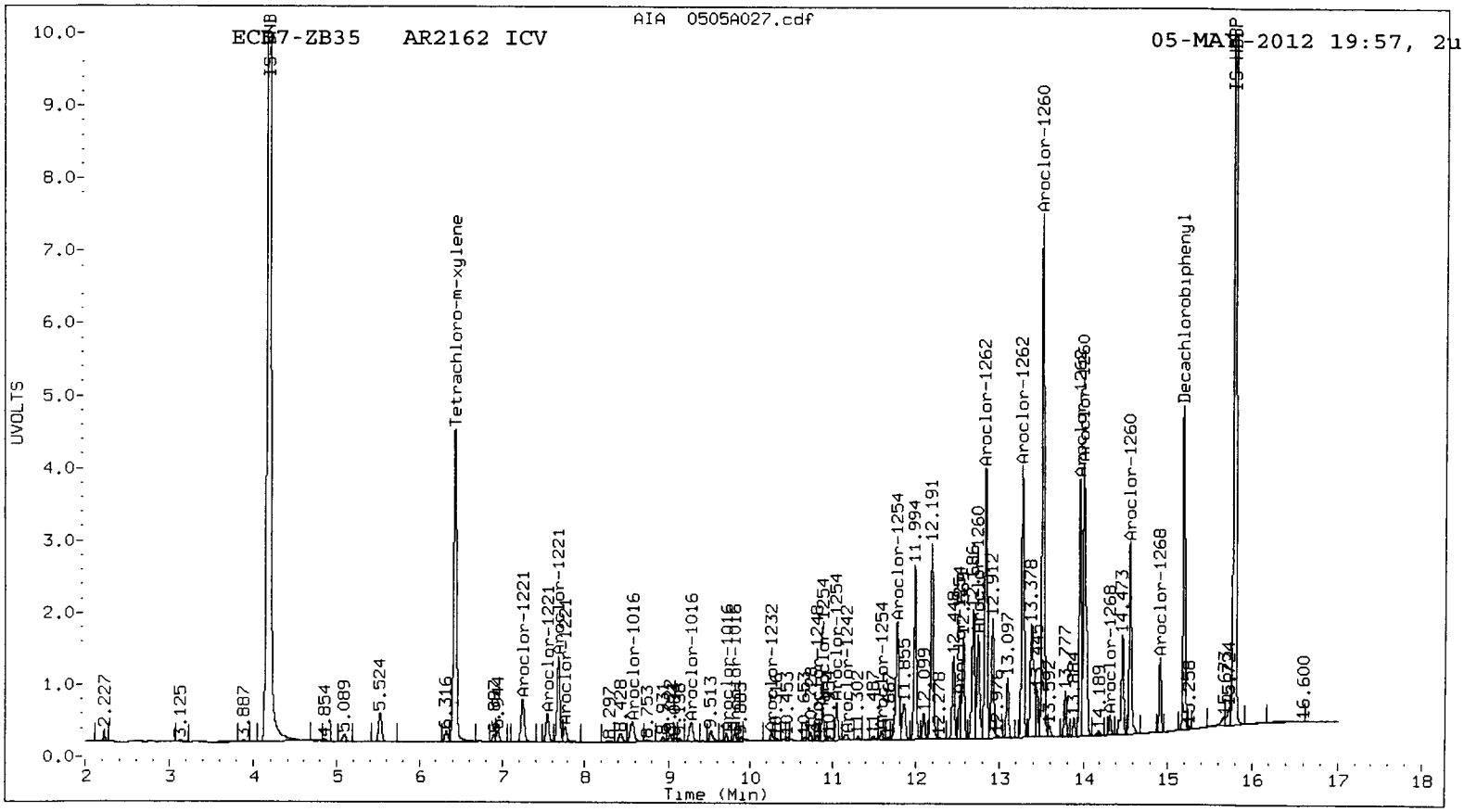
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/ical-1.b/0505A028.d
Data file 2: 20120505.B/ical-2.b/0505A028.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 05-MAY-2012 20:18
Report Date: 05/07/2012 11:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.291	-0.001	1406789	6.418	-0.001	2222665	20.3	19.4	4.4	Tetrachloro-m-xylen
14.870	0.001	1901483	15.199	0.001	2469490	31.3	30.6	2.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

05/07/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.8	48.6
Decachlorobiphenyl	78.3	76.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5864354	0.4
Hexabromobiphenyl	4847662	4993833	3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9155686	0.0
Hexabromobiphenyl	6845779	7046106	2.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	Shift	Area	Amount
Aroclor-1016	1	8.297	-0.003	183309	106.9	1	8.549	-0.001	539267	116.4
Aroclor-1016	2	8.786	-0.001	612909	104.2	2	9.278	-0.002	973146	103.5
Aroclor-1016	3	8.959	-0.002	242739	105.7	3	9.705	-0.001	267489	109.8
Aroclor-1016	4	9.087	-0.001	172408	108.2	4	9.813	-0.001	273147	96.6
Total Col1Ave (4 peaks):				106.3		Total Col2Ave (4 peaks):			106.6	RPD = 0
Corrected Ave (3 peaks):				105.6		Corrected Ave (3 peaks):			103.3	RPD = 2
Aroclor-1221	1	6.743	0.001	102978	151.9	1	7.243	0.001	211733	160.8
Aroclor-1221	2	6.954	0.000	91200	179.7	2	7.542	0.000	139750	172.2
Aroclor-1221	3	7.077	0.000	337036	199.1	3	7.682	0.001	492819	203.6
Aroclor-1221	NS	---			----	4	7.767	0.000	70008	151.9
Total Col1Ave (3 peaks):				176.9		Total Col2Ave (4 peaks):			172.1	RPD = 3
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			161.6	
Aroclor-1232	1	8.297	-0.001	183309	270.6	1	8.549	0.001	539267	270.7
Aroclor-1232	2	8.786	0.003	612909	265.9	2	9.278	0.000	973146	262.3
Aroclor-1232	3	8.959	0.000	242739	267.1	3	9.705	0.001	267489	267.8
Aroclor-1232	4	10.329	0.000	222319	216.4	4	10.258	0.000	348887	232.7
Total Col1Ave (4 peaks):				255.0		Total Col2Ave (4 peaks):			258.4	RPD = 1
Corrected Ave (3 peaks):				249.8		Corrected Ave (3 peaks):			254.3	RPD = 2
Aroclor-1242	1	8.297	0.000	183309	141.0	1	8.549	0.001	539267	158.6
Aroclor-1242	2	8.786	0.002	612909	137.7	2	9.278	0.000	973146	140.1
Aroclor-1242	3	8.959	0.001	242739	139.9	3	9.705	0.001	267489	145.6
Aroclor-1242	4	10.576	0.001	186716	117.9	4	11.168	0.001	360999	126.5
Total Col1Ave (4 peaks):				134.1		Total Col2Ave (4 peaks):			142.7	RPD = 6
Corrected Ave (3 peaks):				131.8		Corrected Ave (3 peaks):			137.4	RPD = 4
Aroclor-1248	1	9.356	0.000	126225	70.8	1	9.813	0.001	273147	84.7
Aroclor-1248	2	9.686	0.000	170184	78.1	2	10.258	0.000	348887	98.3
Aroclor-1248	3	10.329	0.000	222319	68.6	3	10.807	0.000	306734	85.1
Aroclor-1248	4	10.576	0.001	186716	74.4	4	11.168	0.001	360999	77.7
Total Col1Ave (4 peaks):				73.0		Total Col2Ave (4 peaks):			86.5	RPD = 17
Corrected Ave (3 peaks):				71.2		Corrected Ave (3 peaks):			82.5	RPD = 15
Aroclor-1254	1	10.329	-0.008	222319	80.4	1	10.872	0.000	83100	24.2
Aroclor-1254	2	10.657	-0.001	66079	17.3	2	11.044	0.001	78809	18.0
Aroclor-1254	3	11.042	0.001	36280	15.1	3	11.580	0.001	72599	20.8
Aroclor-1254	4	11.182	0.002	63985	14.0	4	11.732	0.001	146699	19.8
Aroclor-1254	5	11.903	0.005	36205	11.9	5	12.514	-0.002	67337	15.1
Total Col1Ave (5 peaks):				27.7		Total Col2Ave (5 peaks):			19.6	RPD = 34
Corrected Ave (4 peaks):				14.6		Corrected Ave (4 peaks):			18.4	RPD = 23
Aroclor-1260	1	11.839	-0.001	26856	6.1	1	12.741	0.000	36176	5.7
Aroclor-1260	2	12.443	-0.001	561062	197.1	2	13.513	0.000	530943	54.5
Aroclor-1260	3	12.758	-0.001	50358	17.8	3	14.010	0.002	3184817	493.0
Aroclor-1260	4	13.493	0.001	12678	3.6	4	14.564	-0.001	1050399	443.6
Aroclor-1260	5	13.591	-0.001	2323300	1633.8	NS	---			----
Total Col1Ave (5 peaks):				371.7		Total Col2Ave (4 peaks):			249.2	RPD = 39
Corrected Ave (4 peaks):				56.1		Corrected Ave (3 peaks):			168.0	RPD = 100*
Aroclor-1262	1	12.443	0.000	561062	125.5	1	12.831	0.000	821377	135.3
Aroclor-1262	2	12.758	0.000	50358	15.6	2	13.274	0.000	893460	174.7
Aroclor-1262	3	13.120	-0.001	354983	41.9	3	13.513	0.000	530943	46.3
Aroclor-1262	4	13.591	0.000	2323300	815.6	4	13.956	-0.001	3080828	706.5
Aroclor-1262	5	13.654	-0.001	2319644	769.8	5	14.010	0.002	3184817	455.1
Total Col1Ave (5 peaks):				353.7		Total Col2Ave (5 peaks):			303.6	RPD = 15
Corrected Ave (4 peaks):				238.2		Corrected Ave (4 peaks):			202.9	RPD = 16
Aroclor-1268	1	13.591	0.001	2323300	264.3	1	13.956	0.001	3080828	264.3

Aroclor-1268 2	13.654	0.002	2319644	290.7	2	14.010	0.000	3184817	291.1
Aroclor-1268 3	13.976	0.001	1587201	235.4	3	14.323	0.001	2036798	235.1
Aroclor-1268 4	14.578	0.001	4518000	217.9	4	14.913	0.001	5946937	218.7

Total Col1Ave (4 peaks): 252.1 Total Col2Ave (4 peaks): 252.3 RPD = 0

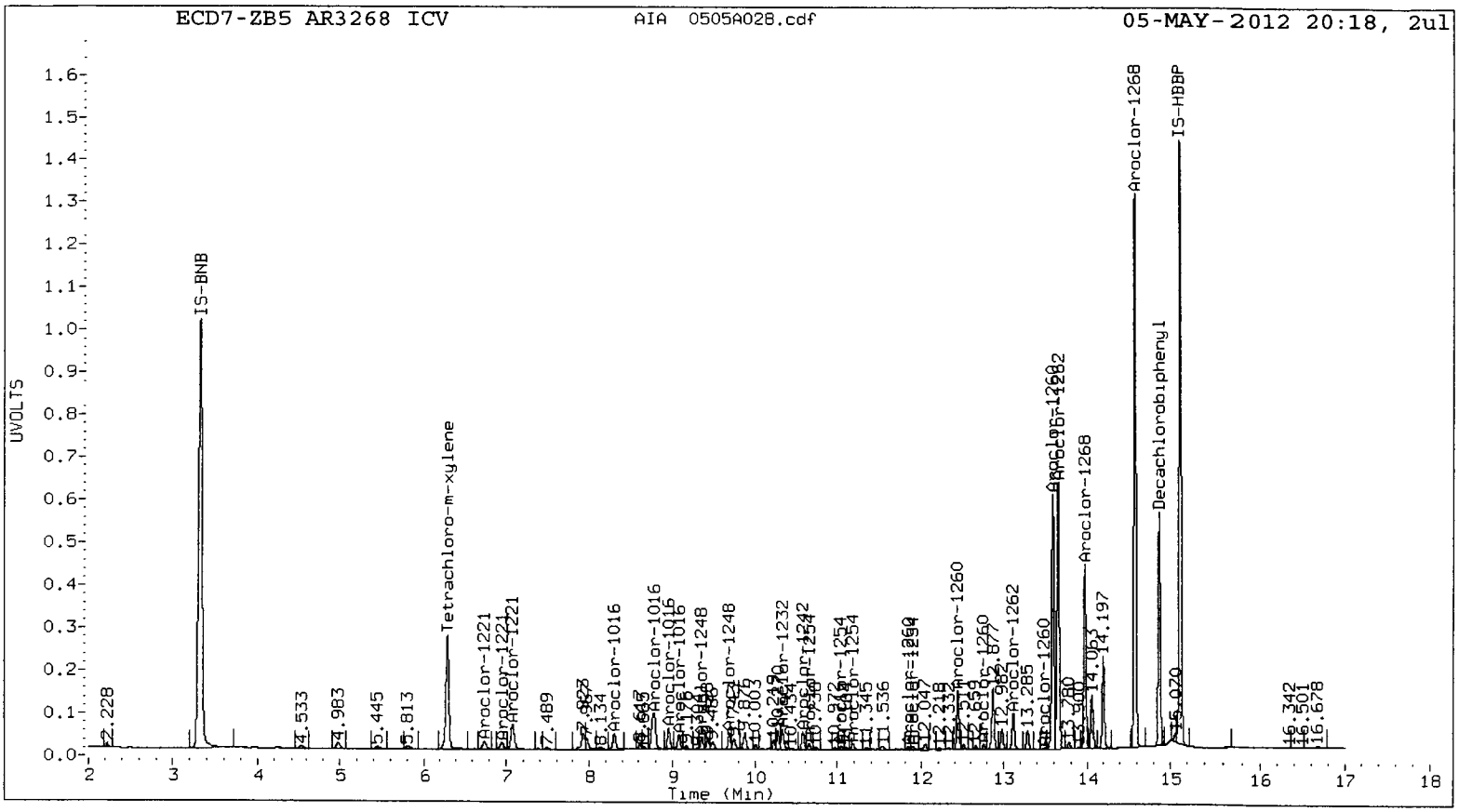
Corrected Ave (3 peaks): 239.2 Corrected Ave (3 peaks): 239.4 RPD = 0

Total PCB Area Col1 (6.392 - 14.769) = 18431507 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.519 - 15.098) = 26966229 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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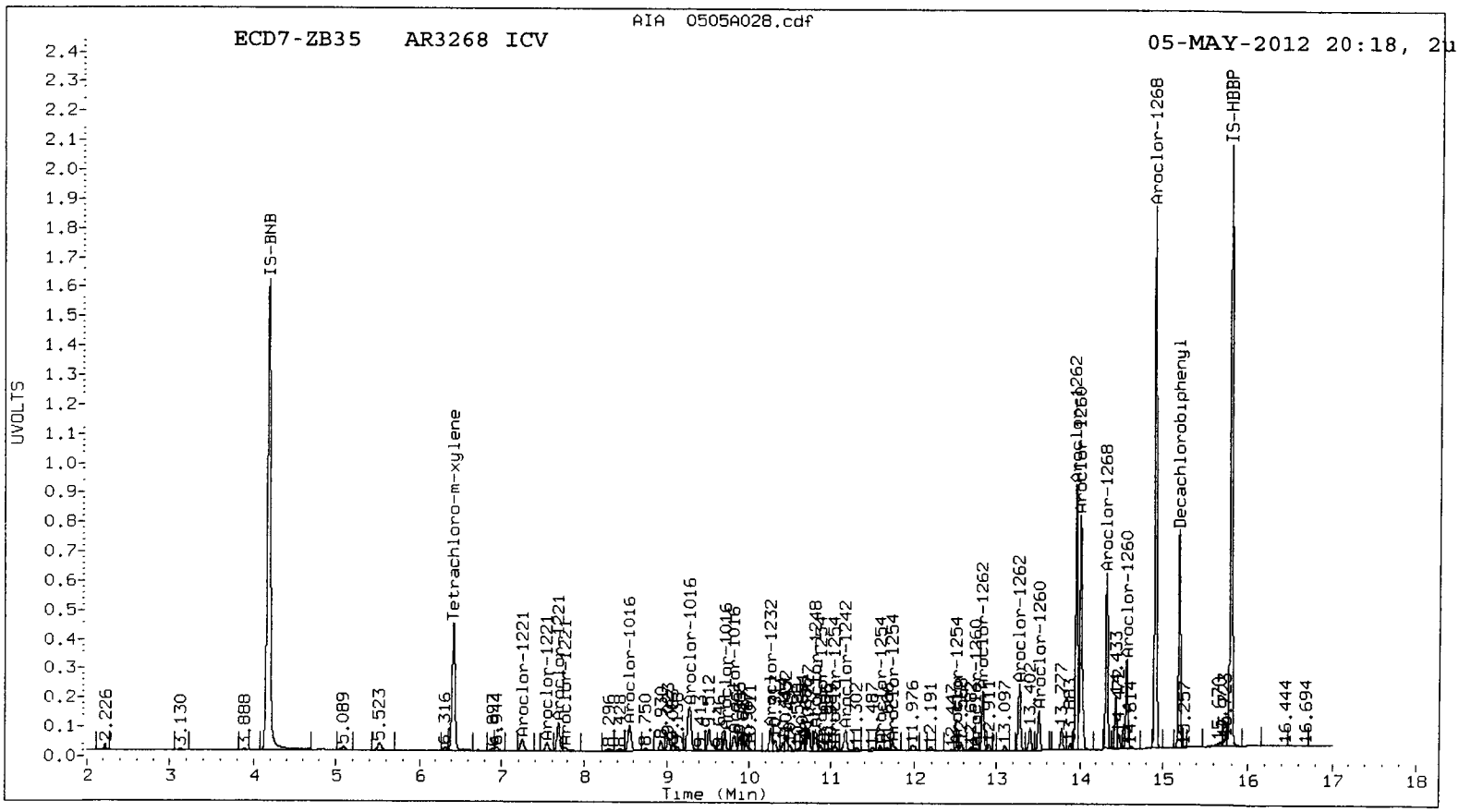
IS-HBBP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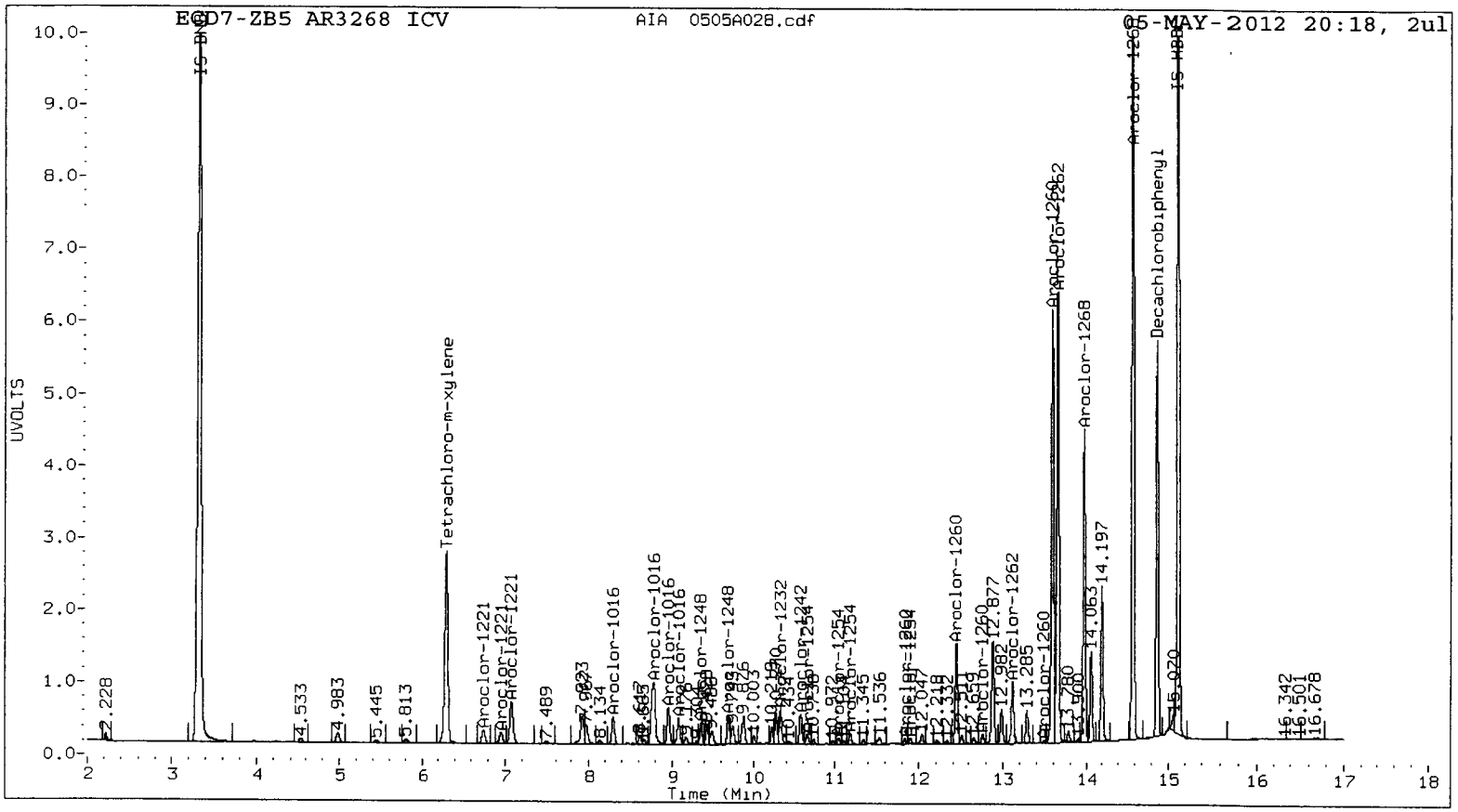
IS-HBBP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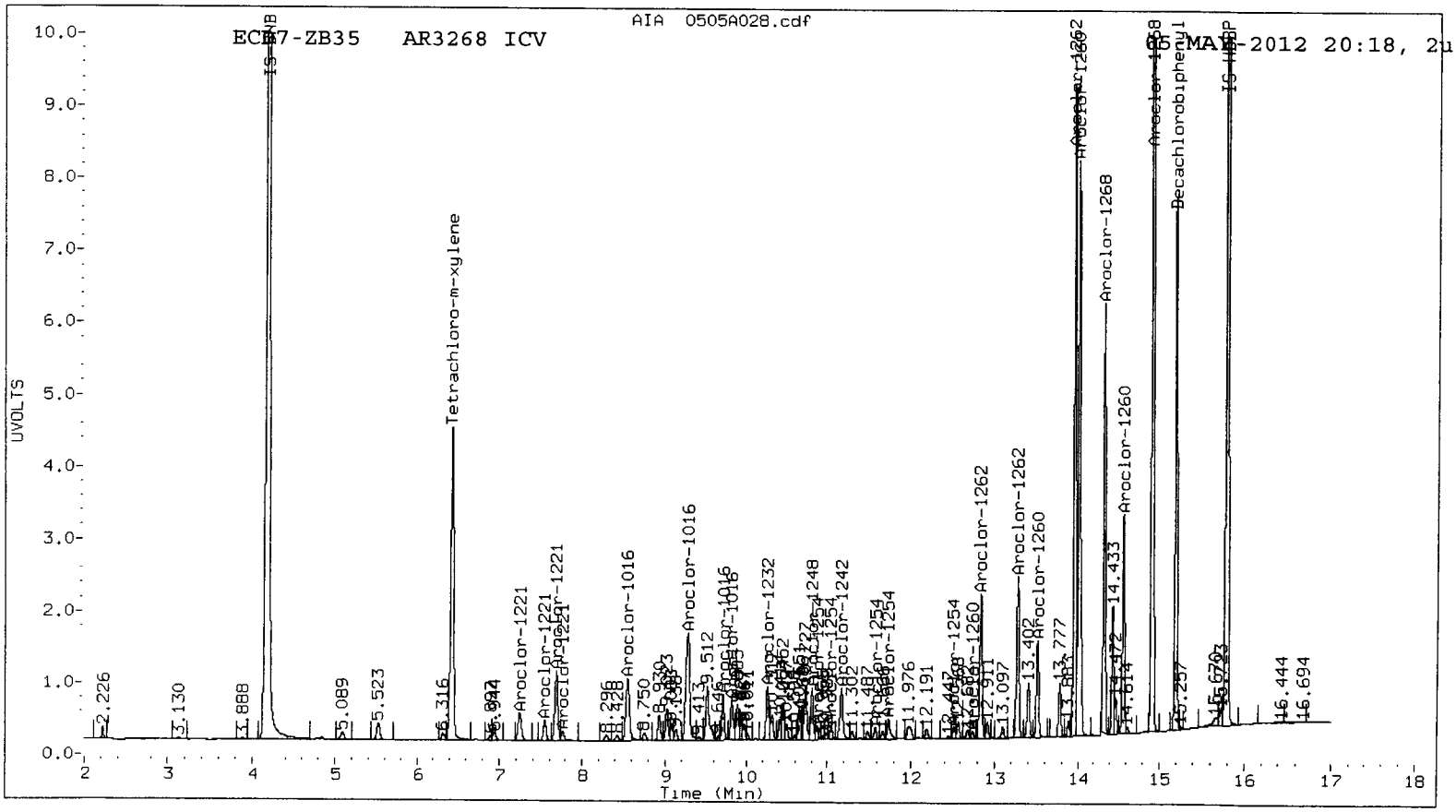
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Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20120505.B/ddts-1.b/0505A029.d ARI ID: DDT

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
10.622	0.000	4742474	11.136	0.000	6872521	0.100	0.100	0.0	2,4-DDE
11.185	0.000	4051145	11.826	0.000	5833790	0.100	0.100	0.0	2,4-DDD
11.696	0.000	5328238	12.277	0.000	16718211	0.100	0.200#	66.7*	2,4-DDT
11.060	0.000	7743314	11.519	0.000	11157964	0.100	0.100	0.0	4,4-DDE
11.639	0.000	6224848	12.277	0.000	16718211	0.100	0.200#	66.7*	4,4-DDD
12.152	0.000	6745688	12.719	0.000	9693156	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

JM 05/07/12

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 05-MAY-2012 21:00 Init. Calib. Date: 05-MAY-2012

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.059	23113
4,4-DDD	11.640	57793
4,4-DDT	12.152	7592380

Col 1: 4,4-DDT Percent Breakdown = 1.1 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.520	58903
4,4-DDD/2,4-DDT	12.285	194641
4,4-DDT	12.719	10972359

Col 2: 4,4-DDT Percent Breakdown = 2.3 %

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/07/12

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: UR81 Client ID: I&J waterway RI/FS

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): PCB's TCMX DCB

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 05/05/12 Analysis Start: 05/08/12

Endrin/DDT Breakdown <15%? YES / NO / NA

Method Blank In Control? YES / NO

ICal Meets RF & %RSD Criteria? YES / NO

LCS/LCSD Recovery In Control? YES / NO

CCal Meets RF & %RSD Criteria? YES / NO

Surrogate Recovery In Control? YES / NO See note

Manual Integrations for ICal? YES / NO

Manual Integrations for Samples? YES / NO

Internal Standard Meets Criteria? YES / NO / NA

Special Analysis Criteria Met? YES / NO / NA

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary): LCSd not spiked w/ surr, LCS spike rec. w/in qc for LCSd. reported surr as NS for LCSd JL 05/09/12

Additional Details on Reverse: Yes / No

Analyst: JL **Date:** 05/09/12

Reviewer: MW **Date:** 5/9

Form 4060F Version 007 6/18/10

UR01 : 02035

Analytical Resources Inc.: Organics Instrument Log

ECD7 Serial No.: US00003975

Date: 05/08/12 Analysis: PCB's Analyst: JK

Column 1 Serial No.: 196396 Column Type: 7B5

Column 2 Serial No.: 175388 Column Type: 7B35

GC Method: PCB ICal Date: 05/05/12

IS	Ical/Ccal	ICV
1878-3	1920-3,4	1923-1,2,3,4,5
	1921-1,2,3,4	1928-2

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID	
1	08-MAY-2012 06:43	0508A001 d	1	AR1254	
2	08-MAY-2012 07:04	0508A002.d	1	AR1660	
3	08-MAY-2012 08:32	0508A004.d	1	UR81MBS1	UR
4	08-MAY-2012 08:53	0508A005.d	1	UR81LCSS1	UR
5	08-MAY-2012 09:14	0508A006.d	1	UR81LCSDS1	UR
6	08-MAY-2012 09:35	0508A007.d	1	UR81A	IJ
7	08-MAY-2012 09:56	0508A008.d	1	UR81B	IJ
8	08-MAY-2012 10:17	0508A009.d	1	UR81C	IJ
9	08-MAY-2012 10:37	0508A010.d	1	UR81D	IJ
10	08-MAY-2012 10:58	0508A011.d	1	UT43A	
11	08-MAY-2012 11:19	0508A012.d	1	UR81Emisinj	
12	08-MAY-2012 11:36	0508A013.d	1	UR81Emisinj2	
13	08-MAY-2012 11:56	0508A014.d	1	UR81E	IJ
14	08-MAY-2012 12:17	0508A015.d	1	UR81F	IJ
15	08-MAY-2012 12:38	0508A016.d	1	AR1248	
16	08-MAY-2012 12:59	0508A017.d	1	AR1660	
17	08-MAY-2012 13:20	0508A018.d	1	UR81G	IJ
18	08-MAY-2012 13:41	0508A019.d	1	UR81GMS	IJ
19	08-MAY-2012 14:02	0508A020.d	1	UR81GMSD	IJ
20	08-MAY-2012 14:23	0508A021.d	1	UR81H	IJ
21	08-MAY-2012 14:44	0508A022.d	1	UR81I	IJ
22	08-MAY-2012 15:05	0508A023.d	1	UR81J	IJ
23	08-MAY-2012 15:26	0508A024.d	1	I7504	
24	08-MAY-2012 15:47	0508A025.d	1	AR1242	
25	08-MAY-2012 16:08	0508A026.d	1	AR1660	
26	08-MAY-2012 16:29	0508A027.d	1	DDT	
27	08-MAY-2012 16:50	0508A028.d	1	DDT BD	
28	08-MAY-2012 17:10	0508A029.d	1	UT36MBS1	
29	08-MAY-2012 17:31	0508A030.d	1	UT36LCSS1	
30	08-MAY-2012 17:52	0508A031.d	1	UT36LCSDS1	
31	08-MAY-2012 18:13	0508A032.d	1	UT36A	
32	08-MAY-2012 18:34	0508A033.d	1	UT36B	
33	08-MAY-2012 18:55	0508A034.d	1	UT36C	
34	08-MAY-2012 19:16	0508A035.d	1	UT36D	
35	08-MAY-2012 19:37	0508A036.d	1	UT36E	
36	08-MAY-2012 19:58	0508A037.d	1	AR1254	
37	08-MAY-2012 20:19	0508A038 d	1	AR1660	
38	08-MAY-2012 20:40	0508A039.d	1	US30MBW1	
39	08-MAY-2012 21:01	0508A040.d	1	US30LCSW1	
40	08-MAY-2012 21:22	0508A041.d	1	US30LCSDW1	
41	08-MAY-2012 21:43	0508A042.d	1	US30QLS	
42	08-MAY-2012 22:04	0508A043.d	1	US30A	
43	08-MAY-2012 22:25	0508A044.d	1	AR1248	
44	08-MAY-2012 22:46	0508A045.d	1	AR1660	

1 05/09/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Revis

Form 4131F
ECD7 Daily Run Log

UR81 : 020

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A001.d
Data file 2: 20120505.B/0508-2.b/0508A001.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 08-MAY-2012 06:43
Report Date: 05/09/2012 08:34
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.256	-0.028	1569527	6.368	-0.042	2599280	19.7	19.4	1.7	Tetrachloro-m-xylen
14.867	0.002	1425474	15.192	-0.002	1850829	19.0	18.5	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.3	48.4
Decachlorobiphenyl	47.5	46.3

05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	6741418	15.4
Hexabromobiphenyl	4847662	6166951	27.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	10736352	17.3
Hexabromobiphenyl	6845779	8707784	27.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1254	1	10.319	-0.012	777392	244.5	1	10.850	-0.017	970813	241.6
Aroclor-1254	2	10.641	-0.011	1084977	247.4	2	11.021	-0.015	1255345	244.7
Aroclor-1254	3	11.026	-0.010	689373	249.4	3	11.559	-0.014	992186	242.9
Aroclor-1254	4	11.165	-0.009	1304219	249.1	4	11.712	-0.014	2120332	244.3
Aroclor-1254	5	11.884	-0.008	876101	250.8	5	12.497	-0.013	1280882	244.8

Total Col1Ave (5 peaks): 248.2 Total Col2Ave (5 peaks): 243.6 RPD = 2

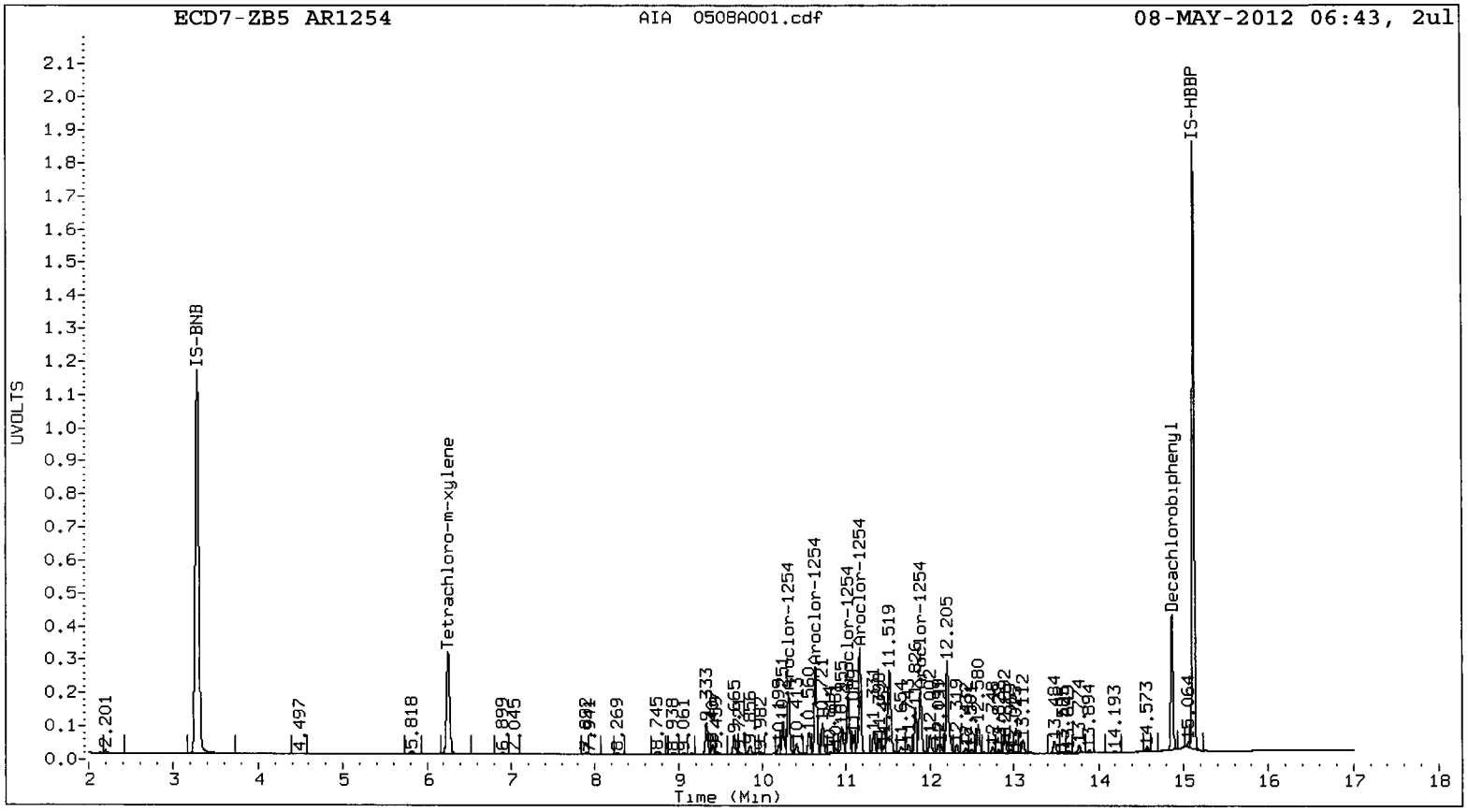
Corrected Ave (4 peaks): 247.6 Corrected Ave (4 peaks): 243.4 RPD = 2

Total PCB Area Col1 (6.384 - 14.765) = 13536405 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 21097927 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR81 : 020838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08-MAY-2012 06:43, 2ul
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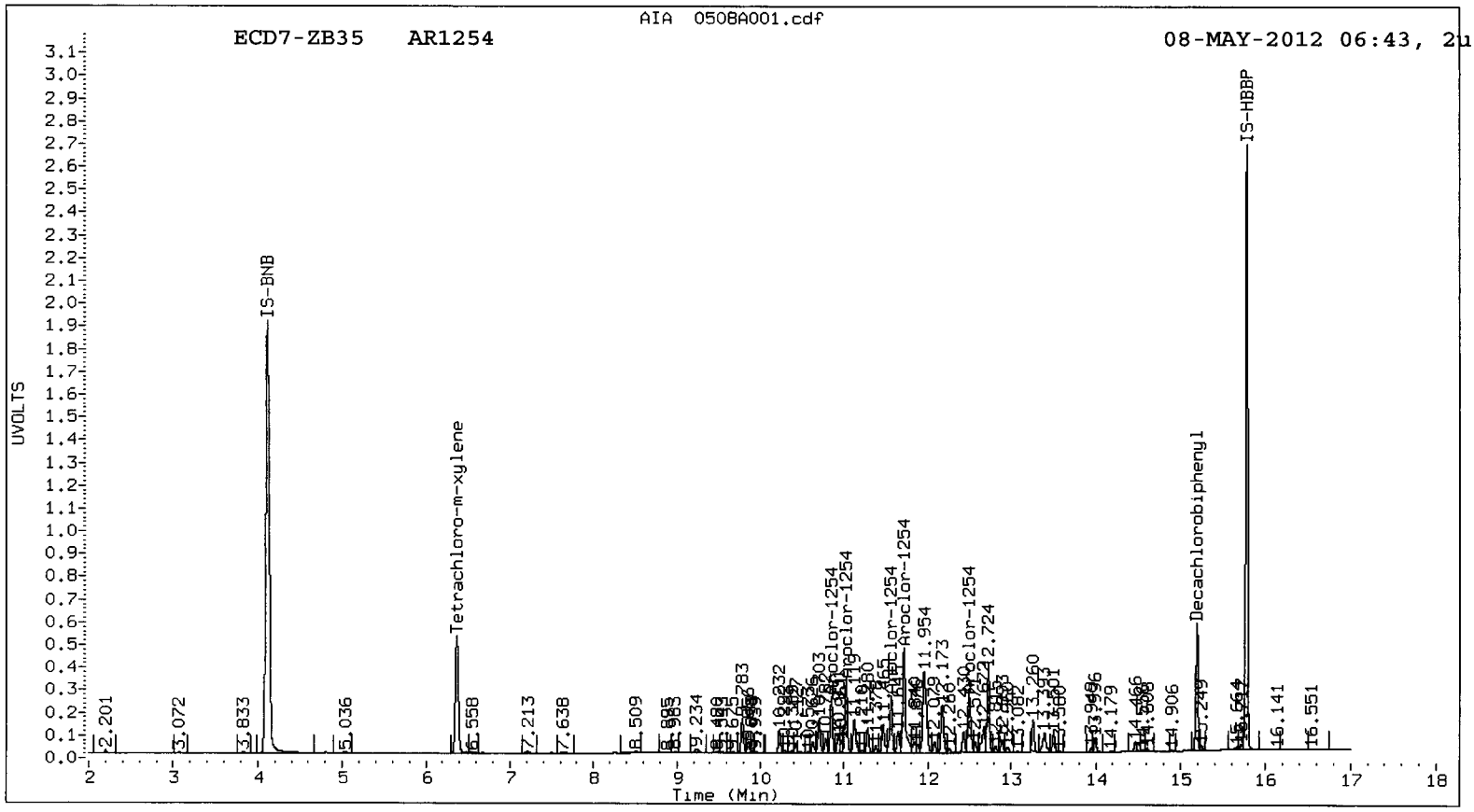
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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ECD7-ZB35 AR1254
08-MAY-2012 06:43, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A002.d
Data file 2: 20120505.B/0508-2.b/0508A002.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 08-MAY-2012 07:04
Report Date: 05/09/2012 08:34
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.266	-0.018	1756437	6.391	-0.019	2809066	20.7	19.7	5.1	Tetrachloro-m-xylen
14.866	0.001	1552517	15.193	0.000	2038577	19.5	18.9	3.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.8	49.2
Decachlorobiphenyl	48.7	47.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	7181119	22.9
Hexabromobiphenyl	4847662	6549817	35.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	11420507	24.7
Hexabromobiphenyl	6845779	9405729	37.4

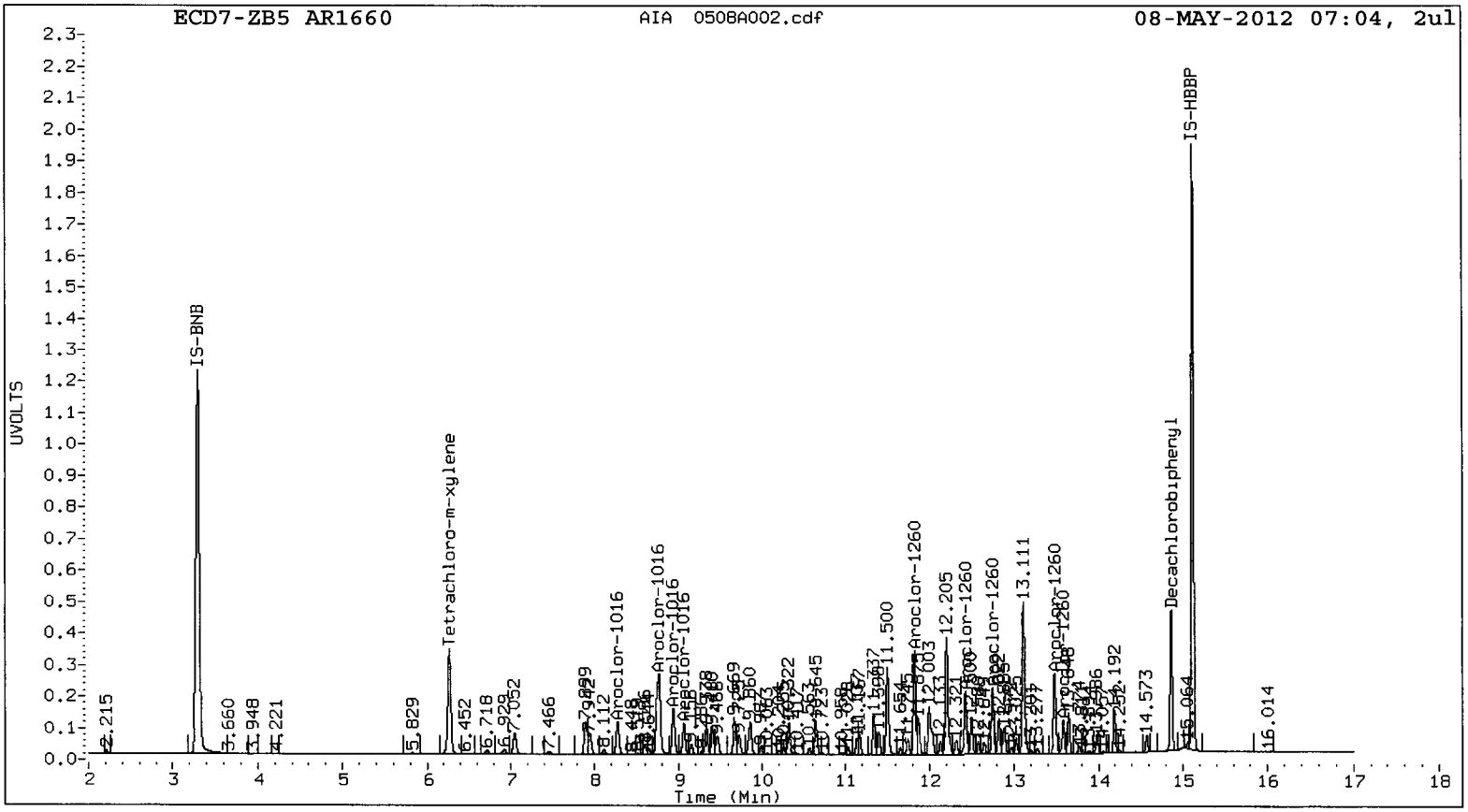
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.276	-0.015	514105	244.9	1	8.525	-0.014	1339601	231.7
Aroclor-1016	2	8.766	-0.013	1768525	245.6	2	9.258	-0.012	2749059	234.5
Aroclor-1016	3	8.939	-0.012	684308	243.4	3	9.687	-0.010	711586	234.2
Aroclor-1016	4	9.067	-0.012	469700	240.8	4	9.795	-0.010	797137	226.1
Total Col1Ave (4 peaks):				243.7		Total Col2Ave (4 peaks):			231.6	RPD = 5
Corrected Ave (3 peaks):				243.0		Corrected Ave (3 peaks):			230.7	RPD = 5
Aroclor-1260	1	11.827	-0.005	1269775	221.5	1	12.729	-0.004	1782867	211.3
Aroclor-1260	2	12.433	-0.004	832867	223.1	2	13.504	-0.003	2850042	219.4
Aroclor-1260	3	12.749	-0.002	846105	227.6	3	14.000	-0.001	1914716	222.0
Aroclor-1260	4	13.483	-0.002	1082895	232.5	4	14.557	-0.001	716102	226.6
Aroclor-1260	5	13.584	-0.002	429270	230.2	NS	---			----
Total Col1Ave (5 peaks):				226.9		Total Col2Ave (4 peaks):			219.8	RPD = 3
Corrected Ave (4 peaks):				225.6		Corrected Ave (3 peaks):			217.6	RPD = 4

Total PCB Area Col1 (6.384 - 14.765) = 25204035 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 38466324 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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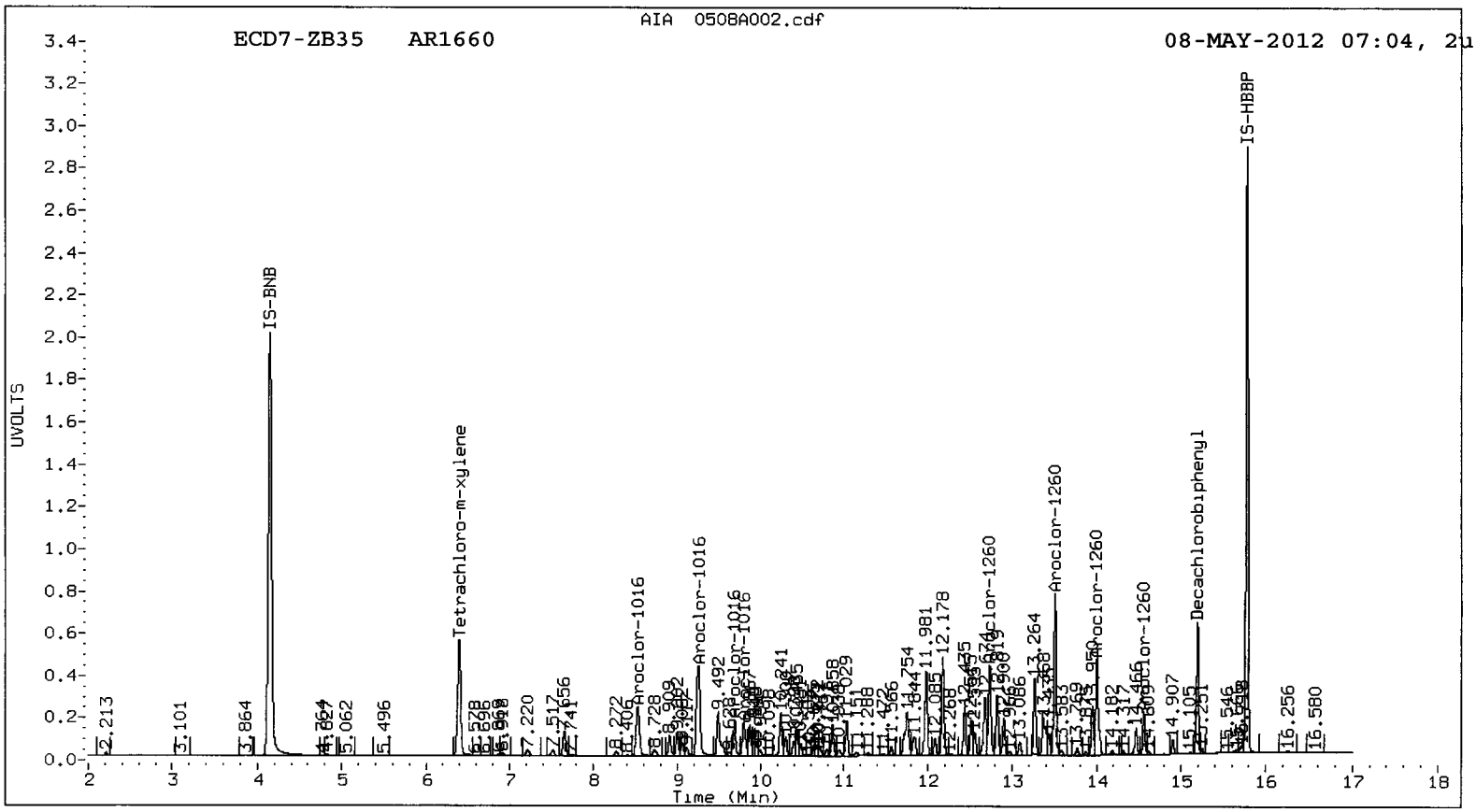
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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08-MAY-2012 07:04, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A004.d
Data file 2: 20120505.B/0508-2.b/0508A004.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81MBS1
Client ID: UR81MBS1
Injection Date: 08-MAY-2012 08:32
Report Date: 05/09/2012 08:34
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.253	-0.031	2512376	6.364	-0.046	4034894	35.7	36.5	2.2	Tetrachloro-m-xylen
14.866	0.001	2479455	15.191	-0.003	3236688	39.3	39.3	0.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	89.3	91.3
Decachlorobiphenyl	98.4	98.2

05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5950350	1.9
Hexabromobiphenyl	4847662	5183786	6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8836328	-3.5
Hexabromobiphenyl	6845779	7188784	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

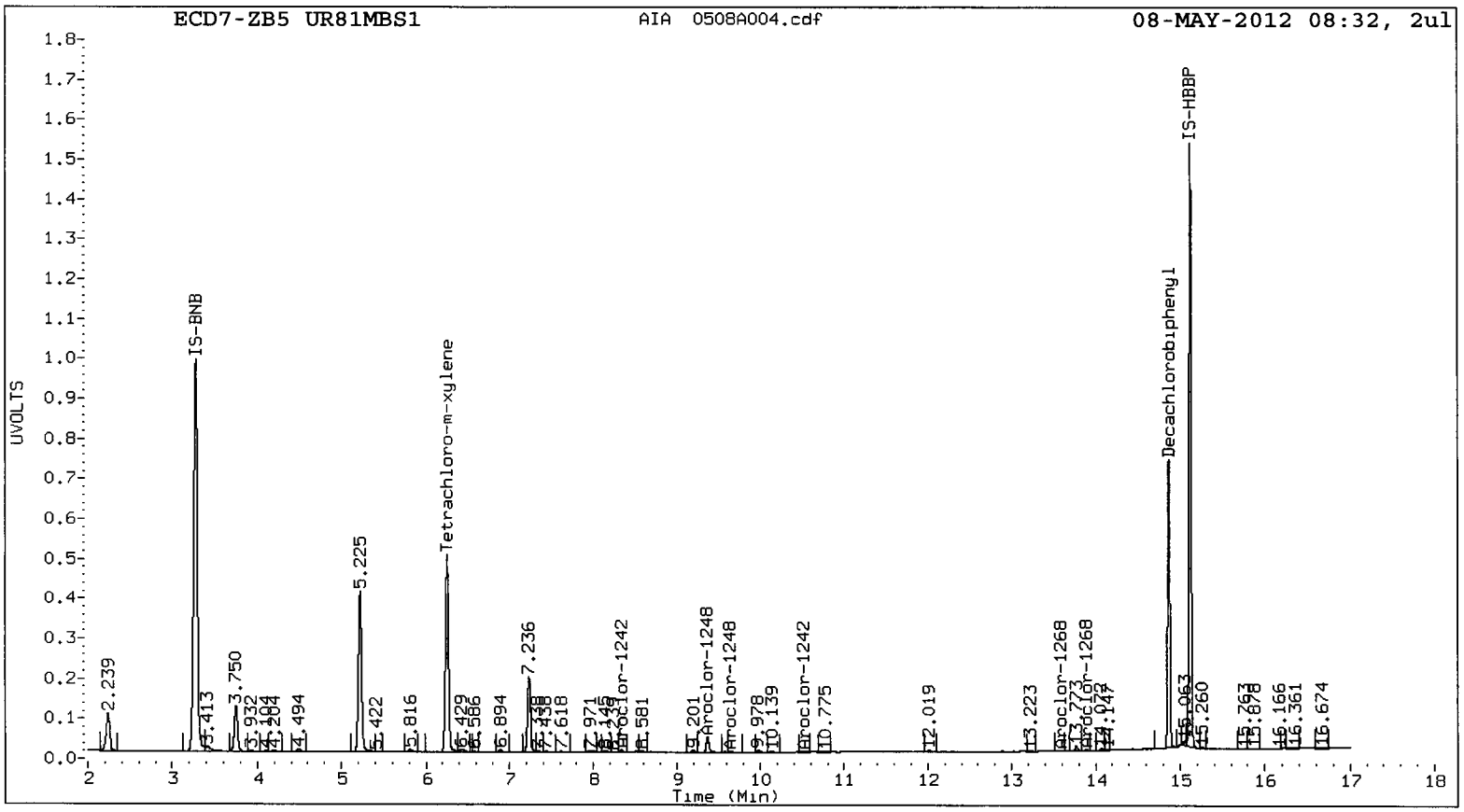
Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	8.497	-0.041	41316	9.2
Aroclor-1016	2	---			0.0	2	9.208	-0.061	22361	2.5
Aroclor-1016	3	---			0.0	3	9.771	0.074	112535	47.9
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave:			19.9	
Aroclor-1221	1	---			0.0	1	7.213	-0.028	82394	64.8
Aroclor-1221	2	---			0.0	2	7.520	-0.021	1535777	1960.5
Aroclor-1221	3	---			0.0	3	7.704	0.023	16244	7.0
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave:			677.4	
Aroclor-1232	1	---			0.0	1	8.565	0.017	46648	24.3
Aroclor-1232	2	---			0.0	2	9.208	-0.069	22361	6.2
Aroclor-1232	3	---			0.0	3	9.771	0.067	112535	116.7
Aroclor-1232	4	---			0.0	4	10.211	-0.047	54304	37.5
	Col1Ave: <3 Quant Peaks					Col2Ave:			46.2	
Aroclor-1242	1	8.337	0.042	24445	18.5	1	8.565	0.021	46648	14.2
Aroclor-1242	2	---			0.0	2	9.208	-0.066	22361	3.3
Aroclor-1242	3	---			0.0	3	9.771	0.071	112535	63.5
Aroclor-1242	4	10.526	-0.046	18682	11.6	4	11.169	0.008	17649	6.4
	Col1Ave: <3 Quant Peaks					Col2Ave:			21.9	
Aroclor-1248	1	9.373	0.023	179503	99.2	1	9.771	-0.035	112535	36.2
Aroclor-1248	2	9.642	-0.038	11244	5.1	2	10.211	-0.040	54304	15.9
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	10.526	-0.043	18682	7.3	4	11.169	0.010	17649	3.9
	Total Col1Ave (3 peaks):			37.2		Total Col2Ave (3 peaks):			18.7	RPD = 66*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	12.733	0.000	10290	1.6
Aroclor-1260	2	---			0.0	2	13.506	-0.001	22925	2.3
Aroclor-1260	3	---			0.0	3	13.997	-0.004	10310	1.6
Aroclor-1260	4	---			0.0	4	14.574	0.016	20230	8.4
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave:			3.5	
Aroclor-1262	1	---			0.0	1	12.733	-0.098	10290	1.7
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	13.506	-0.007	22925	2.0
Aroclor-1262	4	---			0.0	4	13.918	-0.039	16768	3.8
Aroclor-1262	5	---			0.0	5	13.997	-0.012	10310	1.4
	Col1Ave: <3 Quant Peaks					Col2Ave:			2.2	
Aroclor-1268	1	13.596	0.005	11037	1.2	1	13.918	-0.037	16768	1.4
Aroclor-1268	2	---			0.0	2	13.997	-0.013	10310	0.9
Aroclor-1268	3	13.890	-0.085	21139	3.0	3	14.394	0.071	36463	4.1
Aroclor-1268	4	---			0.0	4	14.906	-0.007	14824	0.5
	Col1Ave: <3 Quant Peaks					Col2Ave:			1.7	

Total PCB Area Col1 (6.384 - 14.765) = 1669716 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 2771405 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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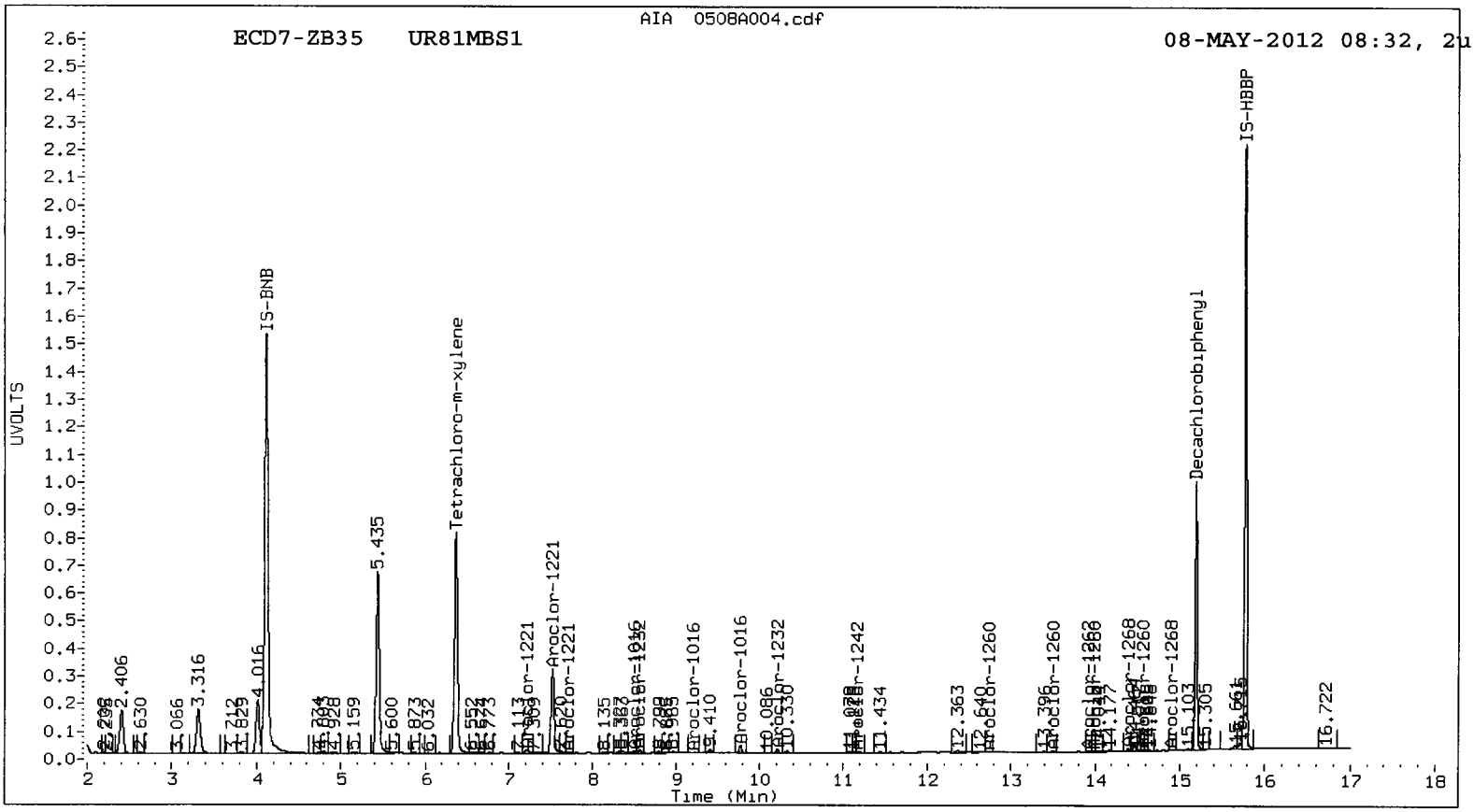
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1242
Aroclor-1248
Aroclor-1268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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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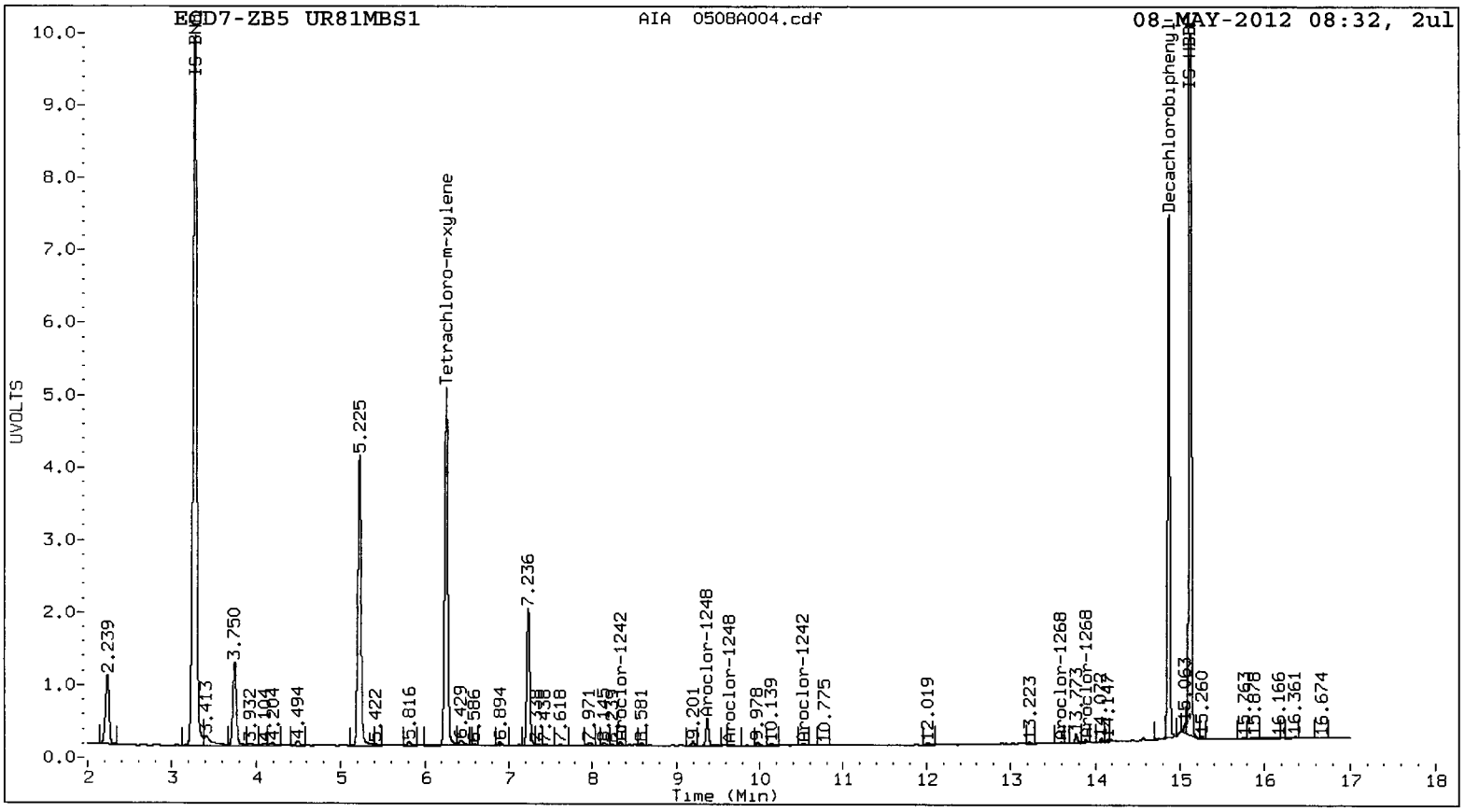
Aroclor-1016
Aroclor-1232
Aroclor-1242
Aroclor-1260
Aroclor-1268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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
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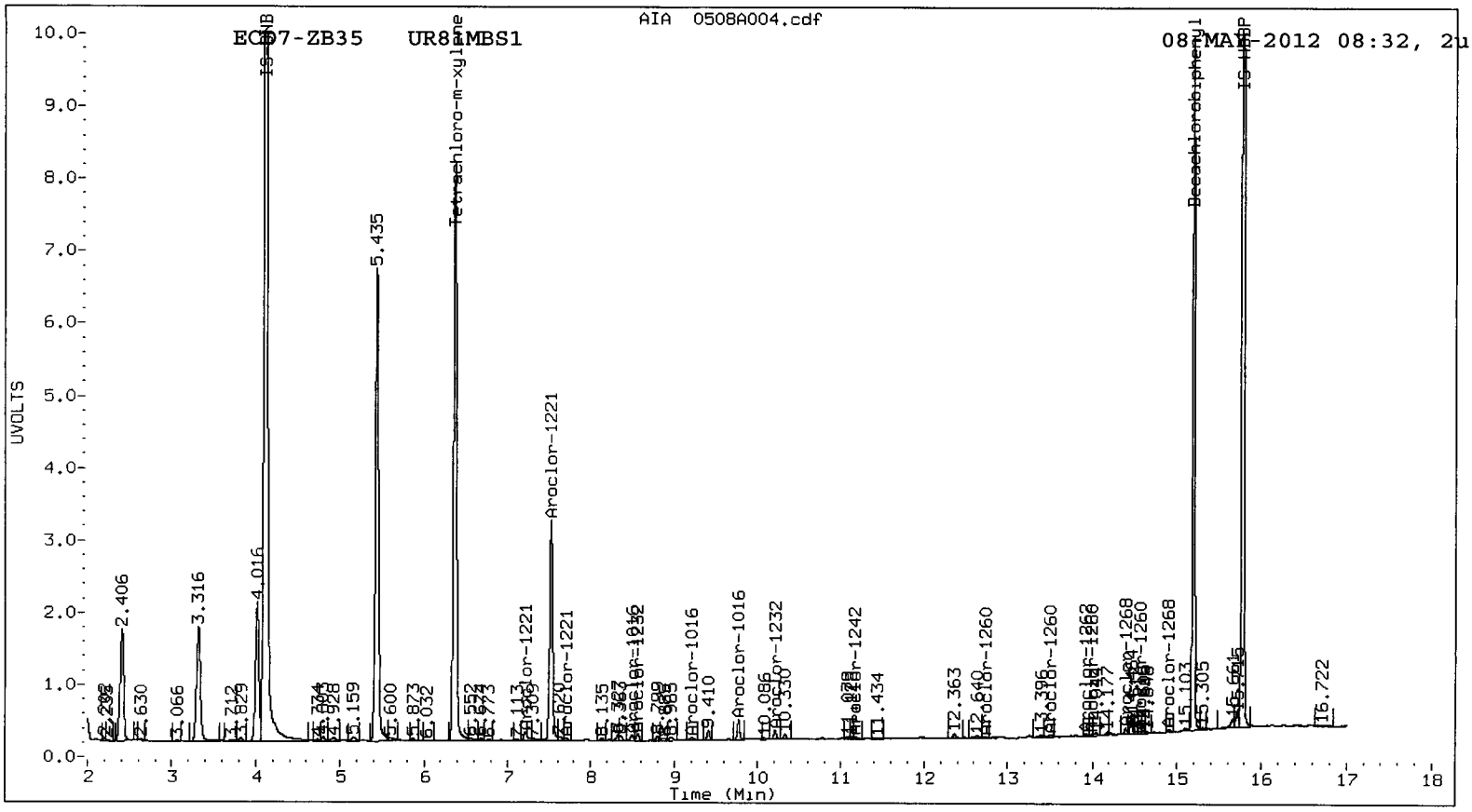
Aroclor-1242
Aroclor-1268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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1242
Aroclor-1260
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A005.d
Data file 2: 20120505.B/0508-2.b/0508A005.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81LCSS1
Client ID: UR81LCSS1
Injection Date: 08-MAY-2012 08:53
Report Date: 05/09/2012 08:34
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.267	-0.017	2652494	6.392	-0.017	4140689	40.3	35.0	14.3	Tetrachloro-m-xylen
14.864	-0.001	2575459	15.192	-0.002	3378730	40.5	40.1	1.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	100.9	87.4
Decachlorobiphenyl	101.2	100.2

JL 05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5563844	-4.8
Hexabromobiphenyl	4847662	5233260	8.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9475758	3.5
Hexabromobiphenyl	6845779	7352973	7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.276	-0.015	721840	443.8	1	8.525	-0.014	1800935	375.4
Aroclor-1016	2	8.764	-0.015	2488179	446.0	2	9.258	-0.011	3758946	386.5
Aroclor-1016	3	8.939	-0.012	967877	444.3	3	9.686	-0.011	971295	385.2
Aroclor-1016	4	9.067	-0.012	670174	443.4	4	9.794	-0.011	1112418	380.3
Total Col1Ave (4 peaks):				444.4		Total Col2Ave (4 peaks):			381.9	RPD = 15
Corrected Ave (3 peaks):				443.8		Corrected Ave (3 peaks):			380.3	RPD = 15
Aroclor-1221	1	6.717	-0.025	85836	133.5	1	7.221	-0.021	203798	149.6
Aroclor-1221	2	6.929	-0.024	127791	265.4	2	7.524	-0.018	287764	342.6
Aroclor-1221	3	7.053	-0.024	504067	313.8	3	7.656	-0.024	758845	302.9
Aroclor-1221	NS	---			----	4	7.741	-0.027	59776	125.3
Total Col1Ave (3 peaks):				237.6		Total Col2Ave (4 peaks):			230.1	RPD = 3
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			192.6	
Aroclor-1232	1	8.276	-0.023	721840	1123.2	1	8.525	-0.023	1800935	873.5
Aroclor-1232	2	8.764	-0.019	2488179	1137.8	2	9.258	-0.019	3758946	979.0
Aroclor-1232	3	8.939	-0.019	967877	1122.6	3	9.686	-0.018	971295	939.5
Aroclor-1232	4	10.321	-0.007	594648	610.0	4	10.240	-0.017	1239699	798.9
Total Col1Ave (4 peaks):				998.4		Total Col2Ave (4 peaks):			897.7	RPD = 11
Corrected Ave (3 peaks):				951.9		Corrected Ave (3 peaks):			870.6	RPD = 9
Aroclor-1242	1	8.276	-0.020	721840	585.4	1	8.525	-0.019	1800935	511.9
Aroclor-1242	2	8.764	-0.019	2488179	589.2	2	9.258	-0.016	3758946	522.7
Aroclor-1242	3	8.939	-0.017	967877	588.2	3	9.686	-0.014	971295	510.8
Aroclor-1242	4	10.563	-0.010	116180	77.3	4	11.150	-0.012	110230	37.3
Total Col1Ave (4 peaks):				460.0		Total Col2Ave (4 peaks):			395.7	RPD = 15
Corrected Ave (3 peaks):				416.9		Corrected Ave (3 peaks):			353.3	RPD = 17
Aroclor-1248	1	9.337	-0.013	568884	336.3	1	9.794	-0.012	1112418	333.4
Aroclor-1248	2	9.669	-0.012	701811	339.4	2	10.240	-0.011	1239699	337.5
Aroclor-1248	3	10.321	-0.002	594648	193.3	3	10.790	-0.009	173512	46.5
Aroclor-1248	4	10.563	-0.007	116180	48.8	4	11.150	-0.010	110230	22.9
Total Col1Ave (4 peaks):				229.4		Total Col2Ave (4 peaks):			185.1	RPD = 21
Corrected Ave (3 peaks):				192.8		Corrected Ave (3 peaks):			134.3	RPD = 36
Aroclor-1254	1	10.321	-0.010	594648	226.6	1	10.857	-0.009	778925	219.6
Aroclor-1254	2	10.645	-0.007	621782	171.8	2	11.027	-0.009	889588	196.5
Aroclor-1254	3	11.027	-0.009	127766	56.0	3	11.565	-0.009	230355	63.9
Aroclor-1254	4	11.165	-0.009	373812	86.5	4	11.719	-0.006	436862	57.0
Aroclor-1254	5	11.874	-0.018	610111	211.6	5	12.513	0.004	915457	198.2
Total Col1Ave (5 peaks):				150.5		Total Col2Ave (5 peaks):			147.0	RPD = 2
Corrected Ave (4 peaks):				131.5		Corrected Ave (4 peaks):			128.9	RPD = 2
Aroclor-1260	1	11.826	-0.006	1850766	404.0	1	12.728	-0.006	2553306	387.1
Aroclor-1260	2	12.432	-0.004	1214599	407.2	2	13.503	-0.004	4150941	408.7
Aroclor-1260	3	12.747	-0.004	1239394	417.2	3	13.998	-0.002	2756952	408.9
Aroclor-1260	4	13.483	-0.003	1597390	429.2	4	14.556	-0.002	1048946	424.5
Aroclor-1260	5	13.583	-0.003	623229	418.2	NS	---			----
Total Col1Ave (5 peaks):				415.2		Total Col2Ave (4 peaks):			407.3	RPD = 2
Corrected Ave (4 peaks):				411.6		Corrected Ave (3 peaks):			401.6	RPD = 2
Aroclor-1262	1	12.432	-0.011	1214599	259.2	1	12.818	-0.013	1657622	261.7
Aroclor-1262	2	12.747	-0.011	1239394	366.1	2	13.263	-0.011	1925376	360.8
Aroclor-1262	3	13.109	-0.011	3031708	341.3	3	13.503	-0.010	4150941	346.7
Aroclor-1262	4	13.583	-0.008	623229	208.8	4	13.949	-0.008	1154061	253.6
Aroclor-1262	5	13.647	-0.007	715591	226.6	5	13.998	-0.010	2756952	377.5
Total Col1Ave (5 peaks):				280.4		Total Col2Ave (5 peaks):			320.1	RPD = 13
Corrected Ave (4 peaks):				259.0		Corrected Ave (4 peaks):			305.7	RPD = 17
Aroclor-1268	1	13.583	-0.007	623229	67.7	1	13.949	-0.006	1154061	94.9

Aroclor-1268 2	13.647	-0.005	715591	85.6	2	13.998	-0.012	2756952	241.4
Aroclor-1268 3	13.984	0.009	344630	48.8	3	14.315	-0.007	75516	8.4
Aroclor-1268 4	14.572	-0.005	223439	10.3	4	14.906	-0.007	308646	10.9

Total Col1Ave (4 peaks): 53.1 Total Col2Ave (4 peaks): 88.9 RPD = 50*

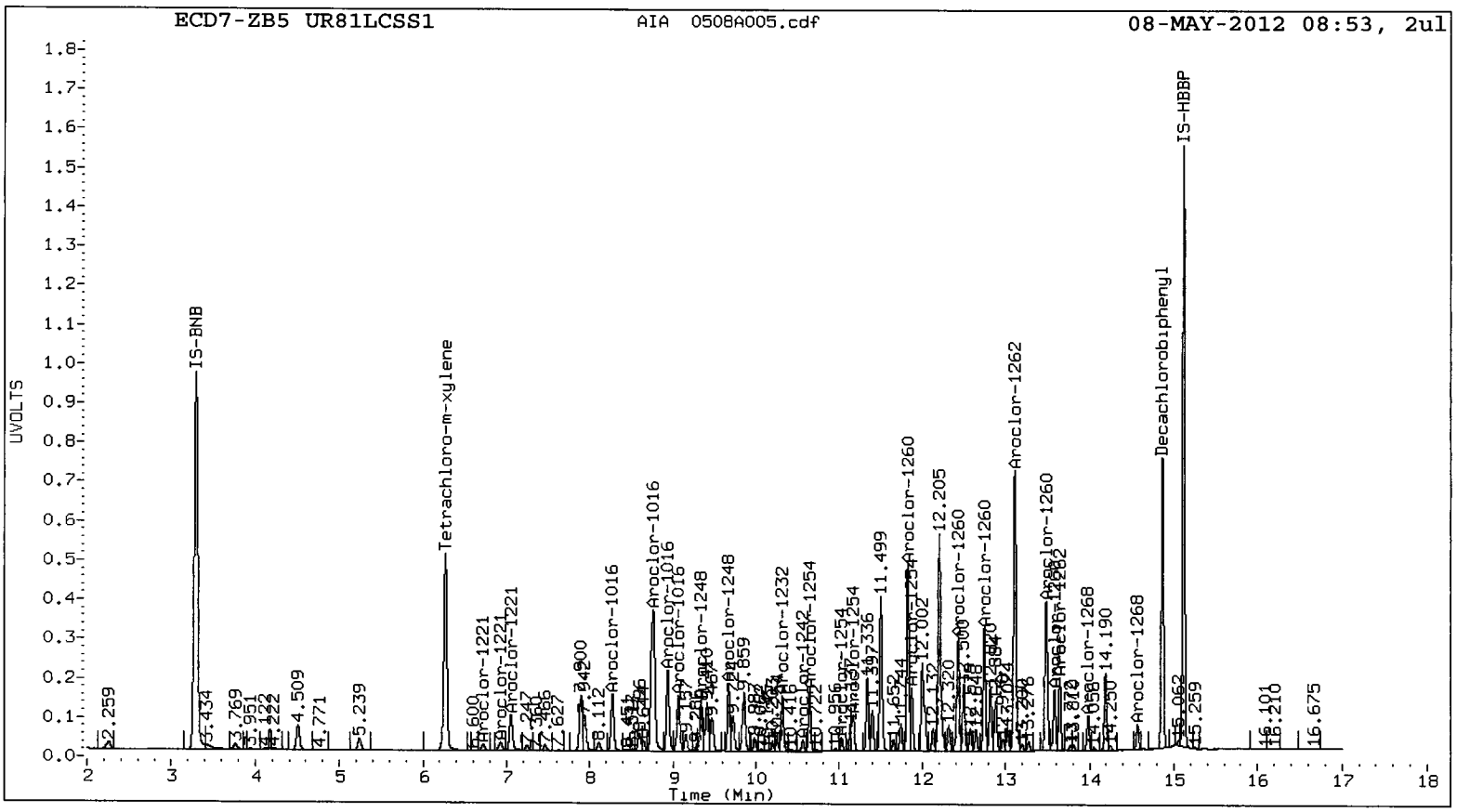
Corrected Ave (3 peaks): 42.2 Corrected Ave (3 peaks): 38.0 RPD = 10

Total PCB Area Col1 (6.384 - 14.765) = 36392059 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 53658585 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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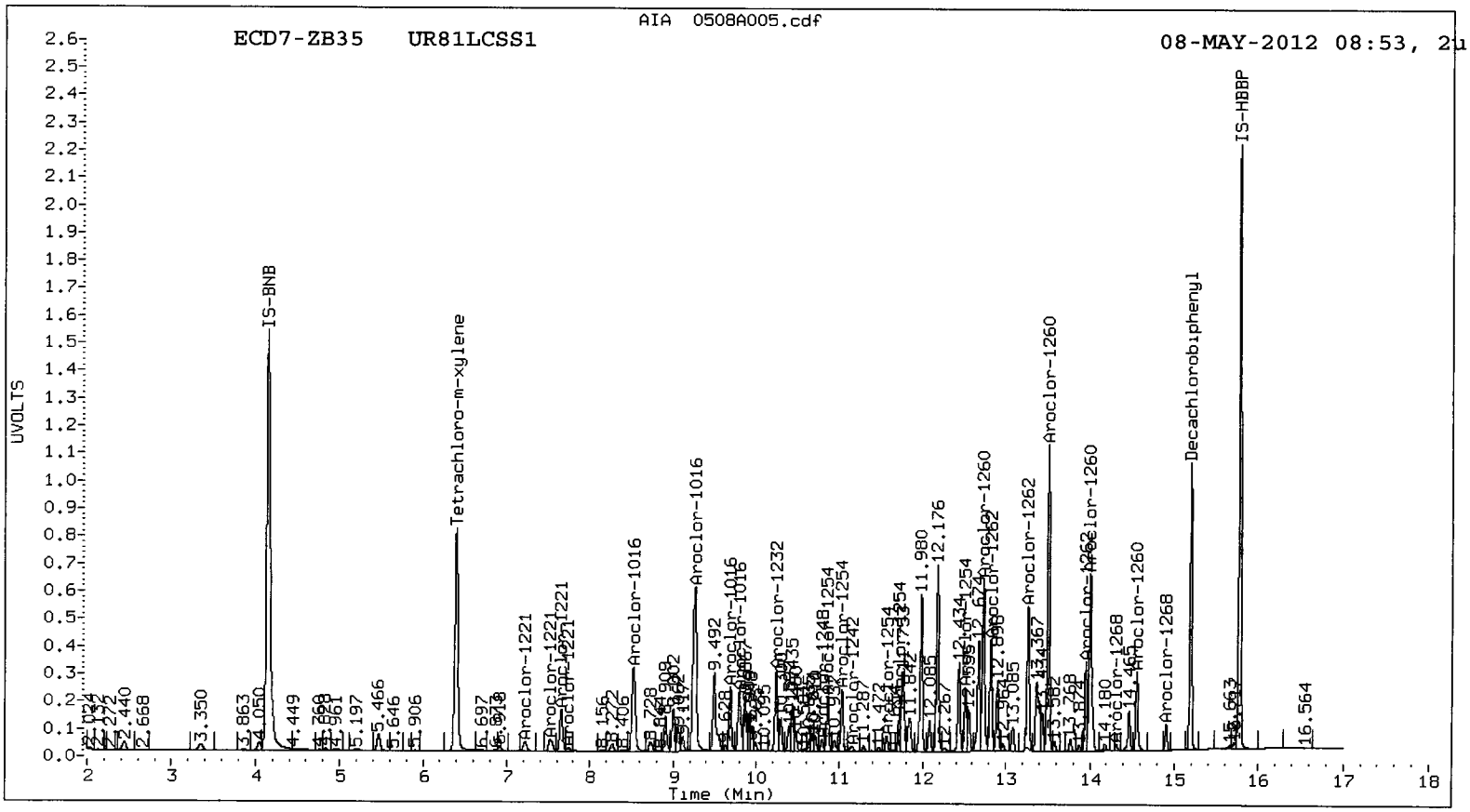
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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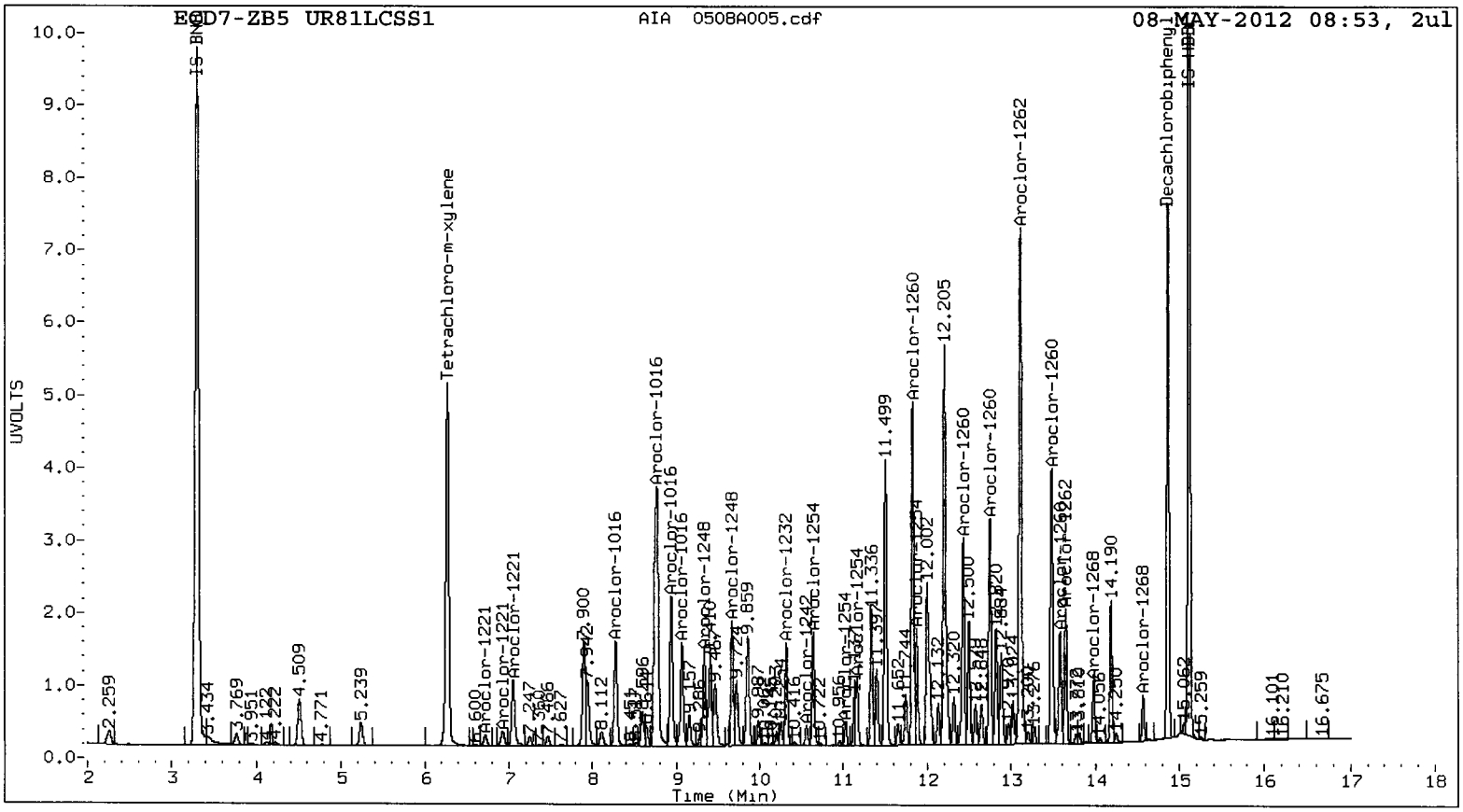
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

UR81 : 02851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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
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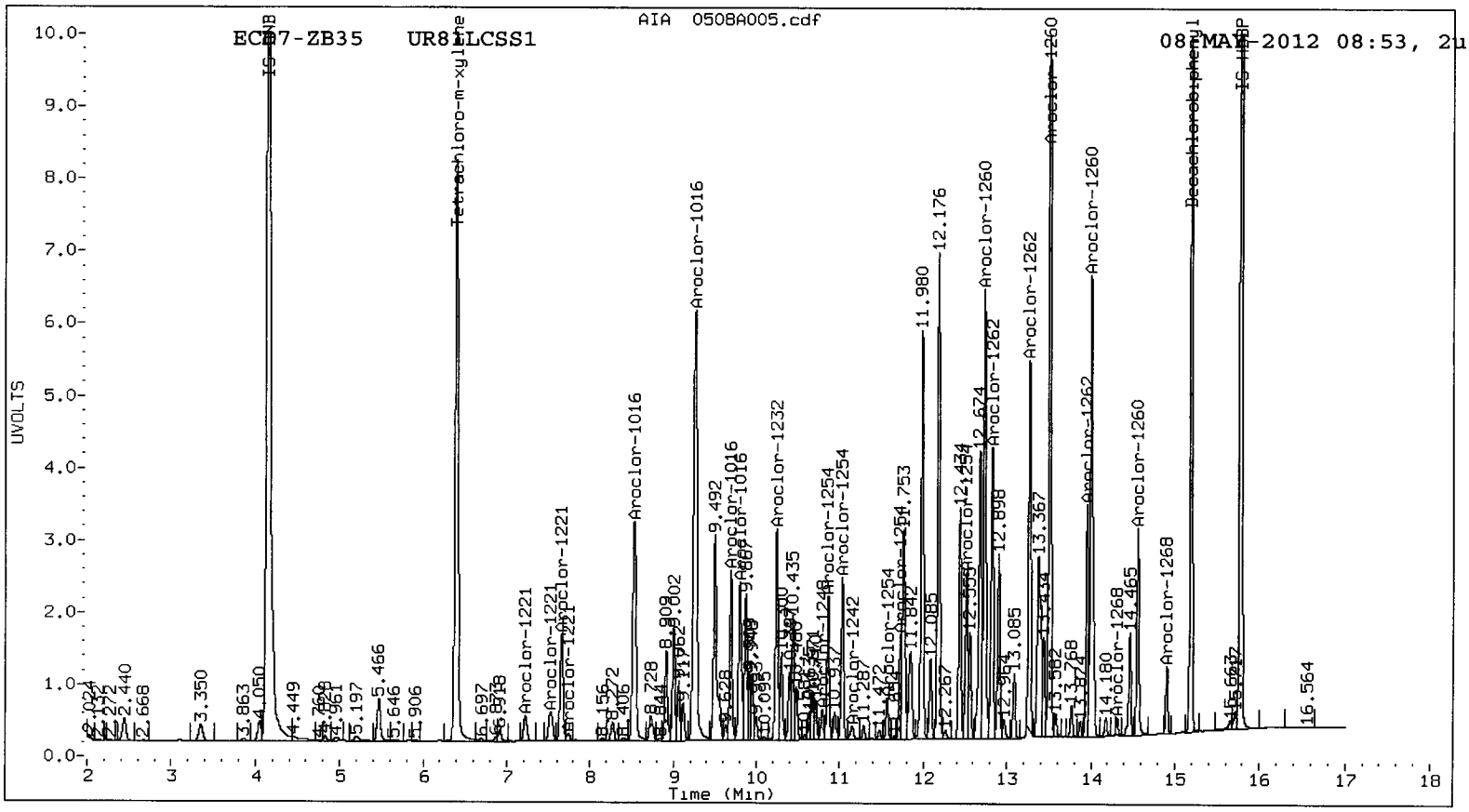
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBP

UR81 . 02052

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A006.d
Data file 2: 20120505.B/0508-2.b/0508A006.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81LCSDS1
Client ID: UR81LCSDS1
Injection Date: 08-MAY-2012 09:14
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.231	-0.053	76428	6.402	-0.008	38596	1.2	0.3	108.5*	Tetrachloro-m-xylen
14.866	0.000	38470	15.194	0.000	71628	0.6	0.8	32.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	2.9	0.9
Decachlorobiphenyl	1.5	2.1

NS

K 05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5510927	-5.7
Hexabromobiphenyl	4847662	5189819	7.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8872103	-3.1
Hexabromobiphenyl	6845779	7359788	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.283	-0.008	717874	445.6	1	8.533	-0.005	1809586	402.9
Aroclor-1016	2	8.773	-0.007	2470982	447.2	2	9.266	-0.004	3734279	410.1
Aroclor-1016	3	8.946	-0.006	956420	443.2	3	9.692	-0.005	964365	408.5
Aroclor-1016	4	9.074	-0.006	663197	443.0	4	9.800	-0.005	1104392	403.2
Total Col1Ave (4 peaks):				444.7		Total Col2Ave (4 peaks):			406.2	RPD = 9
Corrected Ave (3 peaks):				443.9		Corrected Ave (3 peaks):			404.9	RPD = 9
Aroclor-1221	1	6.727	-0.016	85130	133.7	1	7.227	-0.015	161162	126.3
Aroclor-1221	2	6.941	-0.013	98855	207.3	2	7.527	-0.015	187637	238.6
Aroclor-1221	3	7.062	-0.015	505566	317.8	3	7.665	-0.015	756863	322.6
Aroclor-1221	NS	---			----	4	7.751	-0.016	67349	150.8
Total Col1Ave (3 peaks):				219.6		Total Col2Ave (4 peaks):			209.6	RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			171.9	
Aroclor-1232	1	8.283	-0.015	717874	1127.7	1	8.533	-0.015	1809586	937.4
Aroclor-1232	2	8.773	-0.011	2470982	1140.7	2	9.266	-0.012	3734279	1038.7
Aroclor-1232	3	8.946	-0.013	956420	1120.0	3	9.692	-0.012	964365	996.3
Aroclor-1232	4	10.325	-0.003	583930	604.7	4	10.246	-0.012	1213816	835.5
Total Col1Ave (4 peaks):				998.3		Total Col2Ave (4 peaks):			952.0	RPD = 5
Corrected Ave (3 peaks):				950.8		Corrected Ave (3 peaks):			923.0	RPD = 3
Aroclor-1242	1	8.283	-0.012	717874	587.8	1	8.533	-0.010	1809586	549.4
Aroclor-1242	2	8.773	-0.011	2470982	590.8	2	9.266	-0.008	3734279	554.6
Aroclor-1242	3	8.946	-0.011	956420	586.8	3	9.692	-0.008	964365	541.7
Aroclor-1242	4	10.567	-0.005	114253	76.7	4	11.155	-0.007	107802	39.0
Total Col1Ave (4 peaks):				460.5		Total Col2Ave (4 peaks):			421.2	RPD = 9
Corrected Ave (3 peaks):				417.1		Corrected Ave (3 peaks):			376.7	RPD = 10
Aroclor-1248	1	9.343	-0.007	558927	333.6	1	9.800	-0.006	1104392	353.5
Aroclor-1248	2	9.675	-0.006	698110	340.9	2	10.246	-0.005	1213816	352.9
Aroclor-1248	3	10.325	0.003	583930	191.6	3	10.795	-0.004	169645	48.6
Aroclor-1248	4	10.567	-0.002	114253	48.4	4	11.155	-0.005	107802	24.0
Total Col1Ave (4 peaks):				228.6		Total Col2Ave (4 peaks):			194.7	RPD = 16
Corrected Ave (3 peaks):				191.2		Corrected Ave (3 peaks):			141.8	RPD = 30
Aroclor-1254	1	10.325	-0.006	583930	224.6	1	10.862	-0.005	768235	231.3
Aroclor-1254	2	10.649	-0.003	609601	170.1	2	11.033	-0.004	876974	206.9
Aroclor-1254	3	11.031	-0.005	128708	57.0	3	11.569	-0.004	224619	66.5
Aroclor-1254	4	11.169	-0.006	352742	82.4	4	11.757	0.032	1865310	260.1
Aroclor-1254	5	11.877	-0.015	595444	208.5	5	12.517	0.008	901975	208.6
Total Col1Ave (5 peaks):				148.5		Total Col2Ave (5 peaks):			194.7	RPD = 27
Corrected Ave (4 peaks):				129.5		Corrected Ave (4 peaks):			178.3	RPD = 32
Aroclor-1260	1	11.829	-0.003	1812464	399.0	1	12.731	-0.002	2506462	379.7
Aroclor-1260	2	12.434	-0.002	1183938	400.2	2	13.505	-0.002	4074116	400.7
Aroclor-1260	3	12.749	-0.002	1208822	410.3	3	14.001	0.000	2708254	401.3
Aroclor-1260	4	13.484	-0.001	1560957	422.9	4	14.558	0.000	1025881	414.8
Aroclor-1260	5	13.585	-0.001	609783	412.6	NS	---			----
Total Col1Ave (5 peaks):				409.0		Total Col2Ave (4 peaks):			399.1	RPD = 2
Corrected Ave (4 peaks):				408.5		Corrected Ave (3 peaks):			393.9	RPD = 3
Aroclor-1262	1	12.434	-0.009	1183938	254.7	1	12.822	-0.009	1626272	256.5
Aroclor-1262	2	12.749	-0.009	1208822	360.0	2	13.266	-0.008	1922012	359.9
Aroclor-1262	3	13.112	-0.008	2956557	335.6	3	13.505	-0.008	4074116	340.0
Aroclor-1262	4	13.585	-0.006	609783	206.0	4	13.951	-0.006	1136100	249.4
Aroclor-1262	5	13.649	-0.006	699581	223.4	5	14.001	-0.008	2708254	370.5
Total Col1Ave (5 peaks):				276.0		Total Col2Ave (5 peaks):			315.3	RPD = 13
Corrected Ave (4 peaks):				254.9		Corrected Ave (4 peaks):			301.5	RPD = 17
Aroclor-1268	1	13.585	-0.006	609783	66.7	1	13.951	-0.004	1136100	93.3

Aroclor-1268 2	13.649	-0.003	699581	84.3	2	14.001	-0.009	2708254	237.0
Aroclor-1268 3	13.986	0.011	336166	48.0	3	14.318	-0.005	77421	8.6
Aroclor-1268 4	14.573	-0.004	218078	10.1	4	14.908	-0.005	306071	10.8

Total Col1Ave (4 peaks): 52.3 Total Col2Ave (4 peaks): 87.4 RPD = 50*

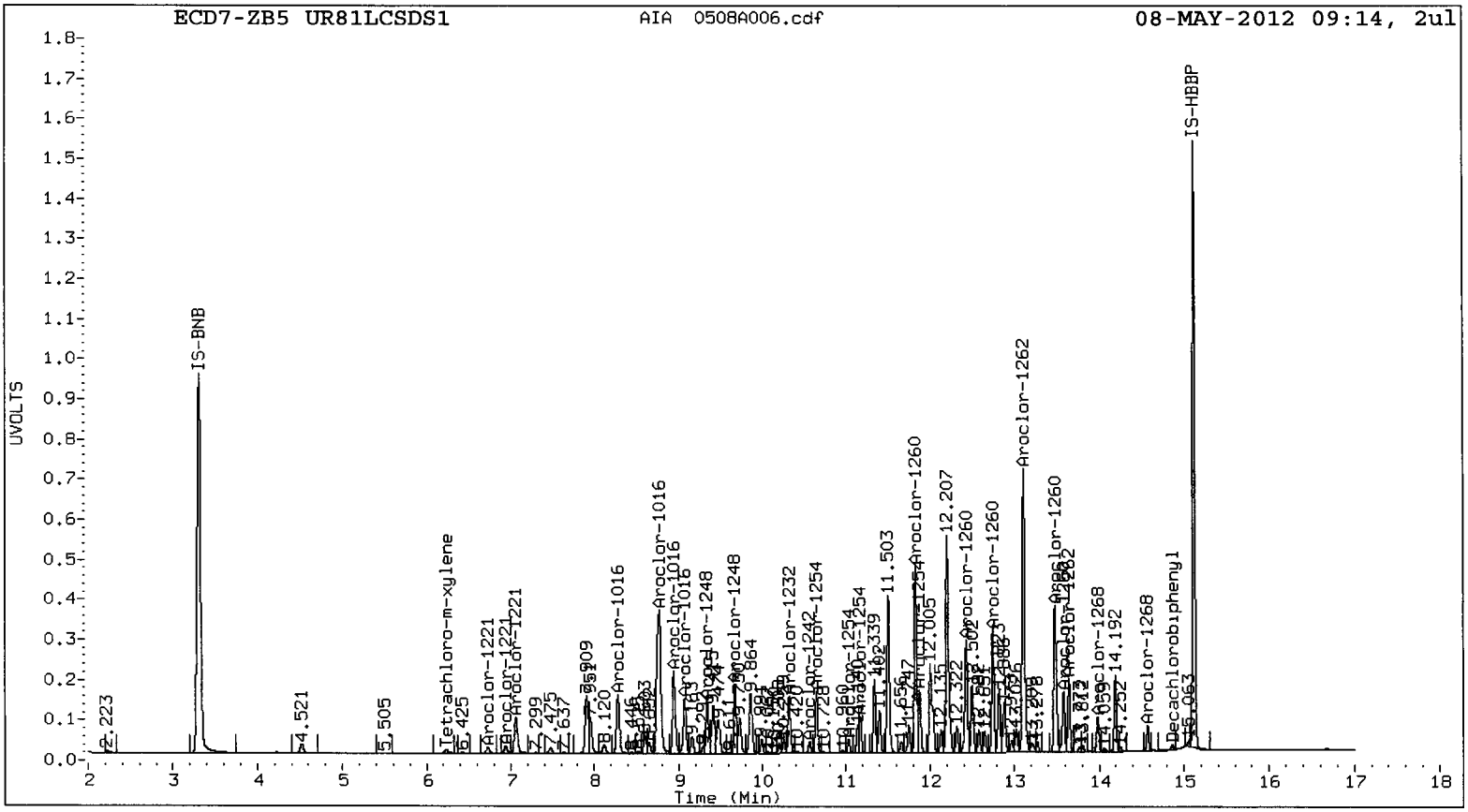
Corrected Ave (3 peaks): 41.6 Corrected Ave (3 peaks): 37.5 RPD = 10

Total PCB Area Col1 (6.384 - 14.765) = 35682782 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 52833519 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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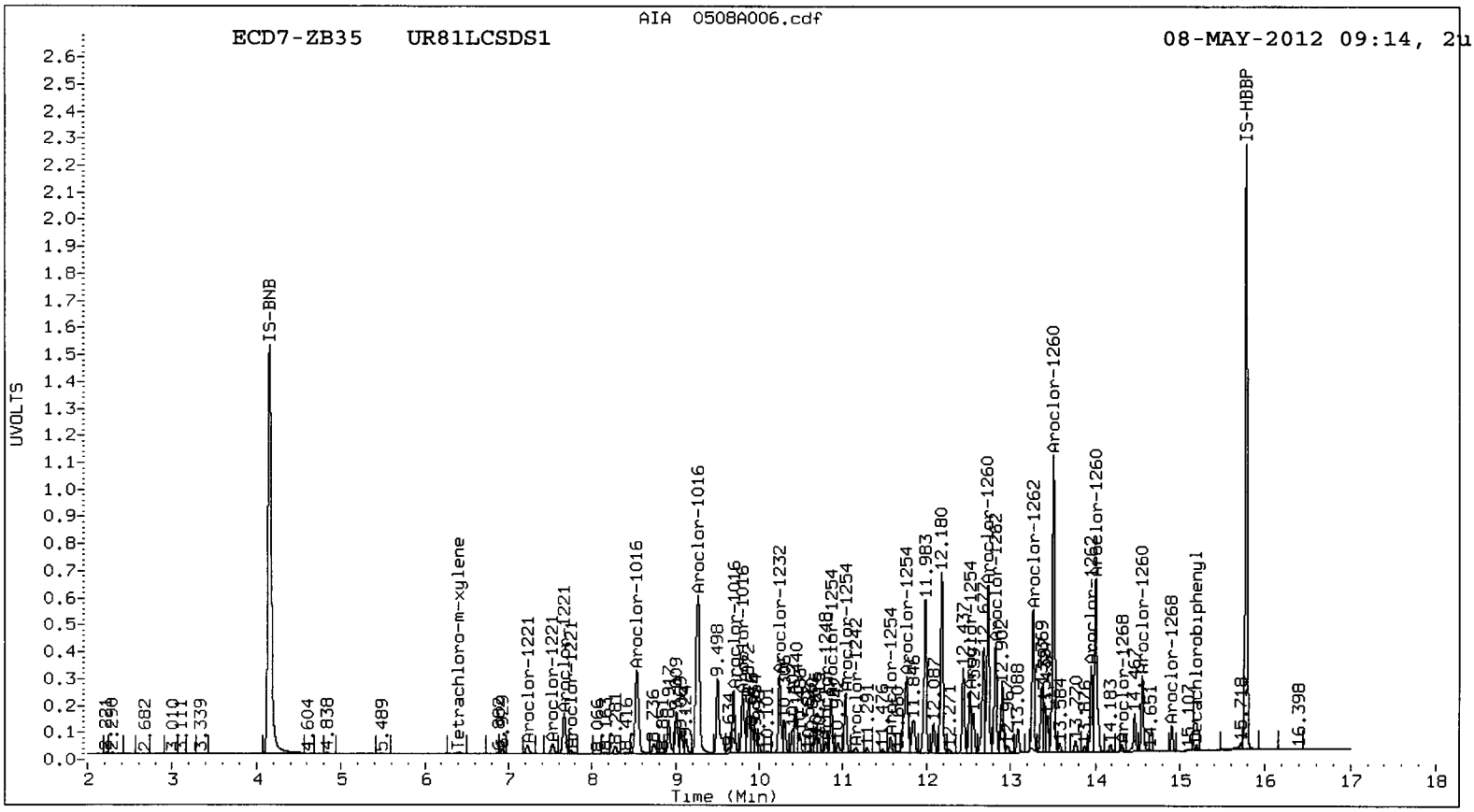
08-MAY-2012 09:14, 2ul
UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
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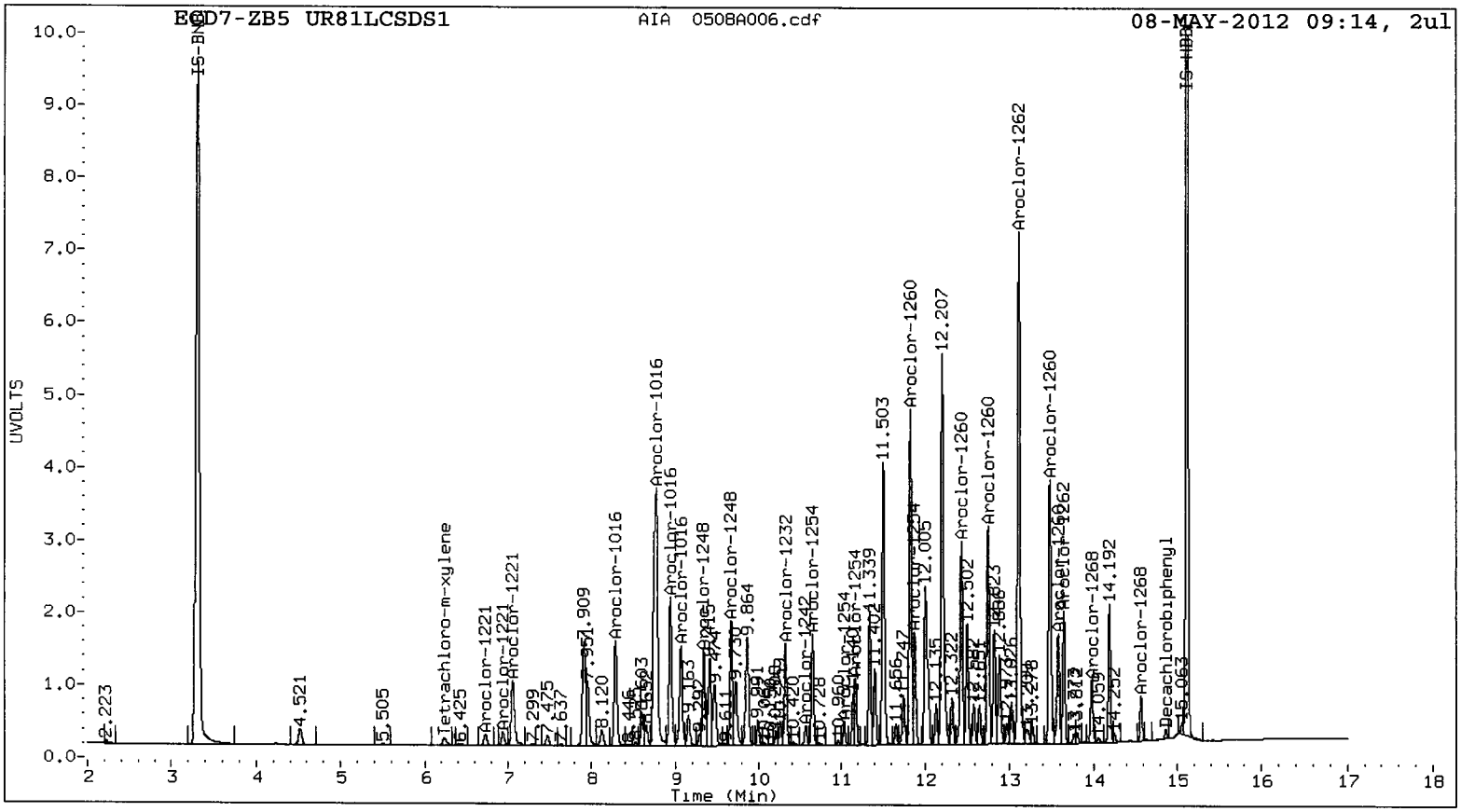
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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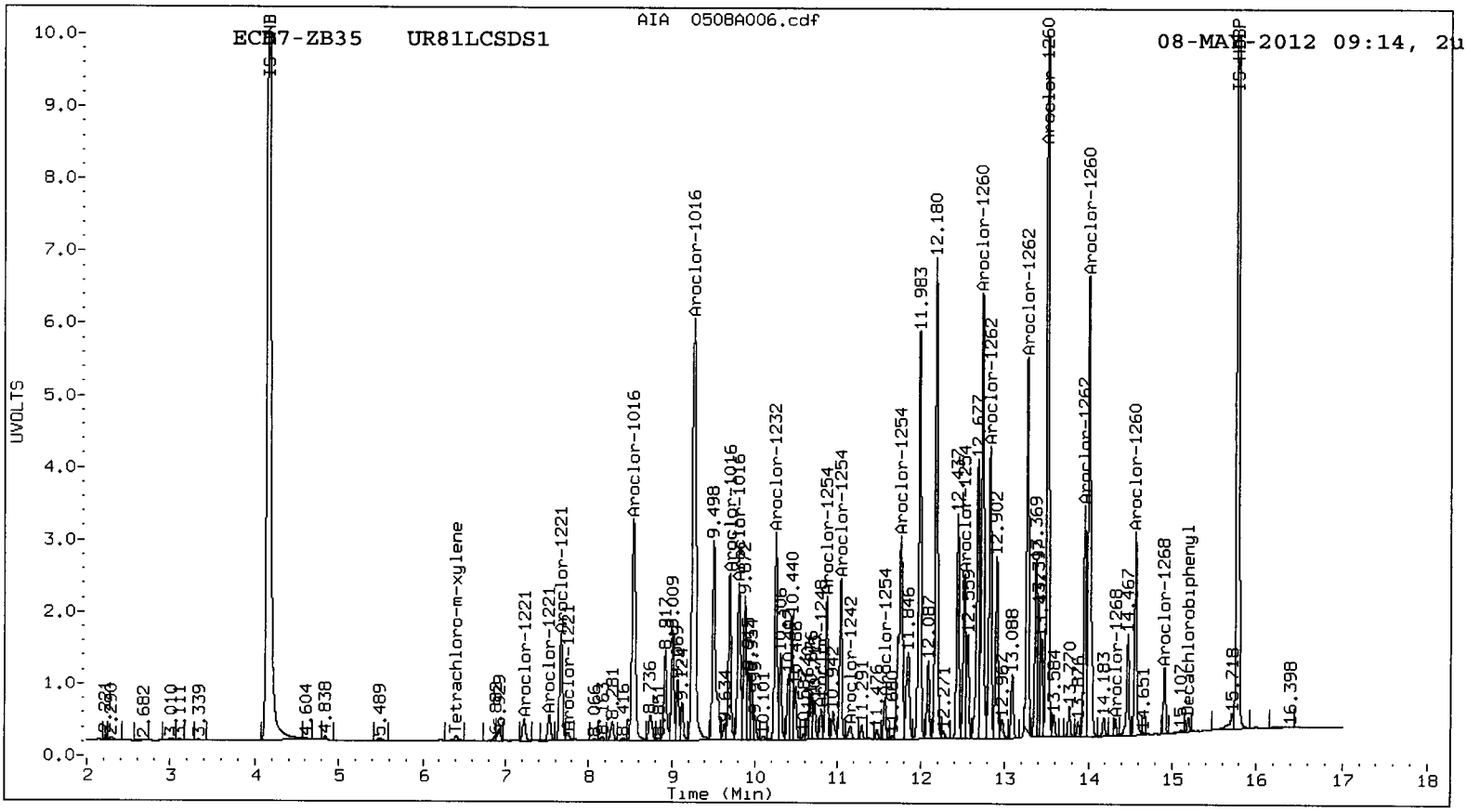
08-MAY-2012 09:14, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A007.d
Data file 2: 20120505.B/0508-2.b/0508A007.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81A
Client ID: IJ12-03
Injection Date: 08-MAY-2012 09:35
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.280	-0.004	1829201	6.406	-0.004	3213358	28.7	30.2	5.0	Tetrachloro-m-xylen
14.865	0.000	1550445	15.194	0.000	2321593	25.5	27.2	6.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	71.7	75.4
Decachlorobiphenyl	63.8	68.1

JL 05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5396036	-7.6
Hexabromobiphenyl	4847662	4993852	3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8523498	-6.9
Hexabromobiphenyl	6845779	7431040	8.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.249	-0.042	94309	59.8	1	8.527	-0.012	307508	71.3
Aroclor-1016	2	8.755	-0.024	155611	28.8	2	9.268	-0.002	127735	14.6
Aroclor-1016	3	8.923	-0.029	71705	33.9	3	9.698	0.001	27904	12.3
Aroclor-1016	4	9.079	-0.001	64152	43.8	4	9.793	-0.012	142149	54.0
Total Col1Ave (4 peaks):				41.6		Total Col2Ave (4 peaks):			38.0	RPD = 9
Corrected Ave (3 peaks):				35.5		Corrected Ave (3 peaks):			27.0	RPD = 27
Aroclor-1221	1	6.661	-0.082	20301	32.6	1	7.256	0.015	216247	176.4
Aroclor-1221	2	6.965	0.011	153458	328.6	2	7.556	0.014	736447	974.6
Aroclor-1221	3	7.070	-0.007	44769	28.7	3	7.694	0.014	284778	126.4
Aroclor-1221	NS	---			----	4	7.830	0.062	36725	85.6
Total Col1Ave (3 peaks):				130.0		Total Col2Ave (4 peaks):			340.8	RPD = 90*
Corrected Ave: <3 Peaks						Corrected Ave (3 peaks):			129.5	
Aroclor-1232	1	8.249	-0.049	94309	151.3	1	8.527	-0.021	307508	165.8
Aroclor-1232	2	8.755	-0.029	155611	73.4	2	9.268	-0.010	127735	37.0
Aroclor-1232	3	8.923	-0.036	71705	85.8	3	9.698	-0.007	27904	30.0
Aroclor-1232	4	10.349	0.020	664982	703.3	4	10.259	0.001	136544	97.8
Total Col1Ave (4 peaks):				253.4		Total Col2Ave (4 peaks):			82.7	RPD = 102*
Corrected Ave (3 peaks):				103.5		Corrected Ave (3 peaks):			54.9	RPD = 61*
Aroclor-1242	1	8.249	-0.046	94309	78.9	1	8.527	-0.016	307508	97.2
Aroclor-1242	2	8.755	-0.028	155611	38.0	2	9.268	-0.007	127735	19.7
Aroclor-1242	3	8.923	-0.034	71705	44.9	3	9.698	-0.002	27904	16.3
Aroclor-1242	4	10.528	-0.044	323263	221.8	4	11.129	-0.033	118115	44.5
Total Col1Ave (4 peaks):				95.9		Total Col2Ave (4 peaks):			44.4	RPD = 73*
Corrected Ave (3 peaks):				53.9		Corrected Ave (3 peaks):			26.8	RPD = 67*
Aroclor-1248	1	9.337	-0.013	105626	64.4	1	9.793	-0.013	142149	47.4
Aroclor-1248	2	9.677	-0.004	35571	17.7	2	10.259	0.008	136544	41.3
Aroclor-1248	3	10.349	0.026	664982	222.9	3	10.793	-0.006	91535	27.3
Aroclor-1248	4	10.528	-0.042	323263	139.9	4	11.129	-0.030	118115	27.3
Total Col1Ave (4 peaks):				111.2		Total Col2Ave (4 peaks):			35.8	RPD = 103*
Corrected Ave (3 peaks):				74.0		Corrected Ave (3 peaks):			32.0	RPD = 79*
Aroclor-1254	1	10.349	0.017	664982	261.3	1	10.860	-0.006	121232	38.0
Aroclor-1254	2	10.646	-0.005	119319	34.0	2	11.031	-0.006	131460	32.3
Aroclor-1254	3	11.048	0.012	217497	98.3	3	11.570	-0.003	60051	18.5
Aroclor-1254	4	11.172	-0.003	163206	38.9	4	11.723	-0.003	234531	34.0
Aroclor-1254	5	11.887	-0.005	74367	26.6	5	12.504	-0.005	124325	29.9
Total Col1Ave (5 peaks):				91.8		Total Col2Ave (5 peaks):			30.6	RPD = 100*
Corrected Ave (4 peaks):				49.5		Corrected Ave (4 peaks):			28.7	RPD = 53*
Aroclor-1260	1	11.830	-0.002	64765	14.8	1	12.731	-0.002	183938	27.6
Aroclor-1260	2	12.434	-0.002	38766	13.6	2	13.507	0.001	181925	17.7
Aroclor-1260	3	12.737	-0.014	243419	85.9	3	13.996	-0.005	70809	10.4
Aroclor-1260	4	13.483	-0.002	62320	17.5	4	14.531	-0.028	98561	39.5
Aroclor-1260	5	13.594	0.008	98652	69.4	NS	---			----
Total Col1Ave (5 peaks):				40.2		Total Col2Ave (4 peaks):			23.8	RPD = 51*
Corrected Ave (4 peaks):				28.8		Corrected Ave (3 peaks):			18.6	RPD = 43*
Aroclor-1262	1	12.434	-0.009	38766	8.7	1	12.771	-0.060	88387	13.8
Aroclor-1262	2	12.737	-0.021	243419	75.3	2	13.263	-0.011	58797	10.9
Aroclor-1262	3	13.104	-0.016	199683	23.6	3	13.507	-0.006	181925	15.0
Aroclor-1262	4	13.594	0.003	98652	34.6	4	13.949	-0.008	125275	27.2
Aroclor-1262	5	13.660	0.005	36926	12.3	5	13.996	-0.013	70809	9.6
Total Col1Ave (5 peaks):				30.9		Total Col2Ave (5 peaks):			15.3	RPD = 67*
Corrected Ave (4 peaks):				19.8		Corrected Ave (4 peaks):			12.3	RPD = 46*
Aroclor-1268	1	13.594	0.003	98652	11.2	1	13.949	-0.006	125275	10.2

Aroclor-1268 2	13.660	0.008	36926	4.6	2	13.996	-0.014	70809	6.1
Aroclor-1268 3	13.983	0.008	77022	11.4	3	14.311	-0.011	51878	5.7
Aroclor-1268 4	14.613	0.036	16156	0.8	4	14.964	0.052	110318	3.8

Total Col1Ave (4 peaks): 7.0 Total Col2Ave (4 peaks): 6.5 RPD = 8

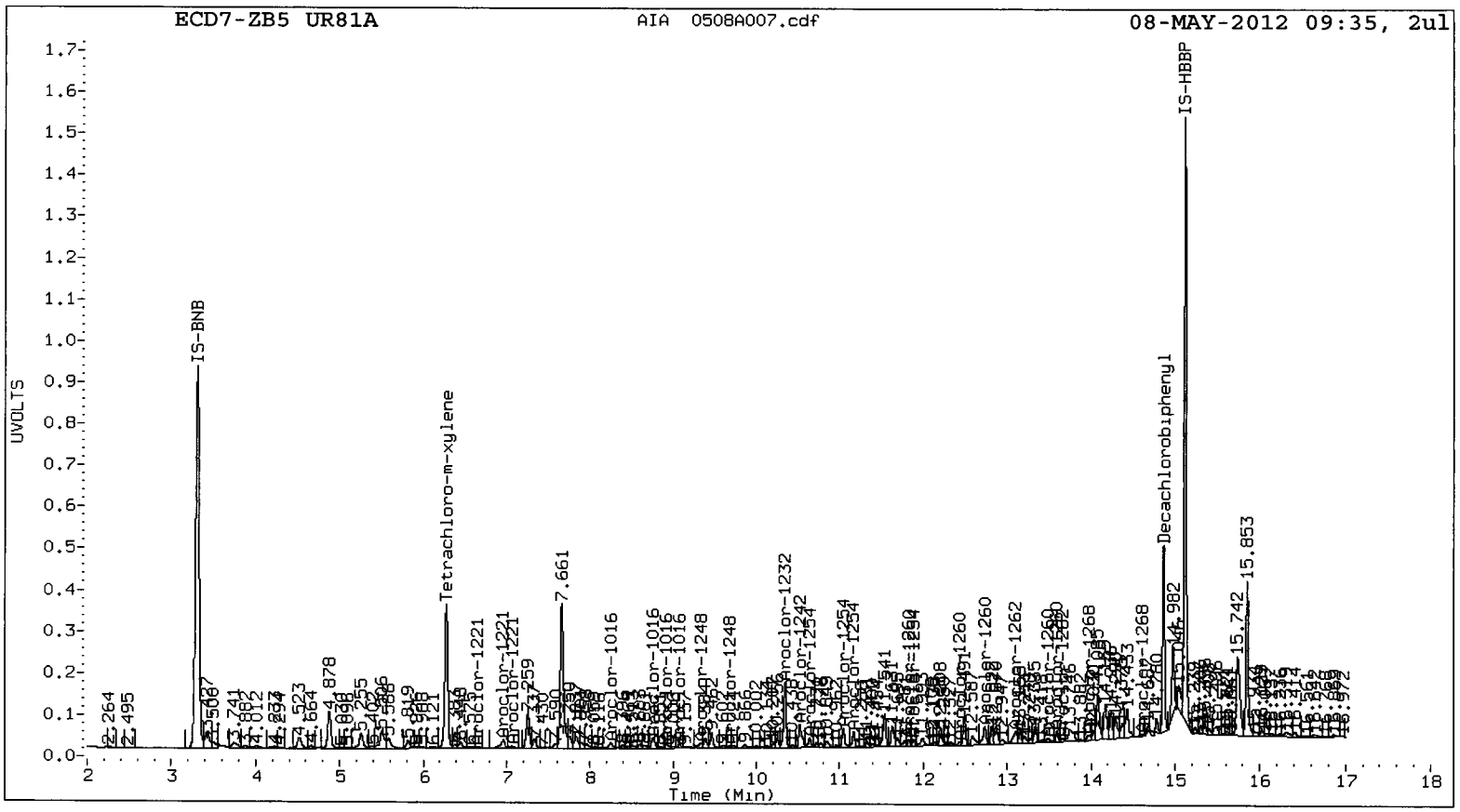
Corrected Ave (3 peaks): 5.5 Corrected Ave (3 peaks): 5.2 RPD = 6

Total PCB Area Col1 (6.384 - 14.765) = 13026984 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 18545148 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

URB1 : 02868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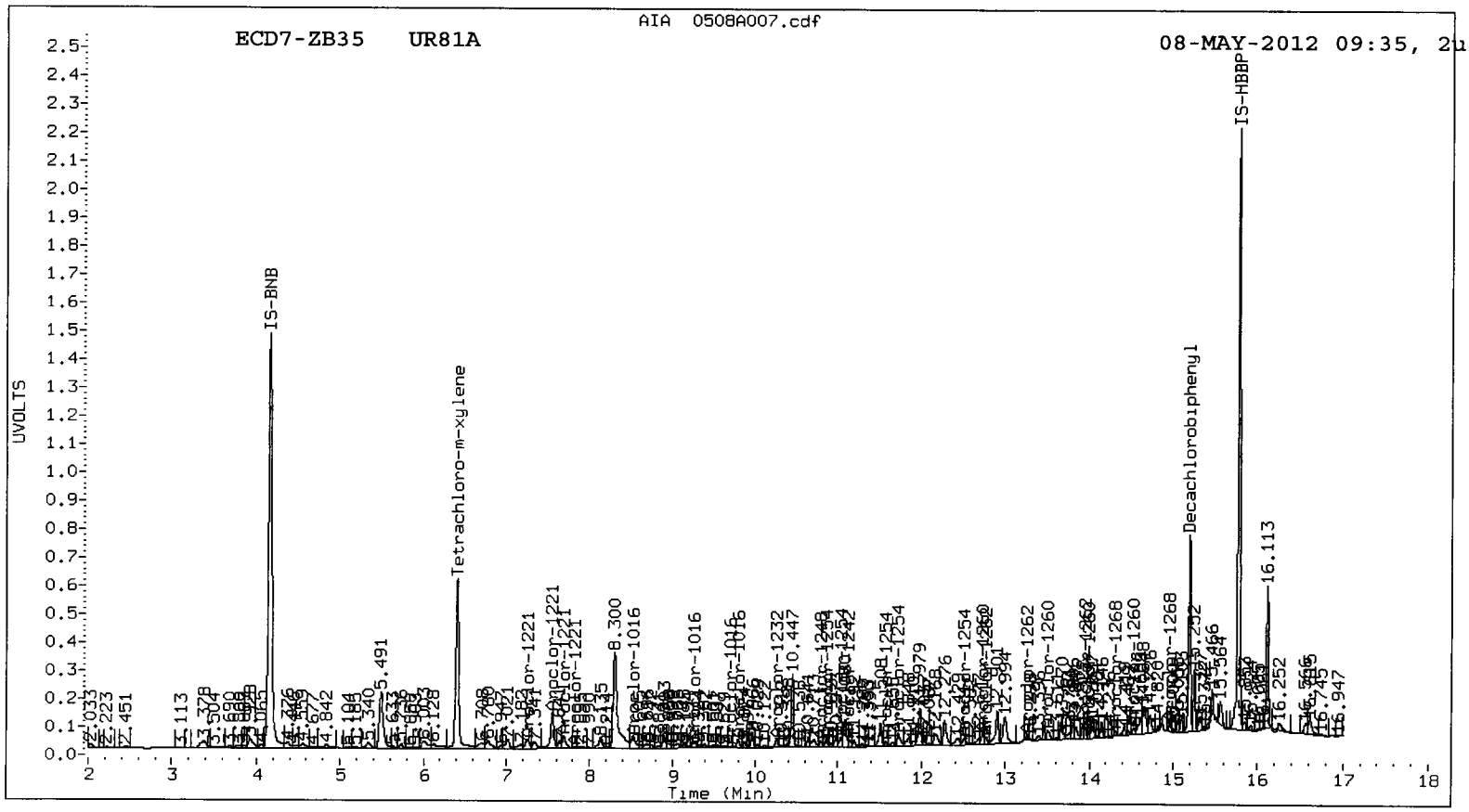
AIA 0508A007.cdf
08-MAY-2012 09:35, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.661
IS-HBBP
Decachlorobiphenyl
15.853
15.742
14.982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Time (Min)
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Tetrachloro-m-xylene
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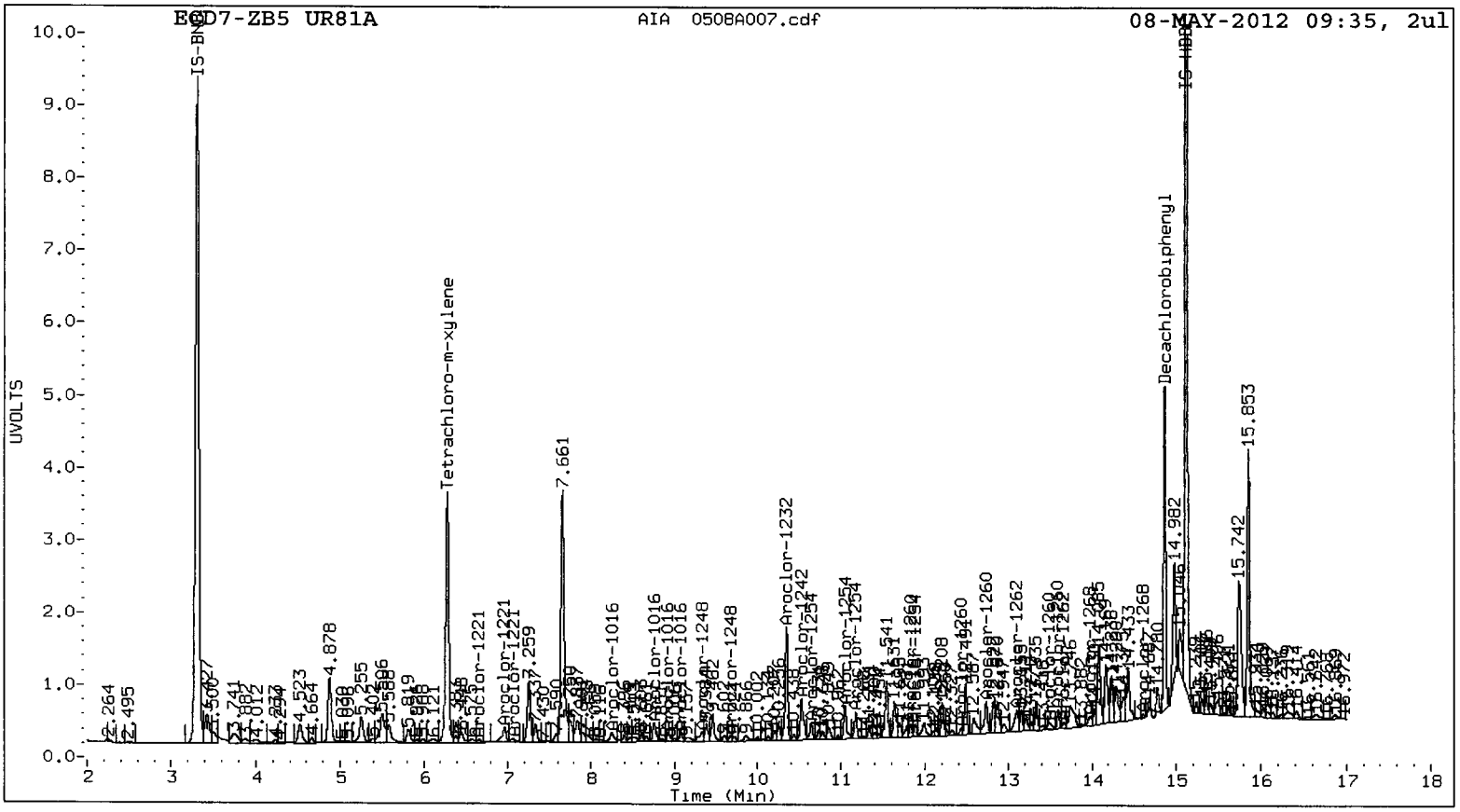
5.491
IS-HBBP
Decachlorobiphenyl
16.113
16.252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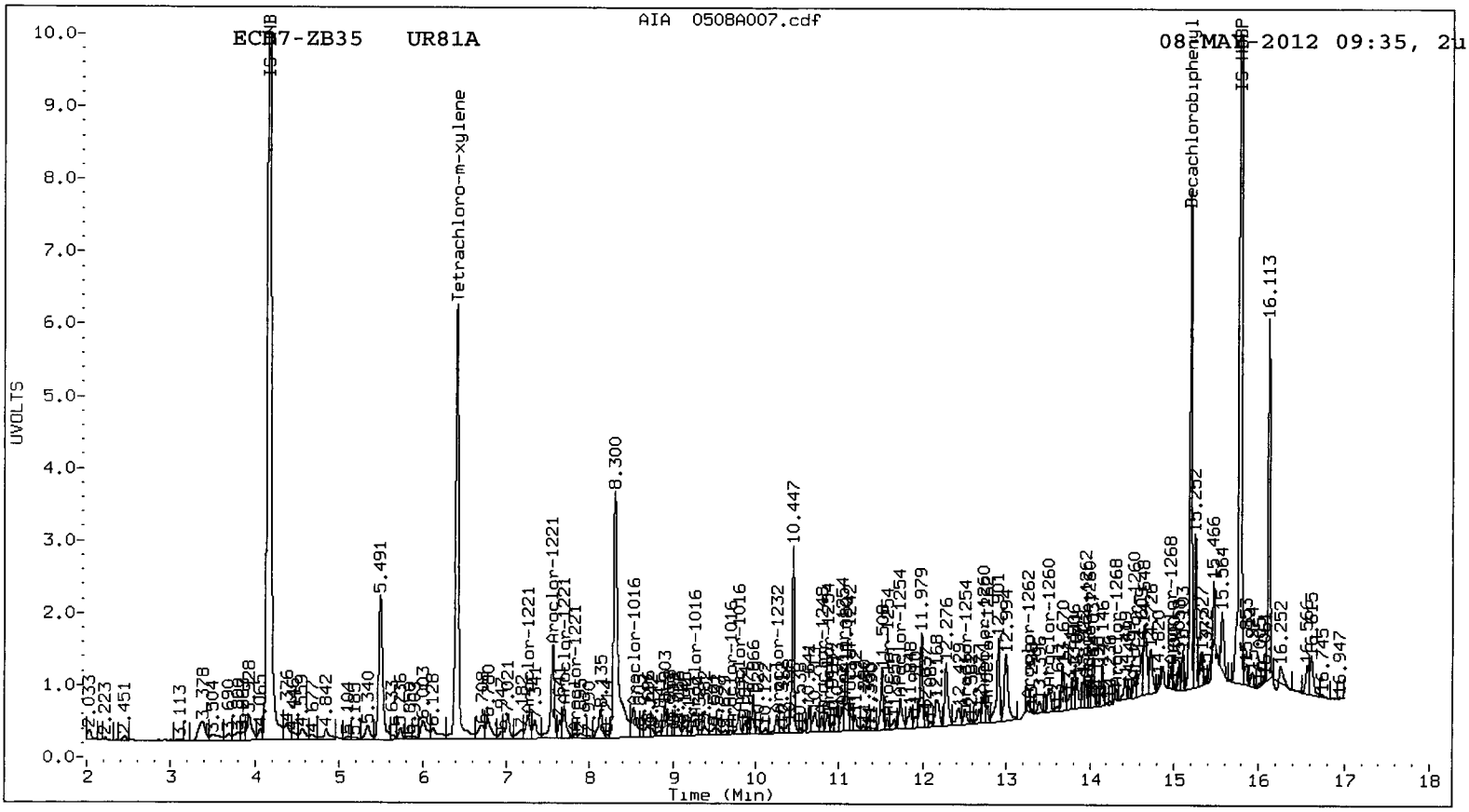
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
7.661
15.853
15.742
14.982
4.878
Aroclor-1232
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1260
Aroclor-1262
Aroclor-1268
Aroclor-1254
Aroclor-1242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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
16.113
8.300
10.447
5.491
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1262
Aroclor-1260
Aroclor-1268
Aroclor-1248

UR81 : 02062

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A008.d
Data file 2: 20120505.B/0508-2.b/0508A008.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81B
Client ID: IJ12-05
Injection Date: 08-MAY-2012 09:56
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.284	0.000	2204550	6.410	0.000	3805515	34.2	36.3	6.1	Tetrachloro-m-xylen
14.866	0.001	1944786	15.194	0.001	2999381	32.8	35.5	8.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	85.5	90.8
Decachlorobiphenyl	81.9	88.7

05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5457370	-6.6
Hexabromobiphenyl	4847662	4882791	0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8382585	-8.5
Hexabromobiphenyl	6845779	7374006	7.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.254	-0.037	110323	69.1	1	8.528	-0.010	395091	93.1
Aroclor-1016	2	8.759	-0.020	168470	30.8	2	9.269	0.000	120407	14.0
Aroclor-1016	3	8.926	-0.025	64573	30.2	3	9.703	0.006	28727	12.9
Aroclor-1016	4	9.084	0.005	65832	44.4	4	9.795	-0.010	128179	49.5
Total Col1Ave (4 peaks):				43.6		Total Col2Ave (4 peaks):			42.4	RPD = 3
Corrected Ave (3 peaks):				35.1		Corrected Ave (3 peaks):			25.5	RPD = 32
Aroclor-1221	1	6.665	-0.078	16919	26.9	1	7.260	0.019	256748	213.0
Aroclor-1221	2	6.969	0.015	158945	336.5	2	7.561	0.019	909590	1224.0
Aroclor-1221	3	7.075	-0.002	48871	31.0	3	7.698	0.018	297333	134.1
Aroclor-1221	NS	---			----	4	7.835	0.068	42900	101.7
Total Col1Ave (3 peaks):				131.5		Total Col2Ave (4 peaks):			418.2	RPD = 104*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			149.6	
Aroclor-1232	1	8.254	-0.045	110323	175.0	1	8.528	-0.020	395091	216.6
Aroclor-1232	2	8.759	-0.025	168470	78.5	2	9.269	-0.008	120407	35.4
Aroclor-1232	3	8.926	-0.032	64573	76.4	3	9.703	-0.001	28727	31.4
Aroclor-1232	4	10.352	0.023	741619	775.6	4	10.262	0.004	128427	93.6
Total Col1Ave (4 peaks):				276.4		Total Col2Ave (4 peaks):			94.3	RPD = 98*
Corrected Ave (3 peaks):				110.0		Corrected Ave (3 peaks):			53.5	RPD = 69*
Aroclor-1242	1	8.254	-0.042	110323	91.2	1	8.528	-0.015	395091	126.9
Aroclor-1242	2	8.759	-0.024	168470	40.7	2	9.269	-0.005	120407	18.9
Aroclor-1242	3	8.926	-0.030	64573	40.0	3	9.703	0.003	28727	17.1
Aroclor-1242	4	10.530	-0.042	329249	223.3	4	11.132	-0.029	111998	42.9
Total Col1Ave (4 peaks):				98.8		Total Col2Ave (4 peaks):			51.5	RPD = 63*
Corrected Ave (3 peaks):				57.3		Corrected Ave (3 peaks):			26.3	RPD = 74*
Aroclor-1248	1	9.340	-0.010	105538	63.6	1	9.795	-0.011	128179	43.4
Aroclor-1248	2	9.685	0.004	21348	10.5	2	10.262	0.011	128427	39.5
Aroclor-1248	3	10.352	0.029	741619	245.8	3	10.796	-0.004	78840	23.9
Aroclor-1248	4	10.530	-0.040	329249	140.9	4	11.132	-0.027	111998	26.3
Total Col1Ave (4 peaks):				115.2		Total Col2Ave (4 peaks):			33.3	RPD = 110*
Corrected Ave (3 peaks):				71.7		Corrected Ave (3 peaks):			29.9	RPD = 82*
Aroclor-1254	1	10.352	0.021	741619	288.1	1	10.863	-0.003	114763	36.6
Aroclor-1254	2	10.650	-0.002	121406	34.2	2	11.032	-0.004	138132	34.5
Aroclor-1254	3	11.050	0.014	207648	92.8	3	11.572	-0.001	59045	18.5
Aroclor-1254	4	11.174	0.000	158270	37.3	4	11.725	0.000	233066	34.4
Aroclor-1254	5	11.888	-0.004	72023	25.5	5	12.506	-0.003	114513	28.0
Total Col1Ave (5 peaks):				95.6		Total Col2Ave (5 peaks):			30.4	RPD = 103*
Corrected Ave (4 peaks):				47.5		Corrected Ave (4 peaks):			28.9	RPD = 49*
Aroclor-1260	1	11.832	0.000	67370	15.8	1	12.731	-0.002	195540	29.6
Aroclor-1260	2	12.436	-0.001	44646	16.0	2	13.507	0.001	221789	21.8
Aroclor-1260	3	12.738	-0.013	275916	99.5	3	13.996	-0.005	79933	11.8
Aroclor-1260	4	13.482	-0.003	64002	18.4	4	14.578	0.020	108051	43.6
Aroclor-1260	5	13.594	0.008	118124	85.0	NS	---			----
Total Col1Ave (5 peaks):				46.9		Total Col2Ave (4 peaks):			26.7	RPD = 55*
Corrected Ave (4 peaks):				33.8		Corrected Ave (3 peaks):			21.1	RPD = 46*
Aroclor-1262	1	12.436	-0.007	44646	10.2	1	12.771	-0.060	102157	16.1
Aroclor-1262	2	12.738	-0.020	275916	87.3	2	13.265	-0.009	59606	11.1
Aroclor-1262	3	13.105	-0.015	191710	23.1	3	13.507	-0.006	221789	18.5
Aroclor-1262	4	13.594	0.003	118124	42.4	4	13.949	-0.008	149138	32.7
Aroclor-1262	5	13.659	0.004	46224	15.7	5	13.996	-0.013	79933	10.9
Total Col1Ave (5 peaks):				35.8		Total Col2Ave (5 peaks):			17.9	RPD = 67*
Corrected Ave (4 peaks):				22.9		Corrected Ave (4 peaks):			14.2	RPD = 47*
Aroclor-1268	1	13.594	0.004	118124	13.7	1	13.949	-0.006	149138	12.2

Aroclor-1268	2	13.659	0.007	46224	5.9	2	13.996	-0.014	79933	7.0
Aroclor-1268	3	13.986	0.011	84409	12.8	3	14.310	-0.012	73192	8.1
Aroclor-1268	4	14.571	-0.006	10969	0.5	4	14.964	0.051	185759	6.5

Total Col1Ave (4 peaks): 8.3 Total Col2Ave (4 peaks): 8.5 RPD = 2

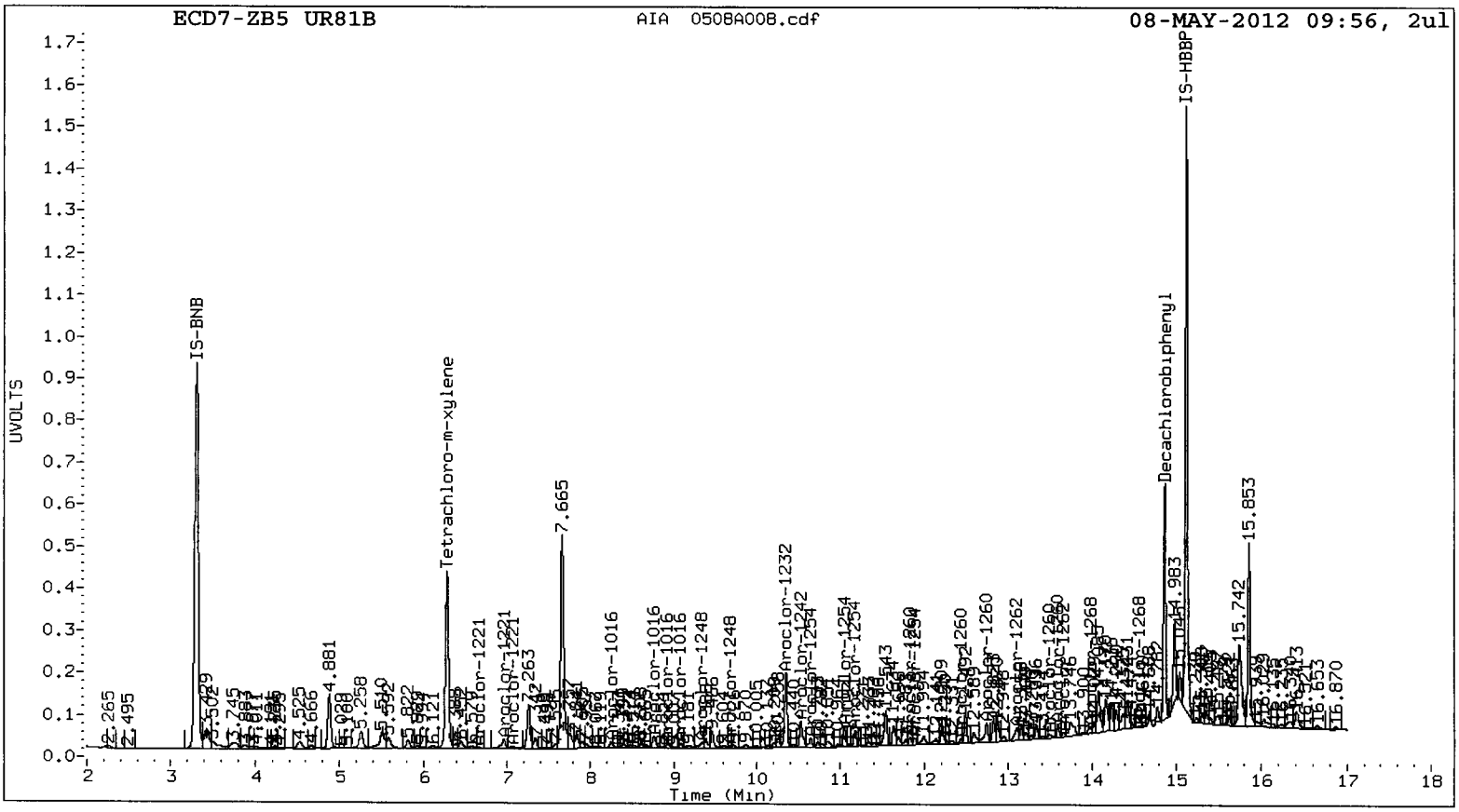
Corrected Ave (3 peaks): 6.4 Corrected Ave (3 peaks): 7.2 RPD = 11

Total PCB Area Col1 (6.384 - 14.765) = 14394444 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 20655797 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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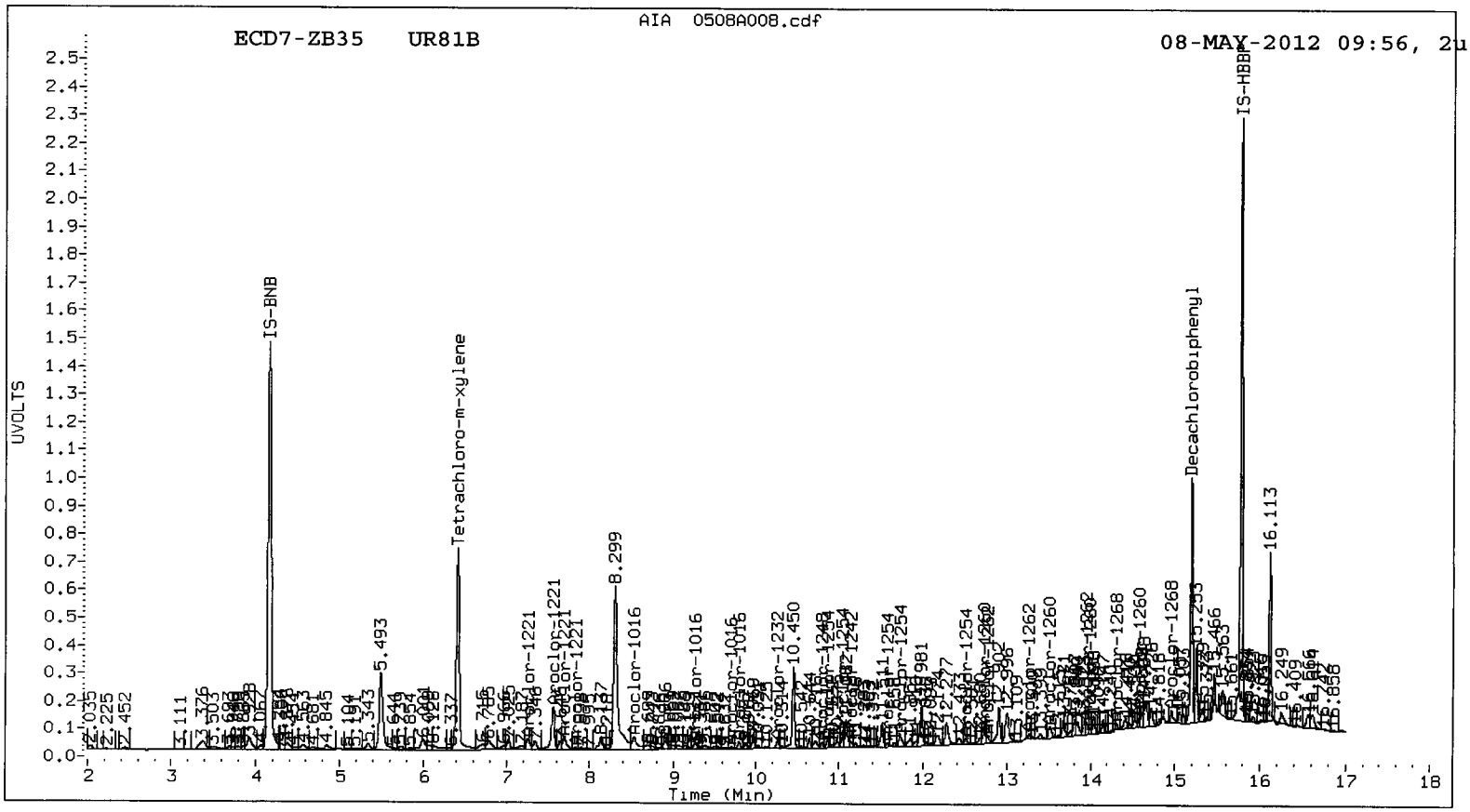
AIA 0508A008.cdf
08-MAY-2012 09:56, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
7.665
15.853
15.742
14.983
4.881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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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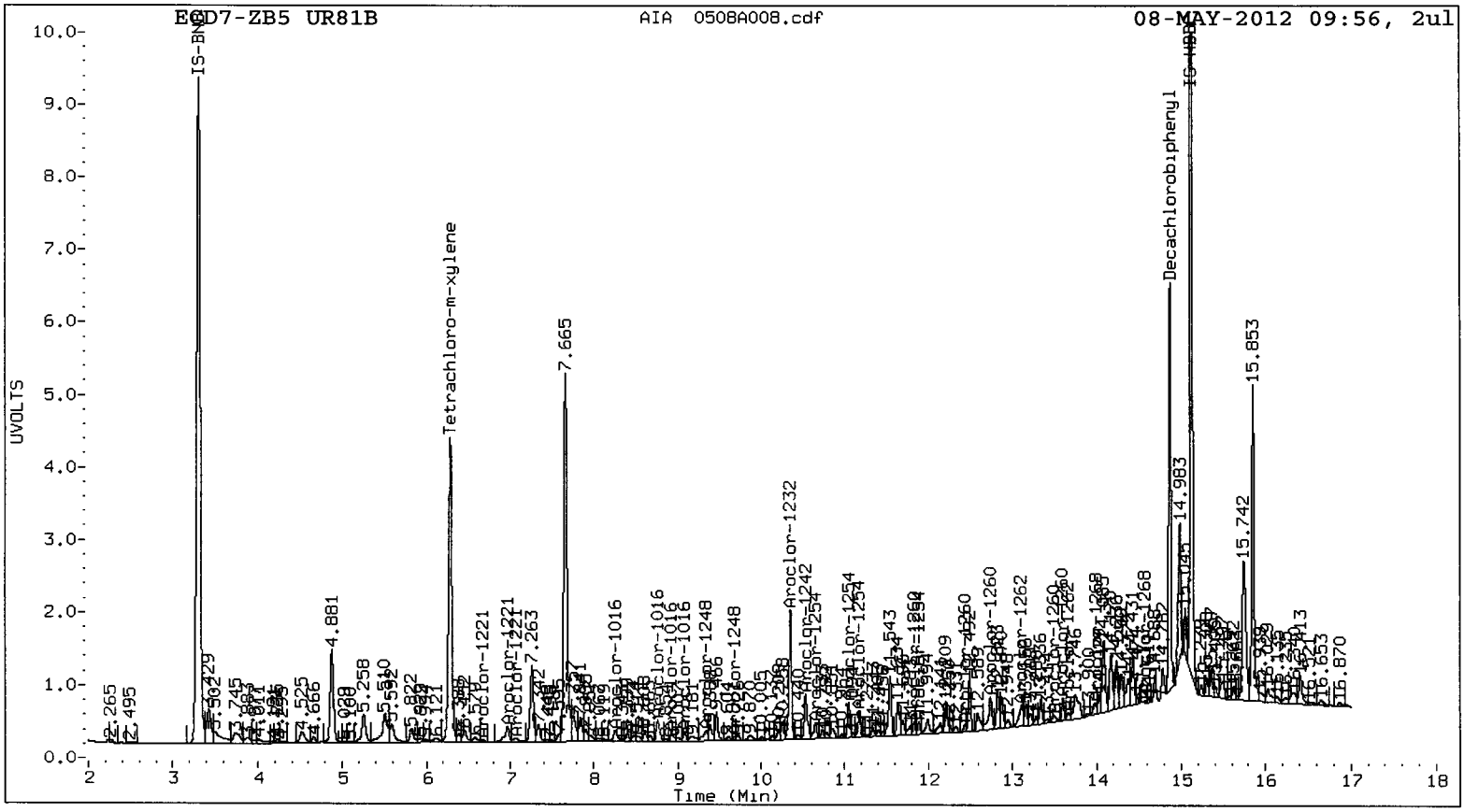
5.493
10.450
16.113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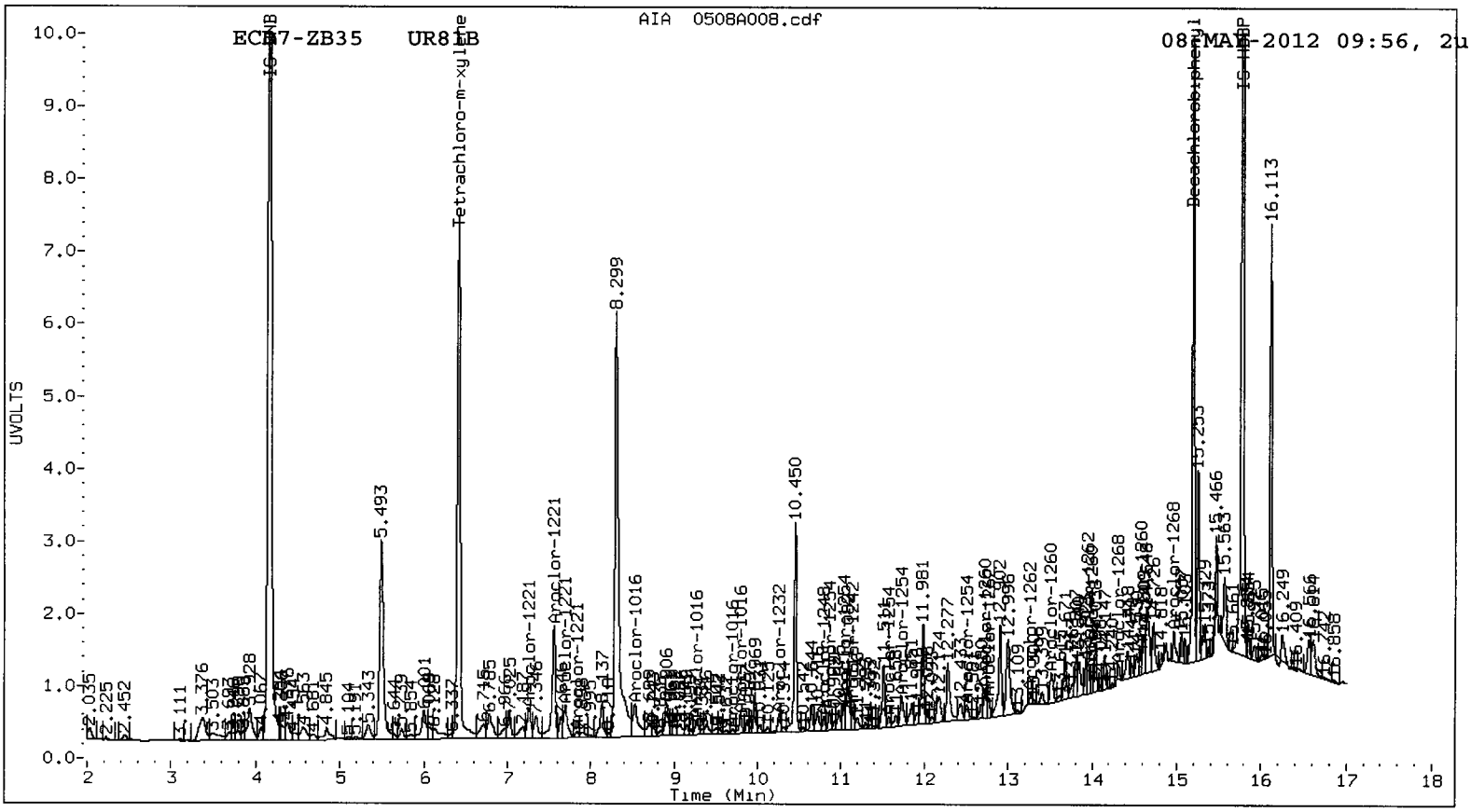
AIA 0508A008.cdf
08-MAY-2012 09:56, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.665
4.881
Decachlorobiphenyl
IS-HBP
15.853
14.983
15.742
Aroclor-1232
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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08-MAY-2012 09:56, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
8.299
5.493
10.450
Decachlorobiphenyl
IS-HBP
16.113
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A009.d
Data file 2: 20120505.B/0508-2.b/0508A009.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81C
Client ID: IJ12-06
Injection Date: 08-MAY-2012 10:17
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.282	-0.002	2217877	6.408	-0.002	3887439	33.7	36.0	6.7	Tetrachloro-m-xylen
14.866	0.000	1870622	15.195	0.001	2813505	30.6	31.6	3.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

JK 05/09/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	84.2	90.1
Decachlorobiphenyl	76.6	78.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5571603	-4.6
Hexabromobiphenyl	4847662	5020700	3.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8634140	-5.7
Hexabromobiphenyl	6845779	7771871	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.251	-0.040	95234	58.5	1	8.527	-0.012	433025	99.1
Aroclor-1016	2	8.757	-0.022	193352	34.6	2	9.269	0.000	116270	13.1
Aroclor-1016	3	8.925	-0.026	79406	36.4	3	9.703	0.006	25763	11.2
Aroclor-1016	4	9.081	0.001	68261	45.1	4	9.795	-0.010	144857	54.3
Total Col1Ave (4 peaks):				43.6		Total Col2Ave (4 peaks):			44.4	RPD = 2
Corrected Ave (3 peaks):				38.7		Corrected Ave (3 peaks):			26.2	RPD = 38
Aroclor-1221	1	6.662	-0.080	16862	26.2	1	7.258	0.016	246187	198.3
Aroclor-1221	2	6.968	0.014	198514	411.7	2	7.558	0.017	1009722	1319.2
Aroclor-1221	3	7.075	-0.002	71670	44.6	3	7.697	0.017	275761	120.8
Aroclor-1221	NS	---			----	4	7.833	0.066	63295	145.7
Total Col1Ave (3 peaks):				160.8		Total Col2Ave (4 peaks):			446.0	RPD = 94*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			154.9	
Aroclor-1232	1	8.251	-0.047	95234	148.0	1	8.527	-0.021	433025	230.5
Aroclor-1232	2	8.757	-0.027	193352	88.3	2	9.269	-0.008	116270	33.2
Aroclor-1232	3	8.925	-0.033	79406	92.0	3	9.703	-0.001	25763	27.3
Aroclor-1232	4	10.351	0.022	923771	946.3	4	10.260	0.003	127341	90.1
Total Col1Ave (4 peaks):				318.6		Total Col2Ave (4 peaks):			95.3	RPD = 108*
Corrected Ave (3 peaks):				109.4		Corrected Ave (3 peaks):			50.2	RPD = 74*
Aroclor-1242	1	8.251	-0.044	95234	77.1	1	8.527	-0.016	433025	135.1
Aroclor-1242	2	8.757	-0.026	193352	45.7	2	9.269	-0.005	116270	17.7
Aroclor-1242	3	8.925	-0.031	79406	48.2	3	9.703	0.003	25763	14.9
Aroclor-1242	4	10.529	-0.043	365186	242.6	4	11.132	-0.030	128316	47.7
Total Col1Ave (4 peaks):				103.4		Total Col2Ave (4 peaks):			53.8	RPD = 63*
Corrected Ave (3 peaks):				57.0		Corrected Ave (3 peaks):			26.8	RPD = 72*
Aroclor-1248	1	9.340	-0.010	91210	53.8	1	9.795	-0.011	144857	47.6
Aroclor-1248	2	9.682	0.001	29124	14.1	2	10.260	0.009	127341	38.0
Aroclor-1248	3	10.351	0.028	923771	299.8	3	10.795	-0.004	78307	23.0
Aroclor-1248	4	10.529	-0.040	365186	153.1	4	11.132	-0.028	128316	29.3
Total Col1Ave (4 peaks):				130.2		Total Col2Ave (4 peaks):			34.5	RPD = 116*
Corrected Ave (3 peaks):				73.7		Corrected Ave (3 peaks):			30.1	RPD = 84*
Aroclor-1254	1	10.351	0.019	923771	351.5	1	10.862	-0.004	139236	43.1
Aroclor-1254	2	10.649	-0.003	145664	40.2	2	11.033	-0.003	163848	39.7
Aroclor-1254	3	11.049	0.013	211365	92.5	3	11.572	-0.002	84713	25.8
Aroclor-1254	4	11.173	-0.001	192636	44.5	4	11.724	-0.001	285962	41.0
Aroclor-1254	5	11.887	-0.004	94935	32.9	5	12.507	-0.003	171120	40.7
Total Col1Ave (5 peaks):				112.3		Total Col2Ave (5 peaks):			38.0	RPD = 99*
Corrected Ave (4 peaks):				52.5		Corrected Ave (4 peaks):			36.8	RPD = 35
Aroclor-1260	1	11.831	0.000	84342	19.2	1	12.731	-0.002	224717	32.2
Aroclor-1260	2	12.434	-0.003	60171	21.0	2	13.506	-0.001	201220	18.7
Aroclor-1260	3	12.738	-0.013	368334	129.2	3	13.996	-0.005	135583	19.0
Aroclor-1260	4	13.482	-0.003	87120	24.4	4	14.533	-0.026	93091	35.6
Aroclor-1260	5	13.594	0.008	130192	91.1	NS	---			----
Total Col1Ave (5 peaks):				57.0		Total Col2Ave (4 peaks):			26.4	RPD = 73*
Corrected Ave (4 peaks):				38.9		Corrected Ave (3 peaks):			23.3	RPD = 50*
Aroclor-1262	1	12.434	-0.009	60171	13.4	1	12.772	-0.059	124578	18.6
Aroclor-1262	2	12.738	-0.020	368334	113.4	2	13.265	-0.009	71368	12.7
Aroclor-1262	3	13.105	-0.016	226570	26.6	3	13.506	-0.007	201220	15.9
Aroclor-1262	4	13.594	0.003	130192	45.5	4	13.923	-0.034	420664	87.5
Aroclor-1262	5	13.660	0.005	39470	13.0	5	13.996	-0.012	135583	17.6
Total Col1Ave (5 peaks):				42.4		Total Col2Ave (5 peaks):			30.4	RPD = 33
Corrected Ave (4 peaks):				24.6		Corrected Ave (4 peaks):			16.2	RPD = 41*
Aroclor-1268	1	13.594	0.004	130192	14.7	1	13.923	-0.032	420664	32.7

Aroclor-1268 2	13.660	0.007	39470	4.9	2	13.996	-0.014	135583	11.2
Aroclor-1268 3	13.983	0.008	80963	11.9	3	14.311	-0.011	75662	7.9
Aroclor-1268 4	14.610	0.033	22380	1.1	4	14.962	0.050	225809	7.5

Total Col1Ave (4 peaks): 8.2 Total Col2Ave (4 peaks): 14.8 RPD = 58*

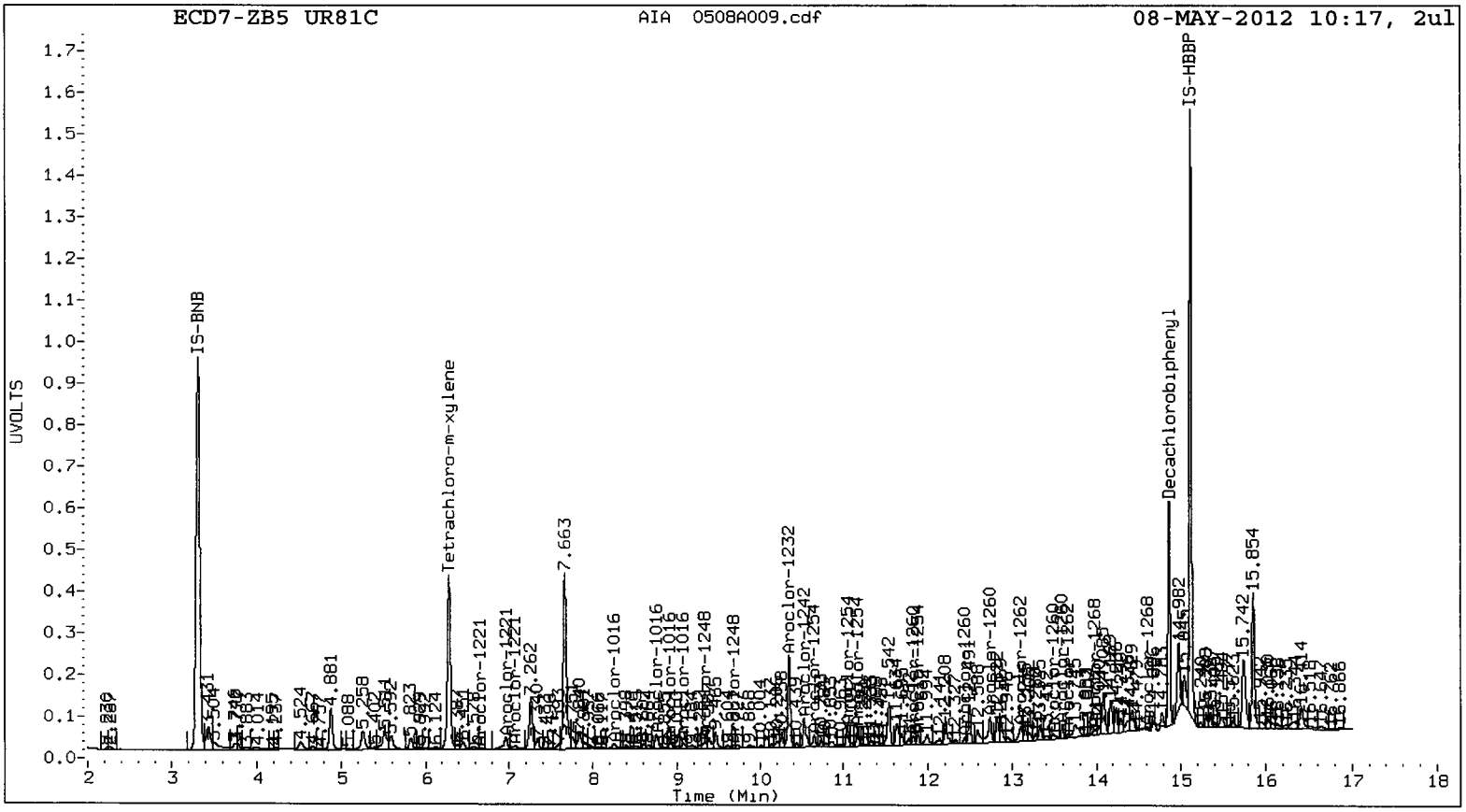
Corrected Ave (3 peaks): 6.0 Corrected Ave (3 peaks): 8.9 RPD = 39

Total PCB Area Col1 (6.384 - 14.765) = 14913153 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 21572155 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 UR81C
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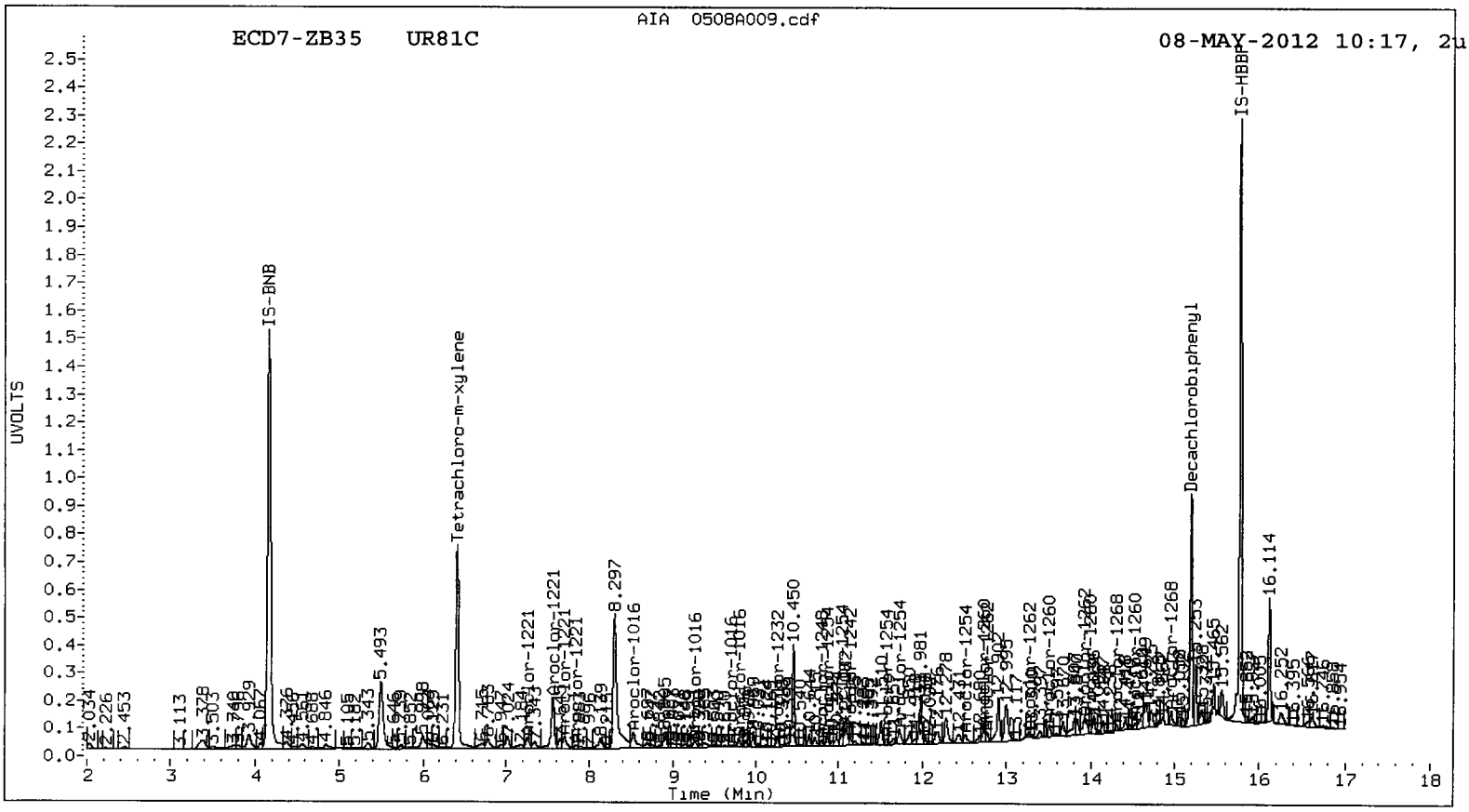
08-MAY-2012 10:17, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.663
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
15.854
15.742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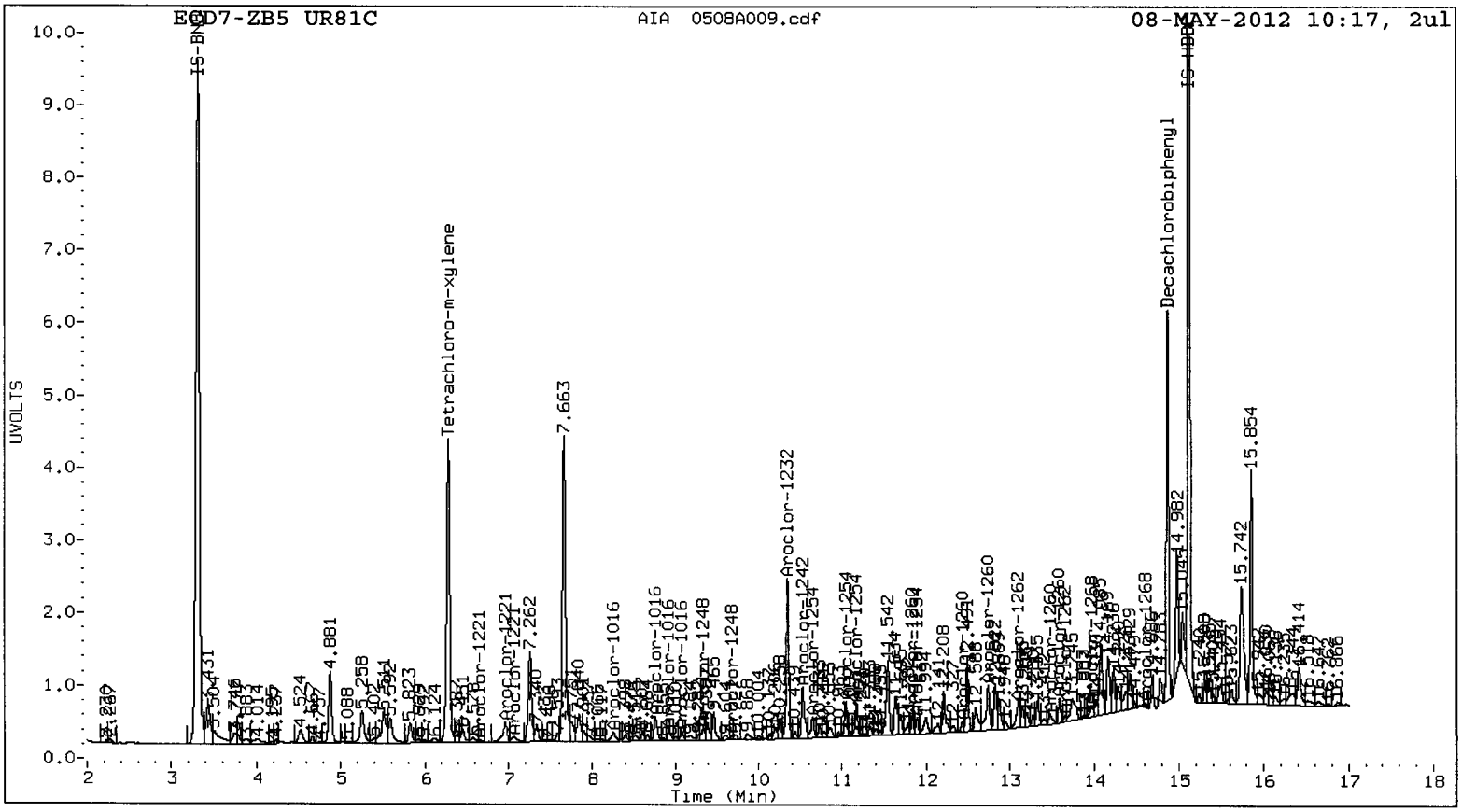
08-MAY-2012 10:17, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
5.493
8.297
Aroclor-1221
Aroclor-1016
Aroclor-1232
10.450
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
16.114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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1232
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1260
Aroclor-1262
Aroclor-1254
Aroclor-1268
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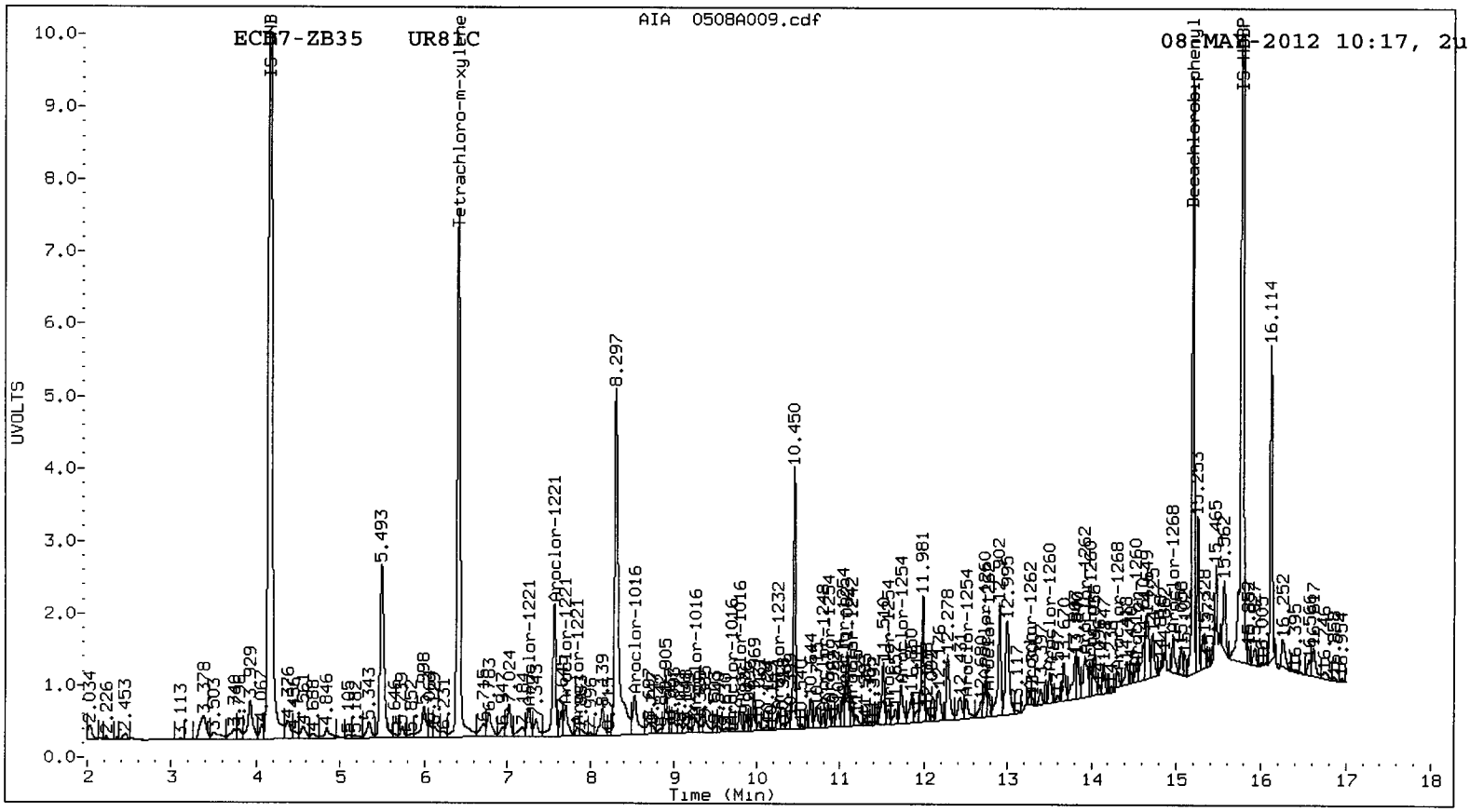
14.982
4.881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08-MAY-2012 10:17, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1262
Aroclor-1260
Aroclor-1268
8.297
10.450
16.114
5.493
11.981

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A010.d
Data file 2: 20120505.B/0508-2.b/0508A010.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81D
Client ID: IJ12-02
Injection Date: 08-MAY-2012 10:37
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.286	0.002	2328920	6.411	0.001	4152948	35.4	38.8	9.1	Tetrachloro-m-xylen
14.867	0.001	2055518	15.195	0.001	3224952	33.5	36.8	9.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

JL 05/09/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	88.6	97.1
Decachlorobiphenyl	83.7	92.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5561210	-4.8
Hexabromobiphenyl	4847662	5048708	4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8556218	-6.6
Hexabromobiphenyl	6845779	7633042	11.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.256	-0.035	124579	76.6	1	8.530	-0.009	487628	112.6
Aroclor-1016	2	8.762	-0.018	201991	36.2	2	9.273	0.004	133157	15.2
Aroclor-1016	3	8.928	-0.023	83834	38.5	3	9.701	0.004	40417	17.8
Aroclor-1016	4	9.086	0.007	72540	48.0	4	9.797	-0.008	137810	52.2
Total Col1Ave (4 peaks):				49.8		Total Col2Ave (4 peaks):			49.4	RPD = 1
Corrected Ave (3 peaks):				40.9		Corrected Ave (3 peaks):			28.4	RPD = 36
Aroclor-1221	1	6.666	-0.076	24860	38.7	1	7.261	0.020	303715	246.8
Aroclor-1221	2	6.970	0.016	181351	376.8	2	7.563	0.021	1037962	1368.4
Aroclor-1221	3	7.077	0.000	51375	32.0	3	7.701	0.020	379162	167.6
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				149.2		Total Col2Ave (3 peaks):			594.3	RPD = 120*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	8.256	-0.042	124579	193.9	1	8.530	-0.018	487628	261.9
Aroclor-1232	2	8.762	-0.022	201991	92.4	2	9.273	-0.004	133157	38.4
Aroclor-1232	3	8.928	-0.030	83834	97.3	3	9.701	-0.003	40417	43.3
Aroclor-1232	4	10.353	0.025	825934	847.6	4	10.264	0.006	143766	102.6
Total Col1Ave (4 peaks):				307.8		Total Col2Ave (4 peaks):			111.6	RPD = 94*
Corrected Ave (3 peaks):				127.9		Corrected Ave (3 peaks):			61.4	RPD = 70*
Aroclor-1242	1	8.256	-0.039	124579	101.1	1	8.530	-0.014	487628	153.5
Aroclor-1242	2	8.762	-0.021	201991	47.9	2	9.273	-0.001	133157	20.5
Aroclor-1242	3	8.928	-0.028	83834	51.0	3	9.701	0.001	40417	23.5
Aroclor-1242	4	10.532	-0.040	387138	257.7	4	11.132	-0.030	117696	44.1
Total Col1Ave (4 peaks):				114.4		Total Col2Ave (4 peaks):			60.4	RPD = 62*
Corrected Ave (3 peaks):				66.6		Corrected Ave (3 peaks):			29.4	RPD = 78*
Aroclor-1248	1	9.342	-0.008	114091	67.5	1	9.797	-0.008	137810	45.7
Aroclor-1248	2	9.687	0.006	26060	12.6	2	10.264	0.013	143766	43.3
Aroclor-1248	3	10.353	0.030	825934	268.6	3	10.798	-0.001	83588	24.8
Aroclor-1248	4	10.532	-0.038	387138	162.6	4	11.132	-0.028	117696	27.1
Total Col1Ave (4 peaks):				127.8		Total Col2Ave (4 peaks):			35.3	RPD = 114*
Corrected Ave (3 peaks):				80.9		Corrected Ave (3 peaks):			31.8	RPD = 87*
Aroclor-1254	1	10.353	0.022	825934	314.9	1	10.865	-0.001	134232	41.9
Aroclor-1254	2	10.651	0.000	140971	39.0	2	11.036	-0.001	151090	37.0
Aroclor-1254	3	11.053	0.017	316638	138.9	3	11.574	0.000	77419	23.8
Aroclor-1254	4	11.176	0.001	196838	45.6	4	11.726	0.000	283807	41.0
Aroclor-1254	5	11.890	-0.002	86179	29.9	5	12.508	-0.002	136726	32.8
Total Col1Ave (5 peaks):				113.6		Total Col2Ave (5 peaks):			35.3	RPD = 105*
Corrected Ave (4 peaks):				63.3		Corrected Ave (4 peaks):			33.6	RPD = 61*
Aroclor-1260	1	11.834	0.002	83372	18.9	1	12.732	-0.001	249702	36.5
Aroclor-1260	2	12.436	-0.001	49529	17.2	2	13.509	0.002	248497	23.6
Aroclor-1260	3	12.740	-0.011	306972	107.1	3	13.997	-0.004	86855	12.4
Aroclor-1260	4	13.486	0.001	78546	21.9	4	14.579	0.021	109311	42.6
Aroclor-1260	5	13.596	0.010	128090	89.1	NS	---			----
Total Col1Ave (5 peaks):				50.8		Total Col2Ave (4 peaks):			28.8	RPD = 55*
Corrected Ave (4 peaks):				36.8		Corrected Ave (3 peaks):			24.1	RPD = 41*
Aroclor-1262	1	12.436	-0.007	49529	11.0	1	12.774	-0.057	112918	17.2
Aroclor-1262	2	12.740	-0.018	306972	94.0	2	13.266	-0.008	83435	15.1
Aroclor-1262	3	13.108	-0.013	230904	26.9	3	13.509	-0.004	248497	20.0
Aroclor-1262	4	13.596	0.004	128090	44.5	4	13.951	-0.006	153238	32.4
Aroclor-1262	5	13.663	0.008	41028	13.5	5	13.997	-0.012	86855	11.5
Total Col1Ave (5 peaks):				38.0		Total Col2Ave (5 peaks):			19.2	RPD = 66*
Corrected Ave (4 peaks):				24.0		Corrected Ave (4 peaks):			15.9	RPD = 40*
Aroclor-1268	1	13.596	0.005	128090	14.4	1	13.951	-0.004	153238	12.1

Aroclor-1268 2	13.663	0.011	41028	5.1	2	13.997	-0.013	86855	7.3
Aroclor-1268 3	13.988	0.013	120203	17.6	3	14.309	-0.014	94718	10.1
Aroclor-1268 4	14.542	-0.035	16541	0.8	4	14.965	0.052	286527	9.7

Total Col1Ave (4 peaks): 9.5 Total Col2Ave (4 peaks): 9.8 RPD = 4

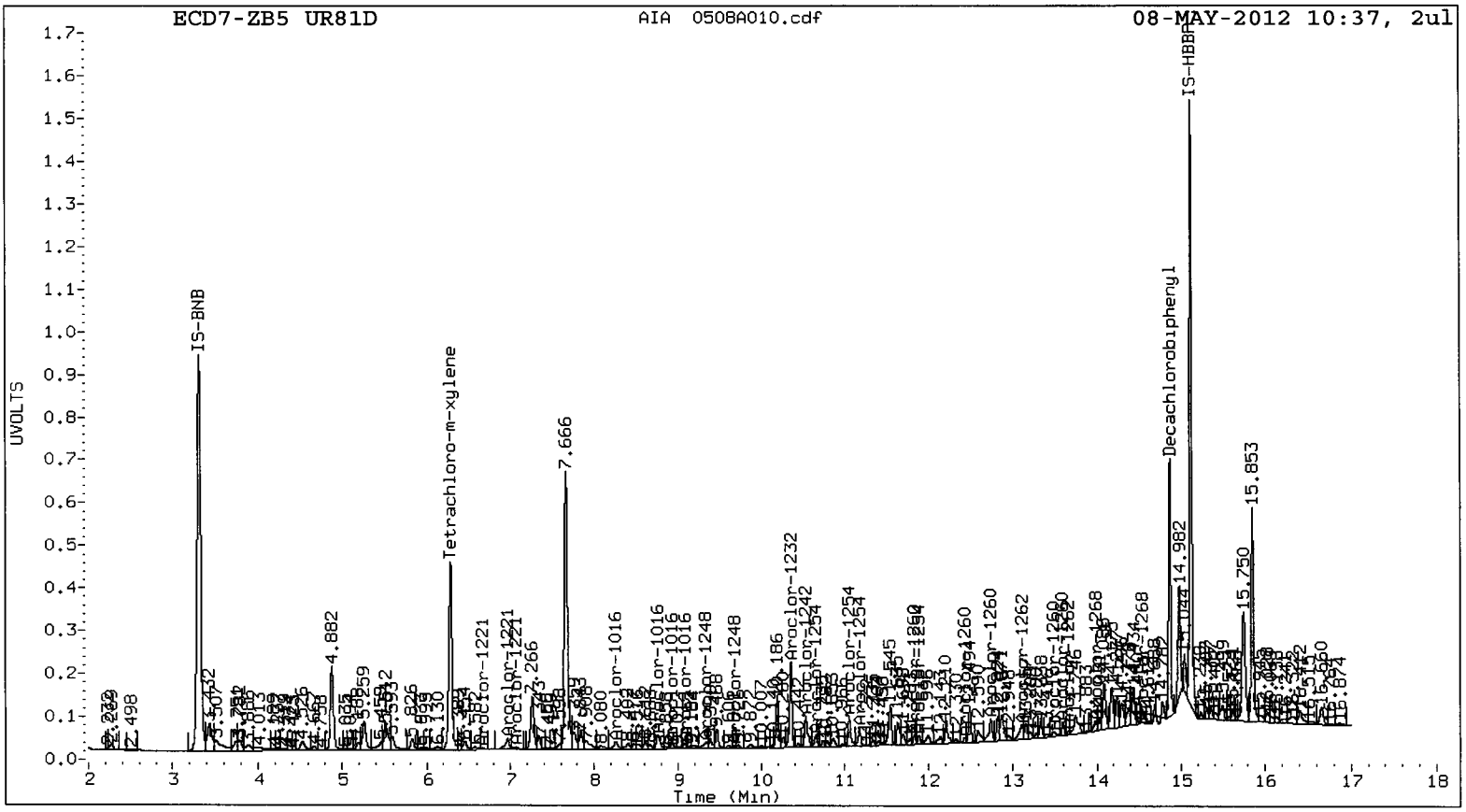
Corrected Ave (3 peaks): 6.8 Corrected Ave (3 peaks): 9.0 RPD = 29

Total PCB Area Col1 (6.384 - 14.765) = 17425819 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 24976167 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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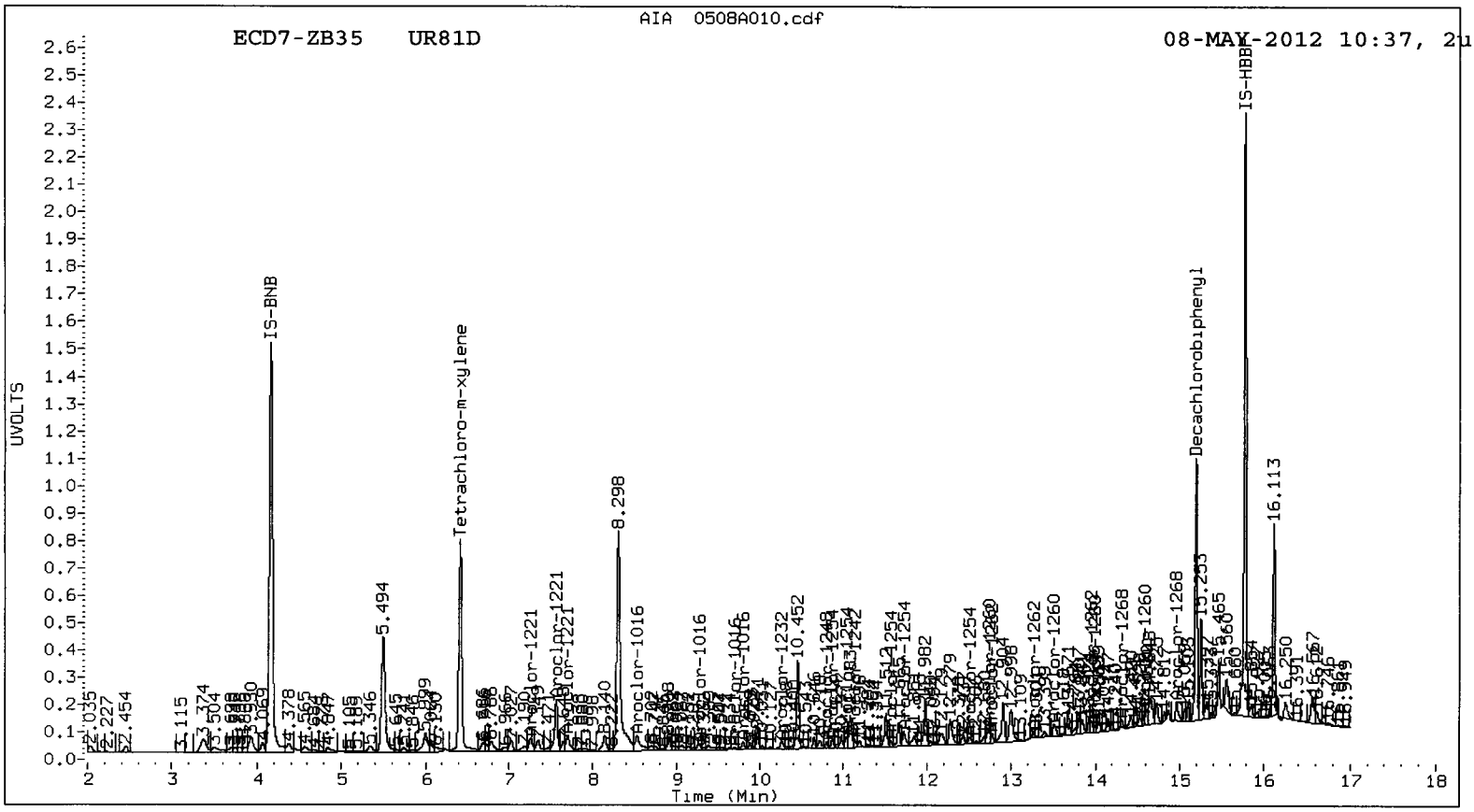
08-MAY-2012 10:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.666
4.882
Decachlorobiphenyl
IS-HBBP
14.982
15.853
15.750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Tetrachloro-m-xylene
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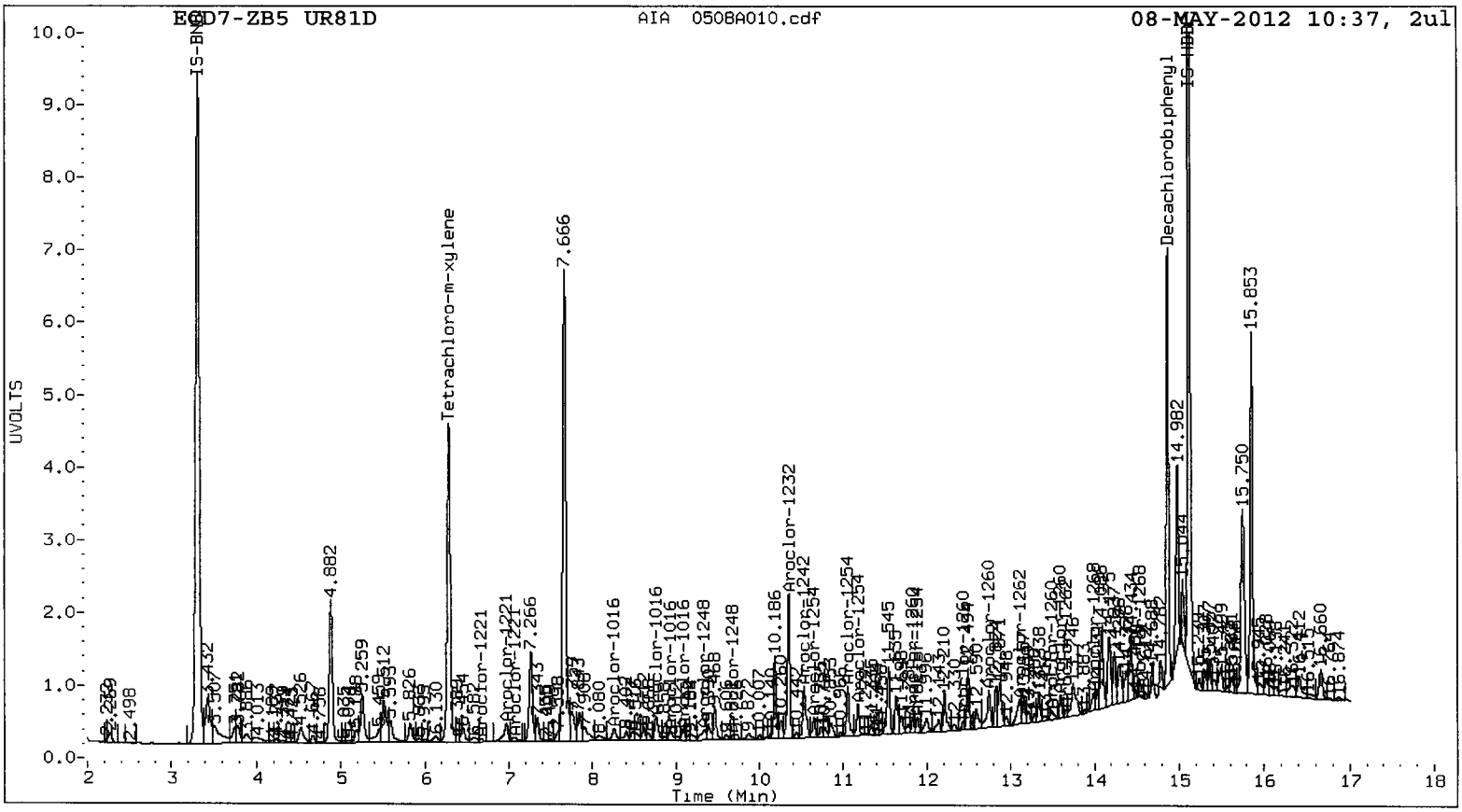
Decachlorobiphenyl
IS-HBBP
16.113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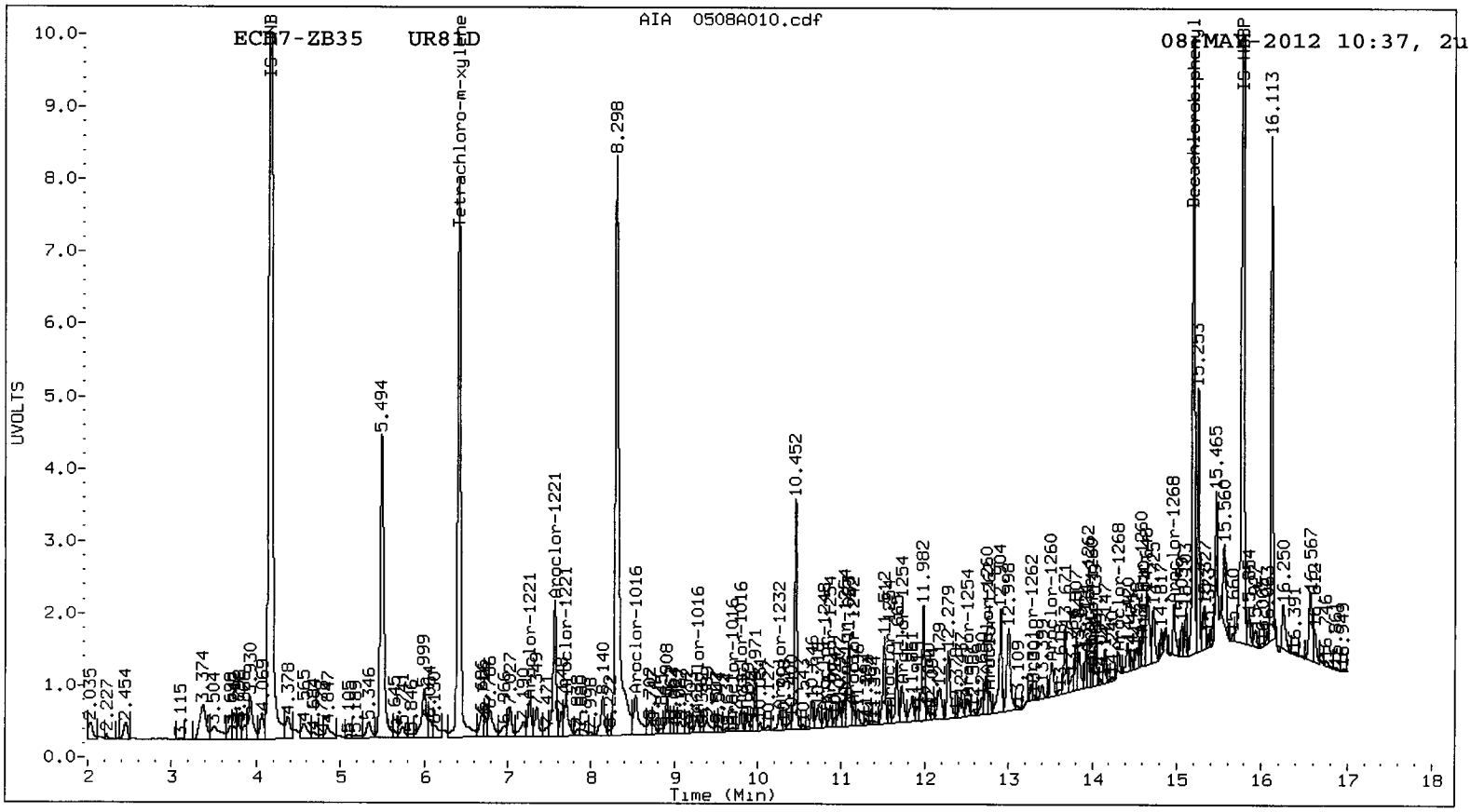
08-MAY-2012 10:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.666
4.882
Decachlorobiphenyl
15.853
15.750
14.982
Aroclor-1232
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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08-MAY-2012 10:37, 2u
UVOLTS
Time (Min)
IS
Tetrachloro-m-xylene
8.298
5.494
10.452
16.113
15.465
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A014.d
Data file 2: 20120505.B/0508-2.b/0508A014.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81E
Client ID: IJ12-04
Injection Date: 08-MAY-2012 11:56
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.285	0.001	1743072	6.410	0.000	2880361	26.9	27.4	1.8	Tetrachloro-m-xylen
14.867	0.001	1401696	15.194	0.001	2638975	16.5	27.8	51.3*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	67.2	68.4
Decachlorobiphenyl	41.2	69.6

A 05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5489654	-6.0
Hexabromobiphenyl	4847662	7002019	44.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8424588	-8.0
Hexabromobiphenyl	6845779	8272704	20.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.257	-0.033	80551	50.2	1	8.532	-0.007	317582	74.5
Aroclor-1016	2	8.763	-0.017	80988	14.7	2	9.273	0.003	86865	10.0
Aroclor-1016	3	8.952	0.001	21667	10.1	3	9.700	0.003	19431	8.7
Aroclor-1016	4	9.079	0.000	52683	35.3	4	9.795	-0.010	122003	46.9
Total Col1Ave (4 peaks):				27.6		Total Col2Ave (4 peaks):			35.0	RPD = 24
Corrected Ave (3 peaks):				20.0		Corrected Ave (3 peaks):			21.9	RPD = 9
Aroclor-1221	1	6.664	-0.079	30077	47.4	1	7.254	0.013	132048	109.0
Aroclor-1221	2	6.963	0.009	65391	137.6	2	7.561	0.019	183603	245.8
Aroclor-1221	3	7.077	0.000	18693	11.8	3	7.699	0.019	1232405	553.3
Aroclor-1221	NS	---			----	4	7.834	0.066	18126	42.7
Total Col1Ave (3 peaks):				65.6		Total Col2Ave (4 peaks):			237.7	RPD = 113*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			132.5	
Aroclor-1232	1	8.257	-0.041	80551	127.0	1	8.532	-0.016	317582	173.2
Aroclor-1232	2	8.763	-0.021	80988	37.5	2	9.273	-0.005	86865	25.4
Aroclor-1232	3	8.952	-0.007	21667	25.5	3	9.700	-0.005	19431	21.1
Aroclor-1232	4	10.350	0.021	116284	120.9	4	10.254	-0.003	77389	56.1
Total Col1Ave (4 peaks):				77.7		Total Col2Ave (4 peaks):			69.0	RPD = 12
Corrected Ave (3 peaks):				61.3		Corrected Ave (3 peaks):			34.2	RPD = 57*
Aroclor-1242	1	8.257	-0.038	80551	66.2	1	8.532	-0.012	317582	101.5
Aroclor-1242	2	8.763	-0.021	80988	19.4	2	9.273	-0.002	86865	13.6
Aroclor-1242	3	8.952	-0.004	21667	13.3	3	9.700	0.000	19431	11.5
Aroclor-1242	4	10.564	-0.008	69721	47.0	4	11.194	0.032	88178	33.6
Total Col1Ave (4 peaks):				36.5		Total Col2Ave (4 peaks):			40.0	RPD = 9
Corrected Ave (3 peaks):				26.6		Corrected Ave (3 peaks):			19.6	RPD = 31
Aroclor-1248	1	9.348	-0.003	35352	21.2	1	9.795	-0.011	122003	41.1
Aroclor-1248	2	9.682	0.001	28062	13.8	2	10.254	0.003	77389	23.7
Aroclor-1248	3	10.303	-0.020	399401	131.6	3	10.799	0.000	53876	16.2
Aroclor-1248	4	10.564	-0.006	69721	29.7	4	11.194	0.034	88178	20.6
Total Col1Ave (4 peaks):				49.0		Total Col2Ave (4 peaks):			25.4	RPD = 63*
Corrected Ave (3 peaks):				21.5		Corrected Ave (3 peaks):			20.2	RPD = 6
Aroclor-1254	1	10.303	-0.028	399401	154.2	1	10.866	-0.001	79818	25.3
Aroclor-1254	2	10.652	0.000	94048	26.3	2	11.035	-0.002	92681	23.0
Aroclor-1254	3	11.052	0.015	147113	65.4	3	11.573	0.000	52080	16.2
Aroclor-1254	4	11.175	0.000	181972	42.7	4	11.725	-0.001	183782	27.0
Aroclor-1254	5	11.885	-0.007	79582	28.0	5	12.515	0.006	182564	44.5
Total Col1Ave (5 peaks):				63.3		Total Col2Ave (5 peaks):			27.2	RPD = 80*
Corrected Ave (4 peaks):				40.6		Corrected Ave (4 peaks):			22.9	RPD = 56*
Aroclor-1260	1	11.833	0.001	75565	12.3	1	12.730	-0.003	285607	38.5
Aroclor-1260	2	12.459	0.022	89722	22.5	2	13.509	0.002	221497	19.4
Aroclor-1260	3	12.761	0.010	136228	34.3	3	13.997	-0.004	67601	8.9
Aroclor-1260	4	13.500	0.015	96679	19.4	4	14.579	0.020	97384	35.0
Aroclor-1260	5	13.590	0.004	67350	33.8	NS	---			----
Total Col1Ave (5 peaks):				24.5		Total Col2Ave (4 peaks):			25.5	RPD = 4
Corrected Ave (4 peaks):				22.0		Corrected Ave (3 peaks):			21.1	RPD = 4
Aroclor-1262	1	12.459	0.016	89722	14.3	1	12.826	-0.005	45775	6.4
Aroclor-1262	2	12.761	0.003	136228	30.1	2	13.267	-0.007	91845	15.3
Aroclor-1262	3	13.113	-0.007	155159	13.1	3	13.509	-0.004	221497	16.4
Aroclor-1262	4	13.590	-0.001	67350	16.9	4	13.954	-0.003	181616	35.5
Aroclor-1262	5	13.648	-0.006	35719	8.5	5	13.997	-0.012	67601	8.2
Total Col1Ave (5 peaks):				16.6		Total Col2Ave (5 peaks):			16.4	RPD = 1
Corrected Ave (4 peaks):				13.2		Corrected Ave (4 peaks):			11.6	RPD = 13
Aroclor-1268	1	13.590	0.000	67350	5.5	1	13.954	0.000	181616	13.3

Aroclor-1268	2	13.648	-0.004	35719	3.2	2	13.997	-0.013	67601	5.3
Aroclor-1268	3	13.991	0.016	115459	12.2	3	14.305	-0.018	111077	10.9
Aroclor-1268	4	14.558	-0.019	15955	0.5	4	14.861	-0.051	65021	2.0

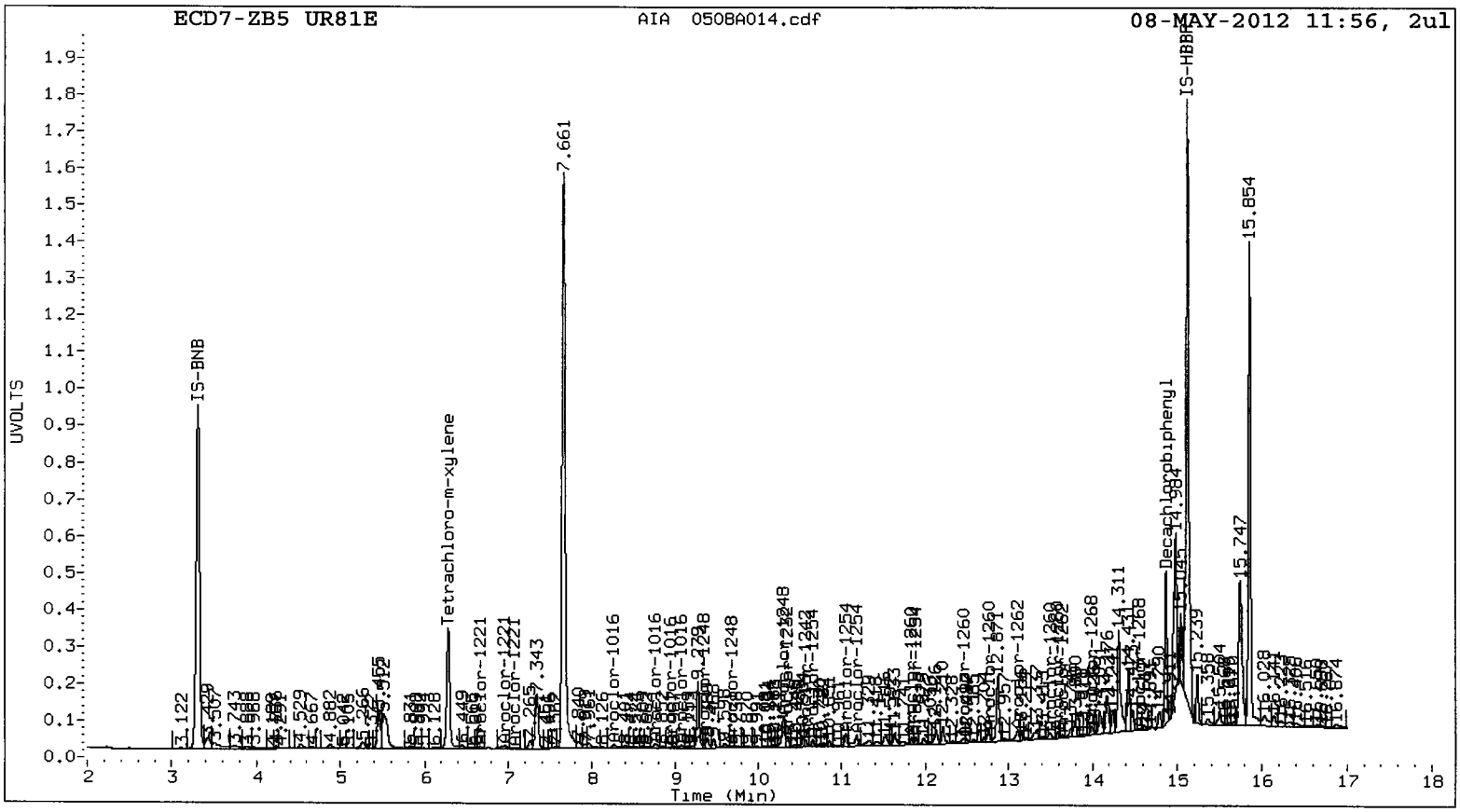
Total Col1Ave (4 peaks): 5.4 Total Col2Ave (4 peaks): 7.9 RPD = 38
Corrected Ave (3 peaks): 3.1 Corrected Ave (3 peaks): 6.1 RPD = 66*

Total PCB Area Col1 (6.384 - 14.765) = 19914005 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 27816463 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR81:02080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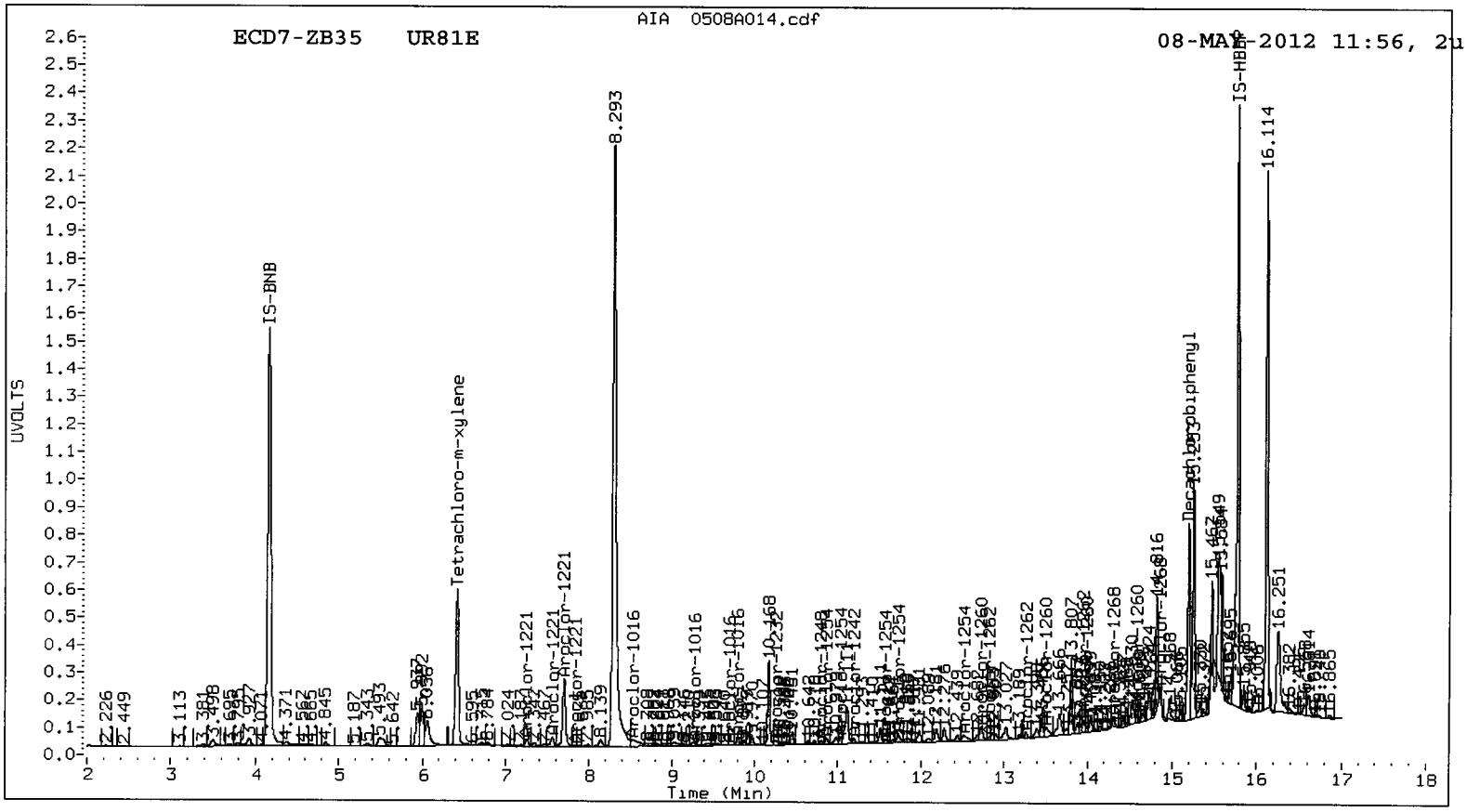
08-MAY-2012 11:56, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.661
IS-HBB
15.854
Decachlorobiphenyl
15.747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Time (Min)
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IS-HBB
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Decachlorobiphenyl
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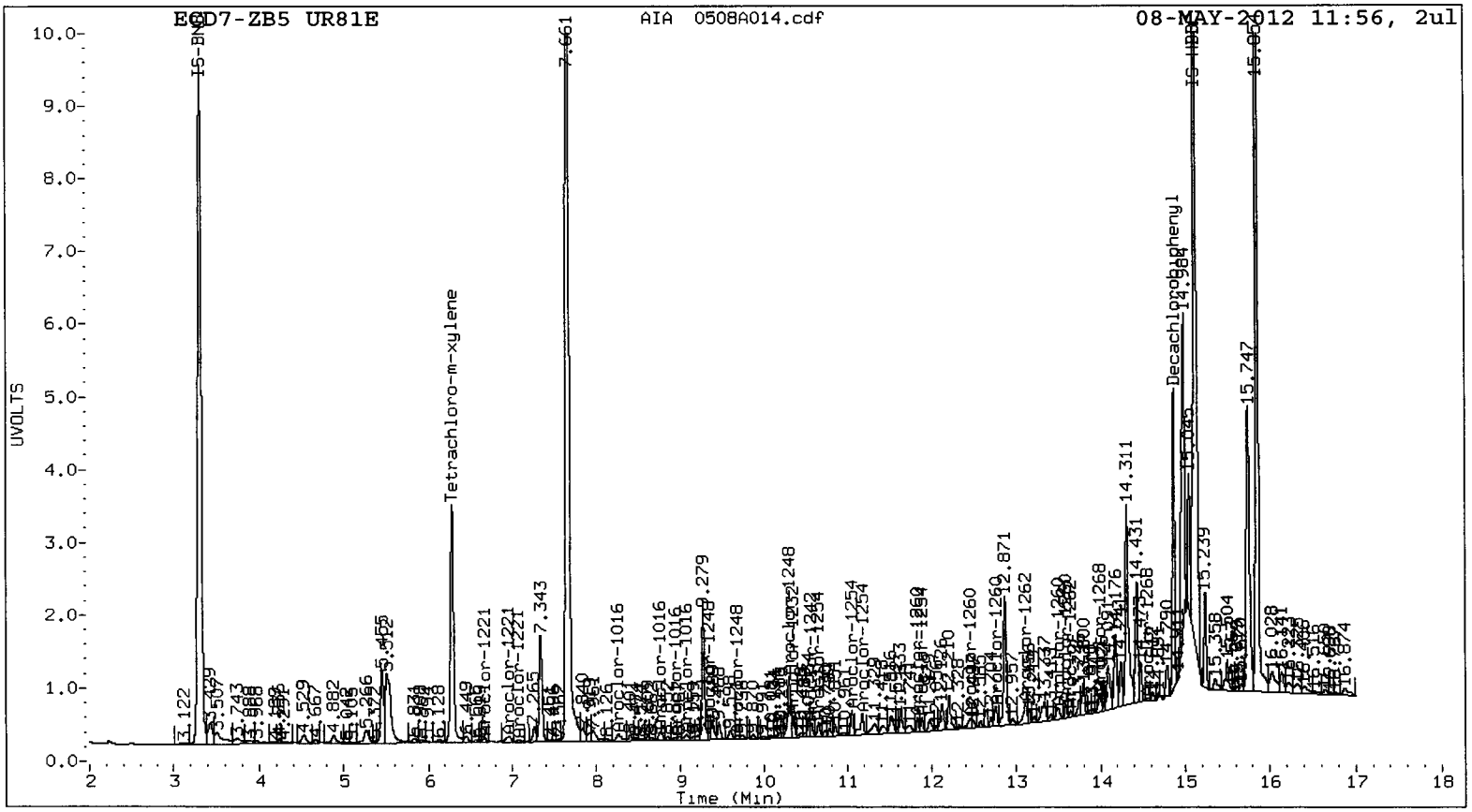
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08-MAY-2012 11:56, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBP
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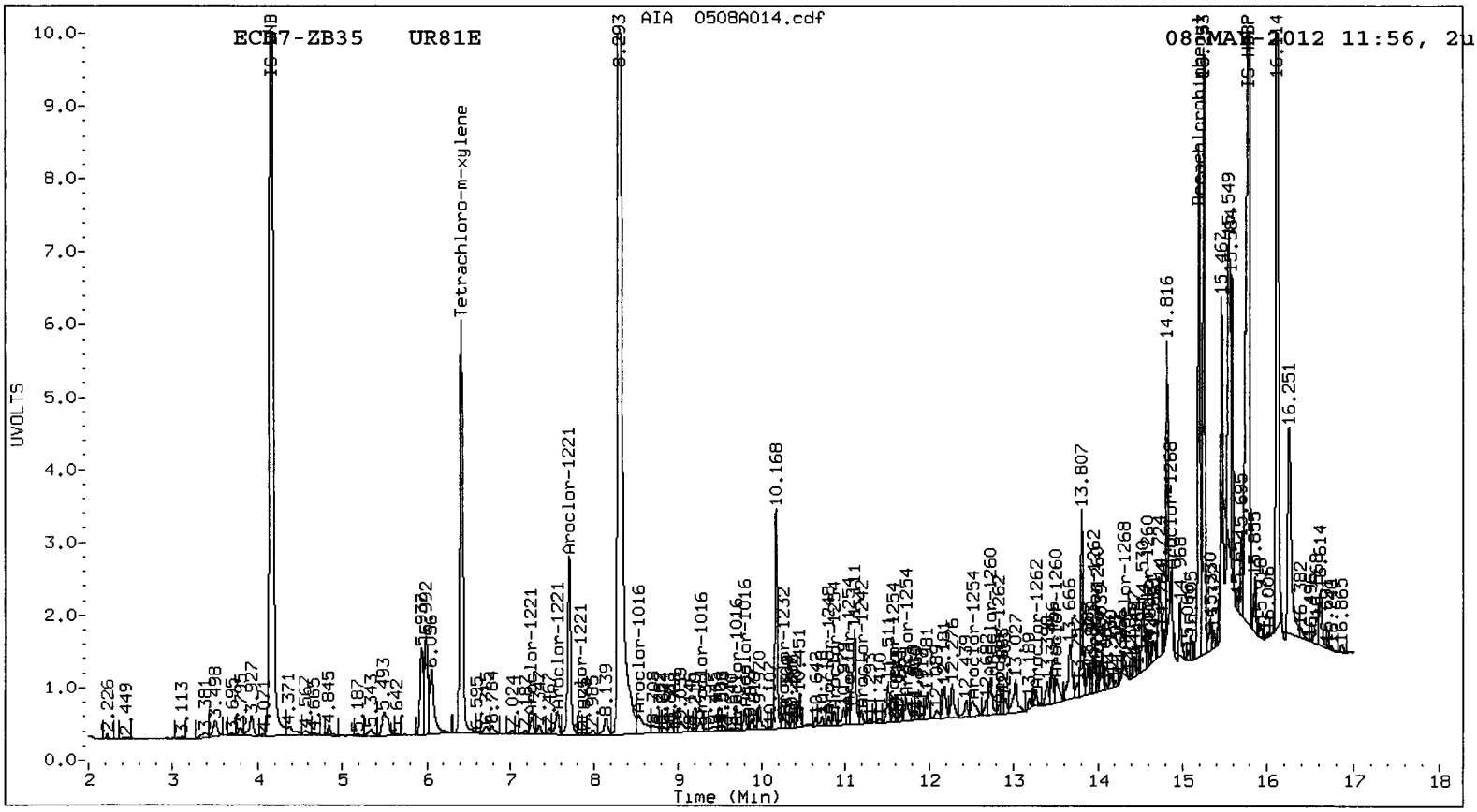
7.343
14.311
15.747
15.239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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
8.293
10.168
13.807
14.816
16.251

UR81 : 02082

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A015.d
Data file 2: 20120505.B/0508-2.b/0508A015.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81F
Client ID: IJ12-07
Injection Date: 08-MAY-2012 12:17
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.285	0.001	1808542	6.411	0.001	3162378	27.7	29.9	7.7	Tetrachloro-m-xylen
14.867	0.001	1426325	15.195	0.002	2144774	24.2	25.3	4.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

jk 05/09/12

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	69.3	74.9
Decachlorobiphenyl	60.5	63.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5519673	-5.5
Hexabromobiphenyl	4847662	4848817	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8450635	-7.7
Hexabromobiphenyl	6845779	7385400	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.254	-0.037	79107	49.0	1	8.530	-0.009	369635	86.4
Aroclor-1016	2	8.760	-0.019	141250	25.5	2	9.273	0.003	87948	10.1
Aroclor-1016	3	8.928	-0.023	58499	27.1	3	9.701	0.004	15204	6.8
Aroclor-1016	4	9.084	0.004	51385	34.3	4	9.796	-0.009	137288	52.6
Total Col1Ave (4 peaks):				34.0		Total Col2Ave (4 peaks):			39.0	RPD = 14
Corrected Ave (3 peaks):				29.0		Corrected Ave (3 peaks):			23.2	RPD = 22
Aroclor-1221	1	6.666	-0.077	12617	19.8	1	7.260	0.019	236634	194.7
Aroclor-1221	2	6.970	0.016	147058	307.9	2	7.562	0.020	1453305	1939.9
Aroclor-1221	3	7.078	0.001	52982	33.3	3	7.699	0.019	227408	101.8
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				120.3		Total Col2Ave (3 peaks):			745.5	RPD = 144*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	8.254	-0.044	79107	124.1	1	8.530	-0.018	369635	201.0
Aroclor-1232	2	8.760	-0.024	141250	65.1	2	9.273	-0.005	87948	25.7
Aroclor-1232	3	8.928	-0.031	58499	68.4	3	9.701	-0.004	15204	16.5
Aroclor-1232	4	10.353	0.025	620986	642.1	4	10.262	0.005	94716	68.4
Total Col1Ave (4 peaks):				224.9		Total Col2Ave (4 peaks):			77.9	RPD = 97*
Corrected Ave (3 peaks):				85.9		Corrected Ave (3 peaks):			36.9	RPD = 80*
Aroclor-1242	1	8.254	-0.041	79107	64.7	1	8.530	-0.013	369635	117.8
Aroclor-1242	2	8.760	-0.023	141250	33.7	2	9.273	-0.002	87948	13.7
Aroclor-1242	3	8.928	-0.028	58499	35.8	3	9.701	0.001	15204	9.0
Aroclor-1242	4	10.533	-0.040	278209	186.6	4	11.132	-0.030	123350	46.8
Total Col1Ave (4 peaks):				80.2		Total Col2Ave (4 peaks):			46.8	RPD = 53*
Corrected Ave (3 peaks):				44.7		Corrected Ave (3 peaks):			23.2	RPD = 64*
Aroclor-1248	1	9.344	-0.006	55324	33.0	1	9.796	-0.010	137288	46.1
Aroclor-1248	2	9.684	0.003	21130	10.3	2	10.262	0.011	94716	28.9
Aroclor-1248	3	10.353	0.030	620986	203.5	3	10.798	-0.001	67790	20.4
Aroclor-1248	4	10.533	-0.037	278209	117.7	4	11.132	-0.028	123350	28.8
Total Col1Ave (4 peaks):				91.1		Total Col2Ave (4 peaks):			31.0	RPD = 98*
Corrected Ave (3 peaks):				53.7		Corrected Ave (3 peaks):			26.0	RPD = 69*
Aroclor-1254	1	10.353	0.022	620986	238.5	1	10.864	-0.003	118786	37.6
Aroclor-1254	2	10.651	-0.001	123361	34.4	2	11.035	-0.002	143328	35.5
Aroclor-1254	3	11.050	0.014	161534	71.4	3	11.573	0.000	56583	17.6
Aroclor-1254	4	11.176	0.001	201408	47.0	4	11.725	-0.001	218210	31.9
Aroclor-1254	5	11.889	-0.003	78751	27.5	5	12.507	-0.002	126898	30.8
Total Col1Ave (5 peaks):				83.8		Total Col2Ave (5 peaks):			30.7	RPD = 93*
Corrected Ave (4 peaks):				45.1		Corrected Ave (4 peaks):			29.0	RPD = 44*
Aroclor-1260	1	11.833	0.001	59988	14.1	1	12.732	-0.001	151467	22.9
Aroclor-1260	2	12.436	0.000	48998	17.7	2	13.511	0.005	114981	11.3
Aroclor-1260	3	12.739	-0.012	293323	106.6	3	13.998	-0.003	61356	9.1
Aroclor-1260	4	13.484	-0.002	59062	17.1	4	14.536	-0.023	89778	36.2
Aroclor-1260	5	13.595	0.009	94514	68.5	NS	---			----
Total Col1Ave (5 peaks):				44.8		Total Col2Ave (4 peaks):			19.8	RPD = 77*
Corrected Ave (4 peaks):				29.4		Corrected Ave (3 peaks):			14.4	RPD = 68*
Aroclor-1262	1	12.436	-0.007	48998	11.3	1	12.773	-0.058	97800	15.4
Aroclor-1262	2	12.739	-0.019	293323	93.5	2	13.266	-0.008	44726	8.3
Aroclor-1262	3	13.106	-0.015	167518	20.4	3	13.511	-0.002	114981	9.6
Aroclor-1262	4	13.595	0.004	94514	34.2	4	13.924	-0.033	189823	41.5
Aroclor-1262	5	13.660	0.006	36833	12.6	5	13.998	-0.010	61356	8.4
Total Col1Ave (5 peaks):				34.4		Total Col2Ave (5 peaks):			16.6	RPD = 70*
Corrected Ave (4 peaks):				19.6		Corrected Ave (4 peaks):			10.4	RPD = 61*
Aroclor-1268	1	13.595	0.005	94514	11.1	1	13.924	-0.031	189823	15.5

Aroclor-1268 2	13.660	0.008	36833	4.8	2	13.998	-0.012	61356	5.3
Aroclor-1268 3	13.988	0.013	74167	11.3	3	14.313	-0.009	55622	6.1
Aroclor-1268 4	14.572	-0.004	13336	0.7	4	14.964	0.052	111114	3.9

Total Col1Ave (4 peaks): 7.0 Total Col2Ave (4 peaks): 7.7 RPD = 11

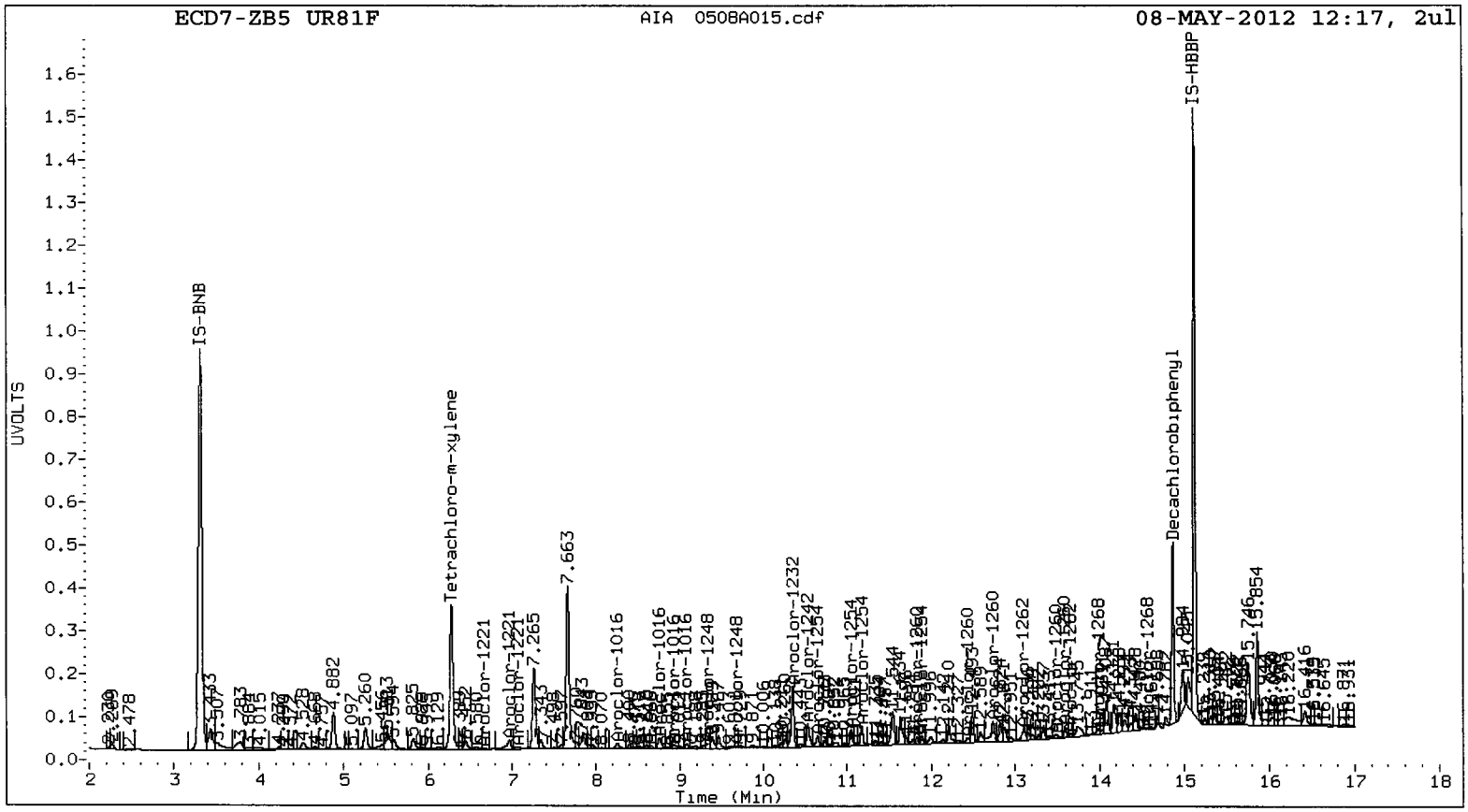
Corrected Ave (3 peaks): 5.5 Corrected Ave (3 peaks): 5.1 RPD = 7

Total PCB Area Col1 (6.384 - 14.765) = 12079243 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 17928830 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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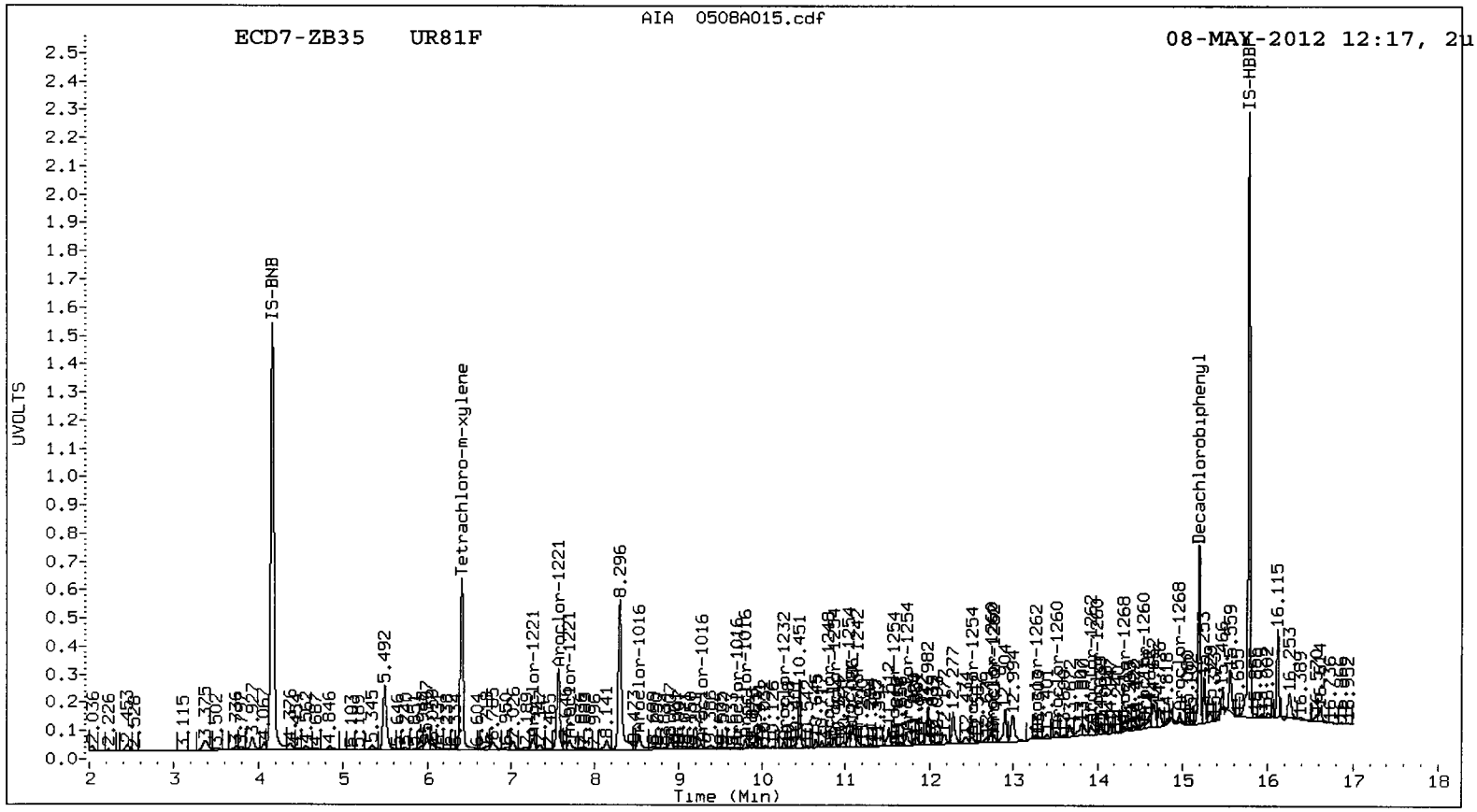
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Time (Min)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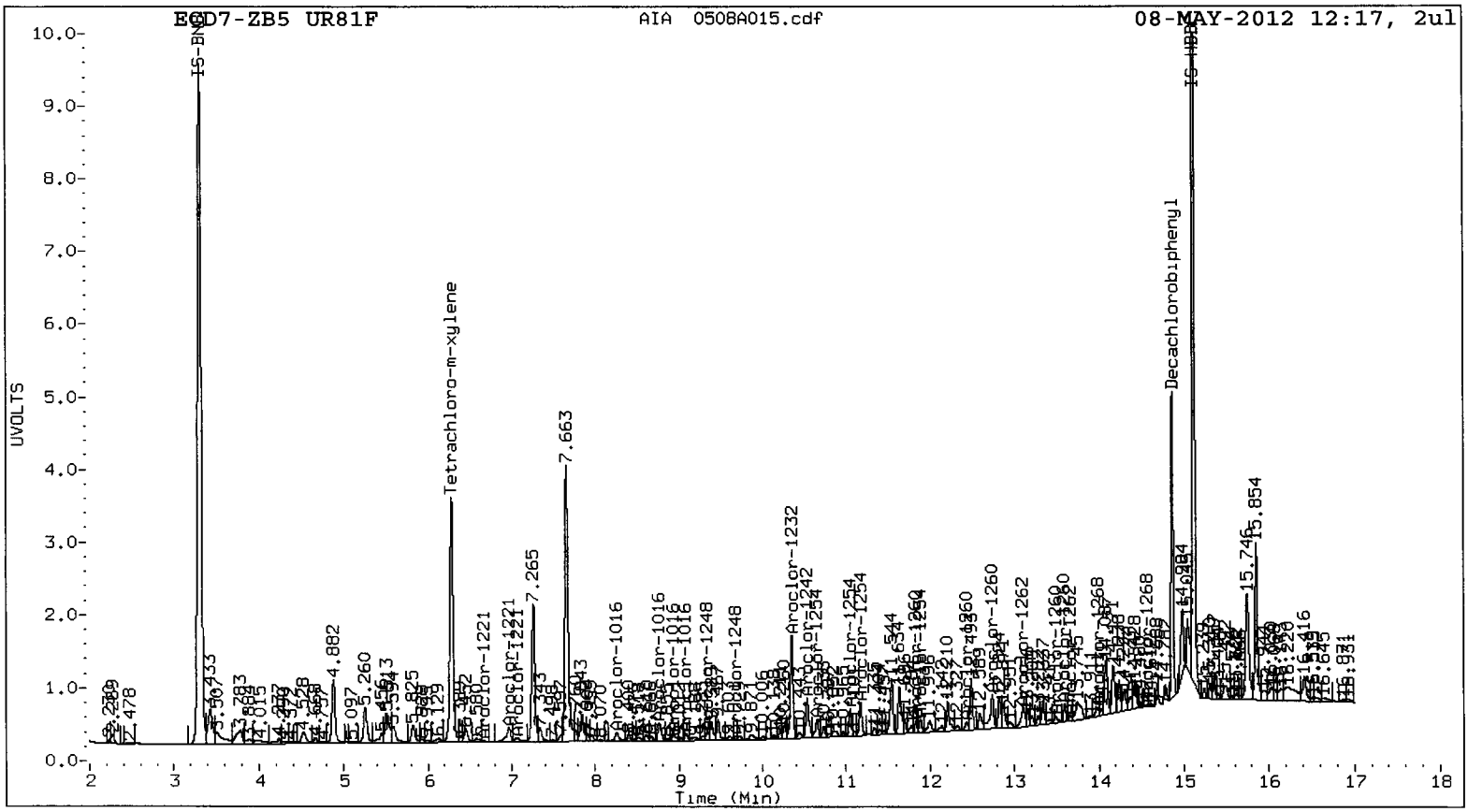
IS-HBBP
Time (Min)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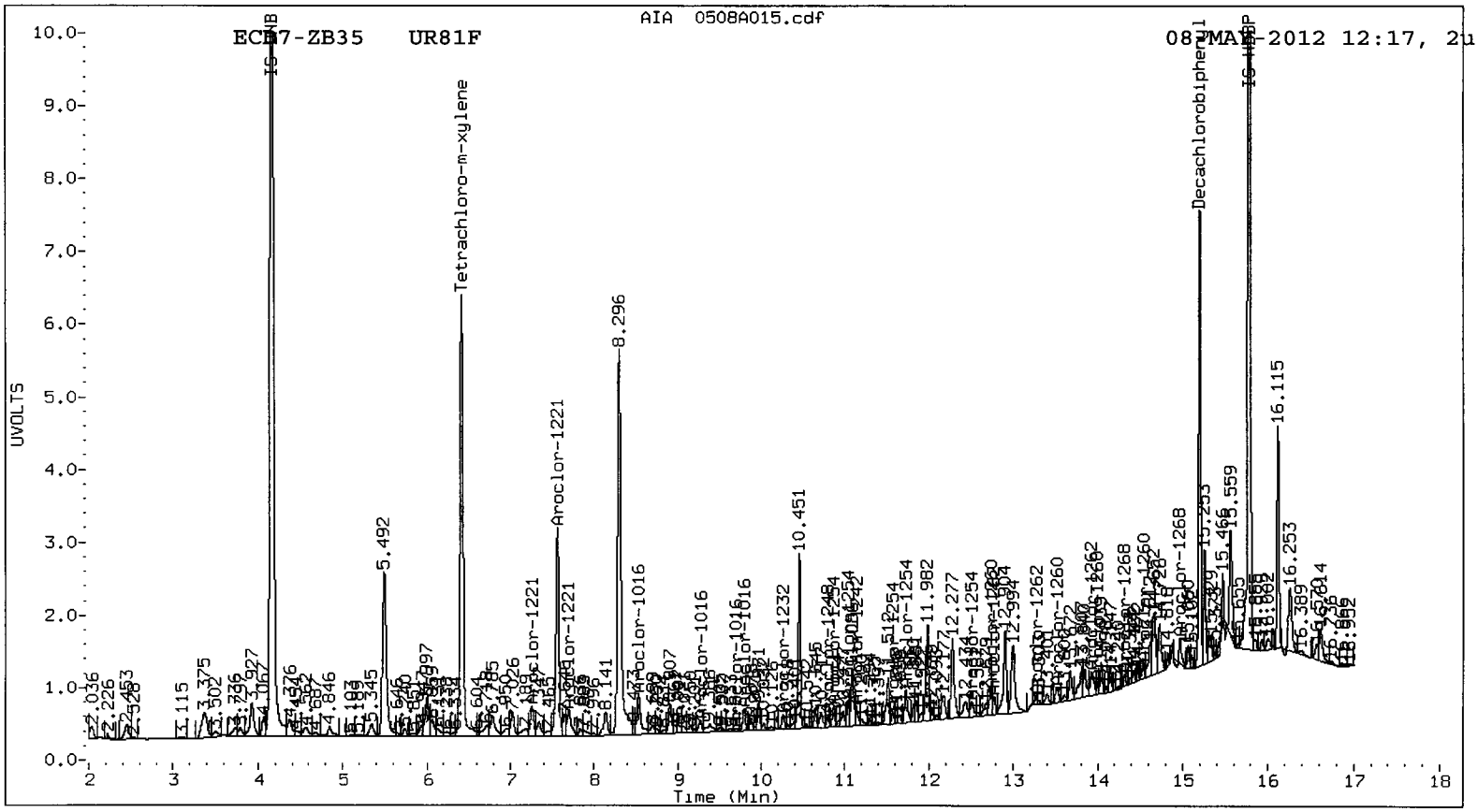
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A016.d
Data file 2: 20120505.B/0508-2.b/0508A016.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 08-MAY-2012 12:38
Report Date: 05/09/2012 08:35
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.286	0.002	1606054	6.412	0.002	2599745	20.0	19.5	2.5	Tetrachloro-m-xylen
14.867	0.002	1292900	15.196	0.002	1769112	18.6	18.3	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.0	48.8
Decachlorobiphenyl	46.5	45.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	6793692	16.3
Hexabromobiphenyl	4847662	5723179	18.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	10662034	16.4
Hexabromobiphenyl	6845779	8443597	23.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	9.351	0.001	488639	236.6	1	9.807	0.001	875992	233.3
Aroclor-1248	2	9.681	0.001	595951	236.0	2	10.253	0.002	956902	231.5
Aroclor-1248	3	10.323	0.001	876084	233.2	3	10.800	0.001	974297	232.0
Aroclor-1248	4	10.570	0.000	688318	236.6	4	11.160	0.001	1225105	226.6

Total Col1Ave (4 peaks): 235.6 Total Col2Ave (4 peaks): 230.9 RPD = 2

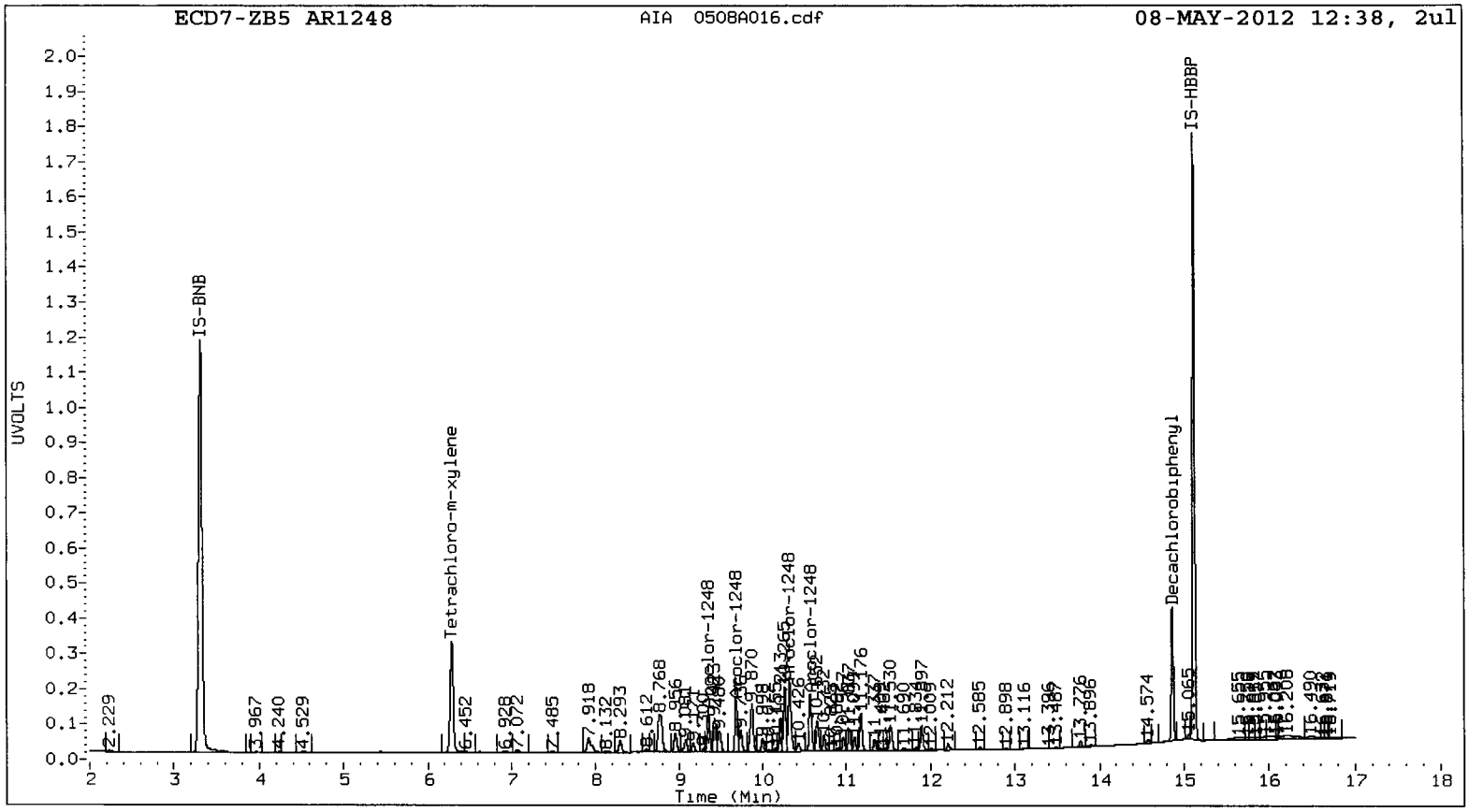
Corrected Ave (3 peaks): 235.3 Corrected Ave (3 peaks): 230.0 RPD = 2

Total PCB Area Col1 (6.384 - 14.765) = 10390895 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 16218530 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR81:02089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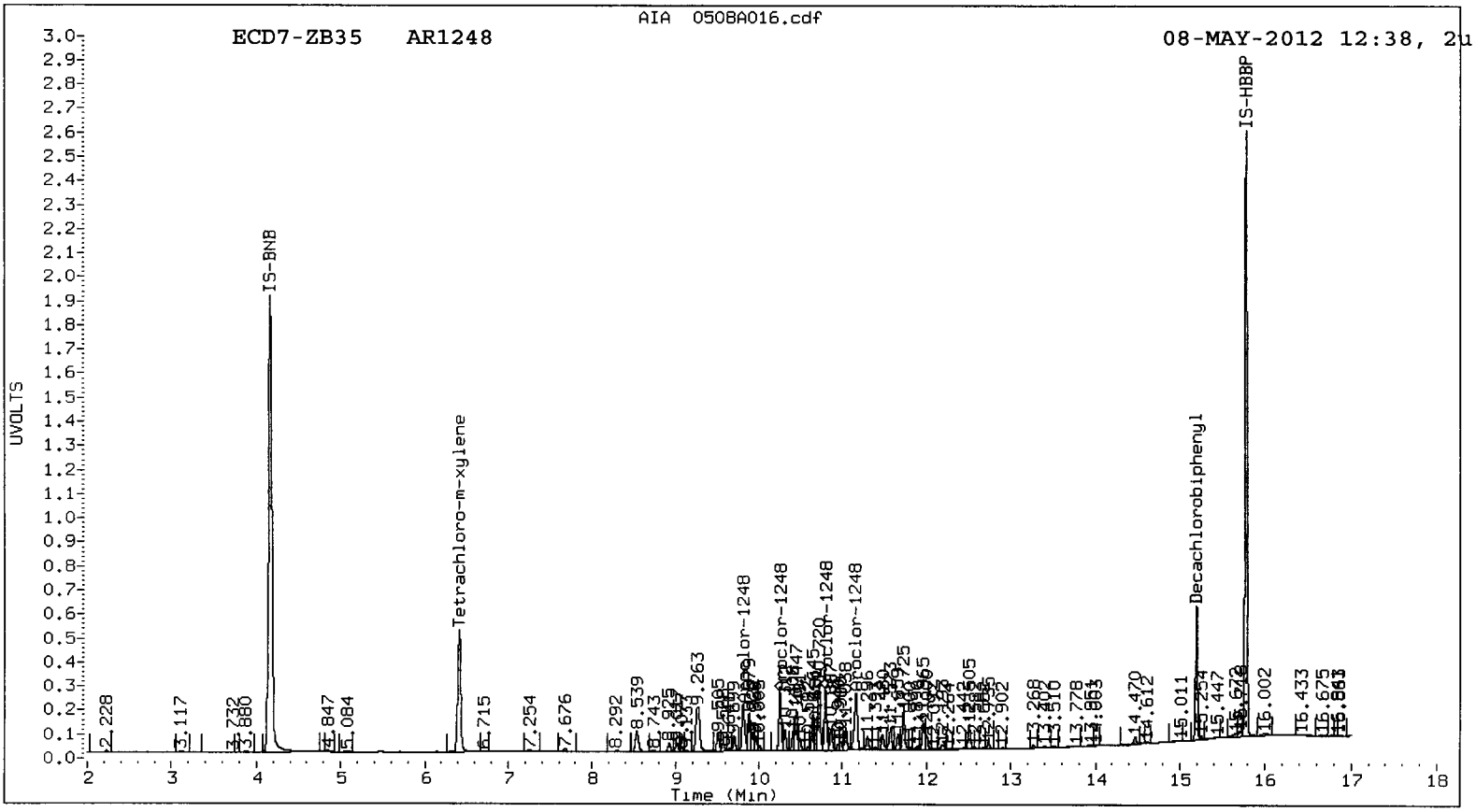
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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08-MAY-2012 12:38, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A017.d
Data file 2: 20120505.B/0508-2.b/0508A017.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 08-MAY-2012 12:59
Report Date: 05/09/2012 08:35
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.287	0.003	1748317	6.413	0.003	2766020	20.5	19.5	5.1	Tetrachloro-m-xylen
14.867	0.002	1426779	15.196	0.002	1931815	18.8	18.5	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.3	48.7
Decachlorobiphenyl	46.9	46.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	7212237	23.5
Hexabromobiphenyl	4847662	6255609	29.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	11351273	24.0
Hexabromobiphenyl	6845779	9105253	33.0

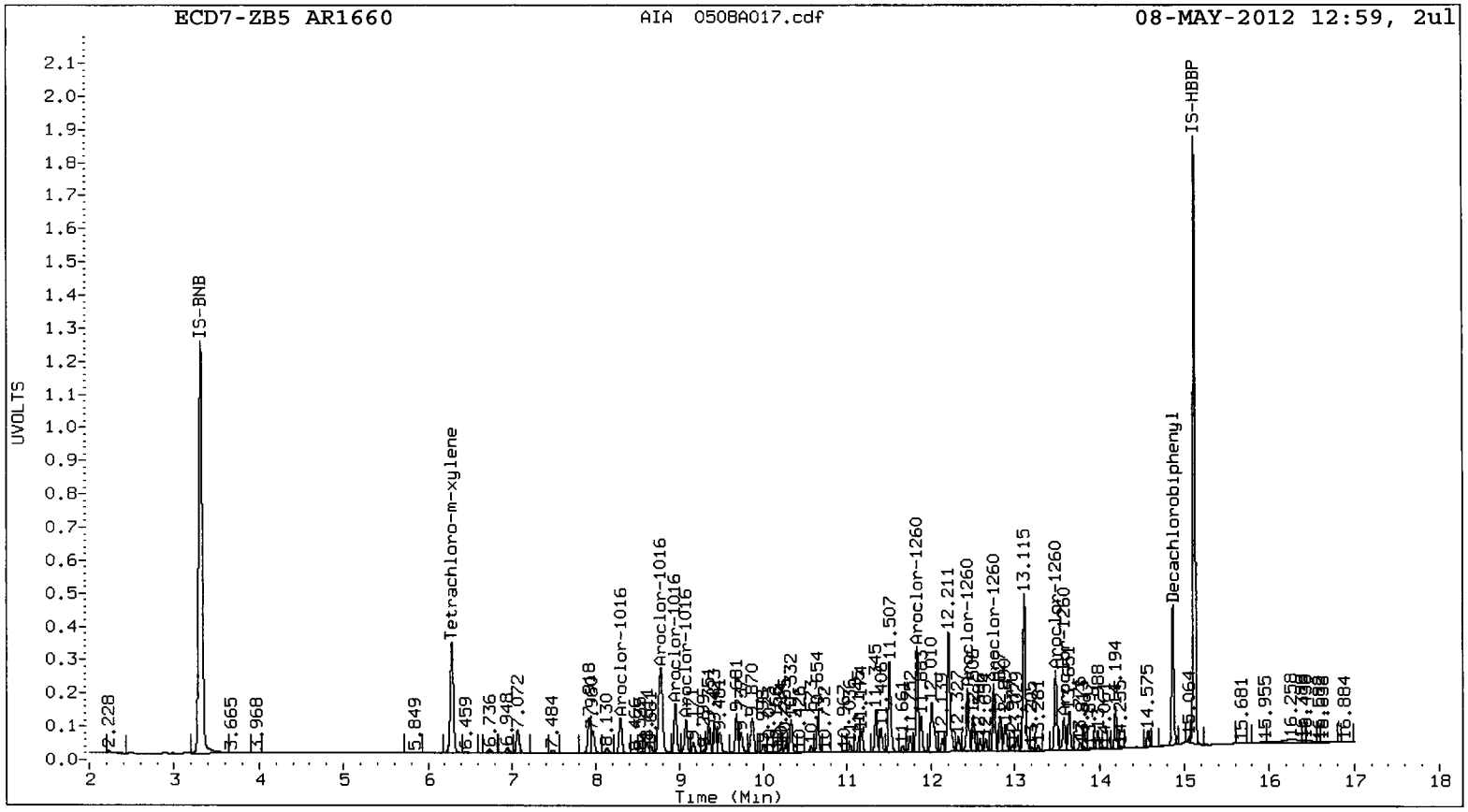
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.293	0.002	510360	242.0	1	8.542	0.003	1323218	230.3
Aroclor-1016	2	8.781	0.002	1762728	243.8	2	9.272	0.002	2717521	233.2
Aroclor-1016	3	8.954	0.003	678323	240.2	3	9.698	0.001	687155	227.5
Aroclor-1016	4	9.082	0.002	466442	238.1	4	9.806	0.001	770161	219.8
Total Col1Ave (4 peaks):				241.0		Total Col2Ave (4 peaks):			227.7	RPD = 6
Corrected Ave (3 peaks):				240.1		Corrected Ave (3 peaks):			225.9	RPD = 6
Aroclor-1260	1	11.834	0.002	1230506	224.7	1	12.734	0.001	1706907	209.0
Aroclor-1260	2	12.438	0.002	792319	222.2	2	13.508	0.002	2743541	218.1
Aroclor-1260	3	12.753	0.002	798990	225.0	3	14.003	0.002	1765803	211.5
Aroclor-1260	4	13.487	0.002	1010516	227.1	4	14.561	0.002	668506	218.5
Aroclor-1260	5	13.587	0.001	391242	219.6	NS	---			----
Total Col1Ave (5 peaks):				223.7		Total Col2Ave (4 peaks):			214.3	RPD = 4
Corrected Ave (4 peaks):				222.9		Corrected Ave (3 peaks):			212.9	RPD = 5

Total PCB Area Col1 (6.384 - 14.765) = 24246684 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 36423941 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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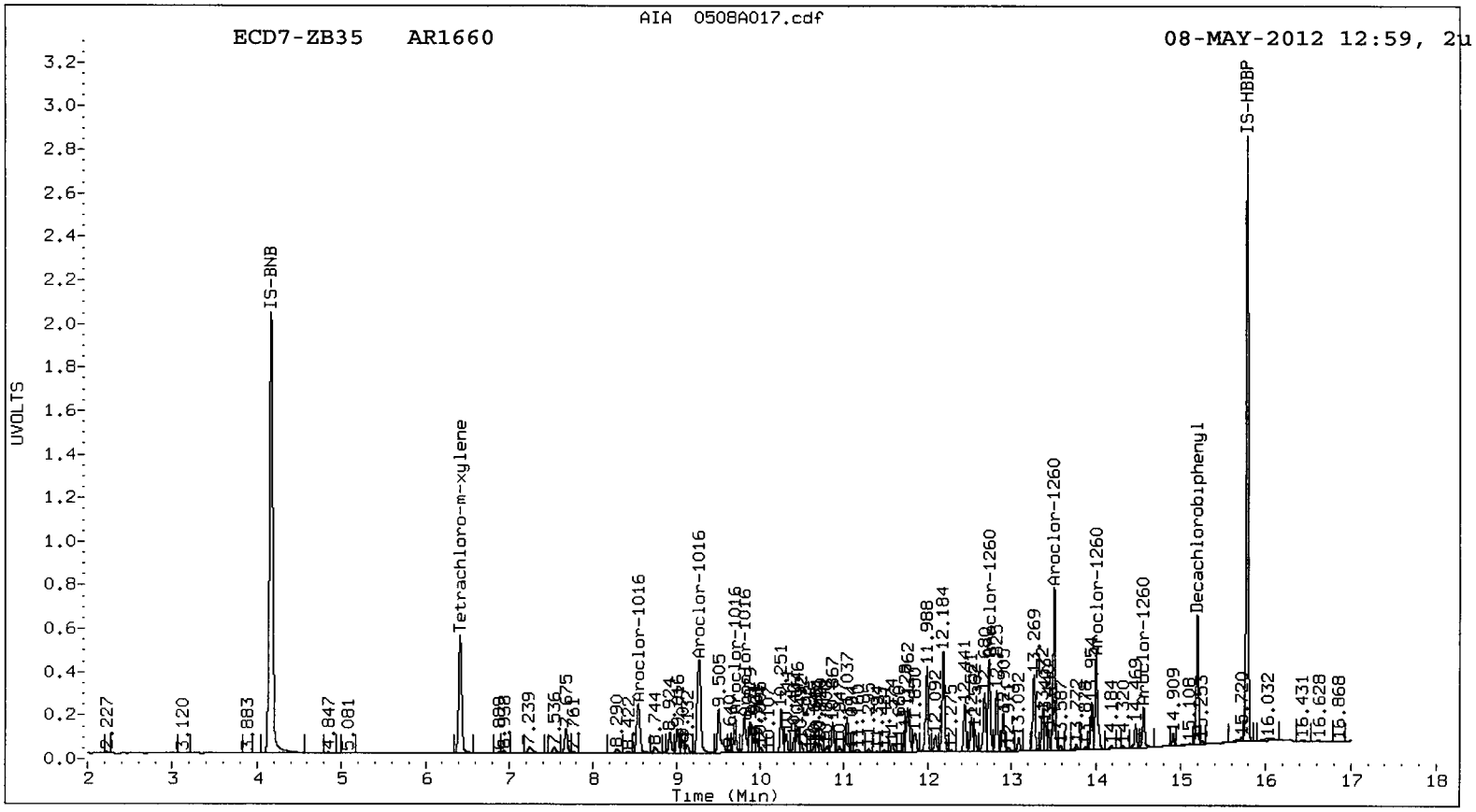
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A018.d
Data file 2: 20120505.B/0508-2.b/0508A018.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81G
Client ID: IJ12-01
Injection Date: 08-MAY-2012 13:20
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.287	0.003	1887983	6.413	0.003	3120946	30.1	29.7	1.2	Tetrachloro-m-xylen
14.867	0.002	1782431	15.196	0.002	2871944	28.9	34.0	16.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

pc 05/09/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	75.2	74.3
Decachlorobiphenyl	72.3	85.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5313088	-9.0
Hexabromobiphenyl	4847662	5068671	4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8399942	-8.3
Hexabromobiphenyl	6845779	7369509	7.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.255	-0.036	51375	33.1	1	8.531	-0.008	130246	30.6
Aroclor-1016	2	8.772	-0.007	65823	12.4	2	9.277	0.007	38167	4.4
Aroclor-1016	3	8.996	0.045	28231	13.6	3	9.704	0.007	14781	6.6
Aroclor-1016	4	9.082	0.003	32142	22.3	4	9.798	-0.007	108630	41.9
Total Col1Ave (4 peaks):				20.3		Total Col2Ave (4 peaks):			20.9	RPD = 3
Corrected Ave (3 peaks):				16.1		Corrected Ave (3 peaks):			13.9	RPD = 15
Aroclor-1221	1	6.666	-0.077	65161	106.1	1	7.260	0.019	273171	226.2
Aroclor-1221	2	6.926	-0.028	47847	104.1	2	7.564	0.022	233842	314.0
Aroclor-1221	3	7.083	0.006	14877	9.7	3	7.701	0.021	567609	255.6
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				73.3		Total Col2Ave (3 peaks):			265.2	RPD = 113*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	8.255	-0.043	51375	83.7	1	8.531	-0.017	130246	71.3
Aroclor-1232	2	8.772	-0.012	65823	31.5	2	9.277	-0.001	38167	11.2
Aroclor-1232	3	8.996	0.037	28231	34.3	3	9.704	-0.001	14781	16.1
Aroclor-1232	4	10.333	0.005	145399	156.2	4	10.258	0.000	85579	62.2
Total Col1Ave (4 peaks):				76.4		Total Col2Ave (4 peaks):			40.2	RPD = 62*
Corrected Ave (3 peaks):				49.8		Corrected Ave (3 peaks):			29.9	RPD = 50*
Aroclor-1242	1	8.255	-0.040	51375	43.6	1	8.531	-0.012	130246	41.8
Aroclor-1242	2	8.772	-0.011	65823	16.3	2	9.277	0.003	38167	6.0
Aroclor-1242	3	8.996	0.040	28231	18.0	3	9.704	0.004	14781	8.8
Aroclor-1242	4	10.536	-0.036	413379	288.0	4	11.196	0.034	177314	67.7
Total Col1Ave (4 peaks):				91.5		Total Col2Ave (4 peaks):			31.1	RPD = 99*
Corrected Ave (3 peaks):				26.0		Corrected Ave (3 peaks):			18.8	RPD = 32
Aroclor-1248	1	9.391	0.041	108658	67.3	1	9.798	-0.008	108630	36.7
Aroclor-1248	2	9.683	0.002	28222	14.3	2	10.258	0.007	85579	26.3
Aroclor-1248	3	10.333	0.010	145399	49.5	3	10.800	0.001	56272	17.0
Aroclor-1248	4	10.536	-0.034	413379	181.7	4	11.196	0.036	177314	41.6
Total Col1Ave (4 peaks):				78.2		Total Col2Ave (4 peaks):			30.4	RPD = 88*
Corrected Ave (3 peaks):				43.7		Corrected Ave (3 peaks):			26.7	RPD = 48*
Aroclor-1254	1	10.333	0.002	145399	58.0	1	10.868	0.001	124125	39.5
Aroclor-1254	2	10.653	0.001	139700	40.4	2	11.038	0.001	110491	27.5
Aroclor-1254	3	11.053	0.016	160920	73.9	3	11.575	0.002	75872	23.7
Aroclor-1254	4	11.176	0.001	165810	40.2	4	11.726	0.001	259526	38.2
Aroclor-1254	5	11.888	-0.004	98220	35.7	5	12.513	0.003	137726	33.6
Total Col1Ave (5 peaks):				49.6		Total Col2Ave (5 peaks):			32.5	RPD = 42*
Corrected Ave (4 peaks):				43.6		Corrected Ave (4 peaks):			30.8	RPD = 34
Aroclor-1260	1	11.835	0.003	96141	21.7	1	12.733	0.000	327839	49.6
Aroclor-1260	2	12.437	0.001	26909	9.3	2	13.528	0.021	323521	31.8
Aroclor-1260	3	12.760	0.009	61348	21.3	3	14.001	0.001	57252	8.5
Aroclor-1260	4	13.496	0.011	84744	23.5	4	14.579	0.021	174810	70.6
Aroclor-1260	5	13.592	0.006	35277	24.4	NS	---			----
Total Col1Ave (5 peaks):				20.1		Total Col2Ave (4 peaks):			40.1	RPD = 67*
Corrected Ave (4 peaks):				19.0		Corrected Ave (3 peaks):			29.9	RPD = 45*
Aroclor-1262	1	12.437	-0.006	26909	5.9	1	12.866	0.035	114877	18.1
Aroclor-1262	2	12.760	0.002	61348	18.7	2	13.268	-0.006	88364	16.5
Aroclor-1262	3	13.114	-0.007	98182	11.4	3	13.528	0.014	323521	27.0
Aroclor-1262	4	13.592	0.001	35277	12.2	4	13.922	-0.035	478652	104.9
Aroclor-1262	5	13.660	0.005	52693	17.2	5	14.001	-0.007	57252	7.8
Total Col1Ave (5 peaks):				13.1		Total Col2Ave (5 peaks):			34.9	RPD = 91*
Corrected Ave (4 peaks):				11.7		Corrected Ave (4 peaks):			17.4	RPD = 39
Aroclor-1268	1	13.592	0.002	35277	4.0	1	13.922	-0.033	478652	39.3

Aroclor-1268	2	13.660	0.008	52693	6.5	2	14.001	-0.009	57252	5.0
Aroclor-1268	3	13.969	-0.006	65101	9.5	3	14.313	-0.009	240909	26.6
Aroclor-1268	4	---			0.0	4	14.968	0.056	14089	0.5

Total Col1Ave (3 peaks): 6.7 Total Col2Ave (4 peaks): 17.8 RPD = 91*

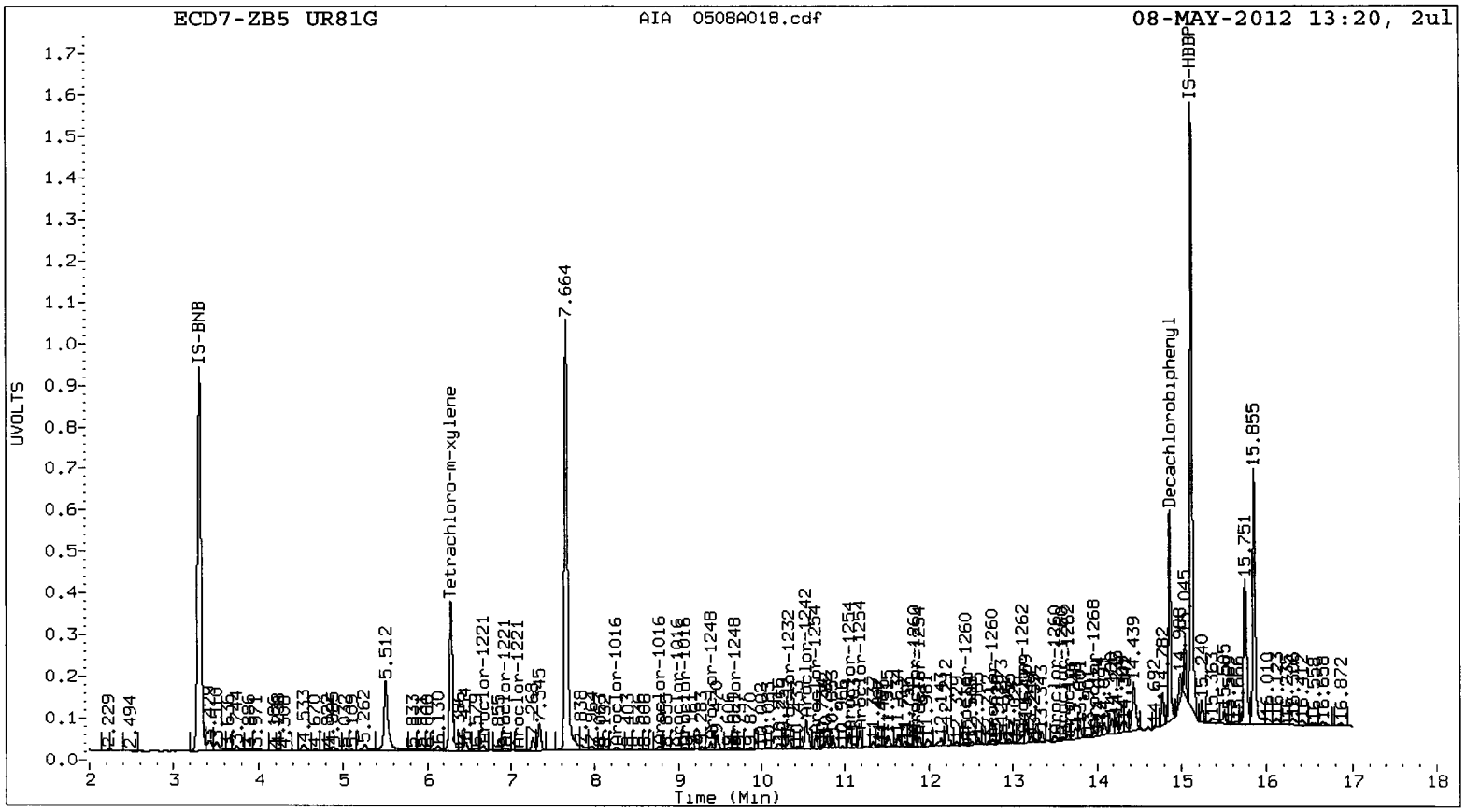
Corrected Ave: < 3 Peaks Corrected Ave (3 peaks): 10.7

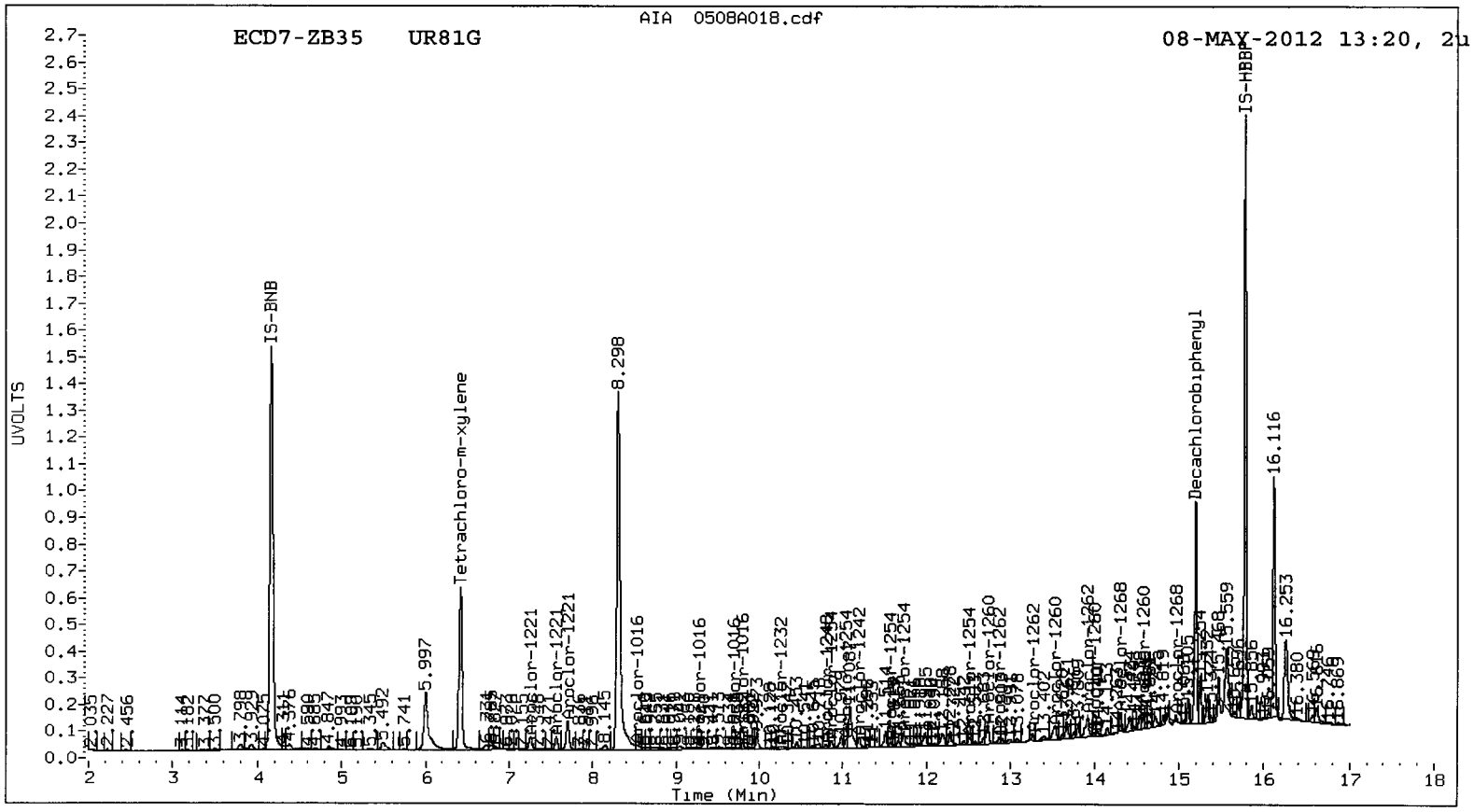
Total PCB Area Col1 (6.384 - 14.765) = 12988643 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 19145712 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 UR81G
AIA 0508A018.cdf
08-MAY-2012 13:20, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.664
5.512
IS-HBBP
Decachlorobiphenyl
15.855
15.751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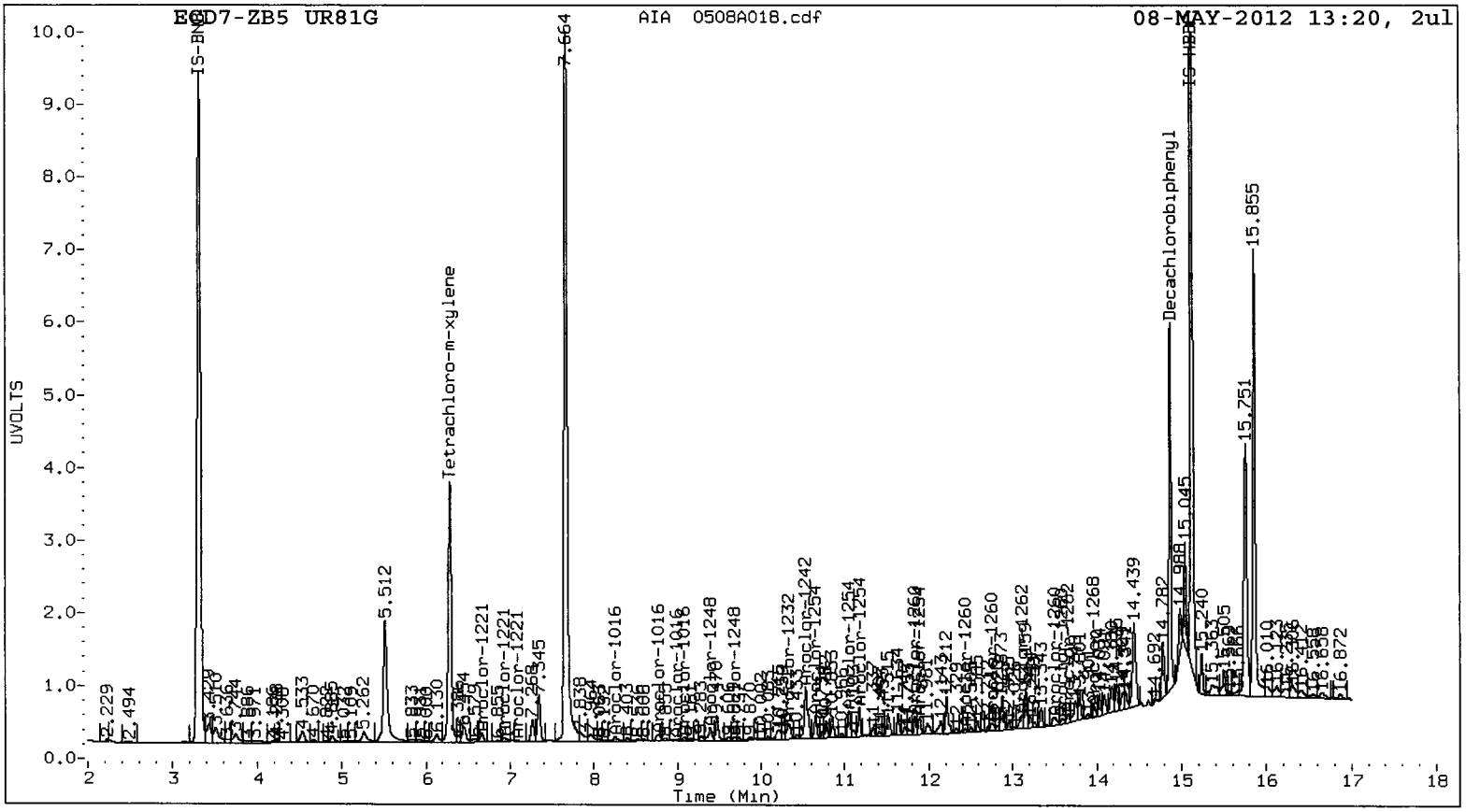
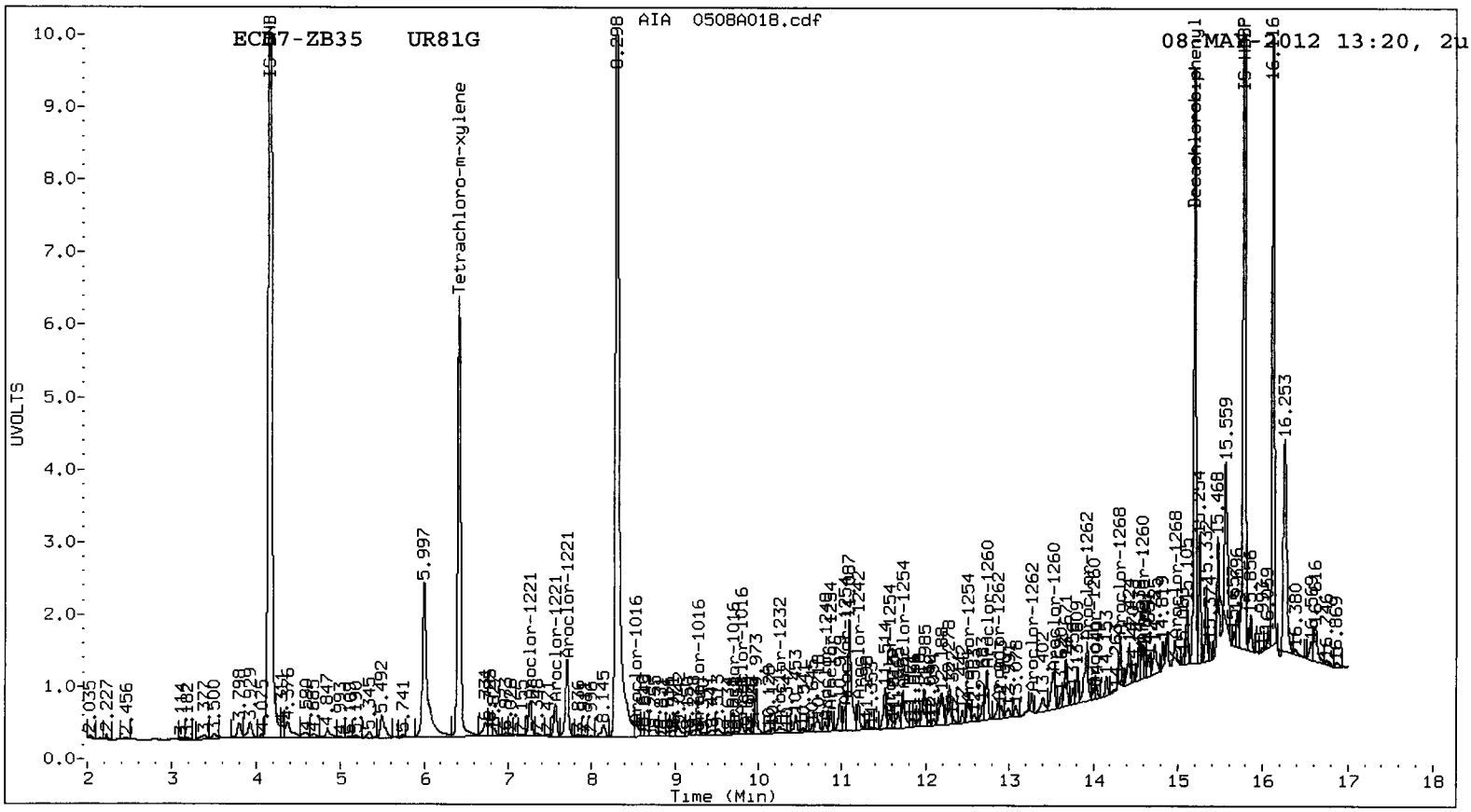
08-MAY-2012 13:20, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
8.298
5.997
IS-HBBP
Decachlorobiphenyl
16.116
16.253

UR81 : 02697


ECD7-ZB5 UR81G
AIA 0508A018.cdf
08-MAY-2012 13:20, 2ul
IS-BNB
7.664
Tetrachloro-m-xylene
5.512
Decachlorobiphenyl
IS-HBB
15.855
15.751
15.045
14.988
14.782
14.692
14.439
UVOLTS
Time (Min)


ECD7-ZB35 UR81G
AIA 0508A018.cdf
08-MAY-2012 13:20, 2u
IS-HBB
8.298
Tetrachloro-m-xylene
5.997
Decachlorobiphenyl
IS-HBP
16.116
15.559
15.468
16.253
16.380
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A019.d
Data file 2: 20120505.B/0508-2.b/0508A019.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81GMS
Client ID: IJ12-01 MS
Injection Date: 08-MAY-2012 13:41
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.287	0.003	1569927	6.413	0.003	2775874	25.5	27.2	6.6	Tetrachloro-m-xylen
14.868	0.002	1249719	15.197	0.003	1986305	21.6	24.3	11.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

M 05/09/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	63.8	68.1
Decachlorobiphenyl	54.0	60.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5208451	-10.8
Hexabromobiphenyl	4847662	4755922	-1.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8153233	-11.0
Hexabromobiphenyl	6845779	7118587	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.294	0.003	423489	278.1	1	8.543	0.005	1128910	273.5
Aroclor-1016	2	8.781	0.002	1287243	246.5	2	9.273	0.003	1958914	234.1
Aroclor-1016	3	8.954	0.003	483704	237.2	3	9.699	0.002	496721	229.0
Aroclor-1016	4	9.082	0.002	347518	245.6	4	9.806	0.001	629501	250.1
Total Col1Ave (4 peaks):				251.8		Total Col2Ave (4 peaks):			246.7	RPD = 2
Corrected Ave (3 peaks):				243.1		Corrected Ave (3 peaks):			237.7	RPD = 2
Aroclor-1221	1	6.736	-0.006	95160	158.1	1	7.254	0.013	358290	305.6
Aroclor-1221	2	6.949	-0.005	134727	298.9	2	7.561	0.019	401914	556.1
Aroclor-1221	3	7.072	-0.005	352827	234.7	3	7.682	0.002	810657	376.0
Aroclor-1221	NS	---			----	4	7.837	0.070	41484	101.1
Total Col1Ave (3 peaks):				230.6		Total Col2Ave (4 peaks):			334.7	RPD = 37
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			260.9	
Aroclor-1232	1	8.294	-0.005	423489	703.9	1	8.543	-0.005	1128910	636.3
Aroclor-1232	2	8.781	-0.002	1287243	628.8	2	9.273	-0.005	1958914	592.9
Aroclor-1232	3	8.954	-0.004	483704	599.3	3	9.699	-0.005	496721	558.4
Aroclor-1232	4	10.332	0.004	363344	398.1	4	10.253	-0.004	723885	542.2
Total Col1Ave (4 peaks):				582.5		Total Col2Ave (4 peaks):			582.5	RPD = 0
Corrected Ave (3 peaks):				542.1		Corrected Ave (3 peaks):			564.5	RPD = 4
Aroclor-1242	1	8.294	-0.002	423489	366.9	1	8.543	0.000	1128910	372.9
Aroclor-1242	2	8.781	-0.002	1287243	325.6	2	9.273	-0.001	1958914	316.6
Aroclor-1242	3	8.954	-0.002	483704	314.0	3	9.699	-0.001	496721	303.6
Aroclor-1242	4	10.537	-0.036	334011	237.4	4	11.196	0.034	137473	54.1
Total Col1Ave (4 peaks):				311.0		Total Col2Ave (4 peaks):			261.8	RPD = 17
Corrected Ave (3 peaks):				292.3		Corrected Ave (3 peaks):			224.8	RPD = 26
Aroclor-1248	1	9.352	0.002	293827	185.6	1	9.806	0.000	629501	219.2
Aroclor-1248	2	9.683	0.002	383066	197.9	2	10.253	0.002	723885	229.0
Aroclor-1248	3	10.332	0.010	363344	126.2	3	10.800	0.000	96912	30.2
Aroclor-1248	4	10.537	-0.033	334011	149.8	4	11.196	0.036	137473	33.2
Total Col1Ave (4 peaks):				164.8		Total Col2Ave (4 peaks):			127.9	RPD = 25
Corrected Ave (3 peaks):				153.8		Corrected Ave (3 peaks):			94.2	RPD = 48*
Aroclor-1254	1	10.332	0.001	363344	147.9	1	10.868	0.001	425010	139.3
Aroclor-1254	2	10.655	0.003	364456	107.6	2	11.038	0.002	483513	124.1
Aroclor-1254	3	11.047	0.011	167573	78.5	3	11.575	0.002	142355	45.9
Aroclor-1254	4	11.175	0.001	418138	103.4	4	11.727	0.002	304684	46.2
Aroclor-1254	5	11.883	-0.009	315702	117.0	5	12.521	0.011	479359	120.6
Total Col1Ave (5 peaks):				110.9		Total Col2Ave (5 peaks):			95.2	RPD = 15
Corrected Ave (4 peaks):				101.6		Corrected Ave (4 peaks):			84.2	RPD = 19
Aroclor-1260	1	11.834	0.003	890088	213.8	1	12.734	0.001	1328473	208.1
Aroclor-1260	2	12.439	0.003	560699	206.8	2	13.509	0.002	2231435	226.9
Aroclor-1260	3	12.754	0.003	609553	225.8	3	14.003	0.003	1426017	218.5
Aroclor-1260	4	13.488	0.002	745298	220.3	4	14.561	0.002	793120	331.6
Aroclor-1260	5	13.589	0.003	313464	231.5	NS	---			----
Total Col1Ave (5 peaks):				219.6		Total Col2Ave (4 peaks):			246.3	RPD = 11
Corrected Ave (4 peaks):				216.7		Corrected Ave (3 peaks):			217.8	RPD = 1
Aroclor-1262	1	12.439	-0.004	560699	131.6	1	12.826	-0.005	802177	130.8
Aroclor-1262	2	12.754	-0.004	609553	198.1	2	13.270	-0.004	981368	190.0
Aroclor-1262	3	13.116	-0.004	1597318	197.9	3	13.509	-0.005	2231435	192.5
Aroclor-1262	4	13.589	-0.002	313464	115.5	4	13.954	-0.003	846650	192.2
Aroclor-1262	5	13.653	-0.002	376717	131.3	5	14.003	-0.005	1426017	201.7
Total Col1Ave (5 peaks):				154.9		Total Col2Ave (5 peaks):			181.4	RPD = 16
Corrected Ave (4 peaks):				144.1		Corrected Ave (4 peaks):			176.4	RPD = 20
Aroclor-1268	1	13.589	-0.002	313464	37.4	1	13.954	-0.001	846650	71.9

Aroclor-1268	2	13.653	0.001	376717	49.6	2	14.003	-0.007	1426017	129.0
Aroclor-1268	3	13.987	0.012	231471	36.0	3	14.314	-0.009	189216	21.6
Aroclor-1268	4	14.576	-0.001	75794	3.8	4	14.911	-0.002	61196	2.2

Total Col1Ave (4 peaks): 31.7 Total Col2Ave (4 peaks): 56.2 RPD = 56*

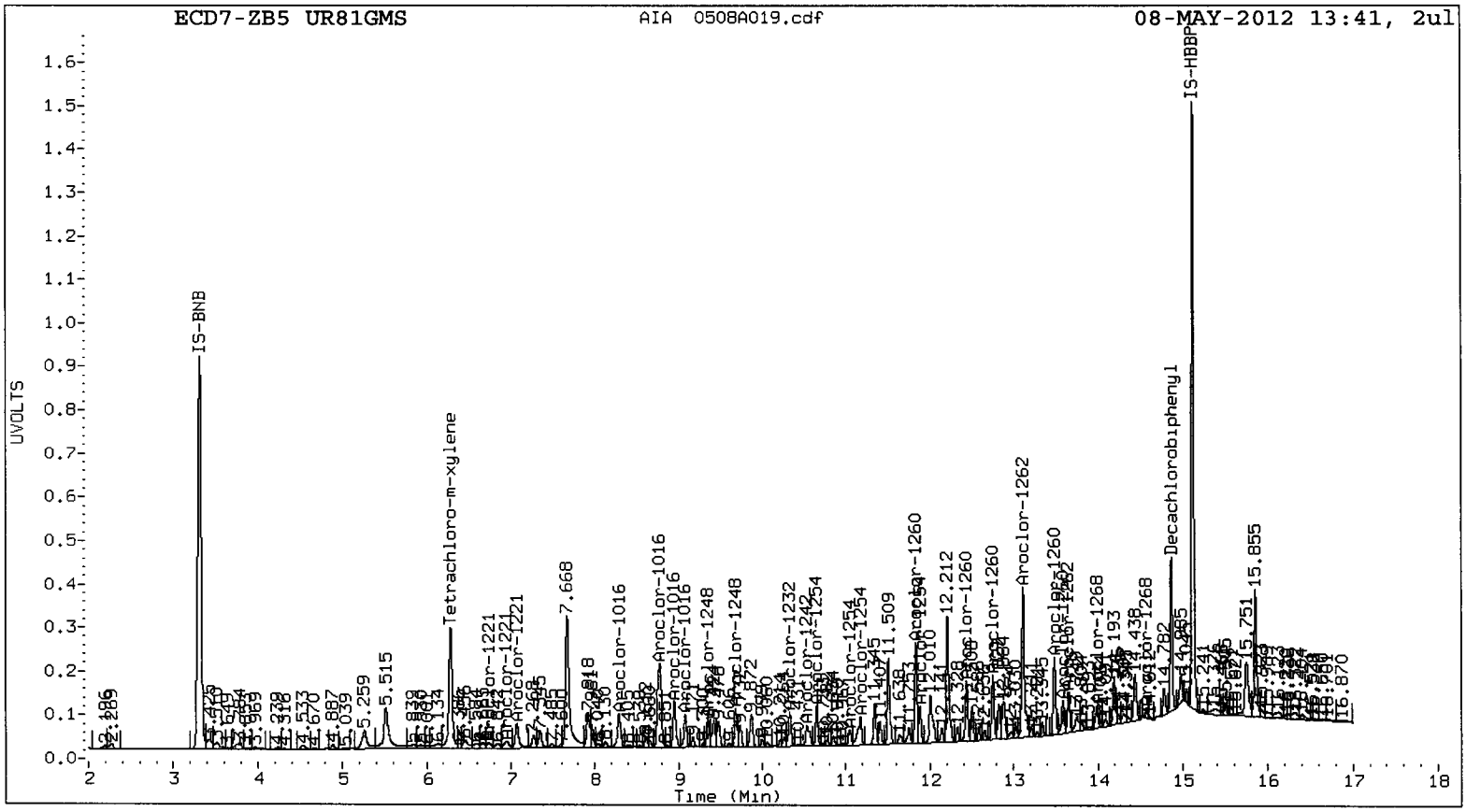
Corrected Ave (3 peaks): 25.8 Corrected Ave (3 peaks): 31.9 RPD = 21

Total PCB Area Col1 (6.384 - 14.765) = 24534474 Col1 Total PCB = 0.7 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 36866930 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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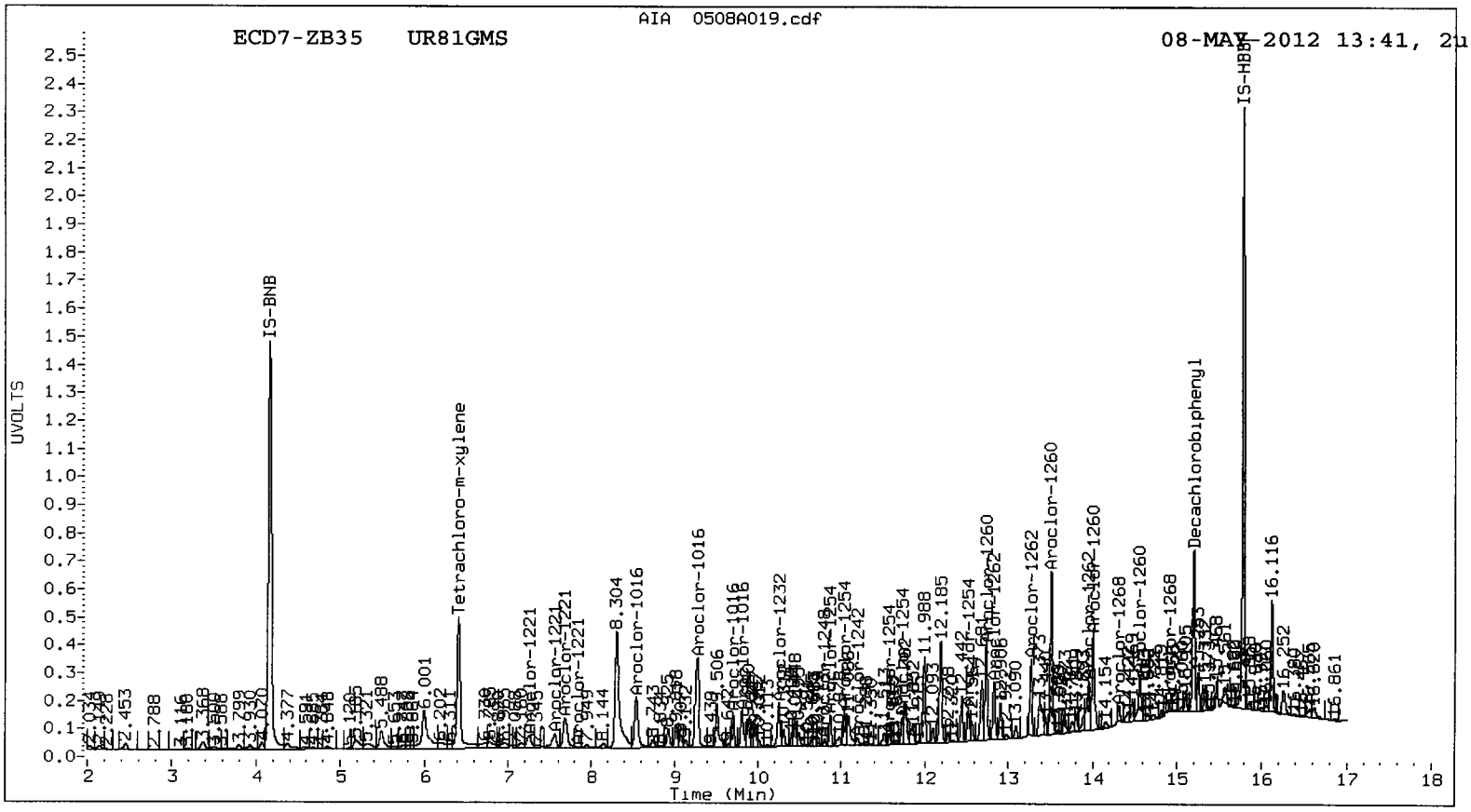
08-MAY-2012 13:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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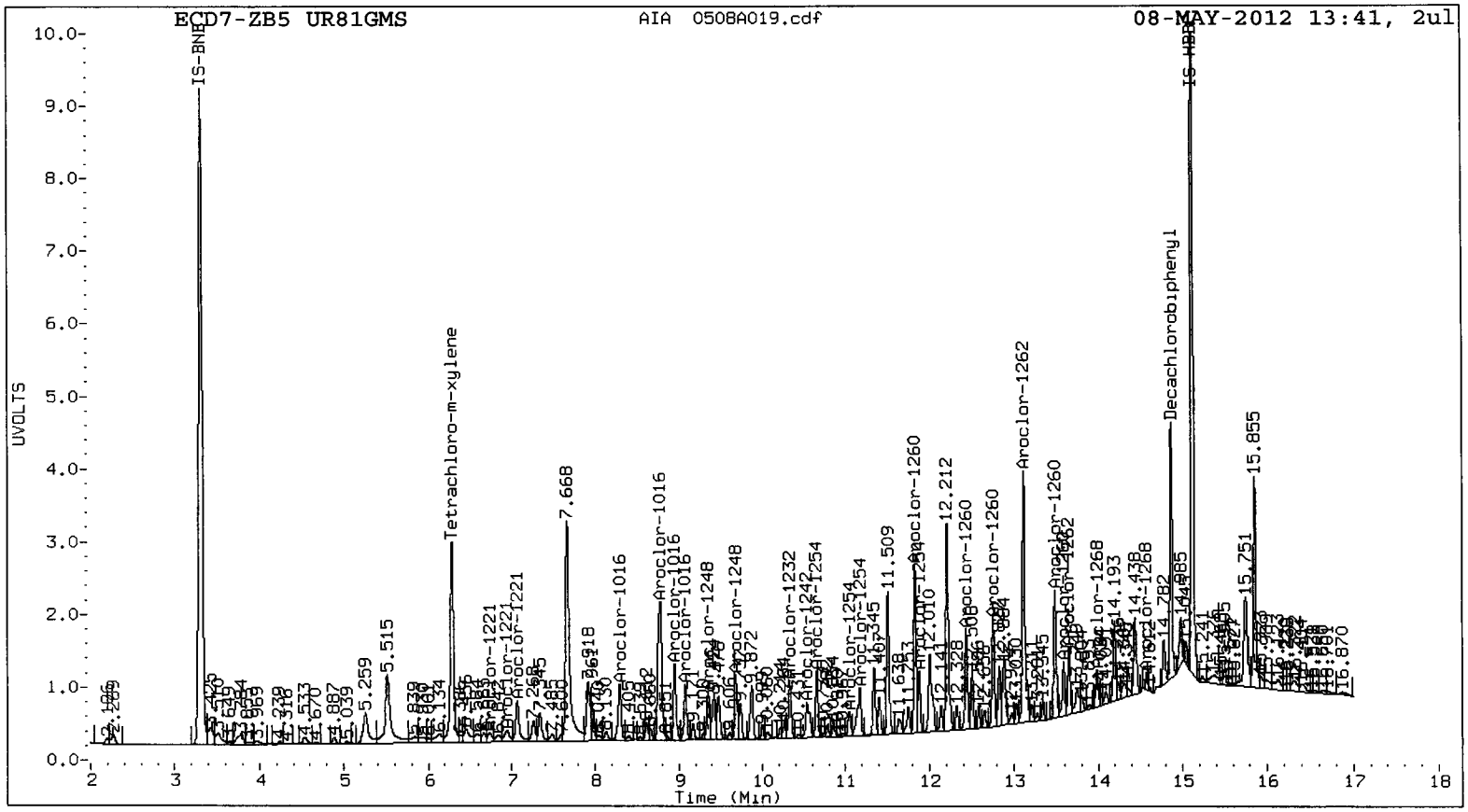
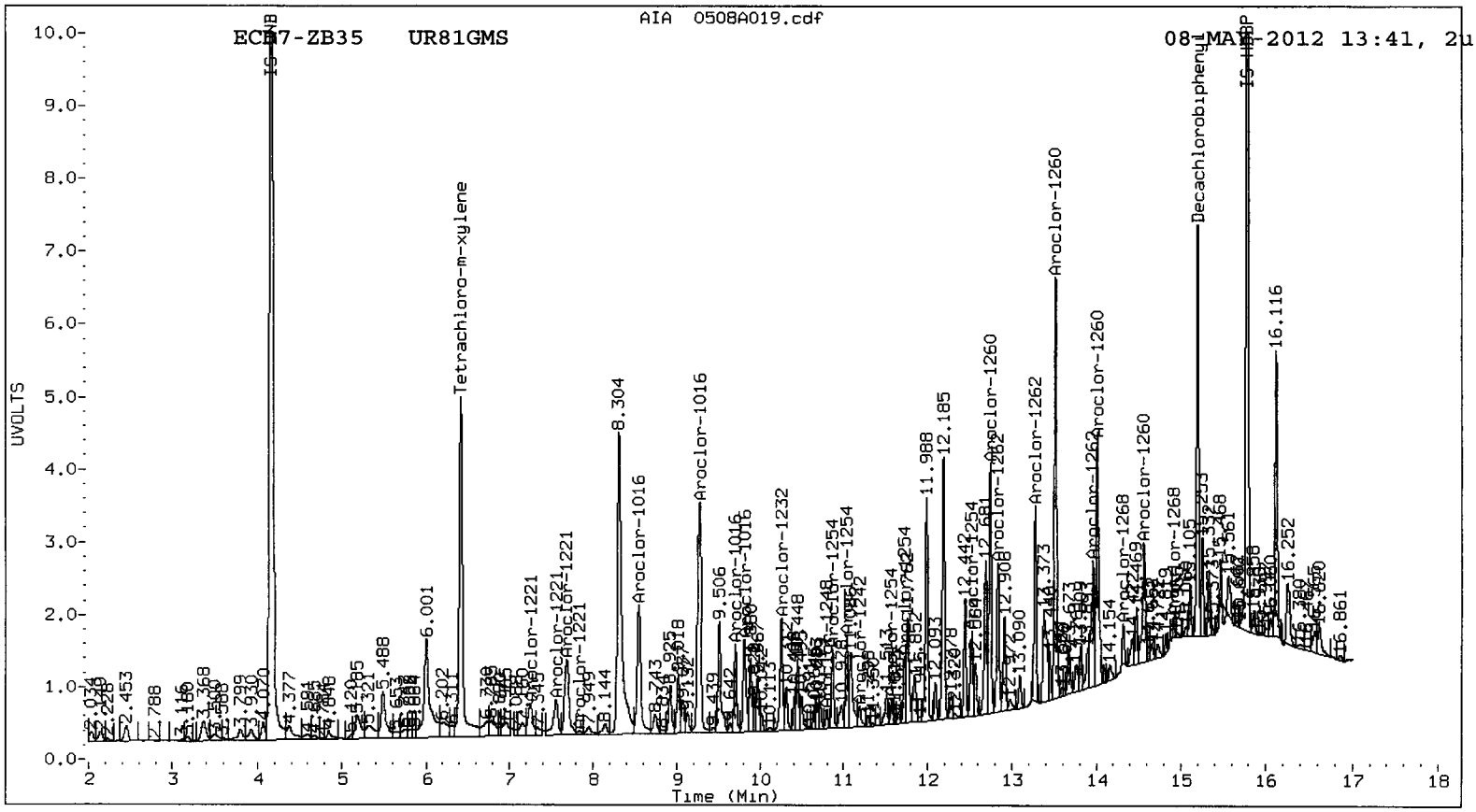
ECD7-ZB35 UR81GMS
08-MAY-2012 13:41, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBB
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD7-ZB5 UR81GMS
AIA 0508A019.cdf
08-MAY-2012 13:41, 2ul
UVOLTS
Time (Min)
IS-BNB
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
5.259
5.515
7.668
11.509
12.212
15.855
15.751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UVOLTS
Time (Min)
IS-BNB
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
6.001
8.304
9.506
11.988
12.185
16.116
16.252

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A020.d
Data file 2: 20120505.B/0508-2.b/0508A020.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81GMSD
Client ID: IJ12-01 MSD
Injection Date: 08-MAY-2012 14:02
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.289	0.005	2172463	6.414	0.004	3552870	35.1	34.3	2.1	Tetrachloro-m-xylen
14.867	0.002	1951971	15.196	0.003	3166570	31.9	38.0	17.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	87.6	85.8
Decachlorobiphenyl	79.7	95.0

05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5244578	-10.2
Hexabromobiphenyl	4847662	5039026	3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8280823	-9.6
Hexabromobiphenyl	6845779	7268817	6.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.295	0.005	571780	372.9	1	8.544	0.005	1529056	364.8
Aroclor-1016	2	8.781	0.002	1964803	373.6	2	9.272	0.002	2907036	342.0
Aroclor-1016	3	8.954	0.003	710898	346.2	3	9.699	0.002	728779	330.8
Aroclor-1016	4	9.082	0.003	507712	356.3	4	9.807	0.002	891924	348.9
Total Col1Ave (4 peaks):				362.3		Total Col2Ave (4 peaks):			346.6	RPD = 4
Corrected Ave (3 peaks):				358.5		Corrected Ave (3 peaks):			340.6	RPD = 5
Aroclor-1221	1	6.738	-0.005	70266	115.9	1	7.256	0.015	461609	387.7
Aroclor-1221	2	6.952	-0.002	118090	260.2	2	7.564	0.022	415576	566.1
Aroclor-1221	3	7.074	-0.003	406550	268.5	3	7.683	0.003	1141908	521.5
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				214.9		Total Col2Ave (3 peaks):			491.8	RPD = 78*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	8.295	-0.003	571780	943.8	1	8.544	-0.004	1529056	848.6
Aroclor-1232	2	8.781	-0.002	1964803	953.1	2	9.272	-0.006	2907036	866.4
Aroclor-1232	3	8.954	-0.004	710898	874.7	3	9.699	-0.005	728779	806.7
Aroclor-1232	4	10.332	0.004	547619	595.9	4	10.253	-0.005	979965	722.7
Total Col1Ave (4 peaks):				841.9		Total Col2Ave (4 peaks):			811.1	RPD = 4
Corrected Ave (3 peaks):				804.8		Corrected Ave (3 peaks):			792.7	RPD = 2
Aroclor-1242	1	8.295	0.000	571780	491.9	1	8.544	0.000	1529056	497.3
Aroclor-1242	2	8.781	-0.002	1964803	493.6	2	9.272	-0.002	2907036	462.6
Aroclor-1242	3	8.954	-0.002	710898	458.3	3	9.699	-0.001	728779	438.6
Aroclor-1242	4	10.567	-0.005	176258	124.4	4	11.195	0.033	181866	70.4
Total Col1Ave (4 peaks):				392.1		Total Col2Ave (4 peaks):			367.2	RPD = 7
Corrected Ave (3 peaks):				358.2		Corrected Ave (3 peaks):			323.9	RPD = 10
Aroclor-1248	1	9.352	0.002	443030	277.9	1	9.807	0.001	891924	305.8
Aroclor-1248	2	9.683	0.002	522270	268.0	2	10.253	0.002	979965	305.3
Aroclor-1248	3	10.332	0.010	547619	188.8	3	10.799	0.000	147509	45.2
Aroclor-1248	4	10.567	-0.003	176258	78.5	4	11.195	0.035	181866	43.3
Total Col1Ave (4 peaks):				203.3		Total Col2Ave (4 peaks):			174.9	RPD = 15
Corrected Ave (3 peaks):				178.4		Corrected Ave (3 peaks):			131.3	RPD = 30
Aroclor-1254	1	10.332	0.001	547619	221.4	1	10.868	0.001	627162	202.3
Aroclor-1254	2	10.655	0.003	559511	164.0	2	11.038	0.001	735819	186.0
Aroclor-1254	3	11.047	0.010	269796	125.5	3	11.574	0.001	235841	74.9
Aroclor-1254	4	11.174	0.000	412396	101.2	4	11.726	0.001	503686	75.2
Aroclor-1254	5	11.883	-0.009	474067	174.5	5	12.521	0.011	743248	184.1
Total Col1Ave (5 peaks):				157.3		Total Col2Ave (5 peaks):			144.5	RPD = 8
Corrected Ave (4 peaks):				141.3		Corrected Ave (4 peaks):			130.0	RPD = 8
Aroclor-1260	1	11.834	0.002	1356294	307.5	1	12.734	0.001	2119126	325.0
Aroclor-1260	2	12.438	0.002	860063	299.4	2	13.508	0.001	3538444	352.4
Aroclor-1260	3	12.753	0.003	946531	330.9	3	14.003	0.002	2168480	325.4
Aroclor-1260	4	13.487	0.002	1185475	330.8	4	14.561	0.002	1117855	457.7
Aroclor-1260	5	13.588	0.002	459596	320.3	NS	---			----
Total Col1Ave (5 peaks):				317.8		Total Col2Ave (4 peaks):			365.1	RPD = 14
Corrected Ave (4 peaks):				314.5		Corrected Ave (3 peaks):			334.3	RPD = 6
Aroclor-1262	1	12.438	-0.005	860063	190.6	1	12.826	-0.005	1248663	199.4
Aroclor-1262	2	12.753	-0.004	946531	290.4	2	13.270	-0.004	1513204	286.9
Aroclor-1262	3	13.116	-0.005	2428152	283.9	3	13.508	-0.005	3538444	299.0
Aroclor-1262	4	13.588	-0.003	459596	159.9	4	13.953	-0.004	1181552	262.6
Aroclor-1262	5	13.652	-0.002	545297	179.4	5	14.003	-0.005	2168480	300.4
Total Col1Ave (5 peaks):				220.8		Total Col2Ave (5 peaks):			269.7	RPD = 20
Corrected Ave (4 peaks):				203.4		Corrected Ave (4 peaks):			262.0	RPD = 25
Aroclor-1268	1	13.588	-0.003	459596	51.8	1	13.953	-0.002	1181552	98.3

Aroclor-1268 2	13.652	0.000	545297	67.7	2	14.003	-0.007	2168480	192.1
Aroclor-1268 3	13.986	0.012	353473	52.0	3	14.315	-0.007	272168	30.5
Aroclor-1268 4	14.576	-0.001	169669	8.1	4	14.910	-0.002	72141	2.6

Total Col1Ave (4 peaks): 44.9 Total Col2Ave (4 peaks): 80.8 RPD = 57*

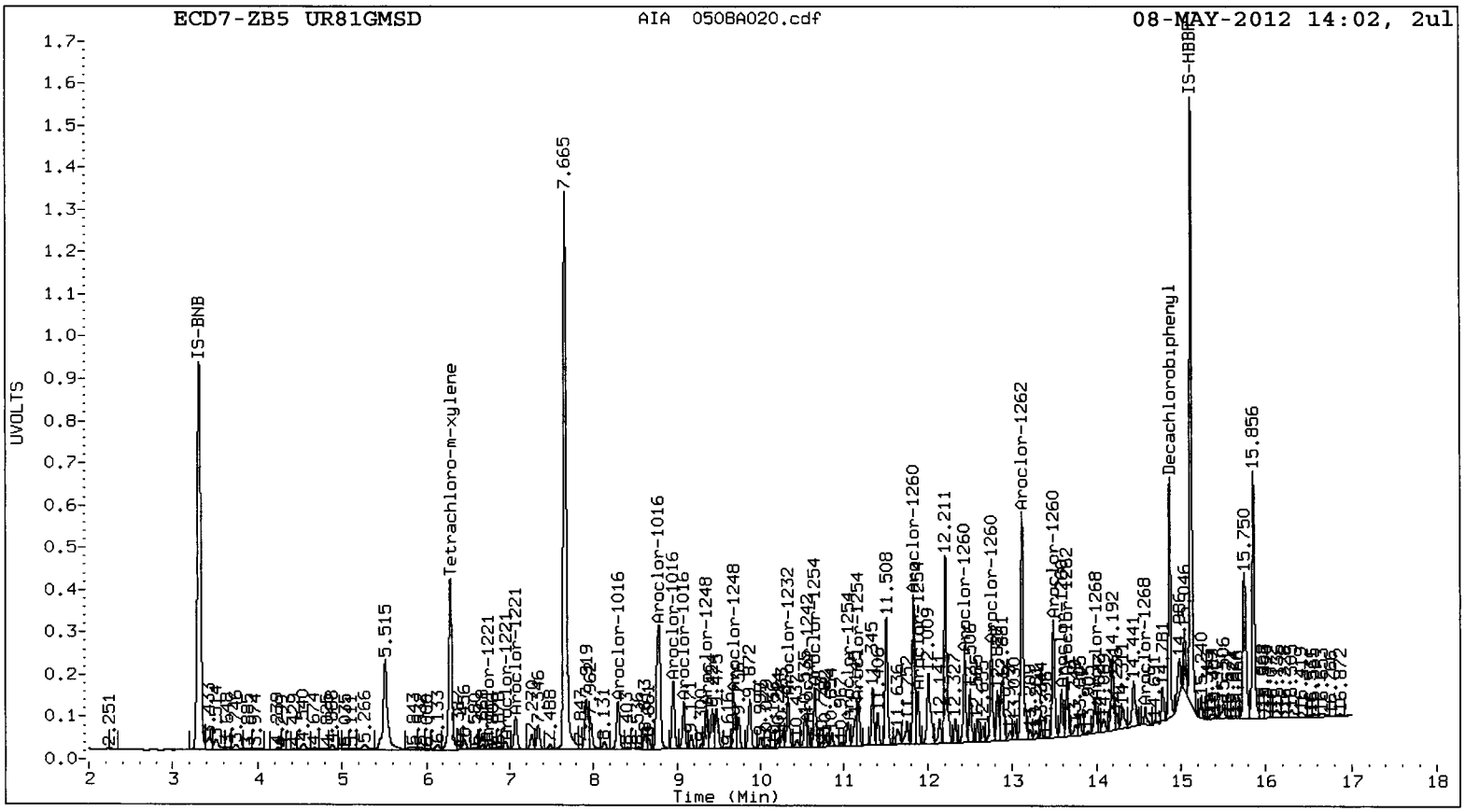
Corrected Ave (3 peaks): 37.3 Corrected Ave (3 peaks): 43.8 RPD = 16

Total PCB Area Col1 (6.384 - 14.765) = 39580257 Col1 Total PCB = 1.1 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 59784503 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 UR81GMSD
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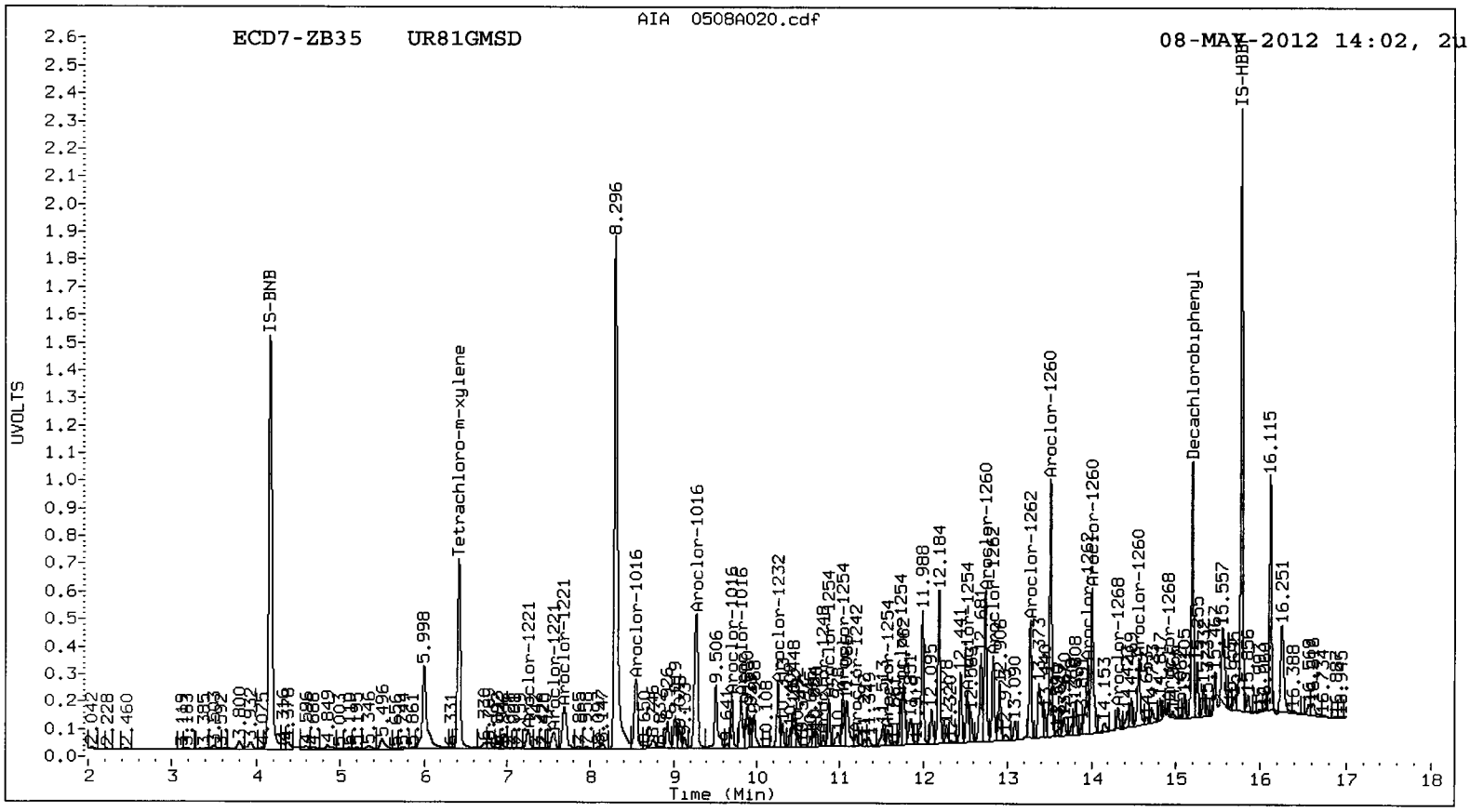
08-MAY-2012 14:02, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.665
5.515
IS-HBB
Decachlorobiphenyl
15.856
15.750
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1260
Aroclor-1262
Aroclor-1268
Aroclor-1221
11.508
12.211
12.327
14.192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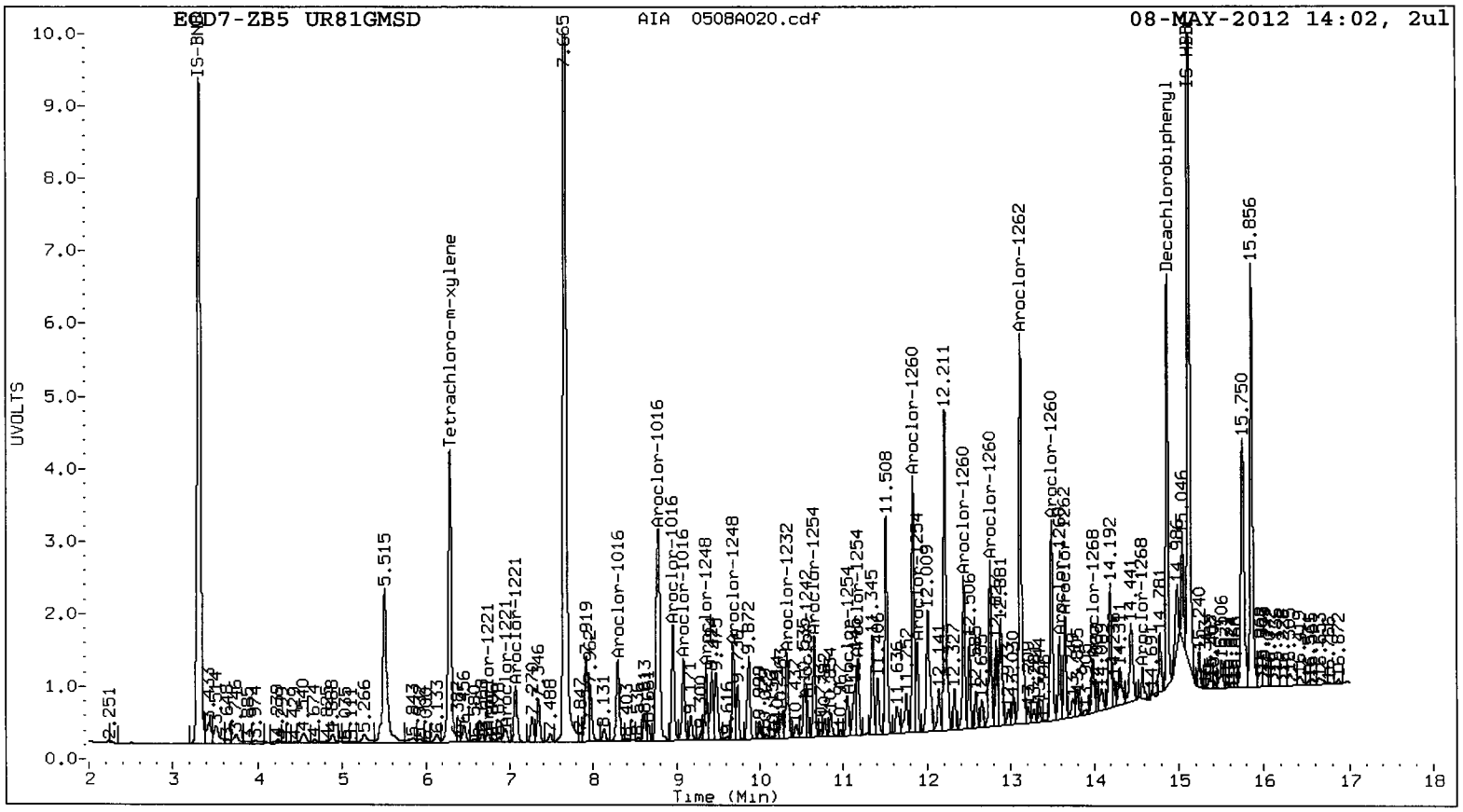
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
8.296
5.998
IS-HBB
Decachlorobiphenyl
16.115
16.251
Aroclor-1016
Aroclor-1232
Aroclor-1260
Aroclor-1262
Aroclor-1268
Aroclor-1221
9.506
11.988
12.184
15.557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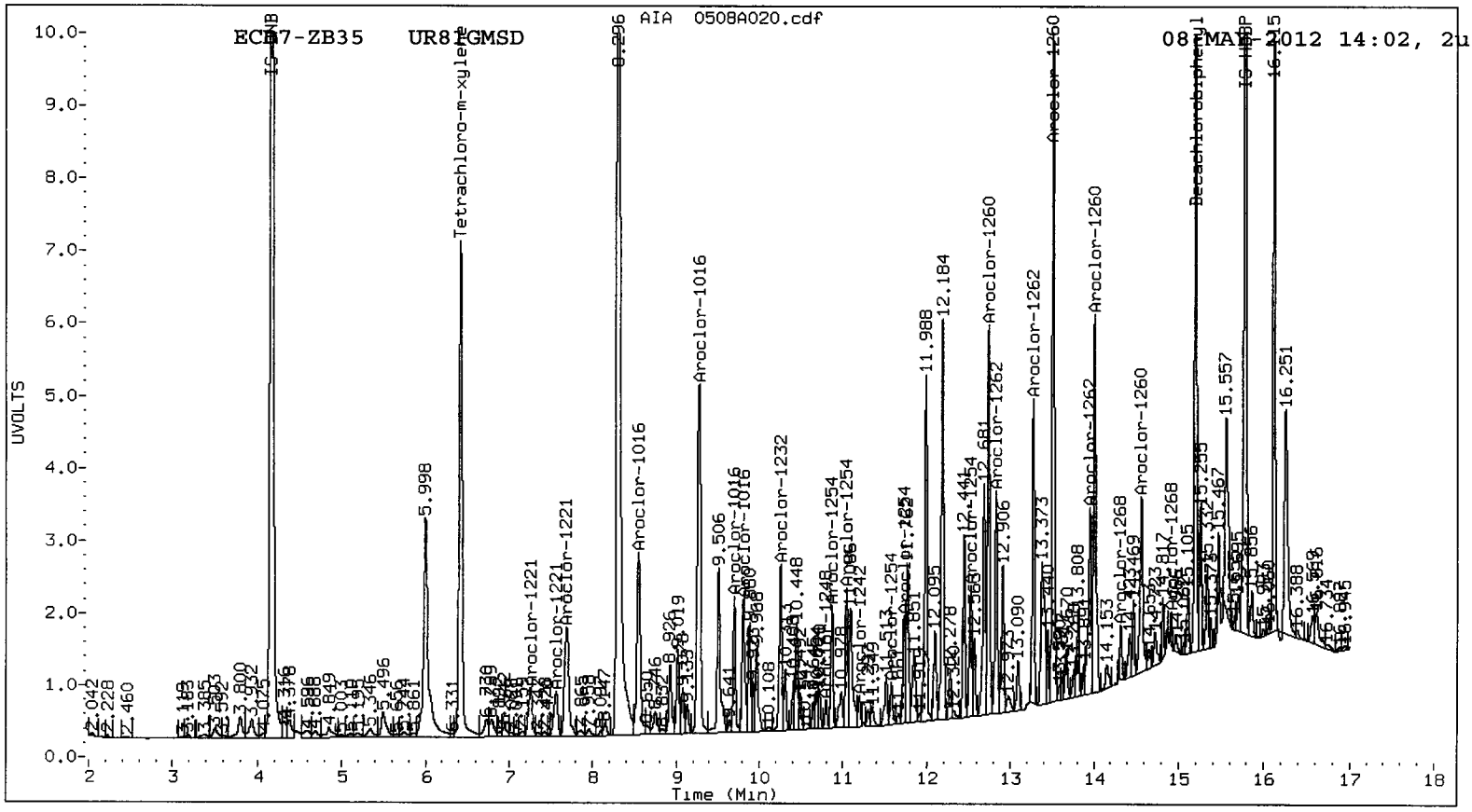
08-MAY-2012 14:02, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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08-MAY-2012 14:02, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A021.d
Data file 2: 20120505.B/0508-2.b/0508A021.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81H
Client ID: IJ12-58A
Injection Date: 08-MAY-2012 14:23
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.290	0.006	1968219	6.415	0.005	3376992	30.6	32.9	7.2	Tetrachloro-m-xylen
14.868	0.002	1576114	15.199	0.005	3563660	26.1	41.5	45.4*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	76.5	82.3
Decachlorobiphenyl	65.3	103.7

JL 05/09/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5441652	-6.8
Hexabromobiphenyl	4847662	4964522	2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8211901	-10.3
Hexabromobiphenyl	6845779	7494427	9.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.260	-0.031	124274	78.1	1	8.534	-0.004	345065	83.0
Aroclor-1016	2	8.765	-0.015	200888	36.8	2	9.275	0.006	134716	16.0
Aroclor-1016	3	8.932	-0.020	88405	41.5	3	9.705	0.008	15870	7.3
Aroclor-1016	4	9.091	0.011	82772	56.0	4	9.801	-0.005	144530	57.0
Total Col1Ave (4 peaks):				53.1		Total Col2Ave (4 peaks):			40.8	RPD = 26
Corrected Ave (3 peaks):				44.8		Corrected Ave (3 peaks):			26.8	RPD = 50*
Aroclor-1221	1	6.671	-0.071	20287	32.3	1	7.264	0.023	321136	271.9
Aroclor-1221	2	6.973	0.019	189115	401.6	2	7.566	0.024	1360314	1868.6
Aroclor-1221	3	7.082	0.005	50760	32.3	3	7.704	0.023	320322	147.5
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				155.4		Total Col2Ave (3 peaks):			762.7	RPD = 132*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	8.260	-0.038	124274	197.7	1	8.534	-0.014	345065	193.1
Aroclor-1232	2	8.765	-0.019	200888	93.9	2	9.275	-0.002	134716	40.5
Aroclor-1232	3	8.932	-0.027	88405	104.8	3	9.705	0.000	15870	17.7
Aroclor-1232	4	10.356	0.027	856230	898.0	4	10.265	0.007	132792	98.8
Total Col1Ave (4 peaks):				323.6		Total Col2Ave (4 peaks):			87.5	RPD = 115*
Corrected Ave (3 peaks):				132.2		Corrected Ave (3 peaks):			52.3	RPD = 87*
Aroclor-1242	1	8.260	-0.035	124274	103.0	1	8.534	-0.009	345065	113.2
Aroclor-1242	2	8.765	-0.018	200888	48.6	2	9.275	0.001	134716	21.6
Aroclor-1242	3	8.932	-0.025	88405	54.9	3	9.705	0.005	15870	9.6
Aroclor-1242	4	10.535	-0.037	327014	222.5	4	11.136	-0.026	143594	56.1
Total Col1Ave (4 peaks):				107.3		Total Col2Ave (4 peaks):			50.1	RPD = 73*
Corrected Ave (3 peaks):				68.9		Corrected Ave (3 peaks):			29.1	RPD = 81*
Aroclor-1248	1	9.346	-0.005	131381	79.4	1	9.801	-0.005	144530	50.0
Aroclor-1248	2	9.688	0.007	31083	15.4	2	10.265	0.014	132792	41.7
Aroclor-1248	3	10.356	0.033	856230	284.6	3	10.800	0.001	168011	52.0
Aroclor-1248	4	10.535	-0.035	327014	140.4	4	11.136	-0.024	143594	34.5
Total Col1Ave (4 peaks):				129.9		Total Col2Ave (4 peaks):			44.5	RPD = 98*
Corrected Ave (3 peaks):				78.4		Corrected Ave (3 peaks):			42.1	RPD = 60*
Aroclor-1254	1	10.356	0.024	856230	333.6	1	10.866	-0.001	236917	77.1
Aroclor-1254	2	10.653	0.001	150419	42.5	2	11.037	0.000	190870	48.6
Aroclor-1254	3	11.054	0.018	245415	110.0	3	11.576	0.002	82044	26.3
Aroclor-1254	4	11.178	0.003	213235	50.4	4	11.728	0.003	296265	44.6
Aroclor-1254	5	11.890	-0.002	135658	48.1	5	12.509	0.000	129522	32.4
Total Col1Ave (5 peaks):				116.9		Total Col2Ave (5 peaks):			45.8	RPD = 87*
Corrected Ave (4 peaks):				62.8		Corrected Ave (4 peaks):			38.0	RPD = 49*
Aroclor-1260	1	11.835	0.003	84638	19.5	1	12.716	-0.017	797518	118.6
Aroclor-1260	2	12.438	0.002	55514	19.6	2	13.512	0.005	236263	22.8
Aroclor-1260	3	12.741	-0.010	381765	135.5	3	13.998	-0.003	97348	14.2
Aroclor-1260	4	13.486	0.000	96151	27.2	4	14.536	-0.023	117569	46.7
Aroclor-1260	5	13.597	0.011	149527	105.8	NS	---			----
Total Col1Ave (5 peaks):				61.5		Total Col2Ave (4 peaks):			50.6	RPD = 20
Corrected Ave (4 peaks):				43.0		Corrected Ave (3 peaks):			27.9	RPD = 43*
Aroclor-1262	1	12.438	-0.005	55514	12.5	1	12.834	0.003	52315	8.1
Aroclor-1262	2	12.741	-0.017	381765	118.9	2	13.267	-0.007	97582	17.9
Aroclor-1262	3	13.110	-0.011	216240	25.7	3	13.512	-0.002	236263	19.4
Aroclor-1262	4	13.597	0.005	149527	52.8	4	13.953	-0.004	381209	82.2
Aroclor-1262	5	13.660	0.005	63959	21.4	5	13.998	-0.011	97348	13.1
Total Col1Ave (5 peaks):				46.2		Total Col2Ave (5 peaks):			28.1	RPD = 49*
Corrected Ave (4 peaks):				28.1		Corrected Ave (4 peaks):			14.6	RPD = 63*
Aroclor-1268	1	13.597	0.006	149527	17.1	1	13.953	-0.002	381209	30.7

Aroclor-1268	2	13.660	0.007	63959	8.1	2	13.998	-0.012	97348	8.4
Aroclor-1268	3	13.991	0.016	145967	21.8	3	14.311	-0.012	111318	12.1
Aroclor-1268	4	14.483	-0.093	83873	4.1	4	14.965	0.053	257162	8.9

Total Col1Ave (4 peaks): 12.8 Total Col2Ave (4 peaks): 15.0 RPD = 16

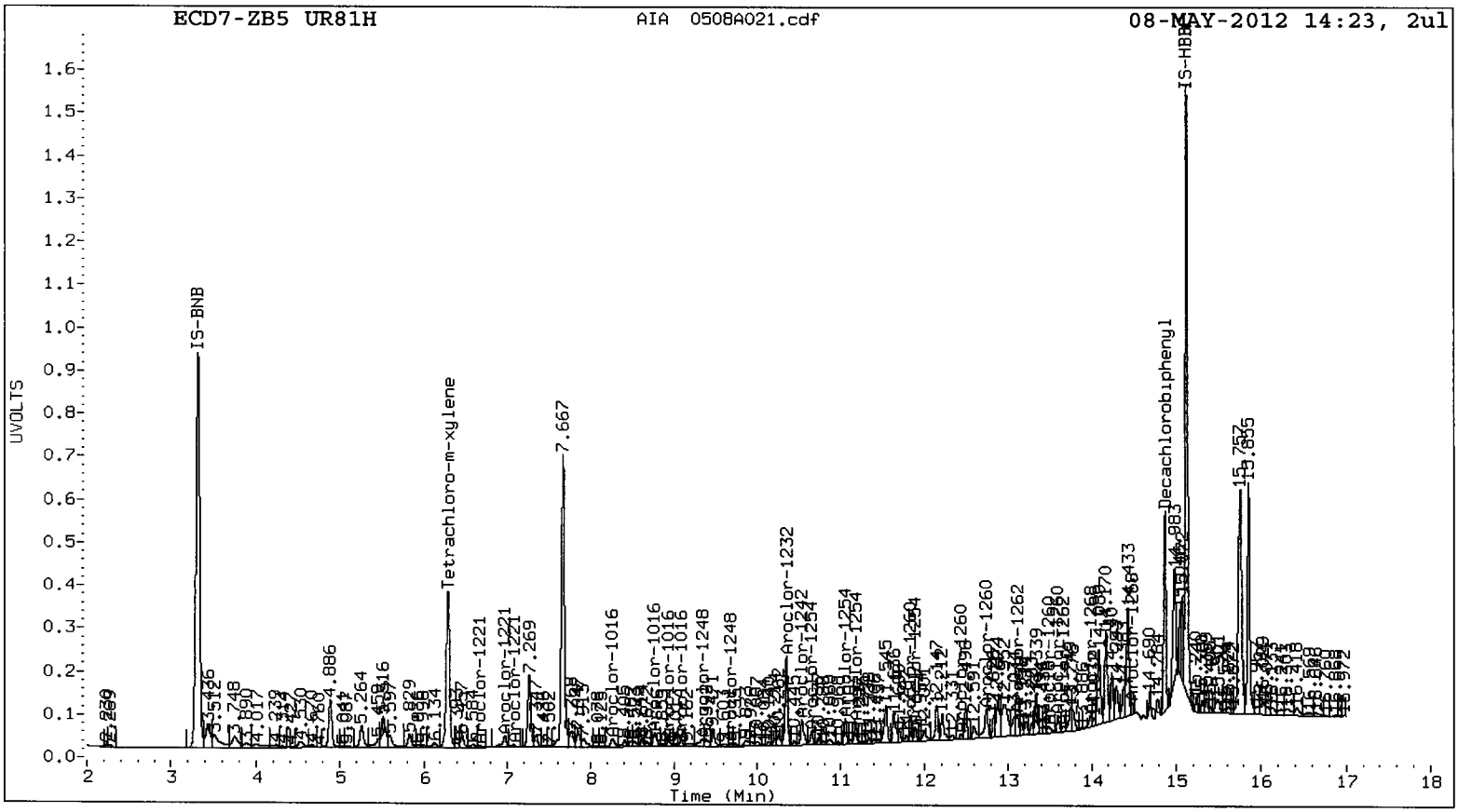
Corrected Ave (3 peaks): 9.7 Corrected Ave (3 peaks): 9.8 RPD = 0

Total PCB Area Col1 (6.384 - 14.765) = 21166343 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 31137527 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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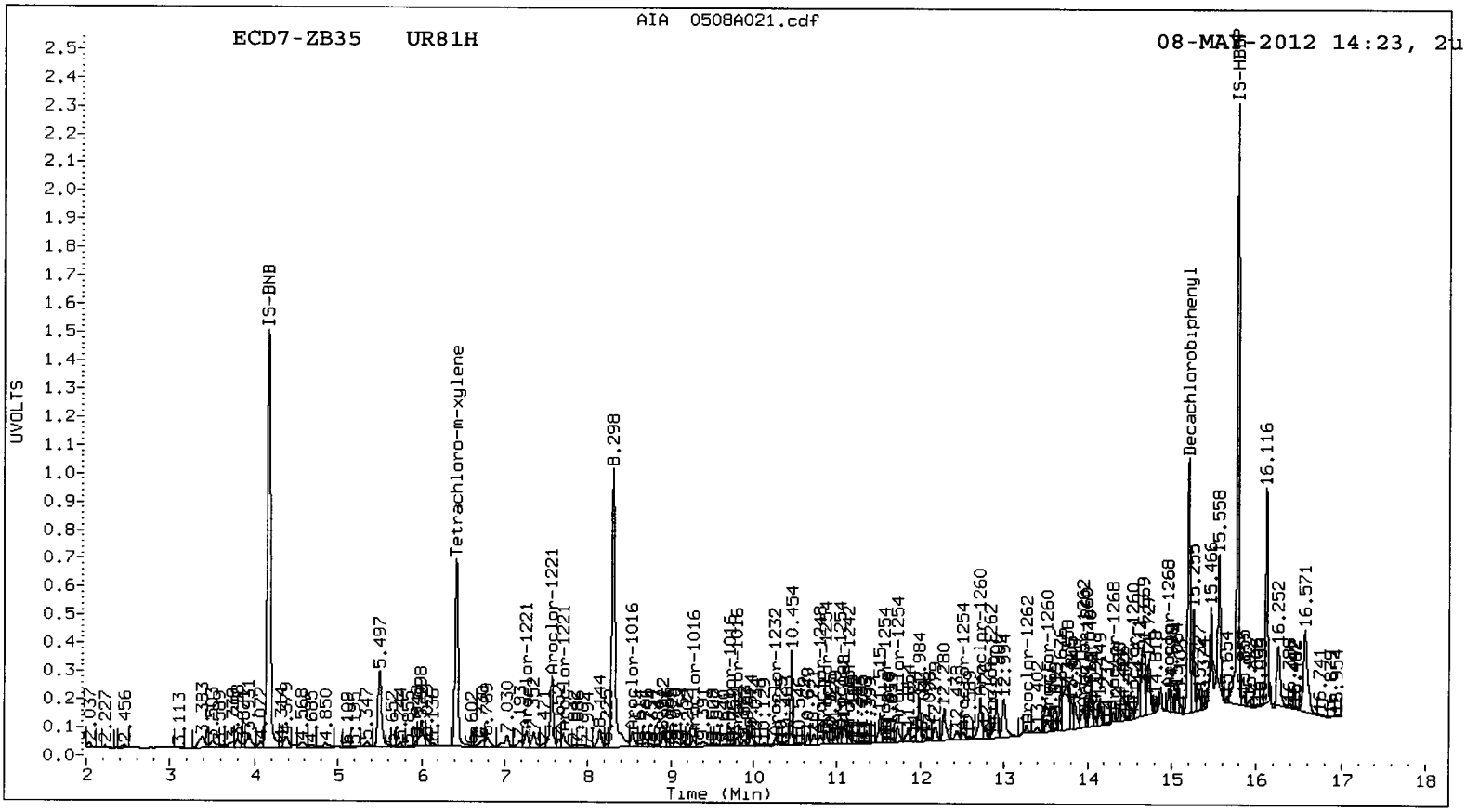
08-MAY-2012 14:23, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.667
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Decachlorobiphenyl
IS-HBB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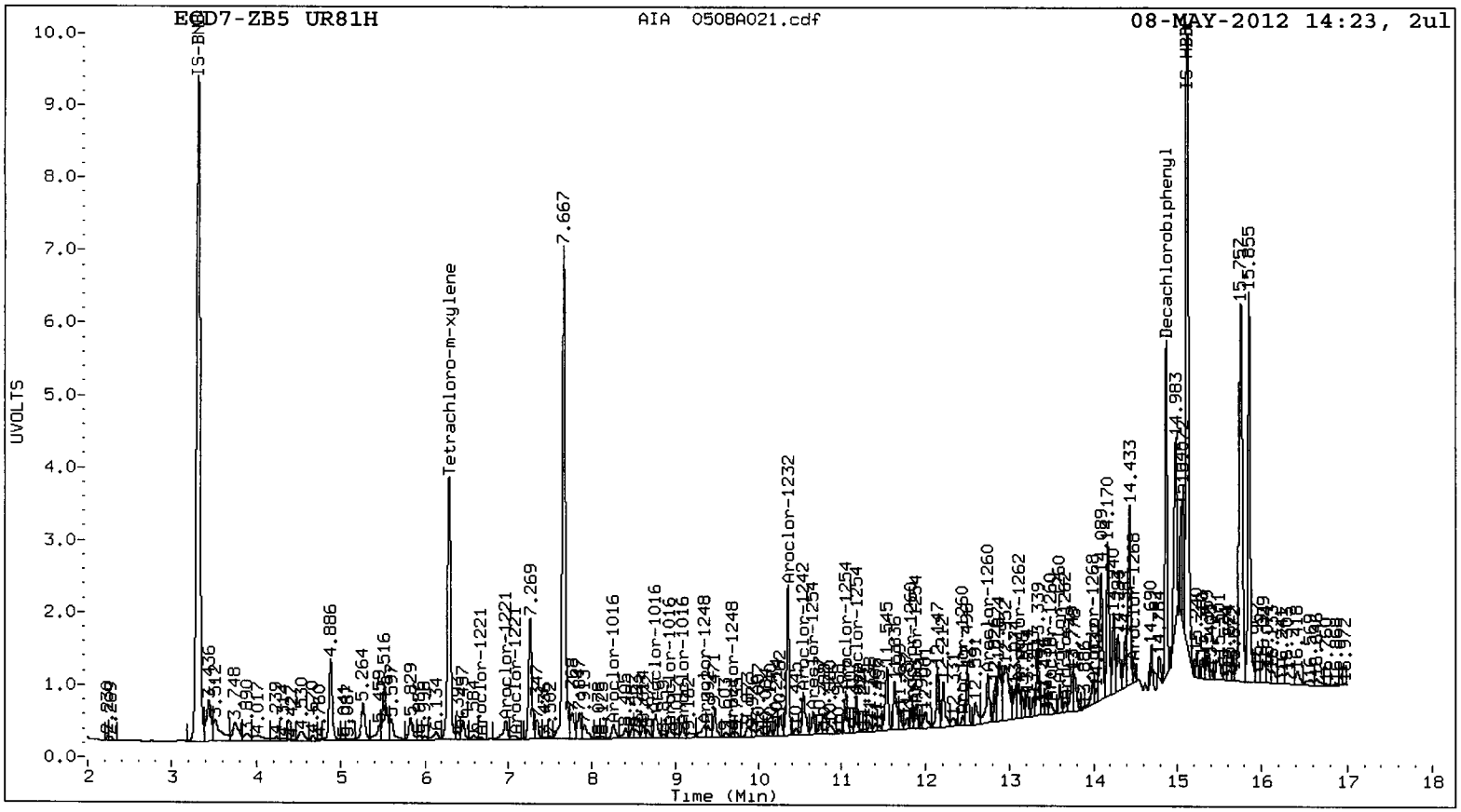
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
8.298
5.497
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBB
16.116
15.558
16.252
16.571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AIA 0508A021.cdf
08-MAY-2012 14:23, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
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Decachlorobiphenyl
IS-HBBP
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14.433
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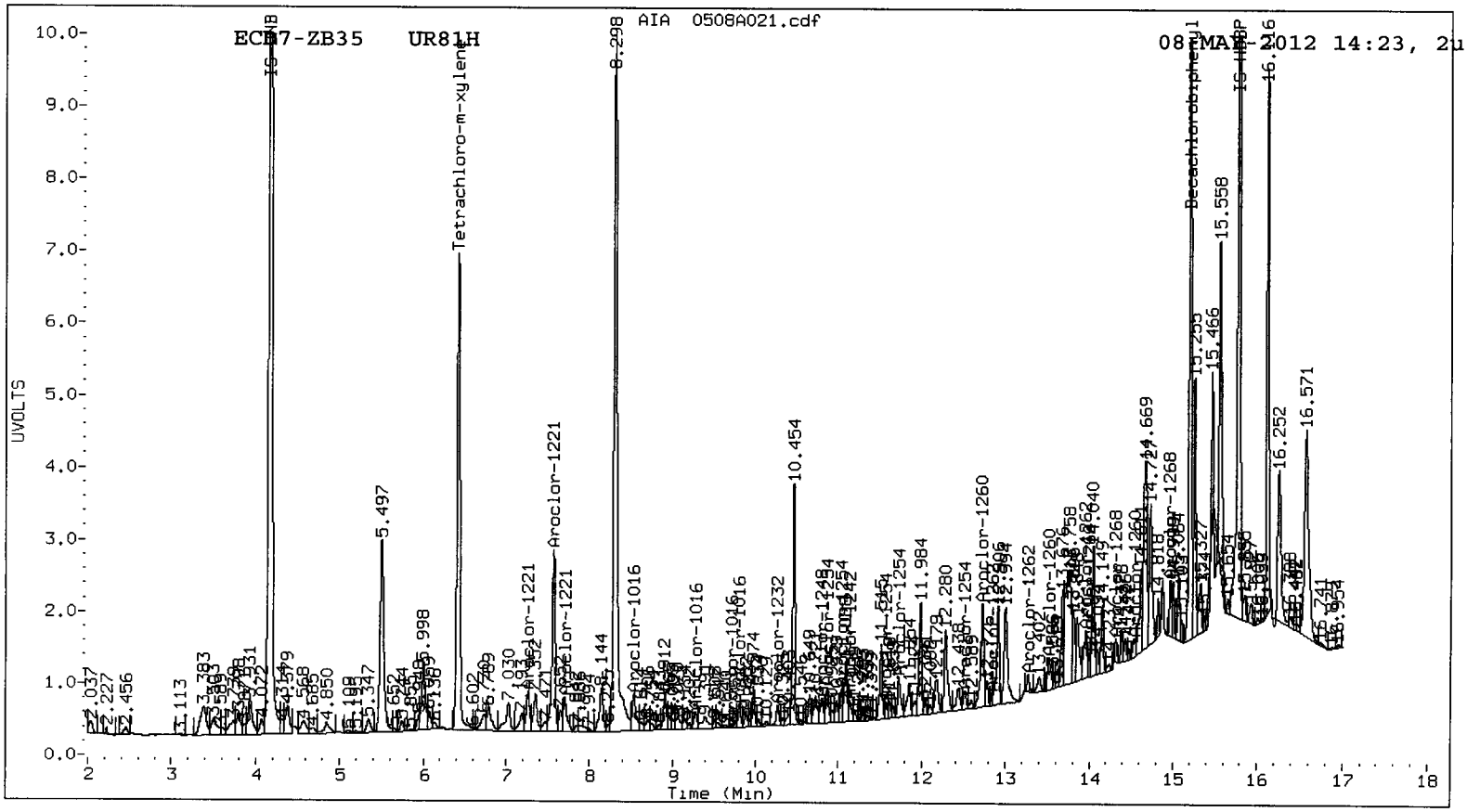
15.855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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Decachlorobiphenyl
IS-HBBP
8.298
5.497
10.454
11.984
15.558
15.466
16.252
16.571

UR81 : 02113

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A022.d
Data file 2: 20120505.B/0508-2.b/0508A022.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81I
Client ID: IJ12-11
Injection Date: 08-MAY-2012 14:44
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.290	0.006	2289476	6.415	0.005	3925189	34.8	36.4	4.4	Tetrachloro-m-xylen
14.868	0.003	1841841	15.196	0.003	2741410	31.5	32.8	4.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/09/12

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	87.1	91.0
Decachlorobiphenyl	78.8	82.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5560237	-4.8
Hexabromobiphenyl	4847662	4805744	-0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8623339	-5.8
Hexabromobiphenyl	6845779	7289225	6.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.257	-0.033	69713	42.9	1	8.536	-0.003	251937	57.7
Aroclor-1016	2	8.764	-0.016	186060	33.4	2	9.275	0.005	114325	12.9
Aroclor-1016	3	8.931	-0.021	72356	33.2	3	9.673	-0.024	66321	28.9
Aroclor-1016	4	9.086	0.006	54632	36.2	4	9.798	-0.007	151772	57.0
Total Col1Ave (4 peaks):				36.4	Total Col2Ave (4 peaks):				39.1	RPD = 7
Corrected Ave (3 peaks):				34.3	Corrected Ave (3 peaks):				32.9	RPD = 4
Aroclor-1221	1	6.673	-0.069	11965	18.6	1	7.264	0.023	240538	194.0
Aroclor-1221	2	6.975	0.021	162743	238.2	2	7.567	0.025	1060829	1387.7
Aroclor-1221	3	7.086	0.009	114674	71.4	3	7.703	0.023	194233	85.2
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				142.8	Total Col2Ave (3 peaks):				555.6	RPD = 118*
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks					
Aroclor-1232	1	8.257	-0.041	69713	108.5	1	8.536	-0.012	251937	134.3
Aroclor-1232	2	8.764	-0.020	186060	85.1	2	9.275	-0.003	114325	32.7
Aroclor-1232	3	8.931	-0.028	72356	84.0	3	9.673	-0.032	66321	70.5
Aroclor-1232	4	10.355	0.027	726025	745.2	4	10.264	0.006	103799	73.5
Total Col1Ave (4 peaks):				255.7	Total Col2Ave (4 peaks):				77.7	RPD = 107*
Corrected Ave (3 peaks):				92.6	Corrected Ave (3 peaks):				58.9	RPD = 44*
Aroclor-1242	1	8.257	-0.038	69713	56.6	1	8.536	-0.008	251937	78.7
Aroclor-1242	2	8.764	-0.020	186060	44.1	2	9.275	0.001	114325	17.5
Aroclor-1242	3	8.931	-0.026	72356	44.0	3	9.673	-0.027	66321	38.3
Aroclor-1242	4	10.535	-0.037	269173	179.2	4	11.138	-0.024	112559	41.9
Total Col1Ave (4 peaks):				81.0	Total Col2Ave (4 peaks):				44.1	RPD = 59*
Corrected Ave (3 peaks):				48.2	Corrected Ave (3 peaks):				32.6	RPD = 39
Aroclor-1248	1	9.343	-0.007	68955	40.8	1	9.798	-0.008	151772	50.0
Aroclor-1248	2	9.686	0.006	26546	12.8	2	10.264	0.013	103799	31.1
Aroclor-1248	3	10.355	0.032	726025	236.1	3	10.800	0.001	74169	21.8
Aroclor-1248	4	10.535	-0.035	269173	113.1	4	11.138	-0.022	112559	25.7
Total Col1Ave (4 peaks):				100.7	Total Col2Ave (4 peaks):				32.2	RPD = 103*
Corrected Ave (3 peaks):				55.6	Corrected Ave (3 peaks):				26.2	RPD = 72*
Aroclor-1254	1	10.355	0.024	726025	276.8	1	10.864	-0.002	124638	38.6
Aroclor-1254	2	10.652	0.000	107475	29.7	2	11.036	0.000	129675	31.5
Aroclor-1254	3	11.053	0.017	156543	68.7	3	11.575	0.002	57821	17.6
Aroclor-1254	4	11.178	0.003	158034	36.6	4	11.727	0.002	167873	24.1
Aroclor-1254	5	11.892	0.000	65594	22.8	5	12.509	0.000	116002	27.6
Total Col1Ave (5 peaks):				86.9	Total Col2Ave (5 peaks):				27.9	RPD = 103*
Corrected Ave (4 peaks):				39.4	Corrected Ave (4 peaks):				25.2	RPD = 44*
Aroclor-1260	1	11.835	0.003	50064	11.9	1	12.735	0.002	151928	23.2
Aroclor-1260	2	12.437	0.001	58031	21.2	2	13.509	0.002	117120	11.6
Aroclor-1260	3	12.739	-0.011	409073	149.9	3	13.998	-0.003	80307	12.0
Aroclor-1260	4	13.485	-0.001	75309	22.0	4	14.539	-0.019	62177	25.4
Aroclor-1260	5	13.596	0.010	123200	90.0	NS	---			----
Total Col1Ave (5 peaks):				59.0	Total Col2Ave (4 peaks):				18.1	RPD = 106*
Corrected Ave (4 peaks):				36.3	Corrected Ave (3 peaks):				15.6	RPD = 80*
Aroclor-1262	1	12.437	-0.006	58031	13.5	1	12.776	-0.055	147726	23.5
Aroclor-1262	2	12.739	-0.019	409073	131.6	2	13.268	-0.006	32460	6.1
Aroclor-1262	3	13.108	-0.013	225553	27.7	3	13.509	-0.004	117120	9.9
Aroclor-1262	4	13.596	0.005	123200	44.9	4	13.926	-0.031	186634	41.4
Aroclor-1262	5	13.661	0.007	40846	14.1	5	13.998	-0.011	80307	11.1
Total Col1Ave (5 peaks):				46.3	Total Col2Ave (5 peaks):				18.4	RPD = 86*
Corrected Ave (4 peaks):				25.0	Corrected Ave (4 peaks):				12.7	RPD = 66*
Aroclor-1268	1	13.596	0.006	123200	14.6	1	13.926	-0.029	186634	15.5

Aroclor-1268 2	13.661	0.009	40846	5.3	2	13.998	-0.013	80307	7.1
Aroclor-1268 3	13.989	0.014	80283	12.4	3	14.313	-0.010	69027	7.7
Aroclor-1268 4	14.557	-0.020	23190	1.2	4	14.963	0.051	232173	8.3

Total Col1Ave (4 peaks): 8.4 Total Col2Ave (4 peaks): 9.6 RPD = 14

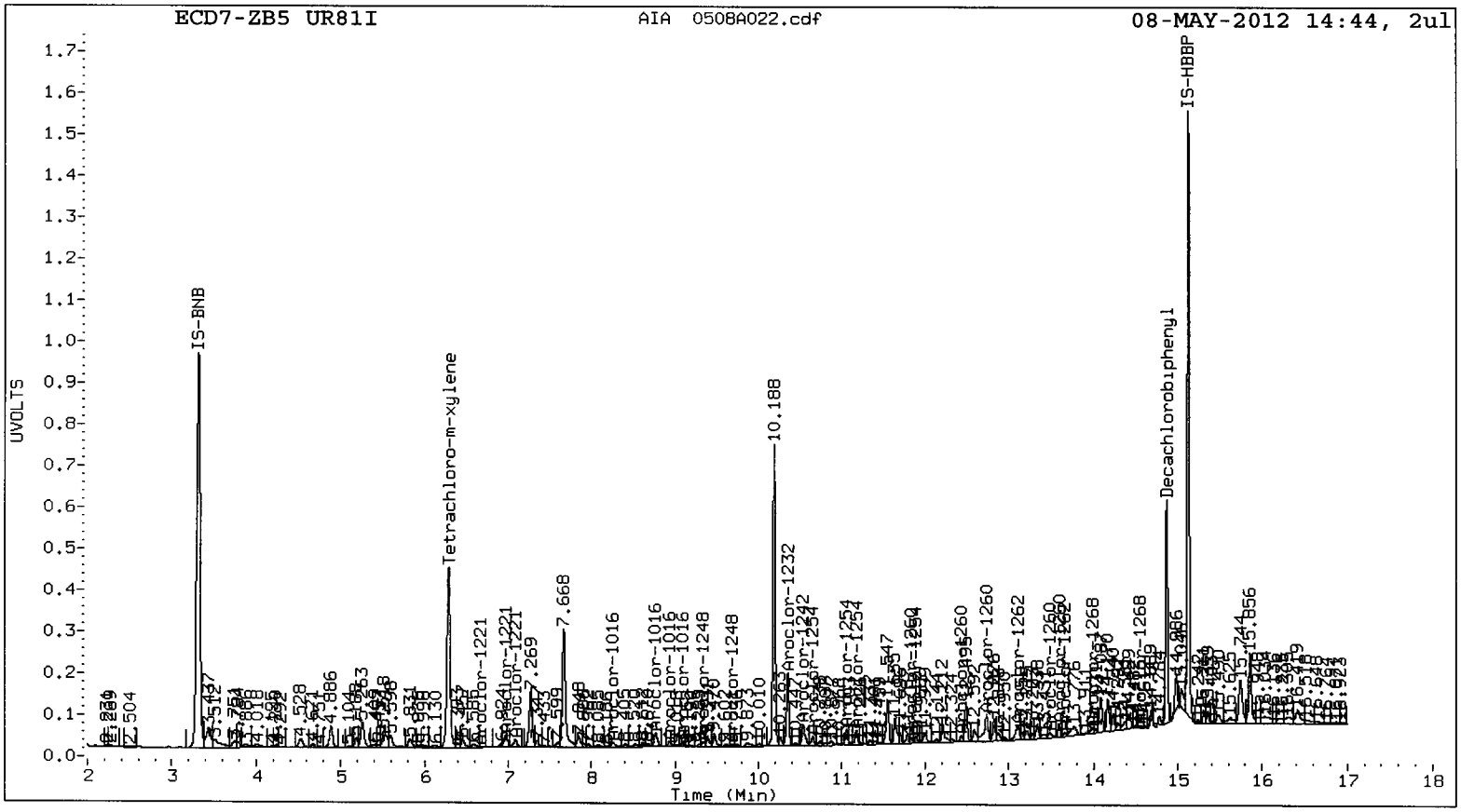
Corrected Ave (3 peaks): 6.3 Corrected Ave (3 peaks): 7.7 RPD = 20

Total PCB Area Col1 (6.384 - 14.765) = 14895450 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 20425220 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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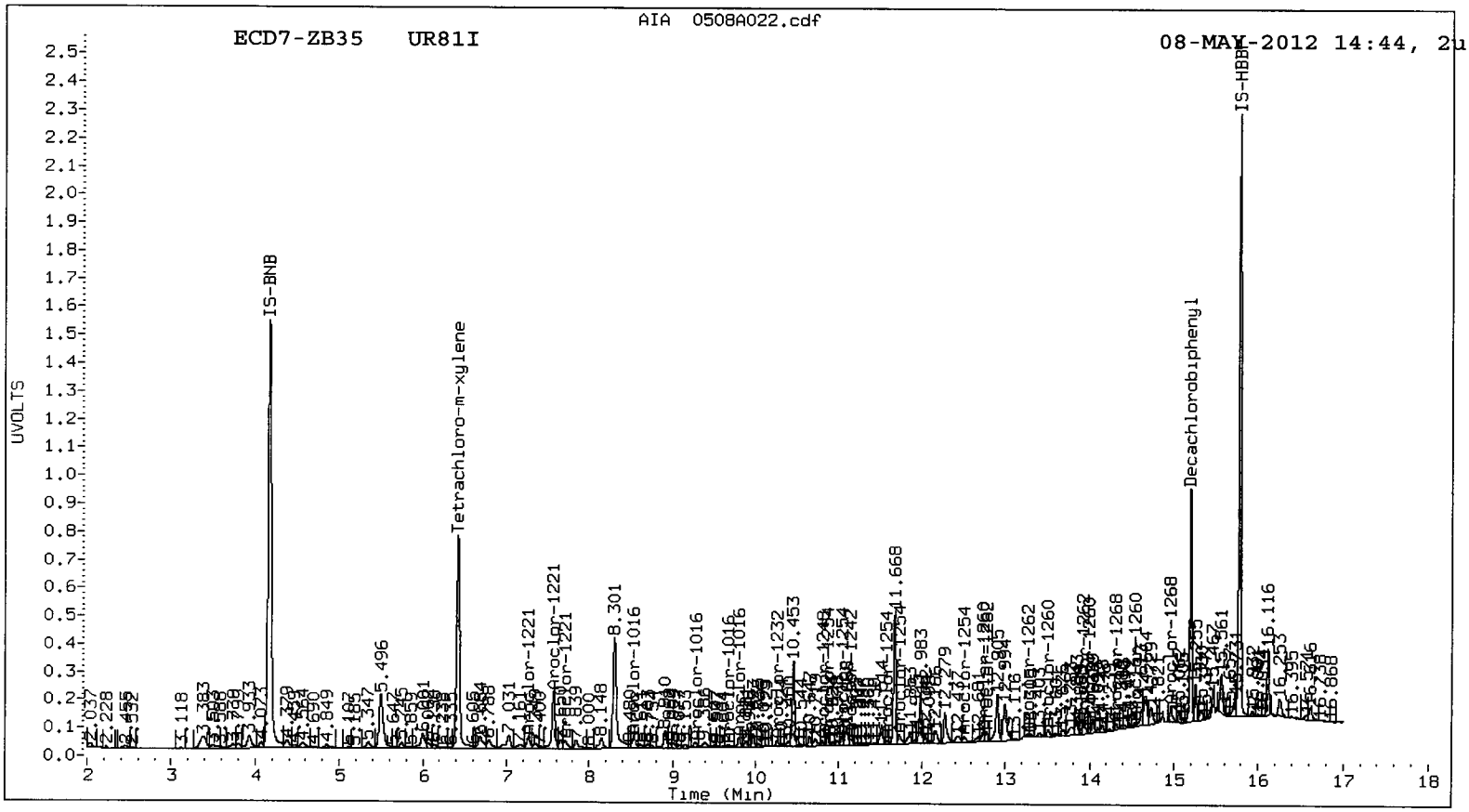
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
10.188
7.668
Decachlorobiphenyl
IS-HBBP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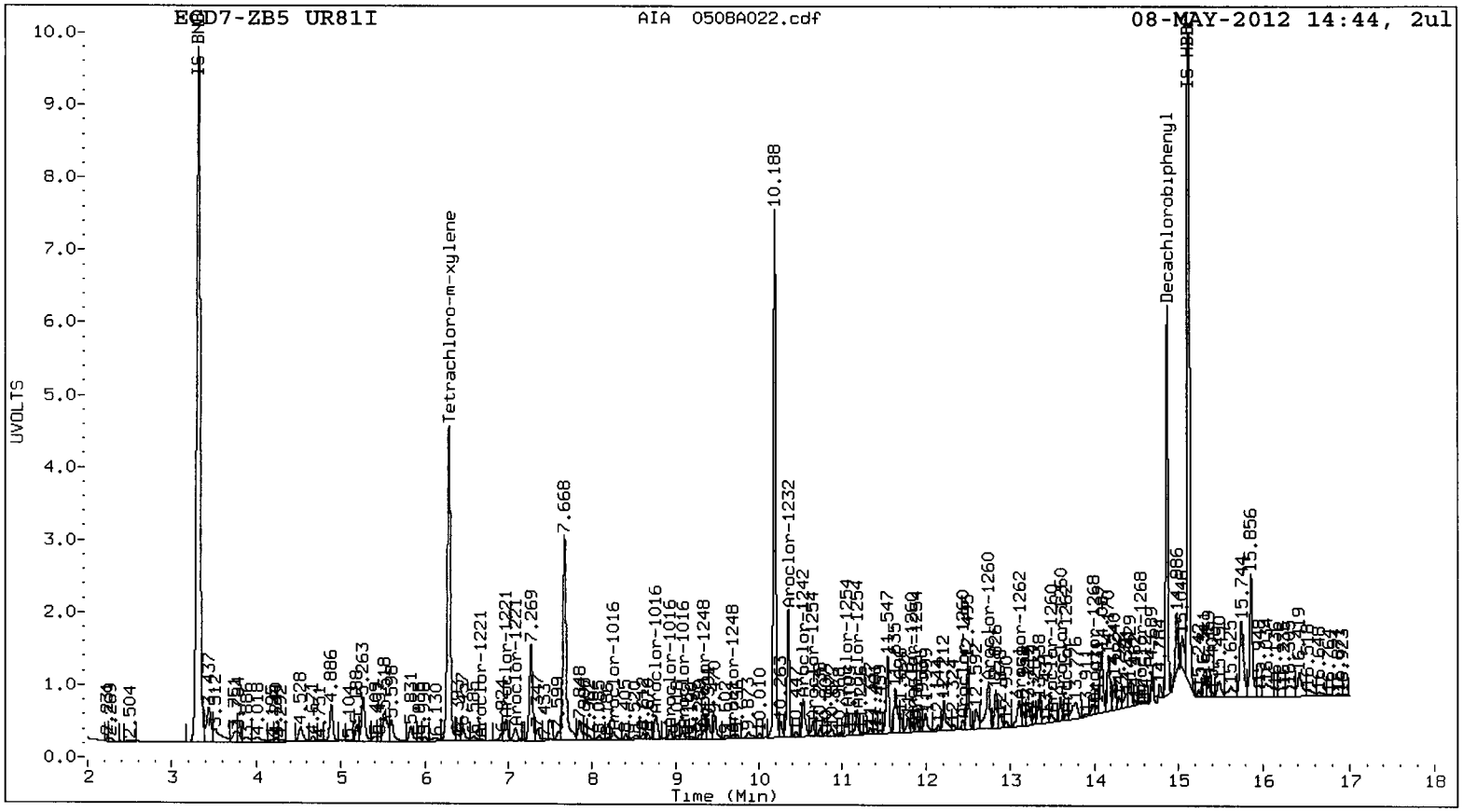
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBP
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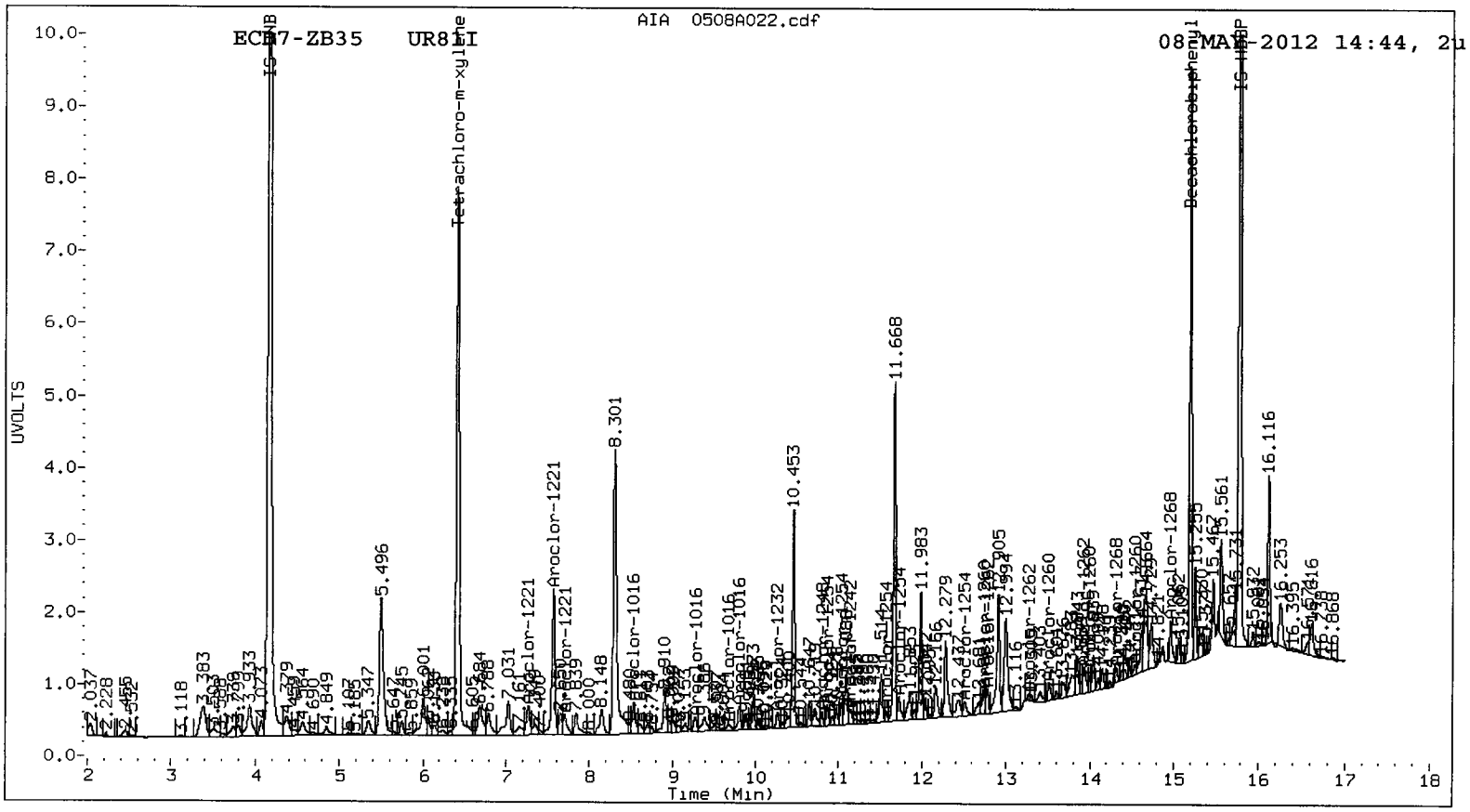
7.668
7.269
15.856
15.744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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBP
11.668
8.301
10.453
5.496
16.116
15.561
15.253

UR81 : 02118

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A023.d
Data file 2: 20120505.B/0508-2.b/0508A023.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UR81J
Client ID: IJ12-08A
Injection Date: 08-MAY-2012 15:05
Report Date: 05/09/2012 08:35
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.290	0.006	2065498	6.415	0.005	3674744	31.3	34.4	9.6	Tetrachloro-m-xylen
14.868	0.003	1599007	15.199	0.005	3527766	25.9	39.8	42.3*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

A 05/09/12

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	78.2	86.1
Decachlorobiphenyl	64.7	99.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5590180	-4.3
Hexabromobiphenyl	4847662	5084638	4.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8538858	-6.7
Hexabromobiphenyl	6845779	7737978	13.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.259	-0.032	107242	65.6	1	8.534	-0.005	382911	88.6
Aroclor-1016	2	8.764	-0.015	186933	33.4	2	9.274	0.004	130702	14.9
Aroclor-1016	3	8.932	-0.019	82157	37.5	3	9.704	0.007	18234	8.0
Aroclor-1016	4	9.089	0.010	74692	49.2	4	9.801	-0.005	172955	65.6
Total Col1Ave (4 peaks):				46.4		Total Col2Ave (4 peaks):			44.3	RPD = 5
Corrected Ave (3 peaks):				40.0		Corrected Ave (3 peaks):			29.5	RPD = 30
Aroclor-1221	1	6.672	-0.071	19133	29.6	1	7.265	0.023	317097	258.2
Aroclor-1221	2	6.974	0.020	183802	379.9	2	7.567	0.025	962226	1271.2
Aroclor-1221	3	7.081	0.004	31747	19.7	3	7.704	0.024	286248	126.8
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				143.1		Total Col2Ave (3 peaks):			552.1	RPD = 118*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	8.259	-0.040	107242	166.1	1	8.534	-0.014	382911	206.1
Aroclor-1232	2	8.764	-0.020	186933	85.1	2	9.274	-0.004	130702	37.8
Aroclor-1232	3	8.932	-0.026	82157	94.8	3	9.704	0.000	18234	19.6
Aroclor-1232	4	10.355	0.027	830942	848.4	4	10.262	0.005	149825	107.2
Total Col1Ave (4 peaks):				298.6		Total Col2Ave (4 peaks):			92.6	RPD = 105*
Corrected Ave (3 peaks):				115.3		Corrected Ave (3 peaks):			54.8	RPD = 71*
Aroclor-1242	1	8.259	-0.037	107242	86.6	1	8.534	-0.009	382911	120.8
Aroclor-1242	2	8.764	-0.019	186933	44.1	2	9.274	-0.001	130702	20.2
Aroclor-1242	3	8.932	-0.024	82157	49.7	3	9.704	0.004	18234	10.6
Aroclor-1242	4	10.535	-0.037	351597	232.8	4	11.137	-0.025	163725	61.5
Total Col1Ave (4 peaks):				103.3		Total Col2Ave (4 peaks):			53.3	RPD = 64*
Corrected Ave (3 peaks):				60.1		Corrected Ave (3 peaks):			30.8	RPD = 65*
Aroclor-1248	1	9.347	-0.003	99157	58.3	1	9.801	-0.005	172955	57.5
Aroclor-1248	2	9.686	0.005	46302	22.3	2	10.262	0.012	149825	45.3
Aroclor-1248	3	10.355	0.033	830942	268.8	3	10.801	0.001	238330	70.9
Aroclor-1248	4	10.535	-0.035	351597	146.9	4	11.137	-0.023	163725	37.8
Total Col1Ave (4 peaks):				124.1		Total Col2Ave (4 peaks):			52.9	RPD = 80*
Corrected Ave (3 peaks):				75.8		Corrected Ave (3 peaks):			46.9	RPD = 47*
Aroclor-1254	1	10.355	0.024	830942	315.1	1	10.865	-0.002	310700	97.2
Aroclor-1254	2	10.652	0.000	164939	45.4	2	11.037	0.000	190621	46.7
Aroclor-1254	3	11.052	0.016	250818	109.4	3	11.575	0.002	109982	33.9
Aroclor-1254	4	11.178	0.003	231403	53.3	4	11.728	0.002	312901	45.3
Aroclor-1254	5	11.891	-0.001	100565	34.7	5	12.509	0.000	143175	34.4
Total Col1Ave (5 peaks):				111.6		Total Col2Ave (5 peaks):			51.5	RPD = 74*
Corrected Ave (4 peaks):				60.7		Corrected Ave (4 peaks):			40.1	RPD = 41*
Aroclor-1260	1	11.836	0.004	77097	17.3	1	12.735	0.002	203746	29.4
Aroclor-1260	2	12.438	0.002	51940	17.9	2	13.513	0.006	197412	18.5
Aroclor-1260	3	12.741	-0.009	413401	143.2	3	14.000	-0.001	82854	11.7
Aroclor-1260	4	13.486	0.001	97625	27.0	4	14.537	-0.022	78693	30.3
Aroclor-1260	5	13.597	0.011	133893	92.5	NS	---			----
Total Col1Ave (5 peaks):				59.6		Total Col2Ave (4 peaks):			22.4	RPD = 91*
Corrected Ave (4 peaks):				38.7		Corrected Ave (3 peaks):			19.8	RPD = 64*
Aroclor-1262	1	12.438	-0.005	51940	11.4	1	12.776	-0.055	134254	20.1
Aroclor-1262	2	12.741	-0.016	413401	125.7	2	13.268	-0.006	70984	12.6
Aroclor-1262	3	13.110	-0.010	380103	44.0	3	13.513	0.000	197412	15.7
Aroclor-1262	4	13.597	0.006	133893	46.2	4	13.925	-0.032	335448	70.0
Aroclor-1262	5	13.659	0.005	53109	17.3	5	14.000	-0.009	82854	10.8
Total Col1Ave (5 peaks):				48.9		Total Col2Ave (5 peaks):			25.9	RPD = 62*
Corrected Ave (4 peaks):				29.7		Corrected Ave (4 peaks):			14.8	RPD = 67*
Aroclor-1268	1	13.597	0.007	133893	15.0	1	13.925	-0.030	335448	26.2

Aroclor-1268 2	13.659	0.007	53109	6.5	2	14.000	-0.010	82854	6.9
Aroclor-1268 3	13.993	0.018	116803	17.0	3	14.312	-0.010	110510	11.6
Aroclor-1268 4	14.484	-0.092	88173	4.2	4	14.965	0.053	235218	7.9

Total Col1Ave (4 peaks): 10.7 Total Col2Ave (4 peaks): 13.1 RPD = 21

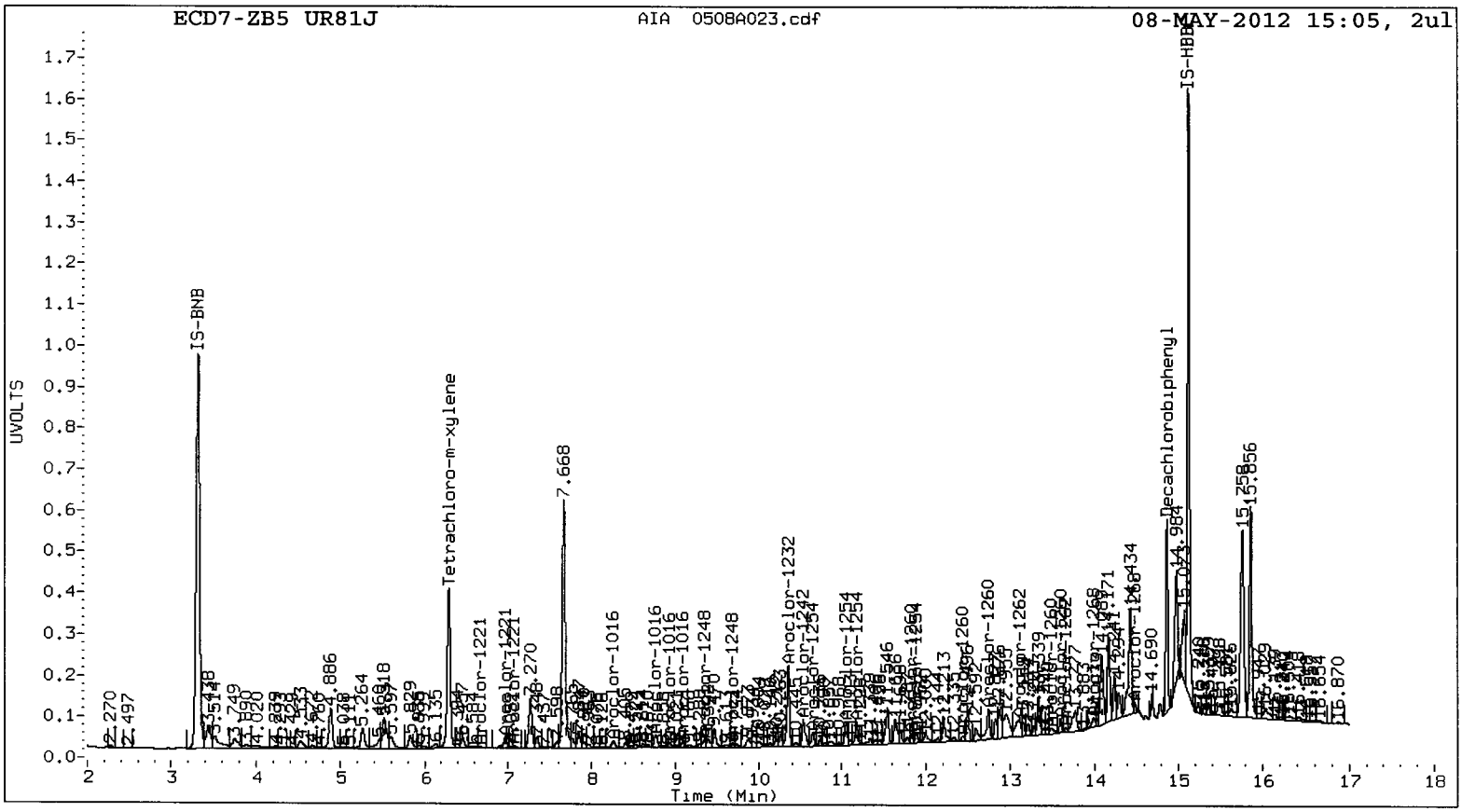
Corrected Ave (3 peaks): 8.6 Corrected Ave (3 peaks): 8.8 RPD = 3

Total PCB Area Col1 (6.384 - 14.765) = 19414117 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 28426966 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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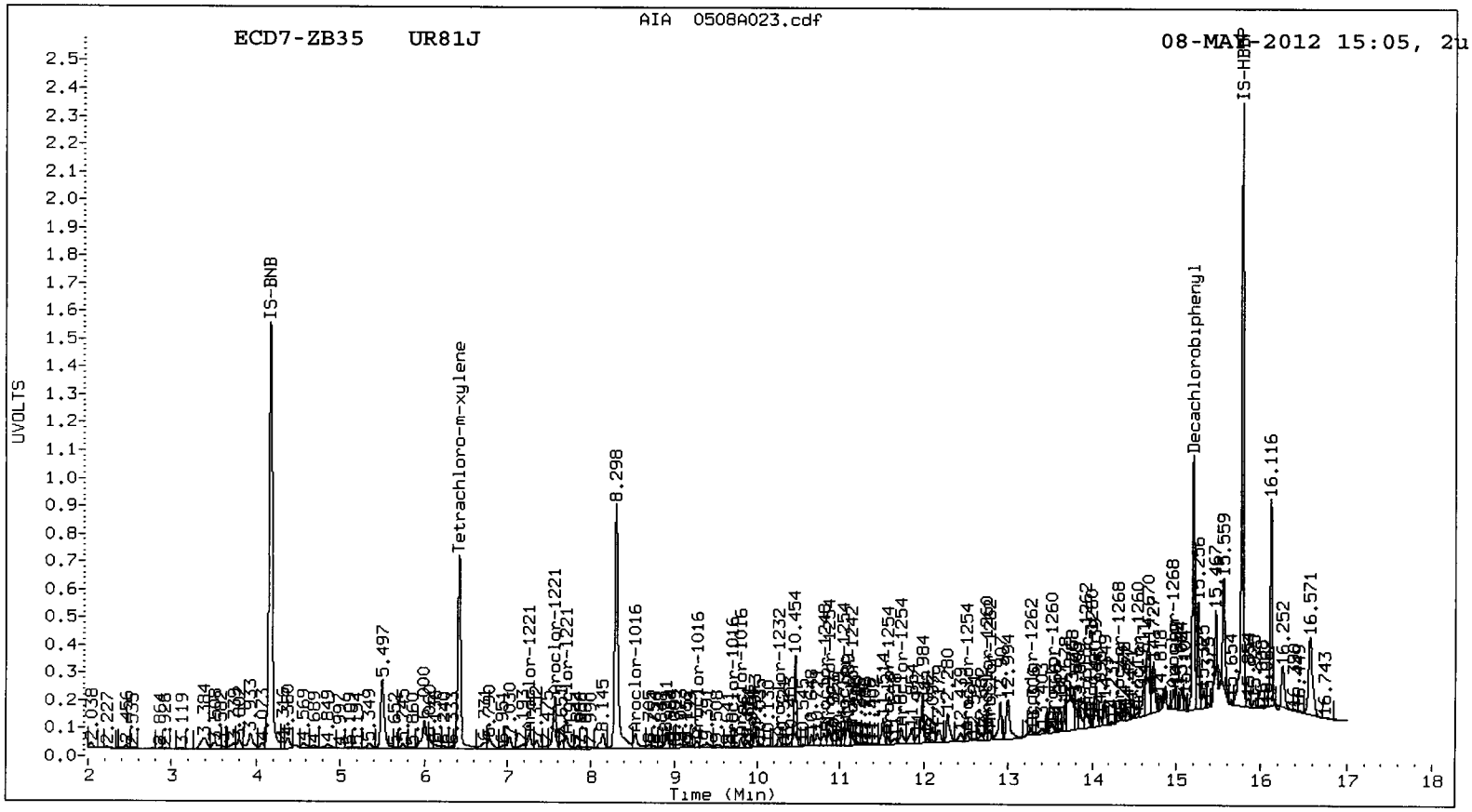
Time (Min)
IS-BNB
Tetrachloro-m-xylene
7.668
Decachlorobiphenyl
IS-HBB
15.856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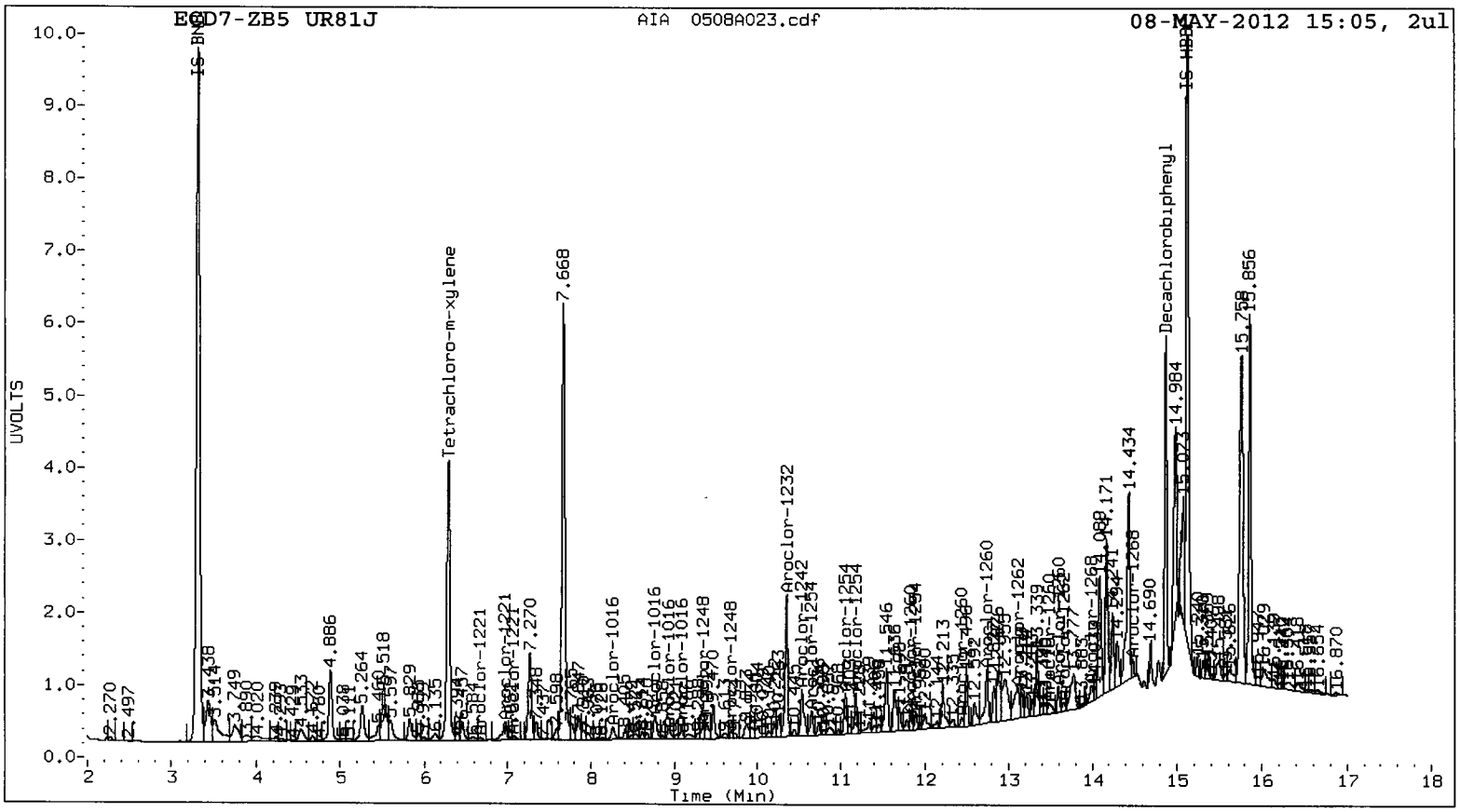
IS-HBB
16.116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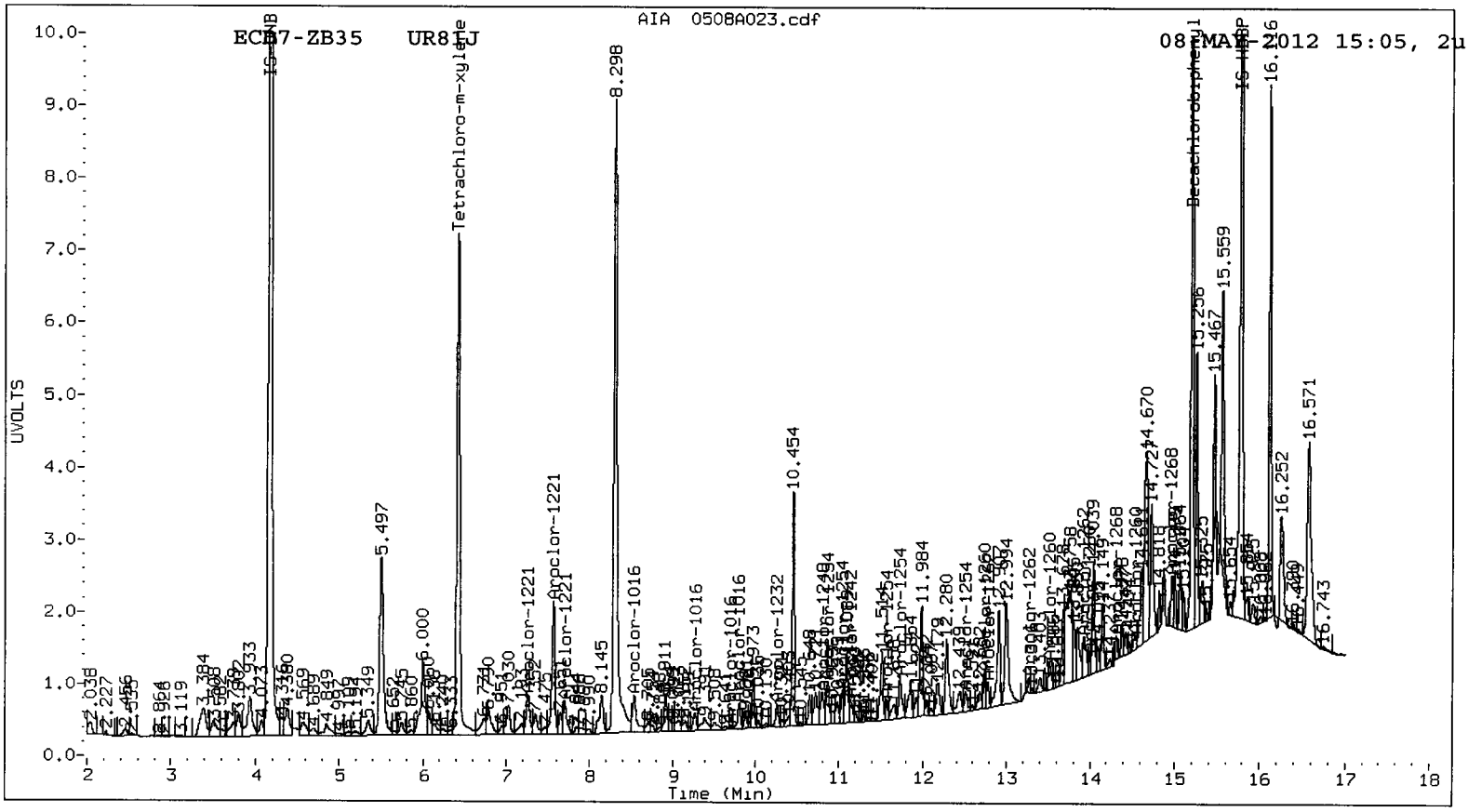
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Decachlorobiphenyl
IS-HBP

UR81 : 02123

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A025.d
Data file 2: 20120505.B/0508-2.b/0508A025.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 08-MAY-2012 15:47
Report Date: 05/09/2012 08:36
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.288	0.004	1582767	6.414	0.004	2570058	20.2	19.4	4.0	Tetrachloro-m-xylen
14.868	0.002	1305383	15.196	0.002	1774095	18.6	18.4	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.6	48.6
Decachlorobiphenyl	46.6	46.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	6624392	13.4
Hexabromobiphenyl	4847662	5757562	18.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	10586963	15.6
Hexabromobiphenyl	6845779	8400574	22.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1242	1	8.295	0.000	361336	246.1	1	8.543	0.000	950499	241.8
Aroclor-1242	2	8.783	0.000	1237868	246.2	2	9.274	0.000	1949752	242.7
Aroclor-1242	3	8.956	0.000	479252	244.6	3	9.700	0.000	506745	238.5
Aroclor-1242	4	10.572	0.000	443854	248.0	4	11.162	0.000	775195	234.9

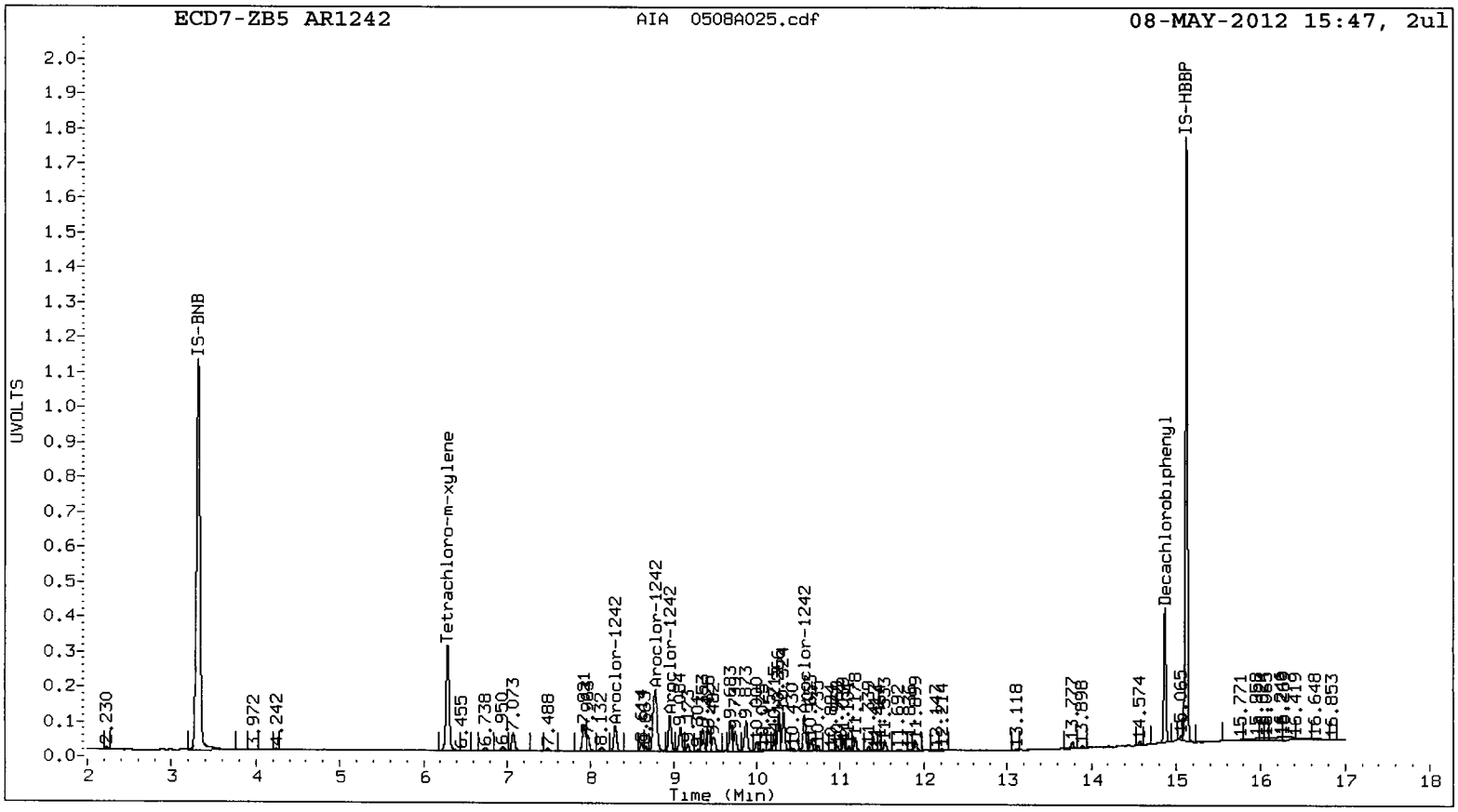
Total Col1Ave (4 peaks): 246.2 Total Col2Ave (4 peaks): 239.5 RPD = 3

Corrected Ave (3 peaks): 245.6 Corrected Ave (3 peaks): 238.4 RPD = 3

Total PCB Area Col1 (6.384 - 14.765) = 8437034 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 13992934 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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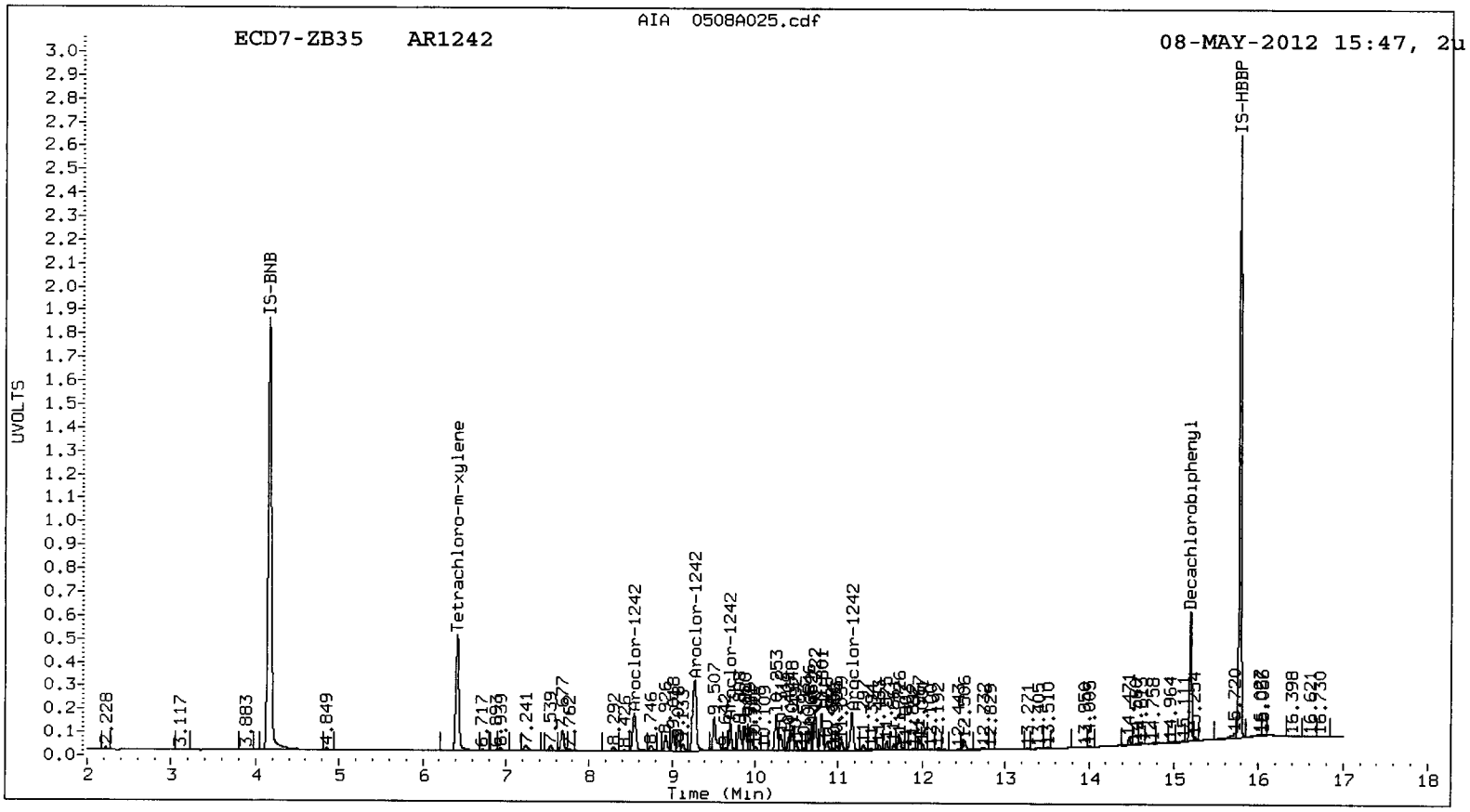
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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08-MAY-2012 15:47, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0508-1.b/0508A026.d
Data file 2: 20120505.B/0508-2.b/0508A026.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 08-MAY-2012 16:08
Report Date: 05/09/2012 08:36
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.290	0.006	1810752	6.415	0.005	2875880	20.6	19.3	6.6	Tetrachloro-m-xylen
14.868	0.003	1497249	15.196	0.002	2025493	18.9	18.6	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.5	48.3
Decachlorobiphenyl	47.4	46.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	7432505	27.2
Hexabromobiphenyl	4847662	6501865	34.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	11918745	30.2
Hexabromobiphenyl	6845779	9499577	38.8

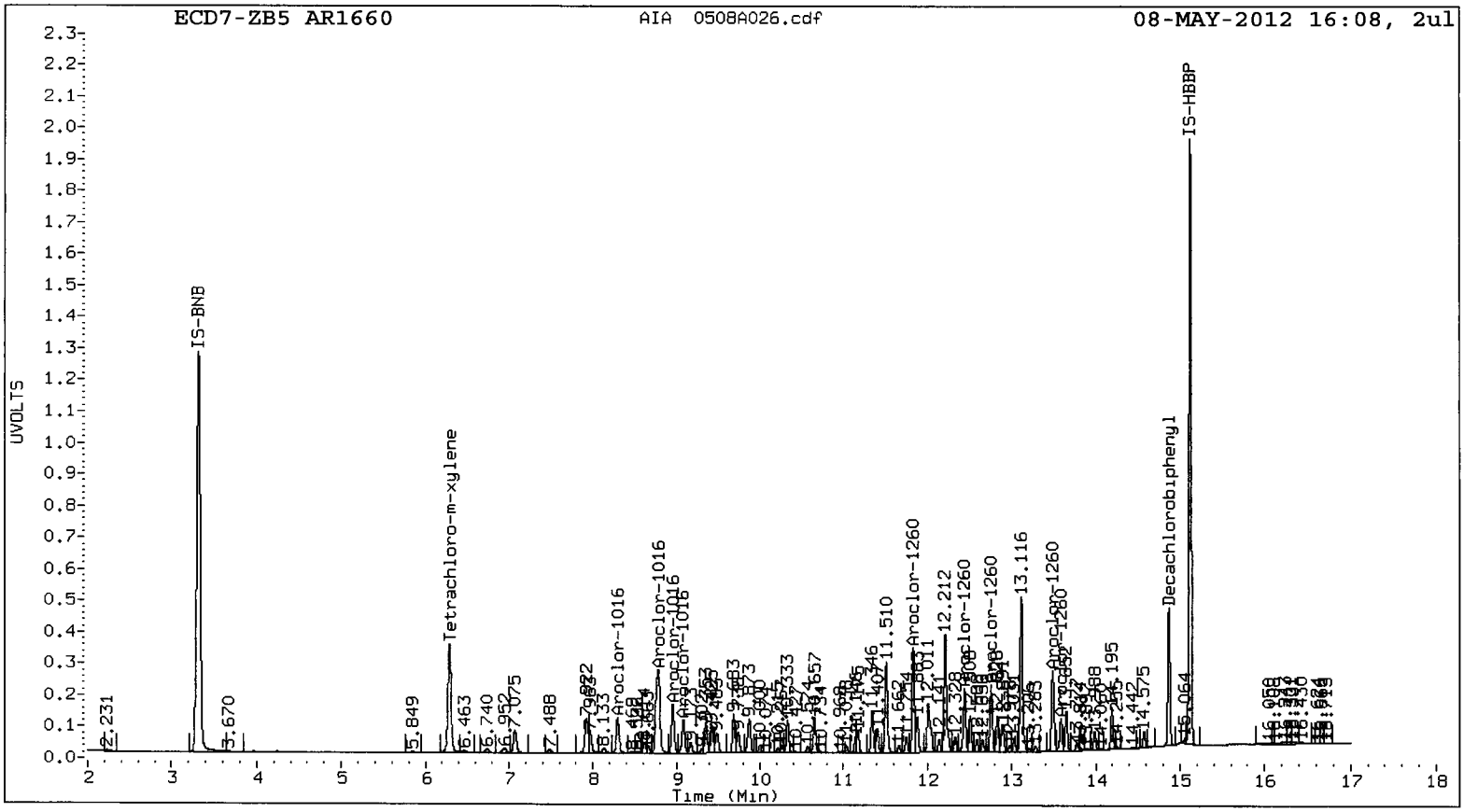
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.296	0.005	529278	243.6	1	8.544	0.006	1380754	228.8
Aroclor-1016	2	8.783	0.004	1831118	245.7	2	9.275	0.005	2856043	233.4
Aroclor-1016	3	8.956	0.004	705405	242.4	3	9.700	0.003	728915	229.8
Aroclor-1016	4	9.084	0.004	485722	240.6	4	9.808	0.003	814689	221.4
Total Col1Ave (4 peaks):				243.1		Total Col2Ave (4 peaks):			228.4	RPD = 6
Corrected Ave (3 peaks):				242.2		Corrected Ave (3 peaks):			226.7	RPD = 7
Aroclor-1260	1	11.835	0.003	1289492	226.6	1	12.736	0.003	1817199	213.3
Aroclor-1260	2	12.440	0.003	832719	224.7	2	13.509	0.002	2912516	221.9
Aroclor-1260	3	12.754	0.004	841819	228.1	3	14.004	0.003	1891367	217.1
Aroclor-1260	4	13.488	0.003	1074660	232.4	4	14.561	0.002	708175	221.9
Aroclor-1260	5	13.588	0.002	416372	224.9	NS	---			----
Total Col1Ave (5 peaks):				227.3		Total Col2Ave (4 peaks):			218.6	RPD = 4
Corrected Ave (4 peaks):				226.1		Corrected Ave (3 peaks):			217.4	RPD = 4

Total PCB Area Col1 (6.384 - 14.765) = 25433937 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.094) = 38741270 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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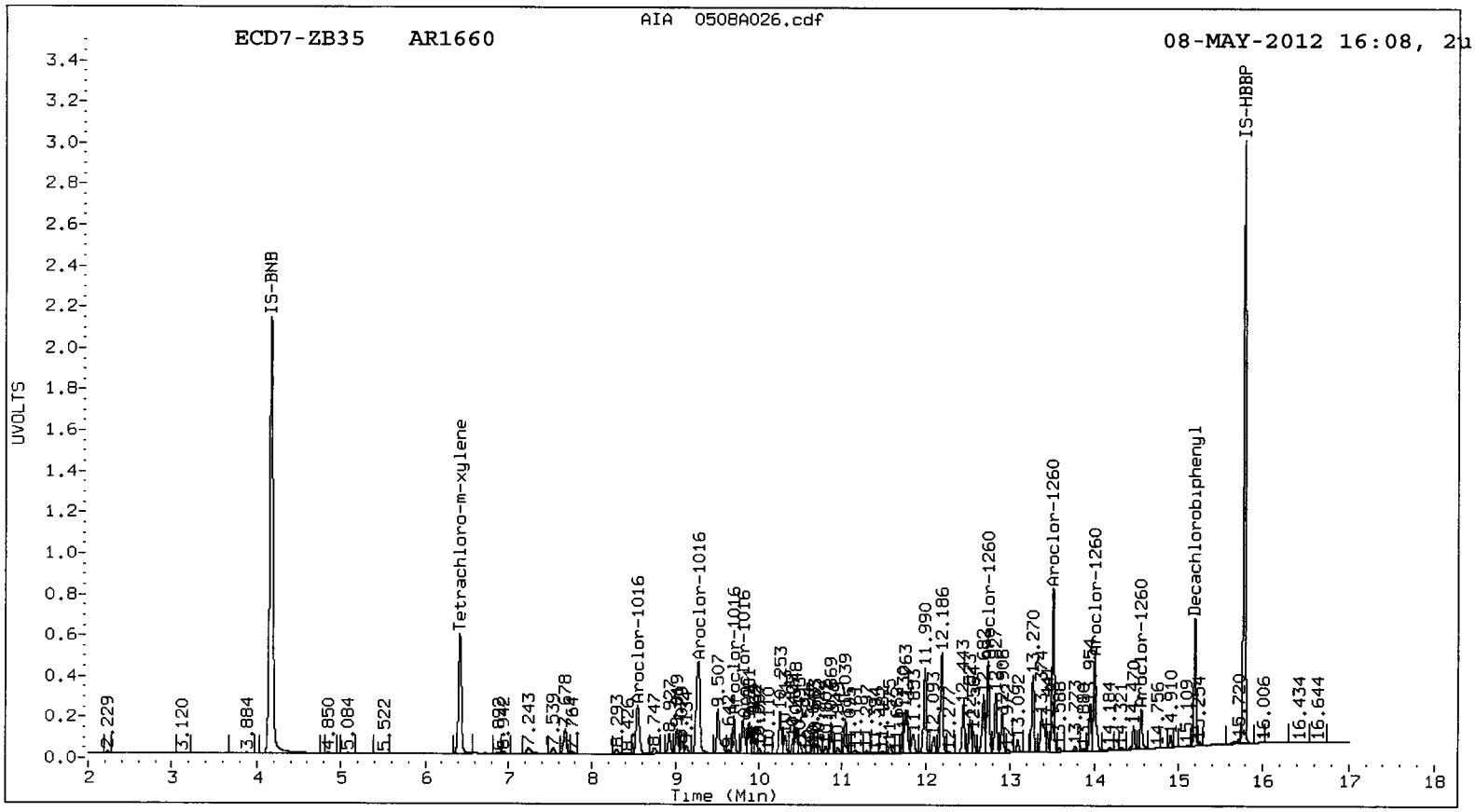
08-MAY-2012 16:08, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: US18 Client ID: I & J waterway RI/FS

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): PCB's TCMX DCB

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 05/05/12 Analysis Start: 05/09/12

Endrin/DDT Breakdown <15%? YES / NO / NA

Method Blank In Control? YES / NO

ICal Meets RF & %RSD Criteria? YES / NO

LCS/LCSD Recovery In Control? YES / NO

CCal Meets RF & %RSD Criteria? YES / NO

Surrogate Recovery In Control? YES / NO

Manual Integrations for ICal? YES / NO

Manual Integrations for Samples? YES / NO

Internal Standard Meets Criteria? YES / NO / NA

Special Analysis Criteria Met? YES / NO / NA

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: [signature] **Date:** 05/10/12

Reviewer: [signature] **Date:** 5/10/12

Form 4060F Version 007 6/18/10

Analytical Resources Inc.: Organics Instrument Log

ECD7 Serial No.: US00003975

Date: 05/09/12 Analysis: PCBs Analyst: [illegible]

Column 1 Serial No.: [illegible] Column Type: [illegible]

Column 2 Serial No.: 175 588 Column Type: [illegible]

GC Method: PCB ICal Date: 05/05/11

IS	Ical/Ccal	ICV
1878-3	1920-3,4	1923-1,2,3,4,5
	1921-1,2,3,4	1928-2

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	09-MAY-2012 06:29	0509A001.d	1	AR1248
2	09-MAY-2012 06:50	0509A002.d	1	AR1660
3	09-MAY-2012 07:10	0509A003.d	1	UT44MBW1
4	09-MAY-2012 07:31	0509A004.d	1	UT44LCSW1
5	09-MAY-2012 07:52	0509A005.d	1	UT44LCSD1
6	09-MAY-2012 08:13	0509A006.d	1	UT44A
7	09-MAY-2012 08:34	0509A007.d	1	AR1254
8	09-MAY-2012 08:55	0509A008.d	1	AR1660
9	09-MAY-2012 12:07	0509A010.d	1	DDT
10	09-MAY-2012 12:28	0509A011.d	1	DDT BD
11	09-MAY-2012 13:42	0509A013.d	1	AR1254
12	09-MAY-2012 14:03	0509A014.d	1	AR1660
13	09-MAY-2012 14:24	0509A015.d	1	US24MBS1
14	09-MAY-2012 14:45	0509A016.d	1	US24LCSS1
15	09-MAY-2012 15:06	0509A017.d	1	US24LCSD1
16	09-MAY-2012 15:26	0509A018.d	1	US24QLS
17	09-MAY-2012 15:47	0509A019.d	5	US24A
18	09-MAY-2012 16:08	0509A020.d	1	US18MBS1
19	09-MAY-2012 16:29	0509A021.d	1	US18LCSS
20	09-MAY-2012 16:50	0509A022.d	1	US18LCSD
21	09-MAY-2012 17:11	0509A023.d	1	US18A
22	09-MAY-2012 17:32	0509A024.d	1	US18B
23	09-MAY-2012 17:53	0509A025.d	1	AR1248
24	09-MAY-2012 18:14	0509A026.d	1	AR1660
25	09-MAY-2012 18:35	0509A027.d	1	UT32MBS1
26	09-MAY-2012 18:56	0509A028.d	1	UT32LCSS
27	09-MAY-2012 19:17	0509A029.d	1	UT32LCSD
28	09-MAY-2012 19:38	0509A030.d	5	UT32A
29	09-MAY-2012 19:58	0509A031.d	1	UT32B
30	09-MAY-2012 20:19	0509A032.d	5	UT32C
31	09-MAY-2012 20:40	0509A033.d	5	UT32D
32	09-MAY-2012 21:01	0509A034.d	1	UT32E
33	09-MAY-2012 21:22	0509A035.d	5	UT32F
34	09-MAY-2012 21:43	0509A036.d	5	UT32G
35	09-MAY-2012 22:04	0509A037.d	1	UT32H
36	09-MAY-2012 22:25	0509A038.d	1	AR1242
37	09-MAY-2012 22:46	0509A039.d	1	AR1660
38	09-MAY-2012 23:07	0509A040.d	1	AR1242
39	09-MAY-2012 23:28	0509A041.d	1	AR1660

Ever Start

05/10/12

Form 4131F
ECD7 Daily Run Log

Revision 001

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A013.d
Data file 2: 20120505.B/0509-2.b/0509A013.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 09-MAY-2012 13:42
Report Date: 05/10/2012 08:30
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.253	-0.031	1288781	6.364	-0.046	2175915	19.5	19.4	0.7	Tetrachloro-m-xylen
14.864	-0.003	1202206	15.191	-0.005	1594036	19.3	18.9	2.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

05/10/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	48.7	48.4
Decachlorobiphenyl	48.3	47.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5596240	-4.2
Hexabromobiphenyl	4847662	5121663	5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8995898	-1.8
Hexabromobiphenyl	6845779	7352610	7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	10.316	0.000	656286	248.6	1	10.847	0.000	849759	252.3
Aroclor-1254	2	10.639	0.000	909066	249.7	2	11.019	0.000	1092766	254.2
Aroclor-1254	3	11.023	0.000	574234	250.3	3	11.557	0.000	859482	251.1
Aroclor-1254	4	11.163	0.000	1093457	251.5	4	11.710	0.000	1849398	254.3
Aroclor-1254	5	11.882	0.000	731281	252.2	5	12.496	0.000	1121145	255.7

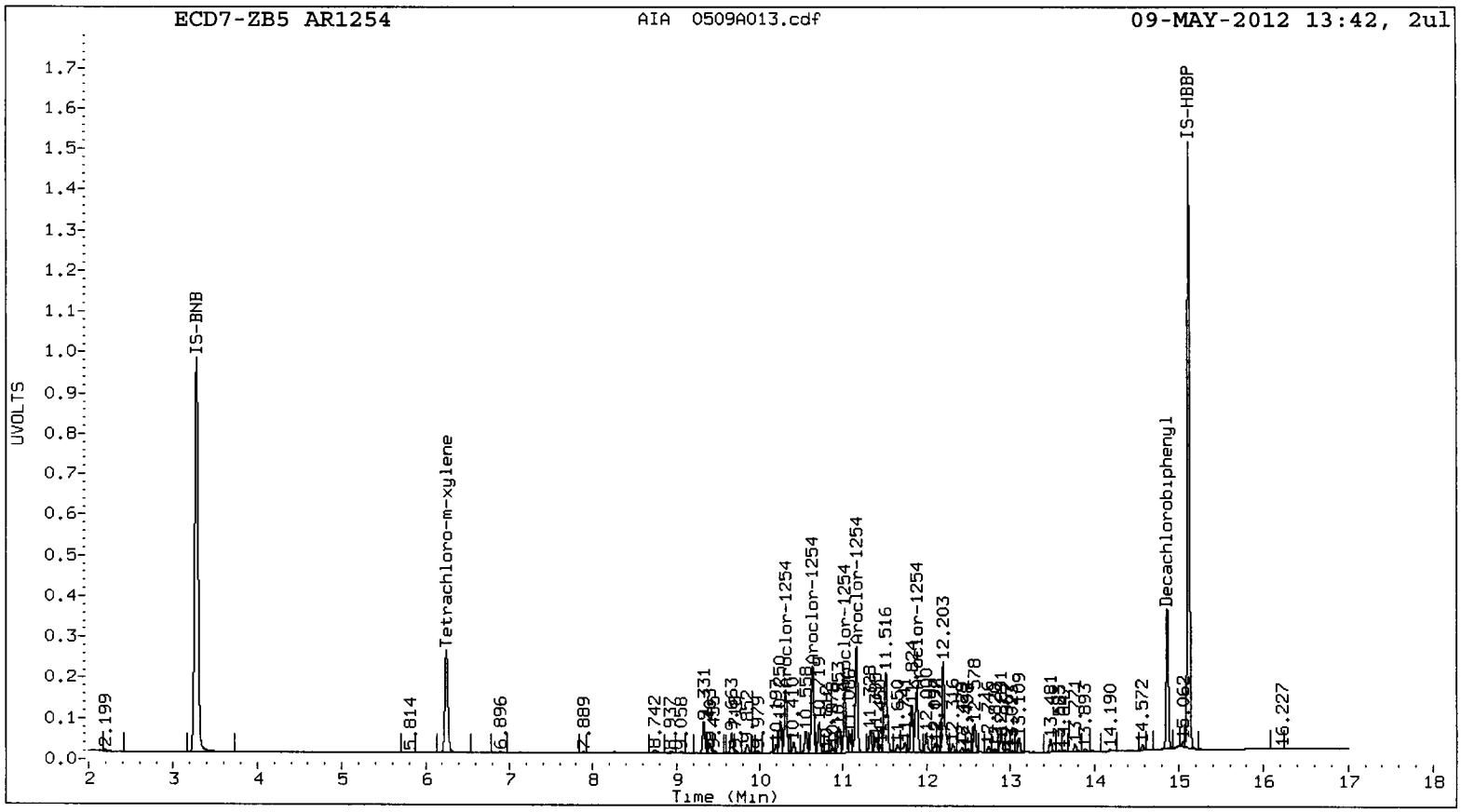
Total Col1Ave (5 peaks): 250.5 Total Col2Ave (5 peaks): 253.5 RPD = 1
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 253.0 RPD = 1

Total PCB Area Col1 (6.384 - 14.767) = 11273823 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 18418247 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR81:02133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09-MAY-2012 13:42, 2ul
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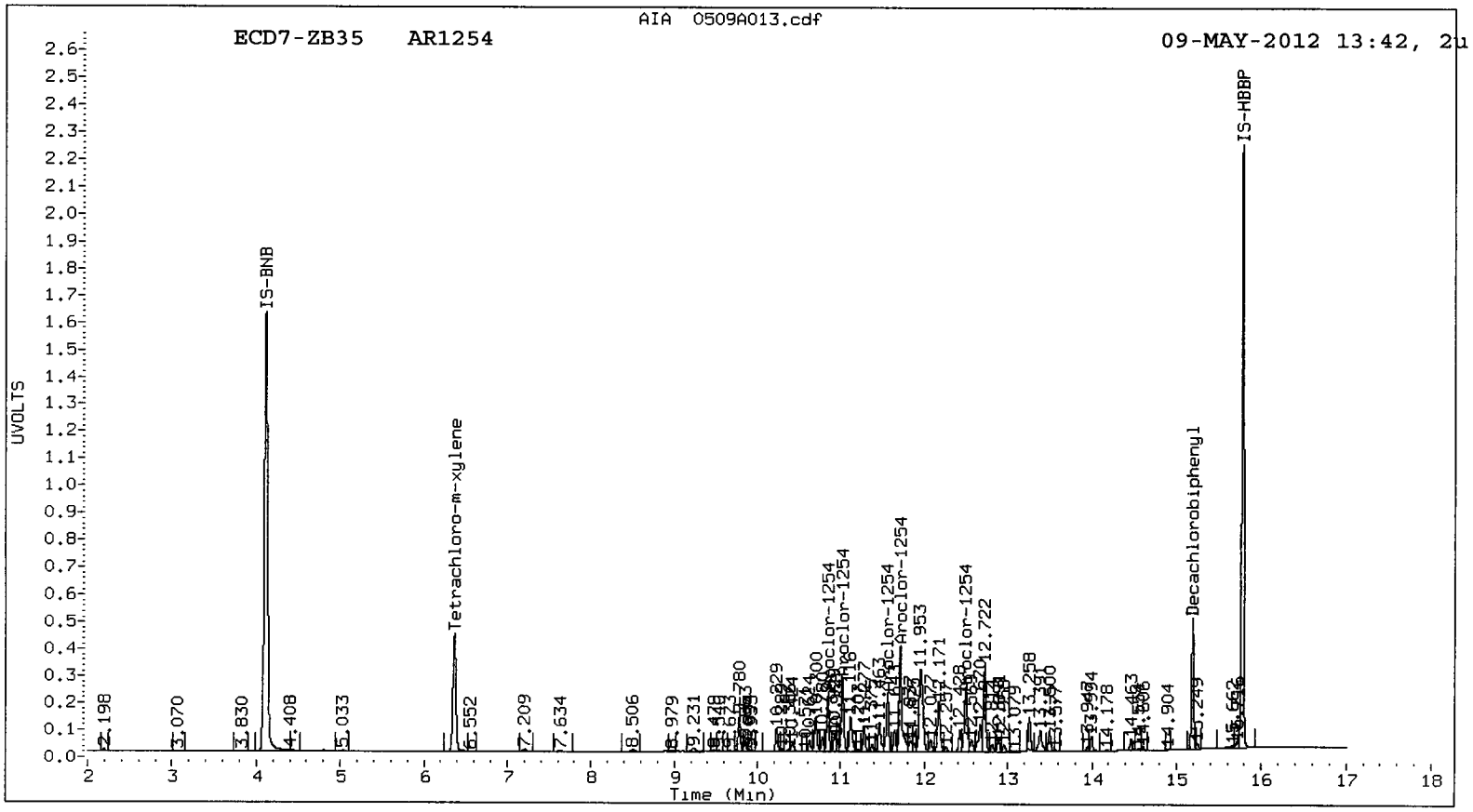
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1254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ECD7-ZB35 AR1254
09-MAY-2012 13:42, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1254

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A014.d
Data file 2: 20120505.B/0509-2.b/0509A014.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 09-MAY-2012 14:03
Report Date: 05/10/2012 08:30
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.269	-0.015	1427124	6.394	-0.016	2345544	20.5	19.7	4.1	Tetrachloro-m-xylen
14.865	-0.002	1298907	15.193	-0.002	1754607	19.9	19.3	2.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.2	49.1
Decachlorobiphenyl	49.6	48.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5900438	1.0
Hexabromobiphenyl	4847662	5382025	11.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9548361	4.3
Hexabromobiphenyl	6845779	7924428	15.8

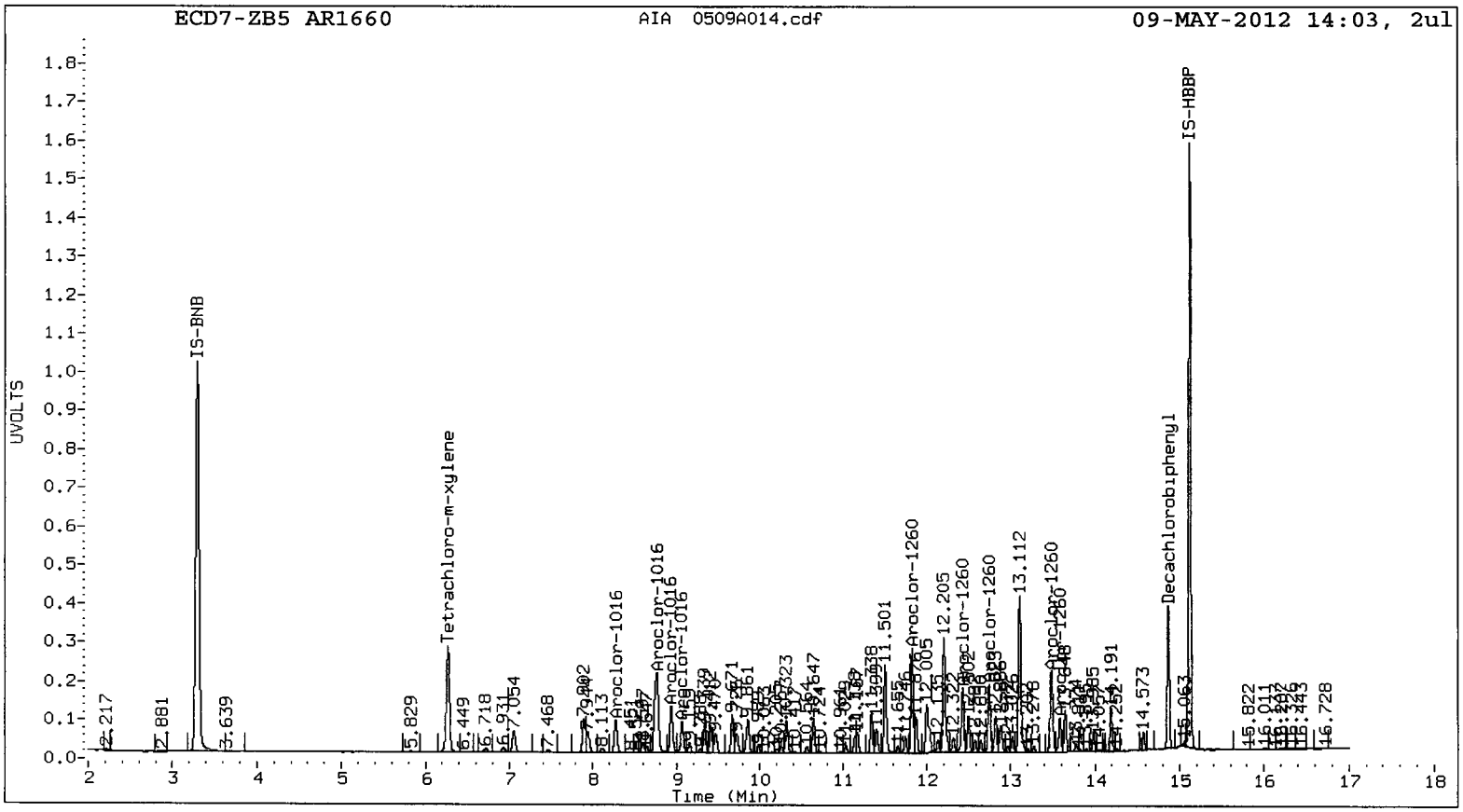
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.277	-0.014	425703	246.8	1	8.526	-0.014	1145680	237.0
Aroclor-1016	2	8.767	-0.012	1460518	246.9	2	9.259	-0.013	2377451	242.6
Aroclor-1016	3	8.940	-0.012	567667	245.7	3	9.687	-0.011	619524	243.8
Aroclor-1016	4	9.069	-0.012	389066	242.7	4	9.796	-0.010	699156	237.2
Total Col1Ave (4 peaks):				245.5		Total Col2Ave (4 peaks):			240.2	RPD = 2
Corrected Ave (3 peaks):				245.1		Corrected Ave (3 peaks):			238.9	RPD = 3
Aroclor-1260	1	11.828	-0.006	1066873	226.5	1	12.730	-0.005	1565046	220.2
Aroclor-1260	2	12.434	-0.005	697940	227.5	2	13.506	-0.003	2484835	227.0
Aroclor-1260	3	12.749	-0.004	708397	231.9	3	14.000	-0.004	1674330	230.4
Aroclor-1260	4	13.484	-0.003	905909	236.7	4	14.558	-0.002	622391	233.7
Aroclor-1260	5	13.585	-0.003	359639	234.7	NS	---			----
Total Col1Ave (5 peaks):				231.4		Total Col2Ave (4 peaks):			227.8	RPD = 2
Corrected Ave (4 peaks):				230.1		Corrected Ave (3 peaks):			225.9	RPD = 2

Total PCB Area Col1 (6.384 - 14.767) = 21010499 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 33870917 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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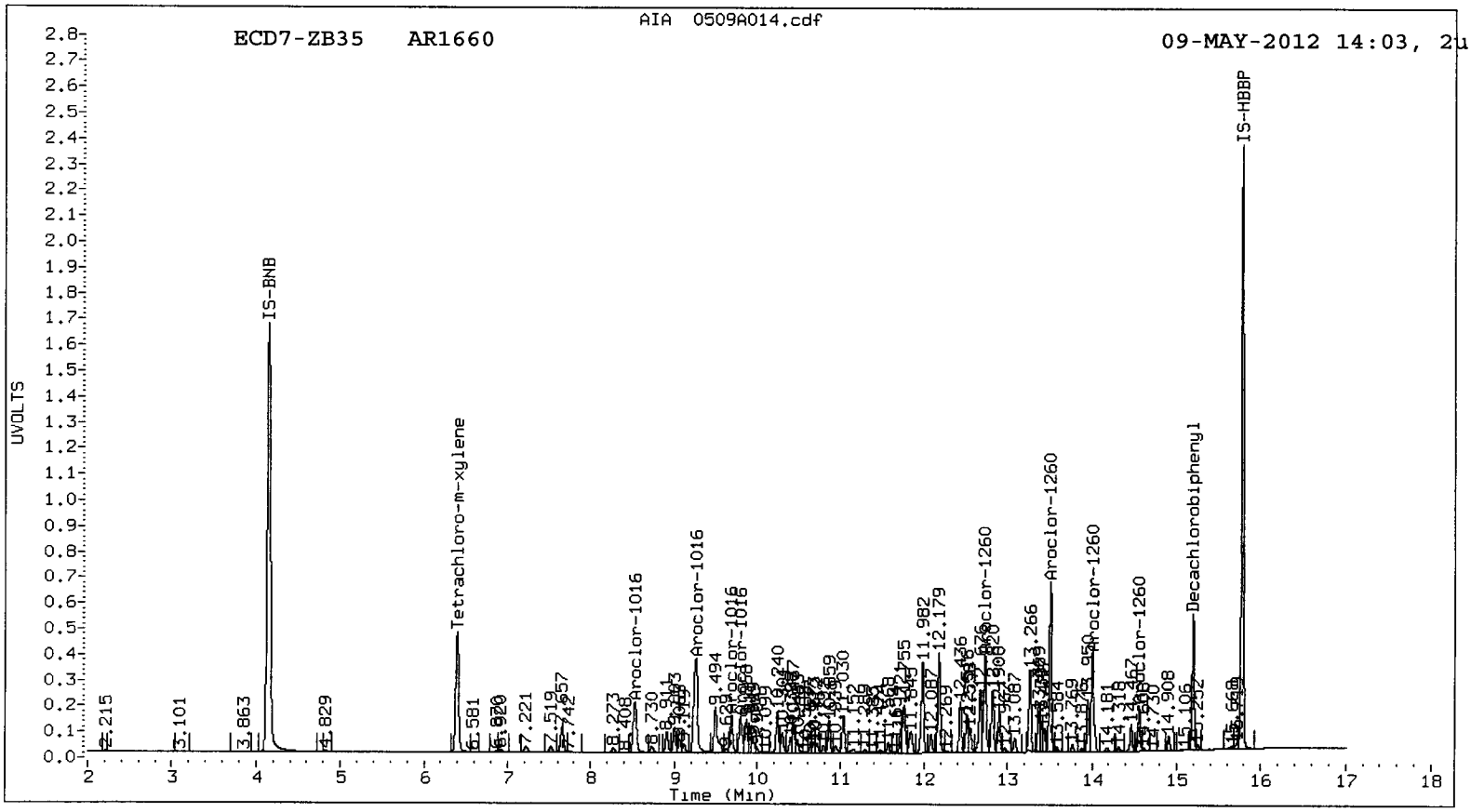
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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ECD7-ZB35 AR1660
09-MAY-2012 14:03, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A020.d
Data file 2: 20120505.B/0509-2.b/0509A020.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: US18MBS1
Client ID:
Injection Date: 09-MAY-2012 16:08
Report Date: 05/10/2012 08:30
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.286	0.002	2150816	6.411	0.002	3544648	33.0	31.5	4.7	Tetrachloro-m-xylen
14.867	-0.001	2149186	15.195	0.000	3009397	36.8	36.6	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	82.6	78.8
Decachlorobiphenyl	92.0	91.5

05/10/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5509547	-5.7
Hexabromobiphenyl	4847662	4802579	-0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8996718	-1.7
Hexabromobiphenyl	6845779	7174912	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

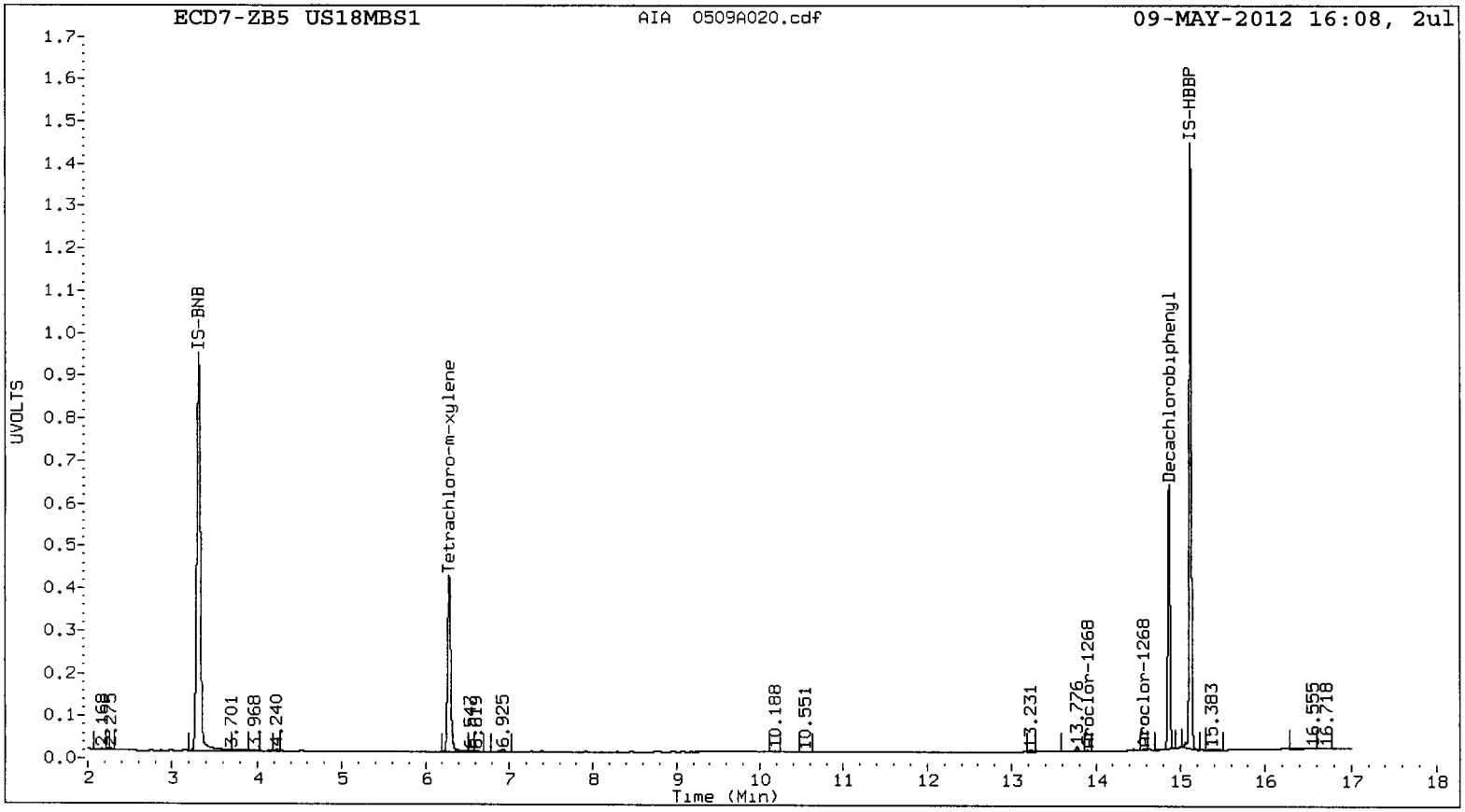
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	8.543	0.003	13206	2.9
Aroclor-1016	2	---			0.0	2	9.273	0.001	20401	2.2
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	7.254	0.013	52106	40.3
Aroclor-1221	2	---			0.0	2	7.563	0.021	11105	13.9
Aroclor-1221	3	---			0.0	3	7.678	-0.002	15389	6.5
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: 20.2				
Aroclor-1232	1	---			0.0	1	8.543	-0.006	13206	6.7
Aroclor-1232	2	---			0.0	2	9.273	-0.005	20401	5.6
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	8.543	0.002	13206	4.0
Aroclor-1242	2	---			0.0	2	9.273	0.001	20401	3.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	11.117	-0.044	22411	8.0
	Col1Ave: <3 Quant Peaks					Col2Ave: 5.0				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	13.924	-0.079	10974	1.7
Aroclor-1260	4	---			0.0	4	14.613	0.052	25377	10.5
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	13.924	-0.030	10974	0.9
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	13.900	-0.075	11634	1.8	3	---			0.0
Aroclor-1268	4	14.576	0.000	12431	0.6	4	15.000	0.087	16681	0.6
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (6.384 - 14.767) = 175839 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 320193 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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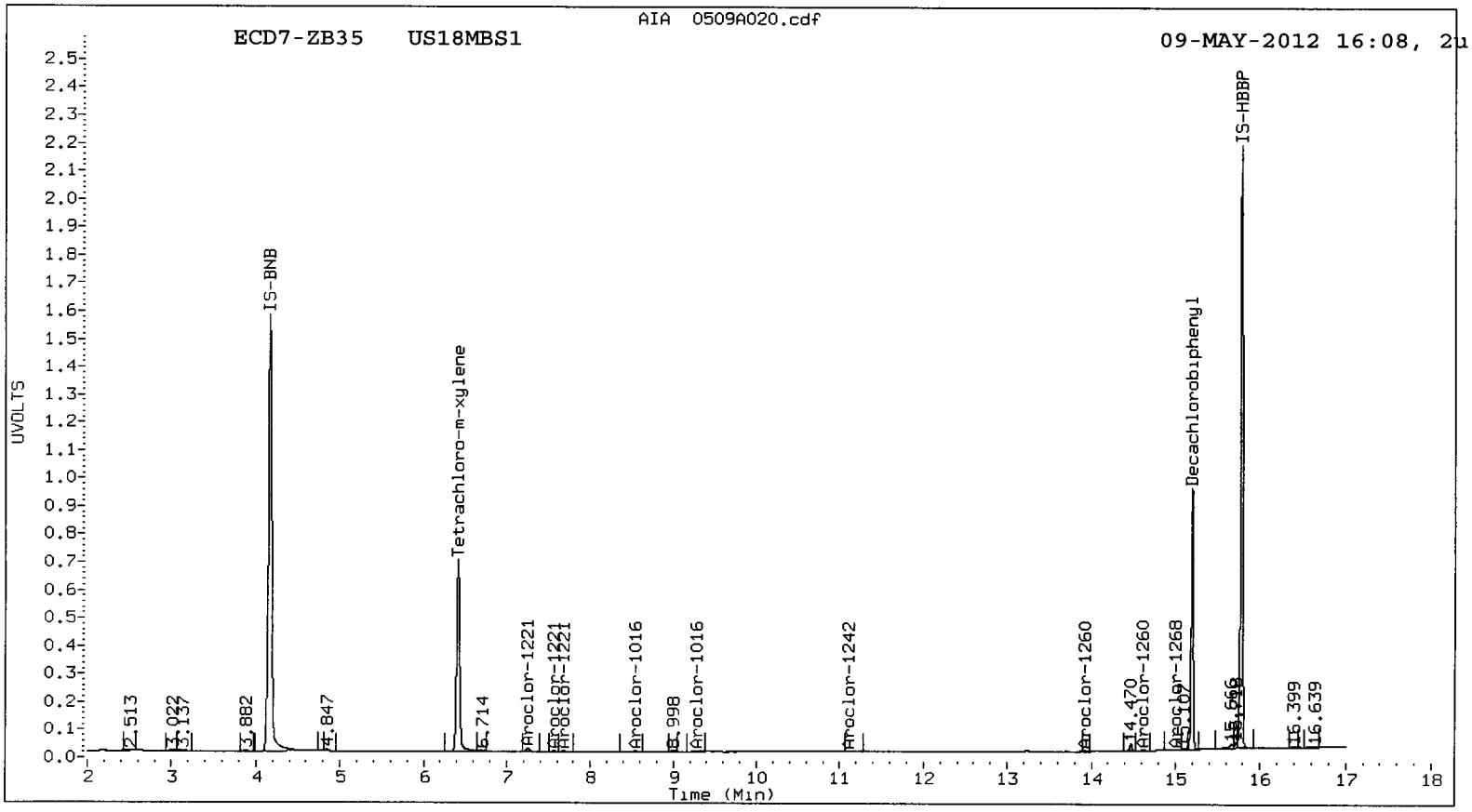
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1268
Time (Min)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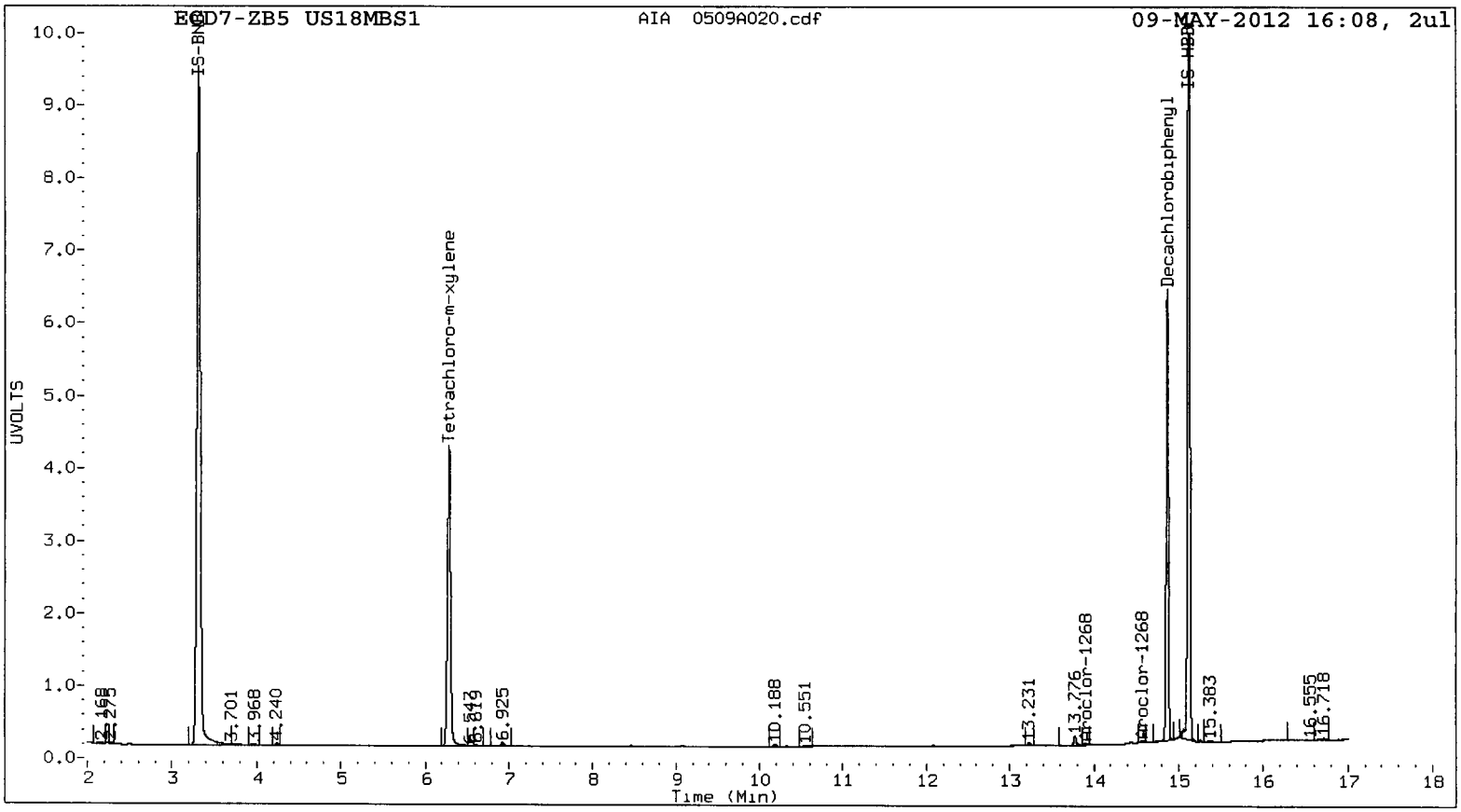
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1260
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)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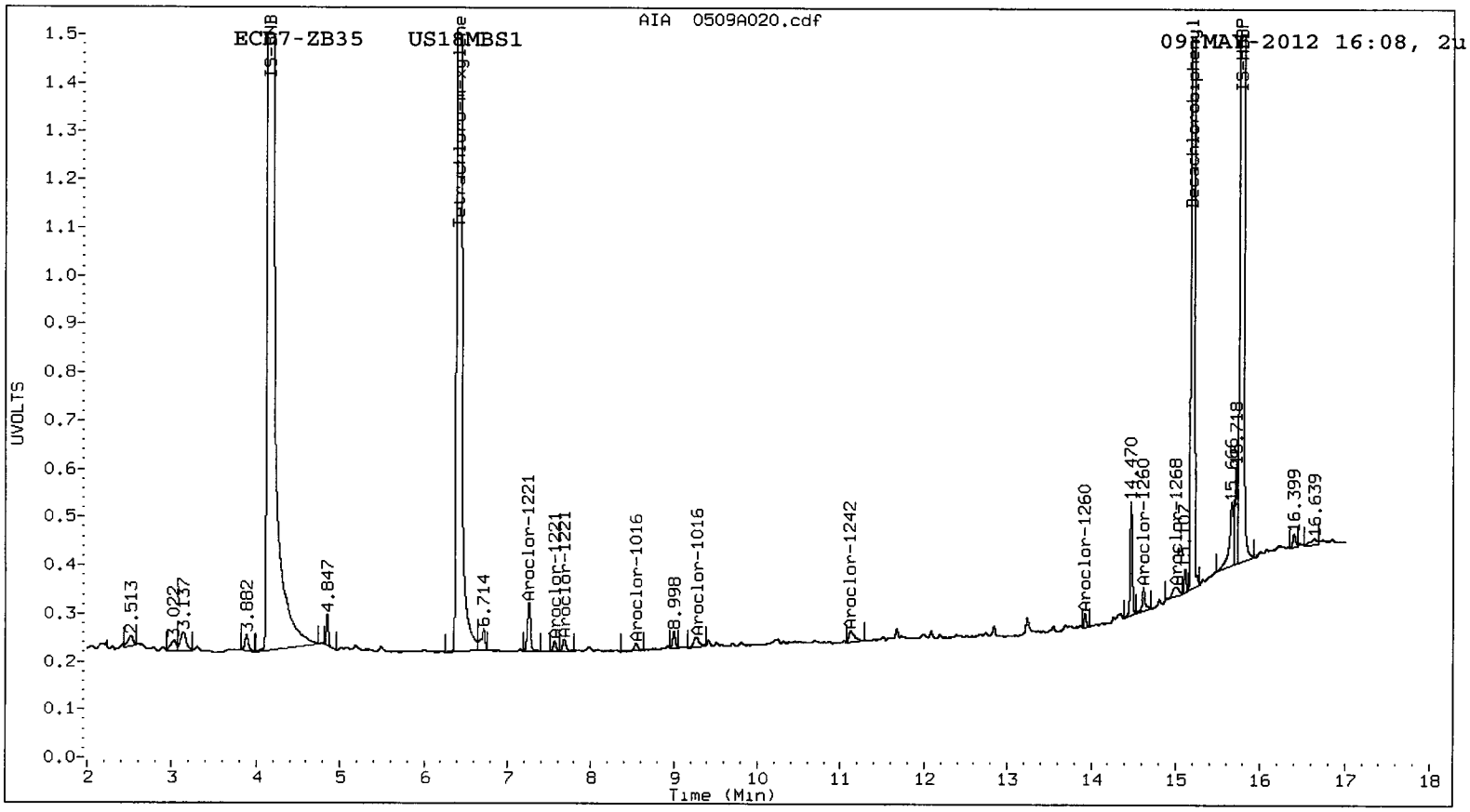
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1268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ECD7-ZB35 US18MBS1
09-MAY-2012 16:08, 2u
UVOLTS
Time (Min)
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1260
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A021.d
Data file 2: 20120505.B/0509-2.b/0509A021.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: US18LCSS1
Client ID:
Injection Date: 09-MAY-2012 16:29
Report Date: 05/10/2012 08:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.286	0.002	2143935	6.411	0.002	3470875	32.3	30.5	5.9	Tetrachloro-m-xylen
14.867	0.000	2308683	15.196	0.000	3208032	38.1	37.4	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	80.8	76.2
Decachlorobiphenyl	95.2	93.4

JK 05/10/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5613841	-3.9
Hexabromobiphenyl	4847662	4986086	2.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9116188	-0.4
Hexabromobiphenyl	6845779	7486356	9.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak# RT	Shift	Area	Amount	Peak# RT	Shift	Area	Amount
Aroclor-1016	1 8.293	0.001	648815	395.3	1 8.541	0.001	1681519	364.4
Aroclor-1016	2 8.780	0.001	2286536	406.2	2 9.272	0.001	3590627	383.7
Aroclor-1016	3 8.953	0.001	885864	403.0	3 9.699	0.001	928666	382.9
Aroclor-1016	4 9.082	0.000	615911	403.8	4 9.806	0.000	1036234	368.2
Total Col1Ave (4 peaks):			402.1		Total Col2Ave (4 peaks):		374.8	RPD = 7
Corrected Ave (3 peaks):			400.7		Corrected Ave (3 peaks):		371.8	RPD = 7
Aroclor-1221	1 6.735	-0.008	74595	115.0	1 7.239	-0.003	189558	144.6
Aroclor-1221	2 6.948	-0.006	114207	235.1	2 7.535	-0.007	169180	209.3
Aroclor-1221	3 7.071	-0.006	438168	270.4	3 7.674	-0.007	697092	289.2
Aroclor-1221	NS ---			----	4 7.759	-0.008	60932	132.8
Total Col1Ave (3 peaks):			206.8		Total Col2Ave (4 peaks):		194.0	RPD = 6
Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):		162.2	
Aroclor-1232	1 8.293	-0.006	648815	1000.6	1 8.541	-0.007	1681519	847.7
Aroclor-1232	2 8.780	-0.003	2286536	1036.2	2 9.272	-0.005	3590627	972.0
Aroclor-1232	3 8.953	-0.005	885864	1018.3	3 9.699	-0.005	928666	933.7
Aroclor-1232	4 10.332	0.003	553040	562.3	4 10.252	-0.005	1172303	785.3
Total Col1Ave (4 peaks):			904.3		Total Col2Ave (4 peaks):		884.7	RPD = 2
Corrected Ave (3 peaks):			860.4		Corrected Ave (3 peaks):		855.6	RPD = 1
Aroclor-1242	1 8.293	0.001	648815	521.5	1 8.541	0.001	1681519	496.8
Aroclor-1242	2 8.780	0.001	2286536	536.7	2 9.272	0.000	3590627	519.0
Aroclor-1242	3 8.953	0.000	885864	533.5	3 9.699	0.001	928666	507.6
Aroclor-1242	4 10.573	0.002	111965	73.8	4 11.160	-0.001	113321	39.9
Total Col1Ave (4 peaks):			416.4		Total Col2Ave (4 peaks):		390.8	RPD = 6
Corrected Ave (3 peaks):			376.3		Corrected Ave (3 peaks):		348.1	RPD = 8
Aroclor-1248	1 9.351	0.001	514876	301.7	1 9.806	0.001	1036234	322.8
Aroclor-1248	2 9.681	0.001	658667	315.7	2 10.252	0.002	1172303	331.7
Aroclor-1248	3 10.332	0.009	553040	178.2	3 10.800	0.001	167227	46.6
Aroclor-1248	4 10.573	0.003	111965	46.6	4 11.160	0.001	113321	24.5
Total Col1Ave (4 peaks):			210.5		Total Col2Ave (4 peaks):		181.4	RPD = 15
Corrected Ave (3 peaks):			175.5		Corrected Ave (3 peaks):		131.3	RPD = 29
Aroclor-1254	1 10.332	0.016	553040	208.9	1 10.868	0.020	748589	219.4
Aroclor-1254	2 10.655	0.016	576940	158.0	2 11.038	0.020	856566	196.6
Aroclor-1254	3 11.037	0.014	121316	52.7	3 11.575	0.018	210325	60.6
Aroclor-1254	4 11.174	0.011	354833	81.4	4 11.728	0.018	419218	56.9
Aroclor-1254	5 11.882	0.000	545288	187.5	5 12.522	0.026	859543	193.4
Total Col1Ave (5 peaks):			137.7		Total Col2Ave (5 peaks):		145.4	RPD = 5
Corrected Ave (4 peaks):			119.9		Corrected Ave (4 peaks):		126.9	RPD = 6
Aroclor-1260	1 11.834	0.000	1689607	387.1	1 12.735	0.000	2412136	359.2
Aroclor-1260	2 12.439	0.000	1105155	388.9	2 13.508	-0.001	3960102	382.9
Aroclor-1260	3 12.754	0.000	1113759	393.5	3 14.003	-0.001	2585968	376.7
Aroclor-1260	4 13.487	0.000	1414677	398.9	4 14.560	0.000	996432	396.1
Aroclor-1260	5 13.588	0.000	550197	387.5	NS ---			----
Total Col1Ave (5 peaks):			391.2		Total Col2Ave (4 peaks):		378.7	RPD = 3
Corrected Ave (4 peaks):			389.2		Corrected Ave (3 peaks):		373.0	RPD = 4
Aroclor-1262	1 12.439	-0.004	1105155	247.5	1 12.825	-0.006	1570852	243.6
Aroclor-1262	2 12.754	-0.004	1113759	345.3	2 13.270	-0.004	1899120	349.6
Aroclor-1262	3 13.116	-0.005	2737487	323.5	3 13.508	-0.005	3960102	324.9
Aroclor-1262	4 13.588	-0.003	550197	193.4	4 13.953	-0.004	1086843	234.6
Aroclor-1262	5 13.651	-0.003	631461	209.9	5 14.003	-0.006	2585968	347.8
Total Col1Ave (5 peaks):			263.9		Total Col2Ave (5 peaks):		300.1	RPD = 13
Corrected Ave (4 peaks):			243.6		Corrected Ave (4 peaks):		287.7	RPD = 17
Aroclor-1268	1 13.588	-0.003	550197	62.7	1 13.953	-0.002	1086843	87.8

Aroclor-1268	2	13.651	-0.001	631461	79.2	2	14.003	-0.007	2585968	222.4
Aroclor-1268	3	13.988	0.013	300628	44.7	3	14.319	-0.003	75220	8.2
Aroclor-1268	4	14.575	-0.002	197087	9.5	4	14.909	-0.003	281449	9.7

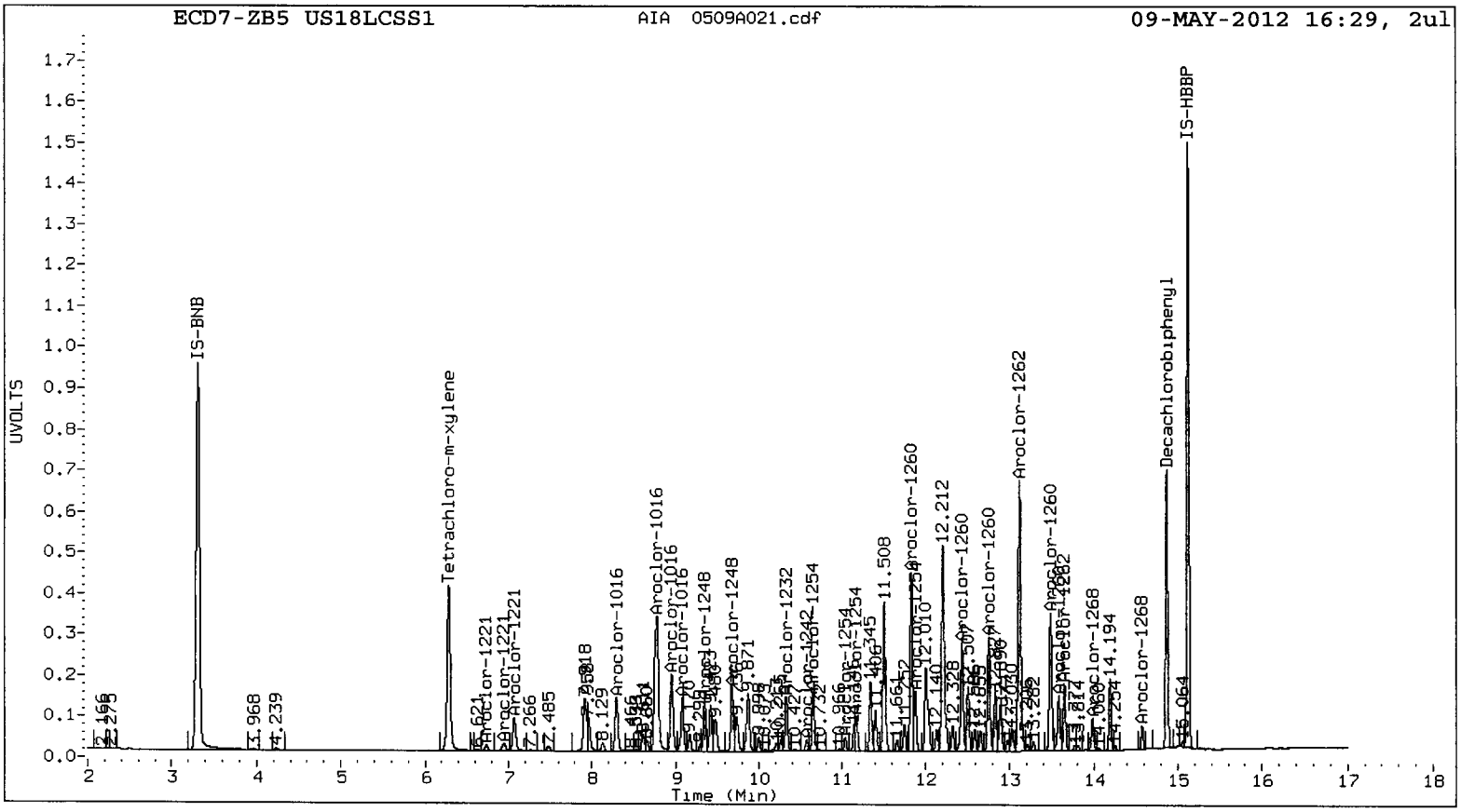
Total Col1Ave (4 peaks): 49.0 Total Col2Ave (4 peaks): 82.0 RPD = 50*
Corrected Ave (3 peaks): 39.0 Corrected Ave (3 peaks): 35.2 RPD = 10

Total PCB Area Col1 (6.384 - 14.767) = 32849886 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 50814066 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR81 : 02145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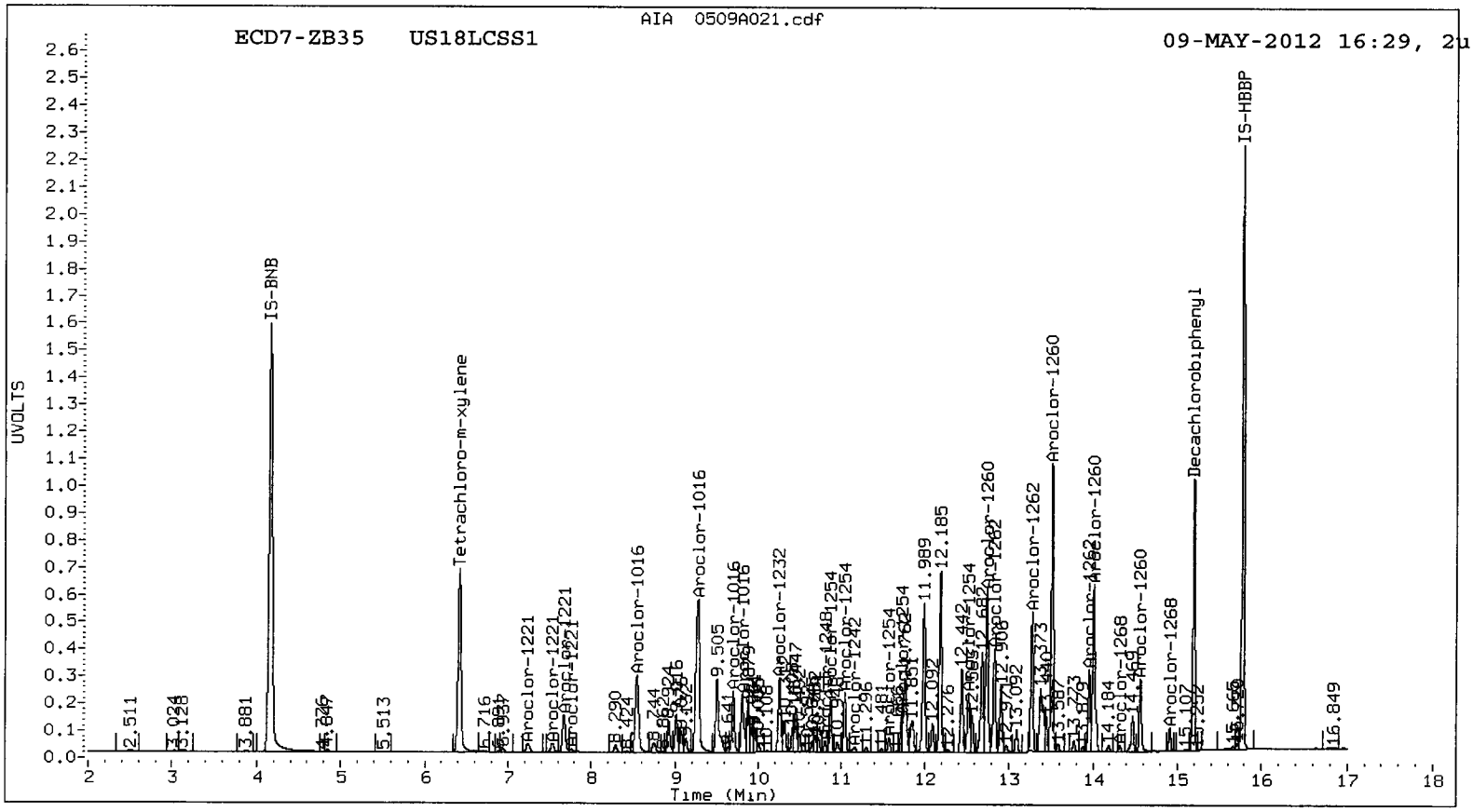
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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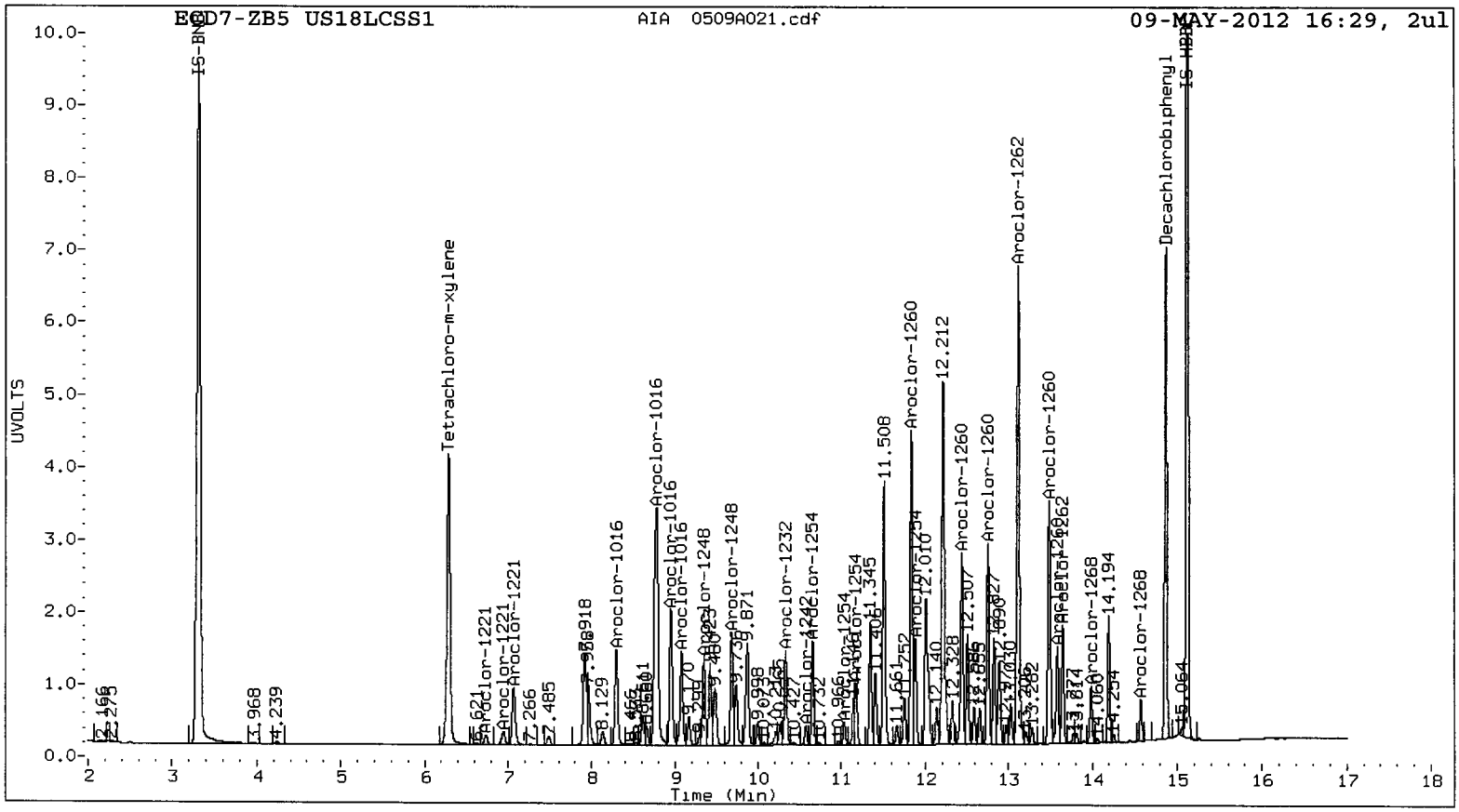
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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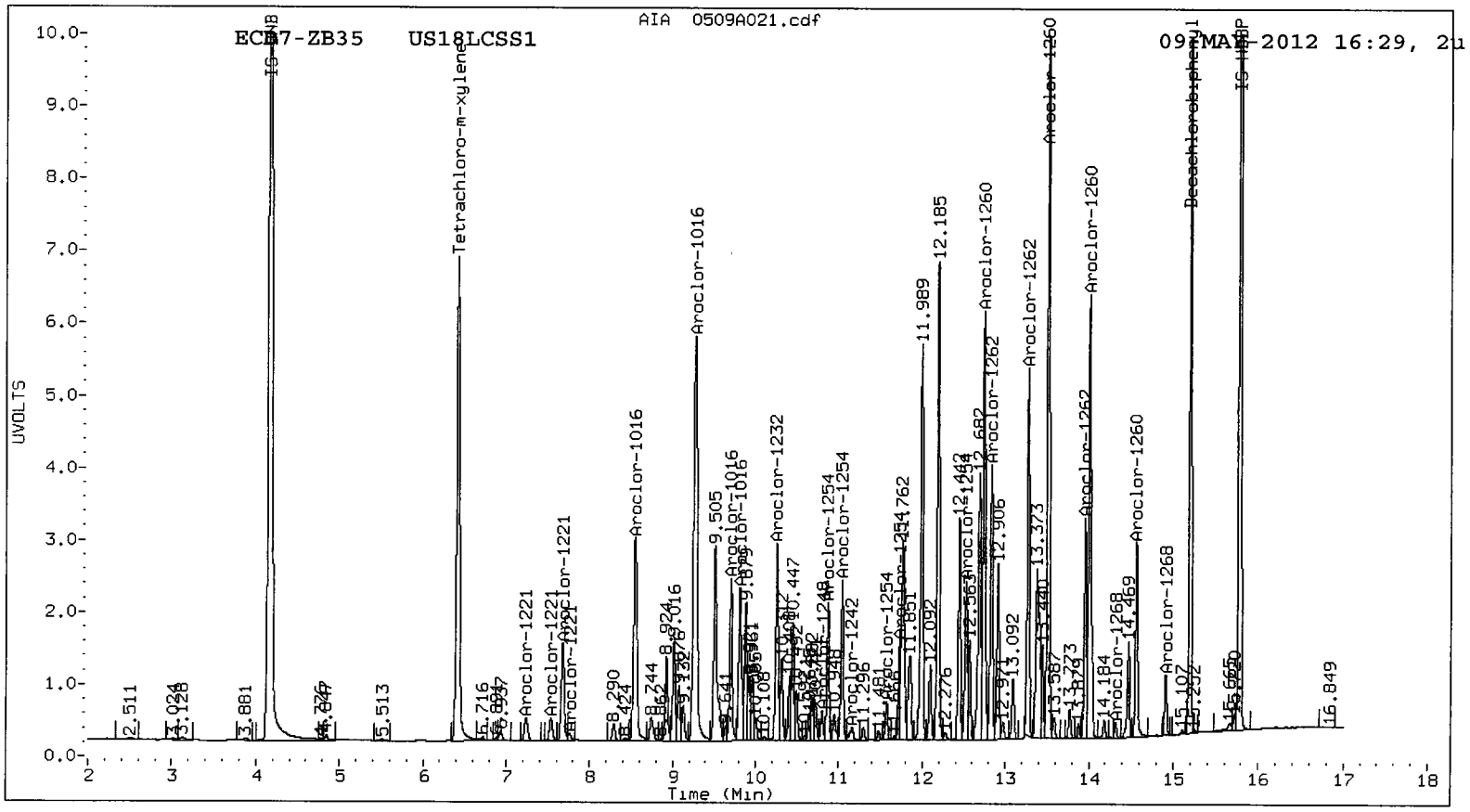
09-MAY-2012 16:29, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A022.d
Data file 2: 20120505.B/0509-2.b/0509A022.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: US18LCSDS1
Client ID:
Injection Date: 09-MAY-2012 16:50
Report Date: 05/10/2012 08:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.286	0.002	2212714	6.412	0.002	3530353	32.7	30.7	6.4	Tetrachloro-m-xylen
14.866	-0.001	2217270	15.194	-0.002	3031166	35.5	34.9	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	81.8	76.7
Decachlorobiphenyl	88.8	87.2

