

TDI - BROOKS INTERNATIONAL, INC.
B&B Laboratories, Inc.
College Station, TX

Arcadis
Mayflower AR Project
(Contract # B0086003.1301)
July 27, 2013 and July 28, 2013
Collection Dates

Determination of:
Aliphatic Hydrocarbons (ALI), Total Petroleum
Hydrocarbons (TPH), and Polycyclic Aromatic
Hydrocarbons (PAHs) in Sediment Samples

(QC Batch ENV 3075)

August 28, 2013

Technical Report 13-3088

Arcadis
Mayflower AR Project
(Contract # B0086003.1301)
July 27, 2013 through July 28, 2013
Collection Dates
Table of Contents
B&B Laboratories
August 28, 2013

Heading	Page Number
Sample/Analyses Description.....	1
Sediment Samples.....	3
Aliphatic Hydrocarbons (C9-C40)/Total Petroleum Hydrocarbons/Extractable	
Organic Matter Concentrations.....	4
Aliphatic Hydrocarbon Histograms.....	11
Polycyclic Aromatic Hydrocarbon Concentration	26
Polycyclic Aromatic Hydrocarbon Histograms.....	51
Polycyclic Aromatic Hydrocarbon Total Ion Chromatograms	71
Total Petroleum Hydrocarbons/Aliphatic Hydrocarbons Raw Data	91
Polycyclic Aromatic Hydrocarbon Raw Data.....	161
Aliphatic Hydrocarbons/Total Petroleum Hydrocarbons/Initial Calibration Data and	
Initial Calibration Verification Data.....	347
TPH/Aliphatic ICAL FID1C08FRONT081213.M GC/FID-1 FRONT	348
Aliphatic Mass Discrimination Ratio.....	381
Aliphatic Internal Standard Area Data.....	383
Polycyclic Aromatic Hydrocarbon Initial Calibration Data and Initial Calibration	
Verification Data	385
PAH ICAL AR 70055.M GC/MS 7 (PAH-2012).....	386
PAH Mass Discrimination Ratio.....	421
PAH Internal Standard Area Data.....	423
SRM-2779 Reference Oil Aliphatic and PAH Resolution Checks.....	425
Supporting Documents.....	428
Shipping, Sample Receiving, and Project Initiation Documents.....	429
Laboratory Bench Sheet Logs	444
Last Page.....	453

Narrative

Technical Report 13-3088
Arcadis
Mayflower AR Project
(Contract # B0086003.1301)
Sediment Samples
July 27, 2013 and July 28, 2013 Collection Dates
August 28, 2013

Introduction

B&B Laboratories received a shipment of two (2) ice chests that were sent by Daniel Mays of Arcadis using FedEx on July 29, 2013 and arrived on July 30, 2013 in College Station, Texas. The ice chests arrived sealed and in good condition.

Cooler Number	Temperature	Samples Received
1	7.4°C 5.1°C (Temp Blank)	Eleven (11) sediments in 8oz or 4oz jars Two (2) 1L water samples in B/R amber bottles.
2	10.9°C 2.3°C (Temp Blank)	Sixteen (16) sediments in 8oz or 4oz jars

The water and sediment samples were collected between July 27, 2013 and July 28, 2013 in support of the Mayflower AR, Project (Arcadis-US Contract # B0086003.1301). The water samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009) and were stored in an access-controlled refrigerator (4.0°C) prior to analysis. The sediment samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009) and were stored in an access-controlled freezer (<-16.0°C) prior to analysis. Selected sediment samples were analyzed for Total Petroleum Hydrocarbons (TPH) and C₉ to C₄₀ Aliphatic Hydrocarbons (ALI) by GC/FID, Polycyclic Aromatic Hydrocarbons (PAH) by GC/MS-SIM, and selected biological markers by GC/MS-SIM.

The analytical results for TPH, ALI, PAH, selected hopane's, and TAS compounds in the sediment samples are included in this report.

Analytical Methods

The standard operating procedures for TPH, ALI, PAH, hopanes, and TAS are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	ALI/TPH	PAH
Sediment	B&B 1003	B&B 1016	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <3X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report. Data Qualifier Definitions are listed in Table 3. The method detection limits (MDL) for each analyte are listed in Table 4.

Table 2. Analytical reporting units.

Matrix	TPH	ALI	PAH
Sediment	µg/dry g	µg/dry g	ng/dry g

Table 3. Data Qualifier Definitions.

Qualifier	Definition
B	Analyte detected in the procedural blank greater than 3X MDL
D	Diluted Value
E	Analyte concentration exceeds the calibration range of the GC/MS for that specific analysis.
I	Analytical interference
J	Analyte detected below the method detection limit
NA	Not Applicable
U	Analyte not detected
X	Analyte <3X MDL
Y	Spiked level of analyte <50% of the native concentration
*	Outside QA limits, refer to narrative

Table 4. Method Detection Limits.

Aliphatics	Sediment MDLs
Sample size	15 g, 1ml final extract volume
Unit of measure	µg/g
n-C9	0.012
n-C10	0.021
n-C11	0.016
n-C12	0.019
n-C13	0.045
i-c15	0.016
n-C14	0.013
i-c16	0.004
n-C15	0.016
n-C16	0.004
i-c18	0.004
n-C17	0.003
Pristane	0.003
n-C18	0.004
Phytane	0.006
n-C19	0.005
n-C20	0.012
n-C21	0.004
n-C22	0.003
n-C23	0.008
n-C24	0.005
n-C25	0.007
n-C26	0.008
n-C27	0.011
n-C28	0.011
n-C29	0.021
n-C30	0.013
n-C31	0.015
n-C32	0.012
n-C33	0.021
n-C34	0.016
n-C35	0.015
n-C36	0.016
n-C37	0.017
n-C38	0.019
n-C39	0.019
n-C40	0.019
Total Petroleum Hydrocarbons	1.4
Total Resolved Hydrocarbons	1.4
Unresolved Complex Mixture	1.4
Extractable Organic Matter	100

Table 4. Continued. Method Detection Limits.

PAH	Sediment MDLs
Sample size	15.0 g, 1ml final extract volume
Unit of measure	ng/g
cis/trans Decalin	0.132
C1-Decalins	0.263
C2-Decalins	0.263
C3-Decalins	0.263
C4-Decalins	0.263
Naphthalene	0.342
C1-Naphthalenes	1.03
C2-Naphthalenes	0.684
C3-Naphthalenes	0.684
C4-Naphthalenes	0.684
Benzothiophene	0.090
C1-Benzothiophenes	0.180
C2-Benzothiophenes	0.180
C3-Benzothiophenes	0.180
C4-Benzothiophenes	0.180
Biphenyl	0.294
Acenaphthylene	0.041
Acenaphthene	0.103
Dibenzofuran	0.204
Fluorene	0.183
C1-Fluorenes	0.367
C2-Fluorenes	0.367
C3-Fluorenes	0.367
Carbazole	0.150
Anthracene	0.115
Phenanthrene	0.208
C1-Phenanthrenes/Anthracenes	0.077
C2-Phenanthrenes/Anthracenes	0.285
C3-Phenanthrenes/Anthracenes	0.285
C4-Phenanthrenes/Anthracenes	0.285
Dibenzothiophene	0.116
C1-Dibenzothiophenes	0.064
C2-Dibenzothiophenes	0.232
C3-Dibenzothiophenes	0.232
C4-Dibenzothiophenes	0.232
Fluoranthene	0.333
Pyrene	0.136
C1-Fluoranthenes/Pyrenes	0.469
C2-Fluoranthenes/Pyrenes	0.469
C3-Fluoranthenes/Pyrenes	0.469
C4-Fluoranthenes/Pyrenes	0.469
Naphthobenzothiophene	0.128
C1-Naphthobenzothiophenes	0.256
C2-Naphthobenzothiophenes	0.256
C3-Naphthobenzothiophenes	0.256
C4-Naphthobenzothiophenes	0.256
Benz(a)anthracene	0.192
Chrysene/Triphenylene	0.116
C1-Chrysenes	0.232

PAH (continued)	Sediment MDLs
Sample size	15.0 g, 1ml final extract volume
Unit of measure	ng/g
C2-Chrysenes	0.232
C3-Chrysenes	0.232
C4-Chrysenes	0.232
Benzo(b)fluoranthene	0.203
Benzo(k,j)fluoranthene	0.098
Benzo(a)fluoranthene	0.098
Benzo(e)pyrene	0.177
Benzo(a)pyrene	0.101
Perylene	1.27
Indeno(1,2,3-c,d)pyrene	0.050
Dibenzo(a,h)anthracene	0.064
Benzo(g,h,i)perylene	0.088
Individual Alkyl Isomers, TAS, and Hopanes	
2-Methylnaphthalene	1.30
1-Methylnaphthalene	0.546
2,6-Dimethylnaphthalene	0.261
1,6,7-Trimethylnaphthalene	0.127
1-Methylfluorene	0.191
4-Methyldibenzothiophene	0.091
2/3-Methyldibenzothiophene	0.091
1-Methyldibenzothiophene	0.091
3-Methylphenanthrene	0.097
2/4-Methylphenanthrene	0.097
2-Methylantracene	0.097
9-Methylphenanthrene	0.097
1-Methylphenanthrene	0.097
3,6-Dimethylphenanthrene	0.110
Retene	0.231
2-Methylfluoranthene	0.223
Benzo(b)fluorene	0.125
C29-Hopane	0.575
18a-Oleanane	0.575
C30-Hopane	0.575
C20-TAS	0.575
C21-TAS	0.575
C26(20S)-TAS	0.575
C26(20R)/C27(20S)-TAS	0.575
C28(20S)-TAS	0.575
C27(20R)-TAS	0.575
C28(20R)-TAS	0.575

Quality Assurance/Quality Control - Sediment

Total Petroleum Hydrocarbons (TPH) and Aliphatic Hydrocarbons (ALI)

The quality assurance/quality control procedure for this program included the analyses of a procedural blank, laboratory duplicate, and a matrix spike/matrix spike duplicate per analytical batch of no more than 20 samples. Additionally, a standard reference material (SRM) was analyzed with each data set. The SRM is a petroleum sample (NIST SRM 2779) that is analyzed with each TPH/ALI run and for which controls are established based on performance. Procedural blanks are used to determine that sample preparation and analyses are free of contaminants. The laboratory duplicate sample is used to determine the precision of the analysis. The matrix spike/matrix spike duplicate are used to measure accuracy and precision of the analysis. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies no more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs in valid spiked duplicates is ≤30%. The QA criterion for RPDs for valid laboratory duplicates is ≤30%. The QC criterion for the NIST SRM 2779 is <20% of the laboratory determined mean.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%. Refer to Table 5 for Method Performance Criteria for Aliphatic Hydrocarbons and TPH.

Polycyclic Aromatic Hydrocarbons (PAH)

The quality assurance/quality control procedure for this program included the analyses of a procedural blank, laboratory duplicate, a matrix spike/matrix spike duplicate, and a sediment SRM (NIST SRM 1941b) of no more than 19 samples. A standard reference oil (NIST 2779) was analyzed with this data set. Procedural blanks are used to determine that sample preparation and analyses are free of contaminants. The laboratory duplicate sample is used to determine the precision of the analysis. The matrix spike/matrix spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. SRMs are used to verify analytical accuracy. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies no more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value. The QC criteria for spike recoveries are between 40-120% (except for Biphenyl which is 40% to 140%, Decalin which is 25% to 120%, and Perylene which is 10-120%). The QC criterion for RPDs for valid spiked duplicates is ≤30%. The QC criterion for RPDs for valid laboratory duplicates is ≤30%. The QC criterion for the reference sediment 1941b SRM is ± 30% the NIST certified concentration range for those compounds whose concentration is greater than the laboratory method detection limit. The QC criterion for the reference oil 2779 SRM is ± 20% the NIST reference range for those compounds whose concentration is greater than the detection limit of 10 ng/g.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene whose recovery criteria are 10-120%. Refer to Table 6 for Method Performance Criteria for PAH.

Quality Assurance/Quality Control Variances - Sediments

Aliphatic Hydrocarbons (ALI) and Total Petroleum Hydrocarbons (TPH)

Initial Calibration (Six Point)

Observation

- No variances were observed.

Initial Calibration Verification

Observation

- No variances were observed.

Mass Discrimination Ratio

Observation

- No variances were observed.

Internal Standard Area Response

Observation

- No variances were observed.

Continuing Calibration Checks

Observation

- No variances were observed.

Surrogate Recoveries

Observation

- No variances were observed.

Procedural Blank

Observation

- No variances were observed.

Matrix Spike/Matrix Spike Duplicate

Observation

- No variances were observed.

Laboratory Duplicate

Observation

- No variances were observed.

Laboratory Control Standard (Petroleum)

Observation

- No variances were observed.

Additional QC Batch Information

Observation

- No variances were observed.

Polycyclic Aromatic Hydrocarbons (PAH)

Initial Calibration (Six Point)

Observation

- No variances were observed.

Initial Calibration Verification

Observation

- No variances were observed.

Mass Discrimination Ratio

Observation

- No variances were observed.

Internal Standard Area Response

Observation

- No variances were observed.

Continuing Calibration Checks

Observation

- No variances were observed.

Surrogate Recoveries

Observation

- No variances were observed.

Procedural Blank

Observation

- No variances were observed.

Matrix Spike/Matrix Spike Duplicate

Observation

- No variances were observed.

Laboratory Duplicate

Observation

- No variances were observed.

Laboratory Control Standard (Solution, Sediment, and Petroleum)

Observation

- No variances were observed.

Additional QC Batch Information

Observation

- The concentrations reported for the C1-Naphthalenes, C1-Dibenzothiophenes, and the C1-Phenanthrene/Anthracenes are calculated using the RRF of the parent compound (Naphthalene, Dibenzothiophene, and Phenanthrene). The concentration of these individual isomers is based on their RRF or an individual isomer from the same family.
- Labeling of Perylene outside of the calibration range of the GC/MS with an "E" code was made in consultation with Dr. Ted Sauer.

Table 5. Method Performance Criteria for Alkanes/Isoprenoids Compounds and Total Petroleum Hydrocarbons

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Initial Calibration (all target analytes, except i-C13, i-C14, i-C15 and i-C18)	Prior to every sequence, or as needed based on continuing calibration/verification check.	6-point calibration curve %RSD ≤ 15	Resolve before proceeding.
Continuing Calibration Verification (CCV)	Every 12 hours or every 10 field samples, whichever is more frequent	%D ≤ 25	Perform Instrument Maintenance. Re-analyze affected samples.
Initial Calibration Verification (Second Source or can be met if CCAL is second source)	Per initial calibration	%R target analytes 80-120%	Resolve before proceeding.
SRM 2779 Reference Oil (Instrument SRM)	One per batch per GC sequence	Baseline resolution of n-C17 from pristane and analytes must be $<20\%$ of laboratory derived mean	Resolve before proceeding.
Performance Evaluation Mixture (PEM)	One per batch per GC sequence	%R 75-125%	Resolve before proceeding.
Matrix Spike/Matrix Spike Duplicate (Sediments, Soils, Tissues only)	One per batch/every 20 field samples	%R 40% - 120% for target analytes; average %R 60-120% for valid spikes, RPD $\leq 30\%$. No more than 2 analytes may exceed 40-120%	Evaluate impact to data, discuss with manager to determine if corrective action is needed.
Blank Spike/Blank Spike Duplicate	One per batch/every 20 field samples	%R 40% - 120% for target analytes; RPD $\leq 30\%$. No more than 2 analytes may exceed 40-120%	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Procedural Blank	One per batch/every 20 field samples	No more than 2 analytes to exceed 3x MDL unless analyte not detected in associated sample(s) or analyte concentration $>10\times$ blank value	Resolve before proceeding. QA coordinator may be contacted to resolve issues.
Laboratory Duplicate (not required for aqueous samples)	One per batch/every 20 field samples	RPD $\leq 30\%$ if analyte concentration is 3x greater than the MDL, no more than 2 individual analyte RPDs with conc. 3x MDL can exceed 35%.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Mass Discrimination	Initial calibration and CCVs (mid-level)	Ratio for the raw areas of n-C36 / n-C20 ≥ 0.70	Resolve before proceeding.
Internal Standard (IS)	Every sample	50% - 200% of the area of the IS in the associated calibration standard	Resolve before proceeding.
Surrogates	Every sample	%R 40-120%	Re-extract affected samples. Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.

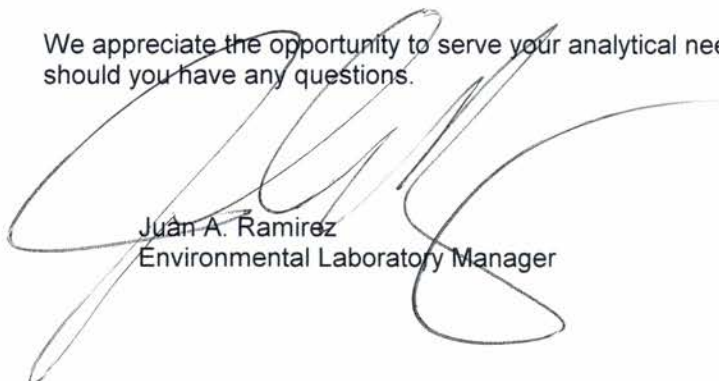
Table 6. Method Performance Criteria for Extended PAH (Parent and Alkyl Homologs) and Related Compounds.

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Tuning	Prior to every sequence	Tune as specified in laboratory SOP	Resolve before proceeding.
Initial Calibration (All parent PAH and selected alkyl homologue PAH)	Prior to every sequence, or as needed based on continuing calibration/verification check.	6-point calibration curve over two orders of magnitude RPD $\leq$ 20%	Resolve before proceeding.
Continuing Calibration Verification (CCV)	Every 12 hours or 6-9 field samples	RPD $\leq$ 25%, No more than 2 analytes can be between 25% and 35% RPD.	Perform instrument maintenance. Re-analyze affected samples.
Initial Calibration Verification (Second Source or can be met if CCV is second source)	Per initial calibration	%R target analytes 80-120%	Resolve before proceeding.
SRM 1941b for sediment; SRM 1974c for tissue If available use SRMs for appropriate matrices	One per batch/every 20 field samples	Within $\pm$ 30% of NIST 95% uncertainty range for analytes within the quantitation range. No more than 2 analytes may exceed this criterion.	Resolve before proceeding.
SRM 2779 Reference Oil	One per batch/every 20 field samples	Peak resolution >70% of 4/9-methylphenanthrene from 1-methylphenanthrene (m/z 192). Within $\pm$ 20% of NIST 95% uncertainty range for analytes within the quantitation range. No more than 2 analytes may exceed this criterion.	Resolve before proceeding.
Matrix Spike/Matrix Spike Duplicate (Sediments, Soils, Tissues only)	One per batch/every 20 field samples	%R 40% - 120% for target analytes, except biphenyl (40-140%), decalin (25-120%) and perylene (10-120%); RPD $\leq$ 30%, average %R 60-120% for valid spikes. No more than 2 analytes may exceed 40-120% recovery or >35% RPD.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Blank Spike/Blank Spike Duplicate	One per batch/every 20 field samples	See MS/MSD criteria above.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Procedural Blank	One per batch/every 20 field samples	No more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value	Resolve before proceeding. Lab manager may be contacted to resolve issues.
Laboratory Duplicate (not required for aqueous samples)	One per batch/every 20 field samples	RPD $\leq$ 30% if analyte concentration is 3x greater than the MDL, no more than 2 individual analyte RPDs with conc. 3x MDL can exceed 35%.	Evaluate impact to data, discuss with lab manager, and determine if corrective action is needed.