JL 15/10/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5722639	-2.0
Hexabromobiphenyl	4847662	5135469	5.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9205360	0.5
Hexabromobiphenyl	6845779	7578974	10.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.291	0.000	640067	382.6	1	8.540	0.001	1646157	353.3
Aroclor-1016	2	8.780	0.001	2258443	393.6	2	9.271	-0.001	3467052	366.9
Aroclor-1016	3	8.953	0.000	870679	388.6	3	9.697	-0.001	899379	367.2
Aroclor-1016	4	9.080	-0.001	603683	388.3	4	9.805	-0.001	1002052	352.6
Total Col1Ave (4 peaks):				388.3		Total Col2Ave (4 peaks):			360.0	RPD = 8
Corrected Ave (3 peaks):				386.5		Corrected Ave (3 peaks):			357.6	RPD = 8
Aroclor-1221	1	6.736	-0.007	77071	116.5	1	7.238	-0.003	187043	141.3
Aroclor-1221	2	6.946	-0.008	118192	238.6	2	7.534	-0.007	163824	200.8
Aroclor-1221	3	7.070	-0.007	443417	268.4	3	7.673	-0.007	686722	282.1
Aroclor-1221	NS	---			----	4	7.758	-0.009	58476	126.2
Total Col1Ave (3 peaks):				207.9		Total Col2Ave (4 peaks):			187.6	RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			156.1	
Aroclor-1232	1	8.291	-0.007	640067	968.3	1	8.540	-0.008	1646157	821.8
Aroclor-1232	2	8.780	-0.004	2258443	1004.0	2	9.271	-0.007	3467052	929.5
Aroclor-1232	3	8.953	-0.006	870679	981.9	3	9.697	-0.008	899379	895.5
Aroclor-1232	4	10.330	0.002	537037	535.6	4	10.250	-0.008	1139793	756.1
Total Col1Ave (4 peaks):				872.4		Total Col2Ave (4 peaks):			850.7	RPD = 3
Corrected Ave (3 peaks):				828.6		Corrected Ave (3 peaks):			824.5	RPD = 0
Aroclor-1242	1	8.291	-0.001	640067	504.7	1	8.540	0.000	1646157	481.6
Aroclor-1242	2	8.780	0.000	2258443	520.0	2	9.271	-0.001	3467052	496.3
Aroclor-1242	3	8.953	-0.001	870679	514.4	3	9.697	-0.001	899379	486.9
Aroclor-1242	4	10.571	0.000	109023	70.5	4	11.157	-0.004	113156	39.4
Total Col1Ave (4 peaks):				402.4		Total Col2Ave (4 peaks):			376.1	RPD = 7
Corrected Ave (3 peaks):				363.2		Corrected Ave (3 peaks):			336.0	RPD = 8
Aroclor-1248	1	9.350	0.000	502878	289.0	1	9.805	0.000	1002052	309.1
Aroclor-1248	2	9.680	0.000	638693	300.3	2	10.250	-0.001	1139793	319.4
Aroclor-1248	3	10.330	0.007	537037	169.7	3	10.798	-0.001	160681	44.3
Aroclor-1248	4	10.571	0.001	109023	44.5	4	11.157	-0.001	113156	24.2
Total Col1Ave (4 peaks):				200.9		Total Col2Ave (4 peaks):			174.3	RPD = 14
Corrected Ave (3 peaks):				167.7		Corrected Ave (3 peaks):			125.9	RPD = 29
Aroclor-1254	1	10.330	0.014	537037	199.0	1	10.866	0.018	721915	209.5
Aroclor-1254	2	10.653	0.014	562308	151.1	2	11.036	0.017	830045	188.7
Aroclor-1254	3	11.034	0.011	118555	50.5	3	11.572	0.015	209305	59.8
Aroclor-1254	4	11.172	0.009	337153	75.8	4	11.726	0.016	411695	55.3
Aroclor-1254	5	11.879	-0.002	544634	183.7	5	12.519	0.023	838784	186.9
Total Col1Ave (5 peaks):				132.0		Total Col2Ave (5 peaks):			140.0	RPD = 6
Corrected Ave (4 peaks):				115.3		Corrected Ave (4 peaks):			122.7	RPD = 6
Aroclor-1260	1	11.832	-0.002	1674679	372.5	1	12.733	-0.002	2378017	349.8
Aroclor-1260	2	12.436	-0.002	1082127	369.7	2	13.506	-0.003	3791967	362.2
Aroclor-1260	3	12.751	-0.002	1094939	375.6	3	14.001	-0.003	2540241	365.6
Aroclor-1260	4	13.485	-0.002	1416632	387.9	4	14.559	-0.002	954352	374.7
Aroclor-1260	5	13.585	-0.002	549091	375.5	NS	---			----
Total Col1Ave (5 peaks):				376.2		Total Col2Ave (4 peaks):			363.1	RPD = 4
Corrected Ave (4 peaks):				373.3		Corrected Ave (3 peaks):			359.2	RPD = 4
Aroclor-1262	1	12.436	-0.007	1082127	235.3	1	12.824	-0.007	1548732	237.2
Aroclor-1262	2	12.751	-0.007	1094939	329.6	2	13.268	-0.006	1837157	334.0
Aroclor-1262	3	13.114	-0.007	2699094	309.7	3	13.506	-0.007	3791967	307.3
Aroclor-1262	4	13.585	-0.006	549091	187.4	4	13.951	-0.006	1079503	230.1
Aroclor-1262	5	13.650	-0.005	630359	203.4	5	14.001	-0.007	2540241	337.4
Total Col1Ave (5 peaks):				253.1		Total Col2Ave (5 peaks):			289.2	RPD = 13
Corrected Ave (4 peaks):				234.0		Corrected Ave (4 peaks):			277.2	RPD = 17
Aroclor-1268	1	13.585	-0.005	549091	60.7	1	13.951	-0.004	1079503	86.1

Aroclor-1268	2	13.650	-0.002	630359	76.8	2	14.001	-0.009	2540241	215.8
Aroclor-1268	3	13.986	0.011	310086	44.7	3	14.319	-0.004	79785	8.6
Aroclor-1268	4	14.573	-0.003	195015	9.1	4	14.908	-0.004	271171	9.3

Total Col1Ave (4 peaks): 47.9 Total Col2Ave (4 peaks): 79.9 RPD = 50*

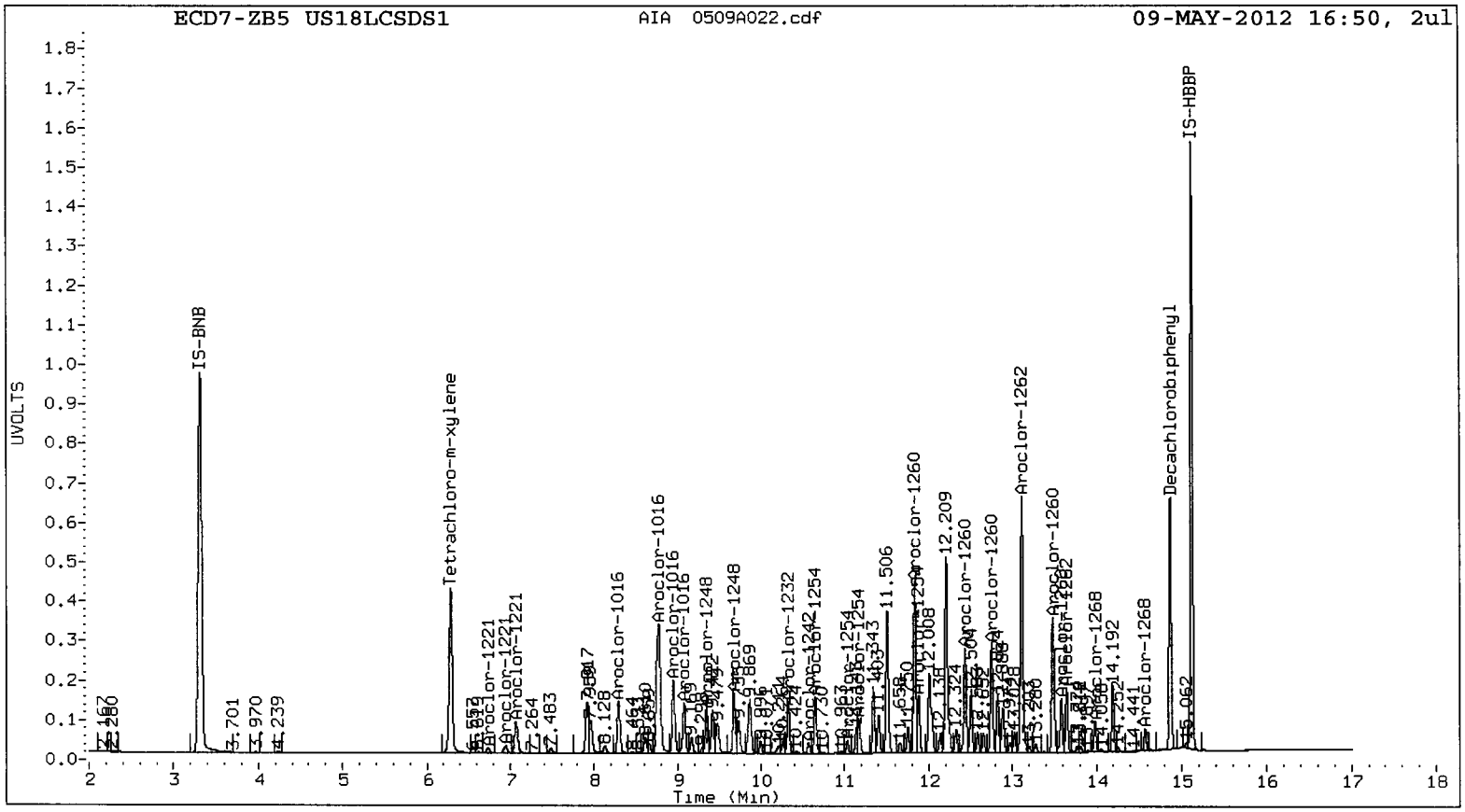
Corrected Ave (3 peaks): 38.2 Corrected Ave (3 peaks): 34.6 RPD = 10

Total PCB Area Col1 (6.384 - 14.767) = 32491843 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 49474787 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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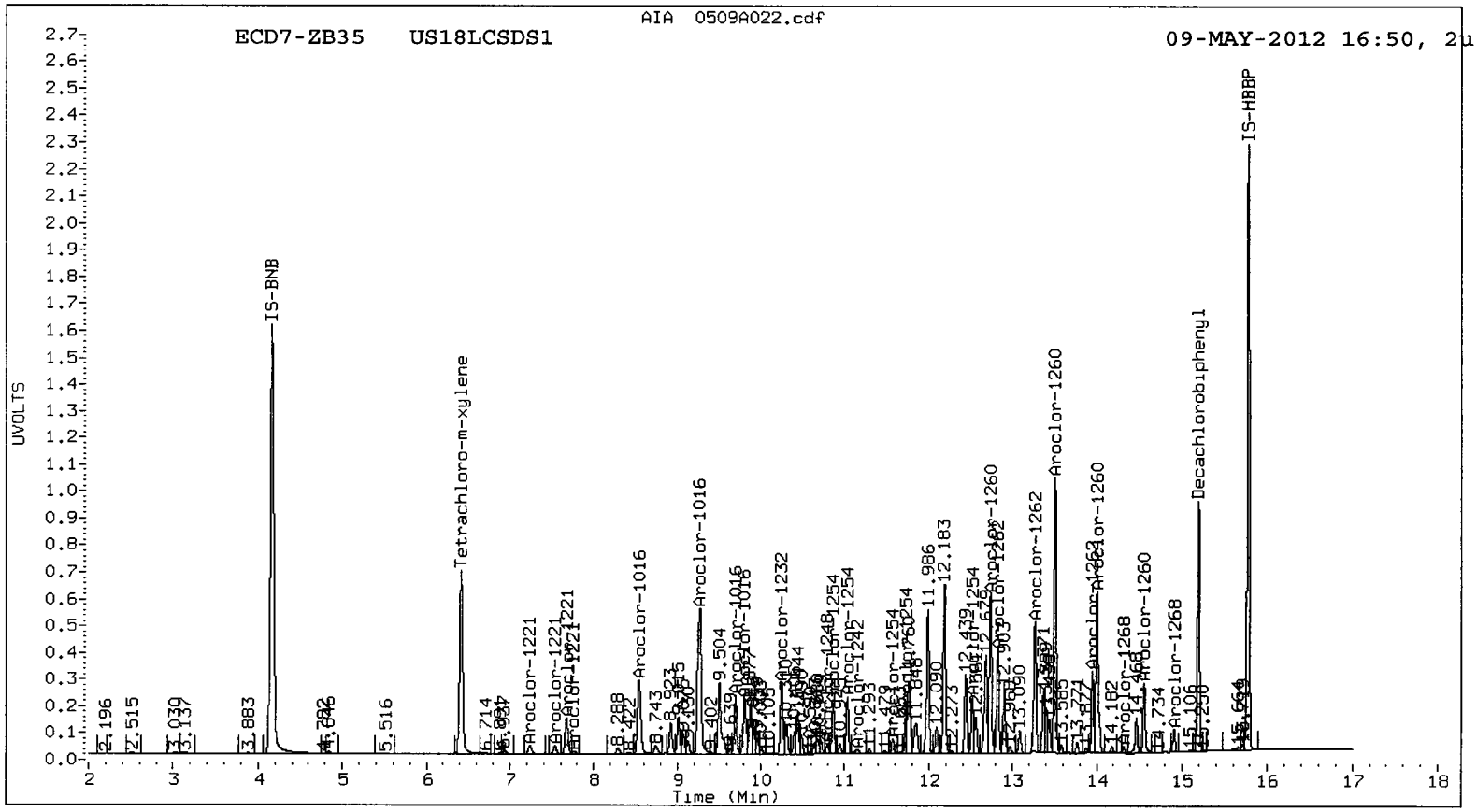
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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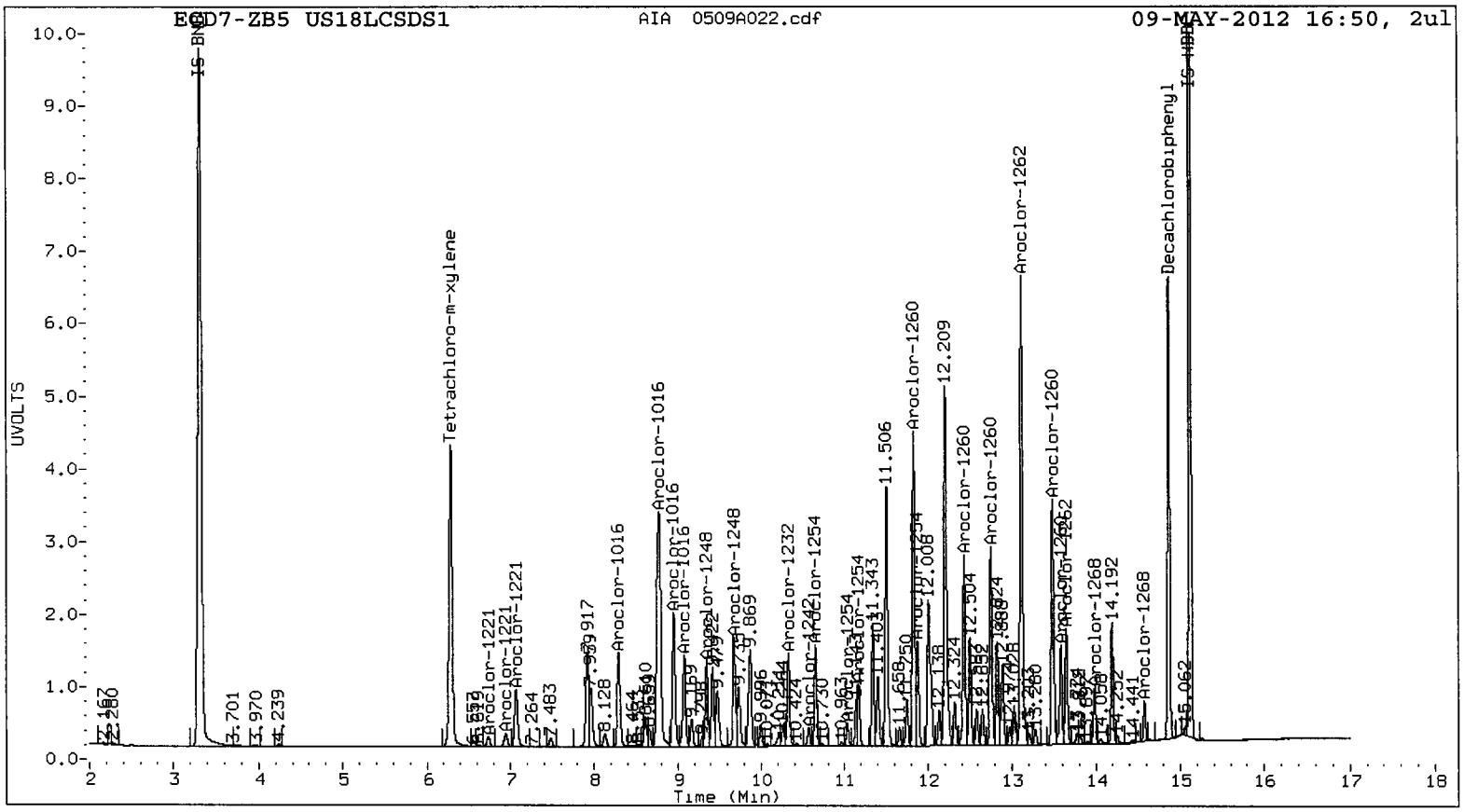
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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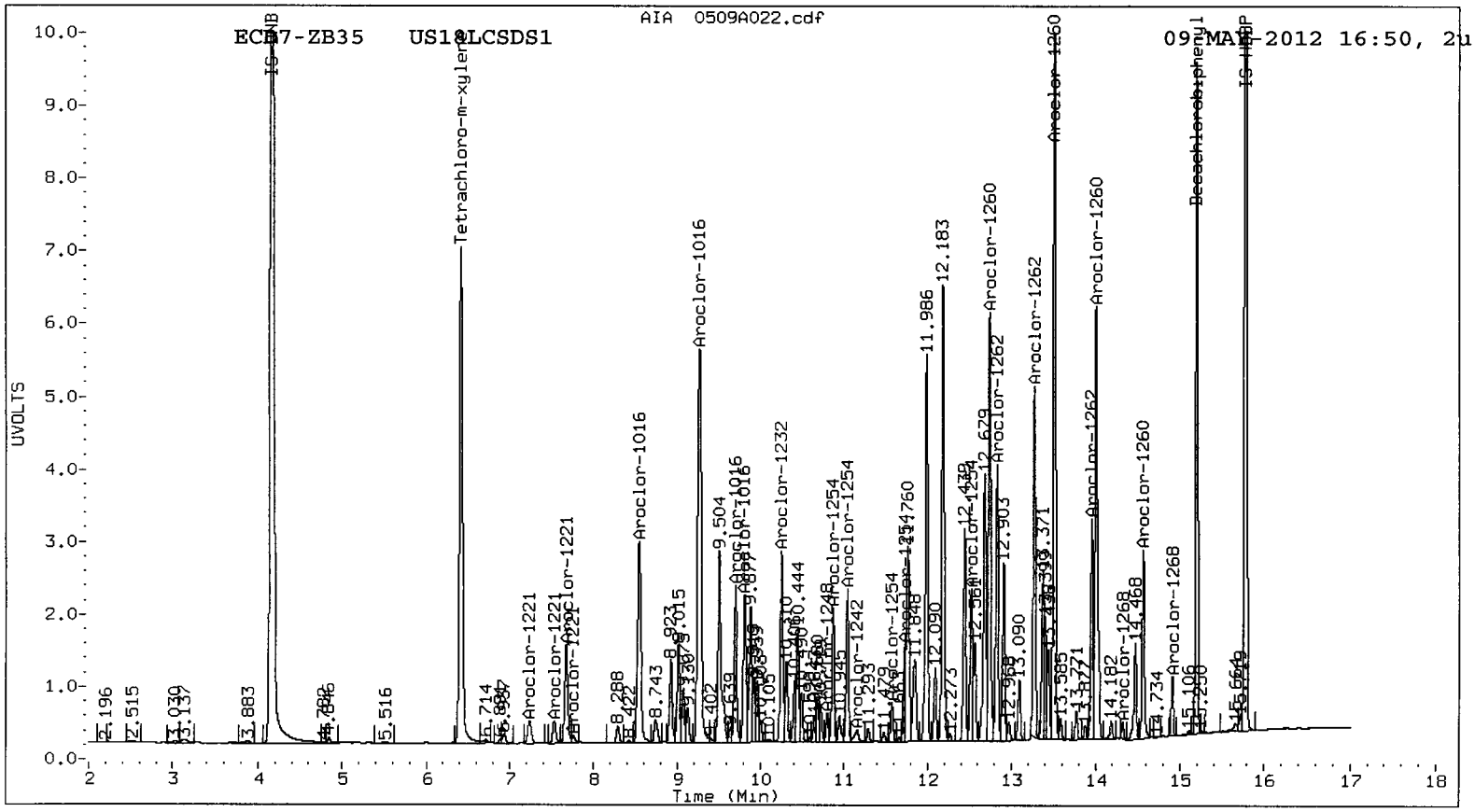
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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09-MAY-2012 16:50, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A023.d
Data file 2: 20120505.B/0509-2.b/0509A023.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: US18A
Client ID:
Injection Date: 09-MAY-2012 17:11
Report Date: 05/10/2012 08:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.287	0.003	1676388	6.412	0.003	2714737	27.6	27.9	0.9	Tetrachloro-m-xylen
14.868	0.001	1574571	15.196	0.000	2327927	29.0	28.6	1.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	69.1	69.8
Decachlorobiphenyl	72.6	71.5

JL 05/10/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5132236	-12.1
Hexabromobiphenyl	4847662	4462081	-8.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	7784293	-15.0
Hexabromobiphenyl	6845779	7101073	3.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.294	0.003	197214	131.4	1	8.539	-0.001	403901	102.5
Aroclor-1016	2	8.763	-0.016	993957	193.2	2	9.273	0.001	1133812	141.9
Aroclor-1016	3	8.944	-0.008	468420	233.1	3	9.699	0.001	183600	88.6
Aroclor-1016	4	9.080	-0.001	189172	135.7	4	9.807	0.001	729123	303.4
Total Col1Ave (4 peaks):				173.3		Total Col2Ave (4 peaks):			159.1	RPD = 9
Corrected Ave (3 peaks):				153.4		Corrected Ave (3 peaks):			111.0	RPD = 32
Aroclor-1221	1	6.775	0.033	42478	71.6	1	7.251	0.009	122059	109.0
Aroclor-1221	2	6.972	0.018	808576	1820.4	2	7.564	0.022	536507	777.5
Aroclor-1221	3	7.066	-0.011	149676	101.0	3	7.701	0.021	502701	244.2
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):				664.4		Total Col2Ave (3 peaks):			376.9	RPD = 55*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	8.294	-0.004	197214	332.7	1	8.539	-0.009	403901	238.5
Aroclor-1232	2	8.763	-0.020	993957	492.7	2	9.273	-0.005	1133812	359.5
Aroclor-1232	3	8.944	-0.014	468420	589.0	3	9.699	-0.005	183600	216.2
Aroclor-1232	4	10.352	0.023	1884990	2096.2	4	10.254	-0.004	865342	678.9
Total Col1Ave (4 peaks):				877.7		Total Col2Ave (4 peaks):			373.2	RPD = 81*
Corrected Ave (3 peaks):				471.5		Corrected Ave (3 peaks):			271.4	RPD = 54*
Aroclor-1242	1	8.294	0.002	197214	173.4	1	8.539	-0.001	403901	139.8
Aroclor-1242	2	8.763	-0.016	993957	255.2	2	9.273	0.001	1133812	191.9
Aroclor-1242	3	8.944	-0.009	468420	308.6	3	9.699	0.001	183600	117.5
Aroclor-1242	4	10.568	-0.003	866347	624.9	4	11.156	-0.005	1315395	542.0
Total Col1Ave (4 peaks):				340.5		Total Col2Ave (4 peaks):			247.8	RPD = 32
Corrected Ave (3 peaks):				245.7		Corrected Ave (3 peaks):			149.7	RPD = 49*
Aroclor-1248	1	9.349	0.000	524893	336.4	1	9.807	0.001	729123	266.0
Aroclor-1248	2	9.683	0.002	418051	219.2	2	10.254	0.003	865342	286.8
Aroclor-1248	3	10.352	0.029	1884990	664.2	3	10.799	0.000	1004677	327.7
Aroclor-1248	4	10.568	-0.002	866347	394.2	4	11.156	-0.002	1315395	333.2
Total Col1Ave (4 peaks):				403.5		Total Col2Ave (4 peaks):			303.4	RPD = 28
Corrected Ave (3 peaks):				316.6		Corrected Ave (3 peaks):			293.5	RPD = 8
Aroclor-1254	1	10.352	0.036	1884990	778.7	1	10.867	0.019	570111	195.6
Aroclor-1254	2	10.653	0.015	668177	200.2	2	11.036	0.018	997580	268.2
Aroclor-1254	3	11.051	0.028	802162	381.2	3	11.573	0.016	404373	136.5
Aroclor-1254	4	11.176	0.013	984853	247.0	4	11.725	0.016	1393564	221.4
Aroclor-1254	5	11.891	0.009	496345	186.7	5	12.506	0.009	910871	240.1
Total Col1Ave (5 peaks):				358.8		Total Col2Ave (5 peaks):			212.4	RPD = 51*
Corrected Ave (4 peaks):				253.8		Corrected Ave (4 peaks):			198.4	RPD = 24
Aroclor-1260	1	11.834	0.000	376270	96.3	1	12.736	0.001	995938	156.4
Aroclor-1260	2	12.433	-0.005	240227	94.5	2	13.510	0.001	581289	59.3
Aroclor-1260	3	12.742	-0.012	459829	181.5	3	13.998	-0.005	673587	103.5
Aroclor-1260	4	13.486	-0.001	269941	85.1	4	14.571	0.011	225042	94.3
Aroclor-1260	5	13.597	0.009	499512	393.1	NS	---			----
Total Col1Ave (5 peaks):				170.1		Total Col2Ave (4 peaks):			103.3	RPD = 49*
Corrected Ave (4 peaks):				124.3		Corrected Ave (3 peaks):			85.7	RPD = 29
Aroclor-1262	1	12.433	-0.009	240227	60.1	1	12.874	0.043	2344746	383.3
Aroclor-1262	2	12.742	-0.016	459829	159.3	2	13.268	-0.006	579780	112.5
Aroclor-1262	3	13.112	-0.009	452311	59.7	3	13.510	-0.003	581289	50.3
Aroclor-1262	4	13.597	0.006	499512	196.2	4	13.952	-0.005	238129	54.2
Aroclor-1262	5	13.653	-0.001	135723	50.4	5	13.998	-0.010	673587	95.5
Total Col1Ave (5 peaks):				105.2		Total Col2Ave (5 peaks):			139.2	RPD = 28
Corrected Ave (4 peaks):				82.4		Corrected Ave (4 peaks):			78.1	RPD = 5
Aroclor-1268	1	13.597	0.006	499512	63.6	1	13.952	-0.003	238129	20.3

Aroclor-1268 2	13.653	0.001	135723	19.0	2	13.998	-0.012	673587	61.1
Aroclor-1268 3	13.991	0.016	234047	38.8	3	14.310	-0.013	189776	21.7
Aroclor-1268 4	14.574	-0.003	80960	4.4	4	14.910	-0.003	108927	4.0

Total Col1Ave (4 peaks): 31.5 Total Col2Ave (4 peaks): 26.8 RPD = 16

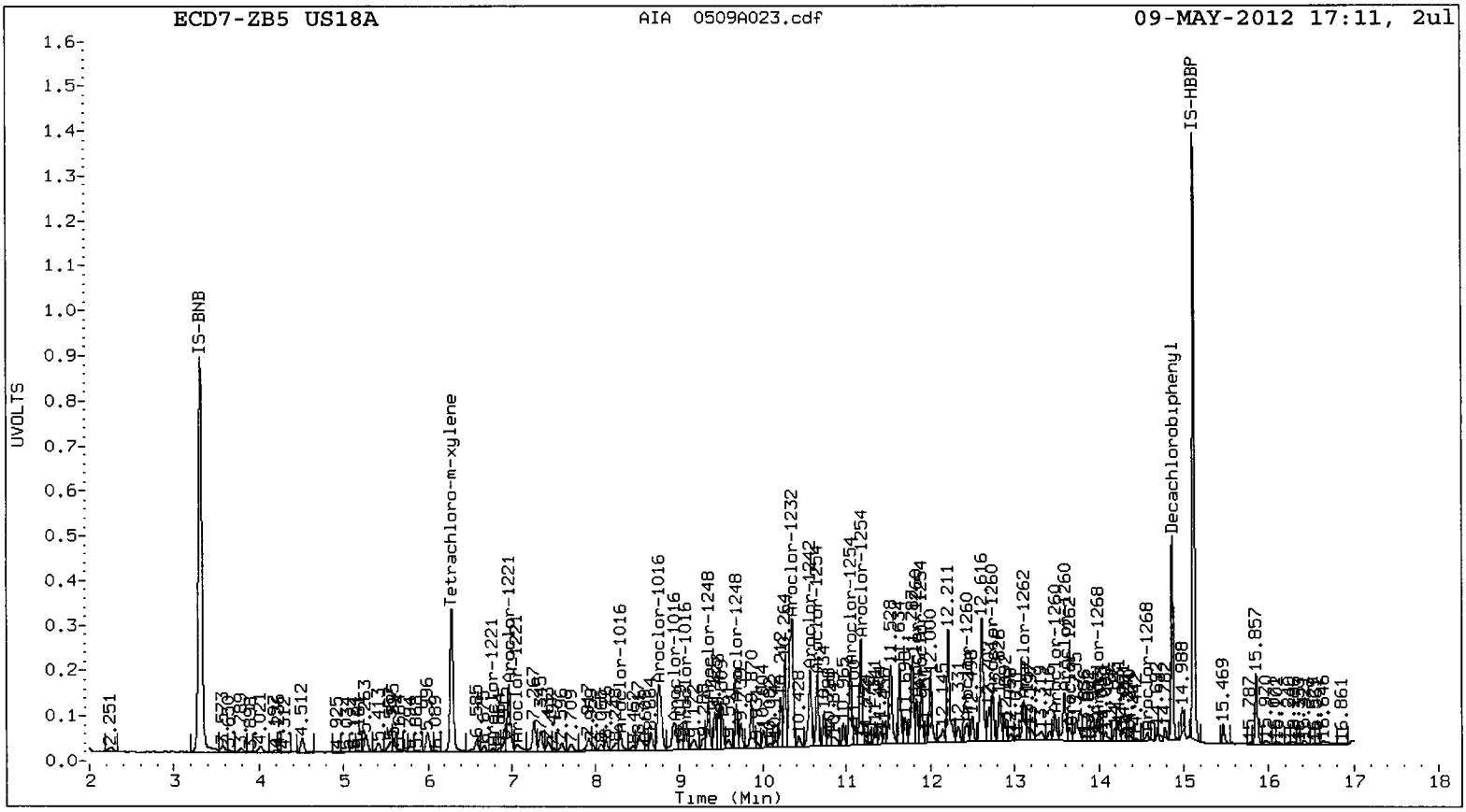
Corrected Ave (3 peaks): 20.8 Corrected Ave (3 peaks): 15.3 RPD = 30

Total PCB Area Col1 (6.384 - 14.767) = 29961750 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 45071442 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR91:02155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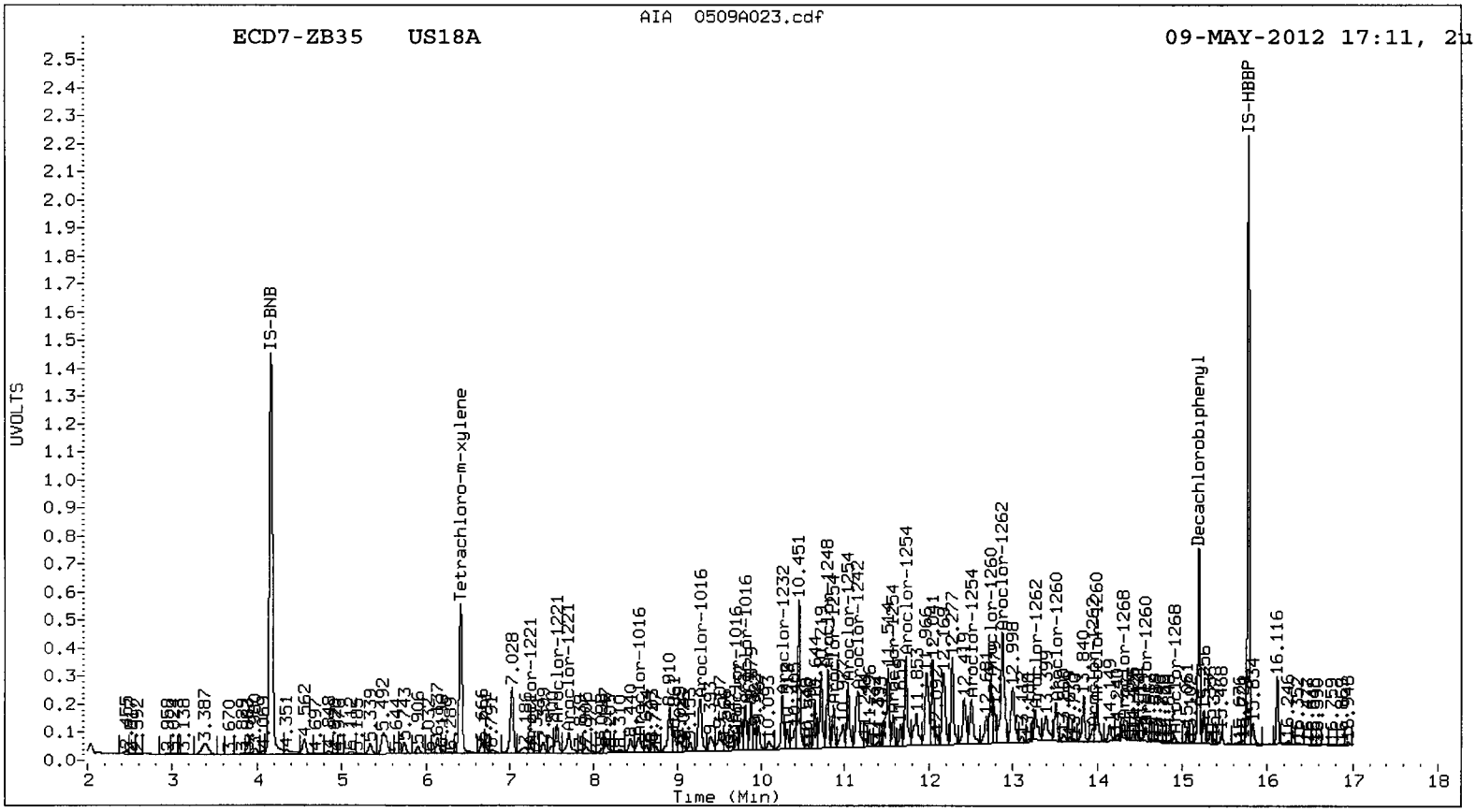
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl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Time (Min)
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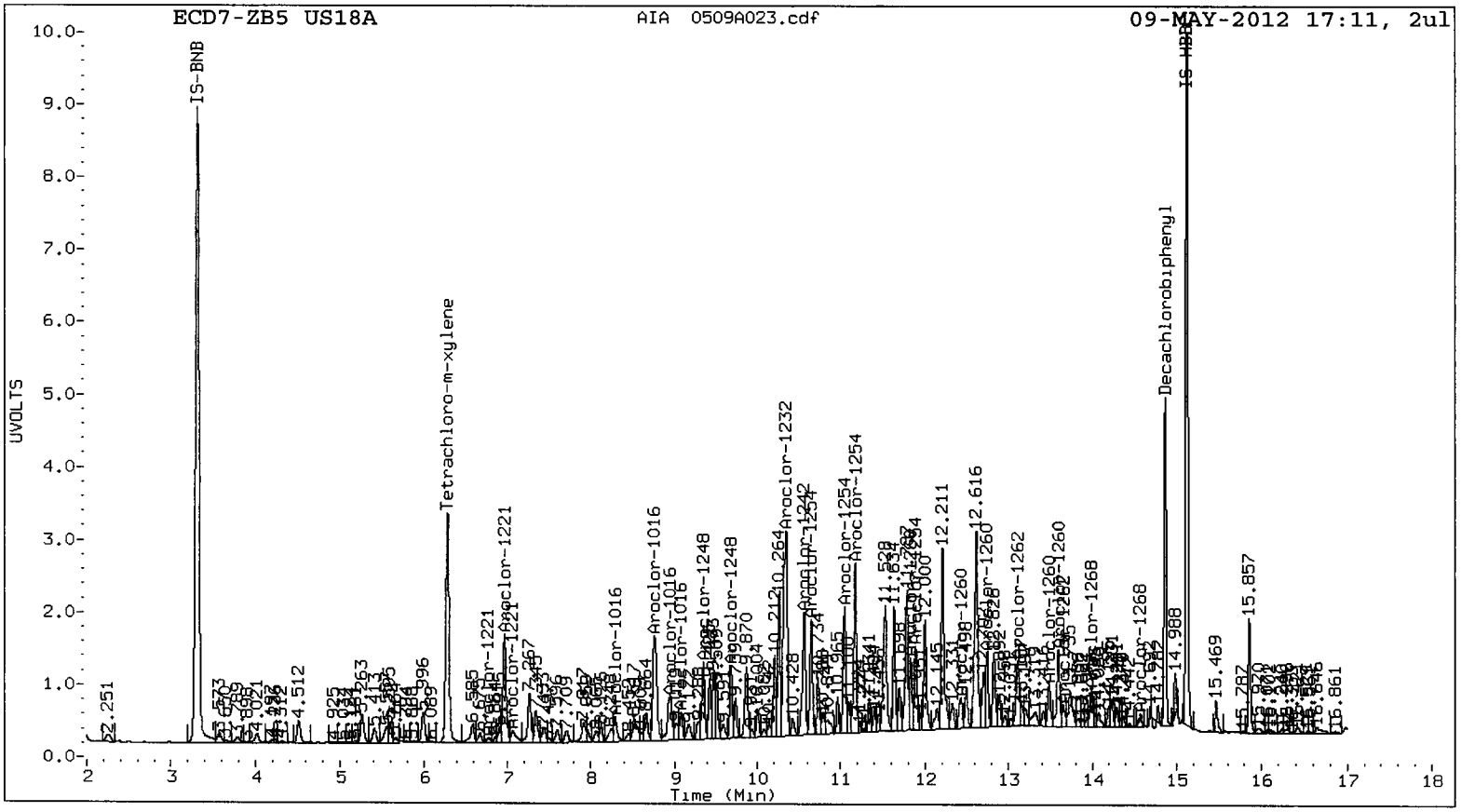
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl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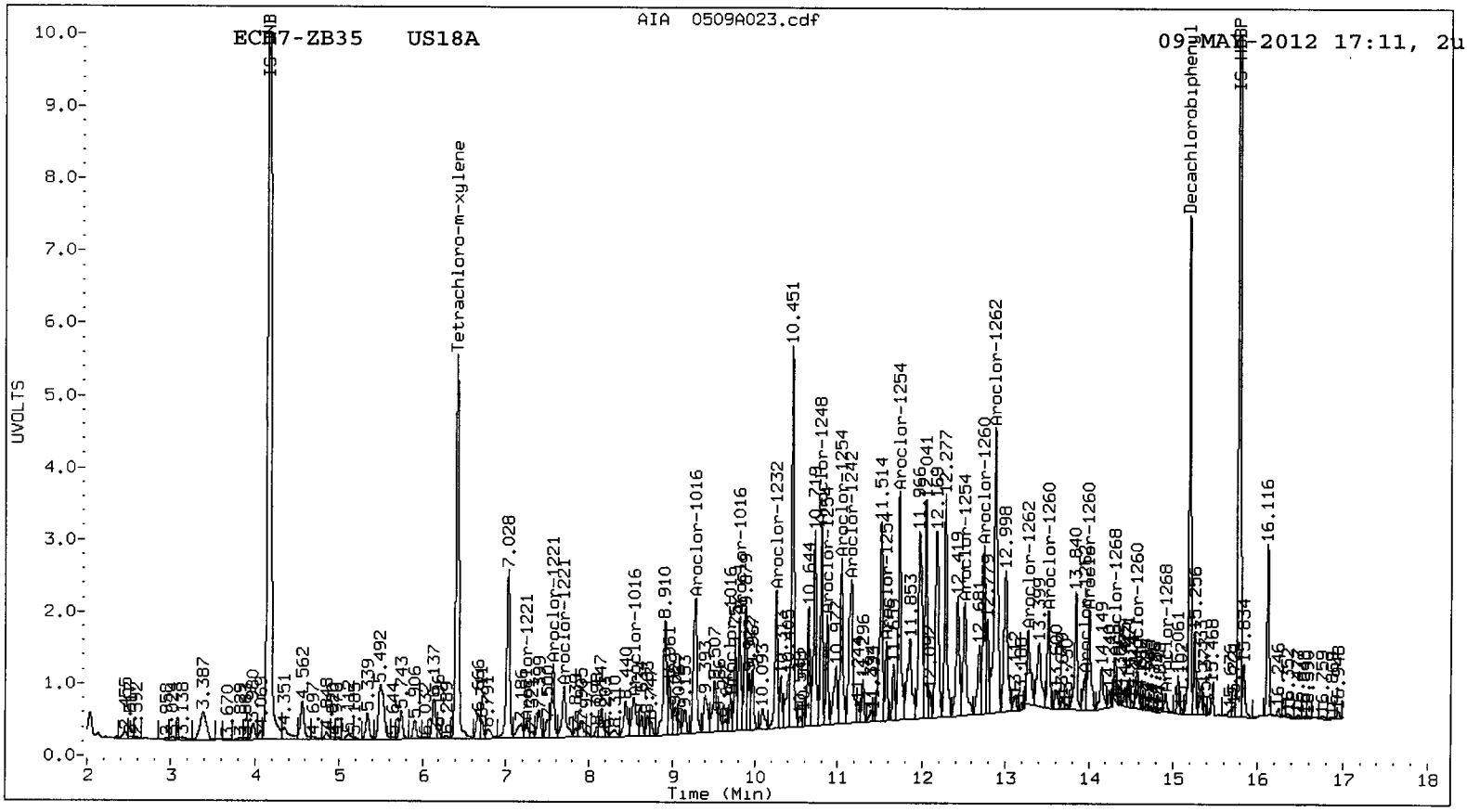
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
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Decachlorobiphenyl
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Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A024.d
Data file 2: 20120505.B/0509-2.b/0509A024.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: US18B
Client ID:
Injection Date: 09-MAY-2012 17:32
Report Date: 05/10/2012 08:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.284	0.000	1834544	6.410	0.000	2971381	19.1	28.4	39.2	Tetrachloro-m-xylen
14.866	-0.001	1897563	15.195	-0.001	2889923	31.2	34.4	9.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	47.7	71.0
Decachlorobiphenyl	78.0	86.1

JL 05/10/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	8138042	39.3
Hexabromobiphenyl	4847662	5004670	3.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	8373294	-8.6
Hexabromobiphenyl	6845779	7320727	6.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.295	0.003	284626	119.6	1	8.527	-0.012	494288	116.6
Aroclor-1016	2	8.757	-0.022	983009	120.5	2	9.271	-0.001	1019458	118.6
Aroclor-1016	3	8.928	-0.024	628564	197.2	3	9.696	-0.002	152736	68.6
Aroclor-1016	4	9.075	-0.006	195383	88.4	4	9.804	-0.002	737647	285.4
Total Col1Ave (4 peaks):				131.4		Total Col2Ave (4 peaks):			147.3	RPD = 11
Corrected Ave (3 peaks):				109.5		Corrected Ave (3 peaks):			101.3	RPD = 8
Aroclor-1221	1	6.781	0.038	22997	24.5	1	7.246	0.005	87300	72.5
Aroclor-1221	2	6.969	0.015	1099254	1560.8	2	7.560	0.018	8075530	10879.1
Aroclor-1221	3	7.060	-0.017	179289	76.3	3	7.695	0.015	419507	189.5
Aroclor-1221	NS	---			----	4	7.751	-0.016	158425	375.9
Total Col1Ave (3 peaks):				553.9		Total Col2Ave (4 peaks):			2879.3	RPD = 135*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			212.6	
Aroclor-1232	1	8.295	-0.004	284626	302.8	1	8.527	-0.021	494288	271.3
Aroclor-1232	2	8.757	-0.027	983009	307.3	2	9.271	-0.007	1019458	300.5
Aroclor-1232	3	8.928	-0.030	628564	498.4	3	9.696	-0.009	152736	167.2
Aroclor-1232	4	10.341	0.012	1964373	1377.6	4	10.252	-0.006	876595	639.3
Total Col1Ave (4 peaks):				621.5		Total Col2Ave (4 peaks):			344.6	RPD = 57*
Corrected Ave (3 peaks):				369.5		Corrected Ave (3 peaks):			246.3	RPD = 40*
Aroclor-1242	1	8.295	0.003	284626	157.8	1	8.527	-0.013	494288	159.0
Aroclor-1242	2	8.757	-0.022	983009	159.2	2	9.271	-0.001	1019458	160.4
Aroclor-1242	3	8.928	-0.025	628564	261.1	3	9.696	-0.003	152736	90.9
Aroclor-1242	4	10.561	-0.010	1174703	534.4	4	11.132	-0.029	1421112	544.4
Total Col1Ave (4 peaks):				278.1		Total Col2Ave (4 peaks):			238.7	RPD = 15
Corrected Ave (3 peaks):				192.7		Corrected Ave (3 peaks):			136.8	RPD = 34
Aroclor-1248	1	9.344	-0.006	906365	366.3	1	9.804	-0.002	737647	250.2
Aroclor-1248	2	9.679	-0.001	321815	106.4	2	10.252	0.001	876595	270.1
Aroclor-1248	3	10.341	0.018	1964373	436.5	3	10.795	-0.003	963107	292.1
Aroclor-1248	4	10.561	-0.009	1174703	337.1	4	11.132	-0.026	1421112	334.6
Total Col1Ave (4 peaks):				311.6		Total Col2Ave (4 peaks):			286.7	RPD = 8
Corrected Ave (3 peaks):				270.0		Corrected Ave (3 peaks):			270.8	RPD = 0
Aroclor-1254	1	10.341	0.025	1964373	511.8	1	10.864	0.016	958219	305.7
Aroclor-1254	2	10.651	0.012	1379203	260.6	2	11.033	0.015	2507123	626.6
Aroclor-1254	3	11.051	0.028	3395723	1017.8	3	11.570	0.013	717985	225.4
Aroclor-1254	4	11.172	0.010	2004882	317.2	4	11.723	0.013	2954168	436.4
Aroclor-1254	5	11.887	0.006	1014495	240.6	5	12.508	0.011	1522104	372.9
Total Col1Ave (5 peaks):				469.6		Total Col2Ave (5 peaks):			393.4	RPD = 18
Corrected Ave (4 peaks):				332.5		Corrected Ave (4 peaks):			335.1	RPD = 1
Aroclor-1260	1	11.831	-0.003	952528	217.4	1	12.732	-0.003	2143768	326.5
Aroclor-1260	2	12.434	-0.005	414964	145.5	2	13.507	-0.002	1104879	109.3
Aroclor-1260	3	12.741	-0.013	725298	255.3	3	13.999	-0.005	1098855	163.7
Aroclor-1260	4	13.484	-0.003	456513	128.3	4	14.576	0.015	668095	271.6
Aroclor-1260	5	13.594	0.007	1080674	758.3	NS	---			----
Total Col1Ave (5 peaks):				300.9		Total Col2Ave (4 peaks):			217.8	RPD = 32
Corrected Ave (4 peaks):				186.6		Corrected Ave (3 peaks):			181.5	RPD = 3
Aroclor-1262	1	12.434	-0.009	414964	92.6	1	12.827	-0.004	446838	70.9
Aroclor-1262	2	12.741	-0.017	725298	224.0	2	13.267	-0.007	1294657	243.7
Aroclor-1262	3	13.111	-0.009	931067	109.6	3	13.507	-0.006	1104879	92.7
Aroclor-1262	4	13.594	0.003	1080674	378.5	4	13.950	-0.007	290862	64.2
Aroclor-1262	5	13.652	-0.003	155248	51.4	5	13.999	-0.010	1098855	151.1
Total Col1Ave (5 peaks):				171.2		Total Col2Ave (5 peaks):			124.5	RPD = 32
Corrected Ave (4 peaks):				119.4		Corrected Ave (4 peaks):			94.7	RPD = 23
Aroclor-1268	1	13.594	0.004	1080674	122.7	1	13.950	-0.005	290862	24.0

Aroclor-1268 2	13.652	0.000	155248	19.4	2	13.999	-0.011	1098855	96.7
Aroclor-1268 3	13.991	0.016	1236182	182.9	3	14.305	-0.017	730745	81.2
Aroclor-1268 4	14.573	-0.004	121444	5.8	4	14.906	-0.007	117794	4.2

Total Col1Ave (4 peaks): 82.7 Total Col2Ave (4 peaks): 51.5 RPD = 47*

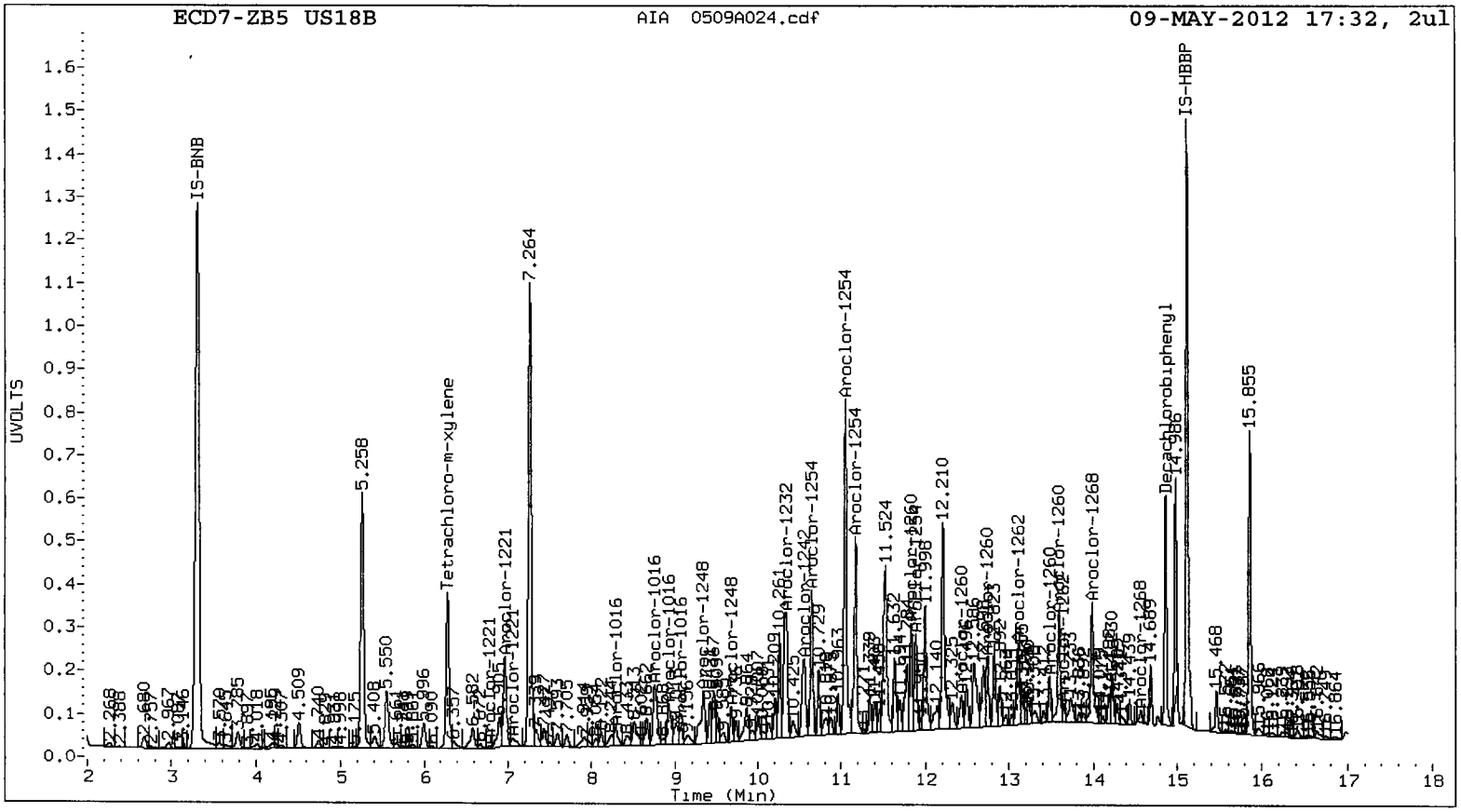
Corrected Ave (3 peaks): 49.3 Corrected Ave (3 peaks): 36.5 RPD = 30

Total PCB Area Col1 (6.384 - 14.767) = 53294077 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 78871887 Col2 Total PCB = 1.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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09-MAY-2012 17:32, 2ul
UVOLTS
Time (Min)
IS-BNB
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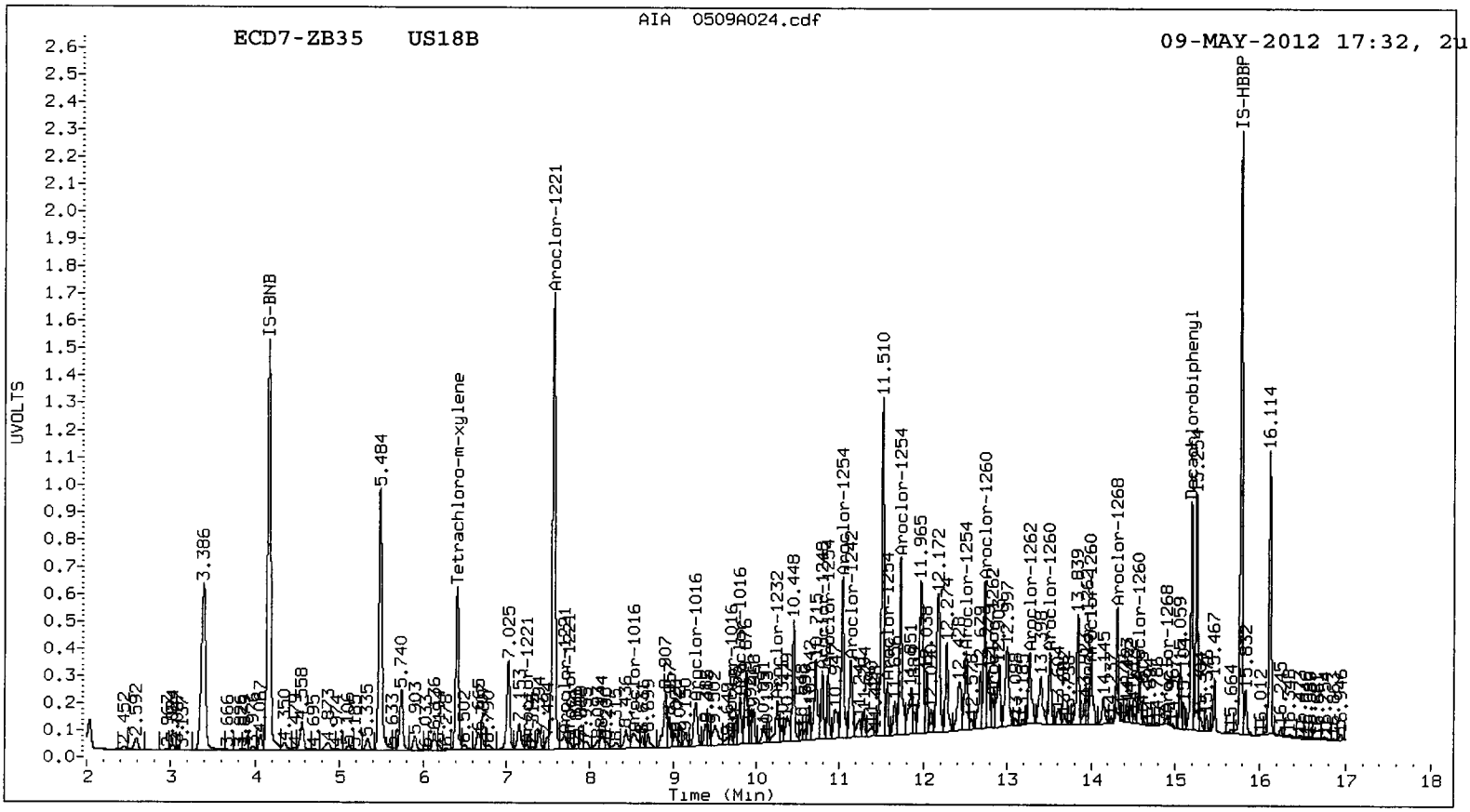
Tetrachloro-m-xylene
7.264
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
11.524
12.210
Aroclor-1260
Aroclor-1262
Aroclor-1268
IS-HBBP
Decachlorobiphenyl
15.855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UVOLTS
Time (Min)
IS-BNB
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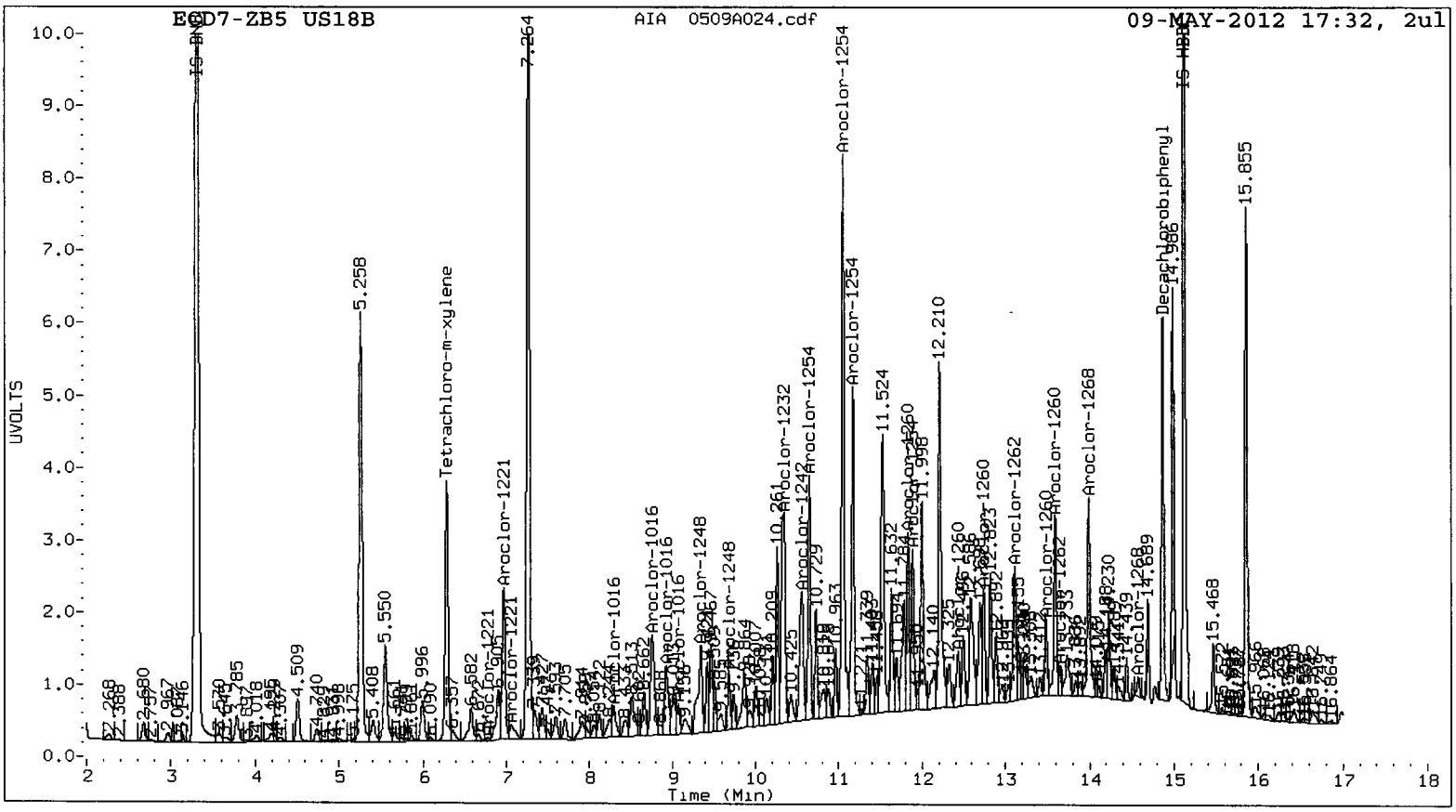
5.484
Tetrachloro-m-xylene
7.025
Aroclor-1221
Aroclor-1016
Aroclor-1232
10.448
Aroclor-1254
11.510
11.965
12.172
Aroclor-1260
Aroclor-1262
Aroclor-1268
IS-HBBP
Decachlorobiphenyl
16.114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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1254
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1016
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
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IS-BN
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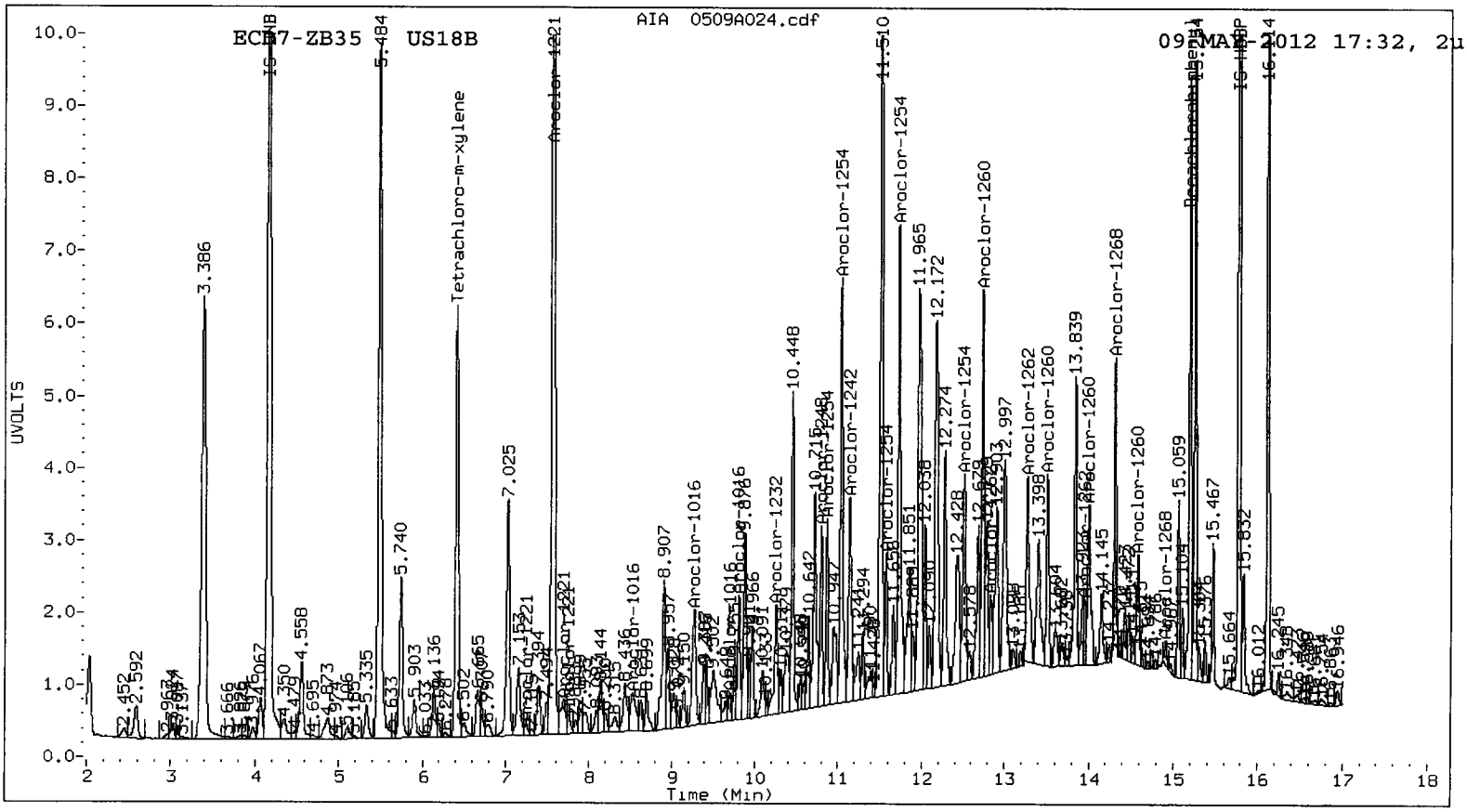
7.264
11.524
12.210
15.855
14.986
15.468


ECD7-ZB35 US18B
AIA 0509A024.cdf
09-MAY-2012 17:32, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1254
Aroclor-1242
Aroclor-1232
Aroclor-1016
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBB
IS-HBP
3.386
5.484
5.740
7.025
10.448
11.510
11.965
12.172
12.274
13.839
15.059
15.467
15.832
16.214

UR81:02162

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A025.d
Data file 2: 20120505.B/0509-2.b/0509A025.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 09-MAY-2012 17:53
Report Date: 05/10/2012 08:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.285	0.001	1358264	6.411	0.002	2264405	20.1	19.8	1.5	Tetrachloro-m-xylen
14.866	-0.001	1136777	15.195	-0.001	1560672	19.1	18.9	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.2	49.4
Decachlorobiphenyl	47.8	47.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5729762	-1.9
Hexabromobiphenyl	4847662	4887590	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9163747	0.1
Hexabromobiphenyl	6845779	7218592	5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1248	1	9.350	0.000	421452	241.9	1	9.806	0.000	782236	242.4
Aroclor-1248	2	9.680	0.000	510069	239.5	2	10.250	0.000	824391	232.1
Aroclor-1248	3	10.323	0.000	749095	236.4	3	10.799	0.000	861430	238.7
Aroclor-1248	4	10.570	0.000	578036	235.6	4	11.159	0.000	1080572	232.5

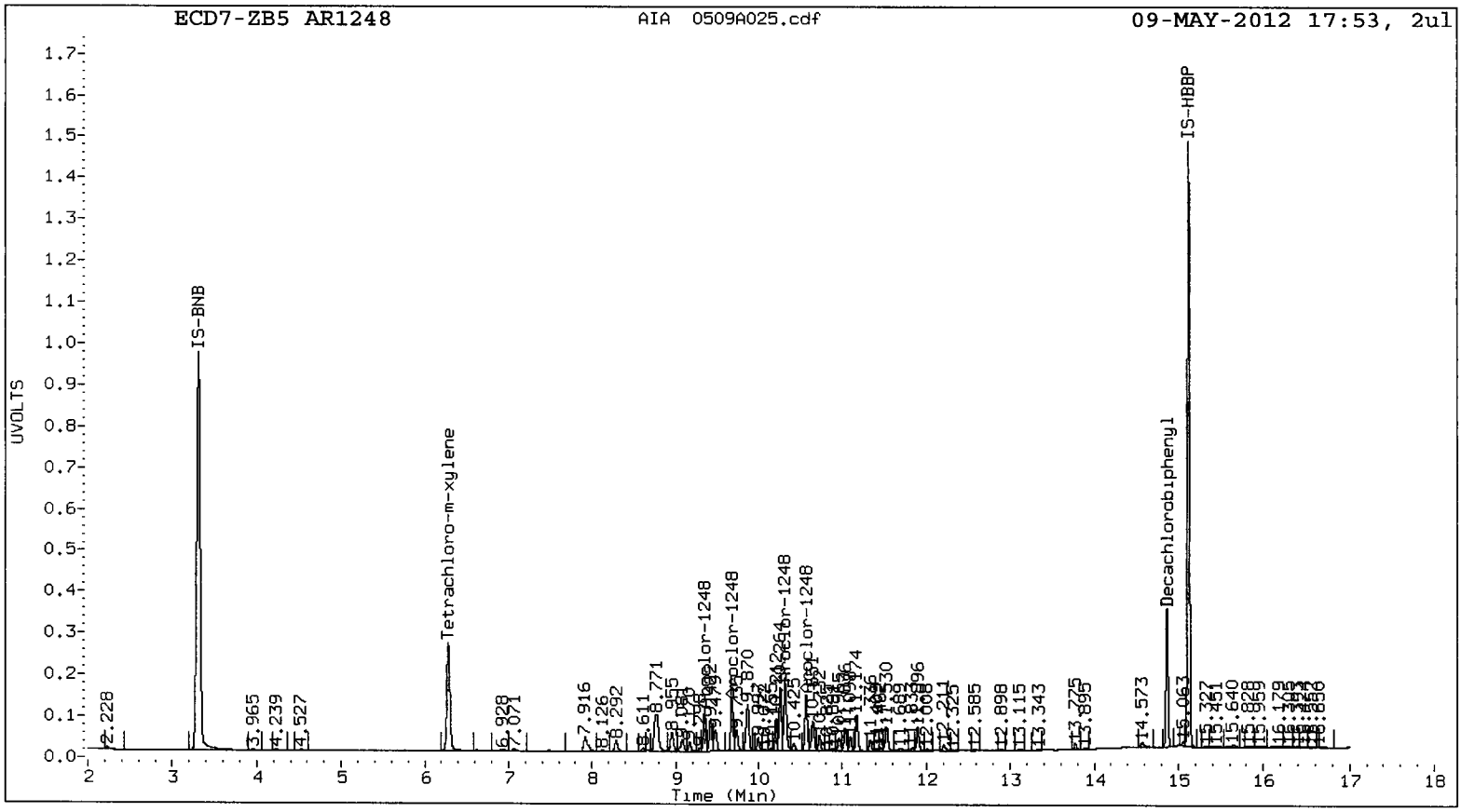
Total Col1Ave (4 peaks): 238.4 Total Col2Ave (4 peaks): 236.4 RPD = 1

Corrected Ave (3 peaks): 237.2 Corrected Ave (3 peaks): 234.4 RPD = 1

Total PCB Area Col1 (6.384 - 14.767) = 8946577 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 15060252 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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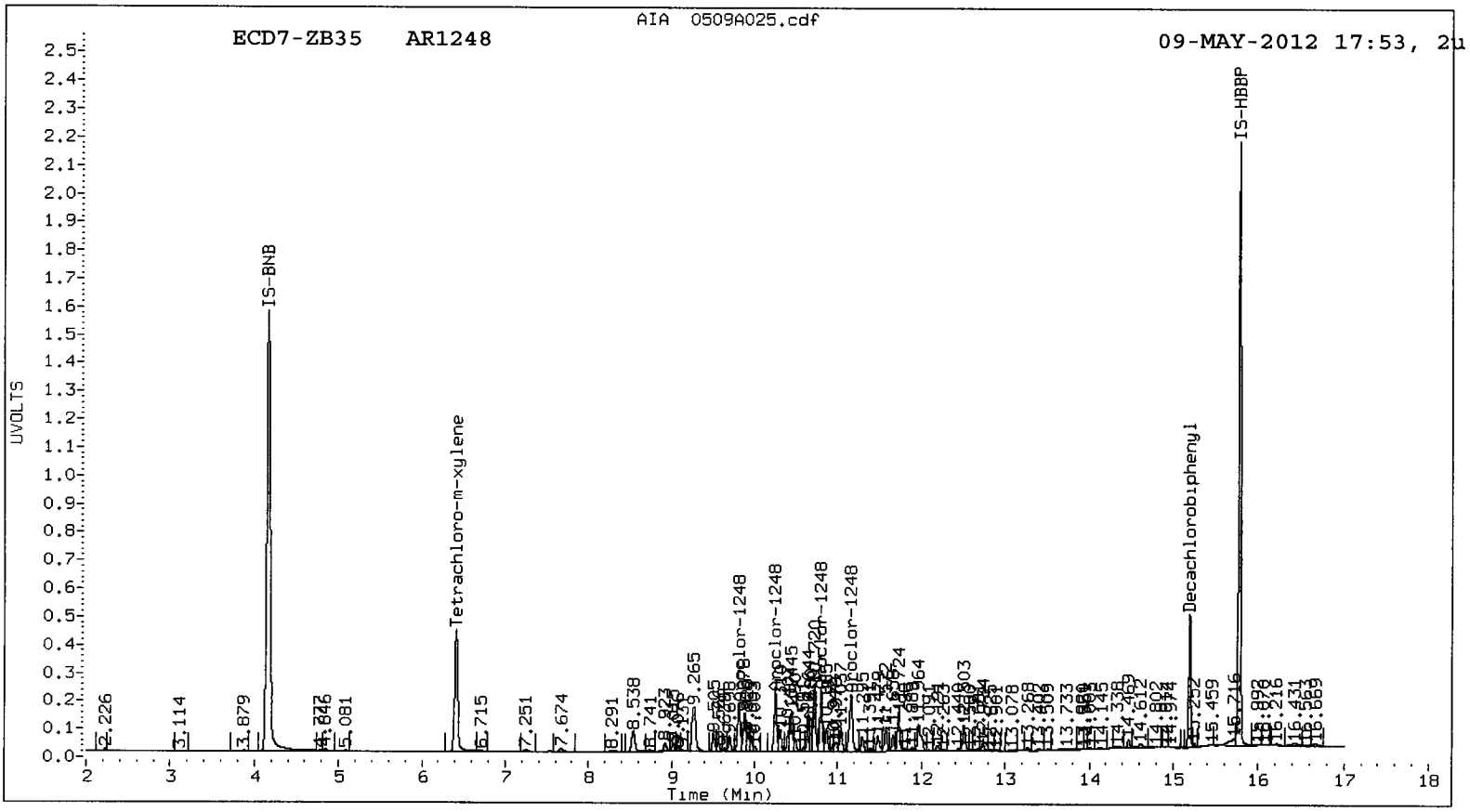
AIA 0509A025.cdf
09-MAY-2012 17:53, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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09-MAY-2012 17:53, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120505.B/0509-1.b/0509A026.d
Data file 2: 20120505.B/0509-2.b/0509A026.d
Method: /chem2/ecd7.i/20120505.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 09-MAY-2012 18:14
Report Date: 05/10/2012 08:31
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.286	0.002	1441710	6.412	0.003	2345339	20.5	19.7	4.0	Tetrachloro-m-xylen
14.866	-0.001	1219186	15.195	-0.001	1665888	19.5	19.2	1.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.3	49.3
Decachlorobiphenyl	48.8	48.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5841740	5950392	1.9
Hexabromobiphenyl	4847662	5137168	6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9156558	9523746	4.0
Hexabromobiphenyl	6845779	7554278	10.3

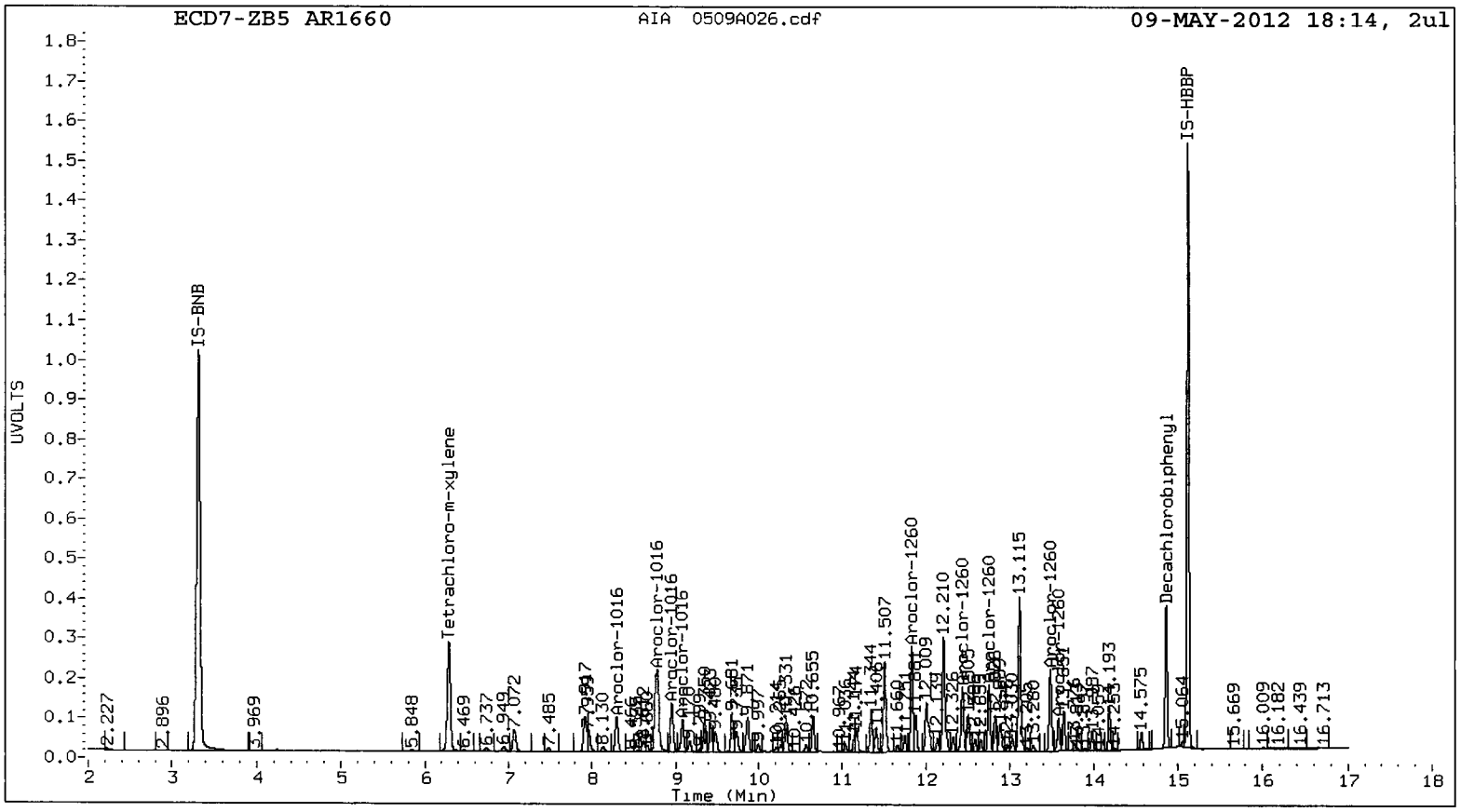
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.293	0.001	428792	246.5	1	8.540	0.001	1147550	238.0
Aroclor-1016	2	8.780	0.001	1475289	247.3	2	9.272	0.000	2363881	241.8
Aroclor-1016	3	8.954	0.001	571479	245.3	3	9.699	0.001	612776	241.8
Aroclor-1016	4	9.082	0.001	391180	242.0	4	9.806	0.000	692969	235.7
Total Col1Ave (4 peaks):				245.3		Total Col2Ave (4 peaks):			239.3	RPD = 2
Corrected Ave (3 peaks):				244.6		Corrected Ave (3 peaks):			238.5	RPD = 3
Aroclor-1260	1	11.833	-0.001	1043043	231.9	1	12.734	-0.002	1496489	220.9
Aroclor-1260	2	12.437	-0.001	677304	231.3	2	13.507	-0.002	2365565	226.7
Aroclor-1260	3	12.752	-0.001	680838	233.5	3	14.002	-0.002	1574145	227.3
Aroclor-1260	4	13.487	0.000	859106	235.1	4	14.560	-0.001	572999	225.7
Aroclor-1260	5	13.587	-0.001	339130	231.8	NS	---			----
Total Col1Ave (5 peaks):				232.7		Total Col2Ave (4 peaks):			225.1	RPD = 3
Corrected Ave (4 peaks):				232.1		Corrected Ave (3 peaks):			224.4	RPD = 3

Total PCB Area Col1 (6.384 - 14.767) = 20542177 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.510 - 15.096) = 32731501 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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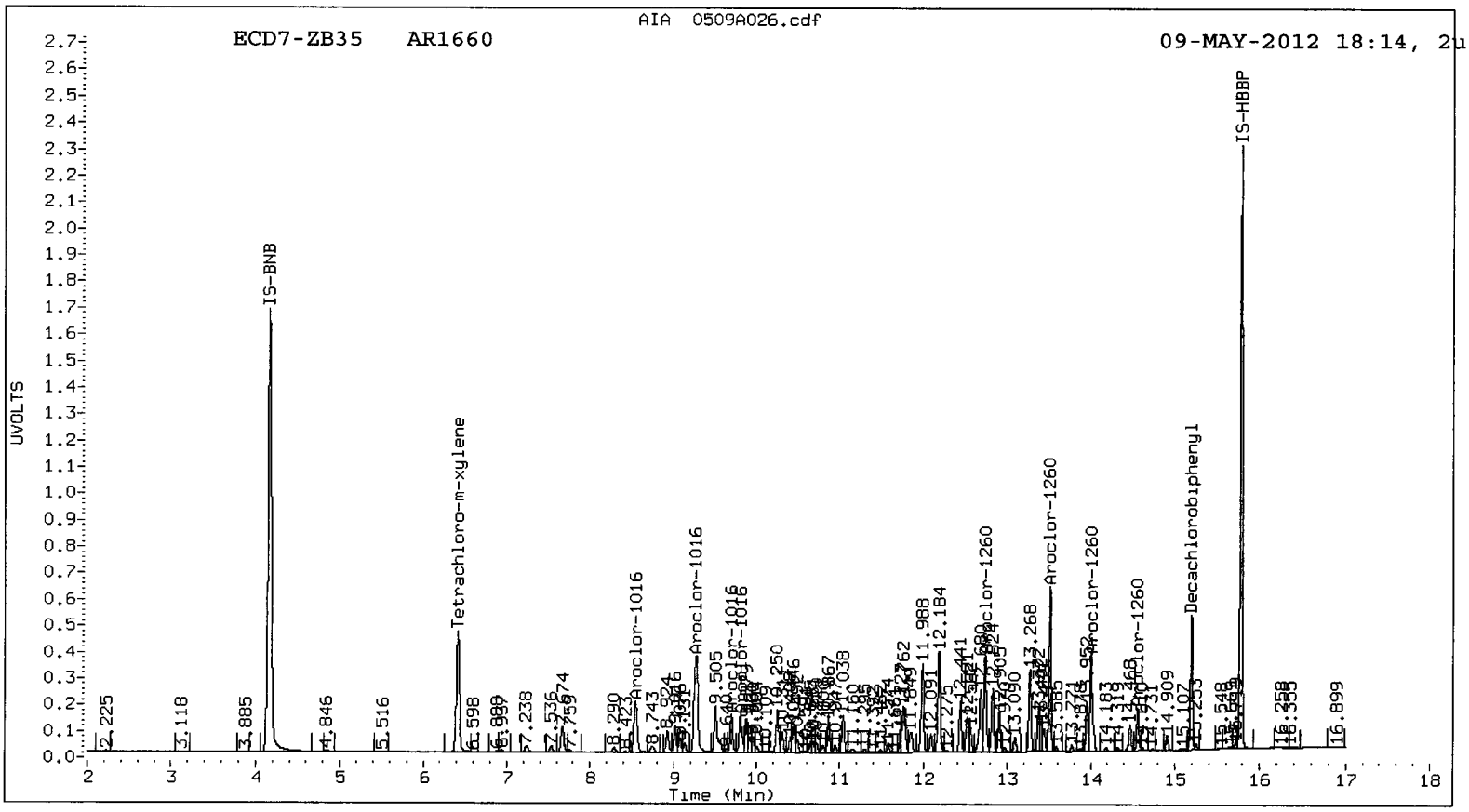
AIA 0509A026.cdf
09-MAY-2012 18:14, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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09-MAY-2012 18:14, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 4-30-12

Final Volume 50

Final Volume (Hg): 50

Sample ID UR61 ASPK, MBISPK

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	2002-1		
	Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag	50 ✓		2.0
	Al	200	200	
	As	200 ✓		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50 ✓		2.0
	Co	50	50	
	Cr	50 ✓	50	
	Cu	50 ✓	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50 ✓	50	
	Pb	200 ✓		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50 ✓	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	5mm	CVA	1.0	0.05	2008-7
Hg MBSPK	5mm	CVA	1.0	0.1	2008-7
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Start Time 0955

Analyst: DM Date: 4-30-12

Matrix: Soil Block ID: #1 Block Temp: 94°c Thermometer: MP30

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
URS7 A	5	–	1.054	50.0			
URS7 ADUP	5	–	1.052	50.0			
URS7 ASPK	5	–	1.059	50.0			
URS7 B	5	–	1.008	50.0			
URS7 C	5	–	1.024	50.0			
URS7 REF1	2053	–	1.007	50.0			
URS7 MB1	–	–	–	50.0			
URS7 MBSPK	–	–	–	50.0			
URS1 A	3	–	1.041	50.0			
URS1 ADUP	3	–	1.039	50.0			
URS1 ASPK	3	–	1.046	50.0			
URS1 B	3	–	1.013	50.0			
URS1 C	3	–	1.024	50.0			
URS1 D	3	–	1.044	50.0			
URS1 E	3	–	1.095	50.0			
URS1 F	3	–	1.062	50.0			
URS1 G	3	–	1.079	50.0			
URS1 H	3	–	1.081	50.0			
URS1 I	3	–	1.026	50.0			
URS1 J	3	–	1.097	50.0			
URS1 MB1	–	–	–	50.0			
URS1 MBSPK	–	–	–	50.0			
				4-30-12 DM			

Chemical/Reagent ID:

HNO_3: ~~MP2086~~ I7370 HCl: I7305 H_2O_2: I7403 Tube Lot #: 111173

URS1 : 02171

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM
Analyst: DM
Bath Temp: 95°C
Start Time: 1015
End Time: 1045
Matrix: Soil
Date: 4-30-12

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
URB7 A	5	—	0.246	50.0	5h 1	Y	
URB7 ADUP	5	—	0.241	50.0	1	Y	
URB7 ABPK	5	—	0.243	50.0	1	Y	
URB7 B	5	—	0.225	50.0	1	Y	
URB7 C	5	—	0.285	50.0	1	Y	
URB7 REF1	D053	—	0.204	50.0	1	Y	
URB7 MB1	—	—	—	50.0	1	Y	
URB7 MB1SPK	—	—	—	50.0	1	Y	
URB1 A	3	—	0.244	50.0	5/10 1	Y	
URB1 ADUP	3	—	0.242	50.0	1	Y	
URB1 ABPK	3	—	0.242	50.0	1	Y	
URB1 B	3	—	0.209	50.0	1	Y	
URB1 C	3	—	0.230	50.0	1	Y	
URB1 D	3	—	0.201	50.0	1	Y	
URB1 E	3	—	0.213	50.0	1	Y	
URB1 F	3	—	0.276	50.0	1	Y	
URB1 G	3	—	0.245	50.0	1	Y	
URB1 H	3	—	0.262	50.0	1	Y	
URB1 I	3	—	0.203	50.0	1	Y	
URB1 J	3	—	0.271	50.0	1	Y	
URB1 MB1	—	—	—	50.0	1	Y	
URB1 MB1SPK	—	—	—	50.0	1	Y	
			4-30-12 DM				

Chemical/Reagent ID:

HNO_3: I7370
H_2SO_4: I7184
HCl: —
5% $K_2S_2O_8$: MP2272
5% $KMnO_4$: MP2273
Digest Tube Lot: 1108215

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: KM

Date: 5/02/12

Final Volume 50

Final Volume (Hg): 50

Sample ID US18 BSPK, MBISPK

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	2902-1		
	Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag	50 ✓		2.0
	Al	200	200	
	As	200 ✓		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50 ✓		2.0
	Co	50	50	
	Cr	50 ✓	50	
	Cu	50 ✓	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50 ✓	50	
	Pb	200 ✓		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50 ✓	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SMM	CVA	1.0	0.05	2908-7
Hg MBSPK	SMM	CVA	1.0	0.1	2908-7
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Start time: 1140

Analyst: KM

Date: 5/02/12

Matrix: Soil Block ID: #1 Block Temp: 90°C Thermometer: MP30

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) Vol (mL)	Prep Code: SWC Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
US18 A	1	—	1.059	50.0			
US18 B	1	—	1.046	50.0			
US18 BDUP	1	—	1.043	50.0			
US18 BSPK	1	—	1.045	50.0			
US18 MBI	—	—	—	50.0			
US18 MBISPK	—	—	—	50.0			

KM 5/02/12

Chemical/Reagent ID:

HNO_3: MP2288 I7370 HCl: I7305 H_2O_2: I7403 Tube Lot #: 1111173

UR01 : 021 74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM
Analyst: KM
Bath Temp: 95°C
Start Time: 1150
Matrix: Soil
Date: 5/02/12
End Time: 1220

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
US18 A	1	—	0.233	50.0	5/14 1	Y	
US18 B	1	—	0.242	50.0	1	Y	
US18 BDUP	1	—	0.244	50.0	1	Y	
US18 BSPK	1	—	0.239	50.0	1	Y	
US18 MB1	—	—	—	50.0	1	Y	
US18 MB1SPK	—	—	—	50.0	1	Y	

KM
5/02/12

Chemical/Reagent ID:

HNO_3: I7370
H_2SO_4: I7184
HCl: —
5% $K_2S_2O_8$: MP2272
5% $KMnO_4$: MP2273
Digest Tube Lot: 1108215

UR81 : 02175

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	US18
Unacceptable Blank:	☐	Date of Event:	5-03-12
Unacceptable Duplicate:	☐	Client ID:	
Unacceptable Spike:	☒	Method/Element:	Hg CVA
Unacceptable Reference:	☐	Prep Code:	5mm

Details of Problem/Recommended Corrective Action:

1st Analysis: B- 11.09 ppb

BDUP- 11.27 ppb All High

BSPK- 12.05 ppb

2nd Analysis: B- 5.45 ppb

BSPK- 6.15 ppb %R=70 Low

* 2x DIL. @ Inst. *

Samples Affected: B, BDUP, BSPK, MB, MBSPK

Corrective Action Taken:

Analyst Initials: DM **Supervisor:**

Date: 5-03-12 **Date:** 5.3.12

5049F URO1 : Revision 007

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: UR81, US18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 3.19.12 Analysis Date: 5.1.12 Analyst: BW
LR Date: 3.19.12 Page: 1 of 4

All corrections made by analyst unless otherwise noted. BW 5.1.12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		Std 0			2930-15
		2			2931-8
		3			-9
		4			-10
		5			2932-1
		ICV			2925-3
		ICB			
		CRI			
		ICSA			✓ 0.007
		ICSAB			
		CCV1			
		CCB1			
		UR81 MB1	SWC	2	
		B			
		C			
		D			
	✓	E			Fe high - rerun
		Adup		✓	
		A			
		Aspk		✓	
2		~~222822~~ Apost			
		MBlspk		✓	
		CCV2			
		CCB2			

UR81 : 02178

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: – Analysis Date: 5.1.12 Analyst: Sku

LR Date: – Page: 2 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		UR61 MB1	SWC	2	
		UR81 F			
		G			
		H			
		I			
		J			
		UR61 Adup		✓	
		A			
		Asph			Zn 68% CAF
		MBsph		✓	
		CCV3			
		CCB3			
		UR83 B	TWC		
		C			
		D			
		E			
		UR61 B	SWC	2	
		C			
	✓	D			Fe high
		E			
		F			
		G			
		CCV4			
		CCB4			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 5/1/12 Analyst: BW

LR Date: — Page: 3 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		UR83 MB1	TWC		
		F			
		G			
		H			
		I			
		Adup		✓	
		A			
		Asph		✓	
		UR81 E	SWC	5	
		UR83 MB1sph	TWC	✓	
		CCV5			
		CCB5			end package
		UR83 MB2	TWC		
		K			
		L			
		M			
		N			
		O			
		Jdup		✓	
		J			
		Jsph		✓	Fe Mn STL
		MB2sph		✓	
		CCV			
		CCB			

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 5.1.12

ICP2	Analyst BW 5.2	Peer HA 5-2-12	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	UR61
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	UR61

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Analysis Begun

Start Time: 5/1/2012 10:45:59 AM
Plasma On Time: 5/1/2012 9:31:38 AM
Logged In Analyst: metals
Technique: ICP Continuous
Spectrometer Model: Optima 7300 DV, S/N 077C8121202**Autosampler Model:** AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2120501
Results Library: C:\pe\metals\Results\Results.mdb

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Method Loaded
Method Name: 7300bcESI2FAST
Method Last Saved: 3/19/2012 10:25:21 AM
IEC File: IEC031612.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

==========

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank 1
Date Collected: 5/1/2012 10:46:00 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2598695.9	10168.37	0.39%	100.0	%
ScR 361.383	400773.4	3680.20	0.92%	100.0	%
Ag 328.068†	-216.9	19.16	8.83%	[0.00]	mg/L
Al 308.215†	132.0	5.04	3.81%	[0.00]	mg/L
As 188.979†	-1.7	1.90	112.59%	[0.00]	mg/L
B 249.677†	18.1	3.82	21.03%	[0.00]	mg/L

Ba 233.527†	17.0	1.58	9.32%	[0.00] mg/L
Be 313.042†	1159.9	15.18	1.31%	[0.00] mg/L
Ca 317.933†	381.9	11.81	3.09%	[0.00] mg/L
Cd 228.802†	265.7	7.26	2.73%	[0.00] mg/L
Co 228.616†	-22.2	5.70	25.69%	[0.00] mg/L
Cr 267.716†	-40.4	1.57	3.88%	[0.00] mg/L
Cu 324.752†	424.1	12.41	2.93%	[0.00] mg/L
Fe 273.955†	-16.5	2.11	12.85%	[0.00] mg/L
K 766.490†	-379.9	32.17	8.47%	[0.00] mg/L
Mg 279.077†	-35.6	11.54	32.43%	[0.00] mg/L
Mn 257.610†	-11.0	0.75	6.84%	[0.00] mg/L
Mo 202.031†	86.6	1.20	1.39%	[0.00] mg/L
Na 589.592†	-534.5	9.46	1.77%	[0.00] mg/L
Na 330.237†	-24.3	6.97	28.70%	[0.00] mg/L
Ni 231.604†	-3.9	4.26	110.27%	[0.00] mg/L
Pb 220.353†	137.2	2.38	1.74%	[0.00] mg/L
Sb 206.836†	231.8	3.13	1.35%	[0.00] mg/L
Se 196.026†	-122.6	0.35	0.29%	[0.00] mg/L
Si 288.158†	70.3	9.30	13.23%	[0.00] mg/L
Sn 189.927†	-40.2	2.26	5.61%	[0.00] mg/L
Sr 421.552†	-515.3	33.75	6.55%	[0.00] mg/L
Ti 334.903†	-98.8	7.84	7.94%	[0.00] mg/L
Tl 190.801†	-7.0	4.30	61.37%	[0.00] mg/L
V 292.402†	458.0	10.49	2.29%	[0.00] mg/L
Zn 206.200†	-55.1	1.13	2.04%	[0.00] mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 5/1/2012 10:50:13 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2626650.9	13117.78	0.50%	101.1	%
ScR 361.383	401515.0	4496.14	1.12%	100.2	%
Ba 233.527†	83931.2	410.38	0.49%	[10]	mg/L
Cd 228.802†	302008.1	728.78	0.24%	[10]	mg/L
Co 228.616†	383718.6	653.02	0.17%	[10]	mg/L
Cr 267.716†	82367.0	216.51	0.26%	[10]	mg/L
Cu 324.752†	2196022.6	3848.59	0.18%	[10]	mg/L
Mn 257.610†	556186.4	3213.89	0.58%	[10]	mg/L
V 292.402†	1753813.9	5712.48	0.33%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 5/1/2012 10:51:58 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2559919.7	3421.01	0.13%	98.51	%
ScR 361.383	391768.5	3290.55	0.84%	97.75	%
Ag 328.068†	265237.1	802.06	0.30%	[1.0]	mg/L
As 188.979†	23389.0	12.75	0.05%	[10]	mg/L
B 249.677†	63248.7	336.71	0.53%	[10]	mg/L
Be 313.042†	3544606.6	30133.96	0.85%	[5.0]	mg/L
Na 589.592†	657158.7	7111.95	1.08%	[50]	mg/L
Ni 231.604†	46089.4	413.32	0.90%	[10]	mg/L
Pb 220.353†	118424.9	471.86	0.40%	[10]	mg/L
Se 196.026†	18065.4	15.36	0.09%	[10]	mg/L
Sr 421.552†	4336978.5	35728.26	0.82%	[5]	mg/L
Tl 190.801†	25740.7	57.08	0.22%	[10]	mg/L
Zn 206.200†	27215.3	211.07	0.78%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 5/1/2012 10:54:13 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2547752.1	15117.48	0.59%	98.04	%
ScR 361.383	399884.4	2904.53	0.73%	99.78	%
Mo 202.031†	221105.5	875.76	0.40%	[10]	mg/L
Sb 206.836†	37361.9	330.39	0.88%	[10]	mg/L
Si 288.158†	21630.5	351.74	1.63%	[10]	mg/L
Sn 189.927†	72182.3	573.01	0.79%	[10]	mg/L
Ti 334.903†	286888.9	1197.99	0.42%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 5/1/2012 10:56:25 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2448071.4	13496.05	0.55%	94.20	%
ScR 361.383	397602.8	4373.25	1.10%	99.21	%
Al 308.215†	48068.7	400.97	0.83%	[30]	mg/L
Ca 317.933†	300348.6	2325.65	0.77%	[30]	mg/L
Fe 273.955†	140064.3	764.36	0.55%	[100]	mg/L
K 766.490†	219748.1	1516.54	0.69%	[100]	mg/L
Mg 279.077†	37142.2	384.83	1.04%	[30]	mg/L
Na 330.237†	3030.5	33.37	1.10%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	265200	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1602	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	2339	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6325	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	8393	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	708900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	10010	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	30200	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	38370	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8237	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	219600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1401	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2197	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1238	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	55620	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	22110	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	13140	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	30.31	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4609	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	11840	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3736	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1807	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2163	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	7218	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	867400	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	28690	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2574	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	175400	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	2722	0.00000	1.000000	

==========

Analysis Begun

Start Time: 5/1/2012 11:02:50 AM **Plasma On Time: 5/1/2012 9:31:38 AM**
Logged In Analyst: metals **Technique: ICP Continuous**
Spectrometer Model: Optima 7300 DV, S/N 077C8121202Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\0501.sif
Batch ID:
Results Data Set: I2120501
Results Library: C:\pe\metals\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CV **Date Collected: 5/1/2012 11:02:51 AM**
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2582654.9	99.38	%	0.856				0.86%
ScR 361.383	393523.2	98.19	%	0.889				0.91%
Ag 328.068†	274340.2	1.034	mg/L	0.0035	1.034	mg/L	0.0035	0.34%
Al 308.215†	3303.7	2.032	mg/L	0.0097	2.032	mg/L	0.0097	0.48%
As 188.979†	4701.8	2.015	mg/L	0.0181	2.015	mg/L	0.0181	0.90%
B 249.677†	6316.0	0.9966	mg/L	0.00442	0.9966	mg/L	0.00442	0.44%
Ba 233.527†	8500.5	1.012	mg/L	0.0043	1.012	mg/L	0.0043	0.42%
Be 313.042†	680794.8	0.9596	mg/L	0.00830	0.9596	mg/L	0.00830	0.86%
Ca 317.933†	20519.2	2.050	mg/L	0.0159	2.050	mg/L	0.0159	0.77%
Cd 228.802†	30998.4	1.020	mg/L	0.0027	1.020	mg/L	0.0027	0.27%
Co 228.616†	37772.6	0.9826	mg/L	0.00182	0.9826	mg/L	0.00182	0.19%
Cr 267.716†	8460.5	1.027	mg/L	0.0053	1.027	mg/L	0.0053	0.52%
Cu 324.752†	222006.5	1.011	mg/L	0.0049	1.011	mg/L	0.0049	0.49%
Fe 273.955†	2880.5	2.052	mg/L	0.0058	2.052	mg/L	0.0058	0.28%
K 766.490†	45271.9	20.60	mg/L	0.119	20.60	mg/L	0.119	0.58%
Mg 279.077†	2515.2	2.037	mg/L	0.0042	2.037	mg/L	0.0042	0.21%
Mn 257.610†	53470.9	0.9621	mg/L	0.00710	0.9621	mg/L	0.00710	0.74%
Mo 202.031†	21981.1	0.9941	mg/L	0.00079	0.9941	mg/L	0.00079	0.08%
Na 589.592†	651468.0	49.57	mg/L	0.249	49.57	mg/L	0.249	0.50%
Na 330.237†	1600.8	52.86	mg/L	0.039	52.86	mg/L	0.039	0.07%
Ni 231.604†	4550.6	0.9893	mg/L	0.00447	0.9893	mg/L	0.00447	0.45%
Pb 220.353†	23628.8	1.997	mg/L	0.0021	1.997	mg/L	0.0021	0.11%
Sb 206.836†	7726.7	2.067	mg/L	0.0217	2.067	mg/L	0.0217	1.05%
Se 196.026†	3626.0	2.007	mg/L	0.0168	2.007	mg/L	0.0168	0.84%
Si 288.158†	4505.8	2.087	mg/L	0.0031	2.087	mg/L	0.0031	0.15%
Sn 189.927†	7401.2	1.027	mg/L	0.0102	1.027	mg/L	0.0102	1.00%
Sr 421.552†	857712.4	0.9888	mg/L	0.00540	0.9888	mg/L	0.00540	0.55%
Ti 334.903†	28545.7	0.9934	mg/L	0.00586	0.9934	mg/L	0.00586	0.59%
Tl 190.801†	5158.6	2.003	mg/L	0.0157	2.003	mg/L	0.0157	0.78%
V 292.402†	178025.4	1.020	mg/L	0.0071	1.020	mg/L	0.0071	0.70%
Zn 206.200†	2770.6	1.019	mg/L	0.0024	1.019	mg/L	0.0024	0.24%

Sequence No.: 2
Sample ID: CB

Dilution: 1X

Autosampler Location: 1
Date Collected: 5/1/2012 11:06:52 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2671371.7	102.8	%	1.28				1.24%
ScR 361.383	412728.2	103.0	%	0.76				0.74%
Ag 328.068†	4.9	0.00002	mg/L	0.000114	0.00002	mg/L	0.000114	615.10%
Al 308.215†	-4.8	-0.00302	mg/L	0.003059	-0.00302	mg/L	0.003059	101.45%
As 188.979†	-2.7	-0.00116	mg/L	0.001727	-0.00116	mg/L	0.001727	148.99%
B 249.677†	18.5	0.00292	mg/L	0.000629	0.00292	mg/L	0.000629	21.50%
Ba 233.527†	-1.3	-0.00016	mg/L	0.000287	-0.00016	mg/L	0.000287	184.06%
Be 313.042†	-16.1	-0.00002	mg/L	0.000014	-0.00002	mg/L	0.000014	63.68%
Ca 317.933†	-8.0	-0.00080	mg/L	0.000637	-0.00080	mg/L	0.000637	79.53%
Cd 228.802†	2.5	0.00009	mg/L	0.000151	0.00009	mg/L	0.000151	175.11%
Co 228.616†	0.9	0.00002	mg/L	0.000051	0.00002	mg/L	0.000051	236.45%
Cr 267.716†	-0.7	-0.00009	mg/L	0.000856	-0.00009	mg/L	0.000856	962.37%
Cu 324.752†	13.5	0.00006	mg/L	0.000030	0.00006	mg/L	0.000030	48.79%
Fe 273.955†	0.1	0.00005	mg/L	0.000887	0.00005	mg/L	0.000887	>999.9%
K 766.490†	8.3	0.00379	mg/L	0.014083	0.00379	mg/L	0.014083	372.03%
Mg 279.077†	0.4	0.00035	mg/L	0.003431	0.00035	mg/L	0.003431	980.14%
Mn 257.610†	2.5	0.00004	mg/L	0.000008	0.00004	mg/L	0.000008	18.44%
Mo 202.031†	10.9	0.00049	mg/L	0.000013	0.00049	mg/L	0.000013	2.62%
Na 589.592†	2.4	0.00018	mg/L	0.002729	0.00018	mg/L	0.002729	>999.9%
Na 330.237†	1.4	0.04585	mg/L	0.125228	0.04585	mg/L	0.125228	273.12%
Ni 231.604†	-5.0	-0.00109	mg/L	0.000334	-0.00109	mg/L	0.000334	30.72%
Pb 220.353†	-11.8	-0.00100	mg/L	0.000405	-0.00100	mg/L	0.000405	40.53%
Sb 206.836†	13.3	0.00357	mg/L	0.000312	0.00357	mg/L	0.000312	8.75%
Se 196.026†	11.5	0.00638	mg/L	0.000597	0.00638	mg/L	0.000597	9.36%
Si 288.158†	-3.2	-0.00147	mg/L	0.002941	-0.00147	mg/L	0.002941	200.13%
Sn 189.927†	4.6	0.00064	mg/L	0.000571	0.00064	mg/L	0.000571	88.69%
Sr 421.552†	54.3	0.00006	mg/L	0.000012	0.00006	mg/L	0.000012	18.68%
Ti 334.903†	22.1	0.00077	mg/L	0.000290	0.00077	mg/L	0.000290	37.61%
Tl 190.801†	4.0	0.00156	mg/L	0.001342	0.00156	mg/L	0.001342	85.79%
V 292.402†	4.2	0.00002	mg/L	0.000143	0.00002	mg/L	0.000143	604.37%
Zn 206.200†	-0.3	-0.00010	mg/L	0.000371	-0.00010	mg/L	0.000371	354.71%

Sequence No.: 3
Sample ID: CRI

Dilution: 1X

Autosampler Location: 301
Date Collected: 5/1/2012 11:11:05 AM
Data Type: Original

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2640818.8	101.6	%	0.47				0.46%
ScR 361.383	406208.1	101.4	%	0.53				0.53%
Ag 328.068†	782.8	0.00295	mg/L	0.000118	0.00295	mg/L	0.000118	4.00%
Al 308.215†	87.1	0.05425	mg/L	0.002655	0.05425	mg/L	0.002655	4.89%
As 188.979†	115.3	0.04931	mg/L	0.000406	0.04931	mg/L	0.000406	0.82%
B 249.677†	138.6	0.02192	mg/L	0.000937	0.02192	mg/L	0.000937	4.28%
Ba 233.527†	24.8	0.00295	mg/L	0.000363	0.00295	mg/L	0.000363	12.33%
Be 313.042†	678.4	0.00095	mg/L	0.000012	0.00095	mg/L	0.000012	1.29%
Ca 317.933†	489.9	0.04893	mg/L	0.001112	0.04893	mg/L	0.001112	2.27%
Cd 228.802†	73.1	0.00226	mg/L	0.000060	0.00226	mg/L	0.000060	2.65%
Co 228.616†	117.0	0.00304	mg/L	0.000100	0.00304	mg/L	0.000100	3.31%
Cr 267.716†	45.2	0.00548	mg/L	0.000653	0.00548	mg/L	0.000653	11.92%
Cu 324.752†	432.3	0.00197	mg/L	0.000053	0.00197	mg/L	0.000053	2.68%
Fe 273.955†	70.8	0.05054	mg/L	0.000529	0.05054	mg/L	0.000529	1.05%
K 766.490†	1105.7	0.5032	mg/L	0.00550	0.5032	mg/L	0.00550	1.09%
Mg 279.077†	69.0	0.05569	mg/L	0.003912	0.05569	mg/L	0.003912	7.02%
Mn 257.610†	52.1	0.00094	mg/L	0.000050	0.00094	mg/L	0.000050	5.35%
Mo 202.031†	109.3	0.00494	mg/L	0.000154	0.00494	mg/L	0.000154	3.12%
Na 589.592†	6248.3	0.4754	mg/L	0.00235	0.4754	mg/L	0.00235	0.49%
Na 330.237†	15.6	0.5142	mg/L	0.36382	0.5142	mg/L	0.36382	70.75%
Ni 231.604†	44.4	0.00968	mg/L	0.000206	0.00968	mg/L	0.000206	2.13%
Pb 220.353†	234.7	0.01983	mg/L	0.001183	0.01983	mg/L	0.001183	5.96%
Sb 206.836†	186.9	0.05003	mg/L	0.000583	0.05003	mg/L	0.000583	1.17%
Se 196.026†	96.4	0.05339	mg/L	0.004530	0.05339	mg/L	0.004530	8.49%
Si 288.158†	125.7	0.05811	mg/L	0.000865	0.05811	mg/L	0.000865	1.49%
Sn 189.927†	73.3	0.01019	mg/L	0.000299	0.01019	mg/L	0.000299	2.93%
Sr 421.552†	931.7	0.00107	mg/L	0.000034	0.00107	mg/L	0.000034	3.14%
Ti 334.903†	150.2	0.00523	mg/L	0.000424	0.00523	mg/L	0.000424	8.11%
Tl 190.801†	129.3	0.05024	mg/L	0.001307	0.05024	mg/L	0.001307	2.60%
V 292.402†	520.5	0.00299	mg/L	0.000007	0.00299	mg/L	0.000007	0.22%
Zn 206.200†	26.2	0.00962	mg/L	0.000410	0.00962	mg/L	0.000410	4.26%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 5/1/2012 11:15:18 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2549172.2	98.09	%	0.570				0.58%
ScR 361.383	400806.0	100.0	%	0.48				0.48%
Ag 328.068†	-191.2	-0.00139	mg/L	0.000083	-0.00139	mg/L	0.000083	6.01%
Al 308.215†	324544.3	202.5	mg/L	1.49	202.5	mg/L	1.49	0.74%
As 188.979†	1.6	-0.01526	mg/L	0.003703	-0.01526	mg/L	0.003703	24.26%
B 249.677†	37.8	0.00597	mg/L	0.001947	0.00597	mg/L	0.001947	32.61%
Ba 233.527†	108.0	0.00266	mg/L	0.000401	0.00266	mg/L	0.000401	15.06%
Be 313.042†	32.1	0.00002	mg/L	0.000020	0.00002	mg/L	0.000020	81.90%
Ca 317.933†	999980.7	99.88	mg/L	0.692	99.88	mg/L	0.692	0.69%
Cd 228.802†	78.0	0.00069	mg/L	0.000160	0.00069	mg/L	0.000160	23.35%
Co 228.616†	108.0	0.00281	mg/L	0.000056	0.00281	mg/L	0.000056	2.01%
Cr 267.716†	-23.3	0.00012	mg/L	0.000688	0.00012	mg/L	0.000688	553.13%
Cu 324.752†	-3490.1	-0.00201	mg/L	0.000097	-0.00201	mg/L	0.000097	4.83%
Fe 273.955†	279888.4	199.8	mg/L	1.80	199.8	mg/L	1.80	0.90%
K 766.490†	58.4	0.02659	mg/L	0.005295	0.02659	mg/L	0.005295	19.91%
Mg 279.077†	121877.5	98.32	mg/L	0.629	98.32	mg/L	0.629	0.64%
Mn 257.610†	55.2	0.00012	mg/L	0.000075	0.00012	mg/L	0.000075	61.99%
Mo 202.031†	134.1	0.00437	mg/L	0.000214	0.00437	mg/L	0.000214	4.89%
Na 589.592†	283.6	0.02158	mg/L	0.000772	0.02158	mg/L	0.000772	3.58%
Na 330.237†	15.3	-0.1426	mg/L	0.10427	-0.1426	mg/L	0.10427	73.14%
Ni 231.604†	-6.7	-0.00136	mg/L	0.000617	-0.00136	mg/L	0.000617	45.35%
Pb 220.353†	-248.3	-0.00598	mg/L	0.000963	-0.00598	mg/L	0.000963	16.10%
Sb 206.836†	402.8	0.01857	mg/L	0.001084	0.01857	mg/L	0.001084	5.84%
Se 196.026†	-27.2	0.00786	mg/L	0.001419	0.00786	mg/L	0.001419	18.05%
Si 288.158†	-42.2	-0.01949	mg/L	0.002223	-0.01949	mg/L	0.002223	11.41%
Sn 189.927†	-102.9	-0.01126	mg/L	0.000106	-0.01126	mg/L	0.000106	0.94%
Sr 421.552†	8599.6	0.00991	mg/L cont.	0.000008	0.00991	mg/L	0.000008	0.08%
Ti 334.903†	100.1	0.00000	mg/L	0.000253	0.00000	mg/L	0.000253	>999.9%
Tl 190.801†	-44.4	0.00903	mg/L	0.003041	0.00903	mg/L	0.003041	33.67%
V 292.402†	5548.7	0.00749	mg/L	0.000264	0.00749	mg/L	0.000264	3.53%
Zn 206.200†	-32.7	-0.00458	mg/L	0.000701	-0.00458	mg/L	0.000701	15.31%

Sequence No.: 5
Sample ID: ICSAB

Dilution: 1X

Autosampler Location: 303
Date Collected: 5/1/2012 11:19:31 AM
Data Type: Original

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2521701.6	97.04	%	0.058				0.06%
ScR 361.383	402607.0	100.5	%	1.03				1.02%
Ag 328.068†	275758.4	1.039	mg/L	0.0064	1.039	mg/L	0.0064	0.62%
Al 308.215†	324901.9	202.8	mg/L	1.73	202.8	mg/L	1.73	0.85%
As 188.979†	2408.9	1.014	mg/L	0.0073	1.014	mg/L	0.0073	0.72%
B 249.677†	46.8	0.00461	mg/L	0.000954	0.00461	mg/L	0.000954	20.70%
Ba 233.527†	8509.6	1.003	mg/L	0.0087	1.003	mg/L	0.0087	0.87%
Be 313.042†	700700.4	0.9877	mg/L	0.00727	0.9877	mg/L	0.00727	0.74%
Ca 317.933†	1008512.8	100.7	mg/L	0.45	100.7	mg/L	0.45	0.44%
Cd 228.802†	31698.3	1.045	mg/L	0.0071	1.045	mg/L	0.0071	0.68%
Co 228.616†	36885.9	0.9609	mg/L	0.00248	0.9609	mg/L	0.00248	0.26%
Cr 267.716†	8365.2	1.018	mg/L	0.0076	1.018	mg/L	0.0076	0.75%
Cu 324.752†	222207.8	1.026	mg/L	0.0025	1.026	mg/L	0.0025	0.25%
Fe 273.955†	281087.6	200.7	mg/L	1.75	200.7	mg/L	1.75	0.87%
K 766.490†	9.6	0.00438	mg/L	0.005134	0.00438	mg/L	0.005134	117.30%
Mg 279.077†	122481.0	98.81	mg/L	0.552	98.81	mg/L	0.552	0.56%
Mn 257.610†	53112.7	0.9544	mg/L	0.00769	0.9544	mg/L	0.00769	0.81%
Mo 202.031†	138.5	0.00455	mg/L	0.000423	0.00455	mg/L	0.000423	9.30%
Na 589.592†	177.2	0.01349	mg/L	0.000265	0.01349	mg/L	0.000265	1.96%
Na 330.237†	29.3	0.1103	mg/L	0.20931	0.1103	mg/L	0.20931	189.69%
Ni 231.604†	4336.5	0.9419	mg/L	0.01142	0.9419	mg/L	0.01142	1.21%
Pb 220.353†	11711.3	1.005	mg/L	0.0046	1.005	mg/L	0.0046	0.46%
Sb 206.836†	4033.7	0.9818	mg/L	0.00900	0.9818	mg/L	0.00900	0.92%
Se 196.026†	1829.8	1.035	mg/L	0.0059	1.035	mg/L	0.0059	0.57%
Si 288.158†	-53.1	-0.02063	mg/L	0.004003	-0.02063	mg/L	0.004003	19.41%
Sn 189.927†	-107.3	-0.01112	mg/L	0.001411	-0.01112	mg/L	0.001411	12.69%
Sr 421.552†	8639.5	0.00996	mg/L	0.000084	0.00996	mg/L	0.000084	0.84%
Ti 334.903†	105.4	-0.00007	mg/L	0.000182	-0.00007	mg/L	0.000182	262.41%
Tl 190.801†	2439.1	0.9694	mg/L	0.00368	0.9694	mg/L	0.00368	0.38%
V 292.402†	180834.4	1.011	mg/L	0.0072	1.011	mg/L	0.0072	0.71%
Zn 206.200†	2524.8	0.9358	mg/L	0.00609	0.9358	mg/L	0.00609	0.65%

Sequence No.: 6
Sample ID: CV

Dilution: 1X

Autosampler Location: 7
Date Collected: 5/1/2012 11:23:15 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2596852.2	99.93	%	0.524				0.52%
ScR 361.383	400075.4	99.83	%	0.369				0.37%
Ag 328.068†	269891.1	1.017	mg/L	0.0072	1.017	mg/L	0.0072	0.71%
Al 308.215†	3300.8	2.030	mg/L	0.0157	2.030	mg/L	0.0157	0.78%
As 188.979†	4642.2	1.990	mg/L	0.0138	1.990	mg/L	0.0138	0.69%
B 249.677†	6258.4	0.9875	mg/L	0.00152	0.9875	mg/L	0.00152	0.15%
Ba 233.527†	8441.6	1.005	mg/L	0.0048	1.005	mg/L	0.0048	0.47%
Be 313.042†	675393.6	0.9520	mg/L	0.00326	0.9520	mg/L	0.00326	0.34%
Ca 317.933†	20515.1	2.049	mg/L	0.0081	2.049	mg/L	0.0081	0.39%
Cd 228.802†	31135.8	1.025	mg/L	0.0018	1.025	mg/L	0.0018	0.18%
Co 228.616†	37911.5	0.9862	mg/L	0.00289	0.9862	mg/L	0.00289	0.29%
Cr 267.716†	8431.2	1.023	mg/L	0.0043	1.023	mg/L	0.0043	0.42%
Cu 324.752†	222114.0	1.011	mg/L	0.0055	1.011	mg/L	0.0055	0.55%
Fe 273.955†	2879.5	2.051	mg/L	0.0132	2.051	mg/L	0.0132	0.64%
K 766.490†	45124.3	20.53	mg/L	0.035	20.53	mg/L	0.035	0.17%
Mg 279.077†	2513.8	2.035	mg/L	0.0069	2.035	mg/L	0.0069	0.34%
Mn 257.610†	53125.6	0.9559	mg/L	0.00367	0.9559	mg/L	0.00367	0.38%
Mo 202.031†	22364.9	1.011	mg/L	0.0061	1.011	mg/L	0.0061	0.60%
Na 589.592†	645223.2	49.09	mg/L	0.275	49.09	mg/L	0.275	0.56%
Na 330.237†	1598.4	52.78	mg/L	0.199	52.78	mg/L	0.199	0.38%
Ni 231.604†	4516.1	0.9818	mg/L	0.00553	0.9818	mg/L	0.00553	0.56%
Pb 220.353†	24086.2	2.035	mg/L	0.0129	2.035	mg/L	0.0129	0.64%
Sb 206.836†	7653.5	2.048	mg/L	0.0141	2.048	mg/L	0.0141	0.69%
Se 196.026†	3587.3	1.985	mg/L	0.0141	1.985	mg/L	0.0141	0.71%
Si 288.158†	4460.0	2.066	mg/L	0.0083	2.066	mg/L	0.0083	0.40%
Sn 189.927†	7339.3	1.019	mg/L	0.0060	1.019	mg/L	0.0060	0.59%
Sr 421.552†	850714.2	0.9808	mg/L	0.00368	0.9808	mg/L	0.00368	0.37%
Ti 334.903†	28336.3	0.9861	mg/L	0.00420	0.9861	mg/L	0.00420	0.43%
Tl 190.801†	5103.6	1.982	mg/L	0.0105	1.982	mg/L	0.0105	0.53%
V 292.402†	176294.5	1.010	mg/L	0.0073	1.010	mg/L	0.0073	0.72%
Zn 206.200†	2756.5	1.013	mg/L	0.0043	1.013	mg/L	0.0043	0.43%

Sequence No.: 7
Sample ID: CB

Dilution: 1X

Autosampler Location: 1
Date Collected: 5/1/2012 11:27:16 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2659790.0	102.4	%	0.45				0.44%
ScR 361.383	407107.8	101.6	%	0.63				0.62%
Ag 328.068†	18.7	0.00007	mg/L	0.000051	0.00007	mg/L	0.000051	72.99%
Al 308.215†	8.9	0.00557	mg/L	0.001265	0.00557	mg/L	0.001265	22.72%
As 188.979†	2.5	0.00105	mg/L	0.001360	0.00105	mg/L	0.001360	129.26%
B 249.677†	17.0	0.00269	mg/L	0.001076	0.00269	mg/L	0.001076	40.06%
Ba 233.527†	-0.8	-0.00009	mg/L	0.000233	-0.00009	mg/L	0.000233	246.94%
Be 313.042†	-0.7	0.00000	mg/L	0.000032	0.00000	mg/L	0.000032	>999.9%
Ca 317.933†	8.2	0.00082	mg/L	0.000732	0.00082	mg/L	0.000732	89.00%
Cd 228.802†	3.2	0.00010	mg/L	0.000171	0.00010	mg/L	0.000171	170.67%
Co 228.616†	-1.8	-0.00005	mg/L	0.000037	-0.00005	mg/L	0.000037	79.95%
Cr 267.716†	-2.9	-0.00036	mg/L	0.000670	-0.00036	mg/L	0.000670	188.52%
Cu 324.752†	17.6	0.00008	mg/L	0.000065	0.00008	mg/L	0.000065	81.34%
Fe 273.955†	0.9	0.00066	mg/L	0.000883	0.00066	mg/L	0.000883	132.93%
K 766.490†	6.4	0.00291	mg/L	0.003678	0.00291	mg/L	0.003678	126.58%
Mg 279.077†	5.7	0.00464	mg/L	0.002659	0.00464	mg/L	0.002659	57.25%
Mn 257.610†	-2.8	-0.00005	mg/L	0.000077	-0.00005	mg/L	0.000077	153.07%
Mo 202.031†	8.9	0.00040	mg/L	0.000125	0.00040	mg/L	0.000125	31.04%
Na 589.592†	-20.1	-0.00153	mg/L	0.000864	-0.00153	mg/L	0.000864	56.57%
Na 330.237†	0.1	0.00182	mg/L	0.193667	0.00182	mg/L	0.193667	>999.9%
Ni 231.604†	-5.3	-0.00114	mg/L	0.000557	-0.00114	mg/L	0.000557	48.84%
Pb 220.353†	-9.5	-0.00081	mg/L	0.000286	-0.00081	mg/L	0.000286	35.48%
Sb 206.836†	4.8	0.00130	mg/L	0.001742	0.00130	mg/L	0.001742	133.58%
Se 196.026†	3.4	0.00186	mg/L	0.001870	0.00186	mg/L	0.001870	100.35%
Si 288.158†	-1.4	-0.00064	mg/L	0.001348	-0.00064	mg/L	0.001348	212.06%
Sn 189.927†	5.4	0.00074	mg/L	0.000559	0.00074	mg/L	0.000559	75.07%
Sr 421.552†	23.5	0.00003	mg/L	0.000023	0.00003	mg/L	0.000023	86.71%
Ti 334.903†	8.9	0.00031	mg/L	0.000372	0.00031	mg/L	0.000372	119.50%
Tl 190.801†	3.5	0.00135	mg/L	0.001390	0.00135	mg/L	0.001390	102.55%
V 292.402†	-2.5	-0.00002	mg/L	0.000095	-0.00002	mg/L	0.000095	617.54%
Zn 206.200†	-0.7	-0.00026	mg/L	0.000408	-0.00026	mg/L	0.000408	155.62%

Sequence No.: 8
Sample ID: UR81 MB1 SWC

Dilution: 2X

Autosampler Location: 304
Date Collected: 5/1/2012 11:31:29 AM
Data Type: Original

Nebulizer Parameters: UR81 MB1 SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 MB1 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2674827.2	102.9	%	0.77				0.75%
ScR 361.383	416367.4	103.9	%	0.42				0.40%
Ag 328.068†	17.8	0.00007	mg/L	0.000120	0.00013	mg/L	0.000241	179.69%
Al 308.215†	-1.5	-0.00095	mg/L	0.003367	-0.00190	mg/L	0.006735	354.98%
As 188.979†	0.0	0.00001	mg/L	0.001639	0.00003	mg/L	0.003278	>999.9%
B 249.677†	4.8	0.00076	mg/L	0.000488	0.00152	mg/L	0.000977	64.37%
Ba 233.527†	-0.7	-0.00009	mg/L	0.000221	-0.00017	mg/L	0.000443	254.83%
Be 313.042†	-33.4	-0.00005	mg/L	0.000019	-0.00009	mg/L	0.000039	41.06%
Ca 317.933†	101.5	0.01014	mg/L	0.000243	0.02028	mg/L	0.000486	2.39%
Cd 228.802†	-3.3	-0.00011	mg/L	0.000129	-0.00022	mg/L	0.000257	117.11%
Co 228.616†	-1.3	-0.00003	mg/L	0.000085	-0.00007	mg/L	0.000171	251.01%
Cr 267.716†	2.7	0.00032	mg/L	0.000508	0.00064	mg/L	0.001015	157.98%
Cu 324.752†	31.8	0.00014	mg/L	0.000101	0.00029	mg/L	0.000201	69.42%
Fe 273.955†	5.5	0.00395	mg/L	0.001185	0.00790	mg/L	0.002370	29.99%
K 766.490†	18.1	0.00824	mg/L	0.005166	0.01648	mg/L	0.010333	62.69%
Mg 279.077†	12.1	0.00974	mg/L	0.003763	0.01948	mg/L	0.007525	38.63%
Mn 257.610†	2.6	0.00005	mg/L	0.000076	0.00009	mg/L	0.000153	162.80%
Mo 202.031†	3.4	0.00015	mg/L	0.000233	0.00031	mg/L	0.000466	152.49%
Na 589.592†	19.6	0.00149	mg/L	0.001601	0.00298	mg/L	0.003202	107.46%
Na 330.237†	1.4	0.04476	mg/L	0.091488	0.08951	mg/L	0.182976	204.41%
Ni 231.604†	-2.9	-0.00062	mg/L	0.000737	-0.00125	mg/L	0.001474	118.07%
Pb 220.353†	-9.0	-0.00076	mg/L	0.000570	-0.00153	mg/L	0.001141	74.79%
Sb 206.836†	-1.7	-0.00044	mg/L	0.000230	-0.00089	mg/L	0.000460	51.80%
Se 196.026†	3.6	0.00199	mg/L	0.001738	0.00397	mg/L	0.003477	87.48%
Si 288.158†	-5.5	-0.00254	mg/L	0.001867	-0.00508	mg/L	0.003735	73.49%
Sn 189.927†	4.2	0.00058	mg/L	0.000322	0.00115	mg/L	0.000644	55.80%
Sr 421.552†	49.7	0.00006	mg/L	0.000027	0.00011	mg/L	0.000054	47.07%
Ti 334.903†	9.8	0.00034	mg/L	0.000803	0.00068	mg/L	0.001607	236.00%
Tl 190.801†	3.7	0.00145	mg/L	0.001212	0.00290	mg/L	0.002423	83.42%
V 292.402†	-13.0	-0.00007	mg/L	0.000084	-0.00015	mg/L	0.000167	114.32%
Zn 206.200†	3.1	0.00116	mg/L	0.000131	0.00231	mg/L	0.000262	11.34%

Sequence No.: 9
Sample ID: UR81 B SWC

Dilution: 2X

Autosampler Location: 305
Date Collected: 5/1/2012 11:35:42 AM
Data Type: Original

Nebulizer Parameters: UR81 B SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 B SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2619734.0	100.8	%	1.16				1.15%
ScR 361.383	406056.8	101.3	%	0.48				0.47%
Ag 328.068†	-127.7	-0.00080	mg/L	0.000100	-0.00159	mg/L	0.000199	12.51%
Al 308.215†	180260.5	112.5	mg/L	0.79	225.0	mg/L	1.59	0.70%
As 188.979†	23.3	0.03800	mg/L	0.000997	0.07601	mg/L	0.001993	2.62%
B 249.677†	1037.2	0.1638	mg/L	0.00198	0.3275	mg/L	0.00396	1.21%
Ba 233.527†	3200.4	0.3726	mg/L	0.00342	0.7452	mg/L	0.00684	0.92%
Be 313.042†	1514.4	0.00184	mg/L	0.000033	0.00368	mg/L	0.000065	1.77%
Ca 317.933†	334845.4	33.45	mg/L	0.237	66.89	mg/L	0.474	0.71%
Cd 228.802†	160.0	0.00399	mg/L	0.000176	0.00797	mg/L	0.000353	4.43%
Co 228.616†	3106.7	0.07161	mg/L	0.000726	0.1432	mg/L	0.00145	1.01%
Cr 267.716†	2657.8	0.3261	mg/L	0.00213	0.6521	mg/L	0.00427	0.65%
Cu 324.752†	59637.8	0.2817	mg/L	0.00431	0.5633	mg/L	0.00862	1.53%
Fe 273.955†	234521.6	167.4	mg/L	1.11	334.9	mg/L	2.22	0.66%
K 766.490†	35311.3	16.07	mg/L	0.105	32.14	mg/L	0.210	0.65%
Mg 279.077†	106478.0	85.91	mg/L	0.261	171.8	mg/L	0.52	0.30%
Mn 257.610†	104584.4	1.880	mg/L	0.0124	3.760	mg/L	0.0248	0.66%
Mo 202.031†	231.2	0.00989	mg/L	0.000394	0.01977	mg/L	0.000789	3.99%
Na 589.592†	904794.2	68.84	mg/L	0.808	137.7	mg/L	1.62	1.17%
Na 330.237†	2186.7	73.31	mg/L	0.431	146.6	mg/L	0.86	0.59%
Ni 231.604†	2287.6	0.4964	mg/L	0.00448	0.9928	mg/L	0.00897	0.90%
Pb 220.353†	652.7	0.06000	mg/L	0.000795	0.1200	mg/L	0.00159	1.33%
Sb 206.836†	219.5	0.00865	mg/L	0.001357	0.01729	mg/L	0.002714	15.70%
Se 196.026†	-25.0	0.00365	mg/L	0.003159	0.00730	mg/L	0.006318	86.54%
Si 288.158†	6545.9	3.026	mg/L	0.0080	6.053	mg/L	0.0160	0.26%
Sn 189.927†	-46.9	-0.00278	mg/L	0.000971	-0.00556	mg/L	0.001941	34.94%
Sr 421.552†	326752.7	0.3767	mg/L	0.00228	0.7534	mg/L	0.00456	0.61%
Ti 334.903†	156488.5	5.453	mg/L	0.0256	10.91	mg/L	0.051	0.47%
Tl 190.801†	-34.0	0.00498	mg/L	0.004298	0.00995	mg/L	0.008596	86.37%
V 292.402†	61536.2	0.3289	mg/L	0.00457	0.6578	mg/L	0.00913	1.39%
Zn 206.200†	1444.3	0.5353	mg/L	0.00474	1.071	mg/L	0.0095	0.89%

Sequence No.: 10
Sample ID: UR81 C SWC

Dilution: 2X

Autosampler Location: 306
Date Collected: 5/1/2012 11:39:42 AM
Data Type: Original

Nebulizer Parameters: UR81 C SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 C SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2563469.1	98.64	%	0.342				0.35%
ScR 361.383	406706.8	101.5	%	0.71				0.70%
Ag 328.068†	-101.1	-0.00075	mg/L	0.000133	-0.00150	mg/L	0.000267	17.75%
Al 308.215†	210066.7	131.1	mg/L	0.70	262.2	mg/L	1.40	0.53%
As 188.979†	26.4	0.04410	mg/L	0.000763	0.08821	mg/L	0.001526	1.73%
B 249.677†	1038.9	0.1640	mg/L	0.00205	0.3280	mg/L	0.00409	1.25%
Ba 233.527†	3777.5	0.4399	mg/L	0.00306	0.8798	mg/L	0.00613	0.70%
Be 313.042†	1743.8	0.00211	mg/L	0.000025	0.00422	mg/L	0.000049	1.16%
Ca 317.933†	380641.3	38.02	mg/L	0.266	76.04	mg/L	0.531	0.70%
Cd 228.802†	183.6	0.00454	mg/L	0.000153	0.00907	mg/L	0.000306	3.38%
Co 228.616†	3650.1	0.08421	mg/L	0.000667	0.1684	mg/L	0.00133	0.79%
Cr 267.716†	3147.7	0.3863	mg/L	0.00399	0.7725	mg/L	0.00798	1.03%
Cu 324.752†	68805.9	0.3251	mg/L	0.00167	0.6503	mg/L	0.00335	0.52%
Fe 273.955†	274283.9	195.8	mg/L	1.05	391.7	mg/L	2.10	0.54%
K 766.490†	38437.3	17.49	mg/L	0.058	34.98	mg/L	0.116	0.33%
Mg 279.077†	120980.9	97.60	mg/L	0.143	195.2	mg/L	0.29	0.15%
Mn 257.610†	124320.7	2.235	mg/L	0.0032	4.470	mg/L	0.0064	0.14%
Mo 202.031†	229.4	0.00973	mg/L	0.000350	0.01946	mg/L	0.000699	3.59%
Na 589.592†	852559.0	64.87	mg/L	0.188	129.7	mg/L	0.38	0.29%
Na 330.237†	2051.3	69.04	mg/L	0.869	138.1	mg/L	1.74	1.26%
Ni 231.604†	2602.4	0.5647	mg/L	0.00285	1.129	mg/L	0.0057	0.51%
Pb 220.353†	725.2	0.06689	mg/L	0.000511	0.1338	mg/L	0.00102	0.76%
Sb 206.836†	262.1	0.01164	mg/L	0.002071	0.02328	mg/L	0.004142	17.80%
Se 196.026†	-33.7	0.00178	mg/L	0.002763	0.00356	mg/L	0.005525	155.33%
Si 288.158†	6212.7	2.872	mg/L	0.0280	5.744	mg/L	0.0561	0.98%
Sn 189.927†	-57.4	-0.00363	mg/L	0.000756	-0.00727	mg/L	0.001512	20.81%
Sr 421.552†	376043.7	0.4335	mg/L	0.00053	0.8671	mg/L	0.00105	0.12%
Ti 334.903†	182668.6	6.366	mg/L	0.0063	12.73	mg/L	0.013	0.10%
Tl 190.801†	-42.9	0.00460	mg/L	0.000364	0.00920	mg/L	0.000729	7.92%
V 292.402†	71605.2	0.3826	mg/L	0.00361	0.7653	mg/L	0.00723	0.94%
Zn 206.200†	1604.1	0.5948	mg/L	0.00404	1.190	mg/L	0.0081	0.68%

Sequence No.: 11
Sample ID: UR81 D SWC

Dilution: 2X

Autosampler Location: 307
Date Collected: 5/1/2012 11:43:27 AM
Data Type: Original

Nebulizer Parameters: UR81 D SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 D SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2559174.5	98.48	%	0.856				0.87%
ScR 361.383	408231.9	101.9	%	0.62				0.60%
Ag 328.068†	-107.1	-0.00074	mg/L	0.000017	-0.00147	mg/L	0.000034	2.28%
Al 308.215†	186098.6	116.1	mg/L	0.30	232.3	mg/L	0.60	0.26%
As 188.979†	20.9	0.03846	mg/L	0.001660	0.07691	mg/L	0.003320	4.32%
B 249.677†	1018.2	0.1607	mg/L	0.00075	0.3215	mg/L	0.00150	0.47%
Ba 233.527†	3213.9	0.3737	mg/L	0.00235	0.7474	mg/L	0.00470	0.63%
Be 313.042†	1518.3	0.00183	mg/L	0.000020	0.00366	mg/L	0.000040	1.10%
Ca 317.933†	343480.8	34.31	mg/L	0.196	68.62	mg/L	0.391	0.57%
Cd 228.802†	170.8	0.00433	mg/L	0.000294	0.00865	mg/L	0.000587	6.79%
Co 228.616†	3407.6	0.07894	mg/L	0.000783	0.1579	mg/L	0.00157	0.99%
Cr 267.716†	2742.7	0.3363	mg/L	0.00203	0.6725	mg/L	0.00405	0.60%
Cu 324.752†	61724.1	0.2917	mg/L	0.00323	0.5835	mg/L	0.00646	1.11%
Fe 273.955†	248320.4	177.3	mg/L	0.39	354.6	mg/L	0.78	0.22%
K 766.490†	35407.5	16.11	mg/L	0.074	32.23	mg/L	0.148	0.46%
Mg 279.077†	124173.0	100.2	mg/L	0.38	200.4	mg/L	0.75	0.37%
Mn 257.610†	111359.6	2.002	mg/L	0.0079	4.004	mg/L	0.0157	0.39%
Mo 202.031†	255.6	0.01098	mg/L	0.000475	0.02195	mg/L	0.000951	4.33%
Na 589.592†	891283.4	67.81	mg/L	0.256	135.6	mg/L	0.51	0.38%
Na 330.237†	2142.2	71.91	mg/L	0.190	143.8	mg/L	0.38	0.26%
Ni 231.604†	2791.7	0.6058	mg/L	0.00149	1.212	mg/L	0.0030	0.25%
Pb 220.353†	744.6	0.06762	mg/L	0.002027	0.1352	mg/L	0.00405	3.00%
Sb 206.836†	240.6	0.01235	mg/L	0.001484	0.02469	mg/L	0.002968	12.02%
Se 196.026†	-31.3	0.00121	mg/L	0.002616	0.00242	mg/L	0.005232	216.55%
Si 288.158†	6624.0	3.062	mg/L	0.0178	6.125	mg/L	0.0356	0.58%
Sn 189.927†	-45.9	-0.00246	mg/L	0.000743	-0.00492	mg/L	0.001486	30.17%
Sr 421.552†	327930.7	0.3781	mg/L	0.00139	0.7561	mg/L	0.00277	0.37%
Ti 334.903†	164977.3	5.749	mg/L	0.0218	11.50	mg/L	0.044	0.38%
Tl 190.801†	-39.9	0.00377	mg/L	0.000465	0.00754	mg/L	0.000929	12.32%
V 292.402†	64041.6	0.3419	mg/L	0.00356	0.6838	mg/L	0.00713	1.04%
Zn 206.200†	1494.9	0.5540	mg/L	0.00383	1.108	mg/L	0.0077	0.69%

Sequence No.: 12
Sample ID: UR81 E SWC

Dilution: 2X

Autosampler Location: 308
Date Collected: 5/1/2012 11:47:27 AM
Data Type: Original

Nebulizer Parameters: UR81 E SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 E SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2501229.5	96.25	%	0.232				0.24%
ScR 361.383	394931.6	98.54	%	0.604				0.61%
Ag 328.068†	-206.7	-0.00249	mg/L	0.000169	-0.00497	mg/L	0.000337	6.78%
Al 308.215†	134401.9	83.87	mg/L	0.366	167.7	mg/L	0.73	0.44%
As 188.979†	73.6	0.05262	mg/L	0.000828	0.1052	mg/L	0.00166	1.57%
B 249.677†	652.5	0.1029	mg/L	0.00090	0.2059	mg/L	0.00180	0.88%
Ba 233.527†	3346.8	0.3819	mg/L	0.00035	0.7638	mg/L	0.00071	0.09%
Be 313.042†	1088.6	0.00128	mg/L	0.000002	0.00256	mg/L	0.000005	0.19%
Ca 317.933†	2251057.7	224.8	mg/L	1.28	449.7	mg/L	2.57	0.57%
Cd 228.802†	173.5	0.00298	mg/L	0.000154	0.00596	mg/L	0.000307	5.16%
Co 228.616†	3079.0	0.07295	mg/L	0.000535	0.1459	mg/L	0.00107	0.73%
Cr 267.716†	1612.3	0.2013	mg/L	0.00078	0.4027	mg/L	0.00157	0.39%
Cu 324.752†	42649.2	0.2160	mg/L	0.00143	0.4321	mg/L	0.00287	0.66%
Fe 273.955†	458058.6	327.0	mg/L	1.10	654.1	mg/L	2.21	0.34%
K 766.490†	20136.6	9.164	mg/L	0.0654	18.33	mg/L	0.131	0.71%
Mg 279.077†	124793.3	100.6	mg/L	0.42	201.2	mg/L	0.84	0.42%
Mn 257.610†	116109.6	2.088	mg/L	0.0086	4.177	mg/L	0.0171	0.41%
Mo 202.031†	321.2	0.01071	mg/L	0.000357	0.02141	mg/L	0.000713	3.33%
Na 589.592†	390428.5	29.71	mg/L	0.167	59.41	mg/L	0.335	0.56%
Na 330.237†	961.5	31.26	mg/L	0.081	62.52	mg/L	0.162	0.26%
Ni 231.604†	3202.2	0.6949	mg/L	0.00056	1.390	mg/L	0.0011	0.08%
Pb 220.353†	2028.2	0.1614	mg/L	0.00032	0.3228	mg/L	0.00064	0.20%
Sb 206.836†	303.4	0.02029	mg/L	0.001893	0.04057	mg/L	0.003786	9.33%
Se 196.026†	-33.4	0.01716	mg/L	0.003562	0.03433	mg/L	0.007125	20.76%
Si 288.158†	7063.2	3.265	mg/L	0.0037	6.531	mg/L	0.0073	0.11%
Sn 189.927†	-52.4	0.00145	mg/L	0.000682	0.00290	mg/L	0.001364	46.97%
Sr 421.552†	1229885.3	1.418	mg/L	0.0065	2.836	mg/L	0.0131	0.46%
Ti 334.903†	120805.6	4.203	mg/L	0.0173	8.406	mg/L	0.0346	0.41%
Tl 190.801†	-99.3	0.00145	mg/L	0.000864	0.00290	mg/L	0.001728	59.66%
V 292.402†	53668.4	0.2651	mg/L	0.00128	0.5301	mg/L	0.00257	0.48%
Zn 206.200†	1779.4	0.6546	mg/L	0.00242	1.309	mg/L	0.0048	0.37%

Sequence No.: 13
Sample ID: UR81 ADUP SWC

Dilution: 2X

Autosampler Location: 309
Date Collected: 5/1/2012 11:51:12 AM
Data Type: Original

Nebulizer Parameters: UR81 ADUP SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 ADUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2573795.5	99.04	%	1.037				1.05%
ScR 361.383	401575.8	100.2	%	0.35				0.35%
Ag 328.068†	-40.4	-0.00054	mg/L	0.000137	-0.00108	mg/L	0.000274	25.45%
Al 308.215†	178739.5	111.5	mg/L	0.19	223.1	mg/L	0.38	0.17%
As 188.979†	28.7	0.04092	mg/L	0.002832	0.08184	mg/L	0.005664	6.92%
B 249.677†	1249.0	0.1972	mg/L	0.00037	0.3945	mg/L	0.00073	0.19%
Ba 233.527†	3295.7	0.3838	mg/L	0.00188	0.7676	mg/L	0.00376	0.49%
Be 313.042†	1491.9	0.00180	mg/L	0.000035	0.00360	mg/L	0.000071	1.97%
Ca 317.933†	439083.1	43.86	mg/L	0.137	87.71	mg/L	0.273	0.31%
Cd 228.802†	185.7	0.00485	mg/L	0.000365	0.00970	mg/L	0.000731	7.54%
Co 228.616†	3251.9	0.07520	mg/L	0.000765	0.1504	mg/L	0.00153	1.02%
Cr 267.716†	2658.9	0.3258	mg/L	0.00117	0.6516	mg/L	0.00234	0.36%
Cu 324.752†	60890.0	0.2875	mg/L	0.00286	0.5750	mg/L	0.00571	0.99%
Fe 273.955†	238580.7	170.3	mg/L	0.59	340.7	mg/L	1.18	0.35%
K 766.490†	35043.2	15.95	mg/L	0.106	31.89	mg/L	0.212	0.67%
Mg 279.077†	116749.3	94.20	mg/L	0.280	188.4	mg/L	0.56	0.30%
Mn 257.610†	105992.3	1.905	mg/L	0.0158	3.811	mg/L	0.0317	0.83%
Mo 202.031†	231.6	0.00973	mg/L	0.000314	0.01946	mg/L	0.000629	3.23%
Na 589.592†	890286.8	67.74	mg/L	0.573	135.5	mg/L	1.15	0.85%
Na 330.237†	2146.0	71.91	mg/L	0.265	143.8	mg/L	0.53	0.37%
Ni 231.604†	2609.1	0.5662	mg/L	0.00236	1.132	mg/L	0.0047	0.42%
Pb 220.353†	745.9	0.06753	mg/L	0.001106	0.1351	mg/L	0.00221	1.64%
Sb 206.836†	228.6	0.01121	mg/L	0.001738	0.02243	mg/L	0.003475	15.50%
Se 196.026†	-21.5	0.00590	mg/L	0.002166	0.01180	mg/L	0.004332	36.71%
Si 288.158†	5584.0	2.582	mg/L	0.0154	5.163	mg/L	0.0307	0.60%
Sn 189.927†	-48.2	-0.00259	mg/L	0.000326	-0.00518	mg/L	0.000653	12.62%
Sr 421.552†	393288.2	0.4534	mg/L	0.00260	0.9068	mg/L	0.00520	0.57%
Ti 334.903†	159503.9	5.558	mg/L	0.0324	11.12	mg/L	0.065	0.58%
Tl 190.801†	-36.6	0.00427	mg/L	0.000898	0.00853	mg/L	0.001796	21.04%
V 292.402†	62413.6	0.3335	mg/L	0.00394	0.6670	mg/L	0.00789	1.18%
Zn 206.200†	1543.9	0.5717	mg/L	0.00284	1.143	mg/L	0.0057	0.50%

Sequence No.: 14
Sample ID: UR81 A SWC

Dilution: 2X

Autosampler Location: 310
Date Collected: 5/1/2012 11:55:12 AM
Data Type: Original

Nebulizer Parameters: UR81 A SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2607386.6	100.3	%	0.48				0.48%
ScR 361.383	405451.0	101.2	%	1.00				0.99%
Ag 328.068†	10.5	-0.00071	mg/L	0.000093	-0.00141	mg/L	0.000186	13.20%
Al 308.215†	170705.7	106.5	mg/L	1.09	213.1	mg/L	2.19	1.03%
As 188.979†	23.4	0.03671	mg/L	0.001607	0.07341	mg/L	0.003214	4.38%
B 249.677†	1312.8	0.2073	mg/L	0.00275	0.4147	mg/L	0.00550	1.33%
Ba 233.527†	3000.0	0.3487	mg/L	0.00258	0.6975	mg/L	0.00516	0.74%
Be 313.042†	1419.2	0.00172	mg/L	0.000031	0.00343	mg/L	0.000061	1.78%
Ca 317.933†	962760.4	96.16	mg/L	0.635	192.3	mg/L	1.27	0.66%
Cd 228.802†	181.0	0.00473	mg/L	0.000107	0.00945	mg/L	0.000213	2.26%
Co 228.616†	3138.7	0.07283	mg/L	0.000789	0.1457	mg/L	0.00158	1.08%
Cr 267.716†	2576.7	0.3145	mg/L	0.00228	0.6291	mg/L	0.00457	0.73%
Cu 324.752†	59789.0	0.2824	mg/L	0.00121	0.5647	mg/L	0.00242	0.43%
Fe 273.955†	234103.6	167.1	mg/L	1.89	334.3	mg/L	3.79	1.13%
K 766.490†	33021.0	15.03	mg/L	0.100	30.05	mg/L	0.200	0.67%
Mg 279.077†	114649.3	92.51	mg/L	0.507	185.0	mg/L	1.01	0.55%
Mn 257.610†	103163.0	1.855	mg/L	0.0156	3.709	mg/L	0.0312	0.84%
Mo 202.031†	254.4	0.00987	mg/L	0.000281	0.01974	mg/L	0.000563	2.85%
Na 589.592†	889303.8	67.66	mg/L	0.458	135.3	mg/L	0.92	0.68%
Na 330.237†	2172.9	72.37	mg/L	0.466	144.7	mg/L	0.93	0.64%
Ni 231.604†	2569.2	0.5575	mg/L	0.00596	1.115	mg/L	0.0119	1.07%
Pb 220.353†	735.3	0.06614	mg/L	0.001632	0.1323	mg/L	0.00326	2.47%
Sb 206.836†	226.4	0.01213	mg/L	0.001589	0.02425	mg/L	0.003177	13.10%
Se 196.026†	-2.6	0.01605	mg/L	0.004287	0.03209	mg/L	0.008575	26.72%
Si 288.158†	6797.9	3.143	mg/L	0.0117	6.285	mg/L	0.0234	0.37%
Sn 189.927†	-55.7	-0.00227	mg/L	0.000559	-0.00454	mg/L	0.001118	24.63%
Sr 421.552†	493529.8	0.5690	mg/L	0.00376	1.138	mg/L	0.0075	0.66%
Ti 334.903†	149843.6	5.220	mg/L	0.0356	10.44	mg/L	0.071	0.68%
Tl 190.801†	-34.6	0.00485	mg/L	0.001814	0.00971	mg/L	0.003627	37.37%
V 292.402†	58758.1	0.3132	mg/L	0.00165	0.6264	mg/L	0.00331	0.53%
Zn 206.200†	1512.5	0.5593	mg/L	0.00385	1.119	mg/L	0.0077	0.69%

Sequence No.: 15
Sample ID: UR81 ASPK SWC

Dilution: 2X

Autosampler Location: 311
Date Collected: 5/1/2012 11:59:12 AM
Data Type: Original

Nebulizer Parameters: UR81 ASPK SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 ASPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2560802.0	98.54	%	0.224				0.23%
ScR 361.383	405555.6	101.2	%	0.33				0.33%
Ag 328.068†	135913.0	0.5120	mg/L	0.00307	1.024	mg/L	0.0061	0.60%
Al 308.215†	184039.6	114.8	mg/L	0.43	229.7	mg/L	0.87	0.38%
As 188.979†	4693.9	2.035	mg/L	0.0075	4.071	mg/L	0.0150	0.37%
B 249.677†	1227.9	0.1925	mg/L	0.00544	0.3850	mg/L	0.01089	2.83%
Ba 233.527†	19938.5	2.366	mg/L	0.0193	4.733	mg/L	0.0386	0.82%
Be 313.042†	341398.2	0.4809	mg/L	0.00158	0.9619	mg/L	0.00315	0.33%
Ca 317.933†	478477.5	47.79	mg/L	0.100	95.58	mg/L	0.200	0.21%
Cd 228.802†	16272.0	0.5309	mg/L	0.00255	1.062	mg/L	0.0051	0.48%
Co 228.616†	21942.1	0.5617	mg/L	0.00205	1.123	mg/L	0.0041	0.37%
Cr 267.716†	6832.5	0.8320	mg/L	0.01135	1.664	mg/L	0.0227	1.36%
Cu 324.752†	173229.6	0.7994	mg/L	0.00635	1.599	mg/L	0.0127	0.79%
Fe 273.955†	243688.2	174.0	mg/L	0.58	348.0	mg/L	1.17	0.34%
K 766.490†	56305.8	25.62	mg/L	0.023	51.25	mg/L	0.046	0.09%
Mg 279.077†	130727.5	105.5	mg/L	0.17	211.0	mg/L	0.35	0.16%
Mn 257.610†	133647.7	2.403	mg/L	0.0092	4.806	mg/L	0.0184	0.38%
Mo 202.031†	255.0	0.01072	mg/L	0.000182	0.02144	mg/L	0.000365	1.70%
Na 589.592†	1036652.2	78.87	mg/L	0.427	157.7	mg/L	0.85	0.54%
Na 330.237†	2491.6	83.20	mg/L	0.483	166.4	mg/L	0.97	0.58%
Ni 231.604†	4753.0	1.031	mg/L	0.0104	2.063	mg/L	0.0209	1.01%
Pb 220.353†	23839.9	2.018	mg/L	0.0085	4.036	mg/L	0.0170	0.42%
Sb 206.836†	247.6	0.01070	mg/L	0.000886	0.02141	mg/L	0.001772	8.28%
Se 196.026†	3550.6	1.983	mg/L	0.0012	3.966	mg/L	0.0025	0.06%
Si 288.158†	6616.9	3.061	mg/L	0.0051	6.122	mg/L	0.0102	0.17%
Sn 189.927†	-53.4	-0.00310	mg/L	0.000394	-0.00621	mg/L	0.000787	12.68%
Sr 421.552†	788897.9	0.9095	mg/L	0.00204	1.819	mg/L	0.0041	0.22%
Ti 334.903†	160736.8	5.601	mg/L	0.0083	11.20	mg/L	0.017	0.15%
Tl 190.801†	4738.8	1.857	mg/L	0.0089	3.715	mg/L	0.0177	0.48%
V 292.402†	148765.6	0.8276	mg/L	0.00664	1.655	mg/L	0.0133	0.80%
Zn 206.200†	2842.0	1.049	mg/L	0.0159	2.099	mg/L	0.0319	1.52%

Sequence No.: 16
Sample ID: UR81 APOST SWC
Dilution: 2X

222222
BW 5-1

Autosampler Location: 312
Date Collected: 5/1/2012 12:02:28 PM
Data Type: Original

Nebulizer Parameters: UR81 APOST SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 APOST SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2562055.0	98.59	%	0.969				0.98%
ScR 361.383	398464.2	99.42	%	0.601				0.60%
Ag 328.068†	130216.2	0.4902	mg/L	0.00521	0.9803	mg/L	0.01041	1.06%
Al 308.215†	172826.1	107.8	mg/L	0.70	215.7	mg/L	1.39	0.65%
As 188.979†	4876.2	2.111	mg/L	0.0281	4.221	mg/L	0.0561	1.33%
B 249.677†	1302.9	0.2043	mg/L	0.00224	0.4087	mg/L	0.00448	1.10%
Ba 233.527†	20157.5	2.393	mg/L	0.0164	4.786	mg/L	0.0329	0.69%
Be 313.042†	340734.6	0.4800	mg/L	0.00501	0.9600	mg/L	0.01002	1.04%
Ca 317.933†	1058344.0	105.7	mg/L	0.29	211.4	mg/L	0.58	0.28%
Cd 228.802†	16430.8	0.5359	mg/L	0.00744	1.072	mg/L	0.0149	1.39%
Co 228.616†	21854.6	0.5602	mg/L	0.00797	1.120	mg/L	0.0159	1.42%
Cr 267.716†	6750.2	0.8205	mg/L	0.00655	1.641	mg/L	0.0131	0.80%
Cu 324.752†	173061.0	0.7983	mg/L	0.00799	1.597	mg/L	0.0160	1.00%
Fe 273.955†	233879.8	167.0	mg/L	1.23	334.0	mg/L	2.45	0.73%
K 766.490†	55641.8	25.32	mg/L	0.191	50.64	mg/L	0.382	0.75%
Mg 279.077†	126104.5	101.8	mg/L	0.53	203.5	mg/L	1.05	0.52%
Mn 257.610†	128815.6	2.316	mg/L	0.0195	4.633	mg/L	0.0390	0.84%
Mo 202.031†	259.3	0.00993	mg/L	0.000272	0.01986	mg/L	0.000544	2.74%
Na 589.592†	1019115.1	77.54	mg/L	0.501	155.1	mg/L	1.00	0.65%
Na 330.237†	2490.9	82.68	mg/L	0.535	165.4	mg/L	1.07	0.65%
Ni 231.604†	4752.7	1.031	mg/L	0.0092	2.063	mg/L	0.0184	0.89%
Pb 220.353†	24311.1	2.057	mg/L	0.0240	4.115	mg/L	0.0481	1.17%
Sb 206.836†	244.7	0.01239	mg/L	0.000428	0.02478	mg/L	0.000856	3.45%
Se 196.026†	3753.8	2.095	mg/L	0.0252	4.190	mg/L	0.0504	1.20%
Si 288.158†	6267.1	2.899	mg/L	0.0170	5.799	mg/L	0.0340	0.59%
Sn 189.927†	-61.2	-0.00271	mg/L	0.001395	-0.00542	mg/L	0.002790	51.48%
Sr 421.552†	920339.9	1.061	mg/L	0.0090	2.122	mg/L	0.0180	0.85%
Ti 334.903†	148078.3	5.158	mg/L	0.0396	10.32	mg/L	0.079	0.77%
Tl 190.801†	4835.0	1.894	mg/L	0.0173	3.788	mg/L	0.0345	0.91%
V 292.402†	147457.5	0.8212	mg/L	0.01047	1.642	mg/L	0.0209	1.28%
Zn 206.200†	2793.7	1.031	mg/L	0.0089	2.061	mg/L	0.0179	0.87%

Sequence No.: 17
Sample ID: UR81 MB1SPK SWC

Dilution: 2X

Autosampler Location: 313
Date Collected: 5/1/2012 12:06:29 PM
Data Type: Original

Nebulizer Parameters: UR81 MB1SPK SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 MB1SPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2624692.8	101.0	%	0.49				0.49%
ScR 361.383	400364.6	99.90	%	1.567				1.57%
Ag 328.068†	139825.2	0.5271	mg/L	0.00274	1.054	mg/L	0.0055	0.52%
Al 308.215†	3400.6	2.112	mg/L	0.0336	4.224	mg/L	0.0672	1.59%
As 188.979†	4794.9	2.050	mg/L	0.0093	4.099	mg/L	0.0186	0.45%
B 249.677†	15.2	0.00092	mg/L	0.000311	0.00184	mg/L	0.000622	33.85%
Ba 233.527†	16820.8	2.004	mg/L	0.0197	4.008	mg/L	0.0394	0.98%
Be 313.042†	349522.4	0.4927	mg/L	0.00568	0.9854	mg/L	0.01135	1.15%
Ca 317.933†	101123.5	10.10	mg/L	0.089	20.20	mg/L	0.178	0.88%
Cd 228.802†	15993.3	0.5228	mg/L	0.00420	1.046	mg/L	0.0084	0.80%
Co 228.616†	19575.3	0.5096	mg/L	0.00311	1.019	mg/L	0.0062	0.61%
Cr 267.716†	4364.0	0.5292	mg/L	0.00762	1.058	mg/L	0.0152	1.44%
Cu 324.752†	112331.4	0.5118	mg/L	0.00253	1.024	mg/L	0.0051	0.49%
Fe 273.955†	2982.7	2.127	mg/L	0.0294	4.254	mg/L	0.0588	1.38%
K 766.490†	22551.4	10.26	mg/L	0.091	20.52	mg/L	0.182	0.89%
Mg 279.077†	12482.6	10.08	mg/L	0.065	20.17	mg/L	0.131	0.65%
Mn 257.610†	26854.0	0.4835	mg/L	0.00461	0.9669	mg/L	0.00922	0.95%
Mo 202.031†	37.9	0.00154	mg/L	0.000120	0.00309	mg/L	0.000240	7.78%
Na 589.592†	130885.3	9.958	mg/L	0.0958	19.92	mg/L	0.192	0.96%
Na 330.237†	332.0	10.78	mg/L	0.230	21.56	mg/L	0.460	2.14%
Ni 231.604†	2262.4	0.4909	mg/L	0.00657	0.9818	mg/L	0.01314	1.34%
Pb 220.353†	24223.2	2.046	mg/L	0.0092	4.092	mg/L	0.0184	0.45%
Sb 206.836†	29.0	0.00247	mg/L	0.001477	0.00494	mg/L	0.002954	59.81%
Se 196.026†	3674.0	2.034	mg/L	0.0112	4.067	mg/L	0.0224	0.55%
Si 288.158†	-4.7	-0.00021	mg/L	0.002839	-0.00042	mg/L	0.005677	>999.9%
Sn 189.927†	-10.1	-0.00103	mg/L	0.000172	-0.00206	mg/L	0.000344	16.72%
Sr 421.552†	429515.4	0.4952	mg/L	0.00428	0.9904	mg/L	0.00855	0.86%
Ti 334.903†	90.4	0.00268	mg/L	0.000162	0.00536	mg/L	0.000325	6.05%
Tl 190.801†	5298.8	2.056	mg/L	0.0134	4.113	mg/L	0.0268	0.65%
V 292.402†	91253.0	0.5224	mg/L	0.00129	1.045	mg/L	0.0026	0.25%
Zn 206.200†	1362.2	0.5011	mg/L	0.00603	1.002	mg/L	0.0121	1.20%

Sequence No.: 18
Sample ID: CV 2
Dilution: 1X

Autosampler Location: 7
Date Collected: 5/1/2012 12:10:26 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2608816.9	100.4	%	1.28				1.28%
ScR 361.383	394402.9	98.41	%	0.648				0.66%
Ag 328.068†	270109.1	1.018	mg/L	0.0151	1.018	mg/L	0.0151	1.48%
Al 308.215†	3309.0	2.035	mg/L	0.0136	2.035	mg/L	0.0136	0.67%
As 188.979†	4662.7	1.999	mg/L	0.0211	1.999	mg/L	0.0211	1.06%
B 249.677†	6345.1	1.001	mg/L	0.0013	1.001	mg/L	0.0013	0.13%
Ba 233.527†	8550.4	1.018	mg/L	0.0061	1.018	mg/L	0.0061	0.60%
Be 313.042†	683714.3	0.9637	mg/L	0.00482	0.9637	mg/L	0.00482	0.50%
Ca 317.933†	20811.7	2.079	mg/L	0.0007	2.079	mg/L	0.0007	0.03%
Cd 228.802†	31316.4	1.031	mg/L	0.0184	1.031	mg/L	0.0184	1.79%
Co 228.616†	38193.3	0.9935	mg/L	0.01764	0.9935	mg/L	0.01764	1.78%
Cr 267.716†	8535.8	1.036	mg/L	0.0027	1.036	mg/L	0.0027	0.26%
Cu 324.752†	221543.2	1.009	mg/L	0.0160	1.009	mg/L	0.0160	1.59%
Fe 273.955†	2901.1	2.067	mg/L	0.0151	2.067	mg/L	0.0151	0.73%
K 766.490†	45522.9	20.72	mg/L	0.061	20.72	mg/L	0.061	0.30%
Mg 279.077†	2544.3	2.060	mg/L	0.0050	2.060	mg/L	0.0050	0.24%
Mn 257.610†	53922.7	0.9702	mg/L	0.00500	0.9702	mg/L	0.00500	0.52%
Mo 202.031†	22456.4	1.016	mg/L	0.0119	1.016	mg/L	0.0119	1.17%
Na 589.592†	656787.7	49.97	mg/L	0.156	49.97	mg/L	0.156	0.31%
Na 330.237†	1602.0	52.89	mg/L	0.311	52.89	mg/L	0.311	0.59%
Ni 231.604†	4582.2	0.9961	mg/L	0.00978	0.9961	mg/L	0.00978	0.98%
Pb 220.353†	24206.6	2.045	mg/L	0.0253	2.045	mg/L	0.0253	1.24%
Sb 206.836†	7647.9	2.046	mg/L	0.0254	2.046	mg/L	0.0254	1.24%
Se 196.026†	3583.0	1.983	mg/L	0.0247	1.983	mg/L	0.0247	1.25%
Si 288.158†	4507.4	2.088	mg/L	0.0104	2.088	mg/L	0.0104	0.50%
Sn 189.927†	7368.8	1.023	mg/L	0.0097	1.023	mg/L	0.0097	0.95%
Sr 421.552†	857376.9	0.9884	mg/L	0.00321	0.9884	mg/L	0.00321	0.32%
Ti 334.903†	28660.5	0.9974	mg/L	0.00272	0.9974	mg/L	0.00272	0.27%
Tl 190.801†	5126.3	1.990	mg/L	0.0223	1.990	mg/L	0.0223	1.12%
V 292.402†	178085.1	1.020	mg/L	0.0149	1.020	mg/L	0.0149	1.46%
Zn 206.200†	2815.8	1.035	mg/L	0.0062	1.035	mg/L	0.0062	0.59%

Sequence No.: 19
Sample ID: CB 2
Dilution: 1X

Autosampler Location: 1
Date Collected: 5/1/2012 12:14:27 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2693415.8	103.6	%	1.24				1.20%
ScR 361.383	406516.2	101.4	%	0.95				0.93%
Ag 328.068†	-19.4	-0.00007	mg/L	0.000172	-0.00007	mg/L	0.000172	234.21%
Al 308.215†	14.5	0.00903	mg/L	0.004750	0.00903	mg/L	0.004750	52.62%
As 188.979†	0.5	0.00023	mg/L	0.000988	0.00023	mg/L	0.000988	423.45%
B 249.677†	16.2	0.00257	mg/L	0.000246	0.00257	mg/L	0.000246	9.57%
Ba 233.527†	-2.9	-0.00035	mg/L	0.000208	-0.00035	mg/L	0.000208	60.37%
Be 313.042†	2.8	0.00000	mg/L	0.000018	0.00000	mg/L	0.000018	473.98%
Ca 317.933†	11.3	0.00112	mg/L	0.001426	0.00112	mg/L	0.001426	126.78%
Cd 228.802†	1.4	0.00005	mg/L	0.000138	0.00005	mg/L	0.000138	307.28%
Co 228.616†	1.6	0.00004	mg/L	0.000085	0.00004	mg/L	0.000085	204.90%
Cr 267.716†	-2.1	-0.00026	mg/L	0.000617	-0.00026	mg/L	0.000617	236.42%
Cu 324.752†	-1.8	-0.00001	mg/L	0.000050	-0.00001	mg/L	0.000050	590.20%
Fe 273.955†	2.8	0.00202	mg/L	0.001691	0.00202	mg/L	0.001691	83.63%
K 766.490†	18.0	0.00820	mg/L	0.014464	0.00820	mg/L	0.014464	176.37%
Mg 279.077†	2.8	0.00229	mg/L	0.004266	0.00229	mg/L	0.004266	185.95%
Mn 257.610†	0.7	0.00001	mg/L	0.000018	0.00001	mg/L	0.000018	149.19%
Mo 202.031†	9.0	0.00041	mg/L	0.000114	0.00041	mg/L	0.000114	28.03%
Na 589.592†	31.3	0.00238	mg/L	0.000864	0.00238	mg/L	0.000864	36.25%
Na 330.237†	0.9	0.02933	mg/L	0.162033	0.02933	mg/L	0.162033	552.44%
Ni 231.604†	2.3	0.00051	mg/L	0.000807	0.00051	mg/L	0.000807	158.14%
Pb 220.353†	-3.4	-0.00028	mg/L	0.000929	-0.00028	mg/L	0.000929	328.03%
Sb 206.836†	4.9	0.00132	mg/L	0.001264	0.00132	mg/L	0.001264	95.62%
Se 196.026†	10.4	0.00575	mg/L	0.003433	0.00575	mg/L	0.003433	59.66%
Si 288.158†	-3.5	-0.00161	mg/L	0.002239	-0.00161	mg/L	0.002239	139.26%
Sn 189.927†	3.0	0.00041	mg/L	0.000535	0.00041	mg/L	0.000535	129.03%
Sr 421.552†	27.5	0.00003	mg/L	0.000048	0.00003	mg/L	0.000048	150.72%
Ti 334.903†	21.8	0.00076	mg/L	0.000510	0.00076	mg/L	0.000510	67.04%
Tl 190.801†	4.3	0.00169	mg/L	0.000843	0.00169	mg/L	0.000843	49.94%
V 292.402†	9.8	0.00005	mg/L	0.000033	0.00005	mg/L	0.000033	60.08%
Zn 206.200†	-0.9	-0.00033	mg/L	0.000990	-0.00033	mg/L	0.000990	301.86%

Sequence No.: 20
Sample ID: UR61 MB1 SWC

Dilution: 2X

Autosampler Location: 314
Date Collected: 5/1/2012 12:18:39 PM
Data Type: Original

Nebulizer Parameters: UR61 MB1 SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 MB1 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2676231.6	103.0	%	1.33				1.29%
ScR 361.383	409432.5	102.2	%	0.51				0.50%
Ag 328.068†	13.0	0.00005	mg/L	0.000117	0.00010	mg/L	0.000234	238.47%
Al 308.215†	11.6	0.00722	mg/L	0.001762	0.01444	mg/L	0.003523	24.40%
As 188.979†	-3.3	-0.00141	mg/L	0.001293	-0.00282	mg/L	0.002586	91.60%
B 249.677†	3.7	0.00059	mg/L	0.001044	0.00118	mg/L	0.002089	176.41%
Ba 233.527†	1.0	0.00012	mg/L	0.000493	0.00024	mg/L	0.000987	403.73%
Be 313.042†	-35.4	-0.00005	mg/L	0.000014	-0.00010	mg/L	0.000028	28.27%
Ca 317.933†	102.5	0.01024	mg/L	0.001353	0.02048	mg/L	0.002707	13.22%
Cd 228.802†	5.4	0.00018	mg/L	0.000116	0.00037	mg/L	0.000232	63.59%
Co 228.616†	-1.5	-0.00004	mg/L	0.000083	-0.00008	mg/L	0.000165	206.05%
Cr 267.716†	6.2	0.00075	mg/L	0.000382	0.00150	mg/L	0.000764	51.04%
Cu 324.752†	54.6	0.00025	mg/L	0.000077	0.00050	mg/L	0.000155	31.06%
Fe 273.955†	7.9	0.00566	mg/L	0.000334	0.01132	mg/L	0.000669	5.91%
K 766.490†	14.4	0.00655	mg/L	0.007414	0.01310	mg/L	0.014829	113.18%
Mg 279.077†	6.1	0.00489	mg/L	0.002647	0.00978	mg/L	0.005294	54.14%
Mn 257.610†	-1.1	-0.00002	mg/L	0.000036	-0.00004	mg/L	0.000073	189.34%
Mo 202.031†	2.4	0.00011	mg/L	0.000265	0.00021	mg/L	0.000531	249.71%
Na 589.592†	57.2	0.00435	mg/L	0.002155	0.00870	mg/L	0.004310	49.51%
Na 330.237†	-4.0	-0.1335	mg/L	0.07551	-0.2670	mg/L	0.15101	56.56%
Ni 231.604†	-2.9	-0.00063	mg/L	0.000806	-0.00126	mg/L	0.001613	128.21%
Pb 220.353†	-5.0	-0.00042	mg/L	0.000540	-0.00085	mg/L	0.001079	127.31%
Sb 206.836†	-1.4	-0.00038	mg/L	0.000958	-0.00076	mg/L	0.001916	251.83%
Se 196.026†	5.1	0.00282	mg/L	0.001119	0.00563	mg/L	0.002238	39.73%
Si 288.158†	-2.6	-0.00120	mg/L	0.001202	-0.00241	mg/L	0.002404	99.89%
Sn 189.927†	5.5	0.00076	mg/L	0.000125	0.00153	mg/L	0.000250	16.36%
Sr 421.552†	40.1	0.00005	mg/L	0.000052	0.00009	mg/L	0.000104	112.46%
Ti 334.903†	20.0	0.00070	mg/L	0.000223	0.00139	mg/L	0.000447	32.09%
Tl 190.801†	1.1	0.00044	mg/L	0.001146	0.00088	mg/L	0.002291	260.92%
V 292.402†	-24.0	-0.00013	mg/L	0.000066	-0.00027	mg/L	0.000133	49.27%
Zn 206.200†	19.7	0.00725	mg/L	0.000522	0.01450	mg/L	0.001043	7.19%

Sequence No.: 21
Sample ID: UR81 F SWC

Dilution: 2X

Autosampler Location: 315
Date Collected: 5/1/2012 12:22:52 PM
Data Type: Original

Nebulizer Parameters: UR81 F SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2624551.6	101.0	%	0.45				0.45%
ScR 361.383	407018.7	101.6	%	1.86				1.83%
Ag 328.068†	-135.4	-0.00092	mg/L	0.000102	-0.00184	mg/L	0.000204	11.05%
Al 308.215†	224643.4	140.2	mg/L	1.42	280.4	mg/L	2.84	1.01%
As 188.979†	40.8	0.05186	mg/L	0.002880	0.1037	mg/L	0.00576	5.55%
B 249.677†	1059.2	0.1672	mg/L	0.00309	0.3344	mg/L	0.00617	1.85%
Ba 233.527†	3994.3	0.4649	mg/L	0.00745	0.9298	mg/L	0.01490	1.60%
Be 313.042†	1844.6	0.00223	mg/L	0.000057	0.00447	mg/L	0.000113	2.53%
Ca 317.933†	422473.2	42.20	mg/L	0.125	84.40	mg/L	0.250	0.30%
Cd 228.802†	184.3	0.00440	mg/L	0.000415	0.00880	mg/L	0.000831	9.44%
Co 228.616†	3843.7	0.08867	mg/L	0.001026	0.1773	mg/L	0.00205	1.16%
Cr 267.716†	3329.8	0.4088	mg/L	0.00634	0.8175	mg/L	0.01268	1.55%
Cu 324.752†	76822.0	0.3627	mg/L	0.00323	0.7254	mg/L	0.00647	0.89%
Fe 273.955†	296888.9	212.0	mg/L	2.48	423.9	mg/L	4.97	1.17%
K 766.490†	40337.7	18.36	mg/L	0.239	36.71	mg/L	0.478	1.30%
Mg 279.077†	128452.2	103.6	mg/L	1.07	207.3	mg/L	2.13	1.03%
Mn 257.610†	133096.0	2.393	mg/L	0.0461	4.785	mg/L	0.0922	1.93%
Mo 202.031†	242.4	0.01025	mg/L	0.000173	0.02049	mg/L	0.000346	1.69%
Na 589.592†	886330.2	67.44	mg/L	1.294	134.9	mg/L	2.59	1.92%
Na 330.237†	2139.2	72.00	mg/L	1.036	144.0	mg/L	2.07	1.44%
Ni 231.604†	2699.3	0.5857	mg/L	0.00974	1.171	mg/L	0.0195	1.66%
Pb 220.353†	736.3	0.06802	mg/L	0.000118	0.1360	mg/L	0.00024	0.17%
Sb 206.836†	278.1	0.01143	mg/L	0.003575	0.02286	mg/L	0.007151	31.28%
Se 196.026†	-28.3	0.00646	mg/L	0.001330	0.01293	mg/L	0.002660	20.57%
Si 288.158†	8642.6	3.996	mg/L	0.0359	7.991	mg/L	0.0718	0.90%
Sn 189.927†	-59.5	-0.00363	mg/L	0.000441	-0.00725	mg/L	0.000882	12.17%
Sr 421.552†	405399.4	0.4674	mg/L	0.00741	0.9348	mg/L	0.01481	1.58%
Ti 334.903†	192437.7	6.706	mg/L	0.1147	13.41	mg/L	0.229	1.71%
Tl 190.801†	-43.1	0.00639	mg/L	0.002232	0.01277	mg/L	0.004464	34.95%
V 292.402†	76258.6	0.4071	mg/L	0.00498	0.8143	mg/L	0.00997	1.22%
Zn 206.200†	1691.3	0.6272	mg/L	0.00927	1.254	mg/L	0.0185	1.48%

Sequence No.: 22
Sample ID: UR81 G SWC

Dilution: 2X

Autosampler Location: 316
Date Collected: 5/1/2012 12:26:51 PM
Data Type: Original

Nebulizer Parameters: UR81 G SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 G SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2564561.5	98.69	%	0.873				0.88%
ScR 361.383	401696.4	100.2	%	0.46				0.46%
Ag 328.068†	76.5	-0.00028	mg/L	0.000134	-0.00057	mg/L	0.000267	47.16%
Al 308.215†	82636.8	51.57	mg/L	0.046	103.1	mg/L	0.09	0.09%
As 188.979†	45.2	0.03233	mg/L	0.002336	0.06465	mg/L	0.004672	7.23%
B 249.677†	1080.7	0.1705	mg/L	0.00213	0.3411	mg/L	0.00426	1.25%
Ba 233.527†	2470.2	0.2869	mg/L	0.00260	0.5738	mg/L	0.00521	0.91%
Be 313.042†	701.6	0.00082	mg/L	0.000025	0.00164	mg/L	0.000050	3.02%
Ca 317.933†	583097.0	58.24	mg/L	0.017	116.5	mg/L	0.03	0.03%
Cd 228.802†	72.2	0.00221	mg/L	0.000207	0.00441	mg/L	0.000415	9.39%
Co 228.616†	4500.9	0.1115	mg/L	0.00105	0.2230	mg/L	0.00209	0.94%
Cr 267.716†	1892.8	0.2254	mg/L	0.00174	0.4509	mg/L	0.00348	0.77%
Cu 324.752†	44231.8	0.2095	mg/L	0.00168	0.4190	mg/L	0.00337	0.80%
Fe 273.955†	197410.4	140.9	mg/L	0.14	281.9	mg/L	0.27	0.10%
K 766.490†	15969.9	7.267	mg/L	0.0385	14.53	mg/L	0.077	0.53%
Mg 279.077†	307571.5	248.3	mg/L	0.16	496.7	mg/L	0.32	0.06%
Mn 257.610†	94426.3	1.697	mg/L	0.0061	3.393	mg/L	0.0121	0.36%
Mo 202.031†	263.8	0.01094	mg/L	0.000260	0.02188	mg/L	0.000520	2.37%
Na 589.592†	599274.6	45.60	mg/L	0.249	91.19	mg/L	0.498	0.55%
Na 330.237†	1462.7	48.66	mg/L	0.396	97.32	mg/L	0.792	0.81%
Ni 231.604†	8747.5	1.898	mg/L	0.0118	3.796	mg/L	0.0235	0.62%
Pb 220.353†	1255.5	0.1041	mg/L	0.00103	0.2081	mg/L	0.00205	0.99%
Sb 206.836†	160.6	0.01270	mg/L	0.000498	0.02540	mg/L	0.000996	3.92%
Se 196.026†	2.5	0.01600	mg/L	0.003455	0.03200	mg/L	0.006910	21.60%
Si 288.158†	3550.4	1.641	mg/L	0.0216	3.283	mg/L	0.0432	1.31%
Sn 189.927†	-14.0	0.00140	mg/L	0.001594	0.00279	mg/L	0.003189	114.16%
Sr 421.552†	459379.3	0.5296	mg/L	0.00156	1.059	mg/L	0.0031	0.29%
Ti 334.903†	92391.6	3.218	mg/L	0.0081	6.437	mg/L	0.0163	0.25%
Tl 190.801†	-35.4	0.00236	mg/L	0.003003	0.00472	mg/L	0.006005	127.18%
V 292.402†	34573.8	0.1794	mg/L	0.00103	0.3587	mg/L	0.00205	0.57%
Zn 206.200†	1261.5	0.4651	mg/L	0.00182	0.9303	mg/L	0.00363	0.39%

Sequence No.: 23
Sample ID: UR81 H SWC

Dilution: 2X

Autosampler Location: 317
Date Collected: 5/1/2012 12:30:50 PM
Data Type: Original

Nebulizer Parameters: UR81 H SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 H SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2629362.4	101.2	%	1.06				1.04%
ScR 361.383	409001.5	102.1	%	0.71				0.69%
Ag 328.068†	-79.7	-0.00066	mg/L	0.000167	-0.00132	mg/L	0.000335	25.36%
Al 308.215†	186195.9	116.2	mg/L	0.44	232.4	mg/L	0.88	0.38%
As 188.979†	43.9	0.04839	mg/L	0.001469	0.09678	mg/L	0.002938	3.04%
B 249.677†	1287.5	0.2033	mg/L	0.00247	0.4067	mg/L	0.00493	1.21%
Ba 233.527†	4032.6	0.4714	mg/L	0.00298	0.9427	mg/L	0.00595	0.63%
Be 313.042†	1532.2	0.00185	mg/L	0.000029	0.00369	mg/L	0.000059	1.59%
Ca 317.933†	405624.9	40.52	mg/L	0.025	81.03	mg/L	0.049	0.06%
Cd 228.802†	185.2	0.00471	mg/L	0.000219	0.00942	mg/L	0.000438	4.65%
Co 228.616†	3245.7	0.07477	mg/L	0.000614	0.1495	mg/L	0.00123	0.82%
Cr 267.716†	2768.4	0.3397	mg/L	0.00268	0.6793	mg/L	0.00537	0.79%
Cu 324.752†	73460.4	0.3451	mg/L	0.00371	0.6902	mg/L	0.00743	1.08%
Fe 273.955†	245459.7	175.2	mg/L	0.74	350.5	mg/L	1.47	0.42%
K 766.490†	36444.4	16.58	mg/L	0.127	33.17	mg/L	0.253	0.76%
Mg 279.077†	107017.3	86.34	mg/L	0.226	172.7	mg/L	0.45	0.26%
Mn 257.610†	107564.5	1.934	mg/L	0.0125	3.867	mg/L	0.0249	0.64%
Mo 202.031†	261.6	0.01114	mg/L	0.000424	0.02228	mg/L	0.000847	3.80%
Na 589.592†	931733.2	70.89	mg/L	0.597	141.8	mg/L	1.19	0.84%
Na 330.237†	2266.4	75.95	mg/L	0.433	151.9	mg/L	0.87	0.57%
Ni 231.604†	2222.3	0.4822	mg/L	0.00458	0.9644	mg/L	0.00916	0.95%
Pb 220.353†	721.1	0.06572	mg/L	0.000265	0.1314	mg/L	0.00053	0.40%
Sb 206.836†	229.0	0.00940	mg/L	0.000702	0.01880	mg/L	0.001405	7.47%
Se 196.026†	-22.4	0.00593	mg/L	0.006464	0.01187	mg/L	0.012929	108.94%
Si 288.158†	4570.1	2.113	mg/L	0.0049	4.226	mg/L	0.0098	0.23%
Sn 189.927†	-36.6	-0.00100	mg/L	0.000541	-0.00200	mg/L	0.001082	54.12%
Sr 421.552†	435149.1	0.5017	mg/L	0.00293	1.003	mg/L	0.0059	0.58%
Ti 334.903†	164085.9	5.718	mg/L	0.0295	11.44	mg/L	0.059	0.52%
Tl 190.801†	-32.2	0.00650	mg/L	0.003962	0.01301	mg/L	0.007925	60.94%
V 292.402†	65301.1	0.3493	mg/L	0.00370	0.6987	mg/L	0.00739	1.06%
Zn 206.200†	1642.3	0.6081	mg/L	0.00432	1.216	mg/L	0.0086	0.71%

Sequence No.: 24
Sample ID: UR81 I SWC

Dilution: 2X

Autosampler Location: 318
Date Collected: 5/1/2012 12:34:50 PM
Data Type: Original

Nebulizer Parameters: UR81 I SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2667758.5	102.7	%	0.97				0.95%
ScR 361.383	406692.0	101.5	%	0.73				0.72%
Ag 328.068†	-102.6	-0.00078	mg/L	0.000026	-0.00155	mg/L	0.000053	3.39%
Al 308.215†	202996.8	126.7	mg/L	0.70	253.4	mg/L	1.39	0.55%
As 188.979†	31.3	0.04850	mg/L	0.002534	0.09699	mg/L	0.005067	5.22%
B 249.677†	930.2	0.1468	mg/L	0.00109	0.2936	mg/L	0.00219	0.74%
Ba 233.527†	3867.4	0.4510	mg/L	0.00516	0.9019	mg/L	0.01032	1.14%
Be 313.042†	1674.8	0.00201	mg/L	0.000023	0.00403	mg/L	0.000047	1.16%
Ca 317.933†	435440.4	43.49	mg/L	0.378	86.99	mg/L	0.755	0.87%
Cd 228.802†	134.6	0.00293	mg/L	0.000009	0.00585	mg/L	0.000017	0.30%
Co 228.616†	3450.2	0.07857	mg/L	0.000282	0.1571	mg/L	0.00056	0.36%
Cr 267.716†	2968.3	0.3643	mg/L	0.00437	0.7286	mg/L	0.00874	1.20%
Cu 324.752†	59622.1	0.2828	mg/L	0.00228	0.5656	mg/L	0.00456	0.81%
Fe 273.955†	264551.8	188.9	mg/L	1.25	377.8	mg/L	2.51	0.66%
K 766.490†	35350.9	16.09	mg/L	0.042	32.17	mg/L	0.084	0.26%
Mg 279.077†	111971.5	90.33	mg/L	0.623	180.7	mg/L	1.25	0.69%
Mn 257.610†	122265.0	2.198	mg/L	0.0139	4.396	mg/L	0.0278	0.63%
Mo 202.031†	230.4	0.00968	mg/L	0.000130	0.01936	mg/L	0.000259	1.34%
Na 589.592†	711503.4	54.13	mg/L	0.348	108.3	mg/L	0.70	0.64%
Na 330.237†	1708.5	57.78	mg/L	0.625	115.6	mg/L	1.25	1.08%
Ni 231.604†	2264.0	0.4913	mg/L	0.00328	0.9826	mg/L	0.00656	0.67%
Pb 220.353†	618.0	0.05769	mg/L	0.001107	0.1154	mg/L	0.00221	1.92%
Sb 206.836†	235.3	0.00733	mg/L	0.001331	0.01467	mg/L	0.002663	18.15%
Se 196.026†	-25.0	0.00581	mg/L	0.002916	0.01161	mg/L	0.005832	50.21%
Si 288.158†	4756.1	2.199	mg/L	0.0166	4.398	mg/L	0.0333	0.76%
Sn 189.927†	-56.7	-0.00326	mg/L	0.000389	-0.00651	mg/L	0.000777	11.94%
Sr 421.552†	393900.6	0.4541	mg/L	0.00221	0.9082	mg/L	0.00443	0.49%
Ti 334.903†	190056.2	6.623	mg/L	0.0391	13.25	mg/L	0.078	0.59%
Tl 190.801†	-31.9	0.00783	mg/L	0.002414	0.01566	mg/L	0.004827	30.82%
V 292.402†	70776.0	0.3785	mg/L	0.00112	0.7570	mg/L	0.00225	0.30%
Zn 206.200†	1386.2	0.5145	mg/L	0.00506	1.029	mg/L	0.0101	0.98%

Sequence No.: 25
Sample ID: UR81 J SWC

Dilution: 2X

Autosampler Location: 319
Date Collected: 5/1/2012 12:38:50 PM
Data Type: Original

Nebulizer Parameters: UR81 J SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 J SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2693247.3	103.6	%	0.15				0.14%
ScR 361.383	413446.0	103.2	%	0.80				0.77%
Ag 328.068†	-46.1	-0.00053	mg/L	0.000085	-0.00106	mg/L	0.000170	16.01%
Al 308.215†	168830.2	105.4	mg/L	0.36	210.7	mg/L	0.73	0.34%
As 188.979†	40.8	0.04406	mg/L	0.001895	0.08811	mg/L	0.003790	4.30%
B 249.677†	1227.7	0.1939	mg/L	0.00253	0.3878	mg/L	0.00506	1.31%
Ba 233.527†	3572.1	0.4172	mg/L	0.00452	0.8343	mg/L	0.00904	1.08%
Be 313.042†	1407.0	0.00170	mg/L	0.000014	0.00339	mg/L	0.000027	0.80%
Ca 317.933†	397954.2	39.75	mg/L	0.272	79.50	mg/L	0.545	0.69%
Cd 228.802†	165.5	0.00416	mg/L	0.000132	0.00832	mg/L	0.000263	3.16%
Co 228.616†	3011.9	0.06963	mg/L	0.000309	0.1393	mg/L	0.00062	0.44%
Cr 267.716†	2579.6	0.3164	mg/L	0.00159	0.6328	mg/L	0.00319	0.50%
Cu 324.752†	73631.1	0.3451	mg/L	0.00218	0.6902	mg/L	0.00436	0.63%
Fe 273.955†	227276.4	162.3	mg/L	0.38	324.5	mg/L	0.76	0.23%
K 766.490†	33027.0	15.03	mg/L	0.070	30.06	mg/L	0.140	0.46%
Mg 279.077†	99854.2	80.56	mg/L	0.280	161.1	mg/L	0.56	0.35%
Mn 257.610†	100265.9	1.802	mg/L	0.0059	3.605	mg/L	0.0118	0.33%
Mo 202.031†	247.6	0.01052	mg/L	0.000063	0.02105	mg/L	0.000125	0.59%
Na 589.592†	900080.2	68.48	mg/L	0.221	137.0	mg/L	0.44	0.32%
Na 330.237†	2211.6	73.99	mg/L	0.574	148.0	mg/L	1.15	0.78%
Ni 231.604†	2067.6	0.4487	mg/L	0.00171	0.8973	mg/L	0.00341	0.38%
Pb 220.353†	653.0	0.05927	mg/L	0.000196	0.1185	mg/L	0.00039	0.33%
Sb 206.836†	209.8	0.00857	mg/L	0.002231	0.01713	mg/L	0.004462	26.05%
Se 196.026†	-15.8	0.00823	mg/L	0.004857	0.01646	mg/L	0.009713	59.01%
Si 288.158†	4313.5	1.994	mg/L	0.0176	3.988	mg/L	0.0353	0.88%
Sn 189.927†	-34.3	-0.00100	mg/L	0.000491	-0.00199	mg/L	0.000982	49.26%
Sr 421.552†	410032.9	0.4727	mg/L	0.00145	0.9454	mg/L	0.00289	0.31%
Ti 334.903†	148068.4	5.160	mg/L	0.0148	10.32	mg/L	0.030	0.29%
Tl 190.801†	-31.1	0.00562	mg/L	0.001395	0.01124	mg/L	0.002790	24.83%
V 292.402†	59683.4	0.3191	mg/L	0.00106	0.6382	mg/L	0.00212	0.33%
Zn 206.200†	1570.4	0.5812	mg/L	0.00411	1.162	mg/L	0.0082	0.71%

Sequence No.: 26
Sample ID: UR61 ADUP SWC

Dilution: 2X

Autosampler Location: 320
Date Collected: 5/1/2012 12:42:50 PM
Data Type: Original

Nebulizer Parameters: UR61 ADUP SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2732098.8	105.1	%	0.91				0.87%
ScR 361.383	422078.6	105.3	%	0.76				0.73%
Ag 328.068†	20.0	0.00002	mg/L	0.000088	0.00004	mg/L	0.000176	431.39%
Al 308.215†	35472.9	22.13	mg/L	0.107	44.26	mg/L	0.215	0.48%
As 188.979†	58.4	0.03232	mg/L	0.001636	0.06464	mg/L	0.003272	5.06%
B 249.677†	269.3	0.04253	mg/L	0.000239	0.08505	mg/L	0.000478	0.56%
Ba 233.527†	2615.8	0.3072	mg/L	0.00261	0.6144	mg/L	0.00523	0.85%
Be 313.042†	573.7	0.00051	mg/L	0.000022	0.00102	mg/L	0.000044	4.28%
Ca 317.933†	114435.8	11.43	mg/L	0.032	22.86	mg/L	0.064	0.28%
Cd 228.802†	284.4	0.00858	mg/L	0.000337	0.01717	mg/L	0.000674	3.93%
Co 228.616†	876.3	0.02055	mg/L	0.000235	0.04109	mg/L	0.000470	1.14%
Cr 267.716†	859.6	0.1074	mg/L	0.00136	0.2147	mg/L	0.00272	1.27%
Cu 324.752†	88721.5	0.4096	mg/L	0.00416	0.8192	mg/L	0.00831	1.01%
Fe 273.955†	117156.0	83.64	mg/L	0.349	167.3	mg/L	0.70	0.42%
K 766.490†	3901.2	1.775	mg/L	0.0063	3.551	mg/L	0.0125	0.35%
Mg 279.077†	10635.4	8.541	mg/L	0.0528	17.08	mg/L	0.106	0.62%
Mn 257.610†	34726.7	0.6248	mg/L	0.00351	1.250	mg/L	0.0070	0.56%
Mo 202.031†	252.5	0.01122	mg/L	0.000392	0.02245	mg/L	0.000784	3.49%
Na 589.592†	15947.3	1.213	mg/L	0.0114	2.427	mg/L	0.0228	0.94%
Na 330.237†	36.0	1.225	mg/L	0.0870	2.450	mg/L	0.1741	7.11%
Ni 231.604†	332.3	0.07212	mg/L	0.000428	0.1442	mg/L	0.00086	0.59%
Pb 220.353†	4773.0	0.4003	mg/L	0.00393	0.8005	mg/L	0.00786	0.98%
Sb 206.836†	76.0	0.00516	mg/L	0.000592	0.01032	mg/L	0.001184	11.47%
Se 196.026†	-8.1	0.00456	mg/L	0.001228	0.00911	mg/L	0.002455	26.94%
Si 288.158†	3808.9	1.761	mg/L	0.0157	3.522	mg/L	0.0313	0.89%
Sn 189.927†	80.7	0.01219	mg/L	0.000505	0.02438	mg/L	0.001010	4.14%
Sr 421.552†	76470.5	0.08816	mg/L	0.000423	0.1763	mg/L	0.00085	0.48%
Ti 334.903†	37727.3	1.315	mg/L	0.0067	2.629	mg/L	0.0134	0.51%
Tl 190.801†	-20.0	0.00172	mg/L	0.001316	0.00344	mg/L	0.002631	76.42%
V 292.402†	73960.2	0.4113	mg/L	0.00543	0.8227	mg/L	0.01085	1.32%
Zn 206.200†	3097.5	1.139	mg/L	0.0058	2.278	mg/L	0.0116	0.51%

Sequence No.: 27
Sample ID: UR61 A SWC

Dilution: 2X

Autosampler Location: 321
Date Collected: 5/1/2012 12:46:47 PM
Data Type: Original

Nebulizer Parameters: UR61 A SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2734828.7	105.2	%	0.96				0.92%
ScR 361.383	426679.4	106.5	%	0.21				0.19%
Ag 328.068†	410.9	0.00149	mg/L	0.000050	0.00298	mg/L	0.000099	3.33%
Al 308.215†	39060.9	24.37	mg/L	0.057	48.73	mg/L	0.115	0.24%
As 188.979†	55.6	0.03239	mg/L	0.001342	0.06477	mg/L	0.002684	4.14%
B 249.677†	296.2	0.04676	mg/L	0.000386	0.09353	mg/L	0.000771	0.82%
Ba 233.527†	2821.0	0.3313	mg/L	0.00115	0.6626	mg/L	0.00230	0.35%
Be 313.042†	586.5	0.00051	mg/L	0.000006	0.00102	mg/L	0.000013	1.25%
Ca 317.933†	125772.5	12.56	mg/L	0.028	25.13	mg/L	0.056	0.22%
Cd 228.802†	301.2	0.00908	mg/L	0.000046	0.01816	mg/L	0.000092	0.51%
Co 228.616†	958.3	0.02232	mg/L	0.000207	0.04465	mg/L	0.000414	0.93%
Cr 267.716†	953.9	0.1191	mg/L	0.00058	0.2382	mg/L	0.00116	0.49%
Cu 324.752†	97021.3	0.4478	mg/L	0.00545	0.8957	mg/L	0.01090	1.22%
Fe 273.955†	127097.5	90.74	mg/L	0.275	181.5	mg/L	0.55	0.30%
K 766.490†	4259.4	1.938	mg/L	0.0034	3.877	mg/L	0.0068	0.18%
Mg 279.077†	10937.5	8.781	mg/L	0.0049	17.56	mg/L	0.010	0.06%
Mn 257.610†	37589.7	0.6763	mg/L	0.00231	1.353	mg/L	0.0046	0.34%
Mo 202.031†	291.0	0.01295	mg/L	0.000156	0.02590	mg/L	0.000313	1.21%
Na 589.592†	17518.4	1.333	mg/L	0.0069	2.666	mg/L	0.0138	0.52%
Na 330.237†	41.5	1.431	mg/L	0.0342	2.862	mg/L	0.0683	2.39%
Ni 231.604†	374.8	0.08134	mg/L	0.000688	0.1627	mg/L	0.00138	0.85%
Pb 220.353†	5080.8	0.4261	mg/L	0.00196	0.8522	mg/L	0.00391	0.46%
Sb 206.836†	83.5	0.00591	mg/L	0.001834	0.01182	mg/L	0.003668	31.04%
Se 196.026†	-11.3	0.00357	mg/L	0.001702	0.00714	mg/L	0.003403	47.69%
Si 288.158†	4016.5	1.857	mg/L	0.0188	3.714	mg/L	0.0377	1.01%
Sn 189.927†	127.3	0.01879	mg/L	0.000764	0.03758	mg/L	0.001528	4.06%
Sr 421.552†	83791.9	0.09660	mg/L	0.000242	0.1932	mg/L	0.00048	0.25%
Ti 334.903†	43712.6	1.523	mg/L	0.0024	3.046	mg/L	0.0047	0.15%
Tl 190.801†	-20.6	0.00229	mg/L	0.002325	0.00459	mg/L	0.004650	101.33%
V 292.402†	78420.1	0.4358	mg/L	0.00318	0.8717	mg/L	0.00637	0.73%
Zn 206.200†	3403.4	1.252	mg/L	0.0069	2.503	mg/L	0.0139	0.55%

Sequence No.: 28
Sample ID: UR61 ASPK SWC

Autosampler Location: 322
Date Collected: 5/1/2012 12:50:44 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: UR61 ASPK SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2663700.5	102.5	%	0.86				0.83%
ScR 361.383	414056.6	103.3	%	1.35				1.31%
Ag 328.068†	132247.2	0.4985	mg/L	0.00138	0.9970	mg/L	0.00276	0.28%
Al 308.215†	38562.6	24.05	mg/L	0.218	48.10	mg/L	0.436	0.91%
As 188.979†	4684.6	2.010	mg/L	0.0244	4.020	mg/L	0.0488	1.21%
B 249.677†	262.1	0.03991	mg/L	0.002230	0.07982	mg/L	0.004461	5.59%
Ba 233.527†	19141.8	2.276	mg/L	0.0339	4.552	mg/L	0.0679	1.49%
Be 313.042†	336674.6	0.4743	mg/L	0.00547	0.9486	mg/L	0.01093	1.15%
Ca 317.933†	215151.1	21.49	mg/L	0.148	42.98	mg/L	0.296	0.69%
Cd 228.802†	16286.5	0.5319	mg/L	0.00422	1.064	mg/L	0.0084	0.79%
Co 228.616†	20270.8	0.5254	mg/L	0.00452	1.051	mg/L	0.0090	0.86%
Cr 267.716†	5020.2	0.6117	mg/L	0.01034	1.223	mg/L	0.0207	1.69%
Cu 324.752†	199031.1	0.9120	mg/L	0.00572	1.824	mg/L	0.0114	0.63%
Fe 273.955†	116713.4	83.32	mg/L	0.778	166.6	mg/L	1.56	0.93%
K 766.490†	25343.6	11.53	mg/L	0.054	23.07	mg/L	0.107	0.46%
Mg 279.077†	23131.4	18.64	mg/L	0.269	37.27	mg/L	0.537	1.44%
Mn 257.610†	60339.0	1.086	mg/L	0.0123	2.172	mg/L	0.0246	1.13%
Mo 202.031†	290.3	0.01276	mg/L	0.000194	0.02553	mg/L	0.000388	1.52%
Na 589.592†	141211.1	10.74	mg/L	0.161	21.49	mg/L	0.322	1.50%
Na 330.237†	351.9	11.49	mg/L	0.264	22.99	mg/L	0.528	2.30%
Ni 231.604†	2497.9	0.5420	mg/L	0.01058	1.084	mg/L	0.0212	1.95%
Pb 220.353†	28588.8	2.412	mg/L	0.0256	4.824	mg/L	0.0511	1.06%
Sb 206.836†	102.7	0.00762	mg/L	0.001525	0.01524	mg/L	0.003050	20.01%
Se 196.026†	3533.6	1.965	mg/L	0.0179	3.929	mg/L	0.0357	0.91%
Si 288.158†	3897.7	1.804	mg/L	0.0340	3.608	mg/L	0.0679	1.88%
Sn 189.927†	82.3	0.01280	mg/L	0.000068	0.02559	mg/L	0.000136	0.53%
Sr 421.552†	490160.3	0.5651	mg/L	0.00528	1.130	mg/L	0.0106	0.93%
Ti 334.903†	38690.2	1.348	mg/L	0.0136	2.695	mg/L	0.0272	1.01%
Tl 190.801†	4956.7	1.933	mg/L	0.0167	3.865	mg/L	0.0334	0.86%
V 292.402†	157995.4	0.8927	mg/L	0.00057	1.785	mg/L	0.0011	0.06%
Zn 206.200†	4310.0	1.585	mg/L	0.0241	3.170	mg/L	0.0482	1.52%

Sequence No.: 29
Sample ID: UR61 MB1SPK SWC

Autosampler Location: 323
Date Collected: 5/1/2012 12:54:42 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: UR61 MB1SPK SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2657405.2	102.3	%	1.12				1.09%
ScR 361.383	412651.8	103.0	%	0.86				0.83%
Ag 328.068†	135539.1	0.5110	mg/L	0.00471	1.022	mg/L	0.0094	0.92%
Al 308.215†	3271.9	2.032	mg/L	0.0122	4.064	mg/L	0.0243	0.60%
As 188.979†	4703.4	2.011	mg/L	0.0189	4.021	mg/L	0.0378	0.94%
B 249.677†	6.4	-0.00046	mg/L	0.000729	-0.00093	mg/L	0.001459	157.71%
Ba 233.527†	16361.7	1.949	mg/L	0.0197	3.898	mg/L	0.0394	1.01%
Be 313.042†	339425.1	0.4784	mg/L	0.00537	0.9569	mg/L	0.01074	1.12%
Ca 317.933†	99902.6	9.979	mg/L	0.0104	19.96	mg/L	0.021	0.10%
Cd 228.802†	15968.7	0.5221	mg/L	0.00430	1.044	mg/L	0.0086	0.82%
Co 228.616†	19440.8	0.5061	mg/L	0.00434	1.012	mg/L	0.0087	0.86%
Cr 267.716†	4249.3	0.5153	mg/L	0.00425	1.031	mg/L	0.0085	0.82%
Cu 324.752†	111072.4	0.5060	mg/L	0.00449	1.012	mg/L	0.0090	0.89%
Fe 273.955†	2884.4	2.057	mg/L	0.0158	4.114	mg/L	0.0316	0.77%
K 766.490†	21746.7	9.896	mg/L	0.0798	19.79	mg/L	0.160	0.81%
Mg 279.077†	12226.2	9.876	mg/L	0.0567	19.75	mg/L	0.113	0.57%
Mn 257.610†	25970.2	0.4676	mg/L	0.00537	0.9351	mg/L	0.01075	1.15%
Mo 202.031†	36.4	0.00148	mg/L	0.000138	0.00296	mg/L	0.000275	9.31%
Na 589.592†	124801.6	9.496	mg/L	0.1191	18.99	mg/L	0.238	1.25%
Na 330.237†	322.3	10.46	mg/L	0.243	20.93	mg/L	0.486	2.32%
Ni 231.604†	2191.9	0.4756	mg/L	0.00285	0.9512	mg/L	0.00569	0.60%
Pb 220.353†	23798.1	2.010	mg/L	0.0115	4.020	mg/L	0.0231	0.57%
Sb 206.836†	26.9	0.00208	mg/L	0.002562	0.00415	mg/L	0.005125	123.41%
Se 196.026†	3606.4	1.996	mg/L	0.0226	3.992	mg/L	0.0453	1.13%
Si 288.158†	-5.2	-0.00044	mg/L	0.001873	-0.00088	mg/L	0.003747	427.14%
Sn 189.927†	-6.5	-0.00053	mg/L	0.000513	-0.00106	mg/L	0.001027	96.71%
Sr 421.552†	415680.2	0.4792	mg/L	0.00464	0.9585	mg/L	0.00928	0.97%
Ti 334.903†	36.8	0.00082	mg/L	0.000321	0.00164	mg/L	0.000642	39.26%
Tl 190.801†	5181.4	2.011	mg/L	0.0233	4.021	mg/L	0.0466	1.16%
V 292.402†	89955.8	0.5149	mg/L	0.00191	1.030	mg/L	0.0038	0.37%
Zn 206.200†	1331.1	0.4896	mg/L	0.00311	0.9793	mg/L	0.00623	0.64%

Sequence No.: 30
Sample ID: CV 3
Dilution: 1X

Autosampler Location: 7
Date Collected: 5/1/2012 12:58:39 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2657072.8	102.2	%	0.17				0.17%
ScR 361.383	406015.4	101.3	%	0.78				0.77%
Ag 328.068†	267846.7	1.010	mg/L	0.0042	1.010	mg/L	0.0042	0.41%
Al 308.215†	3253.4	2.000	mg/L	0.0144	2.000	mg/L	0.0144	0.72%
As 188.979†	4664.6	1.999	mg/L	0.0046	1.999	mg/L	0.0046	0.23%
B 249.677†	6245.4	0.9854	mg/L	0.00813	0.9854	mg/L	0.00813	0.83%
Ba 233.527†	8441.6	1.005	mg/L	0.0093	1.005	mg/L	0.0093	0.93%
Be 313.042†	679349.5	0.9576	mg/L	0.01058	0.9576	mg/L	0.01058	1.10%
Ca 317.933†	20656.6	2.063	mg/L	0.0143	2.063	mg/L	0.0143	0.69%
Cd 228.802†	31631.7	1.041	mg/L	0.0032	1.041	mg/L	0.0032	0.30%
Co 228.616†	38558.7	1.003	mg/L	0.0017	1.003	mg/L	0.0017	0.17%
Cr 267.716†	8451.5	1.026	mg/L	0.0089	1.026	mg/L	0.0089	0.86%
Cu 324.752†	222465.6	1.013	mg/L	0.0020	1.013	mg/L	0.0020	0.20%
Fe 273.955†	2875.1	2.048	mg/L	0.0158	2.048	mg/L	0.0158	0.77%
K 766.490†	44757.2	20.37	mg/L	0.199	20.37	mg/L	0.199	0.98%
Mg 279.077†	2510.3	2.033	mg/L	0.0151	2.033	mg/L	0.0151	0.74%
Mn 257.610†	53189.6	0.9570	mg/L	0.00905	0.9570	mg/L	0.00905	0.95%
Mo 202.031†	22364.2	1.011	mg/L	0.0016	1.011	mg/L	0.0016	0.16%
Na 589.592†	636871.9	48.46	mg/L	0.567	48.46	mg/L	0.567	1.17%
Na 330.237†	1581.0	52.20	mg/L	0.509	52.20	mg/L	0.509	0.97%
Ni 231.604†	4525.2	0.9838	mg/L	0.01097	0.9838	mg/L	0.01097	1.11%
Pb 220.353†	24202.0	2.045	mg/L	0.0038	2.045	mg/L	0.0038	0.18%
Sb 206.836†	7633.9	2.043	mg/L	0.0044	2.043	mg/L	0.0044	0.22%
Se 196.026†	3585.1	1.984	mg/L	0.0007	1.984	mg/L	0.0007	0.04%
Si 288.158†	4438.8	2.056	mg/L	0.0234	2.056	mg/L	0.0234	1.14%
Sn 189.927†	7360.7	1.022	mg/L	0.0012	1.022	mg/L	0.0012	0.11%
Sr 421.552†	845527.1	0.9748	mg/L	0.00958	0.9748	mg/L	0.00958	0.98%
Ti 334.903†	28338.2	0.9861	mg/L	0.00857	0.9861	mg/L	0.00857	0.87%
Tl 190.801†	5107.3	1.983	mg/L	0.0030	1.983	mg/L	0.0030	0.15%
V 292.402†	178705.3	1.023	mg/L	0.0024	1.023	mg/L	0.0024	0.24%
Zn 206.200†	2796.2	1.028	mg/L	0.0090	1.028	mg/L	0.0090	0.88%

Sequence No.: 31
Sample ID: CB 3
Dilution: 1X

Autosampler Location: 1
Date Collected: 5/1/2012 1:02:39 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2692826.3	103.6	%	0.94				0.91%
ScR 361.383	409274.4	102.1	%	0.46				0.45%
Ag 328.068†	5.3	0.00002	mg/L	0.000119	0.00002	mg/L	0.000119	602.23%
Al 308.215†	12.0	0.00750	mg/L	0.004623	0.00750	mg/L	0.004623	61.65%
As 188.979†	-0.4	-0.00015	mg/L	0.002276	-0.00015	mg/L	0.002276	>999.9%
B 249.677†	14.9	0.00236	mg/L	0.000600	0.00236	mg/L	0.000600	25.41%
Ba 233.527†	1.0	0.00012	mg/L	0.000172	0.00012	mg/L	0.000172	139.14%
Be 313.042†	12.6	0.00002	mg/L	0.000020	0.00002	mg/L	0.000020	114.66%
Ca 317.933†	9.4	0.00094	mg/L	0.000636	0.00094	mg/L	0.000636	67.41%
Cd 228.802†	3.5	0.00012	mg/L	0.000144	0.00012	mg/L	0.000144	122.70%
Co 228.616†	-0.6	-0.00002	mg/L	0.000175	-0.00002	mg/L	0.000175	>999.9%
Cr 267.716†	2.3	0.00028	mg/L	0.000815	0.00028	mg/L	0.000815	292.31%
Cu 324.752†	3.1	0.00001	mg/L	0.000068	0.00001	mg/L	0.000068	488.00%
Fe 273.955†	1.7	0.00119	mg/L	0.001338	0.00119	mg/L	0.001338	112.26%
K 766.490†	22.4	0.01020	mg/L	0.015995	0.01020	mg/L	0.015995	156.75%
Mg 279.077†	4.0	0.00322	mg/L	0.002372	0.00322	mg/L	0.002372	73.66%
Mn 257.610†	-0.4	-0.00001	mg/L	0.000033	-0.00001	mg/L	0.000033	413.80%
Mo 202.031†	9.3	0.00042	mg/L	0.000105	0.00042	mg/L	0.000105	24.98%
Na 589.592†	-13.4	-0.00102	mg/L	0.001394	-0.00102	mg/L	0.001394	136.54%
Na 330.237†	-3.9	-0.1281	mg/L	0.26579	-0.1281	mg/L	0.26579	207.47%
Ni 231.604†	-1.4	-0.00030	mg/L	0.000729	-0.00030	mg/L	0.000729	243.65%
Pb 220.353†	-2.4	-0.00020	mg/L	0.000232	-0.00020	mg/L	0.000232	116.58%
Sb 206.836†	9.0	0.00242	mg/L	0.000761	0.00242	mg/L	0.000761	31.44%
Se 196.026†	7.8	0.00429	mg/L	0.001526	0.00429	mg/L	0.001526	35.55%
Si 288.158†	0.3	0.00015	mg/L	0.003240	0.00015	mg/L	0.003240	>999.9%
Sn 189.927†	2.7	0.00038	mg/L	0.000102	0.00038	mg/L	0.000102	26.91%
Sr 421.552†	56.1	0.00006	mg/L	0.000025	0.00006	mg/L	0.000025	38.14%
Ti 334.903†	20.7	0.00072	mg/L	0.000750	0.00072	mg/L	0.000750	103.92%
Tl 190.801†	2.8	0.00111	mg/L	0.001458	0.00111	mg/L	0.001458	131.82%
V 292.402†	8.3	0.00005	mg/L	0.000090	0.00005	mg/L	0.000090	188.46%
Zn 206.200†	-2.1	-0.00078	mg/L	0.000163	-0.00078	mg/L	0.000163	20.73%

Sequence No.: 32
Sample ID: UR83 B TWC

Dilution: 1X

Autosampler Location: 324
Date Collected: 5/1/2012 1:06:52 PM
Data Type: Original

Nebulizer Parameters: UR83 B TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 B TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2500197.6	96.21	%	0.189				0.20%
ScR 361.383	398538.8	99.44	%	0.584				0.59%
Ag 328.068†	181.8	-0.00011	mg/L	0.000209	-0.00011	mg/L	0.000209	182.37%
Al 308.215†	21.8	0.01353	mg/L	0.000220	0.01353	mg/L	0.000220	1.63%
As 188.979†	-5.5	-0.00458	mg/L	0.001580	-0.00458	mg/L	0.001580	34.52%
B 249.677†	1597.8	0.2526	mg/L	0.00196	0.2526	mg/L	0.00196	0.78%
Ba 233.527†	80.0	0.00952	mg/L	0.000299	0.00952	mg/L	0.000299	3.14%
Be 313.042†	5.9	0.00001	mg/L	0.000017	0.00001	mg/L	0.000017	215.25%
Ca 317.933†	585796.1	58.51	mg/L	0.272	58.51	mg/L	0.272	0.47%
Cd 228.802†	30.8	0.00103	mg/L	0.000033	0.00103	mg/L	0.000033	3.17%
Co 228.616†	46.8	0.00121	mg/L	0.000157	0.00121	mg/L	0.000157	12.89%
Cr 267.716†	47.8	0.00086	mg/L	0.000173	0.00086	mg/L	0.000173	20.06%
Cu 324.752†	336.8	0.00109	mg/L	0.000049	0.00109	mg/L	0.000049	4.51%
Fe 273.955†	60.3	0.04304	mg/L	0.000149	0.04304	mg/L	0.000149	0.35%
K 766.490†	56425.7	25.68	mg/L	0.062	25.68	mg/L	0.062	0.24%
Mg 279.077†	119382.8	96.43	mg/L	0.201	96.43	mg/L	0.201	0.21%
Mn 257.610†	107392.1	1.930	mg/L	0.0145	1.930	mg/L	0.0145	0.75%
Mo 202.031†	134.8	0.00510	mg/L	0.000170	0.00510	mg/L	0.000170	3.32%
Na 589.592†	3991260.0	303.7	mg/L	3.26	303.7	mg/L	3.26	1.07%
Na 330.237†	10059.9	331.6	mg/L	1.33	331.6	mg/L	1.33	0.40%
Ni 231.604†	5.0	0.00111	mg/L	0.000302	0.00111	mg/L	0.000302	27.30%
Pb 220.353†	-69.4	-0.00585	mg/L	0.000252	-0.00585	mg/L	0.000252	4.30%
Sb 206.836†	48.0	0.01274	mg/L	0.001016	0.01274	mg/L	0.001016	7.98%
Se 196.026†	42.5	0.02177	mg/L	0.004466	0.02177	mg/L	0.004466	20.52%
Si 288.158†	50182.5	23.20	mg/L	0.568	23.20	mg/L	0.568	2.45%
Sn 189.927†	-49.8	-0.00518	mg/L	0.000113	-0.00518	mg/L	0.000113	2.17%
Sr 421.552†	433681.6	0.5000	mg/L	0.00317	0.5000	mg/L	0.00317	0.63%
Ti 334.903†	70.9	0.00042	mg/L	0.000230	0.00042	mg/L	0.000230	54.37%
Tl 190.801†	14.5	0.00564	mg/L	0.002312	0.00564	mg/L	0.002312	40.98%
V 292.402†	103.7	0.00092	mg/L	0.000052	0.00092	mg/L	0.000052	5.64%
Zn 206.200†	-10.8	-0.00473	mg/L	0.001347	-0.00473	mg/L	0.001347	28.47%

Sequence No.: 33
Sample ID: UR83 C TWC

Dilution: 1X

Autosampler Location: 325
Date Collected: 5/1/2012 1:11:24 PM
Data Type: Original

Nebulizer Parameters: UR83 C TWC

Analyte	Back Pressure	Flow
All	211.0 kPa	0.75 L/min

Mean Data: UR83 C TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2600168.5	100.1	%	0.88				0.88%
ScR 361.383	400186.2	99.85	%	0.780				0.78%
Ag 328.068†	111.5	-0.00006	mg/L	0.000101	-0.00006	mg/L	0.000101	180.67%
Al 308.215†	27.3	0.01700	mg/L	0.010786	0.01700	mg/L	0.010786	63.44%
As 188.979†	-5.5	-0.00303	mg/L	0.001012	-0.00303	mg/L	0.001012	33.37%
B 249.677†	464.4	0.07342	mg/L	0.000445	0.07342	mg/L	0.000445	0.61%
Ba 233.527†	182.8	0.02166	mg/L	0.000279	0.02166	mg/L	0.000279	1.29%
Be 313.042†	5.3	0.00001	mg/L	0.000021	0.00001	mg/L	0.000021	303.68%
Ca 317.933†	308589.8	30.82	mg/L	0.135	30.82	mg/L	0.135	0.44%
Cd 228.802†	20.7	0.00067	mg/L	0.000026	0.00067	mg/L	0.000026	3.81%
Co 228.616†	137.9	0.00359	mg/L	0.000089	0.00359	mg/L	0.000089	2.49%
Cr 267.716†	15.5	0.00017	mg/L	0.000677	0.00017	mg/L	0.000677	388.48%
Cu 324.752†	73.0	0.00037	mg/L	0.000089	0.00037	mg/L	0.000089	23.98%
Fe 273.955†	3427.1	2.447	mg/L	0.0245	2.447	mg/L	0.0245	1.00%
K 766.490†	18555.2	8.444	mg/L	0.1061	8.444	mg/L	0.1061	1.26%
Mg 279.077†	36865.0	29.77	mg/L	0.266	29.77	mg/L	0.266	0.89%
Mn 257.610†	70987.8	1.276	mg/L	0.0158	1.276	mg/L	0.0158	1.24%
Mo 202.031†	84.9	0.00332	mg/L	0.000204	0.00332	mg/L	0.000204	6.16%
Na 589.592†	1210186.8	92.08	mg/L	0.438	92.08	mg/L	0.438	0.48%
Na 330.237†	2971.8	97.86	mg/L	0.848	97.86	mg/L	0.848	0.87%
Ni 231.604†	38.2	0.00830	mg/L	0.000299	0.00830	mg/L	0.000299	3.60%
Pb 220.353†	-55.0	-0.00480	mg/L	0.001268	-0.00480	mg/L	0.001268	26.43%
Sb 206.836†	41.0	0.01062	mg/L	0.002408	0.01062	mg/L	0.002408	22.66%
Se 196.026†	23.8	0.01230	mg/L	0.002509	0.01230	mg/L	0.002509	20.39%
Si 288.158†	29671.3	13.72	mg/L	0.200	13.72	mg/L	0.200	1.46%
Sn 189.927†	-27.0	-0.00283	mg/L	0.000240	-0.00283	mg/L	0.000240	8.49%
Sr 421.552†	208248.2	0.2401	mg/L	0.00096	0.2401	mg/L	0.00096	0.40%
Ti 334.903†	38.1	0.00025	mg/L	0.000398	0.00025	mg/L	0.000398	160.01%
Tl 190.801†	8.2	0.00351	mg/L	0.000909	0.00351	mg/L	0.000909	25.90%
V 292.402†	143.2	0.00073	mg/L	0.000049	0.00073	mg/L	0.000049	6.72%
Zn 206.200†	16.2	0.00556	mg/L	0.001115	0.00556	mg/L	0.001115	20.06%

Sequence No.: 34
Sample ID: UR83 D TWC

Autosampler Location: 326
Date Collected: 5/1/2012 1:15:37 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UR83 D TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 D TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2336952.1	89.93	%	0.028				0.03%
ScR 361.383	377007.9	94.07	%	0.492				0.52%
Ag 328.068†	322.5	-0.00067	mg/L	0.000238	-0.00067	mg/L	0.000238	35.79%
Al 308.215†	3.3	0.00182	mg/L	0.007074	0.00182	mg/L	0.007074	388.63%
As 188.979†	0.1	-0.00766	mg/L	0.002072	-0.00766	mg/L	0.002072	27.04%
B 249.677†	2953.4	0.4670	mg/L	0.00462	0.4670	mg/L	0.00462	0.99%
Ba 233.527†	256.5	0.03055	mg/L	0.000270	0.03055	mg/L	0.000270	0.88%
Be 313.042†	99.4	0.00014	mg/L	0.000021	0.00014	mg/L	0.000021	15.46%
Ca 317.933†	2271747.9	226.9	mg/L	0.90	226.9	mg/L	0.90	0.40%
Cd 228.802†	49.8	0.00165	mg/L	0.000122	0.00165	mg/L	0.000122	7.39%
Co 228.616†	118.3	0.00306	mg/L	0.000140	0.00306	mg/L	0.000140	4.58%
Cr 267.716†	147.2	0.00017	mg/L	0.001578	0.00017	mg/L	0.001578	904.02%
Cu 324.752†	486.5	0.00068	mg/L	0.000069	0.00068	mg/L	0.000069	10.23%
Fe 273.955†	112.8	0.08048	mg/L	0.001647	0.08048	mg/L	0.001647	2.05%
K 766.490†	115300.1	52.47	mg/L	0.262	52.47	mg/L	0.262	0.50%
Mg 279.077†	414014.4	334.4	mg/L	1.50	334.4	mg/L	1.50	0.45%
Mn 257.610†	94695.6	1.701	mg/L	0.0121	1.701	mg/L	0.0121	0.71%
Mo 202.031†	220.8	0.00613	mg/L	0.000124	0.00613	mg/L	0.000124	2.02%
Na 589.592†	16440946.2	1251	mg/L	9.7	1251	mg/L	9.7	0.78%
Na 330.237†	41283.8	1361	mg/L	7.7	1361	mg/L	7.7	0.57%
Ni 231.604†	10.6	0.00233	mg/L	0.000200	0.00233	mg/L	0.000200	8.61%
Pb 220.353†	-90.1	-0.00758	mg/L	0.000710	-0.00758	mg/L	0.000710	9.37%
Sb 206.836†	88.6	0.02347	mg/L	0.001090	0.02347	mg/L	0.001090	4.65%
Se 196.026†	64.1	0.03394	mg/L	0.001931	0.03394	mg/L	0.001931	5.69%
Si 288.158†	51652.2	23.88	mg/L	0.183	23.88	mg/L	0.183	0.77%
Sn 189.927†	-96.1	-0.00666	mg/L	0.001932	-0.00666	mg/L	0.001932	28.98%
Sr 421.552†	1628911.1	1.878	mg/L	0.0098	1.878	mg/L	0.0098	0.52%
Ti 334.903†	327.5	0.00349	mg/L	0.000332	0.00349	mg/L	0.000332	9.51%
Tl 190.801†	22.4	0.00871	mg/L	0.002001	0.00871	mg/L	0.002001	22.98%
V 292.402†	1213.7	0.00725	mg/L	0.000028	0.00725	mg/L	0.000028	0.39%
Zn 206.200†	-8.9	-0.00626	mg/L	0.001325	-0.00626	mg/L	0.001325	21.17%

Sequence No.: 35
Sample ID: UR83 E TWC

Dilution: 1X

Autosampler Location: 327
Date Collected: 5/1/2012 1:20:18 PM
Data Type: Original

Nebulizer Parameters: UR83 E TWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: UR83 E TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2498779.4	96.16	%	0.151				0.16%
ScR 361.383	399167.1	99.60	%	0.911				0.91%
Ag 328.068†	68.6	-0.00026	mg/L	0.000175	-0.00026	mg/L	0.000175	66.23%
Al 308.215†	23.7	0.01472	mg/L	0.002326	0.01472	mg/L	0.002326	15.81%
As 188.979†	-7.8	-0.00410	mg/L	0.001018	-0.00410	mg/L	0.001018	24.82%
B 249.677†	990.0	0.1565	mg/L	0.00193	0.1565	mg/L	0.00193	1.23%
Ba 233.527†	3125.1	0.3718	mg/L	0.00274	0.3718	mg/L	0.00274	0.74%
Be 313.042†	-14.4	-0.00002	mg/L	0.000025	-0.00002	mg/L	0.000025	115.60%
Ca 317.933†	562473.2	56.18	mg/L	0.233	56.18	mg/L	0.233	0.42%
Cd 228.802†	27.0	0.00081	mg/L	0.000133	0.00081	mg/L	0.000133	16.39%
Co 228.616†	167.5	0.00428	mg/L	0.000073	0.00428	mg/L	0.000073	1.71%
Cr 267.716†	11.0	-0.00075	mg/L	0.000392	-0.00075	mg/L	0.000392	52.13%
Cu 324.752†	-43.5	0.00037	mg/L	0.000093	0.00037	mg/L	0.000093	25.59%
Fe 273.955†	13994.3	9.991	mg/L	0.0967	9.991	mg/L	0.0967	0.97%
K 766.490†	32562.8	14.82	mg/L	0.052	14.82	mg/L	0.052	0.35%
Mg 279.077†	41077.2	33.17	mg/L	0.202	33.17	mg/L	0.202	0.61%
Mn 257.610†	38163.6	0.6860	mg/L	0.00614	0.6860	mg/L	0.00614	0.89%
Mo 202.031†	147.0	0.00570	mg/L	0.000231	0.00570	mg/L	0.000231	4.06%
Na 589.592†	4918476.1	374.2	mg/L	8.12	374.2	mg/L	8.12	2.17%
Na 330.237†	12356.6	407.4	mg/L	3.23	407.4	mg/L	3.23	0.79%
Ni 231.604†	29.7	0.00645	mg/L	0.002062	0.00645	mg/L	0.002062	31.98%
Pb 220.353†	-49.9	-0.00487	mg/L	0.000519	-0.00487	mg/L	0.000519	10.65%
Sb 206.836†	51.0	0.01241	mg/L	0.001881	0.01241	mg/L	0.001881	15.16%
Se 196.026†	34.7	0.01973	mg/L	0.002108	0.01973	mg/L	0.002108	10.68%
Si 288.158†	21659.7	10.01	mg/L	0.092	10.01	mg/L	0.092	0.92%
Sn 189.927†	-36.8	-0.00345	mg/L	0.000633	-0.00345	mg/L	0.000633	18.35%
Sr 421.552†	545421.0	0.6288	mg/L	0.00466	0.6288	mg/L	0.00466	0.74%
Ti 334.903†	55.0	-0.00005	mg/L	0.000226	-0.00005	mg/L	0.000226	451.84%
Tl 190.801†	9.0	0.00484	mg/L	0.001382	0.00484	mg/L	0.001382	28.54%
V 292.402†	356.6	0.00094	mg/L	0.000016	0.00094	mg/L	0.000016	1.66%
Zn 206.200†	-2.0	-0.00147	mg/L	0.001040	-0.00147	mg/L	0.001040	70.54%

Sequence No.: 36
Sample ID: UR61 B SWC

Autosampler Location: 328
Date Collected: 5/1/2012 1:24:47 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: UR61 B SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2628439.4	101.1	%	0.20				0.20%
ScR 361.383	408045.9	101.8	%	0.52				0.51%
Ag 328.068†	951.6	0.00334	mg/L	0.000119	0.00668	mg/L	0.000238	3.56%
Al 308.215†	113686.8	70.94	mg/L	0.312	141.9	mg/L	0.62	0.44%
As 188.979†	20.9	0.03279	mg/L	0.002794	0.06558	mg/L	0.005587	8.52%
B 249.677†	304.7	0.04804	mg/L	0.001383	0.09609	mg/L	0.002766	2.88%
Ba 233.527†	5349.2	0.6309	mg/L	0.00313	1.262	mg/L	0.0063	0.50%
Be 313.042†	965.4	0.00107	mg/L	0.000023	0.00214	mg/L	0.000045	2.11%
Ca 317.933†	344434.6	34.40	mg/L	0.207	68.81	mg/L	0.413	0.60%
Cd 228.802†	536.2	0.01664	mg/L	0.000052	0.03328	mg/L	0.000104	0.31%
Co 228.616†	1869.1	0.04143	mg/L	0.000541	0.08286	mg/L	0.001083	1.31%
Cr 267.716†	2257.5	0.2779	mg/L	0.00150	0.5558	mg/L	0.00300	0.54%
Cu 324.752†	109369.3	0.5056	mg/L	0.00231	1.011	mg/L	0.0046	0.46%
Fe 273.955†	173153.1	123.6	mg/L	0.44	247.2	mg/L	0.87	0.35%
K 766.490†	9454.6	4.302	mg/L	0.0344	8.605	mg/L	0.0688	0.80%
Mg 279.077†	25082.5	20.19	mg/L	0.006	40.37	mg/L	0.013	0.03%
Mn 257.610†	71680.7	1.289	mg/L	0.0072	2.578	mg/L	0.0144	0.56%
Mo 202.031†	351.0	0.01529	mg/L	0.000273	0.03058	mg/L	0.000547	1.79%
Na 589.592†	68325.2	5.199	mg/L	0.0323	10.40	mg/L	0.065	0.62%
Na 330.237†	143.9	5.124	mg/L	0.2243	10.25	mg/L	0.449	4.38%
Ni 231.604†	700.9	0.1521	mg/L	0.00182	0.3042	mg/L	0.00364	1.20%
Pb 220.353†	7157.0	0.6060	mg/L	0.00343	1.212	mg/L	0.0069	0.57%
Sb 206.836†	178.8	0.01506	mg/L	0.001087	0.03013	mg/L	0.002174	7.22%
Se 196.026†	-6.4	0.00946	mg/L	0.001098	0.01892	mg/L	0.002195	11.60%
Si 288.158†	4527.1	2.093	mg/L	0.0099	4.186	mg/L	0.0199	0.48%
Sn 189.927†	99.7	0.01697	mg/L	0.000245	0.03394	mg/L	0.000490	1.44%
Sr 421.552†	330770.0	0.3813	mg/L	0.00158	0.7627	mg/L	0.00316	0.41%
Ti 334.903†	121240.1	4.225	mg/L	0.0158	8.449	mg/L	0.0316	0.37%
Tl 190.801†	-18.1	0.00612	mg/L	0.003226	0.01223	mg/L	0.006452	52.74%
V 292.402†	63641.8	0.3467	mg/L	0.00197	0.6934	mg/L	0.00393	0.57%
Zn 206.200†	6867.4	2.526	mg/L	0.0122	5.052	mg/L	0.0244	0.48%

Sequence No.: 37
Sample ID: UR61 C SWC

Dilution: 2X

Autosampler Location: 329
Date Collected: 5/1/2012 1:28:44 PM
Data Type: Original

Nebulizer Parameters: UR61 C SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2677585.6	103.0	%	0.45				0.43%
ScR 361.383	419387.4	104.6	%	1.42				1.36%
Ag 328.068†	130.1	0.00018	mg/L	0.000070	0.00035	mg/L	0.000140	39.51%
Al 308.215†	59720.2	37.26	mg/L	0.359	74.52	mg/L	0.717	0.96%
As 188.979†	76.4	0.04736	mg/L	0.000469	0.09471	mg/L	0.000939	0.99%
B 249.677†	332.7	0.05251	mg/L	0.000600	0.1050	mg/L	0.00120	1.14%
Ba 233.527†	4942.7	0.5762	mg/L	0.00585	1.152	mg/L	0.0117	1.02%
Be 313.042†	967.7	0.00106	mg/L	0.000041	0.00213	mg/L	0.000082	3.85%
Ca 317.933†	198869.6	19.86	mg/L	0.089	39.73	mg/L	0.177	0.45%
Cd 228.802†	1172.8	0.03647	mg/L	0.000300	0.07295	mg/L	0.000600	0.82%
Co 228.616†	1375.4	0.03138	mg/L	0.000052	0.06277	mg/L	0.000103	0.16%
Cr 267.716†	2428.9	0.3047	mg/L	0.00327	0.6093	mg/L	0.00653	1.07%
Cu 324.752†	151910.6	0.7086	mg/L	0.00345	1.417	mg/L	0.0069	0.49%
Fe 273.955†	343272.4	245.1	mg/L	2.32	490.2	mg/L	4.64	0.95%
K 766.490†	5210.6	2.371	mg/L	0.0081	4.742	mg/L	0.0162	0.34%
Mg 279.077†	16554.3	13.23	mg/L	0.133	26.46	mg/L	0.265	1.00%
Mn 257.610†	99875.2	1.797	mg/L	0.0128	3.594	mg/L	0.0256	0.71%
Mo 202.031†	494.2	0.02201	mg/L	0.000164	0.04403	mg/L	0.000327	0.74%
Na 589.592†	21806.3	1.659	mg/L	0.0072	3.318	mg/L	0.0145	0.44%
Na 330.237†	57.3	1.548	mg/L	0.1029	3.097	mg/L	0.2059	6.65%
Ni 231.604†	571.5	0.1241	mg/L	0.00145	0.2481	mg/L	0.00289	1.16%
Pb 220.353†	9289.3	0.7730	mg/L	0.00159	1.546	mg/L	0.0032	0.21%
Sb 206.836†	253.6	0.02861	mg/L	0.001929	0.05723	mg/L	0.003857	6.74%
Se 196.026†	-44.3	0.00196	mg/L	0.005944	0.00391	mg/L	0.011889	303.89%
Si 288.158†	3685.4	1.704	mg/L	0.0164	3.408	mg/L	0.0328	0.96%
Sn 189.927†	237.2	0.03478	mg/L	0.000879	0.06957	mg/L	0.001758	2.53%
Sr 421.552†	129675.7	0.1495	mg/L	0.00101	0.2990	mg/L	0.00201	0.67%
Ti 334.903†	73523.8	2.562	mg/L	0.0185	5.124	mg/L	0.0371	0.72%
Tl 190.801†	-76.5	0.00030	mg/L	0.001996	0.00060	mg/L	0.003991	668.38%
V 292.402†	70794.8	0.3740	mg/L	0.00300	0.7480	mg/L	0.00599	0.80%
Zn 206.200†	11401.6	4.191	mg/L	0.0458	8.382	mg/L	0.0915	1.09%

Sequence No.: 38
Sample ID: UR61 D SWC

Dilution: 2X

Autosampler Location: 330
Date Collected: 5/1/2012 1:32:41 PM
Data Type: Original

Nebulizer Parameters: UR61 D SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

rerun

Mean Data: UR61 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2722412.9	104.8	%	0.27				0.26%
ScR 361.383	419045.6	104.6	%	0.42				0.40%
Ag 328.068†	-382.9	-0.00174	mg/L	0.000127	-0.00348	mg/L	0.000253	7.28%
Al 308.215†	30030.2	18.74	mg/L	0.124	37.47	mg/L	0.248	0.66%
As 188.979†	59.4	0.03352	mg/L	0.001456	0.06703	mg/L	0.002911	4.34%
B 249.677†	306.9	0.04848	mg/L	0.002674	0.09695	mg/L	0.005349	5.52%
Ba 233.527†	3461.8	0.3968	mg/L	0.00133	0.7936	mg/L	0.00265	0.33%
Be 313.042†	441.3	0.00046	mg/L	0.000017	0.00091	mg/L	0.000034	3.72%
Ca 317.933†	144906.0	14.47	mg/L	0.039	28.95	mg/L	0.078	0.27%
Cd 228.802†	369.8	0.00929	mg/L	0.000166	0.01857	mg/L	0.000333	1.79%
Co 228.616†	697.1	0.01575	mg/L	0.000095	0.03149	mg/L	0.000189	0.60%
Cr 267.716†	689.5	0.09672	mg/L	0.000577	0.1934	mg/L	0.00115	0.60%
Cu 324.752†	41891.2	0.2123	mg/L	0.00033	0.4246	mg/L	0.00066	0.15%
Fe 273.955†	428163.6	305.7	mg/L	1.77	611.4	mg/L	3.54	0.58%
K 766.490†	2625.2	1.195	mg/L	0.0109	2.389	mg/L	0.0219	0.92%
Mg 279.077†	7501.8	5.880	mg/L	0.0159	11.76	mg/L	0.032	0.27%
Mn 257.610†	81205.0	1.462	mg/L	0.0056	2.924	mg/L	0.0113	0.38%
Mo 202.031†	158.1	0.00690	mg/L	0.000166	0.01381	mg/L	0.000333	2.41%
Na 589.592†	16521.9	1.257	mg/L	0.0065	2.514	mg/L	0.0130	0.52%
Na 330.237†	32.8	1.101	mg/L	0.1139	2.202	mg/L	0.2279	10.35%
Ni 231.604†	192.8	0.04190	mg/L	0.001135	0.08380	mg/L	0.002270	2.71%
Pb 220.353†	2178.7	0.1662	mg/L	0.00176	0.3324	mg/L	0.00352	1.06%
Sb 206.836†	249.9	0.02599	mg/L	0.000600	0.05198	mg/L	0.001199	2.31%
Se 196.026†	-64.7	-0.00206	mg/L	0.002918	-0.00412	mg/L	0.005837	141.64%
Si 288.158†	3477.4	1.608	mg/L	0.0094	3.215	mg/L	0.0188	0.59%
Sn 189.927†	49.1	0.00796	mg/L	0.000134	0.01592	mg/L	0.000269	1.69%
Sr 421.552†	152554.5	0.1759	mg/L	0.00077	0.3518	mg/L	0.00154	0.44%
Ti 334.903†	39588.7	1.379	mg/L	0.0062	2.759	mg/L	0.0124	0.45%
Tl 190.801†	-110.3	-0.00379	mg/L	0.000864	-0.00758	mg/L	0.001729	22.80%
V 292.402†	39143.5	0.1860	mg/L	0.00052	0.3720	mg/L	0.00105	0.28%
Zn 206.200†	3286.4	1.208	mg/L	0.0056	2.416	mg/L	0.0112	0.47%

Sequence No.: 39
Sample ID: UR61 E SWC

Autosampler Location: 331
Date Collected: 5/1/2012 1:36:38 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: UR61 E SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 E SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2656726.7	102.2	%	0.66				0.64%
ScR 361.383	414333.3	103.4	%	0.89				0.86%
Ag 328.068†	1867.3	0.00670	mg/L	0.000185	0.01340	mg/L	0.000369	2.76%
Al 308.215†	108950.0	67.98	mg/L	0.394	136.0	mg/L	0.79	0.58%
As 188.979†	70.6	0.05266	mg/L	0.003305	0.1053	mg/L	0.00661	6.28%
B 249.677†	568.5	0.08974	mg/L	0.001389	0.1795	mg/L	0.00278	1.55%
Ba 233.527†	5422.3	0.6384	mg/L	0.00201	1.277	mg/L	0.0040	0.31%
Be 313.042†	975.0	0.00107	mg/L	0.000019	0.00215	mg/L	0.000038	1.78%
Ca 317.933†	303358.2	30.30	mg/L	0.122	60.60	mg/L	0.244	0.40%
Cd 228.802†	800.9	0.02514	mg/L	0.000112	0.05028	mg/L	0.000224	0.44%
Co 228.616†	2103.1	0.04789	mg/L	0.000307	0.09577	mg/L	0.000615	0.64%
Cr 267.716†	2764.1	0.3404	mg/L	0.00038	0.6809	mg/L	0.00075	0.11%
Cu 324.752†	156724.3	0.7230	mg/L	0.00779	1.446	mg/L	0.0156	1.08%
Fe 273.955†	205385.5	146.6	mg/L	0.55	293.3	mg/L	1.09	0.37%
K 766.490†	9581.6	4.360	mg/L	0.0070	8.721	mg/L	0.0140	0.16%
Mg 279.077†	26416.4	21.25	mg/L	0.032	42.50	mg/L	0.063	0.15%
Mn 257.610†	102102.7	1.836	mg/L	0.0031	3.672	mg/L	0.0062	0.17%
Mo 202.031†	540.3	0.02392	mg/L	0.000189	0.04784	mg/L	0.000378	0.79%
Na 589.592†	52640.5	4.005	mg/L	0.0160	8.010	mg/L	0.0319	0.40%
Na 330.237†	118.2	3.849	mg/L	0.0842	7.698	mg/L	0.1685	2.19%
Ni 231.604†	885.4	0.1921	mg/L	0.00134	0.3843	mg/L	0.00267	0.69%
Pb 220.353†	7409.3	0.6252	mg/L	0.00362	1.250	mg/L	0.0072	0.58%
Sb 206.836†	195.5	0.01691	mg/L	0.000580	0.03382	mg/L	0.001160	3.43%
Se 196.026†	-15.9	0.00633	mg/L	0.003593	0.01267	mg/L	0.007186	56.74%
Si 288.158†	2922.5	1.351	mg/L	0.0081	2.702	mg/L	0.0161	0.60%
Sn 189.927†	239.9	0.03616	mg/L	0.000343	0.07232	mg/L	0.000687	0.95%
Sr 421.552†	244139.3	0.2815	mg/L	0.00015	0.5629	mg/L	0.00029	0.05%
Ti 334.903†	115041.1	4.009	mg/L	0.0039	8.018	mg/L	0.0077	0.10%
Tl 190.801†	-25.9	0.00619	mg/L	0.001936	0.01238	mg/L	0.003872	31.28%
V 292.402†	66915.9	0.3631	mg/L	0.00314	0.7261	mg/L	0.00629	0.87%
Zn 206.200†	11825.2	4.348	mg/L	0.0078	8.696	mg/L	0.0156	0.18%

Sequence No.: 40
Sample ID: UR61 F SWC

Autosampler Location: 332
Date Collected: 5/1/2012 1:40:35 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: UR61 F SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2663939.1	102.5	%	0.49				0.47%
ScR 361.383	416969.9	104.0	%	0.22				0.21%
Ag 328.068†	537.7	0.00164	mg/L	0.000087	0.00328	mg/L	0.000173	5.29%
Al 308.215†	95978.0	59.89	mg/L	0.072	119.8	mg/L	0.14	0.12%
As 188.979†	133.0	0.07625	mg/L	0.002208	0.1525	mg/L	0.00442	2.90%
B 249.677†	750.0	0.1184	mg/L	0.00030	0.2368	mg/L	0.00060	0.26%
Ba 233.527†	4919.3	0.5783	mg/L	0.00099	1.157	mg/L	0.0020	0.17%
Be 313.042†	981.7	0.00110	mg/L	0.000008	0.00220	mg/L	0.000017	0.75%
Ca 317.933†	332456.3	33.21	mg/L	0.069	66.41	mg/L	0.138	0.21%
Cd 228.802†	1476.5	0.04740	mg/L	0.000359	0.09480	mg/L	0.000718	0.76%
Co 228.616†	2309.9	0.05417	mg/L	0.000428	0.1083	mg/L	0.00086	0.79%
Cr 267.716†	3044.6	0.3746	mg/L	0.00080	0.7492	mg/L	0.00160	0.21%
Cu 324.752†	236565.1	1.087	mg/L	0.0012	2.174	mg/L	0.0023	0.11%
Fe 273.955†	209070.2	149.3	mg/L	0.26	298.5	mg/L	0.51	0.17%
K 766.490†	8089.7	3.681	mg/L	0.0101	7.363	mg/L	0.0203	0.28%
Mg 279.077†	23247.2	18.69	mg/L	0.041	37.38	mg/L	0.082	0.22%
Mn 257.610†	102952.9	1.852	mg/L	0.0107	3.704	mg/L	0.0214	0.58%
Mo 202.031†	627.2	0.02780	mg/L	0.000121	0.05560	mg/L	0.000242	0.44%
Na 589.592†	31643.2	2.408	mg/L	0.0145	4.815	mg/L	0.0290	0.60%
Na 330.237†	83.6	2.381	mg/L	0.2361	4.763	mg/L	0.4723	9.92%
Ni 231.604†	921.0	0.1999	mg/L	0.00089	0.3998	mg/L	0.00177	0.44%
Pb 220.353†	12598.6	1.062	mg/L	0.0060	2.123	mg/L	0.0120	0.57%
Sb 206.836†	237.7	0.02934	mg/L	0.000357	0.05868	mg/L	0.000713	1.22%
Se 196.026†	-11.1	0.00929	mg/L	0.004791	0.01858	mg/L	0.009583	51.57%
Si 288.158†	4600.0	2.127	mg/L	0.0092	4.254	mg/L	0.0184	0.43%
Sn 189.927†	336.3	0.04937	mg/L	0.000193	0.09875	mg/L	0.000386	0.39%
Sr 421.552†	196264.7	0.2263	mg/L	0.00109	0.4525	mg/L	0.00218	0.48%
Ti 334.903†	100033.1	3.486	mg/L	0.0146	6.971	mg/L	0.0292	0.42%
Tl 190.801†	-27.7	0.00611	mg/L	0.003483	0.01222	mg/L	0.006966	57.01%
V 292.402†	63431.9	0.3434	mg/L	0.00044	0.6867	mg/L	0.00089	0.13%
Zn 206.200†	13913.0	5.115	mg/L	0.0149	10.23	mg/L	0.030	0.29%

Sequence No.: 41
Sample ID: UR61 G SWC

Dilution: 2X

Autosampler Location: 333
Date Collected: 5/1/2012 1:44:32 PM
Data Type: Original

Nebulizer Parameters: UR61 G SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR61 G SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2697930.1	103.8	%	0.83				0.80%
ScR 361.383	415258.1	103.6	%	1.04				1.01%
Ag 328.068†	343.6	0.00107	mg/L	0.000124	0.00215	mg/L	0.000247	11.51%
Al 308.215†	75521.8	47.12	mg/L	0.460	94.25	mg/L	0.920	0.98%
As 188.979†	93.9	0.05670	mg/L	0.001151	0.1134	mg/L	0.00230	2.03%
B 249.677†	567.3	0.08962	mg/L	0.000882	0.1792	mg/L	0.00176	0.98%
Ba 233.527†	3846.1	0.4528	mg/L	0.00369	0.9056	mg/L	0.00737	0.81%
Be 313.042†	773.7	0.00088	mg/L	0.000041	0.00175	mg/L	0.000081	4.63%
Ca 317.933†	193325.0	19.31	mg/L	0.047	38.62	mg/L	0.095	0.25%
Cd 228.802†	680.2	0.02150	mg/L	0.000289	0.04299	mg/L	0.000577	1.34%
Co 228.616†	1478.3	0.03346	mg/L	0.000273	0.06691	mg/L	0.000546	0.82%
Cr 267.716†	2614.8	0.3210	mg/L	0.00261	0.6420	mg/L	0.00523	0.81%
Cu 324.752†	210914.4	0.9671	mg/L	0.00793	1.934	mg/L	0.0159	0.82%
Fe 273.955†	146440.3	104.6	mg/L	1.05	209.1	mg/L	2.11	1.01%
K 766.490†	6004.8	2.733	mg/L	0.0118	5.465	mg/L	0.0235	0.43%
Mg 279.077†	17248.4	13.87	mg/L	0.076	27.74	mg/L	0.153	0.55%
Mn 257.610†	71841.5	1.292	mg/L	0.0100	2.585	mg/L	0.0200	0.78%
Mo 202.031†	707.7	0.03168	mg/L	0.000296	0.06336	mg/L	0.000591	0.93%
Na 589.592†	24345.3	1.852	mg/L	0.0043	3.705	mg/L	0.0087	0.23%
Na 330.237†	56.3	1.814	mg/L	0.1265	3.628	mg/L	0.2530	6.97%
Ni 231.604†	763.5	0.1657	mg/L	0.00193	0.3314	mg/L	0.00386	1.16%
Pb 220.353†	13859.0	1.169	mg/L	0.0034	2.339	mg/L	0.0068	0.29%
Sb 206.836†	222.8	0.03426	mg/L	0.001764	0.06851	mg/L	0.003528	5.15%
Se 196.026†	-2.6	0.00935	mg/L	0.006334	0.01871	mg/L	0.012668	67.71%
Si 288.158†	3800.3	1.757	mg/L	0.0112	3.514	mg/L	0.0224	0.64%
Sn 189.927†	314.4	0.04565	mg/L	0.000165	0.09131	mg/L	0.000330	0.36%
Sr 421.552†	149268.6	0.1721	mg/L	0.00114	0.3442	mg/L	0.00228	0.66%
Ti 334.903†	84264.8	2.936	mg/L	0.0202	5.873	mg/L	0.0404	0.69%
Tl 190.801†	-16.8	0.00496	mg/L	0.002690	0.00993	mg/L	0.005380	54.19%
V 292.402†	47233.3	0.2564	mg/L	0.00196	0.5129	mg/L	0.00393	0.77%
Zn 206.200†	8985.8	3.304	mg/L	0.0250	6.608	mg/L	0.0499	0.76%

Sequence No.: 42
Sample ID: CV 4
Dilution: 1X

Autosampler Location: 7
Date Collected: 5/1/2012 1:48:29 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2672494.4	102.8	%	0.48				0.47%
ScR 361.383	408832.1	102.0	%	0.63				0.62%
Ag 328.068†	269157.1	1.015	mg/L	0.0013	1.015	mg/L	0.0013	0.13%
Al 308.215†	3273.1	2.013	mg/L	0.0033	2.013	mg/L	0.0033	0.16%
As 188.979†	4616.9	1.979	mg/L	0.0068	1.979	mg/L	0.0068	0.34%
B 249.677†	6267.8	0.9889	mg/L	0.00365	0.9889	mg/L	0.00365	0.37%
Ba 233.527†	8448.4	1.006	mg/L	0.0033	1.006	mg/L	0.0033	0.33%
Be 313.042†	674714.2	0.9511	mg/L	0.00726	0.9511	mg/L	0.00726	0.76%
Ca 317.933†	20757.3	2.073	mg/L	0.0128	2.073	mg/L	0.0128	0.62%
Cd 228.802†	31463.7	1.035	mg/L	0.0022	1.035	mg/L	0.0022	0.21%
Co 228.616†	38425.4	0.9996	mg/L	0.00255	0.9996	mg/L	0.00255	0.25%
Cr 267.716†	8459.4	1.027	mg/L	0.0043	1.027	mg/L	0.0043	0.42%
Cu 324.752†	222274.5	1.012	mg/L	0.0041	1.012	mg/L	0.0041	0.40%
Fe 273.955†	2902.8	2.068	mg/L	0.0143	2.068	mg/L	0.0143	0.69%
K 766.490†	44649.3	20.32	mg/L	0.152	20.32	mg/L	0.152	0.75%
Mg 279.077†	2522.0	2.042	mg/L	0.0049	2.042	mg/L	0.0049	0.24%
Mn 257.610†	53022.3	0.9540	mg/L	0.00694	0.9540	mg/L	0.00694	0.73%
Mo 202.031†	22174.5	1.003	mg/L	0.0035	1.003	mg/L	0.0035	0.35%
Na 589.592†	639369.3	48.65	mg/L	0.489	48.65	mg/L	0.489	1.00%
Na 330.237†	1582.2	52.24	mg/L	0.207	52.24	mg/L	0.207	0.40%
Ni 231.604†	4525.8	0.9839	mg/L	0.00445	0.9839	mg/L	0.00445	0.45%
Pb 220.353†	23968.0	2.025	mg/L	0.0072	2.025	mg/L	0.0072	0.36%
Sb 206.836†	7576.5	2.027	mg/L	0.0048	2.027	mg/L	0.0048	0.24%
Se 196.026†	3555.3	1.967	mg/L	0.0046	1.967	mg/L	0.0046	0.23%
Si 288.158†	4478.9	2.075	mg/L	0.0158	2.075	mg/L	0.0158	0.76%
Sn 189.927†	7285.0	1.011	mg/L	0.0058	1.011	mg/L	0.0058	0.57%
Sr 421.552†	842858.7	0.9717	mg/L	0.00607	0.9717	mg/L	0.00607	0.62%
Ti 334.903†	28295.7	0.9847	mg/L	0.00606	0.9847	mg/L	0.00606	0.62%
Tl 190.801†	5051.4	1.961	mg/L	0.0084	1.961	mg/L	0.0084	0.43%
V 292.402†	177920.9	1.019	mg/L	0.0034	1.019	mg/L	0.0034	0.33%
Zn 206.200†	2805.1	1.031	mg/L	0.0045	1.031	mg/L	0.0045	0.44%

Sequence No.: 43
Sample ID: CB 4
Dilution: 1X

Autosampler Location: 1
Date Collected: 5/1/2012 1:52:30 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2707694.7	104.2	%	0.50				0.48%
ScR 361.383	416078.7	103.8	%	0.66				0.64%
Ag 328.068†	33.8	0.00013	mg/L	0.000138	0.00013	mg/L	0.000138	108.66%
Al 308.215†	5.2	0.00321	mg/L	0.002397	0.00321	mg/L	0.002397	74.56%
As 188.979†	1.0	0.00045	mg/L	0.001523	0.00045	mg/L	0.001523	340.60%
B 249.677†	16.1	0.00255	mg/L	0.001082	0.00255	mg/L	0.001082	42.51%
Ba 233.527†	-0.9	-0.00010	mg/L	0.000213	-0.00010	mg/L	0.000213	204.73%
Be 313.042†	-12.0	-0.00002	mg/L	0.000009	-0.00002	mg/L	0.000009	53.29%
Ca 317.933†	-3.4	-0.00034	mg/L	0.001389	-0.00034	mg/L	0.001389	414.13%
Cd 228.802†	3.9	0.00013	mg/L	0.000143	0.00013	mg/L	0.000143	112.09%
Co 228.616†	-5.2	-0.00014	mg/L	0.000102	-0.00014	mg/L	0.000102	74.47%
Cr 267.716†	0.7	0.00008	mg/L	0.000274	0.00008	mg/L	0.000274	331.37%
Cu 324.752†	29.7	0.00013	mg/L	0.000064	0.00013	mg/L	0.000064	47.64%
Fe 273.955†	2.9	0.00209	mg/L	0.000933	0.00209	mg/L	0.000933	44.63%
K 766.490†	45.2	0.02056	mg/L	0.007287	0.02056	mg/L	0.007287	35.44%
Mg 279.077†	0.1	0.00011	mg/L	0.006820	0.00011	mg/L	0.006820	>999.9%
Mn 257.610†	-5.3	-0.00010	mg/L	0.000058	-0.00010	mg/L	0.000058	61.05%
Mo 202.031†	6.1	0.00028	mg/L	0.000141	0.00028	mg/L	0.000141	50.75%
Na 589.592†	160.2	0.01219	mg/L	0.001646	0.01219	mg/L	0.001646	13.51%
Na 330.237†	-4.2	-0.1376	mg/L	0.27408	-0.1376	mg/L	0.27408	199.13%
Ni 231.604†	0.7	0.00014	mg/L	0.000525	0.00014	mg/L	0.000525	367.51%
Pb 220.353†	-11.0	-0.00093	mg/L	0.000194	-0.00093	mg/L	0.000194	20.86%
Sb 206.836†	4.9	0.00131	mg/L	0.000857	0.00131	mg/L	0.000857	65.29%
Se 196.026†	6.5	0.00361	mg/L	0.002042	0.00361	mg/L	0.002042	56.50%
Si 288.158†	12.4	0.00572	mg/L	0.005903	0.00572	mg/L	0.005903	103.12%
Sn 189.927†	3.9	0.00055	mg/L	0.000281	0.00055	mg/L	0.000281	51.16%
Sr 421.552†	80.0	0.00009	mg/L	0.000034	0.00009	mg/L	0.000034	36.81%
Ti 334.903†	13.6	0.00047	mg/L	0.000881	0.00047	mg/L	0.000881	186.21%
Tl 190.801†	2.3	0.00089	mg/L	0.000482	0.00089	mg/L	0.000482	53.91%
V 292.402†	-9.4	-0.00005	mg/L	0.000029	-0.00005	mg/L	0.000029	54.39%
Zn 206.200†	0.5	0.00020	mg/L	0.000387	0.00020	mg/L	0.000387	195.09%

Sequence No.: 44
Sample ID: UR83 MB1 TWC

Autosampler Location: 334
Date Collected: 5/1/2012 1:56:43 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UR83 MB1 TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2689242.8	103.5	%	0.28				0.27%
ScR 361.383	413400.5	103.2	%	1.00				0.97%
Ag 328.068†	3.0	0.00001	mg/L	0.000082	0.00001	mg/L	0.000082	726.62%
Al 308.215†	12.3	0.00768	mg/L	0.001542	0.00768	mg/L	0.001542	20.07%
As 188.979†	-2.3	-0.00100	mg/L	0.000338	-0.00100	mg/L	0.000338	33.67%
B 249.677†	20.8	0.00328	mg/L	0.000684	0.00328	mg/L	0.000684	20.83%
Ba 233.527†	-1.8	-0.00022	mg/L	0.000302	-0.00022	mg/L	0.000302	139.81%
Be 313.042†	-23.0	-0.00003	mg/L	0.000036	-0.00003	mg/L	0.000036	109.83%
Ca 317.933†	214.7	0.02145	mg/L	0.000792	0.02145	mg/L	0.000792	3.69%
Cd 228.802†	4.8	0.00016	mg/L	0.000016	0.00016	mg/L	0.000016	9.89%
Co 228.616†	-1.3	-0.00003	mg/L	0.000170	-0.00003	mg/L	0.000170	497.40%
Cr 267.716†	0.8	0.00010	mg/L	0.000489	0.00010	mg/L	0.000489	481.89%
Cu 324.752†	47.2	0.00022	mg/L	0.000083	0.00022	mg/L	0.000083	38.45%
Fe 273.955†	7.4	0.00527	mg/L	0.001970	0.00527	mg/L	0.001970	37.37%
K 766.490†	32.0	0.01457	mg/L	0.014499	0.01457	mg/L	0.014499	99.49%
Mg 279.077†	5.6	0.00448	mg/L	0.000513	0.00448	mg/L	0.000513	11.45%
Mn 257.610†	6.4	0.00011	mg/L	0.000025	0.00011	mg/L	0.000025	22.16%
Mo 202.031†	0.3	0.00001	mg/L	0.000201	0.00001	mg/L	0.000201	>999.9%
Na 589.592†	534.1	0.04064	mg/L	0.002963	0.04064	mg/L	0.002963	7.29%
Na 330.237†	0.3	0.00839	mg/L	0.257604	0.00839	mg/L	0.257604	>999.9%
Ni 231.604†	-3.4	-0.00073	mg/L	0.000919	-0.00073	mg/L	0.000919	125.16%
Pb 220.353†	-3.5	-0.00029	mg/L	0.000306	-0.00029	mg/L	0.000306	104.45%
Sb 206.836†	1.3	0.00034	mg/L	0.000808	0.00034	mg/L	0.000808	235.88%
Se 196.026†	5.4	0.00300	mg/L	0.001748	0.00300	mg/L	0.001748	58.32%
Si 288.158†	16.1	0.00745	mg/L	0.001036	0.00745	mg/L	0.001036	13.90%
Sn 189.927†	4.6	0.00064	mg/L	0.000164	0.00064	mg/L	0.000164	25.67%
Sr 421.552†	96.9	0.00011	mg/L	0.000010	0.00011	mg/L	0.000010	9.36%
Ti 334.903†	-0.3	-0.00001	mg/L	0.000744	-0.00001	mg/L	0.000744	>999.9%
Tl 190.801†	0.8	0.00030	mg/L	0.000874	0.00030	mg/L	0.000874	287.87%
V 292.402†	-19.1	-0.00011	mg/L	0.000204	-0.00011	mg/L	0.000204	186.86%
Zn 206.200†	2.4	0.00090	mg/L	0.000237	0.00090	mg/L	0.000237	26.45%

Sequence No.: 45
Sample ID: UR83 F TWC

Dilution: 1X

Autosampler Location: 335
Date Collected: 5/1/2012 2:00:56 PM
Data Type: Original

Nebulizer Parameters: UR83 F TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 F TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2463472.3	94.80	%	0.416				0.44%
ScR 361.383	392444.4	97.92	%	0.749				0.76%
Ag 328.068†	79.9	-0.00023	mg/L	0.000090	-0.00023	mg/L	0.000090	39.26%
Al 308.215†	40.2	0.02502	mg/L	0.000956	0.02502	mg/L	0.000956	3.82%
As 188.979†	-9.2	-0.00445	mg/L	0.002205	-0.00445	mg/L	0.002205	49.52%
B 249.677†	2395.8	0.3788	mg/L	0.00087	0.3788	mg/L	0.00087	0.23%
Ba 233.527†	2929.0	0.3490	mg/L	0.00283	0.3490	mg/L	0.00283	0.81%
Be 313.042†	14.4	0.00002	mg/L	0.000052	0.00002	mg/L	0.000052	271.87%
Ca 317.933†	732544.1	73.17	mg/L	0.157	73.17	mg/L	0.157	0.22%
Cd 228.802†	27.2	0.00092	mg/L	0.000169	0.00092	mg/L	0.000169	18.38%
Co 228.616†	76.8	0.00192	mg/L	0.000159	0.00192	mg/L	0.000159	8.29%
Cr 267.716†	16.3	-0.00054	mg/L	0.000496	-0.00054	mg/L	0.000496	91.20%
Cu 324.752†	559.3	0.00244	mg/L	0.000190	0.00244	mg/L	0.000190	7.79%
Fe 273.955†	14.8	0.01052	mg/L	0.000362	0.01052	mg/L	0.000362	3.44%
K 766.490†	51065.0	23.24	mg/L	0.084	23.24	mg/L	0.084	0.36%
Mg 279.077†	28035.1	22.64	mg/L	0.156	22.64	mg/L	0.156	0.69%
Mn 257.610†	10301.4	0.1851	mg/L	0.00156	0.1851	mg/L	0.00156	0.84%
Mo 202.031†	133.9	0.00481	mg/L	0.000107	0.00481	mg/L	0.000107	2.23%
Na 589.592†	7338098.9	558.3	mg/L	2.88	558.3	mg/L	2.88	0.52%
Na 330.237†	18227.6	601.0	mg/L	6.39	601.0	mg/L	6.39	1.06%
Ni 231.604†	27.3	0.00593	mg/L	0.000216	0.00593	mg/L	0.000216	3.64%
Pb 220.353†	-49.8	-0.00420	mg/L	0.000696	-0.00420	mg/L	0.000696	16.58%
Sb 206.836†	39.4	0.01050	mg/L	0.000839	0.01050	mg/L	0.000839	7.99%
Se 196.026†	44.4	0.02439	mg/L	0.003136	0.02439	mg/L	0.003136	12.86%
Si 288.158†	14159.3	6.546	mg/L	0.0547	6.546	mg/L	0.0547	0.84%
Sn 189.927†	-34.9	-0.00269	mg/L	0.000150	-0.00269	mg/L	0.000150	5.56%
Sr 421.552†	572996.7	0.6606	mg/L	0.00114	0.6606	mg/L	0.00114	0.17%
Ti 334.903†	89.2	0.00055	mg/L	0.000193	0.00055	mg/L	0.000193	35.20%
Tl 190.801†	17.0	0.00661	mg/L	0.002255	0.00661	mg/L	0.002255	34.13%
V 292.402†	270.3	0.00158	mg/L	0.000051	0.00158	mg/L	0.000051	3.21%
Zn 206.200†	-0.6	-0.00118	mg/L	0.000261	-0.00118	mg/L	0.000261	22.16%

Sequence No.: 46
Sample ID: UR83 G TWC

Autosampler Location: 336
Date Collected: 5/1/2012 2:05:30 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UR83 G TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 G TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2302517.2	88.60	%	0.428				0.48%
ScR 361.383	373380.6	93.17	%	0.877				0.94%
Ag 328.068†	329.6	-0.00058	mg/L	0.000073	-0.00058	mg/L	0.000073	12.50%
Al 308.215†	7.3	0.00429	mg/L	0.003292	0.00429	mg/L	0.003292	76.71%
As 188.979†	6.2	-0.00484	mg/L	0.001881	-0.00484	mg/L	0.001881	38.84%
B 249.677†	3050.0	0.4822	mg/L	0.00459	0.4822	mg/L	0.00459	0.95%
Ba 233.527†	272.6	0.03247	mg/L	0.000222	0.03247	mg/L	0.000222	0.68%
Be 313.042†	76.4	0.00010	mg/L	0.000016	0.00010	mg/L	0.000016	15.72%
Ca 317.933†	2206816.4	220.4	mg/L	1.45	220.4	mg/L	1.45	0.66%
Cd 228.802†	52.6	0.00173	mg/L	0.000114	0.00173	mg/L	0.000114	6.59%
Co 228.616†	117.8	0.00305	mg/L	0.000149	0.00305	mg/L	0.000149	4.91%
Cr 267.716†	151.7	0.00116	mg/L	0.000688	0.00116	mg/L	0.000688	59.28%
Cu 324.752†	488.1	0.00072	mg/L	0.000140	0.00072	mg/L	0.000140	19.51%
Fe 273.955†	108.3	0.07730	mg/L	0.000145	0.07730	mg/L	0.000145	0.19%
K 766.490†	114351.0	52.04	mg/L	0.259	52.04	mg/L	0.259	0.50%
Mg 279.077†	404279.5	326.5	mg/L	2.20	326.5	mg/L	2.20	0.67%
Mn 257.610†	90967.1	1.634	mg/L	0.0086	1.634	mg/L	0.0086	0.53%
Mo 202.031†	215.0	0.00598	mg/L	0.000256	0.00598	mg/L	0.000256	4.28%
Na 589.592†	16261108.6	1237	mg/L	13.0	1237	mg/L	13.0	1.05%
Na 330.237†	40811.1	1345	mg/L	8.8	1345	mg/L	8.8	0.65%
Ni 231.604†	12.6	0.00275	mg/L	0.000842	0.00275	mg/L	0.000842	30.60%
Pb 220.353†	-103.4	-0.00870	mg/L	0.000636	-0.00870	mg/L	0.000636	7.32%
Sb 206.836†	85.1	0.02252	mg/L	0.000637	0.02252	mg/L	0.000637	2.83%
Se 196.026†	79.7	0.04266	mg/L	0.004520	0.04266	mg/L	0.004520	10.60%
Si 288.158†	52079.6	24.08	mg/L	0.174	24.08	mg/L	0.174	0.72%
Sn 189.927†	-89.0	-0.00587	mg/L	0.001510	-0.00587	mg/L	0.001510	25.74%
Sr 421.552†	1594632.6	1.838	mg/L	0.0091	1.838	mg/L	0.0091	0.50%
Ti 334.903†	328.9	0.00377	mg/L	0.000377	0.00377	mg/L	0.000377	10.02%
Tl 190.801†	19.9	0.00774	mg/L	0.000927	0.00774	mg/L	0.000927	11.97%
V 292.402†	1328.9	0.00790	mg/L	0.000134	0.00790	mg/L	0.000134	1.69%
Zn 206.200†	-10.9	-0.00688	mg/L	0.001644	-0.00688	mg/L	0.001644	23.88%

Sequence No.: 47
Sample ID: UR83 H TWC

Autosampler Location: 337
Date Collected: 5/1/2012 2:10:11 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UR83 H TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 H TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2676683.5	103.0	%	0.57				0.55%
ScR 361.383	401117.8	100.1	%	1.20				1.20%
Ag 328.068†	-29.4	-0.00011	mg/L	0.000069	-0.00011	mg/L	0.000069	61.75%
Al 308.215†	15.0	0.00936	mg/L	0.002201	0.00936	mg/L	0.002201	23.52%
As 188.979†	-1.3	-0.00054	mg/L	0.001971	-0.00054	mg/L	0.001971	363.90%
B 249.677†	16.1	0.00255	mg/L	0.000349	0.00255	mg/L	0.000349	13.66%
Ba 233.527†	3.2	0.00038	mg/L	0.000236	0.00038	mg/L	0.000236	62.41%
Be 313.042†	-34.7	-0.00005	mg/L	0.000019	-0.00005	mg/L	0.000019	38.42%
Ca 317.933†	430.9	0.04304	mg/L	0.003911	0.04304	mg/L	0.003911	9.09%
Cd 228.802†	4.7	0.00016	mg/L	0.000108	0.00016	mg/L	0.000108	68.51%
Co 228.616†	0.7	0.00002	mg/L	0.000110	0.00002	mg/L	0.000110	619.45%
Cr 267.716†	4.8	0.00058	mg/L	0.000235	0.00058	mg/L	0.000235	40.52%
Cu 324.752†	1028.6	0.00468	mg/L	0.000050	0.00468	mg/L	0.000050	1.07%
Fe 273.955†	3.3	0.00234	mg/L	0.000044	0.00234	mg/L	0.000044	1.88%
K 766.490†	67.5	0.03074	mg/L	0.011802	0.03074	mg/L	0.011802	38.40%
Mg 279.077†	23.4	0.01893	mg/L	0.002917	0.01893	mg/L	0.002917	15.41%
Mn 257.610†	35.9	0.00064	mg/L	0.000102	0.00064	mg/L	0.000102	15.86%
Mo 202.031†	-2.7	-0.00012	mg/L	0.000038	-0.00012	mg/L	0.000038	30.47%
Na 589.592†	3211.3	0.2443	mg/L	0.04049	0.2443	mg/L	0.04049	16.57%
Na 330.237†	14.3	0.4698	mg/L	0.08863	0.4698	mg/L	0.08863	18.87%
Ni 231.604†	-2.2	-0.00048	mg/L	0.000892	-0.00048	mg/L	0.000892	187.35%
Pb 220.353†	-2.2	-0.00019	mg/L	0.000245	-0.00019	mg/L	0.000245	127.97%
Sb 206.836†	-2.6	-0.00071	mg/L	0.000483	-0.00071	mg/L	0.000483	68.55%
Se 196.026†	2.5	0.00141	mg/L	0.002936	0.00141	mg/L	0.002936	208.33%
Si 288.158†	129.9	0.06003	mg/L	0.008471	0.06003	mg/L	0.008471	14.11%
Sn 189.927†	6.0	0.00084	mg/L	0.000623	0.00084	mg/L	0.000623	74.63%
Sr 421.552†	164.0	0.00019	mg/L	0.000060	0.00019	mg/L	0.000060	31.48%
Ti 334.903†	4.5	0.00016	mg/L	0.000272	0.00016	mg/L	0.000272	174.08%
Tl 190.801†	4.4	0.00170	mg/L	0.001810	0.00170	mg/L	0.001810	106.42%
V 292.402†	-6.4	-0.00003	mg/L	0.000097	-0.00003	mg/L	0.000097	279.71%
Zn 206.200†	10.8	0.00396	mg/L	0.000811	0.00396	mg/L	0.000811	20.49%

Sequence No.: 48
Sample ID: UR83 I TWC

Dilution: 1X

Autosampler Location: 338
Date Collected: 5/1/2012 2:14:27 PM
Data Type: Original

Nebulizer Parameters: UR83 I TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 I TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2600278.7	100.1	%	0.89				0.89%
ScR 361.383	394455.3	98.42	%	0.544				0.55%
Ag 328.068†	51.4	-0.00023	mg/L	0.000048	-0.00023	mg/L	0.000048	20.78%
Al 308.215†	17.7	0.01102	mg/L	0.003202	0.01102	mg/L	0.003202	29.07%
As 188.979†	-9.9	-0.00474	mg/L	0.001526	-0.00474	mg/L	0.001526	32.20%
B 249.677†	1431.1	0.2263	mg/L	0.00092	0.2263	mg/L	0.00092	0.40%
Ba 233.527†	227.7	0.02701	mg/L	0.000325	0.02701	mg/L	0.000325	1.20%
Be 313.042†	-23.7	-0.00003	mg/L	0.000037	-0.00003	mg/L	0.000037	108.25%
Ca 317.933†	331398.8	33.10	mg/L	0.155	33.10	mg/L	0.155	0.47%
Cd 228.802†	17.4	0.00057	mg/L	0.000060	0.00057	mg/L	0.000060	10.61%
Co 228.616†	61.3	0.00159	mg/L	0.000190	0.00159	mg/L	0.000190	11.94%
Cr 267.716†	11.2	-0.00011	mg/L	0.000465	-0.00011	mg/L	0.000465	428.76%
Cu 324.752†	221.9	0.00107	mg/L	0.000064	0.00107	mg/L	0.000064	5.99%
Fe 273.955†	3192.6	2.279	mg/L	0.0115	2.279	mg/L	0.0115	0.50%
K 766.490†	73733.2	33.55	mg/L	0.091	33.55	mg/L	0.091	0.27%
Mg 279.077†	26682.2	21.55	mg/L	0.094	21.55	mg/L	0.094	0.44%
Mn 257.610†	54030.4	0.9713	mg/L	0.00731	0.9713	mg/L	0.00731	0.75%
Mo 202.031†	72.9	0.00273	mg/L	0.000130	0.00273	mg/L	0.000130	4.77%
Na 589.592†	778652.0	59.24	mg/L	0.216	59.24	mg/L	0.216	0.36%
Na 330.237†	1873.1	61.59	mg/L	0.563	61.59	mg/L	0.563	0.91%
Ni 231.604†	10.9	0.00238	mg/L	0.001164	0.00238	mg/L	0.001164	48.86%
Pb 220.353†	-46.4	-0.00406	mg/L	0.000135	-0.00406	mg/L	0.000135	3.32%
Sb 206.836†	24.9	0.00637	mg/L	0.000095	0.00637	mg/L	0.000095	1.49%
Se 196.026†	27.0	0.01432	mg/L	0.002067	0.01432	mg/L	0.002067	14.43%
Si 288.158†	25062.8	11.59	mg/L	0.073	11.59	mg/L	0.073	0.63%
Sn 189.927†	-22.2	-0.00210	mg/L	0.000282	-0.00210	mg/L	0.000282	13.38%
Sr 421.552†	162485.5	0.1873	mg/L	0.00054	0.1873	mg/L	0.00054	0.29%
Ti 334.903†	48.4	0.00053	mg/L	0.000671	0.00053	mg/L	0.000671	126.46%
Tl 190.801†	6.6	0.00287	mg/L	0.003002	0.00287	mg/L	0.003002	104.49%
V 292.402†	89.2	0.00039	mg/L	0.000197	0.00039	mg/L	0.000197	50.16%
Zn 206.200†	-2.7	-0.00142	mg/L	0.000838	-0.00142	mg/L	0.000838	58.89%

Sequence No.: 49
Sample ID: UR83 ADUP TWC

Autosampler Location: 339
Date Collected: 5/1/2012 2:18:40 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UR83 ADUP TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2521663.9	97.04	%	1.034				1.07%
ScR 361.383	394632.7	98.47	%	0.777				0.79%
Ag 328.068†	99.7	-0.00020	mg/L	0.000254	-0.00020	mg/L	0.000254	130.16%
Al 308.215†	46.4	0.02885	mg/L	0.003589	0.02885	mg/L	0.003589	12.44%
As 188.979†	-2.3	-0.00248	mg/L	0.000281	-0.00248	mg/L	0.000281	11.34%
B 249.677†	715.0	0.1130	mg/L	0.00075	0.1130	mg/L	0.00075	0.66%
Ba 233.527†	179.9	0.02134	mg/L	0.000920	0.02134	mg/L	0.000920	4.31%
Be 313.042†	-21.2	-0.00003	mg/L	0.000014	-0.00003	mg/L	0.000014	45.55%
Ca 317.933†	470139.0	46.96	mg/L	0.326	46.96	mg/L	0.326	0.69%
Cd 228.802†	22.9	0.00075	mg/L	0.000152	0.00075	mg/L	0.000152	20.41%
Co 228.616†	160.3	0.00417	mg/L	0.000187	0.00417	mg/L	0.000187	4.48%
Cr 267.716†	37.8	0.00118	mg/L	0.000281	0.00118	mg/L	0.000281	23.72%
Cu 324.752†	312.7	0.00126	mg/L	0.000129	0.00126	mg/L	0.000129	10.26%
Fe 273.955†	2543.6	1.816	mg/L	0.0009	1.816	mg/L	0.0009	0.05%
K 766.490†	30085.5	13.69	mg/L	0.112	13.69	mg/L	0.112	0.82%
Mg 279.077†	79652.2	64.33	mg/L	0.317	64.33	mg/L	0.317	0.49%
Mn 257.610†	67488.9	1.213	mg/L	0.0126	1.213	mg/L	0.0126	1.04%
Mo 202.031†	143.0	0.00567	mg/L	0.000120	0.00567	mg/L	0.000120	2.12%
Na 589.592†	3635824.9	276.6	mg/L	2.89	276.6	mg/L	2.89	1.05%
Na 330.237†	9025.7	297.5	mg/L	2.22	297.5	mg/L	2.22	0.75%
Ni 231.604†	17.3	0.00375	mg/L	0.000492	0.00375	mg/L	0.000492	13.12%
Pb 220.353†	-64.2	-0.00552	mg/L	0.000662	-0.00552	mg/L	0.000662	11.99%
Sb 206.836†	38.5	0.01001	mg/L	0.002865	0.01001	mg/L	0.002865	28.63%
Se 196.026†	36.5	0.01932	mg/L	0.005224	0.01932	mg/L	0.005224	27.03%
Si 288.158†	45779.4	21.16	mg/L	0.118	21.16	mg/L	0.118	0.56%
Sn 189.927†	-38.4	-0.00394	mg/L	0.000307	-0.00394	mg/L	0.000307	7.80%
Sr 421.552†	316117.8	0.3644	mg/L	0.00365	0.3644	mg/L	0.00365	1.00%
Ti 334.903†	95.7	0.00169	mg/L	0.000235	0.00169	mg/L	0.000235	13.92%
Tl 190.801†	7.4	0.00314	mg/L	0.001537	0.00314	mg/L	0.001537	48.95%
V 292.402†	432.6	0.00246	mg/L	0.000107	0.00246	mg/L	0.000107	4.36%
Zn 206.200†	-10.3	-0.00442	mg/L	0.001048	-0.00442	mg/L	0.001048	23.71%

Sequence No.: 50
Sample ID: UR83 A TWC

Dilution: 1X

Autosampler Location: 340
Date Collected: 5/1/2012 2:23:10 PM
Data Type: Original

Nebulizer Parameters: UR83 A TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2503693.2	96.34	%	0.676				0.70%
ScR 361.383	398041.4	99.32	%	0.530				0.53%
Ag 328.068†	106.5	-0.00017	mg/L	0.000035	-0.00017	mg/L	0.000035	21.20%
Al 308.215†	46.5	0.02891	mg/L	0.003875	0.02891	mg/L	0.003875	13.40%
As 188.979†	-0.3	-0.00159	mg/L	0.000691	-0.00159	mg/L	0.000691	43.33%
B 249.677†	710.6	0.1123	mg/L	0.00128	0.1123	mg/L	0.00128	1.14%
Ba 233.527†	178.1	0.02113	mg/L	0.000232	0.02113	mg/L	0.000232	1.10%
Be 313.042†	-12.4	-0.00002	mg/L	0.000033	-0.00002	mg/L	0.000033	172.34%
Ca 317.933†	469927.3	46.94	mg/L	0.039	46.94	mg/L	0.039	0.08%
Cd 228.802†	26.2	0.00085	mg/L	0.000087	0.00085	mg/L	0.000087	10.21%
Co 228.616†	169.6	0.00441	mg/L	0.000164	0.00441	mg/L	0.000164	3.71%
Cr 267.716†	34.4	0.00078	mg/L	0.000600	0.00078	mg/L	0.000600	77.40%
Cu 324.752†	293.1	0.00117	mg/L	0.000042	0.00117	mg/L	0.000042	3.58%
Fe 273.955†	2533.1	1.809	mg/L	0.0136	1.809	mg/L	0.0136	0.75%
K 766.490†	29904.1	13.61	mg/L	0.052	13.61	mg/L	0.052	0.39%
Mg 279.077†	79523.3	64.23	mg/L	0.073	64.23	mg/L	0.073	0.11%
Mn 257.610†	66798.3	1.201	mg/L	0.0081	1.201	mg/L	0.0081	0.67%
Mo 202.031†	141.0	0.00558	mg/L	0.000123	0.00558	mg/L	0.000123	2.20%
Na 589.592†	3613047.2	274.9	mg/L	2.92	274.9	mg/L	2.92	1.06%
Na 330.237†	8954.8	295.2	mg/L	0.36	295.2	mg/L	0.36	0.12%
Ni 231.604†	18.3	0.00398	mg/L	0.001889	0.00398	mg/L	0.001889	47.48%
Pb 220.353†	-65.8	-0.00566	mg/L	0.000614	-0.00566	mg/L	0.000614	10.83%
Sb 206.836†	41.2	0.01073	mg/L	0.001843	0.01073	mg/L	0.001843	17.18%
Se 196.026†	37.7	0.01998	mg/L	0.003053	0.01998	mg/L	0.003053	15.28%
Si 288.158†	48136.9	22.25	mg/L	0.096	22.25	mg/L	0.096	0.43%
Sn 189.927†	-39.9	-0.00415	mg/L	0.000934	-0.00415	mg/L	0.000934	22.54%
Sr 421.552†	315564.4	0.3638	mg/L	0.00255	0.3638	mg/L	0.00255	0.70%
Ti 334.903†	88.7	0.00145	mg/L	0.000440	0.00145	mg/L	0.000440	30.43%
Tl 190.801†	8.9	0.00370	mg/L	0.000812	0.00370	mg/L	0.000812	21.94%
V 292.402†	438.1	0.00249	mg/L	0.000126	0.00249	mg/L	0.000126	5.05%
Zn 206.200†	-10.9	-0.00460	mg/L	0.001141	-0.00460	mg/L	0.001141	24.78%

Sequence No.: 51
Sample ID: UR83 ASPK TWC

Dilution: 1X

Autosampler Location: 341
Date Collected: 5/1/2012 2:27:39 PM
Data Type: Original

Nebulizer Parameters: UR83 ASPK TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 ASPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2493606.4	95.96	%	0.484				0.50%
ScR 361.383	390965.5	97.55	%	1.140				1.17%
Ag 328.068†	121.2	-0.00016	mg/L	0.000080	-0.00016	mg/L	0.000080	50.33%
Al 308.215†	3343.0	2.076	mg/L	0.0204	2.076	mg/L	0.0204	0.98%
As 188.979†	-6.2	-0.00457	mg/L	0.001583	-0.00457	mg/L	0.001583	34.63%
B 249.677†	717.4	0.1120	mg/L	0.00244	0.1120	mg/L	0.00244	2.18%
Ba 233.527†	17131.1	2.041	mg/L	0.0186	2.041	mg/L	0.0186	0.91%
Be 313.042†	343945.2	0.4848	mg/L	0.00185	0.4848	mg/L	0.00185	0.38%
Ca 317.933†	576820.4	57.62	mg/L	0.334	57.62	mg/L	0.334	0.58%
Cd 228.802†	22.9	0.00096	mg/L	0.000123	0.00096	mg/L	0.000123	12.76%
Co 228.616†	18800.4	0.4894	mg/L	0.00478	0.4894	mg/L	0.00478	0.98%
Cr 267.716†	4213.2	0.5074	mg/L	0.00651	0.5074	mg/L	0.00651	1.28%
Cu 324.752†	113492.3	0.5169	mg/L	0.00307	0.5169	mg/L	0.00307	0.59%
Fe 273.955†	5463.4	3.898	mg/L	0.0279	3.898	mg/L	0.0279	0.71%
K 766.490†	53003.9	24.12	mg/L	0.150	24.12	mg/L	0.150	0.62%
Mg 279.077†	92901.3	75.04	mg/L	0.209	75.04	mg/L	0.209	0.28%
Mn 257.610†	93641.6	1.683	mg/L	0.0063	1.683	mg/L	0.0063	0.37%
Mo 202.031†	160.8	0.00629	mg/L	0.000350	0.00629	mg/L	0.000350	5.56%
Na 589.592†	3857043.1	293.5	mg/L	4.75	293.5	mg/L	4.75	1.62%
Na 330.237†	9513.0	313.4	mg/L	2.14	313.4	mg/L	2.14	0.68%
Ni 231.604†	2223.7	0.4825	mg/L	0.00491	0.4825	mg/L	0.00491	1.02%
Pb 220.353†	-75.9	-0.00599	mg/L	0.000676	-0.00599	mg/L	0.000676	11.29%
Sb 206.836†	64.4	0.01190	mg/L	0.001383	0.01190	mg/L	0.001383	11.62%
Se 196.026†	39.5	0.02077	mg/L	0.002107	0.02077	mg/L	0.002107	10.14%
Si 288.158†	48204.5	22.29	mg/L	0.109	22.29	mg/L	0.109	0.49%
Sn 189.927†	-49.2	-0.00512	mg/L	0.000360	-0.00512	mg/L	0.000360	7.04%
Sr 421.552†	751630.3	0.8665	mg/L	0.00328	0.8665	mg/L	0.00328	0.38%
Ti 334.903†	115.7	0.00190	mg/L	0.000056	0.00190	mg/L	0.000056	2.92%
Tl 190.801†	15.6	0.00428	mg/L	0.001492	0.00428	mg/L	0.001492	34.90%
V 292.402†	91878.8	0.5258	mg/L	0.00344	0.5258	mg/L	0.00344	0.65%
Zn 206.200†	1308.4	0.4803	mg/L	0.00406	0.4803	mg/L	0.00406	0.85%

Sequence No.: 52
Sample ID: UR81 E SWC

Dilution: 5X

Autosampler Location: 342
Date Collected: 5/1/2012 2:31:54 PM
Data Type: Original

Nebulizer Parameters: UR81 E SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR81 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2608974.2	100.4	%	1.37				1.36%
ScR 361.383	400855.4	100.0	%	0.52				0.52%
Ag 328.068†	-69.2	-0.00095	mg/L	0.000094	-0.00476	mg/L	0.000471	9.91%
Al 308.215†	53420.3	33.34	mg/L	0.272	166.7	mg/L	1.36	0.81%
As 188.979†	22.1	0.01792	mg/L	0.001224	0.08960	mg/L	0.006118	6.83%
B 249.677†	266.6	0.04206	mg/L	0.001232	0.2103	mg/L	0.00616	2.93%
Ba 233.527†	1362.4	0.1555	mg/L	0.00124	0.7773	mg/L	0.00619	0.80%
Be 313.042†	446.7	0.00053	mg/L	0.000035	0.00263	mg/L	0.000176	6.68%
Ca 317.933†	909404.3	90.83	mg/L	0.308	454.2	mg/L	1.54	0.34%
Cd 228.802†	75.0	0.00137	mg/L	0.000219	0.00685	mg/L	0.001097	16.02%
Co 228.616†	1289.7	0.03069	mg/L	0.000520	0.1535	mg/L	0.00260	1.69%
Cr 267.716†	659.3	0.08235	mg/L	0.001443	0.4117	mg/L	0.00721	1.75%
Cu 324.752†	17174.7	0.08711	mg/L	0.000739	0.4355	mg/L	0.00370	0.85%
Fe 273.955†	186541.5	133.2	mg/L	1.04	665.9	mg/L	5.18	0.78%
K 766.490†	8083.6	3.679	mg/L	0.0328	18.39	mg/L	0.164	0.89%
Mg 279.077†	50382.0	40.62	mg/L	0.124	203.1	mg/L	0.62	0.31%
Mn 257.610†	46855.2	0.8428	mg/L	0.00383	4.214	mg/L	0.0192	0.45%
Mo 202.031†	180.2	0.00661	mg/L	0.000236	0.03303	mg/L	0.001181	3.58%
Na 589.592†	158649.4	12.07	mg/L	0.101	60.35	mg/L	0.503	0.83%
Na 330.237†	390.5	12.69	mg/L	0.234	63.46	mg/L	1.170	1.84%
Ni 231.604†	1312.2	0.2847	mg/L	0.00158	1.424	mg/L	0.0079	0.55%
Pb 220.353†	789.6	0.06254	mg/L	0.000926	0.3127	mg/L	0.00463	1.48%
Sb 206.836†	127.8	0.00959	mg/L	0.001201	0.04797	mg/L	0.006004	12.52%
Se 196.026†	5.8	0.01770	mg/L	0.001597	0.08852	mg/L	0.007983	9.02%
Si 288.158†	2861.5	1.323	mg/L	0.0190	6.615	mg/L	0.0952	1.44%
Sn 189.927†	-39.2	-0.00192	mg/L	0.000551	-0.00960	mg/L	0.002755	28.69%
Sr 421.552†	489704.4	0.5646	mg/L	0.00361	2.823	mg/L	0.0181	0.64%
Ti 334.903†	48351.1	1.682	mg/L	0.0092	8.411	mg/L	0.0462	0.55%
Tl 190.801†	-31.5	0.00409	mg/L	0.000987	0.02043	mg/L	0.004937	24.17%
V 292.402†	21914.1	0.1083	mg/L	0.00123	0.5415	mg/L	0.00615	1.14%
Zn 206.200†	737.6	0.2713	mg/L	0.00173	1.357	mg/L	0.0086	0.64%

Sequence No.: 53
Sample ID: UR83 MB1SPK TWC

Autosampler Location: 343
Date Collected: 5/1/2012 2:35:52 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UR83 MB1SPK TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR83 MB1SPK TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2654958.5	102.2	%	0.34				0.33%
ScR 361.383	407030.1	101.6	%	1.60				1.57%
Ag 328.068†	11.7	0.00000	mg/L	0.000141	0.00000	mg/L	0.000141	>999.9%
Al 308.215†	3329.9	2.068	mg/L	0.0296	2.068	mg/L	0.0296	1.43%
As 188.979†	-4.3	-0.00228	mg/L	0.001606	-0.00228	mg/L	0.001606	70.43%
B 249.677†	27.1	0.00283	mg/L	0.000872	0.00283	mg/L	0.000872	30.77%
Ba 233.527†	16758.0	1.996	mg/L	0.0212	1.996	mg/L	0.0212	1.06%
Be 313.042†	347809.0	0.4903	mg/L	0.00510	0.4903	mg/L	0.00510	1.04%
Ca 317.933†	101296.9	10.12	mg/L	0.041	10.12	mg/L	0.041	0.41%
Cd 228.802†	9.9	0.00055	mg/L	0.000092	0.00055	mg/L	0.000092	16.57%
Co 228.616†	19233.8	0.5007	mg/L	0.00461	0.5007	mg/L	0.00461	0.92%
Cr 267.716†	4287.4	0.5199	mg/L	0.00715	0.5199	mg/L	0.00715	1.37%
Cu 324.752†	109881.7	0.5006	mg/L	0.00431	0.5006	mg/L	0.00431	0.86%
Fe 273.955†	2903.3	2.070	mg/L	0.0314	2.070	mg/L	0.0314	1.52%
K 766.490†	22175.7	10.09	mg/L	0.066	10.09	mg/L	0.066	0.66%
Mg 279.077†	12345.0	9.971	mg/L	0.0281	9.971	mg/L	0.0281	0.28%
Mn 257.610†	27299.8	0.4908	mg/L	0.00552	0.4908	mg/L	0.00552	1.12%
Mo 202.031†	35.7	0.00144	mg/L	0.000213	0.00144	mg/L	0.000213	14.78%
Na 589.592†	131447.4	10.00	mg/L	0.139	10.00	mg/L	0.139	1.39%
Na 330.237†	327.4	10.63	mg/L	0.135	10.63	mg/L	0.135	1.27%
Ni 231.604†	2284.9	0.4958	mg/L	0.00865	0.4958	mg/L	0.00865	1.74%
Pb 220.353†	-22.6	-0.00134	mg/L	0.000182	-0.00134	mg/L	0.000182	13.63%
Sb 206.836†	26.5	0.00193	mg/L	0.000437	0.00193	mg/L	0.000437	22.65%
Se 196.026†	11.2	0.00599	mg/L	0.003140	0.00599	mg/L	0.003140	52.39%
Si 288.158†	37.7	0.01743	mg/L	0.001810	0.01743	mg/L	0.001810	10.39%
Sn 189.927†	-9.9	-0.00107	mg/L	0.000128	-0.00107	mg/L	0.000128	11.94%
Sr 421.552†	425185.1	0.4902	mg/L	0.00430	0.4902	mg/L	0.00430	0.88%
Ti 334.903†	20.5	0.00024	mg/L	0.000251	0.00024	mg/L	0.000251	102.74%
Tl 190.801†	10.8	0.00215	mg/L	0.001148	0.00215	mg/L	0.001148	53.51%
V 292.402†	91069.8	0.5213	mg/L	0.00194	0.5213	mg/L	0.00194	0.37%
Zn 206.200†	1351.0	0.4966	mg/L	0.00817	0.4966	mg/L	0.00817	1.65%

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Analysis Begun

Start Time: 5/1/2012 2:39:51 PM
Plasma On Time: 5/1/2012 9:31:38 AM
Logged In Analyst: metals
Technique: ICP Continuous
Spectrometer Model: Optima 7300 DV, S/N 077C8121202 **Autosampler Model:** AS-93plus

Sample Information File: C:\pe\metals\Sample Information\0501A.sif
Batch ID:
Results Data Set: I2120501
Results Library: C:\pe\metals\Results\Results.mdb

==========

Sequence No.: 1
Sample ID: CV 5
Dilution: 1X

Autosampler Location: 7
Date Collected: 5/1/2012 2:39:52 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	211.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2569911.0	98.89	%	0.681				0.69%
ScR 361.383	396783.5	99.00	%	0.457				0.46%
Ag 328.068†	278364.5	1.049	mg/L	0.0094	1.049	mg/L	0.0094	0.89%
Al 308.215†	3316.6	2.039	mg/L	0.0110	2.039	mg/L	0.0110	0.54%
As 188.979†	4806.5	2.060	mg/L	0.0152	2.060	mg/L	0.0152	0.74%
B 249.677†	6329.5	0.9986	mg/L	0.00501	0.9986	mg/L	0.00501	0.50%
Ba 233.527†	8499.1	1.012	mg/L	0.0043	1.012	mg/L	0.0043	0.42%
Be 313.042†	675940.7	0.9528	mg/L	0.00525	0.9528	mg/L	0.00525	0.55%
Ca 317.933†	20786.7	2.076	mg/L	0.0133	2.076	mg/L	0.0133	0.64%
Cd 228.802†	32253.5	1.061	mg/L	0.0092	1.061	mg/L	0.0092	0.87%
Co 228.616†	39310.9	1.023	mg/L	0.0089	1.023	mg/L	0.0089	0.87%
Cr 267.716†	8497.8	1.031	mg/L	0.0057	1.031	mg/L	0.0057	0.55%
Cu 324.752†	227828.9	1.037	mg/L	0.0078	1.037	mg/L	0.0078	0.75%
Fe 273.955†	2899.6	2.065	mg/L	0.0167	2.065	mg/L	0.0167	0.81%
K 766.490†	44973.3	20.47	mg/L	0.066	20.47	mg/L	0.066	0.32%
Mg 279.077†	2540.4	2.057	mg/L	0.0132	2.057	mg/L	0.0132	0.64%
Mn 257.610†	53265.0	0.9584	mg/L	0.00723	0.9584	mg/L	0.00723	0.75%
Mo 202.031†	22401.0	1.013	mg/L	0.0071	1.013	mg/L	0.0071	0.70%
Na 589.592†	655054.0	49.84	mg/L	0.307	49.84	mg/L	0.307	0.62%
Na 330.237†	1610.3	53.17	mg/L	0.457	53.17	mg/L	0.457	0.86%
Ni 231.604†	4530.7	0.9850	mg/L	0.00291	0.9850	mg/L	0.00291	0.30%
Pb 220.353†	24190.8	2.044	mg/L	0.0182	2.044	mg/L	0.0182	0.89%
Sb 206.836†	7891.5	2.112	mg/L	0.0178	2.112	mg/L	0.0178	0.84%
Se 196.026†	3677.1	2.035	mg/L	0.0196	2.035	mg/L	0.0196	0.96%
Si 288.158†	4542.1	2.104	mg/L	0.0047	2.104	mg/L	0.0047	0.22%
Sn 189.927†	7588.1	1.053	mg/L	0.0078	1.053	mg/L	0.0078	0.74%
Sr 421.552†	849656.7	0.9795	mg/L	0.00563	0.9795	mg/L	0.00563	0.58%
Ti 334.903†	28358.9	0.9869	mg/L	0.00743	0.9869	mg/L	0.00743	0.75%
Tl 190.801†	5261.2	2.043	mg/L	0.0172	2.043	mg/L	0.0172	0.84%
V 292.402†	183823.2	1.053	mg/L	0.0088	1.053	mg/L	0.0088	0.83%
Zn 206.200†	2808.2	1.032	mg/L	0.0030	1.032	mg/L	0.0030	0.29%

Sequence No.: 2
Sample ID: CB 5
Dilution: 1X

Autosampler Location: 1
Date Collected: 5/1/2012 2:43:52 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2682857.1	103.2	%	0.20				0.19%
ScR 361.383	402007.2	100.3	%	1.29				1.29%
Ag 328.068†	-0.6	0.00000	mg/L	0.000040	0.00000	mg/L	0.000040	>999.9%
Al 308.215†	11.2	0.00700	mg/L	0.002677	0.00700	mg/L	0.002677	38.22%
As 188.979†	-1.9	-0.00080	mg/L	0.002618	-0.00080	mg/L	0.002618	325.96%
B 249.677†	10.7	0.00169	mg/L	0.001862	0.00169	mg/L	0.001862	110.18%
Ba 233.527†	-0.1	-0.00001	mg/L	0.000337	-0.00001	mg/L	0.000337	>999.9%
Be 313.042†	-1.0	0.00000	mg/L	0.000024	0.00000	mg/L	0.000024	>999.9%
Ca 317.933†	24.0	0.00240	mg/L	0.001077	0.00240	mg/L	0.001077	44.88%
Cd 228.802†	6.3	0.00021	mg/L	0.000029	0.00021	mg/L	0.000029	13.44%
Co 228.616†	3.5	0.00009	mg/L	0.000011	0.00009	mg/L	0.000011	11.92%
Cr 267.716†	2.2	0.00026	mg/L	0.000509	0.00026	mg/L	0.000509	192.35%
Cu 324.752†	18.8	0.00009	mg/L	0.000111	0.00009	mg/L	0.000111	129.14%
Fe 273.955†	-0.1	-0.00009	mg/L	0.001483	-0.00009	mg/L	0.001483	>999.9%
K 766.490†	2.9	0.00131	mg/L	0.009480	0.00131	mg/L	0.009480	722.37%
Mg 279.077†	0.3	0.00022	mg/L	0.001206	0.00022	mg/L	0.001206	557.65%
Mn 257.610†	-6.6	-0.00012	mg/L	0.000040	-0.00012	mg/L	0.000040	33.96%
Mo 202.031†	8.5	0.00039	mg/L	0.000084	0.00039	mg/L	0.000084	21.71%
Na 589.592†	517.3	0.03936	mg/L	0.003307	0.03936	mg/L	0.003307	8.40%
Na 330.237†	-2.0	-0.06510	mg/L	0.244983	-0.06510	mg/L	0.244983	376.31%
Ni 231.604†	-2.8	-0.00061	mg/L	0.000298	-0.00061	mg/L	0.000298	48.89%
Pb 220.353†	-5.4	-0.00046	mg/L	0.000273	-0.00046	mg/L	0.000273	59.76%
Sb 206.836†	8.4	0.00224	mg/L	0.000966	0.00224	mg/L	0.000966	43.14%
Se 196.026†	4.2	0.00231	mg/L	0.000264	0.00231	mg/L	0.000264	11.42%
Si 288.158†	23.9	0.01107	mg/L	0.004579	0.01107	mg/L	0.004579	41.38%
Sn 189.927†	2.8	0.00038	mg/L	0.000461	0.00038	mg/L	0.000461	120.07%
Sr 421.552†	54.0	0.00006	mg/L	0.000018	0.00006	mg/L	0.000018	29.16%
Ti 334.903†	-0.6	-0.00002	mg/L	0.000126	-0.00002	mg/L	0.000126	597.03%
Tl 190.801†	-0.2	-0.00008	mg/L	0.001483	-0.00008	mg/L	0.001483	>999.9%
V 292.402†	9.6	0.00006	mg/L	0.000071	0.00006	mg/L	0.000071	126.39%
Zn 206.200†	-2.5	-0.00092	mg/L	0.000424	-0.00092	mg/L	0.000424	45.92%

end package

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-03-12

Page: 1 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
STD	0.0	5mm	1x			
STD	0.1	5mm	1x			
STD	0.5	5mm	1x			
STD	1.0	5mm	1x			
STD	2.0	5mm	1x			
STD	5.0	5mm	1x			
STD	10.0	5mm	1x			
ICV		5mm	1x	7.90	Begin CLP %R=99	✓
ICB		5mm	1x	-0.01		✓
CCV1		5mm	1x	4.12	%R=103	✓
CCB1		5mm	1x	-0.01		✓
CRA		5mm	1x	0.12		✓
URG1	MB1	5mm	1x	0.00		✓
URG1	MB1SPK	5mm	1x	2.05	%R=103	✓
URG1	A	5mm	1x	0.15		
URG1	ADUP	5mm	1x	0.15		✓
URG1	ASPK	5mm	1x	1.22	%R=107	✓
URG1	B	5mm	1x			
URG1	C	5mm	1x			
URG1	D	5mm	1x			
URG1	E	5mm	1x			
CCV2		5mm	1x	4.11	%R=103	✓
CCB2		5mm	1x	-0.00		✓
URG1	F	5mm	1x			
URG1	G	5mm	1x			
US24	MB1	5mm	1x	-0.01		✓
US24	MB1SPK	5mm	1x	2.03	%R=102	✓
US24	MB1SPD	5mm	1x	2.00	%R=100	✓
US24	A	5mm	1x	0.04		
US24	ADUP	5mm	1x	0.05	No RPD: Undetected	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2292

14% $NH_2OH/NaCl$: MP2259

Standard ID:

Standard: 2931-1

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-03-12

Page: 2 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
US24	ASPK	5mm	1X	1.07	%R=107	✓
US18	MBI	5mm	1X	0.00		✓
US18	MBISPK	5mm	1X	2.08	%R=104	✓
CCV3		5mm	1X	4.06	%R=102	✓
CCB3		5mm	1X	-0.00		✓
US18	A	5mm	1X			
US18	B	5mm	1X	11.09	PEL AS 5-3-12	High X
US18	BDUP	5mm	1X	11.27	↓	High X
US18	BSPK	5mm	1X	12.05	↓	High X
UR87	MBI	5mm	1X	-0.02		✓
UR87	MBISPK	5mm	1X	2.02	%R=101	✓
UR87	REF1	5mm	5X	6.59	8.07 mg/kg	✓
UR87	A	5mm	1X	0.12		
UR87	ADUP	5mm	1X	0.12		✓
UR87	ASPK	5mm	1X	1.15	%R=99	✓
CCV4		5mm	1X	4.06	%R=102	✓
CCB4		5mm	1X	-0.00		✓
UR87	B	5mm	1X			
UR87	C	5mm	1X			
UR81	MBI	5mm	1X	-0.00		✓
UR81	MBISPK	5mm	1X	2.05	%R=103	✓
UR81	A	5mm	1X	0.47		
UR81	ADUP	5mm	1X	0.49		✓
UR81	ASPK	5mm	1X	1.54	%R=107	✓
UR81	B	5mm	1X			
UR81	C	5mm	1X			
UR81	D	5mm	1X			
CCV5		5mm	1X	4.09	%R=102	✓
CCB5		5mm	1X	-0.00		✓
UR81	E	5mm	1X			

Chemical/Reagent ID:
10% $SnCl_2$: MP2292

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2931-1

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-03-12

Page: 3 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
URS1	F	5mm	1x			
URS1	G	5mm	1x			
URS1	H	5mm	1x			
URS1	I	5mm	1x			
URS1	J	5mm	1x			
CCVL		5mm	1x	4.08	%R = 104	✓
CCBL		5mm	1x	-0.00		✓
US18	B	5mm	2x	5.45		
US18	BDUP	5mm	2x	5.66	RPD = 3.78 %	✓
US18	BSPK	5mm	2x	6.15	%R = 70 LOW	✗
CCV7		5mm	1x	4.04	%R = 101	✓
CCB7		5mm	1x	-0.01	END CLP	✓
STD	0.0	Twm	1x			
STD	0.1	Twm	1x			
STD	0.5	Twm	1x			
STD	1.0	Twm	1x			
STD	2.0	Twm	1x			
STD	5.0	Twm	1x			
STD	10.0	Twm	1x			
ICV		Twm	1x	8.63	Begin CLP %R = 108	✓
ICB		Twm	1x	-0.01		✓
CCV1		Twm	1x	4.18	%R = 105	✓
CCB1		Twm	1x	-0.00		✓
CRA		Twm	1x	0.11		✓
URS7	MB2	Twm	1x	0.01		✓
URS7	MB2SPK	Twm	1x	2.10	%R = 105	✓
URS7	D	Twm	1x	0.01		
URS7	DDUP	Twm	1x	0.01	NO RPD: Undetected	✓
URS7	DSPK	Twm	1x	1.13	%R = 113	✓
US02	MB1	Twm	1x	0.01		✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2292

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2931-1 (5mm)
2932-3 (Twm)

ICV/CCV: SL-18

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 5-03-12

	Analyst 5-3 DM	Peer 5-3 P	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓		
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	✓	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See RUN LOG
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's:	✓	✓	See CAF

CETAC Hg Analysis Report - 12050300.DB - Thursday, May 03, 2012, 12:35:45 PM

5372 M

Analyst
Date Started Thursday, May 03, 2012, 09:14:43
Worksheet ARI 10ppb CALIB
Comment

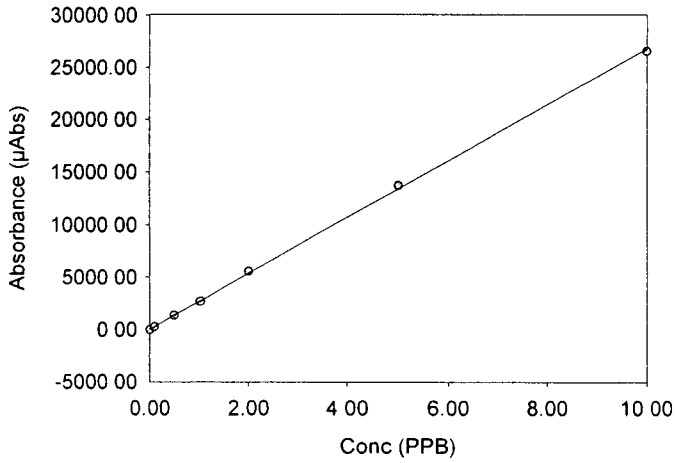
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	03-May-2012, 09:14	10 00	0 63	26100.00	1 00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	03-May-2012, 09:17	0 00	5.60	-20.00	1 00	
Standard #1	03-May-2012, 09.18	0.10	1.37	297 00	1.00	
Standard #2	03-May-2012, 09 20	0.50	0 87	1350.00	1 00	
Standard #3	03-May-2012, 09.21	1.00	0 16	2660 00	1 00	
Standard #4	03-May-2012, 09 23	2.00	1.33	5560.00	1.00	
Standard #5	03-May-2012, 09 25	5.00	0 34	13700 00	1 00	
Standard #6	03-May-2012, 09.26	10.00	0 09	26600 00	1.00	

SMM

Calibration Data



Int.	0.000
Slope	2677 394
Correlation	0 99981

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	03-May-2012, 09:29	7.90	0 13	21200.00	1.00	
ICB	03-May-2012, 09.31	-0.01	16.80	-28 30	1 00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 09.32	4.12	0.10	11000 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 09:34	-0.01	6 33	-32.30	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	03-May-2012, 09 36	0.12	1 54	315.00	1 00	
UR61 MB1 SMM	03-May-2012, 09 37	0 00	28.40	10.80	1 00	
UR61 MB1SPK SMM	03-May-2012, 09.39	2 05	0.11	5500.00	1 00	
UR61 A SMM	03-May-2012, 09.40	0 15	0.98	401.00	1 00	
UR61 ADUP SMM	03-May-2012, 09.42	0.15	0 20	401 00	1.00	
UR61 ASPK SMM	03-May-2012, 09.44	1 22	0.26	3260 00	1.00	
UR61 B SMM	03-May-2012, 09:45	0.33	0.13	894 00	1.00	
UR61 C SMM	03-May-2012, 09 47	0.65	0 49	1730 00	1.00	
UR61 D SMM	03-May-2012, 09:48	0.11	0.62	293 00	1 00	
UR61 E SMM	03-May-2012, 09:50	0.72	0.30	1930.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 09:52	4.11	1.09	11000 00	1 00	

CETAC Hg Analysis Report - 12050300.DB - Thursday, May 03, 2012, 12:35:46 PM

Analyst
Date Started Thursday, May 03, 2012, 09.53·53
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 09·53	-0 00	16 20	-8 73	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UR61 F SMM	03-May-2012, 09:55	0.65	1.29	1730.00	1 00	
UR61 G SMM	03-May-2012, 09:57	0 36	1.17	951.00	1.00	
US24 MB1 SMM	03-May-2012, 09:58	-0.01	17.30	-13.60	1 00	
US24 MB1SPK SMM	03-May-2012, 10·00	2.03	0.04	5430 00	1 00	
US24 MB1SPD SMM	03-May-2012, 10·01	2.00	1.31	5360.00	1 00	
US24 A SMM	03-May-2012, 10:03	0.04	0.75	120.00	1 00	
US24 ADUP SMM	03-May-2012, 10 05	0 05	0.74	141.00	1 00	
US24 ASPK SMM	03-May-2012, 10·06	1 07	0.10	2870 00	1 00	
US18 MB1 SMM	03-May-2012, 10:08	0.00	929.00	0.27	1.00	
US18 MB1SPK SMM	03-May-2012, 10:09	2.08	0.24	5580.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 10 11	4.06	0 47	10900 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 10.13	-0.00	11 00	-4 08	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
US18 A SMM	03-May-2012, 10·14	1.12	0 80	3000.00	1 00	
US18 B SMM	03-May-2012, 10:16	11 10	1.06	29700.00	1.00	O
US18 BDUP SMM	03-May-2012, 10 18	11.30	0.25	30200 00	1 00	O High
US18 BSPK SMM	03-May-2012, 10.19	12.10	0 90	32300 00	1.00	O
UR87 MB1 SMM	03-May-2012, 10.21	-0 02	5.51	-46.40	1.00	
UR87 MB1SPK SMM	03-May-2012, 10.23	2.02	0.22	5410 00	1.00	
UR87 REF1 SMM	03-May-2012, 10:24	6.59	0.35	17600 00	5 00	
UR87 A SMM	03-May-2012, 10:26	0 16	0.51	430 00	1.00	
UR87 ADUP SMM	03-May-2012, 10:27	0.12	0.12	333.00	1.00	
UR87 ASPK SMM	03-May-2012, 10 29	1.15	1.00	3070 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 10.31	4.06	0 69	10900 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 10:32	-0 00	47 90	-9 98	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UR87 B SMM	03-May-2012, 10 34	0.13	0 32	355 00	1 00	
UR87 C SMM	03-May-2012, 10·36	0 12	1.31	311 00	1 00	
UR81 MB1 SMM	03-May-2012, 10 37	-0 00	95 30	-2 61	1.00	
UR81 MB1SPK SMM	03-May-2012, 10.39	2.05	0.91	5480.00	1.00	
UR81 A SMM	03-May-2012, 10.40	0 47	0 55	1270 00	1 00	
UR81 ADUP SMM	03-May-2012, 10.42	0 49	1 16	1310 00	1.00	
UR81 ASPK SMM	03-May-2012, 10.44	1.54	0.31	4130 00	1 00	
UR81 B SMM	03-May-2012, 10.45	0.43	1.35	1140 00	1.00	
UR81 C SMM	03-May-2012, 10·47	0.59	0 18	1580.00	1.00	
UR81 D SMM	03-May-2012, 10.49	0.42	0.62	1110.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 10:50	4.09	0.10	10900.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 10.52	-0 00	25.10	-7 54	1 00	

CETAC Hg Analysis Report - 12050300.DB - Thursday, May 03, 2012, 12:35:46 PM

Analyst
Date Started Thursday, May 03, 2012, 10.54:00
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UR81 E SMM	03-May-2012, 10 54	0.29	0.38	777.00	1 00	
UR81 F SMM	03-May-2012, 10 55	0.68	0.26	1830 00	1 00	
UR81 G SMM	03-May-2012, 10 57	0.13	1.33	356 00	1 00	
UR81 H SMM	03-May-2012, 10.58	0.57	0.92	1520 00	1 00	
UR81 I SMM	03-May-2012, 11.00	0.59	0 63	1570 00	1 00	
UR81 J SMM	03-May-2012, 11.02	0.54	0 36	1450 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 11.03	4 08	0.16	10900.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 11:05	-0.00	18.40	-11.70	1.00	

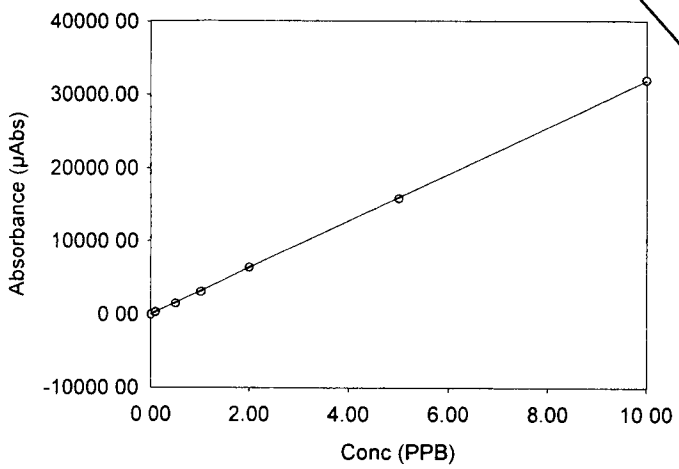
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
US18 B SMM	03-May-2012, 11:07	5.45	0.62	14600.00	2 00	
US18 BDUP SMM	03-May-2012, 11:09	5.66	0 69	15200 00	2 00	
US18 BSPK SMM	03-May-2012, 11:10	6 15	0 37	16500 00	2 00	- LOW %R

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 11:12	4 04	1.38	10800 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 11:13	-0 01	3 42	-38 40	1.00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	03-May-2012, 11:16	0 00	3 41	-46 50	1 00	
Standard #1	03-May-2012, 11:17	0.10	1 97	323 00	1 00	
Standard #2	03-May-2012, 11:19	0 50	0 13	1490.00	1.00	TWM
Standard #3	03-May-2012, 11:21	1 00	0.54	3060 00	1 00	
Standard #4	03-May-2012, 11:22	2.00	0.15	6370.00	1 00	
Standard #5	03-May-2012, 11 24	5.00	0 62	15800 00	1 00	
Standard #6	03-May-2012, 11:25	10.00	1.10	32000 00	1 00	

Calibration Data



Int.	0 000
Slope	3187 983
Correlation	0 99996

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	03-May-2012, 11:28	8.63	0.53	27500.00	1 00	Begin CLP
ICB	03-May-2012, 11:30	-0.01	3.23	-37.40	1 00	

5/3/12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: SMM
Instrument: CETAC
Analyst: KM
Date: 4/27/12
Bath Temp: 95°C
Start Time: 1450
End Time: 1520

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	2931-1	0.01	50.0	0.1	2
STD2	2931-1	0.05	50.0	0.5	2
STD3	2931-1	0.10	50.0	1.0	2
STD4	2931-1	0.20	50.0	2.0	2
STD5	2931-1	0.50	50.0	5.0	2
STD6	2931-1	1.00	50.0	10.0	2
CRA	2931-1	0.01	50.0	0.1	1
ICB/CCB	—	0.00	50.0	0.0	3
ICV/LCS	56-18	0.08	50.0	8.0	2
CCV	56-18	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: I7370
H_2SO_4: I7184
HCl: —
5% $K_2S_2O_8$: MP2272
5% $KMnO_4$: MP2273

Prep Code: _____
Instrument: _____
Analyst: _____
Date: _____
Bath Temp: _____
Start Time: _____
End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____
H_2SO_4: _____
HCl: _____
5% $K_2S_2O_8$: _____
5% $KMnO_4$: _____

UR81 : 02256

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm
Matrix: Soil
Analyst: DM
Date: 4-30-12
Bath Temp: 95°C
Start Time: 1015
End Time: 1045

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
URB7 A	5	—	0.246	50.0	5/7 1	Y	5/3/12
URB7 ADUP	5	—	0.241	50.0	1	Y	
URB7 ABSPK	5	—	0.243	50.0	1	Y	
URB7 B	5	—	0.225	50.0	1	Y	
URB7 C	5	—	0.285	50.0	1	Y	
URB7 REF1	D053	—	0.204	50.0	1	Y	
URB7 MB1	—	—	—	50.0	1	Y	
URB7 MB1SPK	—	—	—	50.0	1	Y	
URB1 A	3	—	0.244	50.0	5/10 1	Y	
URB1 ADUP	3	—	0.242	50.0	1	Y	
URB1 ABSPK	3	—	0.242	50.0	1	Y	
URB1 B	3	—	0.209	50.0	1	Y	
URB1 C	3	—	0.230	50.0	1	Y	
URB1 D	3	—	0.201	50.0	1	Y	
URB1 E	3	—	0.213	50.0	1	Y	
URB1 F	3	—	0.276	50.0	1	Y	
URB1 G	3	—	0.245	50.0	1	Y	
URB1 H	3	—	0.262	50.0	1	Y	
URB1 I	3	—	0.203	50.0	1	Y	
URB1 J	3	—	0.271	50.0	1	Y	
URB1 MB1	—	—	—	50.0	1	Y	
URB1 MB1SPK	—	—	—	50.0	1	Y	
			4-30-12 DM				

Chemical/Reagent ID:

HNO_3: I7370
H_2SO_4: I7184
HCl: —
5% $K_2S_2O_8$: MP2272
5% $KMnO_4$: MP2273
Digest Tube Lot: 1108215

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 3.19.12 Analysis Date: 5.3.12 Analyst: BW
LR Date: 3.19.12 Page: 1 of 2

All corrections made by analyst unless otherwise noted. BW 5.3.12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		std 0			2930-15
		2			2931-8
		3			-9
		4			-10
		5			2932-1
		ICV			2925-3
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCVI			
		CCBI			
		US18 MBI	SWC	2	
		UR96 MB	TWC		
		K			
		R			
		US18 A	SWC	2	
		Bdup			✓
		B			
		Bsph			✓
2		~~22247~~ Bpost			
		MBlsph			✓
		CCV2			
		CCB2			end packag

URS1 : 02252

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 5.3.12

ICP 2	Analyst BW 5.3	Peer HA 5-3	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	see log
ICB/CCB	✓	✓	↓
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	see log
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	—	—	

Analysis Begun

Start Time: 5/3/2012 10:27:53 AM
Plasma On Time: 5/3/2012 9:29:23 AM
Logged In Analyst: metals
Technique: ICP Continuous
Spectrometer Model: Optima 7300 DV, S/N 077C8121202**Autosampler Model:** AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2120503
Results Library: C:\pe\metals\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
Method Last Saved: 3/19/2012 10:25:21 AM
IEC File: IEC031612.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank 1
Date Collected: 5/3/2012 10:27:54 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2474481.3	12303.75	0.50%	100.0	%
ScR 361.383	383367.9	1865.74	0.49%	100.0	%
Ag 328.068†	-214.7	25.23	11.75%	[0.00]	mg/L
Al 308.215†	139.1	3.72	2.68%	[0.00]	mg/L
As 188.979†	-2.5	4.86	197.91%	[0.00]	mg/L
B 249.677†	42.9	1.82	4.24%	[0.00]	mg/L

Ba 233.527†	20.4	3.56	17.43%	[0.00]	mg/L
Be 313.042†	1256.7	14.32	1.14%	[0.00]	mg/L
Ca 317.933†	395.6	4.14	1.05%	[0.00]	mg/L
Cd 228.802†	264.9	1.67	0.63%	[0.00]	mg/L
Co 228.616†	-12.6	5.41	43.04%	[0.00]	mg/L
Cr 267.716†	-41.1	2.48	6.04%	[0.00]	mg/L
Cu 324.752†	1097.2	34.38	3.13%	[0.00]	mg/L
Fe 273.955†	-19.1	1.67	8.75%	[0.00]	mg/L
K 766.490†	-406.7	4.99	1.23%	[0.00]	mg/L
Mg 279.077†	-50.0	6.38	12.77%	[0.00]	mg/L
Mn 257.610†	-19.9	6.42	32.19%	[0.00]	mg/L
Mo 202.031†	92.2	1.36	1.47%	[0.00]	mg/L
Na 589.592†	-468.4	31.71	6.77%	[0.00]	mg/L
Na 330.237†	-20.7	4.99	24.09%	[0.00]	mg/L
Ni 231.604†	-7.8	3.83	49.07%	[0.00]	mg/L
Pb 220.353†	158.6	8.28	5.22%	[0.00]	mg/L
Sb 206.836†	254.6	3.10	1.22%	[0.00]	mg/L
Se 196.026†	-122.1	9.68	7.93%	[0.00]	mg/L
Si 288.158†	73.2	2.22	3.04%	[0.00]	mg/L
Sn 189.927†	-44.0	1.92	4.37%	[0.00]	mg/L
Sr 421.552†	-490.9	48.21	9.82%	[0.00]	mg/L
Ti 334.903†	-119.0	2.63	2.21%	[0.00]	mg/L
Tl 190.801†	-2.6	0.95	35.98%	[0.00]	mg/L
V 292.402†	502.7	6.21	1.24%	[0.00]	mg/L
Zn 206.200†	-60.2	1.09	1.81%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 5/3/2012 10:32:06 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2492032.0	19432.13	0.78%	100.7	%
ScR 361.383	383861.0	3631.61	0.95%	100.1	%
Ba 233.527†	83902.9	668.92	0.80%	[10]	mg/L
Cd 228.802†	298318.8	481.84	0.16%	[10]	mg/L
Co 228.616†	383480.7	381.66	0.10%	[10]	mg/L
Cr 267.716†	84466.4	611.42	0.72%	[10]	mg/L
Cu 324.752†	2176497.2	1733.89	0.08%	[10]	mg/L
Mn 257.610†	552573.4	5016.83	0.91%	[10]	mg/L
V 292.402†	1761542.7	9334.27	0.53%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 5/3/2012 10:33:51 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2472329.1	19747.69	0.80%	99.91	%
ScR 361.383	375039.9	5644.28	1.50%	97.83	%
Ag 328.068†	259763.5	855.50	0.33%	[1.0]	mg/L
As 188.979†	23251.7	193.39	0.83%	[10]	mg/L
B 249.677†	62804.0	547.56	0.87%	[10]	mg/L
Be 313.042†	3576950.0	16185.12	0.45%	[5.0]	mg/L
Na 589.592†	636679.8	5216.09	0.82%	[50]	mg/L
Ni 231.604†	46640.6	248.95	0.53%	[10]	mg/L
Pb 220.353†	117172.0	679.50	0.58%	[10]	mg/L
Se 196.026†	18044.7	141.09	0.78%	[10]	mg/L
Sr 421.552†	4176688.8	20455.00	0.49%	[5]	mg/L
Tl 190.801†	25486.6	152.34	0.60%	[10]	mg/L
Zn 206.200†	27299.9	271.64	1.00%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 5/3/2012 10:36:05 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2507154.2	12630.04	0.50%	101.3	%
ScR 361.383	390744.9	3676.00	0.94%	101.9	%
Mo 202.031†	210272.6	1309.73	0.62%	[10]	mg/L
Sb 206.836†	35678.4	243.94	0.68%	[10]	mg/L
Si 288.158†	20712.3	337.36	1.63%	[10]	mg/L
Sn 189.927†	68695.5	382.05	0.56%	[10]	mg/L
Ti 334.903†	280047.8	1410.04	0.50%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 5/3/2012 10:38:17 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2365672.0	8535.22	0.36%	95.60	%
ScR 361.383	386410.9	2348.90	0.61%	100.8	%
Al 308.215†	46595.1	515.60	1.11%	[30]	mg/L
Ca 317.933†	302574.9	803.90	0.27%	[30]	mg/L
Fe 273.955†	136411.0	360.95	0.26%	[100]	mg/L
K 766.490†	221976.2	462.93	0.21%	[100]	mg/L
Mg 279.077†	36645.6	282.02	0.77%	[30]	mg/L
Na 330.237†	2971.4	42.03	1.41%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	259800	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1553	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	2325	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6280	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	8390	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	715400	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	10090	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	29830	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	38350	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8447	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	217600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1364	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2220	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1222	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	55260	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	21030	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12730	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	29.71	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4664	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	11720	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3568	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1804	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2071	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	6870	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	835300	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	28000	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2549	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	176200	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	2730	0.00000	1.000000	

Analysis Begun

Start Time: 5/3/2012 11:03:52 AM
Logged In Analyst: metals
Plasma On Time: 5/3/2012 9:29:23 AM
Technique: ICP Continuous
Spectrometer Model: Optima 7300 DV, S/N 077C8121202 Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\0503.sif
Batch ID:
Results Data Set: I2120503
Results Library: C:\pe\metals\Results\Results.mdb

Sequence No.: 1
Sample ID: CV
Autosampler Location: 7
Date Collected: 5/3/2012 11:03:53 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2517683.6	101.7	%	0.83				0.81%
ScR 361.383	388913.9	101.4	%	0.57				0.56%
Ag 328.068†	256413.2	0.9870	mg/L	0.00946	0.9870	mg/L	0.00946	0.96%
Al 308.215†	3119.4	1.979	mg/L	0.0133	1.979	mg/L	0.0133	0.67%
As 188.979†	4453.7	1.920	mg/L	0.0142	1.920	mg/L	0.0142	0.74%
B 249.677†	6073.1	0.9651	mg/L	0.00637	0.9651	mg/L	0.00637	0.66%
Ba 233.527†	8096.3	0.9645	mg/L	0.00698	0.9645	mg/L	0.00698	0.72%
Be 313.042†	669562.3	0.9353	mg/L	0.00600	0.9353	mg/L	0.00600	0.64%
Ca 317.933†	20526.7	2.035	mg/L	0.0192	2.035	mg/L	0.0192	0.94%
Cd 228.802†	30427.0	1.014	mg/L	0.0101	1.014	mg/L	0.0101	1.00%
Co 228.616†	37118.6	0.9662	mg/L	0.00904	0.9662	mg/L	0.00904	0.94%
Cr 267.716†	8366.6	0.9901	mg/L	0.00753	0.9901	mg/L	0.00753	0.76%
Cu 324.752†	219526.8	1.009	mg/L	0.0096	1.009	mg/L	0.0096	0.95%
Fe 273.955†	2740.6	2.005	mg/L	0.0082	2.005	mg/L	0.0082	0.41%
K 766.490†	44690.1	20.13	mg/L	0.110	20.13	mg/L	0.110	0.55%
Mg 279.077†	2435.8	1.999	mg/L	0.0202	1.999	mg/L	0.0202	1.01%
Mn 257.610†	50977.1	0.9232	mg/L	0.00667	0.9232	mg/L	0.00667	0.72%
Mo 202.031†	21167.1	1.007	mg/L	0.0094	1.007	mg/L	0.0094	0.93%
Na 589.592†	614479.0	48.26	mg/L	0.386	48.26	mg/L	0.386	0.80%
Na 330.237†	1542.2	51.94	mg/L	0.229	51.94	mg/L	0.229	0.44%
Ni 231.604†	4413.2	0.9482	mg/L	0.00517	0.9482	mg/L	0.00517	0.54%
Pb 220.353†	22898.6	1.956	mg/L	0.0187	1.956	mg/L	0.0187	0.96%
Sb 206.836†	7310.4	2.048	mg/L	0.0146	2.048	mg/L	0.0146	0.71%
Se 196.026†	3462.7	1.918	mg/L	0.0161	1.918	mg/L	0.0161	0.84%
Si 288.158†	4291.3	2.076	mg/L	0.0108	2.076	mg/L	0.0108	0.52%
Sn 189.927†	6893.4	1.006	mg/L	0.0071	1.006	mg/L	0.0071	0.71%
Sr 421.552†	805528.0	0.9643	mg/L	0.00458	0.9643	mg/L	0.00458	0.48%
Ti 334.903†	27337.1	0.9745	mg/L	0.00428	0.9745	mg/L	0.00428	0.44%
Tl 190.801†	4896.0	1.920	mg/L	0.0185	1.920	mg/L	0.0185	0.96%
V 292.402†	172613.8	0.9842	mg/L	0.01241	0.9842	mg/L	0.01241	1.26%
Zn 206.200†	2689.2	0.9857	mg/L	0.00612	0.9857	mg/L	0.00612	0.62%

Sequence No.: 2
Sample ID: CB

Dilution: 1X

Autosampler Location: 1
Date Collected: 5/3/2012 11:07:54 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2568278.7	103.8	%	0.86				0.83%
ScR 361.383	392169.6	102.3	%	0.64				0.62%
Ag 328.068†	-10.7	-0.00004	mg/L	0.000312	-0.00004	mg/L	0.000312	755.51%
Al 308.215†	3.2	0.00203	mg/L	0.005188	0.00203	mg/L	0.005188	255.31%
As 188.979†	-3.6	-0.00154	mg/L	0.001115	-0.00154	mg/L	0.001115	72.45%
B 249.677†	12.0	0.00191	mg/L	0.000271	0.00191	mg/L	0.000271	14.18%
Ba 233.527†	-1.8	-0.00021	mg/L	0.000198	-0.00021	mg/L	0.000198	93.37%
Be 313.042†	-17.8	-0.00002	mg/L	0.000023	-0.00002	mg/L	0.000023	93.70%
Ca 317.933†	-19.7	-0.00195	mg/L	0.001023	-0.00195	mg/L	0.001023	52.38%
Cd 228.802†	-1.2	-0.00004	mg/L	0.000081	-0.00004	mg/L	0.000081	228.74%
Co 228.616†	-4.4	-0.00011	mg/L	0.000120	-0.00011	mg/L	0.000120	105.79%
Cr 267.716†	3.3	0.00039	mg/L	0.000103	0.00039	mg/L	0.000103	26.52%
Cu 324.752†	30.7	0.00014	mg/L	0.000146	0.00014	mg/L	0.000146	103.26%
Fe 273.955†	2.5	0.00184	mg/L	0.001155	0.00184	mg/L	0.001155	62.87%
K 766.490†	31.5	0.01417	mg/L	0.008606	0.01417	mg/L	0.008606	60.72%
Mg 279.077†	-1.4	-0.00111	mg/L	0.002374	-0.00111	mg/L	0.002374	214.51%
Mn 257.610†	7.5	0.00014	mg/L	0.000051	0.00014	mg/L	0.000051	37.56%
Mo 202.031†	5.5	0.00026	mg/L	0.000082	0.00026	mg/L	0.000082	31.32%
Na 589.592†	10.1	0.00079	mg/L	0.002346	0.00079	mg/L	0.002346	296.44%
Na 330.237†	11.7	0.3952	mg/L	0.43941	0.3952	mg/L	0.43941	111.20%
Ni 231.604†	1.0	0.00022	mg/L	0.001288	0.00022	mg/L	0.001288	589.79%
Pb 220.353†	-13.1	-0.00112	mg/L	0.000872	-0.00112	mg/L	0.000872	78.15%
Sb 206.836†	-8.9	-0.00249	mg/L	0.001231	-0.00249	mg/L	0.001231	49.39%
Se 196.026†	3.3	0.00185	mg/L	0.003640	0.00185	mg/L	0.003640	196.69%
Si 288.158†	-1.9	-0.00090	mg/L	0.001151	-0.00090	mg/L	0.001151	127.41%
Sn 189.927†	7.5	0.00109	mg/L	0.000286	0.00109	mg/L	0.000286	26.22%
Sr 421.552†	60.0	0.00007	mg/L	0.000050	0.00007	mg/L	0.000050	70.23%
Tl 334.903†	0.0	0.00000	mg/L	0.000309	0.00000	mg/L	0.000309	>999.9%
Tl 190.801†	-3.4	-0.00135	mg/L	0.002076	-0.00135	mg/L	0.002076	153.69%
V 292.402†	-19.1	-0.00011	mg/L	0.000103	-0.00011	mg/L	0.000103	96.11%
Zn 206.200†	2.3	0.00083	mg/L	0.000643	0.00083	mg/L	0.000643	77.34%

Sequence No.: 3
Sample ID: CRI

Dilution: 1X

Autosampler Location: 301
Date Collected: 5/3/2012 11:12:07 AM
Data Type: Original

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2550813.3	103.1	%	0.49				0.48%
ScR 361.383	390869.8	102.0	%	0.85				0.83%
Ag 328.068†	729.8	0.00281	mg/L	0.000084	0.00281	mg/L	0.000084	3.00%
Al 308.215†	83.6	0.05369	mg/L	0.002154	0.05369	mg/L	0.002154	4.01%
As 188.979†	108.3	0.04658	mg/L	0.001025	0.04658	mg/L	0.001025	2.20%
B 249.677†	129.1	0.02055	mg/L	0.000143	0.02055	mg/L	0.000143	0.70%
Ba 233.527†	19.8	0.00236	mg/L	0.000210	0.00236	mg/L	0.000210	8.91%
Be 313.042†	655.4	0.00091	mg/L	0.000045	0.00091	mg/L	0.000045	4.93%
Ca 317.933†	479.7	0.04756	mg/L	0.000860	0.04756	mg/L	0.000860	1.81%
Cd 228.802†	64.2	0.00200	mg/L	0.000174	0.00200	mg/L	0.000174	8.74%
Co 228.616†	106.0	0.00276	mg/L	0.000108	0.00276	mg/L	0.000108	3.93%
Cr 267.716†	41.3	0.00488	mg/L	0.000381	0.00488	mg/L	0.000381	7.81%
Cu 324.752†	454.4	0.00209	mg/L	0.000122	0.00209	mg/L	0.000122	5.86%
Fe 273.955†	69.5	0.05092	mg/L	0.000241	0.05092	mg/L	0.000241	0.47%
K 766.490†	1124.0	0.5063	mg/L	0.01331	0.5063	mg/L	0.01331	2.63%
Mg 279.077†	64.4	0.05276	mg/L	0.002939	0.05276	mg/L	0.002939	5.57%
Mn 257.610†	62.5	0.00114	mg/L	0.000064	0.00114	mg/L	0.000064	5.60%
Mo 202.031†	104.5	0.00497	mg/L	0.000051	0.00497	mg/L	0.000051	1.03%
Na 589.592†	5918.5	0.4648	mg/L	0.00237	0.4648	mg/L	0.00237	0.51%
Na 330.237†	27.8	0.9328	mg/L	0.08834	0.9328	mg/L	0.08834	9.47%
Ni 231.604†	45.2	0.00973	mg/L	0.000638	0.00973	mg/L	0.000638	6.55%
Pb 220.353†	219.3	0.01873	mg/L	0.000626	0.01873	mg/L	0.000626	3.34%
Sb 206.836†	167.7	0.04701	mg/L	0.001398	0.04701	mg/L	0.001398	2.97%
Se 196.026†	89.0	0.04932	mg/L	0.003310	0.04932	mg/L	0.003310	6.71%
Si 288.158†	123.7	0.05973	mg/L	0.001321	0.05973	mg/L	0.001321	2.21%
Sn 189.927†	71.2	0.01041	mg/L	0.000719	0.01041	mg/L	0.000719	6.91%
Sr 421.552†	860.4	0.00103	mg/L	0.000038	0.00103	mg/L	0.000038	3.66%
Ti 334.903†	136.1	0.00485	mg/L	0.000506	0.00485	mg/L	0.000506	10.43%
Tl 190.801†	117.3	0.04603	mg/L	0.001120	0.04603	mg/L	0.001120	2.43%
V 292.402†	500.9	0.00286	mg/L	0.000064	0.00286	mg/L	0.000064	2.23%
Zn 206.200†	27.5	0.01009	mg/L	0.000812	0.01009	mg/L	0.000812	8.05%

Sequence No.: 4
Sample ID: ICSA

Dilution: 1X

Autosampler Location: 302
Date Collected: 5/3/2012 11:16:20 AM
Data Type: Original

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2492402.8	100.7	%	0.22				0.21%
ScR 361.383	391280.7	102.1	%	0.99				0.97%
Ag 328.068†	-183.4	-0.00138	mg/L	0.000076	-0.00138	mg/L	0.000076	5.51%
Al 308.215†	309230.0	199.1	mg/L	1.27	199.1	mg/L	1.27	0.64%
As 188.979†	2.0	-0.01488	mg/L	0.002863	-0.01488	mg/L	0.002863	19.24%
B 249.677†	29.5	0.00470	mg/L	0.000368	0.00470	mg/L	0.000368	7.83%
Ba 233.527†	97.7	0.00161	mg/L	0.000352	0.00161	mg/L	0.000352	21.82%
Be 313.042†	23.1	0.00001	mg/L	0.000033	0.00001	mg/L	0.000033	268.00%
Ca 317.933†	1020743.2	101.2	mg/L	0.62	101.2	mg/L	0.62	0.61%
Cd 228.802†	66.7	0.00037	mg/L	0.000222	0.00037	mg/L	0.000222	60.12%
Co 228.616†	96.1	0.00250	mg/L	0.000202	0.00250	mg/L	0.000202	8.09%
Cr 267.716†	-24.9	-0.00017	mg/L	0.000534	-0.00017	mg/L	0.000534	306.06%
Cu 324.752†	-3390.2	-0.00193	mg/L	0.000163	-0.00193	mg/L	0.000163	8.45%
Fe 273.955†	268000.3	196.5	mg/L	1.88	196.5	mg/L	1.88	0.96%
K 766.490†	78.7	0.03547	mg/L	0.012536	0.03547	mg/L	0.012536	35.34%
Mg 279.077†	120338.4	98.40	mg/L	0.646	98.40	mg/L	0.646	0.66%
Mn 257.610†	50.4	0.00004	mg/L	0.000023	0.00004	mg/L	0.000023	51.90%
Mo 202.031†	125.6	0.00425	mg/L	0.000279	0.00425	mg/L	0.000279	6.55%
Na 589.592†	309.6	0.02432	mg/L	0.002497	0.02432	mg/L	0.002497	10.27%
Na 330.237†	35.0	0.5197	mg/L	0.29421	0.5197	mg/L	0.29421	56.61%
Ni 231.604†	-1.8	-0.00029	mg/L	0.000273	-0.00029	mg/L	0.000273	93.73%
Pb 220.353†	-249.3	-0.00654	mg/L	0.001078	-0.00654	mg/L	0.001078	16.48%
Sb 206.836†	362.8	0.01396	mg/L	0.002558	0.01396	mg/L	0.002558	18.32%
Se 196.026†	-28.6	0.00671	mg/L	0.004981	0.00671	mg/L	0.004981	74.26%
Si 288.158†	-37.3	-0.01801	mg/L	0.002319	-0.01801	mg/L	0.002319	12.87%
Sn 189.927†	-94.3	-0.01070	mg/L	0.001040	-0.01070	mg/L	0.001040	9.72%
Sr 421.552†	8270.5	0.00990	mg/L cont.	0.000035	0.00990	mg/L	0.000035	0.35%
Ti 334.903†	96.0	-0.00011	mg/L	0.000336	-0.00011	mg/L	0.000336	316.11%
Tl 190.801†	-42.3	0.00926	mg/L	0.001780	0.00926	mg/L	0.001780	19.22%
V 292.402†	5209.5	0.00584	mg/L	0.000191	0.00584	mg/L	0.000191	3.28%
Zn 206.200†	-31.0	-0.00406	mg/L	0.001435	-0.00406	mg/L	0.001435	35.36%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 5/3/2012 11:24:18 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2542815.9	102.8	%	0.26				0.25%
ScR 361.383	394938.7	103.0	%	1.06				1.03%
Ag 328.068†	249198.0	0.9593	mg/L	0.00087	0.9593	mg/L	0.00087	0.09%
Al 308.215†	3140.0	1.993	mg/L	0.0185	1.993	mg/L	0.0185	0.93%
As 188.979†	4496.4	1.939	mg/L	0.0094	1.939	mg/L	0.0094	0.48%
B 249.677†	6044.3	0.9604	mg/L	0.01072	0.9604	mg/L	0.01072	1.12%
Ba 233.527†	8105.3	0.9656	mg/L	0.01230	0.9656	mg/L	0.01230	1.27%
Be 313.042†	663505.1	0.9268	mg/L	0.00762	0.9268	mg/L	0.00762	0.82%
Ca 317.933†	20670.0	2.049	mg/L	0.0263	2.049	mg/L	0.0263	1.29%
Cd 228.802†	30379.0	1.012	mg/L	0.0042	1.012	mg/L	0.0042	0.41%
Co 228.616†	37349.8	0.9722	mg/L	0.00441	0.9722	mg/L	0.00441	0.45%
Cr 267.716†	8386.4	0.9924	mg/L	0.01125	0.9924	mg/L	0.01125	1.13%
Cu 324.752†	214028.6	0.9833	mg/L	0.00375	0.9833	mg/L	0.00375	0.38%
Fe 273.955†	2771.0	2.027	mg/L	0.0270	2.027	mg/L	0.0270	1.33%
K 766.490†	44603.1	20.09	mg/L	0.116	20.09	mg/L	0.116	0.58%
Mg 279.077†	2448.6	2.010	mg/L	0.0246	2.010	mg/L	0.0246	1.23%
Mn 257.610†	50671.6	0.9177	mg/L	0.00706	0.9177	mg/L	0.00706	0.77%
Mo 202.031†	21277.3	1.012	mg/L	0.0037	1.012	mg/L	0.0037	0.37%
Na 589.592†	604924.7	47.51	mg/L	0.411	47.51	mg/L	0.411	0.86%
Na 330.237†	1542.4	51.94	mg/L	0.366	51.94	mg/L	0.366	0.70%
Ni 231.604†	4423.3	0.9503	mg/L	0.01326	0.9503	mg/L	0.01326	1.40%
Pb 220.353†	23144.4	1.977	mg/L	0.0075	1.977	mg/L	0.0075	0.38%
Sb 206.836†	7375.1	2.067	mg/L	0.0090	2.067	mg/L	0.0090	0.43%
Se 196.026†	3479.0	1.927	mg/L	0.0082	1.927	mg/L	0.0082	0.43%
Si 288.158†	4270.1	2.065	mg/L	0.0167	2.065	mg/L	0.0167	0.81%
Sn 189.927†	6960.8	1.015	mg/L	0.0048	1.015	mg/L	0.0048	0.47%
Sr 421.552†	797086.6	0.9542	mg/L	0.00617	0.9542	mg/L	0.00617	0.65%
Ti 334.903†	27116.5	0.9666	mg/L	0.00821	0.9666	mg/L	0.00821	0.85%
Tl 190.801†	4925.6	1.932	mg/L	0.0048	1.932	mg/L	0.0048	0.25%
V 292.402†	169713.8	0.9678	mg/L	0.01096	0.9678	mg/L	0.01096	1.13%
Zn 206.200†	2716.4	0.9956	mg/L	0.01045	0.9956	mg/L	0.01045	1.05%

Sequence No.: 7
Sample ID: CB

Dilution: 1X

Autosampler Location: 1
Date Collected: 5/3/2012 11:28:05 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2606461.5	105.3	%	0.94				0.89%
ScR 361.383	403159.4	105.2	%	0.70				0.67%
Ag 328.068†	4.7	0.00002	mg/L	0.000239	0.00002	mg/L	0.000239	>999.9%
Al 308.215†	10.9	0.00703	mg/L	0.003463	0.00703	mg/L	0.003463	49.24%
As 188.979†	0.2	0.00007	mg/L	0.001758	0.00007	mg/L	0.001758	>999.9%
B 249.677†	9.3	0.00149	mg/L	0.000585	0.00149	mg/L	0.000585	39.31%
Ba 233.527†	-3.4	-0.00040	mg/L	0.000520	-0.00040	mg/L	0.000520	130.02%
Be 313.042†	-22.4	-0.00003	mg/L	0.000021	-0.00003	mg/L	0.000021	67.09%
Ca 317.933†	10.5	0.00104	mg/L	0.002028	0.00104	mg/L	0.002028	194.24%
Cd 228.802†	-1.1	-0.00004	mg/L	0.000128	-0.00004	mg/L	0.000128	360.16%
Co 228.616†	-5.3	-0.00014	mg/L	0.000169	-0.00014	mg/L	0.000169	120.61%
Cr 267.716†	0.8	0.00009	mg/L	0.000223	0.00009	mg/L	0.000223	244.04%
Cu 324.752†	32.3	0.00015	mg/L	0.000084	0.00015	mg/L	0.000084	56.35%
Fe 273.955†	8.6	0.00630	mg/L	0.000757	0.00630	mg/L	0.000757	12.03%
K 766.490†	33.8	0.01524	mg/L	0.006974	0.01524	mg/L	0.006974	45.76%
Mg 279.077†	4.6	0.00376	mg/L	0.002248	0.00376	mg/L	0.002248	59.79%
Mn 257.610†	9.9	0.00018	mg/L	0.000103	0.00018	mg/L	0.000103	57.96%
Mo 202.031†	3.6	0.00017	mg/L	0.000215	0.00017	mg/L	0.000215	126.95%
Na 589.592†	2.3	0.00018	mg/L	0.002754	0.00018	mg/L	0.002754	>999.9%
Na 330.237†	7.8	0.2634	mg/L	0.31084	0.2634	mg/L	0.31084	118.00%
Ni 231.604†	3.9	0.00084	mg/L	0.001007	0.00084	mg/L	0.001007	119.85%
Pb 220.353†	-20.6	-0.00176	mg/L	0.000256	-0.00176	mg/L	0.000256	14.59%
Sb 206.836†	-9.6	-0.00270	mg/L	0.002264	-0.00270	mg/L	0.002264	83.97%
Se 196.026†	6.0	0.00335	mg/L	0.002964	0.00335	mg/L	0.002964	88.43%
Si 288.158†	-1.2	-0.00060	mg/L	0.005176	-0.00060	mg/L	0.005176	860.39%
Sn 189.927†	8.5	0.00123	mg/L	0.000778	0.00123	mg/L	0.000778	63.30%
Sr 421.552†	83.2	0.00010	mg/L	0.000013	0.00010	mg/L	0.000013	13.55%
Ti 334.903†	8.7	0.00031	mg/L	0.000711	0.00031	mg/L	0.000711	227.91%
Tl 190.801†	-2.2	-0.00085	mg/L	0.001115	-0.00085	mg/L	0.001115	131.68%
V 292.402†	-41.9	-0.00024	mg/L	0.000076	-0.00024	mg/L	0.000076	31.99%
Zn 206.200†	4.9	0.00180	mg/L	0.000531	0.00180	mg/L	0.000531	29.58%

Sequence No.: 8
Sample ID: US18 MB1 SWC

Dilution: 2X

Autosampler Location: 304
Date Collected: 5/3/2012 11:32:18 AM
Data Type: Original

Nebulizer Parameters: US18 MB1 SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: US18 MB1 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2677877.2	108.2	%	0.99				0.91%
ScR 361.383	412902.5	107.7	%	0.78				0.72%
Ag 328.068†	16.3	0.00006	mg/L	0.000076	0.00013	mg/L	0.000151	120.91%
Al 308.215†	6.6	0.00426	mg/L	0.004502	0.00852	mg/L	0.009004	105.64%
As 188.979†	-1.2	-0.00050	mg/L	0.000958	-0.00101	mg/L	0.001915	189.72%
B 249.677†	-3.8	-0.00060	mg/L	0.001043	-0.00121	mg/L	0.002086	172.88%
Ba 233.527†	-2.9	-0.00035	mg/L	0.000102	-0.00070	mg/L	0.000204	29.20%
Be 313.042†	-71.3	-0.00010	mg/L	0.000035	-0.00020	mg/L	0.000071	35.66%
Ca 317.933†	74.0	0.00733	mg/L	0.001144	0.01466	mg/L	0.002289	15.61%
Cd 228.802†	-5.7	-0.00019	mg/L	0.000209	-0.00038	mg/L	0.000419	111.62%
Co 228.616†	-4.6	-0.00012	mg/L	0.000050	-0.00024	mg/L	0.000099	40.74%
Cr 267.716†	7.2	0.00086	mg/L	0.000661	0.00171	mg/L	0.001322	77.24%
Cu 324.752†	44.4	0.00020	mg/L	0.000046	0.00041	mg/L	0.000091	22.42%
Fe 273.955†	5.3	0.00391	mg/L	0.001386	0.00782	mg/L	0.002772	35.45%
K 766.490†	60.7	0.02733	mg/L	0.009235	0.05466	mg/L	0.018470	33.79%
Mg 279.077†	4.8	0.00391	mg/L	0.002367	0.00781	mg/L	0.004734	60.60%
Mn 257.610†	7.7	0.00014	mg/L	0.000051	0.00028	mg/L	0.000101	36.80%
Mo 202.031†	-3.0	-0.00014	mg/L	0.000186	-0.00029	mg/L	0.000371	130.25%
Na 589.592†	-5.8	-0.00045	mg/L	0.002630	-0.00091	mg/L	0.005259	579.47%
Na 330.237†	10.5	0.3528	mg/L	0.17056	0.7056	mg/L	0.34112	48.35%
Ni 231.604†	1.0	0.00021	mg/L	0.000299	0.00043	mg/L	0.000599	140.68%
Pb 220.353†	-24.2	-0.00206	mg/L	0.000241	-0.00413	mg/L	0.000483	11.70%
Sb 206.836†	-22.2	-0.00624	mg/L	0.000921	-0.01247	mg/L	0.001842	14.77%
Se 196.026†	10.5	0.00580	mg/L	0.001710	0.01161	mg/L	0.003420	29.47%
Si 288.158†	-2.8	-0.00137	mg/L	0.002799	-0.00274	mg/L	0.005598	204.22%
Sn 189.927†	8.1	0.00118	mg/L	0.000550	0.00235	mg/L	0.001101	46.79%
Sr 421.552†	68.0	0.00008	mg/L	0.000012	0.00016	mg/L	0.000023	14.20%
Ti 334.903†	25.8	0.00092	mg/L	0.000353	0.00184	mg/L	0.000706	38.30%
Tl 190.801†	-1.2	-0.00048	mg/L	0.000768	-0.00096	mg/L	0.001536	160.31%
V 292.402†	-59.5	-0.00034	mg/L	0.000068	-0.00067	mg/L	0.000137	20.37%
Zn 206.200†	7.6	0.00280	mg/L	0.000899	0.00559	mg/L	0.001797	32.15%

Sequence No.: 9
Sample ID: UR96 MB TWC

Dilution: 1X

Autosampler Location: 305
Date Collected: 5/3/2012 11:36:31 AM
Data Type: Original

Nebulizer Parameters: UR96 MB TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR96 MB TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2650833.7	107.1	%	1.18				1.10%
ScR 361.383	420214.0	109.6	%	0.52				0.48%
Ag 328.068†	19.8	0.00008	mg/L	0.000189	0.00008	mg/L	0.000189	248.41%
Al 308.215†	-0.2	-0.00012	mg/L	0.003939	-0.00012	mg/L	0.003939	>999.9%
As 188.979†	-2.3	-0.00100	mg/L	0.000591	-0.00100	mg/L	0.000591	59.11%
B 249.677†	-3.3	-0.00053	mg/L	0.001114	-0.00053	mg/L	0.001114	209.87%
Ba 233.527†	-2.8	-0.00034	mg/L	0.000130	-0.00034	mg/L	0.000130	38.16%
Be 313.042†	-101.8	-0.00014	mg/L	0.000014	-0.00014	mg/L	0.000014	9.89%
Ca 317.933†	75.5	0.00749	mg/L	0.001436	0.00749	mg/L	0.001436	19.18%
Cd 228.802†	-3.1	-0.00010	mg/L	0.000085	-0.00010	mg/L	0.000085	85.26%
Co 228.616†	-13.3	-0.00035	mg/L	0.000112	-0.00035	mg/L	0.000112	32.31%
Cr 267.716†	3.5	0.00042	mg/L	0.001013	0.00042	mg/L	0.001013	241.19%
Cu 324.752†	52.5	0.00024	mg/L	0.000172	0.00024	mg/L	0.000172	71.14%
Fe 273.955†	12.8	0.00937	mg/L	0.000362	0.00937	mg/L	0.000362	3.86%
K 766.490†	47.3	0.02130	mg/L	0.013086	0.02130	mg/L	0.013086	61.44%
Mg 279.077†	10.4	0.00847	mg/L	0.002065	0.00847	mg/L	0.002065	24.38%
Mn 257.610†	7.8	0.00014	mg/L	0.000039	0.00014	mg/L	0.000039	27.76%
Mo 202.031†	-3.0	-0.00015	mg/L	0.000066	-0.00015	mg/L	0.000066	45.71%
Na 589.592†	74.0	0.00581	mg/L	0.003398	0.00581	mg/L	0.003398	58.48%
Na 330.237†	5.7	0.1900	mg/L	0.23892	0.1900	mg/L	0.23892	125.76%
Ni 231.604†	2.5	0.00053	mg/L	0.000676	0.00053	mg/L	0.000676	126.45%
Pb 220.353†	-30.1	-0.00257	mg/L	0.000242	-0.00257	mg/L	0.000242	9.42%
Sb 206.836†	-19.6	-0.00549	mg/L	0.001439	-0.00549	mg/L	0.001439	26.22%
Se 196.026†	8.6	0.00476	mg/L	0.001720	0.00476	mg/L	0.001720	36.11%
Si 288.158†	-4.1	-0.00199	mg/L	0.000382	-0.00199	mg/L	0.000382	19.17%
Sn 189.927†	8.1	0.00118	mg/L	0.000138	0.00118	mg/L	0.000138	11.71%
Sr 421.552†	58.1	0.00007	mg/L	0.000019	0.00007	mg/L	0.000019	27.05%
Ti 334.903†	16.3	0.00058	mg/L	0.000107	0.00058	mg/L	0.000107	18.36%
Tl 190.801†	-3.2	-0.00125	mg/L	0.001400	-0.00125	mg/L	0.001400	111.74%
V 292.402†	-54.7	-0.00031	mg/L	0.000072	-0.00031	mg/L	0.000072	23.23%
Zn 206.200†	9.0	0.00328	mg/L	0.000467	0.00328	mg/L	0.000467	14.24%

Sequence No.: 10
Sample ID: UR96 K TWC

Dilution: 1X

Autosampler Location: 306
Date Collected: 5/3/2012 11:40:43 AM
Data Type: Original

Nebulizer Parameters: UR96 K TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: UR96 K TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2519051.3	101.8	%	0.48				0.47%
ScR 361.383	398715.3	104.0	%	1.16				1.12%
Ag 328.068†	158.3	-0.00022	mg/L	0.000012	-0.00022	mg/L	0.000012	5.45%
Al 308.215†	3.5	0.00219	mg/L	0.004953	0.00219	mg/L	0.004953	225.78%
As 188.979†	-11.5	-0.00761	mg/L	0.002149	-0.00761	mg/L	0.002149	28.23%
B 249.677†	640.6	0.1020	mg/L	0.00070	0.1020	mg/L	0.00070	0.68%
Ba 233.527†	98.3	0.01171	mg/L	0.000070	0.01171	mg/L	0.000070	0.60%
Be 313.042†	9.9	0.00001	mg/L	0.000027	0.00001	mg/L	0.000027	207.99%
Ca 317.933†	1221637.9	121.1	mg/L	0.55	121.1	mg/L	0.55	0.45%
Cd 228.802†	19.9	0.00068	mg/L	0.000018	0.00068	mg/L	0.000018	2.62%
Co 228.616†	22.9	0.00059	mg/L	0.000071	0.00059	mg/L	0.000071	12.06%
Cr 267.716†	56.5	-0.00040	mg/L	0.000475	-0.00040	mg/L	0.000475	118.19%
Cu 324.752†	273.2	0.00073	mg/L	0.000095	0.00073	mg/L	0.000095	13.04%
Fe 273.955†	175.2	0.1285	mg/L	0.00140	0.1285	mg/L	0.00140	1.09%
K 766.490†	41072.1	18.50	mg/L	0.094	18.50	mg/L	0.094	0.51%
Mg 279.077†	141065.2	115.5	mg/L	0.97	115.5	mg/L	0.97	0.84%
Mn 257.610†	3359.4	0.06007	mg/L	0.000519	0.06007	mg/L	0.000519	0.86%
Mo 202.031†	143.8	0.00478	mg/L	0.000114	0.00478	mg/L	0.000114	2.38%
Na 589.592†	1818226.8	142.8	mg/L	0.82	142.8	mg/L	0.82	0.57%
Na 330.237†	4558.1	152.6	mg/L	1.21	152.6	mg/L	1.21	0.79%
Ni 231.604†	8.1	0.00175	mg/L	0.000296	0.00175	mg/L	0.000296	16.94%
Pb 220.353†	-108.8	-0.00928	mg/L	0.000719	-0.00928	mg/L	0.000719	7.74%
Sb 206.836†	21.0	0.00575	mg/L	0.001008	0.00575	mg/L	0.001008	17.52%
Se 196.026†	54.1	0.02994	mg/L	0.002888	0.02994	mg/L	0.002888	9.64%
Si 288.158†	34999.9	16.90	mg/L	0.352	16.90	mg/L	0.352	2.08%
Sn 189.927†	-52.8	-0.00414	mg/L	0.001263	-0.00414	mg/L	0.001263	30.50%
Sr 421.552†	633994.3	0.7590	mg/L	0.00363	0.7590	mg/L	0.00363	0.48%
Ti 334.903†	168.9	0.00180	mg/L	0.000137	0.00180	mg/L	0.000137	7.64%
Tl 190.801†	11.0	0.00437	mg/L	0.000488	0.00437	mg/L	0.000488	11.16%
V 292.402†	209.7	0.00121	mg/L	0.000082	0.00121	mg/L	0.000082	6.72%
Zn 206.200†	-0.1	-0.00163	mg/L	0.000576	-0.00163	mg/L	0.000576	35.26%

Sequence No.: 12
Sample ID: US18 A SWC

Dilution: 2X

Autosampler Location: 308
Date Collected: 5/3/2012 11:49:11 AM
Data Type: Original

Nebulizer Parameters: US18 A SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: US18 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2513407.2	101.6	%	0.56				0.55%
ScR 361.383	403134.8	105.2	%	1.37				1.30%
Ag 328.068†	226.4	0.00047	mg/L	0.000314	0.00095	mg/L	0.000628	66.34%
Al 308.215†	161459.9	103.9	mg/L	0.67	207.9	mg/L	1.35	0.65%
As 188.979†	27.1	0.03923	mg/L	0.001107	0.07846	mg/L	0.002214	2.82%
B 249.677†	1203.4	0.1914	mg/L	0.00006	0.3828	mg/L	0.00013	0.03%
Ba 233.527†	21944.0	2.608	mg/L	0.0244	5.215	mg/L	0.0489	0.94%
Be 313.042†	1478.0	0.00177	mg/L	0.000027	0.00354	mg/L	0.000054	1.51%
Ca 317.933†	502215.3	49.79	mg/L	0.930	99.59	mg/L	1.860	1.87%
Cd 228.802†	201.6	0.00558	mg/L	0.000097	0.01116	mg/L	0.000194	1.74%
Co 228.616†	3188.4	0.07364	mg/L	0.000477	0.1473	mg/L	0.00095	0.65%
Cr 267.716†	2540.5	0.3034	mg/L	0.00248	0.6067	mg/L	0.00495	0.82%
Cu 324.752†	72256.3	0.3409	mg/L	0.00058	0.6818	mg/L	0.00115	0.17%
Fe 273.955†	203623.9	149.3	mg/L	0.99	298.5	mg/L	1.97	0.66%
K 766.490†	28255.9	12.73	mg/L	0.058	25.46	mg/L	0.115	0.45%
Mg 279.077†	92435.6	75.59	mg/L	0.235	151.2	mg/L	0.47	0.31%
Mn 257.610†	94171.8	1.704	mg/L	0.0136	3.408	mg/L	0.0272	0.80%
Mo 202.031†	394.6	0.01792	mg/L	0.000409	0.03584	mg/L	0.000817	2.28%
Na 589.592†	608904.9	47.82	mg/L	0.634	95.64	mg/L	1.268	1.33%
Na 330.237†	1503.6	51.58	mg/L	0.436	103.2	mg/L	0.87	0.85%
Ni 231.604†	2076.1	0.4452	mg/L	0.00296	0.8904	mg/L	0.00591	0.66%
Pb 220.353†	2183.8	0.1912	mg/L	0.00159	0.3823	mg/L	0.00318	0.83%
Sb 206.836†	178.7	0.00490	mg/L	0.001359	0.00981	mg/L	0.002717	27.70%
Se 196.026†	-2.6	0.01413	mg/L	0.000757	0.02827	mg/L	0.001514	5.36%
Si 288.158†	3400.2	1.642	mg/L	0.0123	3.283	mg/L	0.0247	0.75%
Sn 189.927†	38.2	0.00967	mg/L	0.000722	0.01935	mg/L	0.001444	7.47%
Sr 421.552†	2139463.4	2.561	mg/L	0.0347	5.122	mg/L	0.0693	1.35%
Ti 334.903†	147443.0	5.263	mg/L	0.0382	10.53	mg/L	0.076	0.73%
Tl 190.801†	-24.5	0.00631	mg/L	0.003333	0.01263	mg/L	0.006666	52.78%
V 292.402†	61505.6	0.3294	mg/L	0.00094	0.6588	mg/L	0.00187	0.28%
Zn 206.200†	1641.5	0.6053	mg/L	0.00409	1.211	mg/L	0.0082	0.68%

Sequence No.: 13
Sample ID: US18 BDUP SWC

Dilution: 2X

Autosampler Location: 309
Date Collected: 5/3/2012 11:53:11 AM
Data Type: Original

Nebulizer Parameters: US18 BDUP SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: US18 BDUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2501941.0	101.1	%	0.29				0.28%
ScR 361.383	396704.8	103.5	%	0.73				0.71%
Ag 328.068†	343.5	0.00097	mg/L	0.000129	0.00193	mg/L	0.000258	13.35%
Al 308.215†	188089.5	121.1	mg/L	0.57	242.2	mg/L	1.14	0.47%
As 188.979†	36.7	0.04300	mg/L	0.004235	0.08599	mg/L	0.008469	9.85%
B 249.677†	1008.0	0.1603	mg/L	0.00194	0.3205	mg/L	0.00388	1.21%
Ba 233.527†	9600.4	1.135	mg/L	0.0199	2.270	mg/L	0.0398	1.75%
Be 313.042†	1584.5	0.00190	mg/L	0.000050	0.00381	mg/L	0.000100	2.62%
Ca 317.933†	388767.6	38.55	mg/L	0.108	77.09	mg/L	0.217	0.28%
Cd 228.802†	290.8	0.00834	mg/L	0.000034	0.01669	mg/L	0.000069	0.41%
Co 228.616†	3358.4	0.07806	mg/L	0.000142	0.1561	mg/L	0.00028	0.18%
Cr 267.716†	3961.4	0.4725	mg/L	0.00811	0.9450	mg/L	0.01623	1.72%
Cu 324.752†	72667.3	0.3446	mg/L	0.00079	0.6892	mg/L	0.00158	0.23%
Fe 273.955†	240233.1	176.1	mg/L	1.15	352.2	mg/L	2.30	0.65%
K 766.490†	34032.1	15.33	mg/L	0.045	30.66	mg/L	0.089	0.29%
Mg 279.077†	109256.0	89.34	mg/L	0.316	178.7	mg/L	0.63	0.35%
Mn 257.610†	106569.1	1.928	mg/L	0.0063	3.857	mg/L	0.0125	0.32%
Mo 202.031†	435.6	0.02006	mg/L	0.000245	0.04012	mg/L	0.000490	1.22%
Na 589.592†	737904.0	57.95	mg/L	0.135	115.9	mg/L	0.27	0.23%
Na 330.237†	1828.0	62.61	mg/L	1.038	125.2	mg/L	2.08	1.66%
Ni 231.604†	2375.1	0.5093	mg/L	0.00906	1.019	mg/L	0.0181	1.78%
Pb 220.353†	2475.5	0.2170	mg/L	0.00080	0.4340	mg/L	0.00161	0.37%
Sb 206.836†	224.0	0.00753	mg/L	0.001773	0.01505	mg/L	0.003545	23.55%
Se 196.026†	-20.5	0.00708	mg/L	0.003749	0.01415	mg/L	0.007499	52.98%
Si 288.158†	4715.1	2.277	mg/L	0.0277	4.553	mg/L	0.0554	1.22%
Sn 189.927†	78.0	0.01523	mg/L	0.000971	0.03047	mg/L	0.001942	6.37%
Sr 421.552†	948877.3	1.136	mg/L	0.0033	2.272	mg/L	0.0065	0.29%
Ti 334.903†	152718.8	5.452	mg/L	0.0160	10.90	mg/L	0.032	0.29%
Tl 190.801†	-37.0	0.00473	mg/L	0.001783	0.00946	mg/L	0.003567	37.69%
V 292.402†	65207.3	0.3478	mg/L	0.00112	0.6956	mg/L	0.00225	0.32%
Zn 206.200†	1815.0	0.6698	mg/L	0.01045	1.340	mg/L	0.0209	1.56%

Sequence No.: 14
Sample ID: US18 B SWC

Dilution: 2X

Autosampler Location: 310
Date Collected: 5/3/2012 11:56:56 AM
Data Type: Original

Nebulizer Parameters: US18 B SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: US18 B SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2515592.4	101.7	%	0.13				0.13%
ScR 361.383	407546.4	106.3	%	2.14				2.01%
Ag 328.068†	390.8	0.00114	mg/L	0.000071	0.00229	mg/L	0.000142	6.23%
Al 308.215†	185976.8	119.7	mg/L	1.04	239.5	mg/L	2.08	0.87%
As 188.979†	40.2	0.04430	mg/L	0.001949	0.08859	mg/L	0.003899	4.40%
B 249.677†	1012.7	0.1610	mg/L	0.00327	0.3220	mg/L	0.00654	2.03%
Ba 233.527†	9704.3	1.147	mg/L	0.0175	2.295	mg/L	0.0350	1.53%
Be 313.042†	1588.1	0.00191	mg/L	0.000074	0.00382	mg/L	0.000147	3.86%
Ca 317.933†	391132.0	38.78	mg/L	0.075	77.56	mg/L	0.150	0.19%
Cd 228.802†	291.9	0.00838	mg/L	0.000114	0.01676	mg/L	0.000228	1.36%
Co 228.616†	3371.2	0.07847	mg/L	0.000537	0.1569	mg/L	0.00107	0.68%
Cr 267.716†	3958.9	0.4722	mg/L	0.00626	0.9444	mg/L	0.01252	1.33%
Cu 324.752†	72756.5	0.3450	mg/L	0.00015	0.6899	mg/L	0.00030	0.04%
Fe 273.955†	239233.9	175.4	mg/L	1.13	350.8	mg/L	2.26	0.64%
K 766.490†	33912.4	15.28	mg/L	0.108	30.56	mg/L	0.217	0.71%
Mg 279.077†	108621.8	88.82	mg/L	0.424	177.6	mg/L	0.85	0.48%
Mn 257.610†	106742.3	1.931	mg/L	0.0117	3.863	mg/L	0.0234	0.61%
Mo 202.031†	452.1	0.02084	mg/L	0.000311	0.04168	mg/L	0.000621	1.49%
Na 589.592†	734486.2	57.68	mg/L	0.400	115.4	mg/L	0.80	0.69%
Na 330.237†	1814.5	62.14	mg/L	0.778	124.3	mg/L	1.56	1.25%
Ni 231.604†	2371.5	0.5085	mg/L	0.00878	1.017	mg/L	0.0176	1.73%
Pb 220.353†	2460.7	0.2156	mg/L	0.00061	0.4312	mg/L	0.00121	0.28%
Sb 206.836†	216.5	0.00586	mg/L	0.001851	0.01172	mg/L	0.003703	31.58%
Se 196.026†	-19.1	0.00779	mg/L	0.002174	0.01557	mg/L	0.004349	27.92%
Si 288.158†	4751.9	2.294	mg/L	0.0297	4.589	mg/L	0.0594	1.29%
Sn 189.927†	71.0	0.01420	mg/L	0.000353	0.02841	mg/L	0.000706	2.48%
Sr 421.552†	947687.0	1.134	mg/L	0.0060	2.269	mg/L	0.0120	0.53%
Ti 334.903†	151387.5	5.404	mg/L	0.0307	10.81	mg/L	0.061	0.57%
Tl 190.801†	-33.4	0.00608	mg/L	0.002658	0.01215	mg/L	0.005315	43.74%
V 292.402†	65241.9	0.3481	mg/L	0.00116	0.6962	mg/L	0.00231	0.33%
Zn 206.200†	1817.9	0.6708	mg/L	0.00927	1.342	mg/L	0.0185	1.38%

Sequence No.: 15
Sample ID: US18 BSPK SWC

Dilution: 2X

Autosampler Location: 311
Date Collected: 5/3/2012 12:00:41 PM
Data Type: Original

Nebulizer Parameters: US18 BSPK SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: US18 BSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2481885.8	100.3	%	0.87				0.87%
ScR 361.383	408175.5	106.5	%	0.68				0.64%
Ag 328.068†	124816.6	0.4801	mg/L	0.00231	0.9602	mg/L	0.00462	0.48%
Al 308.215†	192980.9	124.2	mg/L	0.49	248.5	mg/L	0.98	0.39%
As 188.979†	4378.0	1.909	mg/L	0.0184	3.818	mg/L	0.0368	0.96%
B 249.677†	1042.4	0.1644	mg/L	0.00139	0.3288	mg/L	0.00278	0.85%
Ba 233.527†	25181.8	2.992	mg/L	0.0341	5.984	mg/L	0.0682	1.14%
Be 313.042†	329198.5	0.4595	mg/L	0.00066	0.9191	mg/L	0.00131	0.14%
Ca 317.933†	493649.5	48.94	mg/L	0.229	97.89	mg/L	0.458	0.47%
Cd 228.802†	15579.6	0.5147	mg/L	0.00880	1.029	mg/L	0.0176	1.71%
Co 228.616†	21149.4	0.5416	mg/L	0.00767	1.083	mg/L	0.0153	1.42%
Cr 267.716†	7896.7	0.9378	mg/L	0.01324	1.876	mg/L	0.0265	1.41%
Cu 324.752†	178801.3	0.8324	mg/L	0.00211	1.665	mg/L	0.0042	0.25%
Fe 273.955†	243003.5	178.1	mg/L	0.78	356.3	mg/L	1.56	0.44%
K 766.490†	54485.5	24.55	mg/L	0.039	49.09	mg/L	0.077	0.16%
Mg 279.077†	120719.9	98.73	mg/L	0.231	197.5	mg/L	0.46	0.23%
Mn 257.610†	131377.9	2.378	mg/L	0.0091	4.756	mg/L	0.0181	0.38%
Mo 202.031†	465.6	0.02131	mg/L	0.000891	0.04262	mg/L	0.001783	4.18%
Na 589.592†	850753.0	66.81	mg/L	0.419	133.6	mg/L	0.84	0.63%
Na 330.237†	2082.3	70.99	mg/L	0.594	142.0	mg/L	1.19	0.84%
Ni 231.604†	4366.6	0.9363	mg/L	0.01160	1.873	mg/L	0.0232	1.24%
Pb 220.353†	23966.4	2.052	mg/L	0.0199	4.104	mg/L	0.0398	0.97%
Sb 206.836†	243.2	0.00773	mg/L	0.002413	0.01547	mg/L	0.004826	31.20%
Se 196.026†	3358.9	1.880	mg/L	0.0163	3.759	mg/L	0.0327	0.87%
Si 288.158†	4274.0	2.065	mg/L	0.0282	4.131	mg/L	0.0564	1.37%
Sn 189.927†	62.1	0.01326	mg/L	0.001313	0.02652	mg/L	0.002627	9.90%
Sr 421.552†	1355195.5	1.622	mg/L	0.0035	3.245	mg/L	0.0070	0.22%
Ti 334.903†	151222.7	5.398	mg/L	0.0145	10.80	mg/L	0.029	0.27%
Tl 190.801†	4435.7	1.758	mg/L	0.0172	3.515	mg/L	0.0344	0.98%
V 292.402†	145633.1	0.8062	mg/L	0.00160	1.612	mg/L	0.0032	0.20%
Zn 206.200†	3030.3	1.116	mg/L	0.0191	2.231	mg/L	0.0383	1.72%

Sequence No.: 16
Sample ID: US18 ~~BPOST~~ SWC
Dilution: 2X

222222
5.3

Autosampler Location: 312
Date Collected: 5/3/2012 12:02:57 PM
Data Type: Original

Nebulizer Parameters: US18 BPOST SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: US18 BPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2530216.5	102.3	%	0.49				0.48%
ScR 361.383	406239.2	106.0	%	0.51				0.48%
Ag 328.068†	123115.4	0.4735	mg/L	0.00351	0.9471	mg/L	0.00703	0.74%
Al 308.215†	186919.3	120.3	mg/L	0.61	240.6	mg/L	1.21	0.50%
As 188.979†	4697.7	2.046	mg/L	0.0260	4.093	mg/L	0.0521	1.27%
B 249.677†	1002.3	0.1579	mg/L	0.00144	0.3159	mg/L	0.00288	0.91%
Ba 233.527†	26313.9	3.127	mg/L	0.0243	6.254	mg/L	0.0485	0.78%
Be 313.042†	339520.4	0.4740	mg/L	0.00493	0.9479	mg/L	0.00985	1.04%
Ca 317.933†	486996.9	48.29	mg/L	0.125	96.57	mg/L	0.250	0.26%
Cd 228.802†	16371.0	0.5408	mg/L	0.00640	1.082	mg/L	0.0128	1.18%
Co 228.616†	22037.6	0.5649	mg/L	0.00664	1.130	mg/L	0.0133	1.18%
Cr 267.716†	8094.7	0.9611	mg/L	0.00650	1.922	mg/L	0.0130	0.68%
Cu 324.752†	184317.4	0.8575	mg/L	0.00495	1.715	mg/L	0.0099	0.58%
Fe 273.955†	237648.7	174.2	mg/L	1.22	348.4	mg/L	2.44	0.70%
K 766.490†	55874.2	25.17	mg/L	0.275	50.34	mg/L	0.549	1.09%
Mg 279.077†	119214.5	97.50	mg/L	0.300	195.0	mg/L	0.60	0.31%
Mn 257.610†	130660.0	2.365	mg/L	0.0224	4.730	mg/L	0.0448	0.95%
Mo 202.031†	455.4	0.02084	mg/L	0.000252	0.04168	mg/L	0.000503	1.21%
Na 589.592†	845769.1	66.42	mg/L	1.086	132.8	mg/L	2.17	1.63%
Na 330.237†	2087.7	71.14	mg/L	0.679	142.3	mg/L	1.36	0.95%
Ni 231.604†	4524.8	0.9702	mg/L	0.00960	1.940	mg/L	0.0192	0.99%
Pb 220.353†	25234.9	2.160	mg/L	0.0288	4.319	mg/L	0.0575	1.33%
Sb 206.836†	220.9	0.00290	mg/L	0.002250	0.00579	mg/L	0.004500	77.68%
Se 196.026†	3670.9	2.052	mg/L	0.0236	4.104	mg/L	0.0472	1.15%
Si 288.158†	4660.6	2.252	mg/L	0.0361	4.504	mg/L	0.0722	1.60%
Sn 189.927†	67.8	0.01403	mg/L	0.001842	0.02807	mg/L	0.003684	13.12%
Sr 421.552†	1342354.9	1.607	mg/L	0.0132	3.214	mg/L	0.0264	0.82%
Ti 334.903†	148544.0	5.302	mg/L	0.0446	10.60	mg/L	0.089	0.84%
Tl 190.801†	4709.8	1.865	mg/L	0.0242	3.729	mg/L	0.0484	1.30%
V 292.402†	150902.4	0.8368	mg/L	0.00408	1.674	mg/L	0.0082	0.49%
Zn 206.200†	3055.2	1.125	mg/L	0.0095	2.249	mg/L	0.0190	0.84%

Sequence No.: 17
Sample ID: US18 MB1SPK SWC

Dilution: 2X

Autosampler Location: 313
Date Collected: 5/3/2012 12:05:13 PM
Data Type: Original

Nebulizer Parameters: US18 MB1SPK SWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: US18 MB1SPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2555318.8	103.3	%	0.48				0.46%
ScR 361.383	407911.7	106.4	%	0.59				0.56%
Ag 328.068†	133118.5	0.5124	mg/L	0.00503	1.025	mg/L	0.0101	0.98%
Al 308.215†	3784.0	2.426	mg/L	0.0182	4.853	mg/L	0.0364	0.75%
As 188.979†	4684.5	2.014	mg/L	0.0135	4.029	mg/L	0.0271	0.67%
B 249.677†	10.5	0.00021	mg/L	0.000475	0.00042	mg/L	0.000951	224.52%
Ba 233.527†	15993.1	1.906	mg/L	0.0056	3.812	mg/L	0.0111	0.29%
Be 313.042†	338708.6	0.4731	mg/L	0.00184	0.9462	mg/L	0.00368	0.39%
Ca 317.933†	101536.1	10.07	mg/L	0.033	20.13	mg/L	0.066	0.33%
Cd 228.802†	15619.7	0.5169	mg/L	0.00228	1.034	mg/L	0.0046	0.44%
Co 228.616†	19332.2	0.5036	mg/L	0.00335	1.007	mg/L	0.0067	0.67%
Cr 267.716†	4324.0	0.5113	mg/L	0.00335	1.023	mg/L	0.0067	0.65%
Cu 324.752†	111912.4	0.5144	mg/L	0.00208	1.029	mg/L	0.0042	0.40%
Fe 273.955†	3582.9	2.624	mg/L	0.0208	5.248	mg/L	0.0416	0.79%
K 766.490†	22181.1	9.993	mg/L	0.0158	19.99	mg/L	0.032	0.16%
Mg 279.077†	12355.8	10.12	mg/L	0.030	20.23	mg/L	0.060	0.30%
Mn 257.610†	25665.4	0.4651	mg/L	0.00159	0.9302	mg/L	0.00318	0.34%
Mo 202.031†	34.1	0.00145	mg/L	0.000128	0.00290	mg/L	0.000256	8.80%
Na 589.592†	122809.1	9.644	mg/L	0.0358	19.29	mg/L	0.072	0.37%
Na 330.237†	331.4	10.99	mg/L	0.247	21.98	mg/L	0.494	2.25%
Ni 231.604†	2204.4	0.4726	mg/L	0.00449	0.9453	mg/L	0.00899	0.95%
Pb 220.353†	23305.7	1.990	mg/L	0.0208	3.979	mg/L	0.0416	1.05%
Sb 206.836†	8.3	-0.00292	mg/L	0.000983	-0.00585	mg/L	0.001966	33.62%
Se 196.026†	3597.1	1.993	mg/L	0.0146	3.987	mg/L	0.0293	0.73%
Si 288.158†	17.1	0.01020	mg/L	0.000961	0.02039	mg/L	0.001922	9.42%
Sn 189.927†	-6.5	-0.00058	mg/L	0.000686	-0.00115	mg/L	0.001371	119.01%
Sr 421.552†	405341.7	0.4852	mg/L	0.00114	0.9705	mg/L	0.00228	0.23%
Ti 334.903†	524.6	0.01826	mg/L	0.000148	0.03653	mg/L	0.000296	0.81%
Tl 190.801†	5098.9	1.998	mg/L	0.0154	3.997	mg/L	0.0308	0.77%
V 292.402†	89738.3	0.5114	mg/L	0.00350	1.023	mg/L	0.0070	0.68%
Zn 206.200†	1329.3	0.4875	mg/L	0.00373	0.9750	mg/L	0.00746	0.76%

Sequence No.: 18
Sample ID: CV 2
Dilution: 1X

Autosampler Location: 7
Date Collected: 5/3/2012 12:09:10 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2612224.5	105.6	%	0.02				0.02%
ScR 361.383	408235.8	106.5	%	1.55				1.45%
Ag 328.068†	257556.0	0.9914	mg/L	0.00228	0.9914	mg/L	0.00228	0.23%
Al 308.215†	3125.1	1.983	mg/L	0.0368	1.983	mg/L	0.0368	1.86%
As 188.979†	4541.5	1.958	mg/L	0.0066	1.958	mg/L	0.0066	0.34%
B 249.677†	6080.5	0.9662	mg/L	0.01448	0.9662	mg/L	0.01448	1.50%
Ba 233.527†	8137.3	0.9694	mg/L	0.01651	0.9694	mg/L	0.01651	1.70%
Be 313.042†	669869.0	0.9357	mg/L	0.00920	0.9357	mg/L	0.00920	0.98%
Ca 317.933†	19732.5	1.956	mg/L	0.0029	1.956	mg/L	0.0029	0.15%
Cd 228.802†	30516.8	1.017	mg/L	0.0118	1.017	mg/L	0.0118	1.16%
Co 228.616†	37534.0	0.9770	mg/L	0.00801	0.9770	mg/L	0.00801	0.82%
Cr 267.716†	8466.0	1.002	mg/L	0.0147	1.002	mg/L	0.0147	1.47%
Cu 324.752†	220599.1	1.013	mg/L	0.0054	1.013	mg/L	0.0054	0.53%
Fe 273.955†	2769.7	2.026	mg/L	0.0309	2.026	mg/L	0.0309	1.53%
K 766.490†	44455.1	20.03	mg/L	0.154	20.03	mg/L	0.154	0.77%
Mg 279.077†	2453.3	2.013	mg/L	0.0341	2.013	mg/L	0.0341	1.70%
Mn 257.610†	50958.9	0.9229	mg/L	0.00767	0.9229	mg/L	0.00767	0.83%
Mo 202.031†	21389.8	1.017	mg/L	0.0015	1.017	mg/L	0.0015	0.15%
Na 589.592†	608164.6	47.76	mg/L	0.390	47.76	mg/L	0.390	0.82%
Na 330.237†	1543.8	51.99	mg/L	0.796	51.99	mg/L	0.796	1.53%
Ni 231.604†	4428.0	0.9514	mg/L	0.01746	0.9514	mg/L	0.01746	1.84%
Pb 220.353†	23261.8	1.987	mg/L	0.0037	1.987	mg/L	0.0037	0.19%
Sb 206.836†	7419.5	2.079	mg/L	0.0044	2.079	mg/L	0.0044	0.21%
Se 196.026†	3519.5	1.950	mg/L	0.0096	1.950	mg/L	0.0096	0.49%
Si 288.158†	4286.2	2.073	mg/L	0.0298	2.073	mg/L	0.0298	1.44%
Sn 189.927†	7005.6	1.022	mg/L	0.0029	1.022	mg/L	0.0029	0.28%
Sr 421.552†	802942.0	0.9612	mg/L	0.00826	0.9612	mg/L	0.00826	0.86%
Ti 334.903†	27328.4	0.9742	mg/L	0.00765	0.9742	mg/L	0.00765	0.79%
Tl 190.801†	4950.0	1.941	mg/L	0.0020	1.941	mg/L	0.0020	0.10%
V 292.402†	174133.5	0.9929	mg/L	0.00259	0.9929	mg/L	0.00259	0.26%
Zn 206.200†	2728.0	0.9999	mg/L	0.01710	0.9999	mg/L	0.01710	1.71%

Sequence No.: 19
Sample ID: CB 2

Dilution: 1X

Autosampler Location: 1
Date Collected: 5/3/2012 12:13:12 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	211.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2619999.2	105.9	%	0.40				0.38%
ScR 361.383	406093.5	105.9	%	1.42				1.34%
Ag 328.068†	50.1	0.00019	mg/L	0.000209	0.00019	mg/L	0.000209	108.10%
Al 308.215†	9.1	0.00584	mg/L	0.003136	0.00584	mg/L	0.003136	53.74%
As 188.979†	0.4	0.00017	mg/L	0.000818	0.00017	mg/L	0.000818	479.98%
B 249.677†	4.8	0.00076	mg/L	0.000695	0.00076	mg/L	0.000695	91.32%
Ba 233.527†	-5.5	-0.00066	mg/L	0.000606	-0.00066	mg/L	0.000606	91.72%
Be 313.042†	-62.4	-0.00009	mg/L	0.000023	-0.00009	mg/L	0.000023	26.92%
Ca 317.933†	-15.7	-0.00156	mg/L	0.000966	-0.00156	mg/L	0.000966	62.01%
Cd 228.802†	-0.0	0.00000	mg/L	0.000096	0.00000	mg/L	0.000096	>999.9%
Co 228.616†	-4.4	-0.00012	mg/L	0.000050	-0.00012	mg/L	0.000050	43.27%
Cr 267.716†	3.0	0.00036	mg/L	0.000669	0.00036	mg/L	0.000669	186.95%
Cu 324.752†	53.9	0.00025	mg/L	0.000037	0.00025	mg/L	0.000037	14.79%
Fe 273.955†	5.5	0.00407	mg/L	0.001662	0.00407	mg/L	0.001662	40.85%
K 766.490†	35.5	0.01599	mg/L	0.007724	0.01599	mg/L	0.007724	48.30%
Mg 279.077†	0.4	0.00033	mg/L	0.002417	0.00033	mg/L	0.002417	736.00%
Mn 257.610†	7.2	0.00013	mg/L	0.000051	0.00013	mg/L	0.000051	38.81%
Mo 202.031†	6.7	0.00032	mg/L	0.000100	0.00032	mg/L	0.000100	31.43%
Na 589.592†	60.3	0.00474	mg/L	0.001725	0.00474	mg/L	0.001725	36.42%
Na 330.237†	-0.4	-0.01298	mg/L	0.207204	-0.01298	mg/L	0.207204	>999.9%
Ni 231.604†	2.0	0.00042	mg/L	0.000094	0.00042	mg/L	0.000094	22.44%
Pb 220.353†	-15.9	-0.00136	mg/L	0.000346	-0.00136	mg/L	0.000346	25.51%
Sb 206.836†	-9.5	-0.00266	mg/L	0.001106	-0.00266	mg/L	0.001106	41.61%
Se 196.026†	4.6	0.00254	mg/L	0.002659	0.00254	mg/L	0.002659	104.61%
Si 288.158†	4.6	0.00222	mg/L	0.002686	0.00222	mg/L	0.002686	120.74%
Sn 189.927†	10.4	0.00152	mg/L	0.000422	0.00152	mg/L	0.000422	27.83%
Sr 421.552†	82.4	0.00010	mg/L	0.000016	0.00010	mg/L	0.000016	15.73%
Ti 334.903†	30.6	0.00109	mg/L	0.000248	0.00109	mg/L	0.000248	22.73%
Tl 190.801†	-2.8	-0.00111	mg/L	0.000266	-0.00111	mg/L	0.000266	24.03%
V 292.402†	8.8	0.00005	mg/L	0.000203	0.00005	mg/L	0.000203	401.08%
Zn 206.200†	5.8	0.00211	mg/L	0.000479	0.00211	mg/L	0.000479	22.63%

end
pachage

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-03-12

Page: 1 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
STD	0.0	5mm	1x			
STD	0.1	5mm	1x			
STD	0.5	5mm	1x			
STD	1.0	5mm	1x			
STD	2.0	5mm	1x			
STD	5.0	5mm	1x			
STD	10.0	5mm	1x			
ICV		5mm	1x	7.90	Begin CLP %R=99	✓
ICB		5mm	1x	-0.01		✓
CCV1		5mm	1x	4.12	%R=103	✓
CCB1		5mm	1x	-0.01		✓
CRA		5mm	1x	0.12		✓
URG1	MB1	5mm	1x	0.00		✓
URG1	MB1SPK	5mm	1x	2.05	%R=103	✓
URG1	A	5mm	1x	0.15		
URG1	ADUP	5mm	1x	0.15		✓
URG1	ASPK	5mm	1x	1.22	%R=107	✓
URG1	B	5mm	1x			
URG1	C	5mm	1x			
URG1	D	5mm	1x			
URG1	E	5mm	1x			
CCV2		5mm	1x	4.11	%R=103	✓
CCB2		5mm	1x	-0.00		✓
URG1	F	5mm	1x			
URG1	G	5mm	1x			
US24	MB1	5mm	1x	-0.01		✓
US24	MB1SPK	5mm	1x	2.03	%R=102	✓
US24	MB1SPD	5mm	1x	2.00	%R=100	✓
US24	A	5mm	1x	0.04		
US24	ADUP	5mm	1x	0.05	No RPD: Undetected	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2292

14% $NH_2OH/NaCl$: MP2259

Standard ID:

Standard: 2931-1

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-03-12

Page: 2 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
US24	ASPK	5mm	1X	1.07	%R=107	✓
US18	MB1	5mm	1X	0.00		✓
US18	MB1SPK	5mm	1X	2.08	%R=104	✓
CCV3		5mm	1X	4.06	%R=102	✓
CCB3		5mm	1X	-0.00		✓
US18	A	5mm	1X			
US18	B	5mm	1X	11.09	REL AS 5-3-12	High X
US18	BDUP	5mm	1X	11.27	↓	High X
US18	BSPK	5mm	1X	12.05	↓	High X
UR87	MB1	5mm	1X	-0.02		✓
UR87	MB1SPK	5mm	1X	2.02	%R=101	✓
UR87	REF1	5mm	5X	6.59	8.07 mg/kg	✓
UR87	A	5mm	1X	0.16		
UR87	ADUP	5mm	1X	0.12		✓
UR87	ASPK	5mm	1X	1.15	%R=99	✓
CCV4		5mm	1X	4.06	%R=102	✓
CCB4		5mm	1X	-0.00		✓
UR87	B	5mm	1X			
UR87	C	5mm	1X			
UR81	MB1	5mm	1X	-0.00		✓
UR81	MB1SPK	5mm	1X	2.05	%R=103	✓
UR81	A	5mm	1X	0.47		
UR81	ADUP	5mm	1X	0.49		✓
UR81	ASPK	5mm	1X	1.54	%R=107	✓
UR81	B	5mm	1X			
UR81	C	5mm	1X			
UR81	D	5mm	1X			
CCV5		5mm	1X	4.09	%R=102	✓
CCB5		5mm	1X	-0.00		✓
UR81	E	5mm	1X			

Chemical/Reagent ID:
10% $SnCl_2$: MP2292

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2931-1

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-03-12

Page: 3 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
URS1	F	5mm	1x			
URS1	G	5mm	1x			
URS1	H	5mm	1x			
URS1	I	5mm	1x			
URS1	J	5mm	1x			
CCVL		5mm	1x	4.08	%R= 104	✓
CCBL		5mm	1x	-0.00		✓
US18	B	5mm	2x	5.45		
US18	BDUP	5mm	2x	5.66	RPD= 3.78 %	✓
US18	BSPK	5mm	2x	6.15	%R=70 LOW	x
CCV7		5mm	1x	4.04	%R=101	✓
CCB7		5mm	1x	-0.01	END CLP	✓
STD	0.0	Twm	1x			
STD	0.1	Twm	1x			
STD	0.5	Twm	1x			
STD	1.0	Twm	1x			
STD	2.0	Twm	1x			
STD	5.0	Twm	1x			
STD	10.0	Twm	1x			
ICV		Twm	1x	8.63	Begin CLP %R=108	✓
ICB		Twm	1x	-0.01		✓
CCV1		Twm	1x	4.18	%R=105	✓
CCB1		Twm	1x	-0.00		✓
CRA		Twm	1x	0.11		✓
URS7	MB2	Twm	1x	0.01		✓
URS7	MB2SPK	Twm	1x	2.10	%R=105	✓
URS7	D	Twm	1x	0.01		
URS7	DDUP	Twm	1x	0.01	NO RPD: Undetected	✓
URS7	DSPK	Twm	1x	1.13	%R=113	✓
US02	MB1	Twm	1x	0.01		✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2292

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2931-1 (5mm)
2932-3 (Twm)

ICV/CCV: 5L-18

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 5-03-12

	Analyst 5-3 DM	Peer 5-3 P	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓		
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	✓	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See RUN LOG
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	See CAF

CETAC Hg Analysis Report - 12050300.DB - Thursday, May 03, 2012, 12:35:45 PM

5372 M

Analyst
Date Started Thursday, May 03, 2012, 09:14.43
Worksheet ARI 10ppb CALIB
Comment

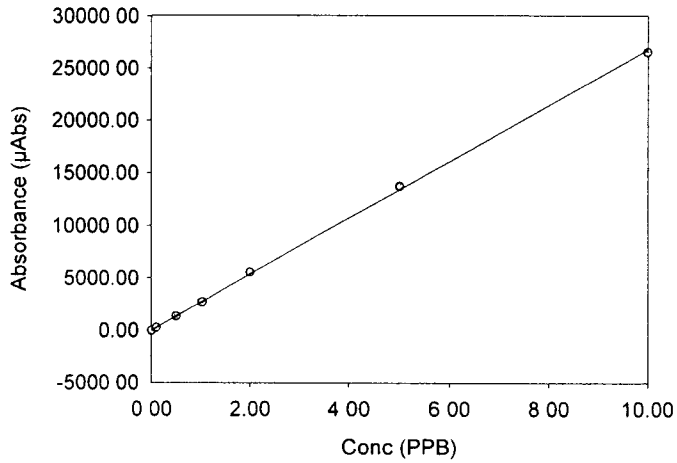
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	03-May-2012, 09:14	10.00	0.63	26100 00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	03-May-2012, 09.17	0.00	5.60	-20.00	1 00	
Standard #1	03-May-2012, 09:18	0 10	1.37	297.00	1.00	
Standard #2	03-May-2012, 09:20	0.50	0 87	1350.00	1 00	
Standard #3	03-May-2012, 09:21	1 00	0 16	2660.00	1 00	
Standard #4	03-May-2012, 09:23	2 00	1.33	5560.00	1.00	
Standard #5	03-May-2012, 09:25	5 00	0.34	13700.00	1 00	
Standard #6	03-May-2012, 09.26	10.00	0.09	26600 00	1 00	

SMM

Calibration Data



Int.	0 000
Slope	2677 394
Correlation	0 99981

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	03-May-2012, 09 29	7.90	0.13	21200.00	1 00	
ICB	03-May-2012, 09:31	-0.01	16.80	-28 30	1 00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 09:32	4 12	0.10	11000 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 09:34	-0.01	6.33	-32.30	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	03-May-2012, 09:36	0 12	1 54	315 00	1.00	
UR61 MB1 SMM	03-May-2012, 09:37	0.00	28 40	10.80	1 00	
UR61 MB1SPK SMM	03-May-2012, 09:39	2 05	0.11	5500.00	1.00	
UR61 A SMM	03-May-2012, 09.40	0.15	0.98	401.00	1 00	
UR61 ADUP SMM	03-May-2012, 09:42	0 15	0.20	401 00	1.00	
UR61 ASPK SMM	03-May-2012, 09:44	1 22	0.26	3260.00	1.00	
UR61 B SMM	03-May-2012, 09 45	0 33	0.13	894 00	1.00	
UR61 C SMM	03-May-2012, 09:47	0.65	0 49	1730 00	1 00	
UR61 D SMM	03-May-2012, 09.48	0.11	0 62	293 00	1 00	
UR61 E SMM	03-May-2012, 09:50	0.72	0.30	1930.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 09:52	4.11	1.09	11000 00	1.00	

CETAC Hg Analysis Report - 12050300.DB - Thursday, May 03, 2012, 12:35:46 PM

Analyst
Date Started Thursday, May 03, 2012, 09 53·53
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 09:53	-0 00	16.20	-8 73	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UR61 F SMM	03-May-2012, 09 55	0 65	1.29	1730.00	1.00	
UR61 G SMM	03-May-2012, 09:57	0.36	1.17	951.00	1.00	
US24 MB1 SMM	03-May-2012, 09·58	-0 01	17.30	-13 60	1 00	
US24 MB1SPK SMM	03-May-2012, 10.00	2.03	0 04	5430 00	1.00	
US24 MB1SPD SMM	03-May-2012, 10·01	2.00	1.31	5360.00	1 00	
US24 A SMM	03-May-2012, 10·03	0 04	0 75	120.00	1 00	
US24 ADUP SMM	03-May-2012, 10.05	0 05	0.74	141 00	1.00	
US24 ASPK SMM	03-May-2012, 10.06	1.07	0 10	2870.00	1 00	
US18 MB1 SMM	03-May-2012, 10:08	0.00	929.00	0 27	1 00	
US18 MB1SPK SMM	03-May-2012, 10:09	2.08	0 24	5580.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 10 11	4.06	0 47	10900 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 10·13	-0.00	11 00	-4.08	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
US18 A SMM	03-May-2012, 10:14	1 12	0.80	3000.00	1 00	
US18 B SMM	03-May-2012, 10·16	11.10	1 06	29700.00	1.00	O
US18 BDUP SMM	03-May-2012, 10 18	11.30	0.25	30200.00	1.00	O High
US18 BSPK SMM	03-May-2012, 10.19	12.10	0.90	32300 00	1 00	O
UR87 MB1 SMM	03-May-2012, 10:21	-0.02	5.51	-46 40	1.00	
UR87 MB1SPK SMM	03-May-2012, 10:23	2.02	0.22	5410 00	1.00	
UR87 REF1 SMM	03-May-2012, 10:24	6.59	0.35	17600.00	5.00	
UR87 A SMM	03-May-2012, 10:26	0.16	0.51	430 00	1.00	
UR87 ADUP SMM	03-May-2012, 10:27	0.12	0.12	333.00	1.00	
UR87 ASPK SMM	03-May-2012, 10·29	1 15	1 00	3070 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 10.31	4 06	0 69	10900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 10.32	-0 00	47 90	-9 98	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UR87 B SMM	03-May-2012, 10:34	0.13	0.32	355.00	1 00	
UR87 C SMM	03-May-2012, 10 36	0.12	1.31	311.00	1 00	
UR81 MB1 SMM	03-May-2012, 10·37	-0.00	95 30	-2.61	1.00	
UR81 MB1SPK SMM	03-May-2012, 10 39	2.05	0.91	5480.00	1.00	
UR81 A SMM	03-May-2012, 10 40	0.47	0.55	1270.00	1 00	
UR81 ADUP SMM	03-May-2012, 10.42	0 49	1.16	1310.00	1 00	
UR81 ASPK SMM	03-May-2012, 10:44	1.54	0.31	4130.00	1 00	
UR81 B SMM	03-May-2012, 10:45	0 43	1.35	1140.00	1.00	
UR81 C SMM	03-May-2012, 10·47	0.59	0.18	1580.00	1.00	
UR81 D SMM	03-May-2012, 10.49	0.42	0.62	1110.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 10:50	4.09	0.10	10900.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 10.52	-0.00	25 10	-7 54	1 00	

CETAC Hg Analysis Report - 12050300.DB - Thursday, May 03, 2012, 12:35:46 PM

Analyst
Date Started Thursday, May 03, 2012, 10:54:00
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UR81 E SMM	03-May-2012, 10 54	0 29	0 38	777.00	1 00	
UR81 F SMM	03-May-2012, 10.55	0.68	0 26	1830 00	1 00	
UR81 G SMM	03-May-2012, 10:57	0.13	1 33	356.00	1 00	
UR81 H SMM	03-May-2012, 10.58	0.57	0 92	1520.00	1 00	
UR81 I SMM	03-May-2012, 11:00	0 59	0 63	1570.00	1 00	
UR81 J SMM	03-May-2012, 11:02	0 54	0.36	1450.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 11:03	4.08	0.16	10900 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 11:05	-0.00	18 40	-11 70	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
US18 B SMM	03-May-2012, 11 07	5.45	0 62	14600 00	2 00	
US18 BDUP SMM	03-May-2012, 11:09	5.66	0.69	15200 00	2 00	
US18 BSPK SMM	03-May-2012, 11.10	6.15	0 37	16500.00	2 00	- LOW %R

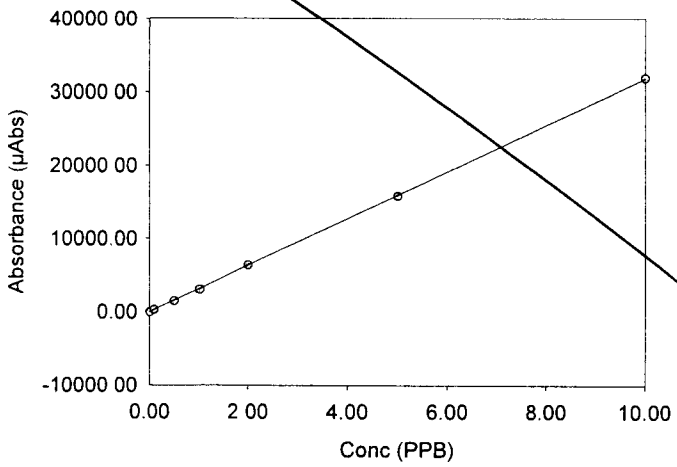
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-May-2012, 11.12	4.04	1 38	10800 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-May-2012, 11:13	-0 01	3 42	-38 40	1 00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	03-May-2012, 11:16	0 00	3 41	-46 50	1 00	
Standard #1	03-May-2012, 11 17	0.10	1 97	323 00	1 00	
Standard #2	03-May-2012, 11:19	0.50	0 13	1490 00	1.00	
Standard #3	03-May-2012, 11:21	1 00	0 54	3060.00	1.00	
Standard #4	03-May-2012, 11:22	2.00	0.15	6370 00	1.00	
Standard #5	03-May-2012, 11:24	5.00	0 62	15800 00	1.00	
Standard #6	03-May-2012, 11:25	10.00	1.10	32000 00	1 00	

TWM

Calibration Data



Int.	0.000
Slope	3187.983
Correlation	0 99996

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	03-May-2012, 11:28	8 63	0.53	27500.00	1.00	
ICB	03-May-2012, 11:30	-0.01	3.23	-37.40	1 00	Begin CLP

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: SMM
Instrument: CETAC
Analyst: KM
Date: 4/27/12
Bath Temp: 95°C
Start Time: 1450
End Time: 1520

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	2931-1	0.01	50.0	0.1	2
STD2	2931-1	0.05	50.0	0.5	2
STD3	2931-1	0.10	50.0	1.0	2
STD4	2931-1	0.20	50.0	2.0	2
STD5	2931-1	0.50	50.0	5.0	2
STD6	2931-1	1.00	50.0	10.0	2
CRA	2931-1	0.01	50.0	0.1	1
ICB/CCB	—	0.00	50.0	0.0	3
ICV/LCS	56-18	0.08	50 0	8.0	2
CCV	56-18	0.04	50 0	4 0	3

Chemical/Reagent ID:

HNO_3: I7370
H_2SO_4: I7184
HCl: —
5% $K_2S_2O_8$: MP2272
5% $KMnO_4$: MP2273

Prep Code:
Instrument:
Analyst:
Date:
Bath Temp:
Start Time:
End Time:

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3:
H_2SO_4:
HCl:
5% $K_2S_2O_8$:
5% $KMnO_4$:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM
Analyst: KM
Bath Temp: 95°C
Start Time: 1150
End Time: 1220
Matrix: Soil
Date: 5/02/12

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
US18 A	1	—	0.233	50.0	5/14 1	Y	
US18 B	1	—	0.242	50.0	1	Y	
US18 BDUP	1	—	0.244	50.0	1	Y	
US18 BSPK	1	—	0.239	50.0	1	Y	
US18 MBI	—	—	—	50.0	1	Y	
US18 MBISPK	—	—	—	50.0	1	Y	

KM
5/02/12

Chemical/Reagent ID:

HNO_3: I7370
H_2SO_4: I7184
HCl: —
5% $K_2S_2O_8$: MP2272
5% $KMnO_4$: MP2273
Digest Tube Lot: 1108215

UR01 : 02295

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: UR81, US18

w
4-27-12

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 4/26/2012
ANALYST: KE 17:48

Instrumentation **Drying Ovens:** 12 **Analytical Balance:** 1123230597
Muffle Furnace: N / A

Batch drying time
record times as mm/dd/yy hh:mm
4/26/2012 17:48 date/time in oven KE
4/27/2012 9:38 date/time out KE
elapsed hrs = 15.8

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

Cal Weight ID		CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
Date & Time		4/26/12 16:44 KE	4/26/12 15:02 KE	4/27/12 9:56 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
record weights to 4 places		*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0711	1.0710			0.00							
UR61 A1		6.6081	1.0691	1.8299			0.76	**13.7%**						
UR61 A1 dup		6.8529	1.0652	1.8569			0.79	**13.7%**						
							RPD =	0.41%				RPD =	NA	
UR61 A1 trp		6.8643	1.0896	1.8866			0.80	**13.8%**						
							RSD =	0.45%				RSD =	NA	
UR61 B1		6.1043	1.0588	3.6145			2.56	**50.7%**						
UR61 C1		5.4146	1.0889	2.2816			1.19	**27.6%**						
UR61 D1		5.3488	1.0858	1.8536			0.77	**18.0%**						
UR61 E1		6.5526	1.0762	3.2473			2.17	**39.6%**						
UR61 F1		6.0277	1.0788	2.2913			1.21	**24.5%**						
UR61 G1		5.5084	1.0778	2.0403			0.96	**21.7%**						
UR81 A2		6.4348	1.1033	3.0977			1.99	**37.4%**						
UR81 A2 dup		6.5700	1.1026	3.1625			2.06	**37.7%**						
							RPD =	0.71%				RPD =	NA	
UR81 A2 trp		6.3724	1.0779	3.0714			1.99	**37.7%**						
							RSD =	0.40%				RSD =	NA	
UR81 B2		6.2399	1.0626	3.0464			1.98	**38.3%**						
UR81 C2		6.3949	1.0786	3.3665			2.29	**43.0%**						
UR81 D2		7.1164	1.1021	3.5129			2.41	**40.1%**						
UR81 E2		7.0097	1.0632	4.8598			3.80	**63.8%**						
UR81 F2		7.0334	1.0773	3.5388			2.46	**41.3%**						

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 4/26/2012

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 17:48

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
4/26/2012 17:48	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
4/27/2012 9:38	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	15.8			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	4/26/12 16:44 KE	4/26/12 15:02 KE	4/27/12 9:56 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
UR81 G2		8.9185	1.0562	5.5046			4.45	56.6%						
UR81 H2		6.5015	1.0764	3.1393			2.06	38.0%						
UR81 I 2		7.2819	1.1148	4.3722			3.26	52.8%						
UR81 J 2		7.0638	1.0998	3.4487			2.35	39.4%						
UR85 A2		8.8915	1.0988	7.2097			6.11	78.4%						
UR85 A2 dup		8.6301	1.0627	6.9389			5.88	77.7%						
							RPD =	0.98%				RPD =	NA	
UR85 B2		7.0747	1.0827	5.6496			4.57	76.2%						

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analyst: W	Date: 4-26-12	Oven ID: 12		Balance ID:	1123230597
Time in Oven:	~~7:38~~ 17:48 4-26-12 W	Time Out of Oven:	9:38	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	4-26-12 10:14	4-26-12 15:02	4-27-12 9:56						
Cal Weight (10.0000).	10.0000 W	10.0000 W	10.0000 W						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	Dry Weight 104°C 2	Dry Weight 104°C 3	Dry Weight grams	Ash Weight 550°C 1	Ash Weight 550°C 2	Ash Weight 550°C 3
BLANK	1	Ø	1.0711	1.0710						
UR61 A1	2	66081	1.0691	1.8299						
↓ A1	3	68529	1.0652	1.8569						
↓ A1	4	68643	1.0896	1.8866						
B1	5	61043	1.0588	3.6145						
C1	6	54146	1.0889	2.2816						
D1	7	53486	1.0858	1.8536						
E1	8	65526	1.0762	3.2473						
F1	9	60277	1.0788	2.2913						
G1	10	55084	1.0778	2.0403						
UR81 A2	11	6.4348	1.1033	3.0977						
↓ A2	12	65700	1.1026	3.1625						
↓ A2	13	6.3724	1.0779	3.0714						
B2	14	6.2399	1.0626	3.0464						
C2	15	6.3949	1.0786	3.3665						
D2	16	7.1164	1.1021	3.5129						
E2	17	7.0097	1.0632	4.8598						
F2	18	7.0334	1.0773	3.5388						
G2	19	8.9185	1.0562	5.5046						
H2	20	65015	1.0764	3.1393						
I2	21	7.2819	1.1148	4.3722						
J2	22	7.0638	1.0998	3.4487						
UR85 A2	23	8.8915	1.0988	7.2097						
↓ A2	24	8.6301	1.0627	6.9389						
B2	25	7.0747	1.0827	5.6496						

6053F

Revision 002
12/28/09

UR81 : 62289

W
11-27-12

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* **ZnOAc PRES.**

DATE: 4/26/2012
ANALYST: KE 17:48

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597
Muffle Furnace: N / A

Batch drying time		
record times as mm/dd/yy hh:mm		
4/26/2012 17:48	date/time in oven	KE
4/27/2012 9:38	date/time out	KE
elapsed hrs =	15.8	

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	4/26/12 17:22 KE	4/26/12 15:54 KE	4/17/12 9:56 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10 0000									
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0876	1.0876			0.00							
UR81 A1		7.0616	1.1012	3.1683			2.07	**34.7%**						
UR81 A1 dup		7.2067	1.0675	3.2066			2.14	**34.8%**						
							RPD =	0.47%				RPD =	NA	
UR81 B1		7.5868	1.0631	3.3659			2.30	**35.3%**						
UR81 C1		6.4600	1.0783	3.1249			2.05	**38.0%**						
UR81 D1		7.9097	1.0960	3.7016			2.61	**38.2%**						
UR81 E1		8.6270	1.0966	5.6223			4.53	**60.1%**						
UR81 F1		7.6040	1.0961	3.7071			2.61	**40.1%**						
UR81 G1		7.5918	1.1269	3.6599			2.53	**39.2%**						
UR81 H1		7.8724	1.1138	3.3955			2.28	**33.8%**						
UR81 I 1		8.2994	1.0766	4.2668			3.19	**44.2%**						
UR81 J 1		7.2862	1.0992	3.1049			2.01	**32.4%**						
UR85 A1		8.5316	1.0770	7.0678			5.99	**80.4%**						
UR85 A1 dup		8.4160	1.0777	6.9394			5.86	**79.9%**						
							RPD =	0.61%				RPD =	NA	
UR85 B1		6.1859	1.0671	5.0365			3.97	**77.5%**						
UR87 A2		8.1621	1.1048	6.4492			5.34	**75.7%**						
UR87 A2 dup		7.9589	1.1128	5.9905			4.88	**71.2%**						
							RPD =	6.10%				RPD =	NA	

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

① 4-26-12 (W) ZnOAc Pres.

Analyst: (W)	Date: 4-26-12		Oven ID: 12	Balance ID:	1123230597
Time in Oven:	17:48	Time Out of Oven:	9:38	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time	4-26-12 16:14	4-26-12 15:54	4-26-12 17:22	4-26-12 9:58					
Cal Weight (10 0000)	10.0000 (W)	10.0000 (W)	10.0000 (W)	10.0000 (W)					

Sample ID	Dish #	Sample	Tare	Sample Dry Weight 104°C 1	① ~~2~~ 1	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	① ~~0~~	1.0876	~~0~~	1.0876					
UR81 A1	2	~~6.6081~~	1.1012	7.0616	3.16~~8~~83					
nl A1	3	~~6.8529~~	1.0675	7.2067	3.2066					
B1	4	~~6.8643~~	1.0631	7.5868	3.3659					
C1	5	~~6.1043~~	1.0783	6.4600	3.1249					
D1	6	~~8.4146~~	1.0960	7.9097	3.7016					
E1	7	~~5.3488~~	1.0966	8.6270	5.6223					
F1	8	~~6.5526~~	1.0961	7.6040	3.7071					
G1	9	~~6.0277~~	1.1269	7.5918	3.6599					
H1	10	~~5.5034~~	1.1130	7.8724	① ~~3.9~~ 3.3955					
I1	11		1.0766	8.2994	4.2668					
J1	12		1.0992	7.2862	3.1049					
UR85 A1	13		1.0770	8.5316	7.0678					
A1	14		1.0777	8.4160	6.9394					
B1	15		1.0671	6.1859	5.0365					
UR87 A2	16		1.1048	8.1621	6.4492					
nl B2	17		1.1128	7.9589	① ~~5.48~~ 5.9905					
~~B2~~	~~18~~		~~1.0934~~	~~7.9652~~	~~5.4643~~		Not Preserved 4-27-12 (W)			
~~C2~~	~~19~~		1.0729	7.7498	6.1461					

4-26-12 (W)

SULFIDE BENCHSHEET (Spectrophotometric, EPA 376.2) Soils, sediments and solid phase samples		Date Time	Analyst
	Distillation	4/30/12 9:35	CR
	Finish	4/30/12 16:48	CR

If distilled, specify Procedure: PSEP

1. Standardization of sodium thiosulfate titrant — Buret used for titrations: #2

Thiosulfate ID: 9237C
Bi-iodate ID: 8530C
Stock bi-iodate = 0.8130 grams to 1000 mL
Normality = 0.025

Titration of bi-iodate with thiosulfate

mL bi-iodate =	3.00	3.00	3.00	
mL thiosulfate =	3.05	3.05	3.05	nthio
Normality thiosulfate = (mL bi-iodate*normbio) / mL thiosulfate =	0.025	0.025	0.025	**0.025**

2. Normality of Iodine

Iodine ID: 9182C

Titration of Iodine with thiosulfate

mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	3.00	3.00	3.00	ni
Normality iodine = (mL thiosulfate*nthio) / mL iodine=	0.025	0.025	0.025	**0.025**

3. Standardization of Sodium Sulfide Stock

Stock ID = 00126-8
Approx conc in 100ml
g Na2S = 0.6025 mg/ mL = 0.804

Titration of standard with thiosulfate

mL Standard =	1.00	1.00	1.00	
mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	1.55	1.55	1.55	stkconc (mg/mL)
Sulfide (mg/mL) = {[(mL iodine*ni)-(mL thio *nthio)]*16} / mL standard =	0.571	0.571	0.571	**0.571**

Intermediate Standard

Add 10.9 ml stk to 250 mL 0.01M NaOH = **0.025** **mg/mL**

mL required for for 0.025 mg/mL 10.9

4. Calibration Standard Curve — spectrophotometer used:

Inter Std Volume (mL)	Final Volume (mL)	Calc Conc (mg S/L)	Absorbance @650 nm 1	2	AVG ABS	mg/L
0.00	50	0.000	0.000		0.000	0.011
0.10	50	0.050	0.022		0.022	0.053
0.25	50	0.124	0.059		0.059	0.123
0.50	50	0.249	0.123		0.123	0.244
1.00	50	0.498	0.249		0.249	0.482
2.00	50	0.996	0.526		0.526	1.005

RegressionData

intercept = -0.006
slope = 0.529
r = 0.9996

Comment: Calibration OK!

maxabs = 0.526

Calib Verif Std =	1.0	ml INT to	50	ml ZnOAc=	0.498	mg/l
Distillation Std =	1.0	ml stk to	100	=	5.71	mg/l

SAMPLE DATA

enter dilution as mL final/mL sample

SAMPLE ID	Distillation Data: SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Spectrophotometric Data: Dilution Factor	Abs @ 650 nm Sample	Bkg	regressed Conc (mg S/L)	SAMPLE DATA: CORR CONC (ppm)	
ICB		na	na	1.00	0.000		0.011	< 0.05	OK!
ICV		na	na	1.00	0.252		0.487	0.487	97.89%
Distilled samples									
Dist Blk	100.0	100%	100	1.00	0.008		0.026	< 0.05	OK!
Dist Chk	100.0	100%	100	10.00	0.337		0.648	6.480	113.50%
Soil Samples	**(grams)**	**% Solids**	**(mL)**		**Sample**	**Bkg**	**(mg/L)**	**mg/kg**	
UR81 A1	5.112	34.7%	100	50.00	0.484		0.926	2609.685	
UR81 A1 dup	5.086	34.7%	100	50.00	0.518		0.990	2805.086	RPD=7.22%
UR81 A1 trp	5.102	34.7%	100	50.00	0.526		1.005	2838.993	RSD=4.5%
UR81 A1 ms	5.088	34.7%	100	100.00	0.300		0.578	3274.226	102.75%
		Spike at	2.00	ml stock to	1.766	g dry wt =		646.751	mg/kg
UR81 A1 msd	5.183	34.7%	100	100.00	0.288		0.555	3088.104	75.35%
		Spike at	2.00	ml stock to	1.799	g dry wt =		634.896	mg/kg

SAMPLE DATA

enter dilution as mL final/mL sample

	Distillation Data			Spectrophotometric Data				SAMPLE DATA	
SAMPLE ID	SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Dilution Factor	Abs @ 650 nm Sample	Abs @ 650 nm Bkg	regressed Conc (mg S/L)	CORR CONC (ppm)	
UR81 B1	5.283	35.3%	100	50.00	0.415		0.795	2132.640	
~~UR81 C1~~	~~5.078~~	~~38.0%~~	~~100~~	~~10.00~~	~~0.570~~		~~1.088~~	~~564.037~~	~~*offscale*~~
UR81 D1	5.115	38.2%	100	20.00	0.510		0.975	997.975	
Cal Blk		na	na	1.00	-0.004		0.004	< 0.05	*OK!*
CCV		na	na	1.00	0.273		0.527	0.527	*105.86%*
UR81 E1	5.101	60.1%	100	50.00	0.386		0.741	1207.914	
UR81 F1	5.073	40.1%	100	10.00	0.412		0.790	388.228	
UR81 G1	5.031	39.2%	100	20.00	0.466		0.892	904.417	
~~UR81 H1~~	~~5.232~~	~~33.8%~~	~~100~~	~~50.00~~	~~0.715~~		~~1.362~~	~~3852.165~~	~~*offscale*~~
~~UR81 I1~~	~~5.255~~	~~44.2%~~	~~100~~	~~5.00~~	~~0.614~~		~~1.172~~	~~252.195~~	~~*offscale*~~
~~UR81 J1~~	~~5.103~~	~~32.4%~~	~~100~~	~~20.00~~	~~0.864~~		~~1.644~~	~~1988.740~~	~~*offscale*~~
UR81 C1	5.078	38.0%	100	20.00	0.308		0.593	614.826	
UR81 H1	5.232	33.8%	100	100.00	0.240		0.465	2627.625	
UR81 I1	5.255	44.2%	100	10.00	0.333		0.640	275.733	
UR81 J1	5.103	32.4%	100	50.00	0.360		0.691	2091.118	
Cal Blk		na	na	1.00	0.009		0.028	< 0.05	*OK!*
CCV		na	na	1.00	0.286		0.552	0.552	*Err @111%*
CCV		na	na	1.00	0.238		0.461	0.461	*92.58%*

SULFIDE BENCHSHEET (Spectrophotometric, EPA 376.2) Soils, sediments and solid phase samples		Date Time	Analyst
	Distillation	4-30-12 8:35	an
	Finish	4-30-12 16:48	an

If distilled, specify Procedure: **PSEP**

1. Standardization of sodium thiosulfate titrant — Buret used for titrations: **#2**

Thiosulfate ID: **9237C**
Bi-iodate ID: **8530C**
Stock bi-iodate = **0.8130** grams to 1000 mL
Normality = **0.025**

Titration of bi-iodate with thiosulfate				
mL bi-iodate =	3.00	3.00	3.00	
mL thiosulfate =	3.05	3.05	3.05	nthio
Normality thiosulfate = (mL bi-iodate*normbio) / mL thiosulfate =	0.025	0.025	0.025	**0.025**

2. Normality of Iodine

Iodine ID: **9182C**

Titration of Iodine with thiosulfate				
mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	3.00	3.00	3.00	ni
Normality iodine = (mL thiosulfate*nthio) / mL iodine=	0.025	0.025	0.025	**0.025**

3. Standardization of Sodium Sulfide Stock

Stock ID = **00126-8**
Approx conc in 100ml
g Na2S = 0.6025 mg/ mL = 0.804

Titration of standard with thiosulfate				
mL Standard =	1.00	1.00	1.00	
mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	1.55	1.55	1.55	stkconc (mg/mL)
Sulfide (mg/mL) = {[(mL iodine*ni)-(mL thio *nthio)]*16} / mL standard =	0.571	0.571	0.571	**0.571**

Intermediate Standard

Add 10.9 ml stk to 250 mL 0.01M NaOH = **0.025** **mg/mL**

mL required for for 0.025 mg/mL 10.9

4. Calibration Standard Curve — spectrophotometer used:

Inter Std Volume (mL)	Final Volume (mL)	Calc Conc (mg S/L)	Absorbance @650 nm 1	2	AVG ABS	mg/L
0.00	50	0.000	0.000			
0.10	50	0.050	0.022			
0.25	50	0.124	0.059			
0.50	50	0.249	0.123			
1.00	50	0.498	0.249			
2.00	50	0.996	0.526			
Calib Verif Std =		1.0	ml INT to	50	ml ZnOAc=	0.498 mg/l
Distillation Std =		1.0	ml stk to	100	=	5.71 mg/l

RegressionData

intercept =
slope =
r =
Comment:
maxabs =

SAMPLE DATA

enter dilution as mL final/mL sample

SAMPLE ID	Distillation Data: SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Spectrophotometric Data: Dilution Factor	Abs @ 650 nm Sample	Bkg	regressed Conc (mg S/L)	SAMPLE DATA: CORR CONC (ppm)	
ICB		na	na	1.00	0.000				
ICV		na	na	1.00	0.252				
Distilled samples									
Dist Blk	100.0	100%	100	1.00	0.008				
Dist Chk	100.0	100%	100	10.00	0.337				
Soil Samples	(grams)	% Solids	(mL)		Sample	Bkg	(mg/L)	mg/kg	
10981 M	5.112	34.2%	100	50	0.484				
M dup	5.086		100	50	0.518				
M trp	5.102		100	50	0.526				
M ms	5.088		100	100	0.300				
		Spike at	2.00	ml stock to		g dry wt =			mg/kg
M msd	5.183	34.9%	100	100	0.288				
		Spike at	2.00	ml stock to		g dry wt =			mg/kg

SAMPLE DATA

enter dilution as mL final/mL sample

	Distillation Data			Spectrophotometric Data				SAMPLE DATA	
SAMPLE ID	SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Dilution Factor	Abs @ 650 nm Sample	Abs @ 650 nm Bkg	regressed Conc (mg S/L)	CORR CONC (ppm)	
UR81 B1	5.283	35.3%	100	50	0.415				
C1	5.028	38.0%	100	10	0.570				
D1	5.115	38.2%	100	20	0.510				
Cal Blk		na	na	1.00	0.004				
CCV		na	na	1.00	0.273				
UR81 E1	5.101	60.1%	100	50	0.386				
F1	5.073	70.1%	100	10	0.412				
G1	5.031	39.2%	100	20	0.466				
H1	5.232	33.8%	100	50	0.715				
I1	5.255	44.2%	100	5	0.614				
J1	5.103	32.4%	100	20	0.864				
C1	5.028	38.0%	100	20	0.308				
H1	5.232	33.8%	100	100	0.240				
I1	5.255	44.2%	100	10	0.333				
J1	5.103	32.4%	100	50	0.360				
Cal Blk		na	na	1.00	0.009				
CCV		na	na	1.00	0.286				
CCV				1.00	0.238				

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Sulfide Digestion Log

			Pretreatment Data							Sample Extraction Data				
Sample ID	% Solids	% Water	Date	Sample Weight	Extract Method*	Acid	Required pH	mL DI Water	Observed mL acid	Date	Sample Weight	mL Acid Required	mL DI Water Required	Trap Volume (mL)
PB	NA	NA	4-30-12	NA	PSEP	HCl + AL	<2	NA	NA	4-30-12	100mL	NA	100mL	100mL
LCS														
UR81 A											5.112		50mL	
A1 DUP											~~5.128~~	5.086		
A1 TRP											~~5.168~~	5.102		
A1 MS											~~5.113~~	5.088		
A1 MSD											5.183			
B1											5.283			
C1											5.078			
D1											5.115			
E1											5.101			
F1											5.073			
G1											5.031			
H1											5.232			
I1											5.255			
J1											5.103			

TO WORKS OVER PLEV

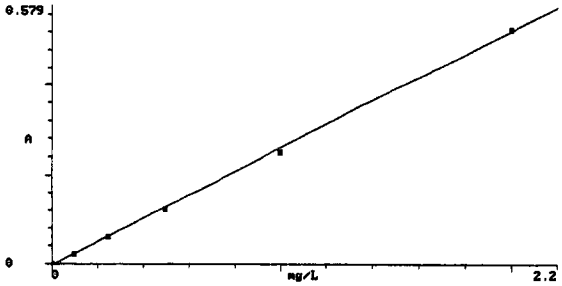
2ML ~~[illegible]~~ 00120-7

* Extarct Methods: **PSEP** = PSEP; **9030A** = 9030A Acid Soluble; **9030AI** = 9030A acid insoluble; **AVS** = Acid Volatile; **Reactive** = SW-846 reactive

Analyst Name: [illegible] Date: 4-30-12 Time: 9:55

TEST SETUP
GENESYS 10 v2.021 2G2G048006

Standard Curve	16:48 30Apr12
Test Name	SULFIDE
Date Standards Measured	30Apr12
Wavelength	650nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	6
Units	mg/L
ID# (0=OFF)	Off
Low/High Limits	0.050/1.000
Statistics	Off
Auto Print	On



Curve Fit	Linear
Slope	0.263
Intercept	-0.00585
Std Dev	0.006
Corr Coeff	1.000

Conc. mg/L	Abs 650nm
0.000	0.000
0.100	0.022
0.250	0.059
0.500	0.123
1.000	0.249
2.000	0.526

dv
4-30-12

TEST SETUP
GENESYS 10 v2.021 2G2G048006

Advanced A-%T-C	16:51 30Apr12
Test Name	SULFIDE[Saved]
Measurement Mode	Absorbance
Wavelength	650nm
Ref. Wavelength Correction	Off
Delay Time (min:sec)	0:00
ID# (0=OFF)	1
Low/High Limits	0.000/1.000
Statistics	Off
Auto Print	On

ID#	Abs 650nm
1	0.000
2	0.252
3	0.008
4	0.337
5	0.484
6	0.518
7	0.526

8 0.300

9 0.288

10 0.415

11 0.570

12 0.510

13 -0.004

14 0.273

15 0.386

16 0.412

17 0.466

UR81 02299

18	0.715
19	0.614
20	0.864
21	0.308
22	0.240
23	0.333
24	0.360
25	0.009
26	0.286
27	0.238

UR81 : 02300

5-3-12

TOC Solids Prep Log

DATE:	4/26/2012
ANALYST:	KE 17:16

acid purging to remove IC and drying at 70ºC for TOC analysis

General notes regarding prep method and samples (identify the acid used)

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70ºC dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.2781		13.2782	0.1 mg	
UR61 A1		-	13.1333	18.9056	14.0024	15.06%	
UR61 A1 dup		-	13.3348	18.2625	14.1292	16.12%	RPD = 6.83%
UR61 A1 trip		-	13.1612	18.8966	14.0463	15.43%	RSD = 3.48%
UR61 B1		-	13.1414	18.6523	16.1630	54.83%	
UR61 C1		-	13.3591	18.7741	15.3247	36.30%	
UR61 D1		-	13.1811	16.8632	13.9930	22.05%	
UR61 E1		-	13.3489	18.4652	15.4714	41.49%	
UR61 F1		-	13.3173	18.1617	14.6198	26.89%	
UR61 G1		-	13.2698	18.1321	14.4637	24.55%	
UR81 A2		-	13.3774	19.8200	16.0127	40.90%	
UR81 A2 dup		-	13.2345	19.0025	15.6573	42.00%	RPD = 2.65%
UR81 A2 trip		-	13.3489	19.5976	16.0048	42.50%	RSD = 1.96%
UR81 B2		-	13.2330	18.8018	16.0942	51.38%	
UR81 C2		-	13.2801	19.7130	16.5020	50.08%	
UR81 D2		-	13.1757	20.0929	16.1797	43.43%	
UR81 E2			13.1761	18.7908	17.3193	73.79%	
UR81 F2		-	13.1599	19.8550	16.1255	44.30%	
UR81 G2			13.1723	22.0386	19.4890	71.24%	
UR81 H2		-	13.2846	19.0837	15.6472	40.74%	
UR81 I 2		-	13.1854	19.0463	16.4539	55.77%	
UR81 J 2		-	13.1998	20.4055	16.4904	45.67%	

(1) 2-26-12 (10)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W) / CDL Date 4-26-12 17:16

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	~~Tare~~ Wet	~~Wet~~	70 °C		
Blank			~~0~~	13.2781	13.2782		
UR61 A1		–	18.9056	13.1333	14.0024		wet Rebi
↓ nP A1		–	18.2625	13.3348	14.1292		↓
↓ +P A1		–	18.8966	13.1612	14.0463		↓
↓ B1		–	18.6523	13.1414	16.1630		Sedmt
↓ C1		–	18.7741	13.3591	15.3247		
↓ D1		–	16.8632	13.1811	13.9930		
↓ E1		–	18.4652	13.3489	15.4714		
↓ F1		–	18.1617	13.3173	14.6198		
↓ G1		–	18.1321	13.2698	14.4637		
UR81 A2		–	19.8200	13.3774	16.0127		
↓ nP A2		–	19.0025	13.2345	15.6573		
↓ +P A2		–	19.5976	13.3489	16.0048		
↓ B2		(1) –	18.8018	13.2330	16.0942		
↓ C2		–	19.7130	13.2801	16.5020		
↓ D2		–	20.0929	13.1757	16.1797		
↓ E2		++ –	18.7908	13.1761	17.3193		w/Reks + Reb
↓ F2		–	19.8550	13.1599	16.1255		
↓ G2		++ –	22.0386	13.1723	19.4890		c Rebi
↓ H2		–	19.0837	13.2846	15.6472		
↓ I2		–	19.0463	13.1854	16.4539		
↓ J2		–	20.4055	13.1998	16.4904		

4-26-12
(W)

Original Run Filename: OM_5-1-2012_09-33-33AM.OMN Created: 5/1/2012 9:33:33 AM
Original Run Author's Signature: [Carol Hawkins]
Current Run Filename: 050112NH3A.omn Last Modified: 5/1/2012 11:10:11 AM
Current Run Author's Signature: [Carol Hawkins]
Description: LACHAT 1
ARI In-House Standards: 00122-3

Sample	Cup No.	Channel 1 NH3 Conc. (mg N/L)	Channel 1 NH3 Area (V.s)	Detection Time	MANUAL DILUTION FACTOR	
STD 1.0	S1	1	42.5575	5/1/2012@9:34:32 AM		
STD 0.8	S2	0.8	34.055	5/1/2012@9:35:43 AM		
STD 0.5	S3	0.5	21.4707	5/1/2012@9:36:53 AM		
STD 0.2	S4	0.2	8.3258	5/1/2012@9:38:03 AM		
STD 0.05	S5	0.05	1.9728	5/1/2012@9:39:14 AM		
STD 0.02	S6	0.02	0.7453	5/1/2012@9:40:24 AM		
STD 0.01	S7	0.01	0.4503	5/1/2012@9:41:35 AM		
BLANK	S8	0	-0.0766	5/1/2012@9:42:46 AM		
ICV ERA 130611	9	0.4835	20.5627	5/1/2012@9:43:56 AM		%R= 96.70
Known Conc:		0.5				
ICB	10	-0.0072	-0.3899	5/1/2012@9:50:01 AM		
Known Conc:		0				
LOW	11	0.0146	0.5394	5/1/2012@9:56:08 AM		%R= 146.00
Known Conc:		0.01				
~~FILTER BLK~~	~~12~~	~~0.0116~~	~~0.4142~~	~~5/1/2012@10:02:14 AM~~		
PREP CHECK	13	10.2948	21.8959	5/1/2012@10:03:25 AM	20	R= 102.95
Spiking Conc:		10				
UR81A2	14	0.85	36.2086	5/1/2012@10:04:36 AM		
UR81A2 DUP	15	0.7684	32.7272	5/1/2012@10:05:46 AM		%RPD= 10.08
UR81A2 MS	16	10.209	21.7126	5/1/2012@10:06:57 AM	20	%R= 93.59
Spiking Conc:		10			SPK=0.4ML@1000PPM/40ML=10PPM	

UR81B2	19	0.7143	30.4164	5/1/2012@10:08:07 AM		
UR81C2	20	0.8181	34.8484	5/1/2012@10:09:18 AM		
UR81D2	21	0.6678	28.4304	5/1/2012@10:10:29 AM		
UR81E2	22	1.9832	84.5957	5/1/2012@10:11:40 AM		
CCV	17	0.4831	20.5449	5/1/2012@10:12:51 AM		%R= 96.62
Known Conc:		0.5				
CCB	18	-0.0153	-0.7363	5/1/2012@10:18:58 AM		
Known Conc:		0				
UR81F2	23	0.7573	32.2545	5/1/2012@10:25:15 AM		
UR81G2	24	0.728	31.0028	5/1/2012@10:26:25 AM		
UR81H2	25	0.974	41.5042	5/1/2012@10:27:36 AM		
UR81I2	26	0.5711	24.3019	5/1/2012@10:28:48 AM		
UR81J2	27	0.6851	29.1701	5/1/2012@10:29:59 AM		
UR87A4	28	0.1937	8.1871	5/1/2012@10:31:10 AM		
UR87A4 DUP	29	0.1972	8.338	5/1/2012@10:32:21 AM		%RPD= 1.79
UR87A4 MS	30	9.8009	20.8415	5/1/2012@10:33:32 AM	20	%R= 96.07
Spiking Conc:		10			SPK=0.4ML@1000PPM/40ML=10PPM	
UR87B4	31	0.1965	8.3069	5/1/2012@10:34:44 AM		
UR87C4	32	0.2105	8.9071	5/1/2012@10:35:55 AM		
CCV	17	0.4858	20.6609	5/1/2012@10:37:06 AM		%R= 97.16
Known Conc:		0.5				
CCB	18	-0.012	-0.594	5/1/2012@10:43:13 AM		
Known Conc:		0				
BLANK REFILTER	33	0.0093	0.3138	5/1/2012@10:49:57 AM		
UR81E2	34	2.0169	17.1406	5/1/2012@10:51:09 AM	5	
KCL	35	-0.0148	-0.7133	5/1/2012@10:56:16 AM		

CCV	17	0.4886	20.7803	5/1/2012@10:57:27 AM	
Known Conc:		0.5			
CCB	18	-0.0123	-0.6066	5/1/2012@11:03:33 AM	
Known Conc:		0			

%R= 97.72

Soil Extraction Log

Parameter:

Date: 4-30-12 9:15

Analyst: [illegible]

Extraction Procedure: N 4g soil 40ml KCl Shake 1 hr
Let settle, filter, Analyze

Time	Sample ID	Sample Wt (grams)	Extract Vol (mL)	Spikes and Standards: Vol added (mL)	Conc of Std (mg/L)	Conc in Extract (mg/L)	Notes & Comments
10:30	P. Blank		40ml				
	P. Check			0.4	1000	10	ERA 130611
	URS1A2	5.26					
	dup	4.53					
	MS	4.03		0.4	1000	10	ARI 00122-3
	B2	3.88					
	C2	3.79					
	D2	4.21					
	E2	4.16					
	F2	3.80					
	G2	4.43					
	H2	4.38					
	I2	4.01					
	J2	3.87					
	UR87A4	3.81					
	dup	4.18					
	MS	4.04		0.4	1000	10	ARI 00122-5
	B4	3.92					
	C4	4.28					

Author: Carol Hawkins

Date : 5/1/2012

Original Run Filename: OM_5-1-2012_09-33-33AM.OMN Created: 5/1/2012 9:33:33 AM
Original Run Author's Signature: [Carol Hawkins]
Current Run Filename: 050112NH3A.omn Last Modified: 5/1/2012 11:10:11 AM
Current Run Author's Signature: [Carol Hawkins]
Description: Default New Run

Sample	Cup No.	Channel 1 NH3 Conc. (mg N/L)	Channel 1 NH3 Area (V.s)	Detection Time	MDF
STD 1.0	S1	1.0000	42.5575	5/1/2012@9:34:32 AM	
STD 0.8	S2	0.8000	34.0550	5/1/2012@9:35:43 AM	
STD 0.5	S3	0.5000	21.4707	5/1/2012@9:36:53 AM	
STD 0.2	S4	0.2000	8.3258	5/1/2012@9:38:03 AM	
STD 0.05	S5	0.0500	1.9728	5/1/2012@9:39:14 AM	
STD 0.02	S6	0.0200	0.7453	5/1/2012@9:40:24 AM	
STD 0.01	S7	0.0100	0.4503	5/1/2012@9:41:35 AM	
BLANK	S8	0.0000	-0.0766	5/1/2012@9:42:46 AM	
ICV	9	0.4835	20.5627	5/1/2012@9:43:56 AM	
Known Conc:		0.5000			
Calibration:		Table/Fig. : 1			
ICB	10	-0.0072	-0.3899	5/1/2012@9:50:01 AM	
Known Conc:		0.0000			
LOW	11	0.0146	0.5394	5/1/2012@9:56:08 AM	
Known Conc:		0.0100			
FILTER BLK	12	0.0116	0.4142	5/1/2012@10:02:14 AM	
PREP CHECK	13	10.2948	21.8959	5/1/2012@10:03:25 AM	20.00
Spiking Conc:		10.0000			
UR81A2	14	0.8500	36.2086	5/1/2012@10:04:36 AM	
UR81A2 DUP	15	0.7684	32.7272	5/1/2012@10:05:46 AM	
UR81A2 MS	16	10.2090	21.7126	5/1/2012@10:06:57 AM	20.00
Spiking Conc:		10.0000			
UR81B2	19	0.7143	30.4164	5/1/2012@10:08:07 AM	
UR81C2	20	0.8181	34.8484	5/1/2012@10:09:18 AM	
UR81D2	21	0.6678	28.4304	5/1/2012@10:10:29 AM	
UR81E2	22	1.9832	84.5957	5/1/2012@10:11:40 AM	
CCV	17	0.4831	20.5449	5/1/2012@10:12:51 AM	
Known Conc:		0.5000			
CCB	18	-0.0153	-0.7363	5/1/2012@10:18:58 AM	
Known Conc:		0.0000			
UR81F2	23	0.7573	32.2545	5/1/2012@10:25:15 AM	
UR81G2	24	0.7280	31.0028	5/1/2012@10:26:25 AM	
UR81H2	25	0.9740	41.5042	5/1/2012@10:27:36 AM	
UR81I2	26	0.5711	24.3019	5/1/2012@10:28:48 AM	
UR81J2	27	0.6851	29.1701	5/1/2012@10:29:59 AM	
UR87A4	28	0.1937	8.1871	5/1/2012@10:31:10 AM	
UR87A4 DUP	29	0.1972	8.3380	5/1/2012@10:32:21 AM	
UR87A4 MS	30	9.8009	20.8415	5/1/2012@10:33:32 AM	20.00
Spiking Conc:		10.0000			
UR87B4	31	0.1965	8.3069	5/1/2012@10:34:44 AM	
UR87C4	32	0.2105	8.9071	5/1/2012@10:35:55 AM	
CCV	17	0.4858	20.6609	5/1/2012@10:37:06 AM	
Known Conc:		0.5000			
CCB	18	-0.0120	-0.5940	5/1/2012@10:43:13 AM	
Known Conc:		0.0000			
PREP BLANK REFILTER	33	0.0093	0.3138	5/1/2012@10:49:57 AM	
UR81E2	34	2.0169	17.1406	5/1/2012@10:51:09 AM	5.00
KCL	35	-0.0148	-0.7133	5/1/2012@10:56:16 AM	
CCV	17	0.4886	20.7803	5/1/2012@10:57:27 AM	
Known Conc:		0.5000			
CCB	18	-0.0123	-0.6066	5/1/2012@11:03:33 AM	
Known Conc:		0.0000			

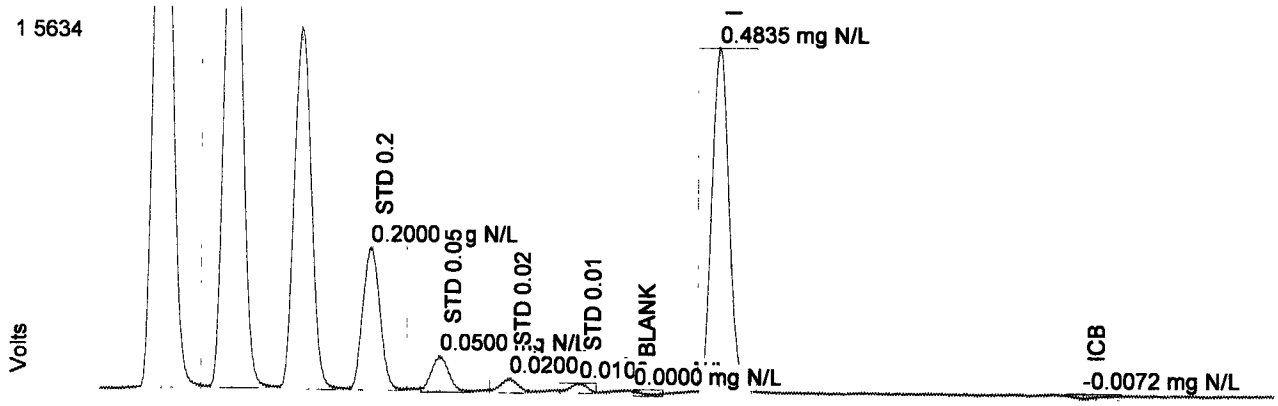
5-1-12

UR81 : 02387

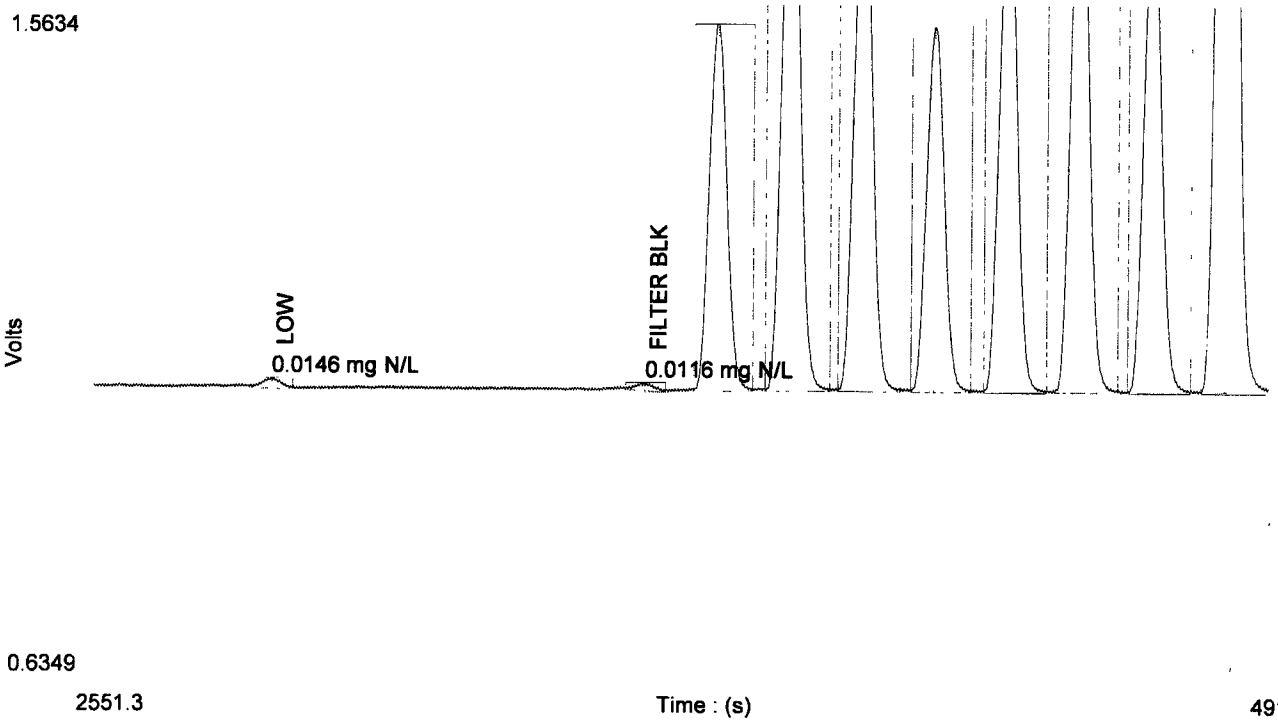
Author: Carol Hawkins

Date : 5/1/2012

Channel 1 - Set: 1 / 4



Channel 1 - Set: 2 / 4

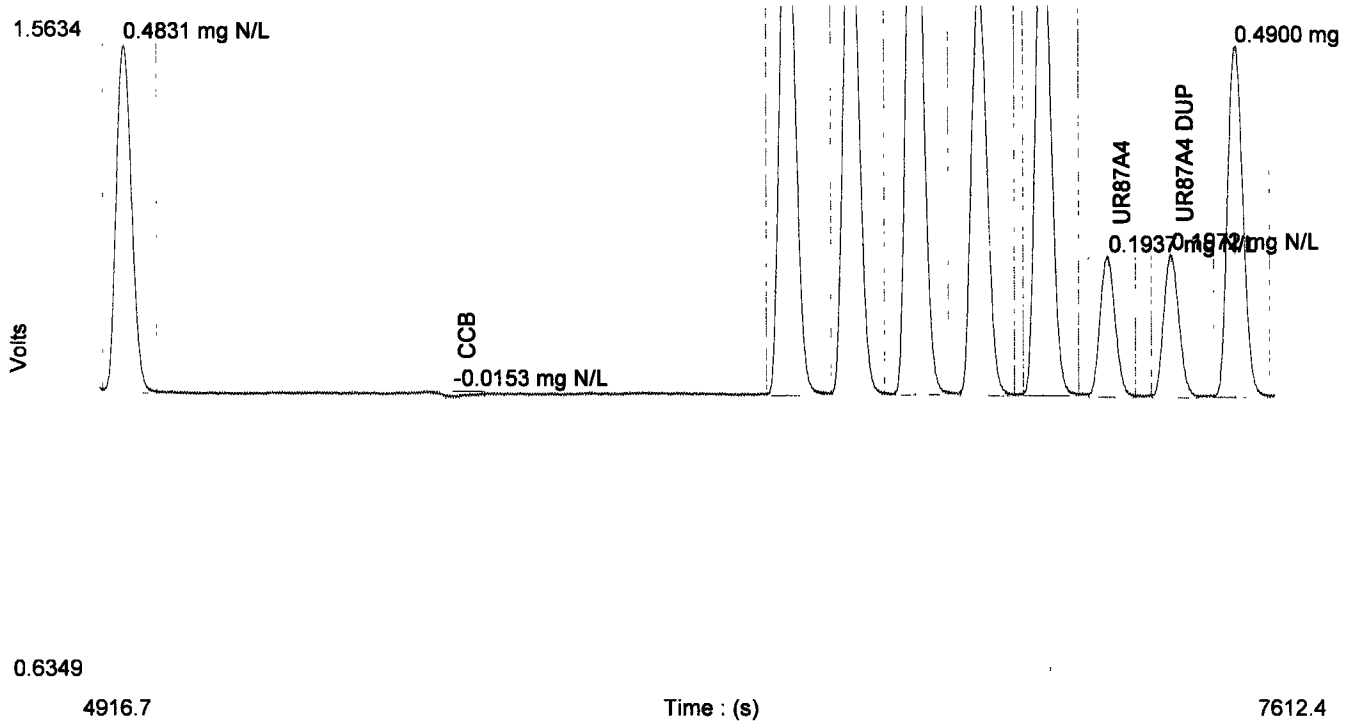


05012012NH3A SOILS LACHAT 1

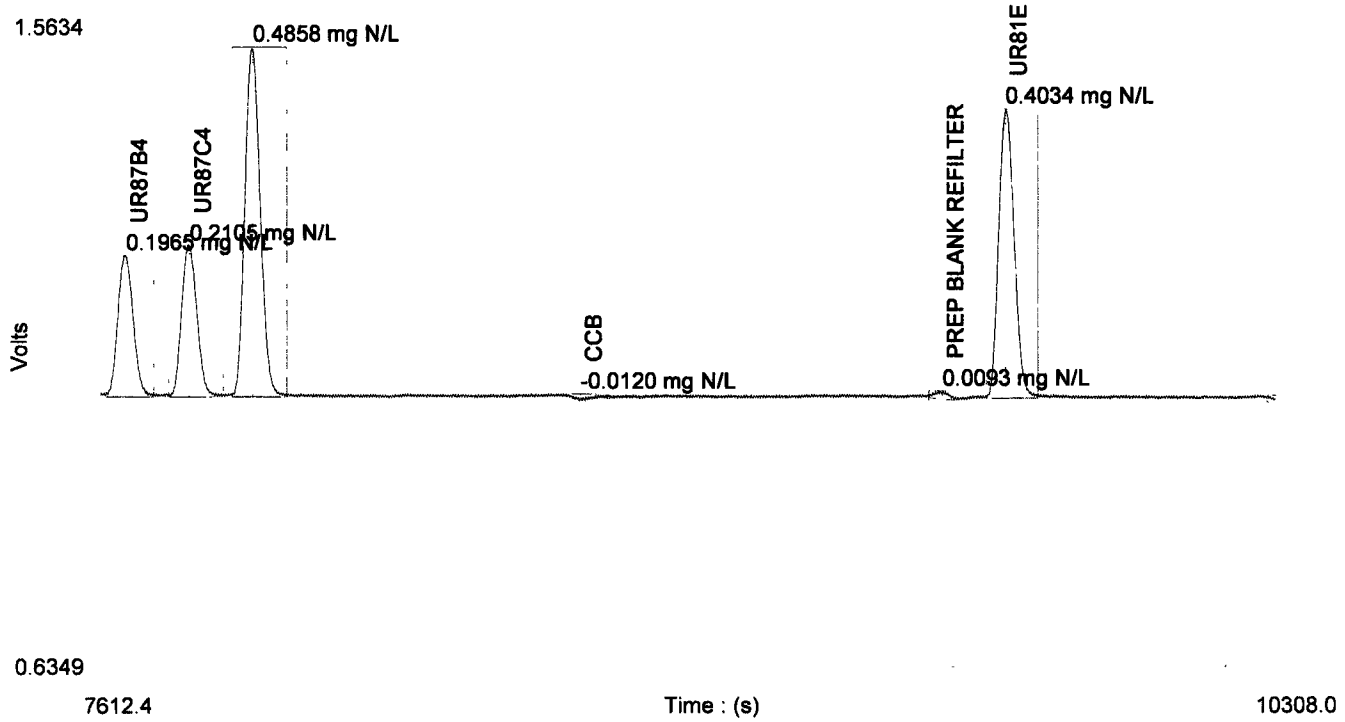
Author: Carol Hawkins

Date : 5/1/2012

Channel 1 - Set: 3 / 4



Channel 1 - Set: 4 / 4



05012012NH3A SOILS LACHAT 1

UR01 : 02360

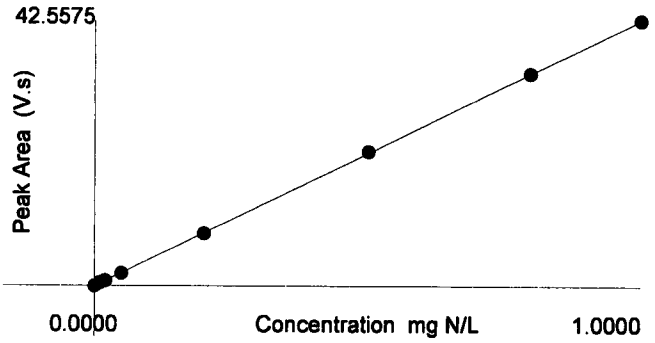
Author: Carol Hawkins

Date : 5/1/2012

Table : 1 (NH3)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	1.0000	1	42.5575	1.0400	0.0	0.1	0.9986	5/1/2012	9:34:32 AM
2	0.8000	1	34.0550	0.8346	0.0	0.1	0.7995	5/1/2012	9:35:43 AM
3	0.5000	1	21.4707	0.5258	0.0	-1.0	0.5048	5/1/2012	9:36:53 AM
4	0.2000	1	8.3258	0.2079	0.0	1.6	0.1969	5/1/2012	9:38:03 AM
5	0.0500	1	1.9728	0.0521	0.0	3.9	0.0481	5/1/2012	9:39:14 AM
6	0.0200	1	0.7453	0.0214	0.0	3.5	0.0194	5/1/2012	9:40:24 AM
7	0.0100	1	0.4503	0.0149	0.0	-30.5	0.0125	5/1/2012	9:41:35 AM
8	0.0000	1	-0.0766	0.0046			0.0001	5/1/2012	9:42:46 AM

Figure : 1 (NH3)



Area = 42.6959 * Conc - 0.0818
Conc = 0.0234 * Area + 0.0019
Correlation Coefficient (r) = 0.99998

Weighting : None

05012012NH3A SOILS LACHAT 1

UR01 : 02316

5/3/12

TOC, Solids Data Analysis

DATE: 5/2/2012
ANALYST: KE 10:40

Instrument: Apollo 2
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*

Calibration Data

Cal Curve ID: 3/30/12 BOAT CAL *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00123 - 4 *Curve Date:* 03/30/12
CalFact: 2.796E+50 *intercept:* -226534 *r2 :* 0.99943
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): 8 *to* 100 *40 µL injections of designated standard*

Verification Standard

Source: *ERA# 0513 - 10 - 06* *Conc:* 5,000 *ppm*
dilution : 10 *mL to* 50 1,000 *ppm*

Standard Reference Material

Source: *NIST 8704* *Conc:* 33,510 *ppm*
Source: *NIST 1941B* *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
ICV				1.00		40.0	1025	1,025	102.50%
Blank				1.00		40.0	30.55	31	Blank OK
NIST 1941B				1.00		2.4	27903	27,903	93.32%
UR81 A2				1.00		2.1	26555	26,555	Range OK!
UR81 A2 dup				1.00		2.2	24844	24,844	RPD=6.7%
UR81 A2 trp				1.00		2.3	24318	24,318	RSD=4.6%
UR81 A2 ms				1.00	20	1.4	65062	65,062	Range OK!
Spike =	*0.05*	*mg C to*	*1.4*	*mg samp=*	*35,714*	*ppm*		*108%*	
UR81 B2				1.00		1.6	23201	23,201	Range OK!
UR81 C2				1.00		1.7	21895	21,895	Range OK!
UR81 D2				1.00		2.0	22588	22,588	Range OK!
UR81 E2				1.00		2.0	18151	18,151	Range OK!
UR81 F2				1.00		1.9	24271	24,271	Range OK!
CCV				1.00		40.0	973	973	97.30%
Blank				1.00		40.0	25.37	25	Blank OK
UR81 G2				1.00		1.6	39540	39,540	Range OK!
UR81 H2				1.00		1.4	40175	40,175	Range OK!
UR81 I 2				1.00		1.6	19127	19,127	Range OK!
UR81 J 2				1.00		2.2	32442	32,442	Range OK!
NIST 1941B				1.00		2.4	25279	25,279	84.55%
CCV				1.00		40.0	1022	1,022	102.20%
Blank				1.00		40.0	22.65	23	Blank OK

Analytical Resources, Incorporated
Analytical Chemists and Consultants

① 5-1-12 ②

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler
Standards:	Source	Conc (ppm)	
Calibration:	ARI – 00123-4	5000	
Verification:	ERA – 1513-10-06	5000 to 1000 for CVS	10:10
SRM:	NBS – 1941B or 8704	29900	

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941 B			2.6			
SB 1			36.0			
2			35.4			Exchange Sel. code ✓
3			37.7			
4			37.8			
5			37.5			
URSS A3			1.1			a. Dry & Injected Rerun
A3			1.0			
DA3			1.1			
+DA3			1.2			
MSA3	13.4	133.6	1.7	2500	10	
CCV			40			spend hot/hi only Rerun
CCV			40			
CCB			40			
URSS MSA3			1.0	2500	10	
B			0.8			
UR61 A'	10.2	102.0	1.6			
DA'	10.6	106.1	1.5			
+DA'	10.4	103.8	* 1.7/1.8 ②			a. Low
MSA'	10.2	102.0	1.6	2500	10	
B'	15.1	141.1	2.5			
C'			1.7			
B'			1.2			
CCV			40			
CCB			40			
UR61 D1	14.6	143.4	1.8			
E'	13.2	128.1	2.1			
F1	14.4	141.9	1.5			
G'	17.9	175.7	1.1			
NBS 1941 B			2.5			
CCV/CCB			40/40			

UR61 : 022912

Detailed Analysis Report Print Date/Time: 2012/05/02 15:55:18

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021124
Timestamp: 2012/05/02 11:28
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1025.0231	41.0009	11238004	37.262	38.261	179

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021133
Timestamp: 2012/05/02 11:35
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30.5499	1.2220	115156	37.130	38.126	57

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021140
Timestamp: 2012/05/02 11:45
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27902.8926	66.9669	18498532	37.119	38.119	260

Sample ID: UR81 A2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021151
Timestamp: 2012/05/02 11:55
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26555.1152	55.7657	15593025	37.458	38.457	205

Sample ID: UR81 A2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021159
Timestamp: 2012/05/02 12:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24844.4160	54.6577	15283203	37.476	38.474	206

Sample ID: UR81 A2 TRIP
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021219
Timestamp: 2012/05/02 12:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24317.7344	55.9308	15639175	37.321	38.321	207

Sample ID: UR81 A2 MS
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021234
Timestamp: 2012/05/02 12:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	65062.0547	91.0869	25469400	37.394	38.388	243

Last Message: Over-range

Sample ID: UR81 B2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021252
Timestamp: 2012/05/02 12:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23200.6289	37.1210	10379648	37.564	38.561	187

Sample ID: UR81 C2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021303
Timestamp: 2012/05/02 13:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21895.2266	37.2219	10407856	37.466	38.465	195

Sample ID: UR81 D2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021313
Timestamp: 2012/05/02 13:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22587.7383	45.1755	12631811	37.588	38.585	205

Sample ID: UR81 E2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021321
Timestamp: 2012/05/02 13:30
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18151.2715	36.3025	10150792	37.653	38.650	178

Sample ID: UR81 F2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021332
Timestamp: 2012/05/02 13:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24271.1289	46.1151	12894558	37.713	38.713	196

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021350
Timestamp: 2012/05/02 13:54
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	972.9463	38.9179	10655542	38.113	39.111	169

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05021438
Timestamp: 2012/05/02 14:40
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25.3720	1.0149	57243	37.946	38.943	46

Sample ID: UR81 G2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05021443
Timestamp: 2012/05/02 14:48
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	39540.3320	63.2645	17689812	38.211	39.210	211

Sample ID: UR81 H2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05021450
Timestamp: 2012/05/02 14:55
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	40175.4961	56.2457	15727228	38.190	39.186	212

Sample ID: UR81 H2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05021458
Timestamp: 2012/05/02 15:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19126.8965	30.6030	8557115	38.404	39.400	177

Sample ID: UR81 J2
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05021509
Timestamp: 2012/05/02 15:16
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	32442.3555	71.3732	19957124	38.300	39.297	217

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05021519
Timestamp: 2012/05/02 15:29
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25279.3320	60.6704	16737914	38.351	39.348	235

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05021538
Timestamp: 2012/05/02 15:43
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1022.3759	40.8950	11208396	38.237	39.237	174

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05021546
Timestamp: 2012/05/02 15:49
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22.6476	0.9059	26772	38.069	37.830	120

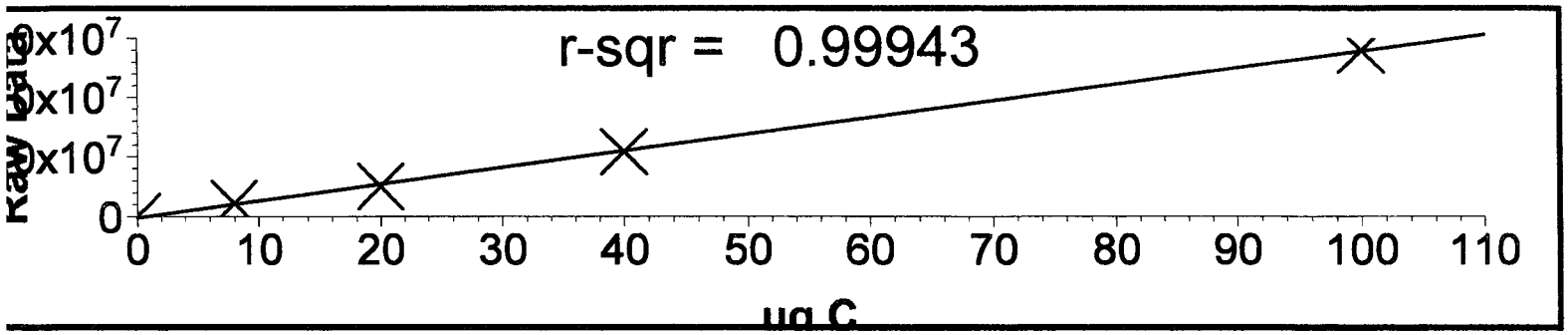
UR81 : 02315

Last Message: Low Sample Detected

Calibration Report Print Date/Time: 2012/04/30 14:05:52

Cal. Curve ID: 43012 BOAT CAL
Created: 2012/04/30 13:43
Calibration Factor (m): 2.796e+05
Y Intercept (b): -226534
r-squared: 0.99943

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI WATER	52595	0.000	0.998		2012/04/30 11:58
200	2144822	8.000	8.481		2012/04/30 12:17
500	4986789	20.000	18.645		2012/04/30 12:34
1000	10792143	40.000	39.406		2012/04/30 12:59
2500	27866566	100.000	100.470	Max Integrati	2012/04/30 13:42


r-sqr = 0.99943
Raw Data
x10^7
x10^7
x10^7
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2012/04/30 14:01:21

Sample ID: DI WATER
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301036
Timestamp: 2012/04/30 10:51
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			47566	33.280	33.185	120
2			203139	33.304	34.302	63
3			1104	33.476	33.511	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 83936 Std Dev: 105814 RSD: 126.06

Sample ID: 200
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301053
Timestamp: 2012/04/30 10:56
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1241941	33.597	34.592	83

Sample ID: DI WATER
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301141
Timestamp: 2012/04/30 11:43
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			723490	34.109	41.661	46

Last Message: Canceled

Sample ID: DI WATER
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301150
Timestamp: 2012/04/30 11:58
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			92631	34.301	35.189	120
2			19076	34.635	34.665	120
3			46077	35.023	36.011	43

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 52595 Std Dev: 37208 RSD: 70.75

Sample ID: 200
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301202
Timestamp: 2012/04/30 12:17
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2354047	34.824	35.822	117
2			2071224	34.958	35.956	106
3			2009197	35.047	36.046	100

<<<Statistics>>> Mean: 2144823 Std Dev: 183829 RSD: 8.57

Sample ID: 500
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301220
Timestamp: 2012/04/30 12:34
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5039759	35.057	36.056	104
2			4609986	35.167	36.164	123
3			5310623	35.293	36.291	131

<<<Statistics>>> Mean: 4986790 Std Dev: 353309 RSD: 7.08

Sample ID: 1000
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301241
Timestamp: 2012/04/30 12:59
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			10754481	35.424	36.423	161
2			10442873	36.018	37.015	150
3			11179075	36.556	37.551	190

<<<Statistics>>> Mean: 10792143 Std Dev: 369543 RSD: 3.42

Sample ID: 2500
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301309
Timestamp: 2012/04/30 13:42
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			29661636	37.962	38.960	254
2			29032984	38.591	39.586	273
3			24905076	39.615	40.673	300

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 27866566 Std Dev: 2583915 RSD: 9.27

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301346
Timestamp: 2012/04/30 13:51
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1028.4240	41.1370	11276042	40.270	41.269	235

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 43012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04301352
Timestamp: 2012/04/30 13:55
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23.6818	0.9473	38339	40.923	41.149	120

Last Message: Low Sample Detected

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 4/30/2012
ANALYST: KE / CDE 17:14

Instrumentation

Drying Ovens: 12
Muffle Furnace: 62790918520
Analytical Balance: 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

4/30/2012 17:14 date/time in oven KE
5/1/2012 11:00 date/time out CDE
elapsed hrs = 17.8

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	4/30/12 16:24	4/30/12 15:54	5/1/12 11:19					5/1/12 12:26	5/1/12 13:33				
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000					10.0000	10.0000				
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*					*Cal OK!*	*Cal OK!*				
SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank		0.0000	1.1077	1.1076			0.00		1.1075	1.1075	OK	0.00		
UR87 A4		6.5713	1.0906	4.9150			3.82	69.8%	4.8231	4.8156	OK	3.73	25,991	2.60%
UR87 A4 dup		6.9652	1.0966	5.2582			4.16	70.9%	5.1502	5.1429	OK	4.05	27,706	2.77%
							RPD =	1.61%				RPD =	6.39%	
UR87 A4 trp		6.3645	1.1220	5.0385			3.92	74.7%	4.9576	4.9511	OK	3.83	22,316	2.23%
							RSD =	3.59%				RSD =	10.87%	
UR87 B4		6.7483	1.0941	4.4668			3.37	59.6%	4.2866	4.2801	OK	3.19	55,356	5.54%
UR87 C4		7.7135	1.0816	6.7318			5.65	85.2%	6.6563	6.6501	OK	5.57	14,460	1.45%
US18 A1		7.4516	1.1260	4.8939			3.77	59.6%						
US18 A1 dup		7.0929	1.1090	4.6715			3.56	59.5%						
							RPD =	0.05%				RPD =	NA	
US18 B1		7.0752	1.1041	4.1643			3.06	51.3%						
US24 A1		7.4854	1.0775	4.7983			3.72	58.1%						
US24 A1 dup		7.1359	1.0668	4.4103			3.34	55.1%						
							RPD =	5.26%				RPD =	NA	
US24 A1 trp		7.6849	1.0993	4.8024			3.70	56.2%						
							RSD =	2.66%				RSD =	NA	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

② 65713 4-30-12 (W) ① 6-30-12 (W) Furnace # 6279018520

Analyst: (W) JCK	Date: 4-30-12		Oven ID: 12		Balance ID: 1123230597
Time in Oven:	17:14	Time Out of Oven:	5-1-12 11:00	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02
Date & Time:		4-30-12 16:27	4-30-12 15:54	5-1-12 13:19				5-1-12 12:26	5-1-12 13:33	
Cal Weight (10.0000):		10.0000 (W)	10.0000 (W)	10.0000 ok				10.0000 ok	10.0000 ok	
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	Ø	1.1077	1.1076				1.1075	1.1075	
1R87 A4	2	~~6.56~~ (D)	1.0906	4.9150				4.8231	4.8156	
nA4	3	6.9652	1.0966	5.2582				5.1502	5.1429	
tPA4	4	6.3645	1.1220	5.0385				4.9576	4.9511	
B4	5	6.7483	1.0941	4.4668				4.2866	4.2801	
C4	6	7.7135	1.0816	6.7318				6.6563	6.6501	
US18 A1	7	7.4516	1.1260	4.8939						
nA1	8	7.0929	1.1090	4.6715						
B1	9 (6) (D)	~~7.1087~~	1.1041	4.1643						
US24 A1	10 (3)	~~6.7359~~	1.0775	4.7983						
nA1	11 (4)	~~7.1062~~	1.0668	4.4103						
tPA1	12 (5)	~~6.9190~~	1.0993	4.8024						
					4-30-12 (W)					

(3) 7.0752 4-30-12 (W) (3) ~~7.5379~~ (1) 7.4854 (4) ~~6.0746~~ (1) 7.1359 (5) ~~8.0544~~ (1) 7.6244 4-30-12 (W)

Original Run Filename: OM_5-9-2012_08-35-06AM.OMN Created: 5/9/2012 8:35:06 AM
Original Run Author's Signature: [Carol Hawkins]
Current Run Filename: 050912NH3A.omn Last Modified: 5/9/2012 9:47:22 AM
Current Run Author's Signature: [Carol Hawkins]
Description: LACHAT 1
ARI In-House Standards: 00122-3

5/9/12

Sample	Cup No.	Channel 1 NH3 Conc. (mg N/L)	Channel 1 NH3 Area (V.s)	Detection Time	MANUAL DILUTION FACTOR	
STD 1.0	S1	1.0000	39.6373	5/9/2012@8:36:06 AM		
STD 0.8	S2	0.8000	31.3266	5/9/2012@8:37:16 AM		
STD 0.5	S3	0.5000	19.6497	5/9/2012@8:38:27 AM		
STD 0.2	S4	0.2000	7.632	5/9/2012@8:39:36 AM		
STD 0.05	S5	0.0500	1.7717	5/9/2012@8:40:47 AM		
STD 0.02	S6	0.0200	0.6159	5/9/2012@8:41:57 AM		
STD 0.01	S7	0.0100	0.273	5/9/2012@8:43:08 AM		
BLANK	S8	0.0000	-0.1072	5/9/2012@8:44:19 AM		
ICV ERA 130611	9	0.5044	19.81	5/9/2012@8:45:28 AM		%R= 100.88
Known Conc:		0.5000				
ICB	10	0.0003	-0.1735	5/9/2012@8:51:48 AM		
Known Conc:		0.0000				
LOW	11	0.0110	0.2498	5/9/2012@8:58:08 AM		%R= 110.00
Known Conc:		0.0100				
PREP BLANK	12	0.0048	0.0053	5/9/2012@9:04:27 AM		
PREP CHECK	13	10.0720	19.7801	5/9/2012@9:05:38 AM	20	%R= 100.72
Spiking Conc:		10.0000			SPK=0.4ML@1000PPM/40ML=10PPM	
~~US18A1~~	~~14~~	~~5.4837~~	~~217.2201~~	~~5/9/2012@9:06:49 AM~~		
~~US18A1 DUP~~	~~15~~	~~5.5838~~	~~221.1907~~	~~5/9/2012@9:07:59 AM~~		

US18A1 MS	16	15.7300	30.4013	5/9/2012@9:09:10 AM	20	%R= 102.11
Spiking Conc:		10.0000			SPK=0.4ML@1000PPM/40ML=10PPM	
US18B1	19	3.7475	148.3887	5/9/2012@9:10:20 AM		
CCV	17	0.4977	19.5476	5/9/2012@9:11:32 AM		%R= 99.54
Known Conc:		0.5000				
CCB	18	-0.0035	-0.3259	5/9/2012@9:17:51 AM		
Known Conc:		0.0000				
US18A1	20	5.5188	21.6939	5/9/2012@9:24:11 AM	10	
US18A1	21	5.6596	22.2521	5/9/2012@9:25:22 AM	10	%RPD= 2.52
US18B1	22	3.7204	29.3136	5/9/2012@9:31:42 AM	5	
CCV	17	0.5017	19.7061	5/9/2012@9:32:53 AM		%R= 100.34
Known Conc:		0.5000				
CCB	18	-0.0020	-0.2637	5/9/2012@9:39:13 AM		
Known Conc:		0.0000				

Soil Extraction Log

Parameter:

Date: 5-8-12 10:45

Analyst: [illegible]

Extraction Procedure: 4g Soil 40ml KCl
Shake 1 hr let settle filter analyze

Time	Sample ID	Sample Wt (grams)	Extract Vol (mL)	Spikes and Standards: Vol added (mL)	Conc of Std (mg/L)	Conc in Extract (mg/L)	Notes & Comments
	Blank		40				
	Check			0.4	1000	10	
	MS/MSD	4.04					
	dup	4.12					
	MS	4.11		0.4	1000	10	
	B7	4.01					

5-8-12

Author: Carol Hawkins

Date : 5/9/2012

Original Run Filename: OM_5-9-2012_08-35-06AM.OMN Created: 5/9/2012 8:35:06 AM
Original Run Author's Signature: [Carol Hawkins]
Current Run Filename: 050912NH3A.omn Last Modified: 5/9/2012 9:47:22 AM
Current Run Author's Signature: [Carol Hawkins]
Description: Default New Run

Sample	Cup No.	Channel 1 NH3 Conc. (mg N/L)	Channel 1 NH3 Area (V.s)	Detection Time	MDF
STD 1.0	S1	1.0000	39.6373	5/9/2012@8:36:06 AM	
STD 0.8	S2	0.8000	31.3266	5/9/2012@8:37:16 AM	
STD 0.5	S3	0.5000	19.6497	5/9/2012@8:38:27 AM	
STD 0.2	S4	0.2000	7.6320	5/9/2012@8:39:36 AM	
STD 0.05	S5	0.0500	1.7717	5/9/2012@8:40:47 AM	
STD 0.02	S6	0.0200	0.6159	5/9/2012@8:41:57 AM	
STD 0.01	S7	0.0100	0.2730	5/9/2012@8:43:08 AM	
BLANK	S8	0.0000	-0.1072	5/9/2012@8:44:19 AM	
ICV	9	0.5044	19.8100	5/9/2012@8:45:28 AM	
Known Conc:		0.5000			
Calibration:		Table/Fig. : 1			
ICB	10	0.0003	-0.1735	5/9/2012@8:51:48 AM	
Known Conc:		0.0000			
LOW	11	0.0110	0.2498	5/9/2012@8:58:08 AM	
Known Conc:		0.0100			
PREP BLANK	12	0.2 0.0048	0.0053	5/9/2012@9:04:27 AM	
PREP CHECK	13	10.5 ~~0.5036~~	19.7801	5/9/2012@9:05:38 AM	20
Spiking Conc:		10 ~~100.0000~~			
US18A1	14	5.4837	217.2201	5/9/2012@9:06:49 AM	
US18A1 DUP	15	5.5838	221.1907	5/9/2012@9:07:59 AM	
US18A1 MS	16	5.73 ~~0.7715~~	30.4013	5/9/2012@9:09:10 AM	20
Spiking Conc:		10 ~~0.5000~~			
US18B1	19	3.7475	148.3887	5/9/2012@9:10:20 AM	
CCV	17	0.4977	19.5476	5/9/2012@9:11:32 AM	
Known Conc:		0.5000			
CCB	18	-0.0035	-0.3259	5/9/2012@9:17:51 AM	
Known Conc:		0.0000			
US18A1	20	5.5188	21.6939	5/9/2012@9:24:11 AM	10.00
US18A1	21	5.6596	22.2521	5/9/2012@9:25:22 AM	10.00
US18B1	22	3.7204	29.3136	5/9/2012@9:31:42 AM	5.00
CCV	17	0.5017	19.7061	5/9/2012@9:32:53 AM	
Known Conc:		0.5000			
CCB	18	-0.0020	-0.2637	5/9/2012@9:39:13 AM	
Known Conc:		0.0000			

CH
5-9-12

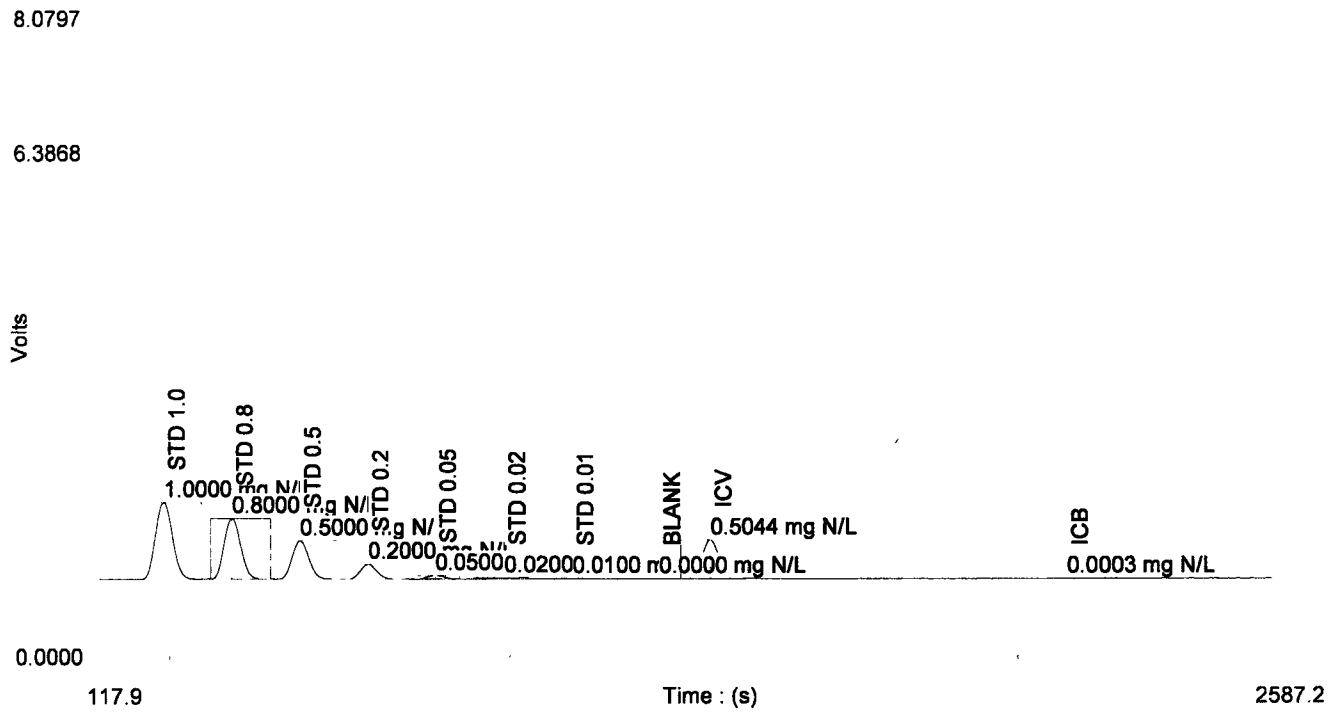
05092012NH3A SOILS LACHAT 1

UN91 : 82326

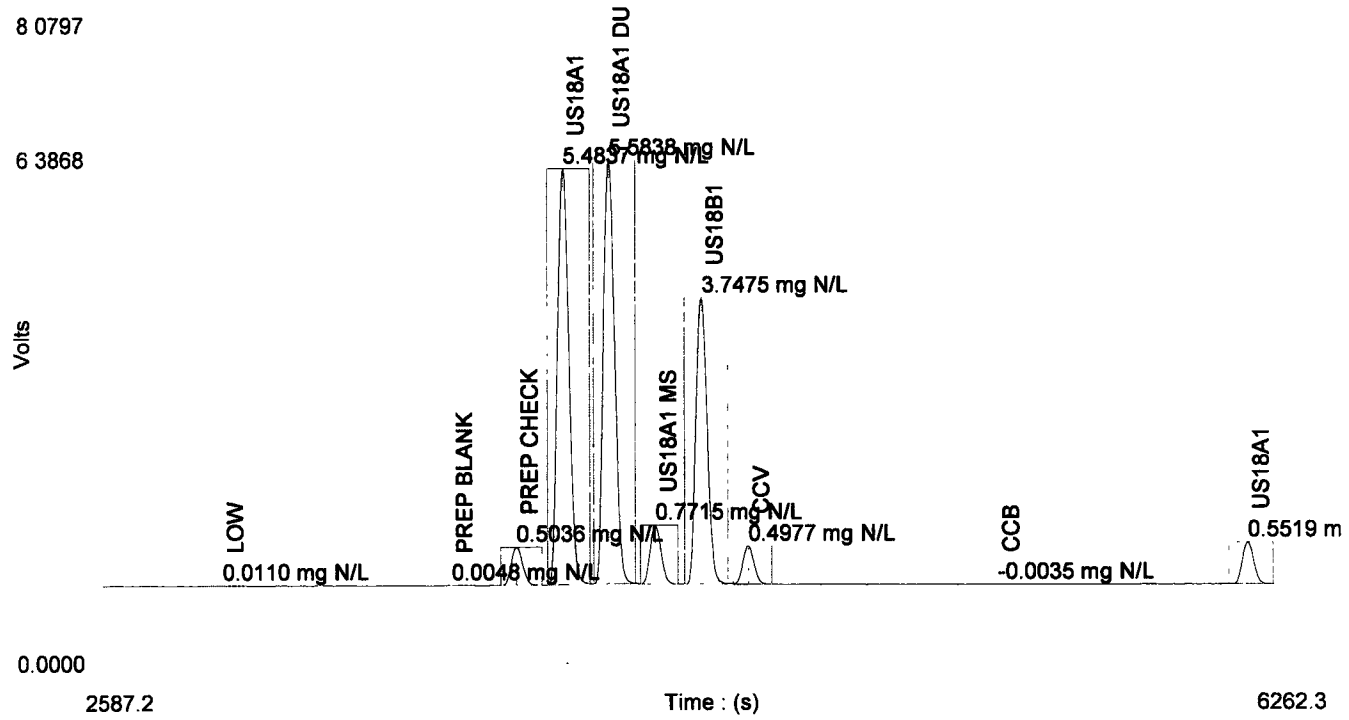
Author: Carol Hawkins

Date : 5/9/2012

Channel 1 - Set: 1 / 3



Channel 1 - Set: 2 / 3



05092012NH3A SOILS LACHAT 1

UR01 : 02327

Author: Carol Hawkins

Date : 5/9/2012

Channel 1 - Set: 3 / 3

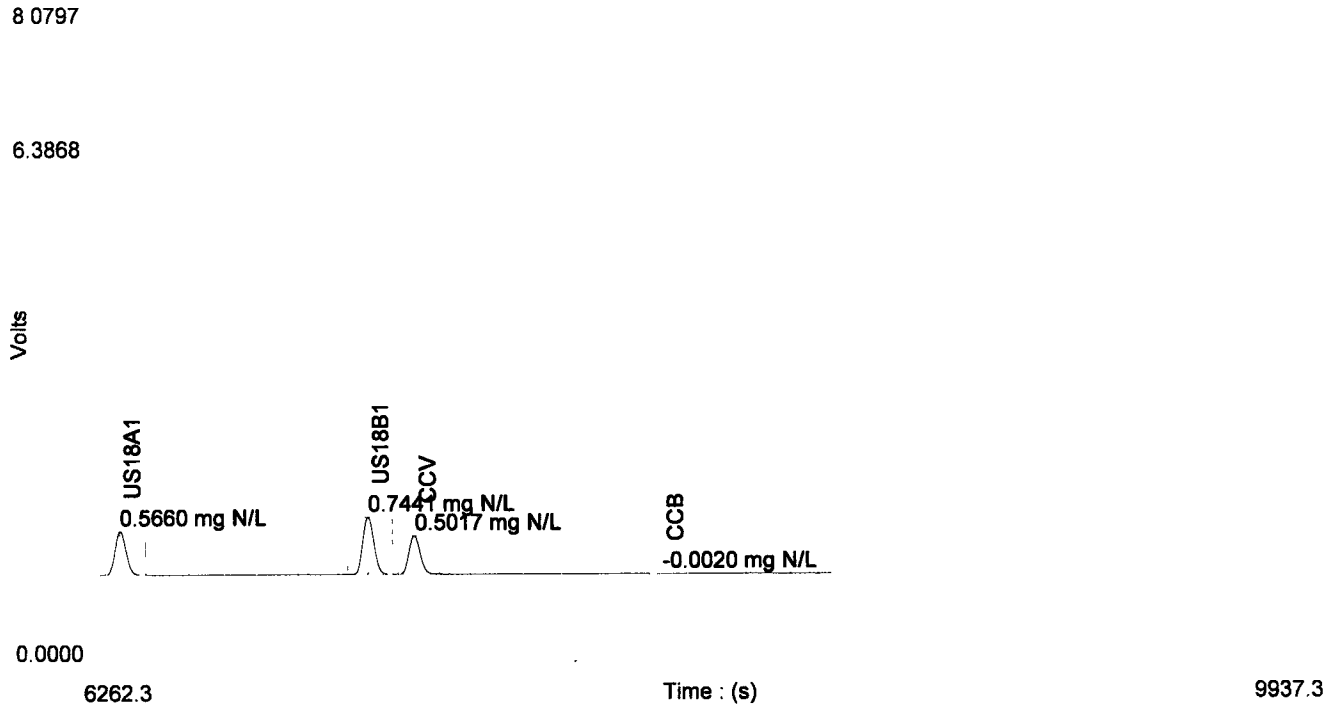
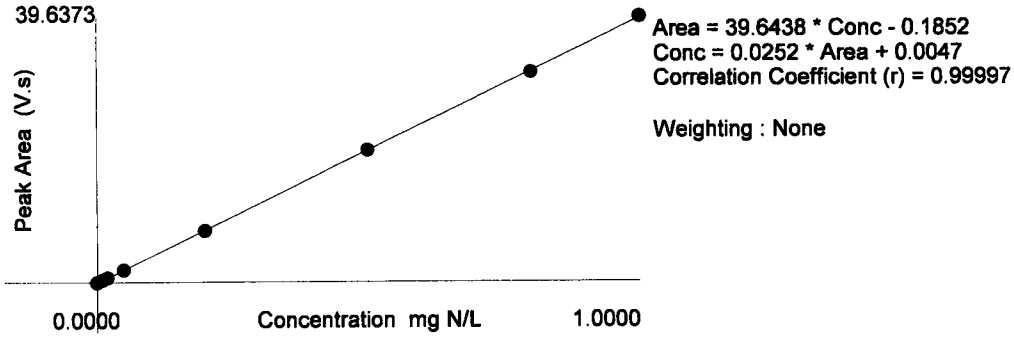


Table : 1 (NH3)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	1.0000	1	39.6373	0.9688	0.0	-0.5	1.0045	5/9/2012	8:36:06 AM
2	0.8000	1	31.3266	0.7673	0.0	0.6	0.7948	5/9/2012	8:37:16 AM
3	0.5000	1	19.6497	0.4825	0.0	-0.1	0.5003	5/9/2012	8:38:27 AM
4	0.2000	1	7.6320	0.1881	0.0	1.4	0.1972	5/9/2012	8:39:36 AM
5	0.0500	1	1.7717	0.0444	0.0	1.4	0.0494	5/9/2012	8:40:47 AM
6	0.0200	1	0.6159	0.0154	0.0	-1.4	0.0202	5/9/2012	8:41:57 AM
7	0.0100	1	0.2730	0.0061	0.0	-29.3	0.0116	5/9/2012	8:43:08 AM
8	0.0000	1	-0.1072	-0.0019			0.0020	5/9/2012	8:44:19 AM

Figure : 1 (NH3)



05092012NH3A SOILS LACHAT 1

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: UR81, US18

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: B-1 Client Sample No.: IJ12-05

Set-up Date: 5-9-2012 Sample Description: Silty Clay

SOLIDS CONTENT

Moisture Content	Initials: QL
Container No.	155
Tare Weight	1.5352
Wet Weight + Tare	15.8331
Dry Weight + Tare	7.0203

Test Sample	Initials: QL
Container No.	155
Tare Weight	50.6248
Wet Weight + Tare	85.0648
Dry Weight + Tare	51.2287

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-10-12

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	50.6336
4	50.6336
10	50.6336
18	50.7288
35	50.9353
60	51.1275
120	51.2690
230	51.3992
PAN	0.0758

PIPETTE ANALYSIS

5/10/2012

Temp:23

Initials: eg

TIME	Tare ID	Tare Wt	Dry Wt & Tare
12:30:00			
12:30:20	B1-1	1.5537	1.7251
12:31:46	B1-2	1.5662	1.8324
12:37:05	B1-3	1.5706	1.8085
12:58:18	B1-4	1.5774	1.7469
14:23:00	B1-5	1.5670357	1.7009
17:56:00	B1-6	1.5555	1.6544
11:06:00	B1-7	1.5460	1.6133

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: B-2 Client Sample No.: IJ12-05

Set-up Date: 5-9-2012 Sample Description: silty clay

SOLIDS CONTENT

Moisture Content	Initials: CBL
Container No.	173
Tare Weight	1.5233
Wet Weight + Tare	18.5080
Dry Weight + Tare	8.0790

Test Sample	Initials: CBL
Container No.	173
Tare Weight	50.0626
Wet Weight + Tare	86.6809
Dry Weight + Tare	501.0581

Calgon Batch #: 2166

SIEVE ANALYSIS

Sieve Date: 5-10-12

Sieve Set #: 2 Initials: eg

Sieve Size	Weight Retained
Tare	50.0764
4	50.0764
10	50.0950
18	50.4586
35	50.7122
60	50.8316
120	50.9316
230	51.0479
PAN	0.0914

5/10/2012

Temp:23

PIPETTE ANALYSIS

Initials: eg

TIME	Tare ID	Tare Wt	Dry Wt & Tare
12:33:00	B2-1	1.5476	1.8286
12:33:20	B2-2	1.5531	1.8285
12:34:46	B2-3	1.5682	1.8175
12:40:05	B2-4	1.5722	1.7478
13:01:18	B2-5	1.5407	1.6747
14:26:00	B2-6	1.5465	1.6481
17:59:00	B2-7	1.5489	1.6180
11:09:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: B-3 Client Sample No.: IJ12-05

Set-up Date: 5-9-2012 Sample Description: silty clay

SOLIDS CONTENT

Moisture Content	Initials: CR
Container No.	194
Tare Weight	1.5492
Wet Weight + Tare	17.6162
Dry Weight + Tare	7.7077

Test Sample	Initials: CR
Container No.	194
Tare Weight	50.5285
Wet Weight + Tare	84.8018
Dry Weight + Tare	51.2800

Calgon Batch #: 2466

SIEVE ANALYSIS

Sieve Date: 5-10-12

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	50.5399
4	50.5399
10	50.5399
18	50.7643
35	50.9659
60	51.0699
120	51.1465
230	51.2482
PAN	0.0670

PIPETTE ANALYSIS

5/10/2012

Temp:23

Initials: eg

TIME	Tare ID	Tare Wt	Dry Wt & Tare
12:36:00			
12:36:20	B3-1	1.5460	1.8171
12:37:46	B3-2	1.5482	1.8096
12:43:05	B3-3	1.5395	1.7752
13:04:18	B3-4	1.53673 eg	1.7128
14:29:00	B3-5	1.5407	1.6708
18:02:00	B3-6	1.5424	1.6410
11:12:00	B3-7	1.5350	1.6003

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: A Client Sample No.: IJ12-03

Set-up Date: 5-2-2012 Sample Description: Silty Clay, Shell? (excluded)

SOLIDS CONTENT

Moisture Content	Initials: RL
Container No.	134
Tare Weight	1.5652
Wet Weight + Tare	23.1189
Dry Weight + Tare	109.0504

Test Sample	Initials: RL
Container No.	134
Tare Weight	50.5254
Wet Weight + Tare	87.2395
Dry Weight + Tare	51.8776

Calgon Batch #: 2466

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 2 Initials: ey

Sieve Size	Weight Retained
Tare	50.5477
4	50.5477
10	50.5477
18	50.8736
35	51.1727
60	51.3972
120	51.6090
230	51.8752
PAN	0.1509

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: RL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:28:00	A1	1.5562	1.8380
9:28:20	A2	1.5520	1.8233
9:29:46	A3	1.5396	1.7689
9:35:05	A4	1.5482	1.6952
9:56:18	A5	1.5540	1.6639
11:21:00	A6	1.5557	1.6402
14:54:00	A7	1.5447	1.6020
8:04:00			

ey

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: C Client Sample No.: LJ12-06

Set-up Date: 5-2-2012 Sample Description: Silty Clay

SOLIDS CONTENT

Moisture Content	Initials: BL
Container No.	135
Tare Weight	1.5552
Wet Weight + Tare	19.7722
Dry Weight + Tare	9.5890

Test Sample	Initials: BL
Container No.	135
Tare Weight	50.3866
Wet Weight + Tare	82.7697
Dry Weight + Tare	50.9936

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	50.4014
4	50.4014
10	50.4014
18	50.5227
35	50.6661
60	50.7550
120	50.8459
230	50.9~~5~~717 eg
PAN	0.0729

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: BL

TIME			
9:31:00	Tare ID	Tare Wt	Dry Wt & Tare
9:31:20	C1	1.5532	1.8471
9:32:46	C2	1.5514	1.8384
9:38:05	C3	1.5528	1.8128
9:59:18	C4	1.5525	1.7592
11:24:00	C5	1.5395	1.6882
14:57:00	C6	1.5407	1.6479
8:07:00	C7	1.5377	1.6089

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: D Client Sample No.: IJ12-02

Set-up Date: 5-2-2012 Sample Description: Silty Clay, Nail? (excluded)

SOLIDS CONTENT

Moisture Content	Initials: BL
Container No.	137
Tare Weight	1.5428
Wet Weight + Tare	29.8008
Dry Weight + Tare	13.1644

Test Sample	Initials: BL
Container No.	137
Tare Weight	51.0116
Wet Weight + Tare	84.6763
Dry Weight + Tare	52.0932

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 2 Initials: ey

Sieve Size	Weight Retained
Tare	51.0219
4	51.0219
10	51.0605
18	51.1999
35	51.3893
60	51.5132
120	51.7726
230	52.0356
PAN	0.1010

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: BL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:34:00	D1	1.5363	1.8109
9:34:20	D2	1.5352	1.8018
9:35:46	D3	1.5377	1.7770
9:41:05	D4	1.5321	1.6950
10:02:18	D5	1.5286	1.6474
11:27:00	D6	1.5340	1.6210
15:00:00	D7	1.5441	1.6038
8:10:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
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PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: E Client Sample No.: IJ12-04

Set-up Date: 5-2-2012 Sample Description: Gravel, Sandy Silty Clay, 1½" Rock (excluded) shell fragments

SOLIDS CONTENT

Moisture Content	Initials: CR
Container No.	147
Tare Weight	1.5165
Wet Weight + Tare	25.7586
Dry Weight + Tare	18.0831

Test Sample	Initials: CR
Container No.	147
Tare Weight	50.0486
Wet Weight + Tare	139.5930
Dry Weight + Tare	98.6869

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	50.0678
4	69.1305
10	79.9537
18	85.6010
35	89.8135
60	93.9546
120	97.2820
230	98.33297 eg
PAN	0.2684

5/7/2012

Temp:23

PIPETTE ANALYSIS

Initials: CR

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:37:00	E1	1.5407	1.7788
9:37:20	E2	1.5422	1.7729
9:38:46	E3	1.5640	1.7791
9:44:05	E4	1.5746	1.7532
10:05:18	E5	1.5645	1.7106
11:30:00	E6	1.5656	1.6775
15:03:00	E7	1.5601	1.6312
8:13:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: F Client Sample No.: IJ12-07

Set-up Date: 5-2-2012 Sample Description: Sandy Silty Clay

SOLIDS CONTENT

Moisture Content	Initials: BL
Container No.	153
Tare Weight	1.5333
Wet Weight + Tare	80.4481
Dry Weight + Tare	13.9059

Test Sample	Initials: BL
Container No.	153
Tare Weight	49.0337
Wet Weight + Tare	83.7938
Dry Weight + Tare	50.0589

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 2 Initials: eg

Sieve Size	Weight Retained
Tare	49.0472
4	49.0472
10	49.0862
18	49.26701 eg
35	49.4752
60	49.6047
120	49.67542 eg
230	49.9506
PAN	0.1178

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: BL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:40:00	F1	1.5493	1.8476
9:40:20	F2	1.5503	1.8400
9:41:46	F3	1.5509	1.8185
9:47:05	F4	1.5354	1.7434
10:08:18	F5	1.5390	1.6881
11:33:00	F6	1.5341	1.6428
15:06:00	F7	1.5481	1.6205
8:16:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: G Client Sample No.: IJ12-01

Set-up Date: 5-2-2012 Sample Description: Organic Fines, Sand, Silt

SOLIDS CONTENT

Moisture Content	Initials: PBL
Container No.	160
Tare Weight	1.5344
Wet Weight + Tare	45.3216
Dry Weight + Tare	27.4491

Test Sample	Initials: PBL
Container No.	160
Tare Weight	50.6074
Wet Weight + Tare	137.1228
Dry Weight + Tare	96.2097

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	50.6533
4	54.7606
10	58.9074 eg
18	62.8421
35	66.6254
60	73.5578
120	91.8711
230	95.5531
PAN	0.6577

5/7/2012

Temp:23

PIPETTE ANALYSIS

Initials: PBL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:43:00	G1	1.5329	1.6792
9:43:20	G2	1.5406	1.6621
9:44:46	G3	1.5466	1.6508
9:50:05	G4	1.5483	1.6373
10:11:18	G5	1.5481	1.6200
11:36:00	G6	1.5075	1.5621
15:09:00	G7	1.5292	1.5682
8:19:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: H Client Sample No.: IJ12.58A

Set-up Date: 5.2.2012 Sample Description: Silty Clay

SOLIDS CONTENT

Moisture Content	Initials: CBL
Container No.	169
Tare Weight	1.5381
Wet Weight + Tare	22.2529
Dry Weight + Tare	9.7782

Test Sample	Initials: CBL
Container No.	169
Tare Weight	50.0479
Wet Weight + Tare	90.3089
Dry Weight + Tare	51.6739

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5.6.12

Sieve Set #: 2 Initials: lg

Sieve Size	Weight Retained
Tare	50.0610
4	50.0610
10	50.1001
18	50.3253
35	50.5668
60	50.8307
120	51.1178
230	51.5633
PAN	0.1143

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: CBL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:46:00	H1	1.5075	1.8116
9:46:20	H2	1.5362	1.8283
9:47:46	H3	1.5351	1.7803
9:53:05	H4	1.5314	1.6938
10:14:18	H5	1.5269	1.6538
11:39:00	H6	1.5301	1.6305
15:12:00	H7	1.5231	1.5923
8:22:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: I Client Sample No.: IJ12-11

Set-up Date: 5-2-2012 Sample Description: Sandy Silty Clay

SOLIDS CONTENT

Moisture Content	Initials: BL
Container No.	170
Tare Weight	1.5365
Wet Weight + Tare	26.5322
Dry Weight + Tare	14.9424

Test Sample	Initials: BL
Container No.	170
Tare Weight	49.4027
Wet Weight + Tare	79.8987
Dry Weight + Tare	54.0718

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	49.4104
4	49.4104
10	49.4104
18	49.4650
35	49.6108
60	50.2299
120	52.8291
230	53.9929
PAN	0.1329

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: BL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:49:00	I1	1.5271	1.7761
9:49:20	I2	1.5216	1.7519
9:50:46	I3	1.5216	1.7301
9:56:05	I4	1.5355	1.6993
10:17:18	I5	1.5659	1.6879
11:42:00	I6	1.5351	1.6252
15:15:00	I7	1.5399	1.6034
8:25:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UR81 ARI Sample Letter: J Client Sample No.: IJ12-08A

Set-up Date: 5-2-2012 Sample Description: Sandy Silty Clay, Organic Fines, shell fragment

SOLIDS CONTENT

Moisture Content	Initials: BL
Container No.	196
Tare Weight	1.5503
Wet Weight + Tare	19.9185
Dry Weight + Tare	8.8427

Test Sample	Initials: BL
Container No.	196
Tare Weight	51.3737
Wet Weight + Tare	99.1329
Dry Weight + Tare	53.6721

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-6-12

Sieve Set #: 2 Initials: eg

Sieve Size	Weight Retained
Tare	51.3867
4	51.5514
10	51.60788 eg
18	51.9372
35	52.2695
60	52.6066
120	52.9680
230	53.5134
PAN	0.1584

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: BL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:52:00			
9:52:20	J1	1.5263	1.8859
9:53:46	J2	1.5307	1.8485
9:59:05	J3	1.5289	1.7665
10:20:18	J4	1.5765	1.7319
11:45:00	J5	1.5720	1.6928
15:18:00	J6	1.5516	1.6489
8:28:00	J7	1.5113	1.5794

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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Calgon Batch #2666 4.30.12 eg

Tare Weight (g)	Dry + Tare Weight (g)	Calgon Weight (g)
1 1.5251	2.0719	0.5468
2 1.5272	2.0724	0.5452
3 1.5230	2.0644	0.5414
4 1.5257	2.0620	0.5363
5 1.5297	2.0681	0.5384

Average = 0.5416

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: U5156 ARI Sample Letter: A Client Sample No.: I-1-Z

Set-up Date: 5-3-2012 Sample Description: Sandy Silt Clay, organic debris

SOLIDS CONTENT

Moisture Content	Initials: CBL
Container No.	109A
Tare Weight	1.5322
Wet Weight + Tare	20.8039
Dry Weight + Tare	12.9766

Test Sample	Initials: CBL
Container No.	109A
Tare Weight	51.1631
Wet Weight + Tare	109.5551
Dry Weight + Tare	66.4179

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5-7-12

Sieve Set #: 2 Initials: eg

Sieve Size	Weight Retained
Tare	51.1871
4	51.2894
10	51.4369
18	51.6457
35	51.9886
60	53.5214
120	596505
230	64.7735
PAN	1.8084

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: CBL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
10:04:00	A1	1.9418	1.9816
10:04:20	A2	1.5399	1.8971
10:05:46	A3	1.5276	1.8228
10:11:05	A4	1.5254	1.7569
10:32:18	A5	1.5328	1.7035
11:57:00	A6	1.5392	1.6677
15:30:00	A7	1.5378	~~1.5539~~ 1.6299 eg
8:40:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: US18 ARI Sample Letter: B Client Sample No.: I·2·A·Z

Set-up Date: 5·3·2012 Sample Description: Sandy Silty Clay

SOLIDS CONTENT

Moisture Content	Initials: BL
Container No.	171
Tare Weight	1.5348
Wet Weight + Tare	20.4403
Dry Weight + Tare	11.4535

Test Sample	Initials: BL
Container No.	171
Tare Weight	50.4471
Wet Weight + Tare	91.1808
Dry Weight + Tare	54.7879

Calgon Batch #: 266

SIEVE ANALYSIS

Sieve Date: 5·7·12

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	50.4700
4	50.4700
10	50.5558
18	50.7669
35	50.9737
60	51.4338
120	53.2654
230	54.5596
PAN	0.3095

PIPETTE ANALYSIS

5/7/2012

Temp:23

Initials: BL

TIME	Tare ID	Tare Wt	Dry Wt & Tare
10:07:00	B1	1.5449	1.9073
10:07:20	B2	1.5104	1.8505
10:08:46	B3	1.5550	1.8611
10:14:05	B4	1.5481	1.7858
10:35:18	B5	1.5179	1.6860
12:00:00	B6	1.5186	1.6385
15:33:00	B7	1.5267	1.6099
8:43:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

Calgon Batch #266 4.30.12 eg

	Tare Weight (g)	Dry + Tare Weight (g)	Calgon Weight (g)
1	1.5251	2.0719	0.5468
2	1.5272	2.0724	0.5452
3	1.5230	2.0644	0.5414
4	1.5257	2.0620	0.5363
5	1.5297	2.0681	0.5384

Average = 0.5416

Table of Contents: ARI Job UW82

Client: Anchor QEA, LLC

Project: 090007-01 I&J Waterway

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BC
Signature

June-19-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 20, 2012

Cindy Fields
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: I & J Waterway, 090007-01
ARI Job No.: UW82

Dear Cindy:

Please find enclosed the Chain of Custody (COC) record, sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: UW82

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: UW82

NEWFIELDS

UW82

NewFields Northwest, LLC.
Shipping: 4729 NE View Dr.
Mailing: P.O. Box 216
Port Gamble, WA. 98364
Tel: (360) 297-6040, Fax: (360)297-7268

CHAIN OF CUSTODY

13872

Destination Lab: ARI	Sample Originator: NewFields	Report Results To: NA	Phone NA
Destination Contact Sue Dunihoo	Contact Name Bill Gardiner	Contact Name ↓	Fax ↓
Date 5/31/12	Address Same as above	Address ↓	Email ↓
Turn-Around-Time NA			
Project Name I&J Waterway	Phone ↓	Invoicing To:	
	Fax ↓	Comments or Special Instructions:	
Contract/PO NA	E-mail bgardiner@newfields.com		

No.	Sample ID	Matrix	No. & Type of Container	Date & Time	Analysis: GS	TOC	TSS				Preservation	Sample Temp Upon Receipt	LAB ID
1	CR023	SS	1.16oz.	5/30/12, 1400	X	X	X				4.C		
2	CR.12	SS	1.16oz.	↓	X	X	X				4.C		
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

Relinquished by:	Recieved by:	Relinquished by:	Recieved by:
Print Name M Bacon	Print Name A. Volgardsen	Print Name	Print Name
Signature M Bacon	Signature [signature]	Signature	Signature
Affiliation NewFields	Affiliation ARI	Affiliation.	Affiliation
Date/Time 31 May '12, 0945	Date/Time 6/1/12 1020	Date/Time	Date/Time:

Matrix Codes
FW = Fresh Water
WW = Waste Water
SB = Salt & Brackish Water
SS = Soil & Sediment
TS = plant & Animal Tissue
OT = Other

WHITE – return to originator • YELLOW – lab • PINK – retained by originator

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: NewFields
COC No(s): 13872 NA
Assigned ARI Job No: UW82

Project Name: I&J Waterway
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Tracking No: 793628937318 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc)	YES	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	3.4	

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 6/1/12 Time: 1620

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Was Sample Split by ARI: NA YES Date/Time: Equipment: Split by:

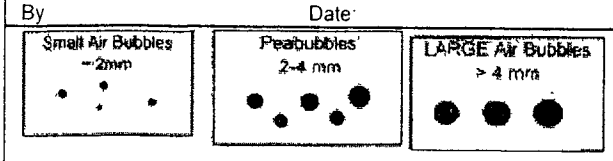
Samples Logged by: AV Date: 6/1/12 Time: 1200

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By Date



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

From: (360) 297-6045
Brian Hester
NewFields Northwest
4729 NE View Dr.