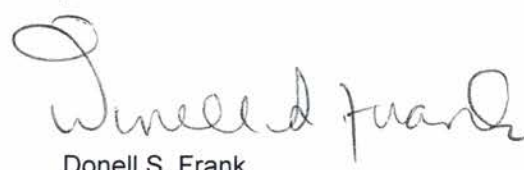
Table 6. Continued. Method Performance Criteria for Extended PAH (Parent and Alkyl Homologs) and Related Compounds.

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Mass Discrimination	Initial calibration and CCVs (mid-level)	Ratio for the concentration of Benzo[g,h,i]perylene to phenanthrene ≥ 0.70	Resolve before proceeding.
Internal Standard (IS)	Every sample	50% - 200% of the area of the IS in the associated calibration standard	Resolve before proceeding.
Surrogates	Every sample	%R 40-120% except d12-perylene which is 10-120%	Re-extract affected samples. Evaluate impact to data, discuss with lab manager, if corrective action is needed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.



Juan A. Ramirez
Environmental Laboratory Manager



Donell S. Frank
Project Quality Manager

Sample/Analyses Description

#	File Number	Client Identification	Collection Date	Received Date	Analysis	Matrix	Comments	B&B SDG	Client Project #
1	ARC1537	SED-DA-033 (0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	Sediment		13073001	B0086003.1301
2	ARC1538	SED-DA-033 (0.5-1.0)	07/27/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
3	ARC1539	SED-DA-033 (1.0-1.5)	07/27/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
4	ARC1540	SED-DA-034 (0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	Sediment		13073001	B0086003.1301
5	ARC1541	SED-DA-034 (0.5-1.0)	07/27/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
6	ARC1542	SED-DA-034 (1.0-1.5)	07/27/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
7	ARC1543	SED-DA-035 (0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	Sediment		13073001	B0086003.1301
8	ARC1544	SED-DA-035 (0.5-1.0)	07/27/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
9	ARC1545	SED-DA-035 (1.0-1.5)	07/27/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
10	ARC1546	SED-DA-035 (0-0.5) MS/MSD	07/27/13	07/30/13	PAH, TPH, ALI	Sediment	1 of 2	13073001	B0086003.1301
11	ARC1548	SED-DA-036 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	Sediment		13073001	B0086003.1301
12	ARC1549	SED-DA-DUP-01-072813	07/28/13	07/30/13	PAH, TPH, ALI	Sediment		13073001	B0086003.1301
13	ARC1550	SED-DA-036 (0.5-1.0)	07/28/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
14	ARC1551	SED-DA-036 (1.0-1.5)	07/28/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
15	ARC1552	SED-DA-037 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	Sediment		13073001	B0086003.1301
16	ARC1553	SED-DA-037 (0.5-1.0)	07/28/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
17	ARC1554	SED-DA-037 (1.0-1.5)	07/28/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
18	ARC1555	SED-DA-038 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	Sediment		13073001	B0086003.1301
19	ARC1556	SED-DA-038 (0.5-1.0)	07/28/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301
20	ARC1557	SED-DA-038 (1.0-1.5)	07/28/13	07/30/13	PAH	Sediment	44 analytes	13073001	B0086003.1301

Sediment Samples

**Aliphatic Hydrocarbons (C9 – C40)/
Total Petroleum Hydrocarbons/
Extractable Organic Matter
Concentrations**

Sample Name	ARC1537.D	ARC1540.D	ARC1543.D	ARC1548.D
Client Name	SED-DA-033 (0-0.5)	SED-DA-034 (0-0.5)	SED-DA-035 (0-0.5)	SED-DA-036 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	15-Aug-2013, 05:52:40	15-Aug-2013, 07:03:17	15-Aug-2013, 08:14:05	15-Aug-2013, 09:24:43
Method	ALI2012.M	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.0	15.1	15.040000	15.0
Sample Wet Weight (g)	24.6	34.1	31.1	47.2
% Dry	61	44	48	32
% Moisture	39	56	52	68
% Lipid (dry)	NA	NA	NA	NA
% Lipid (wet)	NA	NA	NA	NA
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q
n-C9	<0.012	U	<0.012	U	<0.012	U	<0.012	U
n-C10	0.010	J	0.009	J	0.013	J	0.013	J
n-C11	0.015	J	0.016	J	0.023		0.019	
n-C12	0.048		0.027		0.072		0.034	
n-C13	0.023	J	0.021	J	0.045	J	0.025	J
i-C15	0.014	J	0.020		0.016	J	0.031	
n-C14	0.045		0.029		0.079		0.046	
i-C16	0.015		0.044		0.063		0.070	
n-C15	0.204		0.664		0.048		0.543	
n-C16	0.089		0.127		0.137		0.084	
i-C18	0.026		0.024		0.031		0.052	
n-C17	0.138		0.237		0.253		0.959	
Pristane	0.055		0.055		0.062		0.071	
n-C18	0.244		0.469		0.485		0.621	
Phytane	0.076		0.129		0.079		0.230	
n-C19	0.351		0.643		0.696		1.12	
n-C20	0.125		0.262		0.160		0.403	
n-C21	0.505		1.69		1.23		2.18	
n-C22	0.172		0.277		0.176		0.203	
n-C23	0.467		1.17		0.840		1.70	
n-C24	0.204		0.353		0.269		0.474	
n-C25	0.456		0.954		0.790		1.56	
n-C26	0.157		0.262		0.173		0.481	
n-C27	1.16		1.88		1.35		3.05	
n-C28	0.442		0.861		0.456		1.11	
n-C29	3.49		7.70		2.70		2.56	
n-C30	0.321		0.751		0.234		1.00	
n-C31	3.54		9.18		2.75		10.7	
n-C32	0.626		0.837		0.154		0.761	
n-C33	5.05		13.8		4.70		15.8	
n-C34	0.448		1.21		0.447		0.558	
n-C35	3.41		10.5		3.86		8.67	
n-C36	0.187		0.511		0.291		0.605	
n-C37	0.972		1.94		0.746		2.05	
n-C38	0.083		0.162		0.151		0.236	
n-C39	0.085		0.160		0.151		0.238	
n-C40	0.092		0.087		<0.019	U	<0.019	U
Total Alkanes	23.3		57.1		23.7		58.3	
Total Petroleum Hydrocarbons	303		558		738		798	
Total Resolved Hydrocarbons	161		319		147		354	
Unresolved Complex Mixture	142		239		591		444	
EOM (µg/dry g)	991		2033		2543		2544	

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	87	90	88	89
n-eicosane-d42	92	97	88	95
n-triacontane-d62	93	96	86	97

Sample Name	ARC1549.D	ARC1552.D	ARC1555.D
Client Name	SED-DA-DUP-01-072813	SED-DA-037 (0-0.5)	SED-DA-038 (0-0.5)
Matrix	Sediment	Sediment	Sediment
Collection Date	07/28/13	07/28/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075
Date Acquired	15-Aug-2013, 10:35:23	15-Aug-2013, 11:46:06	15-Aug-2013, 12:56:43
Method	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.0	15.0	15.1
Sample Wet Weight (g)	43.0	53.2	55.7
% Dry	35	28	27
% Moisture	65	72	73
% Lipid (dry)	NA	NA	NA
% Lipid (wet)	NA	NA	NA
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q
n-C9	<0.012	U	<0.012	U	<0.012	U
n-C10	0.011	J	0.020	J	0.020	J
n-C11	0.020		0.034		0.026	
n-C12	0.035		0.055		0.053	
n-C13	0.024	J	0.049		0.040	J
i-C15	0.028		0.026		0.029	
n-C14	0.046		0.069		0.097	
i-C16	0.094		0.109		0.102	
n-C15	0.536		0.369		0.403	
n-C16	0.089		0.133		0.141	
i-C18	0.043		0.031		0.041	
n-C17	0.647		2.74		1.13	
Pristane	0.052		0.119		0.098	
n-C18	0.560		1.01		1.01	
Phytane	0.169		0.451		0.277	
n-C19	0.905		1.42		1.88	
n-C20	0.353		0.602		0.755	
n-C21	1.95		3.32		2.63	
n-C22	0.323		0.475		0.494	
n-C23	1.45		3.20		3.13	
n-C24	0.407		0.723		0.749	
n-C25	1.26		3.29		3.01	
n-C26	0.310		0.867		0.854	
n-C27	2.51		5.89		5.12	
n-C28	0.965		0.610		1.42	
n-C29	7.18		6.57		6.75	
n-C30	0.962		0.687		0.878	
n-C31	9.99		7.45		7.25	
n-C32	0.983		1.38		1.46	
n-C33	11.4		10.4		10.1	
n-C34	1.33		1.36		1.83	
n-C35	7.25		9.55		10.8	
n-C36	0.964		0.619		0.561	
n-C37	1.95		1.49		1.35	
n-C38	0.206		0.236		0.366	
n-C39	0.215		0.315		0.315	
n-C40	<0.019	U	<0.019	U	<0.019	U
Total Alkanes	55.2		65.7		65.2	
Total Petroleum Hydrocarbons	503		705		673	
Total Resolved Hydrocarbons	291		364		331	
Unresolved Complex Mixture	213		340		342	
EOM (µg/dry g)	1555		2387		2238	

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	95	90	90
n-eicosane-d42	83	78	80
n-triacontane-d62	87	96	66

Sample Name ENV3075A.D
Client Name Procedural Blank
Matrix Sediment
Collection Date NA
Received Date NA
Extraction Date 08/08/13
Extraction Batch ENV 3075
Date Acquired 14-Aug-2013, 23:59:28
Method ALI2012.M
Sample Dry Weight (g) 15.0
Sample Wet Weight (g) NA
% Dry NA
% Moisture NA
% Lipid (dry) NA
% Lipid (wet) NA
Dilution 1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q Q	3X MDL Conc. (µg/dry g)	Actual MDL Conc. (µg/dry g)
n-C9	<0.012 U		0.037	0.012
n-C10	<0.021 U		0.064	0.021
n-C11	<0.016 U		0.049	0.016
n-C12	<0.019 U		0.056	0.019
n-C13	<0.045 U		0.134	0.045
i-C15	<0.016 U		0.049	0.016
n-C14	<0.013 U		0.039	0.013
i-C16	<0.004 U		0.013	0.004
n-C15	<0.016 U		0.049	0.016
n-C16	<0.004 U		0.013	0.004
i-C18	<0.004 U		0.011	0.004
n-C17	<0.003 U		0.010	0.003
Pristane	<0.003 U		0.008	0.003
n-C18	<0.004 U		0.011	0.004
Phytane	<0.006 U		0.018	0.006
n-C19	<0.005 U		0.015	0.005
n-C20	<0.012 U		0.037	0.012
n-C21	<0.004 U		0.012	0.004
n-C22	<0.003 U		0.010	0.003
n-C23	<0.008 U		0.024	0.008
n-C24	<0.005 U		0.016	0.005
n-C25	<0.007 U		0.021	0.007
n-C26	<0.008 U		0.023	0.008
n-C27	<0.011 U		0.032	0.011
n-C28	<0.011 U		0.033	0.011
n-C29	<0.021 U		0.064	0.021
n-C30	<0.013 U		0.038	0.013
n-C31	<0.015 U		0.044	0.015
n-C32	<0.012 U		0.035	0.012
n-C33	<0.021 U		0.064	0.021
n-C34	<0.016 U		0.049	0.016
n-C35	<0.015 U		0.044	0.015
n-C36	<0.016 U		0.047	0.016
n-C37	<0.017 U		0.052	0.017
n-C38	<0.019 U		0.057	0.019
n-C39	<0.019 U		0.056	0.019
n-C40	<0.019 U		0.056	0.019
Total Alkanes	U			
Total Petroleum Hydrocarbons	<1.4 U		4.20	1.40
Total Resolved Hydrocarbons	<1.4 U		4.20	1.40
Unresolved Complex Mixture	<1.4 U		4.20	1.40
EOM (µg/dry g)	<100 U		300	100
Surrogate (Su)	Su Recovery (%)			
n-dodecane-d26	93			
n-eicosane-d42	95			
n-triacontane-d62	95			

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Matrix Spike Report

Sample Name	ARC1543.D	ENV3075C.D	ENV3075D.D
Client Name	SED-DA-035 (0-0.5)	MS (SED-DA-035 (0-0.5))	MSD (SED-DA-035 (0-0.5))
Matrix	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13
Received Date	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075
Date Acquired	15-Aug-2013, 08:14:05	15-Aug-2013, 01:10:02	15-Aug-2013, 02:20:41
Method	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.0	15.0	15.1
Sample Wet Weight (g)	31.1	34.0	34.1
% Dry	48	44	44
% Moisture	52	56	56
% Lipid (dry)	NA	NA	NA
% Lipid (wet)	NA	NA	NA
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Recovery (%)	Q	Su. Corrected Conc. (µg/dry g)	Q	Recovery (%)	Q	RPD	Q	Spike Amount (µg)
n-C9	<0.012	U	0.458	69			0.444	67			3		9.95
n-C10	0.013	J	0.594	87			0.523	77			13		10.0
n-C11	0.023		0.658	96			0.572	84			14		9.90
n-C12	0.072		0.702	95			0.608	81			14		10.0
n-C13	0.045	J	0.722	102			0.630	89			14		10.0
i-C15	0.016	J	NA				NA						
n-C14	0.079		0.761	104			0.666	90			13		9.86
i-C16	0.063		NA				NA						
n-C15	0.048		0.797	113			0.774	110			3		9.98
n-C16	0.137		0.795	99			0.707	86			12		10.0
i-C18	0.031		NA				NA						
n-C17	0.253		1.01	114			0.922	102			9		9.94
Pristane	0.062		0.781	109			0.706	98			10		9.90
n-C18	0.485		1.13	97			1.04	84			8		10.0
Phytane	0.079		0.819	112			0.762	104			7		9.91
n-C19	0.696		1.40	106			1.29	91			8		10.0
n-C20	0.160		0.914	113			0.885	110			3		10.0
n-C21	1.23		1.83	89			1.83	91			0		10.0
n-C22	0.176		0.916	112			0.835	100			9		9.95
n-C23	0.840		1.63	120			1.49	100			9		9.91
n-C24	0.269		1.03	114			0.940	102			9		10.0
n-C25	0.790		1.50	106			1.47	103			2		10.0
n-C26	0.173		0.924	113			0.916	113			1		10.0
n-C27	1.35		2.30		Y		2.00			Y	14		9.89
n-C28	0.456		1.07	92			1.18	110			10		10.0
n-C29	2.70		3.75		Y		3.47			Y	8		10.0
n-C30	0.234		0.941	106			1.02	119			8		10.0
n-C31	2.75		2.31		Y		2.23			Y	3		10.0
n-C32	0.154		0.716	84			0.749	90			5		10.0
n-C33	4.70		0.562		Y		0.510			Y	10		10.0
n-C34	0.447		0.862	62			0.874	65			1		10.0
n-C35	3.86		0.628		Y		0.588			Y	7		10.0
n-C36	0.291		0.932	97			0.881	90			6		9.90
n-C37	0.746		1.50	114			1.41	101			6		10.0
n-C38	0.151		0.783	95			0.738	89			6		10.0
n-C39	0.151		0.651	75			0.624	71			4		10.0
n-C40	<0.019	U	0.712	107			0.687	104			4		10.0
Average %Recovery					100			94					
Surrogate (Su)	Su Recovery (%)		Su Recovery (%)				Su Recovery (%)						
n-dodecane-d26	88		86				83						
n-eicosane-d42	88		89				97						
n-triacontane-d62	86		87				84						

Sample Name	ARC1540.D	ENV3075E.D
Client Name	SED-DA-034 (0-0.5)	Dup (SED-DA-034 (0-0.5))
Matrix	Sediment	Sediment
Collection Date	07/27/13	07/27/13
Received Date	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075
Date Acquired	15-Aug-2013, 07:03:17	15-Aug-2013, 03:31:17
Method	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.1	15.0
Sample Wet Weight (g)	34.1	34.0
% Dry	44	44
% Moisture	56	56
% Lipid (dry)	NA	NA
% Lipid (wet)	NA	NA
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	RPD (%)	Q	Q	MDL (µg/dry g)	3X MDL (µg/dry g)
n-C9	<0.012	U	<0.012	U	0			0.012	0.037
n-C10	0.009	J	0.010	J	11	X		0.021	0.064
n-C11	0.016	J	0.015	J	6	X		0.016	0.049
n-C12	0.027		0.026		4	X		0.019	0.056
n-C13	0.021	J	0.022	J	5	X		0.045	0.134
i-C15	0.020		0.020		0	X		0.016	0.049
n-C14	0.029		0.032		10	X		0.013	0.039
i-C16	0.044		0.042		5			0.004	0.013
n-C15	0.664		0.601		10			0.016	0.049
n-C16	0.127		0.135		6			0.004	0.013
i-C18	0.024		0.026		8			0.004	0.011
n-C17	0.237		0.253		7			0.003	0.010
Pristane	0.055		0.057		4			0.003	0.008
n-C18	0.469		0.477		2			0.004	0.011
Phytane	0.129		0.135		5			0.006	0.018
n-C19	0.643		0.663		3			0.005	0.015
n-C20	0.262		0.270		3			0.012	0.037
n-C21	1.69		1.73		2			0.004	0.012
n-C22	0.277		0.284		2			0.003	0.010
n-C23	1.17		1.17		0			0.008	0.024
n-C24	0.353		0.374		6			0.005	0.016
n-C25	0.954		0.990		4			0.007	0.021
n-C26	0.262		0.260		1			0.008	0.023
n-C27	1.88		2.03		8			0.011	0.032
n-C28	0.861		0.878		2			0.011	0.033
n-C29	7.70		8.87		14			0.021	0.064
n-C30	0.751		0.771		3			0.013	0.038
n-C31	9.18		9.88		7			0.015	0.044
n-C32	0.837		0.857		2			0.012	0.035
n-C33	13.8		13.0		6			0.021	0.064
n-C34	1.21		1.20		1			0.016	0.049
n-C35	10.5		11.1		6			0.015	0.044
n-C36	0.511		0.534		4			0.016	0.047
n-C37	1.94		2.17		11			0.017	0.052
n-C38	0.162		0.143		12			0.019	0.057
n-C39	0.160		0.133		18			0.019	0.056
n-C40	0.087		0.087		0			0.019	0.056
Total Alkanes	57.1		59.2		4				
Total Petroleum Hydrocarbons	558		581		4			1.40	4.20
Total Resolved Hydrocarbons	319		324		2			1.40	4.20
Unresolved Complex Mixture	239		257		7			1.40	4.20
EOM (µg/dry g)	2033		2387		16				
Surrogate (Su)	Su Recovery (%)		Su Recovery (%)						
n-dodecane-d26	90		90						
n-eicosane-d42	97		95						
n-triacontane-d62	96		88						