Port Gamble, WA 98364

Origin ID: PWTA

FedEx Express

J12101112190225

Ship Date: 31MAY12
ActWgt: 11.0 LB
CAD: 7698805/INET3250

Delivery Address Bar Code

SHIP TO: (206) 695-6200 BILL SENDER

Sue Dunnihoo
Analytical Resources, Inc.
4611 South 134th Place
Suite 100
Tukwila, WA 98168

Ref # 860.0024.000
Invoice #
PO # CR023 & CR-12
Dept #

FRI - 01 JUN A1
STANDARD OVERNIGHT

TRK# 7936 2593 7318
0201

85 BFIA

98168
WA-US
SEA

512G3/61A4/A278

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: UW82

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: I & J Waterway, 090007-01
ARI Job No.: UW82

Sample receipt

Two sediment samples were received on June 1, 2012 under ARI job UW82. The cooler temperature measured by IR thermometer following ARI SOP was 3.4°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

General Chemistry Parameters

The samples and associated laboratory were prepared and analyzed within the method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recovery was within control limits.

The SRM percent recovery was within limits.

The matrix spike percent recovery and replicate RSDs were within control limits.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Anchor QEA, LLC	**ARI Job No.:** UW82
Client Project: I&J Waterway	**Client Project No.:** 090007-01

Case Narrative

1. Two samples were submitted for grain size analysis according to Puget Sound Estuary Protocol (PSEP) methodology on June 1, 2012.
2. The samples were run in a single batch and one sample from this job was chosen for triplicate analysis. The triplicate data is reported on the QA summary.
3. The data is provided in summary tables and plots.
4. There were no other noted anomalies in this project.

Released by: _____ Date: June 14, 2012
Technician

Reviewed by: _____ Date: 6/14/12
Geotechnical Laboratory Manager

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UW82
Client: Anchor QEA, LLC
Project Event: 090007-01
Project Name: I&J Waterway

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CR023	UW82A	12-10063	Sediment	05/30/12 14:00	06/01/12 10:20
2.	CR-12	UW82B	12-10064	Sediment	05/30/12 14:00	06/01/12 10:20

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q — Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

UW82:00010

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

UW82:00012

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry Effective 5/1/09		
Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip		
	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

UW82:00013

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: UW82

SAMPLE RESULTS-CONVENTIONALS
UW82-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/19/12

Project: I&J Waterway
Event: 090007-01
Date Sampled: 05/30/12
Date Received: 06/01/12

Client ID: CR023
ARI ID: 12-10063 UW82A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/04/12 060412#1	SM2540B	Percent	0.01	32.80
Total Organic Carbon	06/14/12 061412#1	Plumb,1981	Percent	0.020	3.45

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
UW82-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/19/12

Project: I&J Waterway
Event: 090007-01
Date Sampled: 05/30/12
Date Received: 06/01/12

Client ID: CR-12
ARI ID: 12-10064 UW82B

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/04/12 060412#1	SM2540B	Percent	0.01	75.40
Total Organic Carbon	06/14/12 061412#1	Plumb,1981	Percent	0.020	0.351

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
UW82-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/19/12

Project: I&J Waterway
Event: 090007-01
Date Sampled: 05/30/12
Date Received: 06/01/12

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: UW82A Client ID: CR023						
Total Organic Carbon	06/14/12	Percent	3.45	7.86	4.60	95.9%

REPLICATE RESULTS-CONVENTIONALS
UW82-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/19/12

Project: I&J Waterway
Event: 090007-01
Date Sampled: 05/30/12
Date Received: 06/01/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UW82A Client ID: CR023					
Total Solids	06/04/12	Percent	32.80	32.90 32.80	0.2%
Total Organic Carbon	06/14/12	Percent	3.45	3.58 3.85	5.6%

LAB CONTROL RESULTS-CONVENTIONALS
UW82-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/19/12

Project: I&J Waterway
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb,1981	ICVL	06/14/12	Percent	0.103	0.100	103.0%

METHOD BLANK RESULTS-CONVENTIONALS
UW82-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/19/12

Project: I&J Waterway
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	06/04/12	Percent	< 0.01 U
Total Organic Carbon	06/14/12	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
UW82-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/19/12

Project: I&J Waterway
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	06/14/12	Percent	2.99	2.99	100.0%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: UW82

Anchor QEA, LLC
090007-01
I&J Waterway

Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2.00	1.00
CR023	100.0	100.0	100 0	100.0	99.8	99.0	98.4	97.1	87.3	68.1	53.4	40.3	29.1	20.3
	100.0	100.0	100.0	99.9	99.5	98.5	97.8	96.4	84.5	68.3	54.5	40.6	29.2	20.4
	100.0	100.0	100.0	99.9	99.2	98.2	97.6	96.3	83.9	68.2	54.0	41.2	29.3	20.5
CR-12	100.0	100.0	99.8	99.2	95.4	74.4	28.1	4.4	2.9	2.6	2.4	2.1	1.7	1.3

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

UW82

UW82 : 000023

Anchor QEA, LLC
090007-01
I&J Waterway

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62 5-31.0	31 0-15 6	15.6-7 8	7 8-3 9	3.9-2.0	2 0-1.0	<1 0	<230 (<62)
CR023	0.0	0.0	0.2	0.8	0.6	1.3	9.9	19.1	14.8	13.1	11.1	8.9	20.3	97.1
	0.0	0.1	0.4	1.0	0.7	1.4	11.9	16.2	13.7	14.0	11.4	8.8	20.4	96.4
	0.0	0.1	0.6	1.0	0.6	1.4	12.3	15.7	14.2	12.9	11.9	8.8	20.5	96.3
CR-12	0.2	0.5	3.9	20.9	46.3	23.7	1.5	0.3	0.3	0.3	0.4	0.4	1.3	4.4

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

UW82

UW82 : 000021

QA SUMMARY

Client.	Anchor QEA, LLC	Client Project No.	090007-01
		Client Project	I&J Waterway
ARI Trip Sample ID	UW82A	Batch No.:	UW82-1
Client Trip Sample ID:	CR023	Page.	1 of 1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
CR023	100.0	100.0	100.0	100.0	99.8	99.0	98.4	97.1	87.3	68 1	53 4	40 3	29.1	20.3
	100.0	100.0	100.0	99 9	99.5	98.5	97.8	96.4	84.5	68 3	54 5	40 6	29.2	20.4
	100.0	100.0	100 0	99.9	99.2	98.2	97.6	96 3	83.9	68.2	54.0	41.2	29.3	20.5
AVE	NA	100.00	99.99	99 91	99.49	98.57	97 94	96.60	85.23	68.21	53.97	40.67	29.18	20 38
STDEV	NA	0.00	0.02	0 05	0.27	0.38	0.41	0 46	1.78	0.07	0 59	0.47	0.07	0.11
%RSD	NA	0.00	0 02	0.05	0.27	0.39	0.42	0.47	2.08	0.10	1 09	1.15	0 24	0.52

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	QA Ratio (95-105)	Data Qualifiers	Pipette Portion (5.0-25.0g)
CR023	5/30/2012	6/8/2012	6/14/2012	97.4		10.4
	5/30/2012	6/8/2012	6/14/2012	98.4		10 6
	5/30/2012	6/8/2012	6/14/2012	99.0		10.5
CR-12	5/30/2012	6/8/2012	6/14/2012	100.5		5.1

* ARI Internal QA limits = 95-105%

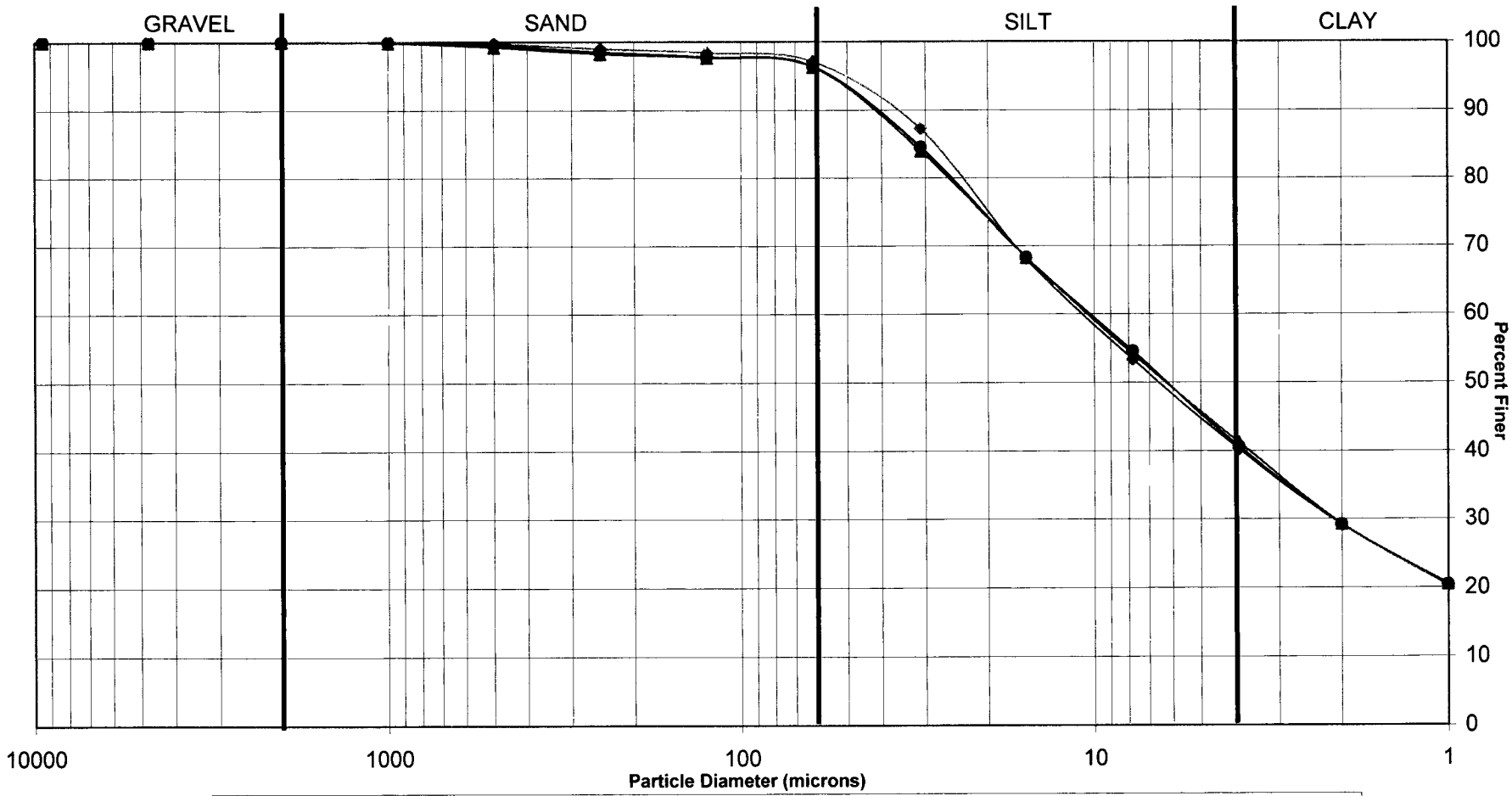
Notes to the Testing:

1 Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing

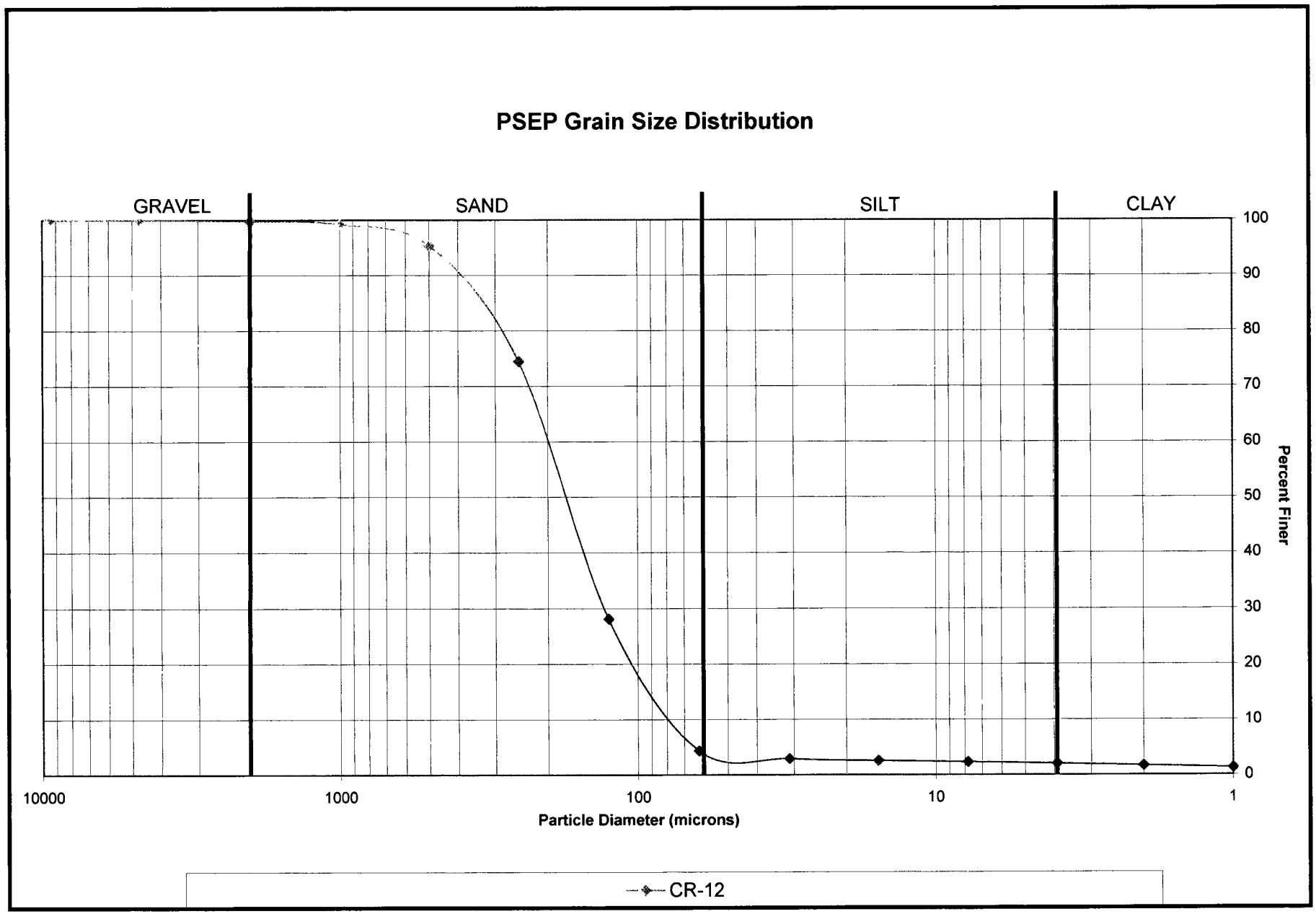
UW82 : 000025

PSEP Grain Size Distribution

Triplicate Sample Plot



UW82 : 000026


PSEP Grain Size Distribution
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
CR-12

UW82:00027

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: UW82

W
6-5-12

TOC Solids Prep Log

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE: 6/4/2012

ANALYST: CDE / KE 19:01 (C)

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1224		13.1222	-0 2 mg	
UW82 A1		-	13.0022	19.3213	16.8140	60.32%	
UW82 A1 dup		-	13.1442	20.2258	17.3410	59.26%	RPD = 1 77%
UW82 A1 trip		-	13.2063	18.0090	16.1160	60.58%	RSD = 1 16%
UW82 B1		-	13.0509	18.7612	17.4966	77.85%	

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst ADE / K Date 6-4-12 19:01

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.1224	Ø	13.1222		
UW82A'		—	13.0022	19.3213	16.8140		inst mud
A'10		—	13.1442	20.2258	15.3410		↓
A'15		—	13.2063	18.0090	16.1160		
B'		—	13.0509	18.7612	17.4966		Sandy w/water

6-4-12 UC

W
6-5-12

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 6/4/12 (C)
ANALYST: CDE / KE 17:54

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597
Muffle Furnace: N /A

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
6/4/2012 17:54	date/time in oven	CDE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
6/5/2012 9:42	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	15.8			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	6/4/12 17:42 CDE	6/4/12 17:42 CDE	6/5/12 9:59 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0878	1.0877			0.00							
UW82 A1		6.3186	1.0834	2.7995			1.72	32.8%						
UW82 A1 dup		7.0907	1.0962	3.0656			1.97	32.9%						
							RPD =	0.22%				RPD =	NA	
UW82 A1 trp		7.3797	1.1230	3.1758			2.05	32.8%						
							RSD =	0.11%				RSD =	NA	
UW82 B1		6.7511	1.0965	5.3575			4.26	75.4%						

UW82 : 000031

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET (C)

① 6-5-12 ②

B146454145

Analyst: CW / (W)	Date: 6-4-12	Oven ID: 12		Balance ID: ~~1123230597~~	
Time in Oven: 17:54	Time Out of Oven: ① 19:42		Elapsed Time (> 12 Hrs):		

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	←	6-4-12 17:42	6-5-12 9:54						
Cal Weight (10.0000):	←	10.0000 WDL	10.0000 ②						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	Dry Weight 104°C 2	Dry Weight 104°C 3	Dry Weight grams	Ash Weight 550°C 1	Ash Weight 550°C 2	Ash Weight 550°C 3
BLANK	48	Ø	1.0878	1.0877						
UW82 A'	49	6.3186	1.0834	2.7995						
A' dp	50	7.0907	1.0962	3.0656						
A' TP	51	7.3797	1.1230	3.1758						
B'	52	6.7511	1.0965	5.3575						

6-4-12 CWL

UW82 : 00032

iw
6-18-12

TOC, Solids Data Analysis

DATE: 6/14/2012
ANALYST: KE 9:54

Instrument: Apollo 2
Mode: NPOC *Inlet:* Boat
Spike Std = **2,500** *ppm C*

Calibration Data

Cal Curve ID: **6/8/12 BOAT CAL** *Conc:* 5,000 *ppm*
Calibration Curve Standard: **00128 - 03** *Curve Date:* **06/08/12**
CalFact: **1.577E+05** *intercept:* **259687** *r2 :* **0.99928**
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): **8** *to* **100** *40 µL injections of designated standard*

Verification Standard

Source: ***ERA# 0409-12-01*** *Conc:* **5,000** *ppm*
dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material

Source: ***NIST 8704*** *Conc:* **33,510** *ppm*
Source: ***NIST 1941B*** *Conc:* **29,900** *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
20.7	25.3	27.2				24.4	13.7%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
~~ICV~~			-	~~1.00~~		~~40.0~~	~~-40.37~~	~~-40~~	~~Low, increase wt~~
ICV				1.00		40.0	1027	1,027	102.70%
Blank				1.00		40.0	-39.98	-40	Blank OK
NIST 1941B				1.00		2.1	29921	29,921	100.07%
UW27 A1				1.00		1.5	51671	51,671	Range OK!
Silica Blank 1				1.00		40.5	20.66	21	Low Scale
Silica Blank 2				1.00		44.5	25.26	25	Low Scale
Silica Blank 3				1.00		41.1	27.15	27	Low Scale
UW27 A1	18.9	185.5	89.81%	9.81		2.6	6458	63,169	Range OK!
UW27 A1 dup	18.6	184.4	89.91%	9.91		2.8	6688	66,088	RPD=4.5%
UW27 A1 trp	18.6	185.1	89.95%	9.95		2.4	5916	58,656	RSD=6%
UW27 A1 ms	18.9	185.5	89.81%	9.81	10	3.1	14706	144,122	Range OK!
Spike =	*0.025*	*mg C to*	*0.3*	*mg samp=*	*79,152*	*ppm*		*102%*	
UW27 B2	17.6	175.1	89.95%	9.95		3.0	10330	102,554	Range OK!
CCV				1.00		40.0	998	998	99.80%
Blank				1.00		40.0	-38.93	-39	Blank OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
UW27 C2	19.0	188.2	89.90%	9.91		2.4	12882	127,383	Range OK!
UW27 D2				1.00		1.1	40824	40,824	Range OK!
UW27 E2	17.7	175.7	89.93%	9.93		2.7	11705	115,973	Range OK!
UW99 E1				1.00		3.0	20898	20,898	Range OK!
UW99 G1				1.00		3.4	15689	15,689	Range OK!
UW97 B1				1.00		2.3	16180	16,180	Range OK!
UW97 B1 dup				1.00		2.4	17482	17,482	RPD=7.7%
UW97 B1 trp				1.00		2.5	19634	19,634	RSD=9.8%
UW97 B1 ms				1.00	20	2.5	37645	37,645	Range OK!
Spike =	0.05	mg C to	2.5	mg samp=	20,000	ppm		107%	
UW97 A1				1.00		1.9	15609	15,609	Range OK!
CCV				1.00		40.0	1061	1,061	106.10%
Blank				1.00		40.0	-39.11	-39	Blank OK
UW97 C1				1.00		1.9	17758	17,758	Range OK!
UW97 D1				1.00		1.6	19973	19,973	Range OK!
UW97 E1				1.00		2.3	21017	21,017	Range OK!
UW82 A1				1.00		2.0	18771	18,771	Range OK!
UW82 A1 dup				1.00		1.9	19490	19,490	RPD=3.8%
UW82 A1 trp				1.00		2.0	20918	20,918	RSD=5.5%
UW82 A1 ms				1.00	20	2.0	42729	42,729	Range OK!
Spike =	0.05	mg C to	2.0	mg samp=	25,000	ppm		96%	
UW82 B1				1.00		4.6	3404	3,404	Range OK!
NIST 1941B				1.00		2.3	29427	29,427	98.42%
CCV				1.00		40.0	981	981	98.10%
Blank				1.00		40.0	-36.22	-36	Blank OK

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(1) 6-14-12 (2)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 2

Set-Up Parameters MODE: NPOC		INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	
Calibration:	ARI – 00128-3	5000	9:54
Verification:	ERA (1) 00409-12-01	5000 to 1000 for CVS	
SRM:	NBS 1941b or 8704	09900	

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			No inject Blank Boat
ICV			40			
ICB			40			
NBS 1941 B			2.1			
UW27 A'			1.5			
SilicaBlank 1			40.5			
2			44.5			
3			41.1			
UW27 A'	18.9	185.5	2.6			
DA'	18.6	184.4	2.8			
MA'	18.6	185.1	2.4			
MSA'	18.9	185.5	3.1	2500	10	
B	17.6	175.1	3.0			
CCV			40			
CCB			40			
UW27 C2	19.0	188.2	2.4			
D2			1.1			
E2	17.7	175.7	2.7			
UW99 E'			3.0			
G'			3.4			
UW97 B'			2.3			
DB'			2.4			
MB'			2.5			
MSB'			2.5	2500	20	
A'			1.9			
CCV			40			
CCB			40			
UW97 C'			1.9			
D'			1.6			
E'			2.3			
UW82 A'			2.0			
A'			1.9			

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(1) 6-14-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 2 of 2

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler
Standards:	Source	Conc (ppm)	9:54
Calibration:	ARI - 00128-3	5000	
Verification:	ERA - 0409-12-01	5000 to 1000 for CVS	
SRM:	NBS 1941b or 8704	29900	

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
UW82 µA'			2.0			
↓ ms A'			2.0	2500	20	
B'			4.6			
NBS 1941 B			2.3			
CCV			40			
CCB			40			

6-14-12 (W)

6-14-12 (W)

Detailed Analysis Report Print Date/Time: 2012/06/15 9:46:15

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06140951
Timestamp: 2012/06/14 09:53
Sample Type: Cal. Verification

6-14-12 (W) No inject Blank Boat

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-40.3747	-1.6150	5017	12.559	12.534	73

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06140957
Timestamp: 2012/06/14 10:01
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1027.4893	41.0996	6740744	12.686	13.685	174

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141004
Timestamp: 2012/06/14 10:07
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-39.9789	-1.5992	7514	12.708	12.586	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141015
Timestamp: 2012/06/14 10:21
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29920.9062	62.8339	10168065	12.662	13.683	300

Last Message: Max Integration Time Reached

Sample ID: UU77 A1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141036
Timestamp: 2012/06/14 10:41
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	51670.9062	77.5064	12222101	12.620	13.616	260

Sample ID: Silica Blank 1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141055
Timestamp: 2012/06/14 10:57
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20.6607	0.8368	131950	12.869	13.865	59

Sample ID: Silica Blank 2
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL

Mode: TOC
Filename: 06141112
Timestamp: 2012/06/14 11:14

Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25.2567	1.1239	177233	12.754	13.754	64

Sample ID: Silica Blank 3 Mode: TOC
Method: Boat Sampler Filename: 06141120
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 11:22
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27.1516	1.1159	175973	12.948	13.944	62

Sample ID: UW27 A1 Mode: TOC
Method: Boat Sampler Filename: 06141140
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 11:44
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6457.8086	16.7903	2647689	12.907	13.906	136

Sample ID: UW27 A1 Mode: TOC
Method: Boat Sampler Filename: 06141150
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 11:57
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6688.1167	18.7267	2953047	12.812	13.808	145

Sample ID: UW27 A1 TRIP Mode: TOC
Method: Boat Sampler Filename: 06141159
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 12:02
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5916.2056	14.1989	2239046	12.920	13.917	125

Sample ID: UW27 A1 MS Mode: TOC
Method: Boat Sampler Filename: 06141217
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 12:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14705.9434	45.5884	7188911	12.983	13.982	176

Sample ID: UW27 B1 Mode: TOC
Method: Boat Sampler Filename: 06141225
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 12:28
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10330.4150	30.9912	4887059	12.905	13.904	162

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 06141237
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 12:41
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	998.1934	39.9277	6555955	12.909	13.907	174

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141251
Timestamp: 2012/06/14 12:54
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-38.9338	-1.5574	14106	12.865	12.845	120

Last Message: Low Sample Detected

Sample ID: UW27 C2
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141310
Timestamp: 2012/06/14 13:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12882.1836	30.9172	4875389	12.835	13.834	168

Sample ID: UW27 D2
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141319
Timestamp: 2012/06/14 13:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	40824.0977	44.9065	7081379	12.907	13.907	230

Sample ID: UW27 E2
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141327
Timestamp: 2012/06/14 13:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11704.6406	31.6025	4983453	12.920	13.918	174

Sample ID: UW99 E1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141334
Timestamp: 2012/06/14 13:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20897.6973	62.6931	9886173	13.114	14.113	215

Sample ID: UW99 G1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06141346
Timestamp: 2012/06/14 13:51
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15689.3135	53.3437	8411848	13.093	14.092	212

Sample ID: UW97 B1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL

Mode: TOC
Filename: 06141356
Timestamp: 2012/06/14 14:00

Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16180.0986	37.2142	5868371	13.198	14.195	181

Sample ID: UW97 B1 Mode: TOC
Method: Boat Sampler Filename: 06141440
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 14:45
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17481.6387	41.9559	6616098	12.987	13.983	191

Sample ID: UW97 B1 TRIP Mode: TOC
Method: Boat Sampler Filename: 06141450
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 14:55
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19633.6934	49.0842	7740171	12.971	13.968	188

Sample ID: UW97 B1 MS Mode: TOC
Method: Boat Sampler Filename: 06141501
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 15:06
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	37644.8359	94.1121	14840686	12.838	13.837	238

Sample ID: UW97 A1 Mode: TOC
Method: Boat Sampler Filename: 06141509
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 15:13
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15609.0566	29.6572	4676692	12.881	13.881	179

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 06141517
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 15:22
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1060.6075	42.4243	6949642	12.771	13.771	196

Sample ID: ICB BOAT Mode: TOC
Method: Boat Sampler Filename: 06141524
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 15:29
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-39.1083	-1.5643	13005	12.938	12.860	120

Last Message: Low Sample Detected

Sample ID: UW97 C1 Mode: TOC
Method: Boat Sampler Filename: 06141532

Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Timestamp: 2012/06/14 15:36
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17758.3105	33.7408	5320639	12.871	13.869	174

Sample ID: UW97 D1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06141540
Timestamp: 2012/06/14 15:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19973.2812	31.9573	5039390	12.916	13.915	193

Sample ID: UW97 E1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06141548
Timestamp: 2012/06/14 15:52
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21017.3301	48.3399	7622789	12.974	13.973	200

Sample ID: UW82 A1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06141556
Timestamp: 2012/06/14 16:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18771.2910	37.5426	5920150	13.053	14.049	183

Sample ID: UW82 A1 DUP
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06141620
Timestamp: 2012/06/14 16:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19490.1914	37.0314	5839535	13.391	14.389	178

Sample ID: UW82 A1 TRIP
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06141705
Timestamp: 2012/06/14 17:10
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20917.9766	41.8360	6597178	13.191	14.191	185

Sample ID: UW82 A1 MS
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06141716
Timestamp: 2012/06/14 17:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	42728.9844	85.4580	13476003	13.884	14.884	197

Sample ID: UW82 B1
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Mode: TOC
Filename: 06141725
Timestamp: 2012/06/14 17:29

Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3404.2009	15.6593	2469344	13.126	14.124	132

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 06141733
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 17:39
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29426.9863	67.6821	10932580	13.150	15.613	301

Last Message: Max Integration Time Reached

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 06141743
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 17:49
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	981.0708	39.2428	6447952	13.192	14.191	199

Sample ID: ICB BOAT Mode: TOC
Method: Boat Sampler Filename: 06141752
Cal. Curve: 06082012 BOAT CAL Timestamp: 2012/06/14 17:55
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-36.2150	-1.4486	31255	13.115	13.317	120

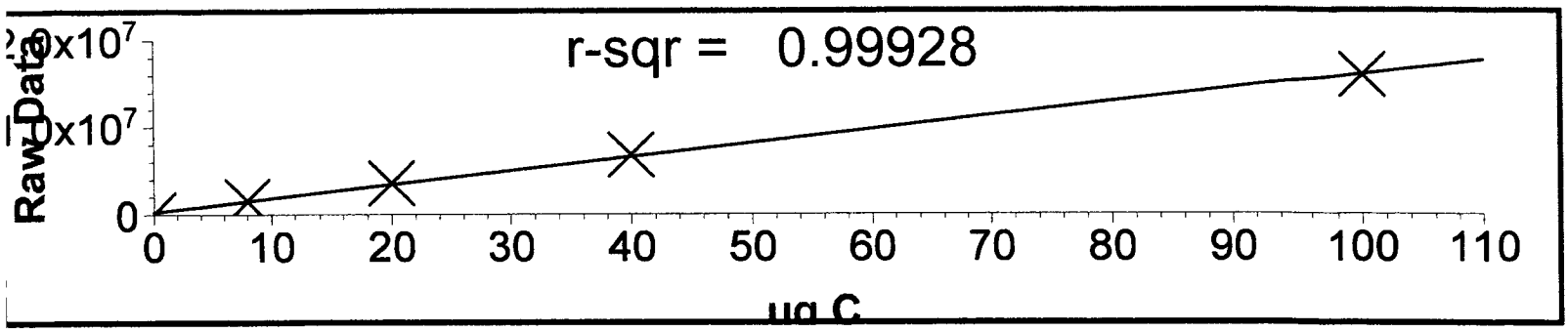
Last Message: Low Sample Detected

① 6-8-12 ⑩

Calibration Report Print Date/Time: 2012/06/08 12:06:13

Cal. Curve ID: 06082012 BOAT CAL
Created: 2012/06/08 12:05
Calibration Factor (m): 1.577e+05
Y Intercept (b): 259687
r-squared: 0.99928

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	28469	0.000	-1.466	Low Sample De	2012/06/08 10:04
200 ppm	1537092	8.000	8.101		2012/06/08 10:19
2500 ppm	15928888	100.000	99.366		2012/06/08 11:04
500 ppm	3550686	20.000	20.870		2012/06/08 11:48
1000 ppm	6745486	40.000	41.130		2012/06/08 12:04


r-sqr = 0.99928
Raw Data
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2012/06/08 12:07:44

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06080954
Timestamp: 2012/06/08 10:04
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			26852	15.677	15.567	120
2			23662	15.599	15.517	120
3			34894	15.552	15.622	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 28469 Std Dev: 5788 RSD: 20.33

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06081008
Timestamp: 2012/06/08 10:19
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1581758	15.615	16.613	108
2			1547904	15.919	16.916	98
3			1481615	16.147	17.145	103

<<<Statistics>>> Mean: 1537092 Std Dev: 50939 RSD: 3.31

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06081021
Timestamp: 2012/06/08 10:33
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			3563421	15.715	16.714	134
2			3691857	15.944	16.944	139
3			3664818	16.142	17.140	134

<<<Statistics>>> Mean: 3640032 Std Dev: 67710 RSD: 1.86

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06081035
Timestamp: 2012/06/08 10:47
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6926440	15.879	16.877	170
2			7220094	16.008	17.004	155
3			6976834	16.454	17.453	132

<<<Statistics>>> Mean: 7041122 Std Dev: 157028 RSD: 2.23

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06081050
Timestamp: 2012/06/08 11:04
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			15664311	16.073	17.072	207
2			15803491	16.272	17.271	222
3			16318860	16.647	17.642	183

<<<Statistics>>> Mean: 15928888 Std Dev: 344821 RSD: 2.16

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06081124
Timestamp: 2012/06/08 11:37
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2723221	15.944	16.939	194
2			1621530	16.311	17.310	109
3			1611314	16.000	16.999	119

<<<Statistics>>> Mean: 1985355 Std Dev: 639031 RSD: 32.19

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06081138
Timestamp: 2012/06/08 11:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			3602224	16.232	17.228	119
2			3521153	16.166	17.166	124
3			3528681	16.644	17.644	123

<<<Statistics>>> Mean: 3550686 Std Dev: 44792 RSD: 1.26

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 06082012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06081150
Timestamp: 2012/06/08 12:04
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6625248	16.080	17.080	206
2			6685455	16.748	17.745	179
3			6925754	16.398	17.395	190

<<<Statistics>>> Mean: 6745486 Std Dev: 158993 RSD: 2.36

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: UW82

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UW82 ARI Sample Letter: A-1 Client Sample No.: CR023

Set-up Date: 6-8-2012 Sample Description: mostly Clay

SOLIDS CONTENT

Moisture Content	Initials: BR
Container No.	107
Tare Weight	1.5319
Wet Weight + Tare	17.4420
Dry Weight + Tare	6.8106

Test Sample	Initials: BR
Container No.	107
Tare Weight	51.1539
Wet Weight + Tare	83.3232
Dry Weight + Tare	51.5695

Calgon Batch #: 268

SIEVE ANALYSIS

Sieve Date: 6-11-2012

Sieve Set #: 1 Initials: BR

Sieve Size	Weight Retained
Tare	51.1559
4	51.1559
10	51.1559
18	51.1600
35	51.1820
60	51.2643
120	51.3257
230	51.4628
PAN	.1208

PIPETTE ANALYSIS

6/12/2012

Temp:23

Initials: eg

TIME	Tare ID	Tare Wt	Dry Wt & Tare
7:54:00	A1-1	1.5320	1.7603
7:54:20	A1-2	1.5153	1.7218
7:55:46	A1-3	1.5164	1.6810
8:01:05	A1-4	1.5082	1.6404
8:22:18	A1-5	1.5048	1.6083
9:47:00	A1-6	1.5025	1.5816
13:20:00	A1-7	1.5267	1.5864
6:30:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UW82 ARI Sample Letter: A-2 Client Sample No.: CR023

Set-up Date: 6-8-2012 Sample Description: _____

SOLIDS CONTENT

Moisture Content	Initials: RL
Container No.	145
Tare Weight	1.5413
Wet Weight + Tare	16.0051
Dry Weight + Tare	6.3544

Test Sample	Initials: RL
Container No.	145
Tare Weight	50.7567
Wet Weight + Tare	83.7153
Dry Weight + Tare	51.2647

Calgon Batch #: 268

SIEVE ANALYSIS

Sieve Date: 6-11-2012

Sieve Set #: 2 Initials: RR

Sieve Size	Weight Retained
Tare	50.7611
4	50.7611
10	50.7658
18	50.7716
35	50.8178
60	50.9282
120	51.0055
230	51.1541
PAN	.1320

6/12/2012

Temp:23

PIPETTE ANALYSIS

Initials: eg

TIME	Tare ID	Tare Wt	Dry Wt & Tare
7:57:00	A2-1	1.5261	1.7564
7:57:20	A2-2	1.5302	1.7338
7:58:46	A2-3	1.5350	1.7024
8:04:05	A2-4	1.5482	1.6850
8:25:18	A2-5	1.5244	1.6301
9:50:00	A2-6	1.5380	1.6183
13:23:00	A2-7	1.5326	1.5933
6:33:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UW82 ARI Sample Letter: A-3 Client Sample No.: CR023

Set-up Date: 6-6-2012 Sample Description: _____

SOLIDS CONTENT

Moisture Content	Initials: CBL
Container No.	217
Tare Weight	1.5369
Wet Weight + Tare	16.9912
Dry Weight + Tare	6.6775

Test Sample	Initials: CBL
Container No.	217
Tare Weight	49.9665
Wet Weight + Tare	82.6827
Dry Weight + Tare	50.5209

Calgon Batch #: 268

SIEVE ANALYSIS

Sieve Date: 6-11-2012

Sieve Set #: 1 Initials: CBL

Sieve Size	Weight Retained
Tare	49.9705
4	49.9705
10	49.9705
18	49.9857
35	50.0557
60	50.1620
120	50.2265
230	50.3764
PAN	.1426

PIPETTE ANALYSIS

6/12/2012

Temp:23

Initials: eg

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:00:00	A3-1	1.5559	1.7829
8:00:20	A3-2	1.5768	1.7766
8:01:46	A3-3	1.5574	1.7227
8:07:05	A3-4	1.5561	1.6902
8:28:18	A3-5	1.5633	1.6691
9:53:00	A3-6	1.5525	1.6321
13:26:00	A3-7	1.5565	1.6168
6:36:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UW82 ARI Sample Letter: B Client Sample No.: CR-12

Set-up Date: 6-8-2012 Sample Description: Sand, some Organic Debris

SOLIDS CONTENT

Moisture Content	Initials: CR
Container No.	223
Tare Weight	1.5414
Wet Weight + Tare	34.1492
Dry Weight + Tare	26.3950

Test Sample	Initials: CR
Container No.	223
Tare Weight	49.5584
Wet Weight + Tare	202.1467
Dry Weight + Tare	161.7968

Calgon Batch #: 268

SIEVE ANALYSIS

Sieve Date: 6-11-2012

Sieve Set #: 2 Initials: CR

Sieve Size	Weight Retained
Tare	49.5827
4	49.5827
10	49.8304
18	50.4651
35	54.9757
60	79.3025
120	133.1691
230	160.7840
PAN	.7592

6/12/2012

Temp:23

PIPETTE ANALYSIS

Initials: eg

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:03:00	B1	1.5617	1.6666
8:03:20	B2	1.5551	1.6383
8:04:46	B3	1.5475	1.6235
8:10:05	B4	1.5521	1.6221
8:31:18	B5	1.5330	1.5963
9:56:00	B6	1.5597	1.6146
13:29:00	B7	1.5694	1.6156
6:39:00			

SALT CORRECTION

Date: _____ Initials: ____

Tare Weight	
Dry Weight + Tare	

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Calgon Batch #268

6.11.12 eg

Tare Weight (g)	Dry+Tare Weight (g)	Calgon Weight (g)
1 1.5152	2.2786	.7634
2 1.5070	2.2717	.7647
3 1.5087	2.2710	.7623
4 1.5259	2.2879	.7620
5 1.5432	2.3102	.7670
	Average:	.7639

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Project: 090007-01 I&J Waterway RI/FS

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AV
Signature

July-05-2012
Date

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Project: 090007-01 I&J Waterway RI/FS

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AV
Signature

July-05-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 18, 2012

Cindy Fields
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: I & J Waterway RI/FS, 090007-01
ARI Job No.: UZ99

Dear Cindy:

Please find enclosed the Chain of Custody record (COC), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile UZ99

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: UZ99

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: U299	Turn-around Requested: Standard (15-day)
ARI Client Company: Anchor QEA	Phone: (206) 903-3394
Client Contact: Cindy Fields (labdata@anchorqea.com)	
Client Project Name: I&J Waterway RI/FS	
Client Project #: 09D007-01	Samplers: JL

Page: 1 of 1	
Date: 6/22/2012	Ice Present? Yes
No. of Coolers: 1	Cooler Temps: 1.6°C

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	~~Archive~~	Dioxins/Furans	Grain size	Metals	SVOC, PCB	Total Sulfide	TS, TOC, Ammonia		Notes/Comments
CB-002-0622 2012	6/22/2012	1320	SE	6		X	X	X	X	X	X		

Comments/Special Instructions

Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)	(Signature)	(Signature)	(Signature)
Printed Name: Julia Labadie	Printed Name: Van Spohn	Printed Name:	Printed Name:
Company: Anchor QEA, LLC	Company: ARI	Company:	Company:
Date & Time: 1430 6/22/2012	Date & Time: 6/23/12 750	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

U299 : 00003

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor

Project Name: I & J Waterway

COC No(s): _____ (NA)

Delivered by: (Fed-Ex) UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: UZ99

Tracking No: 798854531843 1 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	(YES)	NO
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 1.6 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90941619

Cooler Accepted by: VS (AV) Date: 6/23/12 Time: 750

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)	_____	

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

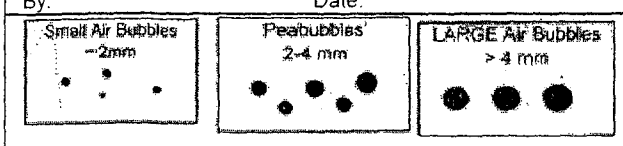
Samples Logged by: AV Date: 6/23/12 Time: 1115

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: UZ99

Case Narrative

Client: Anchor QEA
Project: I & J Waterway RI/FS, 090007-01
ARI Job No.: UZ99

Sample receipt

One sediment sample was received on June 23, 2012 under ARI job UZ99. The cooler temperature measured by IR thermometer following ARI SOP was 1.6°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Semivolatiles by SW8270

The sample was extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Bis(2-Ethylhexyl)phthalate was present in **MB-062812** at a level that was greater than ½ the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

SIM Semivolatiles by SW8270

The sample was extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Diethylphthalate was present in **MB-062812** at a level that was greater than the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

Dioxins/Furans by 1613B

The samples was extracted and analyzed within the method recommended holding times.

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique isomer separation for the 2378-TCDF, eliminating the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

Both extraction and cleanup surrogates had recoveries within control limits.

The method blank contained reportable responses below the reporting limits for several compounds. All associated sample results had hits that were greater than ten times the levels found in the blank. No corrective action was taken.

The OPR (Ongoing Precision and Accuracy or LCS) percent recoveries were within control limits.

Specific results have been "EMPC"-flagged indicating a response not meeting requirements of positive identification. The EMPC values are treated as undetects under some programs and as hits under programs with more conservative protocols.

The TEQ is presented with WHO2005 with ND=0 for undetects and ND=1/2 for undetects, with EMPCs included as hits.

Aroclor PCBs by SW8082

The sample was extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

Metals and Mercury by SW6010C/7471A

The sample and associated laboratory QC were digested and analyzed within recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries of chromium and copper fell outside the control limit low for sample **CB-002-06222012**. Post digestion spikes were performed and recoveries were within control limits. All relevant data have been flagged with an "N" qualifier on the Form V. No further corrective action was taken.

The duplicate RPD of mercury was outside the control limit for sample **CB-002-06222012**. All relevant data have been flagged with a "*" qualifier on the Form VI. No further corrective action was taken.

General Chemistry Parameters

The sample and associated laboratory QC were prepared and analyzed within the method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The SRM percent recoveries were within limits.

The matrix spike percent recoveries were within control limits.

The replicate RPD of sulfide was outside the control limit for sample **CB-002-06222012**. All other quality parameters were met for this analysis. No corrective action was taken.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Anchor QEA, LLC.	**ARI Job No.:** UZ99
Client Project: I&J Waterway RI/FS	**Client Project No.:** 090007-01

Case Narrative

1. One sample was submitted for grain size analysis according to Puget Sound Estuary Protocol (PSEP) methodology on June 25, 2012.
2. The sample was run in a single batch and one sample from another job was chosen for triplicate analysis. The triplicate data is reported on the QA summary.
3. The data is provided in summary tables and plots.
4. There were no other noted anomalies in this project.

Released by: Geena Curtis — Date: 7/18/12
Geotechnical Laboratory Manager

Reviewed by: [illegible] — Date: July 18, 2012
Lead Technician

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** (fax)

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UZ99
Client: Anchor QEA, LLC
Project Event: 090007-01
Project Name: I&J Waterway RI/FS

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CB-002-06222012	UZ99A	12-11979	Sediment	06/22/12 13:20	06/23/12 07:50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q — Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

UZ99 : 00011

S — Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA — The flagged analyte was not analyzed for

NR — Spiked compound recovery is not reported due to chromatographic interference

NS — The flagged analyte was not spiked into the sample

M — Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 — The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N — The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y — The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC — Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C — The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P — The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X — Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z — Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS,MS Control Limits	RPD[2]
	DL	LOD	LOQ	DL	LOD	LOQ		
Phenol	8.65	10	**20**	2.56	5	**5**	30 – 160	≤ 40
bis-(2-Chloroethyl)ether	3.35	10	**20**	--	--	--	30 – 160	≤ 40
2-Chlorophenol	2.39	10	**20**	--	--	--	30 – 160	≤ 40
1,3-Dichlorobenzene	2.63	10	**20**	1.31	2.5	**5**	30 – 160	≤ 40
1,4-Dichlorobenzene	2.86	10	**20**	1.19	2.5	**5**	30 – 160	≤ 40
1,2-Dichlorobenzene	2.50	10	**20**	1.10	2.5	**5**	30 – 160	≤ 40
Benzyl alcohol	6.09	10	**20**	7.04	10	**20[3]**	30 – 160	≤ 40
2,2'-oxy-*bis*-(1-Chloropropane)	3.76	10	**20**	--	--	--	30 – 160	≤ 40
2-Methylphenol	5.25	10	**20**	1.81	2.5	**5**	30 – 160	≤ 40
Hexachloroethane	2.94	10	**20**	--	--	--	30 – 160	≤ 40
N-Nitroso-di-n-propylamine	3.36	10	**20**	9.48	10	**12[3]**	30 – 160	≤ 40
4-Methylphenol[6]	6.63	20	**40**	2.52	5	**10**	30 – 160	≤ 40
Nitrobenzene	4.06	10	**20**	--	--	--	30 – 160	≤ 40
Isophorone	2.86	10	**20**	--	--	--	30 – 160	≤ 40
2-Nitrophenol	38.7	50	**100**	--	--	--	30 – 160	≤ 40
2,4-Dimethylphenol	3.46	20	**40**	2.89	10	**20**	30 – 160	≤ 40
bis-(2-Chloroethoxy)methane	2.00	10	**20**	--	--	--	30 – 160	≤ 40
2,4-Dichlorophenol	21.5	100	**200**	--	--	--	30 – 160	≤ 40
1,2,4-Trichlorobenzene	3.48	10	**20**	1.86	2.5	**5**	30 – 160	≤ 40
Naphthalene	2.76	10	**20**	--	--	--	30 – 160	≤ 40
Benzoic acid	101	200	**400[5]**	--	--	--	30 – 160	≤ 40
4-Chloroaniline	22.3	135	**270[4]**	--	--	--	30 – 160	≤ 40
Hexachlorobutadiene	4.57	50	**100**	0.96	2.5	**5**	30 – 160	≤ 40
4-Chloro-3-methylphenol	15.1	50	**100**	--	--	--	30 – 160	≤ 40
2-Methylnaphthalene	3.06	10	**20**	--	--	--	30 – 160	≤ 40
Hexachlorocyclopentadiene	66.4	200	**400[4]**	--	--	--	30 – 160	≤ 40
2,4,6-Trichlorophenol	22.4	50	**100**	--	--	--	30 – 160	≤ 40
2,4,5-Trichlorophenol	21.4	50	**100**	--	--	--	30 – 160	≤ 40
2-Chloronaphthalene	2.64	10	**20**	--	--	--	30 – 160	≤ 40
2-Nitroaniline	18.4	50	**100**	--	--	--	30 – 160	≤ 40
Acenaphthylene	5.71	10	**20**	--	--	--	30 – 160	≤ 40
Dimethylphthalate	2.90	10	**20**	1.34	2.5	**5**	30 – 160	≤ 40
2,6-Dinitrotoluene	30.6	50	**100**	--	--	--	30 – 160	≤ 40
Acenaphthene	3.28	10	**20**	--	--	--	30 – 160	≤ 40
3-Nitroaniline	22.5	50	**100**	--	--	--	30 – 160	≤ 40

UZ99 : 00014

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS,MS Control Limits	RPD[2]
	DL	LOD	LOQ	DL	LOD	LOQ		
2,4-Dinitrophenol	111	425	**850[4]**	--	--	--	30 – 160	≤ 40
Dibenzofuran	4.10	10	**20**	--	--	--	30 – 160	≤ 40
4-Nitrophenol	34.7	50	**100**	--	--	--	30 – 160	≤ 40
2,4-Dinitrotoluene	19.5	50	**100**	--	--	--	30 – 160	≤ 40
Fluorene	4.35	10	**20**	--	--	--	30 – 160	≤ 40
4-Chlorophenyl-phenylether	5.29	10	**20**	--	--	--	30 – 160	≤ 40
Diethylphthalate	36.6	50	**50[3]**	3.26	5.0	**5.0**	30 – 160	≤ 40
4-Nitroaniline	37.9	50	**100**	--	--	--	30 – 160	≤ 40
4,6-Dinitro-2-methylphenol	21.2	100	**200**	--	--	--	30 – 160	≤ 40
N-Nitrosodiphenylamine	5.39	10	**20**	1.38	10	**20**	30 – 160	≤ 40
4-Bromophenyl-phenylether	5.03	10	**20**	--	--	--	30 – 160	≤ 40
Hexachlorobenzene	4.29	10	**20**	1.26	2.5	**5**	30 – 160	≤ 40
Pentachlorophenol	48.5	100	**200[4]**	14.3	25	**50**	30 – 160	≤ 40
Phenanthrene	3.64	10	**20**	--	--	--	30 – 160	≤ 40
Anthracene	4.50	10	**20**	--	--	--	30 – 160	≤ 40
Carbazole	2.69	10	**20**	--	--	--	30 – 160	≤ 40
Di-n-butylphthalate	8.16	10	**20**	--	--	--	30 – 160	≤ 40
Fluoranthene	2.91	10	**20**	--	--	--	30 – 160	≤ 40
Pyrene	1.94	10	**20**	--	--	--	30 – 160	≤ 40
Butylbenzylphthalate	6.14	10	**20**	2.89	5.0	**5**	30 – 160	≤ 40
Benzo(a)anthracene	3.29	10	**20**	--	--	--	30 – 160	≤ 40
3,3'-Dichlorobenzidine	17.8	75	**150[4]**	--	--	--	30 – 160	≤ 40
Chrysene	3.75	10	**20**	--	--	--	30 – 160	≤ 40
bis-(2-Ethylhexyl)phthalate	14.6	20	**25[3]**	--	--	--	30 – 160	≤ 40
Di-n-octylphthalate	5.84	10	**20**	--	--	--	30 – 160	≤ 40
Benzo(b)fluoranthene[7]	3.47	10	**20**	--	--	--	30 – 160	≤ 40
Benzo(k)fluoranthene[7]	4.18	10	**20**	--	--	--	30 – 160	≤ 40
Benzofluoranthene-Total[8]	6.67	20	**40**	--	--	--	30 – 160	≤ 40
Benzo(a)pyrene	5.45	10	**20**	--	--	--	30 – 160	≤ 40
Indeno(1,2,3-cd)pyrene	4.68	10	**20**	--	--	--	30 – 160	≤ 40
Dibenzo(a,h)anthracene	4.31	10	**20**	2.02	2.5	**5**	30 – 160	≤ 40
Benzo(g,h,i)perylene	4.40	10	**20**	--	--	--	30 – 160	≤ 40
N-Nitrosodimethylamine	14.1	50	**100**	3.15	13	**25**	30 – 160	≤ 40
Aniline	40.0	270	**540[4]**	--	--	--	30 – 160	≤ 40
Pyridine	32.7	75	**150[4]**	--	--	--	30 – 160	≤ 40
1-Methylnaphthalene	2.68	10	**20**	--	--	--	30 – 160	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS,MS Control Limits	RPD[2]
	DL	LOD	LOQ	DL	LOD	LOQ		
Azobenzene (1,2-DP-Hydrazine)	2.98	10	**20**	--	--	--	30 – 160	≤ 40
Surrogate Standards						**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol						30 – 160	30 – 160	≤ 40
Phenol-d_5						30 – 160	30 – 160	≤ 40
2-Chlorophenol-d_4						30 – 160	30 – 160	≤ 40
1,2-Dichlorobenzene-d_4						30 – 160	30 – 160	≤ 40
Nitrobenzene-d_5						30 – 160	30 – 160	≤ 40
2-Fluorobiphenyl						30 – 160	30 – 160	≤ 40
2,4,6-Tribromophenol						30 – 160	30 – 160	≤ 40
p-Terphenyl-d_{14}						30 – 160	30 – 160	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(3) Spiked at 5 ppb
(4) Spiked at 100 ppb
(5) Spiked at 200 ppb
(6) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphennol (calibrated)
(7) Benzo(b)fluoranthene and Benzo(k)fluoranthene are reported as separate analytes only when the height of the valley between the isomer peaks is less than than 50% of the average of the two peak heights, otherwise total Benzofluoranthenes are reported.
(8) Benzo(b)fluoranthene + Benzo(j)fluoranthene + Benzo(k)fluoranthene (only the b & k isomers are calibrated)

UZ99 : 00016

Analytical Resources,Incorporated
Analytical Chemists and Consultants

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Soil Samples for Dioxins & Furans
EPA Method 1613B

Soxhlet (EPA Method 3540C) Extraction using 10 g sample with extract concentrated to 0.02 mL final volume. ARI Bench Sheet 3083F

LOD Spike level = LOQ = 0.1 ppt (ng/kg) = 1 pg/g

Analyte	DL[1] pg/g	LOD[1] pg/g	LOQ[1] pg/g	OPR Control Limit [2,3]	Sample Replicate RPD [3,4]
2,3,7,8-TCDF	0.230	**0.5**	**1**	75 – 158	≤ 25
2,3,7,8-TCDD	0.274	**0.5**	**1**	67 – 158	≤ 25
1,2,3,7,8-PeCDF	0.832	**2.5**	**5**	80 – 134	≤ 25
2,3,4,7,8-PeCDF	1.076	**2.5**	**5**	68 – 160	≤ 25
1,2,3,7,8-PeCDD	0.647	**2.5**	**5**	70 – 141	≤ 25
1,2,3,4,7,8-HxCDF	0.991	**2.5**	**5**	72 – 134	≤ 25
1,2,3,6,7,8-HxCDF	0.769	**2.5**	**5**	84 – 130	≤ 25
2,3,4,6,7,8-HxCDF	0.904	**2.5**	**5**	70 – 156	≤ 25
1,2,3,7,8,9-HxCDF	0.857	**2.5**	**5**	78 – 130	≤ 25
1,2,3,4,7,8-HxCDD	0.481	**2.5**	**5**	70 – 164	≤ 25
1,2,3,6,7,8-HxCDD	0.561	**2.5**	**5**	76 – 134	≤ 25
1,2,3,7,8,9-HxCDD	0.886	**2.5**	**5**	64 – 162	≤ 25
1,2,3,4,6,7,8-HpCDF	1.165	**2.5**	**5**	82 – 122	≤ 25
1,2,3,4,7,8,9-HpCDF	0.688	**2.5**	**5**	78 – 138	≤ 25
1,2,3,4,6,7,8-HpCDD	0.828	**2.5**	**5**	70 – 140	≤ 25
OCDF	2.176	**5.0**	**10**	63 – 170	≤ 25
OCDD	7.452	**5.0**	**10**	78 – 144	≤ 25

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Ongoing precision and recovery (OPR) analyzes as specified in the referenced method.
(3) Method specified control limits.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

UZ99 : 00017

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Criteria for Analysis of Solid Matrix Samples for Aroclors (Polychlorinated Biphenyls – PCB) EPA Method 8082B

Analysis Code	Extraction	DL[1] (ppb)	LOD[1] (ppb)	LOQ[1] (ppb)	Analyte	Spike Recovery Control Limits (%)[2,3,8]			RPD[4]
						LCS	MB/LCS Surrogate	Sample Surrogate	
Soil / Sediment Samples (Microwave Extraction – EPA Method 3546)									
PCBSMI 15-3067F	12g to 4 mL	9.83	17	33	Aroclor 1016	55 – 109	--	--	≤ 40
		7.06	17	33	Aroclor 1260	50 – 125	--	--	
PCBSCI 08-3025F		--	--	--	TCMX	--	53 – 108	39 – 122	
		--	--	--	DCBP	--	49 – 126	31 – 140	
PCBDMP20 05-3017F	12.5 g to 2.5 mL[6]	9.33	10	20[6]	Aroclor 1016	46 – 110	--	--	≤ 40
		10.82	15	20[6]	Aroclor 1260	47 – 124	--	--	
PCBDCP20 06-3026F		--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
PCBDMP10 05-3017F	12.5 g to 2.5 mL[6]	0.759	5	10[6]	Aroclor 1016	46 – 110	--	--	≤ 40
		1.066	5	10[6]	Aroclor 1260	47 – 124	--	--	
PCBDCP10 06-3026F		--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
PCBDMP4 05-3017F	12.5 g to 2.5 mL[6]	0.577	2	4[6]	Aroclor 1016	46 – 110	--	--	≤ 40
		0.610	2	4[6]	Aroclor 1260	47 – 124	--	--	
PCBDCP4 06-3026F		--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
Soil / Sediment Samples Medium Level (Vortex Extraction – EPA Method 3546)									
PCBSVX 12-3019F	5 g to 40 mL	109[7]	400	800	Aroclor 1016	30 – 160	--	--	≤ 40
		192[7]	400	800	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	

(1) Detection Limit (DL), Limit of Detection (LOD) & Limit of Quantitation (LOQ) are defined in ARI SOP 1018S.
(2) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(3) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) LOQ determined by lowest concentration used to calibrate the GC-ECD instrument.
(7) MDL Study PC66 6/24/09
(8) Control Limits calculated using all data generated between 1/1/11 and 11/30/11

UZ99 : 00018

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Parameters for Metals Analysis using ICP-OES

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) ARI does not analyze for Silicon in solids or tissue samples

UZ99 : 00019

Quality Control Parameters for Mercury Analysis using CVAA

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[3]	75 – 125	80 – 120	≤ 20
	Soil / Sediment / Tissue[4] Samples			**Spike Recovery**		**RPD[5]**
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	**0.025**[3,4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

UZ99 : 00020

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

UZ99 : 00021

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: UZ99

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: CB-002-06222012
SAMPLE

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: VD
Reported: 07/10/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Date Extracted: 06/28/12
Date Analyzed: 07/03/12 19:02
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.79 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	18	< 18 U
106-46-7	1,4-Dichlorobenzene	18	< 18 U
100-51-6	Benzyl Alcohol	18	< 18 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
95-48-7	2-Methylphenol	18	< 18 U
106-44-5	4-Methylphenol	37	< 37 U
105-67-9	2,4-Dimethylphenol	37	< 37 U
65-85-0	Benzoic Acid	370	< 370 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
91-20-3	**Naphthalene**	**18**	**28**
87-68-3	Hexachlorobutadiene	93	< 93 U
91-57-6	**2-Methylnaphthalene**	**18**	**29**
131-11-3	**Dimethylphthalate**	**18**	**15 J**
208-96-8	Acenaphthylene	18	< 18 U
83-32-9	Acenaphthene	18	< 18 U
132-64-9	Dibenzofuran	18	< 18 U
84-66-2	Diethylphthalate	46	< 46 U
86-73-7	Fluorene	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-86-5	Pentachlorophenol	180	< 180 U
85-01-8	**Phenanthrene**	**18**	**33**
120-12-7	Anthracene	18	< 18 U
84-74-2	Di-n-Butylphthalate	18	< 18 U
206-44-0	**Fluoranthene**	**18**	**29**
129-00-0	**Pyrene**	**18**	**31**
85-68-7	**Butylbenzylphthalate**	**18**	**160**
56-55-3	**Benzo(a)anthracene**	**18**	**9.3 J**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**23**	**51 B**
218-01-9	**Chrysene**	**18**	**22**
117-84-0	Di-n-Octyl phthalate	18	< 18 U
50-32-8	**Benzo(a)pyrene**	**18**	**11 J**
193-39-5	Indeno(1,2,3-cd)pyrene	18	< 18 U
53-70-3	Dibenz(a,h)anthracene	18	< 18 U
191-24-2	**Benzo(g,h,i)perylene**	**18**	**21**
TOTBFA	**Total Benzofluoranthenes**	**18**	**25**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.0%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	76.6%	d4-1,2-Dichlorobenzene	63.0%
d5-Phenol	68.0%	2-Fluorophenol	62.5%
2,4,6-Tribromophenol	75.5%	d4-2-Chlorophenol	69.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-062812	74.0%	72.2%	88.0%	73.2%	73.1%	70.1%	77.1%	74.3%	0
LCS-062812	71.4%	70.4%	84.8%	68.4%	75.5%	70.9%	80.1%	73.1%	0
LCSD-062812	65.8%	63.6%	75.2%	61.8%	67.3%	64.1%	74.8%	66.0%	0
CB-002-06222012	67.0%	71.6%	76.6%	63.0%	68.0%	62.5%	75.5%	69.9%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(30-160)	(30-160)
(FBP) = 2-Fluorobiphenyl	(30-160)	(30-160)
(TPH) = d14-p-Terphenyl	(30-160)	(30-160)
(DCB) = d4-1,2-Dichlorobenzene	(30-160)	(30-160)
(PHL) = d5-Phenol	(30-160)	(30-160)
(2FP) = 2-Fluorophenol	(30-160)	(30-160)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)
(2CP) = d4-2-Chlorophenol	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 12-11979 to 12-11979

FORM-II SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-062812
LCS/LCSD

Lab Sample ID: LCS-062812
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: VD
Reported: 07/10/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Date Extracted LCS/LCSD: 06/28/12

Date Analyzed LCS: 07/03/12 16:38
LCSD: 07/03/12 17:14
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount LCS: 10.00 g
LCSD: 10.00 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	398	500	79.6%	382	500	76.4%	4.1%
1,4-Dichlorobenzene	328	500	65.6%	310	500	62.0%	5.6%
Benzyl Alcohol	422	500	84.4%	377	500	75.4%	11.3%
1,2-Dichlorobenzene	333	500	66.6%	322	500	64.4%	3.4%
2-Methylphenol	289	500	57.8%	275	500	55.0%	5.0%
4-Methylphenol	593	1000	59.3%	569	1000	56.9%	4.1%
2,4-Dimethylphenol	787	1500	52.5%	802	1500	53.5%	1.9%
Benzoic Acid	1750	2750	63.6%	1790	2750	65.1%	2.3%
1,2,4-Trichlorobenzene	327	500	65.4%	322	500	64.4%	1.5%
Naphthalene	354	500	70.8%	351	500	70.2%	0.9%
Hexachlorobutadiene	336	500	67.2%	329	500	65.8%	2.1%
2-Methylnaphthalene	343	500	68.6%	340	500	68.0%	0.9%
Dimethylphthalate	398	500	79.6%	382	500	76.4%	4.1%
Acenaphthylene	366	500	73.2%	352	500	70.4%	3.9%
Acenaphthene	375	500	75.0%	359	500	71.8%	4.4%
Dibenzofuran	354	500	70.8%	344	500	68.8%	2.9%
Diethylphthalate	418	500	83.6%	411	500	82.2%	1.7%
Fluorene	405	500	81.0%	399	500	79.8%	1.5%
N-Nitrosodiphenylamine	367	500	73.4%	364	500	72.8%	0.8%
Hexachlorobenzene	328	500	65.6%	319	500	63.8%	2.8%
Pentachlorophenol	1300	1500	86.7%	1260	1500	84.0%	3.1%
Phenanthrene	406	500	81.2%	396	500	79.2%	2.5%
Anthracene	369	500	73.8%	360	500	72.0%	2.5%
Di-n-Butylphthalate	431	500	86.2%	417	500	83.4%	3.3%
Fluoranthene	416	500	83.2%	406	500	81.2%	2.4%
Pyrene	432	500	86.4%	408	500	81.6%	5.7%
Butylbenzylphthalate	463	500	92.6%	431	500	86.2%	7.2%
Benzo(a)anthracene	394	500	78.8%	372	500	74.4%	5.7%
bis(2-Ethylhexyl)phthalate	371 B	500	74.2%	323 B	500	64.6%	13.8%
Chrysene	357	500	71.4%	347	500	69.4%	2.8%
Di-n-Octyl phthalate	343	500	68.6%	296	500	59.2%	14.7%
Benzo(a)pyrene	354	500	70.8%	349	500	69.8%	1.4%
Indeno(1,2,3-cd)pyrene	386	500	77.2%	373	500	74.6%	3.4%
Dibenz(a,h)anthracene	352	500	70.4%	337	500	67.4%	4.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCSD-062812
LCS/LCSD

Lab Sample ID: LCS-062812
LIMS ID: 12-11979
Matrix: Sediment
Date Analyzed LCS: 07/03/12 16:38
LCSD: 07/03/12 17:14

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(g,h,i)perylene	370	500	74.0%	360	500	72.0%	2.7%
Total Benzofluoranthenes	787	1000	78.7%	760	1000	76.0%	3.5%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	71.4%	65.8%
2-Fluorobiphenyl	70.4%	63.6%
d14-p-Terphenyl	84.8%	75.2%
d4-1,2-Dichlorobenzene	68.4%	61.8%
d5-Phenol	75.5%	67.3%
2-Fluorophenol	70.9%	64.1%
2,4,6-Tribromophenol	80.1%	74.8%
d4-2-Chlorophenol	73.1%	66.0%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

UZ99MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: UZ99

Project: I&J WATERWAY RI/FS

Lab File ID: UZ99MB

Date Extracted: 06/28/12

Instrument ID: NT10

Date Analyzed: 07/03/12

Matrix: SOLID

Time Analyzed: 1601

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	UZ99LCSS1	UZ99LCSS1	UZ99SB	07/03/12
02	UZ99LCSDS1	UZ99LCSDS1	UZ99SBD	07/03/12
03	CB-002-06222012	UZ99A	UZ99A	07/03/12
04				
05				
06				
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: MB-062812
METHOD BLANK

Lab Sample ID: MB-062812
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: VD
Reported: 07/10/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 06/28/12
Date Analyzed: 07/03/12 16:01
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.00 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
106-44-5	4-Methylphenol	40	< 40 U
105-67-9	2,4-Dimethylphenol	40	< 40 U
65-85-0	Benzoic Acid	400	< 400 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
87-68-3	Hexachlorobutadiene	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
83-32-9	Acenaphthene	20	< 20 U
132-64-9	Dibenzofuran	20	< 20 U
84-66-2	Diethylphthalate	50	< 50 U
86-73-7	Fluorene	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**25**	**23 J**
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	74.0%	2-Fluorobiphenyl	72.2%
d14-p-Terphenyl	88.0%	d4-1,2-Dichlorobenzene	73.2%
d5-Phenol	73.1%	2-Fluorophenol	70.1%
2,4,6-Tribromophenol	77.1%	d4-2-Chlorophenol	74.3%

FORM I

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 05/26/12 DFTPP Injection Time: 1044

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	25.1
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	41.3
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	51.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	24.4
365	Greater than 1.0% of mass 198	3.46
441	0.0 - 24.0% of mass 442	12.2 (15.8)2
442	50.0 - 200.0% of mass 198	77.1
443	15.0 - 24.0% of mass 442	15.4 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		ABN5	IC0526A	05/26/12	1059
02		ABN20	IC0526B	05/26/12	1136
03		ABN.2	IC0526C	05/26/12	1213
04		ABN10	IC0526D	05/26/12	1250
05		ABN.5	IC0526E	05/26/12	1327
06		ABN2.5	IC0526F	05/26/12	1405
07		ABN1.0	IC0526G	05/26/12	1442
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 07/03/12 DFTPP Injection Time: 1434

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	27.3
68	Less than 2.0% of mass 69	0.7 (1.4)1
69	Mass 69 relative abundance	46.2
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	55.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	24.0
365	Greater than 1.0% of mass 198	3.51
441	0.0 - 24.0% of mass 442	11.6 (15.6)2
442	50.0 - 200.0% of mass 198	74.0
443	15.0 - 24.0% of mass 442	14.4 (19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0703B	CC0703B	07/03/12	1449
02	UZ99MBS1	UZ99MBS1	UZ99MB	07/03/12	1601
03	UZ99LCSS1	UZ99LCSS1	UZ99SB	07/03/12	1638
04	UZ99LCSDS1	UZ99LCSDS1	UZ99SBD	07/03/12	1714
05	CB-002-06222012	UZ99A	UZ99A	07/03/12	1902
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Calibration Date: 05/26/12

LAB FILE ID: RRF0.2=IC0526C RRF0.5=IC0526E RRF1 =IC0526G
RRF2.5=IC0526F RRF5 =IC0526A RRF10 =IC0526D
RRF20 =IC0526B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
Phenol	1.938	1.782	1.799	1.837	1.945	1.859	1.841	1.857	3.4
1,3-Dichlorobenzene	1.720	1.648	1.662	1.652	1.657	1.607	1.548	1.642	3.2
1,4-Dichlorobenzene	1.670	1.614	1.602	1.614	1.592	1.585	1.542	1.603	2.4
1,2-Dichlorobenzene	1.584	1.569	1.616	1.560	1.570	1.542	1.506	1.564	2.2
Benzyl alcohol	0.791	0.754	0.686	0.756	0.807	0.835	0.832	0.780	6.7
2-Methylphenol	1.537	1.414	1.454	1.445	1.466	1.471	1.460	1.464	2.6
Hexachloroethane	0.616	0.617	0.615	0.618	0.624	0.631	0.637	0.622	1.4
4-Methylphenol	1.520	1.518	1.520	1.549	1.532	1.541	1.508	1.527	0.9
2,4-Dimethylphenol	0.347	0.340	0.366	0.356	0.364	0.351	0.342	0.352	2.9
1,2,4-Trichlorobenzene	0.340	0.332	0.329	0.315	0.325	0.314	0.303	0.322	3.9
Naphthalene	1.019	0.990	1.020	0.987	1.023	1.022	0.998	1.008	1.6
Benzoic acid		0.094	0.130	0.188	0.236	0.253	0.270	0.195	0.999
Hexachlorobutadiene	0.171	0.174	0.173	0.173	0.181	0.175	0.166	0.173	2.6
2-Methylnaphthalene	0.689	0.674	0.692	0.694	0.722	0.721	0.714	0.701	2.6
Acenaphthylene	1.851	1.791	1.804	1.809	1.782	1.823	1.715	1.796	2.4
Dimethylphthalate	1.288	1.237	1.277	1.254	1.226	1.219	1.102	1.229	5.0
Acenaphthene	1.092	1.055	1.083	1.094	1.090	1.103	1.068	1.084	1.5
Dibenzofuran	1.561	1.557	1.619	1.620	1.575	1.609	1.570	1.587	1.7
Fluorene	1.279	1.208	1.223	1.211	1.202	1.206	1.186	1.216	2.4
Diethylphthalate	1.238	1.230	1.219	1.235	1.209	1.170	1.086	1.198	4.6
N-Nitrosodiphenylamine (1)	0.564	0.550	0.561	0.536	0.537	0.527	0.492	0.538	4.5
Hexachlorobenzene	0.246	0.253	0.252	0.249	0.242	0.245	0.241	0.247	1.9
Pentachlorophenol		0.052	0.078	0.098	0.130	0.138	0.143	0.106	0.998
Phenanthrene	1.060	0.976	1.036	1.008	1.023	1.041	1.075	1.031	3.2
Anthracene	1.070	1.030	1.068	1.054	1.113	1.103	1.104	1.077	2.8
Di-n-butylphthalate	1.334	1.278	1.384	1.371	1.471	1.486	1.498	1.403	6.0
Fluoranthene	1.154	1.110	1.131	1.139	1.202	1.218	1.242	1.171	4.3
Pyrene	1.206	1.159	1.236	1.209	1.245	1.233	1.231	1.217	2.4
Butylbenzylphthalate	0.577	0.555	0.571	0.562	0.584	0.554	0.549	0.564	2.3
Benzo(a)anthracene	1.207	1.091	1.119	1.099	1.111	1.116	1.134	1.125	3.4
Chrysene	0.989	0.952	0.998	0.965	1.006	1.010	1.009	0.990	2.3
bis(2-Ethylhexyl)phthalate	0.607	0.550	0.540	0.538	0.544	0.546	0.520	0.549	4.9
Di-n-octylphthalate	1.036	0.963	0.987	0.956	0.967	0.959	0.944	0.973	3.1
Benzo(a)pyrene	1.065	0.984	1.038	1.015	1.048	1.051	1.039	1.034	2.6
Indeno(1,2,3-cd)pyrene	1.121	1.119	1.177	1.212	1.249	1.259	1.237	1.196	4.9
Dibenzo(a,h)anthracene	0.850	0.866	0.936	0.958	0.992	1.004	0.989	0.942	6.6
Benzo(g,h,i)perylene	1.002	0.953	1.000	1.025	1.068	1.072	1.060	1.026	4.3

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Calibration Date: 05/26/12

LAB FILE ID: RRF0.2=IC0526C RRF0.5=IC0526E RRF1 =IC0526G
RRF2.5=IC0526F RRF5 =IC0526A RRF10 =IC0526D
RRF20 =IC0526B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
1-methylnaphthalene	0.690	0.690	0.700	0.710	0.740	0.738	0.735	0.715	3.2
Total Benzofluoranthenes	1.124	1.091	1.124	1.083	1.118	1.124	1.104	1.110	1.6
2-Fluorophenol	1.380	1.389	1.397	1.401	1.417	1.437	1.369	1.398	1.6
Phenol-d5	1.676	1.697	1.709	1.740	1.776	1.808	1.791	1.742	2.9
2-Chlorophenol-d4	1.557	1.524	1.537	1.497	1.523	1.523	1.525	1.526	1.2
1,2-Dichlorobenzene-d4	1.006	0.973	1.017	0.997	1.013	1.007	0.997	1.001	1.4
Nitrobenzene-d5	0.357	0.347	0.362	0.360	0.366	0.361	0.356	0.358	1.7
2-Fluorobiphenyl	1.422	1.388	1.385	1.405	1.355	1.402	1.348	1.386	1.9
2,4,6-Tribromophenol	0.154	0.157	0.164	0.165	0.172	0.174	0.169	0.165	4.5
Terphenyl-d14	0.792	0.755	0.775	0.777	0.776	0.743	0.719	0.762	3.3

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-2

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Cont. Calib. Date: 07/03/12

Init. Calib. Date: 05/26/12 — Cont. Calib. Time: 1449

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	1.857	1.979	0.800	AVRG	6.6
1,3-Dichlorobenzene	1.642	1.502	0.010	AVRG	-8.5
1,4-Dichlorobenzene	1.603	1.452	0.010	AVRG	-9.4
1,2-Dichlorobenzene	1.564	1.442	0.010	AVRG	-7.8
Benzyl alcohol	0.780	0.769	0.010	AVRG	-1.4
2-Methylphenol	1.464	1.354	0.700	AVRG	-7.5
Hexachloroethane	0.622	0.619	0.300	AVRG	-0.5
4-Methylphenol	1.527	1.397	0.600	AVRG	-8.5
2,4-Dimethylphenol	0.352	0.326	0.200	AVRG	-7.4
1,2,4-Trichlorobenzene	0.322	0.287	0.010	AVRG	-10.9
Naphthalene	1.008	0.932	0.700	AVRG	-7.5
Benzoic acid	20.00	21.34	0.010	2ORDR	6.7
Hexachlorobutadiene	0.173	0.164	0.010	AVRG	-5.2
2-Methylnaphthalene	0.701	0.602	0.400	AVRG	-14.1
Acenaphthylene	1.796	1.676	0.900	AVRG	-6.7
Dimethylphthalate	1.229	1.144	0.010	AVRG	-6.9
Acenaphthene	1.084	0.993	0.900	AVRG	-8.4
Dibenzofuran	1.587	1.377	0.800	AVRG	-13.2
Fluorene	1.216	1.217	0.900	AVRG	0.1
Diethylphthalate	1.198	1.137	0.010	AVRG	-5.1
N-Nitrosodiphenylamine(1)	0.538	0.478	0.010	AVRG	-11.2
Hexachlorobenzene	0.247	0.211	0.100	AVRG	-14.6
Pentachlorophenol	10.00	10.62	0.050	2ORDR	6.2
Phenanthrene	1.031	0.924	0.700	AVRG	-10.4
Anthracene	1.077	0.979	0.700	AVRG	-9.1
Di-n-butylphthalate	1.403	1.366	0.010	AVRG	-2.6
Fluoranthene	1.171	1.078	0.600	AVRG	-7.9
Pyrene	1.217	1.176	0.600	AVRG	-3.4
Butylbenzylphthalate	0.564	0.576	0.010	AVRG	2.1
Benzo(a)anthracene	1.125	1.021	0.800	AVRG	-9.2
Chrysene	0.990	0.911	0.700	AVRG	-8.0
bis(2-Ethylhexyl)phthalate	0.549	0.489	0.010	AVRG	-10.9
Di-n-octylphthalate	0.973	0.864	0.010	AVRG	-11.2
Benzo(a)pyrene	1.034	0.916	0.700	AVRG	-11.4
Indeno(1,2,3-cd)pyrene	1.196	1.111	0.500	AVRG	-7.1
Dibenzo(a,h)anthracene	0.942	0.870	0.400	AVRG	-7.6
Benzo(g,h,i)perylene	1.026	0.959	0.500	AVRG	-6.5

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Cont. Calib. Date: 07/03/12

Init. Calib. Date: 05/26/12 — Cont. Calib. Time: 1449

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
1-methylnaphthalene	0.715	0.549	0.010	AVRG	-23.2	<-
Total Benzofluoranthenes	1.110	0.999	0.010	AVRG	-10.0	
2-Fluorophenol	1.398	1.262	0.010	AVRG	-9.7	
Phenol-d5	1.742	1.587	0.010	AVRG	-8.9	
2-Chlorophenol-d4	1.526	1.363	0.010	AVRG	-10.7	
1,2-Dichlorobenzene-d4	1.001	0.885	0.010	AVRG	-11.6	
Nitrobenzene-d5	0.358	0.325	0.010	AVRG	-9.2	
2-Fluorobiphenyl	1.386	1.196	0.010	AVRG	-13.7	
2,4,6-Tribromophenol	0.165	0.146	0.010	AVRG	-11.5	
Terphenyl-d14	0.762	0.680	0.010	AVRG	-10.8	

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-2

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0526A — Ical Date: 05/26/12

Instrument ID: NT10 — Cont. Cal Date: 07/03/12

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	189516	8.86	730932	11.50	420698	15.37
	UPPER LIMIT	379032		1461864		841396	
	LOWER LIMIT	94758		365466		210349	
	CCAL	199795	8.73	792438	11.39	438708	15.29
	UPPER LIMIT		9.23		11.89		15.79
	LOWER LIMIT		8.23		10.89		14.79
01	UZ99MBS1	196096	8.73	789111	11.39	422103	15.29
02	UZ99LCSS1	195084	8.73	779418	11.39	430647	15.29
03	UZ99LCSDS1	213059	8.73	831714	11.39	463712	15.29
04	CB-002-06222	204860	8.73	799124	11.39	432034	15.29
05							
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0526A — Ical Date: 05/26/12

Instrument ID: NT10 — Cont. Cal Date: 07/03/12

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	638950	18.63	645065	23.71	650033	26.10
	UPPER LIMIT	1277900		1290130		1300066	
	LOWER LIMIT	319475		322532		325016	
	CCAL	678619	18.57	653508	23.69	644384	26.10
	UPPER LIMIT		19.07		24.19		26.60
	LOWER LIMIT		18.07		23.19		25.60
01	UZ99MBS1	669917	18.57	606932	23.69	561716	26.09
02	UZ99LCSS1	662777	18.57	627471	23.69	607569	26.10
03	UZ99LCSDS1	712021	18.57	691376	23.69	656242	26.10
04	CB-002-06222	707568	18.57	718233	23.71	689373	26.16
05							
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25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0526A — Ical Date: 05/26/12

Instrument ID: NT10 — Cont. Cal Date: 07/03/12

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1016118	24.79				
	UPPER LIMIT	2032236					
	LOWER LIMIT	508059					
	CCAL	1131114	24.83				
	UPPER LIMIT		25.33				
	LOWER LIMIT		24.33				
01	UZ99MBS1	1030780	24.82				
02	UZ99LCSS1	1074104	24.82				
03	UZ99LCSDS1	1178123	24.82				
04	CB-002-06222	1199931	24.87				
05							
06							
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25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: UZ99

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CB-002-06222012**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/10/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Date Extracted: 06/28/12
Date Analyzed: 07/03/12 19:02
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.79 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.6**	**5.1**
106-46-7	1,4-Dichlorobenzene	4.6	< 4.6 U
120-82-1	1,2,4-Trichlorobenzene	4.6	< 4.6 U
118-74-1	Hexachlorobenzene	4.6	< 4.6 U
87-68-3	Hexachlorobutadiene	4.6	< 4.6 U
131-11-3	**Dimethylphthalate**	**4.6**	**15**
84-66-2	**Diethylphthalate**	**4.6**	**14 B**
85-68-7	**Butylbenzylphthalate**	**4.6**	**150**
95-48-7	2-Methylphenol	4.6	< 4.6 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	**N-Nitrosodiphenylamine**	**18**	**3.6 J**
87-86-5	Pentachlorophenol	46	< 46 U
95-50-1	1,2-Dichlorobenzene	4.6	< 4.6 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.8%
d14-p-Terphenyl	73.4%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Client ID	FPH	TER	TOT OUT
MB-062812	68.9%	84.6%	0
LCS-062812	70.0%	82.0%	0
LCSD-062812	63.1%	73.8%	0
CB-002-06222012	62.8%	73.4%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(30-160)	(30-160)
(TER) = d14-p-Terphenyl	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 12-11979 to 12-11979

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-062812**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-062812
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/10/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 06/28/12

Date Analyzed LCS: 07/03/12 16:38
LCSD: 07/03/12 17:14
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ

Sample Amount LCS: 10.0 g-dry-wt
LCSD: 10.0 g-dry-wt
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dibenz(a,h)anthracene	350	500	70.0%	335	500	67.0%	4.4%
1,4-Dichlorobenzene	318	500	63.6%	314	500	62.8%	1.3%
1,2,4-Trichlorobenzene	330	500	66.0%	322	500	64.4%	2.5%
Hexachlorobenzene	328	500	65.6%	324	500	64.8%	1.2%
Hexachlorobutadiene	336	500	67.2%	330	500	66.0%	1.8%
Dimethylphthalate	387	500	77.4%	368	500	73.6%	5.0%
Diethylphthalate	410 B	500	82.0%	396 B	500	79.2%	3.5%
Butylbenzylphthalate	427	500	85.4%	411	500	82.2%	3.8%
2-Methylphenol	286	500	57.2%	278	500	55.6%	2.8%
2,4-Dimethylphenol	744	1500	49.6%	770	1500	51.3%	3.4%
N-Nitrosodiphenylamine	372	500	74.4%	362	500	72.4%	2.7%
Pentachlorophenol	1170	1500	78.0%	1150	1500	76.7%	1.7%
1,2-Dichlorobenzene	326	500	65.2%	318	500	63.6%	2.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
2-Fluorophenol	70.0%	63.1%
d14-p-Terphenyl	82.0%	73.8%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

UZ99MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: UZ99

Project: I&J WATERWAY RI/FS

Lab File ID: UZ99MB

Date Extracted: 06/28/12

Instrument ID: NT10

Date Analyzed: 07/03/12

Matrix: SOLID

Time Analyzed: 1601

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	UZ99LCSS1	UZ99LCSS1	UZ99SB	07/03/12
02	UZ99LCSDS1	UZ99LCSDS1	UZ99SBD	07/03/12
03	CB-002-06222012	UZ99A	UZ99A	07/03/12
04				
05				
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-062812**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-062812
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/10/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 06/28/12
Date Analyzed: 07/03/12 16:01
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 10.00 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
131-11-3	Dimethylphthalate	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**5.0**	**17**
85-68-7	Butylbenzylphthalate	5.0	< 5.0 U
95-48-7	2-Methylphenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
87-86-5	Pentachlorophenol	50	< 50 U
95-50-1	1,2-Dichlorobenzene	5.0	< 5.0 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	68.9%
d14-p-Terphenyl	84.6%

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 06/05/12 DFTPP Injection Time: 1325

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	26.5
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Mass 69 relative abundance	44.1
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	53.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.0
365	Greater than 1.0% of mass 198	3.63
441	0.0 - 24.0% of mass 442	12.7 (16.0)2
442	50.0 - 200.0% of mass 198	79.6
443	15.0 - 24.0% of mass 442	16.0 (20.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0605A	IC0605A	06/05/12	1339
02		IC0605B	IC0605B	06/05/12	1416
03		IC0605C	IC0605C	06/05/12	1453
04		IC0605D	IC0605D	06/05/12	1530
05		IC0605E	IC0605E	06/05/12	1607
06		IC0605F	IC0605F	06/05/12	1644
07		IC0605G	IC0605G	06/05/12	1721
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FORM V SV

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT10 Project: I&J WATERWAY RI/FS

DFTPP Injection Date: 07/03/12 DFTPP Injection Time: 1434

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	27.3
68	Less than 2.0% of mass 69	0.7 (1.4)1
69	Mass 69 relative abundance	46.2
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	55.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	24.0
365	Greater than 1.0% of mass 198	3.51
441	0.0 - 24.0% of mass 442	11.6 (15.6)2
442	50.0 - 200.0% of mass 198	74.0
443	15.0 - 24.0% of mass 442	14.4 (19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0703A	CC0703A	07/03/12	1525
02	UZ99MBS1	UZ99MBS1	UZ99MB	07/03/12	1601
03	UZ99LCSS1	UZ99LCSS1	UZ99SB	07/03/12	1638
04	UZ99LCSDS1	UZ99LCSDS1	UZ99SBD	07/03/12	1714
05	CB-002-06222012	UZ99A	UZ99A	07/03/12	1902
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: UZ99 Project: I&J WATERWAY RI/FS

Instrument ID: NT10 Calibration Date: 06/05/12

LAB FILE ID: RRF0.05=IC0605C RRF0.1=IC0605E RRF0.2=IC0605G
RRF0.5=IC0605F RRF1 =IC0605A RRF2.5=IC0605D
RRF5 =IC0605B

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	___ RRF	%RSD /R^2
Phenol	2.252	1.934	2.134	2.009	2.082	2.083	2.064	2.080	4.8
1,3-Dichlorobenzene	1.638	1.561	1.748	1.602	1.654	1.638	1.602	1.635	3.6
1,4-Dichlorobenzene	1.611	1.568	1.678	1.554	1.606	1.579	1.561	1.594	2.7
1,2-Dichlorobenzene	1.540	1.471	1.622	1.531	1.571	1.547	1.530	1.544	3.0
Benzyl alcohol	0.902	0.910	0.901	0.919	0.990	1.004	1.020	0.949	5.5
2-Methylphenol	1.472	1.332	1.472	1.420	1.433	1.473	1.441	1.435	3.5
N-Nitroso-di-n-propylamine	0.840	0.835	0.888	0.820	0.844	0.830	0.825	0.840	2.7
4-Methylphenol	1.509	1.369	1.499	1.461	1.522	1.525	1.514	1.486	3.7
2,4-Dimethylphenol	0.368	0.339	0.362	0.354	0.363	0.351	0.336	0.353	3.4
1,2,4-Trichlorobenzene	0.327	0.319	0.338	0.325	0.337	0.315	0.319	0.326	2.8
Hexachlorobutadiene	0.182	0.174	0.183	0.178	0.186	0.178	0.183	0.180	2.2
Dimethylphthalate	1.261	1.151	1.213	1.183	1.227	1.203	1.151	1.198	3.3
Diethylphthalate	1.410	1.271	1.328	1.317	1.375	1.353	1.313	1.338	3.4
N-Nitrosodiphenylamine (1)	0.535	0.496	0.551	0.536	0.554	0.532	0.536	0.534	3.6
Hexachlorobenzene	0.277	0.254	0.273	0.256	0.268	0.255	0.257	0.263	3.6
Pentachlorophenol	0.054	0.053	0.056	0.072	0.115	0.114	0.138	0.086	0.998
Butylbenzylphthalate	0.580	0.516	0.556	0.553	0.589	0.560	0.565	0.560	4.2
Dibenzo(a,h)anthracene	1.023	0.898	0.942	0.924	0.997	0.945	0.965	0.956	4.5
N-Nitrosodimethylamine	0.798	0.754	0.848	0.802	0.838	0.822	0.816	0.811	3.8
2-Fluorophenol	1.360	1.264	1.395	1.329	1.397	1.396	1.389	1.361	3.7
Terphenyl-d14	0.645	0.593	0.619	0.604	0.634	0.597	0.602	0.613	3.2

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Instrument ID: NT10 — Cont. Calib. Date: 07/03/12

Init. Calib. Date: 06/05/12 — Cont. Calib. Time: 1525

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	2.080	1.711	0.800	AVRG	-17.7
1,3-Dichlorobenzene	1.635	1.444	0.010	AVRG	-11.7
1,4-Dichlorobenzene	1.594	1.383	0.010	AVRG	-13.2
1,2-Dichlorobenzene	1.544	1.359	0.010	AVRG	-12.0
Benzyl alcohol	0.949	0.794	0.010	AVRG	-16.3
2-Methylphenol	1.435	1.217	0.700	AVRG	-15.2
N-Nitroso-di-n-propylamine	0.840	0.726	0.500	AVRG	-13.6
4-Methylphenol	1.486	1.270	0.600	AVRG	-14.5
2,4-Dimethylphenol	0.353	0.309	0.200	AVRG	-12.5
1,2,4-Trichlorobenzene	0.326	0.286	0.010	AVRG	-12.3
Hexachlorobutadiene	0.180	0.157	0.010	AVRG	-12.8
Dimethylphthalate	1.198	1.067	0.010	AVRG	-10.9
Diethylphthalate	1.338	1.195	0.010	AVRG	-10.7
N-Nitrosodiphenylamine(1)	0.534	0.465	0.010	AVRG	-12.9
Hexachlorobenzene	0.263	0.222	0.100	AVRG	-15.6
Pentachlorophenol	2.000	2.075	0.050	2ORDR	3.8
Butylbenzylphthalate	0.560	0.513	0.010	AVRG	-8.4
Dibenzo(a,h)anthracene	0.956	0.850	0.400	AVRG	-11.1
N-Nitrosodimethylamine	0.811	0.686	0.010	AVRG	-15.4
2-Fluorophenol	1.361	1.143	0.010	AVRG	-16.0
Terphenyl-d14	0.613	0.512	0.010	AVRG	-16.5

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0605A — Ical Date: 06/05/12

Instrument ID: NT10 — Cont. Cal Date: 07/03/12

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	254374	8.46	947590	11.10	481282	14.97
	UPPER LIMIT	508748		1895180		962564	
	LOWER LIMIT	127187		473795		240641	
	CCAL	245151	8.74	943407	11.39	477328	15.28
	UPPER LIMIT		9.24		11.89		15.78
	LOWER LIMIT		8.24		10.89		14.78
01	UZ99MBS1	235030	8.74	912491	11.39	458253	15.29
02	UZ99LCSS1	232964	8.74	904188	11.39	460671	15.29
03	UZ99LCSDS1	251580	8.74	966945	11.39	501092	15.29
04	CB-002-06222	239303	8.74	927390	11.38	466668	15.28
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No: UZ99 — Project: I&J WATERWAY RI/FS

Ical Midpoint ID: IC0605A — Ical Date: 06/05/12

Instrument ID: NT10 — Cont. Cal Date: 07/03/12

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	834942	18.24	846355	23.39	841446	25.74
	UPPER LIMIT	1669884		1692710		1682892	
	LOWER LIMIT	417471		423178		420723	
	CCAL	836019	18.57	823505	23.69	800599	26.10
	UPPER LIMIT		19.07		24.19		26.60
	LOWER LIMIT		18.07		23.19		25.60
01	UZ99MBS1	809525	18.57	767273	23.69	725293	26.09
02	UZ99LCSS1	798325	18.57	792251	23.70	772987	26.10
03	UZ99LCSDS1	859641	18.57	861376	23.70	847011	26.11
04	CB-002-06222	836744	18.57	892664	23.71	886694	26.15
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: UZ99

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: CB-002-06222012

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/12/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Date Extracted: 07/09/12
Date Analyzed: 07/11/12 15:44
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.75	0.65-0.89		0.984	3.75	
2,3,7,8-TCDD	0.72	0.65-0.89		0.984	0.744	J
1,2,3,7,8-PeCDF	1.48	1.32-1.78		1.97	4.78	
2,3,4,7,8-PeCDF	1.48	1.32-1.78		0.984	5.82	
1,2,3,7,8-PeCDD	1.58	1.32-1.78		0.984	4.36	
1,2,3,4,7,8-HxCDF	1.27	1.05-1.43		1.97	9.55	
1,2,3,6,7,8-HxCDF	1.26	1.05-1.43		1.97	6.71	
2,3,4,6,7,8-HxCDF	1.19	1.05-1.43		1.97	6.61	
1,2,3,7,8,9-HxCDF	1.10	1.05-1.43		1.97	2.05	
1,2,3,4,7,8-HxCDD	1.22	1.05-1.43		1.97	3.29	
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43		1.97	8.57	
1,2,3,7,8,9-HxCDD	1.19	1.05-1.43		1.97	5.92	
1,2,3,4,6,7,8-HpCDF	1.01	0.88-1.20		1.97	35.5	
1,2,3,4,7,8,9-HpCDF	1.00	0.88-1.20		1.97	4.15	
1,2,3,4,6,7,8-HpCDD	1.02	0.88-1.20		1.97	95.9	
OCDF	0.90	0.76-1.02		4.92	50.8	
OCDD	0.89	0.76-1.02		4.92	611	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.984	64.2	67.7
Total TCDD		0.984	41.2	42.2
Total PeCDF		1.97	76.9	85.1
Total PeCDD		0.984	55.7	
Total HxCDF		1.97	79.2	80.7
Total HxCDD		1.97	83.7	85.0
Total HpCDF		1.97	77.5	
Total HpCDD		1.97	174	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 13.2

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 13.2

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: CB-002-06222012

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/12/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Date Extracted: 07/09/12
Date Analyzed: 07/11/12 15:44
Instrument/Analyst: AS1/PK

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	87.4	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	75.7	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	92.8	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	93.0	21-178	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	88.9	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	84.6	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	82.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	82.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	87.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	80.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	81.5	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	78.0	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.46	0.37-0.51	82.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.07	0.88-1.20	82.2	23-140	
13C-OCDD	0.89	0.76-1.02	59.7	17-157	
37Cl4-2,3,7,8-TCDD			80.7	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: OPR-070912

Lab Sample ID: OPR-070912
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/12/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 07/09/12
Date Analyzed: 07/11/12 14:54
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.77	0.65-0.89	1.00	22.6
2,3,7,8-TCDD	0.78	0.65-0.89	1.00	21.1
1,2,3,7,8-PeCDF	1.56	1.32-1.78	2.00	107
2,3,4,7,8-PeCDF	1.50	1.32-1.78	1.00	106
1,2,3,7,8-PeCDD	1.58	1.32-1.78	1.00	109
1,2,3,4,7,8-HxCDF	1.21	1.05-1.43	2.00	105
1,2,3,6,7,8-HxCDF	1.22	1.05-1.43	2.00	105
2,3,4,6,7,8-HxCDF	1.20	1.05-1.43	2.00	112
1,2,3,7,8,9-HxCDF	1.24	1.05-1.43	2.00	105
1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	2.00	111
1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	2.00	108
1,2,3,7,8,9-HxCDD	1.22	1.05-1.43	2.00	111
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20	2.00	112
1,2,3,4,7,8,9-HpCDF	1.02	0.88-1.20	2.00	104
1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	2.00	108
OCDF	0.88	0.76-1.02	5.00	225
OCDD	0.84	0.76-1.02	5.00	217

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	22.9	23.2
Total TCDD		1.00	21.7	
Total PeCDF		2.00	215	217
Total PeCDD		1.00	109	110
Total HxCDF		2.00	427	
Total HxCDD		2.00	329	330
Total HpCDF		2.00	216	217
Total HpCDD		2.00	108	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: OPR-070912

Lab Sample ID: OPR-070912
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/12/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 07/09/12
Date Analyzed: 07/11/12 14:54
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	96.6	22-152	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	77.6	20-175	
13C-1,2,3,7,8-PeCDF	1.60	1.32-1.78	91.6	21-192	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	87.2	13-328	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	82.2	21-227	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	92.7	19-202	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	95.2	21-159	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	90.3	22-176	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	89.2	17-205	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	88.7	21-193	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	90.8	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	84.8	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	89.8	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	88.7	26-166	
13C-OCDD	0.87	0.76-1.02	67.8	13-198	
37Cl4-2,3,7,8-TCDD			83.2	31-191	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: OPR-070912

Lab Sample ID: OPR-070912
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/12/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 07/09/12
Date Analyzed: 07/11/12 14:54
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	22.6	20.0	113	75-158
2,3,7,8-TCDD	21.1	20.0	106	67-158
1,2,3,7,8-PeCDF	107	100	107	80-134
2,3,4,7,8-PeCDF	106	100	106	68-160
1,2,3,7,8-PeCDD	109	100	109	70-142
1,2,3,4,7,8-HxCDF	105	100	105	72-134
1,2,3,6,7,8-HxCDF	105	100	105	84-130
2,3,4,6,7,8-HxCDF	112	100	112	70-156
1,2,3,7,8,9-HxCDF	105	100	105	78-130
1,2,3,4,7,8-HxCDD	111	100	111	70-164
1,2,3,6,7,8-HxCDD	108	100	108	76-134
1,2,3,7,8,9-HxCDD	111	100	111	64-162
1,2,3,4,6,7,8-HpCDF	112	100	112	82-132
1,2,3,4,7,8,9-HpCDF	104	100	104	78-138
1,2,3,4,6,7,8-HpCDD	108	100	108	70-140
OCDF	225	200	112	63-170
OCDD	217	200	108	78-144

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.

UZ99MB

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: UZ99
Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL
Sample wt/vol: 10 (g/ml) g
Water Sample Prep: (sep/spe)
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Instrument ID: AUTOSPEC1

Contract: ANCHOR
Project: I&J WATERWAY
Lab Sample ID: UZ99MB
Lab File ID: 12071104
Date Received: 23-JUN-12
Date Extracted: 09-JUL-12
Date Analyzed: 11-JUL-12

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
UZ99OPR	UZ99OPR	12071105	07/11/12
CB-002-06222012	UZ99A	12071106	07/11/12

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: MB-070912

Lab Sample ID: MB-070912
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/12/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 07/09/12
Date Analyzed: 07/11/12 13:58
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.55	0.65-0.89		1.00	0.0214	JEMPC
2,3,7,8-TCDD	0.18	0.65-0.89		1.00	0.0440	JEMPC
1,2,3,7,8-PeCDF	2.51	1.32-1.78		2.00	0.0266	JEMPC
2,3,4,7,8-PeCDF		1.32-1.78	0.0742	1.00	< 0.0742	U
1,2,3,7,8-PeCDD		1.32-1.78	0.122	1.00	< 0.122	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0580	2.00	< 0.0580	U
1,2,3,6,7,8-HxCDF	1.00	1.05-1.43		2.00	0.0290	JEMPC
2,3,4,6,7,8-HxCDF	0.98	1.05-1.43		2.00	0.0290	JEMPC
1,2,3,7,8,9-HxCDF	1.54	1.05-1.43		2.00	0.0218	JEMPC
1,2,3,4,7,8-HxCDD		1.05-1.43	0.100	2.00	< 0.100	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0816	2.00	< 0.0816	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.126	2.00	< 0.126	U
1,2,3,4,6,7,8-HpCDF	1.32	0.88-1.20		2.00	0.0440	JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0948	2.00	< 0.0948	U
1,2,3,4,6,7,8-HpCDD	2.57	0.88-1.20		2.00	0.0748	JEMPC
OCDF		0.76-1.02	0.268	5.00	< 0.268	U
OCDD	0.92	0.76-1.02		5.00	1.54	J

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC	
Total TCDF		1.00	< 0.0214	0.0416	U
Total TCDD		1.00	< 0.0440	0.103	U
Total PeCDF		2.00	< 0.0742	0.0266	U
Total PeCDD	0.122	1.00	< 0.122		U
Total HxCDF		2.00	< 0.0580	0.0798	U
Total HxCDD	0.126	2.00	< 0.126	0.203	U
Total HpCDF		2.00	< 0.0948	0.0440	U
Total HpCDD		2.00	< 0.0748	0.273	U

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.06

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.15

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

Sample ID: MB-070912

Lab Sample ID: MB-070912
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/12/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 07/09/12
Date Analyzed: 07/11/12 13:58
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	104	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	86.8	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	104	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	101	21-178	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	97.4	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	94.4	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	101	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	90.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	92.4	29-147	
13C-1,2,3,4,7,8-HxCDD	1.29	1.05-1.43	91.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	92.0	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	85.7	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	89.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.08	0.88-1.20	89.4	23-140	
13C-OCDD	0.92	0.76-1.02	68.9	17-157	
37Cl4-2,3,7,8-TCDD			93.2	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.

CS3

Lab Name: ANALYTICAL RESOURCES, INC.
Contract: ANCHOR
Lab Code: UZ99
Project: I&J WATERWAY
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Lab File ID: 12071102
Instrument ID: AUTOSPEC1
Date Analyzed: 11-JUL-12
Time Analyzed: 1101

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	23.81	27.24
TCDF	22.54	27.50
PeCDD	29.02	32.12
PeCDF	27.35	32.49
HxCDD	34.19	36.90
HxCDF	33.40	37.35
HpCDD	39.92	41.17
HpCDF	39.38	42.05

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.

TETRA ISC

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	ANCHOR
Lab Code:	UZ99	Project:	I&J WATERWAY
GC Column:	RTX-DIOXIN2 ID: .25 mm	Lab File ID:	12071103
Instrument ID: AUTOSPEC1		Date Analyzed:	11-JUL-12
		Time Analyzed:	1155

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 20.2

Quality Control (QC) Limits:

Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 16.8

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: ANCHOR

Lab Code: UZ99 Project: I&J WATERWAY

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 03-MAY-12

Init: Calib. Times: 12:27 to 18:54

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
I7214	CS3	12071102	07/11/12	1101
1929-2	TETRA ISC	12071103	07/11/12	1155
UZ99MBS	UZ99MBS	12071104	07/11/12	1358
UZ99OPR	UZ99OPR	12071105	07/11/12	1454
CB-002-06222012	UZ99A	12071106	07/11/12	1544
I7214	CS3	12071112	07/11/12	2058

USEPA
6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	ANCHOR
Lab Code:	UZ99	Case No.:	I&J WATERWAY
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	03-May-12	Init.Calib.Time CSL:	12:27:37
Init.Calib.Date CS1:	03-May-12	Init.Calib.Time CS1:	15:26:24
Init.Calib.Date CS2:	03-May-12	Init.Calib.Time CS2:	16:19:31
Init.Calib.Date CS3:	03-May-12	Init.Calib.Time CS3:	17:09:55
Init.Calib.Date CS4:	03-May-12	Init.Calib.Time CS4:	18:02:13
Init.Calib.Date CS5:	03-May-12	Init.Calib.Time CS5:	18:54:20

Target Analytes	RRF						Mean RRF	% RSD	QC Limits
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	1.19	1.03	1.00	1.00	1.02	1.04	1.05	7.0	20.0
2378-TCDF	0.93	0.84	0.85	0.85	0.85	0.88	0.87	3.9	20.0
12378-PeCDF	0.89	0.89	0.89	0.91	0.93	0.93	0.91	2.1	20.0
12378-PeCDD	1.00	0.96	0.95	0.97	0.97	0.99	0.97	1.6	20.0
23478-PeCDF	0.92	0.94	0.92	0.93	0.94	0.96	0.94	1.8	20.0
123478-HxCDF	1.06	1.04	1.08	1.09	1.08	1.14	1.08	2.9	20.0
123678-HxCDF	1.01	1.01	1.05	1.04	1.08	1.09	1.05	3.3	20.0
123478-HxCDD	0.90	0.95	0.92	0.94	0.95	0.95	0.94	2.2	20.0
123678-HxCDD	0.83	0.87	0.90	0.87	0.89	0.91	0.88	3.3	20.0
123789-HxCDD[2]	0.80	0.80	0.85	0.84	0.87	0.87	0.84	3.8	20.0
234678-HxCDF	1.05	1.07	1.04	1.05	1.09	1.10	1.07	2.3	20.0
123789-HxCDF	1.05	1.01	0.99	1.00	1.01	1.05	1.02	2.8	20.0
1234678-HpCDF	1.14	1.22	1.22	1.22	1.22	1.27	1.21	3.2	20.0
1234678-HpCDD	0.94	0.94	0.98	0.96	1.00	1.02	0.97	3.3	20.0
1234789-HpCDF	1.34	1.23	1.24	1.21	1.23	1.27	1.25	3.6	20.0
OCDD	0.92	0.91	0.94	0.94	1.00	0.99	0.95	3.8	20.0
OCDF[1]	1.10	1.02	1.04	1.08	1.16	1.24	1.11	7.3	20.0

(1) The RRF is calculated based on the labeled analog of OCDD.
(2) The relative response factor (RRF) is calculated based on the labeled analogs of the other two HxCDDs.

Labeled Compounds	RRF						Mean RRF	% RSD	QC Limits
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.93	0.92	0.92	0.93	0.96	1.06	0.96	5.7	20.0
13C-12378-PeCDD	0.61	0.58	0.60	0.63	0.69	0.87	0.66	16.0	20.0
13C-123478-HxCDD	1.03	1.02	1.01	1.01	1.03	1.05	1.02	1.4	20.0
13C-123678-HxCDD	1.10	1.14	1.10	1.11	1.12	1.10	1.11	1.5	20.0
13C-1234678-HpCDD	0.83	0.82	0.82	0.82	0.81	0.79	0.82	1.5	20.0
13C-OCDD	0.70	0.69	0.72	0.70	0.71	0.77	0.72	4.1	20.0
13C-2378-TCDF	1.46	1.44	1.46	1.46	1.49	1.59	1.48	3.7	20.0
13C-12378-PeCDF	0.97	0.94	0.96	1.02	1.07	1.34	1.05	14.2	20.0
13C-23478-PeCDF	0.93	0.89	0.92	0.96	1.04	1.28	1.00	14.6	20.0
13C-123478-HxCDF	1.19	1.22	1.17	1.19	1.20	1.15	1.19	2.2	20.0
13C-123678-HxCDF	1.29	1.35	1.31	1.34	1.31	1.28	1.32	2.1	20.0
13C-234678-HxCDF	1.23	1.25	1.22	1.23	1.22	1.19	1.22	1.6	20.0
13C-123789-HxCDF	1.06	1.04	1.06	1.05	1.07	1.06	1.06	0.9	20.0
13C-1234678-HpCDF	1.01	1.01	1.02	1.01	1.03	0.99	1.01	1.2	20.0
13C-1234789-HpCDF	0.75	0.73	0.74	0.75	0.75	0.74	0.74	1.2	20.0

USEPA
6DFB - Form VI-HR CDD-2
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	ANCHOR
Lab Code:	UZ99	Case No.:	I&J WATERWAY
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	03-May-12	Init.Calib.Time CSL:	12:27:37
Init.Calib.Date CS1:	03-May-12	Init.Calib.Time CS1:	15:26:24
Init.Calib.Date CS2:	03-May-12	Init.Calib.Time CS2:	16:19:31
Init.Calib.Date CS3:	03-May-12	Init.Calib.Time CS3:	17:09:55
Init.Calib.Date CS4:	03-May-12	Init.Calib.Time CS4:	18:02:13
Init.Calib.Date CS5:	03-May-12	Init.Calib.Time CS5:	18:54:20

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.72	0.73	0.80	0.79	0.77	0.77		0.65 - 0.89
2378-TCDF	304/306	0.73	0.77	0.77	0.73	0.77	0.78		0.65 - 0.89
12378-PeCDF	340/342	1.73	1.58	1.51	1.56	1.54	1.56		1.32 - 1.78
12378-PeCDD	356/358	1.60	1.57	1.50	1.57	1.53	1.52		1.32 - 1.78
23478-PeCDF	340/342	1.62	1.56	1.53	1.55	1.55	1.56		1.32 - 1.78
123478-HxCDF	374/376	1.23	1.14	1.21	1.23	1.23	1.23		1.05 - 1.43
123678-HxCDF	374/376	1.21	1.15	1.28	1.24	1.22	1.23		1.05 - 1.43
123478-HxCDD	390/392	1.11	1.17	1.25	1.23	1.27	1.23		1.05 - 1.43
123678-HxCDD	390/392	1.15	1.25	1.24	1.24	1.19	1.23		1.05 - 1.43
123789-HxCDD	390/392	1.41	1.33	1.24	1.24	1.21	1.23		1.05 - 1.43
234678-HxCDF	374/376	1.24	1.20	1.21	1.25	1.23	1.24		1.05 - 1.43
123789-HxCDF	374/376	1.24	1.23	1.19	1.22	1.24	1.24		1.05 - 1.43
1234678-HpCDF	408/410	0.92	1.06	1.05	1.01	1.01	1.02		0.89 - 1.21
1234678-HpCDD	424/426	0.99	1.07	1.08	1.05	1.07	1.04		0.89 - 1.21
1234789-HpCDF	408/410	1.19	0.93	0.97	1.02	1.02	1.03		0.89 - 1.21
OCDD	458/460	0.89	0.89	0.86	0.87	0.89	0.88		0.76 - 1.02
OCDF	442/444	0.81	0.90	0.87	0.89	0.90	0.89		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.77	0.77	0.77	0.77	0.77	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.61	1.57	1.58	1.56	1.59	1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	1.26	1.27	1.25	1.25	1.26	1.27		1.05 - 1.43
13C-123678-HxCDD	402/404	1.26	1.25	1.25	1.25	1.25	1.26		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.04	1.04	1.07	1.04	1.06	1.04		0.89 - 1.21
13C-OCDD	470/472	0.90	0.88	0.89	0.89	0.91	0.89		0.76 - 1.02
13C-2378-TCDF	316/318	0.77	0.78	0.77	0.77	0.78	0.77		0.65 - 0.89
13C-12378-PeCDF	352/354	1.55	1.56	1.55	1.55	1.55	1.54		1.32 - 1.78
13C-23478-PeCDF	352/354	1.56	1.55	1.55	1.56	1.55	1.54		1.32 - 1.78
13C-123478-HxCDF	384/386	0.52	0.51	0.52	0.52	0.51	0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	0.52	0.50	0.52	0.50	0.52	0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.53	0.53	0.52	0.52	0.52	0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.53	0.52	0.53	0.52	0.52	0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.45	0.46	0.46	0.46	0.45	0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.45	0.46	0.45	0.45	0.45	0.46		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.77	0.78	0.78	0.78	0.78	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	1.23	1.25	1.27	1.22	1.24	1.25		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	UZ99	Case No.:	I&J WATERWAY
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12071102
Date Analysed	11-Jul-12	Time Analysed	11:01:13
Init.Calib.Date:	03-MAY-12	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.06	1.05	1.1		0.79		0.65 - 0.89
2378-TCDF	304/306	0.88	0.87	1.3		0.74		0.65 - 0.89
12378-PeCDF	340/342	0.94	0.91	3.1		1.54		1.32 - 1.78
12378-PeCDD	356/358	0.99	0.97	2.2		1.56		1.32 - 1.78
23478-PeCDF	340/342	0.95	0.94	1.8		1.48		1.32 - 1.78
123478-HxCDF	374/376	1.09	1.08	1.1		1.20		1.05 - 1.43
123678-HxCDF	374/376	1.06	1.05	0.8		1.22		1.05 - 1.43
123478-HxCDD	390/392	1.00	0.94	7.0		1.26		1.05 - 1.43
123678-HxCDD	390/392	0.92	0.88	4.6		1.26		1.05 - 1.43
123789-HxCDD	390/392	0.90	0.84	7.3		1.22		1.05 - 1.43
234678-HxCDF	374/376	1.07	1.07	-0.1		1.23		1.05 - 1.43
123789-HxCDF	374/376	1.01	1.02	-1.0		1.21		1.05 - 1.43
1234678-HpCDF	408/410	1.26	1.21	3.3		1.04		0.89 - 1.21
1234678-HpCDD	424/426	1.02	0.97	4.8		1.04		0.89 - 1.21
1234789-HpCDF	408/410	1.26	1.25	0.8		0.97		0.89 - 1.21
OCDD	458/460	1.03	0.95	8.5		0.87		0.76 - 1.02
OCDF	442/444	1.20	1.11	8.5		0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.91	0.96	-4.7		0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	0.72	0.66	8.1		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	0.98	1.02	-3.9		1.25		1.05 - 1.43
13C-123678-HxCDD	402/404	1.12	1.11	1.0		1.22		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.84	0.82	3.4		1.06		0.89 - 1.21
13C-OCDD	470/472	0.69	0.72	-3.6		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.52	1.48	2.3		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.18	1.05	12.2		1.58		1.32 - 1.78
13C-23478-PeCDF	352/354	1.16	1.00	15.3		1.58		1.32 - 1.78
13C-123478-HxCDF	384/386	1.25	1.19	5.2		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.39	1.32	6.0		0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	1.31	1.22	7.2		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	1.11	1.06	4.7		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.07	1.01	6.3		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.79	0.74	6.9		0.46		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.24		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	UZ99	Case No.:	I&J WATERWAY
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12071102
Date Analysed	11-Jul-12	Time Analysed	11:01:13
Init.Calib.Date:	03-MAY-12	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	26.65
2378-TCDF	1.00	26.02
12378-PeCDF	1.00	30.13
12378-PeCDD	1.00	31.72
23478-PeCDF	1.00	31.47
123478-HxCDF	1.00	35.12
123678-HxCDF	1.00	35.26
123478-HxCDD	1.00	36.34
123678-HxCDD	1.00	36.47
123789-HxCDD	1.01	36.90
234678-HxCDF	1.00	36.21
123789-HxCDF	1.00	37.35
1234678-HpCDF	1.00	39.38
1234678-HpCDD	1.00	41.17
1234789-HpCDF	1.00	42.05
OCDD	1.00	47.00
OCDF	1.01	47.27

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.63
13C-12378-PeCDD	1.23	31.70
13C-123478-HxCDD	0.99	36.33
13C-123678-HxCDD	0.99	36.45
13C-1234678-HpCDD	1.12	41.15
13C-OCDD	1.27	46.98
13C-2378-TCDF	1.01	26.00
13C-12378-PeCDF	1.17	30.11
13C-23478-PeCDF	1.22	31.45
13C-123478-HxCDF	0.95	35.10
13C-123678-HxCDF	0.96	35.25
13C-234678-HxCDF	0.98	36.19
13C-123789-HxCDF	1.01	37.33
13C-1234678-HpCDF	1.07	39.36
13C-1234789-HpCDF	1.14	42.03

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.82
13C-123789-HxCDD	0.00	36.87

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	UZ99	Case No.:	I&J WATERWAY
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12071112
Date Analysed	11-Jul-12	Time Analysed	20:58:05
Init.Calib.Date:	03-MAY-12	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.06	1.05	1.5		0.79		0.65 - 0.89
2378-TCDF	304/306	0.89	0.87	2.8		0.79		0.65 - 0.89
12378-PeCDF	340/342	0.92	0.91	1.5		1.54		1.32 - 1.78
12378-PeCDD	356/358	0.99	0.97	2.1		1.57		1.32 - 1.78
23478-PeCDF	340/342	0.96	0.94	2.9		1.54		1.32 - 1.78
123478-HxCDF	374/376	1.10	1.08	1.2		1.21		1.05 - 1.43
123678-HxCDF	374/376	1.07	1.05	1.6		1.22		1.05 - 1.43
123478-HxCDD	390/392	0.97	0.94	3.6		1.25		1.05 - 1.43
123678-HxCDD	390/392	0.93	0.88	6.4		1.25		1.05 - 1.43
123789-HxCDD	390/392	0.95	0.84	12.9		1.24		1.05 - 1.43
234678-HxCDF	374/376	1.09	1.07	1.5		1.21		1.05 - 1.43
123789-HxCDF	374/376	1.02	1.02	0.0		1.22		1.05 - 1.43
1234678-HpCDF	408/410	1.26	1.21	3.6		1.04		0.89 - 1.21
1234678-HpCDD	424/426	1.02	0.97	4.4		1.06		0.89 - 1.21
1234789-HpCDF	408/410	1.26	1.25	0.6		1.02		0.89 - 1.21
OCDD	458/460	1.01	0.95	6.7		0.90		0.76 - 1.02
OCDF	442/444	1.16	1.11	4.7		0.89		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.95	0.96	-0.9		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.85	0.66	27.6		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	0.98	1.02	-4.3		1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.01	1.11	-9.2		1.25		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.86	0.82	5.7		1.05		0.89 - 1.21
13C-OCDD	470/472	0.71	0.72	-0.3		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.57	1.48	5.6		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.34	1.05	28.2		1.56		1.32 - 1.78
13C-23478-PeCDF	352/354	1.33	1.00	32.3		1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	1.15	1.19	-2.9		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.24	1.32	-5.9		0.53		0.43 - 0.59
13C-234678-HxCDF	384/386	1.24	1.22	1.2		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.09	1.06	2.8		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.05	1.01	3.5		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.81	0.74	8.9		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.24		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	UZ99	Case No.:	I&J WATERWAY
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12071112
Date Analysed	11-Jul-12	Time Analysed	20:58:05
Init.Calib.Date:	03-MAY-12	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	26.63
2378-TCDF	1.00	26.00
12378-PeCDF	1.00	30.12
12378-PeCDD	1.00	31.71
23478-PeCDF	1.00	31.46
123478-HxCDF	1.00	35.11
123678-HxCDF	1.00	35.26
123478-HxCDD	1.00	36.33
123678-HxCDD	1.00	36.46
123789-HxCDD	1.01	36.89
234678-HxCDF	1.00	36.21
123789-HxCDF	1.00	37.35
1234678-HpCDF	1.00	39.38
1234678-HpCDD	1.00	41.17
1234789-HpCDF	1.00	42.05
OCDD	1.00	47.00
OCDF	1.01	47.28

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.62
13C-12378-PeCDD	1.23	31.69
13C-123478-HxCDD	0.99	36.32
13C-123678-HxCDD	0.99	36.45
13C-1234678-HpCDD	1.12	41.15
13C-OCDD	1.27	46.99
13C-2378-TCDF	1.01	25.99
13C-12378-PeCDF	1.17	30.10
13C-23478-PeCDF	1.22	31.44
13C-123478-HxCDF	0.95	35.09
13C-123678-HxCDF	0.96	35.24
13C-234678-HxCDF	0.98	36.19
13C-123789-HxCDF	1.01	37.33
13C-1234678-HpCDF	1.07	39.36
13C-1234789-HpCDF	1.14	42.03

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.81
13C-123789-HxCDD	0.00	36.87

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

PCB Analysis
Report and Summary QC Forms

ARI Job ID: UZ99

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546

Sample ID: CB-002-06222012
SAMPLE

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Date Extracted: 06/27/12
Date Analyzed: 07/02/12 10:49
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.37 g-dry-wt
Final Extract Volume: 5.00 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.2%
Tetrachlorometaxylene	71.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-062712	64.5%	48-123	70.5%	43-107	0
LCS-062712	65.8%	48-123	73.0%	43-107	0
LCSD-062712	66.8%	48-123	74.0%	43-107	0
CB-002-06222012	62.2%	24-127	71.5%	34-109	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 12-11979 to 12-11979

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-062712
LCS/LCSD

Lab Sample ID: LCS-062712
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/27/12

Date Analyzed LCS: 07/02/12 09:46
LCSD: 07/02/12 10:07
Instrument/Analyst LCS: ECD7/JGR
LCSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Final Extract Volume LCS: 5.00 mL
LCSD: 5.00 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: No

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	368	500	73.6%	373	500	74.6%	1.3%
Aroclor 1260	318	500	63.6%	322	500	64.4%	1.2%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	65.8%	66.8%
Tetrachlorometaxylene	73.0%	74.0%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

FORM III

PCB METHOD BLANK SUMMARY

BLANK NO.

UZ99MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No.: UZ99

Project: I&J WATERWAY RI/FS

Lab Sample ID: UZ99MBS1

Lab File ID: 0702A005

Date Extracted: 06/27/12

Matrix: SOLID

Date Analyzed: 07/02/12

Instrument ID: ECD7

Time Analyzed: 0925

GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	UZ99LCSS1	UZ99LCSS1	07/02/12
02	UZ99LCSDS1	UZ99LCSDS1	07/02/12
03	CB-002-06222012	UZ99A	07/02/12

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: MB-062712
METHOD BLANK

Lab Sample ID: MB-062712
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS 090007-01
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/12
Date Analyzed: 07/02/12 09:25
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.00 g
Final Extract Volume: 5.00 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.5%
Tetrachlorometaxylene	70.5%

FORM I

6F

8082 INITIAL CALIBRATION OF AROCLOR 1232

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UZ99

Project: I & J WATERWAY

GC Column: ZB5

Instrument ID: ECD7

Calibration Date: 06/27/12

Aroclor-1242		LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
Peak	RT WIN	.02	0.05	0.1	.25	0.5	1.0		R^2
1	8.18- 8.38	0.0000	0.0						
2	8.67- 8.87	0.0000	0.0						
3	8.84- 9.04	0.0000	0.0						
4	10.46-10.66	0.0000	0.0						

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No.: UZ99 — Project: I & J WATERWAY

GC Column: ZB5 — Instrument ID: ECD7

Calibration Date: 06/27/12

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 6.18- 6.38	0.9035	0.9276	0.9813	0.9836	1.0222	1.0201	0.9731	5.0
DCB 14.76-14.96	0.9793	0.9667	0.9820	0.9361	0.9572	0.9353	0.9594	2.1

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	8.18- 8.38	0.0245	0.0240	0.0240	0.0227	0.0229	0.0222	0.0234	3.9
2	8.67- 8.87	0.0826	0.0814	0.0824	0.0786	0.0793	0.0770	0.0802	2.8
3	8.85- 9.05	0.0336	0.0326	0.0326	0.0306	0.0306	0.0296	0.0316	4.9
4	8.97- 9.17	0.0228	0.0220	0.0221	0.0209	0.0211	0.0207	0.0216	3.8

AROCLOR AVERAGE %RSD = 3.8

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	11.73-11.93	0.0649	0.0625	0.0624	0.0605	0.0601	0.0582	0.0614	3.8
2	12.33-12.53	0.0423	0.0411	0.0410	0.0398	0.0398	0.0387	0.0405	3.2
3	12.65-12.85	0.0418	0.0411	0.0412	0.0403	0.0406	0.0396	0.0408	1.8
4	13.38-13.58	0.0522	0.0519	0.0531	0.0520	0.0533	0.0525	0.0525	1.1
5	13.48-13.68	0.0212	0.0209	0.0211	0.0203	0.0205	0.0201	0.0207	2.1

AROCLOR AVERAGE %RSD = 2.4

6F

8082 INITIAL CALIBRATION OF AROCLOR 1232

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UZ99

Project: I & J WATERWAY

GC Column: ZB35

Instrument ID: ECD7

Calibration Date: 06/27/12

Aroclor-1242		LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
Peak	RT WIN	.02	0.05	0.1	.25	0.5	1.0		R^2
1	8.42- 8.62	0.0000	0.0						
2	9.15- 9.35	0.0000	0.0						
3	9.58- 9.78	0.0000	0.0						
4	11.05-11.25	0.0000	0.0						

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No.: UZ99 — Project: I & J WATERWAY

GC Column: ZB35 — Instrument ID: ECD7

Calibration Date: 06/27/12

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 6.30- 6.50	1.0848	1.0423	1.0543	1.0088	1.0191	1.0086	1.0363	2.9
DCB 15.09-15.29	1.0941	0.9735	0.9574	0.8780	0.8754	0.8652	0.9406	9.4

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	8.43- 8.63	0.0509	0.0458	0.0435	0.0383	0.0365	0.0340	0.0415	15.4
2	9.16- 9.36	0.1028	0.0934	0.0896	0.0809	0.0786	0.0749	0.0867	12.1
3	9.59- 9.79	0.0260	0.0244	0.0234	0.0209	0.0203	0.0192	0.0224	11.8
4	9.69- 9.89	0.0320	0.0291	0.0274	0.0237	0.0227	0.0213	0.0260	15.9

AROCLOR AVERAGE %RSD = 13.8

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	12.62-12.82	0.0862	0.0774	0.0723	0.0655	0.0634	0.0616	0.0711	13.3
2	13.40-13.60	0.1308	0.1180	0.1128	0.1041	0.1025	0.1015	0.1116	10.2
3	13.89-14.09	0.0905	0.0816	0.0772	0.0680	0.0679	0.0663	0.0752	12.8
4	14.45-14.65	0.0326	0.0298	0.0285	0.0263	0.0252	0.0236	0.0277	11.8

AROCLOR AVERAGE %RSD = 12.0

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No.: UZ99 — Project: I & J WATERWAY

GC Column: ZB5 — Instrument ID: ECD7

Calibration Date: 06/27/12

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	6.724	6.62- 6.82	0.00972
2	6.936	6.84- 7.04	0.00729
3	7.059	6.96- 7.16	0.02422

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	8.279	8.18- 8.38	0.00925
2	8.768	8.67- 8.87	0.03146
3	8.942	8.84- 9.04	0.01249
4	10.313	10.21-10.41	0.01423

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	8.277	8.18- 8.38	0.01822
2	8.766	8.67- 8.87	0.06230
3	8.939	8.84- 9.04	0.02445
4	10.559	10.46-10.66	0.02288

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	9.342	9.24- 9.44	0.02416
2	9.673	9.57- 9.77	0.03051
3	10.316	10.22-10.42	0.04559
4	10.562	10.46-10.66	0.03569

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No.: UZ99 — Project: I & J WATERWAY

GC Column: ZB5 — Instrument ID: ECD7

Calibration Date: 06/27/12

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.324	10.22-10.42	0.03321
2	10.645	10.54-10.74	0.04781
3	11.027	10.93-11.13	0.02917
4	11.166	11.07-11.27	0.05828
5	11.882	11.78-11.98	0.03723

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.428	12.33-12.53	0.06647
2	12.743	12.64-12.84	0.04823
3	13.107	13.01-13.21	0.13142
4	13.579	13.48-13.68	0.04447
5	13.643	13.54-13.74	0.04769

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.580	13.48-13.68	0.13787
2	13.641	13.54-13.74	0.12697
3	13.965	13.87-14.07	0.10799
4	14.568	14.47-14.67	0.33733

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC — Client: ANCHOR QEA

ARI Job No.: UZ99 — Project: I & J WATERWAY

GC Column: ZB35 — Instrument ID: ECD7

Calibration Date: 06/27/12

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	7.217	7.12- 7.32	0.01198
2	7.517	7.42- 7.62	0.00737
3	7.657	7.56- 7.76	0.02222
4	7.743	7.64- 7.84	0.00428

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	8.524	8.42- 8.62	0.01789
2	9.255	9.16- 9.36	0.03417
3	9.683	9.58- 9.78	0.00911
4	10.237	10.14-10.34	0.01340

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	8.520	8.42- 8.62	0.03067
2	9.253	9.15- 9.35	0.06455
3	9.681	9.58- 9.78	0.01705
4	11.145	11.05-11.25	0.02737

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	9.793	9.69- 9.89	0.02968
2	10.239	10.14-10.34	0.03284
3	10.789	10.69-10.89	0.03368
4	11.148	11.05-11.25	0.04425

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UZ99 Project: I & J WATERWAY

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 06/27/12

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.854	10.75-10.95	0.02952
2	11.025	10.92-11.12	0.03775
3	11.561	11.46-11.66	0.02915
4	11.713	11.61-11.81	0.06434
5	12.499	12.40-12.60	0.03711

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.812	12.71-12.91	0.07055
2	13.257	13.16-13.36	0.05034
3	13.496	13.40-13.60	0.13573
4	13.942	13.84-14.04	0.05195
5	13.993	13.89-14.09	0.08421

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.941	13.84-14.04	0.13455
2	13.995	13.90-14.10	0.12780
3	14.309	14.21-14.41	0.07046
4	14.900	14.80-15.00	0.28730

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA

ARI Job No.: UZ99
Project: I & J WATERWAY

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1242
Time Analyzed :0843

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	8.28	8.18	8.38	254.9	250.0	2.0
Aroclor-1242-2	8.77	8.67	8.87	254.3	250.0	1.7
Aroclor-1242-3	8.94	8.84	9.04	255.1	250.0	2.0
Aroclor-1242-4	10.56	10.46	10.66	248.8	250.0	-0.5

AVERAGE %D = 1.6

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UZ99

Project: I & J WATERWAY

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1242

Time Analyzed :0843

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	8.52	8.42	8.62	255.4	250.0	2.2
Aroclor-1242-2	9.25	9.15	9.35	256.5	250.0	2.6
Aroclor-1242-3	9.68	9.58	9.78	256.7	250.0	2.7
Aroclor-1242-4	11.15	11.05	11.25	253.2	250.0	1.3

AVERAGE %D = 2.2

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA

ARI Job No.: UZ99
Project: I & J WATERWAY

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1660
Time Analyzed :0904

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.28	8.18	8.38	246.3	250.0	-1.5
Aroclor-1016-2	8.77	8.67	8.87	246.6	250.0	-1.4
Aroclor-1016-3	8.94	8.85	9.05	245.0	250.0	-2.0
Aroclor-1016-4	9.07	8.97	9.17	245.8	250.0	-1.7

AVERAGE %D = 1.7

Date Analyzed :07/02/12

Lab Standard ID: AR1660
Time Analyzed :0904

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.82	11.73	11.93	236.3	250.0	-5.5
Aroclor-1260-2	12.43	12.33	12.53	236.8	250.0	-5.3
Aroclor-1260-3	12.74	12.65	12.85	240.4	250.0	-3.8
Aroclor-1260-4	13.48	13.38	13.58	244.7	250.0	-2.1
Aroclor-1260-5	13.58	13.48	13.68	243.2	250.0	-2.7

AVERAGE %D = 3.9

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UZ99 Project: I & J WATERWAY

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1660 Time Analyzed :0904

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.52	8.43	8.63	233.7	250.0	-6.5
Aroclor-1016-2	9.26	9.16	9.36	236.8	250.0	-5.3
Aroclor-1016-3	9.68	9.59	9.79	236.5	250.0	-5.4
Aroclor-1016-4	9.79	9.69	9.89	231.7	250.0	-7.3

AVERAGE %D = 6.1

Date Analyzed :07/02/12

Lab Standard ID: AR1660 Time Analyzed :0904

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.72	12.62	12.82	220.8	250.0	-11.7
Aroclor-1260-2	13.50	13.40	13.60	225.5	250.0	-9.8
Aroclor-1260-3	13.99	13.89	14.09	228.8	250.0	-8.5
Aroclor-1260-4	14.55	14.45	14.65	247.9	250.0	-0.8

AVERAGE %D = 7.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA

ARI Job No.: UZ99
Project: I & J WATERWAY

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1248
Time Analyzed :1151

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	9.34	9.24	9.44	255.8	250.0	2.3
Aroclor-1248-2	9.67	9.57	9.77	250.1	250.0	0.0
Aroclor-1248-3	10.32	10.22	10.42	249.5	250.0	-0.2
Aroclor-1248-4	10.56	10.46	10.66	245.1	250.0	-2.0

AVERAGE %D = 1.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA

ARI Job No.: UZ99
Project: I & J WATERWAY

GC Column: ZB35
Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1248
Time Analyzed :1151

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	9.79	9.69	9.89	246.7	250.0	-1.3
Aroclor-1248-2	10.24	10.14	10.34	232.9	250.0	-6.8
Aroclor-1248-3	10.79	10.69	10.89	241.1	250.0	-3.6
Aroclor-1248-4	11.15	11.05	11.25	240.3	250.0	-3.9

AVERAGE %D = 3.9

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UZ99 Project: I & J WATERWAY

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1660 Time Analyzed :1212

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.28	8.18	8.38	244.8	250.0	-2.1
Aroclor-1016-2	8.77	8.67	8.87	246.0	250.0	-1.6
Aroclor-1016-3	8.95	8.85	9.05	243.9	250.0	-2.4
Aroclor-1016-4	9.07	8.97	9.17	245.2	250.0	-1.9

AVERAGE %D = 2.0

Date Analyzed :07/02/12

Lab Standard ID: AR1660 Time Analyzed :1212

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.83	11.73	11.93	244.0	250.0	-2.4
Aroclor-1260-2	12.43	12.33	12.53	242.7	250.0	-2.9
Aroclor-1260-3	12.75	12.65	12.85	245.0	250.0	-2.0
Aroclor-1260-4	13.48	13.38	13.58	246.4	250.0	-1.4
Aroclor-1260-5	13.58	13.48	13.68	243.6	250.0	-2.6

AVERAGE %D = 2.3

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: UZ99

Project: I & J WATERWAY

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 06/27/12

Date Analyzed :07/02/12

Lab Standard ID: AR1660

Time Analyzed :1212

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	8.53	8.43	8.63	233.5	250.0	-6.6
Aroclor-1016-2	9.26	9.16	9.36	235.3	250.0	-5.9
Aroclor-1016-3	9.69	9.59	9.79	234.7	250.0	-6.1
Aroclor-1016-4	9.79	9.69	9.89	228.9	250.0	-8.4

AVERAGE %D = 6.8

Date Analyzed :07/02/12

Lab Standard ID: AR1660

Time Analyzed :1212

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.72	12.62	12.82	221.7	250.0	-11.3
Aroclor-1260-2	13.50	13.40	13.60	224.5	250.0	-10.2
Aroclor-1260-3	13.99	13.89	14.09	223.0	250.0	-10.8
Aroclor-1260-4	14.55	14.45	14.65	245.0	250.0	-2.0

AVERAGE %D = 8.6

FORM VII PCB

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UZ99 Project: I & J WATERWAY

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 06/27/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	5720022	3.303	5604480	15.117
UPPER LIMIT	11440044	3.403	11208960	15.217
LOWER LIMIT	2860011	3.203	2802240	15.017

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	06/27/12	1542	5605508	3.301	5457719	15.116
02		0.25 PPM AR1	06/27/12	1603	5720022	3.303	5604480	15.117
03		0.02 PPM AR1	06/27/12	1624	5694920	3.303	5601954	15.116
04		0.05 PPM AR1	06/27/12	1645	5614270	3.303	5582298	15.116
05		1 PPM AR1660	06/27/12	1706	5417173	3.300	5417655	15.115
06		0.1 PPM AR16	06/27/12	1727	5748862	3.304	5801030	15.116
07		0.5 PPM AR16	06/27/12	1747	5550278	3.303	5547097	15.116
08		AR1242	06/27/12	1808	5614983	3.295	5600602	15.115
09		AR1248	06/27/12	1829	5706716	3.301	5757997	15.114
10		AR1254	06/27/12	1850	5672305	3.303	5775746	15.115
11		AR2162	06/27/12	1911	5588179	3.301	5740312	15.115
12		AR3268	06/27/12	1932	5698649	3.299	5896333	15.115
13	ZZZZZ	ZZZZZ	06/27/12	1953	5594335	3.300	5776889	15.115
14	ZZZZZ	ZZZZZ	06/27/12	2014	5740650	3.300	5947392	15.115
15	ZZZZZ	ZZZZZ	06/27/12	2035	5759219	3.301	5950396	15.116
16	ZZZZZ	ZZZZZ	06/27/12	2056	5685139	3.300	5929668	15.115
17	ZZZZZ	ZZZZZ	06/27/12	2116	5742453	3.300	5978174	15.115
18	ZZZZZ	ZZZZZ	06/27/12	2137	5742545	3.303	5991550	15.114
19		AR1242	07/02/12	0843	5653450	3.302	5915233	15.114
20		AR1660	07/02/12	0904	5801342	3.304	6053981	15.115
21	UZ99MBS1	UZ99MBS1	07/02/12	0925	7441540	3.306	8796548	15.114
22	UZ99LCSS1	UZ99LCSS1	07/02/12	0946	7040149	3.307	8457582	15.115
23	UZ99LCSDS1	UZ99LCSDS1	07/02/12	1007	6924550	3.307	8327001	15.115
24	CB-002-06222	UZ99A	07/02/12	1049	6765252	3.305	7105412	15.114
25		AR1248	07/02/12	1151	6182779	3.305	6003152	15.116
26		AR1660	07/02/12	1212	5827123	3.306	5811727	15.116

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No.: UZ99 Project: I & J WATERWAY

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 06/27/12

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	9296471	4.149	7801648	15.771
UPPER LIMIT	18592942	4.249	15603296	15.871
LOWER LIMIT	4648236	4.049	3900824	15.671

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	06/27/12	1542	9129729	4.146	7623158	15.771
02		0.25 PPM AR1	06/27/12	1603	9296471	4.149	7801648	15.771
03		0.02 PPM AR1	06/27/12	1624	9232502	4.148	7738023	15.770
04		0.05 PPM AR1	06/27/12	1645	9105722	4.148	7663559	15.771
05		1 PPM AR1660	06/27/12	1706	8697630	4.146	7424644	15.770
06		0.1 PPM AR16	06/27/12	1727	9280199	4.149	7964481	15.771
07		0.5 PPM AR16	06/27/12	1747	8920862	4.149	7679788	15.770
08		AR1242	06/27/12	1808	9060821	4.142	7776507	15.771
09		AR1248	06/27/12	1829	9132424	4.147	7913166	15.769
10		AR1254	06/27/12	1850	9088389	4.149	7876020	15.769
11		AR2162	06/27/12	1911	8945979	4.148	7846852	15.770
12		AR3268	06/27/12	1932	9156528	4.146	8076546	15.770
13	ZZZZZ	ZZZZZ	06/27/12	1953	9064270	4.147	7877449	15.770
14	ZZZZZ	ZZZZZ	06/27/12	2014	9260529	4.146	8077679	15.769
15	ZZZZZ	ZZZZZ	06/27/12	2035	9311029	4.147	8153637	15.771
16	ZZZZZ	ZZZZZ	06/27/12	2056	9152139	4.146	8040164	15.769
17	ZZZZZ	ZZZZZ	06/27/12	2116	9195510	4.146	8102311	15.770
18	ZZZZZ	ZZZZZ	06/27/12	2137	9219975	4.149	8133208	15.769
19		AR1242	07/02/12	0843	8748807	4.146	7934634	15.769
20		AR1660	07/02/12	0904	8982549	4.149	8216540	15.769
21	UZ99MBS1	UZ99MBS1	07/02/12	0925	11469664	4.150	11631800	15.768
22	UZ99LCSS1	UZ99LCSS1	07/02/12	0946	10890829	4.152	11211573	15.769
23	UZ99LCSDS1	UZ99LCSDS1	07/02/12	1007	10756853	4.153	11074887	15.769
24	CB-002-06222	UZ99A	07/02/12	1049	10289894	4.151	10129743	15.769
25		AR1248	07/02/12	1151	9734682	4.151	8357994	15.770
26		AR1660	07/02/12	1212	9103150	4.152	7969587	15.769

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

Metals Analysis
Report and Summary QC Forms

ARI Job ID: UZ99

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
CB-002-06222012	UZ99A	12-11979	
CB-002-06222012D	UZ99ADUP	12-11979	
CB-002-06222012S	UZ99ASPK	12-11979	
PBS	UZ99MB1	12-11979	
LCSS	UZ99MB1SPK	12-11979	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 7/3/12 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: CB-002-06222012
SAMPLE

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Percent Total Solids: 83.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/12	6010C	07/02/12	7440-38-2	Arsenic	10	10	U
3050B	06/26/12	6010C	07/02/12	7440-43-9	Cadmium	0.6	0.6	U
3050B	06/26/12	6010C	07/02/12	**7440-47-3**	**Chromium**	1	**38**	
3050B	06/26/12	6010C	07/02/12	**7440-50-8**	**Copper**	0.6	**34.4**	
3050B	06/26/12	6010C	07/02/12	**7439-92-1**	**Lead**	6	**18**	
CLP	06/26/12	7471A	06/27/12	**7439-97-6**	**Mercury**	0.03	**0.04**	
3050B	06/26/12	6010C	07/02/12	**7440-02-0**	**Nickel**	3	**826**	
3050B	06/26/12	6010C	07/02/12	7440-22-4	Silver	0.8	0.8	U
3050B	06/26/12	6010C	07/02/12	**7440-66-6**	**Zinc**	3	**98**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: CB-002-06222012
MATRIX SPIKE

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	10 U	180	222	81.1%	
Cadmium	6010C	0.6 U	46.1	55.6	82.9%	
Chromium	6010C	38	67	55.6	52.2%	N
Copper	6010C	34.4	75.0	55.6	73.0%	N
Lead	6010C	18	191	222	77.9%	
Mercury	7471A	0.04	0.38	0.272	125%	
Nickel	6010C	826	677	55.6	-268%	H
Silver	6010C	0.8 U	48.9	55.6	87.9%	
Zinc	6010C	98	143	55.6	80.9%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: CB-002-06222012
DUPLICATE

Lab Sample ID: UZ99A
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	10 U	10 U	0.0%	+/- 10	L
Cadmium	6010C	0.6 U	0.6	0.0%	+/- 0.6	L
Chromium	6010C	38	37	2.7%	+/- 20%	
Copper	6010C	34.4	36.6	6.2%	+/- 20%	
Lead	6010C	18	21	15.4%	+/- 6	L
Mercury	7471A	0.04	0.11	93.3%	+/- 0.03	L*
Nickel	6010C	826	929	11.7%	+/- 20%	
Silver	6010C	0.8 U	0.8 U	0.0%	+/- 0.8	L
Zinc	6010C	98	102	4.0%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: UZ99LCS
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	200	200	100%	
Cadmium	6010C	50.1	50.0	100%	
Chromium	6010C	49.7	50.0	99.4%	
Copper	6010C	48.7	50.0	97.4%	
Lead	6010C	195	200	97.5%	
Mercury	7471A	0.54	0.50	108%	
Nickel	6010C	49	50	98.0%	
Silver	6010C	52.1	50.0	104%	
Zinc	6010C	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: UZ99MB
LIMS ID: 12-11979
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/12

QC Report No: UZ99-Anchor QEA, LLC
Project: I&J Waterway RI/FS
090007-01
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/12	6010C	07/02/12	7440-38-2	Arsenic	5	5	U
3050B	06/26/12	6010C	07/02/12	7440-43-9	Cadmium	0.2	0.2	U
3050B	06/26/12	6010C	07/02/12	7440-47-3	Chromium	0.5	0.5	U
3050B	06/26/12	6010C	07/02/12	7440-50-8	Copper	0.2	0.2	U
3050B	06/26/12	6010C	07/02/12	7439-92-1	Lead	2	2	U
CLP	06/26/12	7471A	06/27/12	7439-97-6	Mercury	0.02	0.02	U
3050B	06/26/12	6010C	07/02/12	7440-02-0	Nickel	1	1	U
3050B	06/26/12	6010C	07/02/12	7440-22-4	Silver	0.3	0.3	U
3050B	06/26/12	6010C	07/02/12	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	ICP	IP070271	2000.0	2006.84	**100.3**	2000.0	2013.54	**100.7**	2013.22	**100.7**	2069.80	**103.5**	2050.51	**102.5**		
Cadmium	CD	ICP	IP070271	1000.0	1009.42	**100.9**	1000.0	1014.18	**101.4**	1009.11	**100.9**	1037.75	**103.8**	1017.34	**101.7**		
Chromium	CR	ICP	IP070271	1000.0	995.23	**99.5**	1000.0	1004.69	**100.5**	999.10	**99.9**	1013.98	**101.4**	1009.91	**101.0**		
Copper	CU	ICP	IP070271	1000.0	1002.47	**100.2**	1000.0	1011.30	**101.1**	1002.39	**100.2**	1039.03	**103.9**	1001.22	**100.1**		
Lead	PB	ICP	IP070271	2000.0	2012.39	**100.6**	2000.0	2020.64	**101.0**	2021.39	**101.1**	2077.16	**103.9**	2062.97	**103.1**		
Mercury	HG	CVA	HG062701	8.0	7.92	**99.0**	4.0	3.97	**99.3**	4.06	**101.5**	4.08	**102.0**	4.06	**101.5**	4.09	**102.3**
Nickel	NI	ICP	IP070271	1000.0	1008.41	**100.8**	1000.0	1006.62	**100.7**	1005.01	**100.5**	1020.99	**102.1**	1017.14	**101.7**		
Silver	AG	ICP	IP070271	1000.0	1008.85	**100.9**	1000.0	1015.06	**101.5**	1010.62	**101.1**	1062.92	**106.3**	1017.16	**101.7**		
Zinc	ZN	ICP	IP070271	1000.0	1022.62	**102.3**	1000.0	1032.02	**103.2**	1028.18	**102.8**	1052.53	**105.3**	1044.70	**104.5**		

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

UZ99 : 00039

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	ICP	IP070271	2000.0												
Cadmium	CD	ICP	IP070271	1000.0												
Chromium	CR	ICP	IP070271	1000.0												
Copper	CU	ICP	IP070271	1000.0												
Lead	PB	ICP	IP070271	2000.0												
Mercury	HG	CVA	HG062701	4.0	4.08	**102.0**	4.10	**102.5**	4.13	**103.3**	4.19	**104.8**	4.19	**104.8**	4.19	**104.8**
Nickel	NI	ICP	IP070271	1000.0												
Silver	AG	ICP	IP070271	1000.0												
Zinc	ZN	ICP	IP070271	1000.0												

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

UZ99:00100

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV12	%R	CCV13	%R	CCV14	%R	CCV15	%R	CCV16	%R	CCV17	%R
Arsenic	AS	ICP	IP070271	2000.0												
Cadmium	CD	ICP	IP070271	1000.0												
Chromium	CR	ICP	IP070271	1000.0												
Copper	CU	ICP	IP070271	1000.0												
Lead	PB	ICP	IP070271	2000.0												
Mercury	HG	CVA	HG062701	4.0	4.21	**105.3**	4.16	**104.0**	4.30	**107.5**						
Nickel	NI	ICP	IP070271	1000.0												
Silver	AG	ICP	IP070271	1000.0												
Zinc	ZN	ICP	IP070271	1000.0												

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

UZ99:001101

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	ICP	IP070271	50.0	50.96	**101.9**										
Cadmium	CD	ICP	IP070271	2.0	2.39	**119.5**										
Chromium	CR	ICP	IP070271	5.0	5.08	**101.6**										
Copper	CU	ICP	IP070271	2.0	2.22	**111.0**										
Lead	PB	ICP	IP070271	20.0	21.94	**109.7**										
Mercury	HG	CVA	HG062701	0.1	0.11	**110.0**										
Nickel	NI	ICP	IP070271	10.0	9.80	**98.0**										
Silver	AG	ICP	IP070271	3.0	3.29	**109.7**										
Zinc	ZN	ICP	IP070271	10.0	9.99	**99.9**										

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

UZ99:00102

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	ICP	IP070271	10.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Cadmium	CD	ICP	IP070271	5.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U		
Chromium	CR	ICP	IP070271	10.0	5.0	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U		
Copper	CU	ICP	IP070271	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U		
Lead	PB	ICP	IP070271	3.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U		
Mercury	HG	CVA	HG062701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	ICP	IP070271	40.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		
Silver	AG	ICP	IP070271	10.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U		
Zinc	ZN	ICP	IP070271	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		

UZ99 : 00103

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	ICP	IP070271	10.0	50.0												
Cadmium	CD	ICP	IP070271	5.0	2.0												
Chromium	CR	ICP	IP070271	10.0	5.0												
Copper	CU	ICP	IP070271	25.0	2.0												
Lead	PB	ICP	IP070271	3.0	20.0												
Mercury	HG	CVA	HG062701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	ICP	IP070271	40.0	10.0												
Silver	AG	ICP	IP070271	10.0	3.0												
Zinc	ZN	ICP	IP070271	20.0	10.0												

UZ99:00104

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB12	C	CCB13	C	CCB14	C	CCB15	C	CCB16	C	CCB17	C
Arsenic	AS	ICP	IP070271	10.0	50.0												
Cadmium	CD	ICP	IP070271	5.0	2.0												
Chromium	CR	ICP	IP070271	10.0	5.0												
Copper	CU	ICP	IP070271	25.0	2.0												
Lead	PB	ICP	IP070271	3.0	20.0												
Mercury	HG	CVA	HG062701	0.2	0.1	0.1	U	0.1	U	0.1	U						
Nickel	NI	ICP	IP070271	40.0	10.0												
Silver	AG	ICP	IP070271	10.0	3.0												
Zinc	ZN	ICP	IP070271	20.0	10.0												

UZ99:00105

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

ICS SOURCE: I.V.

RUNID: IP070271

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	206321.1	201230.1	**100.6**						
Antimony		1000	19.6	1031.8	**103.2**						
Arsenic		1000	5.4	1029.7	**103.0**						
Barium		1000	-0.5	1000.0	**100.0**						
Beryllium		1000	0.1	1021.1	**102.1**						
Boron			-1.8	2.1							
Cadmium		1000	0.9	1023.9	**102.4**						
Calcium	100000	100000	100889.4	101141.2	**101.1**						
Chromium		1000	-0.8	1026.5	**102.7**						
Cobalt		1000	2.1	957.9	**95.8**						
Copper		1000	0.6	1046.4	**104.6**						
Iron	200000	200000	196166.0	196790.6	**98.4**						
Lead		1000	-12.8	981.0	**98.1**						
Magnesium	100000	100000	101248.6	98348.7	**98.3**						
Manganese		1000	0.7	950.5	**95.1**						
Molybdenum			2.7	2.9							
Nickel		1000	-4.8	990.9	**99.1**						
Potassium			-63.7	358.8							
Selenium		1000	14.8	1018.0	**101.8**						
Silicon			5.3	8.1							
Silver		1000	-0.5	1039.6	**104.0**						
Sodium			9.5	13.0							
Strontium			4.0	4.0							
Thallium		1000	6.5	972.9	**97.3**						
Tin			-0.4	-0.1							
Titanium			4.9	5.2							
Vanadium		1000	-1.8	973.2	**97.3**						
Zinc		1000	-0.1	980.1	**98.0**						

UZ99:00106

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

ANALYSIS METHOD: ICP

SDG: UZ99

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Copper	CB-002-06222012A	UZ99APOST	IP070271	3335.86		617.80		2500	Sediment	**108.7**
Chromium	CB-002-06222012A	UZ99APOST	IP070271	3252.12		676.50		2500	Sediment	**103.0**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	ICP	OPTIMA ICP 2	197.20		10	50.0	4/1/2011	30000.0	3/19/2012
Cadmium	CD	ICP	OPTIMA ICP 2	228.80		5	2.0	4/1/2011	20000.0	3/19/2012
Chromium	CR	ICP	OPTIMA ICP 2	267.72		10	5.0	4/1/2011	100000.0	3/19/2012
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2011	40000.0	3/19/2012
Lead	PB	ICP	OPTIMA ICP 2	220.35		3	20.0	4/1/2011	300000.0	3/19/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2011		
Nickel	NI	ICP	OPTIMA ICP 2	231.60		40	10.0	4/1/2011	100000.0	3/19/2012
Silver	AG	ICP	OPTIMA ICP 2	328.07		10	3.0	4/1/2011	5000.0	3/19/2012
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2011	100000.0	3/19/2012

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

IEC DATE: 6/1/2012

SDG: UZ99

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.2288210	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	10.2020000	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0465308	0.0000000	-0.9907570	1.0929900	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1617070	0.0000000	0.0000000	0.0914952
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	3.4090200	0.0000000	0.0000000	0.0000000	0.0000000	0.1642300	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0409619	0.0000000	0.0000000	-0.0368378
Cobalt	228.62	0.0000000	0.0000000	0.2151410	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2203550	-0.0248240	0.0000000	-0.0823241
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.7214060	0.0000000	0.0000000
Lead	220.35	-0.1513300	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-2.0199800	1.2549900	0.0691628
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.2031830	0.0000000	-1.7927700	-1.2197100	0.0000000	0.8351330
Manganese	257.61	0.0055064	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0067944
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0114978	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7375200	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	4.3564800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0691410	0.0000000	2.5520300	0.3828500	0.0000000	-0.1753480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0309095	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0767423	0.0000000	0.0000000	0.2207060	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2513600	0.0000000	0.1121590
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.4942180	0.0000000	0.0000000

UZ99:00109

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

IEC DATE: 6/1/2012

SDG: UZ99

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	8.7251100	0.0000000	0.0000000	0.0000000	1.2350800	0.0000000	19.6337000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.6262000	0.0000000	-2.0479800	0.0000000
Arsenic	188.98	0.0000000	0.0000000	1.4466600	0.0000000	0.0000000	0.0000000	-6.9568100	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0777109	0.0000000	0.0000000	0.0000000	0.0000000	0.4101220	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0114175	0.0000000	0.6735850	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0576937	-0.6515750	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0358408	0.0000000	0.1461890	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.2854520	0.0267072
Cobalt	228.62	0.0000000	0.0000000	-0.2518640	0.1618730	0.0000000	0.0000000	1.6854600	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.1890580	0.0000000	0.0000000	0.0000000	0.2839350	0.0000000	0.0000000	0.0000000
Iron	273.96	0.1014670	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.2682800	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.3516970	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-3.2487800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0040374	0.0000000	0.0000000	0.0000000	-0.3367650	0.0000000	0.0000000	0.0000000	-0.0331334	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.9494270	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.9119740	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	-0.1314600	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.2105810	0.1262930	0.0000000	0.0000000	0.0000000	-0.0406459	0.0000000	-0.2398130	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	271.7310000	0.0000000	0.0000000	373.0000000
Thallium	190.80	0.0000000	0.0000000	-3.8706100	0.0000000	0.0917790	0.0000000	0.5514110	0.0000000	1.6549500	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0344764	-0.7123520	-0.4958940	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	1.3260700	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1562030	-0.7955440	0.0000000	0.0000000	0.0000000	0.6246810	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2669400	0.0000000	-0.1628880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

UZ99:001119

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 6/26/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CB-002-06222012	UZ99A	1.080	0.0	50.0
CB-002-06222012D	UZ99ADUP	1.083	0.0	50.0
CB-002-06222012S	UZ99ASPK	1.083	0.0	50.0
PBS	UZ99MB1	1.000	0.0	50.0
LCSS	UZ99MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS

SDG: UZ99

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 6/26/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CB-002-06222012	UZ99A	0.222	0.0	50.0
CB-002-06222012D	UZ99ADUP	0.220	0.0	50.0
CB-002-06222012S	UZ99ASPK	0.221	0.0	50.0
PBS	UZ99MB1	0.200	0.0	50.0
LCSW	UZ99MB1SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS INSTRUMENT ID: OPTIMA ICP 2 START DATE: 7/2/2012

SDG: UZ99 RUNID: IP070271 METHOD: ICP END DATE: 7/2/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10102		X		X					X		X	X								X	X									X
S2	S2	1.00	10142									X		X	X																		
S3	S3	1.00	10160		X		X																X	X									X
S4	S4	1.00	10184																														
S5	S5	1.00	10205																														
ICV	ICV	1.00	10301		X		X					X		X	X								X	X									X
ICB	ICB	1.00	10332		X		X					X		X	X								X	X									X
ZZZZZZ	ZZZZZZ	1.00	10372																														
S0	S0	1.00	10444		X		X					X		X	X								X	X									X
CCV	CCV1	1.00	10491		X		X					X		X	X								X	X									X
CCB	CCB1	1.00	10521		X		X					X		X	X								X	X									X
CRI	CRII	1.00	10561		X		X					X		X	X								X	X									X
ICSA	ICSAI	1.00	11001		X		X					X		X	X								X	X									X
ICSAB	ICSABI	1.00	11041		X		X					X		X	X								X	X									X
ZZZZZZ	HiPurQC7M	1.00	11092																														
ZZZZZZ	SPEXQC21	1.00	11132																														
ZZZZZZ	DICHECK	1.00	11172																														
CCV	CCV2	1.00	11212		X		X					X		X	X								X	X									X
CCB	CCB2	1.00	11242		X		X					X		X	X								X	X									X
PBS	UZ99MB1	2.00	11282		X		X					X		X	X								X	X									X
ZZZZZZ	VA19A	2.00	11323																														
ZZZZZZ	VA19B	2.00	11363																														
ZZZZZZ	VA19C	2.00	11403																														
ZZZZZZ	VA19D	2.00	11442																														
CB-002-06222012D	UZ99ADUP	2.00	11482																														
CB-002-06222012	UZ99A	2.00	11512																														
CB-002-06222012S	UZ99ASPK	2.00	11542																														
ZZZZZZ	ZZZZZZ	2.00	11572																														
LCSS	UZ99MB1SPK	2.00	11594		X		X					X		X	X								X	X									X
CCV	CCV3	1.00	12034		X		X					X		X	X								X	X									X
CCB	CCB3	1.00	12070		X		X					X		X	X								X	X									X
ZZZZZZ	VA19MB1	2.00	12110																														
ZZZZZZ	UZ97MB1	1.00	12150																														
ZZZZZZ	UZ97A	1.00	12190																														
ZZZZZZ	VA19E	2.00	12230																														

FORM XIV

UZ99:00113

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS INSTRUMENT ID: OPTIMA ICP 2 START DATE: 7/2/2012

SDG: UZ99 RUNID: IP070271 METHOD: ICP END DATE: 7/2/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CB-002-06222012D	UZ99ADUP	5.00	12270		X		X					X		X	X								X	X									X
CB-002-06222012	UZ99A	5.00	12304		X		X					X		X	X								X	X									X
CB-002-06222012S	UZ99ASPK	5.00	12344		X		X					X		X	X								X	X									X
CB-002-06222012A	UZ99APOST	5.00	12383											X	X																		
ZZZZZZ	VA19MB1SPK	2.00	12414																														
ZZZZZZ	UZ97MB1SPK	1.00	12454																														
CCV	CCV4	1.00	12494		X		X					X		X	X								X	X									X
CCB	CCB4	1.00	12525		X		X					X		X	X								X	X									X

UZ99:00114

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS INSTRUMENT ID: CETAC MERCURY START DATE: 6/27/2012

SDG: UZ99 RUNID: HG062701 METHOD: CVA END DATE: 6/27/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09353														X																
S0.1	S0.1	1.00	09371														X																
S0.5	S0.5	1.00	09384														X																
S1	S1	1.00	09402														X																
S2	S2	1.00	09420														X																
S5	S5	1.00	09434														X																
S10	S10	1.00	09452														X																
ICV	AICV	1.00	10123														X																
ICB	ICB	1.00	10141														X																
CCV	ACCV1	1.00	10155														X																
CCB	CCB1	1.00	10173														X																
CRA	CRA	1.00	10190														X																
ZZZZZZ	UY96MB1	1.00	10204																														
ZZZZZZ	UY96MB1SPK	1.00	10221																														
ZZZZZZ	UY96A	1.00	10235																														
ZZZZZZ	UY96ADUP	1.00	10253																														
ZZZZZZ	UY96ASPK	1.00	10270																														
ZZZZZZ	UY96B	1.00	10284																														
ZZZZZZ	UY96C	1.00	10302																														
ZZZZZZ	UY96D	1.00	10320																														
ZZZZZZ	UY96E	1.00	10333																														
CCV	ACCV2	1.00	10351														X																
CCB	CCB2	1.00	10365														X																
ZZZZZZ	UY96F	1.00	10383																														
ZZZZZZ	UY96G	1.00	10401																														
ZZZZZZ	UY96H	1.00	10414																														
ZZZZZZ	UY96I	1.00	10432																														
ZZZZZZ	UY96J	1.00	10445																														
ZZZZZZ	UY96K	1.00	10463																														
ZZZZZZ	UY96L	1.00	10481																														
ZZZZZZ	UY96M	1.00	10494																														
ZZZZZZ	UY96N	1.00	10512																														
ZZZZZZ	UY96O	1.00	10530																														
CCV	ACCV3	1.00	10544														X																
CCB	CCB3	1.00	10562														X																

FORM XIV

UZ99:00115

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS INSTRUMENT ID: CETAC MERCURY START DATE: 6/27/2012

SDG: UZ99 RUNID: HG062701 METHOD: CVA END DATE: 6/27/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	UY96P	1.00	10580																														
ZZZZZZ	UY96Q	1.00	10594																														
ZZZZZZ	UY96R	1.00	11011																														
ZZZZZZ	UY96S	1.00	11025																														
ZZZZZZ	UY96T	1.00	11042																														
ZZZZZZ	UY96REF1	5.00	11060																														
ZZZZZZ	UY97MB1	1.00	11074																														
ZZZZZZ	UY97MB1SPK	1.00	11091																														
ZZZZZZ	UY97A	1.00	11105																														
ZZZZZZ	UY97ADUP	1.00	11123																														
CCV	ACCV4	1.00	11141														X																
CCB	CCB4	1.00	11155														X																
ZZZZZZ	UY97ASPK	1.00	11173																														
ZZZZZZ	UY97B	1.00	11190																														
ZZZZZZ	UY97C	1.00	11204																														
ZZZZZZ	UY97D	1.00	11222																														
ZZZZZZ	UY97E	1.00	11240																														
ZZZZZZ	UY97F	1.00	11253																														
ZZZZZZ	UY97REF1	5.00	11271																														
CCV	ACCV5	1.00	11285														X																
CCB	CCB5	1.00	11303														X																
CCV	ACCV6	1.00	11344														X																
CCB	CCB6	1.00	11362														X																
ZZZZZZ	UZ21MB1	1.00	11380																														
ZZZZZZ	UZ21MB1SPK	1.00	11393																														
ZZZZZZ	UZ21A	1.00	11411																														
ZZZZZZ	UZ35A	1.00	11424																														
ZZZZZZ	UZ35B	1.00	11442																														
ZZZZZZ	UZ35C	1.00	11455																														
ZZZZZZ	UZ35D	1.00	11473																														
ZZZZZZ	UZ36A	1.00	11491																														
ZZZZZZ	UZ36B	1.00	11504																														
ZZZZZZ	UZ36C	1.00	11522																														
CCV	ACCV7	1.00	11540														X																
CCB	CCB7	1.00	11554														X																

FORM XIV

UZ99:00116

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/27/2012

SDG: UZ99 | RUNID: HG062701 METHOD: CVA | END DATE: 6/27/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	UZ36D	1.00	11572																														
ZZZZZZ	UZ27MB1	1.00	11590																														
ZZZZZZ	UZ27MB1SPK	1.00	12003																														
ZZZZZZ	UZ27A	1.00	12021																														
ZZZZZZ	UZ27ADUP	1.00	12034																														
ZZZZZZ	UZ27ASPK	1.00	12052																														
ZZZZZZ	UZ27B	1.00	12065																														
ZZZZZZ	UZ48MB1	1.00	12083																														
ZZZZZZ	UZ48MB1SPK	1.00	12101																														
ZZZZZZ	UZ48MB1SPD	1.00	12114																														
CCV	ACCV8	1.00	12132														X																
CCB	CCB8	1.00	12150														X																
ZZZZZZ	UZ48A	1.00	12164																														
ZZZZZZ	UZ48ADUP	1.00	12182																														
ZZZZZZ	UZ48ASPK	1.00	12200																														
ZZZZZZ	UZ48B	1.00	12214																														
ZZZZZZ	UZ48C	1.00	12231																														
ZZZZZZ	UZ48D	1.00	12245																														
ZZZZZZ	UZ57MB1	1.00	12263																														
ZZZZZZ	UZ57MB1SPK	1.00	12280																														
ZZZZZZ	UZ57A	1.00	12294																														
ZZZZZZ	UZ57ADUP	1.00	12311																														
CCV	ACCV9	1.00	12325														X																
CCB	CCB9	1.00	12343														X																
ZZZZZZ	UZ57ASPK	1.00	12361																														
ZZZZZZ	UZ57B	1.00	12375																														
ZZZZZZ	UZ57C	1.00	12393																														
ZZZZZZ	UZ57D	1.00	12411																														
ZZZZZZ	UZ57E	1.00	12424																														
ZZZZZZ	UZ57F	5.00	12442																														
CCV	ACCV10	1.00	12460														X																
CCB	CCB10	1.00	12474														X																
ZZZZZZ	UZ49MB1	1.00	12553																														
ZZZZZZ	UZ49MB1SPK	1.00	12570																														
ZZZZZZ	UZ49MB1SPD	1.00	12584																														

FORM XIV

UZ99:00117

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: I&J Waterway RI/FS | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/27/2012

SDG: UZ99 | RUNID: HG062701 METHOD: CVA | END DATE: 6/27/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	UZ49A	1.00	13001																														
ZZZZZZ	UZ49B	1.00	13015																														
ZZZZZZ	UZ49C	1.00	13032																														
ZZZZZZ	UZ69A	1.00	13050																														
ZZZZZZ	UZ69B	1.00	13064																														
ZZZZZZ	UZ69C	1.00	13081																														
ZZZZZZ	UZ69D	1.00	13095																														
CCV	ACCV11	1.00	13113														X																
CCB	CCB11	1.00	13131														X																
ZZZZZZ	UZ69E	1.00	13145																														
PBW	UZ99MB1	1.00	13163														X																
LCSW	UZ99MB1SPK	1.00	13181														X																
CB-002-06222012	UZ99A	1.00	13194														X																
CB-002-06222012D	UZ99ADUP	1.00	13212														X																
CB-002-06222012S	UZ99ASPK	1.00	13225														X																
ZZZZZZ	UY96MB1SPK	1.00	13243																														
ZZZZZZ	VA19MB1	1.00	13260																														
ZZZZZZ	VA19MB1SPK	1.00	13274																														
ZZZZZZ	VA19A	1.00	13292																														
CCV	ACCV12	1.00	13310														X																
CCB	CCB12	1.00	13324														X																
ZZZZZZ	VA19B	1.00	13342																														
ZZZZZZ	VA19C	1.00	13355																														
ZZZZZZ	VA19D	1.00	13373																														
ZZZZZZ	VA19MB2	1.00	13391																														
ZZZZZZ	VA19MB2SPK	1.00	13405																														
ZZZZZZ	VA19E	1.00	13422																														
CCV	ACCV13	1.00	13440														X																
CCB	CCB13	1.00	13454														X																
CB-002-06222012	UZ99A	1.00	13525																														
CB-002-06222012D	UZ99ADUP	1.00	13543																														
CB-002-06222012S	UZ99ASPK	1.00	13560																														
CCV	ACCV14	1.00	13574														X																
CCB	CCB14	1.00	13592														X																

FORM XIV

UZ99:00118

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: UZ99

SAMPLE RESULTS-CONVENTIONALS
UZ99-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/16/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Client ID: CB-002-06222012
ARI ID: 12-11979 UZ99A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/12 062512#1	SM2540B	Percent	0.01	85.70
Preserved Total Solids	06/26/12 062612#1	SM2540B	Percent	0.01	87.50
N-Ammonia	06/27/12 062712#1	EPA 350.1M	mg-N/kg	0.11	2.15
Sulfide	06/26/12 062612#1	EPA 376.2	mg/kg	1.05	1.70
Total Organic Carbon	07/13/12 071312#1	Plumb,1981	Percent	0.020	0.833

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

MS/MSD RESULTS-CONVENTIONALS
UZ99-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/16/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: UZ99A Client ID: CB-002-06222012						
N-Ammonia	06/27/12	mg-N/kg	2.15	101	104	94.7%
Sulfide	06/26/12	mg/kg	1.70	132	142	91.8%
Total Organic Carbon	07/13/12	Percent	0.833	1.90	1.07	100.0%

REPLICATE RESULTS-CONVENTIONALS
UZ99-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/16/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: 06/22/12
Date Received: 06/23/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UZ99A Client ID: CB-002-06222012					
Total Solids	06/25/12	Percent	85.70	85.60 84.80	0.6%
Preserved Total Solids	06/26/12	Percent	87.50	83.80	4.3%
N-Ammonia	06/27/12	mg-N/kg	2.15	1.87 2.07	7.1%
Sulfide	06/26/12	mg/kg	1.70	3.15	59.8%
Total Organic Carbon	07/13/12	Percent	0.833	0.801 0.648	13.0%

LAB CONTROL RESULTS-CONVENTIONALS
UZ99-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/16/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Sulfide EPA 376.2	PREP	06/26/12	mg/kg	6.82	6.44	105.9%
Total Organic Carbon Plumb,1981	ICVL	07/13/12	Percent	0.094	0.100	94.0%

METHOD BLANK RESULTS-CONVENTIONALS
UZ99-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/16/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	06/25/12	Percent	< 0.01 U
Preserved Total Solids	06/26/12	Percent	< 0.01 U
N-Ammonia	06/27/12	mg-N/kg	< 0.10 U
Sulfide	06/26/12	mg/kg	< 1.00 U
Total Organic Carbon	07/13/12	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
UZ99-Anchor QEA, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/16/12

Project: I&J Waterway RI/FS
Event: 090007-01
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
N-Ammonia ERA 160510	06/27/12	mg-N/kg	97.8	100	97.8%
Total Organic Carbon NIST 1941B	07/13/12	Percent	2.63	2.99	88.0%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: UZ99

Anchor QEA, LLC
I&J Waterway RI/FS
090007-01

Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2.00	1.00
UY87 A	100.0	90.2	77.6	64.6	48.0	28.4	15.0	8.1	5.0	2.7	0.9	0.4	0.1	0.0
	100.0	92.0	78.6	66.5	49.4	29.3	15.5	8.8	6.0	2.4	0.9	0.4	0.1	0.0
	100.0	92.5	79.1	66.3	49.5	29.6	15.9	9.1	5.9	2.4	1.0	0.4	0.1	0.0
CB-002-06222012	100.0	63.4	40.8	31.5	24.5	17.1	10.9	7.9	4.4	3.2	2.1	1.4	0.8	0.4

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

UZ99

UZ99 : 001 27

Anchor QEA, LLC
I&J Waterway RI/FS
090007-01

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
UY87 A	22.4	13.1	16.6	19.5	13.4	6.9	3.1	2.3	1.8	0.5	0.3	0.1	0.0	8.1
	21.4	12.2	17.1	20.2	13.8	6.7	2.8	3.6	1.5	0.6	0.3	0.1	0.0	8.8
	20.9	12.8	16.8	20.0	13.6	6.9	3.2	3.5	1.4	0.6	0.3	0.1	0.0	9.1
CB-002-06222012	59.2	9.4	7.0	7.4	6.2	2.9	3.5	1.3	1.0	0.7	0.6	0.4	0.4	7.9

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

UZ99

UZ99 : 091128

QA SUMMARY

Client:	Anchor QEA, LLC	Client Project No.:	I&J Waterway RI/FS
ARI Trip. Sample ID:	UY87 A	Client Project:	090007-01
		Batch No.:	UZ99-1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
UY87 A	100.0	90.2	77.6	64.6	48.0	28.4	15.0	8.1	5.0	2.7	0.9	0.4	0.1	0.0
	100.0	92.0	78.6	66.5	49.4	29.3	15.5	8.8	6.0	2.4	0.9	0.4	0.1	0.0
	100.0	92.5	79.1	66.3	49.5	29.6	15.9	9.1	5.9	2.4	1.0	0.4	0.1	0.0
AVE	NA	91.58	78.46	65.78	48.97	29.09	15.47	8.65	5.63	2.51	0.95	0.38	0.11	0.00
STDEV	NA	1.24	0.77	1.06	0.88	0.58	0.46	0.50	0.55	0.21	0.02	0.02	0.03	0.01
%RSD	NA	1.36	0.98	1.61	1.79	1.99	2.97	5.83	9.71	8.21	1.75	5.21	24.55	1154.12

The Triplicate Applies To The Following Samples

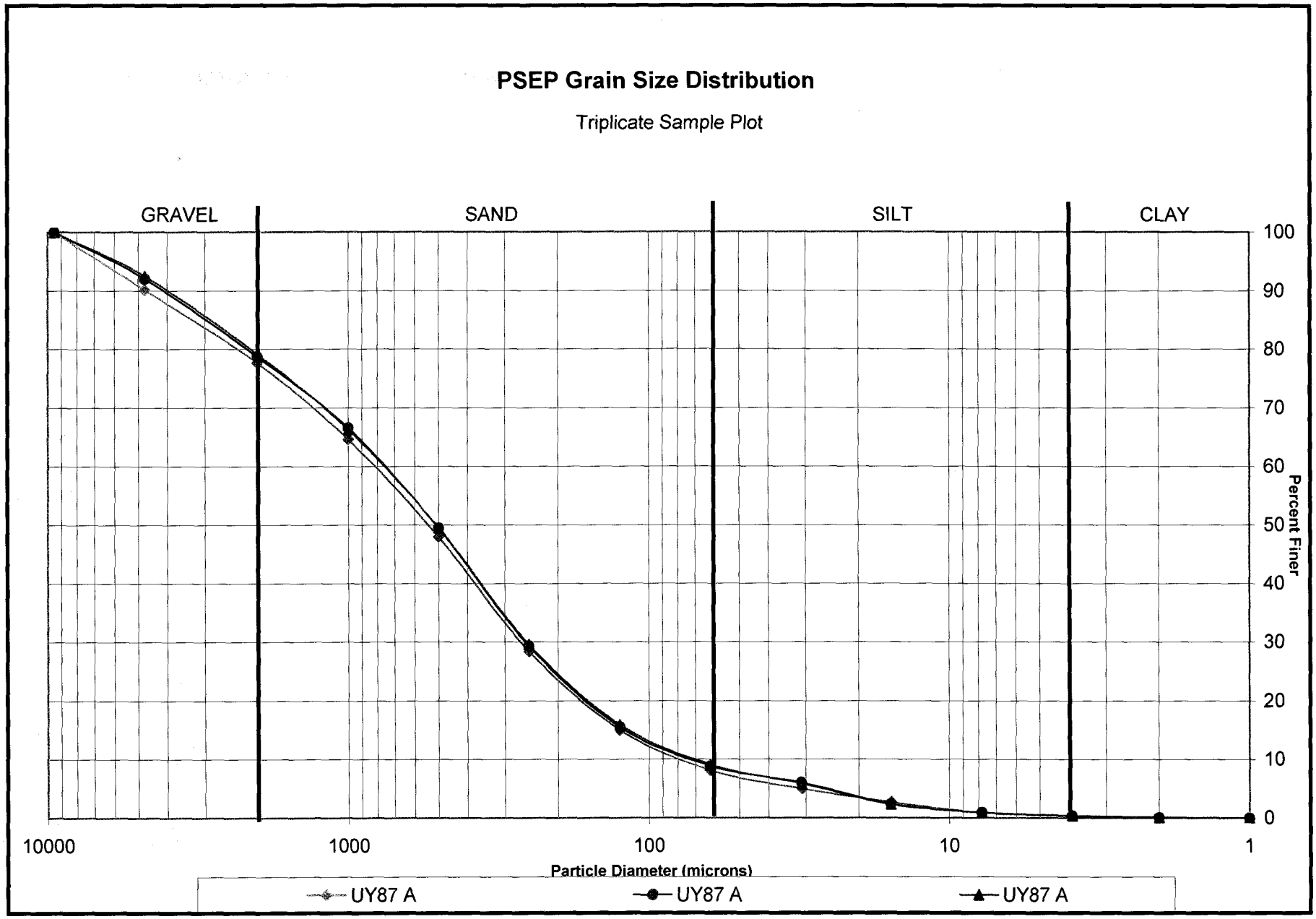
Client ID	Date Sampled	Date Extracted	Date Complete	QA Ratio (95-105)	Data Qualifiers	Pipette Portion (5.0-25.0g)
UY87 A	6/15/2012	6/19/2012	6/27/2012	99.0		8.6
	6/15/2012	6/19/2012	6/27/2012	99.4		9.4
	6/15/2012	6/19/2012	6/27/2012	100.0		9.8
CB-002-06222012	6/22/2012	7/13/2012	7/18/2012	101.9		10.6

* ARI Internal QA limits = 95-105%

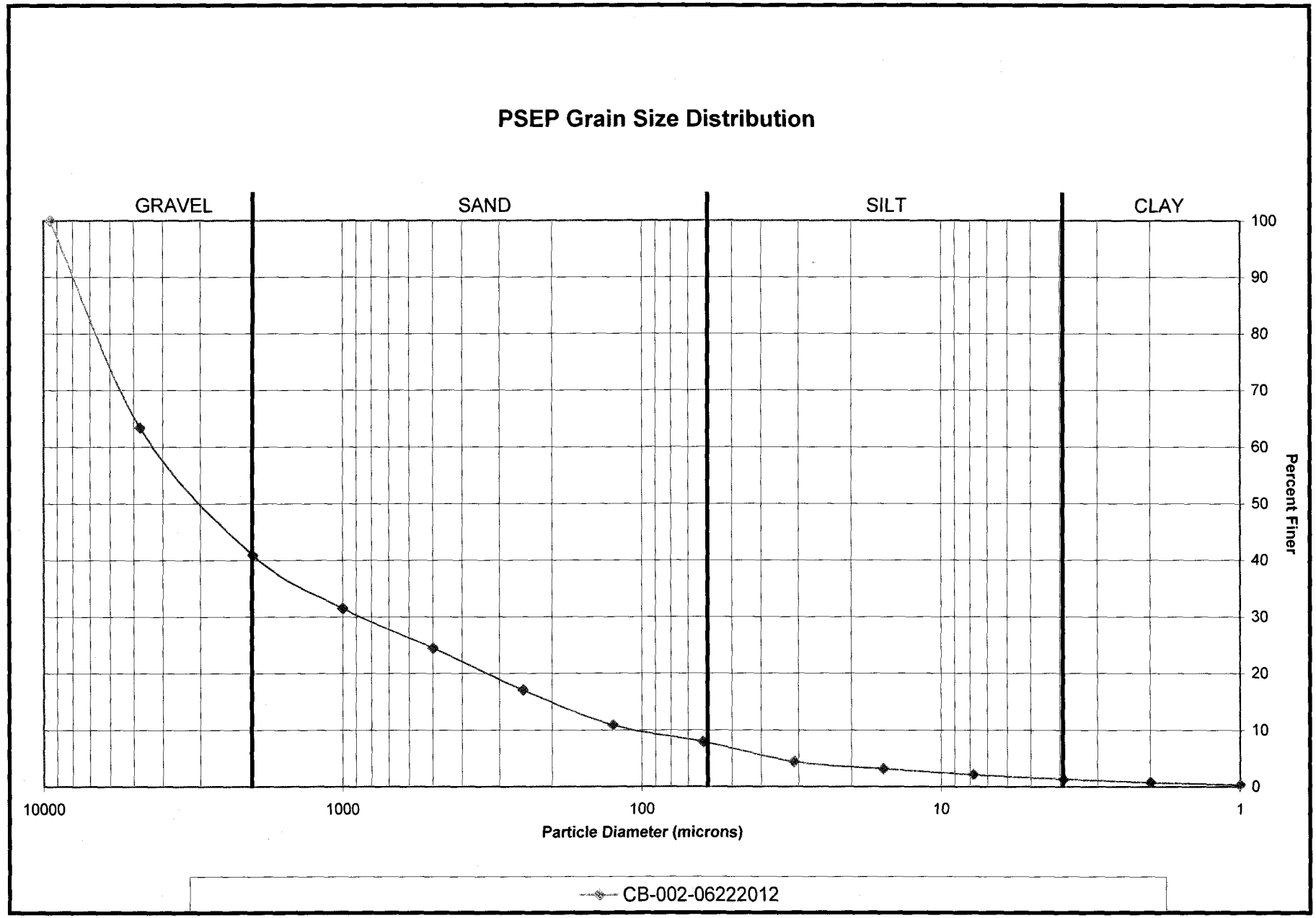
Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

UZ99 : 00129


PSEP Grain Size Distribution
Triplicate Sample Plot
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
UY87 A
UY87 A
UY87 A

UZ99 : 00130


PSEP Grain Size Distribution
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
CB-002-06222012

U2799:00131

Total Solids

ARI Job ID: UZ99

Extractions Total Solids-extts
Data By: Yen Luu
Created: 6/25/12

Worklist: 3484
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UZ99A 12-11979 CB-002-06222012	1.14	12.98	11.53	87.8	NR

Extractions Total Solids-extts
Data By: Yen Luu
Created: 6/25/12

Worklist: 3484
Analyst: YL
Comments:

Oven ID: Ø15

Balance ID: B139298ØØ2

Samples In: Date: 6/25/12 Time: 17:26 Temp: 103 Analyst: YL

Samples Out: Date: Ø6/26/12 Time: Ø6:3Ø Temp: 100 Analyst: RR

ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1. UZ99A 12-11979 CB-002-06222012	1.14	12.98	11.53		NR

Solids Data Entry Report Checked by: CB Date: 6/28/12
Date: 06/27/12 Data Analyst: NB

Solids Determination performed on 06/26/12 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
UZ99	A	CB-002-06222012	0.971	10.501	8.885	83.04

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 6/26/12 Time: 09:50 Temp: 101°C Analyst: CB

Removed from Oven: Date: 6/27/12 Time: 0715 Temp: 100°C Analyst: CB

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
U299 A	0.971	10.501	8.885	—	✓
VA10 A	0.996	10.184	10.173	—	✓
VA 10 B	0.997	10.114	10.106	—	✓
		6/26/12 CB			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: UZ99

Client ID: Anchor QEA, LLC

Parameter: BAN/SIM SVOA

Client Project: I&J Waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A	YL 6/25/12
☒ Standing Water Decanted (Not shared)= A	YL 6/25/12
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 30% medium Rocks A.	YL 6/25/12
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8270 BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (6.7-20ppb)

ARI Job No(s) UZ99 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID NL 6/28/12 Analyst/Date
	UZ99 MBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave ML 6/28/12 Analyst/Date
	SBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	SBS Dup.	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C CJZ 6/28/12 Analyst/Date
	QLS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	QLS (SIM)	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3 CJZ 6/29/12 Analyst/Date
2	A	12.29	(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		GPC Prep Filter (1:1) CJZ 6/29/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C YL 6/30/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 WW 7/2/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		
Analyst/Date	NL 6/28/12		WW 6/29/12	WW 7/2/12	WW 7/2/12		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (1975-1)	100/150µg/mL	50µL	7/05/12	ML	MO 06/28/12
Full List Spike (Freezer)	7 (1974-2)	100µg/mL	50µL	11/09/12	ML	MO 06/28/12
Base Spike	56(1978-2)	200µg/mL	50µL	11/17/12	ML	MO 06/28/12
Acid Spike	38(1985-4)	100/150µg/mL	50µL	11/30/12	ML	MO 06/28/12
QLS Spike (14 in Freezer)	14(1986-1)	100/200µg/mL	20µL	11/09/12	ML	MO 06/28/12
SIM QLS Spike (Freezer)	25(~~1991-1~~ 1994-3)	1µg/mL	50µL	11/09/12	ML	MO 06/28/12

Extraction Time: 09:25 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~[illegible]~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

3093F A. Need Total Solids Y / N B. Archive/Freeze Y / N 0709 : 00139 Revision 4 02/02/12

Semivolatile Raw Data
Initial Calibration

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Initial Calibration Notes GC/MS SVOA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 5/26/12 Internal Standard ID 1875-1 Expiration 7/15/12

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal acceptable?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	1949-2	12/19/12	Ultra	1941-1	7/27/12
	1950-1	10/31/12		1940-1	7/27/12
	1891-2	6/20/12		1932-2	7/6/12
	1892-1	7/5/12			
	1917-3	8/2/12			

* 2.3.4.6 TCP curve was added to the method on 06/02/12. YZ 6/8/12. TCP - linear fit, 5 points curve.

Detail problems, corrective actions and/or other pertinent information below:

Benzoic Acid
Hexachlorocyclopentadiene
2 4 Dinitrophenol
PCP
} Quadratic fit. Low point dropped.

ICV: Benzyl alcohol, 2 4 Dinitrophenol, 3.3 Dichlorobenzidine, Aniline, Benzidine above 30%

Analyst: YZ **Date:** 5/30/12

Reviewer: **Date:**

Form 7050F Version 002 3/23/12

UZ99 : 00141

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/26/12 Analysis: ABN Analyst: VS/YZ

GC Program: ABN2 Column No: 227815 Column Type: ZB5 msi

Instrument Tune (.U or .CT.): 112164 EM Voltage: 1800

Calibration File: DF0514 Curve Date: 5/26/12 Injection Vol.: 1.ul

IS/SS	Ical/Ccal		LCS/ICV
1875-1	1949-2	1891-2	1941-1
	1950-1	1892-1	1940-1
			1932-2.

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120526.b

	Time	Filename	LabID	ClientId	DF															
1	1044	df0526.d	DFTPP	DFTPP	1	NO ISTDS FOUND														
2	1059	ic0526a.d	ABN5		1	8.86	189516	11.50	730932	15.37	420698	18.63	638950	23.71	645065	26.10	650033	24.79	1016118	
3	1136	ic0526b.d	ABN20		1	8.86	184424	11.50	732078	15.38	416049	18.64	604660	23.71	638131	26.11	642084	24.80	1045968	
4	1213	ic0526c.d	ABN.2		1	8.86	196685	11.50	765616	15.37	413229	18.63	646258	23.70	644080	26.10	645156	24.79	952925	
5	1250	ic0526d.d	ABN10		1	8.86	182402	11.50	714951	15.38	396335	18.64	598080	23.71	620456	26.10	621376	24.79	977954	
6	1327	ic0526e.d	ABN.5		1	8.86	190457	11.50	743799	15.37	404393	18.63	632241	23.70	634764	26.10	624951	24.79	934301	
7	1405	ic0526f.d	ABN2.5		1	8.86	187226	11.50	736534	15.37	398626	18.63	624933	23.70	619154	26.10	625787	24.79	927369	
8	1442	ic0526g.d	ABN1.0		1	8.86	193887	11.50	750391	15.37	411692	18.63	635080	23.70	638910	26.10	628310	24.79	937949	
9	1519	icv0526.d	ICV-5		1	8.86	249364	11.50	989810	15.37	545323	18.63	840695	23.71	872921	26.10	859333	24.79	1354341	
10	1556	uu52mb.d	UU52MBS1	UU52MBS1	1	8.86	192270	11.50	755212	15.36	409923	18.63	652568	23.70	628746	24.79	911710	26.10	575994	
11	1634	uu52sb.d	UU52LCSS1	UU52LCSS1	1	8.86	180960	11.50	713226	15.37	402827	18.63	613172	23.70	610564	24.79	927500	26.10	601200	
12	1711	uu52a.d	UU52A	MS001-SS-120	3	8.86	192479	11.50	766868	15.37	424558	18.64	586032	23.71	664578	24.79	1081857	26.11	673821	
13	1748	uu52b.d	UU52B	MS101-SS-120	3	8.86	191331	11.50	774622	15.38	431955	18.64	601035	23.72	668327	24.80	1085453	26.12	667061	
14	1825	uu52c.d	UU52C	MS002-SS-120	3	8.86	189793	11.50	762840	15.38	421087	18.64	644641	23.72	673614	24.80	1081717	26.12	665077	
15	1902	uu52d.d	UU52D	MS003-SS-120	3	8.86	195684	11.50	781696	15.38	433584	18.64	608068	23.72	705866	24.80	1095300	26.12	688484	
16	1939	uu52e.d	UU52E	MS004-SS-120	3	8.86	197248	11.50	788940	15.38	430674	18.64	660353	23.72	700903	24.80	1104559	26.12	683374	
17	2016	uu52f.d	UU52F	MS005-SS-120	3	8.86	190373	11.51	742174	15.39	431594	18.66	643967	23.73	721119	24.81	1107167	26.14	669438	
18	2054	uu52g.d	UU52G	MS006-SS-120	3	8.86	189614	11.51	736251	15.38	426687	18.65	605251	23.72	696152	24.81	1081407	26.13	658886	
19	2131	uu52h.d	UU52H	MS007-SS-120	3	8.86	194227	11.51	756334	15.39	437900	18.66	626572	23.73	703620	24.81	1121633	26.13	665896	
20	2208	uu52hms.d	UU52HMS	MS007-SS-120	3	8.86	189708	11.51	749764	15.39	426739	18.66	614981	23.73	691706	24.81	1104162	26.13	671591	
21	2245	uu52hmsd.d	UU52HMSD	MS007-SS-120	3	8.86	190489	11.50	741504	15.39	417132	18.66	622626	23.73	711179	24.81	1127612	26.13	667595	

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

YZ 5/31/12

Form 7044F
NT-10 Logbook

Version 002
9/15/11

UZ99 : 00142

Report Date : 30-May-2012 11:39

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0526a	ic0526b	ic0526c	ic0526d	ic0526e	ic0526f	ic0526g
INJ.DATE:	26-MAY-2012	26-MAY-2012	26-MAY-2012	26-MAY-2012	26-MAY-2012	26-MAY-2012	26-MAY-2012
INJ.TIME:	10:59	11:36	12:13	12:50	13:27	14:05	14:42

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.537	6.544	6.537	6.537	6.537	6.537	6.537	6.537	3.537-9.537	6.538	0.003
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.620	15.620-21.620	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.672	5.673-11.672	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.599	14.599-20.599	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.120	18.120-24.120	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.015	16.015-22.015	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.090	17.090-23.090	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.317	16.317-22.317	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.482	20.482-26.482	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.348	16.348-22.348	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.090	17.090-23.090	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.967	16.967-22.967	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.790	4.790-10.790	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.914	12.914-18.914	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: 5/30/12
Reviewer 2 _____ Date: _____

U2991:66T

Report Date : 30-May-2012 11:39

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.231	6.231-12.231	+++++	+++++
105 1-methylnaphthalene	13.275	13.283	13.275	13.283	13.275	13.275	13.275	13.275	10.275-16.275	13.278	0.004
151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.466	24.466-30.466	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.712	22.712-28.712	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.505	24.505-30.505	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.783	23.783-29.783	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.451	24.451-30.451	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.952	21.952-27.952	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.480	22.480-28.480	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.346	17.346-23.346	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	8.237	8.244	8.237	8.237	8.237	8.237	8.229	8.237	5.237-11.237	8.237	0.004
3 Phenol	8.260	8.268	8.260	8.260	8.252	8.252	8.252	8.260	5.260-11.260	8.258	0.006
4 Bis(2-Chloroethyl)ethe	8.399	8.407	8.399	8.407	8.399	8.399	8.399	8.399	5.399-11.399	8.401	0.004
$ 5 2-Chlorophenol-d4	8.476	8.484	8.476	8.484	8.476	8.476	8.476	8.476	5.476-11.476	8.478	0.004

UZ99:00144

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.767	12.767-18.767	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.794	24.802	24.794	24.794	24.794	24.794	24.794	24.794	21.794-27.794	24.795	0.003
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.397	12.397-18.397	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.799	8.799-14.799	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

UZ99:00145

Report Date : 30-May-2012 11:39

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
6 2-Chlorophenol	8.507	8.515	8.507	8.515	8.507	8.507	8.507	8.507	5.507-11.507	8.509	0.004
7 1,3-Dichlorobenzene	8.786	8.793	8.786	8.786	8.786	8.786	8.786	8.786	5.786-11.786	8.787	0.003
* 8 1,4-Dichlorobenzene-d4	8.855	8.863	8.855	8.855	8.856	8.855	8.856	8.855	5.855-11.855	8.857	0.003
9 1,4-Dichlorobenzene	8.886	8.894	8.886	8.894	8.887	8.886	8.887	8.886	5.886-11.886	8.889	0.004
$ 10 1,2-Dichlorobenzene-d4	9.236	9.243	9.236	9.236	9.236	9.236	9.236	9.236	6.236-12.236	9.237	0.003
11 Benzyl alcohol	9.166	9.181	9.166	9.174	9.166	9.166	9.166	9.166	6.166-12.166	9.169	0.006
12 1,2-Dichlorobenzene	9.267	9.267	9.259	9.267	9.267	9.267	9.267	9.267	6.267-12.267	9.266	0.003
13 2-Methylphenol	9.430	9.438	9.430	9.438	9.430	9.430	9.430	9.430	6.430-12.430	9.432	0.004
14 2,2'-oxybis(1-Chloropr	9.492	9.500	9.492	9.492	9.492	9.492	9.492	9.492	6.492-12.492	9.493	0.003
15 4-Methylphenol	9.725	9.740	9.725	9.733	9.725	9.725	9.725	9.725	6.725-12.725	9.728	0.006
16 N-Nitroso-di-n-propyla	9.764	9.779	9.764	9.771	9.764	9.764	9.756	9.764	6.764-12.764	9.766	0.007
17 Hexachloroethane	9.888	9.888	9.888	9.888	9.888	9.888	9.888	9.888	6.888-12.888	9.888	0.000
$ 18 Nitrobenzene-d5	10.027	10.035	10.020	10.028	10.020	10.027	10.020	10.027	7.027-13.027	10.025	0.006
19 Nitrobenzene	10.058	10.074	10.059	10.066	10.059	10.059	10.059	10.058	7.058-13.058	10.062	0.006
20 Isophorone	10.547	10.563	10.547	10.555	10.540	10.547	10.540	10.547	7.547-13.547	10.549	0.008
21 2-Nitrophenol	10.733	10.741	10.733	10.741	10.733	10.733	10.733	10.733	7.733-13.733	10.735	0.004
22 2,4-Dimethylphenol	10.833	10.849	10.833	10.841	10.833	10.833	10.833	10.833	7.833-13.833	10.837	0.006
23 Bis(2-Chloroethoxy)met	11.033	11.041	11.034	11.034	11.034	11.034	11.034	11.033	8.033-14.033	11.035	0.003
24 Benzoic acid	11.087	11.249	10.972	11.157	10.972	11.041	10.995	11.087	8.087-14.087	11.068	0.105
25 2,4-Dichlorophenol	11.234	11.242	11.234	11.234	11.226	11.234	11.226	11.234	8.234-14.234	11.233	0.005
26 1,2,4-Trichlorobenzene	11.419	11.419	11.411	11.419	11.411	11.419	11.411	11.419	8.419-14.419	11.416	0.004
* 27 Naphthalene-d8	11.504	11.504	11.496	11.504	11.496	11.496	11.496	11.504	8.504-14.504	11.500	0.004
28 Naphthalene	11.542	11.550	11.543	11.543	11.543	11.543	11.543	11.542	8.542-14.542	11.544	0.003
29 4-Chloroaniline	11.705	11.720	11.705	11.712	11.705	11.705	11.705	11.705	8.705-14.705	11.708	0.006

UZ99:00146

Report Date : 30-May-2012 11:39

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.308	7.308-13.308	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.541	10.541-16.541	+++++	+++++
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.644	15.644-21.644	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.283	18.283-24.283	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.750	13.750-19.750	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.520	15.520-21.520	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.732	13.732-19.732	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.438	11.438-17.438	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	11.368-17.368	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	16.926	16.941	16.926	16.934	16.926	16.926	16.926	16.926	13.926-19.926	16.929	0.006
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.564	13.564-19.564	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.525	11.525-17.525	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.680	11.680-17.680	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.829	12.829-18.829	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.599	9.599-15.599	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.574	10.574-16.574	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.605	10.605-16.605	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.261	8.261-14.261	+++++	+++++

UZ99:00147

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	11.952	11.952	11.944	11.952	11.952	11.952	11.944	11.952	8.952-14.952	11.950	0.004
	31 4-Chloro-3-methylpheno	12.780	12.788	12.780	12.780	12.780	12.772	12.772	12.780	9.780-15.780	12.779	0.005
	32 2-Methylnaphthalene	13.043	13.051	13.043	13.043	13.043	13.043	13.043	13.043	10.043-16.043	13.044	0.003
	33 Hexachlorocyclopentadi	13.554	13.554	13.554	13.554	13.546	13.554	13.554	13.554	10.554-16.554	13.553	0.003
	34 2,4,6-Trichlorophenol	13.732	13.740	13.732	13.732	13.724	13.724	13.724	13.732	10.732-16.732	13.730	0.006
	35 2,4,5-Trichlorophenol	13.809	13.817	13.817	13.809	13.809	13.809	13.809	13.809	10.809-16.809	13.812	0.004
$	36 2-Fluorobiphenyl	13.902	13.910	13.895	13.902	13.902	13.902	13.902	13.902	10.902-16.902	13.902	0.004
	37 2-Chloronaphthalene	14.103	14.111	14.104	14.104	14.104	14.103	14.104	14.103	11.103-17.103	14.105	0.003
	38 2-Nitroaniline	14.405	14.421	14.398	14.413	14.398	14.398	14.398	14.405	11.405-17.405	14.404	0.009
	39 Dimethylphthalate	14.893	14.908	14.885	14.893	14.885	14.893	14.885	14.893	11.893-17.893	14.892	0.008
	40 Acenaphthylene	15.032	15.040	15.032	15.032	15.032	15.032	15.032	15.032	12.032-18.032	15.033	0.003
	41 2,6-Dinitrotoluene	15.032	15.048	15.025	15.032	15.025	15.025	15.025	15.032	12.032-18.032	15.030	0.009
*	42 Acenaphthene-d10	15.373	15.380	15.373	15.380	15.373	15.373	15.373	15.373	12.373-18.373	15.375	0.004
	43 3-Nitroaniline	15.326	15.342	15.319	15.334	15.319	15.326	15.319	15.326	12.326-18.326	15.326	0.009
	44 Acenaphthene	15.442	15.450	15.442	15.450	15.442	15.442	15.442	15.442	12.442-18.442	15.444	0.004
	45 2,4-Dinitrophenol	15.558	15.581	15.605	15.566	15.566	15.550	15.558	15.558	12.558-18.558	15.569	0.018
	46 Dibenzofuran	15.798	15.813	15.798	15.806	15.798	15.798	15.798	15.798	12.798-18.798	15.801	0.006
	47 4-Nitrophenol	15.728	15.751	15.759	15.736	15.752	15.728	15.736	15.728	12.728-18.728	15.742	0.012
	48 2,4-Dinitrotoluene	15.898	15.914	15.891	15.906	15.891	15.891	15.891	15.898	12.898-18.898	15.897	0.009
	49 Fluorene	16.563	16.571	16.563	16.571	16.563	16.563	16.563	16.563	13.563-19.563	16.566	0.004
	50 Diethylphthalate	16.470	16.494	16.463	16.478	16.463	16.470	16.463	16.470	13.470-19.470	16.472	0.011
	51 4-Chlorophenyl-phenyle	16.579	16.586	16.579	16.587	16.579	16.579	16.579	16.579	13.579-19.579	16.581	0.004
	52 4-Nitroaniline	16.687	16.725	16.687	16.702	16.687	16.687	16.687	16.687	13.687-19.687	16.695	0.015
	53 4,6-Dinitro-2-methylph	16.802	16.826	16.803	16.810	16.795	16.795	16.795	16.802	13.802-19.802	16.804	0.011

U2991 : 6611 8

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	16.856	16.872	16.857	16.864	16.857	16.857	16.857	16.856	13.856-19.856	16.860	0.006
$	55 2,4,6-Tribromophenol	17.142	17.149	17.142	17.150	17.142	17.142	17.142	17.142	14.142-20.142	17.144	0.004
	56 4-Bromophenyl-phenylet	17.658	17.666	17.651	17.658	17.659	17.658	17.659	17.658	14.658-20.658	17.658	0.004
	57 Hexachlorobenzene	17.975	17.983	17.975	17.975	17.976	17.975	17.976	17.975	14.975-20.975	17.977	0.003
	58 Pentachlorophenol	18.378	18.386	18.394	18.378	18.386	18.378	18.386	18.378	15.378-21.378	18.384	0.006
*	59 Phenanthrene-d10	18.633	18.641	18.633	18.641	18.633	18.633	18.633	18.633	15.633-21.633	18.636	0.004
	60 Phenanthrene	18.687	18.695	18.680	18.688	18.680	18.680	18.680	18.687	15.687-21.687	18.684	0.006
	61 Anthracene	18.780	18.788	18.780	18.788	18.780	18.780	18.780	18.780	15.780-21.780	18.783	0.004
	62 Carbazole	19.144	19.152	19.144	19.144	19.144	19.144	19.144	19.144	16.144-22.144	19.145	0.003
	63 Di-n-butylphthalate	20.010	20.011	20.011	20.011	20.011	20.011	20.003	20.010	17.010-23.010	20.009	0.003
	64 Fluoranthene	21.101	21.109	21.101	21.109	21.102	21.101	21.102	21.101	18.101-24.101	21.104	0.004
	65 Pyrene	21.519	21.527	21.519	21.527	21.519	21.519	21.519	21.519	18.519-24.519	21.521	0.004
$	66 Terphenyl-d14	21.844	21.844	21.844	21.844	21.837	21.844	21.837	21.844	18.844-24.844	21.842	0.004
	67 Butylbenzylphthalate	22.781	22.789	22.781	22.789	22.781	22.781	22.781	22.781	19.781-25.781	22.783	0.004
	68 Benzo(a)anthracene	23.679	23.687	23.679	23.679	23.679	23.679	23.679	23.679	20.679-26.679	23.680	0.003
*	69 Chrysene-d12	23.710	23.710	23.702	23.710	23.703	23.702	23.703	23.710	20.710-26.710	23.706	0.004
	70 3,3'-Dichlorobenzidine	23.656	23.671	23.656	23.664	23.656	23.656	23.656	23.656	20.656-26.656	23.659	0.006
	71 Chrysene	23.749	23.764	23.749	23.757	23.749	23.749	23.749	23.749	20.749-26.749	23.752	0.006
	72 bis(2-Ethylhexyl)phtha	23.818	23.826	23.819	23.826	23.819	23.819	23.819	23.818	20.818-26.818	23.821	0.004
	73 Di-n-octylphthalate	24.802	24.809	24.802	24.802	24.802	24.802	24.802	24.802	21.802-27.802	24.803	0.003
	74 Benzo(b)fluoranthene	25.452	25.460	25.444	25.452	25.444	25.444	25.444	25.452	22.452-28.452	25.449	0.006
	75 Benzo(k)fluoranthene	25.483	25.498	25.483	25.491	25.483	25.483	25.483	25.483	22.483-28.483	25.486	0.006
	187 Total Benzofluoranthen	25.483	25.498	25.483	25.491	25.483	25.483	25.483	25.483	22.483-28.483	25.486	0.006
	76 Benzo(a)pyrene	26.002	26.017	26.002	26.002	26.002	26.002	26.002	26.002	23.002-29.002	26.004	0.006

61190:6620

Report Date : 30-May-2012 11:40

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120526.b/ABN.m
Batch File: /chem1/nt10.i/20120526.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 77 Perylene-d12	26.102	26.110	26.102	26.102	26.103	26.102	26.103	26.102	23.102-29.102	26.104	0.003
78 Indeno(1,2,3-cd)pyrene	28.342	28.373	28.342	28.350	28.342	28.334	28.334	28.342	25.342-31.342	28.345	0.013
79 Dibenzo(a,h)anthracene	28.365	28.388	28.357	28.365	28.357	28.357	28.357	28.365	25.365-31.365	28.364	0.011
80 Benzo(g,h,i)perylene	29.002	29.033	28.986	29.010	28.987	28.986	28.987	29.002	26.002-32.002	28.999	0.018
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$ 88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
90 N-Nitrosodimethylamine	4.266	4.282	4.274	4.274	4.266	4.266	4.266	4.266	1.266-7.266	4.271	0.006
91 Aniline	8.291	8.306	8.291	8.299	8.291	8.291	8.291	8.291	5.291-11.291	8.294	0.006
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
93 Benzidine	21.364	21.380	21.365	21.372	21.365	21.364	21.365	21.364	18.364-24.364	21.368	0.006
$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
98 Retene	22.131	22.138	22.131	22.131	22.131	22.131	22.131	22.131	19.131-25.131	22.132	0.003
99 Perylene	26.149	26.164	26.141	26.157	26.149	26.149	26.149	26.149	23.149-29.149	26.151	0.007
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.805	22.805-28.805	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.967	22.967-28.967	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
103 Pyridine	4.282	4.274	4.305	4.274	4.290	4.282	4.290	4.282	1.282-7.282	4.285	0.011

UZ59:00159

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20120526.b

ARI Job No.: ABN5 Method: ABN.m Instrument: nt10.i Date: 26-MAY-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1059	ic0526a.d	ABN5		1	NO MANUAL INTEGRATION
1136	ic0526b.d	ABN20		1	NO MANUAL INTEGRATION
1213	ic0526c.d	ABN.2		1	Benzyl alcohol, Benzoic acid, 2,4-Dinitrophenol, 4-Nitrophenol,
1250	ic0526d.d	ABN10		1	NO MANUAL INTEGRATION
1327	ic0526e.d	ABN.5		1	Benzyl alcohol, 2,4-Dinitrophenol,
1405	ic0526f.d	ABN2.5		1	NO MANUAL INTEGRATION
1442	ic0526g.d	ABN1.0		1	NO MANUAL INTEGRATION

UZ99:00151

Averaged

Report Date : 26-May-2012 15:50

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20120526.b/ic0526c.d
Level 2: /chem1/nt10.i/20120526.b/ic0526e.d
Level 3: /chem1/nt10.i/20120526.b/ic0526g.d
Level 4: /chem1/nt10.i/20120526.b/ic0526f.d
Level 5: /chem1/nt10.i/20120526.b/ic0526a.d
Level 6: /chem1/nt10.i/20120526.b/ic0526d.d
Level 7: /chem1/nt10.i/20120526.b/ic0526b.d

Compound	0.20000 Level 1 / 20.000 Level 7	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD	
186 Carbaryl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
179 n-Decane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
180 n-Octadecane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
169 4-tert-Butylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
170 N,N-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
171 2,3-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	20.000 Level 7	$\overline{RRF}$	% RSD	
111 Azobenzene (1,2-DP-Hydrazine)	1.29168	1.21488	1.24456	1.24502	1.18683	1.20842	1.10678	1.21402	4.779	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	20.000 Level 7	RRF	% RSD	
106 Guaiacol	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	<-
105 1-methylnaphthalene	0.69053	0.69006	0.69964	0.71032	0.74060	0.73836	0.73504	0.71493	3.170	
151 1,2,4,5-Tetrachlorobenzene	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	<-
152 Benzo(e)pyrene	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	
153 Chlorpyrifos	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	
154 Diazinon	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	
155 Kelthane	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	
156 Methyl Parathion	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	
157 Ethyl Parathion	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	20.000 Level 7	RRF	% RSD
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	1.93782	1.78241	1.79890	1.83686	1.94466	1.85875	1.84111	1.85722	3.392
4 Bis(2-Chloroethyl)ether	1.46051	1.38677	1.40901	1.37934	1.35886	1.35721	1.32810	1.38283	3.093
6 2-Chlorophenol	1.59117	1.56214	1.60149	1.59927	1.64063	1.74942	1.73628	1.64006	4.510
7 1,3-Dichlorobenzene	1.71981	1.64778	1.66204	1.65240	1.65734	1.60670	1.54816	1.64203	3.231
9 1,4-Dichlorobenzene	1.67008	1.61418	1.60209	1.61372	1.59176	1.58483	1.54228	1.60271	2.401
11 Benzyl alcohol	0.79060	0.75427	0.68638	0.75631	0.80699	0.83518	0.83216	0.78027	6.740
12 1,2-Dichlorobenzene	1.58456	1.56907	1.61577	1.55958	1.56974	1.54243	1.50567	1.56383	2.192
13 2-Methylphenol	1.53698	1.41390	1.45396	1.44476	1.46574	1.47126	1.45988	1.46378	2.553

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	20.000 Level 7	RRF	% RSD
14 2,2'-oxybis(1-Chloropropane)	0.53070	0.52169	0.50970	0.49884	0.51514	0.49675	0.49076	0.50908	2.842
15 4-Methylphenol	1.51979	1.51828	1.52051	1.54947	1.53207	1.54139	1.50849	1.52714	0.945
16 N-Nitroso-di-n-propylamine	0.85751	0.88217	0.88208	0.88036	0.85602	0.85073	0.82905	0.86256	2.325
17 Hexachloroethane	0.61611	0.61683	0.61533	0.61819	0.62403	0.63110	0.63717	0.62268	1.366
19 Nitrobenzene	0.37089	0.35013	0.35505	0.34631	0.35216	0.35110	0.34346	0.35273	2.515
20 Isophorone	0.64743	0.61491	0.66071	0.65386	0.67901	0.68000	0.71877	0.66495	4.862
21 2-Nitrophenol	0.21671	0.20611	0.21765	0.22034	0.23433	0.23211	0.22968	0.22242	4.548
22 2,4-Dimethylphenol	0.34704	0.34026	0.36562	0.35606	0.36445	0.35120	0.34185	0.35235	2.890
23 Bis(2-Chloroethoxy)methane	0.41334	0.39088	0.40919	0.38692	0.39819	0.38969	0.38389	0.39601	2.869

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	20.000 Level 7	RRF	% RSD	
24 Benzoic acid	+++++	0.09377	0.13003	0.18809	0.23596	0.25300	0.27005	0.19515	36.371	<- Qual
25 2,4-Dichlorophenol	0.29664	0.33637	0.34059	0.34593	0.35431	0.36260	0.33599	0.33892	6.204	
26 1,2,4-Trichlorobenzene	0.34022	0.33179	0.32911	0.31462	0.32535	0.31448	0.30297	0.32265	3.920	
28 Naphthalene	1.01892	0.98976	1.02001	0.98738	1.02274	1.02205	0.99794	1.00840	1.587	
29 4-Chloroaniline	0.42321	0.40373	0.46985	0.48491	0.45332	0.45549	0.45438	0.44927	6.114	
30 Hexachlorobutadiene	0.17092	0.17389	0.17330	0.17339	0.18139	0.17507	0.16653	0.17350	2.580	
31 4-Chloro-3-methylphenol	0.27800	0.27685	0.30318	0.30088	0.32058	0.32488	0.32433	0.30410	6.776	
32 2-Methylnaphthalene	0.68928	0.67454	0.69249	0.69355	0.72209	0.72089	0.71436	0.70103	2.594	
33 Hexachlorocyclopentadiene	+++++	0.11438	0.17125	0.23350	0.27883	0.31960	0.34105	0.24310	36.117	<- Qual

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
	20.000 Level 7							
34 2,4,6-Trichlorophenol	0.36549	0.36162	0.38350	0.40696	0.41230	0.42053	0.39418	6.039
	0.40888							
35 2,4,5-Trichlorophenol	0.37272	0.37175	0.41544	0.42942	0.45764	0.45956	0.42197	8.851
	0.44725							
37 2-Chloronaphthalene	1.18617	1.15537	1.21364	1.19177	1.18318	1.20605	1.18536	1.806
	1.16137							
38 2-Nitroaniline	0.27665	0.27060	0.28017	0.28833	0.28524	0.29564	0.28350	2.943
	0.28790							
39 Dimethylphthalate	1.28781	1.23703	1.27665	1.25445	1.22652	1.21880	1.22903	5.004
	1.10195							
40 Acenaphthylene	1.85098	1.79087	1.80389	1.80942	1.78241	1.82303	1.79648	2.362
	1.71476							
41 2,6-Dinitrotoluene	0.28468	0.28754	0.30858	0.30612	0.30537	0.31266	0.29943	3.778
	0.29106							
43 3-Nitroaniline	0.33023	0.33054	0.34327	0.34560	0.33584	0.35434	0.33807	2.961
	0.32669							
44 Acenaphthene	1.09150	1.05515	1.08275	1.09356	1.09053	1.10299	1.08358	1.517
	1.06860							

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1 / 20.000 Level 7	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
45 2,4-Dinitrophenol	+++++ / 0.22394	0.03405	0.07702	0.13789	0.18678	0.21686	0.14609	53.124 <-
46 Dibenzofuran	1.56097 / 1.57012	1.55749	1.61928	1.61975	1.57536	1.60948	1.58749	1.742
47 4-Nitrophenol	0.10653 / 0.13872	0.11184	0.12375	0.13675	0.14215	0.15101	0.13011	12.670
48 2,4-Dinitrotoluene	0.33964 / 0.38262	0.36432	0.39526	0.39871	0.41047	0.41320	0.38632	6.861
49 Fluorene	1.27900 / 1.18598	1.20760	1.22333	1.21133	1.20161	1.20576	1.21637	2.450
50 Diethylphthalate	1.23815 / 1.08612	1.22983	1.21878	1.23534	1.20929	1.16965	1.19817	4.559
51 4-Chlorophenyl-phenylether	0.59904 / 0.54735	0.57024	0.58557	0.58172	0.57842	0.58070	0.57758	2.756
52 4-Nitroaniline	0.30121 / 0.34993	0.35825	0.37660	0.35473	0.33940	0.33793	0.34544	6.779
53 4,6-Dinitro-2-methylphenol	+++++ / 0.17970	0.10673	0.13877	0.16176	0.17907	0.18626	0.15872	19.364

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 26-MAY-2012 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	20.000 Level 7	RRF	% RSD
54 N-Nitrosodiphenylamine	0.56377	0.55022	0.56120	0.53574	0.53680	0.52692	0.49201	0.53809	4.550
56 4-Bromophenyl-phenylether	0.21951	0.20081	0.21443	0.21141	0.21685	0.22361	0.21231	0.21413	3.381
57 Hexachlorobenzene	0.24619	0.25325	0.25223	0.24875	0.24201	0.24485	0.24098	0.24689	1.927
58 Pentachlorophenol	+++++	0.05177	0.07801	0.09799	0.12954	0.13754	0.14340	0.10637	34.505 <-
60 Phenanthrene	1.06051	0.97569	1.03599	1.00825	1.02336	1.04091	1.07540	1.03144	3.215
61 Anthracene	1.06960	1.03049	1.06853	1.05383	1.11319	1.10262	1.10413	1.07748	2.817
62 Carbazole	1.02492	1.03777	1.07002	0.99487	0.94857	0.89007	1.01254	0.99697	6.046
63 Di-n-butylphthalate	1.33414	1.27773	1.38366	1.37095	1.47098	1.48637	1.49795	1.40311	5.993
64 Fluoranthene	1.15455	1.11006	1.13082	1.13925	1.20211	1.21842	1.24253	1.17111	4.261

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1 / 20.000 Level 7	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
65 Pyrene	1.20581 / 1.23141	1.15940	1.23562	1.20914	1.24483	1.23328	1.21707	2.395
67 Butylbenzylphthalate	0.57732 / 0.54876	0.55533	0.57114	0.56183	0.58390	0.55369	0.56457	2.333
68 Benzo(a)anthracene	1.20699 / 1.13357	1.09061	1.11889	1.09881	1.11070	1.11657	1.12516	3.438
70 3,3'-Dichlorobenzidine	+++++ / 0.65445	0.63372	0.64623	0.63929	0.58563	0.53713	0.61607	7.400
71 Chrysene	0.98916 / 1.00931	0.95229	0.99774	0.96476	1.00552	1.00986	0.98981	2.307
72 bis(2-Ethylhexyl)phthalate	0.60670 / 0.52007	0.55059	0.53958	0.53786	0.54429	0.54605	0.54931	4.937
73 Di-n-octylphthalate	1.03576 / 0.94454	0.96337	0.98665	0.95638	0.96678	0.95873	0.97317	3.124
74 Benzo(b)fluoranthene	1.09905 / 1.24247	1.05571	1.10041	1.06208	1.18164	1.12420	1.12365	5.974
75 Benzo(k)fluoranthene	1.27389 / 1.10821	1.28509	1.28535	1.25133	1.19165	1.26526	1.23726	5.286

Analytical Resources, Inc.

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Start Cal Date : 26-MAY-2012 10:59
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
	20.000 Level 7							
187 Total Benzofluoranthenes	1.12458	1.09115	1.12381	1.08314	1.11851	1.12409		
	1.10396						1.10989	1.555
76 Benzo(a)pyrene	1.06539	0.98413	1.03837	1.01500	1.04753	1.05076		
	1.03871						1.03427	2.600
78 Indeno(1,2,3-cd)pyrene	1.12137	1.11892	1.17740	1.21207	1.24880	1.25883		
	1.23722						1.19637	4.892
79 Dibenzo(a,h)anthracene	0.84993	0.86647	0.93647	0.95859	0.99213	1.00399		
	0.98932						0.94241	6.581
80 Benzo(g,h,i)perylene	1.00242	0.95348	0.99998	1.02510	1.06812	1.07231		
	1.05992						1.02591	4.279
90 N-Nitrosodimethylamine	0.86183	0.83324	0.83206	0.84563	0.84431	0.82304		
	0.78150						0.83166	3.049
91 Aniline	4.08674	3.96856	4.06292	3.99679	3.98672	3.87415		
	3.71782						3.95624	3.176
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
93 Benzidine	0.47016	0.46697	0.47552	0.42523	0.33981	0.44103		
	0.57927						0.45686	15.622

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD	
	20.000 Level 7								
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
	+++++								
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
	+++++								
98 Retene	0.55139	0.53775	0.55210	0.55985	0.58856	0.58501	0.56674	3.821	
	0.59254								
99 Perylene	1.06737	1.00429	1.04991	1.00327	1.04442	1.05530	1.03973	2.455	
	1.05357								
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	+++++								
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	+++++								
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
	+++++								
103 Pyridine	0.73569	0.69513	0.75065	0.74068	0.69537	0.71095	0.71808	3.303	
	0.69810								
$ 1 2-Fluorophenol	1.37967	1.38916	1.39694	1.40122	1.41730	1.43750	1.39876	1.642	
	1.36950								

Analytical Resources, Inc.

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Start Cal Date : 26-MAY-2012 10:59
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120526.b/ABN.m
Cal Date : 26-May-2012 15:47 van
Curve Type : Average

Compound	0.20000 Level 1 / 20.000 Level 7	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
$ 137 d8-1,4-Dioxane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
$ 2 Phenol-d5	1.67567 / 1.79085	1.69701	1.70877	1.73959	1.77639	1.80843	1.74239	2.918
$ 5 2-Chlorophenol-d4	1.55701 / 1.52463	1.52354	1.53700	1.49714	1.52331	1.52306	1.52653	1.177
$ 10 1,2-Dichlorobenzene-d4	1.00618 / 0.99684	0.97328	1.01684	0.99736	1.01271	1.00671	1.00142	1.438
$ 18 Nitrobenzene-d5	0.35681 / 0.35564	0.34705	0.36221	0.35991	0.36634	0.36081	0.35840	1.707
$ 36 2-Fluorobiphenyl	1.42231 / 1.34814	1.38804	1.38526	1.40503	1.35546	1.40214	1.38663	1.933
$ 55 2,4,6-Tribromophenol	0.15415 / 0.16886	0.15709	0.16428	0.16515	0.17168	0.17449	0.16510	4.494
$ 66 Terphenyl-d14	0.79176 / 0.71899	0.75544	0.77467	0.77718	0.77623	0.74269	0.76242	3.277
$ 85 p-Cresol-d4	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Report Date : 05-Jun-2012 11:22

UZ99:00165

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 02-JUN-2012 16:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20120602.b/ic0602c.d
Level 2: /chem1/nt10.i/20120526.b/ic0526e.d
Level 3: /chem1/nt10.i/20120602.b/ic0602e.d
Level 4: /chem1/nt10.i/20120602.b/ic0602d.d
Level 5: /chem1/nt10.i/20120602.b/ic0602a.d
Level 6: /chem1/nt10.i/20120526.b/ic0526d.d
Level 7: /chem1/nt10.i/20120602.b/ic0602b.d

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 02-JUN-2012 16:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
143 1,4-Dioxane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	2241 476722	+++++	12932	46503	101737	+++++	LINR	0.000e+00	0.25738		0.99809	
178 2-Benzyl-4-Chlorophenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 02-JUN-2012 16:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
163 1,2,3,5,8-Pentachloronaphthal	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
3 Phenol	1.93782 1.84111	1.78241	1.79890	1.83686	1.94466	1.85875	AVRG		1.85722		3.39231
4 Bis(2-Chloroethyl)ether	1.46051 1.32810	1.38677	1.40901	1.37934	1.35886	1.35721	AVRG		1.38283		3.09264

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.59117	1.56214	1.60149	1.59927	1.64063	1.74942					
	1.73628						AVRG		1.64006		4.51030
7 1,3-Dichlorobenzene	1.71981	1.64778	1.66204	1.65240	1.65734	1.60670					
	1.54816						AVRG		1.64203		3.23056
9 1,4-Dichlorobenzene	1.67008	1.61418	1.60209	1.61372	1.59176	1.58483					
	1.54228						AVRG		1.60271		2.40082
11 Benzyl alcohol	0.79060	0.75427	0.68638	0.75631	0.80699	0.83518					
	0.83216						AVRG		0.78027		6.73992
12 1,2-Dichlorobenzene	1.58456	1.56907	1.61577	1.55958	1.56974	1.54243					
	1.50567						AVRG		1.56383		2.19174
13 2-Methylphenol	1.53698	1.41390	1.45396	1.44476	1.46574	1.47126					
	1.45988						AVRG		1.46378		2.55288
14 2,2'-oxybis(1-Chloropropane)	0.53070	0.52169	0.50970	0.49884	0.51514	0.49675					
	0.49076						AVRG		0.50908		2.84196

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.51979 1.50849	1.51828	1.52051	1.54947	1.53207	1.54139	AVRG		1.52714		0.94515
16 N-Nitroso-di-n-propylamine	0.85751 0.82905	0.88217	0.88208	0.88036	0.85602	0.85073	AVRG		0.86256		2.32546
17 Hexachloroethane	0.61611 0.63717	0.61683	0.61533	0.61819	0.62403	0.63110	AVRG		0.62268		1.36641
19 Nitrobenzene	0.37089 0.34346	0.35013	0.35505	0.34631	0.35216	0.35110	AVRG		0.35273		2.51451
20 Isophorone	0.64743 0.71877	0.61491	0.66071	0.65386	0.67901	0.68000	AVRG		0.66495		4.86239
21 2-Nitrophenol	0.21671 0.22968	0.20611	0.21765	0.22034	0.23433	0.23211	AVRG		0.22242		4.54831
22 2,4-Dimethylphenol	0.34704 0.34185	0.34026	0.36562	0.35606	0.36445	0.35120	AVRG		0.35235		2.89029

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
23 Bis(2-Chloroethoxy)methane	0.41334	0.39088	0.40919	0.38692	0.39819	0.38969					
	0.38389						AVRG		0.39601		2.86933
24 Benzoic acid	+++++	34874	97576	346329	862339	1808839					
	3954019						QUAD	0.000e+00	4.35066	-0.12146	0.99921
25 2,4-Dichlorophenol	0.29664	0.33637	0.34059	0.34593	0.35431	0.36260					
	0.33599						AVRG		0.33892		6.20399
26 1,2,4-Trichlorobenzene	0.34022	0.33179	0.32911	0.31462	0.32535	0.31448					
	0.30297						AVRG		0.32265		3.92022
28 Naphthalene	1.01892	0.98976	1.02001	0.98738	1.02274	1.02205					
	0.99794						AVRG		1.00840		1.58668
29 4-Chloroaniline	0.42321	0.40373	0.46985	0.48491	0.45332	0.45549					
	0.45438						AVRG		0.44927		6.11437
30 Hexachlorobutadiene	0.17092	0.17389	0.17330	0.17339	0.18139	0.17507					
	0.16653						AVRG		0.17350		2.58021

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
31 4-Chloro-3-methylphenol	0.27800 0.32433	0.27685	0.30318	0.30088	0.32058	0.32488	AVRG		0.30410		6.77614
32 2-Methylnaphthalene	0.68928 0.71436	0.67454	0.69249	0.69355	0.72209	0.72089	AVRG		0.70103		2.59425
33 Hexachlorocyclopentadiene	+++++ 1418921	11564	35252	116347	293255	633343	QUAD	0.000e+00	3.52578	-0.17688	0.99896
34 2,4,6-Trichlorophenol	0.36549 0.40888	0.36162	0.38350	0.40696	0.41230	0.42053	AVRG		0.39418		6.03893
35 2,4,5-Trichlorophenol	0.37272 0.44725	0.37175	0.41544	0.42942	0.45764	0.45956	AVRG		0.42197		8.85120
37 2-Chloronaphthalene	1.18617 1.16137	1.15537	1.21364	1.19177	1.18318	1.20605	AVRG		1.18536		1.80578
38 2-Nitroaniline	0.27665 0.28790	0.27060	0.28017	0.28833	0.28524	0.29564	AVRG		0.28350		2.94270

Analytical Resources, Inc.

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
39 Dimethylphthalate	1.28781 / 1.10195	1.23703	1.27665	1.25445	1.22652	1.21880	AVRG		1.22903		5.00399
40 Acenaphthylene	1.85098 / 1.71476	1.79087	1.80389	1.80942	1.78241	1.82303	AVRG		1.79648		2.36222
41 2,6-Dinitrotoluene	0.28468 / 0.29106	0.28754	0.30858	0.30612	0.30537	0.31266	AVRG		0.29943		3.77761
43 3-Nitroaniline	0.33023 / 0.32669	0.33054	0.34327	0.34560	0.33584	0.35434	AVRG		0.33807		2.96080
44 Acenaphthene	1.09150 / 1.06860	1.05515	1.08275	1.09356	1.09053	1.10299	AVRG		1.08358		1.51680
45 2,4-Dinitrophenol	+++++ / 1863407	6885	31710	137413	392895	859509	QUAD	0.000e+00	5.17724	-0.16339	0.99805
46 Dibenzofuran	1.56097 / 1.57012	1.55749	1.61928	1.61975	1.57536	1.60948	AVRG		1.58749		1.74156

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Analytical Resources, Inc.

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
47 4-Nitrophenol	0.10653	0.11184	0.12375	0.13675	0.14215	0.15101					
	0.13872						AVRG		0.13011		12.67018
48 2,4-Dinitrotoluene	0.33964	0.36432	0.39526	0.39871	0.41047	0.41320					
	0.38262						AVRG		0.38632		6.86139
49 Fluorene	1.27900	1.20760	1.22333	1.21133	1.20161	1.20576					
	1.18598						AVRG		1.21637		2.44972
50 Diethylphthalate	1.23815	1.22983	1.21878	1.23534	1.20929	1.16965					
	1.08612						AVRG		1.19817		4.55852
51 4-Chlorophenyl-phenylether	0.59904	0.57024	0.58557	0.58172	0.57842	0.58070					
	0.54735						AVRG		0.57758		2.75565
52 4-Nitroaniline	0.30121	0.35825	0.37660	0.35473	0.33940	0.33793					
	0.34993						AVRG		0.34544		6.77926
53 4,6-Dinitro-2-methylphenol	+++++	0.10673	0.13877	0.16176	0.17907	0.18626					
	0.17970						AVRG		0.15872		19.36391

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.56377	0.55022	0.56120	0.53574	0.53680	0.52692					
	0.49201						AVRG		0.53809		4.54957
56 4-Bromophenyl-phenylether	0.21951	0.20081	0.21443	0.21141	0.21685	0.22361					
	0.21231						AVRG		0.21413		3.38083
57 Hexachlorobenzene	0.24619	0.25325	0.25223	0.24875	0.24201	0.24485					
	0.24098						AVRG		0.24689		1.92672
58 Pentachlorophenol	+++++	8182	24770	76549	206931	411314					
	867054						QUAD	0.000e+00	7.90524	-0.66208	0.99899
60 Phenanthrene	1.06051	0.97569	1.03599	1.00825	1.02336	1.04091					
	1.07540						AVRG		1.03144		3.21523
61 Anthracene	1.06960	1.03049	1.06853	1.05383	1.11319	1.10262					
	1.10413						AVRG		1.07748		2.81670
62 Carbazole	1.02492	1.03777	1.07002	0.99487	0.94857	0.89007					
	1.01254						AVRG		0.99697		6.04596

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
63 Di-n-butylphthalate	1.33414	1.27773	1.38366	1.37095	1.47098	1.48637					
	1.49795						AVRG		1.40311		5.99287
64 Fluoranthene	1.15455	1.11006	1.13082	1.13925	1.20211	1.21842					
	1.24253						AVRG		1.17111		4.26094
65 Pyrene	1.20581	1.15940	1.23562	1.20914	1.24483	1.23328					
	1.23141						AVRG		1.21707		2.39516
67 Butylbenzylphthalate	0.57732	0.55533	0.57114	0.56183	0.58390	0.55369					
	0.54876						AVRG		0.56457		2.33295
68 Benzo(a)anthracene	1.20699	1.09061	1.11889	1.09881	1.11070	1.11657					
	1.13357						AVRG		1.12516		3.43783
70 3,3'-Dichlorobenzidine	+++++	0.63372	0.64623	0.63929	0.58563	0.53713					
	0.65445						AVRG		0.61607		7.39980
71 Chrysene	0.98916	0.95229	0.99774	0.96476	1.00552	1.00986					
	1.00931						AVRG		0.98981		2.30658

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.60670	0.55059	0.53958	0.53786	0.54429	0.54605					
	0.52007						AVRG		0.54931		4.93651
73 Di-n-octylphthalate	1.03576	0.96337	0.98665	0.95638	0.96678	0.95873					
	0.94454						AVRG		0.97317		3.12405
74 Benzo(b)fluoranthene	1.09905	1.05571	1.10041	1.06208	1.18164	1.12420					
	1.24247						AVRG		1.12365		5.97365
75 Benzo(k)fluoranthene	1.27389	1.28509	1.28535	1.25133	1.19165	1.26526					
	1.10821						AVRG		1.23726		5.28550
187 Total Benzofluoranthenes	1.12458	1.09115	1.12381	1.08314	1.11851	1.12409					
	1.10396						AVRG		1.10989		1.55494
76 Benzo(a)pyrene	1.06539	0.98413	1.03837	1.01500	1.04753	1.05076					
	1.03871						AVRG		1.03427		2.59978
78 Indeno(1,2,3-cd)pyrene	1.12137	1.11892	1.17740	1.21207	1.24880	1.25883					
	1.23722						AVRG		1.19637		4.89151

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
79 Dibenzo(a,h)anthracene	0.84993	0.86647	0.93647	0.95859	0.99213	1.00399					
	0.98932						AVRG		0.94241		6.58108
80 Benzo(g,h,i)perylene	1.00242	0.95348	0.99998	1.02510	1.06812	1.07231					
	1.05992						AVRG		1.02591		4.27892
90 N-Nitrosodimethylamine	0.86183	0.83324	0.83206	0.84563	0.84431	0.82304					
	0.78150						AVRG		0.83166		3.04924
91 Aniline	4.08674	3.96856	4.06292	3.99679	3.98672	3.87415					
	3.71782						AVRG		3.95624		3.17588
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	0.47016	0.46697	0.47552	0.42523	0.33981	0.44103					
	0.57927						AVRG		0.45686		15.62231
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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UZ99:09178

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	0.55139	0.53775	0.55210	0.55985	0.58856	0.58501						
	0.59254						AVRG		0.56674		3.82090	
99 Perylene	1.06737	1.00429	1.04991	1.00327	1.04442	1.05530						
	1.05357						AVRG		1.03973		2.45482	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.73569	0.69513	0.75065	0.74068	0.69537	0.71095						
	0.69810						AVRG		0.71808		3.30261	

Analytical Resources, Inc.

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
$ 1 2-Fluorophenol	1.37967	1.38916	1.39694	1.40122	1.41730	1.43750						
	1.36950						AVRG		1.39876		1.64242	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.67567	1.69701	1.70877	1.73959	1.77639	1.80843						
	1.79085						AVRG		1.74239		2.91839	
$ 5 2-Chlorophenol-d4	1.55701	1.52354	1.53700	1.49714	1.52331	1.52306						
	1.52463						AVRG		1.52653		1.17704	
$ 10 1,2-Dichlorobenzene-d4	1.00618	0.97328	1.01684	0.99736	1.01271	1.00671						
	0.99684						AVRG		1.00142		1.43849	
$ 18 Nitrobenzene-d5	0.35681	0.34705	0.36221	0.35991	0.36634	0.36081						
	0.35564						AVRG		0.35840		1.70700	
$ 36 2-Fluorobiphenyl	1.42231	1.38804	1.38526	1.40503	1.35546	1.40214						
	1.34814						AVRG		1.38663		1.93263	

UZ99:00179

U759:00180

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 02-JUN-2012 16:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 55 2,4,6-Tribromophenol	0.15415	0.15709	0.16428	0.16515	0.17168	0.17449					
	0.16886						AVRG		0.16510		4.49377
$ 66 Terphenyl-d14	0.79176	0.75544	0.77467	0.77718	0.77623	0.74269					
	0.71899						AVRG		0.76242		3.27653
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

tart Cal Date : 26-MAY-2012 10:59
nd Cal Date : 02-JUN-2012 16:16
uant Method : ISTD
rigin : Force
arget Version : 3.50
ntegrator : HP RTE
ethod file : /chem1/nt10.i/20120602.b/ABN.m
al Date : 05-Jun-2012 11:13 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
95 D10-1-methylnaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

U7999:00181

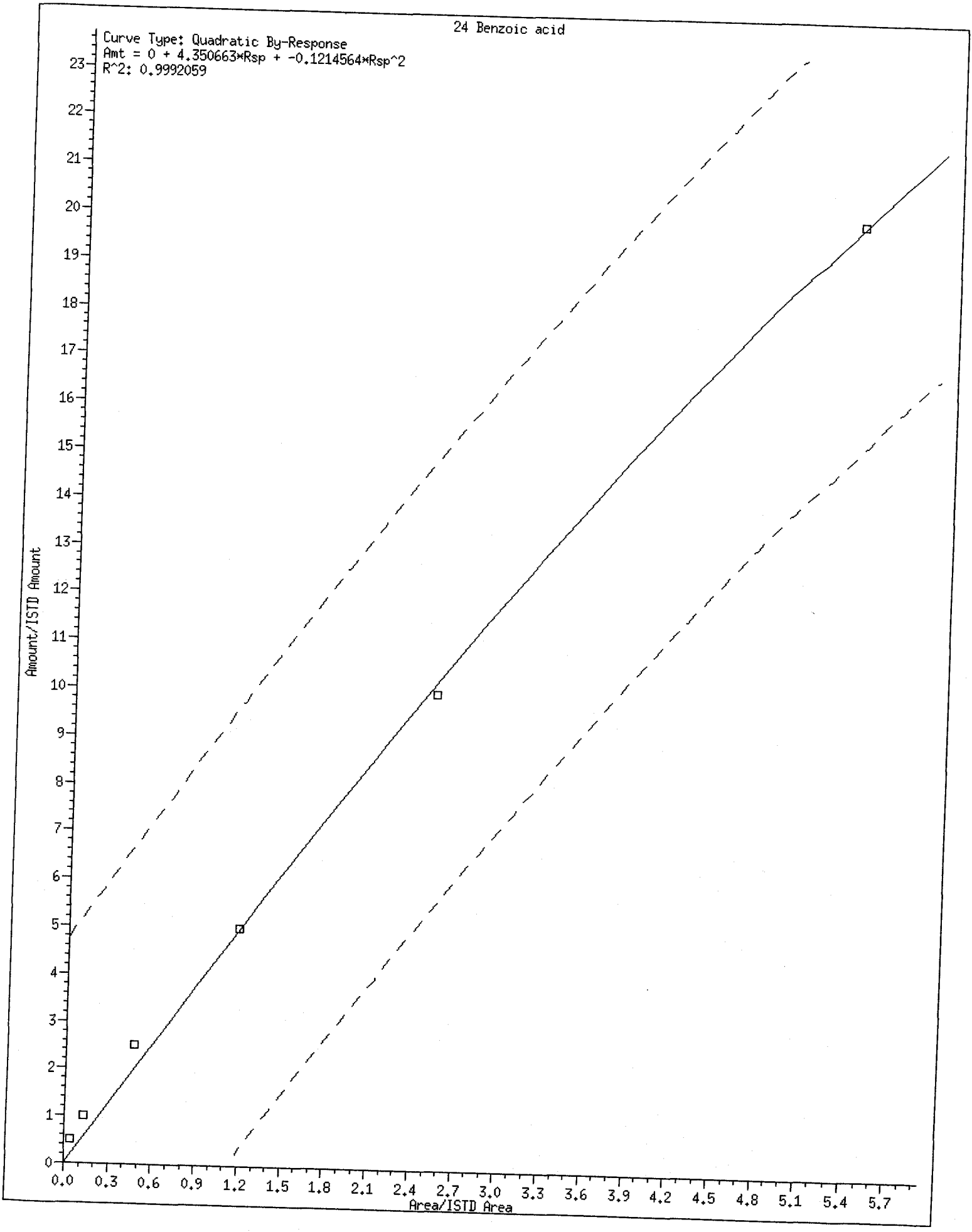
Analytical Resources, Inc.

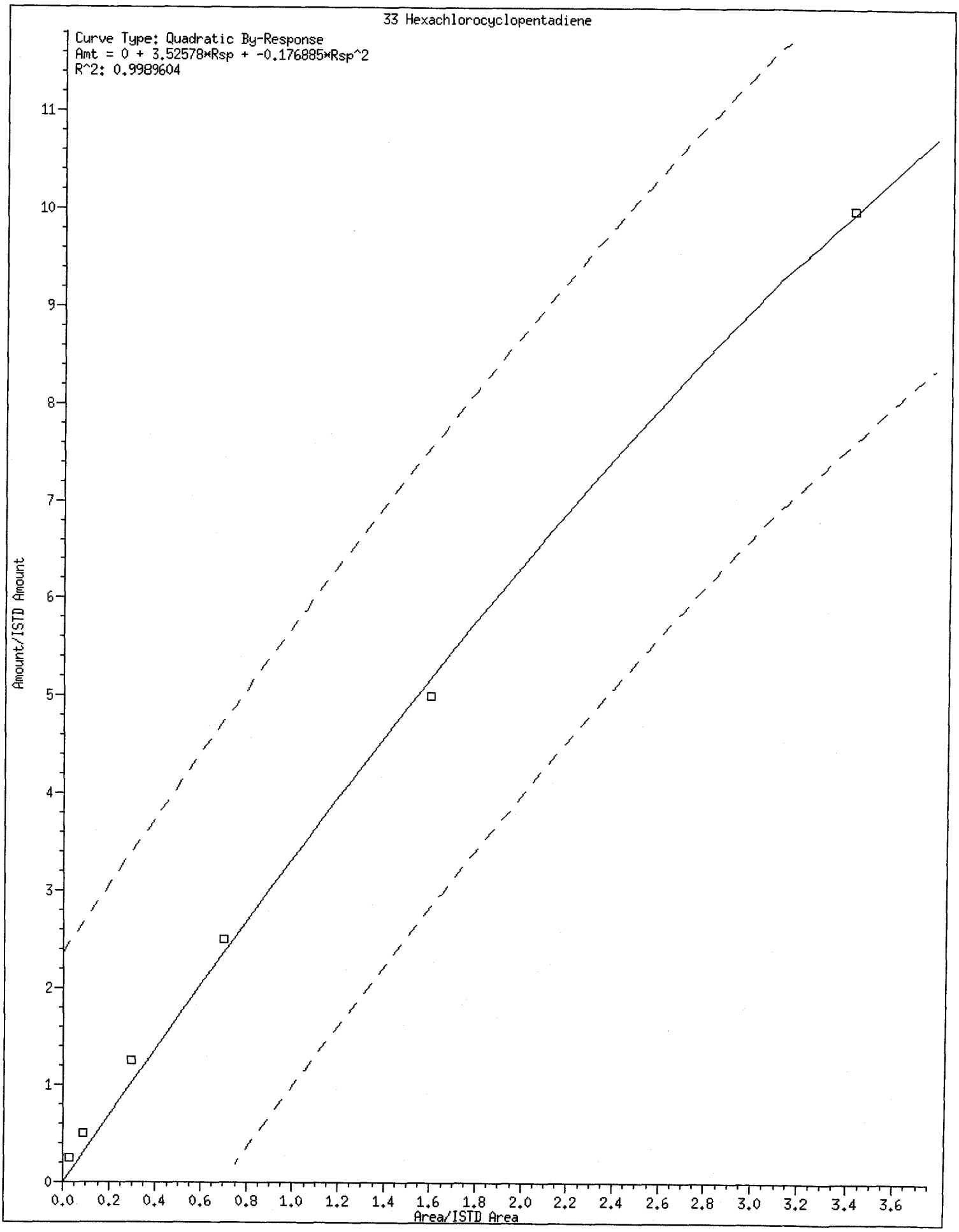
INITIAL CALIBRATION DATA

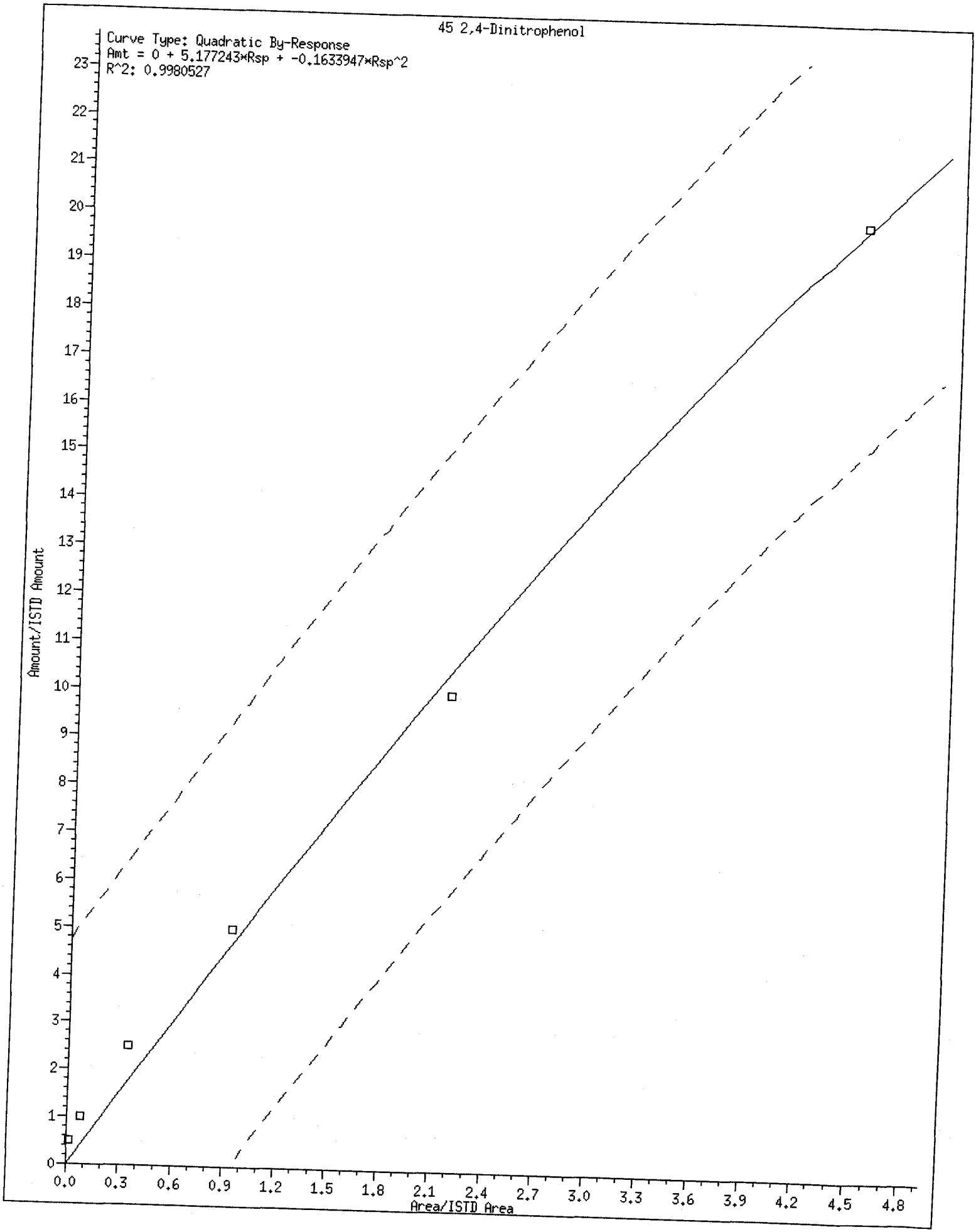
Start Cal Date : 26-MAY-2012 10:59
End Cal Date : 02-JUN-2012 16:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120602.b/ABN.m
Cal Date : 05-Jun-2012 11:13 yev

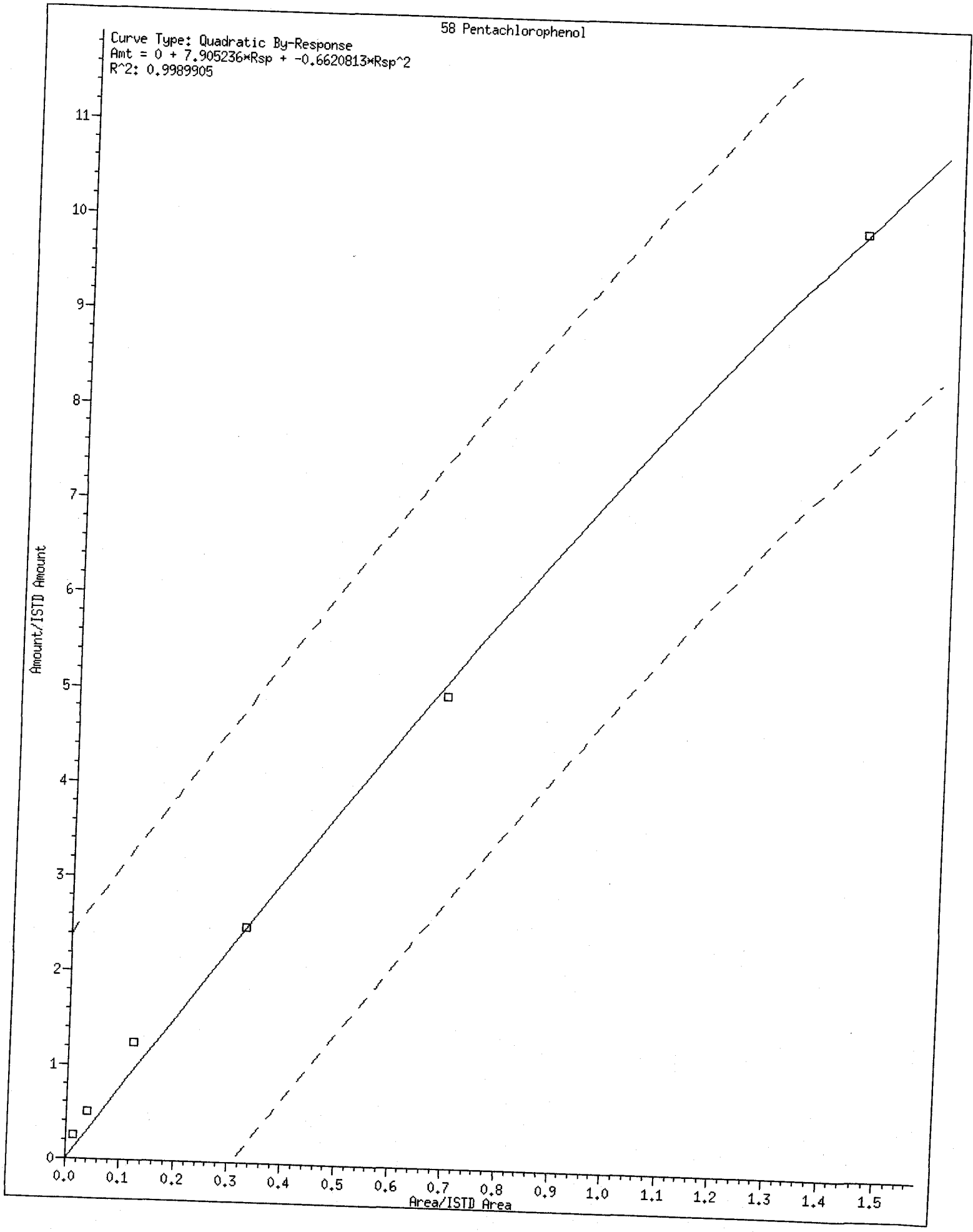
Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

UZ99:00182


24 Benzoic acid
Curve Type: Quadratic By-Response
Amt = 0 + 4.350663*Rsp + -0.1214564*Rsp^2
R^2: 0.9992059
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4
5.7


33 Hexachlorocyclopentadiene
Curve Type: Quadratic By-Response
Amt = 0 + 3.52578*Rsp + -0.176885*Rsp^2
R^2: 0.9989604
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6


45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 5.177243*Rsp + -0.1633947*Rsp^2
R^2: 0.9980527
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8


58 Pentachlorophenol
Curve Type: Quadratic By-Response
Amt = 0 + 7.905236*Rsp + -0.6620813*Rsp^2
R^2: 0.9989905
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5

Analytical Resources, Inc.

YZ 5/30/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120526.b/ic0526a.d
Lab Smp Id: ABN5
Inj Date : 26-MAY-2012 10:59
Operator : VTS/YZ
Smp Info : ABN5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 10:15 yev
Cal Date : 26-MAY-2012 10:59
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0526a.d
Calibration Sample, Level: 5

Compound Sublist: PSDDAICAL.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.537	6.537	(0.738)	335752	5.00000	5.000
$	2 Phenol-d5	99	8.237	8.229	(0.930)	420818	5.00000	5.000
	3 Phenol	94	8.260	8.252	(0.933)	460680	5.00000	5.000
$	5 2-Chlorophenol-d4	132	8.476	8.476	(0.957)	360864	5.00000	5.000
	4 Bis(2-Chloroethyl)ether	93	8.399	8.399	(0.948)	321908	5.00000	5.000
	6 2-Chlorophenol	128	8.507	8.507	(0.961)	388656	5.00000	5.000
	7 1,3-Dichlorobenzene	146	8.786	8.786	(0.992)	392615	5.00000	5.000
*	8 1,4-Dichlorobenzene-d4	152	8.855	8.856	(1.000)	189516	4.00000	
	9 1,4-Dichlorobenzene	146	8.886	8.887	(1.004)	377080	5.00000	5.000
$	10 1,2-Dichlorobenzene-d4	152	9.236	9.236	(1.043)	239905	5.00000	5.000
	12 1,2-Dichlorobenzene	146	9.267	9.267	(1.046)	371864	5.00000	5.000
	11 Benzyl alcohol	108	9.166	9.166	(1.035)	191171	5.00000	5.000
	14 2,2'-oxybis(1-Chloropropane)	121	9.492	9.492	(1.072)	122034	5.00000	5.000
	13 2-Methylphenol	108	9.430	9.430	(1.065)	347227	5.00000	5.000
	17 Hexachloroethane	117	9.888	9.888	(1.117)	147829	5.00000	5.000
	16 N-Nitroso-di-n-propylamine	70	9.764	9.756	(1.103)	202786	5.00000	5.000
	15 4-Methylphenol	108	9.725	9.725	(1.098)	362939	5.00000	5.000
$	18 Nitrobenzene-d5	82	10.027	10.020	(0.872)	334709	5.00000	5.000
	19 Nitrobenzene	77	10.058	10.059	(0.874)	321756	5.00000	5.000
	20 Isophorone	82	10.547	10.540	(0.917)	620384	5.00000	5.000
	21 2-Nitrophenol	139	10.733	10.733	(0.933)	214097	5.00000	5.000
	22 2,4-Dimethylphenol	107	10.833	10.833	(0.942)	665979	10.0000	10.00
	23 Bis(2-Chloroethoxy)methane	93	11.033	11.034	(0.959)	363814	5.00000	5.000
	24 Benzoic acid	105	11.087	10.995	(0.964)	862339	20.0000	20.00
	25 2,4-Dichlorophenol	162	11.234	11.226	(0.977)	647444	10.0000	10.00
	26 1,2,4-Trichlorobenzene	180	11.419	11.411	(0.993)	297260	5.00000	5.000
*	27 Naphthalene-d8	136	11.504	11.496	(1.000)	730932	4.00000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	11.542	11.543	(1.003)	934446	5.00000	5.000
29 4-Chloroaniline	127	11.705	11.705	(1.017)	828363	10.0000	10.00
30 Hexachlorobutadiene	225	11.952	11.944	(1.039)	165733	5.00000	5.000
31 4-Chloro-3-methylphenol	107	12.780	12.772	(1.111)	585802	10.0000	10.00
32 2-Methylnaphthalene	142	13.043	13.043	(1.134)	659745	5.00000	5.000
33 Hexachlorocyclopentadiene	237	13.554	13.554	(0.882)	293255	10.0000	10.00
34 2,4,6-Trichlorophenol	196	13.732	13.724	(0.893)	433637	10.0000	10.00
35 2,4,5-Trichlorophenol	196	13.809	13.809	(0.898)	481317	10.0000	10.00
$ 36 2-Fluorobiphenyl	172	13.902	13.902	(0.904)	712799	5.00000	5.000
37 2-Chloronaphthalene	162	14.103	14.104	(0.917)	622202	5.00000	5.000
38 2-Nitroaniline	65	14.405	14.398	(0.937)	300000	10.0000	10.00
39 Dimethylphthalate	163	14.893	14.885	(0.969)	644991	5.00000	5.000
40 Acenaphthylene	152	15.032	15.032	(0.978)	937321	5.00000	5.000
41 2,6-Dinitrotoluene	165	15.032	15.025	(0.978)	321175	10.0000	10.00
* 42 Acenaphthene-d10	164	15.373	15.373	(1.000)	420698	4.00000	
43 3-Nitroaniline	138	15.326	15.319	(0.997)	353215	10.0000	10.00
44 Acenaphthene	153	15.442	15.442	(1.005)	573481	5.00000	5.000
45 2,4-Dinitrophenol	184	15.558	15.558	(1.012)	392895	20.0000	20.00
46 Dibenzofuran	168	15.798	15.798	(1.028)	828440	5.00000	5.000
47 4-Nitrophenol	109	15.728	15.736	(1.023)	149508	10.0000	10.00
48 2,4-Dinitrotoluene	165	15.898	15.891	(1.034)	431707	10.0000	10.00
50 Diethylphthalate	149	16.470	16.463	(1.071)	635932	5.00000	5.000
49 Fluorene	166	16.563	16.563	(1.077)	631894	5.00000	5.000
51 4-Chlorophenyl-phenylether	204	16.579	16.579	(1.078)	304176	5.00000	5.000
52 4-Nitroaniline	138	16.687	16.687	(1.085)	356961	10.0000	10.00
53 4,6-Dinitro-2-methylphenol	198	16.802	16.795	(0.902)	572088	20.0000	20.00
54 N-Nitrosodiphenylamine	169	16.856	16.857	(0.905)	428732	5.00000	5.000
$ 55 2,4,6-Tribromophenol	330	17.142	17.142	(1.115)	90284	5.00000	5.000
56 4-Bromophenyl-phenylether	248	17.658	17.659	(0.948)	173197	5.00000	5.000
57 Hexachlorobenzene	284	17.975	17.976	(0.965)	193291	5.00000	5.000
58 Pentachlorophenol	266	18.378	18.386	(0.986)	206931	10.0000	10.00
* 59 Phenanthrene-d10	188	18.633	18.633	(1.000)	638950	4.00000	
60 Phenanthrene	178	18.687	18.680	(1.003)	817342	5.00000	5.000
61 Anthracene	178	18.780	18.780	(1.008)	889087	5.00000	5.000
62 Carbazole	167	19.144	19.144	(1.027)	757613	5.00000	5.000
63 Di-n-butylphthalate	149	20.010	20.003	(1.074)	1174853	5.00000	5.000
64 Fluoranthene	202	21.101	21.102	(1.132)	960108	5.00000	5.000
65 Pyrene	202	21.519	21.519	(0.908)	1003743	5.00000	5.000
$ 66 Terphenyl-d14	244	21.844	21.837	(0.921)	625901	5.00000	5.000
67 Butylbenzylphthalate	149	22.781	22.781	(0.961)	470820	5.00000	5.000
68 Benzo(a)anthracene	228	23.679	23.679	(0.999)	895593	5.00000	5.000
* 69 Chrysene-d12	240	23.710	23.703	(1.000)	645065	4.00000	
70 3,3'-Dichlorobenzidine	252	23.656	23.656	(0.998)	944422	10.0000	10.00
71 Chrysene	228	23.749	23.749	(1.002)	810779	5.00000	5.000
72 bis(2-Ethylhexyl)phthalate	149	23.818	23.819	(0.961)	691334	5.00000	5.000
* 134 Di-n-octylphthalate-d4	153	24.794	24.794	(1.000)	1016118	4.00000	
73 Di-n-octylphthalate	149	24.802	24.802	(1.000)	1227950	5.00000	5.000

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.452	25.444	(0.975)	960134	5.00000	5.000
75 Benzo(k)fluoranthene	252	25.483	25.483	(0.976)	968264	5.00000	5.000
76 Benzo(a)pyrene	252	26.002	26.002	(0.996)	851161	5.00000	5.000
* 77 Perylene-d12	264	26.102	26.103	(1.000)	650033	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.342	28.334	(1.086)	1014701	5.00000	5.000
79 Dibenzo(a,h)anthracene	278	28.365	28.357	(1.087)	806147	5.00000	5.000
80 Benzo(g,h,i)perylene	276	29.002	28.987	(1.111)	867892	5.00000	5.000
90 N-Nitrosodimethylamine	74	4.266	4.266	(0.482)	400028	10.0000	10.00
91 Aniline	93	8.291	8.291	(0.936)	944435	5.00000	5.000
93 Benzidine	184	21.364	21.365	(0.901)	548000	10.0000	10.00
103 Pyridine	79	4.282	4.290	(0.484)	329458	10.0000	10.00
105 1-methylnaphthalene	142	13.275	13.275	(1.154)	676659	5.00000	5.000
111 Azobenzene (1,2-DP-Hydrazine)	77	16.926	16.926	(1.101)	624121	5.00000	5.000
187 Total Benzofluoranthenes	252	25.483	25.483	(0.976)	1817664	10.0000	10.00
99 Perylene	252	26.149	26.149	(1.002)	848638	5.00000	5.000
98 Retene	219	22.131	22.131	(0.933)	474577	5.00000	5.000

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0526a.d
Lab Smp Id: ABN5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	189516	0.00
27 Naphthalene-d8	730932	365466	1461864	730932	0.00
42 Acenaphthene-d10	420698	210349	841396	420698	0.00
59 Phenanthrene-d10	638950	319475	1277900	638950	0.00
69 Chrysene-d12	645065	322532	1290130	645065	0.00
134 Di-n-octylphthala	1016118	508059	2032236	1016118	0.00
77 Perylene-d12	650033	325016	1300066	650033	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.00
27 Naphthalene-d8	11.50	11.00	12.00	11.50	0.00
42 Acenaphthene-d10	15.37	14.87	15.87	15.37	0.00
59 Phenanthrene-d10	18.63	18.13	19.13	18.63	0.00
69 Chrysene-d12	23.71	23.21	24.21	23.71	0.00
134 Di-n-octylphthala	24.79	24.29	25.29	24.79	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

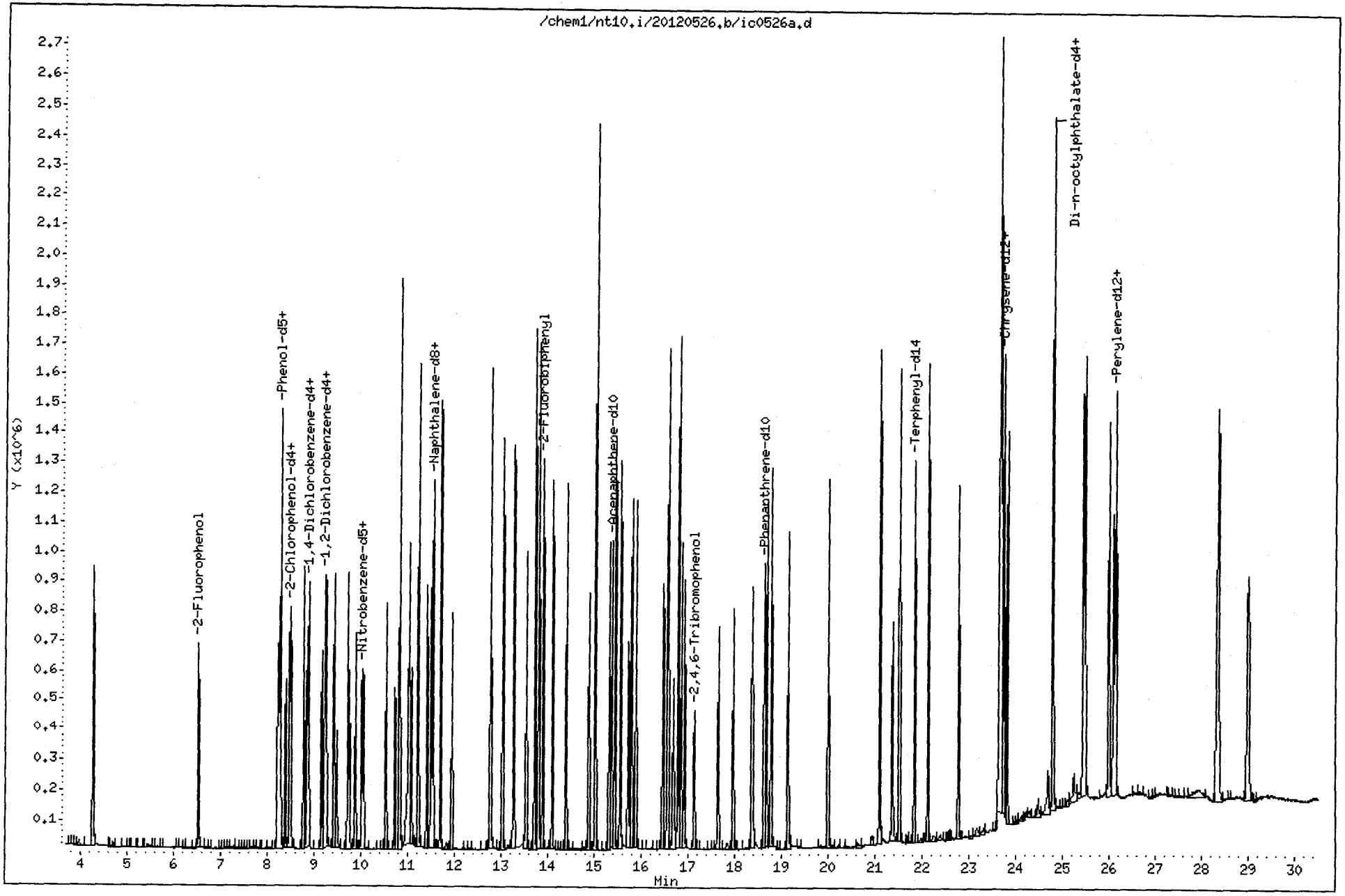
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120526.b/ic0526a.d
Date : 26-MAY-2012 10:59
Client ID:
Sample Info: ABN5

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



UZ99:00191

CO-ELUTION SUMMARY FOR FILE - ic0526a.d

Lab ID: ABN5, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
15.032	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

YZ 5/31/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120526.b/ic0526b.d
Lab Smp Id: ABN20
Inj Date : 26-MAY-2012 11:36
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN20
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 10:15 yev Quant Type: ISTD
Cal Date : 26-MAY-2012 11:36 Cal File: ic0526b.d
Als bottle: 5 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.544	6.537	(0.738)	1262839	20.0000	19.66
$	2 Phenol-d5	99	8.244	8.229	(0.930)	1651383	20.0000	20.08
	3 Phenol	94	8.268	8.252	(0.933)	1697721	20.0000	19.45
$	5 2-Chlorophenol-d4	132	8.484	8.476	(0.957)	1405893	20.0000	20.01
	4 Bis(2-Chloroethyl)ether	93	8.407	8.399	(0.948)	1224663	20.0000	19.77
	6 2-Chlorophenol	128	8.515	8.507	(0.961)	1601054	20.0000	20.57
	7 1,3-Dichlorobenzene	146	8.793	8.786	(0.992)	1427592	20.0000	19.32
*	8 1,4-Dichlorobenzene-d4	152	8.863	8.856	(1.000)	184424	4.00000	
	9 1,4-Dichlorobenzene	146	8.894	8.887	(1.004)	1422168	20.0000	19.68
$	10 1,2-Dichlorobenzene-d4	152	9.243	9.236	(1.043)	919210	20.0000	19.84
	12 1,2-Dichlorobenzene	146	9.267	9.267	(1.046)	1388404	20.0000	19.58
	11 Benzyl alcohol	108	9.181	9.166	(1.036)	767351	20.0000	20.31
	14 2,2'-oxybis(1-Chloropropane)	121	9.500	9.492	(1.072)	452540	20.0000	19.52
	13 2-Methylphenol	108	9.438	9.430	(1.065)	1346182	20.0000	19.96
	17 Hexachloroethane	117	9.888	9.888	(1.116)	587548	20.0000	20.21
	16 N-Nitroso-di-n-propylamine	70	9.779	9.756	(1.103)	764483	20.0000	19.68
	15 4-Methylphenol	108	9.740	9.725	(1.099)	1391012	20.0000	19.84
$	18 Nitrobenzene-d5	82	10.035	10.020	(0.872)	1301788	20.0000	19.70
	19 Nitrobenzene	77	10.074	10.059	(0.876)	1257209	20.0000	19.75
	20 Isophorone	82	10.563	10.540	(0.918)	2630962	20.0000	20.57
	21 2-Nitrophenol	139	10.741	10.733	(0.934)	840731	20.0000	19.80
	22 2,4-Dimethylphenol	107	10.849	10.833	(0.943)	2502613	40.0000	38.72
	23 Bis(2-Chloroethoxy)methane	93	11.041	11.034	(0.960)	1405177	20.0000	19.63
	24 Benzoic acid	105	11.249	10.995	(0.978)	3954019	80.0000	85.39
	25 2,4-Dichlorophenol	162	11.242	11.226	(0.977)	2459708	40.0000	38.94
	26 1,2,4-Trichlorobenzene	180	11.419	11.411	(0.993)	1108979	20.0000	19.29
*	27 Naphthalene-d8	136	11.504	11.496	(1.000)	732078	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	11.550	11.543	(1.004)	3652849	20.0000	19.75
	29 4-Chloroaniline	127	11.720	11.705	(1.019)	3326411	40.0000	40.05
	30 Hexachlorobutadiene	225	11.952	11.944	(1.039)	609557	20.0000	19.15
	31 4-Chloro-3-methylphenol	107	12.788	12.772	(1.112)	2374372	40.0000	40.23
	32 2-Methylnaphthalene	142	13.051	13.043	(1.134)	2614854	20.0000	19.89
	33 Hexachlorocyclopentadiene	237	13.554	13.554	(0.881)	1418921	40.0000	44.01
	34 2,4,6-Trichlorophenol	196	13.740	13.724	(0.893)	1701140	40.0000	39.83
	35 2,4,5-Trichlorophenol	196	13.817	13.809	(0.898)	1860763	40.0000	39.54
$	36 2-Fluorobiphenyl	172	13.910	13.902	(0.904)	2804466	20.0000	19.95
	37 2-Chloronaphthalene	162	14.111	14.104	(0.917)	2415928	20.0000	19.81
	38 2-Nitroaniline	65	14.421	14.398	(0.938)	1197823	40.0000	40.19
	39 Dimethylphthalate	163	14.908	14.885	(0.969)	2292323	20.0000	18.93
	40 Acenaphthylene	152	15.040	15.032	(0.978)	3567122	20.0000	19.61
	41 2,6-Dinitrotoluene	165	15.048	15.025	(0.978)	1210937	40.0000	39.04
*	42 Acenaphthene-d10	164	15.380	15.373	(1.000)	416049	4.00000	
	43 3-Nitroaniline	138	15.342	15.319	(0.997)	1359172	40.0000	39.45
	44 Acenaphthene	153	15.450	15.442	(1.005)	2222947	20.0000	19.80
	45 2,4-Dinitrophenol	184	15.581	15.558	(1.013)	1863407	80.0000	80.66
	46 Dibenzofuran	168	15.813	15.798	(1.028)	3266234	20.0000	19.97
	47 4-Nitrophenol	109	15.751	15.736	(1.024)	577134	40.0000	39.51
	48 2,4-Dinitrotoluene	165	15.914	15.891	(1.035)	1591873	40.0000	38.60
	50 Diethylphthalate	149	16.494	16.463	(1.072)	2259396	20.0000	18.93
	49 Fluorene	166	16.571	16.563	(1.077)	2467121	20.0000	19.87
	51 4-Chlorophenyl-phenylether	204	16.586	16.579	(1.078)	1138615	20.0000	19.45
	52 4-Nitroaniline	138	16.725	16.687	(1.087)	1455861	40.0000	40.61
	53 4,6-Dinitro-2-methylphenol	198	16.826	16.795	(0.903)	2173122	80.0000	80.14
	54 N-Nitrosodiphenylamine	169	16.872	16.857	(0.905)	1487492	20.0000	19.13
$	55 2,4,6-Tribromophenol	330	17.149	17.142	(1.115)	351267	20.0000	19.83
	56 4-Bromophenyl-phenylether	248	17.666	17.659	(0.948)	641886	20.0000	19.79
	57 Hexachlorobenzene	284	17.983	17.976	(0.965)	728562	20.0000	19.96
	58 Pentachlorophenol	266	18.386	18.386	(0.986)	867054	40.0000	42.03
*	59 Phenanthrene-d10	188	18.641	18.633	(1.000)	604660	4.00000	
	60 Phenanthrene	178	18.695	18.680	(1.003)	3251269	20.0000	20.50
	61 Anthracene	178	18.788	18.780	(1.008)	3338115	20.0000	19.92
	62 Carbazole	167	19.152	19.144	(1.027)	3061226	20.0000	20.65
	63 Di-n-butylphthalate	149	20.011	20.003	(1.073)	4528763	20.0000	20.18
	64 Fluoranthene	202	21.109	21.102	(1.132)	3756545	20.0000	20.33
	65 Pyrene	202	21.527	21.519	(0.908)	3928999	20.0000	19.89
$	66 Terphenyl-d14	244	21.844	21.837	(0.921)	2294042	20.0000	19.23
	67 Butylbenzylphthalate	149	22.789	22.781	(0.961)	1750894	20.0000	19.38
	68 Benzo(a)anthracene	228	23.687	23.679	(0.999)	3616838	20.0000	20.20
*	69 Chrysene-d12	240	23.710	23.703	(1.000)	638131	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.671	23.656	(0.998)	4176265	40.0000	42.22
	71 Chrysene	228	23.764	23.749	(1.002)	3220367	20.0000	20.04
	72 bis(2-Ethylhexyl)phthalate	149	23.826	23.819	(0.961)	2719894	20.0000	19.54
*	134 Di-n-octylphthalate-d4	153	24.802	24.794	(1.000)	1045968	4.00000	
	73 Di-n-octylphthalate	149	24.809	24.802	(1.000)	4939797	20.0000	19.77

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.460	25.444	(0.975)	3988850	20.0000	20.50
75 Benzo(k)fluoranthene	252	25.498	25.483	(0.977)	3557823	20.0000	19.27
76 Benzo(a)pyrene	252	26.017	26.002	(0.996)	3334687	20.0000	19.92
* 77 Perylene-d12	264	26.110	26.103	(1.000)	642084	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.373	28.334	(1.087)	3972006	20.0000	19.91
79 Dibenzo(a,h)anthracene	278	28.388	28.357	(1.087)	3176130	20.0000	19.97
80 Benzo(g,h,i)perylene	276	29.033	28.987	(1.112)	3402803	20.0000	19.92
90 N-Nitrosodimethylamine	74	4.282	4.266	(0.483)	1441278	40.0000	38.45
91 Aniline	93	8.306	8.291	(0.937)	3428272	20.0000	19.30
93 Benzidine	184	21.380	21.365	(0.902)	3696511	40.0000	40.59
103 Pyridine	79	4.274	4.290	(0.482)	1287473	40.0000	40.08
105 1-methylnaphthalene	142	13.283	13.275	(1.155)	2690522	20.0000	19.92
111 Azobenzene (1,2-DP-Hydrazine)	77	16.941	16.926	(1.101)	2302372	20.0000	19.30
187 Total Benzofluoranthenes	252	25.498	25.483	(0.977)	7088364	40.0000	39.74
99 Perylene	252	26.164	26.149	(1.002)	3382398	20.0000	20.09
98 Retene	219	22.138	22.131	(0.934)	1890598	20.0000	20.07

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0526b.d
Lab Smp Id: ABN20
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	184424	-2.69
27 Naphthalene-d8	730932	365466	1461864	732078	0.16
42 Acenaphthene-d10	420698	210349	841396	416049	-1.11
59 Phenanthrene-d10	638950	319475	1277900	604660	-5.37
69 Chrysene-d12	645065	322532	1290130	638131	-1.07
134 Di-n-octylphthala	1016118	508059	2032236	1045968	2.94
77 Perylene-d12	650033	325016	1300066	642084	-1.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.09
27 Naphthalene-d8	11.50	11.00	12.00	11.50	0.00
42 Acenaphthene-d10	15.37	14.87	15.87	15.38	0.05
59 Phenanthrene-d10	18.63	18.13	19.13	18.64	0.04
69 Chrysene-d12	23.71	23.21	24.21	23.71	0.00
134 Di-n-octylphthala	24.79	24.29	25.29	24.80	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

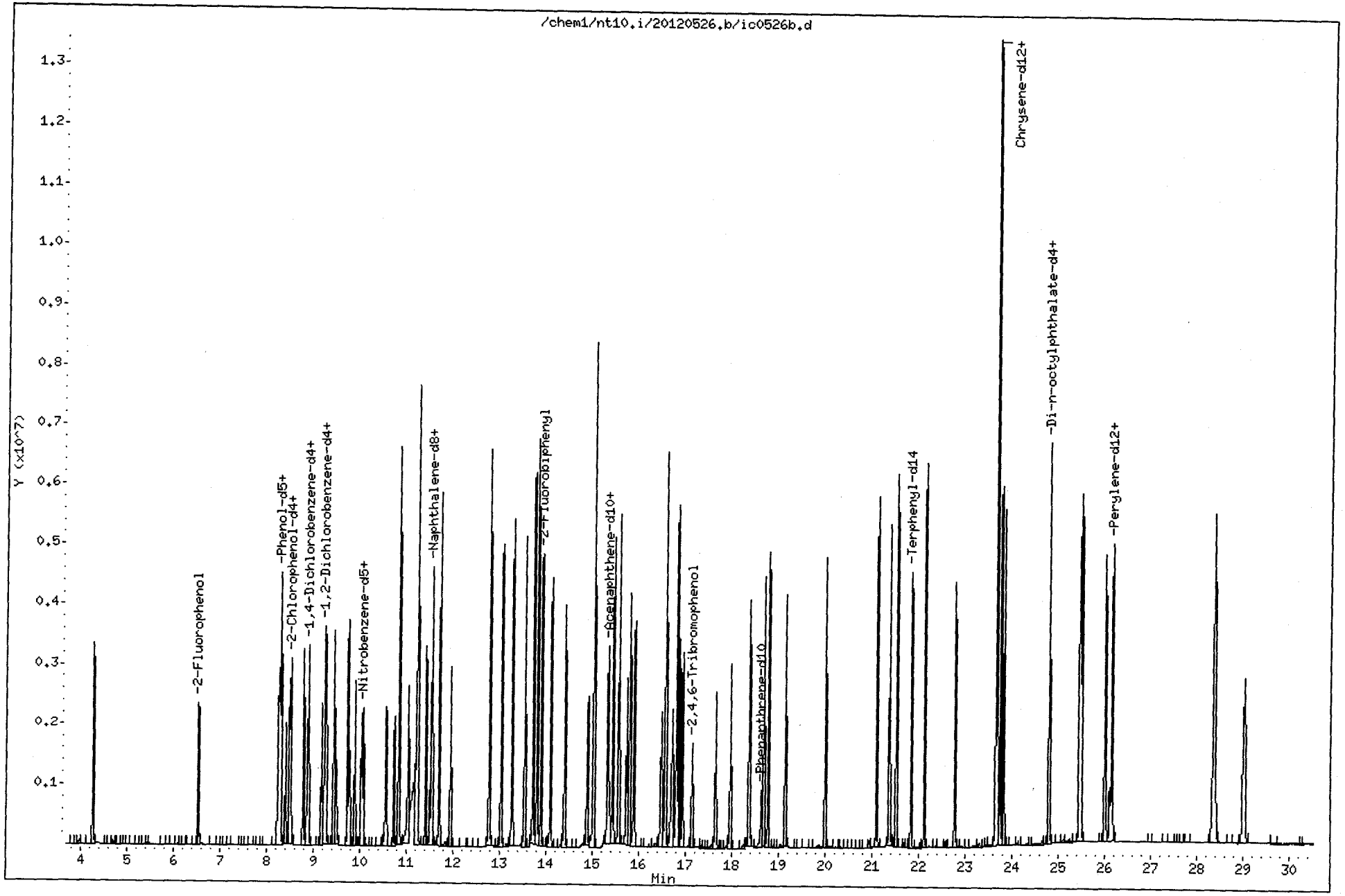
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120526.b/ic0526b.d
Date : 26-MAY-2012 11:36
Client ID:
Sample Info: ABN20

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



U799:00197

CO-ELUTION SUMMARY FOR FILE - ic0526b.d

Lab ID: ABN20, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

1-2 5/30/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120526.b/ic0526c.d
Lab Smp Id: ABN.2
Inj Date : 26-MAY-2012 12:13
Operator : VTS/YZ
Smp Info : ABN.2
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 10:15 yev
Cal Date : 26-MAY-2012 12:13
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0526c.d
Calibration Sample, Level: 1

Compound Sublist: PSDDAICAL.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.537	6.537	(0.738)	13568	0.20000	0.1987
$	2 Phenol-d5	99	8.237	8.229	(0.930)	16479	0.20000	0.1918
	3 Phenol	94	8.260	8.252	(0.933)	19057	0.20000	0.2031
$	5 2-Chlorophenol-d4	132	8.476	8.476	(0.957)	15312	0.20000	0.2029
	4 Bis(2-Chloroethyl)ether	93	8.399	8.399	(0.948)	14363	0.20000	0.2113
	6 2-Chlorophenol	128	8.507	8.507	(0.961)	15648	0.20000	0.1922
	7 1,3-Dichlorobenzene	146	8.786	8.786	(0.992)	16913	0.20000	0.2095
*	8 1,4-Dichlorobenzene-d4	152	8.855	8.856	(1.000)	196685	4.00000	
	9 1,4-Dichlorobenzene	146	8.886	8.887	(1.004)	16424	0.20000	0.2086
$	10 1,2-Dichlorobenzene-d4	152	9.236	9.236	(1.043)	9895	0.20000	0.2002
	12 1,2-Dichlorobenzene	146	9.259	9.267	(1.046)	15583	0.20000	0.2040
	11 Benzyl alcohol	108	9.166	9.166	(1.035)	7775	0.20000	0.1952(M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.492	9.492	(1.072)	5219	0.20000	0.2072
	13 2-Methylphenol	108	9.430	9.430	(1.065)	15115	0.20000	0.2066
	17 Hexachloroethane	117	9.888	9.888	(1.117)	6059	0.20000	0.1969
	16 N-Nitroso-di-n-propylamine	70	9.764	9.756	(1.103)	8433	0.20000	0.2024
	15 4-Methylphenol	108	9.725	9.725	(1.098)	14946	0.20000	0.2000
$	18 Nitrobenzene-d5	82	10.020	10.020	(0.872)	13659	0.20000	0.1985
	19 Nitrobenzene	77	10.059	10.059	(0.875)	14198	0.20000	0.2087
	20 Isophorone	82	10.547	10.540	(0.917)	24784	0.20000	0.1899
	21 2-Nitrophenol	139	10.733	10.733	(0.934)	8296	0.20000	0.1910
	22 2,4-Dimethylphenol	107	10.833	10.833	(0.942)	26570	0.40000	0.3954
	23 Bis(2-Chloroethoxy)methane	93	11.034	11.034	(0.960)	15823	0.20000	0.2075
	24 Benzoic acid	105	10.972	10.995	(0.954)	12487	0.80000	0.3331(M)
	25 2,4-Dichlorophenol	162	11.234	11.226	(0.977)	22711	0.40000	0.3607
	26 1,2,4-Trichlorobenzene	180	11.411	11.411	(0.993)	13024	0.20000	0.2108
*	27 Naphthalene-d8	136	11.496	11.496	(1.000)	765616	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.543	11.543	(1.004)	39005	0.20000	0.2011
	29 4-Chloroaniline	127	11.705	11.705	(1.018)	32402	0.40000	0.3816
	30 Hexachlorobutadiene	225	11.944	11.944	(1.039)	6543	0.20000	0.1977
	31 4-Chloro-3-methylphenol	107	12.780	12.772	(1.112)	21284	0.40000	0.3615
	32 2-Methylnaphthalene	142	13.043	13.043	(1.135)	26386	0.20000	0.1946
	33 Hexachlorocyclopentadiene	237	13.554	13.554	(0.882)	2706	0.40000	0.08451
	34 2,4,6-Trichlorophenol	196	13.732	13.724	(0.893)	15103	0.40000	0.3696
	35 2,4,5-Trichlorophenol	196	13.817	13.809	(0.899)	15402	0.40000	0.3501
$	36 2-Fluorobiphenyl	172	13.895	13.902	(0.904)	29387	0.20000	0.2068
	37 2-Chloronaphthalene	162	14.104	14.104	(0.917)	24508	0.20000	0.2016
	38 2-Nitroaniline	65	14.398	14.398	(0.937)	11432	0.40000	0.3907
	39 Dimethylphthalate	163	14.885	14.885	(0.968)	26608	0.20000	0.2137
	40 Acenaphthylene	152	15.032	15.032	(0.978)	38244	0.20000	0.2077
	41 2,6-Dinitrotoluene	165	15.025	15.025	(0.977)	11764	0.40000	0.3877
*	42 Acenaphthene-d10	164	15.373	15.373	(1.000)	413229	4.00000	
	43 3-Nitroaniline	138	15.319	15.319	(0.996)	13646	0.40000	0.3992
	44 Acenaphthene	153	15.442	15.442	(1.005)	22552	0.20000	0.2015
	45 2,4-Dinitrophenol	184	15.605	15.558	(1.015)	615	0.80000	0.02680 (M)
	46 Dibenzofuran	168	15.798	15.798	(1.028)	32252	0.20000	0.1990
	47 4-Nitrophenol	109	15.759	15.736	(1.025)	4402	0.40000	0.3300 (M)
	48 2,4-Dinitrotoluene	165	15.891	15.891	(1.034)	14035	0.40000	0.3598
	50 Diethylphthalate	149	16.463	16.463	(1.071)	25582	0.20000	0.2102
	49 Fluorene	166	16.563	16.563	(1.077)	26426	0.20000	0.2093
	51 4-Chlorophenyl-phenylether	204	16.579	16.579	(1.078)	12377	0.20000	0.2084
	52 4-Nitroaniline	138	16.687	16.687	(1.085)	12447	0.40000	0.3649
	53 4,6-Dinitro-2-methylphenol	198	16.803	16.795	(0.902)	8258	0.80000	0.3628
	54 N-Nitrosodiphenylamine	169	16.857	16.857	(0.905)	18217	0.20000	0.2124
$	55 2,4,6-Tribromophenol	330	17.142	17.142	(1.115)	3185	0.20000	0.1870
	56 4-Bromophenyl-phenylether	248	17.651	17.659	(0.947)	7093	0.20000	0.2030
	57 Hexachlorobenzene	284	17.975	17.976	(0.965)	7955	0.20000	0.2026
	58 Pentachlorophenol	266	18.394	18.386	(0.987)	2577	0.40000	0.1530
*	59 Phenanthrene-d10	188	18.633	18.633	(1.000)	646258	4.00000	
	60 Phenanthrene	178	18.680	18.680	(1.002)	34268	0.20000	0.2014
	61 Anthracene	178	18.780	18.780	(1.008)	34562	0.20000	0.1952
	62 Carbazole	167	19.144	19.144	(1.027)	33118	0.20000	0.2059
	63 Di-n-butylphthalate	149	20.011	20.003	(1.074)	43110	0.20000	0.1860
	64 Fluoranthene	202	21.101	21.102	(1.132)	37307	0.20000	0.1925
	65 Pyrene	202	21.519	21.519	(0.908)	38832	0.20000	0.1965
$	66 Terphenyl-d14	244	21.844	21.837	(0.922)	25498	0.20000	0.2077
	67 Butylbenzylphthalate	149	22.781	22.781	(0.961)	18592	0.20000	0.2026
	68 Benzo(a)anthracene	228	23.679	23.679	(0.999)	38870	0.20000	0.2098
*	69 Chrysene-d12	240	23.702	23.703	(1.000)	644080	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.656	23.656	(0.998)	42897	0.40000	0.4297
	71 Chrysene	228	23.749	23.749	(1.002)	31855	0.20000	0.1976
	72 bis(2-Ethylhexyl)phthalate	149	23.819	23.819	(0.961)	28907	0.20000	0.2178
*	134 Di-n-octylphthalate-d4	153	24.794	24.794	(1.000)	952925	4.00000	
	73 Di-n-octylphthalate	149	24.802	24.802	(1.000)	49350	0.20000	0.2109

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.444	25.444	(0.975)	35453	0.20000	0.1872
75 Benzo(k)fluoranthene	252	25.483	25.483	(0.976)	41093	0.20000	0.2139
76 Benzo(a)pyrene	252	26.002	26.002	(0.996)	34367	0.20000	0.2028
* 77 Perylene-d12	264	26.102	26.103	(1.000)	645156	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.342	28.334	(1.086)	36173	0.20000	0.1865
79 Dibenzo(a,h)anthracene	278	28.357	28.357	(1.086)	27417	0.20000	0.1801
80 Benzo(g,h,i)perylene	276	28.986	28.987	(1.110)	32336	0.20000	0.1921
90 N-Nitrosodimethylamine	74	4.274	4.266	(0.483)	16951	0.40000	0.4157
91 Aniline	93	8.291	8.291	(0.936)	40190	0.20000	0.2080
93 Benzidine	184	21.365	21.365	(0.901)	30282	0.40000	0.5898
103 Pyridine	79	4.305	4.290	(0.486)	14470	0.40000	0.4146
105 1-methylnaphthalene	142	13.275	13.275	(1.155)	26434	0.20000	0.1913
111 Azobenzene (1,2-DP-Hydrazine)	77	16.926	16.926	(1.101)	26688	0.20000	0.2162
187 Total Benzofluoranthenes	252	25.483	25.483	(0.976)	72553	0.40000	0.4032
99 Perylene	252	26.141	26.149	(1.001)	34431	0.20000	0.2023
98 Retene	219	22.131	22.131	(0.934)	17757	0.20000	0.1910

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem1/nt10.i/20120526.b/ic0526c.d
Report Date: 30-May-2012 11:27

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0526c.d
Lab Smp Id: ABN.2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	196685	3.78
27 Naphthalene-d8	730932	365466	1461864	765616	4.75
42 Acenaphthene-d10	420698	210349	841396	413229	-1.78
59 Phenanthrene-d10	638950	319475	1277900	646258	1.14
69 Chrysene-d12	645065	322532	1290130	644080	-0.15
134 Di-n-octylphthala	1016118	508059	2032236	952925	-6.22
77 Perylene-d12	650033	325016	1300066	645156	-0.75

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.00
27 Naphthalene-d8	11.50	11.00	12.00	11.50	-0.07
42 Acenaphthene-d10	15.37	14.87	15.87	15.37	0.00
59 Phenanthrene-d10	18.63	18.13	19.13	18.63	0.00
69 Chrysene-d12	23.71	23.21	24.21	23.70	-0.03
134 Di-n-octylphthala	24.79	24.29	25.29	24.79	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

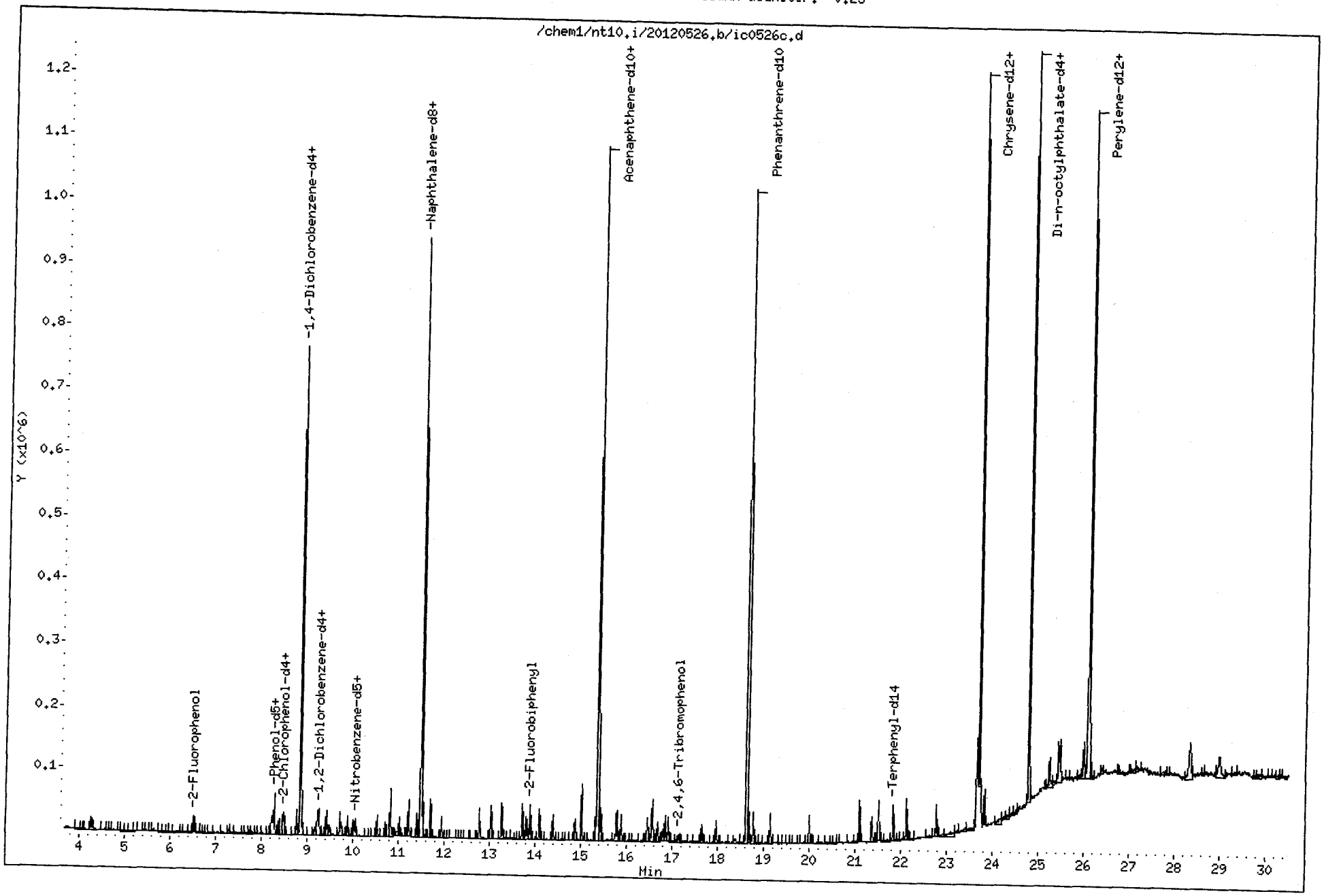
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120526.b/ic0526c.d
Date : 26-MAY-2012 12:13
Client ID:
Sample Info: ABN.2

Column phase: ZB-5msi

Instrument: nt10.i

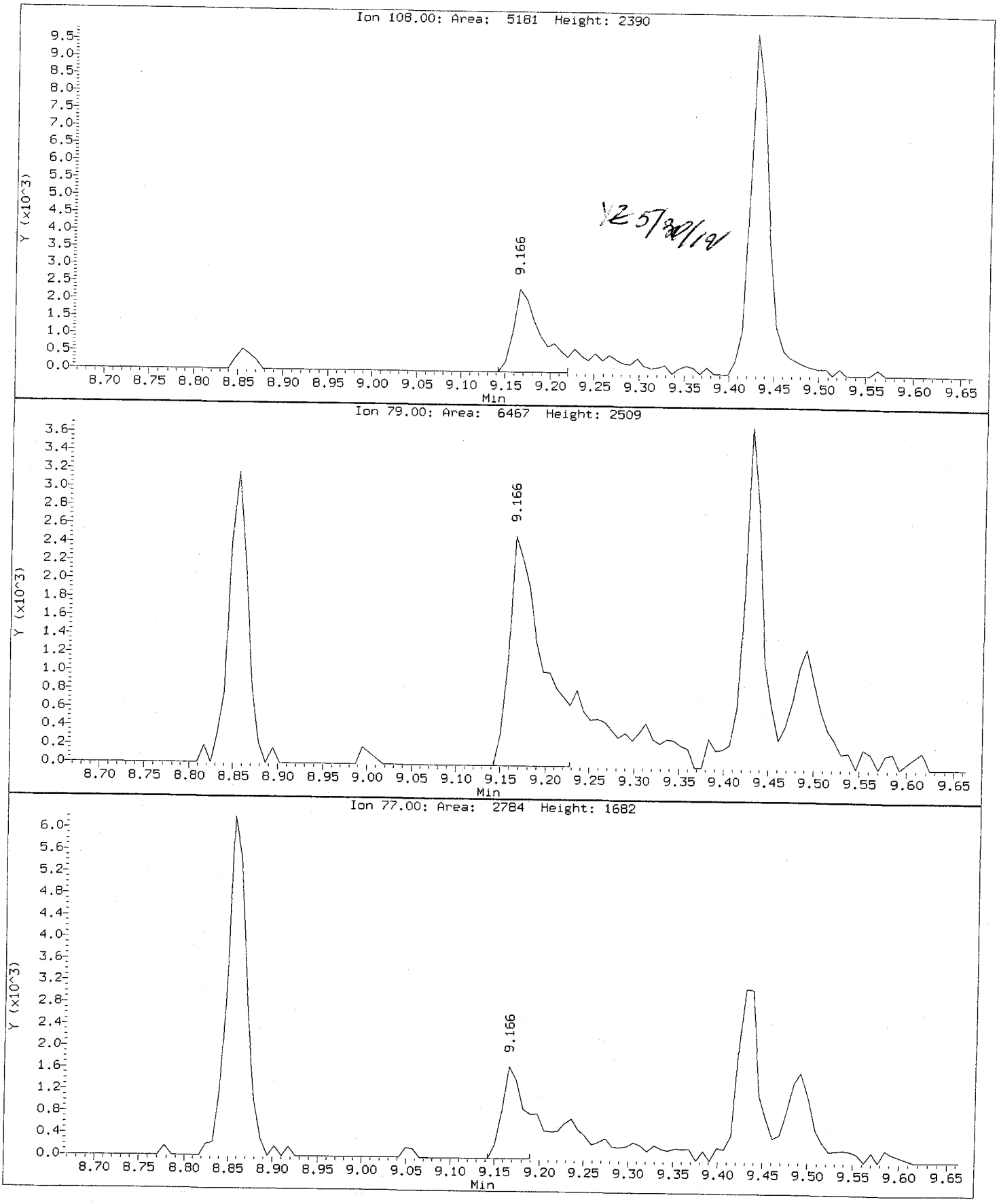
Operator: VTS/YZ
Column diameter: 0.25



UZ99:00203

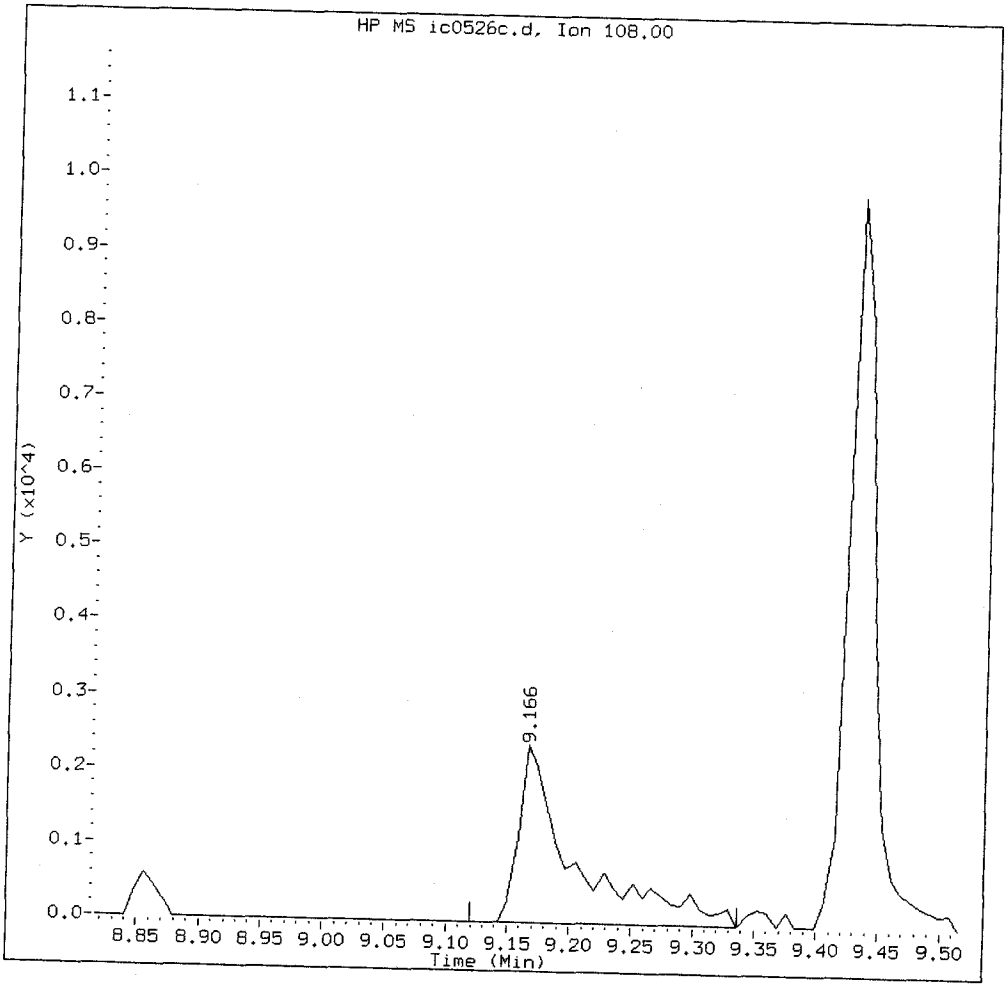
Data File: /chem1/nt10.i/20120526.b/ic0526c.d
Injection Date: 26-MAY-2012 12:13
Instrument: nt10.i
Client Sample ID:

Compound: Benzyl alcohol
CAS Number: 100-51-6



ABN.2, /chem1/nt10.i/20120526.b/ic0526c.d

Benzyl alcohol Amount: 0.20 Area: 7775



MANUAL INTEGRATION for Benzyl alcohol

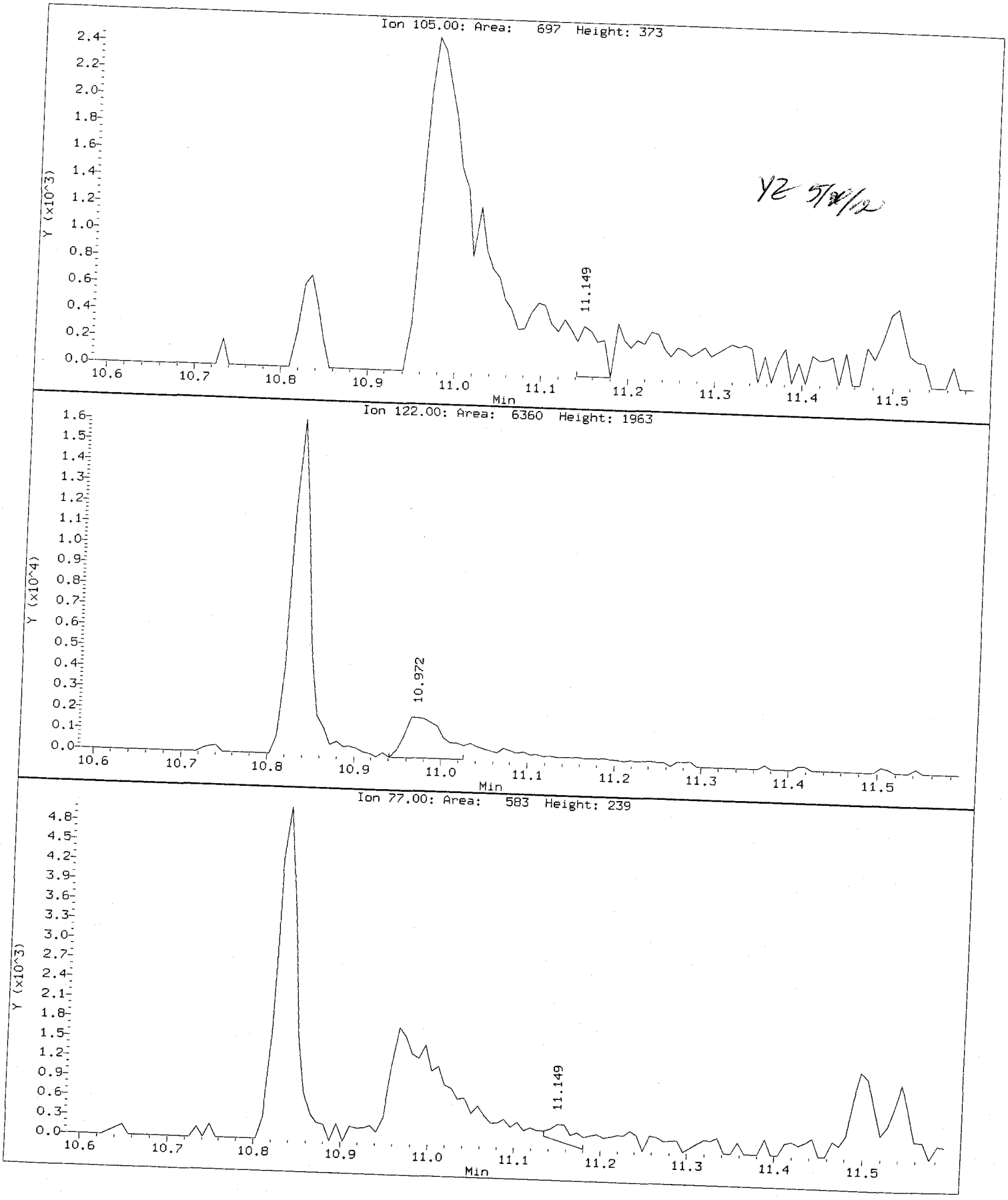
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YR Date: 5/30/12

Data File: /chem1/nt10.i/20120526.b/ic0526c.d
Injection Date: 26-MAY-2012 12:13
Instrument: nt10.i
Client Sample ID:

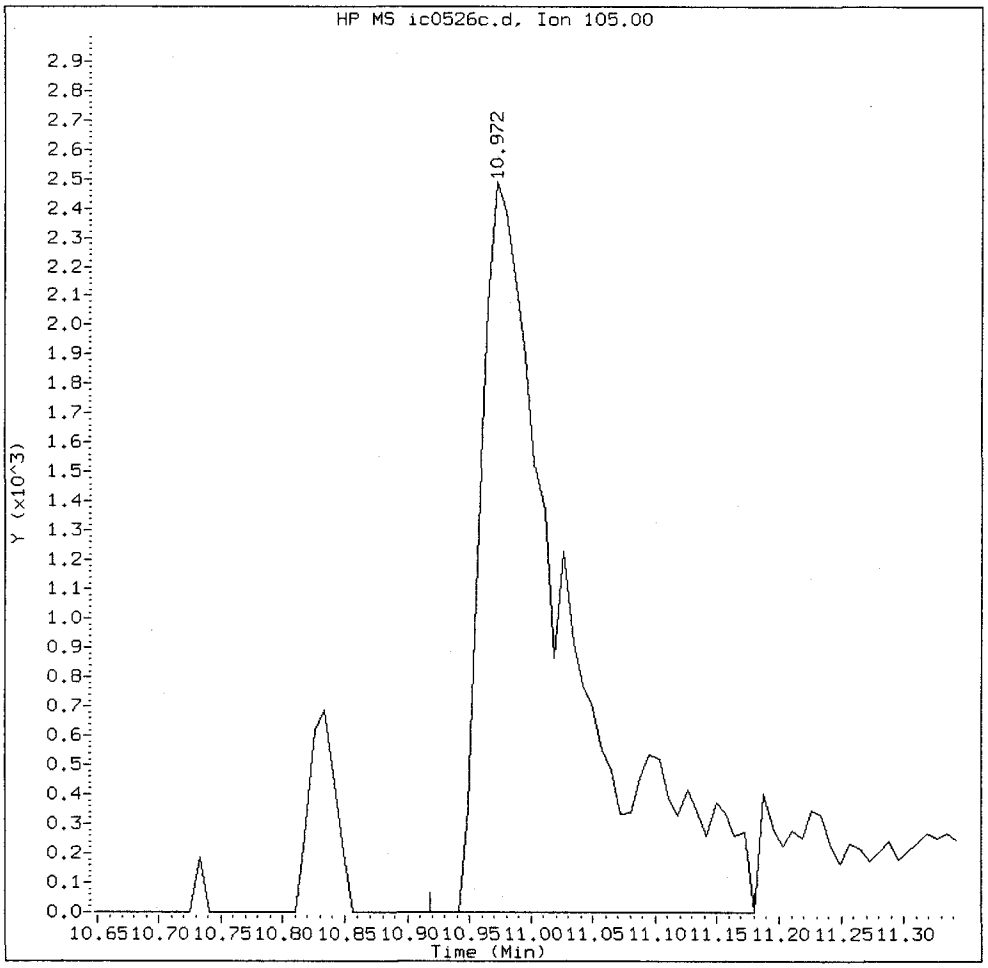
Compound: Benzoic acid
CAS Number: 65-85-0



YZ 5/31/12

ABN.2, /chem1/nt10.i/20120526.b/ic0526c.d

Benzoic acid Amount: 0.33 Area: 12487



MANUAL INTEGRATION for Benzoic acid

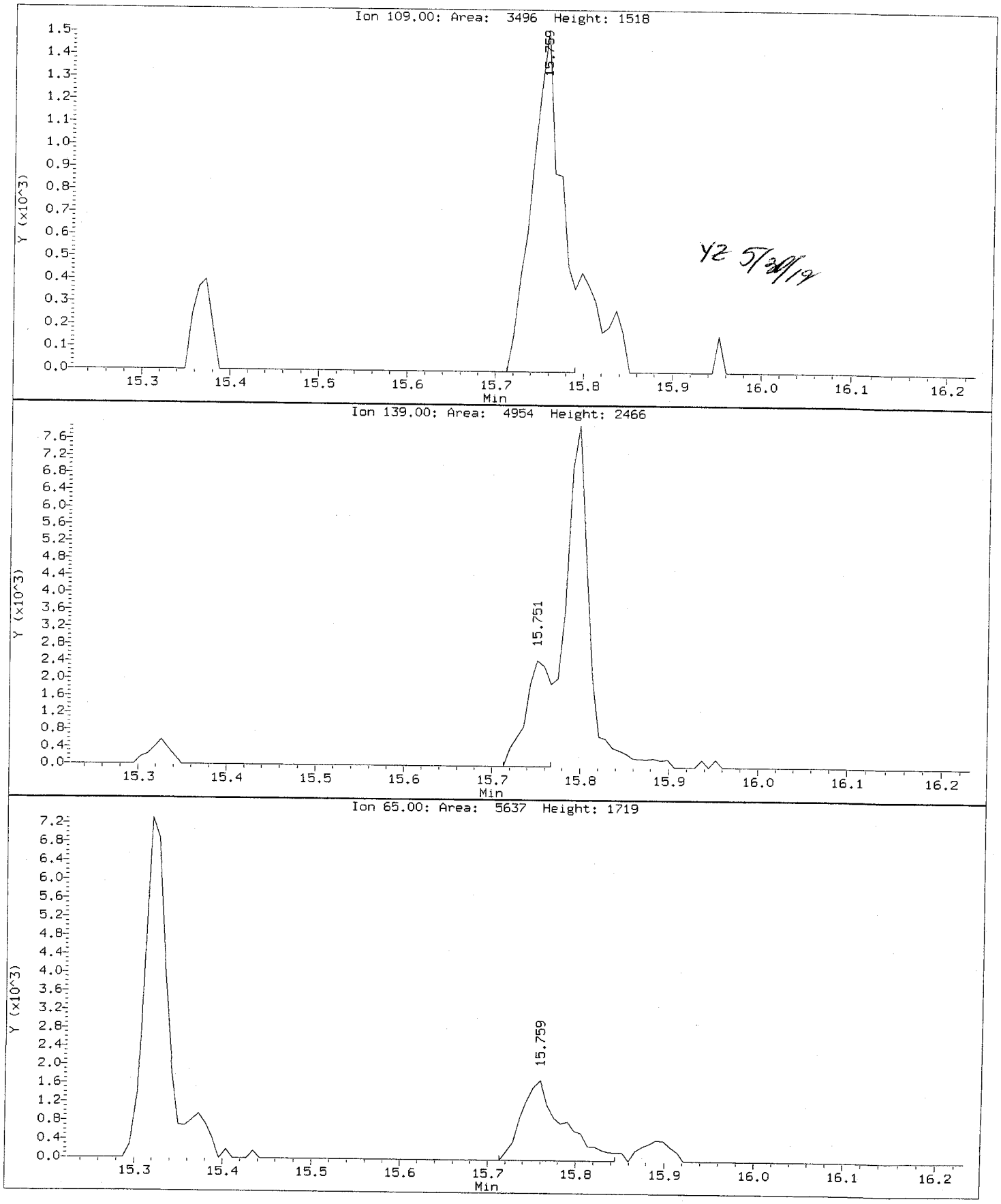
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

Data File: /chem1/nt10.i/20120526.b/ic0526c.d
Injection Date: 26-MAY-2012 12:13
Instrument: nt10.i
Client Sample ID:

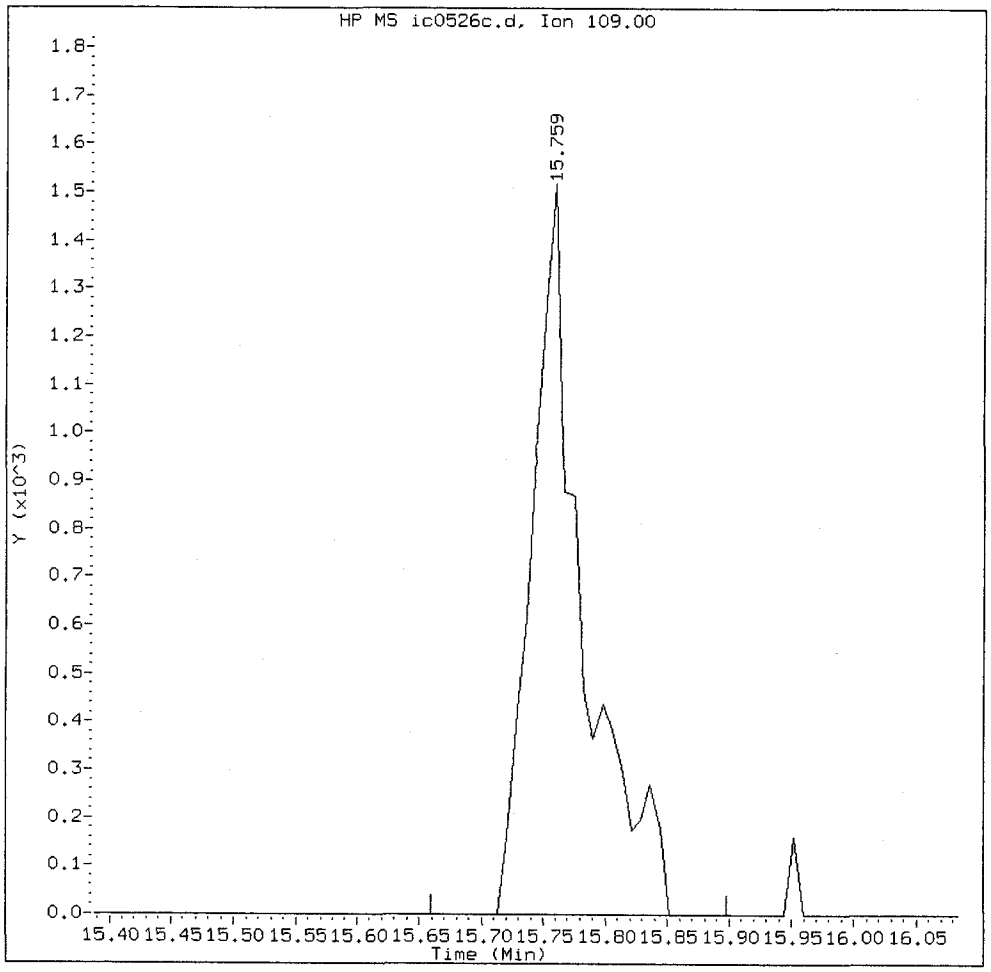
Compound: 4-Nitrophenol
CAS Number: 100-02-7



YZ 5/30/12

ABN.2, /chem1/nt10.i/20120526.b/ic0526c.d

4-Nitrophenol Amount: 0.33 Area: 4402



MANUAL INTEGRATION for 4-Nitrophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/30/12

CO-ELUTION SUMMARY FOR FILE - ic0526c.d

Lab ID: ABN.2, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

YZ 5/30/12

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120526.b/ic0526d.d
Lab Smp Id: ABN10
Inj Date : 26-MAY-2012 12:50
Operator : VTS/YZ
Smp Info : ABN10
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 10:15 yev
Cal Date : 26-MAY-2012 12:50
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0526d.d
Calibration Sample, Level: 6

Compound Sublist: PSDDAICAL.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.537	6.537	(0.738)	655505	10.0000	10.26
$	2 Phenol-d5	99	8.237	8.229	(0.930)	824652	10.0000	10.26
	3 Phenol	94	8.260	8.252	(0.933)	847599	10.0000	9.806
$	5 2-Chlorophenol-d4	132	8.484	8.476	(0.958)	694525	10.0000	9.942
	4 Bis(2-Chloroethyl)ether	93	8.407	8.399	(0.949)	618894	10.0000	9.862
	6 2-Chlorophenol	128	8.515	8.507	(0.962)	797745	10.0000	10.42
	7 1,3-Dichlorobenzene	146	8.786	8.786	(0.992)	732663	10.0000	9.839
*	8 1,4-Dichlorobenzene-d4	152	8.855	8.856	(1.000)	182402	4.00000	
	9 1,4-Dichlorobenzene	146	8.894	8.887	(1.004)	722690	10.0000	9.922
$	10 1,2-Dichlorobenzene-d4	152	9.236	9.236	(1.043)	459065	10.0000	10.01
	12 1,2-Dichlorobenzene	146	9.267	9.267	(1.046)	703357	10.0000	9.947
	11 Benzyl alcohol	108	9.174	9.166	(1.036)	380848	10.0000	10.23
	14 2,2'-oxybis(1-Chloropropane)	121	9.492	9.492	(1.072)	226522	10.0000	9.772
	13 2-Methylphenol	108	9.438	9.430	(1.066)	670901	10.0000	9.918
	17 Hexachloroethane	117	9.888	9.888	(1.117)	287787	10.0000	10.06
	16 N-Nitroso-di-n-propylamine	70	9.771	9.756	(1.103)	387935	10.0000	10.03
	15 4-Methylphenol	108	9.733	9.725	(1.099)	702883	10.0000	10.10
$	18 Nitrobenzene-d5	82	10.028	10.020	(0.872)	644910	10.0000	10.03
	19 Nitrobenzene	77	10.066	10.059	(0.875)	627554	10.0000	9.907
	20 Isophorone	82	10.555	10.540	(0.918)	1215421	10.0000	9.981
	21 2-Nitrophenol	139	10.741	10.733	(0.934)	414864	10.0000	10.17
	22 2,4-Dimethylphenol	107	10.841	10.833	(0.942)	1255466	20.0000	20.00
	23 Bis(2-Chloroethoxy)methane	93	11.034	11.034	(0.959)	696518	10.0000	9.834
	24 Benzoic acid	105	11.157	10.995	(0.970)	1808839	40.0000	48.16
	25 2,4-Dichlorophenol	162	11.234	11.226	(0.977)	1296217	20.0000	21.49
	26 1,2,4-Trichlorobenzene	180	11.419	11.411	(0.993)	562098	10.0000	9.804
*	27 Naphthalene-d8	136	11.504	11.496	(1.000)	714951	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.543	11.543	(1.003)	1826784	10.0000	10.07
	29 4-Chloroaniline	127	11.712	11.705	(1.018)	1628277	20.0000	20.40
	30 Hexachlorobutadiene	225	11.952	11.944	(1.039)	312917	10.0000	10.09
	31 4-Chloro-3-methylphenol	107	12.780	12.772	(1.111)	1161378	20.0000	20.83
	32 2-Methylnaphthalene	142	13.043	13.043	(1.134)	1288499	10.0000	10.13
	33 Hexachlorocyclopentadiene	237	13.554	13.554	(0.881)	633343	20.0000	20.41
	34 2,4,6-Trichlorophenol	196	13.732	13.724	(0.893)	833358	20.0000	20.93
	35 2,4,5-Trichlorophenol	196	13.809	13.809	(0.898)	910701	20.0000	21.16
$	36 2-Fluorobiphenyl	172	13.902	13.902	(0.904)	1389295	10.0000	10.15
	37 2-Chloronaphthalene	162	14.104	14.104	(0.917)	1195001	10.0000	10.18
	38 2-Nitroaniline	65	14.413	14.398	(0.937)	585866	20.0000	20.65
	39 Dimethylphthalate	163	14.893	14.885	(0.968)	1207636	10.0000	10.08
	40 Acenaphthylene	152	15.032	15.032	(0.977)	1806327	10.0000	10.17
	41 2,6-Dinitrotoluene	165	15.032	15.025	(0.977)	619587	20.0000	20.95
*	42 Acenaphthene-d10	164	15.380	15.373	(1.000)	396335	4.00000	
	43 3-Nitroaniline	138	15.334	15.319	(0.997)	702183	20.0000	21.04
	44 Acenaphthene	153	15.450	15.442	(1.005)	1092888	10.0000	10.13
	45 2,4-Dinitrophenol	184	15.566	15.558	(1.012)	859509	40.0000	41.13
	46 Dibenzofuran	168	15.806	15.798	(1.028)	1594733	10.0000	10.19
	47 4-Nitrophenol	109	15.736	15.736	(1.023)	299258	20.0000	22.44
	48 2,4-Dinitrotoluene	165	15.906	15.891	(1.034)	818828	20.0000	21.38
	50 Diethylphthalate	149	16.478	16.463	(1.071)	1158937	10.0000	9.948
	49 Fluorene	166	16.571	16.563	(1.077)	1194717	10.0000	9.899
	51 4-Chlorophenyl-phenylether	204	16.587	16.579	(1.078)	575381	10.0000	10.08
	52 4-Nitroaniline	138	16.702	16.687	(1.086)	669670	20.0000	20.35
	53 4,6-Dinitro-2-methylphenol	198	16.810	16.795	(0.902)	1114006	40.0000	48.94
	54 N-Nitrosodiphenylamine	169	16.864	16.857	(0.905)	787846	10.0000	9.944
$	55 2,4,6-Tribromophenol	330	17.150	17.142	(1.115)	172891	10.0000	10.43
	56 4-Bromophenyl-phenylether	248	17.658	17.659	(0.947)	334345	10.0000	10.25
	57 Hexachlorobenzene	284	17.975	17.976	(0.964)	366099	10.0000	10.06
	58 Pentachlorophenol	266	18.378	18.386	(0.986)	411314	20.0000	24.43
*	59 Phenanthrene-d10	188	18.641	18.633	(1.000)	598080	4.00000	
	60 Phenanthrene	178	18.688	18.680	(1.002)	1556366	10.0000	9.913
	61 Anthracene	178	18.788	18.780	(1.008)	1648643	10.0000	10.05
	62 Carbazole	167	19.144	19.144	(1.027)	1330828	10.0000	9.185
	63 Di-n-butylphthalate	149	20.011	20.003	(1.073)	2222416	10.0000	10.27
	64 Fluoranthene	202	21.109	21.102	(1.132)	1821789	10.0000	10.12
	65 Pyrene	202	21.527	21.519	(0.908)	1912993	10.0000	10.04
$	66 Terphenyl-d14	244	21.844	21.837	(0.921)	1152011	10.0000	9.806
	67 Butylbenzylphthalate	149	22.789	22.781	(0.961)	858848	10.0000	9.784
	68 Benzo(a)anthracene	228	23.679	23.679	(0.999)	1731963	10.0000	9.778
*	69 Chrysene-d12	240	23.710	23.703	(1.000)	620456	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.664	23.656	(0.998)	1666326	20.0000	18.13
	71 Chrysene	228	23.757	23.749	(1.002)	1566433	10.0000	10.06
	72 bis(2-Ethylhexyl)phthalate	149	23.826	23.819	(0.961)	1335029	10.0000	9.852
*	134 Di-n-octylphthalate-d4	153	24.794	24.794	(1.000)	977954	4.00000	
	73 Di-n-octylphthalate	149	24.802	24.802	(1.000)	2343993	10.0000	9.819

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.452	25.444	(0.975)	1746381	10.0000	9.676
75 Benzo(k)fluoranthene	252	25.491	25.483	(0.977)	1965512	10.0000	10.46
76 Benzo(a)pyrene	252	26.002	26.002	(0.996)	1632289	10.0000	10.00
* 77 Perylene-d12	264	26.102	26.103	(1.000)	621376	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.350	28.334	(1.086)	1955515	10.0000	10.35
79 Dibenzo(a,h)anthracene	278	28.365	28.357	(1.087)	1559638	10.0000	10.47
80 Benzo(g,h,i)perylene	276	29.010	28.987	(1.111)	1665774	10.0000	10.21
90 N-Nitrosodimethylamine	74	4.274	4.266	(0.483)	750621	20.0000	19.89
91 Aniline	93	8.299	8.291	(0.937)	1766633	10.0000	9.892
93 Benzidine	184	21.372	21.365	(0.901)	1368200	20.0000	20.66
103 Pyridine	79	4.274	4.290	(0.483)	648393	20.0000	20.03
105 1-methylnaphthalene	142	13.283	13.275	(1.155)	1319734	10.0000	10.17
111 Azobenzene (1,2-DP-Hydrazine)	77	16.934	16.926	(1.101)	1197352	10.0000	10.08
187 Total Benzofluoranthenes	252	25.491	25.483	(0.977)	3492403	20.0000	20.11
99 Perylene	252	26.157	26.149	(1.002)	1639350	10.0000	10.00
98 Retene	219	22.131	22.131	(0.933)	907426	10.0000	10.10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0526d.d
Lab Smp Id: ABN10
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	182402	-3.75
27 Naphthalene-d8	730932	365466	1461864	714951	-2.19
42 Acenaphthene-d10	420698	210349	841396	396335	-5.79
59 Phenanthrene-d10	638950	319475	1277900	598080	-6.40
69 Chrysene-d12	645065	322532	1290130	620456	-3.81
134 Di-n-octylphthala	1016118	508059	2032236	977954	-3.76
77 Perylene-d12	650033	325016	1300066	621376	-4.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.00
27 Naphthalene-d8	11.50	11.00	12.00	11.50	0.00
42 Acenaphthene-d10	15.37	14.87	15.87	15.38	0.05
59 Phenanthrene-d10	18.63	18.13	19.13	18.64	0.04
69 Chrysene-d12	23.71	23.21	24.21	23.71	0.00
134 Di-n-octylphthala	24.79	24.29	25.29	24.79	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

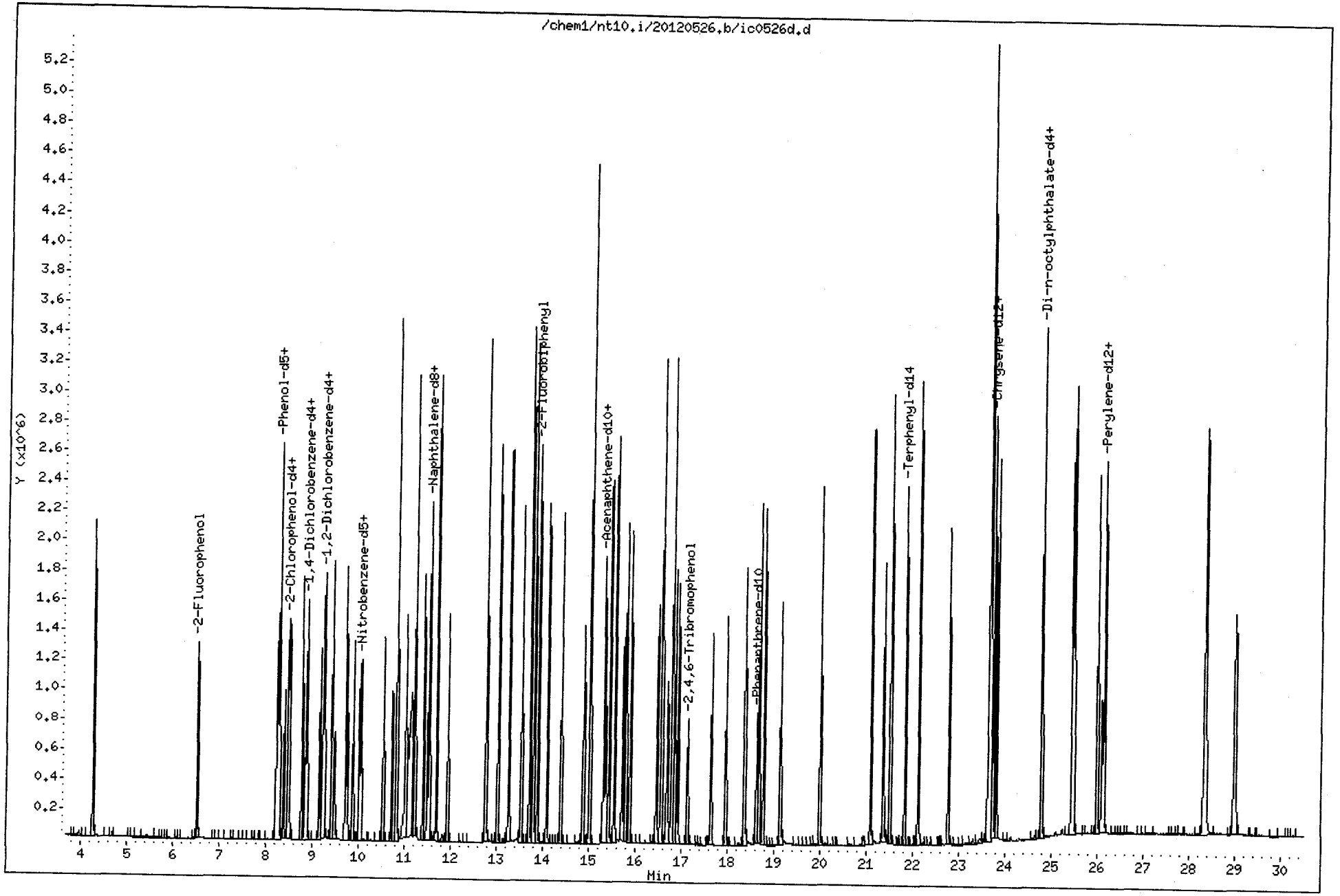
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120526.b/ic0526d.d
Date : 26-MAY-2012 12:50
Client ID:
Sample Info: ABN10

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



UZ99:00215

CO-ELUTION SUMMARY FOR FILE - ic0526d.d

Lab ID: ABN10, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
15.032	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/30/12

Data file : /chem1/nt10.i/20120526.b/ic0526e.d
Lab Smp Id: ABN.5
Inj Date : 26-MAY-2012 13:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN.5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 10:15 yev Quant Type: ISTD
Cal Date : 26-MAY-2012 13:27 Cal File: ic0526e.d
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.537	6.537	(0.738)	33072	0.50000	0.4966
$	2 Phenol-d5	99	8.237	8.229	(0.930)	40401	0.50000	0.4850
	3 Phenol	94	8.252	8.252	(0.932)	42434	0.50000	0.4758
$	5 2-Chlorophenol-d4	132	8.476	8.476	(0.957)	36271	0.50000	0.4978
	4 Bis(2-Chloroethyl)ether	93	8.399	8.399	(0.948)	33015	0.50000	0.5031
	6 2-Chlorophenol	128	8.507	8.507	(0.961)	37190	0.50000	0.4717
	7 1,3-Dichlorobenzene	146	8.786	8.786	(0.992)	39229	0.50000	0.5036
*	8 1,4-Dichlorobenzene-d4	152	8.856	8.856	(1.000)	190457	4.00000	
	9 1,4-Dichlorobenzene	146	8.887	8.887	(1.004)	38429	0.50000	0.5042
$	10 1,2-Dichlorobenzene-d4	152	9.236	9.236	(1.043)	23171	0.50000	0.4871
	12 1,2-Dichlorobenzene	146	9.267	9.267	(1.046)	37355	0.50000	0.5048
	11 Benzyl alcohol	108	9.166	9.166	(1.035)	17957	0.50000	0.4692 (M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.492	9.492	(1.072)	12420	0.50000	0.5105
	13 2-Methylphenol	108	9.430	9.430	(1.065)	33661	0.50000	0.4811
	17 Hexachloroethane	117	9.888	9.888	(1.117)	14685	0.50000	0.4934
	16 N-Nitroso-di-n-propylamine	70	9.764	9.756	(1.103)	21002	0.50000	0.5158
	15 4-Methylphenol	108	9.725	9.725	(1.098)	36146	0.50000	0.4981
$	18 Nitrobenzene-d5	82	10.020	10.020	(0.872)	32267	0.50000	0.4856
	19 Nitrobenzene	77	10.059	10.059	(0.875)	32553	0.50000	0.4952
	20 Isophorone	82	10.540	10.540	(0.917)	57171	0.50000	0.4602
	21 2-Nitrophenol	139	10.733	10.733	(0.934)	19163	0.50000	0.4605
	22 2,4-Dimethylphenol	107	10.833	10.833	(0.942)	63271	1.00000	0.9751
	23 Bis(2-Chloroethoxy)methane	93	11.034	11.034	(0.960)	36342	0.50000	0.4945
	24 Benzoic acid	105	10.972	10.995	(0.954)	34874	2.00000	1.004
	25 2,4-Dichlorophenol	162	11.226	11.226	(0.976)	62547	1.00000	0.9976
	26 1,2,4-Trichlorobenzene	180	11.411	11.411	(0.993)	30848	0.50000	0.5137
*	27 Naphthalene-d8	136	11.496	11.496	(1.000)	743799	4.00000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	11.543	11.543	(1.004)	92023	0.50000	0.4898
29 4-Chloroaniline	127	11.705	11.705	(1.018)	75074	1.00000	0.9217
30 Hexachlorobutadiene	225	11.952	11.944	(1.040)	16167	0.50000	0.5009
31 4-Chloro-3-methylphenol	107	12.780	12.772	(1.112)	51481	1.00000	0.9079
32 2-Methylnaphthalene	142	13.043	13.043	(1.135)	62715	0.50000	0.4789
33 Hexachlorocyclopentadiene	237	13.546	13.554	(0.881)	11564	1.00000	0.4342
34 2,4,6-Trichlorophenol	196	13.724	13.724	(0.893)	36559	1.00000	0.9184
35 2,4,5-Trichlorophenol	196	13.809	13.809	(0.898)	37583	1.00000	0.8814
$ 36 2-Fluorobiphenyl	172	13.902	13.902	(0.904)	70164	0.50000	0.5017
37 2-Chloronaphthalene	162	14.104	14.104	(0.917)	58403	0.50000	0.4902
38 2-Nitroaniline	65	14.398	14.398	(0.937)	27357	1.00000	0.9555
39 Dimethylphthalate	163	14.885	14.885	(0.968)	62531	0.50000	0.5093
40 Acenaphthylene	152	15.032	15.032	(0.978)	90527	0.50000	0.4996
41 2,6-Dinitrotoluene	165	15.025	15.025	(0.977)	29070	1.00000	0.9706
* 42 Acenaphthene-d10	164	15.373	15.373	(1.000)	404393	4.00000	
43 3-Nitroaniline	138	15.319	15.319	(0.996)	33417	1.00000	0.9851
44 Acenaphthene	153	15.442	15.442	(1.005)	53337	0.50000	0.4877
45 2,4-Dinitrophenol	184	15.566	15.558	(1.013)	6885	2.00000	0.3414(M)
46 Dibenzofuran	168	15.798	15.798	(1.028)	78730	0.50000	0.4945
47 4-Nitrophenol	109	15.752	15.736	(1.025)	11307	1.00000	0.8600
48 2,4-Dinitrotoluene	165	15.891	15.891	(1.034)	36832	1.00000	0.9536
50 Diethylphthalate	149	16.463	16.463	(1.071)	62167	0.50000	0.5182
49 Fluorene	166	16.563	16.563	(1.077)	61043	0.50000	0.4965
51 4-Chlorophenyl-phenylether	204	16.579	16.579	(1.078)	28825	0.50000	0.4957
52 4-Nitroaniline	138	16.687	16.687	(1.085)	36218	1.00000	1.062
53 4,6-Dinitro-2-methylphenol	198	16.795	16.795	(0.901)	33741	2.00000	1.491
54 N-Nitrosodiphenylamine	169	16.857	16.857	(0.905)	43484	0.50000	0.5152
$ 55 2,4,6-Tribromophenol	330	17.142	17.142	(1.115)	7941	0.50000	0.4753
56 4-Bromophenyl-phenylether	248	17.659	17.659	(0.948)	15870	0.50000	0.4678
57 Hexachlorobenzene	284	17.976	17.976	(0.965)	20014	0.50000	0.5159
58 Pentachlorophenol	266	18.386	18.386	(0.987)	8182	1.00000	0.5155
* 59 Phenanthrene-d10	188	18.633	18.633	(1.000)	632241	4.00000	
60 Phenanthrene	178	18.680	18.680	(1.002)	77109	0.50000	0.4713
61 Anthracene	178	18.780	18.780	(1.008)	81440	0.50000	0.4753
62 Carbazole	167	19.144	19.144	(1.027)	82015	0.50000	0.5280
63 Di-n-butylphthalate	149	20.011	20.003	(1.074)	100979	0.50000	0.4520
64 Fluoranthene	202	21.102	21.102	(1.132)	87728	0.50000	0.4682
65 Pyrene	202	21.519	21.519	(0.908)	91993	0.50000	0.4771
$ 66 Terphenyl-d14	244	21.837	21.837	(0.921)	59941	0.50000	0.4990
67 Butylbenzylphthalate	149	22.781	22.781	(0.961)	44063	0.50000	0.4925
68 Benzo(a)anthracene	228	23.679	23.679	(0.999)	86535	0.50000	0.4819
* 69 Chrysene-d12	240	23.703	23.703	(1.000)	634764	4.00000	
70 3,3'-Dichlorobenzidine	252	23.656	23.656	(0.998)	100566	1.00000	1.051
71 Chrysene	228	23.749	23.749	(1.002)	75560	0.50000	0.4794
72 bis(2-Ethylhexyl)phthalate	149	23.819	23.819	(0.961)	64302	0.50000	0.4973
* 134 Di-n-octylphthalate-d4	153	24.794	24.794	(1.000)	934301	4.00000	
73 Di-n-octylphthalate	149	24.802	24.802	(1.000)	112510	0.50000	0.4946

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.444	25.444	(0.975)	82471	0.50000	0.4628
75 Benzo(k)fluoranthene	252	25.483	25.483	(0.976)	100390	0.50000	0.5246
76 Benzo(a)pyrene	252	26.002	26.002	(0.996)	76879	0.50000	0.4744
* 77 Perylene-d12	264	26.103	26.103	(1.000)	624951	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.342	28.334	(1.086)	87409	0.50000	0.4674
79 Dibenzo(a,h)anthracene	278	28.357	28.357	(1.086)	67688	0.50000	0.4607
80 Benzo(g,h,i)perylene	276	28.987	28.987	(1.110)	74485	0.50000	0.4623
90 N-Nitrosodimethylamine	74	4.266	4.266	(0.482)	39674	1.00000	1.005
91 Aniline	93	8.291	8.291	(0.936)	94480	0.50000	0.5053
93 Benzidine	184	21.365	21.365	(0.901)	74104	1.00000	1.260
103 Pyridine	79	4.290	4.290	(0.484)	33098	1.00000	0.9831
105 1-methylnaphthalene	142	13.275	13.275	(1.155)	64158	0.50000	0.4799
111 Azobenzene (1,2-DP-Hydrazine)	77	16.926	16.926	(1.101)	61411	0.50000	0.5055
187 Total Benzofluoranthenes	252	25.483	25.483	(0.976)	170479	1.00000	0.9808
99 Perylene	252	26.149	26.149	(1.002)	78454	0.50000	0.4805
98 Retene	219	22.131	22.131	(0.934)	42668	0.50000	0.4708

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0526e.d
Lab Smp Id: ABN.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	190457	0.50
27 Naphthalene-d8	730932	365466	1461864	743799	1.76
42 Acenaphthene-d10	420698	210349	841396	404393	-3.88
59 Phenanthrene-d10	638950	319475	1277900	632241	-1.05
69 Chrysene-d12	645065	322532	1290130	634764	-1.60
134 Di-n-octylphthala	1016118	508059	2032236	934301	-8.05
77 Perylene-d12	650033	325016	1300066	624951	-3.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.00
27 Naphthalene-d8	11.50	11.00	12.00	11.50	-0.07
42 Acenaphthene-d10	15.37	14.87	15.87	15.37	0.00
59 Phenanthrene-d10	18.63	18.13	19.13	18.63	0.00
69 Chrysene-d12	23.71	23.21	24.21	23.70	-0.03
134 Di-n-octylphthala	24.79	24.29	25.29	24.79	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

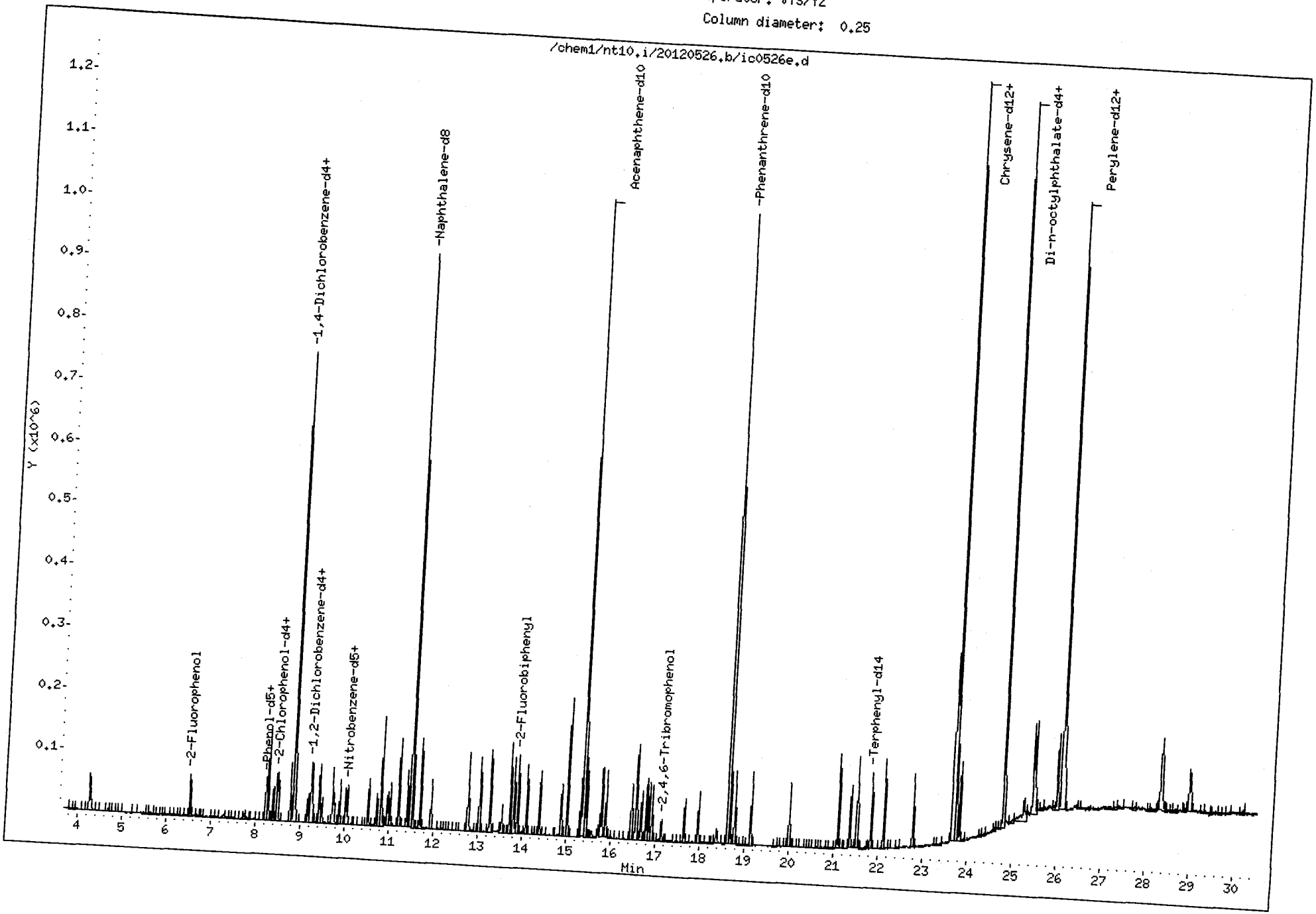
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120526.b/ic0526e.d
Date : 26-MAY-2012 13:27
Client ID:
Sample Info: ABN.5

Column phase: ZB-5msi

Instrument: nt10.i

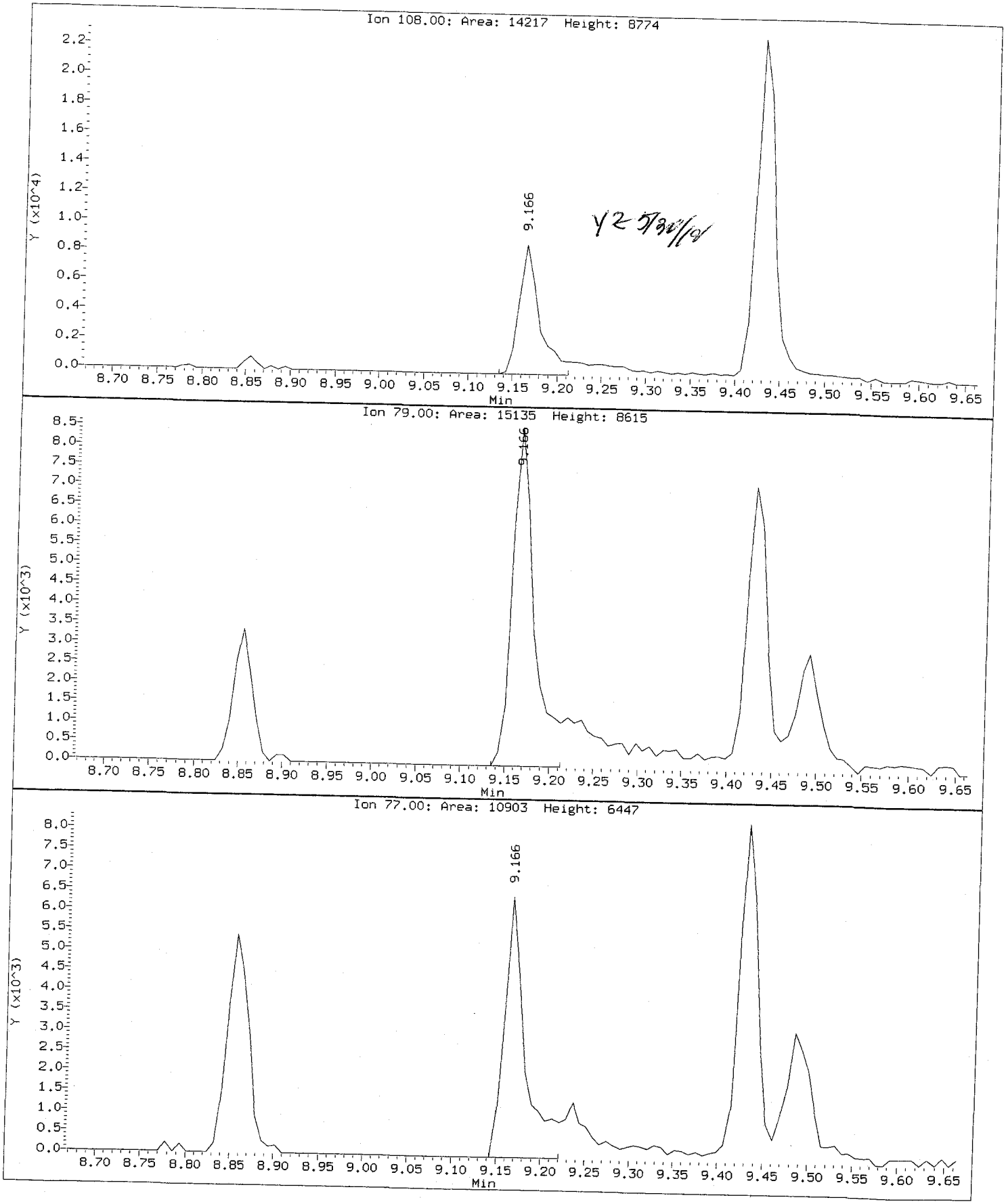
Operator: VTS/YZ
Column diameter: 0.25



UZ99:00221

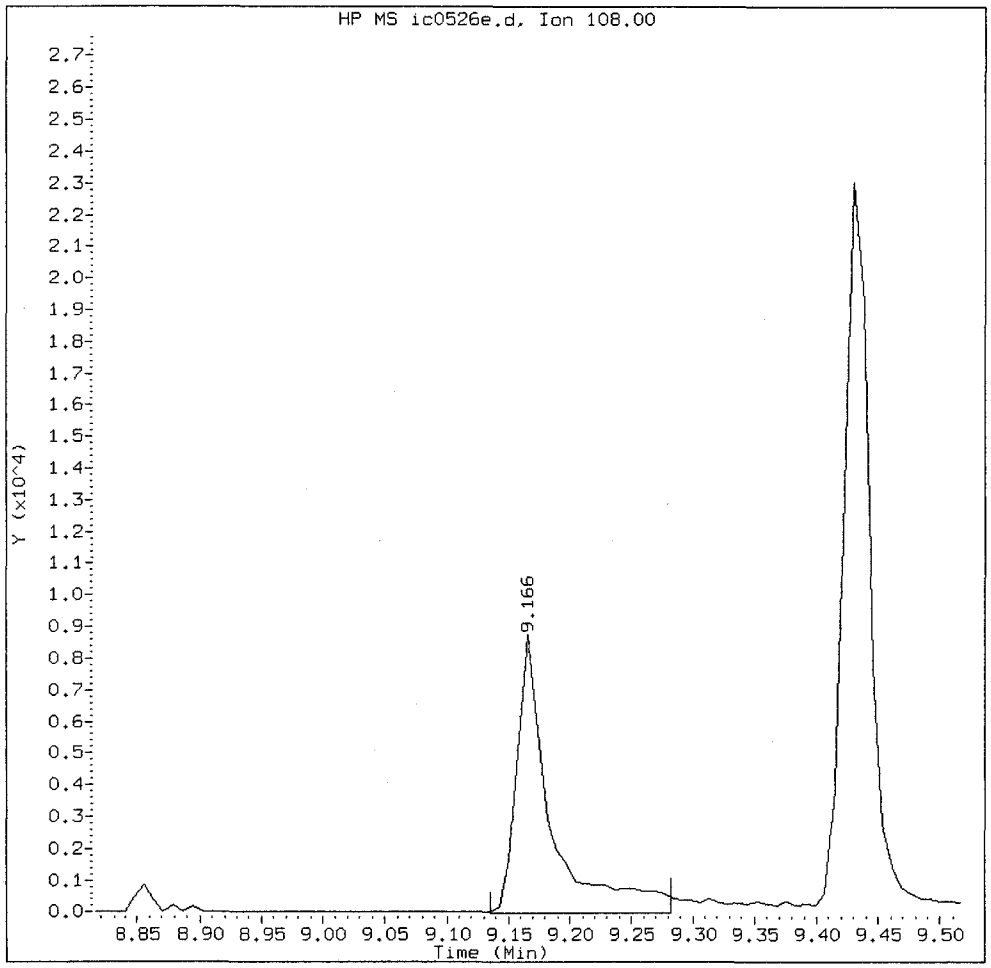
Data File: /chem1/nt10.i/20120526.b/ic0526e.d
Injection Date: 26-MAY-2012 13:27
Instrument: nt10.i
Client Sample ID:

Compound: Benzyl alcohol
CAS Number: 100-51-6



ABN.5, /chem1/nt10.i/20120526.b/ic0526e.d

Benzyl alcohol Amount: 0.47 Area: 17957



MANUAL INTEGRATION for Benzyl alcohol

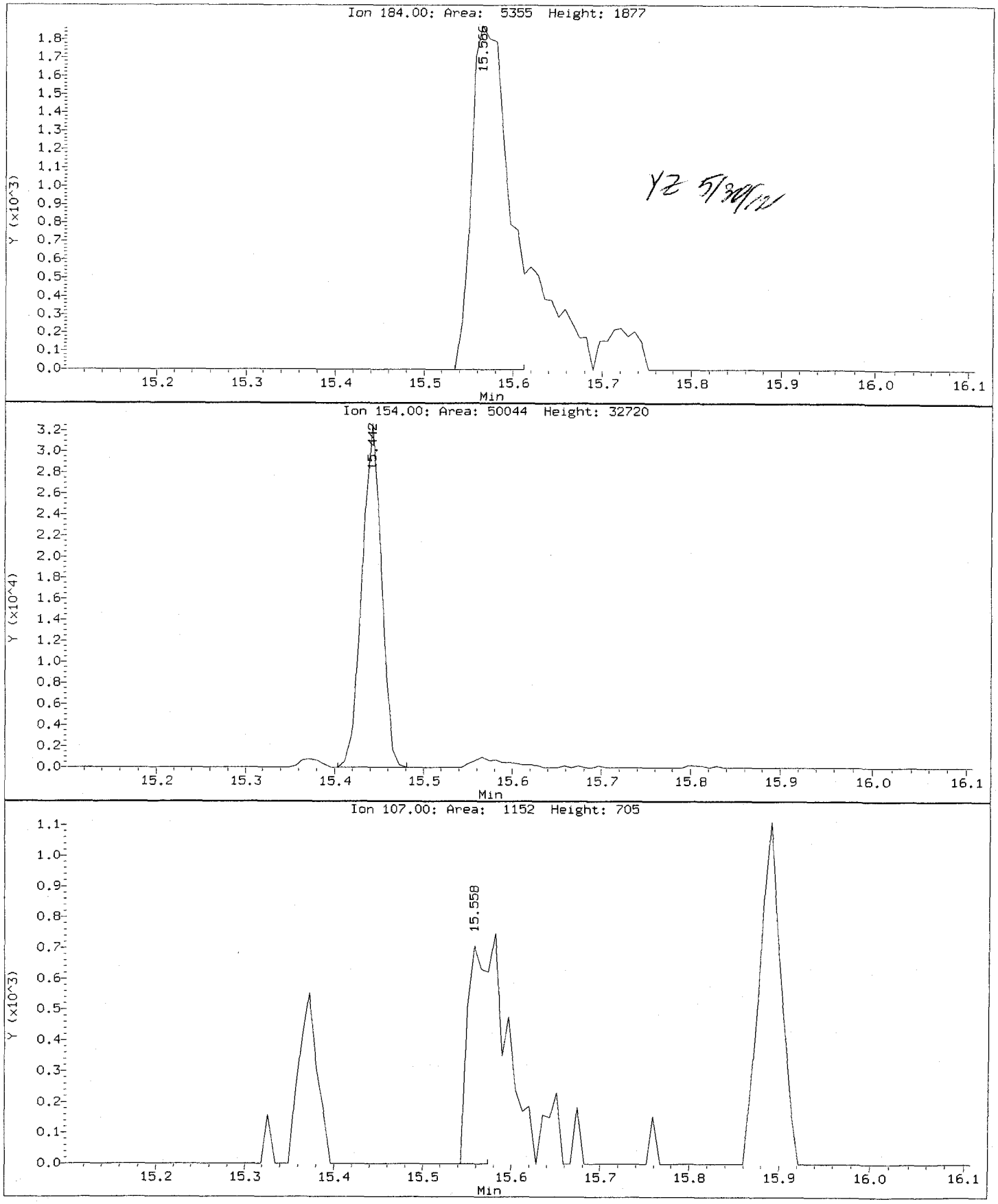
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/30/12

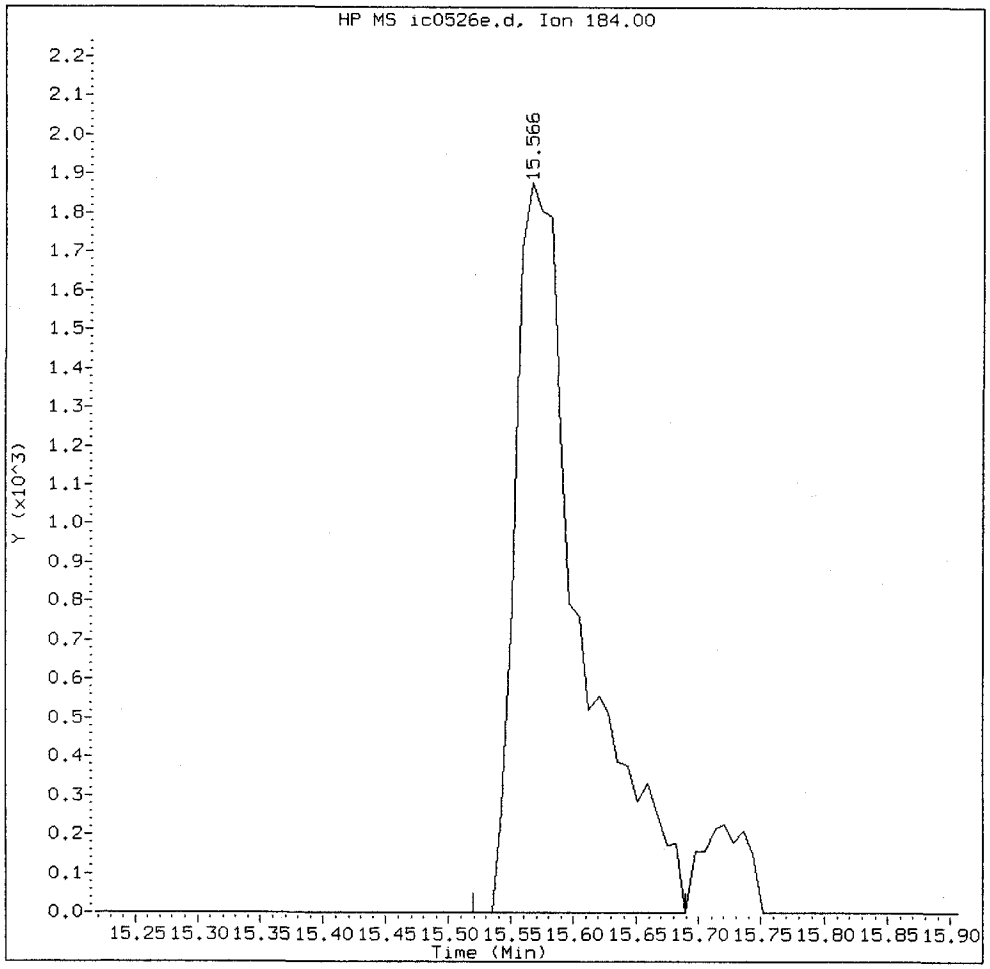
Data File: /chem1/nt10.i/20120526.b/ic0526e.d
Injection Date: 26-MAY-2012 13:27
Instrument: nt10.i
Client Sample ID:

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5



ABN.5, /chem1/nt10.i/20120526.b/ic0526e.d

2,4-Dinitrophenol Amount: 0.34 Area: 6885



MANUAL INTEGRATION for 2,4-Dinitrophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/12

CO-ELUTION SUMMARY FOR FILE - ic0526e.d

Lab ID: ABN.5, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

YZ 5/30/12

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120526.b/ic0526f.d
Lab Smp Id: ABN2.5
Inj Date : 26-MAY-2012 14:05
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN2.5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 10:15 yev Quant Type: ISTD
Cal Date : 26-MAY-2012 14:05 Cal File: ic0526f.d
Als bottle: 9 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.537	6.537	(0.738)	163966	2.50000	2.504
$	2 Phenol-d5	99	8.237	8.229	(0.930)	203560	2.50000	2.488
	3 Phenol	94	8.252	8.252	(0.932)	214943	2.50000	2.460
$	5 2-Chlorophenol-d4	132	8.476	8.476	(0.957)	175190	2.50000	2.455
	4 Bis(2-Chloroethyl)ether	93	8.399	8.399	(0.948)	161405	2.50000	2.502
	6 2-Chlorophenol	128	8.507	8.507	(0.961)	187141	2.50000	2.428
	7 1,3-Dichlorobenzene	146	8.786	8.786	(0.992)	193358	2.50000	2.521
*	8 1,4-Dichlorobenzene-d4	152	8.855	8.856	(1.000)	187226	4.00000	
	9 1,4-Dichlorobenzene	146	8.886	8.887	(1.004)	188831	2.50000	2.517
$	10 1,2-Dichlorobenzene-d4	152	9.236	9.236	(1.043)	116707	2.50000	2.496
	12 1,2-Dichlorobenzene	146	9.267	9.267	(1.046)	182496	2.50000	2.507
	11 Benzyl alcohol	108	9.166	9.166	(1.035)	88501	2.50000	2.376
	14 2,2'-oxybis(1-Chloropropane)	121	9.492	9.492	(1.072)	58372	2.50000	2.450
	13 2-Methylphenol	108	9.430	9.430	(1.065)	169060	2.50000	2.465
	17 Hexachloroethane	117	9.888	9.888	(1.117)	72338	2.50000	2.477
	16 N-Nitroso-di-n-propylamine	70	9.764	9.756	(1.103)	103017	2.50000	2.561
	15 4-Methylphenol	108	9.725	9.725	(1.098)	181313	2.50000	2.535
$	18 Nitrobenzene-d5	82	10.027	10.020	(0.872)	165680	2.50000	2.515
	19 Nitrobenzene	77	10.059	10.059	(0.875)	159420	2.50000	2.457
	20 Isophorone	82	10.547	10.540	(0.917)	300995	2.50000	2.456
	21 2-Nitrophenol	139	10.733	10.733	(0.934)	101431	2.50000	2.468
	22 2,4-Dimethylphenol	107	10.833	10.833	(0.942)	327809	5.00000	5.084
	23 Bis(2-Chloroethoxy)methane	93	11.034	11.034	(0.960)	178112	2.50000	2.456
	24 Benzoic acid	105	11.041	10.995	(0.960)	346329	10.0000	10.05
	25 2,4-Dichlorophenol	162	11.234	11.226	(0.977)	318485	5.00000	5.108
	26 1,2,4-Trichlorobenzene	180	11.419	11.411	(0.993)	144832	2.50000	2.446
*	27 Naphthalene-d8	136	11.496	11.496	(1.000)	736534	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.543	11.543	(1.004)	454524	2.50000	2.453
	29 4-Chloroaniline	127	11.705	11.705	(1.018)	446445	5.00000	5.438
	30 Hexachlorobutadiene	225	11.952	11.944	(1.040)	79815	2.50000	2.498
	31 4-Chloro-3-methylphenol	107	12.772	12.772	(1.111)	277006	5.00000	4.944
	32 2-Methylnaphthalene	142	13.043	13.043	(1.135)	319263	2.50000	2.468
	33 Hexachlorocyclopentadiene	237	13.554	13.554	(0.882)	116347	5.00000	4.534
	34 2,4,6-Trichlorophenol	196	13.724	13.724	(0.893)	202780	5.00000	5.139
	35 2,4,5-Trichlorophenol	196	13.809	13.809	(0.898)	213973	5.00000	5.075
$	36 2-Fluorobiphenyl	172	13.902	13.902	(0.904)	350050	2.50000	2.533
	37 2-Chloronaphthalene	162	14.103	14.104	(0.917)	296918	2.50000	2.524
	38 2-Nitroaniline	65	14.398	14.398	(0.937)	143668	5.00000	5.075
	39 Dimethylphthalate	163	14.893	14.885	(0.969)	312536	2.50000	2.568
	40 Acenaphthylene	152	15.032	15.032	(0.978)	450800	2.50000	2.520
	41 2,6-Dinitrotoluene	165	15.025	15.025	(0.977)	152535	5.00000	5.138
*	42 Acenaphthene-d10	164	15.373	15.373	(1.000)	398626	4.00000	
	43 3-Nitroaniline	138	15.326	15.319	(0.997)	172207	5.00000	5.124
	44 Acenaphthene	153	15.442	15.442	(1.005)	272450	2.50000	2.523
	45 2,4-Dinitrophenol	184	15.550	15.558	(1.012)	137413	10.0000	8.623
	46 Dibenzofuran	168	15.798	15.798	(1.028)	403546	2.50000	2.559
	47 4-Nitrophenol	109	15.728	15.736	(1.023)	68140	5.00000	5.213
	48 2,4-Dinitrotoluene	165	15.891	15.891	(1.034)	198671	5.00000	5.180
	50 Diethylphthalate	149	16.470	16.463	(1.071)	307774	2.50000	2.585
	49 Fluorene	166	16.563	16.563	(1.077)	301793	2.50000	2.492
	51 4-Chlorophenyl-phenylether	204	16.579	16.579	(1.078)	144930	2.50000	2.524
	52 4-Nitroaniline	138	16.687	16.687	(1.085)	176757	5.00000	5.213
	53 4,6-Dinitro-2-methylphenol	198	16.795	16.795	(0.901)	252721	10.0000	9.942
	54 N-Nitrosodiphenylamine	169	16.857	16.857	(0.905)	209250	2.50000	2.507
$	55 2,4,6-Tribromophenol	330	17.142	17.142	(1.115)	41145	2.50000	2.499
	56 4-Bromophenyl-phenylether	248	17.658	17.659	(0.948)	82575	2.50000	2.469
	57 Hexachlorobenzene	284	17.975	17.976	(0.965)	97159	2.50000	2.528
	58 Pentachlorophenol	266	18.378	18.386	(0.986)	76549	5.00000	4.373
*	59 Phenanthrene-d10	188	18.633	18.633	(1.000)	624933	4.00000	
	60 Phenanthrene	178	18.680	18.680	(1.002)	393807	2.50000	2.446
	61 Anthracene	178	18.780	18.780	(1.008)	411608	2.50000	2.442
	62 Carbazole	167	19.144	19.144	(1.027)	388580	2.50000	2.526
	63 Di-n-butylphthalate	149	20.011	20.003	(1.074)	535468	2.50000	2.437
	64 Fluoranthene	202	21.101	21.102	(1.132)	444971	2.50000	2.418
	65 Pyrene	202	21.519	21.519	(0.908)	467901	2.50000	2.490
$	66 Terphenyl-d14	244	21.844	21.837	(0.922)	300747	2.50000	2.555
	67 Butylbenzylphthalate	149	22.781	22.781	(0.961)	217413	2.50000	2.493
	68 Benzo(a)anthracene	228	23.679	23.679	(0.999)	425208	2.50000	2.439
*	69 Chrysene-d12	240	23.702	23.703	(1.000)	619154	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.656	23.656	(0.998)	494771	5.00000	5.240
	71 Chrysene	228	23.749	23.749	(1.002)	373335	2.50000	2.440
	72 bis(2-Ethylhexyl)phthalate	149	23.819	23.819	(0.961)	311745	2.50000	2.441
*	134 Di-n-octylphthalate-d4	153	24.794	24.794	(1.000)	927369	4.00000	
	73 Di-n-octylphthalate	149	24.802	24.802	(1.000)	554323	2.50000	2.463

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.444	25.444	(0.975)	415398	2.50000	2.355
75 Benzo(k)fluoranthene	252	25.483	25.483	(0.976)	489418	2.50000	2.545
76 Benzo(a)pyrene	252	26.002	26.002	(0.996)	396982	2.50000	2.455
* 77 Perylene-d12	264	26.102	26.103	(1.000)	625787	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.334	28.334	(1.085)	474062	2.50000	2.526
79 Dibenzo(a,h)anthracene	278	28.357	28.357	(1.086)	374919	2.50000	2.540
80 Benzo(g,h,i)perylene	276	28.986	28.987	(1.110)	400932	2.50000	2.488
90 N-Nitrosodimethylamine	74	4.266	4.266	(0.482)	197905	5.00000	5.084
91 Aniline	93	8.291	8.291	(0.936)	467689	2.50000	2.537
93 Benzidine	184	21.364	21.365	(0.901)	329105	5.00000	4.686
103 Pyridine	79	4.282	4.290	(0.484)	173343	5.00000	5.197
105 1-methylnaphthalene	142	13.275	13.275	(1.155)	326983	2.50000	2.475
111 Azobenzene (1,2-DP-Hydrazine)	77	16.926	16.926	(1.101)	310185	2.50000	2.575
187 Total Benzofluoranthenes	252	25.483	25.483	(0.976)	847269	5.00000	4.890
99 Perylene	252	26.149	26.149	(1.002)	392397	2.50000	2.416
98 Retene	219	22.131	22.131	(0.934)	216647	2.50000	2.459

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0526f.d
Lab Smp Id: ABN2.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	187226	-1.21
27 Naphthalene-d8	730932	365466	1461864	736534	0.77
42 Acenaphthene-d10	420698	210349	841396	398626	-5.25
59 Phenanthrene-d10	638950	319475	1277900	624933	-2.19
69 Chrysene-d12	645065	322532	1290130	619154	-4.02
134 Di-n-octylphthala	1016118	508059	2032236	927369	-8.73
77 Perylene-d12	650033	325016	1300066	625787	-3.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.00
27 Naphthalene-d8	11.50	11.00	12.00	11.50	-0.07
42 Acenaphthene-d10	15.37	14.87	15.87	15.37	0.00
59 Phenanthrene-d10	18.63	18.13	19.13	18.63	0.00
69 Chrysene-d12	23.71	23.21	24.21	23.70	-0.03
134 Di-n-octylphthala	24.79	24.29	25.29	24.79	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

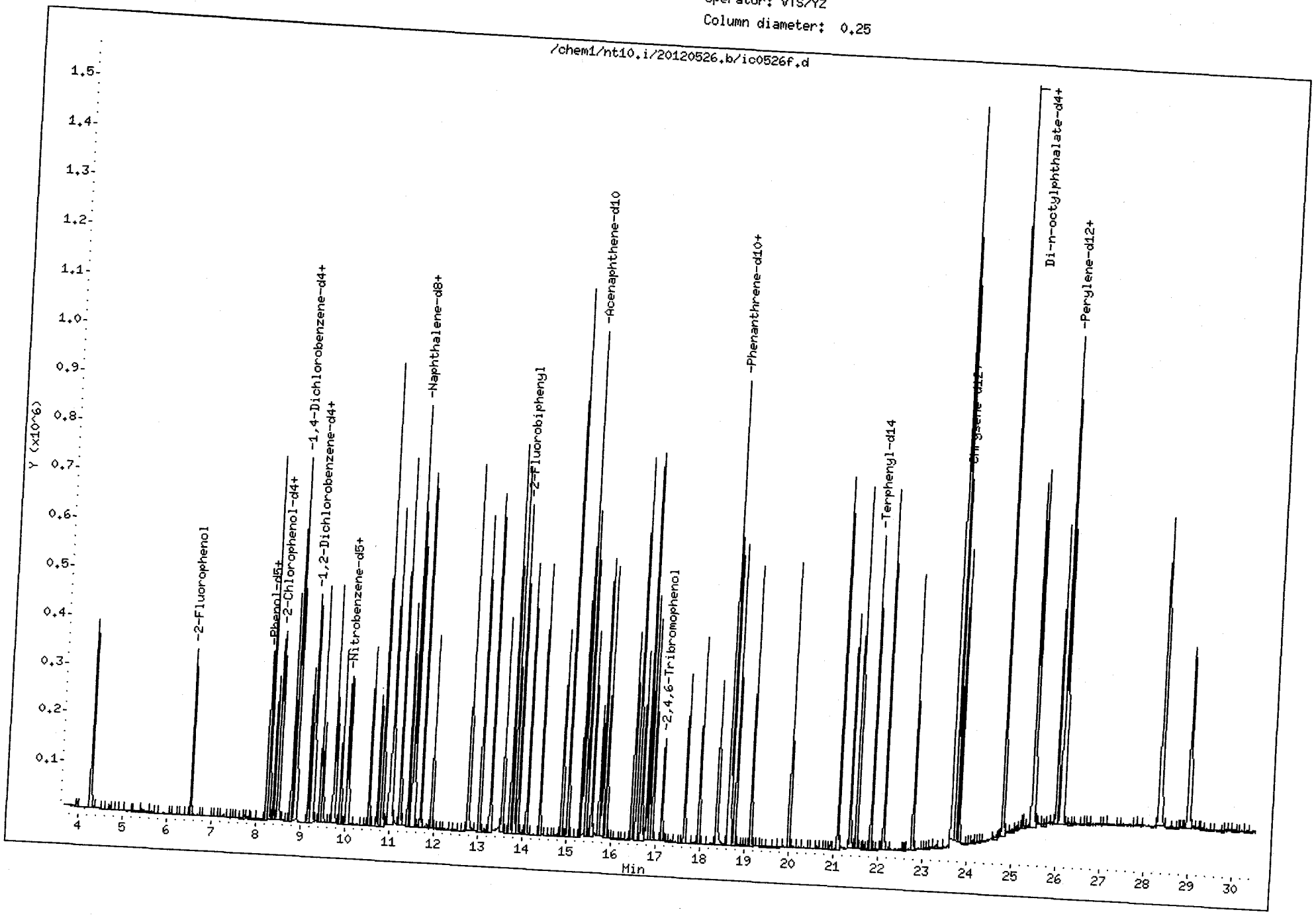
Data File: /chem1/nt10.i/20120526.b/ic0526f.d
Date : 26-MAY-2012 14:05
Client ID:
Sample Info: ABN2.5

Page 5

Instrument: nt10.i

Column phase: ZB-5msi

Operator: VTS/YZ
Column diameter: 0.25



UZ99:00231

CO-ELUTION SUMMARY FOR FILE - ic0526f.d

Lab ID: ABN2.5, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 7/30/12

Data file : /chem1/nt10.i/20120526.b/ic0526g.d
Lab Smp Id: ABN1.0
Inj Date : 26-MAY-2012 14:42
Operator : VTS/YZ
Smp Info : ABN1.0
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 10:15 yev
Cal Date : 26-MAY-2012 14:42
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0526g.d
Calibration Sample, Level: 3

Compound Sublist: PSDDAICAL.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.537	6.537	(0.738)	67712	1.00000	0.9987
$	2 Phenol-d5	99	8.229	8.229	(0.929)	82827	1.00000	0.9807
	3 Phenol	94	8.252	8.252	(0.932)	87196	1.00000	0.9686
$	5 2-Chlorophenol-d4	132	8.476	8.476	(0.957)	74501	1.00000	1.007
	4 Bis(2-Chloroethyl)ether	93	8.399	8.399	(0.948)	68297	1.00000	1.019
	6 2-Chlorophenol	128	8.507	8.507	(0.961)	77627	1.00000	0.9765
	7 1,3-Dichlorobenzene	146	8.786	8.786	(0.992)	80562	1.00000	1.012
*	8 1,4-Dichlorobenzene-d4	152	8.856	8.856	(1.000)	193887	4.00000	
	9 1,4-Dichlorobenzene	146	8.887	8.887	(1.004)	77656	1.00000	0.9996
$	10 1,2-Dichlorobenzene-d4	152	9.236	9.236	(1.043)	49288	1.00000	1.015
	12 1,2-Dichlorobenzene	146	9.267	9.267	(1.046)	78319	1.00000	1.033
	11 Benzyl alcohol	108	9.166	9.166	(1.035)	33270	1.00000	0.8797
	14 2,2'-oxybis(1-Chloropropane)	121	9.492	9.492	(1.072)	24706	1.00000	1.001
	13 2-Methylphenol	108	9.430	9.430	(1.065)	70476	1.00000	0.9933
	17 Hexachloroethane	117	9.888	9.888	(1.117)	29826	1.00000	0.9882
	16 N-Nitroso-di-n-propylamine	70	9.756	9.756	(1.102)	42756	1.00000	1.023
	15 4-Methylphenol	108	9.725	9.725	(1.098)	73702	1.00000	0.9957
$	18 Nitrobenzene-d5	82	10.020	10.020	(0.872)	67950	1.00000	1.011
	19 Nitrobenzene	77	10.059	10.059	(0.875)	66607	1.00000	1.007
	20 Isophorone	82	10.540	10.540	(0.917)	123948	1.00000	0.9936
	21 2-Nitrophenol	139	10.733	10.733	(0.934)	40831	1.00000	0.9786
	22 2,4-Dimethylphenol	107	10.833	10.833	(0.942)	137179	2.00000	2.075
	23 Bis(2-Chloroethoxy)methane	93	11.034	11.034	(0.960)	76763	1.00000	1.033
	24 Benzoic acid	105	10.995	10.995	(0.956)	97576	4.00000	2.907
	25 2,4-Dichlorophenol	162	11.226	11.226	(0.976)	127789	2.00000	2.010
	26 1,2,4-Trichlorobenzene	180	11.411	11.411	(0.993)	61741	1.00000	1.020
*	27 Naphthalene-d8	136	11.496	11.496	(1.000)	750391	4.00000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	11.543	11.543	(1.004)	191351	1.00000	1.012
29 4-Chloroaniline	127	11.705	11.705	(1.018)	176284	2.00000	2.092
30 Hexachlorobutadiene	225	11.944	11.944	(1.039)	32510	1.00000	0.9988
31 4-Chloro-3-methylphenol	107	12.772	12.772	(1.111)	113753	2.00000	1.994
32 2-Methylnaphthalene	142	13.043	13.043	(1.135)	129910	1.00000	0.9878
33 Hexachlorocyclopentadiene	237	13.554	13.554	(0.882)	35252	2.00000	1.409
34 2,4,6-Trichlorophenol	196	13.724	13.724	(0.893)	78941	2.00000	1.946
35 2,4,5-Trichlorophenol	196	13.809	13.809	(0.898)	85517	2.00000	1.969
$ 36 2-Fluorobiphenyl	172	13.902	13.902	(0.904)	142575	1.00000	0.9990
37 2-Chloronaphthalene	162	14.104	14.104	(0.917)	124911	1.00000	1.024
38 2-Nitroaniline	65	14.398	14.398	(0.937)	57672	2.00000	1.976
39 Dimethylphthalate	163	14.885	14.885	(0.968)	131397	1.00000	1.039
40 Acenaphthylene	152	15.032	15.032	(0.978)	185662	1.00000	1.004
41 2,6-Dinitrotoluene	165	15.025	15.025	(0.977)	63520	2.00000	2.061
* 42 Acenaphthene-d10	164	15.373	15.373	(1.000)	411692	4.00000	
43 3-Nitroaniline	138	15.319	15.319	(0.996)	70660	2.00000	2.031
44 Acenaphthene	153	15.442	15.442	(1.005)	111440	1.00000	0.9992
45 2,4-Dinitrophenol	184	15.558	15.558	(1.012)	31710	4.00000	2.109
46 Dibenzofuran	168	15.798	15.798	(1.028)	166661	1.00000	1.020
47 4-Nitrophenol	109	15.736	15.736	(1.024)	25473	2.00000	1.902
48 2,4-Dinitrotoluene	165	15.891	15.891	(1.034)	81362	2.00000	2.046
50 Diethylphthalate	149	16.463	16.463	(1.071)	125440	1.00000	1.017
49 Fluorene	166	16.563	16.563	(1.077)	125909	1.00000	1.006
51 4-Chlorophenyl-phenylether	204	16.579	16.579	(1.078)	60269	1.00000	1.014
52 4-Nitroaniline	138	16.687	16.687	(1.085)	77522	2.00000	2.180
53 4,6-Dinitro-2-methylphenol	198	16.795	16.795	(0.901)	88128	4.00000	3.497
54 N-Nitrosodiphenylamine	169	16.857	16.857	(0.905)	89101	1.00000	1.043
$ 55 2,4,6-Tribromophenol	330	17.142	17.142	(1.115)	16908	1.00000	0.9950
56 4-Bromophenyl-phenylether	248	17.659	17.659	(0.948)	34045	1.00000	1.001
57 Hexachlorobenzene	284	17.976	17.976	(0.965)	40047	1.00000	1.022
58 Pentachlorophenol	266	18.386	18.386	(0.987)	24770	2.00000	1.467
* 59 Phenanthrene-d10	188	18.633	18.633	(1.000)	635080	4.00000	
60 Phenanthrene	178	18.680	18.680	(1.002)	164484	1.00000	1.004
61 Anthracene	178	18.780	18.780	(1.008)	169650	1.00000	0.9917
62 Carbazole	167	19.144	19.144	(1.027)	169887	1.00000	1.073
63 Di-n-butylphthalate	149	20.003	20.003	(1.073)	219684	1.00000	0.9861
64 Fluoranthene	202	21.102	21.102	(1.132)	179541	1.00000	0.9656
65 Pyrene	202	21.519	21.519	(0.908)	197362	1.00000	1.015
$ 66 Terphenyl-d14	244	21.837	21.837	(0.921)	123736	1.00000	1.016
67 Butylbenzylphthalate	149	22.781	22.781	(0.961)	91227	1.00000	1.012
68 Benzo(a)anthracene	228	23.679	23.679	(0.999)	178718	1.00000	0.9944
* 69 Chrysene-d12	240	23.703	23.703	(1.000)	638910	4.00000	
70 3,3'-Dichlorobenzidine	252	23.656	23.656	(0.998)	206440	2.00000	2.098
71 Chrysene	228	23.749	23.749	(1.002)	159367	1.00000	1.008
72 bis(2-Ethylhexyl)phthalate	149	23.819	23.819	(0.961)	126524	1.00000	0.9823
* 134 Di-n-octylphthalate-d4	153	24.794	24.794	(1.000)	937949	4.00000	
73 Di-n-octylphthalate	149	24.802	24.802	(1.000)	231357	1.00000	1.014

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.444	25.444	(0.975)	172850	1.00000	0.9793
75 Benzo(k)fluoranthene	252	25.483	25.483	(0.976)	201900	1.00000	1.039
76 Benzo(a)pyrene	252	26.002	26.002	(0.996)	163104	1.00000	1.004
* 77 Perylene-d12	264	26.103	26.103	(1.000)	628310	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.334	28.334	(1.085)	184943	1.00000	0.9841
79 Dibenzo(a,h)anthracene	278	28.357	28.357	(1.086)	147098	1.00000	0.9937
80 Benzo(g,h,i)perylene	276	28.987	28.987	(1.110)	157075	1.00000	0.9747
90 N-Nitrosodimethylamine	74	4.266	4.266	(0.482)	80663	2.00000	2.001
91 Aniline	93	8.291	8.291	(0.936)	196937	1.00000	1.027
93 Benzidine	184	21.365	21.365	(0.901)	151908	2.00000	2.082
103 Pyridine	79	4.290	4.290	(0.484)	72771	2.00000	2.091
105 1-methylnaphthalene	142	13.275	13.275	(1.155)	131250	1.00000	0.9786
111 Azobenzene (1,2-DP-Hydrazine)	77	16.926	16.926	(1.101)	128094	1.00000	1.025
187 Total Benzofluoranthenes	252	25.483	25.483	(0.976)	353049	2.00000	2.025
99 Perylene	252	26.149	26.149	(1.002)	164917	1.00000	1.010
98 Retene	219	22.131	22.131	(0.934)	88185	1.00000	0.9742

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0526g.d
Lab Smp Id: ABN1.0
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	193887	2.31
27 Naphthalene-d8	730932	365466	1461864	750391	2.66
42 Acenaphthene-d10	420698	210349	841396	411692	-2.14
59 Phenanthrene-d10	638950	319475	1277900	635080	-0.61
69 Chrysene-d12	645065	322532	1290130	638910	-0.95
134 Di-n-octylphthala	1016118	508059	2032236	937949	-7.69
77 Perylene-d12	650033	325016	1300066	628310	-3.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.00
27 Naphthalene-d8	11.50	11.00	12.00	11.50	-0.07
42 Acenaphthene-d10	15.37	14.87	15.87	15.37	0.00
59 Phenanthrene-d10	18.63	18.13	19.13	18.63	0.00
69 Chrysene-d12	23.71	23.21	24.21	23.70	-0.03
134 Di-n-octylphthala	24.79	24.29	25.29	24.79	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

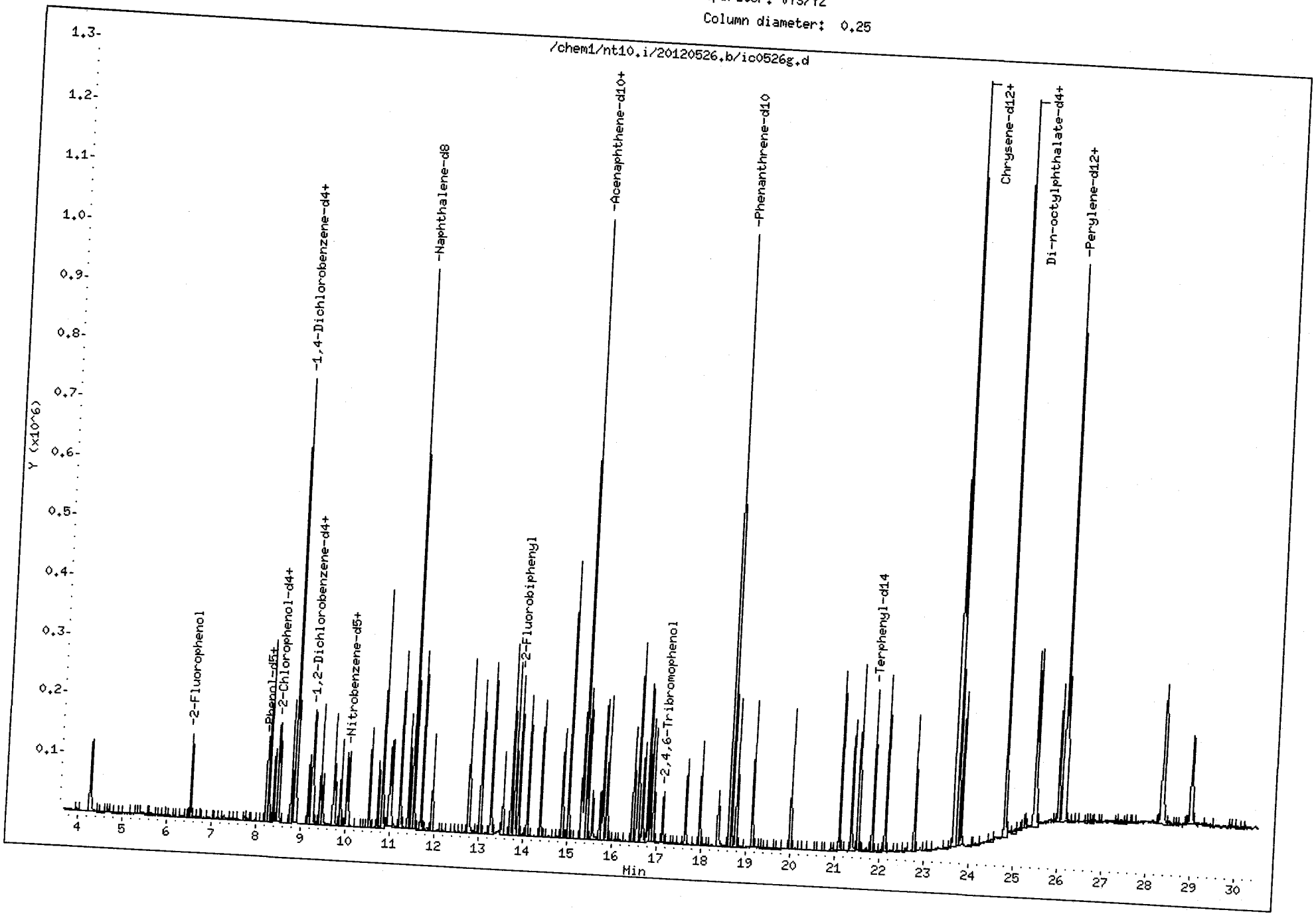
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120526.b/ic0526g.d
Date : 26-MAY-2012 14:42
Client ID:
Sample Info: ABN1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



UZ99:00237

CO-ELUTION SUMMARY FOR FILE - ic0526g.d

Lab ID: ABN1.0, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120526.b/icv0526.d
Lab Smp Id: ICV-5
Inj Date : 26-MAY-2012 15:19
Operator : VTS/YZ
Smp Info : ICV-5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120526.b/ABN.m
Meth Date : 30-May-2012 11:37 yev
Cal Date : 26-MAY-2012 14:42
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0526g.d
QC Sample: LCS

Compound Sublist: PSDDAICAL.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	8.507	8.229	(0.961)	24638	0.22682	0.2268(R)
	3 Phenol	94	8.260	8.252	(0.933)	612543	5.29055	5.291
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.399	8.399	(0.948)	440342	5.10797	5.108
	6 2-Chlorophenol	128	8.507	8.507	(0.961)	524588	5.13081	5.131
	7 1,3-Dichlorobenzene	146	8.786	8.786	(0.992)	519359	5.07355	5.074
*	8 1,4-Dichlorobenzene-d4	152	8.855	8.856	(1.000)	249364	4.00000	
	9 1,4-Dichlorobenzene	146	8.886	8.887	(1.004)	494897	4.95322	4.953
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.267	9.267	(1.046)	486192	4.98706	4.987
	11 Benzyl alcohol	108	9.166	9.166	(1.035)	318906	6.55607	6.556(R)
	14 2,2'-oxybis(1-Chloropropane)	121	9.492	9.492	(1.072)	158721	5.00118	5.001
	13 2-Methylphenol	108	9.438	9.430	(1.066)	446731	4.89549	4.895
	17 Hexachloroethane	117	9.888	9.888	(1.117)	199927	5.15030	5.150
	16 N-Nitroso-di-n-propylamine	70	9.764	9.756	(1.103)	284120	5.28370	5.284
	15 4-Methylphenol	108	9.725	9.725	(1.098)	469429	4.93078	4.931
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.066	10.059	(0.875)	449174	5.14613	5.146
	20 Isophorone	82	10.547	10.540	(0.917)	833349	5.06458	5.065
	21 2-Nitrophenol	139	10.733	10.733	(0.933)	296118	5.38022	5.380
	22 2,4-Dimethylphenol	107	10.833	10.833	(0.942)	431706	4.95126	4.951
	23 Bis(2-Chloroethoxy)methane	93	11.034	11.034	(0.959)	521674	5.32350	5.324
	24 Benzoic acid	105	11.057	10.995	(0.961)	487276	8.44945	8.449
	25 2,4-Dichlorophenol	162	11.234	11.226	(0.977)	459357	5.47726	5.477
	26 1,2,4-Trichlorobenzene	180	11.419	11.411	(0.993)	399924	5.00904	5.009
*	27 Naphthalene-d8	136	11.504	11.496	(1.000)	989810	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	28 Naphthalene	128	11.543	11.543	(1.003)	1452947	5.82271	5.823
	29 4-Chloroaniline	127	11.705	11.705	(1.017)	715126	6.43253	6.433
	30 Hexachlorobutadiene	225	11.952	11.944	(1.039)	220886	5.14498	5.145
	31 4-Chloro-3-methylphenol	107	12.772	12.772	(1.110)	406012	5.39547	5.395
	32 2-Methylnaphthalene	142	13.043	13.043	(1.134)	1037080	5.97841	5.978
	33 Hexachlorocyclopentadiene	237	13.554	13.554	(0.882)	183705	4.67068	4.671
	34 2,4,6-Trichlorophenol	196	13.732	13.724	(0.893)	285210	5.30731	5.307
	35 2,4,5-Trichlorophenol	196	13.809	13.809	(0.898)	299729	5.21021	5.210
$	36 2-Fluorobiphenyl	172	13.802	13.902	(0.898)	489	0.00259	0.002587(R)
	37 2-Chloronaphthalene	162	14.103	14.104	(0.917)	860466	5.32462	5.325
	38 2-Nitroaniline	65	14.405	14.398	(0.937)	240031	6.21031	6.210
	39 Dimethylphthalate	163	14.893	14.885	(0.969)	869716	5.19064	5.191
	40 Acenaphthylene	152	15.032	15.032	(0.978)	1464431	5.97933	5.979
	41 2,6-Dinitrotoluene	165	15.032	15.025	(0.978)	211930	5.19161	5.192
*	42 Acenaphthene-d10	164	15.373	15.373	(1.000)	545323	4.00000	
	43 3-Nitroaniline	138	15.326	15.319	(0.997)	271136	5.88282	5.883
	44 Acenaphthene	153	15.442	15.442	(1.005)	894186	6.05301	6.053
	45 2,4-Dinitrophenol	184	15.558	15.558	(1.012)	218245	8.18330	8.183(R)
	46 Dibenzofuran	168	15.798	15.798	(1.028)	1286067	5.94234	5.942
	47 4-Nitrophenol	109	15.728	15.736	(1.023)	99971	5.63611	5.636
	48 2,4-Dinitrotoluene	165	15.891	15.891	(1.034)	280475	5.32546	5.325
	50 Diethylphthalate	149	16.470	16.463	(1.071)	847615	5.18905	5.189
	49 Fluorene	166	16.563	16.563	(1.077)	996290	6.00793	6.008
	51 4-Chlorophenyl-phenylether	204	16.579	16.579	(1.078)	420476	5.33996	5.340
	52 4-Nitroaniline	138	16.687	16.687	(1.085)	246381	5.23174	5.232
	53 4,6-Dinitro-2-methylphenol	198	16.795	16.795	(0.901)	354119	10.6158	10.62
	54 N-Nitrosodiphenylamine	169	16.857	16.857	(0.905)	589653	5.21389	5.214
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.658	17.659	(0.948)	236862	5.26296	5.263
	57 Hexachlorobenzene	284	17.975	17.976	(0.965)	262810	5.06468	5.065
	58 Pentachlorophenol	266	18.378	18.386	(0.986)	122932	4.56720	4.567
*	59 Phenanthrene-d10	188	18.633	18.633	(1.000)	840695	4.00000	
	60 Phenanthrene	178	18.688	18.680	(1.003)	1321406	6.09554	6.096
	61 Anthracene	178	18.780	18.780	(1.008)	1383648	6.10993	6.110
	62 Carbazole	167	19.144	19.144	(1.027)	1030370	4.91739	4.917
	63 Di-n-butylphthalate	149	20.011	20.003	(1.074)	1644680	5.57713	5.577
	64 Fluoranthene	202	21.101	21.102	(1.132)	1505236	6.11547	6.115
	65 Pyrene	202	21.519	21.519	(0.908)	1556744	5.86121	5.861
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	22.781	22.781	(0.961)	642627	5.21589	5.216
	68 Benzo(a)anthracene	228	23.679	23.679	(0.999)	1435464	5.84603	5.846
*	69 Chrysene-d12	240	23.710	23.703	(1.000)	872921	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.656	23.656	(0.998)	418178	3.11038	3.110(R)
	71 Chrysene	228	23.749	23.749	(1.002)	1272933	5.89305	5.893
	72 bis(2-Ethylhexyl)phthalate	149	23.819	23.819	(0.961)	941422	5.06177	5.062
*	134 Di-n-octylphthalate-d4	153	24.794	24.794	(1.000)	1354341	4.00000	
	73 Di-n-octylphthalate	149	24.802	24.802	(1.000)	1768809	5.36813	5.368

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
74 Benzo(b)fluoranthene	252	25.452	25.444	(0.975)	1497096	6.20177	6.202
75 Benzo(k)fluoranthene	252	25.491	25.483	(0.977)	1570470	5.90838	5.908
76 Benzo(a)pyrene	252	26.002	26.002	(0.996)	1323802	5.95784	5.958
* 77 Perylene-d12	264	26.102	26.103	(1.000)	859333	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.350	28.334	(1.086)	1603345	6.23819	6.238
79 Dibenzo(a,h)anthracene	278	28.365	28.357	(1.087)	1278734	6.31592	6.316
80 Benzo(g,h,i)perylene	276	29.002	28.987	(1.111)	1376066	6.24353	6.244
90 N-Nitrosodimethylamine	74	4.266	4.266	(0.482)	270769	5.22251	5.223
91 Aniline	93	8.291	8.291	(0.936)	665451	2.69811	2.698 (R)
93 Benzidine	184	21.364	21.365	(0.901)	129616	1.30006	1.300 (R)
103 Pyridine	79	4.274	4.290	(0.483)	431672	9.64286	9.643
105 1-methylnaphthalene	142	13.275	13.275	(1.154)	765476	4.32687	4.327
111 Azobenzene (1,2-DP-Hydrazine)	77	16.926	16.926	(1.101)	848874	5.12887	5.129
187 Total Benzofluoranthenes	252	25.491	25.483	(0.977)	2896118	12.1460	12.15
~~99 Perylene~~	~~252~~	~~26.002~~	~~26.149~~	~~(0.996)~~	~~1323802~~	~~5.92651~~	~~5.927~~
98 Retene	219	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem1/nt10.i/20120526.b/icv0526.d
Report Date: 30-May-2012 11:39

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: icv0526.d
Lab Smp Id: ICV-5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Calibration Date: 26-MAY-2012
Calibration Time: 10:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	249364	31.58
27 Naphthalene-d8	730932	365466	1461864	989810	35.42
42 Acenaphthene-d10	420698	210349	841396	545323	29.62
59 Phenanthrene-d10	638950	319475	1277900	840695	31.57
69 Chrysene-d12	645065	322532	1290130	872921	35.32
134 Di-n-octylphthala	1016118	508059	2032236	1354341	33.29
77 Perylene-d12	650033	325016	1300066	859333	32.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.86	8.36	9.36	8.86	0.00
27 Naphthalene-d8	11.50	11.00	12.00	11.50	0.00
42 Acenaphthene-d10	15.37	14.87	15.87	15.37	0.00
59 Phenanthrene-d10	18.63	18.13	19.13	18.63	0.00
69 Chrysene-d12	23.71	23.21	24.21	23.71	0.00
134 Di-n-octylphthala	24.79	24.29	25.29	24.79	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: ICV-5
Level:
Data Type: MS DATA
SpikeList File: ICV.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20120526.b/ABN.m
Misc Info:

Client SDG:
Fraction: SV

Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3 Phenol	5.000	5.291	105.81	
4 Bis(2-Chloroethyl)	5.000	5.108	102.16	
6 2-Chlorophenol	5.000	5.131	102.62	
7 1,3-Dichlorobenzen	5.000	5.074	101.47	
9 1,4-Dichlorobenzen	5.000	4.953	99.06	
11 Benzyl alcohol	5.000	6.556	131.12*	
12 1,2-Dichlorobenzen	5.000	4.987	99.74	
13 2-Methylphenol	5.000	4.895	97.91	
14 2,2'-oxybis(1-Chlo	5.000	5.001	100.02	
15 4-Methylphenol	5.000	4.931	98.62	
16 N-Nitroso-di-n-pro	5.000	5.284	105.67	
17 Hexachloroethane	5.000	5.150	103.01	
19 Nitrobenzene	5.000	5.146	102.92	
20 Isophorone	5.000	5.065	101.29	
21 2-Nitrophenol	5.000	5.380	107.60	
22 2,4-Dimethylphenol	5.000	4.951	99.03	
23 Bis(2-Chloroethoxy	5.000	5.324	106.47	
24 Benzoic acid	10.00	8.449	84.49	
25 2,4-Dichlorophenol	5.000	5.477	109.55	
26 1,2,4-Trichloroben	5.000	5.009	100.18	
28 Naphthalene	5.000	5.823	116.45	
29 4-Chloroaniline	5.000	6.433	128.65	
30 Hexachlorobutadien	5.000	5.145	102.90	
31 4-Chloro-3-methylp	5.000	5.395	107.91	
32 2-Methylnaphthalen	5.000	5.978	119.57	
33 Hexachlorocyclopen	5.000	4.671	93.41	
34 2,4,6-Trichlorophe	5.000	5.307	106.15	
35 2,4,5-Trichlorophe	5.000	5.210	104.20	
37 2-Chloronaphthalen	5.000	5.325	106.49	
38 2-Nitroaniline	5.000	6.210	124.21	
39 Dimethylphthalate	5.000	5.191	103.81	
40 Acenaphthylene	5.000	5.979	119.59	
41 2,6-Dinitrotoluene	5.000	5.192	103.83	

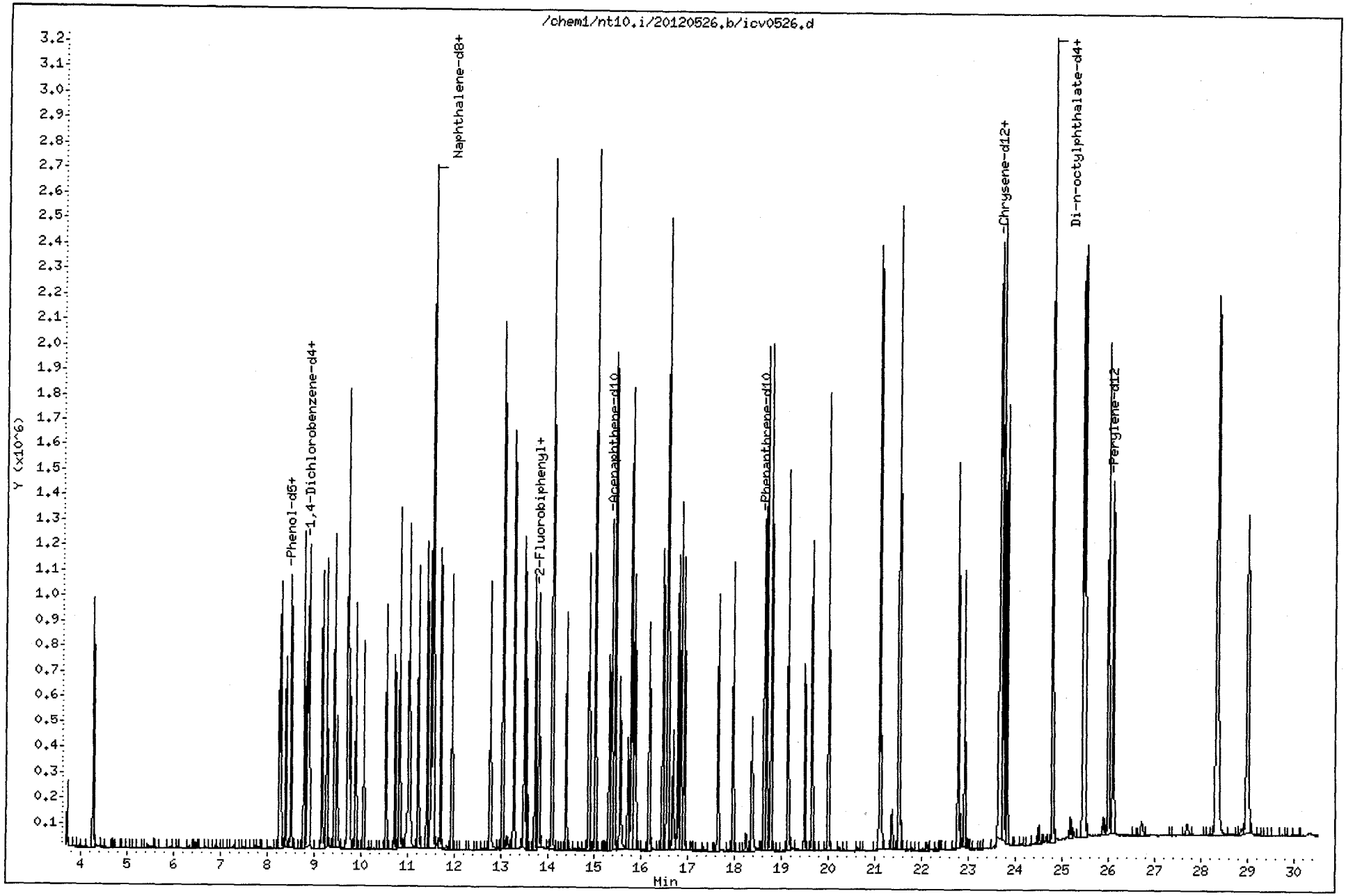
SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43 3-Nitroaniline	5.000	5.883	117.66	
44 Acenaphthene	5.000	6.053	121.06	
45 2,4-Dinitrophenol	5.000	8.183	163.67*	
46 Dibenzofuran	5.000	5.942	118.85	
47 4-Nitrophenol	5.000	5.636	112.72	
48 2,4-Dinitrotoluene	5.000	5.325	106.51	
49 Fluorene	5.000	6.008	120.16	
50 Diethylphthalate	5.000	5.189	103.78	
51 4-Chlorophenyl-phe	5.000	5.340	106.80	
52 4-Nitroaniline	5.000	5.232	104.63	
53 4,6-Dinitro-2-meth	10.00	10.62	106.16	
54 N-Nitrosodiphenyla	5.000	5.214	104.28	
56 4-Bromophenyl-phen	5.000	5.263	105.26	
57 Hexachlorobenzene	5.000	5.065	101.29	
58 Pentachlorophenol	5.000	4.567	91.34	
60 Phenanthrene	5.000	6.096	121.91	
61 Anthracene	5.000	6.110	122.20	
62 Carbazole	5.000	4.917	98.35	
63 Di-n-butylphthalat	5.000	5.577	111.54	
64 Fluoranthene	5.000	6.115	122.31	
65 Pyrene	5.000	5.861	117.22	
67 Butylbenzylphthala	5.000	5.216	104.32	
68 Benzo(a)anthracene	5.000	5.846	116.92	
70 3,3'-Dichlorobenzi	5.000	3.110	62.21*	
71 Chrysene	5.000	5.893	117.86	
72 bis(2-Ethylhexyl)p	5.000	5.062	101.24	
73 Di-n-octylphthalat	5.000	5.368	107.36	
74 Benzo(b)fluoranthe	5.000	6.202	124.04	
75 Benzo(k)fluoranthe	5.000	5.908	118.17	
187 Total Benzofluoran	10.00	12.15	121.46	
76 Benzo(a)pyrene	5.000	5.958	119.16	
78 Indeno(1,2,3-cd)py	5.000	6.238	124.76	
79 Dibenzo(a,h)anthra	5.000	6.316	126.32	
80 Benzo(g,h,i)peryle	5.000	6.244	124.87	
90 N-Nitrosodimethyla	5.000	5.223	104.45	
103 Pyridine	10.00	9.643	96.43	
91 Aniline	5.000	2.698	53.96*	
105 1-methylnaphthalen	5.000	4.327	86.54	
93 Benzidine	5.000	1.300	26.00*	
111 Azobenzene (1,2-DP	5.000	5.129	102.58	
143 1,4-Dioxane	5.000	0.000	*	
144 alpha-Terpineol	5.000	0.000	*	
177 p-Benzoquinone	5.000	0.000	*	
98 Retene	5.000	0.000	*	
133 Butylatedhydroxyt	5.000	0.000	*	
115 Tributyl Phosphate	5.000	0.000	*	
116 Dibutyl Phenyl Ph	5.000	0.000	*	

Data File: /chem1/nt10.i/20120526.b/icv0526.d
Date : 26-MAY-2012 15:19
Client ID:
Sample Info: ICV-5

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



UZ99:00245

CO-ELUTION SUMMARY FOR FILE - icv0526.d

Lab ID: ICV-5, Method: ABN.m, Instrument: nt10.i, Date: 26-MAY-2012

RT	CO-ELUTION COMPOUNDS
15.032	Acenaphthylene and 2,6-Dinitrotoluene
26.002	~~Perylene~~ and Benzo(a)pyrene

Data File: /chem1/nt10.i/20120526.b/df0526.d

Date : 26-MAY-2012 10:44

Client ID: DFTPP

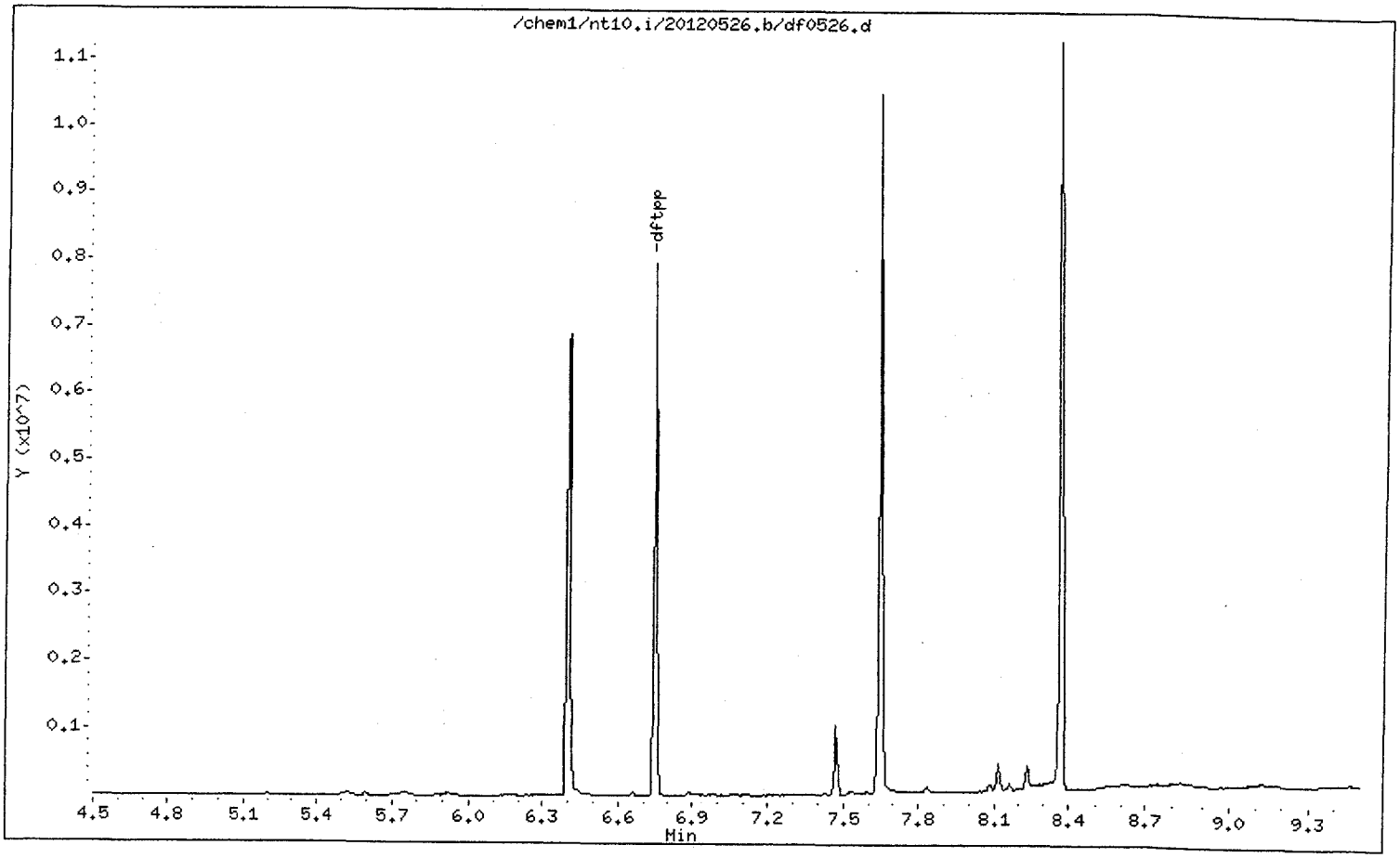
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120526.b/df0526.d

Date : 26-MAY-2012 10:44

Client ID: DFTPP

Sample Info: DFTPP

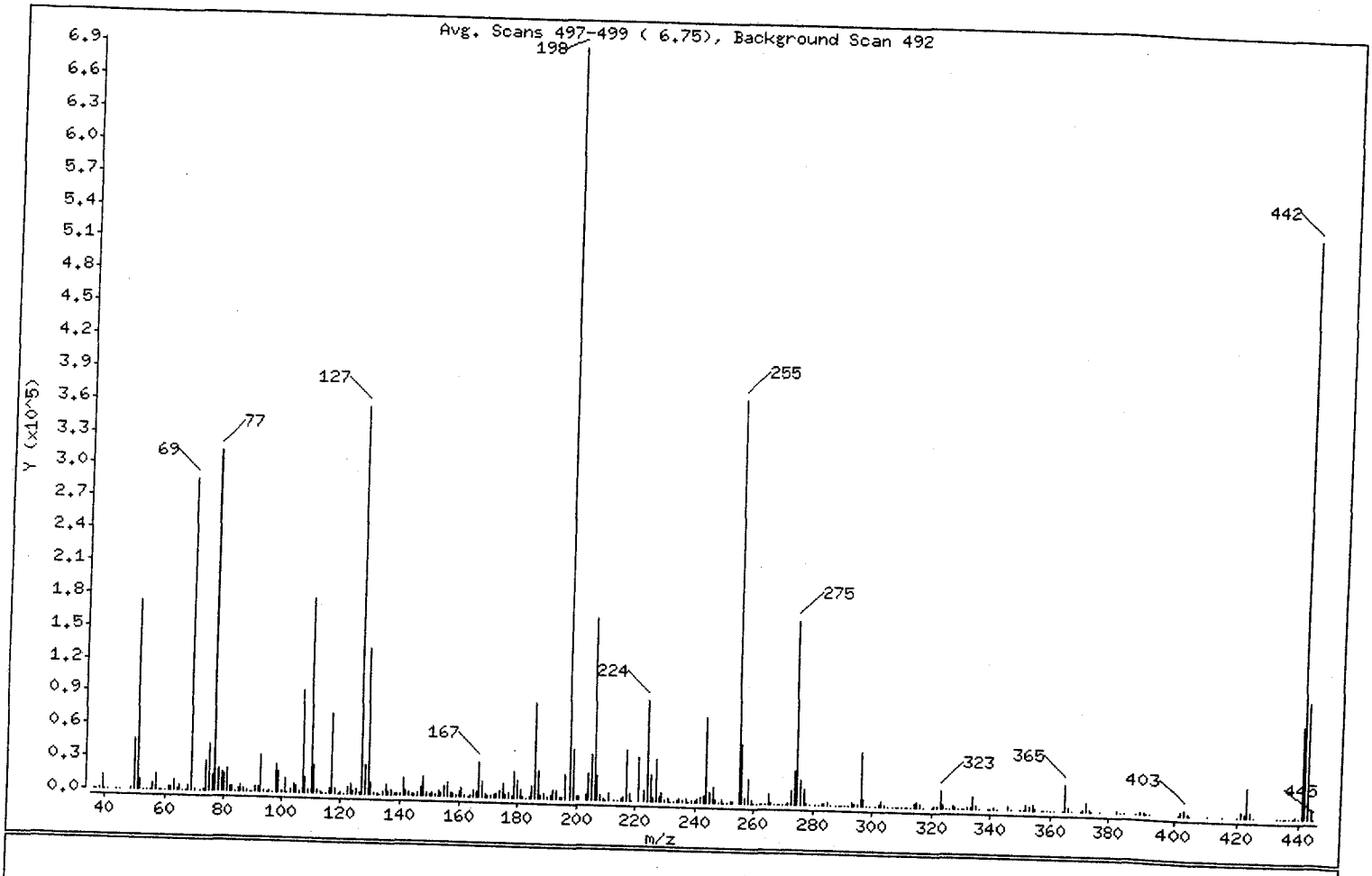
Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	25.07
68	Less than 2.00% of mass 69	0.60 (1.45)
69	Mass 69 relative abundance	41.32
70	Less than 2.00% of mass 69	0.16 (0.40)
127	10.00 - 80.00% of mass 198	51.51
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.70
275	10.00 - 60.00% of mass 198	24.35
365	Greater than 1.00% of mass 198	3.46
441	0.01 - 24.00% of mass 442	12.16 (15.78)
442	50.00 - 200.00% of mass 198	77.09
443	15.00 - 24.00% of mass 442	15.36 (19.93)

Data File: /chem1/nt10.i/20120526.b/df0526.d

Date : 26-MAY-2012 10:44

Client ID: DFTPP

Sample Info: DFTPP

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0526.d

Spectrum: Avg. Scans 497-499 (6.75), Background Scan 492

Location of Maximum: 198.00

Number of points: 344

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	26	129.00	133888	219.00	609	313.00	521
37.00	738	130.00	10870	221.00	40088	314.00	2625
38.00	2259	131.00	2053	223.00	10237	315.00	5121
39.00	13341	132.00	1262	224.00	92880	316.00	2893
40.00	569	133.00	466	225.00	23296	317.00	637
41.00	216	134.00	3414	226.00	2573	320.00	235
44.00	149	135.00	9909	227.00	38288	321.00	1663
45.00	367	136.00	3935	228.00	5304	322.00	1109
49.00	1189	137.00	4873	229.00	7998	323.00	15465
50.00	46176	138.00	1128	230.00	1358	324.00	2751
51.00	173504	139.00	805	231.00	3474	325.00	323
52.00	9398	140.00	1603	232.00	716	326.00	455
53.00	300	141.00	15489	233.00	661	327.00	3101
54.00	229	142.00	5414	234.00	2342	328.00	1494
55.00	448	143.00	3720	235.00	2777	329.00	370
56.00	6014	144.00	1136	236.00	2141	330.00	56
57.00	13761	145.00	942	237.00	3010	331.00	197
58.00	408	146.00	2786	238.00	564	332.00	1250
59.00	179	147.00	8163	239.00	1494	333.00	1705
60.00	272	148.00	18016	240.00	1176	334.00	10488
61.00	2630	149.00	3469	241.00	2531	335.00	2517
62.00	3433	150.00	842	242.00	5295	336.00	303
63.00	9251	151.00	2529	243.00	6077	339.00	186
64.00	1297	152.00	1040	244.00	78016	340.00	284
65.00	4742	153.00	4885	245.00	9692	341.00	2021
66.00	167	154.00	3744	246.00	14024	342.00	519
67.00	487	155.00	9049	247.00	2921	346.00	3558
68.00	4159	156.00	13247	248.00	765	347.00	600
69.00	285952	157.00	2827	249.00	2660	350.00	271
70.00	1139	158.00	2845	250.00	607	351.00	343
72.00	190	159.00	2353	251.00	678	352.00	4486
73.00	1995	160.00	5145	252.00	867	353.00	3227
74.00	27632	161.00	7274	253.00	1909	354.00	4155
75.00	43448	162.00	2140	255.00	370304	355.00	808
76.00	14823	163.00	679	256.00	54880	357.00	121

Data File: /chem1/nt10.i/20120526.b/df0526.d

Date : 26-MAY-2012 10:44

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0526.d
Spectrum: Avg. Scans 497-499 (6.75), Background Scan 492
Location of Maximum: 198.00
Number of points: 344

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	313792	164.00	1059	257.00	4329	358.00	52
78.00	20888	165.00	5892	258.00	21480	359.00	426
79.00	18144	166.00	5005	259.00	3568	360.00	59
80.00	15251	167.00	32544	260.00	602	361.00	119
81.00	20912	168.00	13737	261.00	620	364.00	104
82.00	5239	169.00	2539	262.00	127	365.00	23944
83.00	4808	170.00	1075	263.00	188	366.00	3294
84.00	129	171.00	1308	264.00	584	367.00	152
85.00	3163	172.00	2874	265.00	8905	370.00	494
86.00	5793	173.00	3665	266.00	1076	371.00	1374
87.00	2776	174.00	6643	267.00	74	372.00	7891
88.00	1151	175.00	12622	268.00	51	373.00	1946
89.00	520	176.00	3756	269.00	229	374.00	236
90.00	65	177.00	5429	270.00	372	377.00	229
91.00	4623	178.00	1805	271.00	793	383.00	2132
92.00	5132	179.00	23488	272.00	1269	384.00	670
93.00	33360	180.00	15572	273.00	12611	385.00	117
94.00	2216	181.00	7701	274.00	29880	389.00	52
95.00	380	182.00	1110	275.00	168512	390.00	1125
96.00	1107	183.00	491	276.00	22000	391.00	839
97.00	21	184.00	1883	277.00	13717	392.00	587
98.00	25000	185.00	11629	278.00	2058	393.00	55
99.00	19064	186.00	88272	279.00	511	401.00	443
100.00	1716	187.00	24768	281.00	116	402.00	2867
101.00	12840	188.00	2490	282.00	481	403.00	4359
102.00	537	189.00	5139	283.00	1659	404.00	1567
103.00	3931	190.00	951	284.00	1165	405.00	170
104.00	7795	191.00	2619	285.00	2561	410.00	58
105.00	6943	192.00	7480	286.00	616	415.00	299
106.00	2109	193.00	8529	288.00	167	420.00	73
107.00	94312	194.00	1572	289.00	565	421.00	4081
108.00	14776	195.00	1022	290.00	563	422.00	3772
109.00	2699	196.00	22624	291.00	337	423.00	27824
110.00	178432	198.00	692096	292.00	692	424.00	5405
111.00	26104	199.00	46376	293.00	3255	425.00	517

Data File: /chem1/nt10.i/20120526.b/df0526.d

Date : 26-MAY-2012 10:44

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0526.d

Spectrum: Avg. Scans 497-499 (6.75), Background Scan 492

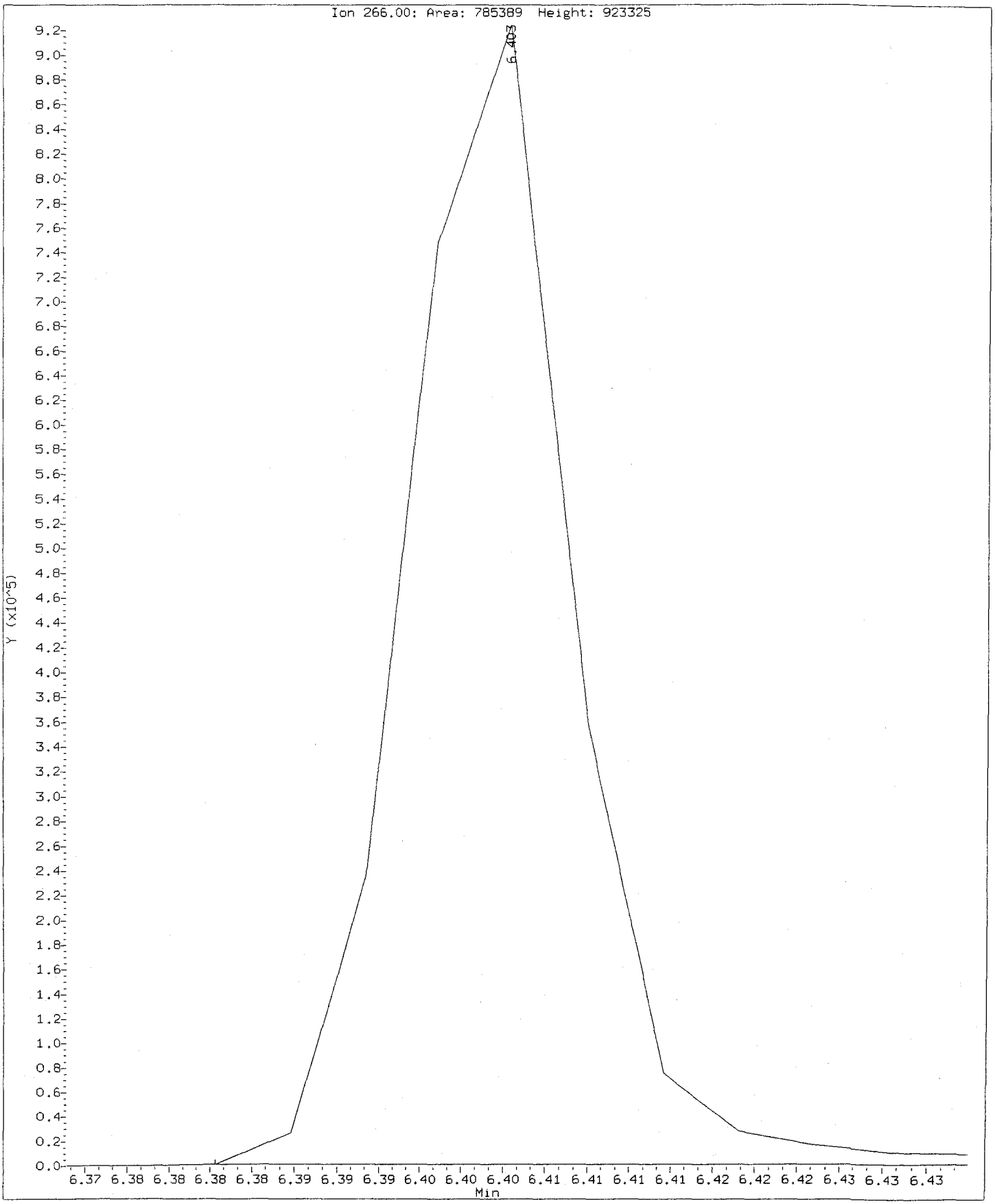
Location of Maximum: 198.00

Number of points: 344

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	2941	200.00	3155	294.00	851	433.00	182
113.00	925	201.00	3528	295.00	1364	434.00	330
114.00	293	203.00	4862	296.00	49064	435.00	384
115.00	582	204.00	24424	297.00	6873	436.00	524
116.00	4751	205.00	40776	298.00	480	437.00	742
117.00	73120	206.00	166848	299.00	121	438.00	378
118.00	5224	207.00	21712	301.00	760	439.00	1052
119.00	711	208.00	5262	302.00	851	440.00	757
120.00	1191	209.00	1631	303.00	5451	441.00	84168
121.00	537	210.00	634	304.00	1399	442.00	533504
122.00	5952	211.00	6697	305.00	61	443.00	106320
123.00	9239	213.00	451	307.00	73	444.00	9542
124.00	3620	214.00	166	308.00	672	445.00	638
125.00	4068	215.00	1855	309.00	579		
126.00	1464	216.00	3870	310.00	726		
127.00	356480	217.00	45744	311.00	93		
128.00	26776	218.00	5952	312.00	210		

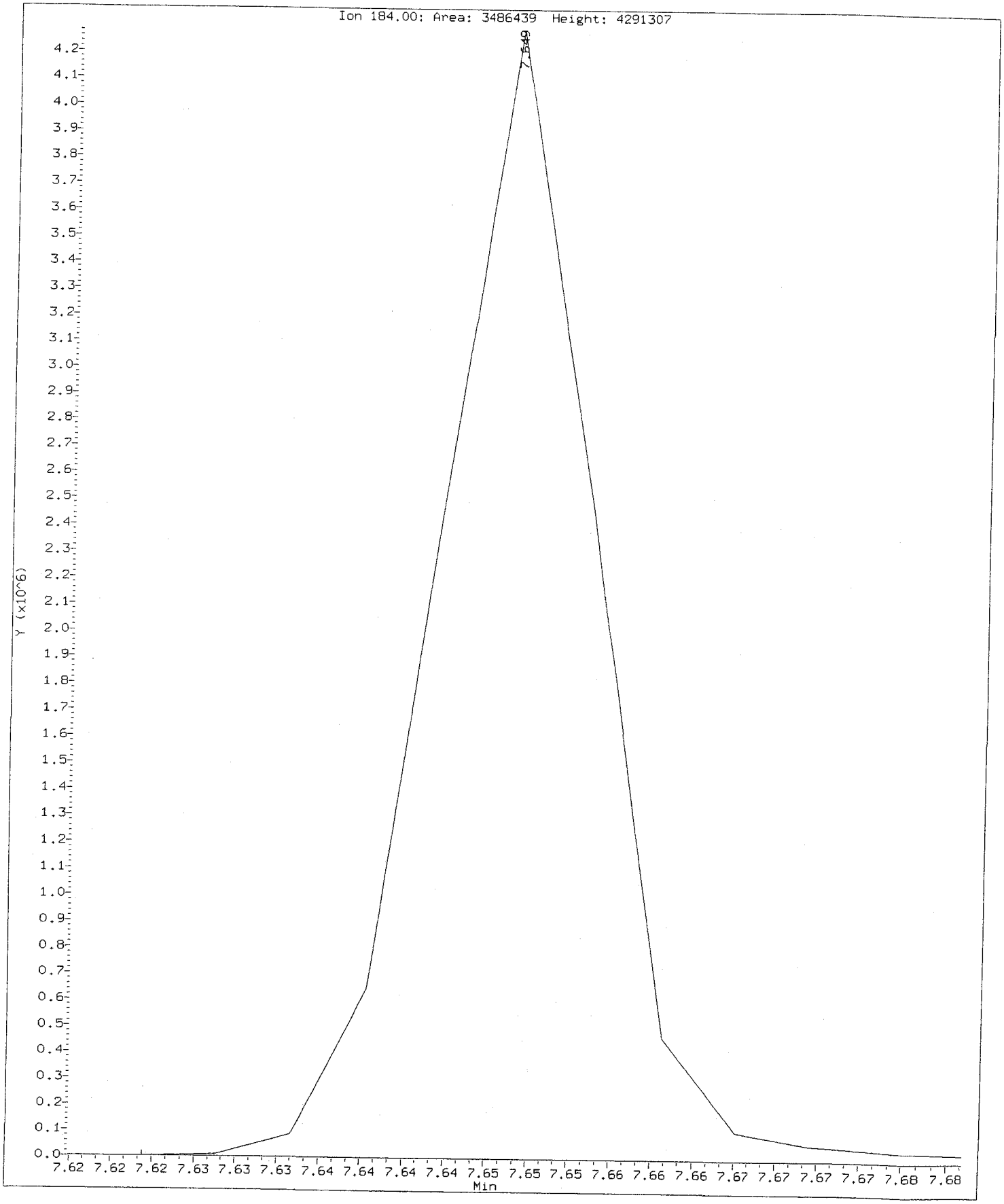
Data File: /chem1/nt10.i/20120526.b/ddt.b/df0526.d
Injection Date: 26-MAY-2012 10:44
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20120526.b/ddt.b/df0526.d
Injection Date: 26-MAY-2012 10:44
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120526.b/ddt.b/df0526.d
Method: /chem1/nt10.i/20120526.b/ddt.b/sw846ddt.m
Analysis Date: 26-MAY-2012 10:44

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.403	785389
Benzidine	7.649	3486439
4,4'-DDE	7.831	8080
4,4'-DDD	8.120	77952
4,4'-DDT	8.371	1823281

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(8080 + 77952) * 100}{(8080 + 77952 + 1823281)}$$

DDT Percent Breakdown = 4.5 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: UZ 99 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): SVOA Pedda

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 5/26/12 Analysis Start Date: 7/3/12

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO
Peak Tailing Factor ≤2?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO	Q flag applied?	YES / NO
Surrogate Recovery in Control?	YES / NO	Special Analysis Criteria Met?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: YZ **Date:** 7/10/12

Reviewer: VD **Date:** 7.10.12

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 7/03/12 Analysis: ABN / SIM ABN Analyst: YZ

GC Program: ABN2 Column No: 227820 Column Type: ZB5 ms

Instrument Tune (.U or .CT.): 1112164 EM Voltage: 1871

Calibration File: DF0703A Curve Date: 5/28/12 Injection Vol.: 1ul

IS/SS	Ical/Ccal		LCS/ICV
1875-1	1949-2	1996-2	
	1950-1	1998-4	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120703.b

	Time	Filename	LabID	ClientId	DF													
1	1434	df0703a.d	DF0703A	DFTPP	1	NO ISTDS FOUND												
2	1449	cc0703b.d	CC0703B		1	8.73	199795	11.39	792438	15.29	438708	18.57	678619	23.69	653508	24.83	1131114	26.10	644384
3	1601	uz99mb.d	UZ99MBS1	UZ99MBS1	1	8.73	196096	11.39	789111	15.29	422103	18.57	669917	23.69	606932	26.09	561716	24.82	1030780
4	1638	uz99sb.d	UZ99LCSS1	UZ99LCSS1	1	8.73	195084	11.39	779418	15.29	430647	18.57	662777	23.69	627471	26.10	607569	24.82	1074104
5	1714	uz99sbd.d	UZ99LCSDS1	UZ99LCSDS1	1	8.73	213059	11.39	831714	15.29	463712	18.57	712021	23.69	691376	26.10	656242	24.82	1178123
6	1750	uz99qls.d	UZ99QLS		1	8.73	204887	11.39	814910	15.29	445065	18.57	708263	23.69	650691	26.09	600385	24.82	1108638
7	1902	uz99a.d	UZ99A	CB-002-06222	1	8.73	204860	11.39	799124	15.29	432034	18.57	707568	23.71	718233	26.16	689373	24.87	1199931

YZ 7/10/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

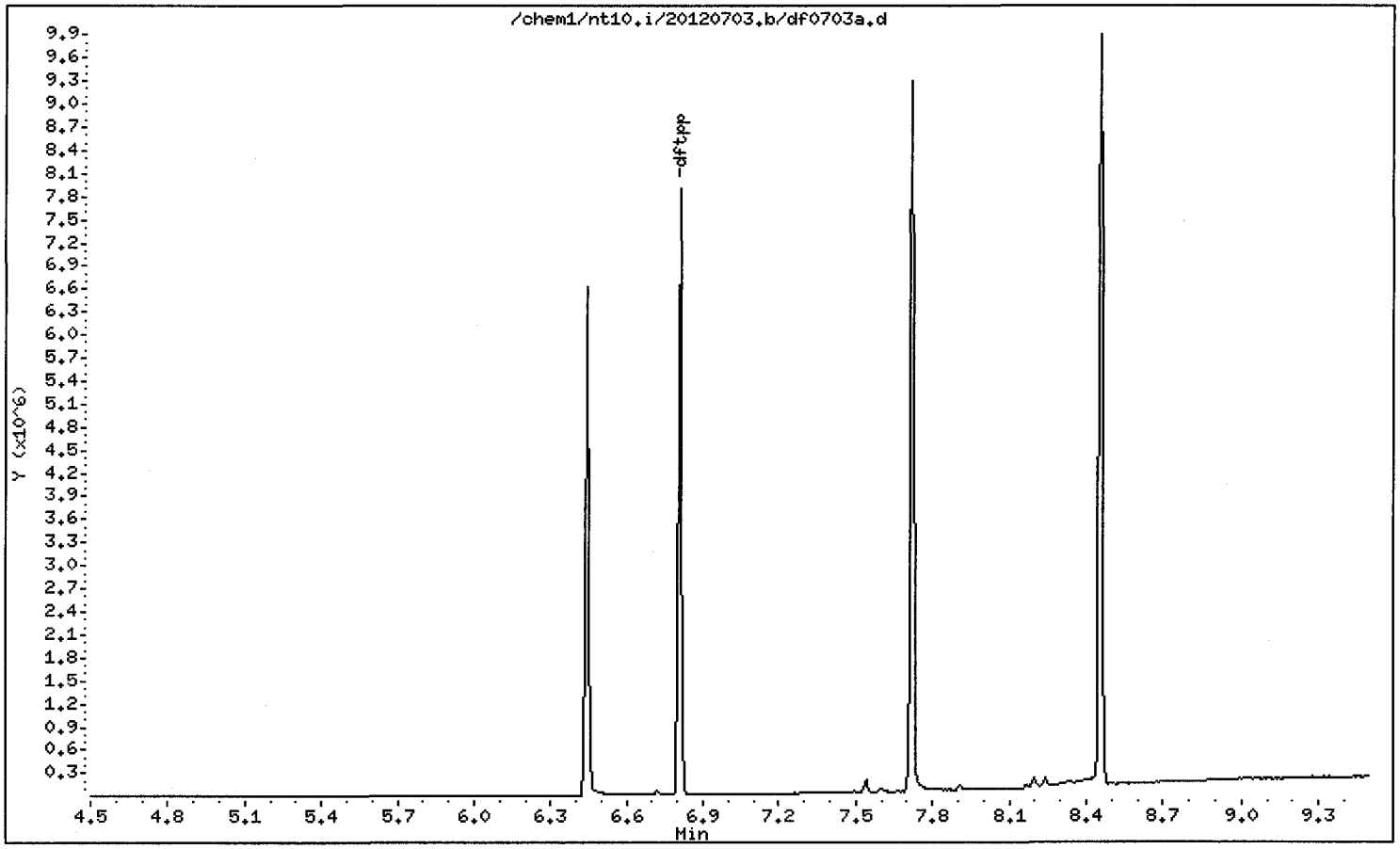
Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

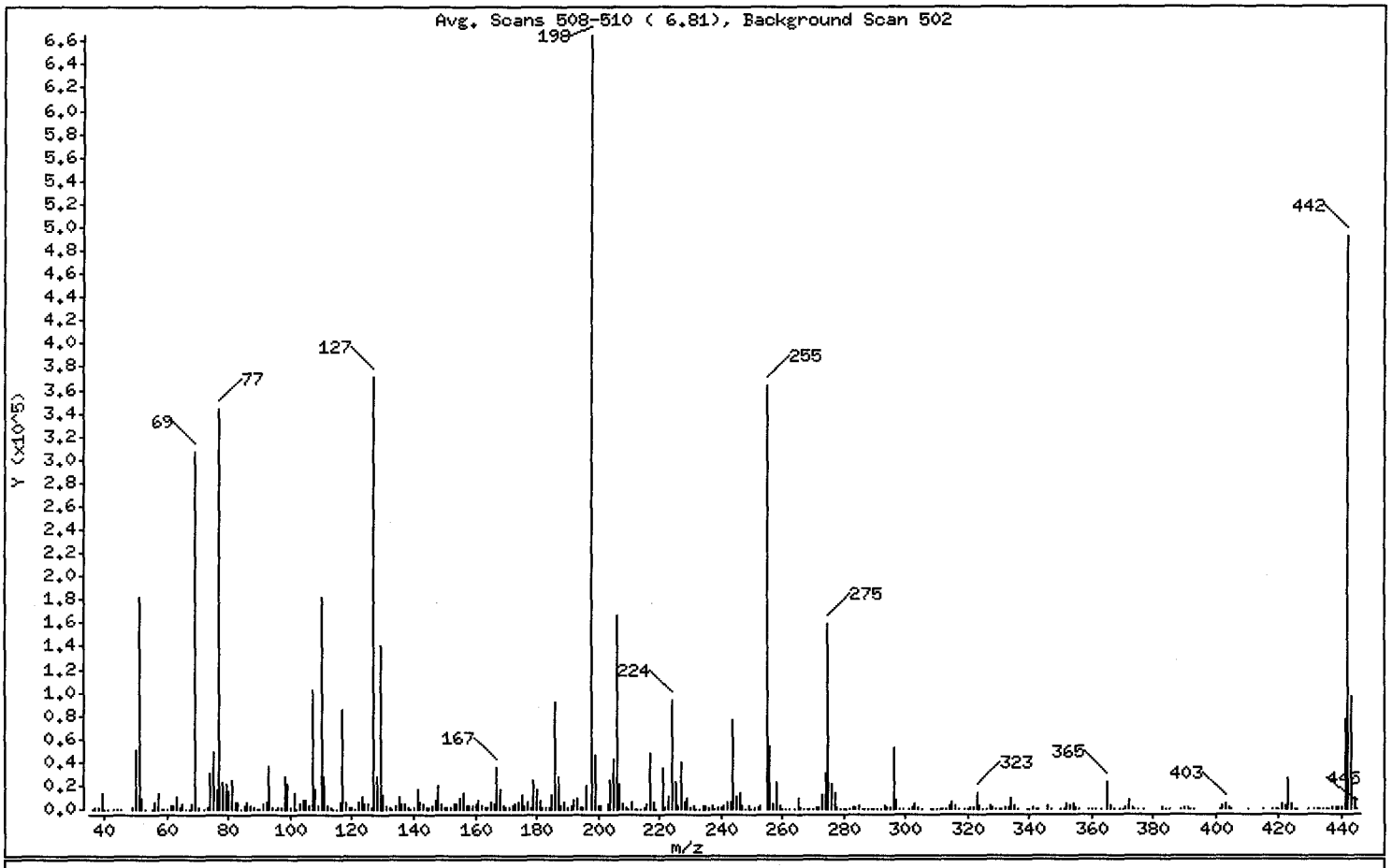
Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	27.29
68	Less than 2.00% of mass 69	0.67 (1.45)
69	Mass 69 relative abundance	46.18
70	Less than 2.00% of mass 69	0.23 (0.51)
127	10.00 - 80.00% of mass 198	55.79
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	24.02
365	Greater than 1.00% of mass 198	3.51
441	0.01 - 24.00% of mass 442	11.57 (15.63)
442	50.00 - 200.00% of mass 198	74.01
443	15.00 - 24.00% of mass 442	14.37 (19.42)

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0703a.d
Spectrum: Avg. Scans 508-510 (6.81), Background Scan 502
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	108	131.00	2402	223.00	10565	317.00	670
37.00	793	132.00	1259	224.00	93864	319.00	128
38.00	2293	133.00	467	225.00	23448	320.00	243
39.00	13725	134.00	3611	226.00	2469	321.00	1799
40.00	532	135.00	10584	227.00	39840	322.00	884
41.00	448	136.00	3990	228.00	5514	323.00	14266
43.00	92	137.00	5272	229.00	8522	324.00	2446
44.00	271	138.00	1230	230.00	1089	325.00	367
45.00	452	139.00	534	231.00	3340	326.00	270
49.00	1242	140.00	1686	232.00	575	327.00	2949
50.00	50736	141.00	16488	233.00	571	328.00	1510
51.00	181504	142.00	5608	234.00	2739	329.00	442
52.00	9490	143.00	3923	235.00	2865	330.00	61
53.00	447	144.00	1095	236.00	2194	331.00	163
55.00	726	145.00	891	237.00	3146	332.00	1260
56.00	5504	146.00	3177	238.00	478	333.00	1490
57.00	14142	147.00	8120	239.00	1726	334.00	9733
58.00	710	148.00	20224	240.00	1239	335.00	2591
59.00	83	149.00	4091	241.00	2347	336.00	197
60.00	7	150.00	1156	242.00	5929	339.00	286
61.00	2445	151.00	2263	243.00	6156	340.00	284
62.00	3325	152.00	1128	244.00	76472	341.00	1792
63.00	10165	153.00	5279	245.00	9949	342.00	517
64.00	1346	154.00	4100	246.00	14259	343.00	75
65.00	5238	155.00	9464	247.00	3200	346.00	3196
66.00	351	156.00	14189	248.00	700	347.00	735
67.00	342	157.00	2934	249.00	2816	350.00	76
68.00	4451	158.00	3253	250.00	411	351.00	360
69.00	307136	159.00	2306	251.00	789	352.00	4604
70.00	1557	160.00	5296	252.00	857	353.00	3314
72.00	137	161.00	7533	253.00	2473	354.00	4198
73.00	2261	162.00	2334	255.00	363392	355.00	985
74.00	30264	163.00	836	256.00	53184	356.00	60
75.00	48336	164.00	993	257.00	4462	359.00	368
76.00	16424	165.00	5881	258.00	22928	360.00	72

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0703a.d
Spectrum: Avg. Scans 508-510 (6.81), Background Scan 502
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	344256	166.00	4884	259.00	3555	361.00	53
78.00	23248	167.00	35544	260.00	695	363.00	70
79.00	21512	168.00	16496	261.00	588	365.00	23328
80.00	15552	169.00	2597	262.00	116	366.00	3500
81.00	23712	170.00	1013	264.00	749	367.00	294
82.00	5567	171.00	1466	265.00	9474	369.00	52
83.00	5405	172.00	3004	266.00	1042	370.00	552
84.00	470	173.00	3927	267.00	135	371.00	1286
85.00	3570	174.00	6801	268.00	114	372.00	7932
86.00	6020	175.00	12697	269.00	294	373.00	1913
87.00	2880	176.00	3802	270.00	403	374.00	177
88.00	1110	177.00	5637	271.00	1006	375.00	60
89.00	623	178.00	2052	272.00	1375	377.00	283
90.00	142	179.00	25200	273.00	12462	383.00	2066
91.00	5162	180.00	17056	274.00	29896	384.00	679
92.00	5451	181.00	7762	275.00	159744	385.00	153
93.00	37424	182.00	1473	276.00	21456	389.00	137
94.00	2194	183.00	888	277.00	13652	390.00	1022
95.00	522	184.00	2114	278.00	2249	391.00	830
96.00	1740	185.00	12741	279.00	465	392.00	422
97.00	996	186.00	91136	280.00	76	393.00	53
98.00	27120	187.00	27024	281.00	67	401.00	496
99.00	20960	188.00	2683	282.00	255	402.00	2910
100.00	1947	189.00	5641	283.00	1720	403.00	3930
101.00	13120	190.00	1102	284.00	1148	404.00	1403
102.00	677	191.00	2650	285.00	2575	405.00	160
103.00	3945	192.00	8049	286.00	578	410.00	127
104.00	7472	193.00	8553	287.00	128	415.00	195
105.00	7612	194.00	1826	288.00	306	418.00	51
106.00	2483	195.00	1661	289.00	614	419.00	74
107.00	102024	196.00	20512	290.00	464	420.00	165
108.00	16424	198.00	665024	291.00	518	421.00	4049
109.00	2762	199.00	45488	292.00	680	422.00	3641
110.00	182080	200.00	3539	293.00	3045	423.00	25584
111.00	27736	201.00	3478	294.00	810	424.00	5066

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0703a.d
Spectrum: Avg. Scans 508-510 (6.81), Background Scan 502
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	3371	203.00	4921	295.00	1037	425.00	504
113.00	1249	204.00	24816	296.00	51448	426.00	56
114.00	363	205.00	42128	297.00	7008	429.00	59
115.00	372	206.00	166144	298.00	504	431.00	159
116.00	5385	207.00	21464	299.00	165	432.00	191
117.00	85328	208.00	5223	301.00	749	433.00	286
118.00	5996	209.00	1716	302.00	966	434.00	290
119.00	824	210.00	677	303.00	5228	435.00	225
120.00	1372	211.00	6771	304.00	1381	436.00	406
121.00	220	212.00	231	305.00	57	437.00	900
122.00	6217	213.00	548	308.00	764	438.00	1079
123.00	10019	214.00	216	309.00	442	439.00	922
124.00	4513	215.00	1857	310.00	541	440.00	963
125.00	4645	216.00	4020	311.00	160	441.00	76936
126.00	1541	217.00	47008	312.00	186	442.00	492160
127.00	371008	218.00	5930	313.00	422	443.00	95584
128.00	27096	219.00	702	314.00	2334	444.00	8946
129.00	140288	221.00	34696	315.00	5703	445.00	565
130.00	12102	222.00	2006	316.00	3270		

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120703.b/ddt.b/df0703a.d ARI ID: DF0703A
Method: /chem1/nt10.i/20120703.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 03-JUL-2012 14:34 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.446	690297
Benzidine	7.719	3273593
4,4'-DDE	7.906	5128
4,4'-DDD	8.200	24897
4,4'-DDT	8.457	1680637

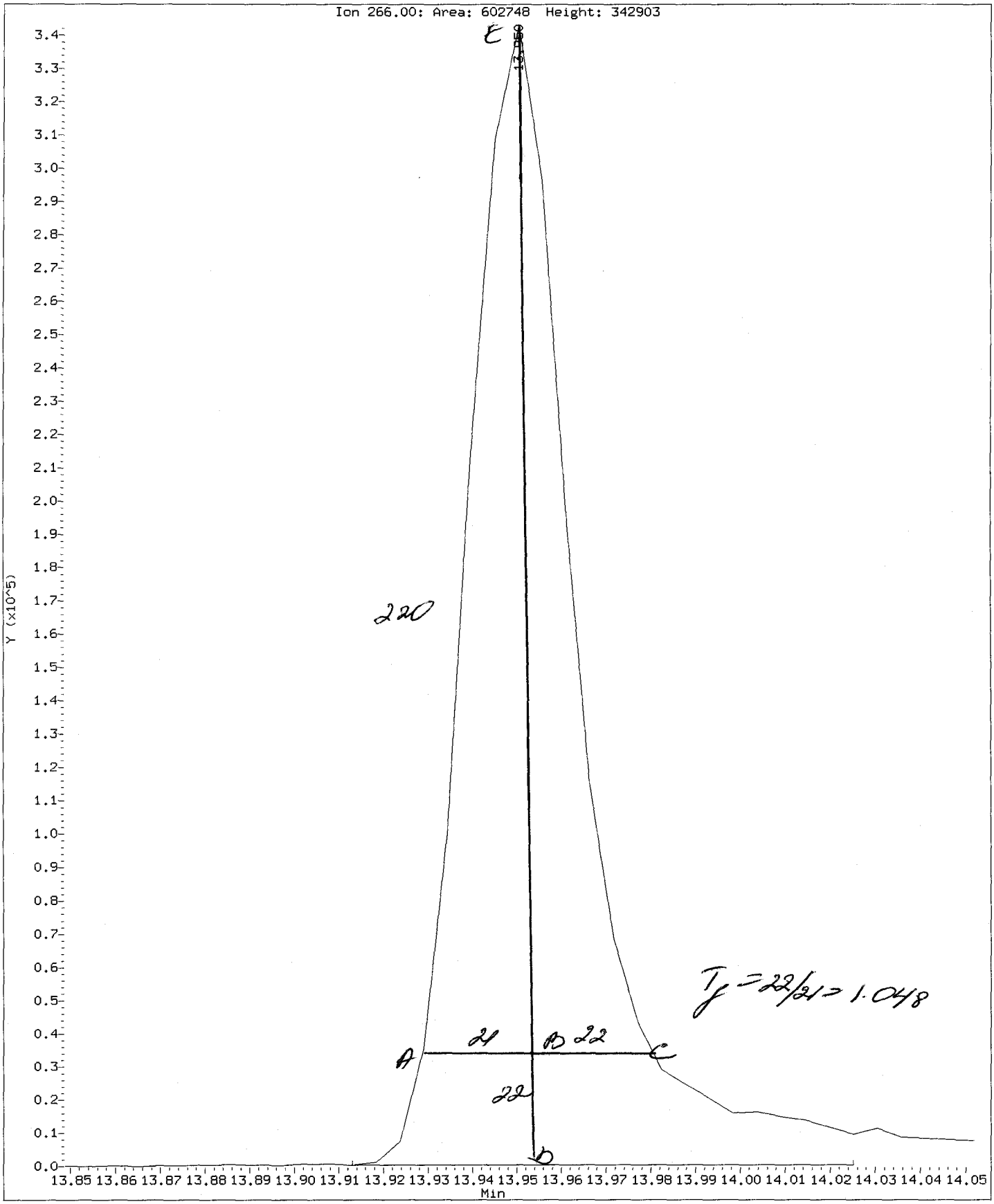
$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(5128 + 24897) * 100}{(5128 + 24897 + 1680637)}$$

DDT Percent Breakdown = 1.8 %

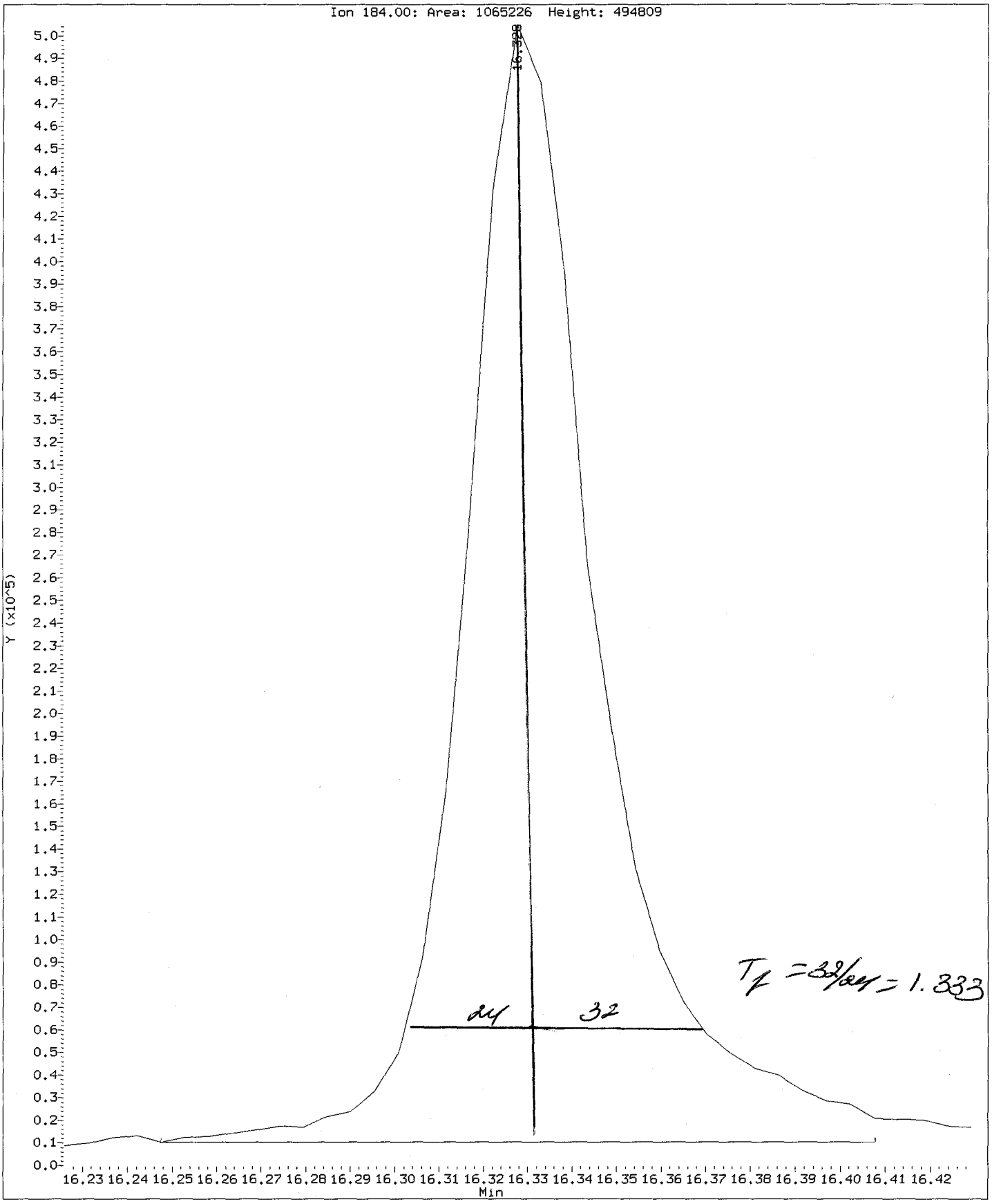
Data File: /chem2/nt6.i/20120710.b/ddt.b/07101201.D
Injection Date: 10-JUL-2012 10:20
Instrument: nt6.i
Client Sample ID: DDT0710