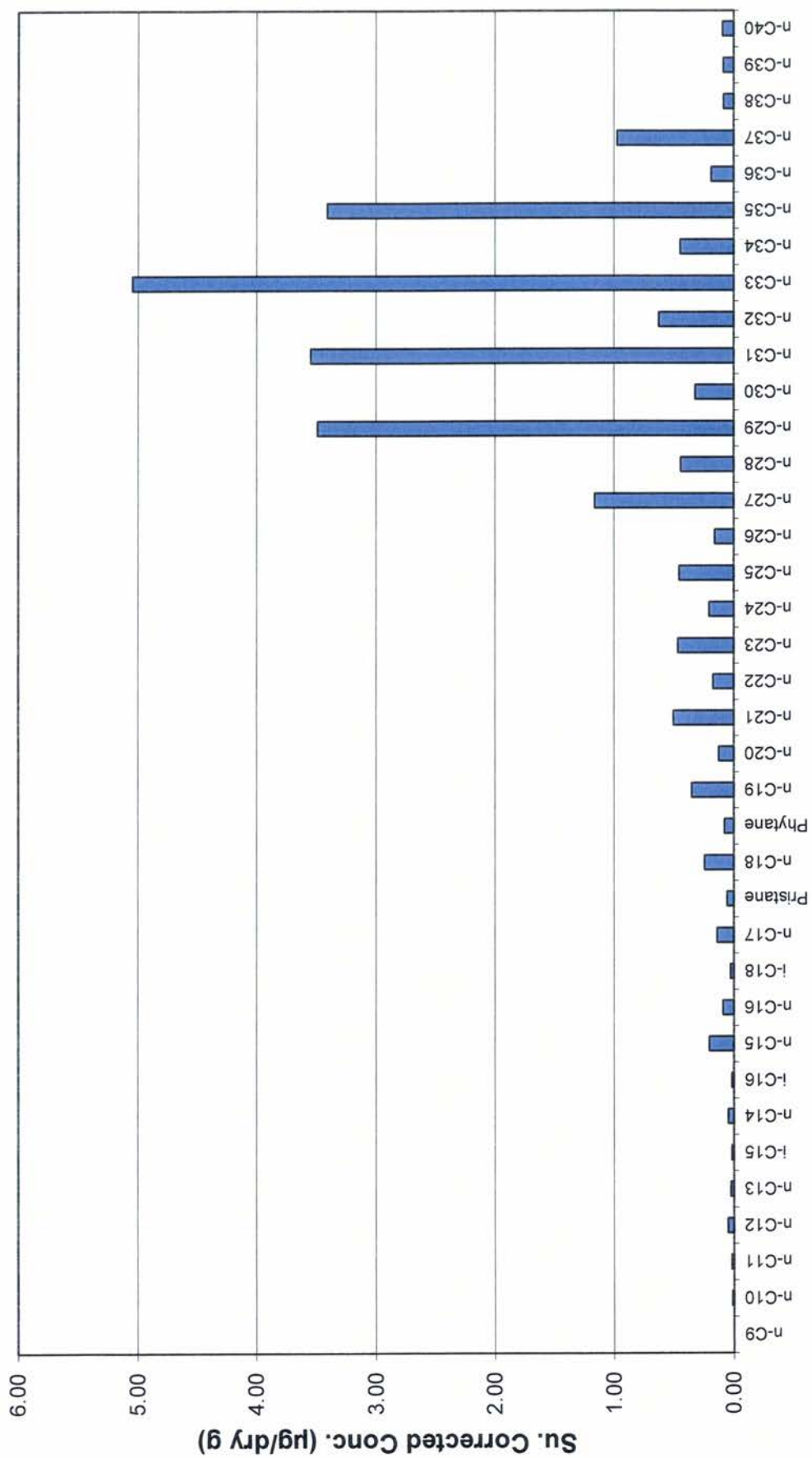
Sample Name FID10076C.D
Client Name AL-WKSRM2779-20-01
Matrix Reference Oil
Collection Date NA
Received Date NA
Extraction Date 08/08/13
Extraction Batch ENV 3075
Date Acquired 14-Aug-2013, 19:16:56
Method ALI2012.M
Sample Dry Weight (mg) 20.0
Sample Wet Weight (mg) NA
% Dry NA
% Moisture NA
% Lipid (dry) NA
% Lipid (wet) NA
Dilution 1X

Target Compounds	Su. Corrected Conc. (µg/mg)	Q Q	RPD (%)	B&B Average	-20% Conc. (µg/mg)	+20% Conc. (µg/mg)
n-C9	13.8		2	13.5	10.8	16.2
n-C10	12.2		2	12.0	9.60	14.4
n-C11	11.1		3	10.8	8.64	13.0
n-C12	9.42		4	9.82	7.86	11.8
n-C13	8.48		1	8.41	6.73	10.1
i-C15	1.93		1	1.95	1.56	2.34
n-C14	7.28		6	7.70	6.16	9.24
i-C16	2.71		9	2.95	2.36	3.54
n-C15	6.91		4	7.23	5.78	8.68
n-C16	5.70		8	6.15	4.92	7.38
i-C18	1.44		8	1.56	1.25	1.87
n-C17	4.56		3	4.69	3.75	5.63
Pristane	2.45		1	2.42	1.94	2.90
n-C18	3.80		1	3.84	3.07	4.61
Phytane	1.47		3	1.51	1.21	1.81
n-C19	3.31		5	3.47	2.78	4.16
n-C20	2.93		3	2.84	2.27	3.41
n-C21	2.44		3	2.37	1.90	2.84
n-C22	2.12		4	2.04	1.63	2.45
n-C23	1.92		4	1.84	1.47	2.21
n-C24	1.76		6	1.66	1.33	1.99
n-C25	1.41		3	1.37	1.10	1.64
n-C26	1.18		4	1.13	0.904	1.36
n-C27	1.00		12	0.892	0.714	1.07
n-C28	0.803		3	0.776	0.621	0.931
n-C29	0.773		4	0.739	0.591	0.887
n-C30	0.685 J		3	0.666	0.533	0.799
n-C31	0.583 J		8	0.539	0.431	0.647
n-C32	0.442 J		0	0.443	0.354	0.532
n-C33	0.482 J		3	0.467	0.374	0.560
n-C34	0.411 J		4	0.428	0.342	0.514
n-C35	0.318 J		7	0.342	0.274	0.410
n-C36	0.200 J		5	0.211	0.169	0.253
n-C37	0.201 J		2	0.206	0.165	0.247
n-C38	0.168 J		2	0.172	0.138	0.206
n-C39	0.156 J		8	0.169	0.135	0.203
n-C40	0.173 J		2	0.176	0.141	0.211
Total Petroleum Hydrocarbons	612		1	607	484	726

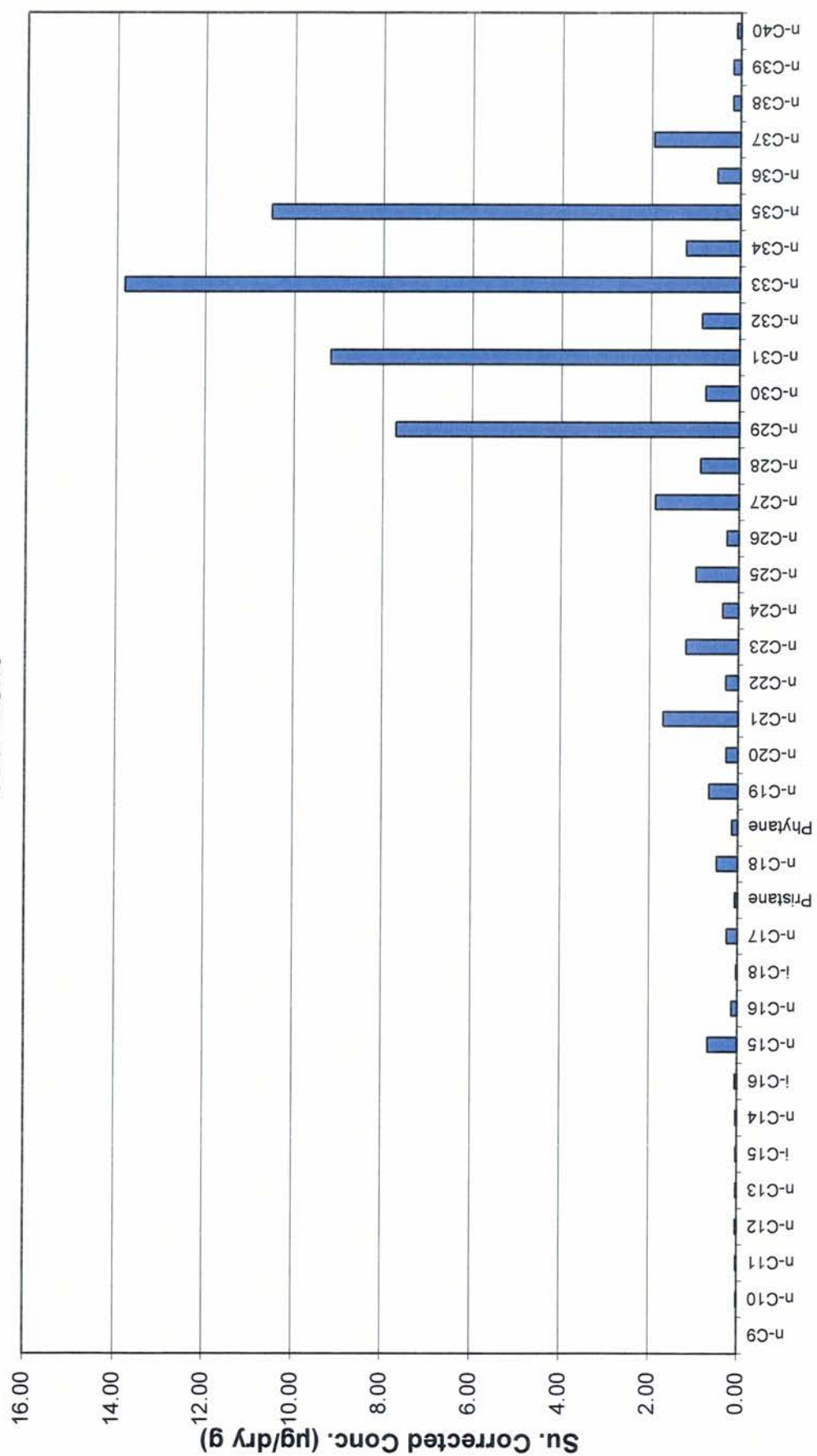
Surrogate (Su)	Su Recovery (%)
n-dodecane-d26	99
n-eicosane-d42	99
n-triacontane-d62	94

Aliphatic Hydrocarbon Histograms

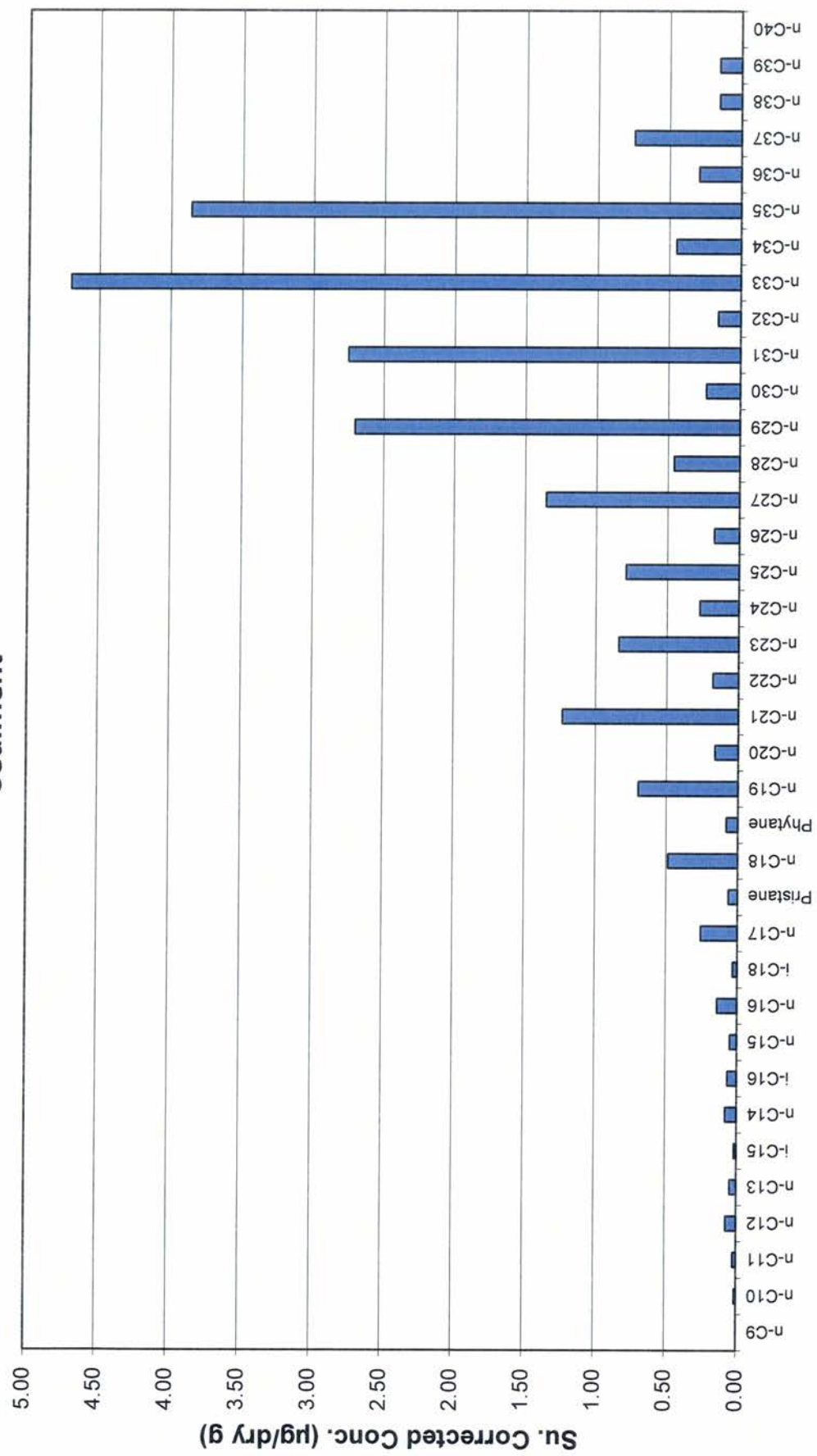
SED-DA-033 (0-0.5)
ARC1537
Sediment



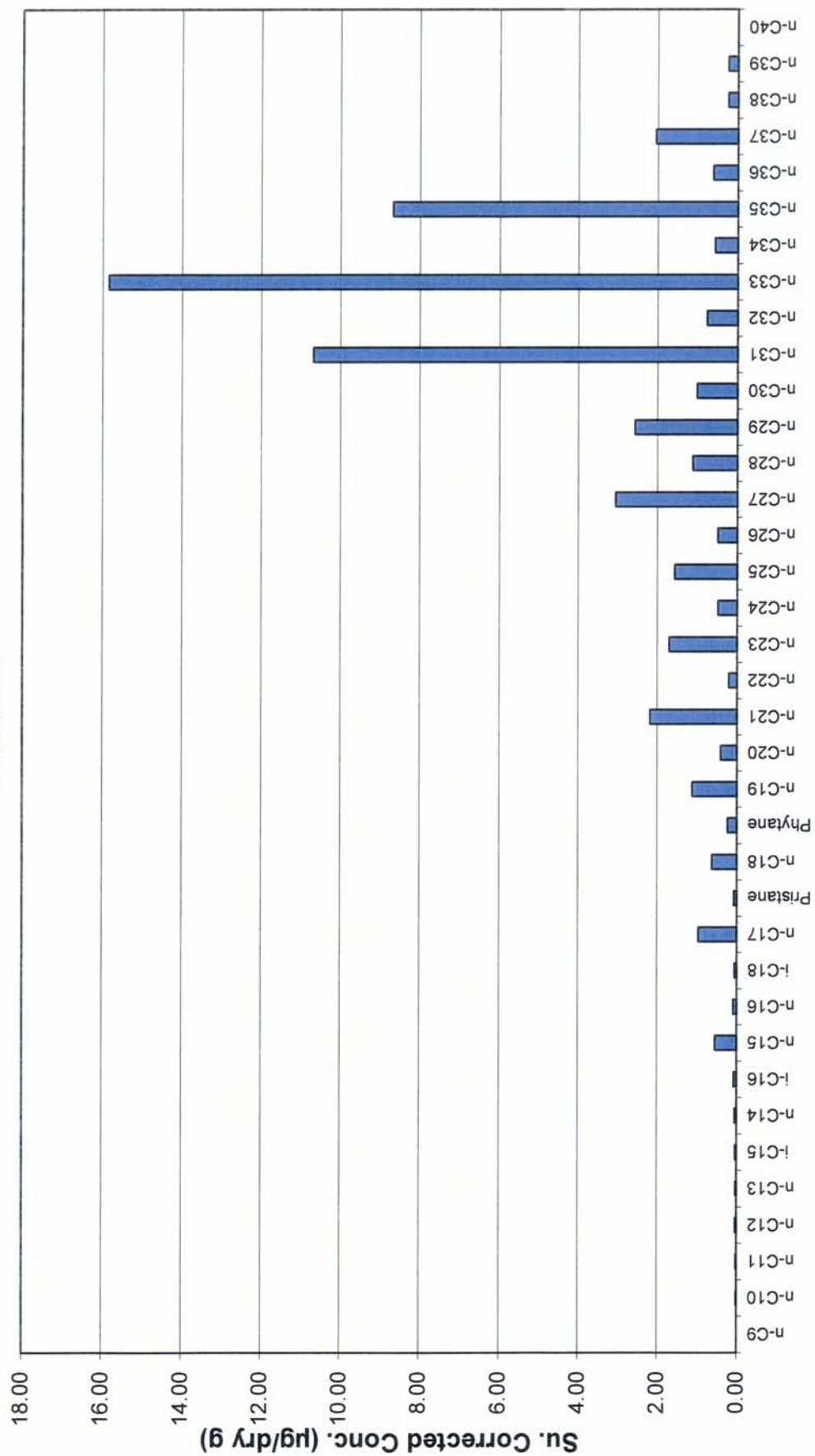
SED-DA-034 (0-0.5)
ARC1540
Sediment



SED-DA-035 (0-0.5)
ARC1543
Sediment



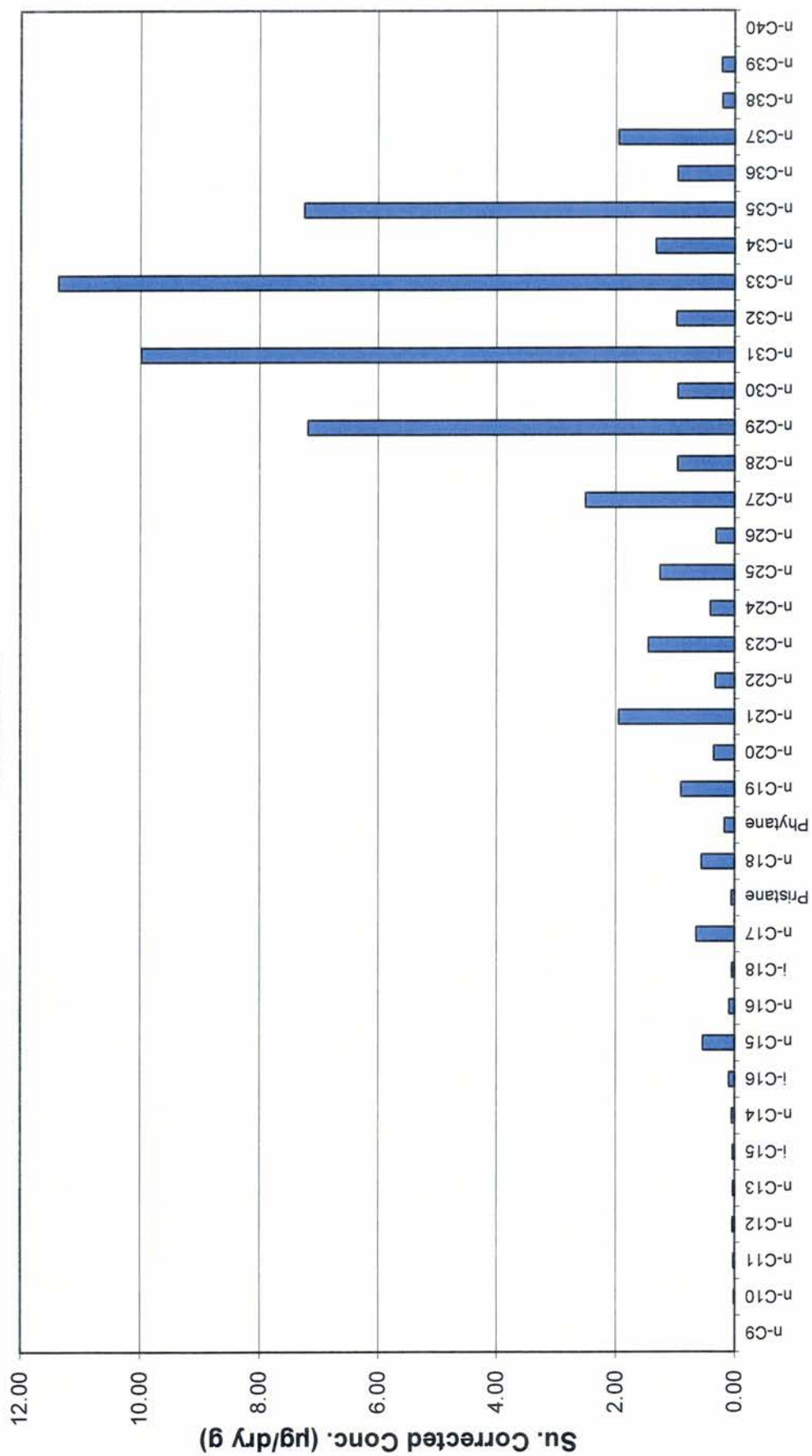