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20120710.b/ddt.b/07101201.D
Injection Date: 10-JUL-2012 10:20
Instrument: nt6.i
Client Sample ID: DDT0710

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0703b.d
Analysis Type:
Lab Sample ID: CC0703B
Method: /chem1/nt10.i/20120703.b/ABN.m

Injection Date: 03-JUL-2012 14:49
Init. Cal. Date(s): 26-MAY-2012 26-MAY-2012
Init. Cal. Times: 10:59 14:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.39876	1.26221	1.26221	0.010	-9.76212	20.00000	Averaged
$ 2 Phenol-d5	1.74239	1.58662	1.58662	0.010	-8.93971	20.00000	Averaged
3 Phenol	1.85722	1.97868	1.97868	0.100	6.54013	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.52653	1.36306	1.36306	0.010	-10.70816	20.00000	Averaged
7 1,3-Dichlorobenzene	1.64203	1.50158	1.50158	0.010	-8.55368	20.00000	Averaged
9 1,4-Dichlorobenzene	1.60271	1.45238	1.45238	0.010	-9.37929	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	1.00142	0.88480	0.88480	0.010	-11.64539	20.00000	Averaged
12 1,2-Dichlorobenzene	1.56383	1.44243	1.44243	0.010	-7.76331	20.00000	Averaged
11 Benzyl alcohol	0.78027	0.76945	0.76945	0.010	-1.38639	20.00000	Averaged
13 2-Methylphenol	1.46378	1.35405	1.35405	0.700	-7.49671	20.00000	Averaged
17 Hexachloroethane	0.62268	0.61934	0.61934	0.300	-0.53597	20.00000	Averaged
15 4-Methylphenol	1.52714	1.39740	1.39740	0.600	-8.49580	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.35840	0.32501	0.32501	0.010	-9.31547	20.00000	Averaged
22 2,4-Dimethylphenol	0.35235	0.32657	0.32657	0.200	-7.31691	20.00000	Averaged
24 Benzoic acid	21.34482	20.00000	0.25433	0.010	6.72408	20.00000	Quadratic
26 1,2,4-Trichlorobenzene	0.32265	0.28661	0.28661	0.010	-11.17029	20.00000	Averaged
28 Naphthalene	1.00840	0.93255	0.93255	0.100	-7.52228	20.00000	Averaged
30 Hexachlorobutadiene	0.17350	0.16387	0.16387	0.010	-5.54734	20.00000	Averaged
32 2-Methylnaphthalene	0.70103	0.60151	0.60151	0.300	-14.19582	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.38663	1.19619	1.19619	0.010	-13.73339	20.00000	Averaged
39 Dimethylphthalate	1.22903	1.14427	1.14427	0.010	-6.89657	20.00000	Averaged
40 Acenaphthylene	1.79648	1.67568	1.67568	0.900	-6.72423	20.00000	Averaged
44 Acenaphthene	1.08358	0.99277	0.99277	0.100	-8.38047	20.00000	Averaged
46 Dibenzofuran	1.58749	1.37667	1.37667	0.800	-13.28044	20.00000	Averaged
50 Diethylphthalate	1.19817	1.13663	1.13663	0.010	-5.13558	20.00000	Averaged
49 Fluorene	1.21637	1.21715	1.21715	0.100	0.06405	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.53809	0.47795	0.47795	0.010	-11.17655	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.16510	0.14602	0.14602	0.010	-11.55713	20.00000	Averaged
57 Hexachlorobenzene	0.24689	0.21122	0.21122	0.100	-14.44863	20.00000	Averaged
58 Pentachlorophenol	10.61633	10.00000	0.13830	0.010	6.16326	20.00000	Quadratic
60 Phenanthrene	1.03144	0.92408	0.92408	0.700	-10.40892	20.00000	Averaged
61 Anthracene	1.07748	0.97938	0.97938	0.700	-9.10501	20.00000	Averaged
63 Di-n-butylphthalate	1.40311	1.36625	1.36625	0.010	-2.62737	20.00000	Averaged
64 Fluoranthene	1.17111	1.07762	1.07762	0.600	-7.98308	20.00000	Averaged
65 Pyrene	1.21707	1.17660	1.17660	0.600	-3.32539	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0703b.d
Analysis Type:
Lab Sample ID: CC0703B
Method: /chem1/nt10.i/20120703.b/ABN.m

Injection Date: 03-JUL-2012 14:49
Init. Cal. Date(s): 26-MAY-2012 26-MAY-2012
Init. Cal. Times: 10:59 14:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 66 Terphenyl-d14	0.76242	0.67968	0.67968	0.010	-10.85242	20.00000	Averaged	
67 Butylbenzylphthalate	0.56457	0.57618	0.57618	0.010	2.05708	20.00000	Averaged	
68 Benzo(a)anthracene	1.12516	1.02128	1.02128	0.700	-9.23266	20.00000	Averaged	
71 Chrysene	0.98981	0.91065	0.91065	0.700	-7.99749	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.54931	0.48909	0.48909	0.010	-10.96168	20.00000	Averaged	
73 Di-n-octylphthalate	0.97317	0.86449	0.86449	0.010	-11.16837	20.00000	Averaged	
76 Benzo(a)pyrene	1.03427	0.91586	0.91586	0.700	-11.44835	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.19637	1.11065	1.11065	0.500	-7.16512	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.94241	0.86950	0.86950	0.400	-7.73692	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.02591	0.95928	0.95928	0.500	-6.49468	20.00000	Averaged	
105 1-methylnaphthalene	0.71493	0.54868	0.54868	0.010	-23.25379	20.00000	Averaged	<-
187 Total Benzofluoranthenes	1.10989	0.99904	0.99904	0.010	-9.98749	20.00000	Averaged	
98 Retene	0.56674	0.00022	0.00022	0.010	-100	20.00000	Averaged	<-

YZ 7/10/12

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120703.b/cc0703b.d
Lab Smp Id: CC0703B
Inj Date : 03-JUL-2012 14:49
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0703B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20120703.b/ABN.m
Meth Date : 10-Jul-2012 10:57 yev Quant Type: ISTD
Cal Date : 26-MAY-2012 14:42 Cal File: ic0526g.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.398	6.398	(0.733)	315229	5.00000	4.512
$	2 Phenol-d5	99	8.121	8.121	(0.930)	396250	5.00000	4.553
	3 Phenol	94	8.144	8.144	(0.933)	494164	5.00000	5.327
$	5 2-Chlorophenol-d4	132	8.353	8.353	(0.957)	340417	5.00000	4.465
	7 1,3-Dichlorobenzene	146	8.662	8.662	(0.992)	375011	5.00000	4.572
*	8 1,4-Dichlorobenzene-d4	152	8.732	8.732	(1.000)	199795	4.00000	
	9 1,4-Dichlorobenzene	146	8.763	8.763	(1.004)	362724	5.00000	4.531
$	10 1,2-Dichlorobenzene-d4	152	9.112	9.112	(1.044)	220973	5.00000	4.418
	12 1,2-Dichlorobenzene	146	9.144	9.144	(1.047)	360237	5.00000	4.612
	11 Benzyl alcohol	108	9.050	9.050	(1.036)	192166	5.00000	4.931
	13 2-Methylphenol	108	9.322	9.322	(1.068)	338165	5.00000	4.625
	17 Hexachloroethane	117	9.765	9.765	(1.118)	154677	5.00000	4.973
	15 4-Methylphenol	108	9.617	9.617	(1.101)	348993	5.00000	4.575
$	18 Nitrobenzene-d5	82	9.904	9.904	(0.870)	321938	5.00000	4.534
	22 2,4-Dimethylphenol	107	10.731	10.731	(0.942)	646973	10.0000	9.268
	24 Benzoic acid	105	10.993	10.993	(0.965)	1007722	20.0000	21.34
	26 1,2,4-Trichlorobenzene	180	11.301	11.301	(0.993)	283899	5.00000	4.441
*	27 Naphthalene-d8	136	11.386	11.386	(1.000)	792438	4.00000	
	28 Naphthalene	128	11.432	11.432	(1.004)	923731	5.00000	4.624
	30 Hexachlorobutadiene	225	11.842	11.842	(1.040)	162323	5.00000	4.723
	32 2-Methylnaphthalene	142	12.941	12.941	(1.137)	595825	5.00000	4.290
$	36 2-Fluorobiphenyl	172	13.808	13.808	(0.903)	655975	5.00000	4.313
	39 Dimethylphthalate	163	14.814	14.814	(0.969)	627501	5.00000	4.655
	40 Acenaphthylene	152	14.938	14.938	(0.977)	918919	5.00000	4.664
*	42 Acenaphthene-d10	164	15.286	15.286	(1.000)	438708	4.00000	
	44 Acenaphthene	153	15.355	15.355	(1.005)	544423	5.00000	4.581
	46 Dibenzofuran	168	15.711	15.711	(1.028)	754944	5.00000	4.336

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	50 Diethylphthalate	149	16.415	16.415	(1.074)	623313	5.00000	4.743
	49 Fluorene	166	16.484	16.484	(1.078)	667468	5.00000	5.003
	54 N-Nitrosodiphenylamine	169	16.793	16.793	(0.904)	405434	5.00000	4.441
$	55 2,4,6-Tribromophenol	330	17.070	17.070	(1.117)	80075	5.00000	4.422
	57 Hexachlorobenzene	284	17.904	17.904	(0.964)	179173	5.00000	4.278
	58 Pentachlorophenol	266	18.314	18.314	(0.986)	234631	10.0000	10.62
*	59 Phenanthrene-d10	188	18.570	18.570	(1.000)	678619	4.00000	
	60 Phenanthrene	178	18.616	18.616	(1.002)	783874	5.00000	4.480
	61 Anthracene	178	18.717	18.717	(1.008)	830781	5.00000	4.545
	63 Di-n-butylphthalate	149	19.986	19.986	(1.076)	1158950	5.00000	4.869
	64 Fluoranthene	202	21.061	21.061	(1.134)	914113	5.00000	4.601
	65 Pyrene	202	21.487	21.487	(0.907)	961145	5.00000	4.834
$	66 Terphenyl-d14	244	21.819	21.819	(0.921)	555222	5.00000	4.457
	67 Butylbenzylphthalate	149	22.787	22.787	(0.962)	470674	5.00000	5.103
	68 Benzo(a)anthracene	228	23.670	23.670	(0.999)	834271	5.00000	4.538
*	69 Chrysene-d12	240	23.693	23.693	(1.000)	653508	4.00000	
	71 Chrysene	228	23.740	23.740	(1.002)	743894	5.00000	4.600
	72 bis(2-Ethylhexyl)phthalate	149	23.840	23.840	(0.960)	691524	5.00000	4.452
*	134 Di-n-octylphthalate-d4	153	24.831	24.831	(1.000)	1131114	4.00000	
	73 Di-n-octylphthalate	149	24.839	24.839	(1.000)	1222289	5.00000	4.442
	76 Benzo(a)pyrene	252	26.000	26.000	(0.996)	737708	5.00000	4.428
*	77 Perylene-d12	264	26.101	26.101	(1.000)	644384	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.333	28.333	(1.086)	894609	5.00000	4.642
	79 Dibenzo(a,h)anthracene	278	28.364	28.364	(1.087)	700365	5.00000	4.613
	80 Benzo(g,h,i)perylene	276	28.986	28.986	(1.111)	772679	5.00000	4.675
	105 1-methylnaphthalene	142	13.173	13.173	(1.157)	543498	5.00000	3.837
	187 Total Benzofluoranthenes	252	25.489	25.489	(0.977)	1609415	10.0000	9.001
	98 Retene	219	22.106	22.106	(0.933)	181	5.00000	0.001961

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0703b.d
Lab Smp Id: CC0703B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info:

Calibration Date: 03-JUL-2012
Calibration Time: 12:47

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	199795	5.42
27 Naphthalene-d8	730932	365466	1461864	792438	8.41
42 Acenaphthene-d10	420698	210349	841396	438708	4.28
59 Phenanthrene-d10	638950	319475	1277900	678619	6.21
69 Chrysene-d12	645065	322532	1290130	653508	1.31
134 Di-n-octylphthala	1016118	508059	2032236	1131114	11.32
77 Perylene-d12	650033	325016	1300066	644384	-0.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.73	8.23	9.23	8.73	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.29	14.79	15.79	15.29	0.00
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.69	0.00
134 Di-n-octylphthala	24.83	24.33	25.33	24.83	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120703.b/cc0703b.d

Date : 03-JUL-2012 14:49

Client ID:

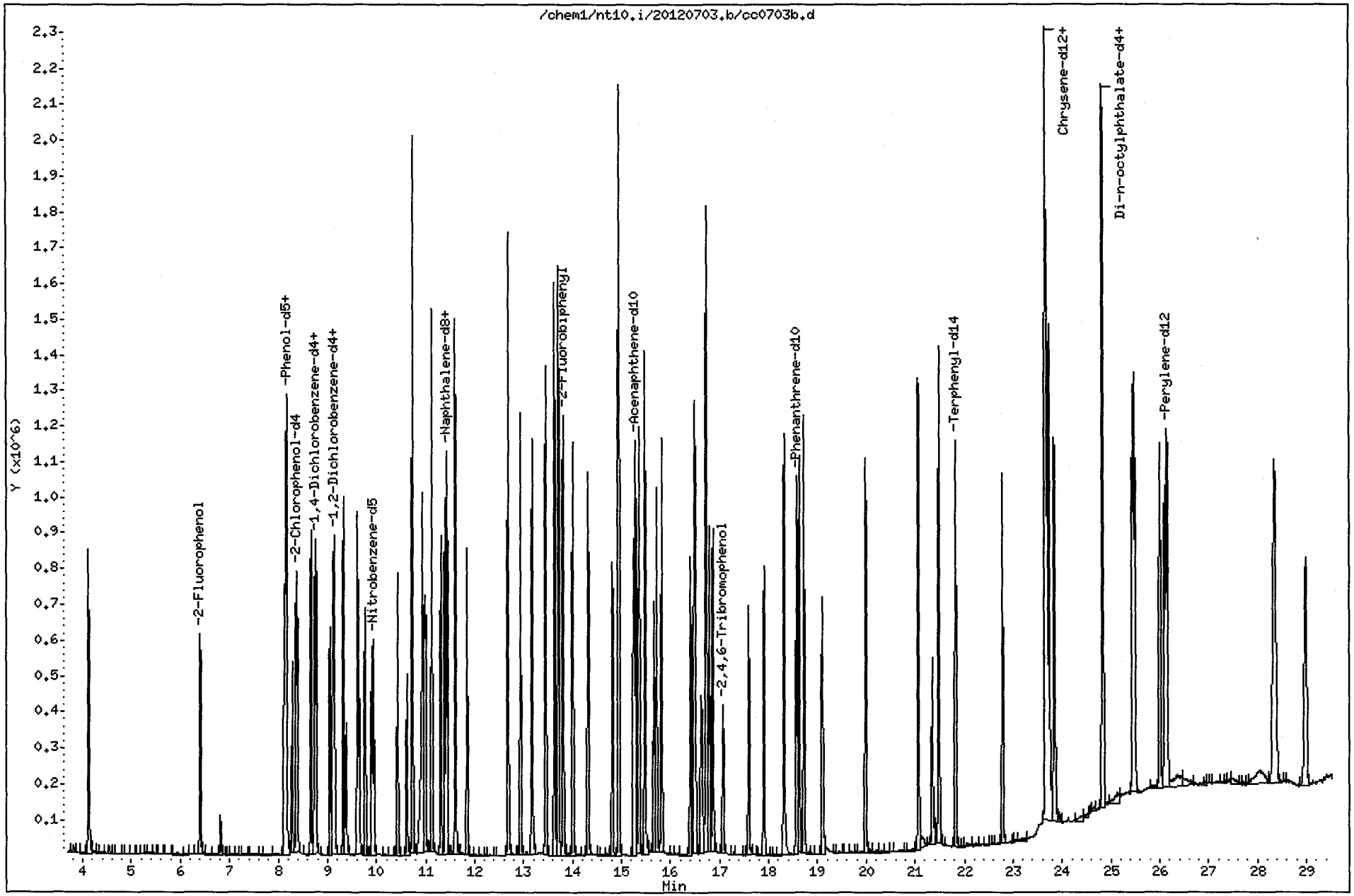
Sample Info: CC0703B

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



UZ99:00271

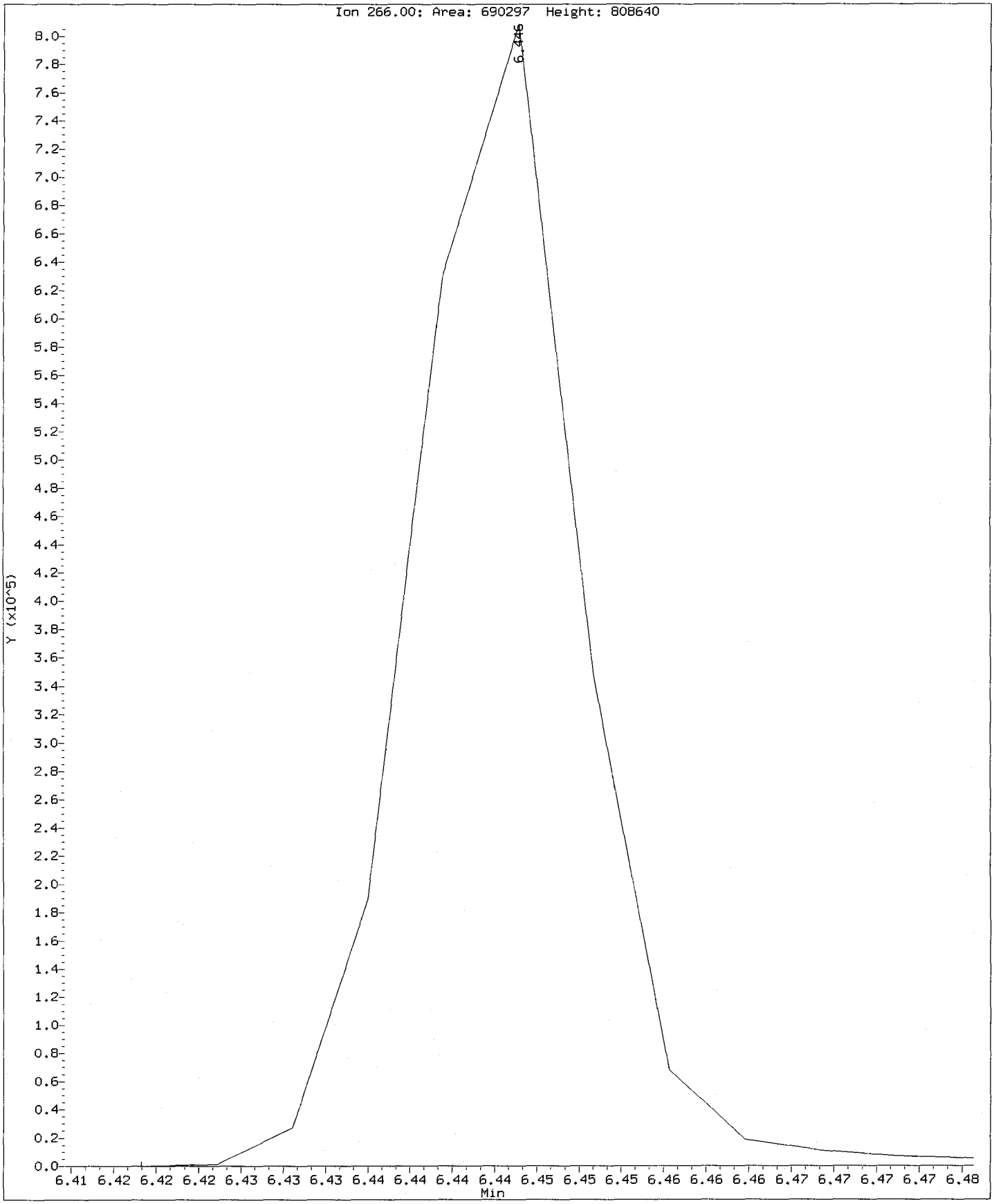
CO-ELUTION SUMMARY FOR FILE - cc0703b.d

Lab ID: CC0703B, Method: ABN.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS

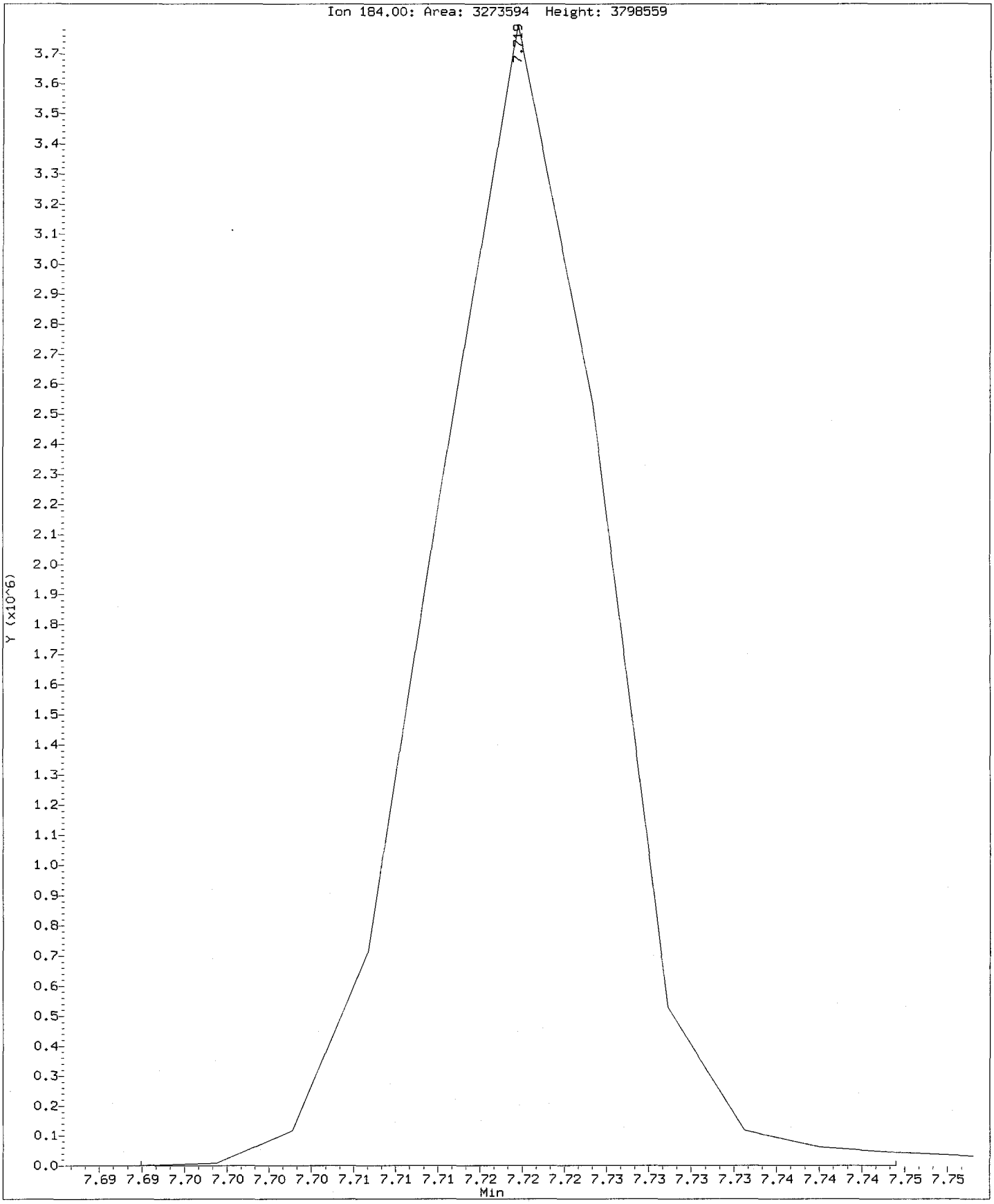
Data File: /chem1/nt10.i/20120703.b/ddt.b/df0703a.d
Injection Date: 03-JUL-2012 14:34
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20120703.b/ddt.b/df0703a.d
Injection Date: 03-JUL-2012 14:34
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

R 7/10/12

Data file : /chem1/nt10.i/20120703.b/uz99mb.d
Lab Smp Id: UZ99MBS1 Client Smp ID: UZ99MBS1
Inj Date : 03-JUL-2012 16:01
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UZ99MBS1
Misc Info : 12-11979
Comment : 1ul Injection
Method : /chem1/nt10.i/20120703.b/ABN.m
Meth Date : 03-Jul-2012 15:38 yev Quant Type: ISTD
Cal Date : 26-MAY-2012 14:42 Cal File: ic0526g.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.421	6.398	(0.735)	360848	5.26228	526.2
$ 2 Phenol-d5	99	8.121	8.121	(0.930)	468467	5.48435	548.4
3 Phenol	94	Compound Not Detected.					
$ 5 2-Chlorophenol-d4	132	8.361	8.353	(0.957)	417033	5.57259	557.3
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	8.732	8.732	(1.000)	196096	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.113	9.112	(1.044)	179510	3.65650	365.6
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	Compound Not Detected.					
$ 18 Nitrobenzene-d5	82	9.912	9.904	(0.871)	261513	3.69872	369.9
22 2,4-Dimethylphenol	107	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.386	11.386	(1.000)	789111	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.808	13.808	(0.903)	527702	3.60638	360.6
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.286	15.286	(1.000)	422103	4.00000	
	44 Acenaphthene	153	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	50 Diethylphthalate	149	16.399	16.415	(1.073)	22138	0.17509 J	17.51(R) <LOD
	49 Fluorene	166	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.071	17.070	(1.117)	100787	5.78492	578.5
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.570	18.570	(1.000)	669917	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	21.827	21.819	(0.921)	508858	4.39866	439.9
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	23.693	23.693	(1.000)	606932	4.00000	
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	23.840	23.840	(0.960)	32124	0.22694	22.69(R)
*	134 Di-n-octylphthalate-d4	153	24.824	24.831	(1.000)	1030780	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	26.093	26.101	(1.000)	561716	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	105 1-methylnaphthalene	142	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					
	98 Retene	219	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99mb.d
Lab Smp Id: UZ99MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 14:49
Client Smp ID: UZ99MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	196096	3.47
27 Naphthalene-d8	730932	365466	1461864	789111	7.96
42 Acenaphthene-d10	420698	210349	841396	422103	0.33
59 Phenanthrene-d10	638950	319475	1277900	669917	4.85
69 Chrysene-d12	645065	322532	1290130	606932	-5.91
134 Di-n-octylphthala	1016118	508059	2032236	1030780	1.44
77 Perylene-d12	650033	325016	1300066	561716	-13.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.73	8.23	9.23	8.73	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.29	14.79	15.79	15.29	0.00
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.69	0.00
134 Di-n-octylphthala	24.83	24.33	25.33	24.82	-0.03
77 Perylene-d12	26.10	25.60	26.60	26.09	-0.03

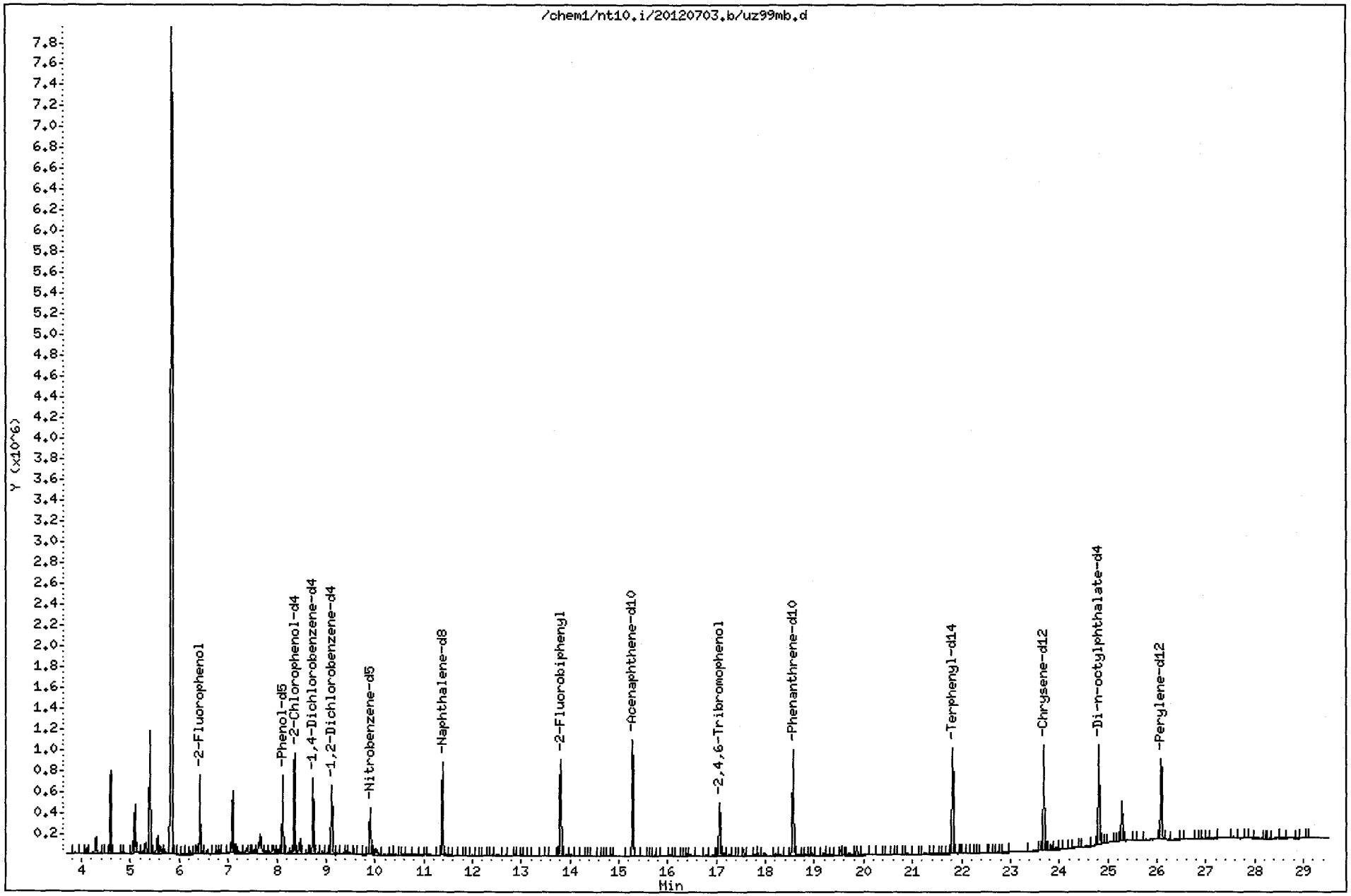
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	0.000	*	30-160
78 Indeno(1,2,3-cd)p	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
80 Benzo(g,h,i)peryl	500.0	0.000	*	30-160
105 1-methylnaphthale	500.0	0.000	*	30-160
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	526.2	70.16	30-160
$ 2 Phenol-d5	750.0	548.4	73.12	30-160
$ 5 2-Chlorophenol-d4	750.0	557.3	74.30	30-160
$ 10 1,2-Dichlorobenzen	500.0	365.6	73.13	30-160
$ 18 Nitrobenzene-d5	500.0	369.9	73.97	30-160
$ 36 2-Fluorobiphenyl	500.0	360.6	72.13	30-160
$ 55 2,4,6-Tribromophen	750.0	578.5	77.13	30-160
$ 66 Terphenyl-d14	500.0	439.9	87.97	30-160

Data File: /chem1/nt10.i/20120703.b/uz99mb.d
Date : 03-JUL-2012 16:01
Client ID: UZ99MBS1
Sample Info: UZ99MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



UZ99:00279

Data File: /chem1/nt10.i/20120703.b/uz99mb.d

Date : 03-JUL-2012 16:01

Client ID: UZ99MBS1 Instrument: nt10.i

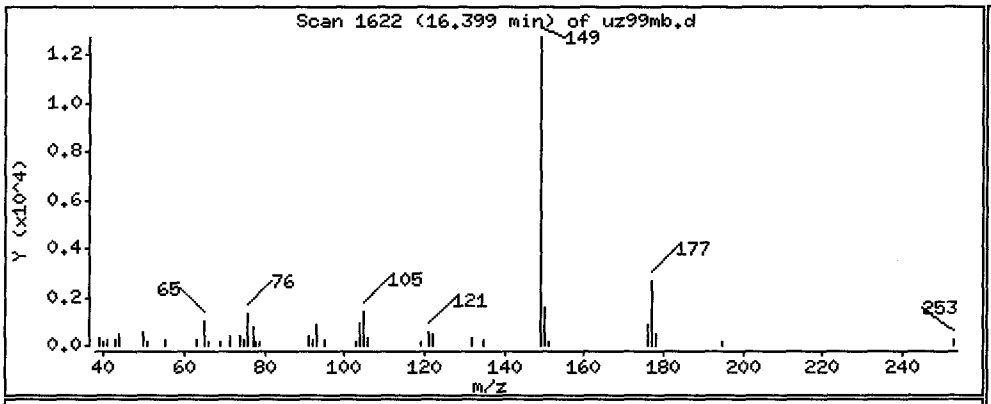
Sample Info: UZ99MBS1

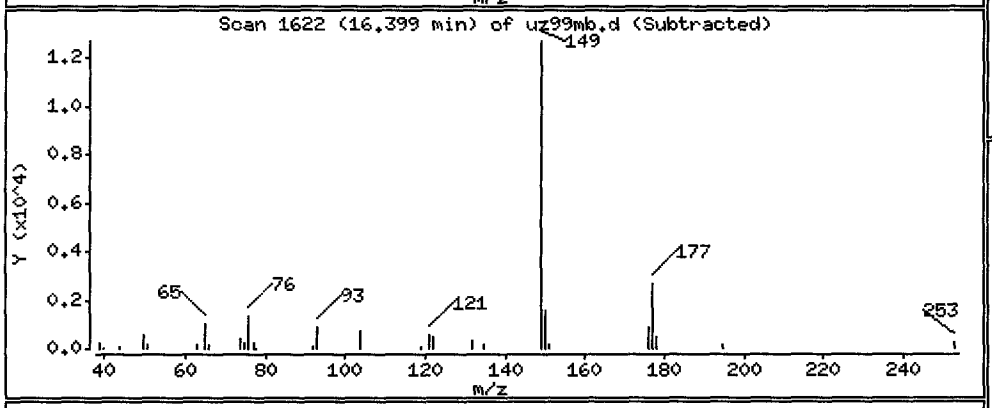
Volume Injected (uL): 1.0 Operator: VTS/YZ

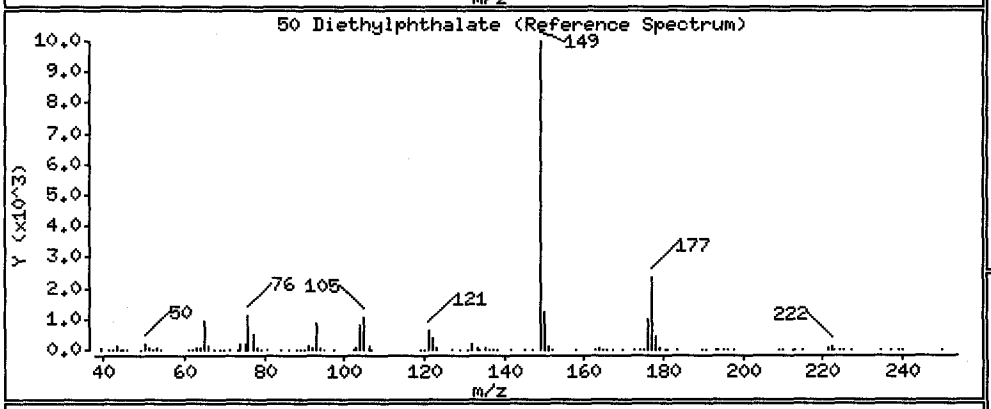
Column phase: ZB-5msi Column diameter: 0.25

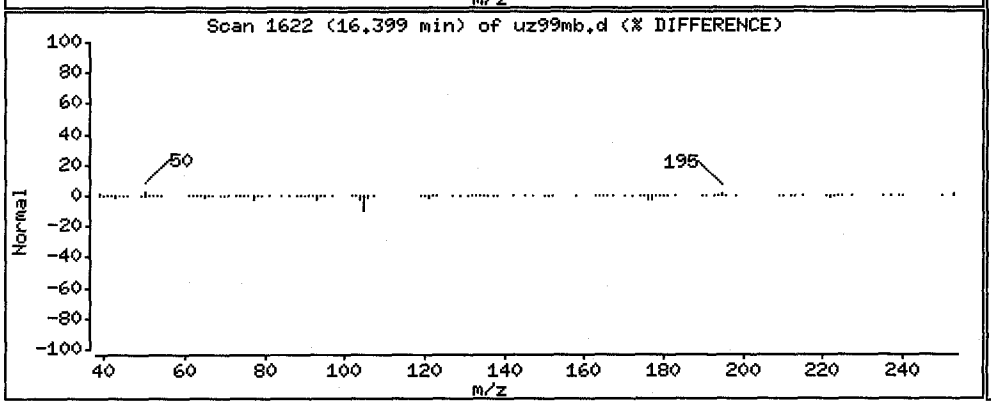
<LOD

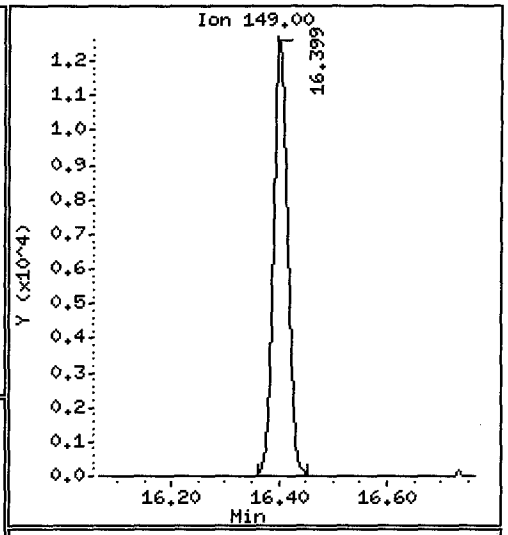
50 Diethylphthalate Concentration: 17.51 ug/kg

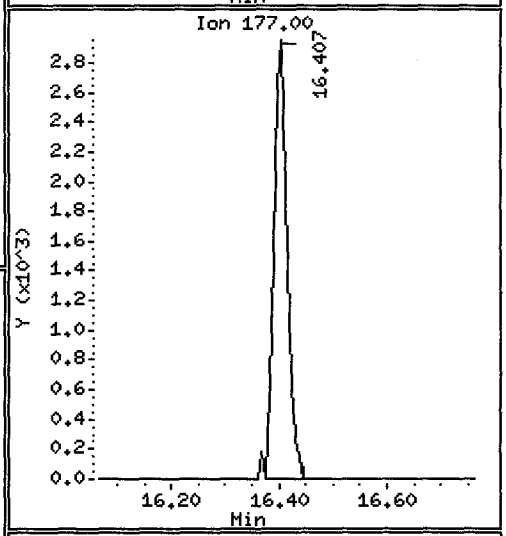


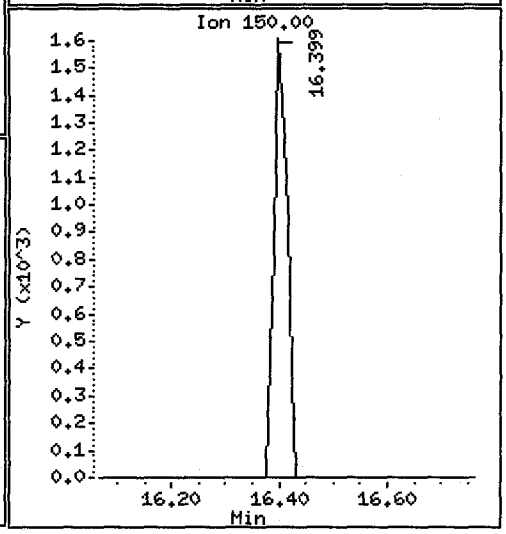












Data File: /chem1/nt10.i/20120703.b/uz99mb.d

Date : 03-JUL-2012 16:01

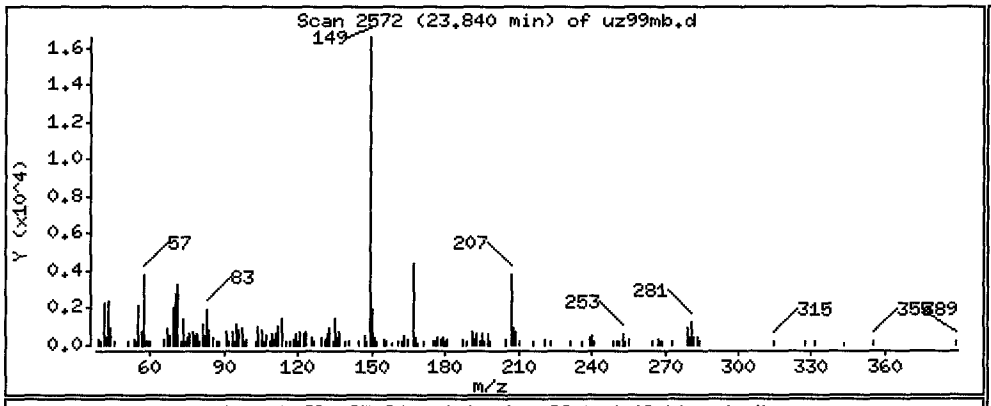
Client ID: UZ99MBS1 Instrument: nt10.i

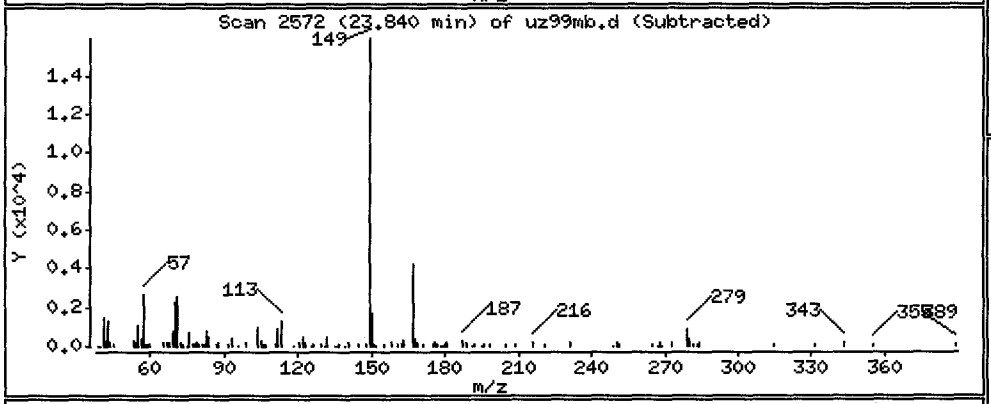
Sample Info: UZ99MBS1

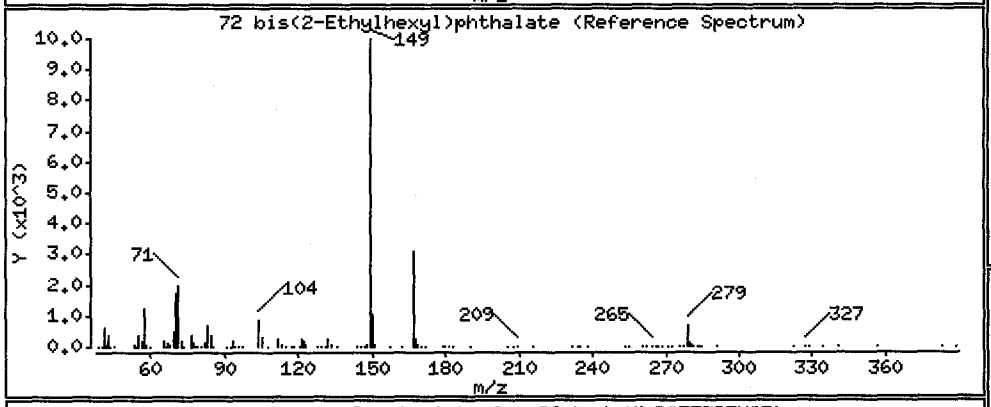
Volume Injected (uL): 1.0 Operator: VTS/YZ

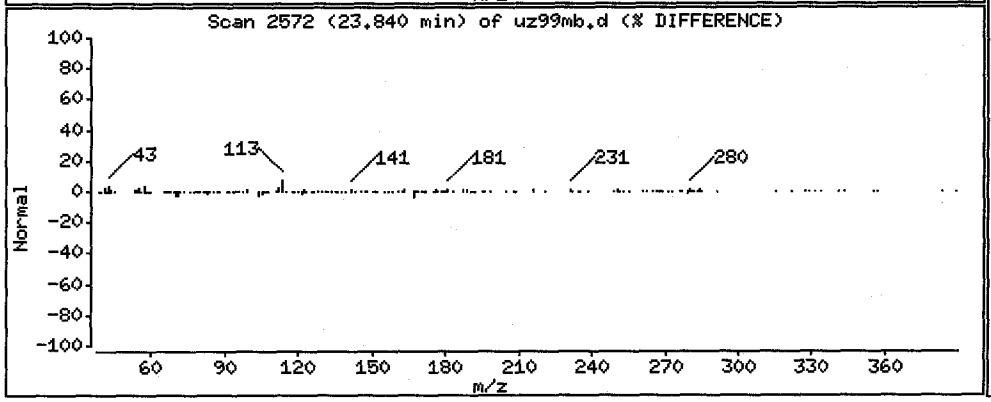
Column phase: ZB-5msi Column diameter: 0.25

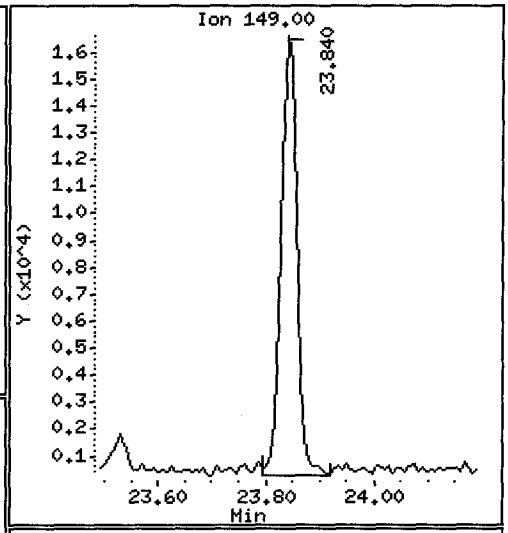
72 bis(2-Ethylhexyl)phthalate Concentration: 22.69 ug/kg

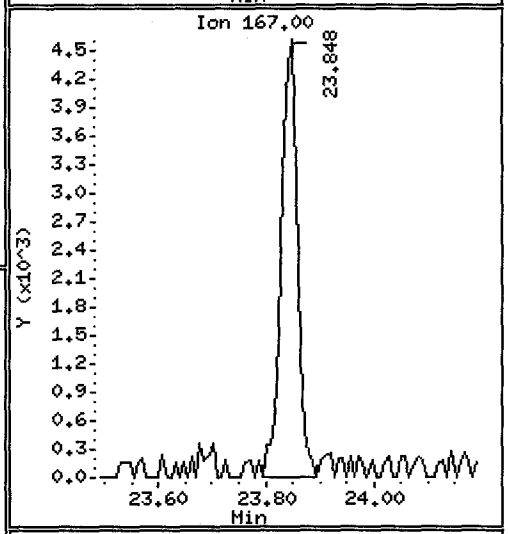


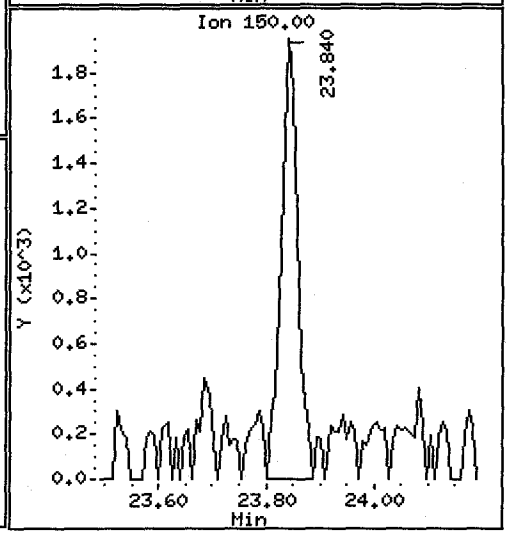












CO-ELUTION SUMMARY FOR FILE - uz99mb.d

Lab ID: UZ99MBS1, Method: ABN.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc. YZ 7/9/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120703.b/uz99sb.d
Lab Smp Id: UZ99LCSS1 Client Smp ID: UZ99LCSS1
Inj Date : 03-JUL-2012 16:38
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UZ99LCSS1
Misc Info : 12-11979
Comment : 1ul Injection
Method : /chem1/nt10.i/20120703.b/ABN.m
Meth Date : 10-Jul-2012 10:57 yev Quant Type: ISTD
Cal Date : 26-MAY-2012 14:42 Cal File: ic0526g.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.413	6.398	(0.734)	363127	5.32298	532.3
$ 2 Phenol-d5	99	8.121	8.121	(0.930)	480819	5.65816	565.8
3 Phenol	94	8.144	8.144	(0.933)	360739	3.98262	398.3
$ 5 2-Chlorophenol-d4	132	8.353	8.353	(0.957)	408334	5.48466	548.5
7 1,3-Dichlorobenzene	146	8.662	8.662	(0.992)	260061	3.24737	324.7
* 8 1,4-Dichlorobenzene-d4	152	8.732	8.732	(1.000)	195084	4.00000	
9 1,4-Dichlorobenzene	146	8.763	8.763	(1.004)	256589	3.28264	328.3
$ 10 1,2-Dichlorobenzene-d4	152	9.112	9.112	(1.044)	166940	3.41809	341.8
12 1,2-Dichlorobenzene	146	9.135	9.144	(1.046)	253622	3.32534	332.5
11 Benzyl alcohol	108	9.050	9.050	(1.036)	160443	4.21613	421.6
13 2-Methylphenol	108	9.322	9.322	(1.068)	206464	2.89205	289.2
17 Hexachloroethane	117	9.764	9.765	(1.118)	105920	3.48780	348.8
15 4-Methylphenol	108	9.625	9.617	(1.102)	441548	5.92838	592.8
$ 18 Nitrobenzene-d5	82	9.904	9.904	(0.870)	249277	3.56950	357.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	10.731	10.731	(0.942)	540315	7.86967	787.0
	24 Benzoic acid	105	10.977	10.993	(0.964)	807985	17.5184	1752
	26 1,2,4-Trichlorobenzene	180	11.301	11.301	(0.993)	205276	3.26510	326.5
*	27 Naphthalene-d8	136	11.386	11.386	(1.000)	779418	4.00000	
	28 Naphthalene	128	11.432	11.432	(1.004)	695340	3.53878	353.9
	30 Hexachlorobutadiene	225	11.842	11.842	(1.040)	113723	3.36392	336.4
	32 2-Methylnaphthalene	142	12.941	12.941	(1.137)	468163	3.42730	342.7
$	36 2-Fluorobiphenyl	172	13.807	13.808	(0.903)	525268	3.51852	351.9
	39 Dimethylphthalate	163	14.814	14.814	(0.969)	526848	3.98163	398.2
	40 Acenaphthylene	152	14.937	14.938	(0.977)	707203	3.65645	365.6
*	42 Acenaphthene-d10	164	15.286	15.286	(1.000)	430647	4.00000	
	44 Acenaphthene	153	15.355	15.355	(1.005)	437765	3.75247	375.2
	46 Dibenzofuran	168	15.711	15.711	(1.028)	605506	3.54279	354.3
	50 Diethylphthalate	149	16.406	16.415	(1.073)	539281	4.18058	418.1
	49 Fluorene	166	16.484	16.484	(1.078)	530326	4.04962	405.0
	54 N-Nitrosodiphenylamine	169	16.793	16.793	(0.904)	326950	3.66705	366.7
$	55 2,4,6-Tribromophenol	330	17.070	17.070	(1.117)	106808	6.00888	600.9
	57 Hexachlorobenzene	284	17.904	17.904	(0.964)	134007	3.27574	327.6
	58 Pentachlorophenol	266	18.314	18.314	(0.986)	282736	13.0073	1301
*	59 Phenanthrene-d10	188	18.570	18.570	(1.000)	662777	4.00000	
	60 Phenanthrene	178	18.616	18.616	(1.002)	693608	4.05846	405.8
	61 Anthracene	178	18.717	18.717	(1.008)	658396	3.68781	368.8
	63 Di-n-butylphthalate	149	19.985	19.986	(1.076)	1001913	4.30954	431.0
	64 Fluoranthene	202	21.061	21.061	(1.134)	807859	4.16324	416.3
	65 Pyrene	202	21.486	21.487	(0.907)	824477	4.31847	431.8
$	66 Terphenyl-d14	244	21.819	21.819	(0.921)	506632	4.23606	423.6
	67 Butylbenzylphthalate	149	22.787	22.787	(0.962)	410141	4.63109	463.1
	68 Benzo(a)anthracene	228	23.662	23.670	(0.999)	695052	3.93793	393.8
*	69 Chrysene-d12	240	23.693	23.693	(1.000)	627471	4.00000	
	71 Chrysene	228	23.739	23.740	(1.002)	554515	3.57132	357.1
	72 bis(2-Ethylhexyl)phthalate	149	23.848	23.840	(0.961)	546910	3.70779	370.8
*	134 Di-n-octylphthalate-d4	153	24.823	24.831	(1.000)	1074104	4.00000	
	73 Di-n-octylphthalate	149	24.839	24.839	(1.001)	896632	3.43113	343.1
	76 Benzo(a)pyrene	252	26.000	26.000	(0.996)	556457	3.54212	354.2
*	77 Perylene-d12	264	26.101	26.101	(1.000)	607569	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.333	28.333	(1.086)	701609	3.86094	386.1
	79 Dibenzo(a,h)anthracene	278	28.356	28.364	(1.086)	503929	3.52040	352.0
	80 Benzo(g,h,i)perylene	276	28.978	28.986	(1.110)	577194	3.70406	370.4
	105 1-methylnaphthalene	142	13.173	13.173	(1.157)	473010	3.39542	339.5
	187 Total Benzofluoranthenes	252	25.443	25.489	(0.975)	1326469	7.86831	786.8
	98 Retene	219	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99sb.d
Lab Smp Id: UZ99LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 14:49
Client Smp ID: UZ99LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	195084	2.94
27 Naphthalene-d8	730932	365466	1461864	779418	6.63
42 Acenaphthene-d10	420698	210349	841396	430647	2.36
59 Phenanthrene-d10	638950	319475	1277900	662777	3.73
69 Chrysene-d12	645065	322532	1290130	627471	-2.73
134 Di-n-octylphthala	1016118	508059	2032236	1074104	5.71
77 Perylene-d12	650033	325016	1300066	607569	-6.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.73	8.23	9.23	8.73	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.29	14.79	15.79	15.29	0.00
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.69	0.00
134 Di-n-octylphthala	24.83	24.33	25.33	24.82	-0.03
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UZ99LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info: 12-11979

Client SDG: UZ99
Fraction: SV
Client Smp ID: UZ99LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

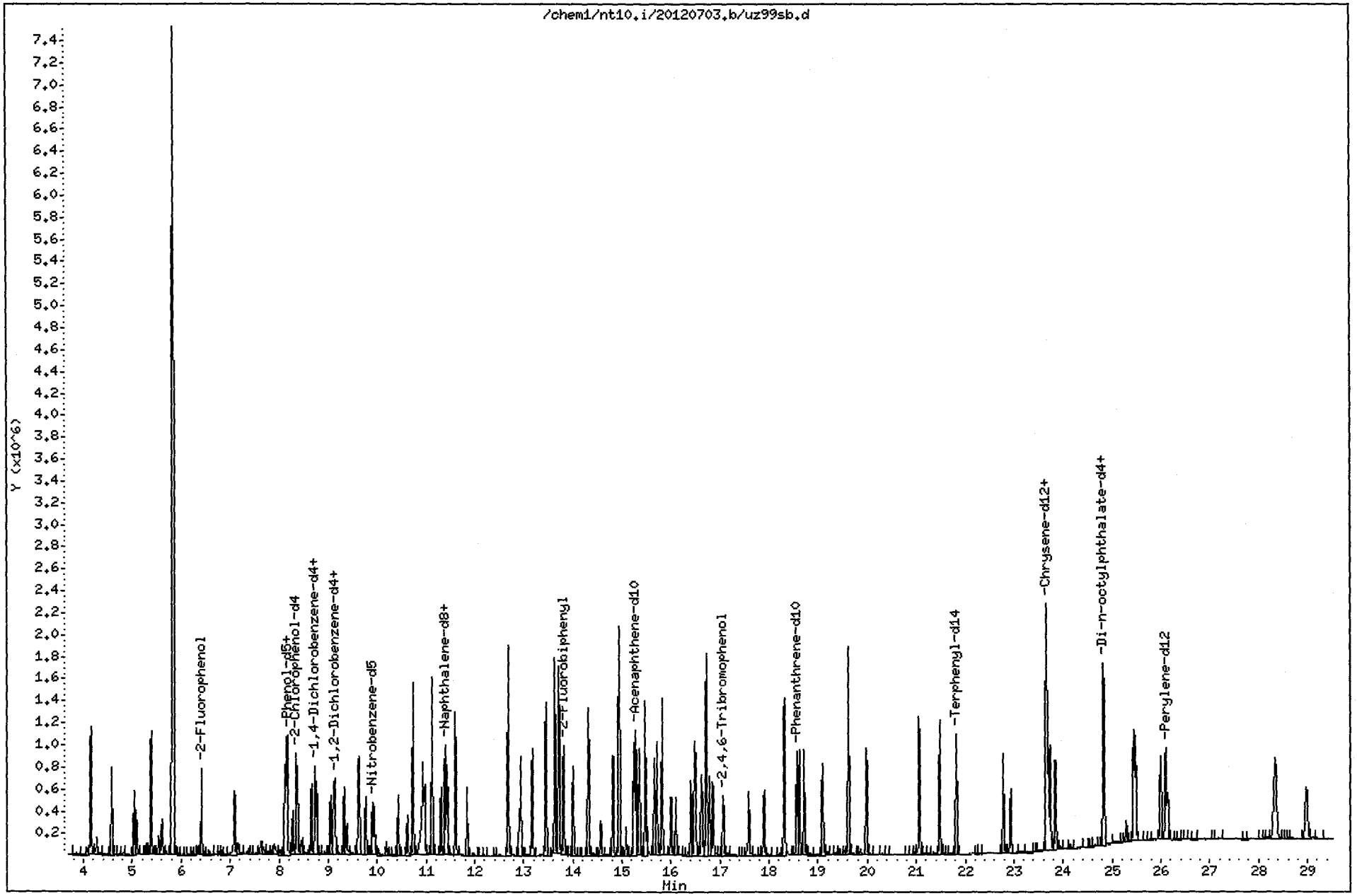
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	398.3	79.65	30-160
7	1,3-Dichlorobenzen	500.0	324.7	64.95	30-160
9	1,4-Dichlorobenzen	500.0	328.3	65.65	30-160
11	Benzyl alcohol	500.0	421.6	84.32	30-160
12	1,2-Dichlorobenzen	500.0	332.5	66.51	30-160
13	2-Methylphenol	500.0	289.2	57.84	30-160
15	4-Methylphenol	1000	592.8	59.28	30-160
17	Hexachloroethane	500.0	348.8	69.76	30-160
22	2,4-Dimethylphenol	1500	787.0	52.46	30-160
24	Benzoic acid	2750	1752	63.70	30-160
26	1,2,4-Trichloroben	500.0	326.5	65.30	30-160
28	Naphthalene	500.0	353.9	70.78	30-160
30	Hexachlorobutadien	500.0	336.4	67.28	30-160
32	2-Methylnaphthalen	500.0	342.7	68.55	30-160
39	Dimethylphthalate	500.0	398.2	79.63	30-160
40	Acenaphthylene	500.0	365.6	73.13	30-160
44	Acenaphthene	500.0	375.2	75.05	30-160
46	Dibenzofuran	500.0	354.3	70.86	30-160
49	Fluorene	500.0	405.0	80.99	30-160
50	Diethylphthalate	500.0	418.1	83.61	30-160
54	N-Nitrosodiphenyla	500.0	366.7	73.34	30-160
57	Hexachlorobenzene	500.0	327.6	65.51	30-160
58	Pentachlorophenol	1500	1301	86.72	30-160
60	Phenanthrene	500.0	405.8	81.17	30-160
61	Anthracene	500.0	368.8	73.76	30-160
63	Di-n-butylphthalat	500.0	431.0	86.19	30-160
64	Fluoranthene	500.0	416.3	83.26	30-160
65	Pyrene	500.0	431.8	86.37	30-160
67	Butylbenzylphthala	500.0	463.1	92.62	30-160
68	Benzo(a)anthracene	500.0	393.8	78.76	30-160
71	Chrysene	500.0	357.1	71.43	30-160
72	bis(2-Ethylhexyl)p	500.0	370.8	74.16	30-160
73	Di-n-octylphthalat	500.0	343.1	68.62	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	354.2	70.84	30-160
78 Indeno(1,2,3-cd)py	500.0	386.1	77.22	30-160
79 Dibenzo(a,h)anthra	500.0	352.0	70.41	30-160
80 Benzo(g,h,i)peryle	500.0	370.4	74.08	30-160
105 1-methylnaphthalen	500.0	339.5	67.91	30-160
187 Total Benzofluoran	1000	786.8	78.68	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	532.3	70.97	30-160
$ 2 Phenol-d5	750.0	565.8	75.44	30-160
$ 5 2-Chlorophenol-d4	750.0	548.5	73.13	30-160
$ 10 1,2-Dichlorobenzen	500.0	341.8	68.36	30-160
$ 18 Nitrobenzene-d5	500.0	357.0	71.39	30-160
$ 36 2-Fluorobiphenyl	500.0	351.9	70.37	30-160
$ 55 2,4,6-Tribromophen	750.0	600.9	80.12	30-160
$ 66 Terphenyl-d14	500.0	423.6	84.72	30-160

Data File: /chem1/nt10.i/20120703.b/uz99sb.d
Date : 03-JUL-2012 16:38
Client ID: UZ99LCSS1
Sample Info: UZ99LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



UZ99:00288

CO-ELUTION SUMMARY FOR FILE - uz99sb.d

Lab ID: UZ99LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ 7/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120703.b/uz99sbd.d
Lab Smp Id: UZ99LCSDS1 Client Smp ID: UZ99LCSDS1
Inj Date : 03-JUL-2012 17:14
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : UZ99LCSDS1
Misc Info : 12-11979
Comment : 1ul Injection
Method : /chem1/nt10.i/20120703.b/ABN.m
Meth Date : 10-Jul-2012 10:57 yev Quant Type: ISTD
Cal Date : 26-MAY-2012 14:42 Cal File: ic0526g.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.413	6.398	(0.734)	358238	4.80828	480.8
$ 2 Phenol-d5	99	8.121	8.121	(0.930)	468977	5.05320	505.3
3 Phenol	94	8.144	8.144	(0.933)	378096	3.82208	382.2
$ 5 2-Chlorophenol-d4	132	8.353	8.353	(0.957)	402326	4.94805	494.8
7 1,3-Dichlorobenzene	146	8.662	8.662	(0.992)	274879	3.14282	314.3
* 8 1,4-Dichlorobenzene-d4	152	8.732	8.732	(1.000)	213059	4.00000	
9 1,4-Dichlorobenzene	146	8.763	8.763	(1.004)	264810	3.10199	310.2
$ 10 1,2-Dichlorobenzene-d4	152	9.112	9.112	(1.044)	164660	3.08698	308.7
12 1,2-Dichlorobenzene	146	9.135	9.144	(1.046)	268387	3.22205	322.2
11 Benzyl alcohol	108	9.050	9.050	(1.036)	156738	3.77128	377.1
13 2-Methylphenol	108	9.322	9.322	(1.068)	214620	2.75267	275.3
17 Hexachloroethane	117	9.764	9.765	(1.118)	112890	3.40369	340.4
15 4-Methylphenol	108	9.625	9.617	(1.102)	463097	5.69314	569.3
$ 18 Nitrobenzene-d5	82	9.904	9.904	(0.870)	244813	3.28516	328.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	22 2,4-Dimethylphenol	107	10.731	10.731	(0.942)	587931	8.02476	802.5
	24 Benzoic acid	105	10.985	10.993	(0.965)	883570	17.9394	1794
	26 1,2,4-Trichlorobenzene	180	11.301	11.301	(0.993)	216080	3.22084	322.1
*	27 Naphthalene-d8	136	11.386	11.386	(1.000)	831714	4.00000	
	28 Naphthalene	128	11.424	11.432	(1.003)	736295	3.51160	351.2
	30 Hexachlorobutadiene	225	11.842	11.842	(1.040)	118546	3.28610	328.6
	32 2-Methylnaphthalene	142	12.933	12.941	(1.136)	495837	3.40165	340.2
$	36 2-Fluorobiphenyl	172	13.807	13.808	(0.903)	510375	3.17499	317.5
	39 Dimethylphthalate	163	14.821	14.814	(0.970)	544868	3.82420	382.4
	40 Acenaphthylene	152	14.937	14.938	(0.977)	733883	3.52384	352.4
*	42 Acenaphthene-d10	164	15.286	15.286	(1.000)	463712	4.00000	
	44 Acenaphthene	153	15.355	15.355	(1.005)	451168	3.59160	359.2
	46 Dibenzofuran	168	15.718	15.711	(1.028)	633619	3.44293	344.3
	50 Diethylphthalate	149	16.414	16.415	(1.074)	570949	4.11047	411.0
	49 Fluorene	166	16.484	16.484	(1.078)	562685	3.99034	399.0
	54 N-Nitrosodiphenylamine	169	16.793	16.793	(0.904)	348990	3.64354	364.4
$	55 2,4,6-Tribromophenol	330	17.070	17.070	(1.117)	107304	5.60633	560.6
	57 Hexachlorobenzene	284	17.904	17.904	(0.964)	140398	3.19460	319.5
	58 Pentachlorophenol	266	18.314	18.314	(0.986)	293256	12.5743	1257
*	59 Phenanthrene-d10	188	18.570	18.570	(1.000)	712021	4.00000	
	60 Phenanthrene	178	18.624	18.616	(1.003)	726765	3.95836	395.8
	61 Anthracene	178	18.717	18.717	(1.008)	689567	3.59528	359.5
	63 Di-n-butylphthalate	149	19.985	19.986	(1.076)	1042249	4.17298	417.3
	64 Fluoranthene	202	21.061	21.061	(1.134)	845526	4.05600	405.6
	65 Pyrene	202	21.479	21.487	(0.907)	858449	4.08080	408.1
$	66 Terphenyl-d14	244	21.819	21.819	(0.921)	495708	3.76162	376.2
	67 Butylbenzylphthalate	149	22.787	22.787	(0.962)	421010	4.31442	431.4
	68 Benzo(a)anthracene	228	23.662	23.670	(0.999)	722763	3.71643	371.6
*	69 Chrysene-d12	240	23.693	23.693	(1.000)	691376	4.00000	
	71 Chrysene	228	23.739	23.740	(1.002)	594283	3.47367	347.4
	72 bis(2-Ethylhexyl)phthalate	149	23.848	23.840	(0.961)	523365	3.23489	323.5
*	134 Di-n-octylphthalate-d4	153	24.823	24.831	(1.000)	1178123	4.00000	
	73 Di-n-octylphthalate	149	24.839	24.839	(1.001)	847017	2.95509	295.5
	76 Benzo(a)pyrene	252	26.000	26.000	(0.996)	591700	3.48710	348.7
*	77 Perylene-d12	264	26.101	26.101	(1.000)	656242	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.333	28.333	(1.086)	732433	3.73162	373.2
	79 Dibenzo(a,h)anthracene	278	28.356	28.364	(1.086)	521046	3.37000	337.0
	80 Benzo(g,h,i)perylene	276	28.978	28.986	(1.110)	605668	3.59851	359.9
	105 1-methylnaphthalene	142	13.173	13.173	(1.157)	494821	3.32865	332.9
	187 Total Benzofluoranthenes	252	25.450	25.489	(0.975)	1383356	7.59714	759.7
	98 Retene	219	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99sbd.d
Lab Smp Id: UZ99LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 14:49
Client Smp ID: UZ99LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	213059	12.42
27 Naphthalene-d8	730932	365466	1461864	831714	13.79
42 Acenaphthene-d10	420698	210349	841396	463712	10.22
59 Phenanthrene-d10	638950	319475	1277900	712021	11.44
69 Chrysene-d12	645065	322532	1290130	691376	7.18
134 Di-n-octylphthala	1016118	508059	2032236	1178123	15.94
77 Perylene-d12	650033	325016	1300066	656242	0.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.73	8.23	9.23	8.73	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.29	14.79	15.79	15.29	0.00
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.69	0.00
134 Di-n-octylphthala	24.83	24.33	25.33	24.82	-0.03
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UZ99LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info: 12-11979

Client SDG: UZ99
Fraction: SV
Client Smp ID: UZ99LCSDS1
Operator: VTS/YZ
SampleType: LCSD
Quant Type: ISTD

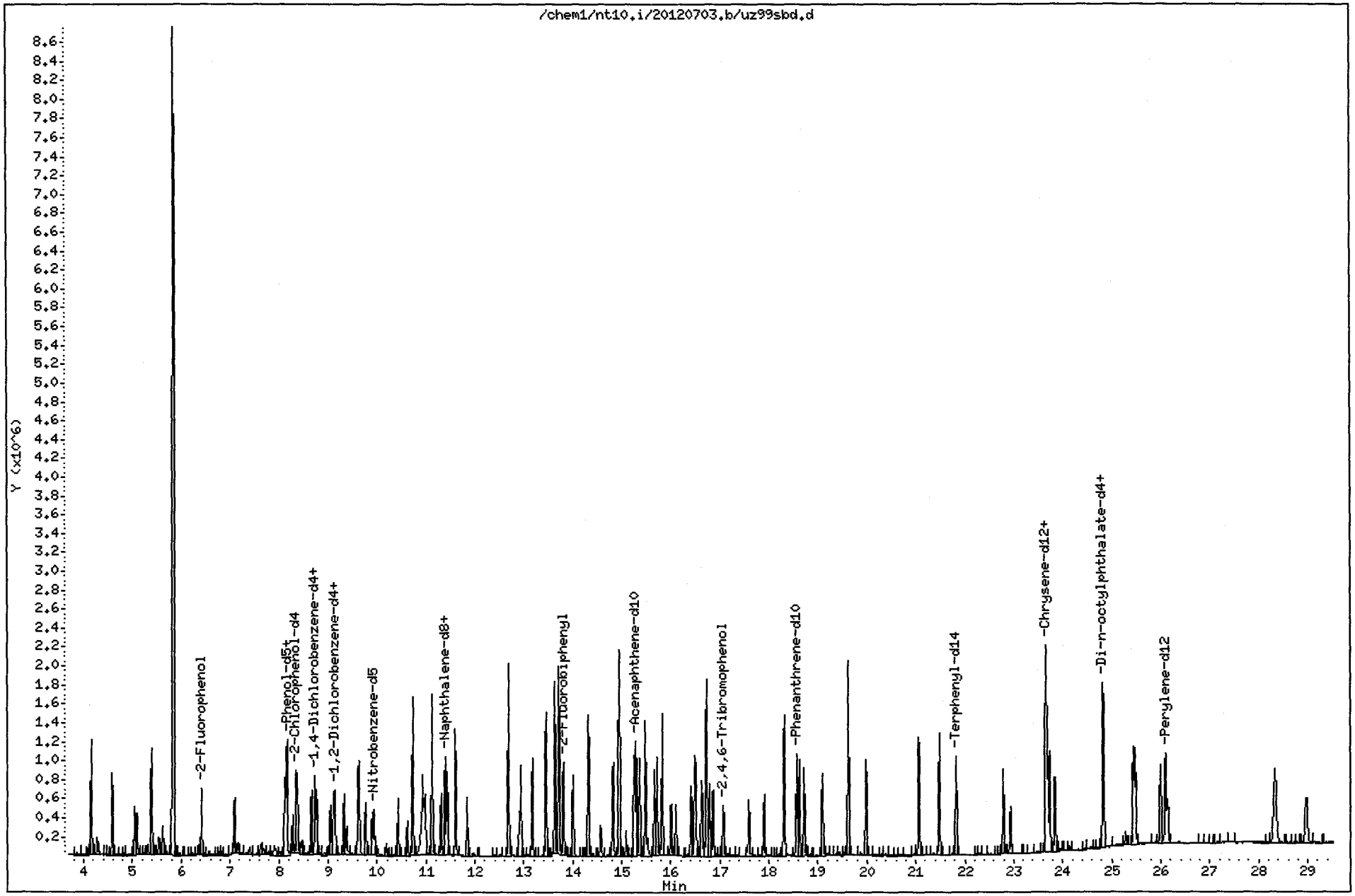
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	382.2	76.44	30-160
7	1,3-Dichlorobenzen	500.0	314.3	62.86	30-160
9	1,4-Dichlorobenzen	500.0	310.2	62.04	30-160
11	Benzyl alcohol	500.0	377.1	75.43	30-160
12	1,2-Dichlorobenzen	500.0	322.2	64.44	30-160
13	2-Methylphenol	500.0	275.3	55.05	30-160
15	4-Methylphenol	1000	569.3	56.93	30-160
17	Hexachloroethane	500.0	340.4	68.07	30-160
22	2,4-Dimethylphenol	1500	802.5	53.50	30-160
24	Benzoic acid	2750	1794	65.23	30-160
26	1,2,4-Trichloroben	500.0	322.1	64.42	30-160
28	Naphthalene	500.0	351.2	70.23	30-160
30	Hexachlorobutadien	500.0	328.6	65.72	30-160
32	2-Methylnaphthalen	500.0	340.2	68.03	30-160
39	Dimethylphthalate	500.0	382.4	76.48	30-160
40	Acenaphthylene	500.0	352.4	70.48	30-160
44	Acenaphthene	500.0	359.2	71.83	30-160
46	Dibenzofuran	500.0	344.3	68.86	30-160
49	Fluorene	500.0	399.0	79.81	30-160
50	Diethylphthalate	500.0	411.0	82.21	30-160
54	N-Nitrosodiphenyla	500.0	364.4	72.87	30-160
57	Hexachlorobenzene	500.0	319.5	63.89	30-160
58	Pentachlorophenol	1500	1257	83.83	30-160
60	Phenanthrene	500.0	395.8	79.17	30-160
61	Anthracene	500.0	359.5	71.91	30-160
63	Di-n-butylphthalat	500.0	417.3	83.46	30-160
64	Fluoranthene	500.0	405.6	81.12	30-160
65	Pyrene	500.0	408.1	81.62	30-160
67	Butylbenzylphthala	500.0	431.4	86.29	30-160
68	Benzo(a)anthracene	500.0	371.6	74.33	30-160
71	Chrysene	500.0	347.4	69.47	30-160
72	bis(2-Ethylhexyl)p	500.0	323.5	64.70	30-160
73	Di-n-octylphthalat	500.0	295.5	59.10	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	348.7	69.74	30-160
78 Indeno(1,2,3-cd)py	500.0	373.2	74.63	30-160
79 Dibenzo(a,h)anthra	500.0	337.0	67.40	30-160
80 Benzo(g,h,i)peryle	500.0	359.9	71.97	30-160
105 1-methylnaphthalen	500.0	332.9	66.57	30-160
187 Total Benzofluoran	1000	759.7	75.97	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	480.8	64.11	30-160
$ 2 Phenol-d5	750.0	505.3	67.38	30-160
$ 5 2-Chlorophenol-d4	750.0	494.8	65.97	30-160
$ 10 1,2-Dichlorobenzen	500.0	308.7	61.74	30-160
$ 18 Nitrobenzene-d5	500.0	328.5	65.70	30-160
$ 36 2-Fluorobiphenyl	500.0	317.5	63.50	30-160
$ 55 2,4,6-Tribromophen	750.0	560.6	74.75	30-160
$ 66 Terphenyl-d14	500.0	376.2	75.23	30-160

Data File: /chem1/nt10.i/20120703.b/uz99sbd.d
Date : 03-JUL-2012 17:14
Client ID: UZ99LCSDS1
Sample Info: UZ99LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



UZ99:00295

CO-ELUTION SUMMARY FOR FILE - uz99sbd.d

Lab ID: UZ99LCSDS1, Method: ABN.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

YZ 7/10/12

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20120703.b/uz99a.d
Lab Smp Id: UZ99A
Client Smp ID: CB-002-06222012
Inj Date : 03-JUL-2012 19:02
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : UZ99A
Misc Info : 12-11979
Comment : 1ul Injection
Method : /chem1/nt10.i/20120703.b/ABN.m
Meth Date : 03-Jul-2012 15:38 yev
Quant Type: ISTD
Cal Date : 26-MAY-2012 14:42
Cal File: ic0526g.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SHORTPSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	12.30000	Weight of sample extracted (g)
M	12.20000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.421	6.398	(0.735)	336092	4.69158	434.4
$ 2 Phenol-d5	99	8.121	8.121	(0.930)	455546	5.10493	472.7
3 Phenol	94	Compound Not Detected.					
$ 5 2-Chlorophenol-d4	132	8.353	8.353	(0.957)	409444	5.23712	484.9
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	8.732	8.732	(1.000)	204860	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	9.112	9.112	(1.044)	161456	3.14805	291.5
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
15 4-Methylphenol	108	Compound Not Detected.					
$ 18 Nitrobenzene-d5	82	9.904	9.904	(0.870)	239829	3.34953	310.2
22 2,4-Dimethylphenol	107	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	24 Benzoic acid	105	10.854	10.993	(0.953)	31611	0.68764	63.67(H)
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.386	11.386	(1.000)	799124	4.00000	
	28 Naphthalene	128	11.425	11.432	(1.003)	60220	0.29892	27.68
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.933	12.941	(1.136)	43092	0.30769	28.49
$	36 2-Fluorobiphenyl	172	13.808	13.808	(0.903)	536346	3.58120	331.6
	39 Dimethylphthalate	163	14.814	14.814	(0.969)	21545	0.16230	15.03
	40 Acenaphthylene	152	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.286	15.286	(1.000)	432034	4.00000	
	44 Acenaphthene	153	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	50 Diethylphthalate	149	16.399	16.415	(1.073)	20072	0.15510	14.36
	49 Fluorene	166	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.070	17.070	(1.117)	100976	5.66254	524.3
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.570	18.570	(1.000)	707568	4.00000	
	60 Phenanthrene	178	18.616	18.616	(1.002)	66291	0.36333	33.64
	61 Anthracene	178	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	21.069	21.061	(1.135)	64263	0.31021	28.72
	65 Pyrene	202	21.487	21.487	(0.906)	72801	0.33313	30.85
$	66 Terphenyl-d14	244	21.835	21.819	(0.921)	524719	3.83288	354.9
	67 Butylbenzylphthalate	149	22.803	22.787	(0.962)	170104	1.67800	155.4
	68 Benzo(a)anthracene	228	23.685	23.670	(0.999)	20527	0.10160	9.408
*	69 Chrysene-d12	240	23.709	23.693	(1.000)	718233	4.00000	
	71 Chrysene	228	23.755	23.740	(1.002)	42972	0.24179	22.39
	72 bis(2-Ethylhexyl)phthalate	149	23.871	23.840	(0.960)	90992	0.55220	51.13
*	134 Di-n-octylphthalate-d4	153	24.870	24.831	(1.000)	1199931	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	76 Benzo(a)pyrene	252	26.047	26.000	(0.996)	21809	0.12235	11.33(H)
*	77 Perylene-d12	264	26.155	26.101	(1.000)	689373	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	29.133	28.986	(1.114)	41236	0.23322	21.60(M)
	105 1-methylnaphthalene	142	13.173	13.173	(1.157)	20092	0.14067	13.03
	187 Total Benzofluoranthenes	252	25.482	25.489	(0.974)	52302	0.27343	25.32
	98 Retene	219	22.121	22.106	(0.933)	17438	0.17136	15.87

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99a.d
Lab Smp Id: UZ99A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 14:49
Client Smp ID: CB-002-06222012
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	189516	94758	379032	204860	8.10
27 Naphthalene-d8	730932	365466	1461864	799124	9.33
42 Acenaphthene-d10	420698	210349	841396	432034	2.69
59 Phenanthrene-d10	638950	319475	1277900	707568	10.74
69 Chrysene-d12	645065	322532	1290130	718233	11.34
134 Di-n-octylphthala	1016118	508059	2032236	1199931	18.09
77 Perylene-d12	650033	325016	1300066	689373	6.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.73	8.23	9.23	8.73	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.29	14.79	15.79	15.29	0.00
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.71	0.07
134 Di-n-octylphthala	24.83	24.33	25.33	24.87	0.16
77 Perylene-d12	26.10	25.60	26.60	26.16	0.21

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UZ99A
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: SHORTPSDDA.sub
Method File: /chem1/nt10.i/20120703.b/ABN.m
Misc Info: 12-11979

Client SDG: UZ99
Fraction: SV
Client Smp ID: CB-002-06222012
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	694.5	434.4	62.55	30-160
$ 2 Phenol-d5	694.5	472.7	68.07	30-160
$ 5 2-Chlorophenol-d4	694.5	484.9	69.83	30-160
$ 10 1,2-Dichlorobenzen	463.0	291.5	62.96	30-160
$ 18 Nitrobenzene-d5	463.0	310.2	66.99	30-160
$ 36 2-Fluorobiphenyl	463.0	331.6	71.62	30-160
$ 55 2,4,6-Tribromophen	694.5	524.3	75.50	30-160
$ 66 Terphenyl-d14	463.0	354.9	76.66	30-160

Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

Client ID: CB-002-06222012

Sample Info: UZ99A

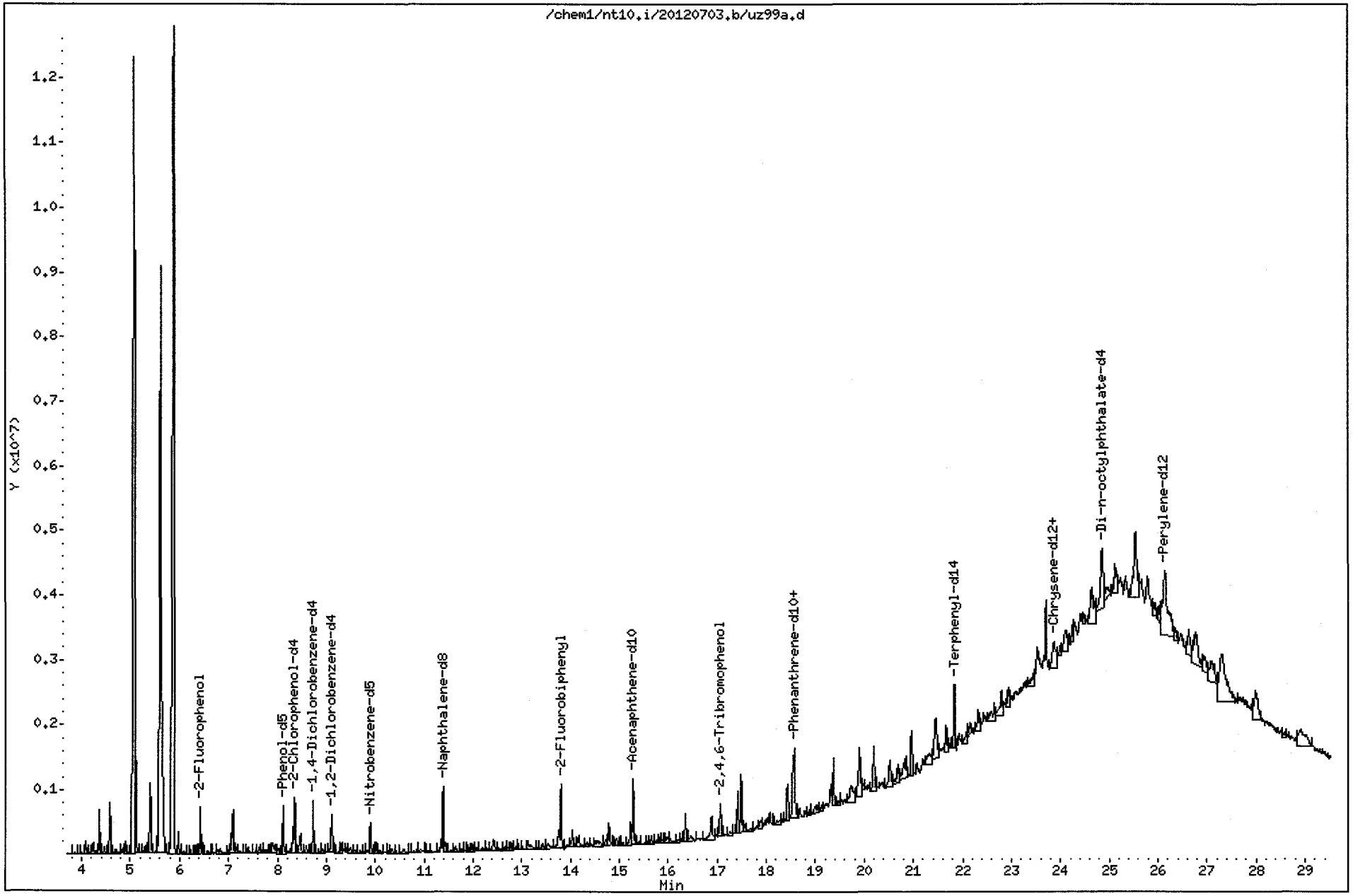
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



UZ99:00301

Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

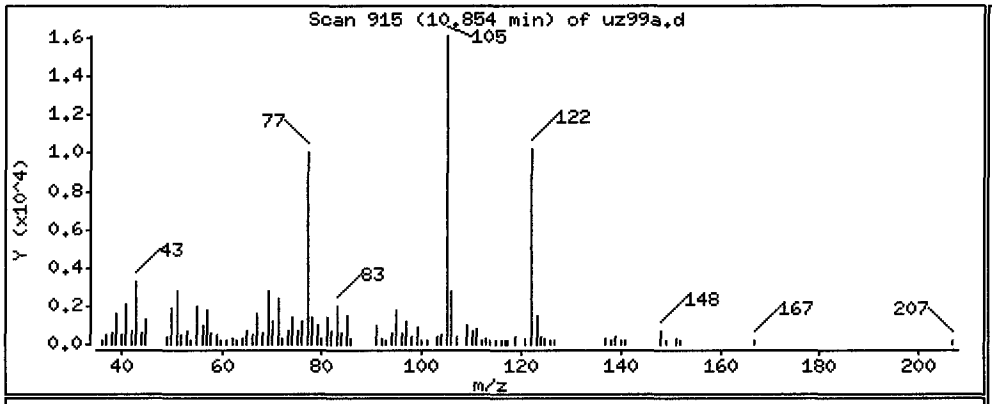
Client ID: CB-002-06222012 Instrument: nt10.i

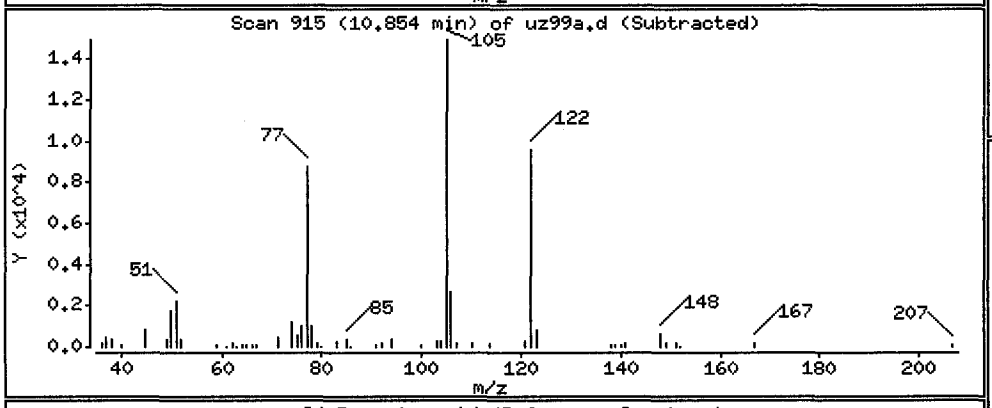
Sample Info: UZ99A

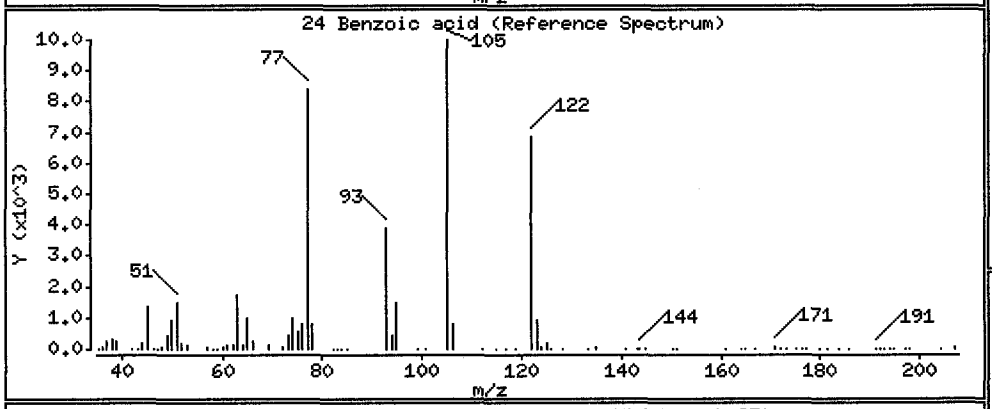
Volume Injected (uL): 1.0 Operator: VTS/YZ

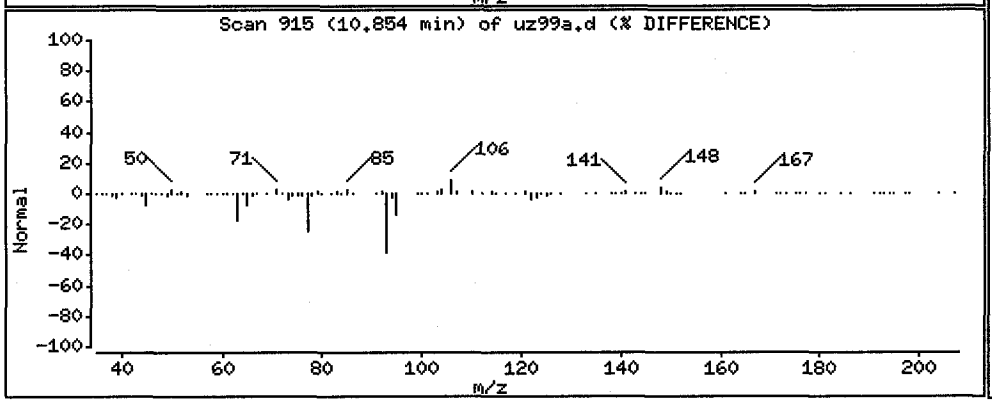
Column phase: ZB-5msi Column diameter: 0.25

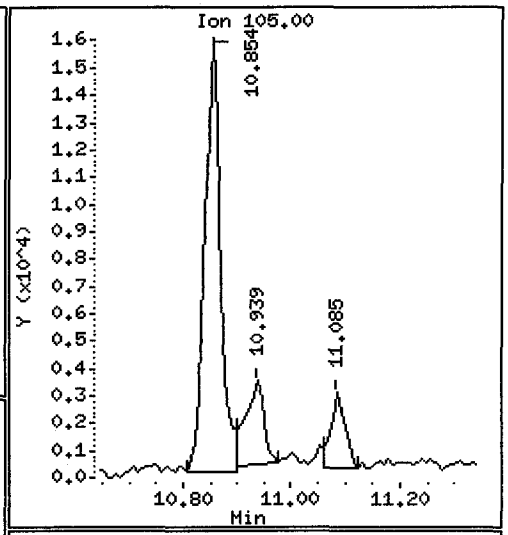
24 Benzoic acid Concentration: 63.67 ug/kg

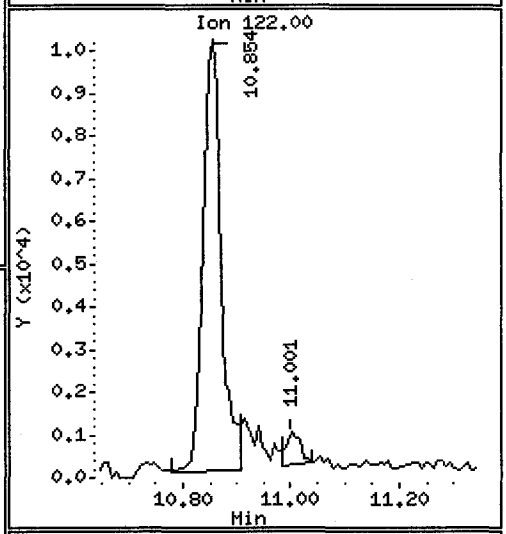


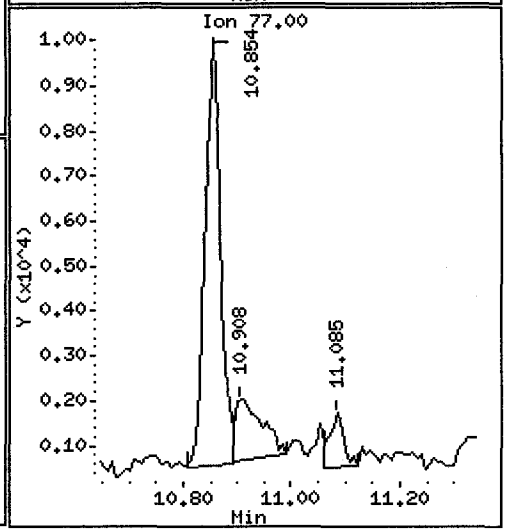












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

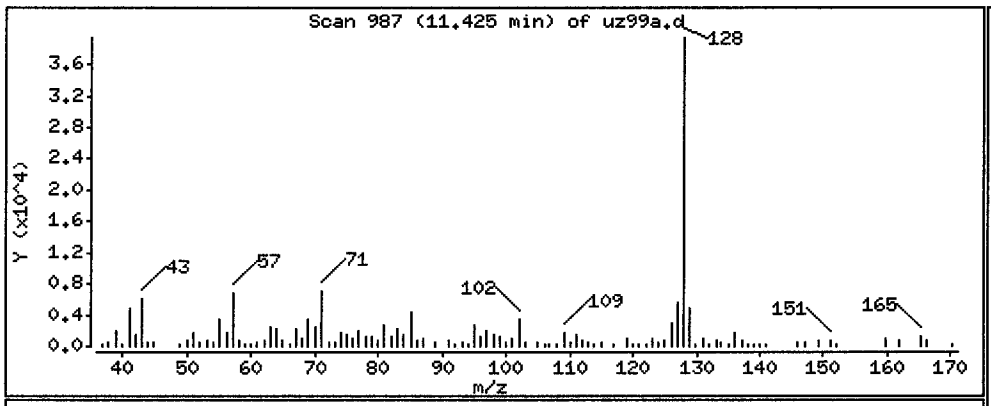
Client ID: CB-002-06222012 Instrument: nt10.i

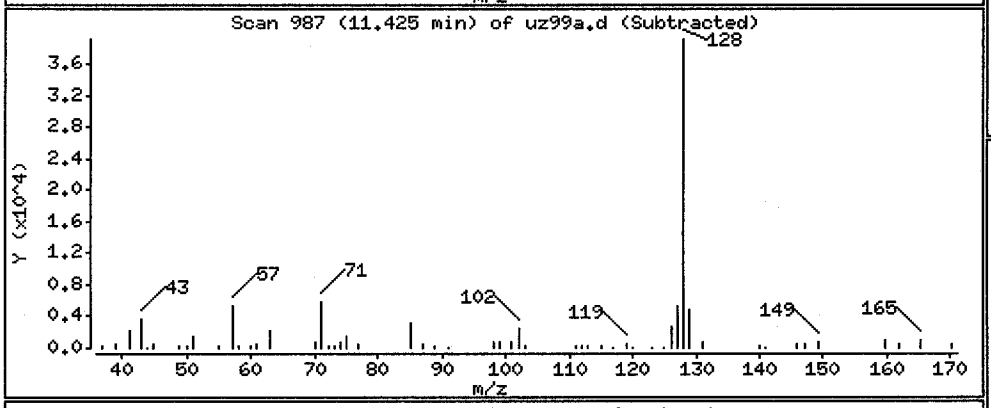
Sample Info: UZ99A

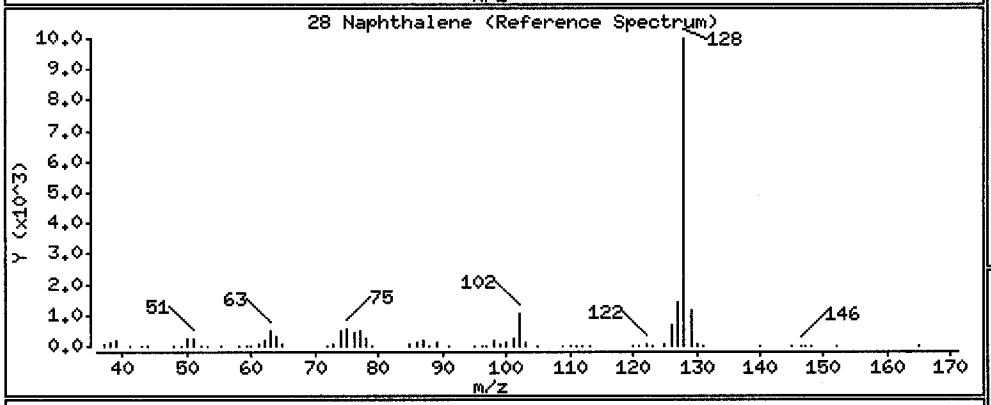
Volume Injected (uL): 1.0 Operator: VTS/YZ

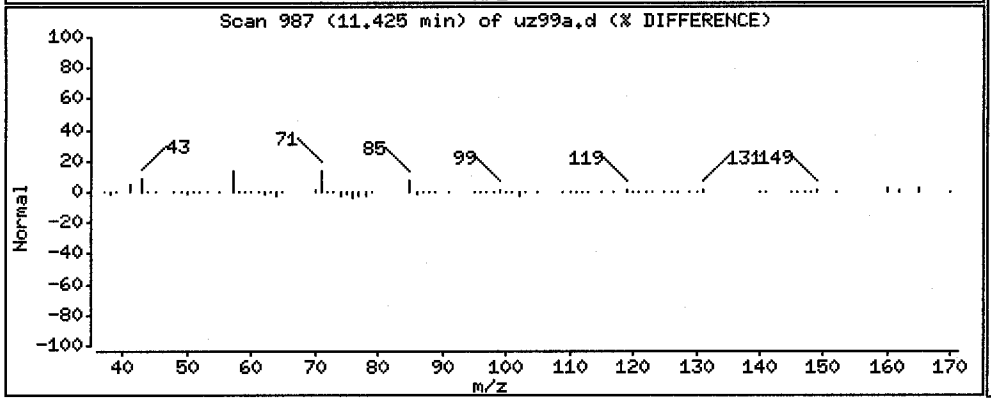
Column phase: ZB-5msi Column diameter: 0.25

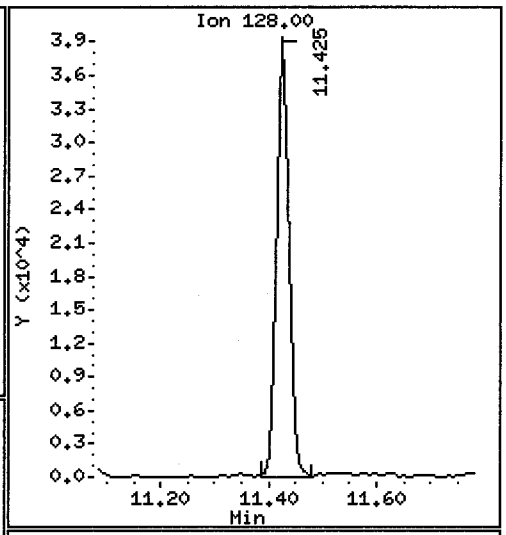
28 Naphthalene Concentration: 27.68 ug/kg

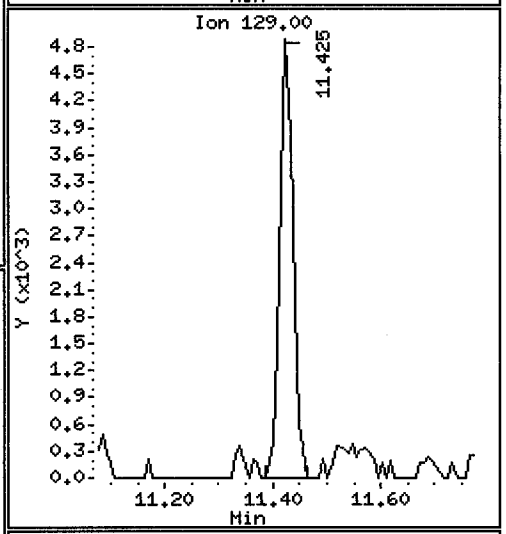


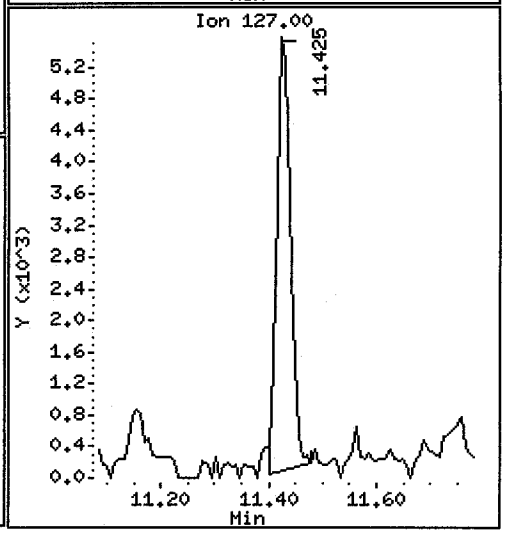












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

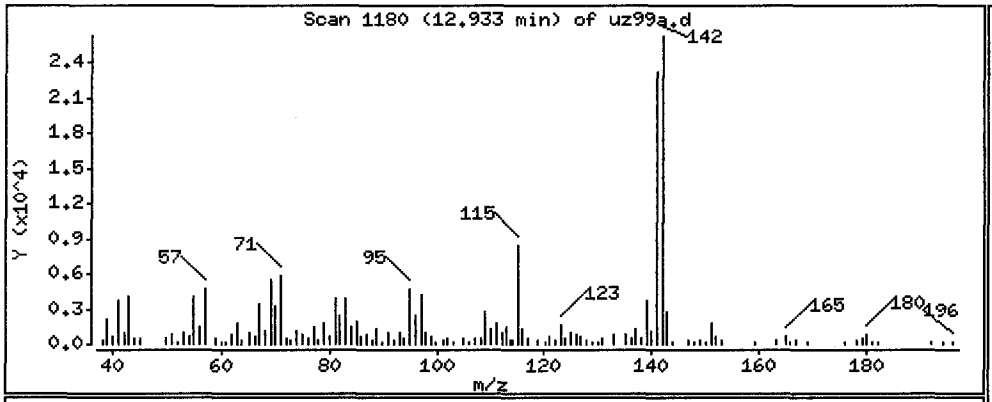
Client ID: CB-002-06222012 Instrument: nt10.i

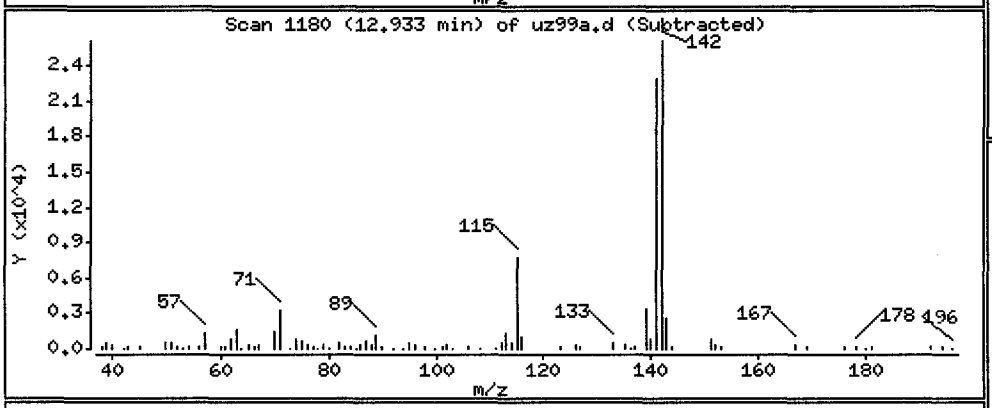
Sample Info: UZ99A

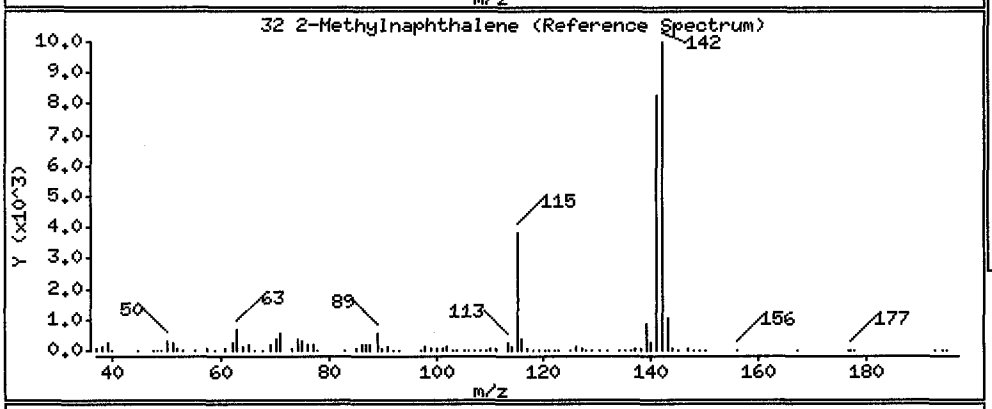
Volume Injected (uL): 1.0 Operator: VTS/YZ

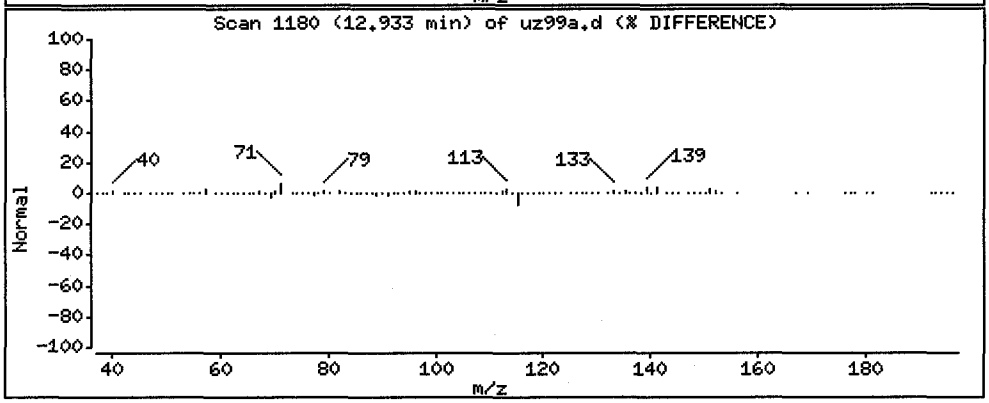
Column phase: ZB-5msi Column diameter: 0.25

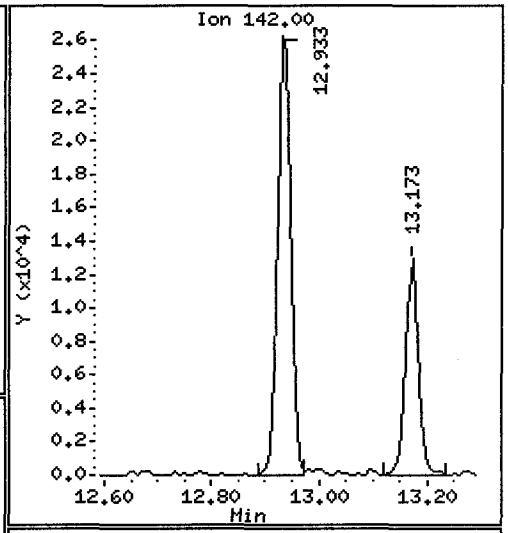
32 2-Methylnaphthalene Concentration: 28.49 ug/kg

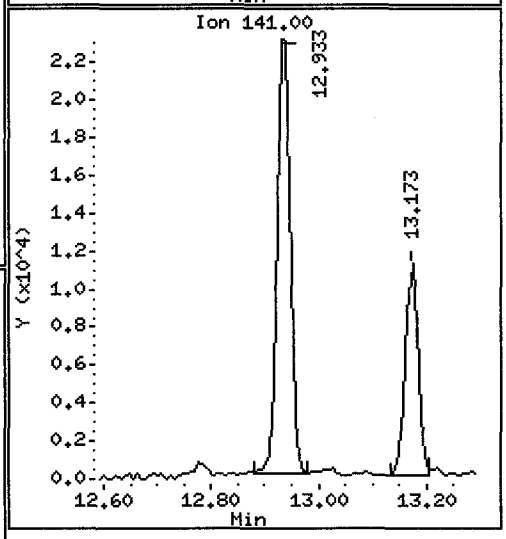












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

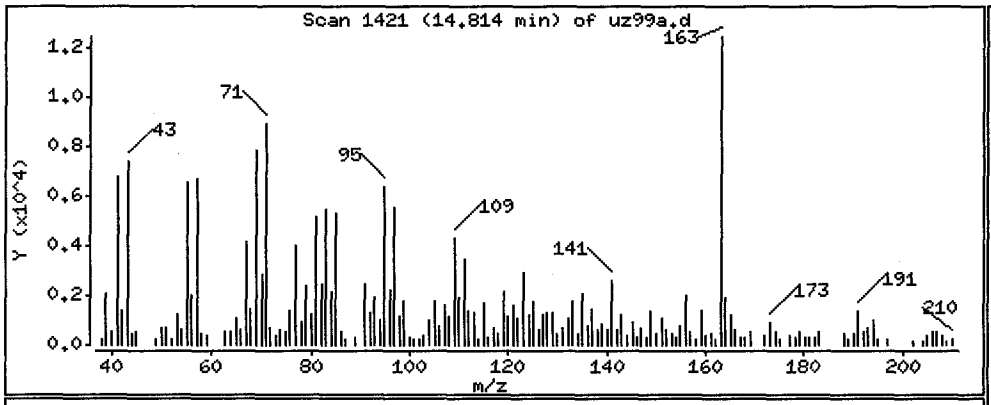
Client ID: CB-002-06222012 Instrument: nt10.i

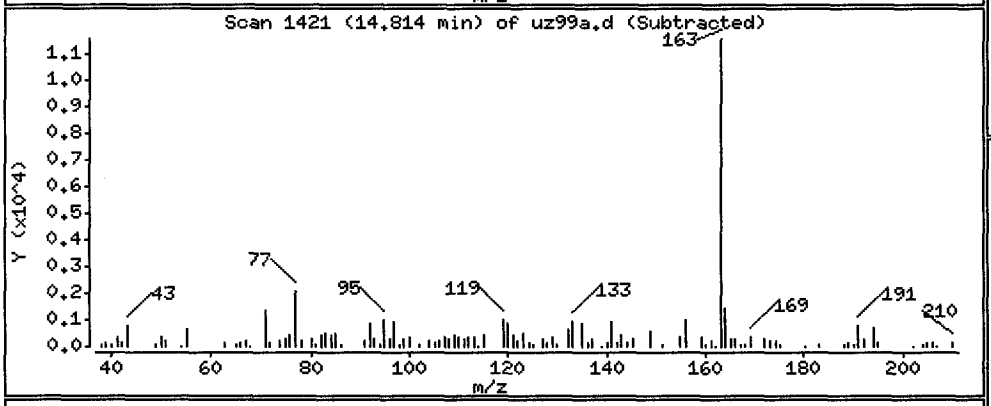
Sample Info: UZ99A

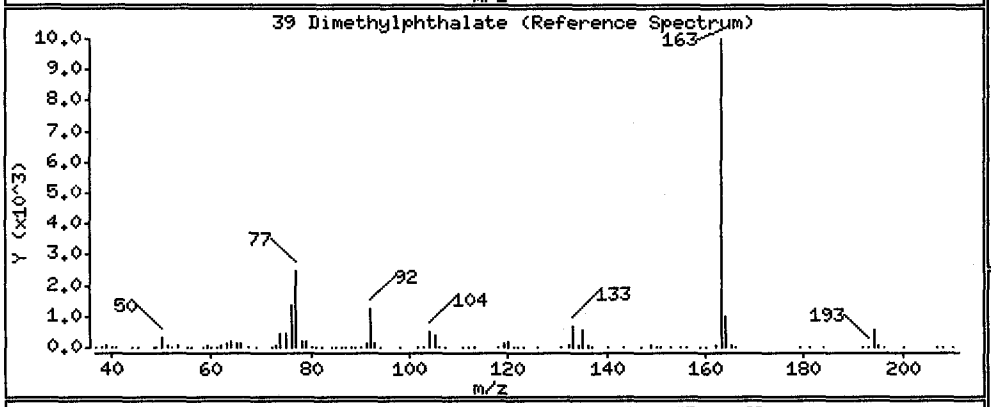
Volume Injected (uL): 1.0 Operator: VTS/YZ

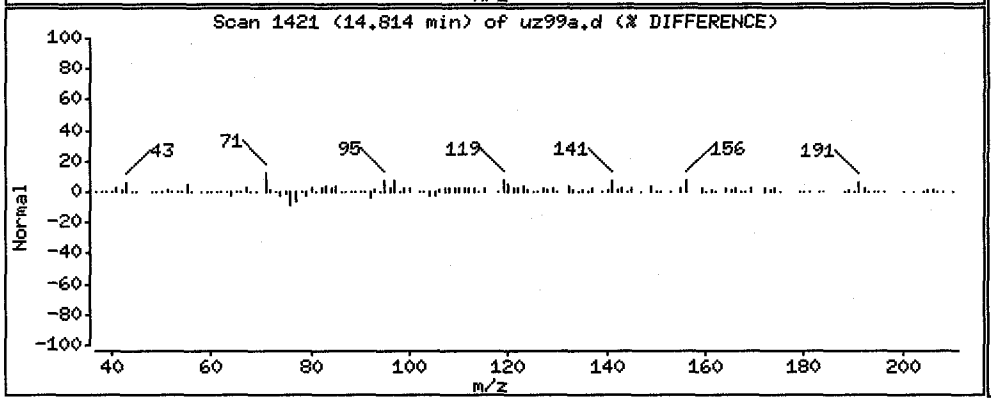
Column phase: ZB-5msi Column diameter: 0.25

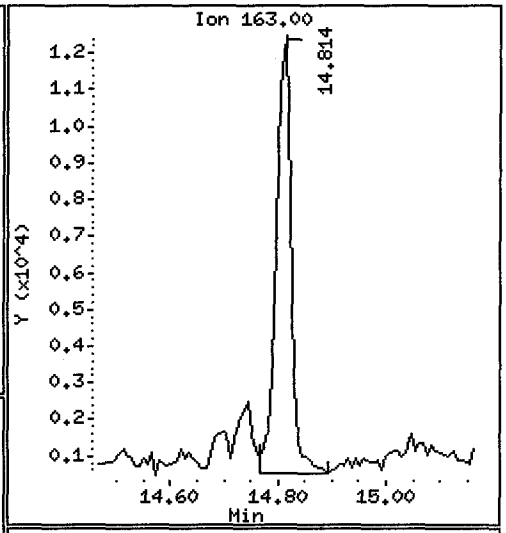
39 Dimethylphthalate Concentration: 15.03 ug/kg

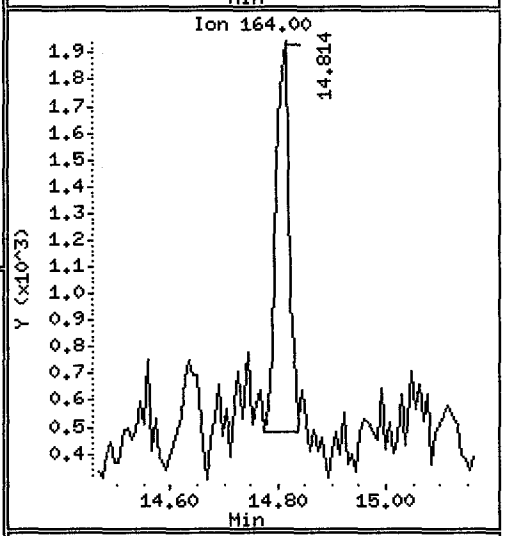


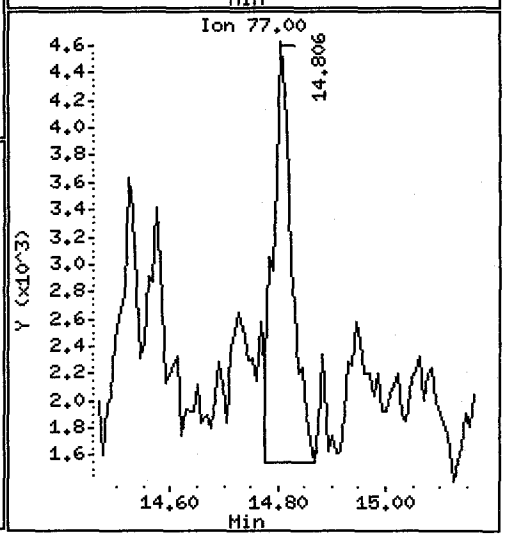












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

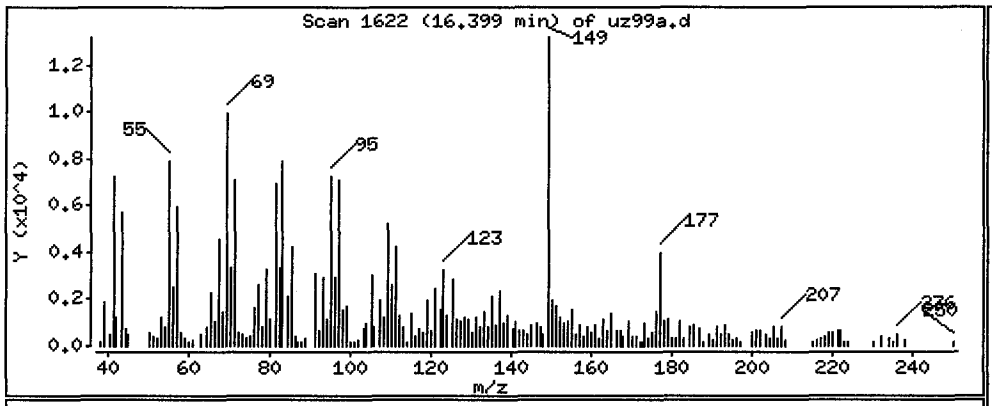
Client ID: CB-002-06222012 Instrument: nt10.i

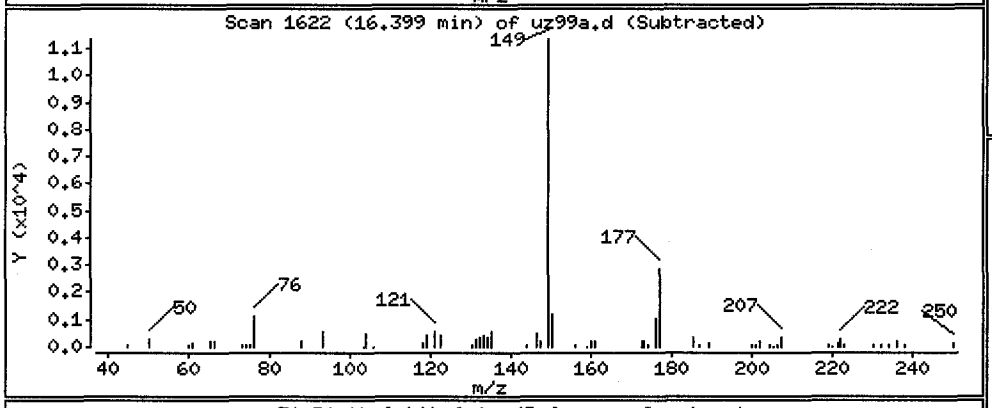
Sample Info: UZ99A

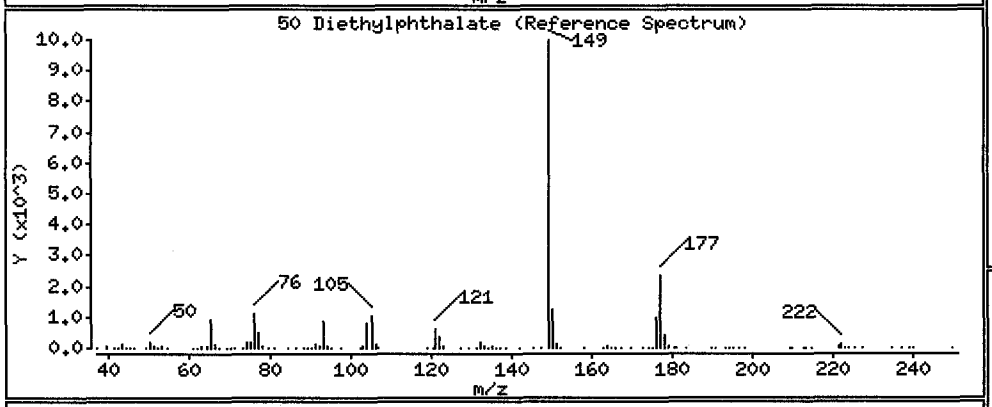
Volume Injected (uL): 1.0 Operator: VTS/YZ

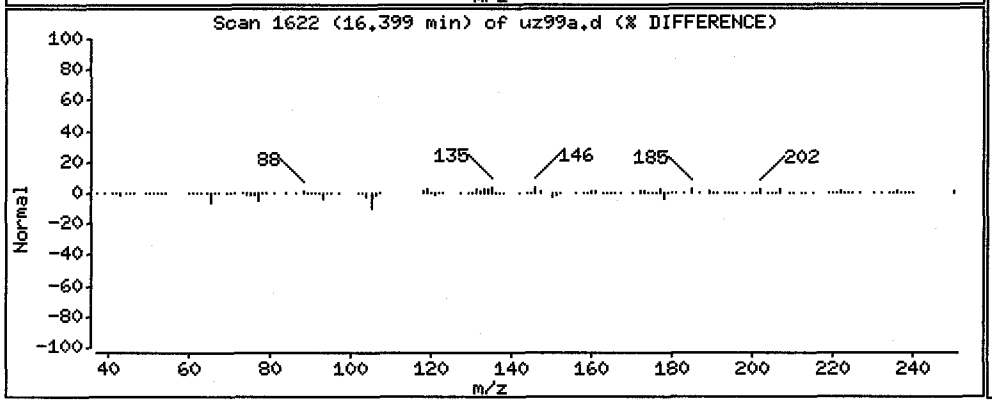
Column phase: ZB-5msi Column diameter: 0.25

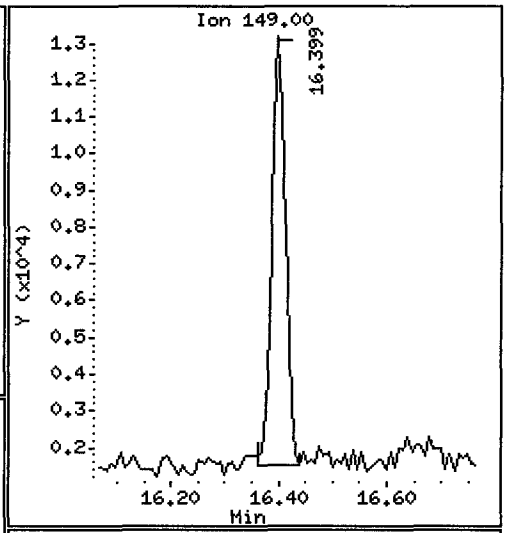
50 Diethylphthalate Concentration: 14.36 ug/kg

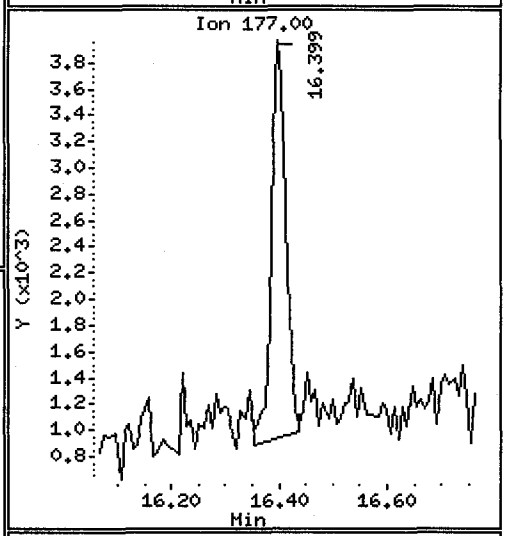


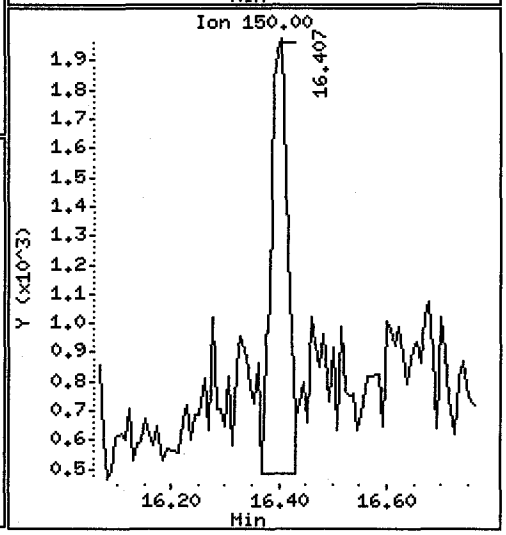












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

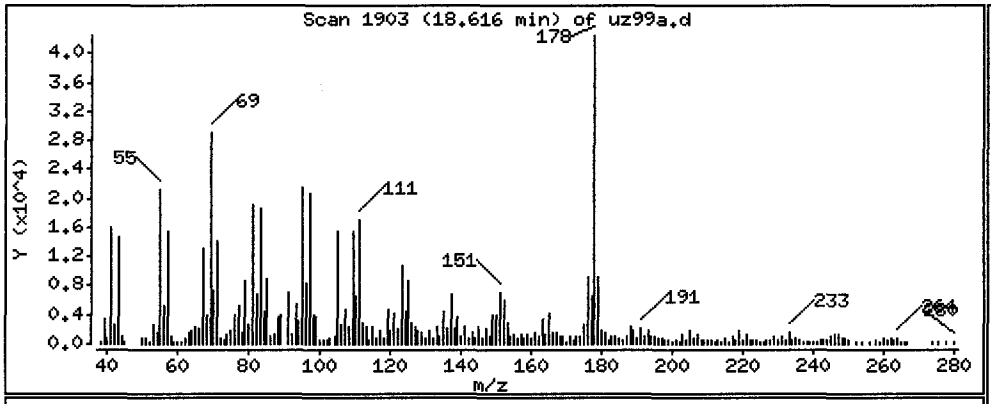
Client ID: CB-002-06222012 Instrument: nt10.i

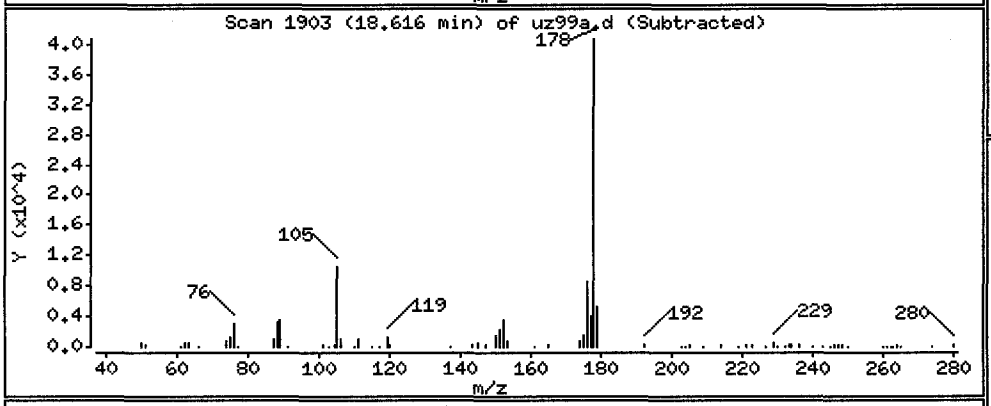
Sample Info: UZ99A

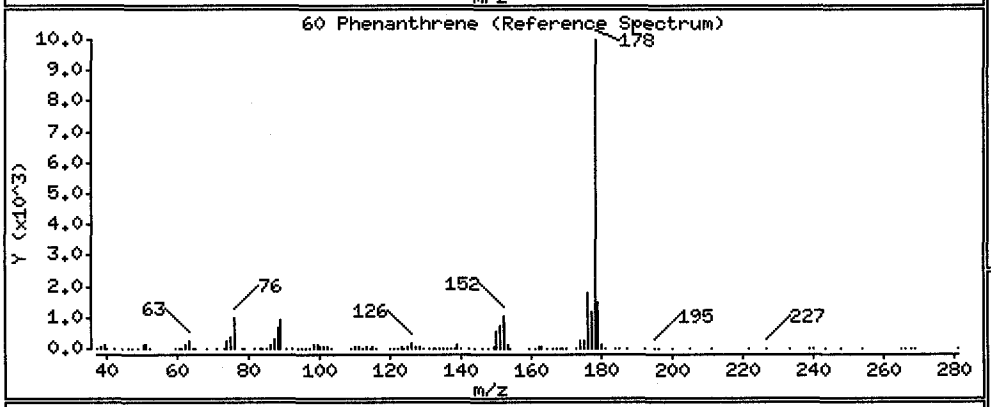
Volume Injected (uL): 1.0 Operator: VTS/YZ

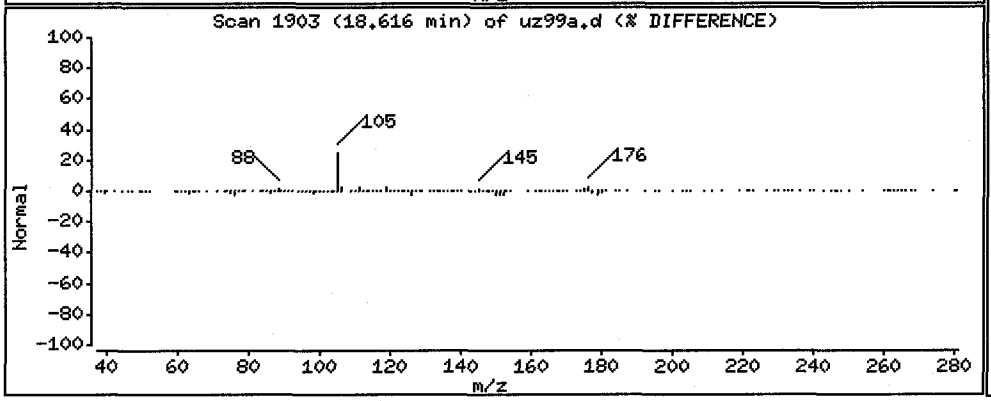
Column phase: ZB-5msi Column diameter: 0.25

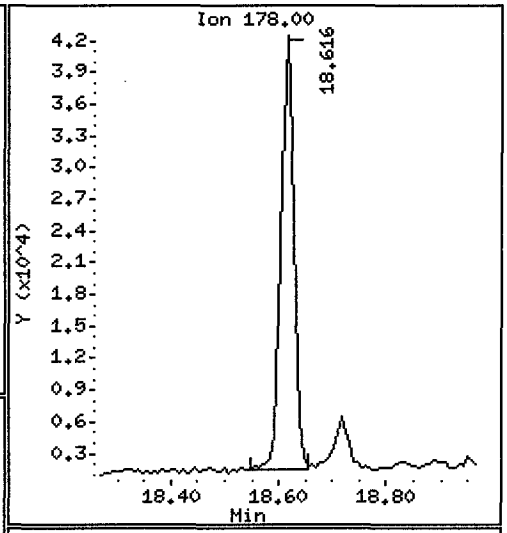
60 Phenanthrene Concentration: 33.64 ug/kg

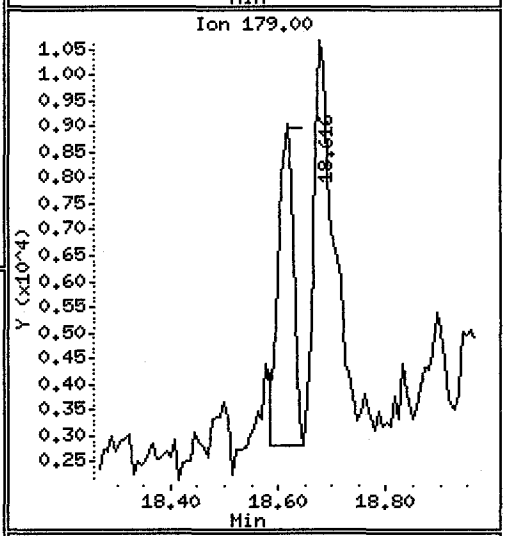


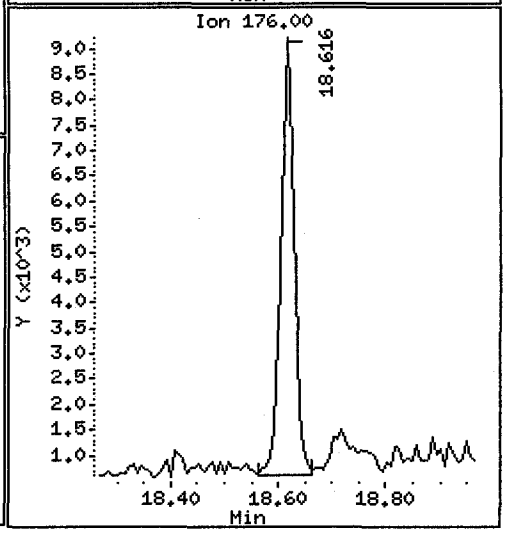












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

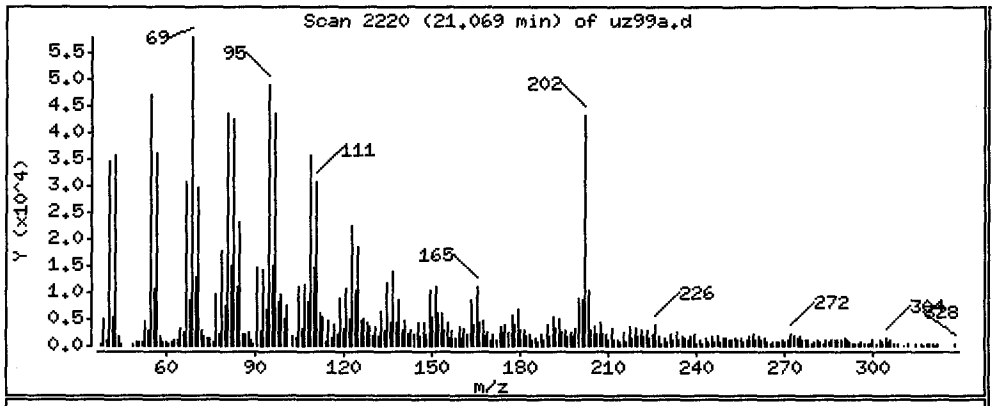
Client ID: CB-002-06222012 Instrument: nt10.i

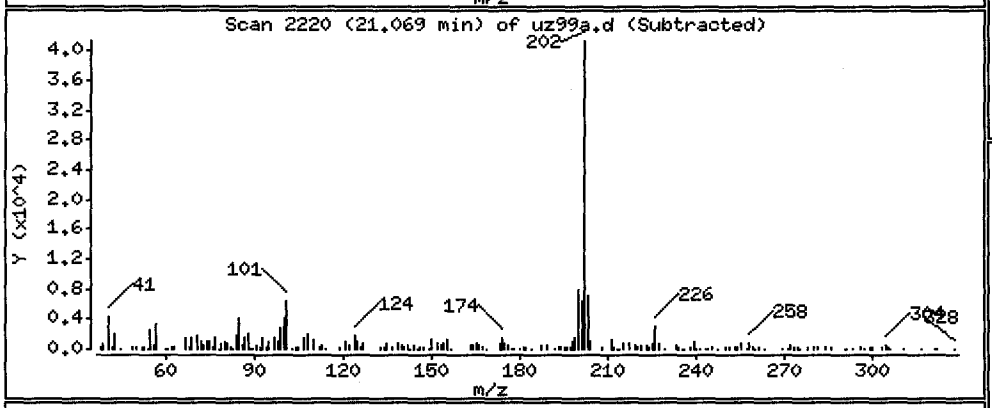
Sample Info: UZ99A

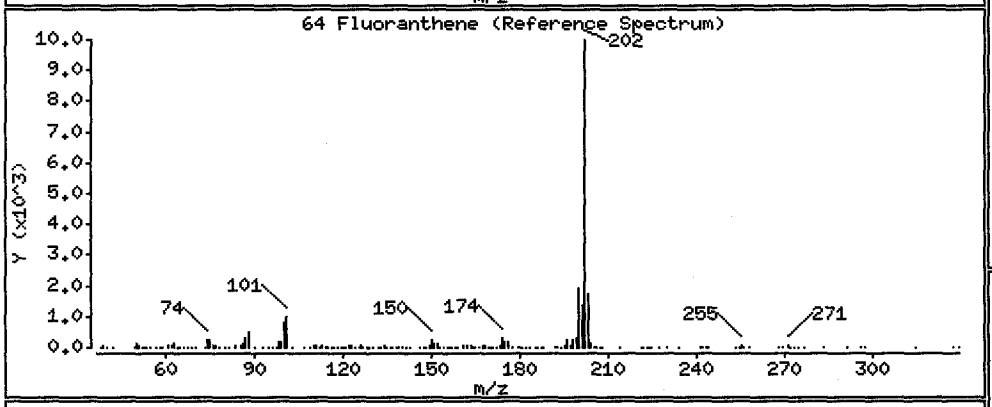
Volume Injected (uL): 1.0 Operator: VTS/YZ

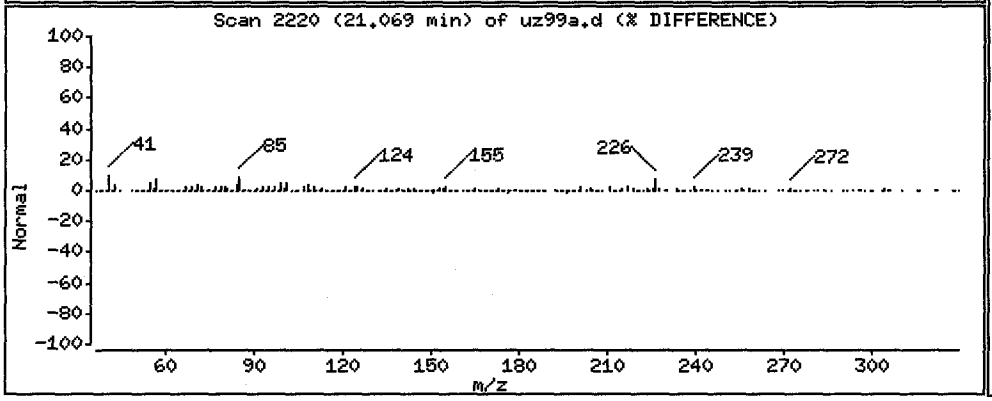
Column phase: ZB-5msi Column diameter: 0.25

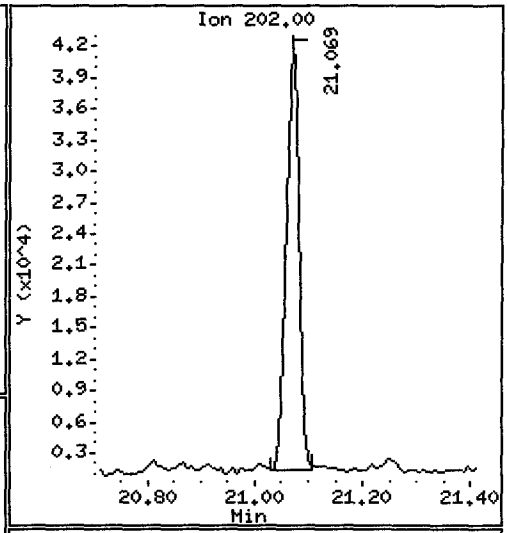
64 Fluoranthene Concentration: 28.72 ug/kg

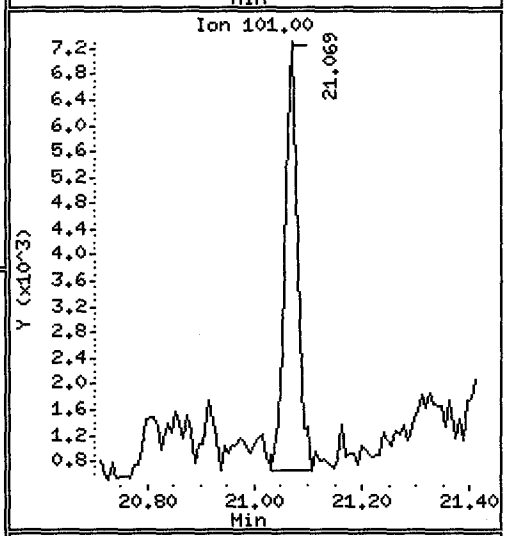


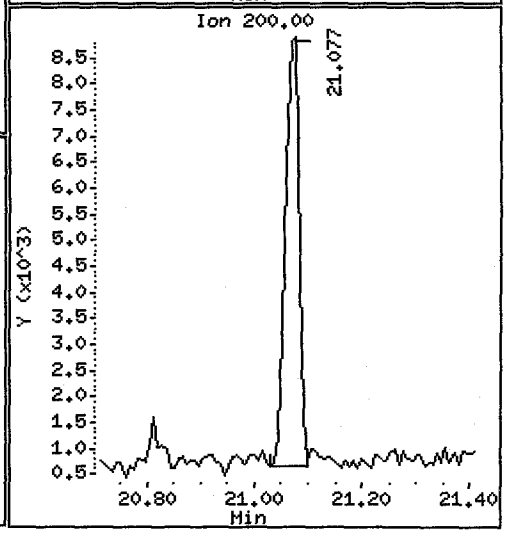












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

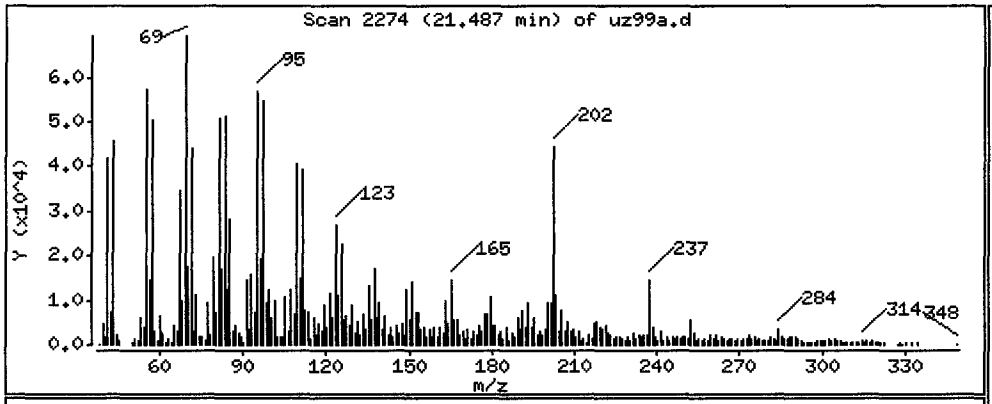
Client ID: CB-002-06222012 Instrument: nt10.i

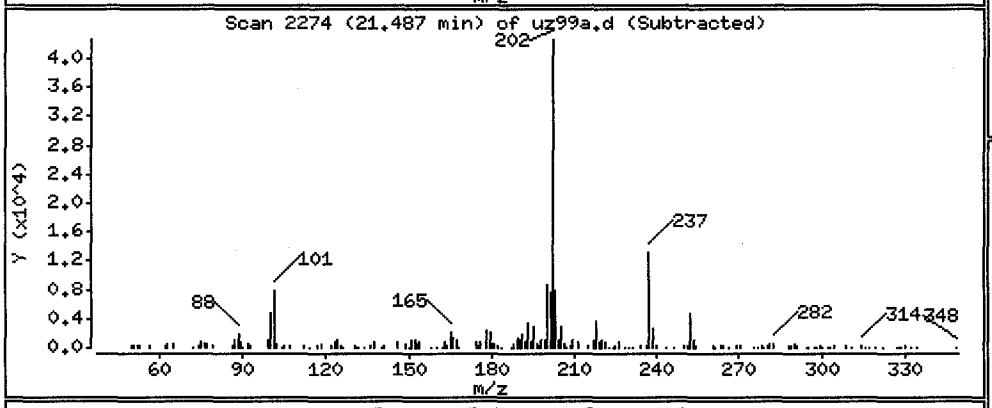
Sample Info: UZ99A

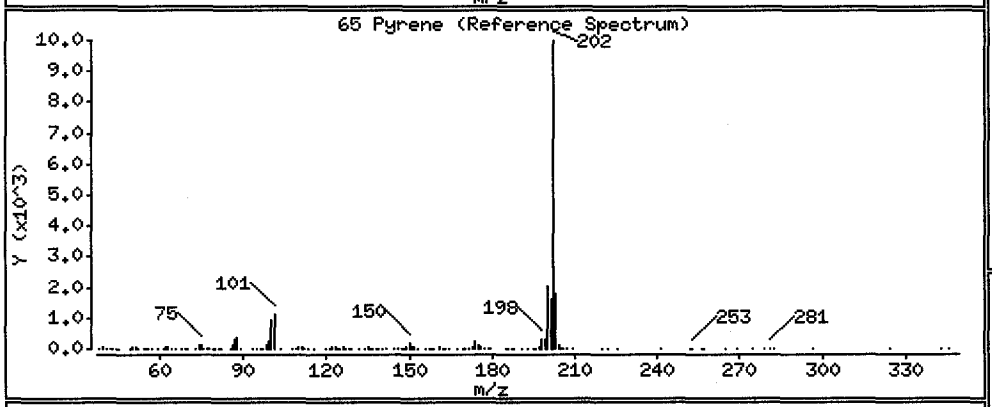
Volume Injected (uL): 1.0 Operator: VTS/YZ

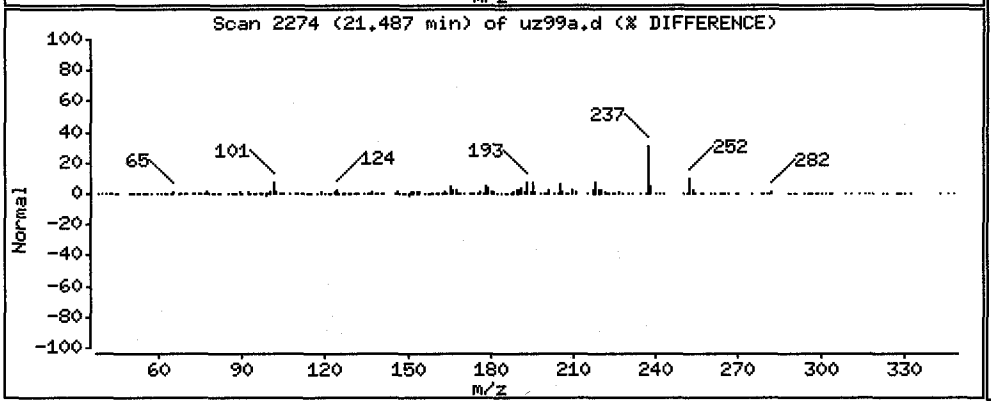
Column phase: ZB-5msi Column diameter: 0.25

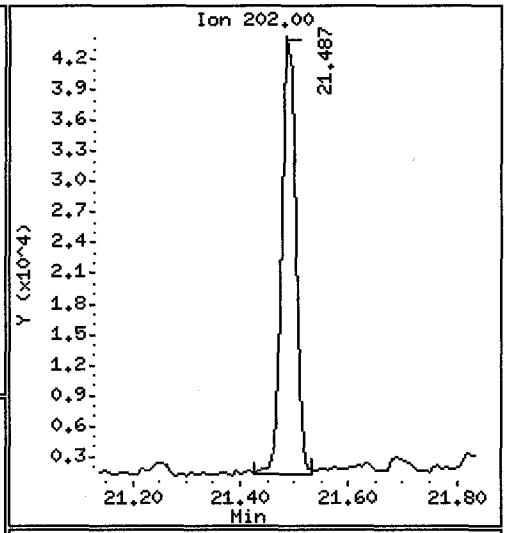
65 Pyrene Concentration: 30.85 ug/kg

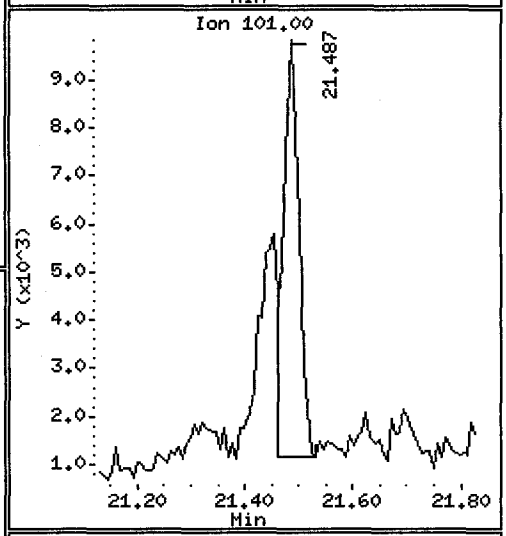


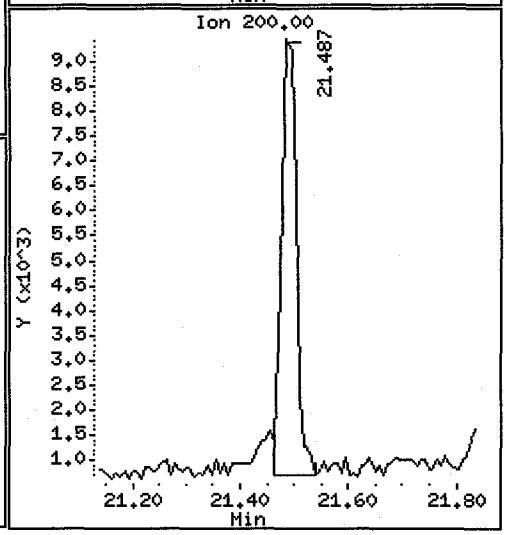












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

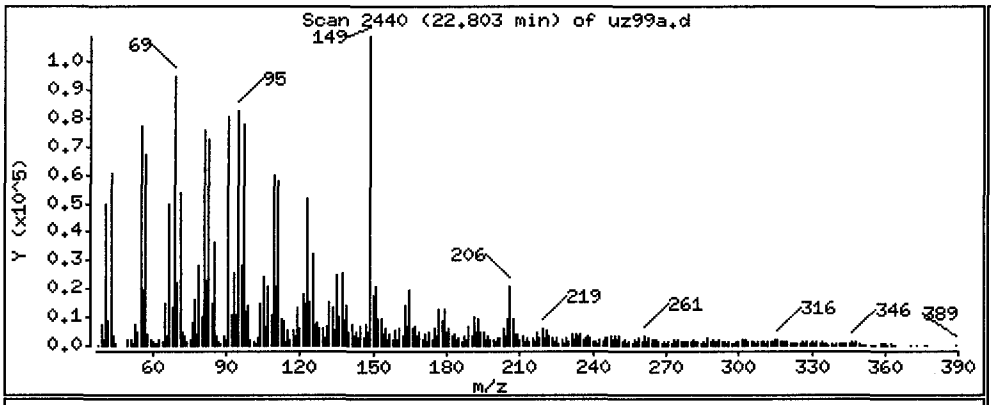
Client ID: CB-002-06222012 Instrument: nt10.i

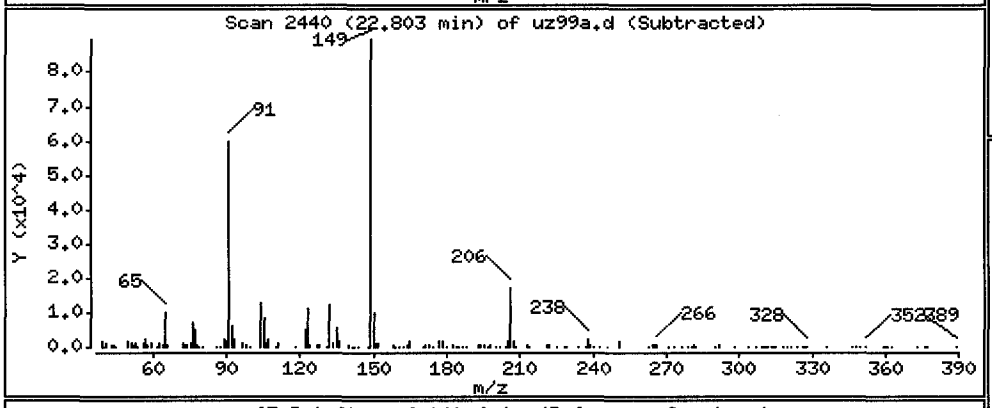
Sample Info: UZ99A

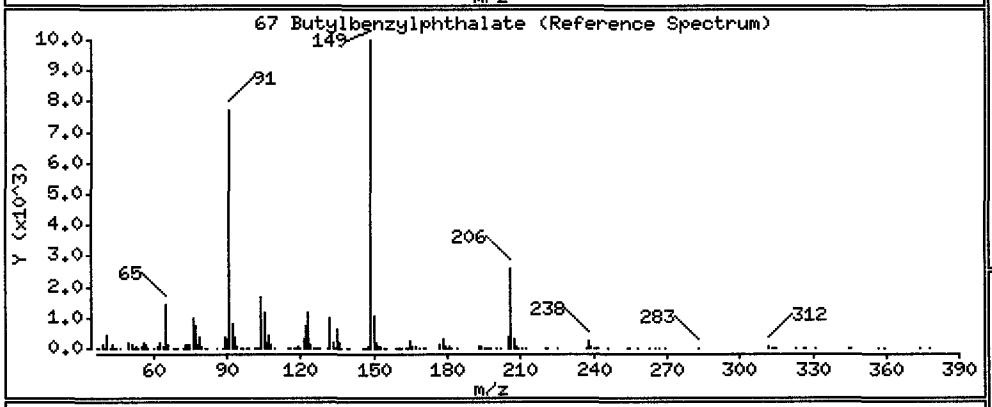
Volume Injected (uL): 1.0 Operator: VTS/YZ

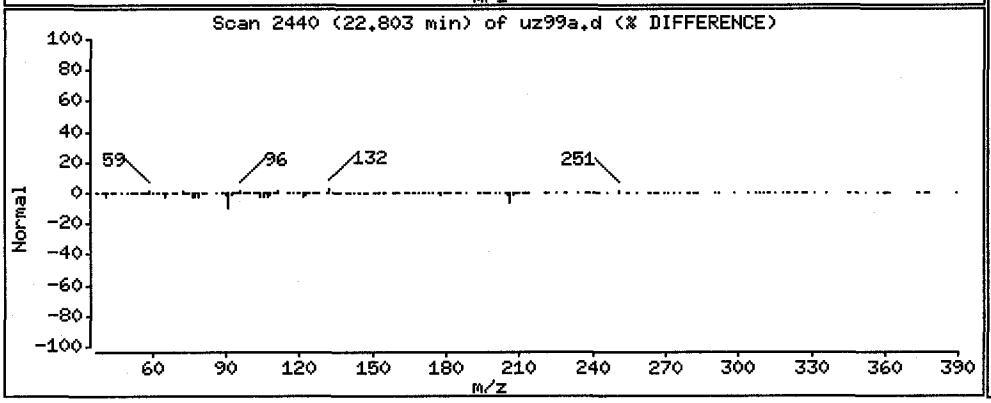
Column phase: ZB-5msi Column diameter: 0.25

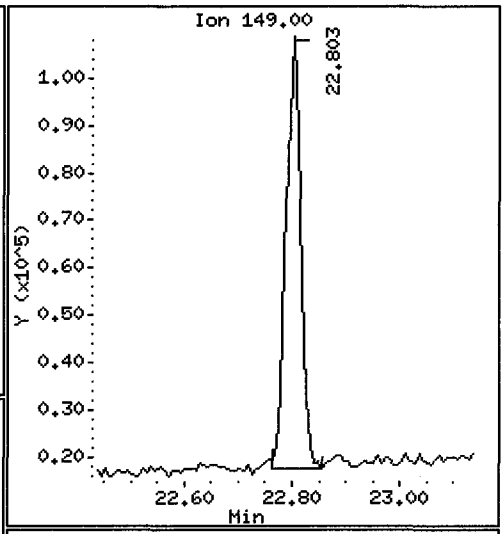
67 Butylbenzylphthalate Concentration: 155.4 ug/kg

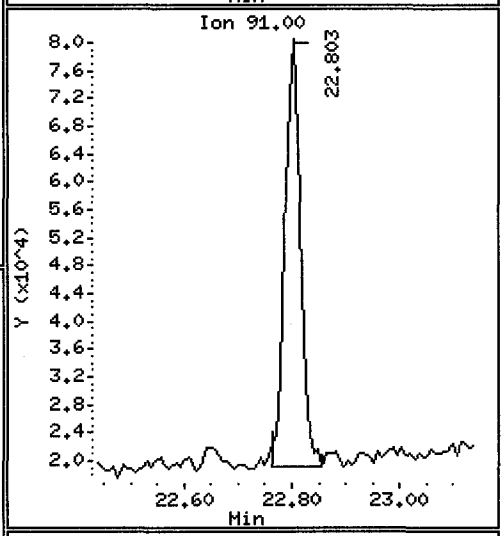


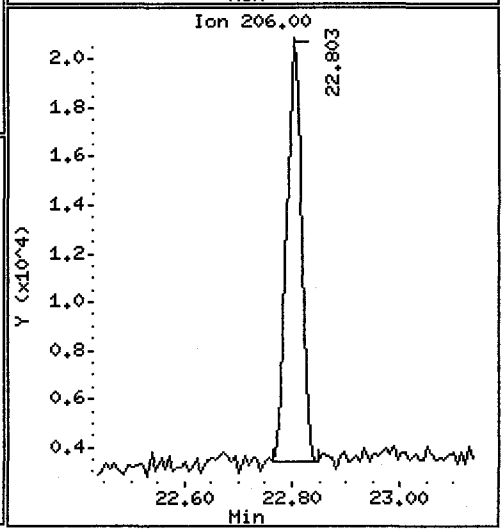












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

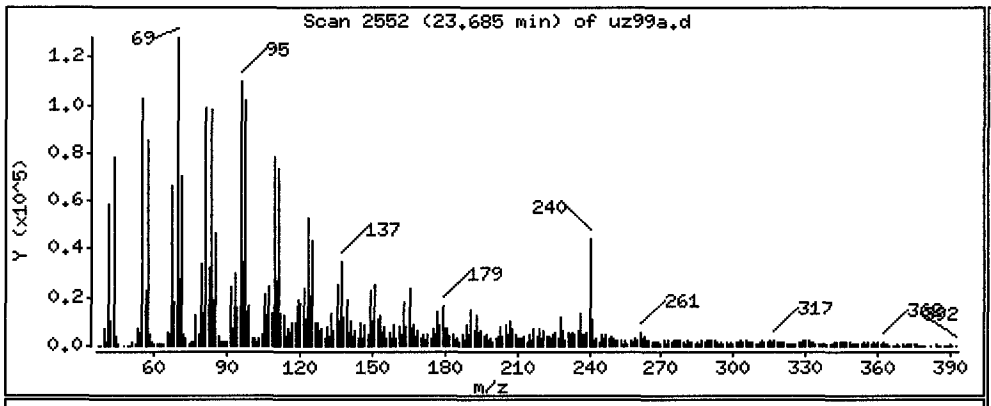
Client ID: CB-002-06222012 Instrument: nt10.i

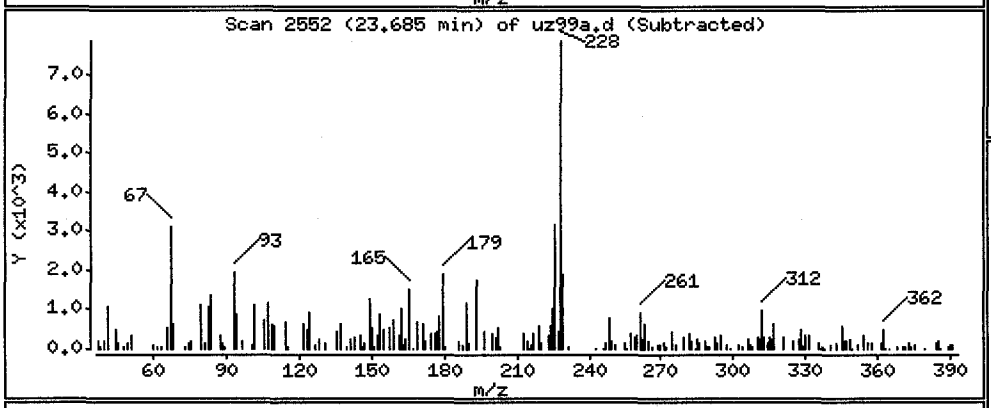
Sample Info: UZ99A

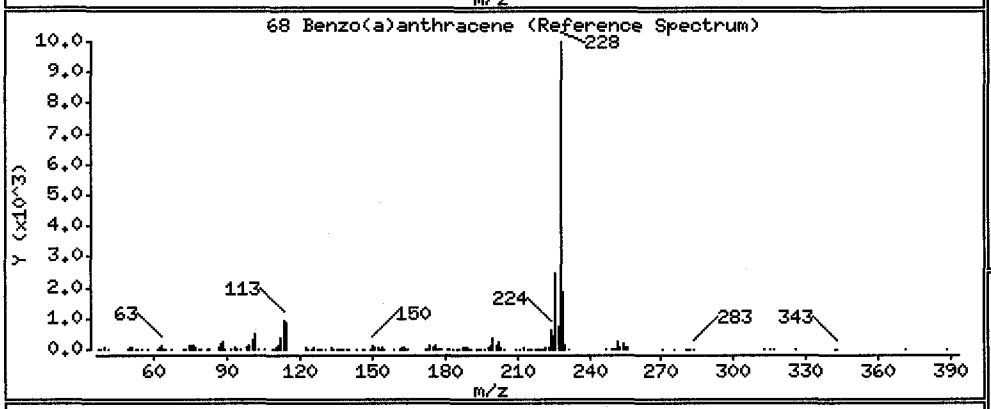
Volume Injected (uL): 1.0 Operator: VTS/YZ

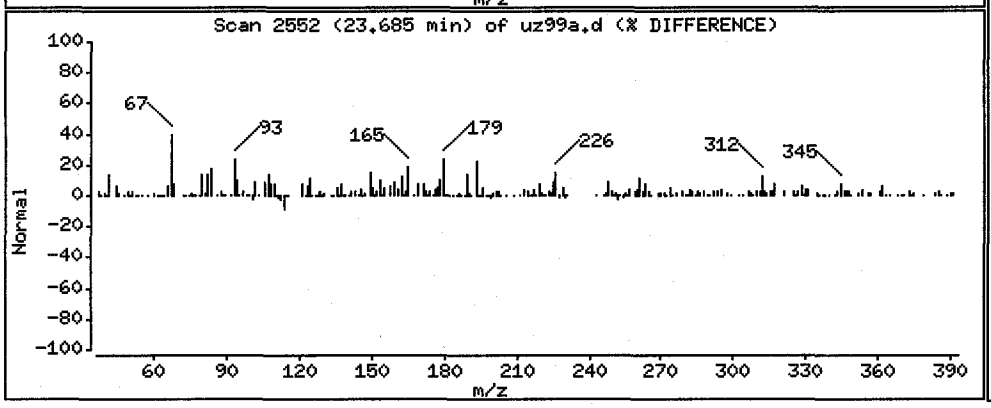
Column phase: ZB-5msi Column diameter: 0.25

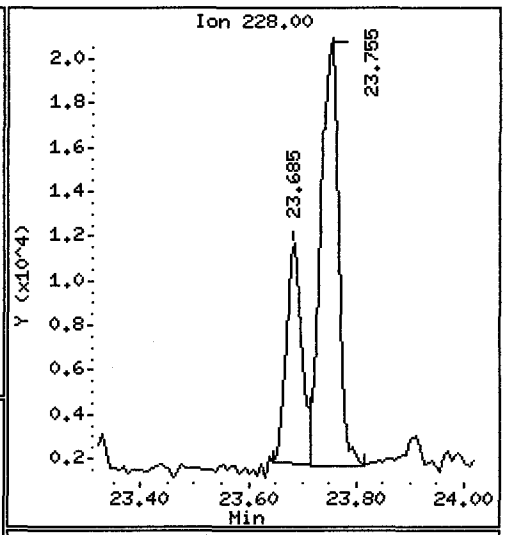
68 Benzo(a)anthracene Concentration: 9.408 ug/kg

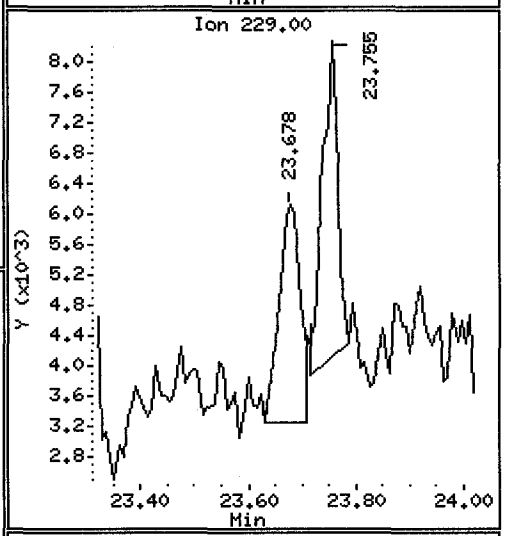


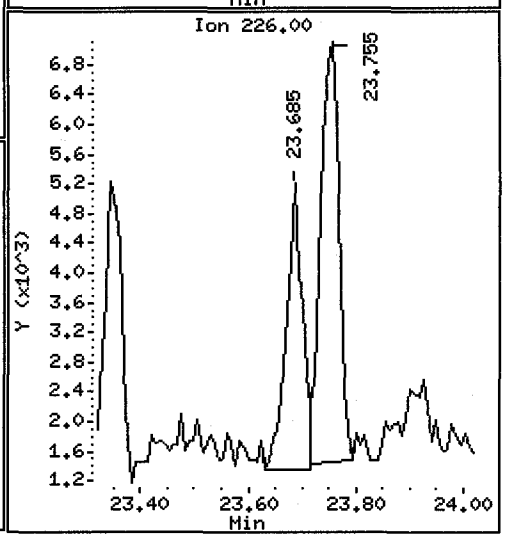












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

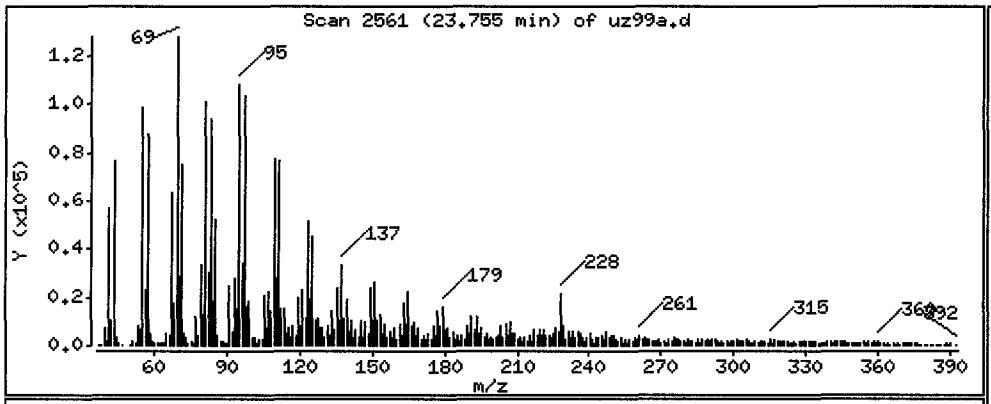
Client ID: CB-002-06222012 Instrument: nt10.i

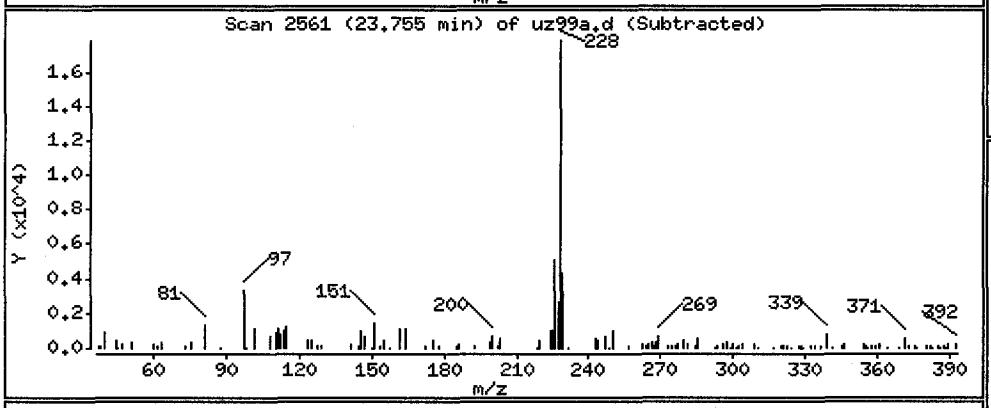
Sample Info: UZ99A

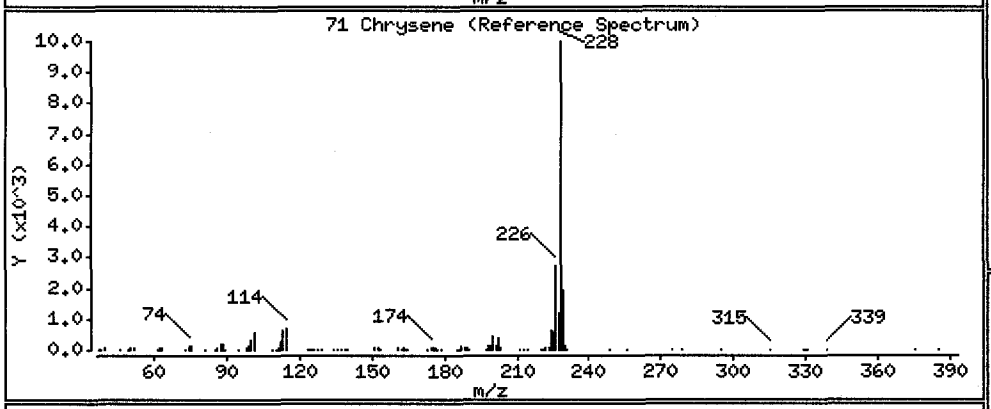
Volume Injected (uL): 1.0 Operator: VTS/YZ

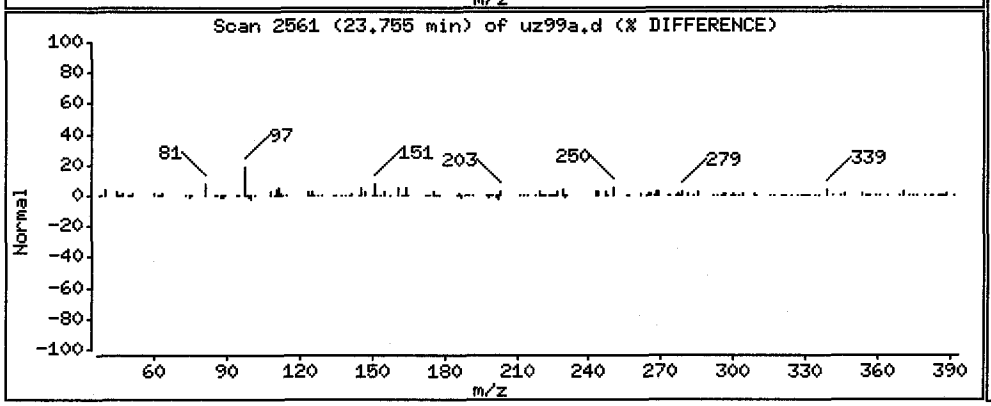
Column phase: ZB-5msi Column diameter: 0.25

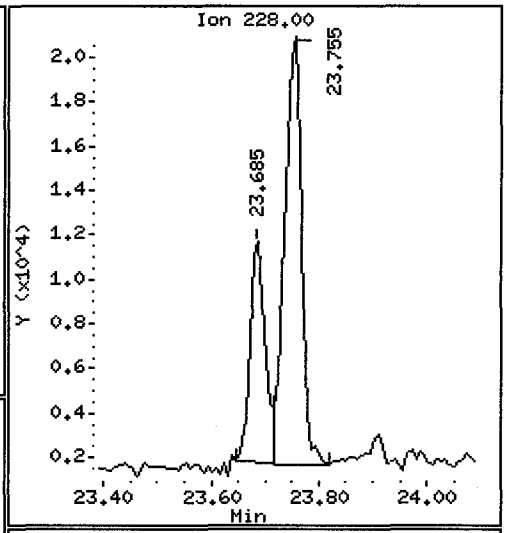
71 Chrysene Concentration: 22.39 ug/kg

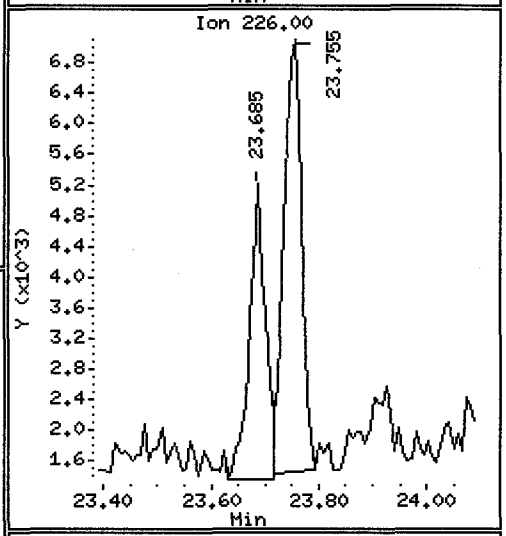


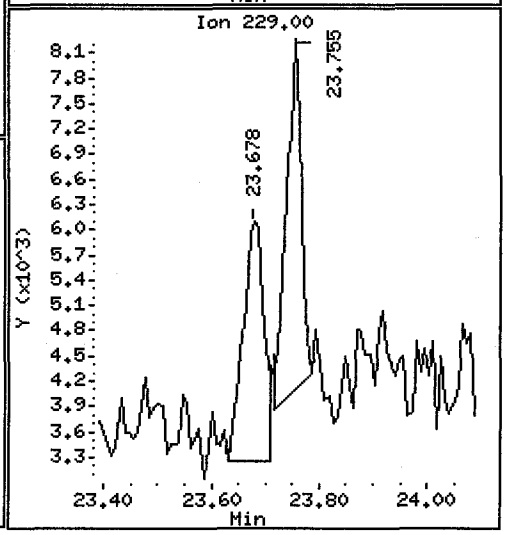












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

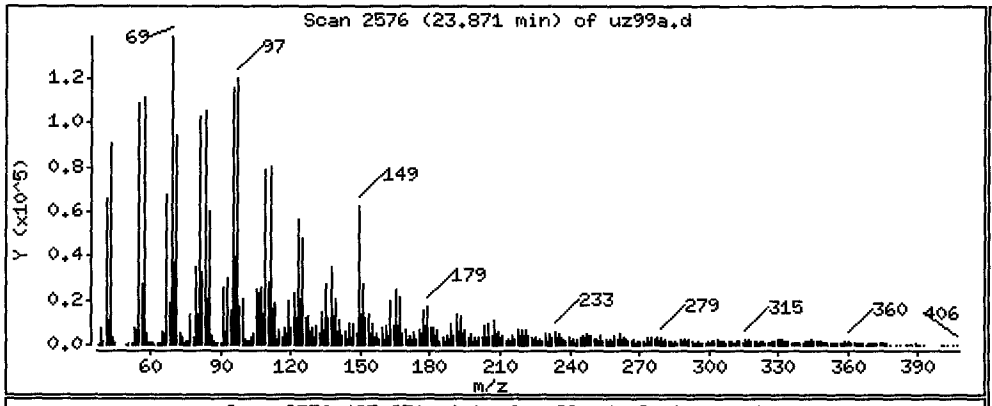
Client ID: CB-002-06222012 Instrument: nt10.i

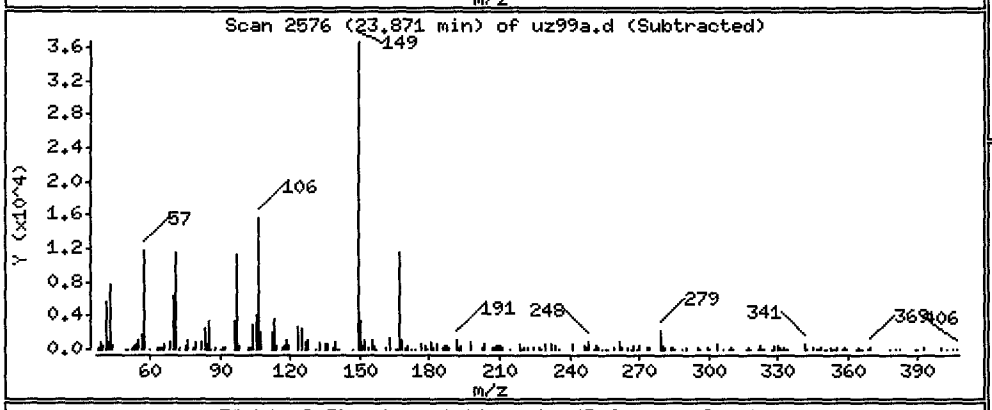
Sample Info: UZ99A

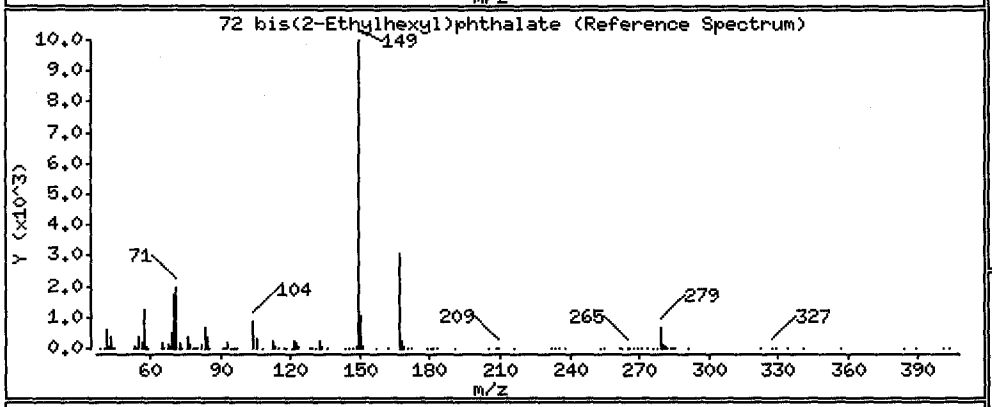
Volume Injected (uL): 1.0 Operator: VTS/YZ

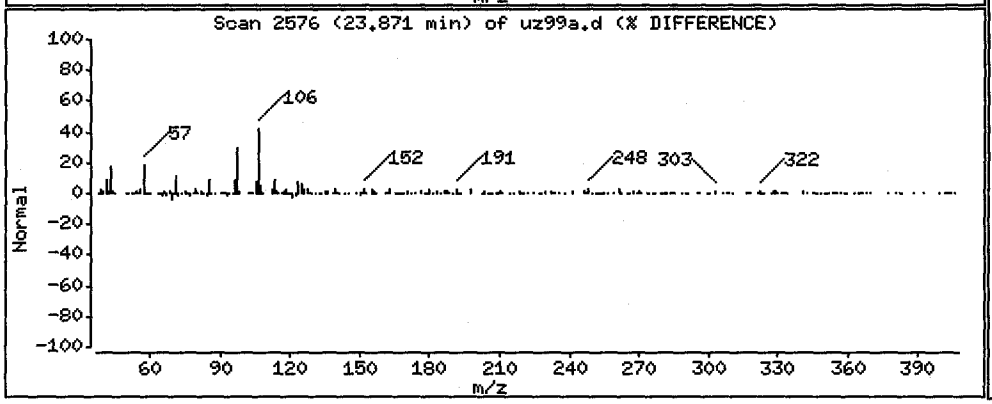
Column phase: ZB-5msi Column diameter: 0.25

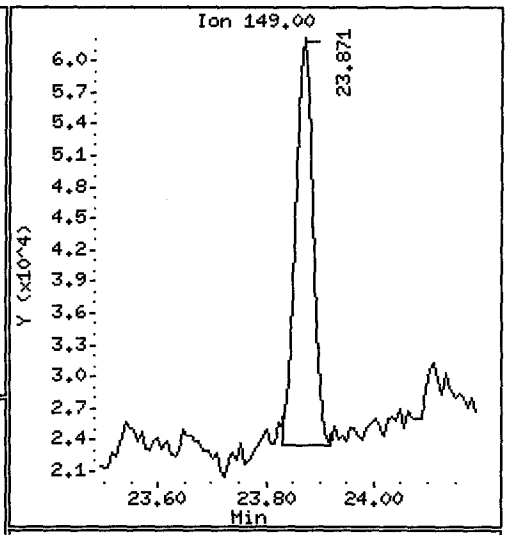
72 bis(2-Ethylhexyl)phthalate Concentration: 51.13 ug/kg

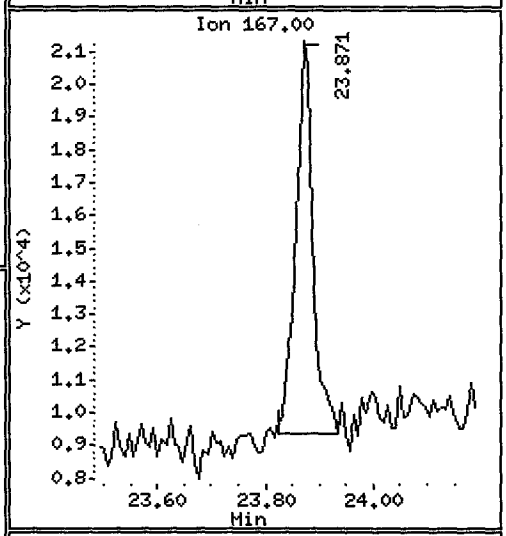


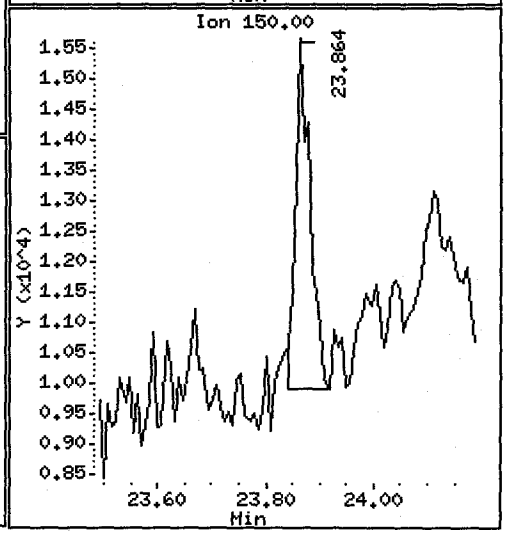












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

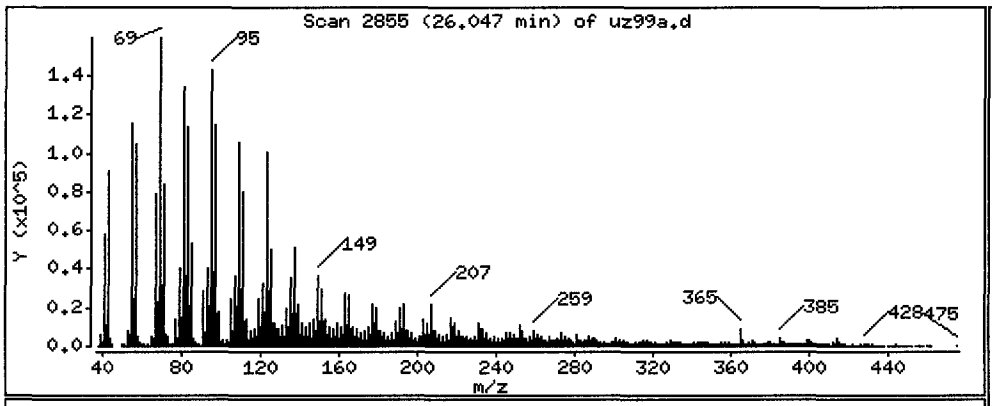
Client ID: CB-002-06222012 Instrument: nt10.i

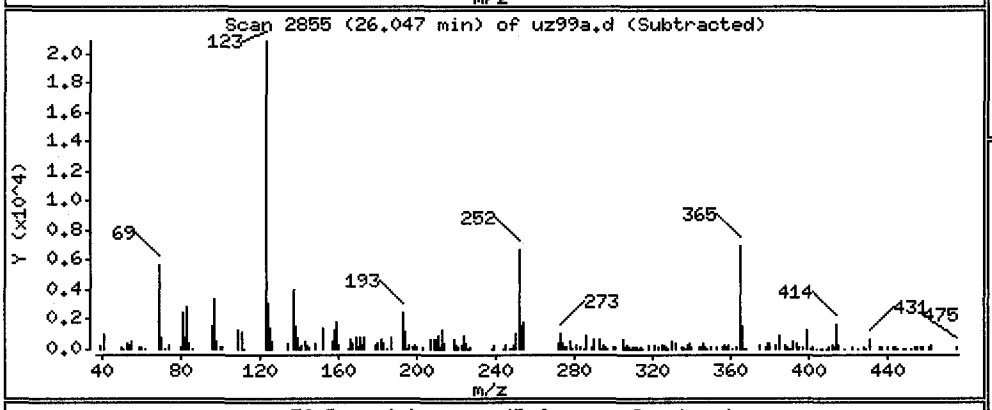
Sample Info: UZ99A

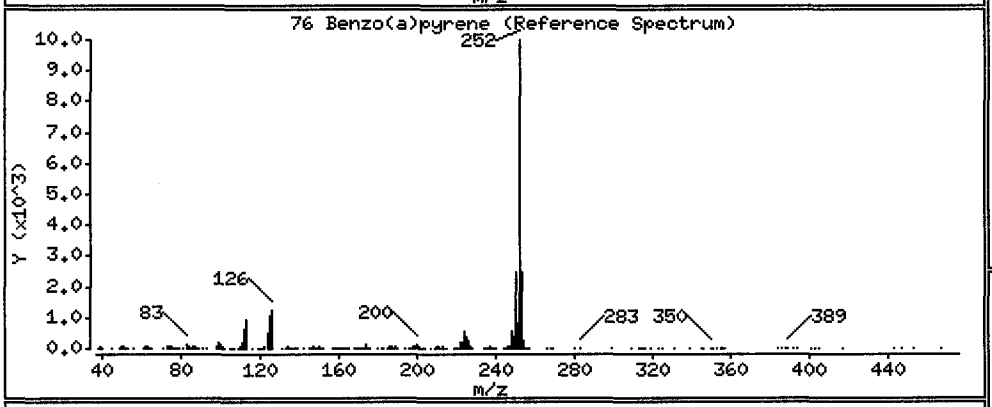
Volume Injected (uL): 1.0 Operator: VTS/YZ

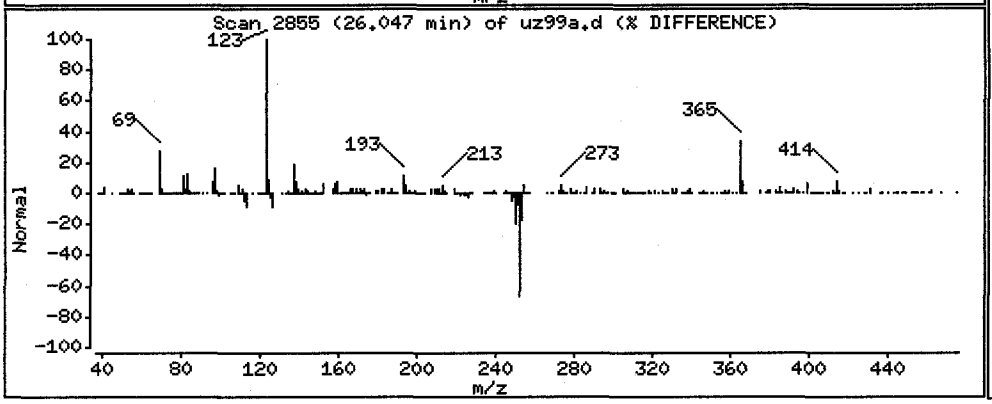
Column phase: ZB-5msi Column diameter: 0.25

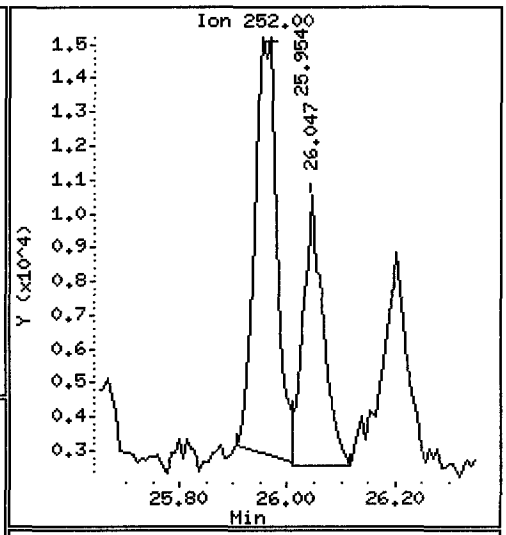
76 Benzo(a)pyrene Concentration: 11.33 ug/kg

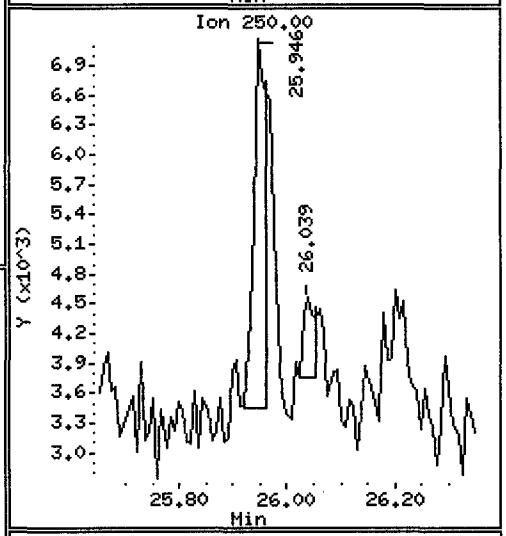


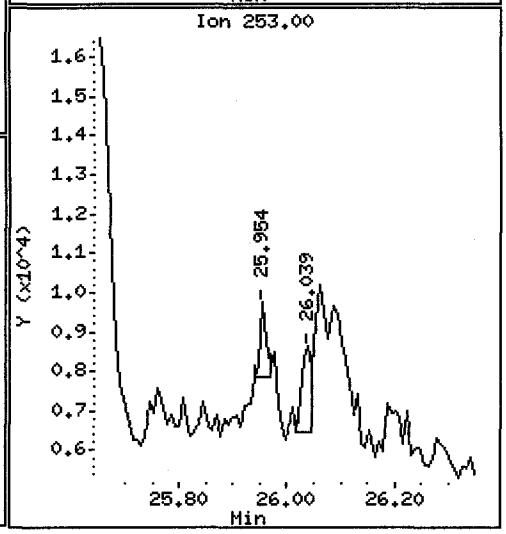












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

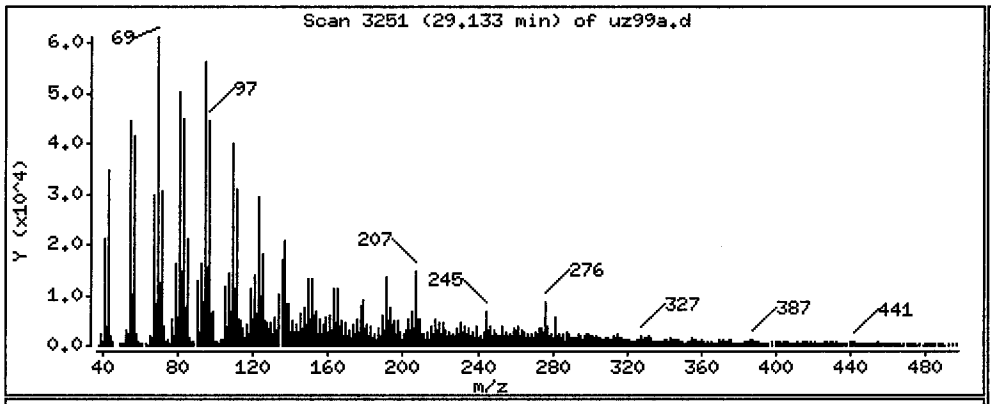
Client ID: CB-002-06222012 Instrument: nt10.i

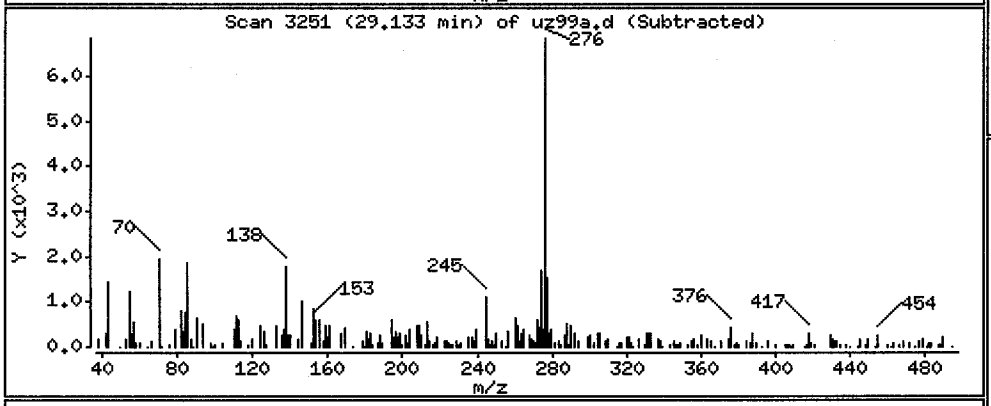
Sample Info: UZ99A

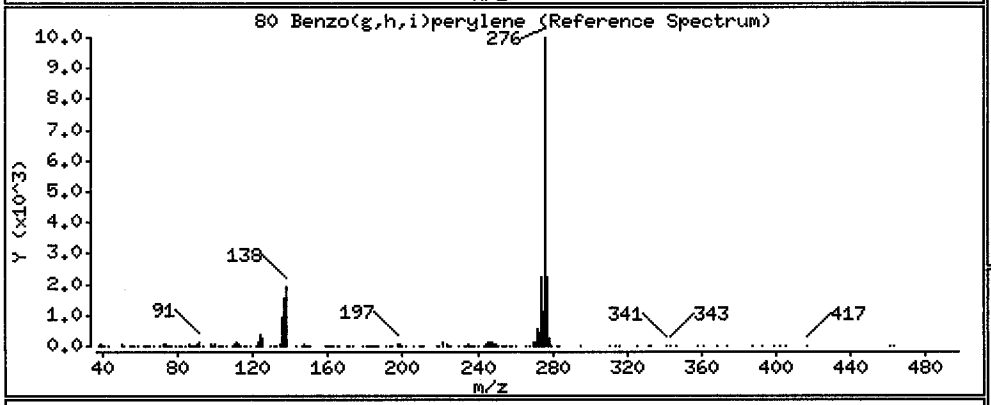
Volume Injected (uL): 1.0 Operator: VTS/YZ

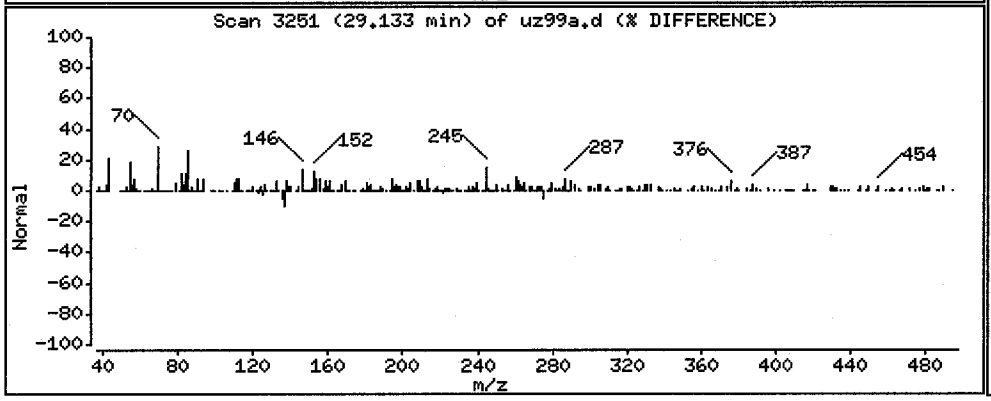
Column phase: ZB-5msi Column diameter: 0.25

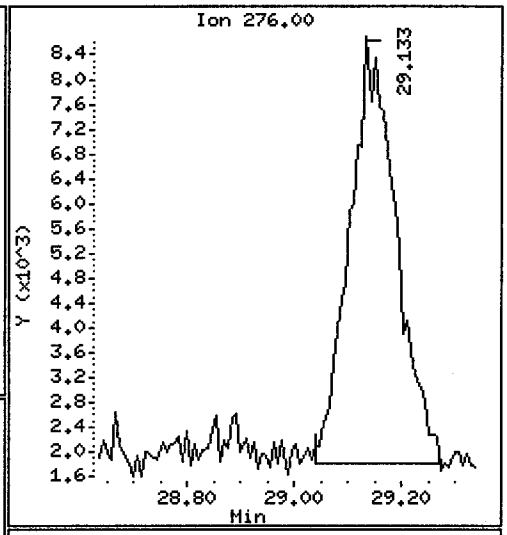
80 Benzo(g,h,i)perylene Concentration: 21.60 ug/kg

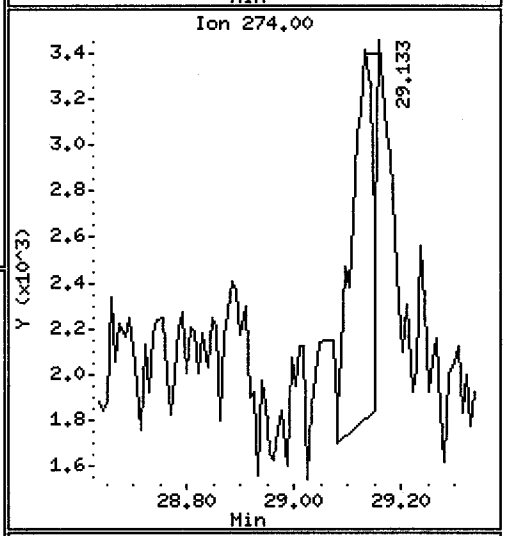


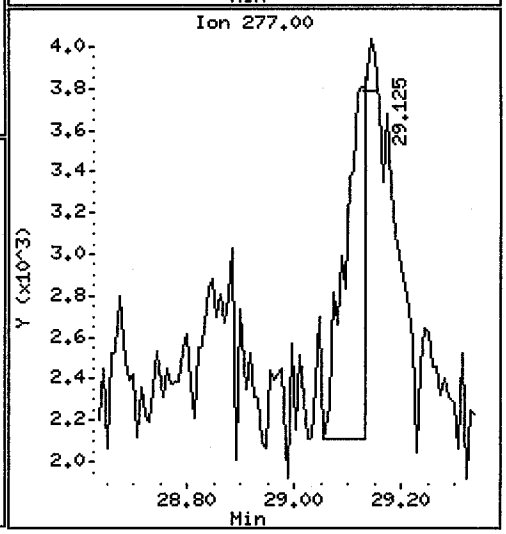












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

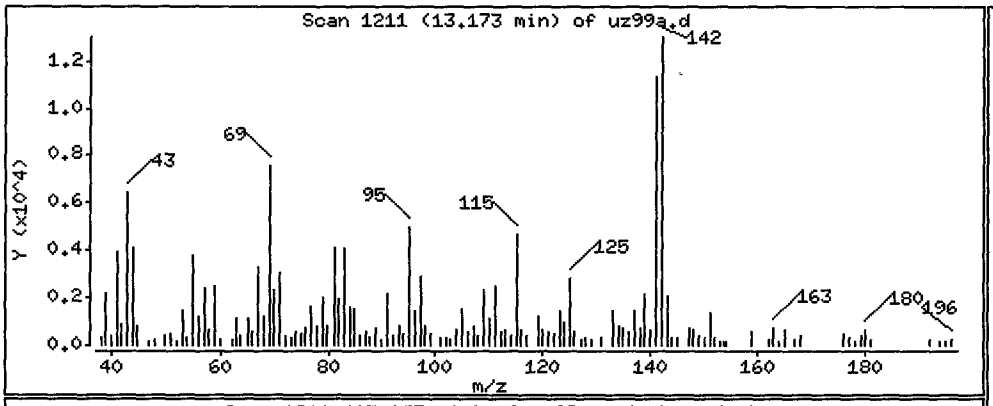
Client ID: CB-002-06222012 Instrument: nt10.i

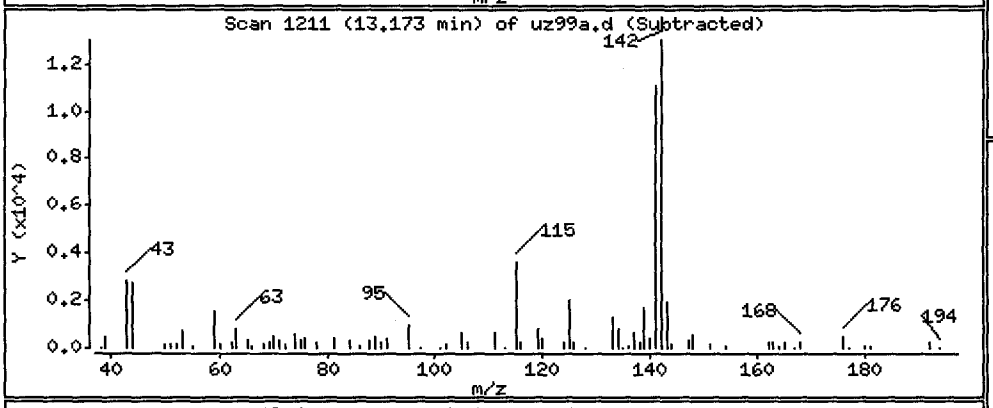
Sample Info: UZ99A

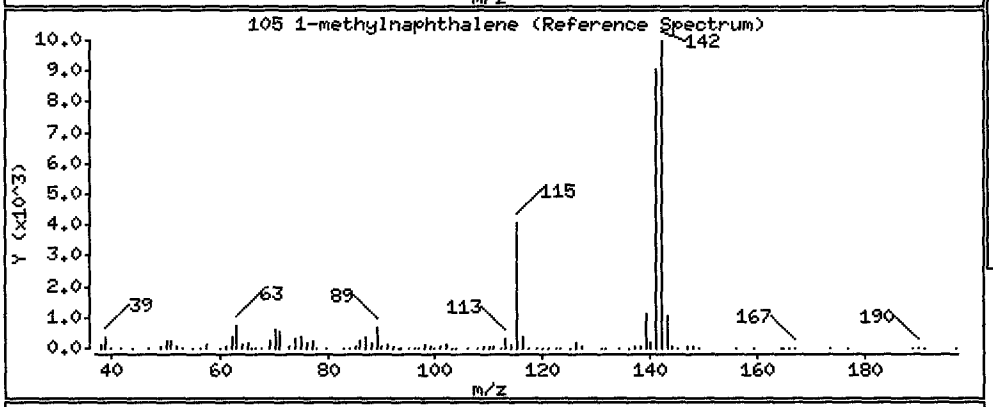
Volume Injected (uL): 1.0 Operator: VTS/YZ

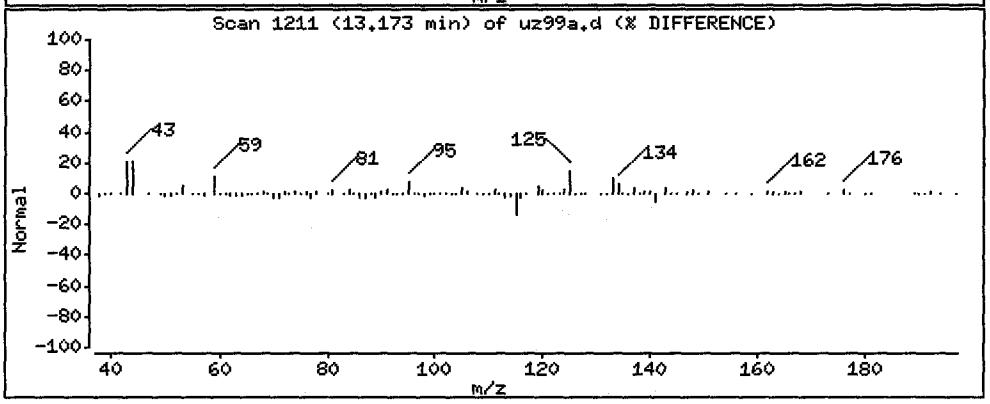
Column phase: ZB-5msi Column diameter: 0.25

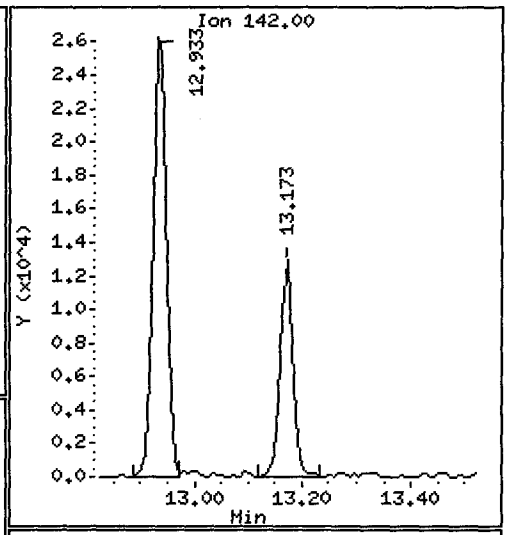
105 1-methylnaphthalene Concentration: 13.03 ug/kg

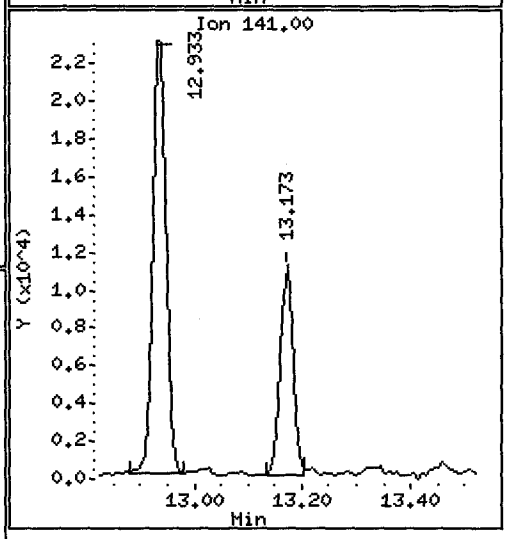












Data File: /chem1/nt10.i/20120703.b/uz99a.d

Date : 03-JUL-2012 19:02

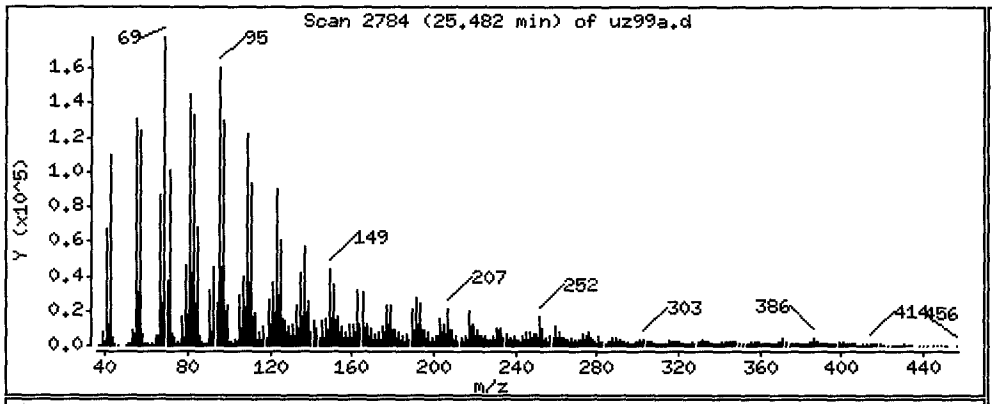
Client ID: CB-002-06222012 Instrument: nt10.i

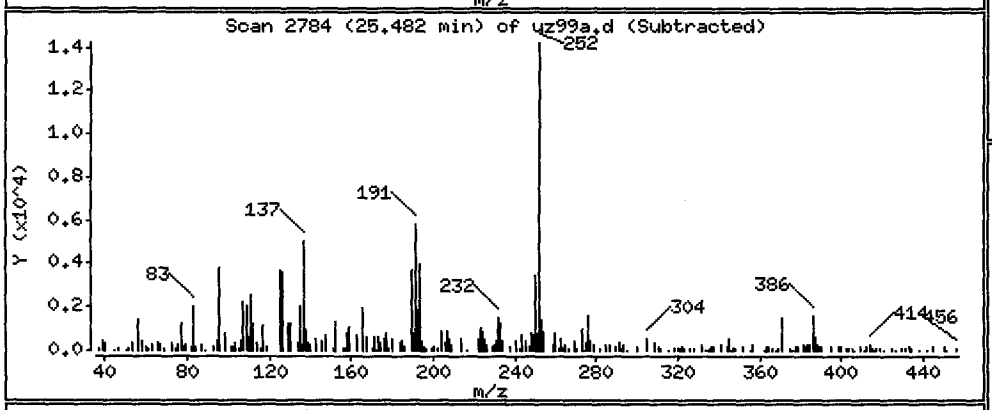
Sample Info: UZ99A

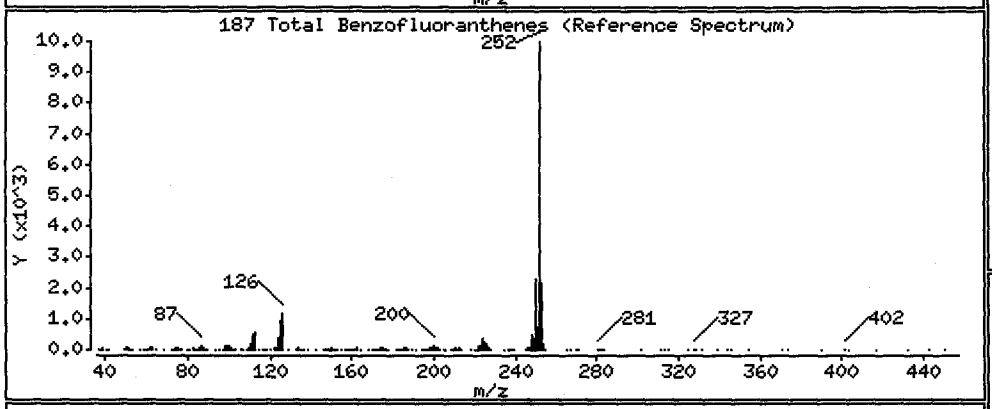
Volume Injected (uL): 1.0 Operator: VTS/YZ

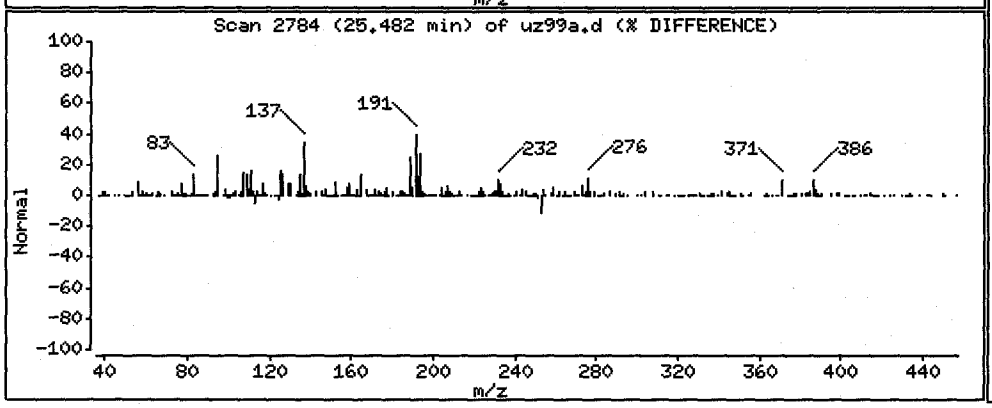
Column phase: ZB-5msi Column diameter: 0.25

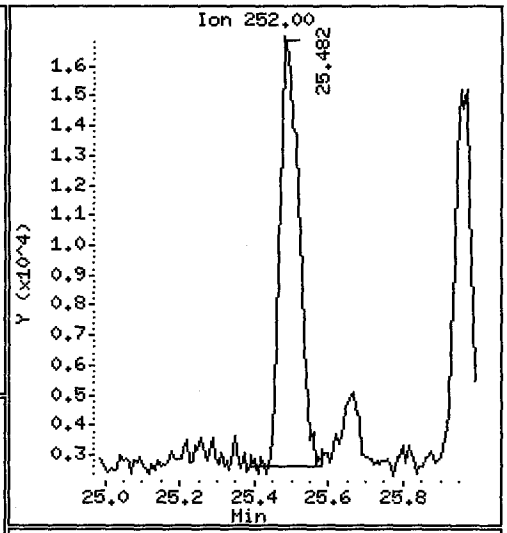
187 Total Benzofluoranthenes Concentration: 25.32 ug/kg

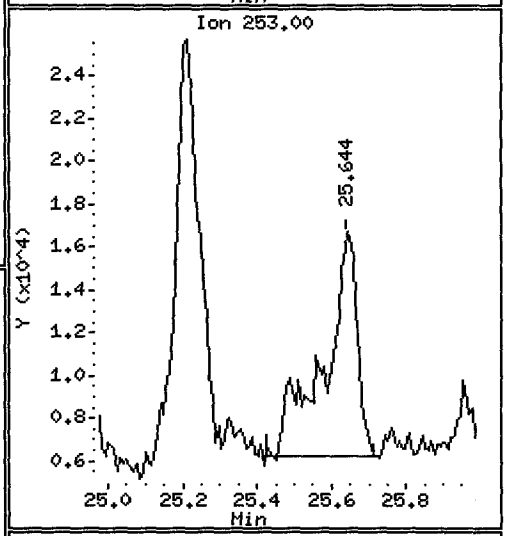


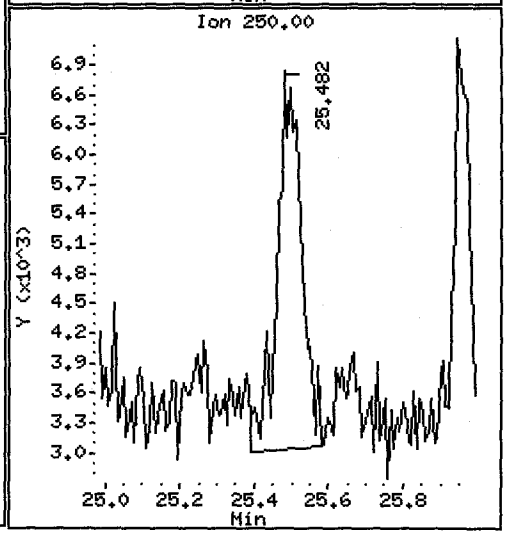






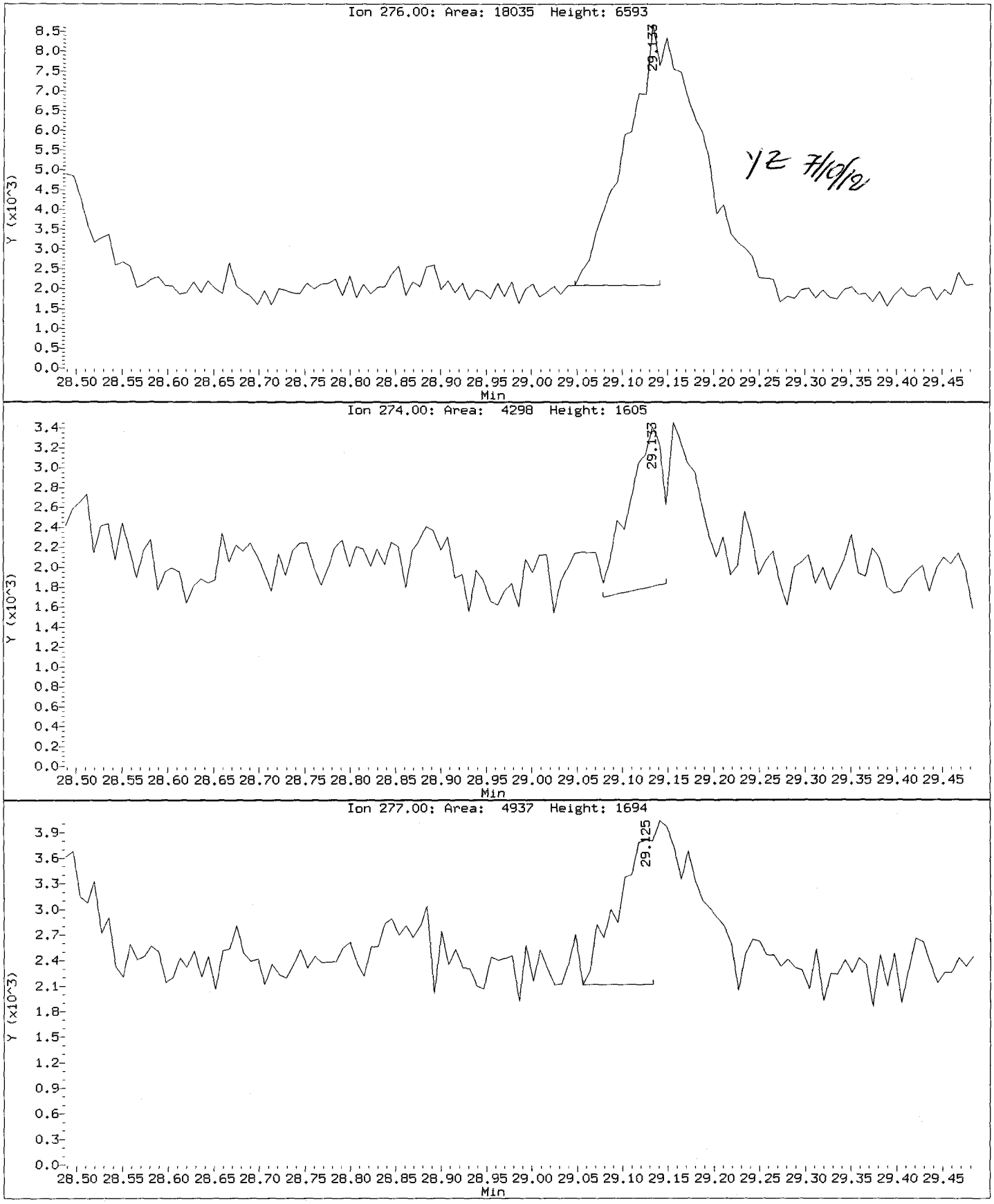






Data File: /chem1/nt10.i/20120703.b/uz99a.d
Injection Date: 03-JUL-2012 19:02
Instrument: nt10.i
Client Sample ID: CB-002-06222012

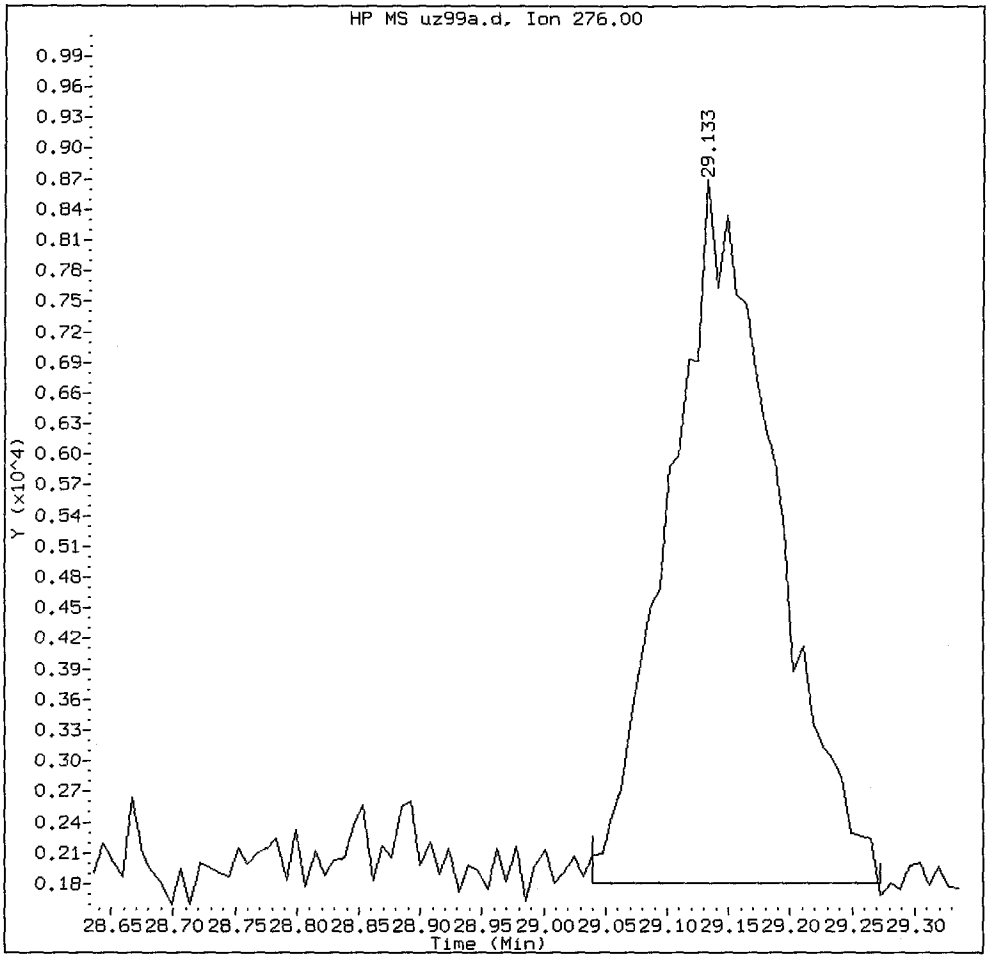
Compound: Benzo(g,h,i)perylene
CAS Number: 191-24-2



YZ 7/10/12

UZ99A, /chem1/nt10.i/20120703.b/uz99a.d

Benzo(g,h,i)perylene Amount: 0.23 Area: 41236



MANUAL INTEGRATION for Benzo(g,h,i)perylene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: yz Date: 7/12/12

CO-ELUTION SUMMARY FOR FILE - uz99a.d

Lab ID: UZ99A, Method: ABN.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: UZ99

Client ID: Anchor QEA, LLC

Parameter: BAN/SIM SVOA

Client Project: I&J Waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A	YL 6/25/12
☒ Standing Water Decanted (Not shared)= A	YL 6/25/12
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 30% medium Rocks A.	YL 6/25/12
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

UZ99 : 00322

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8270 BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

ARI Job No(s) UZ99 Page 1 of 1 PSDDA (6.7-20ppb) Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	UZ99 MBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	NL 6/28/12 Analyst/Date
	SBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave ML 6/28/12 Analyst/Date
	SBS Dup.	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C
	QLS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	CJZ 6/28/12 Analyst/Date
	QLS (SIM)	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3
2	A	12.29	(1:1) Y / N	1mL	1mL		CJZ 6/29/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		GPC Prep Filter (1:1)
			(1:1) Y / N	1mL	1mL		CJZ 6/29/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C
			(1:1) Y / N	1mL	1mL		YL 6/30/12 Analyst/Date
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3
			(1:1) Y / N	1mL	1mL		WW 7/2/12 Analyst/Date
Analyst/Date	NL 6/28/12		WW 6/29/12	WW 7/2/12	WW 7/2/12		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (1975-1)	100/150µg/mL	50µL	7/05/12	ML	WO 06/28/12
Full List Spike (Freezer)	7 (1974-2)	100µg/mL	50µL	11/09/12	ML	WO 06/28/12
Base Spike	56 (1978-2)	200µg/mL	50µL	11/17/12	ML	WO 06/28/12
Acid Spike	38 (1985-4)	100/150µg/mL	50µL	11/30/12	ML	WO 06/28/12
QLS Spike (14 in Freezer)	14 (1986-1)	100/200µg/mL	20µL	11/09/12	ML	WO 06/28/12
SIM QLS Spike (Freezer)	25 (1994-3 ~~1991-1~~)	1µg/mL	50µL	11/09/12	ML	WO 06/28/12

Extraction Time: 09:25 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~[illegible]~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

3093F

A. Need Total Solids Y / N B. Archive/Freeze Y / N

UZ99 00323

Revision 4 02/02/12

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Initial Calibration Notes GC/MS SVOA

SIM ABN

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 6/5/12 Internal Standard ID 1875-1 Expiration 7/15/12

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal acceptable?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	1949-2	12/19/12	UCSG	1941-1	7/27/12
	1950-1	10/31/12		1940-1	7/27/12
	1891-2	6/30/12		1932-3	7/6/12
	1892-2	7/5/12			

Detail problems, corrective actions and/or other pertinent information below:

PCP - quadratic fit.

Analyst: YZ **Date:** 6/8/12

Reviewer: [signature] **Date:** 6/8/12

3/23/12

Version 002

UZ99 : 00325

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 6/5/12 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ~~22~~ ABN 2 Column No: 227815 Column Type: ZB 5 msi

Instrument Tune (.U or .CT.): 1112164 EM Voltage: 1835

Calibration File: DF0605 Curve Date: 6/5/12 Injection Vol.: 1 ul

IS/SS	Ical/Ccal	LCS/ICV
1875-1	1949-2 1891-2	
	1950-1 1892-1	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120605.b

	Time	Filename	LabID	ClientId	DF															
1	1325	df0605.d	DFTPP	DFTPP	1	|NO ISTDS FOUND||														
2	1339	ic0605a.d	IC0605A		1	| 8.46	254374	||11.10	947590	||14.97	481282	||18.24	834942	||23.39	846355	||25.74	841446|			
3	1416	ic0605b.d	IC0605B		1	| 8.46	244149	||11.10	935113	||14.97	486131	||18.24	828694	||23.39	857159	||25.74	865805|			
4	1453	ic0605c.d	IC0605C		1	| 8.46	236302	||11.09	910177	||14.97	445670	||18.23	798796	||23.39	780203	||25.73	775486|			
5	1530	ic0605d.d	IC0605D		1	| 8.46	231821	||11.09	898990	||14.97	451824	||18.23	802664	||23.39	824124	||25.74	809508|			
6	1607	ic0605e.d	IC0605E		1	| 8.46	241031	||11.09	904843	||14.96	455129	||18.23	804407	||23.39	786261	||25.73	765254|			
7	1644	ic0605f.d	IC0605F		3	| 8.46	232154	||11.09	874506	||14.97	431792	||18.23	755253	||23.39	739015	||25.73	735927|			
8	1721	ic0605g.d	IC0605G		2	| 8.46	219044	||11.09	842573	||14.97	417643	||18.23	716873	||23.39	709704	||25.73	698643|			
9	1835	uv63mb.d	UV63MBS1	UV63MBS1	1	| 8.46	217915	||11.09	854537	||14.97	424357	||18.23	738039	||23.39	717860	||25.73	668805|			
10	1912	uv63sb.d	UV63LCSS1	UV63LCSS1	1	| 8.46	219845	||11.09	835546	||14.97	429150	||18.23	739588	||23.39	759859	||25.73	737000|			
11	1948	uv63sbd.d	UV63LCSDS1	UV63LCSDS1	1	| 8.46	206796	||11.09	802724	||14.97	407780	||18.23	701054	||23.39	723976	||25.73	699134|			
12	2025	uv63a.d	UV63A	SED-SS-03-05	1	| 8.46	204487	||11.09	798574	||14.97	395086	||18.24	664513	||23.40	724754	||25.75	731577|			
13	2102	uv63b.d	UV63B	SED-SS-16-05	1	| 8.46	216020	||11.09	834115	||14.97	424719	||18.24	714434	||23.40	776918	||25.75	781831|			
14	2139	uv63c.d	UV63C	SED-SS-01-05	1	| 8.46	203489	||11.09	798684	||14.97	406949	||18.24	713722	||23.41	777607	||25.76	774385|			
15	2216	uv63d.d	UV63D	SED-SS-08-05	1	| 8.46	230008	||11.10	903998	||14.97	457063	||18.24	802234	||23.40	845019	||25.75	843232|			
16	2253	uv63e.d	UV63E	DUP-052212-1	1	| 8.46	219348	||11.10	854666	||14.97	441761	||18.24	758360	||23.40	800139	||25.75	806922|			
17	2329	uv63f.d	UV63F	SED-SS-07-05	1	| 8.46	226747	||11.10	877017	||14.97	448711	||18.24	779981	||23.40	832283	||25.75	840455|			
18	0006	uv63fms.d	UV63FMS	SED-SS-07-05	1	| 8.46	201439	||11.10	777789	||14.97	413268	||18.25	705280	||23.41	772367	||25.76	772097|			
19	0043	uv63fmsd.d	UV63FMSD	SED-SS-07-05	1	| 8.47	202167	||11.10	797105	||14.98	420914	||18.25	723584	||23.41	794772	||25.76	800133|			

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

6/8/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20120605.b/SIM.b

ARI Job No.: IC06 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 05-JUN-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1339	ic0605a.d	IC0605A		1	NO MANUAL INTEGRATION
1416	ic0605b.d	IC0605B		1	NO MANUAL INTEGRATION
1453	ic0605c.d	IC0605C		1	Benzyl alcohol, N-Nitroso-di-n-propylamine,
1530	ic0605d.d	IC0605D		1	NO MANUAL INTEGRATION
1607	ic0605e.d	IC0605E		1	NO MANUAL INTEGRATION
1644	ic0605f.d	IC0605F		3	NO MANUAL INTEGRATION
1721	ic0605g.d	IC0605G		2	NO MANUAL INTEGRATION

UZ99:00327

Report Date : 08-Jun-2012 11:16

UZ99:00328

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120605.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0605a	ic0605b	ic0605c	ic0605d	ic0605e	ic0605f	ic0605g
INJ.DATE:	05-JUN-2012	05-JUN-2012	05-JUN-2012	05-JUN-2012	05-JUN-2012	05-JUN-2012	05-JUN-2012
INJ.TIME:	13:39	14:16	14:53	15:30	16:07	16:44	17:21

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.164	6.164	6.164	6.164	6.164	6.164	6.164	6.164	5.664-6.664	6.164	0.000
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.612	7.112-8.112	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.296	16.796-17.796	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.196	29.696-30.696	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.852	23.352-24.352	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.862	27.362-28.362	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.855	19.355-20.355	+++++	+++++

Reviewer 1 YZ Date: 6/8/12
Reviewer 2 [signature] Date: 6/8/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120605.b/SIM.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.934	14.434-15.434	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
3 Phenol	7.903	7.903	7.903	7.895	7.903	7.895	7.895	7.903	7.403-8.403	7.900	0.004
4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
7 1,3-Dichlorobenzene	8.383	8.390	8.383	8.391	8.391	8.383	8.390	8.383	7.883-8.883	8.387	0.004
* 8 1,4-Dichlorobenzene-d4	8.460	8.460	8.460	8.460	8.460	8.460	8.460	8.460	7.960-8.960	8.460	0.000
9 1,4-Dichlorobenzene	8.491	8.491	8.491	8.491	8.491	8.491	8.491	8.491	7.991-8.991	8.491	0.000
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
11 Benzyl alcohol	8.786	8.786	8.794	8.786	8.786	8.786	8.786	8.786	8.286-9.286	8.787	0.003
12 1,2-Dichlorobenzene	8.864	8.864	8.864	8.864	8.864	8.864	8.864	8.864	8.364-9.364	8.864	0.000
13 2-Methylphenol	9.066	9.066	9.066	9.066	9.066	9.066	9.066	9.066	8.566-9.566	9.066	0.000
14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.966	8.466-9.466	+++++	+++++
15 4-Methylphenol	9.361	9.368	9.361	9.361	9.361	9.361	9.361	9.361	8.861-9.861	9.362	0.003
16 N-Nitroso-di-n-propyla	9.384	9.384	9.376	9.376	9.376	9.376	9.376	9.384	8.884-9.884	9.378	0.004
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.274	8.774-9.774	+++++	+++++
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.618	8.118-9.118	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

UZ99:00329

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120605.b/SIM.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
22 2,4-Dimethylphenol	10.470	10.470	10.462	10.462	10.462	10.462	10.462	10.470	9.970-10.970	10.464	0.004
23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.248	9.748-10.748	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
26 1,2,4-Trichlorobenzene	11.017	11.017	11.017	11.017	11.017	11.017	11.017	11.017	10.517-11.517	11.017	0.000
* 27 Naphthalene-d8	11.102	11.102	11.094	11.095	11.095	11.094	11.094	11.102	10.602-11.602	11.097	0.004
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.480	8.980-9.980	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
30 Hexachlorobutadiene	11.558	11.558	11.558	11.558	11.558	11.558	11.558	11.558	11.058-12.058	11.558	0.000
31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.533	10.033-11.033	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
39 Dimethylphthalate	14.514	14.522	14.514	14.514	14.514	14.514	14.514	14.514	14.014-15.014	14.515	0.003
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
* 42 Acenaphthene-d10	14.971	14.971	14.971	14.971	14.963	14.971	14.971	14.971	14.471-15.471	14.970	0.003
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

UZ59:09330

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120605.b/SIM.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.055	12.555-13.555	+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
50 Diethylphthalate	16.100	16.107	16.092	16.100	16.092	16.099	16.092	16.100	15.600-16.600	16.097	0.006
51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.466	12.966-13.966	+++++	+++++
53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.587	13.087-14.087	+++++	+++++
54 N-Nitrosodiphenylamine	16.478	16.478	16.478	16.478	16.470	16.470	16.470	16.478	15.978-16.978	16.475	0.004
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
57 Hexachlorobenzene	17.574	17.574	17.574	17.574	17.574	17.574	17.574	17.574	17.074-18.074	17.574	0.000
58 Pentachlorophenol	17.992	17.992	17.992	17.984	17.992	17.984	17.992	17.992	17.492-18.492	17.990	0.004
* 59 Phenanthrene-d10	18.239	18.239	18.232	18.232	18.232	18.232	18.232	18.239	17.739-18.739	18.234	0.004
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.286	14.786-15.786	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.761	15.261-16.261	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$ 66 Terphenyl-d14	21.528	21.528	21.527	21.528	21.528	21.528	21.528	21.528	21.028-22.028	21.528	0.000
67 Butylbenzylphthalate	22.503	22.503	22.503	22.503	22.503	22.503	22.503	22.503	22.003-23.003	22.503	0.000
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

UZ99:00331

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20120605.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.394	23.393	23.393	23.394	23.394	23.393	23.393	23.394	22.894-23.894	23.394	0.000
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.185	19.685-20.685	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.382	21.882-22.882	+++++	+++++
*	77 Perylene-d12	25.739	25.739	25.732	25.739	25.732	25.732	25.732	25.739	25.239-26.239	25.735	0.004
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	27.808	27.808	27.800	27.808	27.800	27.800	27.800	27.808	27.308-28.308	27.804	0.004
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.162	24.662-25.662	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.434	15.934-16.934	+++++	+++++
	90 N-Nitrosodimethylamine	3.894	3.894	3.902	3.894	3.902	3.902	3.902	3.894	3.394-4.394	3.898	0.004
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.897	7.397-8.397	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.833	21.333-22.333	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.896	14.396-15.396	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.819	14.319-15.319	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.950	26.450-27.450	+++++	+++++

UZ99:00932

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Average

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20120605.b/SIM.b/ic0605c.d
Level 2: /chem1/nt10.i/20120605.b/SIM.b/ic0605e.d
Level 3: /chem1/nt10.i/20120605.b/SIM.b/ic0605g.d
Level 4: /chem1/nt10.i/20120605.b/SIM.b/ic0605f.d
Level 5: /chem1/nt10.i/20120605.b/SIM.b/ic0605a.d
Level 6: /chem1/nt10.i/20120605.b/SIM.b/ic0605d.d
Level 7: /chem1/nt10.i/20120605.b/SIM.b/ic0605b.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
138 Chlorobenzilate	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
139 Isodrin	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
140 Diallate A	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
141 Diallate B	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
142 1,2-Dibromo-3-Chloropropane	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
135 2,3,5,6-Tetrachlorophenol	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
111 Azobenzene (1,2-DP-Hydrazine)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 Tetrachloroguaiacol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Guaiacol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 1-methylnaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	2.25169 2.06432	1.93403	2.13418	2.00929	2.08249	2.08261	2.07980	4.767
4 Bis(2-Chloroethyl)ether	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.63824	1.56113	1.74750	1.60183	1.65369	1.63837	1.60165	1.63463	3.593
9 1,4-Dichlorobenzene	1.61150	1.56826	1.67765	1.55352	1.60642	1.57913	1.56085	1.59391	2.696
11 Benzyl alcohol	0.90224	0.91009	0.90137	0.91877	0.98950	1.00382	1.01958	0.94934	5.526
12 1,2-Dichlorobenzene	1.54040	1.47085	1.62232	1.53071	1.57076	1.54672	1.52953	1.54447	2.968
13 2-Methylphenol	1.47168	1.33228	1.47167	1.42016	1.43315	1.47274	1.44077	1.43463	3.476
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.50926	1.36912	1.49888	1.46079	1.52178	1.52507	1.51382	1.48553	3.746
16 N-Nitroso-di-n-propylamine	0.83960	0.83491	0.88758	0.81984	0.84425	0.83059	0.82478	0.84022	2.677

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
17 Hexachloroethane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.36780 / 0.33641	0.33937	0.36197	0.35420	0.36262	0.35116	0.35336	3.382
23 Bis(2-Chloroethoxy)methane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.32706 / 0.31938	0.31864	0.33853	0.32475	0.33711	0.31530	0.32583	2.789

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
28 Naphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 4-Chloroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Hexachlorobutadiene	0.18221 / 0.18350	0.17457	0.18346	0.17831	0.18623	0.17829	0.18094	2.222
31 4-Chloro-3-methylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
32 2-Methylnaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 Hexachlorocyclopentadiene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 2,4,6-Trichlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 2,4,5-Trichlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 2-Chloronaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
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Target Version : 3.50
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Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
38 2-Nitroaniline	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.26084 1.15141	1.15150	1.21276	1.18305	1.22698	1.20321	1.19854	3.335
40 Acenaphthylene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
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Quant Method : ISTD
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
48 2,4-Dinitrotoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.41019 / 1.31301	1.27067	1.32778	1.31682	1.37511	1.35267	1.33804	3.413
51 4-Chlorophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.53470 / 0.53557	0.49557	0.55123	0.53577	0.55386	0.53221	0.53413	3.567
56 4-Bromophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.27692 / 0.25724	0.25405	0.27327	0.25587	0.26784	0.25496	0.26288	3.646

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
58 Pentachlorophenol	0.05403	0.05293	0.05615	0.07189	0.11538	0.11407		
	0.13789						0.08605	41.222 <-
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
67 Butylbenzylphthalate	0.57985	0.51601	0.55660	0.55296	0.58893	0.56059		
	0.56492						0.55998	4.157
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

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Quant Method : ISTD
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
79 Dibenzo(a,h)anthracene	1.02305	0.89816	0.94223	0.92433	0.99709	0.94520		
	0.96488						0.95642	4.460

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
80 Benzo(g,h,i)perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.79813 / 0.81622	0.75376	0.84796	0.80198	0.83764	0.82230	0.81114	3.818
91 Aniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 1,2-Diphenylhydrazine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 p-Cymene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 Perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 2-Fluorophenol	1.36029	1.26424	1.39524	1.32908	1.39698	1.39619	1.38935	1.36162	3.658
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

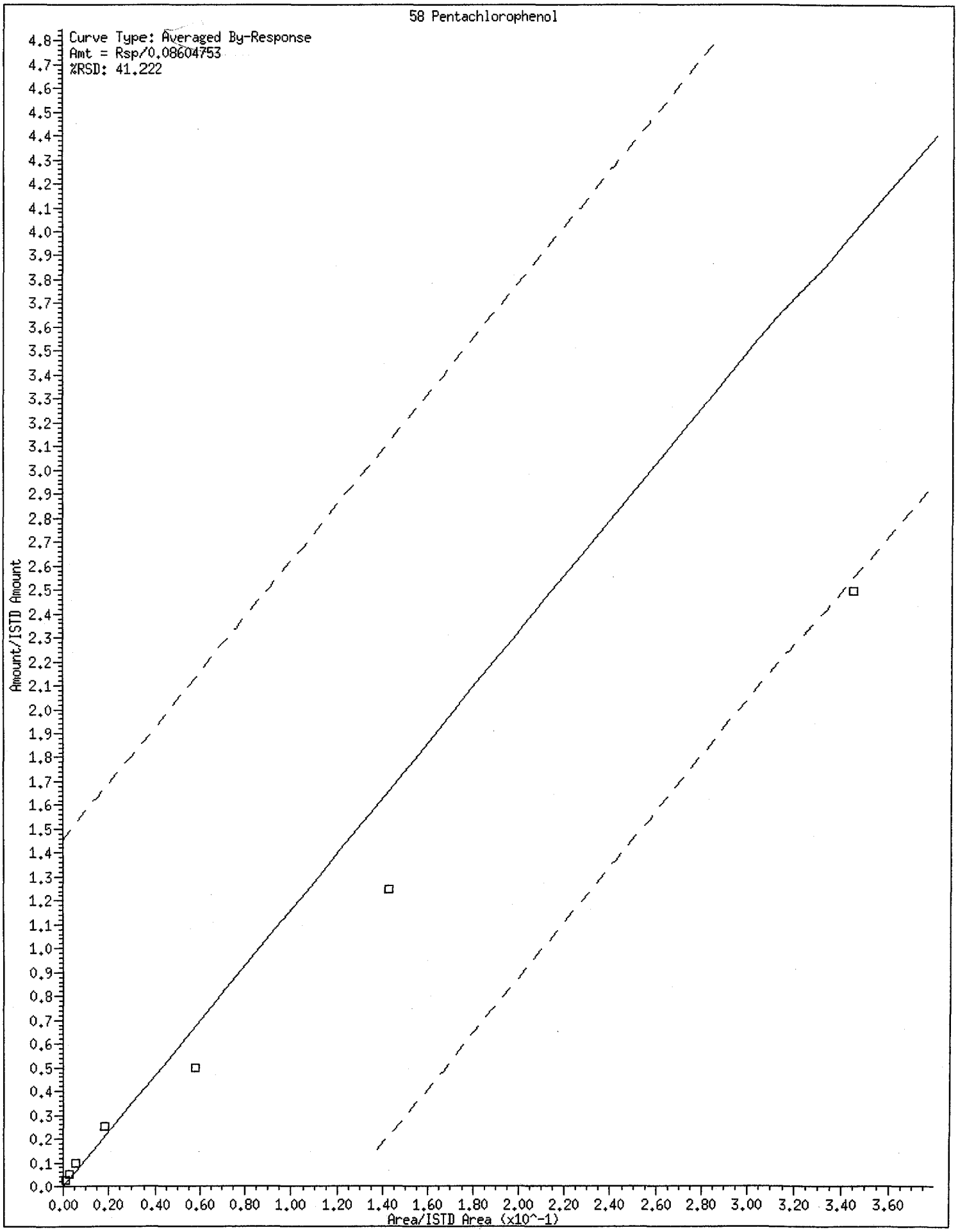
Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 66 Terphenyl-d14	0.64496	0.59278	0.61936	0.60359	0.63393	0.59705		
	0.60161						0.61333	3.248
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

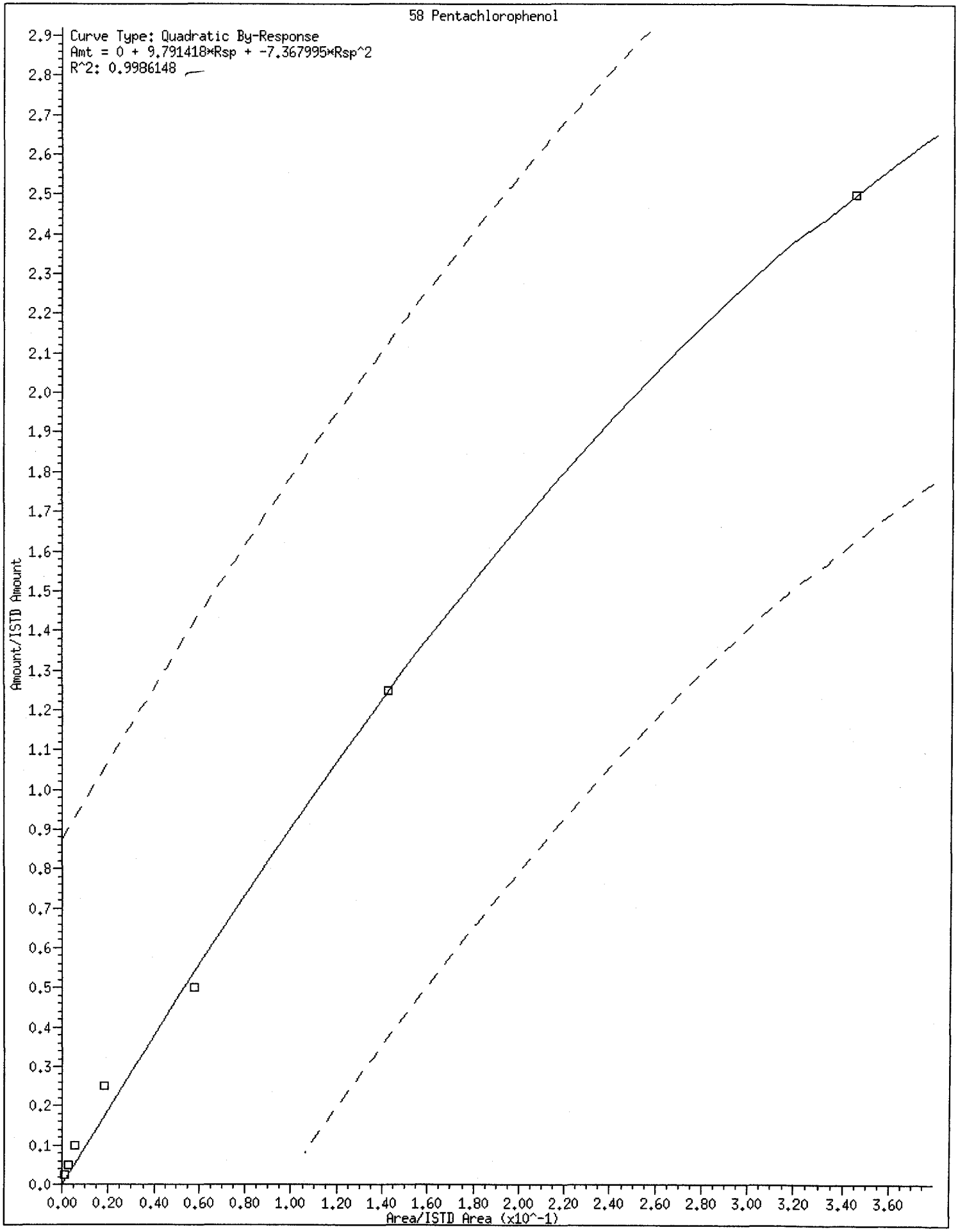
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
$ 95 D10-1-methylnaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++


58 Pentachlorophenol
Curve Type: Averaged By-Response
Amt = Rsp/0.08604753
%RSD: 41.222
Amount/ISTD Amount
Area/ISTD Area (x10^-1)


58 Pentachlorophenol
Curve Type: Quadratic By-Response
Amt = 0 + 9.791418*Rsp + -7.367995*Rsp^2
R^2: 0.9986148
Amount/ISTD Amount
Area/ISTD Area (x10^-1)

UZ99:00348

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

quadratic

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20120605.b/SIM.b/ic0605c.d
Level 2: /chem1/nt10.i/20120605.b/SIM.b/ic0605e.d
Level 3: /chem1/nt10.i/20120605.b/SIM.b/ic0605g.d
Level 4: /chem1/nt10.i/20120605.b/SIM.b/ic0605f.d
Level 5: /chem1/nt10.i/20120605.b/SIM.b/ic0605a.d
Level 6: /chem1/nt10.i/20120605.b/SIM.b/ic0605d.d
Level 7: /chem1/nt10.i/20120605.b/SIM.b/ic0605b.d

Compound	0.0500 Level 1	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5 Level 7										
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

UZ96:00349

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.25169	1.93403	2.13418	2.00929	2.08249	2.08261					
	2.06432						AVRG		2.07980		4.76721
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
7 1,3-Dichlorobenzene	1.63824	1.56113	1.74750	1.60183	1.65369	1.63837					
	1.60165						AVRG		1.63463		3.59297
9 1,4-Dichlorobenzene	1.61150	1.56826	1.67765	1.55352	1.60642	1.57913					
	1.56085						AVRG		1.59391		2.69597
11 Benzyl alcohol	0.90224	0.91009	0.90137	0.91877	0.98950	1.00382					
	1.01958						AVRG		0.94934		5.52555

UZ99:00350

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
12 1,2-Dichlorobenzene	1.54040	1.47085	1.62232	1.53071	1.57076	1.54672					
	1.52953						AVRG		1.54447		2.96785
13 2-Methylphenol	1.47168	1.33228	1.47167	1.42016	1.43315	1.47274					
	1.44077						AVRG		1.43463		3.47610
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
15 4-Methylphenol	1.50926	1.36912	1.49888	1.46079	1.52178	1.52507					
	1.51382						AVRG		1.48553		3.74616
16 N-Nitroso-di-n-propylamine	0.83960	0.83491	0.88758	0.81984	0.84425	0.83059					
	0.82478						AVRG		0.84022		2.67680
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

UZ99:00351

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
22 2,4-Dimethylphenol	0.36780	0.33937	0.36197	0.35420	0.36262	0.35116					
	0.33641						AVRG		0.35336		3.38178
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
26 1,2,4-Trichlorobenzene	0.32706	0.31864	0.33853	0.32475	0.33711	0.31530					
	0.31938						AVRG		0.32583		2.78865

UZ99:00352

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5 Level 7										
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
30 Hexachlorobutadiene	0.18221	0.17457	0.18346	0.17831	0.18623	0.17829					
	0.18350						AVRG		0.18094		2.22186
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

UZ99:00353

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
67 Butylbenzylphthalate	0.57985	0.51601	0.55660	0.55296	0.58893	0.56059					
	0.56492						AVRG		0.55998		4.15735

UZ99:00354

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
39 Dimethylphthalate	1.26084	1.15150	1.21276	1.18305	1.22698	1.20321					
	1.15141						AVRG		1.19854		3.33544
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
50 Diethylphthalate	1.41019	1.27067	1.32778	1.31682	1.37511	1.35267					
	1.31301						AVRG		1.33804		3.41321

UZ99:00355

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
54 N-Nitrosodiphenylamine	0.53470	0.49557	0.55123	0.53577	0.55386	0.53221					
	0.53557						AVRG		0.53413		3.56651
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
57 Hexachlorobenzene	0.27692	0.25405	0.27327	0.25587	0.26784	0.25496					
	0.25724						AVRG		0.26288		3.64551
58 Pentachlorophenol	1079	2129	4025	13573	48168	114449					
	285663						QUAD	0.000e+00	9.79142	-7.36800	0.99861

U299:00356

UZ99:00357

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 1 2-Fluorophenol	1.36029	1.26424	1.39524	1.32908	1.39698	1.39619					
	1.38935						AVRG		1.36162		3.65845
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 66 Terphenyl-d14	0.64496	0.59278	0.61936	0.60359	0.63393	0.59705					
	0.60161						AVRG		0.61333		3.24772
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

UZ59:00358

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Compound	0.0500 Level 1 / 5 Level 7	0.1000 Level 2	0.2000 Level 3	0.5000 Level 4	1 Level 5	2 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 88 Dibenz(a,h)anthracene-d14	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

UZ99:00359

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUN-2012 13:39
End Cal Date : 05-JUN-2012 17:21
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Cal Date : 06-Jun-2012 09:20 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

UZ99:00360

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/8/12

Data file : /chem1/nt10.i/20120605.b/SIM.b/ic0605a.d
Lab Smp Id: IC0605A
Inj Date : 05-JUN-2012 13:39
Operator : YZ Inst ID: nt10.i
Smp Info : IC0605A
Misc Info :
Comment :
Method : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Meth Date : 08-Jun-2012 10:38 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 17:21 Cal File: ic0605g.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.164	6.164	(0.729)	88839	1.00000	1.026
3 Phenol	94	7.903	7.903	(0.934)	132433	1.00000	1.001
7 1,3-Dichlorobenzene	146	8.383	8.383	(0.991)	105164	1.00000	1.012
* 8 1,4-Dichlorobenzene-d4	152	8.460	8.460	(1.000)	254374	4.00000	
9 1,4-Dichlorobenzene	146	8.491	8.491	(1.004)	102158	1.00000	1.008
11 Benzyl alcohol	79	8.786	8.786	(1.039)	62926	1.00000	1.042
12 1,2-Dichlorobenzene	146	8.864	8.864	(1.048)	99890	1.00000	1.017
13 2-Methylphenol	108	9.066	9.066	(1.072)	91139	1.00000	0.9990
15 4-Methylphenol	108	9.361	9.361	(1.106)	96775	1.00000	1.024
16 N-Nitroso-di-n-propylamine	70	9.384	9.384	(1.109)	53689	1.00000	1.005
22 2,4-Dimethylphenol	107	10.470	10.470	(0.943)	171806	2.00000	2.052
26 1,2,4-Trichlorobenzene	180	11.017	11.017	(0.992)	79861	1.00000	1.035
* 27 Naphthalene-d8	136	11.102	11.102	(1.000)	947590	4.00000	
30 Hexachlorobutadiene	225	11.558	11.558	(1.041)	44117	1.00000	1.029
39 Dimethylphthalate	163	14.514	14.514	(0.970)	147631	1.00000	1.024
* 42 Acenaphthene-d10	162	14.971	14.971	(1.000)	481282	4.00000	
50 Diethylphthalate	149	16.100	16.100	(1.075)	165454	1.00000	1.028
54 N-Nitrosodiphenylamine	169	16.478	16.478	(0.903)	115611	1.00000	1.037
57 Hexachlorobenzene	284	17.574	17.574	(0.964)	55907	1.00000	1.019
58 Pentachlorophenol	266	17.992	17.992	(0.986)	48168	2.00000	2.161
* 59 Phenanthrene-d10	188	18.239	18.239	(1.000)	834942	4.00000	
$ 66 Terphenyl-d14	244	21.528	21.528	(0.920)	134133	1.00000	1.034
67 Butylbenzylphthalate	149	22.503	22.503	(0.962)	124612	1.00000	1.052
* 69 Chrysene-d12	240	23.394	23.394	(1.000)	846355	4.00000	
* 77 Perylene-d12	264	25.739	25.739	(1.000)	841446	4.00000	
79 Dibenzo(a,h)anthracene	278	27.808	27.808	(1.080)	209750	1.00000	1.043
90 N-Nitrosodimethylamine	74	3.894	3.894	(0.460)	106537	2.00000	2.065

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0605a.d
Lab Smp Id: IC0605A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUN-2012
Calibration Time: 13:39

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	254374	0.00
27 Naphthalene-d8	947590	473795	1895180	947590	0.00
42 Acenaphthene-d10	481282	240641	962564	481282	0.00
59 Phenanthrene-d10	834942	417471	1669884	834942	0.00
69 Chrysene-d12	846355	423178	1692710	846355	0.00
77 Perylene-d12	841446	420723	1682892	841446	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.46	7.96	8.96	8.46	0.00
27 Naphthalene-d8	11.10	10.60	11.60	11.10	0.00
42 Acenaphthene-d10	14.97	14.47	15.47	14.97	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	0.00
69 Chrysene-d12	23.39	22.89	23.89	23.39	0.00
77 Perylene-d12	25.74	25.24	26.24	25.74	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120605.b/SIM.b/ic0605a.d

Date : 05-JUN-2012 13:39

Client ID:

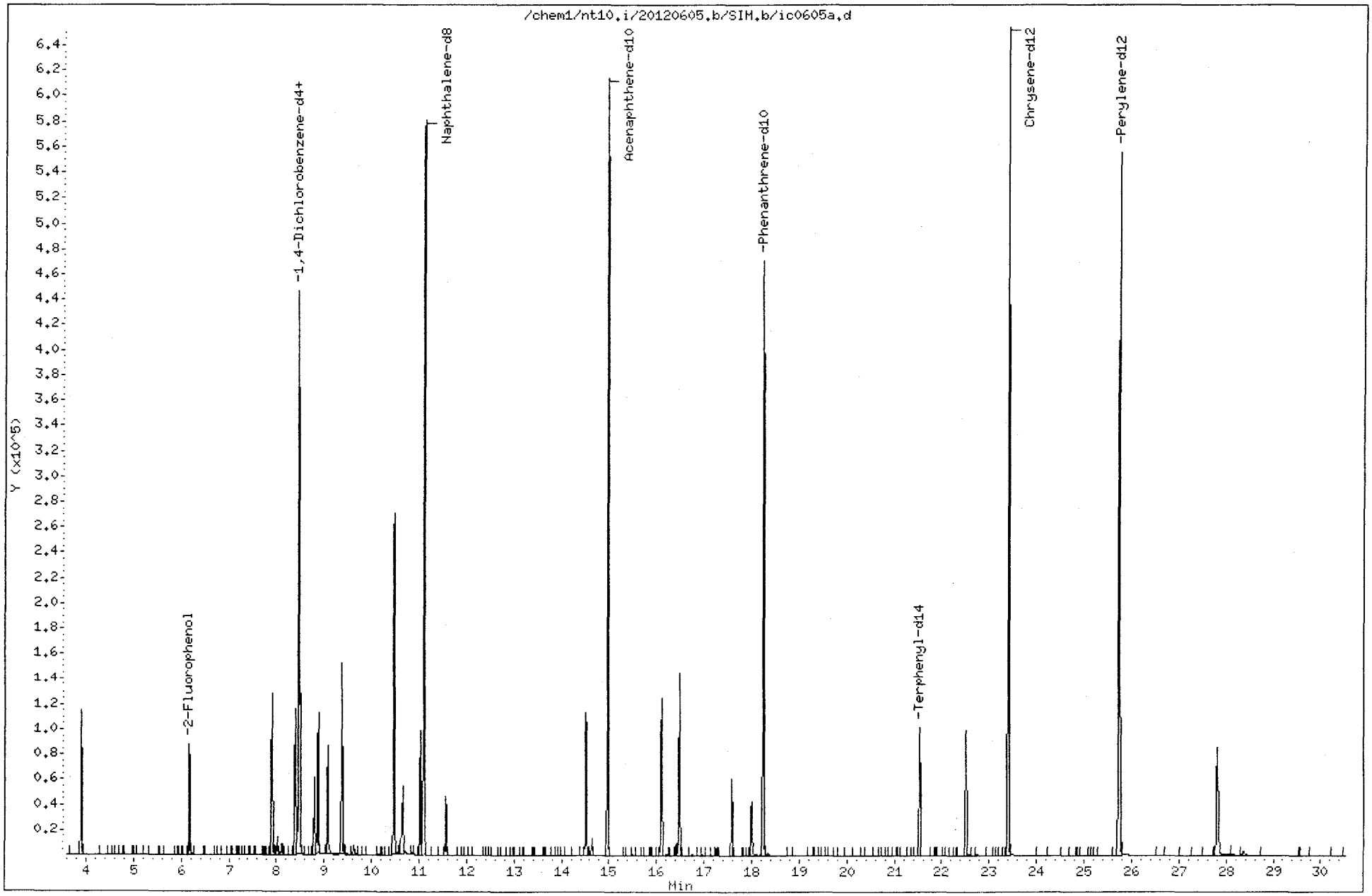
Sample Info: IC0605A

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



UZ99:00363

CO-ELUTION SUMMARY FOR FILE - ic0605a.d

Lab ID: IC0605A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUN-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/8/12

Data file : /chem1/nt10.i/20120605.b/SIM.b/ic0605b.d
Lab Smp Id: IC0605B
Inj Date : 05-JUN-2012 14:16
Operator : YZ Inst ID: nt10.i
Smp Info : IC0605B
Misc Info :
Comment :
Method : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Meth Date : 08-Jun-2012 10:38 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 14:16 Cal File: ic0605b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.164	6.164	(0.729)	424009	5.00000	5.659
	3	Phenol	94	7.903	7.903	(0.934)	630002	5.00000	5.496
	7	1,3-Dichlorobenzene	146	8.390	8.383	(0.992)	488802	5.00000	5.465
*	8	1,4-Dichlorobenzene-d4	152	8.460	8.460	(1.000)	244149	4.00000	
	9	1,4-Dichlorobenzene	146	8.491	8.491	(1.004)	476351	5.00000	5.447
	11	Benzyl alcohol	79	8.786	8.786	(1.039)	311163	5.00000	5.898
	12	1,2-Dichlorobenzene	146	8.864	8.864	(1.048)	466791	5.00000	5.524
	13	2-Methylphenol	108	9.066	9.066	(1.072)	439703	5.00000	5.585
	15	4-Methylphenol	108	9.368	9.361	(1.107)	461996	5.00000	5.650
	16	N-Nitroso-di-n-propylamine	70	9.384	9.384	(1.109)	251710	5.00000	5.463
	22	2,4-Dimethylphenol	107	10.470	10.470	(0.943)	786452	10.0000	10.61
	26	1,2,4-Trichlorobenzene	180	11.017	11.017	(0.992)	373326	5.00000	5.466
*	27	Naphthalene-d8	136	11.102	11.102	(1.000)	935113	4.00000	
	30	Hexachlorobutadiene	225	11.558	11.558	(1.041)	214491	5.00000	5.628
	39	Dimethylphthalate	163	14.522	14.514	(0.970)	699670	5.00000	5.331
*	42	Acenaphthene-d10	162	14.971	14.971	(1.000)	486131	4.00000	
	50	Diethylphthalate	149	16.107	16.100	(1.076)	797867	5.00000	5.431
	54	N-Nitrosodiphenylamine	169	16.478	16.478	(0.903)	554781	5.00000	5.594
	57	Hexachlorobenzene	284	17.574	17.574	(0.964)	266471	5.00000	5.434
	58	Pentachlorophenol	266	17.992	17.992	(0.986)	285663	10.0000	10.00
*	59	Phenanthrene-d10	188	18.239	18.239	(1.000)	828694	4.00000	
$	66	Terphenyl-d14	244	21.528	21.528	(0.920)	644598	5.00000	5.439
	67	Butylbenzylphthalate	149	22.503	22.503	(0.962)	605288	5.00000	5.588
*	69	Chrysene-d12	240	23.393	23.394	(1.000)	857159	4.00000	
*	77	Perylene-d12	264	25.739	25.739	(1.000)	865805	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.808	27.808	(1.080)	1044252	5.00000	5.561
	90	N-Nitrosodimethylamine	74	3.894	3.894	(0.460)	498196	10.0000	11.21

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0605b.d
Lab Smp Id: IC0605B
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUN-2012
Calibration Time: 13:39

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	244149	-4.02
27 Naphthalene-d8	947590	473795	1895180	935113	-1.32
42 Acenaphthene-d10	481282	240641	962564	486131	1.01
59 Phenanthrene-d10	834942	417471	1669884	828694	-0.75
69 Chrysene-d12	846355	423178	1692710	857159	1.28
77 Perylene-d12	841446	420723	1682892	865805	2.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.46	7.96	8.96	8.46	0.00
27 Naphthalene-d8	11.10	10.60	11.60	11.10	0.00
42 Acenaphthene-d10	14.97	14.47	15.47	14.97	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	0.00
69 Chrysene-d12	23.39	22.89	23.89	23.39	0.00
77 Perylene-d12	25.74	25.24	26.24	25.74	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

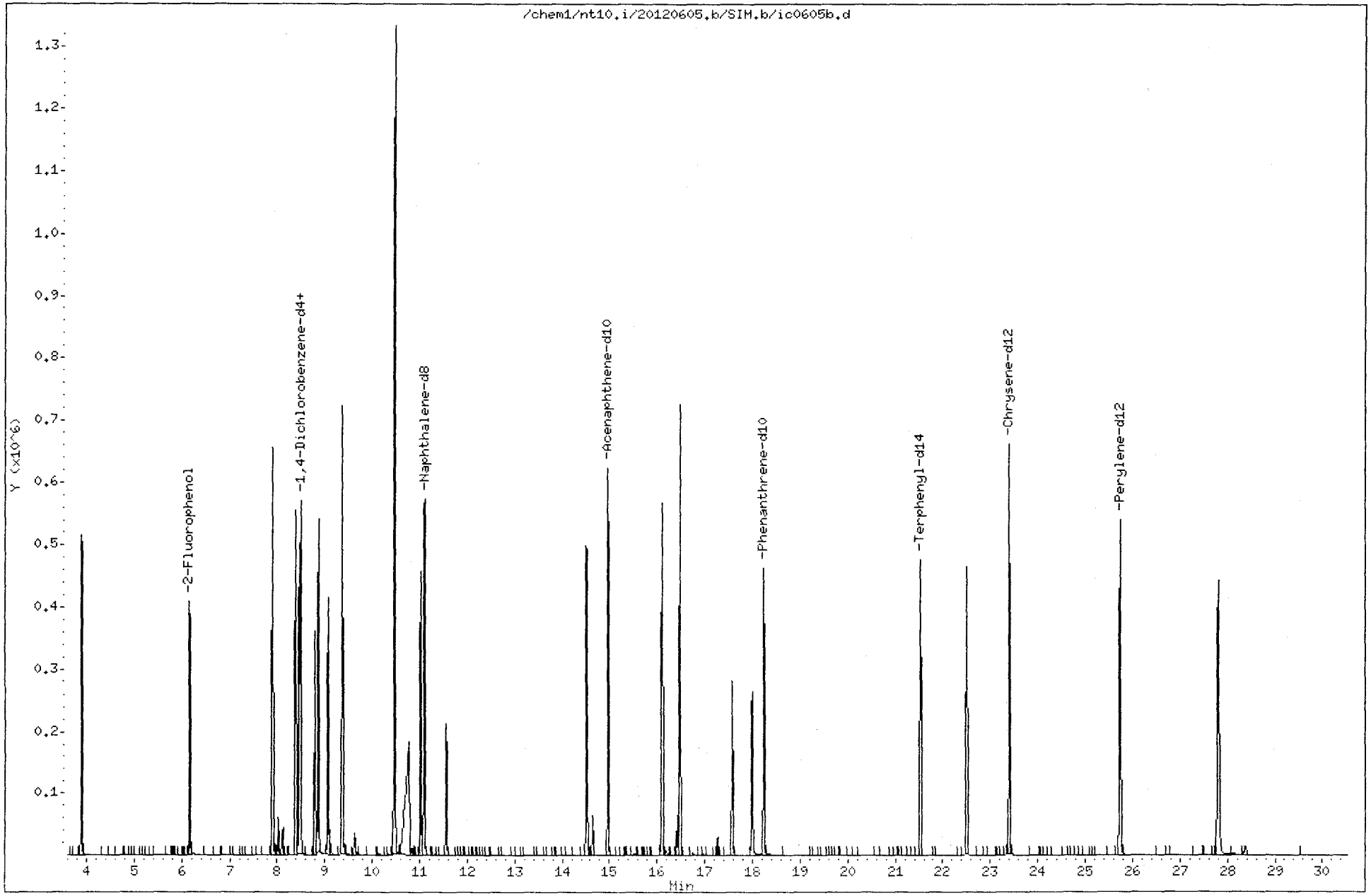
Data File: /chem1/nt10.i/20120605.b/SIM.b/ic0605b.d
Date : 05-JUN-2012 14:16
Client ID:
Sample Info: IC0605B

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



UZ99:00367

CO-ELUTION SUMMARY FOR FILE - ic0605b.d

Lab ID: IC0605B, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUN-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/8/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120605.b/SIM.b/ic0605c.d
Lab Smp Id: IC0605C
Inj Date : 05-JUN-2012 14:53
Operator : YZ Inst ID: nt10.i
Smp Info : IC0605C
Misc Info :
Comment :
Method : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Meth Date : 08-Jun-2012 10:38 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 14:53 Cal File: ic0605c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.164	6.164	(0.729)	4018	0.05000	0.05541
	3 Phenol	94	7.903	7.903	(0.934)	6651	0.05000	0.05994
	7 1,3-Dichlorobenzene	146	8.383	8.383	(0.991)	4839	0.05000	0.05590
*	8 1,4-Dichlorobenzene-d4	152	8.460	8.460	(1.000)	236302	4.00000	
	9 1,4-Dichlorobenzene	146	8.491	8.491	(1.004)	4760	0.05000	0.05623
	11 Benzyl alcohol	79	8.794	8.786	(1.039)	2665	0.05000	0.05219(M)
	12 1,2-Dichlorobenzene	146	8.864	8.864	(1.048)	4550	0.05000	0.05563
	13 2-Methylphenol	108	9.066	9.066	(1.072)	4347	0.05000	0.05705
	15 4-Methylphenol	108	9.361	9.361	(1.106)	4458	0.05000	0.05633
	16 N-Nitroso-di-n-propylamine	70	9.376	9.384	(1.108)	2480	0.05000	0.05561(M)
	22 2,4-Dimethylphenol	107	10.462	10.470	(0.943)	8369	0.10000	0.1160
	26 1,2,4-Trichlorobenzene	180	11.017	11.017	(0.993)	3721	0.05000	0.05597
*	27 Naphthalene-d8	136	11.094	11.102	(1.000)	910177	4.00000	
	30 Hexachlorobutadiene	225	11.558	11.558	(1.042)	2073	0.05000	0.05588
	39 Dimethylphthalate	163	14.514	14.514	(0.970)	7024	0.05000	0.05838
*	42 Acenaphthene-d10	162	14.971	14.971	(1.000)	445670	4.00000	
	50 Diethylphthalate	149	16.092	16.100	(1.075)	7856	0.05000	0.05833
	54 N-Nitrosodiphenylamine	169	16.478	16.478	(0.904)	5339	0.05000	0.05585
	57 Hexachlorobenzene	284	17.574	17.574	(0.964)	2765	0.05000	0.05849
	58 Pentachlorophenol	266	17.992	17.992	(0.987)	1079	0.10000	0.05257
*	59 Phenanthrene-d10	188	18.232	18.239	(1.000)	798796	4.00000	
$	66 Terphenyl-d14	244	21.527	21.528	(0.920)	6290	0.05000	0.05831
	67 Butylbenzylphthalate	149	22.503	22.503	(0.962)	5655	0.05000	0.05735
*	69 Chrysene-d12	240	23.393	23.394	(1.000)	780203	4.00000	
*	77 Perylene-d12	264	25.732	25.739	(1.000)	775486	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.800	27.808	(1.080)	9917	0.05000	0.05896
	90 N-Nitrosodimethylamine	74	3.902	3.894	(0.461)	4715	0.10000	0.1097

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0605c.d
Lab Smp Id: IC0605C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUN-2012
Calibration Time: 13:39

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	236302	-7.10
27 Naphthalene-d8	947590	473795	1895180	910177	-3.95
42 Acenaphthene-d10	481282	240641	962564	445670	-7.40
59 Phenanthrene-d10	834942	417471	1669884	798796	-4.33
69 Chrysene-d12	846355	423178	1692710	780203	-7.82
77 Perylene-d12	841446	420723	1682892	775486	-7.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.46	7.96	8.96	8.46	0.00
27 Naphthalene-d8	11.10	10.60	11.60	11.09	-0.07
42 Acenaphthene-d10	14.97	14.47	15.47	14.97	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.23	-0.04
69 Chrysene-d12	23.39	22.89	23.89	23.39	0.00
77 Perylene-d12	25.74	25.24	26.24	25.73	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

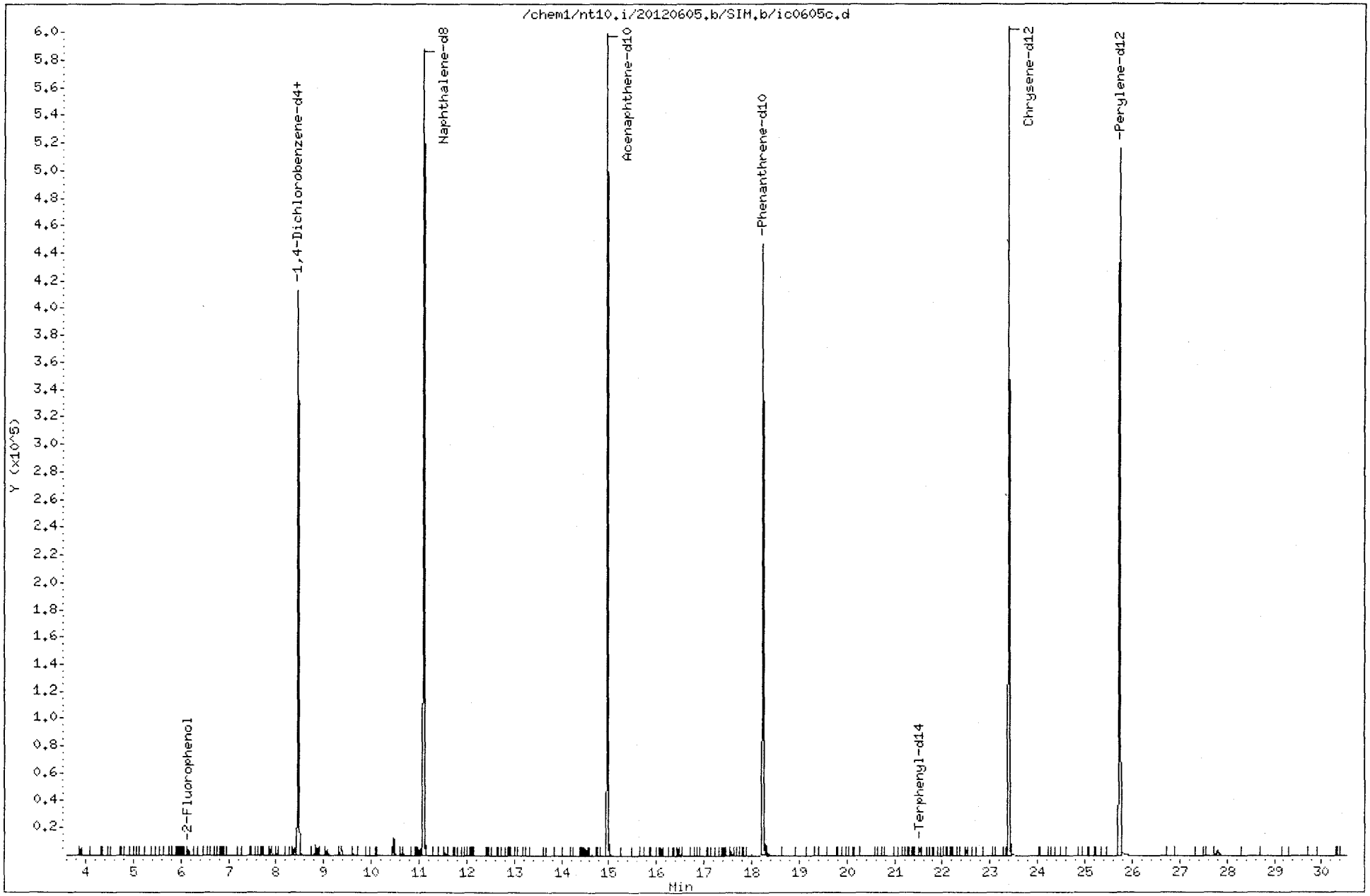
Data File: /chem1/nt10.i/20120605.b/SIM.b/ic0605c.d
Date : 05-JUN-2012 14:53
Client ID:
Sample Info: IC0605C

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

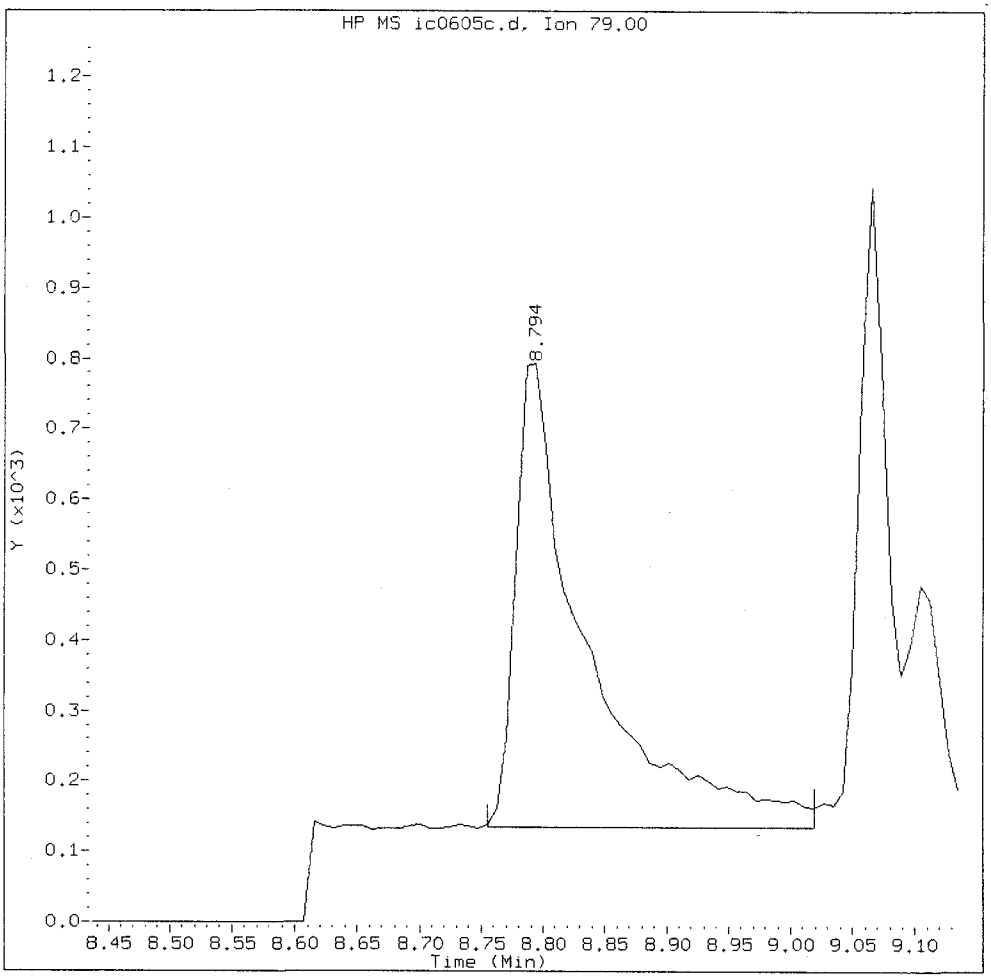
Column diameter: 0.25



UZ99:00372

IC0605C, /chem1/nt10.i/20120605.b/SIM.b/ic0605c.d

Benzyl alcohol Amount: 0.05 Area: 2665



MANUAL INTEGRATION for Benzyl alcohol

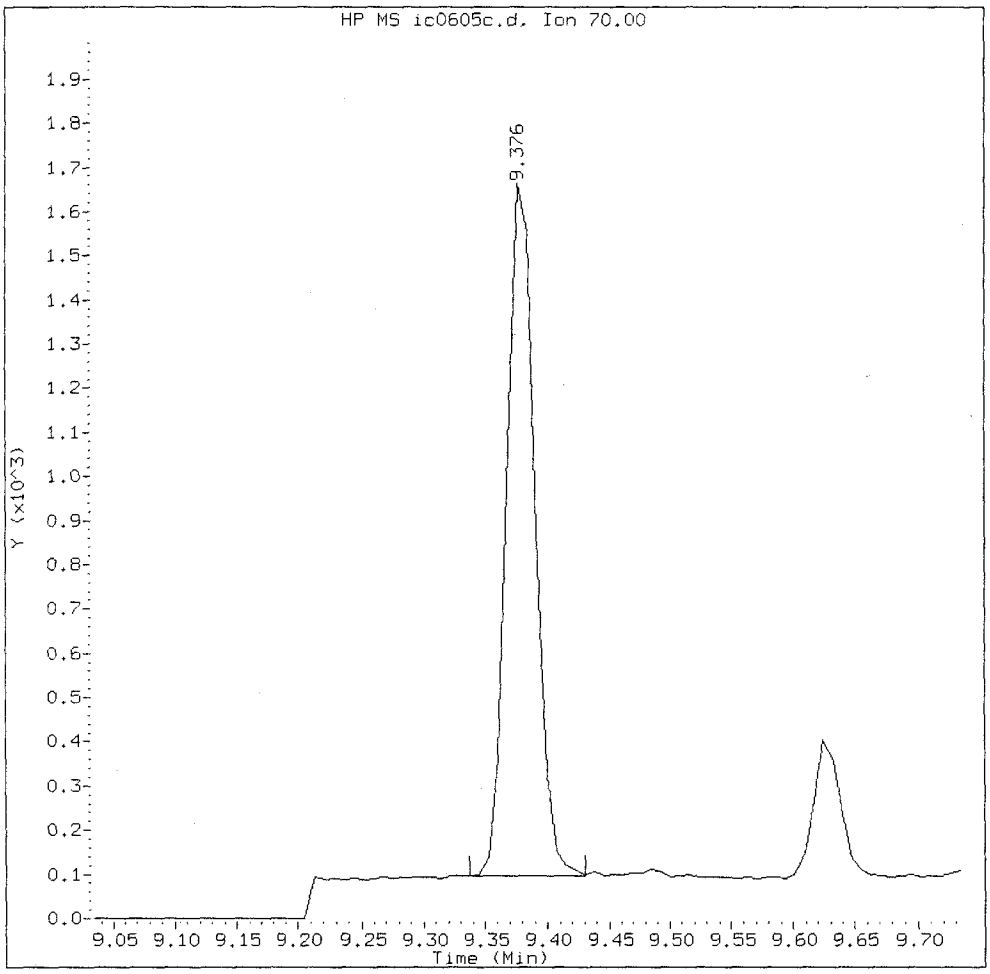
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/8/12

IC0605C, /chem1/nt10.i/20120605.b/SIM.b/ic0605c.d

N-Nitroso-di-n-propylamine Amount: 0.06 Area: 2480



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/8/12

CO-ELUTION SUMMARY FOR FILE - ic0605c.d

Lab ID: IC0605C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUN-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/8/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120605.b/SIM.b/ic0605d.d
Lab Smp Id: IC0605D
Inj Date : 05-JUN-2012 15:30
Operator : YZ Inst ID: nt10.i
Smp Info : IC0605D
Misc Info :
Comment :
Method : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Meth Date : 08-Jun-2012 10:38 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 15:30 Cal File: ic0605d.d
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.164	6.164	(0.729)	202291	2.50000	2.844
	3 Phenol	94	7.895	7.903	(0.933)	301746	2.50000	2.772
	7 1,3-Dichlorobenzene	146	8.391	8.383	(0.992)	237381	2.50000	2.795
*	8 1,4-Dichlorobenzene-d4	152	8.460	8.460	(1.000)	231821	4.00000	
	9 1,4-Dichlorobenzene	146	8.491	8.491	(1.004)	228797	2.50000	2.755
	11 Benzyl alcohol	79	8.786	8.786	(1.039)	145441	2.50000	2.904
	12 1,2-Dichlorobenzene	146	8.864	8.864	(1.048)	224101	2.50000	2.793
	13 2-Methylphenol	108	9.066	9.066	(1.072)	213382	2.50000	2.854
	15 4-Methylphenol	108	9.361	9.361	(1.106)	220964	2.50000	2.846
	16 N-Nitroso-di-n-propylamine	70	9.376	9.384	(1.108)	120342	2.50000	2.751
	22 2,4-Dimethylphenol	107	10.462	10.470	(0.943)	394611	5.00000	5.538
	26 1,2,4-Trichlorobenzene	180	11.017	11.017	(0.993)	177160	2.50000	2.698
*	27 Naphthalene-d8	136	11.095	11.102	(1.000)	898990	4.00000	
	30 Hexachlorobutadiene	225	11.558	11.558	(1.042)	100174	2.50000	2.734
	39 Dimethylphthalate	163	14.514	14.514	(0.970)	339774	2.50000	2.786
*	42 Acenaphthene-d10	162	14.971	14.971	(1.000)	451824	4.00000	
	50 Diethylphthalate	149	16.100	16.100	(1.075)	381980	2.50000	2.798
	54 N-Nitrosodiphenylamine	169	16.478	16.478	(0.904)	266992	2.50000	2.779
	57 Hexachlorobenzene	284	17.574	17.574	(0.964)	127907	2.50000	2.693
	58 Pentachlorophenol	266	17.984	17.992	(0.986)	114449	5.00000	4.968
*	59 Phenanthrene-d10	188	18.232	18.239	(1.000)	802664	4.00000	
$	66 Terphenyl-d14	244	21.528	21.528	(0.920)	307528	2.50000	2.699
	67 Butylbenzylphthalate	149	22.503	22.503	(0.962)	288747	2.50000	2.772
*	69 Chrysene-d12	240	23.394	23.394	(1.000)	824124	4.00000	
*	77 Perylene-d12	264	25.739	25.739	(1.000)	809508	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.808	27.808	(1.080)	478219	2.50000	2.724
	90 N-Nitrosodimethylamine	74	3.894	3.894	(0.460)	238284	5.00000	5.649

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0605d.d
Lab Smp Id: IC0605D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUN-2012
Calibration Time: 13:39

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	231821	-8.87
27 Naphthalene-d8	947590	473795	1895180	898990	-5.13
42 Acenaphthene-d10	481282	240641	962564	451824	-6.12
59 Phenanthrene-d10	834942	417471	1669884	802664	-3.87
69 Chrysene-d12	846355	423178	1692710	824124	-2.63
77 Perylene-d12	841446	420723	1682892	809508	-3.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.46	7.96	8.96	8.46	0.00
27 Naphthalene-d8	11.10	10.60	11.60	11.09	-0.07
42 Acenaphthene-d10	14.97	14.47	15.47	14.97	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.23	-0.04
69 Chrysene-d12	23.39	22.89	23.89	23.39	0.00
77 Perylene-d12	25.74	25.24	26.24	25.74	0.00

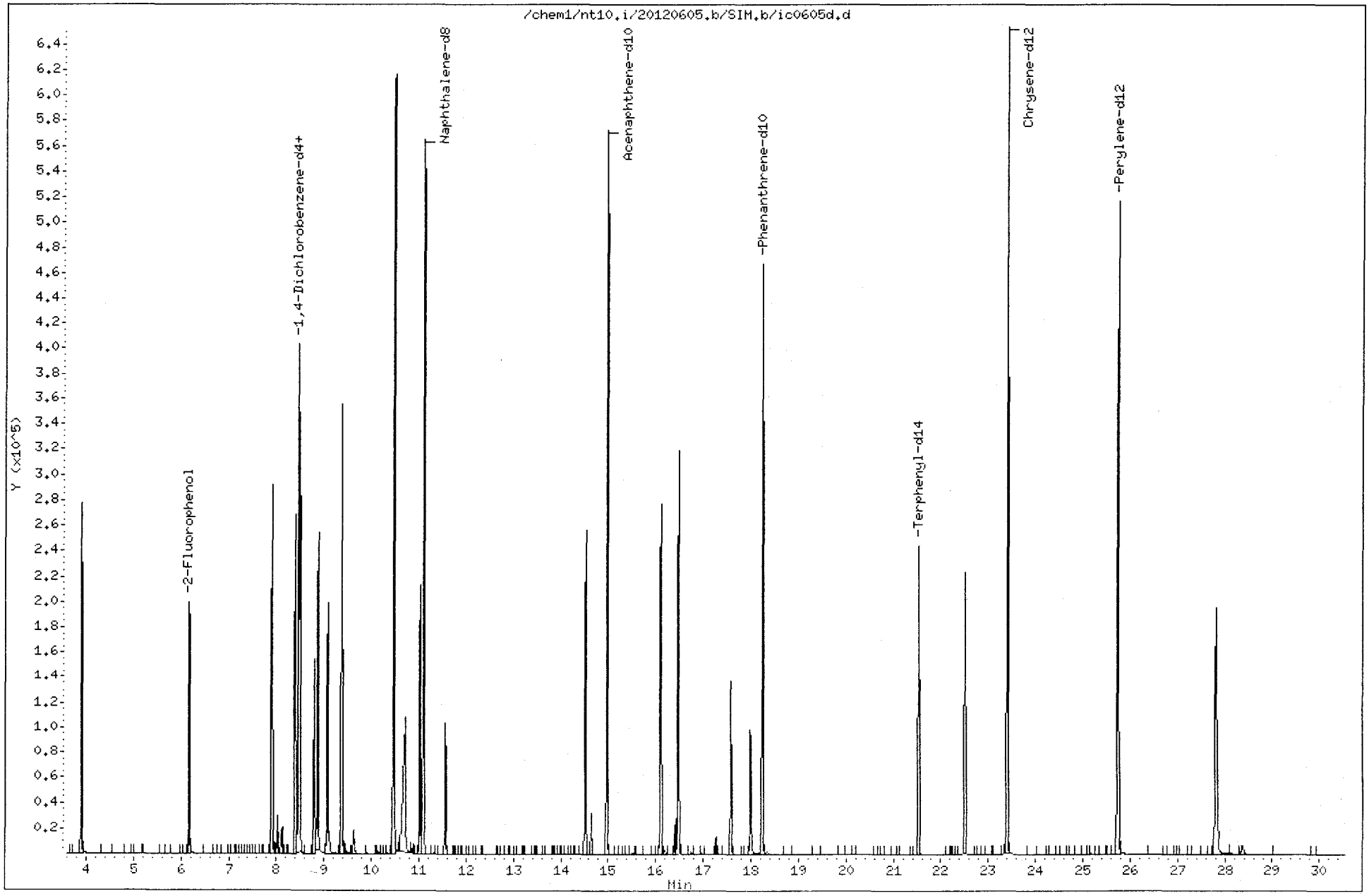
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120605.b/SIM.b/ic0605d.d
Date : 05-JUN-2012 15:30
Client ID:
Sample Info: IC0605D

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



UZ99:00378

CO-ELUTION SUMMARY FOR FILE - ic0605d.d

Lab ID: IC0605D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUN-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/8/12

Data file : /chem1/nt10.i/20120605.b/SIM.b/ic0605e.d
Lab Smp Id: IC0605E
Inj Date : 05-JUN-2012 16:07
Operator : YZ
Inst ID: nt10.i
Smp Info : IC0605E
Misc Info :
Comment :
Method : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Meth Date : 08-Jun-2012 10:38 yev
Quant Type: ISTD
Cal Date : 05-JUN-2012 16:07
Cal File: ic0605e.d
Als bottle: 6
Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.164	6.164	(0.729)	7618	0.10000	0.1030
	3 Phenol	94	7.903	7.903	(0.934)	11654	0.10000	0.1030
	7 1,3-Dichlorobenzene	146	8.391	8.383	(0.992)	9407	0.10000	0.1065
*	8 1,4-Dichlorobenzene-d4	152	8.460	8.460	(1.000)	241031	4.00000	
	9 1,4-Dichlorobenzene	146	8.491	8.491	(1.004)	9450	0.10000	0.1094
	11 Benzyl alcohol	79	8.786	8.786	(1.039)	5484	0.10000	0.1053
	12 1,2-Dichlorobenzene	146	8.864	8.864	(1.048)	8863	0.10000	0.1062
	13 2-Methylphenol	108	9.066	9.066	(1.072)	8028	0.10000	0.1033
	15 4-Methylphenol	108	9.361	9.361	(1.106)	8250	0.10000	0.1022
	16 N-Nitroso-di-n-propylamine	70	9.376	9.384	(1.108)	5031	0.10000	0.1106
	22 2,4-Dimethylphenol	107	10.462	10.470	(0.943)	15354	0.20000	0.2141
	26 1,2,4-Trichlorobenzene	180	11.017	11.017	(0.993)	7208	0.10000	0.1091
*	27 Naphthalene-d8	136	11.095	11.102	(1.000)	904843	4.00000	
	30 Hexachlorobutadiene	225	11.558	11.558	(1.042)	3949	0.10000	0.1071
	39 Dimethylphthalate	163	14.514	14.514	(0.970)	13102	0.10000	0.1066
*	42 Acenaphthene-d10	162	14.963	14.971	(1.000)	455129	4.00000	
	50 Diethylphthalate	149	16.092	16.100	(1.075)	14458	0.10000	0.1051
	54 N-Nitrosodiphenylamine	169	16.470	16.478	(0.903)	9966	0.10000	0.1035
	57 Hexachlorobenzene	284	17.574	17.574	(0.964)	5109	0.10000	0.1073
	58 Pentachlorophenol	266	17.992	17.992	(0.987)	2129	0.20000	0.1029
*	59 Phenanthrene-d10	188	18.232	18.239	(1.000)	804407	4.00000	
$	66 Terphenyl-d14	244	21.528	21.528	(0.920)	11652	0.10000	0.1072
	67 Butylbenzylphthalate	149	22.503	22.503	(0.962)	10143	0.10000	0.1021
*	69 Chrysene-d12	240	23.394	23.394	(1.000)	786261	4.00000	
*	77 Perylene-d12	264	25.732	25.739	(1.000)	765254	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.800	27.808	(1.080)	17183	0.10000	0.1035
	90 N-Nitrosodimethylamine	74	3.902	3.894	(0.461)	9084	0.20000	0.2071

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0605e.d
Lab Smp Id: IC0605E
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUN-2012
Calibration Time: 13:39

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	241031	-5.25
27 Naphthalene-d8	947590	473795	1895180	904843	-4.51
42 Acenaphthene-d10	481282	240641	962564	455129	-5.43
59 Phenanthrene-d10	834942	417471	1669884	804407	-3.66
69 Chrysene-d12	846355	423178	1692710	786261	-7.10
77 Perylene-d12	841446	420723	1682892	765254	-9.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.46	7.96	8.96	8.46	0.00
27 Naphthalene-d8	11.10	10.60	11.60	11.09	-0.07
42 Acenaphthene-d10	14.97	14.47	15.47	14.96	-0.05
59 Phenanthrene-d10	18.24	17.74	18.74	18.23	-0.04
69 Chrysene-d12	23.39	22.89	23.89	23.39	0.00
77 Perylene-d12	25.74	25.24	26.24	25.73	-0.03

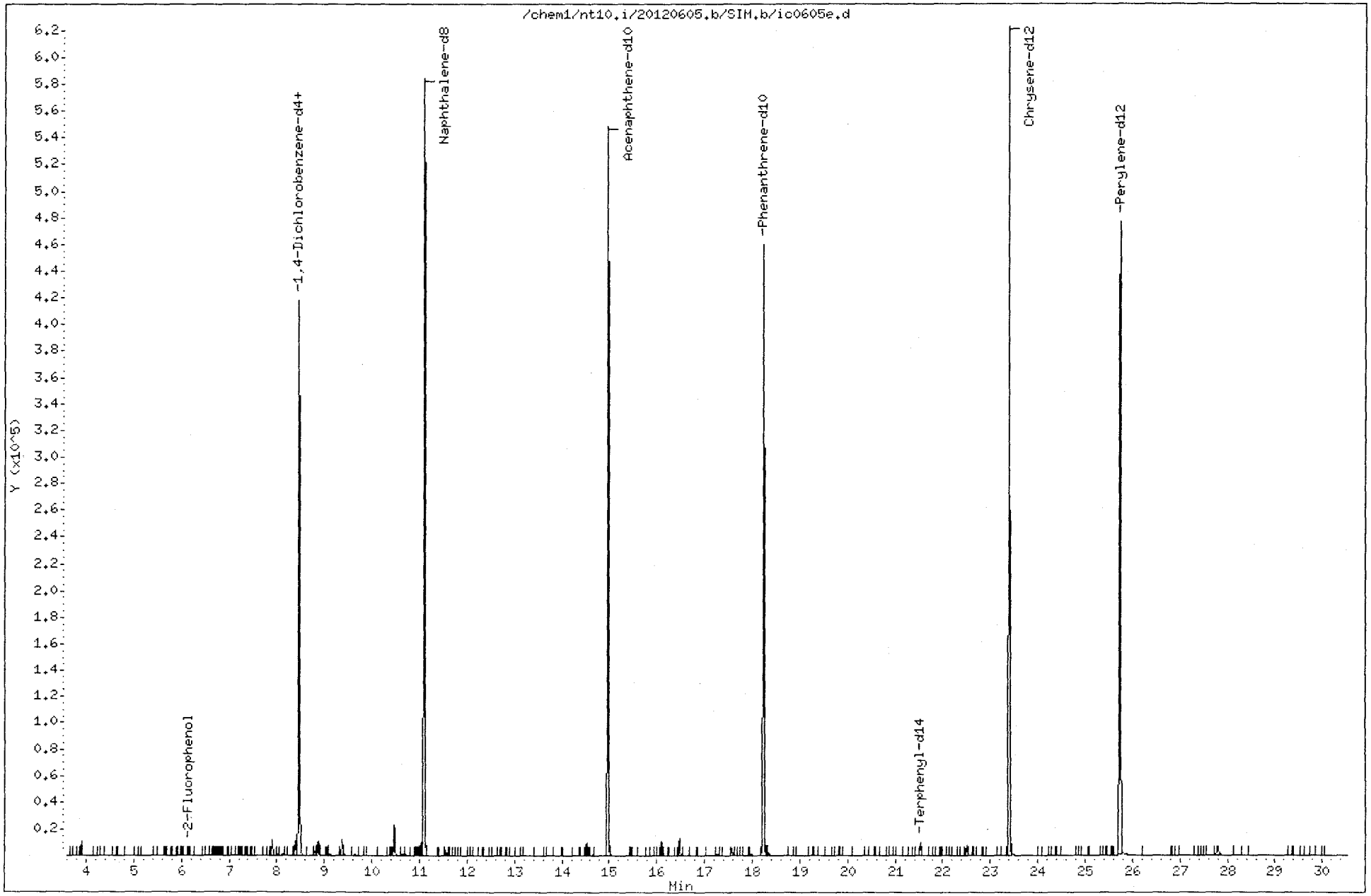
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120605.b/SIM.b/ic0605e.d
Date : 05-JUN-2012 16:07
Client ID:
Sample Info: IC0605E

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



UZ9 : 00382

CO-ELUTION SUMMARY FOR FILE - ic0605e.d

Lab ID: IC0605E, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUN-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/8/12

Data file : /chem1/nt10.i/20120605.b/SIM.b/ic0605f.d
Lab Smp Id: IC0605F
Inj Date : 05-JUN-2012 16:44
Operator : YZ Inst ID: nt10.i
Smp Info : IC0605F
Misc Info :
Comment :
Method : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Meth Date : 08-Jun-2012 10:38 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 16:44 Cal File: ic0605f.d
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.164	6.164	(0.729)	38569	0.50000	0.4901
	3 Phenol	94	7.895	7.903	(0.933)	58308	0.50000	0.4852
	7 1,3-Dichlorobenzene	146	8.383	8.383	(0.991)	46484	0.50000	0.4957
*	8 1,4-Dichlorobenzene-d4	152	8.460	8.460	(1.000)	232154	4.00000	
	9 1,4-Dichlorobenzene	146	8.491	8.491	(1.004)	45082	0.50000	0.4916
	11 Benzyl alcohol	79	8.786	8.786	(1.039)	26662	0.50000	0.4799
	12 1,2-Dichlorobenzene	146	8.864	8.864	(1.048)	44420	0.50000	0.4997
	13 2-Methylphenol	108	9.066	9.066	(1.072)	41212	0.50000	0.4971
	15 4-Methylphenol	108	9.361	9.361	(1.106)	42391	0.50000	0.4924
	16 N-Nitroso-di-n-propylamine	70	9.376	9.384	(1.108)	23791	0.50000	0.4925
	22 2,4-Dimethylphenol	107	10.462	10.470	(0.943)	77438	1.00000	1.006
	26 1,2,4-Trichlorobenzene	180	11.017	11.017	(0.993)	35500	0.50000	0.5016
*	27 Naphthalene-d8	136	11.094	11.102	(1.000)	874506	4.00000	
	30 Hexachlorobutadiene	225	11.558	11.558	(1.042)	19492	0.50000	0.4939
	39 Dimethylphthalate	163	14.514	14.514	(0.970)	63854	0.50000	0.4945
*	42 Acenaphthene-d10	162	14.971	14.971	(1.000)	431792	4.00000	
	50 Diethylphthalate	149	16.099	16.100	(1.075)	71074	0.50000	0.4914
	54 N-Nitrosodiphenylamine	169	16.470	16.478	(0.903)	50580	0.50000	0.5042
	57 Hexachlorobenzene	284	17.574	17.574	(0.964)	24156	0.50000	0.4899
	58 Pentachlorophenol	266	17.984	17.992	(0.986)	13573	1.00000	0.6925
*	59 Phenanthrene-d10	188	18.232	18.239	(1.000)	755253	4.00000	
$	66 Terphenyl-d14	244	21.528	21.528	(0.920)	55758	0.50000	0.4929
	67 Butylbenzylphthalate	149	22.503	22.503	(0.962)	51081	0.50000	0.4932
*	69 Chrysene-d12	240	23.393	23.394	(1.000)	739015	4.00000	
*	77 Perylene-d12	264	25.732	25.739	(1.000)	735927	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.800	27.808	(1.080)	85030	0.50000	0.4820
	90 N-Nitrosodimethylamine	74	3.902	3.894	(0.461)	46546	1.00000	0.9962

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0605f.d
Lab Smp Id: IC0605F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUN-2012
Calibration Time: 13:39

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	232154	-8.74
27 Naphthalene-d8	947590	473795	1895180	874506	-7.71
42 Acenaphthene-d10	481282	240641	962564	431792	-10.28
59 Phenanthrene-d10	834942	417471	1669884	755253	-9.54
69 Chrysene-d12	846355	423178	1692710	739015	-12.68
77 Perylene-d12	841446	420723	1682892	735927	-12.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.46	7.96	8.96	8.46	0.00
27 Naphthalene-d8	11.10	10.60	11.60	11.09	-0.07
42 Acenaphthene-d10	14.97	14.47	15.47	14.97	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.23	-0.04
69 Chrysene-d12	23.39	22.89	23.89	23.39	0.00
77 Perylene-d12	25.74	25.24	26.24	25.73	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

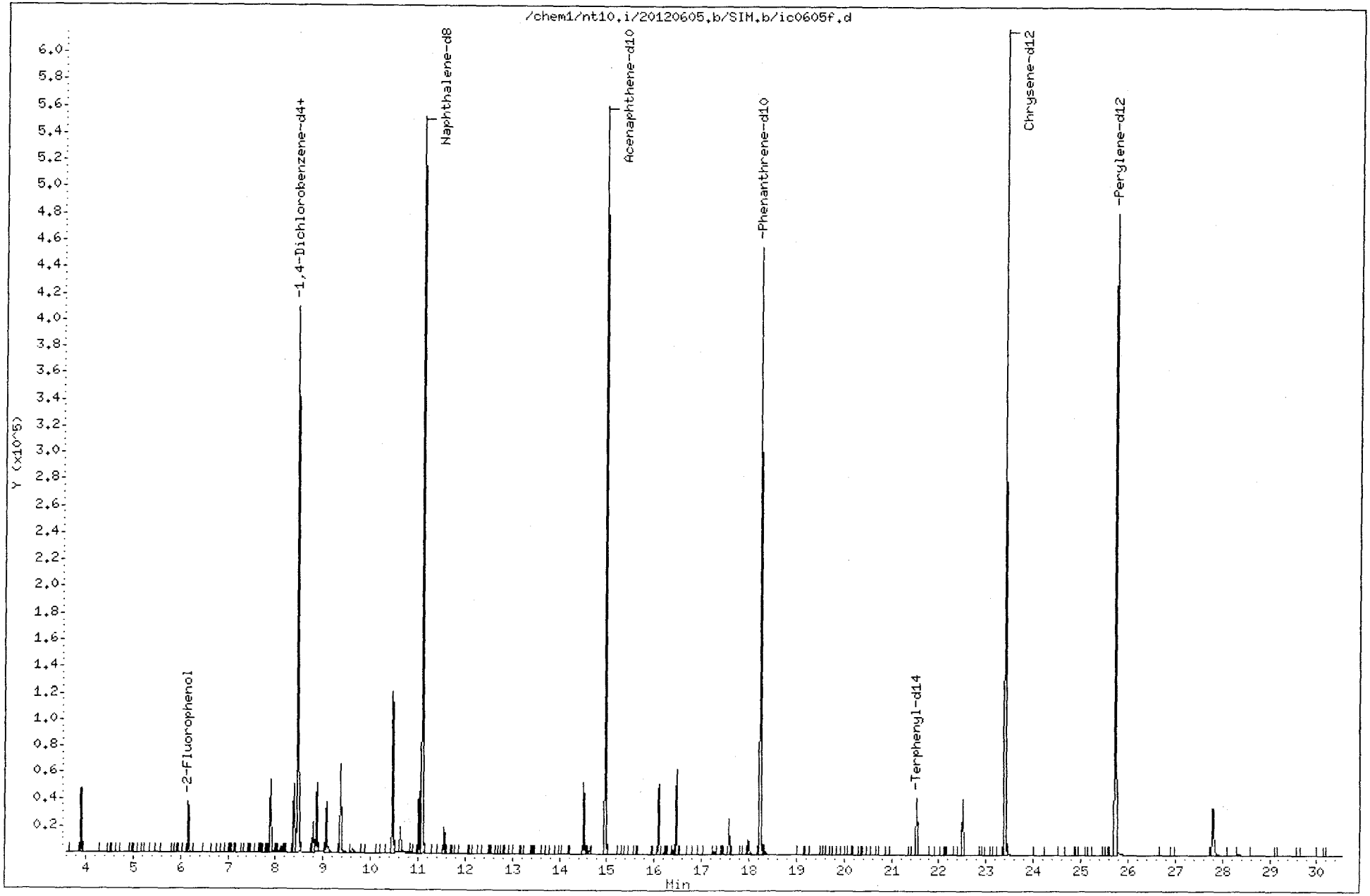
Data File: /chem1/nt10.i/20120605.b/SIM.b/ic0605f.d
Date : 05-JUN-2012 16:44
Client ID:
Sample Info: IC0605F

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



UZ99:00396

CO-ELUTION SUMMARY FOR FILE - ic0605f.d

Lab ID: IC0605F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUN-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120605.b/SIM.b/ic0605g.d
Lab Smp Id: IC0605G
Inj Date : 05-JUN-2012 17:21
Operator : YZ
Smp Info : IC0605G
Misc Info :
Comment :
Method : /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Meth Date : 08-Jun-2012 10:38 yev
Cal Date : 05-JUN-2012 17:21
Als bottle: 8
Dil Factor: 2.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD
Cal File: ic0605g.d
Calibration Sample, Level: 3

Compound Sublist: PSDDA.sub

YZ 6/8/12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.164	6.164	(0.729)	15281	0.20000	0.2049
	3 Phenol	94	7.895	7.903	(0.933)	23374	0.20000	0.2052
	7 1,3-Dichlorobenzene	146	8.390	8.383	(0.992)	19139	0.20000	0.2138
*	8 1,4-Dichlorobenzene-d4	152	8.460	8.460	(1.000)	219044	4.00000	
	9 1,4-Dichlorobenzene	146	8.491	8.491	(1.004)	18374	0.20000	0.2105
	11 Benzyl alcohol	79	8.786	8.786	(1.039)	9872	0.20000	0.1899
	12 1,2-Dichlorobenzene	146	8.864	8.864	(1.048)	17768	0.20000	0.2101
	13 2-Methylphenol	108	9.066	9.066	(1.072)	16118	0.20000	0.2052
	15 4-Methylphenol	108	9.361	9.361	(1.106)	16416	0.20000	0.2018
	16 N-Nitroso-di-n-propylamine	70	9.376	9.384	(1.108)	9721	0.20000	0.2113
	22 2,4-Dimethylphenol	107	10.462	10.470	(0.943)	30499	0.40000	0.4097
	26 1,2,4-Trichlorobenzene	180	11.017	11.017	(0.993)	14262	0.20000	0.2078
*	27 Naphthalene-d8	136	11.094	11.102	(1.000)	842573	4.00000	
	30 Hexachlorobutadiene	225	11.558	11.558	(1.042)	7729	0.20000	0.2028
	39 Dimethylphthalate	163	14.514	14.514	(0.970)	25325	0.20000	0.2024
*	42 Acenaphthene-d10	162	14.971	14.971	(1.000)	417643	4.00000	
	50 Diethylphthalate	149	16.092	16.100	(1.075)	27727	0.20000	0.1985
	54 N-Nitrosodiphenylamine	169	16.470	16.478	(0.903)	19758	0.20000	0.2064
	57 Hexachlorobenzene	284	17.574	17.574	(0.964)	9795	0.20000	0.2079
	58 Pentachlorophenol	266	17.992	17.992	(0.987)	4025	0.40000	0.2190
*	59 Phenanthrene-d10	188	18.232	18.239	(1.000)	716873	4.00000	
$	66 Terphenyl-d14	244	21.528	21.528	(0.920)	21978	0.20000	0.2020
	67 Butylbenzylphthalate	149	22.503	22.503	(0.962)	19751	0.20000	0.1988
*	69 Chrysene-d12	240	23.393	23.394	(1.000)	709704	4.00000	
*	77 Perylene-d12	264	25.732	25.739	(1.000)	698643	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.800	27.808	(1.080)	32914	0.20000	0.1970
	90 N-Nitrosodimethylamine	74	3.902	3.894	(0.461)	18574	0.40000	0.4182

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0605g.d
Lab Smp Id: IC0605G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120605.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUN-2012
Calibration Time: 13:39

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	219044	-13.89
27 Naphthalene-d8	947590	473795	1895180	842573	-11.08
42 Acenaphthene-d10	481282	240641	962564	417643	-13.22
59 Phenanthrene-d10	834942	417471	1669884	716873	-14.14
69 Chrysene-d12	846355	423178	1692710	709704	-16.15
77 Perylene-d12	841446	420723	1682892	698643	-16.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.46	7.96	8.96	8.46	0.00
27 Naphthalene-d8	11.10	10.60	11.60	11.09	-0.07
42 Acenaphthene-d10	14.97	14.47	15.47	14.97	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.23	-0.04
69 Chrysene-d12	23.39	22.89	23.89	23.39	0.00
77 Perylene-d12	25.74	25.24	26.24	25.73	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20120605.b/SIM.b/ic0605g.d

Date : 05-JUN-2012 17:21

Client ID:

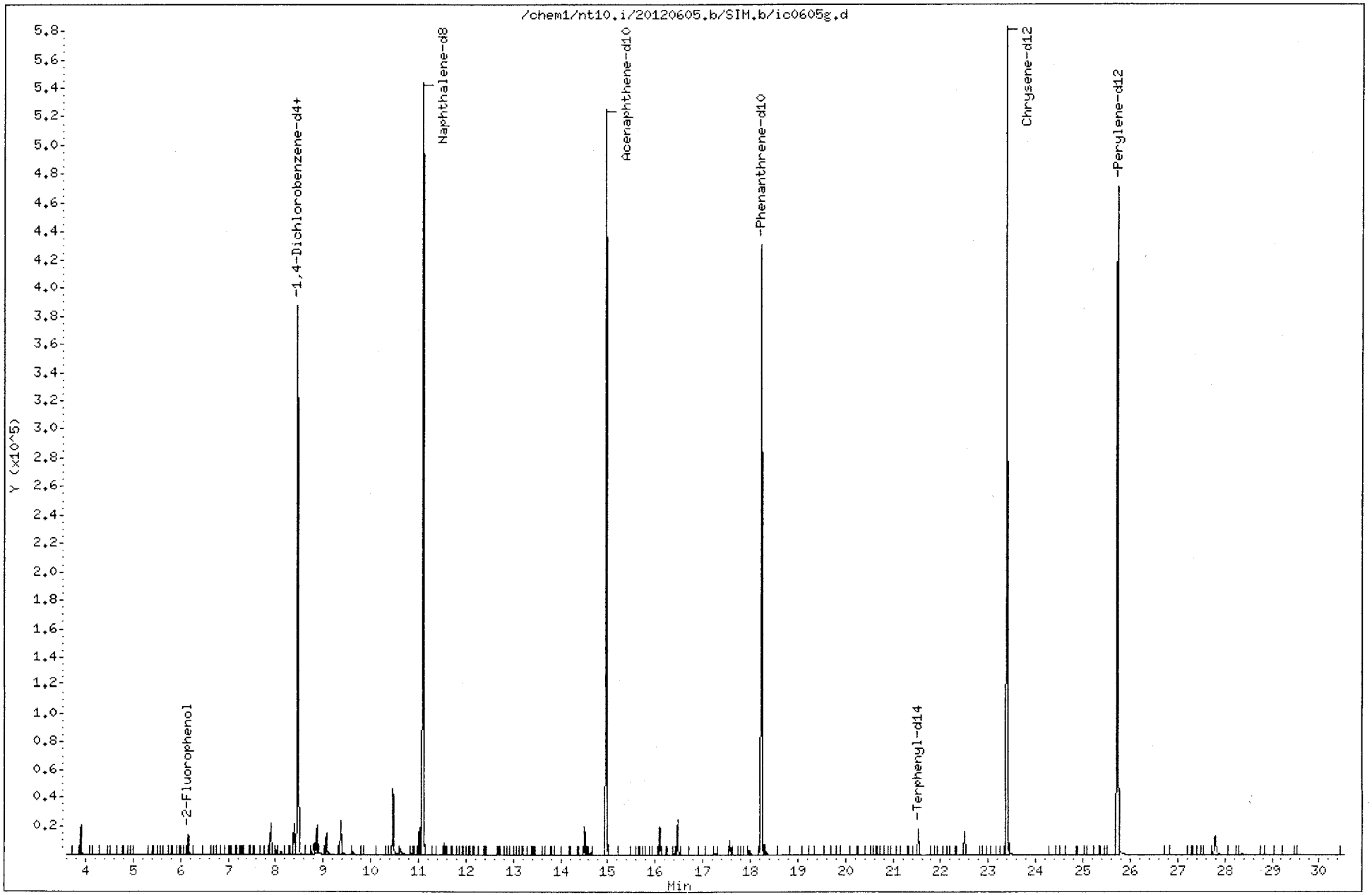
Sample Info: IC0605G

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



UZ99:00390

CO-ELUTION SUMMARY FOR FILE - ic0605g.d

Lab ID: IC0605G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUN-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Data File: /chem1/nt10.i/20120605.b/df0605.d

Date : 05-JUN-2012 13:25

Client ID: DFTPP

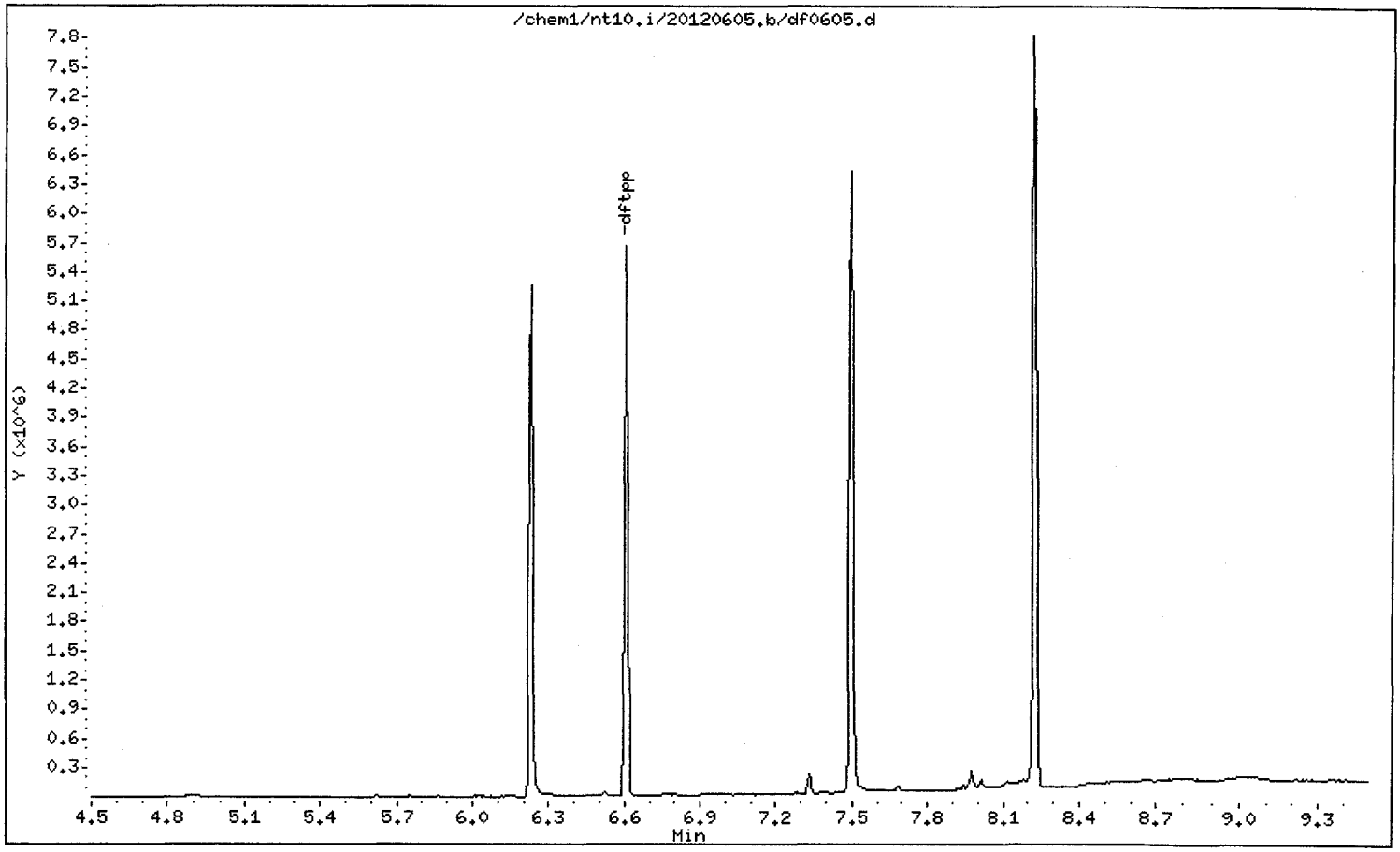
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120605.b/df0605.d

Date : 05-JUN-2012 13:25

Client ID: DFTPP

Instrument: nt10.i

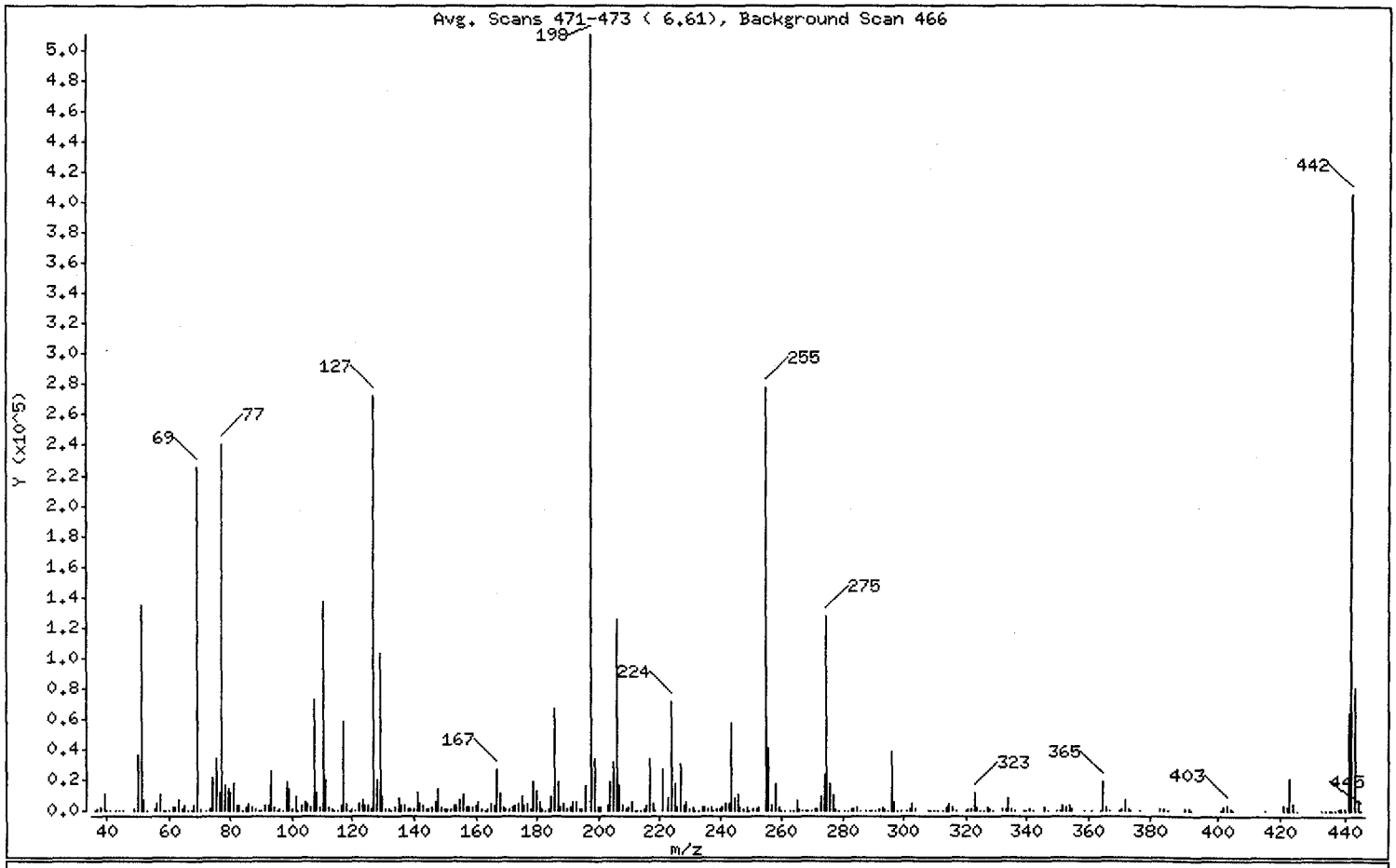
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	26.45
68	Less than 2.00% of mass 69	0.62 (1.41)
69	Mass 69 relative abundance	44.06
70	Less than 2.00% of mass 69	0.19 (0.43)
127	10.00 - 80.00% of mass 198	53.44
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.71
275	10.00 - 60.00% of mass 198	24.96
365	Greater than 1.00% of mass 198	3.63
441	0.01 - 24.00% of mass 442	12.72 (15.98)
442	50.00 - 200.00% of mass 198	79.59
443	15.00 - 24.00% of mass 442	15.96 (20.06)

Data File: /chem1/nt10.i/20120605.b/df0605.d

Date : 05-JUN-2012 13:25

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0605.d
Spectrum: Avg. Scans 471-473 (6.61), Background Scan 466
Location of Maximum: 198.00
Number of points: 332

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	64	126.00	1596	212.00	163	303.00	4468
37.00	704	127.00	272768	213.00	334	304.00	1186
38.00	1948	128.00	20400	214.00	132	308.00	582
39.00	10003	129.00	103240	215.00	1396	309.00	403
40.00	413	130.00	8839	216.00	3156	310.00	464
41.00	188	131.00	1743	217.00	34472	311.00	78
43.00	204	132.00	765	218.00	4238	313.00	465
44.00	146	133.00	353	219.00	511	314.00	1813
45.00	176	134.00	2876	221.00	27576	315.00	4415
49.00	968	135.00	7975	223.00	7984	316.00	2248
50.00	36504	136.00	3079	224.00	71920	317.00	465
51.00	135040	137.00	3692	225.00	17824	320.00	77
52.00	6589	138.00	856	226.00	1925	321.00	1226
53.00	435	139.00	662	227.00	30112	322.00	627
55.00	715	140.00	1134	228.00	4050	323.00	11321
56.00	4579	141.00	11875	229.00	6334	324.00	2073
57.00	10262	142.00	4108	230.00	978	325.00	177
58.00	167	143.00	3089	231.00	2789	326.00	328
59.00	287	144.00	768	232.00	467	327.00	2273
60.00	49	145.00	847	233.00	568	328.00	1275
61.00	2000	146.00	2052	234.00	1866	329.00	269
62.00	2498	147.00	6220	235.00	2178	332.00	982
63.00	7437	148.00	14420	236.00	1462	333.00	1289
64.00	1019	149.00	2553	237.00	2506	334.00	8180
65.00	3810	150.00	909	238.00	416	335.00	1657
66.00	270	151.00	1736	239.00	1318	336.00	195
67.00	129	152.00	1162	240.00	967	339.00	166
68.00	3168	153.00	3938	241.00	1846	340.00	186
69.00	224896	154.00	3051	242.00	4152	341.00	1274
70.00	969	155.00	7201	243.00	4518	342.00	341
72.00	123	156.00	10307	244.00	56984	346.00	2605
73.00	1538	157.00	2276	245.00	7664	347.00	500
74.00	21616	158.00	2240	246.00	10694	350.00	62
75.00	34040	159.00	1770	247.00	2192	351.00	260
76.00	11789	160.00	3768	248.00	684	352.00	3459

Data File: /chem1/nt10.i/20120605.b/df0605.d

Date : 05-JUN-2012 13:25

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0605.d
Spectrum: Avg. Scans 471-473 (6.61), Background Scan 466
Location of Maximum: 198.00
Number of points: 332

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	240256	161.00	5931	249.00	1951	353.00	2415
78.00	16115	162.00	1642	250.00	444	354.00	3677
79.00	14583	163.00	463	251.00	712	355.00	717
80.00	11792	164.00	790	252.00	680	359.00	183
81.00	17048	165.00	4262	253.00	1764	361.00	50
82.00	3917	166.00	3692	255.00	278208	364.00	167
83.00	3812	167.00	26432	256.00	41104	365.00	18512
84.00	191	168.00	11339	257.00	3316	366.00	2631
85.00	2476	169.00	1978	258.00	17216	367.00	137
86.00	4236	170.00	694	259.00	2766	370.00	393
87.00	2209	171.00	1132	260.00	488	371.00	958
88.00	816	172.00	2237	261.00	485	372.00	6515
89.00	270	173.00	3074	263.00	110	373.00	1471
90.00	137	174.00	5123	264.00	354	374.00	161
91.00	3244	175.00	9590	265.00	7078	377.00	184
92.00	3801	176.00	2991	266.00	946	383.00	1682
93.00	26080	177.00	4208	267.00	299	384.00	648
94.00	1776	178.00	1605	268.00	148	385.00	75
95.00	565	179.00	19032	269.00	118	390.00	953
96.00	1141	180.00	12503	270.00	439	391.00	639
97.00	414	181.00	6070	271.00	772	392.00	329
98.00	18968	182.00	1106	272.00	1017	401.00	407
99.00	14453	183.00	586	273.00	9485	402.00	2454
100.00	1471	184.00	1471	274.00	23224	403.00	3269
101.00	9258	185.00	9043	275.00	127432	404.00	1192
102.00	574	186.00	67432	276.00	17024	405.00	197
103.00	2944	187.00	18888	277.00	10519	415.00	126
104.00	5804	188.00	1963	278.00	1649	421.00	3239
105.00	5165	189.00	4251	279.00	504	422.00	2616
106.00	1985	190.00	703	281.00	50	423.00	21584
107.00	72560	191.00	1834	282.00	327	424.00	4359
108.00	11316	192.00	5974	283.00	1306	425.00	411
109.00	1954	193.00	6365	284.00	874	433.00	95
110.00	136768	194.00	1497	285.00	1899	434.00	110
111.00	20304	195.00	900	286.00	319	435.00	282

Data File: /chem1/nt10.i/20120605.b/df0605.d

Date : 05-JUN-2012 13:25

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

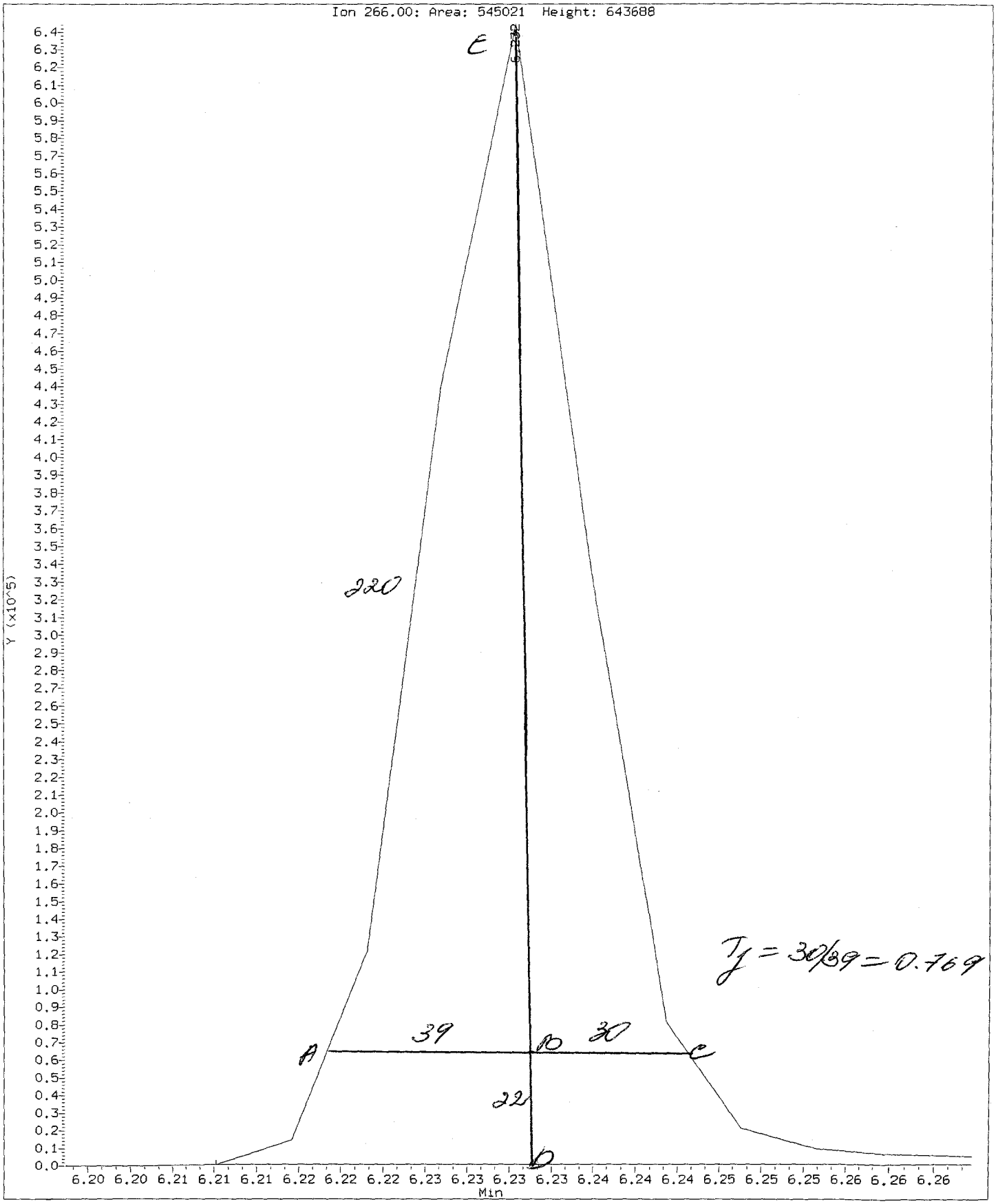
Column diameter: 0.25

Data File: df0605.d
Spectrum: Avg. Scans 471-473 (6.61), Background Scan 466
Location of Maximum: 198.00
Number of points: 332

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	2614	196.00	16191	288.00	72	436.00	463
113.00	823	198.00	510464	289.00	470	437.00	536
114.00	176	199.00	34240	290.00	311	438.00	1140
115.00	250	200.00	2432	291.00	372	439.00	827
116.00	3830	201.00	2433	292.00	599	440.00	1250
117.00	58904	203.00	3429	293.00	2374	441.00	64928
118.00	4161	204.00	18280	294.00	772	442.00	406272
119.00	552	205.00	31488	295.00	318	443.00	81480
120.00	1079	206.00	125688	296.00	38920	444.00	7192
121.00	182	207.00	16370	297.00	5407	445.00	491
122.00	4581	208.00	3750	298.00	298		
123.00	7206	209.00	1316	299.00	69		
124.00	3086	210.00	2241	301.00	530		
125.00	3254	211.00	5301	302.00	651		

Data File: /chem1/nt10.i/20120605.b/ddt.b/df0605.d
Injection Date: 05-JUN-2012 13:25
Instrument: nt10.i
Client Sample ID: DFTPP

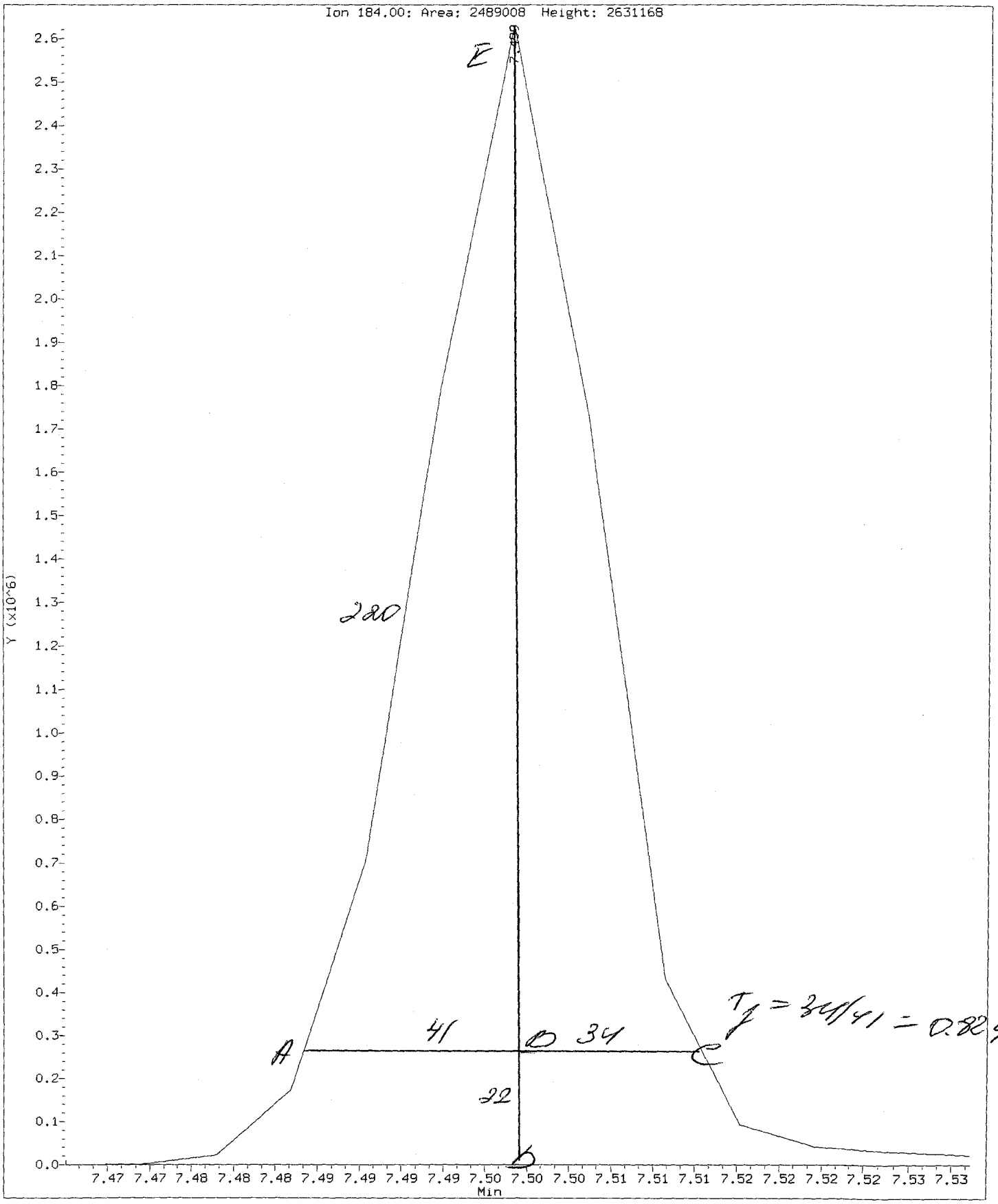
Compound: Pentachlorophenol
CAS Number: 87-86-5



UZ99 : 00397

Data File: /chem1/nt10.i/20120605.b/ddt.b/df0605.d
Injection Date: 05-JUN-2012 13:25
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120605.b/ddt.b/df0605.d ARI ID: DFTPP
Method: /chem1/nt10.i/20120605.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 05-JUN-2012 13:25 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.232	545021
Benzidine	7.499	2489008
4,4'-DDE	7.686	4869
4,4'-DDD	7.975	34720
4,4'-DDT	8.227	1406371

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(4869 + 34720) * 100}{(4869 + 34720 + 1406371)}$$

DDT Percent Breakdown = 2.7 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: UZ99 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): SIM SVOA

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 6/5/12 Analysis Start Date: 7/3/12

DFTPP Tune Meets Criteria? YES / NO

Internal Standard Meets Criteria? YES / NO

DDT Breakdown <20%? YES / NO / NA

Method Blank In Control? YES / NO

Peak Tailing Factor ≤2? YES / NO / NA

LCS / LCSD Recovery In Control? YES / NO

ICal acceptable? YES / NO
Q flag applied? YES / NO

CCal acceptable? YES / NO
Q flag applied? YES / NO

Surrogate Recovery in Control? YES / NO

Special Analysis Criteria Met? YES / NO / NA

Manual Integrations for ICal? YES / NO

Manual Integrations for Samples? Yes / NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: YZ **Date:** 7/10/12

Reviewer: MW **Date:** 7/10

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 7/03/12 Analysis: ABN / SIM ABN Analyst: YZ.

GC Program: _____ Column No: 227820 Column Type: Z65 ms1

Instrument Tune (.U or .CT.): 111216 U EM Voltage: 1871

Calibration File: DF0703A Curve Date: 6/5/12 Injection Vol.: 1uL

IS/SS	Ical/Ccal	LCS/ICV
1875-1	1949-2 1986-2	
	1950-1 1998-4	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20120703.b

	Time	Filename	LabID	ClientId	DF											
1	1434	df0703a.d	DF0703A	DFTPP	1	NO ISTDS FOUND										
2	1525	cc0703a.d	CC0703A		1	8.74	245151	11.39	943407	15.28	477328	18.57	836019	23.69	823505	26.10	800599
3	1601	uz99mb.d	UZ99MBS1	UZ99MBS1	1	8.74	235030	11.39	912491	15.29	458253	18.57	809525	23.69	767273	26.09	725293
4	1638	uz99sb.d	UZ99LCSS1	UZ99LCSS1	1	8.74	232964	11.39	904188	15.29	460671	18.57	798325	23.70	792251	26.10	772987
5	1714	uz99sbd.d	UZ99LCSDS1	UZ99LCSDS1	1	8.74	251580	11.39	966945	15.29	501092	18.57	859641	23.70	861376	26.11	847011
6	1826	uz99qls1.d	UZ99QLS1		1	8.74	260278	11.39	999138	15.29	501173	18.57	877069	23.69	838651	26.10	795061
7	1902	uz99a.d	UZ99A	CB-002-06222	1	8.74	239303	11.38	927390	15.28	466668	18.57	836744	23.71	892664	26.15	886694

YZ 7/10/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

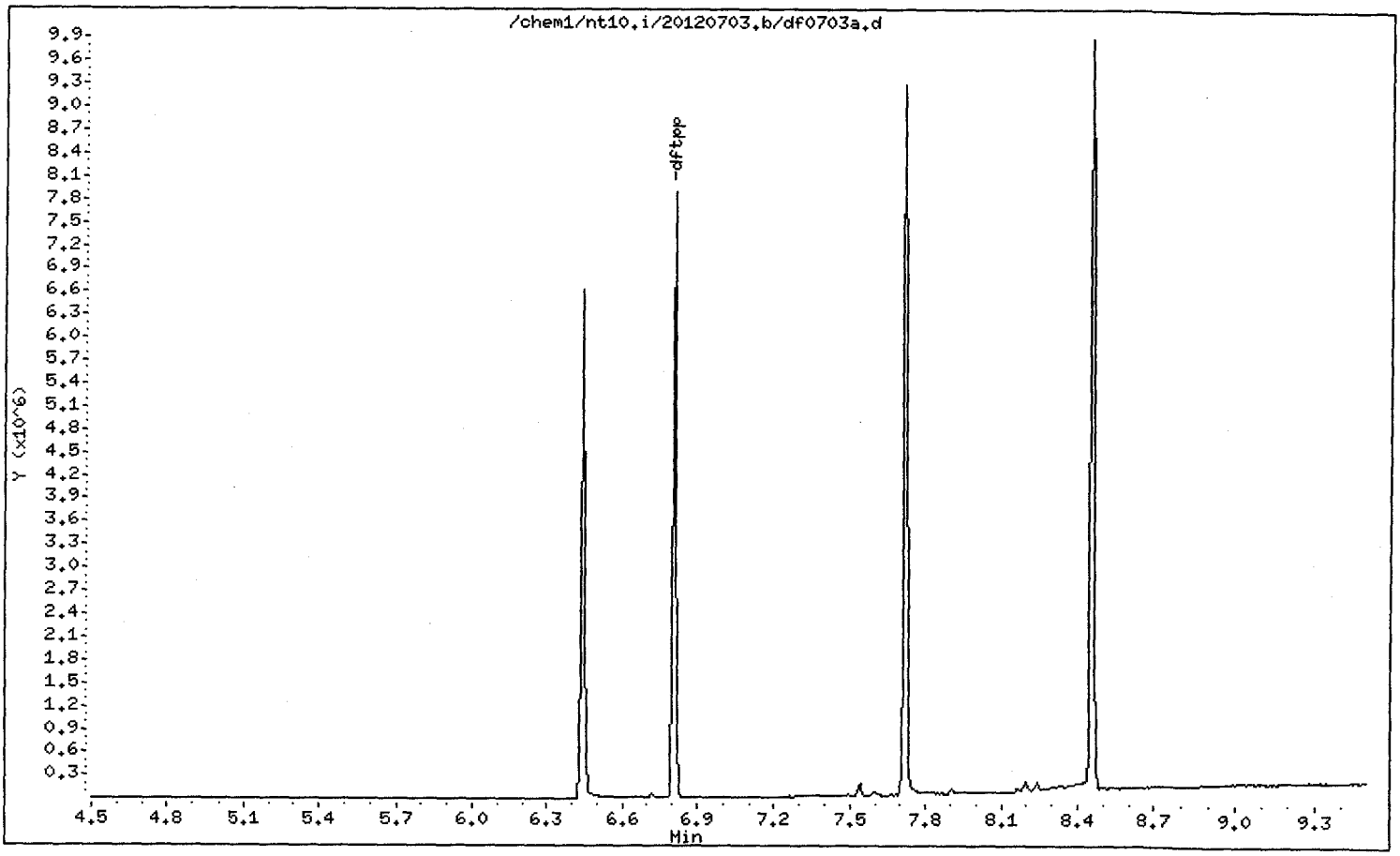
Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

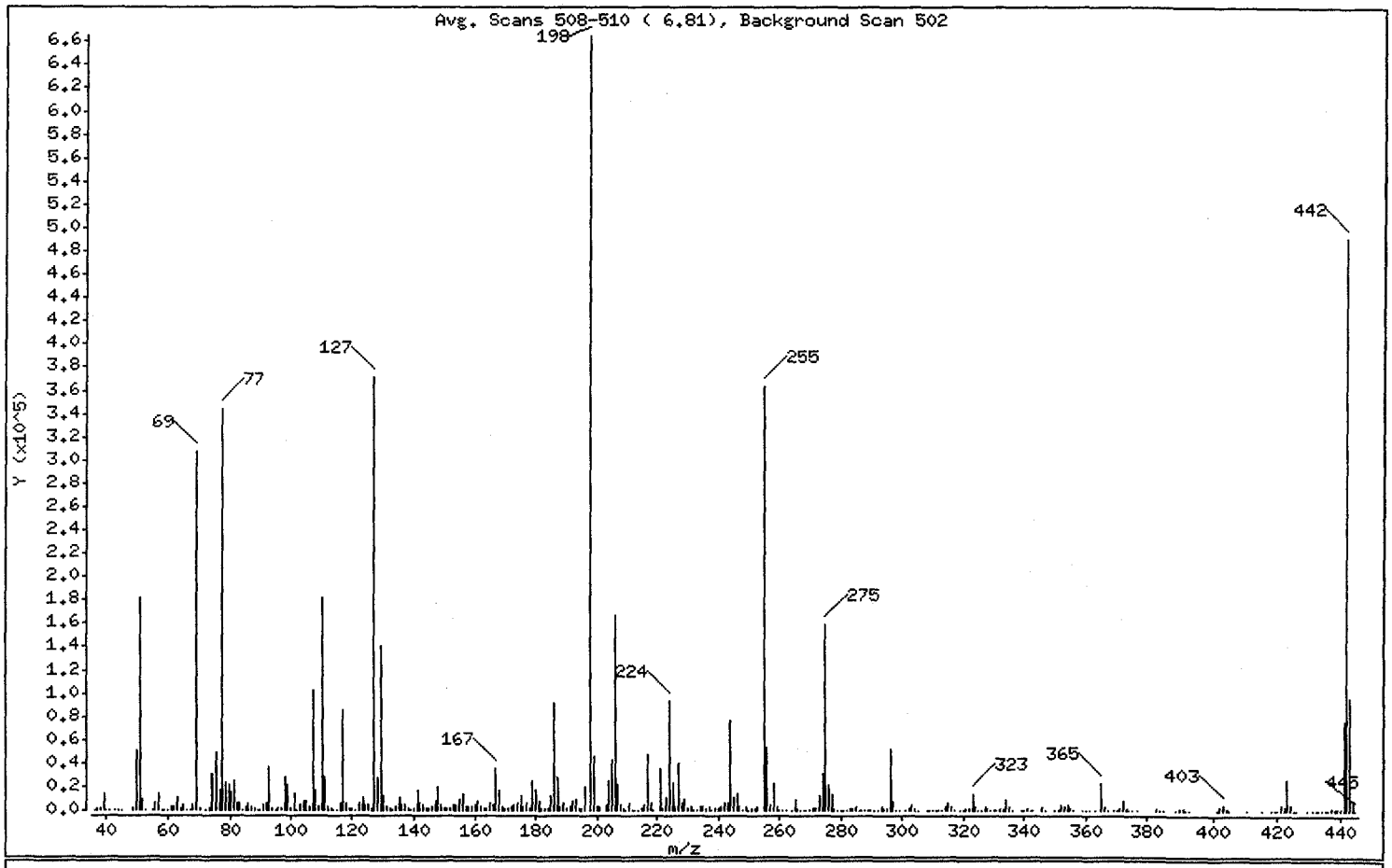
Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	27.29
68	Less than 2.00% of mass 69	0.67 (1.45)
69	Mass 69 relative abundance	46.18
70	Less than 2.00% of mass 69	0.23 (0.51)
127	10.00 - 80.00% of mass 198	55.79
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	24.02
365	Greater than 1.00% of mass 198	3.51
441	0.01 - 24.00% of mass 442	11.57 (15.63)
442	50.00 - 200.00% of mass 198	74.01
443	15.00 - 24.00% of mass 442	14.37 (19.42)

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0703a.d
Spectrum: Avg. Scans 508-510 (6.81), Background Scan 502
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	108	131.00	2402	223.00	10565	317.00	670
37.00	793	132.00	1259	224.00	93864	319.00	128
38.00	2293	133.00	467	225.00	23448	320.00	243
39.00	13725	134.00	3611	226.00	2469	321.00	1799
40.00	532	135.00	10584	227.00	39840	322.00	884
41.00	448	136.00	3990	228.00	5514	323.00	14266
43.00	92	137.00	5272	229.00	8522	324.00	2446
44.00	271	138.00	1230	230.00	1089	325.00	367
45.00	452	139.00	534	231.00	3340	326.00	270
49.00	1242	140.00	1686	232.00	575	327.00	2949
50.00	50736	141.00	16488	233.00	571	328.00	1510
51.00	181504	142.00	5608	234.00	2739	329.00	442
52.00	9490	143.00	3923	235.00	2865	330.00	61
53.00	447	144.00	1095	236.00	2194	331.00	163
55.00	726	145.00	891	237.00	3146	332.00	1260
56.00	5504	146.00	3177	238.00	478	333.00	1490
57.00	14142	147.00	8120	239.00	1726	334.00	9733
58.00	710	148.00	20224	240.00	1239	335.00	2591
59.00	83	149.00	4091	241.00	2347	336.00	197
60.00	7	150.00	1156	242.00	5929	339.00	286
61.00	2445	151.00	2263	243.00	6156	340.00	284
62.00	3325	152.00	1128	244.00	76472	341.00	1792
63.00	10165	153.00	5279	245.00	9949	342.00	517
64.00	1346	154.00	4100	246.00	14259	343.00	75
65.00	5238	155.00	9464	247.00	3200	346.00	3196
66.00	351	156.00	14189	248.00	700	347.00	735
67.00	342	157.00	2934	249.00	2816	350.00	76
68.00	4451	158.00	3253	250.00	411	351.00	360
69.00	307136	159.00	2306	251.00	789	352.00	4604
70.00	1557	160.00	5296	252.00	857	353.00	3314
72.00	137	161.00	7533	253.00	2473	354.00	4198
73.00	2261	162.00	2334	255.00	363392	355.00	985
74.00	30264	163.00	836	256.00	53184	356.00	60
75.00	48336	164.00	993	257.00	4462	359.00	368
76.00	16424	165.00	5881	258.00	22928	360.00	72

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0703a.d

Spectrum: Avg. Scans 508-510 (6.81), Background Scan 502

Location of Maximum: 198.00

Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	344256	166.00	4884	259.00	3555	361.00	53
78.00	23248	167.00	35544	260.00	695	363.00	70
79.00	21512	168.00	16496	261.00	588	365.00	23328
80.00	15552	169.00	2597	262.00	116	366.00	3500
81.00	23712	170.00	1013	264.00	749	367.00	294
82.00	5567	171.00	1466	265.00	9474	369.00	52
83.00	5405	172.00	3004	266.00	1042	370.00	552
84.00	470	173.00	3927	267.00	135	371.00	1286
85.00	3570	174.00	6801	268.00	114	372.00	7932
86.00	6020	175.00	12697	269.00	294	373.00	1913
87.00	2880	176.00	3802	270.00	403	374.00	177
88.00	1110	177.00	5637	271.00	1006	375.00	60
89.00	623	178.00	2052	272.00	1375	377.00	283
90.00	142	179.00	25200	273.00	12462	383.00	2066
91.00	5162	180.00	17056	274.00	29896	384.00	679
92.00	5451	181.00	7762	275.00	159744	385.00	153
93.00	37424	182.00	1473	276.00	21456	389.00	137
94.00	2194	183.00	888	277.00	13652	390.00	1022
95.00	522	184.00	2114	278.00	2249	391.00	830
96.00	1740	185.00	12741	279.00	465	392.00	422
97.00	996	186.00	91136	280.00	76	393.00	53
98.00	27120	187.00	27024	281.00	67	401.00	496
99.00	20960	188.00	2683	282.00	255	402.00	2910
100.00	1947	189.00	5641	283.00	1720	403.00	3930
101.00	13120	190.00	1102	284.00	1148	404.00	1403
102.00	677	191.00	2650	285.00	2575	405.00	160
103.00	3945	192.00	8049	286.00	578	410.00	127
104.00	7472	193.00	8553	287.00	128	415.00	195
105.00	7612	194.00	1826	288.00	306	418.00	51
106.00	2483	195.00	1661	289.00	614	419.00	74
107.00	102024	196.00	20512	290.00	464	420.00	165
108.00	16424	198.00	665024	291.00	518	421.00	4049
109.00	2762	199.00	45488	292.00	680	422.00	3641
110.00	182080	200.00	3539	293.00	3045	423.00	25584
111.00	27736	201.00	3478	294.00	810	424.00	5066

Data File: /chem1/nt10.i/20120703.b/df0703a.d

Date : 03-JUL-2012 14:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DF0703A

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0703a.d
Spectrum: Avg. Scans 508-510 (6.81), Background Scan 502
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	3371	203.00	4921	295.00	1037	425.00	504
113.00	1249	204.00	24816	296.00	51448	426.00	56
114.00	363	205.00	42128	297.00	7008	429.00	59
115.00	372	206.00	166144	298.00	504	431.00	159
116.00	5385	207.00	21464	299.00	165	432.00	191
117.00	85328	208.00	5223	301.00	749	433.00	286
118.00	5996	209.00	1716	302.00	966	434.00	290
119.00	824	210.00	677	303.00	5228	435.00	225
120.00	1372	211.00	6771	304.00	1381	436.00	406
121.00	220	212.00	231	305.00	57	437.00	900
122.00	6217	213.00	548	308.00	764	438.00	1079
123.00	10019	214.00	216	309.00	442	439.00	922
124.00	4513	215.00	1857	310.00	541	440.00	963
125.00	4645	216.00	4020	311.00	160	441.00	76936
126.00	1541	217.00	47008	312.00	186	442.00	492160
127.00	371008	218.00	5930	313.00	422	443.00	95584
128.00	27096	219.00	702	314.00	2334	444.00	8946
129.00	140288	221.00	34696	315.00	5703	445.00	565
130.00	12102	222.00	2006	316.00	3270		

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20120703.b/ddt.b/df0703a.d
Method: /chem1/nt10.i/20120703.b/ddt.b/sw846ddt.m
Analysis Date: 03-JUL-2012 14:34

ARI ID: DF0703A
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.446	690297
Benzidine	7.719	3273593
4,4'-DDE	7.906	5128
4,4'-DDD	8.200	24897
4,4'-DDT	8.457	1680637

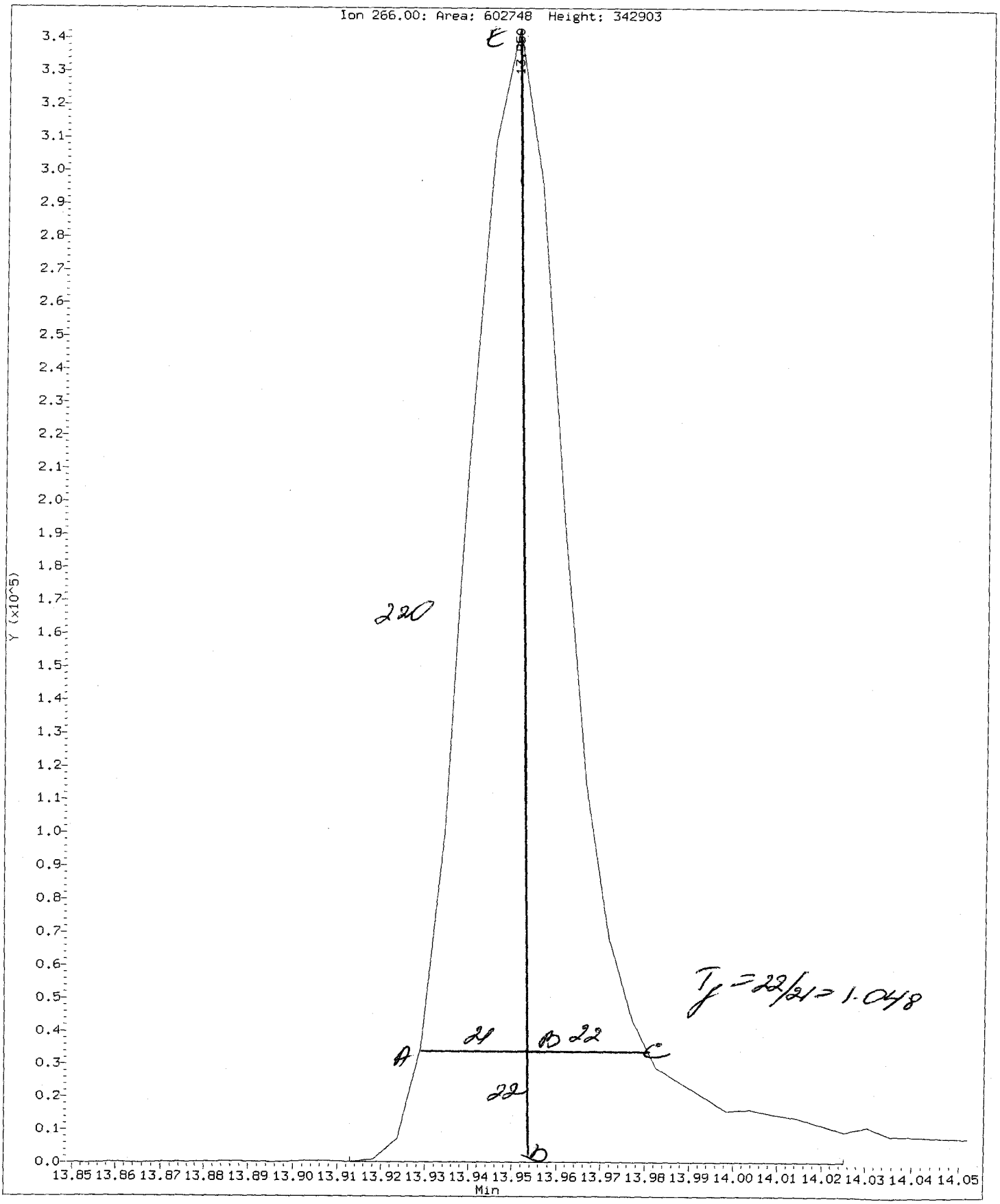
$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(5128 + 24897) * 100}{(5128 + 24897 + 1680637)}$$

DDT Percent Breakdown = 1.8 %

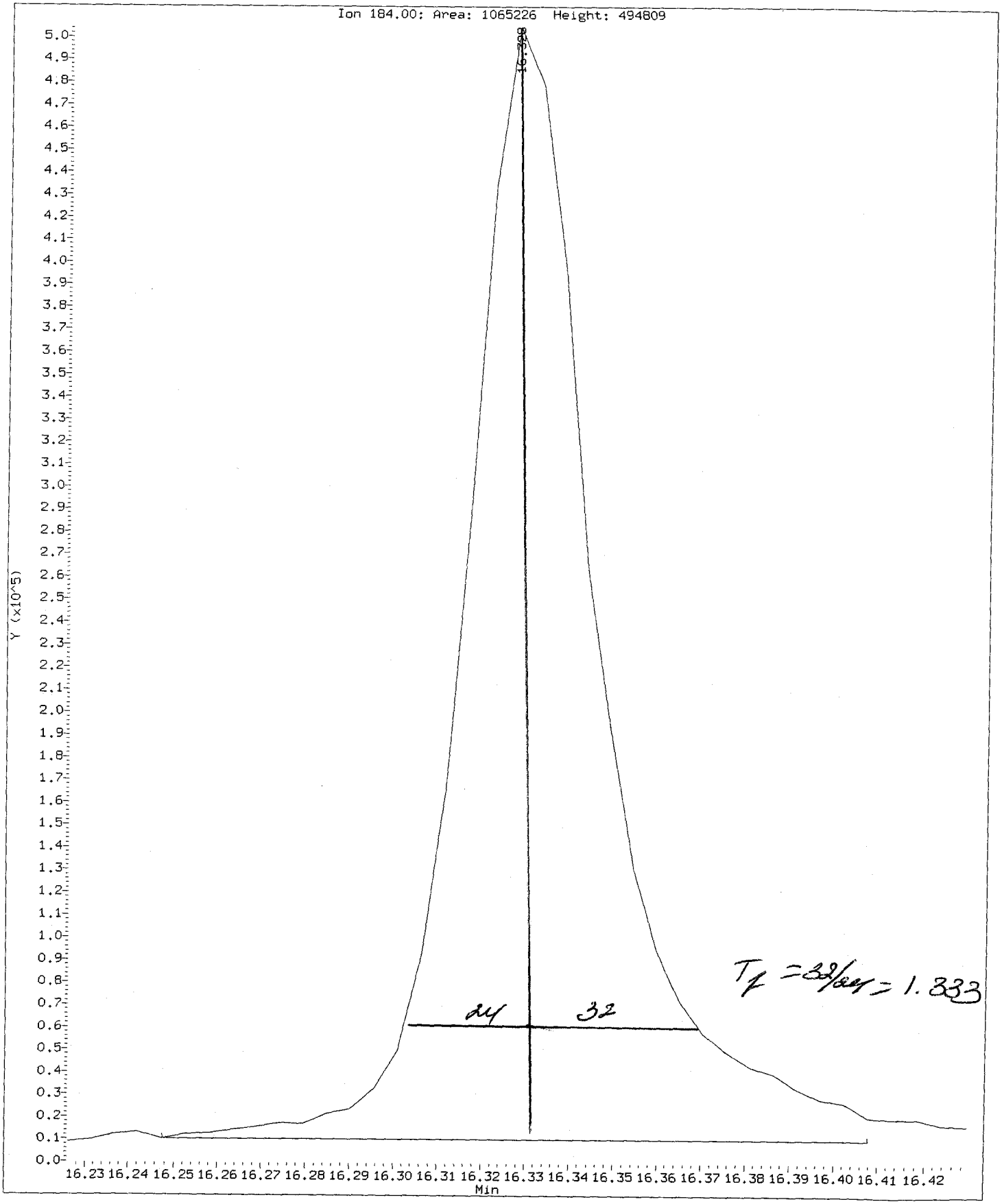
Data File: /chem2/nt6.i/20120710.b/ddt.b/07101201.D
Injection Date: 10-JUL-2012 10:20
Instrument: nt6.i
Client Sample ID: DDT0710

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20120710.b/ddt.b/07101201.D
Injection Date: 10-JUL-2012 10:20
Instrument: nt6.i
Client Sample ID: DDT0710

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0703a.d
Analysis Type:
Lab Sample ID: CC0703A
Method: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m

Injection Date: 03-JUL-2012 15:25
Init. Cal. Date(s): 05-JUN-2012 05-JUN-2012
Init. Cal. Times: 13:39 17:21
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF1	CCAL RRF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.36162	1.14271	1.14271	0.010	-16.07760	20.00000	Averaged
3 Phenol	2.07980	1.71109	1.71109	0.010	-17.72813	20.00000	Averaged
7 1,3-Dichlorobenzene	1.63463	1.44380	1.44380	0.010	-11.67455	20.00000	Averaged
9 1,4-Dichlorobenzene	1.59391	1.38285	1.38285	0.010	-13.24117	20.00000	Averaged
11 Benzyl alcohol	0.94934	0.79417	0.79417	0.010	-16.34473	20.00000	Averaged
12 1,2-Dichlorobenzene	1.54447	1.35947	1.35947	0.010	-11.97802	20.00000	Averaged
13 2-Methylphenol	1.43463	1.21692	1.21692	0.010	-15.17590	20.00000	Averaged
15 4-Methylphenol	1.48553	1.27032	1.27032	0.010	-14.48704	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.84022	0.72574	0.72574	0.050	-13.62509	20.00000	Averaged
22 2,4-Dimethylphenol	0.35336	0.30871	0.30871	0.010	-12.63664	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.32583	0.28618	0.28618	0.010	-12.16949	20.00000	Averaged
30 Hexachlorobutadiene	0.18094	0.15668	0.15668	0.010	-13.40753	20.00000	Averaged
39 Dimethylphthalate	1.19854	1.06739	1.06739	0.010	-10.94201	20.00000	Averaged
50 Diethylphthalate	1.33804	1.19502	1.19502	0.010	-10.68860	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.53413	0.46505	0.46505	0.010	-12.93302	20.00000	Averaged
57 Hexachlorobenzene	0.26288	0.22255	0.22255	0.010	-15.34321	20.00000	Averaged
58 Pentachlorophenol	2.07535	2.00000	0.11058	0.005	3.76768	20.00000	Quadratic
$ 66 Terphenyl-d14	0.61333	0.51186	0.51186	0.010	-16.54433	20.00000	Averaged
67 Butylbenzylphthalate	0.55998	0.51282	0.51282	0.010	-8.42153	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.95642	0.84959	0.84959	0.010	-11.16999	20.00000	Averaged
90 N-Nitrosodimethylamine	0.81114	0.68656	0.68656	0.010	-15.35830	20.00000	Averaged

Analytical Resources, Inc.

YZ 7/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120703.b/SIM.b/cc0703a.d
Lab Smp Id: CC0703A
Inj Date : 03-JUL-2012 15:25
Operator : YZ Inst ID: nt10.i
Smp Info : CC0703A
Misc Info :
Comment :
Method : /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2012 13:51 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 17:21 Cal File: ic0605g.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.403	6.403	(0.733)	70034	1.00000	0.8392
	3 Phenol	94	8.142	8.142	(0.932)	104869	1.00000	0.8227
	7 1,3-Dichlorobenzene	146	8.660	8.660	(0.991)	88487	1.00000	0.8833(H)
*	8 1,4-Dichlorobenzene-d4	152	8.737	8.737	(1.000)	245151	4.00000	
	9 1,4-Dichlorobenzene	146	8.768	8.768	(1.004)	84752	1.00000	0.8676(H)
	11 Benzyl alcohol	79	9.048	9.048	(1.036)	48673	1.00000	0.8366(H)
	12 1,2-Dichlorobenzene	146	9.141	9.141	(1.046)	83319	1.00000	0.8802
	13 2-Methylphenol	108	9.319	9.319	(1.067)	74582	1.00000	0.8482(H)
	15 4-Methylphenol	108	9.614	9.614	(1.100)	77855	1.00000	0.8551
	16 N-Nitroso-di-n-propylamine	70	9.653	9.653	(1.105)	44479	1.00000	0.8637(H)
	22 2,4-Dimethylphenol	107	10.728	10.728	(0.942)	145619	2.00000	1.747
	26 1,2,4-Trichlorobenzene	180	11.306	11.306	(0.993)	67495	1.00000	0.8783
*	27 Naphthalene-d8	136	11.391	11.391	(1.000)	943407	4.00000	
	30 Hexachlorobutadiene	225	11.847	11.847	(1.040)	36953	1.00000	0.8659
	39 Dimethylphthalate	163	14.811	14.811	(0.969)	127374	1.00000	0.8906
*	42 Acenaphthene-d10	162	15.283	15.283	(1.000)	477328	4.00000	
	50 Diethylphthalate	149	16.404	16.404	(1.073)	142604	1.00000	0.8931
	54 N-Nitrosodiphenylamine	169	16.790	16.790	(0.904)	97198	1.00000	0.8707
	57 Hexachlorobenzene	284	17.901	17.901	(0.964)	46513	1.00000	0.8466
	58 Pentachlorophenol	266	18.312	18.312	(0.986)	46223	2.00000	2.075
*	59 Phenanthrene-d10	188	18.567	18.567	(1.000)	836019	4.00000	
$	66 Terphenyl-d14	244	21.824	21.824	(0.921)	105379	1.00000	0.8346
	67 Butylbenzylphthalate	149	22.792	22.792	(0.962)	105578	1.00000	0.9158
*	69 Chrysene-d12	240	23.690	23.690	(1.000)	823505	4.00000	
*	77 Perylene-d12	264	26.098	26.098	(1.000)	800599	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.346	28.346	(1.086)	170045	1.00000	0.8883

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
90 N-Nitrosodimethylamine	74	4.109	4.109	(0.470)	84156	2.00000	1.693

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0703a.d
Lab Smp Id: CC0703A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 03-JUL-2012
Calibration Time: 15:25

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	245151	-3.63
27 Naphthalene-d8	947590	473795	1895180	943407	-0.44
42 Acenaphthene-d10	481282	240641	962564	477328	-0.82
59 Phenanthrene-d10	834942	417471	1669884	836019	0.13
69 Chrysene-d12	846355	423178	1692710	823505	-2.70
77 Perylene-d12	841446	420723	1682892	800599	-4.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.74	8.24	9.24	8.74	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.28	14.78	15.78	15.28	0.00
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.69	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

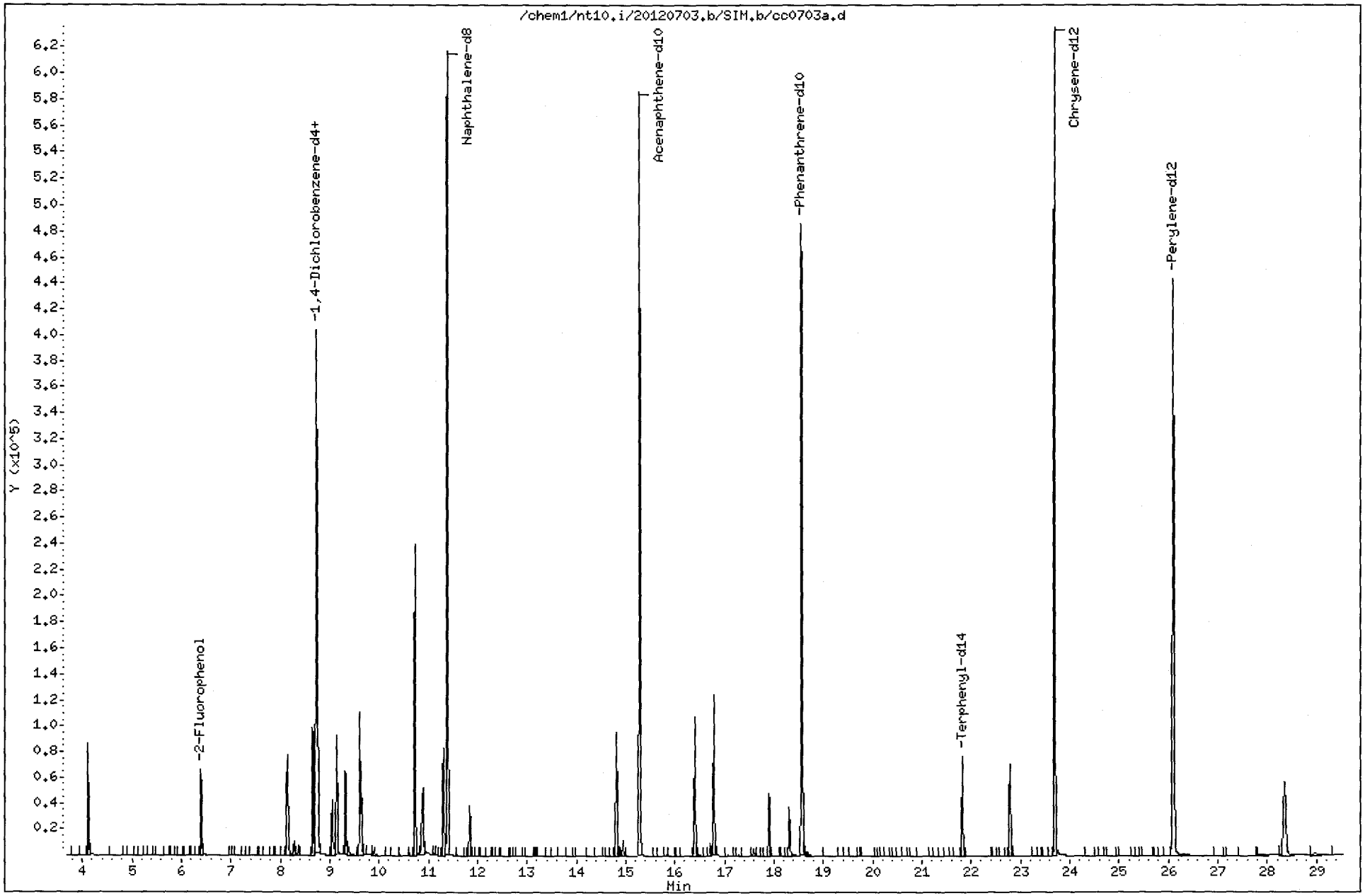
Data File: /chem1/nt10.i/20120703.b/SIM.b/cc0703a.d
Date : 03-JUL-2012 15:25
Client ID:
Sample Info: CC0703A

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



UZ99:00415

CO-ELUTION SUMMARY FOR FILE - cc0703a.d

Lab ID: CC0703A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

12 7/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120703.b/SIM.b/uz99mb.d
Lab Smp Id: UZ99MBS1 Client Smp ID: UZ99MBS1
Inj Date : 03-JUL-2012 16:01
Operator : YZ Inst ID: nt10.i
Smp Info : UZ99MBS1
Misc Info : 12-11979
Comment :
Method : /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2012 13:56 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 17:21 Cal File: ic0605g.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.426	6.403	(0.735)	413380	5.16688	516.7
3 Phenol	94	8.149	8.142	(0.933)	3225	0.02639 NQ	2.639(R)
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	8.737	8.737	(1.000)	235030	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	Compound Not Detected.					
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
15 4-Methylphenol	108	Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.391	11.391	(1.000)	912491	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.291	15.283	(1.000)	458253	4.00000	
	50 Diethylphthalate	149	16.404	16.404	(1.073)	25487	0.16627	16.63(R)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.575	18.567	(1.000)	809525	4.00000	
$	66 Terphenyl-d14	244	21.825	21.824	(0.921)	498087	4.23373	423.4
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	23.691	23.690	(1.000)	767273	4.00000	
*	77 Perylene-d12	264	26.091	26.098	(1.000)	725293	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99mb.d
Lab Smp Id: UZ99MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 15:25
Client Smp ID: UZ99MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	235030	-7.60
27 Naphthalene-d8	947590	473795	1895180	912491	-3.70
42 Acenaphthene-d10	481282	240641	962564	458253	-4.78
59 Phenanthrene-d10	834942	417471	1669884	809525	-3.04
69 Chrysene-d12	846355	423178	1692710	767273	-9.34
77 Perylene-d12	841446	420723	1682892	725293	-13.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.74	8.24	9.24	8.74	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.28	14.78	15.78	15.29	0.05
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.04
69 Chrysene-d12	23.69	23.19	24.19	23.69	0.00
77 Perylene-d12	26.10	25.60	26.60	26.09	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UZ99MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

Client SDG: UZ99
Fraction: SV
Client Smp ID: UZ99MBS1
Operator: YZ
SampleType: BLANK
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	2.639	0.53*	30-160
7 1,3-Dichlorobenze	500.0	0.000	*	30-160
9 1,4-Dichlorobenze	500.0	0.000	*	30-160
11 Benzyl alcohol	500.0	0.000	*	30-160
12 1,2-Dichlorobenze	500.0	0.000	*	30-160
13 2-Methylphenol	500.0	0.000	*	30-160
15 4-Methylphenol	1000	0.000	*	30-160
16 N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22 2,4-Dimethylphenol	1000	0.000	*	30-160
26 1,2,4-Trichlorobe	500.0	0.000	*	30-160
30 Hexachlorobutadie	500.0	0.000	*	30-160
39 Dimethylphthalate	500.0	0.000	*	30-160
50 Diethylphthalate	500.0	16.63	3.33*	30-160
54 N-Nitrosodiphenyl	500.0	0.000	*	30-160
57 Hexachlorobenzene	500.0	0.000	*	30-160
58 Pentachlorophenol	1000	0.000	*	30-160
67 Butylbenzylphthal	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90 N-Nitrosodimethyl	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	516.7	68.89	30-160
$ 66 Terphenyl-d14	500.0	423.4	84.67	30-160

Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99mb.d

Date : 03-JUL-2012 16:01

Client ID: UZ99MBS1

Sample Info: UZ99MBS1

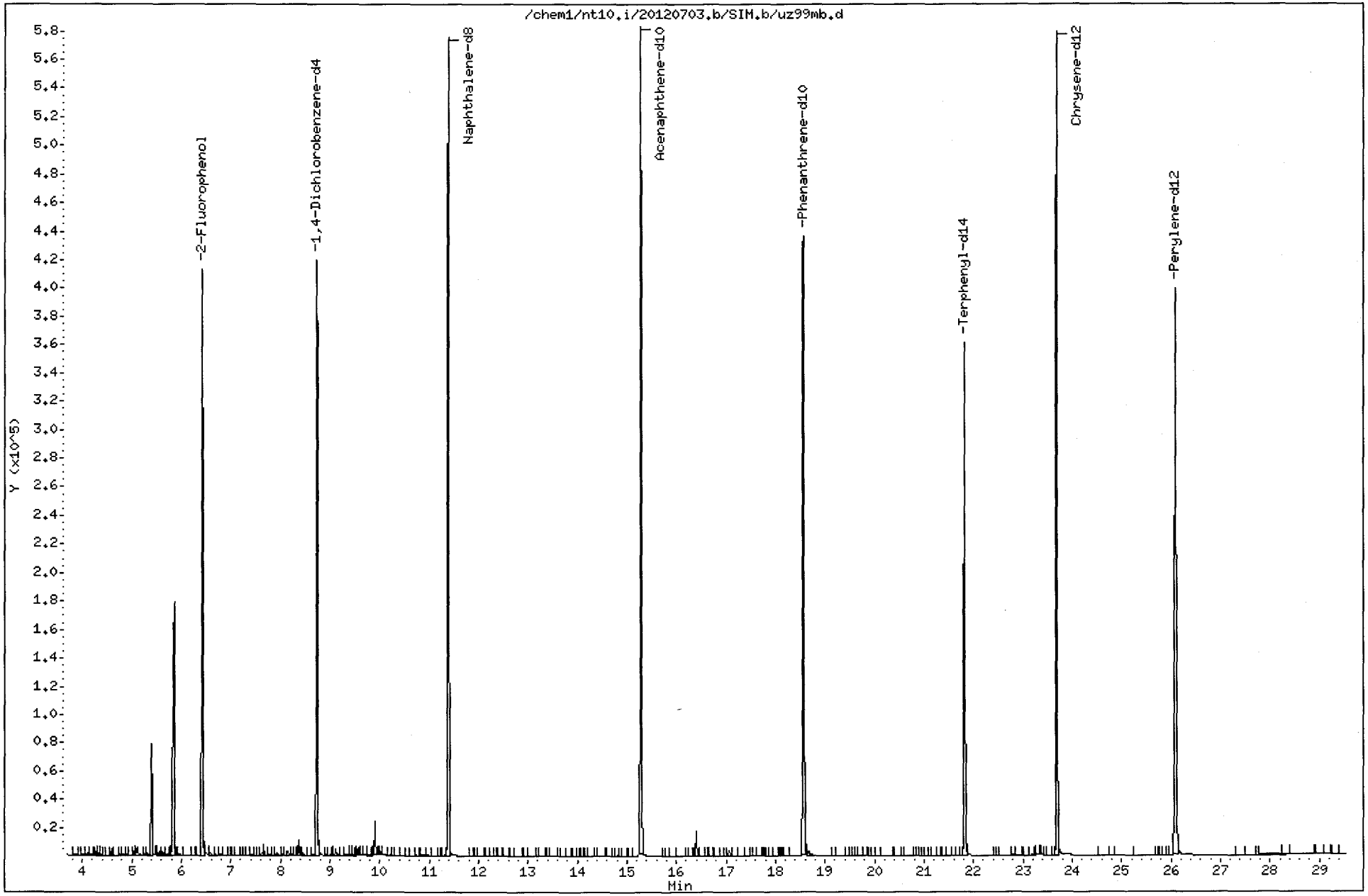
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ

Column diameter: 0.25



UZ99:00421

Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99mb.d

Date : 03-JUL-2012 16:01

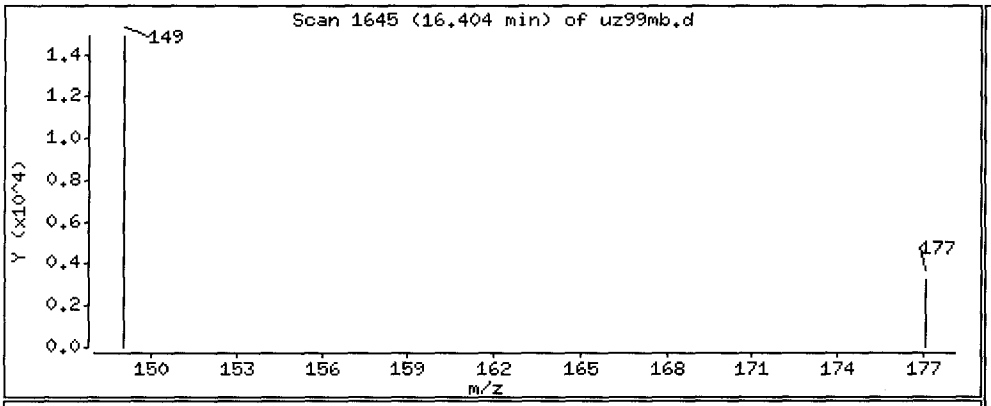
Client ID: UZ99MBS1 Instrument: nt10.i

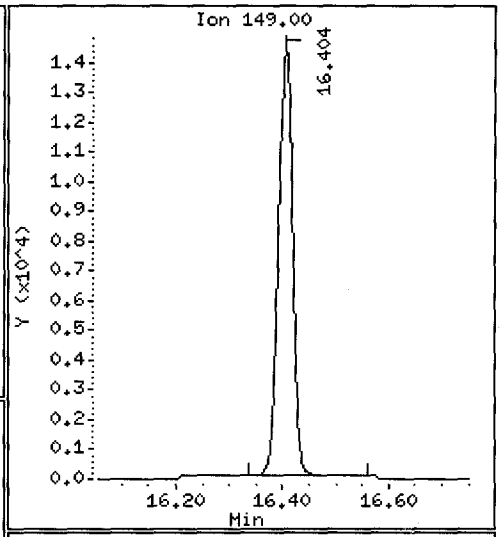
Sample Info: UZ99MBS1

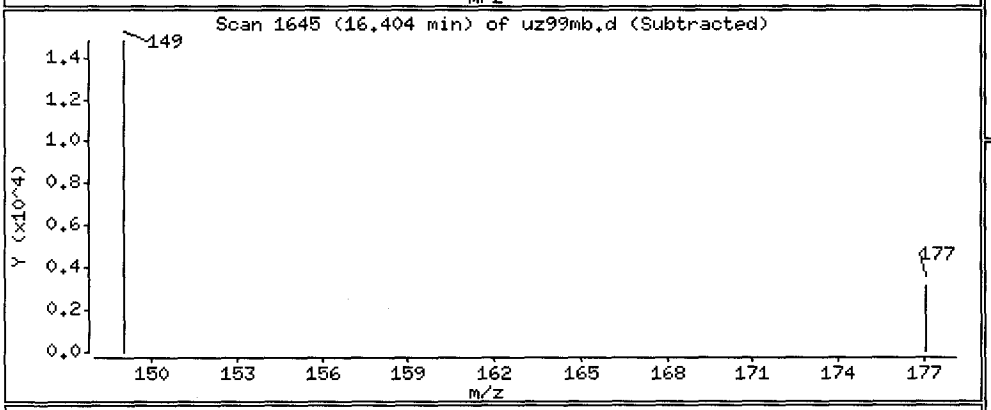
Volume Injected (uL): 1.0 Operator: YZ

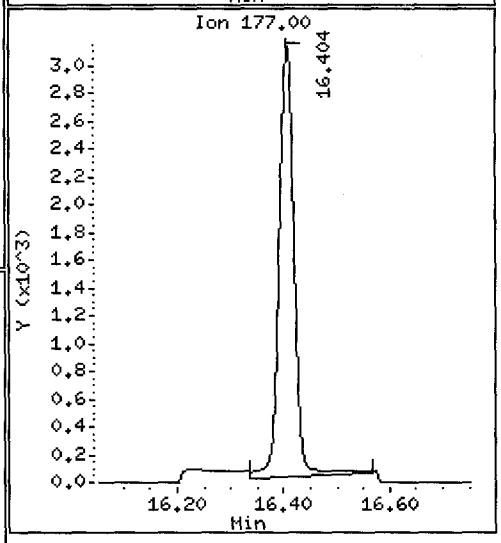
Column phase: ZB-5msi Column diameter: 0.25

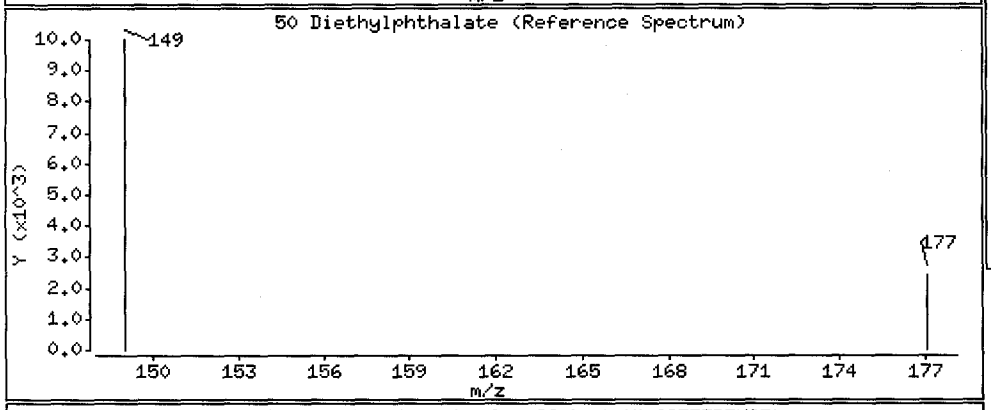
50 Diethylphthalate Concentration: 16.63 ug/kg

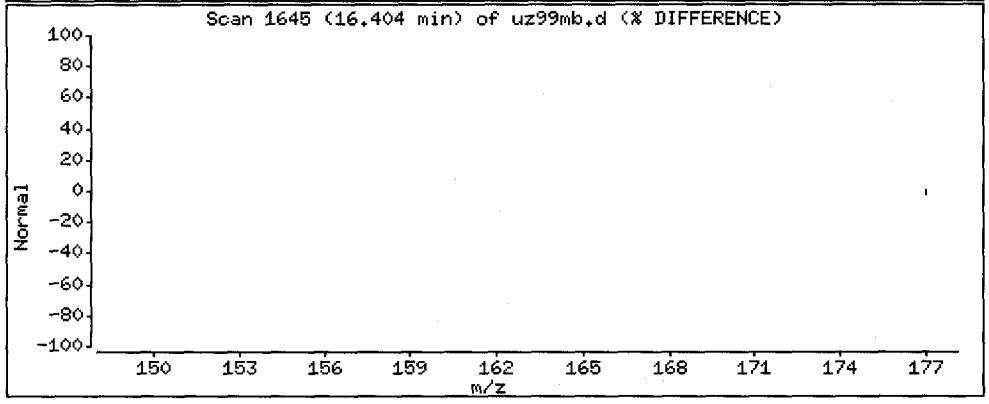












CO-ELUTION SUMMARY FOR FILE - uz99mb.d

Lab ID: UZ99MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120703.b/SIM.b/uz99sb.d
Lab Smp Id: UZ99LCSS1 Client Smp ID: UZ99LCSS1
Inj Date : 03-JUL-2012 16:38
Operator : YZ Inst ID: nt10.i
Smp Info : UZ99LCSS1
Misc Info : 12-11979
Comment :
Method : /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2012 13:51 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 17:21 Cal File: ic0605g.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.418	6.403	(0.735)	416574	5.25298	525.3
3 Phenol	94	8.149	8.142	(0.933)	400489	3.30628	330.6
7 1,3-Dichlorobenzene	146	8.659	8.660	(0.991)	309639	3.25242	325.2
* 8 1,4-Dichlorobenzene-d4	152	8.737	8.737	(1.000)	232964	4.00000	
9 1,4-Dichlorobenzene	146	8.768	8.768	(1.004)	295643	3.18476	318.5
11 Benzyl alcohol	79	9.047	9.048	(1.036)	206251	3.73032	373.0
12 1,2-Dichlorobenzene	146	9.141	9.141	(1.046)	293494	3.26281	326.3
13 2-Methylphenol	108	9.327	9.319	(1.068)	239035	2.86083	286.1
15 4-Methylphenol	108	9.630	9.614	(1.102)	514951	5.95191	595.2
16 N-Nitroso-di-n-propylamine	70	9.653	9.653	(1.105)	157898	3.22667	322.7
22 2,4-Dimethylphenol	107	10.728	10.728	(0.942)	594700	7.44525	744.5
26 1,2,4-Trichlorobenzene	180	11.306	11.306	(0.993)	243068	3.30021	330.0
* 27 Naphthalene-d8	136	11.391	11.391	(1.000)	904188	4.00000	
30 Hexachlorobutadiene	225	11.847	11.847	(1.040)	137613	3.36458	336.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.819	14.811	(0.969)	534499	3.87226	387.2
*	42 Acenaphthene-d10	162	15.291	15.283	(1.000)	460671	4.00000	
	50 Diethylphthalate	149	16.412	16.404	(1.073)	632223	4.10272	410.3
	54 N-Nitrosodiphenylamine	169	16.790	16.790	(0.904)	396576	3.72014	372.0
	57 Hexachlorobenzene	284	17.901	17.901	(0.964)	172361	3.28521	328.5
	58 Pentachlorophenol	266	18.312	18.312	(0.986)	359445	11.6596	1166
*	59 Phenanthrene-d10	188	18.567	18.567	(1.000)	798325	4.00000	
$	66 Terphenyl-d14	244	21.824	21.824	(0.921)	497712	4.09716	409.7
	67 Butylbenzylphthalate	149	22.792	22.792	(0.962)	473088	4.26545	426.5
*	69 Chrysene-d12	240	23.698	23.690	(1.000)	792251	4.00000	
*	77 Perylene-d12	264	26.098	26.098	(1.000)	772987	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.361	28.346	(1.087)	646647	3.49869	349.9
	90 N-Nitrosodimethylamine	74	4.148	4.109	(0.475)	434372	9.19467	919.5

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99sb.d
Lab Smp Id: UZ99LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 15:25
Client Smp ID: UZ99LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	232964	-8.42
27 Naphthalene-d8	947590	473795	1895180	904188	-4.58
42 Acenaphthene-d10	481282	240641	962564	460671	-4.28
59 Phenanthrene-d10	834942	417471	1669884	798325	-4.39
69 Chrysene-d12	846355	423178	1692710	792251	-6.39
77 Perylene-d12	841446	420723	1682892	772987	-8.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.74	8.24	9.24	8.74	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.28	14.78	15.78	15.29	0.05
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.70	0.03
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UZ99LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

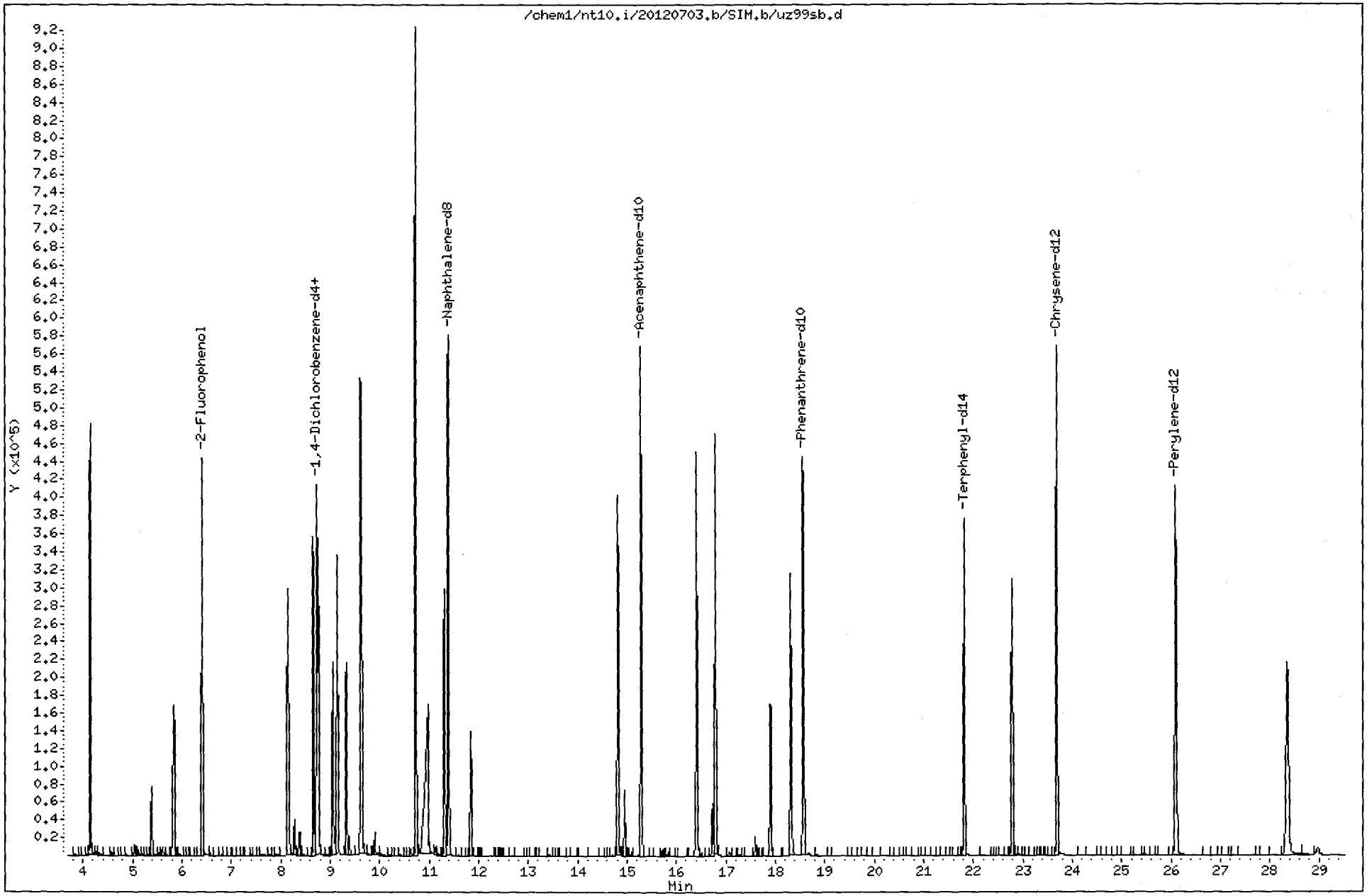
Client SDG: UZ99
Fraction: SV
Client Smp ID: UZ99LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	330.6	66.13	30-160
7 1,3-Dichlorobenzen	500.0	325.2	65.05	30-160
9 1,4-Dichlorobenzen	500.0	318.5	63.70	30-160
11 Benzyl alcohol	500.0	373.0	74.61	30-160
12 1,2-Dichlorobenzen	500.0	326.3	65.26	30-160
13 2-Methylphenol	500.0	286.1	57.22	30-160
15 4-Methylphenol	1000	595.2	59.52	30-160
16 N-Nitroso-di-n-pro	500.0	322.7	64.53	30-160
22 2,4-Dimethylphenol	1000	744.5	74.45	30-160
26 1,2,4-Trichloroben	500.0	330.0	66.00	30-160
30 Hexachlorobutadien	500.0	336.5	67.29	30-160
39 Dimethylphthalate	500.0	387.2	77.45	30-160
50 Diethylphthalate	500.0	410.3	82.05	30-160
54 N-Nitrosodiphenyla	500.0	372.0	74.40	30-160
57 Hexachlorobenzene	500.0	328.5	65.70	30-160
58 Pentachlorophenol	1000	1166	116.60	30-160
67 Butylbenzylphthala	500.0	426.5	85.31	30-160
79 Dibenzo(a,h)anthra	500.0	349.9	69.97	30-160
90 N-Nitrosodimethyla	1000	919.5	91.95	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	525.3	70.04	30-160
$ 66 Terphenyl-d14	500.0	409.7	81.94	30-160

Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99sb.d
Date : 03-JUL-2012 16:38
Client ID: UZ99LCSS1
Sample Info: UZ99LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



UZ99:00428

CO-ELUTION SUMMARY FOR FILE - uz99sb.d

Lab ID: UZ99LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 03-JUL-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/10/12

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20120703.b/SIM.b/uz99sbd.d
Lab Smp Id: UZ99LCSDS1 Client Smp ID: UZ99LCSDS1
Inj Date : 03-JUL-2012 17:14
Operator : YZ Inst ID: nt10.i
Smp Info : UZ99LCSDS1
Misc Info : 12-11979
Comment :
Method : /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2012 13:51 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 17:21 Cal File: ic0605g.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.418	6.403	(0.735)	404939	4.72842	472.8
3 Phenol	94	8.149	8.142	(0.933)	416527	3.18423	318.4
7 1,3-Dichlorobenzene	146	8.659	8.660	(0.991)	323097	3.14266	314.3
* 8 1,4-Dichlorobenzene-d4	152	8.737	8.737	(1.000)	251580	4.00000	
9 1,4-Dichlorobenzene	146	8.768	8.768	(1.004)	314327	3.13547	313.5
11 Benzyl alcohol	79	9.055	9.048	(1.036)	213506	3.57580	357.6
12 1,2-Dichlorobenzene	146	9.141	9.141	(1.046)	309254	3.18361	318.4
13 2-Methylphenol	108	9.327	9.319	(1.068)	250545	2.77670	277.7
15 4-Methylphenol	108	9.630	9.614	(1.102)	541934	5.80029	580.0
16 N-Nitroso-di-n-propylamine	70	9.653	9.653	(1.105)	167822	3.17570	317.6
22 2,4-Dimethylphenol	107	10.728	10.728	(0.942)	657731	7.69993	770.0
26 1,2,4-Trichlorobenzene	180	11.306	11.306	(0.993)	253657	3.22046	322.0
* 27 Naphthalene-d8	136	11.391	11.391	(1.000)	966945	4.00000	
30 Hexachlorobutadiene	225	11.847	11.847	(1.040)	144238	3.29767	329.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
39 Dimethylphthalate	163	14.819	14.811	(0.969)	551835	3.67537	367.5
* 42 Acenaphthene-d10	162	15.291	15.283	(1.000)	501092	4.00000	
50 Diethylphthalate	149	16.412	16.404	(1.073)	663096	3.95595	395.6
54 N-Nitrosodiphenylamine	169	16.798	16.790	(0.904)	416144	3.62526	362.5
57 Hexachlorobenzene	284	17.909	17.901	(0.964)	183184	3.24246	324.2
58 Pentachlorophenol	266	18.319	18.312	(0.986)	376537	11.5008	1150
* 59 Phenanthrene-d10	188	18.575	18.567	(1.000)	859641	4.00000	
$ 66 Terphenyl-d14	244	21.824	21.824	(0.921)	487858	3.69376	369.4
67 Butylbenzylphthalate	149	22.792	22.792	(0.962)	496122	4.11417	411.4
* 69 Chrysene-d12	240	23.698	23.690	(1.000)	861376	4.00000	
* 77 Perylene-d12	264	26.106	26.098	(1.000)	847011	4.00000	
79 Dibenzo(a,h)anthracene	278	28.353	28.346	(1.086)	678203	3.34874	334.9
90 N-Nitrosodimethylamine	74	4.155	4.109	(0.476)	455654	8.93145	893.1

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99sbd.d
Lab Smp Id: UZ99LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 15:25
Client Smp ID: UZ99LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	251580	-1.10
27 Naphthalene-d8	947590	473795	1895180	966945	2.04
42 Acenaphthene-d10	481282	240641	962564	501092	4.12
59 Phenanthrene-d10	834942	417471	1669884	859641	2.96
69 Chrysene-d12	846355	423178	1692710	861376	1.77
77 Perylene-d12	841446	420723	1682892	847011	0.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.74	8.24	9.24	8.74	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.39	0.00
42 Acenaphthene-d10	15.28	14.78	15.78	15.29	0.05
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.04
69 Chrysene-d12	23.69	23.19	24.19	23.70	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UZ99LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

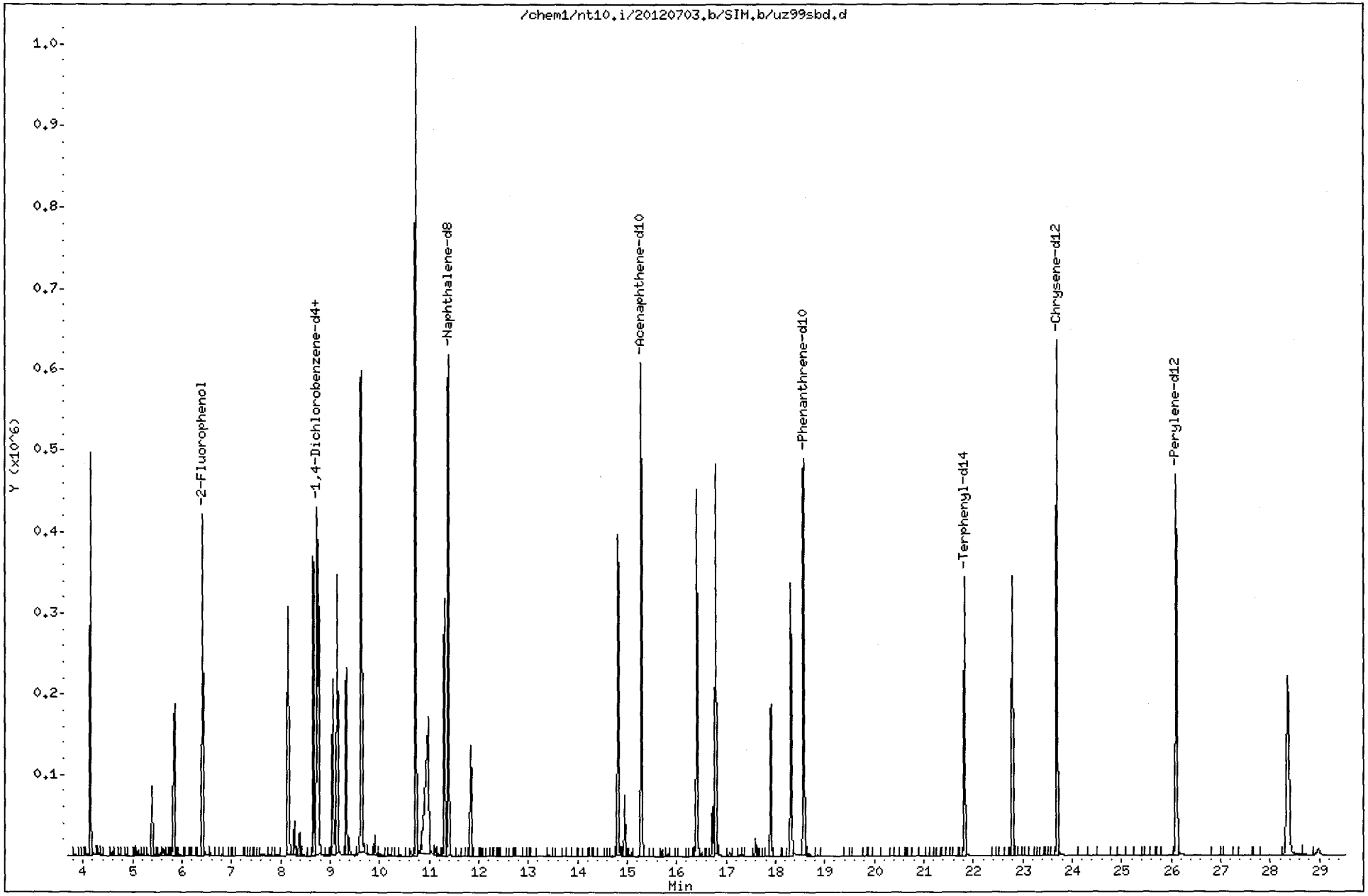
Client SDG: UZ99
Fraction: SV
Client Smp ID: UZ99LCSDS1
Operator: YZ
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	318.4	63.68	30-160
7 1,3-Dichlorobenzen	500.0	314.3	62.85	30-160
9 1,4-Dichlorobenzen	500.0	313.5	62.71	30-160
11 Benzyl alcohol	500.0	357.6	71.52	30-160
12 1,2-Dichlorobenzen	500.0	318.4	63.67	30-160
13 2-Methylphenol	500.0	277.7	55.53	30-160
15 4-Methylphenol	1000	580.0	58.00	30-160
16 N-Nitroso-di-n-pro	500.0	317.6	63.51	30-160
22 2,4-Dimethylphenol	1000	770.0	77.00	30-160
26 1,2,4-Trichloroben	500.0	322.0	64.41	30-160
30 Hexachlorobutadien	500.0	329.8	65.95	30-160
39 Dimethylphthalate	500.0	367.5	73.51	30-160
50 Diethylphthalate	500.0	395.6	79.12	30-160
54 N-Nitrosodiphenyla	500.0	362.5	72.51	30-160
57 Hexachlorobenzene	500.0	324.2	64.85	30-160
58 Pentachlorophenol	1000	1150	115.01	30-160
67 Butylbenzylphthala	500.0	411.4	82.28	30-160
79 Dibenzo(a,h)anthra	500.0	334.9	66.97	30-160
90 N-Nitrosodimethyla	1000	893.1	89.31	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	472.8	63.05	30-160
$ 66 Terphenyl-d14	500.0	369.4	73.88	30-160

Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99sbd.d
Date : 03-JUL-2012 17:14
Client ID: UZ99LCSDS1
Sample Info: UZ99LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



UZ99:00434

CO-ELUTION SUMMARY FOR FILE - uz99sbd.d

Lab ID: UZ99LCSDS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 03-JUL-20

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 7/10/12

Data file : /chem1/nt10.i/20120703.b/SIM.b/uz99a.d
Lab Smp Id: UZ99A Client Smp ID: CB-002-06222012
Inj Date : 03-JUL-2012 19:02
Operator : YZ Inst ID: nt10.i
Smp Info : UZ99A
Misc Info : 12-11979
Comment :
Method : /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2012 13:56 yev Quant Type: ISTD
Cal Date : 05-JUN-2012 17:21 Cal File: ic0605g.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	12.29000	Weight of sample extracted (g)
M	12.20000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1 2-Fluorophenol	112	6.426	6.403	(0.735)	383406	4.70667	436.2
3 Phenol	94	8.149	8.142	(0.933)	8058	0.06476	6.002
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	8.737	8.737	(1.000)	239303	4.00000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	79	Compound Not Detected.					
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
15 4-Methylphenol	108	9.622	9.614	(1.101)	4344	0.04888	4.530(M)
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22 2,4-Dimethylphenol	107	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	11.384	11.391	(1.000)	927390	4.00000	
30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.811	14.811	(0.969)	22436	0.16045	14.87(M)
*	42 Acenaphthene-d10	162	15.283	15.283	(1.000)	466668	4.00000	
	50 Diethylphthalate	149	16.404	16.404	(1.073)	23278	0.14912	13.82(M)
	54 N-Nitrosodiphenylamine	169	16.782	16.790	(0.904)	4371	0.03912	3.625
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.567	18.567	(1.000)	836744	4.00000	
$	66 Terphenyl-d14	244	21.832	21.824	(0.921)	502058	3.66804	339.9
	67 Butylbenzylphthalate	149	22.808	22.792	(0.962)	204594	1.63716	151.7
*	69 Chrysene-d12	240	23.714	23.690	(1.000)	892664	4.00000	
*	77 Perylene-d12	264	26.153	26.098	(1.000)	886694	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.486	28.346	(1.089)	11677	0.05508	5.104
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: uz99a.d
Lab Smp Id: UZ99A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

Calibration Date: 03-JUL-2012
Calibration Time: 15:25
Client Smp ID: CB-002-06222012
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	254374	127187	508748	239303	-5.92
27 Naphthalene-d8	947590	473795	1895180	927390	-2.13
42 Acenaphthene-d10	481282	240641	962564	466668	-3.04
59 Phenanthrene-d10	834942	417471	1669884	836744	0.22
69 Chrysene-d12	846355	423178	1692710	892664	5.47
77 Perylene-d12	841446	420723	1682892	886694	5.38

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.74	8.24	9.24	8.74	0.00
27 Naphthalene-d8	11.39	10.89	11.89	11.38	-0.07
42 Acenaphthene-d10	15.28	14.78	15.78	15.28	0.00
59 Phenanthrene-d10	18.57	18.07	19.07	18.57	0.00
69 Chrysene-d12	23.69	23.19	24.19	23.71	0.10
77 Perylene-d12	26.10	25.60	26.60	26.15	0.21

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

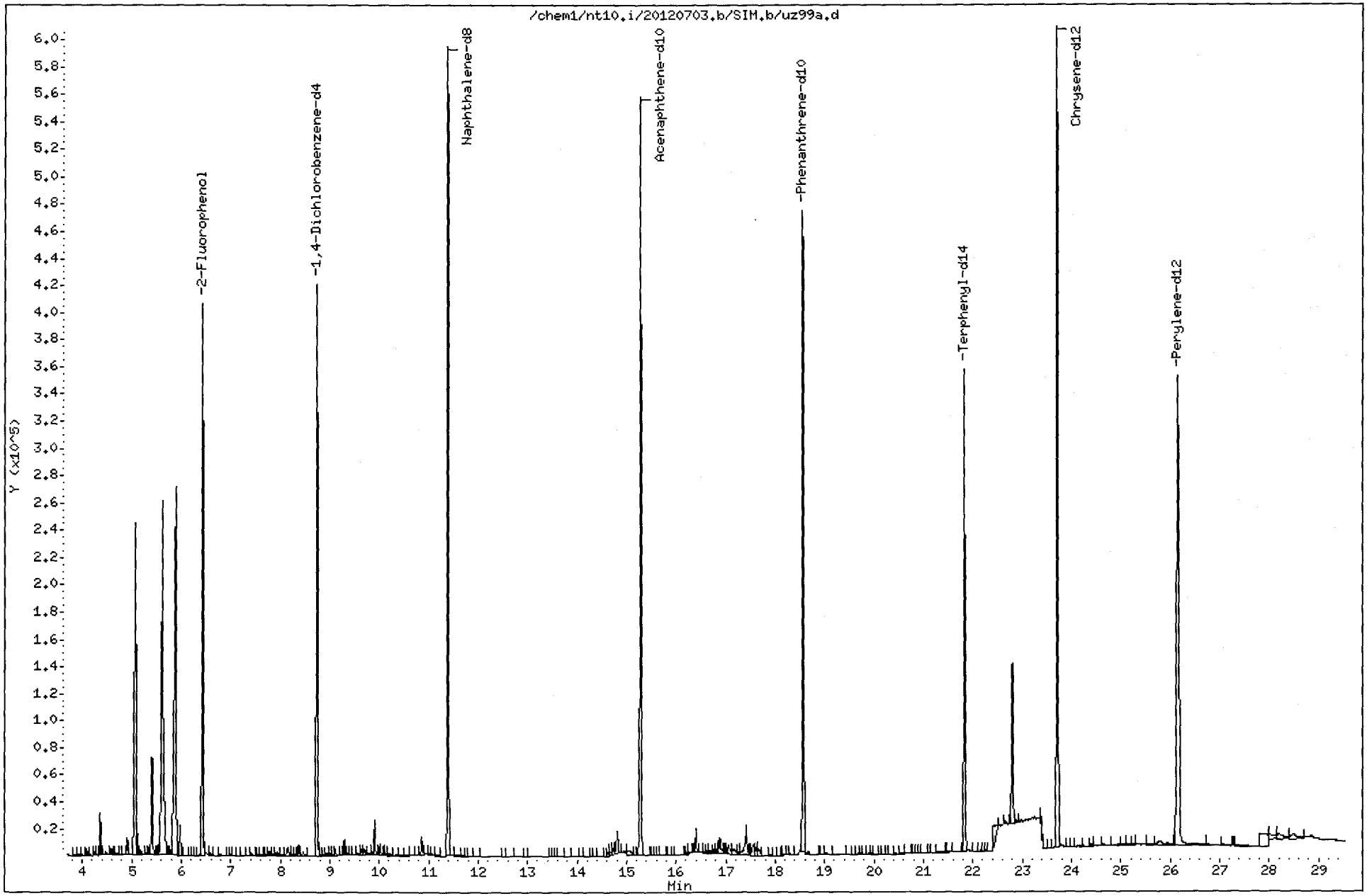
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: UZ99A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20120703.b/SIM.b/SIMABN2.m
Misc Info: 12-11979

Client SDG: UZ99
Fraction: SV
Client Smp ID: CB-002-06222012
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	695.0	436.2	62.76	30-160
$ 66 Terphenyl-d14	463.4	339.9	73.36	30-160

Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d
Date : 03-JUL-2012 19:02
Client ID: CB-002-06222012
Sample Info: UZ99A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



UZ59:09110

Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d

Date : 03-JUL-2012 19:02

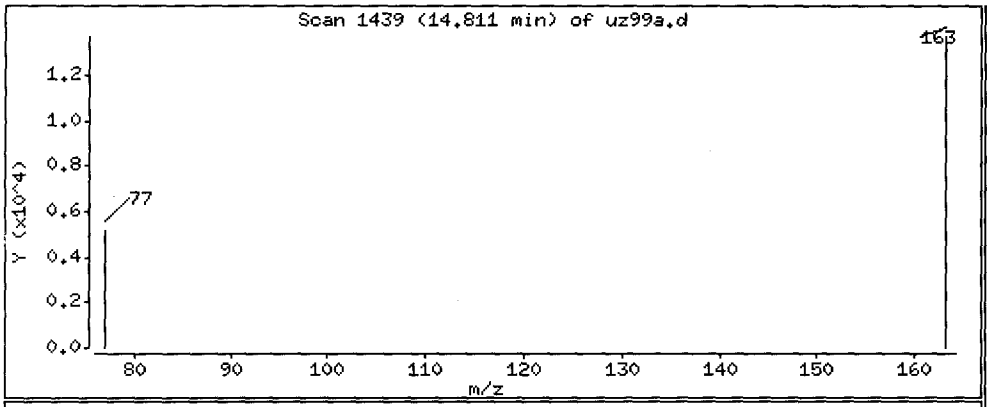
Client ID: CB-002-06222012 Instrument: nt10.i

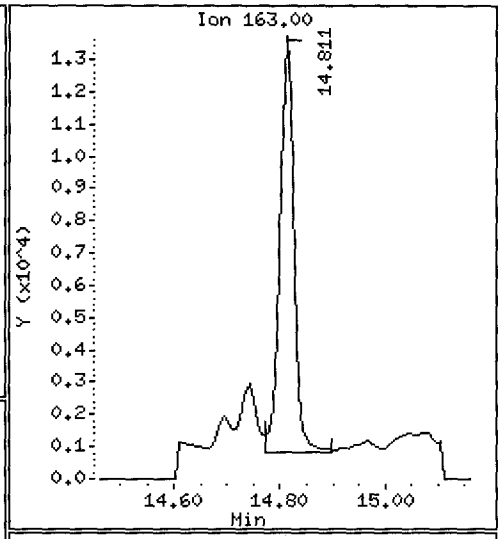
Sample Info: UZ99A

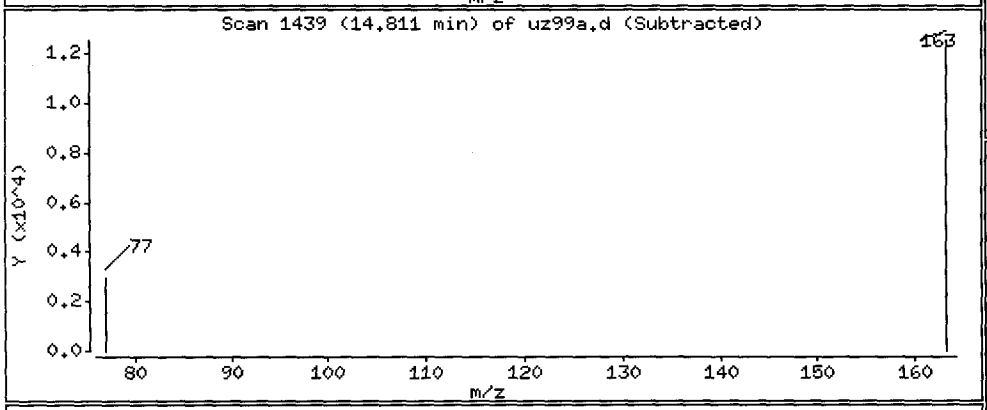
Volume Injected (uL): 1.0 Operator: YZ

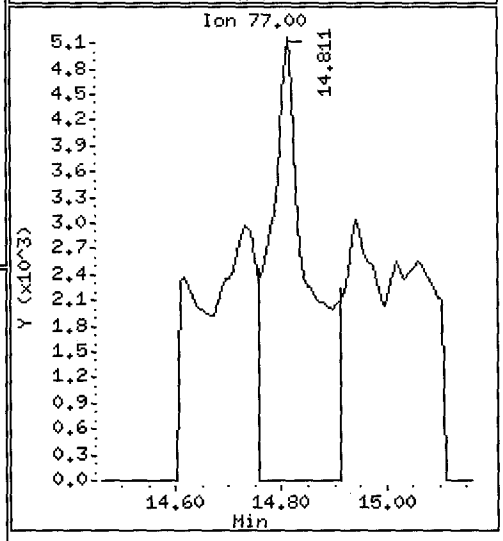
Column phase: ZB-5msi Column diameter: 0.25

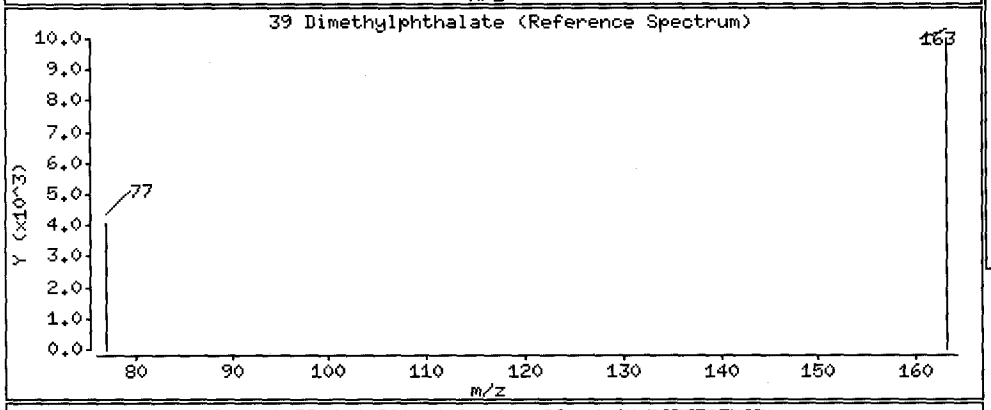
39 Dimethylphthalate Concentration: 14.87 ug/kg

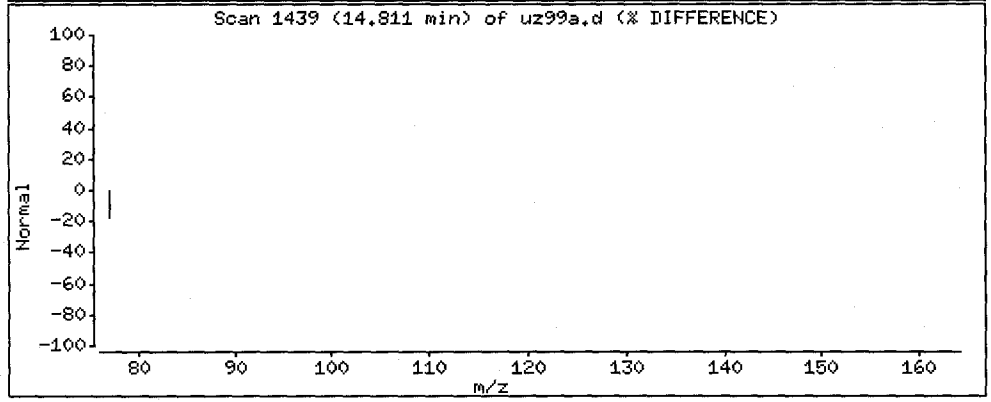












Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d

Date : 03-JUL-2012 19:02

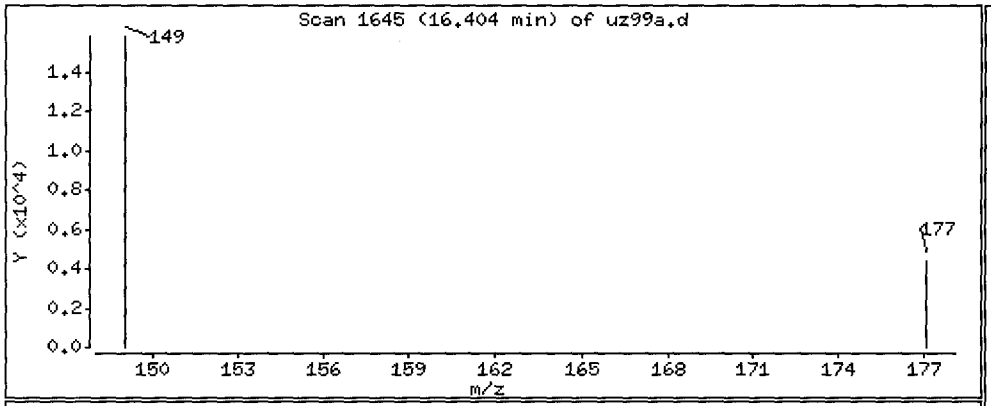
Client ID: CB-002-06222012 Instrument: nt10.i

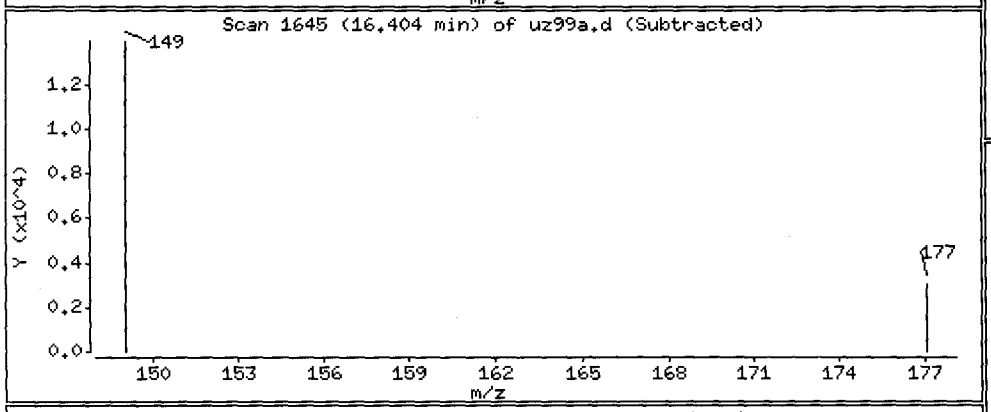
Sample Info: UZ99A

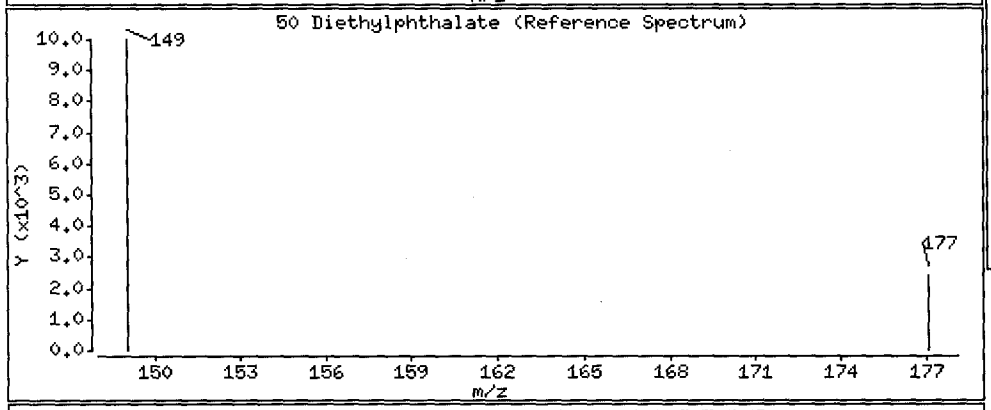
Volume Injected (uL): 1.0 Operator: YZ

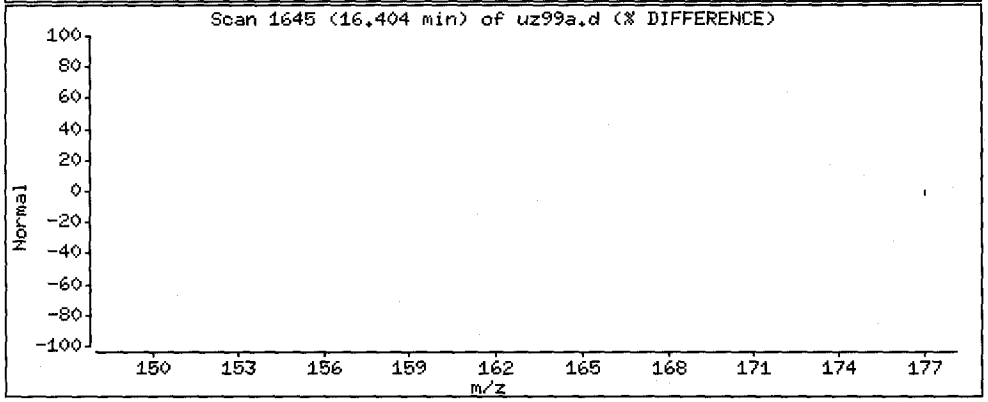
Column phase: ZB-5msi Column diameter: 0.25

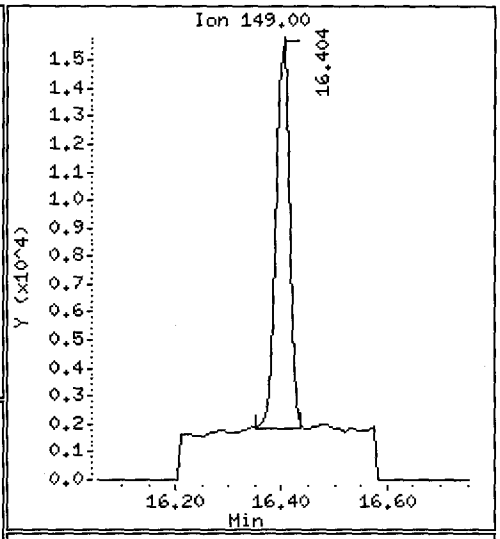
50 Diethylphthalate Concentration: 13.82 ug/kg

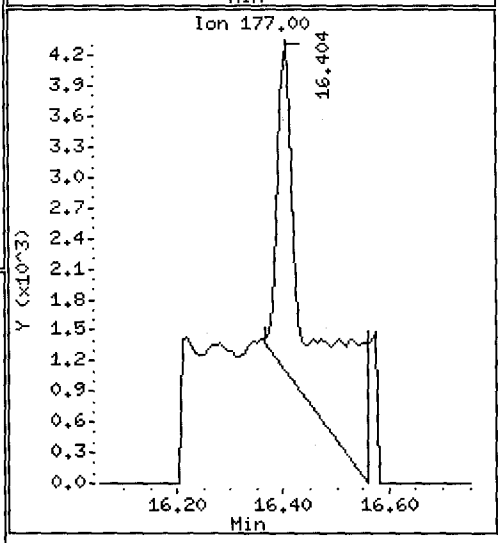












Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d

Date : 03-JUL-2012 19:02

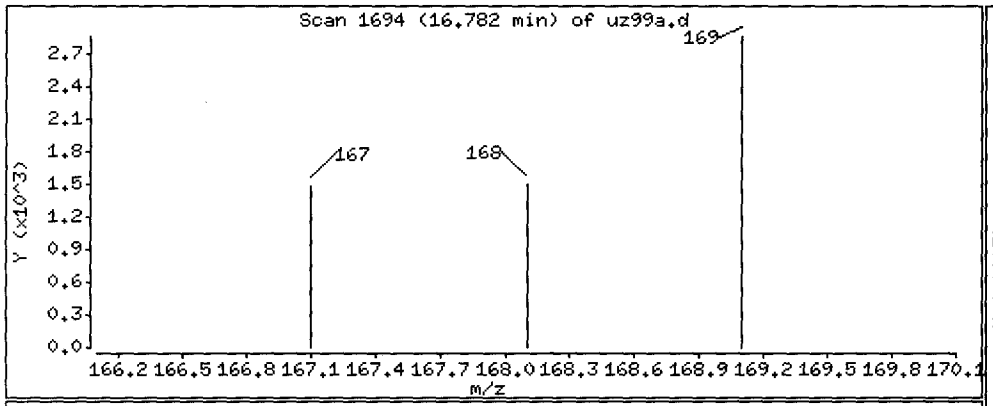
Client ID: CB-002-06222012 Instrument: nt10.i

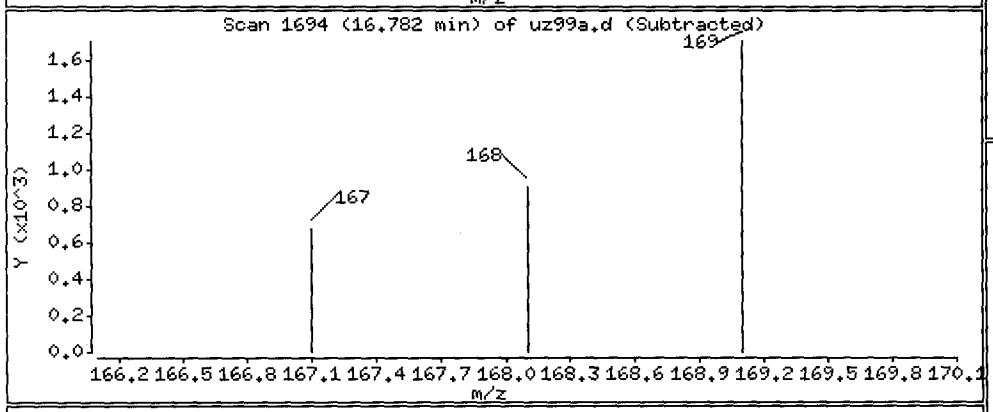
Sample Info: UZ99A

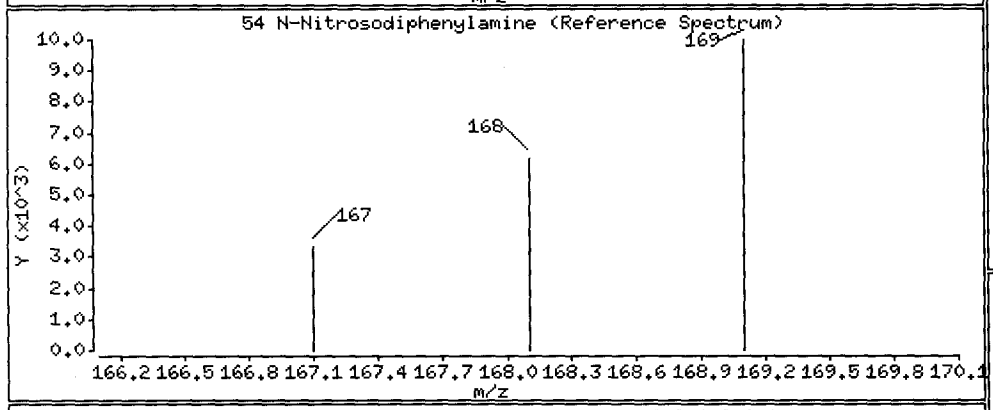
Volume Injected (uL): 1.0 Operator: YZ

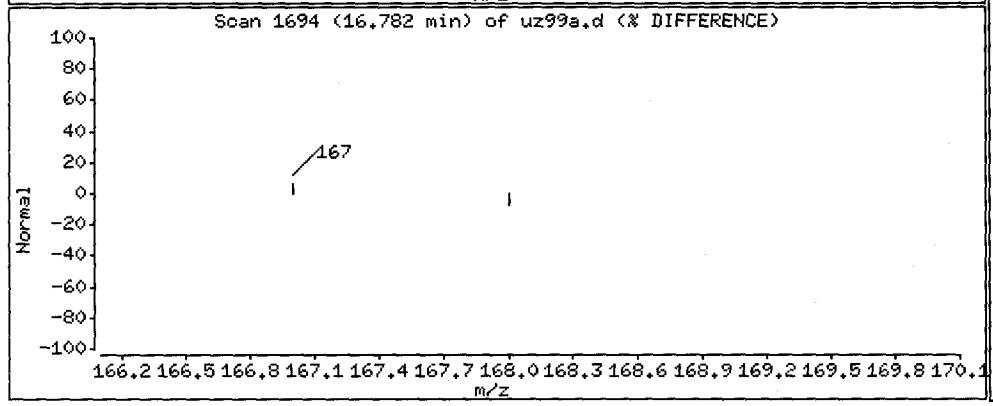
Column phase: ZB-5msi Column diameter: 0.25

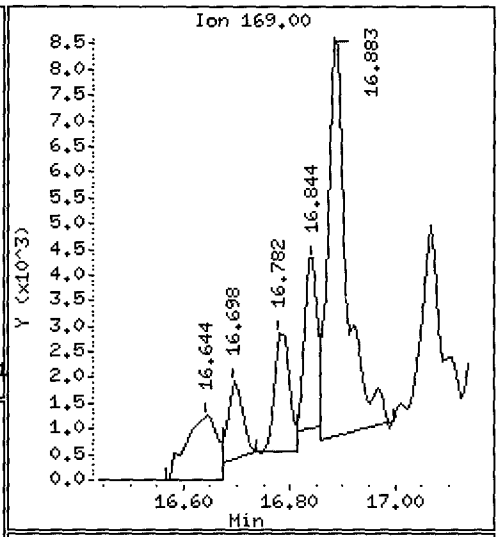
54 N-Nitrosodiphenylamine Concentration: 3.625 ug/kg

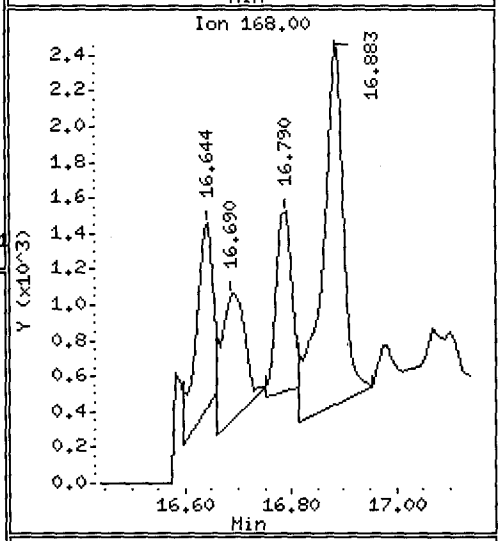


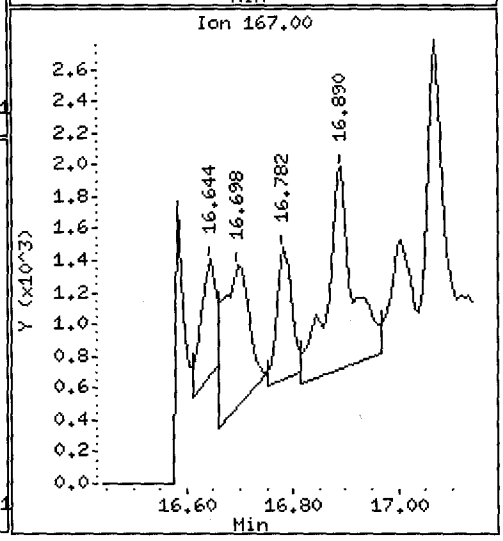












Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d

Date : 03-JUL-2012 19:02

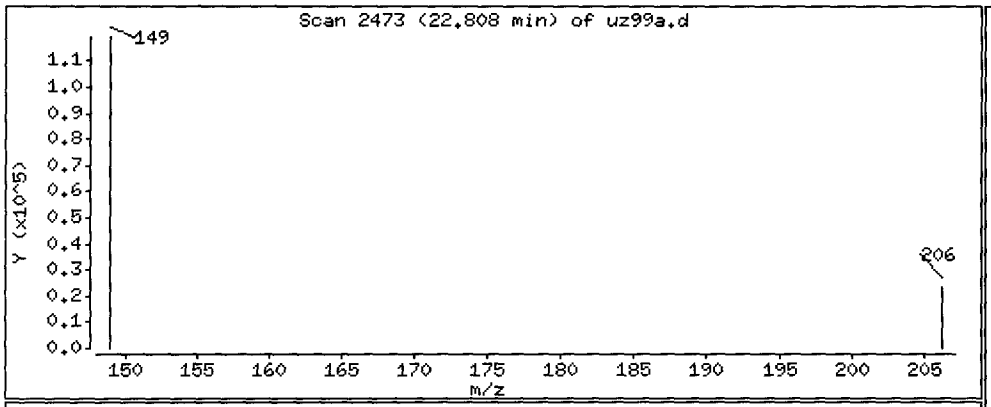
Client ID: CB-002-06222012 Instrument: nt10.i

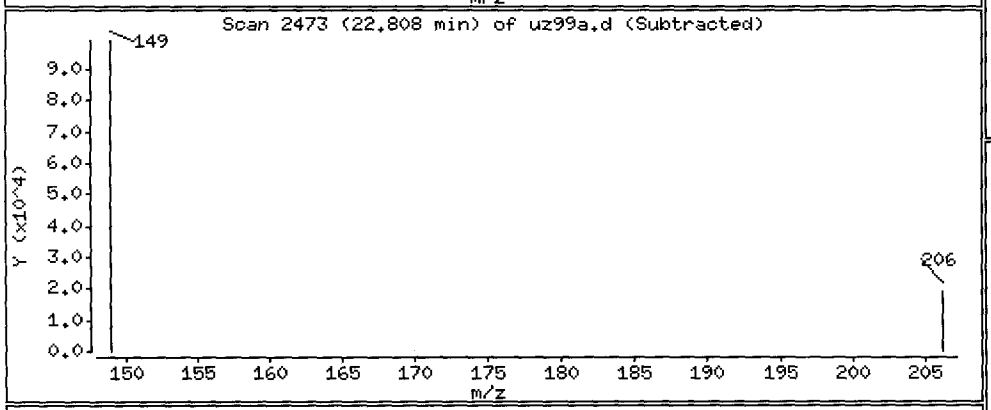
Sample Info: UZ99A

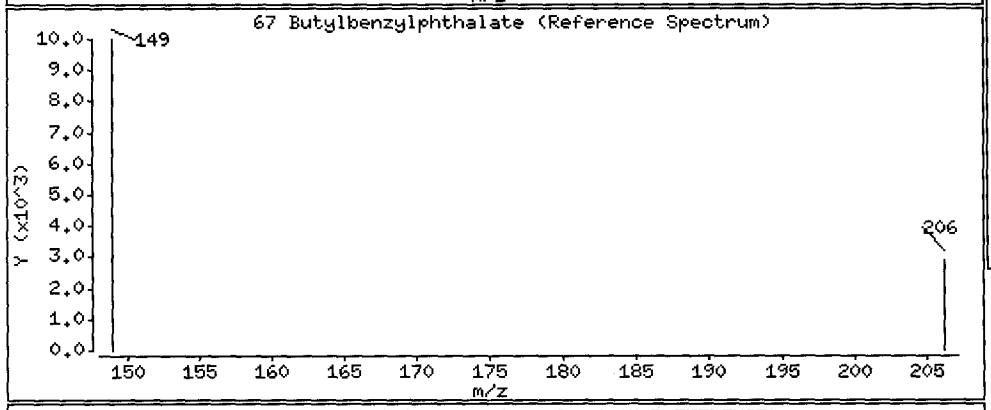
Volume Injected (uL): 1.0 Operator: YZ

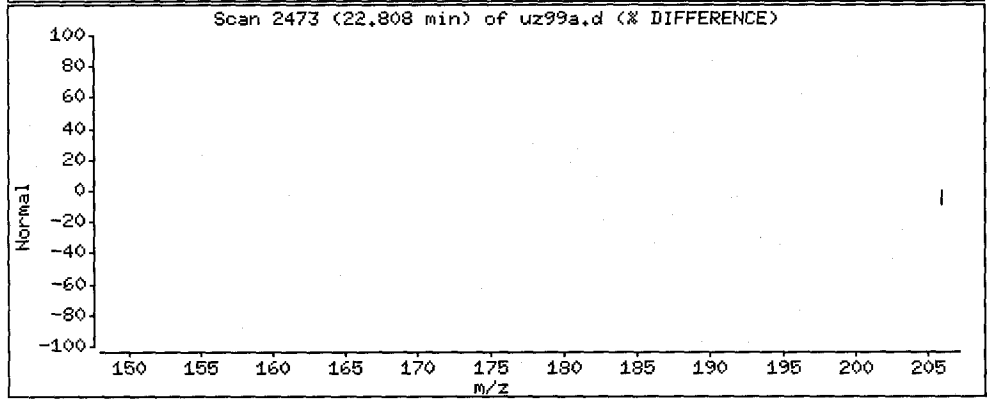
Column phase: ZB-5msi Column diameter: 0.25

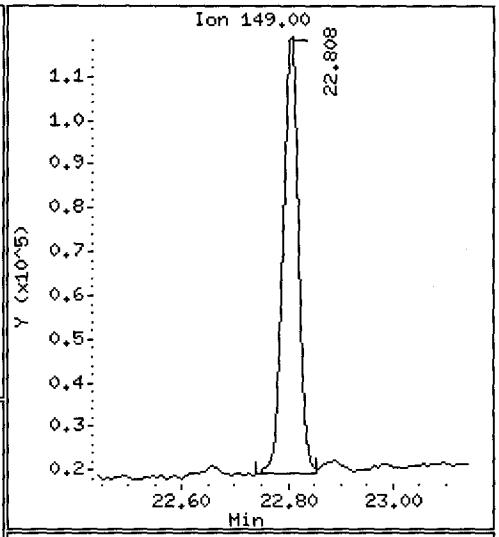
67 Butylbenzylphthalate Concentration: 151.7 ug/kg

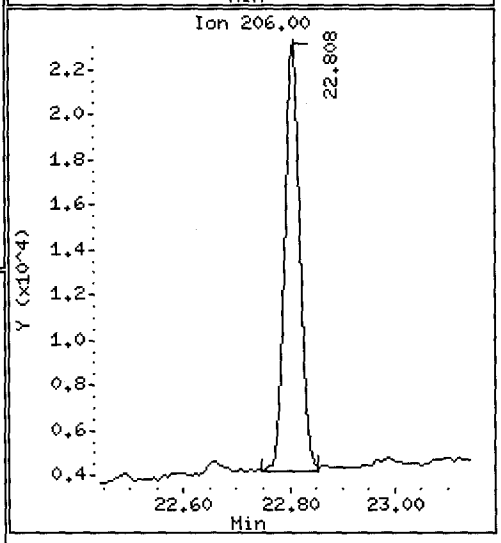












Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d

Date : 03-JUL-2012 19:02

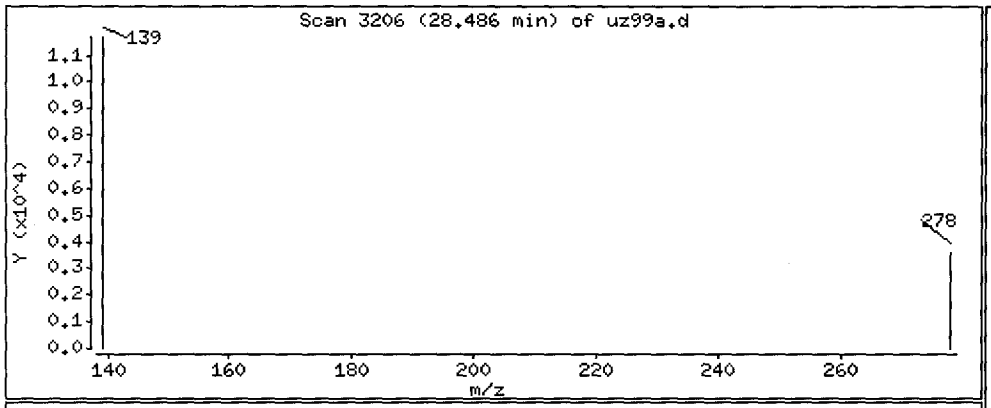
Client ID: CB-002-06222012 Instrument: nt10.i

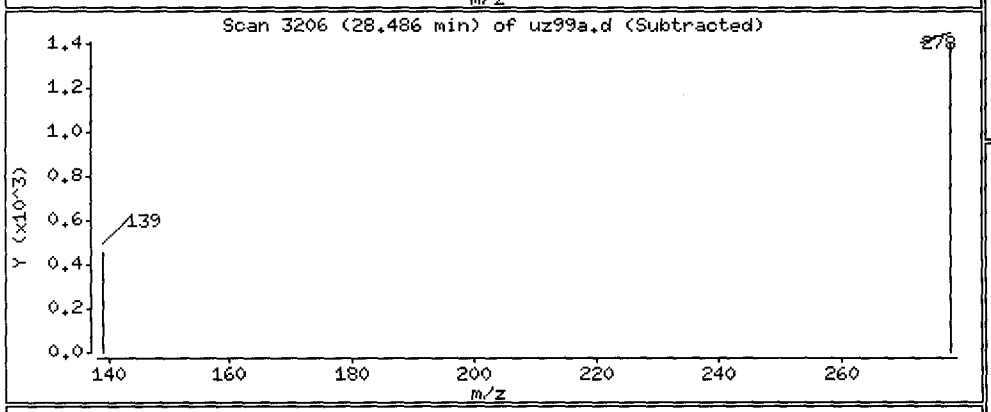
Sample Info: UZ99A

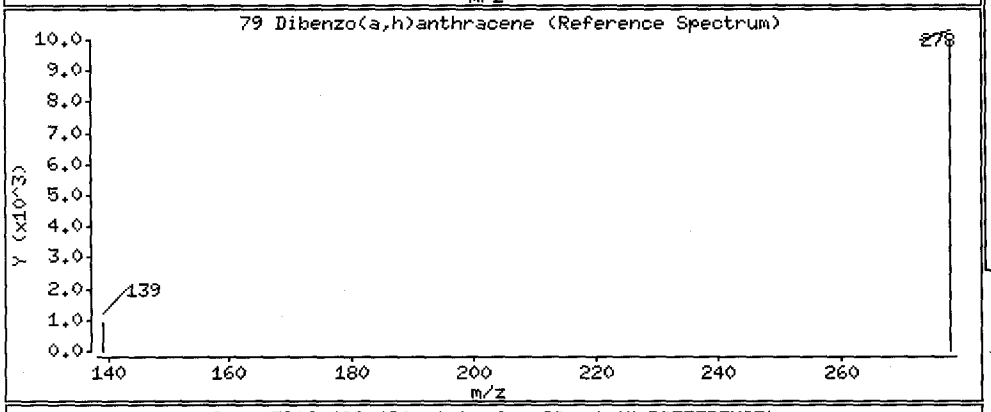
Volume Injected (uL): 1.0 Operator: YZ

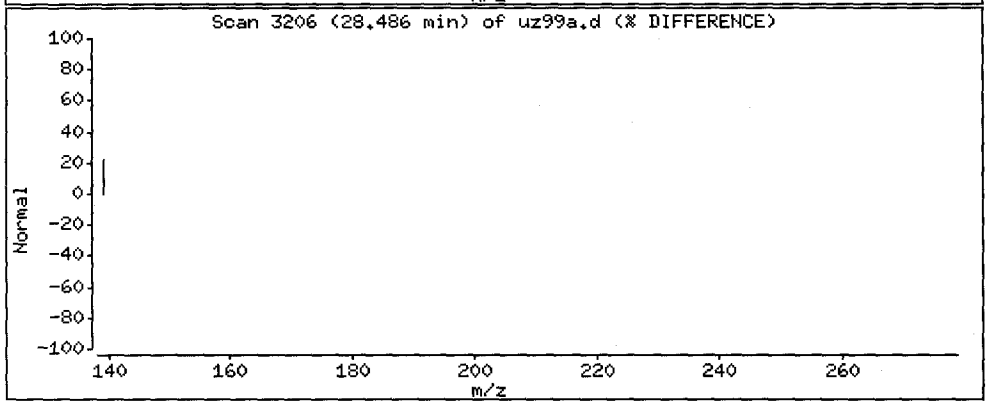
Column phase: ZB-5msi Column diameter: 0.25

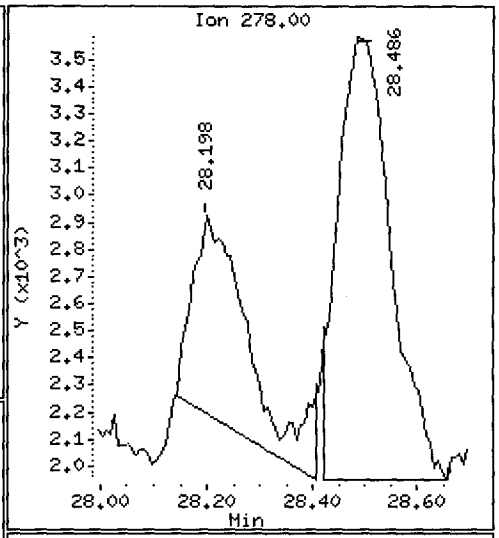
79 Dibenzo(a,h)anthracene Concentration: 5.104 ug/kg

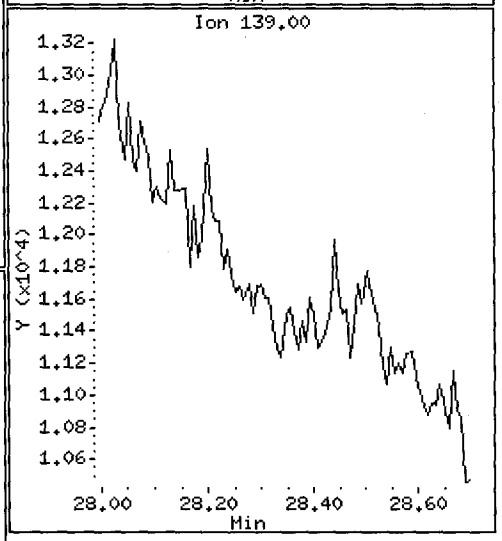






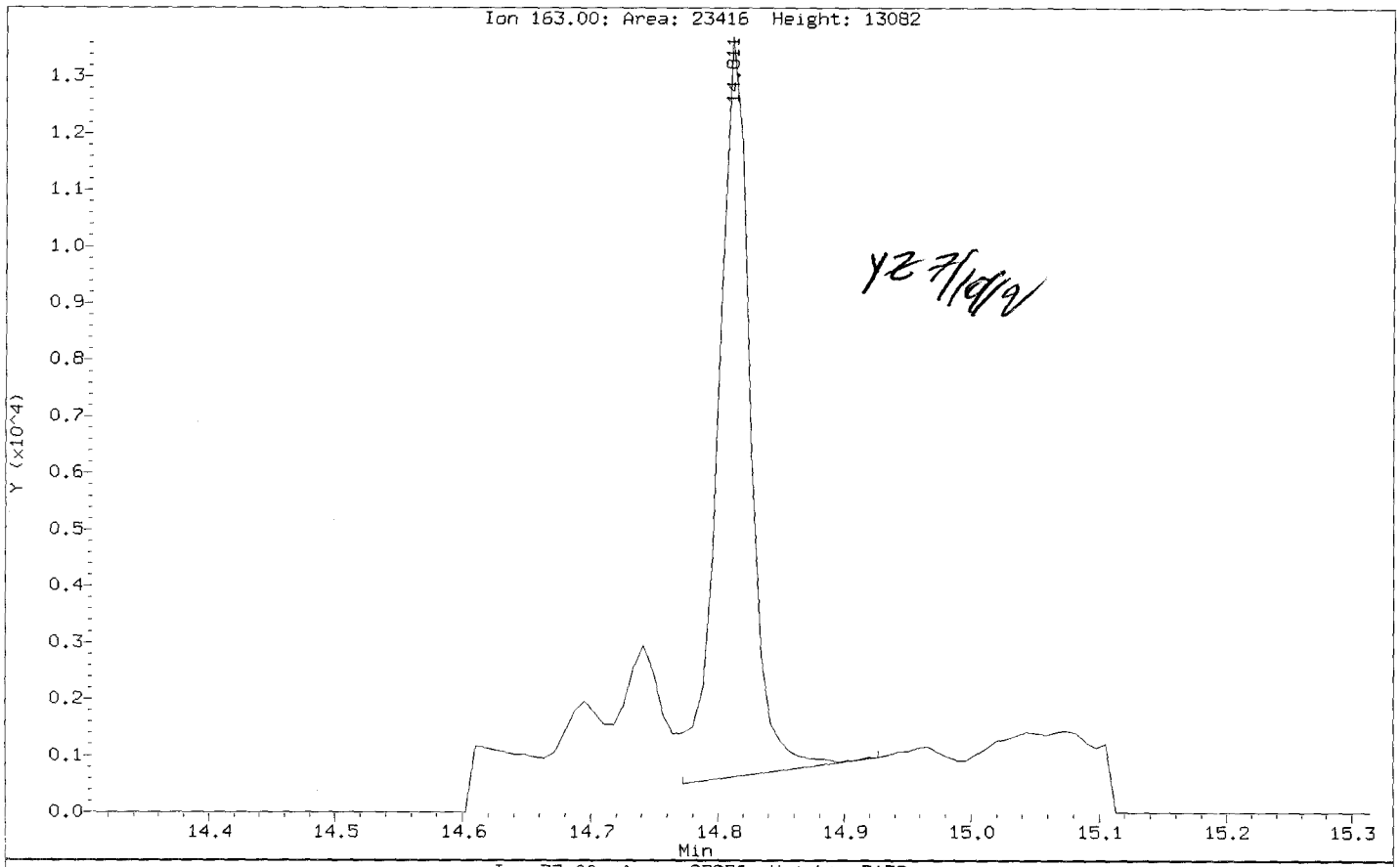




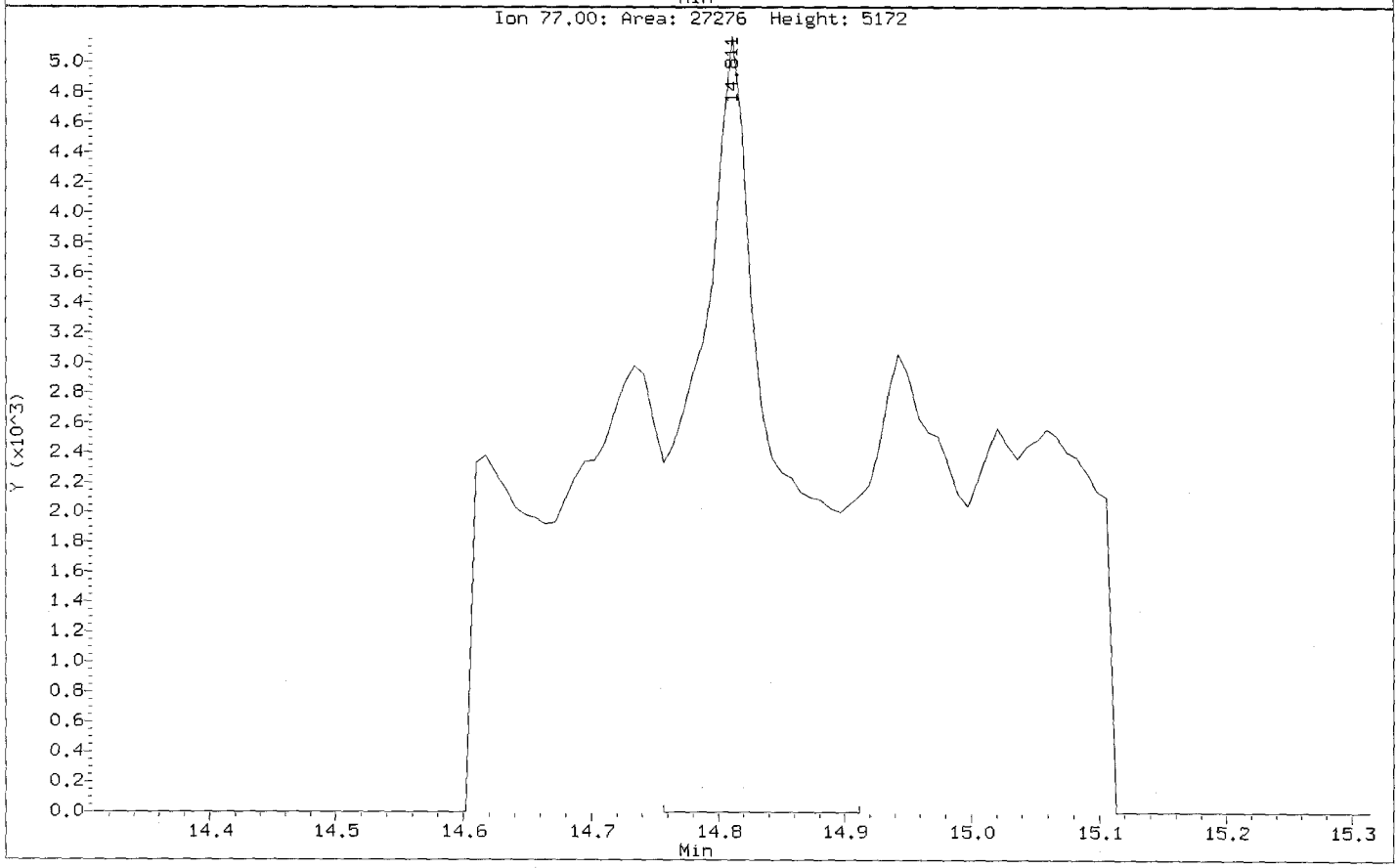


Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d
Injection Date: 03-JUL-2012 19:02
Instrument: nt10.i
Client Sample ID: CB-002-06222012

Compound: Dimethylphthalate
CAS Number: 131-11-3

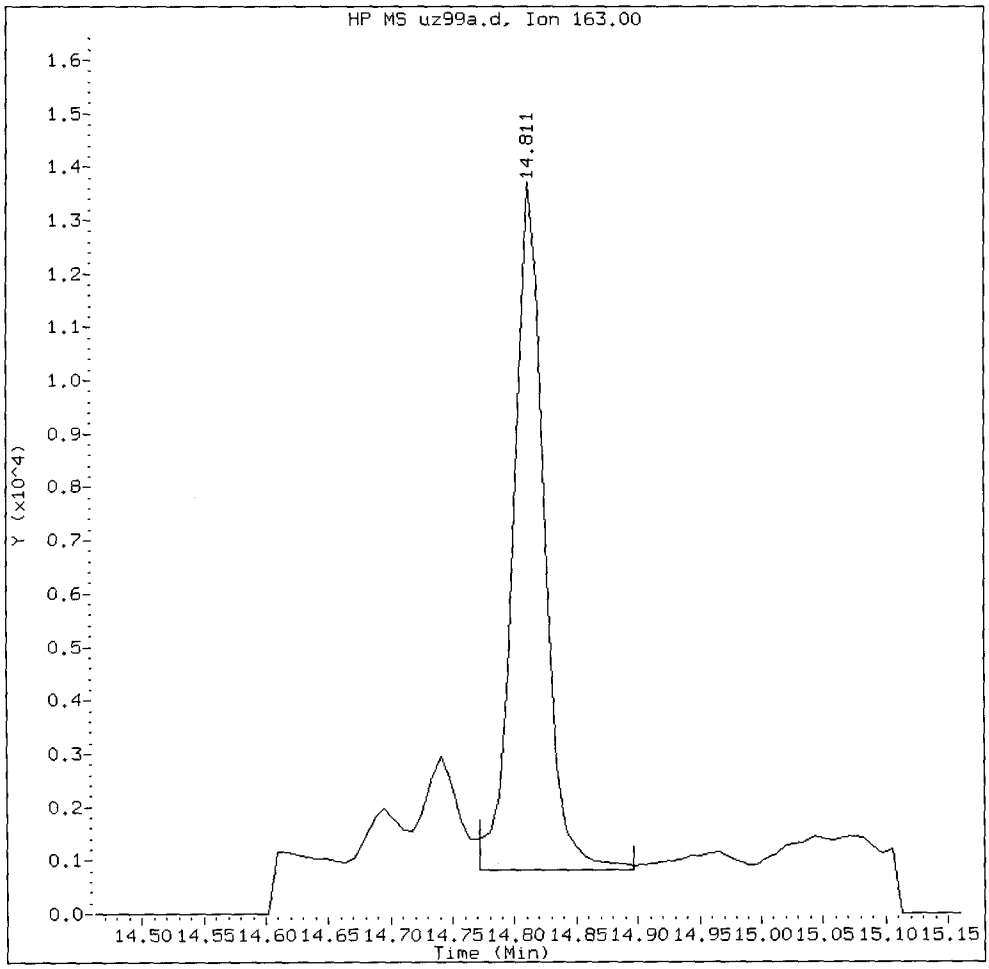


YZ 7/10/12



UZ99A, /chem1/nt10.i/20120703.b/SIM.b/uz99a.d

Dimethylphthalate Amount: 0.16 Area: 22436



MANUAL INTEGRATION for Dimethylphthalate

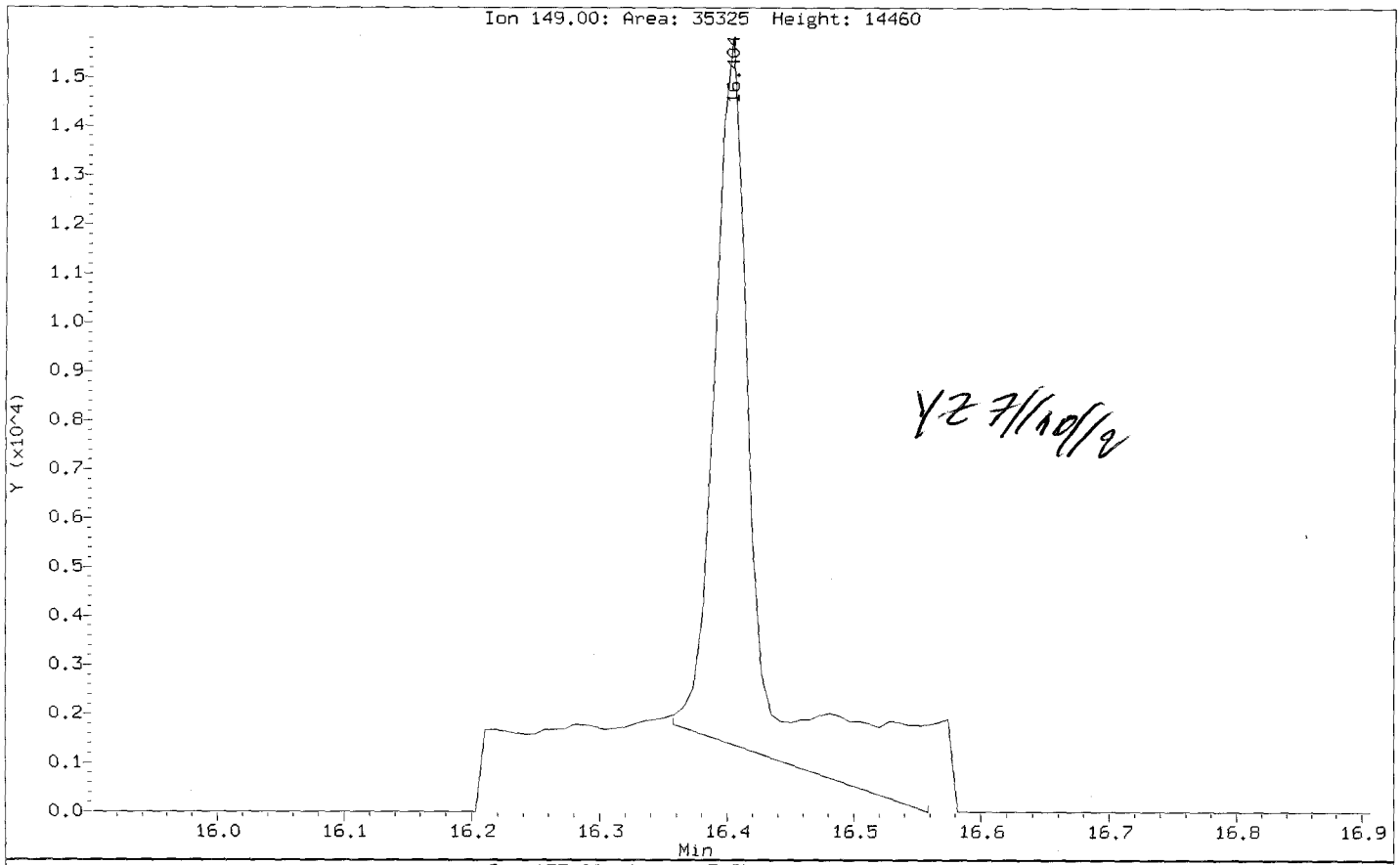
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

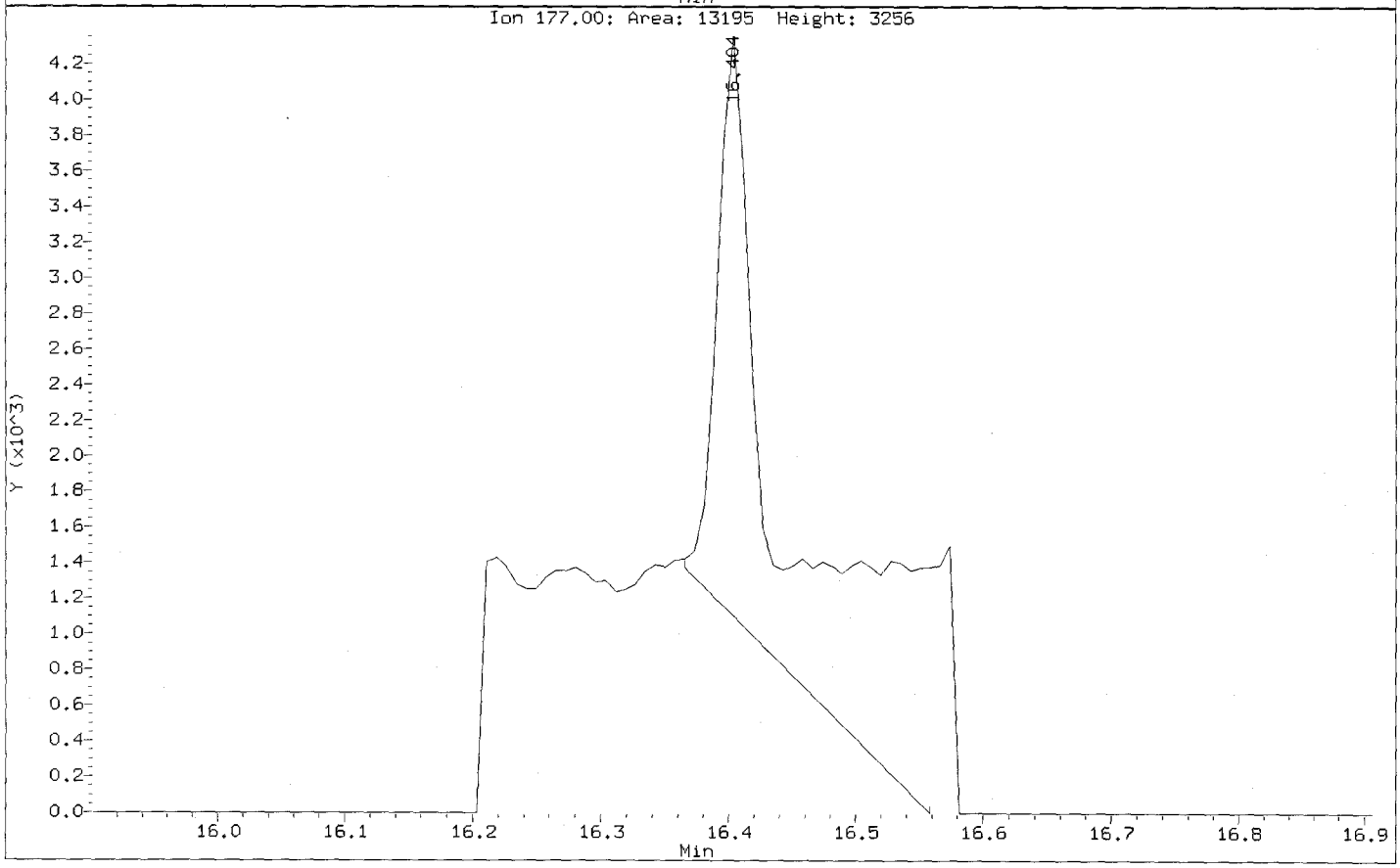
5. Other _____

Analyst: YZ Date: 7/10/12

Data File: /chem1/nt10.i/20120703.b/SIM.b/uz99a.d
Injection Date: 03-JUL-2012 19:02
Instrument: nt10.i
Client Sample ID: CB-002-06222012

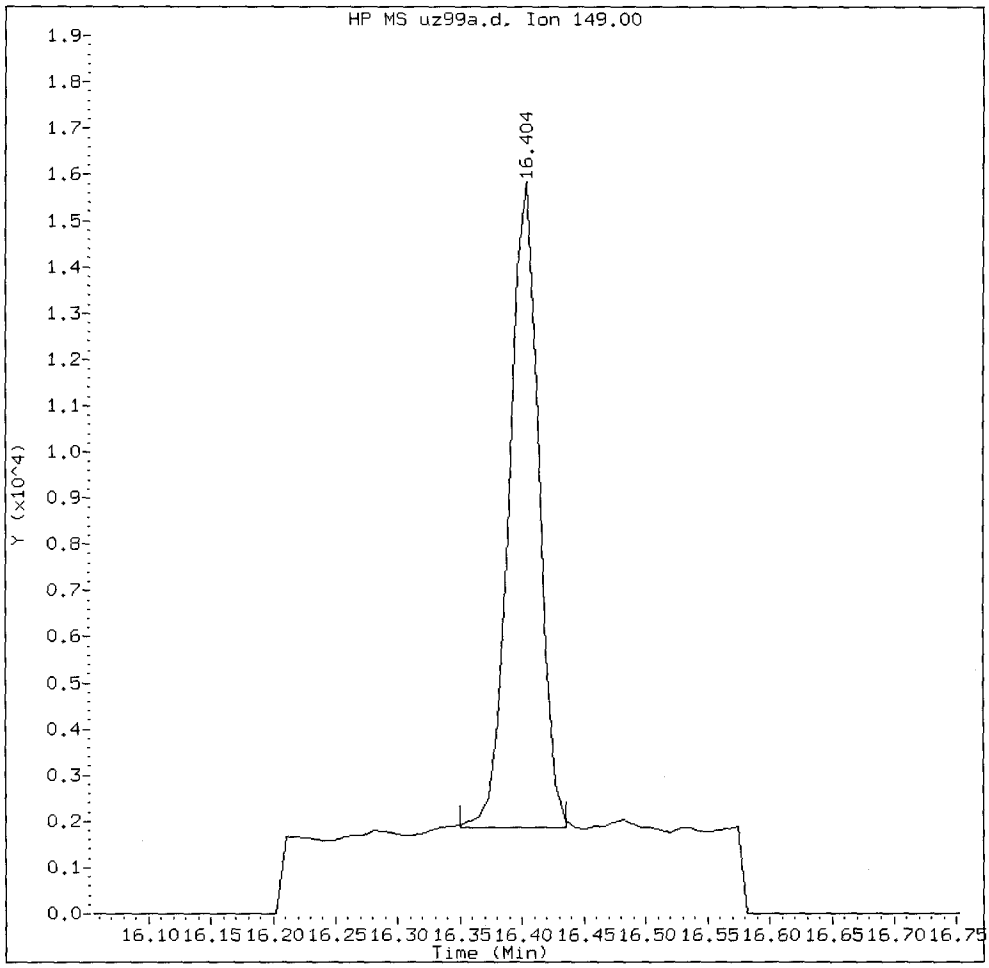
Compound: Diethylphthalate
CAS Number: 84-66-2





UZ99A, /chem1/nt10.i/20120703.b/SIM.b/uz99a.d

Diethylphthalate Amount: 0.15 Area: 23278



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/12

CO-ELUTION SUMMARY FOR FILE - uz99a.d

Lab ID: UZ99A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 03-JUL-2012

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: UZ99

Client ID: Anchor QEA, LLC

Parameter: Dioxin 1613B

Client Project: I & J Waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A	YL 6/25/12
☒ Standing Water Decanted (Not shared)= A	YL 6/25/12
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 30% medium Rocks A.	YL 6/25/12
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290 & 1613B
Solid Samples

ARI Job No(s) U299, VA45, VB00, VB03			
Matrix (circle one)	Soil	Sediment	Oil Tissue
Extraction Method	Start Time/Date:		End Time/Date:
Soxhlet	7/9/12 1515		7/10/12 02:17

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	PD	7/9/12
Purified Sand		3/14/12	PD	7/9/12
Toluene		I7548	PD	7/9/12
Hexane		I7635	PD	7/10/12
CH_2Cl_2		I7357	PD	7/11/12
H_2SO_4		I7567	PD	7/10/12
Na_2SO_4		6/21/12	PD	7/11/12
Glasswool		5/18/12	PD	7/11/12
10 % $AgNO_3$	/			
Basic Silica		G933	PD	7/11/12
Acid Silica		G968	PD	7/11/12
0% Silica		I7104	PD	7/11/12
Activated Florisil		G789	PD	7/11/12
Dual Carbon Column	/			
Other ( )				
Nonane		I5167	PD	7/11/12

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap	Final Vol.	H20 Trap Vol (mL)	Comments
7/9/12	U299 MB	10.00g	(1)/2	10uL	1.0	
↓	↓ OPR	10.00g	1/(2)	10uL	1.1	
	~~QLS~~	~~10.00g~~	~~1/2~~	~~10uL~~		
3	U299 A	11.57	(1)/2	10uL	1.5	
1	VA45 A	12.69	1/(2)	10uL	3.4	
1	↓ B	10.61	(1)/2	10uL	0.6	
5	VB00 A	20.76	(1)/2	10uL	10.8	
1	VB03 A	14.24	1/(2)	10uL	4.0	
1	↓ B	10.74	1/(2)	10uL	0.6	
4	VB16 I	15.41	(1)/2	10uL	4.0	
4	↓ L	12.52	1/(2)	10uL	2.0	
1	VB33 A	11.65	(1)/2	10uL	1.5	
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
Prep Analyst/Date		PD 7/9/12	PD 7/10/12	PD 7/11/12	PD 7/10/11	

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	1976-2	2/4ng/mL	5/8/13	JW	7/9/12	PD
Ongoing Precision /Recovery	20 µL	1954-3	10/50/100ng/mL	2/17/13	JW	7/9/12	PD
~~QLS Standard~~	~~10 µL~~	~~211~~	~~0.5/2.5/5ng/mL~~				
Clean-up Standard	1.0 mL	1995-1	0.8ng/mL	6/27/13	PD	7/11/12	PD
Internal Standard	10 µL		200ng/mL				

Verify Client ID
Analyst/Date PD 7/9/12
Acid Clean
(Y/N)
Analyst/Date PD 7/10/12
Silica-Florisil
(Y/N)
Analyst/Date PD 7/11/12

U2990013

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin Extraction Laboratory – Glassware

ARI Sample ID: U299, VA45, VBØØ, VBØ3 Client Sample ID: N/A Client Project ID: N/A ARI Analyst PD

ARI Sample ID	300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	300 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Microwave Tube
U299 m/b	20	3		59		32	44	43	18				
↓ OPR	17	7		22		24	58	18	49				
↓ A	2	37		21		40	24	20	58				
VA45 A	41	9		24		22	55	6	66				
↓ B	24	12		41		23	2	~~2~~ 1	~~1~~ 10				
VBØØ A	32		19	47		18	5	10	15				
VBØ3 A	12	14		32		33	23	~~23~~ 12	20				
↓ B	25	48		3		34	50	3	33				
VB33 A	18	4		18	~~37~~	37	49	22	48				
VB16 I	8	15		12		7	62	11	69				
↓ L	6	16		42		30	22	19	8				

U299 : 00454

Dioxin Raw Data
Initial Calibration

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HR-GC/MS Analyst Notes / Corrective Action Log

ARI Project ID: _____ Client ID: _____

ARI SOP: **806S** (Dioxins)

Parameter(s): Dioxin Curve 5/3/12

Instrument: **AutoSpec01**

Curve Date: 5/3/12 Analysis Start Date: _____

Internal Standard Meets Criteria?	YES / NO	Method Blank in Control?	YES / NO
Extraction Std Recovery in Control?	YES / NO	IPR / OPR Recovery in Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes /NO

Special Analysis Criteria Met? YES / NO / NA

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

- All cmpds 6 pts: CSL → CS5. All < 30% RSD.
- Man Int for HxD and OCDD in CSL.