SED-DA-036 (0-0.5)
ARC1548
Sediment



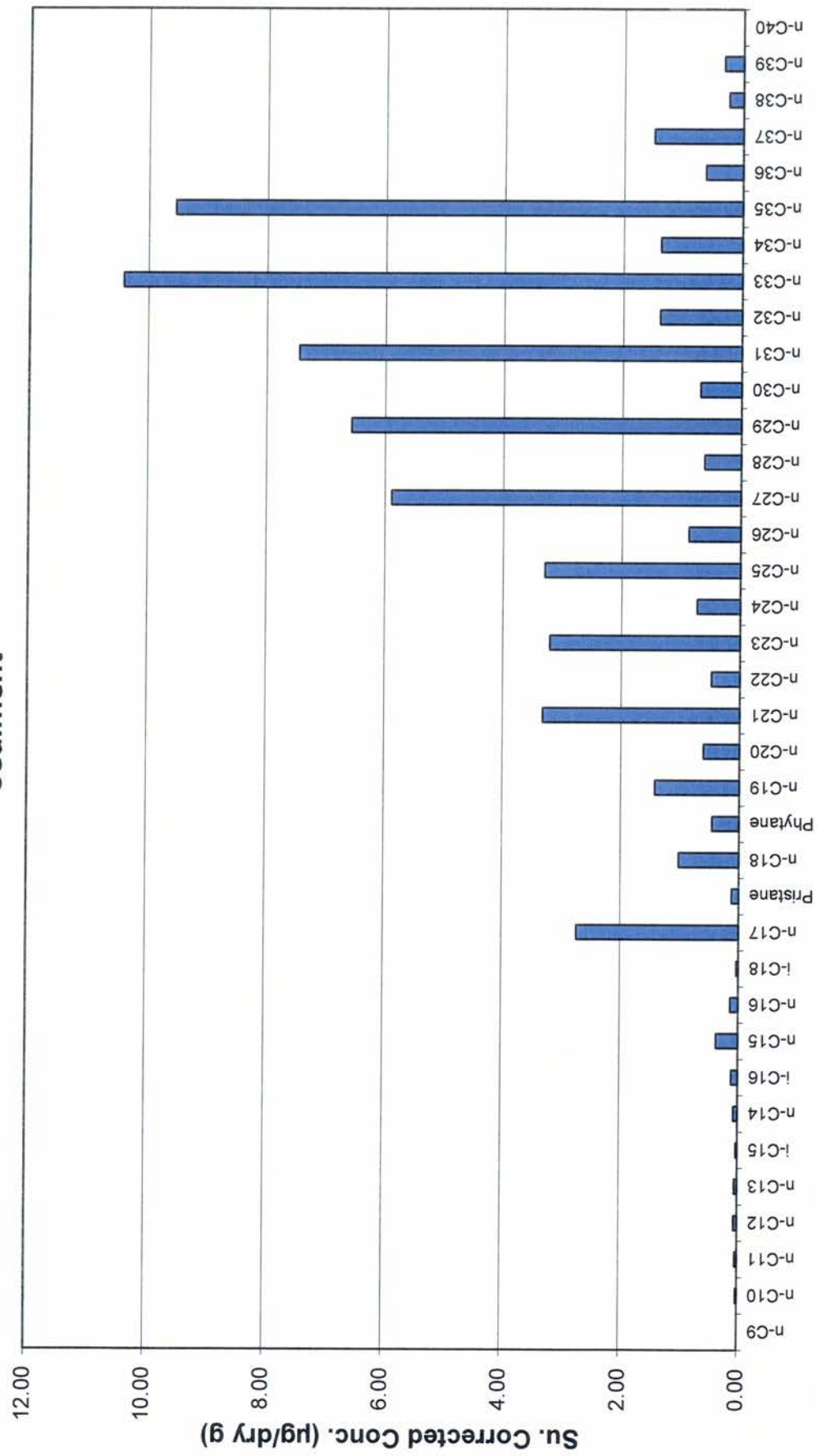
SED-DA-DUP-01-072813

ARC1549

Sediment

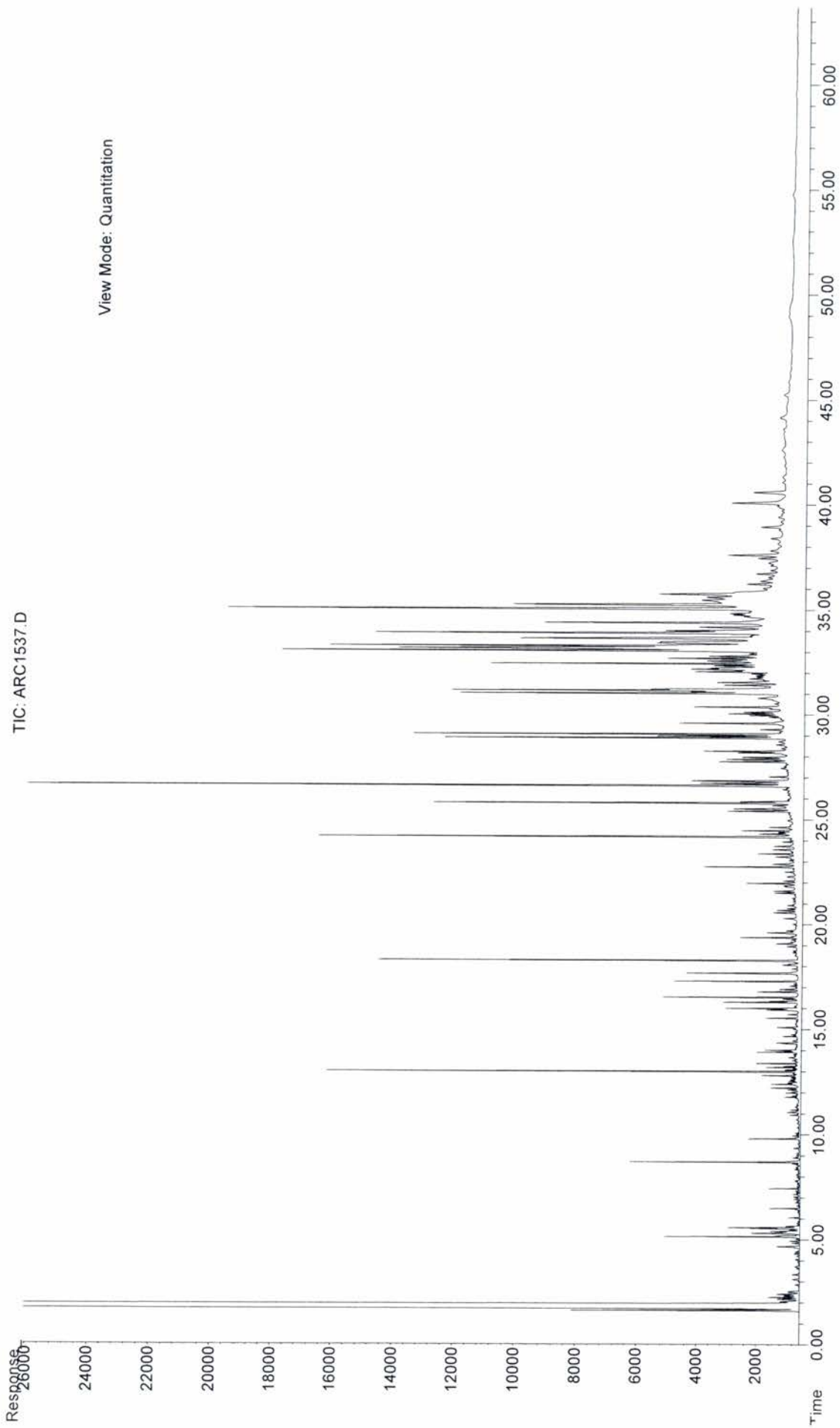


SED-DA-037 (0-0.5)
ARC1552
Sediment

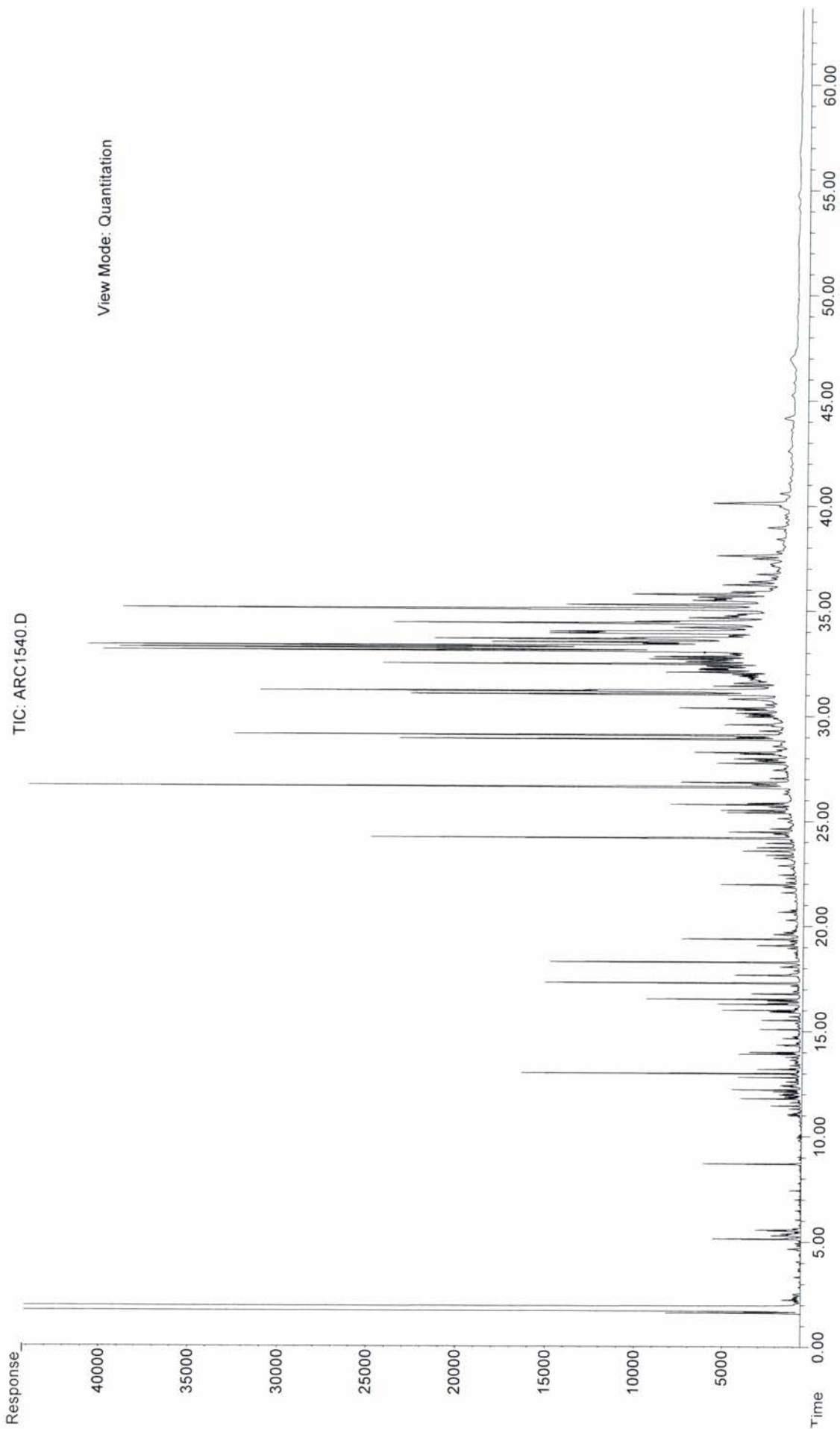


Total Petroleum Hydrocarbons Chromatograms

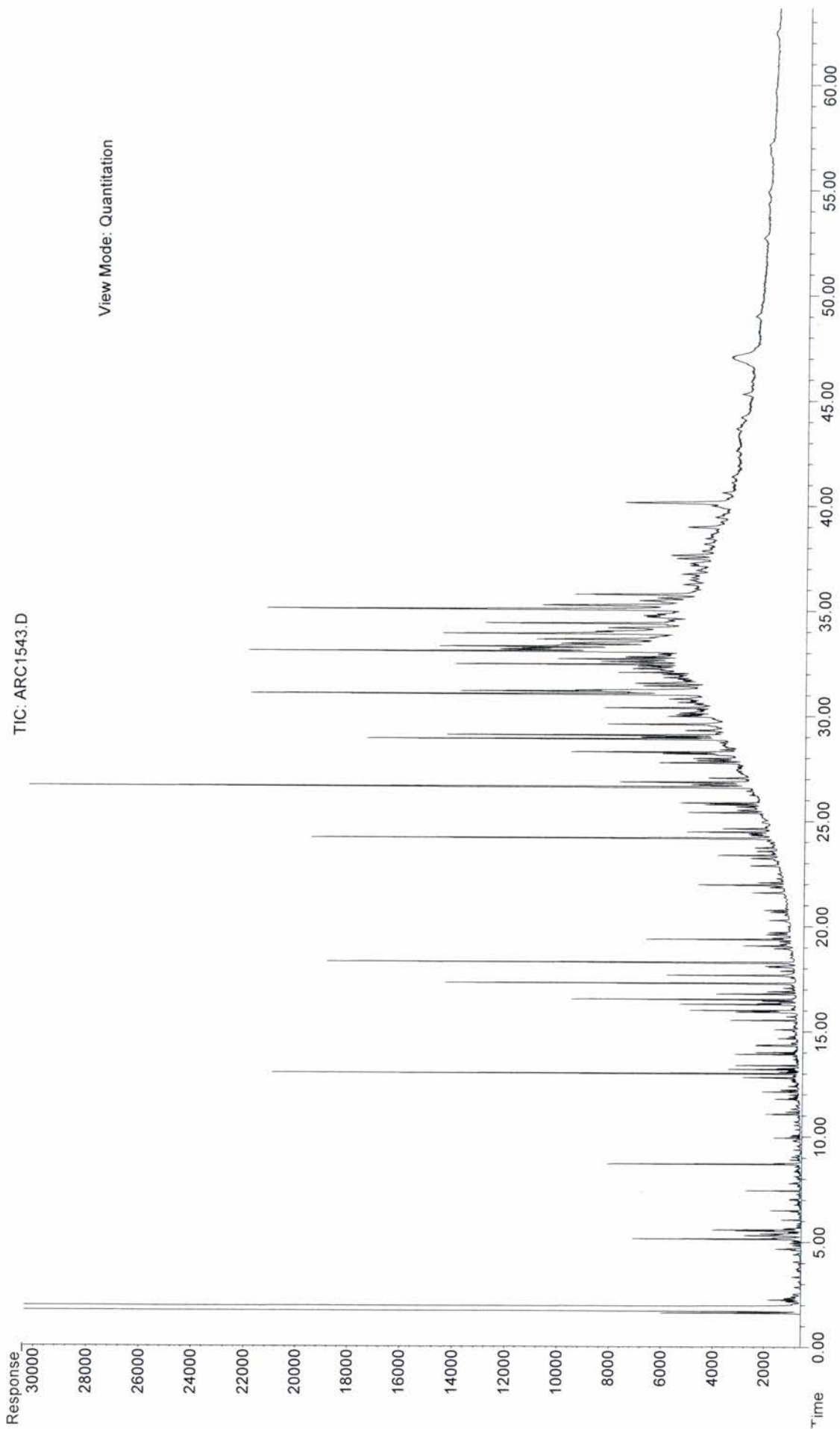
File : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\ARC1537.D
Operator : Meghan Dailey
Acquired : 15-Aug-2013, 05:52 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-033 (0-0.5)
Misc Info :
Vial Number: 11