Additional Details on Reverse: Yes / No

Analyst: [signature] **Date:** 5/4/12

Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 5/3/12 Analysis: Dioxins Analyst: pk

GC Program: 8290C Column No: 985165 Column Type: RTXDioxin2

Inj Vol: 1ul Instrument Tune (IPR): 10K8290B Detector Voltage: 350

Resolution Check Files: 10:40, 20:46 Curve Date: 5/3/12

IS/SS	Ical/Ccal	LCS/ICV
I7436	I7333 - I7337	I7383
	I7214	
	1929-2	

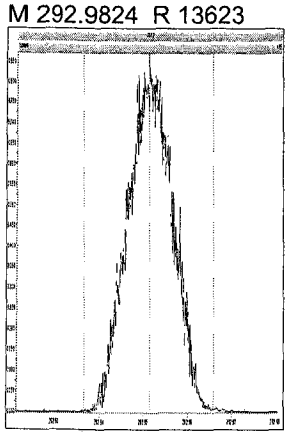
#	Acq.Date	Acq.Time	Name	ID	Pre...	RT	IS AREA	Comments
1	03-May-12	10:42:17	12050302	CS3	26.3	26.3	3856988	
2	03-May-12	11:37:23	12050303	TETRA RES	26.3			
3	03-May-12	12:27:37	12050304	CSL	26.3	26.3	3051040	
4	03-May-12	15:26:24	12050305	CS1	26.3	26.3	2983027	
5	03-May-12	16:19:31	12050306	CS2	26.3	26.3	3059147	
6	03-May-12	17:09:55	12050307	CS3	26.3	26.3	2994466	
7	03-May-12	18:02:13	12050308	CS4	26.3	26.3	3085134	
8	03-May-12	18:54:20	12050309	CS5	26.3	26.3	3297841	
9	03-May-12	19:46:34	12050310	ICV	26.3	26.3	3008147	

pk 5/4/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Printed: Thursday, May 03, 2012 10:40:13 Pacific Daylight Time

M 292.9824 R 13623



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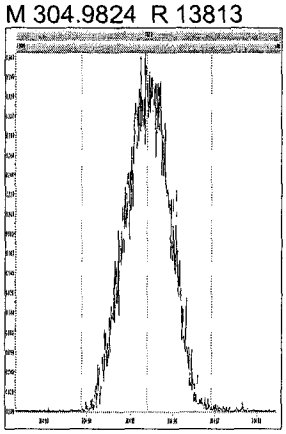

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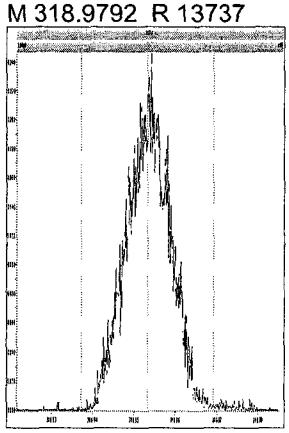

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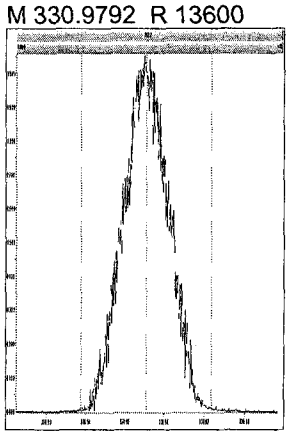

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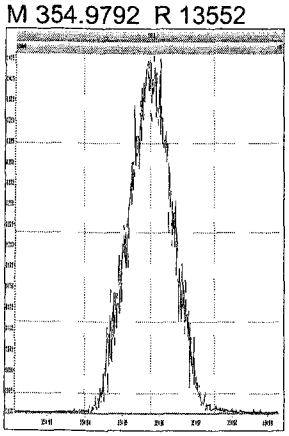

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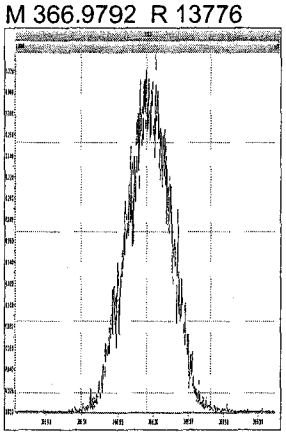

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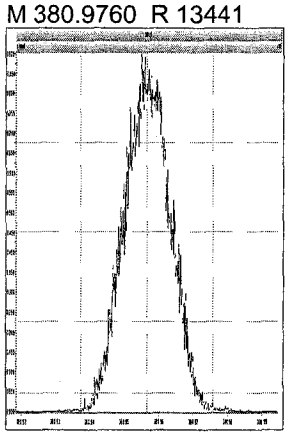

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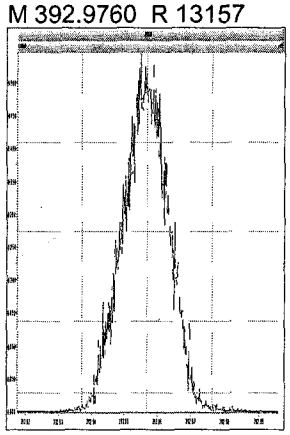

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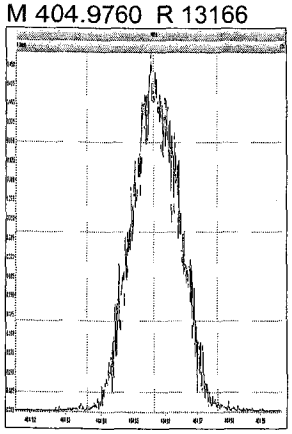

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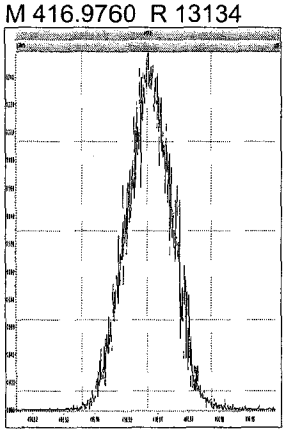

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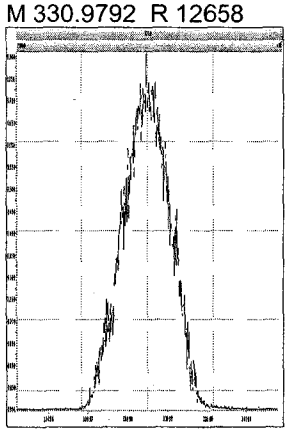

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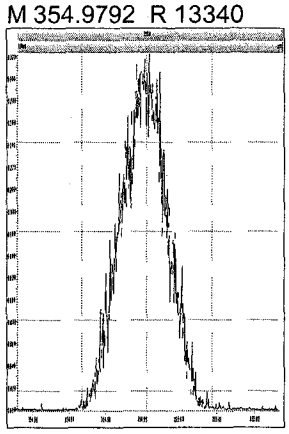

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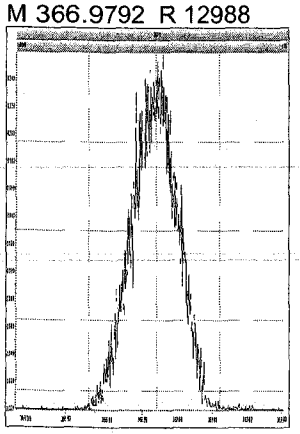

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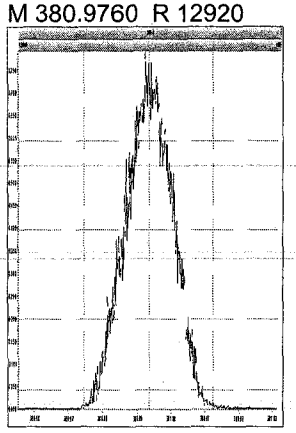

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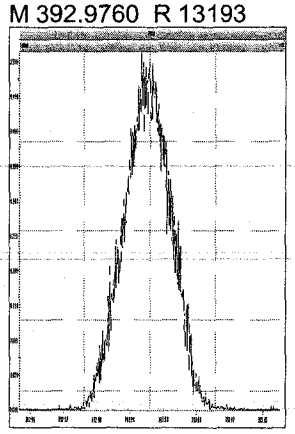

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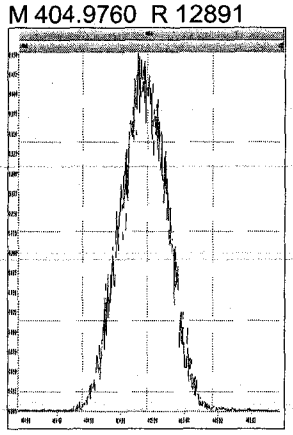

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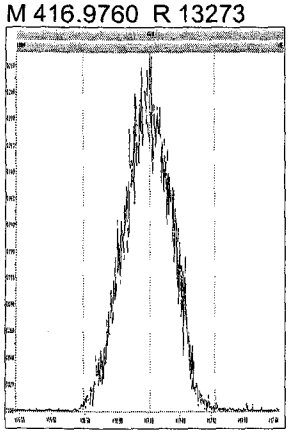

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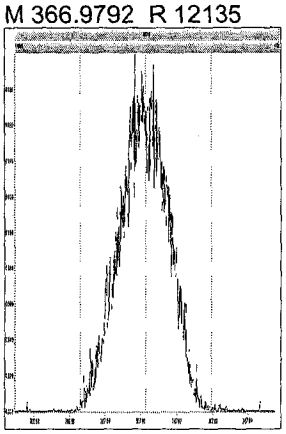

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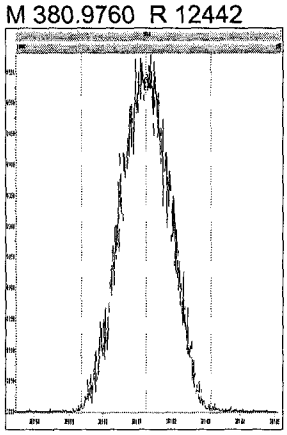

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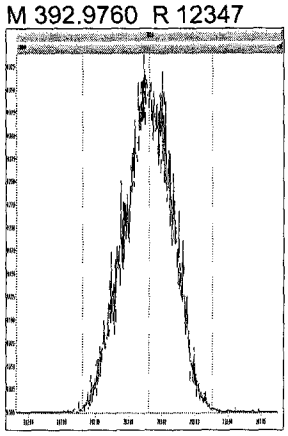

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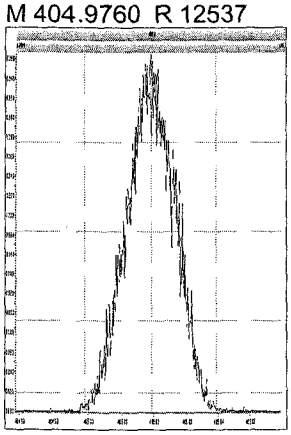

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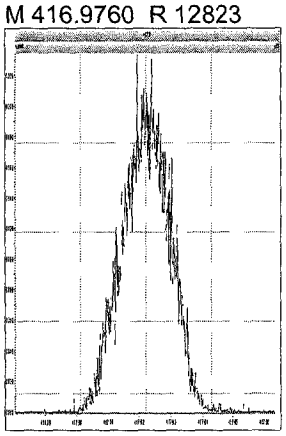

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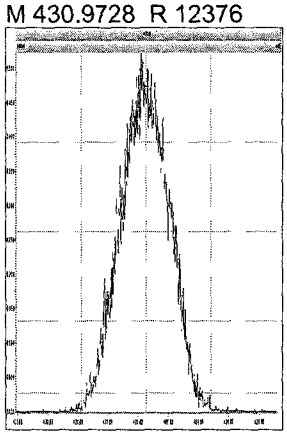

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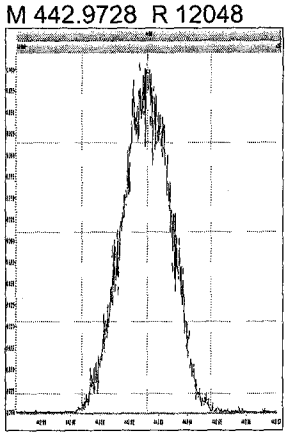

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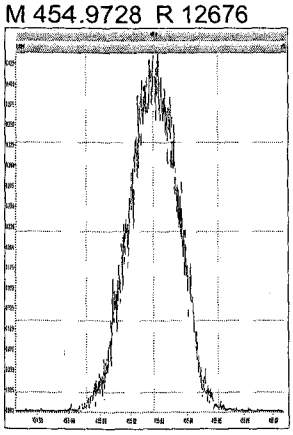

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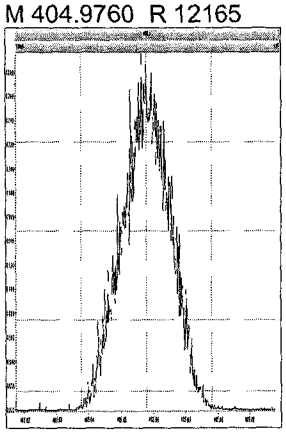

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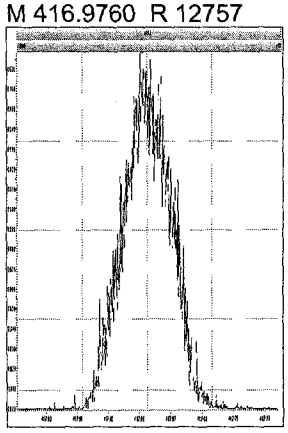

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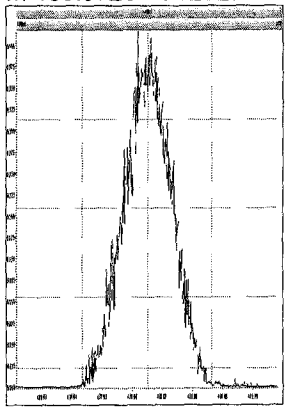

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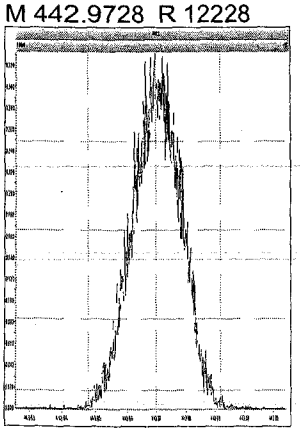

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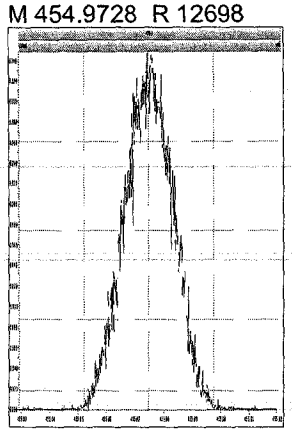

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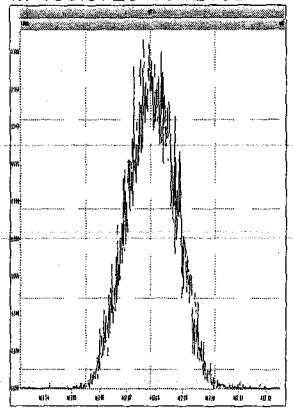

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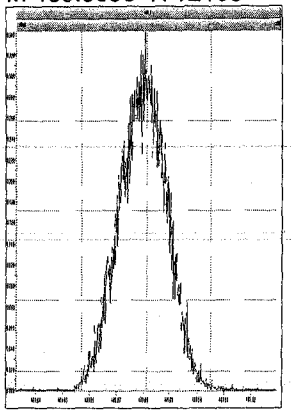

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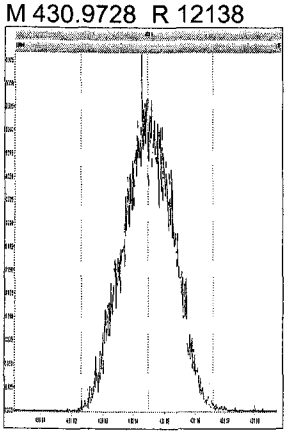

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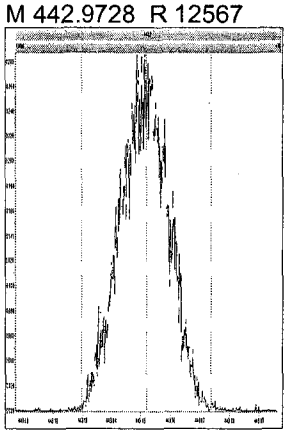

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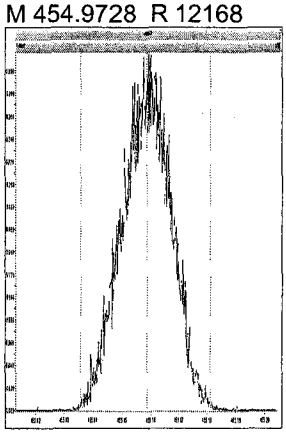

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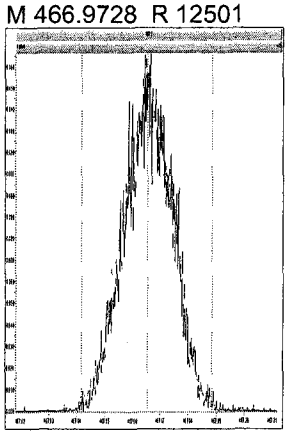

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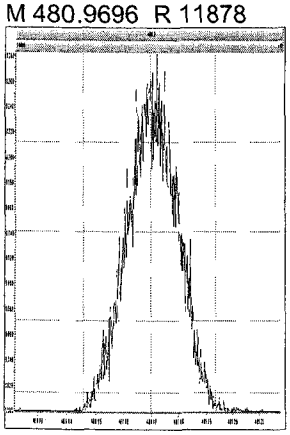

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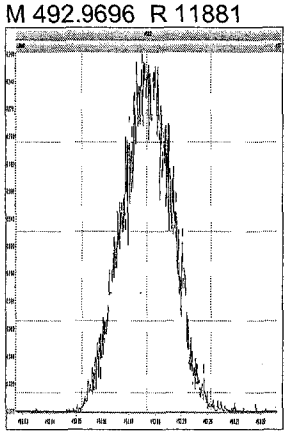

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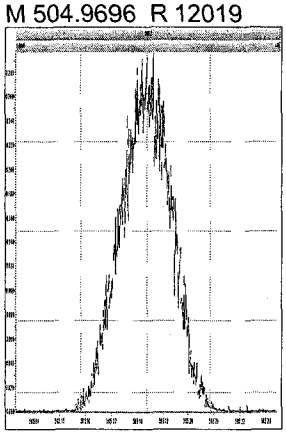

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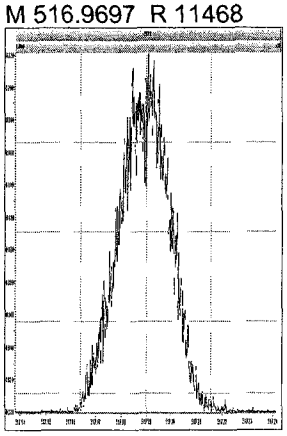

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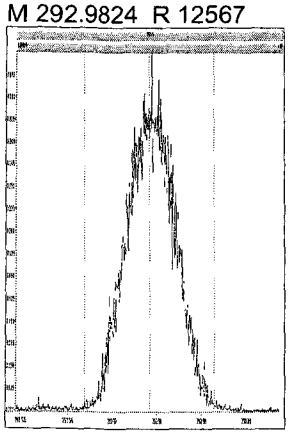

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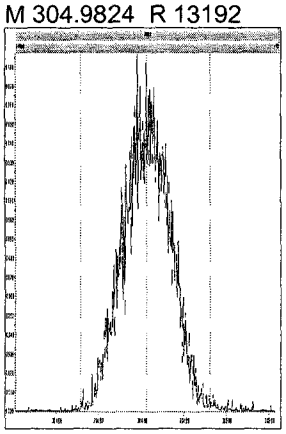

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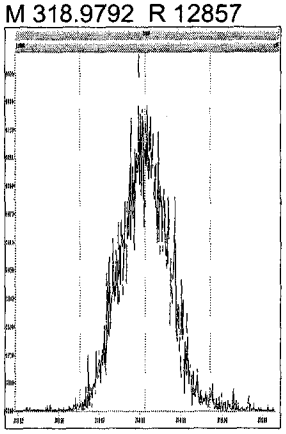

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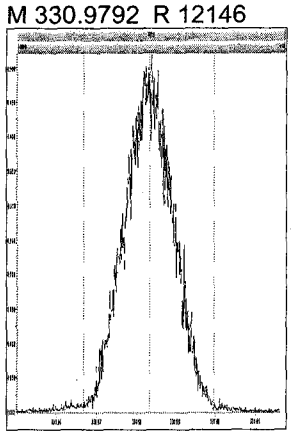

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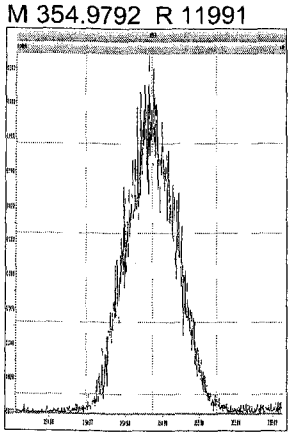

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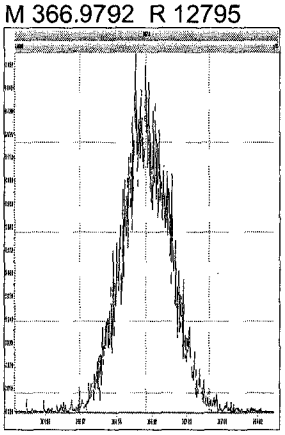

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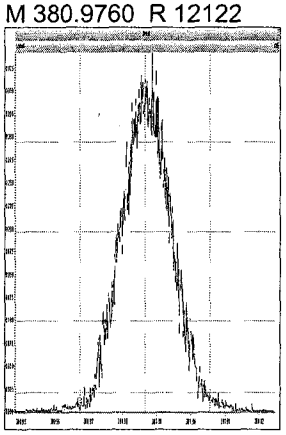

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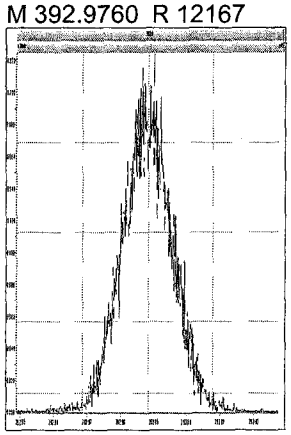

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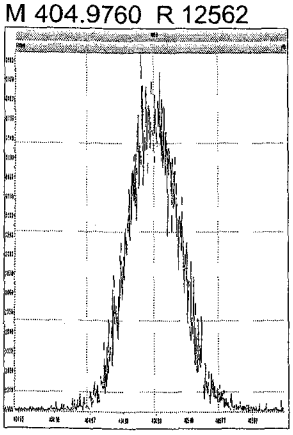

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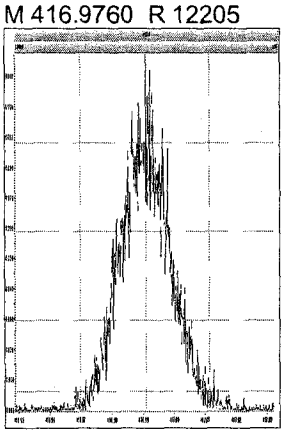

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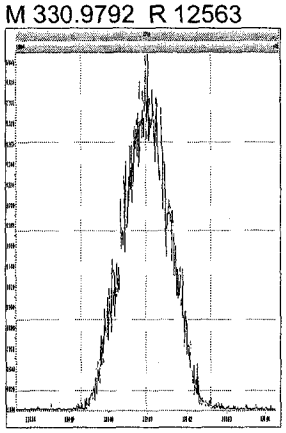

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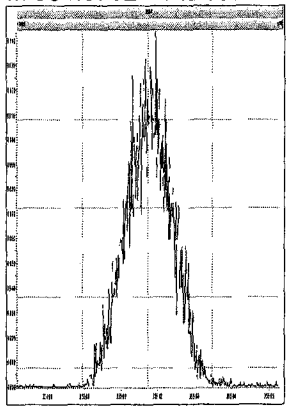

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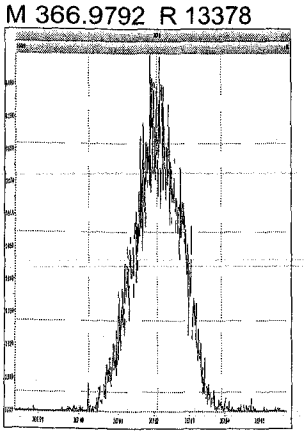
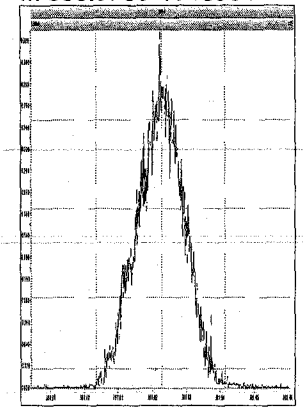
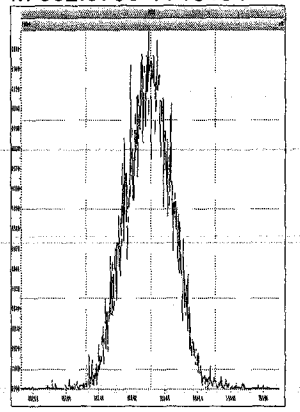


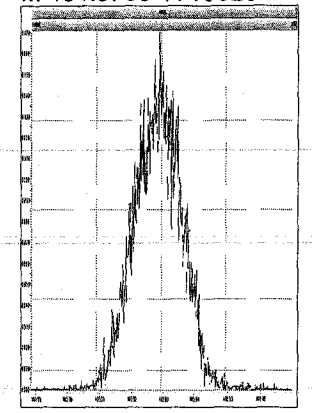
M 380.9760 R 13354



M 392.9760 R 13194



M 404.9760 R 13020



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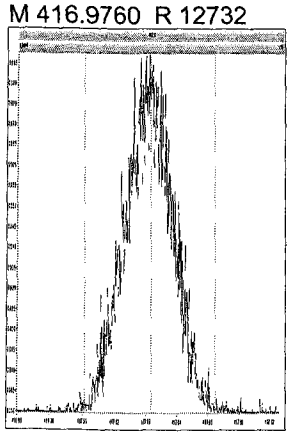
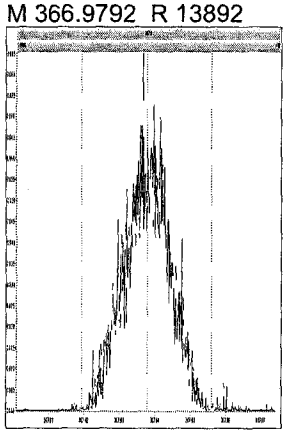
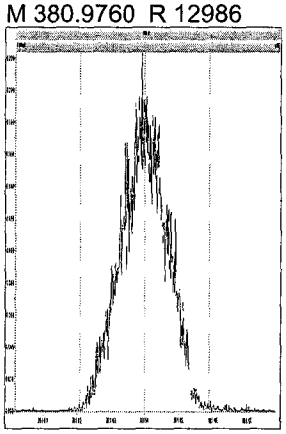
M 416.9760 R 12732



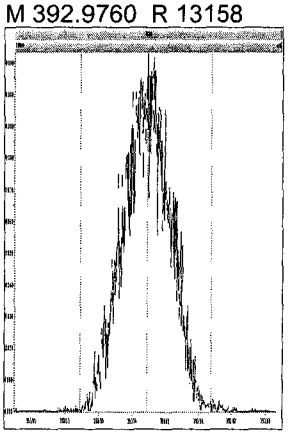
M 366.9792 R 13892



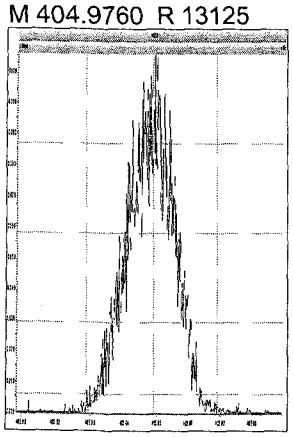
M 380.9760 R 12986



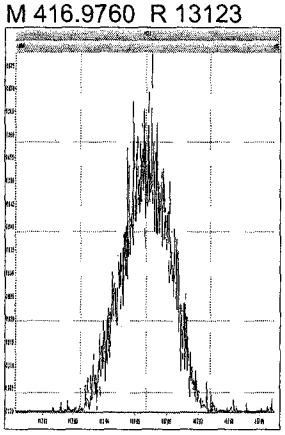
M 392.9760 R 13158



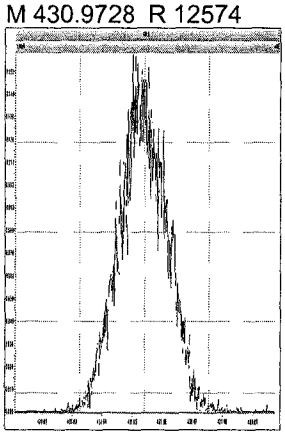
M 404.9760 R 13125



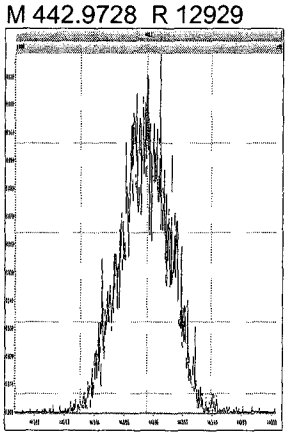
M 416.9760 R 13123



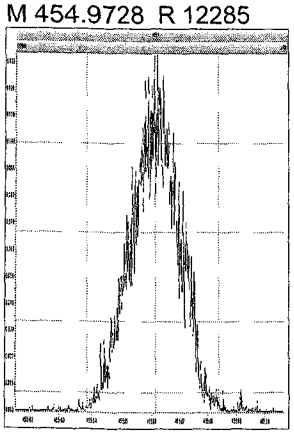
M 430.9728 R 12574



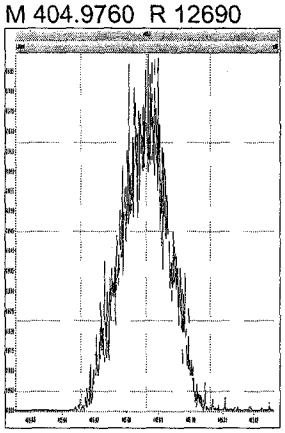
M 442.9728 R 12929



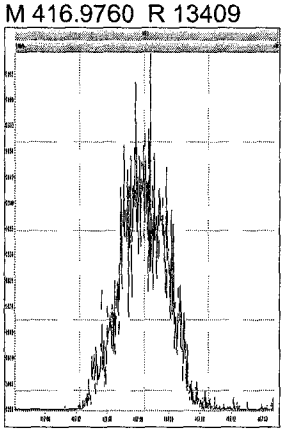
M 454.9728 R 12285



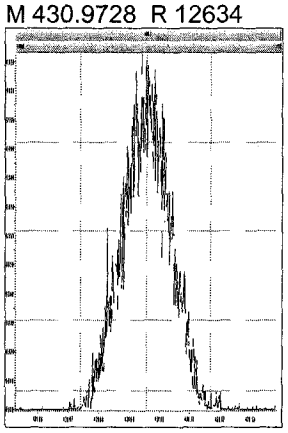
M 404.9760 R 12690



M 416.9760 R 13409



M 430.9728 R 12634



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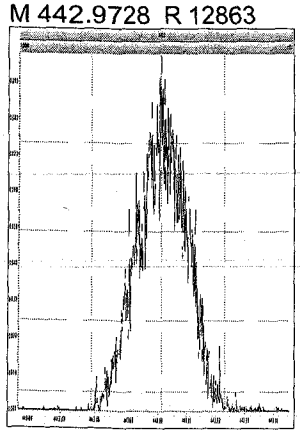

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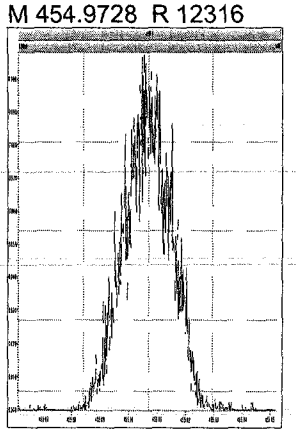
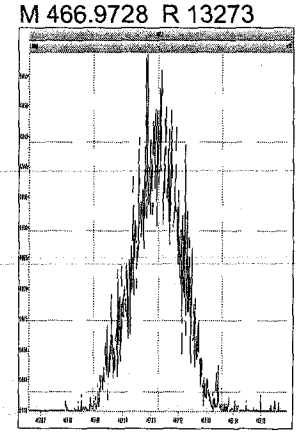
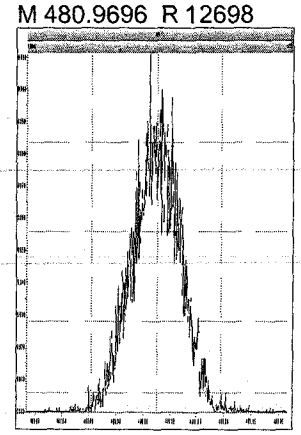


M 466.9728 R 13273



M 480.9696 R 12698



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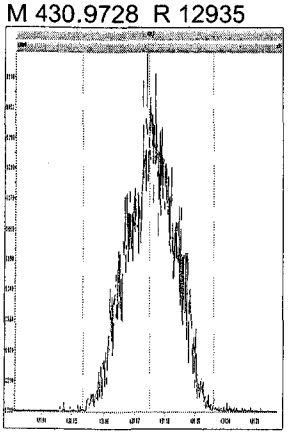
M 430.9728 R 12935



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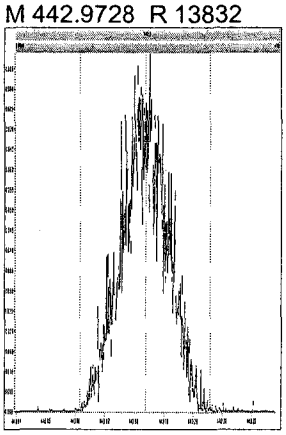
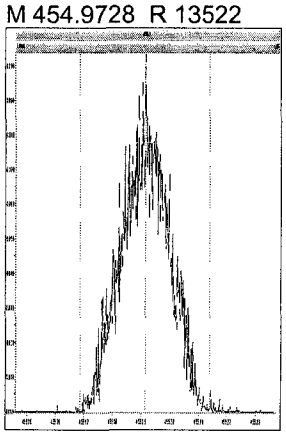
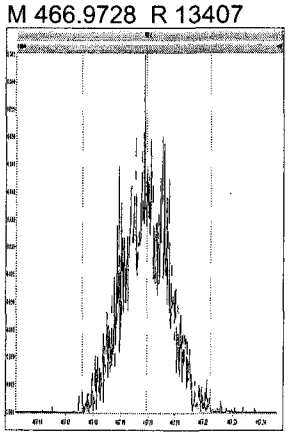


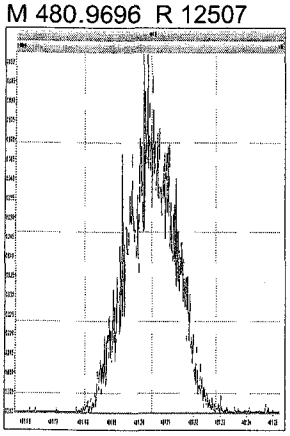
M 454.9728 R 13522



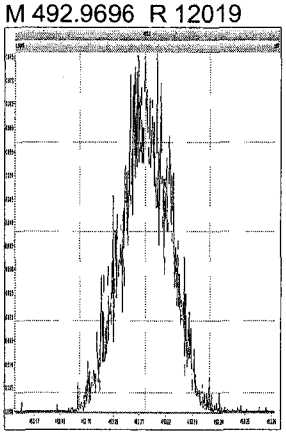
M 466.9728 R 13407



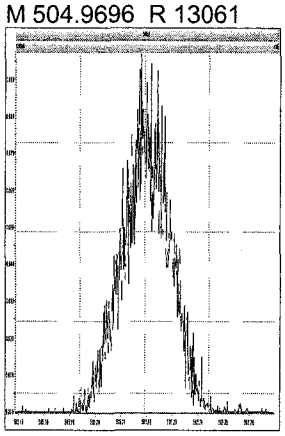
M 480.9696 R 12507



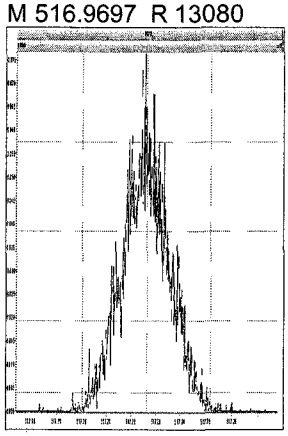
M 492.9696 R 12019

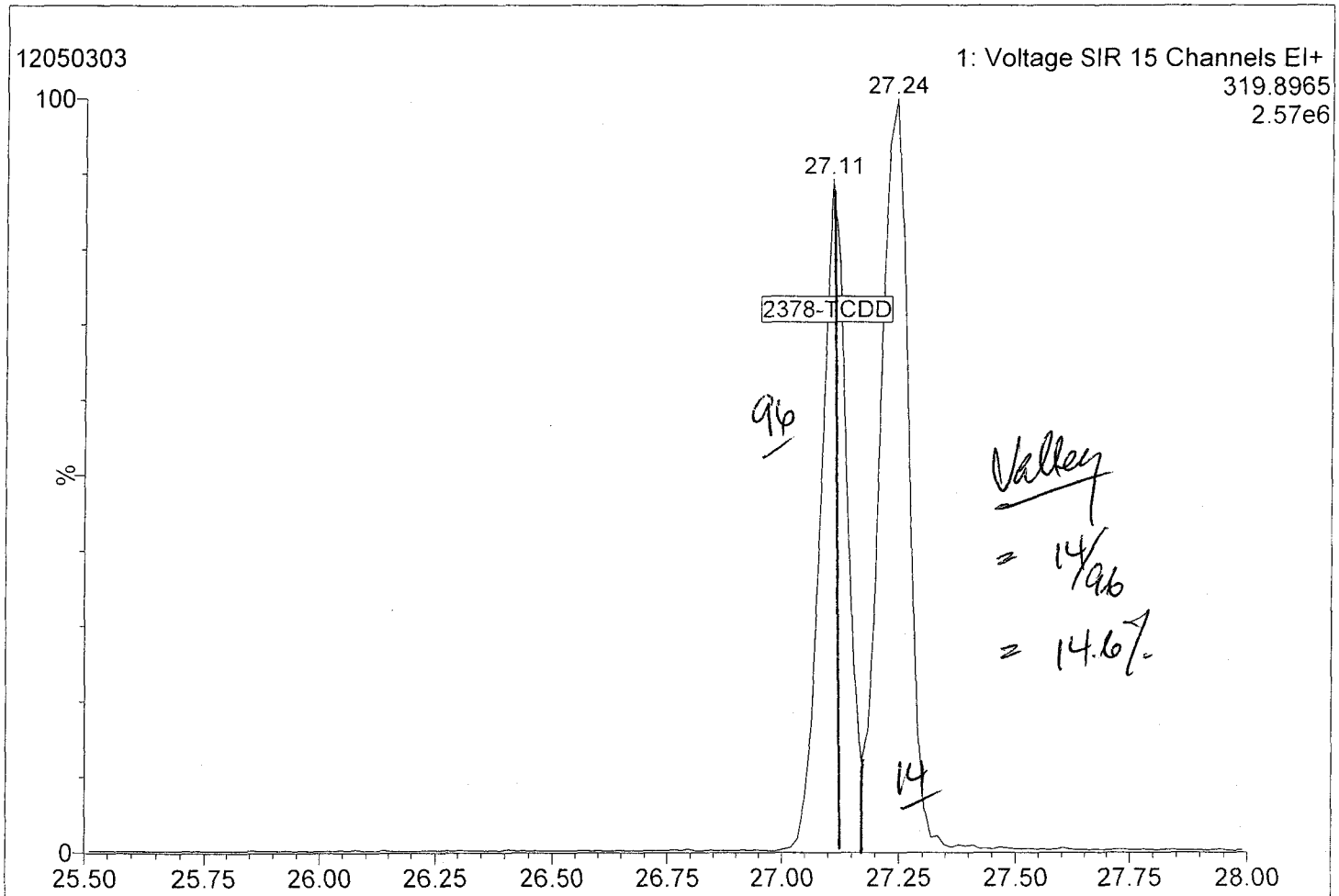


M 504.9696 R 13061



M 516.9697 R 13080

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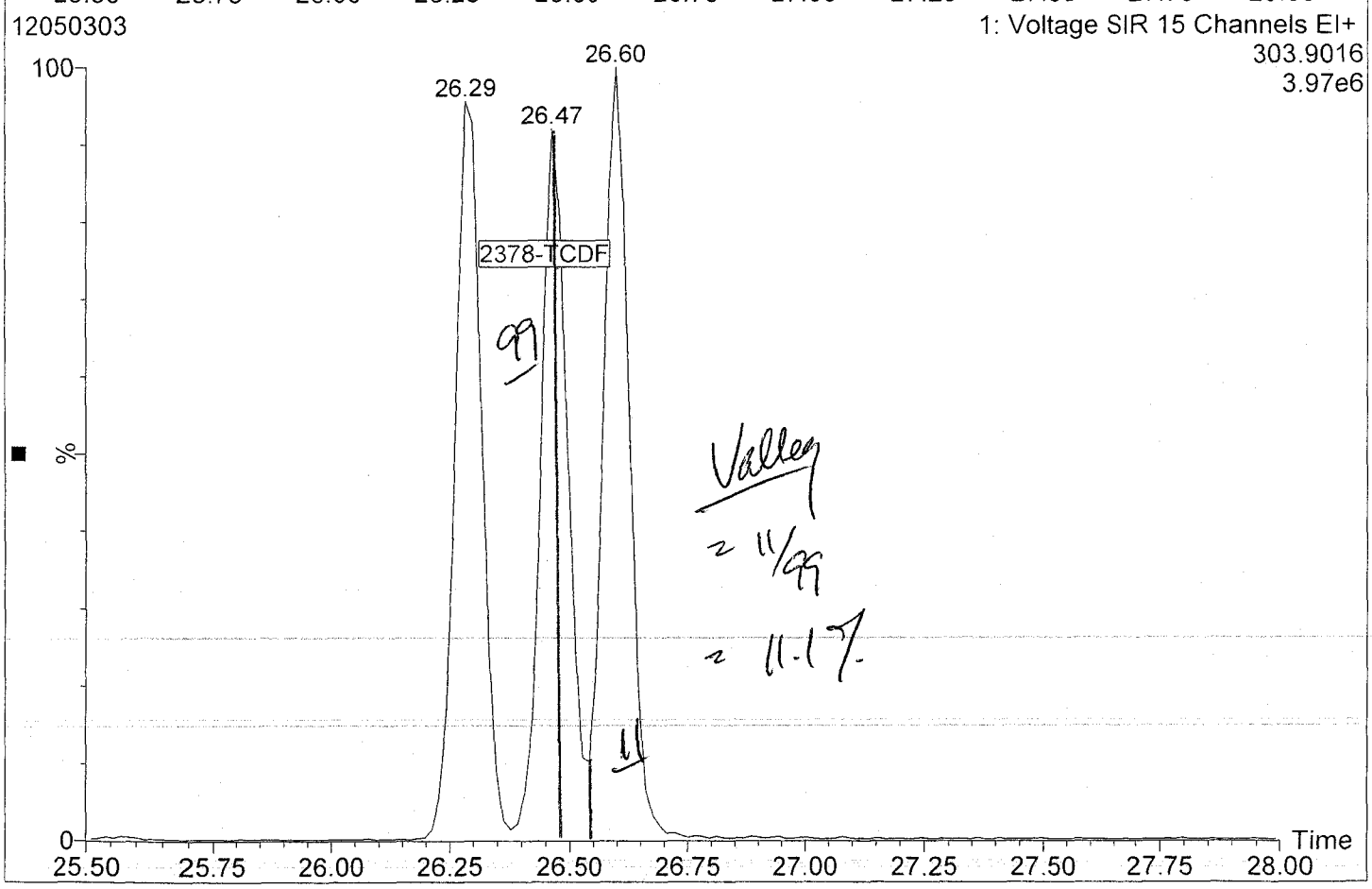
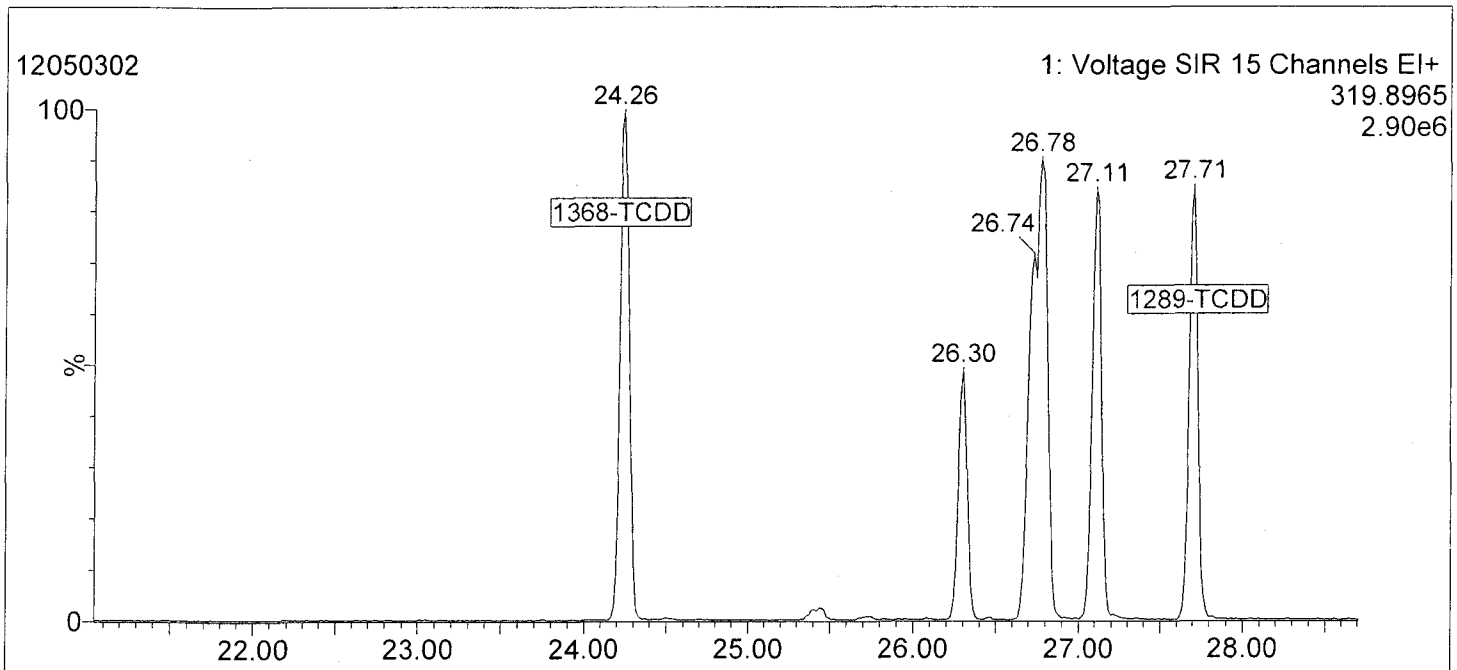
1: Voltage SIR 15 Channels EI+
319.8965
2.57e6
27.24
27.11
2378-TCDD
96
14
Valley
= 14/96
= 14.6%
100
%
0
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00


12050303
1: Voltage SIR 15 Channels EI+
303.9016
3.97e6
26.60
26.29
26.47
2378-TCDF
99
11
Valley
= 11/99
= 11.1%
100
%
0
Time
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00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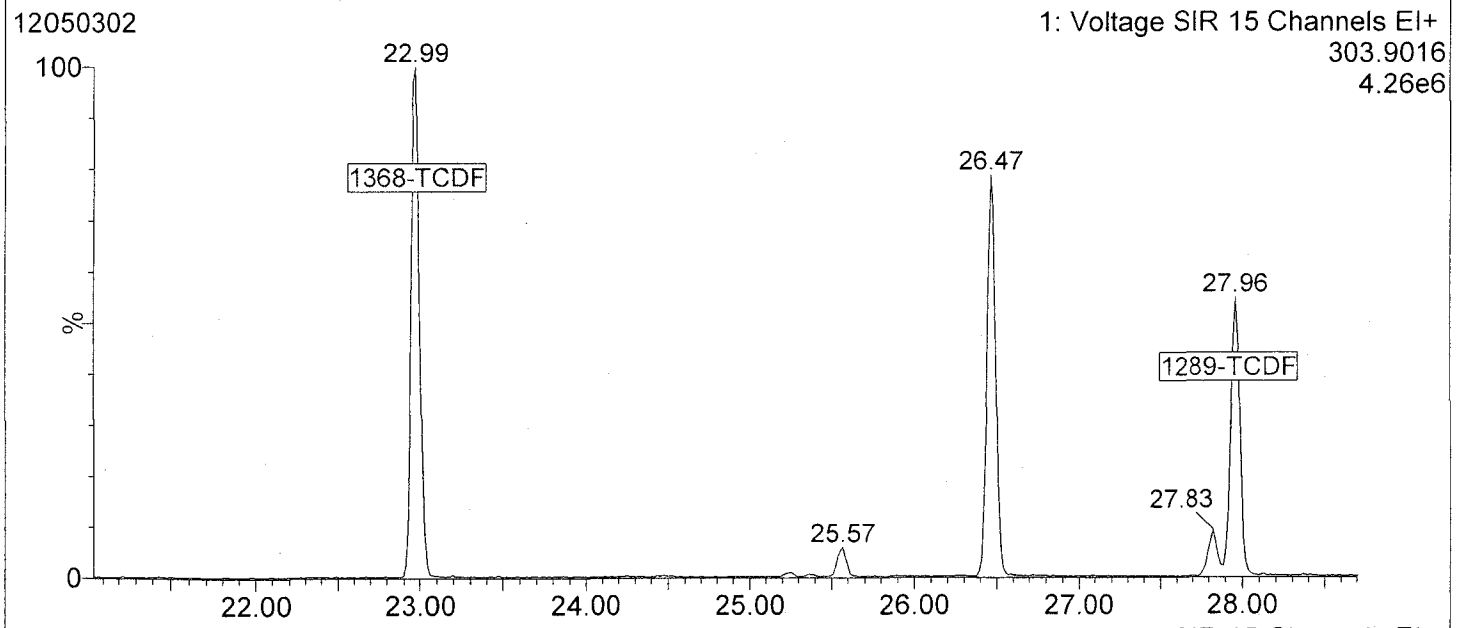
2.90e6
100
%
0
24.26
1368-TCDD
26.30
26.74
26.78
27.11
27.71
1289-TCDD
22.00
23.00
24.00
25.00
26.00
27.00
28.00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4.26e6
100
%
0
22.99
1368-TCDF
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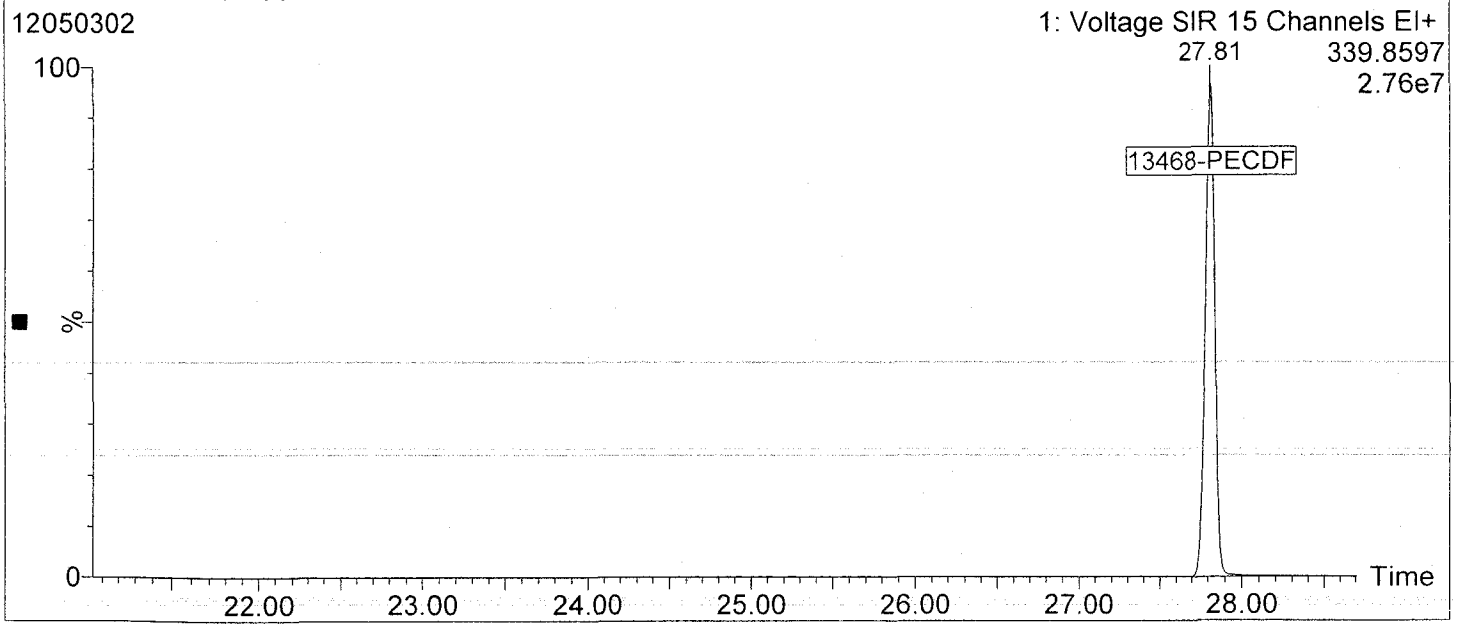
26.47
27.83
27.96
1289-TCDF
22.00
23.00
24.00
25.00
26.00
27.00
28.00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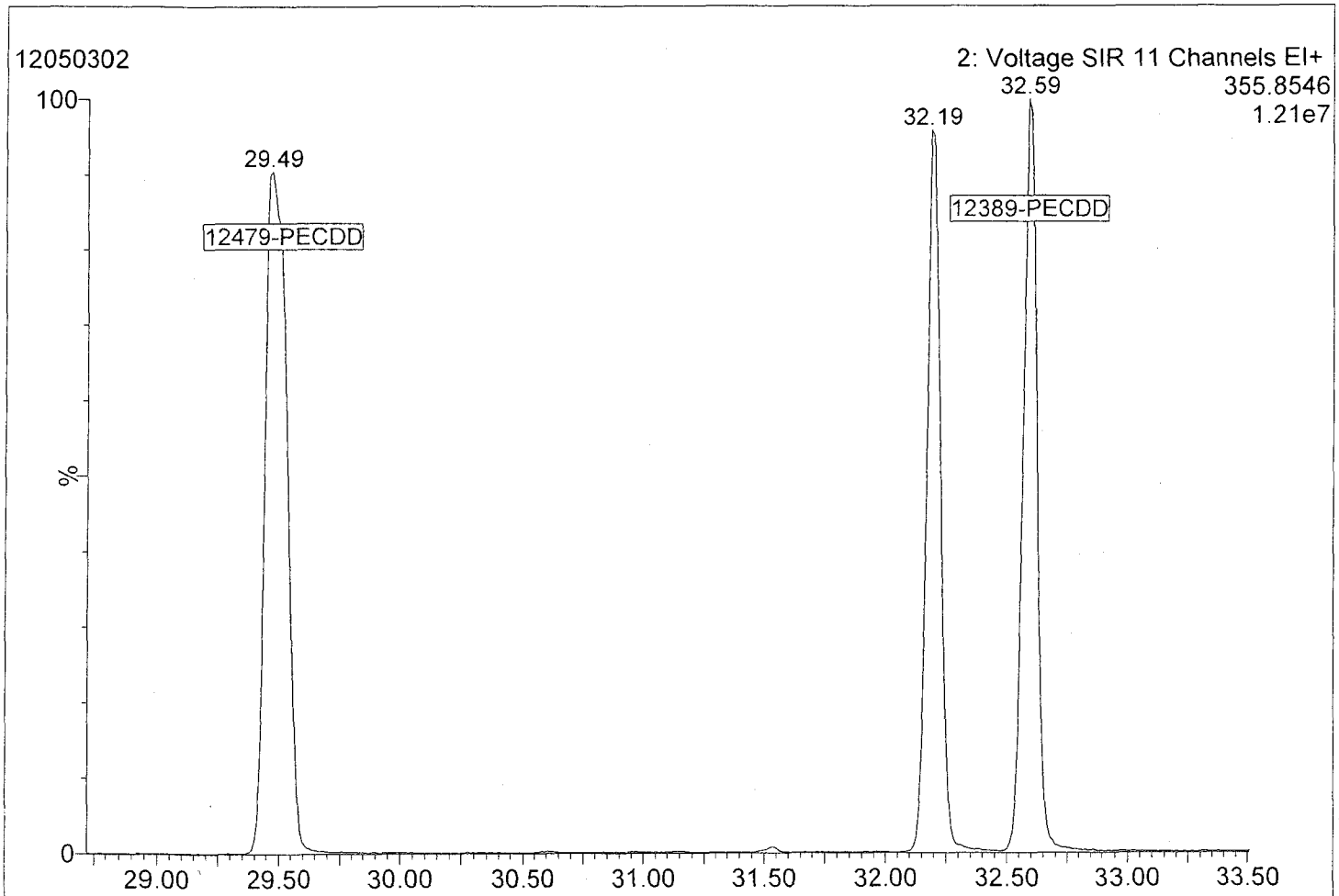
2.76e7
100
%
0
27.81
13468-PECDF
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00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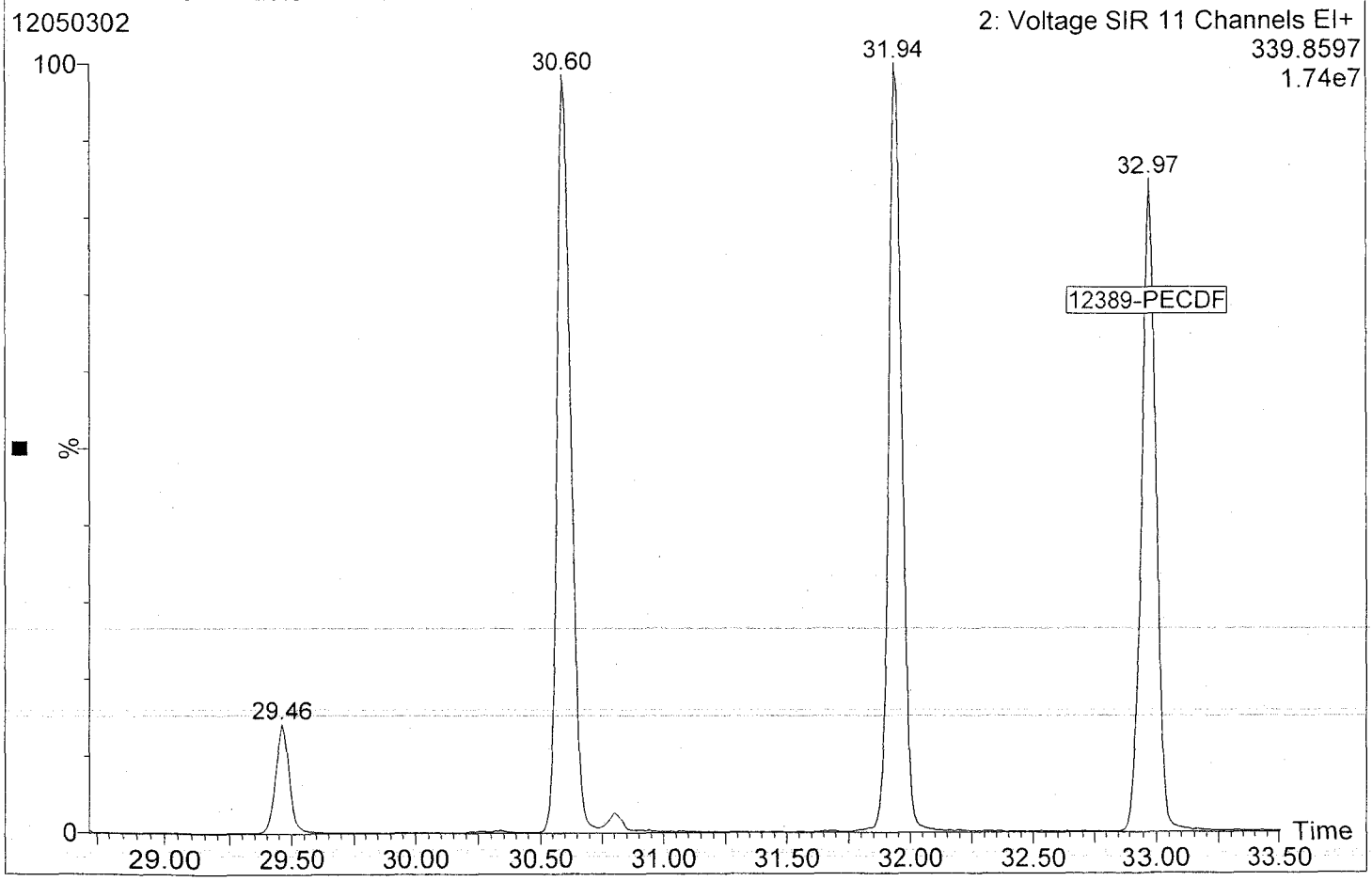
1.21e7
100
%
0
29.49
12479-PECDD
32.19
32.59
12389-PECDD
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50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2: Voltage SIR 11 Channels EI+
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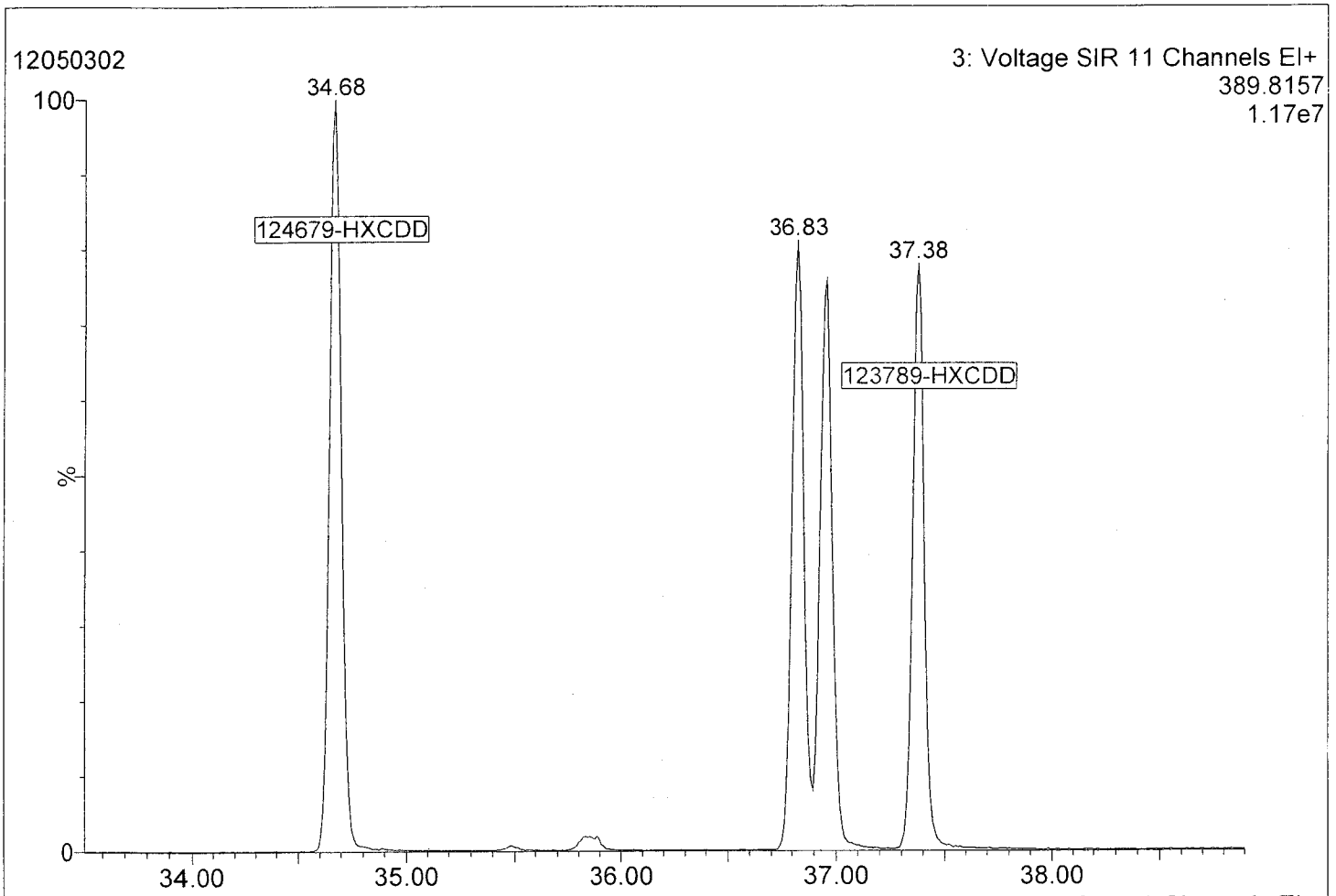
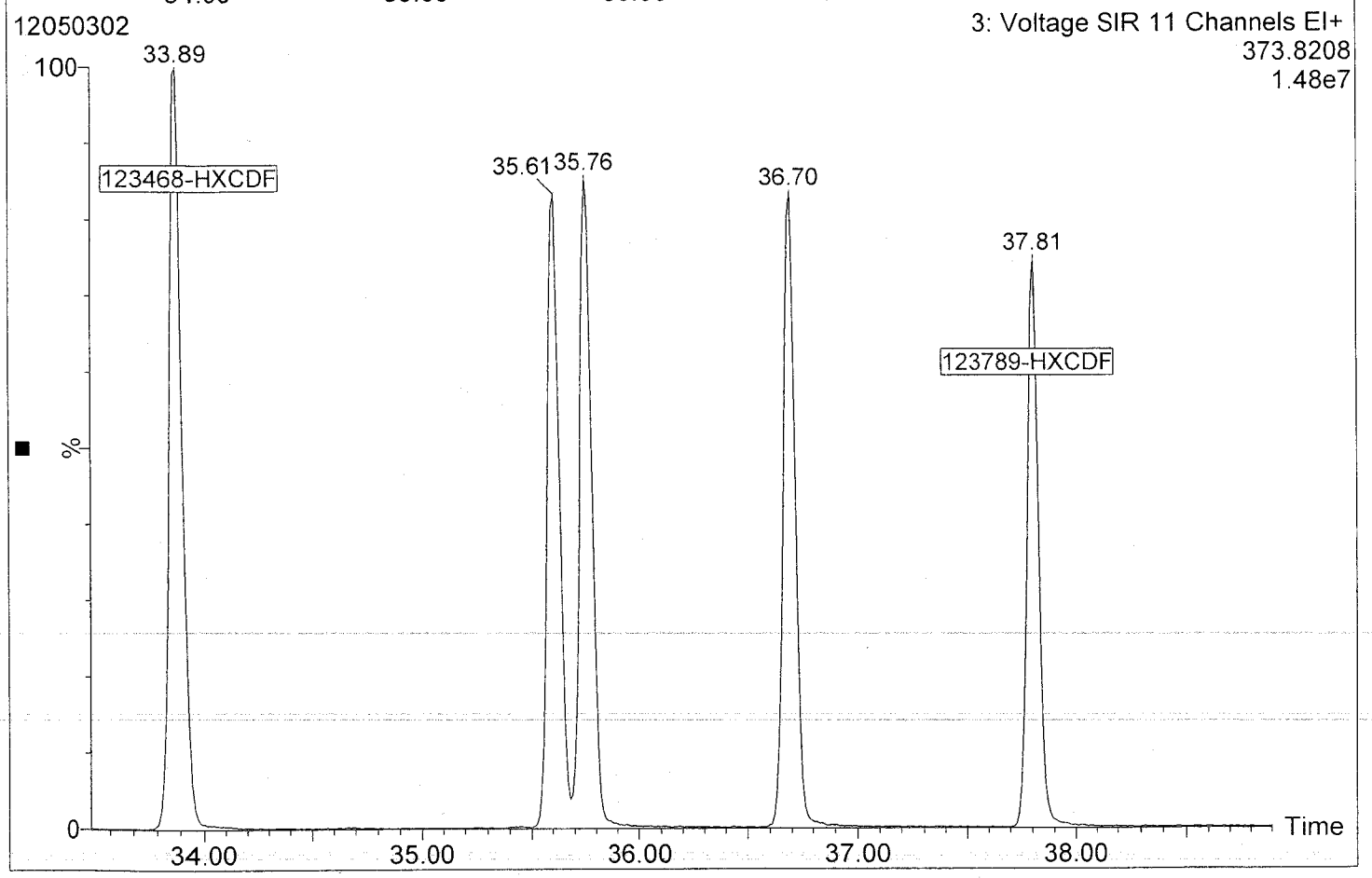
1.74e7
100
%
0
29.46
30.60
31.94
32.97
12389-PECDF
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


12050302
3: Voltage SIR 11 Channels EI+
389.8157
1.17e7
100
%
0
34.68
124679-HXCDD
36.83
37.38
123789-HXCDD
34.00
35.00
36.00
37.00
38.00


12050302
3: Voltage SIR 11 Channels EI+
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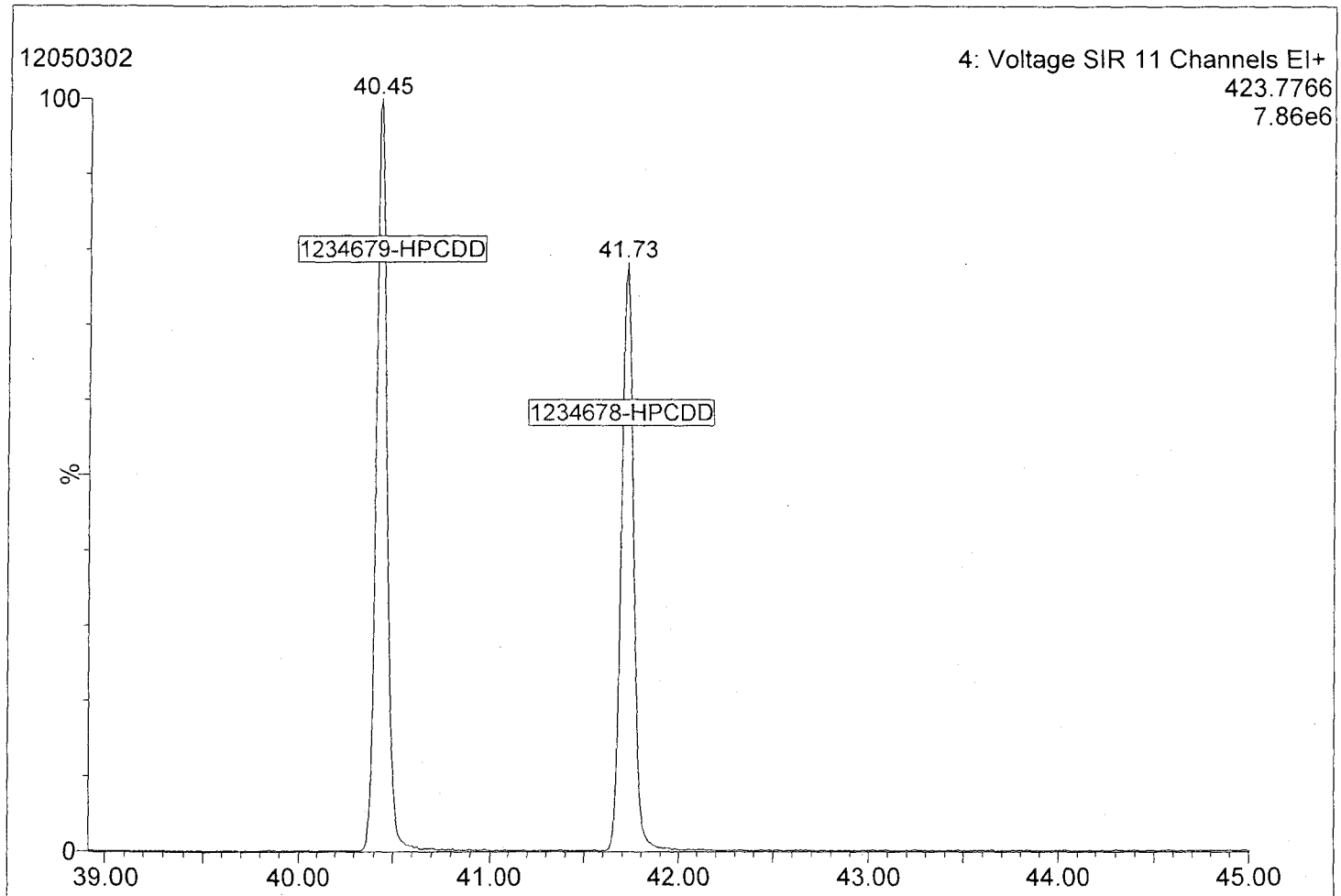
1.48e7
100
%
0
33.89
123468-HXCDF
35.61
35.76
36.70
37.81
123789-HXCDF
Time
34.00
35.00
36.00
37.00
38.00


12050302
4: Voltage SIR 11 Channels EI+
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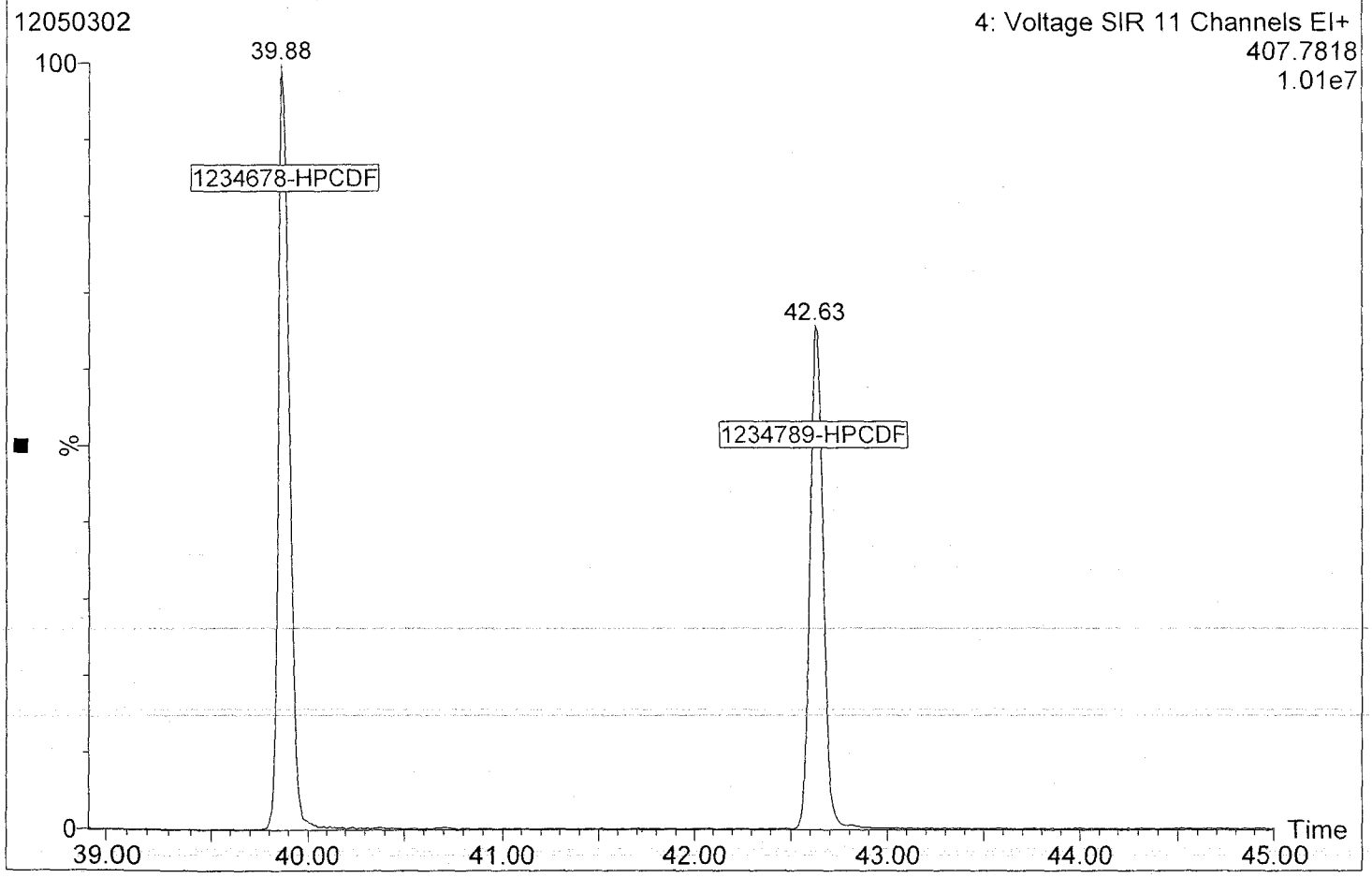
7.86e6
100
%
0
40.45
1234679-HPCDD
41.73
1234678-HPCDD
39.00
40.00
41.00
42.00
43.00
44.00
45.00


12050302
4: Voltage SIR 11 Channels EI+
407.7818
1.01e7
100
%
0
39.88
1234678-HPCDF
42.63
1234789-HPCDF
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.466	26.468	4156	4156	0.866	bb	107.4	0.73	0.77	22.1	NO	0.107	0.107
2	2	12378-PeCDF	339.8597	30.615	30.615	13131	13131	0.907	bb	98.1	1.73	1.55	96.5	NO	0.491	0.491
3	3	23478-PeCDF	339.8597	31.952	31.953	13091	13091	0.936	bb	98.7	1.62	1.55	103.5	NO	0.494	0.494
4	4	123478-HxCDF	373.8208	35.613	35.602	10268	10268	1.082	bd	98.2	1.23	1.24	82.9	NO	0.491	0.491
5	5	234678-HxCDF	373.8208	36.698	36.709	10548	10548	1.070	bd	98.3	1.24	1.24	82.0	NO	0.491	0.491
6	6	123678-HxCDF	373.8208	35.756	35.766	10657	10657	1.048	db	96.5	1.21	1.24	94.4	NO	0.482	0.482
7	7	123789-HxCDF	373.8208	37.806	37.806	9105	9105	1.020	bb	103.4	1.24	1.24	75.5	NO	0.517	0.517
8	8	1234678-HpCDF	407.7818	39.888	39.897	9449	9449	1.214	bb	94.2	0.92	1.05	131.9	NO	0.471	0.471
9	9	1234789-HpCDF	407.7818	42.650	42.641	8126	8126	1.254	bb	106.5	1.19	1.05	92.3	NO	0.533	0.533
10	10	OCDF	441.7428	48.040	48.030	12627	12627	1.105	bb	99.5	0.81	0.89	84.4	NO	0.995	0.995
11	11	2378-TCDD	319.8965	27.124	27.108	3383	3383	1.046	bd	113.9	0.72	0.77	18.3	NO	0.114	0.114
12	12	12378-PeCDD	355.8546	32.204	32.192	9327	9327	0.973	bb	102.3	1.60	1.55	88.4	NO	0.511	0.511
13	13	123478-HxCDD	389.8157	36.830	36.841	7574	7574	0.935	bd	96.5	1.11	1.24	89.2	NO	0.482	0.482
14	14	123678-HxCDD	389.8157	36.961	36.962	7437	7437	0.878	db	94.4	1.15	1.24	76.9	NO	0.472	0.472
15	15	123789-HxCDD	389.8157	37.378	37.357	6932	6932	0.839	MM	95.2	1.41	1.24	87.0	NO	0.476	0.476
16	16	1234678-HpCDD	423.7766	41.729	41.731	6310	6310	0.974	bb	96.2	0.99	1.05	113.7	NO	0.481	0.481
17	17	OCDD	457.7377	47.770	47.758	10594	10594	0.950	bb	97.1	0.89	0.89	185.0	NO	0.971	0.971
18	18	13C-2378-TCDF	315.9419	26.452	26.467	4467983		1.484	bb	98.7	0.77	0.77	9988.1	NO	98.652	
19	19	13C-12378-PeCDF	351.9000	30.593	30.608	2950887		1.048	bb	92.3	1.55	1.55	6795.8	NO	92.281	
20	20	13C-23478-PeCDF	351.9000	31.930	31.945	2833219		1.003	bb	92.5	1.56	1.55	6546.7	NO	92.548	
21	21	13C-123478-HxCDF	383.8639	35.591	35.591	1933351		1.186	bd	100.0	0.52	0.51	2426.1	NO	100.026	
22	22	13C-123678-HxCDF	383.8639	35.745	35.745	2107068		1.315	db	98.3	0.52	0.51	2606.8	NO	98.283	
23	23	13C-234678-HxCDF	383.8639	36.687	36.676	2006640		1.223	bb	100.6	0.53	0.51	2495.3	NO	100.621	
24	24	13C-123789-HxCDF	383.8639	37.794	37.784	1726146		1.056	bb	100.2	0.53	0.51	2259.4	NO	100.222	
25	25	13C-1234678-HpCDF	417.8253	39.877	39.866	1651323		1.011	bb	100.2	0.45	0.44	2803.8	NO	100.150	
26	26	13C-1234789-HpCDF	417.8253	42.628	42.617	1216771		0.741	bd	100.8	0.45	0.44	1788.2	NO	100.787	
27	27	13C-1234-TCDD	331.9368	26.287	26.272	3051040		1.000	bb	100.0	0.77	0.77	5925.3	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.094	27.109	2840475		0.956	bb	97.3	0.77	0.77	5300.2	NO	97.345	
29	29	13C-12378-PeCDD	367.8949	32.182	32.198	1874461		0.663	bb	92.6	1.61	1.55	8507.5	NO	92.602	
30	30	13C-123478-HxCDD	401.8559	36.819	36.808	1678314		1.024	bd	100.5	1.26	1.24	4678.1	NO	100.545	
31	31	13C-123678-HxCDD	401.8559	36.951	36.939	1795151		1.113	db	99.0	1.26	1.24	4804.7	NO	98.970	
32	32	13C-1234678-HpCDD	435.8169	41.718	41.719	1346930		0.815	bd	101.4	1.04	1.05	3595.6	NO	101.361	
33	33	13C-OCDD	469.7779	47.743	47.735	2295902		0.717	bb	98.2	0.90	0.89	3009.1	NO	196.397	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.367	37.368	1630243		1.000	bb	100.0	1.23	1.24	4620.3	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.490			0.866							0.107	0.107
36	36	Total-penta1	339.8597		28.270											
37	37	Total-pentafurans	339.8597		30.840			0.921							0.984	0.995
38	38	Total-hexafurans	373.8208		35.860			1.055							1.982	1.982
39	39	Total-heptafurans	407.7818		41.270			1.234							1.004	1.004
40	40	Total-Furans	303.9016		0.000			1.050							5.072	5.083
41	41	Total-tetradioxins	319.8965		26.000			1.046							0.114	0.129
42	42	Total-pentadioxins	355.8546		31.040			0.973							0.511	0.511
43	43	Total-hexadioxins	389.8157		36.030			0.884							1.430	1.430
44	44	Total-heptadioxins	423.7766		41.090			0.974							0.481	0.481
45	45	Total-Dioxins	319.8965		0.000			0.942							3.508	3.522
46	46	Total-TEQ	319.8965		0.000										8.580	8.606
47	47	37CL-2378-TCDD	327.8847	27.109	27.102	3250		1.037		102.7			23.8		0.103	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000											
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

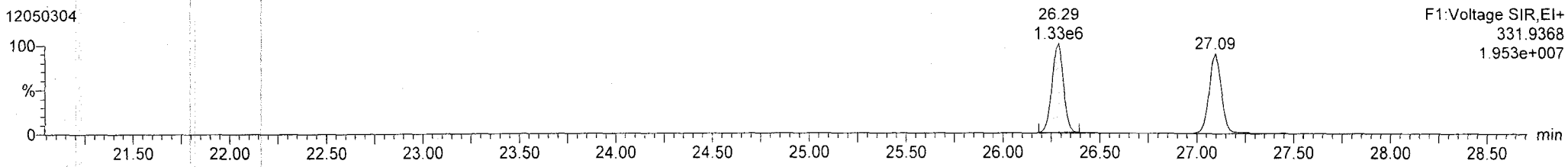
0259 : 00470

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

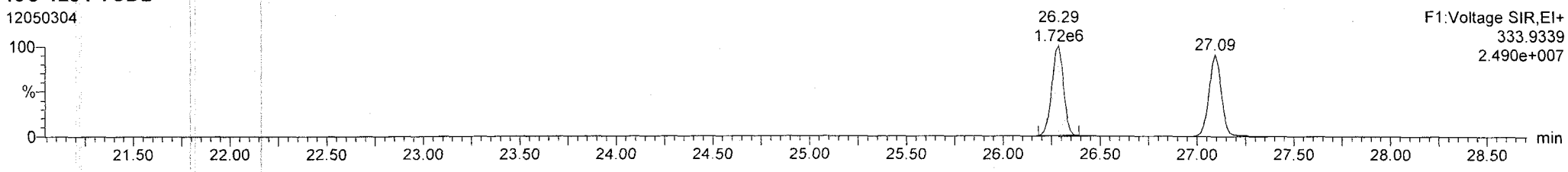
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

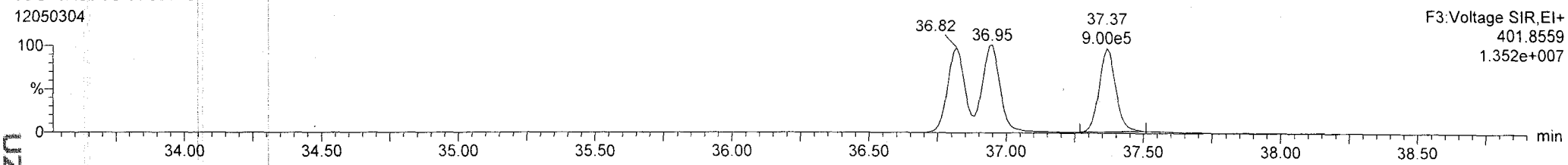
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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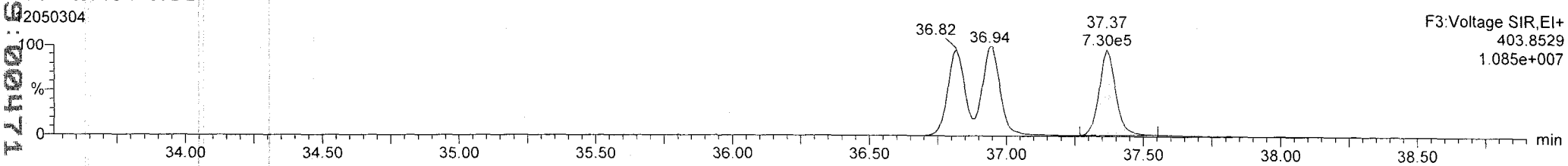
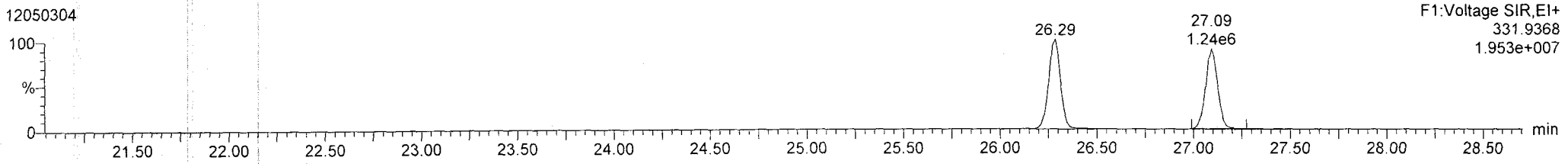


UZ99 : 00ЧГ1

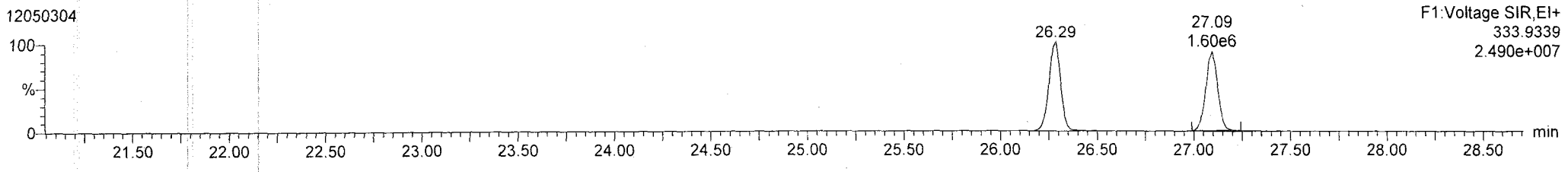
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

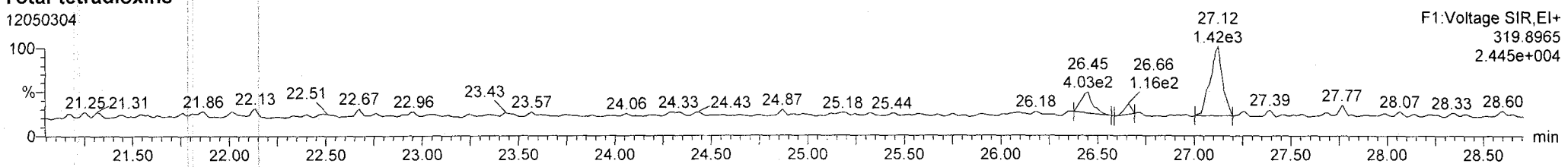
13C-2378-TCDD



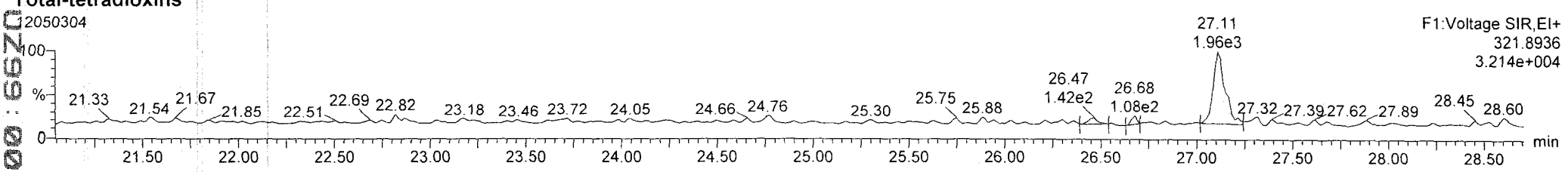
13C-2378-TCDD



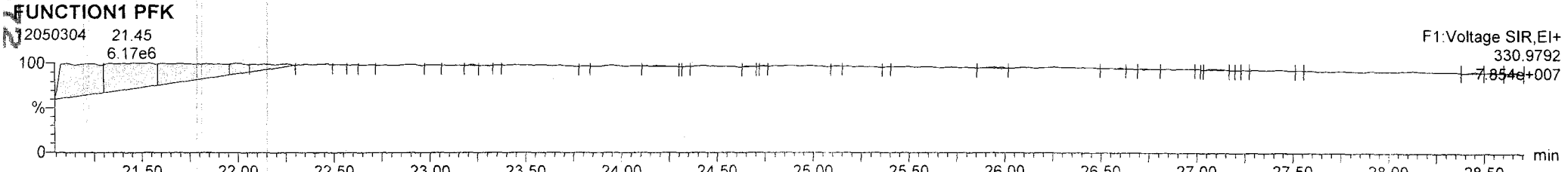
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



00472 : 0799

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
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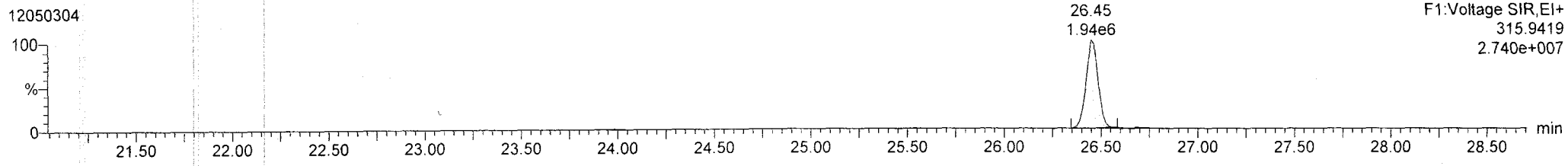
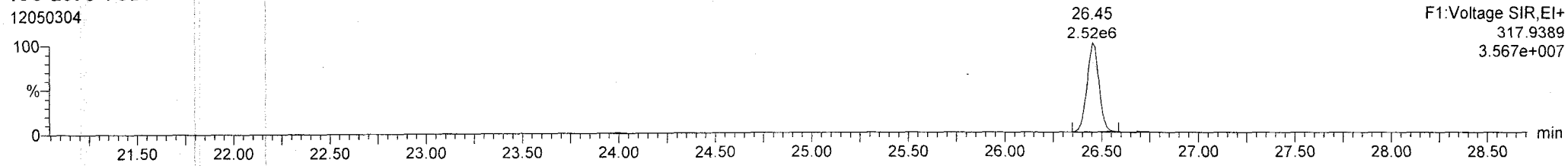
Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

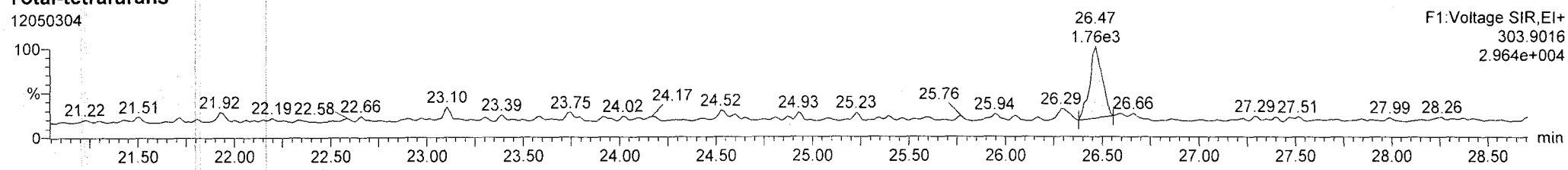
13C-2378-TCDF



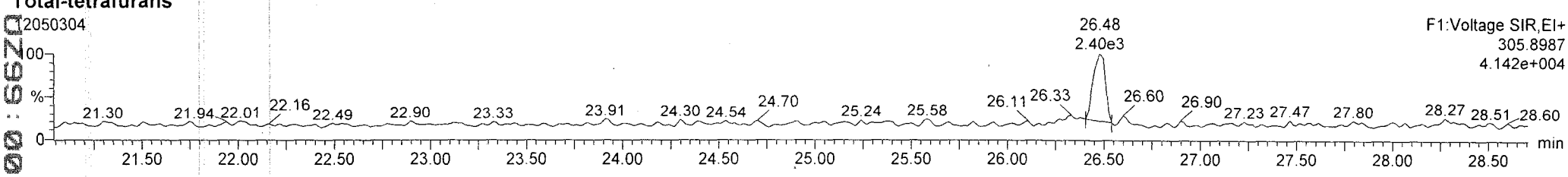
13C-2378-TCDF



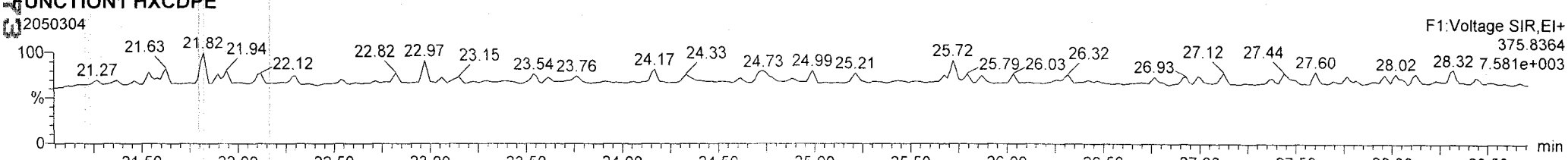
Total-tetrafurans



Total-tetrafurans



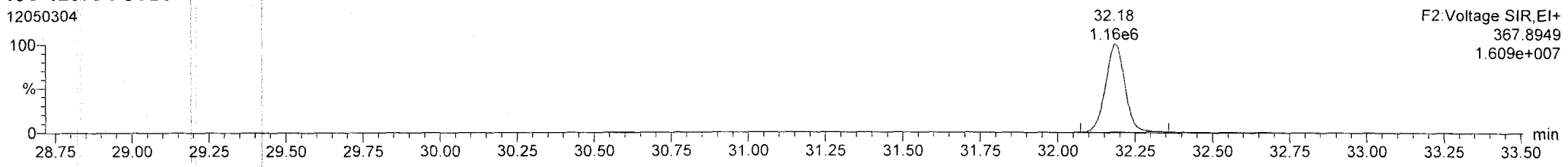
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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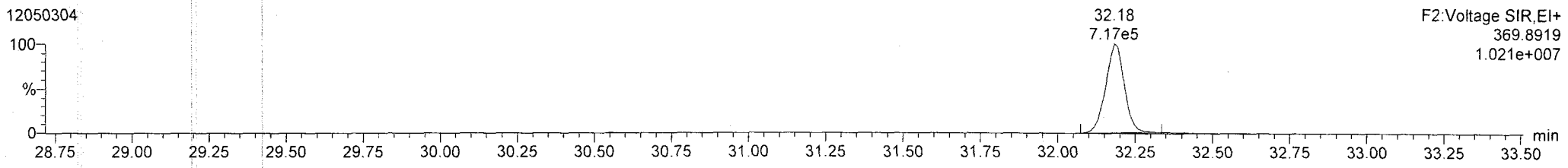
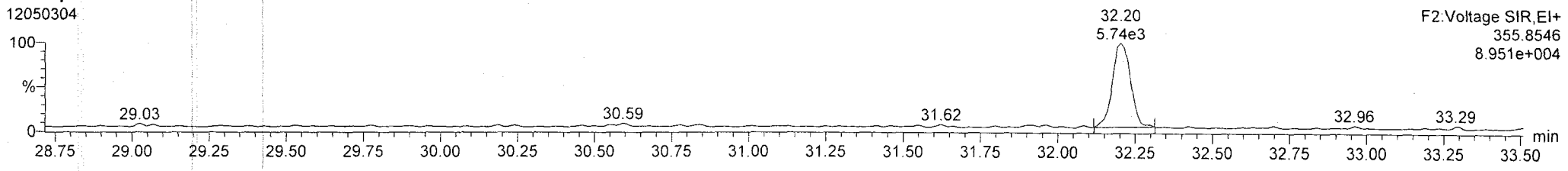
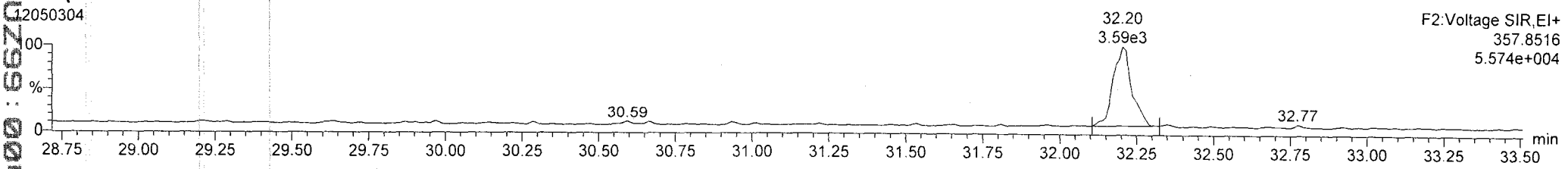


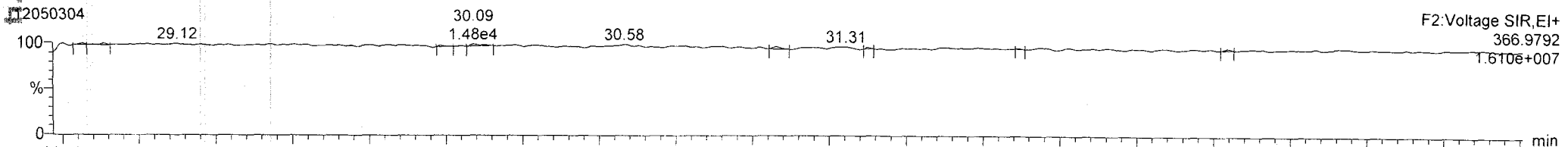
Total-pentadioxins



Total-pentadioxins



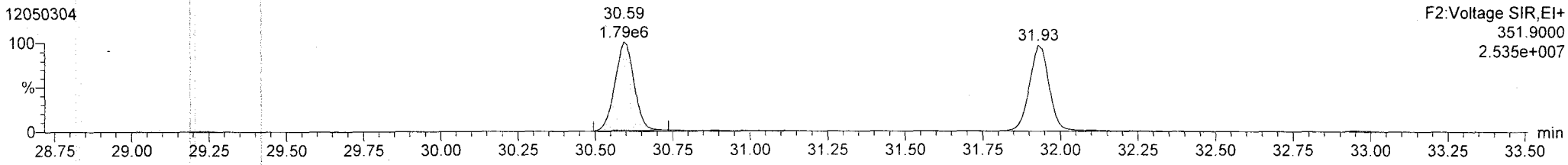
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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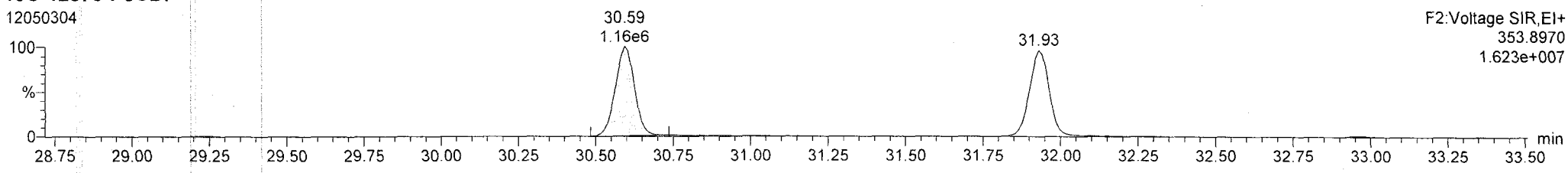
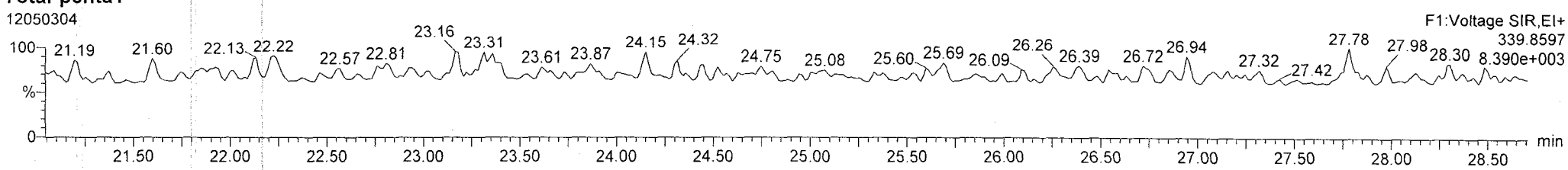
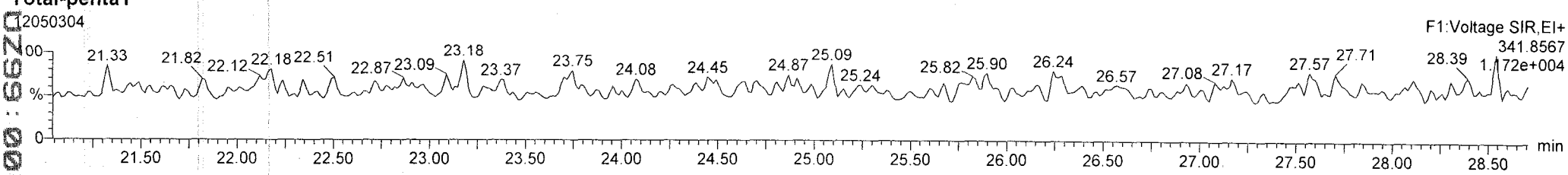


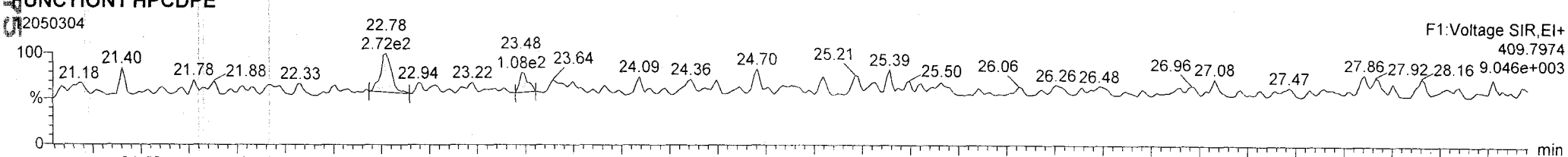
Total-penta1



Total-penta1



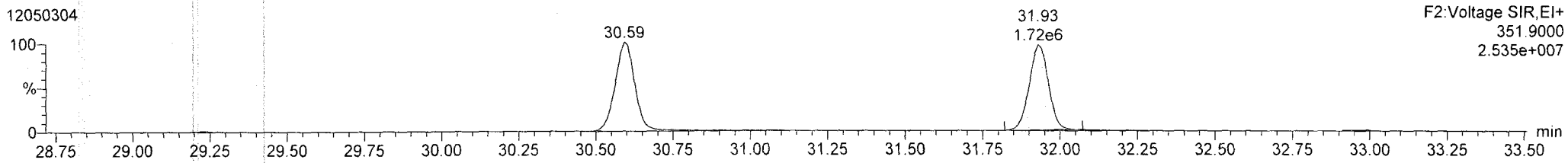
FUNCTION1 HPCDPE



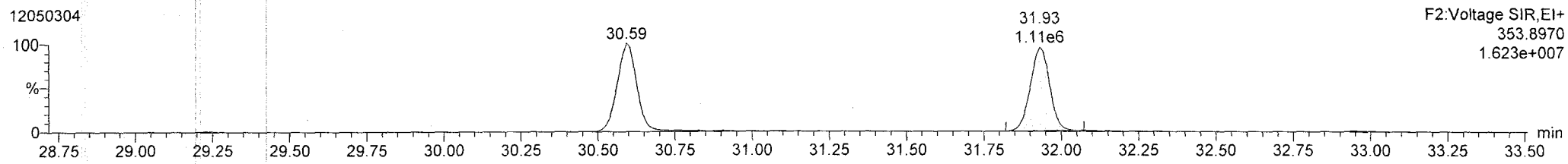
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

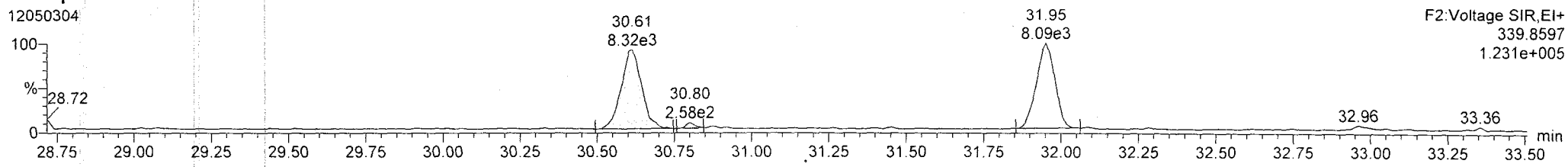
13C-23478-PeCDF



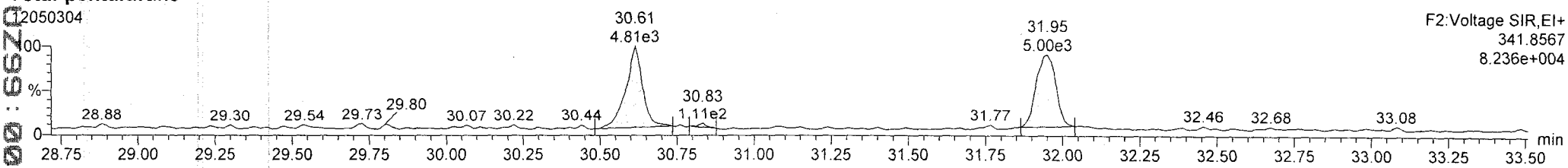
13C-23478-PeCDF



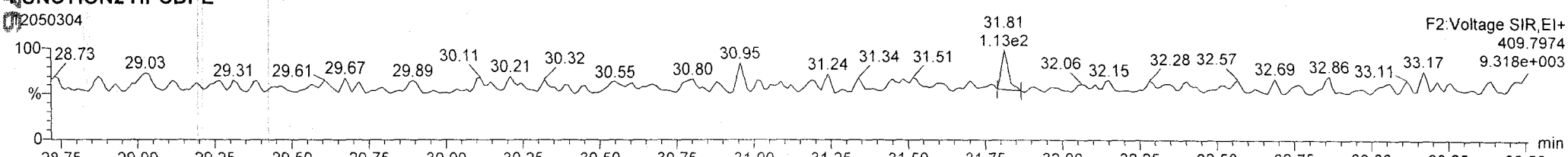
Total-pentafurans



Total-pentafurans



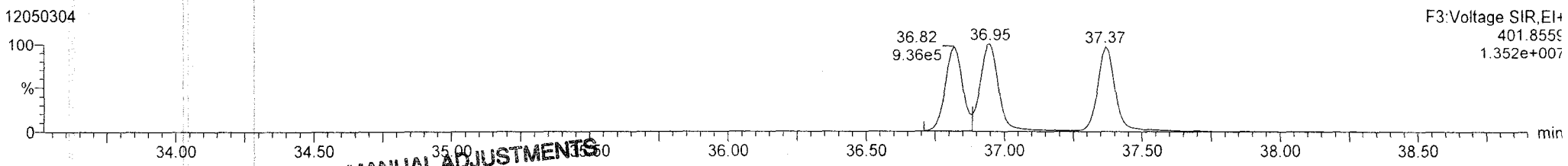
FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

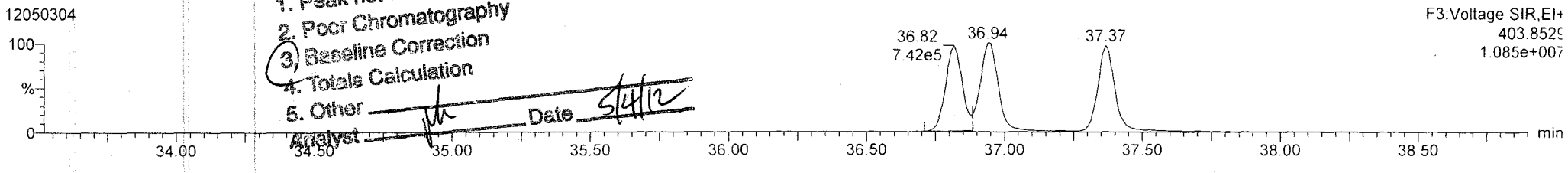
Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD
12050304

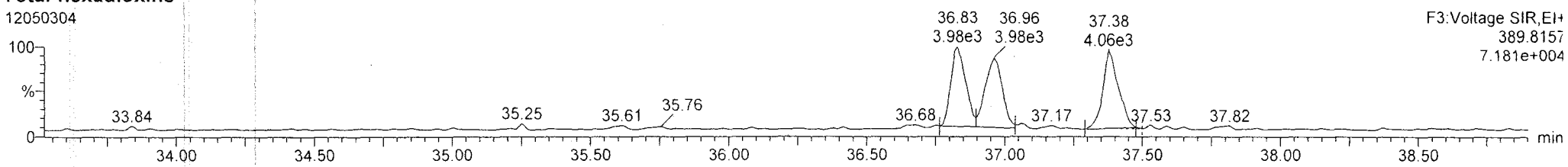


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst Date 5/4/12

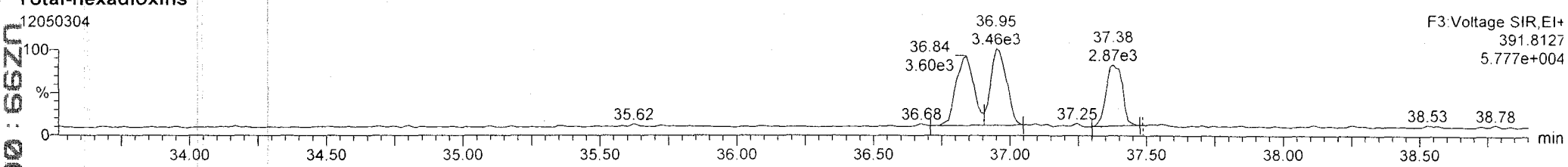
13C-123478-HxCDD
12050304



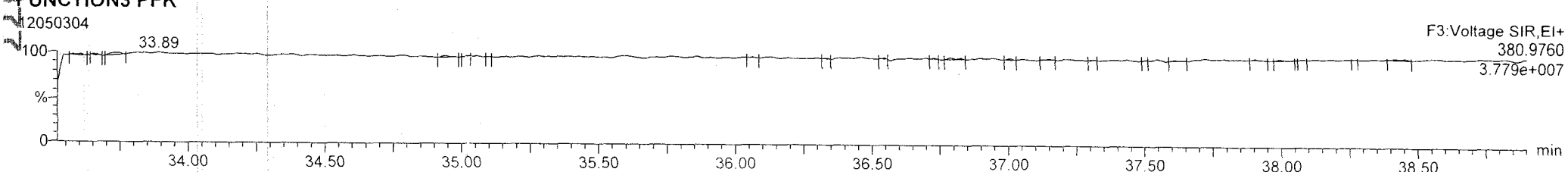
Total-hexadioxins
12050304



Total-hexadioxins
12050304



FUNCTION3 PFK
12050304

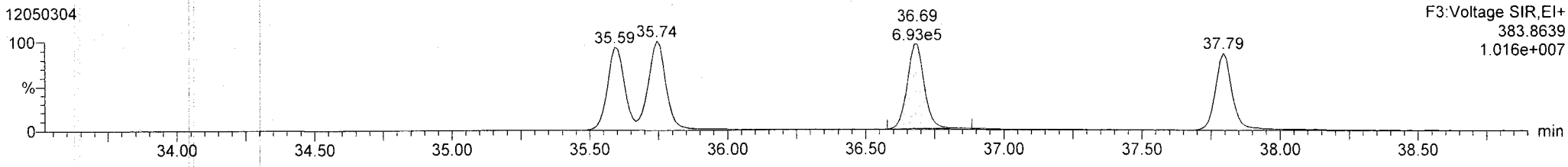


UZ99 : 00477

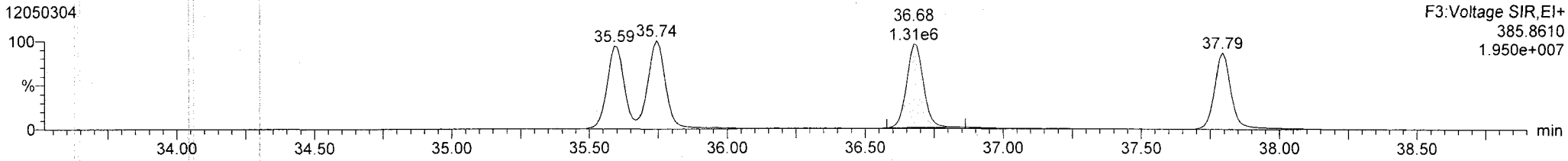
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

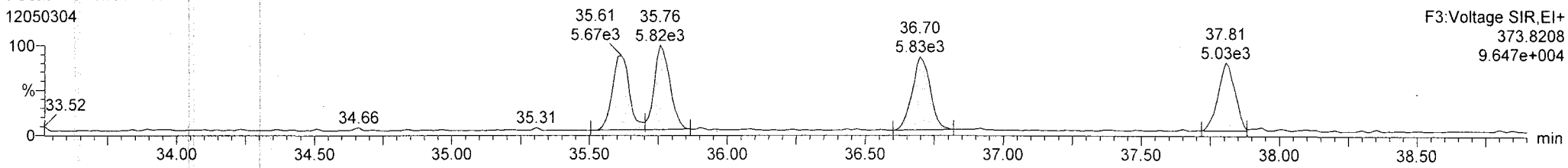
13C-234678-HxCDF



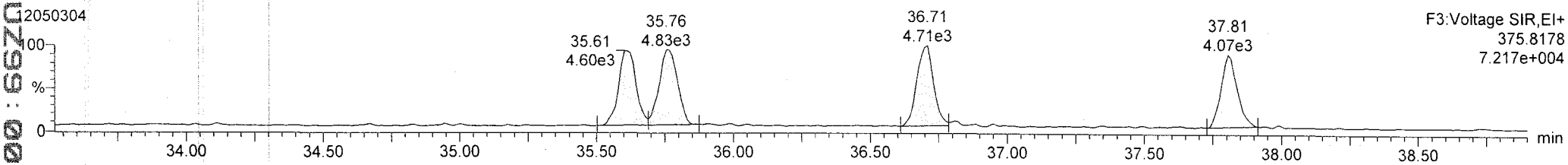
13C-234678-HxCDF



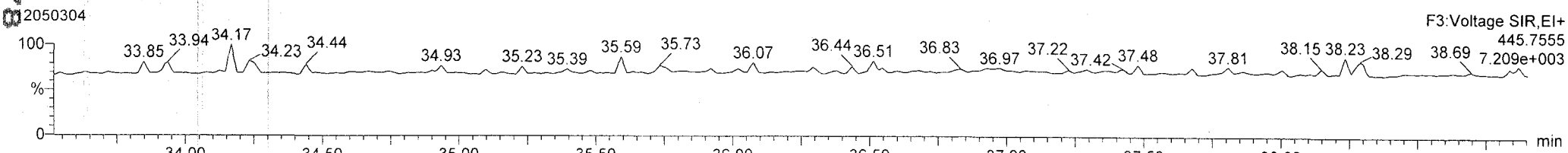
Total-hexafurans



Total-hexafurans



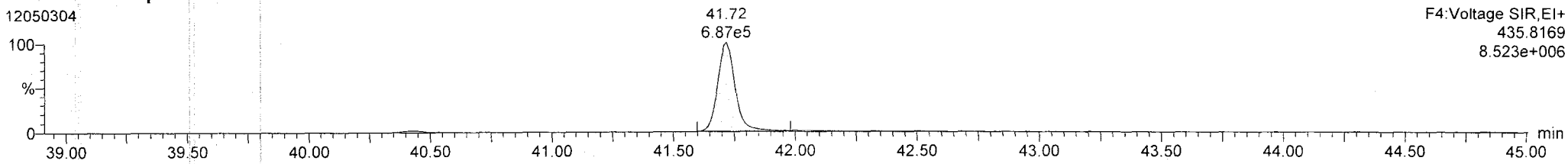
FUNCTION3 OCDPE



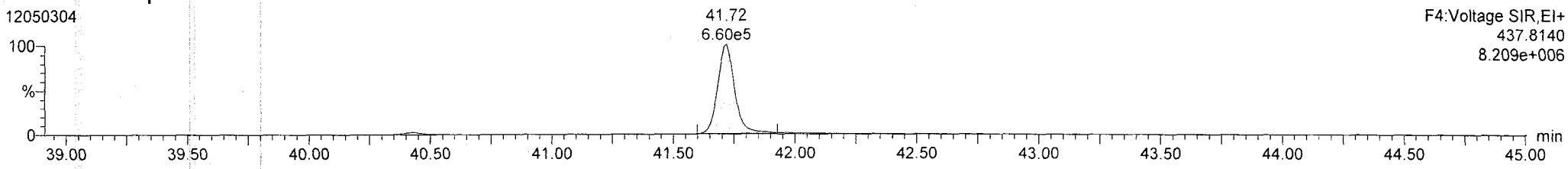
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

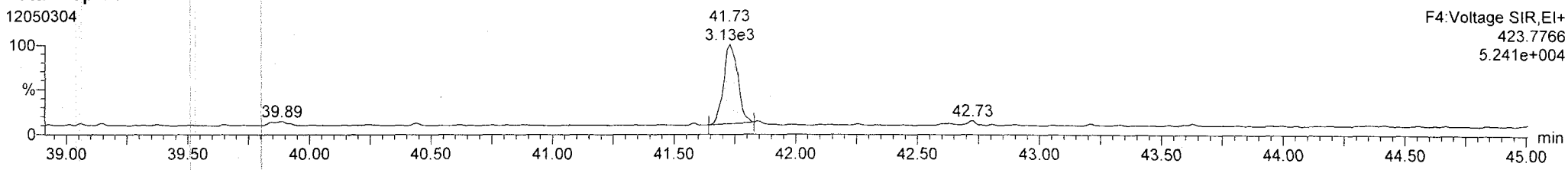
13C-1234678-HpCDD



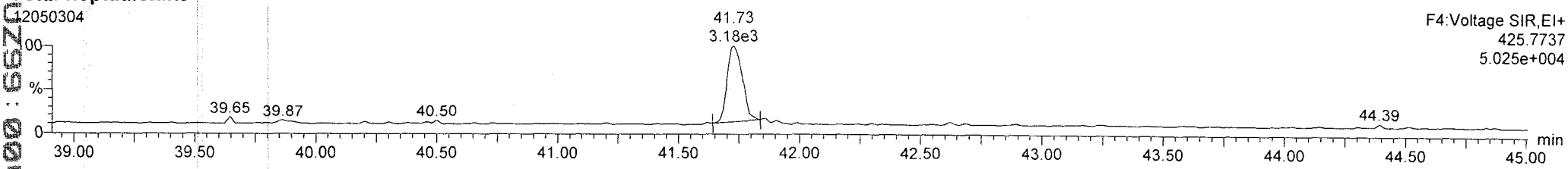
13C-1234678-HpCDD



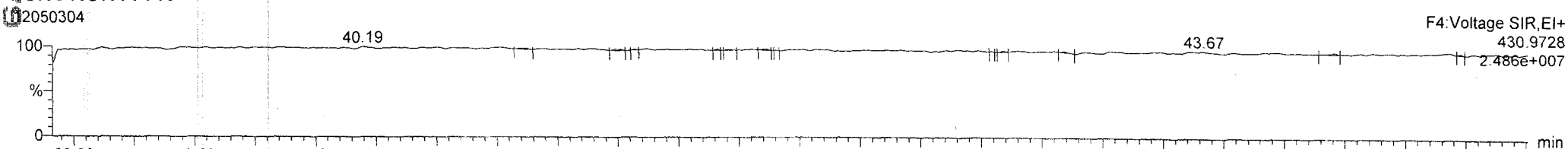
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
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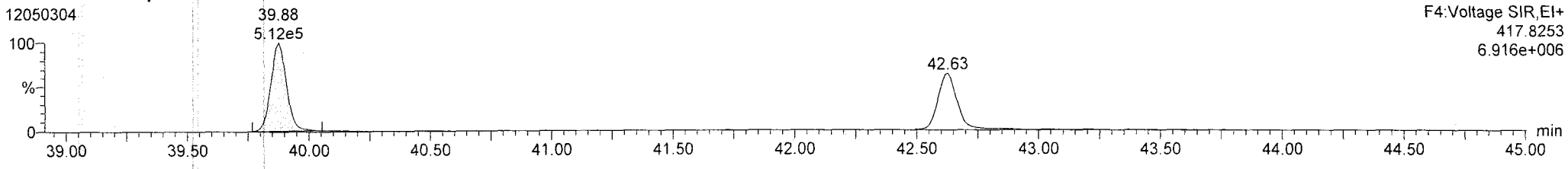
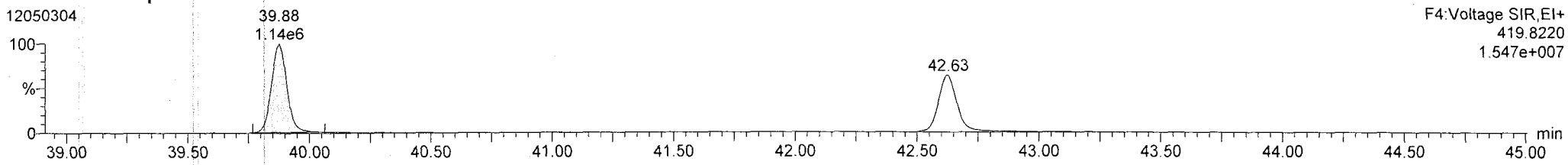
Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

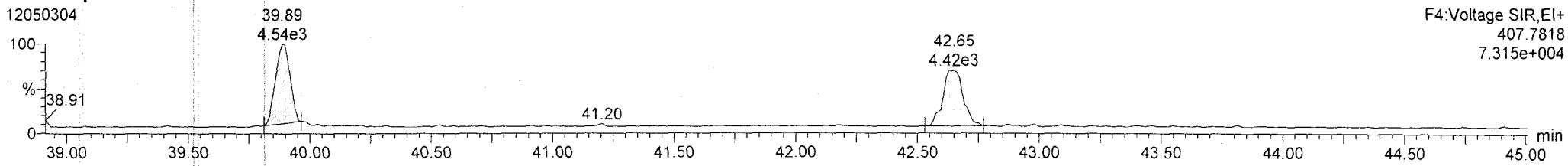
13C-1234678-HpCDF



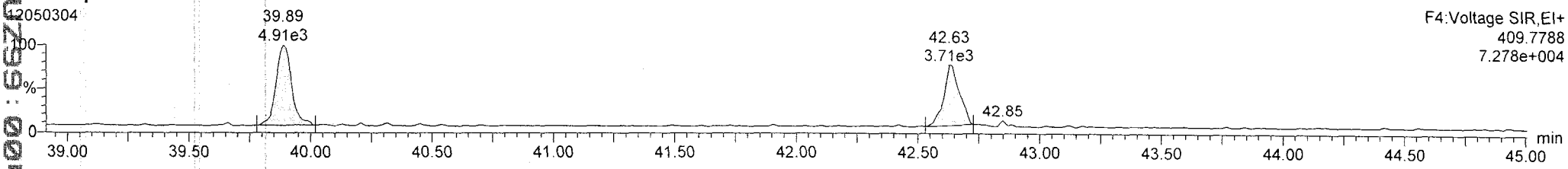
13C-1234678-HpCDF



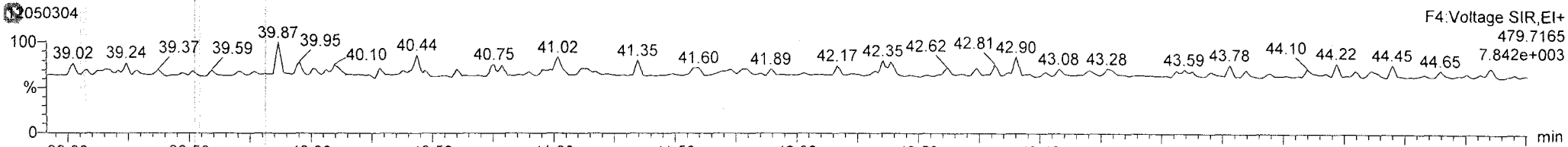
Total-heptafurans



Total-heptafurans



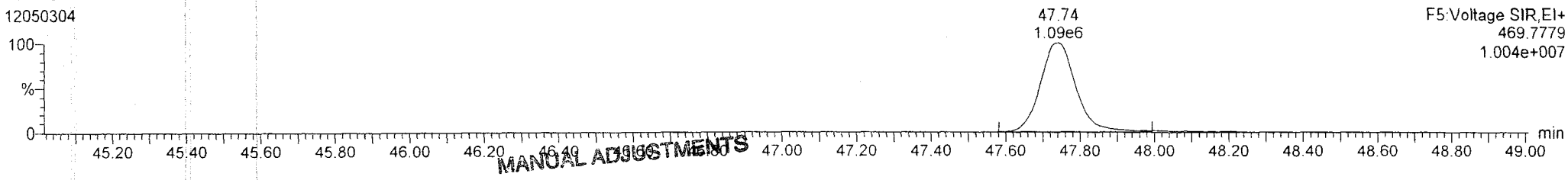
FUNCTION4 NCDPE



Quantify Sample Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

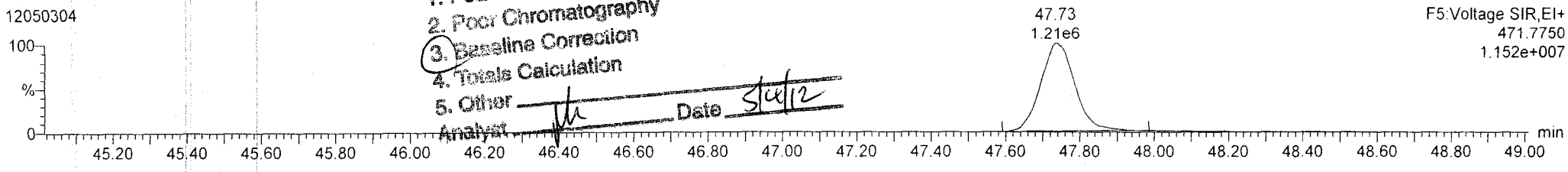
Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-OCDD

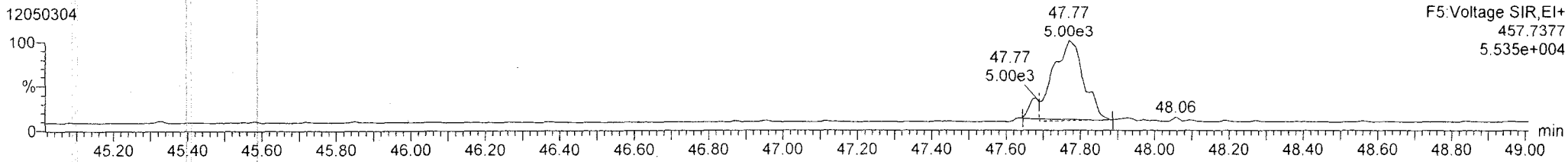


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst Date 5/4/12

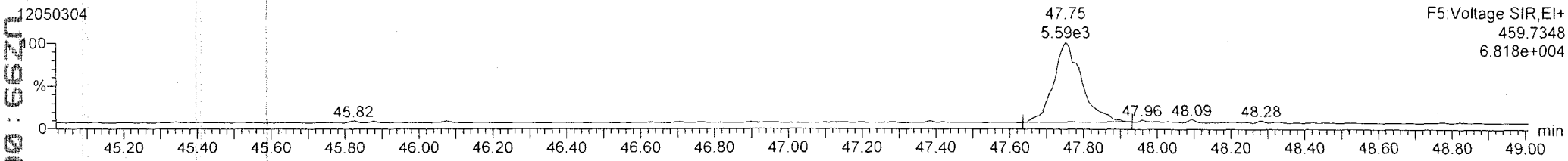
13C-OCDD



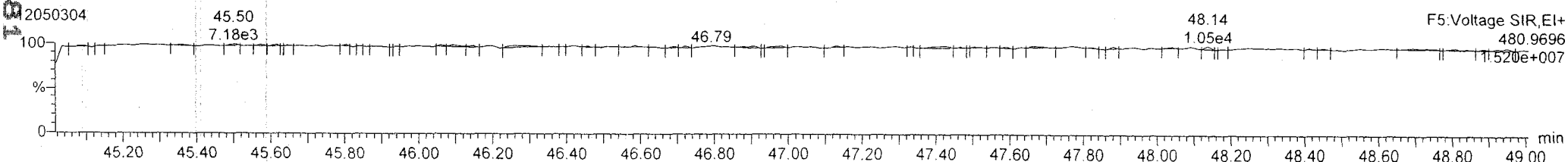
OCDD



OCDD



FUNCTION5 PFK

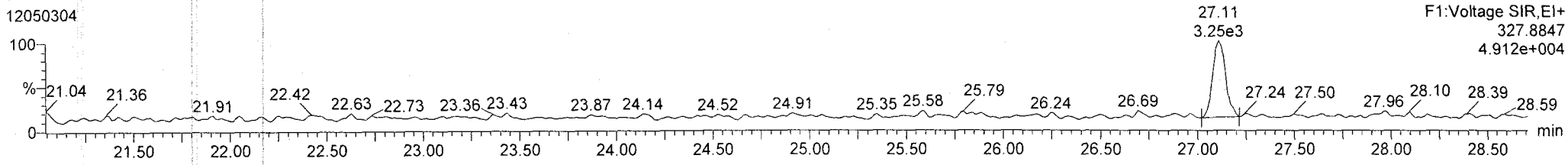


19400 : 66ZL

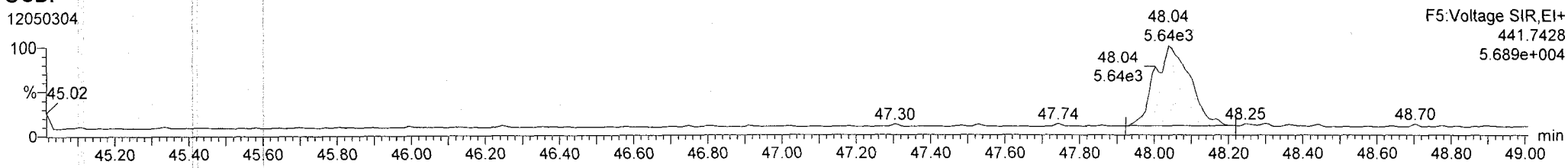
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:15 Pacific Daylight Time

Name: 12050304, Date: 03-May-2012, Time: 12:27:37, ID: CSL, Conditions: AUTOSPEC01, User: pk

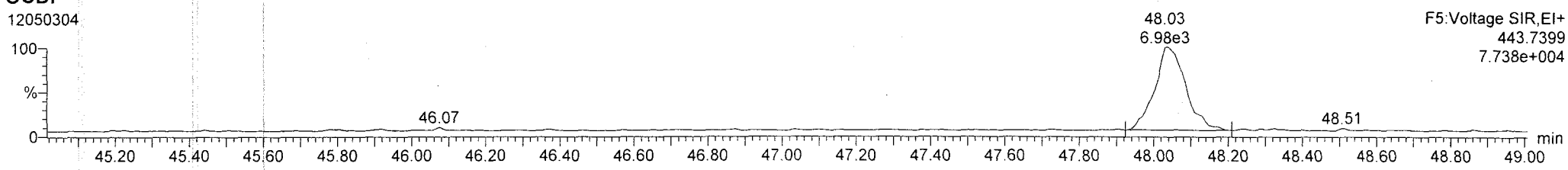
37CL-2378-TCDD



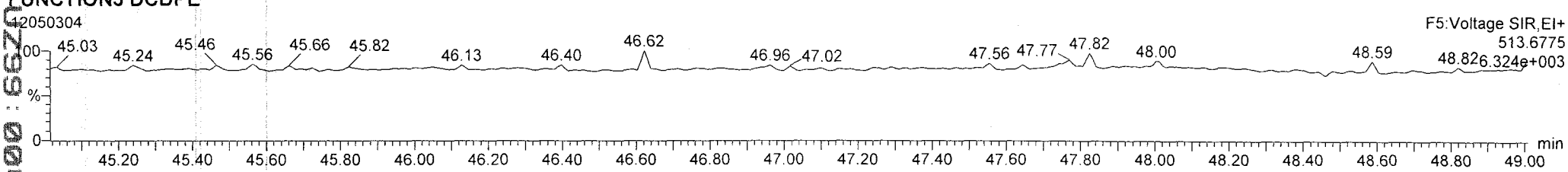
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:19 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.467	26.468	18058	18058	0.866	bb	97.0	0.77	0.77	138.4	NO	0.485	0.485
2	2	12378-PeCDF	339.8597	30.604	30.604	62468	62468	0.907	bd	98.3	1.58	1.55	446.7	NO	2.457	2.457
3	3	23478-PeCDF	339.8597	31.941	31.942	62682	62682	0.936	bb	100.7	1.56	1.55	421.6	NO	2.519	2.519
4	4	123478-HxCDF	373.8208	35.602	35.591	46740	46740	1.082	bd	96.2	1.14	1.24	203.8	NO	2.405	2.405
5	5	234678-HxCDF	373.8208	36.688	36.688	49332	49332	1.070	bd	100.4	1.20	1.24	224.2	NO	2.511	2.511
6	6	123678-HxCDF	373.8208	35.756	35.755	50131	50131	1.048	dd	96.5	1.15	1.24	212.0	NO	2.412	2.412
7	7	123789-HxCDF	373.8208	37.806	37.795	38709	38709	1.020	bb	99.4	1.23	1.24	175.6	NO	2.485	2.485
8	8	1234678-HpCDF	407.7818	39.877	39.886	45343	45343	1.214	bd	100.4	1.06	1.05	450.5	NO	2.511	2.511
9	9	1234789-HpCDF	407.7818	42.618	42.630	32734	32734	1.254	bd	98.0	0.93	1.05	262.0	NO	2.451	2.451
10	10	OCDF	441.7428	48.031	48.012	51862	51862	1.105	bb	92.6	0.90	0.89	305.8	NO	4.629	4.629
11	11	2378-TCDD	319.8965	27.094	27.093	14122	14122	1.046	bd	98.2	0.73	0.77	61.0	NO	0.491	0.491
12	12	12378-PeCDD	355.8546	32.194	32.181	41682	41682	0.973	bb	98.7	1.57	1.55	273.6	NO	2.467	2.467
13	13	123478-HxCDD	389.8157	36.819	36.830	35375	35375	0.935	bd	101.1	1.17	1.24	206.2	NO	2.528	2.528
14	14	123678-HxCDD	389.8157	36.951	36.940	36378	36378	0.878	db	98.9	1.25	1.24	213.8	NO	2.472	2.472
15	15	123789-HxCDD	389.8157	37.367	37.335	31809	31809	0.839	bb	95.6	1.33	1.24	191.9	NO	2.391	2.391
16	16	1234678-HpCDD	423.7766	41.719	41.720	28482	28482	0.974	bd	96.9	1.07	1.05	259.3	NO	2.422	2.422
17	17	OCDD	457.7377	47.744	47.740	46148	46148	0.950	bd	95.8	0.89	0.89	383.7	NO	4.792	4.792
18	18	13C-2378-TCDF	315.9419	26.452	26.452	4299686		1.484	bb	97.1	0.78	0.77	9533.4	NO	97.101	
19	19	13C-12378-PeCDF	351.9000	30.582	30.593	2803498		1.048	bb	89.7	1.56	1.55	9714.3	NO	89.671	
20	20	13C-23478-PeCDF	351.9000	31.919	31.931	2659223		1.003	bb	88.8	1.55	1.55	9234.2	NO	88.845	
21	21	13C-123478-HxCDF	383.8639	35.581	35.580	1796079		1.186	bd	103.2	0.51	0.51	2512.3	NO	103.198	
22	22	13C-123678-HxCDF	383.8639	35.734	35.734	1982156		1.315	dd	102.7	0.50	0.51	2722.7	NO	102.679	
23	23	13C-234678-HxCDF	383.8639	36.666	36.666	1836384		1.223	bb	102.3	0.53	0.51	2592.4	NO	102.265	
24	24	13C-123789-HxCDF	383.8639	37.784	37.773	1526845		1.056	bb	98.5	0.52	0.51	2268.1	NO	98.452	
25	25	13C-1234678-HpCDF	417.8253	39.866	39.855	1487165		1.011	bb	100.2	0.46	0.44	2757.0	NO	100.167	
26	26	13C-1234789-HpCDF	417.8253	42.618	42.607	1064951		0.741	bb	98.0	0.46	0.44	1647.4	NO	97.965	
27	27	13C-1234-TCDD	331.9368	26.272	26.272	2983027		1.000	bb	100.0	0.78	0.77	6010.2	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.079	27.094	2751507		0.956	bb	96.4	0.77	0.77	5313.2	NO	96.446	
29	29	13C-12378-PeCDD	367.8949	32.172	32.183	1736168		0.663	bb	87.7	1.57	1.55	8775.3	NO	87.725	
30	30	13C-123478-HxCDD	401.8559	36.808	36.797	1495775		1.024	bd	99.5	1.27	1.24	3136.3	NO	99.517	
31	31	13C-123678-HxCDD	401.8559	36.929	36.929	1676334		1.113	db	102.6	1.25	1.24	3203.7	NO	102.638	
32	32	13C-1234678-HpCDD	435.8169	41.708	41.708	1207177		0.815	bd	100.9	1.04	1.05	3147.7	NO	100.888	
33	33	13C-OCDD	469.7779	47.726	47.724	2027179		0.717	bd	96.3	0.88	0.89	3609.1	NO	192.583	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
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Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.356	37.368	1467937		1.000	bb	100.0	1.25	1.24	3043.1	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.490			0.866							0.485	0.485
36	36	Total-penta1	339.8597		28.270										0.011	0.011
37	37	Total-pentafurans	339.8597		30.840			0.921							4.976	5.013
38	38	Total-hexafurans	373.8208		35.860			1.055							9.814	9.882
39	39	Total-heptafurans	407.7818		41.270			1.234							4.962	4.977
40	40	Total-Furans	303.9016		0.000			1.050							24.876	24.996
41	41	Total-tetradioxins	319.8965		26.000			1.046							0.491	0.491
42	42	Total-pentadioxins	355.8546		31.040			0.973							2.467	2.467
43	43	Total-hexadioxins	389.8157		36.030			0.884							7.392	7.392
44	44	Total-heptadioxins	423.7766		41.090			0.974							2.422	2.422
45	45	Total-Dioxins	319.8965		0.000			0.942							18.740	19.744
46	46	Total-TEQ	319.8965		0.000										43.616	44.740
47	47	37CL-2378-TCDD	327.8847	27.094	27.087	13346		1.037		86.3			84.2		0.431	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

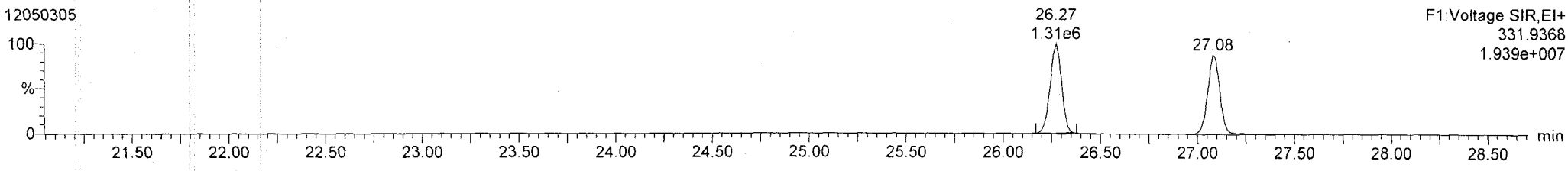
h3h00 : 6599 0

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:19 Pacific Daylight Time

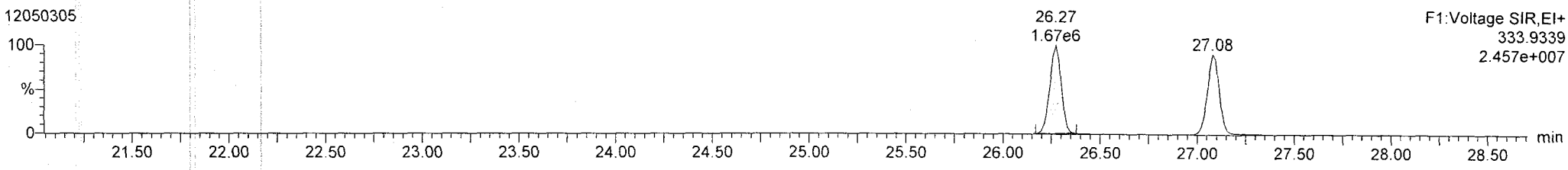
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

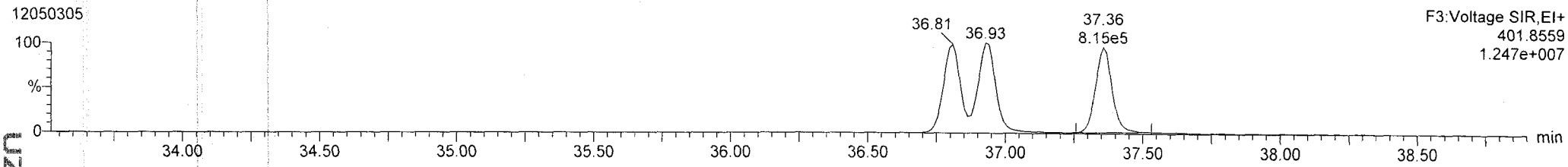
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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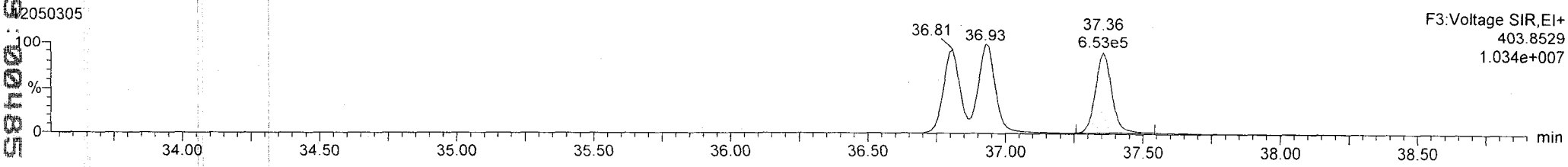

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
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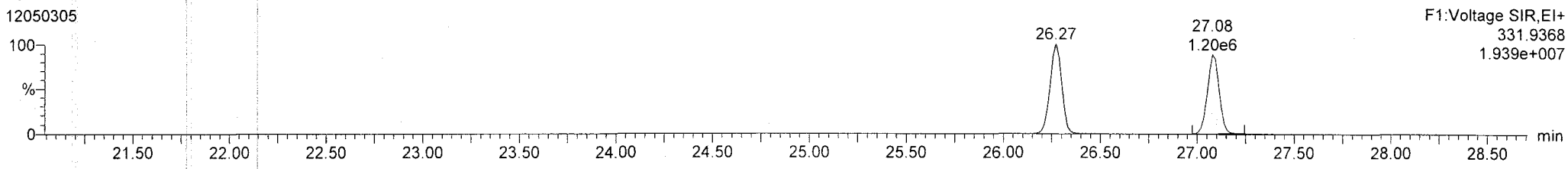
Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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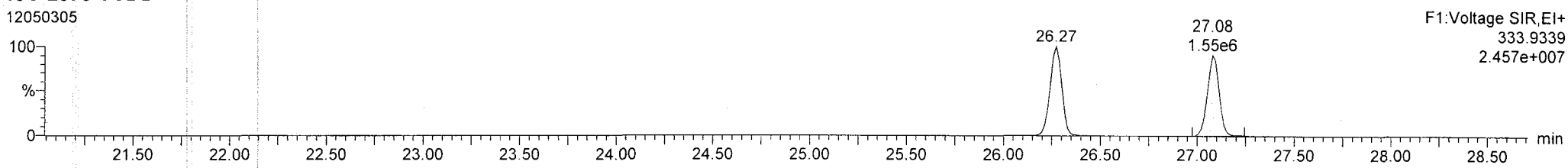
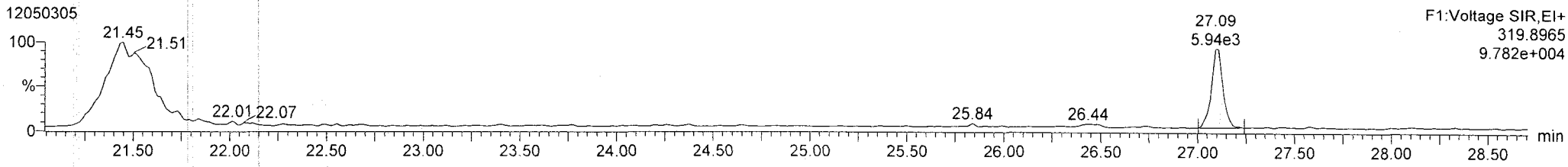
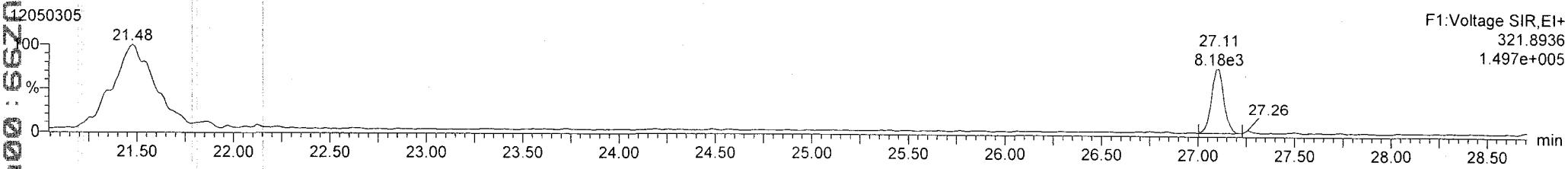


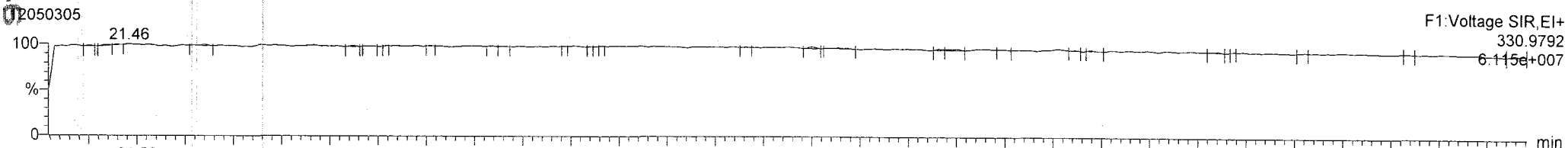
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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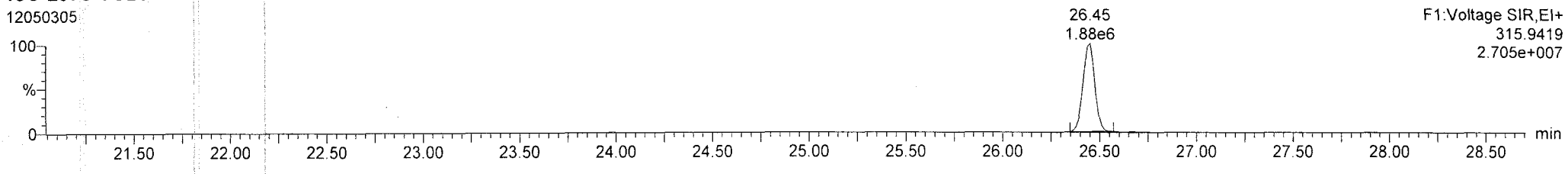
Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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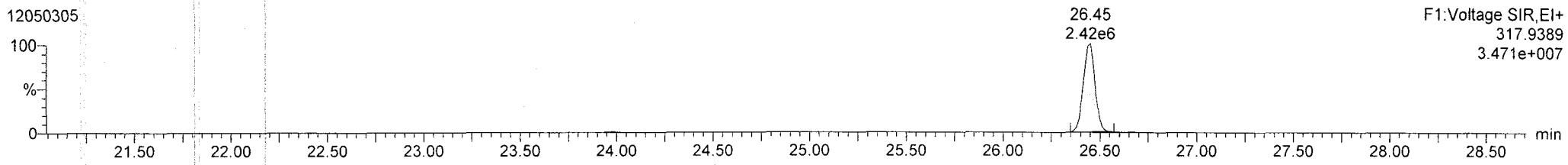

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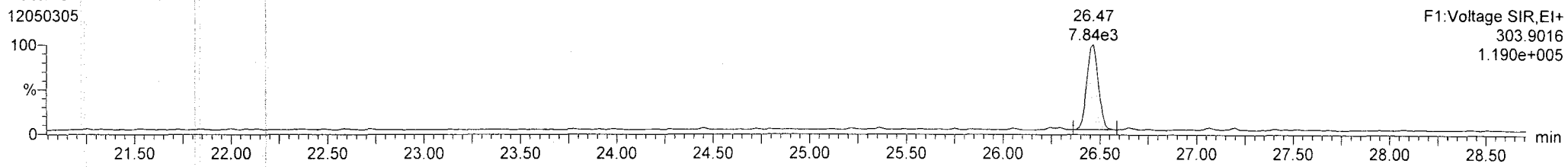

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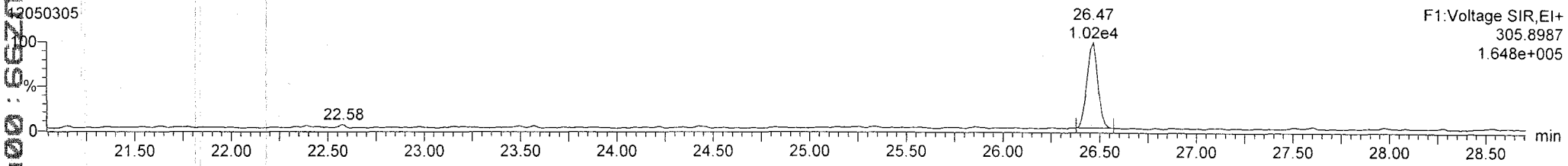
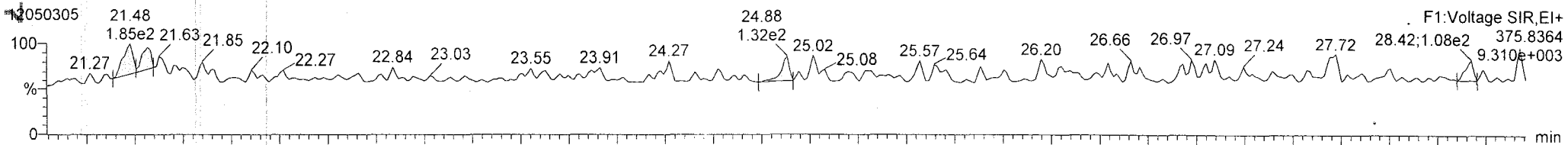


FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
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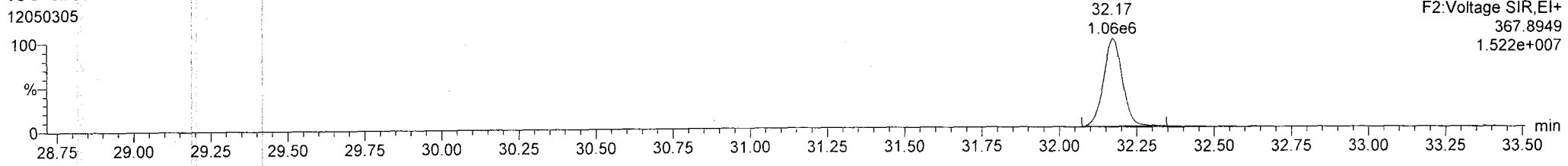
Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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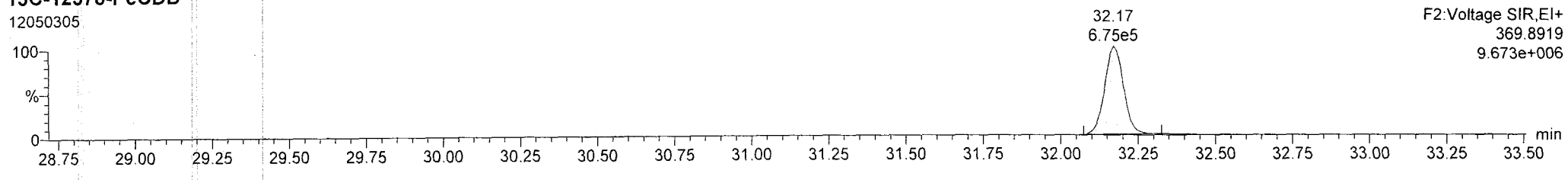
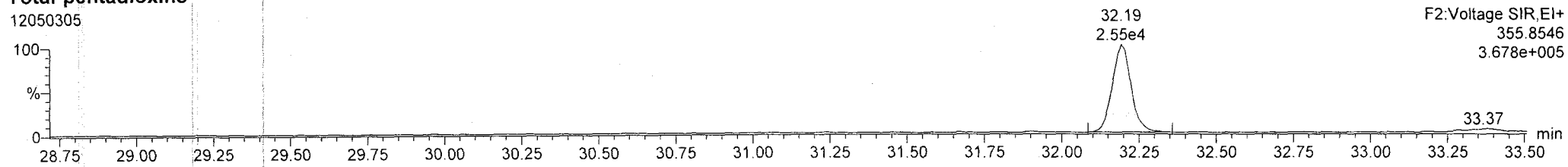
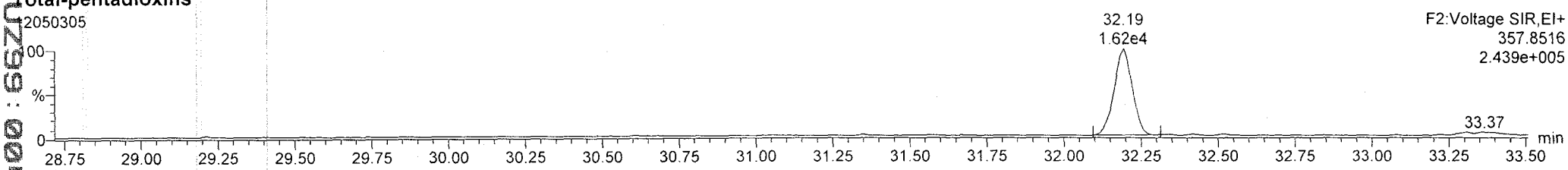


Total-pentadioxins



Total-pentadioxins



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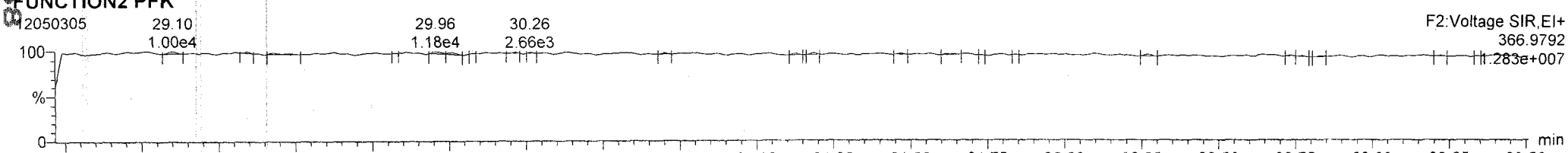

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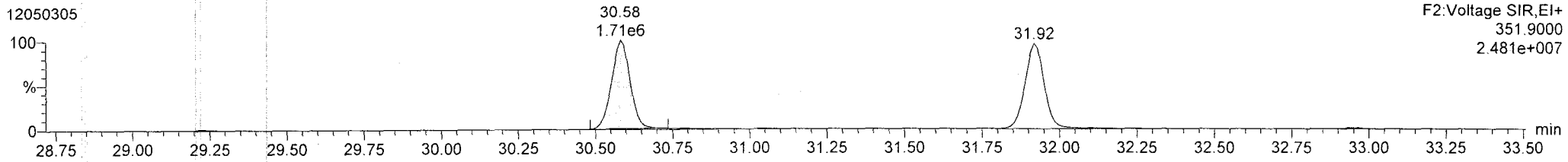
Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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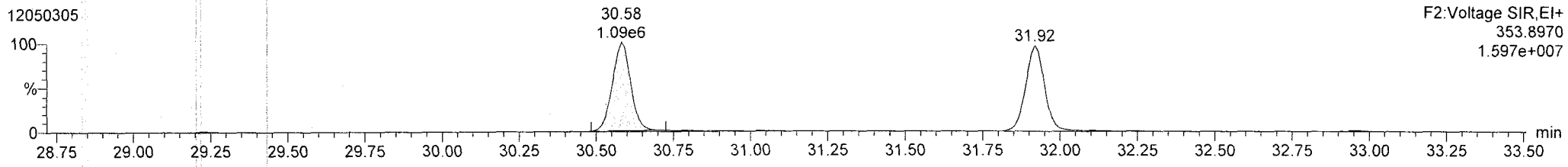

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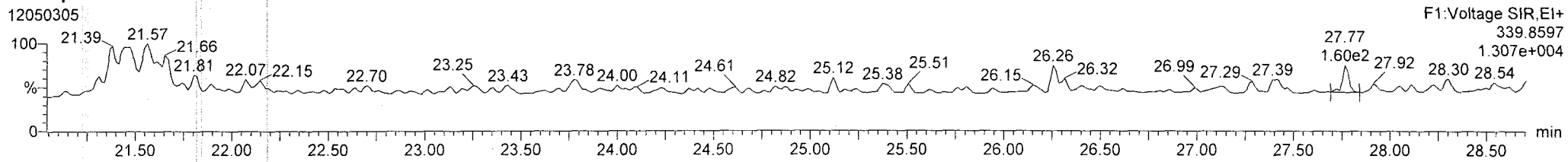

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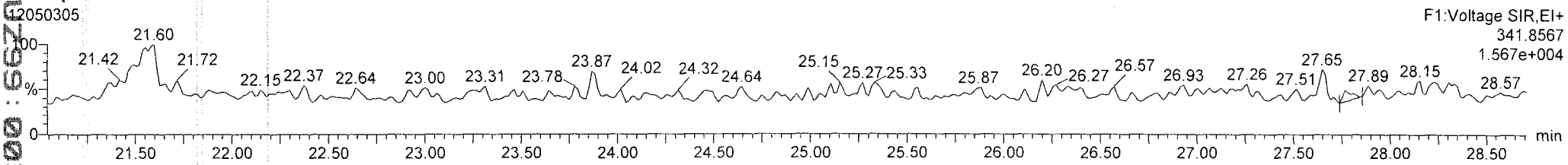
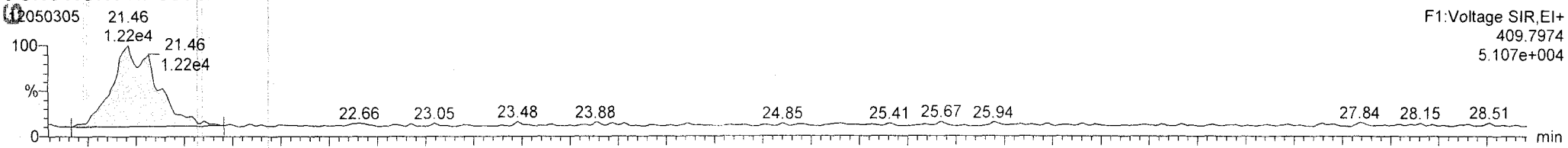


FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
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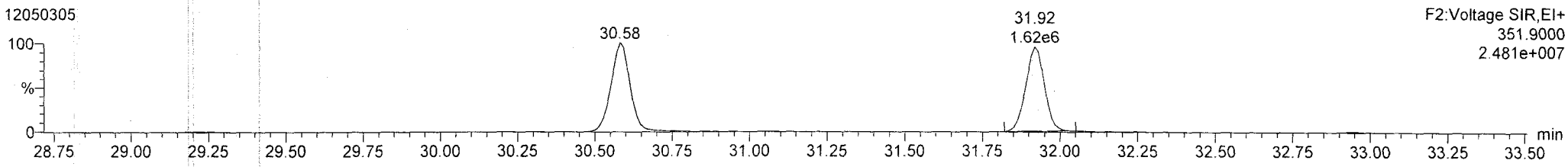
Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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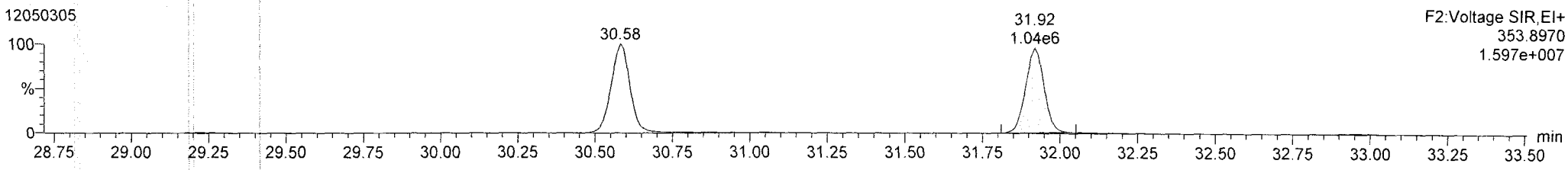
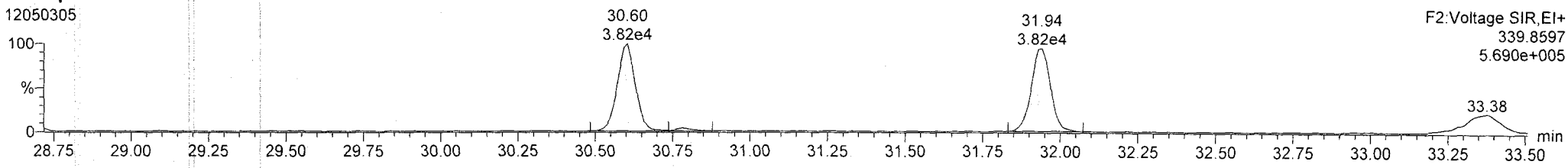


Total-pentafurans



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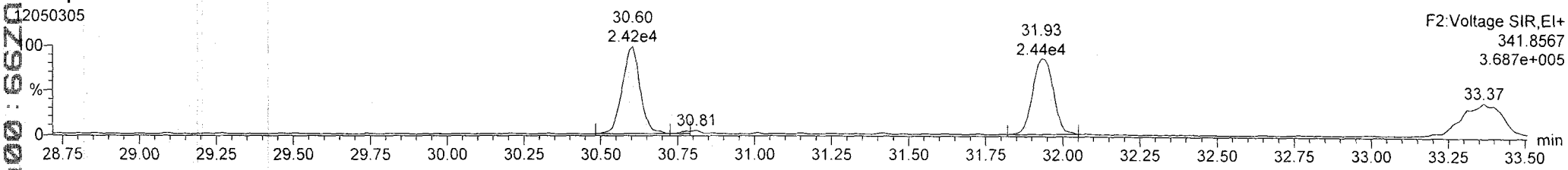

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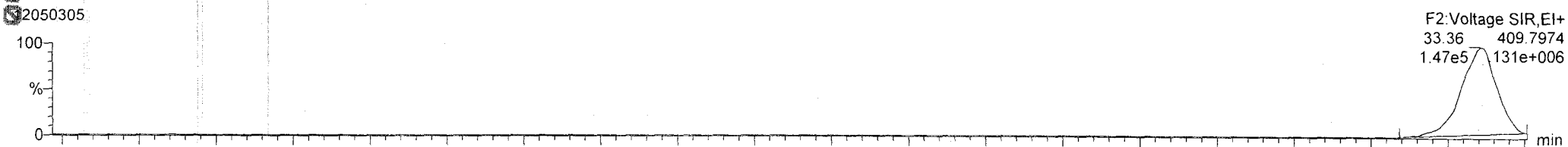

Quantify Sample Report **MassLynx 4.1 SCN 714**
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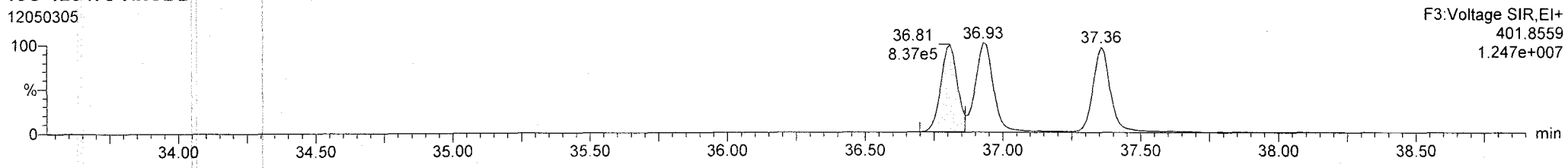
Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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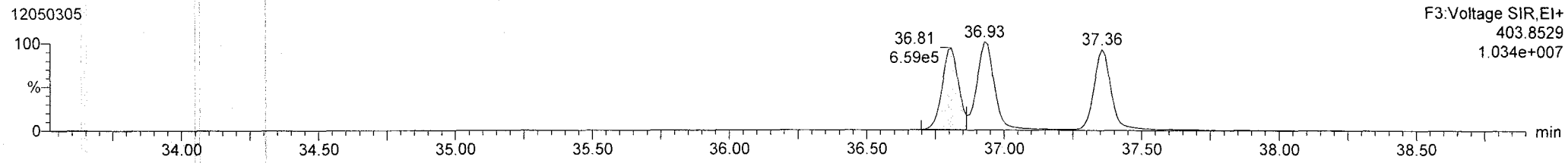
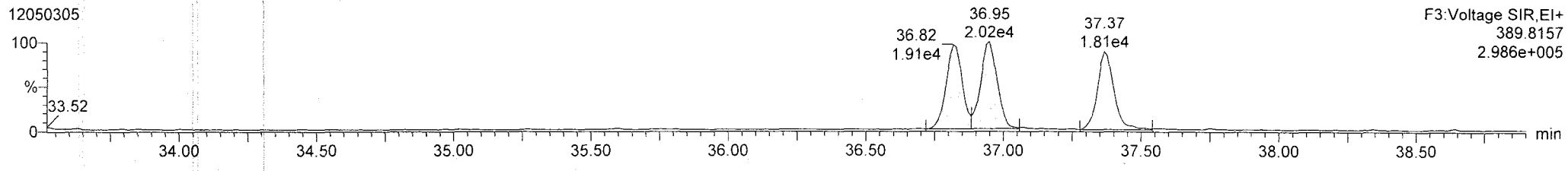


Total-hexadioxins



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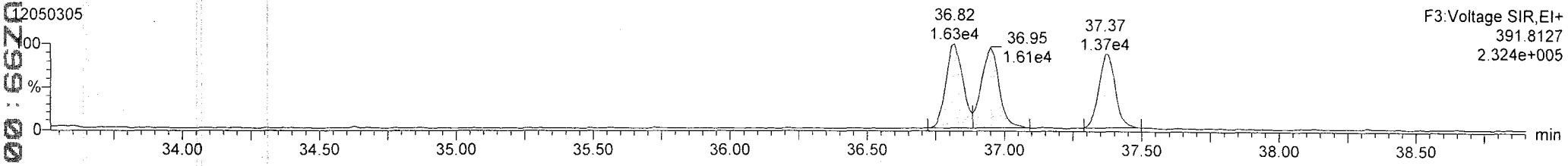
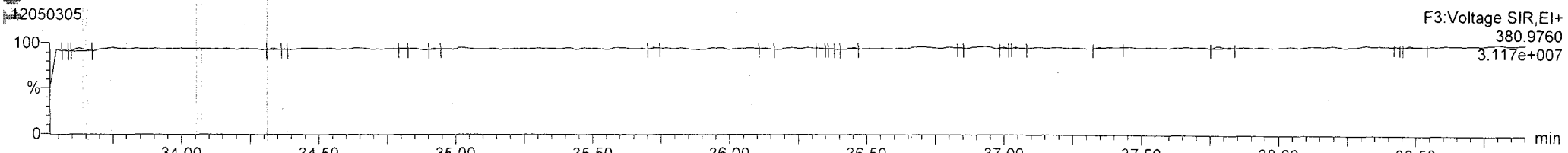


FUNCTION3 PFK



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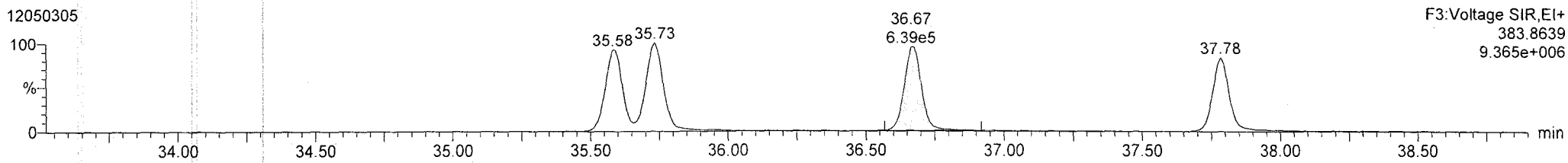
13C-234678-HxCDF



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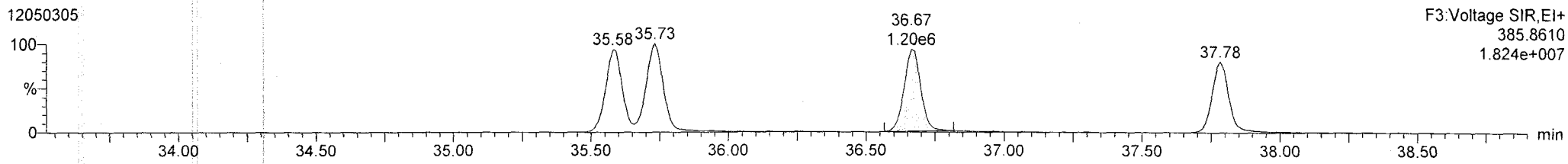
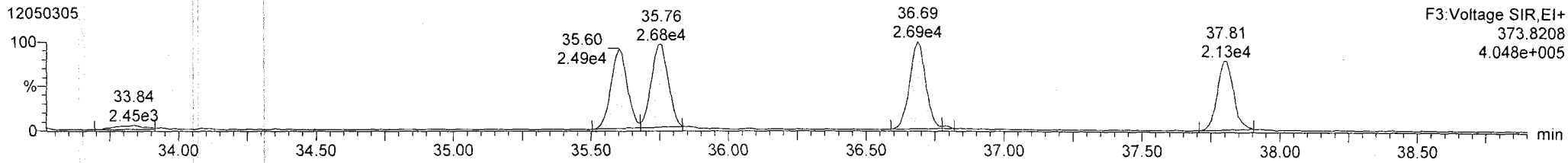


Total-hexafurans



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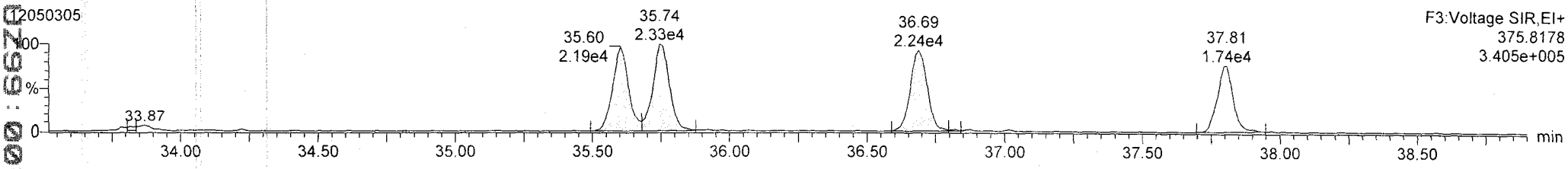
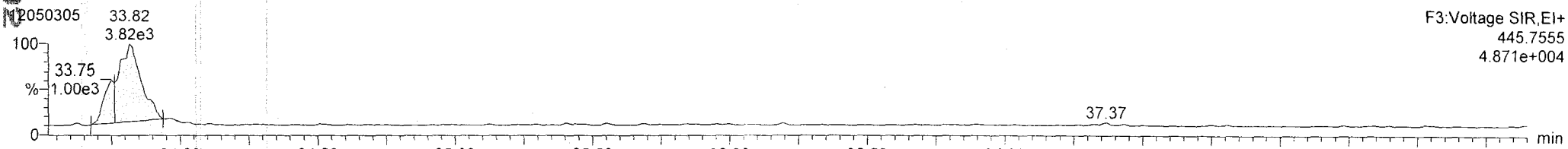


FUNCTION3 OCDPE



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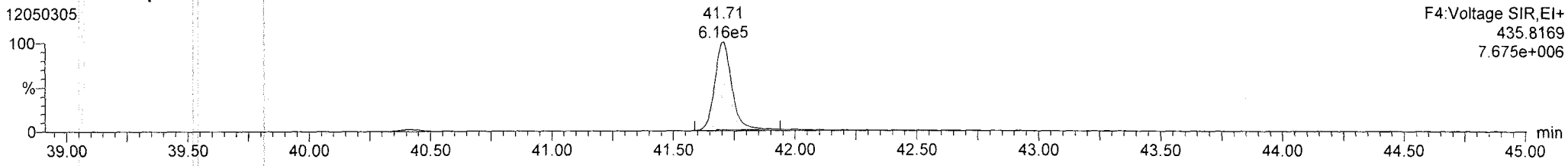
13C-1234678-HpCDD



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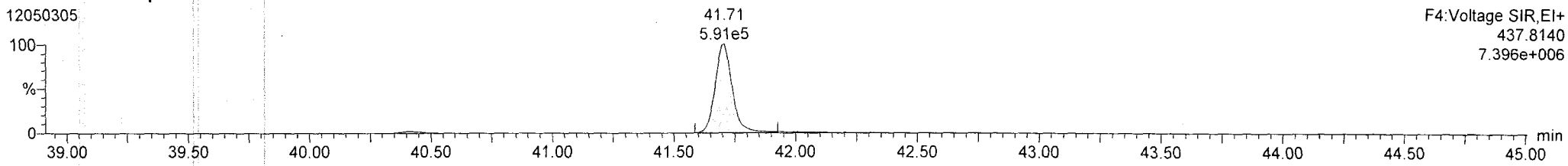
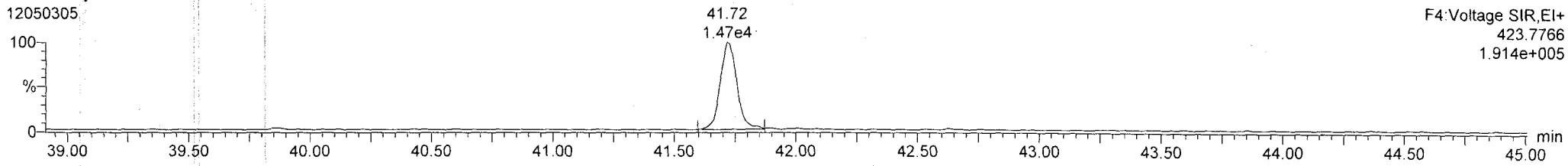
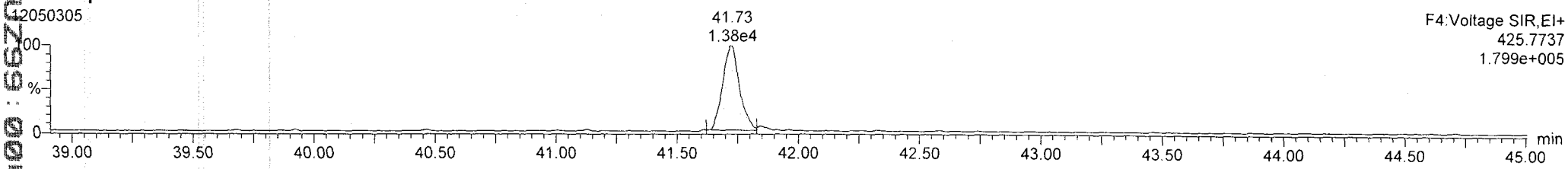


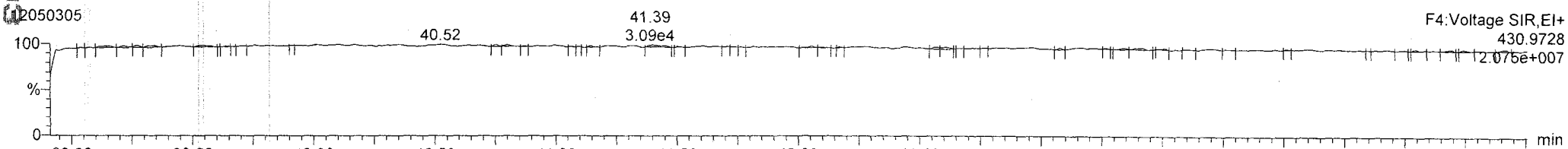
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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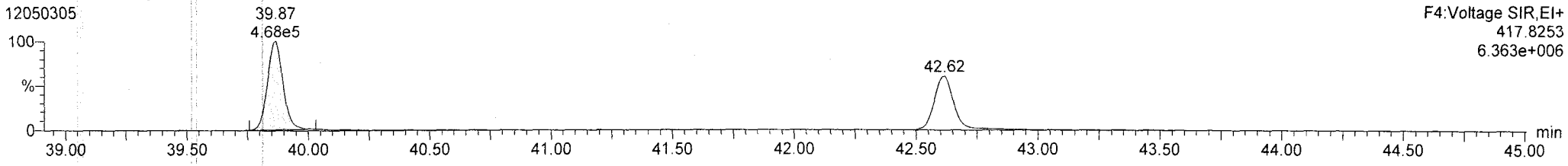
13C-1234678-HpCDF



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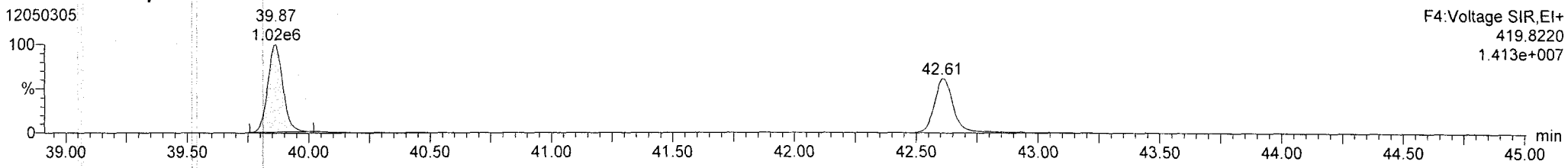

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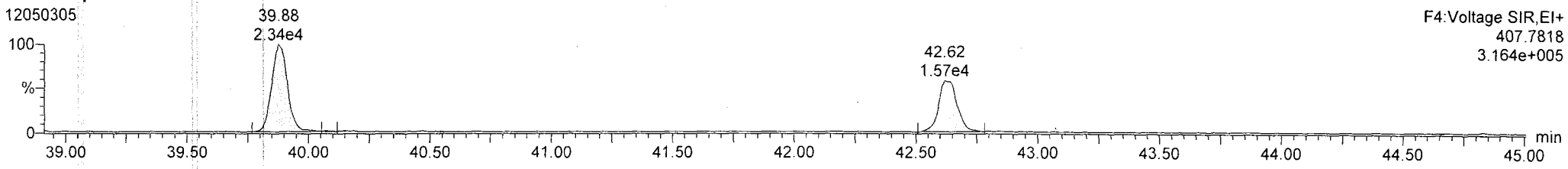
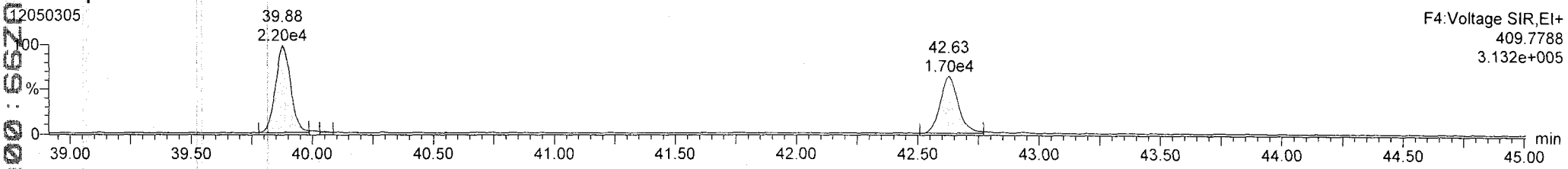
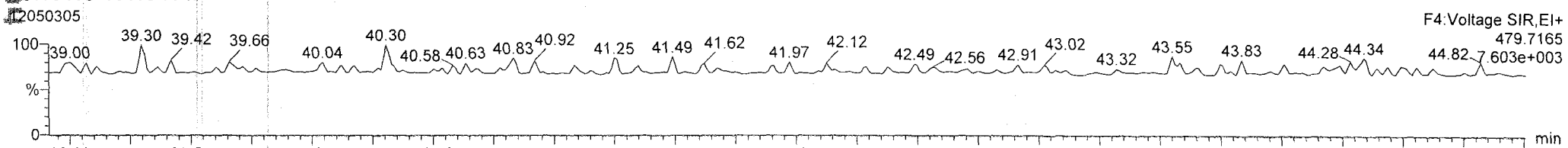


Total-heptafurans



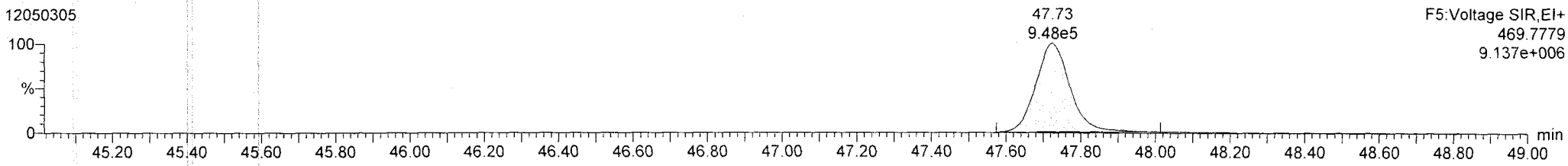
FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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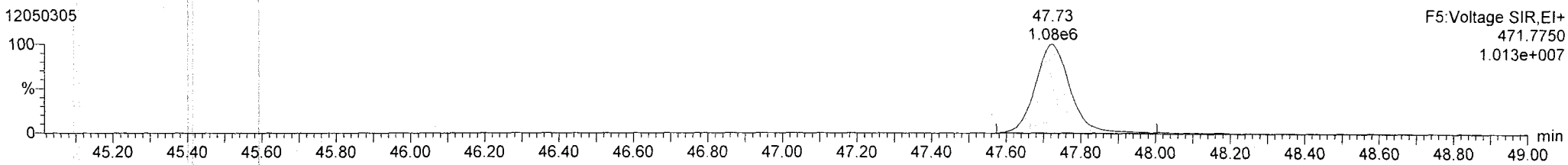

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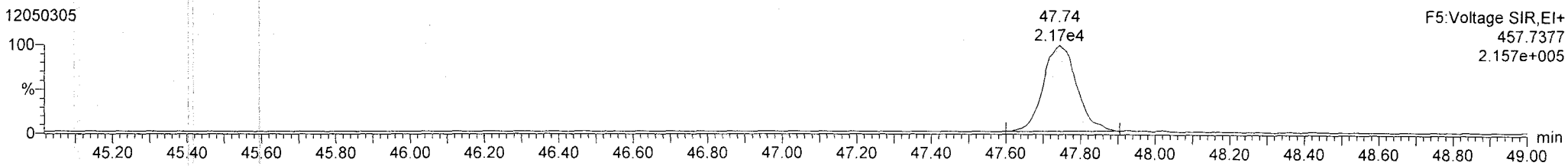

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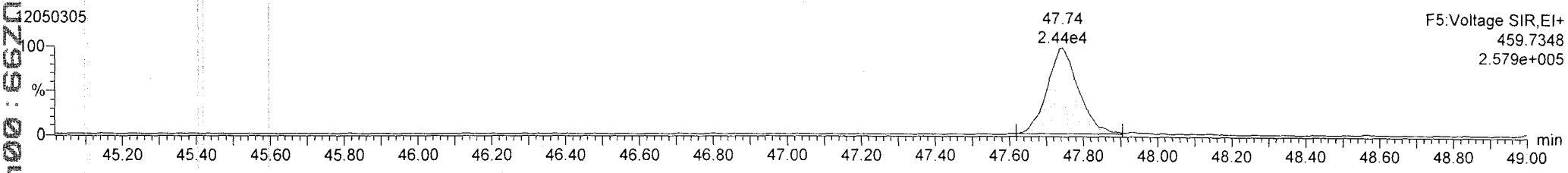
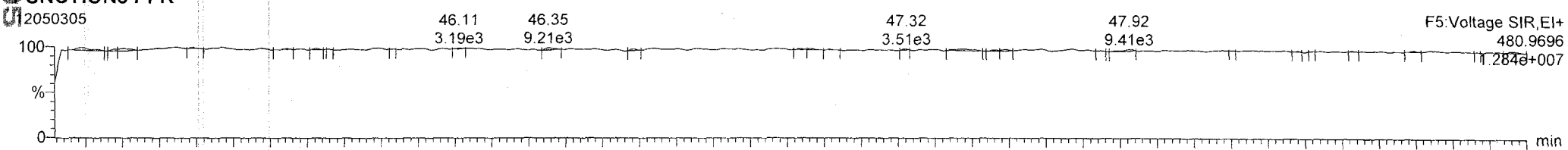


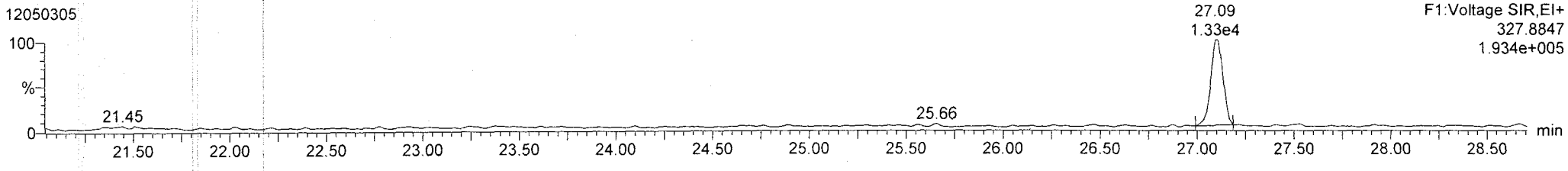
FUNCTION5 PFK



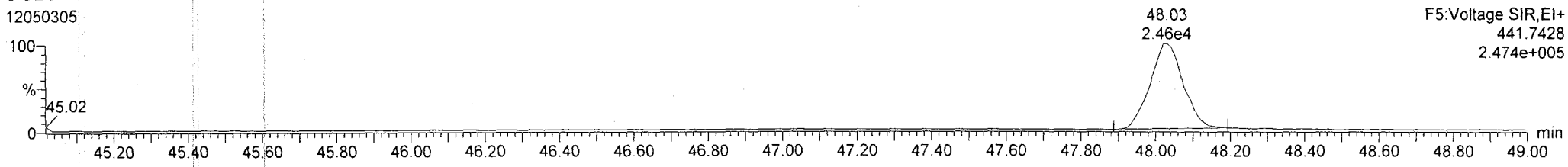
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:19 Pacific Daylight Time

Name: 12050305, Date: 03-May-2012, Time: 15:26:24, ID: CS1, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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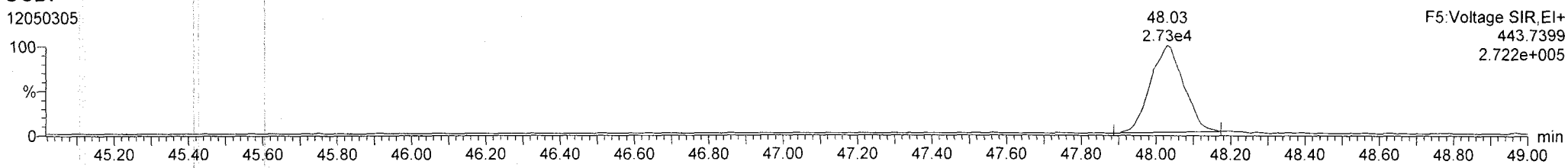
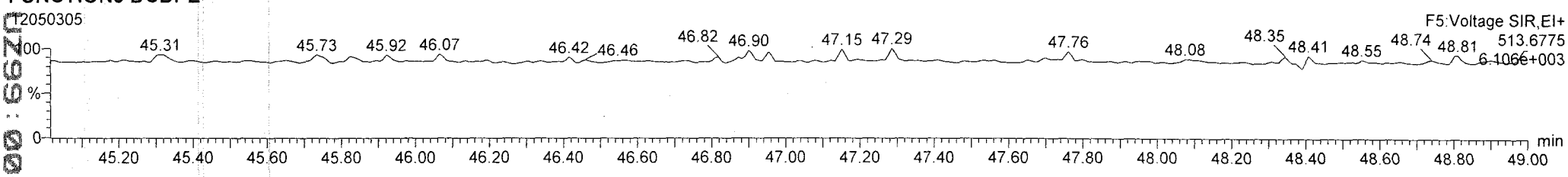


FUNCTION5 DCDPE



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Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.467	26.468	75755	75755	0.866	bb	98.0	0.77	0.77	558.7	NO	1.960	1.960
2	2	12378-PeCDF	339.8597	30.604	30.604	261022	261022	0.907	bd	98.4	1.51	1.55	1686.7	NO	9.839	9.839
3	3	23478-PeCDF	339.8597	31.942	31.942	257867	257867	0.936	bb	97.8	1.53	1.55	1678.5	NO	9.778	9.778
4	4	123478-HxCDF	373.8208	35.603	35.602	206356	206356	1.082	bd	100.2	1.21	1.24	843.6	NO	10.015	10.015
5	5	234678-HxCDF	373.8208	36.688	36.699	206912	206912	1.070	bb	97.7	1.21	1.24	818.3	NO	9.768	9.768
6	6	123678-HxCDF	373.8208	35.756	35.756	222357	222357	1.048	db	99.9	1.28	1.24	903.1	NO	9.989	9.989
7	7	123789-HxCDF	373.8208	37.806	37.795	169387	169387	1.020	bd	96.7	1.19	1.24	705.4	NO	9.666	9.666
8	8	1234678-HpCDF	407.7818	39.877	39.886	200987	200987	1.214	bd	100.2	1.05	1.05	1289.5	NO	10.019	10.019
9	9	1234789-HpCDF	407.7818	42.629	42.619	148417	148417	1.254	bd	98.9	0.97	1.05	771.3	NO	9.889	9.889
10	10	OCDF	441.7428	48.022	48.012	240471	240471	1.105	bd	93.7	0.87	0.89	538.3	NO	18.745	18.745
11	11	2378-TCDD	319.8965	27.109	27.093	56331	56331	1.046	bb	95.2	0.80	0.77	546.6	NO	1.904	1.904
12	12	12378-PeCDD	355.8546	32.194	32.181	175628	175628	0.973	bd	97.9	1.50	1.55	1017.7	NO	9.788	9.788
13	13	123478-HxCDD	389.8157	36.819	36.830	150830	150830	0.935	bd	98.2	1.25	1.24	1351.4	NO	9.821	9.821
14	14	123678-HxCDD	389.8157	36.951	36.951	160788	160788	0.878	dd	102.5	1.24	1.24	1320.0	NO	10.255	10.255
15	15	123789-HxCDD	389.8157	37.378	37.346	146183	146183	0.839	bd	101.7	1.24	1.24	1273.0	NO	10.168	10.168
16	16	1234678-HpCDD	423.7766	41.719	41.720	130583	130583	0.974	bd	100.6	1.08	1.05	874.0	NO	10.060	10.060
17	17	OCDD	457.7377	47.752	47.740	217599	217599	0.950	bd	98.7	0.86	0.89	553.8	NO	19.732	19.732
18	18	13C-2378-TCDF	315.9419	26.452	26.452	4462724		1.484	bb	98.3	0.77	0.77	10410.2	NO	98.275	
19	19	13C-12378-PeCDF	351.9000	30.583	30.594	2925192		1.048	bb	91.2	1.55	1.55	9567.4	NO	91.235	
20	20	13C-23478-PeCDF	351.9000	31.920	31.931	2817940		1.003	bb	91.8	1.55	1.55	9355.1	NO	91.805	
21	21	13C-123478-HxCDF	383.8639	35.592	35.581	1904491		1.186	bd	99.0	0.52	0.51	2439.5	NO	99.006	
22	22	13C-123678-HxCDF	383.8639	35.734	35.734	2123474		1.315	db	99.5	0.52	0.51	2631.4	NO	99.524	
23	23	13C-234678-HxCDF	383.8639	36.677	36.666	1980027		1.223	bb	99.8	0.52	0.51	2451.3	NO	99.763	
24	24	13C-123789-HxCDF	383.8639	37.784	37.773	1717883		1.056	bb	100.2	0.53	0.51	2247.0	NO	100.221	
25	25	13C-1234678-HpCDF	417.8253	39.867	39.856	1651791		1.011	bb	100.7	0.46	0.44	2340.6	NO	100.660	
26	26	13C-1234789-HpCDF	417.8253	42.607	42.607	1196814		0.741	bb	99.6	0.45	0.44	1444.6	NO	99.610	
27	27	13C-1234-TCDD	331.9368	26.273	26.272	3059147		1.000	bb	100.0	0.78	0.77	6901.5	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.080	27.094	2829444		0.956	bb	96.7	0.77	0.77	5900.4	NO	96.710	
29	29	13C-12378-PeCDD	367.8949	32.172	32.183	1843519		0.663	bb	90.8	1.58	1.55	9595.3	NO	90.832	
30	30	13C-123478-HxCDD	401.8559	36.808	36.797	1641893		1.024	bd	98.8	1.25	1.24	3307.9	NO	98.836	
31	31	13C-123678-HxCDD	401.8559	36.940	36.929	1786305		1.113	dd	99.0	1.25	1.24	3408.7	NO	98.955	
32	32	13C-1234678-HpCDD	435.8169	41.708	41.708	1332277		0.815	bb	100.7	1.07	1.05	3488.1	NO	100.740	
33	33	13C-OCDD	469.7779	47.726	47.724	2321409		0.717	bd	99.8	0.89	0.89	2919.3	NO	199.533	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.356	37.368	1622447		1.000	bb	100.0	1.27	1.24	3175.8	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.490			0.866							1.960	1.960
36	36	Total-penta1	339.8597		28.270											
37	37	Total-pentafurans	339.8597		30.840			0.921							19.617	19.872
38	38	Total-hexafurans	373.8208		35.860			1.055							39.438	39.503
39	39	Total-heptafurans	407.7818		41.270			1.234							19.908	19.965
40	40	Total-Furans	303.9016		0.000			1.050							99.667	100.045
41	41	Total-tetradioxins	319.8965		26.000			1.046							1.953	1.953
42	42	Total-pentadioxins	355.8546		31.040			0.973							9.788	9.788
43	43	Total-hexadioxins	389.8157		36.030			0.884							30.243	30.296
44	44	Total-heptadioxins	423.7766		41.090			0.974							10.060	10.087
45	45	Total-Dioxins	319.8965		0.000			0.942							71.776	71.857
46	46	Total-TEQ	319.8965		0.000										171.444	171.902
47	47	37CL-2378-TCDD	327.8847	27.109	27.087	60069		1.037		94.7			400.6		1.893	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

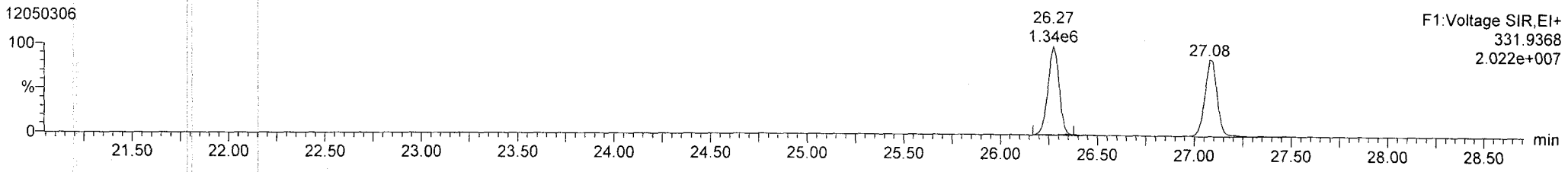
86h00 : 66Ed

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD
12050306



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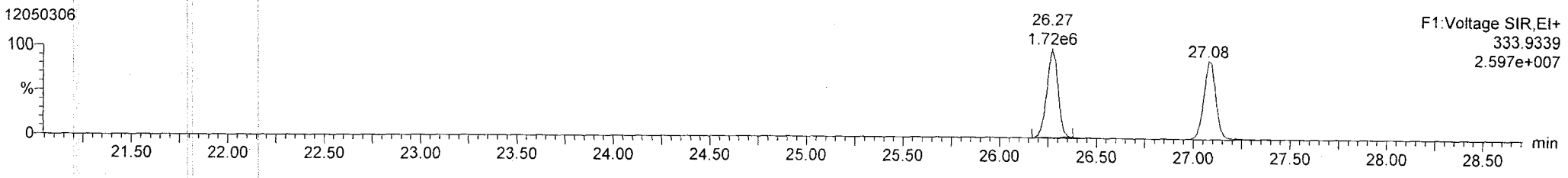

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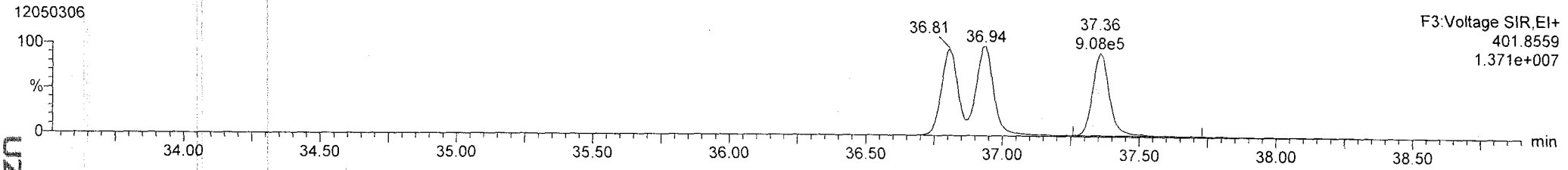

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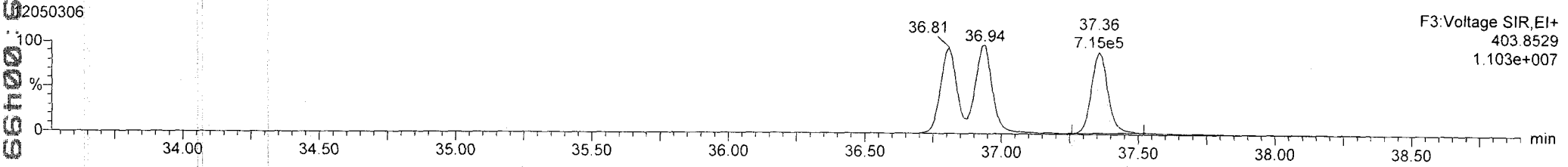
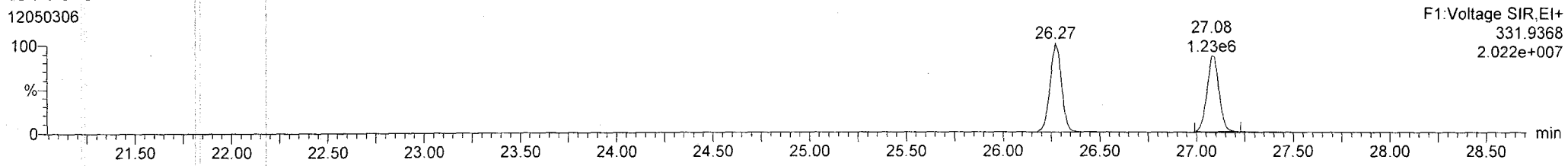
12050306



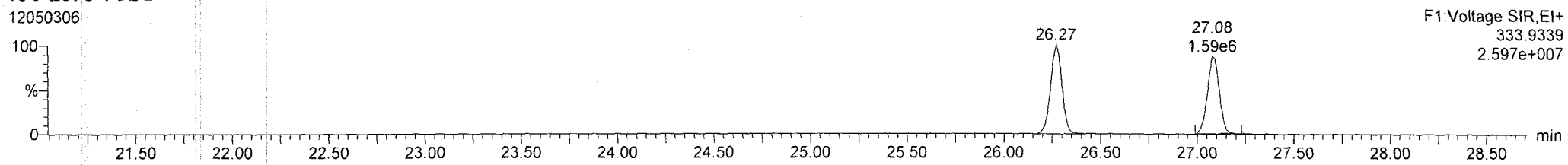
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

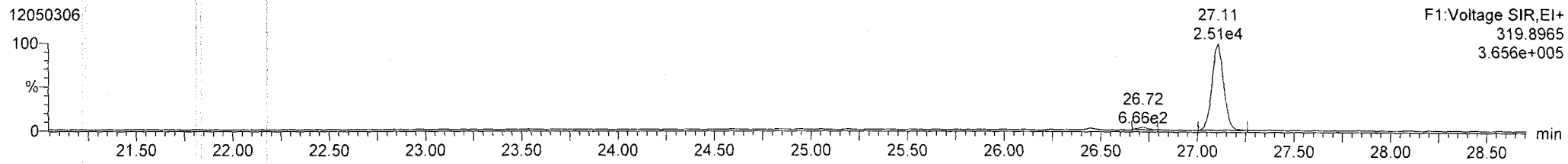
13C-2378-TCDD



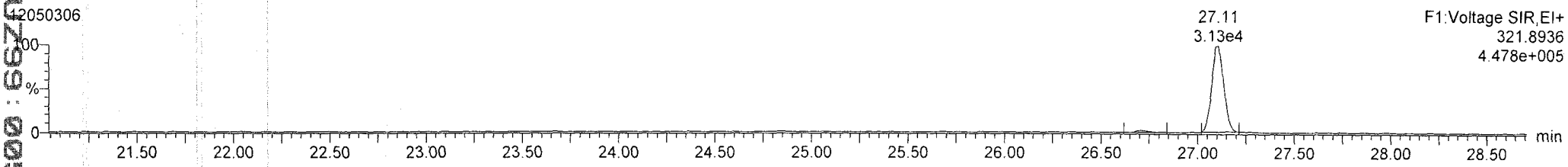
13C-2378-TCDD



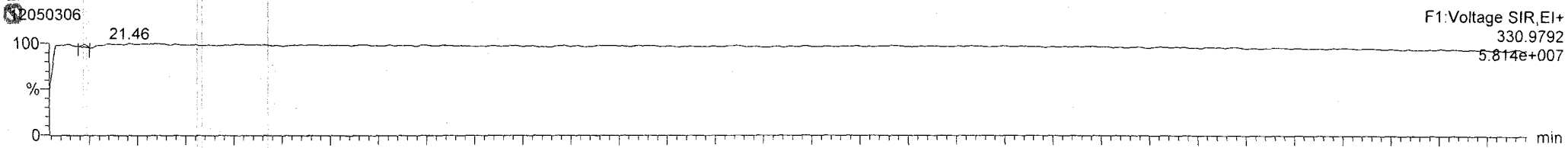
Total-tetradioxins



Total-tetradioxins



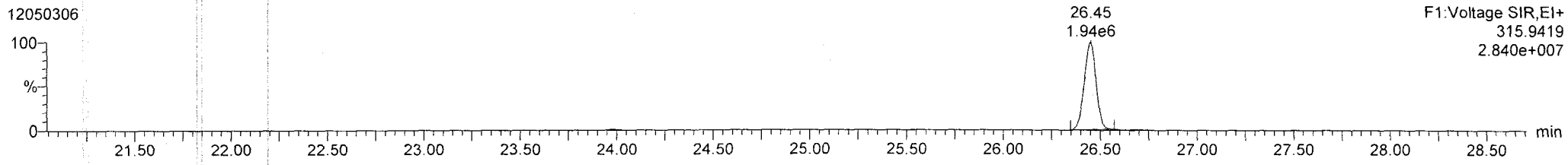
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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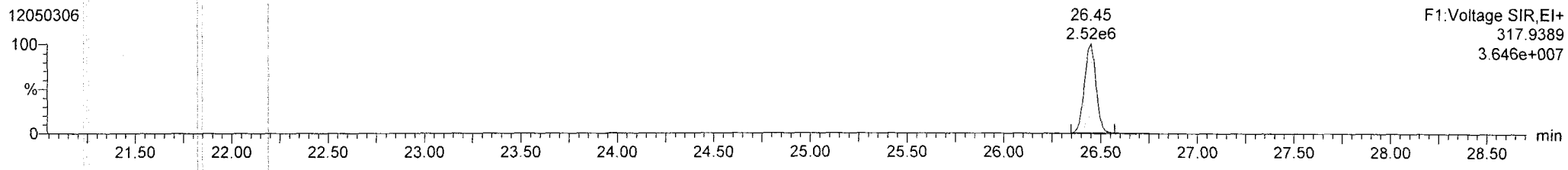
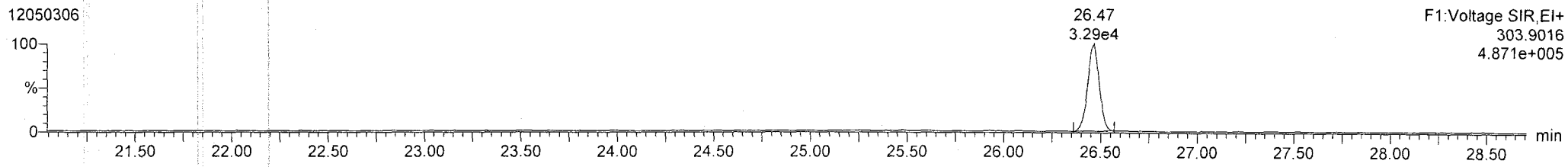
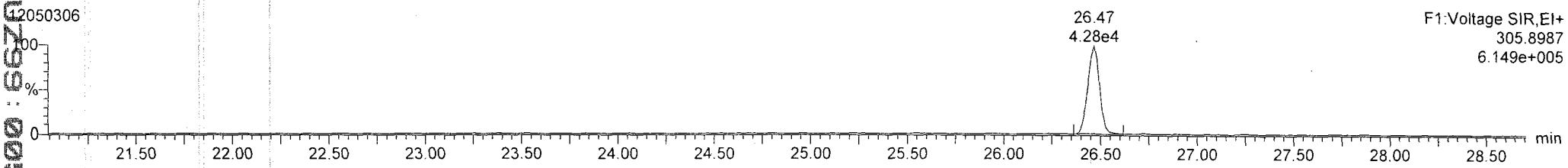


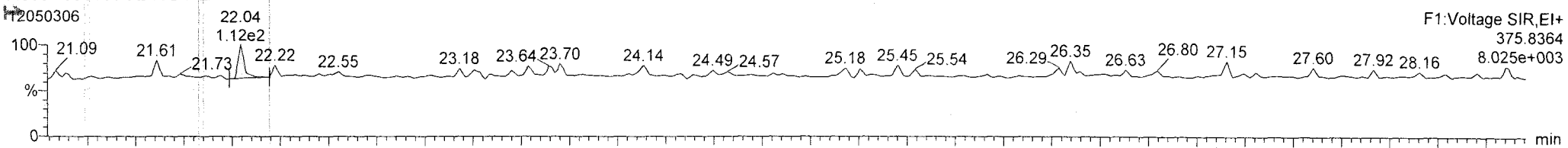
Total-tetrafurans



Total-tetrafurans



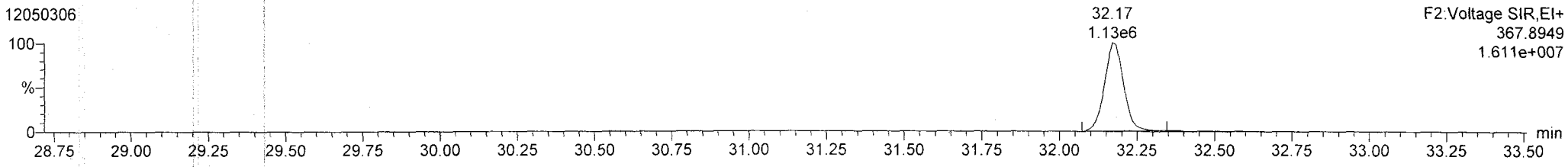
FUNCTION1 HXCDPE



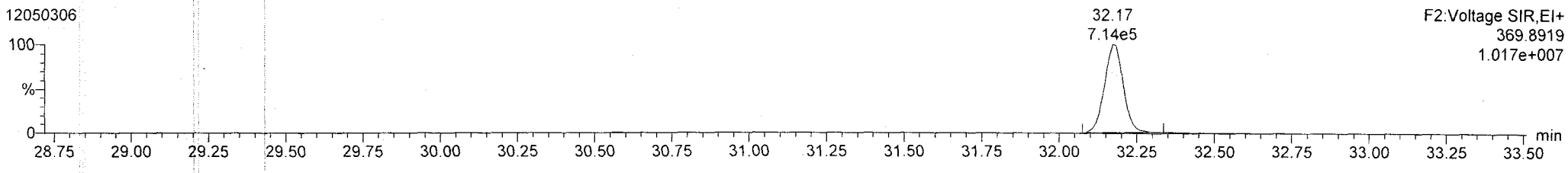
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

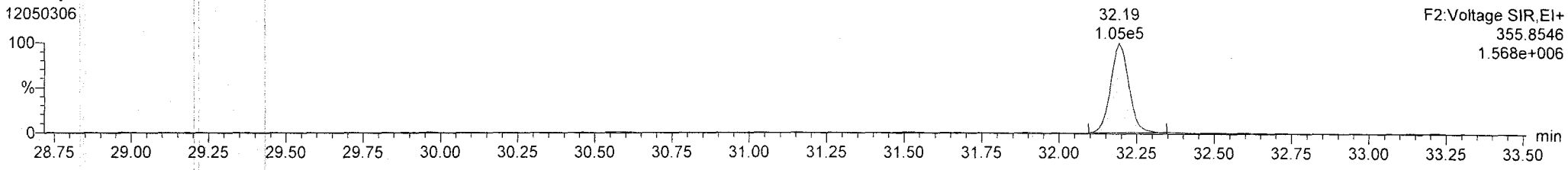
13C-12378-PeCDD



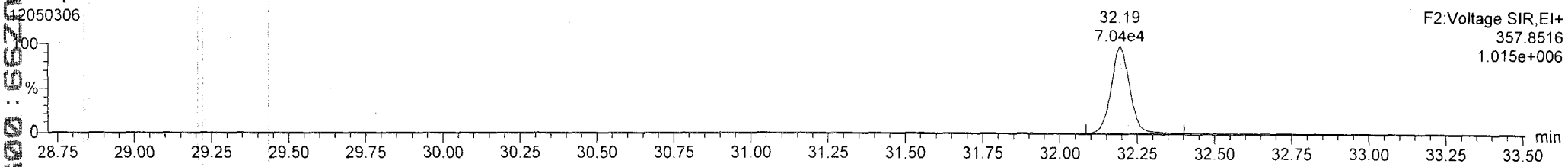
13C-12378-PeCDD



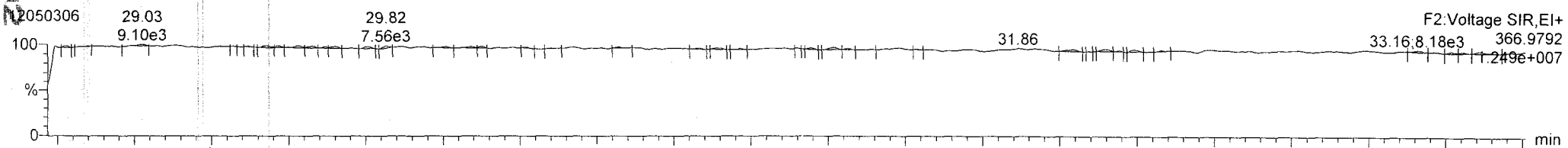
Total-pentadioxins



Total-pentadioxins



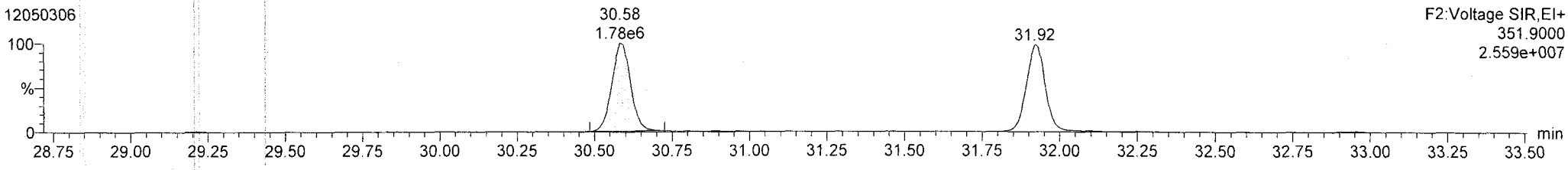
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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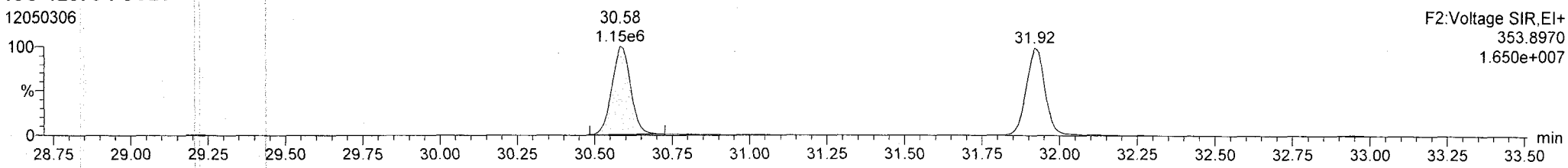
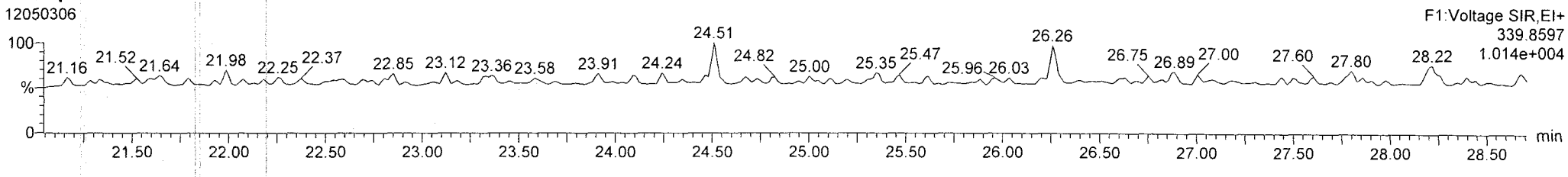
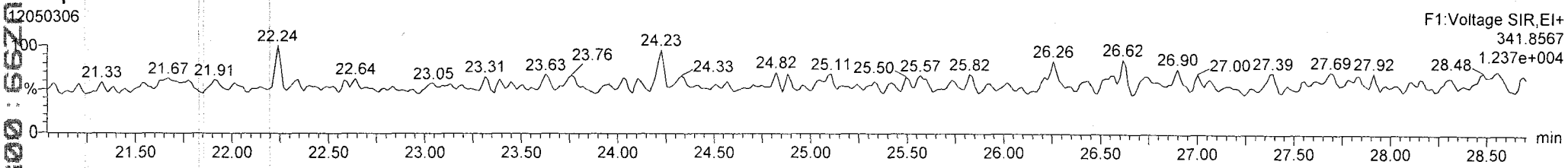


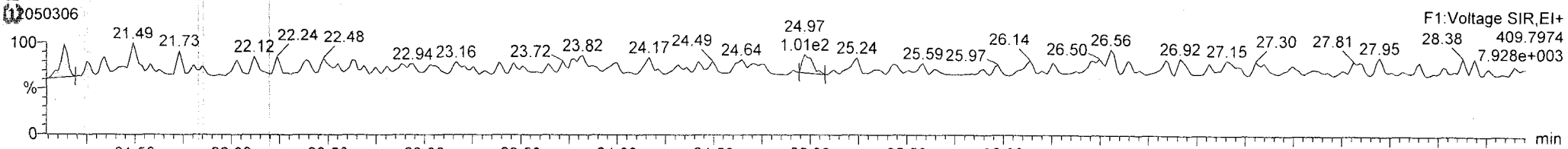
Total-penta1



Total-penta1



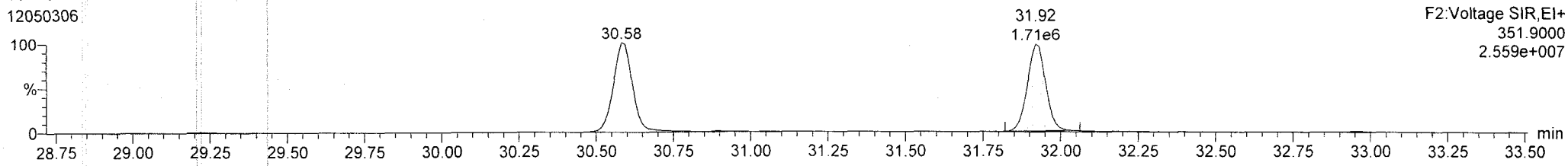
FUNCTION1 HPCDPE



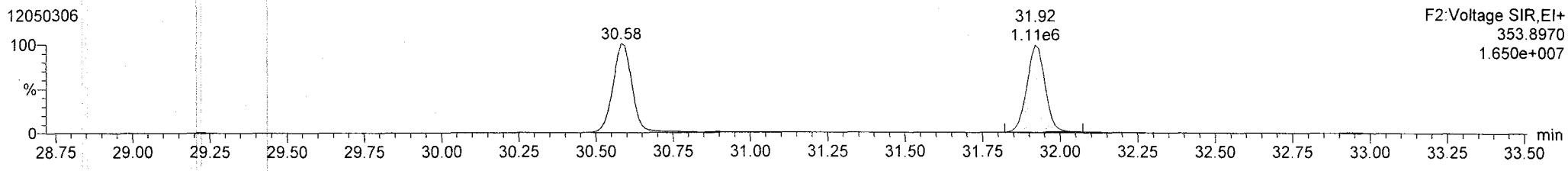
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

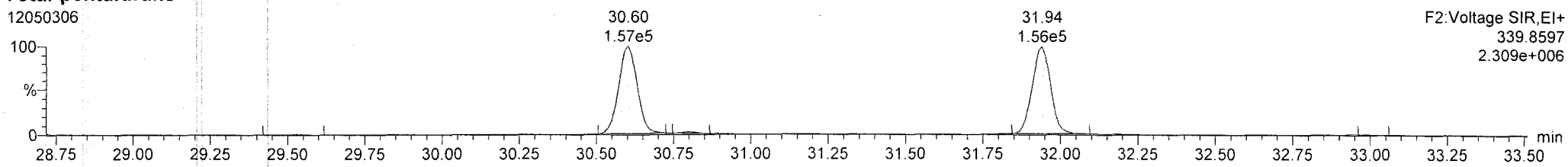
13C-23478-PeCDF



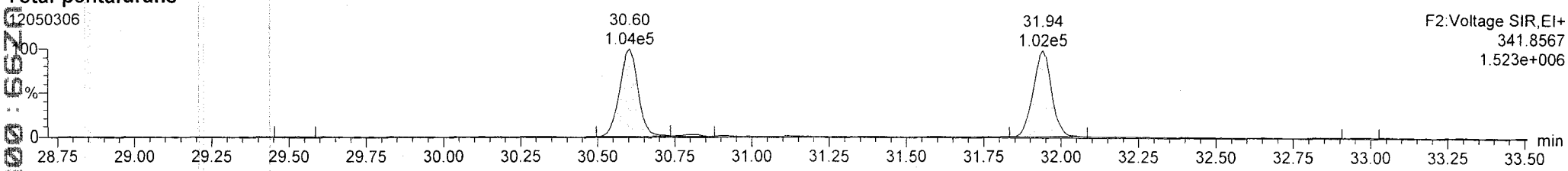
13C-23478-PeCDF



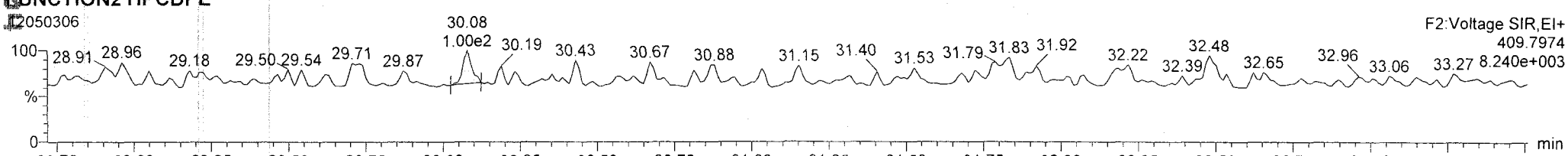
Total-pentafurans



Total-pentafurans



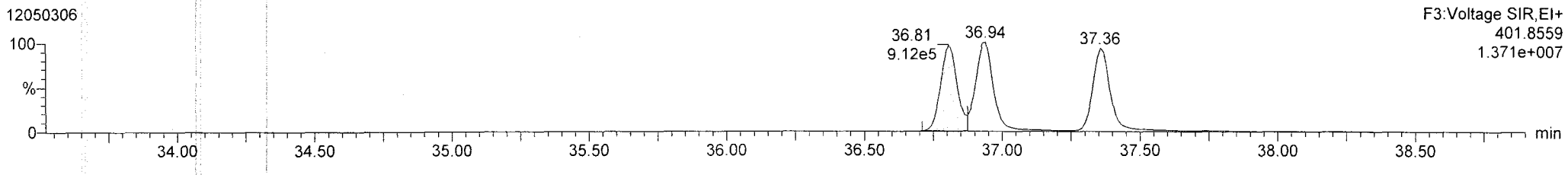
FUNCTION2 HPCDPE



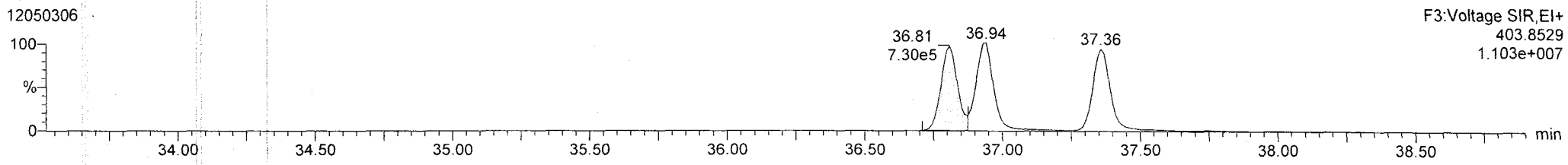
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

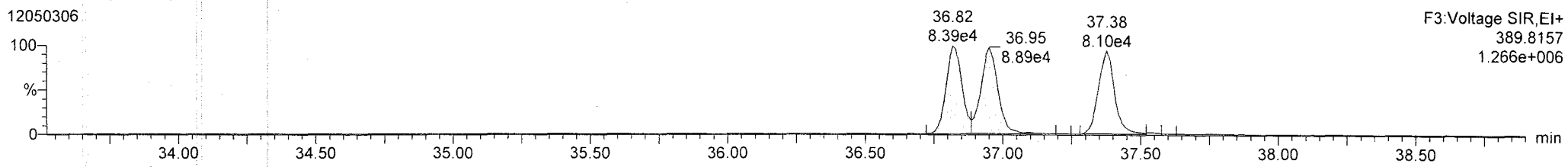
13C-123478-HxCDD



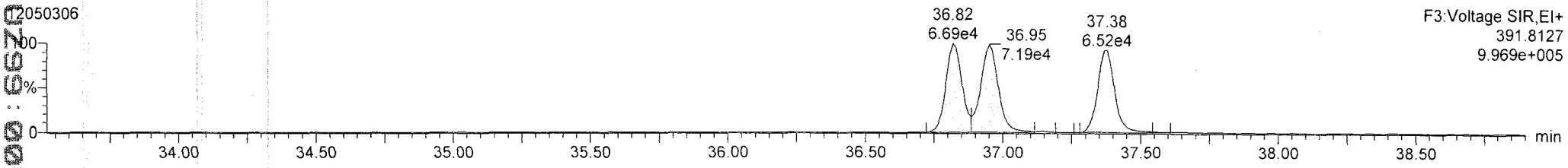
13C-123478-HxCDD



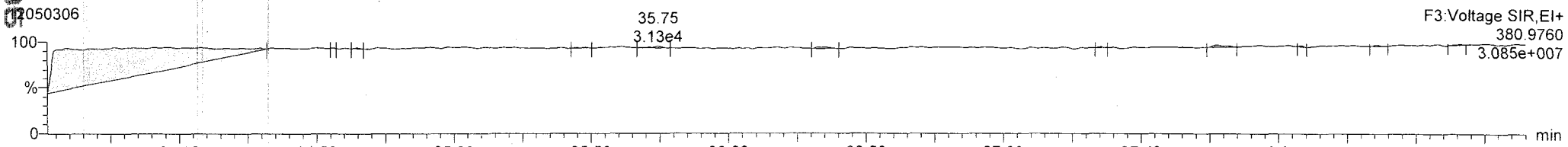
Total-hexadioxins



Total-hexadioxins



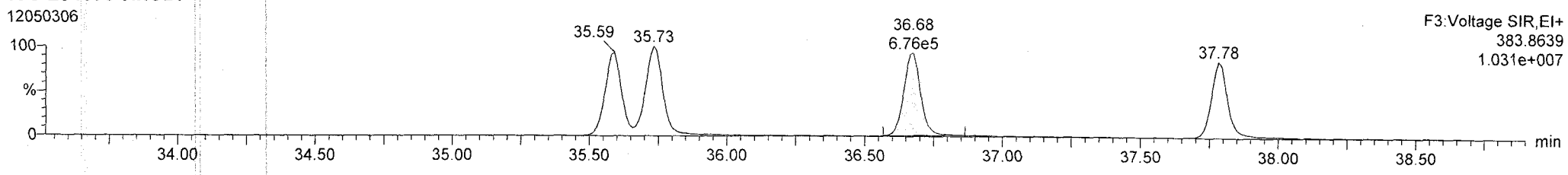
FUNCTION3 PFK



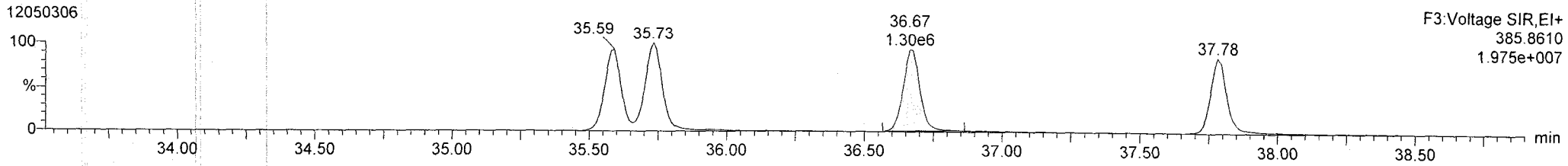
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

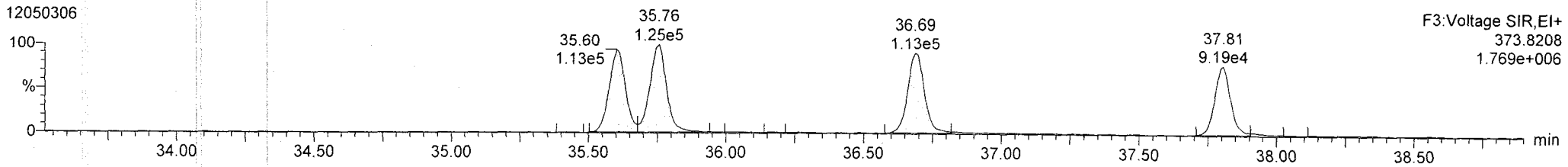
13C-234678-HxCDF



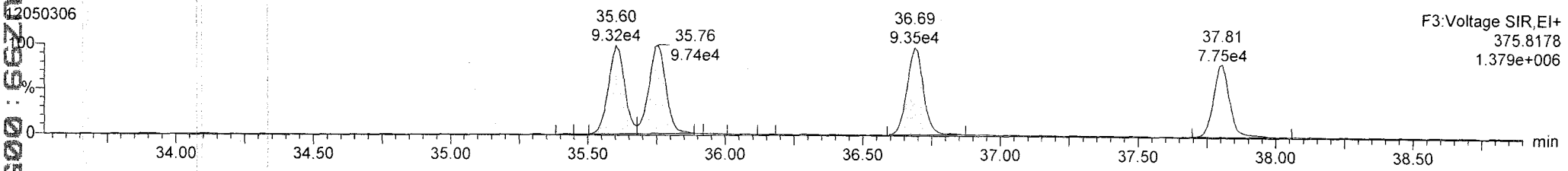
13C-234678-HxCDF



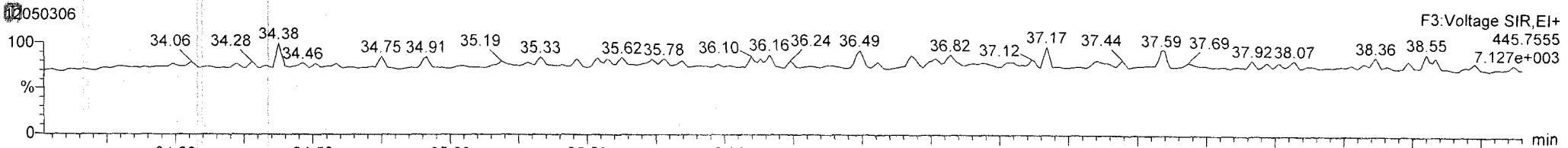
Total-hexafurans



Total-hexafurans



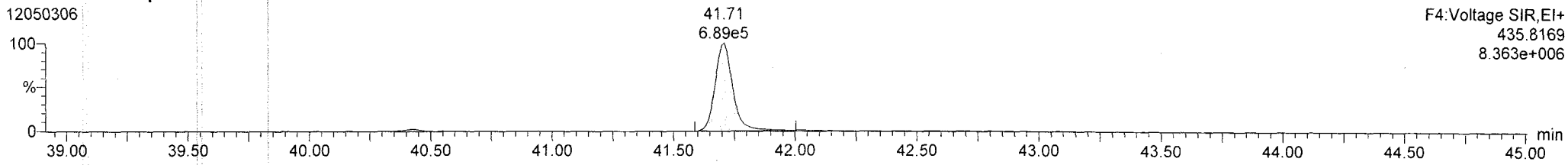
FUNCTION3 OCDPE



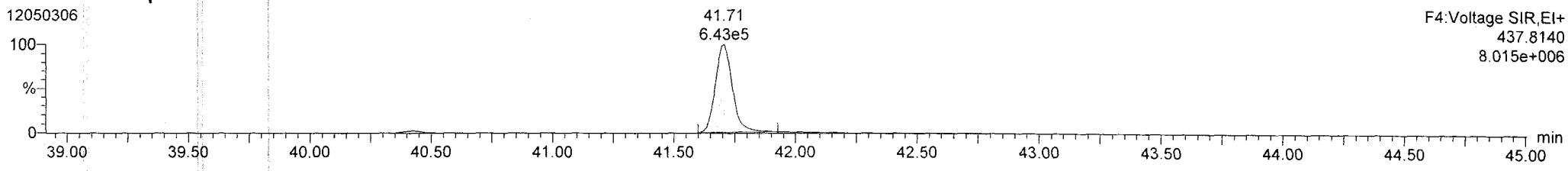
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

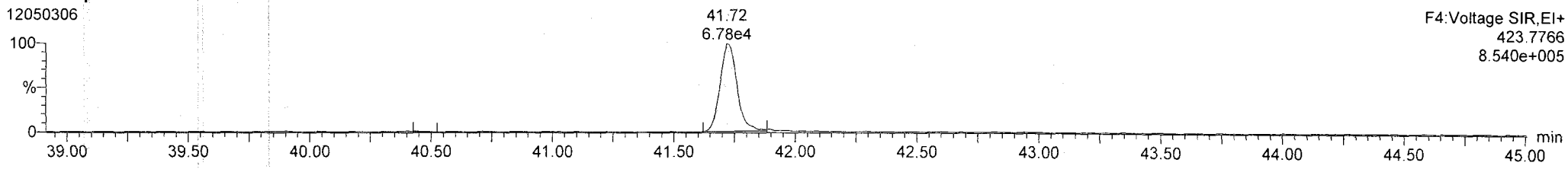
13C-1234678-HpCDD



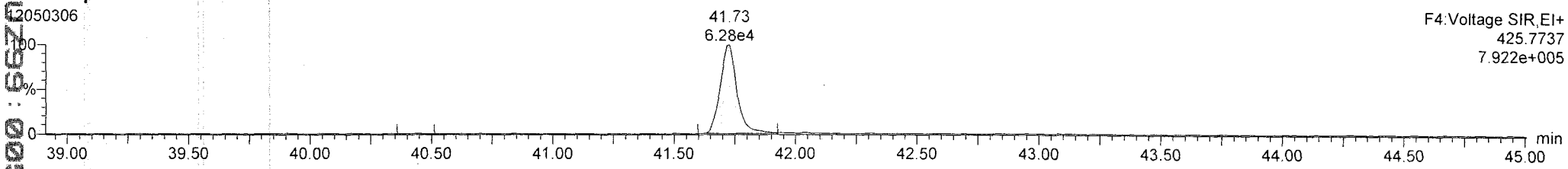
13C-1234678-HpCDD



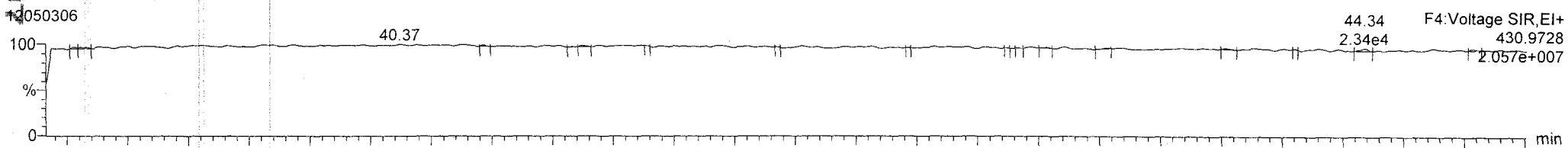
Total-heptadioxins



Total-heptadioxins



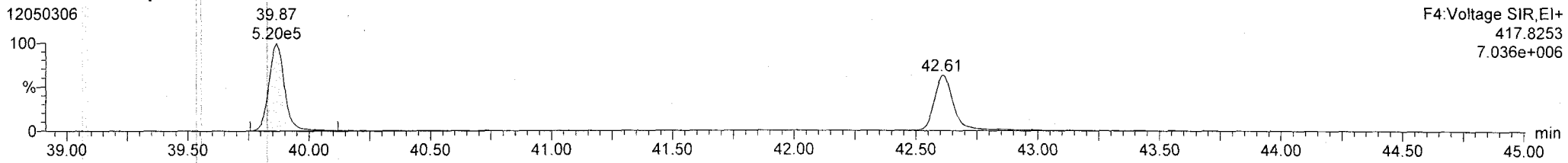
FUNCTION4 PFK



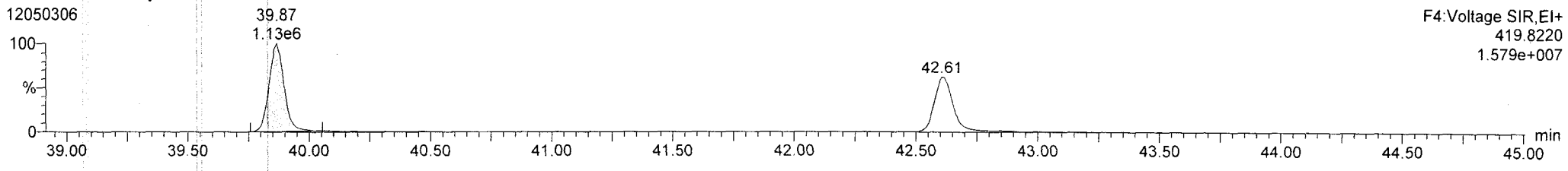
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

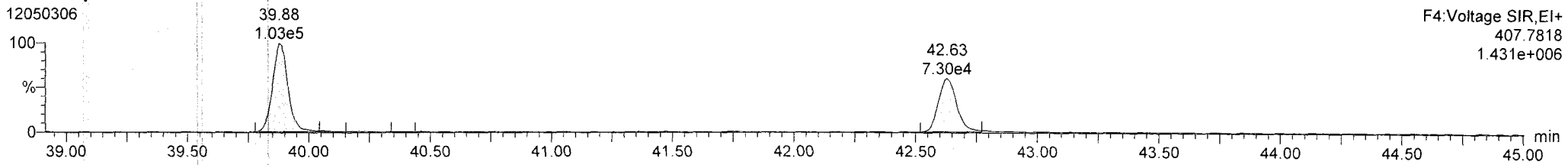
13C-1234678-HpCDF



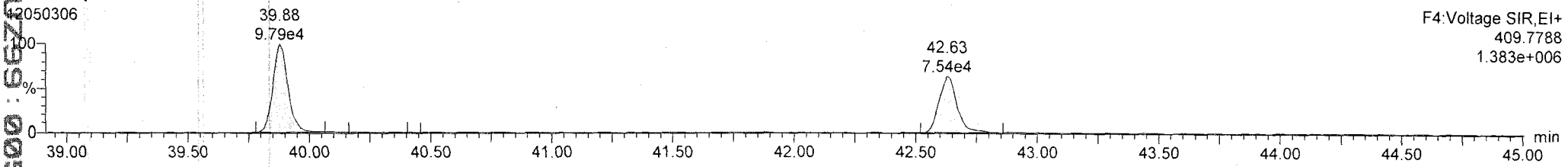
13C-1234678-HpCDF



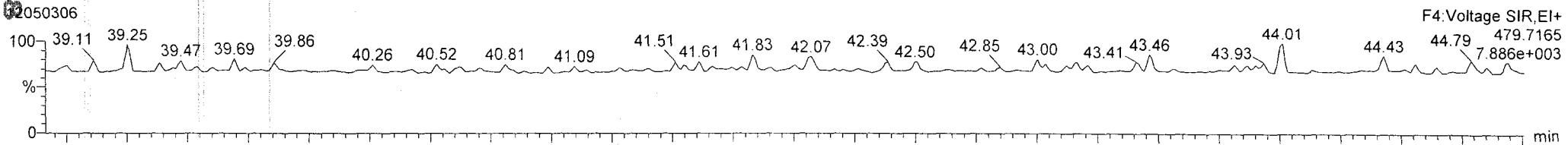
Total-heptafurans



Total-heptafurans



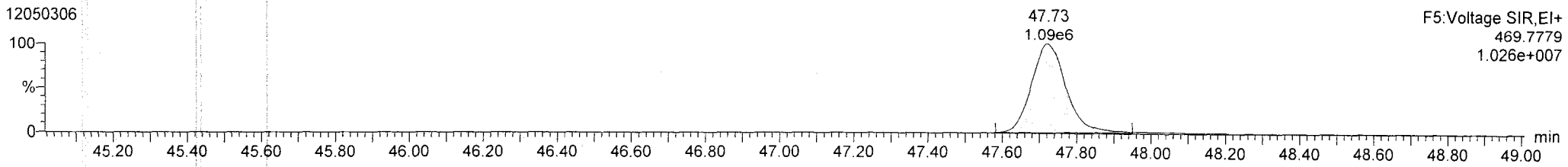
FUNCTION4 NCDPE



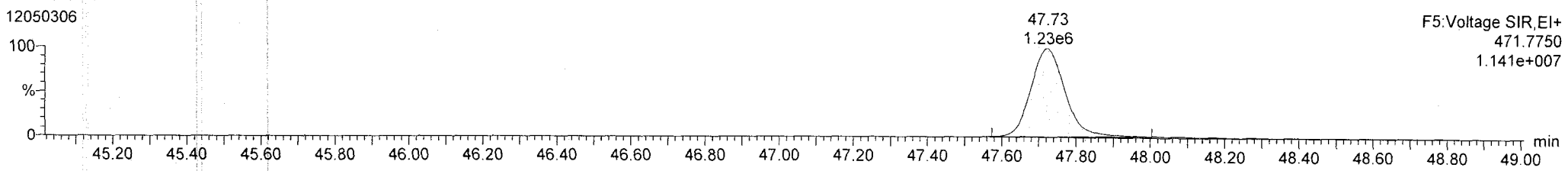
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

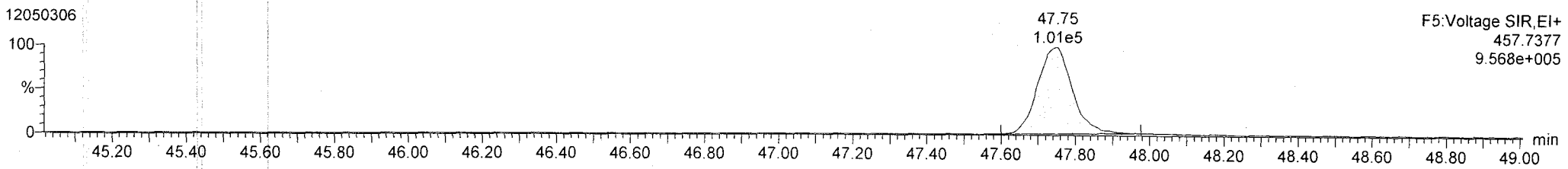
13C-OCDD



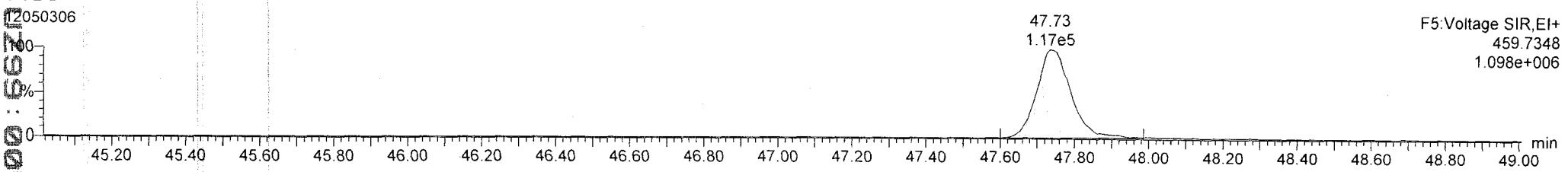
13C-OCDD



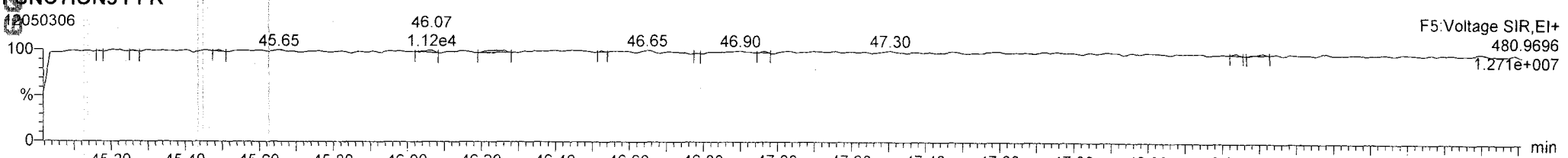
OCDD



OCDD



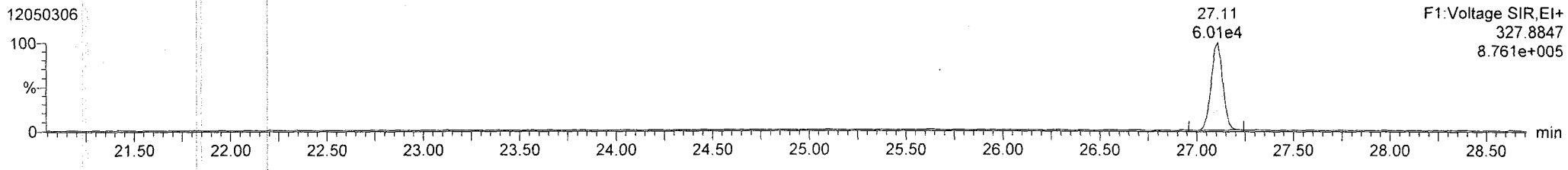
FUNCTION5 PFK



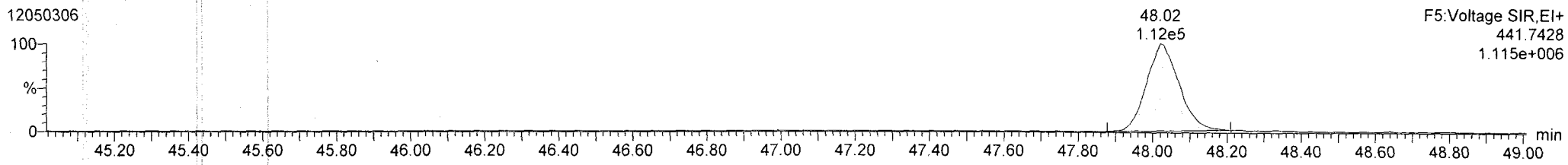
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:23 Pacific Daylight Time

Name: 12050306, Date: 03-May-2012, Time: 16:19:31, ID: CS2, Conditions: AUTOSPEC01, User: pk

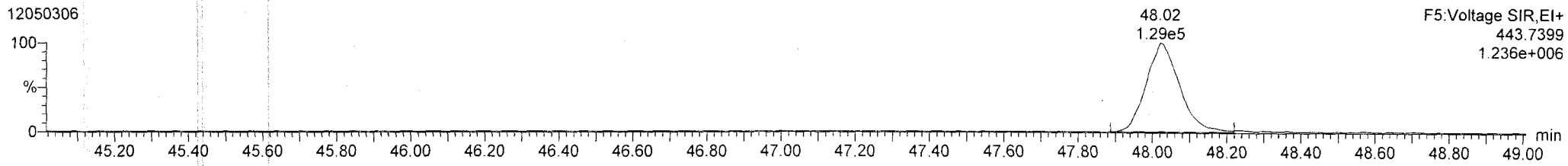
37CL-2378-TCDD



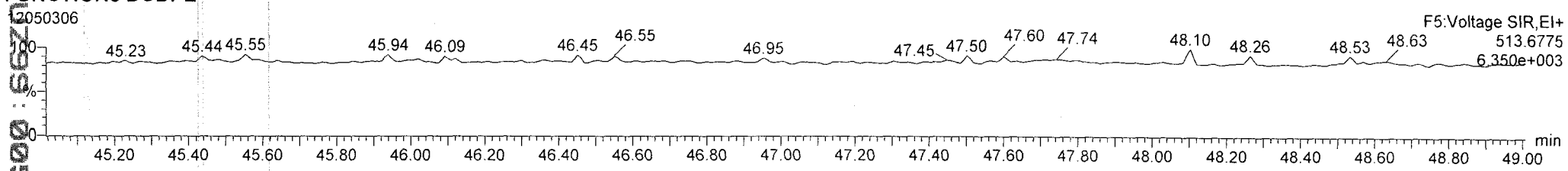
OCDF



OCDF



FUNCTION5 DCDPE



0051 : 0293

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.452	26.453	371811	371811	0.866	bb	98.0	0.73	0.77	1449.2	NO	9.804	9.804
2	2	12378-PeCDF	339.8597	30.593	30.604	1380859	1380859	0.907	bd	100.1	1.56	1.55	3690.0	NO	50.044	50.044
3	3	23478-PeCDF	339.8597	31.930	31.942	1335891	1335891	0.936	bb	99.4	1.55	1.55	3644.1	NO	49.684	49.684
4	4	123478-HxCDF	373.8208	35.602	35.591	1041312	1041312	1.082	bd	100.4	1.23	1.24	2159.5	NO	50.214	50.214
5	5	234678-HxCDF	373.8208	36.687	36.687	1040946	1040946	1.070	bb	98.3	1.25	1.24	2145.7	NO	49.139	49.139
6	6	123678-HxCDF	373.8208	35.744	35.755	1131094	1131094	1.048	db	99.6	1.24	1.24	2255.4	NO	49.800	49.800
7	7	123789-HxCDF	373.8208	37.794	37.794	845472	845472	1.020	bb	98.0	1.22	1.24	1827.4	NO	49.015	49.015
8	8	1234678-HpCDF	407.7818	39.877	39.875	986779	986779	1.214	bb	100.1	1.01	1.05	2484.9	NO	50.060	50.060
9	9	1234789-HpCDF	407.7818	42.628	42.619	728549	728549	1.254	bd	96.7	1.02	1.05	1571.0	NO	48.335	48.335
10	10	OCDF	441.7428	48.012	48.003	1223078	1223078	1.105	bd	97.4	0.89	0.89	2383.7	NO	97.442	97.442
11	11	2378-TCDD	319.8965	27.094	27.093	279788	279788	1.046	bd	95.6	0.79	0.77	977.1	NO	9.560	9.560
12	12	12378-PeCDD	355.8546	32.182	32.181	915126	915126	0.973	bb	100.0	1.57	1.55	2413.7	NO	49.999	49.999
13	13	123478-HxCDD	389.8157	36.819	36.819	764837	764837	0.935	bd	100.7	1.23	1.24	1838.0	NO	50.334	50.334
14	14	123678-HxCDD	389.8157	36.939	36.939	781628	781628	0.878	db	99.3	1.24	1.24	1749.0	NO	49.635	49.635
15	15	123789-HxCDD	389.8157	37.367	37.334	718919	718919	0.839	bb	100.3	1.24	1.24	1733.7	NO	50.145	50.145
16	16	1234678-HpCDD	423.7766	41.718	41.709	635024	635024	0.974	bb	99.0	1.05	1.05	1181.1	NO	49.494	49.494
17	17	OCDD	457.7377	47.743	47.731	1067039	1067039	0.950	bd	98.9	0.87	0.89	1170.6	NO	98.894	98.894
18	18	13C-2378-TCDF	315.9419	26.437	26.452	4378575		1.484	bb	98.5	0.77	0.77	8699.9	NO	98.505	
19	19	13C-12378-PeCDF	351.9000	30.582	30.593	3042396		1.048	bb	96.9	1.55	1.55	3470.5	NO	96.940	
20	20	13C-23478-PeCDF	351.9000	31.919	31.931	2873049		1.003	bb	95.6	1.56	1.55	3307.3	NO	95.622	
21	21	13C-123478-HxCDF	383.8639	35.580	35.580	1916769		1.186	bd	100.4	0.52	0.51	2139.3	NO	100.356	
22	22	13C-123678-HxCDF	383.8639	35.734	35.733	2166531		1.315	dd	102.3	0.50	0.51	2272.3	NO	102.267	
23	23	13C-234678-HxCDF	383.8639	36.665	36.665	1980140		1.223	bb	100.5	0.52	0.51	2194.0	NO	100.481	
24	24	13C-123789-HxCDF	383.8639	37.783	37.772	1690949		1.056	bb	99.4	0.52	0.51	1940.9	NO	99.354	
25	25	13C-1234678-HpCDF	417.8253	39.855	39.855	1623099		1.011	bb	99.6	0.46	0.44	2052.8	NO	99.617	
26	26	13C-1234789-HpCDF	417.8253	42.606	42.606	1201918		0.741	bd	100.7	0.45	0.44	1314.4	NO	100.749	
27	27	13C-1234-TCDD	331.9368	26.272	26.272	2994466		1.000	bb	100.0	0.78	0.77	6042.1	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.079	27.094	2798287		0.956	bb	97.7	0.77	0.77	5658.4	NO	97.711	
29	29	13C-12378-PeCDD	367.8949	32.172	32.183	1880523		0.663	bb	94.7	1.56	1.55	10280.8	NO	94.656	
30	30	13C-123478-HxCDD	401.8559	36.797	36.796	1624450		1.024	bd	98.5	1.25	1.24	5119.4	NO	98.484	
31	31	13C-123678-HxCDD	401.8559	36.928	36.928	1794025		1.113	db	100.1	1.25	1.24	5392.2	NO	100.092	
32	32	13C-1234678-HpCDD	435.8169	41.696	41.707	1316887		0.815	bd	100.3	1.04	1.05	2509.2	NO	100.287	
33	33	13C-OCDD	469.7779	47.716	47.723	2271337		0.717	bb	98.3	0.89	0.89	2615.2	NO	196.622	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.355	37.368	1610949		1.000	bb	100.0	1.22	1.24	5115.0	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.490			0.866							31.674	31.795
36	36	Total-penta1	339.8597		28.270										80.413	80.413
37	37	Total-pentafurans	339.8597		30.840			0.921							148.369	148.430
38	38	Total-hexafurans	373.8208		35.860			1.055							259.776	259.776
39	39	Total-heptafurans	407.7818		41.270			1.234							98.455	98.586
40	40	Total-Furans	303.9016		0.000			1.050							716.130	716.443
41	41	Total-tetradioxins	319.8965		26.000			1.046							53.831	54.158
42	42	Total-pentadioxins	355.8546		31.040			0.973							176.567	176.843
43	43	Total-hexadioxins	389.8157		36.030			0.884							218.166	218.453
44	44	Total-heptadioxins	423.7766		41.090			0.974							109.368	109.390
45	45	Total-Dioxins	319.8965		0.000			0.942							656.826	657.739
46	46	Total-TEQ	319.8965		0.000										1372.956	1374.1...
47	47	37CL-2378-TCDD	327.8847	27.094	27.087	307386		1.037		99.0			1200.0		9.897	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

LJ99:00512

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

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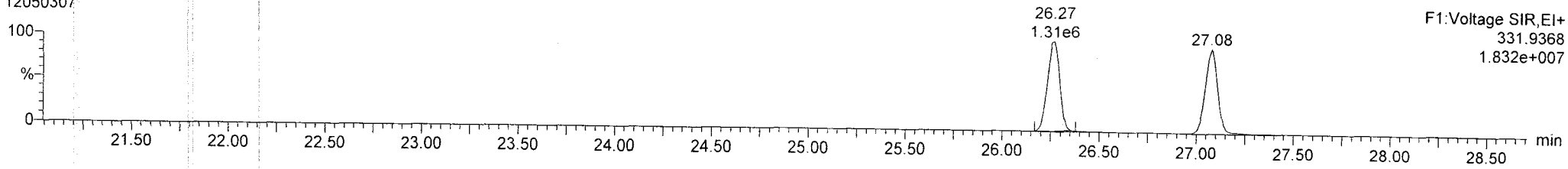
12050307



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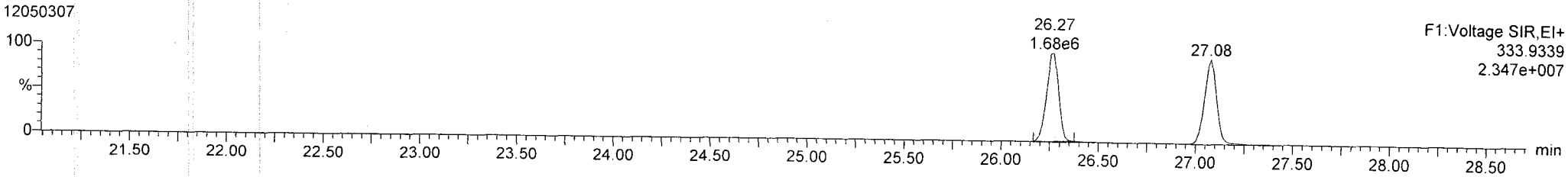

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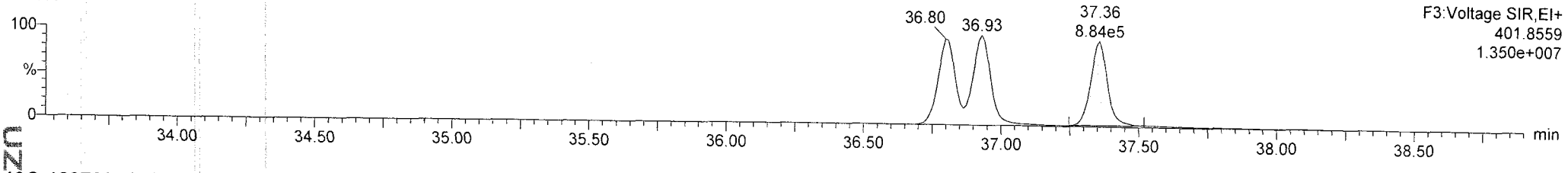

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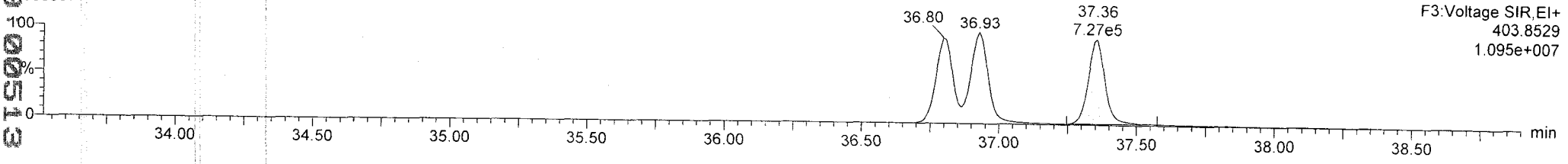
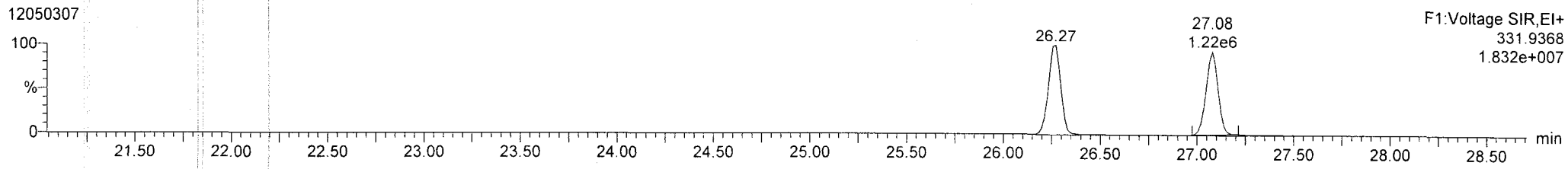


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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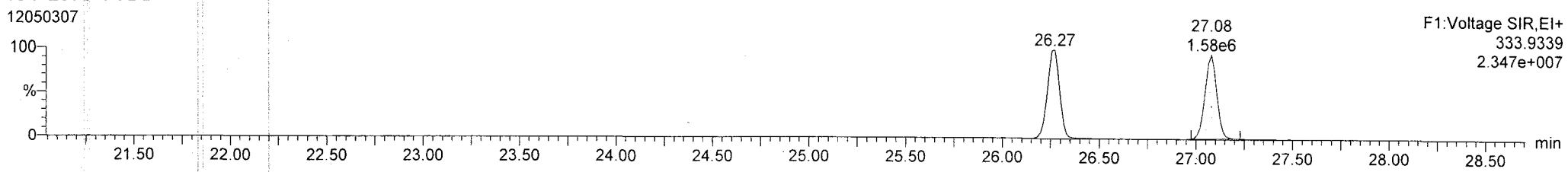
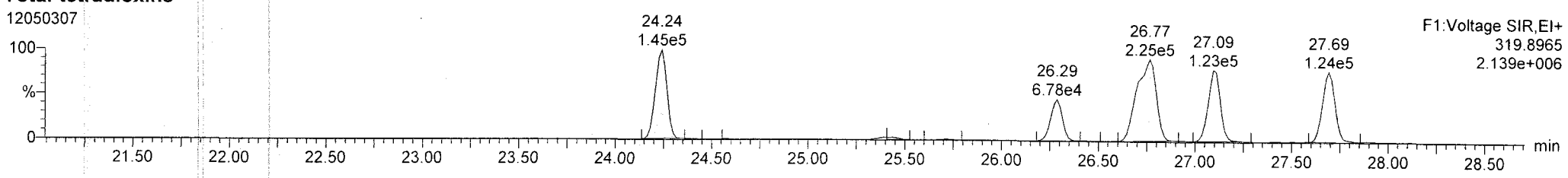
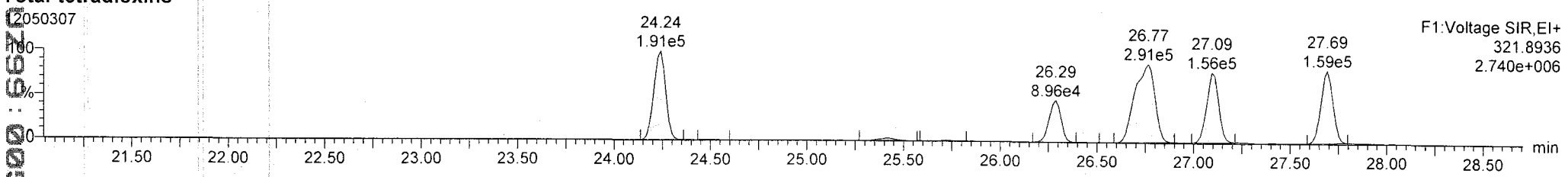


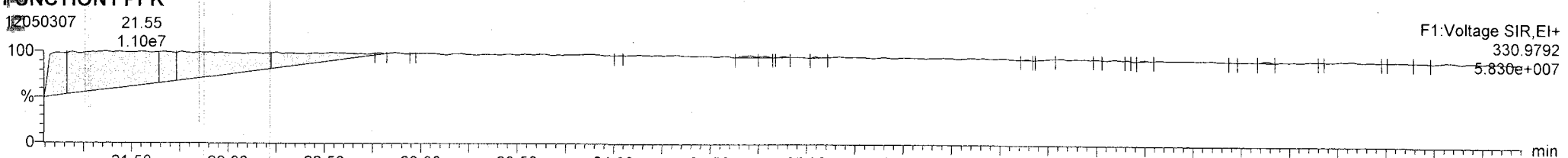
Total-tetradioxins



Total-tetradioxins



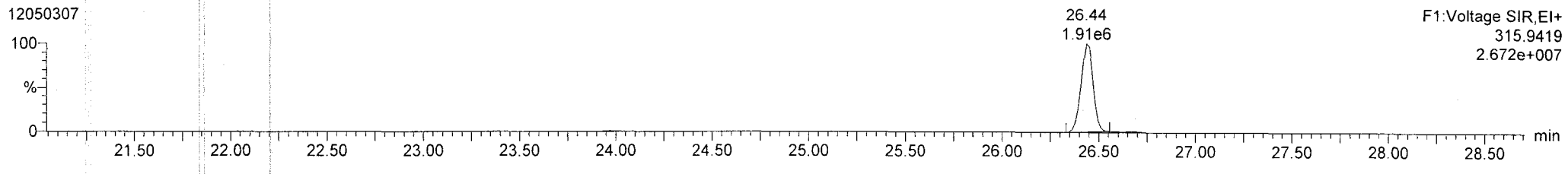
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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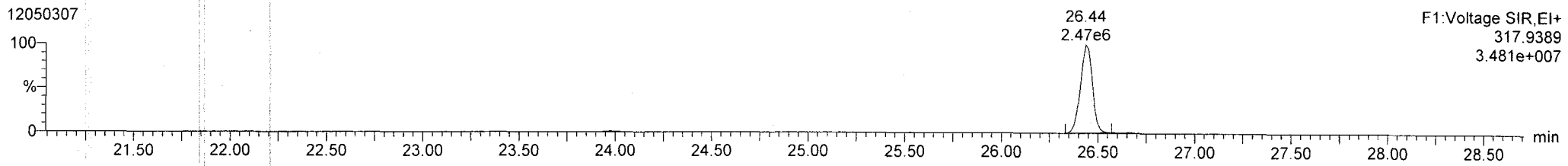
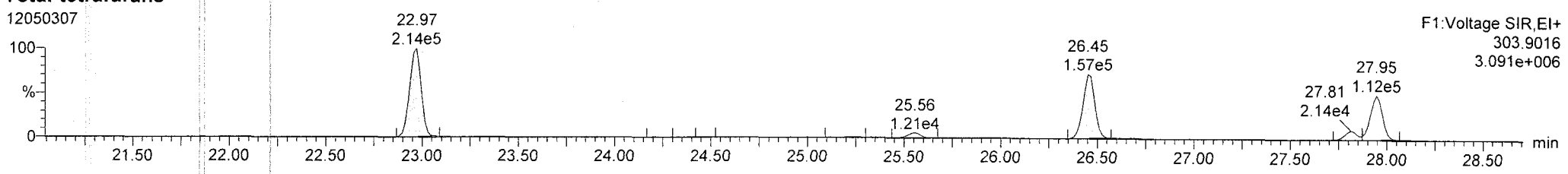


Total-tetrafurans



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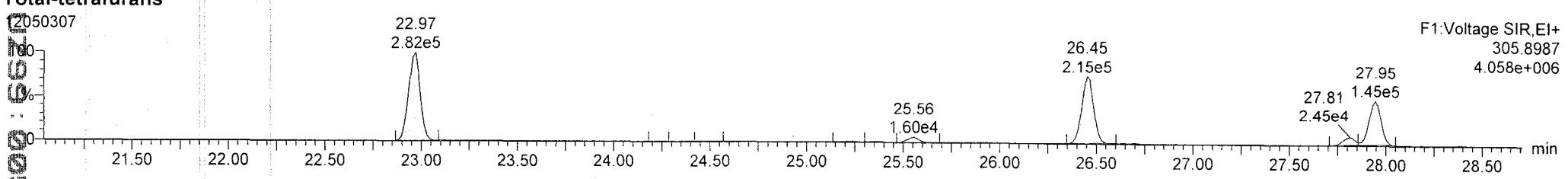
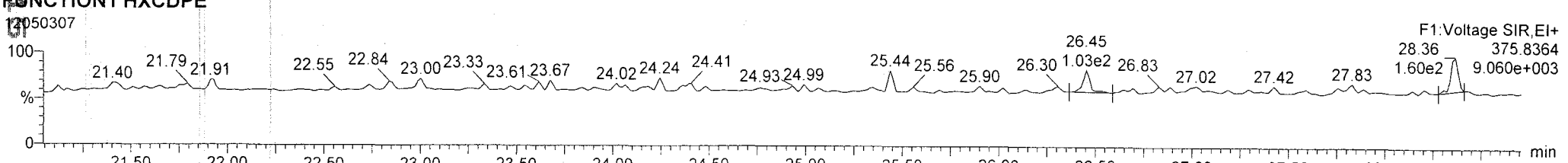


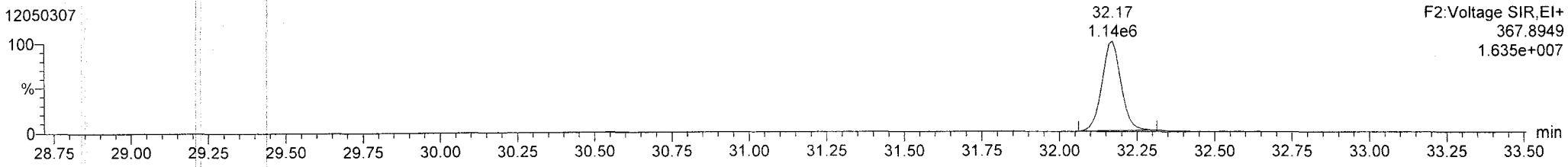
FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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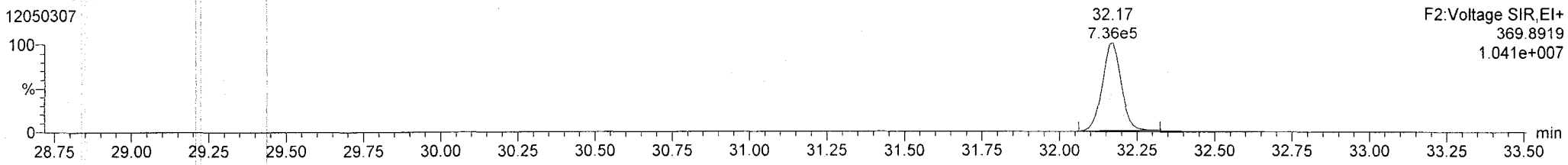
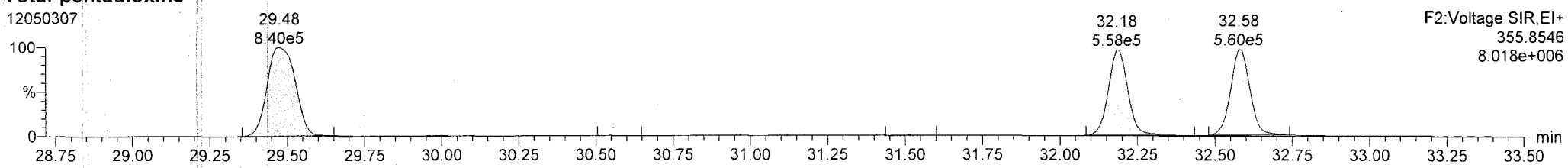


Total-pentadioxins



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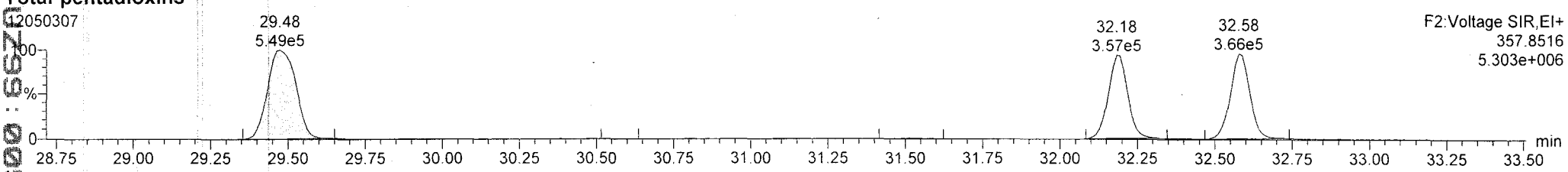
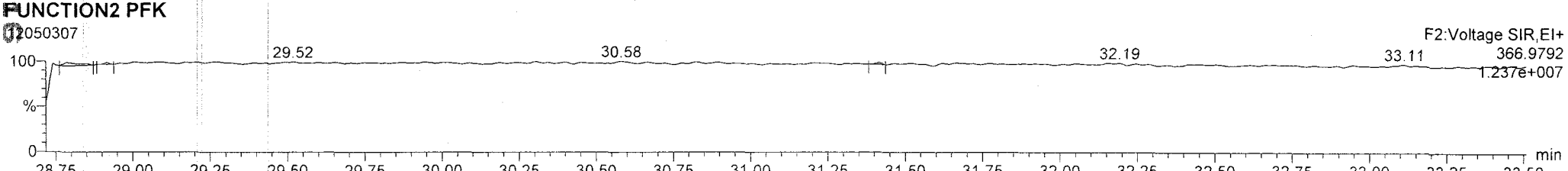


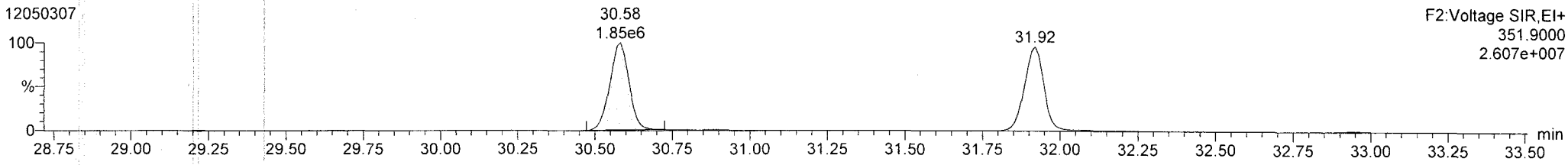
FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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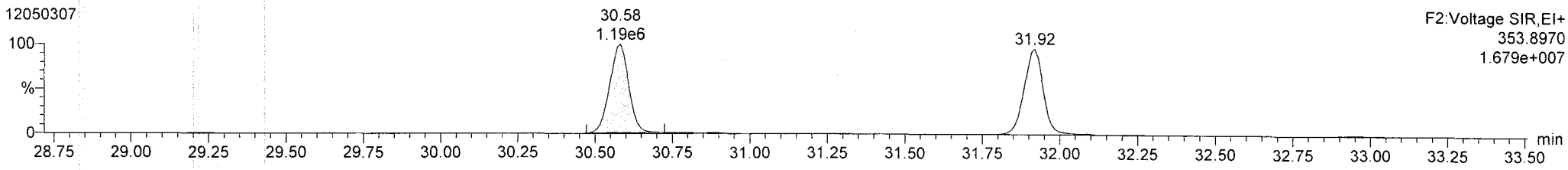
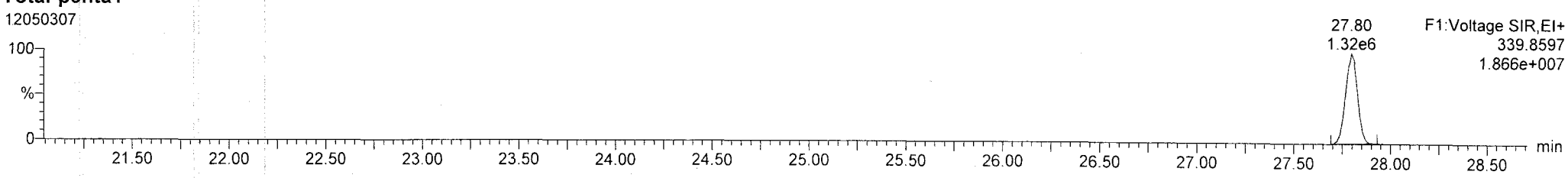


Total-penta1



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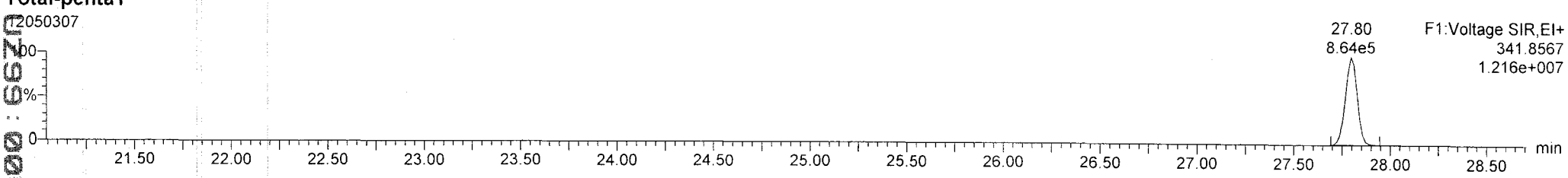

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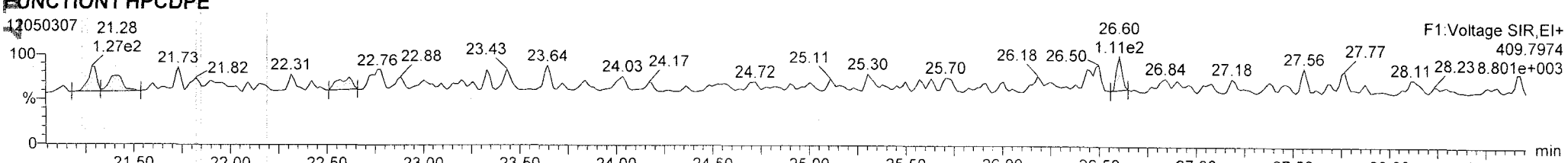
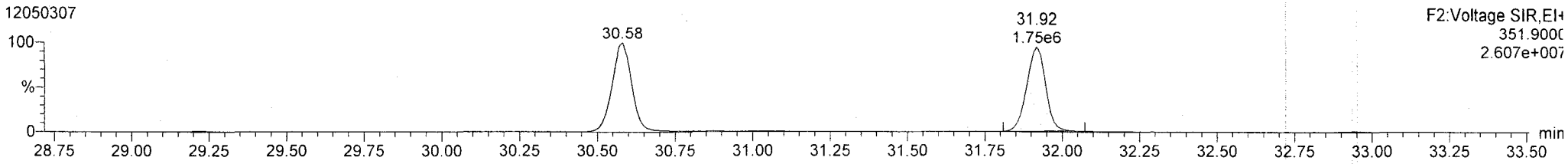


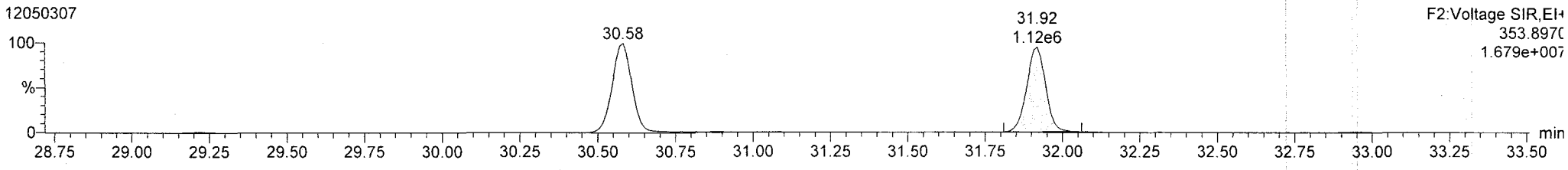
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

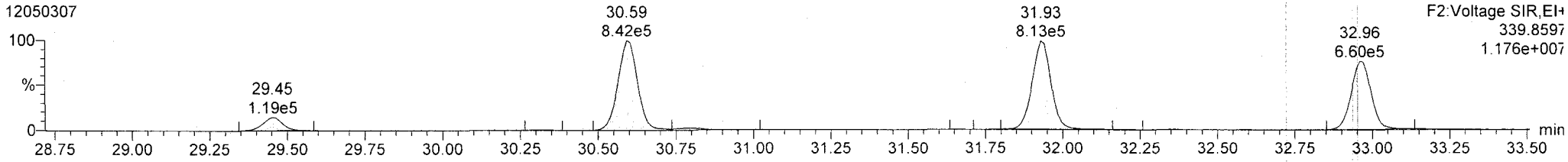
13C-23478-PeCDF



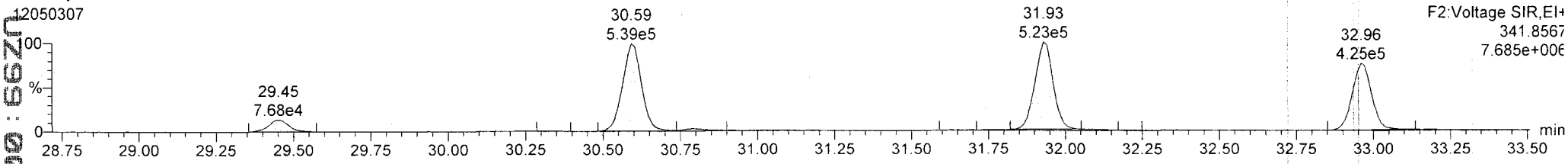
13C-23478-PeCDF



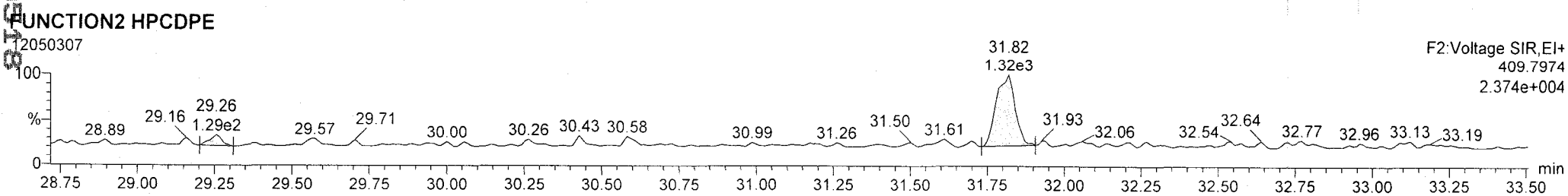
Total-pentafurans



Total-pentafurans



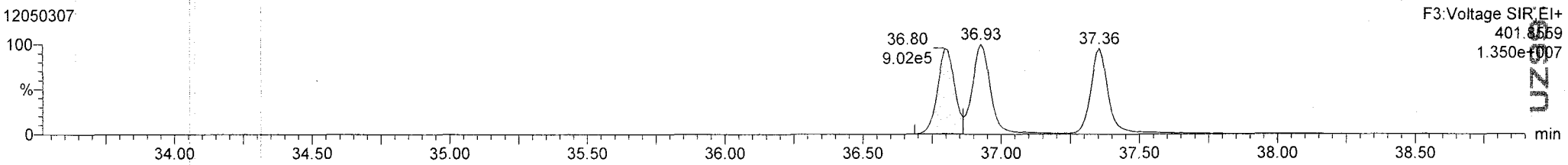
FUNCTION2 HPCDPE



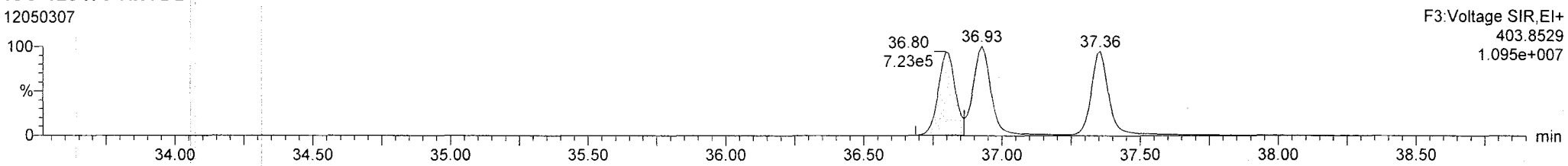
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

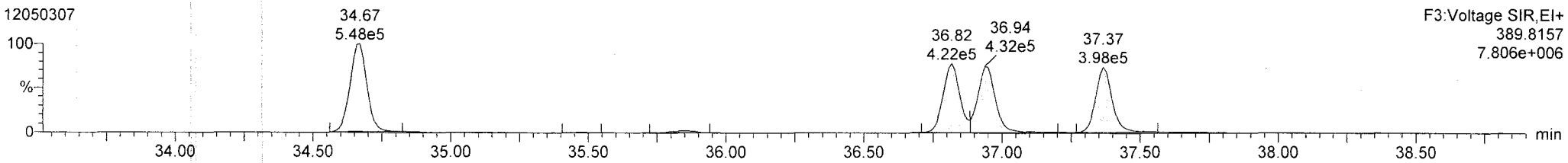
13C-123478-HxCDD
12050307



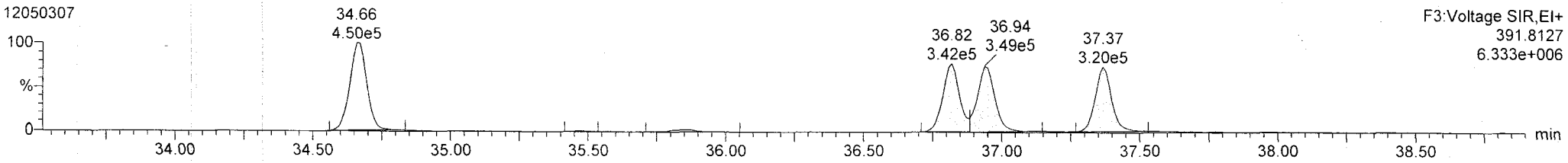
13C-123478-HxCDD
12050307



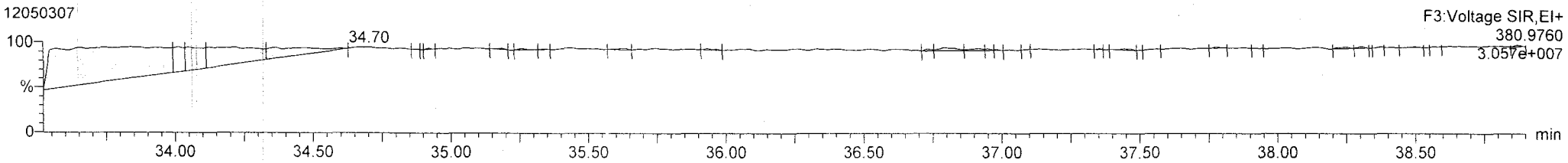
Total-hexadioxins
12050307



Total-hexadioxins
12050307



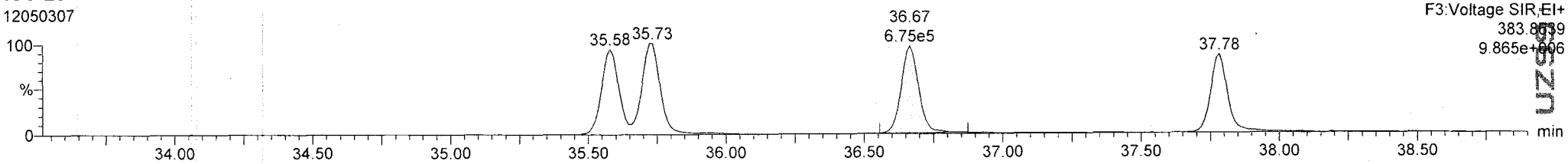
FUNCTION3 PFK
12050307



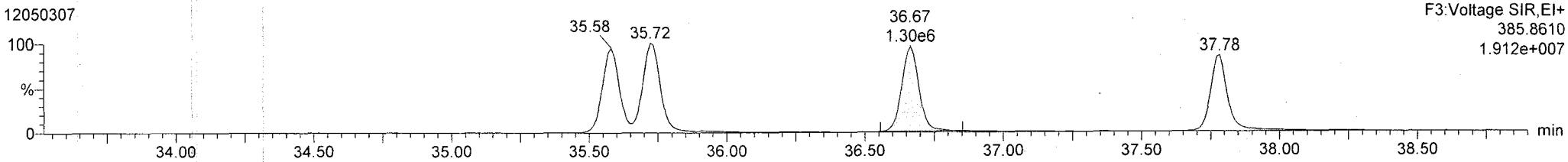
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

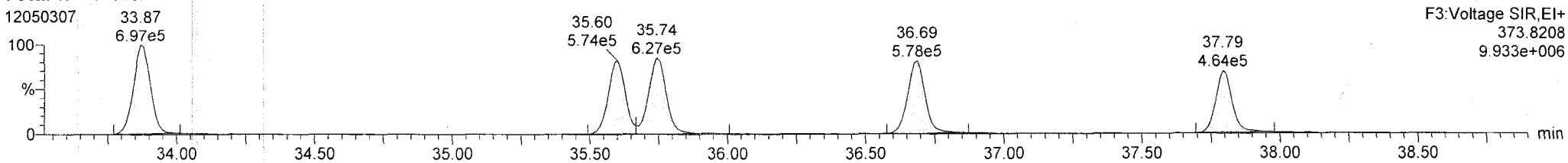
13C-234678-HxCDF
12050307
F3:Voltage SIR,EI+
383.8639
9.865e+006



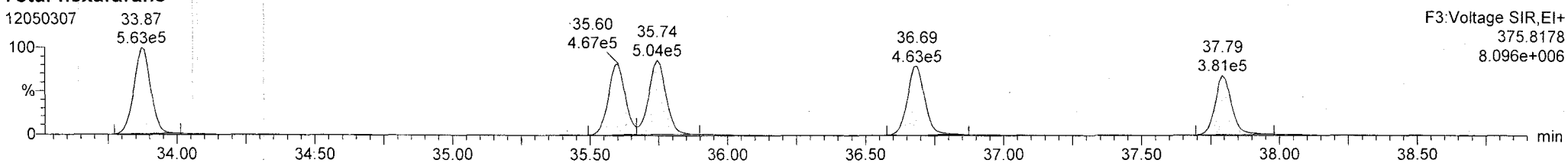
13C-234678-HxCDF
12050307
F3:Voltage SIR,EI+
385.8610
1.912e+007



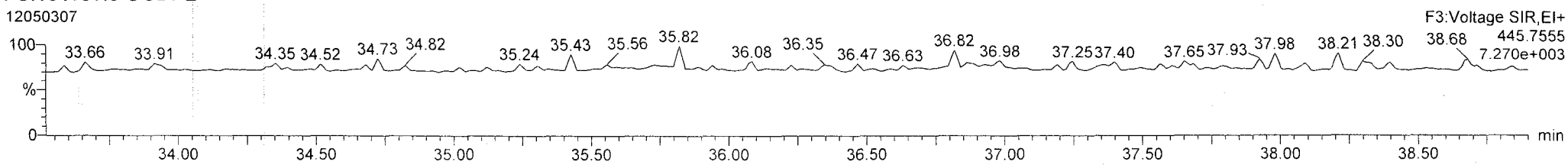
Total-hexafurans
12050307
F3:Voltage SIR,EI+
373.8208
9.933e+006



Total-hexafurans
12050307
F3:Voltage SIR,EI+
375.8178
8.096e+006



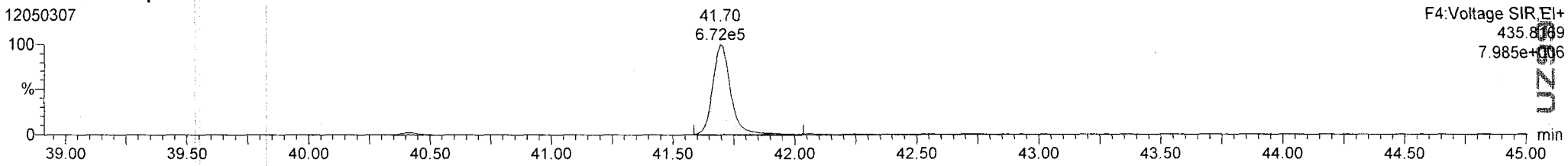
FUNCTION3 OCDPE
12050307
F3:Voltage SIR,EI+
445.7555
7.270e+003



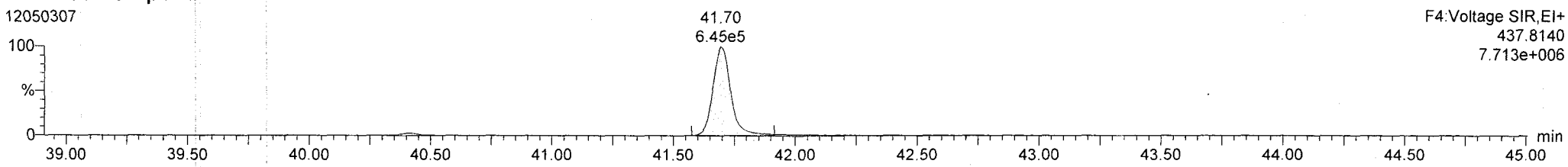
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

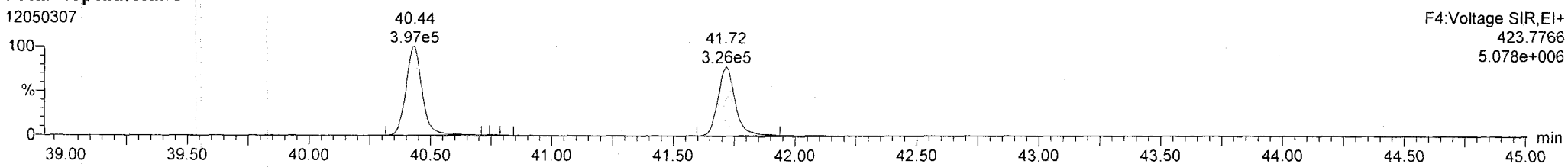
13C-1234678-HpCDD



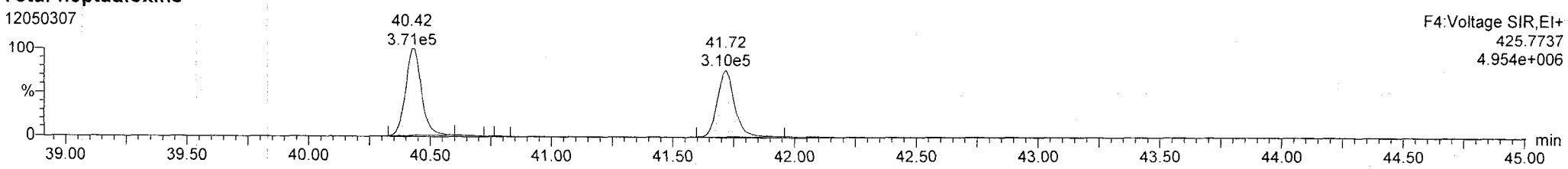
13C-1234678-HpCDD



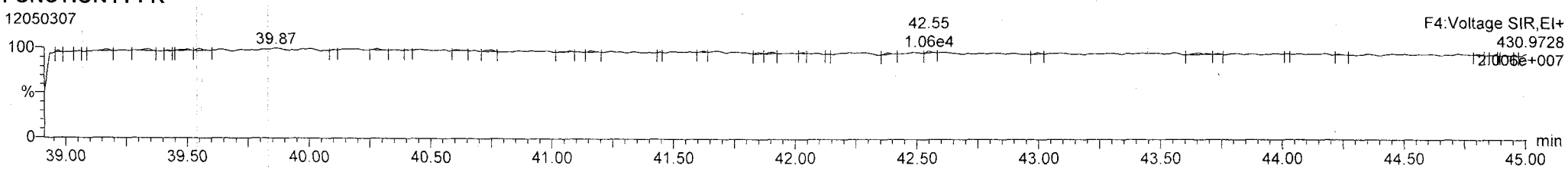
Total-heptadioxins



Total-heptadioxins



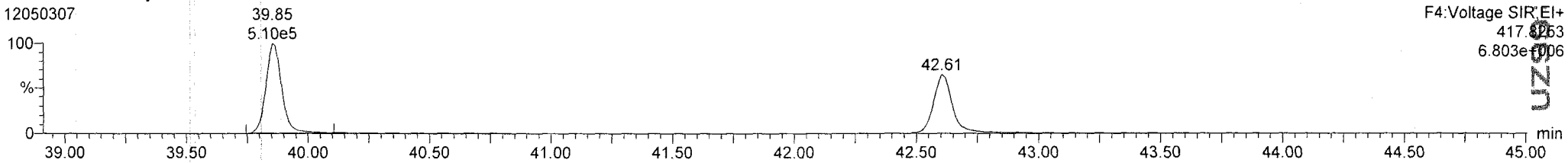
FUNCTION4 PFK



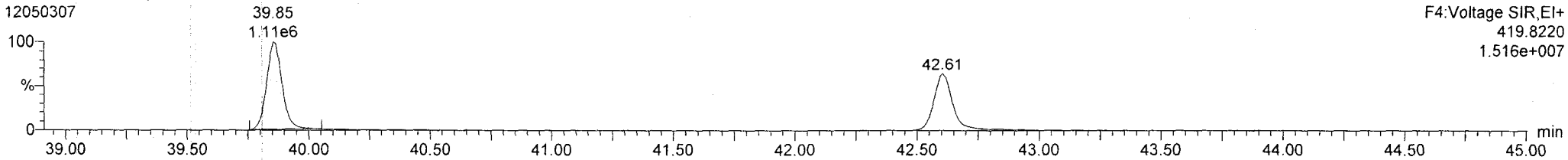
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

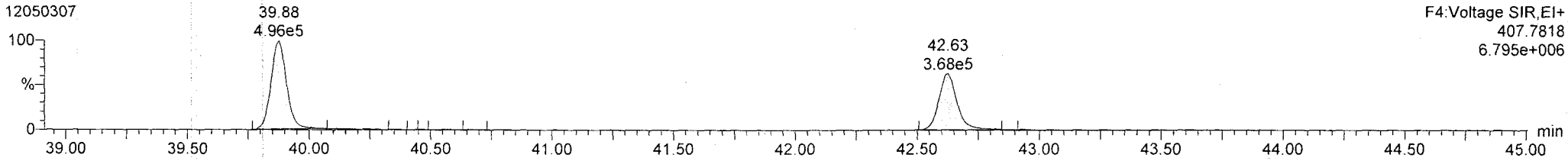
13C-1234678-HpCDF



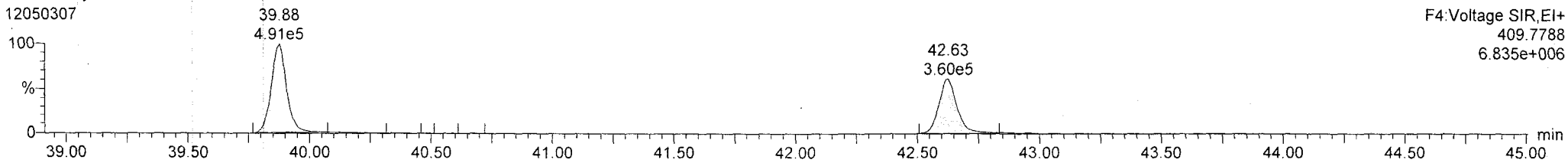
13C-1234678-HpCDF



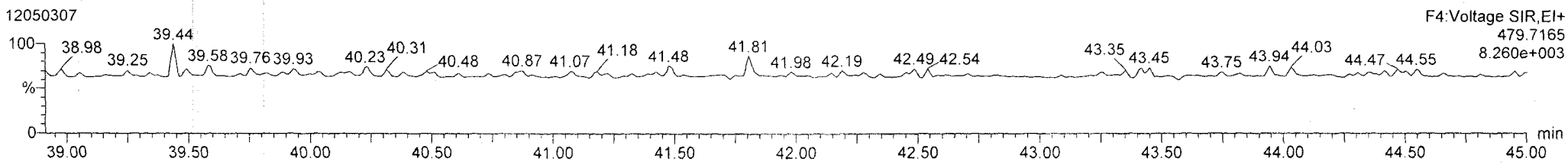
Total-heptafurans



Total-heptafurans



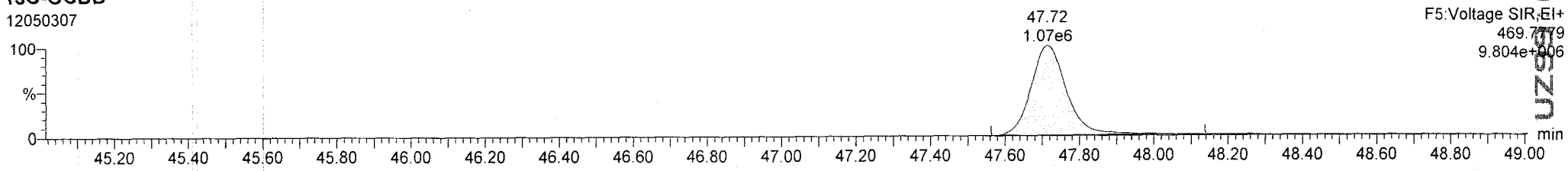
FUNCTION4 NCDPE



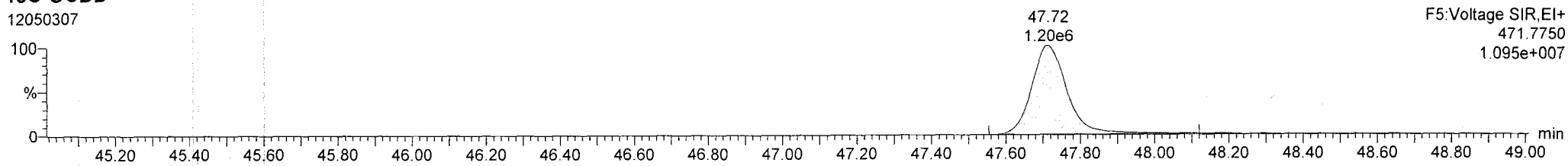
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

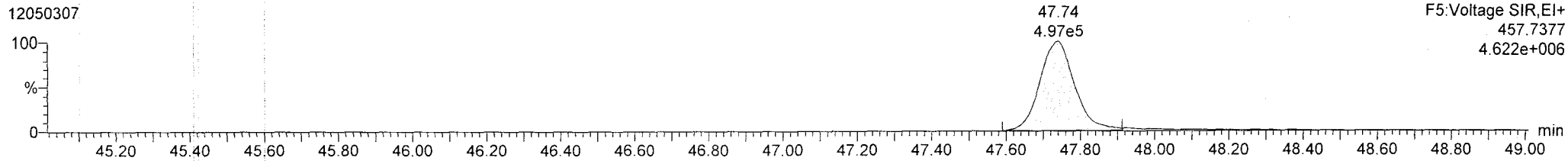
13C-OCDD
12050307



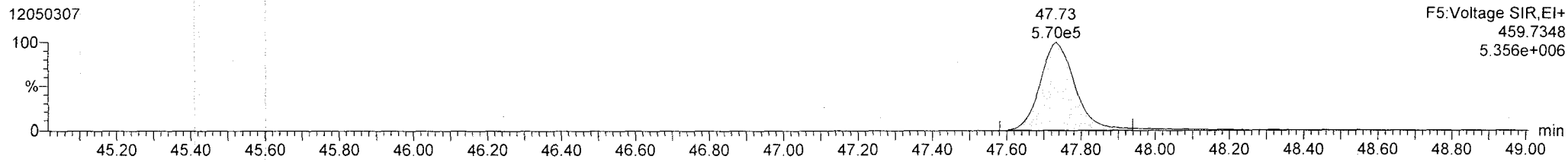
13C-OCDD
12050307



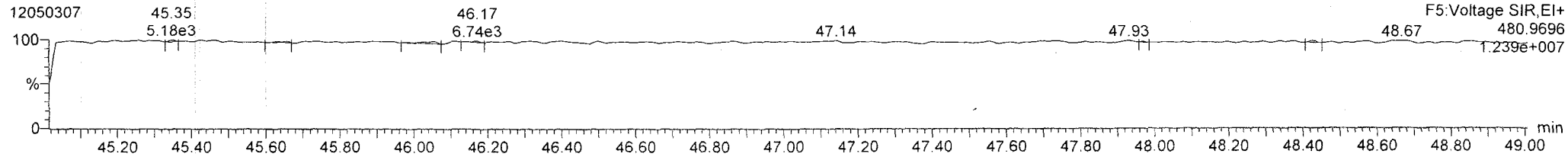
OCDD
12050307



OCDD
12050307



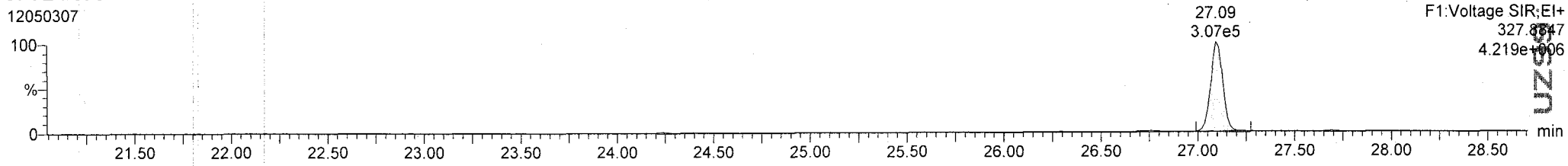
FUNCTION5 PFK
12050307



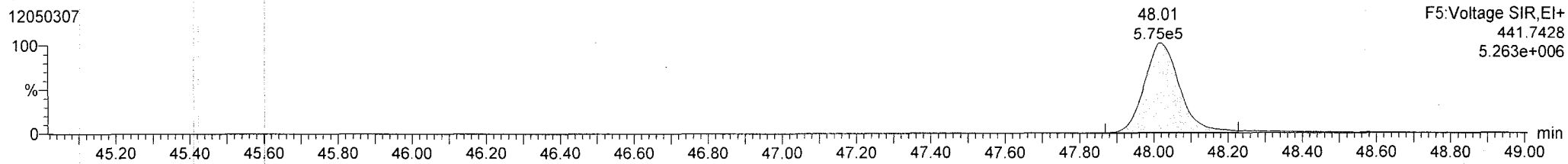
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:27 Pacific Daylight Time

Name: 12050307, Date: 03-May-2012, Time: 17:09:55, ID: CS3, Conditions: AUTOSPEC01, User: pk

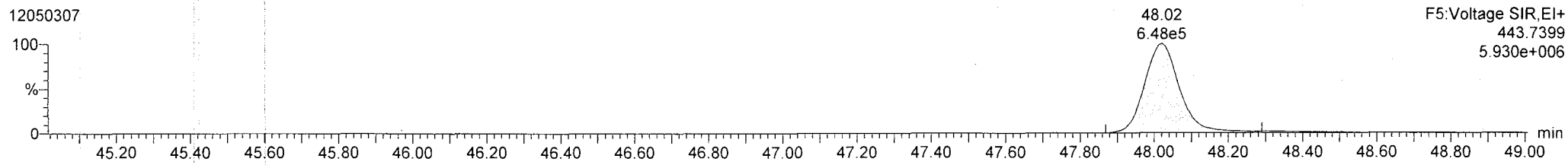
37CL-2378-TCDD



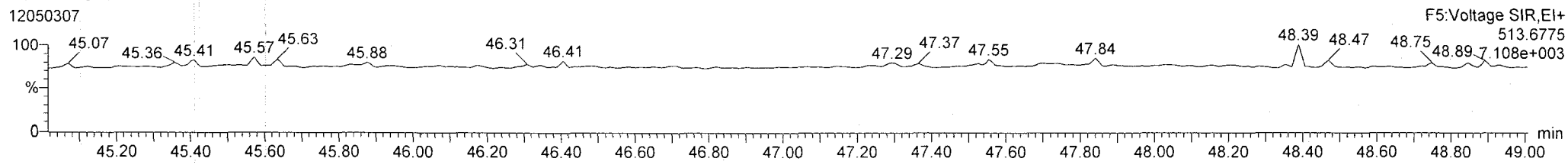
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.451	26.452	1562348	1562348	0.866	bb	98.4	0.77	0.77	6748.7	NO	39.364	39.364
2	2	12378-PeCDF	339.8597	30.582	30.592	6145369	6145369	0.907	bd	102.3	1.54	1.55	10198.2	NO	204.550	204.550
3	3	23478-PeCDF	339.8597	31.919	31.931	6006118	6006118	0.936	bb	100.4	1.55	1.55	10007.6	NO	200.869	200.869
4	4	123478-HxCDF	373.8208	35.591	35.580	4662868	4662868	1.082	bd	100.1	1.23	1.24	7874.8	NO	200.235	200.235
5	5	234678-HxCDF	373.8208	36.676	36.676	4777468	4777468	1.070	bb	102.1	1.23	1.24	7999.8	NO	204.107	204.107
6	6	123678-HxCDF	373.8208	35.734	35.733	5111293	5111293	1.048	db	103.1	1.22	1.24	8122.2	NO	206.170	206.170
7	7	123789-HxCDF	373.8208	37.784	37.784	3888060	3888060	1.020	bb	99.2	1.24	1.24	6734.4	NO	198.381	198.381
8	8	1234678-HpCDF	407.7818	39.866	39.864	4521778	4521778	1.214	bb	100.7	1.01	1.05	7347.2	NO	201.471	201.471
9	9	1234789-HpCDF	407.7818	42.617	42.608	3327592	3327592	1.254	bb	98.4	1.02	1.05	4527.7	NO	196.832	196.832
10	10	OCDF	441.7428	48.013	47.994	5942271	5942271	1.105	bb	104.6	0.90	0.89	8750.0	NO	418.472	418.472
11	11	2378-TCDD	319.8965	27.094	27.078	1212805	1212805	1.046	bb	97.6	0.77	0.77	5562.2	NO	39.048	39.048
12	12	12378-PeCDD	355.8546	32.182	32.170	4116391	4116391	0.973	bb	99.9	1.53	1.55	13432.4	NO	199.712	199.712
13	13	123478-HxCDD	389.8157	36.808	36.808	3508716	3508716	0.935	bd	101.4	1.27	1.24	9034.0	NO	202.890	202.890
14	14	123678-HxCDD	389.8157	36.929	36.929	3585418	3585418	0.878	db	101.3	1.19	1.24	8859.5	NO	202.583	202.583
15	15	123789-HxCDD	389.8157	37.356	37.324	3344494	3344494	0.839	bd	103.2	1.21	1.24	8394.3	NO	206.327	206.327
16	16	1234678-HpCDD	423.7766	41.708	41.698	2913208	2913208	0.974	bb	102.5	1.07	1.05	6235.3	NO	205.048	205.048
17	17	OCDD	457.7377	47.725	47.722	5116185	5116185	0.950	bd	104.8	0.89	0.89	6205.9	NO	419.139	419.139
18	18	13C-2378-TCDF	315.9419	26.437	26.437	4582607		1.484	bb	100.1	0.78	0.77	10399.9	NO	100.065	
19	19	13C-12378-PeCDF	351.9000	30.571	30.578	3312575		1.048	bb	102.4	1.55	1.55	7237.1	NO	102.447	
20	20	13C-23478-PeCDF	351.9000	31.908	31.915	3194971		1.003	bb	103.2	1.55	1.55	7007.4	NO	103.211	
21	21	13C-123478-HxCDF	383.8639	35.569	35.569	2152418		1.186	bd	100.8	0.51	0.51	2683.1	NO	100.823	
22	22	13C-123678-HxCDF	383.8639	35.712	35.723	2364855		1.315	db	99.9	0.52	0.51	2879.5	NO	99.870	
23	23	13C-234678-HxCDF	383.8639	36.654	36.655	2187948		1.223	bb	99.3	0.52	0.51	2812.6	NO	99.331	
24	24	13C-123789-HxCDF	383.8639	37.773	37.762	1921294		1.056	bb	101.0	0.52	0.51	2504.0	NO	100.997	
25	25	13C-1234678-HpCDF	417.8253	39.844	39.844	1848066		1.011	bd	101.5	0.45	0.44	3085.3	NO	101.477	
26	26	13C-1234789-HpCDF	417.8253	42.596	42.596	1348075		0.741	bd	101.1	0.45	0.44	1924.4	NO	101.098	
27	27	13C-1234-TCDD	331.9368	26.257	26.272	3085134		1.000	bb	100.0	0.78	0.77	7059.5	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.064	27.079	2969865		0.956	bb	100.7	0.77	0.77	6506.6	NO	100.655	
29	29	13C-12378-PeCDD	367.8949	32.160	32.167	2117754		0.663	bb	103.5	1.59	1.55	9956.3	NO	103.465	
30	30	13C-123478-HxCDD	401.8559	36.786	36.786	1848772		1.024	bd	100.3	1.26	1.24	3841.9	NO	100.277	
31	31	13C-123678-HxCDD	401.8559	36.918	36.918	2016303		1.113	db	100.6	1.25	1.24	4088.2	NO	100.644	
32	32	13C-1234678-HpCDD	435.8169	41.686	41.697	1458224		0.815	bb	99.4	1.06	1.05	3460.4	NO	99.353	
33	33	13C-OCDD	469.7779	47.708	47.713	2569573		0.717	bb	99.5	0.91	0.89	3719.1	NO	199.009	

52599 : 66ZN

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.345	37.368	1800616		1.000	bb	100.0	1.24	1.24	3667.2	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.490			0.866							40.027	40.072
36	36	Total-penta1	339.8597		28.270										0.000	0.014
37	37	Total-pentafurans	339.8597		30.840			0.921							413.360	413.569
38	38	Total-hexafurans	373.8208		35.860			1.055							809.597	809.806
39	39	Total-heptafurans	407.7818		41.270			1.234							398.398	398.430
40	40	Total-Furans	303.9016		0.000			1.050							2079.855	2080.3...
41	41	Total-tetradioxins	319.8965		26.000			1.046							40.010	40.036
42	42	Total-pentadioxins	355.8546		31.040			0.973							199.998	200.133
43	43	Total-hexadioxins	389.8157		36.030			0.884							611.822	611.848
44	44	Total-heptadioxins	423.7766		41.090			0.974							205.894	205.894
45	45	Total-Dioxins	319.8965		0.000			0.942							1476.864	1477.0...
46	46	Total-TEQ	319.8965		0.000										3556.719	3557.4...
47	47	37CL-2378-TCDD	327.8847	27.094	27.071	1304450		1.037		101.9			6958.8		40.767	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000											
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

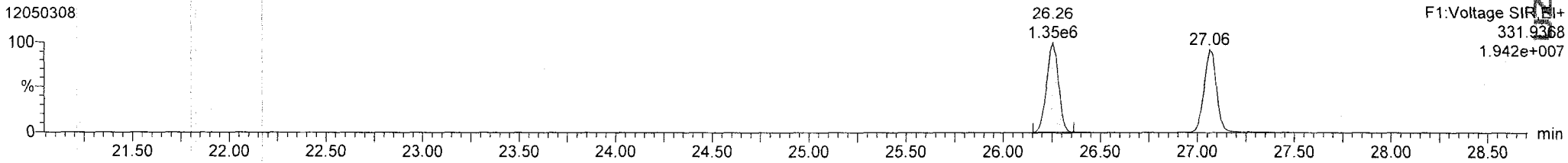
U7596:6652

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

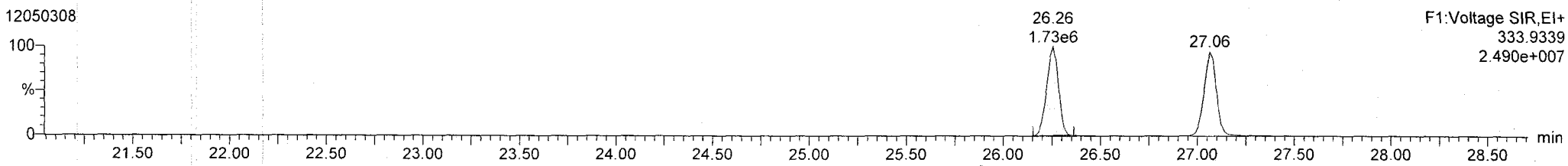
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

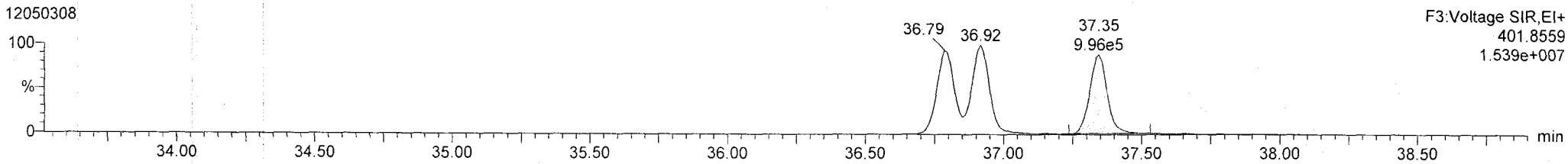
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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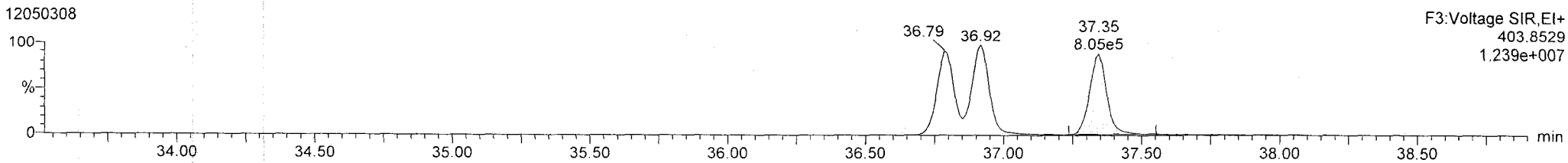
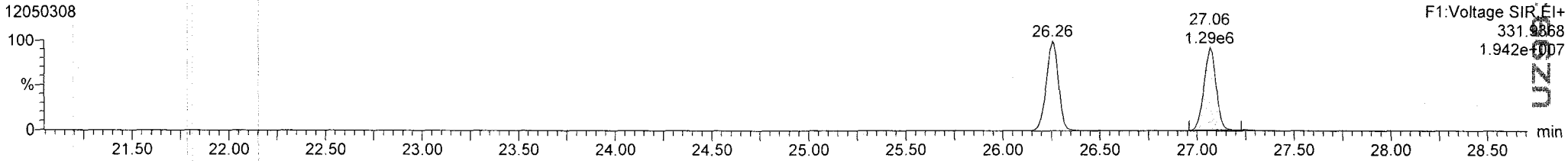


Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

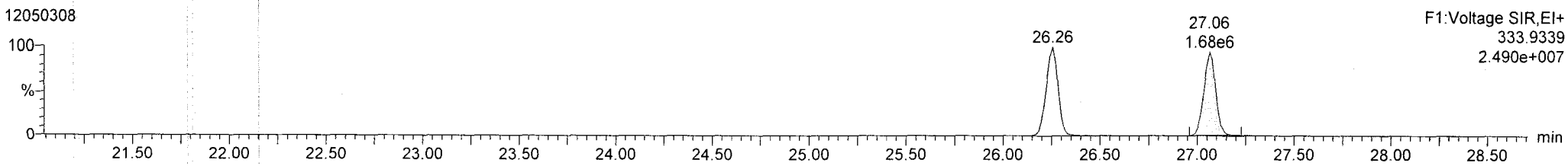
UZ9 00528

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

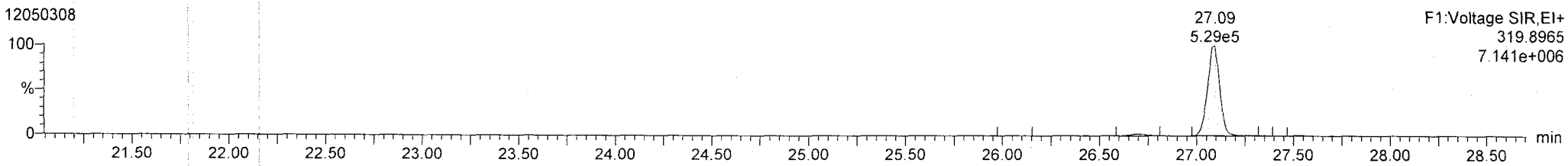
13C-2378-TCDD



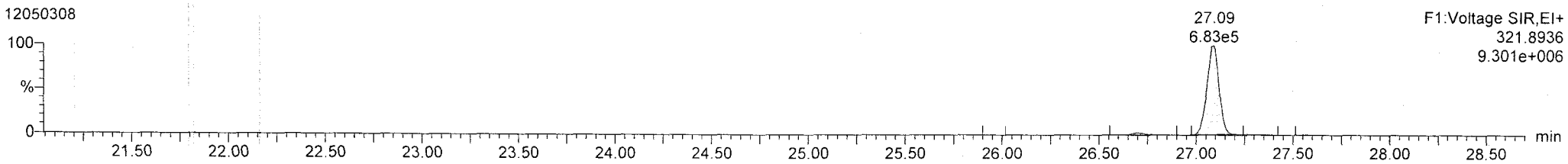
13C-2378-TCDD



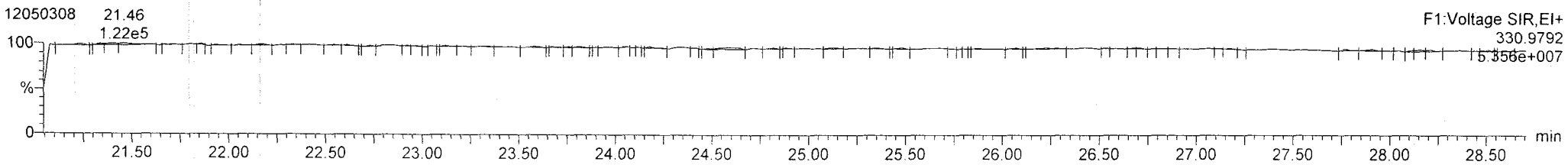
Total-tetradioxins



Total-tetradioxins



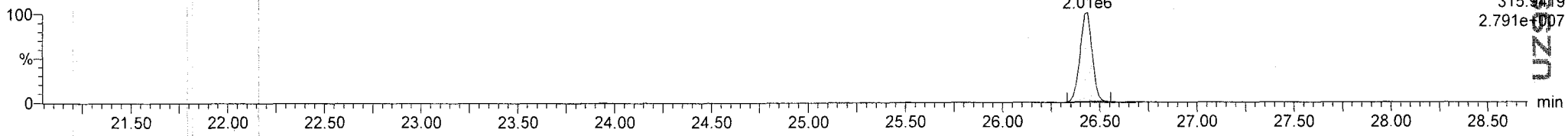
FUNCTION1 PFK



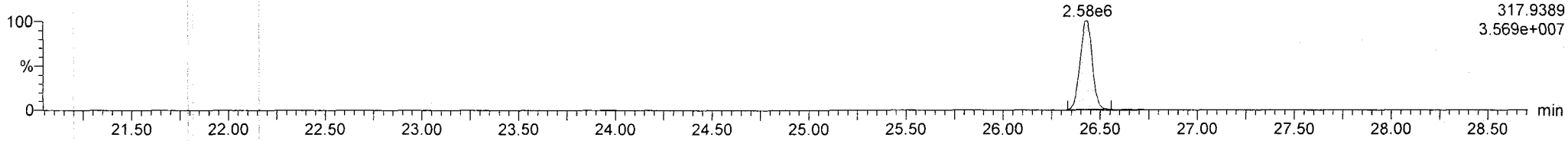
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

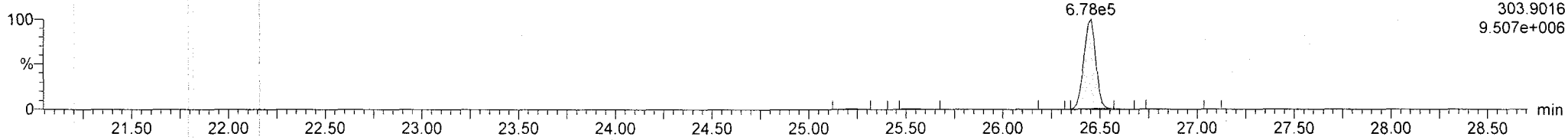
13C-2378-TCDF
12050308
26.44
2.01e6
F1:Voltage SIR,EI+
315.9419
2.791e+007



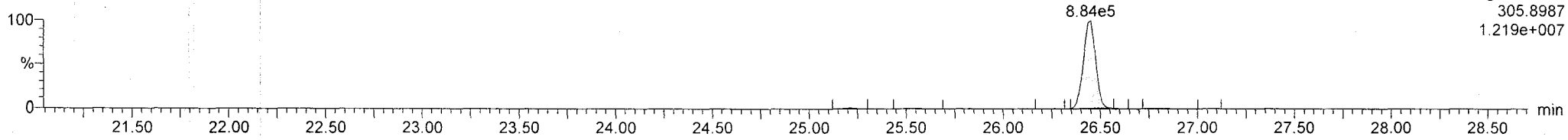
13C-2378-TCDF
12050308
26.44
2.58e6
F1:Voltage SIR,EI+
317.9389
3.569e+007



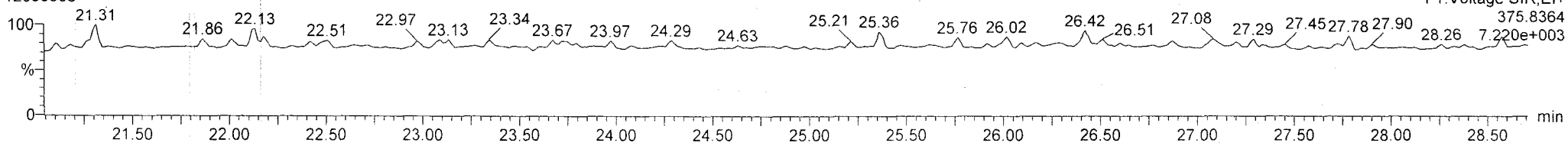
Total-tetrafurans
12050308
26.45
6.78e5
F1:Voltage SIR,EI+
303.9016
9.507e+006



Total-tetrafurans
12050308
26.45
8.84e5
F1:Voltage SIR,EI+
305.8987
1.219e+007



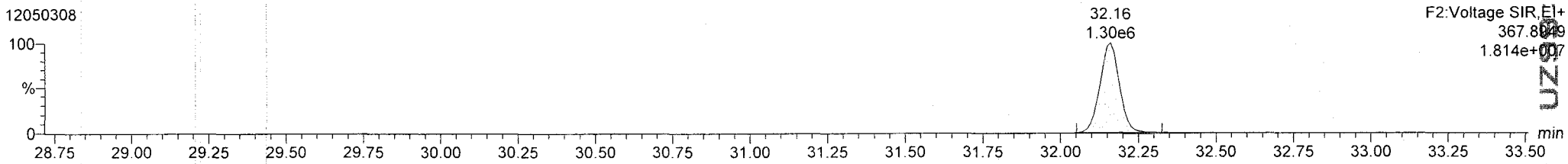
FUNCTION1 HXCDPE
12050308
F1:Voltage SIR,EI+
375.8364
7.220e+003



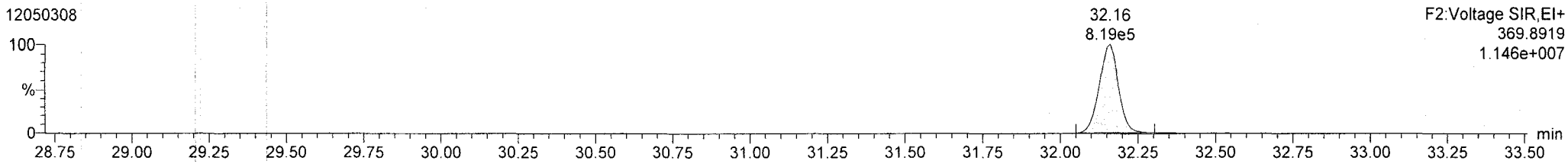
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

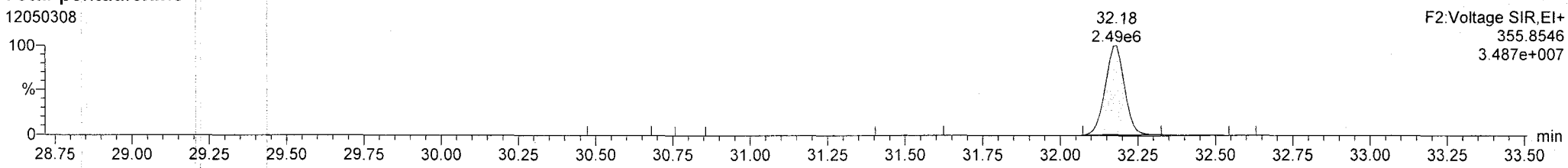
13C-12378-PeCDD



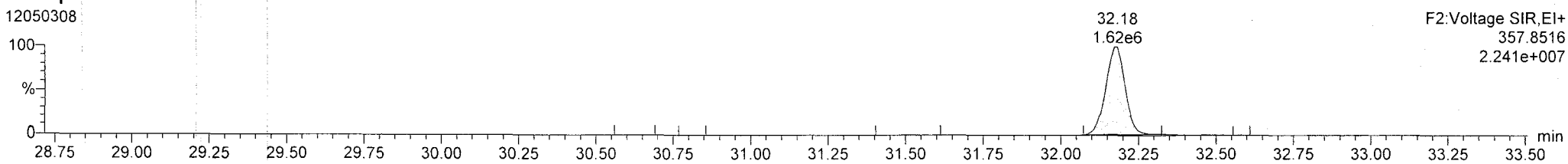
13C-12378-PeCDD



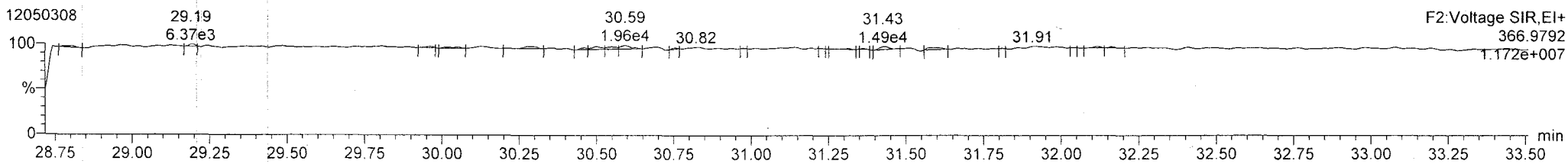
Total-pentadioxins



Total-pentadioxins



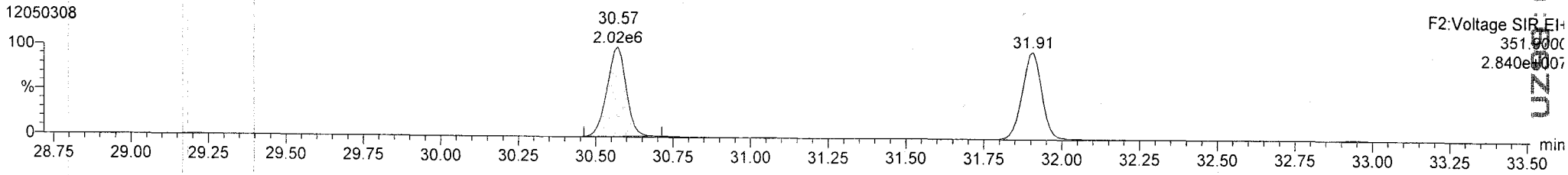
FUNCTION2 PFK



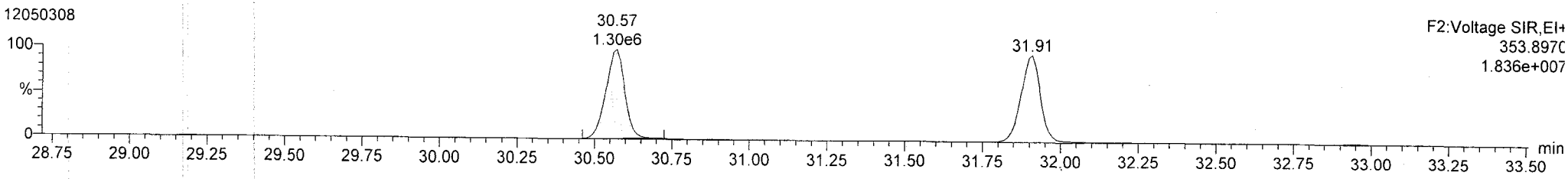
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

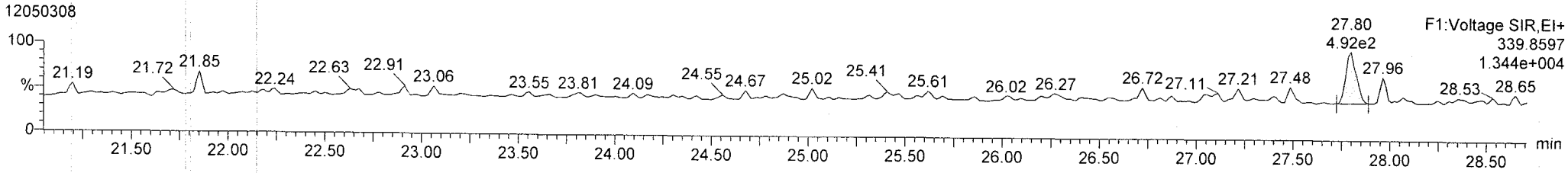
13C-12378-PeCDF
12050308



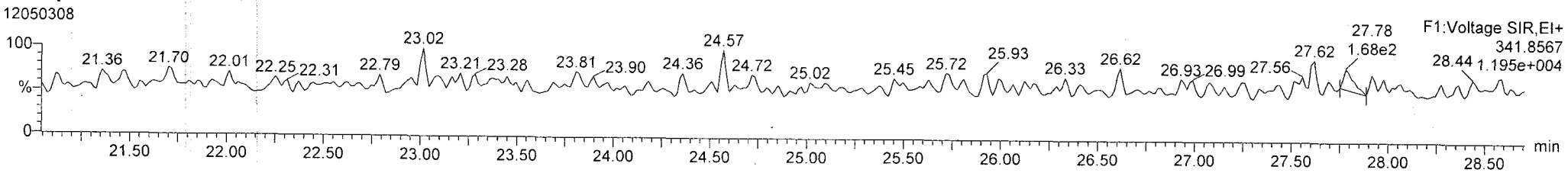
13C-12378-PeCDF
12050308



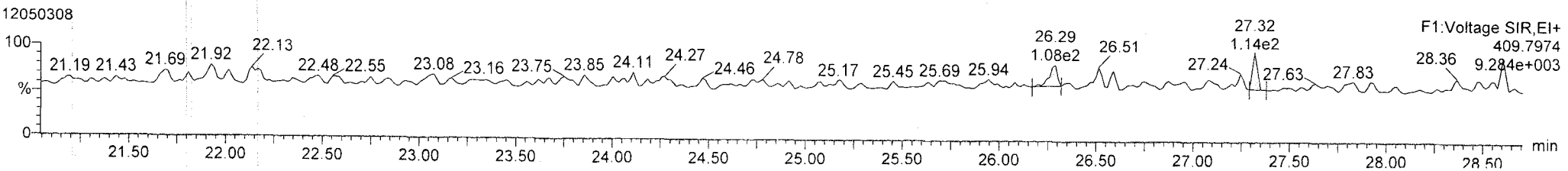
Total-penta1
12050308



Total-penta1
12050308



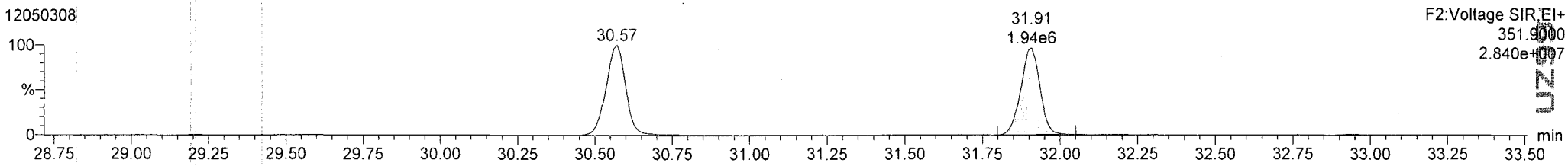
FUNCTION1 HPCDPE
12050308



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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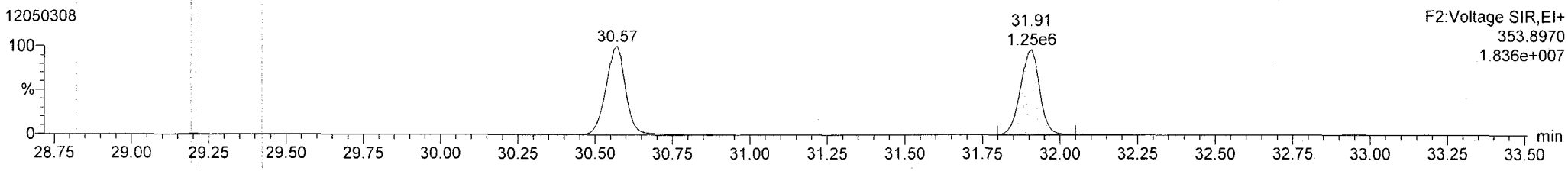
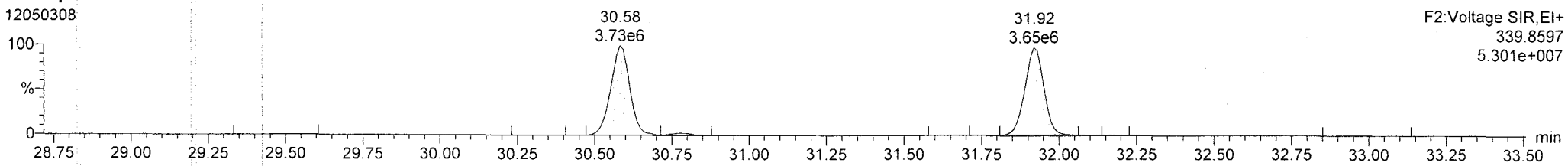
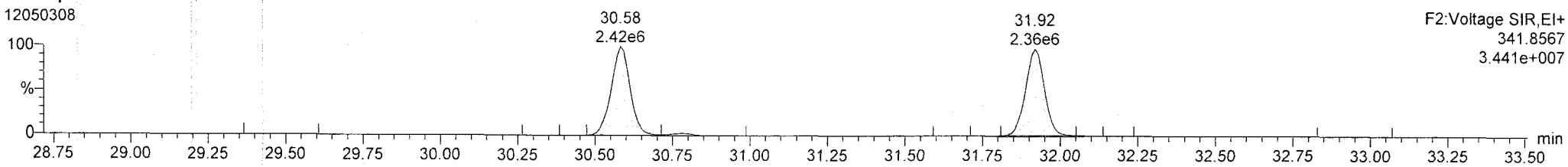


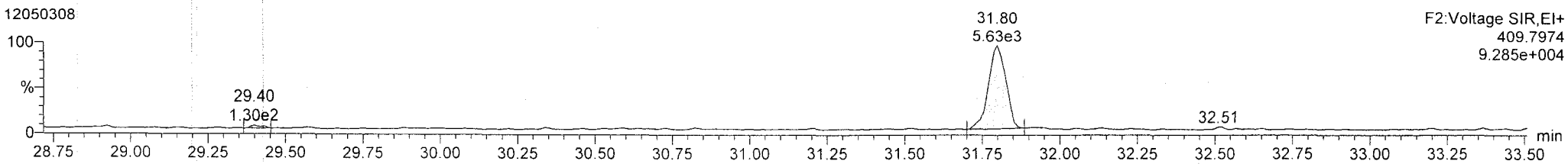
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
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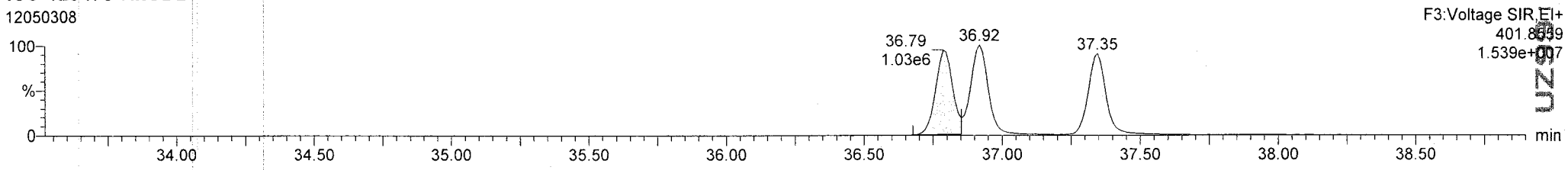
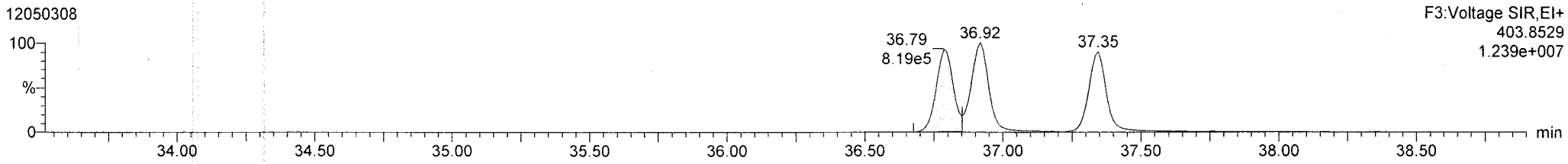
Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

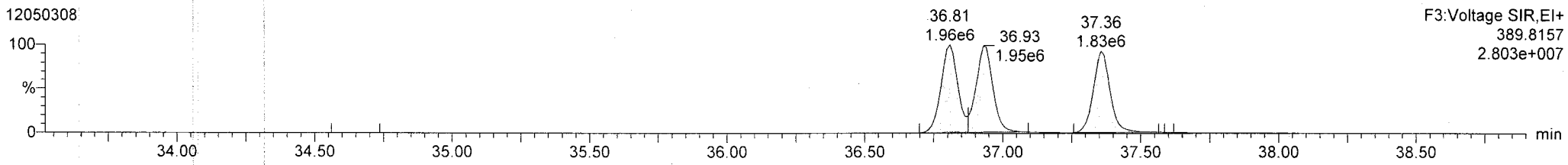
13C-123478-HxCDD
12050308



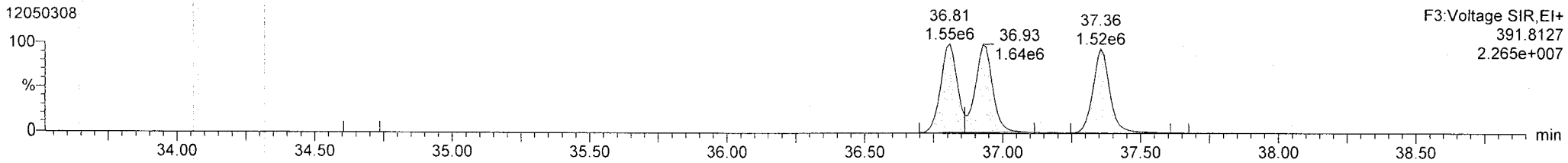
13C-123478-HxCDD
12050308



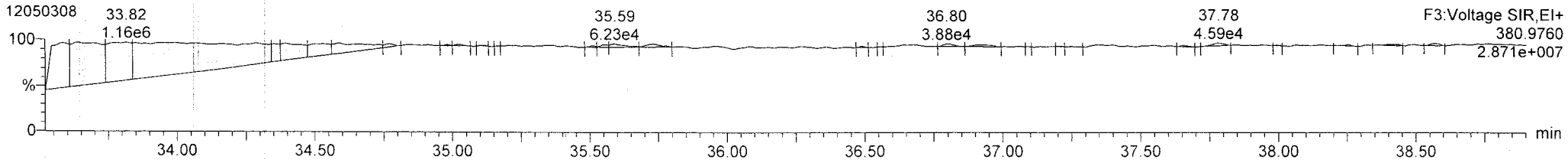
Total-hexadioxins
12050308



Total-hexadioxins
12050308



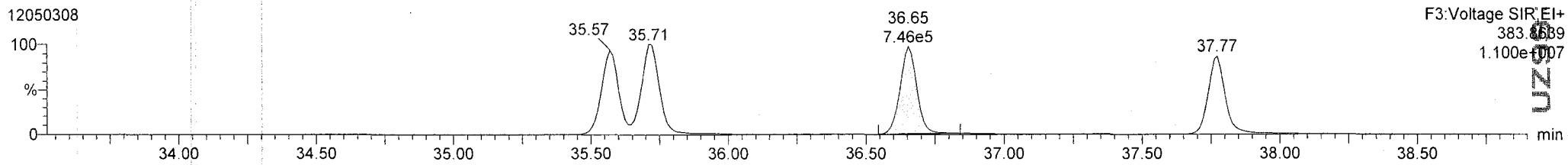
FUNCTION3 PFK
12050308



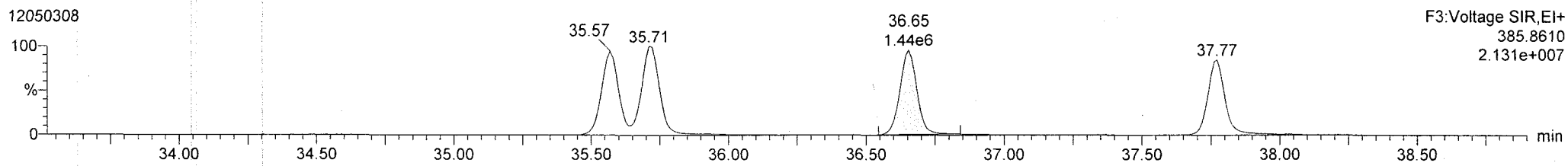
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

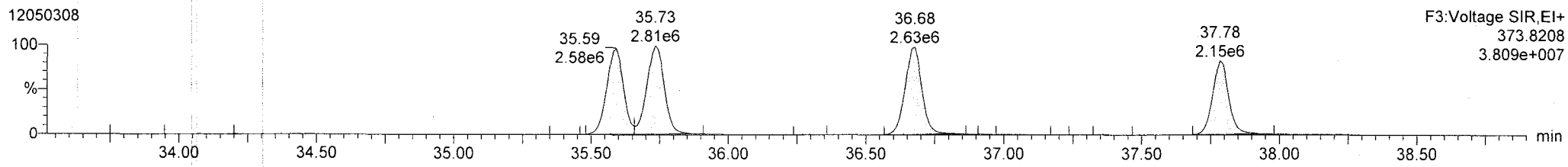
13C-234678-HxCDF



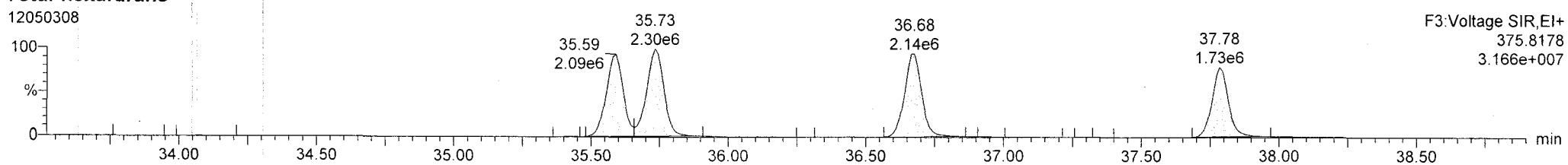
13C-234678-HxCDF



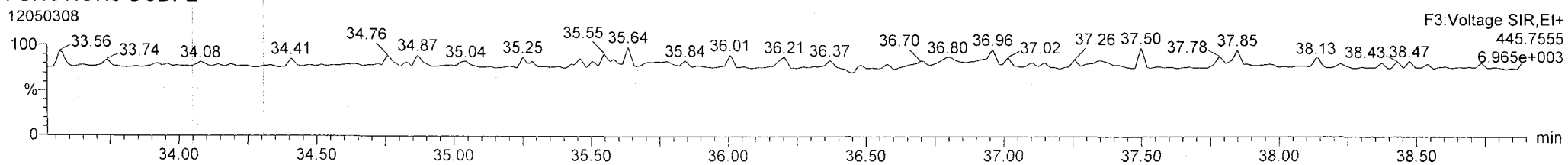
Total-hexafurans



Total-hexafurans



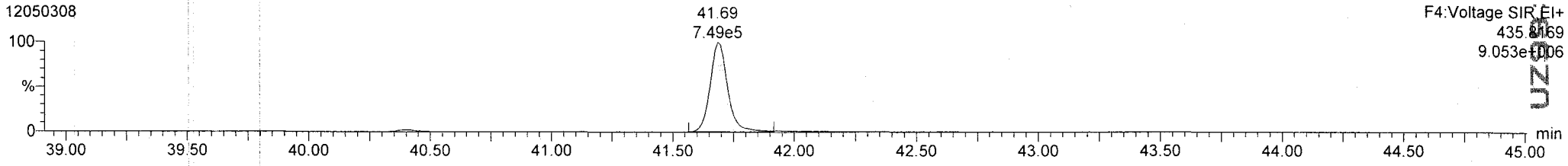
FUNCTION3 OCDPE



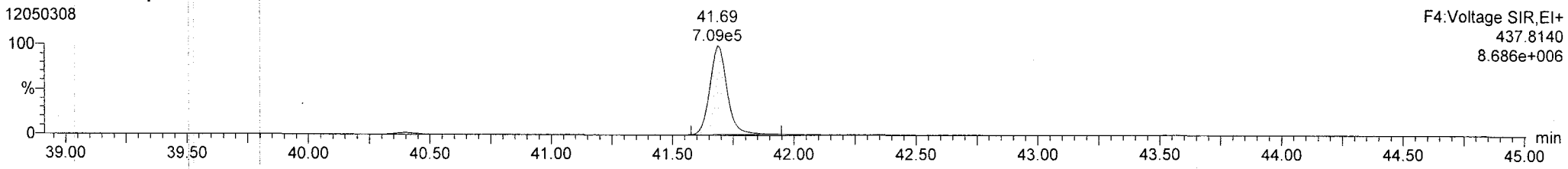
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

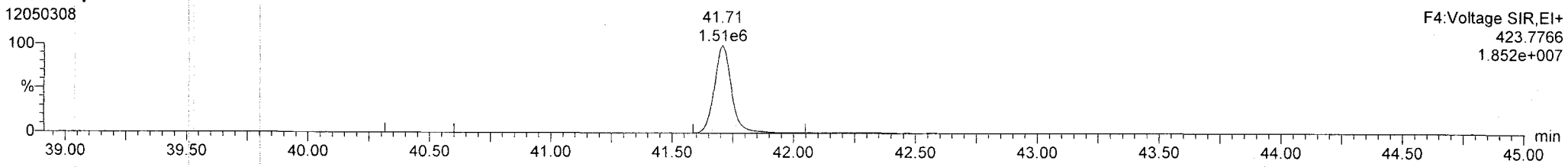
13C-1234678-HpCDD



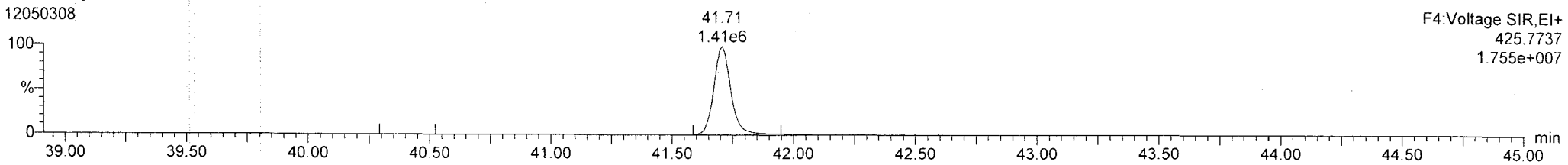
13C-1234678-HpCDD



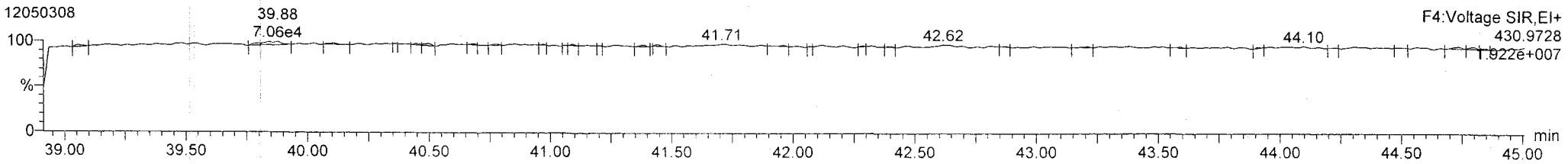
Total-heptadioxins



Total-heptadioxins



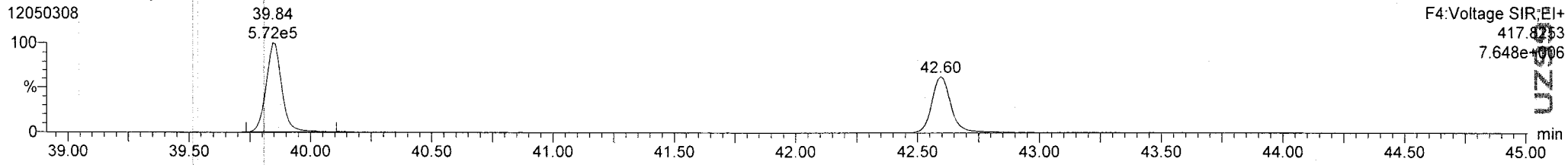
FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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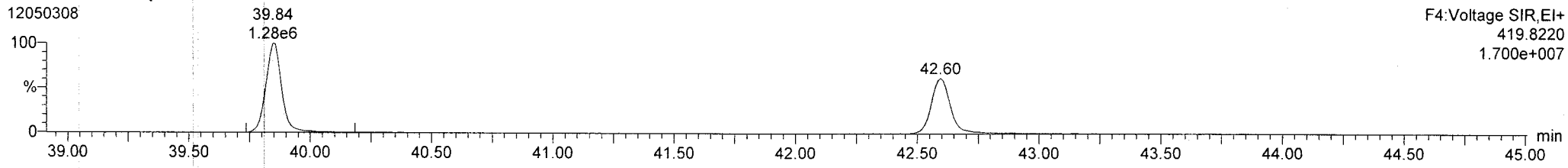

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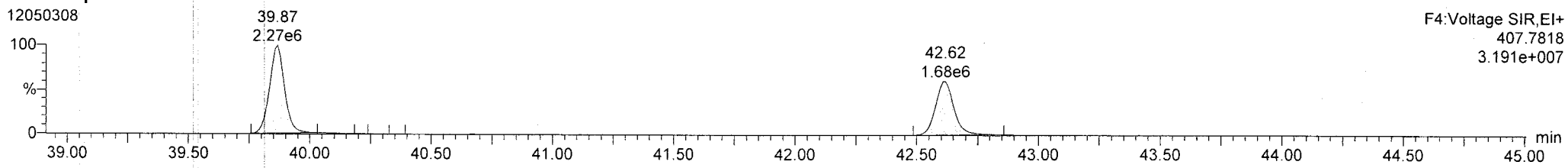
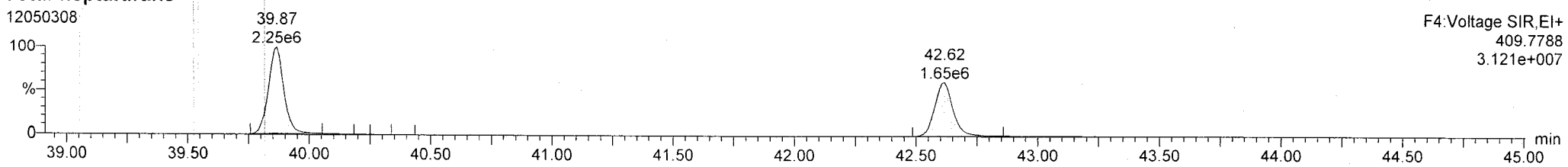
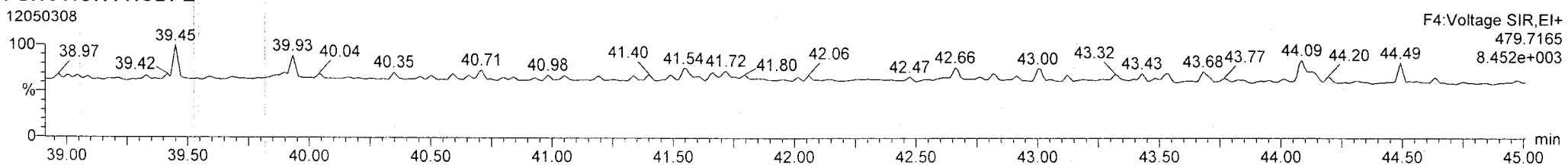


Total-heptafurans



FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

13C-OCDD
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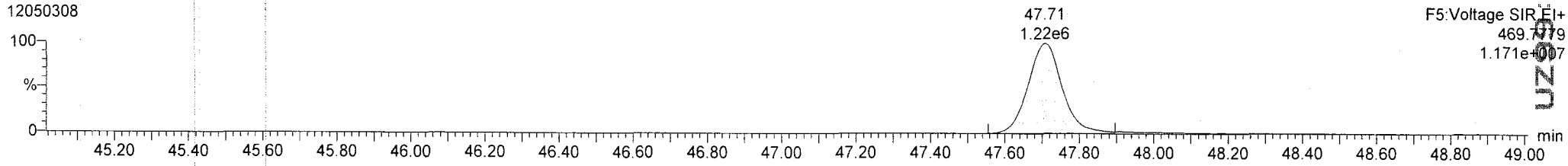

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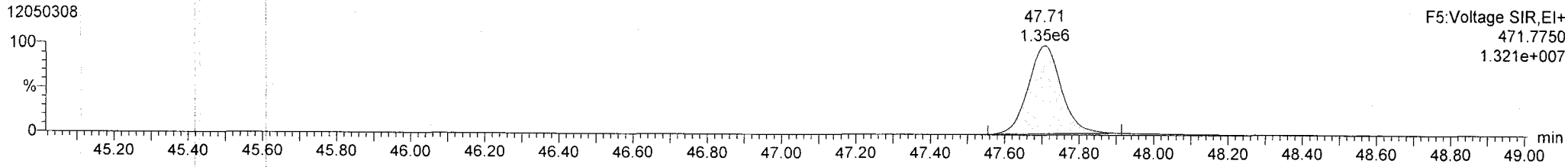

OCDD
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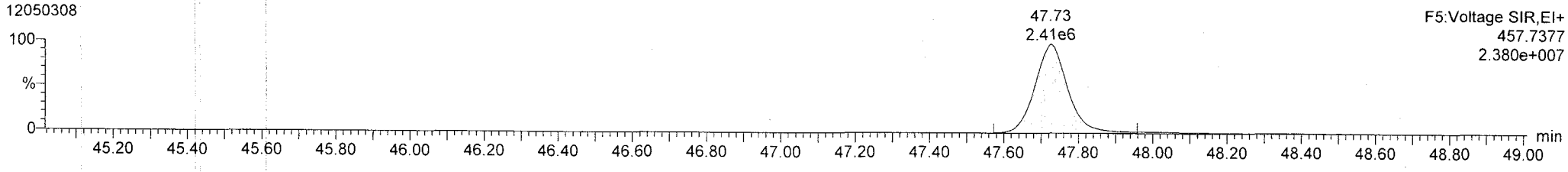

OCDD
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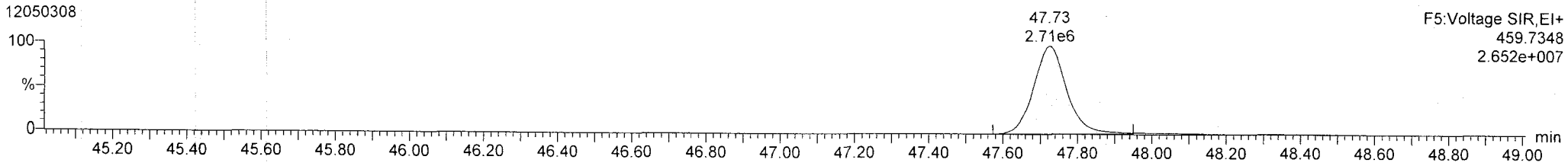
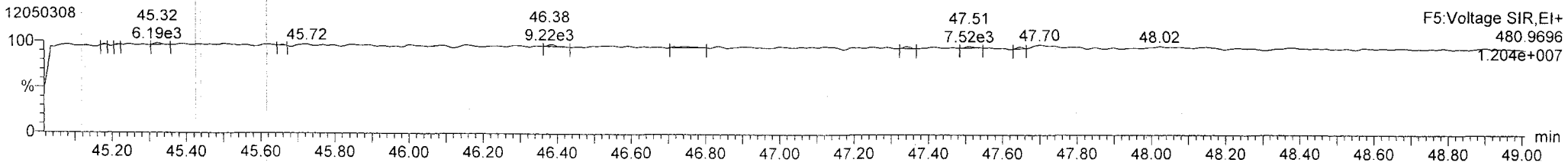


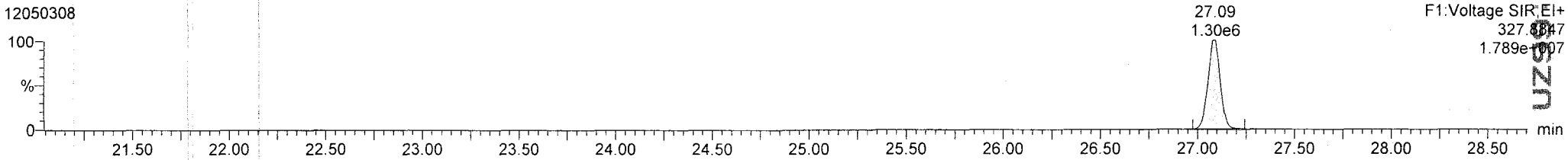
FUNCTION5 PFK
12050308



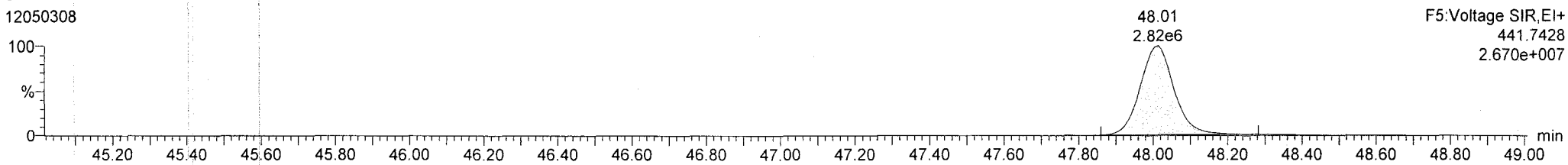
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:31 Pacific Daylight Time

Name: 12050308, Date: 03-May-2012, Time: 18:02:13, ID: CS4, Conditions: AUTOSPEC01, User: pk

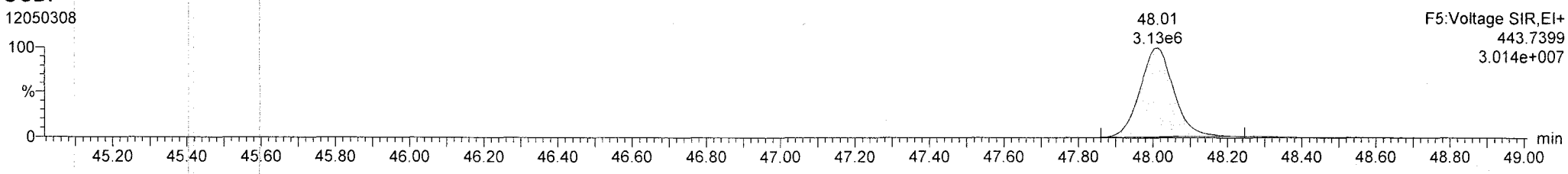
37CL-2378-TCDD



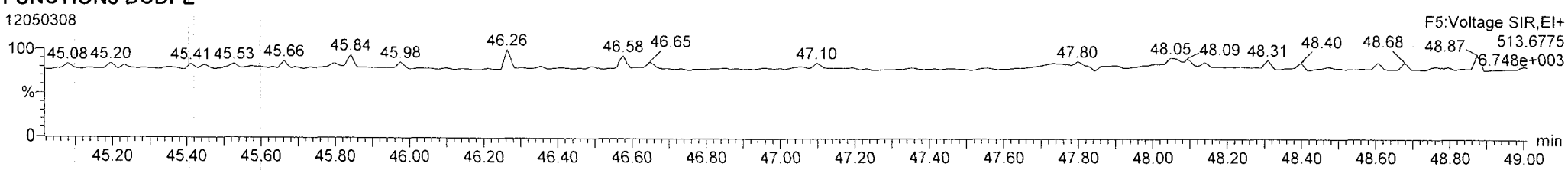
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

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1	1	2378-TCDF	303.9016	26.451	26.452	9213031	9213031	0.866	bb	101.2	0.78	0.77	35839.3	NO	202.318	202.318
2	2	12378-PeCDF	339.8597	30.593	30.592	41082319	41082319	0.907	bb	102.8	1.56	1.55	48470.7	NO	1028.475	1028.4...
3	3	23478-PeCDF	339.8597	31.930	31.931	40789533	40789533	0.936	bb	102.9	1.56	1.55	48354.6	NO	1029.284	1029.2...
4	4	123478-HxCDF	373.8208	35.591	35.591	34351327	34351327	1.082	bd	104.9	1.23	1.24	33621.8	NO	1049.149	1049.1...
5	5	234678-HxCDF	373.8208	36.676	36.687	34833722	34833722	1.070	bb	103.3	1.24	1.24	33683.6	NO	1032.659	1032.6...
6	6	123678-HxCDF	373.8208	35.744	35.744	37052644	37052644	1.048	db	104.4	1.23	1.24	35576.5	NO	1044.434	1044.4...
7	7	123789-HxCDF	373.8208	37.794	37.784	29640604	29640604	1.020	bb	103.3	1.24	1.24	30238.5	NO	1032.956	1032.9...
8	8	1234678-HpCDF	407.7818	39.866	39.875	33153844	33153844	1.214	bb	104.3	1.02	1.05	35693.0	NO	1042.977	1042.9...
9	9	1234789-HpCDF	407.7818	42.617	42.619	24852733	24852733	1.254	bb	101.5	1.03	1.05	23156.0	NO	1014.787	1014.7...
10	10	OCDF	441.7428	48.021	48.002	50681174	50681174	1.105	bb	112.1	0.89	0.89	11740...	NO	2242.093	2242.0...
11	11	2378-TCDD	319.8965	27.094	27.093	7299959	7299959	1.046	bb	99.6	0.77	0.77	27161.0	NO	199.142	199.142
12	12	12378-PeCDD	355.8546	32.182	32.170	28210558	28210558	0.973	bb	101.3	1.52	1.55	63443.4	NO	1013.420	1013.4...
13	13	123478-HxCDD	389.8157	36.808	36.819	26438152	26438152	0.935	bd	102.1	1.23	1.24	38356.2	NO	1020.666	1020.6...
14	14	123678-HxCDD	389.8157	36.939	36.939	26391455	26391455	0.878	db	103.6	1.23	1.24	38514.5	NO	1036.039	1036.0...
15	15	123789-HxCDD	389.8157	37.367	37.335	24749680	24749680	0.839	bb	104.1	1.23	1.24	36902.8	NO	1040.586	1040.5...
16	16	1234678-HpCDD	423.7766	41.707	41.709	21427887	21427887	0.974	bb	104.9	1.04	1.05	28364.8	NO	1048.570	1048.5...
17	17	OCDD	457.7377	47.734	47.730	40682312	40682312	0.950	bb	104.7	0.88	0.89	60678.9	NO	2093.680	2093.6...
18	18	13C-2378-TCDF	315.9419	26.437	26.437	5257728		1.484	bb	107.4	0.77	0.77	12103.7	NO	107.402	
19	19	13C-12378-PeCDF	351.9000	30.571	30.578	4404304		1.048	bb	127.4	1.54	1.55	12148.3	NO	127.425	
20	20	13C-23478-PeCDF	351.9000	31.908	31.915	4234472		1.003	bb	128.0	1.54	1.55	11626.7	NO	127.969	
21	21	13C-123478-HxCDF	383.8639	35.580	35.569	3026358		1.186	bd	96.6	0.52	0.51	4054.8	NO	96.591	
22	22	13C-123678-HxCDF	383.8639	35.723	35.722	3384047		1.315	db	97.4	0.52	0.51	4528.7	NO	97.376	
23	23	13C-234678-HxCDF	383.8639	36.665	36.654	3153122		1.223	bd	97.5	0.52	0.51	4197.7	NO	97.538	
24	24	13C-123789-HxCDF	383.8639	37.772	37.761	2812971		1.056	bb	100.8	0.52	0.51	3938.5	NO	100.754	
25	25	13C-1234678-HpCDF	417.8253	39.855	39.844	2617457		1.011	bb	97.9	0.45	0.44	2953.4	NO	97.929	
26	26	13C-1234789-HpCDF	417.8253	42.606	42.595	1952899		0.741	bb	99.8	0.46	0.44	1891.6	NO	99.791	
27	27	13C-1234-TCDD	331.9368	26.257	26.272	3297841		1.000	bb	100.0	0.78	0.77	7500.0	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.079	27.079	3505072		0.956	bb	111.1	0.77	0.77	7612.0	NO	111.132	
29	29	13C-12378-PeCDD	367.8949	32.160	32.167	2860123		0.663	bd	130.7	1.56	1.55	13320.5	NO	130.721	
30	30	13C-123478-HxCDD	401.8559	36.797	36.786	2769135		1.024	bd	102.3	1.27	1.24	7779.1	NO	102.340	
31	31	13C-123678-HxCDD	401.8559	36.928	36.917	2902057		1.113	db	98.7	1.26	1.24	8126.2	NO	98.701	
32	32	13C-1234678-HpCDD	435.8169	41.696	41.696	2097439		0.815	bb	97.4	1.04	1.05	5992.1	NO	97.371	
33	33	13C-OCDD	469.7779	47.716	47.712	4090423		0.717	bb	107.9	0.89	0.89	7043.1	NO	215.856	

UZ59 : 09:59

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

UZ99:00540

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

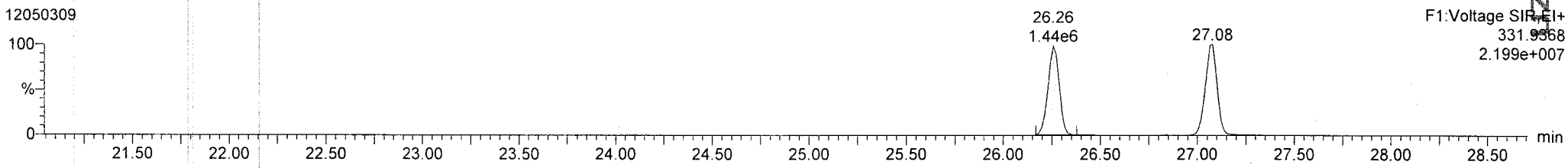
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.345	37.368	2642640		1.000	bb	100.0	1.25	1.24	7416.4	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.490			0.866							205.356	205.740
36	36	Total-penta1	339.8597		28.270										0.000	0.005
37	37	Total-pentafurans	339.8597		30.840			0.921							2085.745	2086.0...
38	38	Total-hexafurans	373.8208		35.860			1.055							4162.975	4163.6...
39	39	Total-heptafurans	407.7818		41.270			1.234							2058.972	2058.9...
40	40	Total-Furans	303.9016		0.000			1.050							10755.141	10756....
41	41	Total-tetradioxins	319.8965		26.000			1.046							203.897	203.978
42	42	Total-pentadioxins	355.8546		31.040			0.973							1015.210	1015.2...
43	43	Total-hexadioxins	389.8157		36.030			0.884							3097.290	3097.4...
44	44	Total-heptadioxins	423.7766		41.090			0.974							1051.841	1051.8...
45	45	Total-Dioxins	319.8965		0.000			0.942							7461.918	7462.2...
46	46	Total-TEQ	319.8965		0.000										18217.059	18218....
47	47	37CL-2378-TCDD	327.8847	27.094	27.071	7899803		1.037		115.5			47865.3		230.962	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000										0.000	

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

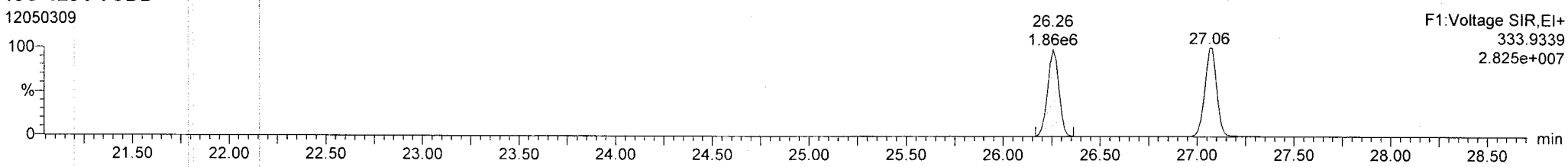
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

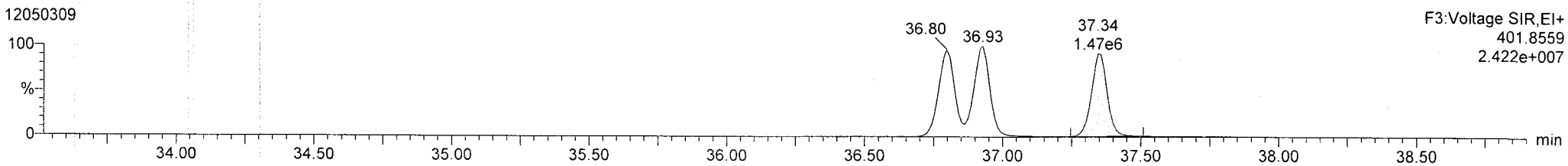
13C-1234-TCDD
12050309



13C-1234-TCDD
12050309



13C-123789-HxCDD
12050309



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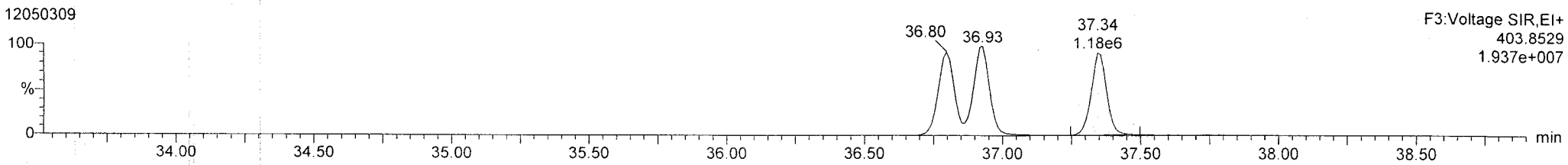
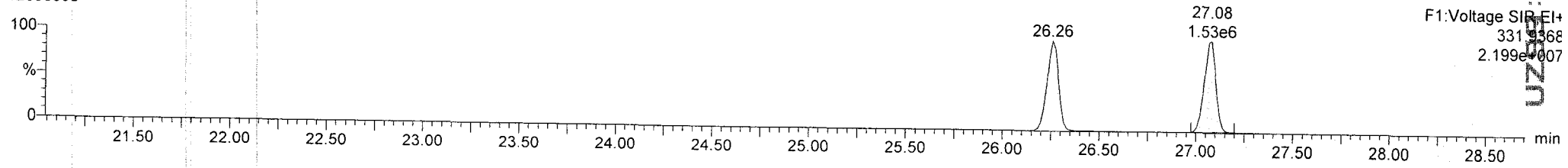


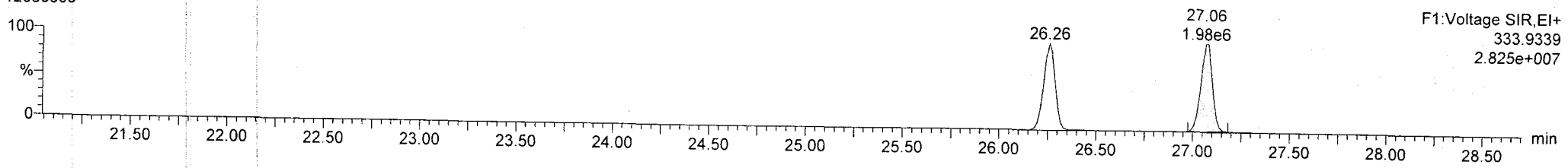
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
12050309



13C-2378-TCDD
12050309



Total-tetradioxins
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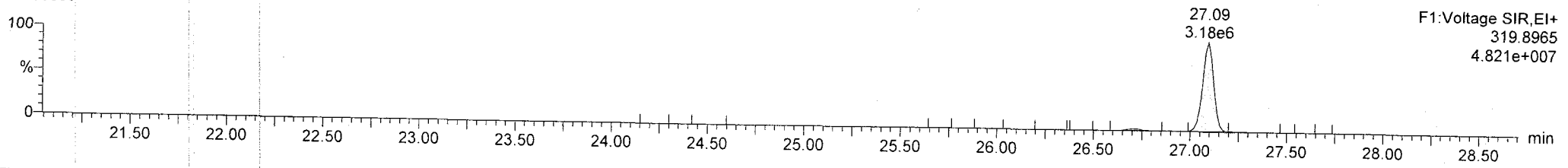
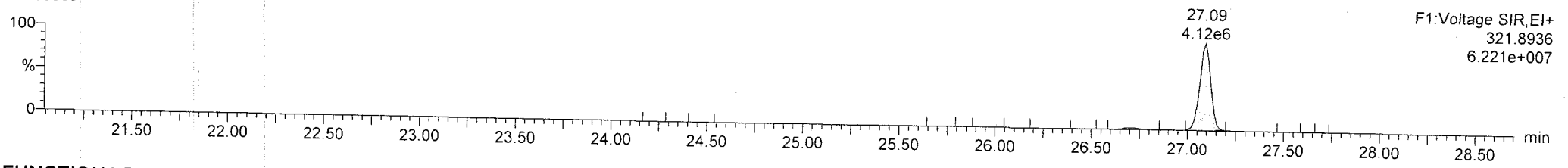
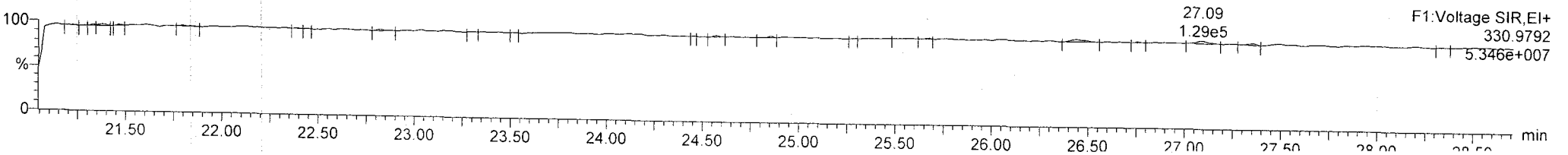


Total-tetradioxins
12050309



FUNCTION1 PFK
12050309



Quantify Sample Report **MassLynx 4.1 SCN 714**
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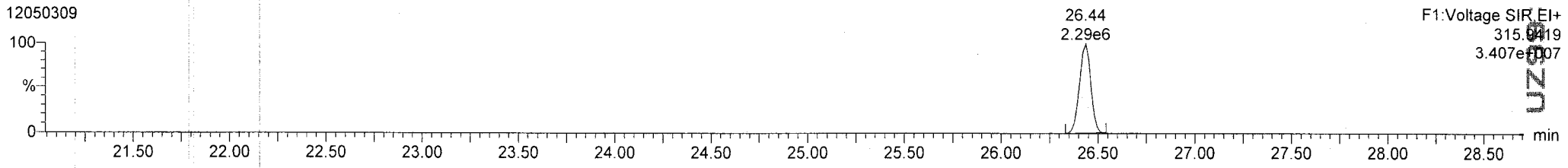
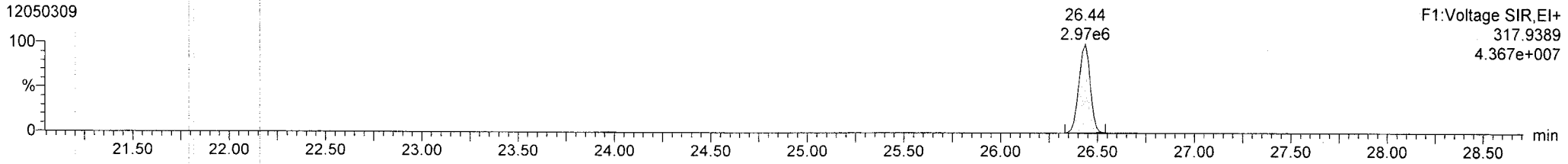
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:32:35 Pacific Daylight Time

Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF
12050309



13C-2378-TCDF
12050309



Total-tetrafurans
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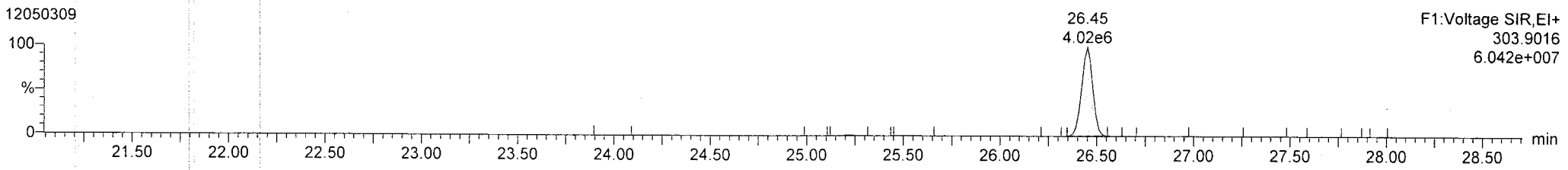

Total-tetrafurans
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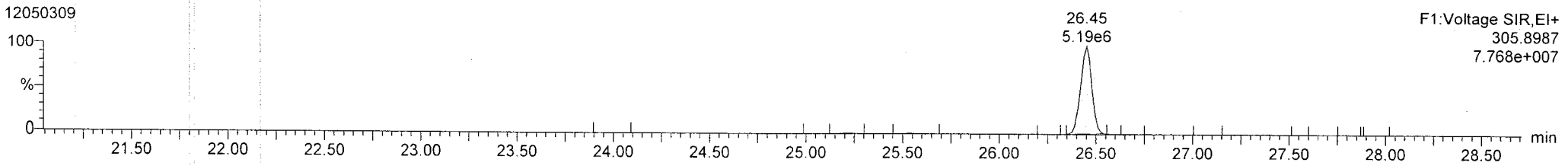

FUNCTION1 HXCDPE
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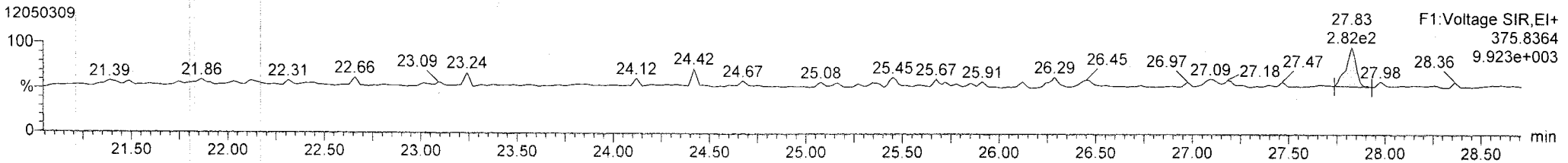

Quantify Sample Report **MassLynx 4.1 SCN 714**
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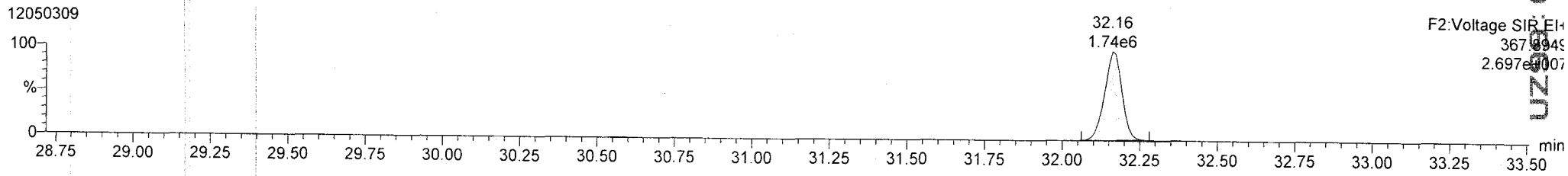
Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD
12050309



13C-12378-PeCDD
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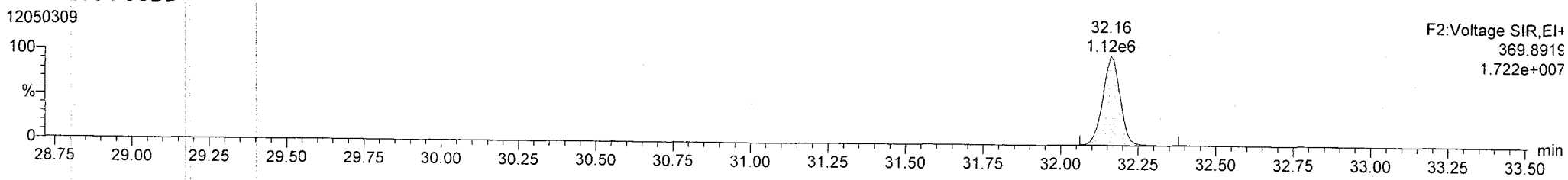

Total-pentadioxins
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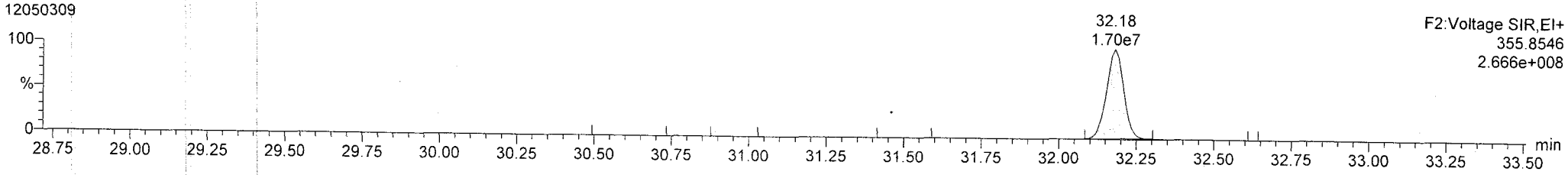

Total-pentadioxins
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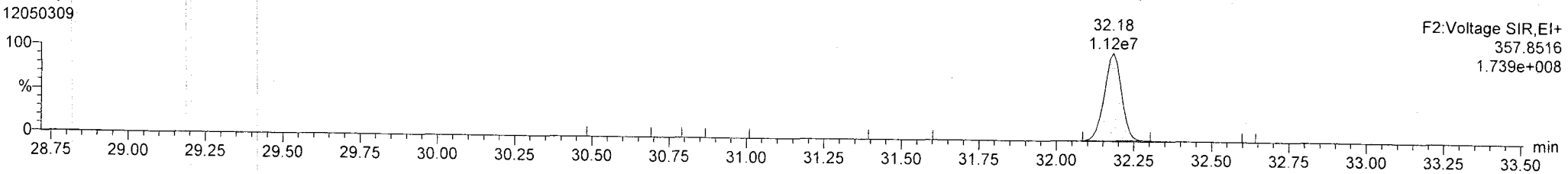
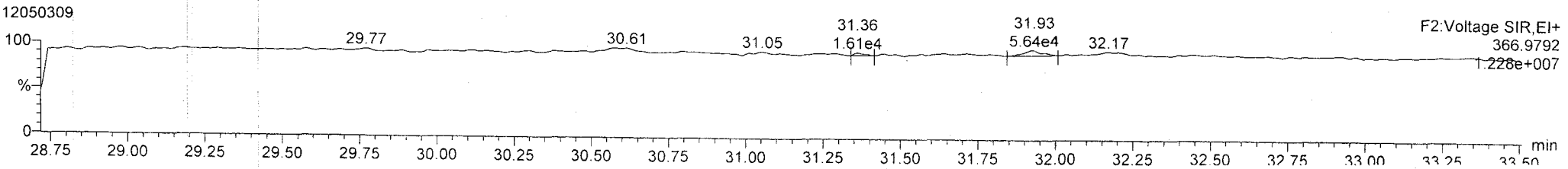


FUNCTION2 PFK
12050309



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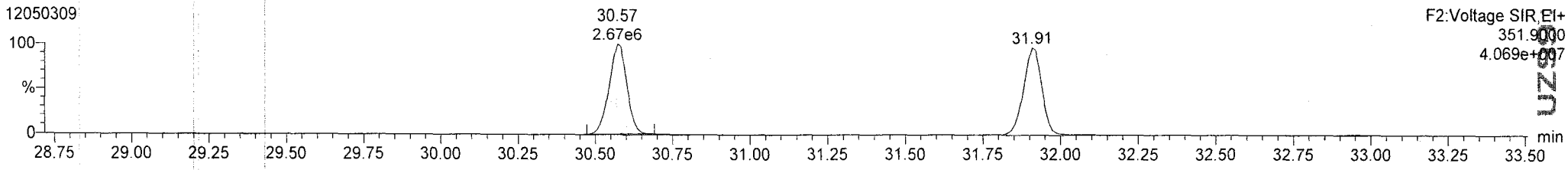
Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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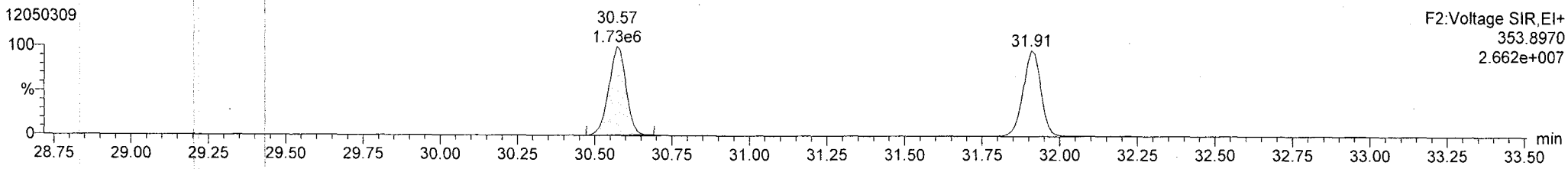
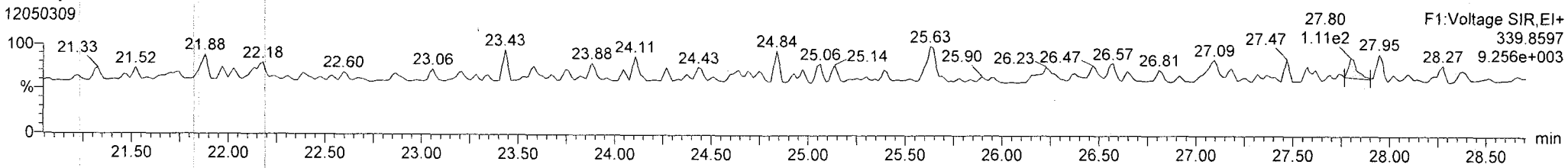
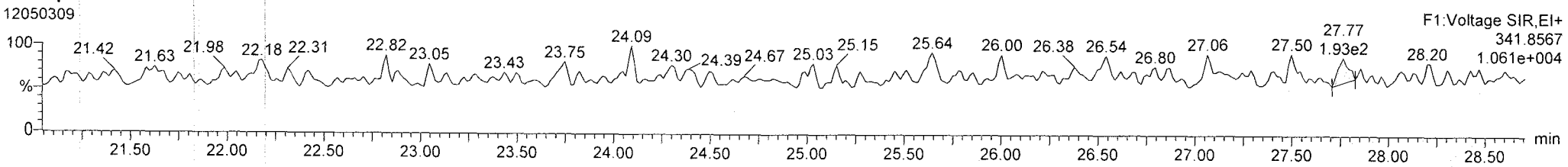


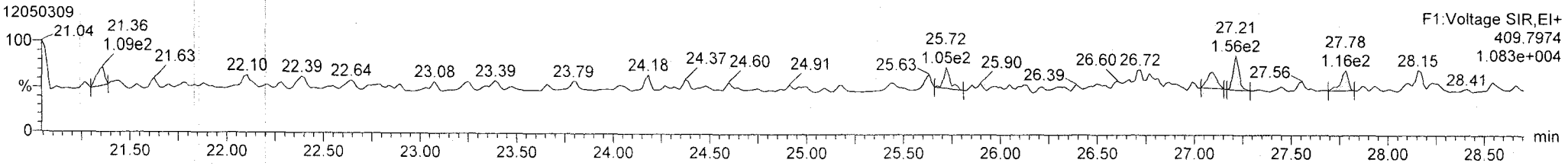
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
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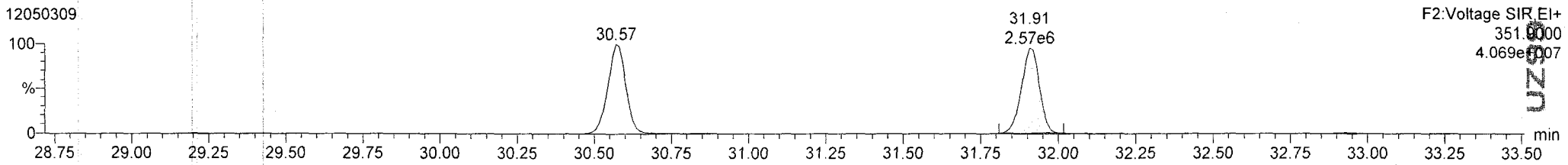
Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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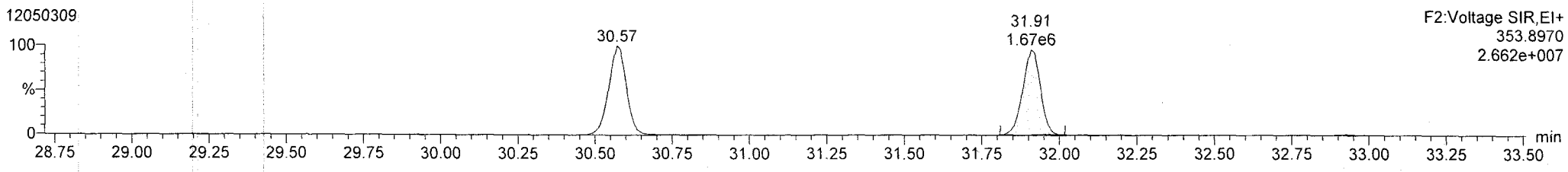
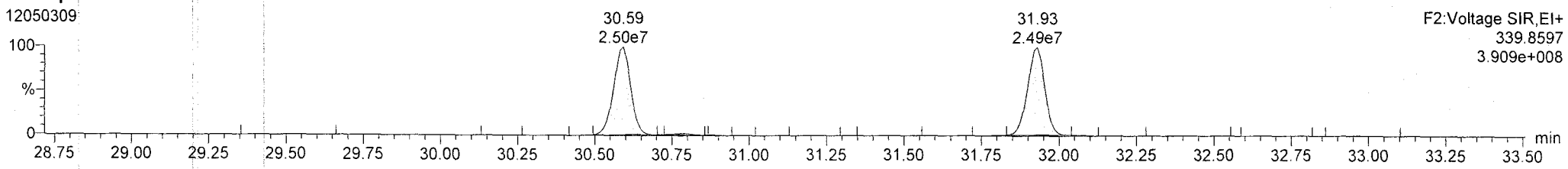
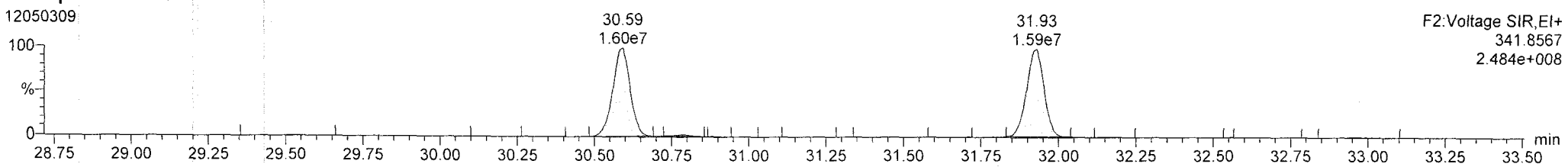


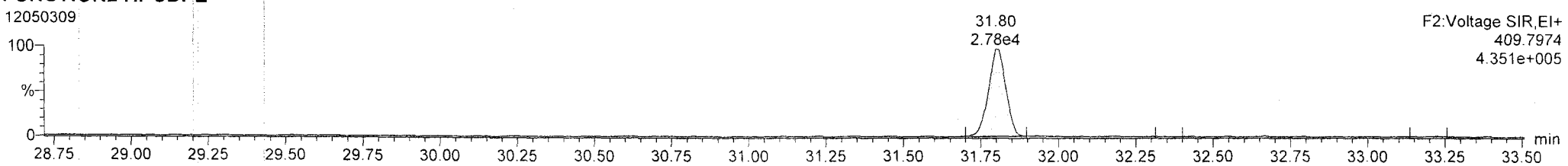
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120503IC.qld
Last Altered: Friday, May 04, 2012 08:31:18 Pacific Daylight Time
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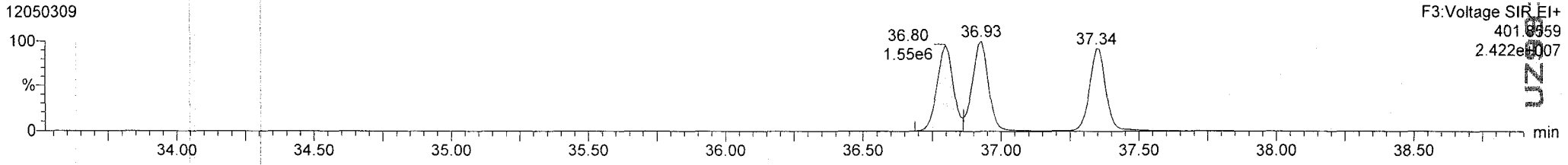
Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD
12050309



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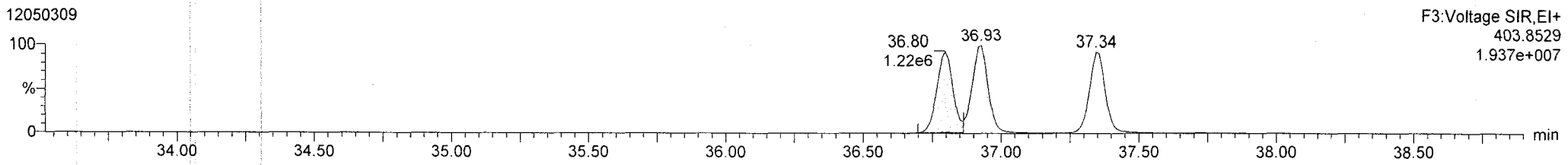

Total-hexadioxins
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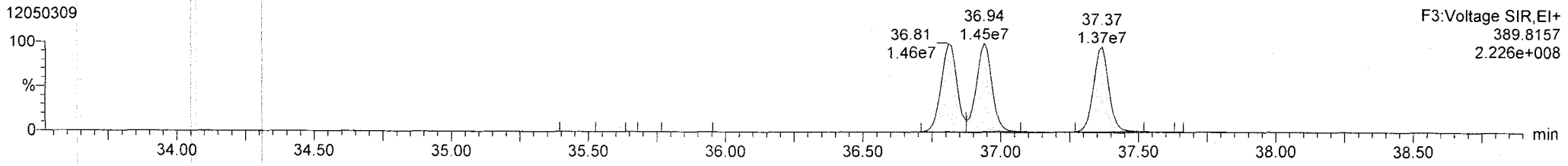

Total-hexadioxins
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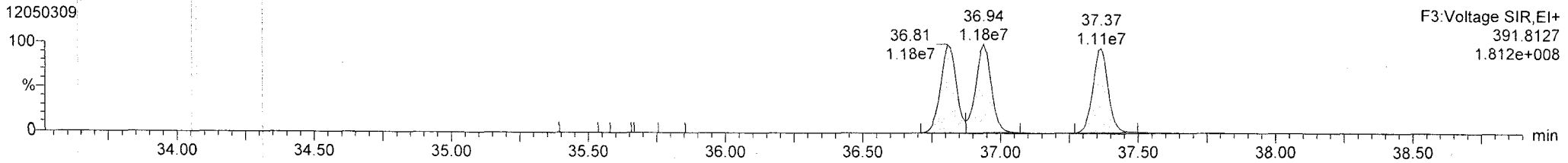

FUNCTION3 PFK
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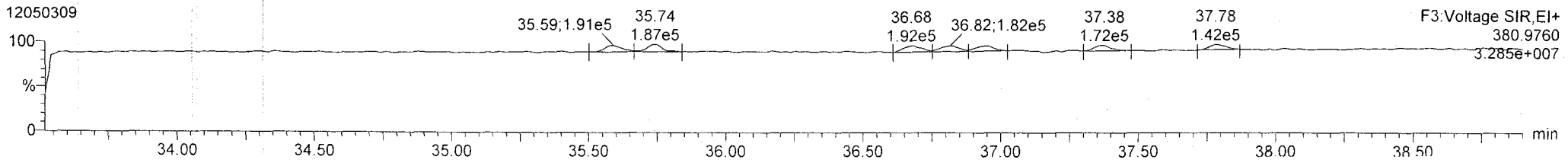

Quantify Sample Report **MassLynx 4.1 SCN 714**
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Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF
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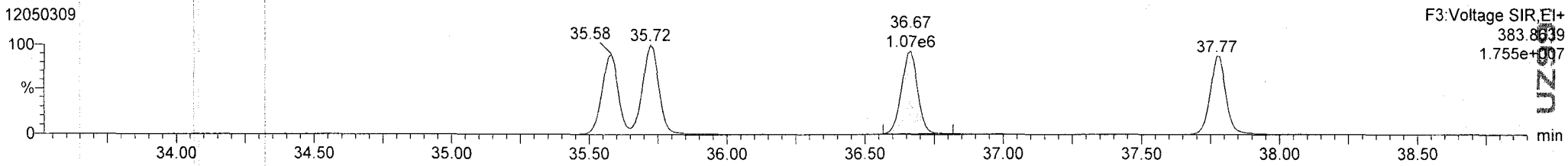

13C-234678-HxCDF
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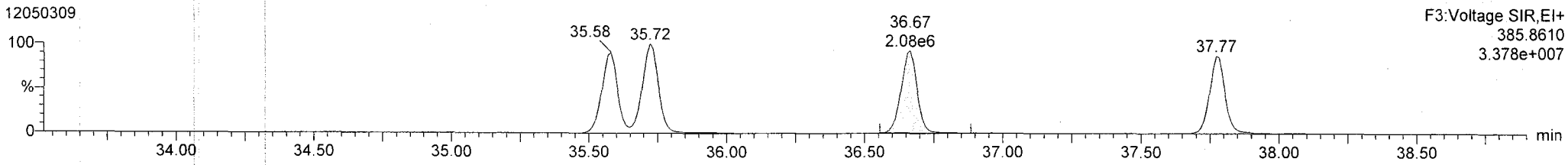

Total-hexafurans
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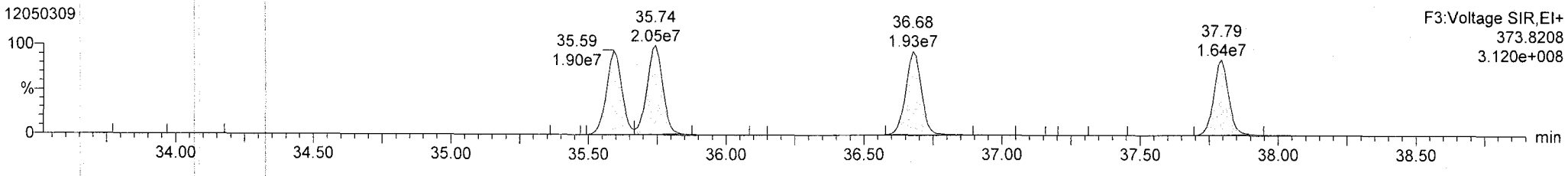

Total-hexafurans
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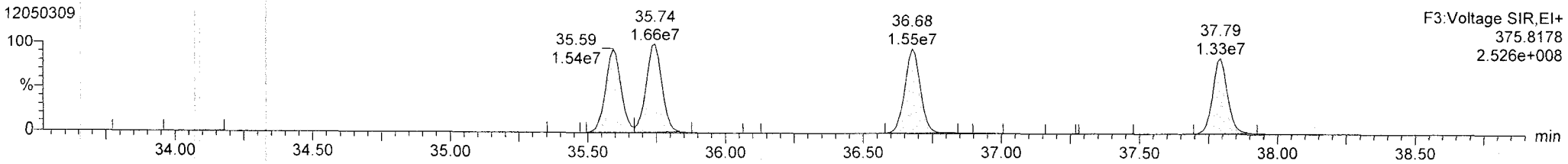

FUNCTION3 OCDPE
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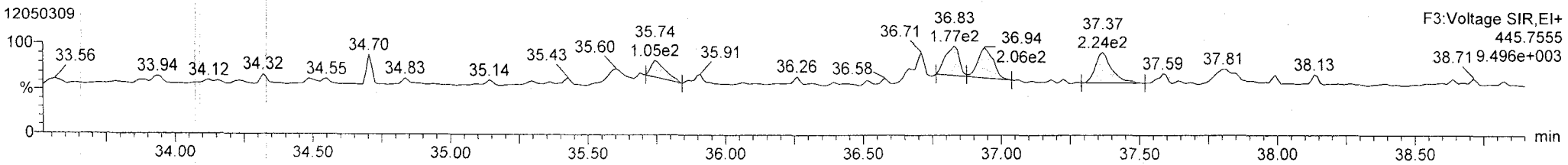

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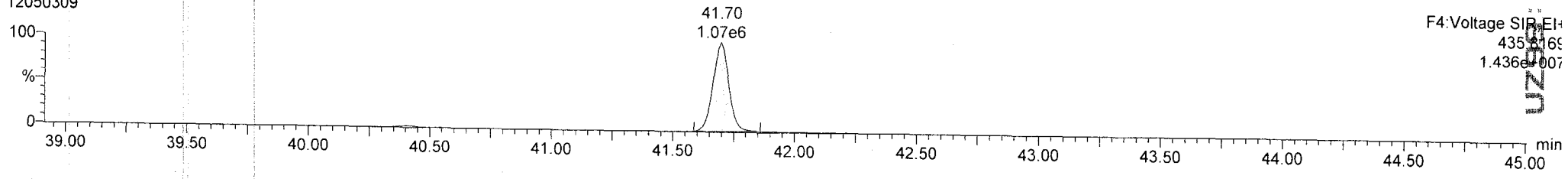
Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD
12050309



13C-1234678-HpCDD
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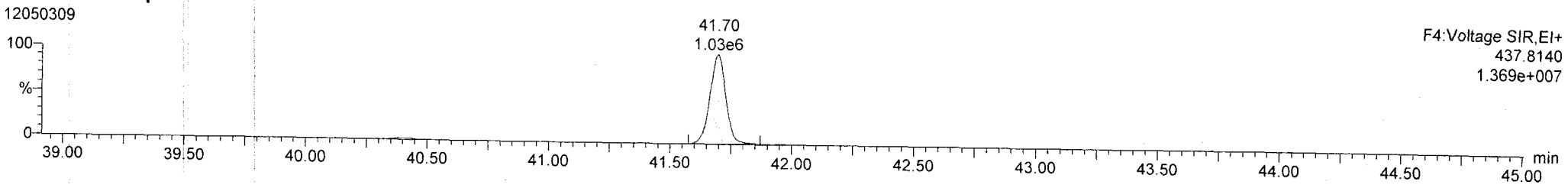

Total-heptadioxins
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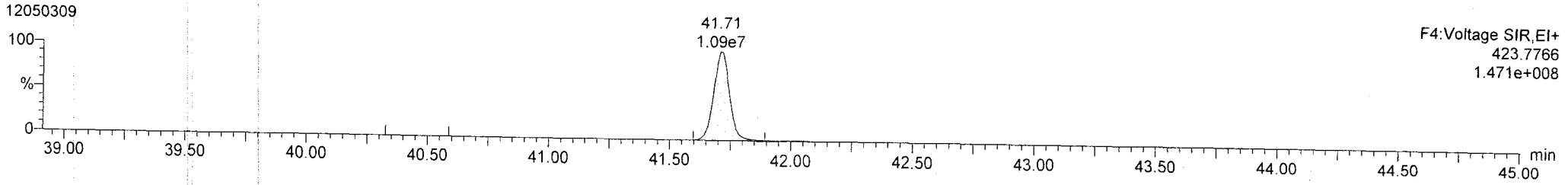

Total-heptadioxins
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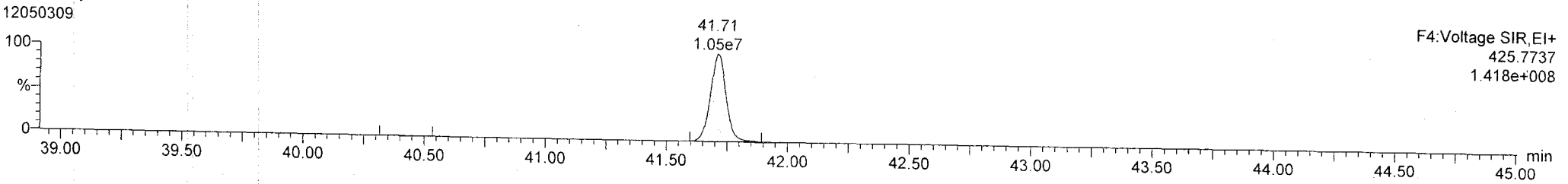
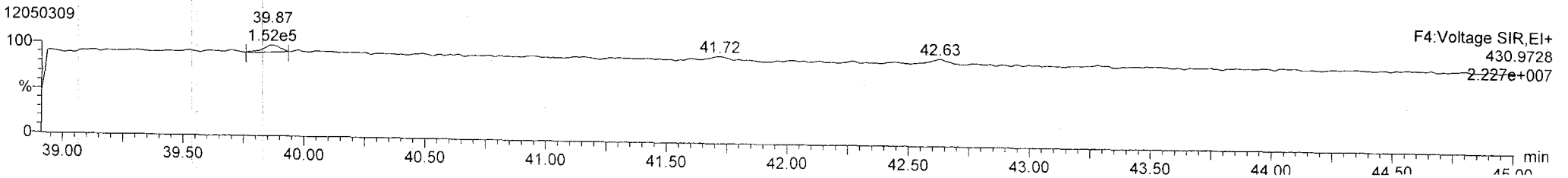


FUNCTION4 PFK
12050309



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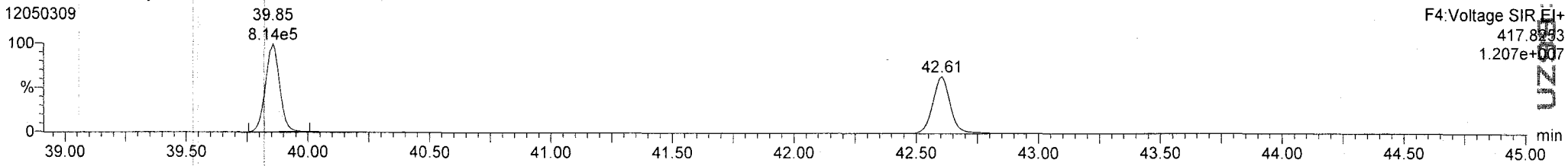
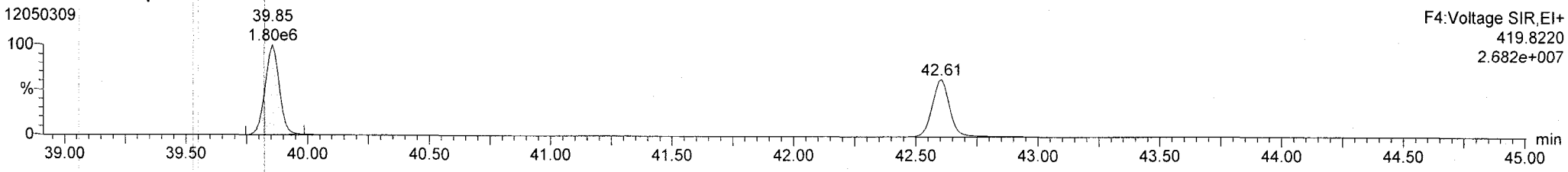
Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

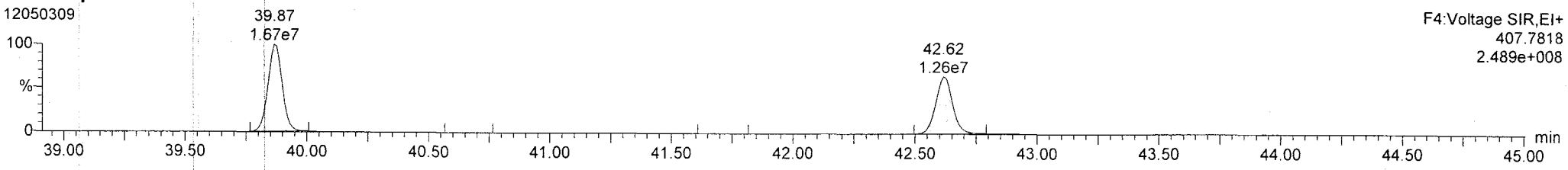
13C-1234678-HpCDF



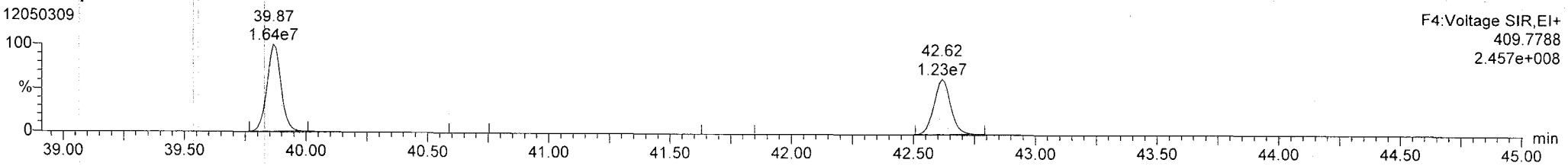
13C-1234678-HpCDF



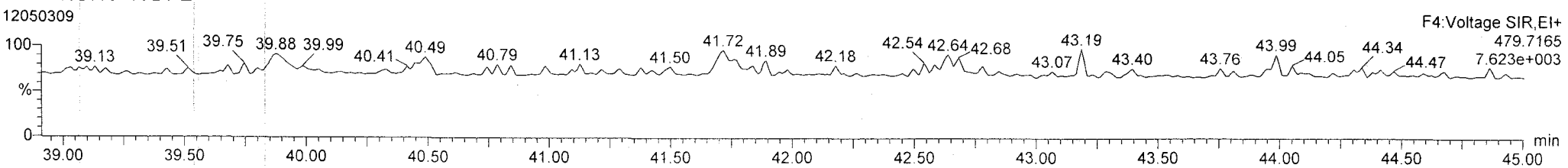
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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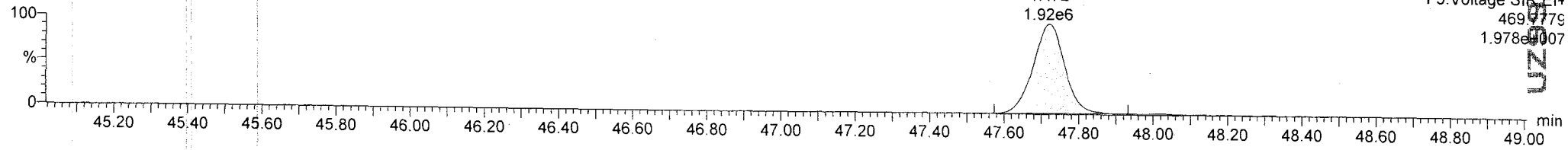
13C-OCDD
12050309



13C-OCDD
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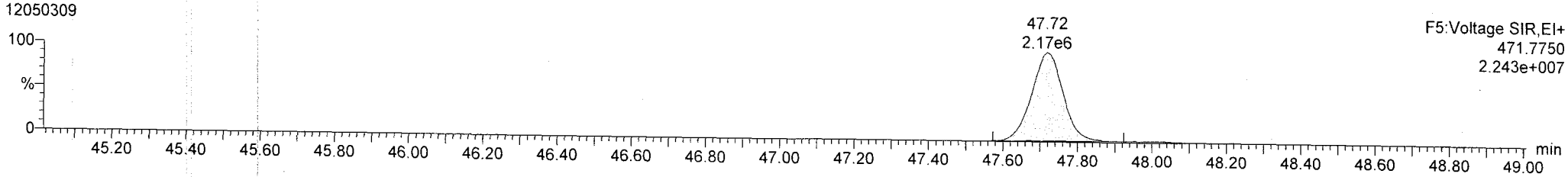

OCDD
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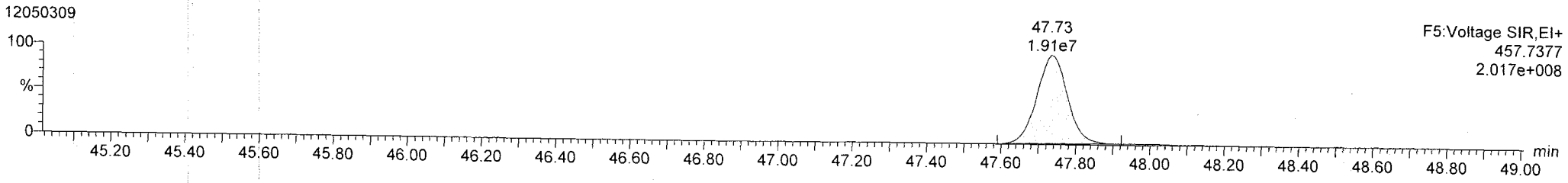

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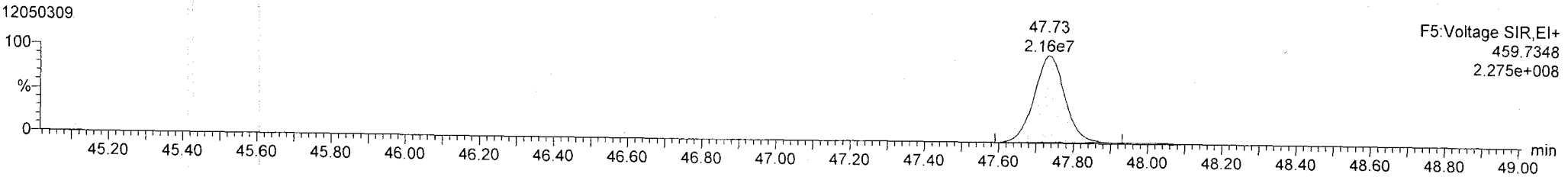

FUNCTION5 PFK
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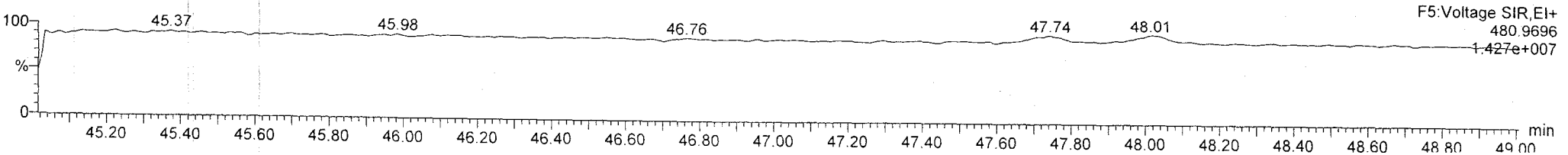

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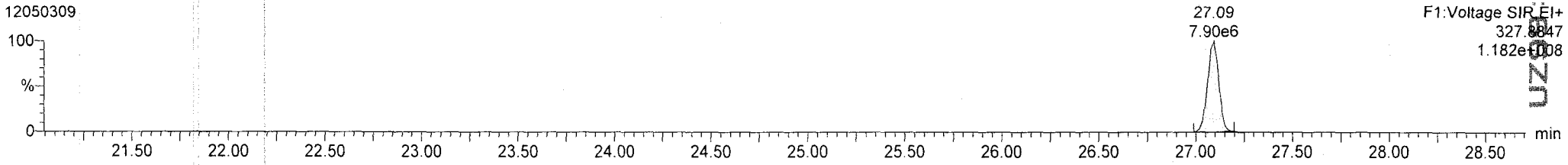
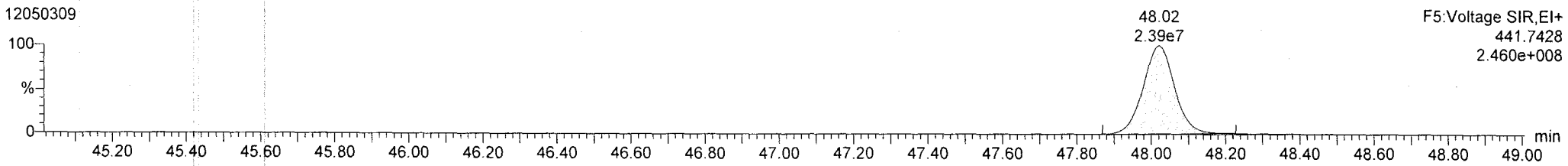
Name: 12050309, Date: 03-May-2012, Time: 18:54:20, ID: CS5, Conditions: AUTOSPEC01, User: pk

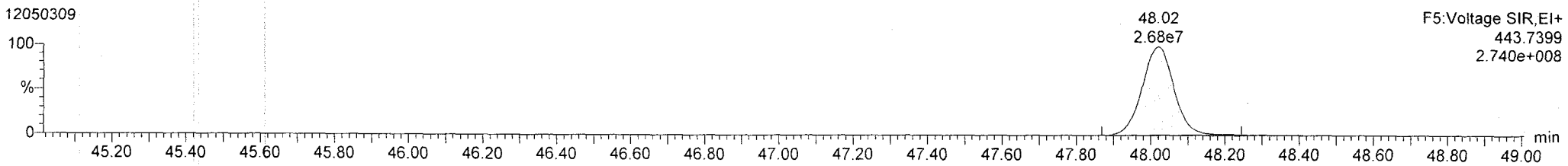
37CL-2378-TCDD



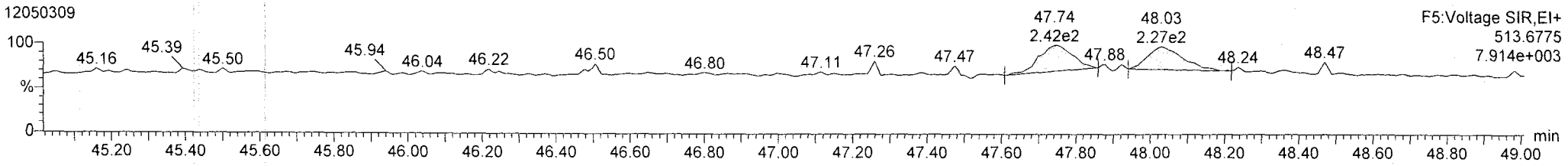
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.452	26.438	351705	351705	0.866	bb		0.79	0.77	1637.8	NO	10.384	10.384
2	2	12378-PeCDF	339.8597	30.582	30.581	1364643	1364643	0.907	bd		1.54	1.55	3295.2	NO	54.462	54.462
3	3	23478-PeCDF	339.8597	31.919	31.920	1264819	1264819	0.936	bb		1.52	1.55	3044.8	NO	50.696	50.696
4	4	123478-HxCDF	373.8208	35.580	35.579	1079541	1079541	1.082	bd		1.24	1.24	2745.1	NO	55.376	55.376
5	5	234678-HxCDF	373.8208	36.665	36.676	1084818	1084818	1.070	bb		1.24	1.24	2751.7	NO	52.329	52.329
6	6	123678-HxCDF	373.8208	35.733	35.733	1182650	1182650	1.048	dd		1.18	1.24	2896.4	NO	53.316	53.316
7	7	123789-HxCDF	373.8208	37.783	37.772	909606	909606	1.020	bd		1.19	1.24	2270.5	NO	55.996	55.996
8	8	1234678-HpCDF	407.7818	39.865	39.863	1009666	1009666	1.214	bd		0.99	1.05	2334.7	NO	54.576	54.576
9	9	1234789-HpCDF	407.7818	42.606	42.596	743681	743681	1.254	bb		1.05	1.05	1509.8	NO	48.437	48.437
10	10	OCDF	441.7428	48.003	47.984	1318603	1318603	1.105	bd		0.89	0.89	3544.4	NO	110.557	110.557
11	11	2378-TCDD	319.8965	27.079	27.078	282352	282352	1.046	bd		0.76	0.77	1609.8	NO	9.581	9.581
12	12	12378-PeCDD	355.8546	32.171	32.159	897726	897726	0.973	bb		1.54	1.55	3841.2	NO	46.840	46.840
13	13	123478-HxCDD	389.8157	36.807	36.807	767624	767624	0.935	bd		1.25	1.24	5356.2	NO	51.548	51.548
14	14	123678-HxCDD	389.8157	36.928	36.928	787244	787244	0.878	dd		1.23	1.24	5173.8	NO	55.632	55.632
15	15	123789-HxCDD	389.8157	37.355	37.323	803272	803272	0.839	bd		1.22	1.24	5304.6	NO	59.778	59.778
16	16	1234678-HpCDD	423.7766	41.696	41.697	684473	684473	0.974	bd		1.02	1.05	2083.5	NO	50.394	50.394
17	17	OCDD	457.7377	47.716	47.712	1140129	1140129	0.950	bd		0.86	0.89	2626.4	NO	111.205	111.205
18	18	13C-2378-TCDF	315.9419	26.422	26.437	3910521		1.484	bb	87.6	0.78	0.77	8495.2	NO	87.575	
19	19	13C-12378-PeCDF	351.9000	30.560	30.578	2762733		1.048	bd	87.6	1.55	1.55	4771.1	NO	87.629	
20	20	13C-23478-PeCDF	351.9000	31.897	31.915	2665902		1.003	bb	88.3	1.56	1.55	4717.1	NO	88.324	
21	21	13C-123478-HxCDF	383.8639	35.569	35.569	1801902		1.186	bd	93.1	0.51	0.51	2357.7	NO	93.073	
22	22	13C-123678-HxCDF	383.8639	35.711	35.722	2115917		1.315	db	98.5	0.52	0.51	2654.2	NO	98.535	
23	23	13C-234678-HxCDF	383.8639	36.654	36.654	1937824		1.223	bb	97.0	0.51	0.51	2518.2	NO	97.012	
24	24	13C-123789-HxCDF	383.8639	37.761	37.761	1592415		1.056	bb	92.3	0.52	0.51	2110.3	NO	92.306	
25	25	13C-1234678-HpCDF	417.8253	39.843	39.843	1523335		1.011	bb	92.2	0.45	0.44	2436.0	NO	92.237	
26	26	13C-1234789-HpCDF	417.8253	42.584	42.595	1224318		0.741	bb	101.2	0.46	0.44	1689.5	NO	101.247	
27	27	13C-1234-TCDD	331.9368	26.257	26.272	3008147		1.000	bb	100.0	0.79	0.77	6176.7	NO	100.000	
28	28	13C-2378-TCDD	331.9368	27.064	27.079	2817897		0.956	bb	97.9	0.79	0.77	5754.2	NO	97.949	
29	29	13C-12378-PeCDD	367.8949	32.149	32.168	1969208		0.663	bb	98.7	1.58	1.55	8761.3	NO	98.669	
30	30	13C-123478-HxCDD	401.8559	36.785	36.785	1591970		1.024	bd	95.2	1.28	1.24	4835.4	NO	95.217	
31	31	13C-123678-HxCDD	401.8559	36.917	36.917	1612141		1.113	db	88.7	1.28	1.24	4650.9	NO	88.735	
32	32	13C-1234678-HpCDD	435.8169	41.685	41.696	1394074		0.815	bd	104.7	1.04	1.05	4243.8	NO	104.737	
33	33	13C-OCDD	469.7779	47.698	47.712	2158259		0.717	bb	92.2	0.92	0.89	2367.5	NO	184.321	

65590 : 66Z0

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**

Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

UZ99 : 00554

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

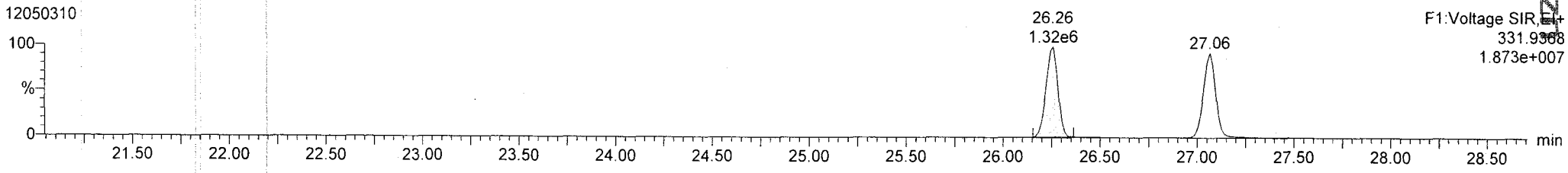
	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	37.344	37.368	1632908		1.000	bb	100.0	1.27	1.24	4738.9	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.490			0.866							10.490	10.490
36	36	Total-penta1	339.8597		28.270											
37	37	Total-pentafurans	339.8597		30.840			0.921							105.369	105.854
38	38	Total-hexafurans	373.8208		35.860			1.055							217.017	217.049
39	39	Total-heptafurans	407.7818		41.270			1.234							103.013	103.060
40	40	Total-Furans	303.9016		0.000			1.050							546.445	547.009
41	41	Total-tetradioxins	319.8965		26.000			1.046							9.581	9.581
42	42	Total-pentadioxins	355.8546		31.040			0.973							46.840	46.840
43	43	Total-hexadioxins	389.8157		36.030			0.884							166.957	167.129
44	44	Total-heptadioxins	423.7766		41.090			0.974							50.394	50.750
45	45	Total-Dioxins	319.8965		0.000			0.942							384.977	385.504
46	46	Total-TEQ	319.8965		0.000										931.422	932.514
47	47	37CL-2378-TCDD	327.8847	27.079	27.071	296093		1.037					1816.6		9.490	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000											
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000											
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

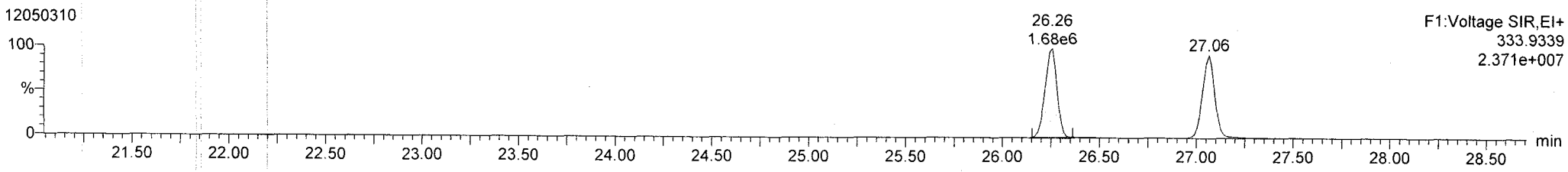
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120502.mdb 02 May 2012 14:09:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

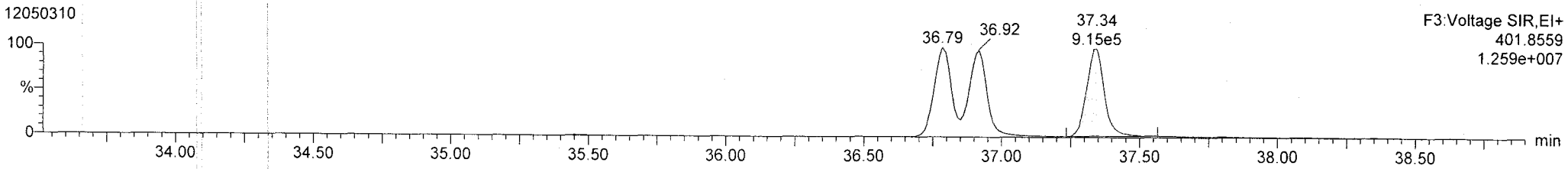
13C-1234-TCDD
12050310



13C-1234-TCDD
12050310



13C-123789-HxCDD
12050310



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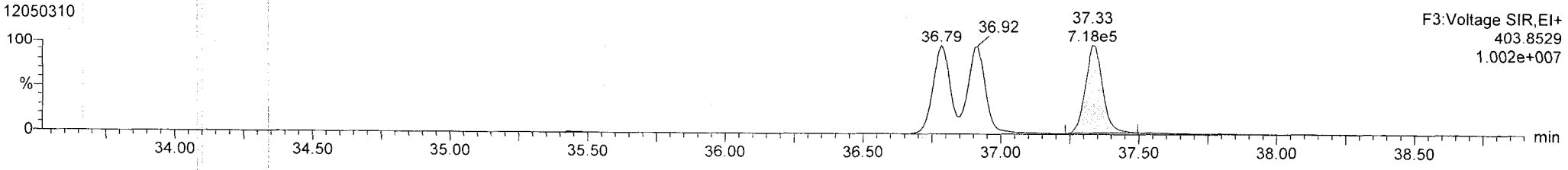
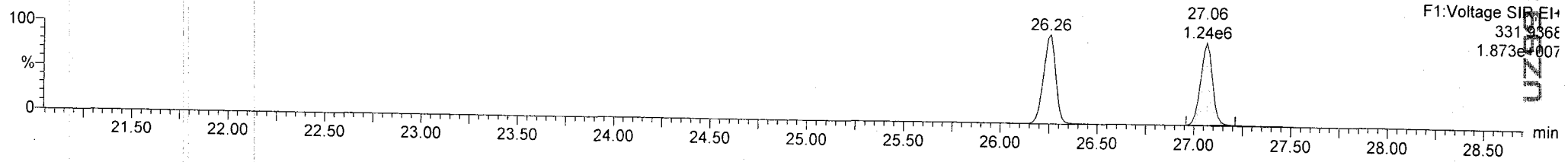


Quantify Sample Report **MassLynx 4.1 SCN 714**

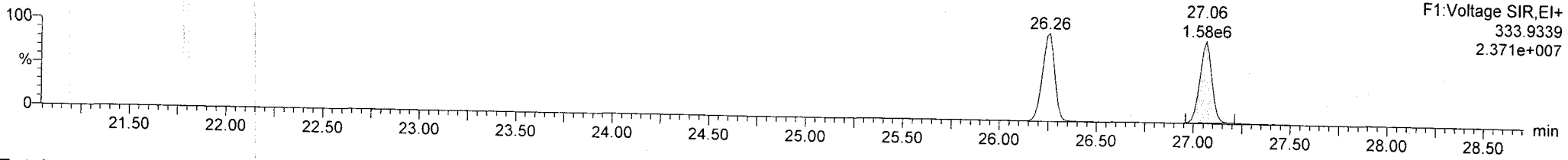
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
12050310



13C-2378-TCDD
12050310



Total-tetradioxins
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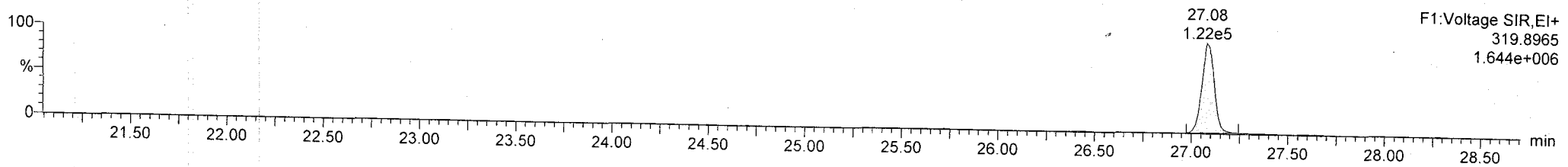
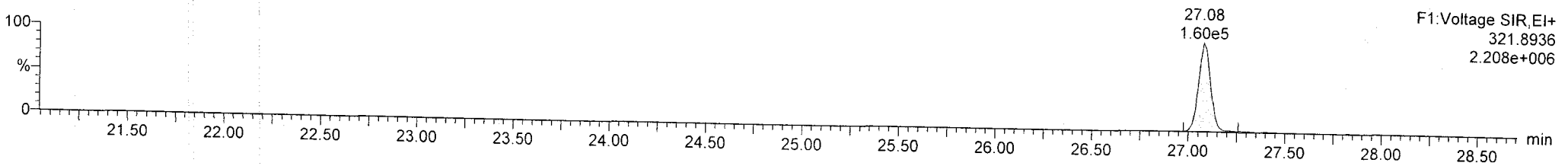
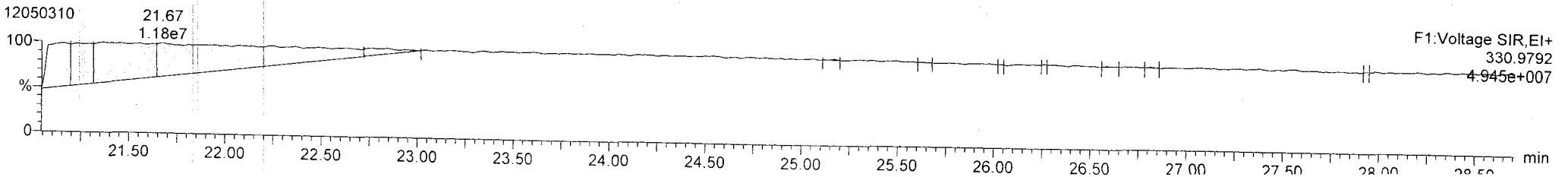


Total-tetradioxins
12050310



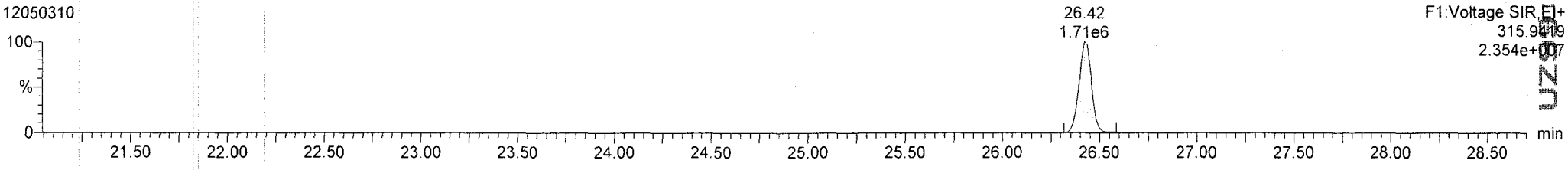
FUNCTION1 PFK
12050310



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF
12050310



13C-2378-TCDF
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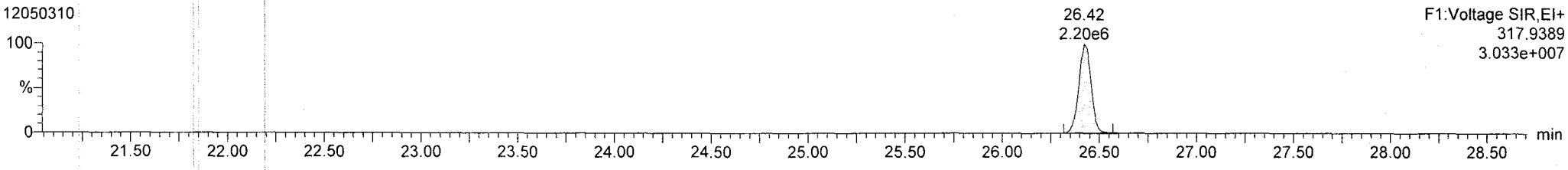
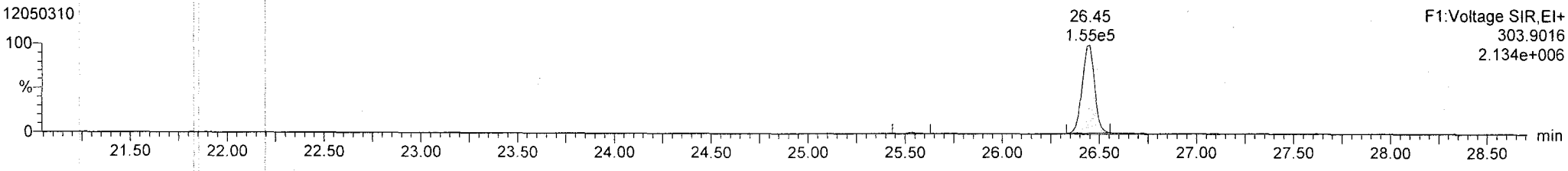
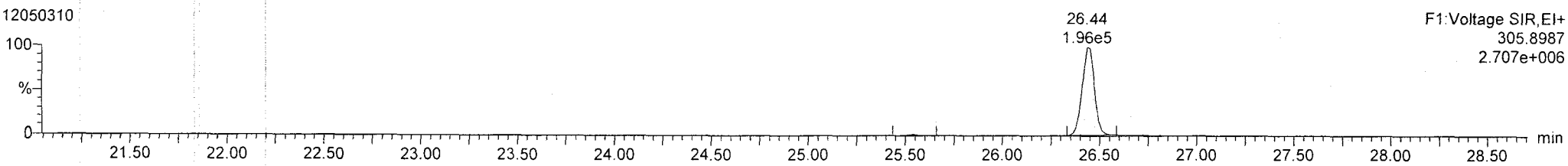


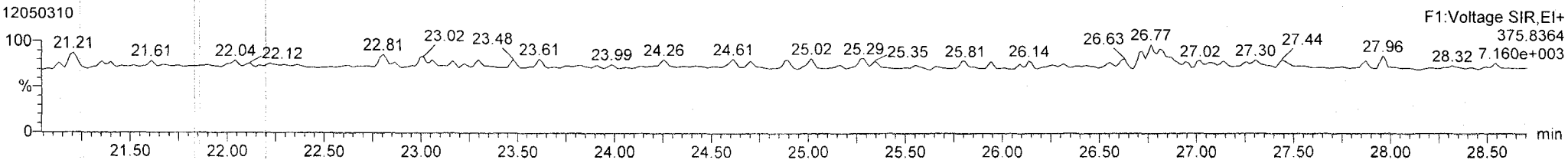
Total-tetrafurans
12050310



Total-tetrafurans
12050310



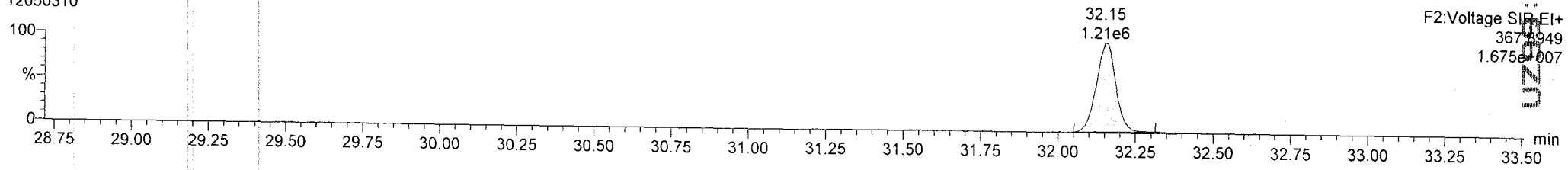
FUNCTION1 HXCDPE
12050310



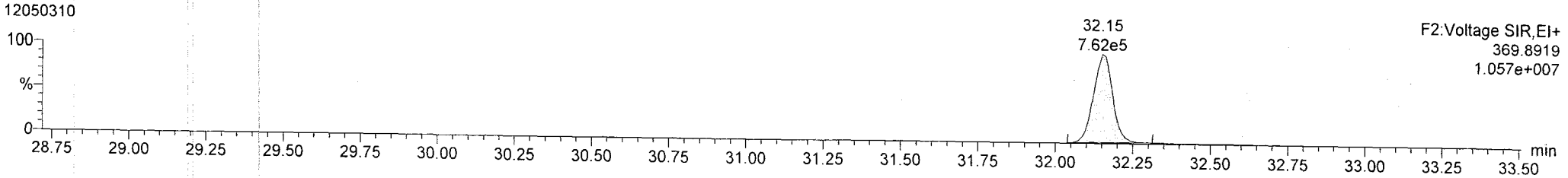
U7B8 00558

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

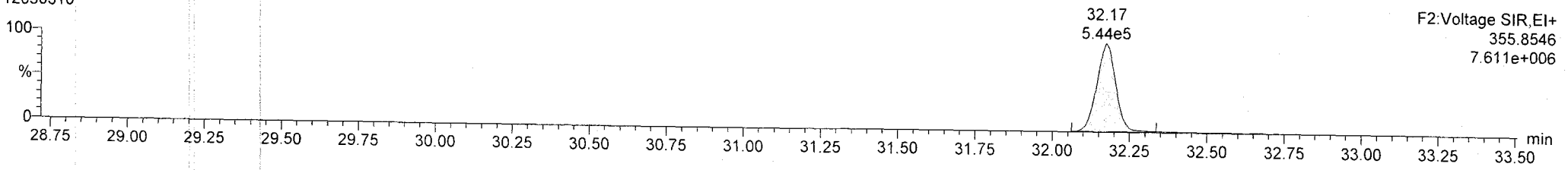
13C-12378-PeCDD
12050310



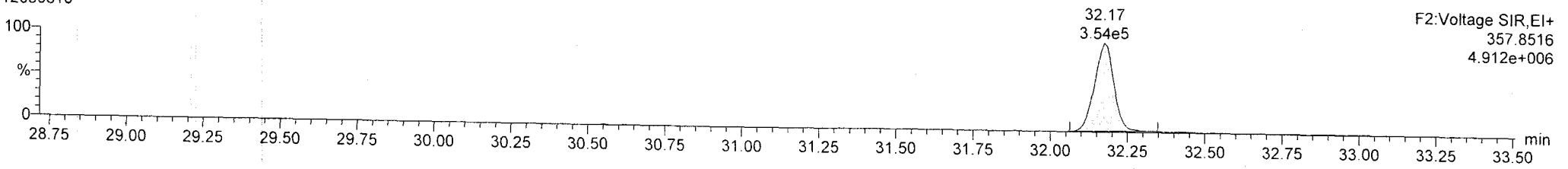
13C-12378-PeCDD
12050310



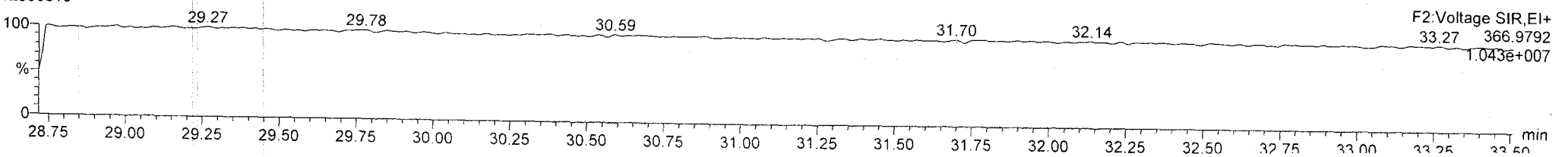
Total-pentadioxins
12050310



Total-pentadioxins
12050310



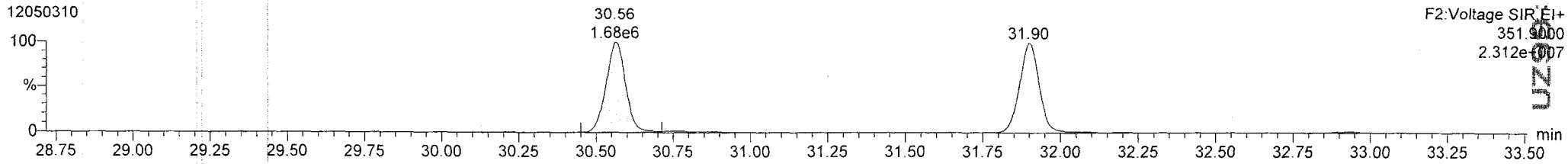
FUNCTION2 PFK
12050310



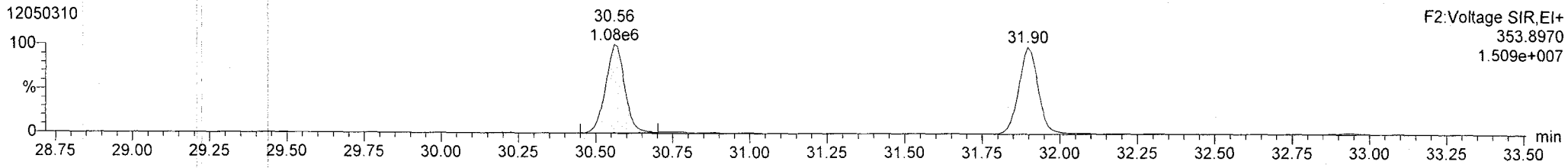
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

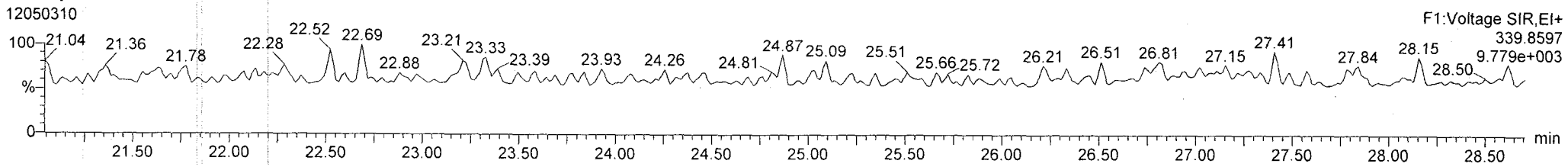
13C-12378-PeCDF



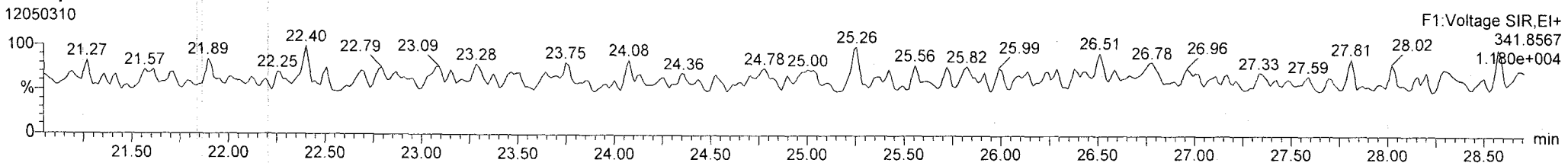
13C-12378-PeCDF



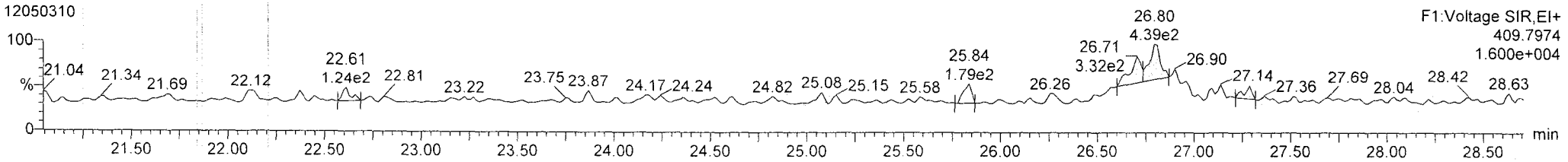
Total-penta1



Total-penta1



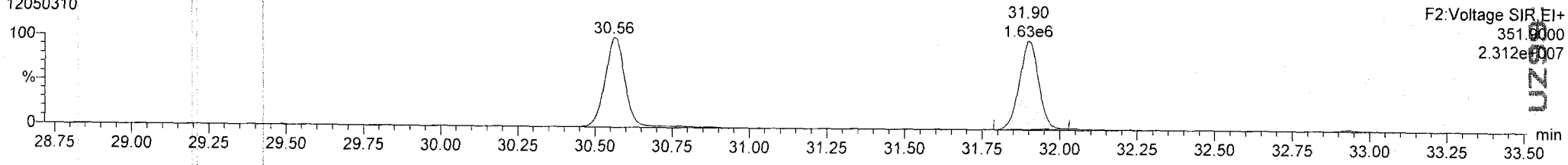
FUNCTION1 HPCDPE



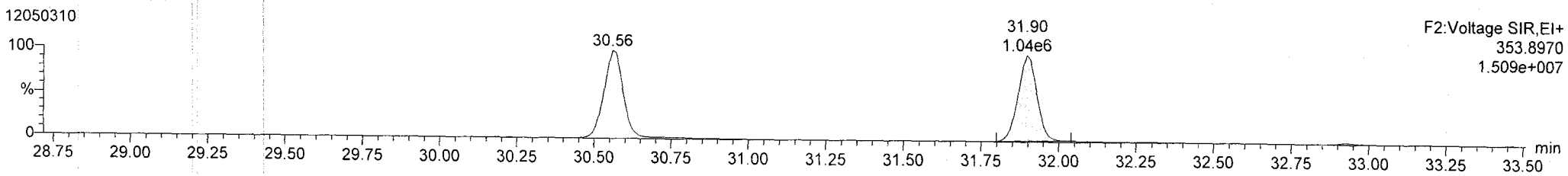
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

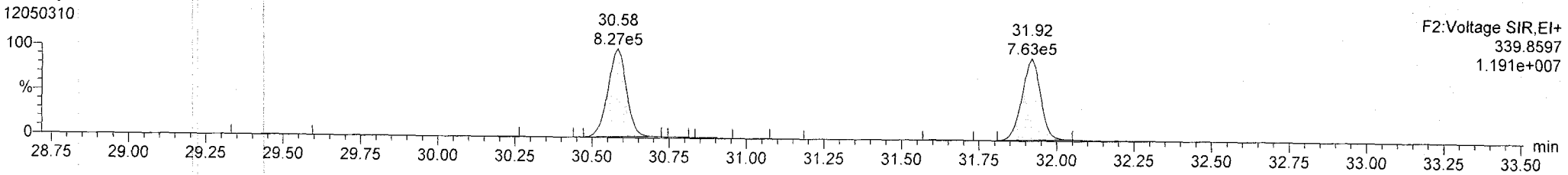
13C-23478-PeCDF
12050310



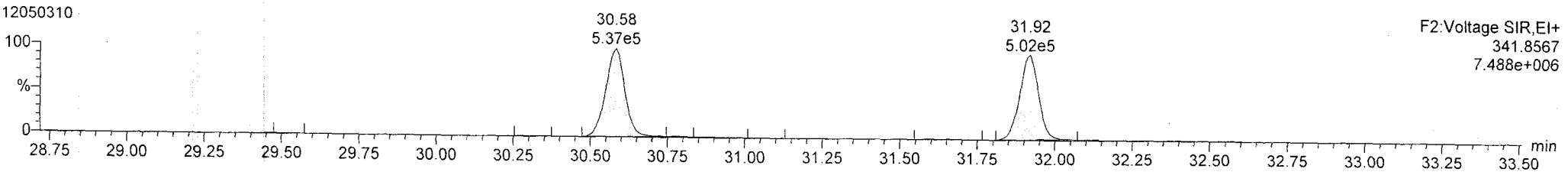
13C-23478-PeCDF
12050310



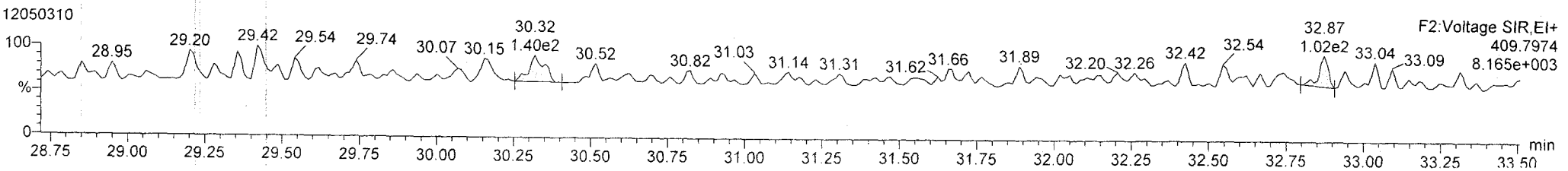
Total-pentafurans
12050310



Total-pentafurans
12050310



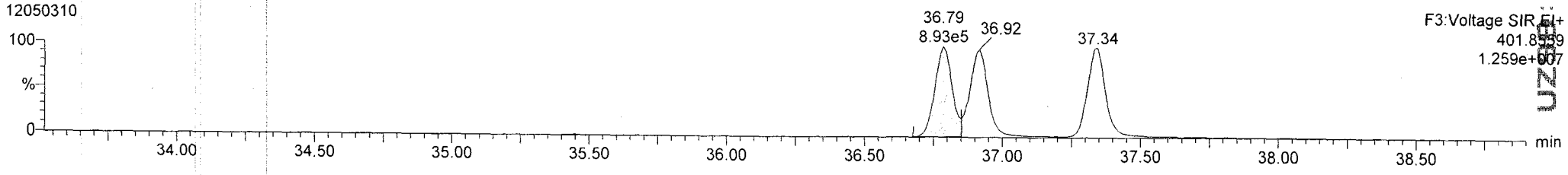
FUNCTION2 HPCDPE
12050310



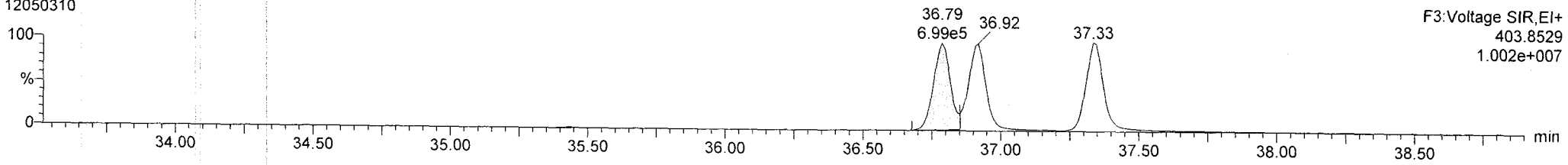
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

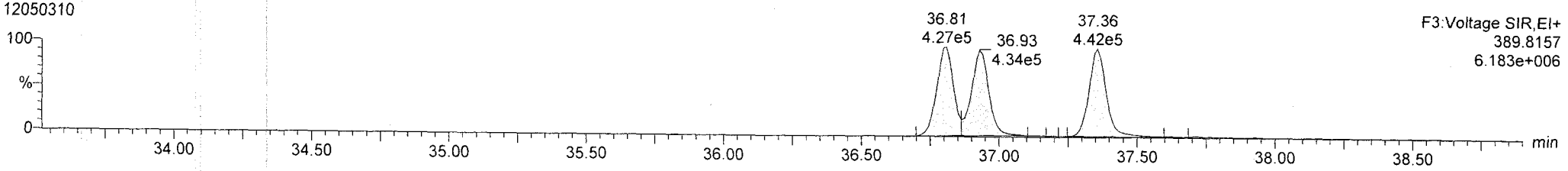
13C-123478-HxCDD
12050310



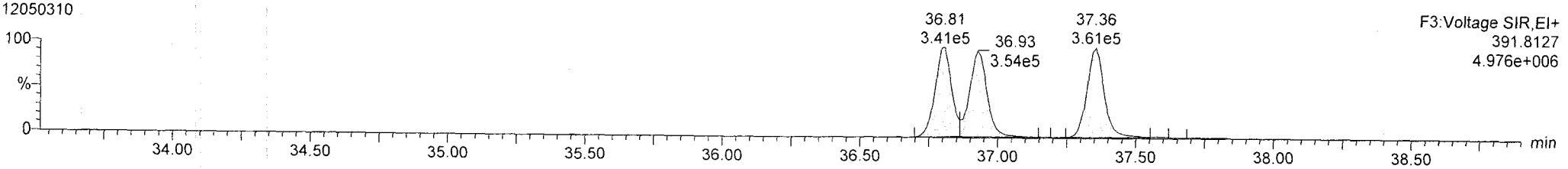
13C-123478-HxCDD
12050310



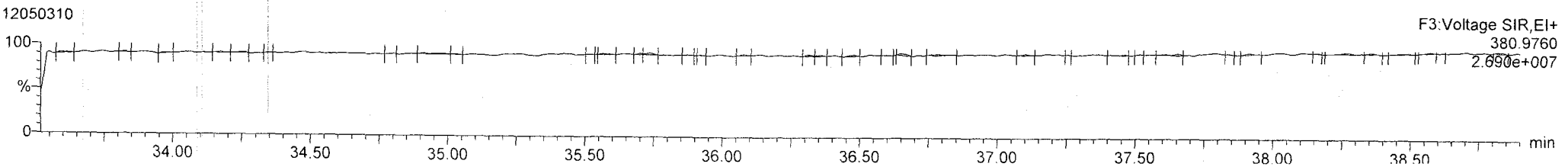
Total-hexadioxins
12050310



Total-hexadioxins
12050310



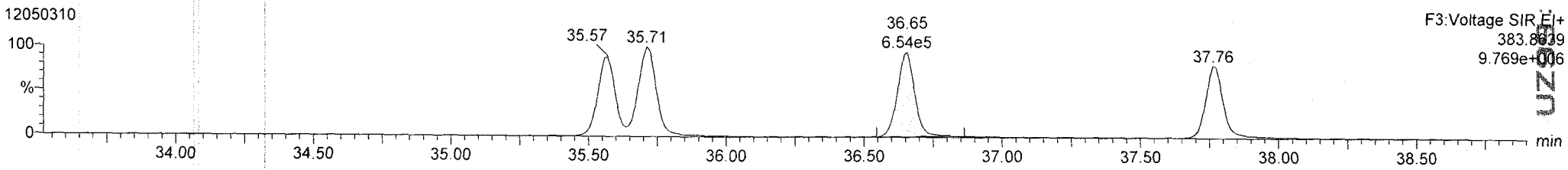
FUNCTION3 PFK
12050310



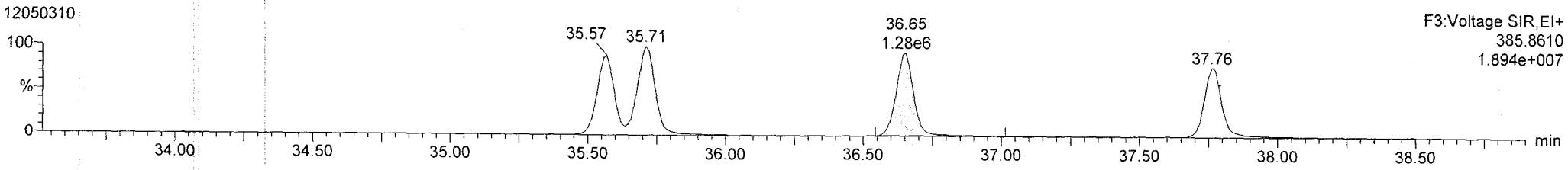
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

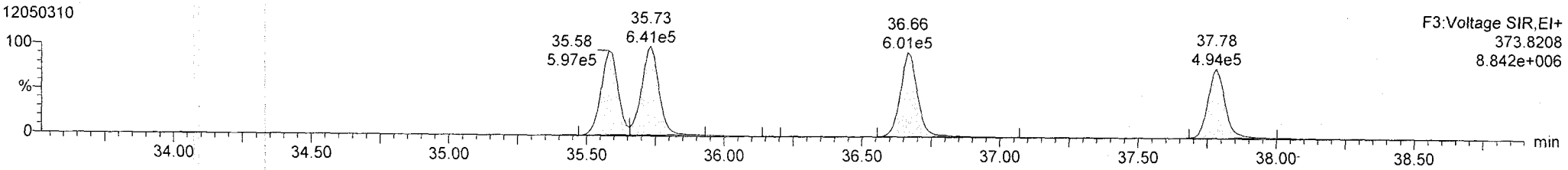
13C-234678-HxCDF
12050310



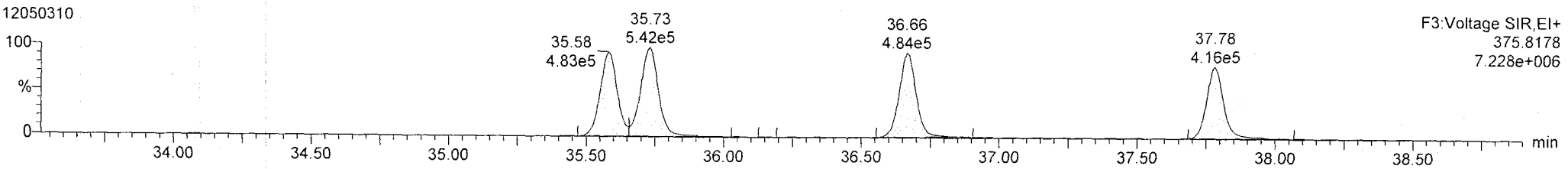
13C-234678-HxCDF
12050310



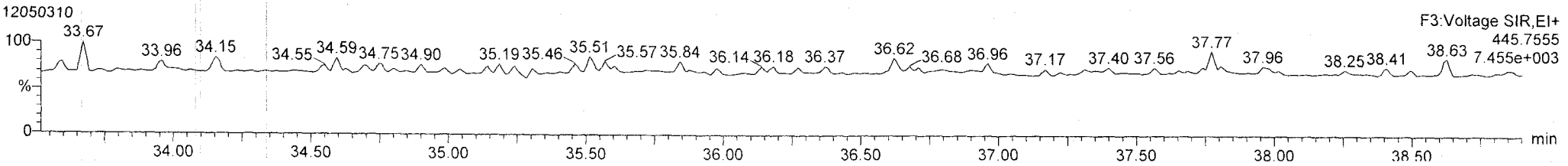
Total-hexafurans
12050310



Total-hexafurans
12050310



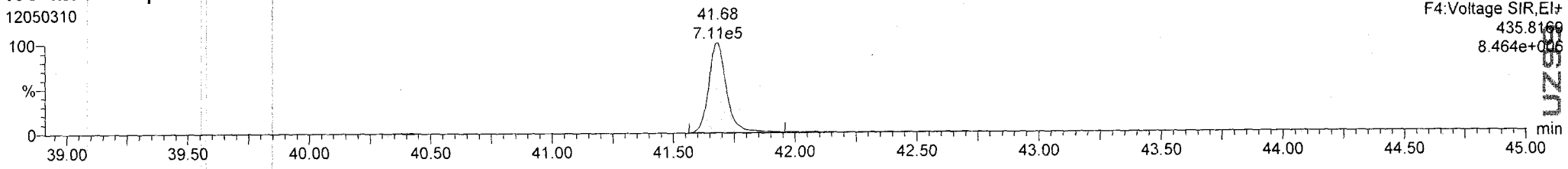
FUNCTION3 OCDPE
12050310



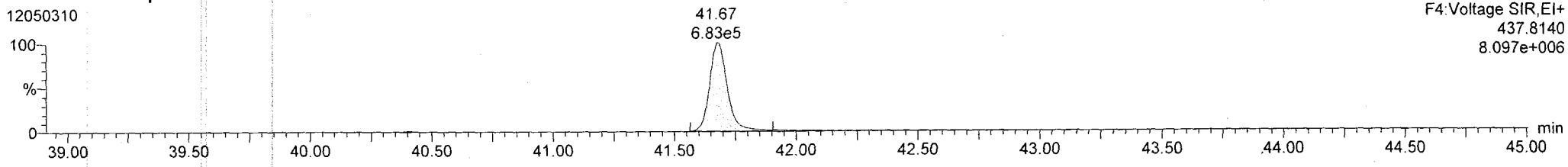
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

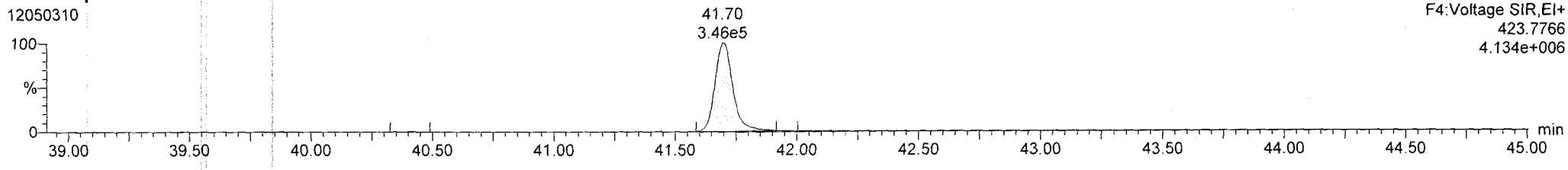
13C-1234678-HpCDD
12050310
F4:Voltage SIR,EI+
435.8169
8.464e+006



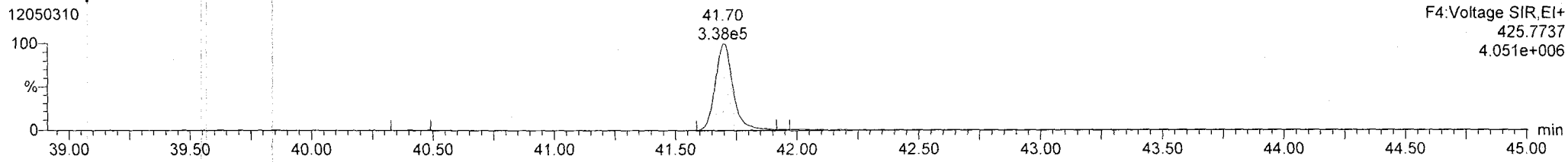
13C-1234678-HpCDD
12050310
F4:Voltage SIR,EI+
437.8140
8.097e+006



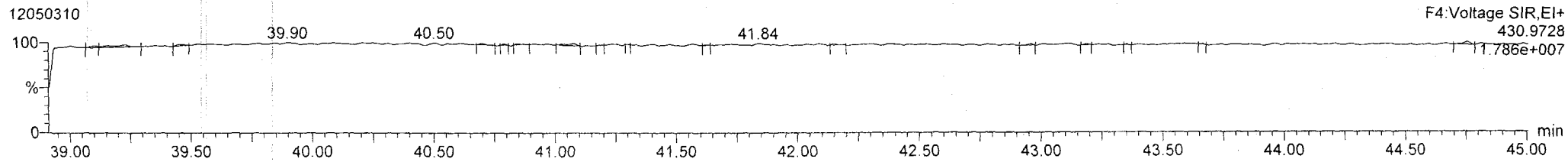
Total-heptadioxins
12050310
F4:Voltage SIR,EI+
423.7766
4.134e+006



Total-heptadioxins
12050310
F4:Voltage SIR,EI+
425.7737
4.051e+006



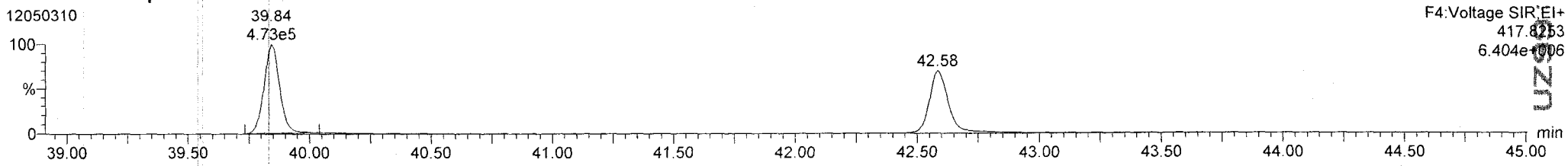
FUNCTION4 PFK
12050310
F4:Voltage SIR,EI+
430.9728
1.786e+007



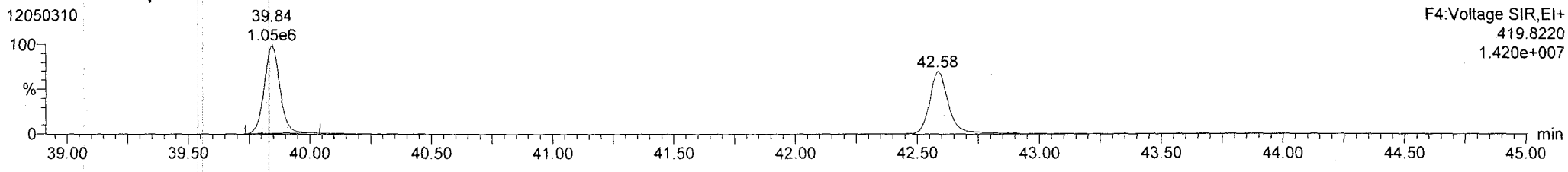
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

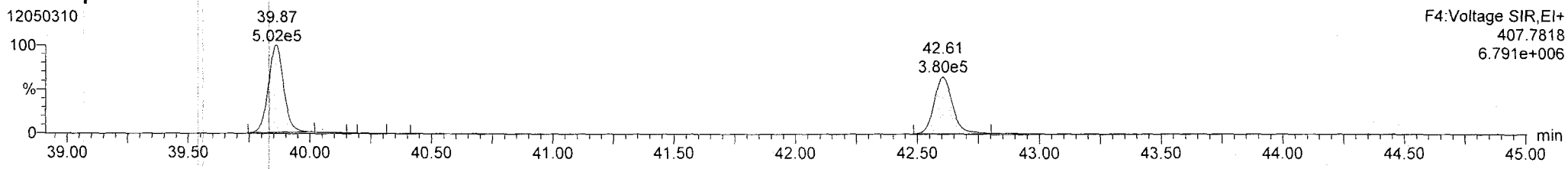
13C-1234678-HpCDF



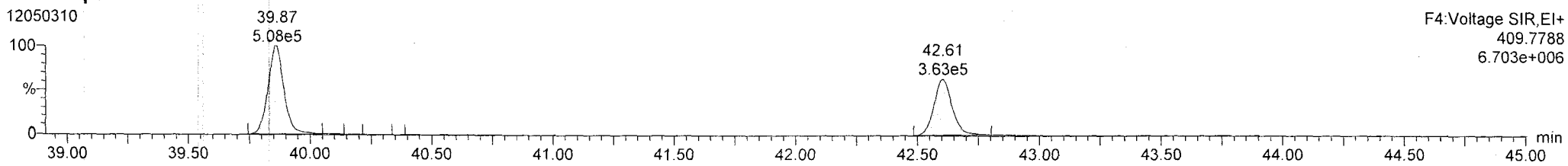
13C-1234678-HpCDF



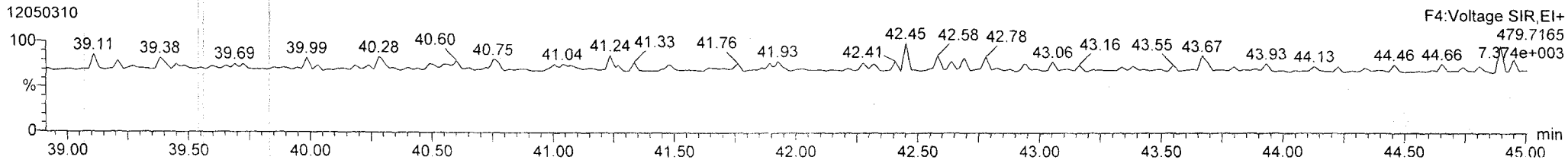
Total-heptafurans



Total-heptafurans



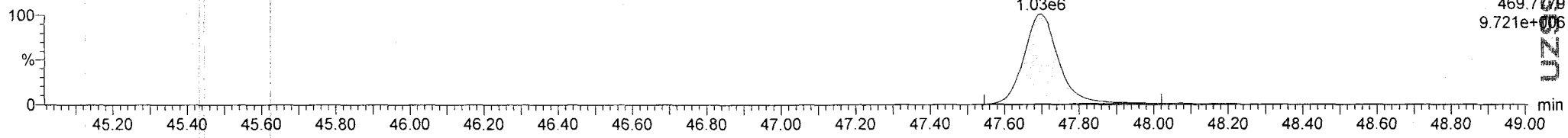
FUNCTION4 NCDPE



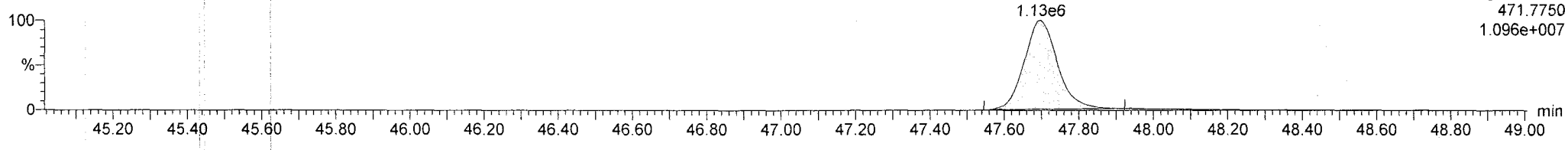
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

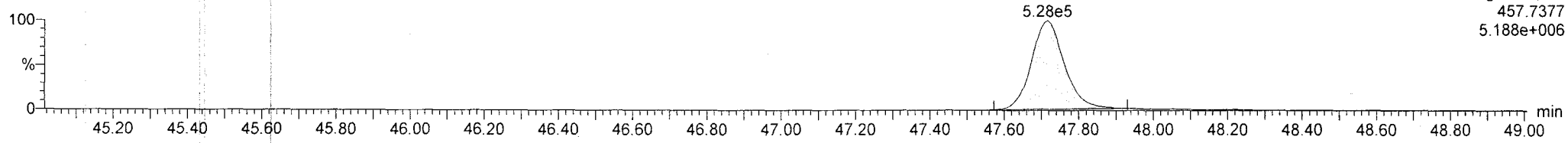
13C-OCDD
12050310
47.70
1.03e6
F5:Voltage SIR,EI+
469.7779
9.721e+006



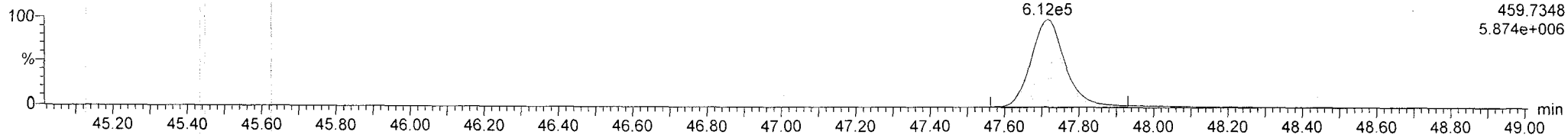
13C-OCDD
12050310
47.70
1.13e6
F5:Voltage SIR,EI+
471.7750
1.096e+007



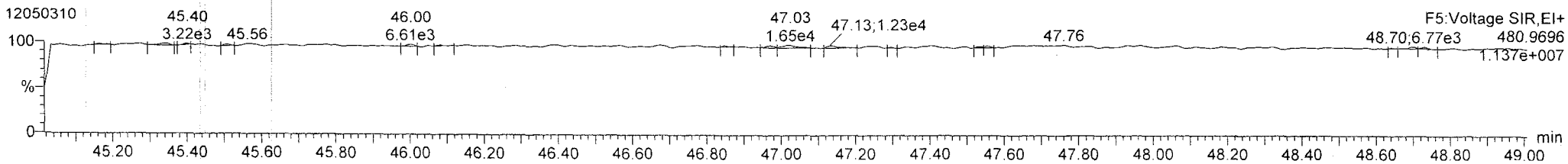
OCDD
12050310
47.72
5.28e5
F5:Voltage SIR,EI+
457.7377
5.188e+006



OCDD
12050310
47.72
6.12e5
F5:Voltage SIR,EI+
459.7348
5.874e+006



FUNCTION5 PFK
12050310
45.40
3.22e3
45.56
46.00
6.61e3
47.03
1.65e4
47.13;1.23e4
47.76
48.70;6.77e3
F5:Voltage SIR,EI+
480.9696
1.137e+007

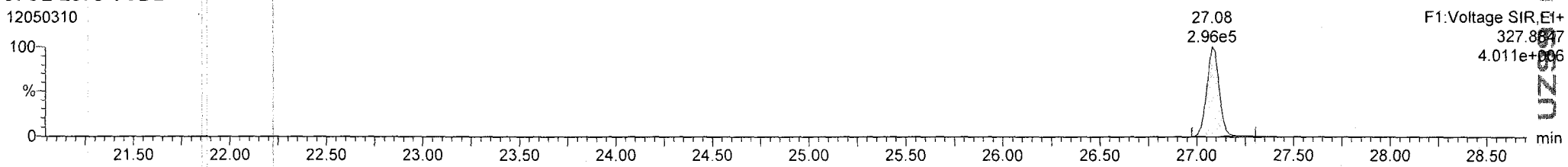


Quantify Sample Report **MassLynx 4.1 SCN 714**

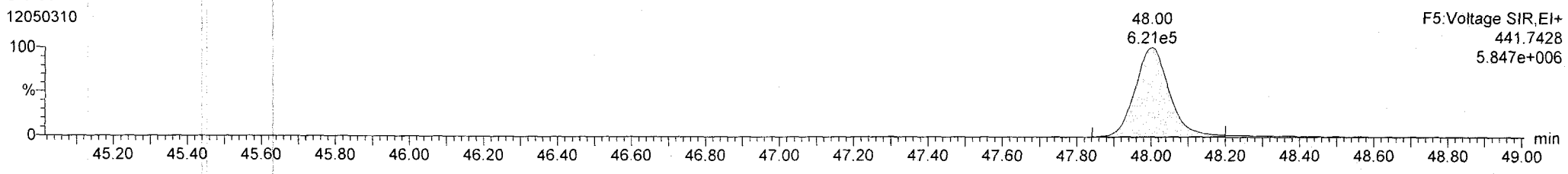
Dataset: Untitled
Last Altered: Friday, May 04, 2012 08:42:24 Pacific Daylight Time
Printed: Friday, May 04, 2012 08:43:30 Pacific Daylight Time

Name: 12050310, Date: 03-May-2012, Time: 19:46:34, ID: ICV, Conditions: AUTOSPEC01, User: pk

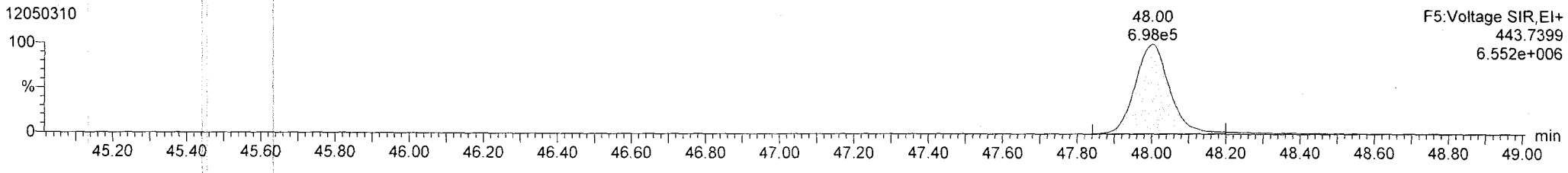
37CL-2378-TCDD



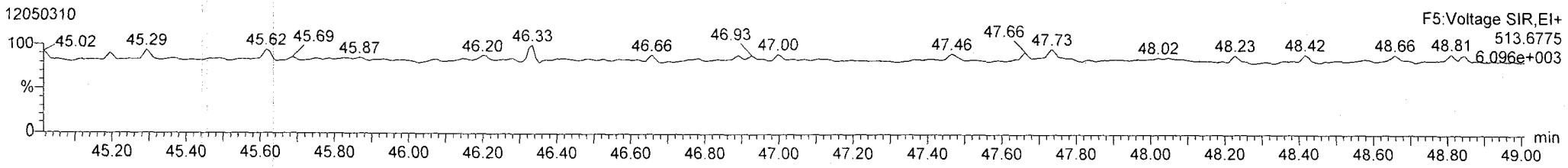
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
1	1	2378-TCDF	303.9016	26.018	26.019	519879	519879	0.866	bb	101.3	0.74	0.77	1544.8	NO	10.126	10.126
2	2	12378-PeCDF	339.8597	30.134	30.134	2146891	2146891	0.907	bd	103.1	1.54	1.55	3919.1	NO	51.547	51.547
3	3	23478-PeCDF	339.8597	31.472	31.472	2152009	2152009	0.936	dd	101.8	1.48	1.55	3899.8	NO	50.922	50.922
4	4	123478-HxCDF	373.8208	35.121	35.110	1787368	1787368	1.082	bd	101.1	1.20	1.24	1998.3	NO	50.545	50.545
5	5	234678-HxCDF	373.8208	36.206	36.217	1835476	1835476	1.070	bd	99.9	1.23	1.24	2032.8	NO	49.936	49.936
6	6	123678-HxCDF	373.8208	35.263	35.274	1927468	1927468	1.048	db	100.8	1.22	1.24	2096.7	NO	50.376	50.376
7	7	123789-HxCDF	373.8208	37.346	37.346	1462666	1462666	1.020	bb	99.0	1.21	1.24	1574.5	NO	49.508	49.508
8	8	1234678-HpCDF	407.7818	39.384	39.382	1766715	1766715	1.214	bb	103.3	1.04	1.05	3320.1	NO	51.673	51.673
9	9	1234789-HpCDF	407.7818	42.048	42.038	1310896	1310896	1.254	bd	100.8	0.97	1.05	2066.1	NO	50.413	50.413
10	10	OCDF	441.7428	47.275	47.261	2171449	2171449	1.105	bd	108.5	0.88	0.89	2946.0	NO	108.507	108.507
11	11	2378-TCDD	319.8965	26.646	26.644	376379	376379	1.046	bb	101.1	0.79	0.77	1291.0	NO	10.112	10.112
12	12	12378-PeCDD	355.8546	31.723	31.711	1393226	1393226	0.973	bb	102.2	1.56	1.55	2770.6	NO	51.109	51.109
13	13	123478-HxCDD	389.8157	36.337	36.348	1290279	1290279	0.935	bd	107.0	1.26	1.24	1905.2	NO	53.506	53.506
14	14	123678-HxCDD	389.8157	36.469	36.458	1351553	1351553	0.878	db	104.6	1.26	1.24	1867.1	NO	52.283	52.283
15	15	123789-HxCDD	389.8157	36.896	36.848	1243264	1243264	0.839	bb	107.3	1.22	1.24	1730.3	NO	53.675	53.675
16	16	1234678-HpCDD	423.7766	41.171	41.161	1126975	1126975	0.974	bd	104.8	1.04	1.05	1576.1	NO	52.383	52.383
17	17	OCDD	457.7377	46.997	46.993	1865853	1865853	0.950	bd	108.5	0.87	0.89	2539.7	NO	108.463	108.463
18	18	13C-2378-TCDF	315.9419	26.003	26.003	5927932		1.484	bb	102.3	0.78	0.77	10249.2	NO	102.278	
19	19	13C-12378-PeCDF	351.9000	30.112	30.131	4592265		1.048	bb	112.2	1.58	1.55	9001.2	NO	112.220	
20	20	13C-23478-PeCDF	351.9000	31.449	31.468	4515653		1.003	bb	115.3	1.58	1.55	8749.1	NO	115.263	
21	21	13C-123478-HxCDF	383.8639	35.099	35.099	3268537		1.186	bd	105.2	0.52	0.51	2950.6	NO	105.244	
22	22	13C-123678-HxCDF	383.8639	35.252	35.252	3649759		1.315	dd	106.0	0.51	0.51	3140.2	NO	105.951	
23	23	13C-234678-HxCDF	383.8639	36.195	36.184	3435808		1.223	bd	107.2	0.51	0.51	3035.6	NO	107.223	
24	24	13C-123789-HxCDF	383.8639	37.335	37.324	2896186		1.056	bb	104.7	0.52	0.51	2497.1	NO	104.653	
25	25	13C-1234678-HpCDF	417.8253	39.362	39.373	2815316		1.011	bb	106.3	0.45	0.44	3176.9	NO	106.265	
26	26	13C-1234789-HpCDF	417.8253	42.026	42.037	2073493		0.741	bb	106.9	0.46	0.44	1991.3	NO	106.891	
27	27	13C-1234-TCDD	331.9368	25.824	25.839	3904504		1.000	bb	100.0	0.79	0.77	5914.5	NO	100.000	
28	28	13C-2378-TCDD	331.9368	26.631	26.631	3559006		0.956	bb	95.3	0.77	0.77	5219.1	NO	95.309	
29	29	13C-12378-PeCDD	367.8949	31.702	31.720	2800835		0.663	bb	108.1	1.58	1.55	10708.4	NO	108.121	
30	30	13C-123478-HxCDD	401.8559	36.326	36.326	2577984		1.024	bd	96.1	1.25	1.24	3404.9	NO	96.119	
31	31	13C-123678-HxCDD	401.8559	36.447	36.447	2945048		1.113	db	101.0	1.22	1.24	3580.2	NO	101.050	
32	32	13C-1234678-HpCDD	435.8169	41.149	41.160	2208179		0.815	bb	103.4	1.06	1.05	3823.1	NO	103.419	
33	33	13C-OCDD	469.7779	46.979	47.009	3621326		0.717	bb	96.4	0.89	0.89	4158.5	NO	192.793	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	36.875	36.909	2619449		1.000	bb	100.0	1.24	1.24	3268.7	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.030			0.866							33.135	33.135
36	36	Total-penta1	339.8597		27.840										65.115	65.115
37	37	Total-pentafurans	339.8597		30.410			0.921							153.534	153.587
38	38	Total-hexafurans	373.8208		35.390			1.055							261.969	261.969
39	39	Total-heptafurans	407.7818		40.740			1.234							102.188	102.188
40	40	Total-Furans	303.9016		0.000			1.050							724.447	724.519
41	41	Total-tetradioxins	319.8965		25.540			1.046							57.593	58.001
42	42	Total-pentadioxins	355.8546		30.580			0.973							183.184	183.200
43	43	Total-hexadioxins	389.8157		35.570			0.884							231.217	231.257
44	44	Total-heptadioxins	423.7766		40.560			0.974							115.255	115.255
45	45	Total-Dioxins	319.8965		0.000			0.942							695.713	696.177
46	46	Total-TEQ	319.8965		0.000										1420.160	1420.6...
47	47	37CL-2378-TCDD	327.8847	26.646	26.625	398817		1.037		98.5			2047.0		9.848	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000											
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000											
58	58	FUNCTION5 DCDPE	513.6775		0.000											

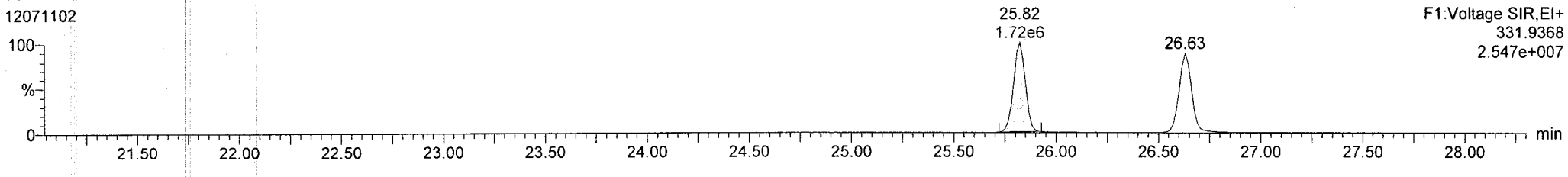
U299:00568

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD
12071102



13C-1234-TCDD
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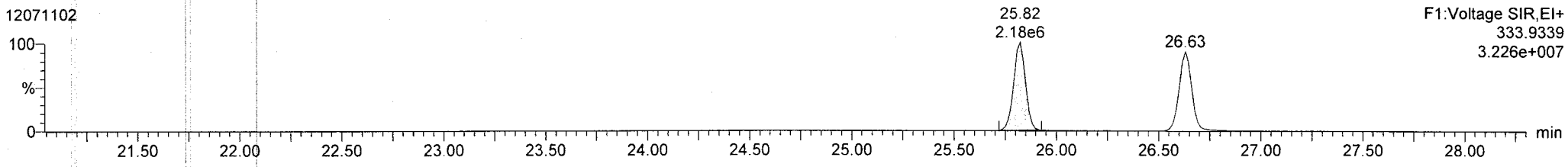
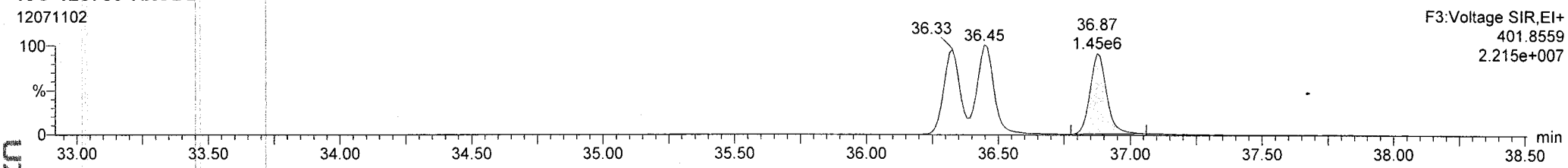


13C-123789-HxCDD
12071102



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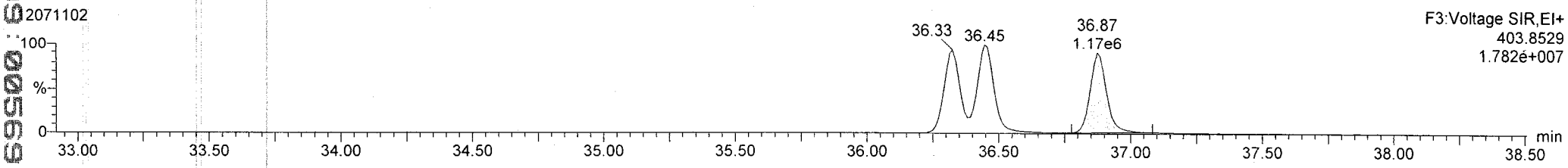
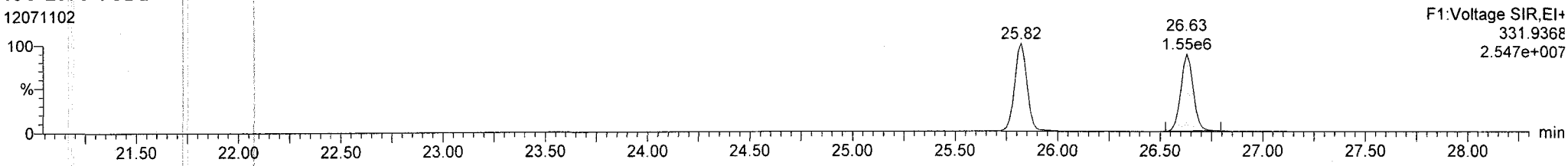


U2969 ; 09/05/09

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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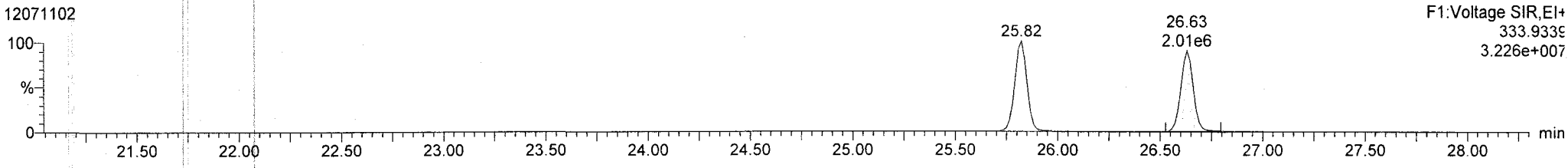
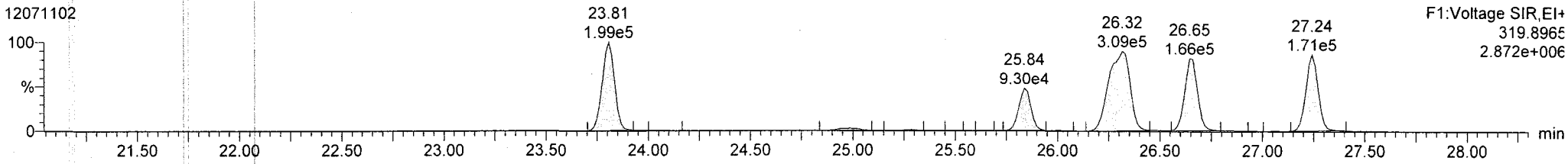
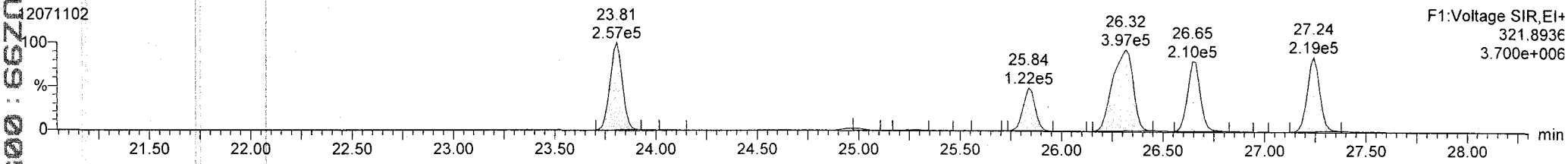


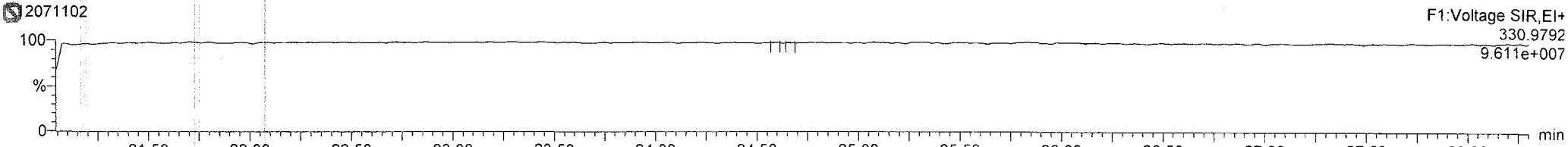
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK

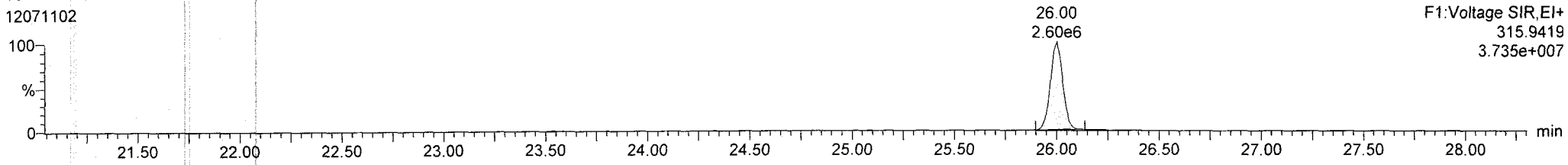


UZ99 : 00570

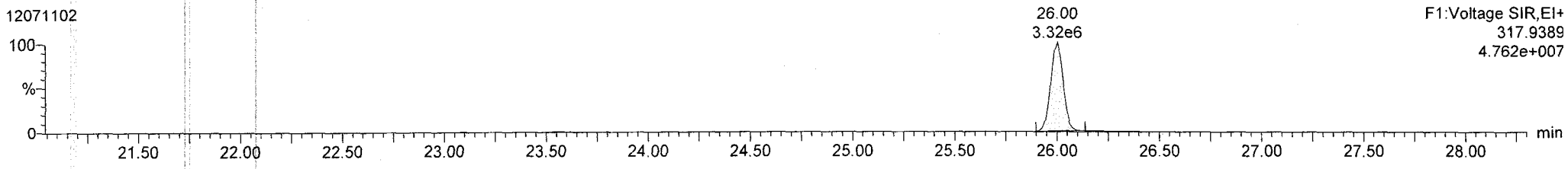
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

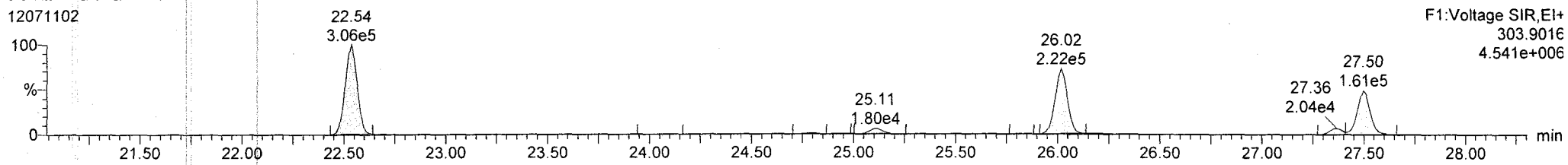
13C-2378-TCDF



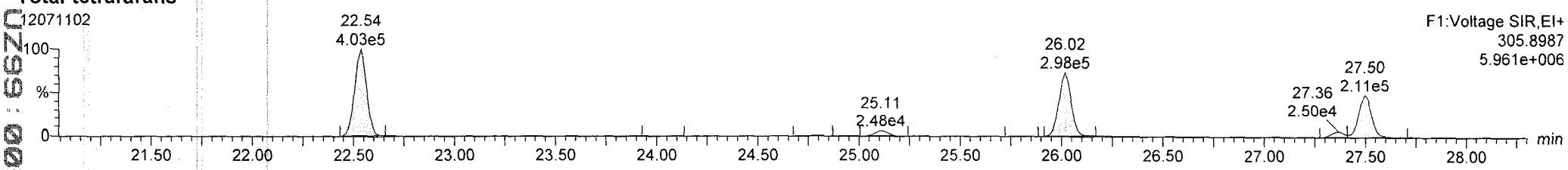
13C-2378-TCDF



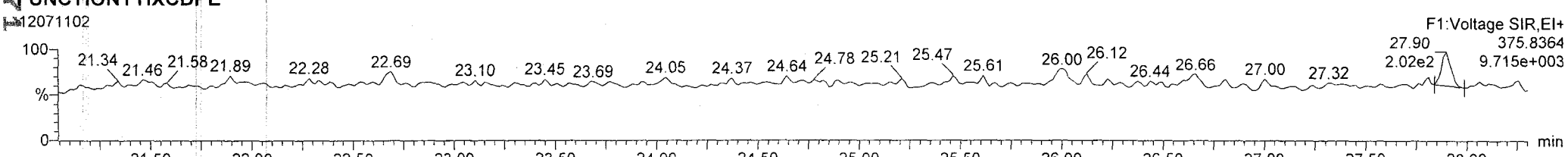
Total-tetrafurans



Total-tetrafurans



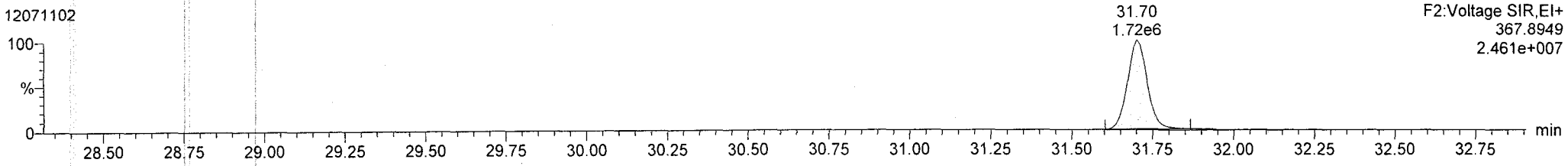
FUNCTION1 HXCDPE



UZ99 : 00571

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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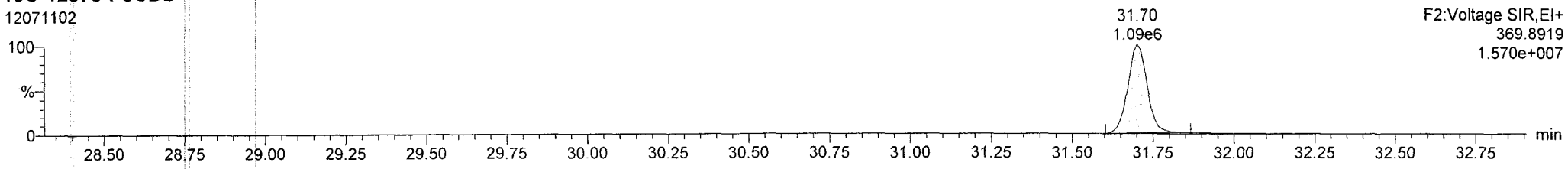
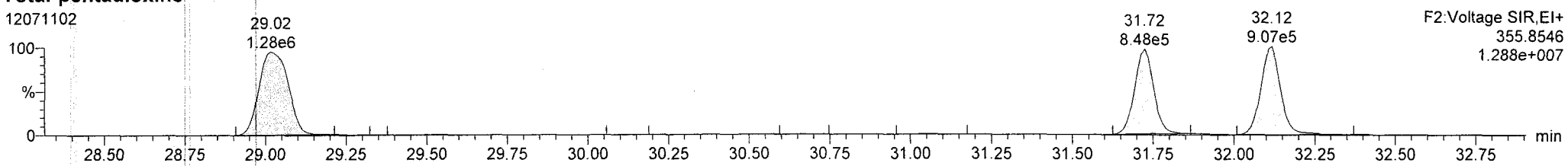
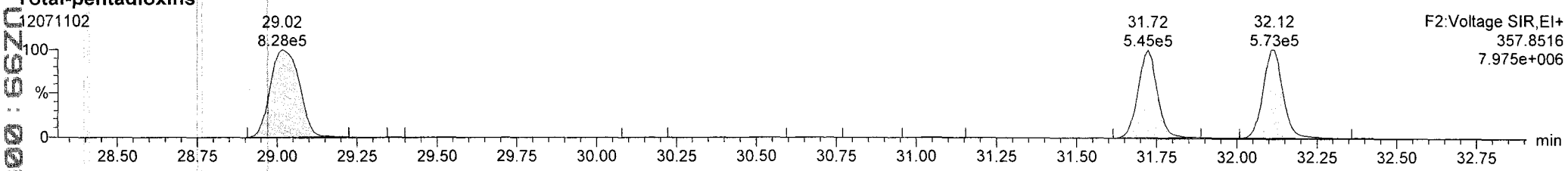


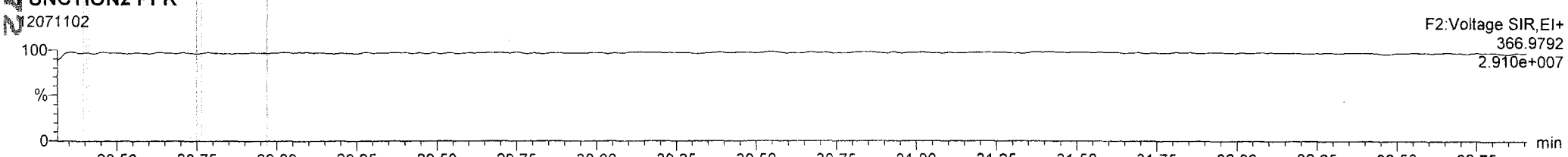
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK

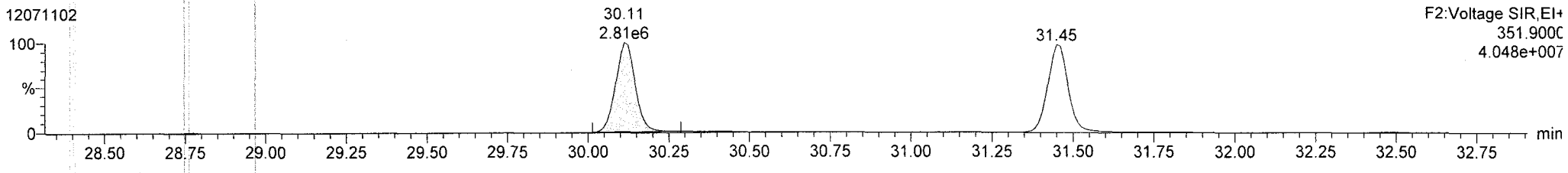


UZ99 : 00572

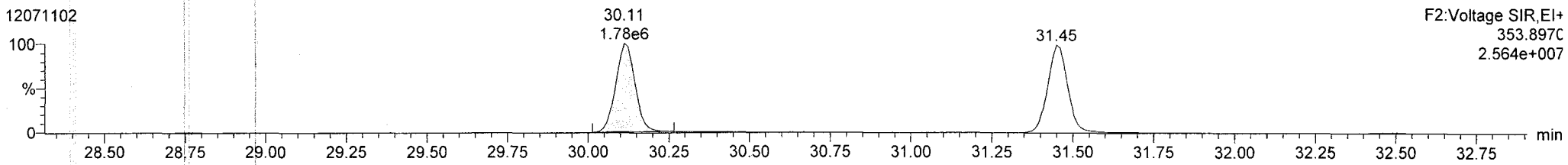
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

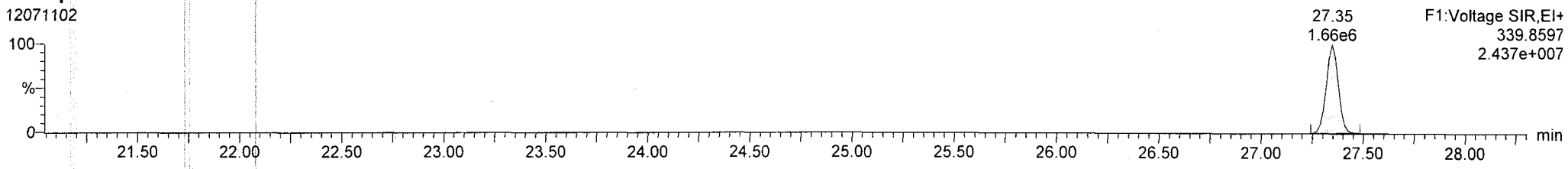
13C-12378-PeCDF



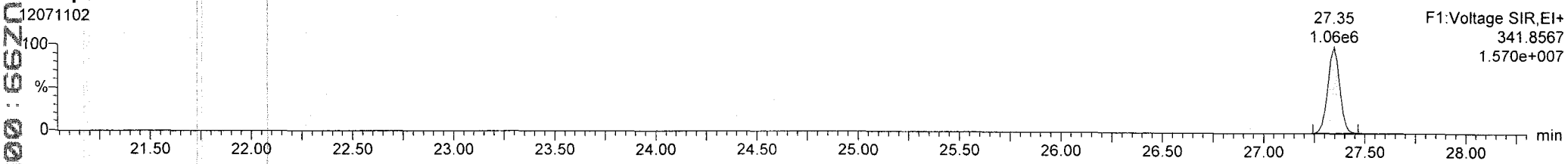
13C-12378-PeCDF



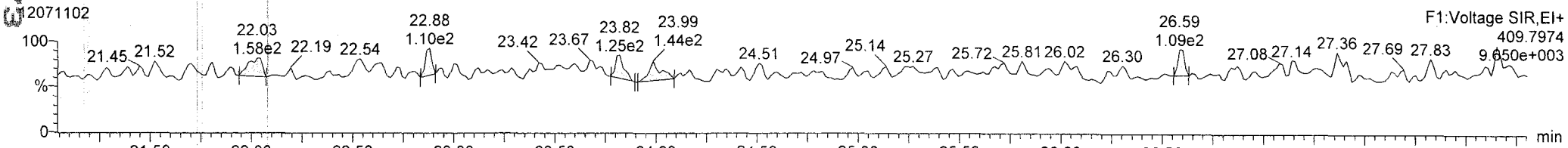
Total-penta1



Total-penta1



FUNCTION1 HPCDPE

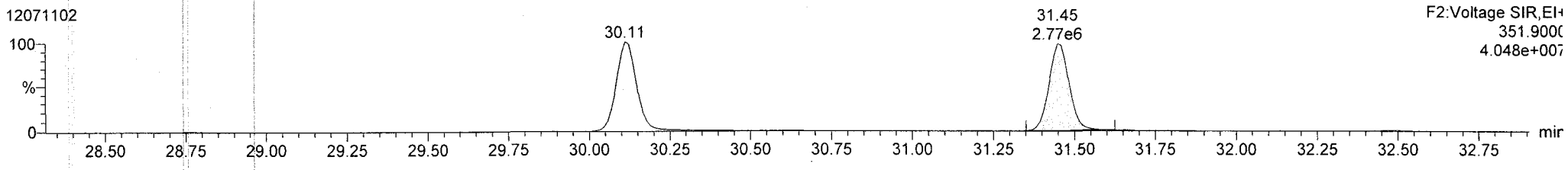


UZ99 : 00573

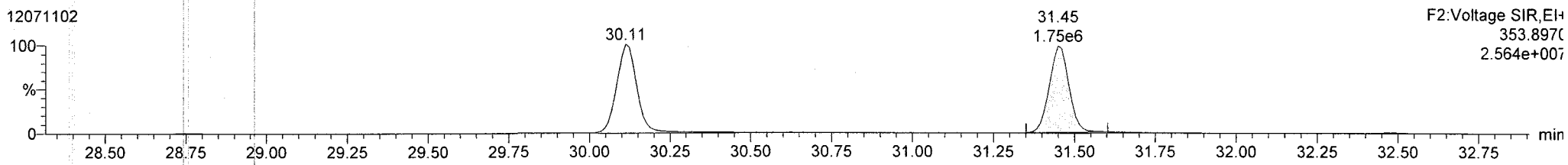
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

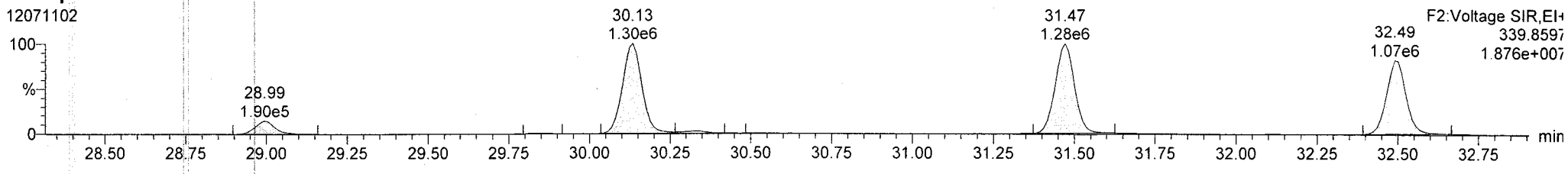
13C-23478-PeCDF



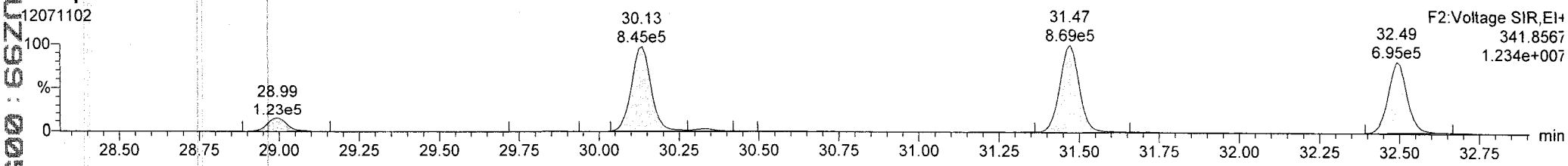
13C-23478-PeCDF



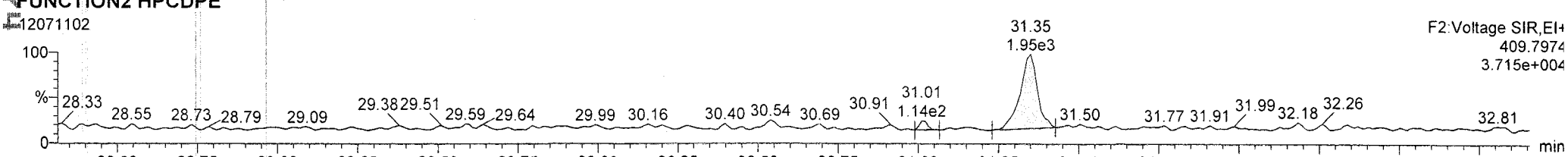
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



UZ99 : 00574

Quantify Sample Report **MassLynx 4.1 SCN 714**
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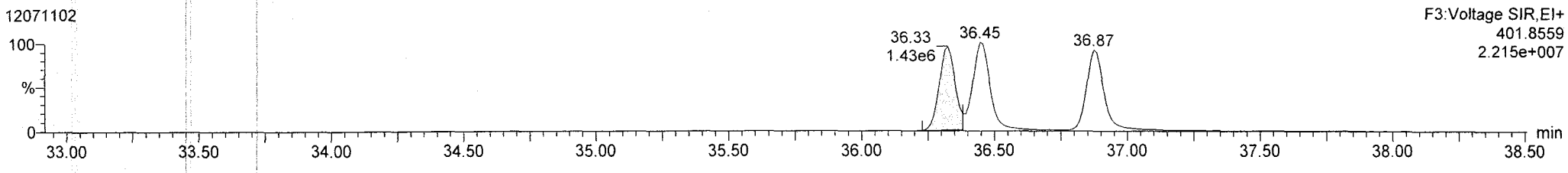
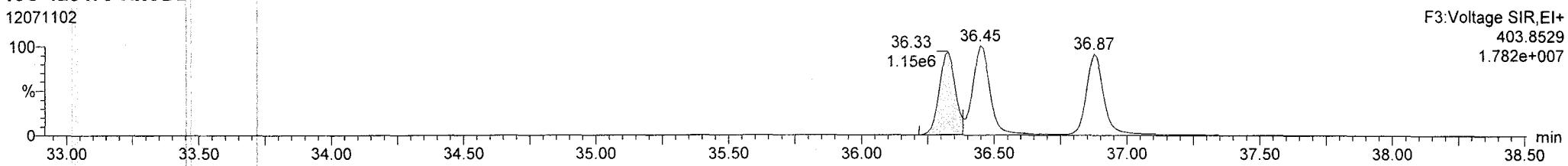
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

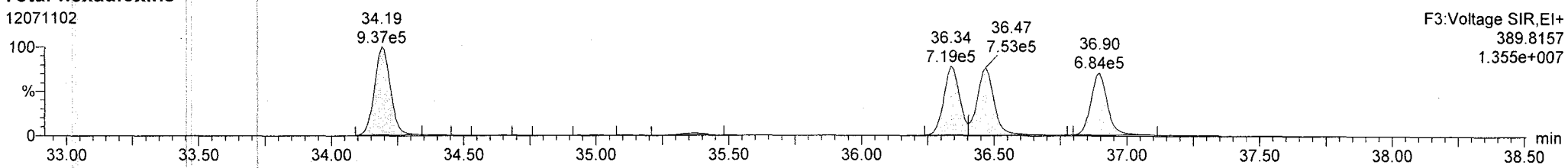
13C-123478-HxCDD



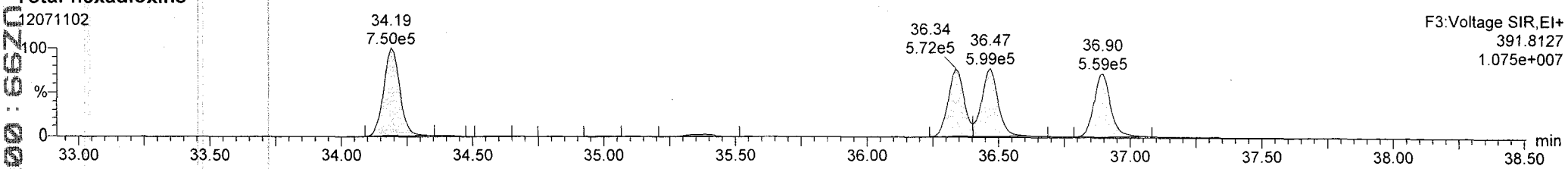
13C-123478-HxCDD



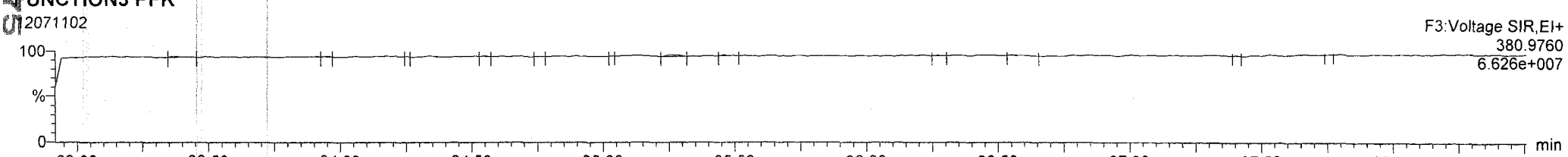
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

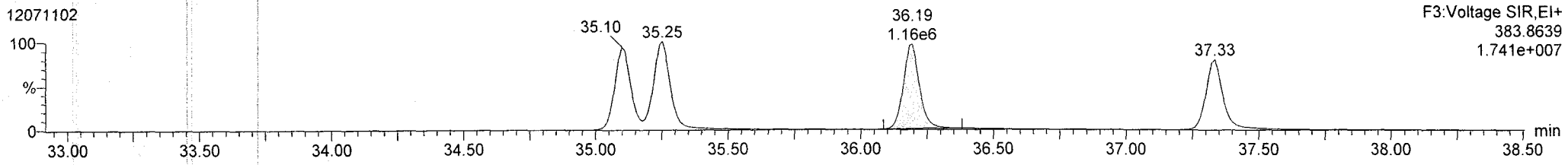


UZ99 : 00575

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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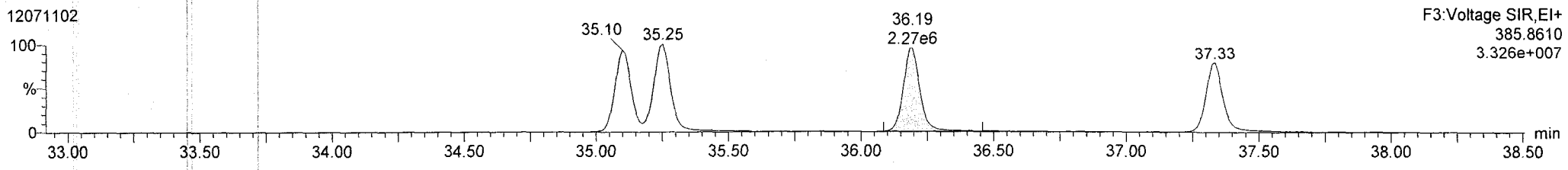
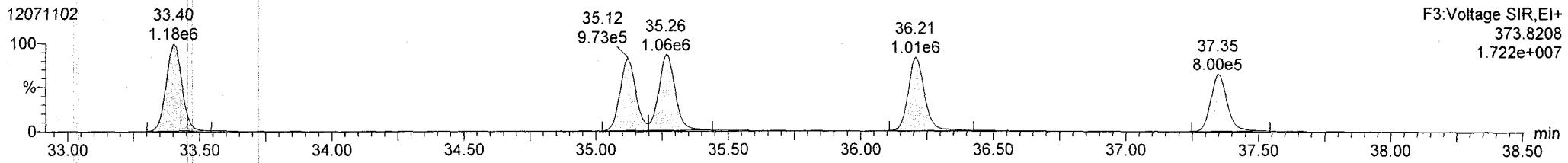
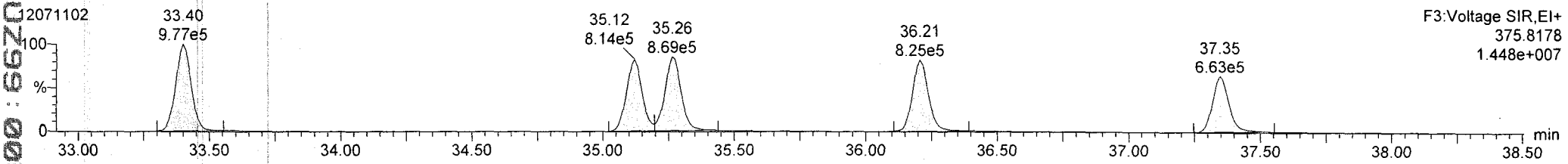


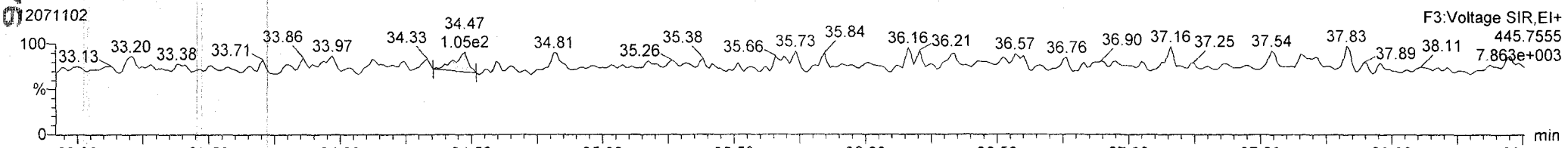
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



UZ99:00576

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
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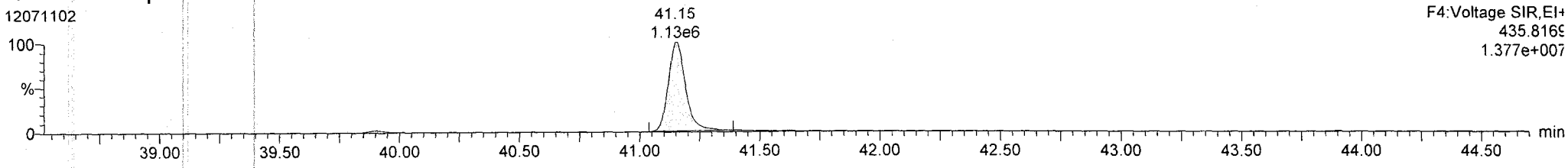
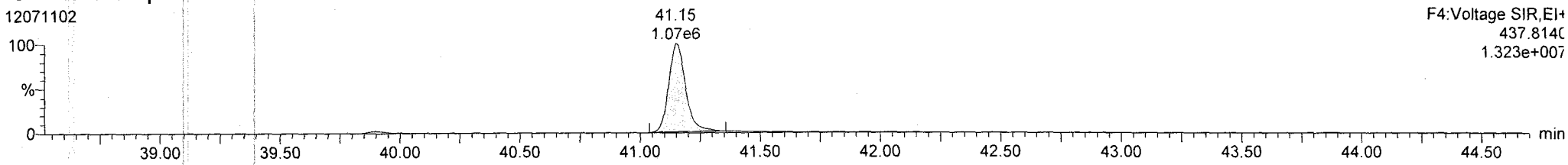
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

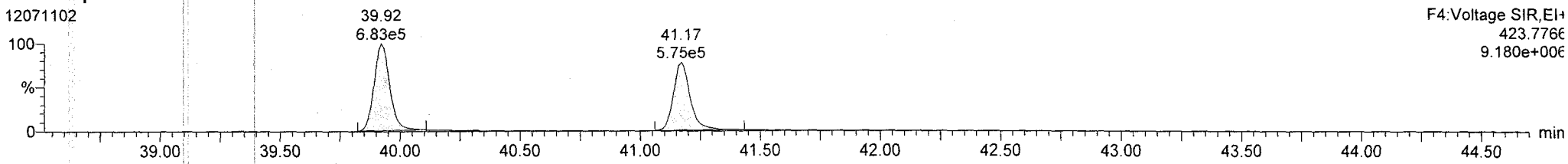
13C-1234678-HpCDD



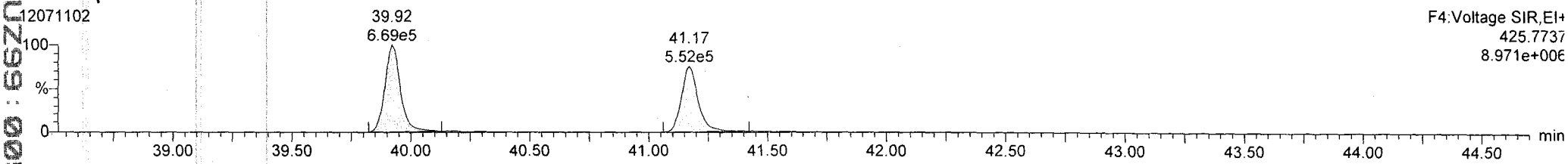
13C-1234678-HpCDD



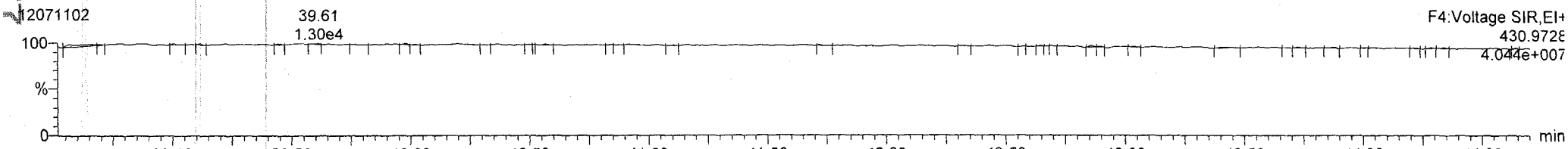
Total-heptadioxins



Total-heptadioxins



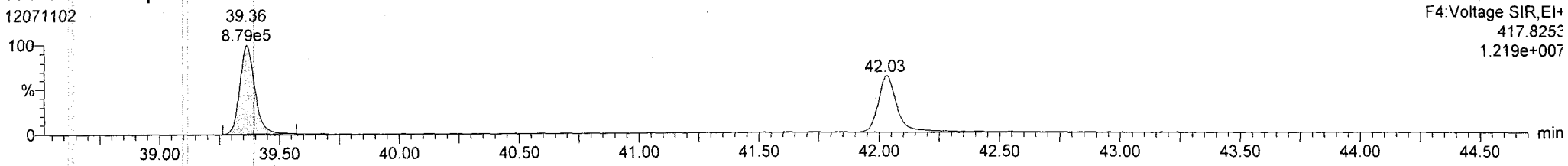
FUNCTION4 PFK



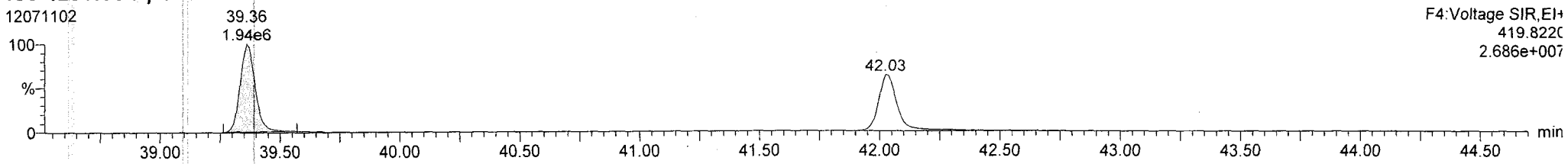
UZ99 : 00577

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

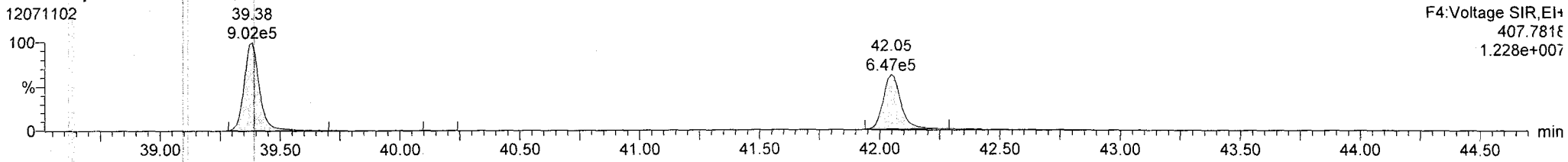
13C-1234678-HpCDF



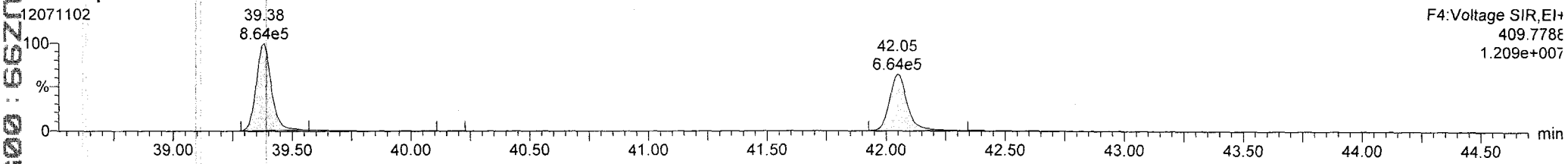
13C-1234678-HpCDF



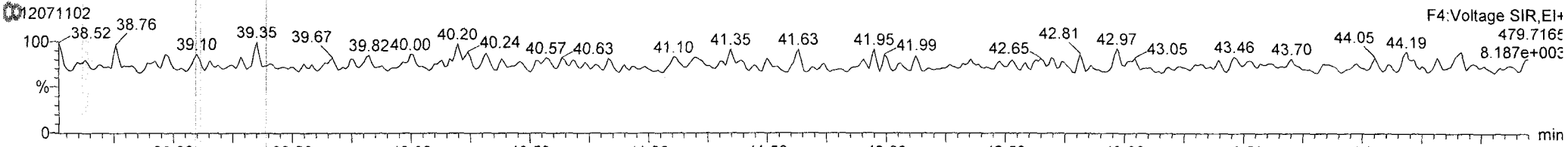
Total-heptafurans



Total-heptafurans



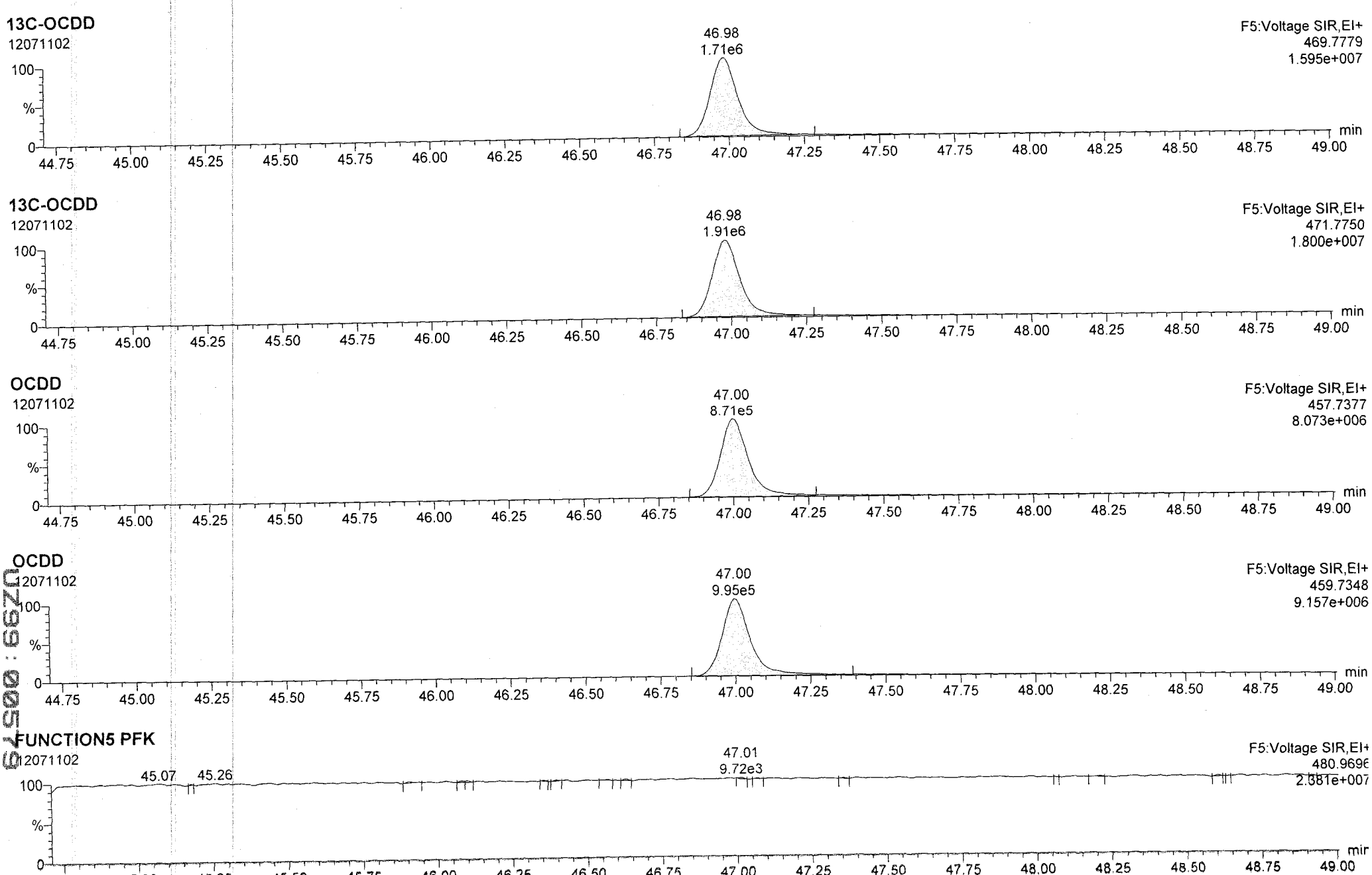
FUNCTION4 NCDPE



UZ99 : 005178

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

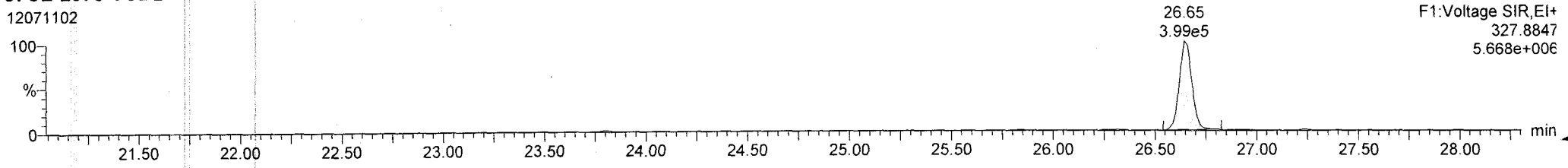
Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk



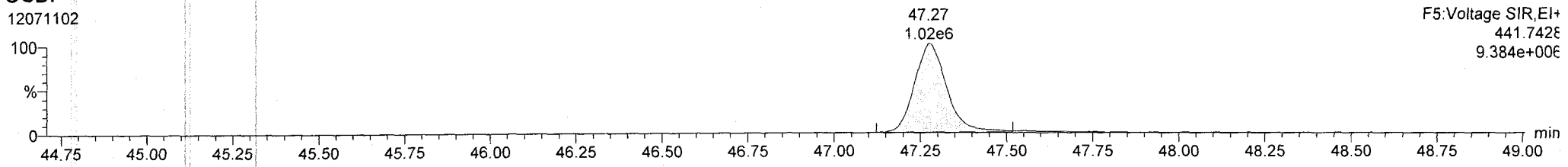
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPEN.qld
Last Altered: Wednesday, July 11, 2012 11:53:10 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 11:55:59 Pacific Daylight Time

Name: 12071102, Date: 11-Jul-2012, Time: 11:01:13, ID: CS3, Conditions: AUTOSPEC01, User: pk

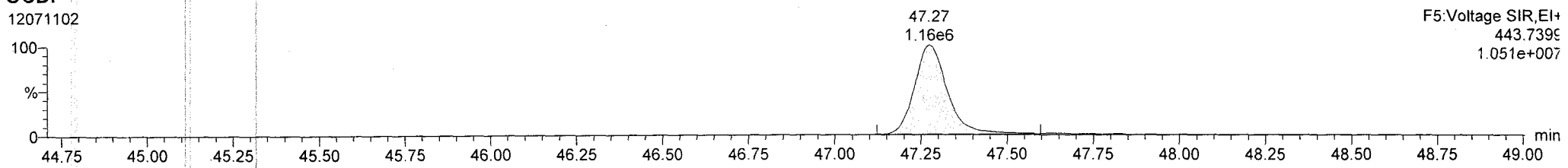
37CL-2378-TCDD



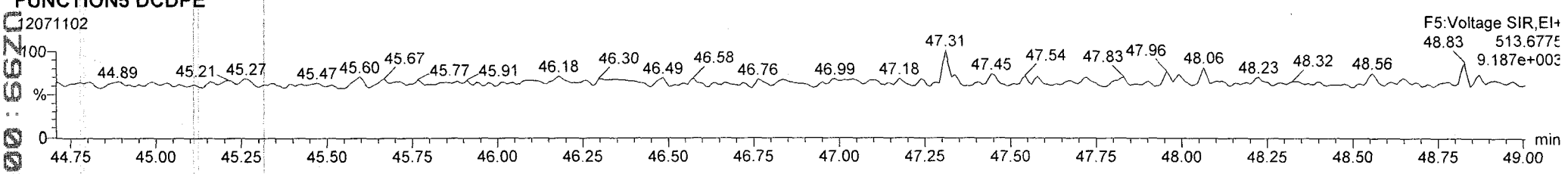
OCDF



OCDF



FUNCTION5 DCDPE



0299 : 00580

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:56:41 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071112, Date: 11-Jul-2012, Time: 20:58:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det...	%Rec	1° Ratio...	1° Rati...	S/N	1°...	pg	EMPC
1	1	2378-TCDF	303.9016	26.003	26.004	647336	647336	0.866	bb	102.8	0.79	0.77	1251.9	NO	10.278	10.278
2	2	12378-PeCDF	339.8597	30.124	30.123	2869886	2869886	0.907	bb	101.5	1.54	1.55	5808.3	NO	50.764	50.764
3	3	23478-PeCDF	339.8597	31.461	31.461	2964661	2964661	0.936	bb	102.9	1.54	1.55	5996.1	NO	51.428	51.428
4	4	123478-HxCDF	373.8208	35.111	35.100	2741001	2741001	1.082	bd	101.2	1.21	1.24	2065.7	NO	50.618	50.618
5	5	234678-HxCDF	373.8208	36.207	36.207	2920768	2920768	1.070	bd	101.5	1.21	1.24	2196.7	NO	50.746	50.746
6	6	123678-HxCDF	373.8208	35.265	35.264	2865375	2865375	1.048	db	101.6	1.22	1.24	2203.8	NO	50.815	50.815
7	7	123789-HxCDF	373.8208	37.347	37.336	2408873	2408873	1.020	bb	100.0	1.22	1.24	1808.7	NO	50.022	50.022
8	8	1234678-HpCDF	407.7818	39.375	39.384	2861786	2861786	1.214	bb	103.6	1.04	1.05	5406.1	NO	51.810	51.810
9	9	1234789-HpCDF	407.7818	42.049	42.040	2211291	2211291	1.254	bb	100.6	1.02	1.05	3627.4	NO	50.304	50.304
10	10	OCDF	441.7428	47.277	47.272	3593791	3593791	1.105	bb	104.7	0.89	0.89	4738.8	NO	104.668	104.668
11	11	2378-TCDD	319.8965	26.631	26.629	466734	466734	1.046	bb	101.5	0.79	0.77	1539.6	NO	10.150	10.150
12	12	12378-PeCDD	355.8546	31.713	31.701	1951722	1951722	0.973	bb	102.1	1.57	1.55	4290.4	NO	51.040	51.040
13	13	123478-HxCDD	389.8157	36.328	36.339	2063915	2063915	0.935	bd	103.6	1.25	1.24	4369.6	NO	51.815	51.815
14	14	123678-HxCDD	389.8157	36.459	36.459	2050208	2050208	0.878	db	106.4	1.25	1.24	4392.0	NO	53.219	53.219
15	15	123789-HxCDD	389.8157	36.887	36.849	2046437	2046437	0.839	bb	112.9	1.24	1.24	4267.7	NO	56.430	56.430
16	16	1234678-HpCDD	423.7766	41.173	41.163	1903460	1903460	0.974	bb	104.4	1.06	1.05	3223.9	NO	52.179	52.179
17	17	OCDD	457.7377	46.999	47.004	3148834	3148834	0.950	bb	106.7	0.90	0.89	4629.0	NO	106.686	106.686
18	18	13C-2378-TCDF	315.9419	25.989	25.989	7271852		1.484	bb	105.6	0.78	0.77	9016.7	NO	105.568	
19	19	13C-12378-PeCDF	351.9000	30.102	30.116	6233347		1.048	bb	128.2	1.56	1.55	9510.4	NO	128.166	
20	20	13C-23478-PeCDF	351.9000	31.439	31.453	6159731		1.003	bb	132.3	1.57	1.55	9225.6	NO	132.294	
21	21	13C-123478-HxCDF	383.8639	35.089	35.089	5005195		1.186	bd	97.1	0.52	0.51	4151.4	NO	97.145	
22	22	13C-123678-HxCDF	383.8639	35.243	35.243	5378789		1.315	db	94.1	0.53	0.51	4466.3	NO	94.120	
23	23	13C-234678-HxCDF	383.8639	36.186	36.174	5380100		1.223	bb	101.2	0.52	0.51	4507.5	NO	101.206	
24	24	13C-123789-HxCDF	383.8639	37.325	37.314	4720782		1.056	bb	102.8	0.52	0.51	3966.7	NO	102.825	
25	25	13C-1234678-HpCDF	417.8253	39.364	39.364	4548259		1.011	bb	103.5	0.45	0.44	4899.2	NO	103.482	
26	26	13C-1234789-HpCDF	417.8253	42.028	42.027	3505275		0.741	bb	108.9	0.45	0.44	3244.9	NO	108.922	
27	27	13C-1234-TCDD	331.9368	25.809	25.839	4640423		1.000	bb	100.0	0.79	0.77	7936.0	NO	100.000	
28	28	13C-2378-TCDD	331.9368	26.616	26.616	4396922		0.956	bb	99.1	0.78	0.77	7327.0	NO	99.075	
29	29	13C-12378-PeCDD	367.8949	31.691	31.705	3928892		0.663	bb	127.6	1.58	1.55	18389.3	NO	127.615	
30	30	13C-123478-HxCDD	401.8559	36.317	36.317	4258289		1.024	bd	95.7	1.26	1.24	7829.9	NO	95.702	
31	31	13C-123678-HxCDD	401.8559	36.449	36.438	4388875		1.113	db	90.8	1.25	1.24	8088.0	NO	90.772	
32	32	13C-1234678-HpCDD	435.8169	41.151	41.151	3744161		0.815	bb	105.7	1.05	1.05	5535.0	NO	105.701	
33	33	13C-OCDD	469.7779	46.990	47.000	6213210		0.717	bb	99.7	0.89	0.89	4694.8	NO	199.387	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:56:41 Pacific Daylight Time

Name: 12071112, Date: 11-Jul-2012, Time: 20:58:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det....	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	36.865	36.909	4345637		1.000	bb	100.0	1.24	1.24	7773.2	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.030			0.866							31.831	32.002
36	36	Total-penta1	339.8597		27.840										56.545	56.545
37	37	Total-pentafurans	339.8597		30.410			0.921							154.871	154.896
38	38	Total-hexafurans	373.8208		35.390			1.055							258.628	258.716
39	39	Total-heptafurans	407.7818		40.740			1.234							102.114	102.270
40	40	Total-Furans	303.9016		0.000			1.050							708.656	709.096
41	41	Total-tetradioxins	319.8965		25.540			1.046							56.829	56.874
42	42	Total-pentadioxins	355.8546		30.580			0.973							176.869	177.115
43	43	Total-hexadioxins	389.8157		35.570			0.884							226.997	228.203
44	44	Total-heptadioxins	423.7766		40.560			0.974							113.957	113.957
45	45	Total-Dioxins	319.8965		0.000			0.942							681.337	682.835
46	46	Total-TEQ	319.8965		0.000										1389.994	1391.9...
47	47	37CL-2378-TCDD	327.8847	26.631	26.609	501811		1.037		104.3			3749.7		10.426	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0.000											

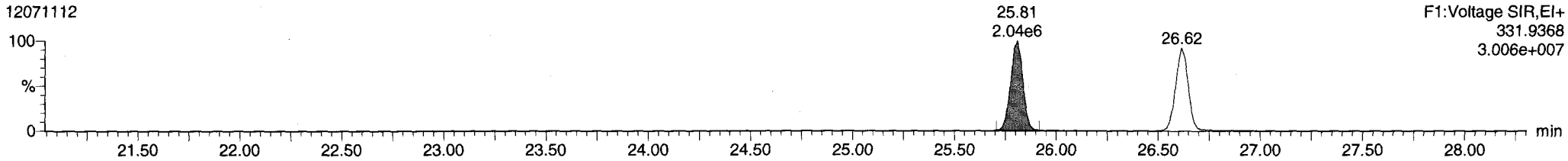
299:00582

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:56:41 Pacific Daylight Time

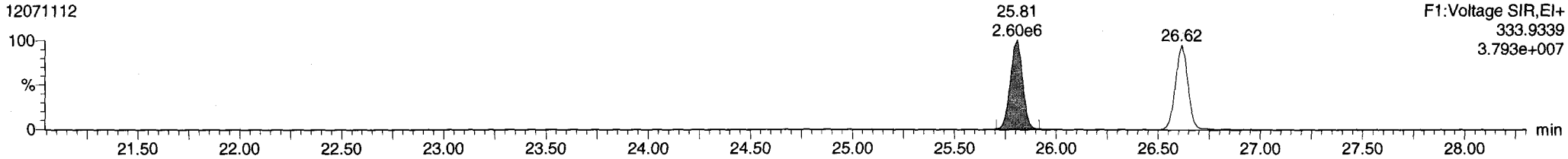
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071112, Date: 11-Jul-2012, Time: 20:58:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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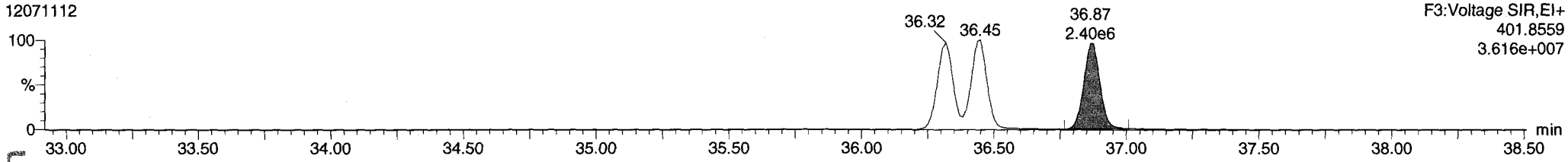

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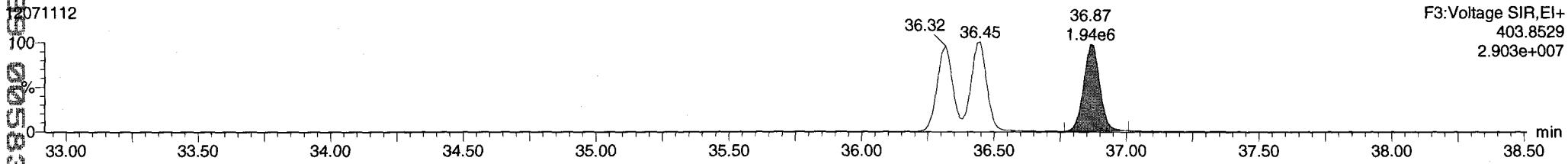
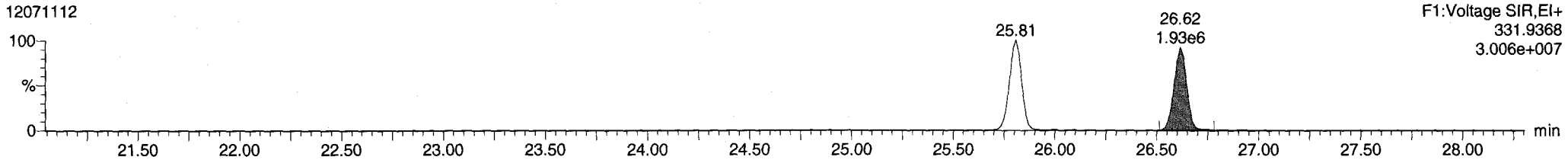


Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:56:41 Pacific Daylight Time

Name: 12071112, Date: 11-Jul-2012, Time: 20:58:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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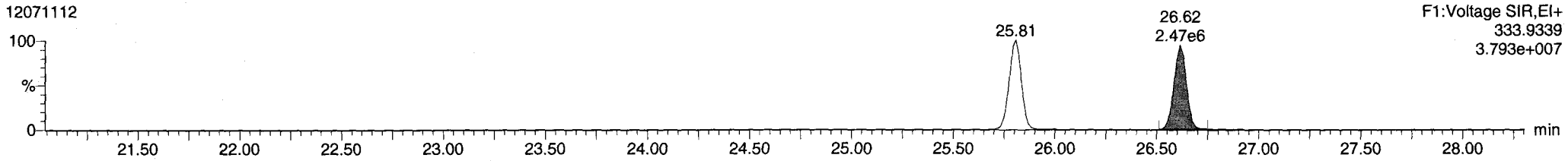
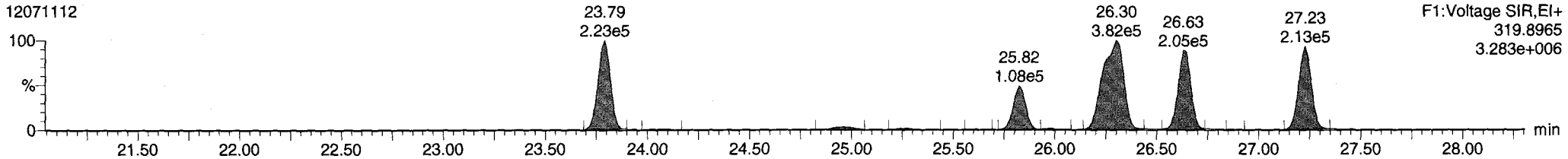
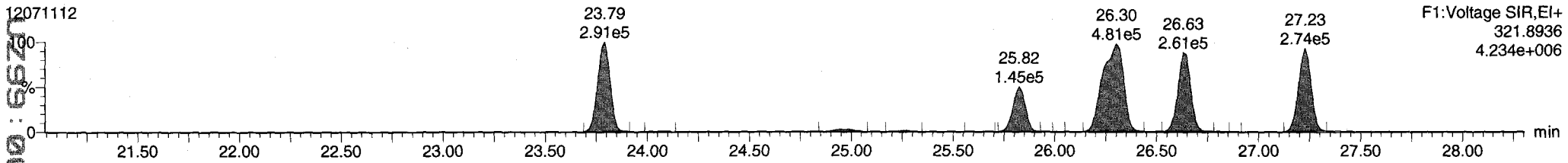


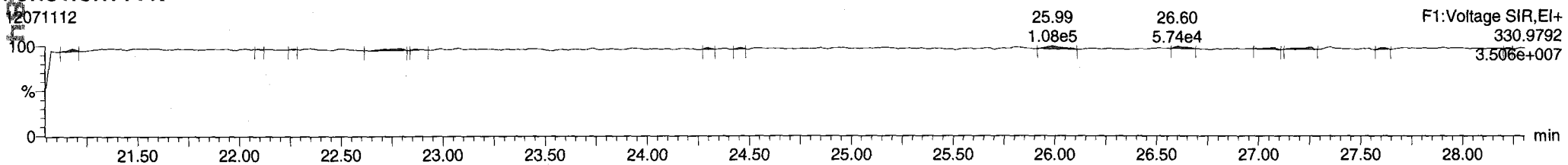
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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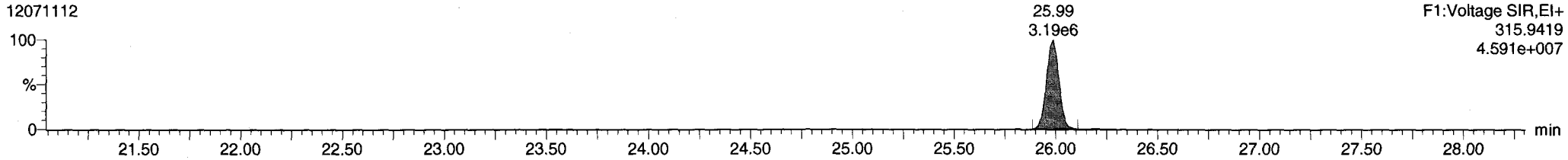
13C-2378-TCDF



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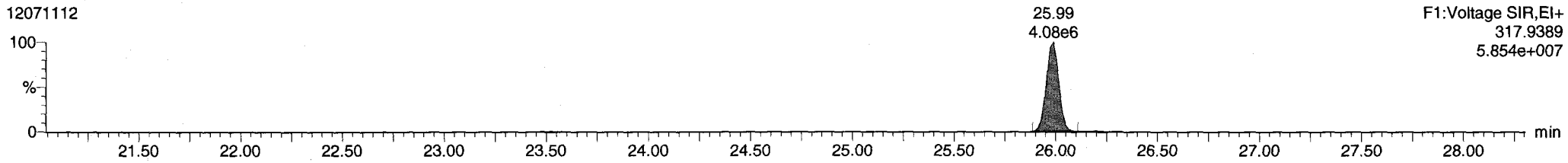
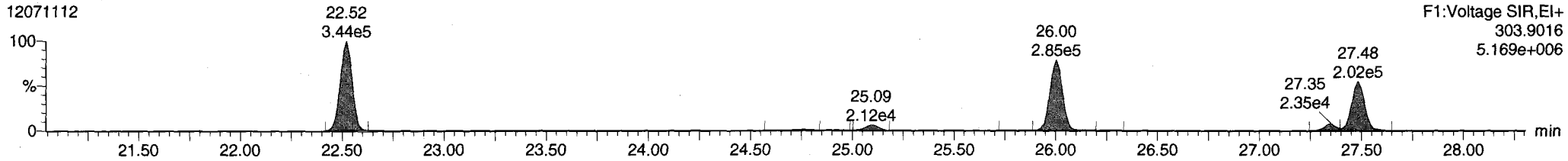


Total-tetrafurans



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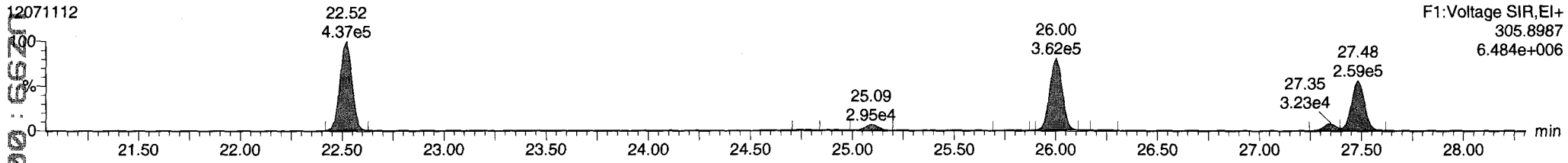
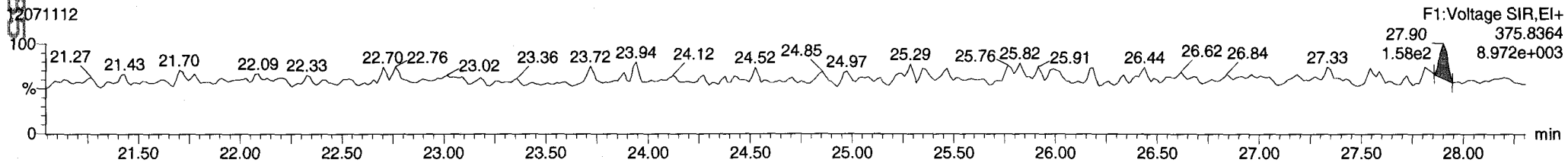


FUNCTION1 HXCDPE



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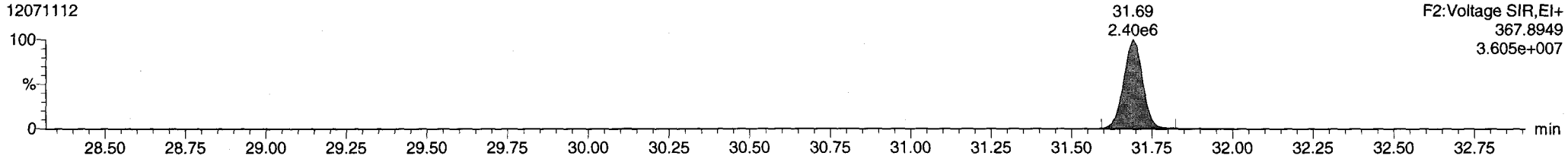
13C-12378-PeCDD



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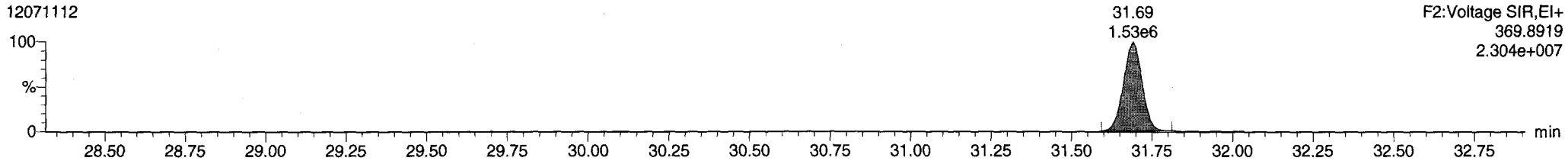
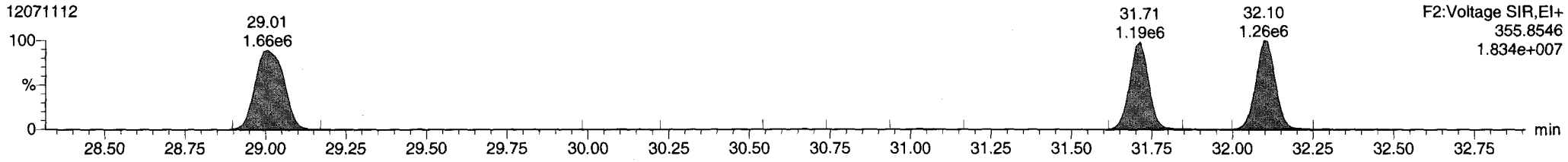
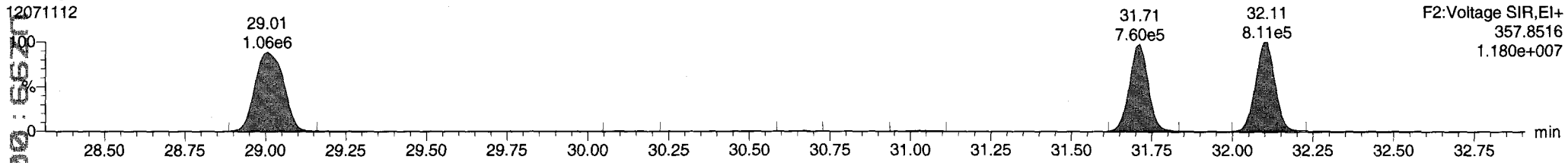


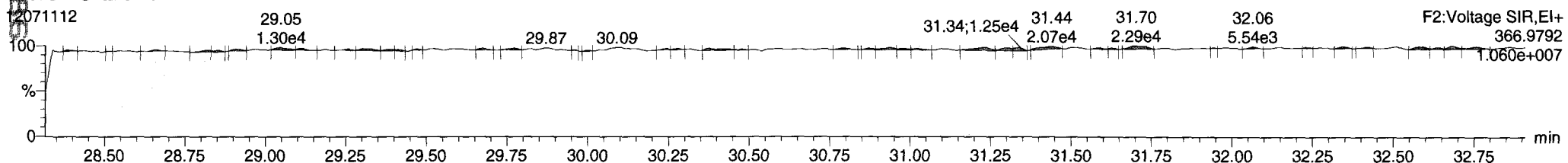
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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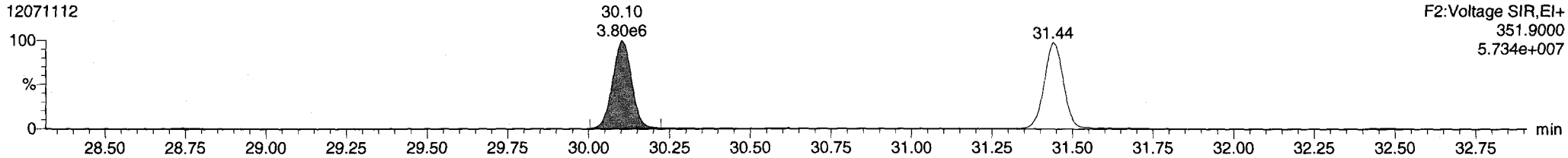
13C-12378-PeCDF



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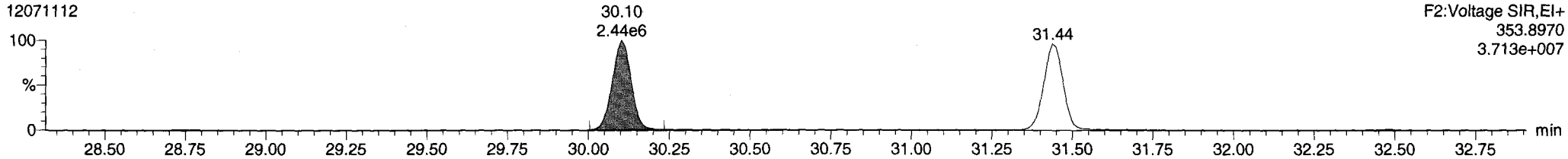
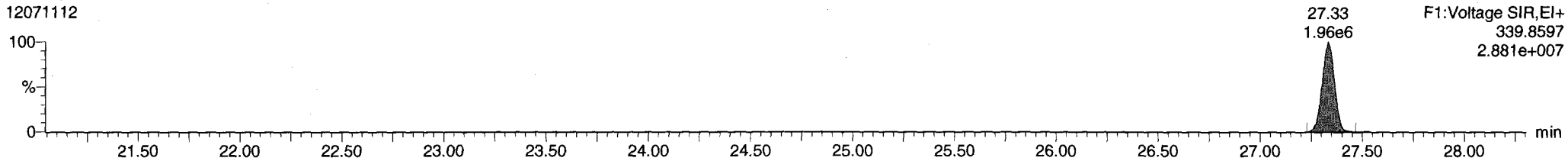
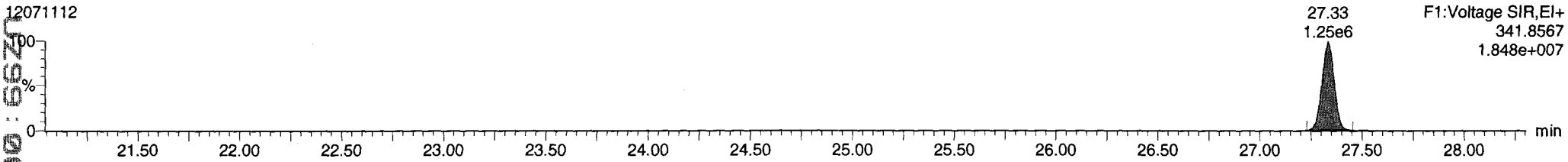


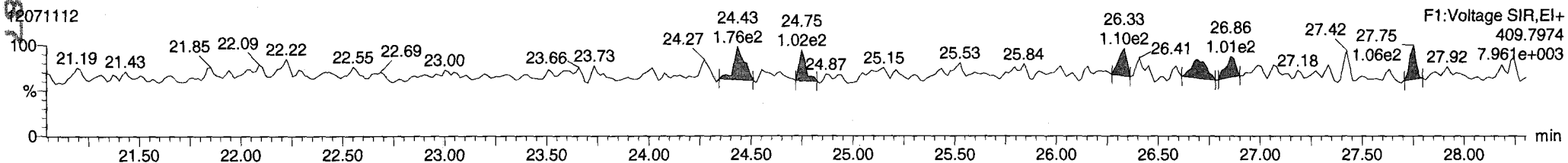
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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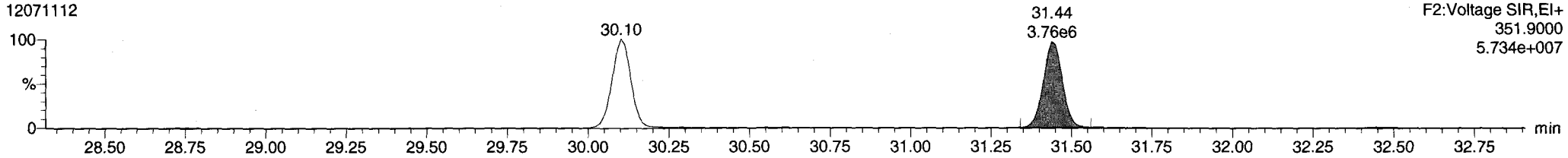
13C-23478-PeCDF



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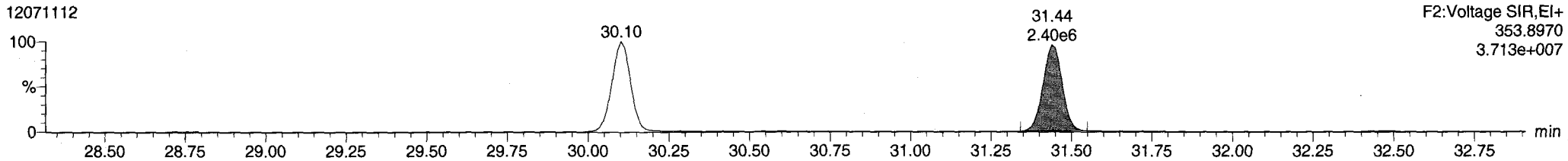
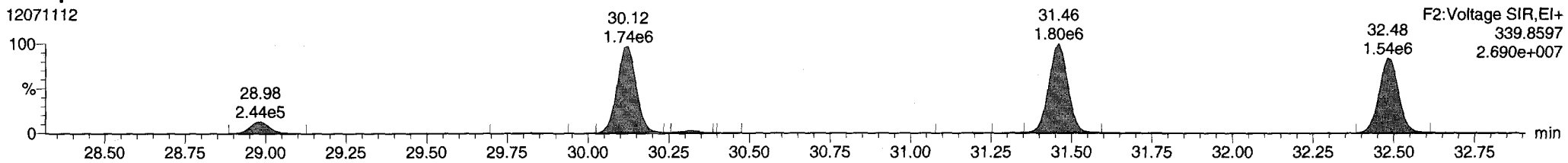
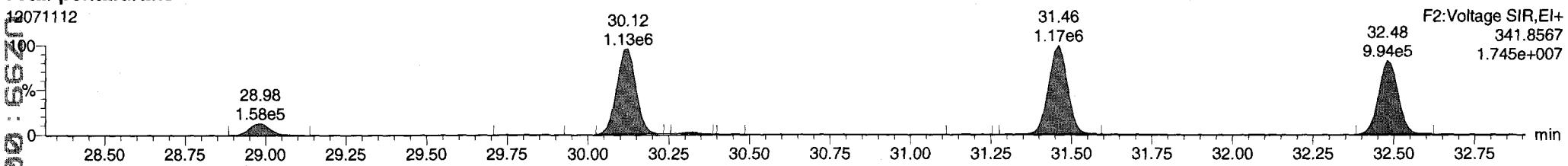


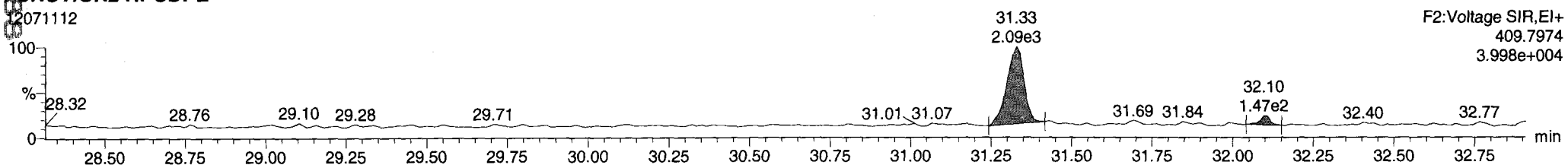
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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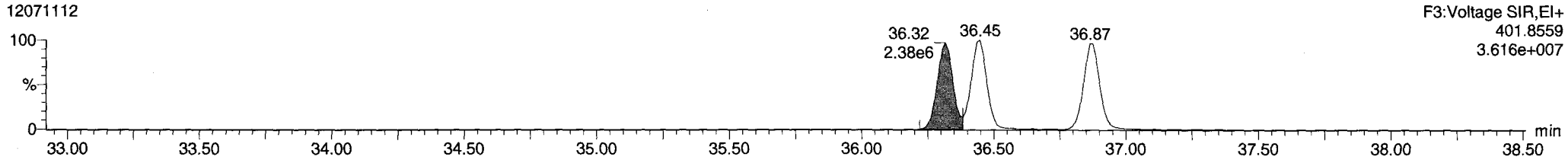
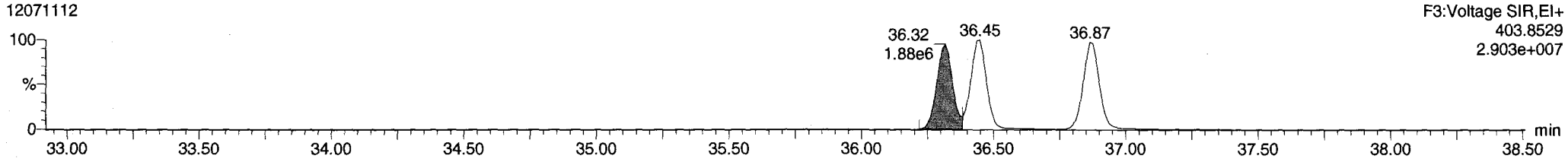
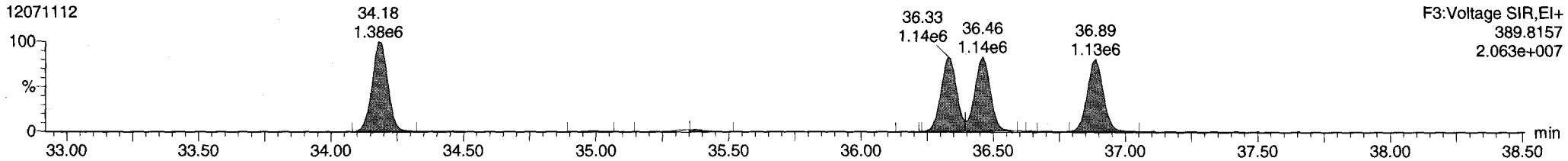
13C-123478-HxCDD



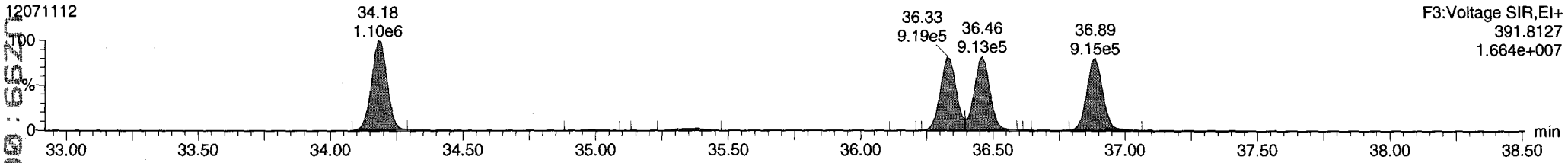
13C-123478-HxCDD



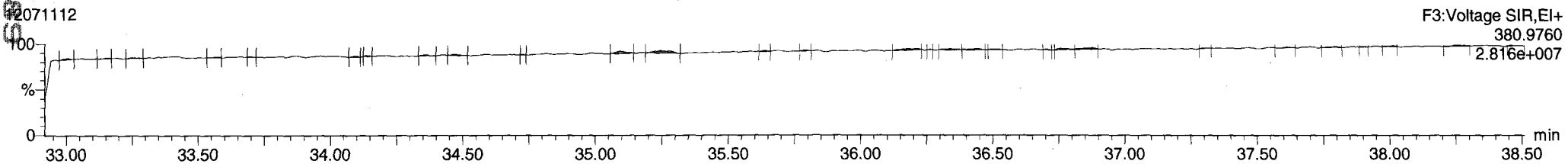
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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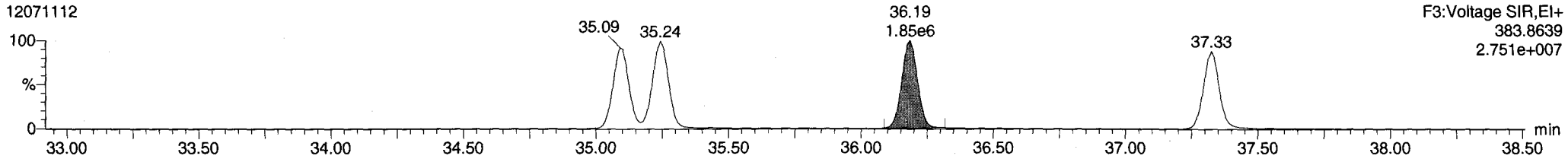
13C-234678-HxCDF



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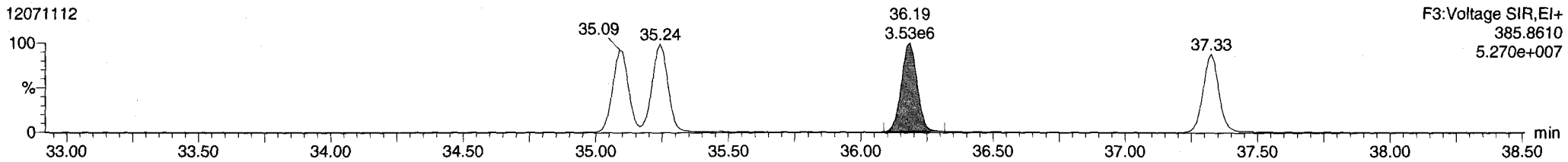
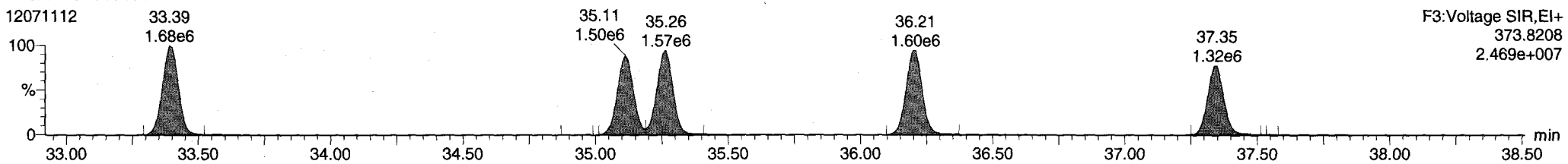
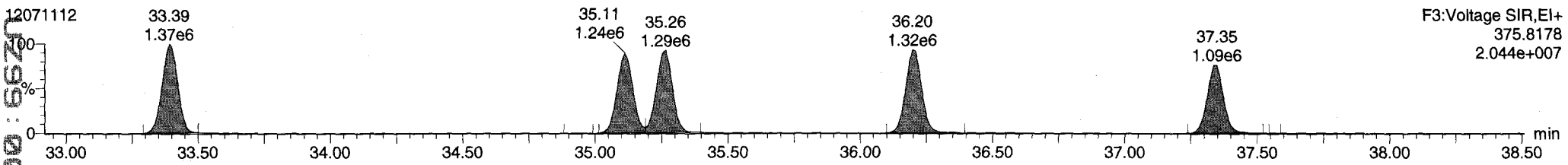


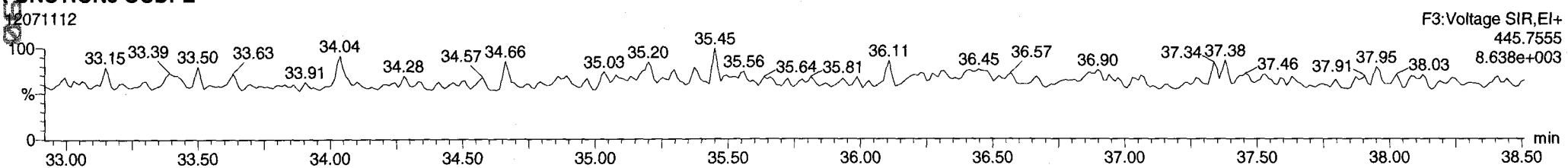
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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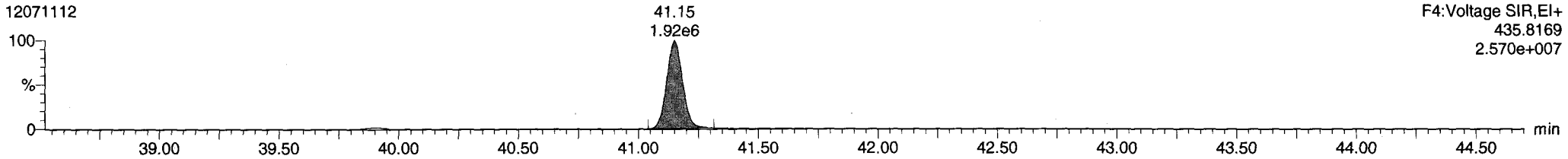
13C-1234678-HpCDD



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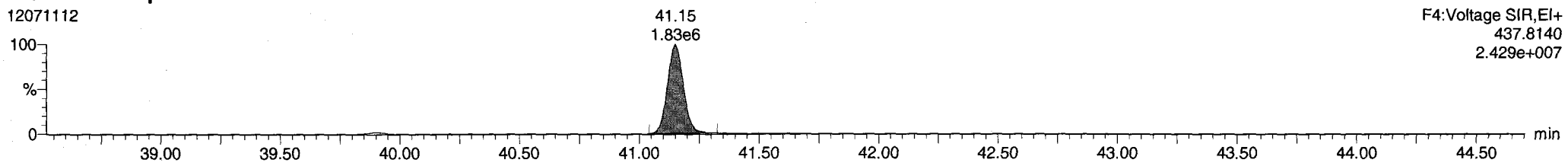
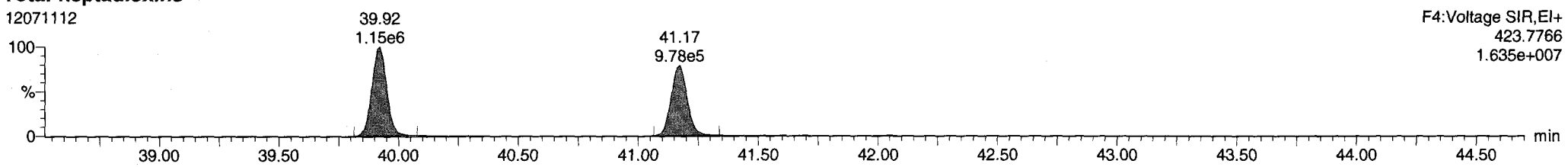
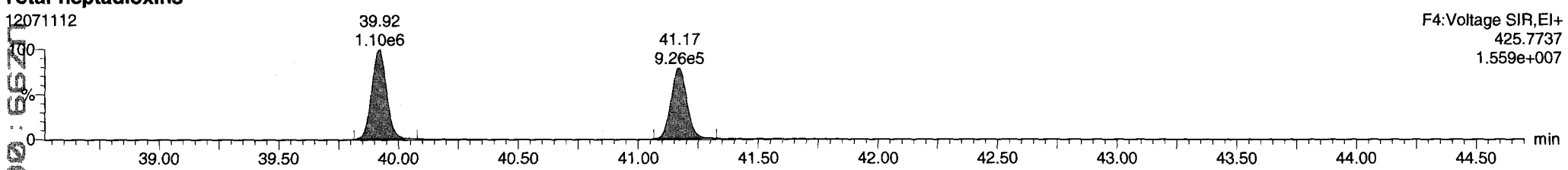


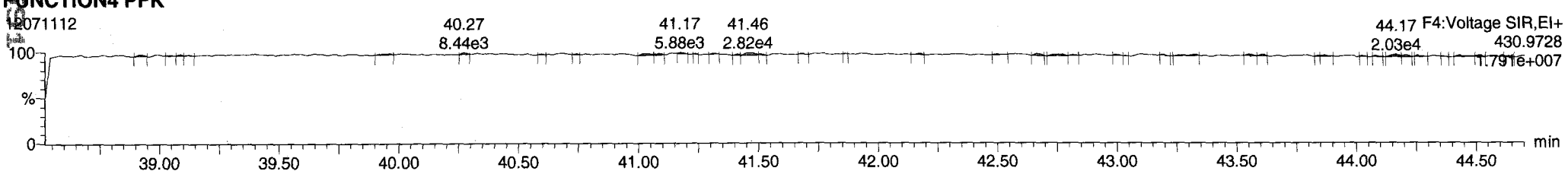
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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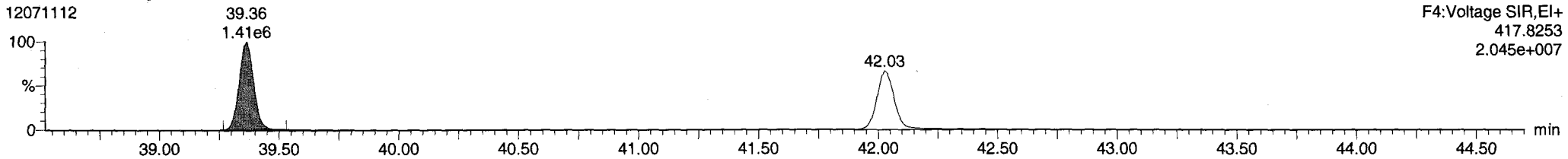
13C-1234678-HpCDF



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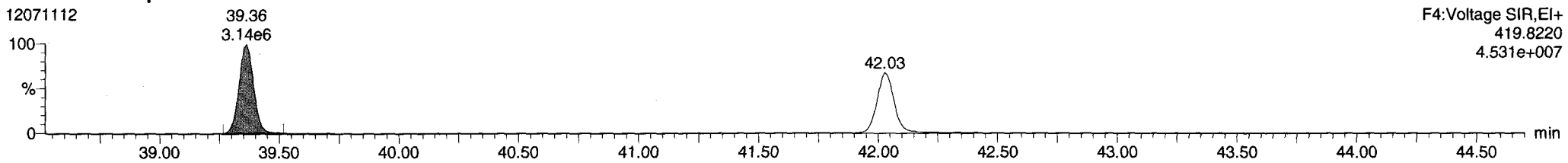
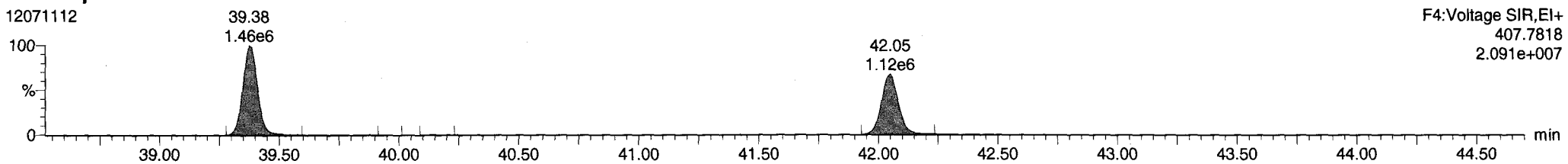
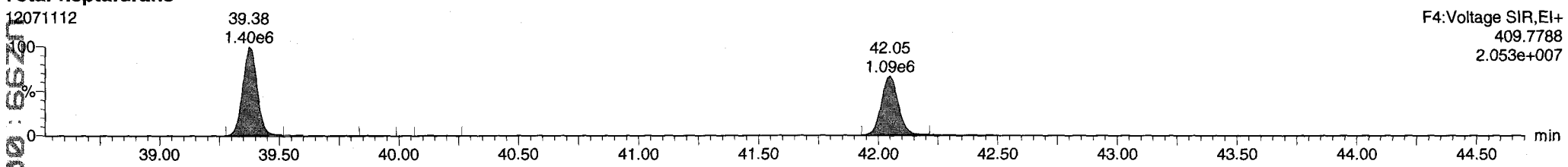


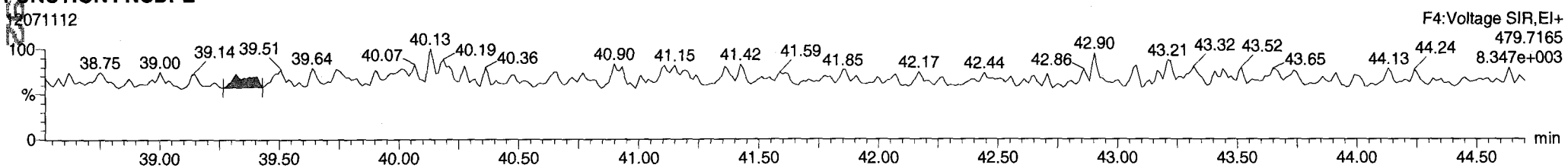
Total-heptafurans



Total-heptafurans



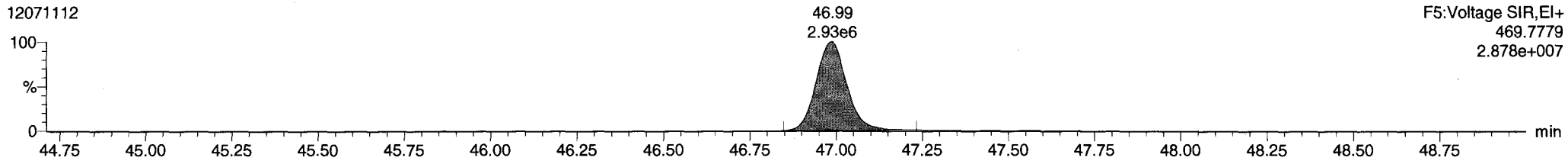
FUNCTION4 NCDPE



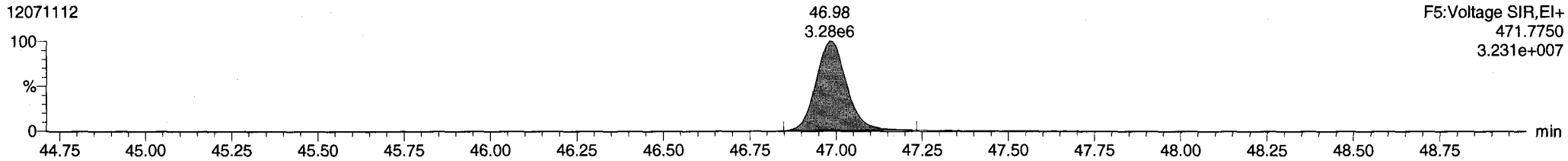
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:56:41 Pacific Daylight Time

Name: 12071112, Date: 11-Jul-2012, Time: 20:58:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

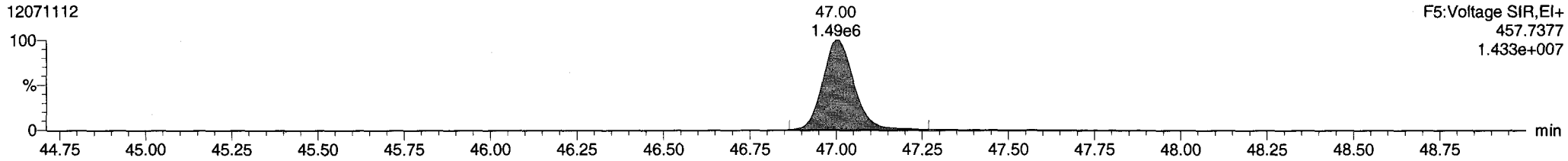
13C-OCDD



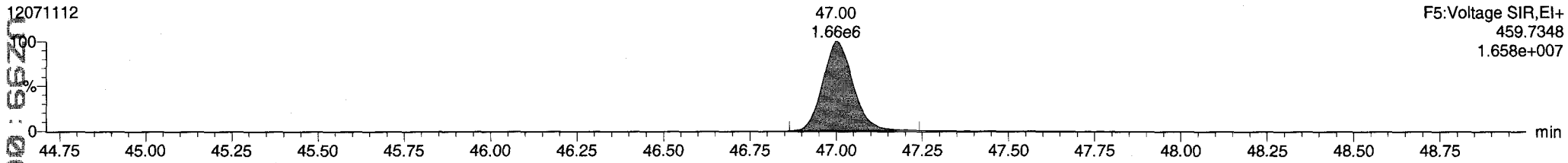
13C-OCDD



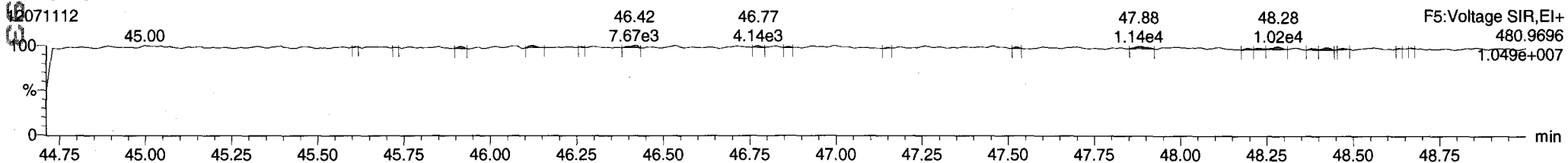
OCDD



OCDD



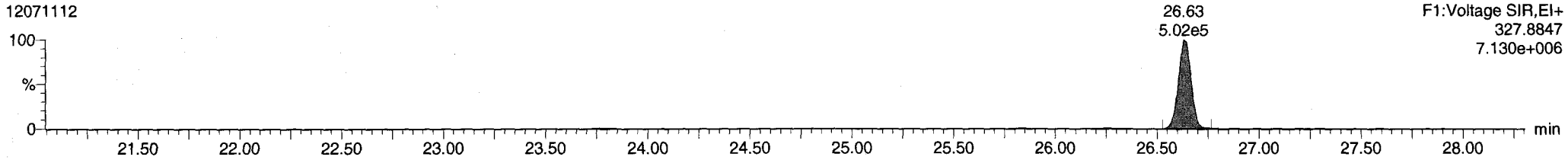
FUNCTION5 PFK



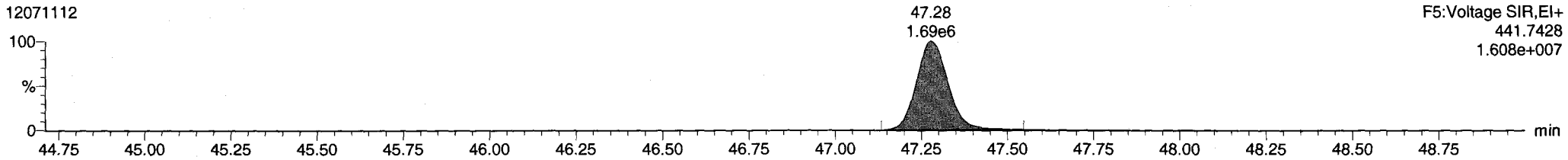
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:56:41 Pacific Daylight Time

Name: 12071112, Date: 11-Jul-2012, Time: 20:58:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

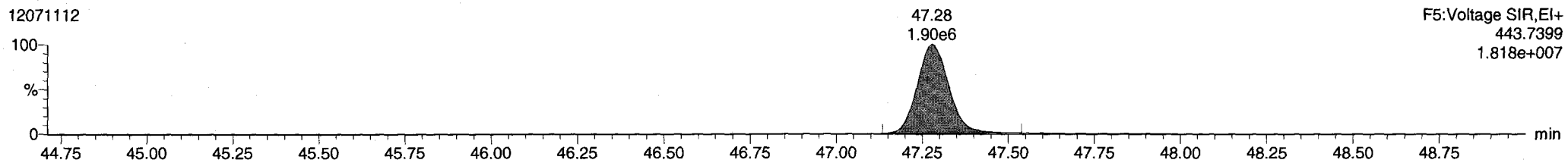
37CL-2378-TCDD



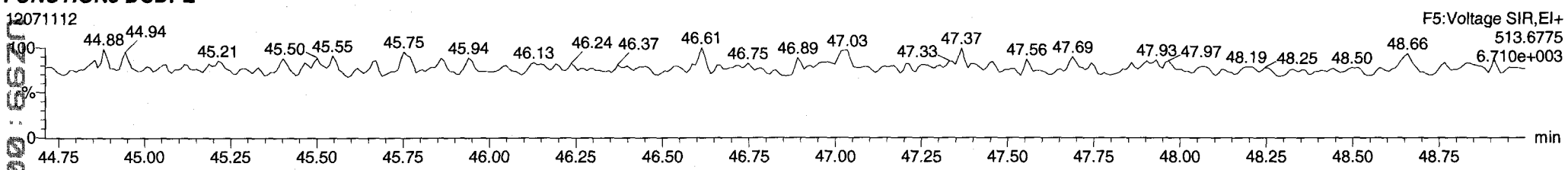
OCDF



OCDF



FUNCTION5 DCDPE



4650 : 0 6 2 7

Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UZ99

Analytical Chemists and Consultants

HR-GC/MS Analyst Notes / Corrective Action Log

ARI Project ID: UZ99 Client ID: Ander

ARI SOP: **806S** (Dioxins)

Parameter(s): 1613

Instrument: **AutoSpec01**

Curve Date: 5/3/12 Analysis Start Date: 7/11/12

Internal Standard Meets Criteria?	YES / NO	Method Blank in Control?	YES / NO
Extraction Std Recovery in Control?	YES / NO	IPR / OPR Recovery in Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes /NO
Special Analysis Criteria Met?	YES / NO / NA		

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

- Extracts received 7/11/12.
- closing ccal had PF label high by 2%. ccal Not required by method.

Additional Details on Reverse: Yes / No

Analyst: [signature] **Date:** 7/12/12

Reviewer: [signature] **Date:** 7/12

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 7/11/12 Analysis: Dioxins Analyst: jh

GC Program: 8290C Column No: 985167 Column Type: RTX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): 10L8290B Detector Voltage: 350

Resolution Check Files: 10:54, 21:58 Curve Date: 5/3/12

IS/SS	Ical/Ccal	LCS/ICV
I7436	I7214 19972	

#	Acq.Date	Acq.Time	Name	ID	Pre...	RT	IS AREA	Comments
1	11-Jul-12	11:01:13	12071102	CS3	25.8	25.8	3904504	
2	11-Jul-12	11:55:13	12071103	TETRA RES	25.8			
3	11-Jul-12	13:58:31	12071104	UZ99MBS	25.8	25.8	3710155	
4	11-Jul-12	14:54:45	12071105	UZ99OPR	25.8	25.8	2897482	
5	11-Jul-12	15:44:50	12071106	UZ99A	25.8	25.8	3433029	
6	11-Jul-12	16:37:06	12071107	VA45A	25.8	25.8	3742697	
7	11-Jul-12	17:29:15	12071108	VA45B	25.8	25.8	4361830	
8	11-Jul-12	18:21:34	12071109	VB00A	25.8	25.8	4459324	
9	11-Jul-12	19:13:43	12071110	VB03A	25.8	25.8	4972886	
10	11-Jul-12	20:05:58	12071111	VB03B	25.8	25.8	3906904	
11	11-Jul-12	20:58:05	12071112	CS3	25.8	25.8	4640423	
12	11-Jul-12	21:58:32	12071113	VB16I	25.8	25.8	4174010	
13	11-Jul-12	22:54:00	12071114	VB16L	25.8	25.8	4468594	
14	11-Jul-12	23:45:03	12071115	VB33A	25.8	25.8	3553831	
15	12-Jul-12	00:37:31	12071116	UZ44MB	25.8	25.8	3446672	
16	12-Jul-12	01:29:40	12071117	UZ44OPR	25.8	25.8	3643186	
17	12-Jul-12	02:21:52	12071118	UZ44A	25.8	25.8	4087724	
18	12-Jul-12	03:14:01	12071119	UZ44B	25.8	25.8	4455154	
19	12-Jul-12	04:06:15	12071120	UZ44C	25.8	25.8	3920010	
20	12-Jul-12	04:58:22	12071121	UZ44D	25.8	25.8	3462481	
21	12-Jul-12	05:50:35	12071122	CS3	25.8	25.8	3880592	

jh 7/12/12

PF out high in middle ccal. rerun 2nd bracket.

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Quantify Audit Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:35 Pacific Daylight Time

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\120711MB.qld'	
Pre modification peak	Sample:12071104, Compound:PF, RT:30.123	1
Peak modified	Sample:12071104, Compound:PF, RT:30.123	1
Peak deleted	Sample:12071104, Compound:HF, RT:35.275	1
Peak deleted	Sample:12071104, Compound:HF, RT:35.264	1
Peak deleted	Sample:12071104, Compound:HF, RT:35.242	1
Peak added	Sample:12071104, Compound:HF, RT:35.242	1
Peak added	Sample:12071104, Compound:HF, RT:35.264	1
Peak added	Sample:12071104, Compound:HF, RT:35.242	1
Peak added	Sample:12071104, Compound:HF, RT:35.264	1
Pre modification peak	Sample:12071104, Compound:HPF, RT:39.373	1
Peak modified	Sample:12071104, Compound:HPF, RT:39.373	1
Pre modification peak	Sample:12071104, Compound:HPF, RT:39.373	1
Peak modified	Sample:12071104, Compound:HPF, RT:39.373	1
Peak modified	Sample:12071104, Compound:HF, RT:35.242	1
Pre modification peak	Sample:12071104, Compound:HPD, RT:41.182	1
Peak modified	Sample:12071104, Compound:HPD, RT:41.182	1
Pre modification peak	Sample:12071104, Compound:HPD, RT:41.171	1
Peak modified	Sample:12071104, Compound:HPD, RT:41.171	1
Pre modification peak	Sample:12071104, Compound:OD, RT:46.997	1
Peak modified	Sample:12071104, Compound:OD, RT:46.997	1
Peak deleted	Sample:12071104, Compound:PF, RT:28.863	1
Peak added	Sample:12071104, Compound:HF, RT:36.206	1
Peak added	Sample:12071104, Compound:HF, RT:36.206	1
Pre modification peak	Sample:12071104, Compound:HD, RT:35.231	1
Peak modified	Sample:12071104, Compound:HD, RT:35.231	1
Pre modification peak	Sample:12071104, Compound:HD, RT:36.184	1
Peak modified	Sample:12071104, Compound:HD, RT:36.184	1
Pre modification peak	Sample:12071104, Compound:HPD, RT:39.910	1
Peak modified	Sample:12071104, Compound:HPD, RT:39.910	1
Pre modification peak	Sample:12071104, Compound:HPD, RT:39.921	1
Peak modified	Sample:12071104, Compound:HPD, RT:39.921	1
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\120711MB.qld'	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

pk 7/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Conc.	RRF M.	1°.Det.	%Rec	1° Ratio	2° Ratio	S/N	Id	pg	EMPC
1	1	2378-TCDF	303.9016	26.018	26.019	0	533	0.866	bb		0.55	0.77	5.0	YES	0.000	0.011
2	2	12378-PeCDF	339.8597	30.123	30.133	0	485	0.907	bb		2.51	1.55	8.4	YES	0.000	0.013
3	3	23478-PeCDF	339.8597		31.471			0.936				1.55				
4	4	123478-HxCDF	373.8208		35.110			1.082	MM		0.00	1.24		YES		
5	5	234678-HxCDF	373.8208	36.206	36.217	0	423	1.070	MM		0.98	1.24	5.7	YES	0.000	0.014
6	6	123678-HxCDF	373.8208	35.264	35.274	0	497	1.048	MM		1.00	1.24	6.3	YES	0.000	0.014
7	7	123789-HxCDF	373.8208	37.346	37.346	0	268	1.020	bb		1.54	1.24	3.5	YES	0.000	0.011
8	8	1234678-HpCDF	407.7818	39.373	39.382	0	569	1.214	MM		1.32	1.05	6.5	YES	0.000	0.022
9	9	1234789-HpCDF	407.7818		42.049			1.254				1.05				
10	10	OCDF	441.7428		47.261			1.105				0.89				
11	11	2378-TCDD	319.8965	26.645	26.644	0	708	1.046	bd		0.18	0.77	5.5	YES	0.000	0.022
12	12	12378-PeCDD	355.8546		31.711			0.973				1.55				
13	13	123478-HxCDD	389.8157		36.348			0.935				1.24				
14	14	123678-HxCDD	389.8157		36.458			0.878				1.24				
15	15	123789-HxCDD	389.8157		36.848			0.839				1.24				
16	16	1234678-HpCDD	423.7766	41.171	41.161	0	652	0.974	MM		2.57	1.05	14.7	YES	0.000	0.037
17	17	OCDD	457.7377	46.988	46.993	8887	8887	0.950	MM		0.92	0.89	70.5	NO	0.771	0.771
18	18	13C-2378-TCDF	315.9419	26.003	26.003	5730534		1.484	bb	104.1	0.78	0.77	12191.5	NO	104.051	
19	19	13C-12378-PeCDF	351.9000	30.112	30.130	4024374		1.048	bb	103.5	1.57	1.55	8758.4	NO	103.494	
20	20	13C-23478-PeCDF	351.9000	31.449	31.468	3773710		1.003	bb	101.4	1.57	1.55	8339.8	NO	101.370	
21	21	13C-123478-HxCDF	383.8639	35.099	35.099	2750056		1.186	bd	94.4	0.51	0.51	3851.1	NO	94.382	
22	22	13C-123678-HxCDF	383.8639	35.252	35.252	3269487		1.315	dd	101.2	0.51	0.51	4429.4	NO	101.164	
23	23	13C-234678-HxCDF	383.8639	36.195	36.184	2731309		1.223	bb	90.9	0.51	0.51	3688.9	NO	90.852	
24	24	13C-123789-HxCDF	383.8639	37.335	37.324	2400417		1.056	bb	92.5	0.51	0.51	3129.1	NO	92.452	
25	25	13C-1234678-HpCDF	417.8253	39.362	39.373	2130352		1.011	bb	85.7	0.45	0.44	3040.6	NO	85.707	
26	26	13C-1234789-HpCDF	417.8253	42.036	42.037	1620107		0.741	bd	89.0	0.43	0.44	1856.1	NO	89.019	
27	27	13C-1234-TCDD	331.9368	25.824	25.839	3710155		1.000	bb	100.0	0.79	0.77	5387.8	NO	100.000	
28	28	13C-2378-TCDD	331.9368	26.630	26.631	3080087		0.956	bb	86.8	0.77	0.77	4317.1	NO	86.805	
29	29	13C-12378-PeCDD	367.8949	31.701	31.720	2397952		0.663	bb	97.4	1.59	1.55	9283.7	NO	97.418	
30	30	13C-123478-HxCDD	401.8559	36.326	36.326	2289712		1.024	bd	91.0	1.29	1.24	6148.7	NO	90.994	
31	31	13C-123678-HxCDD	401.8559	36.447	36.447	2515992		1.113	db	92.0	1.26	1.24	6334.4	NO	92.014	
32	32	13C-1234678-HpCDD	435.8169	41.149	41.160	1792227		0.815	bb	89.5	1.08	1.05	2835.3	NO	89.467	
33	33	13C-OCDD	469.7779	46.979	47.009	2427499		0.717	bb	68.9	0.92	0.89	2059.8	NO	137.748	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred RT	Abs Resp	Abs Corr	RRF M	1° Det	%Rec	1° Ratio	1° Rat	S/N	1°	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	36.875	36.909	2457580		1.000	bb	100.0	1.23	1.24	5987.2	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.030			0.866							0.000	0.021
36	36	Total-penta1	339.8597		27.840											
37	37	Total-pentafurans	339.8597		30.410			0.921							0.000	0.013
38	38	Total-hexafurans	373.8208		35.390			1.055							0.000	0.040
39	39	Total-heptafurans	407.7818		40.740			1.234							0.000	0.022
40	40	Total-Furans	303.9016		0.000			1.050							0.000	0.096
41	41	Total-tetradioxins	319.8965		25.540			1.046							0.000	0.052
42	42	Total-pentadioxins	355.8546		30.580			0.973								
43	43	Total-hexadioxins	389.8157		35.570			0.884							0.000	0.101
44	44	Total-heptadioxins	423.7766		40.560			0.974							0.000	0.136
45	45	Total-Dioxins	319.8965		0.000			0.942							0.771	1.060
46	46	Total-TEQ	319.8965		0.000										0.771	1.156
47	47	37CL-2378-TCDD	327.8847	26.660	26.624	1433957		1.037					8949.4		37.265	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000										0.000	
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0.000											

00900 : 66 7

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1	2378-TCDF	303.9016	26.02	0.000	0.866	0.000	0.011	0.55	0.77	YES	5.0
2	35	Total-tetrafurans	303.9016	25.82	0.000	0.866	0.000	0.010	1.62	0.77	YES	9.0

PP

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N

PF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	2	12378-PeCDF	339.8597	30.12	0.000	0.907	0.000	0.013	2.51	1.55	YES	8.4

HF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	7	123789-HxCDF	373.8208	37.35	0.000	1.020	0.000	0.011	1.54	1.24	YES	3.5
2	5	234678-HxCDF	373.8208	36.21	0.000	1.070	0.000	0.014	0.98	1.24	YES	5.7
3	4	123478-HxCDF	373.8208			1.082			0.00	1.24	YES	
4	6	123678-HxCDF	373.8208	35.26	0.000	1.048	0.000	0.014	1.00	1.24	YES	6.3

HPF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	8	1234678-HpCDF	407.7818	39.37	0.000	1.214	0.000	0.022	1.32	1.05	YES	6.5

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1	2378-TCDF	303.9016	26.02	0.000	0.866	0.000	0.011	0.55	0.77	YES	5.0
2	35	Total-tetrafurans	303.9016	25.82	0.000	0.866	0.000	0.010	1.62	0.77	YES	9.0
3	2	12378-PeCDF	339.8597	30.12	0.000	0.907	0.000	0.013	2.51	1.55	YES	8.4
4	7	123789-HxCDF	373.8208	37.35	0.000	1.020	0.000	0.011	1.54	1.24	YES	3.5
5	5	234678-HxCDF	373.8208	36.21	0.000	1.070	0.000	0.014	0.98	1.24	YES	5.7
6	4	123478-HxCDF	373.8208			1.082			0.00	1.24	YES	
7	8	1234678-HpCDF	407.7818	39.37	0.000	1.214	0.000	0.022	1.32	1.05	YES	6.5
8	6	123678-HxCDF	373.8208	35.26	0.000	1.048	0.000	0.014	1.00	1.24	YES	6.3

TD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	26.65	0.000	1.046	0.000	0.022	0.18	0.77	YES	5.5
2	41	Total-tetradioxins	319.8965	25.99	0.000	1.046	0.000	0.009	9.69	0.77	YES	33.4
3	41	Total-tetradioxins	319.8965	24.78	0.000	1.046	0.000	0.021	0.63	0.77	YES	5.6

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
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Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389.8157	36.18	0.000	0.884	0.000	0.027	2.05	1.24	YES	12.3
2	43	Total-hexadioxins	389.8157	35.23	0.000	0.884	0.000	0.035	2.17	1.24	YES	11.6
3	43	Total-hexadioxins	389.8157	35.10	0.000	0.884	0.000	0.015	4.96	1.24	YES	12.1
4	43	Total-hexadioxins	389.8157	34.19	0.000	0.884	0.000	0.024	0.85	1.24	YES	5.7

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41.17	0.000	0.974	0.000	0.037	2.57	1.05	YES	14.7
2	44	Total-heptadioxins	423.7766	39.92	0.000	0.974	0.000	0.099	1.04	1.05	NO	11.1

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	26.65	0.000	1.046	0.000	0.022	0.18	0.77	YES	5.5
2	41	Total-tetradioxins	319.8965	25.99	0.000	1.046	0.000	0.009	9.69	0.77	YES	33.4
3	41	Total-tetradioxins	319.8965	24.78	0.000	1.046	0.000	0.021	0.63	0.77	YES	5.6
4	43	Total-hexadioxins	389.8157	36.18	0.000	0.884	0.000	0.027	2.05	1.24	YES	12.3
5	43	Total-hexadioxins	389.8157	35.23	0.000	0.884	0.000	0.035	2.17	1.24	YES	11.6
6	43	Total-hexadioxins	389.8157	35.10	0.000	0.884	0.000	0.015	4.96	1.24	YES	12.1
7	43	Total-hexadioxins	389.8157	34.19	0.000	0.884	0.000	0.024	0.85	1.24	YES	5.7
8	17	OCDD	457.7377	46.99	8887.468	0.950	0.771	0.771	0.92	0.89	NO	70.5
9	16	1234678-HpCDD	423.7766	41.17	0.000	0.974	0.000	0.037	2.57	1.05	YES	14.7
10	44	Total-heptadioxins	423.7766	39.92	0.000	0.974	0.000	0.099	1.04	1.05	NO	11.1

Quantify Totals Report MassLynx 4.1 SCN 714
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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF-M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
1	1	2378-TCDF	303.9016	26.02	0.000	0.866	0.000	0.011	0.55	0.77	YES	5.0
2	35	Total-tetrafurans	303.9016	25.82	0.000	0.866	0.000	0.010	1.62	0.77	YES	9.0
3	2	12378-PeCDF	339.8597	30.12	0.000	0.907	0.000	0.013	2.51	1.55	YES	8.4
4	7	123789-HxCDF	373.8208	37.35	0.000	1.020	0.000	0.011	1.54	1.24	YES	3.5
5	5	234678-HxCDF	373.8208	36.21	0.000	1.070	0.000	0.014	0.98	1.24	YES	5.7
6	4	123478-HxCDF	373.8208			1.082			0.00	1.24	YES	
7	8	1234678-HpCDF	407.7818	39.37	0.000	1.214	0.000	0.022	1.32	1.05	YES	6.5
8	6	123678-HxCDF	373.8208	35.26	0.000	1.048	0.000	0.014	1.00	1.24	YES	6.3
9	11	2378-TCDD	319.8965	26.65	0.000	1.046	0.000	0.022	0.18	0.77	YES	5.5
10	41	Total-tetradioxins	319.8965	25.99	0.000	1.046	0.000	0.009	9.69	0.77	YES	33.4
11	41	Total-tetradioxins	319.8965	24.78	0.000	1.046	0.000	0.021	0.63	0.77	YES	5.6
12	43	Total-hexadioxins	389.8157	36.18	0.000	0.884	0.000	0.027	2.05	1.24	YES	12.3
13	43	Total-hexadioxins	389.8157	35.23	0.000	0.884	0.000	0.035	2.17	1.24	YES	11.6
14	43	Total-hexadioxins	389.8157	35.10	0.000	0.884	0.000	0.015	4.96	1.24	YES	12.1
15	43	Total-hexadioxins	389.8157	34.19	0.000	0.884	0.000	0.024	0.85	1.24	YES	5.7
16	17	OCDD	457.7377	46.99	8887.468	0.950	0.771	0.771	0.92	0.89	NO	70.5
17	16	1234678-HpCDD	423.7766	41.17	0.000	0.974	0.000	0.037	2.57	1.05	YES	14.7
18	44	Total-heptadioxins	423.7766	39.92	0.000	0.974	0.000	0.099	1.04	1.05	NO	11.1

Quantify Totals Report MassLynx 4.1 SCN 714
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PFK1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	21.67	0.000							7.5
2	48	FUNCTION1 PFK	330.9792	21.57	0.000							7.1
3	48	FUNCTION1 PFK	330.9792	21.45	0.000							5.9
4	48	FUNCTION1 PFK	330.9792	21.36	0.000							4.2
5	48	FUNCTION1 PFK	330.9792	25.20	0.000							3.6
6	48	FUNCTION1 PFK	330.9792	25.11	0.000							5.0
7	48	FUNCTION1 PFK	330.9792	24.96	0.000							3.4
8	48	FUNCTION1 PFK	330.9792	24.73	0.000							0.6
9	48	FUNCTION1 PFK	330.9792	23.97	0.000							0.5
10	48	FUNCTION1 PFK	330.9792	23.91	0.000							0.6
11	48	FUNCTION1 PFK	330.9792	23.85	0.000							1.3
12	48	FUNCTION1 PFK	330.9792	23.79	0.000							3.0
13	48	FUNCTION1 PFK	330.9792	23.40	0.000							1.3
14	48	FUNCTION1 PFK	330.9792	23.28	0.000							1.5
15	48	FUNCTION1 PFK	330.9792	23.12	0.000							1.4
16	48	FUNCTION1 PFK	330.9792	23.00	0.000							1.8
17	48	FUNCTION1 PFK	330.9792	22.70	0.000							2.3
18	48	FUNCTION1 PFK	330.9792	22.66	0.000							2.2
19	48	FUNCTION1 PFK	330.9792	22.54	0.000							0.7
20	48	FUNCTION1 PFK	330.9792	21.95	0.000							2.0
21	48	FUNCTION1 PFK	330.9792	28.23	0.000							1.6
22	48	FUNCTION1 PFK	330.9792	27.84	0.000							2.3
23	48	FUNCTION1 PFK	330.9792	27.51	0.000							2.3
24	48	FUNCTION1 PFK	330.9792	27.44	0.000							1.4
25	48	FUNCTION1 PFK	330.9792	27.33	0.000							0.6
26	48	FUNCTION1 PFK	330.9792	27.12	0.000							0.6
27	48	FUNCTION1 PFK	330.9792	26.82	0.000							1.3
28	48	FUNCTION1 PFK	330.9792	26.50	0.000							2.0
29	48	FUNCTION1 PFK	330.9792	25.99	0.000							0.7
30	48	FUNCTION1 PFK	330.9792	25.52	0.000							2.0
31	48	FUNCTION1 PFK	330.9792	25.48	0.000							2.2

PFK2

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	32.14	0.000		0.000					2.4

PFK3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	33.62	0.000		0.000					1.3

Quantify Totals Report MassLynx 4.1 SCN 714
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PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	43.17	0.000							0.8
2	51	FUNCTION4 PFK	430.9728	42.96	0.000							0.9
3	51	FUNCTION4 PFK	430.9728	42.84	0.000							1.2
4	51	FUNCTION4 PFK	430.9728	41.63	0.000							1.0
5	51	FUNCTION4 PFK	430.9728	41.38	0.000							0.8
6	51	FUNCTION4 PFK	430.9728	41.29	0.000							1.2
7	51	FUNCTION4 PFK	430.9728	41.15	0.000							0.5
8	51	FUNCTION4 PFK	430.9728	41.07	0.000							0.9
9	51	FUNCTION4 PFK	430.9728	40.73	0.000							1.1
10	51	FUNCTION4 PFK	430.9728	40.52	0.000							1.4
11	51	FUNCTION4 PFK	430.9728	40.47	0.000							1.2
12	51	FUNCTION4 PFK	430.9728	40.03	0.000							0.9
13	51	FUNCTION4 PFK	430.9728	39.69	0.000							1.6
14	51	FUNCTION4 PFK	430.9728	39.49	0.000							0.5
15	51	FUNCTION4 PFK	430.9728	38.87	0.000							0.9
16	51	FUNCTION4 PFK	430.9728	38.60	0.000							0.7
17	51	FUNCTION4 PFK	430.9728	44.12	0.000							0.9
18	51	FUNCTION4 PFK	430.9728	43.94	0.000							1.8
19	51	FUNCTION4 PFK	430.9728	43.90	0.000							0.8
20	51	FUNCTION4 PFK	430.9728	43.66	0.000							0.5
21	51	FUNCTION4 PFK	430.9728	43.61	0.000							1.0
22	51	FUNCTION4 PFK	430.9728	43.48	0.000							0.6

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	47.92	0.000							1.0
2	52	FUNCTION5 PFK	480.9696	47.88	0.000							2.3
3	52	FUNCTION5 PFK	480.9696	47.40	0.000							0.7
4	52	FUNCTION5 PFK	480.9696	47.12	0.000							1.3
5	52	FUNCTION5 PFK	480.9696	46.88	0.000							1.0
6	52	FUNCTION5 PFK	480.9696	46.82	0.000							1.1
7	52	FUNCTION5 PFK	480.9696	46.23	0.000							1.2
8	52	FUNCTION5 PFK	480.9696	45.51	0.000							1.1
9	52	FUNCTION5 PFK	480.9696	44.88	0.000							6.1
10	52	FUNCTION5 PFK	480.9696	48.98	0.000							0.7
11	52	FUNCTION5 PFK	480.9696	48.91	0.000							1.4
12	52	FUNCTION5 PFK	480.9696	48.75	0.000							0.8
13	52	FUNCTION5 PFK	480.9696	48.42	0.000							1.8
14	52	FUNCTION5 PFK	480.9696	48.37	0.000							1.5
15	52	FUNCTION5 PFK	480.9696	48.20	0.000							0.8
16	52	FUNCTION5 PFK	480.9696	48.05	0.000							1.3
17	52	FUNCTION5 PFK	480.9696	47.96	0.000							1.0

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	23.97	0.000		0.000					3.0

Quantify Totals Report MassLynx 4.1 SCN 714
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ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	24.00	0.000		0.000					2.3
2	54	FUNCTION1 HPCD...	409.7974	23.70	0.000		0.000					2.8

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	32.84	0.000		0.000					4.0

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	40.82	0.000		0.000					6.6

ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
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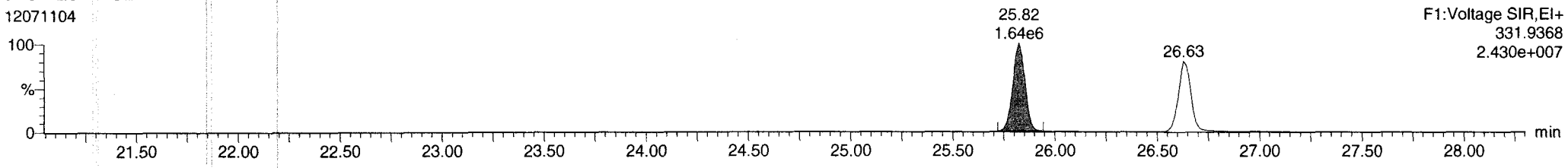
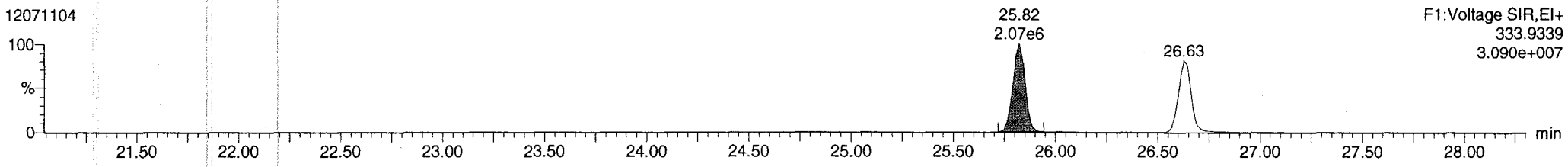
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

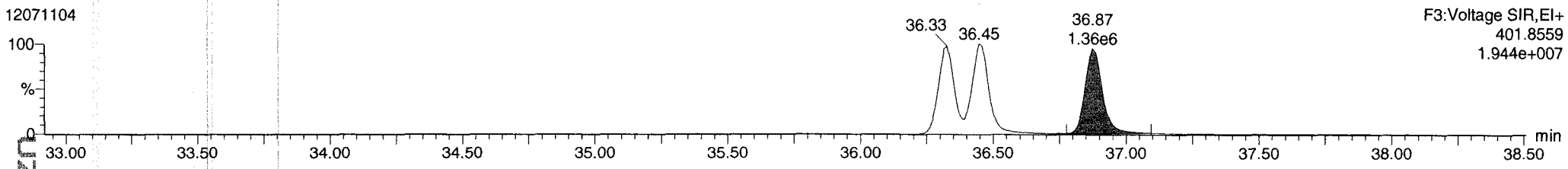
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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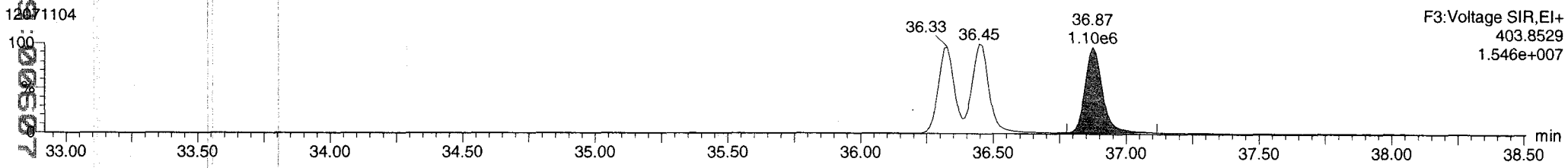

Quantify Sample Report **MassLynx 4.1 SCN 714**
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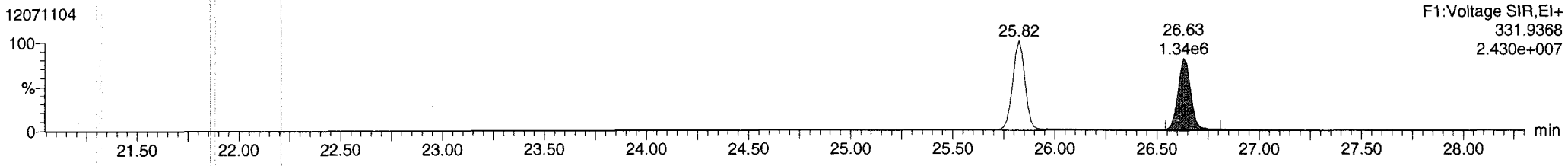
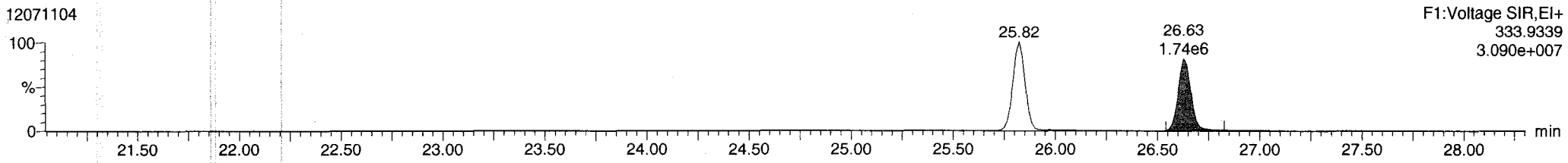
13C-2378-TCDD



13C-2378-TCDD



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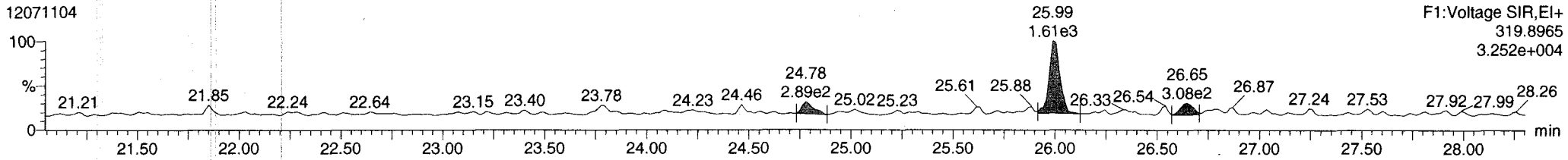
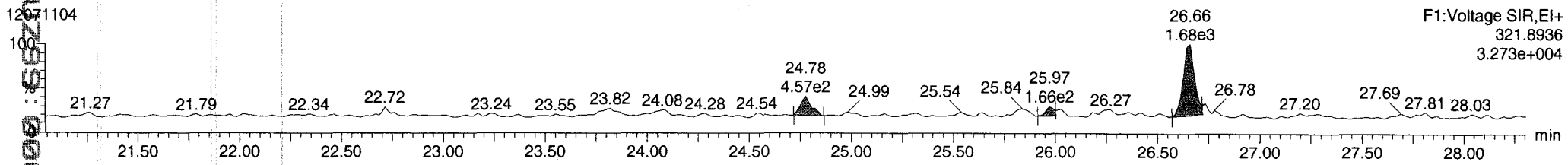
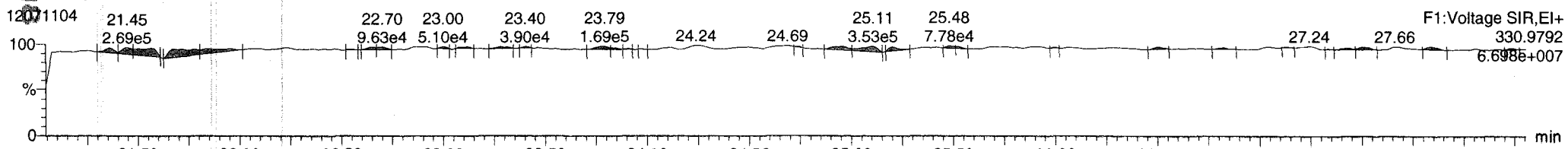


Total-tetradioxins



FUNCTION1 PFK



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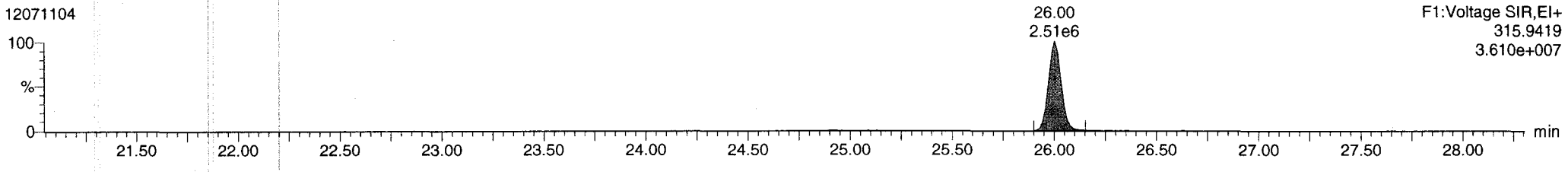
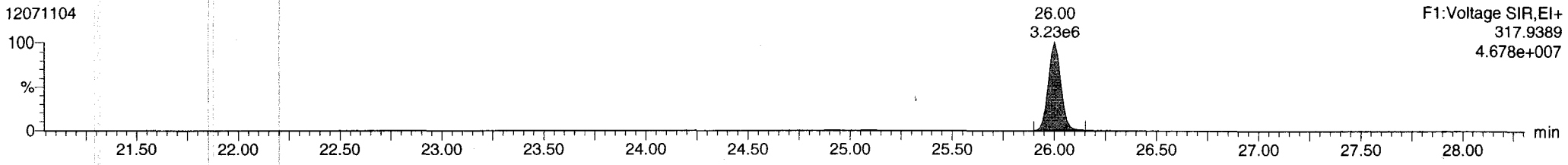
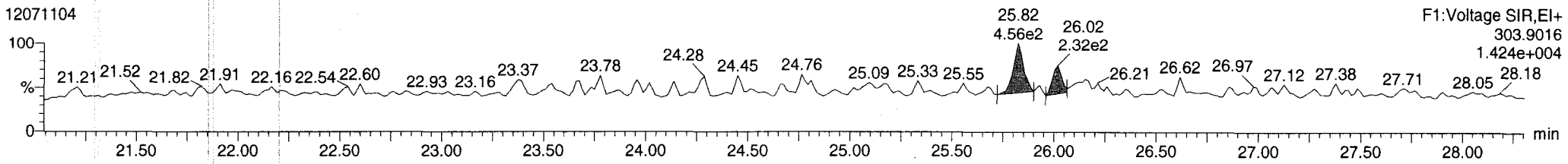
13C-2378-TCDF



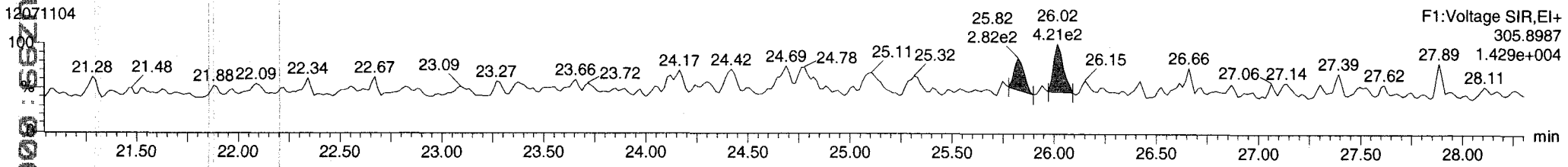
13C-2378-TCDF



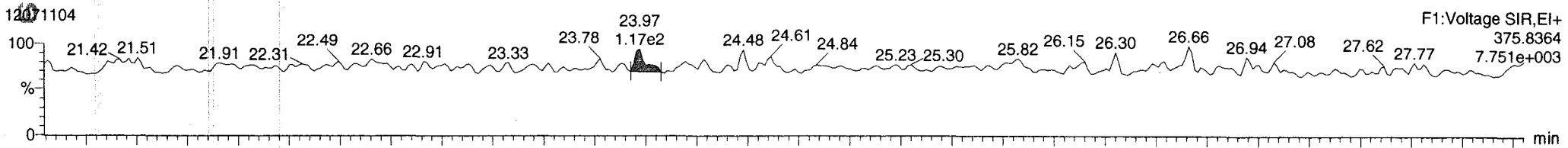
Total-tetrafurans



Total-tetrafurans



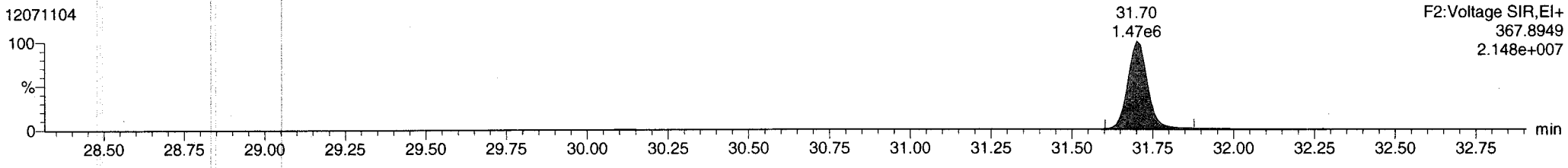
FUNCTION1 HXCDPE



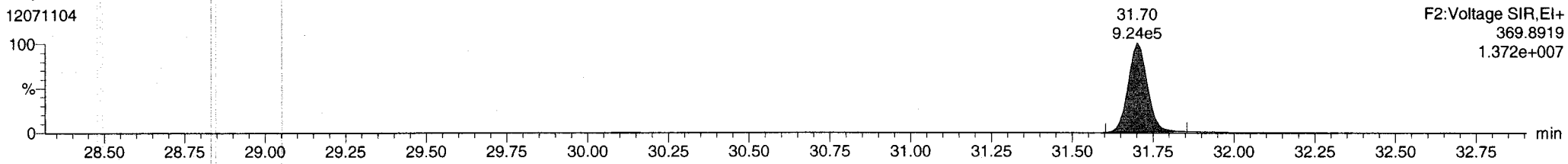
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

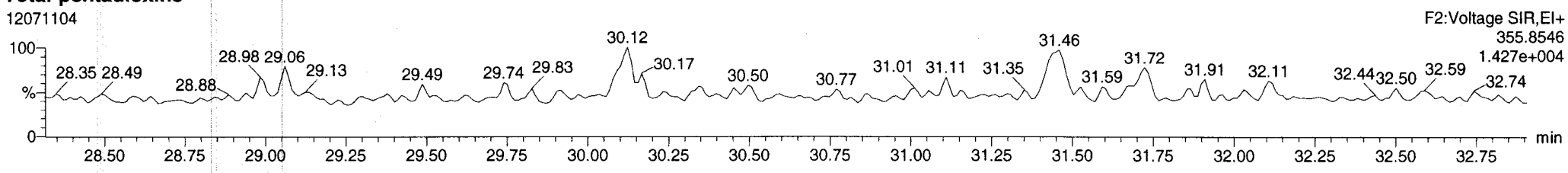
13C-12378-PeCDD



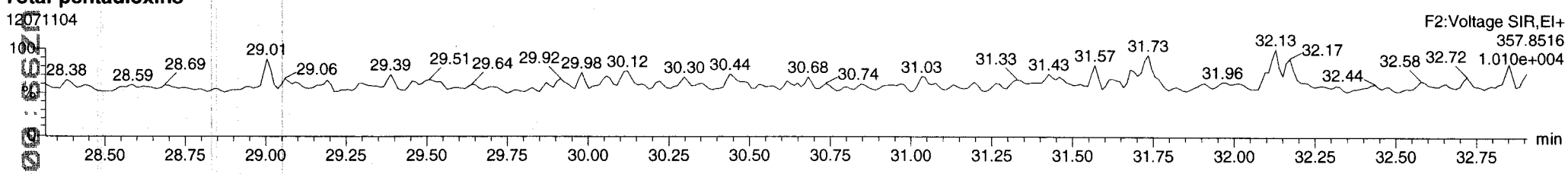
13C-12378-PeCDD



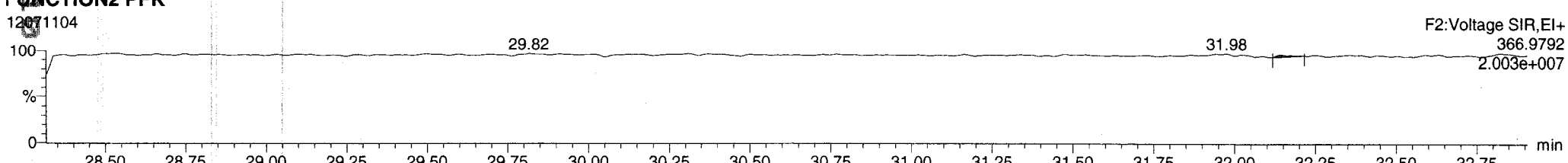
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\120711MB.qld
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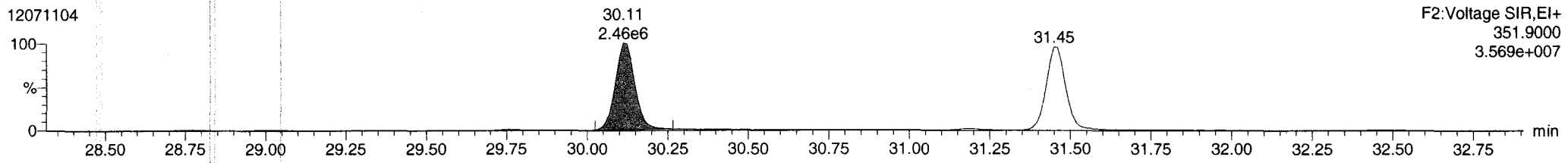
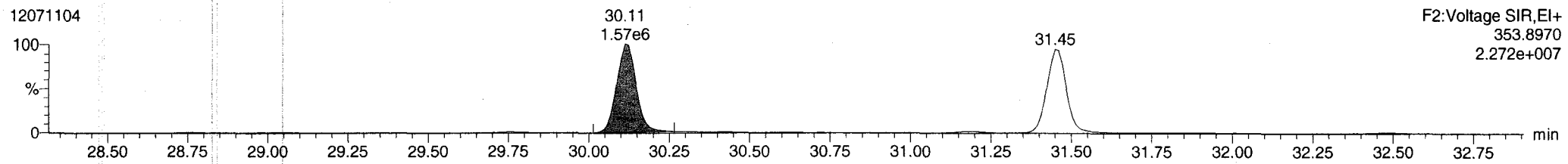
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

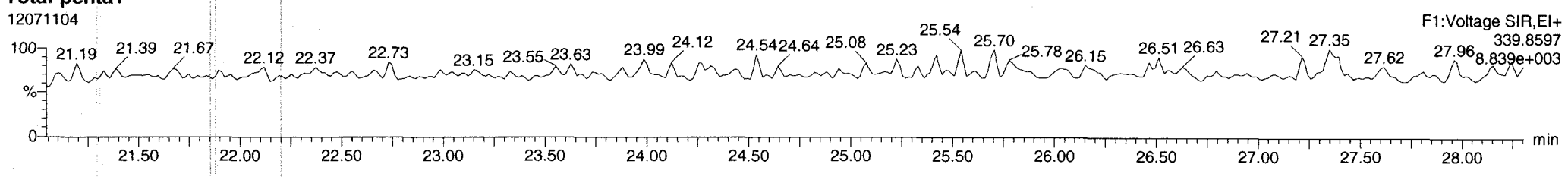
13C-12378-PeCDF



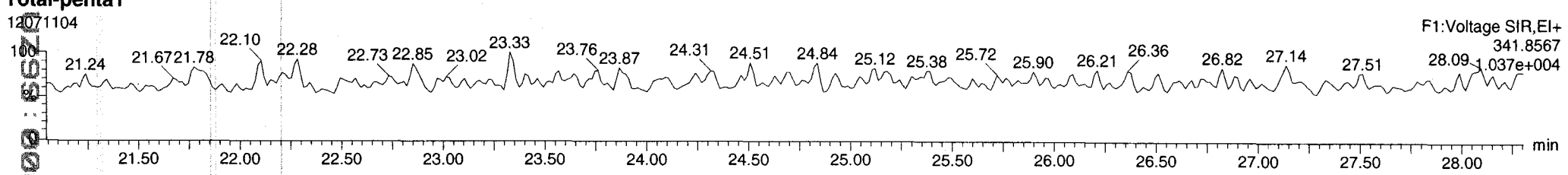
13C-12378-PeCDF



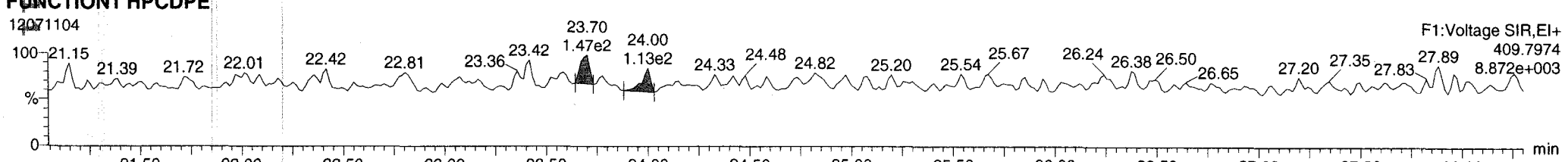
Total-penta1



Total-penta1



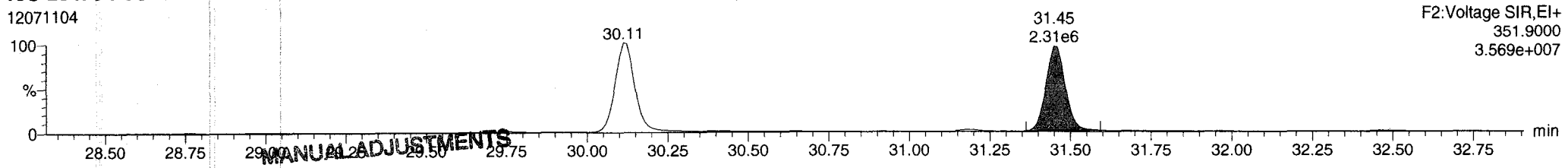
FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

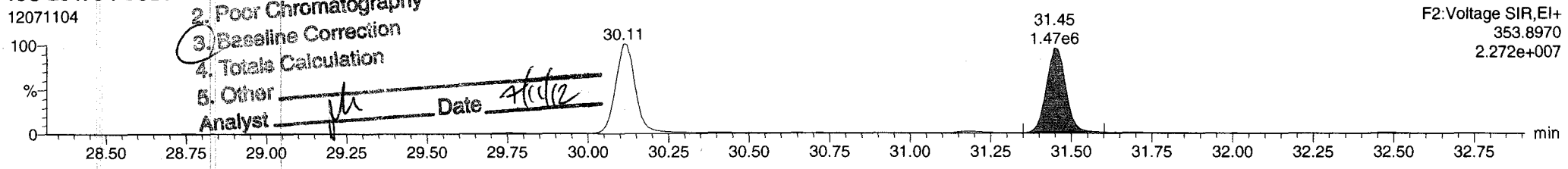
Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF

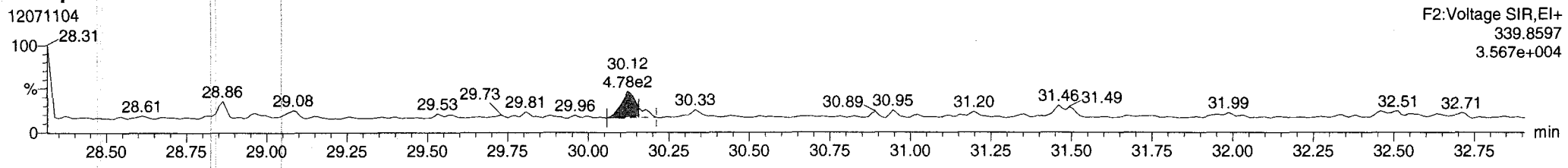


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst pk Date 7/11/12

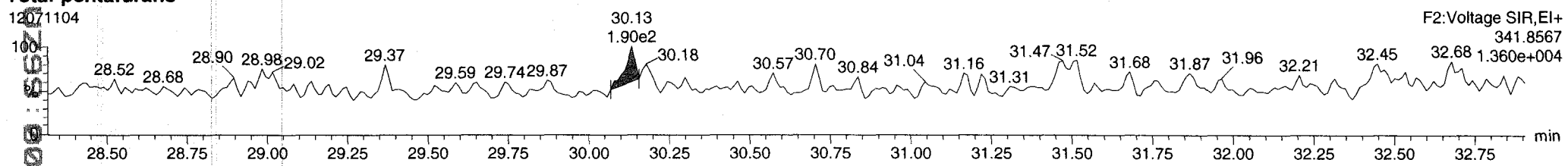
13C-23478-PeCDF



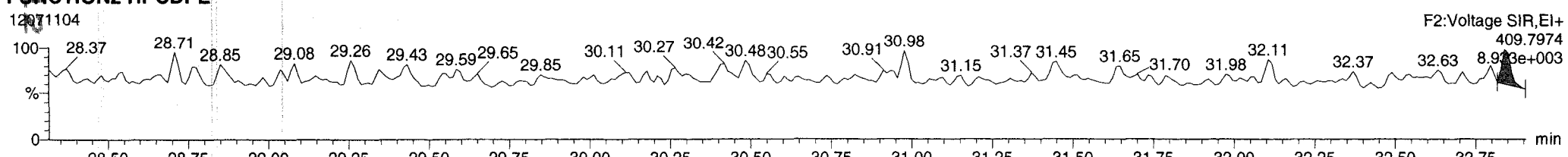
Total-pentafurans



Total-pentafurans



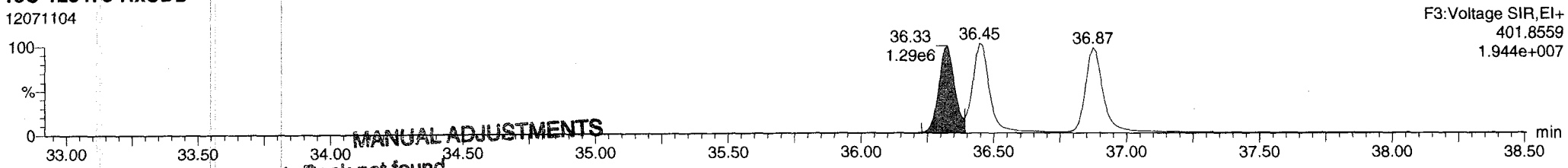
FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

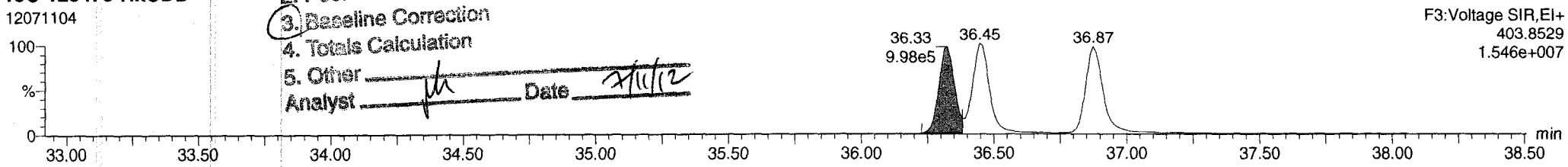
Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

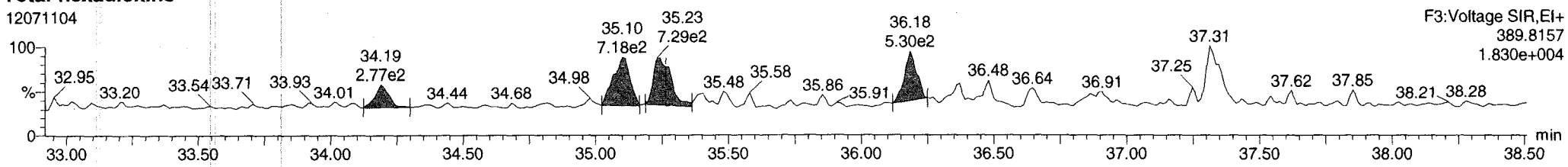


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst pk Date 7/11/12

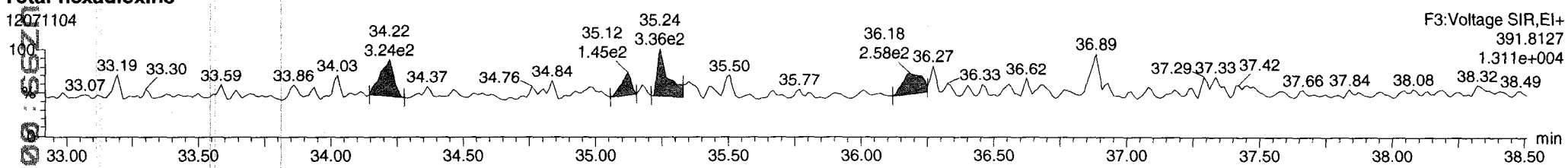
13C-123478-HxCDD



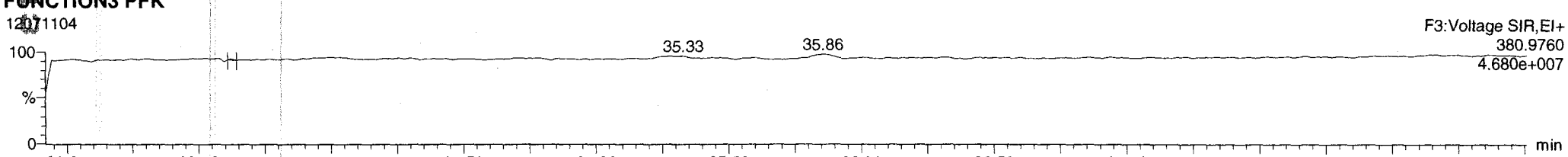
Total-hexadioxins



Total-hexadioxins



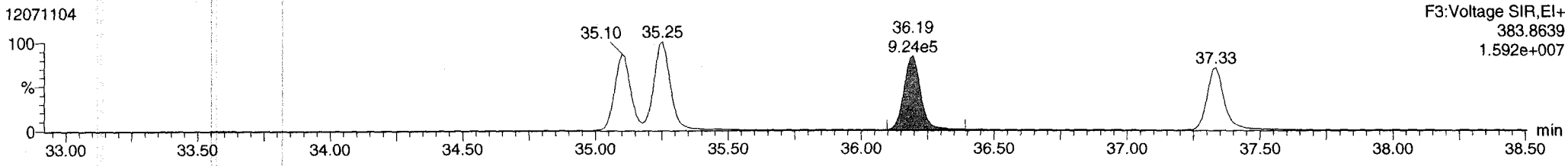
FUNCTION3 PFK



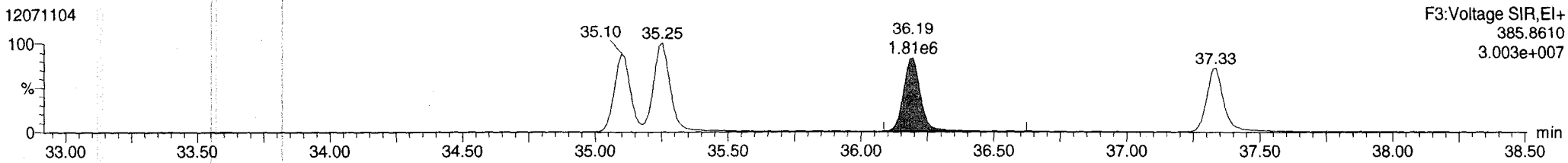
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

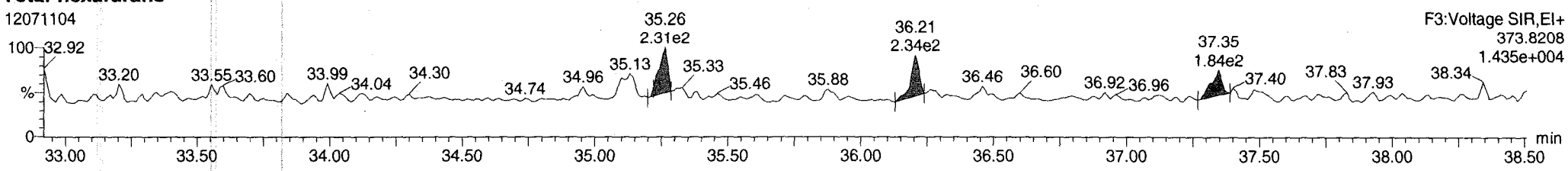
13C-234678-HxCDF



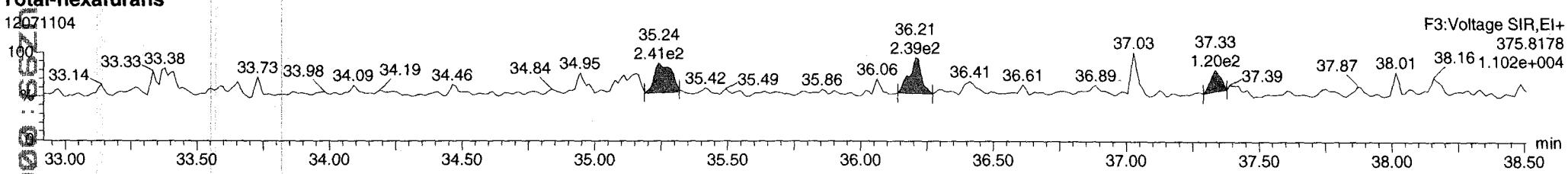
13C-234678-HxCDF



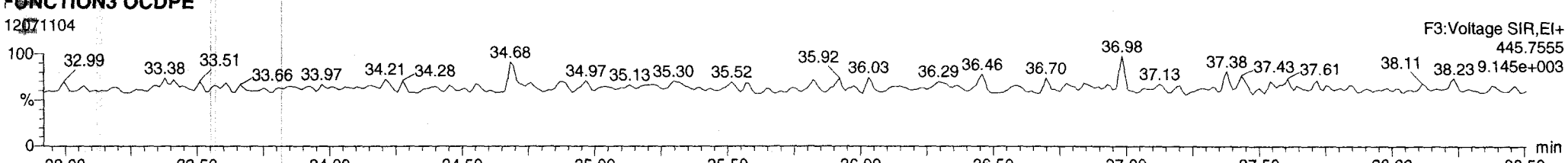
Total-hexafurans



Total-hexafurans



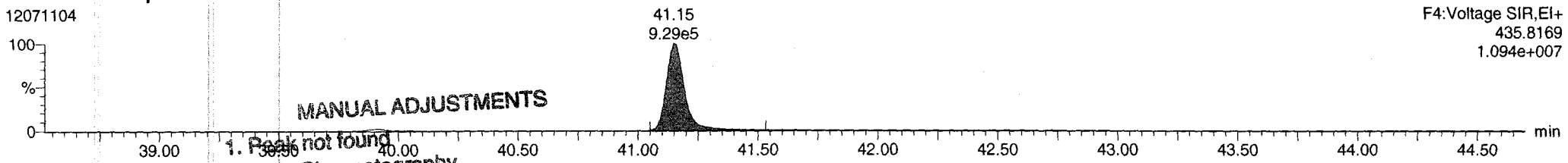
FUNCTION3 OCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

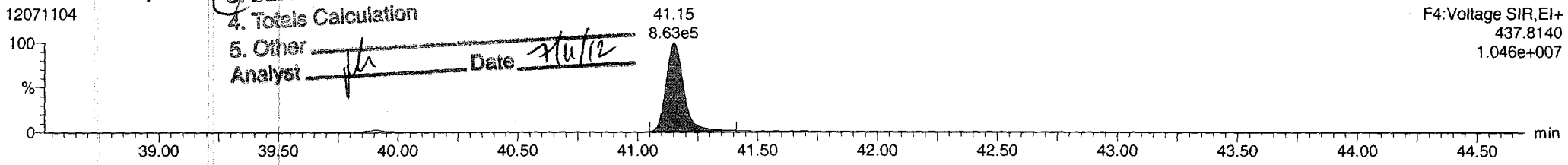
Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD

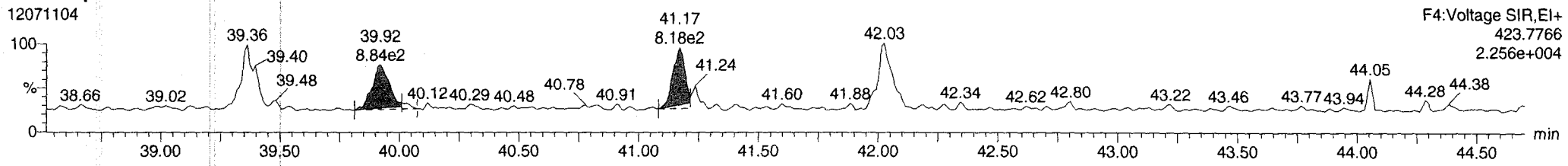


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst pk Date 7/11/12

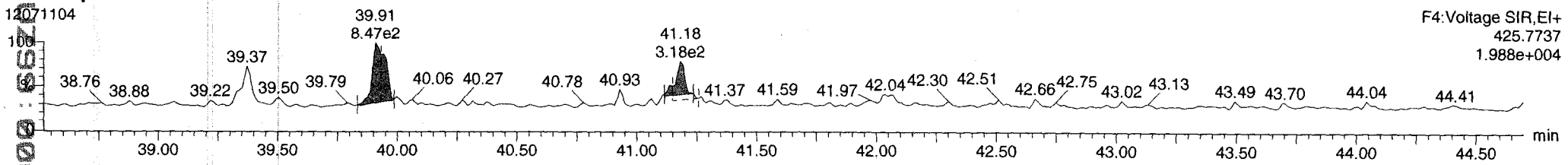
13C-1234678-HpCDD



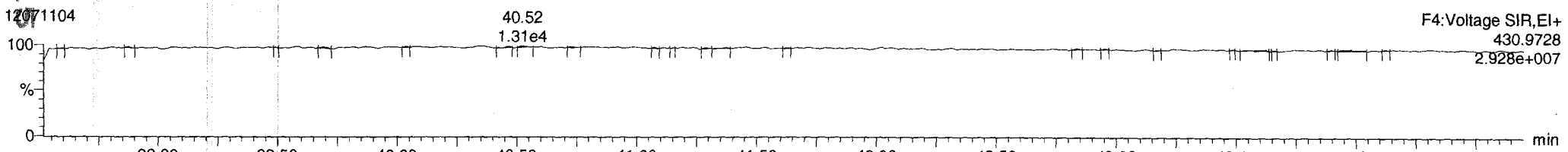
Total-heptadioxins



Total-heptadioxins



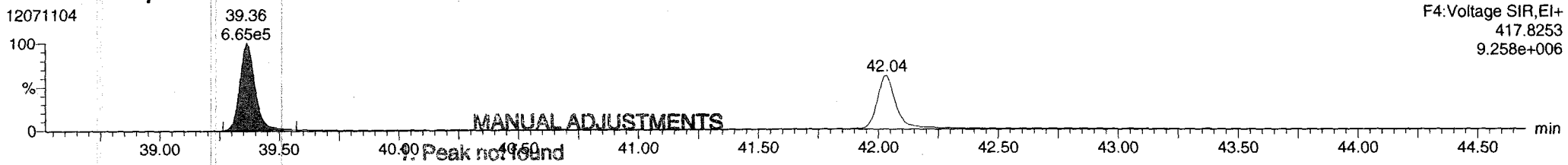
FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



MANUAL ADJUSTMENTS
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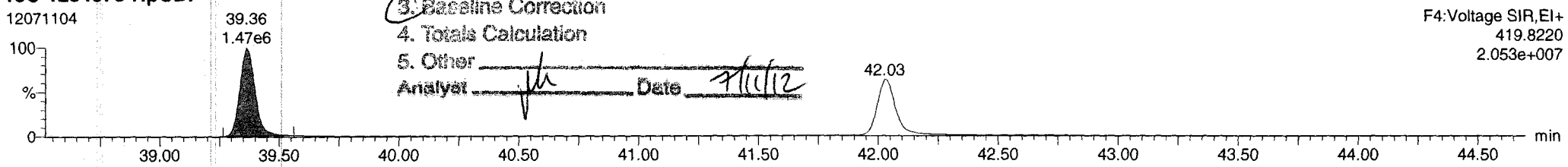
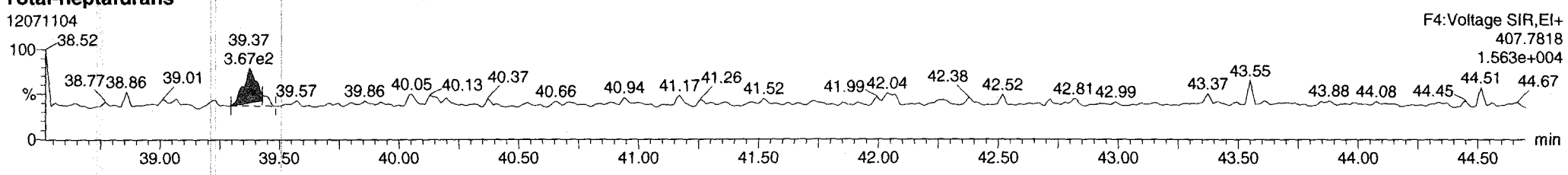
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst pk Date 7/11/12

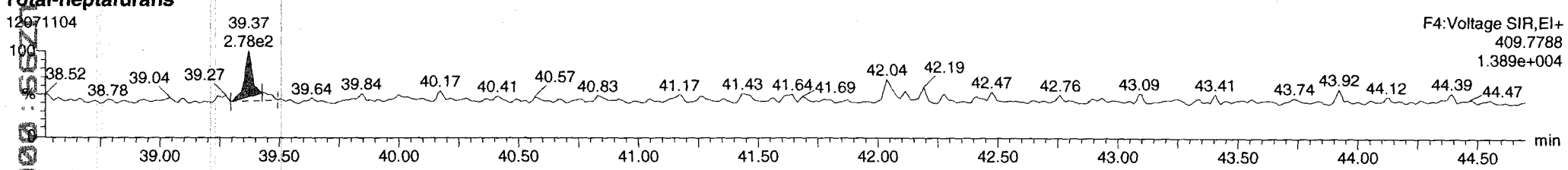
13C-1234678-HpCDF



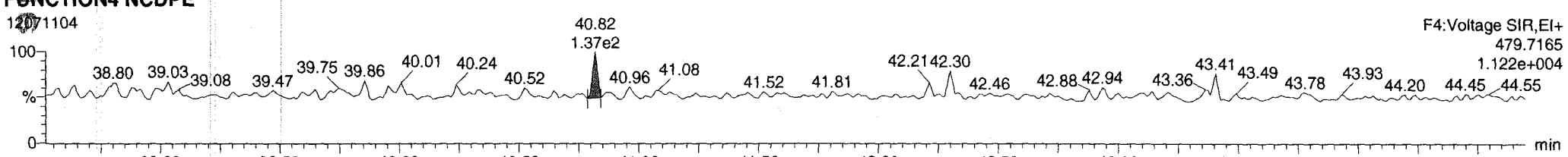
Total-heptafurans



Total-heptafurans



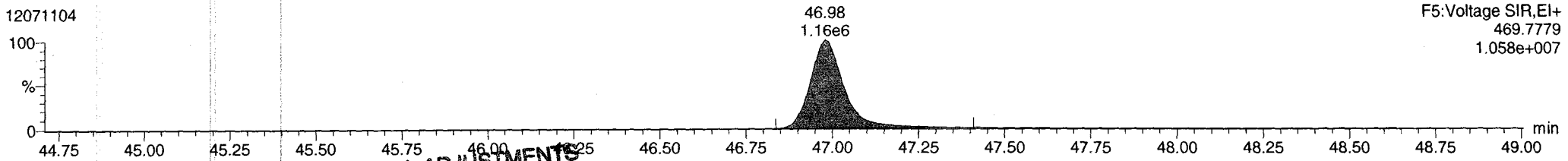
FUNCTION4 NCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:05 Pacific Daylight Time

Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

13C-OCDD



MANUAL ADJUSTMENTS
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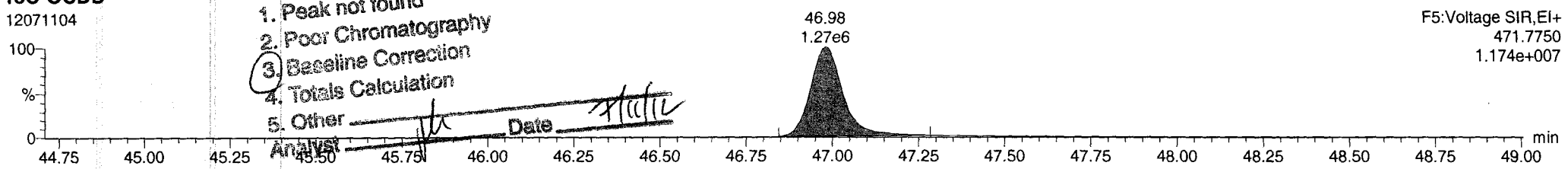
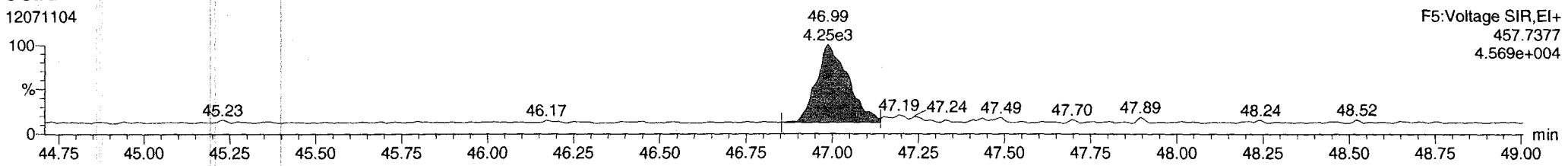
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Date 7/11/12
Analyst

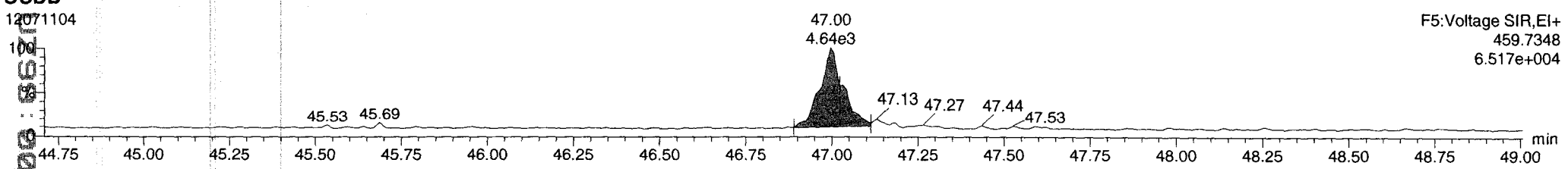
13C-OCDD



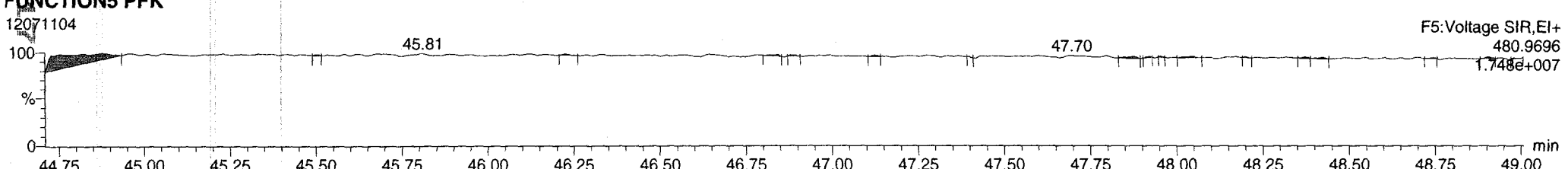
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
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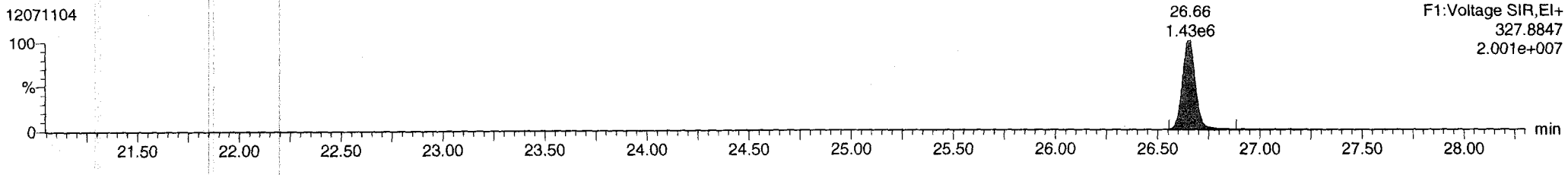
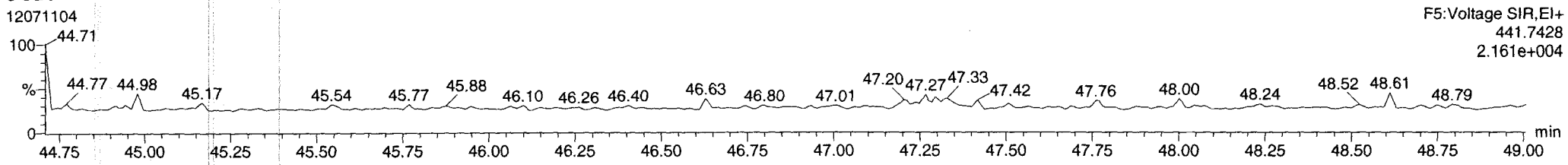
Name: 12071104, Date: 11-Jul-2012, Time: 13:58:31, ID: UZ99MBS, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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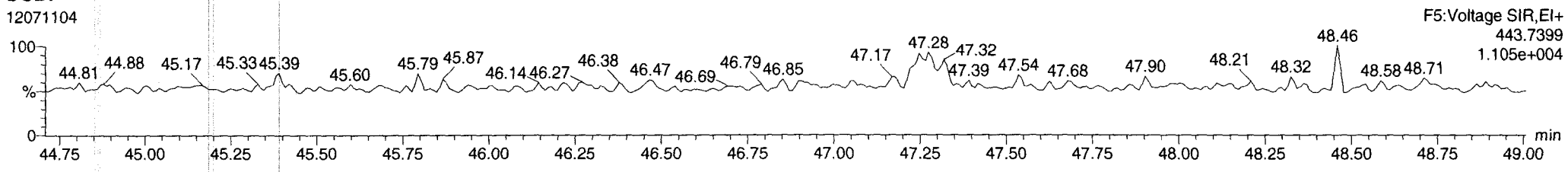
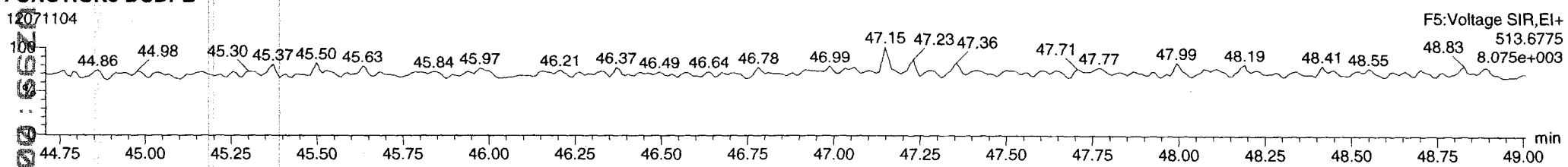


FUNCTION5 DCDPE



0 2 9 9 : 0 0 6 1 8

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
Last Altered: Wednesday, July 11, 2012 16:00:18 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

pk 7/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr.	RRF M.	1° Det.	%Rec	1° Ratio	1° Rati	S/N	1°	pg	EMPC
1	1	2378-TCDF	303.9016	26.003	26.004	406099	406099	0.866	bd		0.77	0.77	1934.8	NO	11.292	11.292
2	2	12378-PeCDF	339.8597	30.113	30.123	1355363	1355363	0.907	bb		1.56	1.55	3265.6	NO	53.713	53.713
3	3	23478-PeCDF	339.8597	31.461	31.461	1252955	1252955	0.936	bb		1.50	1.55	3015.8	NO	52.819	52.819
4	4	123478-HxCDF	373.8208	35.111	35.100	1011047	1011047	1.082	bd		1.21	1.24	2170.1	NO	52.427	52.427
5	5	234678-HxCDF	373.8208	36.196	36.196	1074234	1074234	1.070	bb		1.20	1.24	2286.1	NO	56.046	56.046
6	6	123678-HxCDF	373.8208	35.253	35.253	1120852	1120852	1.048	db		1.21	1.24	2261.1	NO	52.617	52.617
7	7	123789-HxCDF	373.8208	37.336	37.325	816130	816130	1.020	bb		1.24	1.24	1660.9	NO	52.352	52.352
8	8	1234678-HpCDF	407.7818	39.364	39.373	947441	947441	1.214	bd		1.03	1.05	1997.6	NO	56.084	56.084
9	9	1234789-HpCDF	407.7818	42.039	42.029	703698	703698	1.254	bd		1.02	1.05	1315.3	NO	52.043	52.043
10	10	OCDF	441.7428	47.259	47.245	981505	981505	1.105	bd		0.88	0.89	1595.8	NO	112.574	112.574
11	11	2378-TCDD	319.8965	26.631	26.629	237142	237142	1.046	bb		0.78	0.77	1598.0	NO	10.535	10.535
12	12	12378-PeCDD	355.8546	31.713	31.701	840214	840214	0.973	bb		1.58	1.55	3549.9	NO	54.630	54.630
13	13	123478-HxCDD	389.8157	36.328	36.327	761807	761807	0.935	bd		1.26	1.24	3402.3	NO	55.293	55.293
14	14	123678-HxCDD	389.8157	36.459	36.448	774362	774362	0.878	dd		1.24	1.24	3255.1	NO	53.856	53.856
15	15	123789-HxCDD	389.8157	36.876	36.838	723152	723152	0.839	dd		1.22	1.24	2885.0	NO	55.426	55.426
16	16	1234678-HpCDD	423.7766	41.162	41.152	614754	614754	0.974	bb		1.06	1.05	1777.3	NO	53.805	53.805
17	17	OCDD	457.7377	46.990	46.977	814318	814318	0.950	bd		0.84	0.89	1957.1	NO	108.652	108.652
18	18	13C-2378-TCDF	315.9419	25.988	25.989	4152217		1.484	bb	96.5	0.78	0.77	6660.7	NO	96.539	
19	19	13C-12378-PeCDF	351.9000	30.102	30.116	2782205		1.048	bb	91.6	1.60	1.55	6446.0	NO	91.617	
20	20	13C-23478-PeCDF	351.9000	31.439	31.453	2534702		1.003	bb	87.2	1.56	1.55	5901.5	NO	87.185	
21	21	13C-123478-HxCDF	383.8639	35.089	35.089	1782498		1.186	bd	92.7	0.52	0.51	1627.2	NO	92.691	
22	22	13C-123678-HxCDF	383.8639	35.231	35.243	2031980		1.315	dd	95.3	0.53	0.51	1752.7	NO	95.263	
23	23	13C-234678-HxCDF	383.8639	36.174	36.174	1791645		1.223	bb	90.3	0.53	0.51	1638.5	NO	90.297	
24	24	13C-123789-HxCDF	383.8639	37.314	37.314	1528211		1.056	bb	89.2	0.52	0.51	1325.8	NO	89.181	
25	25	13C-1234678-HpCDF	417.8253	39.353	39.363	1391031		1.011	bb	84.8	0.45	0.44	2078.9	NO	84.793	
26	26	13C-1234789-HpCDF	417.8253	42.017	42.027	1078204		0.741	bd	89.8	0.44	0.44	1370.6	NO	89.764	
27	27	13C-1234-TCDD	331.9368	25.809	25.839	2897482		1.000	bb	100.0	0.78	0.77	5343.0	NO	100.000	
28	28	13C-2378-TCDD	331.9368	26.616	26.616	2152362		0.956	bb	77.7	0.78	0.77	3968.9	NO	77.672	
29	29	13C-12378-PeCDD	367.8949	31.691	31.705	1580224		0.663	bb	82.2	1.57	1.55	8003.0	NO	82.203	
30	30	13C-123478-HxCDD	401.8559	36.306	36.317	1472903		1.024	bd	88.7	1.25	1.24	4205.6	NO	88.688	
31	31	13C-123678-HxCDD	401.8559	36.437	36.437	1638065		1.113	dd	90.8	1.22	1.24	4339.8	NO	90.769	
32	32	13C-1234678-HpCDD	435.8169	41.140	41.150	1172709		0.815	bd	88.7	1.05	1.05	2605.4	NO	88.699	
33	33	13C-OCDD	469.7779	46.963	47.000	1577722		0.717	bd	67.8	0.87	0.89	1792.0	NO	135.649	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
Last Altered: Wednesday, July 11, 2012 16:00:18 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr. ...	RRF M...	1° Det...	%Rec	1° Ratio...	1° Rati...	S/N	1° ...	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	36.865	36.909	1621988		1.000	bb	100.0	1.23	1.24	4310.0	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.030			0.866							11.430	11.587
36	36	Total-penta1	339.8597		27.840											
37	37	Total-pentafurans	339.8597		30.410			0.921							107.367	108.476
38	38	Total-hexafurans	373.8208		35.390			1.055							213.641	213.660
39	39	Total-heptafurans	407.7818		40.740			1.234							108.127	108.254
40	40	Total-Furans	303.9016		0.000			1.050							553.138	554.551
41	41	Total-tetradioxins	319.8965		25.540			1.046							10.845	10.863
42	42	Total-pentadioxins	355.8546		30.580			0.973							54.741	54.795
43	43	Total-hexadioxins	389.8157		35.570			0.884							164.575	164.946
44	44	Total-heptadioxins	423.7766		40.560			0.974							53.805	54.231
45	45	Total-Dioxins	319.8965		0.000			0.942							392.618	393.486
46	46	Total-TEQ	319.8965		0.000										945.756	948.037
47	47	37CL-2378-TCDD	327.8847	26.631	26.609	1000555		1.037					7538.3		33.295	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000										0.000	
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000											
54	54	FUNCTION1 HPCDPE	409.7974		0.000											
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000											
57	57	FUNCTION4 NCDPE	479.7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0.000											

UZ99:00620

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
Last Altered: Wednesday, July 11, 2012 16:00:18 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1	2378-TCDF	303.9016	26.00	406098.594	0.866	11.292	11.292	0.77	0.77	NO	1934.8
2	35	Total-tetrafurans	303.9016	25.82	800.319	0.866	0.022	0.022	0.82	0.77	NO	4.8
3	35	Total-tetrafurans	303.9016	25.09	0.000	0.866	0.000	0.074	1.09	0.77	YES	17.5
4	35	Total-tetrafurans	303.9016	24.91	4134.248	0.866	0.115	0.115	0.85	0.77	NO	22.8
5	35	Total-tetrafurans	303.9016	24.78	0.000	0.866	0.000	0.084	0.54	0.77	YES	14.5

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339.8597	32.48	9178.609	0.921	0.375	0.375	1.58	1.55	NO	19.9
2	37	Total-pentafurans	339.8597	31.94	0.000	0.921	0.000	0.014	1.07	1.55	YES	2.1
3	3	23478-PeCDF	339.8597	31.46	1252955.156	0.936	52.819	52.819	1.50	1.55	NO	3015.8
4	37	Total-pentafurans	339.8597	31.19	0.000	0.921	0.000	0.055	2.31	1.55	YES	5.0
5	37	Total-pentafurans	339.8597	30.45	0.000	0.921	0.000	0.022	4.84	1.55	YES	7.9
6	37	Total-pentafurans	339.8597	30.32	0.000	0.921	0.000	0.865	3.06	1.55	YES	90.9
7	2	12378-PeCDF	339.8597	30.11	1355362.938	0.907	53.713	53.713	1.56	1.55	NO	3265.6
8	37	Total-pentafurans	339.8597	29.75	0.000	0.921	0.000	0.154	0.87	1.55	YES	8.8
9	37	Total-pentafurans	339.8597	29.05	11255.413	0.921	0.459	0.459	1.61	1.55	NO	21.9

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	6	123678-HxCDF	373.8208	35.25	1120852.001	1.048	52.617	52.617	1.21	1.24	NO	2261.1
2	4	123478-HxCDF	373.8208	35.11	1011047.313	1.082	52.427	52.427	1.21	1.24	NO	2170.1
3	38	Total-hexafurans	373.8208	33.61	3730.690	1.055	0.198	0.198	1.06	1.24	NO	8.6
4	38	Total-hexafurans	373.8208	37.57	0.000	1.055	0.000	0.019				9.2
5	7	123789-HxCDF	373.8208	37.34	816130.219	1.020	52.352	52.352	1.24	1.24	NO	1660.9
6	5	234678-HxCDF	373.8208	36.20	1074234.251	1.070	56.046	56.046	1.20	1.24	NO	2286.1

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42.04	703698.313	1.254	52.043	52.043	1.02	1.05	NO	1315.3
2	39	Total-heptafurans	407.7818	39.86	0.000	1.234	0.000	0.050	3.05	1.05	YES	4.5
3	39	Total-heptafurans	407.7818	39.63	0.000	1.234	0.000	0.077	6.81	1.05	YES	13.7
4	8	1234678-HpCDF	407.7818	39.36	947440.781	1.214	56.084	56.084	1.03	1.05	NO	1997.6

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
Last Altered: Wednesday, July 11, 2012 16:00:18 Pacific Daylight Time
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Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1	2378-TCDF	303.9016	26.00	406098.594	0.866	11.292	11.292	0.77	0.77	NO	1934.8
2	35	Total-tetrafurans	303.9016	25.82	800.319	0.866	0.022	0.022	0.82	0.77	NO	4.8
3	35	Total-tetrafurans	303.9016	25.09	0.000	0.866	0.000	0.074	1.09	0.77	YES	17.5
4	35	Total-tetrafurans	303.9016	24.91	4134.248	0.866	0.115	0.115	0.85	0.77	NO	22.8
5	35	Total-tetrafurans	303.9016	24.78	0.000	0.866	0.000	0.084	0.54	0.77	YES	14.5
6	37	Total-pentafurans	339.8597	32.48	9178.609	0.921	0.375	0.375	1.58	1.55	NO	19.9
7	37	Total-pentafurans	339.8597	31.94	0.000	0.921	0.000	0.014	1.07	1.55	YES	2.1
8	3	23478-PeCDF	339.8597	31.46	1252955.156	0.936	52.819	52.819	1.50	1.55	NO	3015.8
9	37	Total-pentafurans	339.8597	31.19	0.000	0.921	0.000	0.055	2.31	1.55	YES	5.0
10	37	Total-pentafurans	339.8597	30.45	0.000	0.921	0.000	0.022	4.84	1.55	YES	7.9
11	37	Total-pentafurans	339.8597	30.32	0.000	0.921	0.000	0.865	3.06	1.55	YES	90.9
12	2	12378-PeCDF	339.8597	30.11	1355362.938	0.907	53.713	53.713	1.56	1.55	NO	3265.6
13	37	Total-pentafurans	339.8597	29.75	0.000	0.921	0.000	0.154	0.87	1.55	YES	8.8
14	37	Total-pentafurans	339.8597	29.05	11255.413	0.921	0.459	0.459	1.61	1.55	NO	21.9
15	6	123678-HxCDF	373.8208	35.25	1120852.001	1.048	52.617	52.617	1.21	1.24	NO	2261.1
16	4	123478-HxCDF	373.8208	35.11	1011047.313	1.082	52.427	52.427	1.21	1.24	NO	2170.1
17	38	Total-hexafurans	373.8208	33.61	3730.690	1.055	0.198	0.198	1.06	1.24	NO	8.6
18	38	Total-hexafurans	373.8208	37.57	0.000	1.055	0.000	0.019				9.2
19	7	123789-HxCDF	373.8208	37.34	816130.219	1.020	52.352	52.352	1.24	1.24	NO	1660.9
20	5	234678-HxCDF	373.8208	36.20	1074234.251	1.070	56.046	56.046	1.20	1.24	NO	2286.1
21	9	1234789-HpCDF	407.7818	42.04	703698.313	1.254	52.043	52.043	1.02	1.05	NO	1315.3
22	39	Total-heptafurans	407.7818	39.86	0.000	1.234	0.000	0.050	3.05	1.05	YES	4.5
23	39	Total-heptafurans	407.7818	39.63	0.000	1.234	0.000	0.077	6.81	1.05	YES	13.7
24	8	1234678-HpCDF	407.7818	39.36	947440.781	1.214	56.084	56.084	1.03	1.05	NO	1997.6
25	10	OCDF	441.7428	47.26	981505.282	1.105	112.574	112....	0.88	0.89	NO	1595.8

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	26.63	237142.415	1.046	10.535	10.535	0.78	0.77	NO	1598.0
2	41	Total-tetradioxins	319.8965	26.26	6985.174	1.046	0.310	0.310	0.77	0.77	NO	43.1
3	41	Total-tetradioxins	319.8965	25.97	0.000	1.046	0.000	0.017	4.34	0.77	YES	14.9

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	32.03	0.000	0.973	0.000	0.033	1.77	1.55	NO	4.3
2	42	Total-pentadioxins	355.8546	31.91	0.000	0.973	0.000	0.020	9.37	1.55	YES	20.8
3	12	12378-PeCDD	355.8546	31.71	840213.657	0.973	54.630	54.630	1.58	1.55	NO	3549.9
4	42	Total-pentadioxins	355.8546	31.02	1708.933	0.973	0.111	0.111	1.73	1.55	NO	7.9

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	13	123478-HxCDD	389.8157	36.33	761806.625	0.935	55.293	55.293	1.26	1.24	NO	3402.3
2	43	Total-hexadioxins	389.8157	37.12	0.000	0.884	0.000	0.247	0.56	1.24	YES	17.9
3	15	123789-HxCDD	389.8157	36.88	723152.125	0.839	55.426	55.426	1.22	1.24	NO	2885.0
4	43	Total-hexadioxins	389.8157	36.70	0.000	0.884	0.000	0.124	0.63	1.24	YES	13.8
5	14	123678-HxCDD	389.8157	36.46	774362.313	0.878	53.856	53.856	1.24	1.24	NO	3255.1

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	44	Total-heptadioxins	423.7766	41.42	0.000	0.974	0.000	0.083	2.97	1.05	YES	15.8
2	16	1234678-HpCDD	423.7766	41.16	614754.001	0.974	53.805	53.805	1.06	1.05	NO	1777.3
3	44	Total-heptadioxins	423.7766	39.90	0.000	0.974	0.000	0.344	1.53	1.05	YES	17.2

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	26.63	237142.415	1.046	10.535	10.535	0.78	0.77	NO	1598.0
2	41	Total-tetradioxins	319.8965	26.26	6985.174	1.046	0.310	0.310	0.77	0.77	NO	43.1
3	41	Total-tetradioxins	319.8965	25.97	0.000	1.046	0.000	0.017	4.34	0.77	YES	14.9
4	42	Total-pentadioxins	355.8546	32.03	0.000	0.973	0.000	0.033	1.77	1.55	NO	4.3
5	42	Total-pentadioxins	355.8546	31.91	0.000	0.973	0.000	0.020	9.37	1.55	YES	20.8
6	12	12378-PeCDD	355.8546	31.71	840213.657	0.973	54.630	54.630	1.58	1.55	NO	3549.9
7	42	Total-pentadioxins	355.8546	31.02	1708.933	0.973	0.111	0.111	1.73	1.55	NO	7.9
8	13	123478-HxCDD	389.8157	36.33	761806.625	0.935	55.293	55.293	1.26	1.24	NO	3402.3
9	43	Total-hexadioxins	389.8157	37.12	0.000	0.884	0.000	0.247	0.56	1.24	YES	17.9
10	15	123789-HxCDD	389.8157	36.88	723152.125	0.839	55.426	55.426	1.22	1.24	NO	2885.0
11	43	Total-hexadioxins	389.8157	36.70	0.000	0.884	0.000	0.124	0.63	1.24	YES	13.8
12	14	123678-HxCDD	389.8157	36.46	774362.313	0.878	53.856	53.856	1.24	1.24	NO	3255.1
13	44	Total-heptadioxins	423.7766	41.42	0.000	0.974	0.000	0.083	2.97	1.05	YES	15.8
14	16	1234678-HpCDD	423.7766	41.16	614754.001	0.974	53.805	53.805	1.06	1.05	NO	1777.3
15	44	Total-heptadioxins	423.7766	39.90	0.000	0.974	0.000	0.344	1.53	1.05	YES	17.2
16	17	OCDD	457.7377	46.99	814317.781	0.950	108.652	108....	0.84	0.89	NO	1957.1

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
Last Altered: Wednesday, July 11, 2012 16:00:18 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
1	1	2378-TCDF	303.9016	26.00	406098.594	0.866	11.292	11.292	0.77	0.77	NO	1934.8
2	35	Total-tetrafurans	303.9016	25.82	800.319	0.866	0.022	0.022	0.82	0.77	NO	4.8
3	35	Total-tetrafurans	303.9016	25.09	0.000	0.866	0.000	0.074	1.09	0.77	YES	17.5
4	35	Total-tetrafurans	303.9016	24.91	4134.248	0.866	0.115	0.115	0.85	0.77	NO	22.8
5	35	Total-tetrafurans	303.9016	24.78	0.000	0.866	0.000	0.084	0.54	0.77	YES	14.5
6	37	Total-pentafurans	339.8597	32.48	9178.609	0.921	0.375	0.375	1.58	1.55	NO	19.9
7	37	Total-pentafurans	339.8597	31.94	0.000	0.921	0.000	0.014	1.07	1.55	YES	2.1
8	3	23478-PeCDF	339.8597	31.46	1252955.156	0.936	52.819	52.819	1.50	1.55	NO	3015.8
9	37	Total-pentafurans	339.8597	31.19	0.000	0.921	0.000	0.055	2.31	1.55	YES	5.0
10	37	Total-pentafurans	339.8597	30.45	0.000	0.921	0.000	0.022	4.84	1.55	YES	7.9
11	37	Total-pentafurans	339.8597	30.32	0.000	0.921	0.000	0.865	3.06	1.55	YES	90.9
12	2	12378-PeCDF	339.8597	30.11	1355362.938	0.907	53.713	53.713	1.56	1.55	NO	3265.6
13	37	Total-pentafurans	339.8597	29.75	0.000	0.921	0.000	0.154	0.87	1.55	YES	8.8
14	37	Total-pentafurans	339.8597	29.05	11255.413	0.921	0.459	0.459	1.61	1.55	NO	21.9
15	6	123678-HxCDF	373.8208	35.25	1120852.001	1.048	52.617	52.617	1.21	1.24	NO	2261.1
16	4	123478-HxCDF	373.8208	35.11	1011047.313	1.082	52.427	52.427	1.21	1.24	NO	2170.1
17	38	Total-hexafurans	373.8208	33.61	3730.690	1.055	0.198	0.198	1.06	1.24	NO	8.6
18	38	Total-hexafurans	373.8208	37.57	0.000	1.055	0.000	0.019				9.2
19	7	123789-HxCDF	373.8208	37.34	816130.219	1.020	52.352	52.352	1.24	1.24	NO	1660.9
20	5	234678-HxCDF	373.8208	36.20	1074234.251	1.070	56.046	56.046	1.20	1.24	NO	2286.1
21	9	1234789-HpCDF	407.7818	42.04	703698.313	1.254	52.043	52.043	1.02	1.05	NO	1315.3
22	39	Total-heptafurans	407.7818	39.86	0.000	1.234	0.000	0.050	3.05	1.05	YES	4.5
23	39	Total-heptafurans	407.7818	39.63	0.000	1.234	0.000	0.077	6.81	1.05	YES	13.7
24	8	1234678-HpCDF	407.7818	39.36	947440.781	1.214	56.084	56.084	1.03	1.05	NO	1997.6
25	10	OCDF	441.7428	47.26	981505.282	1.105	112.574	112....	0.88	0.89	NO	1595.8
26	11	2378-TCDD	319.8965	26.63	237142.415	1.046	10.535	10.535	0.78	0.77	NO	1598.0
27	41	Total-tetradioxins	319.8965	26.26	6985.174	1.046	0.310	0.310	0.77	0.77	NO	43.1
28	41	Total-tetradioxins	319.8965	25.97	0.000	1.046	0.000	0.017	4.34	0.77	YES	14.9
29	42	Total-pentadioxins	355.8546	32.03	0.000	0.973	0.000	0.033	1.77	1.55	NO	4.3
30	42	Total-pentadioxins	355.8546	31.91	0.000	0.973	0.000	0.020	9.37	1.55	YES	20.8
31	12	12378-PeCDD	355.8546	31.71	840213.657	0.973	54.630	54.630	1.58	1.55	NO	3549.9
32	42	Total-pentadioxins	355.8546	31.02	1708.933	0.973	0.111	0.111	1.73	1.55	NO	7.9
33	13	123478-HxCDD	389.8157	36.33	761806.625	0.935	55.293	55.293	1.26	1.24	NO	3402.3
34	43	Total-hexadioxins	389.8157	37.12	0.000	0.884	0.000	0.247	0.56	1.24	YES	17.9
35	15	123789-HxCDD	389.8157	36.88	723152.125	0.839	55.426	55.426	1.22	1.24	NO	2885.0
36	43	Total-hexadioxins	389.8157	36.70	0.000	0.884	0.000	0.124	0.63	1.24	YES	13.8
37	14	123678-HxCDD	389.8157	36.46	774362.313	0.878	53.856	53.856	1.24	1.24	NO	3255.1
38	44	Total-heptadioxins	423.7766	41.42	0.000	0.974	0.000	0.083	2.97	1.05	YES	15.8
39	16	1234678-HpCDD	423.7766	41.16	614754.001	0.974	53.805	53.805	1.06	1.05	NO	1777.3
40	44	Total-heptadioxins	423.7766	39.90	0.000	0.974	0.000	0.344	1.53	1.05	YES	17.2
41	17	OCDD	457.7377	46.99	814317.781	0.950	108.652	108....	0.84	0.89	NO	1957.1

Quantify Totals Report MassLynx 4.1 SCN 714
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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	21.42	0.000							4.9
2	48	FUNCTION1 PFK	330.9792	26.05	0.000							3.9
3	48	FUNCTION1 PFK	330.9792	25.35	0.000							2.6
4	48	FUNCTION1 PFK	330.9792	23.46	0.000							4.4
5	48	FUNCTION1 PFK	330.9792	23.39	0.000							5.4
6	48	FUNCTION1 PFK	330.9792	23.27	0.000							4.6
7	48	FUNCTION1 PFK	330.9792	22.19	0.000							3.2

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	30.62	0.000		0.000					3.0
2	49	FUNCTION2 PFK	366.9792	29.76	0.000		0.000					2.0

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	37.40	0.000		0.000					3.2
2	50	FUNCTION3 PFK	380.9760	35.82	0.000		0.000					4.8

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	40.35	0.000							1.9
2	51	FUNCTION4 PFK	430.9728	40.32	0.000							2.0
3	51	FUNCTION4 PFK	430.9728	39.87	0.000							1.3
4	51	FUNCTION4 PFK	430.9728	44.63	0.000							1.1
5	51	FUNCTION4 PFK	430.9728	44.58	0.000							1.6
6	51	FUNCTION4 PFK	430.9728	42.50	0.000							0.8
7	51	FUNCTION4 PFK	430.9728	42.19	0.000							1.0
8	51	FUNCTION4 PFK	430.9728	41.72	0.000							1.8
9	51	FUNCTION4 PFK	430.9728	41.55	0.000							0.7
10	51	FUNCTION4 PFK	430.9728	40.92	0.000							1.8
11	51	FUNCTION4 PFK	430.9728	40.87	0.000							2.0
12	51	FUNCTION4 PFK	430.9728	40.69	0.000							1.1
13	51	FUNCTION4 PFK	430.9728	40.61	0.000							0.6

Quantify Totals Report MassLynx 4.1 SCN 714
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PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	45.72	0.000							2.0
2	52	FUNCTION5 PFK	480.9696	45.56	0.000							1.3
3	52	FUNCTION5 PFK	480.9696	45.26	0.000							1.3
4	52	FUNCTION5 PFK	480.9696	44.94	0.000							0.8
5	52	FUNCTION5 PFK	480.9696	44.79	0.000							0.4
6	52	FUNCTION5 PFK	480.9696	48.53	0.000							1.3
7	52	FUNCTION5 PFK	480.9696	48.39	0.000							1.9
8	52	FUNCTION5 PFK	480.9696	48.33	0.000							0.5
9	52	FUNCTION5 PFK	480.9696	48.29	0.000							0.8
10	52	FUNCTION5 PFK	480.9696	48.14	0.000							1.4
11	52	FUNCTION5 PFK	480.9696	48.11	0.000							1.3
12	52	FUNCTION5 PFK	480.9696	47.61	0.000							1.5
13	52	FUNCTION5 PFK	480.9696	46.72	0.000							1.4
14	52	FUNCTION5 PFK	480.9696	46.67	0.000							0.6
15	52	FUNCTION5 PFK	480.9696	46.50	0.000							1.1
16	52	FUNCTION5 PFK	480.9696	46.09	0.000							1.5
17	52	FUNCTION5 PFK	480.9696	45.84	0.000							1.4

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	31.31	0.000		0.000					3.7
2	55	FUNCTION2 HPCD...	409.7974	31.69	0.000		0.000					2.5

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	41.14	0.000		0.000					3.1

ETHERS6

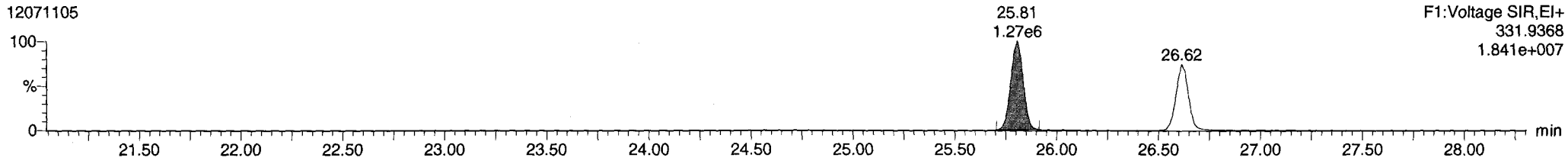
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
Last Altered: Wednesday, July 11, 2012 16:00:18 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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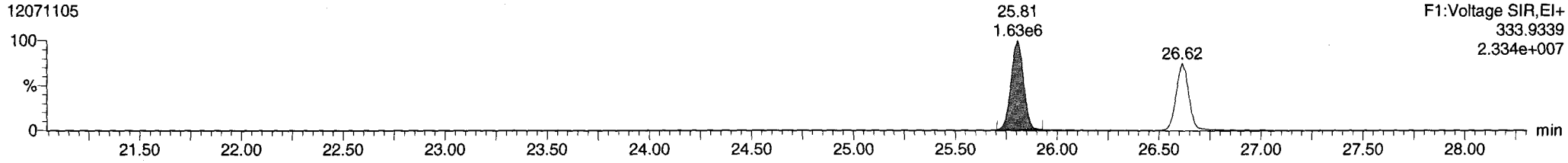

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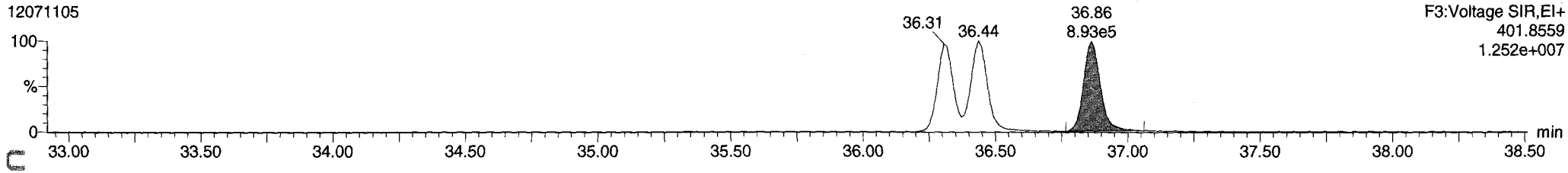

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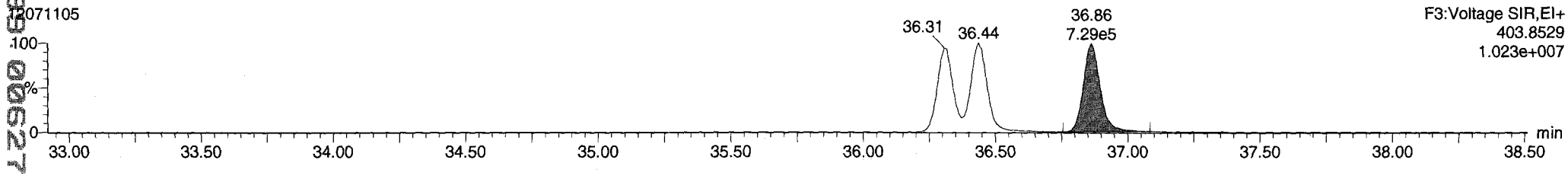

UZ99 060627

Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
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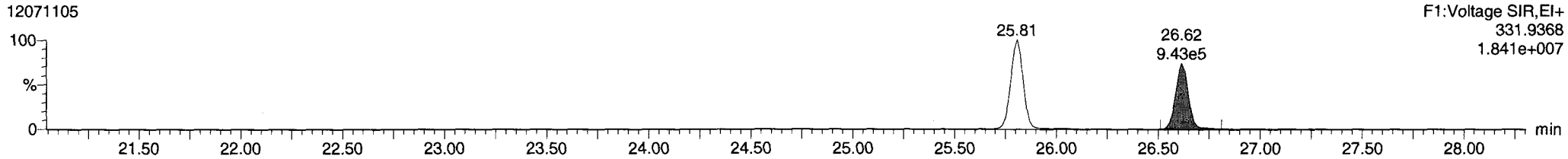
Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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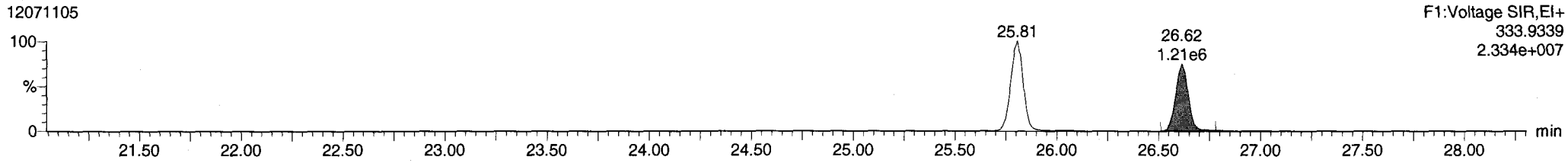
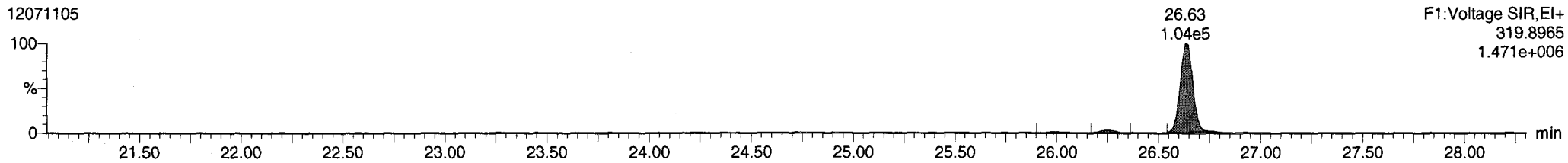
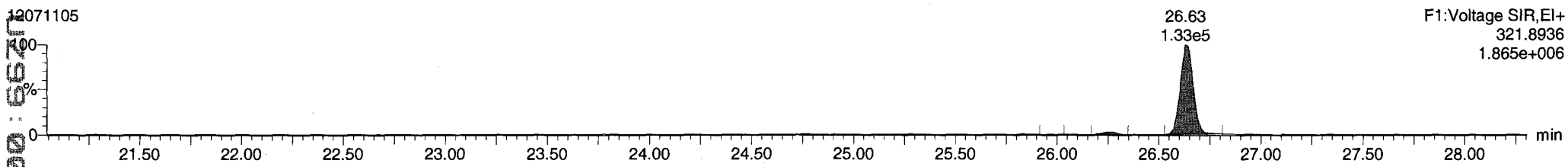


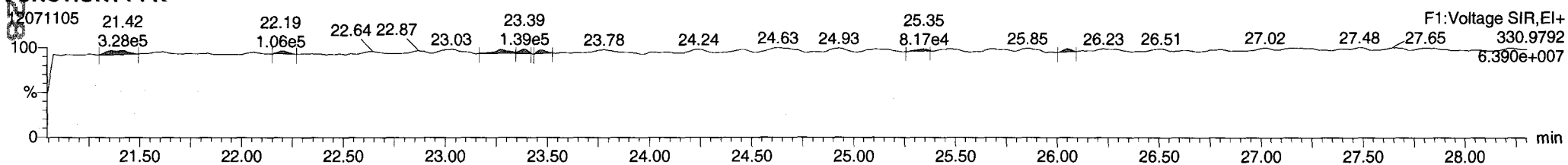
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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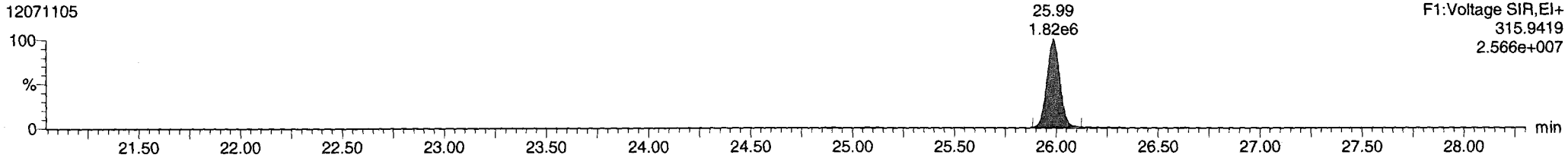
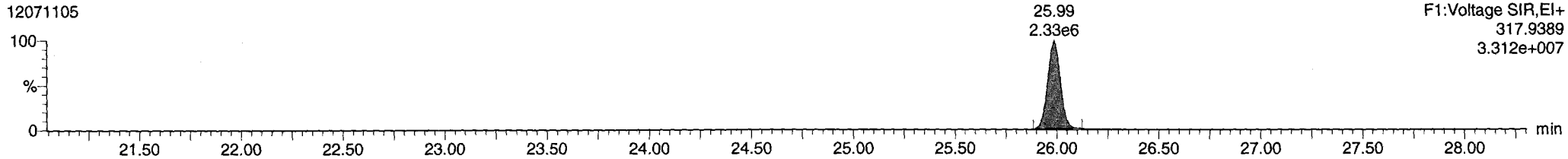
13C-2378-TCDF



13C-2378-TCDF



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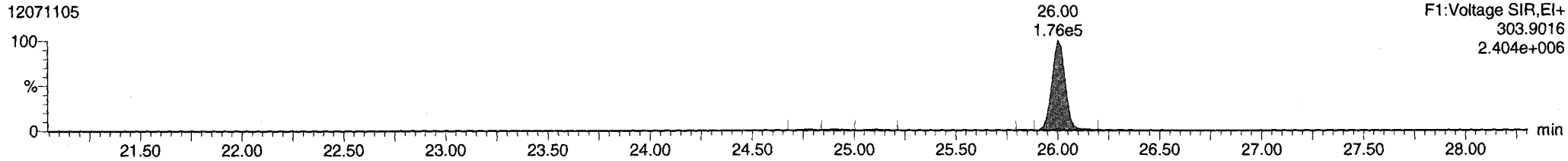

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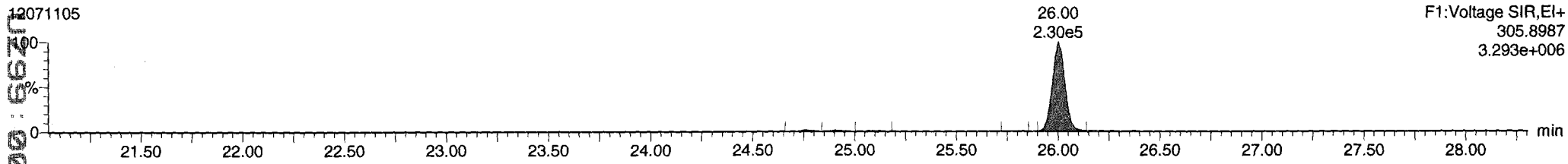

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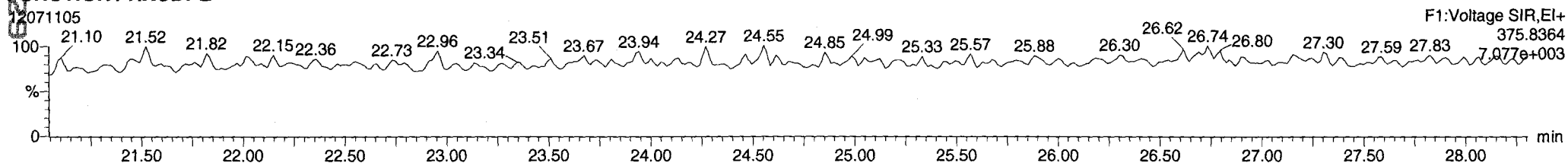

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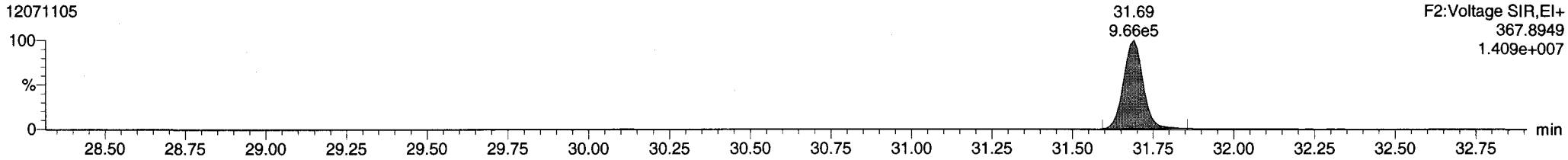
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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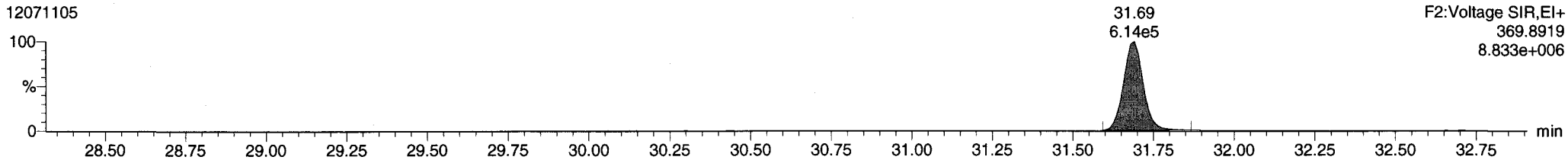
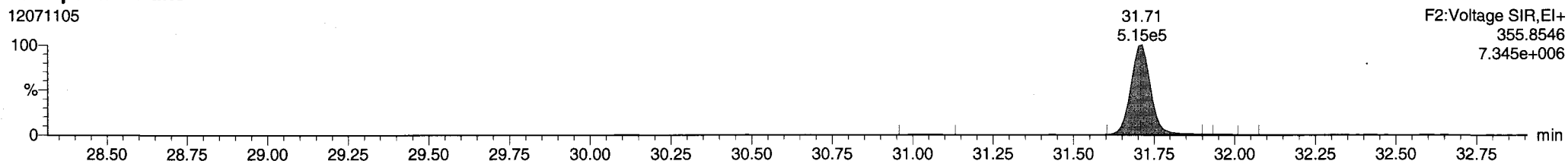
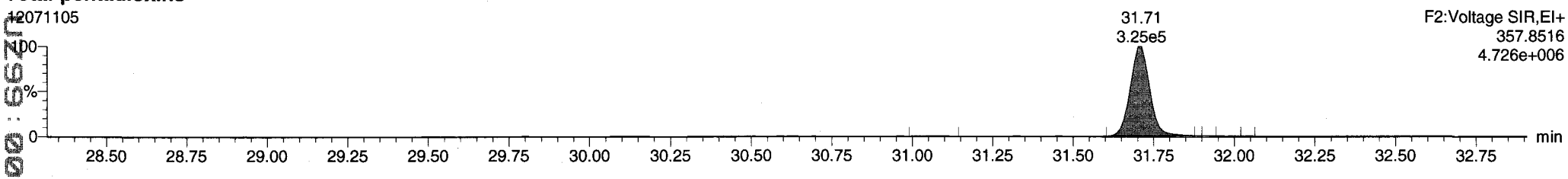


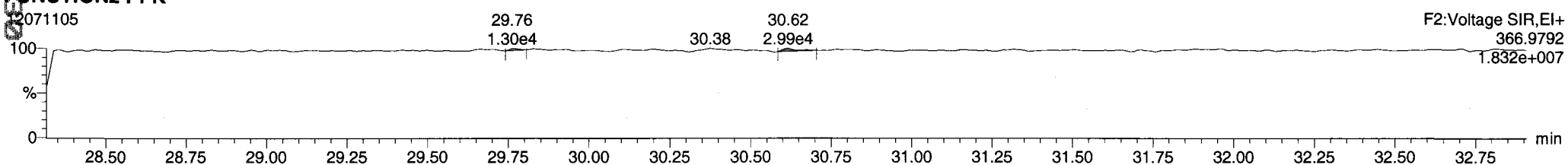
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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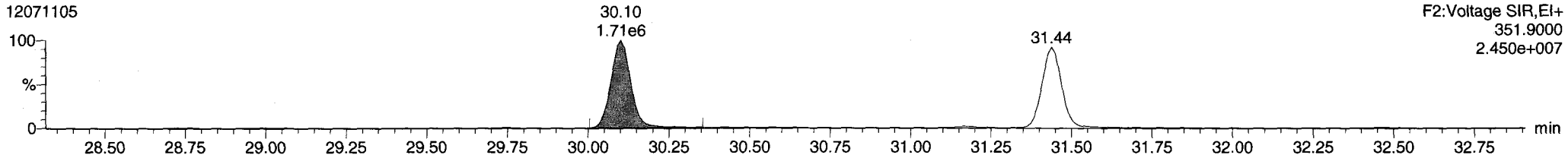
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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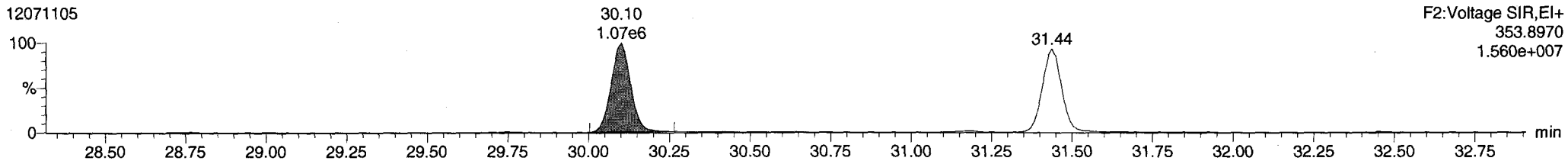

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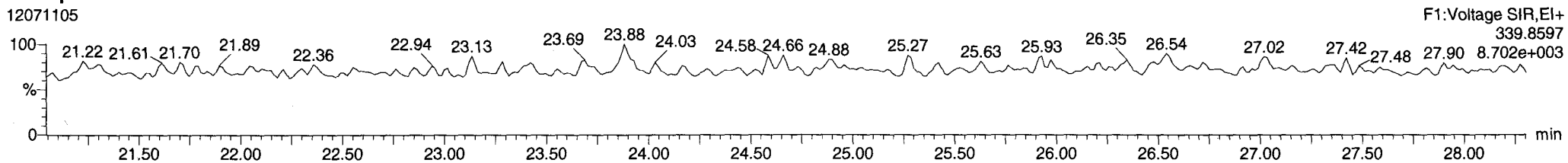

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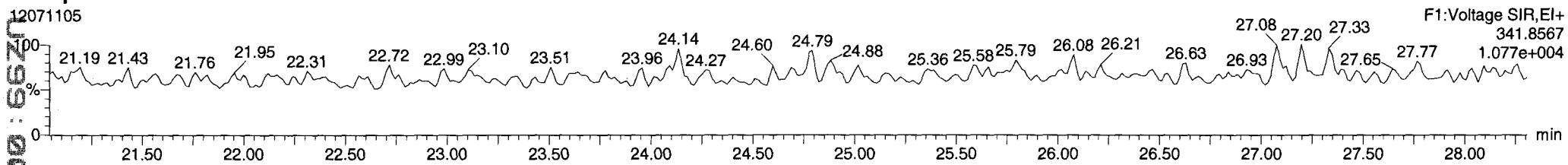
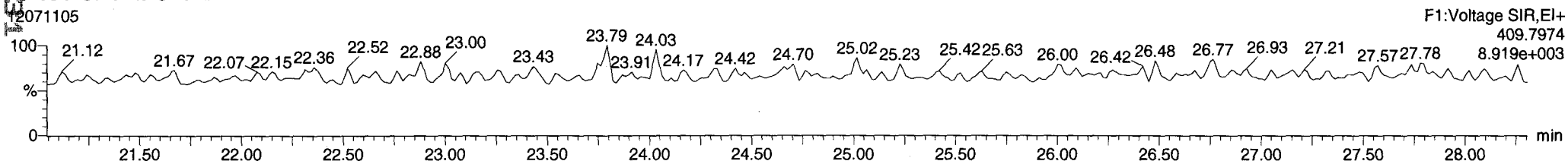


FUNCTION1 HPCDPE



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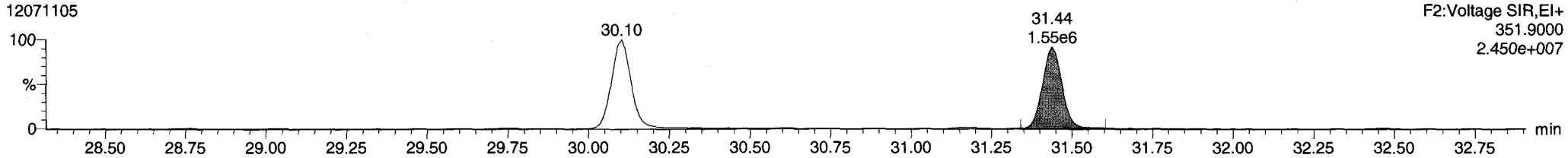
Printed: Wednesday, July 11, 2012 16:06:59 Pacific Daylight Time

Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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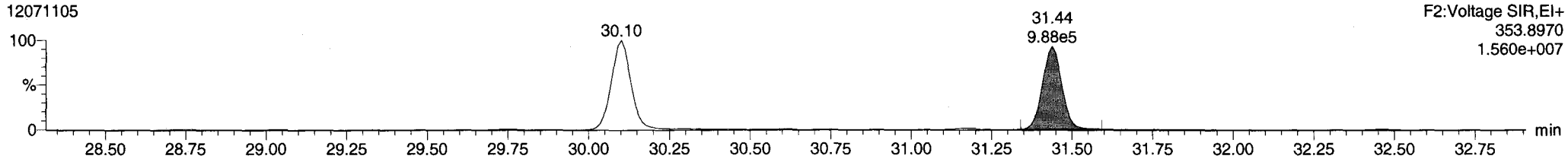
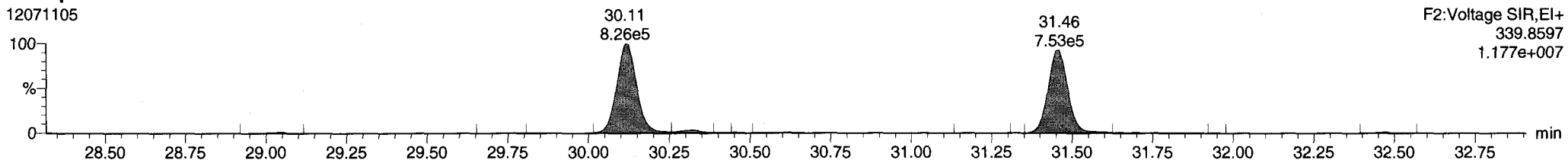
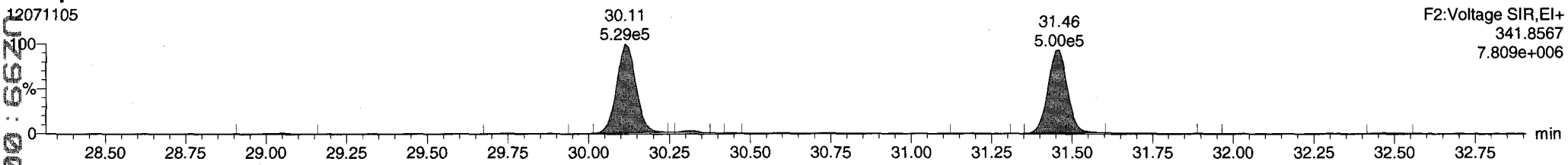


Total-pentafurans



Total-pentafurans



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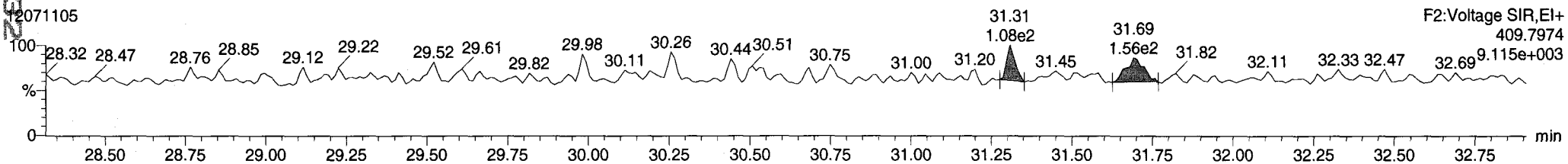

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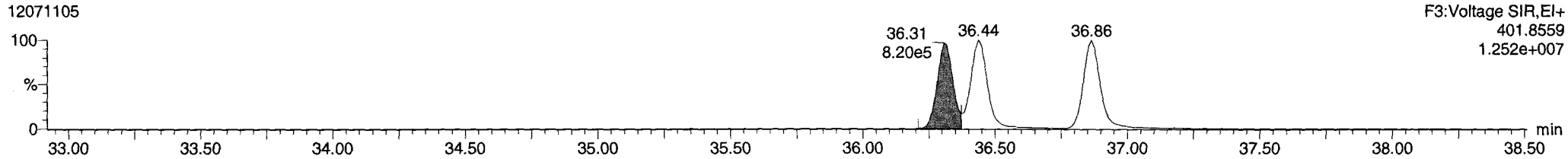
Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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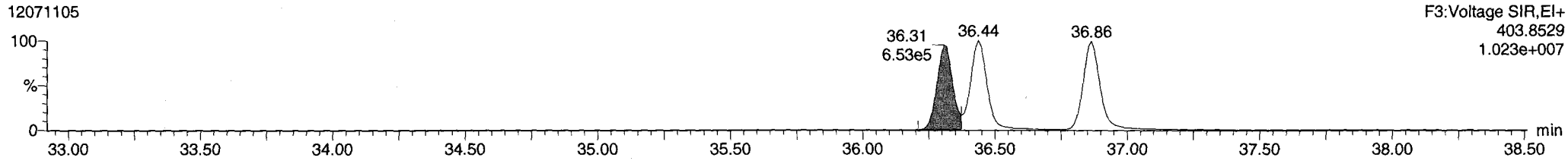

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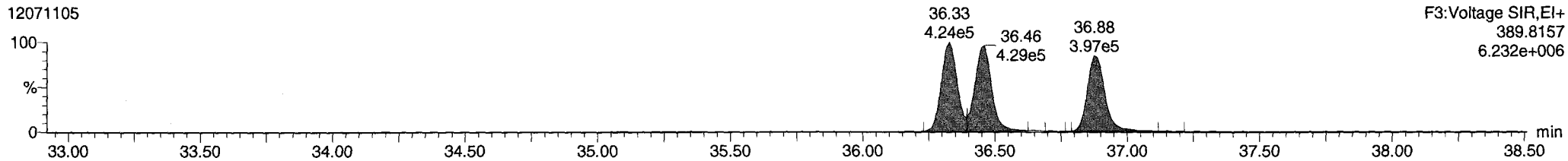
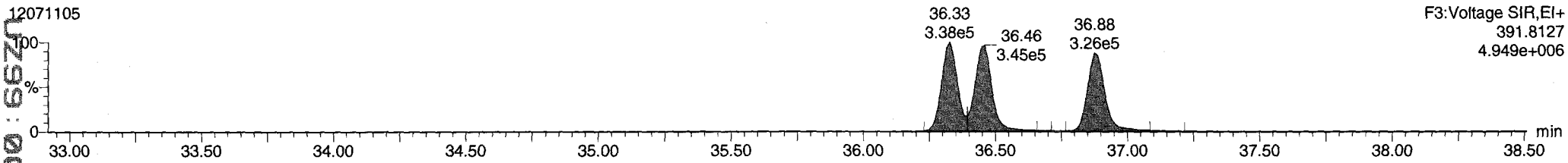
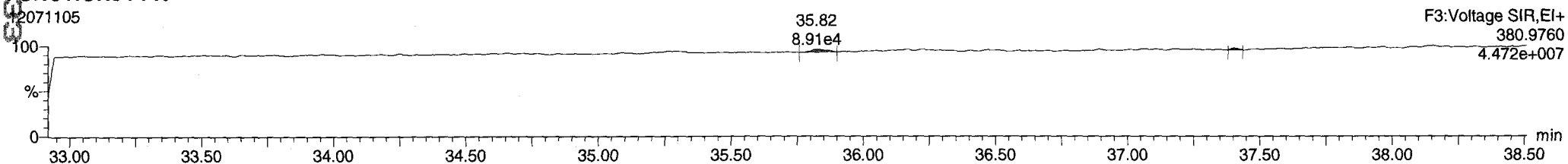


Total-hexadioxins



FUNCTION3 PFK



UZ99 : 00033

Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
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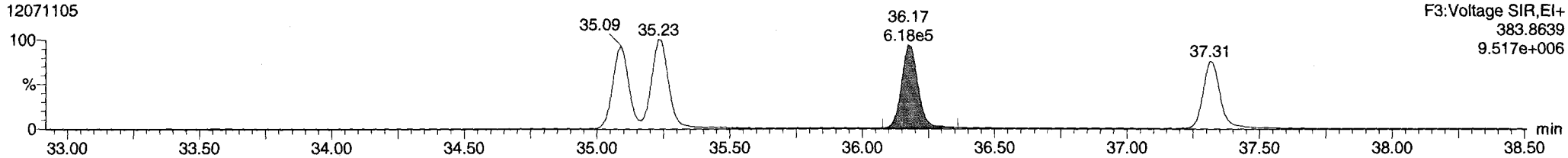
Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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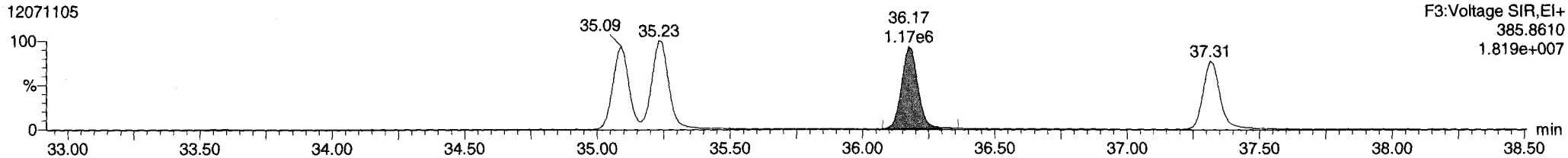

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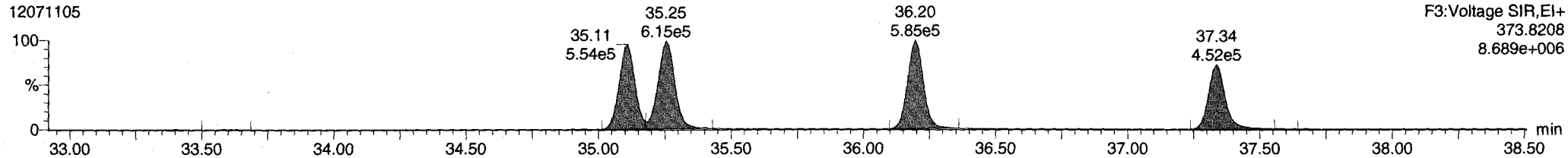
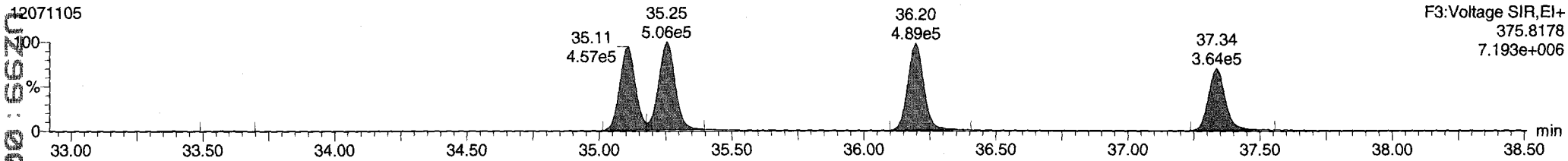
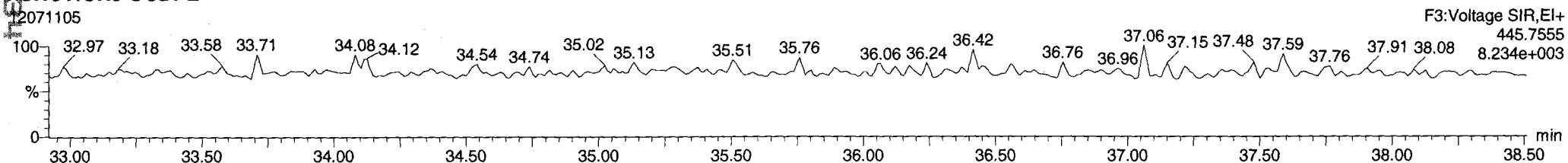


Total-hexafurans



FUNCTION3 OCDPE



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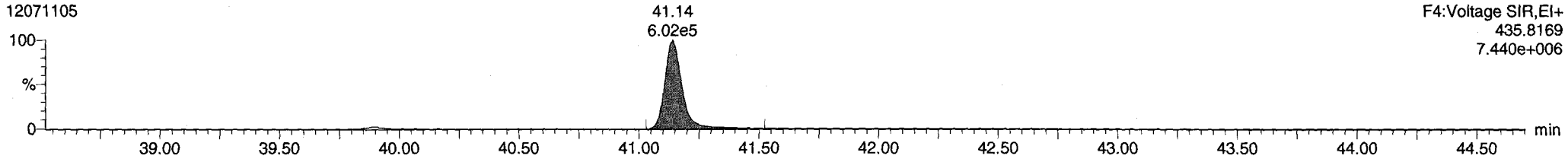
13C-1234678-HpCDD



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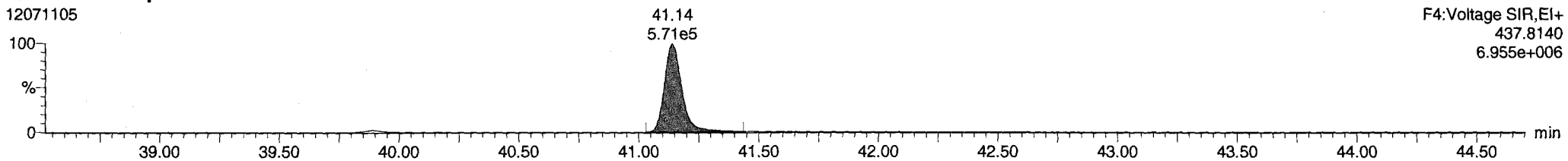
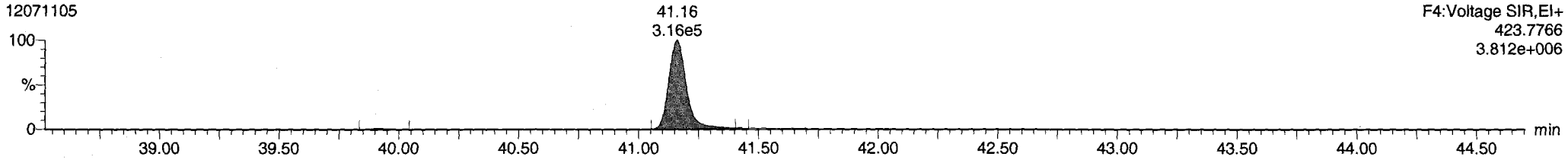


Total-heptadioxins



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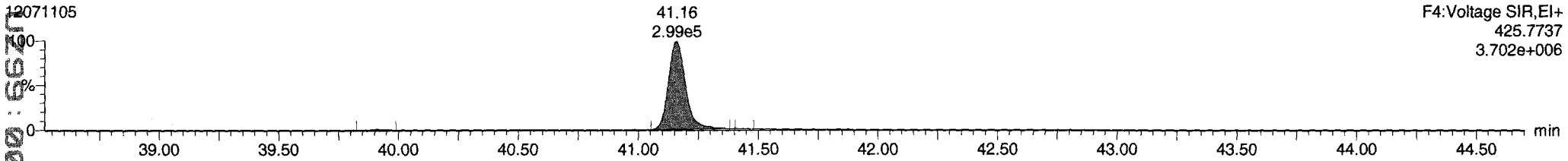
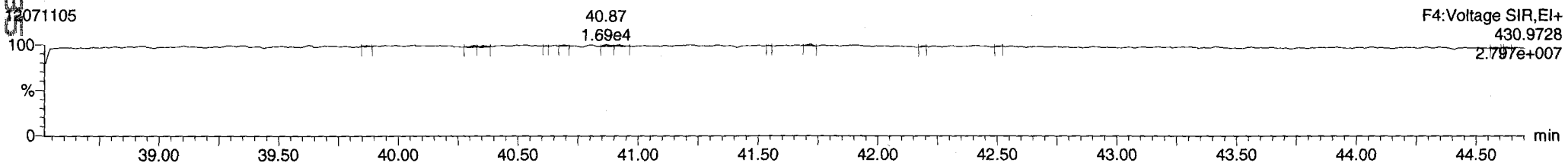


FUNCTION4 PFK



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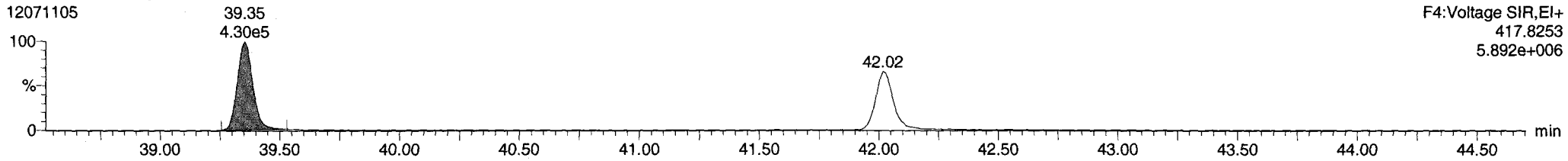
13C-1234678-HpCDF



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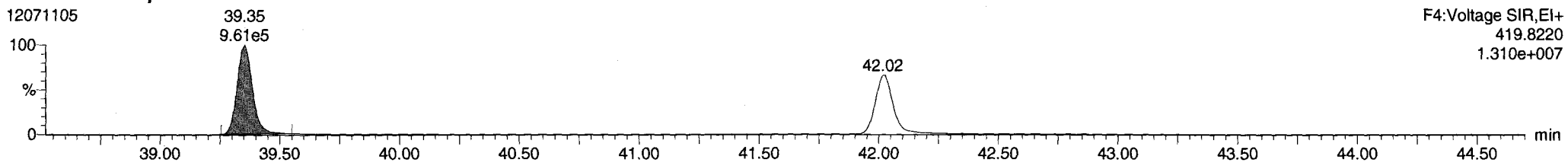
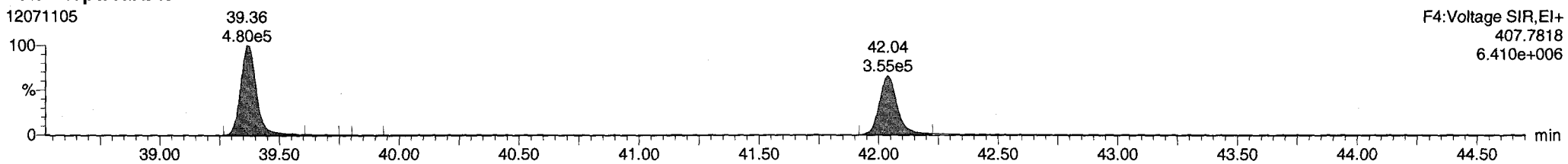


Total-heptafurans



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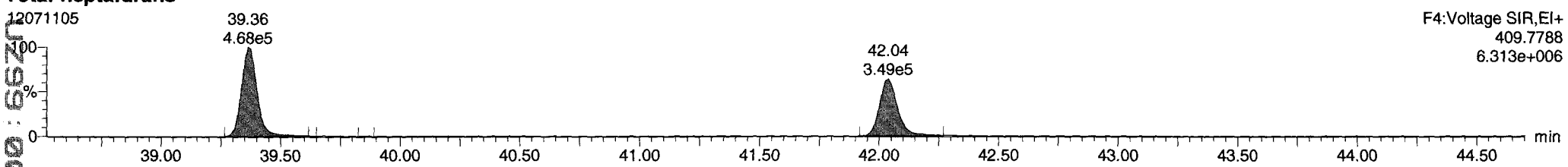
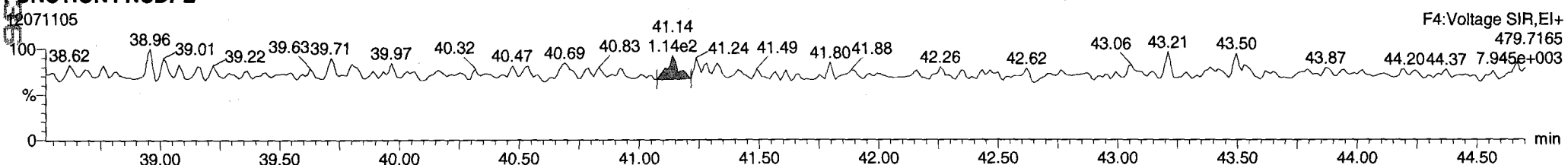


FUNCTION4 NCDPE



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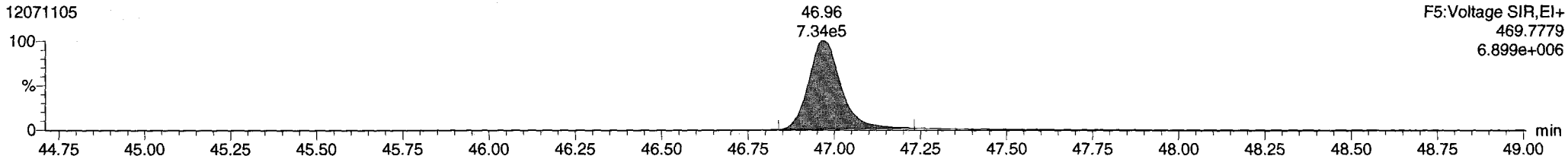
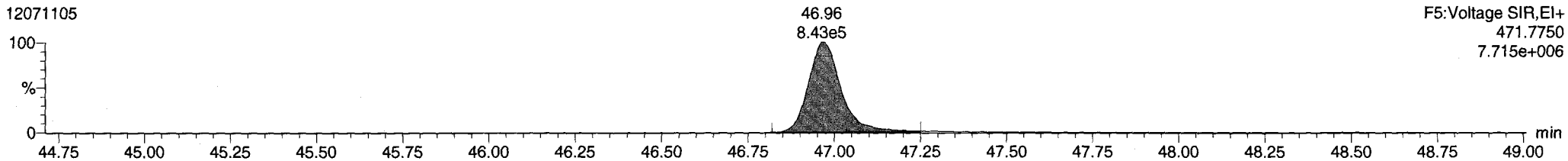
Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

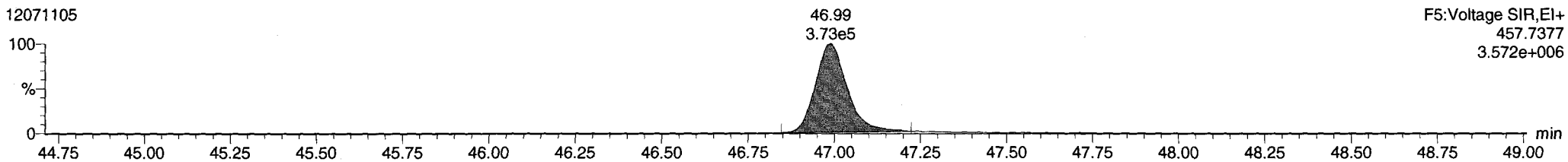
13C-OCDD



13C-OCDD



OCDD



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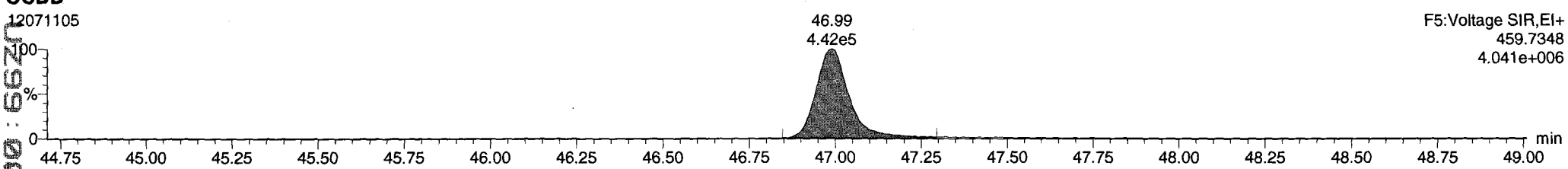
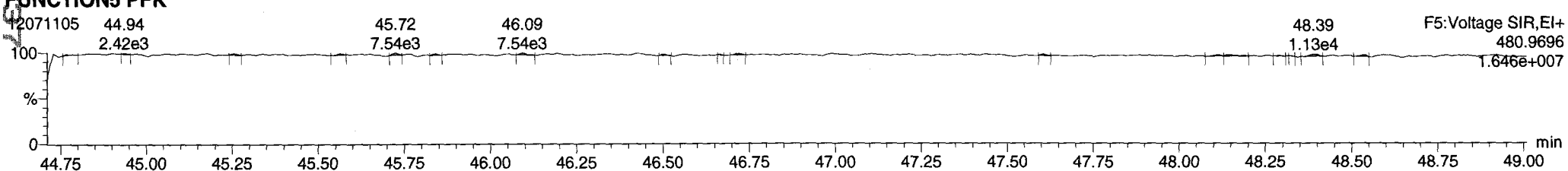


FUNCTION5 PFK



UZ99 : 0037

Dataset: P:\DIOXIN8290.PRO\120711OPR.qld
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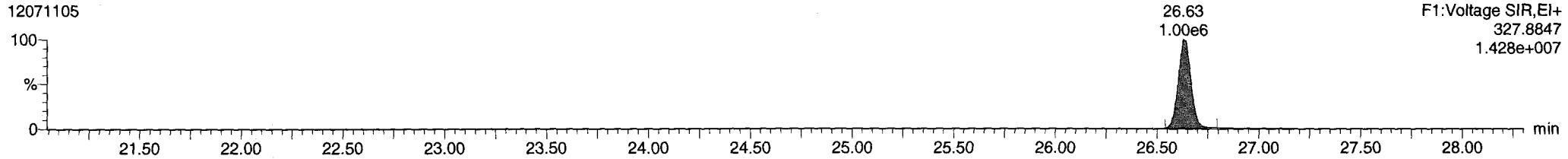
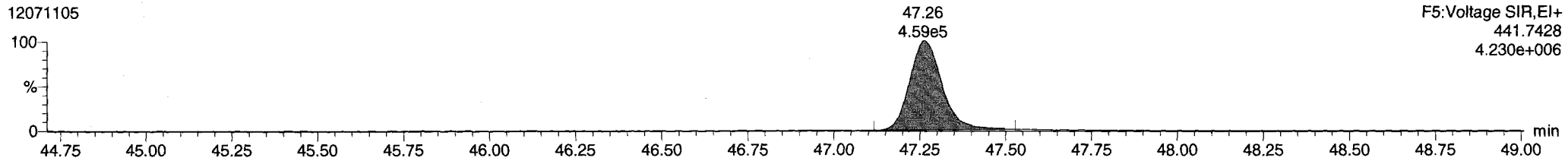
Name: 12071105, Date: 11-Jul-2012, Time: 14:54:45, ID: UZ99OPR, Conditions: AUTOSPEC01, User: pk

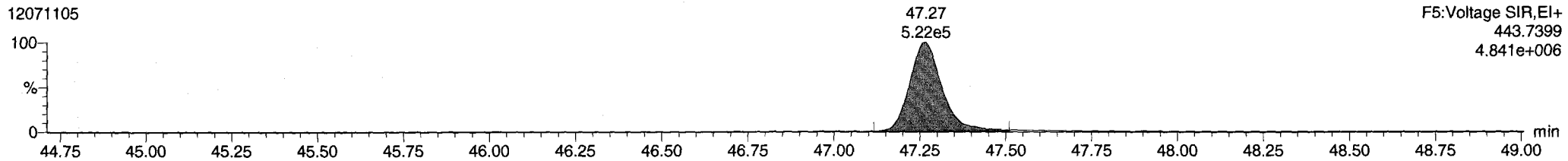
37CL-2378-TCDD



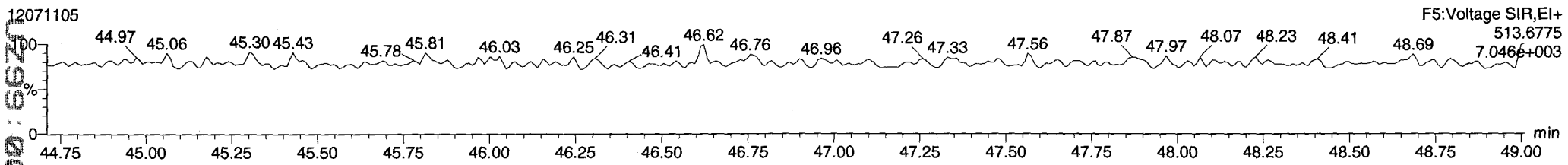
OCDF



OCDF



FUNCTION5 DCDPE



UZ99 : 006538

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
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Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:57:28 Pacific Daylight Time

pk 7/12/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr.	RRF M.	1° Det.	%Rec	1° Ratio	1° Rati	S/N	1°	pg	EMPC
1	1	2378-TCDF	303.9016	26.018	26.004	73454	73454	0.866	dd		0.75	0.77	252.3	NO	1.905	1.905
2	2	12378-PeCDF	339.8597	30.124	30.134	73506	73506	0.907	bd		1.48	1.55	293.2	NO	2.428	2.428
3	3	23478-PeCDF	339.8597	31.461	31.472	88709	88709	0.936	db		1.48	1.55	311.5	NO	2.958	2.958
4	4	123478-HxCDF	373.8208	35.122	35.111	130538	130538	1.082	dd		1.27	1.24	364.6	NO	4.850	4.850
5	5	234678-HxCDF	373.8208	36.207	36.218	89379	89379	1.070	bd		1.19	1.24	209.2	NO	3.356	3.356
6	6	123678-HxCDF	373.8208	35.276	35.275	95754	95754	1.048	db		1.26	1.24	264.6	NO	3.409	3.409
7	7	123789-HxCDF	373.8208	37.326	37.348	24287	24287	1.020	bb		1.10	1.24	55.0	NO	1.040	1.040
8	8	1234678-HpCDF	407.7818	39.397	39.395	428099	428099	1.214	bb		1.01	1.05	1253.5	NO	18.017	18.017
9	9	1234789-HpCDF	407.7818	42.061	42.062	39964	39964	1.254	bb		1.00	1.05	102.1	NO	2.106	2.106
10	10	OCDF	441.7428	47.313	47.299	302659	302659	1.105	bb		0.90	0.89	754.9	NO	25.790	25.790
11	11	2378-TCDD	319.8965	26.646	26.644	9826	9826	1.046	bd		0.72	0.77	38.9	NO	0.378	0.378
12	12	12378-PeCDD	355.8546	31.713	31.712	43678	43678	0.973	bb		1.58	1.55	176.3	NO	2.216	2.216
13	13	123478-HxCDD	389.8157	36.350	36.350	32144	32144	0.935	bd		1.22	1.24	110.8	NO	1.673	1.673
14	14	123678-HxCDD	389.8157	36.471	36.470	85943	85943	0.878	dd		1.23	1.24	283.9	NO	4.354	4.354
15	15	123789-HxCDD	389.8157	36.898	36.861	54272	54272	0.839	bb		1.19	1.24	177.4	NO	3.008	3.008
16	16	1234678-HpCDD	423.7766	41.184	41.185	789316	789316	0.974	bb		1.02	1.05	1203.2	NO	48.720	48.720
17	17	OCDD	457.7377	47.044	47.031	3133346	3133346	0.950	bd		0.89	0.89	4007.3	NO	310.597	310.597
18	18	13C-2378-TCDF	315.9419	25.989	25.989	4452502		1.484	bb	87.4	0.78	0.77	6053.0	NO	87.372	
19	19	13C-12378-PeCDF	351.9000	30.113	30.116	3337683		1.048	bb	92.8	1.58	1.55	9269.0	NO	92.763	
20	20	13C-23478-PeCDF	351.9000	31.450	31.453	3204221		1.003	bb	93.0	1.57	1.55	8794.5	NO	93.021	
21	21	13C-123478-HxCDF	383.8639	35.100	35.100	2487750		1.186	bd	84.6	0.52	0.51	2606.3	NO	84.571	
22	22	13C-123678-HxCDF	383.8639	35.254	35.254	2679175		1.315	dd	82.1	0.51	0.51	2728.7	NO	82.113	
23	23	13C-234678-HxCDF	383.8639	36.196	36.186	2489335		1.223	bb	82.0	0.53	0.51	2744.2	NO	82.019	
24	24	13C-123789-HxCDF	383.8639	37.336	37.325	2289578		1.056	bb	87.3	0.52	0.51	2322.8	NO	87.348	
25	25	13C-1234678-HpCDF	417.8253	39.375	39.375	1956486		1.011	bb	78.0	0.45	0.44	3436.2	NO	77.967	
26	26	13C-1234789-HpCDF	417.8253	42.050	42.038	1512884		0.741	bd	82.3	0.46	0.44	2245.8	NO	82.341	
27	27	13C-1234-TCDD	331.9368	25.809	25.839	3433029		1.000	bb	100.0	0.79	0.77	5590.6	NO	100.000	
28	28	13C-2378-TCDD	331.9368	26.631	26.616	2486738		0.956	bb	75.7	0.78	0.77	3898.6	NO	75.740	
29	29	13C-12378-PeCDD	367.8949	31.702	31.705	2025056		0.663	bb	88.9	1.59	1.55	8757.2	NO	88.910	
30	30	13C-123478-HxCDD	401.8559	36.328	36.328	2053771		1.024	bd	80.8	1.26	1.24	5199.0	NO	80.845	
31	31	13C-123678-HxCDD	401.8559	36.459	36.449	2248639		1.113	db	81.5	1.25	1.24	5423.9	NO	81.458	
32	32	13C-1234678-HpCDD	435.8169	41.173	41.161	1662851		0.815	bb	82.2	1.07	1.05	3924.8	NO	82.223	
33	33	13C-OCDD	469.7779	47.017	47.011	2123653		0.717	bd	59.7	0.89	0.89	3402.2	NO	119.365	

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:57:28 Pacific Daylight Time

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

	#	Name	Trace	RT	Pred.RT	Abs.Resp	Abs. Corr.	RRF M.	1° Det.	%Rec	1° Ratio	1° Rati	S/N	1°	pg	EMPC
34	34	13C-123789-HxCDD	401.8559	36.876	36.909	2481073		1.000	bb	100.0	1.24	1.24	5999.6	NO	100.000	
35	35	Total-tetrafurans	303.9016		25.030			0.866							32.598	34.416
36	36	Total-penta1	339.8597		27.840										9.314	9.314 43207
37	37	Total-pentafurans	339.8597		30.410			0.921						39.085	29.771	33.893
38	38	Total-hexafurans	373.8208		35.390			1.055							40.252	40.991
39	39	Total-heptafurans	407.7818		40.740			1.234							39.353	39.353
40	40	Total-Furans	303.9016		0.000			1.050							177.077	183.756
41	41	Total-tetradioxins	319.8965		25.540			1.046							20.938	21.413
42	42	Total-pentadioxins	355.8546		30.580			0.973							28.293	28.302
43	43	Total-hexadioxins	389.8157		35.570			0.884							42.503	43.185
44	44	Total-heptadioxins	423.7766		40.560			0.974							88.481	88.481
45	45	Total-Dioxins	319.8965		0.000			0.942							490.813	491.978
46	46	Total-TEQ	319.8965		0.000										667.889	675.735
47	47	37CL-2378-TCDD	327.8847	26.646	26.609	1149812		1.037					4521.6		32.293	
48	48	FUNCTION1 PFK	330.9792		0.000											
49	49	FUNCTION2 PFK	366.9792		0.000										0.000	
50	50	FUNCTION3 PFK	380.9760		0.000											
51	51	FUNCTION4 PFK	430.9728		0.000											
52	52	FUNCTION5 PFK	480.9696		0.000											
53	53	FUNCTION1 HXCDPE	375.8364		0.000										0.000	
54	54	FUNCTION1 HPCDPE	409.7974		0.000											
55	55	FUNCTION2 HPCDPE	409.7974		0.000										0.000	
56	56	FUNCTION3 OCDPE	445.7555		0.000										0.000	
57	57	FUNCTION4 NCDPE	479.7165		0.000										0.000	
58	58	FUNCTION5 DCDPE	513.6775		0.000										0.000	

006410 : 0029

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.11	55190.562	0.866	1.431	1.431	0.77	0.77	NO	192.6
2	35	Total-tetrafurans	303.9016	24.93	98854.539	0.866	2.563	2.563	0.77	0.77	NO	303.0
3	35	Total-tetrafurans	303.9016	24.78	45589.762	0.866	1.182	1.182	0.78	0.77	NO	162.8
4	35	Total-tetrafurans	303.9016	24.69	139092.606	0.866	3.607	3.607	0.75	0.77	NO	336.0
5	35	Total-tetrafurans	303.9016	24.26	43326.676	0.866	1.124	1.124	0.77	0.77	NO	158.0
6	35	Total-tetrafurans	303.9016	24.12	33382.228	0.866	0.866	0.866	0.68	0.77	NO	113.9
7	35	Total-tetrafurans	303.9016	24.02	37869.072	0.866	0.982	0.982	0.76	0.77	NO	126.7
8	35	Total-tetrafurans	303.9016	23.85	39187.340	0.866	1.016	1.016	0.80	0.77	NO	137.2
9	35	Total-tetrafurans	303.9016	23.78	24559.065	0.866	0.637	0.637	0.75	0.77	NO	93.4
10	35	Total-tetrafurans	303.9016	23.67	0.000	0.866	0.000	1.518	0.63	0.77	YES	194.0
11	35	Total-tetrafurans	303.9016	23.55	125424.723	0.866	3.252	3.252	0.82	0.77	NO	248.2
12	35	Total-tetrafurans	303.9016	23.37	94691.305	0.866	2.455	2.455	0.78	0.77	NO	257.5
13	35	Total-tetrafurans	303.9016	22.79	43452.523	0.866	1.127	1.127	0.70	0.77	NO	147.4
14	35	Total-tetrafurans	303.9016	22.52	39218.162	0.866	1.017	1.017	0.73	0.77	NO	135.6
15	35	Total-tetrafurans	303.9016	27.48	4953.796	0.866	0.128	0.128	0.67	0.77	NO	21.8
16	35	Total-tetrafurans	303.9016	27.45	0.000	0.866	0.000	0.160	1.04	0.77	YES	20.7
17	35	Total-tetrafurans	303.9016	26.68	492.402	0.866	0.013	0.013	0.67	0.77	NO	2.1
18	35	Total-tetrafurans	303.9016	26.50	4075.577	0.866	0.106	0.106	0.67	0.77	NO	15.4
19	35	Total-tetrafurans	303.9016	26.24	104550.543	0.866	2.711	2.711	0.77	0.77	NO	355.4
20	35	Total-tetrafurans	303.9016	26.14	55864.735	0.866	1.449	1.449	0.72	0.77	NO	198.6
21	1	2378-TCDF	303.9016	26.02	73454.065	0.866	1.905	1.905	0.75	0.77	NO	252.3
22	35	Total-tetrafurans	303.9016	25.78	103056.492	0.866	2.672	2.672	0.70	0.77	NO	223.2
23	35	Total-tetrafurans	303.9016	25.63	0.000	0.866	0.000	0.141	0.57	0.77	YES	21.3
24	35	Total-tetrafurans	303.9016	25.51	49254.664	0.866	1.277	1.277	0.72	0.77	NO	160.4
25	35	Total-tetrafurans	303.9016	25.33	41560.650	0.866	1.078	1.078	0.74	0.77	NO	139.3

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27.41	279368.649		9.314	9.314	1.49	1.55	NO	2472.1

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
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Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339.8597	29.05	0.000	0.921	0.000	2.537	1.84	1.55	YES	419.3
2	37	Total-pentafurans	339.8597	28.98	179164.820	0.921	5.945	5.945	1.38	1.55	NO	673.9
3	37	Total-pentafurans	339.8597	28.85	116668.235	0.921	3.871	3.871	1.57	1.55	NO	366.2
4	37	Total-pentafurans	339.8597	28.76	0.000	0.921	0.000	0.887	1.13	1.55	YES	145.8
5	37	Total-pentafurans	339.8597	32.49	7940.562	0.921	0.263	0.263	1.57	1.55	NO	31.9
6	3	23478-PeCDF	339.8597	31.46	88708.566	0.936	2.958	2.958	1.48	1.55	NO	311.5
7	37	Total-pentafurans	339.8597	31.32	0.000	0.921	0.000	0.500	1.94	1.55	YES	77.1
8	37	Total-pentafurans	339.8597	31.20	98376.101	0.921	3.264	3.264	1.55	1.55	NO	364.2
9	37	Total-pentafurans	339.8597	30.96	9667.410	0.921	0.321	0.321	1.65	1.55	NO	41.5
10	37	Total-pentafurans	339.8597	30.60	0.000	0.921	0.000	0.198	2.00	1.55	YES	28.4
11	37	Total-pentafurans	339.8597	30.43	45406.893	0.921	1.507	1.507	1.46	1.55	NO	174.1
12	37	Total-pentafurans	339.8597	30.32	60165.967	0.921	1.996	1.996	1.63	1.55	NO	238.9
13	2	12378-PeCDF	339.8597	30.12	73506.135	0.907	2.428	2.428	1.48	1.55	NO	293.2
14	37	Total-pentafurans	339.8597	29.78	138961.512	0.921	4.611	4.611	1.52	1.55	NO	336.8
15	37	Total-pentafurans	339.8597	29.67	10742.110	0.921	0.356	0.356	1.67	1.55	NO	46.1
16	37	Total-pentafurans	339.8597	29.55	43918.535	0.921	1.457	1.457	1.68	1.55	NO	156.1
17	37	Total-pentafurans	339.8597	29.36	12624.290	0.921	0.419	0.419	1.70	1.55	NO	56.0
18	37	Total-pentafurans	339.8597	29.17	11272.876	0.921	0.374	0.374	1.55	1.55	NO	45.6

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38	Total-hexafurans	373.8208	35.63	0.000	1.055	0.000	0.469	1.45	1.24	YES	43.4
2	38	Total-hexafurans	373.8208	35.49	0.000	1.055	0.000	0.252	1.63	1.24	YES	24.1
3	6	123678-HxCDF	373.8208	35.28	95753.551	1.048	3.409	3.409	1.26	1.24	NO	264.6
4	4	123478-HxCDF	373.8208	35.12	130538.496	1.082	4.850	4.850	1.27	1.24	NO	364.6
5	38	Total-hexafurans	373.8208	34.96	84595.148	1.055	3.225	3.225	1.22	1.24	NO	241.1
6	38	Total-hexafurans	373.8208	34.48	168247.664	1.055	6.414	6.414	1.19	1.24	NO	488.6
7	38	Total-hexafurans	373.8208	34.15	17729.536	1.055	0.676	0.676	1.27	1.24	NO	50.3
8	38	Total-hexafurans	373.8208	33.88	11900.479	1.055	0.454	0.454	1.20	1.24	NO	29.3
9	38	Total-hexafurans	373.8208	33.61	326805.984	1.055	12.458	12.458	1.23	1.24	NO	746.5
10	38	Total-hexafurans	373.8208	33.40	103601.469	1.055	3.949	3.949	1.26	1.24	NO	307.1
11	7	123789-HxCDF	373.8208	37.33	24287.138	1.020	1.040	1.040	1.10	1.24	NO	55.0
12	38	Total-hexafurans	373.8208	36.37	0.000	1.055	0.000	0.018	0.92	1.24	YES	2.9
13	5	234678-HxCDF	373.8208	36.21	89378.547	1.070	3.356	3.356	1.19	1.24	NO	209.2
14	38	Total-hexafurans	373.8208	35.83	11049.345	1.055	0.421	0.421	1.27	1.24	NO	34.3

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39	Total-heptafurans	407.7818	39.88	31977.233	1.234	1.494	1.494	1.10	1.05	NO	99.1
2	8	1234678-HpCDF	407.7818	39.40	428099.484	1.214	18.017	18.017	1.01	1.05	NO	1253.5
3	9	1234789-HpCDF	407.7818	42.06	39963.967	1.254	2.106	2.106	1.00	1.05	NO	102.1
4	39	Total-heptafurans	407.7818	40.18	379724.047	1.234	17.735	17.735	1.00	1.05	NO	1091.0

Quantify Totals Report MassLynx 4.1 SCN 714
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Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.11	55190.562	0.866	1.431	1.431	0.77	0.77	NO	192.6
2	35	Total-tetrafurans	303.9016	24.93	98854.539	0.866	2.563	2.563	0.77	0.77	NO	303.0
3	35	Total-tetrafurans	303.9016	24.78	45589.762	0.866	1.182	1.182	0.78	0.77	NO	162.8
4	35	Total-tetrafurans	303.9016	24.69	139092.606	0.866	3.607	3.607	0.75	0.77	NO	336.0
5	35	Total-tetrafurans	303.9016	24.26	43326.676	0.866	1.124	1.124	0.77	0.77	NO	158.0
6	35	Total-tetrafurans	303.9016	24.12	33382.228	0.866	0.866	0.866	0.68	0.77	NO	113.9
7	35	Total-tetrafurans	303.9016	24.02	37869.072	0.866	0.982	0.982	0.76	0.77	NO	126.7
8	35	Total-tetrafurans	303.9016	23.85	39187.340	0.866	1.016	1.016	0.80	0.77	NO	137.2
9	35	Total-tetrafurans	303.9016	23.78	24559.065	0.866	0.637	0.637	0.75	0.77	NO	93.4
10	35	Total-tetrafurans	303.9016	23.67	0.000	0.866	0.000	1.518	0.63	0.77	YES	194.0
11	35	Total-tetrafurans	303.9016	23.55	125424.723	0.866	3.252	3.252	0.82	0.77	NO	248.2
12	35	Total-tetrafurans	303.9016	23.37	94691.305	0.866	2.455	2.455	0.78	0.77	NO	257.5
13	35	Total-tetrafurans	303.9016	22.79	43452.523	0.866	1.127	1.127	0.70	0.77	NO	147.4
14	35	Total-tetrafurans	303.9016	22.52	39218.162	0.866	1.017	1.017	0.73	0.77	NO	135.6
15	35	Total-tetrafurans	303.9016	27.48	4953.796	0.866	0.128	0.128	0.67	0.77	NO	21.8
16	35	Total-tetrafurans	303.9016	27.45	0.000	0.866	0.000	0.160	1.04	0.77	YES	20.7
17	35	Total-tetrafurans	303.9016	26.68	492.402	0.866	0.013	0.013	0.67	0.77	NO	2.1
18	35	Total-tetrafurans	303.9016	26.50	4075.577	0.866	0.106	0.106	0.67	0.77	NO	15.4
19	35	Total-tetrafurans	303.9016	26.24	104550.543	0.866	2.711	2.711	0.77	0.77	NO	355.4
20	35	Total-tetrafurans	303.9016	26.14	55864.735	0.866	1.449	1.449	0.72	0.77	NO	198.6
21	1	2378-TCDF	303.9016	26.02	73454.065	0.866	1.905	1.905	0.75	0.77	NO	252.3
22	35	Total-tetrafurans	303.9016	25.78	103056.492	0.866	2.672	2.672	0.70	0.77	NO	223.2
23	35	Total-tetrafurans	303.9016	25.63	0.000	0.866	0.000	0.141	0.57	0.77	YES	21.3
24	35	Total-tetrafurans	303.9016	25.51	49254.664	0.866	1.277	1.277	0.72	0.77	NO	160.4
25	35	Total-tetrafurans	303.9016	25.33	41560.650	0.866	1.078	1.078	0.74	0.77	NO	139.3
26	37	Total-pentafurans	339.8597	29.05	0.000	0.921	0.000	2.537	1.84	1.55	YES	419.3
27	37	Total-pentafurans	339.8597	28.98	179164.820	0.921	5.945	5.945	1.38	1.55	NO	673.9
28	37	Total-pentafurans	339.8597	28.85	116668.235	0.921	3.871	3.871	1.57	1.55	NO	366.2
29	37	Total-pentafurans	339.8597	28.76	0.000	0.921	0.000	0.887	1.13	1.55	YES	145.8
30	37	Total-pentafurans	339.8597	32.49	7940.562	0.921	0.263	0.263	1.57	1.55	NO	31.9
31	3	23478-PeCDF	339.8597	31.46	88708.566	0.936	2.958	2.958	1.48	1.55	NO	311.5
32	37	Total-pentafurans	339.8597	31.32	0.000	0.921	0.000	0.500	1.94	1.55	YES	77.1
33	37	Total-pentafurans	339.8597	31.20	98376.101	0.921	3.264	3.264	1.55	1.55	NO	364.2
34	37	Total-pentafurans	339.8597	30.96	9667.410	0.921	0.321	0.321	1.65	1.55	NO	41.5
35	37	Total-pentafurans	339.8597	30.60	0.000	0.921	0.000	0.198	2.00	1.55	YES	28.4
36	37	Total-pentafurans	339.8597	30.43	45406.893	0.921	1.507	1.507	1.46	1.55	NO	174.1
37	37	Total-pentafurans	339.8597	30.32	60165.967	0.921	1.996	1.996	1.63	1.55	NO	238.9
38	2	12378-PeCDF	339.8597	30.12	73506.135	0.907	2.428	2.428	1.48	1.55	NO	293.2
39	37	Total-pentafurans	339.8597	29.78	138961.512	0.921	4.611	4.611	1.52	1.55	NO	336.8
40	37	Total-pentafurans	339.8597	29.67	10742.110	0.921	0.356	0.356	1.67	1.55	NO	46.1
41	37	Total-pentafurans	339.8597	29.55	43918.535	0.921	1.457	1.457	1.68	1.55	NO	156.1
42	37	Total-pentafurans	339.8597	29.36	12624.290	0.921	0.419	0.419	1.70	1.55	NO	56.0
43	37	Total-pentafurans	339.8597	29.17	11272.876	0.921	0.374	0.374	1.55	1.55	NO	45.6
44	38	Total-hexafurans	373.8208	35.63	0.000	1.055	0.000	0.469	1.45	1.24	YES	43.4
45	38	Total-hexafurans	373.8208	35.49	0.000	1.055	0.000	0.252	1.63	1.24	YES	24.1
46	6	123678-HxCDF	373.8208	35.28	95753.551	1.048	3.409	3.409	1.26	1.24	NO	264.6
47	4	123478-HxCDF	373.8208	35.12	130538.496	1.082	4.850	4.850	1.27	1.24	NO	364.6
48	38	Total-hexafurans	373.8208	34.96	84595.148	1.055	3.225	3.225	1.22	1.24	NO	241.1
49	38	Total-hexafurans	373.8208	34.48	168247.664	1.055	6.414	6.414	1.19	1.24	NO	488.6

Quantify Totals Report MassLynx 4.1 SCN 714
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	38	Total-hexafurans	373.8208	34.15	17729.536	1.055	0.676	0.676	1.27	1.24	NO	50.3
51	38	Total-hexafurans	373.8208	33.88	11900.479	1.055	0.454	0.454	1.20	1.24	NO	29.3
52	38	Total-hexafurans	373.8208	33.61	326805.984	1.055	12.458	12.458	1.23	1.24	NO	746.5
53	38	Total-hexafurans	373.8208	33.40	103601.469	1.055	3.949	3.949	1.26	1.24	NO	307.1
54	7	123789-HxCDF	373.8208	37.33	24287.138	1.020	1.040	1.040	1.10	1.24	NO	55.0
55	38	Total-hexafurans	373.8208	36.37	0.000	1.055	0.000	0.018	0.92	1.24	YES	2.9
56	5	234678-HxCDF	373.8208	36.21	89378.547	1.070	3.356	3.356	1.19	1.24	NO	209.2
57	38	Total-hexafurans	373.8208	35.83	11049.345	1.055	0.421	0.421	1.27	1.24	NO	34.3
58	39	Total-heptafurans	407.7818	39.88	31977.233	1.234	1.494	1.494	1.10	1.05	NO	99.1
59	8	1234678-HpCDF	407.7818	39.40	428099.484	1.214	18.017	18.017	1.01	1.05	NO	1253.5
60	10	OCDF	441.7428	47.31	302658.766	1.105	25.790	25.790	0.90	0.89	NO	754.9
61	9	1234789-HpCDF	407.7818	42.06	39963.967	1.254	2.106	2.106	1.00	1.05	NO	102.1
62	39	Total-heptafurans	407.7818	40.18	379724.047	1.234	17.735	17.735	1.00	1.05	NO	1091.0
63	36	Total-penta1	339.8597	27.41	279368.649		9.314	9.314	1.49	1.55	NO	2472.1

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	25.27	54309.197	1.046	2.088	2.088	0.73	0.77	NO	196.8
2	41	Total-tetradioxins	319.8965	24.99	37750.096	1.046	1.452	1.452	0.81	0.77	NO	133.8
3	41	Total-tetradioxins	319.8965	24.78	3025.509	1.046	0.116	0.116	0.77	0.77	NO	13.1
4	41	Total-tetradioxins	319.8965	24.43	0.000	1.046	0.000	0.009	1.67	0.77	YES	4.2
5	41	Total-tetradioxins	319.8965	24.27	13630.068	1.046	0.524	0.524	0.76	0.77	NO	56.9
6	41	Total-tetradioxins	319.8965	24.06	112528.016	1.046	4.327	4.327	0.75	0.77	NO	439.6
7	41	Total-tetradioxins	319.8965	23.79	200569.672	1.046	7.712	7.712	0.79	0.77	NO	828.9
8	41	Total-tetradioxins	319.8965	27.24	4257.324	1.046	0.164	0.164	0.74	0.77	NO	18.0
9	41	Total-tetradioxins	319.8965	26.77	16230.278	1.046	0.624	0.624	0.77	0.77	NO	63.2
10	11	2378-TCDD	319.8965	26.65	9826.418	1.046	0.378	0.378	0.72	0.77	NO	38.9
11	41	Total-tetradioxins	319.8965	26.27	52672.968	1.046	2.025	2.025	0.77	0.77	NO	150.5
12	41	Total-tetradioxins	319.8965	25.97	0.000	1.046	0.000	0.294	0.98	0.77	YES	37.2
13	41	Total-tetradioxins	319.8965	25.84	23456.328	1.046	0.902	0.902	0.88	0.77	NO	104.2
14	41	Total-tetradioxins	319.8965	25.63	16286.804	1.046	0.626	0.626	0.73	0.77	NO	62.7
15	41	Total-tetradioxins	319.8965	25.53	0.000	1.046	0.000	0.171	0.90	0.77	YES	16.9

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	29.51	15454.047	0.973	0.784	0.784	1.61	1.55	NO	79.9
2	42	Total-pentadioxins	355.8546	29.04	138493.625	0.973	7.027	7.027	1.52	1.55	NO	440.5
3	42	Total-pentadioxins	355.8546	32.23	0.000	0.973	0.000	0.010	0.82	1.55	YES	2.4
4	42	Total-pentadioxins	355.8546	32.11	15412.341	0.973	0.782	0.782	1.61	1.55	NO	73.9
5	12	12378-PeCDD	355.8546	31.71	43677.795	0.973	2.216	2.216	1.58	1.55	NO	176.3
6	42	Total-pentadioxins	355.8546	31.04	54011.820	0.973	2.740	2.740	1.64	1.55	NO	249.5
7	42	Total-pentadioxins	355.8546	30.65	38124.409	0.973	1.934	1.934	1.58	1.55	NO	131.8
8	42	Total-pentadioxins	355.8546	30.49	94500.340	0.973	4.795	4.795	1.52	1.55	NO	436.9
9	42	Total-pentadioxins	355.8546	30.34	25228.013	0.973	1.280	1.280	1.40	1.55	NO	126.5
10	42	Total-pentadioxins	355.8546	30.13	132731.864	0.973	6.734	6.734	1.56	1.55	NO	653.3

Quantify Totals Report MassLynx 4.1 SCN 714
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HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389.8157	35.39	241439.070	0.884	12.696	12.696	1.27	1.24	NO	565.5
2	43	Total-hexadioxins	389.8157	35.00	263265.336	0.884	13.844	13.844	1.24	1.24	NO	882.8
3	43	Total-hexadioxins	389.8157	34.19	102961.094	0.884	5.414	5.414	1.27	1.24	NO	343.7
4	15	123789-HxCDD	389.8157	36.90	54272.204	0.839	3.008	3.008	1.19	1.24	NO	177.4
5	43	Total-hexadioxins	389.8157	36.65	28775.583	0.884	1.513	1.513	1.22	1.24	NO	91.2
6	14	123678-HxCDD	389.8157	36.47	85942.851	0.878	4.354	4.354	1.23	1.24	NO	283.9
7	13	123478-HxCDD	389.8157	36.35	32144.259	0.935	1.673	1.673	1.22	1.24	NO	110.8
8	43	Total-hexadioxins	389.8157	35.49	0.000	0.884	0.000	0.682	0.98	1.24	YES	52.2

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41.18	789316.156	0.974	48.720	48.720	1.02	1.05	NO	1203.2
2	44	Total-heptadioxins	423.7766	39.93	644178.094	0.974	39.761	39.761	1.06	1.05	NO	1095.1

Quantify Totals Report MassLynx 4.1 SCN 714
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Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41	Total-tetradioxins	319.8965	25.27	54309.197	1.046	2.088	2.088	0.73	0.77	NO	196.8
2	41	Total-tetradioxins	319.8965	24.99	37750.096	1.046	1.452	1.452	0.81	0.77	NO	133.8
3	41	Total-tetradioxins	319.8965	24.78	3025.509	1.046	0.116	0.116	0.77	0.77	NO	13.1
4	41	Total-tetradioxins	319.8965	24.43	0.000	1.046	0.000	0.009	1.67	0.77	YES	4.2
5	41	Total-tetradioxins	319.8965	24.27	13630.068	1.046	0.524	0.524	0.76	0.77	NO	56.9
6	41	Total-tetradioxins	319.8965	24.06	112528.016	1.046	4.327	4.327	0.75	0.77	NO	439.6
7	41	Total-tetradioxins	319.8965	23.79	200569.672	1.046	7.712	7.712	0.79	0.77	NO	828.9
8	41	Total-tetradioxins	319.8965	27.24	4257.324	1.046	0.164	0.164	0.74	0.77	NO	18.0
9	41	Total-tetradioxins	319.8965	26.77	16230.278	1.046	0.624	0.624	0.77	0.77	NO	63.2
10	11	2378-TCDD	319.8965	26.65	9826.418	1.046	0.378	0.378	0.72	0.77	NO	38.9
11	41	Total-tetradioxins	319.8965	26.27	52672.968	1.046	2.025	2.025	0.77	0.77	NO	150.5
12	41	Total-tetradioxins	319.8965	25.97	0.000	1.046	0.000	0.294	0.98	0.77	YES	37.2
13	41	Total-tetradioxins	319.8965	25.84	23456.328	1.046	0.902	0.902	0.88	0.77	NO	104.2
14	41	Total-tetradioxins	319.8965	25.63	16286.804	1.046	0.626	0.626	0.73	0.77	NO	62.7
15	41	Total-tetradioxins	319.8965	25.53	0.000	1.046	0.000	0.171	0.90	0.77	YES	16.9
16	42	Total-pentadioxins	355.8546	29.51	15454.047	0.973	0.784	0.784	1.61	1.55	NO	79.9
17	42	Total-pentadioxins	355.8546	29.04	138493.625	0.973	7.027	7.027	1.52	1.55	NO	440.5
18	42	Total-pentadioxins	355.8546	32.23	0.000	0.973	0.000	0.010	0.82	1.55	YES	2.4
19	42	Total-pentadioxins	355.8546	32.11	15412.341	0.973	0.782	0.782	1.61	1.55	NO	73.9
20	12	12378-PeCDD	355.8546	31.71	43677.795	0.973	2.216	2.216	1.58	1.55	NO	176.3
21	42	Total-pentadioxins	355.8546	31.04	54011.820	0.973	2.740	2.740	1.64	1.55	NO	249.5
22	42	Total-pentadioxins	355.8546	30.65	38124.409	0.973	1.934	1.934	1.58	1.55	NO	131.8
23	42	Total-pentadioxins	355.8546	30.49	94500.340	0.973	4.795	4.795	1.52	1.55	NO	436.9
24	42	Total-pentadioxins	355.8546	30.34	25228.013	0.973	1.280	1.280	1.40	1.55	NO	126.5
25	42	Total-pentadioxins	355.8546	30.13	132731.864	0.973	6.734	6.734	1.56	1.55	NO	653.3
26	43	Total-hexadioxins	389.8157	35.39	241439.070	0.884	12.696	12.696	1.27	1.24	NO	565.5
27	43	Total-hexadioxins	389.8157	35.00	263265.336	0.884	13.844	13.844	1.24	1.24	NO	882.8
28	43	Total-hexadioxins	389.8157	34.19	102961.094	0.884	5.414	5.414	1.27	1.24	NO	343.7
29	15	123789-HxCDD	389.8157	36.90	54272.204	0.839	3.008	3.008	1.19	1.24	NO	177.4
30	43	Total-hexadioxins	389.8157	36.65	28775.583	0.884	1.513	1.513	1.22	1.24	NO	91.2
31	14	123678-HxCDD	389.8157	36.47	85942.851	0.878	4.354	4.354	1.23	1.24	NO	283.9
32	13	123478-HxCDD	389.8157	36.35	32144.259	0.935	1.673	1.673	1.22	1.24	NO	110.8
33	43	Total-hexadioxins	389.8157	35.49	0.000	0.884	0.000	0.682	0.98	1.24	YES	52.2
34	16	1234678-HpCDD	423.7766	41.18	789316.156	0.974	48.720	48.720	1.02	1.05	NO	1203.2
35	44	Total-heptadioxins	423.7766	39.93	644178.094	0.974	39.761	39.761	1.06	1.05	NO	1095.1
36	17	OCDD	457.7377	47.04	3133345.875	0.950	310.597	310....	0.89	0.89	NO	4007.3

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.11	55190.562	0.866	1.431	1.431	0.77	0.77	NO	192.6
2	35	Total-tetrafurans	303.9016	24.93	98854.539	0.866	2.563	2.563	0.77	0.77	NO	303.0
3	35	Total-tetrafurans	303.9016	24.78	45589.762	0.866	1.182	1.182	0.78	0.77	NO	162.8
4	35	Total-tetrafurans	303.9016	24.69	139092.606	0.866	3.607	3.607	0.75	0.77	NO	336.0
5	35	Total-tetrafurans	303.9016	24.26	43326.676	0.866	1.124	1.124	0.77	0.77	NO	158.0
6	35	Total-tetrafurans	303.9016	24.12	33382.228	0.866	0.866	0.866	0.68	0.77	NO	113.9
7	35	Total-tetrafurans	303.9016	24.02	37869.072	0.866	0.982	0.982	0.76	0.77	NO	126.7
8	35	Total-tetrafurans	303.9016	23.85	39187.340	0.866	1.016	1.016	0.80	0.77	NO	137.2
9	35	Total-tetrafurans	303.9016	23.78	24559.065	0.866	0.637	0.637	0.75	0.77	NO	93.4
10	35	Total-tetrafurans	303.9016	23.67	0.000	0.866	0.000	1.518	0.63	0.77	YES	194.0
11	35	Total-tetrafurans	303.9016	23.55	125424.723	0.866	3.252	3.252	0.82	0.77	NO	248.2
12	35	Total-tetrafurans	303.9016	23.37	94691.305	0.866	2.455	2.455	0.78	0.77	NO	257.5
13	35	Total-tetrafurans	303.9016	22.79	43452.523	0.866	1.127	1.127	0.70	0.77	NO	147.4
14	35	Total-tetrafurans	303.9016	22.52	39218.162	0.866	1.017	1.017	0.73	0.77	NO	135.6
15	35	Total-tetrafurans	303.9016	27.48	4953.796	0.866	0.128	0.128	0.67	0.77	NO	21.8
16	35	Total-tetrafurans	303.9016	27.45	0.000	0.866	0.000	0.160	1.04	0.77	YES	20.7
17	35	Total-tetrafurans	303.9016	26.68	492.402	0.866	0.013	0.013	0.67	0.77	NO	2.1
18	35	Total-tetrafurans	303.9016	26.50	4075.577	0.866	0.106	0.106	0.67	0.77	NO	15.4
19	35	Total-tetrafurans	303.9016	26.24	104550.543	0.866	2.711	2.711	0.77	0.77	NO	355.4
20	35	Total-tetrafurans	303.9016	26.14	55864.735	0.866	1.449	1.449	0.72	0.77	NO	198.6
21	1	2378-TCDF	303.9016	26.02	73454.065	0.866	1.905	1.905	0.75	0.77	NO	252.3
22	35	Total-tetrafurans	303.9016	25.78	103056.492	0.866	2.672	2.672	0.70	0.77	NO	223.2
23	35	Total-tetrafurans	303.9016	25.63	0.000	0.866	0.000	0.141	0.57	0.77	YES	21.3
24	35	Total-tetrafurans	303.9016	25.51	49254.664	0.866	1.277	1.277	0.72	0.77	NO	160.4
25	35	Total-tetrafurans	303.9016	25.33	41560.650	0.866	1.078	1.078	0.74	0.77	NO	139.3
26	37	Total-pentafurans	339.8597	29.05	0.000	0.921	0.000	2.537	1.84	1.55	YES	419.3
27	37	Total-pentafurans	339.8597	28.98	179164.820	0.921	5.945	5.945	1.38	1.55	NO	673.9
28	37	Total-pentafurans	339.8597	28.85	116668.235	0.921	3.871	3.871	1.57	1.55	NO	366.2
29	37	Total-pentafurans	339.8597	28.76	0.000	0.921	0.000	0.887	1.13	1.55	YES	145.8
30	37	Total-pentafurans	339.8597	32.49	7940.562	0.921	0.263	0.263	1.57	1.55	NO	31.9
31	3	23478-PeCDF	339.8597	31.46	88708.566	0.936	2.958	2.958	1.48	1.55	NO	311.5
32	37	Total-pentafurans	339.8597	31.32	0.000	0.921	0.000	0.500	1.94	1.55	YES	77.1
33	37	Total-pentafurans	339.8597	31.20	98376.101	0.921	3.264	3.264	1.55	1.55	NO	364.2
34	37	Total-pentafurans	339.8597	30.96	9667.410	0.921	0.321	0.321	1.65	1.55	NO	41.5
35	37	Total-pentafurans	339.8597	30.60	0.000	0.921	0.000	0.198	2.00	1.55	YES	28.4
36	37	Total-pentafurans	339.8597	30.43	45406.893	0.921	1.507	1.507	1.46	1.55	NO	174.1
37	37	Total-pentafurans	339.8597	30.32	60165.967	0.921	1.996	1.996	1.63	1.55	NO	238.9
38	2	12378-PeCDF	339.8597	30.12	73506.135	0.907	2.428	2.428	1.48	1.55	NO	293.2
39	37	Total-pentafurans	339.8597	29.78	138961.512	0.921	4.611	4.611	1.52	1.55	NO	336.8
40	37	Total-pentafurans	339.8597	29.67	10742.110	0.921	0.356	0.356	1.67	1.55	NO	46.1
41	37	Total-pentafurans	339.8597	29.55	43918.535	0.921	1.457	1.457	1.68	1.55	NO	156.1
42	37	Total-pentafurans	339.8597	29.36	12624.290	0.921	0.419	0.419	1.70	1.55	NO	56.0
43	37	Total-pentafurans	339.8597	29.17	11272.876	0.921	0.374	0.374	1.55	1.55	NO	45.6
44	38	Total-hexafurans	373.8208	35.63	0.000	1.055	0.000	0.469	1.45	1.24	YES	43.4
45	38	Total-hexafurans	373.8208	35.49	0.000	1.055	0.000	0.252	1.63	1.24	YES	24.1
46	6	123678-HxCDF	373.8208	35.28	95753.551	1.048	3.409	3.409	1.26	1.24	NO	264.6
47	4	123478-HxCDF	373.8208	35.12	130538.496	1.082	4.850	4.850	1.27	1.24	NO	364.6
48	38	Total-hexafurans	373.8208	34.96	84595.148	1.055	3.225	3.225	1.22	1.24	NO	241.1
49	38	Total-hexafurans	373.8208	34.48	168247.664	1.055	6.414	6.414	1.19	1.24	NO	488.6

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
50	38	Total-hexafurans	373.8208	34.15	17729.536	1.055	0.676	0.676	1.27	1.24	NO	50.3
51	38	Total-hexafurans	373.8208	33.88	11900.479	1.055	0.454	0.454	1.20	1.24	NO	29.3
52	38	Total-hexafurans	373.8208	33.61	326805.984	1.055	12.458	12.458	1.23	1.24	NO	746.5
53	38	Total-hexafurans	373.8208	33.40	103601.469	1.055	3.949	3.949	1.26	1.24	NO	307.1
54	7	123789-HxCDF	373.8208	37.33	24287.138	1.020	1.040	1.040	1.10	1.24	NO	55.0
55	38	Total-hexafurans	373.8208	36.37	0.000	1.055	0.000	0.018	0.92	1.24	YES	2.9
56	5	234678-HxCDF	373.8208	36.21	89378.547	1.070	3.356	3.356	1.19	1.24	NO	209.2
57	38	Total-hexafurans	373.8208	35.83	11049.345	1.055	0.421	0.421	1.27	1.24	NO	34.3
58	39	Total-heptafurans	407.7818	39.88	31977.233	1.234	1.494	1.494	1.10	1.05	NO	99.1
59	8	1234678-HpCDF	407.7818	39.40	428099.484	1.214	18.017	18.017	1.01	1.05	NO	1253.5
60	10	OCDF	441.7428	47.31	302658.766	1.105	25.790	25.790	0.90	0.89	NO	754.9
61	9	1234789-HpCDF	407.7818	42.06	39963.967	1.254	2.106	2.106	1.00	1.05	NO	102.1
62	39	Total-heptafurans	407.7818	40.18	379724.047	1.234	17.735	17.735	1.00	1.05	NO	1091.0
63	36	Total-penta1	339.8597	27.41	279368.649		9.314	9.314	1.49	1.55	NO	2472.1
64	41	Total-tetradioxins	319.8965	25.27	54309.197	1.046	2.088	2.088	0.73	0.77	NO	196.8
65	41	Total-tetradioxins	319.8965	24.99	37750.096	1.046	1.452	1.452	0.81	0.77	NO	133.8
66	41	Total-tetradioxins	319.8965	24.78	3025.509	1.046	0.116	0.116	0.77	0.77	NO	13.1
67	41	Total-tetradioxins	319.8965	24.43	0.000	1.046	0.000	0.009	1.67	0.77	YES	4.2
68	41	Total-tetradioxins	319.8965	24.27	13630.068	1.046	0.524	0.524	0.76	0.77	NO	56.9
69	41	Total-tetradioxins	319.8965	24.06	112528.016	1.046	4.327	4.327	0.75	0.77	NO	439.6
70	41	Total-tetradioxins	319.8965	23.79	200569.672	1.046	7.712	7.712	0.79	0.77	NO	828.9
71	41	Total-tetradioxins	319.8965	27.24	4257.324	1.046	0.164	0.164	0.74	0.77	NO	18.0
72	41	Total-tetradioxins	319.8965	26.77	16230.278	1.046	0.624	0.624	0.77	0.77	NO	63.2
73	11	2378-TCDD	319.8965	26.65	9826.418	1.046	0.378	0.378	0.72	0.77	NO	38.9
74	41	Total-tetradioxins	319.8965	26.27	52672.968	1.046	2.025	2.025	0.77	0.77	NO	150.5
75	41	Total-tetradioxins	319.8965	25.97	0.000	1.046	0.000	0.294	0.98	0.77	YES	37.2
76	41	Total-tetradioxins	319.8965	25.84	23456.328	1.046	0.902	0.902	0.88	0.77	NO	104.2
77	41	Total-tetradioxins	319.8965	25.63	16286.804	1.046	0.626	0.626	0.73	0.77	NO	62.7
78	41	Total-tetradioxins	319.8965	25.53	0.000	1.046	0.000	0.171	0.90	0.77	YES	16.9
79	42	Total-pentadioxins	355.8546	29.51	15454.047	0.973	0.784	0.784	1.61	1.55	NO	79.9
80	42	Total-pentadioxins	355.8546	29.04	138493.625	0.973	7.027	7.027	1.52	1.55	NO	440.5
81	42	Total-pentadioxins	355.8546	32.23	0.000	0.973	0.000	0.010	0.82	1.55	YES	2.4
82	42	Total-pentadioxins	355.8546	32.11	15412.341	0.973	0.782	0.782	1.61	1.55	NO	73.9
83	12	12378-PeCDD	355.8546	31.71	43677.795	0.973	2.216	2.216	1.58	1.55	NO	176.3
84	42	Total-pentadioxins	355.8546	31.04	54011.820	0.973	2.740	2.740	1.64	1.55	NO	249.5
85	42	Total-pentadioxins	355.8546	30.65	38124.409	0.973	1.934	1.934	1.58	1.55	NO	131.8
86	42	Total-pentadioxins	355.8546	30.49	94500.340	0.973	4.795	4.795	1.52	1.55	NO	436.9
87	42	Total-pentadioxins	355.8546	30.34	25228.013	0.973	1.280	1.280	1.40	1.55	NO	126.5
88	42	Total-pentadioxins	355.8546	30.13	132731.864	0.973	6.734	6.734	1.56	1.55	NO	653.3
89	43	Total-hexadioxins	389.8157	35.39	241439.070	0.884	12.696	12.696	1.27	1.24	NO	565.5
90	43	Total-hexadioxins	389.8157	35.00	263265.336	0.884	13.844	13.844	1.24	1.24	NO	882.8
91	43	Total-hexadioxins	389.8157	34.19	102961.094	0.884	5.414	5.414	1.27	1.24	NO	343.7
92	15	123789-HxCDD	389.8157	36.90	54272.204	0.839	3.008	3.008	1.19	1.24	NO	177.4
93	43	Total-hexadioxins	389.8157	36.65	28775.583	0.884	1.513	1.513	1.22	1.24	NO	91.2
94	14	123678-HxCDD	389.8157	36.47	85942.851	0.878	4.354	4.354	1.23	1.24	NO	283.9
95	13	123478-HxCDD	389.8157	36.35	32144.259	0.935	1.673	1.673	1.22	1.24	NO	110.8
96	43	Total-hexadioxins	389.8157	35.49	0.000	0.884	0.000	0.682	0.98	1.24	YES	52.2
97	16	1234678-HpCDD	423.7766	41.18	789316.156	0.974	48.720	48.720	1.02	1.05	NO	1203.2
98	44	Total-heptadioxins	423.7766	39.93	644178.094	0.974	39.761	39.761	1.06	1.05	NO	1095.1

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
99	17	OCDD	457.7377	47.04	3133345.875	0.950	310.597	310....	0.89	0.89	NO	4007.3

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	24.26	0.000							5.6
2	48	FUNCTION1 PFK	330.9792	23.08	0.000							4.5
3	48	FUNCTION1 PFK	330.9792	21.66	0.000							6.4
4	48	FUNCTION1 PFK	330.9792	21.57	0.000							5.9
5	48	FUNCTION1 PFK	330.9792	21.36	0.000							2.4

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	28.39	0.000		0.000					1.9
2	49	FUNCTION2 PFK	366.9792	32.78	0.000		0.000					1.8
3	49	FUNCTION2 PFK	366.9792	32.54	0.000		0.000					0.6
4	49	FUNCTION2 PFK	366.9792	32.16	0.000		0.000					0.8
5	49	FUNCTION2 PFK	366.9792	31.59	0.000		0.000					1.1
6	49	FUNCTION2 PFK	366.9792	31.55	0.000		0.000					1.2
7	49	FUNCTION2 PFK	366.9792	31.45	0.000		0.000					1.8
8	49	FUNCTION2 PFK	366.9792	30.62	0.000		0.000					1.8
9	49	FUNCTION2 PFK	366.9792	30.57	0.000		0.000					1.7
10	49	FUNCTION2 PFK	366.9792	30.23	0.000		0.000					0.9
11	49	FUNCTION2 PFK	366.9792	28.61	0.000		0.000					1.4
12	49	FUNCTION2 PFK	366.9792	28.42	0.000		0.000					1.5

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	39.31	0.000							1.0
2	51	FUNCTION4 PFK	430.9728	39.27	0.000							1.0
3	51	FUNCTION4 PFK	430.9728	38.81	0.000							10.4
4	51	FUNCTION4 PFK	430.9728	44.43	0.000							0.8
5	51	FUNCTION4 PFK	430.9728	44.40	0.000							1.7
6	51	FUNCTION4 PFK	430.9728	44.35	0.000							1.1
7	51	FUNCTION4 PFK	430.9728	43.45	0.000							1.4
8	51	FUNCTION4 PFK	430.9728	42.19	0.000							1.7
9	51	FUNCTION4 PFK	430.9728	41.59	0.000							0.7
10	51	FUNCTION4 PFK	430.9728	41.40	0.000							0.8
11	51	FUNCTION4 PFK	430.9728	41.28	0.000							1.5
12	51	FUNCTION4 PFK	430.9728	40.92	0.000							2.4
13	51	FUNCTION4 PFK	430.9728	40.80	0.000							1.0
14	51	FUNCTION4 PFK	430.9728	39.42	0.000							1.2
15	51	FUNCTION4 PFK	430.9728	39.38	0.000							0.6

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PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	44.86	0.000							2.1
2	52	FUNCTION5 PFK	480.9696	44.81	0.000							1.6
3	52	FUNCTION5 PFK	480.9696	44.76	0.000							0.5
4	52	FUNCTION5 PFK	480.9696	46.48	0.000							0.8
5	52	FUNCTION5 PFK	480.9696	46.37	0.000							0.8
6	52	FUNCTION5 PFK	480.9696	46.30	0.000							1.1
7	52	FUNCTION5 PFK	480.9696	46.05	0.000							1.6
8	52	FUNCTION5 PFK	480.9696	45.97	0.000							2.0
9	52	FUNCTION5 PFK	480.9696	45.81	0.000							1.9
10	52	FUNCTION5 PFK	480.9696	45.62	0.000							0.7
11	52	FUNCTION5 PFK	480.9696	45.57	0.000							1.4
12	52	FUNCTION5 PFK	480.9696	45.37	0.000							0.7
13	52	FUNCTION5 PFK	480.9696	45.33	0.000							0.8
14	52	FUNCTION5 PFK	480.9696	45.29	0.000							1.2
15	52	FUNCTION5 PFK	480.9696	45.26	0.000							1.2
16	52	FUNCTION5 PFK	480.9696	45.18	0.000							1.3
17	52	FUNCTION5 PFK	480.9696	45.11	0.000							0.3
18	52	FUNCTION5 PFK	480.9696	44.97	0.000							0.8
19	52	FUNCTION5 PFK	480.9696	44.94	0.000							1.2
20	52	FUNCTION5 PFK	480.9696	48.00	0.000							0.4
21	52	FUNCTION5 PFK	480.9696	47.81	0.000							1.7
22	52	FUNCTION5 PFK	480.9696	47.73	0.000							1.4
23	52	FUNCTION5 PFK	480.9696	47.68	0.000							0.6
24	52	FUNCTION5 PFK	480.9696	47.61	0.000							1.3
25	52	FUNCTION5 PFK	480.9696	47.52	0.000							0.5
26	52	FUNCTION5 PFK	480.9696	47.49	0.000							1.2
27	52	FUNCTION5 PFK	480.9696	47.40	0.000							2.0
28	52	FUNCTION5 PFK	480.9696	47.34	0.000							0.8
29	52	FUNCTION5 PFK	480.9696	47.21	0.000							1.0
30	52	FUNCTION5 PFK	480.9696	47.08	0.000							1.2
31	52	FUNCTION5 PFK	480.9696	47.04	0.000							0.5
32	52	FUNCTION5 PFK	480.9696	46.96	0.000							0.3
33	52	FUNCTION5 PFK	480.9696	46.88	0.000							1.0
34	52	FUNCTION5 PFK	480.9696	46.79	0.000							0.9
35	52	FUNCTION5 PFK	480.9696	46.60	0.000							1.2
36	52	FUNCTION5 PFK	480.9696	48.81	0.000							0.9
37	52	FUNCTION5 PFK	480.9696	48.70	0.000							0.6
38	52	FUNCTION5 PFK	480.9696	48.58	0.000							0.5
39	52	FUNCTION5 PFK	480.9696	48.54	0.000							1.0
40	52	FUNCTION5 PFK	480.9696	48.50	0.000							1.2
41	52	FUNCTION5 PFK	480.9696	48.43	0.000							0.5
42	52	FUNCTION5 PFK	480.9696	48.38	0.000							0.9
43	52	FUNCTION5 PFK	480.9696	48.23	0.000							0.7
44	52	FUNCTION5 PFK	480.9696	48.19	0.000							1.2
45	52	FUNCTION5 PFK	480.9696	48.13	0.000							0.7
46	52	FUNCTION5 PFK	480.9696	48.04	0.000							1.4

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ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	27.32	0.000		0.000					6.2
2	53	FUNCTION1 HXCD...	375.8364	26.09	0.000		0.000					11.3
3	53	FUNCTION1 HXCD...	375.8364	25.81	0.000		0.000					25.2
4	53	FUNCTION1 HXCD...	375.8364	25.58	0.000		0.000					8.9
5	53	FUNCTION1 HXCD...	375.8364	27.60	0.000		0.000					2.5
6	53	FUNCTION1 HXCD...	375.8364	27.39	0.000		0.000					7.8

ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	31.57	0.000		0.000					9.9
2	55	FUNCTION2 HPCD...	409.7974	31.48	0.000		0.000					3.4
3	55	FUNCTION2 HPCD...	409.7974	31.29	0.000		0.000					15.7
4	55	FUNCTION2 HPCD...	409.7974	31.18	0.000		0.000					1.2
5	55	FUNCTION2 HPCD...	409.7974	31.01	0.000		0.000					8.1
6	55	FUNCTION2 HPCD...	409.7974	30.74	0.000		0.000					4.1
7	55	FUNCTION2 HPCD...	409.7974	30.38	0.000		0.000					6.4
8	55	FUNCTION2 HPCD...	409.7974	30.27	0.000		0.000					3.5
9	55	FUNCTION2 HPCD...	409.7974	30.09	0.000		0.000					37.1
10	55	FUNCTION2 HPCD...	409.7974	29.98	0.000		0.000					6.2
11	55	FUNCTION2 HPCD...	409.7974	29.76	0.000		0.000					42.5
12	55	FUNCTION2 HPCD...	409.7974	29.48	0.000		0.000					11.7
13	55	FUNCTION2 HPCD...	409.7974	32.84	0.000		0.000					2.4
14	55	FUNCTION2 HPCD...	409.7974	32.71	0.000		0.000					3.8
15	55	FUNCTION2 HPCD...	409.7974	32.63	0.000		0.000					2.3
16	55	FUNCTION2 HPCD...	409.7974	32.49	0.000		0.000					2.5
17	55	FUNCTION2 HPCD...	409.7974	32.41	0.000		0.000					5.8
18	55	FUNCTION2 HPCD...	409.7974	32.12	0.000		0.000					1.6
19	55	FUNCTION2 HPCD...	409.7974	31.95	0.000		0.000					1.2
20	55	FUNCTION2 HPCD...	409.7974	31.82	0.000		0.000					1.4
21	55	FUNCTION2 HPCD...	409.7974	31.70	0.000		0.000					5.3

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Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445.7555	35.37	0.000		0.000					5.5
2	56	FUNCTION3 OCDPE	445.7555	35.32	0.000		0.000					10.3
3	56	FUNCTION3 OCDPE	445.7555	35.12	0.000		0.000					19.7
4	56	FUNCTION3 OCDPE	445.7555	35.06	0.000		0.000					29.4
5	56	FUNCTION3 OCDPE	445.7555	34.87	0.000		0.000					14.2
6	56	FUNCTION3 OCDPE	445.7555	34.79	0.000		0.000					20.8
7	56	FUNCTION3 OCDPE	445.7555	37.19	0.000		0.000					2.6
8	56	FUNCTION3 OCDPE	445.7555	37.15	0.000		0.000					2.1
9	56	FUNCTION3 OCDPE	445.7555	36.92	0.000		0.000					8.1
10	56	FUNCTION3 OCDPE	445.7555	36.84	0.000		0.000					4.3
11	56	FUNCTION3 OCDPE	445.7555	36.74	0.000		0.000					8.1
12	56	FUNCTION3 OCDPE	445.7555	36.66	0.000		0.000					12.6
13	56	FUNCTION3 OCDPE	445.7555	36.57	0.000		0.000					14.5
14	56	FUNCTION3 OCDPE	445.7555	36.54	0.000		0.000					14.9
15	56	FUNCTION3 OCDPE	445.7555	36.43	0.000		0.000					9.6
16	56	FUNCTION3 OCDPE	445.7555	36.37	0.000		0.000					9.6
17	56	FUNCTION3 OCDPE	445.7555	36.27	0.000		0.000					7.6
18	56	FUNCTION3 OCDPE	445.7555	36.22	0.000		0.000					10.4
19	56	FUNCTION3 OCDPE	445.7555	36.17	0.000		0.000					12.4
20	56	FUNCTION3 OCDPE	445.7555	35.94	0.000		0.000					4.3
21	56	FUNCTION3 OCDPE	445.7555	35.58	0.000		0.000					2.3
22	56	FUNCTION3 OCDPE	445.7555	35.52	0.000		0.000					1.4
23	56	FUNCTION3 OCDPE	445.7555	38.43	0.000		0.000					1.3
24	56	FUNCTION3 OCDPE	445.7555	38.36	0.000		0.000					1.0
25	56	FUNCTION3 OCDPE	445.7555	38.28	0.000		0.000					1.1
26	56	FUNCTION3 OCDPE	445.7555	38.19	0.000		0.000					2.2
27	56	FUNCTION3 OCDPE	445.7555	38.14	0.000		0.000					2.7
28	56	FUNCTION3 OCDPE	445.7555	38.05	0.000		0.000					4.5
29	56	FUNCTION3 OCDPE	445.7555	37.97	0.000		0.000					4.1
30	56	FUNCTION3 OCDPE	445.7555	37.90	0.000		0.000					2.2
31	56	FUNCTION3 OCDPE	445.7555	37.77	0.000		0.000					4.9
32	56	FUNCTION3 OCDPE	445.7555	37.69	0.000		0.000					1.7
33	56	FUNCTION3 OCDPE	445.7555	37.52	0.000		0.000					2.5
34	56	FUNCTION3 OCDPE	445.7555	37.31	0.000		0.000					3.8
35	56	FUNCTION3 OCDPE	445.7555	37.25	0.000		0.000					1.5

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
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Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	39.88	0.000		0.000					15.9
2	57	FUNCTION4 NCDPE	479.7165	38.98	0.000		0.000					4.3
3	57	FUNCTION4 NCDPE	479.7165	43.08	0.000		0.000					3.7
4	57	FUNCTION4 NCDPE	479.7165	43.00	0.000		0.000					4.4
5	57	FUNCTION4 NCDPE	479.7165	42.88	0.000		0.000					5.7
6	57	FUNCTION4 NCDPE	479.7165	42.74	0.000		0.000					3.7
7	57	FUNCTION4 NCDPE	479.7165	42.65	0.000		0.000					9.2
8	57	FUNCTION4 NCDPE	479.7165	42.46	0.000		0.000					6.2
9	57	FUNCTION4 NCDPE	479.7165	41.76	0.000		0.000					2.2
10	57	FUNCTION4 NCDPE	479.7165	41.57	0.000		0.000					8.1
11	57	FUNCTION4 NCDPE	479.7165	41.50	0.000		0.000					7.9
12	57	FUNCTION4 NCDPE	479.7165	41.38	0.000		0.000					24.4
13	57	FUNCTION4 NCDPE	479.7165	41.30	0.000		0.000					14.3
14	57	FUNCTION4 NCDPE	479.7165	41.14	0.000		0.000					47.6
15	57	FUNCTION4 NCDPE	479.7165	40.99	0.000		0.000					21.3
16	57	FUNCTION4 NCDPE	479.7165	40.79	0.000		0.000					30.4
17	57	FUNCTION4 NCDPE	479.7165	40.13	0.000		0.000					13.8
18	57	FUNCTION4 NCDPE	479.7165	39.95	0.000		0.000					10.5
19	57	FUNCTION4 NCDPE	479.7165	43.35	0.000		0.000					1.8

ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
1	58	FUNCTION5 DCDPE	513.6775	48.03	0.000		0.000					3.0
2	58	FUNCTION5 DCDPE	513.6775	47.98	0.000		0.000					3.1
3	58	FUNCTION5 DCDPE	513.6775	47.73	0.000		0.000					10.5
4	58	FUNCTION5 DCDPE	513.6775	47.61	0.000		0.000					4.6
5	58	FUNCTION5 DCDPE	513.6775	47.48	0.000		0.000					3.7
6	58	FUNCTION5 DCDPE	513.6775	47.37	0.000		0.000					2.2
7	58	FUNCTION5 DCDPE	513.6775	47.23	0.000		0.000					10.2
8	58	FUNCTION5 DCDPE	513.6775	47.15	0.000		0.000					9.8
9	58	FUNCTION5 DCDPE	513.6775	47.10	0.000		0.000					10.0

Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
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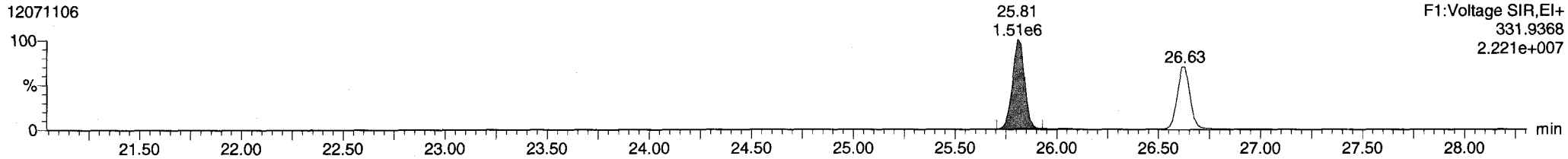
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin120621.mdb 03 Jul 2012 12:26:04
Calibration: P:\DIOXIN8290.PRO\CurveDB\120503ICAL.cdb 04 May 2012 08:25:55

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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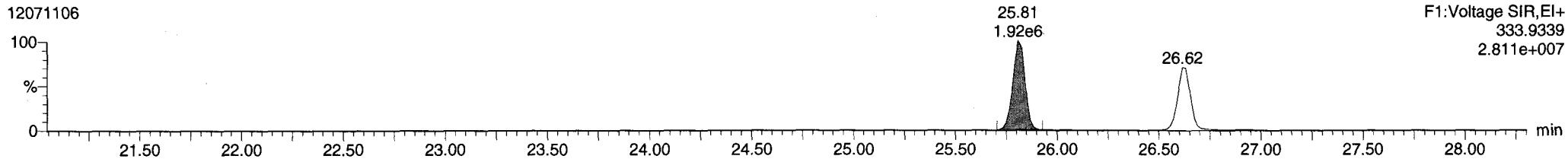

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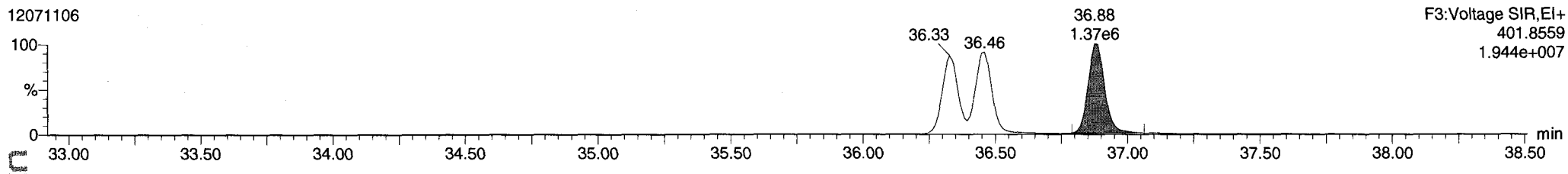

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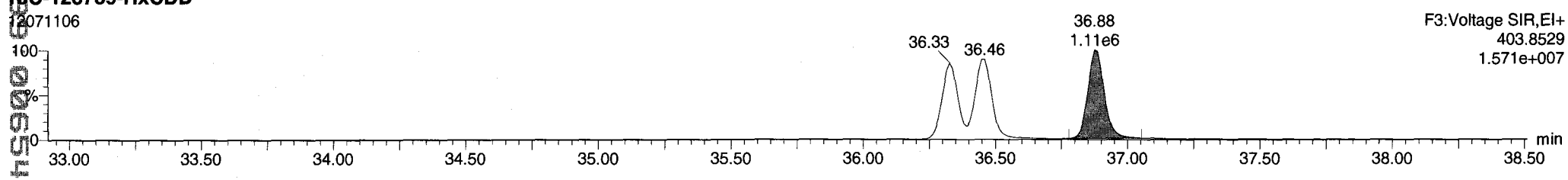

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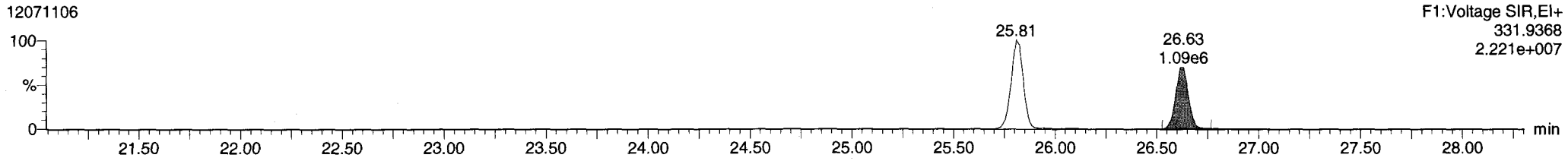
Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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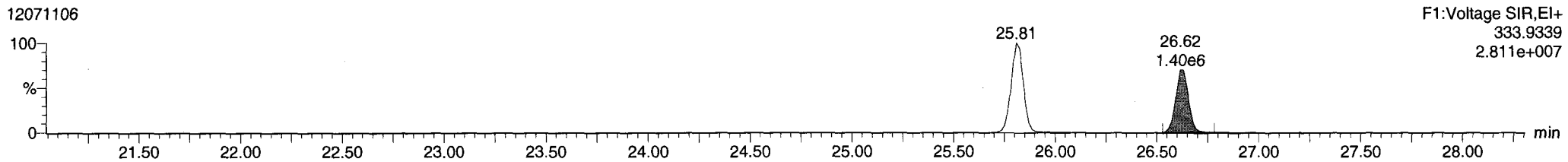

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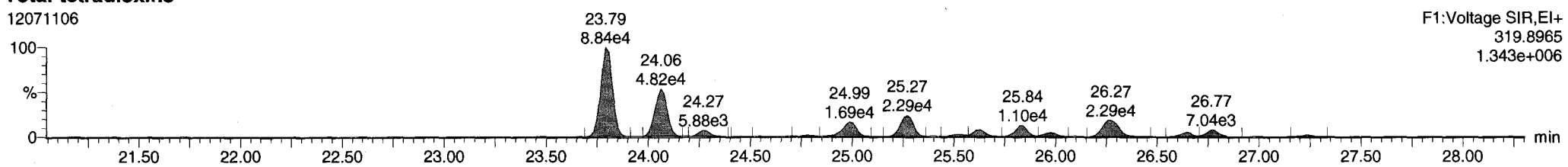

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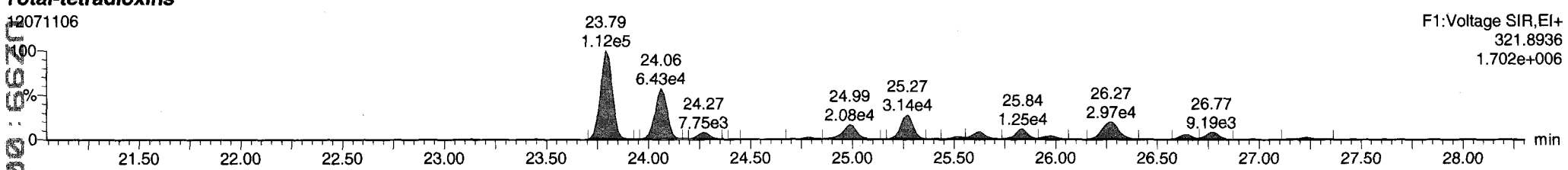
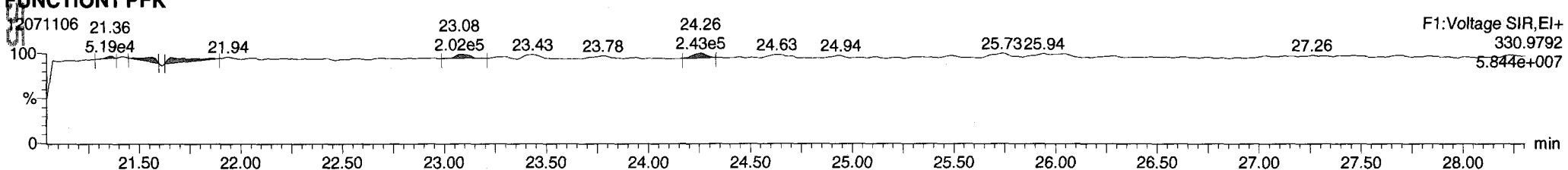


FUNCTION1 PFK



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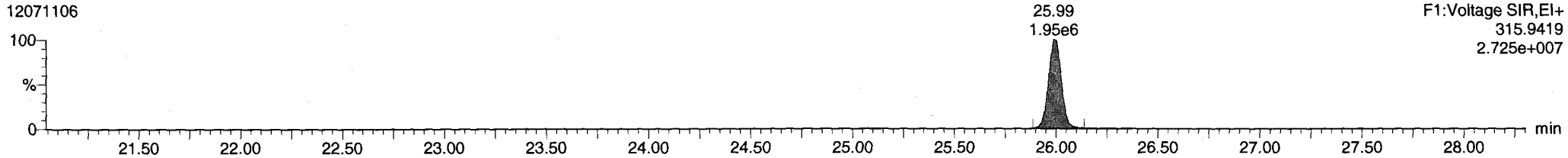
13C-2378-TCDF



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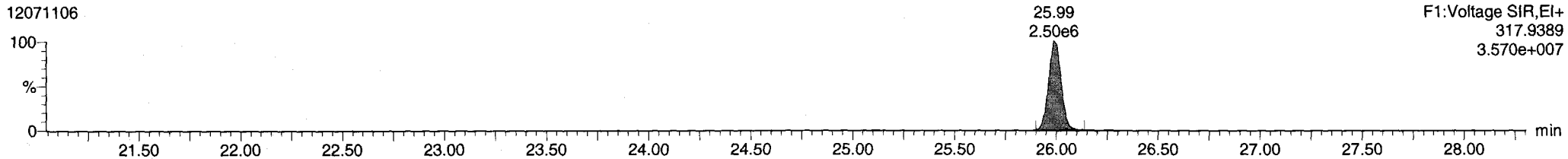
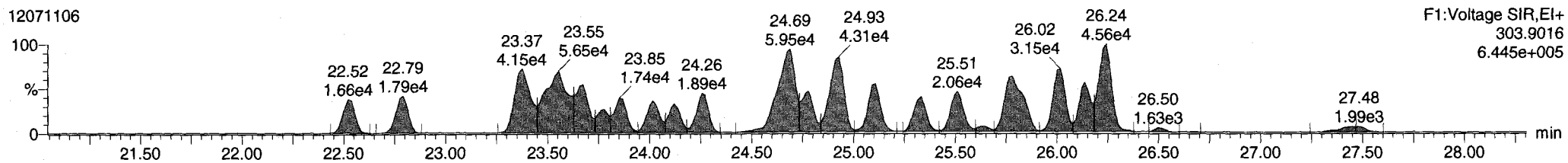
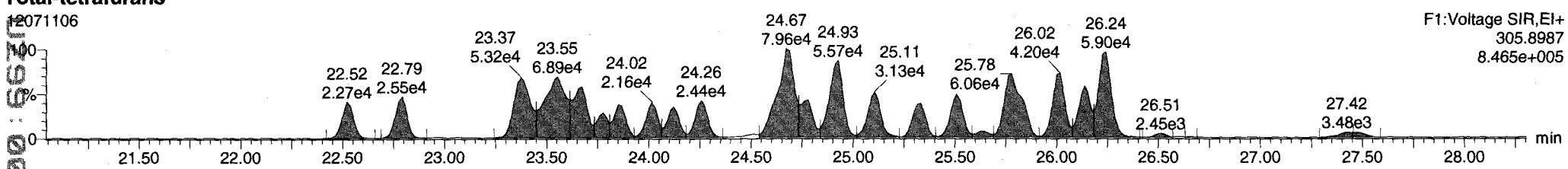


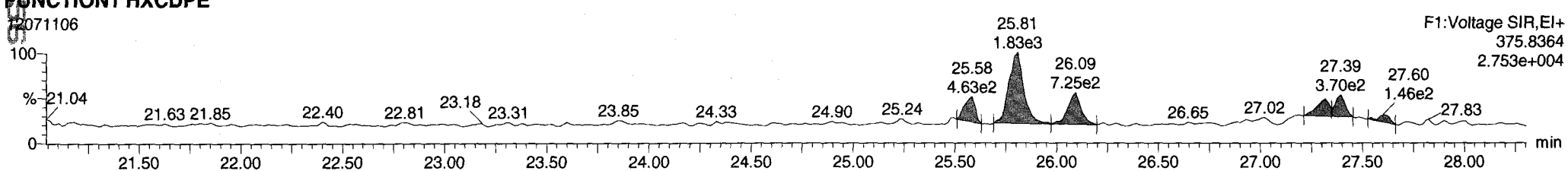
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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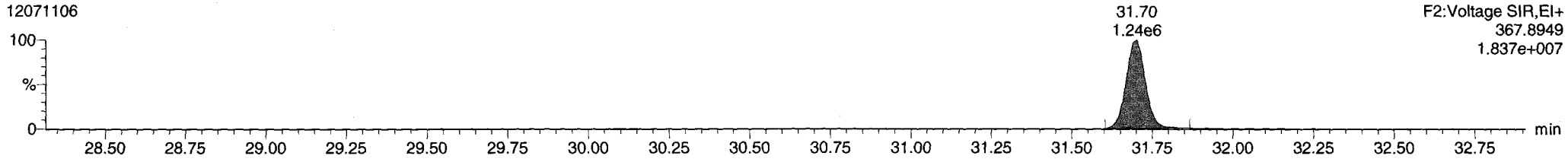
13C-12378-PeCDD



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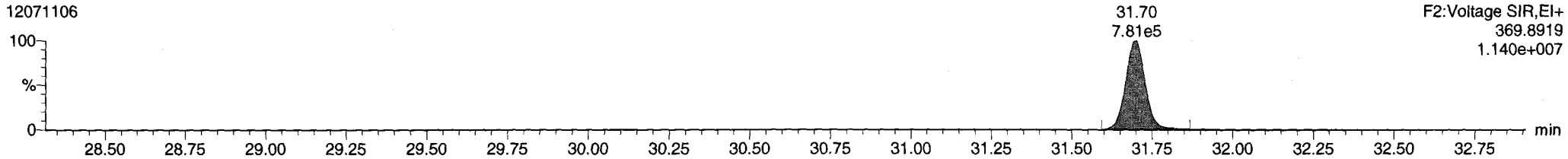
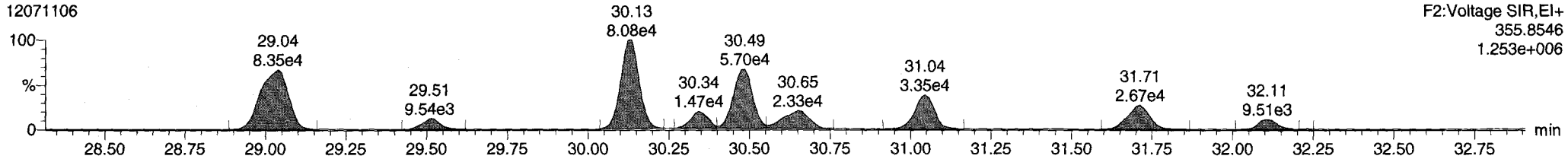
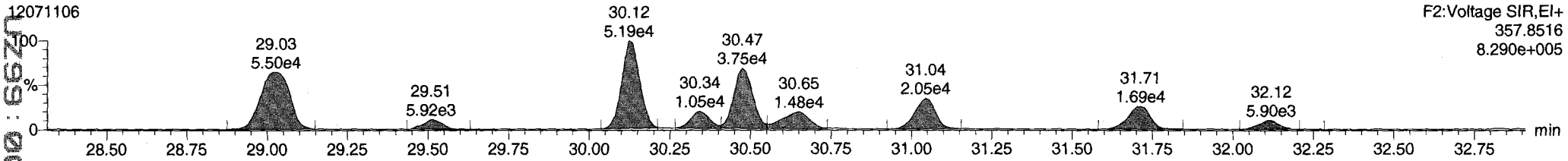


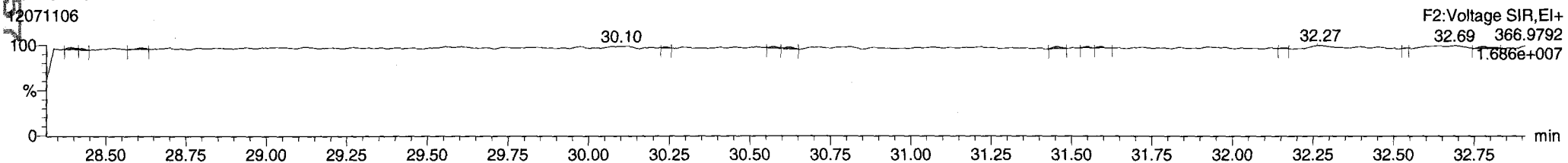
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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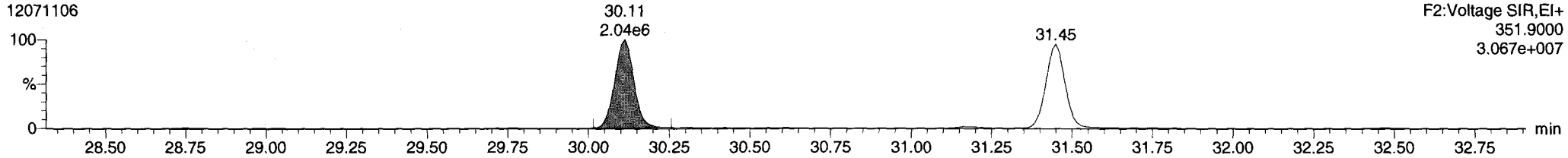
13C-12378-PeCDF



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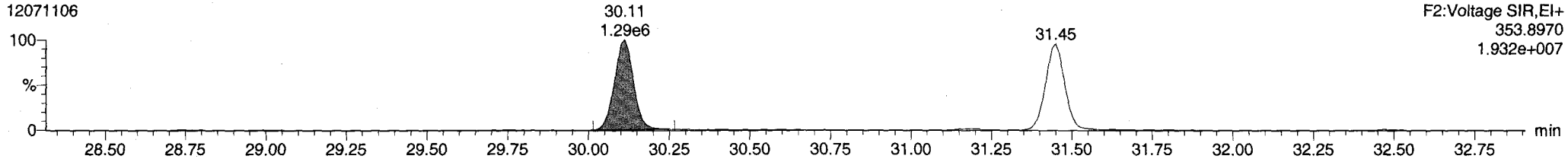

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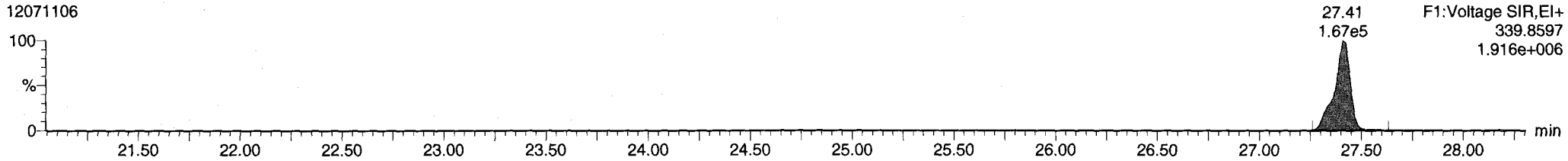

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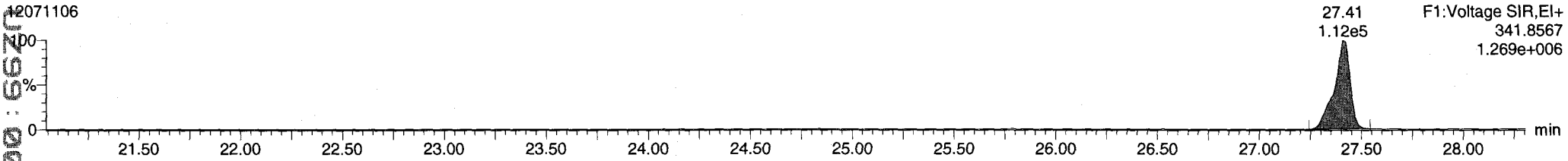
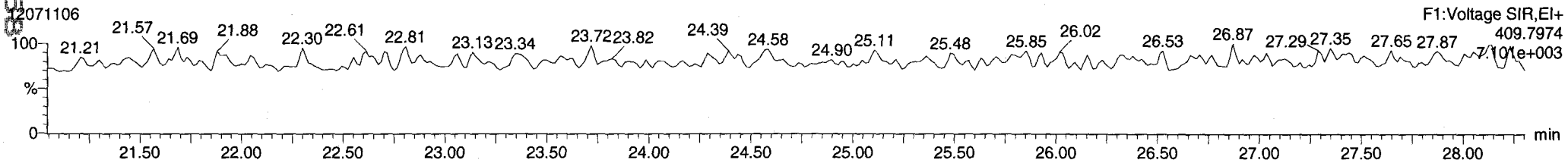


FUNCTION1 HPCDPE



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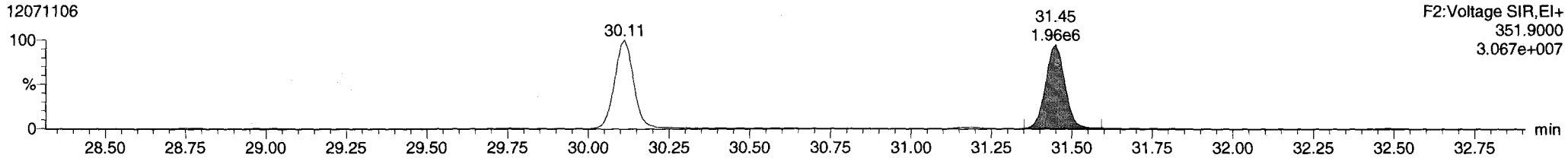
13C-23478-PeCDF



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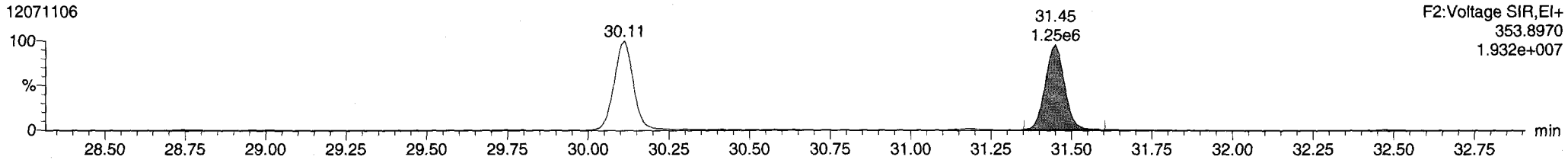
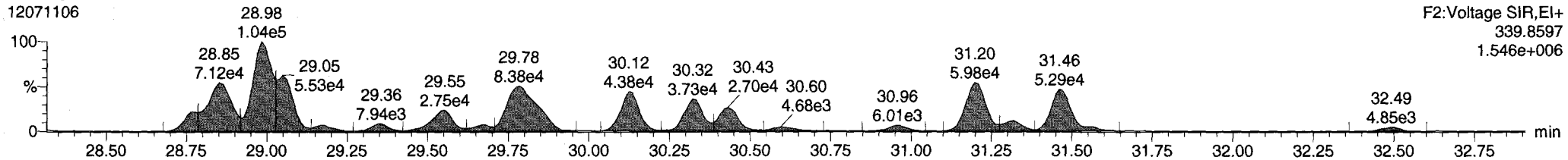
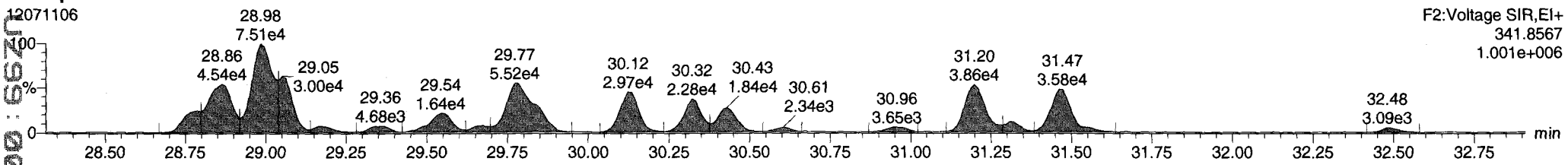


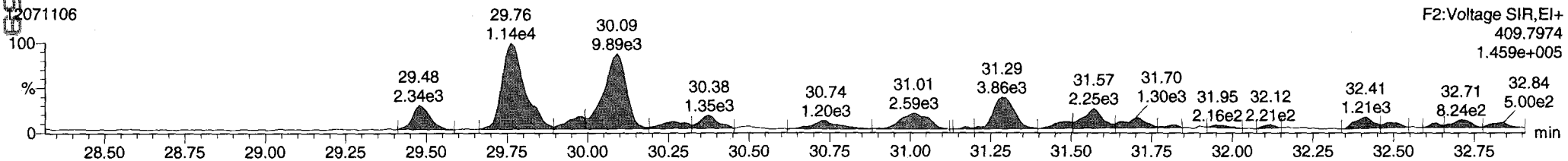
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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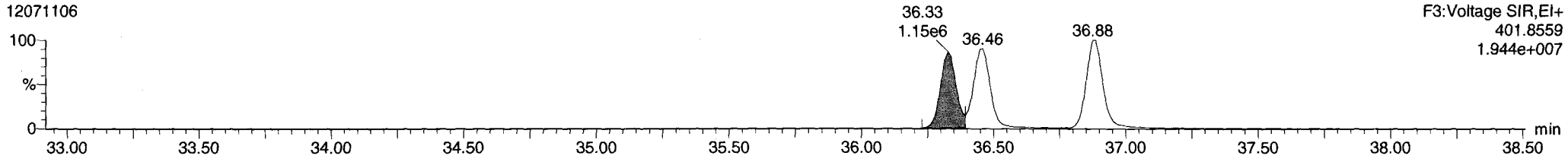
13C-123478-HxCDD



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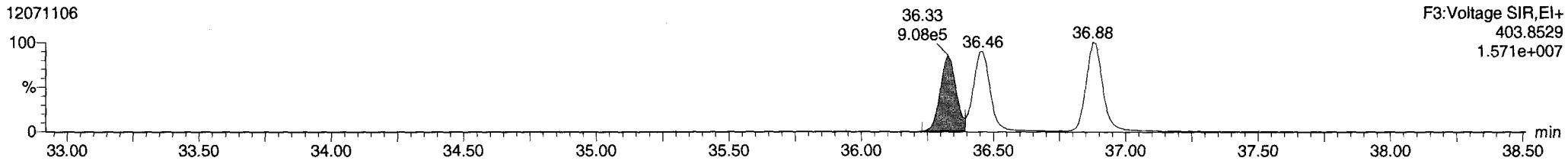
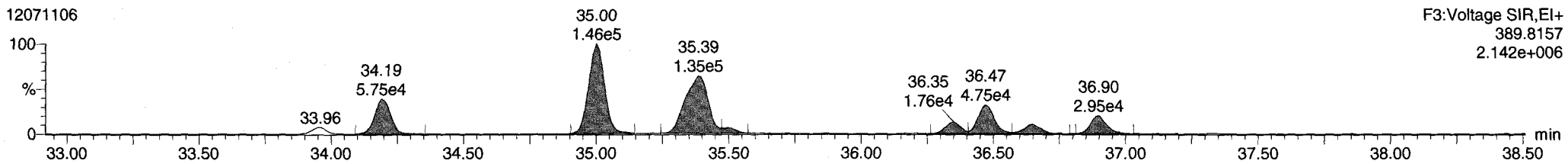
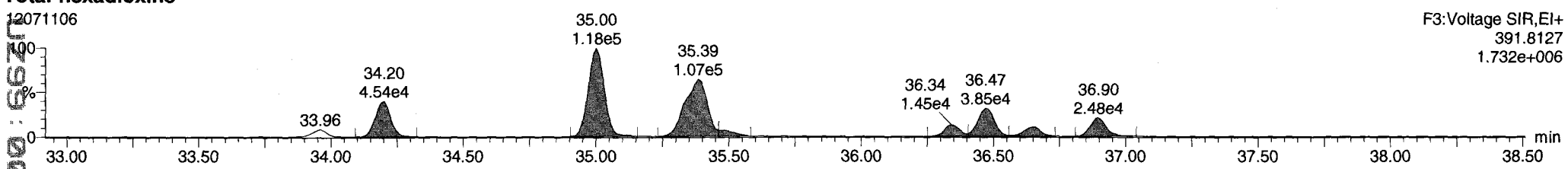


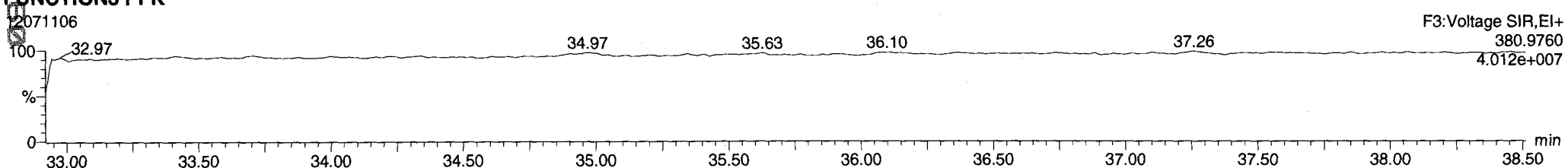
Total-hexadioxins



Total-hexadioxins



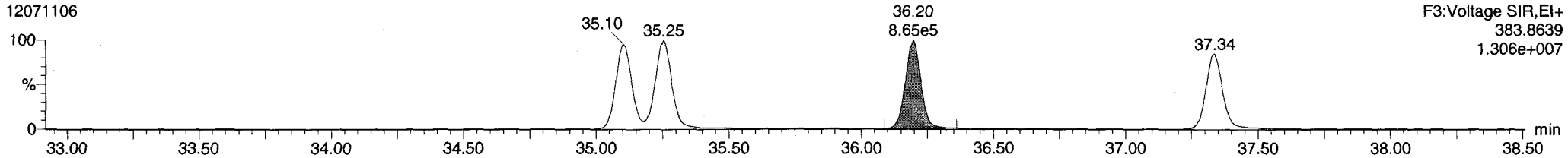
FUNCTION3 PFK



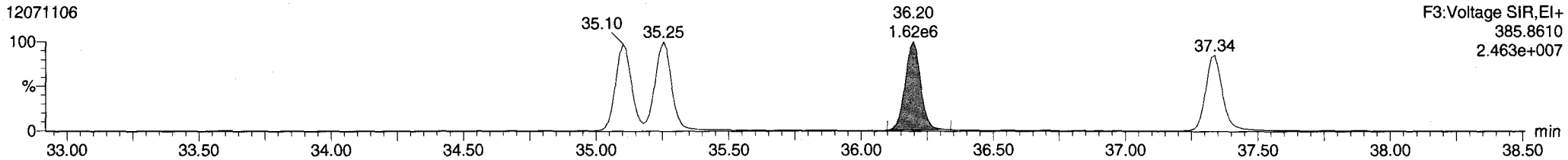
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:57:28 Pacific Daylight Time

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

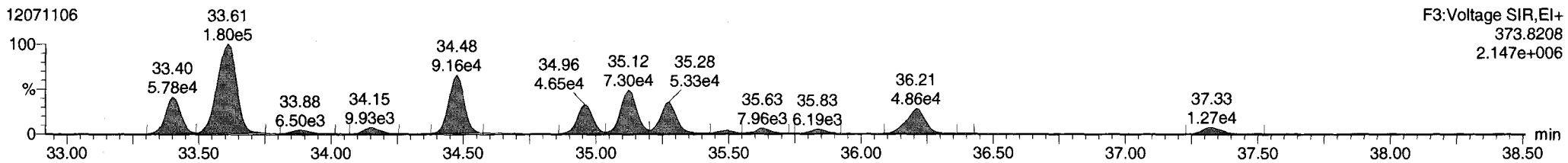
13C-234678-HxCDF



13C-234678-HxCDF



Total-hexafurans



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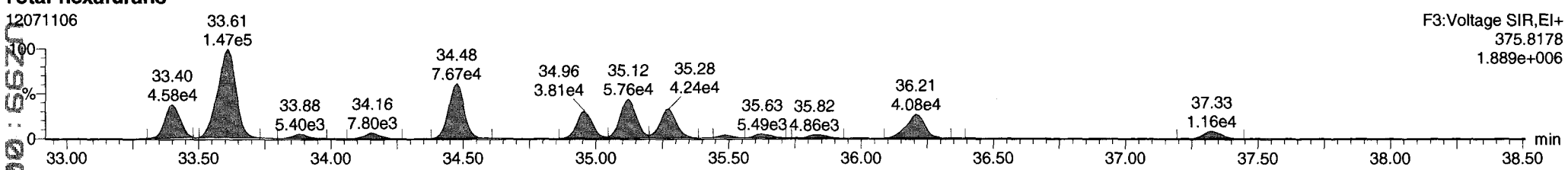
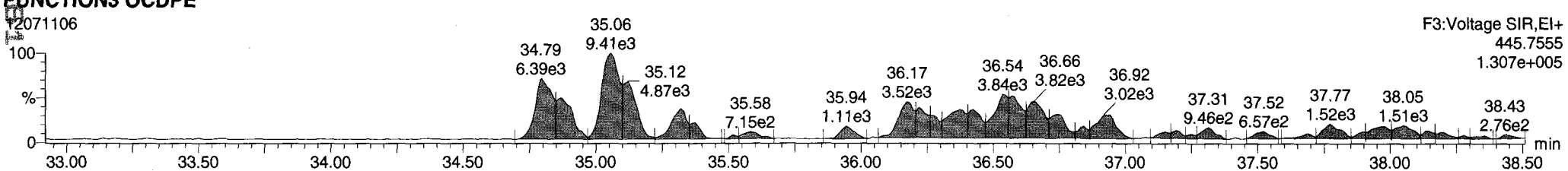


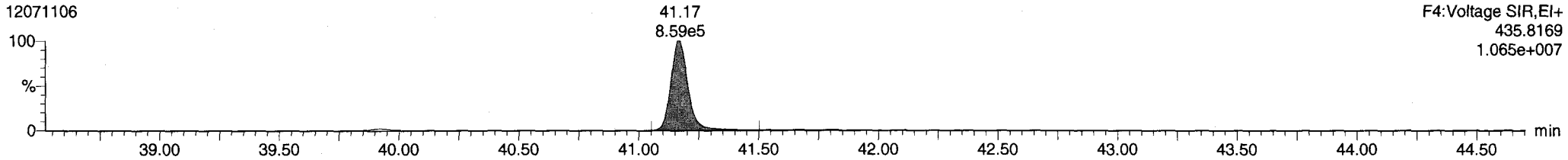
FUNCTION3 OCDPE



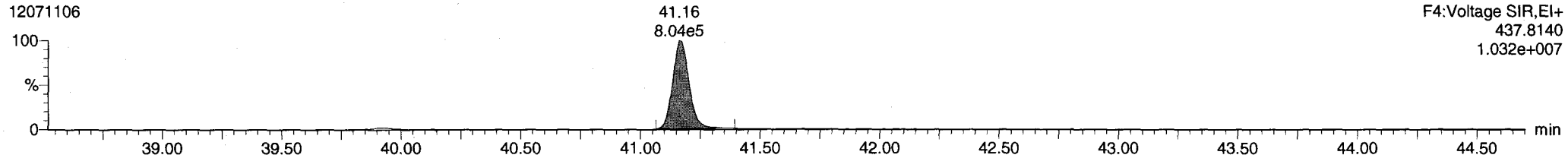
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:57:28 Pacific Daylight Time

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

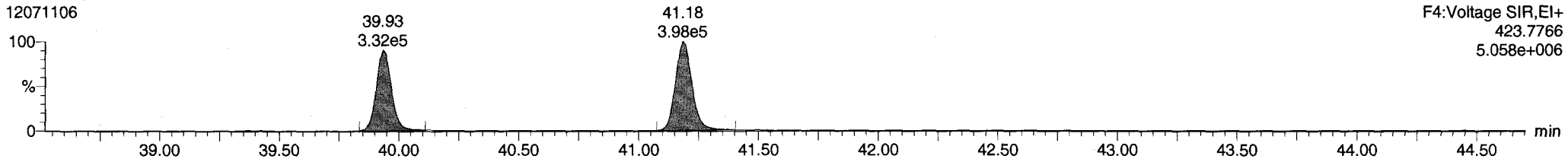
13C-1234678-HpCDD



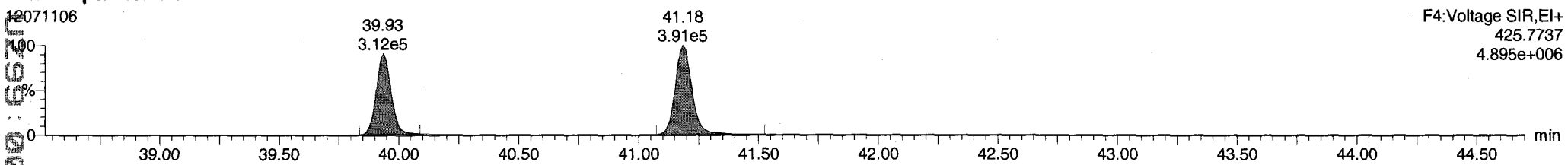
13C-1234678-HpCDD



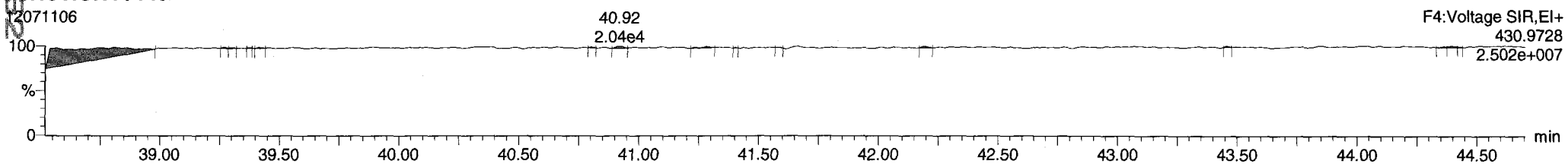
Total-heptadioxins



Total-heptadioxins



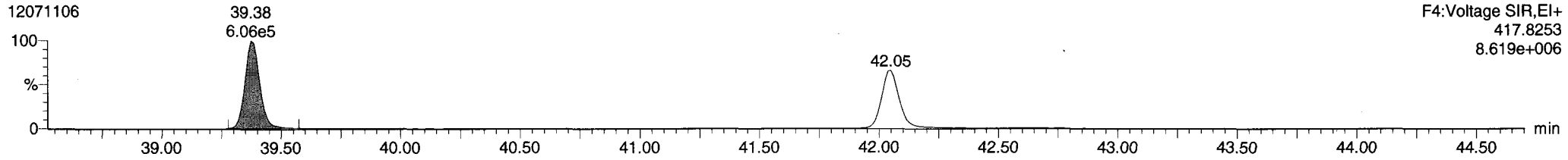
FUNCTION4 PFK



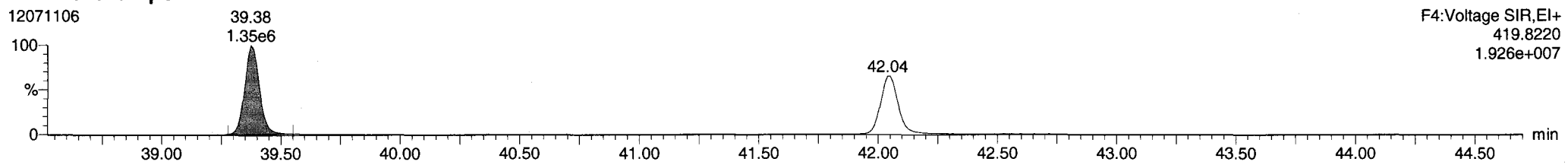
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:57:28 Pacific Daylight Time

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

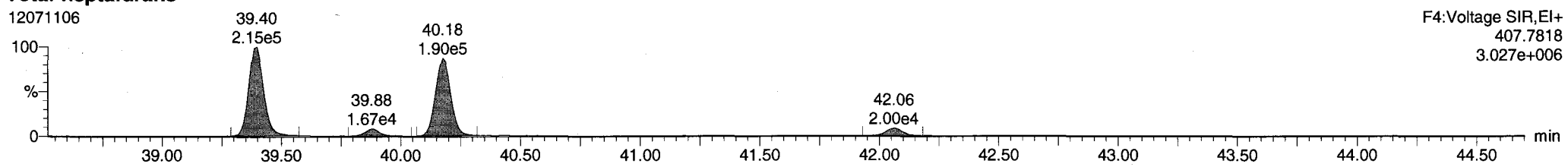
13C-1234678-HpCDF



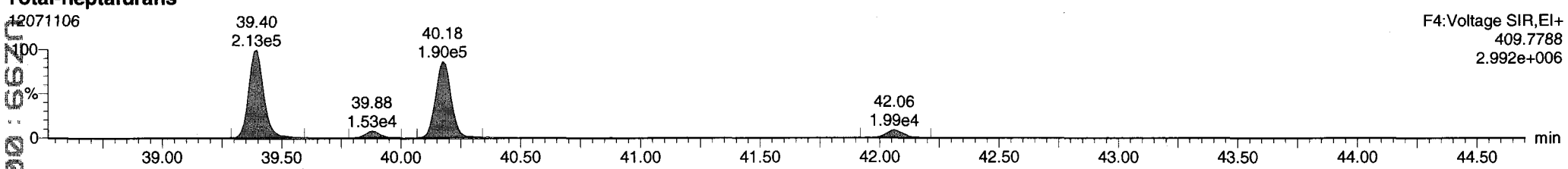
13C-1234678-HpCDF



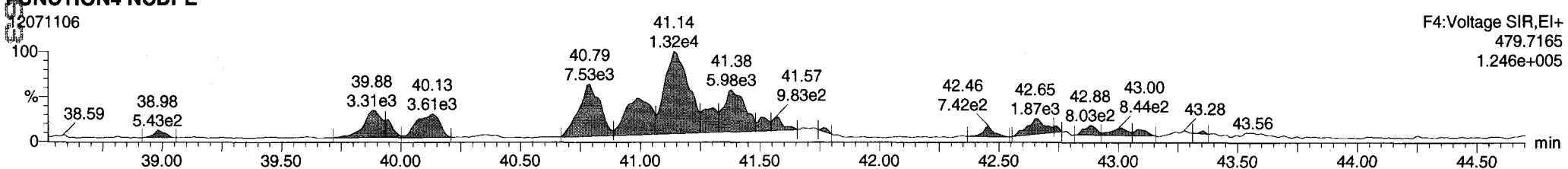
Total-heptafurans



Total-heptafurans



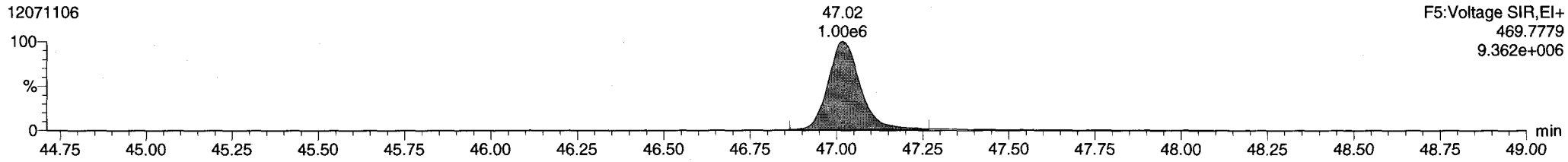
FUNCTION4 NCDPE



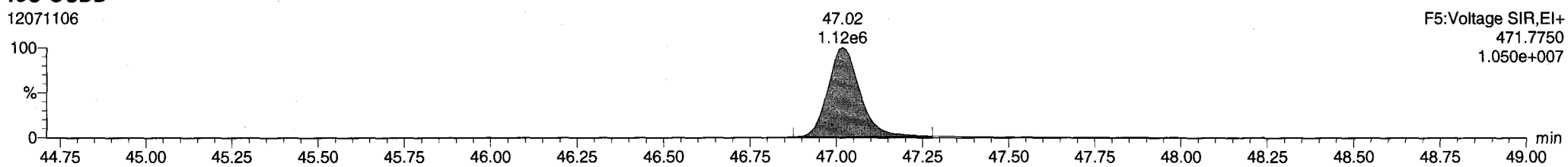
Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:57:28 Pacific Daylight Time

Name: 12071106, Date: 11-Jul-2012, Time: 15:44:50, ID: UZ99A, Conditions: AUTOSPEC01, User: pk

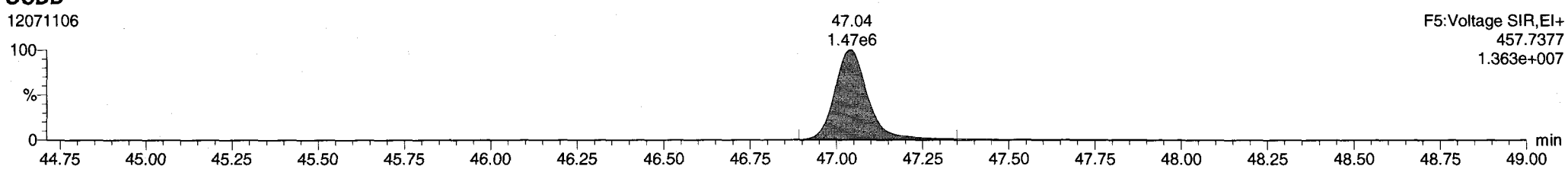
13C-OCDD



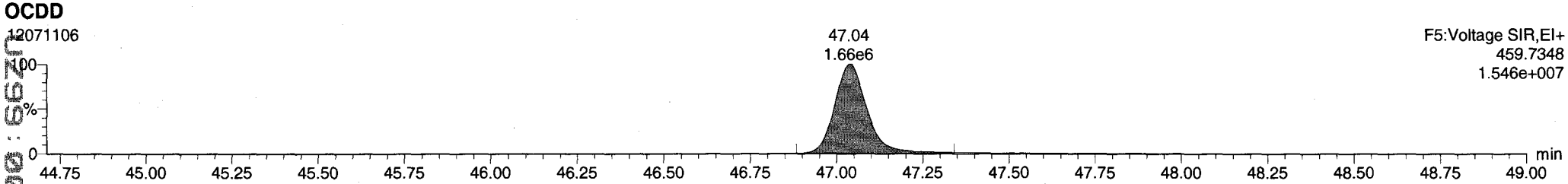
13C-OCDD



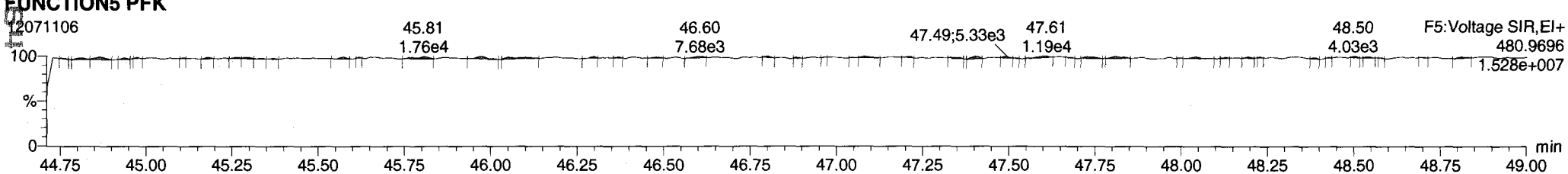
OCDD



OCDD



FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\120711DATA1.qld
Last Altered: Thursday, July 12, 2012 10:55:36 Pacific Daylight Time
Printed: Thursday, July 12, 2012 10:57:28 Pacific Daylight Time

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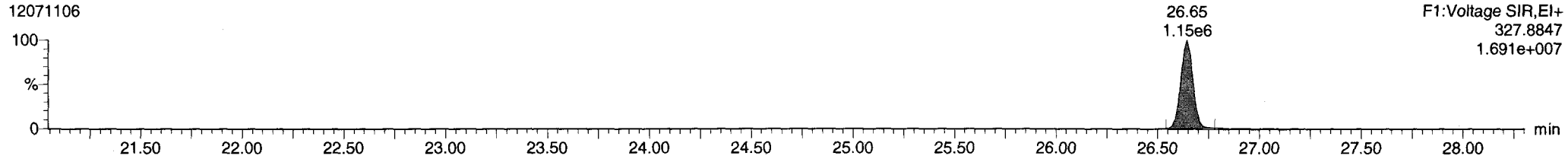
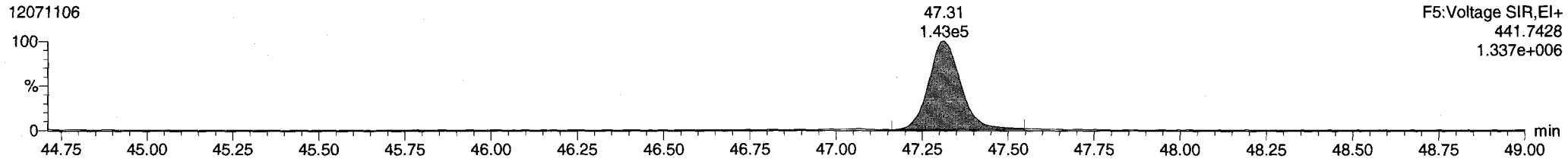
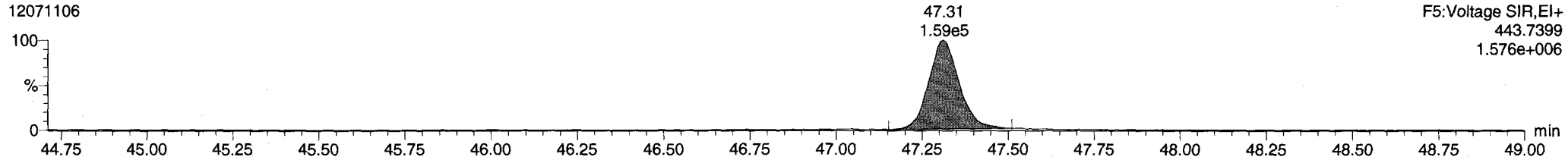
37CL-2378-TCDD



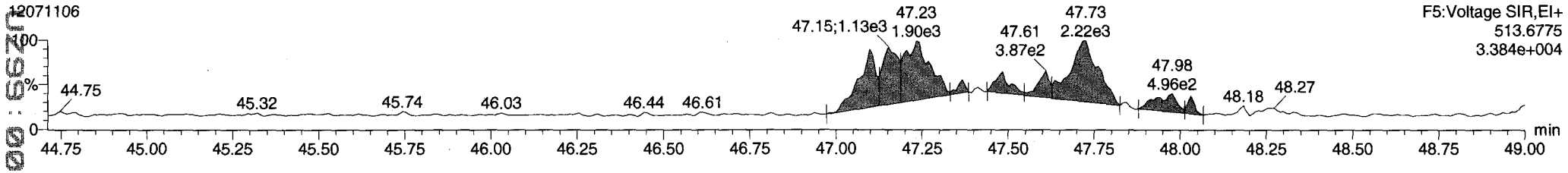
OCDF



OCDF



FUNCTION5 DCDPE



559665

UZ99MB

12071104

EDLs

Curve Date 5/3/2012

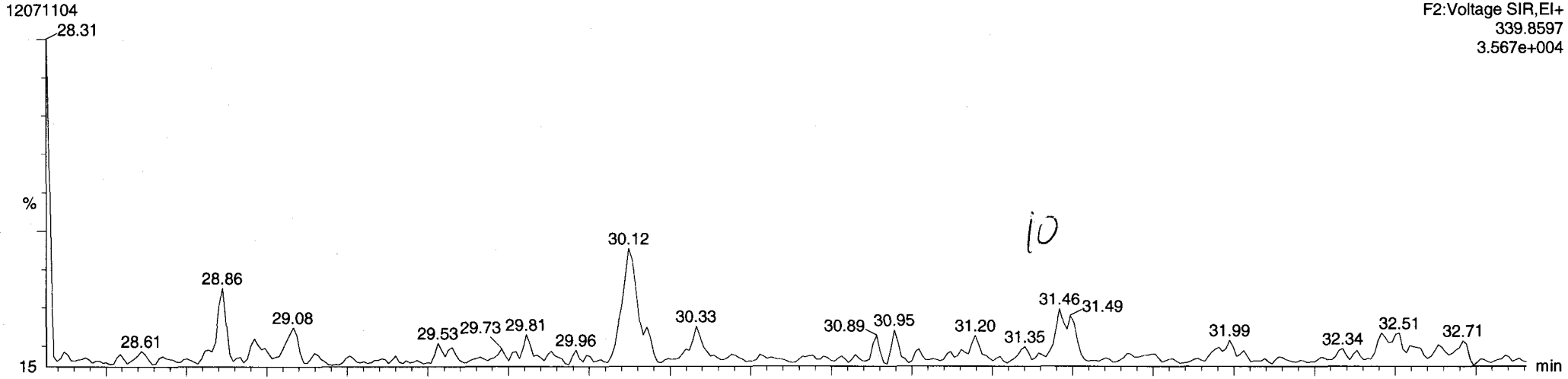
	Noise 1 Percent	Noise 1 Height	Noise 2 Percent	Noise 2 Height	Label 1 Height	Label 2 Height	RRF Mean	EDL (pg)
2378-TCDD							1.046	#DIV/0!
12378-PeCDD	30	14270	40	10100	21392968	13651506	0.973	1.220
123478-HxCDD	20	18300	20	13110	18805420	14764031	0.935	1.001
123678-HxCDD	20	18300	10	13110	19373420	15304601	0.878	0.816
123789-HxCDD	10	18300	40	13110	18805420	14764031	0.839	1.256
1234678-HpCDD							0.974	#DIV/0!
OCDD							0.950	#DIV/0!
2378-TCDF							0.866	#DIV/0!
12378-PeCDF							0.907	#DIV/0!
23478-PeCDF	10	35670	30	13600	33760968	21271110	0.936	0.742
123478-HxCDF	20	14350	20	11020	13722352	26717022	1.082	0.580
234678-HxCDF							1.070	#DIV/0!
123678-HxCDF							1.048	#DIV/0!
123789-HxCDF							1.020	#DIV/0!
1234678-HpCDF							1.214	#DIV/0!
1234789-HpCDF	10	15630	20	13890	5625913	12623839	1.254	0.948
OCDF	10	21610	40	11050	10548054	11671019	1.105	2.680

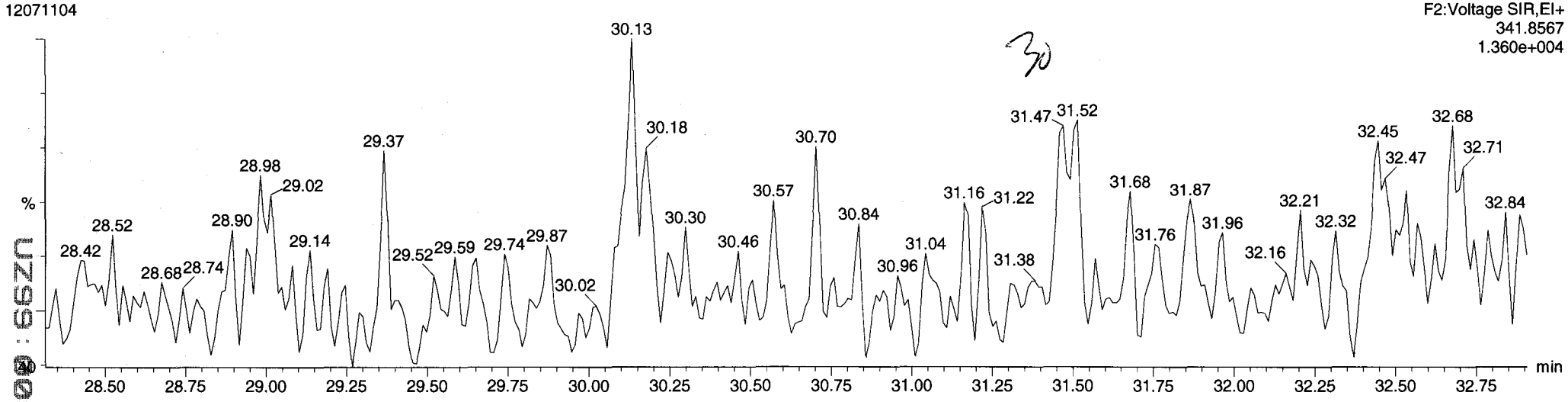
UZ99 : 00666

Quantify Compound Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 23478-PeCDF U2999 MBS

Sample Name: 12071104



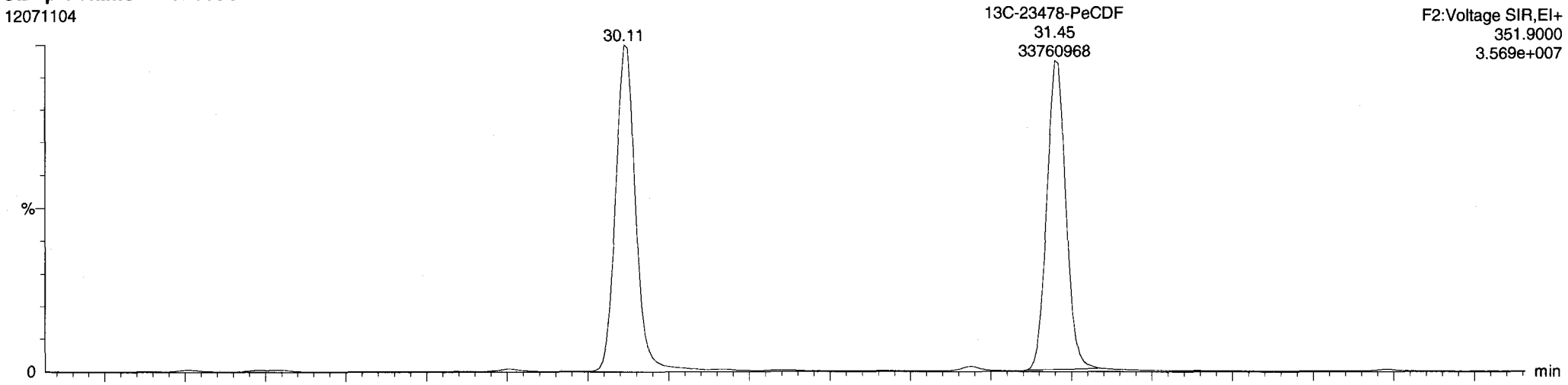


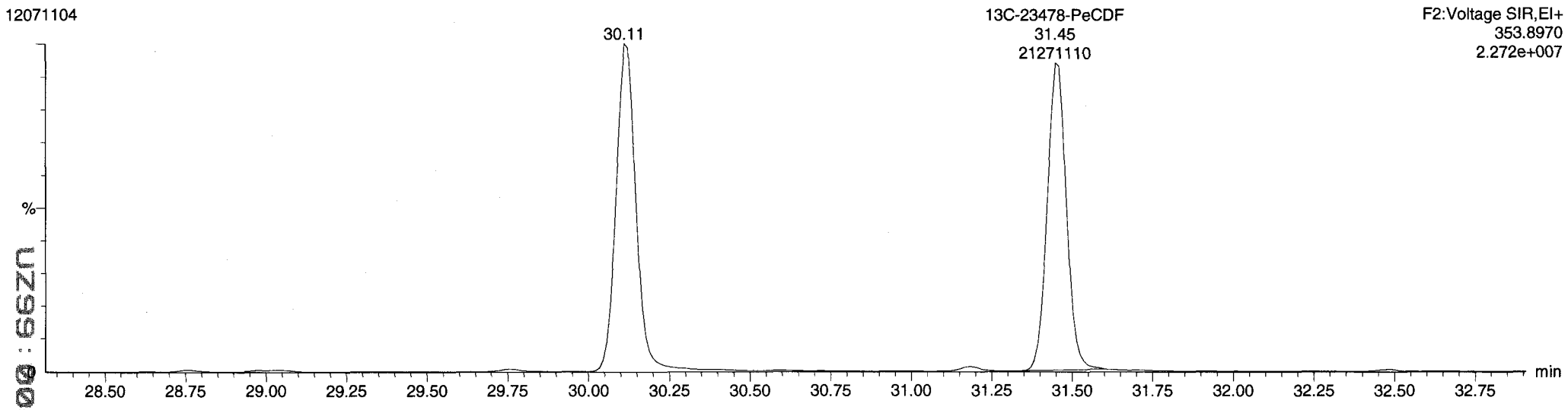
Height	1° Ht	RRF Mean	Pred RT
		0.936	31.47

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-23478-PeCDF

Sample Name: 12071104





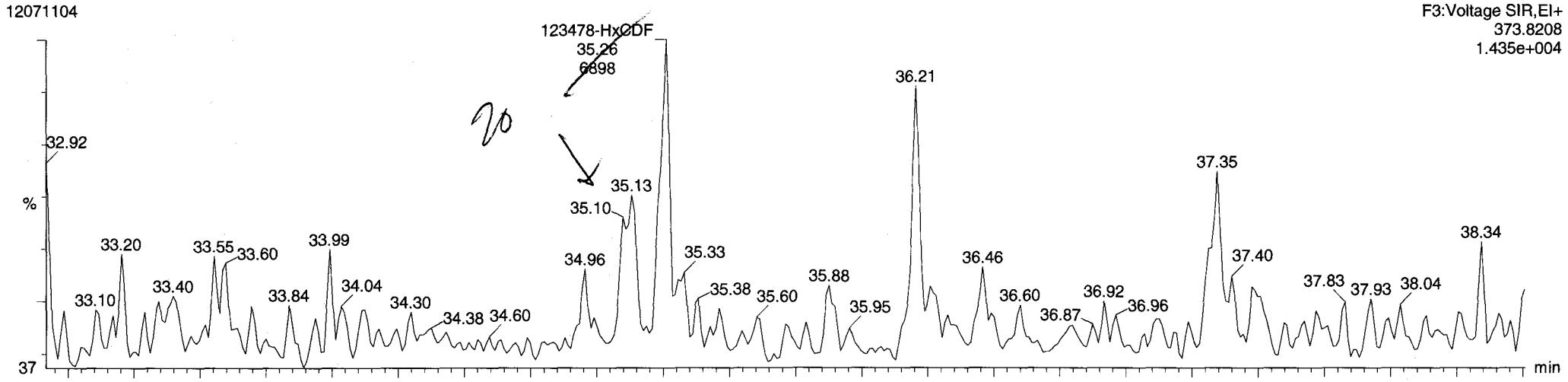
Height	1° Ht	RRF Mean	Pred.RT
33760968	21271110	1.003	31.47

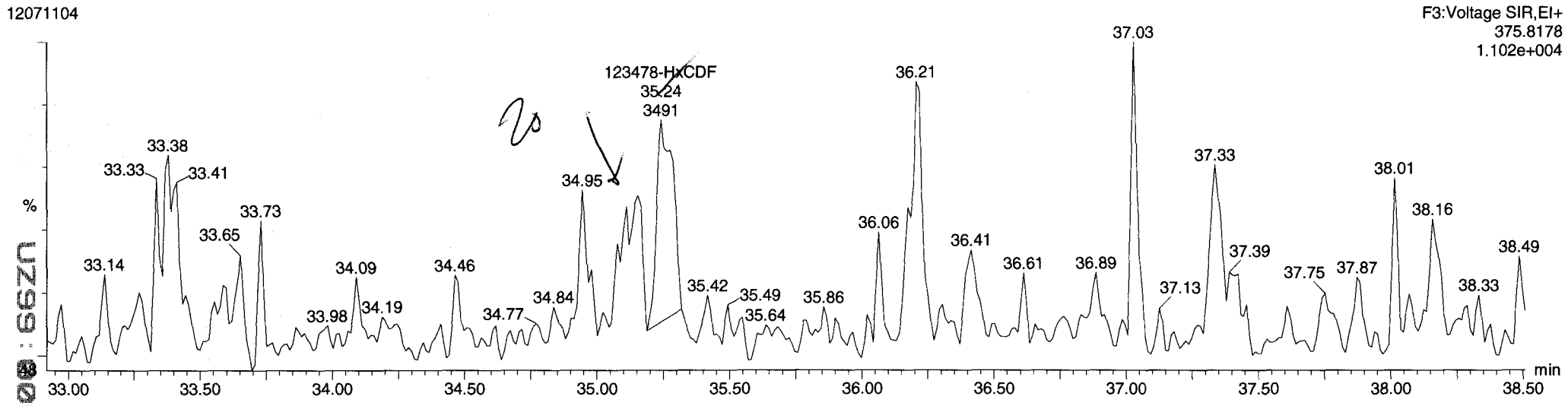
UZ99:00968

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 123478-HxCDF

Sample Name: 12071104





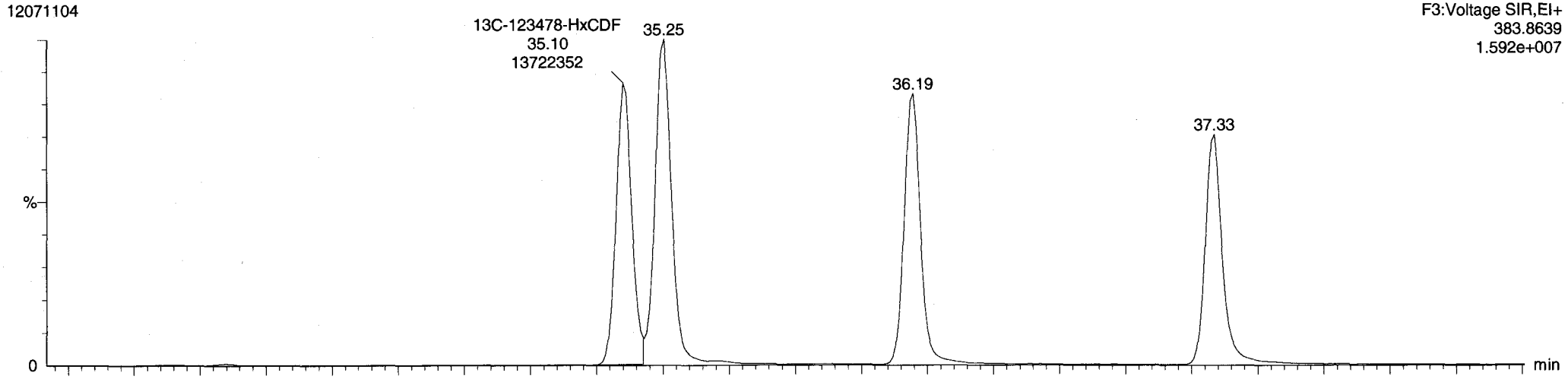
Height	1° Ht	RRF Mean	Pred.RT
	3491	1.082	35.11

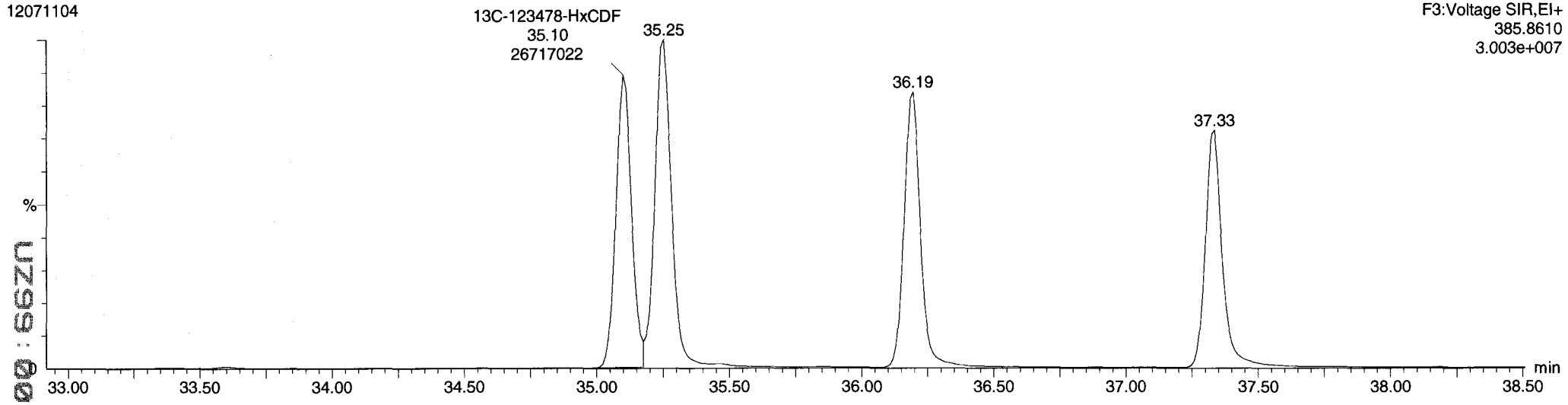
UZ99:8069

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-123478-HxCDF

Sample Name: 12071104





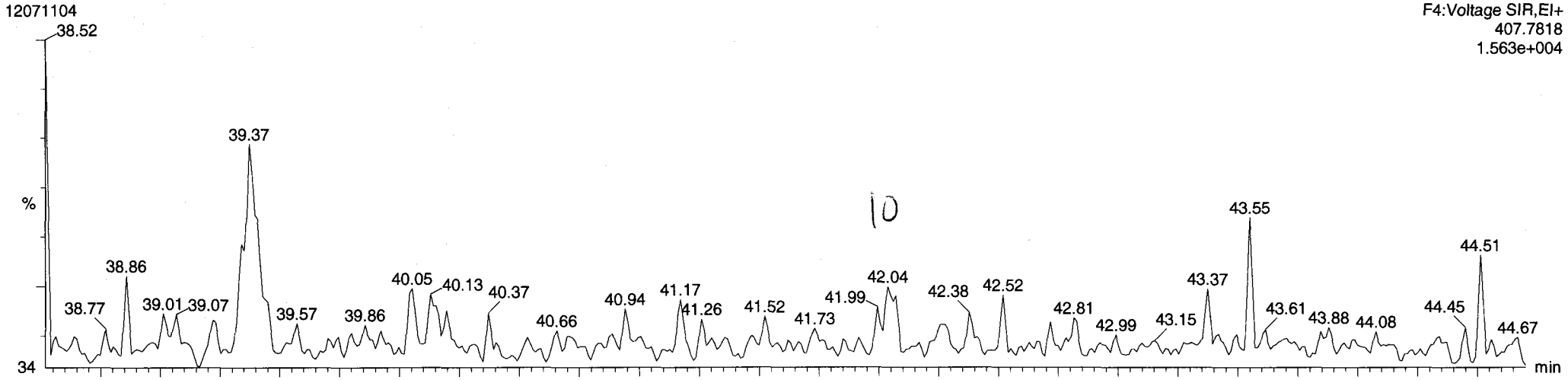
Height	1° Ht	RRF Mean	Pred.RT
13722352	26717022	1.186	35.10

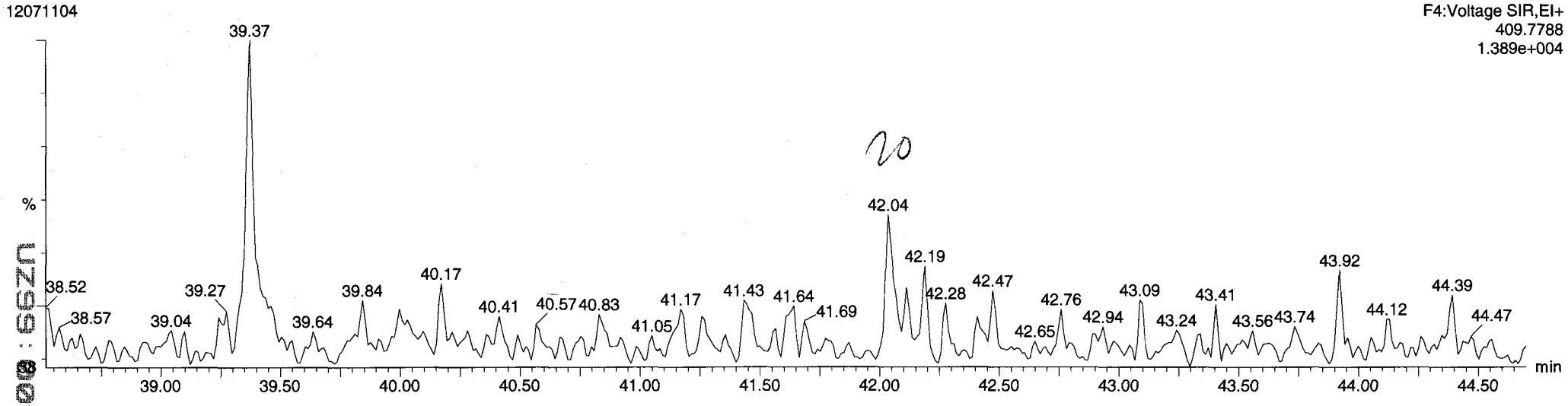
UZ99:00670

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 1234789-HpCDF

Sample Name: 12071104



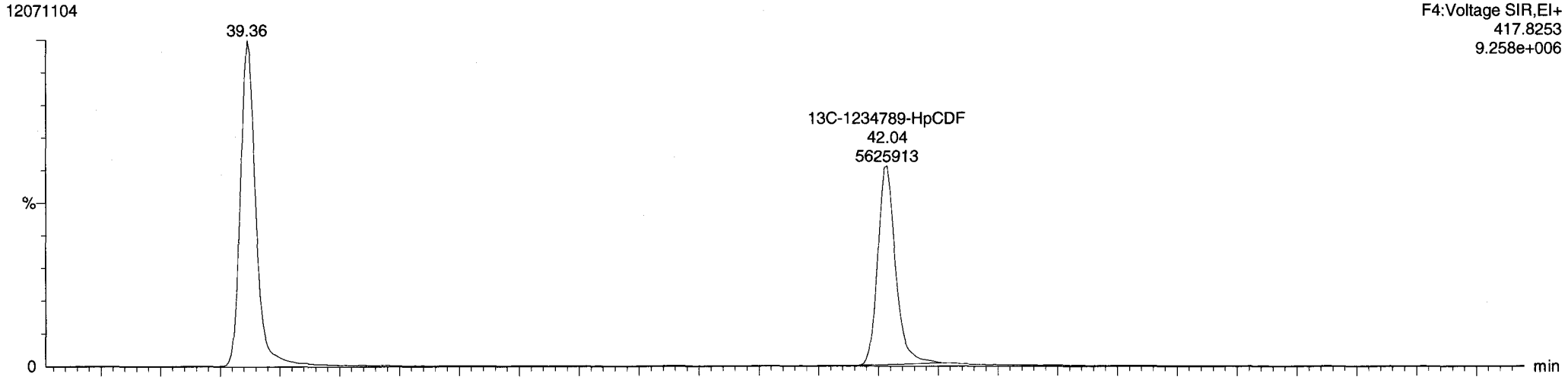


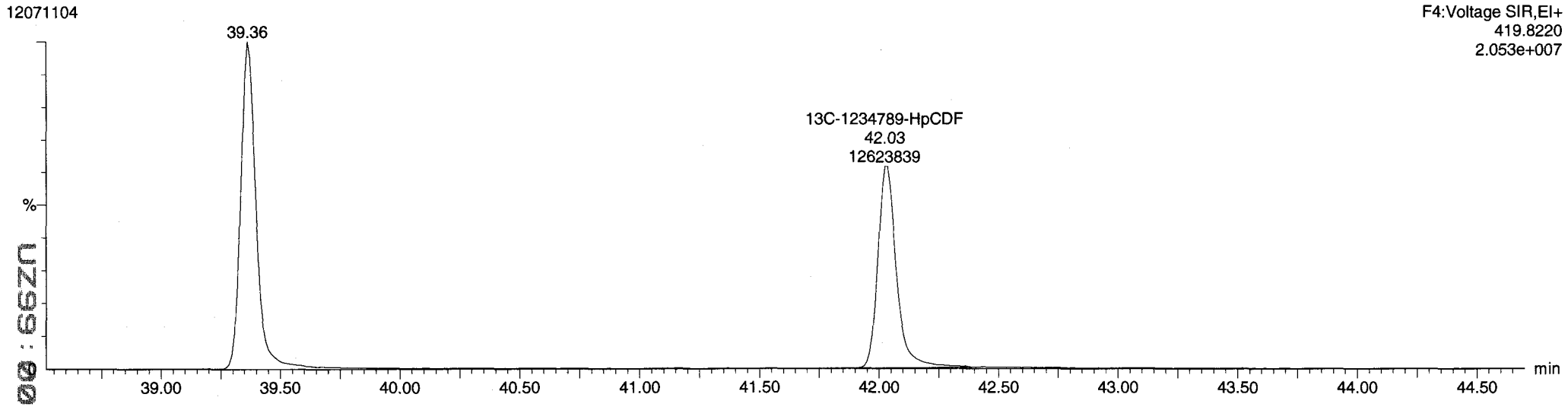
Height	1° Ht	RRF Mean	Pred.RT
		1.254	42.05

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-1234789-HpCDF

Sample Name: 12071104





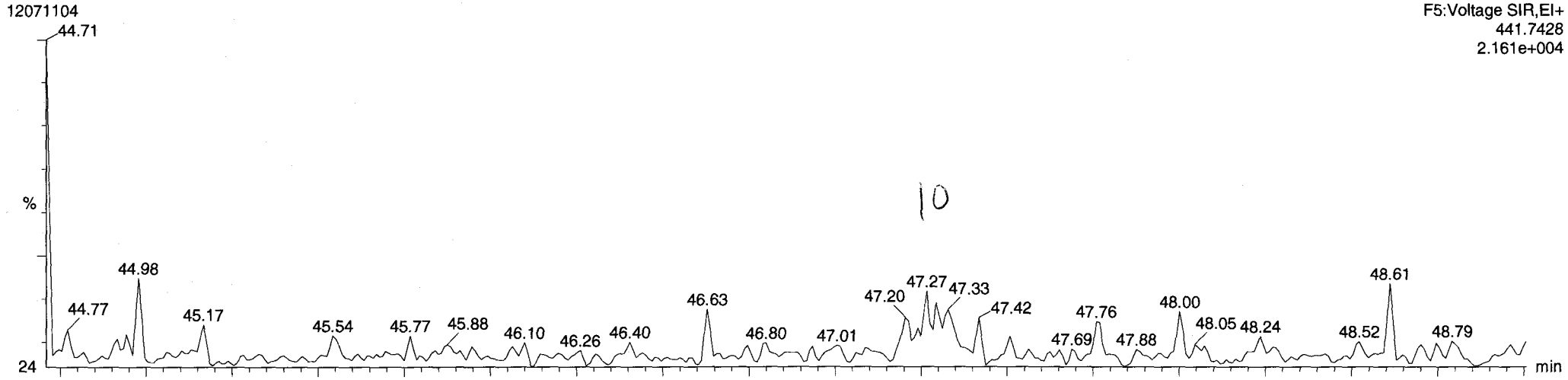
Height	1° Ht	RRF Mean	Pred.RT
5625913	12623839	0.741	42.04

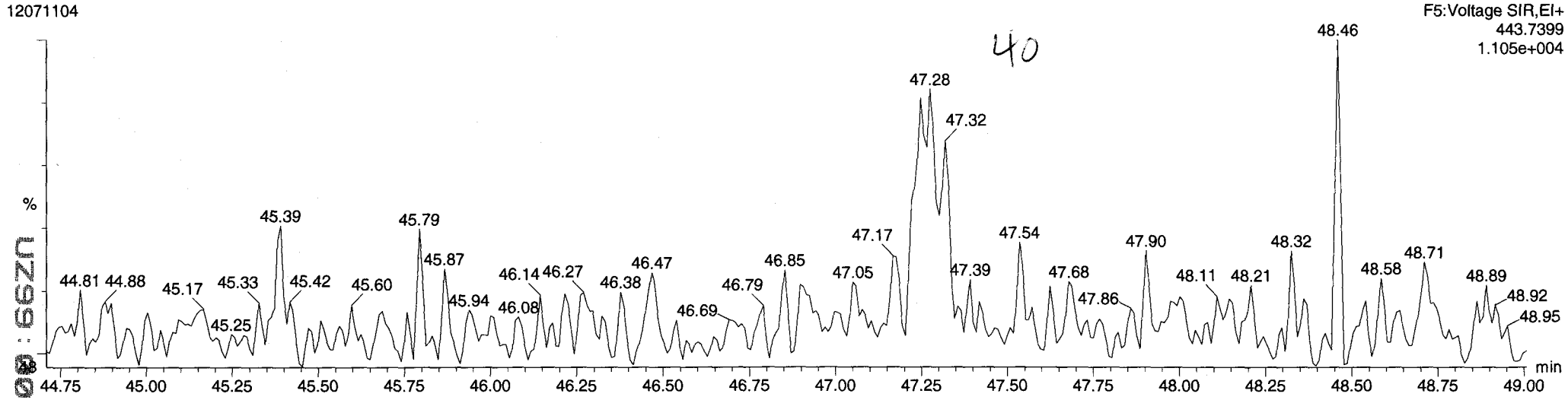
UZ99 : 00672

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: OCDF

Sample Name: 12071104





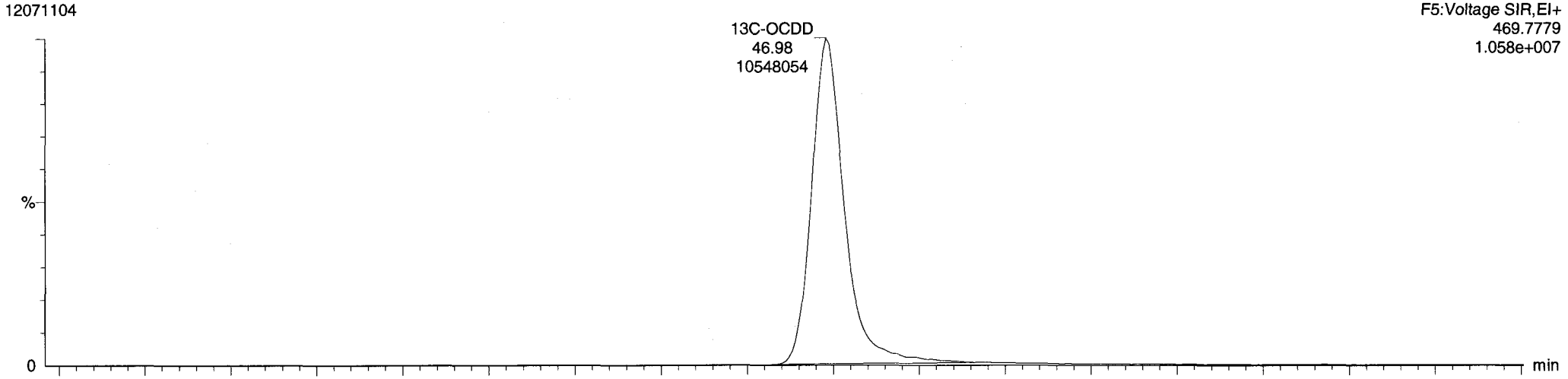
Height	1° Ht	RRF Mean	Pred.RT
		1.105	47.26

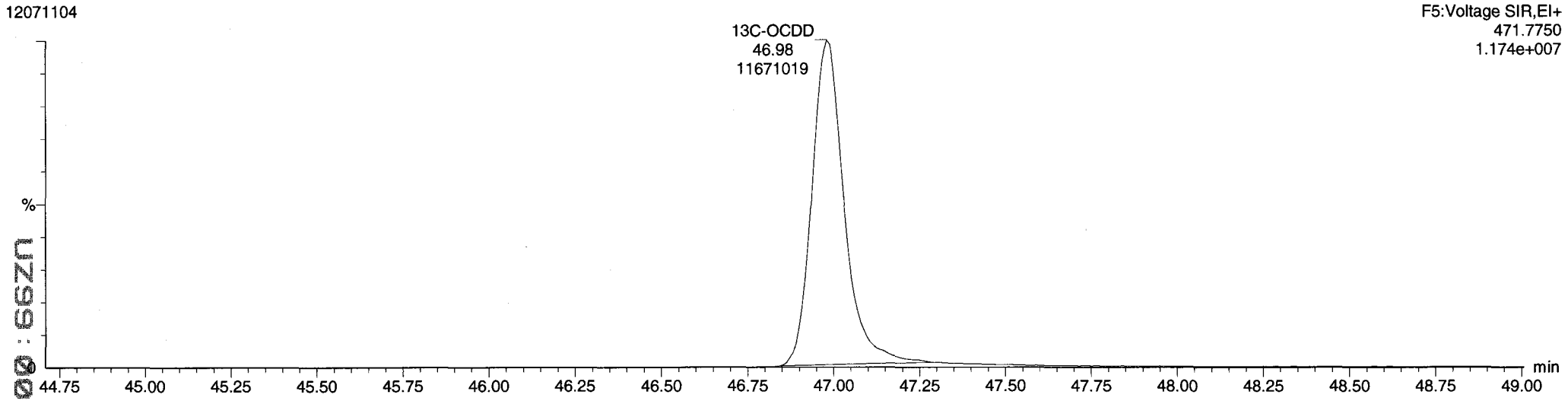
UZ99 : 0063

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-OCDD

Sample Name: 12071104





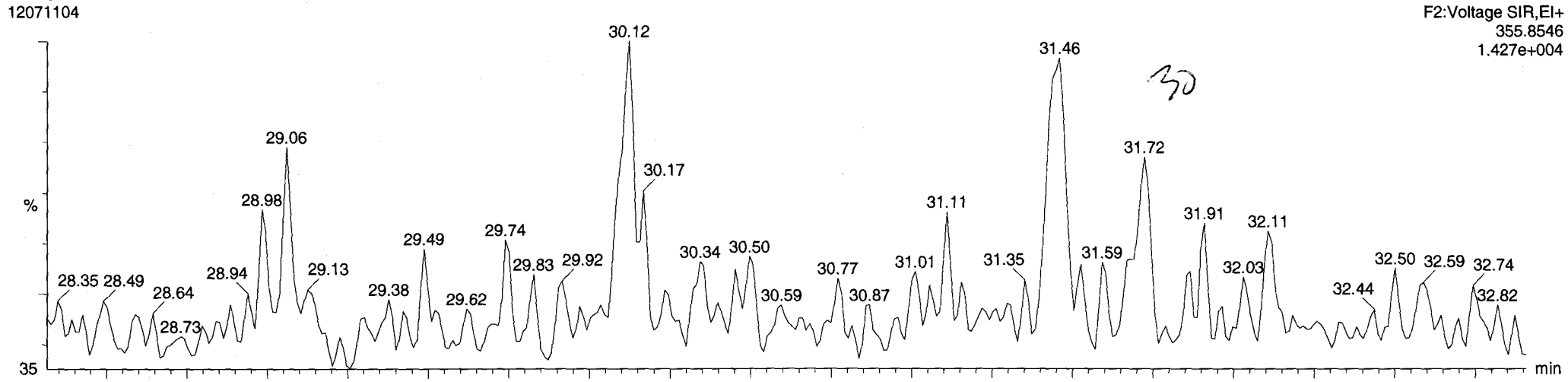
	Height	1° Ht	RRF Mean	Pred.RT
1	10548054	11671019	0.717	47.01

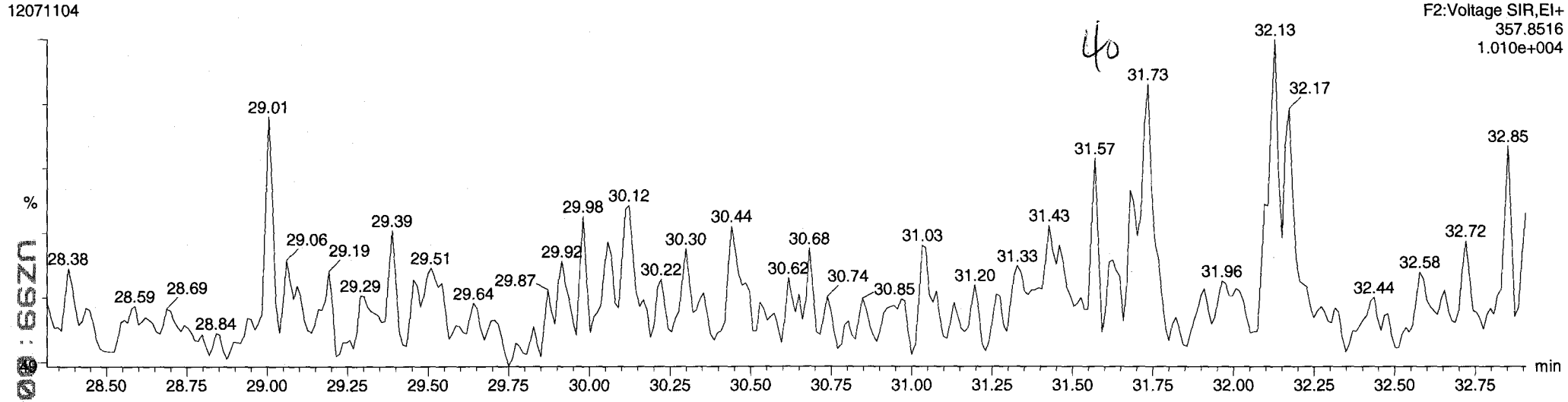
UZ99 : 0065

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 12378-PeCDD

Sample Name: 12071104





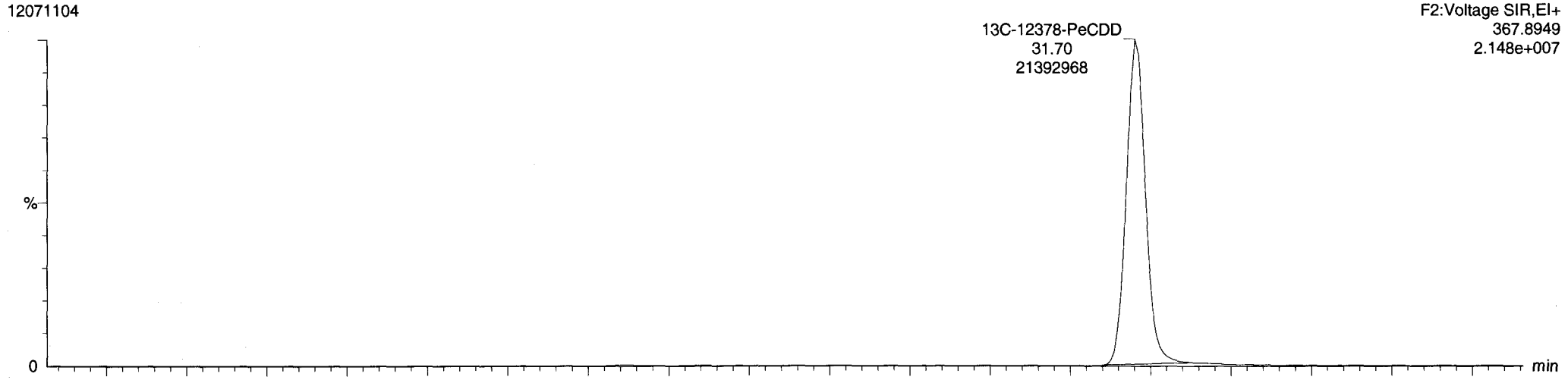
Height	1° Ht	RRF Mean	Pred.RT
		0.973	31.71

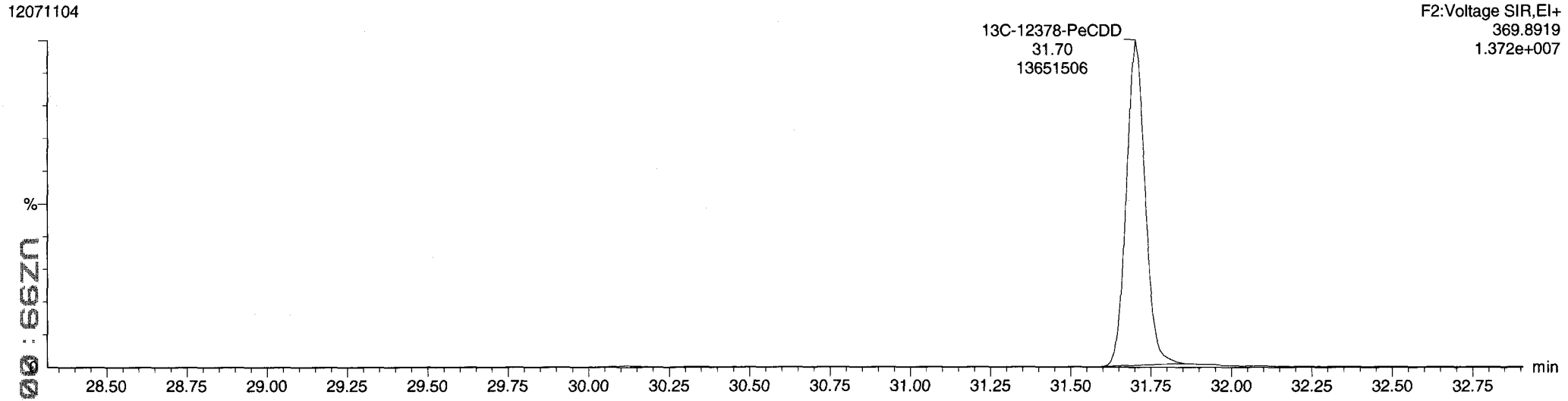
UZ99:0075

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-12378-PeCDD

Sample Name: 12071104





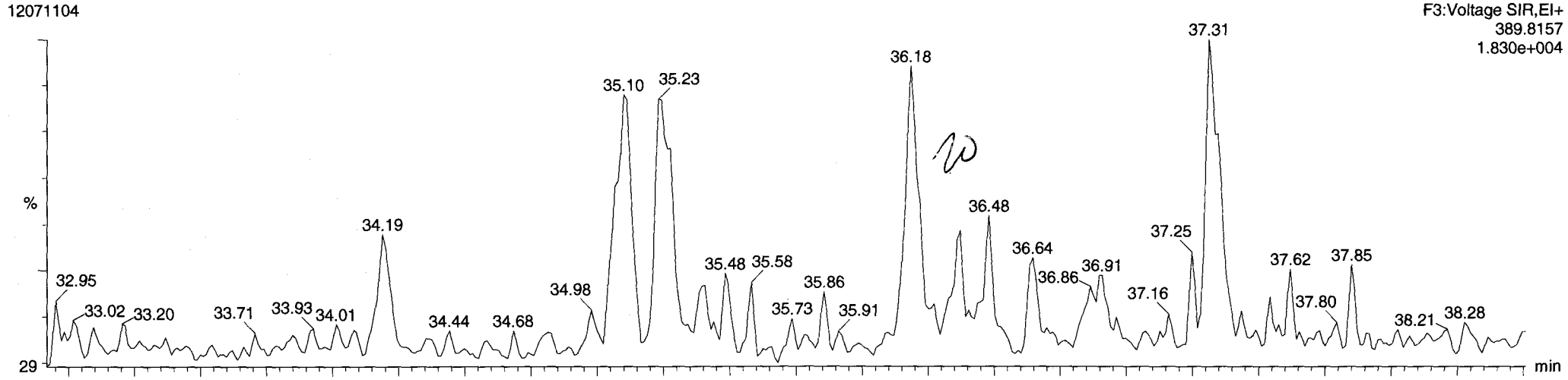
Height	1° Ht	RRF Mean	Pred.RT
21392968	13651506	0.663	31.72

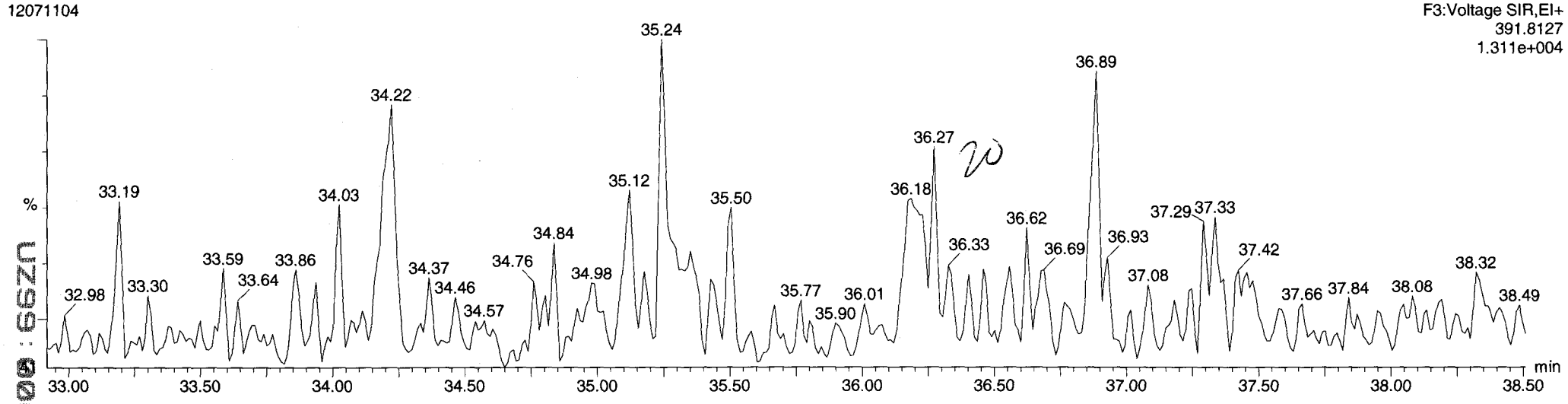
UZ99:0096

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 123478-HxCDD

Sample Name: 12071104





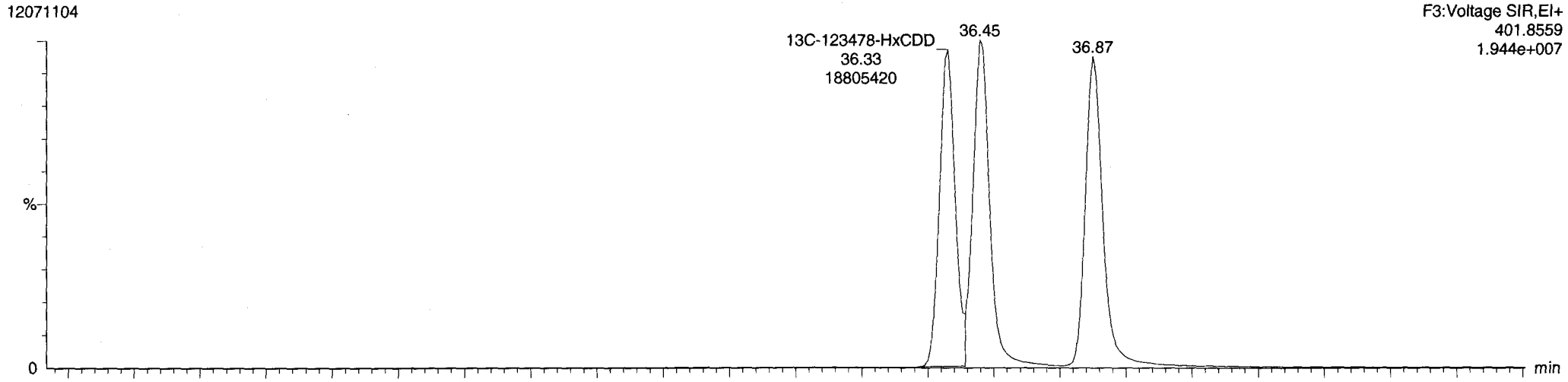
Height	1° Ht	RRF Mean	Pred.RT
		0.935	36.35

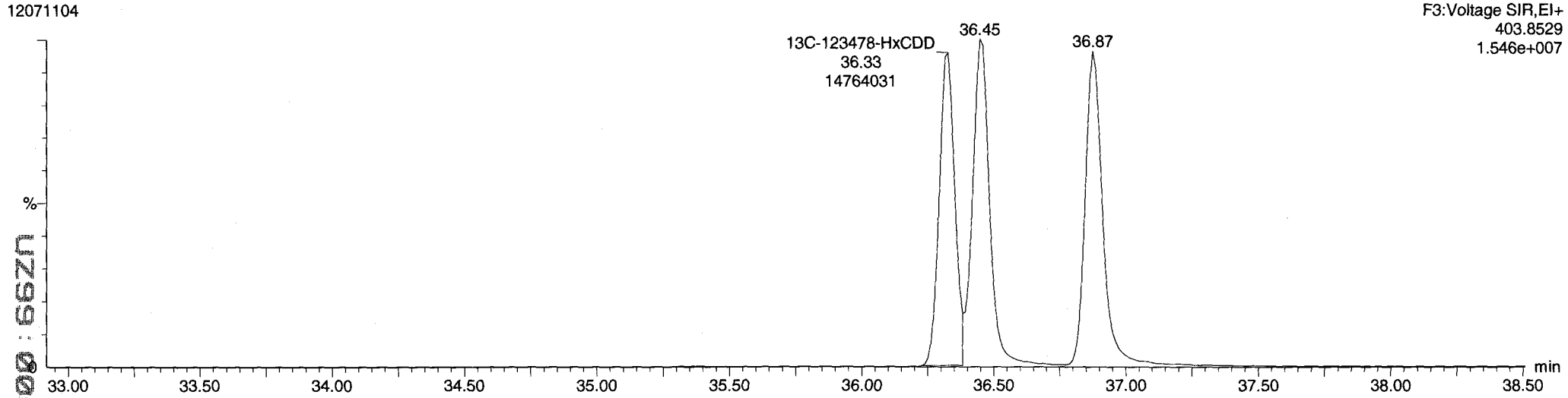
UZ99:0067

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-123478-HxCDD

Sample Name: 12071104





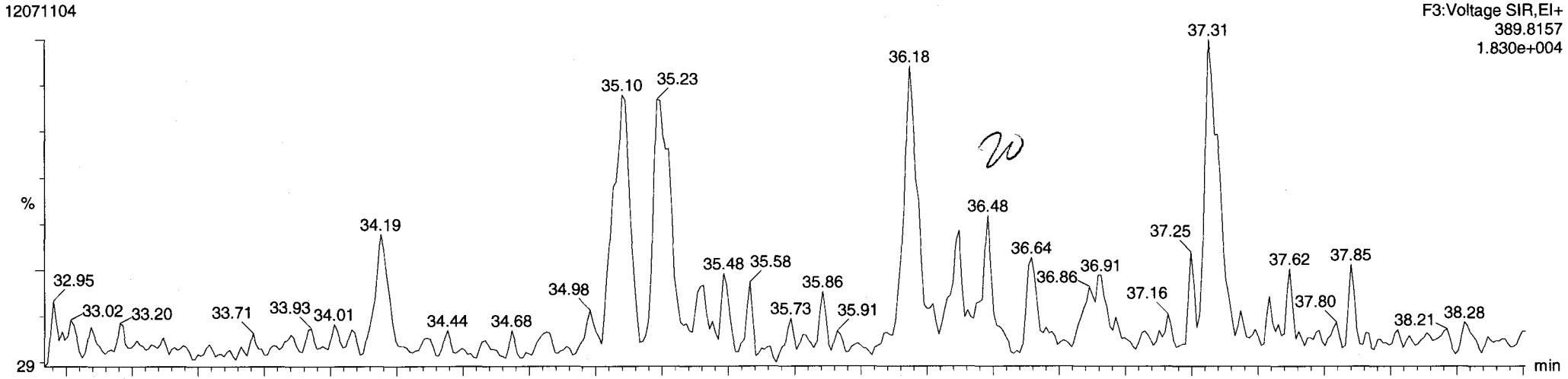
Height	1° Ht	RRF Mean	Pred.RT
18805420	14764031	1.024	36.33

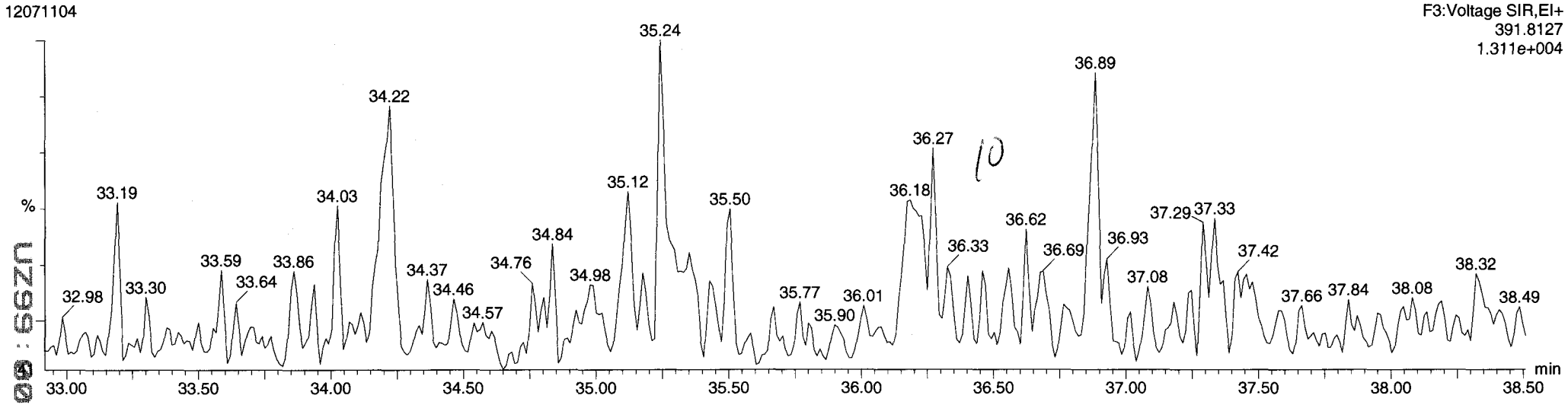
UZ99 : 00678

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 123678-HxCDD

Sample Name: 12071104





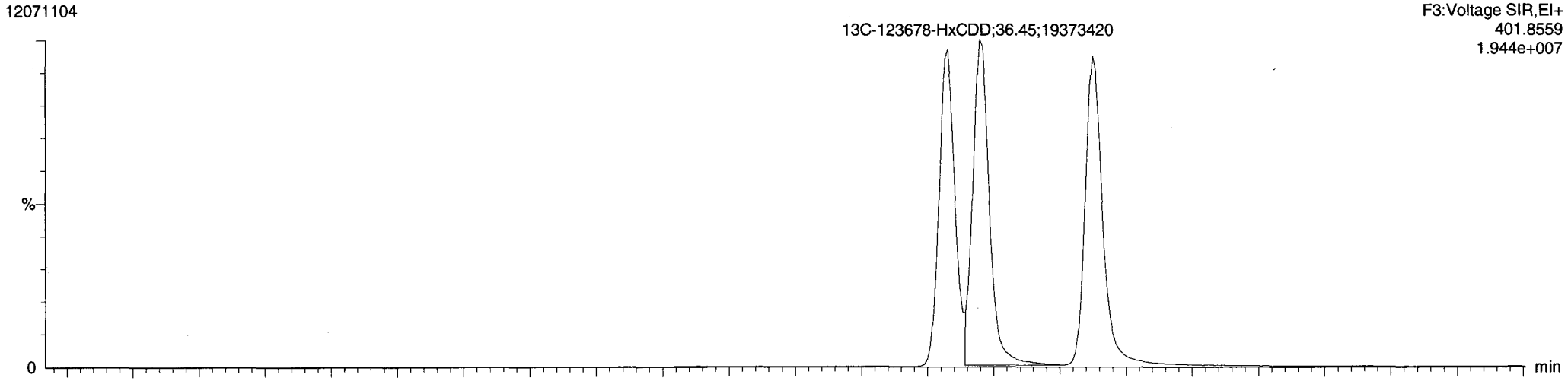
Height	1° Ht	RRF Mean	Pred.RT
		0.878	36.46

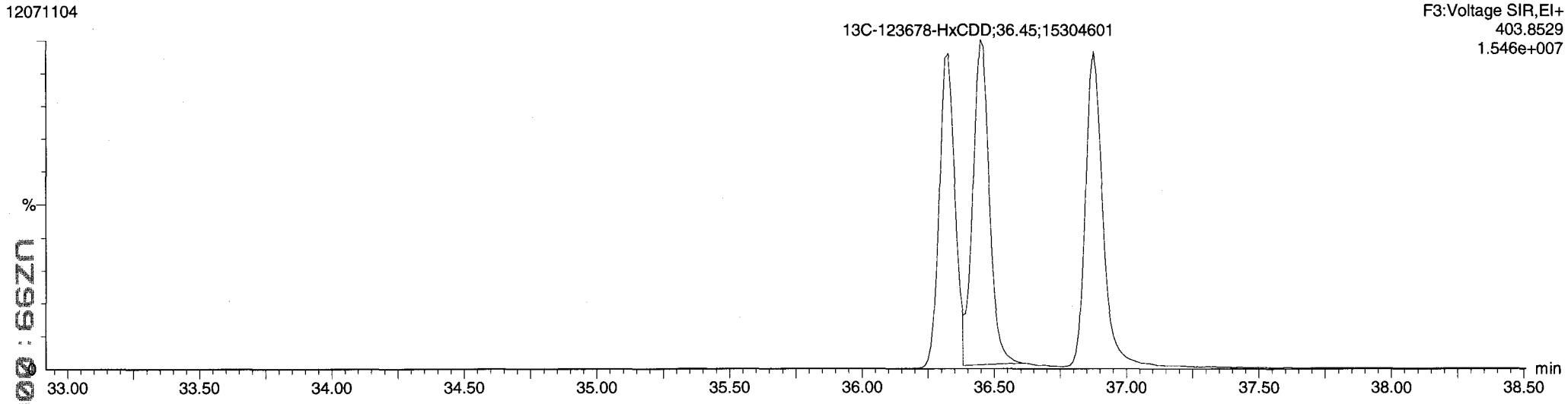
UZ99 : 00679

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-123678-HxCDD

Sample Name: 12071104





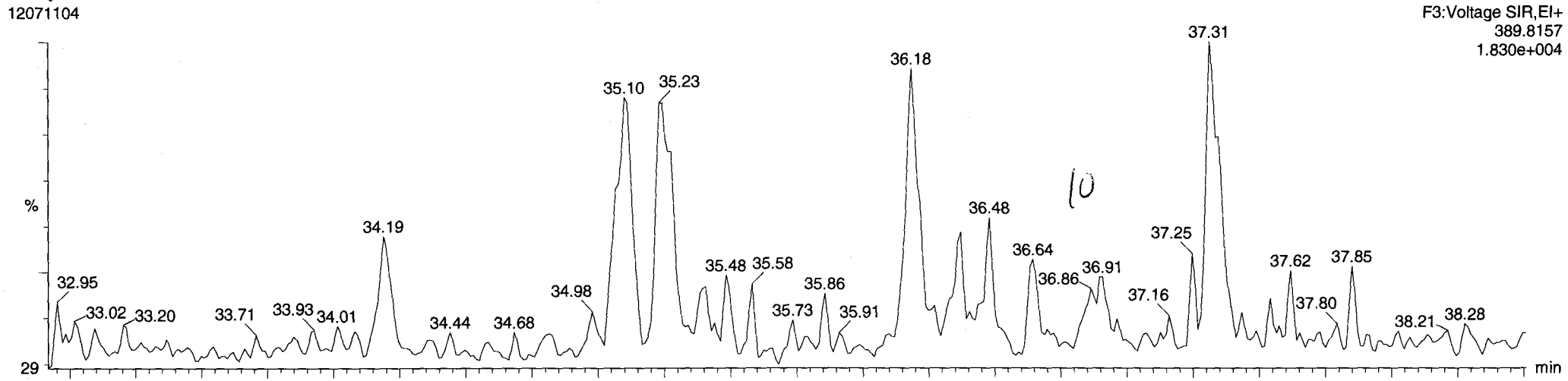
Height	1° Ht	RRF Mean	Pred.RT
19373420	15304601	1.113	36.45

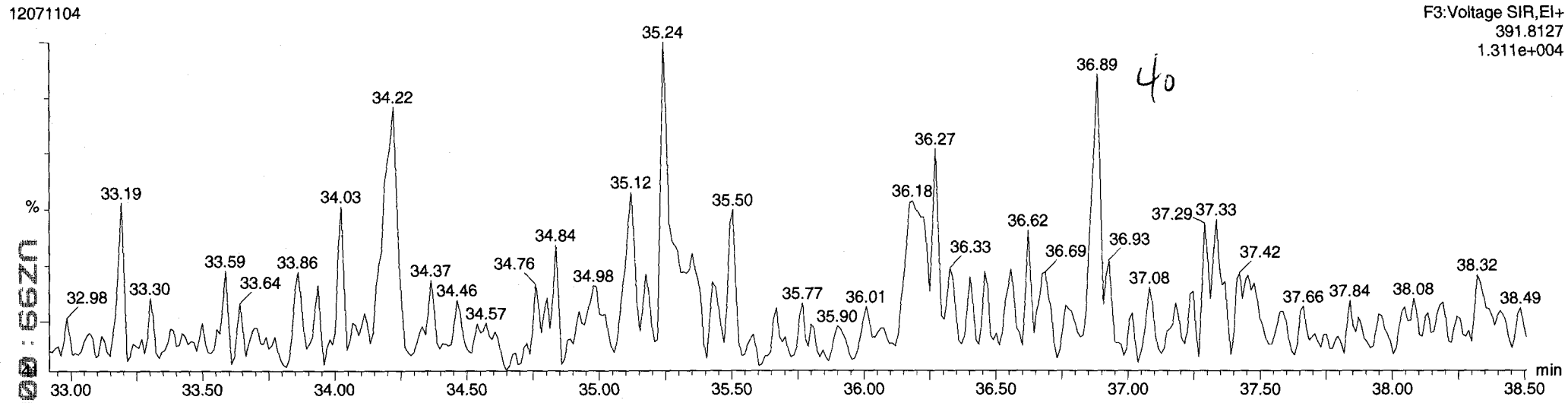
UZ99:0090

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 123789-HxCDD

Sample Name: 12071104





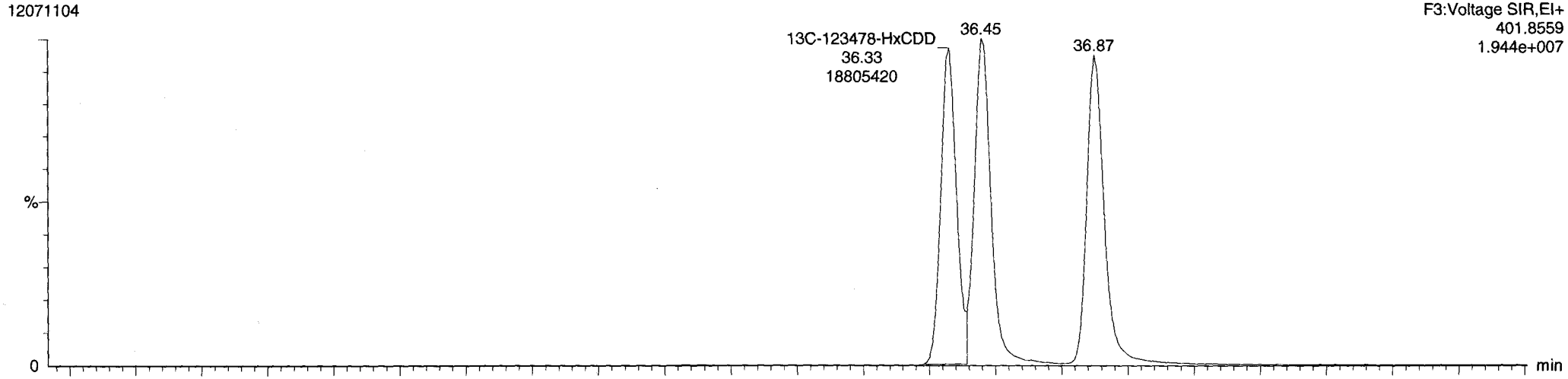
Height	1° Ht	RRF Mean	Pred.RT
		0.839	36.85

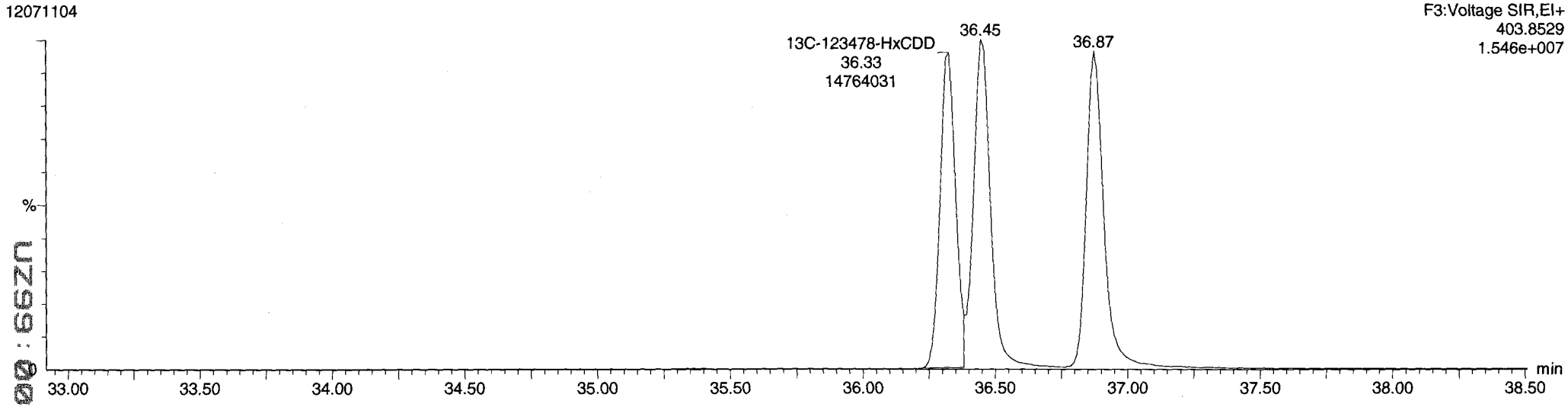
UZ99 : 0061

Dataset: P:\DIOXIN8290.PRO\120711MB.qld
Last Altered: Wednesday, July 11, 2012 15:12:37 Pacific Daylight Time
Printed: Wednesday, July 11, 2012 15:13:49 Pacific Daylight Time

Compound Name: 13C-123478-HxCDD

Sample Name: 12071104





Height	1° Ht	RRF Mean	Pred.RT
18805420	14764031	1.024	36.33

UZ99:0062

TOTALS RANGE RT MARKERS

120711	CS3				Range RT
TF	22.54	27.50	4.96	2.48	**25.02**
P1	27.35	28.30	0.95	0.48	**27.83**
PF	28.30	32.49	4.19	2.10	**30.40**
HF	33.40	37.35	3.95	1.98	**35.38**
HPF	39.38	42.05	2.67	1.34	**40.72**
TD	23.81	27.24	3.43	1.72	**25.53**
PD	29.02	32.12	3.10	1.55	**30.57**
HD	34.19	36.90	2.71	1.36	**35.55**
HPD	39.92	41.17	1.25	0.63	**40.55**

Enter Range RT in method for each totals range to define range windows.

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 5 (PCBSDMP20)

PSDDA (20ppb)
Batch set up by: ~~JZ~~

ARI Job No(s) UZ99, UZ92 Page 1 of 1

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 5.0g dry wt)	(REQ) Acid Clean (5mL)	(REQ) Sulfur Clean (5mL) 1 2 3	(Opt) Silica Gel Clean (1:5) Y / N	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
									NL 6/27/12 Analyst/Date
	MBS UZ99	5.00g	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		Microwave
	SBS	5.00g	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		NL 6/27/12
	SBSDup	5.00g	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		Analyst/Date
	QLS	5.00g	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		KD 100°C Exchange to Hexane (2 X 20mL)
2	A	6.12	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
2	UZ92 A	6.07	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
2	C	6.11	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		6/28/12 Analyst/Date
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		TurboVap 1 2 3 Pre-Cleanups
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		CJZ 6/29/12
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		Analyst/Date
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		~~TurboVap 1 2 3~~ Post Cleanups
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
Analyst/Date NL 6/27/12									CJZ 6/29/12 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(1979-4)	2µg/mL	100µL	5/16/13	NL	NL 06/27/12
Spike	1 (1964-2)	20µg/mL	125µL	4/03/13	NL	NL 6/27/12
QLS Spike	5 (1967-1)	2µg/mL	50µL	4/03/13	NL	NL 6/27/12

Extraction Time: 14:10 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in cold water 15 minutes. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (Small ~~or large~~ Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate). 12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap (if Silica Clean). 16. Vial with Hexane.

A. Need Total Solids Y / N ~~B. Archive~~/Freeze Y / N

~~Both jobs~~ UZ92 only

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: UZ99

Client ID: Anchor QEA, LLC

Parameter: PCB PSDDA

Client Project: I & J Waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A	YL 6/25/12
☒ Standing Water Decanted (Not shared)= A	YL 6/25/12
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 30% medium Rocks A.	YL 6/25/12
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	

3056F

Revision 008
11/02/11

PCB Raw Data
Initial Calibration

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 06/27/12 Internal Standard ID 1878-3 Expiration 08/01/12

Endrin/DDT Breakdown <15%? YES / NO / NA

ICal Meets %RSD & r^2 Criteria YES / NO

Manual Integrations for ICal? YES / NO

Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO

ICV Exceeding ±30%? YES / NO

Linear Fits Used? YES / NO

Quadratic Fits Used? YES / NO

Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
AR1660	1980-1	05/16/13	AR1660	1928-2	05/28/12
AR1242	1980-4	05/16/13	AR1242	1923-1	05/28/12
AR1248	1980-5	05/16/13	AR1248	1923-2	05/28/12
AR1254	1980-6	05/16/13	AR1254	1923-3	05/28/12
AR2162	1980-2	05/16/13	AR2162	1923-4	05/28/12
AR3268	1980-3	05/16/13	AR3268	1923-5	05/28/12
DDT's	1991-2	01/21/13			
BD	1991-1	01/14/13			
IB	1982-2	05/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: [signature] **Date:** 06/28/12

Reviewer: VTB **Date:** 6/28/12

Report Date : 28-Jun-2012 08:18

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120627.B/PCB1.m
Batch File: /chem2/ecd7.i/20120627.B/ical-1.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0627A015	0627A016	0627A017	0627A018	0627A019	0627A020
INJ.DATE:	27-JUN-2012	27-JUN-2012	27-JUN-2012	27-JUN-2012	27-JUN-2012	27-JUN-2012
INJ.TIME:	16:03	16:24	16:45	17:06	17:27	17:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.303	3.303	3.303	3.300	3.304	3.303	3.304	3.204-3.404	3.303	0.001
$ 1 Tetrachloro-m-xylene	6.274	6.274	6.273	6.271	6.273	6.273	6.271	6.171-6.371	6.273	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	6.724	6.624-6.824	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	8.277	8.178-8.377	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	8.279	8.179-8.379	+++++	+++++
7 Aroclor-1016	8.282	8.282	8.282	8.279	8.280	8.281	8.281	8.181-8.381	8.281	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	9.338	9.238-9.438	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10.320	10.220-10.420	+++++	+++++
9 Aroclor-1260	11.826	11.826	11.825	11.823	11.825	11.823	11.823	11.723-11.923	11.825	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12.428	12.328-12.528	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13.580	13.480-13.680	+++++	+++++
$ 13 Decachlorobiphenyl	14.862	14.862	14.861	14.861	14.861	14.861	14.861	14.761-14.961	14.861	0.000
* 12 IS-HBBP	15.117	15.116	15.116	15.115	15.116	15.116	15.115	15.015-15.215	15.116	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10.606	10.556-10.656	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.168	11.118-11.218	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.680	11.630-11.730	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11.044	10.944-11.144	+++++	+++++

Reviewer 1 [signature] Date: 06/28/12
Reviewer 2 VB Date: 6/28/12

UZ99 00689

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120627.B/PCB1.m
Batch File: /chem2/ecd7.i/20120627.B/ical-1.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.624	11.524-11.724	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	12.136	12.036-12.236	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

UZ99:00699

Report Date : 28-Jun-2012 08:19

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120627.B/PCB2.m
Batch File: /chem2/ecd7.i/20120627.B/ical-2.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0627A015	0627A016	0627A017	0627A018	0627A019	0627A020
INJ.DATE:	27-JUN-2012	27-JUN-2012	27-JUN-2012	27-JUN-2012	27-JUN-2012	27-JUN-2012
INJ.TIME:	16:03	16:24	16:45	17:06	17:27	17:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	4.149	4.148	4.148	4.146	4.149	4.149	4.149	4.049-4.249	4.148	0.001
$ 2 Tetrachloro-m-xylene	6.395	6.395	6.394	6.393	6.394	6.395	6.392	6.292-6.492	6.394	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	7.217	7.117-7.317	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	8.524	8.424-8.624	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	8.523	8.423-8.623	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	9.790	9.690-9.890	+++++	+++++
7 Aroclor-1016	8.526	8.526	8.525	8.524	8.525	8.525	8.525	8.425-8.625	8.525	0.001
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10.852	10.752-10.952	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12.812	12.712-12.912	+++++	+++++
9 Aroclor-1260	12.724	12.723	12.723	12.721	12.722	12.721	12.721	12.621-12.821	12.722	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13.941	13.841-14.041	+++++	+++++
$ 13 Decachlorobiphenyl	15.187	15.187	15.187	15.187	15.187	15.187	15.187	15.087-15.287	15.187	0.000
* 12 IS-HBBP	15.771	15.770	15.771	15.770	15.771	15.770	15.770	15.670-15.870	15.770	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11.115	11.065-11.165	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.755-11.855	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11.498	11.398-11.598	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	12.257	12.157-12.357	+++++	+++++

Reviewer 1 [signature] Date: 06/28/12
Reviewer 2 VB Date: 6/28/12

UZ99 00691

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20120627.B/PCB2.m
Batch File: /chem2/ecd7.i/20120627.B/ical-2.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	12.699	12.599-12.799	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.117	7.017-7.217	+++++	+++++

UZ99:00692

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20120627.B/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd7.i Date: 27-JUN-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1542	0627A014.d	IB		1	NO MANUAL INTEGRATION
1603	0627A015.d	0.25 PPM	AR1660	1	NO MANUAL INTEGRATION
1624	0627A016.d	0.02 PPM	AR1660	1	NO MANUAL INTEGRATION
1645	0627A017.d	0.05 PPM	AR1660	1	NO MANUAL INTEGRATION
1706	0627A018.d	1 PPM	AR1660	1	NO MANUAL INTEGRATION
1727	0627A019.d	0.1 PPM	AR1660	1	NO MANUAL INTEGRATION
1747	0627A020.d	0.5 PPM	AR1660	1	NO MANUAL INTEGRATION
1808	0627A021.d	AR1242		1	NO MANUAL INTEGRATION
1829	0627A022.d	AR1248		1	NO MANUAL INTEGRATION
1850	0627A023.d	AR1254		1	NO MANUAL INTEGRATION
1911	0627A024.d	AR2162		1	NO MANUAL INTEGRATION
1932	0627A025.d	AR3268		1	NO MANUAL INTEGRATION
1953	0627A026.d	AR1660	ICV	1	NO MANUAL INTEGRATION
2014	0627A027.d	AR1242	ICV	1	NO MANUAL INTEGRATION
2035	0627A028.d	AR1248	ICV	1	NO MANUAL INTEGRATION
2056	0627A029.d	AR1254	ICV	1	NO MANUAL INTEGRATION
2116	0627A030.d	AR2162	ICV	1	NO MANUAL INTEGRATION
2137	0627A031.d	AR3268	ICV	1	NO MANUAL INTEGRATION

UZ99:00693

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB2.m
Cal Date : 28-Jun-2012 07:39 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20120627.B/ical-2.b/0627A016.d
Level 2: /chem2/ecd7.i/20120627.B/ical-2.b/0627A017.d
Level 3: /chem2/ecd7.i/20120627.B/ical-2.b/0627A019.d
Level 4: /chem2/ecd7.i/20120627.B/ical-2.b/0627A015.d
Level 5: /chem2/ecd7.i/20120627.B/ical-2.b/0627A020.d
Level 6: /chem2/ecd7.i/20120627.B/ical-2.b/0627A018.d
Level 7: /chem2/ecd7.i/20120627.B/ical-2.b/0627A025.d
Level 8: /chem2/ecd7.i/20120627.B/ddts-2.b/0627A032.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01198	+++++					0.01198	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00737	+++++					0.00737	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02222	+++++					0.02222	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00428	+++++					0.00428	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01789	+++++					0.01789	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03417	+++++					0.03417	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB2.m
Cal Date : 28-Jun-2012 07:39 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00911	+++++					0.00911	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01340	+++++					0.01340	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03067	+++++					0.03067	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06455	+++++					0.06455	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01705	+++++					0.01705	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02737	+++++					0.02737	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02968	+++++					0.02968	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03284	+++++					0.03284	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03368	+++++					0.03368	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB2.m
Cal Date : 28-Jun-2012 07:39 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04425	+++++					0.04425	0.000
7 Aroclor-1016(1)	0.05088	0.04582	0.04347	0.03825	0.03649	0.03397		
	+++++	+++++					0.04148	15.354
(2)	0.10276	0.09336	0.08963	0.08093	0.07858	0.07492		
	+++++	+++++					0.08670	12.087
(3)	0.02601	0.02437	0.02343	0.02086	0.02030	0.01921		
	+++++	+++++					0.02236	11.820
(4)	0.03196	0.02915	0.02739	0.02373	0.02270	0.02125		
	+++++	+++++					0.02603	15.928
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02952	+++++					0.02952	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03775	+++++					0.03775	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02915	+++++					0.02915	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06434	+++++					0.06434	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB2.m
Cal Date : 28-Jun-2012 07:39 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03711	+++++					0.03711	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07055	+++++					0.07055	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05034	+++++					0.05034	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13573	+++++					0.13573	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05195	+++++					0.05195	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08421	+++++					0.08421	0.000
9 Aroclor-1260(1)	0.08624	0.07738	0.07227	0.06552	0.06339	0.06165		
	+++++	+++++					0.07108	13.347
(2)	0.13085	0.11798	0.11280	0.10412	0.10254	0.10149		
	+++++	+++++					0.11163	10.237
(3)	0.09045	0.08157	0.07717	0.06804	0.06786	0.06630		
	+++++	+++++					0.07523	12.768

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB2.m
Cal Date : 28-Jun-2012 07:39 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.03261	0.02976	0.02846	0.02631	0.02518	0.02364		
	+++++	+++++					0.02766	11.844
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13455	+++++					0.13455	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12780	+++++					0.12780	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07046	+++++					0.07046	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.28730	+++++					0.28730	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	654					654	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	611					611	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1055					1055	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	808					808	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB2.m
Cal Date : 28-Jun-2012 07:39 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	938					938	0.000
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.08482	1.04230	1.05432	1.00880	1.01914	1.00859		
	+++++	+++++					1.03633	2.906
$ 13 Decachlorobiphenyl	1.09412	0.97347	0.95736	0.87798	0.87538	0.86521		
	+++++	+++++					0.94059	9.364

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB1.m
Cal Date : 28-Jun-2012 07:44 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20120627.B/ical-1.b/0627A016.d
Level 2: /chem2/ecd7.i/20120627.B/ical-1.b/0627A017.d
Level 3: /chem2/ecd7.i/20120627.B/ical-1.b/0627A019.d
Level 4: /chem2/ecd7.i/20120627.B/ical-1.b/0627A015.d
Level 5: /chem2/ecd7.i/20120627.B/ical-1.b/0627A020.d
Level 6: /chem2/ecd7.i/20120627.B/ical-1.b/0627A018.d
Level 7: /chem2/ecd7.i/20120627.B/ical-1.b/0627A025.d
Level 8: /chem2/ecd7.i/20120627.B/ddts-1.b/0627A032.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00972	+++++					0.00972	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00729	+++++					0.00729	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02422	+++++					0.02422	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01822	+++++					0.01822	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06230	+++++					0.06230	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02445	+++++					0.02445	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB1.m
Cal Date : 28-Jun-2012 07:44 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02288	+++++					0.02288	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00925	+++++					0.00925	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03146	+++++					0.03146	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01249	+++++					0.01249	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01423	+++++					0.01423	0.000
7 Aroclor-1016(1)	0.02449	0.02396	0.02399	0.02274	0.02286	0.02217		
	+++++	+++++					0.02337	3.876
(2)	0.08260	0.08143	0.08242	0.07860	0.07933	0.07698		
	+++++	+++++					0.08022	2.836
(3)	0.03355	0.03265	0.03255	0.03064	0.03059	0.02957		
	+++++	+++++					0.03159	4.880
(4)	0.02278	0.02205	0.02209	0.02091	0.02111	0.02071		
	+++++	+++++					0.02161	3.787

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB1.m
Cal Date : 28-Jun-2012 07:44 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02416	+++++					0.02416	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03051	+++++					0.03051	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04559	+++++					0.04559	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03569	+++++					0.03569	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03321	+++++					0.03321	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04781	+++++					0.04781	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02917	+++++					0.02917	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05828	+++++					0.05828	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03723	+++++					0.03723	0.000

Analytical Resources, Inc.

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Origin : Disabled
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Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB1.m
Cal Date : 28-Jun-2012 07:44 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
9 Aroclor-1260(1)	0.06489	0.06252	0.06237	0.06054	0.06009	0.05816	+++++	+++++	0.06143	3.802
(2)	0.04235	0.04111	0.04104	0.03980	0.03979	0.03868	+++++	+++++	0.04046	3.200
(3)	0.04176	0.04109	0.04125	0.04035	0.04065	0.03962	+++++	+++++	0.04079	1.841
(4)	0.05217	0.05185	0.05305	0.05204	0.05330	0.05249	+++++	+++++	0.05248	1.109
(5)	0.02122	0.02093	0.02108	0.02032	0.02053	0.02015	+++++	+++++	0.02071	2.110
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.06647	+++++	0.06647	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04823	+++++	0.04823	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.13142	+++++	0.13142	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.04447	+++++	0.04447	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
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Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB1.m
Cal Date : 28-Jun-2012 07:44 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04769	+++++					0.04769	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13787	+++++					0.13787	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12697	+++++					0.12697	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10799	+++++					0.10799	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.33733	+++++					0.33733	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	691					691	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	646					646	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	804					804	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1125					1125	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2012 16:03
End Cal Date : 27-JUN-2012 21:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20120627.B/PCB1.m
Cal Date : 28-Jun-2012 07:44 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	941					941	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1013					1013	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	0.90354	0.92765	0.98127	0.98363	1.02221	1.02014		
	+++++	+++++					0.97307	4.973
$ 13 Decachlorobiphenyl	0.97930	0.96672	0.98203	0.93615	0.95718	0.93531		
	+++++	+++++					0.95945	2.130

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A014.d
Data file 2: 20120627.B/ical-2.b/0627A014.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 27-JUN-2012 15:42
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.272	0.001	2808936	6.392	-0.001	4648948	41.2	39.3	4.7	Tetrachloro-m-xylene
14.862	0.001	2551712	15.187	0.001	3262883	39.0	36.4	6.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.0	98.3
Decachlorobiphenyl	97.5	91.0

06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5605508	-2.0
Hexabromobiphenyl	5604480	5457719	-2.6

Column 2

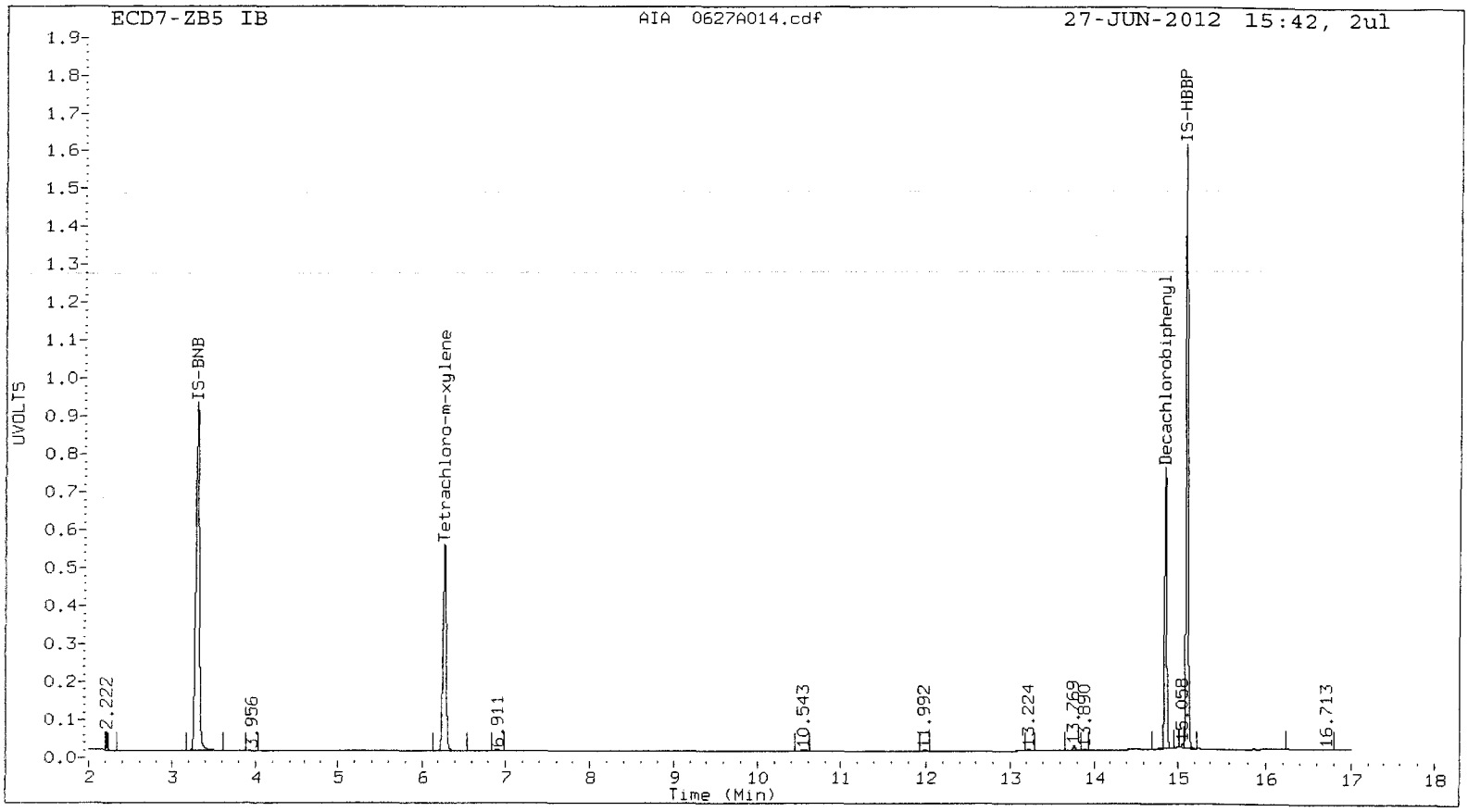
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9129729	-1.8
Hexabromobiphenyl	7801648	7623158	-2.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	7.236	0.019	61380	44.9
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	7.662	0.005	11447	4.5
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	12.644	-0.077	22021	3.3
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	14.604	0.053	22610	8.6
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (6.371 - 14.761) = 166892 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 345958 Col2 Total PCB = 0.0 ppm*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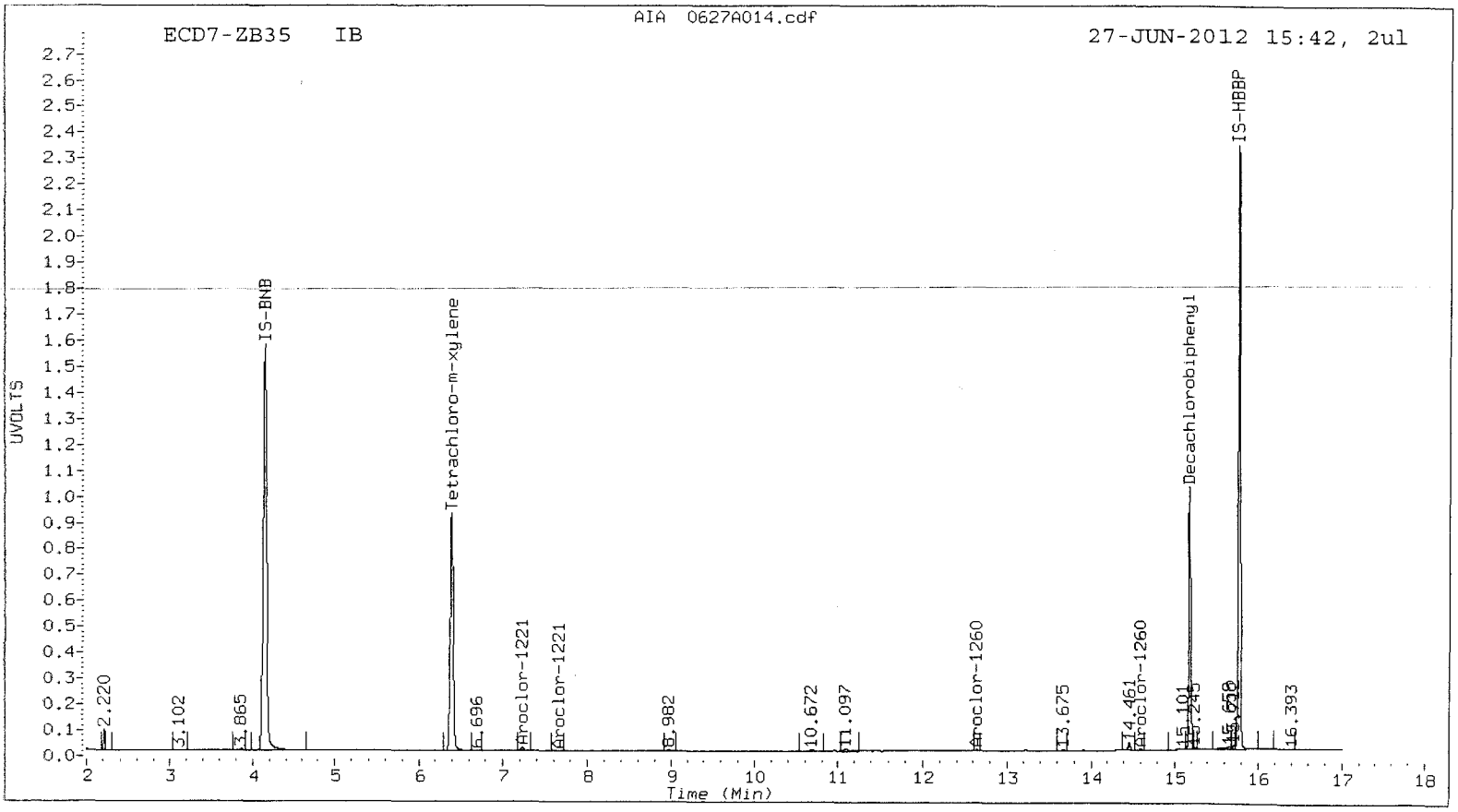
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
2.222
3.956
6.911
10.543
11.992
13.224
13.769
13.890
15.058
16.713
Time (Min)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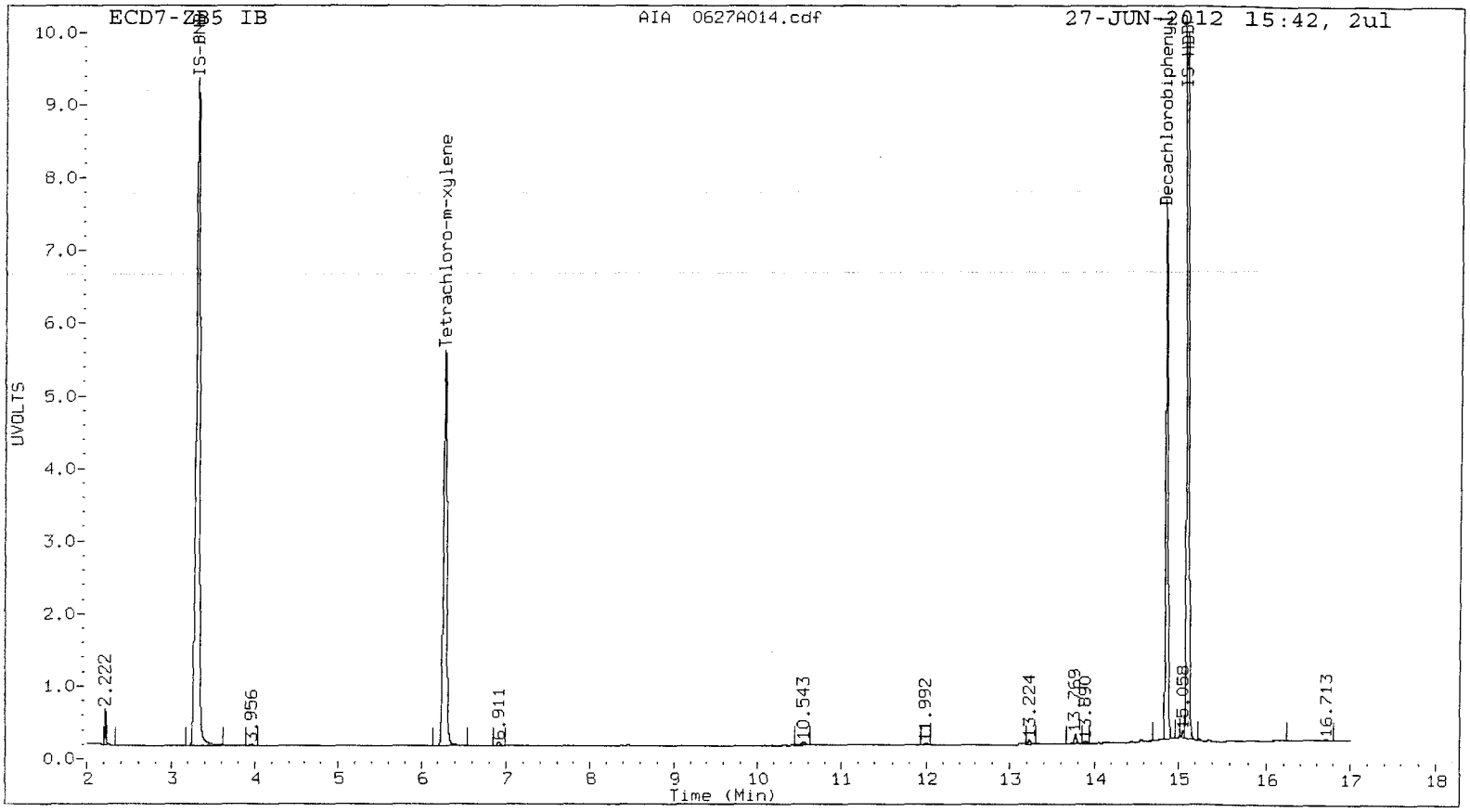
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
2.220
3.102
3.865
6.696
Aroclor-1221
Aroclor-1221
8.982
10.672
11.097
Aroclor-1260
13.675
14.461
Aroclor-1260
15.101
15.245
15.658
16.393
Time (Min)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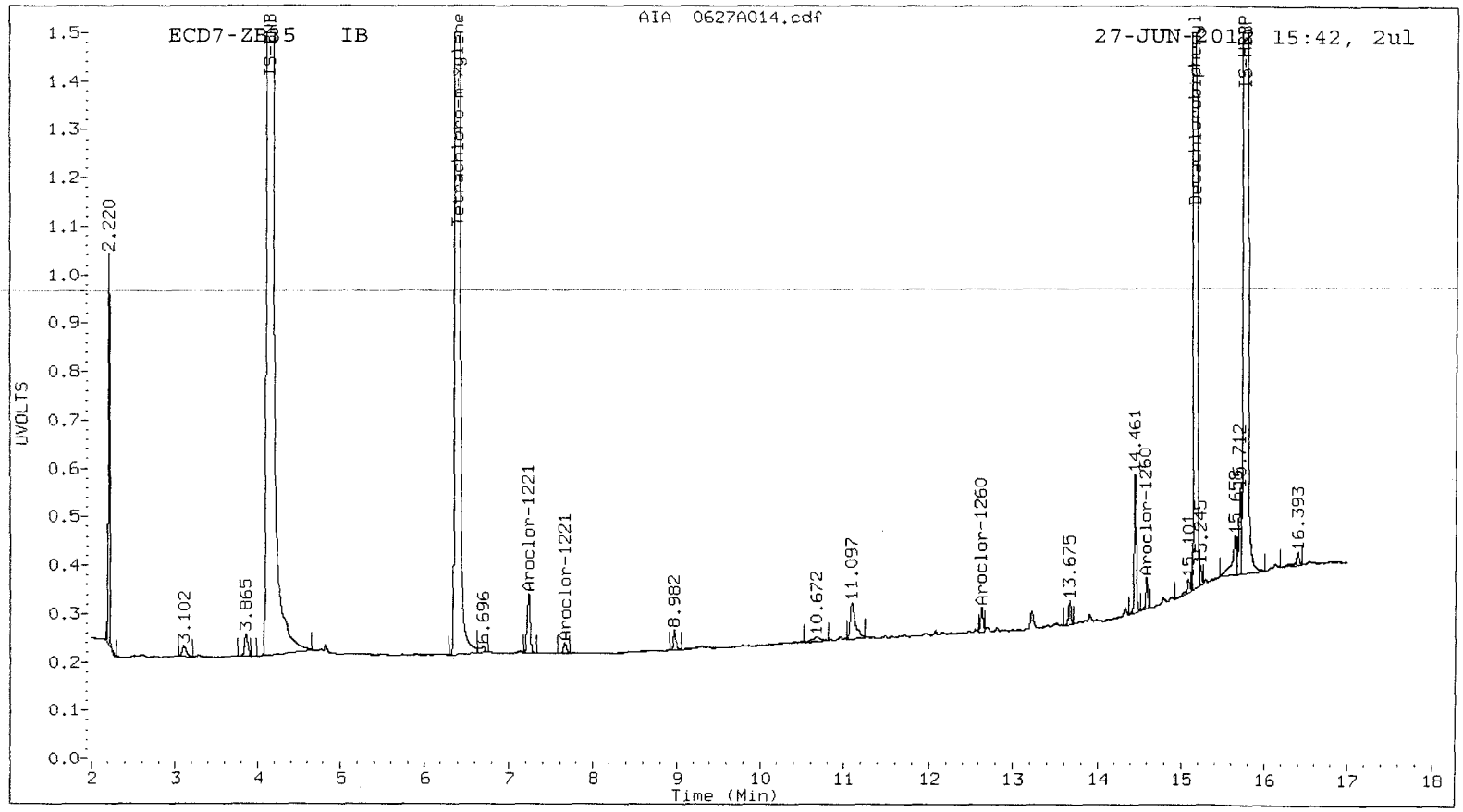
AIA 0627A014.cdf
27-JUN-2012 15:42, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
2.222
3.956
6.911
10.543
11.992
13.224
13.769
13.890
15.058
16.713
UVOLTS
Time (Min)


ECD7-ZB5 IB
AIA 0627A014.cdf
27-JUN-2012 15:42, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
2.220
3.102
3.865
6.696
Aroclor-1221
Aroclor-1221
8.982
10.672
11.097
Aroclor-1260
13.675
14.461
Aroclor-1260
15.101
15.245
15.658
15.712
16.393
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A015.d
Data file 2: 20120627.B/ical-2.b/0627A015.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25 PPM AR1660
Client ID:
Injection Date: 27-JUN-2012 16:03
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.274	0.003	1406600	6.395	0.001	2344560	20.2	19.5	3.8	Tetrachloro-m-xylene
14.862	0.001	1311656	15.187	0.001	1712427	19.5	18.7	4.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.5	48.7
Decachlorobiphenyl	48.8	46.7

jc06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5720022	0.0
Hexabromobiphenyl	5604480	5604480	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9296471	0.0
Hexabromobiphenyl	7801648	7801648	0.0

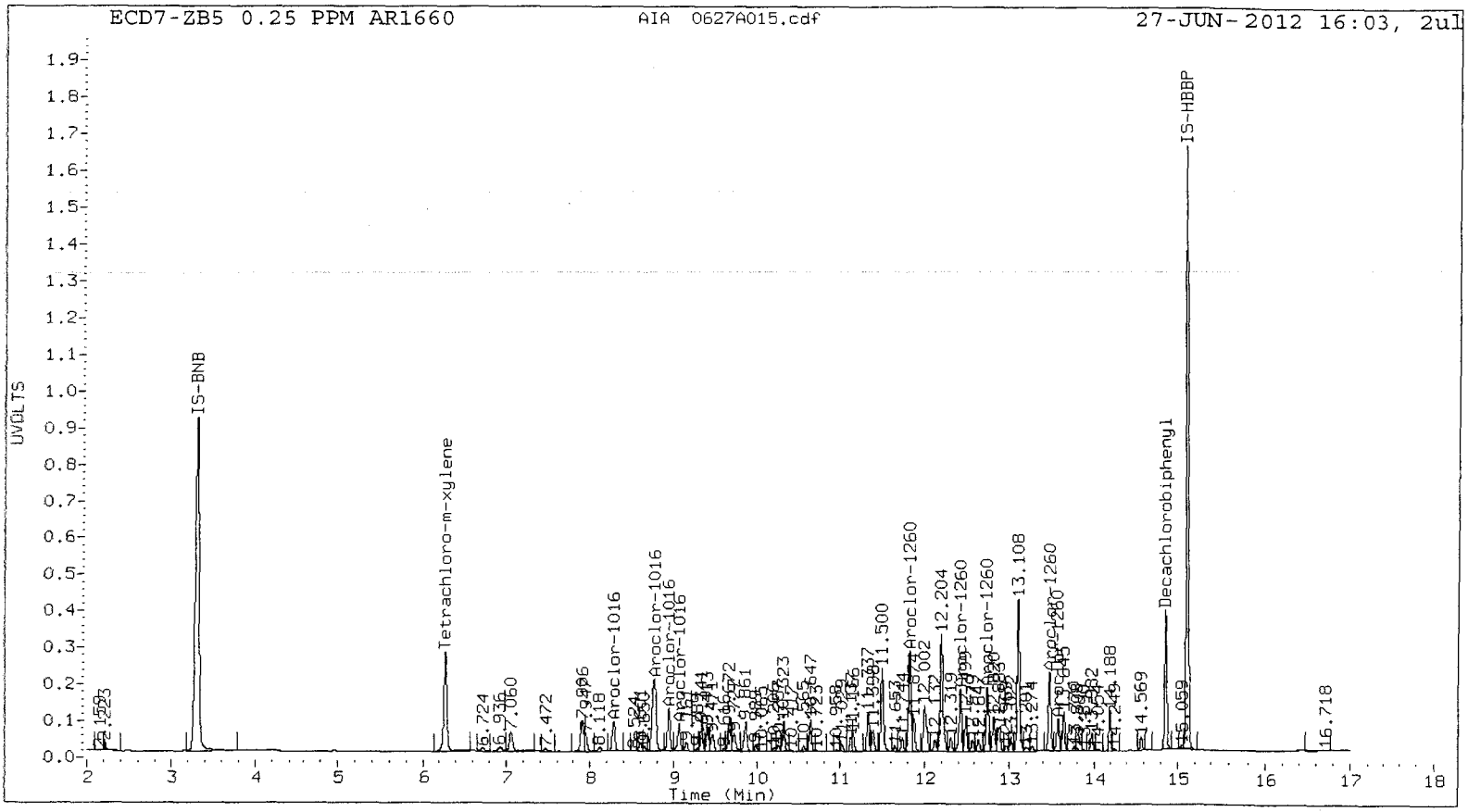
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.282	0.001	406459	243.3	1	8.526	0.002	1111322	230.6
Aroclor-1016	2	8.771	0.002	1404954	244.9	2	9.258	0.000	2351253	233.4
Aroclor-1016	3	8.944	0.002	547612	242.4	3	9.686	0.002	606150	233.2
Aroclor-1016	4	9.072	0.001	373755	241.9	4	9.794	0.002	689281	227.9
Total Col1Ave (4 peaks):				243.1		Total Col2Ave (4 peaks):			231.3	RPD = 5
Corrected Ave (3 peaks):				242.5		Corrected Ave (3 peaks):			230.6	RPD = 5
Aroclor-1260	1	11.826	0.002	1060365	246.4	1	12.724	0.002	1597270	230.4
Aroclor-1260	2	12.431	0.002	696999	245.9	2	13.499	0.002	2538494	233.2
Aroclor-1260	3	12.746	0.002	706638	247.3	3	13.994	0.001	1658719	226.1
Aroclor-1260	4	13.481	0.002	911341	247.9	4	14.551	0.001	641356	237.8
Aroclor-1260	5	13.581	0.002	355826	245.3	NS	---			----
Total Col1Ave (5 peaks):				246.6		Total Col2Ave (4 peaks):			231.9	RPD = 6
Corrected Ave (4 peaks):				246.2		Corrected Ave (3 peaks):			229.9	RPD = 7

Total PCB Area Col1 (6.371 - 14.761) = 20604220 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 33406868 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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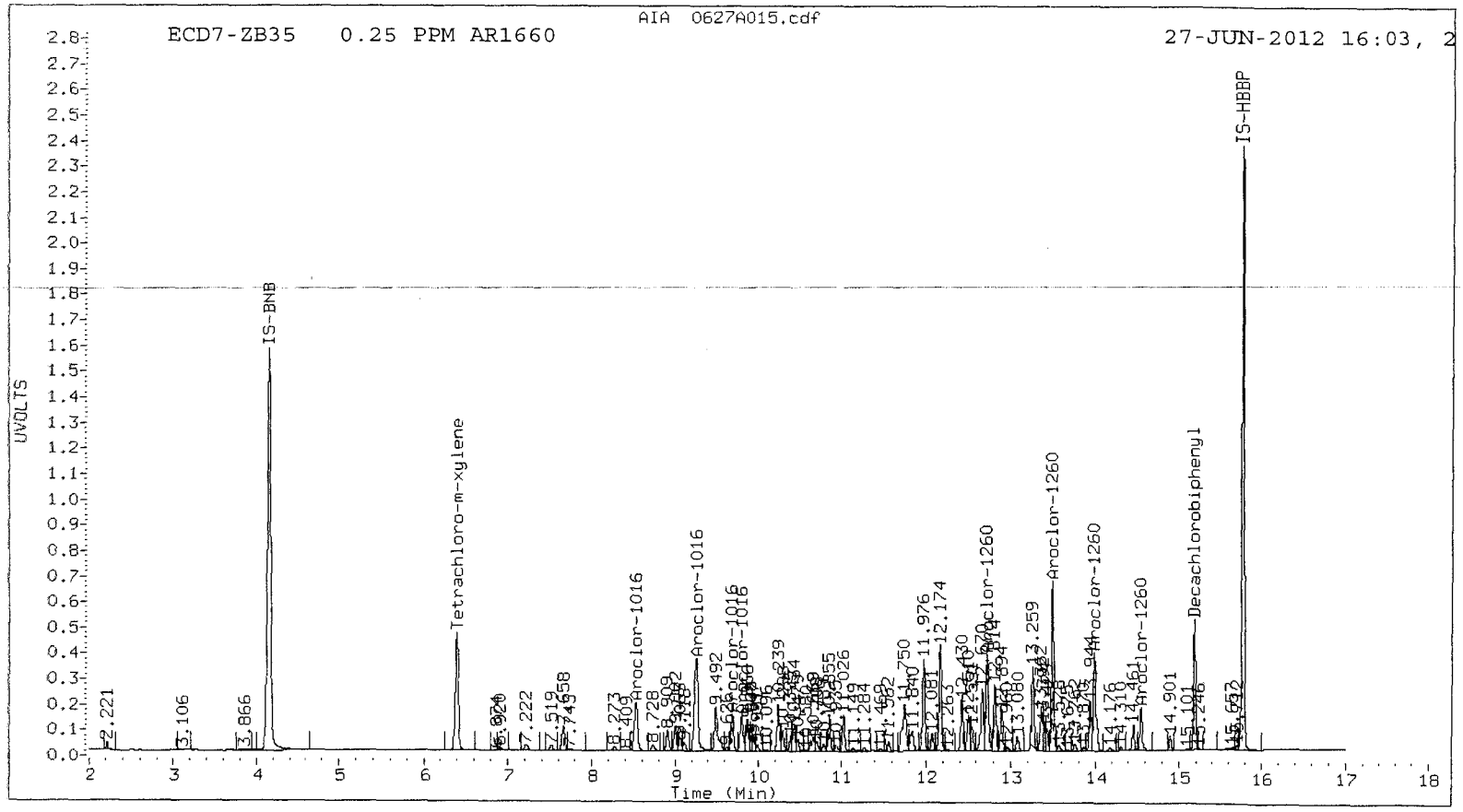
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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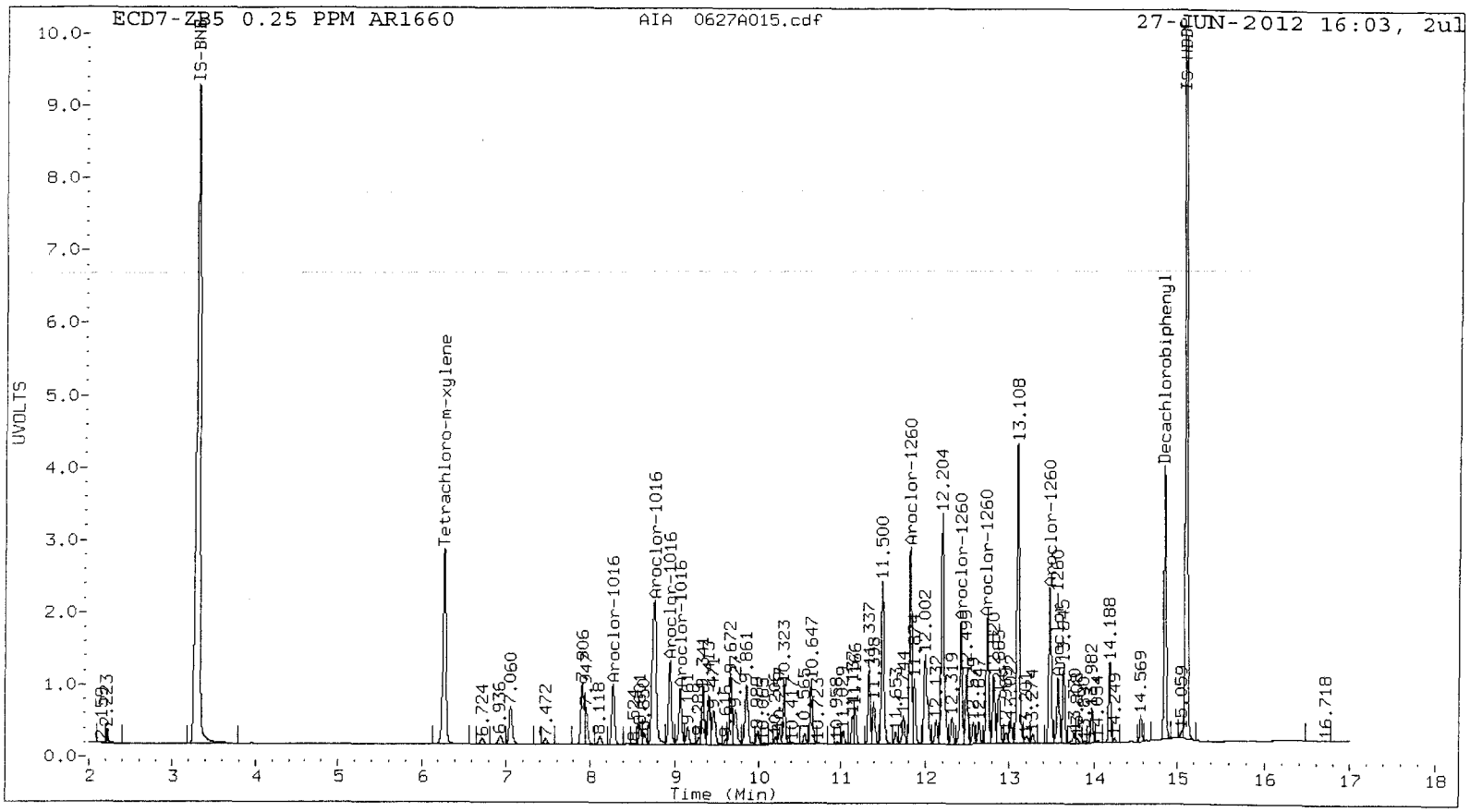
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
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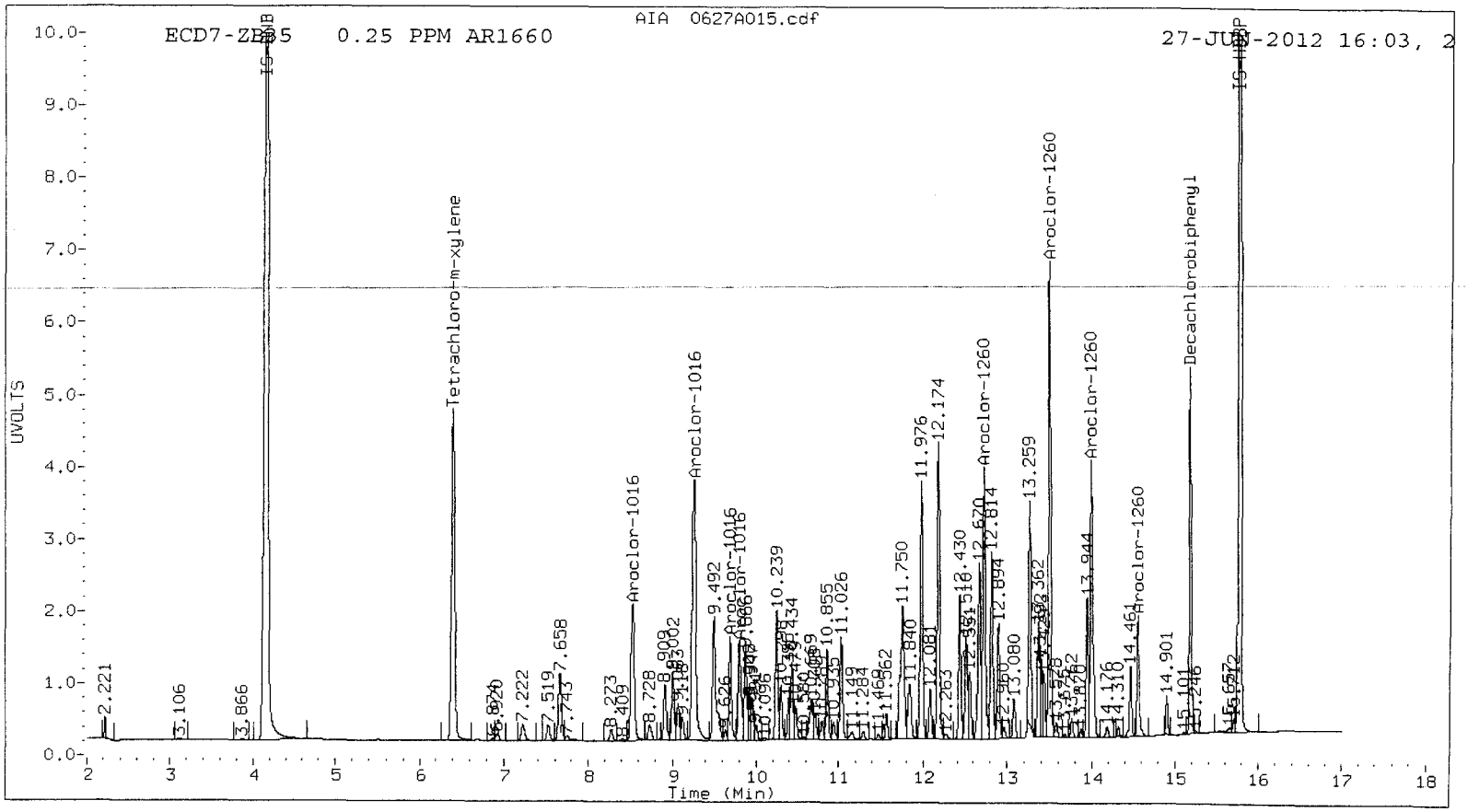
Decachlorobiphenyl
IS-HBP


ECD7-ZB5 0.25 PPM AR1660
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27-JUN-2012 16:03, 2
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A016.d
Data file 2: 20120627.B/ical-2.b/0627A016.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02 PPM AR1660
Client ID:
Injection Date: 27-JUN-2012 16:24
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.274	0.003	102912	6.395	0.002	200312	1.5	1.7	12.0	Tetrachloro-m-xylene
14.862	0.001	109720	15.187	0.001	169327	1.6	1.9	13.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	3.7	4.2
Decachlorobiphenyl	4.1	4.7

06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5694920	-0.4
Hexabromobiphenyl	5604480	5601954	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9232502	-0.7
Hexabromobiphenyl	7801648	7738023	-0.8

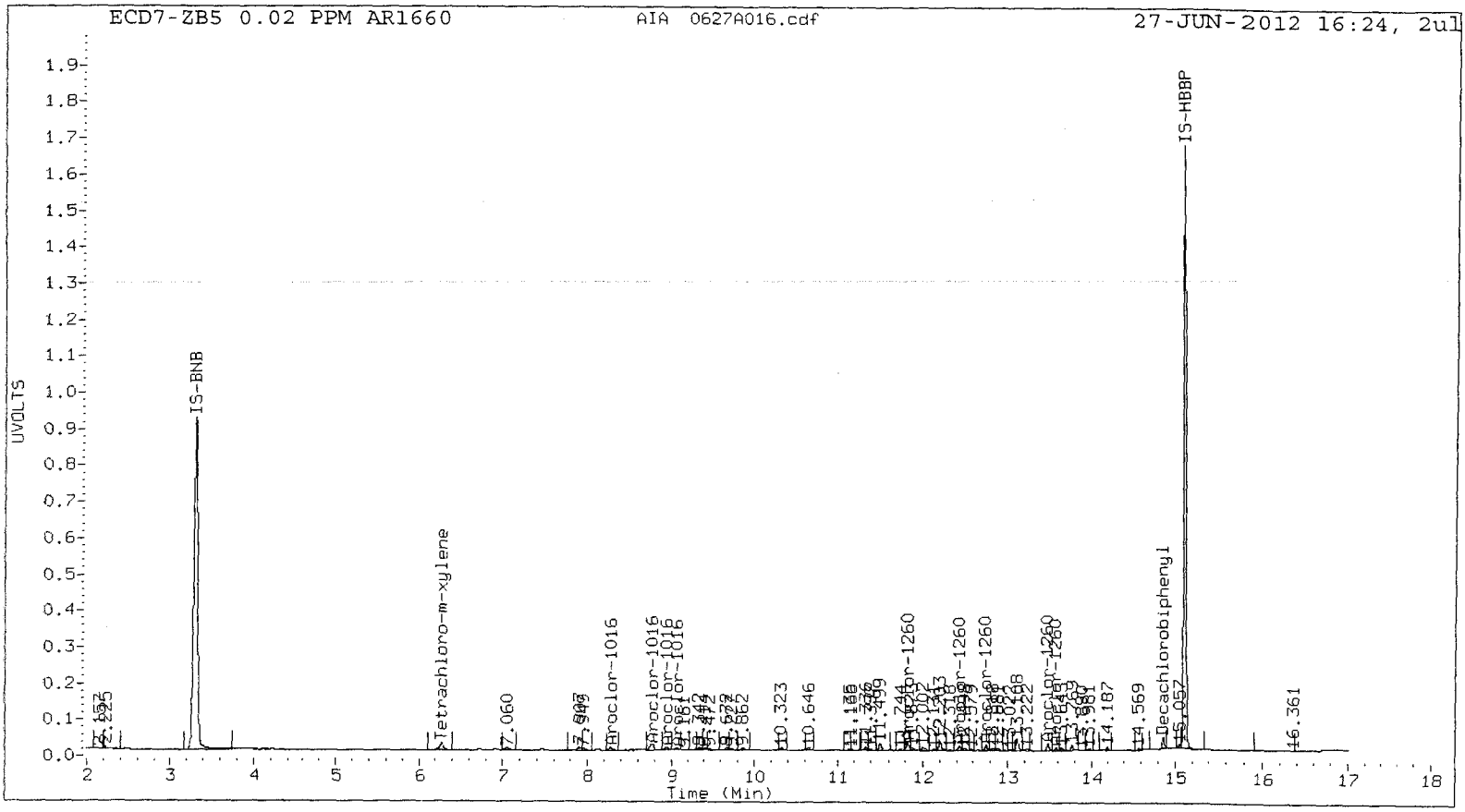
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.282	0.001	34874	21.0	1	8.526	0.002	117430	24.5
Aroclor-1016	2	8.771	0.003	117600	20.6	2	9.260	0.003	237193	23.7
Aroclor-1016	3	8.945	0.003	47771	21.2	3	9.686	0.002	60036	23.3
Aroclor-1016	4	9.073	0.003	32436	21.1	4	9.793	0.002	73757	24.6
Total Col1Ave (4 peaks):				21.0		Total Col2Ave (4 peaks):			24.0	RPD = 14
Corrected Ave (3 peaks):				20.9		Corrected Ave (3 peaks):			23.8	RPD = 13
Aroclor-1260	1	11.826	0.002	90871	21.1	1	12.723	0.002	166831	24.3
Aroclor-1260	2	12.430	0.002	59304	20.9	2	13.499	0.002	253127	23.4
Aroclor-1260	3	12.745	0.001	58488	20.5	3	13.994	0.001	174977	24.0
Aroclor-1260	4	13.480	0.001	73059	19.9	4	14.552	0.001	63086	23.6
Aroclor-1260	5	13.580	0.001	29718	20.5	NS	---			----
Total Col1Ave (5 peaks):				20.6		Total Col2Ave (4 peaks):			23.8	RPD = 15
Corrected Ave (4 peaks):				20.4		Corrected Ave (3 peaks):			23.7	RPD = 15

Total PCB Area Col1 (6.371 - 14.761) = 1748732 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 3507475 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
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Decachlorobiphenyl
IS-HBBP
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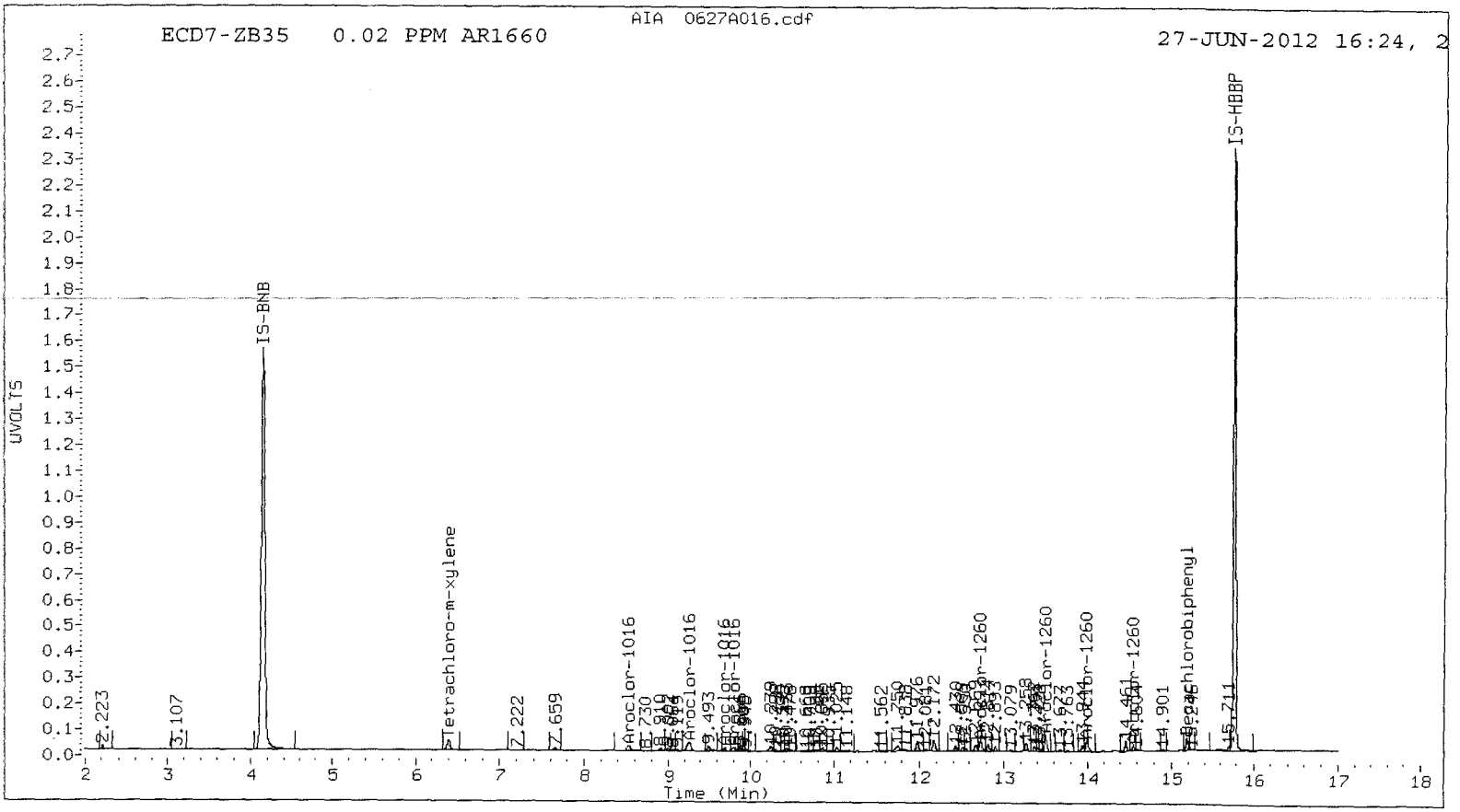
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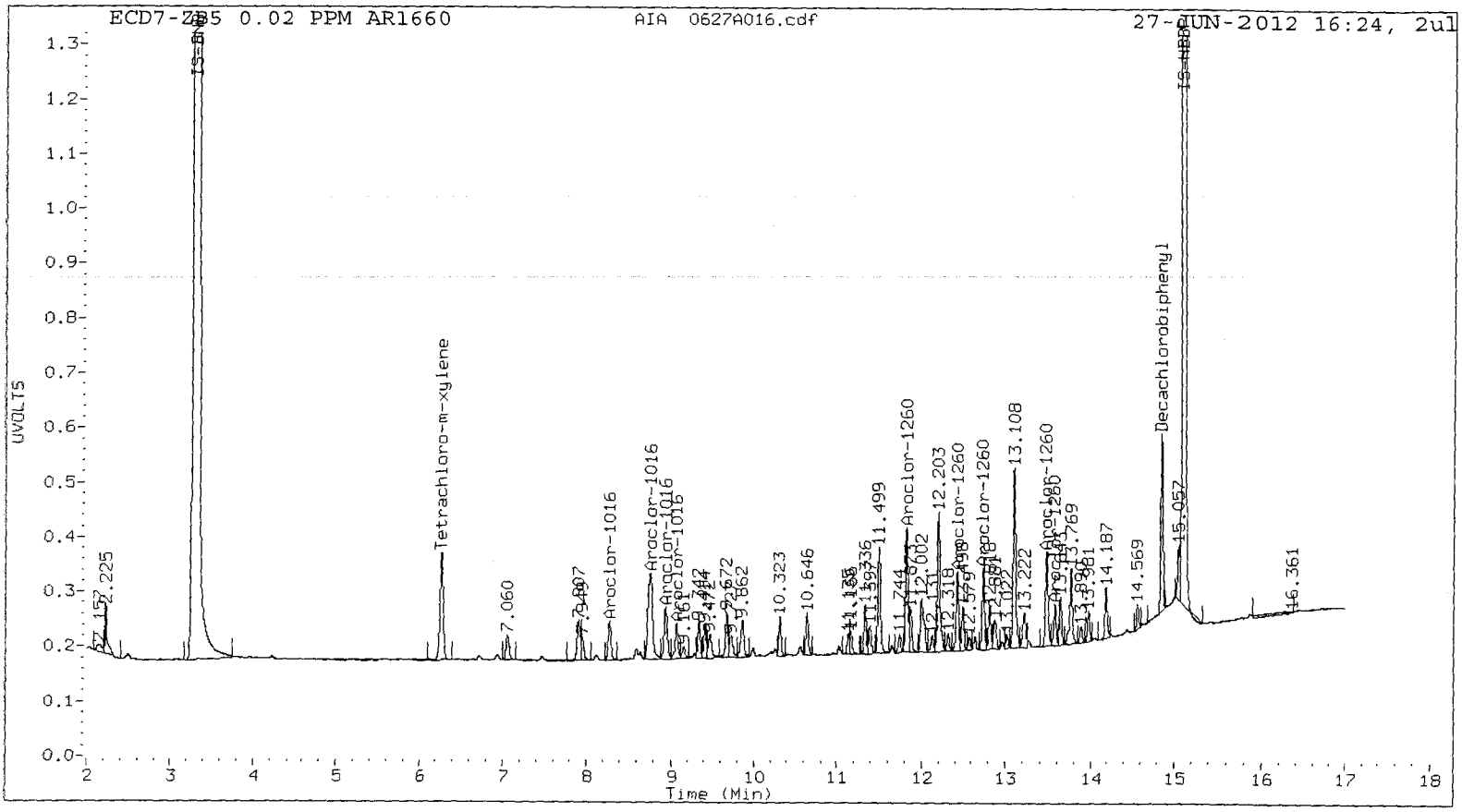
15.711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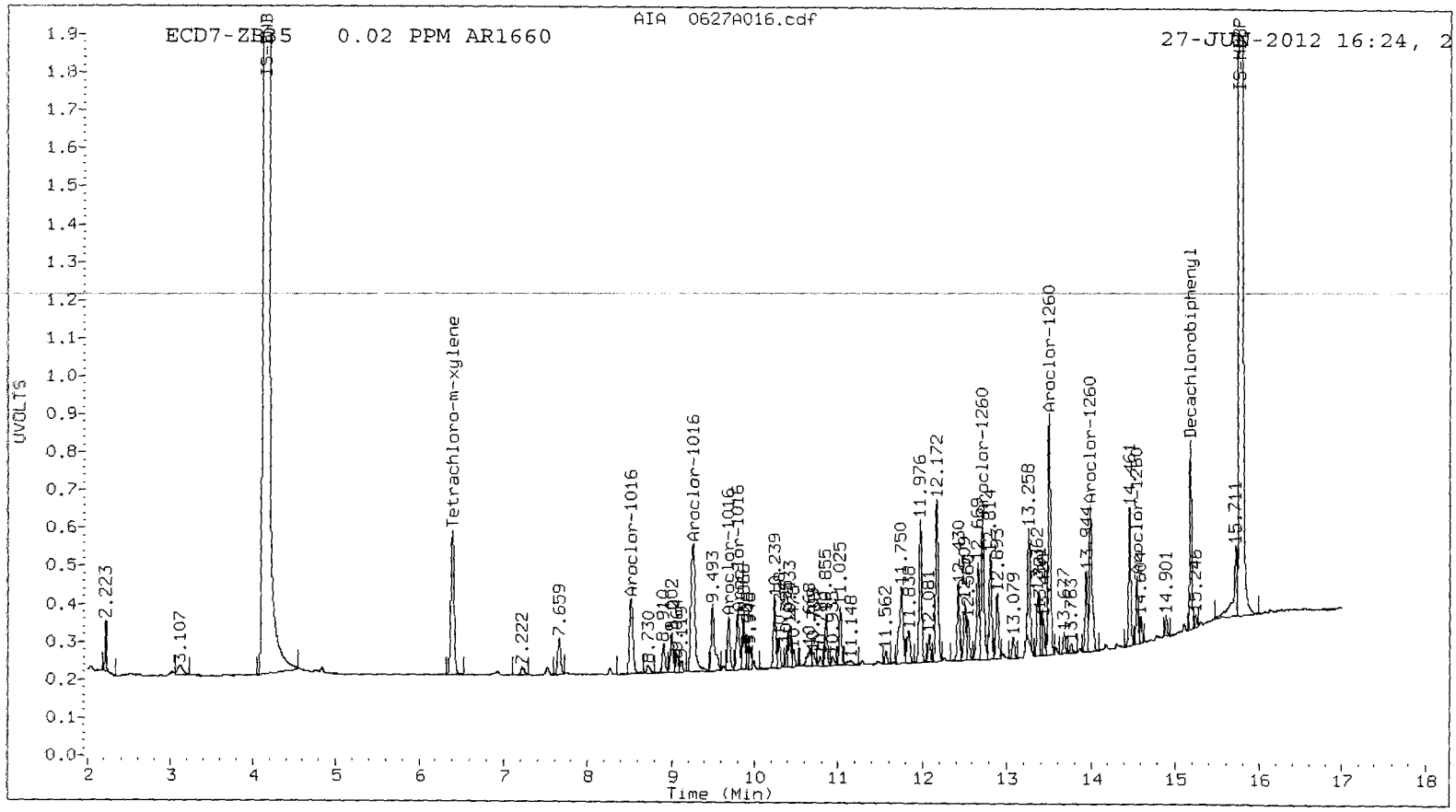
27-JUN-2012 16:24, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
2.225
7.060
10.323
10.646
11.499
12.203
13.108
13.222
14.187
14.569
15.057
16.361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27-JUN-2012 16:24, 2
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
2.223
3.107
7.659
9.493
11.562
11.976
12.172
13.079
13.258
14.901
15.711

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A017.d
Data file 2: 20120627.B/ical-2.b/0627A017.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05 PPM AR1660
Client ID:
Injection Date: 27-JUN-2012 16:45
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.273	0.003	260403	6.394	0.000	474545	3.8	4.0	5.4	Tetrachloro-m-xylene
14.861	0.000	269827	15.187	0.000	373012	4.0	4.1	2.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	9.5	10.1
Decachlorobiphenyl	10.1	10.3

[illegible] 6/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5614270	-1.8
Hexabromobiphenyl	5604480	5582298	-0.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9105722	-2.1
Hexabromobiphenyl	7801648	7663559	-1.8

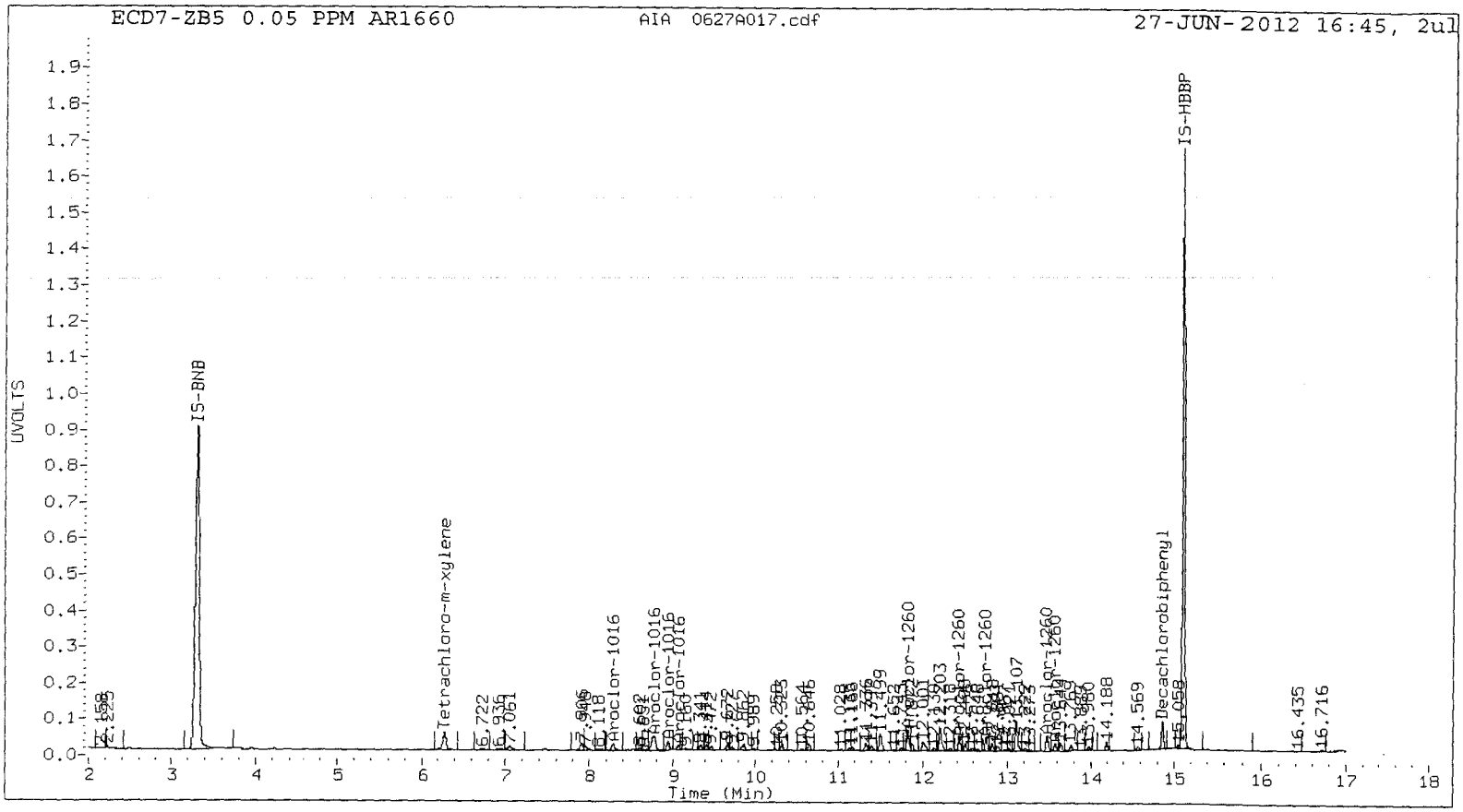
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.282	0.001	84077	51.3	1	8.525	0.001	260761	55.2
Aroclor-1016	2	8.771	0.003	285715	50.7	2	9.259	0.002	531346	53.8
Aroclor-1016	3	8.945	0.003	114564	51.7	3	9.686	0.002	138708	54.5
Aroclor-1016	4	9.073	0.002	77356	51.0	4	9.794	0.002	165883	56.0
Total Col1Ave (4 peaks):				51.2		Total Col2Ave (4 peaks):			54.9	RPD = 7
Corrected Ave (3 peaks):				51.0		Corrected Ave (3 peaks):			54.5	RPD = 7
Aroclor-1260	1	11.825	0.002	218136	50.9	1	12.723	0.001	370649	54.4
Aroclor-1260	2	12.429	0.000	143422	50.8	2	13.498	0.001	565108	52.8
Aroclor-1260	3	12.745	0.001	143345	50.4	3	13.994	0.001	390686	54.2
Aroclor-1260	4	13.480	0.001	180911	49.4	4	14.552	0.001	142549	53.8
Aroclor-1260	5	13.580	0.001	73037	50.6	NS	---			----
Total Col1Ave (5 peaks):				50.4		Total Col2Ave (4 peaks):			53.8	RPD = 7
Corrected Ave (4 peaks):				50.3		Corrected Ave (3 peaks):			53.6	RPD = 6

Total PCB Area Col1 (6.371 - 14.761) = 4261805 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 7826634 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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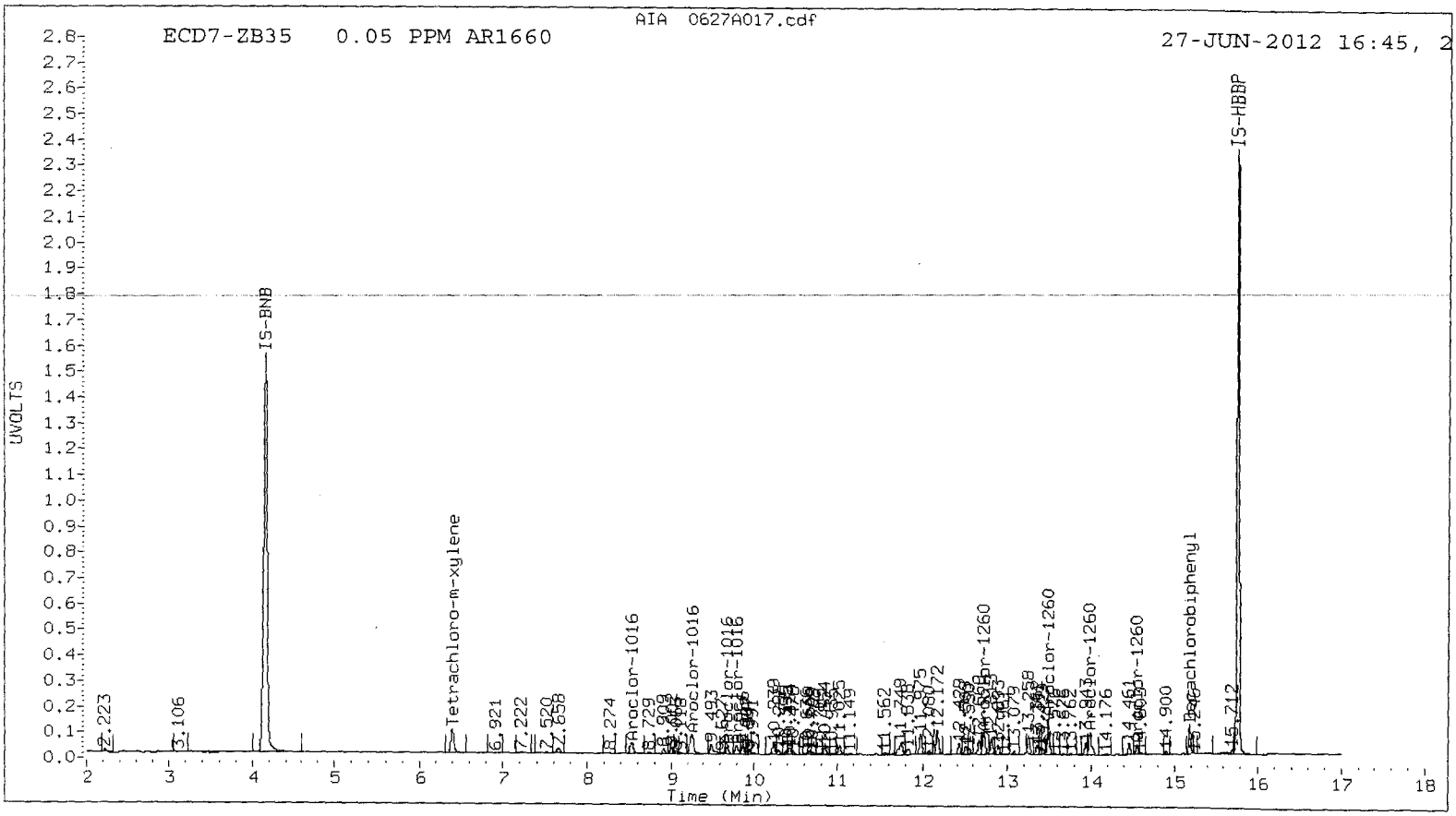
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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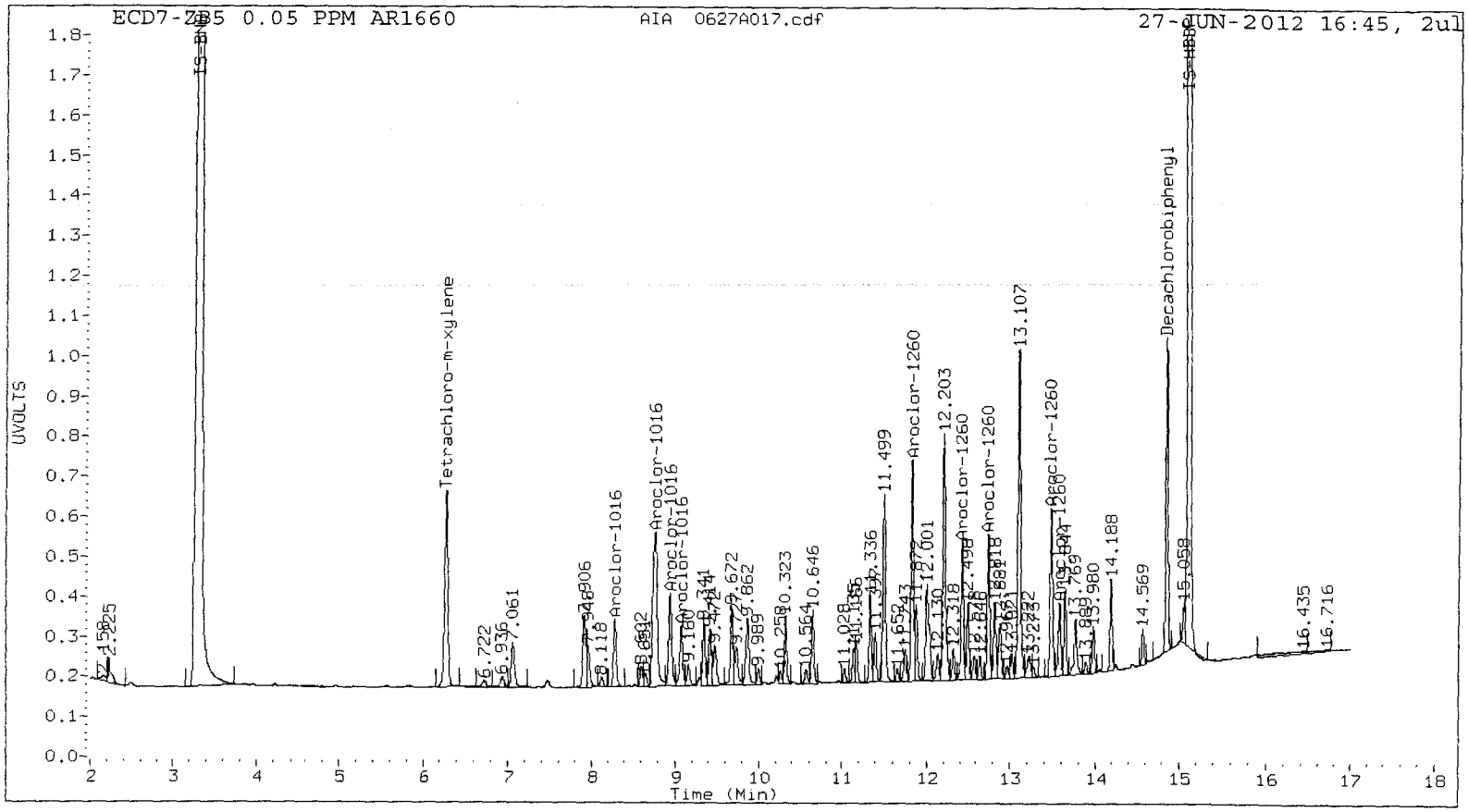
27-JUN-2012 16:45, 2
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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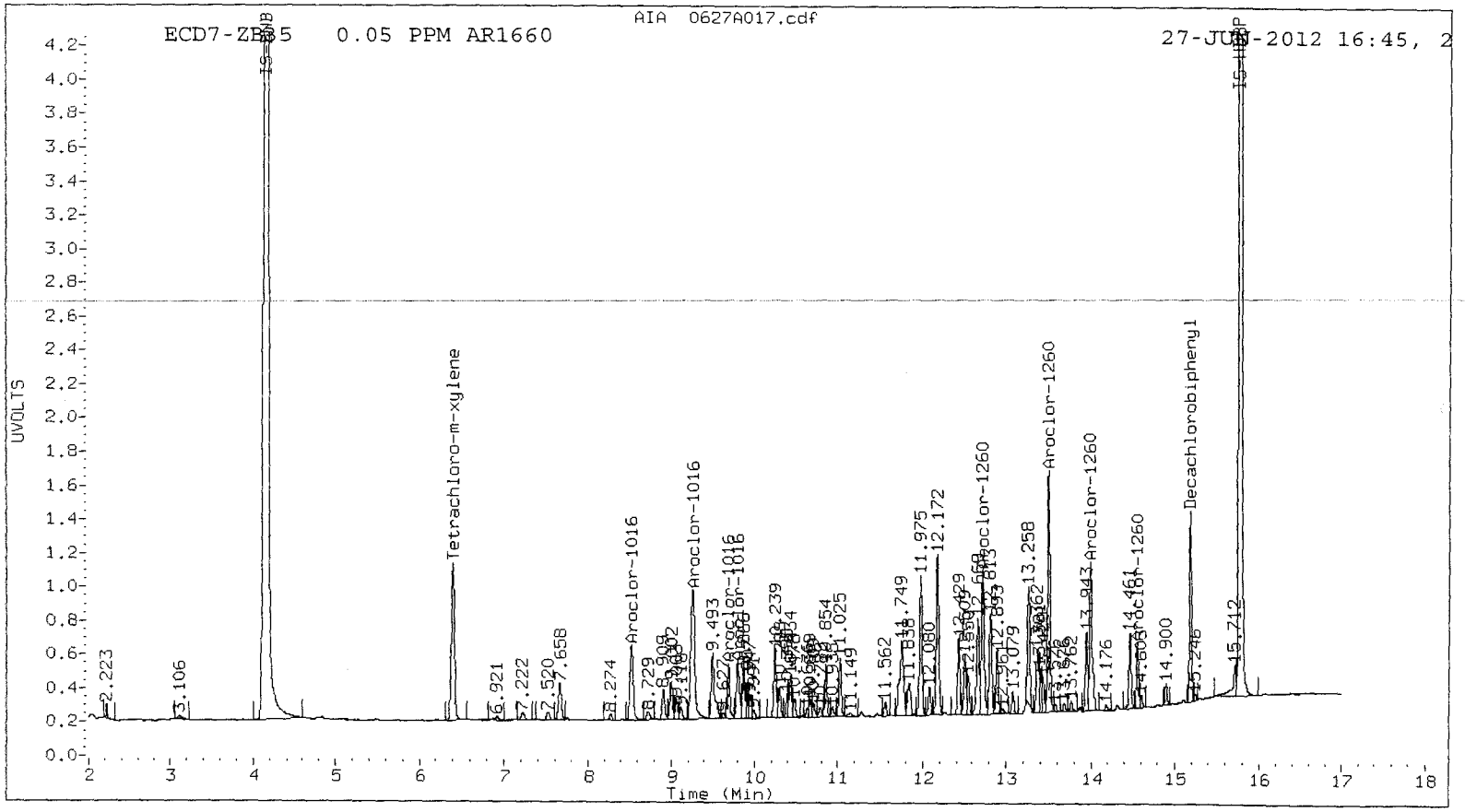
AIA 0627A017.cdf
27-JUN-2012 16:45, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260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27-JUN-2012 16:45, 2
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A018.d
Data file 2: 20120627.B/ical-2.b/0627A018.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1 PPM AR1660
Client ID:
Injection Date: 27-JUN-2012 17:06
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.271	0.001	5526277	6.393	-0.001	8772335	83.9	77.9	7.4	Tetrachloro-m-xylene
14.861	0.000	5067206	15.187	0.000	6423907	78.0	73.6	5.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	209.7	194.6
Decachlorobiphenyl	195.0	184.0

06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5417173	-5.3
Hexabromobiphenyl	5604480	5417655	-3.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	8697630	-6.4
Hexabromobiphenyl	7801648	7424644	-4.8

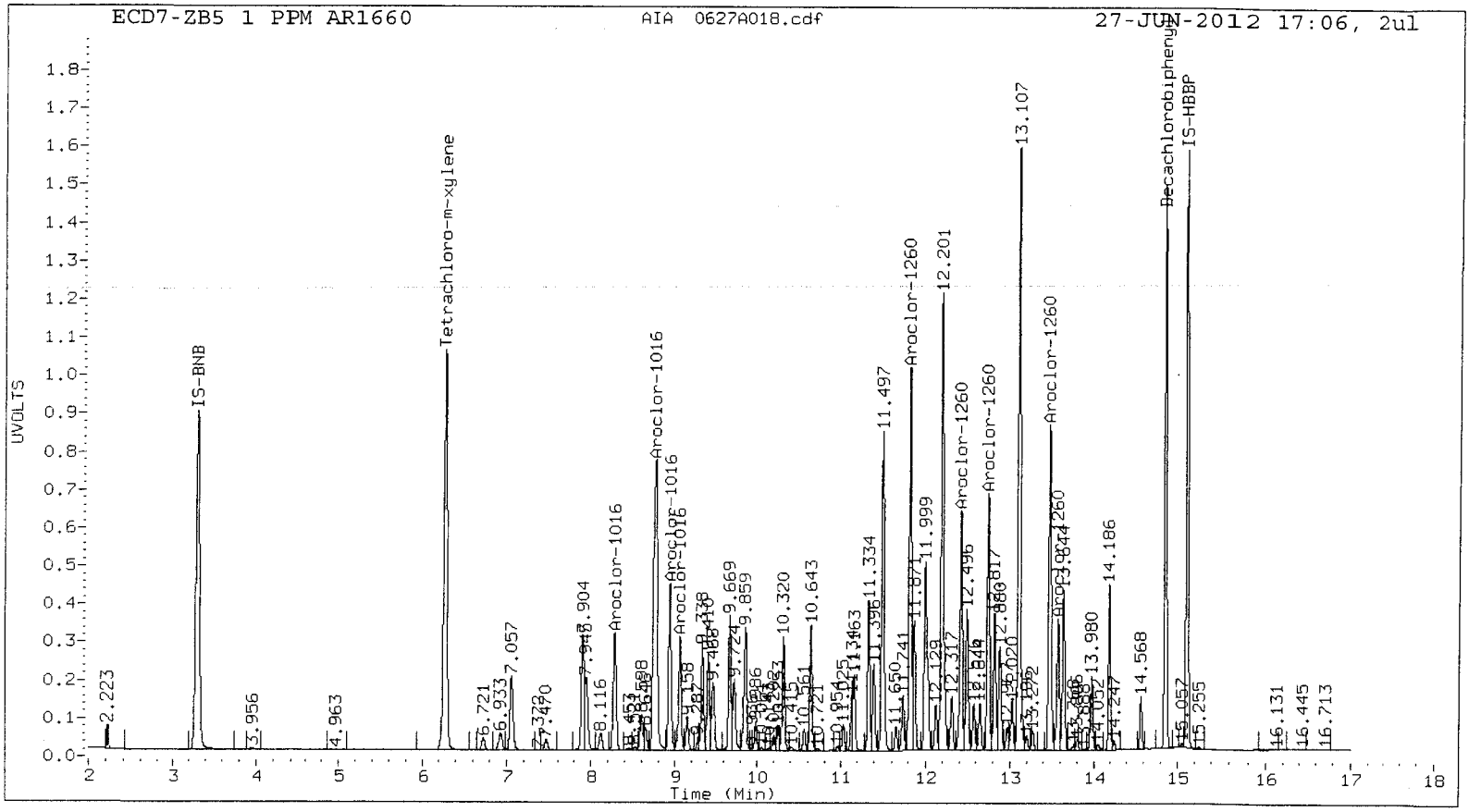
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.279	-0.002	1501104	948.7	1	8.524	-0.001	3693267	819.0
Aroclor-1016	2	8.767	-0.001	5212440	959.5	2	9.255	-0.002	8145057	864.1
Aroclor-1016	3	8.940	-0.002	2002288	936.0	3	9.683	-0.001	2088463	858.9
Aroclor-1016	4	9.068	-0.002	1402573	958.6	4	9.791	-0.001	2310387	816.5
Total Col1Ave (4 peaks):				950.7		Total Col2Ave (4 peaks):			839.6	RPD = 12
Corrected Ave (3 peaks):				947.7		Corrected Ave (3 peaks):			831.5	RPD = 13
Aroclor-1260	1	11.823	0.000	3938736	946.8	1	12.721	-0.001	5721426	867.4
Aroclor-1260	2	12.428	0.000	2619370	956.0	2	13.496	0.000	9419350	909.2
Aroclor-1260	3	12.744	0.000	2683325	971.5	3	13.992	0.000	6153339	881.3
Aroclor-1260	4	13.479	0.000	3554385	1000.1	4	14.551	0.000	2194328	854.8
Aroclor-1260	5	13.578	-0.001	1364348	973.0	NS	---			----
Total Col1Ave (5 peaks):				969.5		Total Col2Ave (4 peaks):			878.2	RPD = 10
Corrected Ave (4 peaks):				961.8		Corrected Ave (3 peaks):			867.8	RPD = 10

Total PCB Area Col1 (6.371 - 14.761) = 77019749 Col1 Total PCB = 2.0 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 115029334 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical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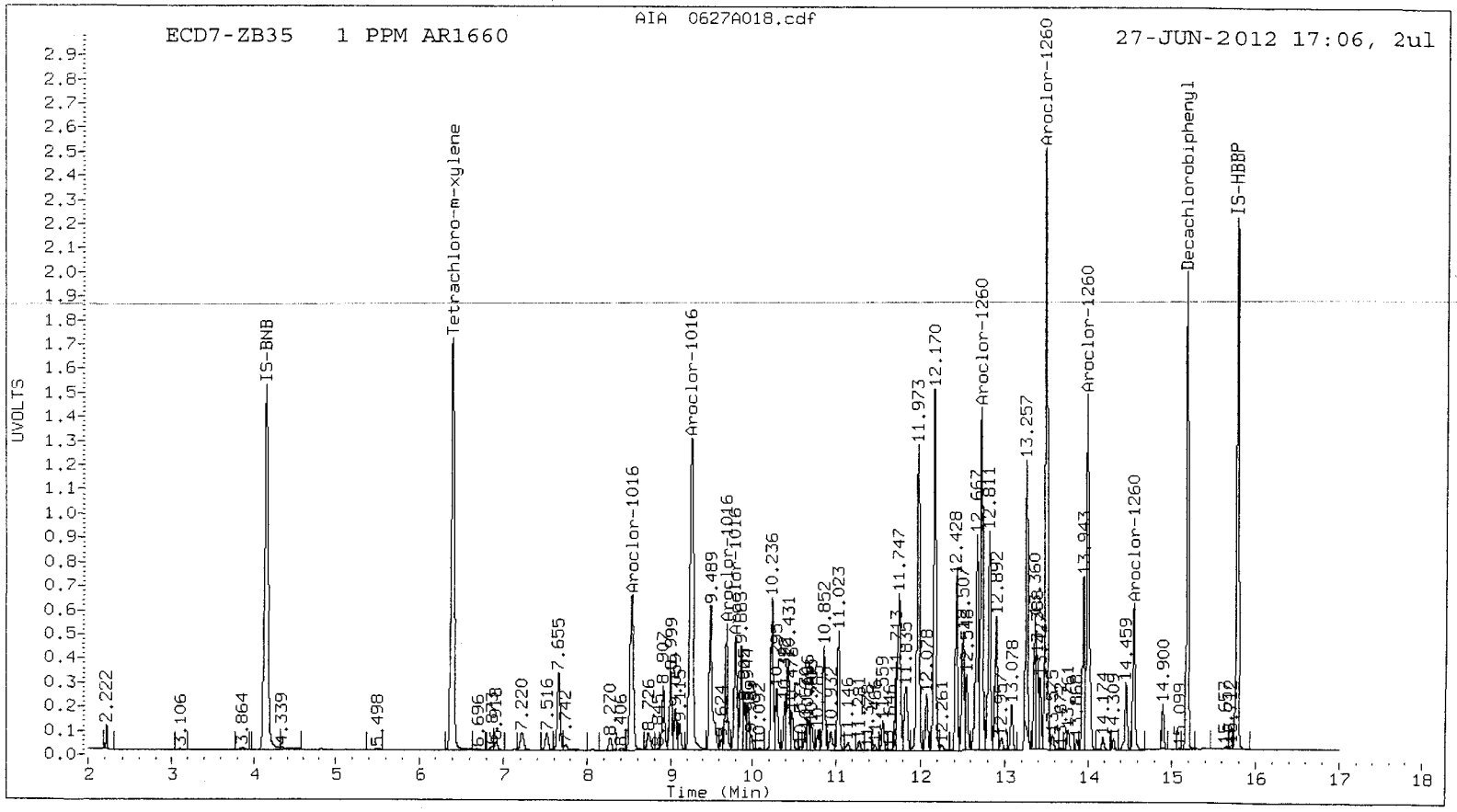
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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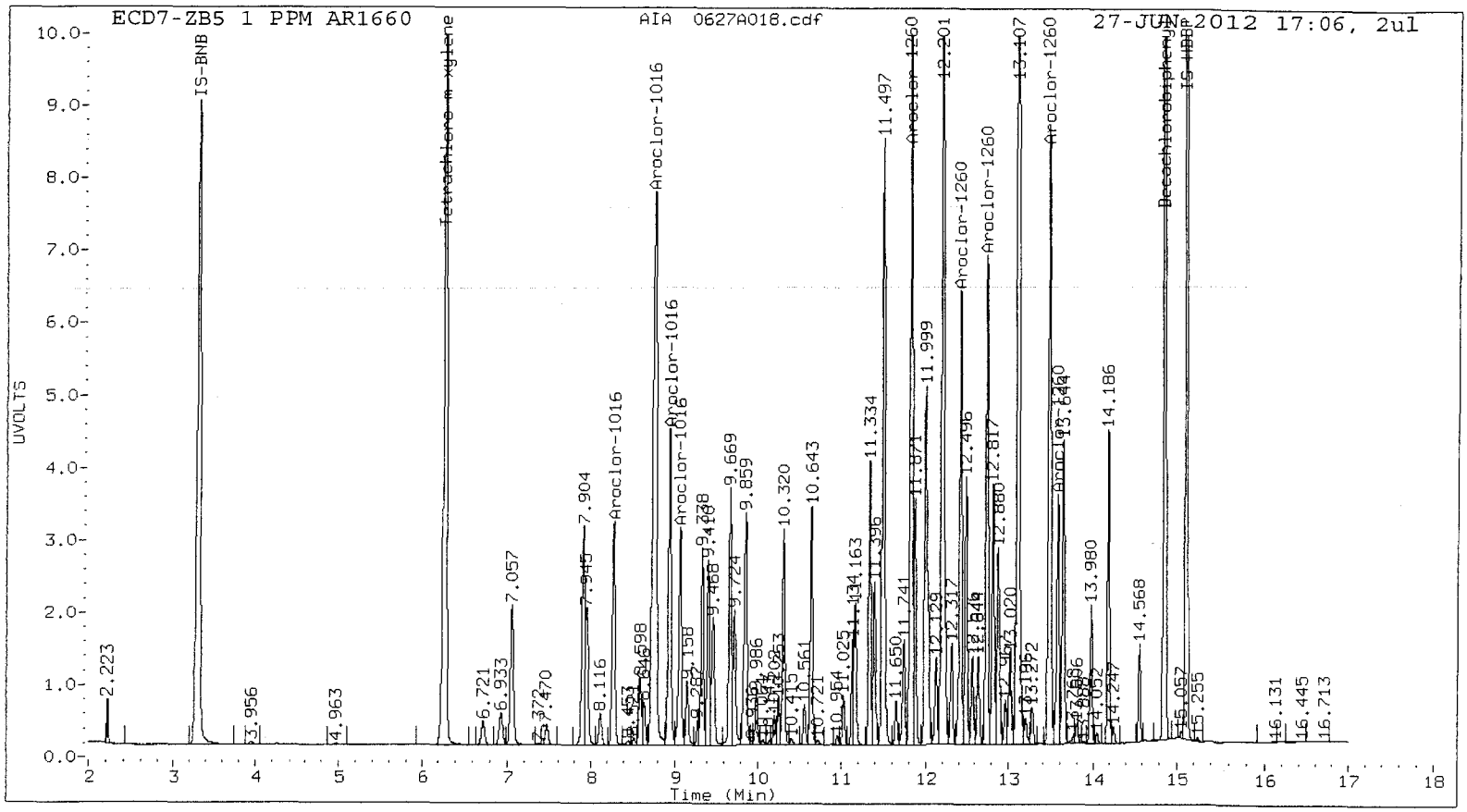
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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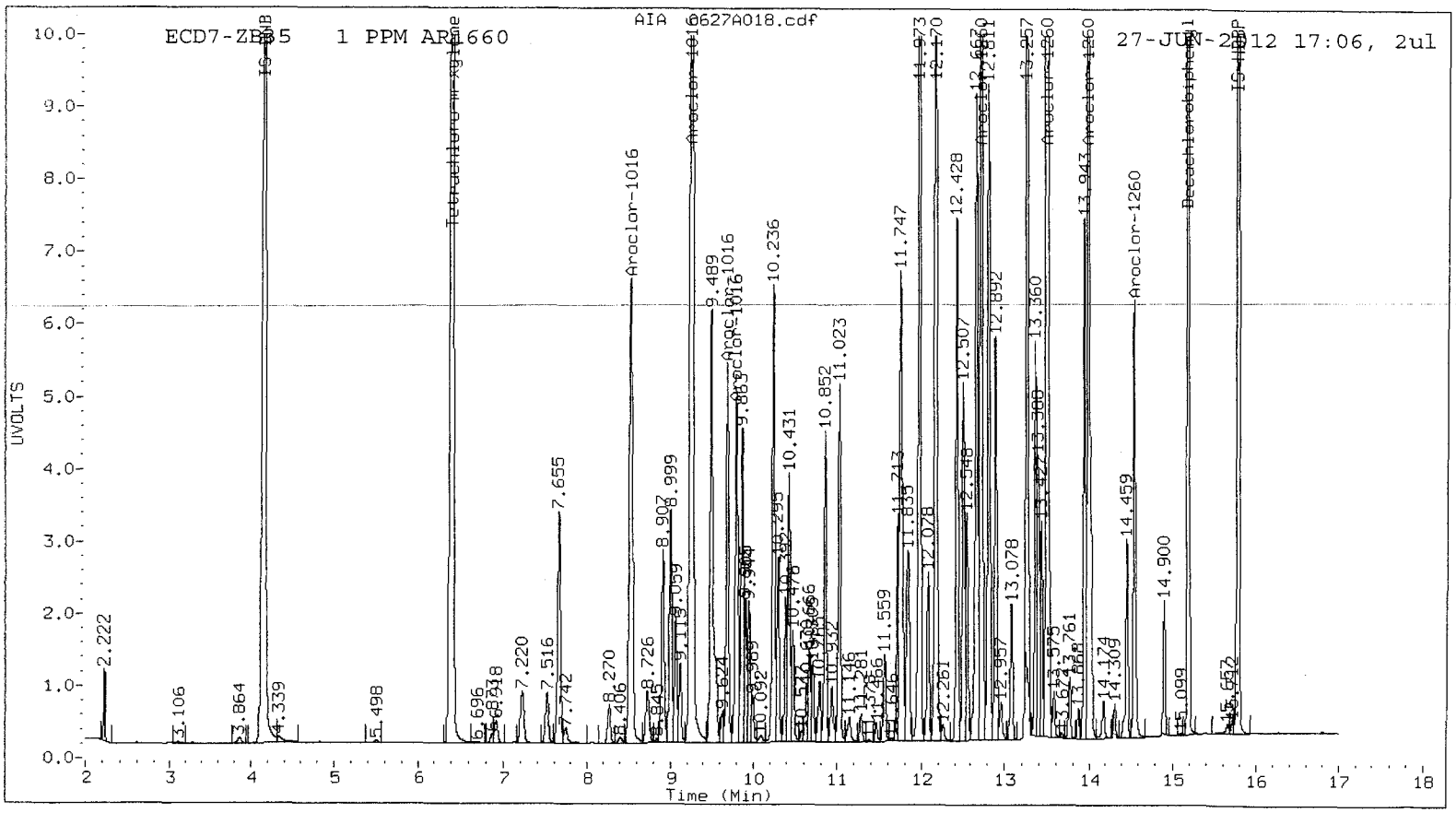
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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27-JUN-2012 17:06, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A019.d
Data file 2: 20120627.B/ical-2.b/0627A019.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1 PPM AR1660
Client ID:
Injection Date: 27-JUN-2012 17:27
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.273	0.003	564119	6.394	0.001	978434	8.1	8.1	0.9	Tetrachloro-m-xylene
14.861	0.000	569678	15.187	0.000	762485	8.2	8.1	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	20.2	20.3
Decachlorobiphenyl	20.5	20.4

06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5748862	0.5
Hexabromobiphenyl	5604480	5801030	3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9280199	-0.2
Hexabromobiphenyl	7801648	7964481	2.1

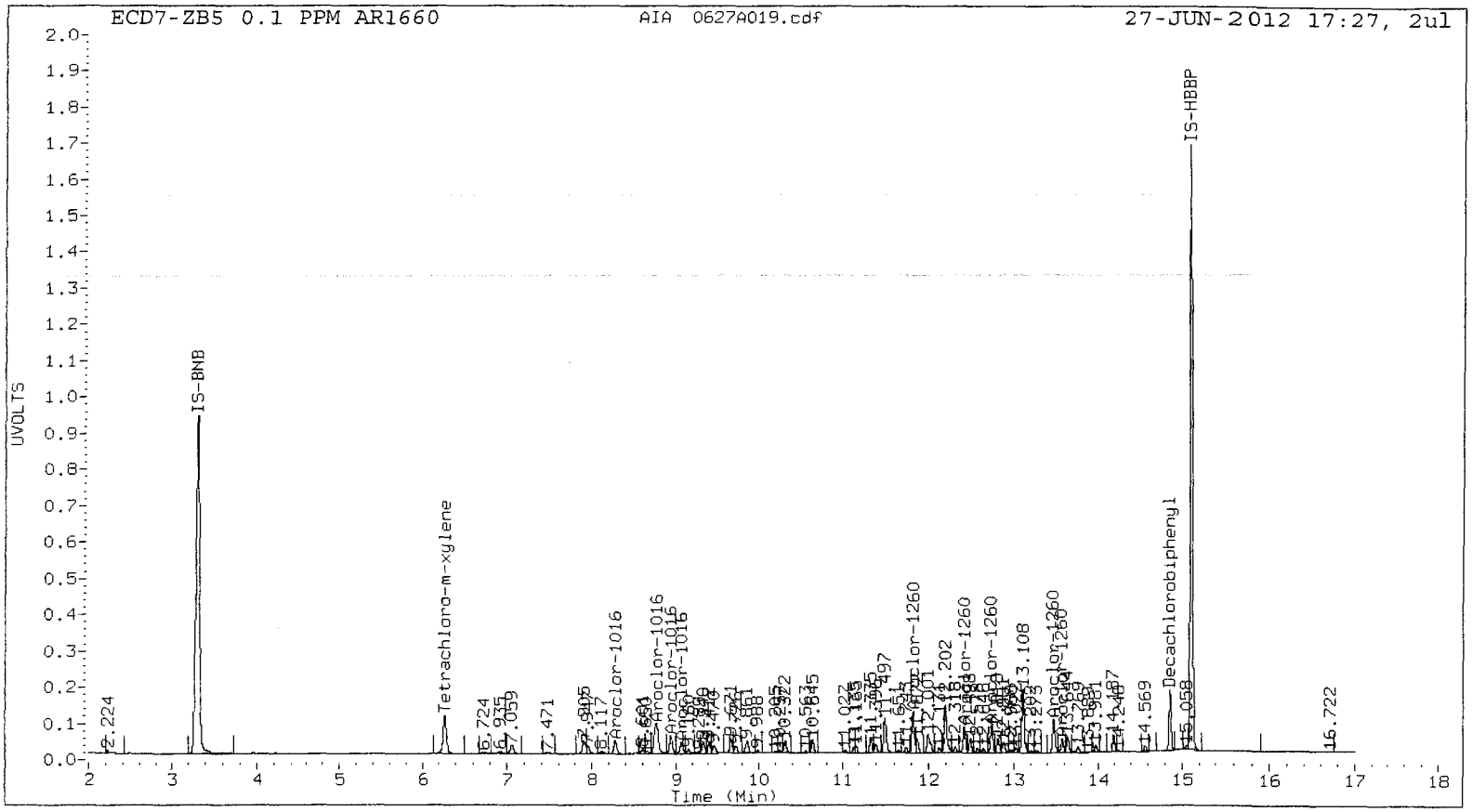
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.280	0.000	172369	102.6	1	8.525	0.001	504244	104.8
Aroclor-1016	2	8.769	0.001	592253	102.7	2	9.258	0.001	1039732	103.4
Aroclor-1016	3	8.943	0.002	233910	103.0	3	9.685	0.002	271781	104.8
Aroclor-1016	4	9.071	0.001	158768	102.2	4	9.793	0.001	317693	105.2
Total Col1Ave (4 peaks):				102.7		Total Col2Ave (4 peaks):			104.5	RPD = 2
Corrected Ave (3 peaks):				102.5		Corrected Ave (3 peaks):			104.3	RPD = 2
Aroclor-1260	1	11.825	0.002	452262	101.5	1	12.722	0.000	719540	101.7
Aroclor-1260	2	12.430	0.001	297613	101.4	2	13.498	0.002	1123028	101.1
Aroclor-1260	3	12.744	0.001	299093	101.1	3	13.994	0.001	768277	102.6
Aroclor-1260	4	13.480	0.001	384684	101.1	4	14.552	0.001	283337	102.9
Aroclor-1260	5	13.580	0.001	152885	101.8	NS	---			----
Total Col1Ave (5 peaks):				101.4		Total Col2Ave (4 peaks):			102.1	RPD = 1
Corrected Ave (4 peaks):				101.3		Corrected Ave (3 peaks):			101.8	RPD = 0

Total PCB Area Col1 (6.371 - 14.761) = 8768101 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 15209234 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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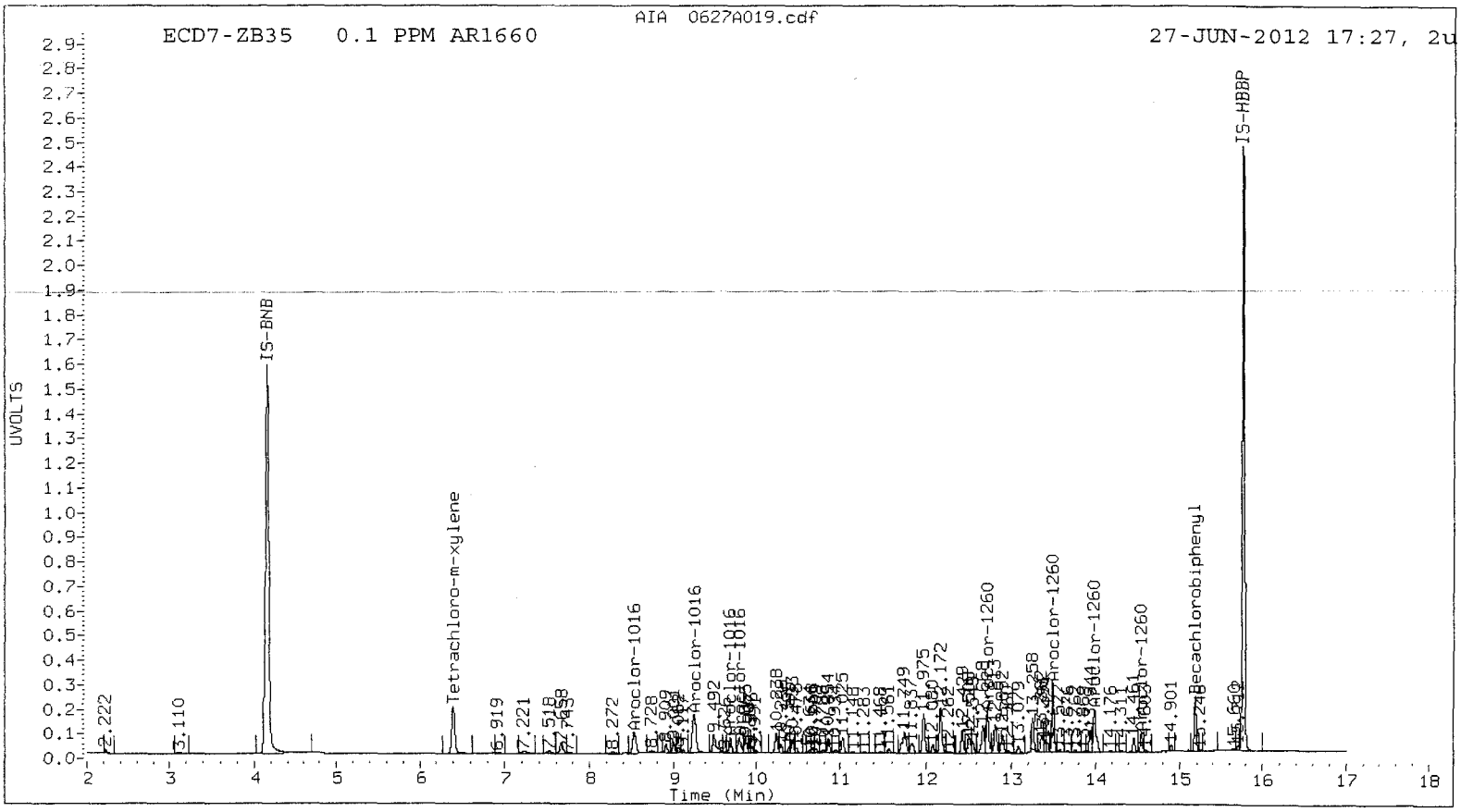
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
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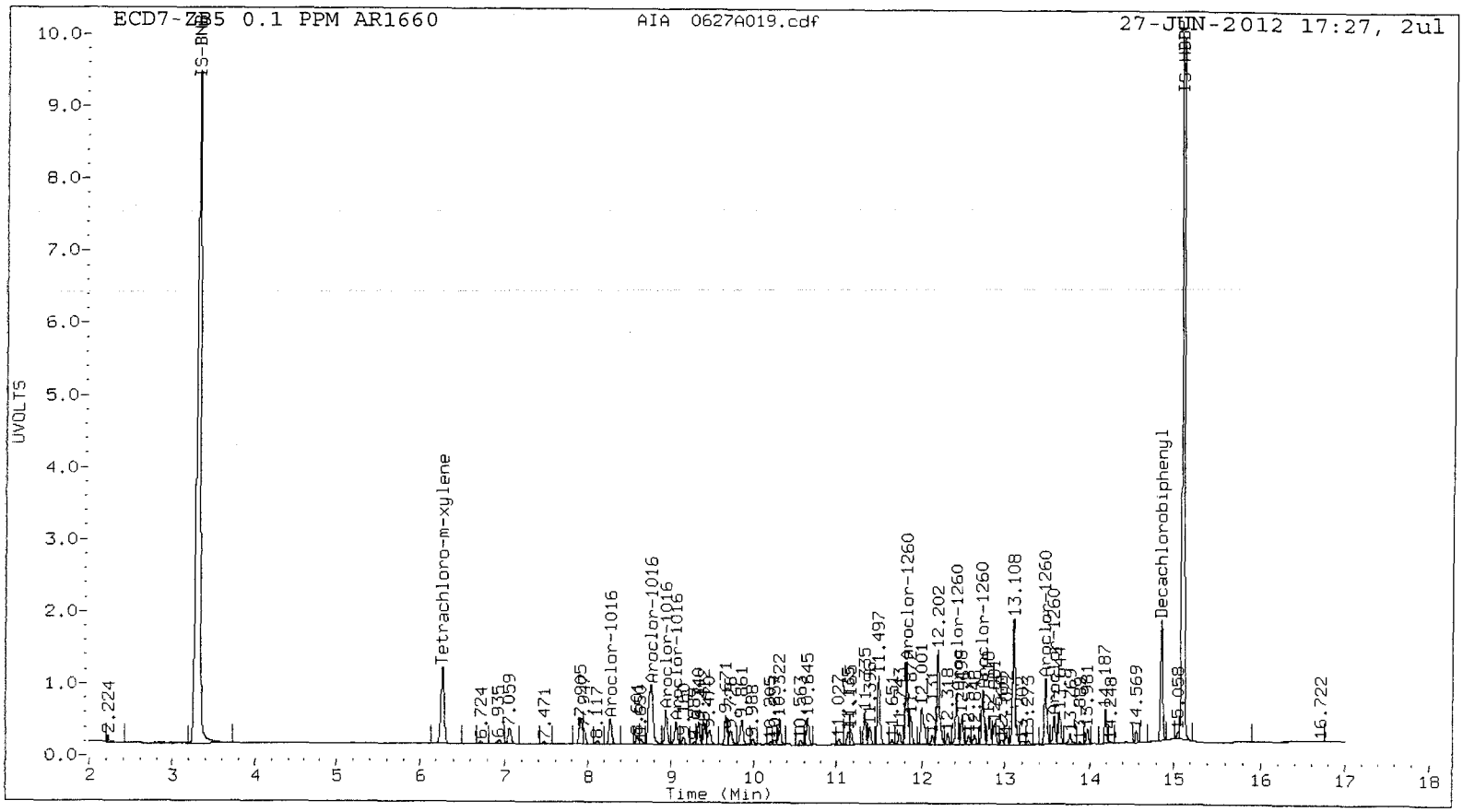
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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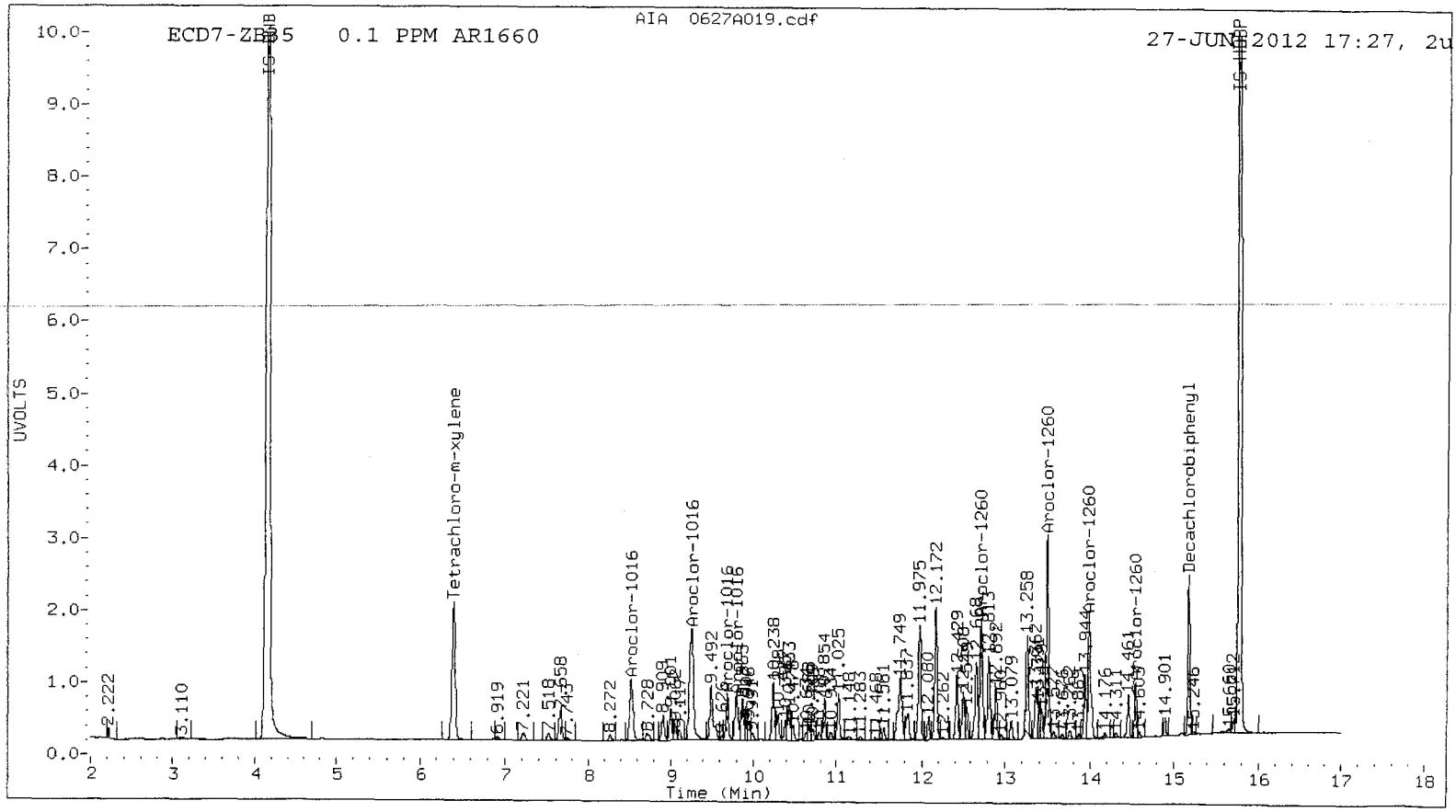
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)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IS
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A020.d
Data file 2: 20120627.B/ical-2.b/0627A020.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5 PPM AR1660
Client ID:
Injection Date: 27-JUN-2012 17:47
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.273	0.002	2836763	6.395	0.001	4545814	42.0	39.3	6.6	Tetrachloro-m-xylene
14.861	0.000	2654794	15.187	0.000	3361370	39.9	37.2	6.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.0	98.3
Decachlorobiphenyl	99.8	93.1

06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5550278	-3.0
Hexabromobiphenyl	5604480	5547097	-1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	8920862	-4.0
Hexabromobiphenyl	7801648	7679788	-1.6

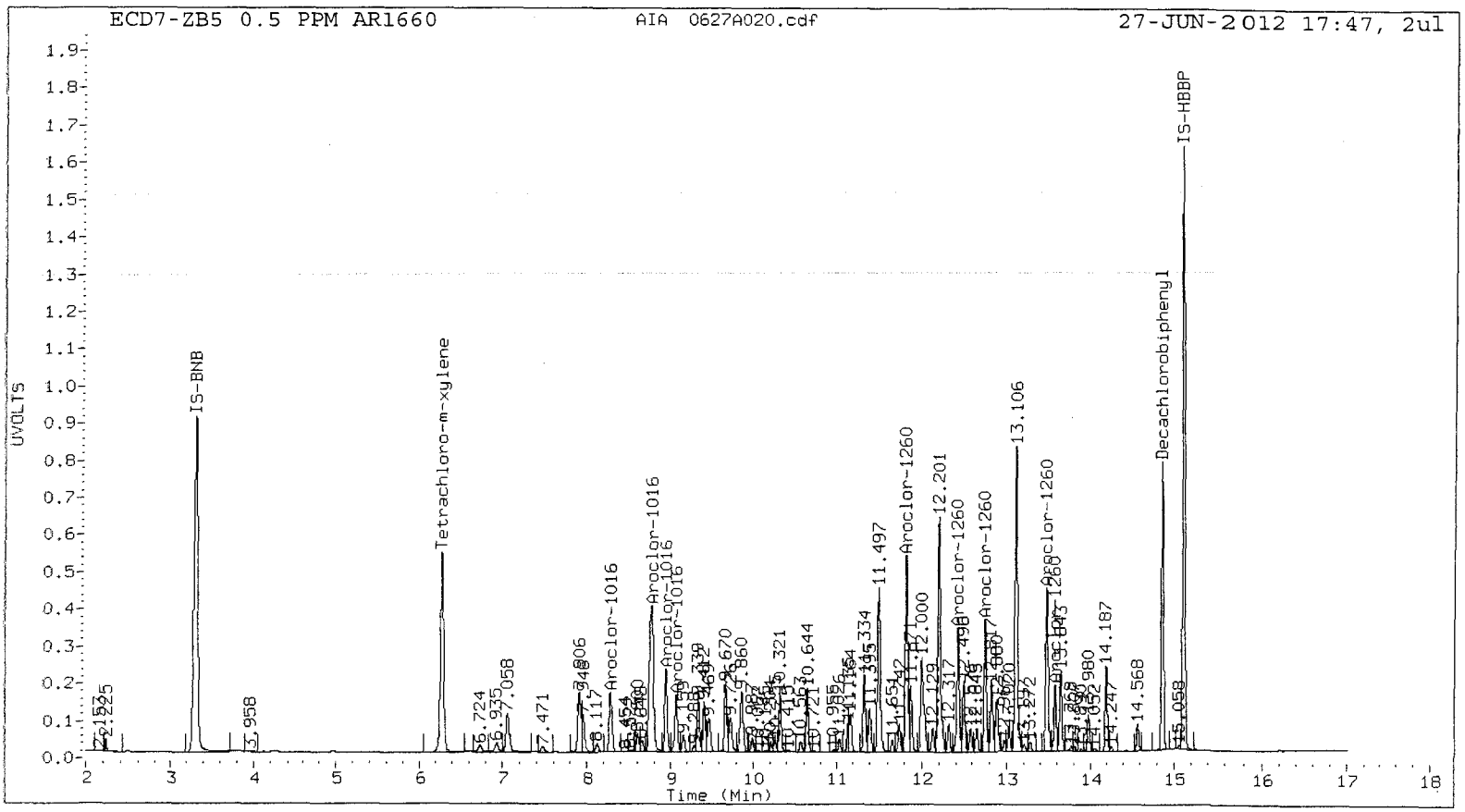
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

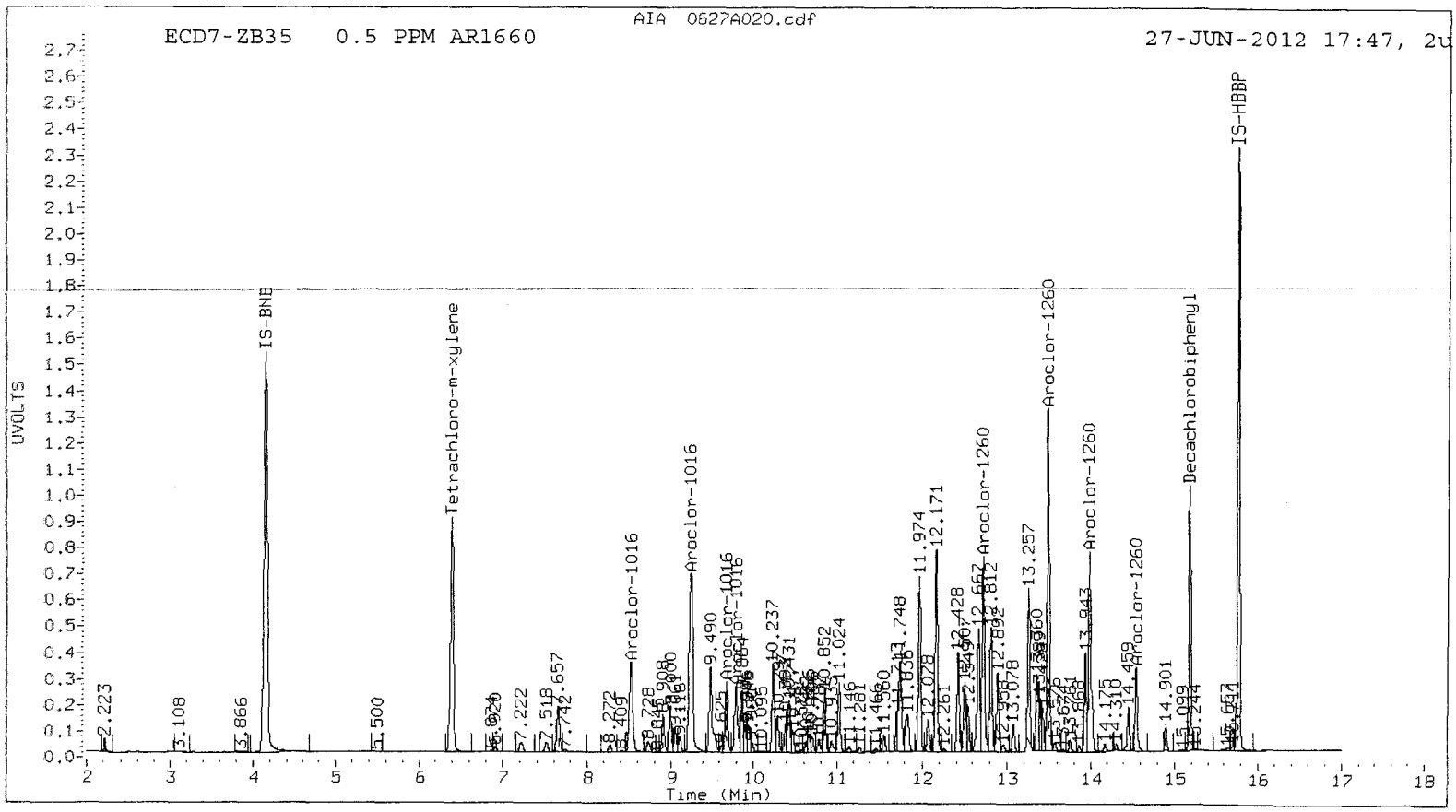
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	8.281	0.000	792879	489.1	1	8.525	0.001	2034401	439.8
Aroclor-1016	2	8.769	0.000	2751864	494.4	2	9.257	-0.001	4381219	453.2
Aroclor-1016	3	8.942	0.000	1061280	484.2	3	9.683	0.000	1131667	453.8
Aroclor-1016	4	9.070	0.000	732154	488.4	4	9.792	0.000	1265504	436.0
Total Col1Ave (4 peaks):				489.0		Total Col2Ave (4 peaks):			445.7	RPD = 9
Corrected Ave (3 peaks):				487.2		Corrected Ave (3 peaks):			443.0	RPD = 10
Aroclor-1260	1	11.823	0.000	2083402	489.1	1	12.721	-0.001	3042831	446.0
Aroclor-1260	2	12.428	0.000	1379329	491.7	2	13.497	0.000	4921564	459.3
Aroclor-1260	3	12.744	0.000	1409149	498.3	3	13.992	0.000	3257262	451.0
Aroclor-1260	4	13.479	0.000	1848004	507.8	4	14.551	0.000	1208762	455.2
Aroclor-1260	5	13.579	0.000	711739	495.8	NS	---			----
Total Col1Ave (5 peaks):				496.5		Total Col2Ave (4 peaks):			452.9	RPD = 9
Corrected Ave (4 peaks):				493.7		Corrected Ave (3 peaks):			450.7	RPD = 9

Total PCB Area Col1 (6.371 - 14.761) = 40474393 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 62156322 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 0.5 PPM AR1660
AIA 0627A020.cdf
27-JUN-2012 17:47, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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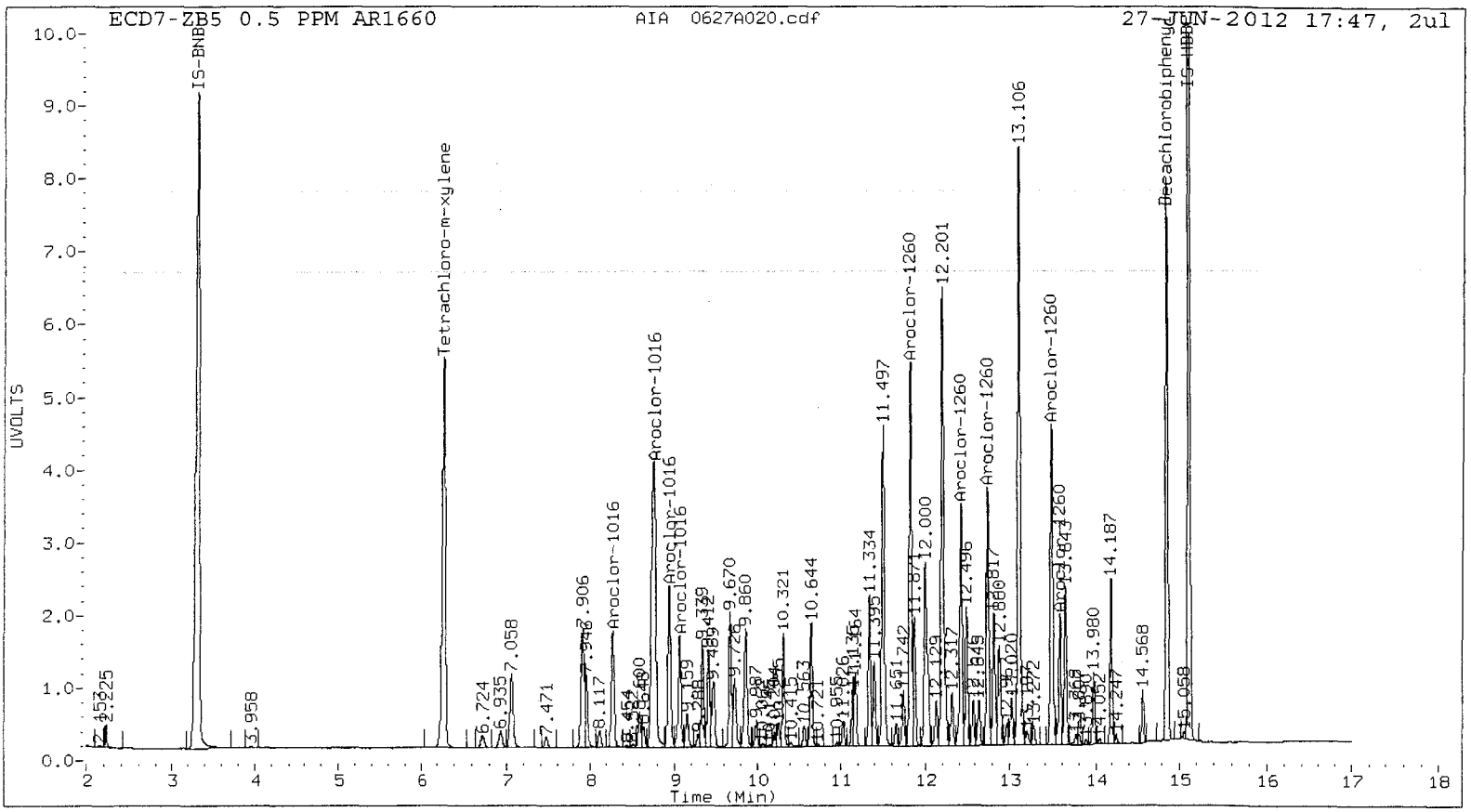
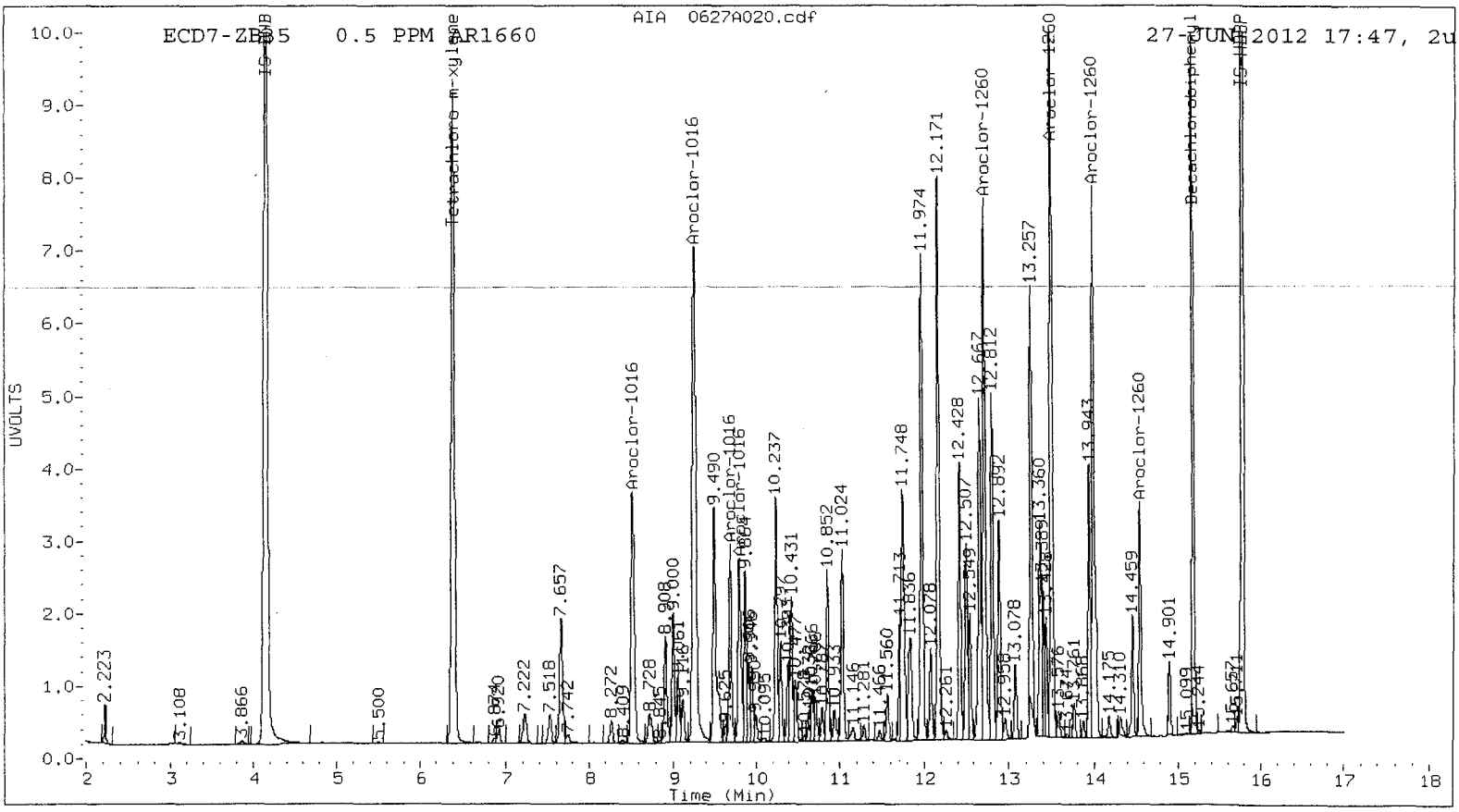
ECD7-ZB35 0.5 PPM AR1660
27-JUN-2012 17:47, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl


ECD7-ZB5 0.5 PPM AR1660
AIA 0627A020.cdf
27-JUN-2012 17:47, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB


ECD7-ZB5 0.5 PPM AR1660
AIA 0627A020.cdf
27-JUN-2012 17:47, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A021.d
Data file 2: 20120627.B/ical-2.b/0627A021.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 27-JUN-2012 18:08
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.269	-0.002	1397816	6.390	-0.003	2305667	20.5	19.6	4.1	Tetrachloro-m-xylene
14.861	0.000	1346710	15.187	0.000	1714576	20.0	18.8	6.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.2	49.1
Decachlorobiphenyl	50.1	46.9

06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5614983	-1.8
Hexabromobiphenyl	5604480	5600602	-0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9060821	-2.5
Hexabromobiphenyl	7801648	7776507	-0.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1242	1	8.277	0.000	319626	250.0	1	8.523	0.000	868395	250.0
Aroclor-1242	2	8.766	0.000	1093206	250.0	2	9.255	0.000	1827636	250.0
Aroclor-1242	3	8.939	0.000	429035	250.0	3	9.682	0.000	482889	250.0
Aroclor-1242	4	10.559	0.000	401529	250.0	4	11.146	0.000	775091	250.0

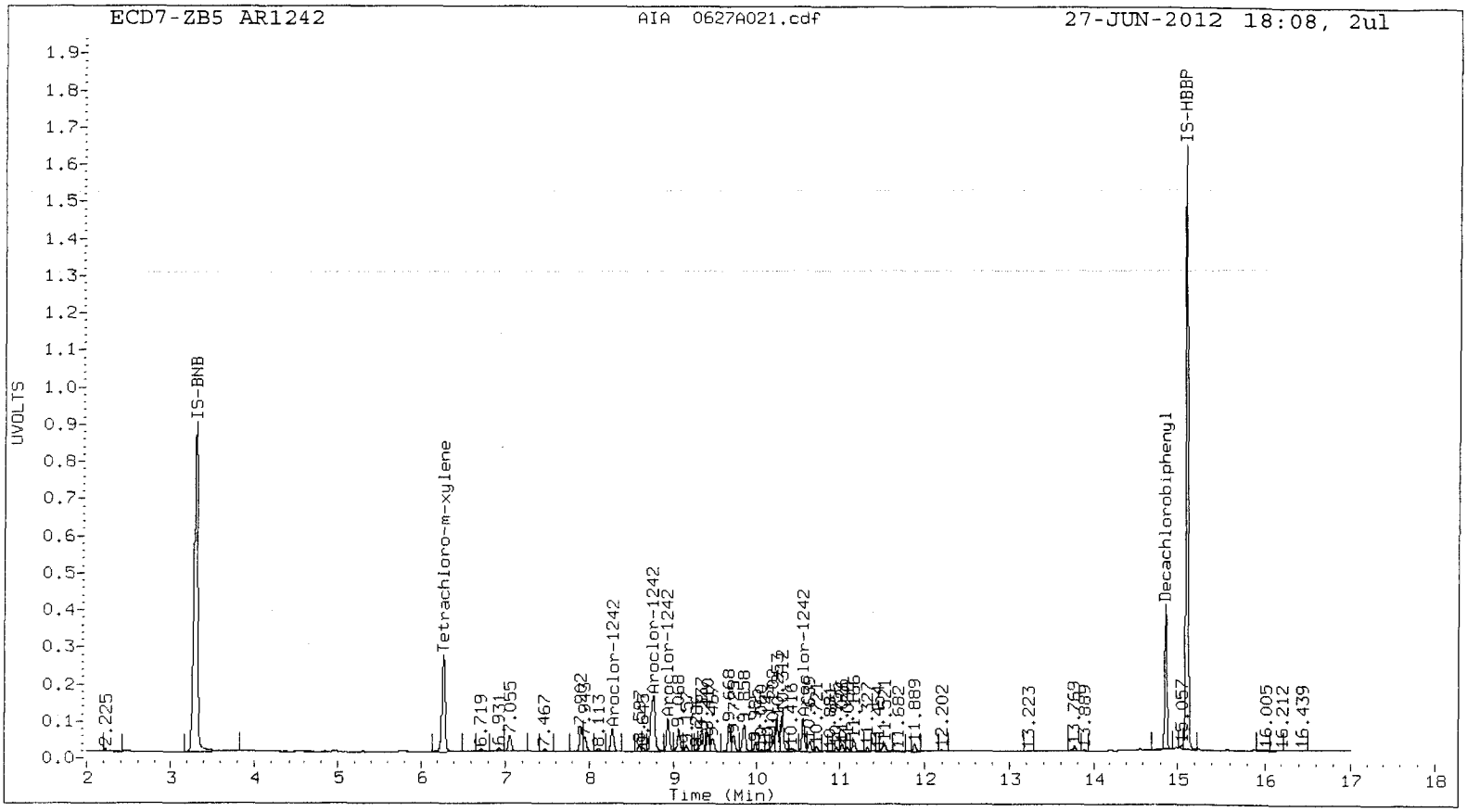
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

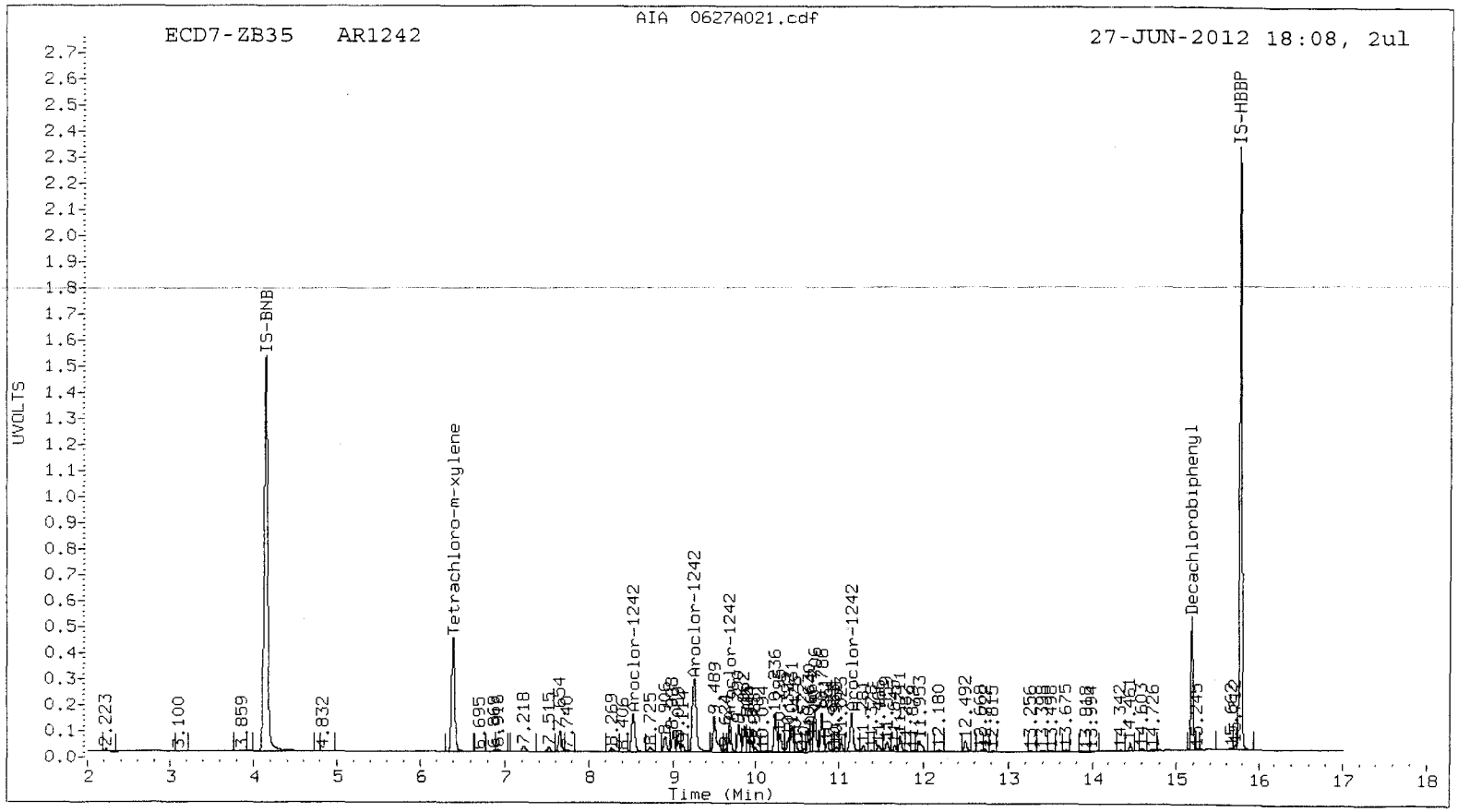
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

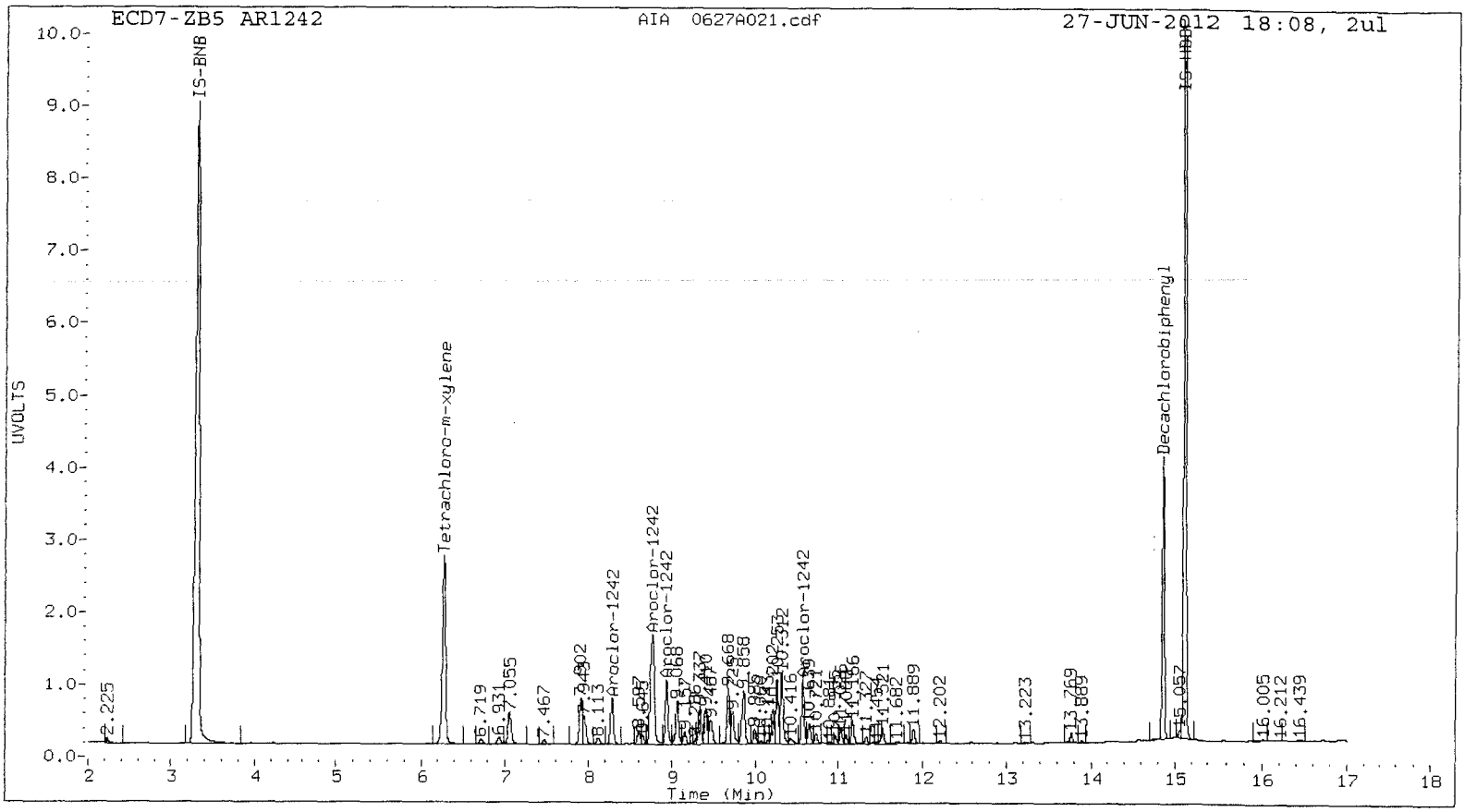
Total PCB Area Col1 (6.371 - 14.761) = 7520756 Col1 Total PCB = 0.2 ppm*

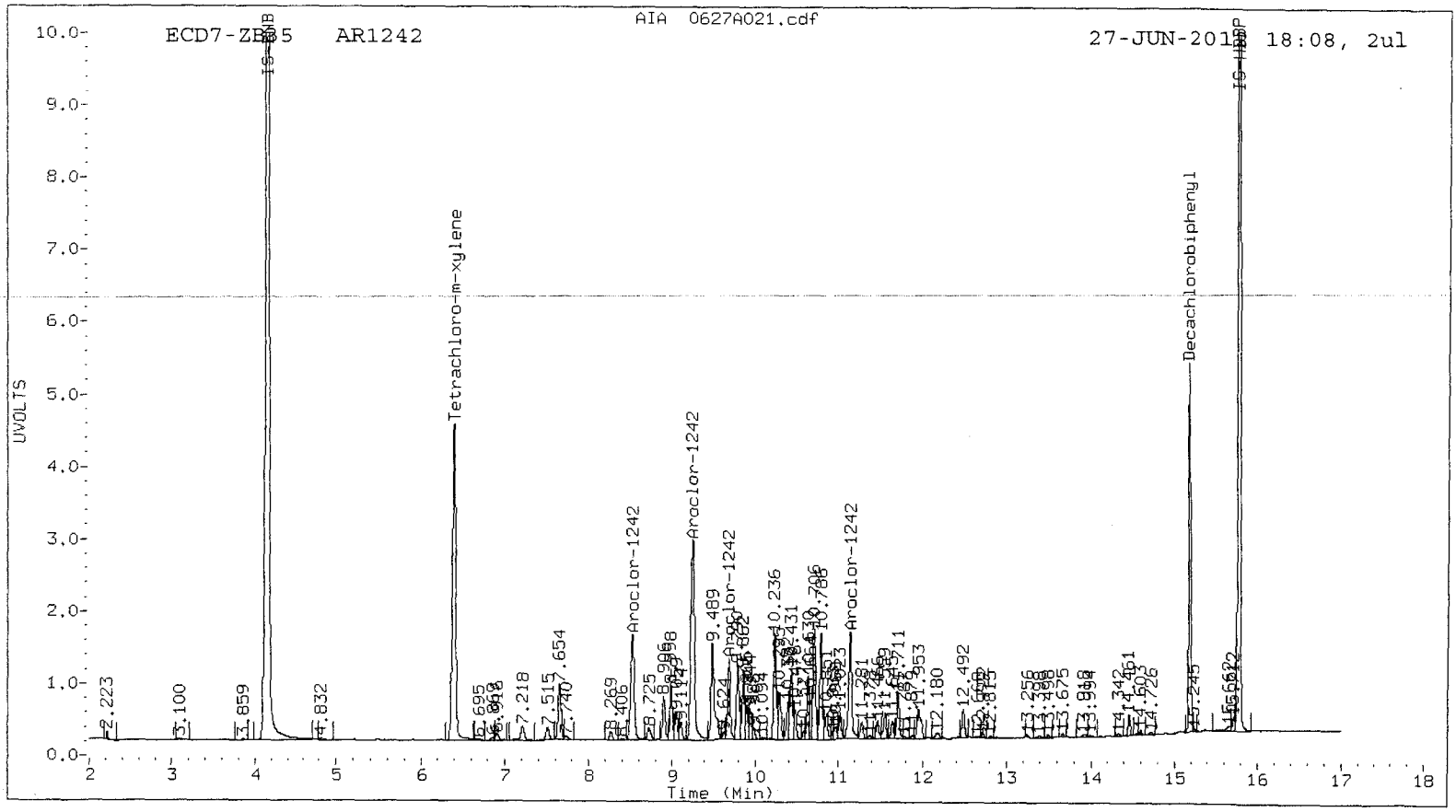
Total PCB Area Col2 (6.494 - 15.086) = 13499717 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1242
AIA 0627A021.cdf
27-JUN-2012 18:08, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1242
AIA 0627A021.cdf
27-JUN-2012 18:08, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP


ECD7-ZB5 AR1242
AIA 0627A021.cdf
27-JUN-2012 18:08, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1242


ECD7-ZB5 AR1242
AIA 0627A021.cdf
27-JUN-2012 18:08, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1242

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A022.d
Data file 2: 20120627.B/ical-2.b/0627A022.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 27-JUN-2012 18:29
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.271	0.001	1360118	6.393	-0.001	2272591	19.6	19.2	2.0	Tetrachloro-m-xylene
14.860	-0.001	1335901	15.186	-0.001	1700781	19.3	18.3	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.0	48.0
Decachlorobiphenyl	48.4	45.7

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5706716	-0.2
Hexabromobiphenyl	5604480	5757997	2.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9132424	-1.8
Hexabromobiphenyl	7801648	7913166	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

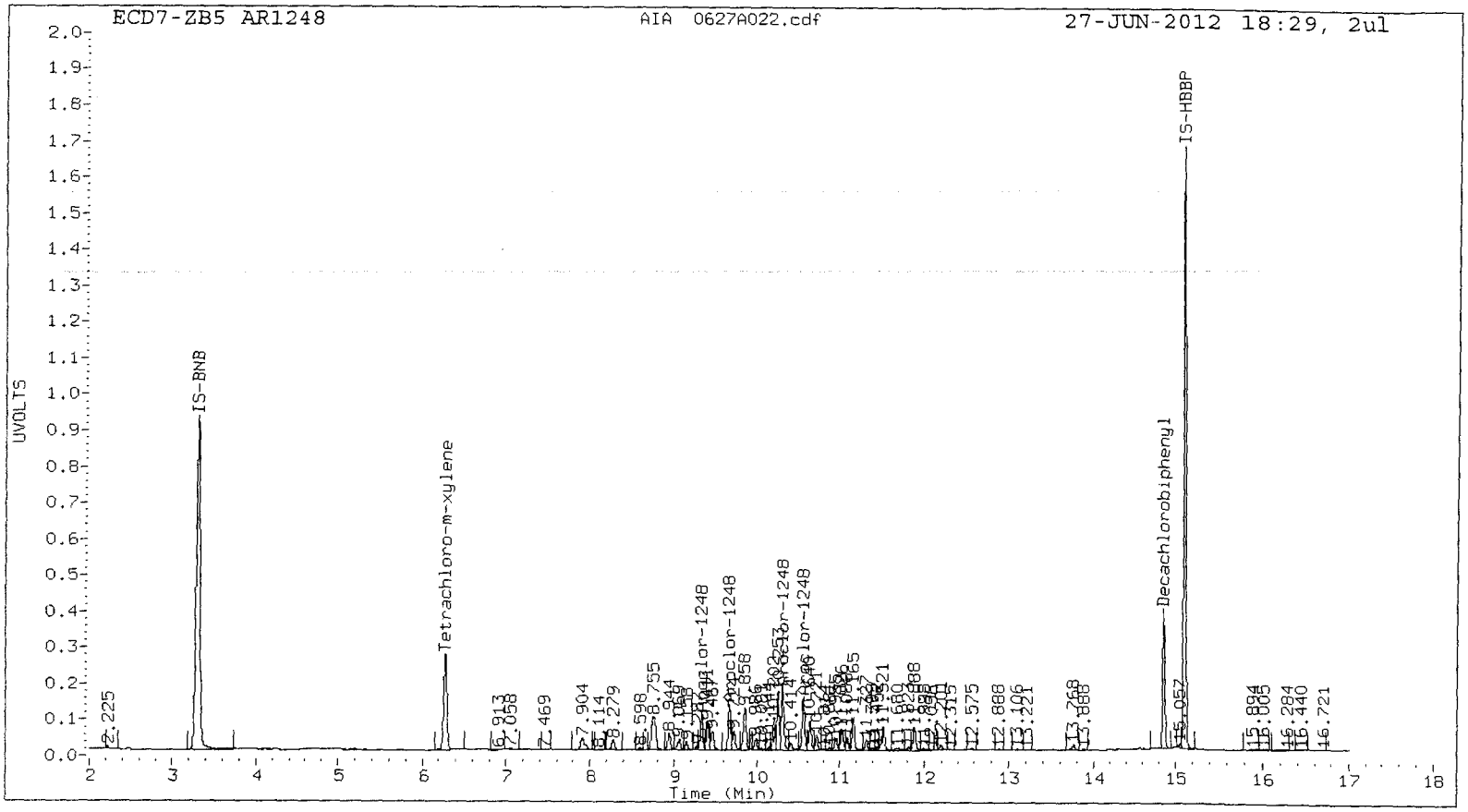
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1248	1	9.338	0.000	430867	250.0	1	9.790	-0.001	847004	250.0
Aroclor-1248	2	9.670	0.000	544115	250.0	2	10.236	-0.001	937287	250.0
Aroclor-1248	3	10.312	0.000	812961	250.0	3	10.785	-0.001	961218	250.0
Aroclor-1248	4	10.559	0.000	636505	250.0	4	11.146	-0.001	1262896	250.0

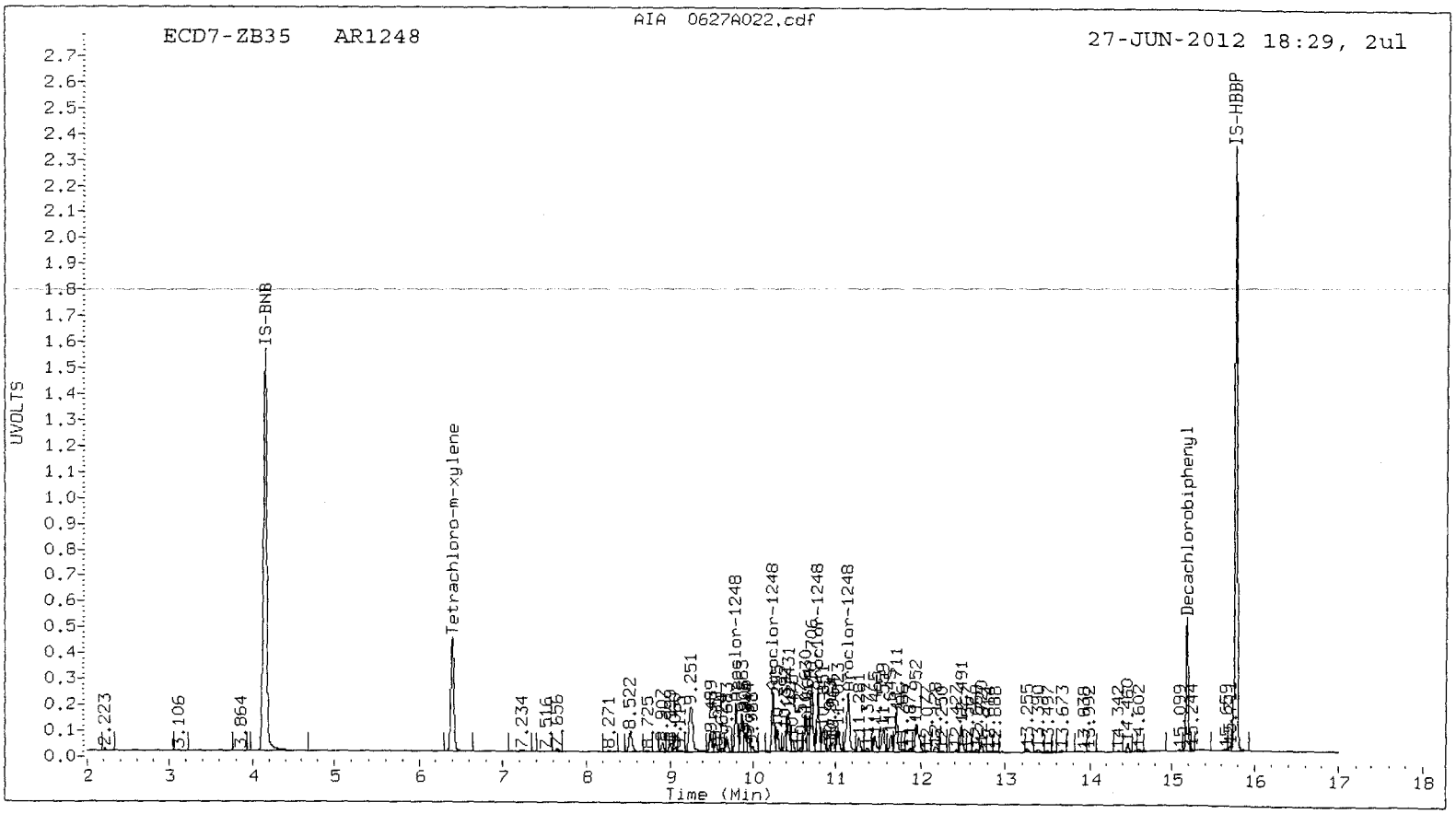
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

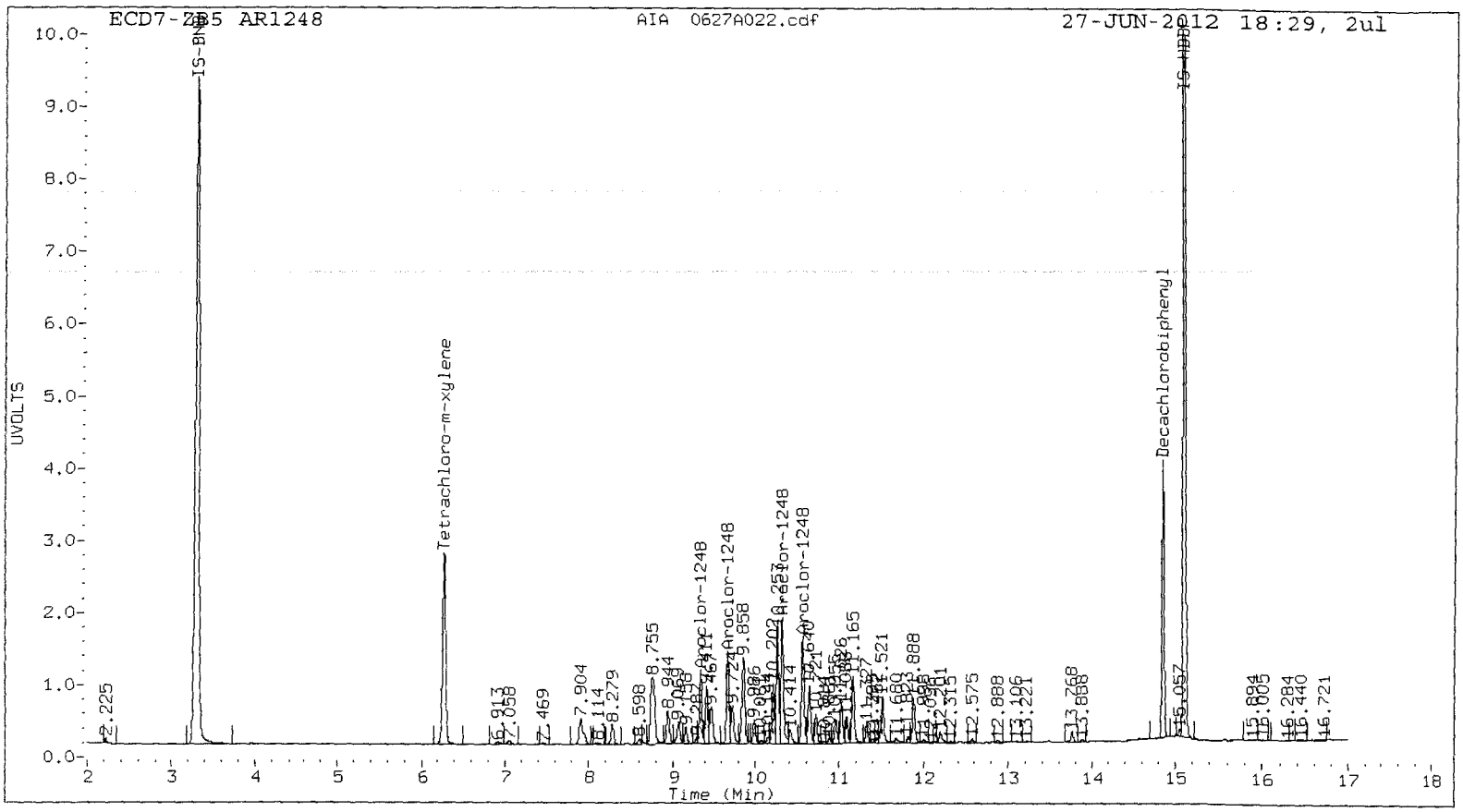
Total PCB Area Col1 (6.371 - 14.761) = 9531268 Col1 Total PCB = 0.2 ppm*

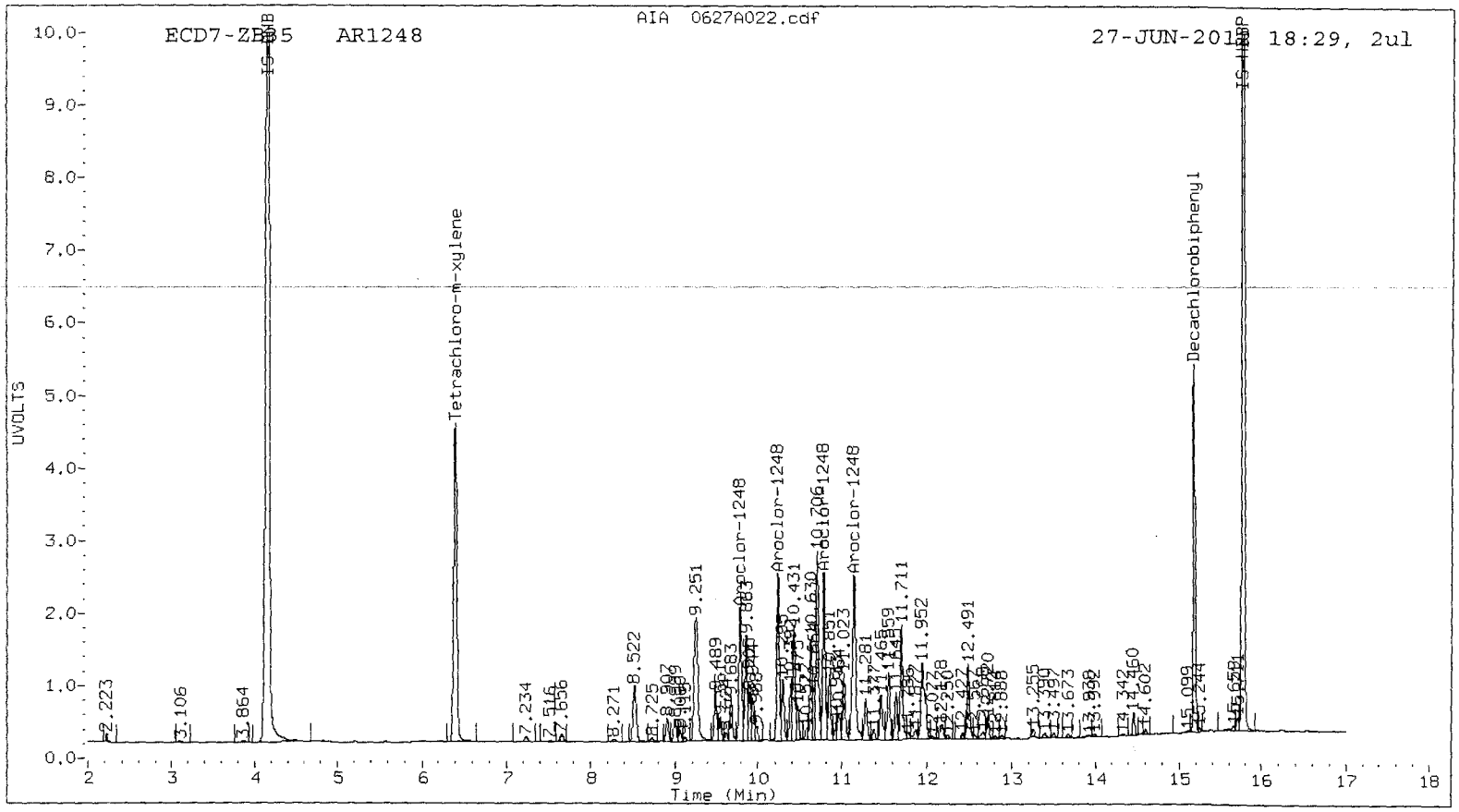
Total PCB Area Col2 (6.494 - 15.086) = 16364504 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1248
AIA 0627A022.cdf
27-JUN-2012 18:29, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB35 AR1248
AIA 0627A022.cdf
27-JUN-2012 18:29, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 AR1248
AIA 0627A022.cdf
27-JUN-2012 18:29, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248


ECD7-ZB5 AR1248
AIA 0627A022.cdf
27-JUN-2012 18:29, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A023.d
Data file 2: 20120627.B/ical-2.b/0627A023.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 27-JUN-2012 18:50
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.273	0.003	1375508	6.394	0.001	2300635	19.9	19.5	2.0	Tetrachloro-m-xylene
14.860	-0.001	1350423	15.186	-0.001	1732599	19.5	18.7	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.8	48.9
Decachlorobiphenyl	48.7	46.8

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5672305	-0.8
Hexabromobiphenyl	5604480	5775746	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9088389	-2.2
Hexabromobiphenyl	7801648	7876020	1.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	10.320	0.000	588717	250.0	1	10.852	-0.001	838420	250.0
Aroclor-1254	2	10.642	0.000	847486	250.0	2	11.023	-0.001	1072166	250.0
Aroclor-1254	3	11.025	0.000	517117	250.0	3	11.559	-0.001	827790	250.0
Aroclor-1254	4	11.164	0.000	1033100	250.0	4	11.711	-0.002	1827443	250.0
Aroclor-1254	5	11.880	0.000	659910	250.0	5	12.497	-0.002	1053844	250.0

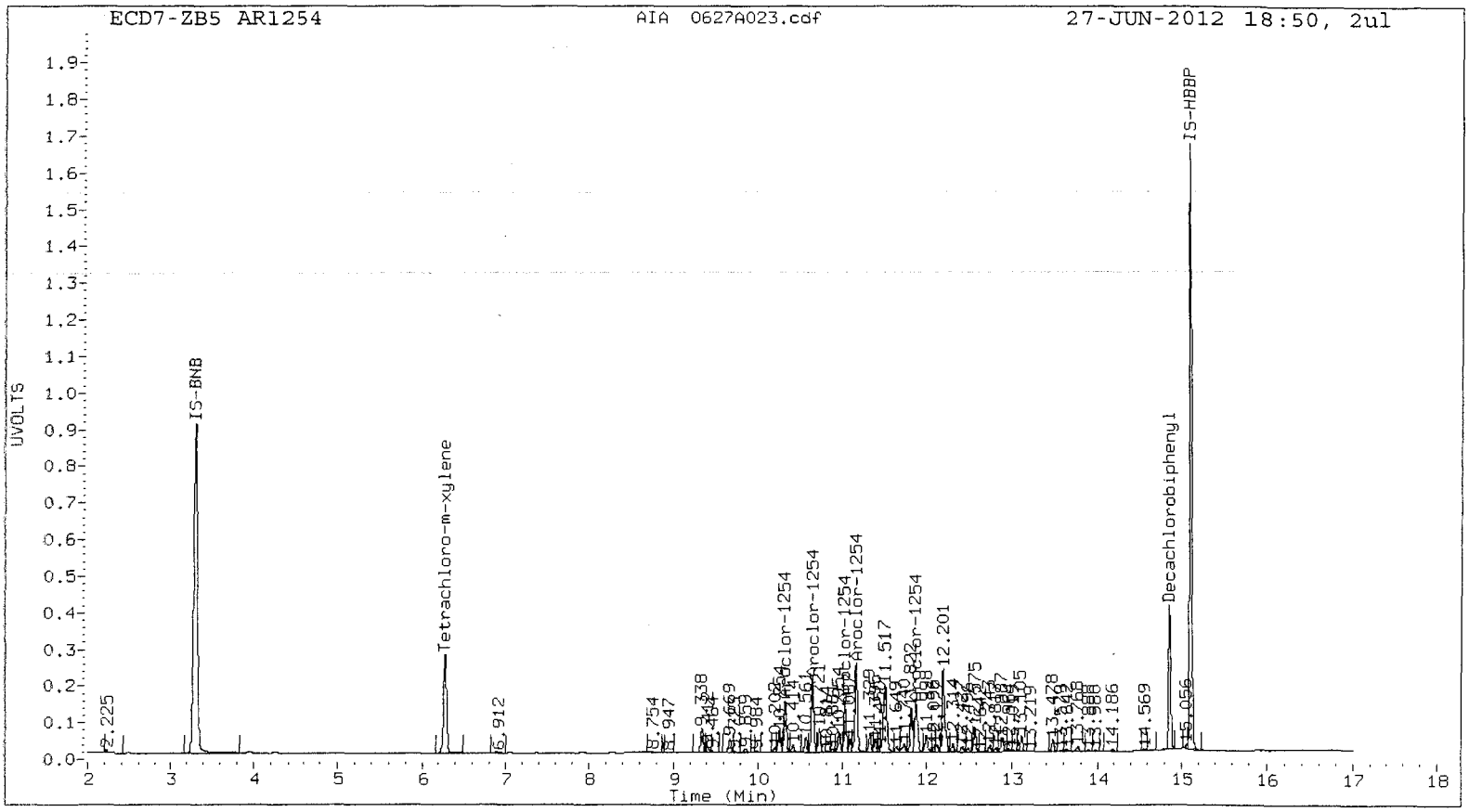
Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

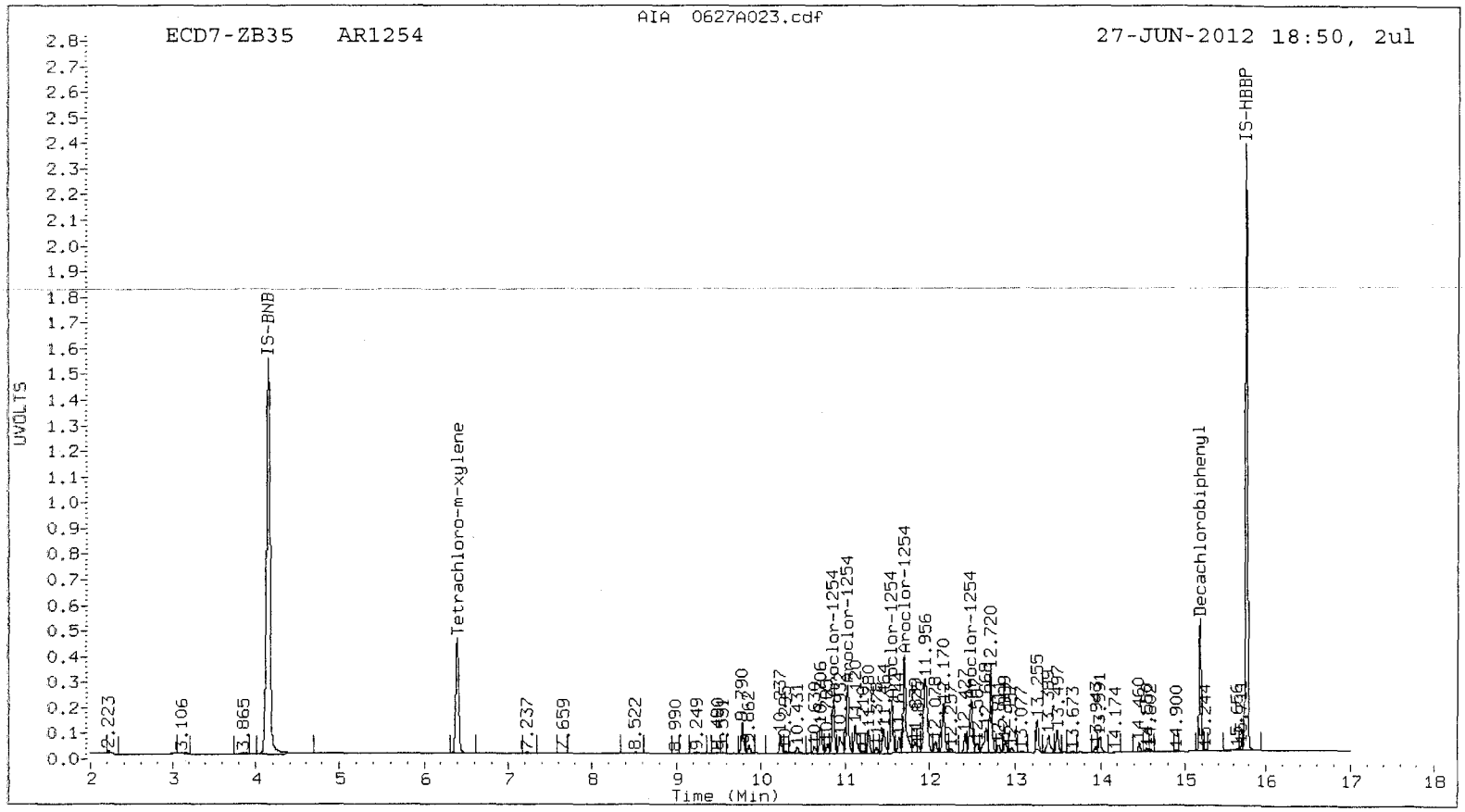
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

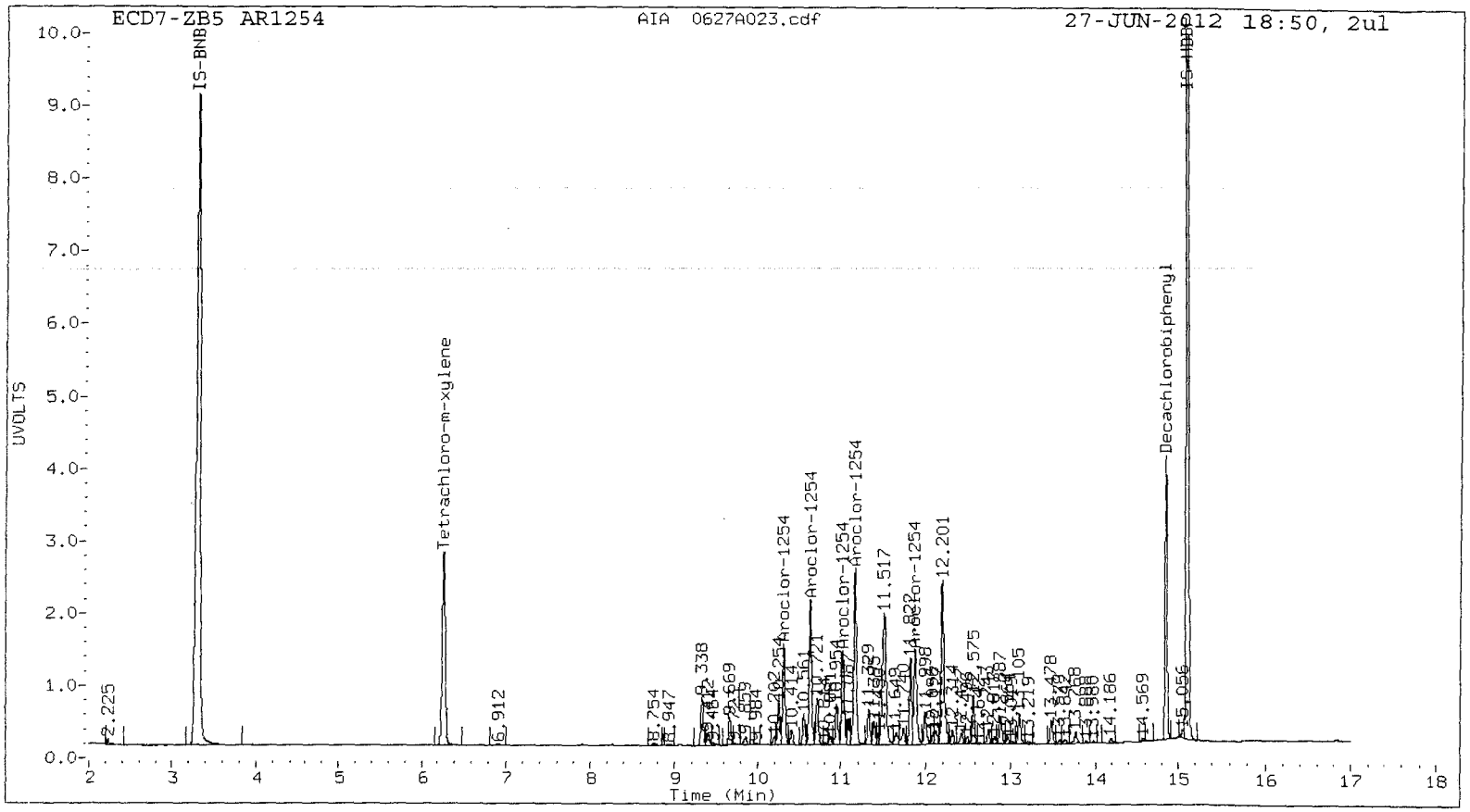
Total PCB Area Col1 (6.371 - 14.761) = 10370539 Col1 Total PCB = 0.3 ppm*

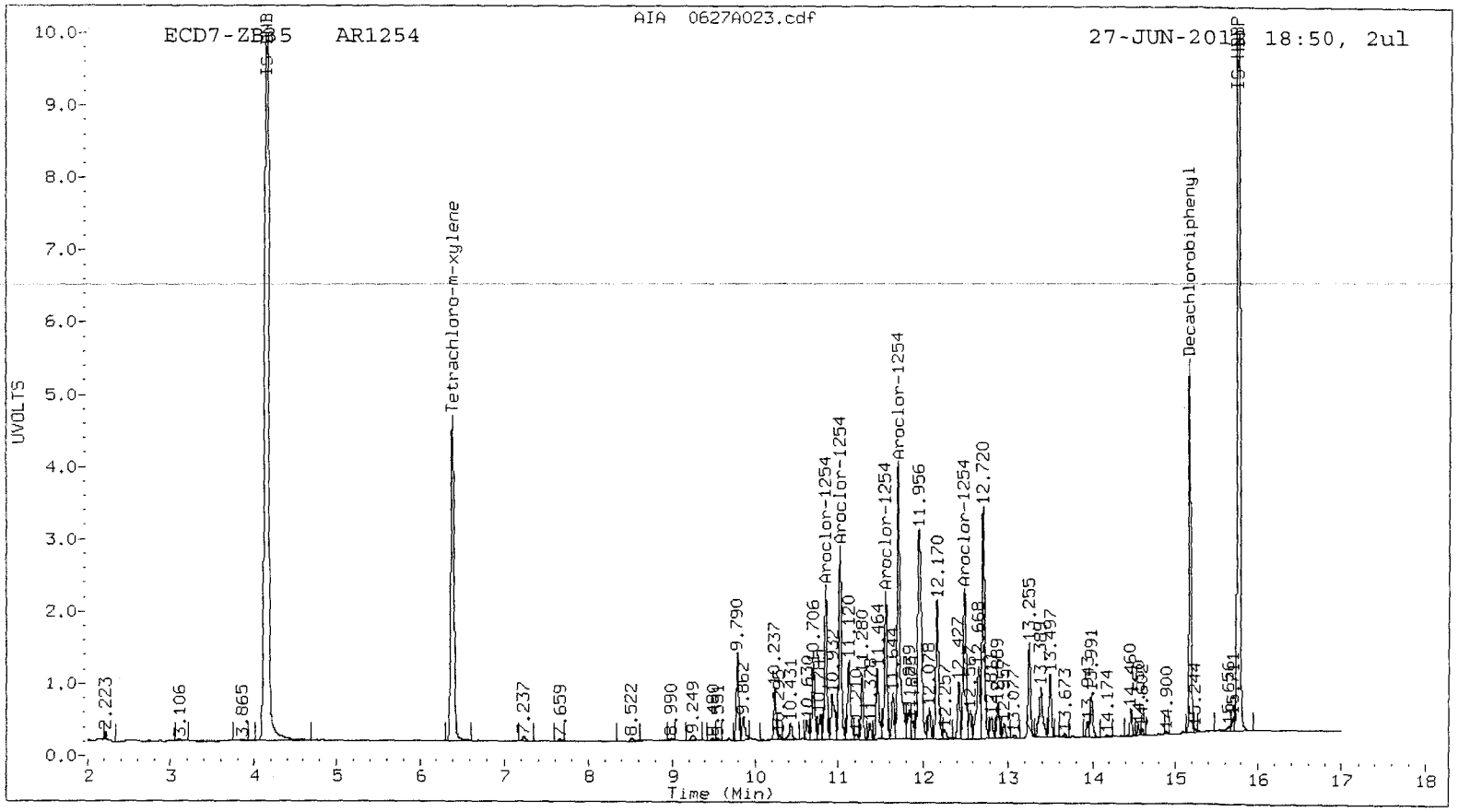
Total PCB Area Col2 (6.494 - 15.086) = 17423467 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1254
AIA 0627A023.cdf
27-JUN-2012 18:50, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1254
Time (Min)


ECD7-ZB35 AR1254
AIA 0627A023.cdf
27-JUN-2012 18:50, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1254
Time (Min)


ECD7-ZB5 AR1254
AIA 0627A023.cdf
27-JUN-2012 18:50, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
12.201
11.517
UVOLTS
Time (Min)


ECD7-ZB5 AR1254
AIA 0627A023.cdf
27-JUN-2012 18:50, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
12.720
11.956
12.170
9.790
UVOLTS
Time (Min)

UZ99:00745

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A024.d
Data file 2: 20120627.B/ical-2.b/0627A024.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 27-JUN-2012 19:11
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.272	0.002	1432711	6.394	0.000	2320504	21.1	20.0	5.1	Tetrachloro-m-xylene
14.861	0.000	1368549	15.187	0.000	1752902	19.9	19.0	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	52.7	50.1
Decachlorobiphenyl	49.7	47.5

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5588179	-2.3
Hexabromobiphenyl	5604480	5740312	2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	8945979	-3.8
Hexabromobiphenyl	7801648	7846852	0.6

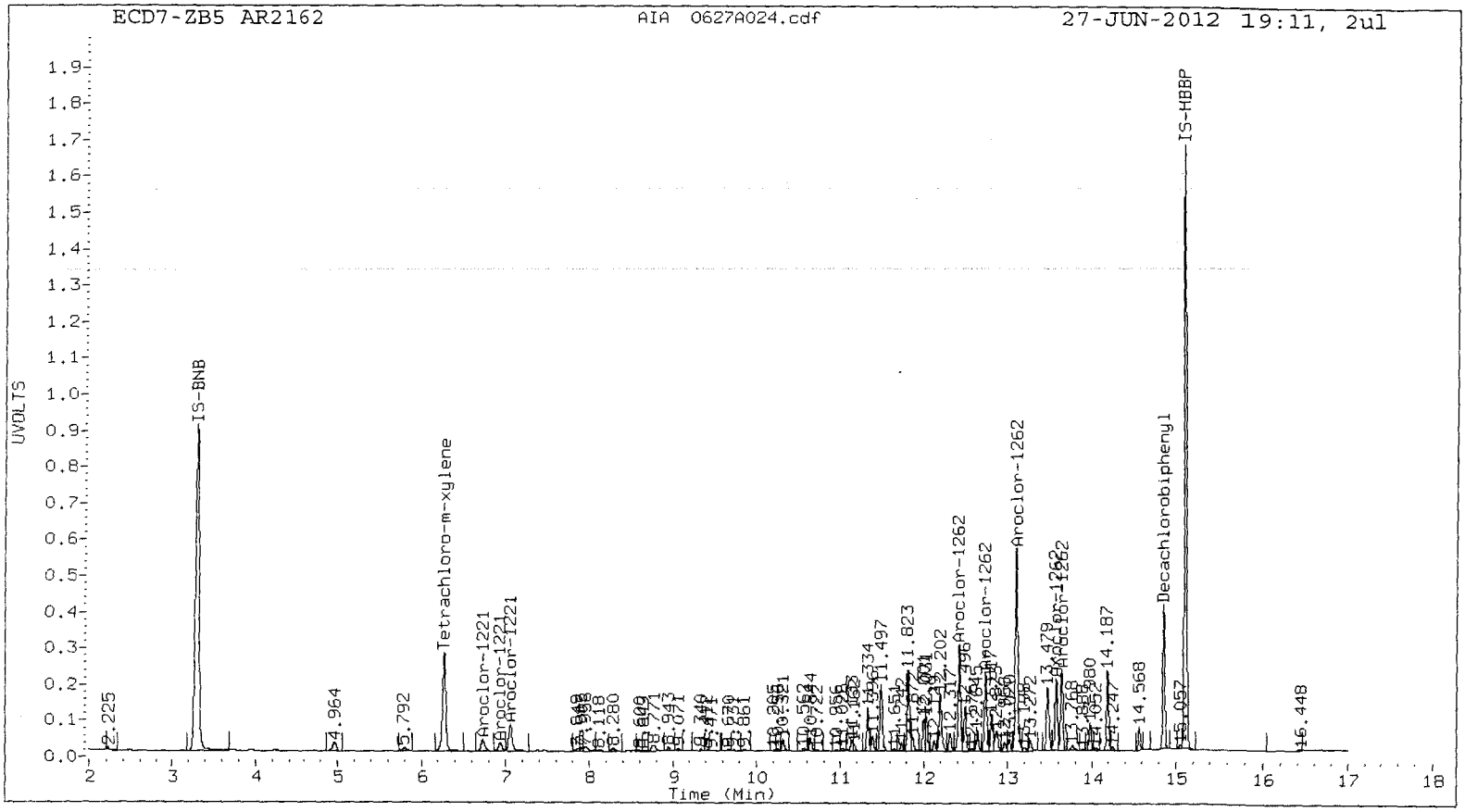
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1221	1	6.724	0.000	169722	250.0	1	7.217	0.000	334962	250.0
Aroclor-1221	2	6.936	0.000	127305	250.0	2	7.517	0.000	205951	250.0
Aroclor-1221	3	7.059	0.000	423026	250.0	3	7.657	0.000	621316	250.0
Aroclor-1221	NS	---			----	4	7.743	0.000	119586	250.0
Total Col1Ave (3 peaks):				250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	12.428	0.000	1192439	250.0	1	12.812	0.000	1729992	250.0
Aroclor-1262	2	12.743	0.000	865147	250.0	2	13.257	0.000	1234336	250.0
Aroclor-1262	3	13.107	0.000	2357487	250.0	3	13.496	0.000	3328392	250.0
Aroclor-1262	4	13.579	0.000	797647	250.0	4	13.942	0.000	1274008	250.0
Aroclor-1262	5	13.643	0.000	855524	250.0	5	13.993	0.000	2065007	250.0
Total Col1Ave (5 peaks):				250.0		Total Col2Ave (5 peaks):			250.0	RPD = 0
Corrected Ave (4 peaks):				250.0		Corrected Ave (4 peaks):			250.0	RPD = 0

Total PCB Area Col1 (6.371 - 14.761) = 16165006 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 25110334 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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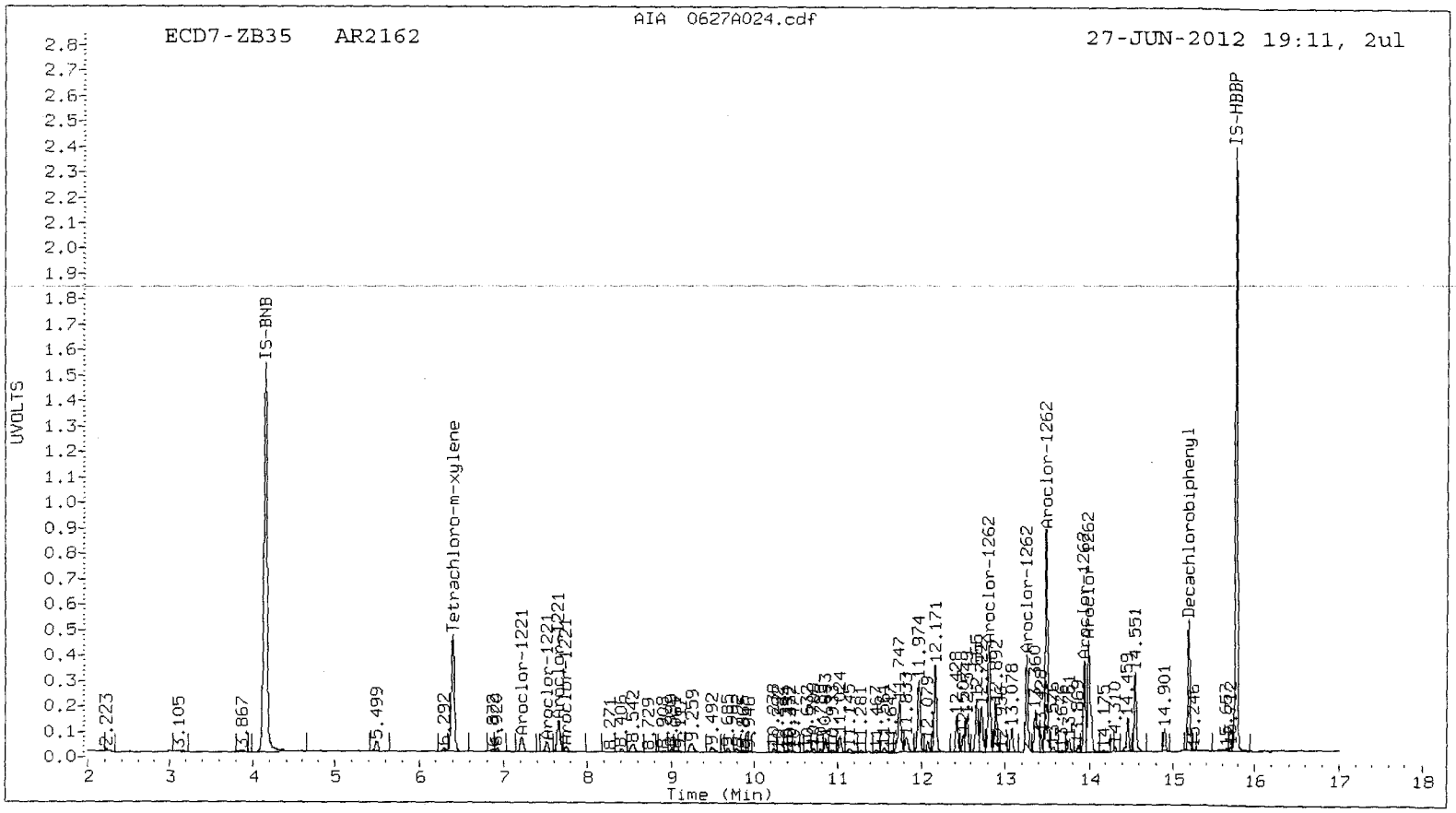
AIA 0627A024.cdf
27-JUN-2012 19:11, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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Time (Min)
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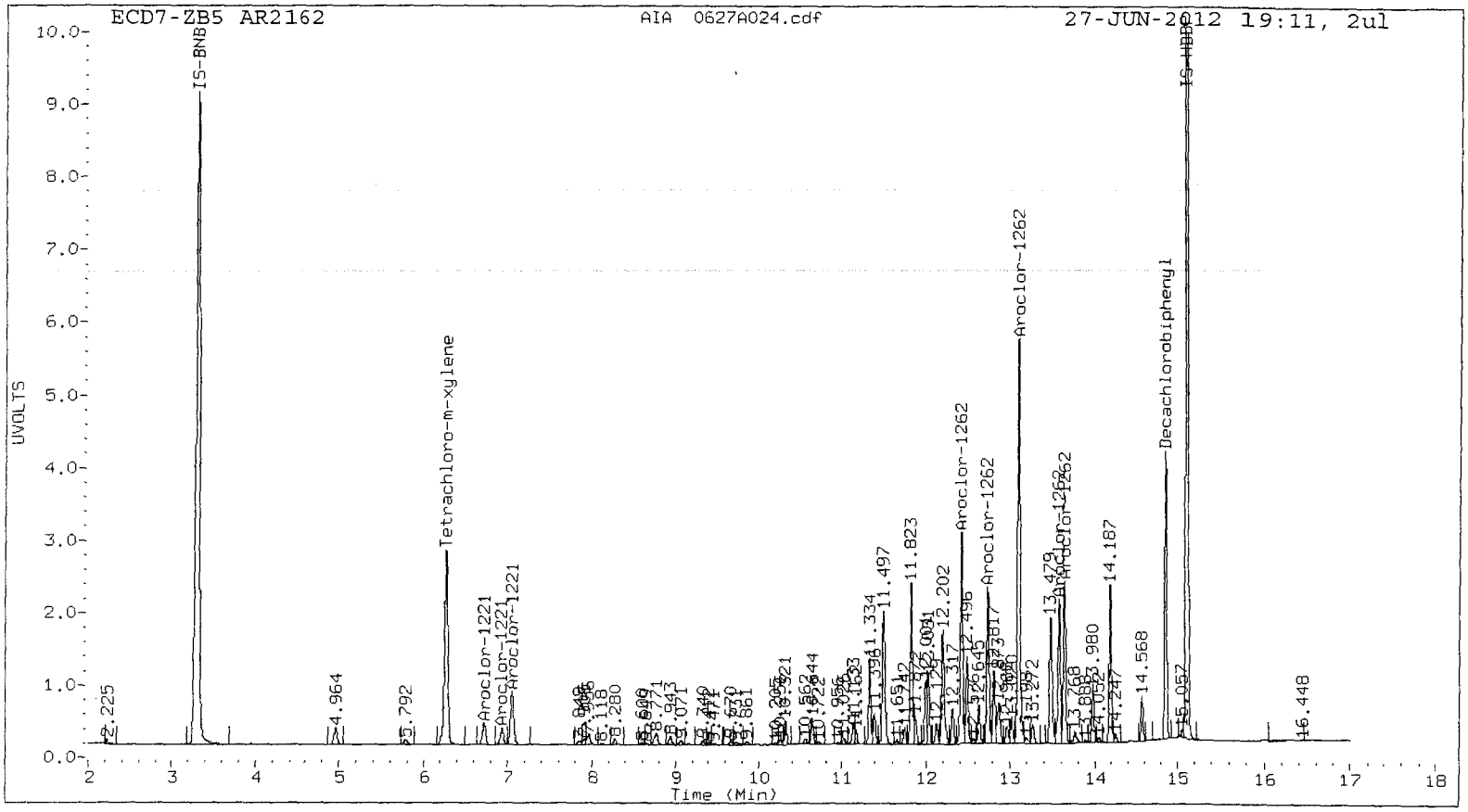
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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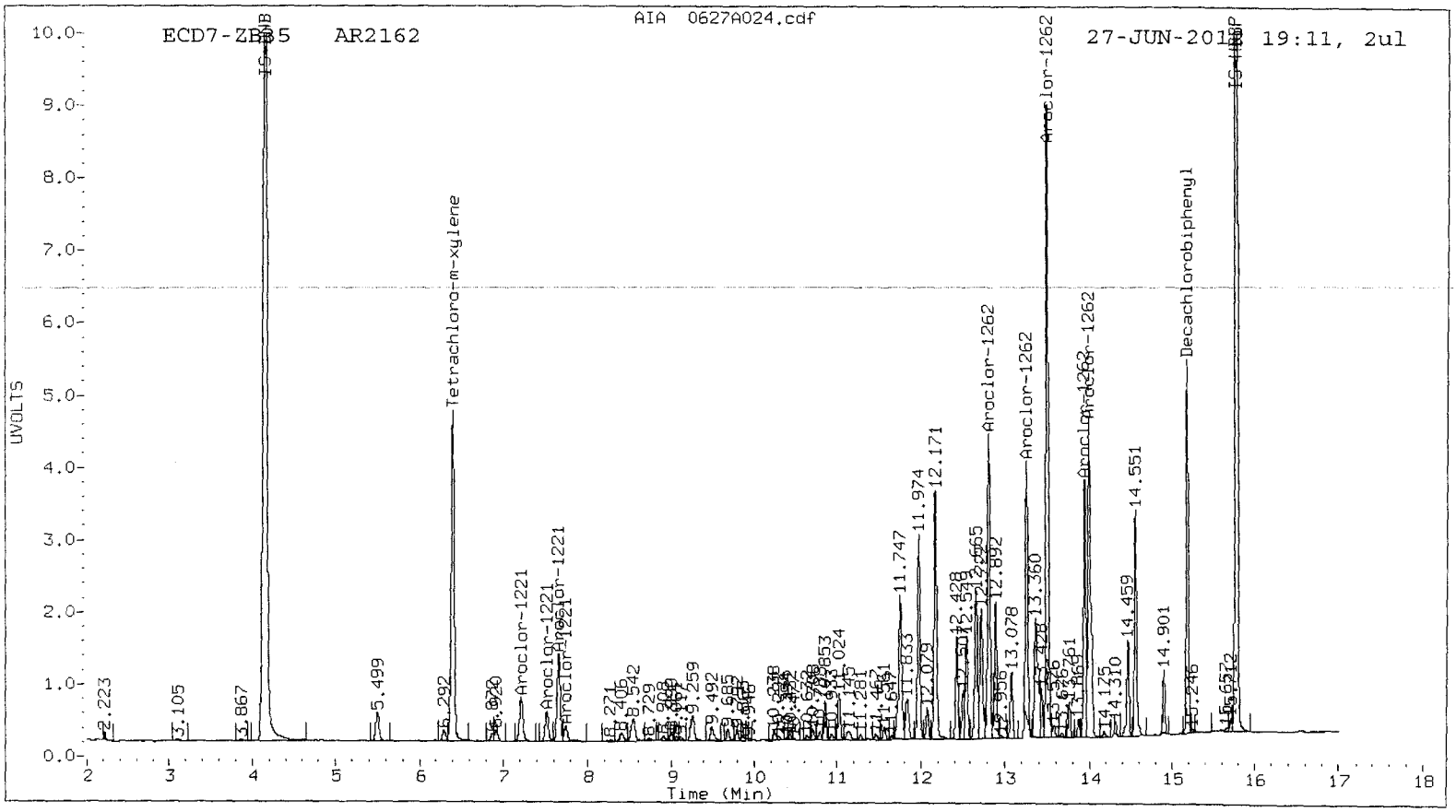
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBP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AIA 0627A024.cdf
27-JUN-2012 19:11, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A025.d
Data file 2: 20120627.B/ical-2.b/0627A025.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 27-JUN-2012 19:32
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.271	0.000	1417554	6.392	-0.002	2339374	20.5	19.7	3.6	Tetrachloro-m-xylene
14.861	0.000	2536895	15.187	0.000	3215059	35.9	33.9	5.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.1	49.3
Decachlorobiphenyl	89.7	84.6

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5698649	-0.4
Hexabromobiphenyl	5604480	5896333	5.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9156528	-1.5
Hexabromobiphenyl	7801648	8076546	3.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1232	1	8.279	0.000	164749	250.0	1	8.524	0.000	511919	250.0
Aroclor-1232	2	8.768	0.000	560191	250.0	2	9.255	0.000	977884	250.0
Aroclor-1232	3	8.942	0.000	222366	250.0	3	9.683	0.000	260785	250.0
Aroclor-1232	4	10.313	0.000	253491	250.0	4	10.237	0.000	383402	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

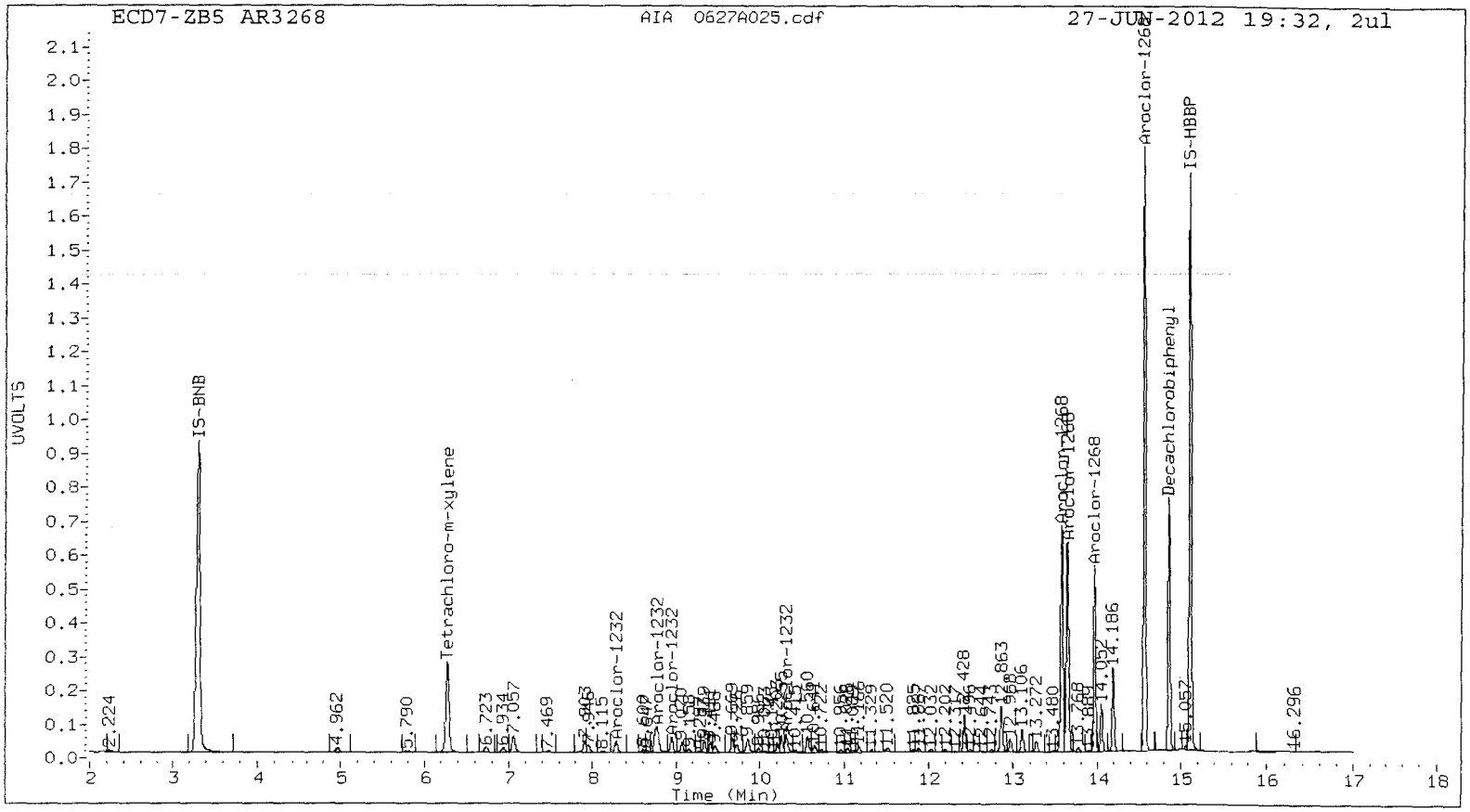
Aroclor-1268	1	13.580	0.000	2540388	250.0	1	13.941	0.000	3396060	250.0
Aroclor-1268	2	13.641	0.000	2339520	250.0	2	13.995	0.000	3225621	250.0
Aroclor-1268	3	13.965	0.000	1989892	250.0	3	14.309	0.000	1778314	250.0
Aroclor-1268	4	14.568	0.000	6215618	250.0	4	14.900	0.000	7251288	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (6.371 - 14.761) = 20623975 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 28758300 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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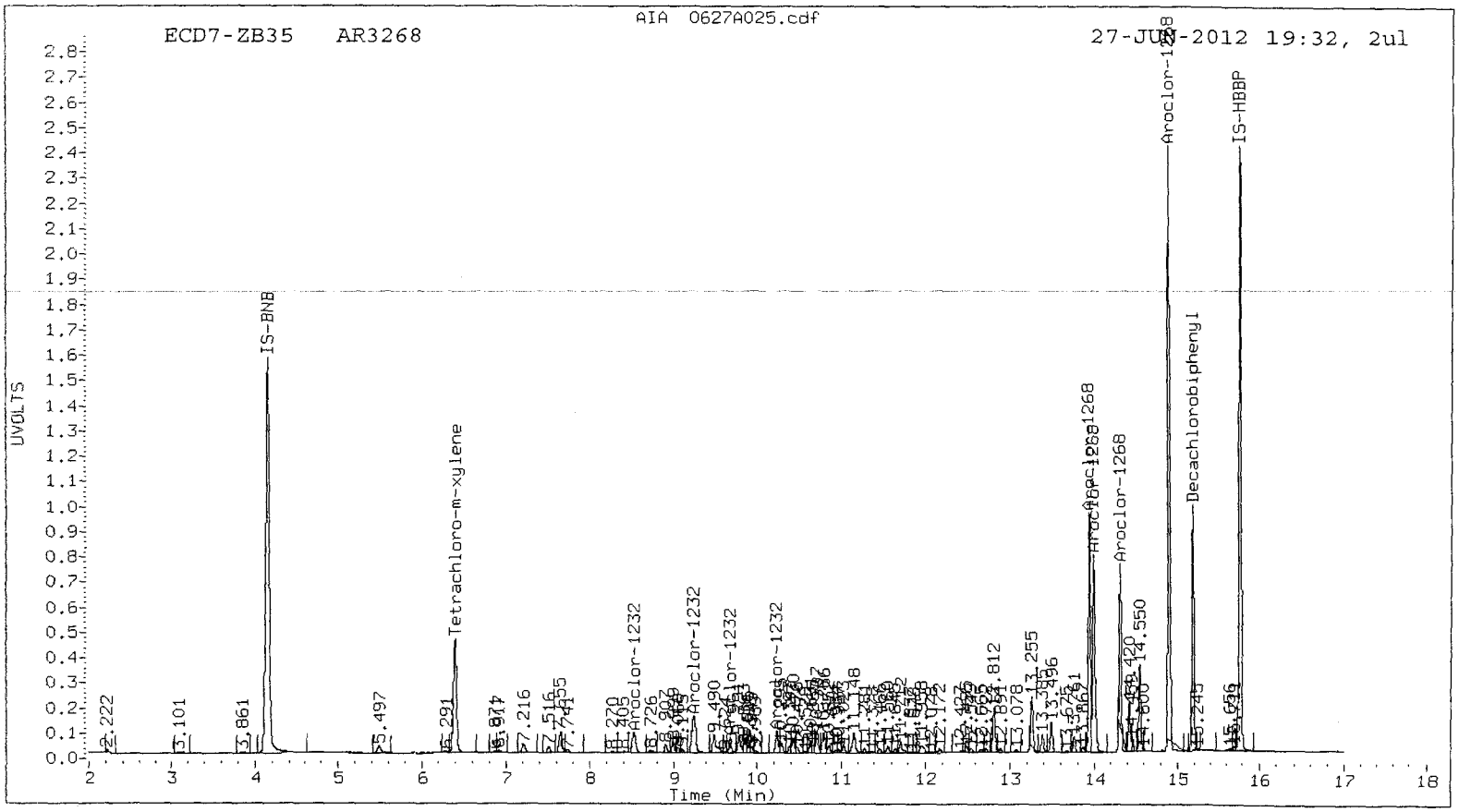
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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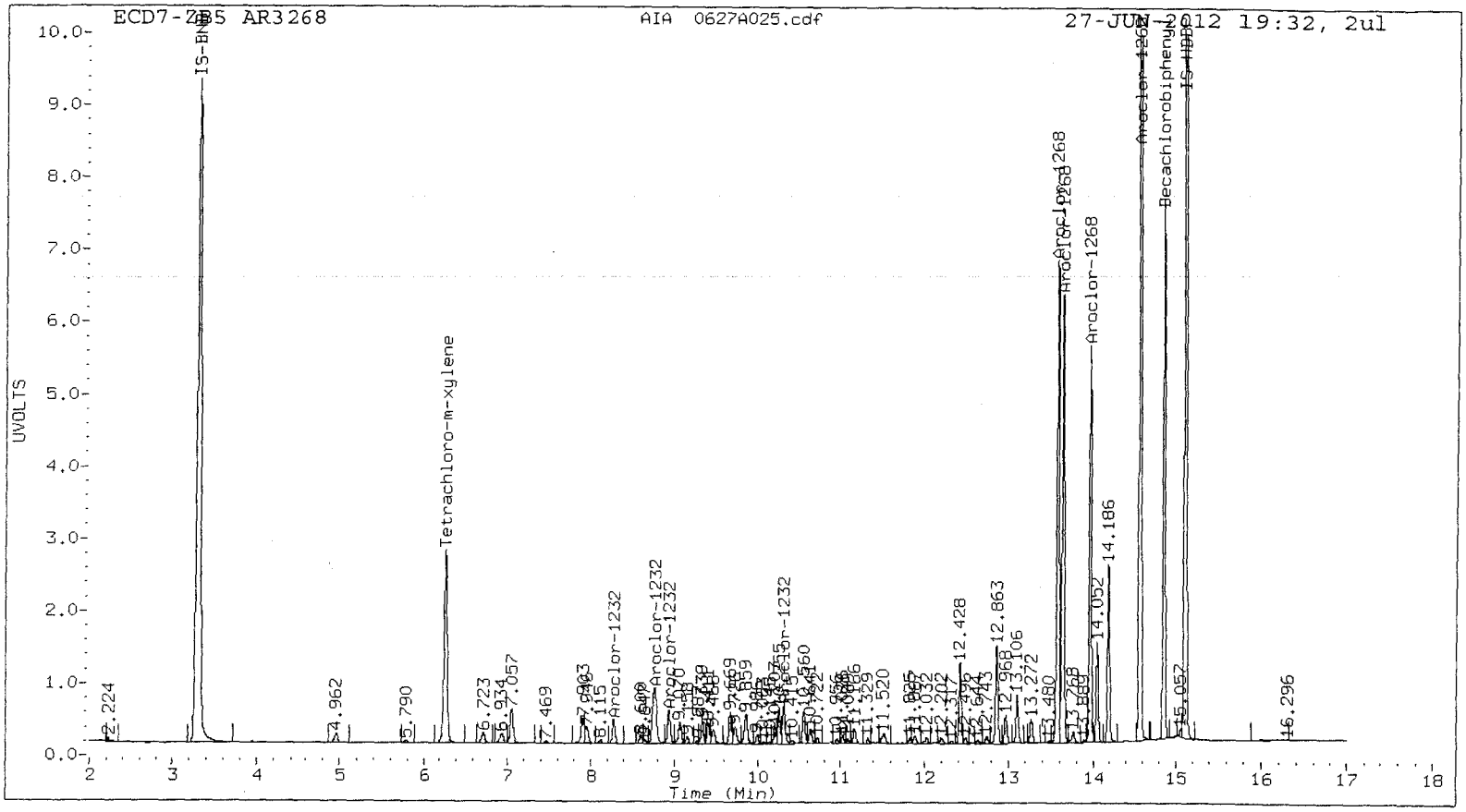
AIA 0627A025.cdf
27-JUN-2012 19:32, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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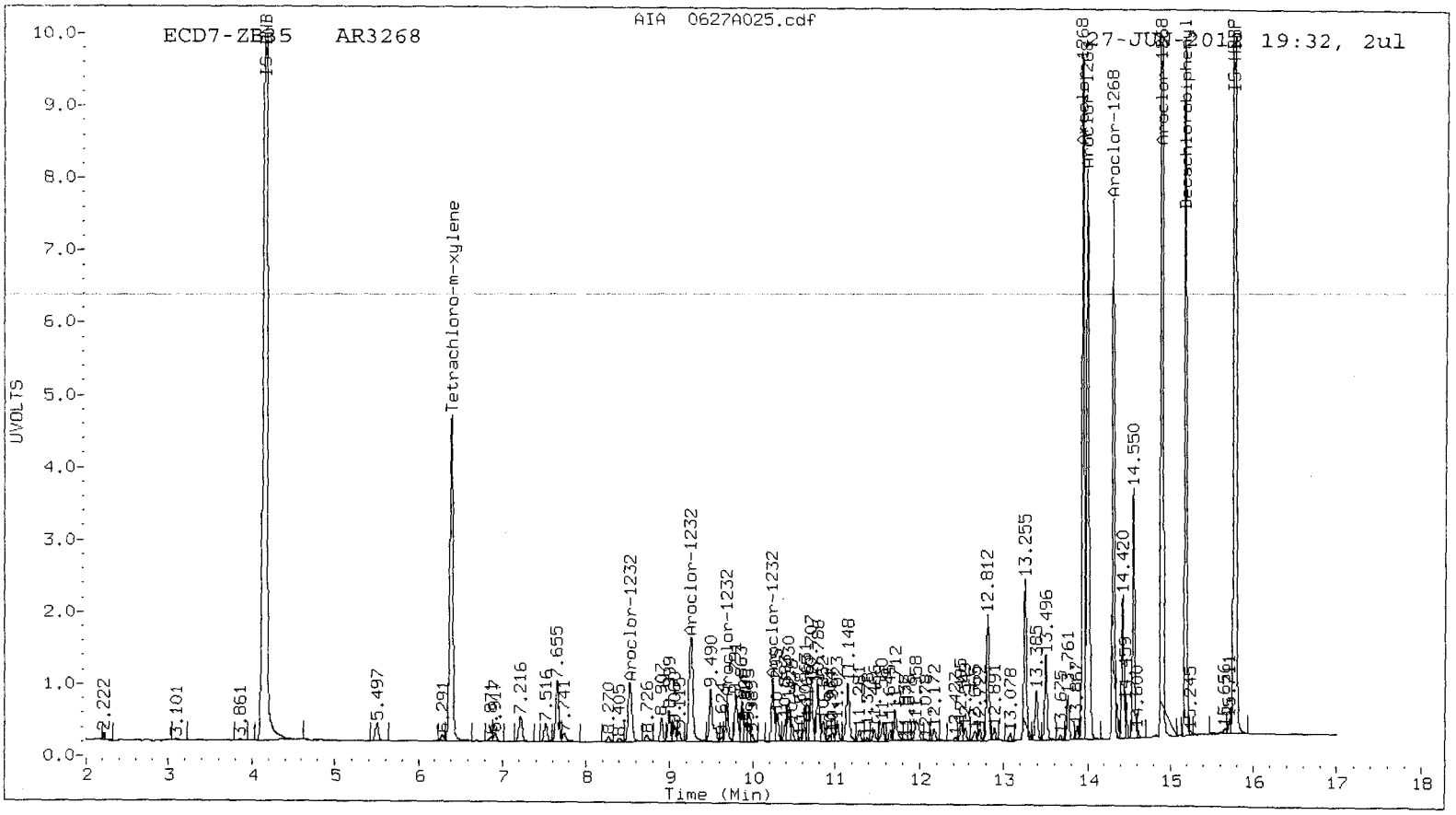
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl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27-JUN-2012 19:32, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A026.d
Data file 2: 20120627.B/ical-2.b/0627A026.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 27-JUN-2012 19:53
Report Date: 06/28/2012 08:18
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.272	0.002	1421390	6.393	-0.001	2345753	20.9	20.0	4.5	Tetrachloro-m-xylene
14.861	0.000	1422892	15.186	0.000	1807313	20.5	19.5	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	52.2	49.9
Decachlorobiphenyl	51.3	48.8

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5594335	-2.2
Hexabromobiphenyl	5604480	5776889	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9064270	-2.5
Hexabromobiphenyl	7801648	7877449	1.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.279	-0.001	403462	246.9	1	8.524	0.000	1103138	234.7
Aroclor-1016	2	8.768	-0.001	1380440	246.1	2	9.257	-0.001	2298311	234.0
Aroclor-1016	3	8.941	-0.001	541507	245.1	3	9.683	0.000	596934	235.6
Aroclor-1016	4	9.070	-0.001	370104	244.9	4	9.792	0.000	666114	225.9
Total Col1Ave (4 peaks):				245.8		Total Col2Ave (4 peaks):			232.5	RPD = 6
Corrected Ave (3 peaks):				245.4		Corrected Ave (3 peaks):			231.5	RPD = 6
Aroclor-1221	1	6.722	-0.002	58112	85.5	1	7.220	0.003	138835	102.3
Aroclor-1221	2	6.935	-0.001	76621	150.3	2	7.518	0.000	117902	141.3
Aroclor-1221	3	7.057	-0.001	313272	184.9	3	7.656	-0.001	501700	199.2
Aroclor-1221	NS	---			----	4	7.742	-0.001	41111	84.8
Total Col1Ave (3 peaks):				140.2		Total Col2Ave (4 peaks):			131.9	RPD = 6
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			109.4	
Aroclor-1232	1	8.279	0.001	403462	623.7	1	8.524	0.000	1103138	544.2
Aroclor-1232	2	8.768	0.000	1380440	627.5	2	9.257	0.001	2298311	593.6
Aroclor-1232	3	8.941	0.000	541507	620.2	3	9.683	0.000	596934	578.1
Aroclor-1232	4	10.320	0.007	299049	300.4	4	10.237	0.000	771073	507.9
Total Col1Ave (4 peaks):				542.9		Total Col2Ave (4 peaks):			555.9	RPD = 2
Corrected Ave (3 peaks):				514.7		Corrected Ave (3 peaks):			543.4	RPD = 5
Aroclor-1242	1	8.279	0.002	403462	316.7	1	8.524	0.002	1103138	317.5
Aroclor-1242	2	8.768	0.002	1380440	316.9	2	9.257	0.001	2298311	314.3
Aroclor-1242	3	8.941	0.002	541507	316.7	3	9.683	0.001	596934	308.9
Aroclor-1242	4	10.562	0.003	43303	27.1	4	11.147	0.001	47709	15.4
Total Col1Ave (4 peaks):				244.3		Total Col2Ave (4 peaks):			239.0	RPD = 2
Corrected Ave (3 peaks):				220.2		Corrected Ave (3 peaks):			212.9	RPD = 3
Aroclor-1248	1	9.339	0.001	304259	180.1	1	9.792	0.001	666114	198.1
Aroclor-1248	2	9.669	0.000	399052	187.0	2	10.237	0.001	771073	207.2
Aroclor-1248	3	10.320	0.008	299049	93.8	3	10.787	0.001	115331	30.2
Aroclor-1248	4	10.562	0.003	43303	17.3	4	11.147	0.000	47709	9.5
Total Col1Ave (4 peaks):				119.6		Total Col2Ave (4 peaks):			111.3	RPD = 7
Corrected Ave (3 peaks):				97.1		Corrected Ave (3 peaks):			79.3	RPD = 20
Aroclor-1254	1	10.320	0.000	299049	128.8	1	10.852	0.000	429669	128.5
Aroclor-1254	2	10.644	0.003	270276	80.8	2	11.024	0.000	450364	105.3
Aroclor-1254	3	11.026	0.001	36391	17.8	3	11.560	0.000	78219	23.7
Aroclor-1254	4	11.163	0.000	116121	28.5	4	11.748	0.035	1131345	155.2
Aroclor-1254	5	11.871	-0.009	299136	114.9	5	12.508	0.009	494799	117.7
Total Col1Ave (5 peaks):				74.2		Total Col2Ave (5 peaks):			106.1	RPD = 35
Corrected Ave (4 peaks):				60.5		Corrected Ave (4 peaks):			93.8	RPD = 43*
Aroclor-1260	1	11.824	0.000	1061601	239.3	1	12.721	-0.001	1422961	203.3
Aroclor-1260	2	12.428	0.000	838245	286.9	2	13.496	0.000	2937794	267.3
Aroclor-1260	3	12.743	0.000	826682	280.7	3	13.992	0.000	1927924	260.3
Aroclor-1260	4	13.478	0.000	994303	262.4	4	14.551	0.001	801851	294.4
Aroclor-1260	5	13.579	-0.001	441211	295.1	NS	---			----
Total Col1Ave (5 peaks):				272.9		Total Col2Ave (4 peaks):			256.3	RPD = 6
Corrected Ave (4 peaks):				267.3		Corrected Ave (3 peaks):			243.6	RPD = 9
Aroclor-1262	1	12.428	0.000	838245	174.6	1	12.811	-0.001	1244475	179.1
Aroclor-1262	2	12.743	0.000	826682	237.4	2	13.256	-0.001	1177498	237.6
Aroclor-1262	3	13.106	-0.001	2056398	216.7	3	13.496	0.000	2937794	219.8
Aroclor-1262	4	13.579	0.000	441211	137.4	4	13.943	0.001	853281	166.8
Aroclor-1262	5	13.644	0.001	524310	152.2	5	13.992	-0.001	1927924	232.5
Total Col1Ave (5 peaks):				183.7		Total Col2Ave (5 peaks):			207.2	RPD = 12
Corrected Ave (4 peaks):				170.2		Corrected Ave (4 peaks):			199.6	RPD = 16
Aroclor-1268	1	13.579	-0.001	441211	44.3	1	13.943	0.002	853281	64.4
Aroclor-1268	2	13.644	0.003	524310	57.2	2	13.992	-0.003	1927924	153.2

Aroclor-1268	3	13.981	0.015	225110	28.9	3	14.310	0.000	22980	3.3
Aroclor-1268	4	14.568	0.000	109288	4.5	4	14.900	0.000	148953	5.3

Total Col1Ave (4 peaks): 33.7 Total Col2Ave (4 peaks): 56.5 RPD = 51*

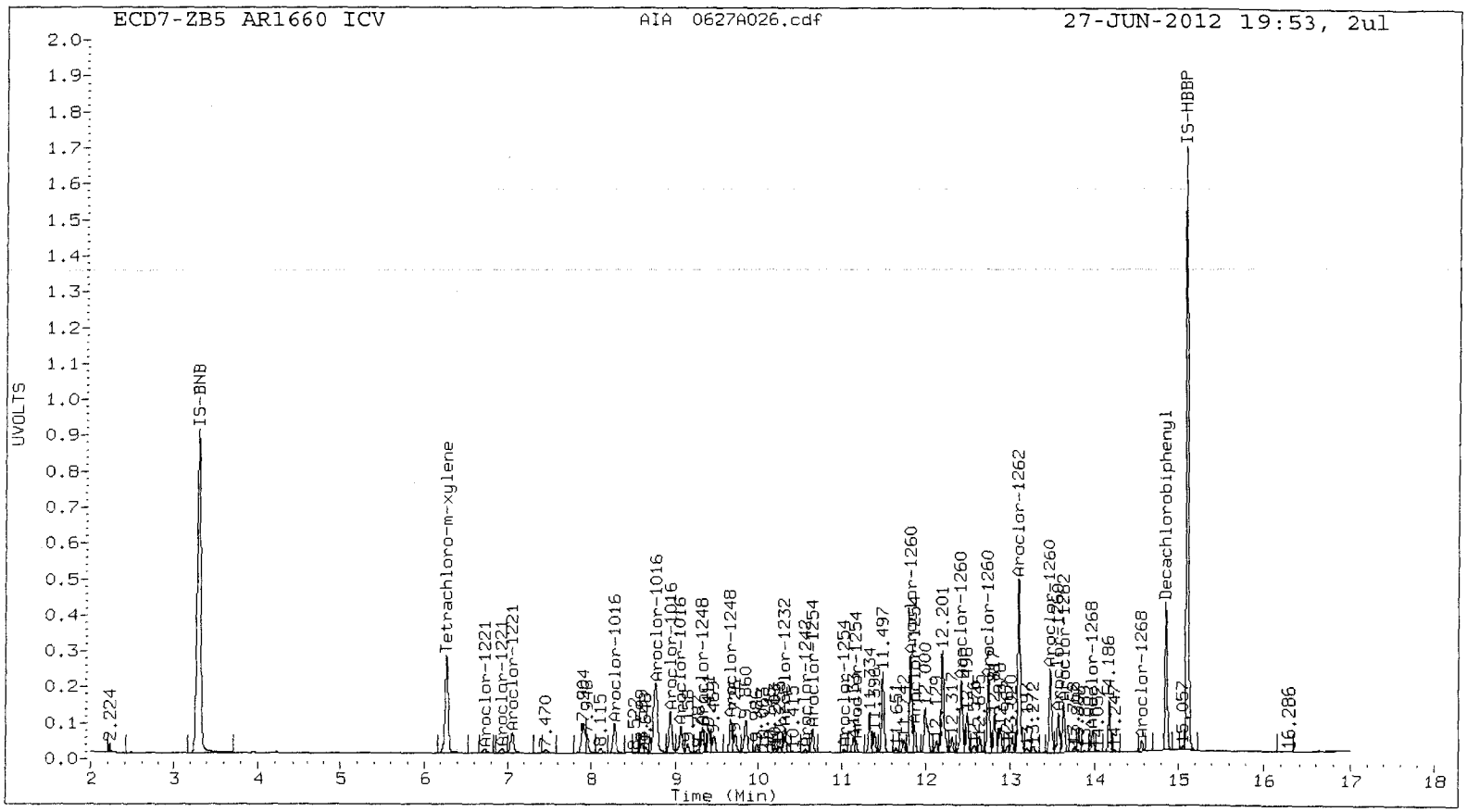
Corrected Ave (3 peaks): 25.9 Corrected Ave (3 peaks): 24.3 RPD = 6

Total PCB Area Col1 (6.371 - 14.761) = 21289998 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 34252034 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
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Decachlorobiphenyl
IS-HBBP
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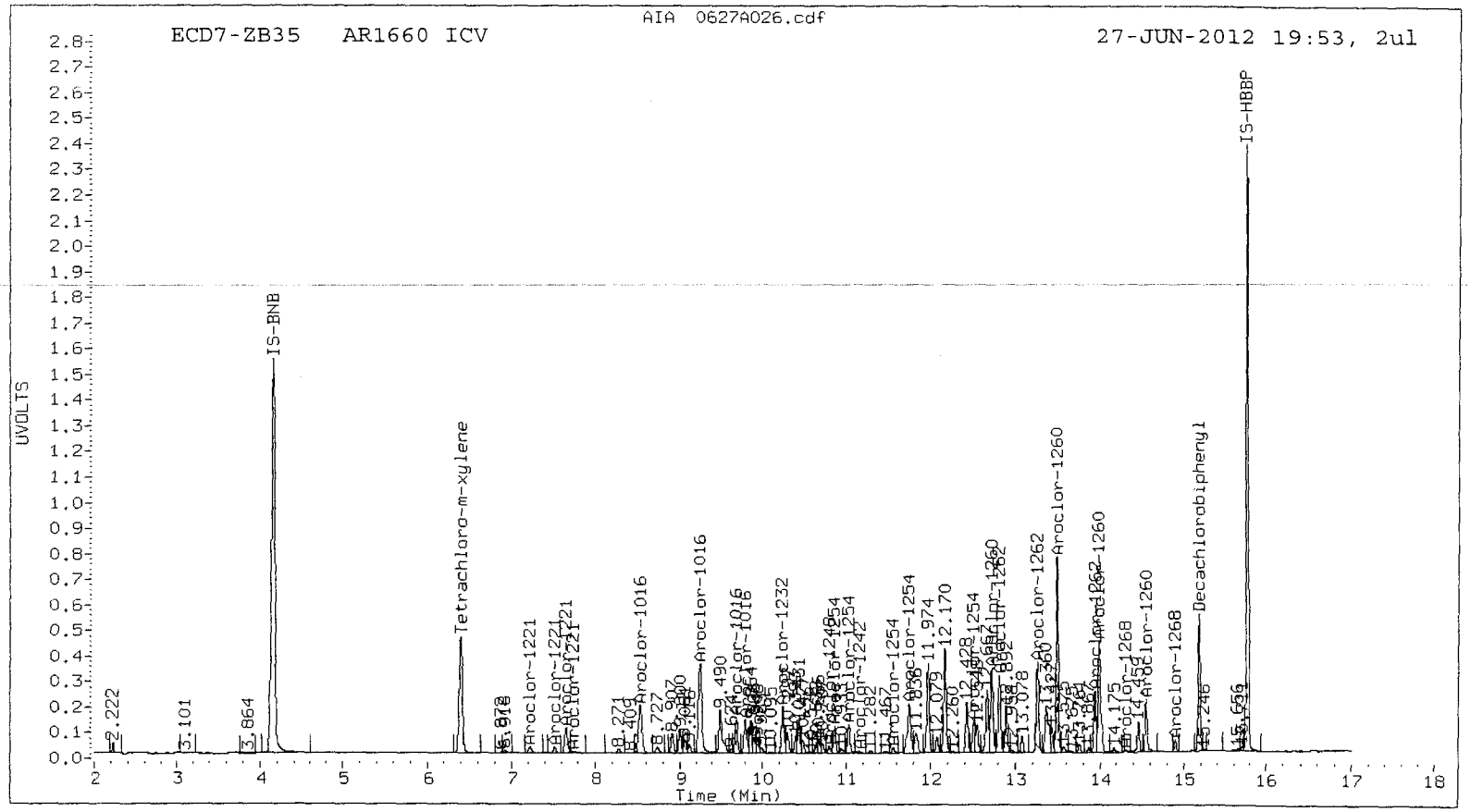
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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
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Decachlorobiphenyl
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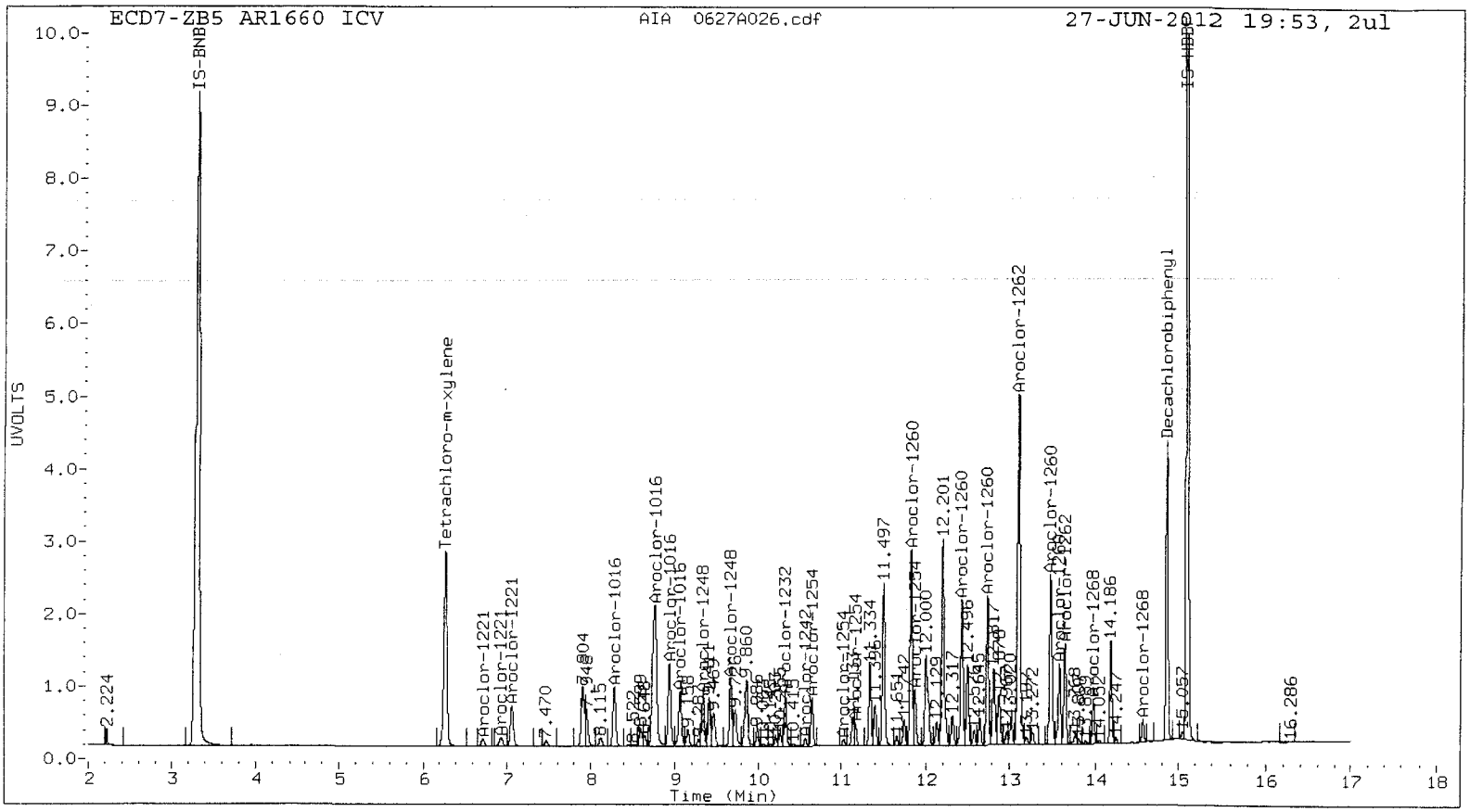
3.864
11.974
12.170

UZ99:00757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UVOLTS
Time (Min)
IS-BNB
IS-HBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
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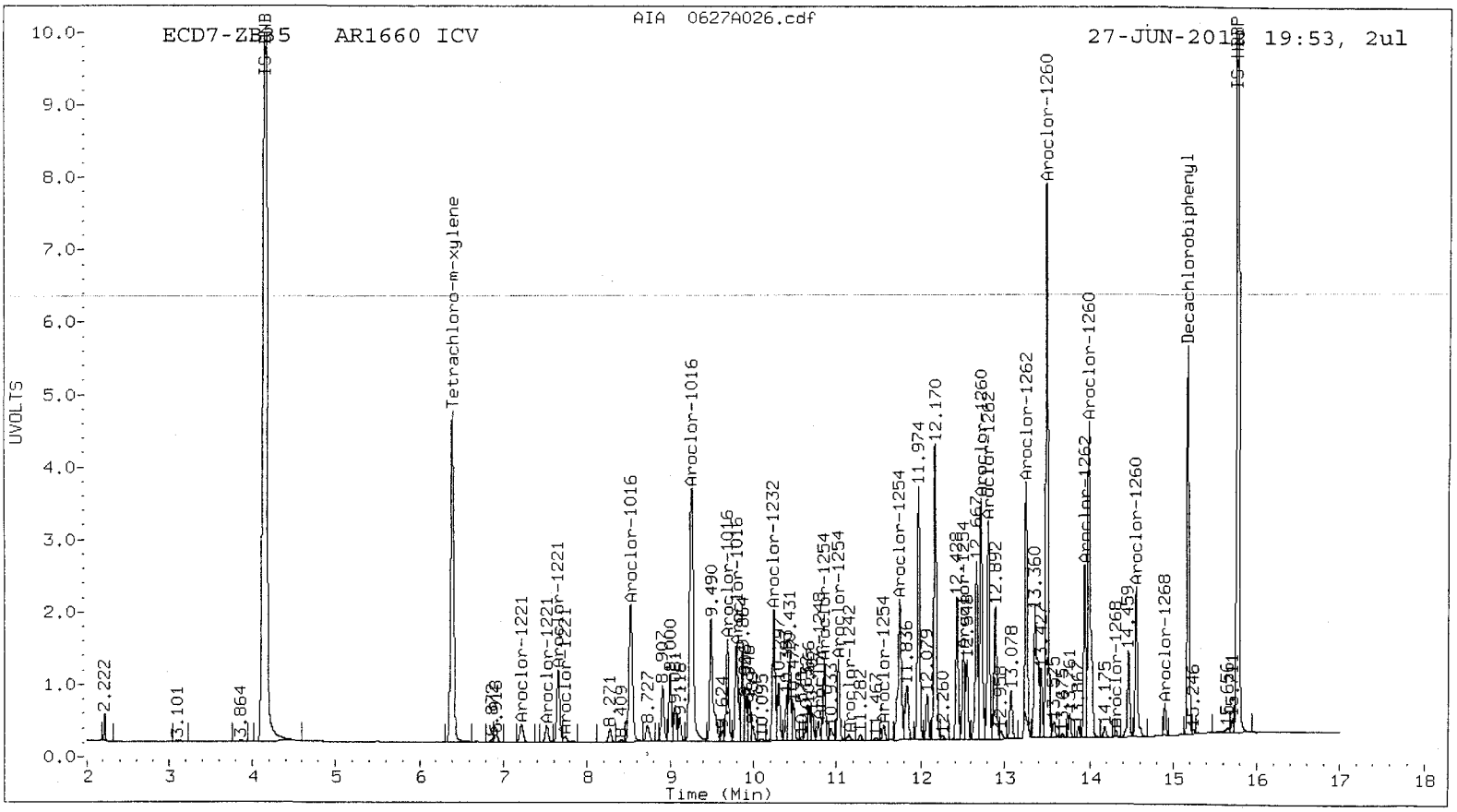
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27-JUN-2012 19:53, 2ul
UVOLTS
Time (Min)
IS-BNB
IS-HBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
2.222
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9.490
11.974
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UZ99:00758

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A027.d
Data file 2: 20120627.B/ical-2.b/0627A027.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 27-JUN-2012 20:14
Report Date: 06/28/2012 08:19
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.271	0.000	1373287	6.392	-0.002	2287751	19.7	19.1	3.1	Tetrachloro-m-xylene
14.860	-0.001	1392600	15.186	-0.001	1768996	19.5	18.6	4.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.2	47.7
Decachlorobiphenyl	48.8	46.6

06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5740650	0.4
Hexabromobiphenyl	5604480	5947392	6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9260529	-0.4
Hexabromobiphenyl	7801648	8077679	3.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.279	-0.002	310723	185.3	1	8.524	0.000	866115	180.4
Aroclor-1016	2	8.767	-0.001	1062052	184.5	2	9.256	-0.001	1789351	178.3
Aroclor-1016	3	8.941	-0.001	418274	184.5	3	9.683	0.000	466614	180.2
Aroclor-1016	4	9.070	-0.001	284915	183.7	4	9.791	0.000	546318	181.3
Total Col1Ave (4 peaks):				184.5		Total Col2Ave (4 peaks):			180.1	RPD = 2
Corrected Ave (3 peaks):				184.2		Corrected Ave (3 peaks):			179.6	RPD = 3
Aroclor-1221	1	6.721	-0.003	41681	59.8	1	7.219	0.003	111082	80.1
Aroclor-1221	2	6.933	-0.003	59734	114.2	2	7.517	0.000	91629	107.4
Aroclor-1221	3	7.057	-0.002	235211	135.3	3	7.655	-0.001	392118	152.4
Aroclor-1221	NS	---			----	4	7.741	-0.002	33673	68.0
Total Col1Ave (3 peaks):				103.1		Total Col2Ave (4 peaks):			102.0	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			85.2	
Aroclor-1232	1	8.279	0.000	310723	468.1	1	8.524	0.000	866115	418.2
Aroclor-1232	2	8.767	0.000	1062052	470.5	2	9.256	0.001	1789351	452.3
Aroclor-1232	3	8.941	-0.001	418274	466.8	3	9.683	0.000	466614	442.3
Aroclor-1232	4	10.313	0.000	449402	440.0	4	10.237	0.000	642677	414.4
Total Col1Ave (4 peaks):				461.3		Total Col2Ave (4 peaks):			431.8	RPD = 7
Corrected Ave (3 peaks):				458.3		Corrected Ave (3 peaks):			425.0	RPD = 8
Aroclor-1242	1	8.279	0.002	310723	237.7	1	8.524	0.002	866115	244.0
Aroclor-1242	2	8.767	0.002	1062052	237.6	2	9.256	0.001	1789351	239.5
Aroclor-1242	3	8.941	0.002	418274	238.4	3	9.683	0.001	466614	236.4
Aroclor-1242	4	10.560	0.001	360460	219.5	4	11.147	0.001	734726	231.9
Total Col1Ave (4 peaks):				233.3		Total Col2Ave (4 peaks):			237.9	RPD = 2
Corrected Ave (3 peaks):				231.6		Corrected Ave (3 peaks):			235.9	RPD = 2
Aroclor-1248	1	9.338	0.001	249091	143.7	1	9.791	0.001	546318	159.0
Aroclor-1248	2	9.669	-0.001	320296	146.3	2	10.237	0.000	642677	169.0
Aroclor-1248	3	10.313	0.001	449402	137.4	3	10.786	0.001	579895	148.7
Aroclor-1248	4	10.560	0.001	360460	140.7	4	11.147	0.000	734726	143.4
Total Col1Ave (4 peaks):				142.0		Total Col2Ave (4 peaks):			155.1	RPD = 9
Corrected Ave (3 peaks):				140.6		Corrected Ave (3 peaks):			150.4	RPD = 7
Aroclor-1254	1	10.313	-0.007	449402	188.6	1	10.852	-0.001	217422	63.6
Aroclor-1254	2	10.641	-0.001	182923	53.3	2	11.023	-0.001	222895	51.0
Aroclor-1254	3	11.026	0.001	111882	53.4	3	11.560	0.000	212970	63.1
Aroclor-1254	4	11.166	0.002	190173	45.5	4	11.711	-0.001	372770	50.0
Aroclor-1254	5	11.887	0.007	120758	45.2	5	12.494	-0.004	229460	53.4
Total Col1Ave (5 peaks):				77.2		Total Col2Ave (5 peaks):			56.2	RPD = 31
Corrected Ave (4 peaks):				49.4		Corrected Ave (4 peaks):			54.4	RPD = 10
Aroclor-1260	1	---			0.0	1	12.721	-0.001	130638	18.2
Aroclor-1260	2	---			0.0	2	13.499	0.002	25842	2.3
Aroclor-1260	3	---			0.0	3	13.992	0.000	18941	2.5
Aroclor-1260	4	---			0.0	4	14.602	0.051	34277	12.3
Aroclor-1260	5	---			0.0	NS	---			----
Col1Ave: <3 Quant Peaks						Col2Ave:			8.8	
Aroclor-1262	1	---			0.0	1	12.889	0.076	19197	2.7
Aroclor-1262	2	---			0.0	2	13.256	-0.001	36495	7.2
Aroclor-1262	3	---			0.0	3	13.499	0.002	25842	1.9
Aroclor-1262	4	---			0.0	4	13.992	0.050	18941	3.6
Aroclor-1262	5	---			0.0	5	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave:			3.8	
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	13.888	-0.077	16130	2.0	3	---			0.0
Aroclor-1268	4	14.569	0.001	12735	0.5	4	---			0.0

Col1Ave: <3 Quant Peaks

Col2Ave: <3 Quant Peaks

Total PCB Area Col1 (6.371 - 14.761) = 7751512

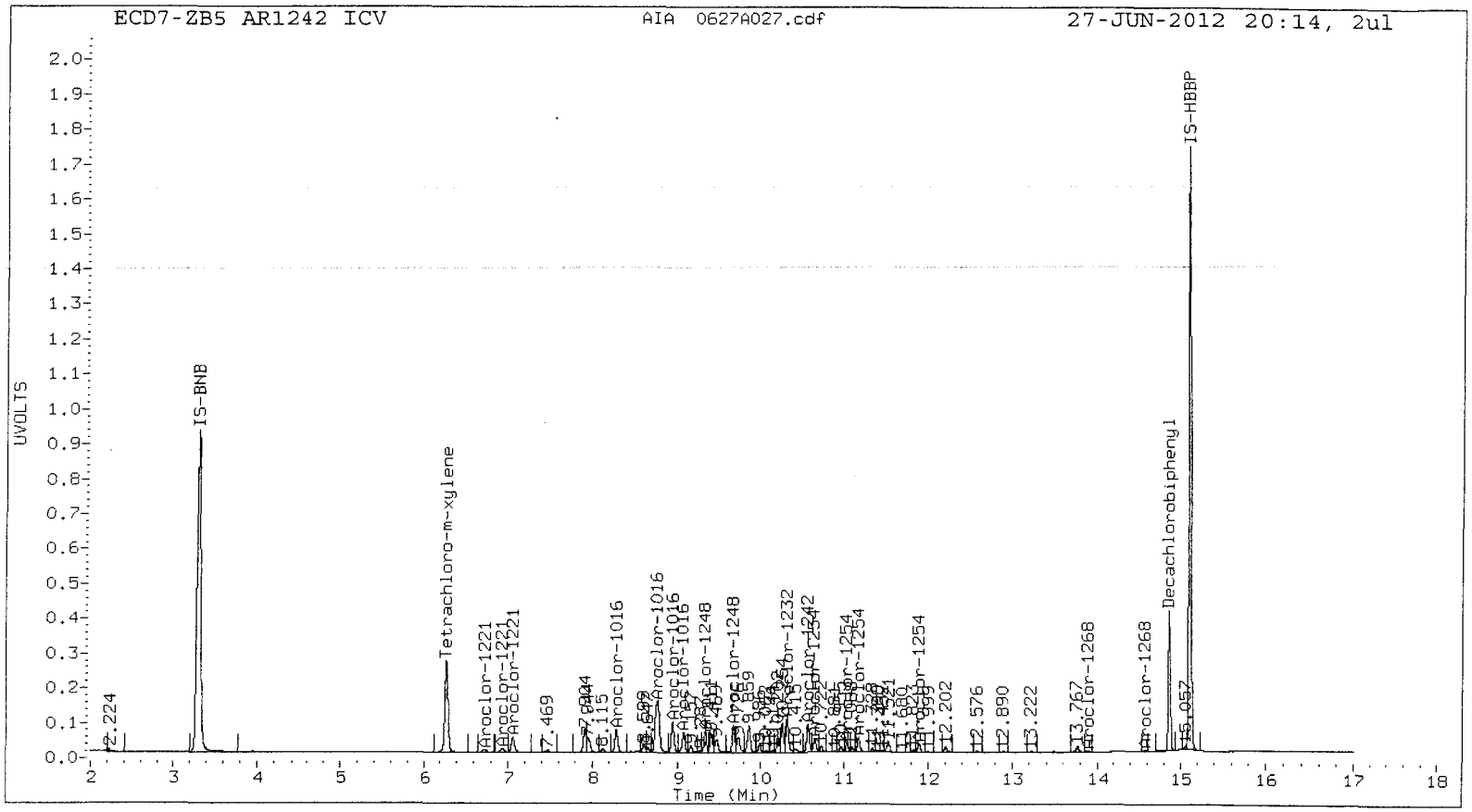
Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 14081445

Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
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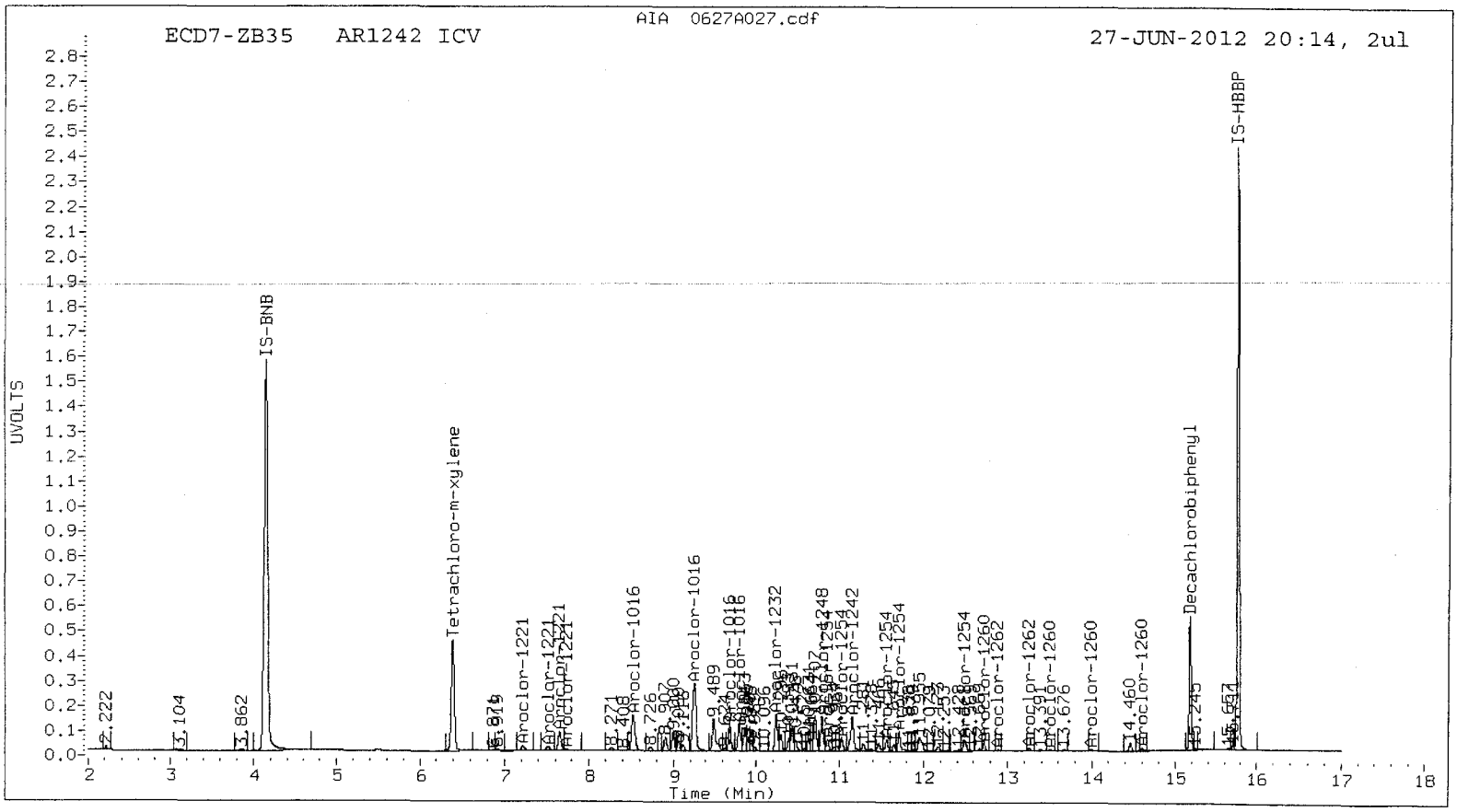
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1268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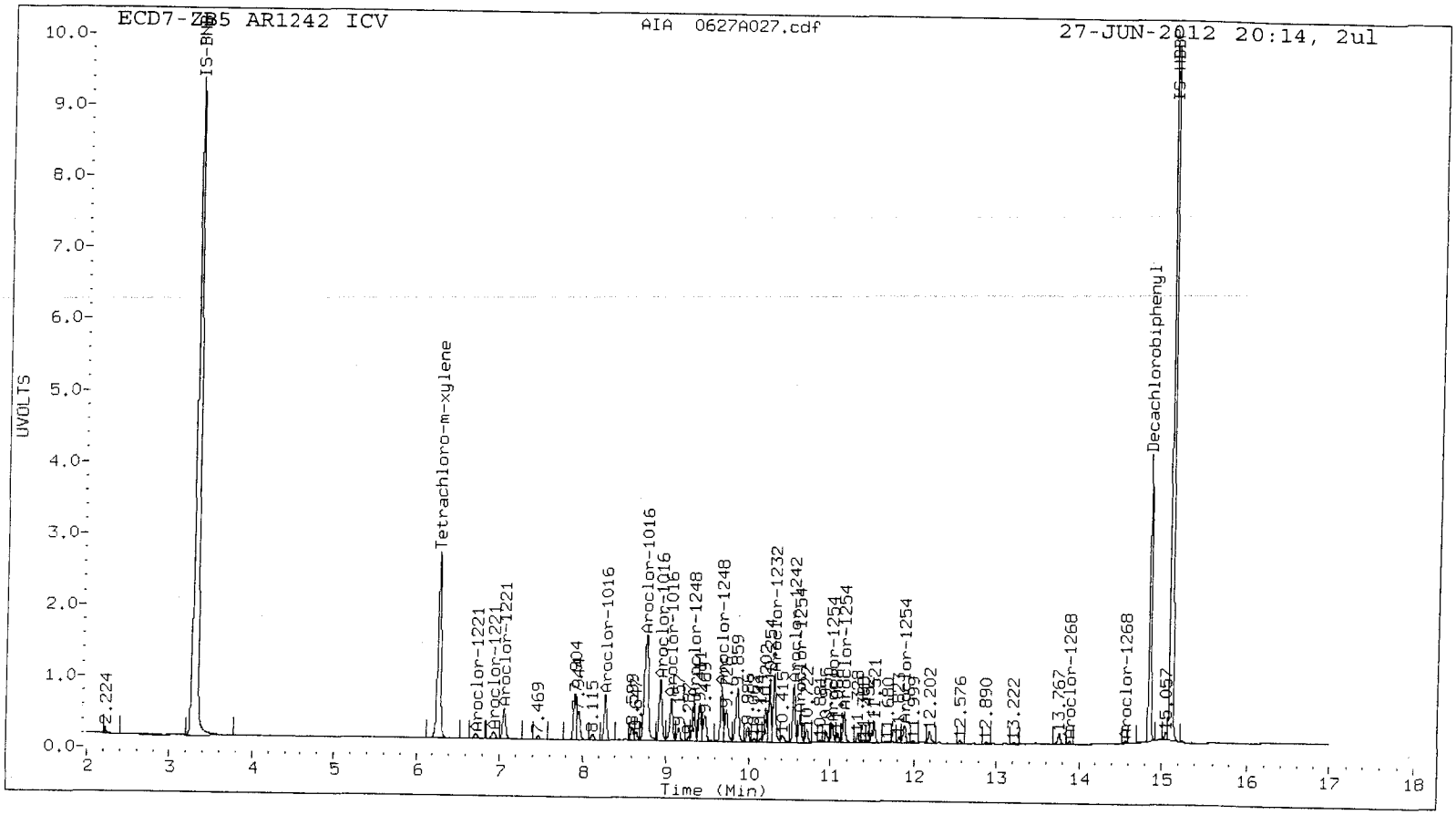
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1242
Aroclor-1260
Aroclor-1262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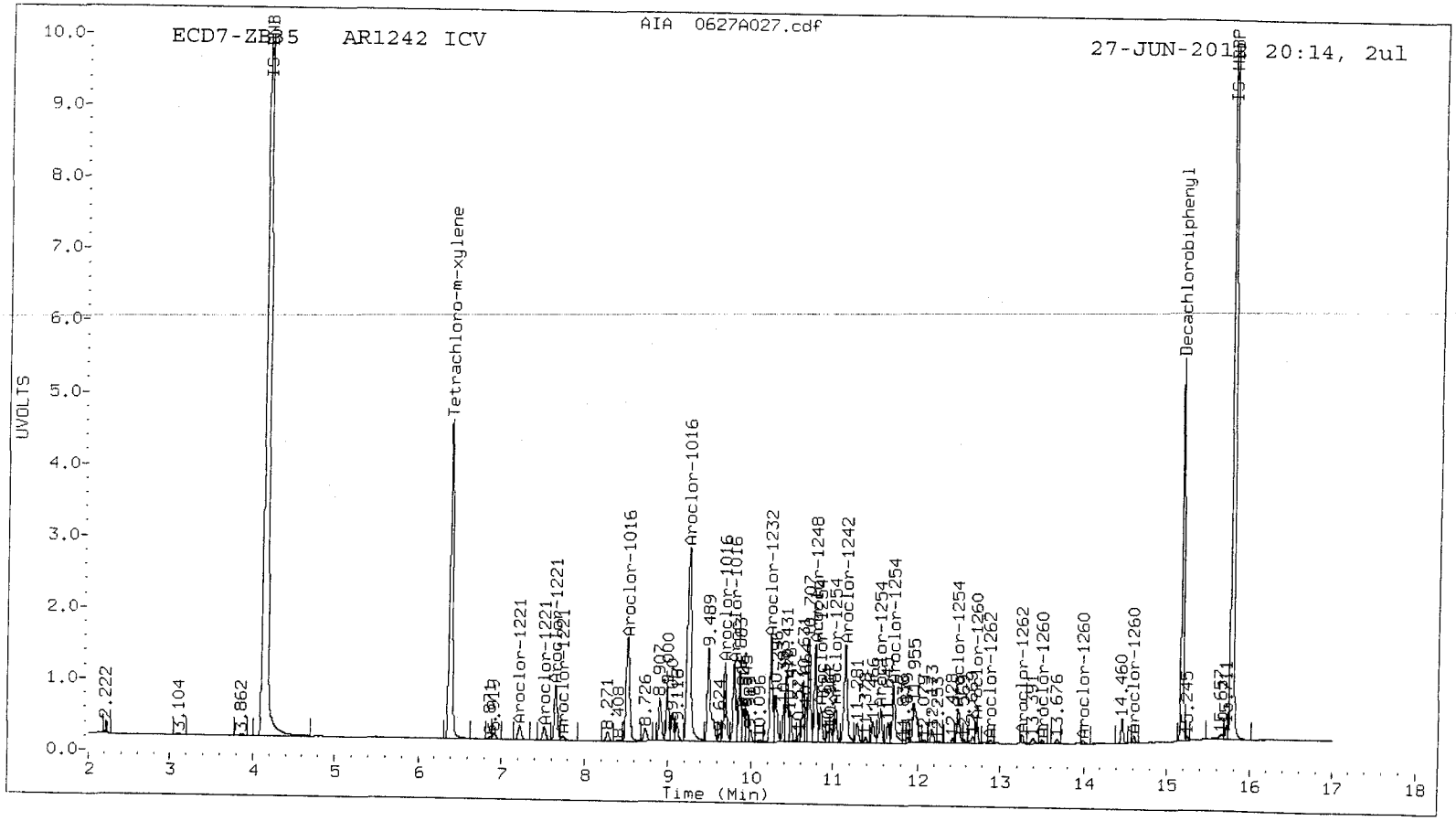
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1268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27-JUN-2012 20:14, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A028.d
Data file 2: 20120627.B/ical-2.b/0627A028.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 27-JUN-2012 20:35
Report Date: 06/28/2012 08:19
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.273	0.002	1400633	6.394	0.000	2370281	20.0	19.7	1.7	Tetrachloro-m-xylene
14.861	0.000	1431195	15.187	0.001	1838353	20.1	19.2	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.0	49.1
Decachlorobiphenyl	50.1	47.9

JR 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5759219	0.7
Hexabromobiphenyl	5604480	5950396	6.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9311029	0.2
Hexabromobiphenyl	7801648	8153637	4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

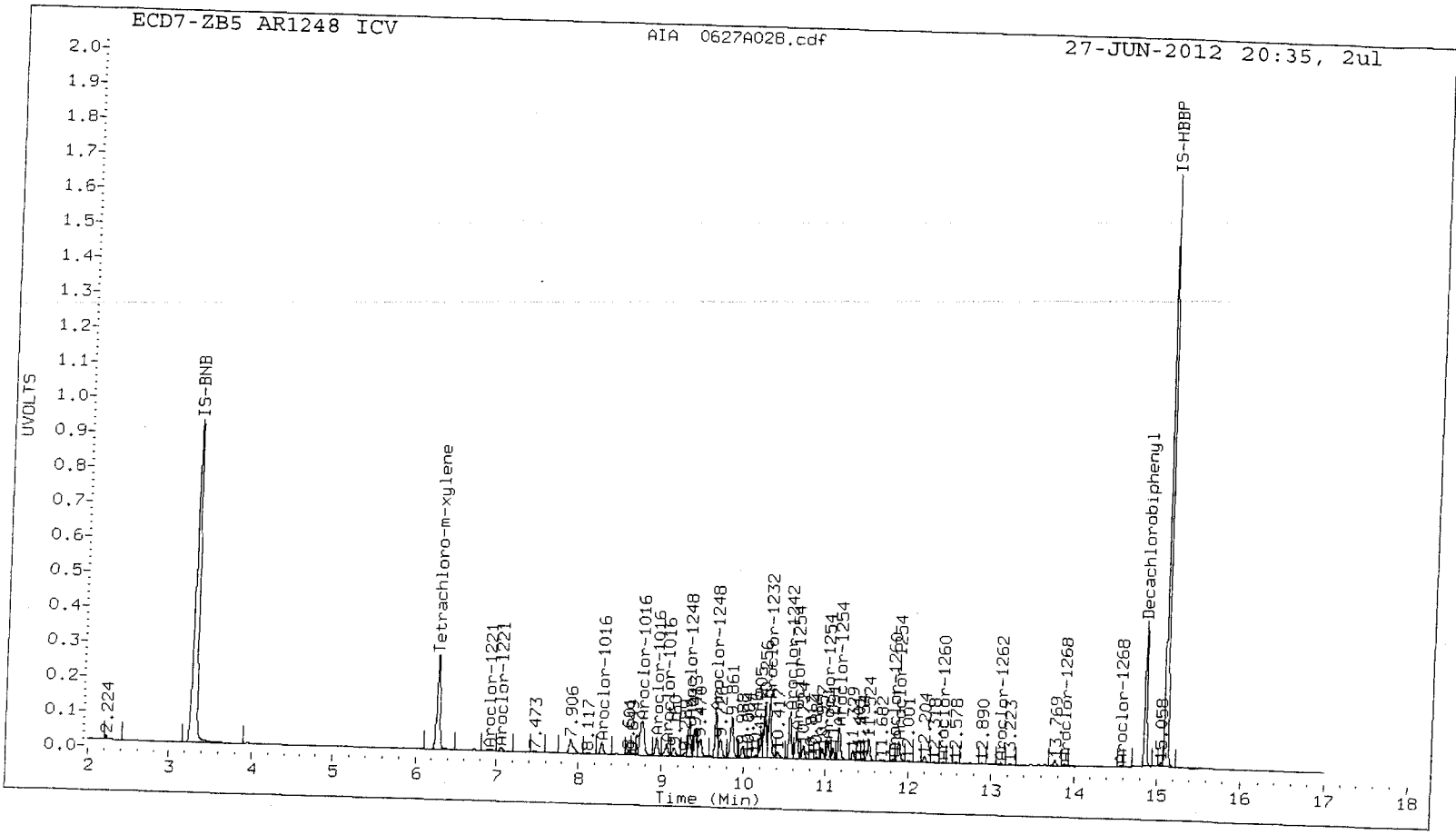
Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.281	0.001	153262	91.1	1	8.523	-0.001	476862	98.8
Aroclor-1016	2	8.763	-0.006	710647	123.0	2	9.254	-0.003	1232507	122.1
Aroclor-1016	3	8.946	0.004	251188	110.4	3	9.685	0.001	274467	105.4
Aroclor-1016	4	9.072	0.002	172705	111.0	4	9.792	0.001	853713	281.8
Total Col1Ave (4 peaks):					108.9	Total Col2Ave (4 peaks):				152.0 RPD = 33
Corrected Ave (3 peaks):					104.2	Corrected Ave (3 peaks):				108.8 RPD = 4
Aroclor-1221	1	---			0.0	1	7.233	0.016	45841	32.9
Aroclor-1221	2	6.920	-0.016	23062	43.9	2	7.520	0.003	17397	20.3
Aroclor-1221	3	7.059	0.000	48587	27.9	3	7.659	0.002	95894	37.1
Aroclor-1221	NS	---			----	4	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave:				30.1
Aroclor-1232	1	8.281	0.003	153262	230.1	1	8.523	0.000	476862	229.0
Aroclor-1232	2	8.763	-0.005	710647	313.8	2	9.254	-0.001	1232507	309.9
Aroclor-1232	3	8.946	0.004	251188	279.4	3	9.685	0.002	274467	258.8
Aroclor-1232	4	10.315	0.002	778292	759.5	4	10.239	0.002	941163	603.5
Total Col1Ave (4 peaks):					395.7	Total Col2Ave (4 peaks):				350.3 RPD = 12
Corrected Ave (3 peaks):					274.5	Corrected Ave (3 peaks):				265.9 RPD = 3
Aroclor-1242	1	8.281	0.004	153262	116.9	1	8.523	0.001	476862	133.6
Aroclor-1242	2	8.763	-0.003	710647	158.4	2	9.254	-0.001	1232507	164.1
Aroclor-1242	3	8.946	0.006	251188	142.7	3	9.685	0.003	274467	138.3
Aroclor-1242	4	10.562	0.003	591069	358.8	4	11.149	0.002	1219635	382.8
Total Col1Ave (4 peaks):					194.2	Total Col2Ave (4 peaks):				204.7 RPD = 5
Corrected Ave (3 peaks):					139.3	Corrected Ave (3 peaks):				145.3 RPD = 4
Aroclor-1248	1	9.340	0.003	431877	248.3	1	9.792	0.002	853713	247.1
Aroclor-1248	2	9.671	0.002	527749	240.3	2	10.239	0.002	941163	246.2
Aroclor-1248	3	10.315	0.003	778292	237.2	3	10.787	0.002	936344	238.9
Aroclor-1248	4	10.562	0.003	591069	230.0	4	11.149	0.002	1219635	236.8
Total Col1Ave (4 peaks):					238.9	Total Col2Ave (4 peaks):				242.3 RPD = 1
Corrected Ave (3 peaks):					235.8	Corrected Ave (3 peaks):				240.6 RPD = 2
Aroclor-1254	1	10.315	-0.005	778292	325.5	1	10.853	0.001	400654	116.6
Aroclor-1254	2	10.643	0.001	364374	105.9	2	11.025	0.002	403151	91.8
Aroclor-1254	3	11.028	0.003	233247	111.1	3	11.562	0.001	411041	121.2
Aroclor-1254	4	11.167	0.004	387627	92.4	4	11.713	0.000	666966	89.1
Aroclor-1254	5	11.890	0.010	255087	95.2	5	12.494	-0.004	456338	105.7
Total Col1Ave (5 peaks):					146.0	Total Col2Ave (5 peaks):				104.9 RPD = 33
Corrected Ave (4 peaks):					101.1	Corrected Ave (4 peaks):				100.8 RPD = 0
Aroclor-1260	1	11.825	0.002	34729	7.6	1	12.723	0.001	129344	17.9
Aroclor-1260	2	12.429	0.001	12860	4.3	2	13.498	0.002	52367	4.6
Aroclor-1260	3	---			0.0	3	13.994	0.002	35110	4.6
Aroclor-1260	4	---			0.0	4	14.552	0.001	14564	5.2
Aroclor-1260	5	---			0.0	NS	---			----
Col1Ave: <3 Quant Peaks						Col2Ave:				8.1
Aroclor-1262	1	12.429	0.001	12860	2.6	1	12.814	0.002	28763	4.0
Aroclor-1262	2	---			0.0	2	13.257	0.000	49368	9.6
Aroclor-1262	3	13.108	0.001	21308	2.2	3	13.498	0.002	52367	3.8
Aroclor-1262	4	---			0.0	4	13.943	0.001	22289	4.2
Aroclor-1262	5	---			0.0	5	13.994	0.001	35110	4.1
Col1Ave: <3 Quant Peaks						Col2Ave:				5.1
Aroclor-1268	1	---			0.0	1	13.943	0.002	22289	1.6
Aroclor-1268	2	---			0.0	2	13.994	-0.001	35110	2.7
Aroclor-1268	3	13.890	-0.076	16941	2.1	3	---			0.0
Aroclor-1268	4	14.570	0.002	14986	0.6	4	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (6.371 - 14.761) = 9382097 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 16671776 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1242
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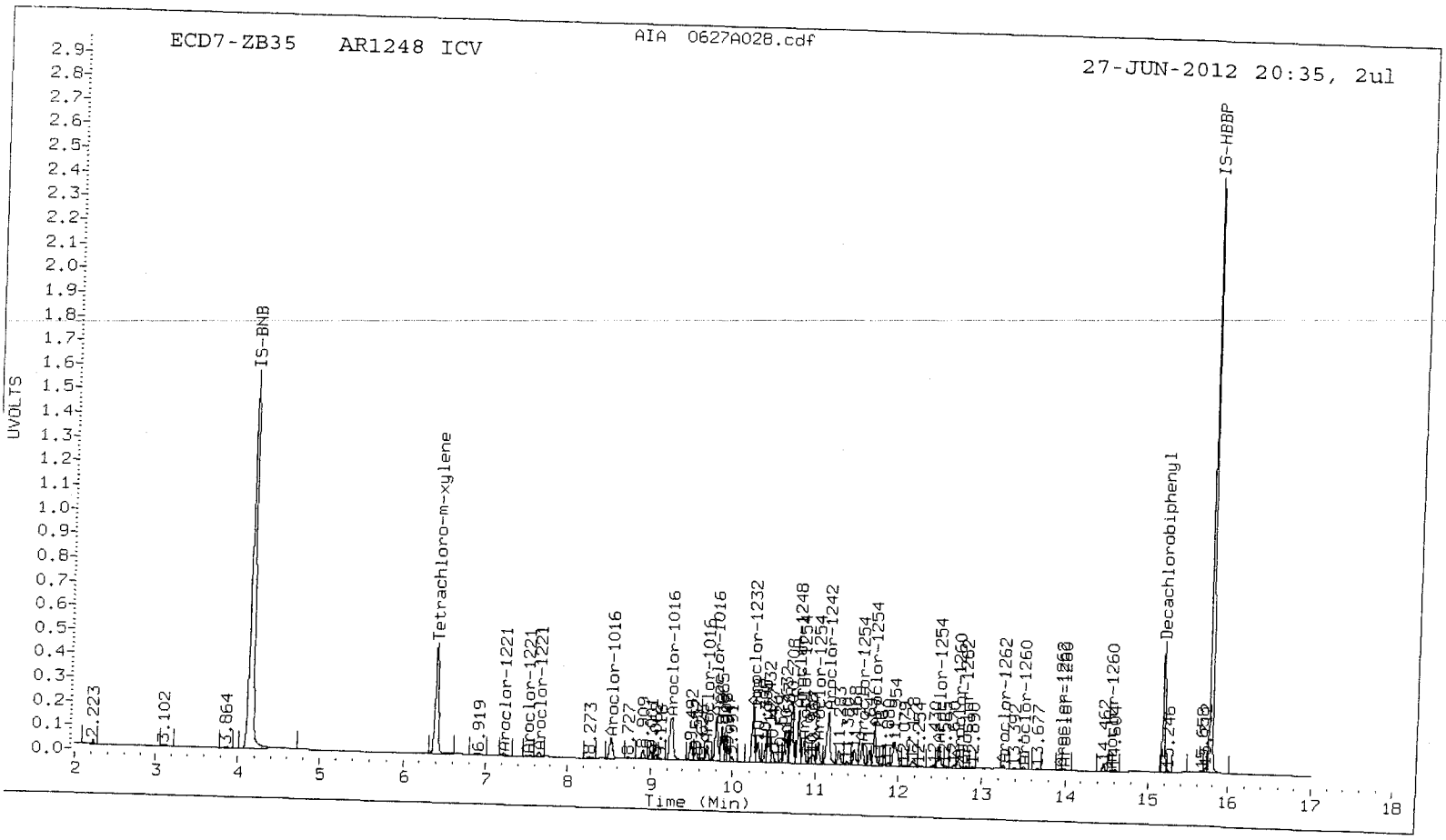
Aroclor-1260
Aroclor-1262
Aroclor-1268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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
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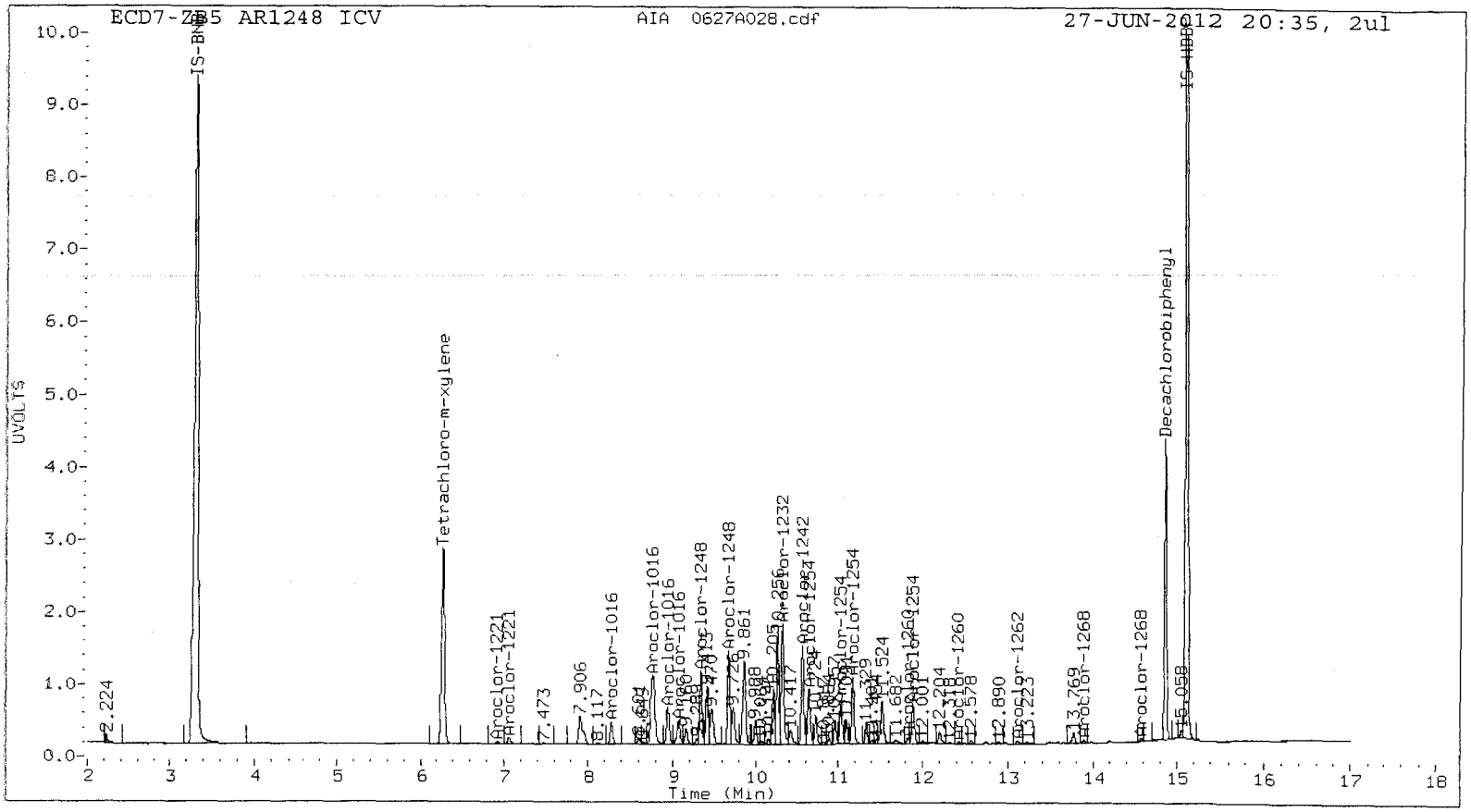
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Decachlorobiphenyl
Aroclor-1221
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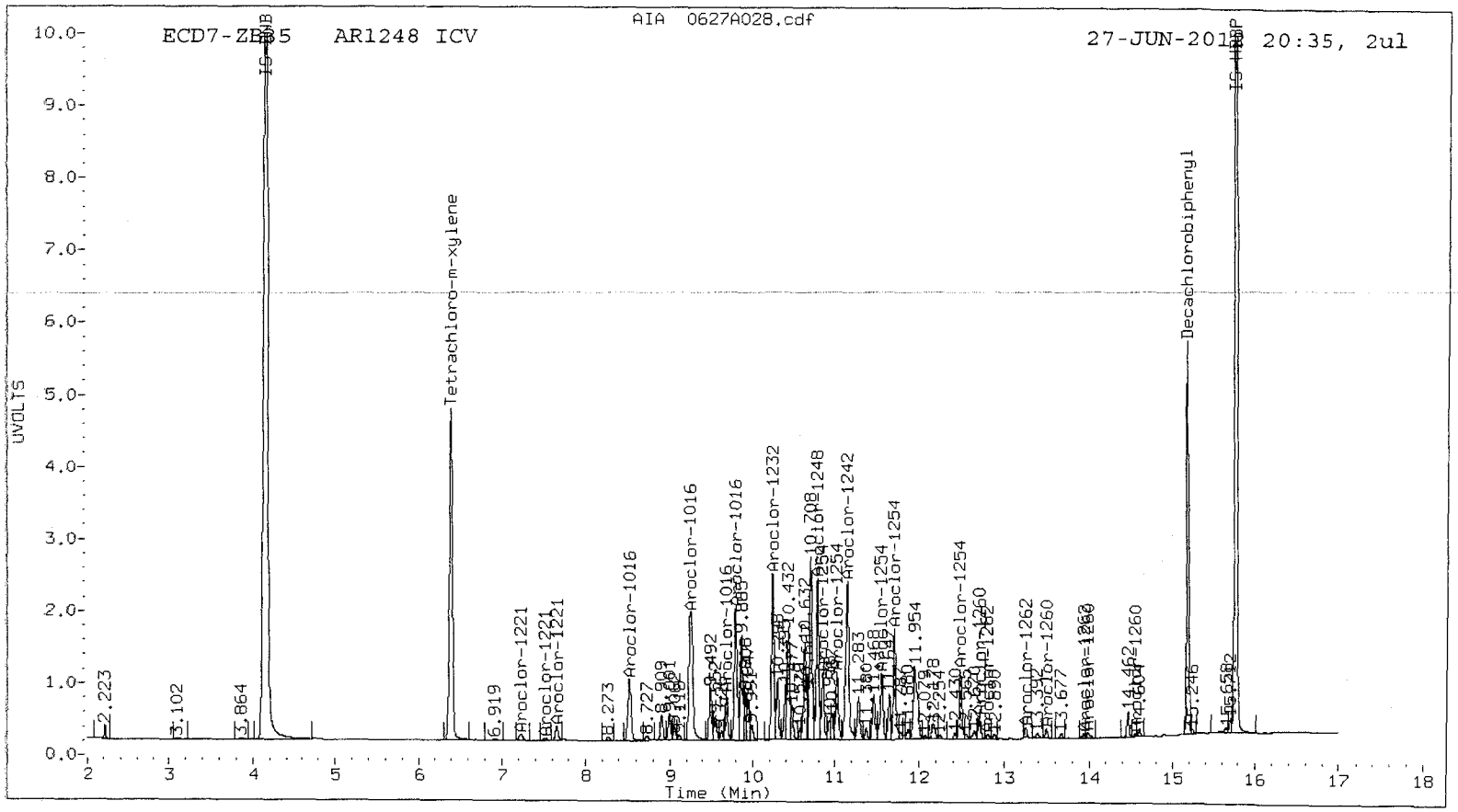
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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A029.d
Data file 2: 20120627.B/ical-2.b/0627A029.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 27-JUN-2012 20:56
Report Date: 06/28/2012 08:19
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.271	0.000	1360838	6.392	-0.001	2289822	19.7	19.3	1.9	Tetrachloro-m-xylene
14.860	-0.001	1407151	15.186	-0.001	1795564	19.8	19.0	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.2	48.3
Decachlorobiphenyl	49.5	47.5

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5685139	-0.6
Hexabromobiphenyl	5604480	5929668	5.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9152139	-1.6
Hexabromobiphenyl	7801648	8040164	3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	8.522	-0.002	16401	3.5
Aroclor-1016	2	8.753	-0.015	22152	3.9	2	9.244	-0.013	47236	4.8
Aroclor-1016	3	8.948	0.006	12040	5.4	3	---			0.0
Aroclor-1016	4	---			0.0	4	9.790	-0.002	559500	187.9
	Col1Ave: <3 Quant Peaks					Col2Ave: 65.4				
Aroclor-1221	1	---			0.0	1	7.235	0.019	31590	23.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	7.660	0.003	10891	4.3
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	8.522	-0.001	16401	8.0
Aroclor-1232	2	8.753	-0.014	22152	9.9	2	9.244	-0.011	47236	12.1
Aroclor-1232	3	8.948	0.006	12040	13.6	3	---			0.0
Aroclor-1232	4	10.320	0.007	696077	688.1	4	10.237	0.000	336515	219.5
	Total Col1Ave (3 peaks): 237.2					Total Col2Ave (3 peaks): 79.9 RPD = 99*				
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1242	1	---			0.0	1	8.522	0.000	16401	4.7
Aroclor-1242	2	8.753	-0.013	22152	5.0	2	9.244	-0.011	47236	6.4
Aroclor-1242	3	8.948	0.008	12040	6.9	3	---			0.0
Aroclor-1242	4	10.561	0.002	211812	130.3	4	11.120	-0.027	659601	210.6
	Total Col1Ave (3 peaks): 47.4					Total Col2Ave (3 peaks): 73.9 RPD = 44*				
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1248	1	9.338	0.000	330453	192.5	1	9.790	0.000	559500	164.8
Aroclor-1248	2	9.668	-0.001	188245	86.8	2	10.237	0.000	336515	89.6
Aroclor-1248	3	10.320	0.008	696077	214.9	3	10.785	0.000	198434	51.5
Aroclor-1248	4	10.561	0.002	211812	83.5	4	11.120	-0.027	659601	130.3
	Total Col1Ave (4 peaks): 144.4					Total Col2Ave (4 peaks): 109.0 RPD = 28				
	Corrected Ave (3 peaks): 120.9					Corrected Ave (3 peaks): 90.5 RPD = 29				
Aroclor-1254	1	10.320	-0.001	696077	294.9	1	10.851	-0.001	970351	287.3
Aroclor-1254	2	10.642	0.000	996874	293.4	2	11.023	-0.001	1251866	289.9
Aroclor-1254	3	11.025	0.000	633412	305.5	3	11.559	-0.001	1001447	300.3
Aroclor-1254	4	11.164	0.001	1196079	288.8	4	11.711	-0.001	2101064	285.4
Aroclor-1254	5	11.882	0.002	802234	303.2	5	12.497	-0.001	1270511	299.3
	Total Col1Ave (5 peaks): 297.2					Total Col2Ave (5 peaks): 292.5 RPD = 2				
	Corrected Ave (4 peaks): 295.1					Corrected Ave (4 peaks): 290.5 RPD = 2				
Aroclor-1260	1	11.823	0.000	490140	107.6	1	12.720	-0.002	1539439	215.5
Aroclor-1260	2	12.426	-0.002	55002	18.3	2	13.497	0.000	316630	28.2
Aroclor-1260	3	12.743	-0.001	61764	20.4	3	13.990	-0.002	222349	29.4
Aroclor-1260	4	13.478	-0.001	135136	34.7	4	14.551	0.000	11824	4.3
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (4 peaks): 45.3					Total Col2Ave (4 peaks): 69.3 RPD = 42*				
	Corrected Ave (3 peaks): 24.5					Corrected Ave (3 peaks): 20.6 RPD = 17				
Aroclor-1262	1	12.426	-0.002	55002	11.2	1	12.811	-0.001	102083	14.4
Aroclor-1262	2	12.743	0.000	61764	17.3	2	13.254	-0.003	426129	84.2
Aroclor-1262	3	13.106	-0.001	139249	14.3	3	13.497	0.001	316630	23.2
Aroclor-1262	4	---			0.0	4	13.944	0.002	52769	10.1
Aroclor-1262	5	---			0.0	5	13.990	-0.003	222349	26.3
	Total Col1Ave (3 peaks): 14.2					Total Col2Ave (5 peaks): 31.6 RPD = 76*				
	Corrected Ave: < 3 Peaks					Corrected Ave (4 peaks): 18.5				
Aroclor-1268	1	---			0.0	1	13.944	0.003	52769	3.9
Aroclor-1268	2	---			0.0	2	13.990	-0.005	222349	17.3
Aroclor-1268	3	13.889	-0.076	14700	1.8	3	---			0.0
Aroclor-1268	4	14.569	0.001	10518	0.4	4	---			0.0

Col1Ave: <3 Quant Peaks

Col2Ave: <3 Quant Peaks

Total PCB Area Col1 (6.371 - 14.761) = 12138508

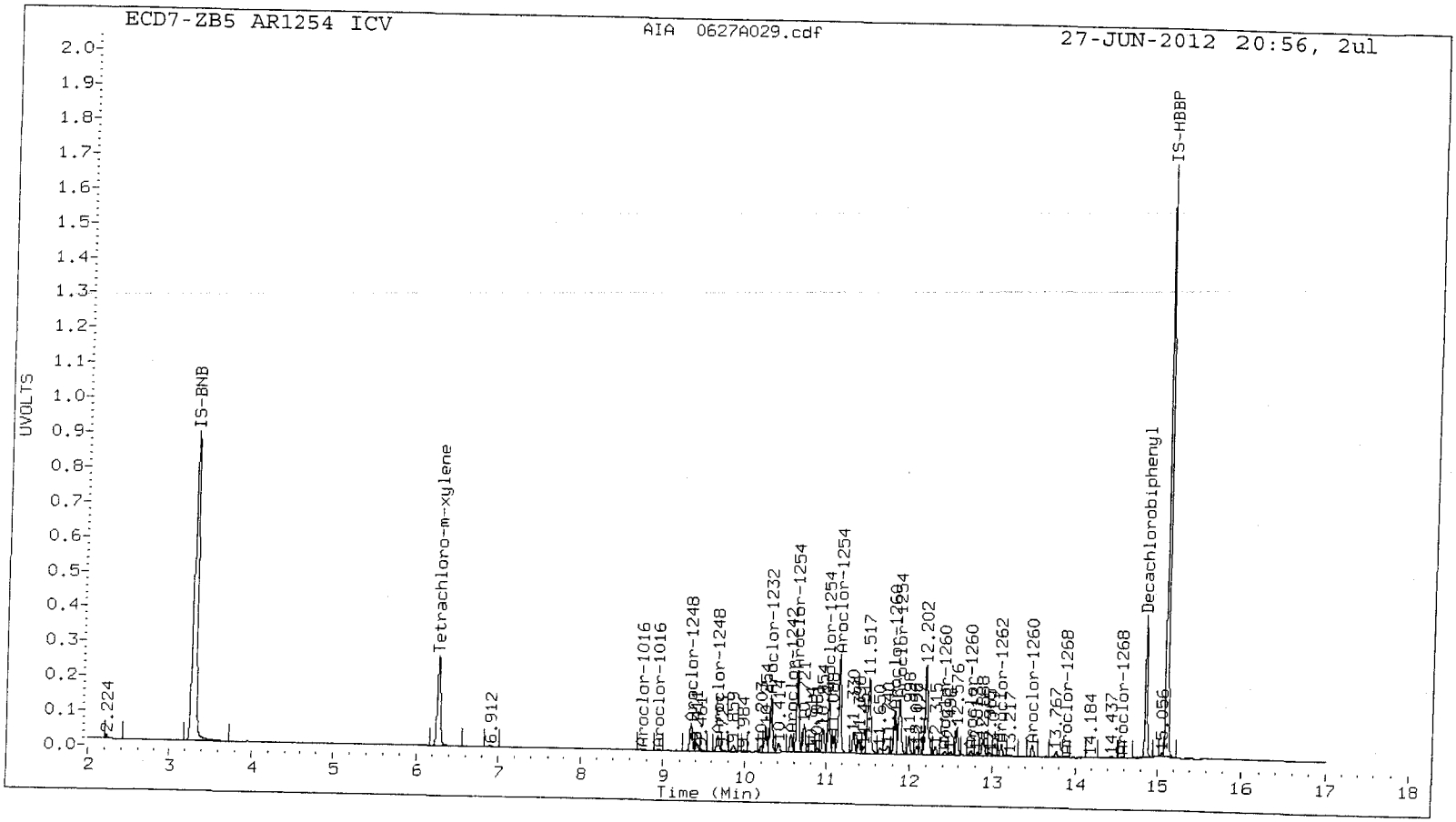
Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 20288899

Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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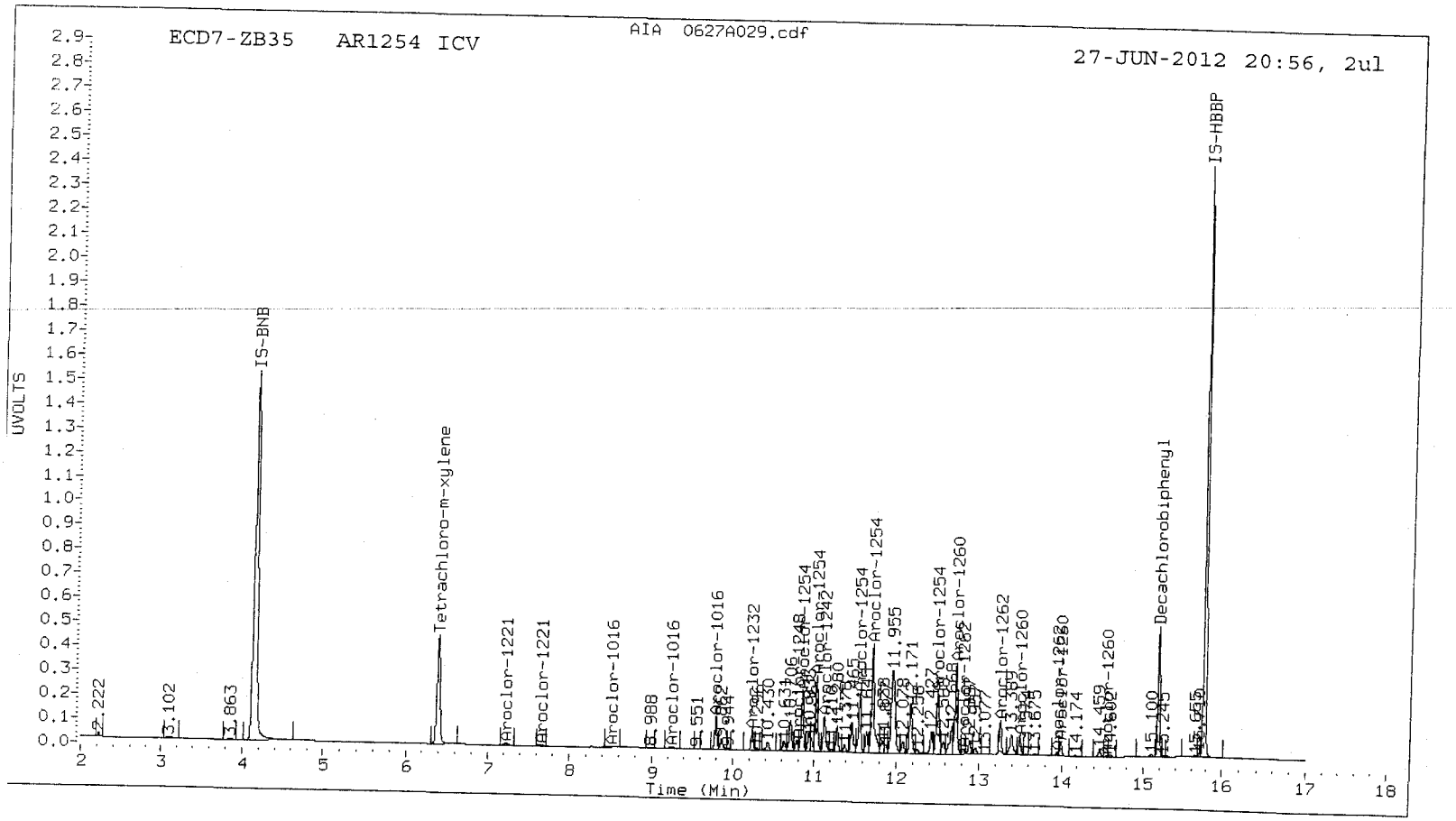
AIA 0627A029.cdf
27-JUN-2012 20:56, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
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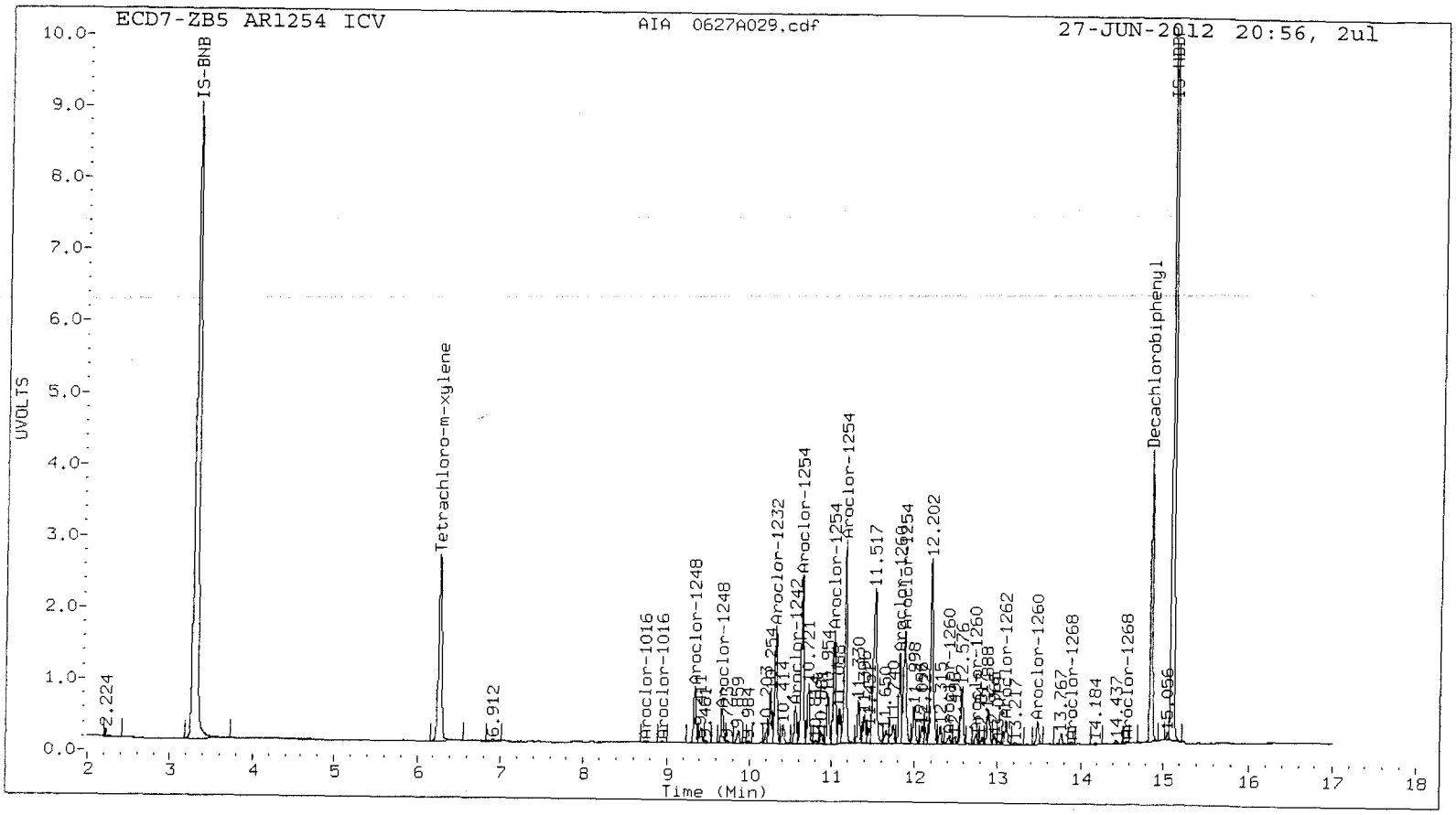
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262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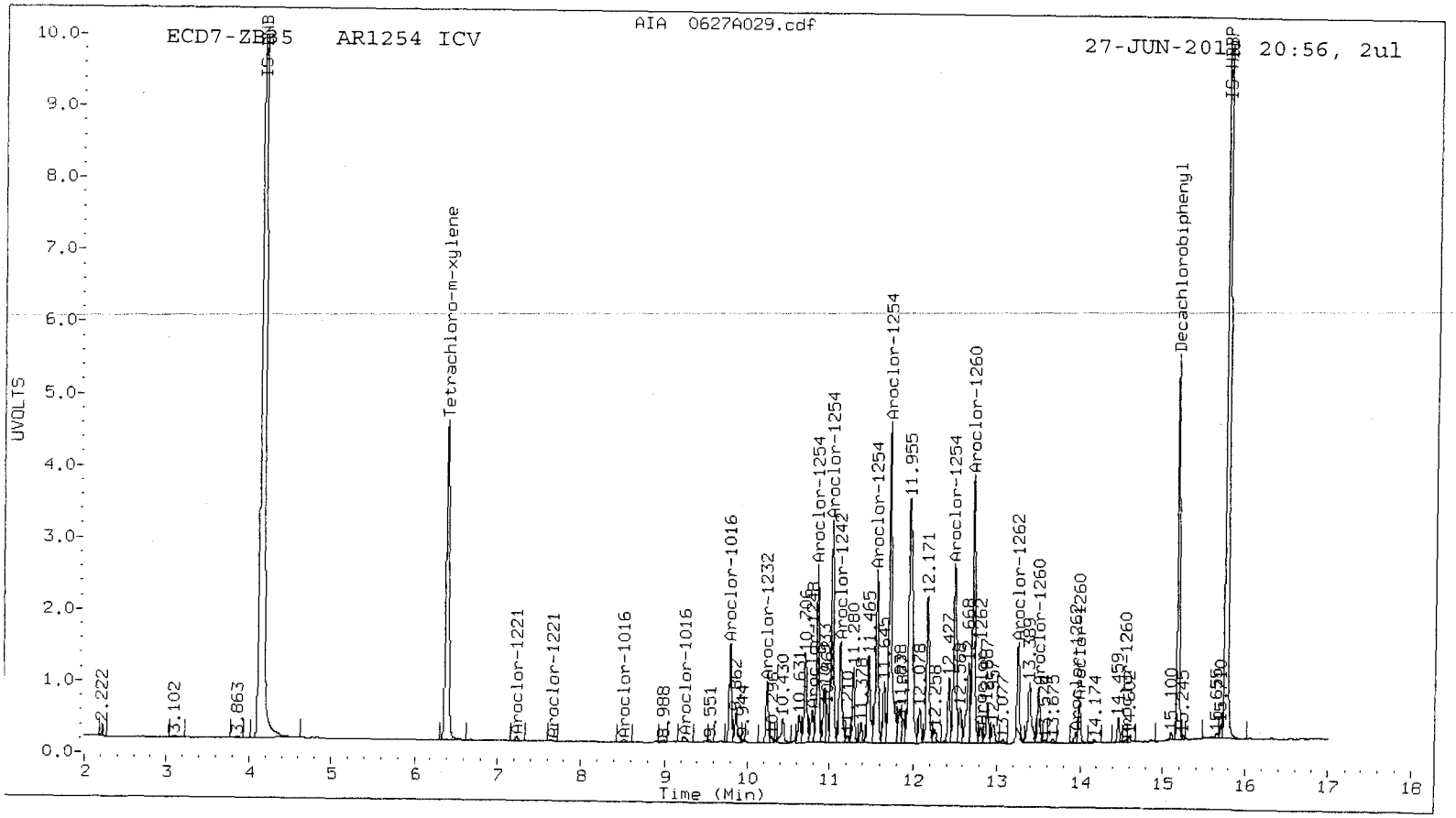
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
UVOLTS
Time (Min)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27-JUN-2012 20:56, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A030.d
Data file 2: 20120627.B/ical-2.b/0627A030.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 27-JUN-2012 21:16
Report Date: 06/28/2012 08:19
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.271	0.001	1440565	6.393	-0.001	2333387	20.6	19.6	5.2	Tetrachloro-m-xylene
14.860	-0.001	1435667	15.186	-0.001	1833676	20.0	19.2	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.6	49.0
Decachlorobiphenyl	50.1	48.1

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5742453	0.4
Hexabromobiphenyl	5604480	5978174	6.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9195510	-1.1
Hexabromobiphenyl	7801648	8102311	3.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.281	0.000	34096	20.3	1	8.542	0.018	210278	44.1
Aroclor-1016	2	8.770	0.001	93510	16.2	2	9.257	0.000	185825	18.6
Aroclor-1016	3	8.942	0.000	42279	18.6	3	9.684	0.001	50660	19.7
Aroclor-1016	4	9.071	0.001	26139	16.9	4	9.791	-0.001	48166	16.1
Total Col1Ave (4 peaks):				18.0		Total Col2Ave (4 peaks):			24.6	RPD = 31
Corrected Ave (3 peaks):				17.2		Corrected Ave (3 peaks):			18.2	RPD = 5
Aroclor-1221	1	6.723	-0.001	180308	258.5	1	7.216	-0.001	351228	255.0
Aroclor-1221	2	6.935	-0.001	133667	255.4	2	7.516	-0.001	215730	254.8
Aroclor-1221	3	7.058	0.000	444413	255.6	3	7.655	-0.001	645534	252.7
Aroclor-1221	NS	---			----	4	7.741	-0.002	125832	255.9
Total Col1Ave (3 peaks):				256.5		Total Col2Ave (4 peaks):			254.6	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			254.2	
Aroclor-1232	1	8.281	0.002	34096	51.3	1	8.542	0.019	210278	102.3
Aroclor-1232	2	8.770	0.002	93510	41.4	2	9.257	0.002	185825	47.3
Aroclor-1232	3	8.942	0.001	42279	47.2	3	9.684	0.001	50660	48.4
Aroclor-1232	4	10.321	0.008	121183	118.6	4	10.237	0.001	45411	29.5
Total Col1Ave (4 peaks):				64.6		Total Col2Ave (4 peaks):			56.9	RPD = 13
Corrected Ave (3 peaks):				46.6		Corrected Ave (3 peaks):			41.7	RPD = 11
Aroclor-1242	1	8.281	0.003	34096	26.1	1	8.542	0.020	210278	59.6
Aroclor-1242	2	8.770	0.004	93510	20.9	2	9.257	0.002	185825	25.0
Aroclor-1242	3	8.942	0.003	42279	24.1	3	9.684	0.002	50660	25.8
Aroclor-1242	4	10.562	0.003	24829	15.1	4	11.146	0.000	59268	18.8
Total Col1Ave (4 peaks):				21.5		Total Col2Ave (4 peaks):			32.3	RPD = 40*
Corrected Ave (3 peaks):				20.0		Corrected Ave (3 peaks):			23.2	RPD = 15
Aroclor-1248	1	9.339	0.001	20541	11.8	1	9.791	0.000	48166	14.1
Aroclor-1248	2	9.670	0.001	19161	8.7	2	10.237	0.001	45411	12.0
Aroclor-1248	3	10.321	0.009	121183	37.0	3	10.788	0.002	32518	8.4
Aroclor-1248	4	10.562	0.003	24829	9.7	4	11.146	-0.001	59268	11.7
Total Col1Ave (4 peaks):				16.8		Total Col2Ave (4 peaks):			11.5	RPD = 37
Corrected Ave (3 peaks):				10.1		Corrected Ave (3 peaks):			10.7	RPD = 6
Aroclor-1254	1	10.321	0.001	121183	50.8	1	10.852	-0.001	200151	59.0
Aroclor-1254	2	10.644	0.002	133715	39.0	2	11.024	0.000	232729	53.6
Aroclor-1254	3	11.026	0.001	23638	11.3	3	11.560	0.000	50210	15.0
Aroclor-1254	4	11.132	-0.031	181321	43.3	4	11.747	0.035	980025	132.5
Aroclor-1254	5	11.871	-0.009	158898	59.5	5	12.507	0.009	254904	59.8
Total Col1Ave (5 peaks):				40.8		Total Col2Ave (5 peaks):			64.0	RPD = 44*
Corrected Ave (4 peaks):				36.1		Corrected Ave (4 peaks):			46.8	RPD = 26
Aroclor-1260	1	11.823	0.000	803355	175.0	1	12.721	-0.001	741200	103.0
Aroclor-1260	2	12.428	0.000	1216908	402.5	2	13.496	-0.001	3157514	279.3
Aroclor-1260	3	12.743	-0.001	1032440	338.8	3	13.993	0.001	2221767	291.6
Aroclor-1260	4	13.479	0.000	731193	186.4	4	14.550	-0.001	1189916	424.7
Aroclor-1260	5	13.578	-0.001	996685	644.2	NS	---			----
Total Col1Ave (5 peaks):				349.4		Total Col2Ave (4 peaks):			274.6	RPD = 24
Corrected Ave (4 peaks):				275.7		Corrected Ave (3 peaks):			224.6	RPD = 20
Aroclor-1262	1	12.428	0.000	1216908	245.0	1	12.811	-0.001	1764303	246.9
Aroclor-1262	2	12.743	0.000	1032440	286.5	2	13.256	-0.001	1332590	261.4
Aroclor-1262	3	13.106	-0.001	2244570	228.6	3	13.496	0.000	3157514	229.7
Aroclor-1262	4	13.578	-0.001	996685	300.0	4	13.941	-0.001	1506057	286.2
Aroclor-1262	5	13.642	-0.001	993906	278.9	5	13.993	0.000	2221767	260.5
Total Col1Ave (5 peaks):				267.8		Total Col2Ave (5 peaks):			256.9	RPD = 4
Corrected Ave (4 peaks):				259.7		Corrected Ave (4 peaks):			249.6	RPD = 4
Aroclor-1268	1	13.578	-0.001	996685	96.7	1	13.941	0.000	1506057	110.5
Aroclor-1268	2	13.642	0.001	993906	104.8	2	13.993	-0.002	2221767	171.6

Aroclor-1268	3	13.979	0.014	384846	47.7	3	14.309	0.000	75961	10.6
Aroclor-1268	4	14.568	0.000	312348	12.4	4	14.900	0.000	393123	13.5

Total Col1Ave (4 peaks): 65.4 Total Col2Ave (4 peaks): 76.6 RPD = 16

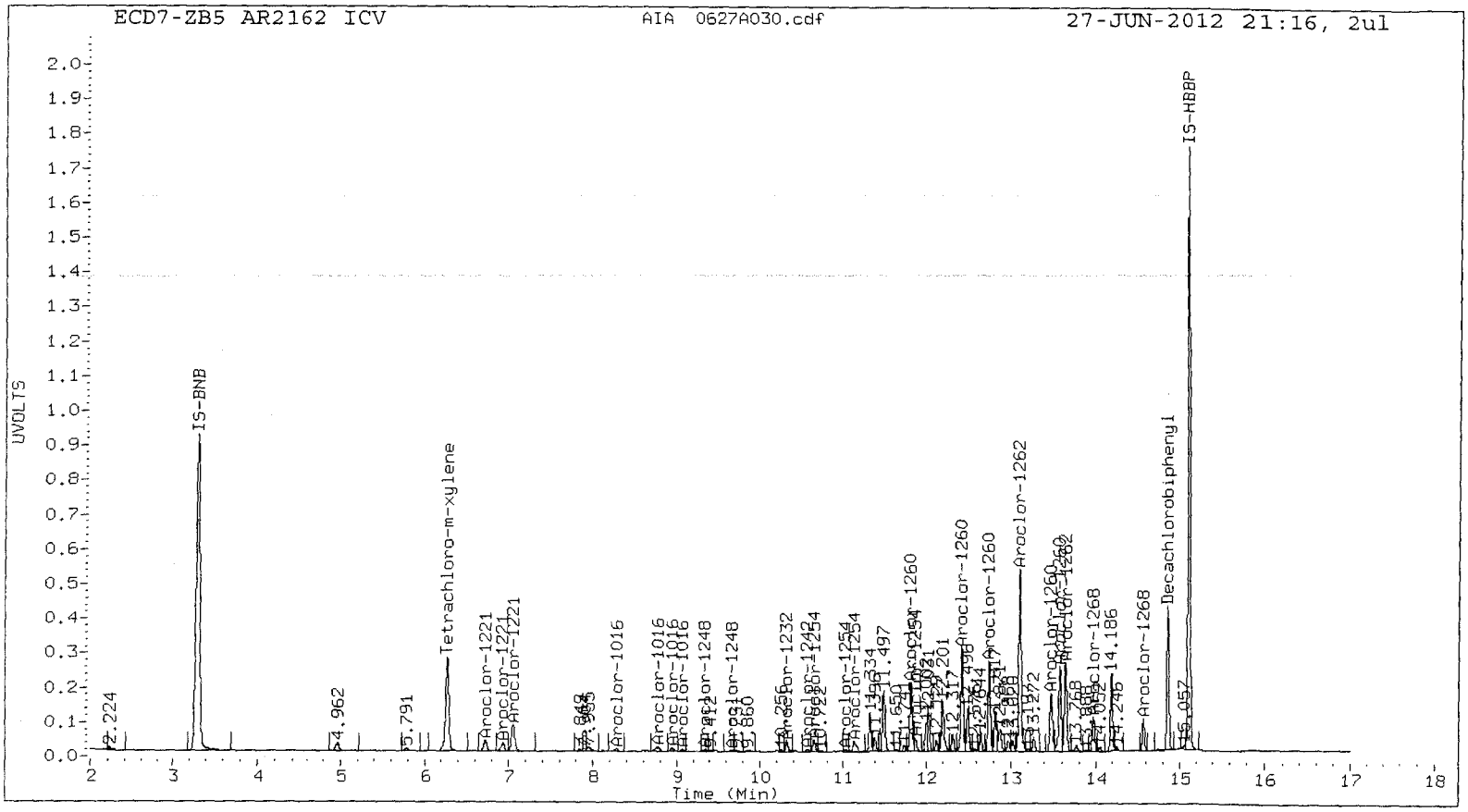
Corrected Ave (3 peaks): 52.3 Corrected Ave (3 peaks): 44.9 RPD = 15

Total PCB Area Col1 (6.371 - 14.761) = 16648722 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 25476483 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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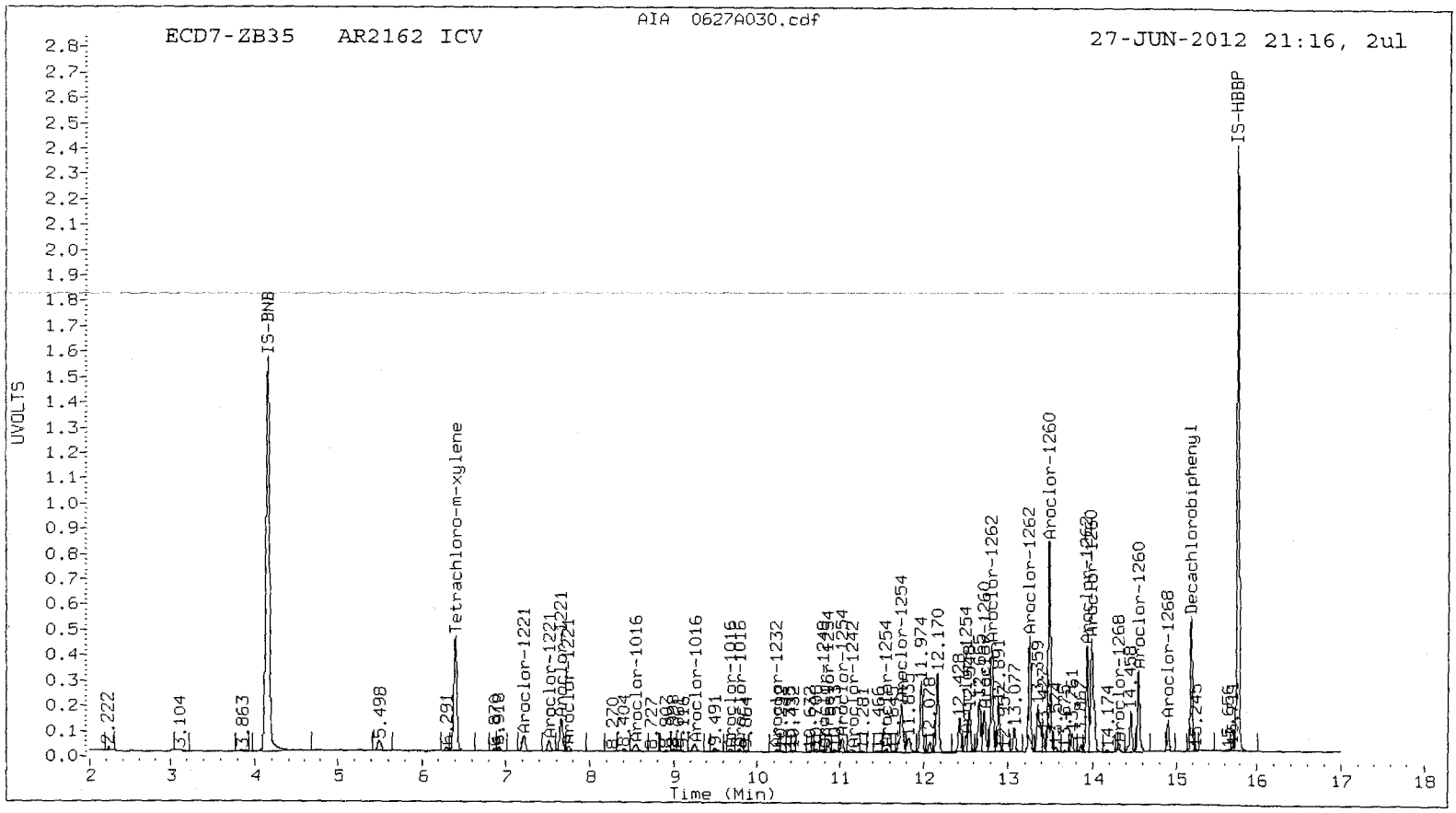
27-JUN-2012 21:16, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
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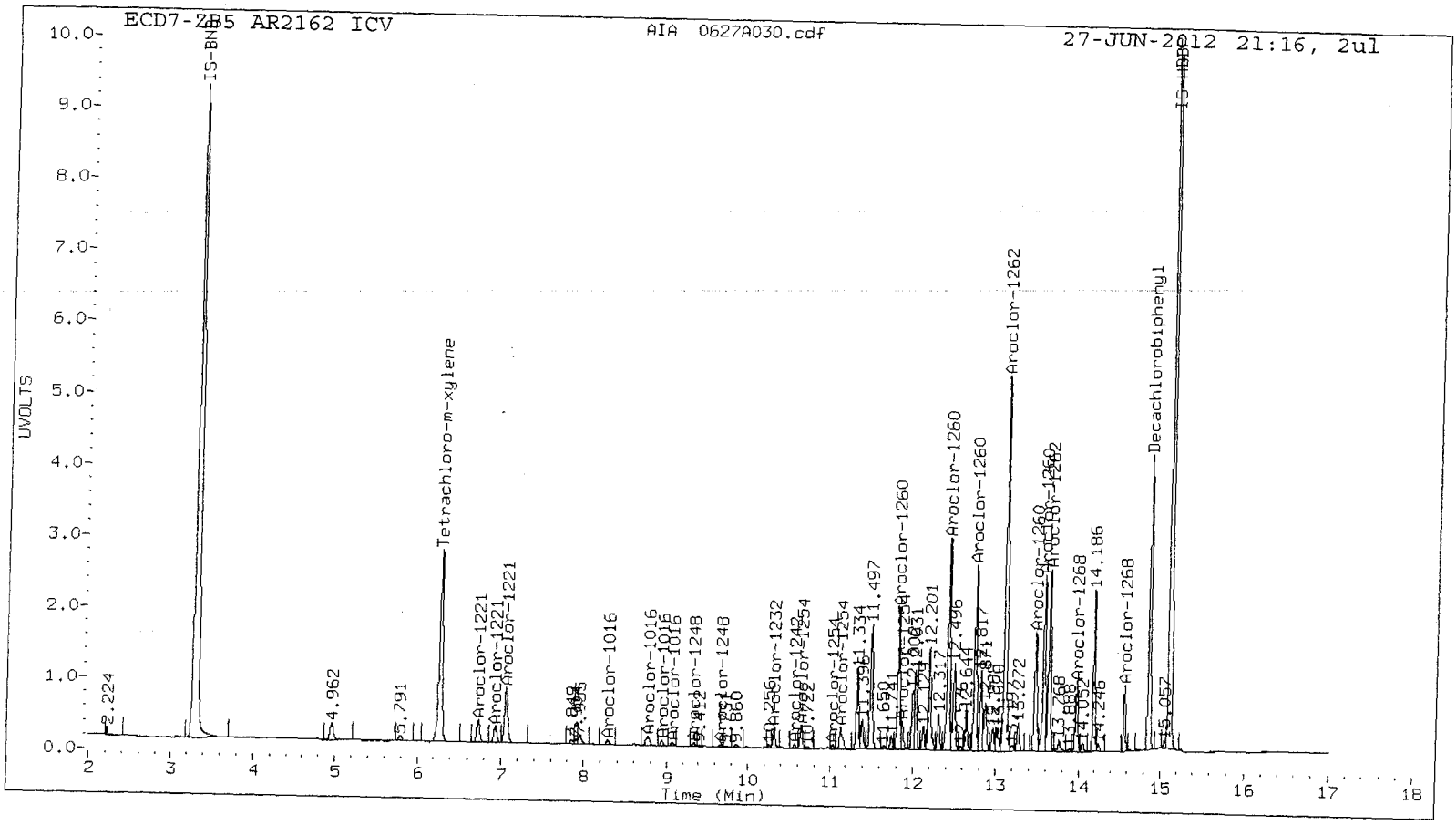
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
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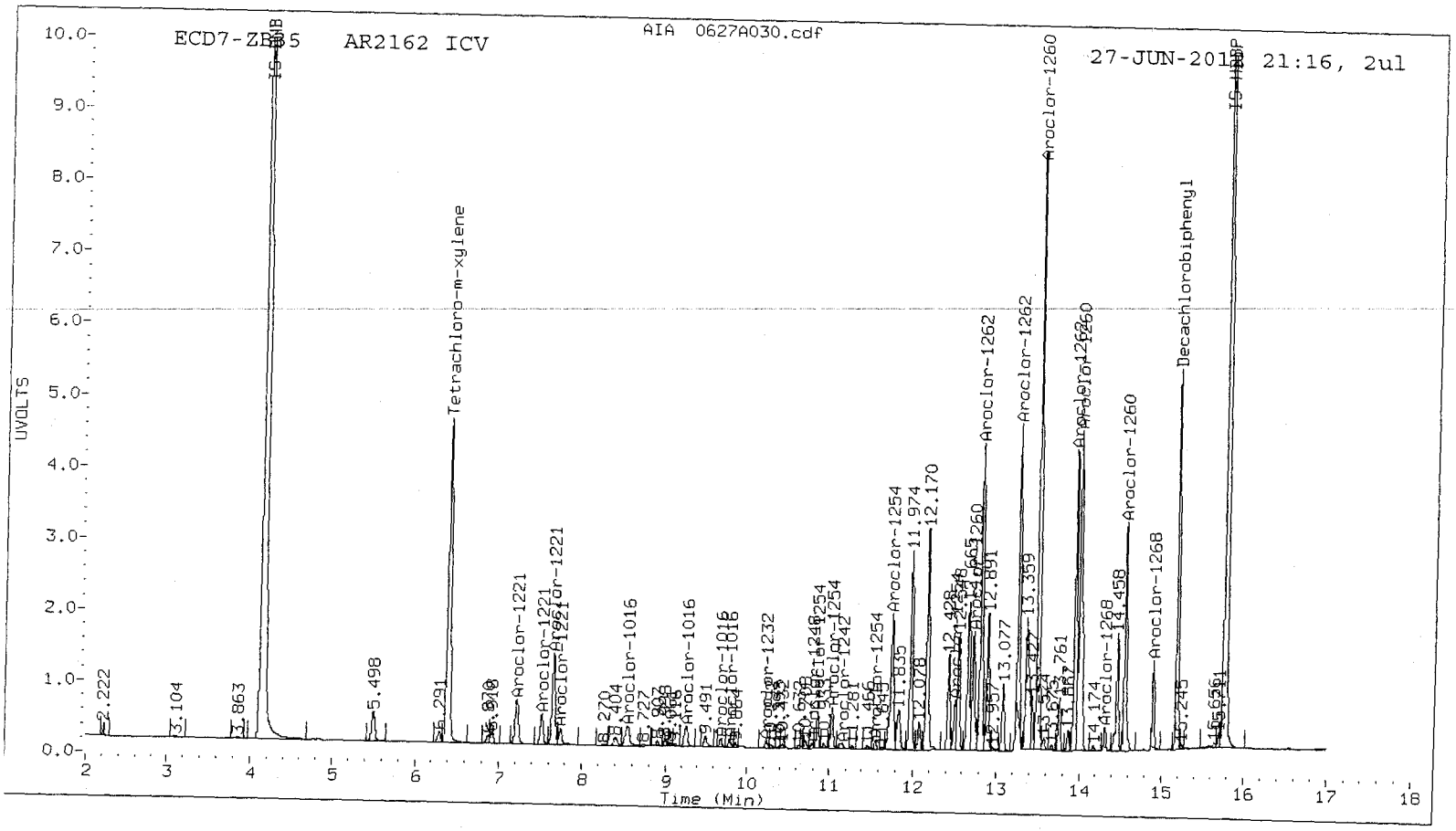
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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/ical-1.b/0627A031.d
Data file 2: 20120627.B/ical-2.b/0627A031.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 27-JUN-2012 21:37
Report Date: 06/28/2012 08:19
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.273	0.002	1427726	6.395	0.001	2332652	20.4	19.5	4.6	Tetrachloro-m-xylene
14.860	-0.001	2357689	15.186	0.000	2965568	32.8	31.0	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.1	48.8
Decachlorobiphenyl	82.0	77.5

JL 06/28/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5742545	0.4
Hexabromobiphenyl	5604480	5991550	6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9219975	-0.8
Hexabromobiphenyl	7801648	8133208	4.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.280	0.000	186280	111.1	1	8.524	0.000	575857	120.5
Aroclor-1016	2	8.768	-0.001	623804	108.3	2	9.256	-0.001	1083276	108.4
Aroclor-1016	3	8.942	0.000	248244	109.5	3	9.684	0.000	292789	113.6
Aroclor-1016	4	9.070	0.000	170392	109.9	4	9.791	-0.001	296313	98.8
Total Col1Ave (4 peaks):				109.7		Total Col2Ave (4 peaks):			110.3	RPD = 1
Corrected Ave (3 peaks):				109.2		Corrected Ave (3 peaks):			106.9	RPD = 2
Aroclor-1221	1	6.725	0.001	106103	152.1	1	7.218	0.002	222631	161.2
Aroclor-1221	2	6.936	0.000	93680	179.0	2	7.518	0.000	146719	172.8
Aroclor-1221	3	7.059	0.000	340804	196.0	3	7.656	0.000	520336	203.1
Aroclor-1221	NS	---			----	4	7.742	0.000	75110	152.4
Total Col1Ave (3 peaks):				175.7		Total Col2Ave (4 peaks):			172.4	RPD = 2
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			162.1	
Aroclor-1232	1	8.280	0.002	186280	280.5	1	8.524	0.001	575857	279.3
Aroclor-1232	2	8.768	0.000	623804	276.3	2	9.256	0.001	1083276	275.0
Aroclor-1232	3	8.942	0.001	248244	277.0	3	9.684	0.000	292789	278.7
Aroclor-1232	4	10.313	0.000	231081	226.2	4	10.237	0.000	366187	237.1
Total Col1Ave (4 peaks):				265.0		Total Col2Ave (4 peaks):			267.6	RPD = 1
Corrected Ave (3 peaks):				259.8		Corrected Ave (3 peaks):			263.6	RPD = 1
Aroclor-1242	1	8.280	0.003	186280	142.5	1	8.524	0.002	575857	162.9
Aroclor-1242	2	8.768	0.002	623804	139.5	2	9.256	0.001	1083276	145.6
Aroclor-1242	3	8.942	0.003	248244	141.4	3	9.684	0.002	292789	149.0
Aroclor-1242	4	10.561	0.002	190528	116.0	4	11.147	0.001	399208	126.5
Total Col1Ave (4 peaks):				134.8		Total Col2Ave (4 peaks):			146.0	RPD = 8
Corrected Ave (3 peaks):				132.3		Corrected Ave (3 peaks):			140.4	RPD = 6
Aroclor-1248	1	9.339	0.001	128249	73.9	1	9.791	0.001	296313	86.6
Aroclor-1248	2	9.670	0.000	177354	81.0	2	10.237	0.001	366187	96.7
Aroclor-1248	3	10.313	0.001	231081	70.6	3	10.786	0.001	339073	87.4
Aroclor-1248	4	10.561	0.002	190528	74.4	4	11.147	0.001	399208	78.3
Total Col1Ave (4 peaks):				75.0		Total Col2Ave (4 peaks):			87.3	RPD = 15
Corrected Ave (3 peaks):				73.0		Corrected Ave (3 peaks):			84.1	RPD = 14
Aroclor-1254	1	10.313	-0.007	231081	96.9	1	10.851	-0.001	92712	27.3
Aroclor-1254	2	10.641	0.000	68822	20.1	2	11.023	-0.001	85239	19.6
Aroclor-1254	3	11.026	0.001	37109	17.7	3	11.559	-0.001	77745	23.1
Aroclor-1254	4	11.166	0.002	65774	15.7	4	11.712	0.000	157846	21.3
Aroclor-1254	5	11.888	0.009	35870	13.4	5	12.494	-0.004	71820	16.8
Total Col1Ave (5 peaks):				32.8		Total Col2Ave (5 peaks):			21.6	RPD = 41*
Corrected Ave (4 peaks):				16.7		Corrected Ave (4 peaks):			20.2	RPD = 19
Aroclor-1260	1	11.823	0.000	26261	5.7	1	12.722	0.000	38297	5.3
Aroclor-1260	2	12.428	-0.001	604719	199.6	2	13.495	-0.001	614298	54.1
Aroclor-1260	3	12.743	-0.001	49992	16.4	3	13.996	0.003	3778177	494.0
Aroclor-1260	4	13.479	0.000	11900	3.0	4	14.550	-0.001	1257383	447.1
Aroclor-1260	5	13.578	-0.001	2742173	1768.4	NS	---			----
Total Col1Ave (5 peaks):				398.6		Total Col2Ave (4 peaks):			250.1	RPD = 46*
Corrected Ave (4 peaks):				56.2		Corrected Ave (3 peaks):			168.9	RPD = 100*
Aroclor-1262	1	12.428	-0.001	604719	121.5	1	12.812	-0.001	945791	131.9
Aroclor-1262	2	12.743	0.000	49992	13.8	2	13.255	-0.002	769319	150.3
Aroclor-1262	3	13.105	-0.001	382120	38.8	3	13.495	-0.001	614298	44.5
Aroclor-1262	4	13.578	-0.001	2742173	823.4	4	13.940	-0.002	3620019	685.3
Aroclor-1262	5	13.640	-0.002	2781385	778.7	5	13.996	0.002	3778177	441.3
Total Col1Ave (5 peaks):				355.2		Total Col2Ave (5 peaks):			290.7	RPD = 20
Corrected Ave (4 peaks):				238.2		Corrected Ave (4 peaks):			192.0	RPD = 21
Aroclor-1268	1	13.578	-0.001	2742173	265.6	1	13.940	-0.001	3620019	264.6
Aroclor-1268	2	13.640	-0.001	2781385	292.5	2	13.996	0.000	3778177	290.8

Aroclor-1268	3	13.964	-0.001	1929224	238.5	3	14.309	0.000	1699670	237.3
Aroclor-1268	4	14.567	-0.001	5635594	223.1	4	14.901	0.001	6506298	222.8

Total Col1Ave (4 peaks): 254.9 Total Col2Ave (4 peaks): 253.9 RPD = 0

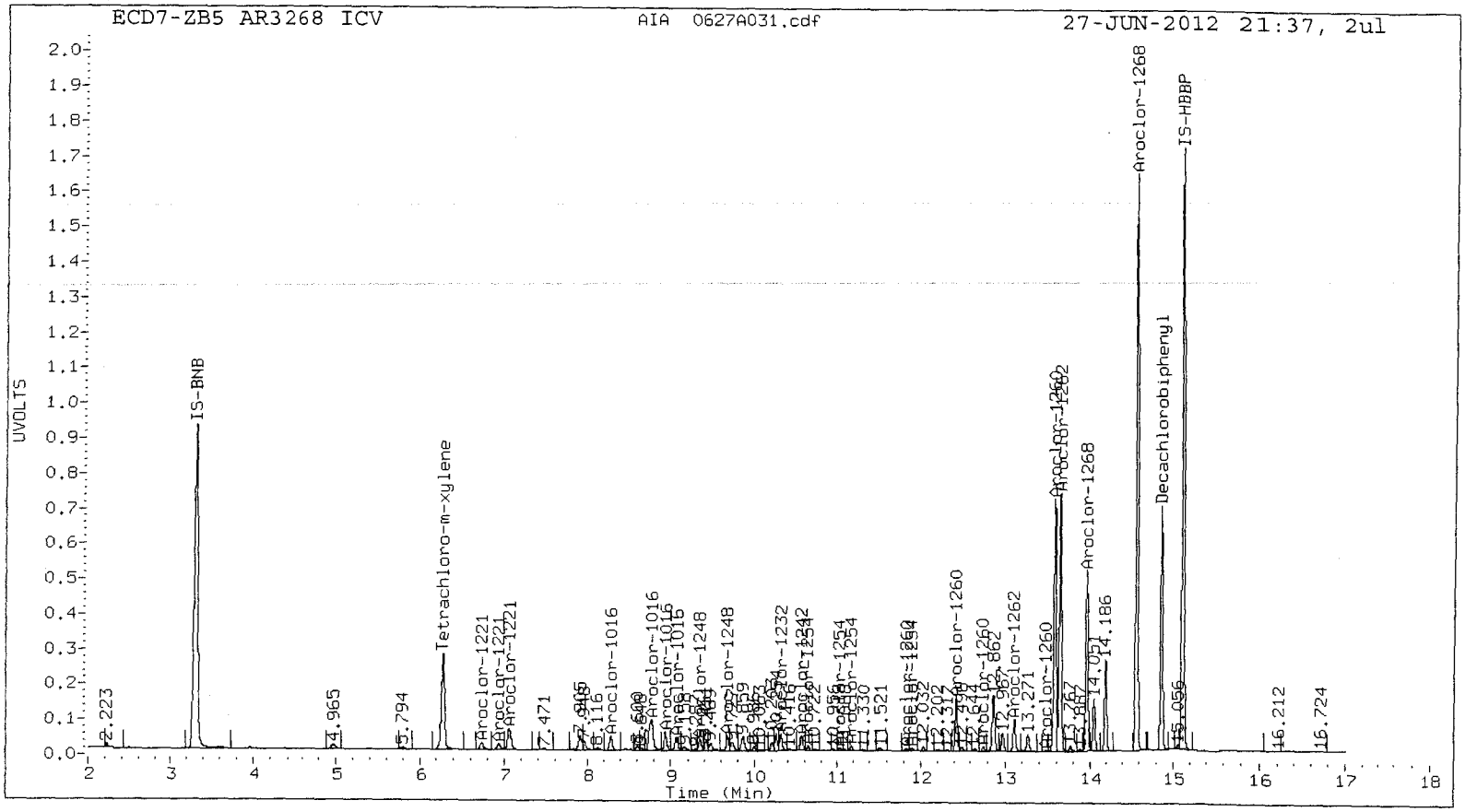
Corrected Ave (3 peaks): 242.4 Corrected Ave (3 peaks): 241.6 RPD = 0

Total PCB Area Col1 (6.371 - 14.761) = 21269556 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.494 - 15.086) = 29561662 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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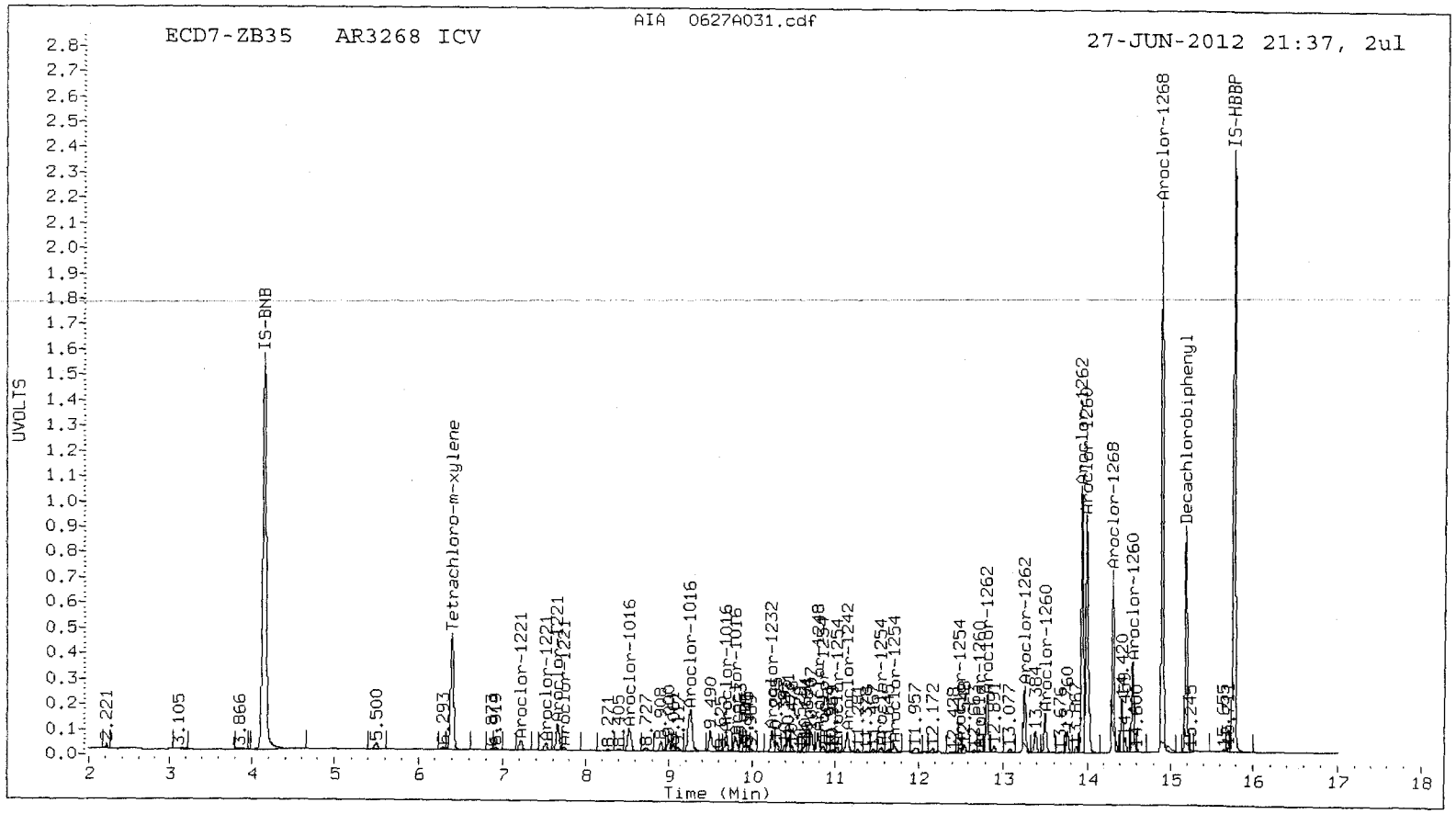
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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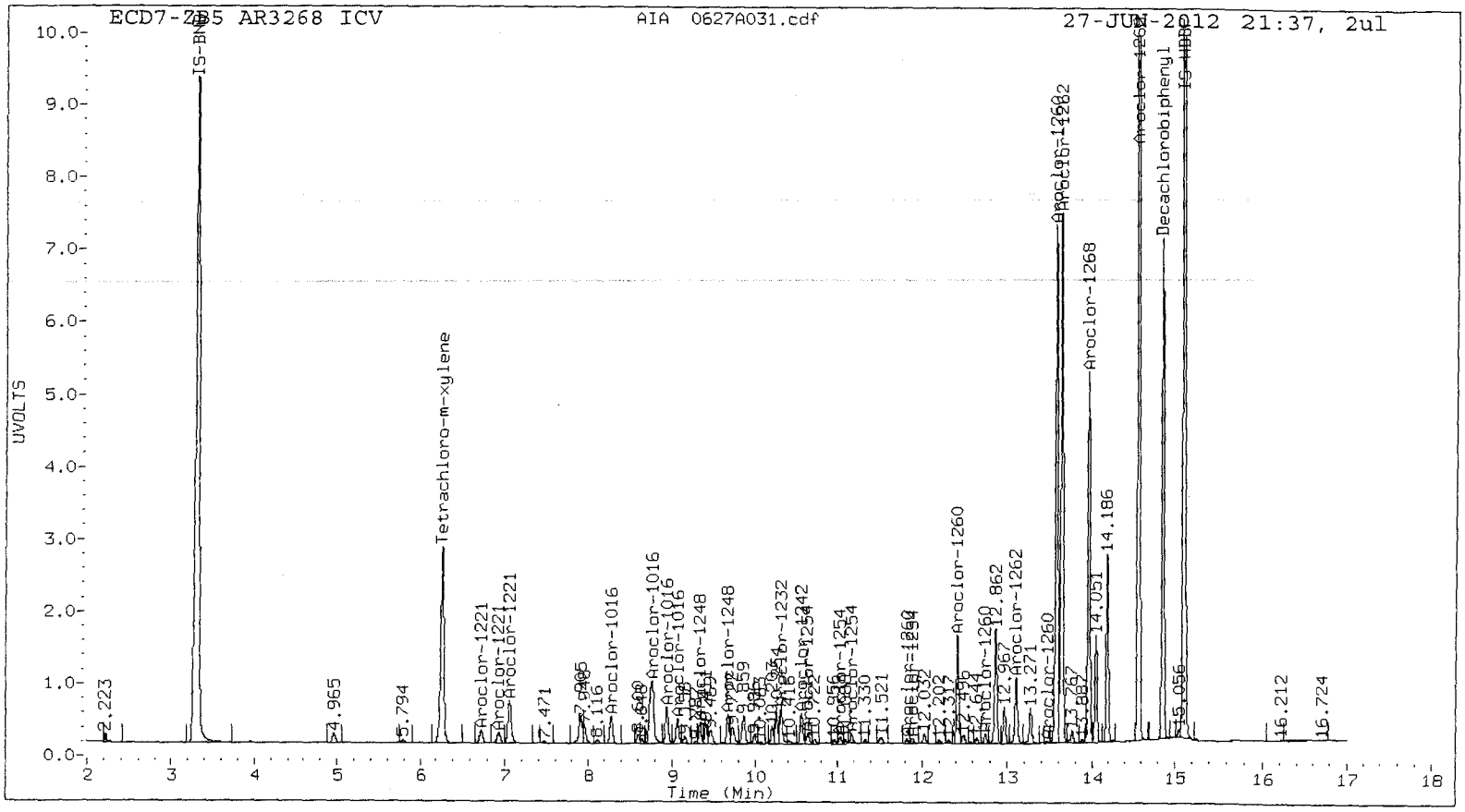
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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27-JUN-2012 21:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
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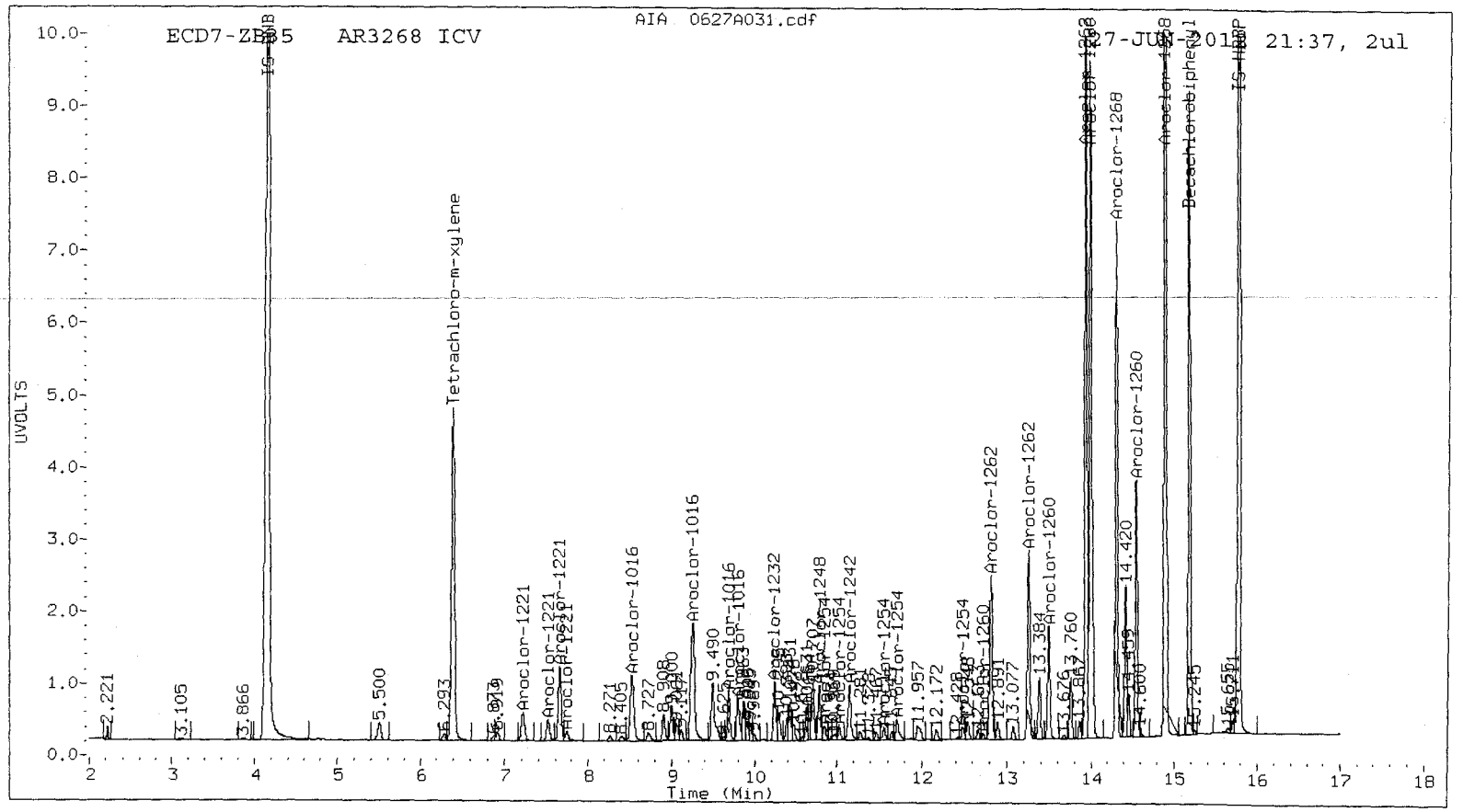
5.794
7.471
8.116
12.862
13.271
14.186
14.051
15.056
16.212
16.724


ECD7-ZB5 AR3268 ICV
AIA 0627A031.cdf
27-JUN-2012 21:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
2.221
3.105
3.866
5.500
6.293
9.490
11.957
12.172
13.077
13.384
13.676
13.760
14.420
14.600
15.245
15.655

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20120627.B/ddts-1.b/0627A032.d ARI ID: 0.1 PPM DDT

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
10.606	0.000	4921917	11.115	0.000	7515725	0.100	0.100	0.0	2,4-DDE
11.168	0.000	4602362	11.805	0.000	7027225	0.100	0.100	0.0	2,4-DDD
11.680	0.000	5727147	12.257	0.000	18567830	0.100	0.200#	66.7*	2,4-DDT
11.044	0.000	8016493	11.498	0.000	12126255	0.100	0.100	0.0	4,4-DDE
11.624	0.000	6700849	12.257	0.000	18567830	0.100	0.200#	66.7*	4,4-DDD
12.136	0.000	7217293	12.699	0.000	10787157	0.100	0.100	0.0	4,4-DDT

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 27-JUN-2012 22:19 Init. Calib. Date: 27-JUN-2012

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.044	15712
4,4-DDD	11.625	171043
4,4-DDT	12.136	7127409

Col 1: 4,4-DDT Percent Breakdown = 2.6 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.500	44666
4,4-DDD/2,4-DDT	12.265	364821
4,4-DDT	12.699	10625680

Col 2: 4,4-DDT Percent Breakdown = 3.7 %

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: UZ99 Client ID: I & J waterway

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): PCB's TCMX DCB

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 06/27/12 Analysis Start: 07/02/12

Endrin/DDT Breakdown <15%? YES / NO / NA

Method Blank In Control? YES / NO

ICal Meets RF & %RSD Criteria? YES / NO

LCS/LCSD Recovery In Control? YES / NO

CCal Meets RF & %RSD Criteria? YES / NO

Surrogate Recovery In Control? YES / NO

Manual Integrations for ICal? YES / NO

Manual Integrations for Samples? YES / NO

Internal Standard Meets Criteria? YES / NO / NA

Special Analysis Criteria Met? YES / NO / NA

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Additional Details on Reverse: Yes / No

Analyst: [signature] **Date:** 07/03/12

Reviewer: [signature] **Date:** 7/3/12

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 07/02/12 Analysis: PCB Analyst: JL

Column 1 Serial No.: 196396 Column Type: ZB5

Column 2 Serial No.: 175388 Column Type: ZB35

GC Method: PCB ICal Date: 06/27/12 Injection Volume: 2µl

IS	Ical/Ccal	ICV
1878-3	1980-1,2,3,4,5,6	1923-1,2,3,4,5
		F28-2

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	02-JUL-2012 08:02	0702A001.d	1	DDT .1
2	02-JUL-2012 08:22	0702A002.d	1	DDT BD
3	02-JUL-2012 08:43	0702A003.d	1	AR1242
4	02-JUL-2012 09:04	0702A004.d	1	AR1660
5	02-JUL-2012 09:25	0702A005.d	1	UZ99MBS1
6	02-JUL-2012 09:46	0702A006.d	1	UZ99LCSS1
7	02-JUL-2012 10:07	0702A007.d	1	UZ99LCSDS1
8	02-JUL-2012 10:28	0702A008.d	1	UZ99QLS
9	02-JUL-2012 10:49	0702A009.d	1	UZ99A
10	02-JUL-2012 11:10	0702A010.d	1	UZ92A
11	02-JUL-2012 11:31	0702A011.d	1	UZ92C
12	02-JUL-2012 11:51	0702A012.d	1	AR1248
13	02-JUL-2012 12:12	0702A013.d	1	AR1660
14	02-JUL-2012 12:52	0702A015.d	1	rinse

1

07/03/12

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A003.d
Data file 2: 20120627.B/0702-2.b/0702A003.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 02-JUL-2012 08:43
Report Date: 07/03/2012 08:11
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.270	-0.007	1435207	6.390	-0.008	2280995	20.9	20.1	3.6	Tetrachloro-m-xylene
14.859	-0.001	1437171	15.185	-0.001	1790725	20.3	19.2	5.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	52.2	50.3
Decachlorobiphenyl	50.6	48.0

07/03/12
07/03/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5653450	-1.2
Hexabromobiphenyl	5604480	5915233	5.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	8748807	-5.9
Hexabromobiphenyl	7801648	7934634	1.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1242	1	8.277	0.000	328167	254.9	1	8.520	0.000	856764	255.4
Aroclor-1242	2	8.766	0.000	1119659	254.3	2	9.253	0.000	1810745	256.5
Aroclor-1242	3	8.939	0.000	440841	255.1	3	9.681	0.000	478732	256.7
Aroclor-1242	4	10.559	0.000	402368	248.8	4	11.145	0.000	758116	253.2

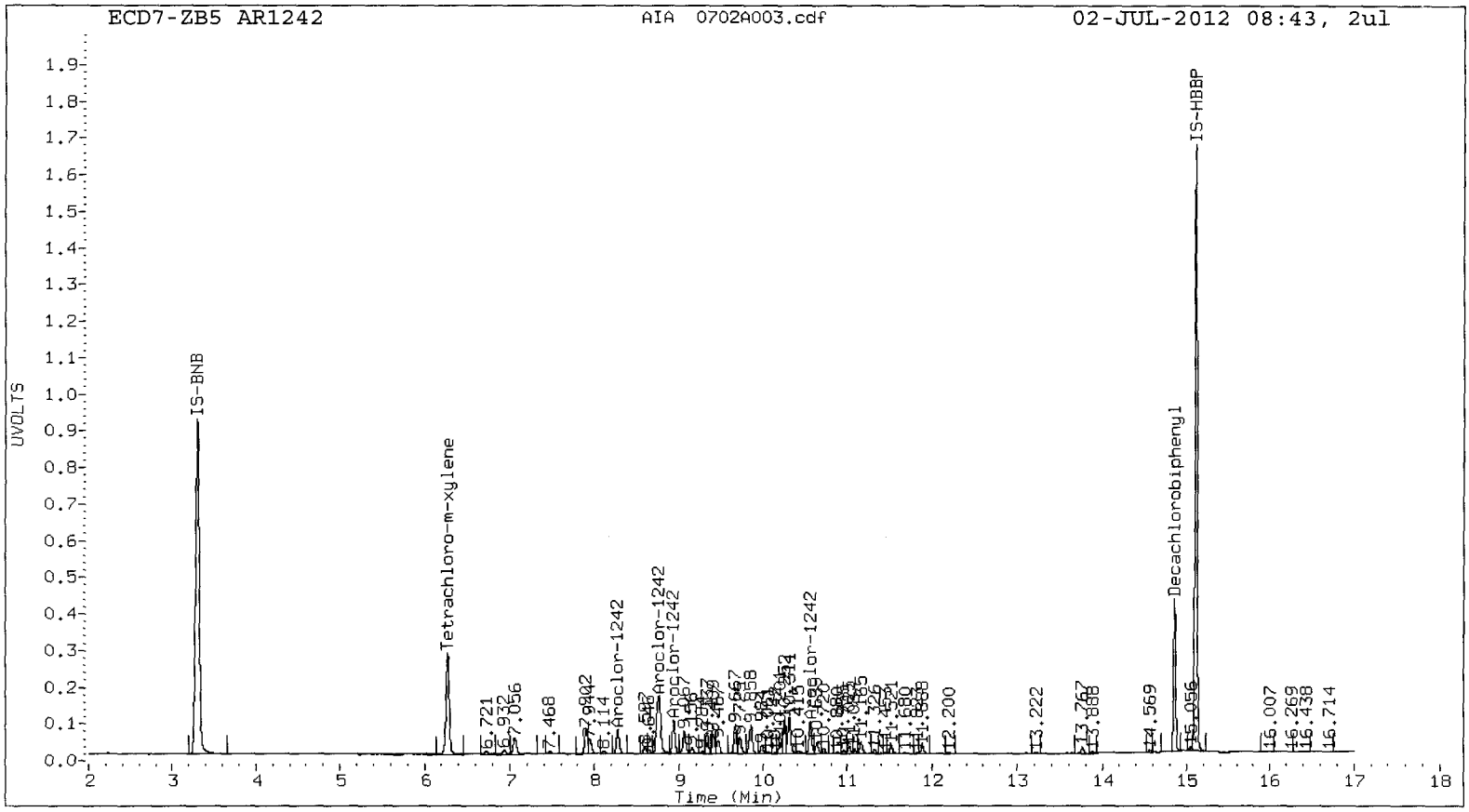
Total Col1Ave (4 peaks): 253.3 Total Col2Ave (4 peaks): 255.5 RPD = 1

Corrected Ave (3 peaks): 252.7 Corrected Ave (3 peaks): 255.1 RPD = 1

Total PCB Area Col1 (6.377 - 14.761) = 7776376 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 13365080 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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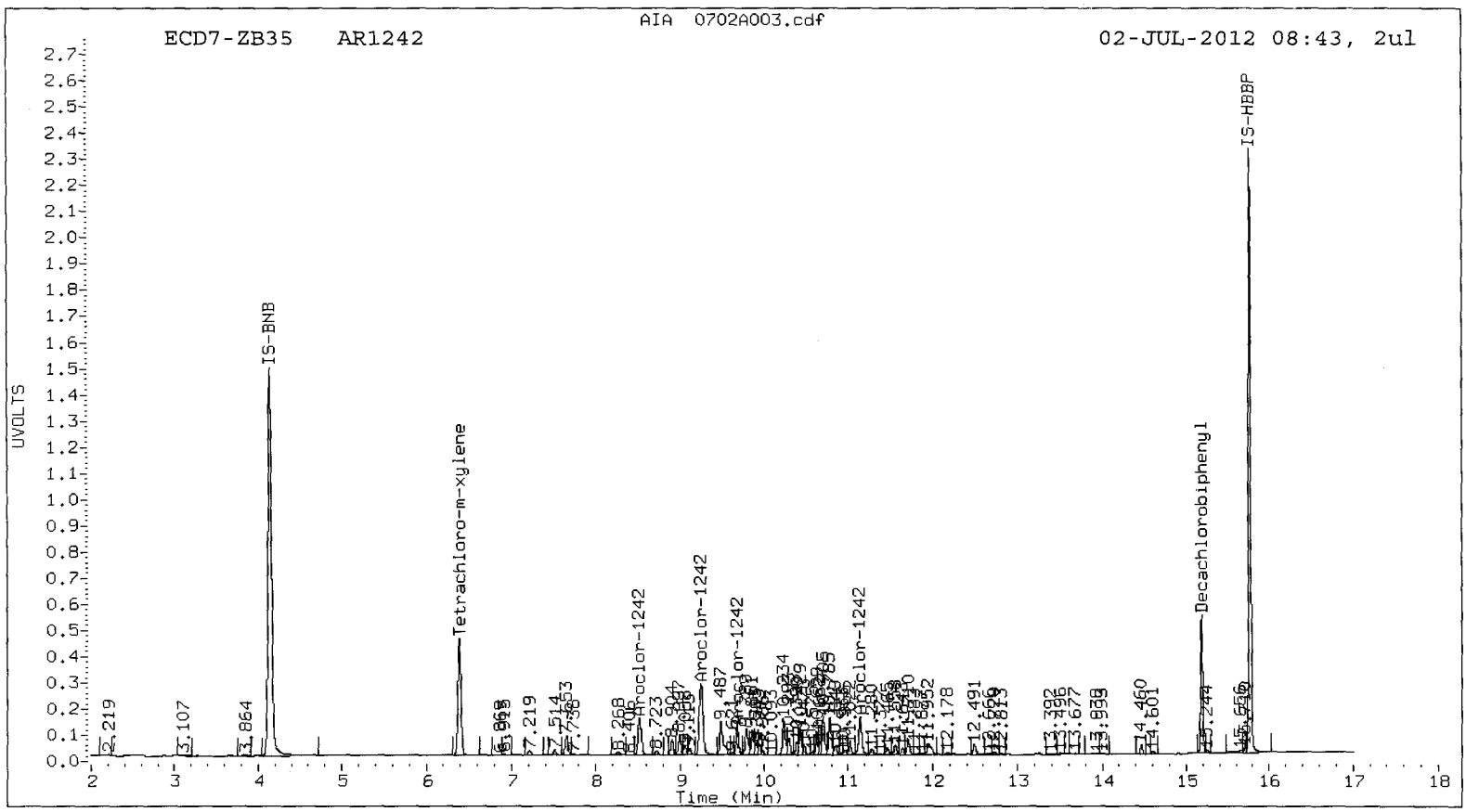
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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02-JUL-2012 08:43, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A004.d
Data file 2: 20120627.B/0702-2.b/0702A004.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 02-JUL-2012 09:04
Report Date: 07/03/2012 08:11
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.274	-0.004	1436568	6.395	-0.003	2294093	20.4	19.7	3.2	Tetrachloro-m-xylene
14.860	0.000	1461455	15.185	-0.002	1832497	20.1	19.0	5.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.9	49.3
Decachlorobiphenyl	50.3	47.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5801342	1.4
Hexabromobiphenyl	5604480	6053981	8.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	8982549	-3.4
Hexabromobiphenyl	7801648	8216540	5.3

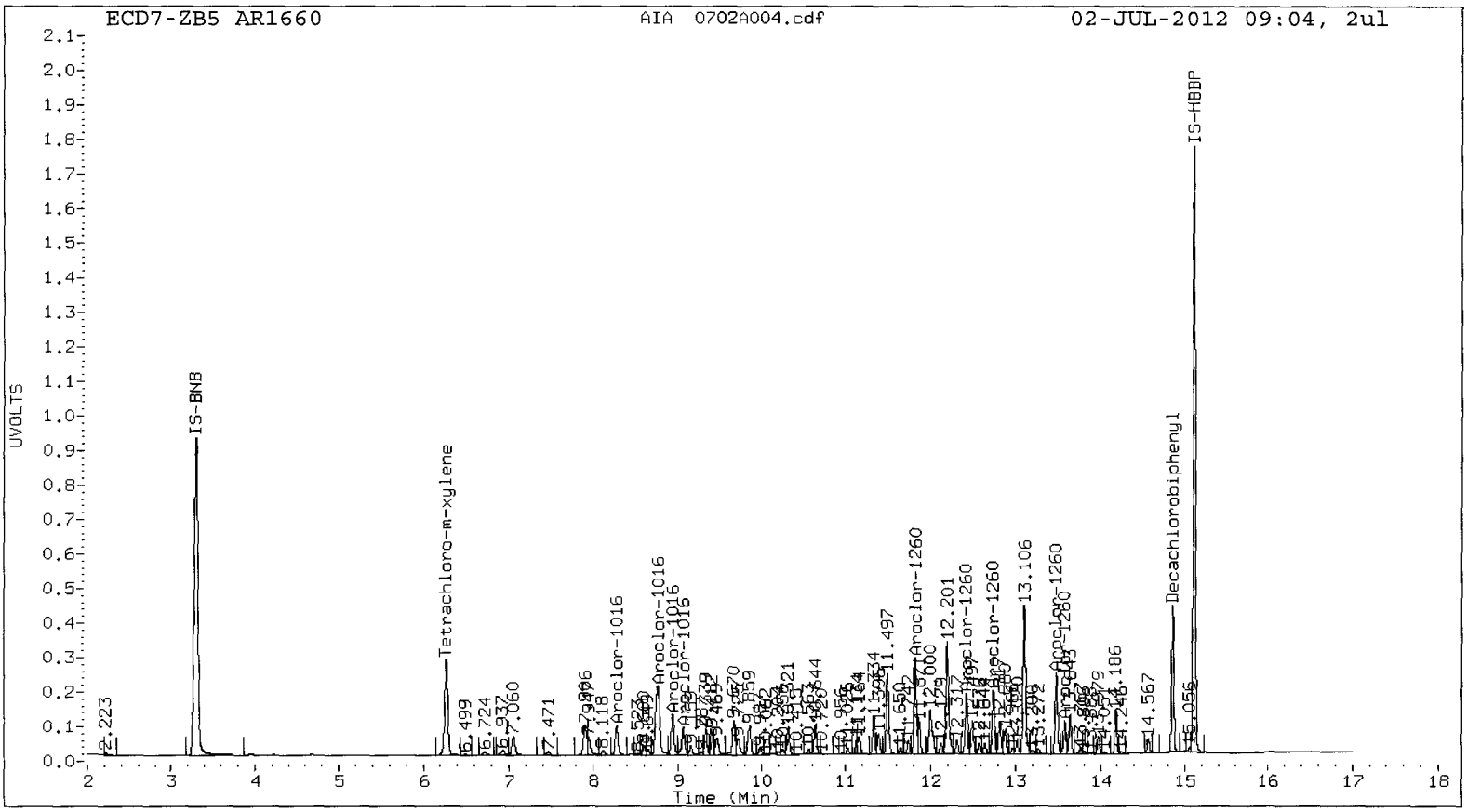
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	Shift	Area	Amount
Aroclor-1016	1	8.280	-0.004	417363	246.3	1	8.524	-0.003	1088642	233.7
Aroclor-1016	2	8.769	-0.004	1434348	246.6	2	9.257	-0.002	2305104	236.8
Aroclor-1016	3	8.942	-0.004	561237	245.0	3	9.683	-0.003	593857	236.5
Aroclor-1016	4	9.071	-0.003	385171	245.8	4	9.791	-0.002	677005	231.7
Total Col1Ave (4 peaks):				245.9		Total Col2Ave (4 peaks):			234.7	RPD = 5
Corrected Ave (3 peaks):				245.7		Corrected Ave (3 peaks):			234.0	RPD = 5
Aroclor-1260	1	11.824	-0.002	1098433	236.3	1	12.721	-0.002	1611953	220.8
Aroclor-1260	2	12.428	-0.002	725123	236.8	2	13.496	-0.001	2585121	225.5
Aroclor-1260	3	12.743	-0.002	742120	240.4	3	13.991	-0.001	1767711	228.8
Aroclor-1260	4	13.479	-0.001	972002	244.7	4	14.549	-0.001	704271	247.9
Aroclor-1260	5	13.579	-0.001	381112	243.2	NS	---			----
Total Col1Ave (5 peaks):				240.3		Total Col2Ave (4 peaks):			230.7	RPD = 4
Corrected Ave (4 peaks):				239.2		Corrected Ave (3 peaks):			225.0	RPD = 6

Total PCB Area Col1 (6.377 - 14.761) = 21520716 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 33407872 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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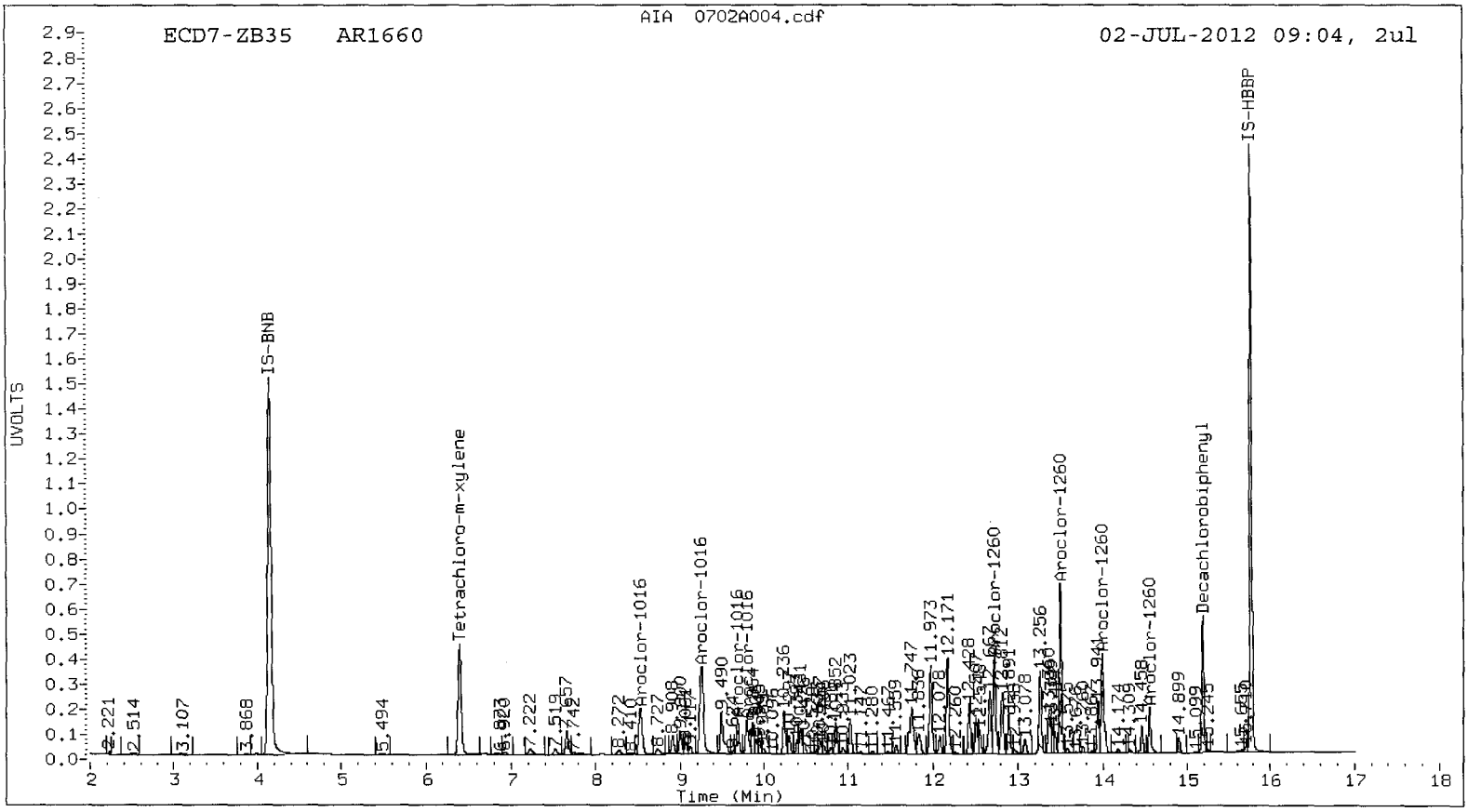
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A005.d
Data file 2: 20120627.B/0702-2.b/0702A005.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UZ99MBS1
Client ID: UZ99MBS1
Injection Date: 02-JUL-2012 09:25
Report Date: 07/03/2012 08:11
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.274	-0.003	2551130	6.395	-0.004	4069730	28.2	27.4	2.9	Tetrachloro-m-xylene
14.860	0.000	2720976	15.185	-0.002	3353831	25.8	24.5	5.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.5	68.5
Decachlorobiphenyl	64.5	61.3

A 07/03/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	7441540	30.1
Hexabromobiphenyl	5604480	8796548	57.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	11469664	23.4
Hexabromobiphenyl	7801648	11631800	49.1

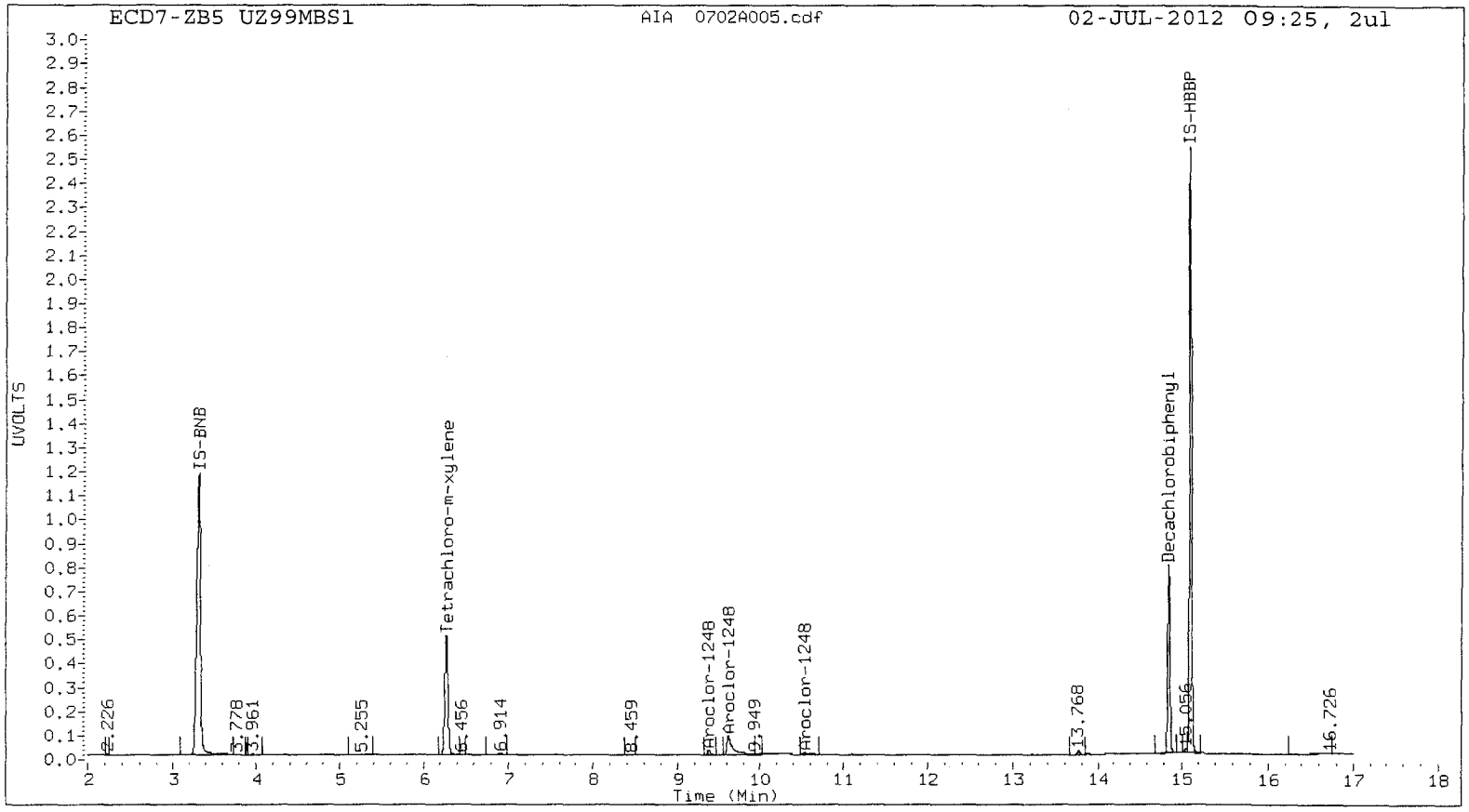
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	7.237	0.021	52706	30.7
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	7.665	0.008	15475	4.9
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	9.780	0.099	77477	31.7
Aroclor-1242	4	---			0.0	4	11.098	-0.047	234742	59.8
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	9.380	0.038	88701	39.5	1	9.780	-0.014	77477	18.2
Aroclor-1248	2	9.619	-0.054	735597	259.2	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	10.542	-0.021	42106	12.7	4	11.098	-0.051	234742	37.0
	Total Col1Ave (3 peaks):			103.8		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	11.098	0.073	234742	43.4
Aroclor-1254	3	---			0.0	3	11.618	0.057	27855	6.7
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (6.377 - 14.761) = 1015759 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 2217233 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Tetrachloro-m-xylene
Aroclor-1248
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Aroclor-1248
Decachlorobiphenyl
IS-HBBP
2.226
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5.255
6.456
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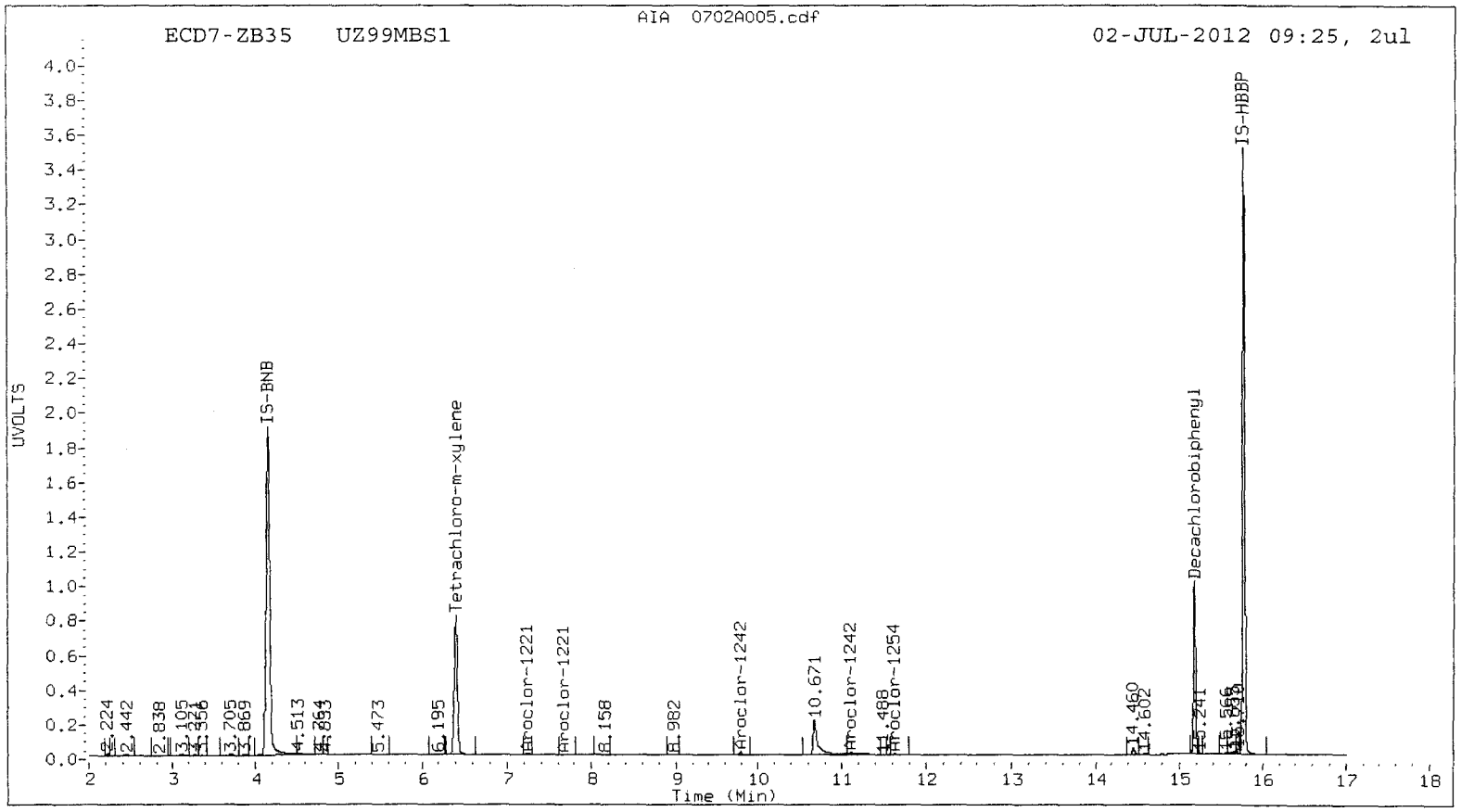
8.459
9.949
13.768
15.056
16.726
Time (Min)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IS-BNB
Tetrachloro-m-xylene
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Aroclor-1221
Aroclor-1242
Aroclor-1242
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
2.224
2.442
2.838
3.705
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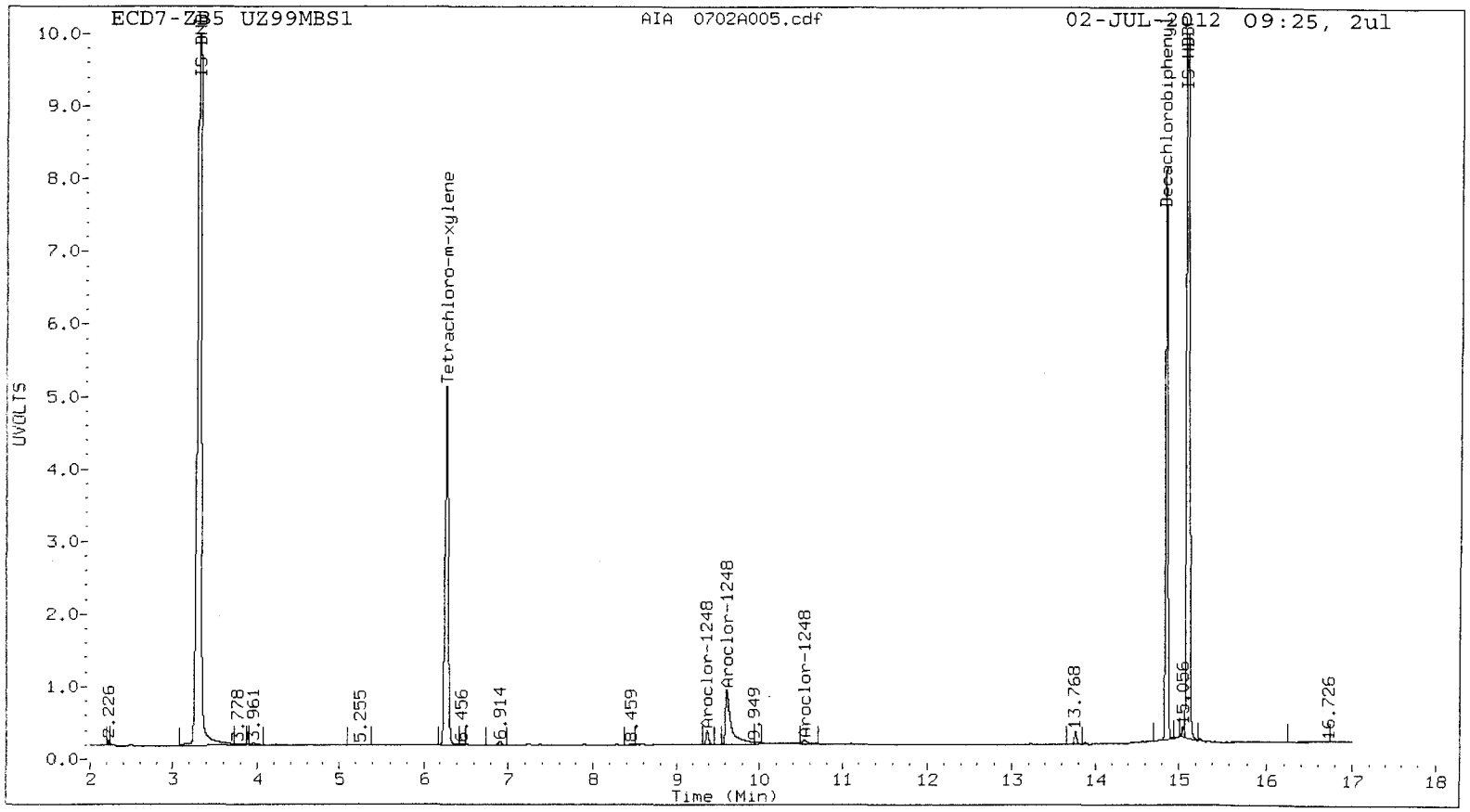
5.473
6.195
8.158
8.982
10.671
14.460
14.602
15.241
Time (Min)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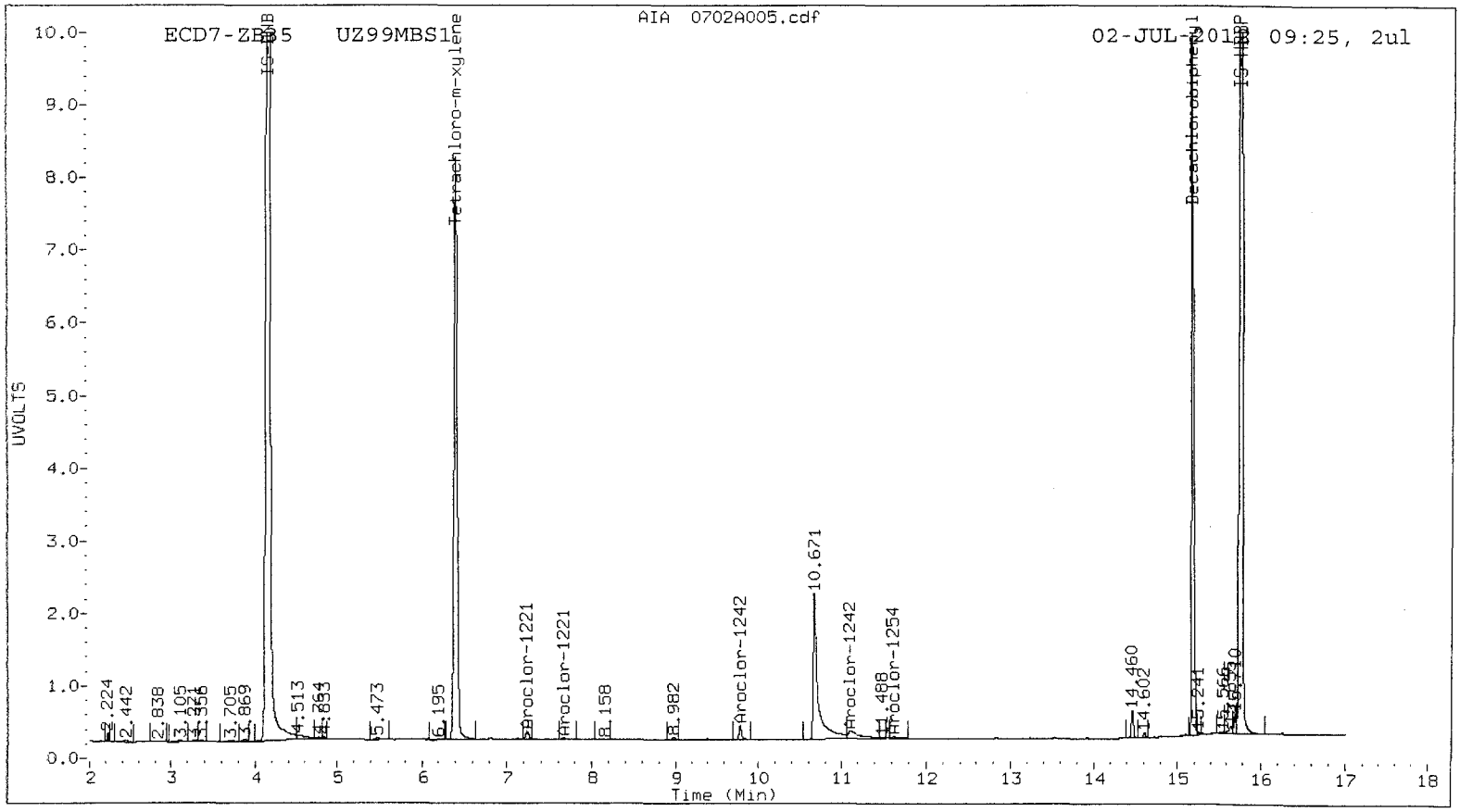
02-JUL-2012 09:25, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
2.226
3.778
3.961
5.255
6.456
6.914
8.459
9.949
13.768
15.056
16.726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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1221
Aroclor-1242
Aroclor-1242
Aroclor-1254
10.671
2.224
2.442
2.838
3.105
3.705
3.869
4.513
5.473
6.195
8.158
8.982
11.488
14.460
14.602
15.241

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A006.d
Data file 2: 20120627.B/0702-2.b/0702A006.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UZ99LCSS1
Client ID: UZ99LCSS1
Injection Date: 02-JUL-2012 09:46
Report Date: 07/03/2012 08:11
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.275	-0.002	2501416	6.396	-0.002	3943457	29.2	28.0	4.4	Tetrachloro-m-xylene
14.860	-0.001	2671290	15.186	-0.001	3312797	26.3	25.1	4.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	73.0	69.9
Decachlorobiphenyl	65.8	62.8

JL 07/03/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	7040149	23.1
Hexabromobiphenyl	5604480	8457582	50.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	10890829	17.2
Hexabromobiphenyl	7801648	11211573	43.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.282	-0.002	750606	365.0	1	8.525	-0.002	1854423	328.4
Aroclor-1016	2	8.770	-0.002	2604542	368.9	2	9.258	-0.002	4033417	341.7
Aroclor-1016	3	8.943	-0.003	1012825	364.3	3	9.684	-0.002	1051241	345.3
Aroclor-1016	4	9.072	-0.002	711179	374.0	4	9.791	-0.002	1141694	322.2
Total Col1Ave (4 peaks):				368.1		Total Col2Ave (4 peaks):			334.4	RPD = 10
Corrected Ave (3 peaks):				366.1		Corrected Ave (3 peaks):			330.8	RPD = 10
Aroclor-1221	1	6.726	0.002	91331	106.8	1	7.223	0.006	211136	129.4
Aroclor-1221	2	6.938	0.002	136611	212.9	2	7.520	0.003	197427	196.9
Aroclor-1221	3	7.061	0.002	516311	242.2	3	7.658	0.001	781816	258.4
Aroclor-1221	NS	---			----	4	7.743	0.001	72826	125.1
Total Col1Ave (3 peaks):				187.3		Total Col2Ave (4 peaks):			177.4	RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			150.5	
Aroclor-1232	1	8.282	0.003	750606	922.0	1	8.525	0.002	1854423	761.4
Aroclor-1232	2	8.770	0.003	2604542	940.9	2	9.258	0.002	4033417	867.0
Aroclor-1232	3	8.943	0.002	1012825	921.7	3	9.684	0.001	1051241	847.3
Aroclor-1232	4	10.321	0.008	644115	514.2	4	10.237	0.001	1334356	731.5
Total Col1Ave (4 peaks):				824.7		Total Col2Ave (4 peaks):			801.8	RPD = 3
Corrected Ave (3 peaks):				786.0		Corrected Ave (3 peaks):			780.1	RPD = 1
Aroclor-1242	1	8.282	0.005	750606	468.2	1	8.525	0.005	1854423	444.2
Aroclor-1242	2	8.770	0.005	2604542	475.0	2	9.258	0.005	4033417	459.0
Aroclor-1242	3	8.943	0.004	1012825	470.7	3	9.684	0.003	1051241	452.8
Aroclor-1242	4	10.562	0.003	143990	71.5	4	11.146	0.001	185742	49.8
Total Col1Ave (4 peaks):				371.4		Total Col2Ave (4 peaks):			351.5	RPD = 6
Corrected Ave (3 peaks):				336.8		Corrected Ave (3 peaks):			315.6	RPD = 7
Aroclor-1248	1	9.340	-0.002	592787	278.8	1	9.791	-0.002	1141694	282.6
Aroclor-1248	2	9.670	-0.002	797107	296.9	2	10.237	-0.002	1334356	298.4
Aroclor-1248	3	10.321	0.006	644115	160.6	3	10.786	-0.003	219942	48.0
Aroclor-1248	4	10.562	0.000	143990	45.8	4	11.146	-0.002	185742	30.8
Total Col1Ave (4 peaks):				195.5		Total Col2Ave (4 peaks):			165.0	RPD = 17
Corrected Ave (3 peaks):				161.7		Corrected Ave (3 peaks):			120.5	RPD = 29
Aroclor-1254	1	10.321	-0.002	644115	220.4	1	10.853	-0.001	886562	220.6
Aroclor-1254	2	10.645	0.000	669011	159.0	2	11.023	-0.001	1000843	194.7
Aroclor-1254	3	11.027	-0.001	144210	56.2	3	11.561	0.000	260154	65.6
Aroclor-1254	4	11.165	-0.001	401489	78.3	4	11.747	0.034	2138983	244.2
Aroclor-1254	5	11.872	-0.011	671673	205.0	5	12.507	0.008	1030023	203.9
Total Col1Ave (5 peaks):				143.8		Total Col2Ave (5 peaks):			185.8	RPD = 26
Corrected Ave (4 peaks):				124.6		Corrected Ave (4 peaks):			171.2	RPD = 31
Aroclor-1260	1	11.824	-0.001	2016664	310.5	1	12.720	-0.002	2881814	289.3
Aroclor-1260	2	12.428	-0.001	1342923	314.0	2	13.496	-0.001	4705639	300.8
Aroclor-1260	3	12.744	-0.002	1376950	319.3	3	13.991	-0.001	3166711	300.4
Aroclor-1260	4	13.478	-0.002	1814911	327.1	4	14.550	0.000	1201190	309.9
Aroclor-1260	5	13.578	-0.001	704393	321.8	NS	---			----
Total Col1Ave (5 peaks):				318.5		Total Col2Ave (4 peaks):			300.1	RPD = 6
Corrected Ave (4 peaks):				316.4		Corrected Ave (3 peaks):			296.8	RPD = 6
Aroclor-1262	1	12.428	0.000	1342923	191.1	1	12.811	-0.001	1859450	188.1
Aroclor-1262	2	12.744	0.000	1376950	270.1	2	13.256	-0.001	1877455	266.1
Aroclor-1262	3	13.106	0.000	3427086	246.7	3	13.496	0.000	4705639	247.4
Aroclor-1262	4	13.578	-0.001	704393	149.8	4	13.942	0.000	1318352	181.1
Aroclor-1262	5	13.643	0.000	818856	162.4	5	13.991	-0.002	3166711	268.3
Total Col1Ave (5 peaks):				204.0		Total Col2Ave (5 peaks):			230.2	RPD = 12
Corrected Ave (4 peaks):				187.5		Corrected Ave (4 peaks):			220.7	RPD = 16
Aroclor-1268	1	13.578	-0.001	704393	48.3	1	13.942	0.001	1318352	69.9
Aroclor-1268	2	13.643	0.002	818856	61.0	2	13.991	-0.004	3166711	176.8

Aroclor-1268	3	13.980	0.015	381624	33.4	3	14.309	0.000	69432	7.0
Aroclor-1268	4	14.567	0.000	246816	6.9	4	14.899	-0.001	335236	8.3

Total Col1Ave (4 peaks): 37.4 Total Col2Ave (4 peaks): 65.5 RPD = 55*

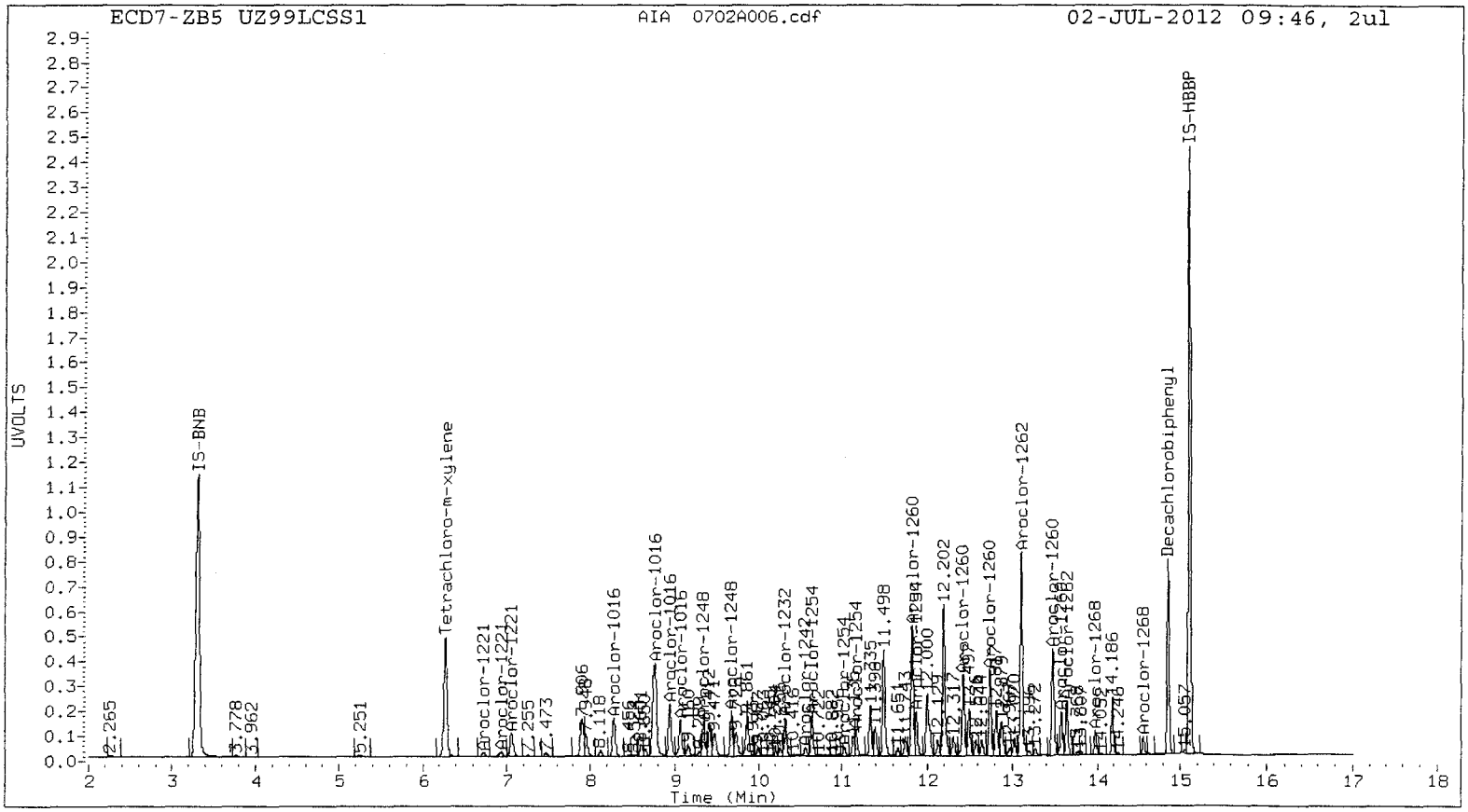
Corrected Ave (3 peaks): 29.6 Corrected Ave (3 peaks): 28.4 RPD = 4

Total PCB Area Col1 (6.377 - 14.761) = 39722861 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 59409677 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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IS-HBBP
Decachlorobiphenyl
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Aroclor-1016
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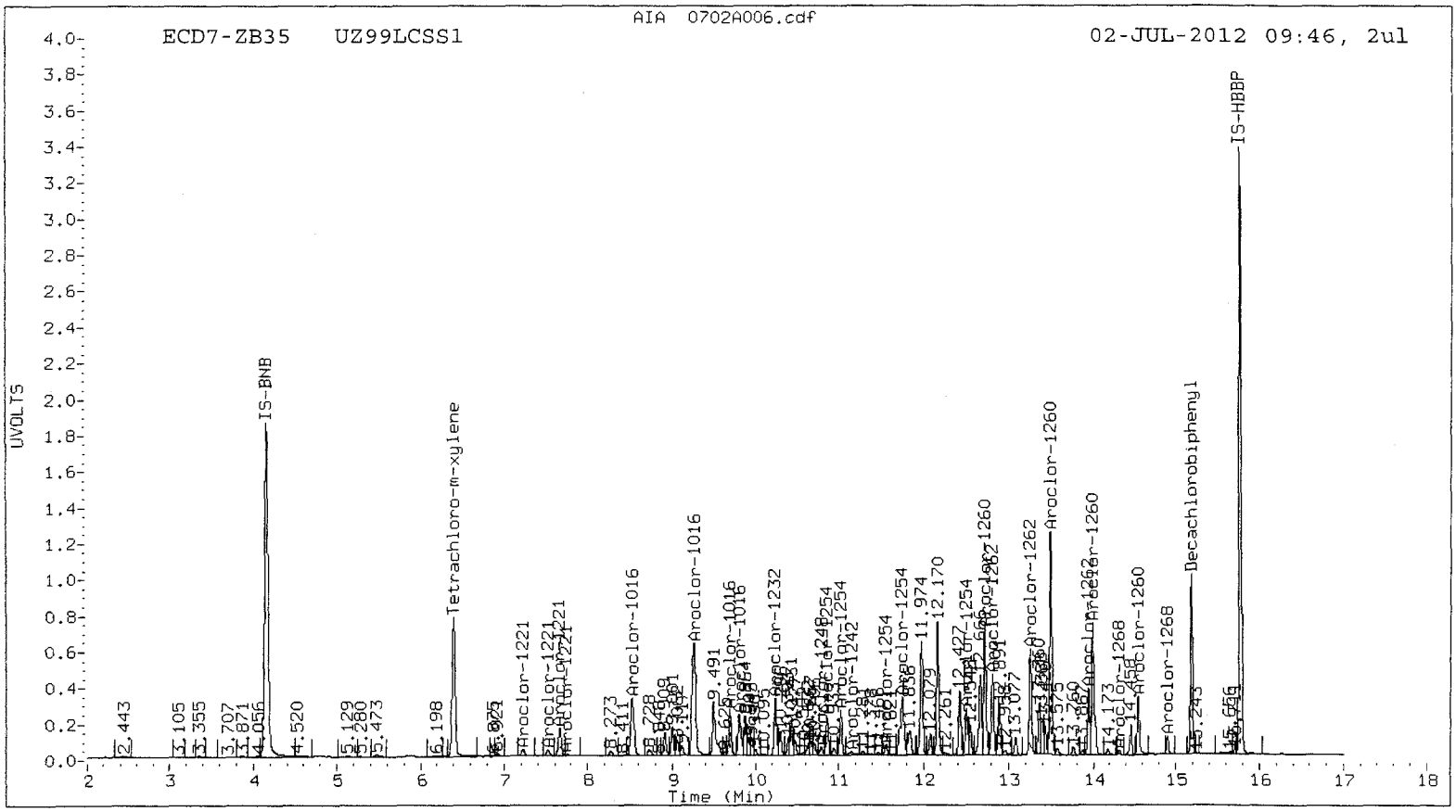
Aroclor-1262
Aroclor-1268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IS-HBBP
Decachlorobiphenyl
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Aroclor-1016
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Aroclor-1254
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Aroclor-1262
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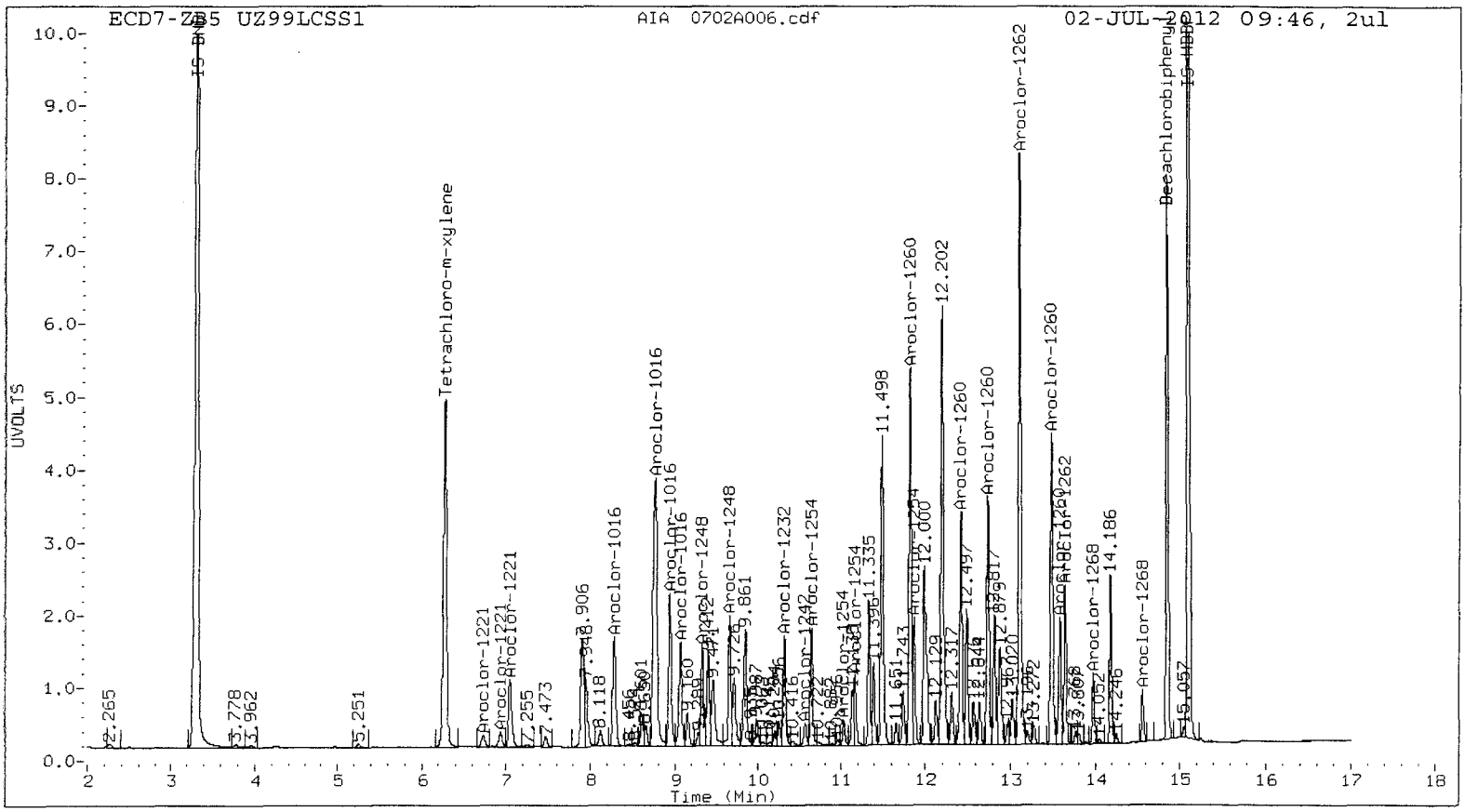
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AIA 0702A006.cdf
02-JUL-2012 09:46, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1248
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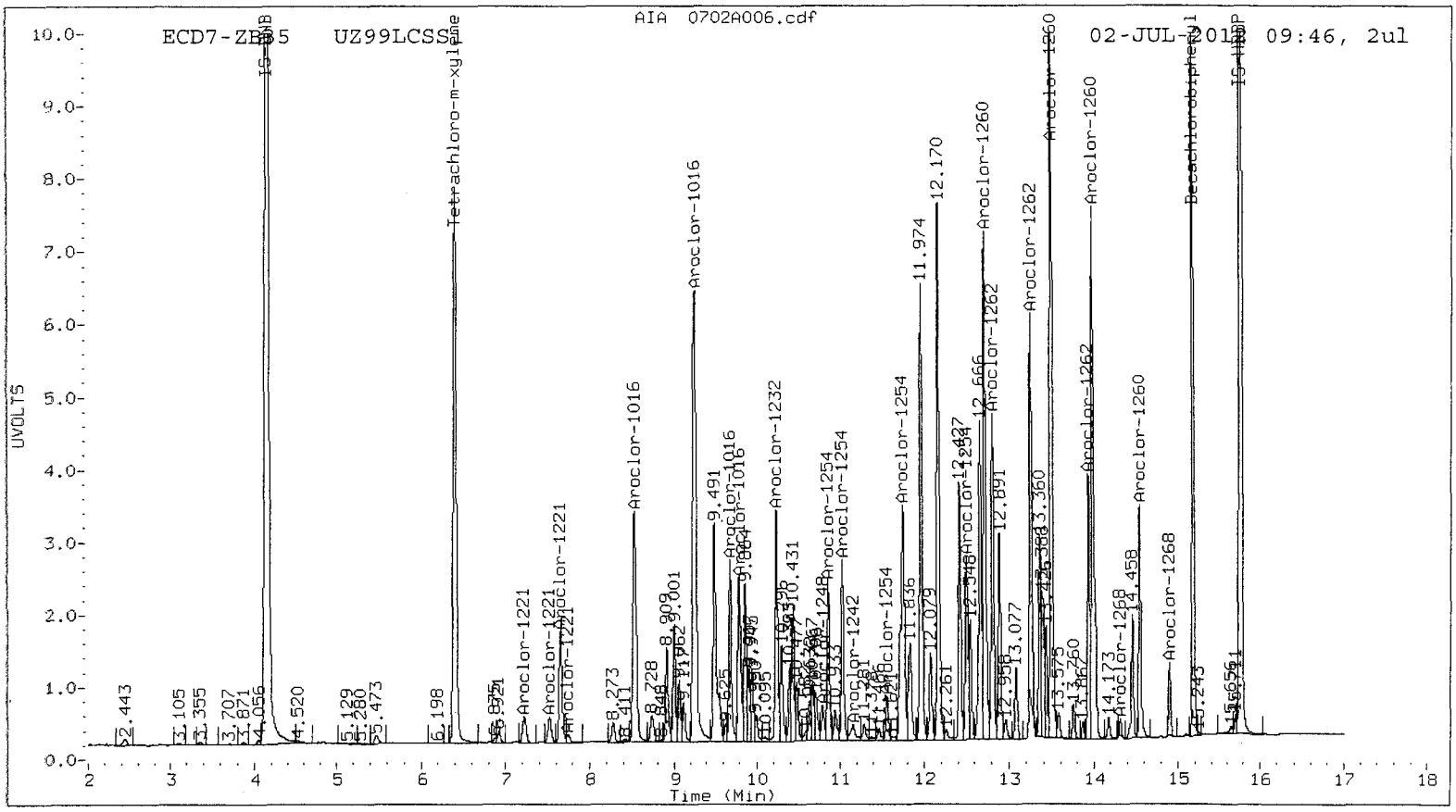
Aroclor-1262
Aroclor-1268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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1242
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A007.d
Data file 2: 20120627.B/0702-2.b/0702A007.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UZ99LCSDS1
Client ID: UZ99LCSDS1
Injection Date: 02-JUL-2012 10:07
Report Date: 07/03/2012 08:11
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.277	-0.001	2492579	6.397	-0.001	3932519	29.6	28.2	4.7	Tetrachloro-m-xylene
14.860	0.000	2670477	15.186	-0.001	3333889	26.7	25.6	4.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	74.0	70.6
Decachlorobiphenyl	66.9	64.0

JL 07/03/12

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	6924550	21.1
Hexabromobiphenyl	5604480	8327001	48.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	10756853	15.7
Hexabromobiphenyl	7801648	11074887	42.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.283	-0.002	747923	369.8	1	8.527	-0.001	1848308	331.4
Aroclor-1016	2	8.771	-0.002	2595912	373.8	2	9.258	-0.001	4025671	345.3
Aroclor-1016	3	8.944	-0.002	1009654	369.2	3	9.685	-0.001	1043530	347.0
Aroclor-1016	4	9.073	-0.001	706312	377.6	4	9.793	-0.001	1139852	325.7
Total Col1Ave (4 peaks):				372.6		Total Col2Ave (4 peaks):			337.4	RPD = 10
Corrected Ave (3 peaks):				370.9		Corrected Ave (3 peaks):			334.1	RPD = 10
Aroclor-1221	1	6.727	0.002	91089	108.3	1	7.225	0.008	209455	130.0
Aroclor-1221	2	6.939	0.003	135308	214.4	2	7.521	0.004	194400	196.3
Aroclor-1221	3	7.062	0.003	514840	245.5	3	7.659	0.003	780476	261.2
Aroclor-1221	NS	---			----	4	7.745	0.002	69081	120.1
Total Col1Ave (3 peaks):				189.4		Total Col2Ave (4 peaks):			176.9	RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			148.8	
Aroclor-1232	1	8.283	0.004	747923	934.0	1	8.527	0.003	1848308	768.3
Aroclor-1232	2	8.771	0.003	2595912	953.4	2	9.258	0.003	4025671	876.1
Aroclor-1232	3	8.944	0.002	1009654	934.2	3	9.685	0.002	1043530	851.5
Aroclor-1232	4	10.322	0.009	631888	512.9	4	10.237	0.001	1313341	729.0
Total Col1Ave (4 peaks):				833.6		Total Col2Ave (4 peaks):			806.2	RPD = 3
Corrected Ave (3 peaks):				793.7		Corrected Ave (3 peaks):			783.0	RPD = 1
Aroclor-1242	1	8.283	0.005	747923	474.4	1	8.527	0.007	1848308	448.2
Aroclor-1242	2	8.771	0.005	2595912	481.4	2	9.258	0.005	4025671	463.8
Aroclor-1242	3	8.944	0.005	1009654	477.1	3	9.685	0.004	1043530	455.1
Aroclor-1242	4	10.563	0.004	138512	69.9	4	11.146	0.001	150813	41.0
Total Col1Ave (4 peaks):				375.7		Total Col2Ave (4 peaks):			352.0	RPD = 7
Corrected Ave (3 peaks):				340.5		Corrected Ave (3 peaks):			314.8	RPD = 8
Aroclor-1248	1	9.341	-0.001	593180	283.6	1	9.793	-0.001	1139852	285.6
Aroclor-1248	2	9.671	-0.001	772878	292.7	2	10.237	-0.002	1313341	297.4
Aroclor-1248	3	10.322	0.007	631888	160.1	3	10.787	-0.002	196599	43.4
Aroclor-1248	4	10.563	0.001	138512	44.8	4	11.146	-0.002	150813	25.3
Total Col1Ave (4 peaks):				195.3		Total Col2Ave (4 peaks):			162.9	RPD = 18
Corrected Ave (3 peaks):				162.9		Corrected Ave (3 peaks):			118.1	RPD = 32
Aroclor-1254	1	10.322	-0.001	631888	219.8	1	10.853	-0.001	863414	217.5
Aroclor-1254	2	10.646	0.001	657422	158.9	2	11.024	-0.001	978565	192.8
Aroclor-1254	3	11.028	0.000	134245	53.2	3	11.561	0.000	241025	61.5
Aroclor-1254	4	11.165	-0.001	391228	77.6	4	11.748	0.035	2117789	244.8
Aroclor-1254	5	11.872	-0.011	664585	206.2	5	12.507	0.007	1021451	204.7
Total Col1Ave (5 peaks):				143.1		Total Col2Ave (5 peaks):			184.3	RPD = 25
Corrected Ave (4 peaks):				124.0		Corrected Ave (4 peaks):			169.1	RPD = 31
Aroclor-1260	1	11.825	-0.001	2002497	313.2	1	12.721	-0.002	2882537	293.0
Aroclor-1260	2	12.429	0.000	1336491	317.4	2	13.496	-0.001	4713708	305.0
Aroclor-1260	3	12.744	-0.001	1371693	323.1	3	13.992	0.000	3168881	304.3
Aroclor-1260	4	13.479	-0.001	1810546	331.4	4	14.551	0.000	1207173	315.2
Aroclor-1260	5	13.580	0.000	704838	327.1	NS	---			----
Total Col1Ave (5 peaks):				322.4		Total Col2Ave (4 peaks):			304.4	RPD = 6
Corrected Ave (4 peaks):				320.2		Corrected Ave (3 peaks):			300.7	RPD = 6
Aroclor-1262	1	12.429	0.001	1336491	193.2	1	12.812	0.000	1866171	191.1
Aroclor-1262	2	12.744	0.001	1371693	273.2	2	13.256	-0.001	1912378	274.4
Aroclor-1262	3	13.107	0.000	3421091	250.1	3	13.496	0.000	4713708	250.9
Aroclor-1262	4	13.580	0.001	704838	152.3	4	13.942	0.000	1321141	183.7
Aroclor-1262	5	13.643	0.000	817468	164.7	5	13.992	-0.001	3168881	271.8
Total Col1Ave (5 peaks):				206.7		Total Col2Ave (5 peaks):			234.4	RPD = 13
Corrected Ave (4 peaks):				190.1		Corrected Ave (4 peaks):			224.4	RPD = 17
Aroclor-1268	1	13.580	0.000	704838	49.1	1	13.942	0.001	1321141	70.9
Aroclor-1268	2	13.643	0.002	817468	61.9	2	13.992	-0.003	3168881	179.1

Aroclor-1268	3	13.980	0.015	380947	33.9	3	14.309	-0.001	63950	6.6
Aroclor-1268	4	14.568	0.000	246365	7.0	4	14.900	0.000	329981	8.3

Total Col1Ave (4 peaks): 38.0 Total Col2Ave (4 peaks): 66.2 RPD = 54*

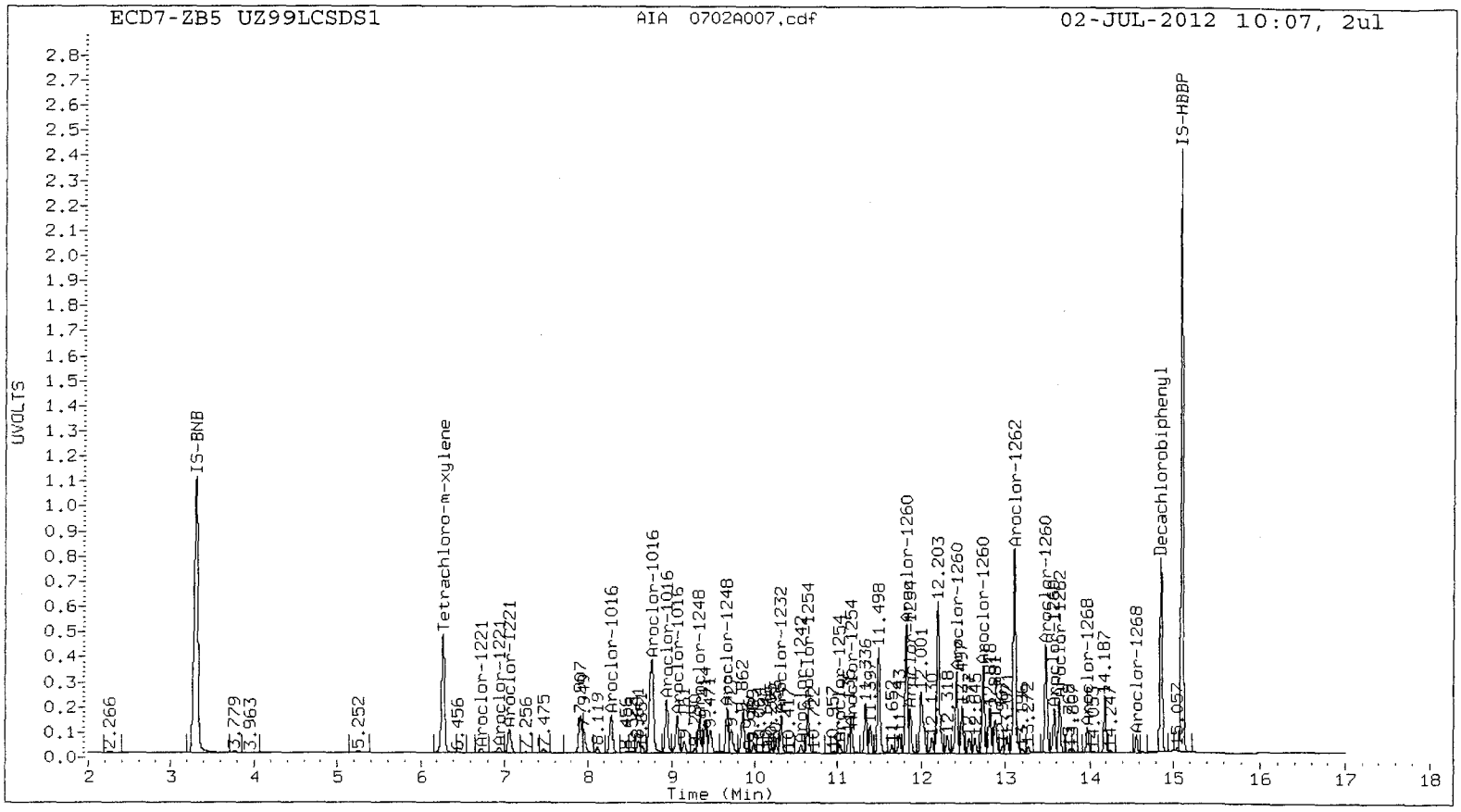
Corrected Ave (3 peaks): 30.0 Corrected Ave (3 peaks): 28.6 RPD = 5

Total PCB Area Col1 (6.377 - 14.761) = 39310416 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 58847237 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Aroclor-1262
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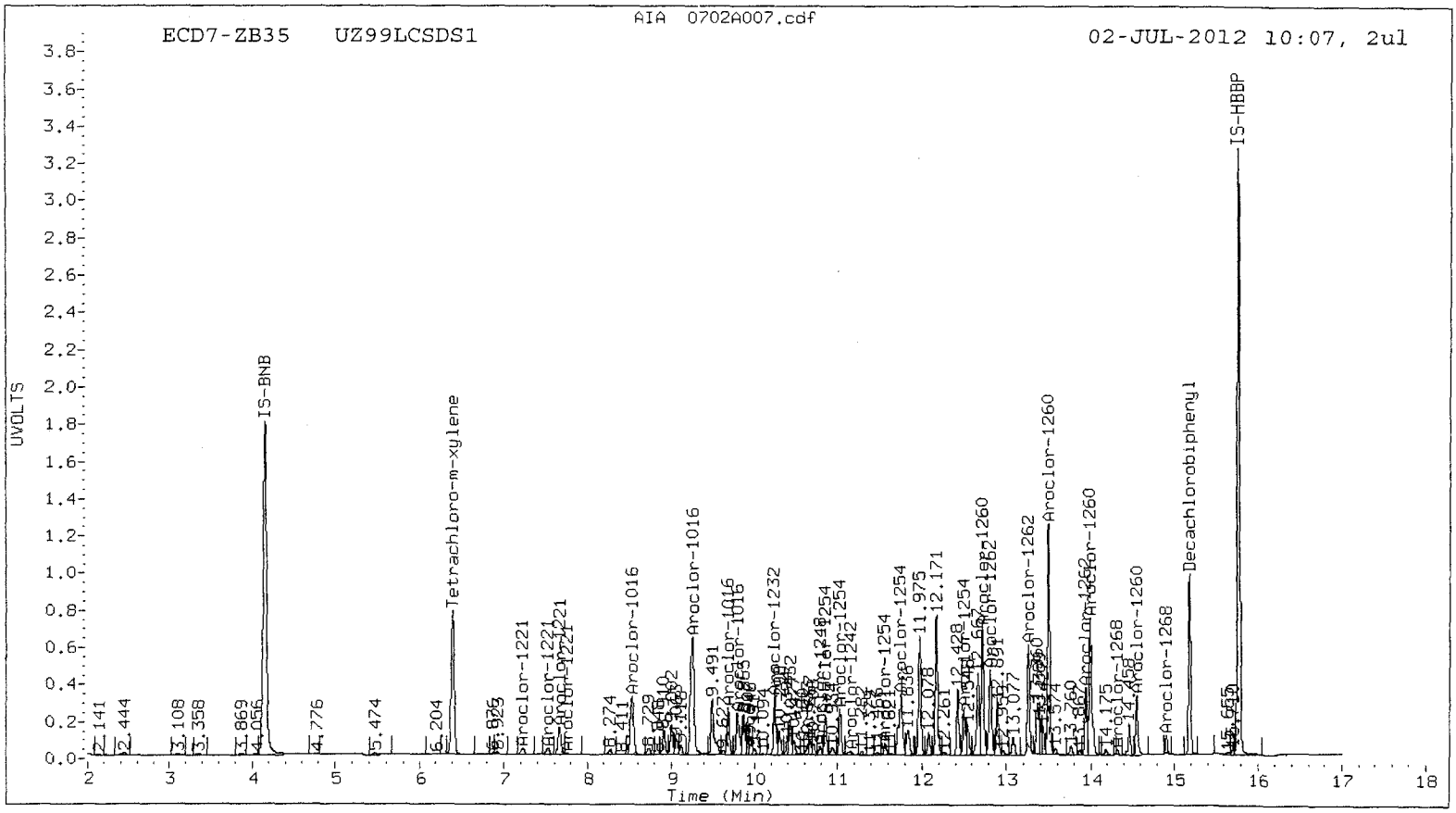
Decachlorobiphenyl
IS-HBBP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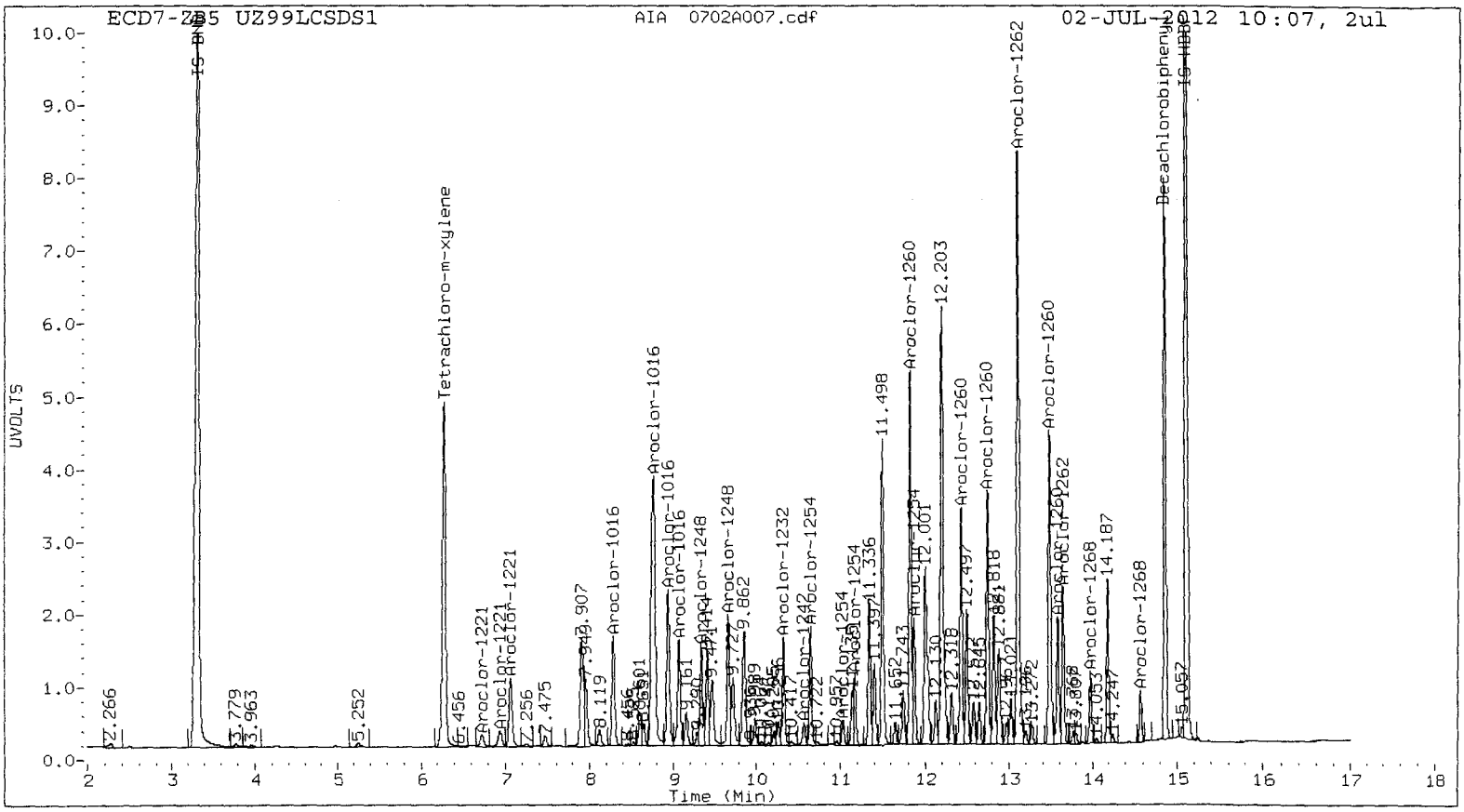
Decachlorobiphenyl
IS-HBBP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Decachlorobiphenyl
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Aroclor-1221
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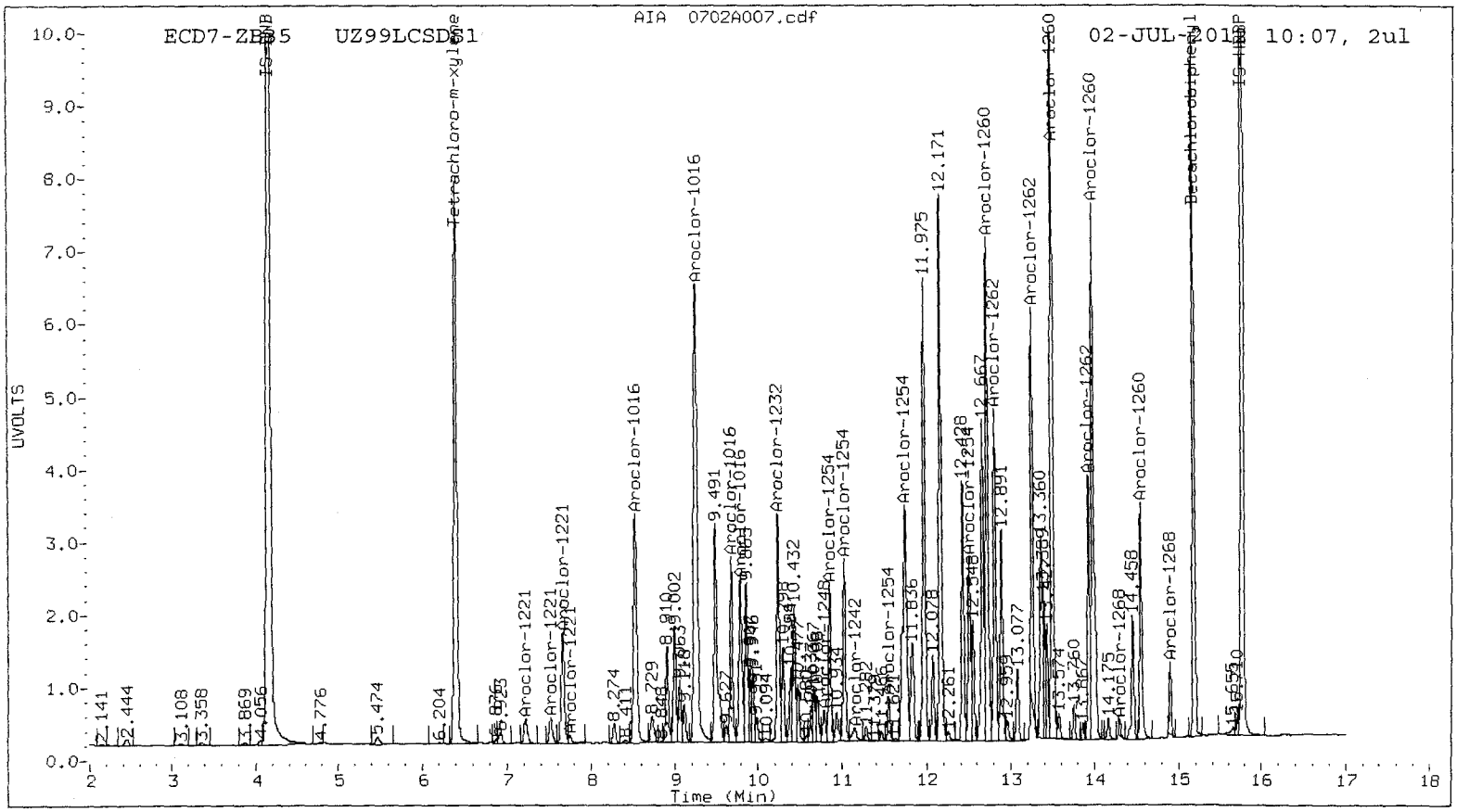
Aroclor-1262
Aroclor-1268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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
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Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A009.d
Data file 2: 20120627.B/0702-2.b/0702A009.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: UZ99A
Client ID: CB-002-06222012
Injection Date: 02-JUL-2012 10:49
Report Date: 07/03/2012 08:11
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.277	0.000	2355566	6.398	0.000	3672508	28.6	27.6	3.8	Tetrachloro-m-xylene
14.861	0.000	2122069	15.186	-0.001	2812299	24.9	23.6	5.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

JL 07/03/12

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	71.6	68.9
Decachlorobiphenyl	62.3	59.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	6765252	18.3
Hexabromobiphenyl	5604480	7105412	26.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	10289894	10.7
Hexabromobiphenyl	7801648	10129743	29.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

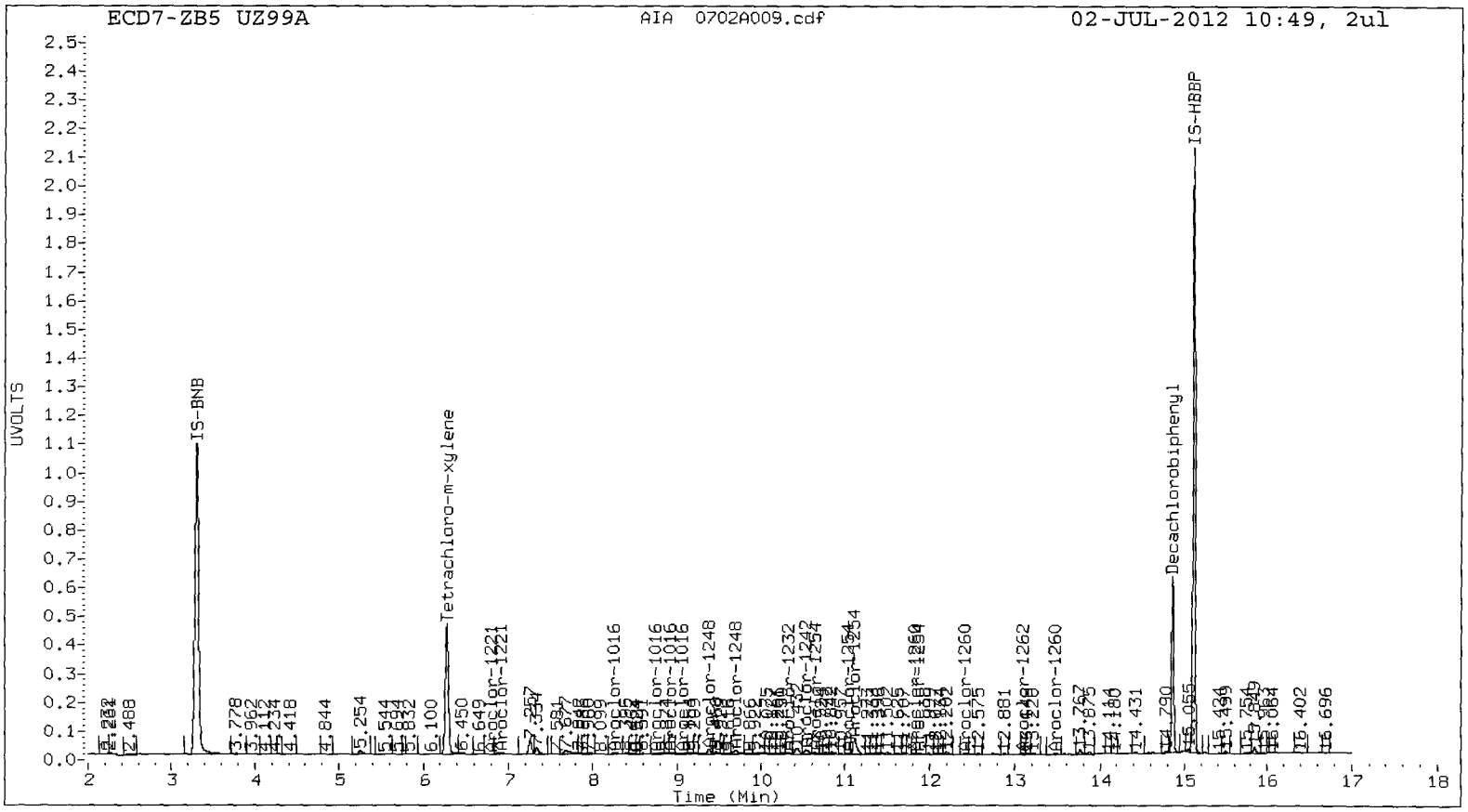
Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	8.254	-0.030	51161	25.9	1	---			0.0
Aroclor-1016	2	8.750	-0.022	52077	7.7	2	---			0.0
Aroclor-1016	3	8.914	-0.032	28103	10.5	3	---			0.0
Aroclor-1016	4	9.064	-0.009	49055	26.8	4	---			0.0
Total Col1Ave (4 peaks):				17.7		Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	6.796	0.072	19796	24.1	1	7.239	0.023	69917	45.4
Aroclor-1221	2	6.915	-0.021	84250	136.7	2	7.550	0.032	381688	402.8
Aroclor-1221	3	---			0.0	3	7.686	0.030	223861	78.3
Aroclor-1221	NS	---			----	4	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: 175.5				
Aroclor-1232	1	8.254	-0.025	51161	65.4	1	---			0.0
Aroclor-1232	2	8.750	-0.018	52077	19.6	2	---			0.0
Aroclor-1232	3	8.914	-0.027	28103	26.6	3	9.782	0.099	61158	52.2
Aroclor-1232	4	10.324	0.011	40769	33.9	4	10.249	0.012	37617	21.8
Total Col1Ave (4 peaks):				36.4		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	8.254	-0.023	51161	33.2	1	---			0.0
Aroclor-1242	2	8.750	-0.016	52077	9.9	2	---			0.0
Aroclor-1242	3	8.914	-0.025	28103	13.6	3	---			0.0
Aroclor-1242	4	10.531	-0.028	110397	57.0	4	---			0.0
Total Col1Ave (4 peaks):				28.4		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	9.381	0.039	132030	64.6	1	9.782	-0.011	61158	16.0
Aroclor-1248	2	9.696	0.023	125162	48.5	2	10.249	0.010	37617	8.9
Aroclor-1248	3	10.324	0.009	40769	10.6	3	10.787	-0.002	30599	7.1
Aroclor-1248	4	10.531	-0.032	110397	36.6	4	11.181	0.033	63695	11.2
Total Col1Ave (4 peaks):				40.1		Total Col2Ave (4 peaks):			10.8	RPD = 115*
Corrected Ave (3 peaks):				31.9		Corrected Ave (3 peaks):			9.1	RPD = 112*
Aroclor-1254	1	10.324	0.001	40769	14.5	1	10.853	-0.002	50654	13.3
Aroclor-1254	2	10.642	-0.003	42980	10.6	2	11.025	0.000	23039	4.7
Aroclor-1254	3	11.032	0.005	24542	9.9	3	11.562	0.001	14761	3.9
Aroclor-1254	4	11.113	-0.053	342084	69.4	4	11.712	-0.001	59150	7.1
Aroclor-1254	5	11.877	-0.006	28381	9.0	5	12.503	0.003	34644	7.3
Total Col1Ave (5 peaks):				22.7		Total Col2Ave (5 peaks):			7.3	RPD = 103*
Corrected Ave (4 peaks):				11.0		Corrected Ave (4 peaks):			5.8	RPD = 63*
Aroclor-1260	1	11.825	0.000	20305	3.7	1	12.720	-0.003	54064	6.0
Aroclor-1260	2	12.429	-0.001	13556	3.8	2	13.499	0.002	47708	3.4
Aroclor-1260	3	---			0.0	3	13.991	-0.001	33042	3.5
Aroclor-1260	4	13.478	-0.001	18089	3.9	4	14.523	-0.028	39363	11.2
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (3 peaks):				3.8		Total Col2Ave (4 peaks):			6.0	RPD = 45*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			4.3	
Aroclor-1262	1	12.429	0.001	13556	2.3	1	12.815	0.003	24456	2.7
Aroclor-1262	2	---			0.0	2	13.256	-0.001	25401	4.0
Aroclor-1262	3	13.106	-0.001	20839	1.8	3	13.499	0.003	47708	2.8
Aroclor-1262	4	---			0.0	4	13.941	-0.001	10629	1.6
Aroclor-1262	5	---			0.0	5	13.991	-0.002	33042	3.1
Col1Ave: <3 Quant Peaks						Col2Ave: 2.8				
Aroclor-1268	1	---			0.0	1	13.941	0.000	10629	0.6
Aroclor-1268	2	---			0.0	2	13.991	-0.004	33042	2.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (6.377 - 14.761) = 3193468 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 3222613 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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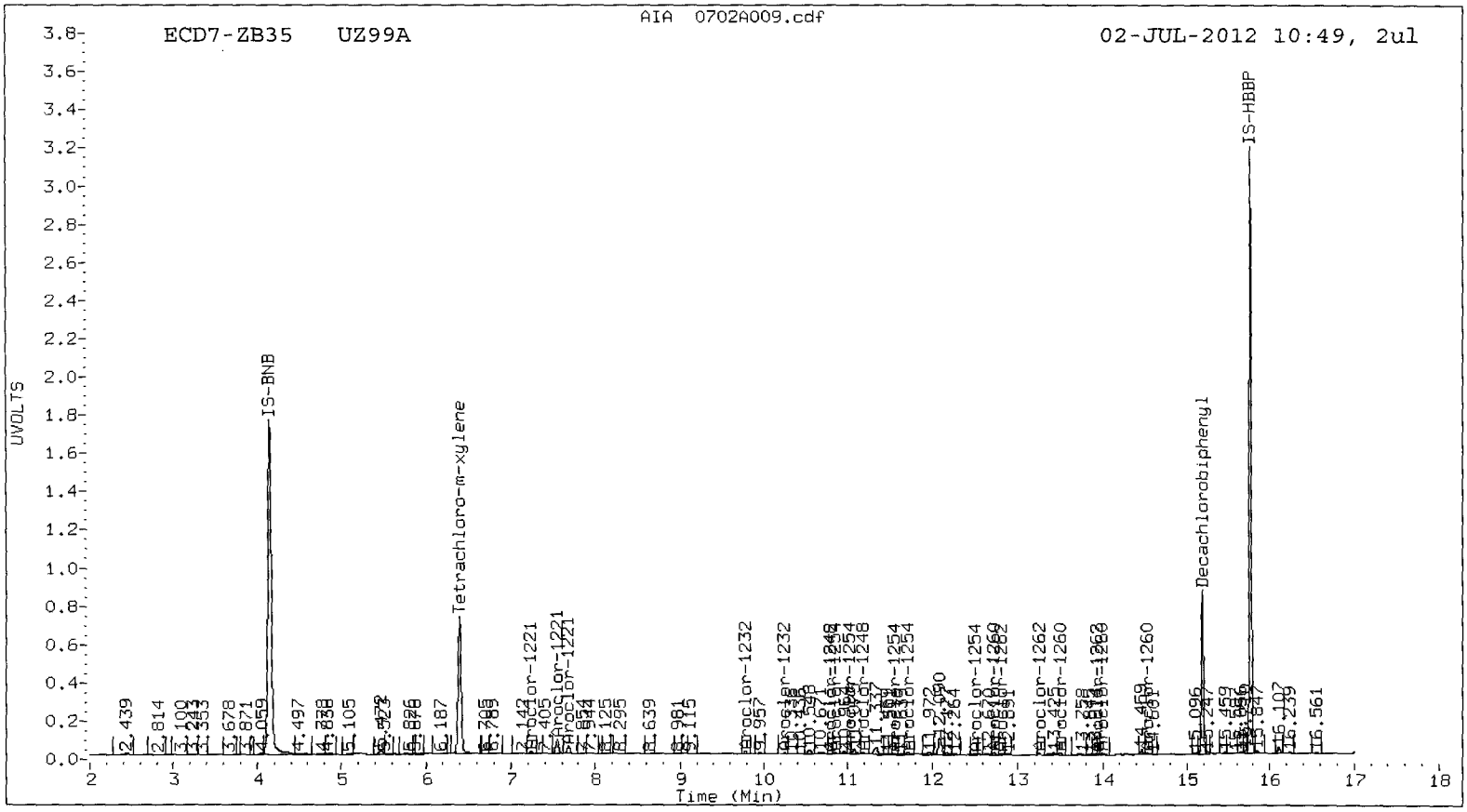
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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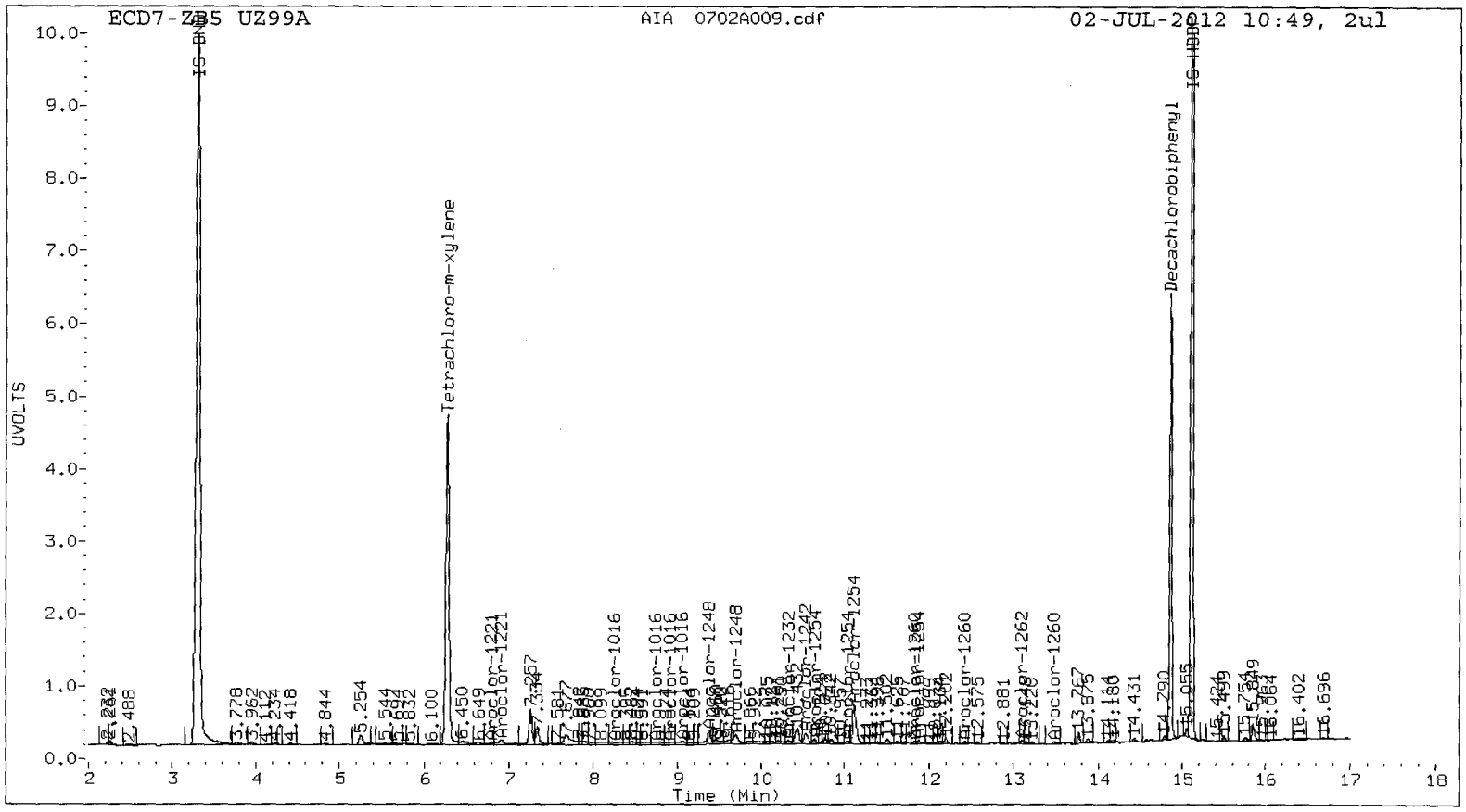
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Decachlorobiphenyl
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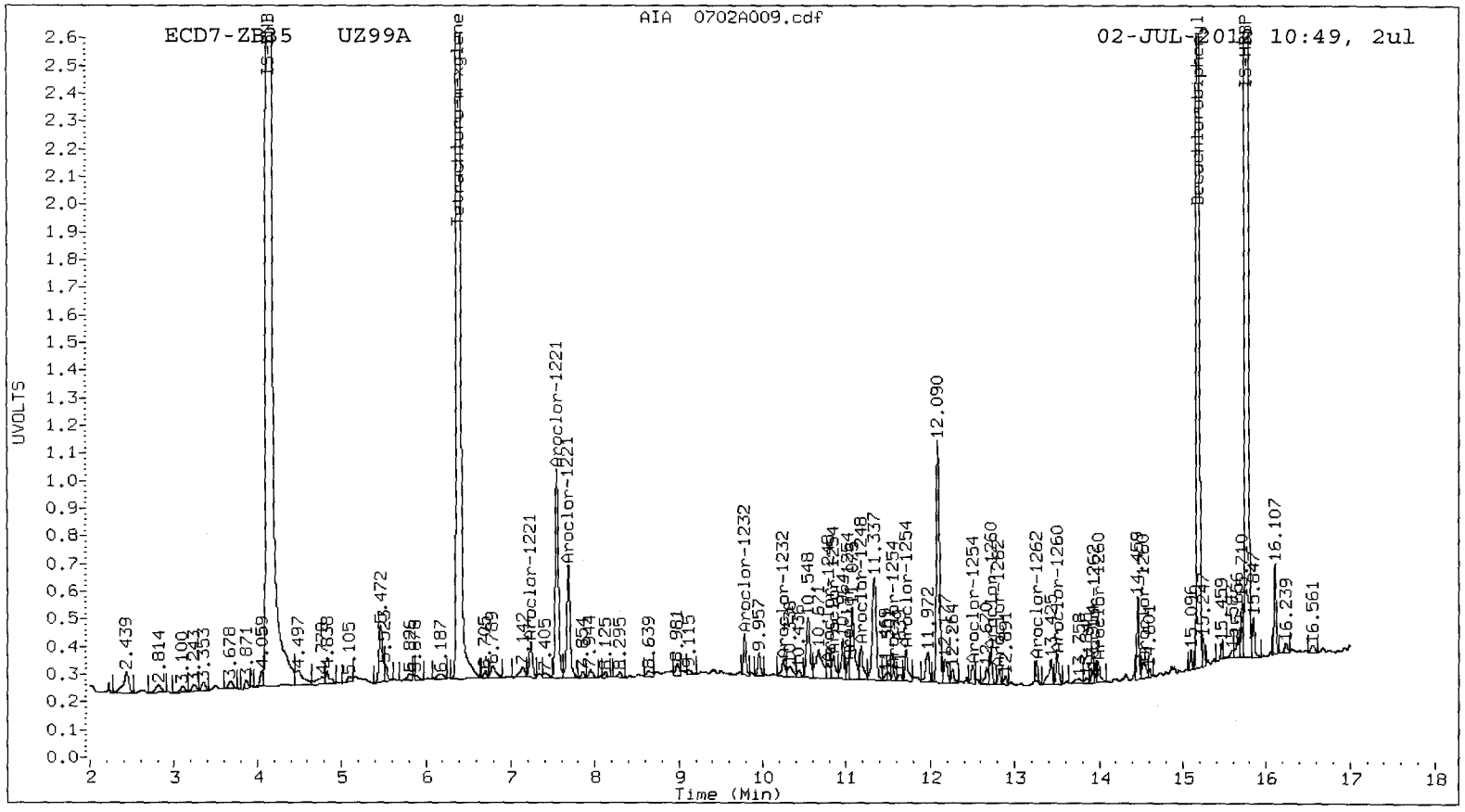
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A012.d
Data file 2: 20120627.B/0702-2.b/0702A012.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 02-JUL-2012 11:51
Report Date: 07/03/2012 08:11
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.277	0.000	1503992	6.398	-0.001	2462821	20.0	19.5	2.4	Tetrachloro-m-xylene
14.861	0.000	1365708	15.186	-0.001	1754695	19.0	17.9	6.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.0	48.8
Decachlorobiphenyl	47.4	44.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	6182779	8.1
Hexabromobiphenyl	5604480	6003152	7.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9734682	4.7
Hexabromobiphenyl	7801648	8357994	7.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1248	1	9.342	0.000	477611	255.8	1	9.793	0.000	891001	246.7
Aroclor-1248	2	9.673	0.000	589668	250.1	2	10.239	0.000	930888	232.9
Aroclor-1248	3	10.316	0.000	878948	249.5	3	10.789	0.000	988133	241.1
Aroclor-1248	4	10.562	0.000	675956	245.1	4	11.148	0.000	1293925	240.3

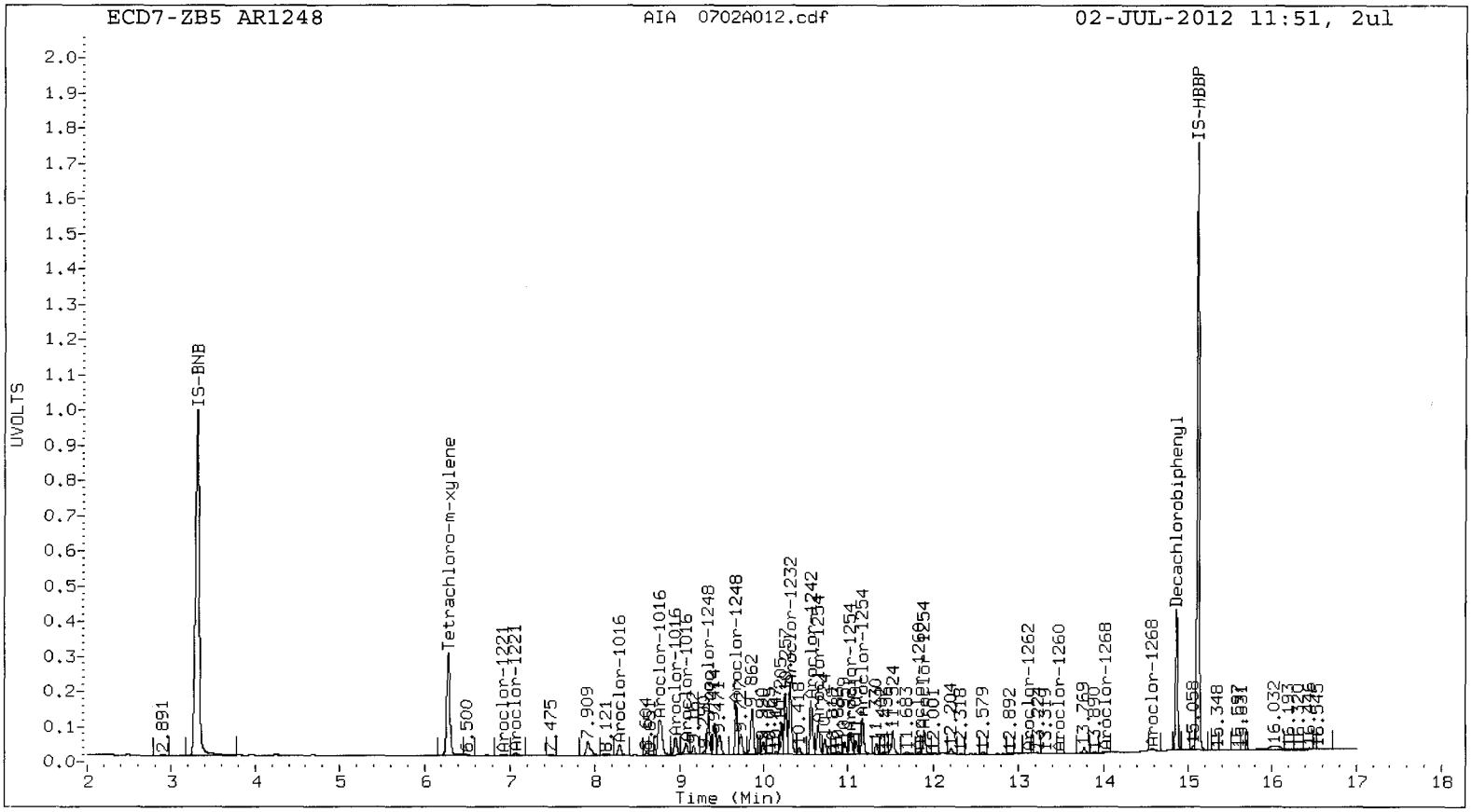
Total Col1Ave (4 peaks): 250.1 Total Col2Ave (4 peaks): 240.3 RPD = 4

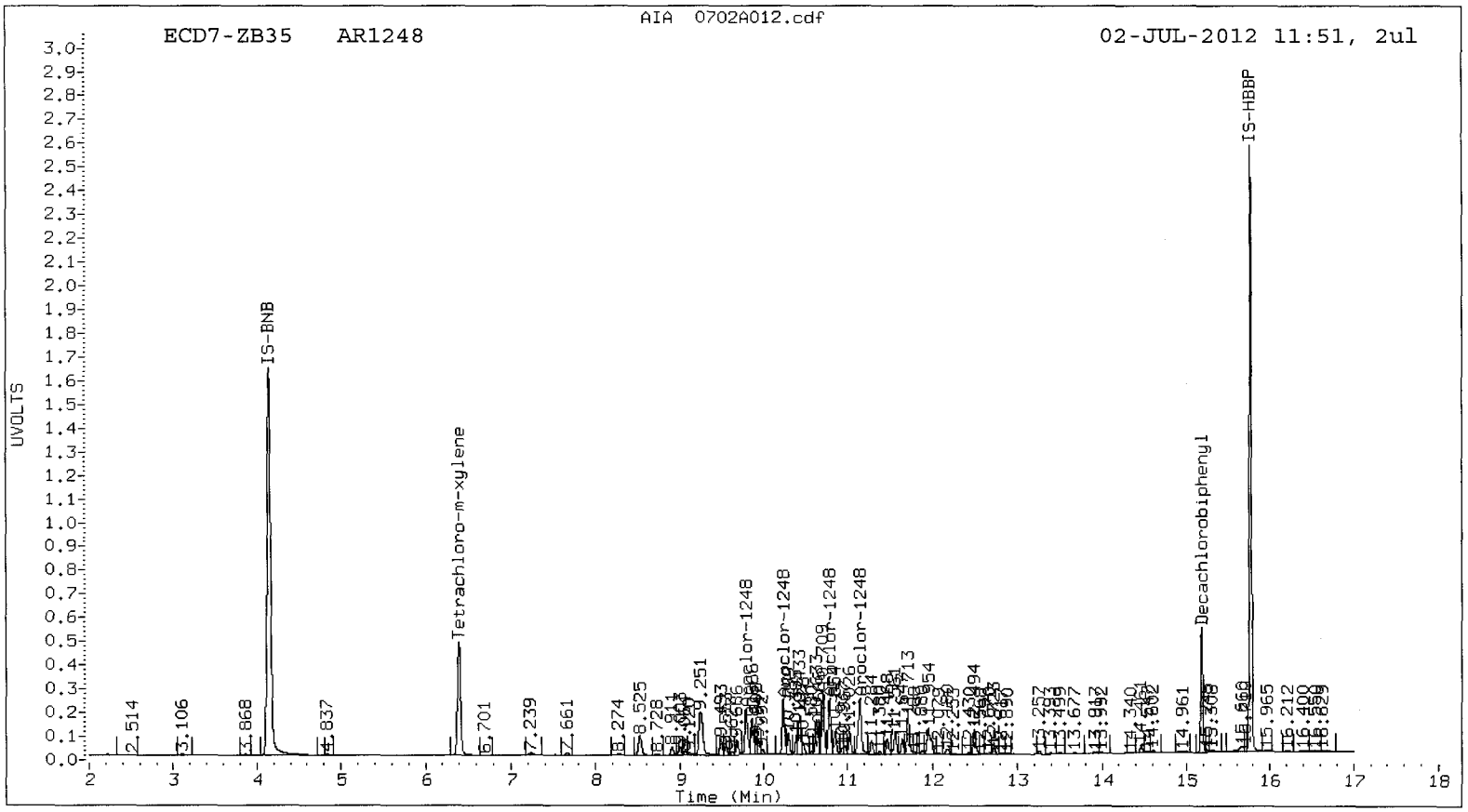
Corrected Ave (3 peaks): 248.2 Corrected Ave (3 peaks): 238.1 RPD = 4

Total PCB Area Col1 (6.377 - 14.761) = 10357705 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 17166570 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1248
AIA 0702A012.cdf
02-JUL-2012 11:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1262
Aroclor-1260
Aroclor-1268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AIA 0702A012.cdf
02-JUL-2012 11:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1248

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20120627.B/0702-1.b/0702A013.d
Data file 2: 20120627.B/0702-2.b/0702A013.d
Method: /chem2/ecd7.i/20120627.B/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 02-JUL-2012 12:12
Report Date: 07/03/2012 08:11
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
6.277	0.000	1437371	6.398	0.000	2328702	20.3	19.7	2.7	Tetrachloro-m-xylene
14.861	0.000	1379415	15.187	0.000	1742962	19.8	18.6	6.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.7	49.4
Decachlorobiphenyl	49.5	46.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5720022	5827123	1.9
Hexabromobiphenyl	5604480	5811727	3.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9296471	9103150	-2.1
Hexabromobiphenyl	7801648	7969587	2.2

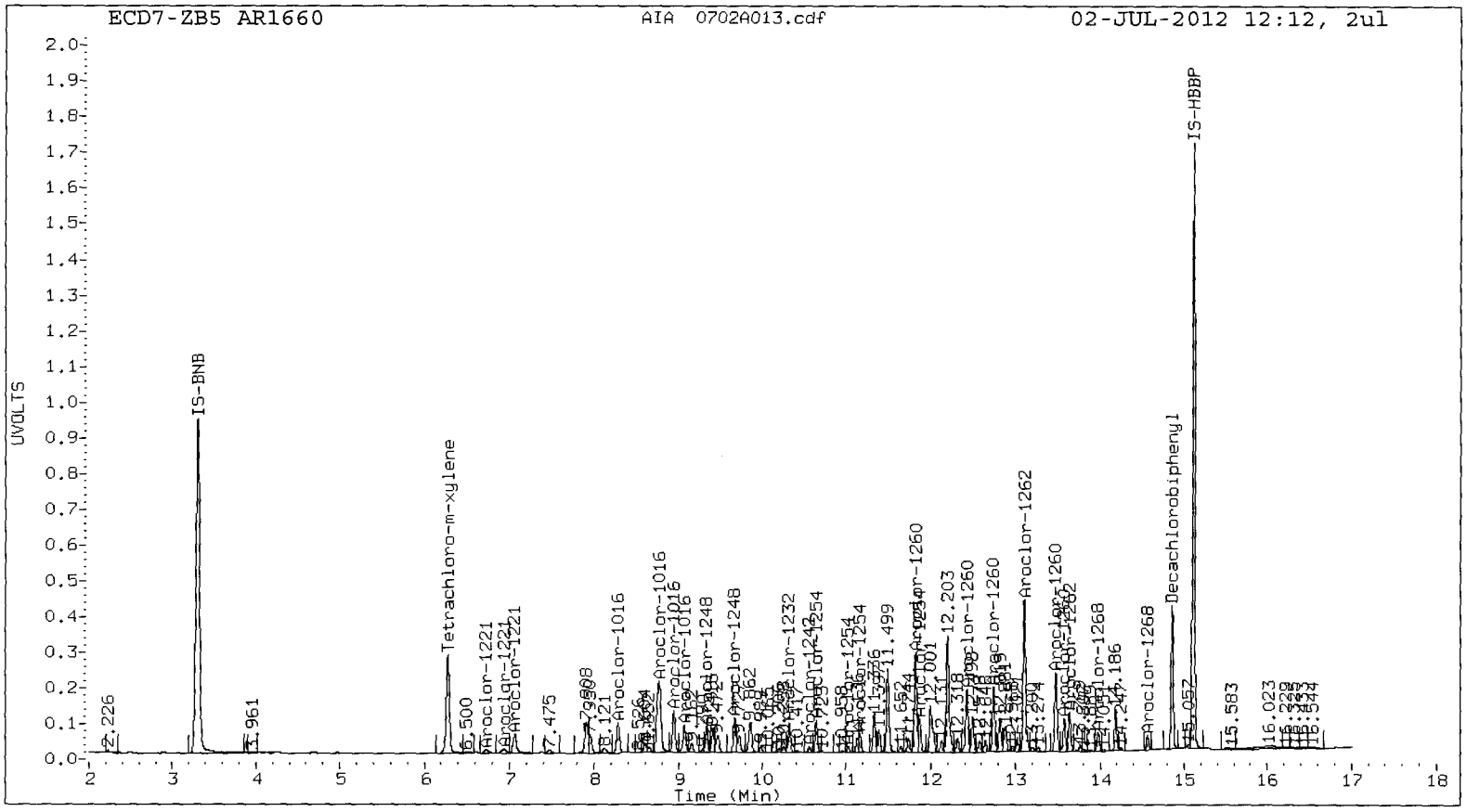
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 27-JUN-2012
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	Shift	Area	Amount
Aroclor-1016	1	8.284	0.000	416663	244.8	1	8.527	0.000	1101972	233.5
Aroclor-1016	2	8.772	0.000	1437335	246.0	2	9.259	0.000	2321569	235.3
Aroclor-1016	3	8.946	0.000	561319	243.9	3	9.686	0.000	597326	234.7
Aroclor-1016	4	9.074	0.000	385955	245.2	4	9.794	0.000	678000	228.9
Total Col1Ave (4 peaks):				245.0		Total Col2Ave (4 peaks):			233.1	RPD = 5
Corrected Ave (3 peaks):				244.6		Corrected Ave (3 peaks):			232.4	RPD = 5
Aroclor-1260	1	11.825	0.000	1089013	244.0	1	12.723	0.000	1569981	221.7
Aroclor-1260	2	12.430	0.000	713294	242.7	2	13.497	0.000	2496349	224.5
Aroclor-1260	3	12.745	0.000	725948	245.0	3	13.992	0.000	1671091	223.0
Aroclor-1260	4	13.480	0.000	939319	246.4	4	14.550	0.000	675139	245.0
Aroclor-1260	5	13.579	0.000	366354	243.6	NS	---			----
Total Col1Ave (5 peaks):				244.3		Total Col2Ave (4 peaks):			228.5	RPD = 7
Corrected Ave (4 peaks):				243.8		Corrected Ave (3 peaks):			223.1	RPD = 9

Total PCB Area Col1 (6.377 - 14.761) = 21176205 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (6.498 - 15.087) = 32894884 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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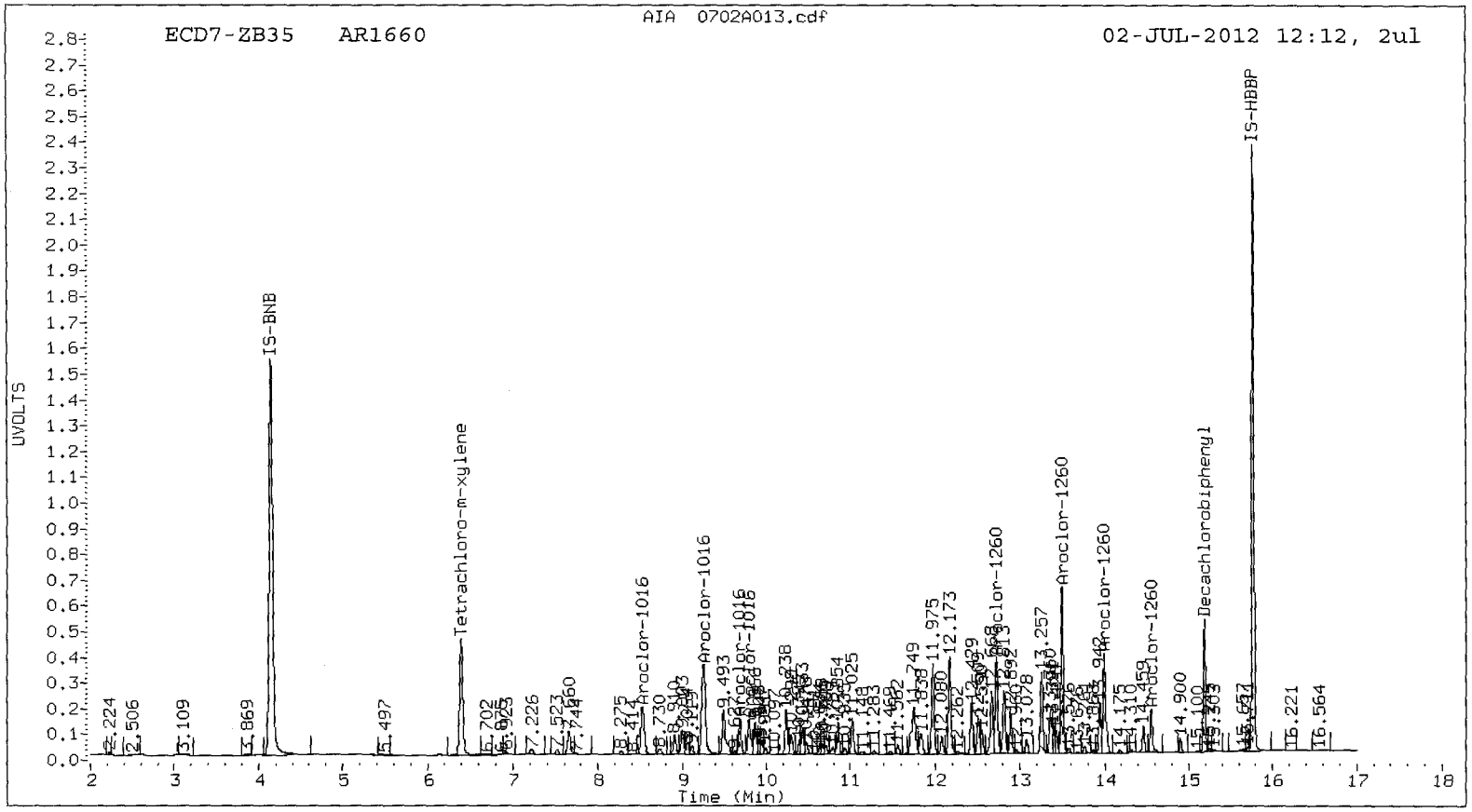
AIA 0702A013.cdf
02-JUL-2012 12:12, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD7-ZB35 AR1660
AIA 0702A013.cdf
02-JUL-2012 12:12, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: LB

Date: 6/26/12

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID U299 ASDK, MBSPK

Prepcode:		SWC		
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No.:		2992-1		
Vol Added (mL):		1.0		
STOCK CONCENTRATION	Ag	50 ✓		2.0
	Al	200	200	
	As	200 ✓		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50 ✓		2.0
	Co	50	50	
	Cr	50 ✓	50	
	Cu	50 ✓	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50 ✓	50	
	Pb	200 ✓		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50 ✓	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SMA	CVA	1.0	.05	2908-7
Hg MBSPK	SMA	CVA	1.0	0.10	2908-7
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

U299:00822

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB start 08:00 **Date:** 6/26/12

Matrix: Soil **Block ID:** 3 **Block Temp:** 95°C **Thermometer:** MP44

ARI Sample ID	Btl #	pH<2	Prep Code: Sme Initial Wt (g) ~~Vol (mL)~~	Prep Code: Sme Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
U299 A	4	–	1.080	50.0			
U299 ADUP	4	–	1.083	50.0			
U299 ASPK	4	–	1.083	50.0			
U299 MB	–	–	–	50.0			
U299 MB SPK	–	–	–	50.0		6/26/12 CB	
VA10 A	1	–	1.046	50.0			
VA10 B	1	–	1.062	50.0			
VA10 MB	–	–	–	50.0			
VA10 MB SPK	–	–	–	50.0			
				6/26/12 CB			

Chemical/Reagent ID:

HNO_3: MP2314 **HCl:** I7305 **H_2O_2:** I7403 **Tube Lot #:** 1202052

I7628

UZ99 : 00823

Analytical Resources, Incorporated
Analytical Chemists and Consultants

All corrections made by CB 6/26/12

Mercury Digestion Log

Prep Code: SMM
Analyst: CB
Bath Temp: 90°C
Start Time: 10:45
Matrix: Soil
Date: 6/26/12
End Time: 11:15

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
U299A	4	–	0.222	~~74~~ 50.0	~~2/1~~ 1	Y	
U299 AOup	4	–	0.220	50.0	1	Y	
U299 ASpk	4	–	0.221	50.0	1	Y	
U299 MB1	–	–	–	50.0	1	Y	
U299 MB1 Spk	–	–	–	50.0	1	Y	

CB 6/26/12

Chemical/Reagent ID:

HNO_3: I7466
H_2SO_4: I7184
HCl: –
5% $K_2S_2O_8$: MA2299
5% $KMnO_4$: MA2298
Digest Tube Lot: 1202252

5037F

Revision 007
6/18/09

UZ99 : 00824

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

ARI Job No.: UZ99

Unacceptable Blank: ☐

Date of Event: ~~Anchor~~ 7-2-12

Unacceptable Duplicate: ☐

Client ID: Anchor

Unacceptable Spike: ☑

Method/Element: ICP

Unacceptable Reference: ☐

Prep Code: SWC

Details of Problem/Recommended Corrective Action:

See attached

low %R for Cr, Cu in Aspk

post spike ok

samples run @ 5x for Fe ~~agg~~ agrees with 2x

Samples Affected:

Corrective Action Taken: A Post Cr, Cu

Analyst Initials: AH

Date: 7-2-12

Supervisor:

Date: 7.3.12

5049F

UZ99 : 00829

Revision 007
6/11/10

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)

DUPLICATION:

	DUP	BKGD
VOLUME	100	100
SAMP WT	1.083	1.08

ELEMENT	DUP mg/L	BKGD	% RPD
Ag	0	0	#DIV/0!
Al			#DIV/0!
As	0	0	#DIV/0!
B			#DIV/0!
Ba			#DIV/0!
Be			#DIV/0!
Ca			#DIV/0!
Cd	0.00213	0	200.00
Co			#DIV/0!
Cr	0.1336	0.1353	1.54
Cu	0.1315	0.1236	5.92
Fe			#DIV/0!
K			#DIV/0!
Mg			#DIV/0!
Mn			#DIV/0!
Mo			#DIV/0!
Na			#DIV/0!
Ni	3.341	2.961	11.78
Pb	0.07567	0.0634	17.37
Sb			#VALUE!
Se			#VALUE!
Si			#DIV/0!
Sn			#VALUE!
Sr			#DIV/0!
Ti			#DIV/0!
Tl			#DIV/0!
V			#VALUE!
Zn	0.3664	0.3515	3.87

SPIKE RECOVERY:

	SPIKE	BKGD
VOLUME	100	100
SAMP WT	1.083	1.0800

ELEMENT	SPIKE mg/L	BKGD mg/L	SPK'D CONC mg/L	% RECOV
Ag	0.1761	0	0.2	88.1
Al			2	0.0
As	0.6593	0	0.8	82.4
B			0.5	0.0
Ba			2	0.0
Be			0.5	0.0
Ca			10	0.0
Cd	0.1658	0	0.2	82.9
Co			0.5	0.0
Cr	0.242	0.1353	0.2	53.2
Cu	0.2697	0.1236	0.20	72.9
Fe			2	0.0
K			10	0.0
Mg			10	0.0
Mn			0.5	0.0
Mo			0.5	0.0
Na			10	0.0
Ni	2.436	2.961	0.2	-266.6
Pb	0.6888	0.0634	0.8	78.2
Sb			2	#VALUE!
Se			2	#VALUE!
Si			10	0.0
Sn			0.5	#VALUE!
Sr			0.5	0.0
Ti			2	0.0
Tl			2	0.0
V			0.5	#VALUE!
Zn	0.5152	0.3515	0.2	81.4

TABLE 6

UZ99 : 008826

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

ARI Job No.: UZ99

Unacceptable Blank: ☐

Date of Event: 06.27.12

Unacceptable Duplicate: ☑

Client ID: Anchor

Unacceptable Spike: ☑

Method/Element: CVAAS | Hg

Unacceptable Reference: ☐

Prep Code: SMM

Details of Problem/Recommended Corrective Action:

1st analysis: UZ99 A 0.14 ppb
UZ99 ADUP 0.39 ppb Diff. > 0.1
UZ99 ASPK 1.41 ppb %R=127 (high)

2nd analysis: UZ99 A 0.15 ppb
UZ99 ADUP 0.39 ppb Diff. > 0.1
UZ99 ASPK 1.42 ppb %R=127 (high)

Samples Affected: A, ADUP, ASPK, MBI, MBISPK

Corrective Action Taken:

Analyst Initials: MJJ

Date: 06.27.12

Supervisor:

Date: 6-28-12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory Analyst Notes

ARI Job No.: U299

Client ID:

Parameter:

Client Project:

List problems, concerns, corrective actions and any other pertinent information

Added another 5 ml of concentrated HNO3 at the last hour
(Reprep)

Analyst Initials:	CB	**Date:**	6/26/12

048F

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 6-1-12 Analysis Date: 7-2-12 Analyst: [illegible]

LR Date: 3-19-12 Page: 1 of 4

All corrections made by analyst unless otherwise noted. [illegible] 7-2-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2961-7
		2			2962-1
		3			-2
		4			-3
		5			-4
		ICV			2925-3
		ICB			
ZZZ		ZZZZZZ			Cr, Ni sl high Ba sl low
		STD0			
		CCV1			
		CCB1			
		CR1			
		ICSA			
		ICSAB			
		HiPurQC7M		✓	
		SpexQC21		✓	
		DI check		✓	
		CCV2			
		CCB2			
		UZ99 MB1	SWC	2	
		VA19 A			
		B			
		C			
		D			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: – Analysis Date: 7-2-12 Analyst: AT

LR Date: – Page: 2 of 11

All corrections made by analyst unless otherwise noted. AT 7-2-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	UZ99 ADup	SWC	2	RR-15 (Fe)
	↓	↓ A	↓	↓	↓
	↓	↓ ASpk			
ZZZ		ZZZZZZ			
		UZ99 MBlspk	↓	↓ ✓	
		CCV3			
		CCB3			
		VA19 MBl	SWC	2	
		UZ97 MBl	TWC		
		↓ A	↓		
		~~UZ99 VA19 ADup~~			
		~~A~~			
		~~ASpk~~			
		~~APost~~			
		~~VA~~			
		VA19 E	SWC	2	
		UZ99 ADup	↓	5 ✓	
		↓ A		↓	CNF
		↓ ASpk			Cr, Cu low %R
		↓ APost		↓ ✓	0.08 mL ICP spk Cr Cu
		VA19 MBlspk	↓	2 ✓	
		UZ97 MBlspk	SWC	✓	
		CCV4			
		CCB4			end pkg

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 7-2-12

OPT 2	Analyst AT 7-3	Peer BW 7.3	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	See log
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	VA10
Matrix Spikes	✓	✓	UZ99
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	UZ99 VA10

==========

Analysis Begun

Start Time: 7/2/2012 10:10:20 AM
Plasma On Time: 7/2/2012 9:12:59 AM
Logged In Analyst: metals
Technique: ICP Continuous
Spectrometer Model: Optima 7300 DV, S/N 077C8121202**Autosampler Model:** AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2120702
Results Library: C:\pe\metals\Results\Results.mdb

==========

Method Loaded
Method Name: 7300bcESI2FAST
Method Last Saved: 6/5/2012 8:24:17 AM
IEC File: IE053112.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

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Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank 1
Date Collected: 7/2/2012 10:10:21 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2606070.7	1372.27	0.05%	100.0	%
ScR 361.383	465225.4	3743.73	0.80%	100.0	%
Ag 328.068†	-119.4	11.09	9.29%	[0.00]	mg/L
Al 308.215†	214.8	3.59	1.67%	[0.00]	mg/L
As 188.979†	-45.1	3.77	8.35%	[0.00]	mg/L
B 249.677†	196.0	9.60	4.90%	[0.00]	mg/L

Ba 233.527†	122.3	1.41	1.15%	[0.00]	mg/L
Be 313.042†	874.2	23.42	2.68%	[0.00]	mg/L
Ca 317.933†	166.6	10.93	6.56%	[0.00]	mg/L
Cd 228.802†	308.5	4.93	1.60%	[0.00]	mg/L
Co 228.616†	-162.4	1.93	1.19%	[0.00]	mg/L
Cr 267.716†	-227.8	9.96	4.37%	[0.00]	mg/L
Cu 324.752†	867.3	33.06	3.81%	[0.00]	mg/L
Fe 273.955†	-297.3	0.64	0.22%	[0.00]	mg/L
K 766.490†	-411.5	19.72	4.79%	[0.00]	mg/L
Mg 279.077†	212.2	5.04	2.37%	[0.00]	mg/L
Mn 257.610†	270.4	3.33	1.23%	[0.00]	mg/L
Mo 202.031†	144.9	3.50	2.42%	[0.00]	mg/L
Na 589.592†	-528.1	18.10	3.43%	[0.00]	mg/L
Na 330.237†	-461.7	11.14	2.41%	[0.00]	mg/L
Ni 231.604†	-373.6	5.51	1.48%	[0.00]	mg/L
Pb 220.353†	-182.4	9.67	5.30%	[0.00]	mg/L
Sb 206.836†	298.5	7.21	2.42%	[0.00]	mg/L
Se 196.026†	-108.7	0.94	0.86%	[0.00]	mg/L
Si 288.158†	309.1	7.24	2.34%	[0.00]	mg/L
Sn 189.927†	-4.8	3.16	65.55%	[0.00]	mg/L
Sr 421.552†	-157.9	22.42	14.21%	[0.00]	mg/L
Ti 334.903†	108.1	24.41	22.58%	[0.00]	mg/L
Tl 190.801†	-88.3	1.49	1.69%	[0.00]	mg/L
V 292.402†	416.9	19.24	4.61%	[0.00]	mg/L
Zn 206.200†	-13.7	1.80	13.08%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 7/2/2012 10:14:21 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2603018.1	6678.46	0.26%	99.88	%
ScR 361.383	469239.0	2668.77	0.57%	100.9	%
Ba 233.527†	102465.5	79.29	0.08%	[10]	mg/L
Cd 228.802†	322832.5	305.36	0.09%	[10]	mg/L
Co 228.616†	471324.9	1051.09	0.22%	[10]	mg/L
Cr 267.716†	96153.3	176.26	0.18%	[10]	mg/L
Cu 324.752†	2134636.6	7918.88	0.37%	[10]	mg/L
Mn 257.610†	621890.0	777.58	0.13%	[10]	mg/L
V 292.402†	1677206.7	10989.21	0.66%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 7/2/2012 10:16:08 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2614111.4	5204.59	0.20%	100.3	%
ScR 361.383	469580.7	520.41	0.11%	100.9	%
Ag 328.068†	243745.7	1397.92	0.57%	[1.0]	mg/L
As 188.979†	24946.9	102.21	0.41%	[10]	mg/L
B 249.677†	96787.2	45.80	0.05%	[10]	mg/L
Be 313.042†	4369291.2	28530.62	0.65%	[5.0]	mg/L
Na 589.592†	596589.9	2978.88	0.50%	[50]	mg/L
Ni 231.604†	50695.1	212.73	0.42%	[10]	mg/L
Pb 220.353†	115006.0	414.21	0.36%	[10]	mg/L
Se 196.026†	23956.8	115.91	0.48%	[10]	mg/L
Sr 421.552†	5328587.5	29932.96	0.56%	[5]	mg/L
Tl 190.801†	26213.5	110.72	0.42%	[10]	mg/L
Zn 206.200†	57858.5	53.04	0.09%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 7/2/2012 10:18:41 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2603985.0	13199.71	0.51%	99.92	%
ScR 361.383	467436.7	483.90	0.10%	100.5	%
Mo 202.031†	295487.9	591.04	0.20%	[10]	mg/L
Sb 206.836†	46046.3	162.84	0.35%	[10]	mg/L
Si 288.158†	24200.3	294.43	1.22%	[10]	mg/L
Sn 189.927†	67977.4	198.44	0.29%	[10]	mg/L
Ti 334.903†	317964.6	875.50	0.28%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 7/2/2012 10:20:56 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2477898.0	3511.34	0.14%	95.08	%
ScR 361.383	468760.3	3136.00	0.67%	100.8	%
Al 308.215†	48188.9	378.31	0.79%	[30]	mg/L
Ca 317.933†	416649.2	1361.31	0.33%	[30]	mg/L
Fe 273.955†	167449.7	230.62	0.14%	[100]	mg/L
K 766.490†	231885.8	469.23	0.20%	[100]	mg/L
Mg 279.077†	42674.2	233.36	0.55%	[30]	mg/L
Na 330.237†	3063.4	34.72	1.13%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	243700	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1606	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	2495	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	9679	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	10250	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	873900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	13890	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	32280	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	47130	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	9615	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	213500	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1674	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2319	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1422	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	62190	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	29550	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11930	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	30.63	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	5070	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	11500	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	4605	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	2396	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2420	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	6798	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1066000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	31800	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2621	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	167700	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	5786	0.00000	1.000000	

Analysis Begun

Start Time: 7/2/2012 10:30:18 AM
Logged In Analyst: metals
Spectrometer Model: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 7/2/2012 9:12:59 AM
Technique: ICP Continuous
Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2120702
Results Library: C:\pe\metals\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV
Dilution: 1X
Autosampler Location: 7
Date Collected: 7/2/2012 10:30:19 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2597330.4	99.66	%	0.372				0.37%
ScR 361.383	473230.9	101.7	%	0.27				0.27%
Ag 328.068†	245916.9	1.009	mg/L	0.0035	1.009	mg/L	0.0035	0.34%
Al 308.215†	3198.3	1.962	mg/L	0.0087	1.962	mg/L	0.0087	0.44%
As 188.979†	4993.3	2.007	mg/L	0.0092	2.007	mg/L	0.0092	0.46%
B 249.677†	9611.4	0.9911	mg/L	0.00638	0.9911	mg/L	0.00638	0.64%
Ba 233.527†	10013.6	0.9768	mg/L	0.00067	0.9768	mg/L	0.00067	0.07%
Be 313.042†	863122.4	0.9870	mg/L	0.00317	0.9870	mg/L	0.00317	0.32%
Ca 317.933†	27997.2	2.016	mg/L	0.0018	2.016	mg/L	0.0018	0.09%
Cd 228.802†	32793.5	1.009	mg/L	0.0009	1.009	mg/L	0.0009	0.09%
Co 228.616†	45886.6	0.9718	mg/L	0.00149	0.9718	mg/L	0.00149	0.15%
Cr 267.716†	9573.4	0.9952	mg/L	0.00433	0.9952	mg/L	0.00433	0.43%
Cu 324.752†	214005.0	1.002	mg/L	0.0018	1.002	mg/L	0.0018	0.18%
Fe 273.955†	3344.3	1.993	mg/L	0.0027	1.993	mg/L	0.0027	0.14%
K 766.490†	47123.2	20.32	mg/L	0.088	20.32	mg/L	0.088	0.43%
Mg 279.077†	2760.1	1.945	mg/L	0.0091	1.945	mg/L	0.0091	0.47%
Mn 257.610†	61014.4	0.9818	mg/L	0.00342	0.9818	mg/L	0.00342	0.35%
Mo 202.031†	29832.1	1.010	mg/L	0.0012	1.010	mg/L	0.0012	0.12%
Na 589.592†	596259.7	49.97	mg/L	0.233	49.97	mg/L	0.233	0.47%
Na 330.237†	1581.6	51.67	mg/L	0.384	51.67	mg/L	0.384	0.74%
Ni 231.604†	5102.0	1.008	mg/L	0.0041	1.008	mg/L	0.0041	0.41%
Pb 220.353†	23129.1	2.012	mg/L	0.0032	2.012	mg/L	0.0032	0.16%
Sb 206.836†	9677.1	2.102	mg/L	0.0052	2.102	mg/L	0.0052	0.25%
Se 196.026†	4698.8	1.960	mg/L	0.0022	1.960	mg/L	0.0022	0.11%
Si 288.158†	4690.0	1.942	mg/L	0.0171	1.942	mg/L	0.0171	0.88%
Sn 189.927†	6924.8	1.021	mg/L	0.0028	1.021	mg/L	0.0028	0.28%
Sr 421.552†	1053613.7	0.9886	mg/L	0.00249	0.9886	mg/L	0.00249	0.25%
Ti 334.903†	31697.6	0.9952	mg/L	0.00302	0.9952	mg/L	0.00302	0.30%
Tl 190.801†	5206.1	1.985	mg/L	0.0004	1.985	mg/L	0.0004	0.02%
V 292.402†	164565.9	0.9855	mg/L	0.00122	0.9855	mg/L	0.00122	0.12%
Zn 206.200†	5913.6	1.023	mg/L	0.0056	1.023	mg/L	0.0056	0.55%

Sequence No.: 2
Sample ID: CB

Dilution: 1X

Autosampler Location: 1
Date Collected: 7/2/2012 10:33:22 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2603928.6	99.92	%	0.436				0.44%
ScR 361.383	480819.8	103.4	%	0.41				0.40%
Ag 328.068†	-11.4	-0.00005	mg/L	0.000118	-0.00005	mg/L	0.000118	252.81%
Al 308.215†	-3.4	-0.00210	mg/L	0.004394	-0.00210	mg/L	0.004394	209.57%
As 188.979†	-2.4	-0.00098	mg/L	0.001800	-0.00098	mg/L	0.001800	183.92%
B 249.677†	18.2	0.00188	mg/L	0.001222	0.00188	mg/L	0.001222	64.89%
Ba 233.527†	-7.6	-0.00074	mg/L	0.000393	-0.00074	mg/L	0.000393	52.99%
Be 313.042†	31.2	0.00004	mg/L	0.000015	0.00004	mg/L	0.000015	41.87%
Ca 317.933†	-3.6	-0.00026	mg/L	0.001778	-0.00026	mg/L	0.001778	679.74%
Cd 228.802†	2.3	0.00008	mg/L	0.000089	0.00008	mg/L	0.000089	117.01%
Co 228.616†	-3.5	-0.00008	mg/L	0.000082	-0.00008	mg/L	0.000082	107.46%
Cr 267.716†	7.5	0.00078	mg/L	0.000927	0.00078	mg/L	0.000927	118.50%
Cu 324.752†	-52.7	-0.00025	mg/L	0.000121	-0.00025	mg/L	0.000121	49.00%
Fe 273.955†	17.0	0.01017	mg/L	0.000848	0.01017	mg/L	0.000848	8.34%
K 766.490†	43.3	0.01869	mg/L	0.007991	0.01869	mg/L	0.007991	42.76%
Mg 279.077†	-7.5	-0.00529	mg/L	0.006281	-0.00529	mg/L	0.006281	118.71%
Mn 257.610†	-6.9	-0.00011	mg/L	0.000091	-0.00011	mg/L	0.000091	82.58%
Mo 202.031†	37.0	0.00125	mg/L	0.000178	0.00125	mg/L	0.000178	14.19%
Na 589.592†	147.5	0.01236	mg/L	0.003192	0.01236	mg/L	0.003192	25.83%
Na 330.237†	14.1	0.4605	mg/L	0.54482	0.4605	mg/L	0.54482	118.32%
Ni 231.604†	20.9	0.00412	mg/L	0.000754	0.00412	mg/L	0.000754	18.29%
Pb 220.353†	8.1	0.00070	mg/L	0.000340	0.00070	mg/L	0.000340	48.51%
Sb 206.836†	13.6	0.00296	mg/L	0.001709	0.00296	mg/L	0.001709	57.80%
Se 196.026†	0.6	0.00025	mg/L	0.001752	0.00025	mg/L	0.001752	696.96%
Si 288.158†	-19.4	-0.00802	mg/L	0.000717	-0.00802	mg/L	0.000717	8.95%
Sn 189.927†	4.1	0.00061	mg/L	0.000235	0.00061	mg/L	0.000235	38.48%
Sr 421.552†	21.8	0.00002	mg/L	0.000013	0.00002	mg/L	0.000013	62.89%
Ti 334.903†	21.0	0.00066	mg/L	0.000346	0.00066	mg/L	0.000346	52.54%
Tl 190.801†	6.0	0.00230	mg/L	0.001570	0.00230	mg/L	0.001570	68.19%
V 292.402†	-8.2	-0.00005	mg/L	0.000155	-0.00005	mg/L	0.000155	335.80%
Zn 206.200†	1.1	0.00019	mg/L	0.000272	0.00019	mg/L	0.000272	145.57%

Sequence No.: 3
Sample ID: ~~CRI~~ 222222

Dilution: 1X *7-2-12

Autosampler Location: 301
Date Collected: 7/2/2012 10:37:22 AM
Data Type: Original

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2600636.2	99.79	%	0.681				0.68%
ScR 361.383	476149.7	102.3	%	0.45				0.44%
Ag 328.068†	777.9	0.00319	mg/L	0.000289	0.00319	mg/L	0.000289	9.05%
Al 308.215†	71.9	0.04466	mg/L	0.001687	0.04466	mg/L	0.001687	3.78%
As 188.979†	126.1	0.05055	mg/L	0.001217	0.05055	mg/L	0.001217	2.41%
B 249.677†	207.4	0.02142	mg/L	0.000880	0.02142	mg/L	0.000880	4.11%
Ba 233.527†	20.8	0.00202	mg/L	0.000278	0.00202	mg/L	0.000278	13.74%
Be 313.042†	872.1	0.00100	mg/L	0.000041	0.00100	mg/L	0.000041	4.08%
Ca 317.933†	648.9	0.04672	mg/L	0.000998	0.04672	mg/L	0.000998	2.14%
Cd 228.802†	78.2	0.00226	mg/L	0.000231	0.00226	mg/L	0.000231	10.24%
Co 228.616†	162.0	0.00343	mg/L	0.000179	0.00343	mg/L	0.000179	5.22%
Cr 267.716†	65.6	0.00682	mg/L	0.000473	0.00682	mg/L	0.000473	6.94%
Cu 324.752†	402.3	0.00189	mg/L	0.000009	0.00189	mg/L	0.000009	0.47%
Fe 273.955†	96.8	0.05781	mg/L	0.001510	0.05781	mg/L	0.001510	2.61%
K 766.490†	1186.6	0.5117	mg/L	0.00516	0.5117	mg/L	0.00516	1.01%
Mg 279.077†	59.8	0.04204	mg/L	0.001920	0.04204	mg/L	0.001920	4.57%
Mn 257.610†	58.1	0.00094	mg/L	0.000067	0.00094	mg/L	0.000067	7.10%
Mo 202.031†	153.0	0.00518	mg/L	0.000327	0.00518	mg/L	0.000327	6.31%
Na 589.592†	5954.1	0.4990	mg/L	0.00115	0.4990	mg/L	0.00115	0.23%
Na 330.237†	39.4	1.285	mg/L	0.6193	1.285	mg/L	0.6193	48.18%
Ni 231.604†	74.6	0.01476	mg/L	0.000370	0.01476	mg/L	0.000370	2.51%
Pb 220.353†	240.2	0.02090	mg/L	0.000785	0.02090	mg/L	0.000785	3.75%
Sb 206.836†	232.0	0.05039	mg/L	0.000265	0.05039	mg/L	0.000265	0.53%
Se 196.026†	117.0	0.04883	mg/L	0.003109	0.04883	mg/L	0.003109	6.37%
Si 288.158†	119.7	0.04948	mg/L	0.004108	0.04948	mg/L	0.004108	8.30%
Sn 189.927†	68.1	0.01005	mg/L	0.000643	0.01005	mg/L	0.000643	6.39%
Sr 421.552†	1133.9	0.00106	mg/L	0.000057	0.00106	mg/L	0.000057	5.37%
Ti 334.903†	157.5	0.00494	mg/L	0.000705	0.00494	mg/L	0.000705	14.26%
Tl 190.801†	130.4	0.04974	mg/L	0.002456	0.04974	mg/L	0.002456	4.94%
V 292.402†	526.3	0.00316	mg/L	0.000157	0.00316	mg/L	0.000157	4.98%
Zn 206.200†	58.2	0.01007	mg/L	0.000635	0.01007	mg/L	0.000635	6.30%

Analysis Begun

Start Time: 7/2/2012 10:44:47 AM
Plasma On Time: 7/2/2012 9:12:59 AM
Logged In Analyst: metals
Technique: ICP Continuous
Spectrometer Model: Optima 7300 DV, S/N 077C8121202Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2120702
Results Library: C:\pe\metals\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Date Collected: 7/2/2012 10:44:47 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2582509.2	1825.76	0.07%	99.10	%
ScR 361.383	479211.6	2403.48	0.50%	103.0	%
Ag 328.068†	-141.9	44.19	31.14%	[0.00]	mg/L
Al 308.215†	205.2	2.01	0.98%	[0.00]	mg/L
As 188.979†	-46.4	3.43	7.41%	[0.00]	mg/L
B 249.677†	198.3	3.26	1.64%	[0.00]	mg/L
Ba 233.527†	118.6	4.98	4.20%	[0.00]	mg/L
Be 313.042†	884.8	23.70	2.68%	[0.00]	mg/L
Ca 317.933†	167.0	31.64	18.95%	[0.00]	mg/L
Cd 228.802†	307.5	2.46	0.80%	[0.00]	mg/L
Co 228.616†	-163.4	5.75	3.52%	[0.00]	mg/L
Cr 267.716†	-223.4	2.31	1.04%	[0.00]	mg/L
Cu 324.752†	792.5	24.71	3.12%	[0.00]	mg/L
Fe 273.955†	-282.5	3.37	1.19%	[0.00]	mg/L
K 766.490†	-359.8	18.35	5.10%	[0.00]	mg/L
Mg 279.077†	204.0	7.07	3.47%	[0.00]	mg/L
Mn 257.610†	263.5	2.97	1.13%	[0.00]	mg/L
Mo 202.031†	146.9	4.07	2.77%	[0.00]	mg/L
Na 589.592†	-478.8	40.26	8.41%	[0.00]	mg/L
Na 330.237†	-444.9	7.97	1.79%	[0.00]	mg/L
Ni 231.604†	-353.1	4.90	1.39%	[0.00]	mg/L
Pb 220.353†	-188.2	12.54	6.66%	[0.00]	mg/L
Sb 206.836†	296.4	4.05	1.37%	[0.00]	mg/L
Se 196.026†	-111.8	6.62	5.92%	[0.00]	mg/L
Si 288.158†	283.2	8.51	3.01%	[0.00]	mg/L
Sn 189.927†	-5.3	2.53	47.67%	[0.00]	mg/L
Sr 421.552†	-121.2	13.09	10.80%	[0.00]	mg/L
Ti 334.903†	118.1	14.62	12.37%	[0.00]	mg/L
Tl 190.801†	-90.2	4.89	5.42%	[0.00]	mg/L
V 292.402†	398.8	24.01	6.02%	[0.00]	mg/L
Zn 206.200†	-10.5	1.13	10.73%	[0.00]	mg/L

Analysis Begun

Start Time: 7/2/2012 10:49:09 AM
Logged In Analyst: metals
Spectrometer Model: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 7/2/2012 9:12:59 AM
Technique: ICP Continuous
Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2120702
Results Library: C:\pe\metals\Results\Results.mdb

Sequence No.: 1
Sample ID: CV

Autosampler Location: 7
Date Collected: 7/2/2012 10:49:10 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2590088.3	99.39	%	0.364				0.37%
ScR 361.383	468406.4	100.7	%	0.42				0.42%
Ag 328.068†	247429.8	1.015	mg/L	0.0054	1.015	mg/L	0.0054	0.53%
Al 308.215†	3269.5	2.006	mg/L	0.0170	2.006	mg/L	0.0170	0.85%
As 188.979†	5009.9	2.014	mg/L	0.0050	2.014	mg/L	0.0050	0.25%
B 249.677†	9768.0	1.007	mg/L	0.0047	1.007	mg/L	0.0047	0.47%
Ba 233.527†	10101.1	0.9853	mg/L	0.00318	0.9853	mg/L	0.00318	0.32%
Be 313.042†	870550.1	0.9955	mg/L	0.00134	0.9955	mg/L	0.00134	0.13%
Ca 317.933†	28465.9	2.050	mg/L	0.0098	2.050	mg/L	0.0098	0.48%
Cd 228.802†	32947.9	1.014	mg/L	0.0015	1.014	mg/L	0.0015	0.14%
Co 228.616†	46162.2	0.9776	mg/L	0.00034	0.9776	mg/L	0.00034	0.03%
Cr 267.716†	9664.4	1.005	mg/L	0.0051	1.005	mg/L	0.0051	0.51%
Cu 324.752†	215891.1	1.011	mg/L	0.0027	1.011	mg/L	0.0027	0.26%
Fe 273.955†	3367.7	2.006	mg/L	0.0080	2.006	mg/L	0.0080	0.40%
K 766.490†	47708.9	20.57	mg/L	0.093	20.57	mg/L	0.093	0.45%
Mg 279.077†	2817.7	1.985	mg/L	0.0222	1.985	mg/L	0.0222	1.12%
Mn 257.610†	61440.1	0.9887	mg/L	0.00433	0.9887	mg/L	0.00433	0.44%
Mo 202.031†	29955.1	1.014	mg/L	0.0035	1.014	mg/L	0.0035	0.35%
Na 589.592†	605367.6	50.74	mg/L	0.092	50.74	mg/L	0.092	0.18%
Na 330.237†	1576.2	51.49	mg/L	0.465	51.49	mg/L	0.465	0.90%
Ni 231.604†	5092.9	1.007	mg/L	0.0086	1.007	mg/L	0.0086	0.86%
Pb 220.353†	23223.8	2.021	mg/L	0.0060	2.021	mg/L	0.0060	0.30%
Sb 206.836†	9700.6	2.107	mg/L	0.0065	2.107	mg/L	0.0065	0.31%
Se 196.026†	4713.0	1.966	mg/L	0.0028	1.966	mg/L	0.0028	0.14%
Si 288.158†	4747.9	1.966	mg/L	0.0201	1.966	mg/L	0.0201	1.02%
Sn 189.927†	6933.1	1.022	mg/L	0.0042	1.022	mg/L	0.0042	0.41%
Sr 421.552†	1069368.3	1.003	mg/L	0.0017	1.003	mg/L	0.0017	0.17%
Ti 334.903†	31942.1	1.003	mg/L	0.0009	1.003	mg/L	0.0009	0.09%
Tl 190.801†	5221.2	1.991	mg/L	0.0097	1.991	mg/L	0.0097	0.49%
V 292.402†	165872.8	0.9934	mg/L	0.00262	0.9934	mg/L	0.00262	0.26%
Zn 206.200†	5967.9	1.032	mg/L	0.0061	1.032	mg/L	0.0061	0.59%

Sequence No.: 2
Sample ID: CB

Dilution: 1X

Autosampler Location: 1
Date Collected: 7/2/2012 10:52:13 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2585662.8	99.22	%	0.683				0.69%
ScR 361.383	474392.9	102.0	%	0.30				0.29%
Ag 328.068†	13.6	0.00006	mg/L	0.000118	0.00006	mg/L	0.000118	211.79%
Al 308.215†	1.6	0.00101	mg/L	0.003170	0.00101	mg/L	0.003170	314.19%
As 188.979†	-0.2	-0.00007	mg/L	0.000813	-0.00007	mg/L	0.000813	>999.9%
B 249.677†	16.0	0.00165	mg/L	0.000408	0.00165	mg/L	0.000408	24.72%
Ba 233.527†	-2.7	-0.00027	mg/L	0.000614	-0.00027	mg/L	0.000614	230.62%
Be 313.042†	35.6	0.00004	mg/L	0.000013	0.00004	mg/L	0.000013	32.84%
Ca 317.933†	-9.6	-0.00069	mg/L	0.000782	-0.00069	mg/L	0.000782	113.66%
Cd 228.802†	4.5	0.00014	mg/L	0.000171	0.00014	mg/L	0.000171	122.01%
Co 228.616†	4.7	0.00010	mg/L	0.000048	0.00010	mg/L	0.000048	48.11%
Cr 267.716†	-0.9	-0.00009	mg/L	0.000579	-0.00009	mg/L	0.000579	609.59%
Cu 324.752†	126.4	0.00059	mg/L	0.000098	0.00059	mg/L	0.000098	16.50%
Fe 273.955†	-3.3	-0.00198	mg/L	0.001003	-0.00198	mg/L	0.001003	50.63%
K 766.490†	-3.1	-0.00133	mg/L	0.023603	-0.00133	mg/L	0.023603	>999.9%
Mg 279.077†	-2.6	-0.00181	mg/L	0.007462	-0.00181	mg/L	0.007462	412.94%
Mn 257.610†	2.6	0.00004	mg/L	0.000036	0.00004	mg/L	0.000036	85.19%
Mo 202.031†	38.0	0.00129	mg/L	0.000097	0.00129	mg/L	0.000097	7.52%
Na 589.592†	50.3	0.00421	mg/L	0.001391	0.00421	mg/L	0.001391	33.02%
Na 330.237†	-4.7	-0.1542	mg/L	0.21324	-0.1542	mg/L	0.21324	138.26%
Ni 231.604†	2.7	0.00053	mg/L	0.000916	0.00053	mg/L	0.000916	172.88%
Pb 220.353†	14.2	0.00123	mg/L	0.000591	0.00123	mg/L	0.000591	47.97%
Sb 206.836†	13.5	0.00294	mg/L	0.000836	0.00294	mg/L	0.000836	28.41%
Se 196.026†	5.1	0.00211	mg/L	0.001327	0.00211	mg/L	0.001327	62.89%
Si 288.158†	14.0	0.00579	mg/L	0.003223	0.00579	mg/L	0.003223	55.71%
Sn 189.927†	0.5	0.00007	mg/L	0.000594	0.00007	mg/L	0.000594	801.77%
Sr 421.552†	18.5	0.00002	mg/L	0.000004	0.00002	mg/L	0.000004	23.58%
Ti 334.903†	1.8	0.00006	mg/L	0.000175	0.00006	mg/L	0.000175	310.72%
Tl 190.801†	5.3	0.00203	mg/L	0.002493	0.00203	mg/L	0.002493	123.01%
V 292.402†	16.9	0.00010	mg/L	0.000055	0.00010	mg/L	0.000055	54.22%
Zn 206.200†	-1.2	-0.00020	mg/L	0.000021	-0.00020	mg/L	0.000021	10.26%

Sequence No.: 3
Sample ID: CRI

Dilution: 1X

Autosampler Location: 301
Date Collected: 7/2/2012 10:56:13 AM
Data Type: Original

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2573716.2	98.76	%	0.486				0.49%
ScR 361.383	477990.5	102.7	%	0.40				0.39%
Ag 328.068†	801.2	0.00329	mg/L	0.000233	0.00329	mg/L	0.000233	7.08%
Al 308.215†	94.2	0.05850	mg/L	0.004139	0.05850	mg/L	0.004139	7.08%
As 188.979†	127.1	0.05096	mg/L	0.000847	0.05096	mg/L	0.000847	1.66%
B 249.677†	196.9	0.02034	mg/L	0.001373	0.02034	mg/L	0.001373	6.75%
Ba 233.527†	26.3	0.00256	mg/L	0.000119	0.00256	mg/L	0.000119	4.62%
Be 313.042†	882.5	0.00101	mg/L	0.000026	0.00101	mg/L	0.000026	2.59%
Ca 317.933†	645.2	0.04646	mg/L	0.000933	0.04646	mg/L	0.000933	2.01%
Cd 228.802†	82.6	0.00239	mg/L	0.000083	0.00239	mg/L	0.000083	3.49%
Co 228.616†	171.5	0.00363	mg/L	0.000020	0.00363	mg/L	0.000020	0.55%
Cr 267.716†	48.9	0.00508	mg/L	0.000998	0.00508	mg/L	0.000998	19.65%
Cu 324.752†	473.6	0.00222	mg/L	0.000087	0.00222	mg/L	0.000087	3.92%
Fe 273.955†	85.1	0.05080	mg/L	0.001627	0.05080	mg/L	0.001627	3.20%
K 766.490†	1122.8	0.4842	mg/L	0.02018	0.4842	mg/L	0.02018	4.17%
Mg 279.077†	66.2	0.04649	mg/L	0.010950	0.04649	mg/L	0.010950	23.55%
Mn 257.610†	65.0	0.00105	mg/L	0.000080	0.00105	mg/L	0.000080	7.61%
Mo 202.031†	153.8	0.00520	mg/L	0.000094	0.00520	mg/L	0.000094	1.81%
Na 589.592†	5940.2	0.4978	mg/L	0.00441	0.4978	mg/L	0.00441	0.89%
Na 330.237†	29.4	0.9596	mg/L	0.31349	0.9596	mg/L	0.31349	32.67%
Ni 231.604†	49.4	0.00980	mg/L	0.000686	0.00980	mg/L	0.000686	7.01%
Pb 220.353†	252.1	0.02194	mg/L	0.000422	0.02194	mg/L	0.000422	1.93%
Sb 206.836†	241.9	0.05256	mg/L	0.001269	0.05256	mg/L	0.001269	2.41%
Se 196.026†	123.1	0.05138	mg/L	0.002159	0.05138	mg/L	0.002159	4.20%
Si 288.158†	149.1	0.06164	mg/L	0.003183	0.06164	mg/L	0.003183	5.16%
Sn 189.927†	69.8	0.01031	mg/L	0.000237	0.01031	mg/L	0.000237	2.30%
Sr 421.552†	1100.3	0.00103	mg/L	0.000020	0.00103	mg/L	0.000020	1.98%
Ti 334.903†	160.8	0.00505	mg/L	0.001021	0.00505	mg/L	0.001021	20.23%
Tl 190.801†	135.9	0.05183	mg/L	0.001185	0.05183	mg/L	0.001185	2.29%
V 292.402†	538.0	0.00323	mg/L	0.000146	0.00323	mg/L	0.000146	4.53%
Zn 206.200†	57.8	0.00999	mg/L	0.000215	0.00999	mg/L	0.000215	2.15%

Sequence No.: 4
Sample ID: ICSA

Dilution: 1X

Autosampler Location: 302
Date Collected: 7/2/2012 11:00:13 AM
Data Type: Original

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2549198.5	97.82	%	0.203				0.21%
ScR 361.383	464372.8	99.82	%	0.061				0.06%
Ag 328.068†	-116.0	-0.00047	mg/L	0.000146	-0.00047	mg/L	0.000146	30.88%
Al 308.215†	331413.8	206.3	mg/L	1.83	206.3	mg/L	1.83	0.89%
As 188.979†	24.9	0.00538	mg/L	0.001435	0.00538	mg/L	0.001435	26.66%
B 249.677†	-17.0	-0.00176	mg/L	0.001240	-0.00176	mg/L	0.001240	70.59%
Ba 233.527†	178.5	-0.00054	mg/L	0.000793	-0.00054	mg/L	0.000793	146.56%
Be 313.042†	88.3	0.00009	mg/L	0.000015	0.00009	mg/L	0.000015	16.88%
Ca 317.933†	1401182.8	100.9	mg/L	0.41	100.9	mg/L	0.41	0.41%
Cd 228.802†	30.7	0.00091	mg/L	0.000150	0.00091	mg/L	0.000150	16.46%
Co 228.616†	100.8	0.00212	mg/L	0.000175	0.00212	mg/L	0.000175	8.26%
Cr 267.716†	-41.8	-0.00076	mg/L	0.001706	-0.00076	mg/L	0.001706	224.69%
Cu 324.752†	-3317.2	0.00061	mg/L	0.000238	0.00061	mg/L	0.000238	39.30%
Fe 273.955†	328496.7	196.2	mg/L	1.40	196.2	mg/L	1.40	0.72%
K 766.490†	-147.7	-0.06371	mg/L	0.013269	-0.06371	mg/L	0.013269	20.83%
Mg 279.077†	144285.7	101.2	mg/L	0.95	101.2	mg/L	0.95	0.94%
Mn 257.610†	56.3	0.00068	mg/L	0.000058	0.00068	mg/L	0.000058	8.44%
Mo 202.031†	112.8	0.00266	mg/L	0.000365	0.00266	mg/L	0.000365	13.72%
Na 589.592†	113.6	0.00952	mg/L	0.002472	0.00952	mg/L	0.002472	25.96%
Na 330.237†	7.0	-0.2077	mg/L	0.47283	-0.2077	mg/L	0.47283	227.67%
Ni 231.604†	-24.5	-0.00476	mg/L	0.002092	-0.00476	mg/L	0.002092	43.92%
Pb 220.353†	-350.7	-0.01283	mg/L	0.001112	-0.01283	mg/L	0.001112	8.67%
Sb 206.836†	307.2	0.01958	mg/L	0.002429	0.01958	mg/L	0.002429	12.41%
Se 196.026†	35.4	0.01477	mg/L	0.010074	0.01477	mg/L	0.010074	68.20%
Si 288.158†	-19.5	0.00528	mg/L	0.006079	0.00528	mg/L	0.006079	115.21%
Sn 189.927†	-24.0	-0.00035	mg/L	0.000837	-0.00035	mg/L	0.000837	235.92%
Sr 421.552†	4303.2	0.00404	mg/L	0.000045	0.00404	mg/L	0.000045	1.12%
Ti 334.903†	402.5	0.00491	mg/L	0.000346	0.00491	mg/L	0.000346	7.03%
Tl 190.801†	-54.8	0.00649	mg/L	0.002136	0.00649	mg/L	0.002136	32.90%
V 292.402†	3399.4	-0.00176	mg/L	0.000255	-0.00176	mg/L	0.000255	14.48%
Zn 206.200†	-0.3	-0.00007	mg/L	0.000638	-0.00007	mg/L	0.000638	972.42%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 7/2/2012 11:04:13 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2546319.8	97.71	%	0.290				0.30%
ScR 361.383	461764.8	99.26	%	1.100				1.11%
Ag 328.068†	253380.8	1.040	mg/L	0.0048	1.040	mg/L	0.0048	0.46%
Al 308.215†	323266.7	201.2	mg/L	0.50	201.2	mg/L	0.50	0.25%
As 188.979†	2580.7	1.030	mg/L	0.0021	1.030	mg/L	0.0021	0.21%
B 249.677†	47.5	0.00212	mg/L	0.000570	0.00212	mg/L	0.000570	26.90%
Ba 233.527†	10434.8	1.000	mg/L	0.0113	1.000	mg/L	0.0113	1.13%
Be 313.042†	892887.9	1.021	mg/L	0.0011	1.021	mg/L	0.0011	0.10%
Ca 317.933†	1404680.1	101.1	mg/L	0.17	101.1	mg/L	0.17	0.17%
Cd 228.802†	33154.4	1.024	mg/L	0.0032	1.024	mg/L	0.0032	0.31%
Co 228.616†	45168.7	0.9579	mg/L	0.00303	0.9579	mg/L	0.00303	0.32%
Cr 267.716†	9837.0	1.027	mg/L	0.0098	1.027	mg/L	0.0098	0.96%
Cu 324.752†	219849.7	1.046	mg/L	0.0014	1.046	mg/L	0.0014	0.13%
Fe 273.955†	329549.5	196.8	mg/L	0.62	196.8	mg/L	0.62	0.31%
K 766.490†	832.1	0.3588	mg/L	0.01275	0.3588	mg/L	0.01275	3.55%
Mg 279.077†	140157.2	98.35	mg/L	0.056	98.35	mg/L	0.056	0.06%
Mn 257.610†	59097.8	0.9505	mg/L	0.00250	0.9505	mg/L	0.00250	0.26%
Mo 202.031†	121.5	0.00295	mg/L	0.000159	0.00295	mg/L	0.000159	5.40%
Na 589.592†	154.5	0.01295	mg/L	0.007114	0.01295	mg/L	0.007114	54.93%
Na 330.237†	9.1	-0.3510	mg/L	0.26148	-0.3510	mg/L	0.26148	74.49%
Ni 231.604†	5018.1	0.9909	mg/L	0.00771	0.9909	mg/L	0.00771	0.78%
Pb 220.353†	11079.5	0.9810	mg/L	0.00149	0.9810	mg/L	0.00149	0.15%
Sb 206.836†	5001.6	1.032	mg/L	0.0018	1.032	mg/L	0.0018	0.18%
Se 196.026†	2440.9	1.018	mg/L	0.0040	1.018	mg/L	0.0040	0.39%
Si 288.158†	-21.1	0.00806	mg/L	0.002582	0.00806	mg/L	0.002582	32.05%
Sn 189.927†	-27.5	-0.00010	mg/L	0.000536	-0.00010	mg/L	0.000536	528.64%
Sr 421.552†	4314.8	0.00405	mg/L	0.000019	0.00405	mg/L	0.000019	0.47%
Ti 334.903†	418.1	0.00516	mg/L	0.000224	0.00516	mg/L	0.000224	4.35%
Tl 190.801†	2490.1	0.9729	mg/L	0.00285	0.9729	mg/L	0.00285	0.29%
V 292.402†	166175.8	0.9732	mg/L	0.00232	0.9732	mg/L	0.00232	0.24%
Zn 206.200†	5666.8	0.9801	mg/L	0.00928	0.9801	mg/L	0.00928	0.95%

Sequence No.: 6
Sample ID: HiPurQC7M

Dilution: 1X

Autosampler Location: 304
Date Collected: 7/2/2012 11:09:24 AM
Data Type: Original

Nebulizer Parameters: HiPurQC7M

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: HiPurQC7M

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2596065.8	99.62	%	0.151				0.15%
ScR 361.383	480576.7	103.3	%	0.56				0.54%
Ag 328.068†	262573.5	1.077	mg/L	0.0043	1.077	mg/L	0.0043	0.40%
Al 308.215†	3280.5	2.042	mg/L	0.0147	2.042	mg/L	0.0147	0.72%
As 188.979†	0.9	0.00037	mg/L	0.001086	0.00037	mg/L	0.001086	292.65%
B 249.677†	19004.1	1.963	mg/L	0.0077	1.963	mg/L	0.0077	0.39%
Ba 233.527†	19792.5	1.932	mg/L	0.0038	1.932	mg/L	0.0038	0.20%
Be 313.042†	1.1	0.00000	mg/L	0.000020	0.00000	mg/L	0.000020	>999.9%
Ca 317.933†	95.4	0.00687	mg/L	0.000763	0.00687	mg/L	0.000763	11.11%
Cd 228.802†	7.5	0.00023	mg/L	0.000108	0.00023	mg/L	0.000108	47.10%
Co 228.616†	20.0	0.00001	mg/L	0.000081	0.00001	mg/L	0.000081	915.61%
Cr 267.716†	2.4	0.00025	mg/L	0.000199	0.00025	mg/L	0.000199	80.84%
Cu 324.752†	-9.1	-0.00004	mg/L	0.000031	-0.00004	mg/L	0.000031	73.05%
Fe 273.955†	9.7	0.00581	mg/L	0.001154	0.00581	mg/L	0.001154	19.85%
K 766.490†	46262.1	19.95	mg/L	0.054	19.95	mg/L	0.054	0.27%
Mg 279.077†	0.3	0.00023	mg/L	0.006375	0.00023	mg/L	0.006375	>999.9%
Mn 257.610†	3.4	0.00004	mg/L	0.000133	0.00004	mg/L	0.000133	309.38%
Mo 202.031†	-3.5	-0.00012	mg/L	0.000184	-0.00012	mg/L	0.000184	153.52%
Na 589.592†	24143.7	2.023	mg/L	0.0131	2.023	mg/L	0.0131	0.65%
Na 330.237†	56.3	1.837	mg/L	0.0871	1.837	mg/L	0.0871	4.74%
Ni 231.604†	-2.8	-0.00054	mg/L	0.001902	-0.00054	mg/L	0.001902	352.51%
Pb 220.353†	-1.4	0.00019	mg/L	0.000186	0.00019	mg/L	0.000186	97.89%
Sb 206.836†	31.4	0.00636	mg/L	0.001299	0.00636	mg/L	0.001299	20.44%
Se 196.026†	7.3	0.00306	mg/L	0.001592	0.00306	mg/L	0.001592	51.96%
Si 288.158†	4533.3	1.873	mg/L	0.0062	1.873	mg/L	0.0062	0.33%
Sn 189.927†	-0.7	-0.00010	mg/L	0.000554	-0.00010	mg/L	0.000554	555.67%
Sr 421.552†	9.0	0.00001	mg/L	0.000023	0.00001	mg/L	0.000023	274.85%
Ti 334.903†	-3.0	-0.00010	mg/L	0.000744	-0.00010	mg/L	0.000744	782.76%
Tl 190.801†	3.3	0.00125	mg/L	0.002072	0.00125	mg/L	0.002072	166.07%
V 292.402†	31.1	0.00019	mg/L	0.000116	0.00019	mg/L	0.000116	62.14%
Zn 206.200†	-1.9	-0.00033	mg/L	0.000060	-0.00033	mg/L	0.000060	18.48%

Sequence No.: 7
Sample ID: SPEXQC21

Autosampler Location: 305
Date Collected: 7/2/2012 11:13:23 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: SPEXQC21

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: SPEXQC21

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622042.8	100.6	%	0.31				0.31%
ScR 361.383	470343.0	101.1	%	0.72				0.71%
Ag 328.068†	54.9	0.00012	mg/L	0.000229	0.00012	mg/L	0.000229	186.04%
Al 308.215†	144.4	0.03149	mg/L	0.014739	0.03149	mg/L	0.014739	46.80%
As 188.979†	5002.1	2.016	mg/L	0.0064	2.016	mg/L	0.0064	0.32%
B 249.677†	84.1	0.00454	mg/L	0.001504	0.00454	mg/L	0.001504	33.10%
Ba 233.527†	16.8	0.00079	mg/L	0.000558	0.00079	mg/L	0.000558	70.76%
Be 313.042†	1759170.6	2.012	mg/L	0.0060	2.012	mg/L	0.0060	0.30%
Ca 317.933†	28387.0	2.044	mg/L	0.0076	2.044	mg/L	0.0076	0.37%
Cd 228.802†	65451.0	2.021	mg/L	0.0087	2.021	mg/L	0.0087	0.43%
Co 228.616†	94162.0	1.995	mg/L	0.0100	1.995	mg/L	0.0100	0.50%
Cr 267.716†	19550.4	2.032	mg/L	0.0062	2.032	mg/L	0.0062	0.31%
Cu 324.752†	426573.0	1.998	mg/L	0.0014	1.998	mg/L	0.0014	0.07%
Fe 273.955†	3520.9	2.093	mg/L	0.0277	2.093	mg/L	0.0277	1.32%
K 766.490†	-123.5	-0.05324	mg/L	0.015211	-0.05324	mg/L	0.015211	28.57%
Mg 279.077†	2960.7	2.091	mg/L	0.0210	2.091	mg/L	0.0210	1.00%
Mn 257.610†	123808.0	1.992	mg/L	0.0088	1.992	mg/L	0.0088	0.44%
Mo 202.031†	56931.6	1.927	mg/L	0.0093	1.927	mg/L	0.0093	0.48%
Na 589.592†	149.8	0.01255	mg/L	0.008218	0.01255	mg/L	0.008218	65.47%
Na 330.237†	-28.8	-0.8500	mg/L	0.21078	-0.8500	mg/L	0.21078	24.80%
Ni 231.604†	10555.4	2.084	mg/L	0.0163	2.084	mg/L	0.0163	0.78%
Pb 220.353†	23475.2	2.043	mg/L	0.0056	2.043	mg/L	0.0056	0.27%
Sb 206.836†	9584.9	2.068	mg/L	0.0057	2.068	mg/L	0.0057	0.28%
Se 196.026†	4775.1	1.991	mg/L	0.0076	1.991	mg/L	0.0076	0.38%
Si 288.158†	207.8	0.09373	mg/L	0.025670	0.09373	mg/L	0.025670	27.39%
Sn 189.927†	-18.7	-0.00013	mg/L	0.000096	-0.00013	mg/L	0.000096	71.55%
Sr 421.552†	2173354.4	2.039	mg/L	0.0041	2.039	mg/L	0.0041	0.20%
Ti 334.903†	64587.8	2.028	mg/L	0.0085	2.028	mg/L	0.0085	0.42%
Tl 190.801†	5337.5	2.033	mg/L	0.0090	2.033	mg/L	0.0090	0.44%
V 292.402†	333986.6	2.000	mg/L	0.0072	2.000	mg/L	0.0072	0.36%
Zn 206.200†	12063.7	2.086	mg/L	0.0171	2.086	mg/L	0.0171	0.82%

Sequence No.: 8
Sample ID: DI CHECK

Autosampler Location: 306
Date Collected: 7/2/2012 11:17:26 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2667443.8	102.4	%	0.40				0.40%
ScR 361.383	490041.1	105.3	%	0.23				0.22%
Ag 328.068†	12.3	0.00005	mg/L	0.000165	0.00005	mg/L	0.000165	328.36%
Al 308.215†	-1.2	-0.00078	mg/L	0.003954	-0.00078	mg/L	0.003954	506.10%
As 188.979†	8.0	0.00319	mg/L	0.000905	0.00319	mg/L	0.000905	28.38%
B 249.677†	-0.6	-0.00007	mg/L	0.001490	-0.00007	mg/L	0.001490	>999.9%
Ba 233.527†	-7.8	-0.00076	mg/L	0.000230	-0.00076	mg/L	0.000230	30.26%
Be 313.042†	22.3	0.00003	mg/L	0.000024	0.00003	mg/L	0.000024	93.82%
Ca 317.933†	-36.5	-0.00263	mg/L	0.000095	-0.00263	mg/L	0.000095	3.62%
Cd 228.802†	1.4	0.00003	mg/L	0.000107	0.00003	mg/L	0.000107	329.10%
Co 228.616†	32.3	0.00069	mg/L	0.000024	0.00069	mg/L	0.000024	3.44%
Cr 267.716†	8.5	0.00089	mg/L	0.000689	0.00089	mg/L	0.000689	77.51%
Cu 324.752†	-16.3	-0.00008	mg/L	0.000117	-0.00008	mg/L	0.000117	154.31%
Fe 273.955†	4.7	0.00284	mg/L	0.001111	0.00284	mg/L	0.001111	39.18%
K 766.490†	-27.6	-0.01189	mg/L	0.006973	-0.01189	mg/L	0.006973	58.62%
Mg 279.077†	-8.6	-0.00604	mg/L	0.005059	-0.00604	mg/L	0.005059	83.81%
Mn 257.610†	-2.2	-0.00003	mg/L	0.000132	-0.00003	mg/L	0.000132	378.44%
Mo 202.031†	39.5	0.00134	mg/L	0.000337	0.00134	mg/L	0.000337	25.21%
Na 589.592†	27.2	0.00228	mg/L	0.002584	0.00228	mg/L	0.002584	113.36%
Na 330.237†	-2.5	-0.08094	mg/L	0.734967	-0.08094	mg/L	0.734967	908.05%
Ni 231.604†	9.8	0.00193	mg/L	0.000801	0.00193	mg/L	0.000801	41.42%
Pb 220.353†	28.8	0.00251	mg/L	0.000498	0.00251	mg/L	0.000498	19.84%
Sb 206.836†	-15.6	-0.00340	mg/L	0.001763	-0.00340	mg/L	0.001763	51.89%
Se 196.026†	19.5	0.00813	mg/L	0.001791	0.00813	mg/L	0.001791	22.02%
Si 288.158†	-9.7	-0.00402	mg/L	0.002436	-0.00402	mg/L	0.002436	60.59%
Sn 189.927†	1.6	0.00023	mg/L	0.000590	0.00023	mg/L	0.000590	261.34%
Sr 421.552†	59.0	0.00006	mg/L	0.000021	0.00006	mg/L	0.000021	38.16%
Ti 334.903†	-10.8	-0.00034	mg/L	0.000473	-0.00034	mg/L	0.000473	138.85%
Tl 190.801†	17.7	0.00677	mg/L	0.002383	0.00677	mg/L	0.002383	35.20%
V 292.402†	16.7	0.00010	mg/L	0.000292	0.00010	mg/L	0.000292	280.39%
Zn 206.200†	0.4	0.00007	mg/L	0.000456	0.00007	mg/L	0.000456	657.71%

Sequence No.: 9
Sample ID: CV 2

Dilution: 1X

Autosampler Location: 7
Date Collected: 7/2/2012 11:21:25 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2599786.8	99.76	%	0.348				0.35%
ScR 361.383	472746.4	101.6	%	0.40				0.39%
Ag 328.068†	246348.3	1.011	mg/L	0.0060	1.011	mg/L	0.0060	0.59%
Al 308.215†	3218.4	1.974	mg/L	0.0080	1.974	mg/L	0.0080	0.40%
As 188.979†	5009.2	2.013	mg/L	0.0136	2.013	mg/L	0.0136	0.68%
B 249.677†	9700.5	1.000	mg/L	0.0041	1.000	mg/L	0.0041	0.41%
Ba 233.527†	10040.1	0.9793	mg/L	0.00687	0.9793	mg/L	0.00687	0.70%
Be 313.042†	870393.8	0.9954	mg/L	0.00239	0.9954	mg/L	0.00239	0.24%
Ca 317.933†	28188.2	2.030	mg/L	0.0130	2.030	mg/L	0.0130	0.64%
Cd 228.802†	32784.2	1.009	mg/L	0.0027	1.009	mg/L	0.0027	0.27%
Co 228.616†	45974.9	0.9736	mg/L	0.00301	0.9736	mg/L	0.00301	0.31%
Cr 267.716†	9610.7	0.9991	mg/L	0.00637	0.9991	mg/L	0.00637	0.64%
Cu 324.752†	213988.3	1.002	mg/L	0.0013	1.002	mg/L	0.0013	0.13%
Fe 273.955†	3349.9	1.996	mg/L	0.0086	1.996	mg/L	0.0086	0.43%
K 766.490†	47515.7	20.49	mg/L	0.060	20.49	mg/L	0.060	0.29%
Mg 279.077†	2790.5	1.966	mg/L	0.0182	1.966	mg/L	0.0182	0.93%
Mn 257.610†	61283.2	0.9861	mg/L	0.00567	0.9861	mg/L	0.00567	0.57%
Mo 202.031†	29926.3	1.013	mg/L	0.0056	1.013	mg/L	0.0056	0.55%
Na 589.592†	601338.2	50.40	mg/L	0.093	50.40	mg/L	0.093	0.18%
Na 330.237†	1561.6	51.02	mg/L	0.473	51.02	mg/L	0.473	0.93%
Ni 231.604†	5084.8	1.005	mg/L	0.0092	1.005	mg/L	0.0092	0.91%
Pb 220.353†	23232.4	2.021	mg/L	0.0113	2.021	mg/L	0.0113	0.56%
Sb 206.836†	9692.9	2.105	mg/L	0.0128	2.105	mg/L	0.0128	0.61%
Se 196.026†	4724.0	1.971	mg/L	0.0124	1.971	mg/L	0.0124	0.63%
Si 288.158†	4703.9	1.948	mg/L	0.0112	1.948	mg/L	0.0112	0.57%
Sn 189.927†	6968.7	1.027	mg/L	0.0070	1.027	mg/L	0.0070	0.68%
Sr 421.552†	1064642.2	0.9990	mg/L	0.00080	0.9990	mg/L	0.00080	0.08%
Ti 334.903†	31814.6	0.9989	mg/L	0.00203	0.9989	mg/L	0.00203	0.20%
Tl 190.801†	5232.4	1.995	mg/L	0.0089	1.995	mg/L	0.0089	0.45%
V 292.402†	164491.4	0.9851	mg/L	0.00196	0.9851	mg/L	0.00196	0.20%
Zn 206.200†	5945.7	1.028	mg/L	0.0100	1.028	mg/L	0.0100	0.98%

Sequence No.: 10
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 7/2/2012 11:24:29 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2580523.4	99.02	%	0.380				0.38%
ScR 361.383	477799.4	102.7	%	0.48				0.47%
Ag 328.068†	-23.7	-0.00010	mg/L	0.000068	-0.00010	mg/L	0.000068	69.29%
Al 308.215†	0.2	0.00013	mg/L	0.007933	0.00013	mg/L	0.007933	>999.9%
As 188.979†	2.5	0.00100	mg/L	0.001388	0.00100	mg/L	0.001388	138.22%
B 249.677†	19.2	0.00199	mg/L	0.000398	0.00199	mg/L	0.000398	20.07%
Ba 233.527†	-3.3	-0.00032	mg/L	0.000455	-0.00032	mg/L	0.000455	140.13%
Be 313.042†	44.1	0.00005	mg/L	0.000013	0.00005	mg/L	0.000013	26.83%
Ca 317.933†	11.9	0.00085	mg/L	0.000580	0.00085	mg/L	0.000580	67.88%
Cd 228.802†	1.1	0.00003	mg/L	0.000084	0.00003	mg/L	0.000084	277.85%
Co 228.616†	2.7	0.00006	mg/L	0.000040	0.00006	mg/L	0.000040	68.38%
Cr 267.716†	6.1	0.00064	mg/L	0.000684	0.00064	mg/L	0.000684	107.68%
Cu 324.752†	-21.0	-0.00010	mg/L	0.000068	-0.00010	mg/L	0.000068	68.80%
Fe 273.955†	-2.2	-0.00129	mg/L	0.001718	-0.00129	mg/L	0.001718	133.10%
K 766.490†	-19.3	-0.00832	mg/L	0.013211	-0.00832	mg/L	0.013211	158.88%
Mg 279.077†	-4.3	-0.00301	mg/L	0.001800	-0.00301	mg/L	0.001800	59.75%
Mn 257.610†	6.7	0.00011	mg/L	0.000120	0.00011	mg/L	0.000120	110.58%
Mo 202.031†	42.5	0.00144	mg/L	0.000128	0.00144	mg/L	0.000128	8.88%
Na 589.592†	36.6	0.00307	mg/L	0.007342	0.00307	mg/L	0.007342	239.37%
Na 330.237†	-3.6	-0.1162	mg/L	0.31999	-0.1162	mg/L	0.31999	275.49%
Ni 231.604†	-2.6	-0.00051	mg/L	0.001174	-0.00051	mg/L	0.001174	232.31%
Pb 220.353†	16.7	0.00146	mg/L	0.000474	0.00146	mg/L	0.000474	32.55%
Sb 206.836†	25.5	0.00553	mg/L	0.000526	0.00553	mg/L	0.000526	9.51%
Se 196.026†	3.0	0.00127	mg/L	0.002219	0.00127	mg/L	0.002219	175.02%
Si 288.158†	15.0	0.00619	mg/L	0.002908	0.00619	mg/L	0.002908	47.00%
Sn 189.927†	3.3	0.00048	mg/L	0.000659	0.00048	mg/L	0.000659	136.06%
Sr 421.552†	0.6	0.00000	mg/L	0.000033	0.00000	mg/L	0.000033	>999.9%
Ti 334.903†	12.5	0.00039	mg/L	0.000597	0.00039	mg/L	0.000597	153.28%
Tl 190.801†	8.9	0.00341	mg/L	0.001572	0.00341	mg/L	0.001572	46.14%
V 292.402†	24.2	0.00015	mg/L	0.000095	0.00015	mg/L	0.000095	64.20%
Zn 206.200†	0.2	0.00004	mg/L	0.000091	0.00004	mg/L	0.000091	221.47%

Sequence No.: 11
Sample ID: UZ99 MB1 SWC

Dilution: 2X

Autosampler Location: 307
Date Collected: 7/2/2012 11:28:29 AM
Data Type: Original

Nebulizer Parameters: UZ99 MB1 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 MB1 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2550157.0	97.85	%	0.562				0.57%
ScR 361.383	475634.3	102.2	%	0.74				0.72%
Ag 328.068†	-30.0	-0.00012	mg/L	0.000100	-0.00025	mg/L	0.000200	81.38%
Al 308.215†	5.3	0.00330	mg/L	0.003330	0.00660	mg/L	0.006659	100.96%
As 188.979†	0.1	0.00005	mg/L	0.000274	0.00009	mg/L	0.000548	597.91%
B 249.677†	3.9	0.00040	mg/L	0.000762	0.00080	mg/L	0.001524	189.40%
Ba 233.527†	-2.7	-0.00027	mg/L	0.000039	-0.00053	mg/L	0.000078	14.56%
Be 313.042†	8.4	0.00001	mg/L	0.000020	0.00002	mg/L	0.000041	212.36%
Ca 317.933†	78.0	0.00561	mg/L	0.000668	0.01123	mg/L	0.001335	11.89%
Cd 228.802†	1.3	0.00004	mg/L	0.000015	0.00008	mg/L	0.000029	37.12%
Co 228.616†	0.9	0.00002	mg/L	0.000186	0.00004	mg/L	0.000371	988.41%
Cr 267.716†	0.0	0.00000	mg/L	0.000743	0.00000	mg/L	0.001486	>999.9%
Cu 324.752†	171.2	0.00080	mg/L	0.000033	0.00160	mg/L	0.000067	4.17%
Fe 273.955†	3.6	0.00216	mg/L	0.001490	0.00431	mg/L	0.002979	69.10%
K 766.490†	-14.4	-0.00622	mg/L	0.006899	-0.01243	mg/L	0.013797	110.99%
Mg 279.077†	3.7	0.00259	mg/L	0.004819	0.00519	mg/L	0.009639	185.80%
Mn 257.610†	7.2	0.00012	mg/L	0.000034	0.00023	mg/L	0.000069	29.48%
Mo 202.031†	-1.3	-0.00004	mg/L	0.000148	-0.00009	mg/L	0.000296	336.23%
Na 589.592†	129.2	0.01083	mg/L	0.005062	0.02165	mg/L	0.010124	46.75%
Na 330.237†	-5.3	-0.1717	mg/L	0.56758	-0.3435	mg/L	1.13515	330.51%
Ni 231.604†	-2.5	-0.00049	mg/L	0.000624	-0.00098	mg/L	0.001249	127.16%
Pb 220.353†	14.5	0.00126	mg/L	0.000082	0.00252	mg/L	0.000164	6.49%
Sb 206.836†	6.4	0.00139	mg/L	0.001175	0.00277	mg/L	0.002350	84.82%
Se 196.026†	-0.9	-0.00038	mg/L	0.004460	-0.00076	mg/L	0.008919	>999.9%
Si 288.158†	201.4	0.08324	mg/L	0.004008	0.1665	mg/L	0.00802	4.82%
Sn 189.927†	0.6	0.00008	mg/L	0.000514	0.00017	mg/L	0.001027	616.93%
Sr 421.552†	43.1	0.00004	mg/L	0.000036	0.00008	mg/L	0.000072	88.99%
Ti 334.903†	10.8	0.00034	mg/L	0.000131	0.00068	mg/L	0.000262	38.46%
Tl 190.801†	3.0	0.00113	mg/L	0.001030	0.00226	mg/L	0.002059	91.23%
V 292.402†	11.8	0.00007	mg/L	0.000063	0.00014	mg/L	0.000127	91.09%
Zn 206.200†	2.8	0.00049	mg/L	0.000623	0.00097	mg/L	0.001246	128.41%

Sequence No.: 12
Sample ID: VA19 A SWC

Dilution: 2X

Autosampler Location: 308
Date Collected: 7/2/2012 11:32:30 AM
Data Type: Original

Nebulizer Parameters: VA19 A SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VA19 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2563881.2	98.38	%	0.266				0.27%
ScR 361.383	476174.2	102.4	%	0.73				0.72%
Ag 328.068†	363.4	-0.00028	mg/L	0.000082	-0.00056	mg/L	0.000164	29.57%
Al 308.215†	135993.3	84.65	mg/L	0.157	169.3	mg/L	0.31	0.19%
As 188.979†	-19.2	0.02823	mg/L	0.001137	0.05646	mg/L	0.002274	4.03%
B 249.677†	295.1	0.03030	mg/L	0.000352	0.06060	mg/L	0.000703	1.16%
Ba 233.527†	6037.4	0.5768	mg/L	0.00460	1.154	mg/L	0.0092	0.80%
Be 313.042†	1372.5	0.00126	mg/L	0.000026	0.00252	mg/L	0.000051	2.04%
Ca 317.933†	424584.8	30.57	mg/L	0.077	61.14	mg/L	0.154	0.25%
Cd 228.802†	81.4	0.00272	mg/L	0.000130	0.00545	mg/L	0.000261	4.79%
Co 228.616†	3099.2	0.05648	mg/L	0.000199	0.1130	mg/L	0.00040	0.35%
Cr 267.716†	2431.5	0.2565	mg/L	0.00161	0.5130	mg/L	0.00323	0.63%
Cu 324.752†	30890.5	0.1542	mg/L	0.00013	0.3084	mg/L	0.00025	0.08%
Fe 273.955†	224256.4	133.9	mg/L	0.27	267.8	mg/L	0.55	0.20%
K 766.490†	9457.8	4.079	mg/L	0.0180	8.157	mg/L	0.0360	0.44%
Mg 279.077†	48001.4	33.63	mg/L	0.080	67.25	mg/L	0.160	0.24%
Mn 257.610†	613024.5	9.858	mg/L	0.0336	19.72	mg/L	0.067	0.34%
Mo 202.031†	107.7	0.00329	mg/L	0.000102	0.00659	mg/L	0.000205	3.11%
Na 589.592†	18983.3	1.591	mg/L	0.0125	3.182	mg/L	0.0250	0.78%
Na 330.237†	-6.1	1.014	mg/L	0.5765	2.029	mg/L	1.1529	56.82%
Ni 231.604†	1464.6	0.2889	mg/L	0.00143	0.5779	mg/L	0.00285	0.49%
Pb 220.353†	1832.7	0.1632	mg/L	0.00080	0.3265	mg/L	0.00159	0.49%
Sb 206.836†	135.0	0.01690	mg/L	0.001889	0.03379	mg/L	0.003778	11.18%
Se 196.026†	35.1	0.00567	mg/L	0.001232	0.01135	mg/L	0.002465	21.72%
Si 288.158†	13225.4	5.469	mg/L	0.0394	10.94	mg/L	0.079	0.72%
Sn 189.927†	-10.1	0.00217	mg/L	0.000669	0.00433	mg/L	0.001338	30.86%
Sr 421.552†	216058.5	0.2027	mg/L	0.00075	0.4055	mg/L	0.00150	0.37%
Ti 334.903†	171768.3	5.400	mg/L	0.0168	10.80	mg/L	0.034	0.31%
Tl 190.801†	-65.0	-0.00728	mg/L	0.000861	-0.01456	mg/L	0.001723	11.83%
V 292.402†	61535.8	0.3511	mg/L	0.00086	0.7022	mg/L	0.00171	0.24%
Zn 206.200†	3271.6	0.5656	mg/L	0.00525	1.131	mg/L	0.0105	0.93%

Sequence No.: 13
Sample ID: VA19 B SWC

Dilution: 2X

Autosampler Location: 309
Date Collected: 7/2/2012 11:36:31 AM
Data Type: Original

Nebulizer Parameters: VA19 B SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VA19 B SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2559095.5	98.20	%	0.338				0.34%
ScR 361.383	468721.8	100.8	%	0.54				0.54%
Ag 328.068†	915.1	0.00061	mg/L	0.000204	0.00121	mg/L	0.000407	33.55%
Al 308.215†	175984.3	109.5	mg/L	0.22	219.1	mg/L	0.43	0.20%
As 188.979†	15.6	0.04907	mg/L	0.002344	0.09813	mg/L	0.004689	4.78%
B 249.677†	513.4	0.05279	mg/L	0.000666	0.1056	mg/L	0.00133	1.26%
Ba 233.527†	10689.7	1.022	mg/L	0.0055	2.045	mg/L	0.0111	0.54%
Be 313.042†	1661.6	0.00148	mg/L	0.000013	0.00296	mg/L	0.000026	0.88%
Ca 317.933†	1733820.7	124.8	mg/L	0.32	249.7	mg/L	0.64	0.26%
Cd 228.802†	288.5	0.00912	mg/L	0.000172	0.01824	mg/L	0.000344	1.89%
Co 228.616†	4550.4	0.08440	mg/L	0.000301	0.1688	mg/L	0.00060	0.36%
Cr 267.716†	3582.5	0.3790	mg/L	0.00233	0.7580	mg/L	0.00466	0.62%
Cu 324.752†	183266.0	0.8752	mg/L	0.00099	1.750	mg/L	0.0020	0.11%
Fe 273.955†	378745.1	226.2	mg/L	0.73	452.4	mg/L	1.46	0.32%
K 766.490†	18568.3	8.008	mg/L	0.0044	16.02	mg/L	0.009	0.05%
Mg 279.077†	66081.0	46.24	mg/L	0.093	92.48	mg/L	0.187	0.20%
Mn 257.610†	1048996.5	16.87	mg/L	0.059	33.74	mg/L	0.118	0.35%
Mo 202.031†	862.3	0.02775	mg/L	0.000162	0.05550	mg/L	0.000324	0.58%
Na 589.592†	99095.4	8.305	mg/L	0.0547	16.61	mg/L	0.109	0.66%
Na 330.237†	235.5	8.259	mg/L	0.2783	16.52	mg/L	0.557	3.37%
Ni 231.604†	1738.0	0.3429	mg/L	0.00077	0.6857	mg/L	0.00154	0.22%
Pb 220.353†	6416.1	0.5585	mg/L	0.00104	1.117	mg/L	0.0021	0.19%
Sb 206.836†	212.1	0.02982	mg/L	0.001124	0.05964	mg/L	0.002248	3.77%
Se 196.026†	57.0	0.00840	mg/L	0.005075	0.01680	mg/L	0.010151	60.41%
Si 288.158†	11113.7	4.599	mg/L	0.0348	9.197	mg/L	0.0697	0.76%
Sn 189.927†	144.7	0.02868	mg/L	0.001236	0.05737	mg/L	0.002472	4.31%
Sr 421.552†	595527.4	0.5588	mg/L	0.00169	1.118	mg/L	0.0034	0.30%
Ti 334.903†	223890.5	7.032	mg/L	0.0179	14.06	mg/L	0.036	0.25%
Tl 190.801†	-99.9	-0.01213	mg/L	0.002719	-0.02427	mg/L	0.005438	22.41%
V 292.402†	85248.9	0.4828	mg/L	0.00113	0.9655	mg/L	0.00227	0.23%
Zn 206.200†	21295.2	3.681	mg/L	0.0182	7.362	mg/L	0.0363	0.49%

Sequence No.: 14
Sample ID: VA19 C SWC

Dilution: 2X

Autosampler Location: 310
Date Collected: 7/2/2012 11:40:34 AM
Data Type: Original

Nebulizer Parameters: VA19 C SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VA19 C SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2623010.4	100.7	%	0.54				0.54%
ScR 361.383	473175.6	101.7	%	0.81				0.80%
Ag 328.068†	1097.7	-0.00005	mg/L	0.000124	-0.00010	mg/L	0.000248	242.11%
Al 308.215†	116426.1	72.47	mg/L	0.125	144.9	mg/L	0.25	0.17%
As 188.979†	86.2	0.06336	mg/L	0.002990	0.1267	mg/L	0.00598	4.72%
B 249.677†	478.1	0.04920	mg/L	0.000849	0.09840	mg/L	0.001698	1.73%
Ba 233.527†	12109.9	1.163	mg/L	0.0101	2.327	mg/L	0.0203	0.87%
Be 313.042†	1300.8	0.00117	mg/L	0.000012	0.00234	mg/L	0.000025	1.05%
Ca 317.933†	658903.0	47.44	mg/L	0.147	94.89	mg/L	0.295	0.31%
Cd 228.802†	240.4	0.00750	mg/L	0.000092	0.01501	mg/L	0.000184	1.22%
Co 228.616†	3389.6	0.06405	mg/L	0.000376	0.1281	mg/L	0.00075	0.59%
Cr 267.716†	2321.3	0.2475	mg/L	0.00181	0.4950	mg/L	0.00362	0.73%
Cu 324.752†	99124.6	0.4795	mg/L	0.00085	0.9590	mg/L	0.00170	0.18%
Fe 273.955†	333568.0	199.2	mg/L	0.69	398.4	mg/L	1.37	0.34%
K 766.490†	12642.2	5.452	mg/L	0.0549	10.90	mg/L	0.110	1.01%
Mg 279.077†	42808.3	29.92	mg/L	0.140	59.84	mg/L	0.280	0.47%
Mn 257.610†	1426533.5	22.94	mg/L	0.086	45.88	mg/L	0.172	0.37%
Mo 202.031†	525.4	0.01723	mg/L	0.000325	0.03447	mg/L	0.000650	1.89%
Na 589.592†	49409.7	4.141	mg/L	0.0198	8.282	mg/L	0.0397	0.48%
Na 330.237†	103.4	3.746	mg/L	0.2589	7.492	mg/L	0.5179	6.91%
Ni 231.604†	1463.8	0.2888	mg/L	0.00235	0.5775	mg/L	0.00471	0.82%
Pb 220.353†	4688.7	0.4048	mg/L	0.00386	0.8096	mg/L	0.00772	0.95%
Sb 206.836†	158.5	0.02360	mg/L	0.000856	0.04720	mg/L	0.001711	3.63%
Se 196.026†	52.4	0.00095	mg/L	0.003270	0.00189	mg/L	0.006540	346.01%
Si 288.158†	10226.7	4.230	mg/L	0.0208	8.460	mg/L	0.0415	0.49%
Sn 189.927†	110.4	0.01998	mg/L	0.001035	0.03996	mg/L	0.002071	5.18%
Sr 421.552†	333952.6	0.3134	mg/L	0.00084	0.6267	mg/L	0.00168	0.27%
Ti 334.903†	142819.6	4.488	mg/L	0.0152	8.976	mg/L	0.0304	0.34%
Tl 190.801†	-127.4	-0.02032	mg/L	0.003211	-0.04064	mg/L	0.006422	15.80%
V 292.402†	66902.7	0.3784	mg/L	0.00119	0.7567	mg/L	0.00238	0.31%
Zn 206.200†	17122.6	2.960	mg/L	0.0203	5.919	mg/L	0.0407	0.69%

Sequence No.: 15
Sample ID: VA19 D SWC

Dilution: 2X

Autosampler Location: 311
Date Collected: 7/2/2012 11:44:21 AM
Data Type: Original

Nebulizer Parameters: VA19 D SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VA19 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2609768.4	100.1	%	0.43				0.43%
ScR 361.383	477294.4	102.6	%	0.51				0.49%
Ag 328.068†	300.1	-0.00065	mg/L	0.000066	-0.00131	mg/L	0.000132	10.07%
Al 308.215†	131184.7	81.66	mg/L	0.492	163.3	mg/L	0.98	0.60%
As 188.979†	67.5	0.06012	mg/L	0.002642	0.1202	mg/L	0.00528	4.39%
B 249.677†	252.0	0.02587	mg/L	0.000698	0.05173	mg/L	0.001396	2.70%
Ba 233.527†	7965.3	0.7600	mg/L	0.00326	1.520	mg/L	0.0065	0.43%
Be 313.042†	1343.3	0.00127	mg/L	0.000033	0.00254	mg/L	0.000066	2.58%
Ca 317.933†	590385.7	42.51	mg/L	0.161	85.02	mg/L	0.322	0.38%
Cd 228.802†	138.3	0.00430	mg/L	0.000059	0.00860	mg/L	0.000117	1.36%
Co 228.616†	2885.3	0.05249	mg/L	0.000336	0.1050	mg/L	0.00067	0.64%
Cr 267.716†	1890.7	0.2023	mg/L	0.00171	0.4046	mg/L	0.00341	0.84%
Cu 324.752†	56631.2	0.2794	mg/L	0.00223	0.5588	mg/L	0.00446	0.80%
Fe 273.955†	315795.0	188.6	mg/L	1.30	377.2	mg/L	2.60	0.69%
K 766.490†	14612.6	6.302	mg/L	0.0311	12.60	mg/L	0.062	0.49%
Mg 279.077†	44861.8	31.37	mg/L	0.146	62.74	mg/L	0.292	0.47%
Mn 257.610†	638710.9	10.27	mg/L	0.052	20.54	mg/L	0.103	0.50%
Mo 202.031†	347.9	0.01129	mg/L	0.000363	0.02257	mg/L	0.000725	3.21%
Na 589.592†	61437.7	5.149	mg/L	0.0249	10.30	mg/L	0.050	0.48%
Na 330.237†	117.3	4.561	mg/L	0.1248	9.122	mg/L	0.2497	2.74%
Ni 231.604†	925.5	0.1826	mg/L	0.00124	0.3652	mg/L	0.00247	0.68%
Pb 220.353†	3662.7	0.3179	mg/L	0.00103	0.6357	mg/L	0.00206	0.32%
Sb 206.836†	161.6	0.02328	mg/L	0.002112	0.04656	mg/L	0.004224	9.07%
Se 196.026†	27.2	0.00200	mg/L	0.001478	0.00400	mg/L	0.002955	73.87%
Si 288.158†	10671.4	4.414	mg/L	0.0169	8.828	mg/L	0.0337	0.38%
Sn 189.927†	17.7	0.00646	mg/L	0.000853	0.01292	mg/L	0.001707	13.21%
Sr 421.552†	314070.0	0.2947	mg/L	0.00113	0.5894	mg/L	0.00226	0.38%
Ti 334.903†	160949.5	5.059	mg/L	0.0228	10.12	mg/L	0.046	0.45%
Tl 190.801†	-77.5	-0.00293	mg/L	0.003041	-0.00587	mg/L	0.006083	103.69%
V 292.402†	51707.3	0.2864	mg/L	0.00126	0.5729	mg/L	0.00251	0.44%
Zn 206.200†	12201.9	2.109	mg/L	0.0062	4.218	mg/L	0.0125	0.30%

Sequence No.: 16
Sample ID: UZ99 ADUP SWC

Dilution: 2X

DEL

Autosampler Location: 312
Date Collected: 7/2/2012 11:48:22 AM
Data Type: Original

Nebulizer Parameters: UZ99 ADUP SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 ADUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2518171.4	96.63	%	0.392				0.41%
ScR 361.383	459046.6	98.67	%	0.534				0.54%
Ag 328.068†	138.8	-0.00003	mg/L	0.000079	-0.00006	mg/L	0.000157	243.89%
Al 308.215†	222571.5	138.5	mg/L	0.36	277.1	mg/L	0.71	0.26%
As 188.979†	-118.5	-0.01164	mg/L	0.001677	-0.02328	mg/L	0.003355	14.41%
B 249.677†	958.7	0.09789	mg/L	0.003273	0.1958	mg/L	0.00655	3.34%
Ba 233.527†	4256.8	0.3876	mg/L	0.00038	0.7753	mg/L	0.00076	0.10%
Be 313.042†	1323.0	0.00126	mg/L	0.000050	0.00251	mg/L	0.000101	4.01%
Ca 317.933†	1333068.9	95.98	mg/L	0.532	192.0	mg/L	1.06	0.55%
Cd 228.802†	-10.6	0.00498	mg/L	0.000202	0.00996	mg/L	0.000404	4.06%
Co 228.616†	19036.7	0.3928	mg/L	0.00112	0.7855	mg/L	0.00224	0.28%
Cr 267.716†	3247.0	0.3153	mg/L	0.00096	0.6305	mg/L	0.00193	0.31%
Cu 324.752†	65351.1	0.3290	mg/L	0.00093	0.6580	mg/L	0.00186	0.28%
Fe 273.955†	496201.2	296.2	mg/L	1.31	592.5	mg/L	2.62	0.44%
K 766.490†	10649.9	4.593	mg/L	0.0156	9.185	mg/L	0.0311	0.34%
Mg 279.077†	1319246.1	927.2	mg/L	3.95	1854	mg/L	7.9	0.43%
Mn 257.610†	266851.2	4.289	mg/L	0.0156	8.577	mg/L	0.0312	0.36%
Mo 202.031†	372.9	0.01152	mg/L	0.000138	0.02303	mg/L	0.000276	1.20%
Na 589.592†	12965.8	1.087	mg/L	0.0072	2.173	mg/L	0.0144	0.66%
Na 330.237†	-41.6	-0.3927	mg/L	0.47269	-0.7854	mg/L	0.94538	120.37%
Ni 231.604†	40570.8	8.003	mg/L	0.0031	16.01	mg/L	0.006	0.04%
Pb 220.353†	2090.4	0.1825	mg/L	0.00184	0.3651	mg/L	0.00368	1.01%
Sb 206.836†	273.9	0.03434	mg/L	0.000158	0.06868	mg/L	0.000317	0.46%
Se 196.026†	51.7	0.01766	mg/L	0.005234	0.03533	mg/L	0.010468	29.63%
Si 288.158†	3883.3	1.727	mg/L	0.0159	3.453	mg/L	0.0317	0.92%
Sn 189.927†	-5.3	0.00511	mg/L	0.001453	0.01022	mg/L	0.002905	28.43%
Sr 421.552†	265882.0	0.2495	mg/L	0.00072	0.4990	mg/L	0.00144	0.29%
Ti 334.903†	184181.3	5.785	mg/L	0.0201	11.57	mg/L	0.040	0.35%
Tl 190.801†	-113.9	-0.00293	mg/L	0.002117	-0.00586	mg/L	0.004235	72.30%
V 292.402†	47557.4	0.2488	mg/L	0.00031	0.4976	mg/L	0.00062	0.12%
Zn 206.200†	5078.3	0.8779	mg/L	0.00430	1.756	mg/L	0.0086	0.49%

Sequence No.: 17
Sample ID: UZ99 A SWC

Dilution: 2X

Autosampler Location: 313
Date Collected: 7/2/2012 11:51:25 AM
Data Type: Original

Nebulizer Parameters: UZ99 A SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2521477.3	96.75	%	0.573				0.59%
ScR 361.383	443398.5	95.31	%	0.650				0.68%
Ag 328.068†	50.0	-0.00037	mg/L	0.000106	-0.00074	mg/L	0.000212	28.76%
Al 308.215†	208956.2	130.1	mg/L	0.37	260.1	mg/L	0.73	0.28%
As 188.979†	-110.3	-0.00697	mg/L	0.002054	-0.01393	mg/L	0.004108	29.49%
B 249.677†	2456.6	0.2527	mg/L	0.00103	0.5055	mg/L	0.00207	0.41%
Ba 233.527†	3511.3	0.3152	mg/L	0.00046	0.6305	mg/L	0.00092	0.15%
Be 313.042†	1266.9	0.00119	mg/L	0.000025	0.00238	mg/L	0.000049	2.07%
Ca 317.933†	969885.0	69.83	mg/L	0.274	139.7	mg/L	0.55	0.39%
Cd 228.802†	-5.2	0.00448	mg/L	0.000221	0.00896	mg/L	0.000443	4.94%
Co 228.616†	17386.5	0.3579	mg/L	0.00171	0.7157	mg/L	0.00342	0.48%
Cr 267.716†	3237.3	0.3175	mg/L	0.00311	0.6350	mg/L	0.00622	0.98%
Cu 324.752†	60926.5	0.3080	mg/L	0.00019	0.6160	mg/L	0.00038	0.06%
Fe 273.955†	491299.2	293.3	mg/L	1.34	586.6	mg/L	2.68	0.46%
K 766.490†	10732.2	4.628	mg/L	0.0253	9.256	mg/L	0.0506	0.55%
Mg 279.077†	1186488.6	833.8	mg/L	2.61	1668	mg/L	5.2	0.31%
Mn 257.610†	259396.5	4.169	mg/L	0.0114	8.338	mg/L	0.0227	0.27%
Mo 202.031†	413.9	0.01320	mg/L	0.000153	0.02641	mg/L	0.000306	1.16%
Na 589.592†	14168.1	1.187	mg/L	0.0043	2.375	mg/L	0.0086	0.36%
Na 330.237†	-55.0	-0.6960	mg/L	0.21387	-1.392	mg/L	0.4277	30.73%
Ni 231.604†	35395.5	6.982	mg/L	0.0073	13.96	mg/L	0.015	0.10%
Pb 220.353†	1777.2	0.1542	mg/L	0.00087	0.3085	mg/L	0.00173	0.56%
Sb 206.836†	271.6	0.03585	mg/L	0.001789	0.07171	mg/L	0.003578	4.99%
Se 196.026†	40.2	0.01296	mg/L	0.002060	0.02593	mg/L	0.004121	15.89%
Si 288.158†	3180.4	1.424	mg/L	0.0052	2.848	mg/L	0.0104	0.36%
Sn 189.927†	6.7	0.00608	mg/L	0.001174	0.01216	mg/L	0.002348	19.31%
Sr 421.552†	212016.0	0.1989	mg/L	0.00049	0.3979	mg/L	0.00098	0.25%
Ti 334.903†	185207.6	5.819	mg/L	0.0119	11.64	mg/L	0.024	0.20%
Tl 190.801†	-114.3	-0.00171	mg/L	0.002817	-0.00342	mg/L	0.005634	164.61%
V 292.402†	48305.3	0.2536	mg/L	0.00071	0.5071	mg/L	0.00141	0.28%
Zn 206.200†	4801.0	0.8300	mg/L	0.00263	1.660	mg/L	0.0053	0.32%

Sequence No.: 18
Sample ID: UZ99 ASPK SWC

Autosampler Location: 314
Date Collected: 7/2/2012 11:54:26 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: UZ99 ASPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2531625.5	97.14	%	0.287				0.30%
ScR 361.383	470451.5	101.1	%	0.59				0.59%
Ag 328.068†	108116.9	0.4431	mg/L	0.00024	0.8862	mg/L	0.00048	0.05%
Al 308.215†	135334.6	84.24	mg/L	0.072	168.5	mg/L	0.14	0.09%
As 188.979†	3992.2	1.624	mg/L	0.0039	3.247	mg/L	0.0079	0.24%
B 249.677†	1056.8	0.1074	mg/L	0.00120	0.2147	mg/L	0.00241	1.12%
Ba 233.527†	17810.9	1.718	mg/L	0.0130	3.437	mg/L	0.0260	0.76%
Be 313.042†	305140.7	0.3488	mg/L	0.00107	0.6976	mg/L	0.00215	0.31%
Ca 317.933†	805587.9	58.00	mg/L	0.209	116.0	mg/L	0.42	0.36%
Cd 228.802†	13231.9	0.4082	mg/L	0.00120	0.8164	mg/L	0.00241	0.30%
Co 228.616†	29716.3	0.6228	mg/L	0.00131	1.246	mg/L	0.0026	0.21%
Cr 267.716†	5823.8	0.5899	mg/L	0.00403	1.180	mg/L	0.0081	0.68%
Cu 324.752†	142133.9	0.6823	mg/L	0.00076	1.365	mg/L	0.0015	0.11%
Fe 273.955†	353625.5	211.1	mg/L	0.67	422.2	mg/L	1.34	0.32%
K 766.490†	23973.5	10.34	mg/L	0.015	20.68	mg/L	0.029	0.14%
Mg 279.077†	928652.7	652.7	mg/L	1.44	1305	mg/L	2.9	0.22%
Mn 257.610†	215999.8	3.472	mg/L	0.0095	6.944	mg/L	0.0189	0.27%
Mo 202.031†	717.7	0.02362	mg/L	0.000297	0.04724	mg/L	0.000594	1.26%
Na 589.592†	103194.3	8.649	mg/L	0.0436	17.30	mg/L	0.087	0.50%
Na 330.237†	212.0	7.415	mg/L	0.3206	14.83	mg/L	0.641	4.32%
Ni 231.604†	30147.6	5.947	mg/L	0.0451	11.89	mg/L	0.090	0.76%
Pb 220.353†	18857.1	1.638	mg/L	0.0033	3.276	mg/L	0.0066	0.20%
Sb 206.836†	272.0	0.04083	mg/L	0.000790	0.08165	mg/L	0.001581	1.94%
Se 196.026†	3752.8	1.563	mg/L	0.0114	3.127	mg/L	0.0227	0.73%
Si 288.158†	1450.6	0.6868	mg/L	0.01191	1.374	mg/L	0.0238	1.73%
Sn 189.927†	10.6	0.00531	mg/L	0.000684	0.01062	mg/L	0.001369	12.88%
Sr 421.552†	518819.7	0.4868	mg/L	0.00054	0.9737	mg/L	0.00107	0.11%
Ti 334.903†	119212.2	3.745	mg/L	0.0075	7.489	mg/L	0.0151	0.20%
Tl 190.801†	3984.8	1.548	mg/L	0.0023	3.097	mg/L	0.0047	0.15%
V 292.402†	91032.1	0.5199	mg/L	0.00119	1.040	mg/L	0.0024	0.23%
Zn 206.200†	7215.6	1.248	mg/L	0.0087	2.495	mg/L	0.0174	0.70%

Sequence No.: 19
Sample ID: ~~UZ99 APOST~~ SWC 222222
7-2-12

Dilution: 2X

Autosampler Location: 315
Date Collected: 7/2/2012 11:57:27 AM
Data Type: Original

Nebulizer Parameters: UZ99 APOST SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 APOST SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2525821.7	96.92	%	0.661				0.68%
ScR 361.383	456503.2	98.13	%	0.385				0.39%
Ag 328.068†	127694.1	0.5233	mg/L	0.00273	1.047	mg/L	0.0055	0.52%
Al 308.215†	206510.0	128.5	mg/L	0.23	257.1	mg/L	0.45	0.18%
As 188.979†	4961.0	2.025	mg/L	0.0094	4.050	mg/L	0.0188	0.47%
B 249.677†	2413.8	0.2470	mg/L	0.00148	0.4939	mg/L	0.00296	0.60%
Ba 233.527†	23784.6	2.294	mg/L	0.0174	4.587	mg/L	0.0349	0.76%
Be 313.042†	440118.2	0.5031	mg/L	0.00203	1.006	mg/L	0.0041	0.40%
Ca 317.933†	1098767.1	79.11	mg/L	0.162	158.2	mg/L	0.32	0.21%
Cd 228.802†	17432.9	0.5380	mg/L	0.00267	1.076	mg/L	0.0053	0.50%
Co 228.616†	39306.7	0.8226	mg/L	0.00425	1.645	mg/L	0.0085	0.52%
Cr 267.716†	8167.7	0.8302	mg/L	0.00762	1.660	mg/L	0.0152	0.92%
Cu 324.752†	172593.6	0.8313	mg/L	0.00130	1.663	mg/L	0.0026	0.16%
Fe 273.955†	491621.6	293.5	mg/L	0.75	587.0	mg/L	1.51	0.26%
K 766.490†	36440.7	15.71	mg/L	0.055	31.43	mg/L	0.109	0.35%
Mg 279.077†	1183393.8	831.7	mg/L	1.85	1663	mg/L	3.7	0.22%
Mn 257.610†	287672.9	4.624	mg/L	0.0094	9.249	mg/L	0.0189	0.20%
Mo 202.031†	389.4	0.01227	mg/L	0.001034	0.02454	mg/L	0.002069	8.43%
Na 589.592†	137799.7	11.55	mg/L	0.023	23.10	mg/L	0.046	0.20%
Na 330.237†	275.8	9.934	mg/L	0.5370	19.87	mg/L	1.074	5.41%
Ni 231.604†	38204.8	7.536	mg/L	0.0625	15.07	mg/L	0.125	0.83%
Pb 220.353†	23914.6	2.079	mg/L	0.0115	4.159	mg/L	0.0231	0.56%
Sb 206.836†	283.3	0.03436	mg/L	0.002490	0.06872	mg/L	0.004979	7.25%
Se 196.026†	4915.7	2.048	mg/L	0.0110	4.095	mg/L	0.0220	0.54%
Si 288.158†	3144.8	1.411	mg/L	0.0131	2.822	mg/L	0.0263	0.93%
Sn 189.927†	10.4	0.00694	mg/L	0.001519	0.01387	mg/L	0.003037	21.89%
Sr 421.552†	751366.4	0.7050	mg/L	0.00196	1.410	mg/L	0.0039	0.28%
Ti 334.903†	182837.2	5.744	mg/L	0.0128	11.49	mg/L	0.026	0.22%
Tl 190.801†	4830.4	1.882	mg/L	0.0058	3.763	mg/L	0.0116	0.31%
V 292.402†	127993.8	0.7310	mg/L	0.00148	1.462	mg/L	0.0030	0.20%
Zn 206.200†	7653.9	1.324	mg/L	0.0095	2.647	mg/L	0.0189	0.72%

Sequence No.: 20
Sample ID: UZ99 MB1SPK SWC

Autosampler Location: 316
Date Collected: 7/2/2012 11:59:45 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: UZ99 MB1SPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 MB1SPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2619709.3	100.5	%	0.34				0.34%
ScR 361.383	474438.4	102.0	%	0.21				0.20%
Ag 328.068†	126974.2	0.5209	mg/L	0.00392	1.042	mg/L	0.0078	0.75%
Al 308.215†	3169.6	1.964	mg/L	0.0118	3.927	mg/L	0.0236	0.60%
As 188.979†	4990.6	2.000	mg/L	0.0037	4.000	mg/L	0.0075	0.19%
B 249.677†	21.5	0.00082	mg/L	0.000557	0.00164	mg/L	0.001115	67.77%
Ba 233.527†	19761.7	1.928	mg/L	0.0087	3.857	mg/L	0.0174	0.45%
Be 313.042†	427082.4	0.4884	mg/L	0.00077	0.9768	mg/L	0.00154	0.16%
Ca 317.933†	133746.1	9.630	mg/L	0.0049	19.26	mg/L	0.010	0.05%
Cd 228.802†	16394.8	0.5013	mg/L	0.00280	1.003	mg/L	0.0056	0.56%
Co 228.616†	22605.0	0.4791	mg/L	0.00250	0.9582	mg/L	0.00499	0.52%
Cr 267.716†	4780.1	0.4967	mg/L	0.00139	0.9934	mg/L	0.00279	0.28%
Cu 324.752†	103911.2	0.4871	mg/L	0.00261	0.9741	mg/L	0.00522	0.54%
Fe 273.955†	3428.0	2.044	mg/L	0.0091	4.088	mg/L	0.0182	0.44%
K 766.490†	22812.7	9.838	mg/L	0.0331	19.68	mg/L	0.066	0.34%
Mg 279.077†	14455.1	10.16	mg/L	0.039	20.32	mg/L	0.077	0.38%
Mn 257.610†	29710.6	0.4784	mg/L	0.00192	0.9568	mg/L	0.00385	0.40%
Mo 202.031†	28.9	0.00087	mg/L	0.000170	0.00173	mg/L	0.000339	19.57%
Na 589.592†	114585.8	9.603	mg/L	0.0293	19.21	mg/L	0.059	0.31%
Na 330.237†	289.2	9.293	mg/L	0.2478	18.59	mg/L	0.496	2.67%
Ni 231.604†	2505.2	0.4942	mg/L	0.00057	0.9884	mg/L	0.00115	0.12%
Pb 220.353†	22389.1	1.947	mg/L	0.0100	3.895	mg/L	0.0199	0.51%
Sb 206.836†	19.6	-0.00026	mg/L	0.000996	-0.00052	mg/L	0.001993	379.71%
Se 196.026†	4767.8	1.990	mg/L	0.0059	3.979	mg/L	0.0118	0.30%
Si 288.158†	32.6	0.01671	mg/L	0.002080	0.03343	mg/L	0.004160	12.45%
Sn 189.927†	-6.2	-0.00053	mg/L	0.000757	-0.00107	mg/L	0.001514	141.50%
Sr 421.552†	514326.2	0.4826	mg/L	0.00022	0.9652	mg/L	0.00044	0.05%
Ti 334.903†	154.6	0.00401	mg/L	0.000689	0.00802	mg/L	0.001377	17.17%
Tl 190.801†	5183.4	1.975	mg/L	0.0040	3.949	mg/L	0.0080	0.20%
V 292.402†	82000.6	0.4909	mg/L	0.00213	0.9817	mg/L	0.00426	0.43%
Zn 206.200†	2817.3	0.4875	mg/L	0.00066	0.9750	mg/L	0.00132	0.14%

Sequence No.: 21
Sample ID: CV 3

Dilution: 1X

Autosampler Location: 7
Date Collected: 7/2/2012 12:03:44 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2598247.6	99.70	%	0.243				0.24%
ScR 361.383	472873.7	101.6	%	0.09				0.09%
Ag 328.068†	259095.6	1.063	mg/L	0.0043	1.063	mg/L	0.0043	0.40%
Al 308.215†	3269.8	2.005	mg/L	0.0045	2.005	mg/L	0.0045	0.22%
As 188.979†	5150.2	2.070	mg/L	0.0075	2.070	mg/L	0.0075	0.36%
B 249.677†	9766.2	1.007	mg/L	0.0061	1.007	mg/L	0.0061	0.61%
Ba 233.527†	10212.4	0.9961	mg/L	0.00424	0.9961	mg/L	0.00424	0.43%
Be 313.042†	883791.8	1.011	mg/L	0.0043	1.011	mg/L	0.0043	0.43%
Ca 317.933†	28785.0	2.073	mg/L	0.0056	2.073	mg/L	0.0056	0.27%
Cd 228.802†	33715.1	1.038	mg/L	0.0028	1.038	mg/L	0.0028	0.27%
Co 228.616†	47286.4	1.001	mg/L	0.0032	1.001	mg/L	0.0032	0.32%
Cr 267.716†	9753.9	1.014	mg/L	0.0030	1.014	mg/L	0.0030	0.30%
Cu 324.752†	221809.3	1.039	mg/L	0.0044	1.039	mg/L	0.0044	0.42%
Fe 273.955†	3424.3	2.040	mg/L	0.0124	2.040	mg/L	0.0124	0.61%
K 766.490†	47841.3	20.63	mg/L	0.057	20.63	mg/L	0.057	0.28%
Mg 279.077†	2874.6	2.025	mg/L	0.0116	2.025	mg/L	0.0116	0.57%
Mn 257.610†	62080.9	0.9990	mg/L	0.00472	0.9990	mg/L	0.00472	0.47%
Mo 202.031†	30584.9	1.035	mg/L	0.0037	1.035	mg/L	0.0037	0.35%
Na 589.592†	600984.5	50.37	mg/L	0.358	50.37	mg/L	0.358	0.71%
Na 330.237†	1568.4	51.24	mg/L	0.398	51.24	mg/L	0.398	0.78%
Ni 231.604†	5165.6	1.021	mg/L	0.0077	1.021	mg/L	0.0077	0.75%
Pb 220.353†	23873.9	2.077	mg/L	0.0091	2.077	mg/L	0.0091	0.44%
Sb 206.836†	9894.1	2.149	mg/L	0.0107	2.149	mg/L	0.0107	0.50%
Se 196.026†	4835.2	2.017	mg/L	0.0092	2.017	mg/L	0.0092	0.45%
Si 288.158†	4784.2	1.981	mg/L	0.0122	1.981	mg/L	0.0122	0.62%
Sn 189.927†	7163.2	1.056	mg/L	0.0049	1.056	mg/L	0.0049	0.46%
Sr 421.552†	1071813.7	1.006	mg/L	0.0034	1.006	mg/L	0.0034	0.33%
Ti 334.903†	32180.6	1.010	mg/L	0.0043	1.010	mg/L	0.0043	0.43%
Tl 190.801†	5366.6	2.046	mg/L	0.0109	2.046	mg/L	0.0109	0.53%
V 292.402†	171842.5	1.029	mg/L	0.0023	1.029	mg/L	0.0023	0.23%
Zn 206.200†	6086.5	1.053	mg/L	0.0047	1.053	mg/L	0.0047	0.45%

Sequence No.: 22
Sample ID: CB 3

Dilution: 1X

Autosampler Location: 1
Date Collected: 7/2/2012 12:07:01 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	221.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2606122.0	100.0	%	0.61				0.61%
ScR 361.383	475971.0	102.3	%	0.41				0.40%
Ag 328.068†	-15.1	-0.00006	mg/L	0.000134	-0.00006	mg/L	0.000134	215.31%
Al 308.215†	11.9	0.00738	mg/L	0.006086	0.00738	mg/L	0.006086	82.47%
As 188.979†	-0.8	-0.00031	mg/L	0.002716	-0.00031	mg/L	0.002716	887.97%
B 249.677†	26.5	0.00273	mg/L	0.000530	0.00273	mg/L	0.000530	19.37%
Ba 233.527†	-0.1	-0.00001	mg/L	0.000200	-0.00001	mg/L	0.000200	>999.9%
Be 313.042†	96.3	0.00011	mg/L	0.000097	0.00011	mg/L	0.000097	88.16%
Ca 317.933†	36.6	0.00264	mg/L	0.001947	0.00264	mg/L	0.001947	73.88%
Cd 228.802†	3.5	0.00011	mg/L	0.000180	0.00011	mg/L	0.000180	164.86%
Co 228.616†	0.0	0.00000	mg/L	0.000066	0.00000	mg/L	0.000066	>999.9%
Cr 267.716†	-0.7	-0.00008	mg/L	0.000530	-0.00008	mg/L	0.000530	695.06%
Cu 324.752†	20.0	0.00009	mg/L	0.000059	0.00009	mg/L	0.000059	63.20%
Fe 273.955†	3.4	0.00202	mg/L	0.004013	0.00202	mg/L	0.004013	198.59%
K 766.490†	-11.6	-0.00499	mg/L	0.009737	-0.00499	mg/L	0.009737	195.02%
Mg 279.077†	15.0	0.01052	mg/L	0.012780	0.01052	mg/L	0.012780	121.52%
Mn 257.610†	29.1	0.00047	mg/L	0.000253	0.00047	mg/L	0.000253	53.97%
Mo 202.031†	36.9	0.00125	mg/L	0.000089	0.00125	mg/L	0.000089	7.10%
Na 589.592†	72.2	0.00605	mg/L	0.001838	0.00605	mg/L	0.001838	30.39%
Na 330.237†	-6.5	-0.2128	mg/L	0.30128	-0.2128	mg/L	0.30128	141.55%
Ni 231.604†	-9.2	-0.00182	mg/L	0.001233	-0.00182	mg/L	0.001233	67.93%
Pb 220.353†	10.7	0.00093	mg/L	0.000177	0.00093	mg/L	0.000177	19.00%
Sb 206.836†	17.8	0.00388	mg/L	0.001340	0.00388	mg/L	0.001340	34.57%
Se 196.026†	7.0	0.00293	mg/L	0.002945	0.00293	mg/L	0.002945	100.68%
Si 288.158†	15.9	0.00657	mg/L	0.002425	0.00657	mg/L	0.002425	36.93%
Sn 189.927†	1.8	0.00027	mg/L	0.000667	0.00027	mg/L	0.000667	245.11%
Sr 421.552†	117.8	0.00011	mg/L	0.000077	0.00011	mg/L	0.000077	69.30%
Ti 334.903†	17.7	0.00055	mg/L	0.000491	0.00055	mg/L	0.000491	88.57%
Tl 190.801†	13.0	0.00496	mg/L	0.001755	0.00496	mg/L	0.001755	35.39%
V 292.402†	24.5	0.00015	mg/L	0.000142	0.00015	mg/L	0.000142	96.91%
Zn 206.200†	-2.3	-0.00039	mg/L	0.000753	-0.00039	mg/L	0.000753	191.05%

Sequence No.: 23
Sample ID: VA19 MB1 SWC

Dilution: 2X

Autosampler Location: 317
Date Collected: 7/2/2012 12:11:01 PM
Data Type: Original

Nebulizer Parameters: VA19 MB1 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VA19 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2611900.4	100.2	%	0.46				0.45%
ScR 361.383	480969.1	103.4	%	0.21				0.21%
Ag 328.068†	22.6	0.00009	mg/L	0.000108	0.00019	mg/L	0.000217	116.90%
Al 308.215†	20.7	0.01290	mg/L	0.006635	0.02580	mg/L	0.013270	51.44%
As 188.979†	4.0	0.00160	mg/L	0.001408	0.00321	mg/L	0.002816	87.79%
B 249.677†	-0.0	0.00000	mg/L	0.000281	0.00000	mg/L	0.000563	>999.9%
Ba 233.527†	5.8	0.00057	mg/L	0.000513	0.00113	mg/L	0.001027	90.51%
Be 313.042†	5.2	0.00001	mg/L	0.000028	0.00001	mg/L	0.000056	472.34%
Ca 317.933†	145.2	0.01046	mg/L	0.001793	0.02091	mg/L	0.003587	17.15%
Cd 228.802†	-0.0	-0.00001	mg/L	0.000034	-0.00001	mg/L	0.000069	527.13%
Co 228.616†	17.9	0.00038	mg/L	0.000083	0.00076	mg/L	0.000165	21.79%
Cr 267.716†	1.6	0.00017	mg/L	0.000521	0.00034	mg/L	0.001042	305.48%
Cu 324.752†	89.1	0.00042	mg/L	0.000223	0.00084	mg/L	0.000446	53.36%
Fe 273.955†	8.6	0.00512	mg/L	0.004833	0.01024	mg/L	0.009666	94.41%
K 766.490†	-38.8	-0.01675	mg/L	0.012954	-0.03350	mg/L	0.025907	77.33%
Mg 279.077†	11.2	0.00789	mg/L	0.005793	0.01577	mg/L	0.011587	73.47%
Mn 257.610†	29.4	0.00047	mg/L	0.000064	0.00095	mg/L	0.000129	13.62%
Mo 202.031†	1.9	0.00006	mg/L	0.000051	0.00013	mg/L	0.000102	80.60%
Na 589.592†	108.3	0.00908	mg/L	0.000843	0.01816	mg/L	0.001685	9.28%
Na 330.237†	-1.7	-0.05551	mg/L	0.105289	-0.1110	mg/L	0.21058	189.69%
Ni 231.604†	-4.1	-0.00081	mg/L	0.000954	-0.00163	mg/L	0.001909	117.12%
Pb 220.353†	13.4	0.00116	mg/L	0.000433	0.00233	mg/L	0.000865	37.16%
Sb 206.836†	-1.2	-0.00027	mg/L	0.000842	-0.00054	mg/L	0.001684	313.52%
Se 196.026†	4.4	0.00183	mg/L	0.002343	0.00366	mg/L	0.004685	127.90%
Si 288.158†	23.7	0.00979	mg/L	0.003351	0.01958	mg/L	0.006702	34.23%
Sn 189.927†	-1.6	-0.00023	mg/L	0.000295	-0.00046	mg/L	0.000590	126.90%
Sr 421.552†	47.2	0.00004	mg/L	0.000012	0.00009	mg/L	0.000024	27.56%
Ti 334.903†	26.2	0.00082	mg/L	0.000483	0.00164	mg/L	0.000967	58.85%
Tl 190.801†	7.2	0.00274	mg/L	0.001244	0.00547	mg/L	0.002488	45.48%
V 292.402†	6.7	0.00004	mg/L	0.000080	0.00008	mg/L	0.000160	200.05%
Zn 206.200†	33.6	0.00580	mg/L	0.000481	0.01160	mg/L	0.000962	8.30%

Sequence No.: 24
Sample ID: UZ97 MB1 TWC

Dilution: 1X

Autosampler Location: 318
Date Collected: 7/2/2012 12:15:02 PM
Data Type: Original

Nebulizer Parameters: UZ97 MB1 TWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ97 MB1 TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2610762.1	100.2	%	0.61				0.61%
ScR 361.383	478748.7	102.9	%	0.54				0.53%
Ag 328.068†	29.5	0.00012	mg/L	0.000074	0.00012	mg/L	0.000074	61.19%
Al 308.215†	16.6	0.01034	mg/L	0.002122	0.01034	mg/L	0.002122	20.53%
As 188.979†	2.5	0.00101	mg/L	0.000764	0.00101	mg/L	0.000764	75.92%
B 249.677†	9.1	0.00094	mg/L	0.000762	0.00094	mg/L	0.000762	81.40%
Ba 233.527†	3.0	0.00029	mg/L	0.000453	0.00029	mg/L	0.000453	154.14%
Be 313.042†	28.1	0.00003	mg/L	0.000010	0.00003	mg/L	0.000010	31.31%
Ca 317.933†	28.6	0.00206	mg/L	0.000380	0.00206	mg/L	0.000380	18.42%
Cd 228.802†	1.0	0.00003	mg/L	0.000062	0.00003	mg/L	0.000062	235.16%
Co 228.616†	4.6	0.00010	mg/L	0.000026	0.00010	mg/L	0.000026	27.51%
Cr 267.716†	-1.1	-0.00012	mg/L	0.000200	-0.00012	mg/L	0.000200	170.35%
Cu 324.752†	-32.0	-0.00015	mg/L	0.000090	-0.00015	mg/L	0.000090	60.18%
Fe 273.955†	-1.6	-0.00094	mg/L	0.001574	-0.00094	mg/L	0.001574	168.04%
K 766.490†	-12.4	-0.00535	mg/L	0.014791	-0.00535	mg/L	0.014791	276.59%
Mg 279.077†	17.0	0.01196	mg/L	0.003235	0.01196	mg/L	0.003235	27.05%
Mn 257.610†	16.9	0.00027	mg/L	0.000023	0.00027	mg/L	0.000023	8.42%
Mo 202.031†	-1.0	-0.00004	mg/L	0.000142	-0.00004	mg/L	0.000142	405.63%
Na 589.592†	34.7	0.00291	mg/L	0.003333	0.00291	mg/L	0.003333	114.63%
Na 330.237†	-0.1	-0.00247	mg/L	0.354753	-0.00247	mg/L	0.354753	>999.9%
Ni 231.604†	-7.4	-0.00146	mg/L	0.000535	-0.00146	mg/L	0.000535	36.58%
Pb 220.353†	15.3	0.00133	mg/L	0.000531	0.00133	mg/L	0.000531	39.86%
Sb 206.836†	-5.7	-0.00123	mg/L	0.000516	-0.00123	mg/L	0.000516	41.85%
Se 196.026†	-1.6	-0.00066	mg/L	0.001583	-0.00066	mg/L	0.001583	239.01%
Si 288.158†	17.2	0.00710	mg/L	0.002101	0.00710	mg/L	0.002101	29.59%
Sn 189.927†	-0.3	-0.00004	mg/L	0.000351	-0.00004	mg/L	0.000351	887.85%
Sr 421.552†	-12.5	-0.00001	mg/L	0.000040	-0.00001	mg/L	0.000040	339.74%
Ti 334.903†	12.0	0.00038	mg/L	0.000652	0.00038	mg/L	0.000652	172.47%
Tl 190.801†	5.9	0.00223	mg/L	0.001107	0.00223	mg/L	0.001107	49.62%
V 292.402†	-3.0	-0.00002	mg/L	0.000071	-0.00002	mg/L	0.000071	382.14%
Zn 206.200†	4.8	0.00083	mg/L	0.000198	0.00083	mg/L	0.000198	23.84%

Sequence No.: 25
Sample ID: UZ97 A TWC

Autosampler Location: 319
Date Collected: 7/2/2012 12:19:01 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UZ97 A TWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ97 A TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2608233.9	100.1	%	0.77				0.77%
ScR 361.383	477239.6	102.6	%	0.33				0.32%
Ag 328.068†	-20.8	-0.00009	mg/L	0.000166	-0.00009	mg/L	0.000166	188.45%
Al 308.215†	2499.4	1.556	mg/L	0.0071	1.556	mg/L	0.0071	0.46%
As 188.979†	3.9	0.00188	mg/L	0.002186	0.00188	mg/L	0.002186	116.18%
B 249.677†	29.1	0.00301	mg/L	0.000363	0.00301	mg/L	0.000363	12.07%
Ba 233.527†	180.3	0.01745	mg/L	0.000252	0.01745	mg/L	0.000252	1.45%
Be 313.042†	72.7	0.00008	mg/L	0.000013	0.00008	mg/L	0.000013	16.70%
Ca 317.933†	26916.6	1.938	mg/L	0.0021	1.938	mg/L	0.0021	0.11%
Cd 228.802†	5.7	0.00017	mg/L	0.000052	0.00017	mg/L	0.000052	30.22%
Co 228.616†	39.8	0.00074	mg/L	0.000142	0.00074	mg/L	0.000142	19.05%
Cr 267.716†	29.4	0.00309	mg/L	0.000705	0.00309	mg/L	0.000705	22.81%
Cu 324.752†	1413.1	0.00674	mg/L	0.000138	0.00674	mg/L	0.000138	2.05%
Fe 273.955†	2703.2	1.614	mg/L	0.0107	1.614	mg/L	0.0107	0.66%
K 766.490†	1317.8	0.5683	mg/L	0.01507	0.5683	mg/L	0.01507	2.65%
Mg 279.077†	824.5	0.5779	mg/L	0.00510	0.5779	mg/L	0.00510	0.88%
Mn 257.610†	1838.1	0.02956	mg/L	0.000142	0.02956	mg/L	0.000142	0.48%
Mo 202.031†	33.3	0.00111	mg/L	0.000103	0.00111	mg/L	0.000103	9.27%
Na 589.592†	10395.7	0.8713	mg/L	0.00538	0.8713	mg/L	0.00538	0.62%
Na 330.237†	14.1	0.4366	mg/L	0.18319	0.4366	mg/L	0.18319	41.96%
Ni 231.604†	17.6	0.00348	mg/L	0.000421	0.00348	mg/L	0.000421	12.11%
Pb 220.353†	69.4	0.00615	mg/L	0.000636	0.00615	mg/L	0.000636	10.34%
Sb 206.836†	2.0	0.00015	mg/L	0.001017	0.00015	mg/L	0.001017	671.04%
Se 196.026†	1.8	0.00073	mg/L	0.000989	0.00073	mg/L	0.000989	135.45%
Si 288.158†	6876.2	2.841	mg/L	0.0179	2.841	mg/L	0.0179	0.63%
Sn 189.927†	0.6	0.00017	mg/L	0.000256	0.00017	mg/L	0.000256	148.09%
Sr 421.552†	11794.2	0.01107	mg/L	0.000025	0.01107	mg/L	0.000025	0.22%
Ti 334.903†	1836.4	0.05761	mg/L	0.000405	0.05761	mg/L	0.000405	0.70%
Tl 190.801†	6.3	0.00252	mg/L	0.000666	0.00252	mg/L	0.000666	26.38%
V 292.402†	961.0	0.00553	mg/L	0.000016	0.00553	mg/L	0.000016	0.29%
Zn 206.200†	810.1	0.1400	mg/L	0.00073	0.1400	mg/L	0.00073	0.52%

Sequence No.: 26
Sample ID: VA19 E SWC

Dilution: 2X

Autosampler Location: 320
Date Collected: 7/2/2012 12:23:01 PM
Data Type: Original

Nebulizer Parameters: VA19 E SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VA19 E SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2616046.0	100.4	%	0.50				0.50%
ScR 361.383	484796.6	104.2	%	0.21				0.21%
Ag 328.068†	28.1	-0.00030	mg/L	0.000040	-0.00060	mg/L	0.000079	13.31%
Al 308.215†	127028.8	79.07	mg/L	0.079	158.1	mg/L	0.16	0.10%
As 188.979†	-46.5	0.01643	mg/L	0.002439	0.03287	mg/L	0.004878	14.84%
B 249.677†	144.9	0.01479	mg/L	0.000746	0.02959	mg/L	0.001492	5.04%
Ba 233.527†	5243.4	0.5005	mg/L	0.00039	1.001	mg/L	0.0008	0.08%
Be 313.042†	1241.4	0.00117	mg/L	0.000007	0.00234	mg/L	0.000013	0.57%
Ca 317.933†	527282.4	37.97	mg/L	0.163	75.93	mg/L	0.327	0.43%
Cd 228.802†	89.8	0.00302	mg/L	0.000166	0.00605	mg/L	0.000333	5.51%
Co 228.616†	2983.3	0.05412	mg/L	0.000649	0.1082	mg/L	0.00130	1.20%
Cr 267.716†	3878.7	0.4064	mg/L	0.00101	0.8128	mg/L	0.00203	0.25%
Cu 324.752†	48032.4	0.2335	mg/L	0.00122	0.4670	mg/L	0.00244	0.52%
Fe 273.955†	203006.0	121.2	mg/L	0.18	242.5	mg/L	0.35	0.14%
K 766.490†	9952.9	4.292	mg/L	0.0067	8.584	mg/L	0.0135	0.16%
Mg 279.077†	50772.9	35.59	mg/L	0.074	71.17	mg/L	0.148	0.21%
Mn 257.610†	205851.9	3.310	mg/L	0.0083	6.621	mg/L	0.0166	0.25%
Mo 202.031†	312.6	0.01014	mg/L	0.000363	0.02029	mg/L	0.000727	3.58%
Na 589.592†	24070.1	2.017	mg/L	0.0076	4.035	mg/L	0.0153	0.38%
Na 330.237†	25.7	1.468	mg/L	0.2728	2.935	mg/L	0.5457	18.59%
Ni 231.604†	1472.2	0.2904	mg/L	0.00070	0.5809	mg/L	0.00141	0.24%
Pb 220.353†	2588.6	0.2292	mg/L	0.00153	0.4584	mg/L	0.00305	0.67%
Sb 206.836†	134.0	0.01619	mg/L	0.000647	0.03238	mg/L	0.001295	4.00%
Se 196.026†	21.8	0.00609	mg/L	0.002825	0.01219	mg/L	0.005649	46.36%
Si 288.158†	11576.1	4.788	mg/L	0.0127	9.576	mg/L	0.0254	0.27%
Sn 189.927†	13.3	0.00581	mg/L	0.000422	0.01163	mg/L	0.000845	7.27%
Sr 421.552†	265367.7	0.2490	mg/L	0.00038	0.4980	mg/L	0.00077	0.15%
Ti 334.903†	170232.1	5.351	mg/L	0.0095	10.70	mg/L	0.019	0.18%
Tl 190.801†	-32.6	0.00249	mg/L	0.003514	0.00498	mg/L	0.007029	141.17%
V 292.402†	47452.4	0.2682	mg/L	0.00235	0.5364	mg/L	0.00470	0.88%
Zn 206.200†	17666.3	3.054	mg/L	0.0080	6.107	mg/L	0.0160	0.26%

Sequence No.: 27
Sample ID: UZ99 ADUP SWC

Dilution: 5X

Autosampler Location: 321
Date Collected: 7/2/2012 12:27:02 PM
Data Type: Original

Nebulizer Parameters: UZ99 ADUP SWC

Analyte	Back Pressure	Flow
All	221.0 kPa	0.75 L/min

Mean Data: UZ99 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2558704.8	98.18	%	0.710				0.72%
ScR 361.383	467585.8	100.5	%	0.88				0.87%
Ag 328.068†	23.6	-0.00015	mg/L	0.000068	-0.00076	mg/L	0.000341	44.88%
Al 308.215†	90352.8	56.24	mg/L	0.269	281.2	mg/L	1.35	0.48%
As 188.979†	-49.4	-0.00499	mg/L	0.001850	-0.02496	mg/L	0.009249	37.05%
B 249.677†	393.9	0.04020	mg/L	0.000881	0.2010	mg/L	0.00440	2.19%
Ba 233.527†	1760.1	0.1601	mg/L	0.00101	0.8005	mg/L	0.00503	0.63%
Be 313.042†	579.0	0.00055	mg/L	0.000003	0.00275	mg/L	0.000015	0.56%
Ca 317.933†	553353.5	39.84	mg/L	0.104	199.2	mg/L	0.52	0.26%
Cd 228.802†	-2.7	0.00213	mg/L	0.000236	0.01066	mg/L	0.001181	11.07%
Co 228.616†	8135.9	0.1680	mg/L	0.00084	0.8400	mg/L	0.00421	0.50%
Cr 267.716†	1370.8	0.1336	mg/L	0.00074	0.6678	mg/L	0.00368	0.55%
Cu 324.752†	26028.0	0.1315	mg/L	0.00032	0.6577	mg/L	0.00160	0.24%
Fe 273.955†	208318.1	124.4	mg/L	0.73	621.8	mg/L	3.67	0.59%
K 766.490†	4554.3	1.964	mg/L	0.0121	9.820	mg/L	0.0604	0.62%
Mg 279.077†	537992.9	378.1	mg/L	1.61	1890	mg/L	8.0	0.42%
Mn 257.610†	110841.2	1.781	mg/L	0.0121	8.907	mg/L	0.0603	0.68%
Mo 202.031†	188.0	0.00590	mg/L	0.000307	0.02952	mg/L	0.001537	5.21%
Na 589.592†	5314.1	0.4454	mg/L	0.00780	2.227	mg/L	0.0390	1.75%
Na 330.237†	-38.2	-0.8511	mg/L	0.11620	-4.256	mg/L	0.5810	13.65%
Ni 231.604†	16937.0	3.341	mg/L	0.0246	16.70	mg/L	0.123	0.74%
Pb 220.353†	869.7	0.07567	mg/L	0.000683	0.3783	mg/L	0.00342	0.90%
Sb 206.836†	110.1	0.01371	mg/L	0.000992	0.06855	mg/L	0.004958	7.23%
Se 196.026†	44.7	0.01702	mg/L	0.002411	0.08508	mg/L	0.012055	14.17%
Si 288.158†	1688.6	0.7475	mg/L	0.00650	3.737	mg/L	0.0325	0.87%
Sn 189.927†	-15.6	0.00014	mg/L	0.000608	0.00068	mg/L	0.003042	447.87%
Sr 421.552†	109520.8	0.1028	mg/L	0.00062	0.5138	mg/L	0.00312	0.61%
Ti 334.903†	76100.7	2.390	mg/L	0.0130	11.95	mg/L	0.065	0.54%
Tl 190.801†	-37.4	0.00281	mg/L	0.002607	0.01403	mg/L	0.013037	92.95%
V 292.402†	21025.8	0.1108	mg/L	0.00058	0.5540	mg/L	0.00288	0.52%
Zn 206.200†	2119.6	0.3664	mg/L	0.00251	1.832	mg/L	0.0126	0.69%

Sequence No.: 28
Sample ID: UZ99 A SWC

Dilution: 5X

Autosampler Location: 322
Date Collected: 7/2/2012 12:30:47 PM
Data Type: Original

Nebulizer Parameters: UZ99 A SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2556780.2	98.11	%	0.713				0.73%
ScR 361.383	476015.8	102.3	%	0.29				0.29%
Ag 328.068†	11.6	-0.00019	mg/L	0.000058	-0.00095	mg/L	0.000292	30.86%
Al 308.215†	81983.2	51.03	mg/L	0.290	255.2	mg/L	1.45	0.57%
As 188.979†	-44.0	-0.00238	mg/L	0.001873	-0.01189	mg/L	0.009367	78.78%
B 249.677†	985.6	0.1014	mg/L	0.00139	0.5069	mg/L	0.00693	1.37%
Ba 233.527†	1467.0	0.1317	mg/L	0.00056	0.6586	mg/L	0.00282	0.43%
Be 313.042†	480.0	0.00044	mg/L	0.000016	0.00219	mg/L	0.000078	3.57%
Ca 317.933†	395558.5	28.48	mg/L	0.129	142.4	mg/L	0.65	0.45%
Cd 228.802†	-1.3	0.00192	mg/L	0.000198	0.00961	mg/L	0.000989	10.29%
Co 228.616†	7343.1	0.1513	mg/L	0.00114	0.7563	mg/L	0.00571	0.76%
Cr 267.716†	1373.5	0.1353	mg/L	0.00090	0.6765	mg/L	0.00451	0.67%
Cu 324.752†	24363.4	0.1236	mg/L	0.00118	0.6178	mg/L	0.00589	0.95%
Fe 273.955†	204700.9	122.2	mg/L	0.70	611.1	mg/L	3.49	0.57%
K 766.490†	4150.0	1.790	mg/L	0.0084	8.948	mg/L	0.0418	0.47%
Mg 279.077†	476578.5	334.9	mg/L	1.66	1675	mg/L	8.3	0.49%
Mn 257.610†	107264.7	1.724	mg/L	0.0091	8.620	mg/L	0.0456	0.53%
Mo 202.031†	205.2	0.00662	mg/L	0.000299	0.03308	mg/L	0.001496	4.52%
Na 589.592†	5402.8	0.4528	mg/L	0.00217	2.264	mg/L	0.0109	0.48%
Na 330.237†	-35.8	-0.7216	mg/L	0.09375	-3.608	mg/L	0.4688	12.99%
Ni 231.604†	15013.1	2.961	mg/L	0.0232	14.81	mg/L	0.116	0.78%
Pb 220.353†	735.9	0.06340	mg/L	0.001229	0.3170	mg/L	0.00614	1.94%
Sb 206.836†	112.5	0.01542	mg/L	0.001796	0.07709	mg/L	0.008979	11.65%
Se 196.026†	36.4	0.01364	mg/L	0.003460	0.06819	mg/L	0.017301	25.37%
Si 288.158†	1837.1	0.8032	mg/L	0.00383	4.016	mg/L	0.0192	0.48%
Sn 189.927†	-5.5	0.00127	mg/L	0.000602	0.00636	mg/L	0.003008	47.31%
Sr 421.552†	81232.6	0.07622	mg/L	0.000344	0.3811	mg/L	0.00172	0.45%
Ti 334.903†	75818.3	2.382	mg/L	0.0116	11.91	mg/L	0.058	0.49%
Tl 190.801†	-47.1	-0.00046	mg/L	0.002246	-0.00231	mg/L	0.011229	486.61%
V 292.402†	21095.7	0.1115	mg/L	0.00102	0.5573	mg/L	0.00509	0.91%
Zn 206.200†	2033.4	0.3515	mg/L	0.00265	1.758	mg/L	0.0133	0.76%

Sequence No.: 29
Sample ID: UZ99 ASPK SWC

Dilution: 5X

Autosampler Location: 323
Date Collected: 7/2/2012 12:34:47 PM
Data Type: Original

Nebulizer Parameters: UZ99 ASPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ99 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2592261.2	99.47	%	0.187				0.19%
ScR 361.383	467707.7	100.5	%	0.28				0.28%
Ag 328.068†	42959.3	0.1761	mg/L	0.00059	0.8803	mg/L	0.00297	0.34%
Al 308.215†	54351.5	33.83	mg/L	0.113	169.2	mg/L	0.57	0.33%
As 188.979†	1621.1	0.6593	mg/L	0.00131	3.296	mg/L	0.0066	0.20%
B 249.677†	438.4	0.04453	mg/L	0.001199	0.2227	mg/L	0.00600	2.69%
Ba 233.527†	7248.7	0.6993	mg/L	0.00173	3.497	mg/L	0.0087	0.25%
Be 313.042†	127056.8	0.1452	mg/L	0.00075	0.7261	mg/L	0.00375	0.52%
Ca 317.933†	329394.3	23.72	mg/L	0.113	118.6	mg/L	0.57	0.48%
Cd 228.802†	5374.9	0.1658	mg/L	0.00089	0.8291	mg/L	0.00444	0.54%
Co 228.616†	12464.2	0.2613	mg/L	0.00110	1.307	mg/L	0.0055	0.42%
Cr 267.716†	2386.8	0.2420	mg/L	0.00160	1.210	mg/L	0.0080	0.66%
Cu 324.752†	56150.9	0.2697	mg/L	0.00045	1.349	mg/L	0.0022	0.17%
Fe 273.955†	143484.7	85.66	mg/L	0.344	428.3	mg/L	1.72	0.40%
K 766.490†	9936.0	4.285	mg/L	0.0199	21.42	mg/L	0.099	0.46%
Mg 279.077†	369847.5	259.9	mg/L	1.19	1300	mg/L	6.0	0.46%
Mn 257.610†	87512.5	1.407	mg/L	0.0054	7.034	mg/L	0.0268	0.38%
Mo 202.031†	320.8	0.01059	mg/L	0.000190	0.05293	mg/L	0.000950	1.80%
Na 589.592†	42934.5	3.598	mg/L	0.0067	17.99	mg/L	0.034	0.19%
Na 330.237†	78.5	2.761	mg/L	0.2804	13.81	mg/L	1.402	10.15%
Ni 231.604†	12347.9	2.436	mg/L	0.0112	12.18	mg/L	0.056	0.46%
Pb 220.353†	7928.4	0.6888	mg/L	0.00173	3.444	mg/L	0.0086	0.25%
Sb 206.836†	108.5	0.01621	mg/L	0.001095	0.08105	mg/L	0.005477	6.76%
Se 196.026†	1544.1	0.6433	mg/L	0.00265	3.216	mg/L	0.0133	0.41%
Si 288.158†	732.1	0.3373	mg/L	0.00353	1.687	mg/L	0.0177	1.05%
Sn 189.927†	-1.2	0.00134	mg/L	0.000336	0.00672	mg/L	0.001679	24.96%
Sr 421.552†	219030.0	0.2055	mg/L	0.00026	1.028	mg/L	0.0013	0.13%
Ti 334.903†	48400.9	1.520	mg/L	0.0040	7.602	mg/L	0.0198	0.26%
Tl 190.801†	1666.7	0.6472	mg/L	0.00411	3.236	mg/L	0.0206	0.64%
V 292.402†	37456.1	0.2140	mg/L	0.00069	1.070	mg/L	0.0035	0.32%
Zn 206.200†	2979.5	0.5152	mg/L	0.00287	2.576	mg/L	0.0144	0.56%

Sequence No.: 30
Sample ID: UZ99 APOST SWC

Dilution: 5X

Autosampler Location: 324
Date Collected: 7/2/2012 12:38:32 PM
Data Type: Original

Nebulizer Parameters: UZ99 APOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: UZ99 APOST SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2553914.3	98.00	%	0.587				0.60%
ScR 361.383	475390.2	102.2	%	0.38				0.38%
Ag 328.068†	133591.3	0.5479	mg/L	0.00527	2.739	mg/L	0.0263	0.96%
Al 308.215†	84028.2	52.30	mg/L	0.038	261.5	mg/L	0.19	0.07%
As 188.979†	5235.6	2.113	mg/L	0.0161	10.57	mg/L	0.080	0.76%
B 249.677†	973.4	0.09865	mg/L	0.001666	0.4933	mg/L	0.00833	1.69%
Ba 233.527†	22039.9	2.139	mg/L	0.0110	10.70	mg/L	0.055	0.51%
Be 313.042†	455126.9	0.5204	mg/L	0.00201	2.602	mg/L	0.0101	0.39%
Ca 317.933†	535465.7	38.56	mg/L	0.025	192.8	mg/L	0.13	0.07%
Cd 228.802†	17963.7	0.5514	mg/L	0.00473	2.757	mg/L	0.0237	0.86%
Co 228.616†	31141.1	0.6558	mg/L	0.00499	3.279	mg/L	0.0249	0.76%
Cr 267.716†	6329.4	0.6504	mg/L	0.00246	3.252	mg/L	0.0123	0.38%
Cu 324.752†	140370.8	0.6672	mg/L	0.00397	3.336	mg/L	0.0198	0.59%
Fe 273.955†	205235.5	122.5	mg/L	0.40	612.6	mg/L	1.98	0.32%
K 766.490†	28936.0	12.48	mg/L	0.043	62.39	mg/L	0.216	0.35%
Mg 279.077†	483398.3	339.7	mg/L	0.78	1699	mg/L	3.9	0.23%
Mn 257.610†	136341.4	2.192	mg/L	0.0064	10.96	mg/L	0.032	0.29%
Mo 202.031†	217.9	0.00693	mg/L	0.000150	0.03465	mg/L	0.000750	2.16%
Na 589.592†	128118.1	10.74	mg/L	0.029	53.69	mg/L	0.145	0.27%
Na 330.237†	299.2	10.05	mg/L	0.397	50.26	mg/L	1.984	3.95%
Ni 231.604†	17242.1	3.401	mg/L	0.0236	17.01	mg/L	0.118	0.69%
Pb 220.353†	24416.1	2.123	mg/L	0.0156	10.61	mg/L	0.078	0.74%
Sb 206.836†	136.1	0.01598	mg/L	0.001916	0.07988	mg/L	0.009579	11.99%
Se 196.026†	5118.6	2.135	mg/L	0.0121	10.67	mg/L	0.060	0.57%
Si 288.158†	1556.1	0.6898	mg/L	0.01304	3.449	mg/L	0.0652	1.89%
Sn 189.927†	-8.2	0.00125	mg/L	0.000956	0.00624	mg/L	0.004779	76.53%
Sr 421.552†	629279.9	0.5905	mg/L	0.00029	2.952	mg/L	0.0015	0.05%
Ti 334.903†	74519.4	2.341	mg/L	0.0036	11.70	mg/L	0.018	0.15%
Tl 190.801†	5322.7	2.045	mg/L	0.0118	10.22	mg/L	0.059	0.58%
V 292.402†	106894.8	0.6253	mg/L	0.00565	3.126	mg/L	0.0283	0.90%
Zn 206.200†	4863.6	0.8413	mg/L	0.00486	4.206	mg/L	0.0243	0.58%

Sequence No.: 31
Sample ID: VA19 MB1SPK SWC

Dilution: 2X

Autosampler Location: 325
Date Collected: 7/2/2012 12:41:48 PM
Data Type: Original

Nebulizer Parameters: VA19 MB1SPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VA19 MB1SPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2629782.8	100.9	%	0.15				0.15%
ScR 361.383	480325.9	103.2	%	0.52				0.50%
Ag 328.068†	133055.3	0.5459	mg/L	0.00186	1.092	mg/L	0.0037	0.34%
Al 308.215†	3335.9	2.067	mg/L	0.0149	4.133	mg/L	0.0298	0.72%
As 188.979†	5261.3	2.108	mg/L	0.0031	4.217	mg/L	0.0062	0.15%
B 249.677†	7.5	-0.00072	mg/L	0.000939	-0.00144	mg/L	0.001878	130.53%
Ba 233.527†	20950.5	2.044	mg/L	0.0076	4.089	mg/L	0.0153	0.37%
Be 313.042†	454444.5	0.5197	mg/L	0.00169	1.039	mg/L	0.0034	0.32%
Ca 317.933†	143633.4	10.34	mg/L	0.036	20.68	mg/L	0.072	0.35%
Cd 228.802†	17344.6	0.5303	mg/L	0.00401	1.061	mg/L	0.0080	0.76%
Co 228.616†	24141.4	0.5117	mg/L	0.00282	1.023	mg/L	0.0056	0.55%
Cr 267.716†	5088.7	0.5288	mg/L	0.00185	1.058	mg/L	0.0037	0.35%
Cu 324.752†	111091.5	0.5207	mg/L	0.00219	1.041	mg/L	0.0044	0.42%
Fe 273.955†	3522.2	2.100	mg/L	0.0061	4.200	mg/L	0.0123	0.29%
K 766.490†	24092.2	10.39	mg/L	0.042	20.78	mg/L	0.085	0.41%
Mg 279.077†	15055.5	10.58	mg/L	0.039	21.16	mg/L	0.077	0.36%
Mn 257.610†	31526.4	0.5076	mg/L	0.00211	1.015	mg/L	0.0042	0.42%
Mo 202.031†	27.6	0.00081	mg/L	0.000160	0.00163	mg/L	0.000320	19.64%
Na 589.592†	120725.9	10.12	mg/L	0.018	20.24	mg/L	0.035	0.18%
Na 330.237†	313.2	10.06	mg/L	0.177	20.13	mg/L	0.353	1.75%
Ni 231.604†	2655.5	0.5238	mg/L	0.00120	1.048	mg/L	0.0024	0.23%
Pb 220.353†	23695.2	2.061	mg/L	0.0047	4.122	mg/L	0.0095	0.23%
Sb 206.836†	16.4	-0.00125	mg/L	0.001098	-0.00250	mg/L	0.002196	87.89%
Se 196.026†	5012.9	2.092	mg/L	0.0053	4.184	mg/L	0.0107	0.25%
Si 288.158†	8.2	0.00679	mg/L	0.001561	0.01358	mg/L	0.003121	22.98%
Sn 189.927†	-12.7	-0.00147	mg/L	0.000355	-0.00293	mg/L	0.000710	24.18%
Sr 421.552†	546515.4	0.5128	mg/L	0.00145	1.026	mg/L	0.0029	0.28%
Ti 334.903†	101.5	0.00228	mg/L	0.000680	0.00456	mg/L	0.001359	29.80%
Tl 190.801†	5461.5	2.081	mg/L	0.0026	4.161	mg/L	0.0052	0.13%
V 292.402†	87163.1	0.5218	mg/L	0.00119	1.044	mg/L	0.0024	0.23%
Zn 206.200†	3073.0	0.5317	mg/L	0.00093	1.063	mg/L	0.0019	0.18%

Sequence No.: 32
Sample ID: UZ97 MB1SPK TWC

Autosampler Location: 326
Date Collected: 7/2/2012 12:45:48 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: UZ97 MB1SPK TWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: UZ97 MB1SPK TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2629215.9	100.9	%	0.37				0.37%
ScR 361.383	480273.5	103.2	%	0.30				0.29%
Ag 328.068†	133455.9	0.5475	mg/L	0.00197	0.5475	mg/L	0.00197	0.36%
Al 308.215†	3296.4	2.042	mg/L	0.0027	2.042	mg/L	0.0027	0.13%
As 188.979†	5259.5	2.108	mg/L	0.0130	2.108	mg/L	0.0130	0.62%
B 249.677†	10.1	-0.00045	mg/L	0.000664	-0.00045	mg/L	0.000664	146.26%
Ba 233.527†	20943.6	2.044	mg/L	0.0017	2.044	mg/L	0.0017	0.08%
Be 313.042†	452288.9	0.5172	mg/L	0.00122	0.5172	mg/L	0.00122	0.24%
Ca 317.933†	141297.6	10.17	mg/L	0.020	10.17	mg/L	0.020	0.19%
Cd 228.802†	17394.3	0.5319	mg/L	0.00028	0.5319	mg/L	0.00028	0.05%
Co 228.616†	24218.5	0.5133	mg/L	0.00101	0.5133	mg/L	0.00101	0.20%
Cr 267.716†	5081.9	0.5281	mg/L	0.00031	0.5281	mg/L	0.00031	0.06%
Cu 324.752†	111170.2	0.5211	mg/L	0.00084	0.5211	mg/L	0.00084	0.16%
Fe 273.955†	3476.9	2.073	mg/L	0.0038	2.073	mg/L	0.0038	0.18%
K 766.490†	24009.5	10.35	mg/L	0.020	10.35	mg/L	0.020	0.19%
Mg 279.077†	14982.8	10.53	mg/L	0.001	10.53	mg/L	0.001	0.01%
Mn 257.610†	31478.4	0.5068	mg/L	0.00089	0.5068	mg/L	0.00089	0.18%
Mo 202.031†	23.2	0.00067	mg/L	0.000212	0.00067	mg/L	0.000212	31.68%
Na 589.592†	119699.6	10.03	mg/L	0.044	10.03	mg/L	0.044	0.44%
Na 330.237†	317.4	10.21	mg/L	0.045	10.21	mg/L	0.045	0.44%
Ni 231.604†	2651.0	0.5229	mg/L	0.00031	0.5229	mg/L	0.00031	0.06%
Pb 220.353†	23790.9	2.069	mg/L	0.0032	2.069	mg/L	0.0032	0.16%
Sb 206.836†	16.7	-0.00117	mg/L	0.000750	-0.00117	mg/L	0.000750	63.91%
Se 196.026†	5010.5	2.091	mg/L	0.0138	2.091	mg/L	0.0138	0.66%
Si 288.158†	8.2	0.00677	mg/L	0.001814	0.00677	mg/L	0.001814	26.79%
Sn 189.927†	-10.4	-0.00114	mg/L	0.000626	-0.00114	mg/L	0.000626	54.92%
Sr 421.552†	544362.6	0.5108	mg/L	0.00099	0.5108	mg/L	0.00099	0.19%
Ti 334.903†	50.0	0.00068	mg/L	0.000327	0.00068	mg/L	0.000327	48.46%
Tl 190.801†	5478.2	2.087	mg/L	0.0118	2.087	mg/L	0.0118	0.56%
V 292.402†	87834.0	0.5258	mg/L	0.00144	0.5258	mg/L	0.00144	0.27%
Zn 206.200†	2977.8	0.5153	mg/L	0.00110	0.5153	mg/L	0.00110	0.21%

Sequence No.: 33
Sample ID: CV 4

Dilution: 1X

Autosampler Location: 7
Date Collected: 7/2/2012 12:49:48 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	221.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2629374.5	100.9	%	0.84				0.84%
ScR 361.383	475387.0	102.2	%	0.34				0.34%
Ag 328.068†	247943.9	1.017	mg/L	0.0061	1.017	mg/L	0.0061	0.60%
Al 308.215†	3221.3	1.976	mg/L	0.0179	1.976	mg/L	0.0179	0.91%
As 188.979†	5102.1	2.051	mg/L	0.0184	2.051	mg/L	0.0184	0.90%
B 249.677†	9651.6	0.9952	mg/L	0.00303	0.9952	mg/L	0.00303	0.30%
Ba 233.527†	10144.5	0.9895	mg/L	0.00331	0.9895	mg/L	0.00331	0.33%
Be 313.042†	883215.4	1.010	mg/L	0.0028	1.010	mg/L	0.0028	0.28%
Ca 317.933†	28503.9	2.052	mg/L	0.0099	2.052	mg/L	0.0099	0.48%
Cd 228.802†	33053.9	1.017	mg/L	0.0043	1.017	mg/L	0.0043	0.42%
Co 228.616†	46564.9	0.9861	mg/L	0.00279	0.9861	mg/L	0.00279	0.28%
Cr 267.716†	9714.7	1.010	mg/L	0.0032	1.010	mg/L	0.0032	0.31%
Cu 324.752†	213740.0	1.001	mg/L	0.0005	1.001	mg/L	0.0005	0.05%
Fe 273.955†	3393.1	2.022	mg/L	0.0116	2.022	mg/L	0.0116	0.58%
K 766.490†	47869.2	20.64	mg/L	0.081	20.64	mg/L	0.081	0.39%
Mg 279.077†	2844.8	2.004	mg/L	0.0107	2.004	mg/L	0.0107	0.53%
Mn 257.610†	61906.5	0.9962	mg/L	0.00192	0.9962	mg/L	0.00192	0.19%
Mo 202.031†	30368.5	1.028	mg/L	0.0084	1.028	mg/L	0.0084	0.82%
Na 589.592†	601872.1	50.44	mg/L	0.082	50.44	mg/L	0.082	0.16%
Na 330.237†	1562.2	51.04	mg/L	0.896	51.04	mg/L	0.896	1.76%
Ni 231.604†	5146.2	1.017	mg/L	0.0043	1.017	mg/L	0.0043	0.42%
Pb 220.353†	23710.3	2.063	mg/L	0.0177	2.063	mg/L	0.0177	0.86%
Sb 206.836†	9792.5	2.127	mg/L	0.0189	2.127	mg/L	0.0189	0.89%
Se 196.026†	4802.9	2.004	mg/L	0.0154	2.004	mg/L	0.0154	0.77%
Si 288.158†	4744.4	1.965	mg/L	0.0141	1.965	mg/L	0.0141	0.72%
Sn 189.927†	7125.1	1.050	mg/L	0.0093	1.050	mg/L	0.0093	0.88%
Sr 421.552†	1072270.9	1.006	mg/L	0.0012	1.006	mg/L	0.0012	0.12%
Ti 334.903†	32135.8	1.009	mg/L	0.0024	1.009	mg/L	0.0024	0.23%
Tl 190.801†	5325.2	2.030	mg/L	0.0219	2.030	mg/L	0.0219	1.08%
V 292.402†	166124.0	0.9949	mg/L	0.00200	0.9949	mg/L	0.00200	0.20%
Zn 206.200†	6041.2	1.045	mg/L	0.0030	1.045	mg/L	0.0030	0.29%

Sequence No.: 34
Sample ID: CB

Dilution: 1X

Autosampler Location: 1
Date Collected: 7/2/2012 12:52:51 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	221.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2639344.5	101.3	%	0.06				0.06%
ScR 361.383	480705.7	103.3	%	0.56				0.55%
Ag 328.068†	27.5	0.00011	mg/L	0.000129	0.00011	mg/L	0.000129	114.15%
Al 308.215†	17.8	0.01106	mg/L	0.004701	0.01106	mg/L	0.004701	42.51%
As 188.979†	2.6	0.00103	mg/L	0.001308	0.00103	mg/L	0.001308	127.00%
B 249.677†	17.7	0.00183	mg/L	0.000728	0.00183	mg/L	0.000728	39.88%
Ba 233.527†	-0.6	-0.00005	mg/L	0.000399	-0.00005	mg/L	0.000399	732.31%
Be 313.042†	81.2	0.00009	mg/L	0.000023	0.00009	mg/L	0.000023	25.18%
Ca 317.933†	18.5	0.00133	mg/L	0.000993	0.00133	mg/L	0.000993	74.59%
Cd 228.802†	-0.9	-0.00003	mg/L	0.000037	-0.00003	mg/L	0.000037	121.62%
Co 228.616†	10.6	0.00022	mg/L	0.000041	0.00022	mg/L	0.000041	18.20%
Cr 267.716†	3.3	0.00034	mg/L	0.000635	0.00034	mg/L	0.000635	184.36%
Cu 324.752†	-34.2	-0.00016	mg/L	0.000225	-0.00016	mg/L	0.000225	140.36%
Fe 273.955†	-2.8	-0.00169	mg/L	0.001765	-0.00169	mg/L	0.001765	104.25%
K 766.490†	-45.0	-0.01939	mg/L	0.017818	-0.01939	mg/L	0.017818	91.91%
Mg 279.077†	4.3	0.00303	mg/L	0.003282	0.00303	mg/L	0.003282	108.29%
Mn 257.610†	13.9	0.00022	mg/L	0.000125	0.00022	mg/L	0.000125	56.12%
Mo 202.031†	34.1	0.00115	mg/L	0.000095	0.00115	mg/L	0.000095	8.23%
Na 589.592†	107.3	0.00899	mg/L	0.000583	0.00899	mg/L	0.000583	6.48%
Na 330.237†	-12.4	-0.4038	mg/L	0.33262	-0.4038	mg/L	0.33262	82.38%
Ni 231.604†	0.7	0.00013	mg/L	0.001257	0.00013	mg/L	0.001257	944.64%
Pb 220.353†	21.3	0.00186	mg/L	0.000087	0.00186	mg/L	0.000087	4.66%
Sb 206.836†	18.4	0.00400	mg/L	0.001351	0.00400	mg/L	0.001351	33.82%
Se 196.026†	2.8	0.00116	mg/L	0.001886	0.00116	mg/L	0.001886	162.60%
Si 288.158†	16.2	0.00671	mg/L	0.004185	0.00671	mg/L	0.004185	62.40%
Sn 189.927†	2.8	0.00042	mg/L	0.000729	0.00042	mg/L	0.000729	173.86%
Sr 421.552†	90.0	0.00008	mg/L	0.000019	0.00008	mg/L	0.000019	22.23%
Ti 334.903†	15.3	0.00048	mg/L	0.000204	0.00048	mg/L	0.000204	42.47%
Tl 190.801†	7.4	0.00283	mg/L	0.000258	0.00283	mg/L	0.000258	9.14%
V 292.402†	38.5	0.00023	mg/L	0.000084	0.00023	mg/L	0.000084	36.30%
Zn 206.200†	-0.1	-0.00001	mg/L	0.001028	-0.00001	mg/L	0.001028	>999.9%

Mercury Analysis Log

Analyst: MJJ

Instrument: CETAC

Date: 06.27.12

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ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
STD	0.0	SMM	1x		
	0.1				
	0.5				
	1.0				
	2.0				
	5.0				
	10.0				
ICV				7.92	Begin CLP %R=99 ✓
ICB				-0.03	✓
CCV1				3.97	%R=99 ✓
CCB1				-0.01	✓
CRA				0.11	✓
UY96	MB1			-0.00	✓
	MB1SPK			1.46	%R=73 low x
	A			0.09	✓
	ADUP			0.10	No RPD: undetected ✓
	ASPK			1.24	%R=124 ✓
	B				
	C				
	D				
	E				
CCV2				4.06	%R=102 ✓
CCB2				-0.01	✓
UY96	F				
	G				
	H				
	I				
	J				
	K				
	L				

Chemical/Reagent ID:
10% $SnCl_2$: MP23313

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2961-9

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: MJJ

Instrument: CETAC

Date: 06.27.12

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ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
UY96 M	SMM	1x		
N				
O				
CCV3			4.08	%R= 102 ✓
CCB3			-0.01	✓
UY96 P				
Q				
R				
S				
T				
REF1		5x	6.69	8.28 mg·kg⁻¹ ✓
UY97 MB1		1x	-0.02	✓
MB1SPK			1.96	%R=98 ✓
A			0.05	✓
ADUP			0.05	No RPD. Undetected ✓
CCV4			4.06	%R= 102 ✓
CCB4			-0.01	✓
UY97 ASPK			1.18	%R= 118 ✓
B				
C				
D				
E				
F				
REF1		5x	6.36	7.79 mg·kg⁻¹ ✓
CCV5		1x	4.09	%R= 102 ✓
CCB5			-0.01	✓
CCV6			4.08	%R=102 ✓
CCB6			-0.01	✓
UZ21 MB1			-0.01	✓
MB1SPK			1.71	%R=85.5 ✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2313

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2961-9

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: MJJ
Instrument: CETAC

Date: 06.27.12
Page: 3 of 7

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
UZ21	A	SMM	1x			
UZ35	A					
	B					
	C					
	D					
UZ36	A					
	B					
	C					
CCV7				4.10	%R = 103	✓
CCB7				-0.01		✓
UZ36	D					
UZ27	MB1			-0.01		✓
	MB1SPK			2.09	%R = 105	✓
	A			0.28		✓
	ADUP			0.26		✓
	ASPK			1.34	%R = 106	✓
	B					
UZ48	MB1			-0.01		✓
	MB1SPK			1.94	%R = 97	✓
	MB1SPD			2.04	%R = 102	✓
CCV8				4.13	%R = 103	✓
CCB8				-0.02		✓
UZ48	A			0.31		✓
	ADUP			0.30		✓
	ASPK			1.49	%R = 118	✓
	B					
	C					
	D					
UZ57	MB1			-0.01		✓
	MB1SPK	✓	✓	2.05	%R = 103	✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2313

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2961-9

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: MJJ

Instrument: CETAC

Date: 06-27-12

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ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
UZ57 A	SMM	1x	0.74	
↓ ADUP	↓	↓	0.70	RPD: 5.56 ✓
CCV9			4.19	%R=105 ✓
CCB9			-0.01	✓
UZ57 ASPK			1.86	%R= 112 ✓
↓ B				
C				
D				
E		↓		
↓ F		5x	3.11	
CCV 10		1x	4.19	%R=105 ✓
CCB 10		↓	-0.01	✓
UZ49 MBI			-0.01	✓
↓ MBISPK			2.09	%R=105 ✓
MBISPD			1.86	%R=93 ✓
A				
B				
↓ C				
UZ69 A				
↓ B				
C				
↓ D				
CCV 11			4.19	%R=105 ✓
CCB 11			-0.00	✓
UZ69 E				
UZ99 MBI			-0.01	✓
↓ MBISPK			2.18	%R=109 ✓
A			0.14	
ADUP			0.39	Diff 70.1 x
↓ ASPK	↓	↓	1.41	%R=127 high x

Chemical/Reagent ID:
10% $SnCl_2$: MP2313

14% $NH_2OH/NaCl$: MP2289

Standard ID:
Standard: 2961-9

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: MJJ

Instrument: CETAC

Date: 06.27.12

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ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
UY96 MB1SPK	SMM	1x	1.58	%R=79 low x
VA19 MB1			-0.01	✓
MB1SPK			2.18	%R=109 ✓
A				
CCV 12			4.21	%R=105 ✓
CCB 12			-0.00	✓
VA19 B				
C				
D				
MB2			-0.01	✓
MB2SPK			2.16	%R=108 ✓
E				
CCV 13			4.16	%R=104 ✓
CCB 13			-0.01	✓
UZ99 A			0.15	
ADUP			0.39	Diff > 0.1 x
ASPK			1.42	%R=127 high x
CCV 14			4.30	%R=107.5 ✓
CCB 14			-0.01	End CLP ✓
UZ92 MB	SMM	1x	-0.01	Probe missed sample; delete
CCV		~~4~~ 1x	4.34	%R=109 ✓
CCB			-0.01	✓
UZ92 MB			-0.01	✓
MBSPK			2.14	%R=107 ✓
A			0.88	✓
ADUP			0.88	✓
ASPK			2.47	%R=159 high x
B				
C				
UZ01 MB1			-0.00	✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2313 / MP2320

14% $NH_2OH/NaCl$: MP2259

Standard ID:
Standard: 2961-9

ICV/CCV: 56-18

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 06.27.12

	Analyst MJJ 06.28.12	Peer 06.28.12	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	—	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	UZ11. UY96, UZ99
Matrix Duplicates	✓	✓	UZ99
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	UZ11, UY96, UZ99

CETAC Hg Analysis Report - 12062700.DB - Wednesday, June 27, 2012, 3:42:38 PM

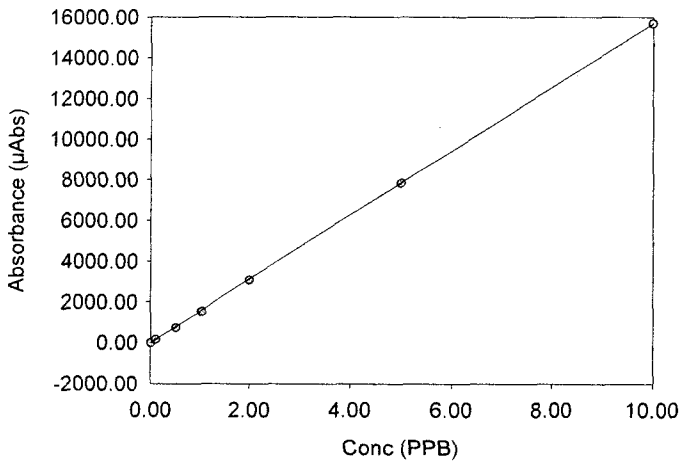
Analyst
Date Started Wednesday, June 27, 2012, 09:29:28
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	27-Jun-2012, 09:29	10.00	0.21	15700.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	27-Jun-2012, 09:35	0.00	95.40	-2.08	1.00	
Standard #1	27-Jun-2012, 09:37	0.10	1.36	170.00	1.00	
Standard #2	27-Jun-2012, 09:38	0.50	0.29	752.00	1.00	
Standard #3	27-Jun-2012, 09:40	1.00	0.43	1540.00	1.00	
Standard #4	27-Jun-2012, 09:42	2.00	0.26	3100.00	1.00	
Standard #5	27-Jun-2012, 09:43	5.00	0.28	7860.00	1.00	
Standard #6	27-Jun-2012, 09:45	10.00	0.28	15700.00	1.00	

Calibration Data



Int.	0.000
Slope	1571.369
Correlation	0.99999

SMM

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	27-Jun-2012, 10:12	7.92	0.19	12500.00	1.00	Begin CLP
ICB	27-Jun-2012, 10:14	-0.03	5.35	-40.30	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 10:15	3.97	0.23	6240.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 10:17	-0.01	8.23	-17.50	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	27-Jun-2012, 10:19	0.11	1.23	170.00	1.00	
UY96 MB1 SMM	27-Jun-2012, 10:20	-0.00	30.20	-2.97	1.00	
UY96 MB1SPK SMM	27-Jun-2012, 10:22	1.46	0.21	2300.00	1.00	x %R=73 (low)
UY96 A SMM	27-Jun-2012, 10:23	0.09	1.09	136.00	1.00	
UY96 ADUP SMM	27-Jun-2012, 10:25	0.10	1.38	155.00	1.00	
UY96 ASPK SMM	27-Jun-2012, 10:27	1.24	0.17	1940.00	1.00	
UY96 B SMM	27-Jun-2012, 10:28	0.10	0.34	163.00	1.00	
UY96 C SMM	27-Jun-2012, 10:30	0.05	4.34	75.10	1.00	
UY96 D SMM	27-Jun-2012, 10:32	0.15	0.71	237.00	1.00	
UY96 E SMM	27-Jun-2012, 10:33	0.02	4.80	32.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 10:35	4.06	0.11	6370.00	1.00	

CETAC Hg Analysis Report - 12062700.DB - Wednesday, June 27, 2012, 3:42:39 PM

Analyst
Date Started Wednesday, June 27, 2012, 10:36:58
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 10:36	-0.01	48.40	-8.55	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UY96 F SMM	27-Jun-2012, 10:38	0.28	0.32	433.00	1.00	
UY96 G SMM	27-Jun-2012, 10:40	0.06	5.22	97.60	1.00	
UY96 H SMM	27-Jun-2012, 10:41	0.05	2.29	74.30	1.00	
UY96 I SMM	27-Jun-2012, 10:43	0.07	1.29	110.00	1.00	
UY96 J SMM	27-Jun-2012, 10:44	0.10	1.03	156.00	1.00	
UY96 K SMM	27-Jun-2012, 10:46	0.11	1.40	167.00	1.00	
UY96 L SMM	27-Jun-2012, 10:48	0.02	2.73	32.50	1.00	
UY96 M SMM	27-Jun-2012, 10:49	0.03	22.20	42.10	1.00	
UY96 N SMM	27-Jun-2012, 10:51	0.15	1.57	243.00	1.00	
UY96 O SMM	27-Jun-2012, 10:53	0.20	0.38	309.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 10:54	4.08	0.08	6420.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 10:56	-0.01	37.70	-13.30	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UY96 P SMM	27-Jun-2012, 10:58	0.07	1.04	117.00	1.00	
UY96 Q SMM	27-Jun-2012, 10:59	0.08	1.10	120.00	1.00	
UY96 R SMM	27-Jun-2012, 11:01	0.03	4.12	53.20	1.00	
UY96 S SMM	27-Jun-2012, 11:02	0.08	2.15	119.00	1.00	
UY96 T SMM	27-Jun-2012, 11:04	0.07	3.10	107.00	1.00	
UY96 REF1 SMM	27-Jun-2012, 11:06	6.69	0.25	10500.00	5.00	
UY97 MB1 SMM	27-Jun-2012, 11:07	-0.02	4.11	-34.70	1.00	
UY97 MB1SPK SMM	27-Jun-2012, 11:09	1.96	0.11	3070.00	1.00	
UY97 A SMM	27-Jun-2012, 11:10	0.05	3.32	81.50	1.00	
UY97 ADUP SMM	27-Jun-2012, 11:12	0.05	2.25	85.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 11:14	4.06	0.16	6390.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 11:15	-0.01	4.79	-10.70	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UY97 ASPK SMM	27-Jun-2012, 11:17	1.18	0.47	1850.00	1.00	
UY97 B SMM	27-Jun-2012, 11:19	0.06	1.21	100.00	1.00	
UY97 C SMM	27-Jun-2012, 11:20	0.12	0.81	185.00	1.00	
UY97 D SMM	27-Jun-2012, 11:22	0.02	5.29	27.40	1.00	
UY97 E SMM	27-Jun-2012, 11:24	0.05	1.55	82.00	1.00	
UY97 F SMM	27-Jun-2012, 11:25	0.02	7.31	25.60	1.00	
UY97 REF1 SMM	27-Jun-2012, 11:27	6.36	0.34	10000.00	5.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 11:28	4.09	0.27	6420.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 11:30	-0.01	28.90	-13.90	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 11:34	4.08	0.38	6410.00	1.00	

CETAC Hg Analysis Report - 12062700.DB - Wednesday, June 27, 2012, 3:42:39 PM

Analyst
Date Started Wednesday, June 27, 2012, 11:36:23
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 11:36	-0.01	15.50	-12.10	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ21 MB1 SMM	27-Jun-2012, 11:38	-0.01	12.90	-12.20	1.00	
UZ21 MB1SPK SMM	27-Jun-2012, 11:39	1.71	0.26	2690.00	1.00	
UZ21 A SMM	27-Jun-2012, 11:41	0.11	2.31	166.00	1.00	
UZ35 A SMM	27-Jun-2012, 11:42	0.28	0.39	434.00	1.00	
UZ35 B SMM	27-Jun-2012, 11:44	0.07	1.61	103.00	1.00	
UZ35 C SMM	27-Jun-2012, 11:45	0.11	0.69	170.00	1.00	
UZ35 D SMM	27-Jun-2012, 11:47	1.16	0.40	1820.00	1.00	
UZ36 A SMM	27-Jun-2012, 11:49	0.14	0.94	222.00	1.00	
UZ36 B SMM	27-Jun-2012, 11:50	0.21	0.66	325.00	1.00	
UZ36 C SMM	27-Jun-2012, 11:52	0.23	0.45	366.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 11:54	4.10	0.32	6440.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 11:55	-0.01	31.80	-10.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ36 D SMM	27-Jun-2012, 11:57	0.14	0.74	225.00	1.00	
UZ27 MB1 SMM	27-Jun-2012, 11:59	-0.01	12.30	-12.10	1.00	
UZ27 MB1SPK SMM	27-Jun-2012, 12:00	2.09	0.25	3280.00	1.00	
UZ27 A SMM	27-Jun-2012, 12:02	0.28	0.43	442.00	1.00	
UZ27 ADUP SMM	27-Jun-2012, 12:03	0.26	0.39	410.00	1.00	
UZ27 ASPK SMM	27-Jun-2012, 12:05	1.34	0.37	2110.00	1.00	
UZ27 B SMM	27-Jun-2012, 12:06	0.52	0.30	816.00	1.00	
UZ48 MB1 SMM	27-Jun-2012, 12:08	-0.01	23.20	-16.80	1.00	
UZ48 MB1SPK SMM	27-Jun-2012, 12:10	1.94	0.33	3040.00	1.00	
UZ48 MB1SPD SMM	27-Jun-2012, 12:11	2.04	0.20	3200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 12:13	4.13	0.23	6490.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 12:15	-0.02	2.34	-25.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ48 A SMM	27-Jun-2012, 12:16	0.31	0.32	490.00	1.00	
UZ48 ADUP SMM	27-Jun-2012, 12:18	0.30	0.48	477.00	1.00	
UZ48 ASPK SMM	27-Jun-2012, 12:20	1.49	0.35	2340.00	1.00	
UZ48 B SMM	27-Jun-2012, 12:21	0.12	0.92	190.00	1.00	
UZ48 C SMM	27-Jun-2012, 12:23	0.30	0.18	468.00	1.00	
UZ48 D SMM	27-Jun-2012, 12:24	0.42	0.96	661.00	1.00	
UZ57 MB1 SMM	27-Jun-2012, 12:26	-0.01	6.31	-12.90	1.00	
UZ57 MB1SPK SMM	27-Jun-2012, 12:28	2.05	0.86	3230.00	1.00	
UZ57 A SMM	27-Jun-2012, 12:29	0.74	0.39	1160.00	1.00	
UZ57 ADUP SMM	27-Jun-2012, 12:31	0.70	0.38	1090.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 12:32	4.19	0.31	6590.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 12:34	-0.01	7.85	-19.00	1.00	

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Analyst
Date Started Wednesday, June 27, 2012, 12:36:17
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ57 ASPK SMM	27-Jun-2012, 12:36	1.86	0.25	2930.00	1.00	
UZ57 B SMM	27-Jun-2012, 12:37	0.27	0.51	422.00	1.00	
UZ57 C SMM	27-Jun-2012, 12:39	0.19	0.71	292.00	1.00	
UZ57 D SMM	27-Jun-2012, 12:41	0.28	0.72	447.00	1.00	
UZ57 E SMM	27-Jun-2012, 12:42	0.61	0.13	957.00	1.00	
UZ57 F SMM	27-Jun-2012, 12:44	3.11	0.87	4890.00	~~1.00~~ 5.00	
					06.28.12 NJJ	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 12:46	4.19	0.29	6580.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 12:47	-0.01	19.70	-12.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ49 MB1 SMM	27-Jun-2012, 12:55	-0.01	19.70	-12.20	1.00	
UZ49 MB1SPK SMM	27-Jun-2012, 12:57	2.09	0.19	3290.00	1.00	
UZ49 MB1SPD SMM	27-Jun-2012, 12:58	1.86	0.23	2920.00	1.00	
UZ49 A SMM	27-Jun-2012, 13:00	0.80	0.34	1260.00	1.00	
UZ49 B SMM	27-Jun-2012, 13:01	0.83	0.49	1300.00	1.00	
UZ49 C SMM	27-Jun-2012, 13:03	0.50	0.50	789.00	1.00	
UZ69 A SMM	27-Jun-2012, 13:05	0.05	3.83	73.70	1.00	
UZ69 B SMM	27-Jun-2012, 13:06	0.45	0.08	713.00	1.00	
UZ59 C SMM	27-Jun-2012, 13:08	0.53	0.58	828.00	1.00	
UZ69 D SMM	27-Jun-2012, 13:09	0.12	0.86	191.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 13:11	4.19	0.35	6580.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 13:13	-0.00	10.40	-7.41	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ69 E SMM	27-Jun-2012, 13:14	0.05	3.82	78.40	1.00	
UZ99 MB1 SMM	27-Jun-2012, 13:16	-0.01	15.90	-13.70	1.00	
UZ99 MB1SPK SMM	27-Jun-2012, 13:18	2.18	0.45	3430.00	1.00	
UZ99 A SMM	27-Jun-2012, 13:19	0.14	1.68	224.00	1.00	
UZ99 ADUP SMM	27-Jun-2012, 13:21	0.39	0.44	608.00	1.00	x Diff > 0.1
UZ99 ASPK SMM	27-Jun-2012, 13:22	1.41	0.32	2210.00	1.00	x high I.R (127%)
UY96 MB1SPK SMM	27-Jun-2012, 13:24	1.58	0.32	2480.00	1.00	x low I.R (79%)
VA19 MB1 SMM	27-Jun-2012, 13:26	-0.01	14.20	-17.90	1.00	
VA19 MB1SPK SMM	27-Jun-2012, 13:27	2.18	0.24	3420.00	1.00	
VA19 A SMM	27-Jun-2012, 13:29	0.15	1.42	239.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 13:31	4.21	0.45	6610.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 13:32	-0.00	45.70	-6.73	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VA19 B SMM	27-Jun-2012, 13:34	0.45	0.55	704.00	1.00	
VA19 C SMM	27-Jun-2012, 13:35	0.38	0.37	605.00	1.00	
VA19 D SMM	27-Jun-2012, 13:37	0.16	1.61	254.00	1.00	
VA19 MB2 SMM	27-Jun-2012, 13:39	-0.01	8.09	-12.10	1.00	
VA19 MB2SPK SMM	27-Jun-2012, 13:40	2.16	0.32	3390.00	1.00	
VA19 E SMM	27-Jun-2012, 13:42	0.10	2.45	155.00	1.00	

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Analyst
Date Started Wednesday, June 27, 2012, 13:44:05
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 13:44	4.16	0.30	6530.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 13:45	-0.01	19.20	-14.90	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ99 A SMM	27-Jun-2012, 13:52	0.15	0.35	232.00	1.00	
UZ99 ADUP SMM	27-Jun-2012, 13:54	0.39	0.63	618.00	1.00	x Diff. > 0.1
UZ99 ASPK SMM	27-Jun-2012, 13:56	1.42	0.29	2230.00	1.00	x high % R (127%)

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 13:57	4.30	0.47	6760.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 13:59	-0.01	18.20	-12.60	1.00	End CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 14:11	4.34	0.37	6820.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 14:12	-0.01	7.35	-13.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ92 MB SMM	27-Jun-2012, 14:14	-0.01	11.50	-11.10	1.00	
UZ92 MBSPK SMM	27-Jun-2012, 14:15	2.14	0.34	3360.00	1.00	
UZ92 A SMM	27-Jun-2012, 14:17	0.88	0.20	1380.00	1.00	
UZ92 ADUP SMM	27-Jun-2012, 14:19	0.88	0.44	1390.00	1.00	
UZ92 ASPK SMM	27-Jun-2012, 14:20	2.47	0.50	3880.00	1.00	x % R=159 high
UZ92 B SMM	27-Jun-2012, 14:22	1.28	0.31	2000.00	1.00	
UZ92 C SMM	27-Jun-2012, 14:23	0.76	0.31	1190.00	1.00	
UZ01 MB1 SMM	27-Jun-2012, 14:25	-0.00	15.80	-7.16	1.00	
UZ01 MB1SPK SMM	27-Jun-2012, 14:27	2.10	0.38	3300.00	1.00	
UZ01 AG SMM	27-Jun-2012, 14:28	0.23	0.94	355.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 14:30	4.48	0.29	7040.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	27-Jun-2012, 14:32	-0.01	6.43	-20.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
UZ01 E SMM	27-Jun-2012, 14:33	0.17	0.48	273.00	1.00	
UZ01 EDUP SMM	27-Jun-2012, 14:35	0.15	0.74	242.00	1.00	
UZ01 ESPK SMM	27-Jun-2012, 14:36	1.27	0.26	2000.00	1.00	
UZ01 F SMM	27-Jun-2012, 14:38	0.13	1.15	200.00	1.00	
UZ01 G SMM	27-Jun-2012, 14:40	0.78	0.17	1230.00	1.00	
UZ01 H SMM	27-Jun-2012, 14:41	0.73	0.32	1150.00	1.00	
UZ01 I SMM	27-Jun-2012, 14:43	0.16	1.64	247.00	1.00	
UZ01 J SMM	27-Jun-2012, 14:44	0.12	1.10	183.00	1.00	
UZ01 K SMM	27-Jun-2012, 14:46	0.18	0.98	281.00	1.00	
UZ02 MB SMM	27-Jun-2012, 14:48	-0.02	12.20	-27.20	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	27-Jun-2012, 14:49	4.41	0.33	6920.00	1.00	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: SMM
Analyst: MJJ
Bath Temp: 90°C
Start Time: 1815
Instrument: CETAC
Date: 06.26.12
End Time: 1845

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	2961-9	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	↓
STD3	↓	0.10	↓	1.0	↓
STD4	↓	0.20	↓	2.0	↓
STD5	↓	0.50	↓	5.0	↓
STD6	↓	1.00	↓	10.0	↓
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	56-18	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: I7466
H_2SO_4: I7184
HCl: —
5% $K_2S_2O_8$: MP2297
5% $KMnO_4$: MP2298

Prep Code: _____
Analyst: _____
Bath Temp: _____
Start Time: _____
Instrument: _____
Date: _____
End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____
H_2SO_4: _____
HCl: _____
5% $K_2S_2O_8$: _____
5% $KMnO_4$: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

All correction made by CB 6/26/12

Mercury Digestion Log

Prep Code: SMM

Analyst: CB

Bath Temp: 90°C

Start Time: 10:45

Matrix: Soil

Date: 6/26/12

End Time: 11:15

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
U299A	4	–	0.222	~~7/4~~ 50.0	7/4 1	Y	
U299 AOUP	4	–	0.220	50.0	1	Y	
U299 ASPK	4	–	0.221	50.0	1	Y	
U299 MB1	–	–	–	50.0	1	Y	
U299 MB1 SPK	–	–	–	50.0	1	Y	

CB 6/26/12

Chemical/Reagent ID:

HNO_3: I7466

5% $K_2S_2O_8$: MP2299

H_2SO_4: I7184

5% $KMnO_4$: MP2298

HCl: –

Digest Tube Lot: 1202052

5037F

Revision 007
6/18/09

UZ99:00889

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: UZ99

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	UZ99
Unacceptable Blank:	☐	Date of Event:	6/26/12
Unacceptable Duplicate:	☒	Client ID:	I + J Waterway
Unacceptable Spike:	☐	Method/Element:	S2 376.2
Unacceptable Reference:	☐	Prep Code:	

Details of Problem/Recommended Corrective Action:
sample duplicate is high @ 60%

Samples Affected: A

Corrective Action Taken: none necessary, since the sample is less than 5 times that of the RL (the high RPD is statistically insignificant.

Analyst Initials: RL **Supervisor:**

Date: 6/26/12 **Date:**

5049F

Revision 007
6/11/10

UZ99 : 00891

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 6/25/2012
ANALYST: KE 20:16 (A)

Instrumentation **Drying Ovens:** 12 **Muffle Furnace:** N / A **Analytical Balance:** 1123230597

Batch drying time		
record times as mm/dd/yy hh:mm		
6/25/2012 20:16	date/time in oven	KE
6/26/2012 10:56	date/time out	KE
elapsed hrs =	14.7	

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

Cal Weight ID		CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
Date & Time		6/25/12 18z:16 KE	6/25/12 17:59 KE	6/25/12 11:12 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
record weights to 4 places		*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0750	1.0750			0.00							
UZ57 A1		6.4904	1.0951	4.9496			3.85	71.4%						
UZ57 A1 dup		6.2789	1.1034	4.2839			3.18	61.5%						
							RPD =	15.03%				RPD =	NA	
UZ57 A1 trp		6.5917	1.1335	4.2906			3.16	57.8%						
							RSD =	11.08%				RSD =	NA	
UZ57 B1		6.1684	1.0975	4.3640			3.27	64.4%						
UZ57 C1		6.0872	1.0851	5.0953			4.01	80.2%						
UZ57 D1		7.3184	1.1120	5.7490			4.64	74.7%						
UZ57 E1		7.2715	1.1021	4.9564			3.85	62.5%						
UZ57 NBS1944 F		2.5968	1.1140	2.5665			1.45	98.0%						
UZ48 A1		6.8290	1.0944	2.7328			1.64	28.6%						
UZ48 B1		7.0336	1.0761	5.3173			4.24	71.2%						
UZ48 B1 dup		7.7121	1.0741	5.7632			4.69	70.6%						
							RPD =	0.78%				RPD =	NA	
UZ48 B1 trp		7.8588	1.0788	5.9025			4.82	71.1%						
							RSD =	0.43%				RSD =	NA	
UZ48 D1		7.9414	1.1100	3.7150			2.61	38.1%						
UZ48 C1		8.0109	1.0818	5.3721			4.29	61.9%						
UZ86 A1		6.3975	1.0936	5.6234			4.53	85.4%						
UZ86 A1 dup		7.8366	1.0712	6.8746			5.80	85.8%						
							RPD =	0.44%				RPD =	NA	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 6/25/2012

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 20:16 (A)

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
6/25/2012 20:16	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
6/26/2012 10:56	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	14.7			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	6/25/12 18z:16 KE	6/25/12 17:59 KE	6/25/12 11:12 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
	record weights to 4 places	Cal OK!	Cal OK!	Cal OK!									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
UZ99 A5		8.5584	1.1025	7.4947			6.39	**85.7%**						
UZ99 A5 dup		7.9472	1.1244	6.9672			5.84	**85.6%**						
							RPD =	0.11%				RPD =	NA	
UZ99 A5 trp		7.8973	1.1059	6.8668			5.76	**84.8%**						
							RSD =	0.58%				RSD =	NA	

UZ99 : 00893

① 6-25-12 (W)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET (A)

② 6.8290 6-25-12 (W)

Analyst: (W)	Date: 6-25-12 / 20:16	Oven ID: 12	Balance ID: 1123230597		
Time in Oven:		Time Out of Oven: 10:56	Elapsed Time (> 12 Hrs):		
Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places	TS (%) calculated as: Final Dry Weight (g) = (Dry Weight – Tare Weight) TS = (Final Dry Weight) / (Grams Sample – Tare Weight)	TVS (mg/kg dry weight) calculated as: Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight) TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000 If Ash Weight > Dry Weight then "Check for Error" If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000			

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	6-25-12 18:16	6-25-12 17:59	6-25-12 11:12						
Cal Weight (10.0000):	10.0000 (W)	10.0000 (W)	10.0000 (W)						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	Dry Weight 104°C 2	Dry Weight 104°C 3	Dry Weight grams	Ash Weight 550°C 1	Ash Weight 550°C 2	Ash Weight 550°C 3
BLANK	1	Ø	1.0750	1.0750						
U257 A1	2	6.4904	1.0951	4.9496						
↓ DP A1	3	6.2799	1.1034	4.2839						
↓ TP A1	4	6.5917	1.1335	~~4.280~~ 4.2906						
B1	5	6.1684	1.0975	4.3640						
C1	6	6.0872	1.0851	5.0953						
D1	7	7.3184	1.1120	5.7490						
E1	8	7.2715	1.1021	4.9564						
NBS (1944) F	9	2.5968	1.1140	2.5665						
U248 A1	10 ②	~~1.0944~~	1.0944	2.7328						
↓ B1	11	7.0336	1.0761	5.3173						
↓ DP B1	12	7.7121	1.0741	5.7632						
↓ TP B1	13	7.8588	1.0788	5.9025						
D1	14	7.9414	1.1100	3.7150						
↓ C1 ~~B1~~	15	8.0109	1.0818	5.3721						
U286 A1	37	6.3975	1.0936	5.6234						
↓ DP A1	38	7.8366	1.0712	6.8746						
U299 A5	39	8.5584	1.1025	7.4947						
↓ DP A5	40	7.9472	1.1244	6.9672						
↓ TP A5	41	7.8973	1.1059	6.8668						

6-25-12 (W)

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U299 : 00894

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* **ZnOAc PRES.**

DATE: 6/26/2012
ANALYST: KE 15:50

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
6/26/2012 15:50	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
6/27/2012 9:58	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	18.1			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	6/26/12 15:40 KE	6/26/12 15:32 KE	6/27/12 9:58 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.1042	1.1041			0.00							
UZ95 A1		6.7154	1.1083	4.0941			2.99	53.3%						
UZ95 A1 dup		6.7045	1.1106	4.0951			2.98	53.4%						
							RPD =	0.19%				RPD =	NA	
UZ95 B1		6.4968	1.0608	3.6692			2.61	48.0%						
UZ95 C1		6.8724	1.1390	4.6648			3.53	61.5%						
UZ99 A6		6.3448	1.1314	5.6941			4.56	87.5%						
UZ99 A6 dup		6.7321	1.1589	5.8315			4.67	83.8%						
							RPD =	4.29%				RPD =	NA	
UA01 A2		6.3211	1.1288	4.2798			3.15	60.7%						
UA01 A2 dup		6.2595	1.1224	4.2623			3.14	61.1%						
							RPD =	0.72%				RPD =	NA	
UA01 B2		6.0807	1.1071	3.9568			2.85	57.3%						
UA01 C2		6.4993	1.0855	4.7382			3.65	67.5%						
UA01 D2		6.9414	1.1115	4.6731			3.56	61.1%						
UA01 E2		6.1562	1.1011	4.1973			3.10	61.2%						
UA01 F2		6.4621	1.1090	4.7431			3.63	67.9%						

UZ99 : 00895

Analytical Resources, Incorporated
Analytical Chemists and Consultants (D 6-26-12 W)

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(2) 1.1011 6-26-12 W

ZnOAc Preserved

Analyst: W	Date: 6-26-12		Oven ID: 12	Balance ID:	1123230597
Time in Oven: 15:50		Time Out of Oven: (D) ~~15~~ 9:40		Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		6-26-12 15:40	6-26-12 15:32	6-27-12 9:58						
Cal Weight (10.0000):		10.0000 W	10.0000 W	10.0000 W						
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	Ø	1.1042	1.1041						
U295 A1	2	6.7154	1.1083	4.0941						
nd A1	3	6.7045	1.1106	4.0951						
B1	4	6.4968	1.0608	3.6692						
C1	5	6.8724	1.1390	4.6648						
U299 A6	6	6.3448	1.1314	5.6941						
nd A6	7	6.7321	1.1589	5.8315						
VA01 A2	8	6.3211	1.1288	4.2798						
nd A2	9	6.2595	1.1224	4.2623						
B4	10	6.0807	1.1071	3.9568						
C2	11	6.4993	1.0865	4.7382						
D2	12	6.9414	1.1115	4.6731						
E2	13	6.1562	~~1.00~~ (2)	4.1973						
F2	14	6.4621	1.1090	4.7431						

6-26-12
W

UZ99 : 00896

SULFIDE BENCHSHEET (Spectrophotometric, EPA 376.2)		Date Time	Analyst
Soils, sediments and solid phase samples	Distillation	6/26/12 11:20	RR
	Finish	6/26/12 18:20	RR

If distilled, specify Procedure: **PSEP**

1. Standardization of sodium thiosulfate titrant — *Buret used for titrations:* S2

Thiosulfate ID: **9237C**
Bi-iodate ID: **8530C**
Stock bi-iodate = **0.8130** *grams to* 1000 *mL*
Normality = **0.025**

Titration of bi-iodate with thiosulfate				
mL bi-iodate =	3.00	3.00	3.00	
mL thiosulfate =	3.11	3.11	3.10	*nthio*
*Normality thiosulfate = (mL bi-iodate*normbio) / mL thiosulfate =*	0.024	0.024	0.024	**0.024**

2. Normality of Iodine
Iodine ID: **9182C**

Titration of Iodine with thiosulfate				
mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	2.97	2.97	2.96	*ni*
*Normality iodine = (mL thiosulfate*nthio) / mL iodine=*	0.024	0.024	0.024	**0.024**

3. Standardization of Sodium Sulfide Stock
Stock ID = **00129-01**
Approx conc in 100ml
g Na2S = 0.6628 *mg /mL =* 0.885

Titration of standard with thiosulfate				
mL Standard =	1.00	1.00	1.00	
mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	1.30	1.30	1.30	*stkconc (mg/mL)*
*Sulfide (mg/mL) = {[(mL iodine*ni)-(mL thio *nthio)]*16} / mL standard =*	0.644	0.644	0.644	**0.644**

Intermediate Standard — *mL required for for 0.025 mg/mL* 9.7
Add 9.7 *mL stk to* 250 *mL 0.01M NaOH =* **0.025** ***mg/mL***

4. Calibration Standard Curve — ***spectrophotometer used:***

Inter Std Volume (mL)	Final Volume (mL)	Calc Conc (mg S/L)	Absorbance @650 nm 1	Absorbance @650 nm 2	AVG ABS	mg/L
0.00	50	0.000	0.000		0.000	0.003
0.10	50	0.050	0.030		0.030	0.051
0.25	50	0.125	0.072		0.072	0.117
0.50	50	0.250	0.152		0.152	0.244
1.00	50	0.500	0.322		0.322	0.514
2.00	50	1.000	0.626		0.626	0.995

RegressionData
intercept = -0.002
slope = 0.631
r = 0.9998
Comment: Calibration OK!
maxabs = 0.626

Calib Verif Std =	1.0	*ml INT to*	50	*ml ZnOAc=*	0.500	*mg/l*
Distillation Std =	1.0	*ml stk to*	100	=	6.44	*mg/l*

SAMPLE DATA

enter dilution as mL final/mL sample

	Distillation Data			Spectrophotometric Data				SAMPLE DATA	
SAMPLE ID	SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Dilution Factor	Abs @ 650 nm Sample	Abs @ 650 nm Bkg	regressed Conc (mg S/L)	CORR CONC (ppm)	
ICB		na	na	1.00	0.000		0.003	< 0.05	*OK!*
ICV		na	na	1.00	0.314		0.501	0.501	*100.20%*
Distilled samples									
Dist Blk	100.0	100%	100	1.00	0.006		0.013	< 0.05	*OK!*
Dist Chk	100.0	100%	100	10.00	0.428		0.682	6.816	*105.80%*
Soil Samples	**(grams)**	**% Solids**	**(mL)**		**Sample**	**Bkg**	**(mg/L)**	**mg/kg**	
~~UZ95 A1~~	~~5.070~~	~~53.3%~~	~~100~~	~~10.00~~	~~0.212~~		~~0.339~~	~~125.557~~	-
~~UZ95 A1 dup~~	~~5.192~~	~~53.3%~~	~~100~~	~~10.00~~	~~0.720~~		~~1.144~~	~~413.538~~	~~*offscale*~~
~~UZ95 A1 ms~~	~~5.152~~	~~53.3%~~	~~100~~	~~20.00~~	~~0.556~~		~~0.884~~	~~644.194~~	~~*221.05%*~~
		~~*Spike at*~~	~~*1.00*~~	~~*ml stock to*~~	~~*2.746*~~	~~*g dry wt =*~~		~~*234.621*~~	~~*mg/kg*~~
~~UZ95 B1~~	~~5.199~~	~~48.0%~~	~~100~~	~~10.00~~	~~0.685~~		~~1.089~~	~~436.354~~	~~*offscale*~~
~~UZ95 C1~~	~~5.076~~	~~61.5%~~	~~100~~	~~10.00~~	~~0.728~~		~~1.157~~	~~370.652~~	~~*offscale*~~
UZ99 A6	5.459	87.5%	100	1.00	0.049		0.081	1.695	
UZ99 A6 dup	5.521	87.5%	100	1.00	0.094		0.152	3.152	*RPD=60.13%*
UZ99 A6 ms	5.216	87.5%	100	10.00	0.378		0.602	131.985	*92.30%*
		Spike at	*1.00*	*ml stock to*	*4.564*	*g dry wt =*		*141.164*	*mg/kg*
Cal Blk		na	na	1.00	-0.001		0.002	< 0.05	*OK!*
CCV		na	na	1.00	0.284		0.453	0.453	*90.69%*
VA01 A1	5.359	60.7%	100	1.00	0.399		0.636	19.541	
VA01 A1 dup	5.543	60.7%	100	1.00	0.537		0.854	25.393	*RPD=26.05%*

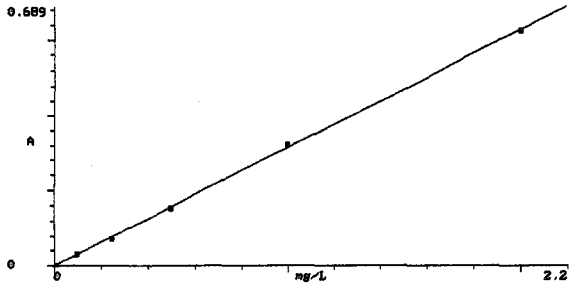
SAMPLE DATA

enter dilution as mL final/mL sample

	Distillation Data			Spectrophotometric Data				SAMPLE DATA	
SAMPLE ID	SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Dilution Factor	Abs @ 650 nm Sample	Abs @ 650 nm Bkg	regressed Conc (mg S/L)	CORR CONC (ppm)	
VA01 A1 ms	5.121	60.7%	100	10.00	0.397		0.632	203.475	*88.74%*
		Spike at	*1.00*	*ml stock to*	*3.108*	*g dry wt =*		*207.265*	*mg/kg*
VA01 B1	5.429	57.3%	100	1.00	0.263		0.420	13.505	
VA01 C1	5.534	67.5%	100	1.00	0.205		0.328	8.786	
~~VA01 D1~~	~~5.410~~	~~61.1%~~	~~100~~	~~1.00~~	~~0.733~~		~~1.165~~	~~35.244~~	~~*offscale*~~
~~VA01 E1~~	~~5.365~~	~~61.2%~~	~~100~~	~~1.00~~	~~0.710~~		~~1.129~~	~~34.372~~	~~*offscale*~~
VA01 F1	5.689	67.9%	100	1.00	0.499		0.794	20.559	
~~UZ95 A1~~	~~5.070~~	~~53.3%~~	~~100~~	~~20.00~~	~~0.112~~		~~0.181~~	~~133.819~~	-
~~UZ95 A1 dup~~	~~5.192~~	~~53.3%~~	~~100~~	~~20.00~~	~~0.392~~		~~0.625~~	~~451.386~~	~~*RPD=108.53%*~~
Cal Blk		na	na	1.00	0.001		0.005	< 0.05	*OK!*
~~CCV~~		~~na~~	~~na~~	~~1.00~~	~~0.265~~		~~0.423~~	~~0.423~~	~~*Err @85%*~~
~~CCV~~		~~na~~	~~na~~	~~1.00~~	~~0.281~~		~~0.449~~	~~0.449~~	~~*Err @90%*~~
CCV		na	na	1.00	0.290		0.463	0.463	*92.59%*
~~UZ95 A1 ms~~	~~5.152~~	~~53.3%~~	~~100~~	~~20.00~~	~~0.540~~		~~0.859~~	~~625.726~~	~~*209.66%*~~
		~~*Spike at*~~	~~*1.00*~~	~~*ml stock to*~~	~~*2.746*~~	~~*g dry wt =*~~		~~*234.621*~~	~~*mg/kg*~~
~~UZ95 B1~~	~~5.199~~	~~48.0%~~	~~100~~	~~20.00~~	~~0.381~~		~~0.607~~	~~486.580~~	-
~~UZ95 C1~~	~~5.076~~	~~61.5%~~	~~100~~	~~20.00~~	~~0.356~~		~~0.568~~	~~363.588~~	-
VA01 D1	5.410	61.1%	100	2.00	0.366		0.583	35.296	
VA01 E1	5.365	61.2%	100	2.00	0.376		0.599	36.500	
Cal Blk		na	na	1.00	-0.005		-0.005	< 0.05	*OK!*
CCV		na	na	1.00	0.291		0.464	0.464	*92.91%*
~~VA01 A1~~	~~5.359~~	~~60.7%~~	~~100~~	~~1.00~~	~~0.380~~		~~0.606~~	~~18.616~~	-
~~VA01 A1 dup~~	~~5.543~~	~~60.7%~~	~~100~~	~~1.00~~	~~0.528~~		~~0.840~~	~~24.969~~	~~*RPD=29.15%*~~
~~VA01 A1 ms~~	~~5.121~~	~~60.7%~~	~~100~~	~~10.00~~	~~0.407~~		~~0.648~~	~~208.574~~	~~*91.65%*~~
		~~*Spike at*~~	~~*1.00*~~	~~*ml stock to*~~	~~*3.108*~~	~~*g dry wt =*~~		~~*207.265*~~	~~*mg/kg*~~
Cal Blk		na	na	1.00	0.000		0.003	< 0.05	*OK!*
CCV		na	na	1.00	0.326		0.520	0.520	*104.00%*

TEST SETUP
GENESYS 10 v2.021 2G2G048006

Standard Curve	18:53 26Jun12
Test Name	SULFIDE[Saved]
Date Standards Measured	26Jun12
Wavelength	650nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	6
Units	mg/L
ID# (0=OFF)	Off
Low/High Limits	0.050/1.000
Statistics	Off
Auto Print	On



Curve Fit	Linear
Slope	0.315
Intercept	-0.00209
Std Dev	0.006
Corr Coeff	1.000

Conc. mg/L	Abs 650nm
0.000	0.000
0.100	0.030
0.250	0.072
0.500	0.152
1.000	0.322
2.000	0.626

6/26/12

TEST SETUP
GENESYS 10 v2.021 2G2G048006

Advanced A-%T-C	18:53 26Jun12
Test Name	SULFIDE[Saved]
Measurement Mode	Absorbance
Wavelength	650nm
Ref. Wavelength Correction	Off
Delay Time (min:sec)	0:00
ID# (0=OFF)	1
Low/High Limits	0.000/1.000
Statistics	Off
Auto Print	On

ID#	Abs 650nm
4	0.000

2	0.314
3	0.006
4	0.428
5	0.212
6	0.720
7	0.556
8	0.685
9	0.728
10	0.049
11	0.094
12	0.378
13	-0.001
14	0.284

UZ99 : 00900

15	0.399
16	0.537
17	0.397
18	0.263
19	0.205
20	0.733
21	0.710
22	0.499
23	0.112
24	0.392
25	0.001
26	0.265
27	0.281

28	0.290
29	0.540
30	0.381
31	0.356
32	0.366
33	0.376
34	-0.005
35	0.291
36	0.380
37	0.528
38	0.407
39	0.000
40	0.326

SULFIDE BENCHSHEET (Spectrophotometric, EPA 376.2)
Soils, sediments and solid phase samples

	Date Time	Analyst
Distillation	6/26/12 11:20	PR
Finish	6/26/12 18:55	PR

If distilled, specify Procedure: P&EP

1. Standardization of sodium thiosulfate titrant — *Buret used for titrations:* S2

Thiosulfate ID: 9237C
Bi-iodate ID: 8530C
Stock bi-iodate = 0.8130 *grams to* 1000 *mL*
Normality =

Titration of bi-iodate with thiosulfate

mL bi-iodate =	3	3	3	
mL thiosulfate =	3.11	3.11	3.10	nthio
*Normality thiosulfate = (mL bi-iodate*normbio) / mL thiosulfate =*				

2. Normality of Iodine
Iodine ID: 9182C

Titration of Iodine with thiosulfate

mL iodine =	3	3	3	
mL thiosulfate =	2.97	2.97	2.96	ni
*Normality iodine = (mL thiosulfate*nthio) / mL iodine=*				

3. Standardization of Sodium Sulfide Stock
Stock ID = 00129-01
Approx conc in 100ml
g Na2S = 0.6628 *mg /mL =*

Titration of standard with thiosulfate

mL Standard =	1	1	1	
mL iodine =	3	3	3	
mL thiosulfate =	1.30	1.30	1.30	stkconc (mg/mL)
*Sulfide (mg/mL) = {[(mL iodine*ni)-(mL thio *nthio)]*16} / mL standard =*				

Intermediate Standard — *mL required for for 0.025 mg/mL*
Add 9.7 *mL stk to* 250 *mL 0.01M NaOH =* **mg/mL**

4. Calibration Standard Curve — ***spectrophotometer used:***

Inter Std Volume (mL)	Final Volume (mL)	Calc Conc (mg S/L)	Absorbance @650 nm 1	Absorbance @650 nm 2	AVG ABS	mg/L
0.00	50		0.000			
0.10	50		0.030			
0.25	50		0.072			
0.50	50		0.152			
1.00	50		0.322			
2.00	50		0.626			

RegressionData
intercept =
slope =
r =
Comment:
maxabs =

Calib Verif Std =	1.0	*ml INT to*	50	*ml ZnOAc=*		*mg/l*
Distillation Std =	1.0	*ml stk to*	100	=		*mg/l*

SAMPLE DATA

enter dilution as mL final/mL sample

SAMPLE ID	Distillation Data: SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Spectrophotometric Data: Dilution Factor	Abs @ 650 nm Sample	Abs @ 650 nm Bkg	regressed Conc (mg S/L)	SAMPLE DATA: CORR CONC (ppm)	
ICB		na	na	1.00	0.000				
ICV		na	na	1.00	0.314				
Distilled samples									
Dist Blk	100.0	100%	100	1.00	0.006				
Dist Chk	100.0	100%	100	10.00	0.428				
Soil Samples	**(grams)**	**% Solids**	**(mL)**		**Sample**	**Bkg**	**(mg/L)**	**mg/kg**	
UZ95 A'	5.070	53.3	100	10 ~~1.00~~	0.212				
DUP	5.192			10 ~~1.00~~	0.720				
MS	5.152			20 ~~1.00~~	0.556				
B'	5.199	48.0		10 ~~1.00~~	0.685				
C	5.076	61.5		10 ~~1.00~~	0.728				
UZ99 A'	5.459	87.5		1.00	0.049				
DUP	5.521			1.00	0.094				
MS	5.216			10 ~~1.00~~	0.378				
Cal Blk		na	na	1.00	-0.001				
CCV		na	na	1.00	0.284				
VA01 A'	5.359	60.7	100	1.00	0.399				
DUP	5.543			1.00	0.537				
MS	5.121			10 ~~1.00~~	0.397				
B'	5.429	57.3		1.00	0.263				

SAMPLE DATA

enter dilution as mL final/mL sample

	Distillation Data			Spectrophotometric Data				SAMPLE DATA	
SAMPLE ID	SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Dilution Factor	Abs @ 650 nm Sample	Abs @ 650 nm Bkg	regressed Conc (mg S/L)	CORR CONC (ppm)	
VA01 C'	5.534	67.5	100	1.00	0.205				
D'	5.410	61.1		1.00	0.733				
E'	5.365	61.2		1.00	0.710				
F'	5.689	67.9		1.00	0.499				
UZ95 A'	5.070	53.3		20 ~~1.00~~	0.112				
Dup	5.192			20 ~~1.00~~	0.392				
Cal Blk		na	na	1.00	0.001				
CCV		na	na	1.00	0.265				
CCV ~~UZ95 A' ms~~			NA	1.00	~~0.285~~	0.281			
CCV			NA	1.00	0.290				
UZ95 A' ms	5.152	53.3	100	20 ~~1.00~~	0.540				
B'	5.199	48.0		20 ~~1.00~~	0.381				
C'	5.076	61.5		20 ~~1.00~~	0.356				
VA01 D'	5.410	61.1		2 ~~1.00~~	0.366				
E'	5.365	61.2		2 ~~1.00~~	0.376				
CCB				1.00	0.005				
CCV				1.00	0.291				
VA01 A'	5.359	60.7	100	1.00	0.380				
~~Cal Blk~~ Dup	5.543	~~na~~	~~na~~	1.00	0.528				
~~CCV~~ ms	5.121	~~na~~	~~na~~	10 ~~1.00~~	0.407				
CCB				1.00	0.000				
CCV				1.00	0.326				
				~~1.00~~					
				1.00					
				1.00					
				1.00					
				~~1.00~~					
				1.00					
				1.00					
				1.00					
Cal Blk		na	na	~~1.00~~					
CCV		na	na	1.00					

6/26/12

UZ99:00964

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Sulfide Digestion Log

			Pretreatment Data							Sample Extraction Data				
Sample ID	% Solids	% Water	Date	Sample Weight	Extract Method*	Acid	Required pH	mL DI Water	Observed mL acid	Date	Sample Weight	mL Acid Required	mL DI Water Required	Trap Volume (mL)
PB			NA	NA	PSEP	HCl+AI	<3	NA	NA	6·26·12	NA	NA	100	100
LCS														1mL st
UZ95 A'											5.070		50	
Dup											5.192			
MS											5.152			1mL st
B'											5.199			
C'											5.076			
UZ99 A6											5.459			
Dup											5.521			
MS											5.216			1mL st
VA01 A'											5.359			
Dup											5.543			
MS											5.121			1mL sto
B'											5.429			
C'											5.534			
D'											5.410			
E'											5.365			
F'											5.689			
							6/26/12 RR							

* Extarct Methods: **PSEP** = PSEP; **9030A** = 9030A Acid Soluble; **9030AI** = 9030A acid insoluble; **AVS** = Acid Volatile; **Reactive** = SW-846 reactive

Analyst Name: RR Date: 6·26·12 Time: 11:20

UZ99 : 000905

Original Run Filename: OM_6-27-2012_02-28-36PM.OMN Created: 6/27/2012 2:28:36 PM
Original Run Author's Signature: [Ursula Walter]
Current Run Filename: 062712NH3B.omn Last Modified: 6/27/2012 4:08:29 PM
Current Run Author's Signature: [Ursula Walter]
Description: LACHAT1
ARI In-House Standards: 00127-12

Sample	Cup No.	Channel 1		Detection Time	MANUAL DILUTION FACTOR	
STD 1.0	S1	1	48.1503	6/27/2012@2:29:36 PM		
STD 0.8	S2	0.8	38.6007	6/27/2012@2:30:47 PM		
STD 0.5	S3	0.5	24.1246	6/27/2012@2:31:57 PM		
STD 0.2	S4	0.2	9.8967	6/27/2012@2:33:07 PM		
STD 0.05	S5	0.05	2.439	6/27/2012@2:34:17 PM		
STD 0.02	S6	0.02	1.1547	6/27/2012@2:35:28 PM		
STD 0.01	S7	0.01	0.8136	6/27/2012@2:36:39 PM		
BLANK	S8	0	-0.0618	6/27/2012@2:37:49 PM		
ICV	9	0.5032	24.3184	6/27/2012@2:38:59 PM		% R = 100.64
Known Conc:		0.5				
Calibration:		Table/Fig. : 1				
ICB	10	-0.0054	-0.1073	6/27/2012@2:44:55 PM		
Known Conc:		0				
LOW	11	0.014	0.8216	6/27/2012@2:50:52 PM		% R = 140.00
Known Conc:		0.01				
PREP BLK	12	-0.002	0.0542	6/27/2012@2:56:48 PM		
PREP CHK	13	9.7792	23.6346	6/27/2012@2:57:59 PM	20	% R = 97.79
						0.4 ml * 1000 ppm / 40 ml
~~UZ95 A2~~	~~14~~	~~7.6661~~	~~368.3448~~	6/27/2012@2:59:10 PM		
~~UZ95 A2 DUP~~	~~15~~	~~8.0144~~	~~385.0748~~	6/27/2012@3:00:20 PM		
~~UZ95 A2 TRP~~	~~16~~	~~7.4779~~	~~359.3045~~	6/27/2012@3:01:31 PM		
~~UZ95 A2 MS~~	~~19~~	~~17.5046~~	~~42.1869~~	6/27/2012@3:02:42 PM	20	

~~UZ95 B2~~	~~20~~	~~4.4479~~	~~213.7766~~	6/27/2012@3:03:52 PM		
UZ95 C2	21	0.4882	23.5974	6/27/2012@3:05:03 PM		
UZ99 A5	22	0.2002	9.7643	6/27/2012@3:06:15 PM		
CCV	17	0.503	24.3097	6/27/2012@3:07:25 PM		% R = 100.60
Known Conc:		0.5				
CCB	18	-0.0012	0.0904	6/27/2012@3:13:22 PM		
Known Conc:		0				
UZ99 A5 DUP	23	0.1755	8.5792	6/27/2012@3:19:19 PM		
UZ99 A5 TRP	24	0.1777	8.6842	6/27/2012@3:20:30 PM		
UZ99 A5 MS	25	9.642	23.303	6/27/2012@3:21:40 PM	20	% R = 94.42
						0.4 ml * 1000 ppm / 40 ml
VA01 A2	26	0.697	33.6257	6/27/2012@3:22:52 PM		
VA01 A2 DUP	27	0.7634	36.8172	6/27/2012@3:24:03 PM		
VA01 A2 TRP	28	0.5961	28.7804	6/27/2012@3:25:14 PM		
VA01 A2 MS	29	9.9467	24.037	6/27/2012@3:26:26 PM	20	% R = 92.50
						0.4 ml * 1000 ppm / 40 ml
VA01 B2	30	0.369	17.8741	6/27/2012@3:27:37 PM		
VA01 C2	31	0.6263	30.2329	6/27/2012@3:28:48 PM		
VA01 D2	32	0.5041	24.3595	6/27/2012@3:30:00 PM		
CCV	17	0.5044	24.377	6/27/2012@3:31:11 PM		% R = 100.88
Known Conc:		0.5				
CCB	18	-0.0013	0.0883	6/27/2012@3:37:08 PM		
Known Conc:		0				
VA01 E2	33	0.4275	20.6815	6/27/2012@3:43:05 PM		
VA01 F2	34	0.4902	23.6937	6/27/2012@3:44:16 PM		
UZ95 A2	35	8.3218	20.1349	6/27/2012@3:45:27 PM	20	
UZ95 A2 DUP	36	8.8713	21.4543	6/27/2012@3:46:39 PM	20	

UZ95 A2 TRP	37	8.1175	19.6441	6/27/2012@3:47:51 PM	20	
UZ95 A2 MS	38	17.5813	42.371	6/27/2012@3:49:03 PM	20	% R = 92.60
						0.4 ml * 1000 ppm / 40 ml
UZ95 B2	39	4.5694	22.097	6/27/2012@3:50:14 PM	10	
~~KCL~~	~~8~~	~~-0.0013~~	~~0.0861~~	6/27/2012@3:51:24 PM		
CCV	17	0.5046	24.3843	6/27/2012@3:57:21 PM		% R = 100.92
Known Conc:		0.5				
CCB	18	-0.0009	0.1077	6/27/2012@4:03:18 PM		
Known Conc:		0				

Author: UW

Date : 6/27/2012

Original Run Filename: OM_6-27-2012_02-28-36PM.OMN Created: 6/27/2012 2:28:36 PM
Original Run Author's Signature: [Ursula Walter]
Current Run Filename: 062712NH3B.omn Last Modified: 6/27/2012 4:08:29 PM
Current Run Author's Signature: [Ursula Walter]
Description: Default New Run

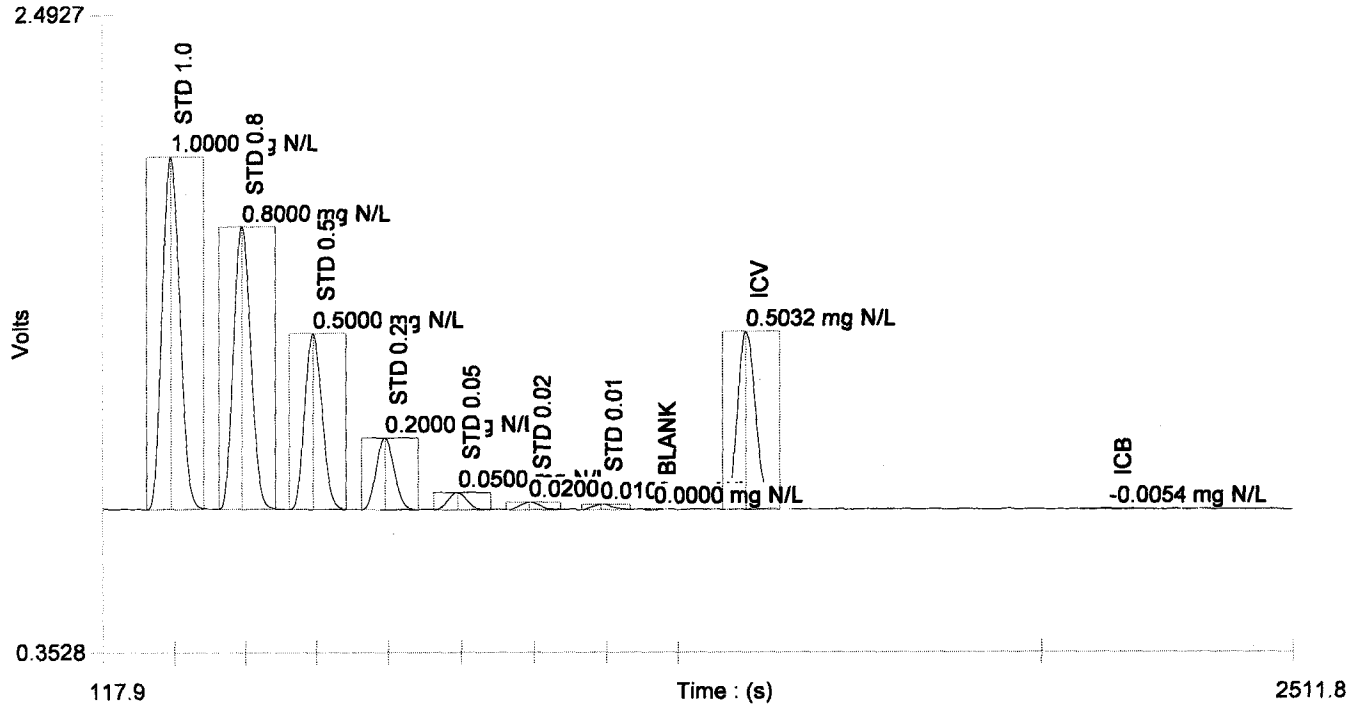
Sample	Cup No.	Channel 1 NH3 Conc. (mg N/L)	Channel 1 NH3 Area (V.s)	Detection Time	MDF
STD 1.0	S1	1.0000	48.1503	6/27/2012@2:29:36 PM	
STD 0.8	S2	0.8000	38.6007	6/27/2012@2:30:47 PM	
STD 0.5	S3	0.5000	24.1246	6/27/2012@2:31:57 PM	
STD 0.2	S4	0.2000	9.8967	6/27/2012@2:33:07 PM	
STD 0.05	S5	0.0500	2.4390	6/27/2012@2:34:17 PM	
STD 0.02	S6	0.0200	1.1547	6/27/2012@2:35:28 PM	
STD 0.01	S7	0.0100	0.8136	6/27/2012@2:36:39 PM	
BLANK	S8	0.0000	-0.0618	6/27/2012@2:37:49 PM	
ICV	9	0.5032	24.3184	6/27/2012@2:38:59 PM	
Known Conc:		0.5000			
Calibration:		Table/Fig. : 1			
ICB	10	-0.0054	-0.1073	6/27/2012@2:44:55 PM	
Known Conc:		0.0000			
LOW	11	0.0140	0.8216	6/27/2012@2:50:52 PM	
Known Conc:		0.0100			
PREP BLK	12	-0.0020	0.0542	6/27/2012@2:56:48 PM	
PREP CHK	13	9.7792	23.6346	6/27/2012@2:57:59 PM	20.00
UZ95 A2	14	7.6661	368.3448	6/27/2012@2:59:10 PM	
UZ95 A2 DUP	15	8.0144	385.0748	6/27/2012@3:00:20 PM	
UZ95 A2 TRP	16	7.4779	359.3045	6/27/2012@3:01:31 PM	
UZ95 A2 MS	19	17.5046	42.1869	6/27/2012@3:02:42 PM	20.00
UZ95 B2	20	4.4479	213.7766	6/27/2012@3:03:52 PM	
UZ95 C2	21	0.4882	23.5974	6/27/2012@3:05:03 PM	
UZ99 A5	22	0.2002	9.7643	6/27/2012@3:06:15 PM	
CCV	17	0.5030	24.3097	6/27/2012@3:07:25 PM	
Known Conc:		0.5000			
CCB	18	-0.0012	0.0904	6/27/2012@3:13:22 PM	
Known Conc:		0.0000			
UZ99 A5 DUP	23	0.1755	8.5792	6/27/2012@3:19:19 PM	
UZ99 A5 TRP	24	0.1777	8.6842	6/27/2012@3:20:30 PM	
UZ99 A5 MS	25	9.642 0.4821	23.3030	6/27/2012@3:21:40 PM	20
VA01 A2	26	0.6970	33.6257	6/27/2012@3:22:52 PM	
VA01 A2 DUP	27	0.7634	36.8172	6/27/2012@3:24:03 PM	
VA01 A2 TRP	28	0.5961	28.7804	6/27/2012@3:25:14 PM	
VA01 A2 MS	29	9.9467	24.0370	6/27/2012@3:26:26 PM	20.00
VA01 B2	30	0.3690	17.8741	6/27/2012@3:27:37 PM	
VA01 C2	31	0.6263	30.2329	6/27/2012@3:28:48 PM	
VA01 D2	32	0.5041	24.3595	6/27/2012@3:30:00 PM	
CCV	17	0.5044	24.3770	6/27/2012@3:31:11 PM	
Known Conc:		0.5000			
CCB	18	-0.0013	0.0883	6/27/2012@3:37:08 PM	
Known Conc:		0.0000			
VA01 E2	33	0.4275	20.6815	6/27/2012@3:43:05 PM	
VA01 F2	34	0.4902	23.6937	6/27/2012@3:44:16 PM	
UZ95 A2	35	8.3218	20.1349	6/27/2012@3:45:27 PM	20.00
UZ95 A2 DUP	36	8.8713	21.4543	6/27/2012@3:46:39 PM	20.00
UZ95 A2 TRP	37	8.1175	19.6441	6/27/2012@3:47:51 PM	20.00
UZ95 A2 MS	38	17.5813	42.3710	6/27/2012@3:49:03 PM	20.00
UZ95 B2	39	4.5694	22.0970	6/27/2012@3:50:14 PM	10.00
KCL	8	-0.0013	0.0861	6/27/2012@3:51:24 PM	
CCV	17	0.5046	24.3843	6/27/2012@3:57:21 PM	
Known Conc:		0.5000			
CCB	18	-0.0009	0.1077	6/27/2012@4:03:18 PM	
Known Conc:		0.0000			

UW 6-27-12

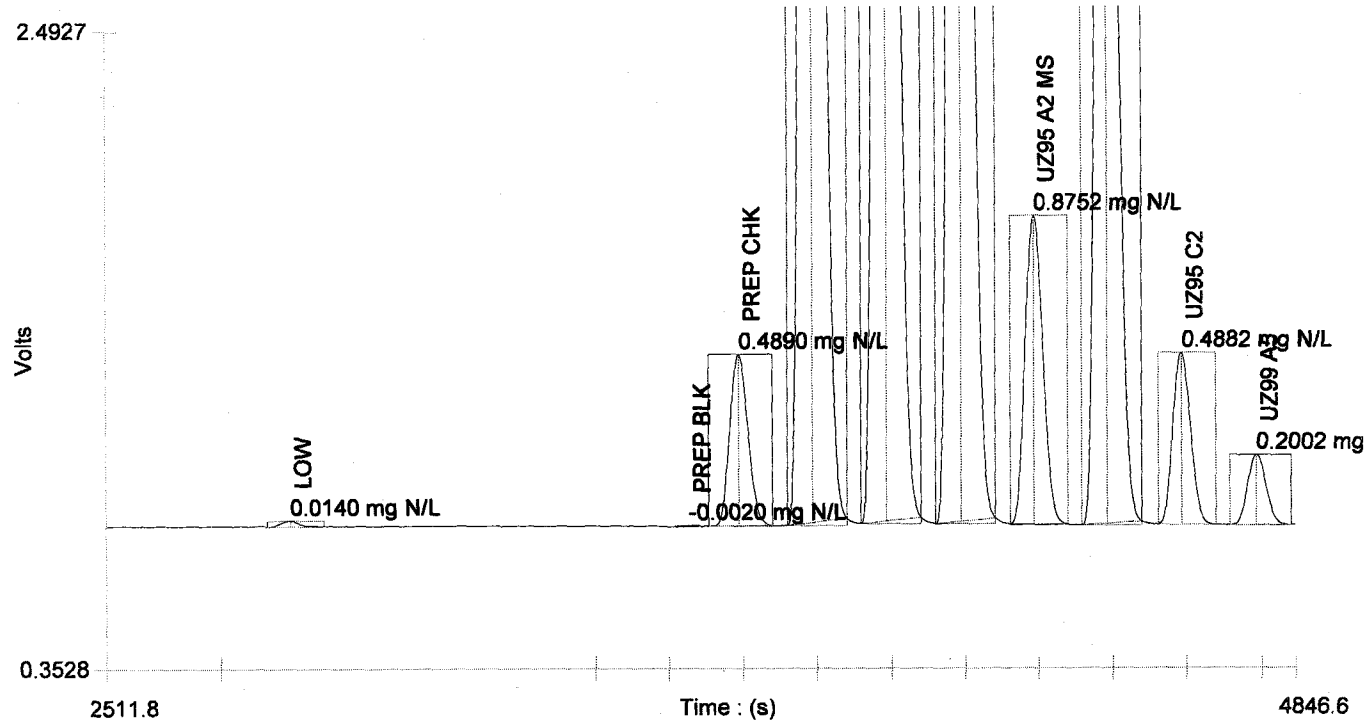
Author: UW

Date : 6/27/2012

Channel 1 - Set: 1 / 5



Channel 1 - Set: 2 / 5



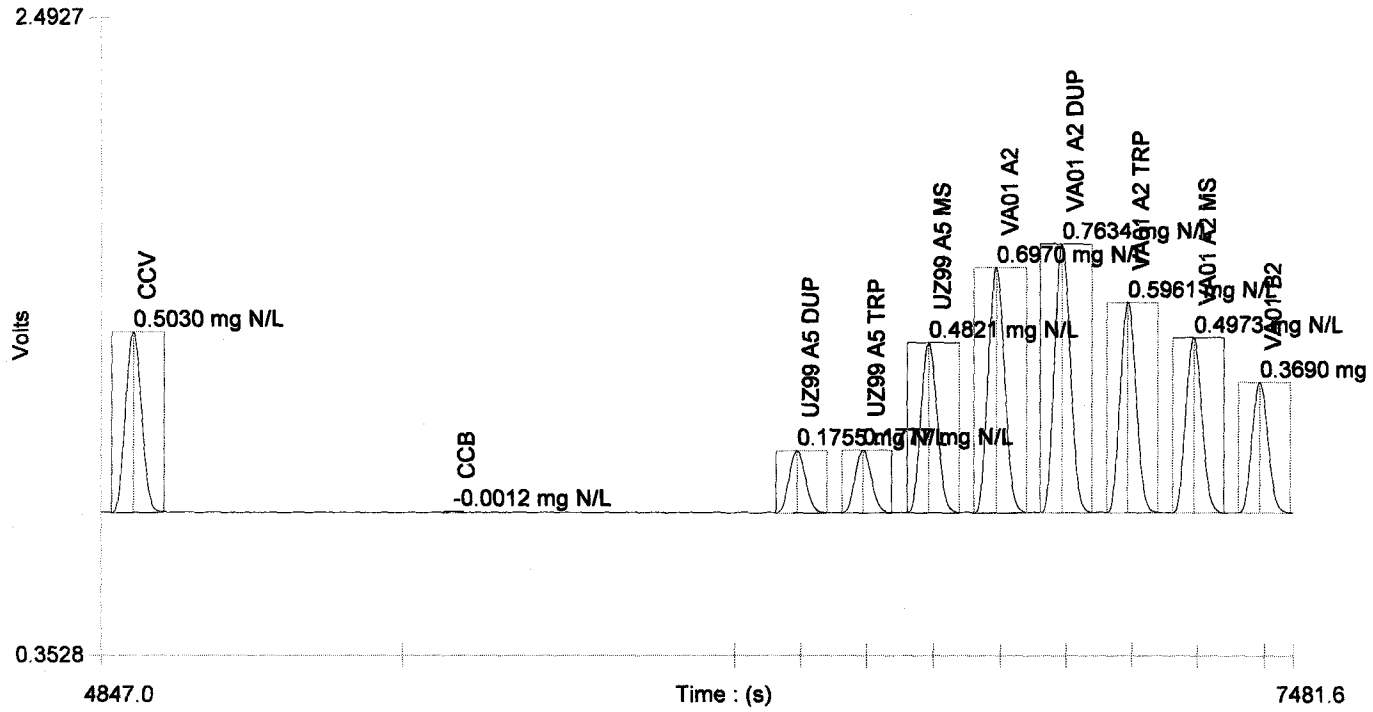
062712NH3B LACHAT1

UZ99 : 00910

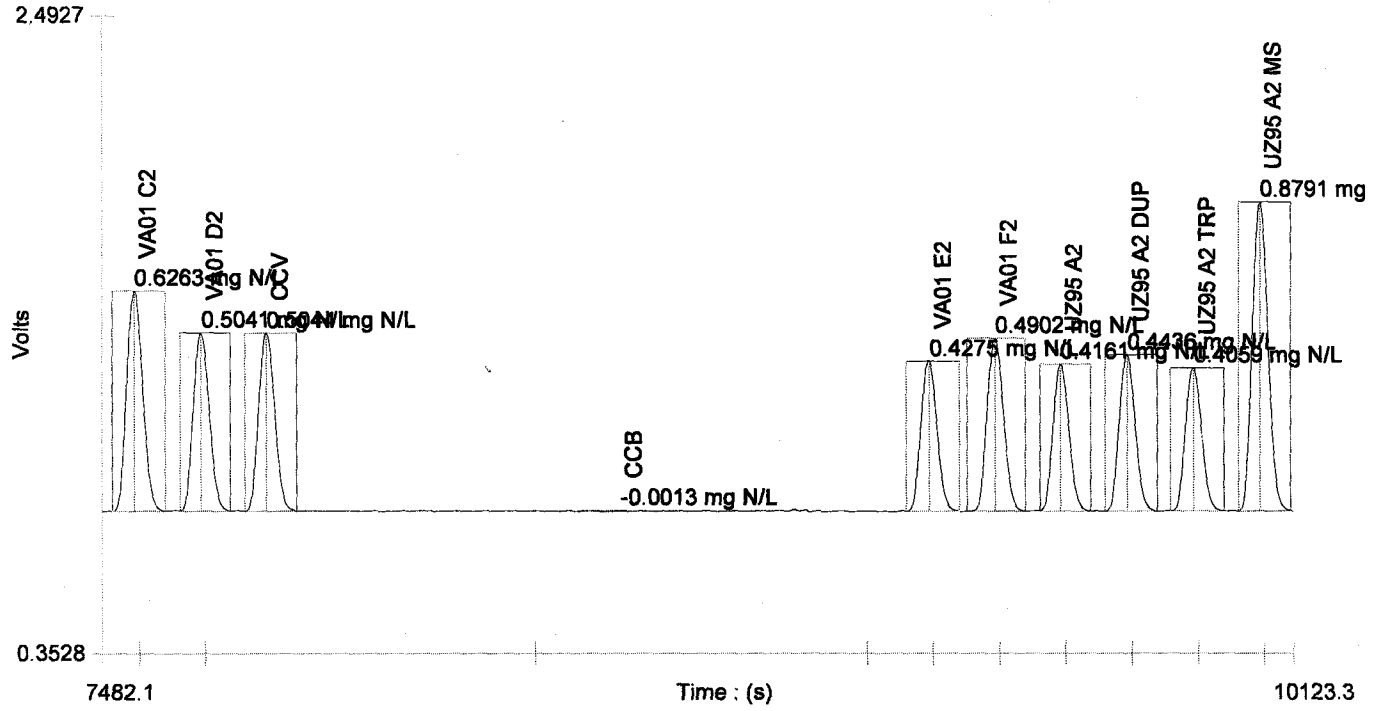
Author: UW

Date : 6/27/2012

Channel 1 - Set: 3 / 5



Channel 1 - Set: 4 / 5



062712NH3B LACHAT1

UZ99 : 00911

Author: UW

Date : 6/27/2012

Channel 1 - Set: 5 / 5

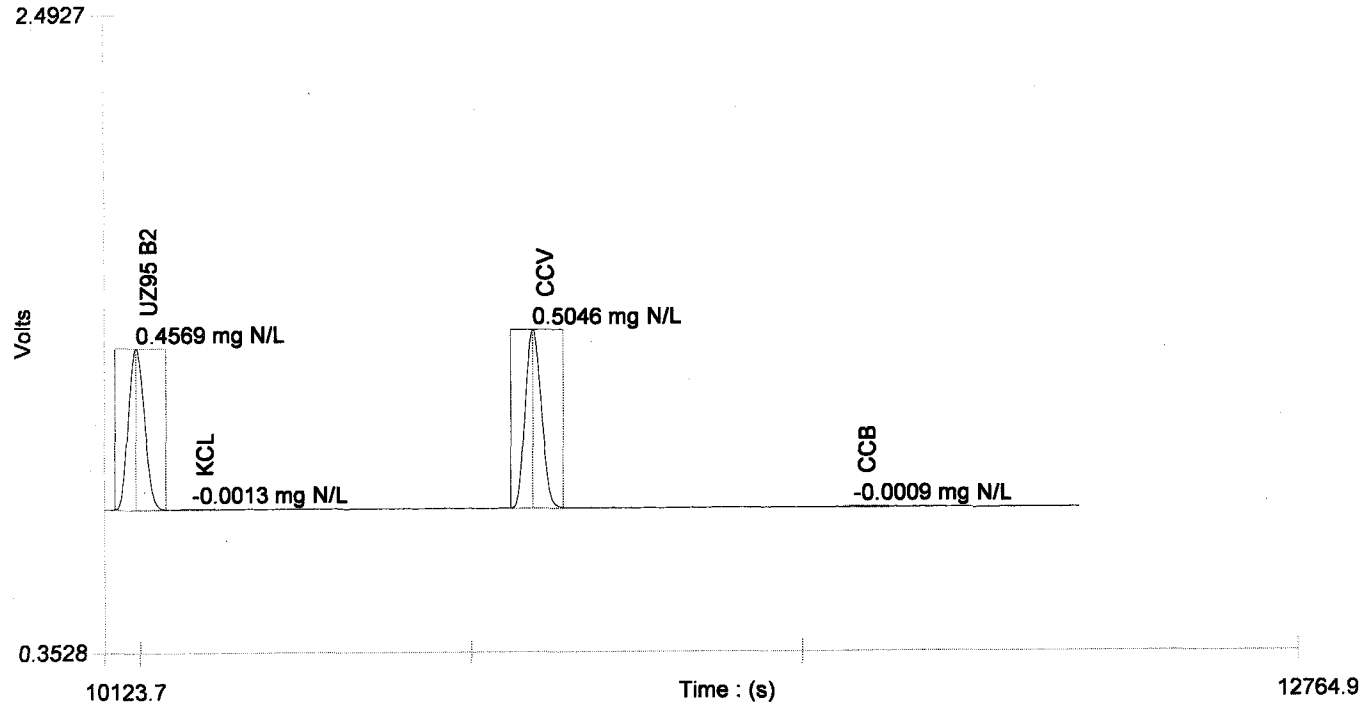
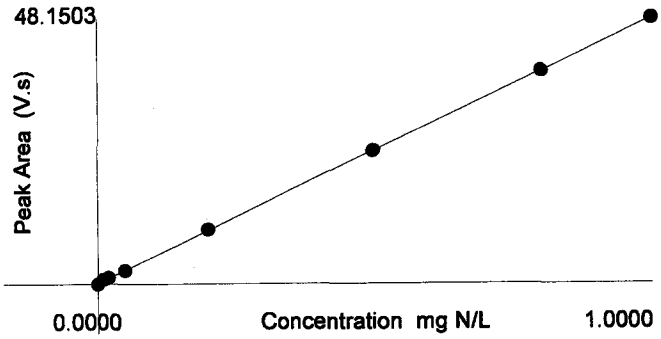


Table : 1 (NH3)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	1.0000	1	48.1503	1.1802	0.0	0.1	0.9994	6/27/2012	2:29:36 PM
2	0.8000	1	38.6007	0.9444	0.0	-0.1	0.8006	6/27/2012	2:30:47 PM
3	0.5000	1	24.1246	0.5895	0.0	0.2	0.4992	6/27/2012	2:31:57 PM
4	0.2000	1	9.8967	0.2402	0.0	-1.4	0.2029	6/27/2012	2:33:07 PM
5	0.0500	1	2.4390	0.0582	0.0	4.4	0.0477	6/27/2012	2:34:17 PM
6	0.0200	1	1.1547	0.0255	0.0	-3.9	0.0209	6/27/2012	2:35:28 PM
7	0.0100	1	0.8136	0.0183	0.0	-28.9	0.0138	6/27/2012	2:36:39 PM
8	0.0000	1	-0.0618	-0.0036			-0.0044	6/27/2012	2:37:49 PM

Figure : 1 (NH3)



Area = 48.0269 * Conc + 0.1511
Conc = 0.0208 * Area - 0.0031
Correlation Coefficient (r) = 0.99998

Weighting : None

062712NH3B LACHAT1

UZ99 : 00912

Soil Extraction Log

Parameter:

Date: 6-27-12

Analyst: [illegible]

Extraction Procedure: 1g sample + 40 ml KCl 2N, shaken 1hr, let settle and filter.

Time	Sample ID	Sample Wt (grams)	Extract Vol (mL)	Spikes and Standards: Vol added (mL)	Conc of Std (mg/L)	Conc in Extract (mg/L)	Notes & Comments
11:11	P-DIK	—	40				
	P-CH3NH4	—	—	0.4	1,000	10	ERA130611
	4295 A2	4.16					
	A2 dup	4.42					
	A2 trip	4.27					
	A2 ms	4.39		0.4	1,000	10	ARI 00127-12
	B2	4.08					
	C2	4.22					
	4299 A5	4.34					
	A5 dup	4.40					
	A5 trip	4.02					
	A5 ms	4.47		0.4	1,000	10	ARI 00127-12
	VA01 A2	4.13					
	A2 dup	4.47					
	A2 trip	4.44					
	A2 ms	4.05		0.4	1,000	10	ARI 00127-12
	B2	4.45					
	C2	4.26					
	D2	4.46					
	E2	4.34					
	F2	4.09					

6-27-12

[illegible]

ARI 6050 Soil Extraction
Revised: 8/27/96

w
7-6-12

TOC Solids Prep Log

DATE:	6/25/2012
ANALYST:	KE 20:32

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.0357		13.0357	0 mg	
UZ57 A1		-	13.0747	18.3075	16.4436	64.38%	
UZ57 A1 dup		-	13.0764	18.1459	16.4089	65.74%	RPD = 2.08%
UZ57 A1 trip		-	13.0708	18.8324	16.8070	64.85%	RSD = 1.06%
UZ57 B1		-	12.9348	19.3431	17.7744	75.52%	
UZ57 C1		-	13.0380	18.6297	17.7929	85.03%	
UZ57 D1		-	13.1677	18.5944	17.2199	74.67%	
UZ57 E1		-	13.1378	18.3944	16.5376	64.68%	
UZ57 F		-	13.1345	15.0094	15.0922	104.42%	
UZ48 A1		+-	13.0328	18.5696	14.8470	32.77%	
UZ48 B1		-	13.1471	19.9264	18.0525	72.36%	
UZ48 B1 dup		-	13.0825	19.3137	17.6469	73.25%	RPD = 1.23%
UZ48 B1 trip		-	13.9823	20.1262	18.1563	67.94%	RSD = 4.00%
UZ48 C1		-	13.0716	18.5456	17.0362	72.43%	
UZ48 D1		-	13.1274	19.2788	15.2920	35.19%	
UZ99 A5		+-	13.0486	18.0456	17.9819	98.73%	
UZ99 A5 dup		+-	13.0674	18.6240	18.6500	100.47%	RPD = 1.75%
UZ99 A5 trip		+-	13.0862	18.4892	18.4826	99.88%	RSD = 0.89%

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (LB) Date 6-25-12 20:32

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.0357	0	13.0357		
U257 A1		-	13.0747	18.3075	16.4436		Rock + Salt
dA1		-	13.0764	18.1459	16.4089		
wP A1		-	13.0708	18.8324	16.8070		
B1		-	12.9348	19.3431	17.7744		
C1		-	13.0380	18.6297	17.7929		
D1		-	13.1627	18.5944	17.2199		
E1		-	13.1378	18.3944	16.5376		Salt & Rocks
NB (1944) F1		/	13.1345	15.0094	15.0924		
U248 A1		+ -	13.0328	18.5696	14.8470		Salt & Rocks
B1		-	13.1471	19.9264	18.0525		+ Sand
dB1		-	13.0825	19.3137	17.6469		
wB1		-	13.9823	20.1262	18.1563		
C1		-	13.0716	18.5456	17.0362		Black Seeds
D1		-	13.1274	19.2784	15.2920		Salt
U299 A5		+ -	13.0486	18.0456	17.9819		Rocks + Sand
dA5		+ -	13.0674	18.6240	18.6500		Very wet
wA5		+ -	13.0862	18.4892	18.4826		

6-25-12 (LB)

TOC, Solids Data Analysis

DATE: 7/13/2012
ANALYST: KE 9:54

Instrument: Apollo 2
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*

Calibration Data

Cal Curve ID: **7/12/12 BOAT CAL** *Conc:* 5,000 *ppm*
Calibration Curve Standard: **00128-03 (B)** *Curve Date:* **07/12/12**
CalFact: **2.369E+06** *intercept:* **-134829** *r2 :* **0.99966**
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): **8** *to* **100** *40 µL injections of designated standard*

Verification Standard

Source: ***ERA# 0409-12-01*** *Conc:* **5,000** *ppm*
dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material

Source: ***NIST 8704*** *Conc:* **33,510** *ppm*
Source: ***NIST 1941B*** *Conc:* **29,900** *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
ICV				1.00		40.0	939	939	*93.90%*
Blank				1.00		40.0	18.32	18	*Blank OK*
~~NIST 1941B~~			-	~~1.00~~		~~2.0~~	~~19970~~	~~19,970~~	~~*66.79%*~~
~~NIST 1941B~~			-	~~1.00~~		~~2.4~~	~~23309~~	~~23,309~~	~~*77.96%*~~
NIST 1941B				1.00		3.0	26310	26,310	*87.99%*
UZ72 E1				1.00		2.9	1451	1,451	*Low Scale*
~~UZ72 E1 dup~~				~~1.00~~		~~2.9~~	~~2799~~	~~2,799~~	~~*RPD=63.4%*~~
UZ72 E1 dup				1.00		2.9	1443	1,443	*RPD=0.6%*
~~UZ72 E1 trp~~				~~1.00~~		~~2.8~~	~~1783~~	~~1,783~~	~~*RSD=34.2%*~~
UZ72 E1 trp				1.00		2.8	1433	1,433	*RSD=0.6%*
UZ72 E1 ms				1.00	10	2.9	11050	11,050	*Range OK!*
Spike =	*0.025*	*mg C to*	*2.9*	*mg samp=*	*8,621*	*ppm*		*111%*	
UZ72 A1				1.00		4.1	1851	1,851	*Low Scale*
CCV				1.00		40.0	986	986	*98.60%*
Blank				1.00		40.0	18.44	18	*Blank OK*
UZ72 B1				1.00		5.9	1707	1,707	*Range OK!*
UZ72 C1				1.00		4.0	1659	1,659	*Low Scale*
UZ72 D1				1.00		4.7	1529	1,529	*Low Scale*
UZ72 F1				1.00		6.8	1322	1,322	*Range OK!*
UZ72 G1				1.00		7.7	1283	1,283	*Range OK!*
UZ72 H1				1.00		7.7	1619	1,619	*Range OK!*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
UZ72 I 1				1.00		7.5	1162	1,162	*Range OK!*
UZ72 J 1				1.00		5.6	3031	3,031	*Range OK!*
UZ72 K1				1.00		7.7	1827	1,827	*Range OK!*
UZ72 L1				1.00		4.7	1626	1,626	*Low Scale*
CCV				1.00		40.0	960	960	*96.00%*
Blank				1.00		40.0	13.27	13	*Blank OK*
UZ72 M1				1.00		11.2	1156	1,156	*Range OK!*
UZ72 N1				1.00		10.6	2120	2,120	*Range OK!*
UZ72 O1				1.00		8.4	2420	2,420	*Range OK!*
UZ72 P1				1.00		8.8	1622	1,622	*Range OK!*
UZ72 Q1				1.00		10.2	1635	1,635	*Range OK!*
UZ72 R1				1.00		10.3	2368	2,368	*Range OK!*
UZ99 A5				1.00		2.3	7232	7,232	*Range OK!*
UZ99 A5 dup				1.00		2.3	6953	6,953	*RPD=3.9%*
UZ99 A5 trp				1.00		2.4	5624	5,624	*RSD=13%*
UZ99 A5 ms				1.00	10	2.7	16490	16,490	*Range OK!*
Spike =	*0.025*	*mg C to*	*2.7*	*mg samp=*	*9,259*	*ppm*		*100%*	
CCV				1.00		40.0	963	963	*96.30%*
Blank				1.00		40.0	15.29	15	*Blank OK*
UZ71 A5				1.00		8.6	1050	1,050	*Range OK!*
UZ71 B5				1.00		5.8	1000	1,000	*Low Scale*
UZ71 C5				1.00		6.5	742	742	*Low Scale*
UZ71 H5				1.00		7.0	1095	1,095	*Low Scale*
UZ71 K5				1.00		8.5	4415	4,415	*Range OK!*
UZ71 L5				1.00		8.1	6144	6,144	*Range OK!*
NIST 1941B				1.00		3.1	26438	26,438	*88.42%*
CCV				1.00		40.0	975	975	*97.50%*
Blank				1.00		40.0	19.31	19	*Blank OK*

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① 7-13-12 (N)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 2

Set-Up Parameters MODE: NPOC		INLET: Boat Sampler
Standards:	Source	Conc (ppm)
Calibration:	ARI -00128-03 (B)	5000
Verification:	ERA - 0409-12-01	5000 to 1000 for CVS
SRM:	NBS - 1941b or 8704	29900

9:59

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941B			2.0			Low Rinse
↓			2.4			Low increase Nish amount Rinse
↓			3.0			
UZ72 - E1			① ~~2.5~~	2.9		
↓ DP E1			2.9			trip not Dup Rinse
↓ DP E1			2.9			
↓ HP E1			2.8			Regrind + Rinse (2 mks)?
↓ HP E1			2.8			
↓ MS E1			2.9	2500	10	
↓ A1			4.1			
CCV			40			
CCB			40			
UZ72 B1			5.9			
↓ C1			4.0			
↓ D1			4.7			
↓ F1			6.8			
↓ G1			7.7			
↓ H1			7.7			
↓ I1			7.5			
↓ J1			5.6			
↓ K1			7.7			
↓ L1			4.7			
CCV			40			
CCB			40			
UZ72 M1			11.2			
↓ N1			10.6			
↓ O1			8.4			
↓ P1			8.8			
↓ Q1			10.2			
↓ R1			10.3			

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① 7-13-12 (N)

TOC Solids Sample Run Log
Apollo 9000

Page 2 of 2

Set-Up Parameters MODE: NPOC		INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	
Calibration:	ARI – 00128-08 (B)	5000	
Verification:	ERA – 0409-12-01	5000 to 1000 for CVS	9'54
SRM:	NBS ~~1941b~~ or 8704	29900	

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
UZ99 As			2.3			
DP As			2.3			
DP As			2.4			
MS As			2.7	2500	10	
CCU			40			
CCB			40			
UZ71 A1			8.6			
B1			5.8			
C1			6.5			
H1			7.0			
K1			8.5			
L1			8.1			
NBS 1941B			3.1			
CCU			40			
CCB			40			

7-13-12 (N)

7-13-12

Detailed Analysis Report Print Date/Time: 2012/07/13 17:59:06

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07130942
Timestamp: 2012/07/13 09:49
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	938.6524	37.5461	9981802	26.171	27.169	212

7-13-12 OK

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07130949
Timestamp: 2012/07/13 09:53
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18.3151	0.7326	62568	26.235	26.283	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07130956
Timestamp: 2012/07/13 10:02
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19970.3965	39.9408	10627043	26.668	27.667	293

Last Message: Out of Calibration

7-13-12

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131007
Timestamp: 2012/07/13 10:14
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23309.2520	55.9422	14938554	27.264	30.323	300

Last Message: Out of Calibration

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131019
Timestamp: 2012/07/13 10:25
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26310.4316	78.9313	21132864	26.621	32.314	300

Last Message: Max Integration Time Reached

Sample ID: UZ72 E1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131030
Timestamp: 2012/07/13 10:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1450.7972	4.2073	1133642	26.601	27.594	120

Sample ID: UZ72 E1
Mode: TOC

Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Filename: 07131041
Timestamp: 2012/07/13 10:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2799.1790	8.1176	2187257	26.525	27.525	177

Sample ID: UZ72 E1 DUP
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131049
Timestamp: 2012/07/13 10:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1443.4690	4.1861	1127916	26.706	27.702	127

Sample ID: UZ72 E1 TRIP
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131110
Timestamp: 2012/07/13 11:16
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1782.9860	4.9924	1345170	27.645	28.639	146

Sample ID: UZ72 E1 TRIP
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131120
Timestamp: 2012/07/13 11:23
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1433.4816	4.0137	1081487	28.066	29.060	126

Sample ID: UZ72 E1 MS
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131133
Timestamp: 2012/07/13 11:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11049.6084	32.0439	8634079	28.887	29.887	243

Sample ID: UZ72 A1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131143
Timestamp: 2012/07/13 11:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1850.7610	7.5881	2044586	29.493	30.492	143

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131149
Timestamp: 2012/07/13 11:54
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	985.6234	39.4249	10488047	29.408	30.407	225

Sample ID: ICB BOAT
Method: Boat Sampler

Mode: TOC
Filename: 07131155

Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Timestamp: 2012/07/13 11:58
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18.4411	0.7376	63926	29.311	29.491	120

Last Message: Low Sample Detected

Sample ID: UZ72 B1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131203
Timestamp: 2012/07/13 12:08
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1706.7415	10.0698	2713257	29.415	30.413	193

Sample ID: UZ72 C1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131214
Timestamp: 2012/07/13 12:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1658.5295	6.6341	1787534	29.307	30.307	155

Sample ID: UZ72 D1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131223
Timestamp: 2012/07/13 12:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1529.0414	7.1865	1936370	29.558	30.552	244

Sample ID: UZ72 F1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131238
Timestamp: 2012/07/13 12:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1321.6543	8.9872	2421575	29.153	30.151	169

Sample ID: UZ72 G1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131245
Timestamp: 2012/07/13 12:49
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1283.0197	9.8793	2661921	28.912	29.911	190

Sample ID: UZ72 H1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131255
Timestamp: 2012/07/13 13:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1618.7998	12.4648	3358575	28.990	30.645	300

Last Message: Max Integration Time Reached

Sample ID: UZ72 I 1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131305
Timestamp: 2012/07/13 13:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1161.7174	8.7129	2347648	29.835	30.834	183

Sample ID: UZ72 J1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131315
Timestamp: 2012/07/13 13:19
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3031.3752	16.9757	4574028	30.600	31.598	183

Sample ID: UZ72 K1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131323
Timestamp: 2012/07/13 13:26
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1827.4441	14.0713	3791456	32.141	33.136	134

Sample ID: UZ72 L1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131330
Timestamp: 2012/07/13 13:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1625.6014	7.6403	2058653	32.014	33.012	125

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131335
Timestamp: 2012/07/13 13:40
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	959.8439	38.3938	10210200	31.528	32.524	227

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131341
Timestamp: 2012/07/13 13:44
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.2721	0.5309	8215	31.974	31.643	120

Last Message: Low Sample Detected

Sample ID: UZ72 M1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131346
Timestamp: 2012/07/13 13:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1156.1066	12.9484	3488888	31.651	32.650	164

Sample ID: UZ72 N1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131505
Timestamp: 2012/07/13 15:11
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2120.2566	22.4747	6055715	32.031	33.031	230

Sample ID: UZ72 O1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131514
Timestamp: 2012/07/13 15:19
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2420.2659	20.3302	5477892	31.678	32.678	206

Sample ID: UZ72 P1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131521
Timestamp: 2012/07/13 15:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1622.4359	14.2774	3846993	31.628	33.296	300

Last Message: Max Integration Time Reached

Sample ID: UZ72 Q1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131531
Timestamp: 2012/07/13 15:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1634.6752	16.6737	4492652	31.382	32.381	187

Sample ID: UZ72 R1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131539
Timestamp: 2012/07/13 15:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2367.7820	24.3882	6571281	30.988	31.988	183

Sample ID: UZ99 A5
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131553
Timestamp: 2012/07/13 15:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7231.6592	16.6328	4481640	30.191	31.188	181

Sample ID: UZ99 A5
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07131600
Timestamp: 2012/07/13 16:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6952.9722	15.9918	4308930	29.960	30.958	174

Sample ID: UZ99 A5 TRIP
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131621
Timestamp: 2012/07/13 16:26
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5623.5679	13.4966	3636590	29.451	30.450	172

Sample ID: UZ99 A5 MS
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131630
Timestamp: 2012/07/13 16:36
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16490.3633	44.5240	11996791	29.348	30.346	219

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131640
Timestamp: 2012/07/13 16:45
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	963.3156	38.5326	10247618	29.279	30.275	194

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131646
Timestamp: 2012/07/13 16:49
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15.2880	0.6115	29942	29.152	28.968	120

Last Message: Low Sample Detected

Sample ID: UZ71 A1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131651
Timestamp: 2012/07/13 16:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1050.0046	9.0300	2433105	29.286	30.282	155

Sample ID: UZ71 B1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131657
Timestamp: 2012/07/13 17:04
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1000.0162	5.8001	1562810	28.909	29.906	130

Sample ID: UZ71 C1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131708
Timestamp: 2012/07/13 17:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	742.3050	4.8250	1300070	28.732	29.726	158

Sample ID: UZ71 H1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131715
Timestamp: 2012/07/13 17:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1095.2474	7.6667	2065767	28.582	29.581	148

Sample ID: UZ71 K1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131721
Timestamp: 2012/07/13 17:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4415.4629	37.5314	10112681	28.774	29.772	215

Sample ID: UZ71 L1
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131729
Timestamp: 2012/07/13 17:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6144.7954	49.7728	13411075	28.612	29.611	244

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131737
Timestamp: 2012/07/13 17:43
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26437.7812	81.9571	21948158	28.756	33.940	301

Last Message: Max Integration Time Reached

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131745
Timestamp: 2012/07/13 17:52
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	975.1547	39.0062	10375217	28.747	29.745	299

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07131753
Timestamp: 2012/07/13 17:57
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.3110	0.7724	73302	29.148	29.527	120

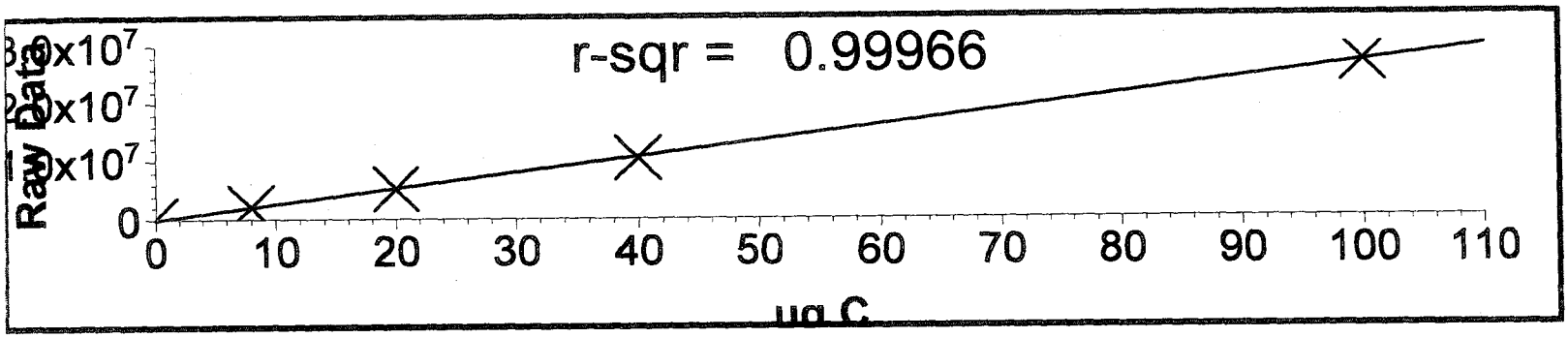
Last Message: Low Sample Detected

7-12-12 (N)

Calibration Report Print Date/Time: 2012/07/12 17:55:43

Cal. Curve ID: 07122012 BOAT CAL
Created: 2012/07/12 17:35
Calibration Factor (m): 2.694e+05
Y Intercept (b): -134829
r-squared: 0.99966

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	48971	0.000	0.682	Low Sample De	2012/07/12 15:54
200 ppm	2063826	8.000	8.160		2012/07/12 16:26
500 ppm	5215424	20.000	19.857		2012/07/12 16:50
1000 ppm	10322143	40.000	38.809		2012/07/12 17:11
2500 ppm	26942358	100.000	100.492	Max Integrati	2012/07/12 17:35


r-sqr = 0.99966
Raw Data
x10^7
x10^7
x10^7
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Afolo (1)

Detailed Analysis Report Print Date/Time: 2012/07/12 17:56:49

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07121020
Timestamp: 2012/07/12 10:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			83952	15.944	16.940	50

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07121024
Timestamp: 2012/07/12 10:28
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			15030	15.966	15.957	120

Last Message: Low Sample Detected

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07121045
Timestamp: 2012/07/12 10:49
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1467686	14.764	15.761	128

7-12-12

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07121101
Timestamp: 2012/07/12 11:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			3123342	14.061	15.058	134

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07121108
Timestamp: 2012/07/12 11:12
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			4765698	14.007	15.005	165

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07121114
Timestamp: 2012/07/12 11:20
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			11163967	14.041	15.040	237

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 07121126
Timestamp: 2012/07/12 11:29
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	3477072	13.980	17.681	116

Last Message: Canceled

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121130
Timestamp: 2012/07/12 11:35
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2700730	14.274	15.272	143

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121137
Timestamp: 2012/07/12 11:40
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1723283	14.236	15.235	120

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121142
Timestamp: 2012/07/12 11:51
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			15445	14.062	14.109	120
2			23881	14.250	14.283	120
3			41357	14.347	15.344	42

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 26894 Std Dev: 13216 RSD: 49.14

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121153
Timestamp: 2012/07/12 12:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1274356	14.271	15.271	110
2			1384411	14.469	15.469	114
3			1403966	14.569	15.567	127

<<<Statistics>>> Mean: 1354244 Std Dev: 69873 RSD: 5.16

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121206
Timestamp: 2012/07/12 12:20
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			3461873	14.688	15.686	170
2			3204178	14.743	15.742	132
3			3423304	14.850	15.848	131

<<<Statistics>>> Mean: 3363118 Std Dev: 138991 RSD: 4.13

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121222
Timestamp: 2012/07/12 13:00
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5978560	14.981	15.980	257
2			5437205	15.120	16.119	193
3			7179527	15.194	16.191	226

<<<Statistics>>> Mean: 6198430 Std Dev: 891728 RSD: 14.39

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121306
Timestamp: 2012/07/12 13:34
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			14369103	15.387	17.705	300
2			14866973	15.509	17.735	300
3			16303195	15.582	16.581	273

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 15179757 Std Dev: 1004268 RSD: 6.62

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121336
Timestamp: 2012/07/12 13:40
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1175.7343	47.0294	7246039	15.816	16.813	171

Last Message: Out of Calibration

7-12

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121342
Timestamp: 2012/07/12 13:47
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1096.1948	43.8478	6767109	15.669	16.668	201

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121348
Timestamp: 2012/07/12 13:52
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1118.2115	44.7285	6899679	15.655	16.653	177

Last Message: Out of Calibration

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121457
Timestamp: 2012/07/12 14:59
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			69057	26.091	27.086	63

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL

Mode: TOC
Filename: 07121505
Timestamp: 2012/07/12 15:08

Operator ID: TRINA Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			41289	26.708	27.035	120

Last Message: Low Sample Detected

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121511
Timestamp: 2012/07/12 15:15
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2394205	27.855	28.853	207

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121520
Timestamp: 2012/07/12 15:26
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5014695	29.693	31.249	301

Last Message: Max Integration Time Reached

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121528
Timestamp: 2012/07/12 15:34
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			10874419	31.621	34.779	300

Last Message: Max Integration Time Reached

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121536
Timestamp: 2012/07/12 15:42
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			20492942	33.138	35.359	300

Last Message: Max Integration Time Reached

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121545
Timestamp: 2012/07/12 15:54
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			79215	34.853	35.454	120
2			48261	35.304	35.980	120
3			19436	35.765	36.037	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 48971 Std Dev: 29896 RSD: 61.05

Boat Cal - 7-12-12
7-12-12

Apolo 2

Sample ID: 200 ppm
Method: Boat Sampler

Mode: TOC
Filename: 07121557

Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Timestamp: 2012/07/12 16:03
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2785228	36.279	37.573	300

Last Message: Max Integration Time Reached

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121604
Timestamp: 2012/07/12 16:26
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1950577	37.552	38.545	141
2			2134443	37.879	38.877	134
3			2106457	38.962	39.961	145

<<<Statistics>>> Mean: 2063826 Std Dev: 99069 RSD: 4.80

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121628
Timestamp: 2012/07/12 16:50
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5102078	39.602	40.601	238
2			5409007	39.958	40.957	253
3			5135188	40.300	41.298	241

<<<Statistics>>> Mean: 5215424 Std Dev: 168463 RSD: 3.23

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121652
Timestamp: 2012/07/12 17:11
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			10034944	40.901	41.988	301
2			10498425	41.595	42.591	255
3			10433062	41.875	42.871	267

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 10322143 Std Dev: 250860 RSD: 2.43

Boat Cal 7-12-12 (W)
Apolo 2

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121714
Timestamp: 2012/07/12 17:35
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			26460880	42.294	44.021	300
2			27395544	42.786	44.059	301
3			26970648	42.790	44.760	301

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 26942358 Std Dev: 467974 RSD: 1.74

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121739
Timestamp: 2012/07/12 17:47
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1048.7819	41.9513	11168759	42.801	44.324	300

Last Message: Max Integration Time Reached

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 07122012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 07121748
Timestamp: 2012/07/12 17:54
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1021.8512	40.8740	10878504	42.987	43.985	219

Boat Cal 7-12-12 (a) Apolo 2

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: UZ99

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: UZ99 ARI Sample Letter: A Client Sample No.: CB-002062212012

Set-up Date: 7.13.2012 Sample Description: Gravel, Sand

SOLIDS CONTENT

Moisture Content	Initials: BR
Container No.	141
Tare Weight	1.5343
Wet Weight + Tare	54.2865
Dry Weight + Tare	47.9337

Test Sample	Initials: BR
Container No.	141
Tare Weight	51.2684
Wet Weight + Tare	203.7895
Dry Weight + Tare	eg 1778.1056

Calgon Batch #: 271 x2

SIEVE ANALYSIS

Sieve Date: 7.17.12

Sieve Set #: 2 Initials: eg

Sieve Size	Weight Retained
Tare	51.2794
4	100.4008
10	130.6383
18	143.1879 eg
35	152.5877
60	162.5509
120	170.8380
230	174.7750
PAN	3.1288

7/17/2012

Temp:23

PIPETTE ANALYSIS

Initials: gc

TIME	Tare ID	Tare Wt	Dry Wt & Tare
11:13:00	A-1	1.5272	1.7115
11:13:20	A-2	1.5272	1.6647
11:14:46	A-3	1.5224	1.6262
11:20:05	A-4	1.5492	1.6261
11:41:18	A-5	1.5456	1.6030
13:06:00	A-6	1.5446	1.5861
16:39:00	A-7	1.5380	1.5684
9:49:00			

SALT CORRECTION

Date: _____ Initials: _____

Tare Weight	
Dry Weight + Tare	

1115F-A
Rev. 01

Calgon Batch #271 7/11/12 gc

(g)	Tare Wt(g)	Dry+Tare Wt(g)	Calgon Wt(g)
	1.5343		
	~~1.5575~~	2.0506	0.5163
	1.5183		
2	~~1.5490~~	2.0407	0.5224
3	1.5391	2.0460	0.5069
4	1.5336	2.0431	0.5095
5	1.5356	2.0519	0.5163

Average 0.5143

APPENDIX E
BIOLOGICAL TESTING LABORATORY DATA REPORT

BIOLOGICAL TESTING OF SEDIMENT FOR I&J WATERWAY RI/FS

BELLINGHAM, WASHINGTON

JULY 2012

PREPARED FOR:
ANCHOR QEA
720 OLIVE WAY, SUITE 1900
SEATTLE, WA 98101

PREPARED BY:
NEWFIELDS
PO BOX 216
4729 NE VIEW DRIVE
PORT GAMBLE, WA 98364

NEWFIELDS

1.0 INTRODUCTION

NewFields conducted biological toxicity testing with sediment samples collected by Anchor QEA as part of a sediment remedial investigation and feasibility study being performed at the I&J Waterway site in Bellingham, Washington. Sediments were evaluated for biological effects following guidance provided by the Washington State Department of Ecology (WDOE) Sediment Management Standards (SMS) under the Washington Administrative Code (WAC) 173-204-315. This report presents the results of the toxicity testing portion of the I&J Waterway sediment investigation.

2.0 METHODS

This section summarizes the test methods followed for this biological characterization. Test methods followed guidance provided by the Puget Sound Estuary Program (PSEP 1995), the WDOE Sampling and Analysis Plan Appendix (SAPA; Ecology 2008), and the various updates presented during the Annual Sediment Management Review meetings (SMARM). Sediment toxicity was evaluated using three standard PSEP bioassays; the 10-day amphipod test, the juvenile polychaete survival and growth test, and the benthic larval development test.

2.1 SAMPLE AND ANIMAL RECEIPT

Fifteen test sediments were collected between April 24 and 25, 2012 and were received at NewFields on April 26, 2012. Five of the fifteen test sediments were identified by Anchor for biological testing. Reference sediments from two stations within Carr Inlet were collected by NewFields personnel on May 17, 2012. Sediment samples were stored in a walk-in cold room at 4 ± 2ºC in the dark. The test sediment was not sieved prior to testing. All tests were conducted within the eight week holding time.

Amphipods (*Ampelisca abdita*) were supplied by Brezina and Associates in Dillon Beach, California. Animals were held in native sediment at 20°C prior to test initiation. Juvenile polychaete worms (*Neanthes arenaceodentata*) were obtained from Aquatic Toxicology Support in Bremerton, Washington. Juvenile polychaetes were held in seawater at 20°C (*Neanthes* were cultured in water-only and were not held in sediment prior to testing). *Mytilus galloprovincialis* (mussel) broodstock were provided by Taylor Shellfish in Shelton, Washington. Broodstock were held in unfiltered seawater at 16°C prior to spawning.

Native *A. abdita* sediment from San Rafael, California was provided by Brezina and Associates for use as control sediment treatments for the amphipod test. Control sediment used in the polychaete test was sediment from Sequim Bay, Washington; a frequently used matrix known to support successful survival and growth.

2.2 SAMPLE GRAIN SIZE AND REFERENCE COMPARISON

Sediment grain size is one of the characteristics used in selecting the appropriate reference sediment(s) to compare the chemical and biological responses of project sediments to. The percent fines value is defined as the amount of sediment that passes through a 62.5-µm sieve, expressed as a percentage of the total sample analyzed. This is also the sum of the silt and clay fraction of sediment. Conventional grain-size analyses were performed on the project sediments by Analytical Resources, Inc. The percent-fines determination of the project sediments are summarized in Table 1.

Table 1. Sample and Reference Grain Size Comparison.

Treatment	Percent Fines[1]	Treatment Compared To:
Reference CR-12	4.5	
Reference CR-023	97.2	
IJ12-01	12.4 *potentially biased by woody debris, see text	CR-023 and CR-12
IJ12-02	92.6	CR-023
IJ02-03	90.8	CR-023
IJ12-05	94.3	CR-023
IJ12-07	94.0	CR-023

[1] Percent fines (∑ silt and clay) provided by Analytical Resources Inc.

Samples IJ12-02, IJ12-03, IJ12-05, and IJ12-07 were compared to the reference CR-023 for the purposes of evaluating the sediment under the sediment management standards. Based upon the results of the conventional grain-size analysis, sample IJ12-01 would be compared to reference CR-12 due to their similarity; however, notations made by the analytical lab (ARI) and anecdotal observations made by NewFields staff, indicated that sample IJ12-01 contained a significant proportion of woody debris that was potentially biasing the grain size results of this sample toward a sandier fraction. Based upon this evidence, sample IJ12-01 was compared to both references in the performance evaluation section (Section 4).

2.3 10-DAY AMPHIPOD BIOASSAY

The 10-day acute toxicity test with *A. abdita* was initiated on May 29, 2012. To prepare the test exposures, approximately 175 mL of sediment was placed in clean, acid and solvent-rinsed 1-L glass jars, which were then filled with 775 mL of 0.45-µm filtered seawater at 28 ppt. Seven replicate chambers were prepared for each test treatment, the two reference sediments, and the native control sediment. The control and reference sediments were tested concurrently with the test treatments. Five replicates were used to evaluate sediment toxicity while the remaining two replicates were designated as sacrificial surrogate chambers. One surrogate chamber was sacrificed at test initiation to measure porewater and overlying ammonia and sulfides. The remaining surrogate chamber was used for measuring daily water quality throughout the test, as well as porewater and overlying ammonia and sulfides at test termination. Total ammonia as nitrogen was monitored using an Orion meter fitted with an ammonia ion-specific probe. Total sulfides as S^{2-} were monitored using a HACH DR/2800 Spectrophotometer.

Test chambers were placed in randomly assigned positions in a 20°C water bath and allowed to equilibrate overnight. Trickle-flow aeration was provided to prevent dissolved oxygen concentrations from dropping below acceptable levels.

Immediately prior to test initiation, water quality parameters were measured in the surrogate chamber for each treatment. Dissolved oxygen (DO), temperature, pH, and salinity were then monitored in the surrogate chambers daily until test termination. Target test parameters were:

Dissolved Oxygen:	≥4.6 mg/L
pH:	7 - 9 units
Temperature:	20 ± 1°C
Salinity:	28 ± 1‰

The tests were initiated by randomly allocating 20 *A. abdita* into each test chamber, ensuring that each of the amphipods successfully buried into the sediment. Amphipods that did not bury

within approximately one hour were replaced with healthy amphipods. The 10-day amphipod bioassay was conducted as a static test with no feeding during the exposure period. At test termination, sediment from each test chamber was sieved through a 0.5-mm screen and all recovered amphipods transferred into a Petri dish. The number of surviving and dead amphipods was then determined under a dissecting microscope.

A water-only, 4-day reference-toxicant test was conducted concurrently with the sediment tests using ammonium chloride. The ammonium chloride reference-toxicant test was used to ensure animals used in the test were healthy and of similar sensitivity to prior tests. This test also provided information on the sensitivity to ammonia concentrations that would possibly be present in the sediments.

2.4 20-DAY JUVENILE POLYCHAETE BIOASSAY

The 20-day chronic toxicity test with *N. arenaceodentata* was initiated on May 23, 2012. Test exposures were prepared with approximately 175 mL of sediment placed in clean, acid and solvent-rinsed 1-L glass jars, which were then filled with 775 mL of 0.45-µm filtered seawater at 28 ppt. Seven replicate chambers were prepared for each test treatment, the two reference sediments, and control sediment. The control and reference sediments were tested concurrently with the test treatments. Five replicates were used to evaluate sediment toxicity while the remaining two replicates were designated as sacrificial surrogate chambers. One surrogate chamber was sacrificed at test initiation to measure overlying and interstitial ammonia and sulfides. The remaining surrogate chamber was used for measuring daily water quality throughout the test, as well as overlying and interstitial ammonia and sulfides at test termination. Total ammonia as nitrogen was monitored using an Orion meter fitted with an ammonia ion-specific probe. Total sulfides as S^{2-} were monitored using a HACH DR/2800 Spectrophotometer.

Test chambers were placed in randomly assigned positions in a water bath at 20°C and allowed to equilibrate overnight. Trickle-flow aeration was provided to prevent dissolved oxygen concentrations from dropping below acceptable levels.

Immediately prior to test initiation, water quality parameters were measured. Dissolved oxygen, temperature, pH, and salinity were then monitored in the surrogates daily until test termination. Target test parameters were:

Dissolved Oxygen:	≥4.6 mg/L
pH:	7 - 9 units
Temperature:	20 ± 1°C
Salinity:	28 ± 2‰

The juvenile polychaete test was initiated by randomly allocating five *N. arenaceodentata* into each test chamber, and observing whether each of the worms successfully buried into the sediment. Worms that did not bury within approximately one hour were replaced with healthy worms. The 20-day test was conducted as a static-renewal test, with exchanges of 300 mL of water occurring every third day. *N. arenaceodentata* were fed every other day with 40 mg of TetraMarin® (approximately 8 mg dry weight per worm). At test termination, sediment from each test chamber was sieved through a 0.5-mm screen and all recovered worms transferred into a Petri dish. The number of surviving and dead worms was determined. All surviving worms were then transferred to pre-weighed, aluminum foil weigh-boats, and then dried in a drying oven at 60°C for approximately 24 hours. Each weigh-boat was removed, cooled in a dessicator, and then weighed on a microbalance to 0.01 mg. Each of the weigh boats was then heated to 550°C for 2 hours in order to determine the ashed weight. Ash-free dry weights (AFDW) were calculated to correct for the influence of sediment grain size differences between treatments.

The ashed boats were weighed to 0.01 mg and the ashed weight was subtracted from the dry weight to calculate the AFDW. Both dry weight and AFDW were used to determine individual worm weight and growth rates.

A water-only, 4-day reference-toxicant test was conducted concurrently with the sediment tests using ammonium chloride. The ammonium chloride reference-toxicant test was used to ensure animals used in the test were healthy and of similar sensitivity to prior tests. This test also provided information on the sensitivity to ammonia concentrations that would possibly be present in the sediments.

2.5 Larval Developmental Bioassay

Test sediment was evaluated using the larval benthic toxicity test with the mussel, *M. galloprovincialis*. The mussel larval test was initiated on June 7, 2012. The control and reference sediments were tested with the test treatments. To prepare the test exposures, 18 g (±1 g) of test sediment was placed in clean, acid and solvent-rinsed 1-L glass jars, which were then filled to 900 mL with 0.45-µm filtered seawater. Six replicate chambers were prepared for each test treatment, reference sediment, and control treatment. Five of the replicates were used to evaluate the test; the sixth replicate was used as a water quality surrogate. Each chamber was shaken for 10 seconds and then placed in predetermined randomly-assigned positions in a water bath at 16°C.

To collect gametes for each test, mussels were placed in clean seawater and acclimated at 16°C for approximately 20 minutes. The water bath temperature was then increased over a period of 15 minutes to 20°C. Mussels were held at 20°C and monitored for spawning individuals. Spawning females and males were removed from the water bath and placed in individual containers with seawater. These individuals were allowed to spawn until sufficient gametes were available to initiate the test. After the spawning period, eggs are transferred to fresh seawater and filtered through a 0.5 mm Nitex® mesh screen to remove large debris, feces, and excess gonadal matter. A composite is made of the sperm and diluted with fresh seawater. The fertilization process was initiated by adding sperm to the isolated egg containers. Egg-sperm solutions were periodically homogenized with a perforated plunger during the fertilization process and sub-samples observed under the microscope for egg and sperm viability. Approximately one to one and a half hours after fertilization, embryo solutions were checked for fertilization rate. Only those embryo stocks with >90% fertilization were used to initiate the tests. Embryo solutions were rinsed free of excess sperm and then combined to create one embryo stock solution. Density of the embryo stock solution was determined by counting the number of embryos in a subsample of homogenized stock solution. This was used to determine the volume of embryo stock solution to deliver approximately 27,000 embryos to each test chamber.

Dissolved oxygen, temperature, pH, and salinity were monitored in water quality surrogates to prevent loss or transfer of larvae by adhesion to water-quality probes. Ammonia and sulfides in the overlying water were measured on Day 0 and Day 2. Total ammonia as nitrogen was monitored using an Orion meter fitted with an ammonia ion-specific probe. Total sulfides as S^{-2} were monitored using a HACH DR/2800V Spectrophotometer. Target test parameters were as follows:

Dissolved Oxygen:	≥5.0 mg/L
pH:	7 - 9 units
Temperature:	16 ± 1°C
Salinity:	28 ± 1‰

The development test was conducted as a static test without aeration. The protocol calls for test termination when ≥90% of the embryos in the control have reached the prodissoconch I stage (approximately 48-60 hours). At approximately 40 hours, the controls were checked for development indicating that greater than 90% of the larvae present had developed into the normal D-cell stage. At 48 hours from test initiation, the larval test was terminated following resuspension protocols recently developed by USACE and Ecology to address the potential entrainment of larvae in very fine sediments or sediments with a high wood-debris component (Kendall et al. 2012). The test was terminated by resuspending the sediment and water in the test chamber at approximately 40 hours and allowing the contents to settle. To terminate the test, the overlying seawater was decanted into a clean 1-L jar and mixed with a perforated plunger. From this container, a 10 mL subsample was transferred to a scintillation vial and preserved in 5% buffered formalin. Larvae were subsequently stained with a dilute solution of Rose Bengal in 70% alcohol to help visualization of larvae. The number of normal and abnormal larvae was enumerated on an inverted microscope. Normal larvae included all D-shaped prodissoconch I stage larvae. Abnormal larvae included abnormally shaped prodissoconch I larvae and all early stage larvae.

A water-only reference-toxicant test was conducted concurrently with the sediment tests using ammonium chloride. The ammonium chloride reference-toxicant test was used to ensure animals used in the test were healthy and of similar sensitivity to prior tests. This test also provided information on the sensitivity to ammonia concentrations that would possibly be present in the sediments.

2.6 Data Analysis and QA/QC

All water quality and endpoint data were entered into Excel spreadsheets. Water quality parameters were summarized by calculating the mean, minimum, and maximum values for each test treatment. Endpoint data were calculated for each replicate and the mean values and standard deviations were determined for each test treatment.

All hand-entered data was reviewed for data entry errors, which were corrected prior to summary calculations. A minimum of 10% of all calculations and data sorting were reviewed for errors. Review counts were conducted on any apparent outliers.

For the larval test, the normalized combined mortality and abnormality endpoint was used to evaluate the test sediment. This was based on the number of normal larvae in each treatment and reference sample divided by the mean number of normal larvae in the control replicates, as defined in Ecology (2005).

For SMS suitability determinations, comparisons were made according to SAPA and Fox et al. (1998). Data reported as percent mortality or survival were transformed using an arcsine square root transformation prior to statistical analysis. All data were tested for normality using the Wilk-Shapiro test and equality of variance using Levene's test. Determinations of statistical significance were based on one-tailed Student's t-tests with an alpha of 0.05. A comparison of the larval endpoint relative to the reference was made using an alpha level of 0.10. For samples failing to meet assumptions of normality, a Mann-Whitney test was conducted to determine significance. For those samples failing to meet the assumptions of normality and equality of variance, a t-test on rankits was used.

3.0 RESULTS

The results of the sediment testing, including a summary of test results and water quality observations are presented in this section. Data for each of the replicates, as well as laboratory bench sheets are provided Appendix A and statistical analyses are provided in Appendix B.

3.1 10-DAY AMPHIPOD BIOASSAY

The bioassay test with *A. abdita* was validated with 10% mortality in the native sediment control, which met the SMS performance criteria of ≤10% mortality. This indicates that the test conditions were suitable for adequate amphipod survival. Mean mortality in the reference treatments (CR-023 and CR-12) were 9 and 22% respectively, which met the SMS performance criteria (<25% mortality) and indicated that the reference sediments were acceptable for suitability determination. Mean mortality in the test treatments ranged from 5 to 18% as shown in Table 2.

Summaries of water quality measurements, ammonia and sulfide concentrations, and test conditions are presented in Tables 3, 4, and 5.

All water quality parameters were within the acceptable limits throughout the duration of the test.

A reference-toxicant test (positive control) was performed on the batch of test organisms utilized for this study. The LC_{50} value was well within control chart limits (±2 standard deviations from the laboratory historical mean). This indicates that the test organisms used in this study were of similar sensitivity to those previously tested at NewFields.

Ammonia concentrations observed in the *A. abdita* test were below the No Observed Effect Concentration (NOEC) value derived from the concurrent ammonia reference-toxicant test (Table 4; compare to NOEC of 15.4 mg/L). Values were also below the published threshold concentration of 15 mg/L total ammonia (Barton 2002). This indicates that ammonia concentrations within the sediment samples should not have been a contributor to any adverse biological effects observed in the test treatments. Initial sulfide concentrations in interstitial water were below 0.3 mg/L and would not be expected to contribute to toxicity.

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Table 2. Test Results for *Ampelisca abdita*.

Treatment	Replicate	Number Initiated	Number Surviving	Percentage Survival	Mean Percentage		Standard Deviation
					Survival	Mortality	
Control	1	20	17	85	90	10	5
	2	20	18	90			
	3	20	17	85			
	4	20	19	95			
	5	20	19	95			
CR-023	1	20	19	95	91	9	7
	2	20	16	80			
	3	20	19	95			
	4	20	19	95			
	5	20	18	90			
CR-12	1	20	17	85	78	22	11
	2	20	17	85			
	3	20	17	85			
	4	20	12	60			
	5	20	15	75			
IJ12-1	1	20	20	100	95	5	9
	2	20	20	100			
	3	20	19	95			
	4	20	20	100			
	5	20	16	80			
IJ12-2	1	20	18	90	85	15	7
	2	20	15	75			
	3	20	18	90			
	4	20	16	80			
	5	20	18	90			
IJ12-3	1	20	15	75	82	18	8
	2	20	15	75			
	3	20	16	80			
	4	20	18	90			
	5	20	18	90			
IJ12-5	1	20	16	80	86	14	14
	2	20	19	95			
	3	20	13	65			
	4	20	18	90			
	5	20	20	100			
IJ12-7	1	20	18	90	92	8	4
	2	20	19	95			
	3	20	19	95			
	4	20	17	85			
	5	20	19	95			

Table 3. Water Quality Summary for *Ampelisca abdita*.

Treatment	Dissolved Oxygen (mg/L)			Temperature (°C)			Salinity (ppt)			pH (units)		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
Control	7.4	7.1	7.6	20.1	19.9	20.2	28	28	28	7.9	7.7	8.1
CR-023	7.6	7.5	7.7	20.0	19.7	20.1	28	28	28	7.9	7.7	8.0
CR-12	7.6	7.5	7.7	20.0	19.8	20.2	28	28	28	8.0	7.7	8.2
IJ12-01	7.5	7.3	7.7	20.0	19.8	20.2	27	27	28	8.0	7.7	8.2
IJ12-02	7.5	7.3	7.7	20.1	19.9	20.2	28	28	29	8.1	7.8	8.3
IJ12-03	7.3	7.2	7.6	20.0	19.6	20.2	28	28	28	8.1	7.8	8.4
IJ12-05	7.2	6.9	7.5	20.1	19.6	20.2	28	28	28	8.0	7.5	8.3
IJ12-07	7.5	7.3	7.7	20.1	19.9	20.2	28	28	28	8.1	7.7	8.3

Table 4. Ammonia and Sulfide Summary for *Ampelisca abdita*.

Treatment	Overlying Ammonia (mg/L Total)		Interstitial Ammonia (mg/L Total)		Overlying Sulfides (mg/L Total)		Interstitial Sulfides (mg/L Total)	
	Day 0	Day 10	Day 0	Day 10	Day 0	Day 10	Day 0	Day 10
Control	<0.5	0.560	1.48	<0.5	0.010	0.005	0.000	0.105
CR-023	<0.5	<0.5	0.804	<0.5	0.042	0.011	0.001	0.057
CR-12	0.958	<0.5	nd	0.991	0.019	0.006	nd	nd
IJ12-01	1.39	<0.5	15.1	1.40	0.018	0.006	0.004	0.079
IJ12-02	1.26	<0.5	10.3	<0.5	0.016	0.012	0.012	0.024
IJ12-03	1.13	<0.5	8.87	0.658	0.017	0.005	0.029	0.036
IJ12-05	1.18	<0.5	8.73	0.775	0.040	0.045	0.014	0.030
IJ12-07	1.49	<0.5	14.0	<0.5	0.040	0.018	0.045	0.020

nd – no data; insufficient volume for analysis.
NOEC (concurrent reference-toxicant test derived) = 15.4 mg/L

Table 5. Test Condition Summary for *Ampelisca abdita*.

Test Conditions: PSEP *A. abdita* (SMS)		
Sample Identification	Control, CR-023, CR-12, IJ12-01, IJ12-02, IJ12-03, IJ12-05, IJ12-07	
Date sampled	April 24 and 25, 2012	
Date received at NewFields Northwest	April 26, 2012	
Test dates	May 29 – June 8, 2012	
Sample storage conditions	4°C, dark	
Days of holding Recommended: ≤8 weeks (56 days)	35 days	
Source of control sediment	San Rafael, CA	
Test Species	***A. abdita***	
Supplier	Brezina & Associates, Dillon Beach, CA	
Date acquired	May 26, 2012	
Acclimation/holding time	3 days	
Age class	Subadult, 3-5 mm	
Test Procedures	PSEP 1995 with SMARM revisions	
Regulatory Program	SMS	
Test location	NewFields Northwest Laboratory	
Test type/duration	10-Day static	
Control water	North Hood Canal sea water, 0.45µm filtered	
Test dissolved oxygen	Recommended: > 4.6 mg/L	Achieved: 6.9 – 7.7 mg/L
Test temperature	Recommended: 20 ± 1 °C	Achieved: 19.6 – 20.2 °C
Test Salinity	Recommended: 28 ± 1 ppt	Achieved: 27 - 29 ppt
Test pH	Recommended: 7 - 9	Achieved: 7.5 – 8.4
SMS control performance standard	Recommended: Control ≤ 10% mortality	Achieved: 10%; Pass
SMS reference performance standard	Recommended: Reference mortality < 25%	Achieved: CR-023: 9%; Pass CR-12: 22%; Pass
Reference Toxicant LC_{50} (total ammonia)	LC_{50} = 46.32 mg $NH_3 + NH_4^+$/L	
Mean; Acceptable Range (total ammonia)	45.4; 15.2 – 136.2 mg $NH_3 + NH_4^+$/L	
NOEC (total ammonia)	15.4 mg $NH_3 + NH_4^+$/L	
NOEC (unionized ammonia)	0.296 mg NH_3/L	
Test Lighting	Continuous	
Test chamber	1-Liter Glass Chamber	
Replicates/treatment	5 + 2 surrogates (one used for WQ measurements throughout the test)	
Organisms/replicate	20	
Exposure volume	175 mL sediment/ 775 mL water	
Feeding	None	
Water renewal	None	
Deviations from Test Protocol	None	

3.2 20-DAY JUVENILE POLYCHAETE BIOASSAY

No mortality was observed in the *N. arenaceodentata* control sediment and mean individual growth (MIG) in the control sediment was 1.192 mg/ind/day (dry weight) and 0.706 mg/ind/day (AFDW). These values fall within the test acceptability criteria for mean mortality (≤10%) and mean individual growth (≥0.38 mg/ind/day dry weight; Kendall 1996), indicating that the test conditions were suitable for adequate polychaete survival and growth. A summary of the test results for all samples is shown in Table 6. Summaries of water quality measurements, ammonia and sulfide concentrations, and test conditions are presented in Tables 7, 8, and 9.

Mean individual growth (dry weight and AFDW) for the reference treatments compared to the control were greater than 80% of the control response and mortality was less than 20%, meeting the recommended SMS performance standards (Ecology 2008). These results indicate that these reference sediments were acceptable for suitability determination. Mortality in the test treatments ranged from 0 – 12%. Mean individual growth (as dry weight) in the test treatments ranged from 0.892 to 1.053 mg/ind/day. MIG in the AFDW assessment, which removes variability caused by gut contents, ranged from 0.610 to 0.808 mg/ind/day as AFDW.

A reference-toxicant test (positive control) was performed on the batch of test organisms utilized for this study. The LC_{50} value was well within control chart limits (±2 standard deviations from the laboratory historical mean). This indicates that the test organisms used in this study were of similar sensitivity to those previously tested at NewFields.

All water quality parameters were within the acceptable limits throughout the duration of the test. Ammonia concentrations observed in the *N. arenaceodentata* test were below the NOEC value derived from the concurrent ammonia reference-toxicant test (Table 8; compare to NOEC of 146 mg/L). This indicates that ammonia concentrations within the sediment samples should not have been a contributor to any adverse biological effects observed in the test treatments. Initial sulfide concentrations in interstitial water were below the NOEC (3.47 mg/L; Kendall and Barton 2004) for all samples.

Table 6. Test Results for *Neanthes arenaceodentata*.

Treat-ment	Repli-cate	Number Initiated	Survivors	Mean Mortality (%)	Individual Growth (mg/ind/day)					
					Dry Weight	Mean	Std Dev	AFDW	Mean	Std Dev
Control	1	5	5	0	1.236	1.192	0.150	0.670	0.706	0.052
	2	5	5		1.035			0.660		
	3	5	5		1.321			0.755		
	4	5	5		1.032			0.677		
	5	5	5		1.337			0.770		
CR-023	1	5	5	4	0.955	0.970	0.156	0.726	0.756	0.101
	2	5	5		0.788			0.639		
	3	5	4		1.209			0.916		
	4	5	5		0.896			0.729		
	5	5	5		1.003			0.769		
CR-12	1	5	5	4	1.043	1.106	0.120	0.728	0.705	0.032
	2	5	5		1.028			0.674		
	3	5	5		1.160			0.743		
	4	5	5		1.292			0.709		
	5	5	4		1.007			0.671		
IJ12-1	1	5	5	0	0.916	0.902	0.072	0.679	0.676	0.067
	2	5	5		0.897			0.691		
	3	5	5		0.807			0.581		
	4	5	5		0.884			0.660		
	5	5	5		1.007			0.767		
IJ12-2	1	5	5	0	0.845	0.895	0.053	0.676	0.711	0.045
	2	5	5		0.873			0.722		
	3	5	5		0.863			0.659		
	4	5	5		0.917			0.722		
	5	5	5		0.977			0.775		
IJ12-3	1	5	5	0	0.995	1.053	0.073	0.747	0.808	0.059
	2	5	5		1.069			0.825		
	3	5	5		1.170			0.890		
	4	5	5		0.992			0.753		
	5	5	5		1.038			0.825		
IJ12-5	1	5	5	0	1.003	0.928	0.104	0.750	0.674	0.083
	2	5	5		0.914			0.675		
	3	5	5		0.768			0.577		
	4	5	5		1.038			0.763		
	5	5	5		0.917			0.606		
IJ12-7	1	5	4	12	0.674	0.892	0.242	0.435	0.610	0.203
	2	5	5		0.921			0.588		
	3	5	3		0.634			0.411		
	4	5	5		1.014			0.722		
	5	5	5		1.215			0.896		

Table 7. Water Quality Summary for *Neanthes arenaceodentata*.

Treatment	Dissolved Oxygen (mg/L)			Temperature (°C)			Salinity (ppt)			pH (units)		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
Control	7.2	6.7	7.6	20.1	19.5	20.5	27	26	28	7.7	7.5	8.0
CR-023	7.3	6.8	7.6	20.1	19.8	20.5	28	27	28	7.6	7.4	7.9
CR-12	7.4	7.0	7.7	20.2	19.9	20.5	28	27	28	7.7	7.4	7.9
IJ12-01	7.2	6.7	7.5	20.1	19.5	20.5	27	26	28	7.9	7.6	8.1
IJ12-02	7.0	6.0	7.5	20.0	19.6	20.5	28	27	29	7.9	7.5	8.2
IJ12-03	6.9	6.3	7.3	20.2	20.0	20.6	28	27	28	7.8	7.4	8.3
IJ12-05	6.9	6.5	7.4	20.2	20.0	20.6	28	27	28	7.8	7.5	8.3
IJ12-07	7.1	6.2	7.5	20.1	19.5	20.5	28	27	28	7.9	7.6	8.2

Table 8. Ammonia and Sulfide Summary for *Neanthes arenaceodentata*.

Treatment	Overlying Ammonia (mg/L Total)		Interstitial Ammonia (mg/L Total)		Overlying Sulfides (mg/L Total)		Interstitial Sulfides (mg/L Total)	
	Day 0	Day 20	Day 0	Day 20	Day 0	Day 20	Day 0	Day 20
Control	<0.5	0.680	<0.5	0.77	0.039	0.012	0.350	0.042
CR-023	<0.5	<0.5	0.68	<0.5	0.031	0.020	0.006	0.168
CR-12	0.52	<0.5	7.54	0.94	0.015	0.044	0.580	0.095
IJ12-01	2.57	<0.5	18.5	1.20	0.012	0.008	0.061	0.057
IJ12-02	2.58	<0.5	14.4	1.04	0.014	0.010	0.000	0.059
IJ12-03	3.09	<0.5	13.9	0.56	0.016	0.021	0.000	0.130
IJ12-05	3.28	<0.5	12.7	1.17	0.013	0.021	0.000	0.069
IJ12-07	2.40	<0.5	9.23	1.74	0.006	0.007	0.066	0.020

NOEC (concurrent reference-toxicant test derived) = 146 mg/L

Table 9. Test Condition Summary for *Neanthes arenaceodentata*.

Test Conditions: PSEP *N. arenaceodentata* (SMS)		
Sample Identification	Control, CR-023, CR-12, IJ12-01, IJ12-02, IJ12-03, IJ12-05, IJ12-07	
Date sampled	April 24 and 25, 2012	
Date received at NewFields Northwest	April 26, 2012	
Test dates	May 23 – June 12, 2012	
Sample storage conditions	4°C, dark	
Days of holding Recommended: ≤8 weeks (56 days)	29 days	
Source of control sediment	Sequim Bay, WA	
Test Species	***N. arenaceodentata***	
Supplier	Aquatic Toxicology Support	
Date acquired	May 23, 2012	
Acclimation/holding time	1 days	
Age class	Juvenile	
Test Procedures	PSEP 1995 with SMARM revisions	
Regulatory Program	SMS	
Test location	NewFields Northwest Laboratory	
Test type/duration	20-Day static renewal	
Control water	North Hood Canal sea water, 0.45µm filtered	
Test dissolved oxygen	Recommended: > 4.6 mg/L	Achieved: 6.0 – 7.7 mg/L
Test temperature	Recommended: 20 ± 1 °C	Achieved: 19.5 - 20.6 °C
Test Salinity	Recommended: 28 ± 2 ppt	Achieved: 26 - 29 ppt
Test pH	Recommended: 7 - 9	Achieved: 7.4 – 8.3
Initial biomass	Recommended: 0.5 - 1.0 mg Minimum: 0.25 mg	1.00 mg
SMS control performance standard	Recommended: Control ≤ 10% mortality	Achieved: 0%; Pass
	Recommended: ≥ 0.72 mg/ind/day Minimum: ≥ 0.38 mg/ind/day (as Dry Weight)	Achieved: 1.192 mg/ind/day; Pass
SMS reference performance standard	Recommended: Mortality ≤20% $MIG_{Reference}/MIG_{Control}$ ≥ 80% (as Dry Weight)	Achieved: (CR-023 / CR-12) Mortality: 4% / 4%; Pass MIG 81% / 93%; Pass
Reference Toxicant LC_{50} (total ammonia)	LC_{50} = 186.8 mg $NH_3 + NH_4^+$/L	
Mean; Acceptable Range (total ammonia)	153.6; 51.3 – 255.9 mg $NH_3 + NH_4^+$/L	
NOEC (total ammonia)	146 mg $NH_3 + NH_4^+$/L	
NOEC (unionized ammonia)	1.162 mg NH_3 /L	
Test Lighting	Continuous	
Test chamber	1-Liter Glass Chamber	
Replicates/treatment	5 + 2 surrogates (one used for WQ measurements throughout the test)	
Organisms/replicate	5	
Exposure volume	175 mL sediment/ 775 mL water	
Feeding	40 mg/jar every other day (8mg/ind every other day)	
Water renewal	Water renewed every third day (1/3 volume of exposure chamber)	
Deviations from Test Protocol	None	

3.3 LARVAL DEVELOPMENT BIOASSAY

The larval development test with *M. galloprovincialis* was validated by 75.1% normalized combined normal survivorship, defined as the mean number of normal larvae within the control divided by the stocking density. This value was within the SMS acceptability criteria of ≥70%. A summary of the test results for all samples is shown in Table 10. Summaries of water quality measurements, ammonia and sulfide concentrations, and test conditions are presented in Tables 11, 12, and 13.

Mean control-normalized normal survival in the reference treatments (CR-023 and CR-12) were 74.4 and 90.6%, respectively. Normal development in both references met the reference acceptability criteria of 65% mean control-normalized normal survival. Mean control-normalized survival in the test treatments ranged from 54.9 to 65.1%. The test mean chamber stocking density (measured at test initiation) was 37.0 embryos/mL.

A reference-toxicant test (positive control) was performed on the batch of test organisms utilized for this study. The LC_{50} value was well within control chart limits (±2 standard deviations from the laboratory historical mean). This indicates that the test organisms used in this study were of similar sensitivity to those previously tested at NewFields.

All water quality parameters were within the acceptable limits throughout the duration of the test. Ammonia concentrations observed in the *M. galloprovincialis* test were below the NOEC value derived from the concurrent ammonia reference-toxicant test (Table 12; compare to NOEC of 1.52 mg/L). This indicates that ammonia concentrations within the sediment samples should not have been a contributor to any adverse biological effects observed in the test treatments.

Table 10. Test Results for *Mytilus galloprovincialis*.

Treatment	Replicate	Number Normal	Number Abnormal	Mean # Normal	Normalized Combined Normal Survivorship (%)[1, 2]	Mean Combined Normal Survivorship (%)	Std. Dev.
Control	1	261	23	277.8	70.5	75.1	3.0
	2	282	33		76.2		
	3	274	25		74.1		
	4	291	29		78.6		
	5	281	20		75.9		
CR-023	1	205	19	206.8	73.8	74.4	5.3
	2	187	21		67.3		
	3	228	16		82.1		
	4	204	18		73.4		
	5	210	14		75.6		
CR-12	1	240	14	251.6	86.4	90.6	5.2
	2	247	10		88.9		
	3	240	8		86.4		
	4	274	17		98.6		
	5	257	19		92.5		
IJ12-1	1	137	104	152.6	49.3	54.9	5.2
	2	163	98		58.7		
	3	147	55		52.9		
	4	144	94		51.8		
	5	172	87		61.9		
IJ12-2	1	153	21	172.6	55.1	62.1	7.5
	2	153	21		55.1		
	3	183	23		65.9		
	4	202	31		72.7		
	5	172	29		61.9		
IJ12-3	1	142	64	163.6	51.1	58.9	10.8
	2	124	38		44.6		
	3	174	26		62.6		
	4	199	61		71.6		
	5	179	31		64.4		
IJ12-5	1	170	45	170.0	61.2	61.2	6.5
	2	140	46		50.4		
	3	176	32		63.4		
	4	189	50		68.0		
	5	175	44		63.0		
IJ12-7	1	182	23	180.8	65.5	65.1	6.4
	2	158	16		56.9		
	3	179	27		64.4		
	4	208	23		74.9		
	5	177	27		63.7		

[1] Control normality normalized to stocking density (370.0).
[2] Reference and treatment normal survivorship are normalized to the mean Control normality (277.8).

Table 11. Water Quality Summary for *Mytilus galloprovincialis*.

Treatment	Dissolved Oxygen (mg/L)			Temperature (°C)			Salinity (ppt)			pH (units)		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
Control	7.7	7.5	8.0	16.3	15.9	16.7	28	28	28	7.6	7.5	7.7
CR-023	6.6	6.0	7.4	16.3	16.1	16.6	28	28	28	7.6	7.5	7.6
CR-12	7.2	7.0	7.6	16.5	16.2	17.0	28	28	29	7.6	7.5	7.7
IJ12-01	5.9	5.2	6.9	16.3	16.2	16.5	28	28	28	7.5	7.4	7.6
IJ12-02	6.3	5.7	7.3	16.4	16.1	16.7	28	28	28	7.5	7.4	7.6
IJ12-03	6.2	5.6	7.3	16.7	16.4	16.9	28	28	28	7.5	7.4	7.6
IJ12-05	6.0	5.4	7.0	16.7	16.5	17.0	29	28	29	7.5	7.4	7.6
IJ12-07	6.2	5.5	7.4	16.4	16.0	16.9	28	28	29	7.5	7.4	7.6

Table 12. Ammonia and Sulfide Summary for *Mytilus galloprovincialis*.

Treatment	Overlying Ammonia (mg/L Total)	Overlying Sulfides (mg/L Total)
	Initial	Initial
Control	0.554	0.002
CR-023	<0.5	0.097
CR-12	<0.5	0.359
IJ12-01	<0.5	0.183
IJ12-02	<0.5	0.175
IJ12-03	<0.5	0.118
IJ12-05	<0.5	0.150
IJ12-07	<0.5	0.141

Table 13. Test Condition Summary for *Mytilus galloprovincialis*.

Test Conditions: PSEP *M. galloprovincialis* (SMS)		
Sample Identification	Control, CR-023, CR-12, IJ12-01, IJ12-02, IJ12-03, IJ12-05, IJ12-07	
Date sampled	April 24 and 25, 2012	
Date received at NewFields Northwest	April 26, 2012	
Test dates	June 7 – 9, 2012	
Sample storage conditions	4°C, dark	
Holding time Recommended: < 8 weeks (56 days)	44 days	
Test Species	***M. galloprovincialis***	
Supplier	Taylor Shellfish, Shelton, WA	
Date acquired	June 7, 2012	
Acclimation/holding time (broodstock)	1 days	
Age class	<2-h old embryos	
Test Procedures	PSEP 1995 with SMARM revisions	
Regulatory Program	SMS	
Test location	NewFields Northwest Laboratory	
Test type/duration	48-60 Hour static test (Actual: 49 hours)	
Control water	North Hood Canal sea water, 0.45µm filtered	
Test dissolved oxygen	Recommended: > 5.0 mg/L	Achieved: 5.2 - 8.0 mg/L
Test temperature	Recommended: 16 ± 1 °C	Achieved: 15.9 - 17.0 °C
Test Salinity	Recommended: 28 ± 1 ppt	Achieved: 28 - 29 ppt
Test pH	Recommended: 7 - 9	Achieved: 7.4- 7.7
Stocking Density	Recommended: 20 – 40 embryos/mL	Achieved: 37 embryos/mL
SMS control performance standard	Recommended: Control normal survival ≥ 70%	Achieved: 75.1%, Pass
SMS reference performance standard	Recommended: Reference normal survival ≥ 65% (DMMP; No standard in 2008 SAPA)	Achieved: 74.4% (CR-023) and 90.6% (CR-12)
Reference Toxicant LC_{50} (total ammonia)	LC_{50} = 4.3 mg $NH_3 + NH_4^+$/L	
Mean; Acceptable Range (total ammonia)	5.8; 0.0 – 14.6 mg $NH_3 + NH_4^+$/L	
NOEC (total ammonia)	1.52 mg $NH_3 + NH_4^+$/L	
NOEC (unionized ammonia)	0.038 mg NH_3/L	
Test Lighting	14hr Light / 10hr Dark	
Test chamber	1-Liter Glass Chamber	
Replicates/treatment	5 + 1 surrogate (used for WQ measurements throughout the test)	
Exposure volume	18 g sediment/ 900 mL water	
Feeding	none	
Water renewal	none	
Deviations from Test Protocol	None	

4.0 Discussion

Sediments were evaluated based on Sediment Management Standards (SMS) criteria. The biological criteria are based on both statistical significance (a statistical comparison) and the degree of biological response (a numerical comparison). The SMS criteria are derived from the Washington Department of Ecology Sampling and Analysis Plan Appendix (WDOE 2008). Comparisons were made for each treatment against the reference sample. Two numerical comparisons were made under SMS, the Sediment Quality Standards (SQS) and the Cleanup Standards Limit (CSL).

4.1 Amphipod Test Suitability Determination

Under the SMS program, a treatment will fail SQS if mean mortality in the test sediment is >25% more than the mean mortality in the appropriate reference sediment and the difference is statistically significant ($p \leq 0.05$). Treatments fail the CSL if mean mortality in the test treatment >30% relative to the reference sediment and the difference is statistically significant.

All test samples met both the SQS and CSL criteria for the amphipod test as shown in Table 14.

Table 14. SMS Comparison for *Ampelisca abdita*.

Treatment	Mean Mortality (%)	Comparison To:	Statistically More than Reference?	Mortality Comparison to Reference M_T-M_R (%)	Fails SQS?[1] > 25 %	Fails CSL?[2] > 30 %
Control	10					
CR-023	9					
CR-12	22					
IJ12-01	5	CR-12	No	-17	No	No
		CR-023	No	-4	No	No
IJ12-02	15	CR-023	No	6	No	No
IJ12-03	18	CR-023	Yes	9	No	No
IJ12-05	14	CR-023	No	5	No	No
IJ12-07	8	CR-023	No	-1	No	No

[1]SQS: Statistical Significance and M_T-M_R >25%
[2]CSL: Statistical Significance and M_T-M_R >30%
No = Meets criteria
Yes = Does not meet criteria

4.2 Juvenile Polychaete Test Suitability Determination

Suitability determinations for the juvenile polychaete test were based on mean individual growth (MIG). A test treatment fails SQS criteria if MIG is statistically lower in the test treatment, relative to the reference, and MIG in the test treatment is <70% that of the reference. The treatments will fail CSL criteria if MIG is significantly lower than the reference treatment and is <50% that of the treatment.

All test samples met the SQS and CSL criteria when evaluated on the dry weight and AFDW basis (Table 15).

Table 15. SMS Comparison for *Neanthes arenaceodentata*.

Treatment	MIG (mg/ind/day)	Comparison To:	Statistically Less than Reference?	MIG Relative to Reference MIG_T/MIG_R (%)	Fails SQS?[1] < 70%	Fails CSL?[2] < 50%
Dry Weight						
Control	1.192					
CR-023	0.970					
CR-12	1.106					
IJ12-01	0.902	CR-12	No	82%	No	No
		CR-023	No	93%	No	No
IJ12-02	0.895	CR-023	No	92%	No	No
IJ12-03	1.053	CR-023	No	109%	No	No
IJ12-05	0.928	CR-023	No	96%	No	No
IJ12-07	0.892	CR-023	No	92%	No	No
Ash-Free Dry Weight						
Control	0.706					
CR-023	0.756					
CR-12	0.705					
IJ12-01	0.676	CR-12	No	96%	No	No
		CR-023	No	89%	No	No
IJ12-02	0.711	CR-023	No	94%	No	No
IJ12-03	0.808	CR-023	No	107%	No	No
IJ12-05	0.674	CR-023	No	89%	No	No
IJ12-07	0.610	CR-023	No	81%	No	No

[1]SQS: Statistical Significance and MIG_T/MIG_R <70%
[2]CSL: Statistical Significance and MIG_T/MIG_R <50%
No = Meets criteria
Yes = Does not meet criteria

4.3 LARVAL TEST SUITABILITY DETERMINATION

Larval test treatments fail SQS criteria if the percentage of normal larvae in the test treatment is significantly lower than that of the reference and if the normal larval development in the test treatment is less than 85% of the normal development in the reference. Treatments fail CSL criteria if the percentage of normal larvae in the test treatment is significantly lower than that of the reference and if the normal larval development in the test treatment is less than 70% of the normal development in the reference.

Four of the five samples failed to meet SQS criteria and one sample also failed to meet CSL criteria. Sample IJ12-01 failed to meet CSL criteria when compared to reference CR-12 only. The comparison results are summarized in Table 16 below.

Table 16. SMS Comparison for *Mytilus galloprovincialis*.

Treatment	Mean Normal Survival (%)	Comparison To:	Statistically Less than Reference?	Normal Survival Comparison to Reference $(N_T/N_C)/(N_R/N_C)$	Fails SQS?[1] < 85%	Fails CSL?[2] < 70%
Control	75.1	Stocking density				
CR-023	74.4	Control				
CR-12	90.6	Control				
IJ12-01	54.9	CR-12	Yes	61%	Yes	Yes
		CR-023	Yes	74%	Yes	No
IJ12-02	62.1	CR-023	Yes	83%	Yes	No
IJ12-03	58.9	CR-023	Yes	79%	Yes	No
IJ12-05	61.2	CR-023	Yes	82%	Yes	No
IJ12-07	65.1	CR-023	Yes	88%	No	No

[1]SQS: Statistical Significance and $N_{CT}<0.85*N_{CR}$
[2]CSL: Statistical Significance and $N_{CT}<0.70*N_{CR}$
No = Meets criteria
Yes = Does not meet criteria

4.4 SUMMARY

Four of the five samples failed to meet SQS performance criteria for the larval test performed on the I&J Waterway sediments (Table 17). One sample (IJ12-01) also failed to meet CSL performance criteria for the larval test when compared to reference CR-12 only. Based on analytical grain-size results, sample IJ12-01 would be compared to reference CR-12; however, results are shown compared to both references for this sample due to the potential influence of wood-waste bias in the grain size analysis (see Section 2.2).

All samples passed the SQS and CSL criteria for the amphipod and polychaete bioassays performed.

Table 17. Summary of I&J Waterway SMS Evaluation.

Treatment	Reference Compared To:	Sediment Quality Standards			Cleanup Screening Levels		
		Amphipod	Polychaete	Larval	Amphipod	Polychaete	Larval
IJ12-01	CR-12	No	No	**Yes**	No	No	**Yes**
	CR-023	No	No	**Yes**	No	No	No
IJ12-02	CR-023	No	No	**Yes**	No	No	No
IJ12-03	CR-023	No	No	**Yes**	No	No	No
IJ12-05	CR-023	No	No	**Yes**	No	No	No
IJ12-07	CR-023	No	No	No	No	No	No

No = Meets criteria
Yes = Does not meet criteria

5.0 REFERENCES

Barton, J, 2002. DMMP/SMS Clarification Paper: Ammonia and Amphipod Toxicity Testing. Presented at the 14th Annual Sediment Management Annual Review Meeting for USACE Seattle, Washington.

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APPENDICES

A. LABORATORY DOCUMENTS

B. STATISTICAL COMPARISONS

C. CHAIN-OF-CUSTODY FORMS

APPENDIX A

LABORATORY DOCUMENTS

***Ampelisca abdita* Amphipod Bioassay:**

Laboratory Data Sheets… A.1.1

Reference Toxicant Test… A.1.2

***Neanthes arenaceodentata* Juvenile Polychaete Bioassay:**

Laboratory Data Sheets… A.2.1

Reference Toxicant Test… A.2.2

***Mytilus galloprovincialis* Bivalve Embryo Bioassay:**

Laboratory Data Sheets… A.3.1

Reference Toxicant Test… A.3.2

APPENDIX A.1.1

Ampelisca abdita

Amphipod Bioassay

Laboratory Data Sheets

NEWFIELDS

10-DAY SOLID PHASE TEST OBSERVATION DATA

CLIENT	PROJECT	SPECIES	NEWFIELDS LABORATORY	PROTOCOL
Anchor QEA	I & J Waterway	*Ampelisca abdita*	Port Gamble Room 1	PSEP 1995
NEWFIELDS JOB NUMBER	PROJECT MANAGER	TEST START DATE	TEST END DATE	
860.0024.000	Bill Gardiner	29-May-12	8-Jun-12	

N = Normal
#E = Emergence
#M = Mortality or Molts
G = Growth (fungal, bacterial, or algal)
D = No Air Flow (DO?)
FOS = Floating on Surface
TC = Too Cloudy

Client/NewFields ID	Rep	Jar #	Initial # of Organisms	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Number Alive
				ENDPOINT DATA AND OBSERVATIONS										
			20	Date 5/30	Date 5/31	Date 6/01	Date 6/02	Date 6/03	Date 6/4	Date 6/5	Date 6/6	Date 6/7	Date 6.8	
				Technician CR	Technician CR	Technician JL	Technician JL	Technician JL	Technician [illegible]	Technician MMB	Technician MMB	Technician [illegible]	Technician BH	
Control	1			N	N	N	N	N	N	1FOS	N	2FOS/G	1FOS, G	17
	2			N	N				1FOS	1FOS	N	G	G	18
	3			1FOS	1FOS				N	1FOS	1FOS	N	N	17
	4			N	N					N	N	G	G	19
	5										N	G	1FOS, G	19
CR-023	1									N	N	N	N	19
	2			1FOS								1FOS	1FOS	16
	3			1FOS								N	N	19
	4			N									N	19
	5									1FOS			N	18
CR-12	1									N	1FOS	G	1FOS, G	17
	2			2E						1FOS	N	G	G	17
	3			N						N		G	G	17
	4			N								N	G	12
	5			2E								G	1FOS, G	15
IJ12-01	1			N						N	N	2FOS	1FOS N	20
	2								2FOS			N	G	20
	3								N				N	19
	4						2FOS						G	20
	5						1FOS		2FOS	2FOS		4FOS	2FOS N	16

NEWFIELDS

10-DAY SOLID PHASE TEST OBSERVATION DATA

CLIENT	PROJECT	SPECIES	NEWFIELDS LABORATORY	PROTOCOL
Anchor QEA	I & J Waterway	*Ampelisca abdita*	Port Gamble Room 1	PSEP 1995
NEWFIELDS JOB NUMBER	PROJECT MANAGER	TEST START DATE	TEST END DATE	
860.0024.000	Bill Gardiner	29-May-12	8-Jun-12	

N = Normal
#E = Emergence
#M = Mortality or Molts
G = Growth (fungal, bacterial, or algal)
D = No Air Flow (DO?)
FOS = Floating on Surface
TC = Too Cloudy

Client/NewFields ID	Rep	Jar #	Initial # of Organisms	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Number Alive	
				ENDPOINT DATA AND OBSERVATIONS											
				Date	Date	Date	Date	Date	Date	Date	Date	Date	Date		
			20	5/30	5/31	6/01	6/02	6/03	6/4	6/5	6/6	6/7	6.8		
				Technician	Technician	Technician	Technician	Technician	Technician	Technician	Technician	Technician	Technician		
				CR	CR	JL	JL	JL		MMB	MMB		BM		
IJ12-02	1			1FOS	1FOS	N	5 FOS	2 FOS	N	1FOS	G	G	1FOS, G	18	
	2			2FOS	N	3 FOS	6 FOS	7 FOS	6FOS/G	G, 3FOS	G, 1FOS	1FOS/G	1FOS, G	15	
	3			N	1FOS	1FOS	1FOS	7 FOS	3FOS	N	G	G	1FOS, G	18	
	4			↓	2FOS	2FOS	4 FOS	2 FOS	1FOS/G	G	G, 1FOS	G	1FOS G	16	
	5			↓	2FOS	4 FOS	7 FOS	3 FOS	5FOS/G	G, 2FOS	G	G	G	18	
IJ12-03	1			3FOS	N	N	N	N	G	G, 1FOS	G, 1FOS	G	G	15	
	2			1FOS	3FOS	1FOS	1FOS	4 FOS	3FOS/G	G, 2FOS	G	G	G	15	
	3			N	N	N	N	5 FOS	4FOS/G	G	G, 1FOS	G	1FOS G	16	
	4			↓	↓	↓	1FOS	2 FOS	1FOS	N	G	2FOS	2FOS	18	
	5			↓	↓	↓	N	N	G	G	G	1FOS G	G	18	
IJ12-05	1			1FOS	↓	↓	5 FOS	6 FOS	3FOS/G	G, 2FOS	G	2FOS G	G	16	
	2			N	↓	↓	3 FOS	N	2FOS/G	G, 2FOS	G, 2FOS	G	↓	19	
	3			N	2FOS	1FOS	2 FOS	1 FOS	3 FOS/G	G, 2FOS	G	G	↓	13	1M
	4			1FOS	N	N	5 FOS	4 FOS	1FOS/G	G, 1FOS	↓	1FOS G	↓	18	
	5			N	N	↓	1FOS	N	G	G	↓	G	↓	20	
IJ12-07	1			1FOS	1FOS	↓	N	2 FOS	G/4FOS	G, 4FOS	G, 3FOS	G	1FOS G	18	
	2			1FOS	N	↓	1FOS	3 FOS	5FOS/G	G	G, 1FOS	1FOS G	G	19	
	3			N	N	↓	N	N	N	N	G	N	N	19	
	4			N	1FOS	↓	1FOS	↓	1FOS/G	G, 1FOS	↓	G	1FOS G	17	1M
	5			1FOS	1FOS	1FOS	1FOS	2 FOS	G	G, 1FOS	↓	1FOS/G	1FOS G	19	

NEWFIELDS

10 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATA SHEET

CLIENT	PROJECT
Anchor QEA	I & J Waterway
NEWFIELDS JOB NUMBER	PROJECT MANAGER
860.0024.000	Bill Gardiner

SPECIES		NEWFIELDS LABORATORY	PROTOCOL
Ampelisca abdita		Port Gamble Room 1	PSEP 1995
TEST START DATE	TIME	TEST END DATE	TIME
29-May-12	1030	8-Jun-12	0930

				WATER QUALITY DATA									
			Test Conditions	DO (mg/L) >5.0 mg/L		Temperature (°C) 20±1		Salinity (ppt) 28±2		pH 7.8±0.5		Tech	Date
Client/NewFields ID	Day	Rep	Jar#	meter	mg/L	meter	deg C	meter	ppt	meter	unit		
Control	0	WQ	23	6	7.6	6	19.9	2	28	2	7.8	JL	5/29/12
CR-023	0	WQ	44		7.7		20.0		28		7.9		
CR-12	0	WQ	36		7.7		20.0		28		7.8		
IJ12-01	0	WQ	16		7.7		19.8		28		7.7		
IJ12-02	0	WQ	24		7.7		20.0		28		7.8		
IJ12-03	0	WQ	29		7.6		20.0		28		7.8		
IJ12-05	0	WQ	4		7.5		19.6		28		7.5		
IJ12-07	0	WQ	20		7.7		19.9		28		7.8		
Control	1	WQ	23	6	7.4	6	20.1	2	28	2	7.7	CR	5/30/12
CR-023	1	WQ	44		7.5		20.1		28		7.8		
CR-12	1	WQ	36		7.6		20.1		28		7.8		
IJ12-01	1	WQ	16		7.5		20.1		28		7.8		
IJ12-02	1	WQ	24		7.5		20.2		28		7.8		
IJ12-03	1	WQ	29		7.4		20.1		28		7.8		
IJ12-05	1	WQ	4		7.2		20.2		28		7.6		
IJ12-07	1	WQ	20		7.5		20.1		28		7.8		

NEWFIELDS

10 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATA SHEET

CLIENT	PROJECT
Anchor QEA	I & J Waterway
NEWFIELDS JOB NUMBER	PROJECT MANAGER
860.0024.000	Bill Gardiner

SPECIES		NEWFIELDS LABORATORY	PROTOCOL
Ampelisca abdita		Port Gamble Room 1	PSEP 1995
TEST START DATE	TIME	TEST END DATE	TIME
29-May-12	1030	8-Jun-12	0930

Test Conditions				WATER QUALITY DATA									
				DO (mg/L) >5.0 mg/L		Temperature (°C) 20±1		Salinity (ppt) 28±2		pH 7.8±0.5		Tech	Date
Client/NewFields ID	Day	Rep	Jar#	meter	mg/L	meter	deg C	meter	ppt	meter	unit		
Control	2	WQ	23	6	7.2	6	20.2	2	28	2	7.7	CR	5/31/12
CR-023	2	WQ	44		7.5		20.1		28		7.7		
CR-12	2	WQ	36		7.6		20.2		28		7.7		
IJ12-01	2	WQ	16		7.5		20.2		28		7.8		
IJ12-02	2	WQ	24		7.4		20.2		28		7.9		
IJ12-03	2	WQ	29		7.4		20.2		28		7.8		
IJ12-05	2	WQ	4		7.1		20.2		28		7.7		
IJ12-07	2	WQ	20		7.5		20.1		28		7.7		
Control	3	WQ	23	6	7.1	6	20.0	2	28	2	7.9	JL	6/01/12
CR-023	3	WQ	44		7.5		20.1		28		7.9		
CR-12	3	WQ	36		7.5		20.0		28		8.0		
IJ12-01	3	WQ	16		7.3		20.1		27		7.9		
IJ12-02	3	WQ	24		7.3		20.0		28		8.1		
IJ12-03	3	WQ	29		7.3		20.0		28		8.1		
IJ12-05	3	WQ	4		6.9		20.2		28		~~7.8 7.10~~		
IJ12-07	3	WQ	20		7.3		20.1		28		8.0		

① MF, JL 6/01/12.

NEWFIELDS

10 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATA SHEET

CLIENT	PROJECT	SPECIES		NEWFIELDS LABORATORY	PROTOCOL
Anchor QEA	I & J Waterway	*Ampelisca abdita*		Port Gamble Room 1	PSEP 1995
NEWFIELDS JOB NUMBER	PROJECT MANAGER	TEST START DATE	TIME	TEST END DATE	TIME
860.0024.000	Bill Gardiner	29-May-12	1030	8-Jun-12	0930

Test Conditions				WATER QUALITY DATA									
				DO (mg/L) >5.0 mg/L		Temperature (°C) 20±1		Salinity (ppt) 28±2		pH 7.8±0.5		Tech	Date
Client/NewFields ID	Day	Rep	Jar#	meter	mg/L	meter	deg C	meter	ppt	meter	unit		
Control	4	WQ	23	6	7.4	6	20.2	2	28	2	7.9	JL	6/02/12
CR-023	4	WQ	44		7.5		20.1		28		7.8		
CR-12	4	WQ	36		7.6		20.1		28		8.0		
IJ12-01	4	WQ	16		7.4		20.2		27		8.1		
IJ12-02	4	WQ	24		7.4		20.2		28		8.2		
IJ12-03	4	WQ	29		7.2		20.2		28		8.2		
IJ12-05	4	WQ	4		7.4		20.1		28		8.3		
IJ12-07	4	WQ	20		7.4		20.2		28		8.3		
Control	5	WQ	23	6	7.5	6	20.1	2	28	2	8.1	JL	6/03/12
CR-023	5	WQ	44		7.6		20.0		28		8.0		
CR-12	5	WQ	36		7.6		20.1		28		8.1		
IJ12-01	5	WQ	16		7.4		20.0		27		8.2		
IJ12-02	5	WQ	24		7.4		20.1		28		8.3		
IJ12-03	5	WQ	29		7.3		20.1		28		8.4		
IJ12-05	5	WQ	4		7.2		20.0		28		8.2		
IJ12-07	5	WQ	20		7.5		20.0		28		8.3		

NEWFIELDS

10 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATA SHEET

CLIENT	PROJECT	SPECIES		NEWFIELDS LABORATORY	PROTOCOL
Anchor QEA	I & J Waterway	*Ampelisca abdita*		Port Gamble Room 1	PSEP 1995
NEWFIELDS JOB NUMBER	PROJECT MANAGER	TEST START DATE	TIME	TEST END DATE	TIME
860.0024.000	Bill Gardiner	29-May-12	1030	8-Jun-12	0930

Test Conditions				WATER QUALITY DATA									
				DO (mg/L) >5.0 mg/L		Temperature (°C) 20±1		Salinity (ppt) 28±2		pH 7.8±0.5		Tech	Date
Client/NewFields ID	Day	Rep	Jar#	meter	mg/L	meter	deg C	meter	ppt	meter	unit		
Control	6	WQ	23	6	7.5	6	20.0	2	28	2	7.9	[illegible]	6/4/12
CR-023	6	WQ	44	↓	7.6	↓	19.9	↓	28	↓	7.9	↓	↓
CR-12	6	WQ	36	↓	7.6	↓	19.9	↓	28	↓	8.0	↓	↓
IJ12-01	6	WQ	16	↓	7.4	↓	20.0	↓	27	↓	7.9	↓	↓
IJ12-02	6	WQ	24	↓	7.4	↓	20.0	↓	28	↓	8.1	↓	↓
IJ12-03	6	WQ	29	↓	7.3	↓	20.0	↓	28	↓	8.2	↓	↓
IJ12-05	6	WQ	4	↓	7.2	↓	20.0	↓	28	↓	7.9	↓	↓
IJ12-07	6	WQ	20	↓	7.4	↓	20.0	↓	28	↓	8.0	↓	↓
Control	7	WQ	23	6	7.6	6	20.0	2	28	2	8.0	MMB	6/5/12
CR-023	7	WQ	44	↓	7.6	↓	19.9	↓	28	↓	7.9	↓	↓
CR-12	7	WQ	36	↓	7.7	↓	19.9	↓	28	↓	8.2	↓	↓
IJ12-01	7	WQ	16	↓	7.5	↓	20.0	↓	27	↓	8.2	↓	↓
IJ12-02	7	WQ	24	↓	7.5	↓	20.0	↓	28	↓	8.3	↓	↓
IJ12-03	7	WQ	29	↓	7.3	↓	20.1	↓	28	↓	8.4	↓	↓
IJ12-05	7	WQ	4	↓	7.2	↓	20.1	↓	28	↓	8.2	↓	↓
IJ12-07	7	WQ	20	↓	7.5	↓	20.0	↓	28	↓	8.2	↓	↓

NEWFIELDS

10 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATA SHEET

CLIENT	PROJECT
Anchor QEA	I & J Waterway
NEWFIELDS JOB NUMBER	PROJECT MANAGER
860.0024.000	Bill Gardiner

SPECIES		NEWFIELDS LABORATORY	PROTOCOL
Ampelisca abdita		Port Gamble Room 1	PSEP 1995
TEST START DATE	TIME	TEST END DATE	TIME
29-May-12	1030	8-Jun-12	0930

Test Conditions				WATER QUALITY DATA									
				DO (mg/L) >5.0 mg/L		Temperature (°C) 20±1		Salinity (ppt) 28±2		pH 7.8±0.5		Tech	Date
Client/NewFields ID	Day	Rep	Jar#	meter	mg/L	meter	deg C	meter	ppt	meter	unit		
Control	8	WQ	23	6	7.4	6	19.9	2	28	2	8.1	MMB	6/6/12
CR-023	8	WQ	44		7.5		19.7		28		7.9		
CR-12	8	WQ	36		7.7		19.8		28		8.2		
IJ12-01	8	WQ	16		7.6		19.9		27		8.2		
IJ12-02	8	WQ	24		7.5		19.9		29		8.3		
IJ12-03	8	WQ	29		7.2		19.6		28		8.3		
IJ12-05	8	WQ	4		7.2		19.9		28		8.2		
IJ12-07	8	WQ	20		7.4		20.0		28		8.2		
Control	9	WQ	23	6	7.6	6	20.1	2	28	2	8.0	[illegible]	6/7/12
CR-023	9	WQ	44		7.5		20.1		28		8.0		
CR-12	9	WQ	36		7.6		20.1		28		8.2		
IJ12-01	9	WQ	16		7.4		20.1		28		8.2		
IJ12-02	9	WQ	24		7.5		20.1		29		8.2		
IJ12-03	9	WQ	29		7.2		20.1		28		8.3		
IJ12-05	9	WQ	4		~~8~~ 7.6		20.2		28		8.2		
IJ12-07	9	WQ	20		7.5		20.1		28		8.2		

① 12 6/7/12 [illegible]

NEWFIELDS

10 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATA SHEET

CLIENT	PROJECT
Anchor QEA	I & J Waterway
NEWFIELDS JOB NUMBER	PROJECT MANAGER
860.0024.000	Bill Gardiner

SPECIES		NEWFIELDS LABORATORY	PROTOCOL
Ampelisca abdita		Port Gamble Room 1	PSEP 1995
TEST START DATE	TIME	TEST END DATE	TIME
29-May-12	1030	8-Jun-12	0930

				WATER QUALITY DATA									
Test Conditions				DO (mg/L) >5.0 mg/L		Temperature (°C) 20±1		Salinity (ppt) 28±2		pH 7.8±0.5		Tech	Date
Client/NewFields ID	Day	Rep	Jar#	meter	mg/L	meter	deg C	meter	ppt	meter	unit		
Control	10	WQ	23	6	7.5	6	20.2	2	28	2	7.9	DPM	06/08/12
CR-023	10	WQ	44		7.6		20.0		28		8.0		
CR-12	10	WQ	36		7.7		20.0		28		8.2		
IJ12-01	10	WQ	16		7.5		20.1		28		8.2		
IJ12-02	10	WQ	24		7.6		20.0		29		8.2		
IJ12-03	10	WQ	29		7.4		20.1		28		8.2		
IJ12-05	10	WQ	4		7.0		20.2		28		7.9		
IJ12-07	10	WQ	20		7.5		20.1		28		8.1		

NEWFIELDS

Ammonia and Sulfide Analysis Record

Client/Project:	Organism:	Test Duration (days):
Anchor / I & J	Ampelisca abdita	10

PRETEST / INITIAL / FINAL / OTHER (circle one) DAY of TEST: Ø
OVERLYING (OV) / POREWATER (PW) (circle one)

Comments:

Calibration Standards Temperature		Sample temperature should be within ±1°C of standards temperature at time and date of analysis.
Date: 5/29/12	Temperature: 21.0	

	Sample ID or Description	Conc. or Rep	Date of Sampling and Initials	Ammonia Value (mg/L)	Temp °C	Date of Reading and Initials	Sample Preserved (Y/N)	pH	Sal (ppt)	Sulf. mg/L
OV	Amp. Ø	Surr	5/29/12 JL	<0.5	20.5	5/29/12 JL	N			0.01
	CR 023			<0.5						0.042
	CR 12			0.958						0.019
	IJ12 01			1.39						0.018
	IJ12 02			1.26						0.016
	IJ12 03			1.13						0.017
	IJ12 05			1.18						0.040
	IJ12 07			1.49						0.040
PW	Amp. Ø	Surr.	5/29/12 JL	1.48	21.0	5/29/12 JL		7.3	29	0.000
	CR 023			0.804				7.3	28	0.001
	CR 12			②				②	②	②
	IJ12 01			15.1				7.3	24	① 0.004
	IJ12 02			10.3				7.4	28	① 0.012
	IJ12 03			8.87				7.3	28	0.029
	IJ12 05			8.73				7.3	28	0.014
	IJ12 07			14.0				7.2	28	0.045

① Diluted by half; multiplier of 2, JL 5/29/12 (final result recorded)

② Insufficient sample volume obtained, JL 5/29/12.

NEWFIELDS

Ammonia and Sulfide Analysis Record

Client/Project:	Organism:	Test Duration (days):
Anchor / I & J	Ampelisca abdita	10

PRETEST / INITIAL / FINAL / OTHER (circle one) DAY of TEST: 10

OVERLYING (OV) / POREWATER (PW) (circle one)

Comments:

Calibration Standards Temperature		Sample temperature should be within ±1°C of standards temperature at time and date of analysis.
Date: 6/08/12	Temperature: 21.5	

	Sample ID or Description	Conc. or Rep	Date of Sampling and Initials	Ammonia Value (mg/L)	Temp °C	Date of Reading and Initials	Sample Preserved (Y/N)	pH	Sal (ppt)	Sulf. mg/L
OV	Ø	Surr.	6/08/12 CR	0.556	21.0	6/08/12 JL	N			0.005
	CR-023			0.310						0.011
	CR-12			0.247						0.006
	NJ12-01			0.204						0.006
	NJ12-02			0.165						0.012
	NJ12-03			0.157						0.065
	NJ12-05			0.138						0.045
	NJ12-07			0.120						0.018
PW	Ø	Surr.		0.297	22.0			7.2	29	0.105
	CR-023			0.244				7.4	29	0.057
	CR-12			0.991				7.7	29	①
	NJ12-01			1.40				7.3	28	0.079
	NJ12-02			0.389				7.3	30	0.024
	NJ12-03			0.658				6.8	29	0.036
	NJ12-05			0.775				6.8	29	0.030
	NJ12-07			0.310				7.3	29	0.020

① Insufficient volume obtained, JL 6/08/12.

NEWFIELDS

ORGANISM RECEIPT LOG

Date: 5.26.12	**Time:** 1210	**NewFields Batch No.** JB 5620
Organism / Project: Ampelisca / I & J Anchor		**Invoice Attached** Yes (No)
Source / Supplier: Brezing & Associates		**Contact:** John Brezing
No. Ordered: 1400	**No. Received:** 1400 +	**Source Batch:** (Collection date, hatch date, etc.): Field
Condition of Organisms: (Good, fair, poor; describe.): Good		**Approximate Size or Age:** (Days from hatch, life stage, size class, etc.): 3-5 mm
Shipper: Fed Ex		**B of L (Tracking No.)** 8770 9238 5620
Condition of Container: (Good, fair, poor; describe.): Good		**Received By:** BH

Container	D.O. (mg/L)	Temp. (°C)	Cond. or Sal. (Include Units)	pH (Units)	Number Dead or Moribund	Technician (Initials)
1	720	16.2	27	6.9	—	BH

Notes:

APPENDIX A.1.2

Ampelisca abdita

Amphipod Bioassay

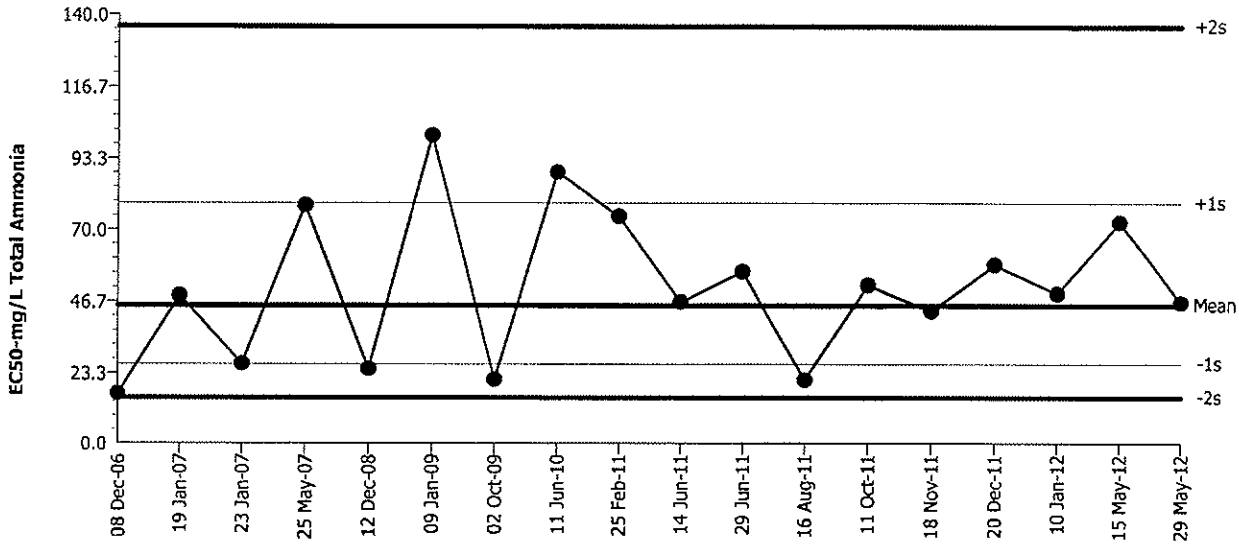
Reference Toxicant Test

CETIS QC Plot

Report Date: 05 Jun-12 16:37 (1 of 1)

Reference Toxicant 96-h Acute Survival Test — NewFields

Test Type:	Survival	Organism:	Ampelisca abdita (Amphipod)	Material:	Total Ammonia
Protocol:	PSEP (1995)	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF



Mean:	45.42	Count:	17	-1s Warning Limit:	26.24	-2s Action Limit:	15.15
Sigma:	N/A	CV:	73.10%	+1s Warning Limit:	78.64	+2s Action Limit:	136.2

Quality Control Data

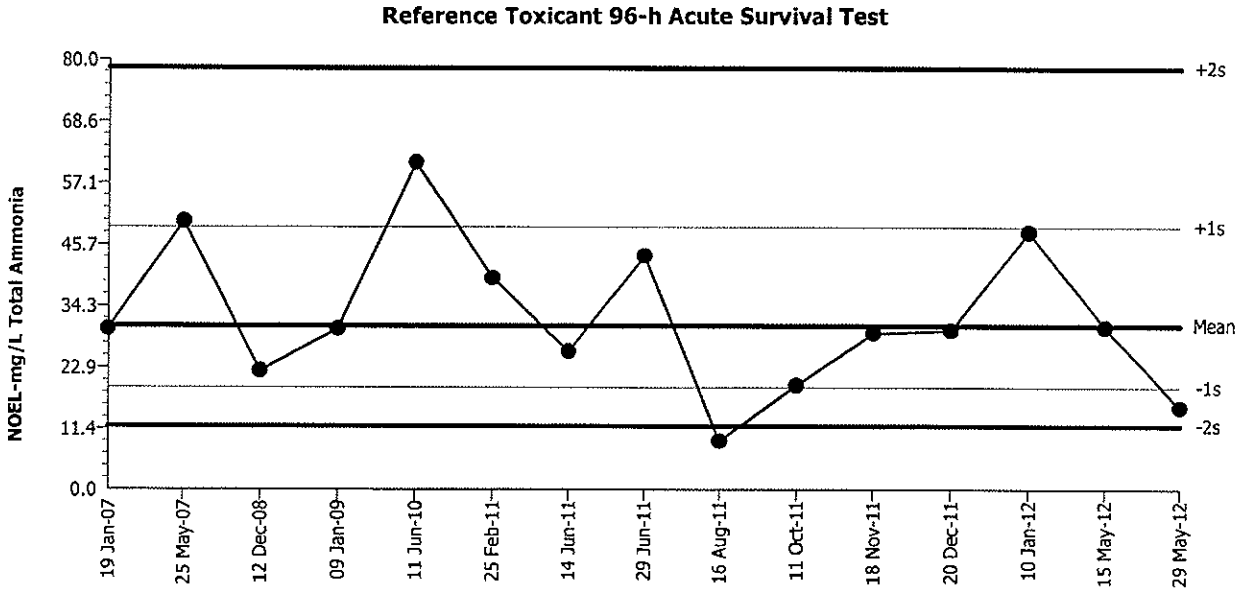
Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2006	Dec	8	16.57	-28.86	-1.838	(-)		07-4916-9791	09-2220-9407
2	2007	Jan	19	48.59	3.166	0.1227			04-0867-8538	03-7515-9235
3			23	26.41	-19.01	-0.9881			03-1168-2630	04-9690-0118
4		May	25	77.95	32.53	0.984			20-2307-8462	10-6781-0786
5	2008	Dec	12	24.73	-20.69	-1.107	(-)		03-9393-0024	18-3424-6501
6	2009	Jan	9	100.7	55.32	1.451	(+)		09-3044-5788	01-9389-6798
7		Oct	2	21.24	-24.18	-1.385	(-)		17-8010-3930	10-5366-2381
8	2010	Jun	11	88.7	43.27	1.219	(+)		08-5480-7806	17-4417-2637
9	2011	Feb	25	74.24	28.82	0.8952			03-2055-3347	20-6886-9535
10		Jun	14	46.53	1.105	0.04381			09-1868-5874	01-9106-6226
11			29	56.23	10.81	0.3889			14-9305-3005	00-0226-7997
12		Aug	16	21.09	-24.33	-1.397	(-)		06-9854-2879	12-5356-8506
13		Oct	11	51.94	6.515	0.2442			01-0904-0691	15-3443-3527
14		Nov	18	43.54	-1.885	-0.07724			12-2254-4742	02-4222-9494
15		Dec	20	58.51	13.09	0.4614			14-0527-6203	15-6286-1591
16	2012	Jan	10	49.25	3.824	0.1473			03-9063-0419	13-1863-6806
17		May	15	72.39	26.97	0.8492			19-7667-7405	14-3535-3938
18			29	46.32	0.8935	0.03549			03-7733-4362	00-5524-0466

CETIS QC Plot

Report Date: 05 Jun-12 16:37 (1 of 1)

Reference Toxicant 96-h Acute Survival Test — NewFields

Test Type:	Survival	**Organism:**	Ampelisca abdita (Amphipod)	**Material:**	Total Ammonia
Protocol:	PSEP (1995)	**Endpoint:**	Proportion Survived	**Source:**	Reference Toxicant-REF



Mean:	30.54	**Count:**	14	**-1s Warning Limit:**	19.05	**-2s Action Limit:**	11.89
Sigma:	N/A	**CV:**	60.30%	**+1s Warning Limit:**	48.95	**+2s Action Limit:**	78.45

Quality Control Data

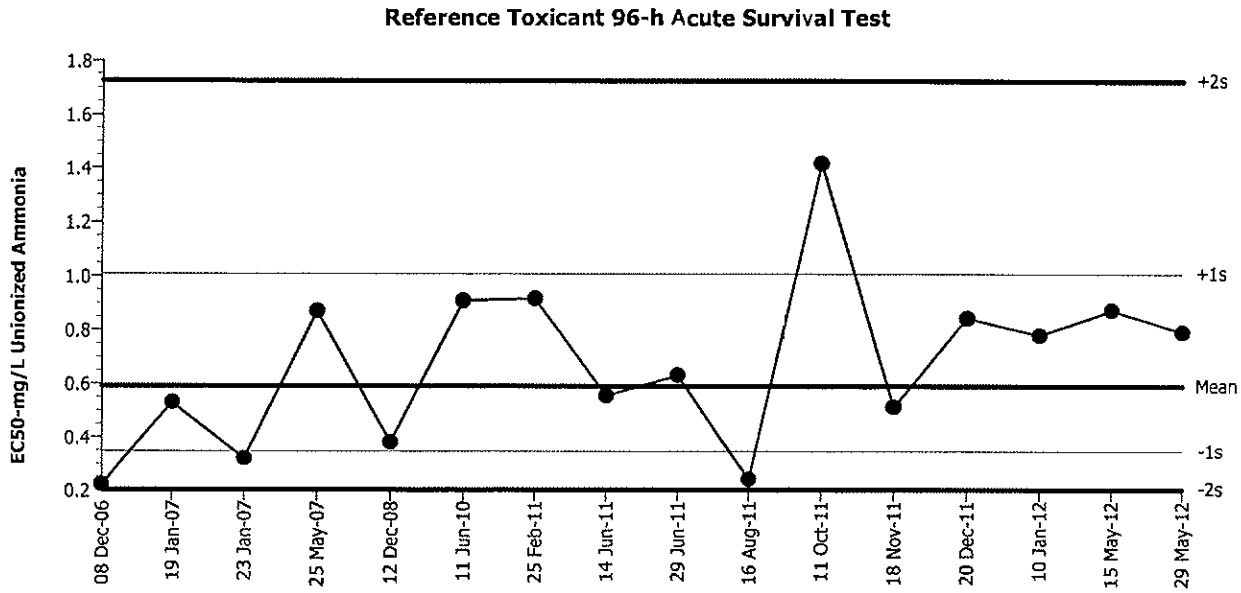
Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2007	Jan	19	30	-0.5389	-0.03774			04-0867-8538	09-6746-9688
2		May	25	50	19.46	1.045	(+)		20-2307-8462	02-5048-4552
3	2008	Dec	12	22.2	-8.339	-0.6761			03-9393-0024	06-2272-7835
4	2009	Jan	9	30	-0.5389	-0.03774			09-3044-5788	07-2104-7796
5	2010	Jun	11	60.9	30.36	1.463	(+)		08-5480-7806	06-7234-3147
6	2011	Feb	25	39.4	8.861	0.5401			03-2055-3347	18-6946-0904
7		Jun	14	25.8	-4.739	-0.3575			09-1868-5874	08-4613-6849
8			29	43.6	13.06	0.7548			14-9305-3005	02-2254-3879
9		Aug	16	9.19	-21.35	-2.546	(-)	(-)	06-9854-2879	01-4256-2767
10		Oct	11	19.5	-11.04	-0.951			01-0904-0691	03-2353-8601
11		Nov	18	29.2	-1.339	-0.09504			12-2254-4742	16-1204-1880
12		Dec	20	29.7	-0.8389	-0.05905			14-0527-6203	01-1824-3598
13	2012	Jan	10	48	17.46	0.9587			03-9063-0419	05-6146-2767
14		May	15	30.3	-0.2389	-0.01665			19-7667-7405	08-1012-4639
15			29	15.4	-15.14	-1.451	(-)		03-7733-4362	15-2881-2817

CETIS QC Plot

Report Date: 05 Jun-12 16:37 (1 of 1)

Reference Toxicant 96-h Acute Survival Test — **NewFields**

Test Type:	Survival	**Organism:**	Ampelisca abdita (Amphipod)	**Material:**	Unionized Ammonia
Protocol:	PSEP (1995)	**Endpoint:**	Proportion Survived	**Source:**	Reference Toxicant-REF



Mean:	0.5903	**Count:**	15	**-1s Warning Limit:**	0.3453	**-2s Action Limit:**	0.2021
Sigma:	N/A	**CV:**	70.90%	**+1s Warning Limit:**	1.009	**+2s Action Limit:**	1.724

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2006	Dec	8	0.2221	-0.3681	-1.823	(-)		20-8133-3870	16-7371-9581
2	2007	Jan	19	0.53	-0.06021	-0.2007			08-9448-4268	11-3900-4742
3			23	0.3197	-0.2706	-1.144	(-)		15-5025-5985	21-1423-6025
4		May	25	0.8699	0.2797	0.7236			21-4477-7834	07-8792-6416
5	2008	Dec	12	0.3812	-0.2091	-0.8158			17-8636-4567	07-7233-4490
6	2010	Jun	11	0.9091	0.3189	0.8059			20-7458-9450	13-8247-7628
7	2011	Feb	25	0.9162	0.3259	0.8203			09-2688-2854	12-8321-3321
8		Jun	14	0.555	-0.03528	-0.115			03-9735-4526	03-6206-6429
9			29	0.6316	0.04129	0.1262			16-0038-0342	16-2517-1647
10		Aug	16	0.2412	-0.3491	-1.67	(-)		17-1366-6383	13-9366-5712
11		Oct	11	1.417	0.8268	1.634	(+)		03-7596-2776	15-2068-6133
12		Nov	18	0.5128	-0.07746	-0.2625			04-9643-4979	12-9127-7177
13		Dec	20	0.8443	0.2541	0.6679			03-1982-3174	07-2473-9439
14	2012	Jan	10	0.7803	0.19	0.5207			14-0134-9355	05-9622-2552
15		May	15	0.8746	0.2844	0.7337			19-0654-4665	02-2736-5527
16			29	0.7925	0.2022	0.5497			16-2142-7193	00-6495-6483

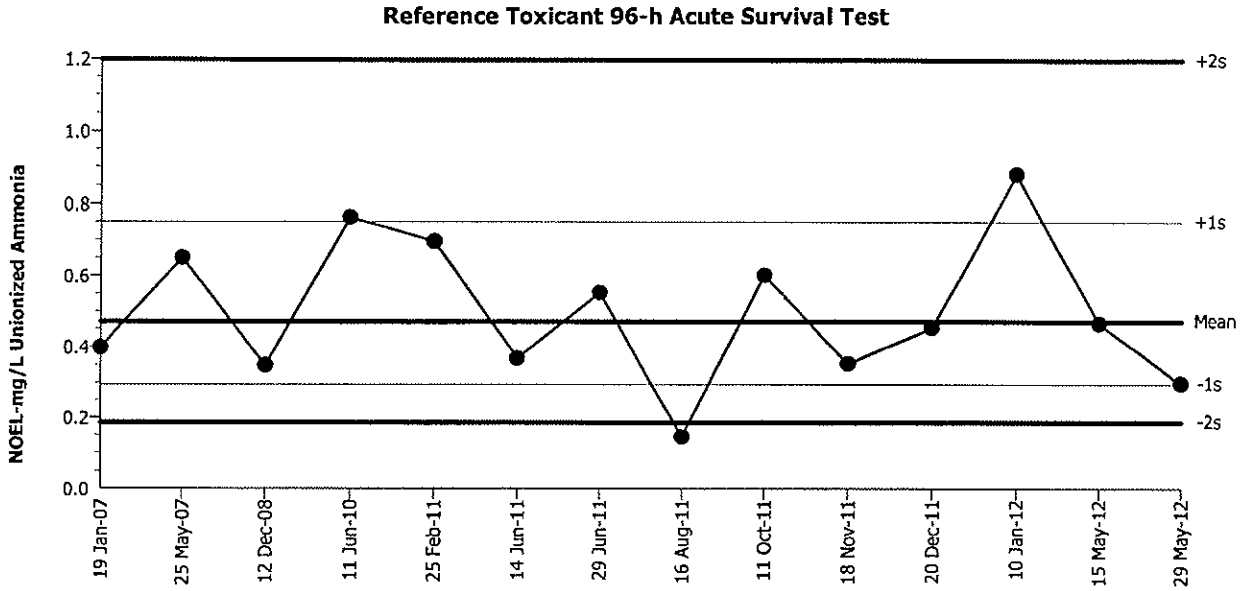
Analyst: BH QA: BH

CETIS QC Plot

Report Date: 05 Jun-12 16:37 (1 of 1)

Reference Toxicant 96-h Acute Survival Test — NewFields

Test Type:	Survival	Organism:	Ampelisca abdita (Amphipod)	Material:	Unionized Ammonia
Protocol:	PSEP (1995)	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF



Mean:	0.4703	Count:	13	-1s Warning Limit:	0.2948	-2s Action Limit:	0.1848
Sigma:	N/A	CV:	59.50%	+1s Warning Limit:	0.7502	+2s Action Limit:	1.197

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2007	Jan	19	0.398	-0.07229	-0.3574			08-9448-4268	07-1730-5485
2		May	25	0.65	0.1797	0.693			21-4477-7834	11-9194-6778
3	2008	Dec	12	0.348	-0.1223	-0.6449			17-8636-4567	05-3149-6205
4	2010	Jun	11	0.762	0.2917	1.033	(+)		20-7458-9450	11-3710-8048
5	2011	Feb	25	0.695	0.2247	0.8363			09-2688-2854	14-0879-4327
6		Jun	14	0.368	-0.1023	-0.5252			03-9735-4526	14-8243-3209
7			29	0.552	0.08171	0.343			16-0038-0342	13-6006-5675
8		Aug	16	0.145	-0.3253	-2.52	(-)	(-)	17-1366-6383	11-0269-0125
9		Oct	11	0.601	0.1307	0.5251			03-7596-2776	09-5230-7986
10		Nov	18	0.352	-0.1183	-0.6204			04-9643-4979	01-1905-2738
11		Dec	20	0.453	-0.01729	-0.08022			03-1982-3174	05-0111-8797
12	2012	Jan	10	0.88	0.4097	1.342	(+)		14-0134-9355	16-9430-9459
13		May	15	0.465	-0.005293	-0.02424			19-0654-4665	02-1023-3166
14			29	0.296	-0.1743	-0.9914			16-2142-7193	05-9105-0121

CETIS Summary Report

Report Date: 05 Jun-12 16:37 (p 1 of 1)
Test Code: 60A503F9 | 16-2142-7193

Reference Toxicant 96-h Acute Survival Test — NewFields

atch ID:	07-1469-0285	Test Type:	Survival	Analyst:	
Start Date:	29 May-12 16:30	Protocol:	PSEP (1995)	Diluent:	Laboratory Seawater
Ending Date:	02 Jun-12 17:25	Species:	Ampelisca abdita	Brine:	Not Applicable
Duration:	4d 1h	Source:	Brezina and Associates	Age:	

Sample ID:	09-8796-1453	Code:	3AE3186D	Client:	Internal Lab
Sample Date:	27 Sep-11	Material:	Unionized Ammonia	Project:	Reference Toxicant
Receive Date:	27 Sep-11	Source:	Reference Toxicant		
Sample Age:	245d 16h	Station:	P110927.50		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
05-9105-0121	Proportion Survived	0.296	0.702	0.4558	21.0%		Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
00-6495-6483	Proportion Survived	EC50	0.7925	0.6674	0.941		Trimmed Spearman-Kärber

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	0.9667	0.9451	0.9882	0.9	1	0.03333	0.05774	5.97%	0.0%
0.296		3	0.9	0.8627	0.9373	0.8	1	0.05774	0.1	11.11%	6.9%
0.702		3	0.6	0.5253	0.6747	0.4	0.8	0.1155	0.2	33.33%	37.93%
1.166		3	0.3	0.2627	0.3373	0.2	0.4	0.05774	0.1	33.33%	68.97%
1.735		3	0	0	0	0	0	0	0		100.0%
2.152		3	0	0	0	0	0	0	0		100.0%

roportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	0.9	1
0.296		0.9	0.8	1
0.702		0.6	0.8	0.4
1.166		0.3	0.4	0.2
1.735		0	0	0
2.152		0	0	0

CETIS Test Data Worksheet

Report Date: 05 Jun-12 16:36 (p 1 of 1)
Test Code: 16-2142-7193/60A503F9

Reference Toxicant 96-h Acute Survival Test — **NewFields**

Start Date:	29 May-12 16:30	**Species:**	Ampelisca abdita	**Sample Code:**	3AE3186D
End Date:	02 Jun-12 17:25	**Protocol:**	PSEP (1995)	**Sample Source:**	Reference Toxicant
Sample Date:	27 Sep-11	**Material:**	Unionized Ammonia	**Sample Station:**	P110927.50

Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	14	10	10	
0	D	2	12	10	9	
0	D	3	9	10	10	
0.296		1	15	10	9	
0.296		2	3	10	8	
0.296		3	10	10	10	
0.702		1	2	10	6	
0.702		2	16	10	8	
0.702		3	18	10	4	
1.166		1	6	10	3	
1.166		2	11	10	4	
1.166		3	13	10	2	
1.735		1	17	10	0	
1.735		2	4	10	0	
1.735		3	8	10	0	
2.152		1	7	10	0	
2.152		2	5	10	0	
2.152		3	1	10	0	

CETIS Summary Report

Report Date: 05 Jun-12 16:35 (p 1 of 1)
Test Code: 167DAA5A | 03-7733-4362

Reference Toxicant 96-h Acute Survival Test — NewFields

atch ID:	07-1469-0285	Test Type:	Survival	Analyst:	
Start Date:	29 May-12 16:30	Protocol:	PSEP (1995)	Diluent:	Laboratory Seawater
Ending Date:	02 Jun-12 17:25	Species:	Ampelisca abdita	Brine:	Not Applicable
Duration:	4d 1h	Source:	Brezina and Associates	Age:	

Sample ID:	09-8340-5253	Code:	3A9D92C5	Client:	Internal Lab
Sample Date:	27 Sep-11	Material:	Total Ammonia	Project:	Reference Toxicant
Receive Date:	27 Sep-11	Source:	Reference Toxicant		
Sample Age:	245d 16h	Station:	P110927.50		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
15-2881-2817	Proportion Survived	15.4	36	23.55	21.0%		Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
00-5524-0466	Proportion Survived	EC50	46.32	37.44	57.3		Trimmed Spearman-Kärber

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	0.9667	0.9451	0.9882	0.9	1	0.03333	0.05774	5.97%	0.0%
15.4		3	0.9	0.8627	0.9373	0.8	1	0.05774	0.1	11.11%	6.9%
36		3	0.6	0.5253	0.6747	0.4	0.8	0.1155	0.2	33.33%	37.93%
75		3	0.3	0.2627	0.3373	0.2	0.4	0.05774	0.1	33.33%	68.97%
139		3	0	0	0	0	0	0	0		100.0%
270		3	0	0	0	0	0	0	0		100.0%

Proportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	0.9	1
15.4		0.9	0.8	1
36		0.6	0.8	0.4
75		0.3	0.4	0.2
139		0	0	0
270		0	0	0

CETIS Test Data Worksheet

Report Date: 05 Jun-12 16:34 (p 1 of 1)
Test Code: 03-7733-4362/167DAA5A

Reference Toxicant 96-h Acute Survival Test **NewFields**

Start Date: 29 May-12 16:30 **Species:** Ampelisca abdita **Sample Code:** 3A9D92C5
End Date: 02 Jun-12 17:25 **Protocol:** PSEP (1995) **Sample Source:** Reference Toxicant
Sample Date: 27 Sep-11 **Material:** Total Ammonia **Sample Station:** P110927.50

Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	12	10	10	
0	D	2	1	10	9	
0	D	3	6	10	10	
15.4		1	2	10	9	
15.4		2	14	10	8	
15.4		3	13	10	10	
36		1	15	10	6	
36		2	18	10	8	
36		3	17	10	4	
75		1	10	10	3	
75		2	11	10	4	
75		3	5	10	2	
139		1	3	10	0	
139		2	4	10	0	
139		3	16	10	0	
270		1	8	10	0	
270		2	7	10	0	
270		3	9	10	0	

Ammonia Reference Toxicant Test Survival Data Sheet

NEWFIELDS

SPECIES					
			Ampelisca abdita		
CLIENT	PROJECT	NEWFIELDS JOB NO.	PROJECT MANAGER	MEC LABORATORY	PROTOCOL
Anchor QEA	I & J Waterway	860.0024.000	Bill Gardiner	Port Gamble Room 1	PSEP 1995

SURVIVAL & BEHAVIOR DATA

N = Normal
#E = Emergence
#M = Mortality or Molts
G = Growth
(fungal, bacterial, or algal)
D = No Air Flow (DO?)
FOS = Floating on Surface
TC = Too Cloudy

INITIAL # OF ORGANISMS: 10

CLIENT/ NEWFIELDS ID	CONC. value	CONC. units	REP	INITIAL NUMBER	DATE 5/30/12 TECHNICIAN CR #ALIVE	#DEAD	OBS	DATE 5/31/12 TECHNICIAN CR #ALIVE	#DEAD	OBS	DATE 6/01/12 TECHNICIAN JL #ALIVE	#DEAD	OBS	DATE 6/02/12 TECHNICIAN JL #ALIVE	#DEAD	OBS
Ref.Tox.-	0	mg/L	1	10	10	0	5FOS	10	0	3FOS	10	Ø	1FOS	10	Ø	1FOS
			2		10	0	5FOS	10	0	4FOS	9	1	3FOS	9	Ø	N
			3		10	0	5FOS	10	0	5FOS	10	Ø	2FOS	10	Ø	1FOS
Ref.Tox.-	15	mg/L	1		10	0	5FOS	10	0	3FOS	10	Ø	2FOS	9	1	N
			2		9	1	3FOS	9	0	2FOS	9	Ø	2FOS	8	1	
			3		10	0	3FOS	10	0	2FOS	10	Ø	2FOS	10	Ø	2FOS
Ref.Tox.-	30	mg/L	1		9	1	4FOS	7	2	2FOS	7	Ø	4FOS	6	1	2FOS
			2		10	0	1FOS	9	1	4FOS	9	Ø	3FOS	8	1	1FOS
			3		10	0	N	8	2	2FOS	7	1	4FOS	4	3	N
Ref.Tox.-	60	mg/L	1		10	0	3FOS	8	2	1FOS	7	1	N	3	4	N
			2		10	0	N	7	3	1FOS	4	3	1FOS	4	Ø	
			3		10	0	2FOS	7	3	N	6	1	N	2	4	
Ref.Tox.-	120	mg/L	1		5	5	4FOS	1	4	N	Ø	1	NA			
			2		6	4	4FOS	2	4	N	Ø	2				
			3		9	1	1FOS	1	8	N	Ø	1				
Ref.Tox.-	240	mg/L	1		1	9	1FOS	0	1	N						
			2		0	10	N									
			3		0	10	3FOS									

NEW FIELDS

Ammonia Reference Toxicant Test Water Quality Data Sheet

CLIENT	PROJECT	SPECIES	NEWFIELDS LABORATORY	PROTOCOL
Anchor QEA	I & J Waterway	*Ampelisca abdita*	Port Gamble Room 1	PSEP 1995

NEWFIELDS JOB NUMBER	PROJECT MANAGER	QUANTITY OF STOCK: See	QUANTITY OF DILUENT: ~~1500mL~~ See	INIT MMB
860.0024.000	Bill Gardiner	ACTUAL: spiking worksheet	ACTUAL: spiking worksheet	DATE PREP 5/29/12

TEST ID	LOT #:	TEST START DATE	TIME	TEST END DATE	TIME
P110927.50	111079	29May12	1630	02Jun12	1725

WATER QUALITY DATA

DILTIN.WAT.BATCH	TEMP REC#	REFERENCE TOX. MATERIAL	REFERENCE TOXXICANT	LOT NO.	96-H LC_{50}
FSW		0	0		

TEST CONDITIONS	DO (mg/L)	TEMP(C)	SAL (ppt)	pH	TECHNICIAN	AMMONIA	SULFIDES
	> 5.0	15 ± 1	28 ± 1	7.8 ± 0.5			

CLIENT/ NEWFIELDS ID	CONCENTRATION value	CONCENTRATION units	DAY	REP	D.O. meter	D.O. mg/L	TEMP. meter	TEMP. °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WQ TECH	AMMONIA METER	AMMONIA mg/L	AMMONIA Tech	SULFIDES meter	SULFIDES mg/L	SULFIDES Tech
Ref.Tox.-	0	mg/L	0	Stock	6	7.9	6	19.4	2	28	2	7.7	CR	3	0.132	JL			
			4	1	6	7.3	6	20.2	2	28	2	7.5	JL						
Ref.Tox.-	15	mg/L	0	Stock	6	8.0	6	19.4	2	28	2	7.8	CR	3	15.4	JL			
			4	1	6	7.3	6	20.1	2	28	2	7.6	JL						
Ref.Tox.-	30	mg/L	0	Stock	6	8.0	6	19.4	2	28	2	7.8	CR	3	36.0	JL			
			4	1	6	7.3	6	20.1	2	28	2	7.6	JL						
Ref.Tox.-	60	mg/L	0	Stock	6	8.0	6	19.4	2	28	2	7.7	CR	3	75.0	JL			
			4	1	6	7.3	6	20.2	2	28	2	7.6	JL						
Ref.Tox.-	120	mg/L	0	Stock	6	8.0	6	19.4	2	28	2	7.6	CR	3	139	JL			
			4	1															
Ref.Tox.-	240	mg/L	0	Stock	6	8.0	6	19.4	2	28	2	7.4	CR	3	270	JL			
			4	1															

Reference Toxicant
Ammmonia Spiking Worksheet

Amp NH_3 RT

Assumptions in Model
Stock ammonia concentration is 10,000 mg/L = 10 mg/mL

Actual Reading
10430

Test Solutions			Volume of stock to reach desired concentration	
Measured Concentration mg/L	Desired Concentration mg/L	Volume mL	mL stock to increase FRESH WATER	SALT WATER
	240	750	[illegible]	25.88686481
	120	750	[illegible]	12.94343241
	60	750	[illegible]	6.471716203
	30	750	[illegible]	3.235858102
	15	750	[illegible]	1.617929051
	0	750	[illegible]	0
			[illegible]	0
			[illegible]	0
			[illegible]	0

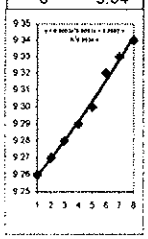
NEWFIELDS

Un-ionized Ammonia Calculator

Project:	Ammonia RT	Date of Test:	29-May-12
Project ID:	Internal	Test Type:	*Ampelisca abdita*

To convert Total Ammonia (mg/L) to Free (un-ionized) Ammonia (mg/L) enter the corresponding total ammonia, salinity, temperature, and pH.

Integer:	I-factor
1	9.26
2	9.27
3	9.28
4	9.29
5	9.30
6	9.32
7	9.33
8	9.34



	Sample	Mod	*NH3T (mg/L)*	*salinity (ppt)*	*pH*	*temp (C)*	temp (K)	i-factor	Mod	**NH3U (mg/L)**
	Example		0.610	22.9	8.0	24.1	297.26	9.3053		**0.027**
	Example2		2.000	10.0	7.5	5.0	278.16	9.2750		**0.008**
1										
2	15		15.400	28	7.8	19.0	292.16	9.3187		**0.296**
3	30		36.000	28	7.8	19.2	292.36	9.3187		**0.702**
4	60		75.000	28	7.7	19.2	292.36	9.3187		**1.166**
5	120		139.000	28	7.6	19.3	292.46	9.3187		**1.735**
6	240		270.000	28	7.4	19.4	292.56	9.3187		**2.152**
7										
8										
9										
10										
11										
12										
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APPENDIX A.2.1

Neanthes arenaceodentata

Juvenile Polychaete Bioassay

Laboratory Data Sheets

NEWFIELDS

20-DAY SOLID PHASE BIOASSAY
OBSERVATION DATASHEET

CLIENT	PROJECT	JOB NO.	PROJECT MANAGER	NEWFIELDS LABORATORY	PROTOCOL	SPECIES
Anchor QEA	I & J Waterway		Bill Gardiner	Port Gamble Room 1	PSEP 1995	*Neanthes arenaceodentata*

ENDPOINT DATA & OBSERVATIONS

N = Normal
#E = Emergence
#M = Mortality
G = Growth (fungal, bacterial, or algal)
D = No Air Flow (DO?)
FOS = Floating on Surface
TC = Too Cloudy
U=Excess food

INITIAL # OF ORGANISMS: 5

CLIENT/NEWFIELDS ID	REP	JAR	INITIAL #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	NUMBER REMAINING	TARE WEIGHT (mg)	TOTAL WEIGHT (mg)	ASHED WEIGHT (mg)
			Date and Initials	5/24 MMB	5/25 GR	5/26 JL	5/27 JL	5/28 GR	5/29 GR	5/30 GR	5/31 GR	6/01 JL	6/02 JL	6/03 JL	6/4 JL	6/5 MMB	6/6 MMB	6/7 JL	6/08 JL	6/09 JL	6/10 JL	6/11 MMB	6/12 MMB				
Control /	1	26	5	N	N	N	N	N	N	U	N	N	N	N	N	N	N	N	N	N	N	N	N	5	1 211.59	340.25	268.93
	2	44	5							U					N				6					5	2 238.62	347.10	276.78
	3	39	5							U					N				15					5	3 208.78	345.92	266.05
	4	24	5							N					N				N	6				5	4 220.32	328.53	256.52
	5	45	5							U					N					15	6			5	5 239.42	378.16	296.84
CR-023 /	1	34	5							N					N					N	N	N	N	5	6 239.78	340.33	263.40
	2	8	5							U					N									5	7 227.68	311.48	243.25
	3	7	5							U					N									4	8 219.00	319.70	242.97
	4	43	5							U					N									5	9 227.36	321.98	244.72
	5	3	5						6	U	6	6	6	6	N				6	6	6			5	10 227.73	333.01	251.79
CR-12 /	1	47	5						G	G,U	G,U	G	G	G	G	G	G	G	G	G	N	N	N	5	11 231.00	340.29	263.19
	2	30	5						G	G,U		G	G	G	G		G				G	G	G	5	12 233.63	341.41	269.62
	3	20	5						G	G,U		N	G	G	G		G,15							5	13 232.04	353.02	274.38
	4	33	5						G	G,U	18	G	G	G	G		G		6					5	14 331.53	465.74	390.52
	5	14	5			6	6		G	G,U		G	G	G	G		G		15,G	6	6			4 ②	15 317.01	401.58	344.41

	Rep	Number	Tare Weight (mg)	Dry Weight (mg)	Ashed Weight (mg)	Comments:
Initial Biomass	1	5	45.39	~~50.40~~ ①	50.13	46.00
	2	5	45.05	~~50.79~~	50.32	45.75
	3	5	44.93	~~50.39~~	49.96	45.63

① samples re-dried and weighed 6.1.12 BH

② one worm was really small 6/12/12 JL

NEWFIELDS

20-DAY SOLID PHASE BIOASSAY
OBSERVATION DATASHEET

CLIENT	PROJECT	JOB N0.	PROJECT MANAGER	NEWFIELDS LABORATORY	PROTOCOL	SPECIES
Anchor QEA	I & J Waterway		Bill Gardiner	Port Gamble Room 1	PSEP 1995	*Neanthes arenaceodentata*

ENDPOINT DATA & OBSERVATIONS

N = Normal
#E = Emergence
#M = Mortality
G = Growth
(fungal, bacterial, or algal)
D = No Air Flow (DO?)
FOS = Floating on Surface
TC = Too Cloudy
U=Excess food

INITIAL # OF ORGANISMS: 5

CLIENT/NEWFIELDS ID	REP	JAR	INITIAL #	Date and initials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	NUMBER REMAINING	TARE WEIGHT (mg)	TOTAL WEIGHT (mg)	ASHED WEIGHT (mg)
				5/24 MMB	5/25 CR	5/26 JL	5/27 JL	5/28 CR	5/29 CR	5/30 CR	5/31 CR	6/01 JL	6/02 JL	6/03 JL	6/4 JL	6/5 MMB	6/6 MMB	6/7 JL	6/08 JL	6/09 JL	6/10 JL	6/11 MMB	6/12 MMB					
IJ12-01 /	1	17	5		N	N	N	N	N	N	U	N	N	N	N	N	N	G	G	G	G	G	G	G	5	16 255.76	352.36	280.15
	2	25	5								U			IS	G	G	G	G					G	G	5	17 251.41	346.16	272.70
	3	2	5								U			N	N	N	N	N	N	N	N	N	IS	N	5	18 261.95	347.65	285.23
	4	13	5							OS	U		G			G	G	G	G			G	G	G	5	19 265.83	359.21	288.83
	5	10	5								U		N			N	N	N	IS				G, IS	G	5	20 290.30	395.99	314.91
IJ12-02 /	1	48	5							G	G,U	G	G	G	G	G	G	G		G	G	G	G	G	5	21 293.96	383.50	② ~~268.89~~ 311.53
	2	29	5							G	G		G	G	G	G							G, IS	G	5	22 235.04	327.40	250.81
	3	18	5							N	N		N	N	N	N				N	N	N	N	N	5	23 219.27	310.52	240.24
	4	6	5							G	G		G	G	G	G				G	G	G	G	G	5	24 216.56	313.29	236.70
	5	28	5							G	G		G	G, IS	G	G						G, IS	G	G	5	25 221.48	324.21	242.35
IJ12-03 /	1	19	5							N	G,U		G	G	G	G	G	G, IS		G		G	G	G	5	26 233.40	337.92	258.86
	2	4	5							G	G		G	G	G	G		G		IS, G					5	27 232.61	344.51	257.67
	3	35	5							G	G		G	G	G	G				G					5	28 272.31	394.32	300.96
	4	37	5							G	G		G	G	G	G									5	29 264.63	368.84	289.23
	5	23	5							G	G		G	G	G	G									5	30 269.81	378.60	291.72

① WC CR 5/29
② WC, JL 6/15 (311.53)

NEWFIELDS

20-DAY SOLID PHASE BIOASSAY
OBSERVATION DATASHEET

CLIENT	PROJECT	JOB NO.	PROJECT MANAGER	NEWFIELDS LABORATORY	PROTOCOL	SPECIES
Anchor QEA	I & J Waterway		Bill Gardiner	Port Gamble Room 1	PSEP 1995	*Neanthes arenaceodentata*

ENDPOINT DATA & OBSERVATIONS

N = Normal
#E = Emergence
#M = Mortality
G = Growth
(fungal, bacterial, or algal)
D = No Air Flow (DO?)
FOS = Floating on Surface
TC = Too Cloudy
U=Excess food

INITIAL # OF ORGANISMS: 5

CLIENT/NEWFIELDS ID	REP	JAR	INITIAL #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	NUMBER REMAINING	TARE WEIGHT (mg)	TOTAL WEIGHT (mg)	ASHED WEIGHT (mg)
			Date and Initials	5/24 MMB	5/25 CR	5/26 JL	5/27 JL	5/28 CR	5/29 CR	5/30 CR	6/01 JL	②	6/02 JL	6/03 JL	6/4 JL	6/5 MMB	6/6 MMB	6/7 JL	6/8 JL	6/9 JL	6/10 JL	6/11 MMB	6/12 MMB				
IJ12-05 /	1	42	5	N	N	N	N	N	G	G,U	G	→	G	G	G	G	G	G	G	G	G	G	G	5	31 284.62	389.94	310.57
	2	9	5	↓	↓	↓	↓	↓	N	N ①	N	→	N	G	G	↓	↓	↓	N	N	N	N	N	5	32 272.75	369.15	297.29
	3	21	5	↓	↓	↓	↓	↓	N	U	G	→	↓	N	N	↓	↓	↓	G	G	G	G	G	5	33 270.83	352.66	290.59
	4	32	5	↓	↓	↓	↓	↓	G	G	G	→	G	G	G	↓	↓	↓	↓	↓	↓	↓	↓	5	34 295.40	404.24	323.59
	5	36	5	↓	↓	↓	↓	↓	G	G	G	→	G	N	G	↓	↓	↓	↓	↓	↓	↓	↓	5	35 301.62	398.34	333.43
IJ12-07 /	1	5	5	↓	↓	↓	↓	↓	N	G	G	→	G	G	G	G	G	↓	G	↓	G,S	G,S	G	3 4	36 258.08	316.02	277.78
	2	41	5	↓	↓	↓	↓	↓	↓	U	G	→	G	G	G	↓	↓	↓	N	N	N	N	N	5	37 290.27	387.39	324.28
	3	27	5	↓	↓	↓	↓	↓	↓	G	G	→	G	G	G	↓	↓	↓	G	G	G	G	G	3	38 302.71	343.74	316.47
	4	40	5	↓	↓	↓	↓	↓	↓	G,U	G	→	G	G	G	↓	↓	↓	N	N	G	G	↓	5	39 286.15	392.57	316.02
	5	46	5	↓	↓	↓	↓	↓	G	G,U	G	→	G	G	G	↓	↓	↓	↓	↓	N	G	↓	5	40 296.30	422.77	328.86

① Dead clam found in jar and removed CR 5/30
② Data recorded in wrong column, JL 6/01/12
③ One short worm 6/12/12

41 275.67
42 250.35

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	1140 /	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
Control /	0	Surr	15	6	7.6	6	19.5	2	26	2	7.7		JL	CR 5/23
Control /	1	Surr	15	6	7.3	6	20.0	2	26	2	7.6			[illegible] 5/24
Control /	2	Surr	15	6	7.4	6	20.0	2	27	2	7.7		MMB	CR 5/25
Control /	3	Surr	15	6	7.2	6	20.2	2	27	2	7.6	JL		JL 5/26
Control /	4	Surr	15	6	7.4	6	20.2	2	27	2	8.0		JL	JL 5/27
Control /	5	Surr	15	6	7.4	6	20.4	2	27	2	7.8			CR 5/28
Control /	6	Surr	15	6	7.5	6	20.0	2	27	2	8.0	MMB	MMB	CR 5/29
Control /	7	Surr	15	6	7.1	6	20.1	2	27	2	7.7			CR 5/30
Control /	8	Surr	15	6	7.2	6	20.2	2	27	2	7.9		CR	CR 5/31
Control /	9	Surr	15	6	7.1	6	20.1	2	27	2	7.8	JL		JL 6/01
Control /	10	Surr	15	6	7.3	6	20.2	2	28	2	7.8		JL	JL 6/02
Control /	11	Surr	15	6	7.3	6	20.0	2	28	2	7.7			JL 6/03
Control /	12	Surr	15	6	7.4	6	20.0	2	28	2	7.8	MMB	MMB	[illegible] 6/4
Control /	13	Surr	15	6	7.3	6	20.1	2	28	2	7.7			MMB 6/5
Control /	14	Surr	15	6	7.4	6	19.5	2	28	2	7.7		MMB	MMB 6/6
Control /	15	Surr	15	6	7.0	6	20.1	2	28	2	7.5	[illegible]		[illegible] 6/7
Control /	16	Surr	15	5	6.7	2	20.2	2	28	2	7.5		JL	MMB 6/8
Control /	17	Surr	15	5	7.0	2	20.4	2	28	2	7.7			JL 6/09
Control /	18	Surr	15	5	7.1	2	20.5	2	28	2	7.7	JL	JL	JL 6/10
Control /	19	Surr	15	5	6.9	2	20.2	2	28	2	7.6			CR 6/11
Control /	20	Surr	15	5	6.9	2	20.4	2	28	2	7.6			MMB 6/12

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	/	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
CR-023 /	0	Surr	16	6	7.6	6	19.8	2	27	2	7.7		JL	CR 5/23
CR-023 /	1	Surr	16	6	7.3	6	20.0	2	27	2	7.6			JL 5/24
CR-023 /	2	Surr	16	6	7.6	6	20.0	2	28	2	7.5		MMB	CR 5/25
CR-023 /	3	Surr	16	6	7.2	6	20.2	2	28	2	7.5	JL		JL 5/26
CR-023 /	4	Surr	16	6	7.5	6	20.1	2	28	2	7.8		JL	JL 5/26① 27
CR-023 /	5	Surr	16	6	7.5	6	20.3	2	28	2	7.8			CR 5/28
CR-023 /	6	Surr	16	6	7.6	6	20.0	2	28	2	7.9	MMB	MMB	CR 5/29
CR-023 /	7	Surr	16	6	7.2	6	20.1	2	28	2	7.6			CR 5/30
CR-023 /	8	Surr	16	6	7.3	6	20.1	2	28	2	7.6		CR	CR 5/31
CR-023 /	9	Surr	16	6	7.1	6	20.1	2	28	2	7.7	JL		JL 6/01
CR-023 /	10	Surr	16	6	7.3	6	20.1	2	28	2	7.7		JL	JL 6/02
CR-023 /	11	Surr	16	6	7.2	6	20.0	2	28	2	7.7			JL 6/03
CR-023 /	12	Surr	16	6	7.4	6	20.0	2	28	2	7.5	MMB	MMB	JL 6/4
CR-023 /	13	Surr	16	6	7.4	6	20.1	2	28	2	7.6			MMB 6/5
CR-023 /	14	Surr	16	6	7.3	6	19.9	2	28	2	7.7		MMB	MMB 6/6
CR-023 /	15	Surr	16	6	7.1	6	20.1	2	28	2	7.5	JL		JL 6/7
CR-023 /	16	Surr	16	5	6.8	2	20.2	2	28	2	7.5		JL	MMB 6/8
CR-023 /	17	Surr	16	5	7.0	2	20.4	2	28	2	7.4			JL 6/09
CR-023 /	18	Surr	16	5	7.0	2	20.5	2	28	2	7.7	JL	JL	JL 6/10
CR-023 /	19	Surr	16	5	7.1	2	20.2	2	28	2	7.6			CR 6/11
CR-023 /	20	Surr	16	5	7.1	2	20.4	2	28	2	7.6			MMB 6/12

① WD, JL 5/27/12

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	/	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
CR-12 /	0	Surr	22	6	7.6	6	20.1	2	27	2	7.4		JL	CR 5/23
CR-12 /	1	Surr	22	6	7.2	6	20.0	2	27	2	7.5			[illegible] 5/24
CR-12 /	2	Surr	22	6	7.6	6	20.0	2	27	2	7.6		MMB	CR 5/25
CR-12 /	3	Surr	22	6	7.1	6	20.2	2	27	2	7.7	JL		JL 5/26
CR-12 /	4	Surr	22	6	7.5	6	20.3	2	28	2	7.8		JL	JL 5/27
CR-12 /	5	Surr	22	6	7.5	6	20.3	2	28	2	7.7			CR 5/28
CR-12 /	6	Surr	22	6	7.7	6	20.0	2	28	2	7.9	MMB	MMB	CR 5/29
CR-12 /	7	Surr	22	6	7.3	6	20.1	2	28	2	7.7			CR 5/30
CR-12 /	8	Surr	22	6	7.4	6	20.2	2	28	2	7.7		CR	CR 5/31
CR-12 /	9	Surr	22	6	7.3	6	20.1	2	28	2	7.7	JL		JL 6/01
CR-12 /	10	Surr	22	6	7.4	6	20.2	2	28	2	7.6		JL	JL 6/02
CR-12 /	11	Surr	22	6	7.3	6	20.1	2	28	2	7.7			JL 6/03
CR-12 /	12	Surr	22	6	7.5	6	20.0	2	28	2	7.6	MMB	MMB	[illegible] 6/4
CR-12 /	13	Surr	22	6	7.5	6	20.0	2	28	2	7.6			MMB 6/5
CR-12 /	14	Surr	22	6	7.4	6	19.9	2	28	2	7.8		MMB	MMB 6/6
CR-12 /	15	Surr	22	6	7.4	6	20.1	2	28	2	7.6	[illegible]		[illegible] 6/7
CR-12 /	16	Surr	22	5	7.3	2	20.2	2	28	2	7.6		JL	MMB 6/8
CR-12 /	17	Surr	22	5	7.5	2	20.4	2	28	2	7.5			JL 6/09
CR-12 /	18	Surr	22	5	7.6	~~2~~ 6 ①	20.5	2	28	2	7.8	JL	JL	JL 6/10
CR-12 /	19	Surr	22	5	7.2	2	20.2	2	28	2	7.6			CR 6/11
CR-12 /	20	Surr	22	5	7.0	2	20.4	2	28	2	7.6			MMB 6/12

① Wrong meter, JL 6/10/12

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	/	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
IJ12-01 /	0	Surr	11	6	7.5	6	19.7	2	27	2	7.8		JL	CR 5/23
IJ12-01 /	1	Surr	11	6	7.5	6	20.0	2	26	2	7.7			JL 5/24
IJ12-01 /	2	Surr	11	6	7.4	6	20.0	2	26	2	7.8		MMB	CR 5/25
IJ12-01 /	3	Surr	11	6	7.2	6	20.2	2	26	2	7.8	JL		JL 5/26
IJ12-01 /	4	Surr	11	6	7.4	6	20.0	2	27	2	8.0		JL	JL 5/27
IJ12-01 /	5	Surr	11	6	7.4	6	20.3	2	27	2	8.0			CR 5/28
IJ12-01 /	6	Surr	11	6	7.5	6	19.9	2	27	2	8.1	MMB	MMB	CR 5/29
IJ12-01 /	7	Surr	11	6	① ~~8.5~~ 7.2	6	20.1	2	27	2	7.9			CR 5/30
IJ12-01 /	8	Surr	11	6	7.1	6	20.2	2	27	2	7.9		CR	CR 5/31
IJ12-01 /	9	Surr	11	6	7.1	6	20.1	2	27	2	8.0	JL		JL 6/01
IJ12-01 /	10	Surr	11	6	7.3	6	20.1	2	28	2	8.0		JL	JL 6/02
IJ12-01 /	11	Surr	11	6	7.2	6	20.0	2	28	2	8.0			JL 6/03
IJ12-01 /	12	Surr	11	6	7.4	6	20.0	2	28	2	8.0	MMB	MMB	JL 6/4
IJ12-01 /	13	Surr	11	6	7.2	6	20.0	2	28	2	7.8			MMB 6/5
IJ12-01 /	14	Surr	11	6	7.4	6	19.5	2	28	2	8.0		MMB	MMB 6/6
IJ12-01 /	15	Surr	11	6	7.2	6	20.1	2	28	2	7.9	JL		JL 6/7
IJ12-01 /	16	Surr	11	② 5	6.7	2	20.1	2	28	2	7.8		JL	MMB 6/8
IJ12-01 /	17	Surr	11	5	7.0	2	20.3	2	28	2	7.6			JL 6/09
IJ12-01 /	18	Surr	11	5	7.2	2	20.5	2	28	2	7.9	JL	JL	JL 6/10
IJ12-01 /	19	Surr	11	5	7.0	2	20.1	2	28	2	7.7			CR 6/11
IJ12-01 /	20	Surr	11	5	6.9	2	20.4	2	28	2	7.8			MMB 6/12

① Wrong setting on meter CR 5/30
② Meter = 5, MMB 6/8/12.

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	/	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
IJ12-02 /	0	Surr	1	6	7.4	6	19.6	2	27	2	7.7		JL	CR 5/23
IJ12-02 /	1	Surr	1	6	7.1	6	20.0	2	27	2	7.7			JL 5/24
IJ12-02 /	2	Surr	1	6	7.1	6	19.9	2	27	2	7.8		MMB	CR 5/25
IJ12-02 /	3	Surr	1	6	6.5	6	20.2	2	27 ~~28~~ ①	2	7.9	JL		JL 5/26
IJ12-02 /	4	Surr	1	6	6.5	6	19.9	2	28	2	8.2		JL	JL 5/27
IJ12-02 /	5	Surr	1	6	6.5	6	20.2	2	28	2	8.0			CR 5/28
IJ12-02 /	6	Surr	1	6	6.7	6	19.8	2	28	2	② ~~8~~ 8.0	MMB	MMB	CR 5/29
IJ12-02 /	7	Surr	1	6	7.5	6	20.2	2	28	2	7.9			CR 5/30
IJ12-02 /	8	Surr	1	6	6.0	6	20.3	2	28	2	7.9		CR	CR 5/31
IJ12-02 /	9	Surr	1	6	③ ~~4~~ 6.0	6	20.3	2	28	2	7.5	JL		JL 6/01
IJ12-02 /	10	Surr	1	6	7.3	6	19.8	2	28	2	8.0		JL	JL 6/02
IJ12-02 /	11	Surr	1	6	7.1	6	19.9	2	28	2	8.1			JL 6/03
IJ12-02 /	12	Surr	1	6	7.4	6	19.8	2	28	2	7.9	MMB	MMB	JL 6/4
IJ12-02 /	13	Surr	1	6	7.3	6	20.0	2	28	2	7.7			MMB 6/5
IJ12-02 /	14	Surr	1	6	7.3	6	20.0	2	28	2	8.0		MMB	MMB 6/6
IJ12-02 /	15	Surr	1	6	7.2	6	20.0	2	29	2	8.0	JL		JL 6/7
IJ12-02 /	16	Surr	1	5	7.0	2	19.9	2	29	2	7.9		JL	MMB 6/8
IJ12-02 /	17	Surr	1	5	7.3	2	20.3	2	29	2	7.7			JL 6/09
IJ12-02 /	18	Surr	1	5	7.3	2	20.5	2	29	2	7.8	JL	JL	JL 6/10
IJ12-02 /	19	Surr	1	5	7.5	2	20.0	2	29	2	7.6			CR 6/11
IJ12-02 /	20	Surr	1	5	7.3	2	20.3	2	29	2	7.8			MMB 6/12

① WP, JL 5/26/12
② IE, CR 5/29/12
③ MP, JL 6/01/12

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	/	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
IJ12-03 /	0	Surr	38	6	7.3	6	20.0	2	27	2	7.6		JL	CR 5/23
IJ12-03 /	1	Surr	38	6	6.9	6	20.0	2	27	2	7.5			[illegible] 5/24
IJ12-03 /	2	Surr	38	6	7.3	6	20.0	2	28	2	7.8		MMB	CR 5/25
IJ12-03 /	3	Surr	38	6	6.5	6	20.2	2	28	2	7.4	JL		JL 5/26
IJ12-03 /	4	Surr	38	6	7.1	6	20.6	2	28	2	8.1		JL	JL 5/27
IJ12-03 /	5	Surr	38	6	7.0	6	20.4	2	28	2	7.9			CR 5/28
IJ12-03 /	6	Surr	38	6	7.3	6	20.1	2	28	2	8.3	MMB	MMB	CR 5/29
IJ12-03 /	7	Surr	38	6	6.7	6	20.1	2	28	2	8.0			CR 5/30
IJ12-03 /	8	Surr	38	6	6.9	6	20.2	2	28	2	8.2		CR	CR 5/31
IJ12-03 /	9	Surr	38	6	6.6	6	20.2	2	28	2	7.9	JL		JL 6/01
IJ12-03 /	10	Surr	38	6	7.0	6	20.2	2	28	2	7.9		JL	JL 6/02
IJ12-03 /	11	Surr	38	6	6.9	6	20.1	2	28	2	7.8			JL 6/03
IJ12-03 /	12	Surr	38	6	7.0	6	20.1	2	28	2	7.8	MMB	MMB	[illegible] 6/4
IJ12-03 /	13	Surr	38	6	6.8	6	20.1	2	28	2	7.8			MMB 6/5
IJ12-03 /	14	Surr	38	6	6.9	6	20.0	2	28	2	7.9		MMB	MMB 6/6
IJ12-03 /	15	Surr	38	6	7.0	6	20.1	2	28	2	7.8	[illegible]		[illegible] 6/7
IJ12-03 /	16	Surr	38	5	6.3	2	20.2	2	28	2	7.7		JL	MMB 6/8
IJ12-03 /	17	Surr	38	5	6.8	2	20.4	2	28	2	7.8			JL 6/09
IJ12-03 /	18	Surr	38	5	6.9	2	20.5	2	28	2	7.9	JL	JL	JL 6/10
IJ12-03 /	19	Surr	38	5	6.8	2	20.2	2	28	2	7.7			CR 6/11
IJ12-03 /	20	Surr	38	5	6.8	2	20.4	2	28	2	7.7			MMB 6/12

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	/	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
IJ12-05 /	0	Surr	31	6	7.4	6	20.3	2	27	2	7.7		JL	CR 5/23
IJ12-05 /	1	Surr	31	6	7.0	6	20.0	2	27	2	7.5			JL 5/24
IJ12-05 /	2	Surr	31	6	7.3	6	20.0	2	27	2	7.8		MMB	CR 5/25
IJ12-05 /	3	Surr	31	6	6.6	6	20.2	2	27	2	7.6	JL		JL 5/26
IJ12-05 /	4	Surr	31	6	6.7	6	20.6	2	28	2	8.3		JL	JL 5/27
IJ12-05 /	5	Surr	31	6	7.0	6	20.4	2	28	2	8.2			CR 5/28
IJ12-05 /	6	Surr	31	6	7.3	6	20.1	2	28	2	8.3	MMB	MMB	CR 5/29
IJ12-05 /	7	Surr	31	6	6.6	6	20.1	2	28	2	7.9			CR 5/30
IJ12-05 /	8	Surr	31	6	6.9	6	20.2	2	28	2	8.1		CR	CR 5/31
IJ12-05 /	9	Surr	31	6	6.5	6	20.2	2	28	2	7.8	JL		JL 6/01
IJ12-05 /	10	Surr	31	6	6.7	6	20.2	2	28	2	7.8		JL	JL 6/02
IJ12-05 /	11	Surr	31	6	6.7	6	20.1	2	28	2	7.7			JL 6/03
IJ12-05 /	12	Surr	31	6	6.9	6	20.1	2	28	2	7.7	MMB	MMB	JL 6/4
IJ12-05 /	13	Surr	31	6	6.8	6	20.1	2	28	2	7.7			MMB 6/5
IJ12-05 /	14	Surr	31	6	7.2	6	20.0	2	28	2	7.9		MMB	MMB 6/6
IJ12-05 /	15	Surr	31	6	6.9	6	20.2	2	28	2	7.7	JL		JL 6/7
IJ12-05 /	16	Surr	31	5/①	6.5	2	20.3	2	28	2	7.8		JL	MMB 6/8
IJ12-05 /	17	Surr	31	5	6.9	2	20.4	2	28	2	7.5			JL 6/09
IJ12-05 /	18	Surr	31	5	7.2	2	20.6	2	28	2	7.9	JL	JL	JL 6/10
IJ12-05 /	19	Surr	31	5	7.1	2	20.2	2	28	2	7.7			CR 6/11
IJ12-05 /	20	Surr	31	5	7.0	2	20.4	2	28	2	7.7			MMB 6/12

① IE, Motu = 5, MMB 6/8/12.

NEWFIELDS

20 DAY SOLID PHASE BIOASSAY
WATER QUALITY DATASHEET

CLIENT	PROJECT	START TIME/ END TIME	DILUTION WATER BATCH	PROTOCOL	TEST START DATE
Anchor QEA	I & J Waterway	/	FSW052212.01	PSEP 1995	23-May-2012
JOB NUMBER	**PROJECT MANAGER**	**NEWFIELDS LABORATORY**	**TEMP. RECDR./HOBO#**	**TEST SPECIES**	**TEST END DATE**
	Bill Gardiner			*Neanthes arenaceodentata*	12-Jun-2012

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) > 6.0		TEMP (C) 20 ± 1		SALINITY (ppt) 28 ± 1		pH 8.0±1.0				
CLIENT/NEWFIELDS ID	DAY	REP	JAR	D.O. meter	D.O. mg/L	TEMP meter	TEMP °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WATER RENEWAL	Feeding	TECH/DATE
IJ12-07 /	0	Surr	12	6	7.4	6	19.9	2	27	2	7.7		JL	CR 5/23
IJ12-07 /	1	Surr	12	6	7.2	6	20.0	2	27	2	7.6			JL 5/24
IJ12-07 /	2	Surr	12	6	7.2	6	20.0	2	27	2	8.0		MMB	CR 5/25
IJ12-07 /	3	Surr	12	6	6.9	6	20.2	2	28	2	7.9	JL		JL 5/26
IJ12-07 /	4	Surr	12	6	7.2	6	20.2	2	28	2	8.1		JL	JL 5/27
IJ12-07 /	5	Surr	12	6	7.2	6	20.4	2	28	2	8.1			CR 5/28
IJ12-07 /	6	Surr	12	6	7.4	6	20.0	2	28	2	8.2	MMB	MMB	CR 5/29
IJ12-07 /	7	Surr	12	6	6.9	6	20.1	2	28	2	7.8			CR 5/30
IJ12-07 /	8	Surr	12	6	7.1	6	20.2	2	28	2	8.0		CR	CR 5/31
IJ12-07 /	9	Surr	12	6	①~~7.8~~ 6.9	6	20.2	2	28	2	7.8	JL		JL 6/01
IJ12-07 /	10	Surr	12	6	7.1	6	20.2	2	28	2	7.8		JL	JL 6/02
IJ12-07 /	11	Surr	12	6	7.0	6	20.1	2	28	2	7.8			JL 6/03
IJ12-07 /	12	Surr	12	6	7.2	6	20.0	2	28	2	7.8	MMB	MMB	JL 6/4
IJ12-07 /	13	Surr	12	6	7.0	6	20.1	2	28	2	7.7			MMB 6/5
IJ12-07 /	14	Surr	12	6	7.4	6	19.5	2	28	2	7.8		MMB	MMB 6/6
IJ12-07 /	15	Surr	12	6	7.0	6	20.1	2	28	2	7.8	JL		JL 6/7
IJ12-07 /	16	Surr	12	5	6.2	2	20.2	2	28	2	7.7		JL	MMB 6/8
IJ12-07 /	17	Surr	12	5	7.4	2	20.4	2	28	2	7.8			JL 6/09
IJ12-07 /	18	Surr	12	5	7.5	2	20.5	2	28	2	7.9	JL	JL	JL 6/10
IJ12-07 /	19	Surr	12	5	7.4	2	20.2	2	28	2	7.8			CR 6/11
IJ12-07 /	20	Surr	12	5	7.3	2	20.4	2	28	2	7.8			MMB 6/12

① WC, JL 6/01/12

NEWFIELDS

Ammonia and Sulfide Analysis Record

Client/Project: Anchor/ I & J	Organism: Neanthes	Test Duration (days): 20

~~PRETEST~~ / INITIAL / ~~FINAL~~ / OTHER (circle one) DAY of TEST: Ø

OVERLYING (OV) / POREWATER (PW) (circle one) / Comments:

Calibration Standards Temperature		
Date: 5/23/12	Temperature: 22.0	Sample temperature should be within ±1°C of standards temperature at time and date of analysis.

	Sample ID or Description	Conc. or Rep	Date of Sampling and Initials	Ammonia Value (mg/L)	Temp °C	Date of Reading and Initials	Sample Preserved (Y/N)	pH	Sal (ppt)	Sample Volume (mL)	Measured Sulf. (mg/L)	Multi-plier	Calc-ulated Sulf. (mg/L)
OV	Ø	Surr.	5/23/12 MMB	0.00	21.5	5/23/12 JC	N			10	0.039	NA	NA
	CR-023			0.00							0.015 ①		
	CR-12			0.518							0.031 ①		
	IJ12-01			2.57							0.012		
	IJ12-02			2.58							0.014		
	IJ12-03			3.09							0.016		
	IJ12-05			3.28							0.013		
	IJ12-07			2.40							0.006		
PW	Ø	Surr.	5/23/12 JC	0.00	21.5	5/23/12 JC		6.8	27	1	0.035	10	0.35
	CR-023			0.683				6.9	29	10 ②	0.006	NA	
	CR-12			7.54				7.2	25	1	0.058	10	0.58
	IJ12-01			18.5				7.1	23	10 ②	0.061	NA	
	IJ12-02			14.4				7.3	29	10 ②	0.000		
	IJ12-03			13.9				7.2	29	10 ②	0.000		
	IJ12-05			12.7				7.3	29	10 ②	0.000		
	IJ12-07			9.23				7.3	28	10 ②	0.066		

① Values Switched, JC 5/23/12 ② Blanked to remove turbidity interference, JC 5/23/12

NEWFIELDS

Page ____ of ____

Ammonia and Sulfide Analysis Record

Client/Project:	Organism:	Test Duration (days):
Anchor / I & J	Neanthes	20

PRETEST / INITIAL / FINAL / OTHER (circle one) DAY of TEST: 20

OVERLYING (OV) / POREWATER (PW) (circle one)

Comments: _____

Calibration Standards Temperature		Sample temperature should be within ±1°C of standards temperature at time and date of analysis.
Date:	Temperature:	
6/12/12	23.0	

	Sample ID or Description	Conc. or Rep	Date of Sampling and Initials	Ammonia Value (mg/L)	Temp °C	Date of Reading and Initials	Sample Preserved (Y/N)	pH	Sal (ppt)	Sulf. mg/L
OV	Ø	Surr.	6/12/12 MMB	0.680	22.0	6/12/12 MMB	N			0.012
	CR023			<0.5						0.020
	CR.12			<0.5						0.044
	IJ12.01			<0.5						0.008
	.02			<0.5						0.010
	.03			<0.5						0.021
	.05			<0.5						0.021
	.07			<0.5						0.007
PW	Ø	Surr.	6/12/12 MMB	0.773	23.0	6/12/12 MMB	N	7.0	28	0.042
	CR023			<0.5				7.0	28	0.168
	CR.12			0.935				7.2	28	0.095
	IJ12.01			1.20				6.9	29	0.057
	.02			1.04				6.6	29	0.059
	.03			0.562				6.7	29	0.130
	.05			1.17				6.3	29	0.069
	.07			1.74				6.6	29	0.020

NEWFIELDS

ORGANISM RECEIPT LOG

Date: 5/23/12	**Time:** 1020	**NewFields Batch No.** ATS 052312
Organism / Project: Neanthes / I & J		**Invoice Attached** Yes (circled) No
Source / Supplier: Aquatic Tox. Support		**Contact:** B. Hester
No. Ordered: 480	**No. Received:** 480 + 10%	**Source Batch:** (Collection date, hatch date, etc.): Emerged 5/02/12
Condition of Organisms: (Good, fair, poor; describe.): Good		**Approximate Size or Age:** (Days from hatch, life stage, size class, etc.): 21 days
Shipper: Courier		**B of L (Tracking No.)** NA
Condition of Container: (Good, fair, poor; describe.): Good		**Received By:** JL

Container	D.O. (mg/L)	Temp. (°C)	Cond. or Sal. (Include Units)	pH (Units)	Number Dead or Moribund	Technician (Initials)
1	13.9	19.9	30ppt	7.0	Ø	JL

Notes:

Aquatic Toxicology Support
1849 Charleston Beach Road West
Bremerton, Washington 98312
(360) 813-1202

Order Summary

Species: *Neanthes arenaceodentata**	Emerge Date: 5/2/12
Number Ordered: 480	Number Shipped: 480 + 10%
Date Shipped: 5/22/12	Salinity (ppt): 30

*Smith 1964. CSU Long Beach strain. Feed upon arrival.

APPENDIX A.2.2

Neanthes arenaceodentata

Juvenile Polychaete Bioassay

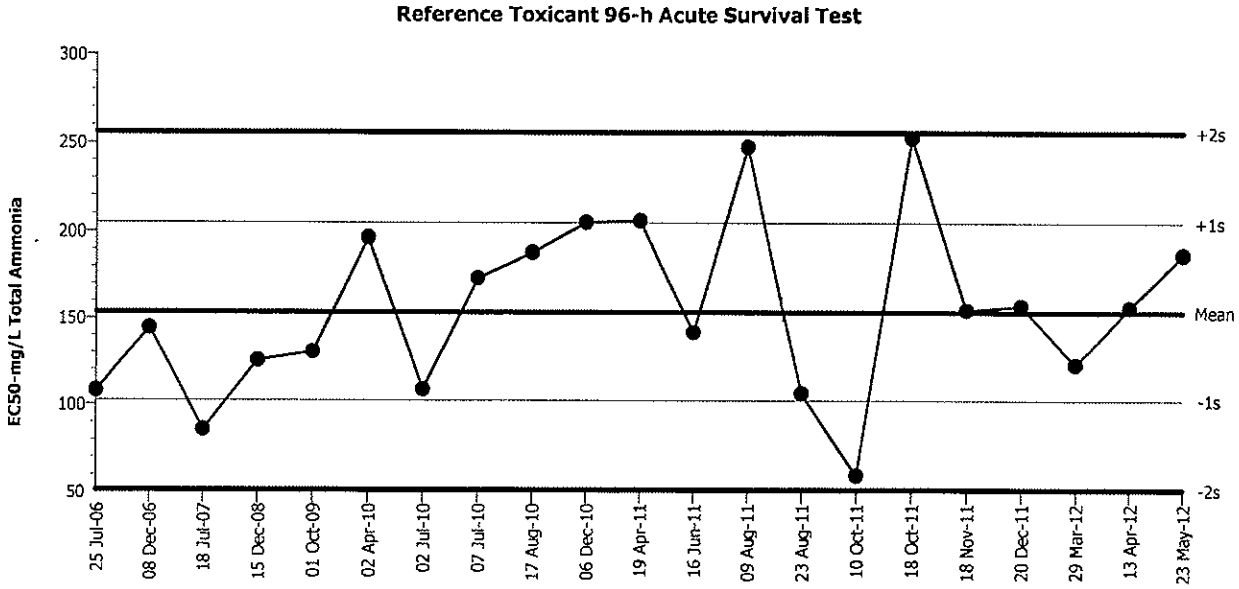
Reference Toxicant Test

CETIS QC Plot

Report Date: 30 May-12 15:48 (1 of 1)

Reference Toxicant 96-h Acute Survival Test — NewFields

Test Type:	Survival	Organism:	Neanthes arenaceodentata (Polycha	Material:	Total Ammonia
Protocol:	PSEP (1995)	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF



Mean:	153.6	Count:	20	-1s Warning Limit:	102.4	-2s Action Limit:	51.26
Sigma:	51.17	CV:	33.30%	+1s Warning Limit:	204.8	+2s Action Limit:	255.9

Quality Control Data

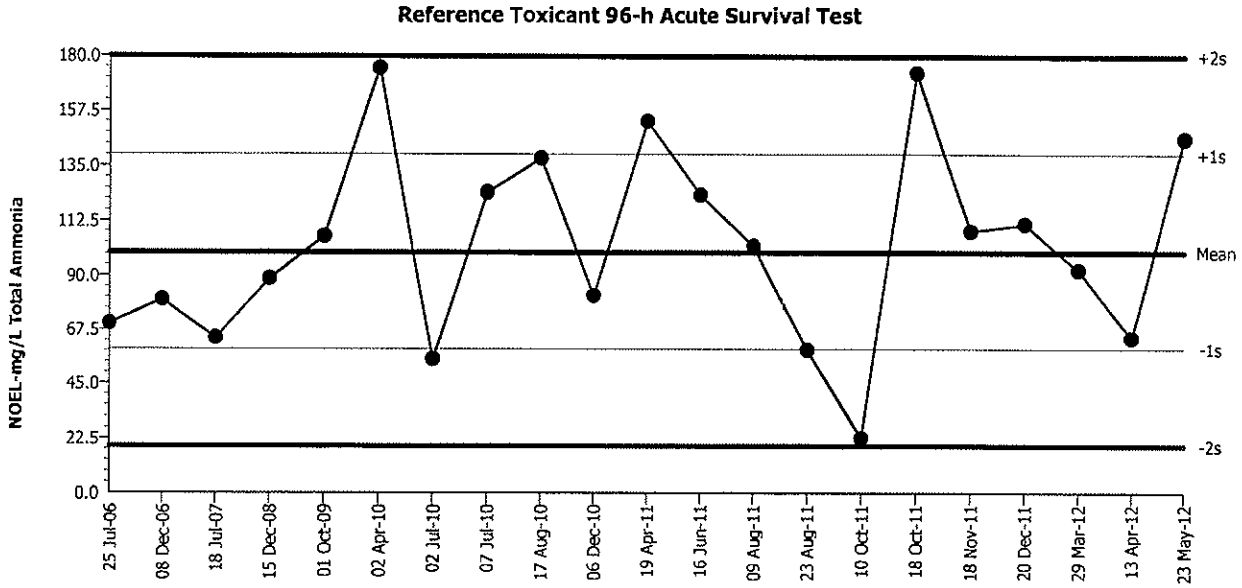
Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2006	Jul	25	108.1	-45.54	-0.8899			00-5832-0530	08-6734-2268
2		Dec	8	144.4	-9.167	-0.1791			13-1239-1057	05-4422-5195
3	2007	Jul	18	85.98	-67.62	-1.321	(-)		17-4748-5140	14-5179-0546
4	2008	Dec	15	125.4	-28.15	-0.5502			00-2280-4578	04-7353-4211
5	2009	Oct	1	130.4	-23.2	-0.4533			11-7052-2566	08-8009-7600
6	2010	Apr	2	196.6	42.98	0.8399			05-7967-6526	05-9239-0913
7		Jul	2	108.7	-44.92	-0.8778			04-1544-7246	20-6247-6714
8			7	173.2	19.62	0.3834			06-6061-1457	04-3232-7747
9		Aug	17	188.2	34.59	0.6759			01-3810-2666	20-3593-2576
10		Dec	6	205.1	51.52	1.007	(+)		05-4114-1826	07-2949-5130
11	2011	Apr	19	206.2	52.64	1.029	(+)		09-3617-4279	06-7713-4574
12		Jun	16	141.9	-11.69	-0.2284			19-0037-4539	19-9050-3573
13		Aug	9	247.5	93.94	1.836	(+)		03-1197-4176	17-1966-7852
14			23	106.6	-47.04	-0.9193			19-2308-3344	15-0713-7604
15		Oct	10	59.38	-94.22	-1.841	(-)		06-7843-9085	12-6856-6267
16			18	252.7	99.06	1.936	(+)		20-2964-2236	02-6630-2269
17		Nov	18	154.8	1.242	0.02427			07-1336-6281	16-3327-5847
18		Dec	20	157.3	3.731	0.07291			13-2009-7329	09-6676-8731
19	2012	Mar	29	123	-30.63	-0.5987			09-7385-3936	17-7765-0407
20		Apr	13	156.2	2.627	0.05133			19-8365-3565	12-2419-3140
21		May	23	186.8	33.2	0.6488			07-1703-6447	03-0067-3412

CETIS QC Plot

Report Date: 30 May-12 15:48 (1 of 1)

Reference Toxicant 96-h Acute Survival Test — NewFields

Test Type:	Survival	Organism:	Neanthes arenaceodentata (Polycha	Material:	Total Ammonia
Protocol:	PSEP (1995)	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF



Mean:	99.49	Count:	20	-1s Warning Limit:	59.31	-2s Action Limit:	19.13
Sigma:	40.18	CV:	40.40%	+1s Warning Limit:	139.7	+2s Action Limit:	179.9

Quality Control Data

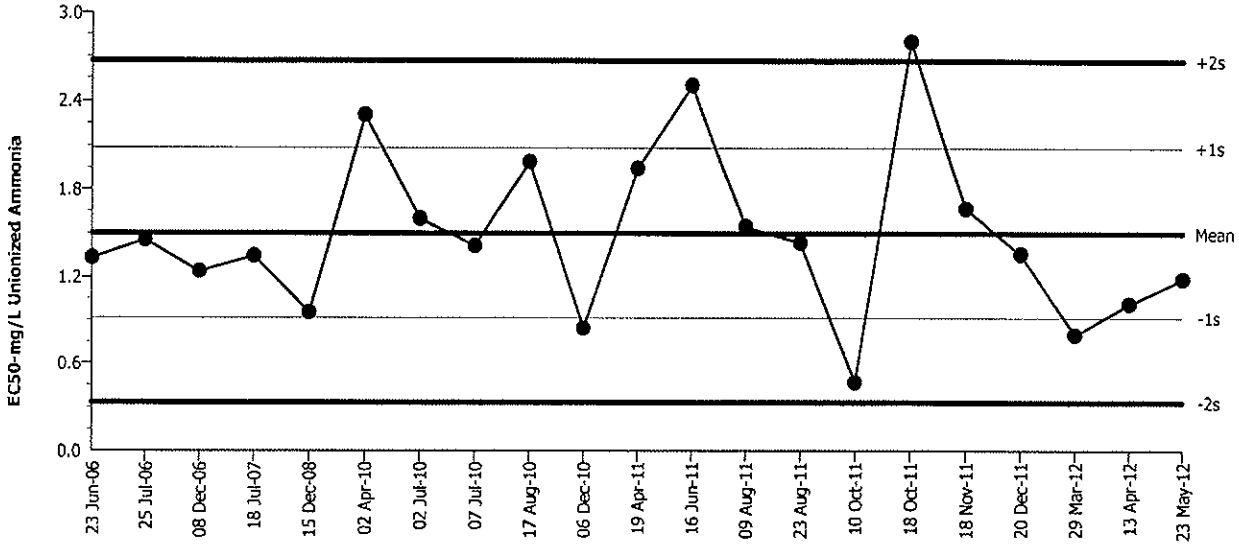
Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2006	Jul	25	70	-29.49	-0.7339			00-5832-0530	14-3508-8233
2		Dec	8	80	-19.49	-0.4851			13-1239-1057	06-4243-0537
3	2007	Jul	18	64	-35.49	-0.8833			17-4748-5140	09-6772-8140
4	2008	Dec	15	88.7	-10.79	-0.2685			00-2280-4578	12-2432-7546
5	2009	Oct	1	106	6.51	0.162			11-7052-2566	11-6901-3523
6	2010	Apr	2	175	75.51	1.879	(+)		05-7967-6526	20-2882-0572
7		Jul	2	55	-44.49	-1.107	(-)		04-1544-7246	20-7364-4574
8			7	124	24.51	0.61			06-6061-1457	16-8916-0042
9		Aug	17	138	38.51	0.9584			01-3810-2666	16-7191-0863
10		Dec	6	81.7	-17.79	-0.4428			05-4114-1826	00-3492-4461
11	2011	Apr	19	153	53.51	1.332	(+)		09-3617-4279	00-3274-1559
12		Jun	16	123	23.51	0.5851			19-0037-4539	07-2127-0891
13		Aug	9	102	2.51	0.06247			03-1197-4176	21-2173-4671
14			23	58.9	-40.59	-1.01	(-)		19-2308-3344	00-4985-4824
15		Oct	10	22.5	-76.99	-1.916	(-)		06-7843-9085	04-4902-3567
16			18	173	73.51	1.83	(+)		20-2964-2236	18-1232-0295
17		Nov	18	108	8.51	0.2118			07-1336-6281	00-5718-5578
18		Dec	20	111	11.51	0.2865			13-2009-7329	14-4698-1316
19	2012	Mar	29	92.2	-7.29	-0.1814			09-7385-3936	12-4682-6521
20		Apr	13	63.9	-35.59	-0.8858			19-8365-3565	05-2732-2674
21		May	23	146	46.51	1.158	(+)		07-1703-6447	01-7113-3932

CETIS QC Plot

Report Date: 30 May-12 15:46 (1 of 1)

Reference Toxicant 96-h Acute Survival Test — **NewFields**

Test Type:	Survival	**Organism:**	Neanthes arenaceodentata (Polycha	**Material:**	Unionized Ammonia
Protocol:	PSEP (1995)	**Endpoint:**	Proportion Survived	**Source:**	Reference Toxicant-REF



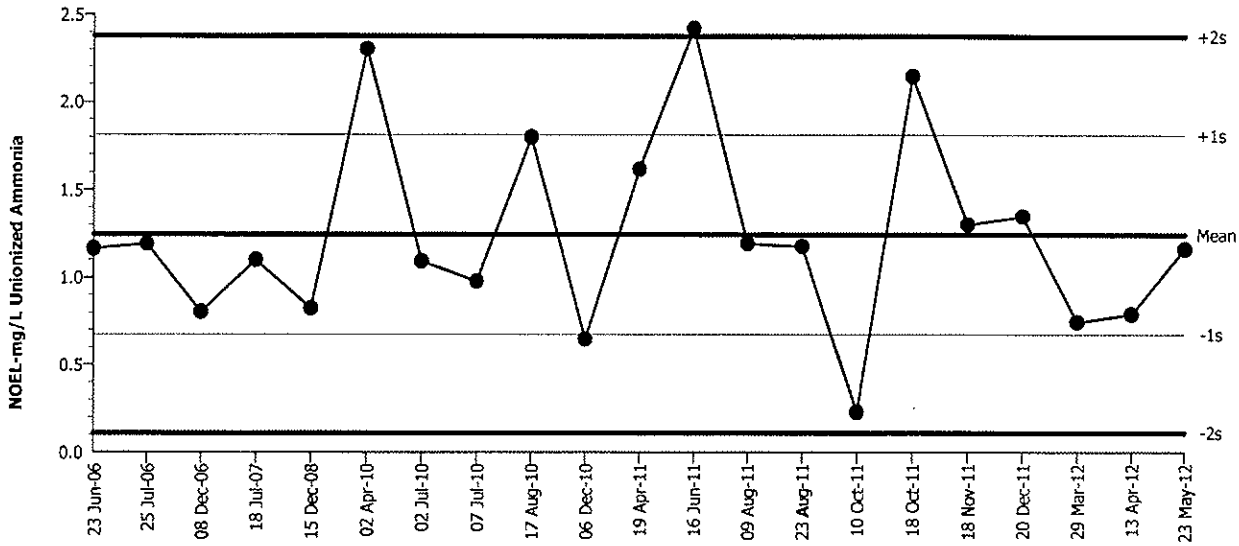
Mean:	1.5	**Count:**	20	**-1s Warning Limit:**	0.9152	**-2s Action Limit:**	0.3304
Sigma:	0.5848	**CV:**	39.00%	**+1s Warning Limit:**	2.085	**+2s Action Limit:**	2.67

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2006	Jun	23	1.334	-0.1661	-0.2841			01-5620-7672	06-6109-1329
2		Jul	25	1.455	-0.0453	-0.07746			04-0700-8845	10-0339-7479
3		Dec	8	1.239	-0.2613	-0.4467			15-8106-3809	02-6828-4699
4	2007	Jul	18	1.346	-0.1544	-0.264			11-3020-7799	19-4406-8190
5	2008	Dec	15	0.9538	-0.5462	-0.9339			14-6494-6267	11-2844-7295
6	2010	Apr	2	2.304	0.804	1.375	(+)		16-4339-8227	08-2621-0447
7		Jul	2	1.597	0.09684	0.1656			11-7762-4490	10-2411-3483
8			7	1.415	-0.08508	-0.1455			08-8641-2659	00-5658-4852
9		Aug	17	1.989	0.4891	0.8363			12-6587-7533	07-3551-5397
10		Dec	6	0.8418	-0.6582	-1.125	(-)		05-4045-9367	05-9672-3549
11	2011	Apr	19	1.945	0.4448	0.7606			02-6580-6357	08-0700-2079
12		Jun	16	2.503	1.003	1.715	(+)		19-7724-1701	13-2075-9938
13		Aug	9	1.547	0.04668	0.07982			03-9854-4015	07-2063-2491
14			23	1.436	-0.06387	-0.1092			09-3666-1661	07-6184-3703
15		Oct	10	0.4667	-1.033	-1.767	(-)		04-4548-8932	08-5329-1975
16			18	2.797	1.297	2.218	(+)	(+)	05-4042-6561	09-4508-3623
17		Nov	18	1.667	0.1671	0.2858			07-2418-7894	04-3530-8185
18		Dec	20	1.359	-0.141	-0.2412			01-5692-9953	01-3178-0533
19	2012	Mar	29	0.7959	-0.7041	-1.204	(-)		11-8184-4663	15-1974-6098
20		Apr	13	1.012	-0.4881	-0.8346			19-8413-7608	13-2594-7323
21		May	23	1.183	-0.3167	-0.5415			00-6722-3532	08-3889-1635

Reference Toxicant 96-h Acute Survival Test **NewFields**

Test Type:	Survival	**Organism:**	Neanthes arenaceodentata (Polycha	**Material:**	Unionized Ammonia
Protocol:	PSEP (1995)	**Endpoint:**	Proportion Survived	**Source:**	Reference Toxicant-REF



Mean:	1.244	**Count:**	20	**-1s Warning Limit:**	0.6765	**-2s Action Limit:**	0.109
Sigma:	0.5675	**CV:**	45.60%	**+1s Warning Limit:**	1.811	**+2s Action Limit:**	2.379

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2006	Jun	23	1.163	-0.081	-0.1427			01-5620-7672	12-8683-2201
2		Jul	25	1.19	-0.054	-0.09515			04-0700-8845	17-9113-5370
3		Dec	8	0.804	-0.44	-0.7753			15-8106-3809	21-1756-9787
4	2007	Jul	18	1.098	-0.146	-0.2573			11-3020-7799	09-9664-9126
5	2008	Dec	15	0.826	-0.418	-0.7366			14-6494-6267	14-8258-9804
6	2010	Apr	2	2.302	1.058	1.864	(+)		16-4339-8227	09-5140-8774
7		Jul	2	1.09	-0.154	-0.2714			11-7762-4490	16-8950-8191
8			7	0.978	-0.266	-0.4687			08-8641-2659	09-2658-2229
9		Aug	17	1.8	0.556	0.9797			12-6587-7533	16-5550-9006
10		Dec	6	0.648	-0.596	-1.05	(-)		05-4045-9367	19-1510-4313
11	2011	Apr	19	1.617	0.373	0.6573			02-6580-6357	12-6447-3293
12		Jun	16	2.421	1.177	2.074	(+)	(+)	19-7724-1701	13-8173-2038
13		Aug	9	1.193	-0.051	-0.08987			03-9854-4015	01-1263-9916
14			23	1.176	-0.068	-0.1198			09-3666-1661	00-3462-6374
15		Oct	10	0.228	-1.016	-1.79	(-)		04-4548-8932	20-7967-8150
16			18	2.146	0.902	1.589	(+)		05-4042-6561	09-7290-5956
17		Nov	18	1.303	0.059	0.104			07-2418-7894	02-8881-3753
18		Dec	20	1.35	0.106	0.1868			01-5692-9953	10-0045-4747
19	2012	Mar	29	0.747	-0.497	-0.8758			11-8184-4663	00-5057-1480
20		Apr	13	0.793	-0.451	-0.7947			19-8413-7608	05-2899-5573
21		May	23	1.162	-0.082	-0.1445			00-6722-3532	11-8382-8902

CETIS Summary Report

Report Date: 30 May-12 15:41 (p 1 of 1)
Test Code: 2ABD1B9F | 07-1703-6447

Reference Toxicant 96-h Acute Survival Test — NewFields

atch ID:	21-0026-3652	Test Type:	Survival	Analyst:	
Start Date:	23 May-12 13:50	Protocol:	PSEP (1995)	Diluent:	Laboratory Seawater
Ending Date:	27 May-12 14:10	Species:	Neanthes arenaceodentata	Brine:	Not Applicable
Duration:	4d 0h	Source:	Aquatic Toxicology Support	Age:	

Sample ID:	11-5542-7615	Code:	44DE6D1F	Client:	Internal Lab
Sample Date:	23 May-12 13:50	Material:	Total Ammonia	Project:	Reference Toxicant
Receive Date:		Source:	Reference Toxicant		
Sample Age:	N/A	Station:	p110927.48		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
01-7113-3932	Proportion Survived	146	239	186.8	N/A		Fisher Exact Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
03-0067-3412	Proportion Survived	EC50	186.8	170.7	204.4		Binomial/Graphical

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
19.5		3	1	1	1	1	1	0	0	0.0%	0.0%
39.5		3	1	1	1	1	1	0	0	0.0%	0.0%
77.6		3	1	1	1	1	1	0	0	0.0%	0.0%
146		3	1	1	1	1	1	0	0	0.0%	0.0%
239		3	0	0	0	0	0	0	0		100.0%

oportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
19.5		1	1	1
39.5		1	1	1
77.6		1	1	1
146		1	1	1
239		0	0	0

CETIS Test Data Worksheet

Report Date: 30 May-12 15:42 (p 1 of 1)
Test Code: 07-1703-6447/2ABD1B9F

Reference Toxicant 96-h Acute Survival Test **NewFields**

Start Date: 23 May-12 13:50 **Species:** Neanthes arenaceodentata **Sample Code:** 44DE6D1F
End Date: 27 May-12 14:10 **Protocol:** PSEP (1995) **Sample Source:** Reference Toxicant
Sample Date: 23 May-12 13:50 **Material:** Total Ammonia **Sample Station:** p110927.48

Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	3	10	10	
0	D	2	11	10	10	
0	D	3	15	10	10	
19.5		1	10	10	10	
19.5		2	14	10	10	
19.5		3	5	10	10	
39.5		1	1	10	10	
39.5		2	13	10	10	
39.5		3	18	10	10	
77.6		1	2	10	10	
77.6		2	6	10	10	
77.6		3	12	10	10	
146		1	16	10	10	
146		2	8	10	10	
146		3	4	10	10	
239		1	9	10	0	
239		2	7	10	0	
239		3	17	10	0	

CETIS Summary Report

Report Date: 30 May-12 15:45 (p 1 of 1)
Test Code: 401BFEC | 00-6722-3532

Reference Toxicant 96-h Acute Survival Test — NewFields

Batch ID:	21-0026-3652	Test Type:	Survival	Analyst:	
Start Date:	23 May-12 13:50	Protocol:	PSEP (1995)	Diluent:	Laboratory Seawater
Ending Date:	27 May-12 14:10	Species:	Neanthes arenaceodentata	Brine:	Not Applicable
Duration:	4d 0h	Source:	Aquatic Toxicology Support	Age:	

Sample ID:	07-2012-2959	Code:	2AEC344F	Client:	Internal Lab
Sample Date:	23 May-12 13:50	Material:	Unionized Ammonia	Project:	Reference Toxicant
Receive Date:		Source:	Reference Toxicant		
Sample Age:	N/A	Station:	p110927.48		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
11-8382-8902	Proportion Survived	1.162	1.205	1.183	N/A		Fisher Exact Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
08-3889-1635	Proportion Survived	EC50	1.183	1.175	1.191		Binomial/Graphical

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
0.24		3	1	1	1	1	1	0	0	0.0%	0.0%
0.492		3	1	1	1	1	1	0	0	0.0%	0.0%
0.77		3	1	1	1	1	1	0	0	0.0%	0.0%
1.162		3	1	1	1	1	1	0	0	0.0%	0.0%
1.205		3	0	0	0	0	0	0	0		100.0%

Proportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
0.24		1	1	1
0.492		1	1	1
0.77		1	1	1
1.162		1	1	1
1.205		0	0	0

CETIS Test Data Worksheet

Report Date: 30 May-12 15:45 (p 1 of 1)
Test Code: 00-6722-3532/401BFEC

Reference Toxicant 96-h Acute Survival Test — **NewFields**

Start Date: 23 May-12 13:50 **Species:** Neanthes arenaceodentata **Sample Code:** 2AEC344F
End Date: 27 May-12 14:10 **Protocol:** PSEP (1995) **Sample Source:** Reference Toxicant
Sample Date: 23 May-12 13:50 **Material:** Unionized Ammonia **Sample Station:** p110927.48

Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	3	10	10	
0	D	2	2	10	10	
0	D	3	4	10	10	
0.24		1	17	10	10	
0.24		2	15	10	10	
0.24		3	9	10	10	
0.492		1	18	10	10	
0.492		2	11	10	10	
0.492		3	5	10	10	
0.77		1	8	10	10	
0.77		2	16	10	10	
0.77		3	1	10	10	
1.162		1	10	10	10	
1.162		2	7	10	10	
1.162		3	12	10	10	
1.205		1	14	10	0	
1.205		2	13	10	0	
1.205		3	6	10	0	

NEWFIELDS

96-HOUR REFERENCE TOXICANT TEST WATER QUALITY DATASHEET

CLIENT	PROJECT	SPECIES	NEWFIELDS LABORATORY		PROTOCOL
Anchor QEA	I & J Waterway	*Neanthes arenaceodentata*	Port Gamble Room 1		PSEP 1995
NEWFIELDS JOB NUMBER	PROJECT MANAGER	QUANTITY OF STOCK TARGET: see spiking wk	QUANTITY OF DILUENT: see spiking wksht		INIT
0	Bill Gardiner	ACTUAL:	ACTUAL:		DATE PREP
Test ID	LOT #:	TEST START DATE:	TIME	TEST END DATE	TIME
P110927.48	111079	23May12	1350	27May12	1410

WATER QUALITY DATA

DILTIN.WAT.BATCH	TEMP REC#	REFERENCE TOX. MATERIAL	REFERENCE TOXXICANT
FSW052212.01		0	0

TEST CONDITIONS	DO (mg/L)	TEMP(C)	SAL (ppt)	pH	TECHNICIAN
	> 6.0	20 ± 1	28 ± 1	8.00 ± 1	

CLIENT/ NEWFIELDS ID	CONCENTRATION value	CONCENTRATION units	DAY	REP	D.O. meter	D.O. mg/L	TEMP. meter	TEMP. °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	WQ TECH
Ref.Tox.-ammonia	0 / 0.00	mg/L	0	Stock	6	7.5	6	19.1	2	27	2	7.5	JL
			4	Rep	6	6.8	6	20.1	2	28	2	7.2	JL
Ref.Tox.-ammonia	15 / 19.5	mg/L	0	Stock	6	7.7	6	19.0	2	27	2	7.6	JL
			4	Rep	6	6.5	6	20.2	2	27	2	7.5	JL
Ref.Tox.-ammonia	30 / 39.5	mg/L	0	Stock	6	7.8	6	19.2	2	27	2	7.6	JL
			4	Rep	6	6.7	6	20.1	2	27	2	7.6	JL
Ref.Tox.-ammonia	60 / 77.6	mg/L	0	Stock	6	7.8	6	19.2	2	27	2	7.5	JL
			4	Rep	6	6.8	6	20.2	2	27	2	7.6	JL
Ref.Tox.-ammonia	120 / 146	mg/L	0	Stock	6	7.8	6	19.3	2	27	2	7.4	JL
			4	Rep	6	6.5	6	20.1	2	28	2	7.6	JL
Ref.Tox.-ammonia	240 / 239	mg/L	0	Stock	6	7.8	6	19.4	2	28	2	7.2	JL
			4	Rep	6	5.9	6	20.2	2	28	2	7.4	JL

96-HOUR REFERENCE TOXICANT TEST
OBSERVATION DATASHEET

SPECIES					
			Neanthes arenaceodentata		
CLIENT	PROJECT	NEWFIELDS JOB #	PROJECT MANAGER	NEWFIELDS LAB	PROTOCOL
Anchor QEA	I & J Waterway	0	Bill Gardiner	Port Gamble Room 1	PSEP 1995

SURVIVAL & BEHAVIOR DATA

OBSERVATIONS KEY
N = normal; L = anoxic surface; B= no burrows; F= fungal patches; M= dead on surface; D= no air flow (DO?); A= avoidance; U= excess food

CLIENT/ NEWFIELDS ID	CONC. value	CONC. units	REP	INITIAL NUMBER	DAY 1 DATE 5/24/12 TECHNICIAN MMS #ALIVE	DAY 1 #DEAD	DAY 1 OBS	DAY 2 DATE 5/25/12 TECHNICIAN CR #ALIVE	DAY 2 #DEAD	DAY 2 OBS	DAY 3 DATE 5/26/12 TECHNICIAN JL #ALIVE	DAY 3 #DEAD	DAY 3 OBS	DAY 4 DATE 5/27/12 TECHNICIAN JL #ALIVE	DAY 4 #DEAD	DAY 4 OBS
Ref.Tox.-ammonia	0	mg/L	1		10	Ø	N	10	0	N	10	Ø	N	10	Ø	N
			2		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
			3		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
Ref.Tox.-ammonia	15.0	mg/L	1		10	Ø	N	10	0	N	10	Ø	N	10	Ø	N
			2		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
			3		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
Ref.Tox.-ammonia	30	mg/L	1		10	Ø	N	10	0	N	10	Ø	N	10	Ø	N
			2		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
			3		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
Ref.Tox.-ammonia	60	mg/L	1		10	Ø	N	10	0	N	10	Ø	N	10	Ø	N
			2		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
			3		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
Ref.Tox.-ammonia	120	mg/L	1		10	Ø	N	10	0	N	10	Ø	N	10	Ø	Ø
			2		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
			3		10	Ø	↓	10	0	↓	10	Ø	↓	10	Ø	↓
Ref.Tox.-ammonia	240	mg/L	1		10	Ø	N	10	0	N	10	Ø	Ø	Ø	10	NA
			2		10	Ø	↓	10	0	↓	10	Ø	↓	Ø	10	↓
			3		10	Ø	↓	10	0	↓	10	Ø	↓	Ø	10	↓

NEWFIELDS

Reference Toxicant
Ammmonia Spiking Worksheet

NH_3 RT

Assumptions in Model
Stock ammonia concentration is 10,000 mg/L = 10 mg/mL

Actual Reading reading from
8500

Test Solutions			Volume of stock to reach desired concentration	
Measured Concentration mg/L	Desired Concentration mg/L	Volume mL	mL stock to increase	SALT WATER (mL)
0	240	750	[illegible]	31.765
	120	750	[illegible]	15.882
	60	750	[illegible]	7.941
	30	750	[illegible]	3.971
	15	750	[illegible]	1.985
	0	750	[illegible]	0.000

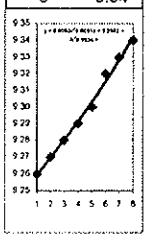
NEWFIELDS

Un-ionized Ammonia Calculator

Project:	Ammonia RT	Date of Test:	23-May-12
Project ID:	Internal	Test Type:	*Neanthes arenaceodentata*

To convert Total Ammonia (mg/L) to Free (un-ionized) Ammonia (mg/L) enter the corresponding total ammonia, salinity, temperature, and pH.

Integer:	I-factor
1	9.26
2	9.27
3	9.28
4	9.29
5	9.30
6	9.32
7	9.33
8	9.34



	Sample	Mod *NH3T (mg/L)*	*salinity (ppt)*	*pH*	*temp (C)*	temp (K)	I-factor	Mod **NH3U (mg/L)**
	Example	0.610	22.9	8.0	24.1	297.26	9.3053	**0.027**
	Example2	2.000	10.0	7.5	5.0	278.16	9.2750	**0.008**
1								
2	15.4	19.500	27	7.6	19.0	292.16	9.3160	**0.240**
3	20.6	39.500	27	7.6	19.2	292.36	9.3160	**0.492**
4	27.4	77.600	27	7.5	19.2	292.36	9.3160	**0.770**
5	36.6	146.000	27	7.4	19.3	292.46	9.3160	**1.162**
6	48.8	239.000	28	7.2	19.4	292.56	9.3187	**1.205**
7								
8								
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APPENDIX A.3.1

Mytilus galloprovincialis

Bivalve Embryo Bioassay

Laboratory Data Sheets

NEWFIELDS

LARVAL DEVELOPMENT TEST
WATER QUALITY DATA

CLIENT	PROJECT	SPECIES		NEWFIELDS LAB / LOCATION	PROTOCOL
Anchor QEA	I & J Waterway	*Mytilus sp*		Port Gamble / Bath 2	PSEP (1995)
JOB NUMBER	**PROJECT MANAGER**	**TEST START DATE**	**TIME**	**TEST END DATE**	**TIME**
860.0024.000	Bill Gardiner	07Jun12	1815	6.9.12	1900

* Day 3&4 observations needed only if development endpoint not met by day 2

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) >4.8		Temp (°C) 16 ± 1		Sal (ppt) 28 ± 2		pH 7.8 ± 0.5		Ammonia NA		Sulfide NA		TECH	DATE
CLIENT/ NEWFIELDS ID	DAY	Random #	REP	D.O.		TEMP.		SALINITY		pH		AMMONIA		SULFIDE			
				meter	mg/L	meter	°C	meter	ppt	meter	unit	Techn.	mg/L (total)	Techn.	mg/L (Total)		
Control /	0	36	WQ Surr	6	7.5	6	16.2	2	28	2	7.5					BH	6.7.12
Control /	1	↓	WQ Surr	5	8.0	2	15.9	2	28	2	7.6					DPM	6/8
Control /	2		WQ Surr	5	7.6	2	16.7	2	28	2	7.7					JL	6/09
Control /	3		WQ Surr														
Control /	4		WQ Surr														
CR-023 /	0	2	WQ Surr	6	7.4	6	16.1	2	28	2	7.6					BH	6.7.12
CR-023 /	1	↓	WQ Surr	5	6.5	2	16.6	2	28	2	7.5					DPM	6/8
CR-023 /	2		WQ Surr	5	6.0	2	16.1	2	28	2	7.6					JL	6/09
CR-023 /	3		WQ Surr	~~5~~		~~2~~		~~2~~		~~2~~						~~JL~~	~~6~~ ①
CR-023 /	4	↓	WQ Surr														
CR-12 /	0	37	WQ Surr	6	7.6	6	16.2	2	28	2	7.5					BH	6.7.12
CR-12 /	1	↓	WQ Surr	5	7.1	2	16.3	2	28	2	7.6					DPM	6/8
CR-12 /	2		WQ Surr	5	7.0	2	17.0	2	29	2	7.7					JL	6/09
CR-12 /	3		WQ Surr														
CR-12 /	4	↓	WQ Surr														

① WC, JL 6/09/12

NEWFIELDS

LARVAL DEVELOPMENT TEST
WATER QUALITY DATA

CLIENT	PROJECT	SPECIES		NEWFIELDS LAB / LOCATION	PROTOCOL
Anchor QEA	I & J Waterway	*Mytilus sp*		Port Gamble / Bath 2	PSEP (1995)
JOB NUMBER	**PROJECT MANAGER**	**TEST START DATE**	**TIME**	**TEST END DATE**	**TIME**
860.0024.000	Bill Gardiner	07Jun12	1815		1900

* Day 3&4 observations needed only if development endpoint not met by day 2

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) >4.8		Temp (°C) 16 ± 1		Sal (ppt) 28 ± 2		pH 7.8 ± 0.5		Ammonia NA		Sulfide NA		TECH	DATE
CLIENT/ NEWFIELDS ID	DAY	Random #	REP	D.O.		TEMP.		SALINITY		pH		AMMONIA		SULFIDE			
				meter	mg/L	meter	°C	meter	ppt	meter	unit	Techn.	mg/L (total)	Techn.	mg/L (Total)		
IJ12-01 /	0	14	WQ Surr	6	6.9	6	16.5	2	28	2	7.6					BM	6.7.12
IJ12-01 /	1	↓	WQ Surr	5	5.6	2	16.2	2	28	2	7.4					DRM	6/8
IJ12-01 /	2	↓	WQ Surr	5	5.2	2	16.3	2	28	2	7.6					JL	6/09
IJ12-01 /	3	↓	WQ Surr														
IJ12-01 /	4	↓	WQ Surr														
IJ12-02 /	0	31	WQ Surr	6	7.3	6	16.7	2	28	2	7.6					BM	6.7.12
IJ12-02 /	1	↓	WQ Surr	5	5.9	2	16.1	2	28	2	7.4					DRM	6/8
IJ12-02 /	2	↓	WQ Surr	5	5.7	2	16.3	2	28	2	7.5					JL	6/09
IJ12-02 /	3	↓	WQ Surr														
IJ12-02 /	4	↓	WQ Surr														
IJ12-03 /	0	26	WQ Surr	6	7.3	6	16.9	2	28	2	7.6					BM	6.7.12
IJ12-03 /	1	↓	WQ Surr	5	5.6	2	16.4	2	28	2	7.4					DRM	6/08
IJ12-03 /	2	↓	WQ Surr	5	5.7	2	16.9	2	28	2	7.4					JL	6/09
IJ12-03 /	3	↓	WQ Surr														
IJ12-03 /	4	↓	WQ Surr														

NEWFIELDS

LARVAL DEVELOPMENT TEST
WATER QUALITY DATA

CLIENT	PROJECT	SPECIES		NEWFIELDS LAB / LOCATION	PROTOCOL
Anchor QEA	I & J Waterway	*Mytilus sp*		Port Gamble / Bath 2	PSEP (1995)
JOB NUMBER	**PROJECT MANAGER**	**TEST START DATE**	**TIME**	**TEST END DATE**	**TIME**
860.0024.000	Bill Gardiner	07Jun12	1815		1900

* Day 3&4 observations needed only if development endpoint not met by day 2

WATER QUALITY DATA

TEST CONDITIONS				DO (mg/L) >4.8		Temp (°C) 16 ± 1		Sal (ppt) 28 ± 2		pH 7.8 ± 0.5		Ammonia NA		Sulfide NA		TECH	DATE
CLIENT/ NEWFIELDS ID	DAY	Random #	REP	D.O. meter	D.O. mg/L	TEMP. meter	TEMP. °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	AMMONIA Techn.	AMMONIA mg/L (total)	SULFIDE Techn.	SULFIDE mg/L (Total)		
IJ12-05 /	0	39	WQ Surr	6	7.0	6	16.5	2	28	2	7.4					BH	6.7.12
IJ12-05 /	1	↓	WQ Surr	5	5.4	2	16.6	2	29	2	7.5					DPM	6/8
IJ12-05 /	2	↓	WQ Surr	5	5.7	2	17.0	2	29	2	7.6					JL	6/09
IJ12-05 /	3	↓	WQ Surr														
IJ12-05 /	4	↓	WQ Surr														
IJ12-07 /	0	25	WQ Surr	6	7.4	6	16.0	2	28	2	7.6					BH	6.7.12
IJ12-07 /	1	↓	WQ Surr	5	5.5	2	16.3	2	28	2	7.4					DPM	6/08
IJ12-07 /	2	↓	WQ Surr	5	5.7	2	16.9	2	29	2	7.5					JL	6/09
IJ12-07 /	3	↓	WQ Surr														
IJ12-07 /	4	↓	WQ Surr														

NEWFIELDS

LARVAL DEVELOPMENT TEST ENDPOINT DATA

Resuspension

SPECIES					
Mytilus sp					
CLIENT	PROJECT	JOB NUMBER	PROJECT MANAGER	NEWFIELDS LAB / LOCATION	PROTOCOL
Anchor QEA	I & J Waterway		Bill Gardiner	Port Gamble / Bath 2	PSEP (1995)

ORGANISM BATCH	TEST START DATE:	TIME	TEST END DATE:	TIME
~~TS0~~ TS5705 Msp	6.7.12	1815	6.9.12	1900

LARVAL OBSERVATION DATA

CLIENT/ NEWFIELDS ID	REP	NUMBER NORMAL	NUMBER	DATE	TECHNICIAN	COMMENTS
STOCKING DENSITY	1		363			
	2		356			
	3		390			
	4		374			
	5		367			
Control /	1	261	23			
	2	282	33			
	3	274	25			
	4	291	29			
	5	281	20			
CR-023 /	1	205	19			
	2	187	21			
	3	228	16			
	4	204	18			
	5	210	14			
CR-12 /	1	240	14			
	2	247	10			
	3	240	8			
	4	274	17			
	5	257	19			
IJ12-01 /	1	137	104			
	2	163	98			
	3	147	55			
	4	144	94			
	5	172	87			

NEWFIELDS

LARVAL DEVELOPMENT TEST
ENDPOINT DATA

Resuspension

SPECIES					
Mytilus sp					
CLIENT	PROJECT	JOB NUMBER	PROJECT MANAGER	NEWFIELDS LAB / LOCATION	PROTOCOL
Anchor QEA	I & J Waterway		Bill Gardiner	Port Gamble / Bath 2	PSEP (1995)

ORGANISM BATCH	TEST START DATE:	TIME	TEST END DATE:	TIME
TS 5705 msp	6.7.12	1815	6.9.12	1900

LARVAL OBSERVATION DATA

CLIENT/ NEWFIELDS ID	REP	NUMBER NORMAL	NUMBER	DATE	TECHNICIAN	COMMENTS
IJ12-02 /	1	153	21			
	2	153	21			
	3	183	23			
	4	202	31			
	5	172	39			
IJ12-03 /	1	142	64			
	2	124	38			
	3	174	26			
	4	199	61			
	5	179	31			
IJ12-05 /	1	170	45			
	2	140	46			
	3	176	32			
	4	189	50			
	5	175	44			
IJ12-07 /	1	182	23			
	2	158	16			
	3	179	27			
	4	208	23			
	5	177	27			

NEWFIELDS

Ammonia and Sulfide Analysis Record

Client/Project:	Organism:	Test Duration (days):
Anchor / I and J Waterway	Mytilus	2

PRETEST / INITIAL / FINAL / OTHER (circle one) DAY of TEST: Ø

OVERLYING (OV) / POREWATER (PW) (circle one)

Comments: _____

Calibration Standards Temperature		Sample temperature should be within ±1°C of standards temperature at time and date of analysis.
Date:	Temperature:	
6/8/12	21.5	

Sample ID or Description	Conc. or Rep	Date of Sampling and Initials	Ammonia Value (mg/L)	Temp °C	Date of Reading and Initials	Sample Preserved (Y/N)	pH	Sal (ppt)	Sample Volume (mL)	Measured Sulf. (mg/L)	Multi-plier	Calc-ulated Sulf. (mg/L)
Control	Surr	6/7/12 CR	0.554	22.0	6/08/12 JL	Y			10	0.002	NA	NA
CR-12			0.318						10	0.097		
CR-023			0.219						10	0.359		
01			0.171						10	0.183		
02			0.144						10	0.175		
03			0.0987						10	0.118		
05			0.104						10	0.150		
07			0.116						10	0.141		

NEWFIELDS

ORGANISM RECEIPT LOG

Date: 6/7/12	Time: 0945	NewFields Batch No. TS 5705 msp
Organism / Project: Mytilus / I & J		Invoice Attached: Yes / No (No circled)
Source / Supplier: Taylor Shellfish		Contact: On File
No. Ordered:	No. Received:	Source Batch: (Collection date, hatch date, etc.):
Condition of Organisms: (Good, fair, poor; describe.): Good		Approximate Size or Age: (Days from hatch, life stage, size class, etc.): Adults
Shipper: UPS		B of L (Tracking No.) 1Z98X685 61000 25705
Condition of Container: (Good, fair, poor; describe.): Good		Received By: MMB

Container	D.O. (mg/L)	Temp. (°C)	Cond. or Sal. (Include Units)	pH (Units)	Number Dead or Moribund	Technician (Initials)
* →						MMB

Notes: *: received dry

APPENDIX A.3.2

Mytilus galloprovincialis

Bivalve Embryo Bioassay

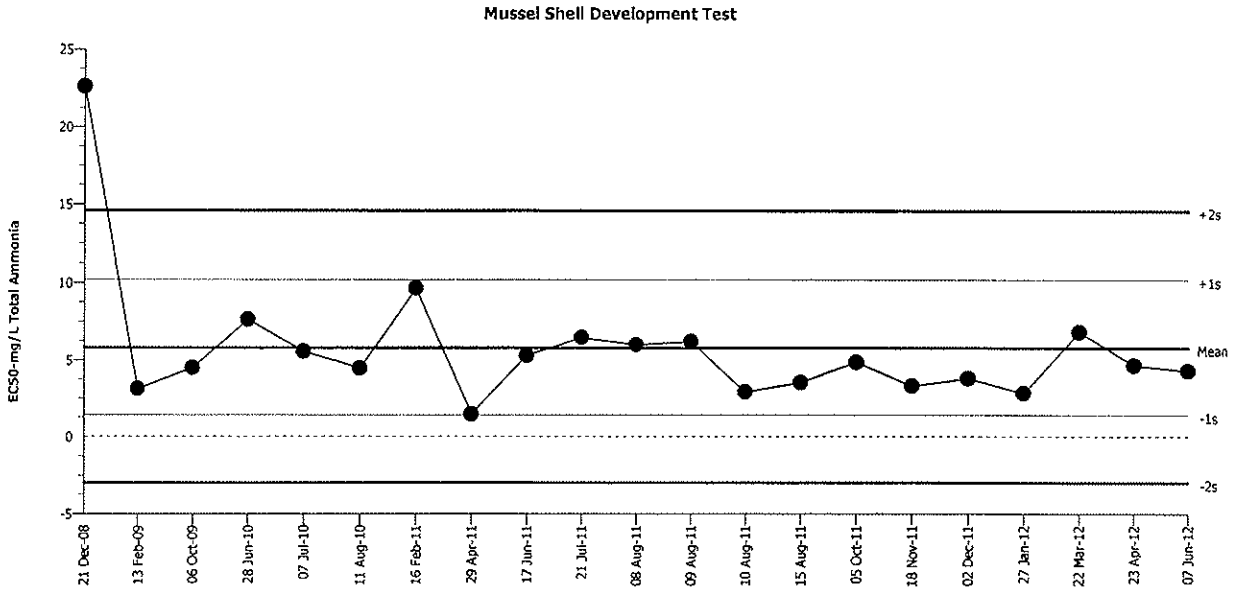
Reference Toxicant Test

CETIS QC Plot

Report Date: 29 Jun-12 13:35 (1 of 1)

Mussel Shell Development Test — NewFields

Test Type:	Development-Survival	**Organism:**	Mytilus galloprovincialis (Bay Mussel	**Material:**	Total Ammonia
Protocol:	EPA/600/R-95/136 (1995)	**Endpoint:**	Combined Proportion Normal	**Source:**	Reference Toxicant-REF



Mean:	5.797	**Count:**	20	**-1s Warning Limit:**	1.402	**-2s Action Limit:**	-2.993
Sigma:	4.395	**CV:**	75.80%	**+1s Warning Limit:**	10.19	**+2s Action Limit:**	14.59

Quality Control Data

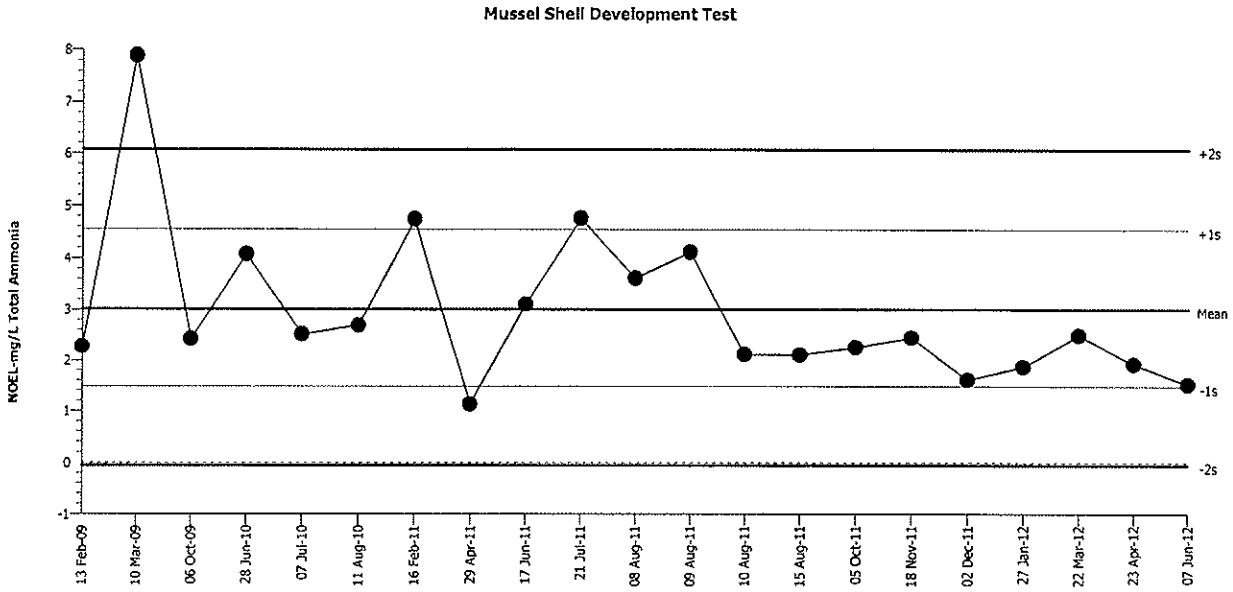
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2008	Dec	21	23:55	22.62	16.82	3.827	(+)	(+)	12-6474-4613	04-0535-6581
2	2009	Feb	13	0:00	3.131	-2.666	-0.6065			10-3071-2823	08-8123-7720
3		Oct	6	0:00	4.492	-1.305	-0.2969			07-2371-5815	13-0415-7840
4	2010	Jun	28	17:35	7.648	1.851	0.4212			07-1034-9426	03-6358-7926
5		Jul	7	18:15	5.575	-0.2215	-0.0504			04-2822-4836	15-5999-5088
6		Aug	11	17:30	4.462	-1.335	-0.3037			13-7609-4380	17-7827-2329
7	2011	Feb	16	20:00	9.664	3.867	0.8798			20-0761-1522	20-6550-1011
8		Apr	29	19:15	1.476	-4.321	-0.9831			18-3523-8130	06-7880-5033
9		Jun	17	17:50	5.304	-0.4926	-0.1121			02-0301-0805	04-5775-2688
10		Jul	21	20:00	6.488	0.6912	0.1573			21-3110-1881	08-5324-8376
11		Aug	8	17:05	6.021	0.2238	0.05091			00-5338-2187	07-3882-4906
12			9	17:10	6.223	0.4262	0.09697			12-0720-7788	06-6142-4669
13			10	19:30	2.922	-2.875	-0.6542			06-5031-7232	20-0591-1540
14			15	21:55	3.553	-2.244	-0.5107			12-1190-9781	06-6457-3298
15		Oct	5	21:10	4.868	-0.9289	-0.2113			09-9207-7928	03-8878-4440
16		Nov	18	17:30	3.323	-2.474	-0.5629			15-5702-8405	04-5641-1567
17		Dec	2	18:25	3.806	-1.991	-0.4531			06-3989-5500	09-5166-6282
18	2012	Jan	27	17:30	2.846	-2.951	-0.6715			17-8035-0885	06-4475-5873
19		Mar	22	12:15	6.852	1.055	0.2399			08-5068-3541	09-7191-1867
20		Apr	23	18:45	4.66	-1.137	-0.2586			02-7458-4371	07-2969-7564
21		Jun	7	18:15	4.304	-1.493	-0.3398			20-4612-5080	14-0164-5214

CETIS QC Plot

Report Date: 29 Jun-12 13:35 (1 of 1)

Mussel Shell Development Test — **NewFields**

Test Type:	Development-Survival	**Organism:**	Mytilus galloprovincialis (Bay Mussel	**Material:**	Total Ammonia
Protocol:	EPA/600/R-95/136 (1995)	**Endpoint:**	Combined Proportion Normal	**Source:**	Reference Toxicant-REF



Mean:	3.011	**Count:**	20	**-1s Warning Limit:**	1.479	**-2s Action Limit:**	-0.053
Sigma:	1.532	**CV:**	50.90%	**+1s Warning Limit:**	4.543	**+2s Action Limit:**	6.075

Quality Control Data

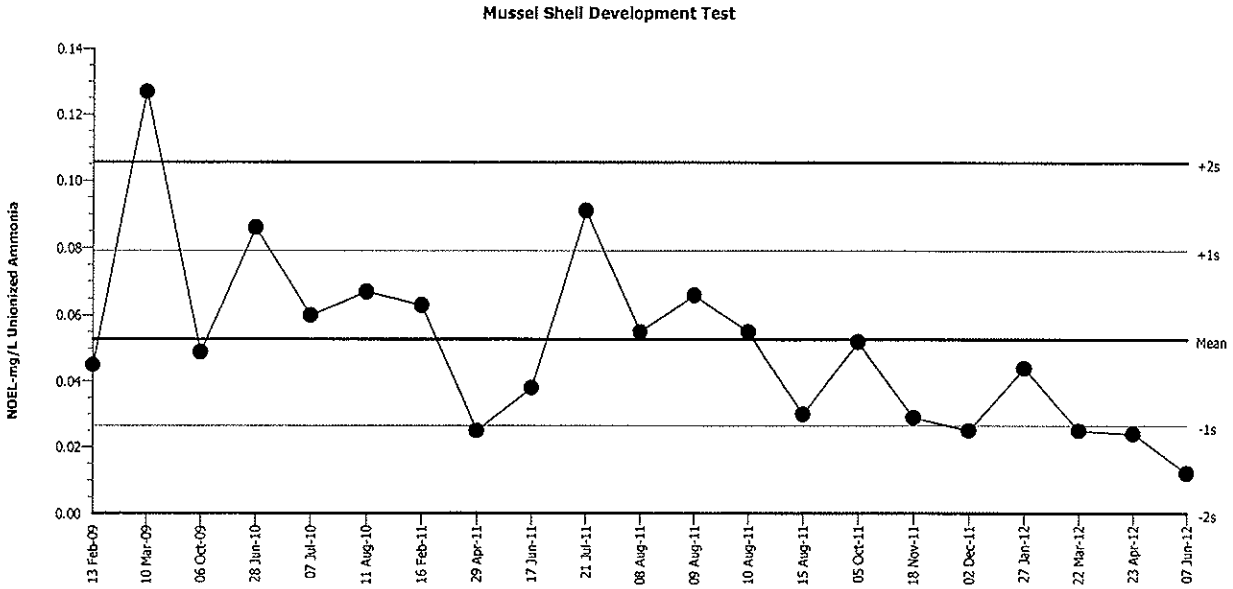
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2009	Feb	13	0:00	2.28	-0.731	-0.4772			10-3071-2823	17-3079-6683
2		Mar	10	17:30	7.89	4.879	3.185	(+)	(+)	06-0704-5509	16-7894-0234
3		Oct	6	0:00	2.43	-0.581	-0.3792			07-2371-5815	10-2017-4175
4	2010	Jun	28	17:35	4.08	1.069	0.6978			07-1034-9426	04-4386-3406
5		Jul	7	18:15	2.52	-0.491	-0.3205			04-2822-4836	10-1366-3288
6		Aug	11	17:30	2.69	-0.321	-0.2095			13-7609-4380	12-7053-9764
7	2011	Feb	16	20:00	4.75	1.739	1.135	(+)		20-0761-1522	16-1511-4918
8		Apr	29	19:15	1.13	-1.881	-1.228	(-)		18-3523-8130	21-1832-0856
9		Jun	17	17:50	3.11	0.099	0.06462			02-0301-0805	00-1872-7736
10		Jul	21	20:00	4.76	1.749	1.142	(+)		21-3110-1881	06-7241-9373
11		Aug	8	17:05	3.62	0.609	0.3975			00-5338-2187	08-7520-6674
12			9	17:10	4.12	1.109	0.7239			12-0720-7788	17-4429-2576
13			10	19:30	2.12	-0.891	-0.5816			06-5031-7232	08-6413-7875
14			15	21:55	2.11	-0.901	-0.5881			12-1190-9781	00-7527-2646
15		Oct	5	21:10	2.26	-0.751	-0.4902			09-9207-7928	02-1647-4157
16		Nov	18	17:30	2.45	-0.561	-0.3662			15-5702-8405	17-4774-1775
17		Dec	2	18:25	1.61	-1.401	-0.9145			06-3989-5500	05-9587-4977
18	2012	Jan	27	17:30	1.87	-1.141	-0.7448			17-8035-0885	19-6006-6064
19		Mar	22	12:15	2.5	-0.511	-0.3336			08-5068-3541	14-6034-1614
20		Apr	23	18:45	1.92	-1.091	-0.7121			02-7458-4371	11-3829-0609
21		Jun	7	18:15	1.52	-1.491	-0.9732			20-4612-5080	06-0541-2169

CETIS QC Plot

Report Date: 29 Jun-12 13:44 (1 of 1)

Mussel Shell Development Test — **NewFields**

Test Type:	Development-Survival	**Organism:**	Mytilus galloprovincialis (Bay Mussel	**Material:**	Unionized Ammonia
Protocol:	EPA/600/R-95/136 (1995)	**Endpoint:**	Combined Proportion Normal	**Source:**	Reference Toxicant-REF



Mean:	0.0528	**Count:**	20	**-1s Warning Limit:**	0.02643	**-2s Action Limit:**	0.00006
Sigma:	0.02637	**CV:**	49.90%	**+1s Warning Limit:**	0.07917	**+2s Action Limit:**	0.1055

Quality Control Data

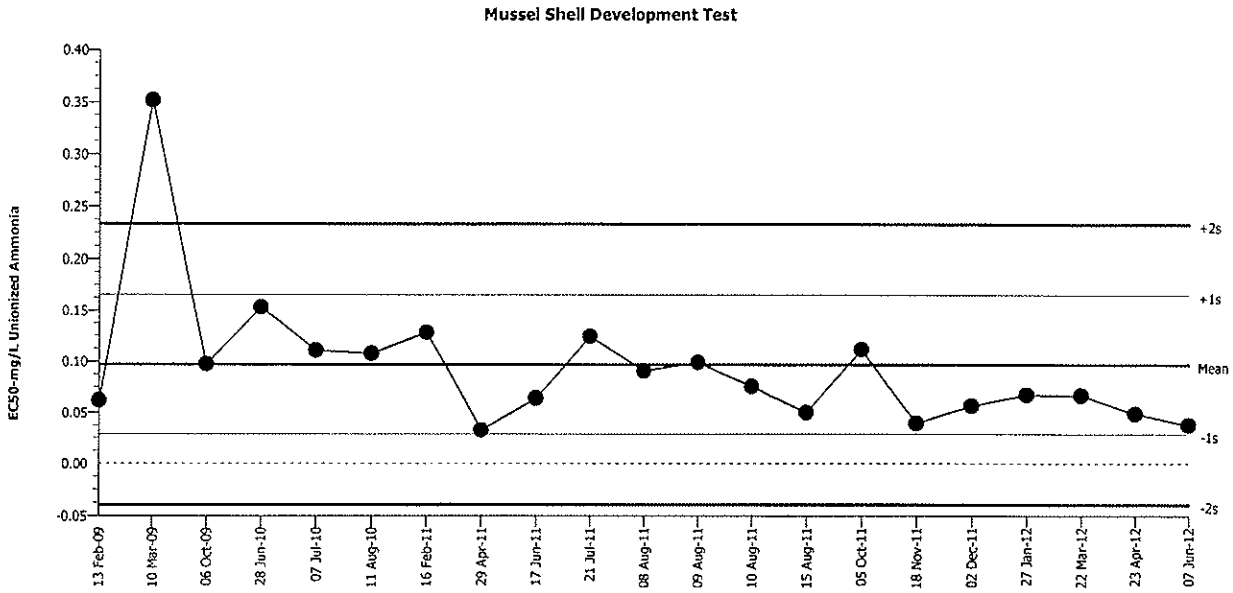
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2009	Feb	13	0:00	0.045	-0.0078	-0.2958			18-6239-0561	11-6295-6211
2		Mar	10	17:30	0.127	0.0742	2.814	(+)	(+)	01-2553-1917	11-1585-4256
3		Oct	6	0:00	0.049	-0.0038	-0.1441			12-5136-9103	12-5054-7030
4	2010	Jun	28	17:35	0.086	0.0332	1.259	(+)		06-4991-0393	11-6909-7502
5		Jul	7	18:15	0.06	0.0072	0.273			02-1495-2371	16-9581-2110
6		Aug	11	17:30	0.067	0.0142	0.5385			00-0200-7271	08-0625-7138
7	2011	Feb	16	20:00	0.063	0.0102	0.3868			09-3897-2905	06-6760-4608
8		Apr	29	19:15	0.025	-0.0278	-1.054	(-)		15-8989-1267	19-9101-7366
9		Jun	17	17:50	0.038	-0.0148	-0.5612			09-8870-1345	16-9496-0223
10		Jul	21	20:00	0.091	0.0382	1.449	(+)		11-2515-1636	20-3348-1432
11		Aug	8	17:05	0.055	0.0022	0.08343			18-0422-6477	16-9302-5062
12			9	17:10	0.066	0.0132	0.5006			13-8465-7623	18-1460-2377
13			10	19:30	0.055	0.0022	0.08343			00-6897-9618	12-9643-7108
14			15	21:55	0.03	-0.0228	-0.8646			20-6313-0684	07-6740-1944
15		Oct	5	21:10	0.052	-0.0008	-0.03034			11-4559-9625	12-7932-7576
16		Nov	18	17:30	0.029	-0.0238	-0.9025			15-1035-6307	02-6656-7352
17		Dec	2	18:25	0.025	-0.0278	-1.054	(-)		02-1703-2403	00-9746-5548
18	2012	Jan	27	17:30	0.044	-0.0088	-0.3337			17-7315-3313	14-7310-3808
19		Mar	22	12:15	0.025	-0.0278	-1.054	(-)		16-8530-3093	00-2118-8798
20		Apr	23	18:45	0.024	-0.0288	-1.092	(-)		11-9474-8117	16-8822-0741
21		Jun	7	18:15	0.012	-0.0408	-1.547	(-)		14-3239-7455	06-8748-6189

CETIS QC Plot

Report Date: 29 Jun-12 13:44 (1 of 1)

Mussel Shell Development Test — **NewFields**

Test Type:	Development-Survival	**Organism:**	Mytilus galloprovincialis (Bay Mussel	**Material:**	Unionized Ammonia
Protocol:	EPA/600/R-95/136 (1995)	**Endpoint:**	Combined Proportion Normal	**Source:**	Reference Toxicant-REF



Mean:	0.097	**Count:**	20	**-1s Warning Limit:**	0.02881	**-2s Action Limit:**	-0.0394
Sigma:	0.06819	**CV:**	70.30%	**+1s Warning Limit:**	0.1652	**+2s Action Limit:**	0.2334

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2009	Feb	13	0:00	0.06204	-0.03496	-0.5127			18-6239-0561	06-7481-6770
2		Mar	10	17:30	0.3517	0.2547	3.735	(+)	(+)	01-2553-1917	07-8608-9501
3		Oct	6	0:00	0.09737	0.000373	0.005466			12-5136-9103	16-3438-8103
4	2010	Jun	28	17:35	0.153	0.05603	0.8216			06-4991-0393	17-5757-3927
5		Jul	7	18:15	0.1108	0.01378	0.202			02-1495-2371	00-1000-1952
6		Aug	11	17:30	0.1078	0.01077	0.1579			00-0200-7271	19-2014-1654
7	2011	Feb	16	20:00	0.1285	0.03146	0.4614			09-3897-2905	17-1388-7996
8		Apr	29	19:15	0.03302	-0.06398	-0.9383			15-8989-1267	11-3776-9131
9		Jun	17	17:50	0.06406	-0.03294	-0.483			09-8870-1345	11-6524-9003
10		Jul	21	20:00	0.1245	0.02753	0.4038			11-2515-1636	01-5330-1472
11		Aug	8	17:05	0.09088	-0.00612	-0.08968			18-0422-6477	19-2033-3628
12			9	17:10	0.09908	0.00208	0.0305			13-8465-7623	20-2831-5425
13			10	19:30	0.07566	-0.02134	-0.3129			00-6897-9618	05-9253-6461
14			15	21:55	0.05015	-0.04685	-0.687			20-6313-0684	14-3277-3764
15		Oct	5	21:10	0.1117	0.01469	0.2154			11-4559-9625	16-1695-0512
16		Nov	18	17:30	0.03966	-0.05734	-0.8409			15-1035-6307	13-1597-7557
17		Dec	2	18:25	0.05664	-0.04036	-0.5918			02-1703-2403	18-2609-9695
18	2012	Jan	27	17:30	0.06751	-0.02949	-0.4324			17-7315-3313	06-2387-0021
19		Mar	22	12:15	0.0669	-0.0301	-0.4414			16-8530-3093	20-6643-2329
20		Apr	23	18:45	0.04914	-0.04786	-0.7018			11-9474-8117	17-4324-5637
21		Jun	7	18:15	0.03798	-0.05902	-0.8655			14-3239-7455	05-6059-9571

CETIS Summary Report

Report Date: 29 Jun-12 13:34 (p 1 of 1)
Test Code: 79F56418 | 20-4612-5080

Mussel Shell Development Test — **NewFields**

Batch ID:	07-5155-8489	**Test Type:**	Development-Survival	**Analyst:**	
Start Date:	07 Jun-12 18:15	**Protocol:**	EPA/600/R-95/136 (1995)	**Diluent:**	Laboratory Seawater
Ending Date:	09 Jun-12 17:15	**Species:**	Mytilus galloprovincialis	**Brine:**	Not Applicable
Duration:	47h	**Source:**	Taylor Shelfish	**Age:**	

Sample ID:	10-6262-8658	**Code:**	3F566D32	**Client:**	Internal Lab
Sample Date:	27 Sep-11	**Material:**	Total Ammonia	**Project:**	Reference Toxicant
Receive Date:	27 Sep-11	**Source:**	Reference Toxicant		
Sample Age:	254d 18h	**Station:**	P110927.59		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
06-0541-2169	Combined Proportion Norm	1.52	4.9	2.729	17.8%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
14-0164-5214	Combined Proportion Norm	EC50	4.304	4.17	4.442		Trimmed Spearman-Kärber

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
06-0541-2169	Combined Proportion Norm	PMSD	0.1781	NL - 0.25	No	Passes Acceptability Criteria

Combined Proportion Normal Summary

C-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	0.7376	0.7152	0.7599	0.6685	0.7735	0.03454	0.05982	8.11%	0.0%
0.38		3	0.756	0.7392	0.7728	0.7072	0.7956	0.02593	0.04491	5.94%	-2.5%
1.32		3	0.7201	0.7144	0.7258	0.7099	0.7376	0.008784	0.01521	2.11%	2.37%
1.52		3	0.7192	0.715	0.7233	0.7072	0.7293	0.006446	0.01116	1.55%	2.5%
4.9		3	0.3803	0.3317	0.4289	0.232	0.4751	0.07508	0.13	34.2%	48.44%
10.3		3	0.007366	0.004771	0.009962	0	0.01381	0.004014	0.006952	94.37%	99.0%

Combined Proportion Normal Detail

C-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	0.7735	0.7707	0.6685
0.38		0.7956	0.7652	0.7072
1.32		0.7376	0.7127	0.7099
1.52		0.7072	0.7293	0.721
4.9		0.232	0.4751	0.4337
10.3		0	0.01381	0.008287

Combined Proportion Normal Binomials

C-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	280/362	279/362	242/362
0.38		288/362	277/362	256/362
1.32		267/362	258/362	257/362
1.52		256/362	264/362	261/362
4.9		84/362	172/362	157/362
10.3		0/362	5/362	3/362

CETIS Test Data Worksheet

Report Date: 29 Jun-12 13:32 (p 1 of 1)
Test Code: 20-4612-5080/79F56418

Mussel Shell Development Test — **NewFields**

Start Date:	07 Jun-12 18:15	**Species:**	Mytilus galloprovincialis	**Sample Code:**	3F566D32
End Date:	09 Jun-12 17:15	**Protocol:**	EPA/600/R-95/136 (1995)	**Sample Source:**	Reference Toxicant
Sample Date:	27 Sep-11	**Material:**	Total Ammonia	**Sample Station:**	P110927.59

C-mg/L	Code	Rep	Pos	Initial Density	Final Density	# Counted	# Normal	Notes
0	D	1	13	362	337	337	280	
0	D	2	14	362	326	326	279	
0	D	3	11	362	301	301	242	
0.38		1	8	362	333	333	288	
0.38		2	7	362	346	346	277	
0.38		3	3	362	298	298	256	
1.32		1	4	362	319	319	267	
1.32		2	6	362	310	310	258	
1.32		3	18	362	316	316	257	
1.52		1	17	362	310	310	256	
1.52		2	10	362	322	322	264	
1.52		3	1	362	311	311	261	
4.9		1	5	362	205	205	84	
4.9		2	9	362	335	335	172	
4.9		3	12	362	302	302	157	
10.3		1	16	362	323	323	0	
10.3		2	15	362	333	333	5	
10.3		3	2	362	334	334	3	

CETIS Summary Report

Report Date: 29 Jun-12 13:43 (p 1 of 1)
Test Code: 5560A68F | 14-3239-7455

Mussel Shell Development Test — **NewFields**

Batch ID:	01-3803-0862	Test Type:	Development-Survival	Analyst:	
Start Date:	07 Jun-12 18:15	Protocol:	EPA/600/R-95/136 (1995)	Diluent:	Laboratory Seawater
Ending Date:	07 Jun-12 17:15	Species:	Mytilus galloprovincialis	Brine:	Not Applicable
Duration:	NA	Source:	Taylor Shelfish	Age:	

Sample ID:	03-3309-2575	Code:	13DA96DF	Client:	Internal Lab
Sample Date:	27 Sep-11	Material:	Unionized Ammonia	Project:	Reference Toxicant
Receive Date:	27 Sep-11	Source:	Reference Toxicant		
Sample Age:	254d 18h	Station:	P110927.59		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
06-8748-6189	Combined Proportion Norm	0.012	0.045	0.02324	17.8%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
05-6059-9571	Combined Proportion Norm	EC50	0.03798	0.03672	0.03928		Trimmed Spearman-Kärber

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
06-8748-6189	Combined Proportion Norm	PMSD	0.1781	NL - 0.25	No	Passes Acceptability Criteria

Combined Proportion Normal Summary

C-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	0.7376	0.7152	0.7599	0.6685	0.7735	0.03454	0.05982	8.11%	0.0%
0.003		3	0.756	0.7392	0.7728	0.7072	0.7956	0.02593	0.04491	5.94%	-2.5%
0.011		3	0.7201	0.7144	0.7258	0.7099	0.7376	0.008784	0.01521	2.11%	2.37%
0.012		3	0.7192	0.715	0.7233	0.7072	0.7293	0.006446	0.01116	1.55%	2.5%
0.045		3	0.3803	0.3317	0.4289	0.232	0.4751	0.07508	0.13	34.2%	48.44%
0.094		3	0.007366	0.004771	0.009962	0	0.01381	0.004014	0.006952	94.37%	99.0%

Combined Proportion Normal Detail

C-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	0.7735	0.7707	0.6685
0.003		0.7956	0.7652	0.7072
0.011		0.7376	0.7127	0.7099
0.012		0.7072	0.7293	0.721
0.045		0.232	0.4751	0.4337
0.094		0	0.01381	0.008287

Combined Proportion Normal Binomials

C-mg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	280/362	279/362	242/362
0.003		288/362	277/362	256/362
0.011		267/362	258/362	257/362
0.012		256/362	264/362	261/362
0.045		84/362	172/362	157/362
0.094		0/362	5/362	3/362

CETIS Test Data Worksheet

Report Date: 29 Jun-12 13:42 (p 1 of 1)
Test Code: 14-3239-7455/5560A68F

Mussel Shell Development Test — **NewFields**

Start Date:	07 Jun-12 18:15	**Species:**	Mytilus galloprovincialis	**Sample Code:**	13DA96DF
End Date:	07 Jun-12 17:15	**Protocol:**	EPA/600/R-95/136 (1995)	**Sample Source:**	Reference Toxicant
Sample Date:	27 Sep-11	**Material:**	Unionized Ammonia	**Sample Station:**	P110927.59

C-mg/L	Code	Rep	Pos	Initial Density	Final Density	# Counted	# Normal	Notes
0	D	1	8	362	337	337	280	
0	D	2	7	362	326	326	279	
0	D	3	2	362	301	301	242	
0.003		1	11	362	333	333	288	
0.003		2	14	362	346	346	277	
0.003		3	10	362	298	298	256	
0.011		1	13	362	319	319	267	
0.011		2	12	362	310	310	258	
0.011		3	17	362	316	316	257	
0.012		1	16	362	310	310	256	
0.012		2	3	362	322	322	264	
0.012		3	18	362	311	311	261	
0.045		1	15	362	205	205	84	
0.045		2	5	362	335	335	172	
0.045		3	6	362	302	302	157	
0.094		1	9	362	323	323	0	
0.094		2	4	362	333	333	5	
0.094		3	1	362	334	334	3	

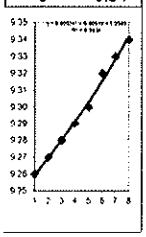
NEWFIELDS

Un-ionized Ammonia Calculator

Project:	Ammonia RT	Date of Test:	07-Jun-12
Project ID:	Internal	Test Type:	*Mytilus sp.*

To convert Total Ammonia (mg/L) to Free (un-ionized) Ammonia (mg/L) enter the corresponding total ammonia, salinity, temperature, and pH.

Integer:	i-factor
1	9.26
2	9.27
3	9.28
4	9.29
5	9.30
6	9.32
7	9.33
8	9.34



	Sample	Mod	*NH3T (mg/L)*	*salinity (ppt)*	*pH*	*temp (C)*	temp (K)	i-factor	Mod	**NH3U (mg/L)**
	Example		0.610	22.9	8.0	24.1	297.26	9.3053		**0.027**
	Example2		2.000	10.0	7.5	5.0	278.16	9.2750		**0.008**
1										
2	0.75		0.380	29	7.5	15.5	288.66	9.3214		**0.003**
3	1.5		1.520	29	7.5	15.2	288.36	9.3214		**0.011**
4	3		1.320	29	7.6	15.1	288.26	9.3214		**0.012**
5	6		4.900	29	7.6	15.1	288.26	9.3214		**0.045**
6	12		10.300	29	7.6	15.1	288.26	9.3214		**0.094**
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NEWFIELDS

LARVAL DEVELOPMENT TEST
AMMONIA REF TOX WQ

CLIENT	PROJECT	SPECIES	NEWFIELDS LAB / LOCATION	PROTOCOL
Anchor QEA	I & J Waterway	*Mytilus sp*	Port Gamble / Incubator	PSEP (1995)
JOB NUMBER	PROJECT MANAGER	QUANTITY OF TOXICANT: See	QUANTITY OF DILUENT: See	INIT BH
860.0024.000	Bill Gardiner	ACTUAL: Spiking wksht	ACTUAL: Spiking wksht.	
TEST ID P110927.59	LOT #: 111079	TEST START DATE: 07Jun12	TIME 1815 / TEST END DATE 6/09/12	TIME 1715

WATER QUALITY DATA

DILTIN.WAT.BATCH	ORGANISM BATCH	REFERENCE TOX. MATERIAL	REFERENCE TOXXICANT
FSW060712.01		Ammonium chloride	Ammonia

				DO (mg/L)		TEMP(C)		SAL (ppt)		pH			
				>5.0		16 ± 1		28 ± 1		7.8 ± 0.5			
CLIENT/ NEWFIELDS ID	CONCENTRATION value units	DAY	REP	D.O. meter	D.O. mg/L	TEMP. meter	TEMP. °C	SALINITY meter	SALINITY ppt	pH meter	pH unit	TECH.	DATE
Ref.Tox.-Ammonia	Target: 0 mg/L	0	Stock	6	7.4	6	16.3	2	① ~~28~~ 29	2	~~6.5~~ 7.4	BH	6.7.12
		1	Stock	5	7.9	2	16.2	2	28	2	7.5	DPM	6/8
	Actual: 0.119	2	Stock	5	8.0	2	16.2	2	28	2	7.7	JL	6/09
		3	Stock										
		4	Stock										
Ref.Tox.-Ammonia	Target: 0.75 mg/L	0	Stock	6	7.9	6	15.5	2	29	2	7.5	BH	6.7
		1	Stock	5	8.3	2	15.9	2	29	2	7.6	DPM	6/8 ②
	Actual: 0.380	2	Stock	~~5~~		~~2~~		~~2~~		~~2~~			
		3	Stock										
		4	Stock										
Ref.Tox.-Ammonia	Target: 1.5 mg/L	0	Stock	6	8.0	6	15.2	2	29	2	7.5	BH	6.7
		1	Stock	5	8.3	2	15.9	2	29	2	7.5	DPM	6/8
	Actual: 1.52	2	Stock	5	8.2	2	15.8	2	29	2	7.8	JL	6/09
		3	Stock										
		4	Stock										
Ref.Tox.-Ammonia	Target: 3 mg/L	0	Stock	6	8.0	6	15.1	2	29	2	7.6	BH	6.7
		1	Stock	5	8.4	2	15.7	2	29	2	7.6	DPM	6/08
	Actual: 1.32	2	Stock	5	8.2	2	15.6	2	29	2	7.8	JL	6/09
		3	Stock										
		4	Stock										
Ref.Tox.-Ammonia	Target: 6 mg/L	0	Stock	6	8.1	6	15.1	2	29	2	7.6	BH	6.7
		1	Stock	5	8.4	2	15.9	2	29	2	7.6	DPM	6/08
	Actual: 4.90	2	Stock	5	8.2	2	15.8	2	29	2	7.8	JL	6/09
		3	Stock										
		4	Stock										
Ref.Tox.-Ammonia	Target: 12 mg/L	0	Stock	6	8.0	6	15.1	2	29	2	7.6	BH	6.7
		1	Stock	5	8.4	2	15.7	2	29	2	7.6	DPM	6/08
	Actual: 10.3	2	Stock	5	8.2	2	15.5	2	29	2	7.8	JL	6/09
		3	Stock										
		4	Stock										

① IE 6.7.12 BH

② WQ surrogate spilled after reading DPM 6/8/12

NEWFIELDS

LARVAL DEVELOPMENT TEST
AMMONIA REF TOX OBSERVATION SHEET

SPECIES					
Mytilus sp					
CLIENT	PROJECT	JOB NUMBER	PROJECT MANAGER	NEWFIELDS LAB / LOCATION	PROTOCOL
Anchor QEA	I & J Waterway	860.0024.000	Bill Gardiner	Port Gamble / Incubator	PSEP (1995)

TEST ID	ORGANISM BATCH	TEST START DATE:	TIME	TEST END DATE:	TIME
P110927.59	TS060712	6/7/12	1815	6/9/12	1715

LARVAL OBSERVATION DATA

CLIENT/ NEWFIELDS ID	CONC. value	CONC. units	VIAL NUMBER	REP	NUMBER NORMAL	NUMBER ABNORMAL	DATE	TECHNICIAN	COMMENTS
Ref.Tox. - Ammonia	0	mg/L		1	280	57	6/27	CR	
				2	279	47			
				3	242	59			
Ref.Tox. - Ammonia	0.75	mg/L		1	288	45			
				2	277	69			
				3	256	42			
Ref.Tox. - Ammonia	1.5	mg/L		1	267	52			
				2	258	52			
				3	257	59			
Ref.Tox. - Ammonia	3	mg/L		1	256	54			
				2	~~66~~264	58			
				3	261	50			
Ref.Tox. - Ammonia	6	mg/L		1	84	121			
				2	172	163			
				3	157	145			
Ref.Tox. - Ammonia	12	mg/L		1	0	323			
				2	5	328			
				3	3	331			

STOCKING DENSITY		1		382			
		2		328			
		3		377			

NEWFIELDS

LARVAL DEVELOPMENT TEST INITIATION DATA SHEET

CLIENT	PROJECT	JOB NUMBER	PROJECT MANAGER	LABORATORY	PROTOCOL
Anchor QEA	I & J Waterway	860.0024.000	Bill Gardiner	Port Gamble Bath 2	PSEP (1995)

TEST ORGANISM SPAWNING DATA

SPECIES: *Mytilus sp*			
SUPPLIER: Taylor Shellfish		ORGANISM BATCH: TS 060712	
DATE RECEIVED: 6.7.12	TIME RECEIVED:	DATE USED: 6.7.12	
SPAWNING METHOD: heat shock	INITIAL SPAWNING TIME: 1400	FINAL SPAWNING TIME: 1535	
MALES: 3 / FEMALES: 6	SPERM VIABILITY: ✓	EGG CONDITION: ✓	
BEGIN FERTILIZATION: 1535	END FERTILIZATION: 1815	CONDITION OF EMBRYOS: ✓	

SAMPLE STORAGE	4 Degrees Celsius - dark
SEDIMENT TREATMENT	none
TEST CHAMBERS	1 L Mason Jars
EXPOSURE VOLUME	900mL seawater / 18g Sediment
TIME OF SHAKE	1415
TIME OF INITIATION	1815

SPECIAL CONDITIONS

UV LIGHT EXPOSURE (YES/NO)	AERATION FROM TEST INITIATION (YES/NO)
No	No
SCREEN TUBE TEST (YES/NO)	**OTHER (EXPLAIN)**
No	—

EMBRYO DENSITY CALCULATIONS

ESS $86 \times 100 = 8600$

target $\frac{25{,}000}{8600} = 2.9$ deliver 2.9 mL

$\frac{26000}{8600} = 3.0$ deliver 3.0

2.9 mL · 92 jars = 267 mL

have ~600

RT $\frac{2600}{\cancel{2500}} = 0.30 \cdot 50\text{mL} = \frac{15 \text{ ESS}}{35 \text{ mL } C\text{-}H_2O}$ deliver 0.100 mL

APPENDIX B

STATISTICAL COMPARISONS

Test	Endpoint	Treatment	Comparison	Prob Normal	Prob Homogeneous	Run Type	Prob T	Significant?	One-tailed T-test
Ampelisca 10-Day	Percentage Survival	CR-023	Control	0.101	0.741	T-test Equal Var	0.633		Treatment >= Comparison
Ampelisca 10-Day	Percentage Survival	CR-12	Control	0.035	0.391	Mann-Whitney	0.038	Yes	Treatment < Comparison
Ampelisca 10-Day	Percentage Survival	IJ12-01	CR-023	0.064	0.112	T-test Equal Var	0.913		Treatment >= Comparison
Ampelisca 10-Day	Percentage Survival	IJ12-01	CR-12	0.036	0.218	Mann-Whitney	0.957		Treatment >= Comparison
Ampelisca 10-Day	Percentage Survival	IJ12-02	CR-023	0.004	0.936	Mann-Whitney	0.080		Treatment >= Comparison
Ampelisca 10-Day	Percentage Survival	IJ12-03	CR-023	0.214	0.806	T-test Equal Var	0.034	Yes	Treatment < Comparison
Ampelisca 10-Day	Percentage Survival	IJ12-05	CR-023	0.736	0.185	T-test Equal Var	0.382		Treatment >= Comparison
Ampelisca 10-Day	Percentage Survival	IJ12-07	CR-023	0.010	0.581	Mann-Whitney	0.500		Treatment >= Comparison
Larval Resuspension	Percent Normal Development	CR-023	Control	0.769	0.468	T-test Equal Var	0.425		Treatment >= Comparison
Larval Resuspension	Percent Normal Development	CR-12	Control	0.082	0.093	T-test Unequal Var	0.996		Treatment >= Comparison
Larval Resuspension	Percent Normal Development	IJ12-01	CR-023	0.868	0.916	T-test Equal Var	0.000	Yes	Treatment < Comparison
Larval Resuspension	Percent Normal Development	IJ12-01	CR-12	0.138	0.234	T-test Equal Var	0.000	Yes	Treatment < Comparison
Larval Resuspension	Percent Normal Development	IJ12-02	CR-023	0.358	0.489	T-test Equal Var	0.009	Yes	Treatment < Comparison
Larval Resuspension	Percent Normal Development	IJ12-03	CR-023	0.969	0.119	T-test Equal Var	0.010	Yes	Treatment < Comparison
Larval Resuspension	Percent Normal Development	IJ12-05	CR-023	0.567	0.913	T-test Equal Var	0.004	Yes	Treatment < Comparison
Larval Resuspension	Percent Normal Development	IJ12-07	CR-023	0.177	0.929	T-test Equal Var	0.019	Yes	Treatment < Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	CR-023	Control	0.573	0.709	T-test Equal Var	0.025	Yes	Treatment < Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	CR-12	Control	0.326	0.359	T-test Equal Var	0.172		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	IJ12-01	CR-023	0.692	0.245	T-test Equal Var	0.200		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	IJ12-01	CR-12	0.339	0.169	T-test Equal Var	0.006	Yes	Treatment < Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	IJ12-02	CR-023	0.467	0.176	T-test Equal Var	0.169		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	IJ12-03	CR-023	0.565	0.280	T-test Equal Var	0.843		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	IJ12-05	CR-023	0.835	0.528	T-test Equal Var	0.315		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate (mg/ind/day)	IJ12-07	CR-023	0.780	0.262	T-test Equal Var	0.279		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	CR-023	Control	0.385	0.439	T-test Equal Var	0.820		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	CR-12	Control	0.141	0.050	T-test Unequal Var	0.482		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	IJ12-01	CR-023	0.570	0.499	T-test Equal Var	0.089		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	IJ12-01	CR-12	0.889	0.410	T-test Equal Var	0.201		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	IJ12-02	CR-023	0.424	0.298	T-test Equal Var	0.198		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	IJ12-03	CR-023	0.663	0.496	T-test Equal Var	0.826		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	IJ12-05	CR-023	0.813	0.932	T-test Equal Var	0.101		Treatment >= Comparison
Neanthes 20-Day	Individual Growth Rate-AFDW	IJ12-07	CR-023	0.693	0.128	T-test Equal Var	0.095		Treatment >= Comparison

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=CR-023 ----------

The TTEST Procedure

Variable: result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control	5	1.2572	0.0862	0.0386	1.1731	1.3453
Reference	5	1.2784	0.1044	0.0467	1.1071	1.3453
Diff (1-2)		-0.0212	0.0957	0.0606		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		1.2572	1.1501	1.3642	0.0862	0.0517	0.2477
Reference		1.2784	1.1488	1.4081	0.1044	0.0626	0.3000
Diff (1-2)	Pooled	-0.0212	-0.1609	0.1184	0.0957	0.0647	0.1834
Diff (1-2)	Satterthwaite	-0.0212	-0.1618	0.1193			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	-0.35	0.7347
Satterthwaite	Unequal	7.7234	-0.35	0.7351

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.47	0.7195

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=CR-023 ----------

The TTEST Procedure

Variable: result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control	5	1.0487	0.0347	0.0155	0.9971	1.0905
Reference	5	1.0425	0.0615	0.0275	0.9622	1.1336
Diff (1-2)		0.00617	0.0499	0.0316		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		1.0487	1.0056	1.0918	0.0347	0.0208	0.0997
Reference		1.0425	0.9661	1.1189	0.0615	0.0369	0.1768
Diff (1-2)	Pooled	0.00617	-0.0667	0.0790	0.0499	0.0337	0.0957
Diff (1-2)	Satterthwaite	0.00617	-0.0702	0.0825			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.20	0.8500
Satterthwaite	Unequal	6.3099	0.20	0.8513

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	3.15	0.2930

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=CR-12 ----------

The TTEST Procedure

Variable: result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control	5	1.0487	0.0347	0.0155	0.9971	1.0905
Reference	5	1.2729	0.1091	0.0488	1.1930	1.4536
Diff (1-2)		-0.2242	0.0809	0.0512		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		1.0487	1.0056	1.0918	0.0347	0.0208	0.0997
Reference		1.2729	1.1375	1.4083	0.1091	0.0653	0.3134
Diff (1-2)	Pooled	-0.2242	-0.3422	-0.1062	0.0809	0.0547	0.1550
Diff (1-2)	Satterthwaite	-0.2242	-0.3574	-0.0910			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	-4.38	0.0023
Satterthwaite	Unequal	4.8012	-4.38	0.0078

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	9.88	0.0476

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=CR-023 ----------

The TTEST Procedure

Variable: result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control	5	1.1923	0.1501	0.0671	1.0320	1.3373
Reference	5	0.9701	0.1556	0.0696	0.7879	1.2086
Diff (1-2)		0.2222	0.1529	0.0967		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		1.1923	1.0059	1.3787	0.1501	0.0899	0.4314
Reference		0.9701	0.7769	1.1633	0.1556	0.0932	0.4472
Diff (1-2)	Pooled	0.2222	-0.00078	0.4452	0.1529	0.1033	0.2929
Diff (1-2)	Satterthwaite	0.2222	-0.00083	0.4452			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	2.30	0.0506
Satterthwaite	Unequal	7.9897	2.30	0.0507

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.07	0.9462

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=CR-12 ----------

The TTEST Procedure

Variable: result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control	5	1.1923	0.1501	0.0671	1.0320	1.3373
Reference	5	1.1058	0.1198	0.0536	1.0070	1.2920
Diff (1-2)		0.0865	0.1358	0.0859		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		1.1923	1.0059	1.3787	0.1501	0.0899	0.4314
Reference		1.1058	0.9571	1.2546	0.1198	0.0718	0.3442
Diff (1-2)	Pooled	0.0865	-0.1116	0.2846	0.1358	0.0917	0.2602
Diff (1-2)	Satterthwaite	0.0865	-0.1133	0.2863			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	1.01	0.3433
Satterthwaite	Unequal	7.6243	1.01	0.3447

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.57	0.6725

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=CR-023 ----------

The TTEST Procedure

Variable: result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control	5	0.7062	0.0520	0.0232	0.6598	0.7698
Reference	5	0.7557	0.1013	0.0453	0.6389	0.9157
Diff (1-2)		-0.0494	0.0805	0.0509		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		0.7062	0.6417	0.7708	0.0520	0.0311	0.1493
Reference		0.7557	0.6299	0.8814	0.1013	0.0607	0.2910
Diff (1-2)	Pooled	-0.0494	-0.1668	0.0680	0.0805	0.0544	0.1542
Diff (1-2)	Satterthwaite	-0.0494	-0.1741	0.0753			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	-0.97	0.3600
Satterthwaite	Unequal	5.9707	-0.97	0.3692

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	3.80	0.2246

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=CR-12 ----------

The TTEST Procedure

Variable: result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control	5	0.7062	0.0520	0.0232	0.6598	0.7698
Reference	5	0.7050	0.0318	0.0142	0.6712	0.7430
Diff (1-2)		0.00125	0.0431	0.0272		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		0.7062	0.6417	0.7708	0.0520	0.0311	0.1493
Reference		0.7050	0.6655	0.7445	0.0318	0.0190	0.0913
Diff (1-2)	Pooled	0.00125	-0.0616	0.0641	0.0431	0.0291	0.0825
Diff (1-2)	Satterthwaite	0.00125	-0.0639	0.0664			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.05	0.9644
Satterthwaite	Unequal	6.6246	0.05	0.9646

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	2.67	0.3638

Mann-Whitney Test Results

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=CR-12 ----------

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable result
Classified by Variable group

group	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
Control	5	37.0	27.50	4.472136	7.40
Reference	5	18.0	27.50	4.472136	3.60

Average scores were used for ties.

Wilcoxon Two-Sample Test

Statistic	37.0000
Normal Approximation	
Z	2.0125
One-Sided Pr > Z	0.0221
Two-Sided Pr > |Z|	0.0442
t Approximation	
One-Sided Pr > Z	0.0375
Two-Sided Pr > |Z|	0.0750

Z includes a continuity correction of 0.5.

Kruskal-Wallis Test

Chi-Square	4.5125

DF	1
Pr > Chi-Square	0.0336

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=IJ12-01 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.2784	0.1044	0.0467	1.1071	1.3453
Test	5	1.4330	0.2067	0.0924	1.1071	1.5708
Diff (1-2)		-0.1546	0.1637	0.1035		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.2784	1.1488	1.4081	0.1044	0.0626	0.3000
Test		1.4330	1.1764	1.6896	0.2067	0.1238	0.5939
Diff (1-2)	Pooled	-0.1546	-0.3933	0.0842	0.1637	0.1106	0.3137
Diff (1-2)	Satterthwaite	-0.1546	-0.4088	0.0997			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	-1.49	0.1739
Satterthwaite	Unequal	5.9172	-1.49	0.1868

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	3.92	0.2145

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=IJ12-03 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.2784	0.1044	0.0467	1.1071	1.3453
Test	5	1.1399	0.1026	0.0459	1.0472	1.2490
Diff (1-2)		0.1385	0.1035	0.0655		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.2784	1.1488	1.4081	0.1044	0.0626	0.3000
Test		1.1399	1.0126	1.2673	0.1026	0.0615	0.2948
Diff (1-2)	Pooled	0.1385	-0.0125	0.2894	0.1035	0.0699	0.1983
Diff (1-2)	Satterthwaite	0.1385	-0.0125	0.2894			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	2.12	0.0673
Satterthwaite	Unequal	7.9975	2.12	0.0673

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.04	0.9733

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=IJ12-05 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.2784	0.1044	0.0467	1.1071	1.3453
Test	5	1.2420	0.2396	0.1071	0.9377	1.5708
Diff (1-2)		0.0364	0.1848	0.1169		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.2784	1.1488	1.4081	0.1044	0.0626	0.3000
Test		1.2420	0.9445	1.5395	0.2396	0.1435	0.6884
Diff (1-2)	Pooled	0.0364	-0.2331	0.3059	0.1848	0.1248	0.3540
Diff (1-2)	Satterthwaite	0.0364	-0.2565	0.3293			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.31	0.7634
Satterthwaite	Unequal	5.4667	0.31	0.7670

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	5.26	0.1366

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=IJ12-01 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.0425	0.0615	0.0275	0.9622	1.1336
Test	5	0.8350	0.0524	0.0234	0.7786	0.9057
Diff (1-2)		0.2075	0.0572	0.0361		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.0425	0.9661	1.1189	0.0615	0.0369	0.1768
Test		0.8350	0.7700	0.9001	0.0524	0.0314	0.1506
Diff (1-2)	Pooled	0.2075	0.1241	0.2908	0.0572	0.0386	0.1095
Diff (1-2)	Satterthwaite	0.2075	0.1238	0.2912			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	5.74	0.0004
Satterthwaite	Unequal	7.8034	5.74	0.0005

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.38	0.7639

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=IJ12-02 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.0425	0.0615	0.0275	0.9622	1.1336
Test	5	0.9093	0.0785	0.0351	0.8362	1.0212
Diff (1-2)		0.1333	0.0705	0.0446		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.0425	0.9661	1.1189	0.0615	0.0369	0.1768
Test		0.9093	0.8118	1.0067	0.0785	0.0470	0.2255
Diff (1-2)	Pooled	0.1333	0.0304	0.2361	0.0705	0.0476	0.1351
Diff (1-2)	Satterthwaite	0.1333	0.0294	0.2371			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	2.99	0.0174
Satterthwaite	Unequal	7.5694	2.99	0.0185

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.63	0.6490

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=IJ12-03 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.0425	0.0615	0.0275	0.9622	1.1336
Test	5	0.8765	0.1111	0.0497	0.7317	1.0091
Diff (1-2)		0.1661	0.0898	0.0568		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.0425	0.9661	1.1189	0.0615	0.0369	0.1768
Test		0.8765	0.7385	1.0144	0.1111	0.0666	0.3192
Diff (1-2)	Pooled	0.1661	0.0351	0.2970	0.0898	0.0607	0.1720
Diff (1-2)	Satterthwaite	0.1661	0.0284	0.3037			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	2.92	0.0192
Satterthwaite	Unequal	6.2425	2.92	0.0253

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	3.26	0.2788

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=IJ12-05 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.0425	0.0615	0.0275	0.9622	1.1336
Test	5	0.8990	0.0668	0.0299	0.7894	0.9699
Diff (1-2)		0.1435	0.0642	0.0406		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.0425	0.9661	1.1189	0.0615	0.0369	0.1768
Test		0.8990	0.8161	0.9819	0.0668	0.0400	0.1919
Diff (1-2)	Pooled	0.1435	0.0499	0.2371	0.0642	0.0434	0.1230
Diff (1-2)	Satterthwaite	0.1435	0.0498	0.2373			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	3.53	0.0077
Satterthwaite	Unequal	7.9469	3.53	0.0078

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.18	0.8777

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=IJ12-07 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	1.0425	0.0615	0.0275	0.9622	1.1336
Test	5	0.9399	0.0686	0.0307	0.8544	1.0457
Diff (1-2)		0.1026	0.0652	0.0412		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		1.0425	0.9661	1.1189	0.0615	0.0369	0.1768
Test		0.9399	0.8547	1.0251	0.0686	0.0411	0.1972
Diff (1-2)	Pooled	0.1026	0.00759	0.1977	0.0652	0.0440	0.1248
Diff (1-2)	Satterthwaite	0.1026	0.00739	0.1979			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	2.49	0.0375
Satterthwaite	Unequal	7.9063	2.49	0.0379

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.24	0.8374

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=IJ12-01 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.9701	0.1556	0.0696	0.7879	1.2086
Test	5	0.9021	0.0717	0.0321	0.8069	1.0068
Diff (1-2)		0.0680	0.1212	0.0766		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.9701	0.7769	1.1633	0.1556	0.0932	0.4472
Test		0.9021	0.8131	0.9912	0.0717	0.0430	0.2061
Diff (1-2)	Pooled	0.0680	-0.1087	0.2447	0.1212	0.0818	0.2321
Diff (1-2)	Satterthwaite	0.0680	-0.1226	0.2586			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.89	0.4007
Satterthwaite	Unequal	5.6261	0.89	0.4111

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	4.71	0.1627

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=IJ12-02 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.9701	0.1556	0.0696	0.7879	1.2086
Test	5	0.8952	0.0529	0.0237	0.8453	0.9772
Diff (1-2)		0.0749	0.1162	0.0735		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.9701	0.7769	1.1633	0.1556	0.0932	0.4472
Test		0.8952	0.8294	0.9609	0.0529	0.0317	0.1521
Diff (1-2)	Pooled	0.0749	-0.0946	0.2444	0.1162	0.0785	0.2227
Diff (1-2)	Satterthwaite	0.0749	-0.1150	0.2649			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	1.02	0.3379
Satterthwaite	Unequal	4.9138	1.02	0.3556

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	8.64	0.0601

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=IJ12-03 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.9701	0.1556	0.0696	0.7879	1.2086
Test	5	1.0527	0.0729	0.0326	0.9920	1.1700
Diff (1-2)		-0.0826	0.1215	0.0768		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.9701	0.7769	1.1633	0.1556	0.0932	0.4472
Test		1.0527	0.9622	1.1432	0.0729	0.0437	0.2094
Diff (1-2)	Pooled	-0.0826	-0.2598	0.0946	0.1215	0.0821	0.2328
Diff (1-2)	Satterthwaite	-0.0826	-0.2733	0.1081			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	-1.08	0.3137
Satterthwaite	Unequal	5.6743	-1.08	0.3259

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	4.56	0.1709

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=IJ12-05 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.9701	0.1556	0.0696	0.7879	1.2086
Test	5	0.9281	0.1045	0.0467	0.7682	1.0383
Diff (1-2)		0.0420	0.1325	0.0838		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.9701	0.7769	1.1633	0.1556	0.0932	0.4472
Test		0.9281	0.7984	1.0578	0.1045	0.0626	0.3002
Diff (1-2)	Pooled	0.0420	-0.1513	0.2353	0.1325	0.0895	0.2539
Diff (1-2)	Satterthwaite	0.0420	-0.1562	0.2403			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.50	0.6296
Satterthwaite	Unequal	6.9971	0.50	0.6315

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	2.22	0.4593

T-test Results, This is a 2-tailed result

See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=IJ12-07 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.9701	0.1556	0.0696	0.7879	1.2086
Test	5	0.8915	0.2419	0.1082	0.6337	1.2146
Diff (1-2)		0.0786	0.2034	0.1286		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.9701	0.7769	1.1633	0.1556	0.0932	0.4472
Test		0.8915	0.5912	1.1918	0.2419	0.1449	0.6950
Diff (1-2)	Pooled	0.0786	-0.2180	0.3752	0.2034	0.1374	0.3896
Diff (1-2)	Satterthwaite	0.0786	-0.2271	0.3843			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.61	0.5580
Satterthwaite	Unequal	6.8271	0.61	0.5608

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	2.42	0.4139

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=IJ12-01 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.7557	0.1013	0.0453	0.6389	0.9157
Test	5	0.6757	0.0669	0.0299	0.5808	0.7674
Diff (1-2)		0.0800	0.0858	0.0543		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.7557	0.6299	0.8814	0.1013	0.0607	0.2910
Test		0.6757	0.5926	0.7587	0.0669	0.0401	0.1922
Diff (1-2)	Pooled	0.0800	-0.0451	0.2052	0.0858	0.0580	0.1644
Diff (1-2)	Satterthwaite	0.0800	-0.0486	0.2086			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	1.47	0.1787
Satterthwaite	Unequal	6.9327	1.47	0.1843

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	2.29	0.4417

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=IJ12-02 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.7557	0.1013	0.0453	0.6389	0.9157
Test	5	0.7111	0.0454	0.0203	0.6594	0.7752
Diff (1-2)		0.0445	0.0785	0.0496		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.7557	0.6299	0.8814	0.1013	0.0607	0.2910
Test		0.7111	0.6547	0.7675	0.0454	0.0272	0.1305
Diff (1-2)	Pooled	0.0445	-0.0699	0.1590	0.0785	0.0530	0.1503
Diff (1-2)	Satterthwaite	0.0445	-0.0794	0.1684			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.90	0.3958
Satterthwaite	Unequal	5.5471	0.90	0.4069

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	4.97	0.1496

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=IJ12-03 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.7557	0.1013	0.0453	0.6389	0.9157
Test	5	0.8081	0.0594	0.0266	0.7472	0.8902
Diff (1-2)		-0.0524	0.0830	0.0525		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.7557	0.6299	0.8814	0.1013	0.0607	0.2910
Test		0.8081	0.7343	0.8818	0.0594	0.0356	0.1706
Diff (1-2)	Pooled	-0.0524	-0.1734	0.0687	0.0830	0.0561	0.1590
Diff (1-2)	Satterthwaite	-0.0524	-0.1787	0.0739			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	-1.00	0.3475
Satterthwaite	Unequal	6.4601	-1.00	0.3541

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	2.91	0.3258

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=IJ12-05 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.7557	0.1013	0.0453	0.6389	0.9157
Test	5	0.6743	0.0833	0.0373	0.5773	0.7631
Diff (1-2)		0.0814	0.0927	0.0586		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.7557	0.6299	0.8814	0.1013	0.0607	0.2910
Test		0.6743	0.5708	0.7778	0.0833	0.0499	0.2395
Diff (1-2)	Pooled	0.0814	-0.0539	0.2166	0.0927	0.0626	0.1776
Diff (1-2)	Satterthwaite	0.0814	-0.0547	0.2175			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	1.39	0.2027
Satterthwaite	Unequal	7.7144	1.39	0.2040

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	1.48	0.7150

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=IJ12-07 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-023	5	0.7557	0.1013	0.0453	0.6389	0.9157
Test	5	0.6102	0.2031	0.0908	0.4111	0.8957
Diff (1-2)		0.1455	0.1605	0.1015		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-023		0.7557	0.6299	0.8814	0.1013	0.0607	0.2910
Test		0.6102	0.3580	0.8624	0.2031	0.1217	0.5836
Diff (1-2)	Pooled	0.1455	-0.0886	0.3795	0.1605	0.1084	0.3074
Diff (1-2)	Satterthwaite	0.1455	-0.1042	0.3951			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	1.43	0.1897
Satterthwaite	Unequal	5.8726	1.43	0.2028

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	4.02	0.2062

Mann-Whitney Test Results

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=IJ12-02 ----------

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable Result
Classified by Variable group

group	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CR-023	5	35.0	27.50	4.564355	7.0
Test	5	20.0	27.50	4.564355	4.0

Average scores were used for ties.

Wilcoxon Two-Sample Test

Statistic	35.0000
Normal Approximation	
Z	1.5336
One-Sided Pr > Z	0.0626
Two-Sided Pr > |Z|	0.1251
t Approximation	
One-Sided Pr > Z	0.0797
Two-Sided Pr > |Z|	0.1595

Z includes a continuity correction of 0.5.

Kruskal-Wallis Test

Chi-Square	2.7000

DF	1
Pr > Chi-Square	0.1003

Mann-Whitney Test Results

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=IJ12-07 ----------

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable Result
Classified by Variable group

group	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CR-023	5	27.0	27.50	4.232808	5.40
Test	5	28.0	27.50	4.232808	5.60

Average scores were used for ties.

Wilcoxon Two-Sample Test

Statistic	27.0000
Normal Approximation	
Z	0.0000
One-Sided Pr < Z	0.5000
Two-Sided Pr > |Z|	1.0000
t Approximation	
One-Sided Pr < Z	0.5000
Two-Sided Pr > |Z|	1.0000

Z includes a continuity correction of 0.5.

Kruskal-Wallis Test

Chi-Square	0.0140

DF	1
Pr > Chi-Square	0.9060

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Larval Resuspension Endpoint=Percent Normal Development Treatment=IJ12-01 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-12	5	1.2729	0.1091	0.0488	1.1930	1.4536
Test	5	0.8350	0.0524	0.0234	0.7786	0.9057
Diff (1-2)		0.4379	0.0856	0.0541		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-12		1.2729	1.1375	1.4083	0.1091	0.0653	0.3134
Test		0.8350	0.7700	0.9001	0.0524	0.0314	0.1506
Diff (1-2)	Pooled	0.4379	0.3131	0.5626	0.0856	0.0578	0.1639
Diff (1-2)	Satterthwaite	0.4379	0.3041	0.5717			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	8.09	<.0001
Satterthwaite	Unequal	5.7548	8.09	0.0002

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	4.33	0.1849

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate (mg Treatment=IJ12-01 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-12	5	1.1058	0.1198	0.0536	1.0070	1.2920
Test	5	0.9021	0.0717	0.0321	0.8069	1.0068
Diff (1-2)		0.2037	0.0987	0.0624		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-12		1.1058	0.9571	1.2546	0.1198	0.0718	0.3442
Test		0.9021	0.8131	0.9912	0.0717	0.0430	0.2061
Diff (1-2)	Pooled	0.2037	0.0597	0.3477	0.0987	0.0667	0.1891
Diff (1-2)	Satterthwaite	0.2037	0.0539	0.3535			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	3.26	0.0115
Satterthwaite	Unequal	6.5412	3.26	0.0152

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	2.79	0.3443

T-test Results, This is a 2-tailed result
See Summary Page for 1-tail Result

---------- Test=Neanthes 20-Day Endpoint=Individual Growth Rate-AFD Treatment=IJ12-01 ----------

The TTEST Procedure

Variable: Result

group	N	Mean	Std Dev	Std Err	Minimum	Maximum
CR-12	5	0.7050	0.0318	0.0142	0.6712	0.7430
Test	5	0.6757	0.0669	0.0299	0.5808	0.7674
Diff (1-2)		0.0293	0.0524	0.0331		

group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
CR-12		0.7050	0.6655	0.7445	0.0318	0.0190	0.0913
Test		0.6757	0.5926	0.7587	0.0669	0.0401	0.1922
Diff (1-2)	Pooled	0.0293	-0.0470	0.1057	0.0524	0.0354	0.1003
Diff (1-2)	Satterthwaite	0.0293	-0.0527	0.1113			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	8	0.89	0.4018
Satterthwaite	Unequal	5.7183	0.89	0.4116

Equality of Variances

Method	Num DF	Den DF	F Value	Pr > F
Folded F	4	4	4.43	0.1785

Mann-Whitney Test Results

---------- Test=Ampelisca 10-Day Endpoint=Percentage Survival Treatment=IJ12-01 ----------

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable Result
Classified by Variable group

group	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CR-12	5	18.0	27.50	4.669642	3.60
Test	5	37.0	27.50	4.669642	7.40

Average scores were used for ties.

Wilcoxon Two-Sample Test

Statistic	18.0000
Normal Approximation	
Z	-1.9273
One-Sided Pr < Z	0.0270
Two-Sided Pr > |Z|	0.0539
t Approximation	
One-Sided Pr < Z	0.0430
Two-Sided Pr > |Z|	0.0860

Z includes a continuity correction of 0.5.

Kruskal-Wallis Test

Chi-Square	4.1389

DF	1
Pr > Chi-Square	0.0419

APPENDIX C

CHAIN-OF-CUSTODY FORMS

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page 1 of 1**

Lab Contact: Bill Bardiner	Project: **I&J Waterway RI/FS**
Lab: **NewFields Northwest, LLC**	
Address: **P.O. Box 216, 4729 NE View Dr.**	Proj. No.: **090007-01**
City, etc: **Port Gamble, WA 98364**	Sampler: **JL, AB**
Phone: 360-297-6040	Shipping Method: **FedEx**
Fax: **360-297-7268**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Archive	10-d Amphipod Bioassay	20-Day Juvenile Polychaete Bioassay	Larval Development Bioassay							Notes/ Comments:
IJ12-10	4-24-2012		SED	2		X	X	X					4.0	2.5	HOLD all samples until verification from Anchor QEA
IJ12-03	4-24-2012		SED	1		X	X	X						2.5	
IJ12-09	4-24-2012		SED	1		X	X	X						4.0	
IJ12-05	4-24-2012		SED	1		X	X	X						2.5	

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Ariel Blanc	Printed Name:	Printed Name:		
Company: Anchor QEA	Company:	Company:		
Date/Time: 4-25-2012 1600	Date/Time:	Date/Time:		
Received By:	Received By:	Received By:		
Printed Name: Brian Hester	Printed Name:	Printed Name:		
Company: NewFields	Company:	Company:	# of Coolers:	Cooler Temp(s):
Date/Time: 4.26.12 1215	Date/Time:	Date/Time:	COC Seals Intact?	Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page 1 of 1**

Lab Contact: Bill Bardiner	Project: **I&J Waterway RI/FS**
Lab: **NewFields Northwest, LLC**	
Address: **P.O. Box 216, 4729 NE View Dr.**	Proj. No.: **090007-01**
City, etc: **Port Gamble, WA 98364**	Sampler: **JL, AB**
Phone: 360-297-6040	Shipping Method: **FedEx**
Fax: **360-297-7268**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Archive	10-d Amphipod Bioassay	20-Day Juvenile Polychaete Bioassay	Larval Development Bioassay							Notes/ Comments:
IJ12-01	4-25-2012		SED	2	X										30, 25
IJ12-11	4-24-2012		SED	1	X										30

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Ariel Blanc	Printed Name:	Printed Name:		
Company: Anchor QEA	Company:	Company:		
Date/Time: 4-24-2016 1600	Date/Time:	Date/Time:		
Received By:	Received By:	Received By:		
Printed Name: Brian Hester	Printed Name:	Printed Name:		
Company: NewFields	Company:	Company:	# of Coolers:	Cooler Temp(s):
Date/Time: 4.25.12 1215	Date/Time:	Date/Time:	COC Seals Intact?	Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page 1 of 1**

Lab Contact: Bill Bardiner	Project: **I&J Waterway RI/FS**
Lab: **NewFields Northwest, LLC**	
Address: **P.O. Box 216, 4729 NE View Dr.**	Proj. No.: **090007-01**
City, etc: **Port Gamble, WA 98364**	Sampler: **JL, AB**
Phone: 360-297-6040	Shipping Method: **FedEx**
Fax: **360-297-7268**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Archive	10-d Amphipod Bioassay	20-Day Juvenile Polychaete Bioassay	Larval Development Bioassay							Notes/ Comments:
IJ12-07	4-24-2012		SED	2	X										3.5, 4.0
IJ12-04	4-24-2012		SED	2	X										2.5, 3.0

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Ariel Blanc	Printed Name:	Printed Name:		
Company: Anchor QEA	Company:	Company:		
Date/Time: 4-25-2012 1600	Date/Time:	Date/Time:		
Received By:	Received By:	Received By:		
Printed Name: Brian Hester	Printed Name:	Printed Name:		
Company: NewFields	Company:	Company:	# of Coolers:	Cooler Temp(s):
Date/Time: 4.26.12 1215	Date/Time:	Date/Time:	COC Seals Intact?	Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
720 Olive Way, Suite 1900
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact:** **Page 1 of 1**

Lab Contact: Bill Bardiner	Project: **I&J Waterway RI/FS**
Lab: **NewFields Northwest, LLC**	
Address: **P.O. Box 216, 4729 NE View Dr.**	Proj. No.: **090007-01**
City, etc: **Port Gamble, WA 98364**	Sampler: **JL, AB**
Phone: 360-297-6040	Shipping Method: **FedEx**
Fax: **360-297-7268**	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Archive	10-d Amphipod Bioassay	20-Day Juvenile Polychaete Bioassay	Larval Development Bioassay							Notes/ Comments:
IJ12-08A	4-24-2012		SED	2	X										5.0, 4.0
IJ12-02	4-24-2012		SED	2	X										5.0, 4.0
IJ12-06	4-24-2012		SED	2	X										5.0, 4.0
IJ12-11	4-24-2012		SED	1	X										5.0
IJ12-03	4-24-2012		SED	1	X										4.0
IJ12-09	4-24-2012		SED	1	X										4.0
IJ12-05	4-24-2012		SED	1	X										3.5

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Ariel Blanc	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 4-25-2012 1600	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name: Brian Hester	Printed Name:	Printed Name:	# of Coolers: / Cooler Temp(s):
Company: NewFields	Company:	Company:	
Date/Time: 4.26.12 1215	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

NEWFIELDS

STATION COORDINATE LOG
For Van Veen or Box Core

Project: I&J Cara Inlet Ref. Collection Cruise Director: M Bacon

Survey Number: 051712 Recorder: M Bacon

DATE	TIME	STATION	DROP NO.	LATITUDE	LONGITUDE	DEPTH ~~(m)~~ ft	
5/17/12	0915	CR023	1	47.29833	122.7133	250	~78% fines
↓	0940	↓	2	↓	↓	↓	
	1000	CR.12	1	47.30016	122.6826	~~29~~21	~34% fines 1 red rock crab
		↓	2	↓	↓	↓	
			3				
			4				
↓	1040	↓	5	↓	↓	↓	

wet sieve @ lab 5.25.12
CR12 12% fines
CR023 79% fines

NEWFIELDS

Field Cruise Log

Project / Program: I & J

Survey Number: 5/17/12

Vessel: Sand Lance

Sampling Type: Donar

Date: 5/17/12

Start Time: 0915

End Time: 1040

Cruise Director: M. Bacon

Boat Captain: M. Blanton

Crew:

Weather:

Time:	Wind:	Sky:	Sea State:
0830	25 knots	Overcast	Calm

Problems:

Comments / Other Observations: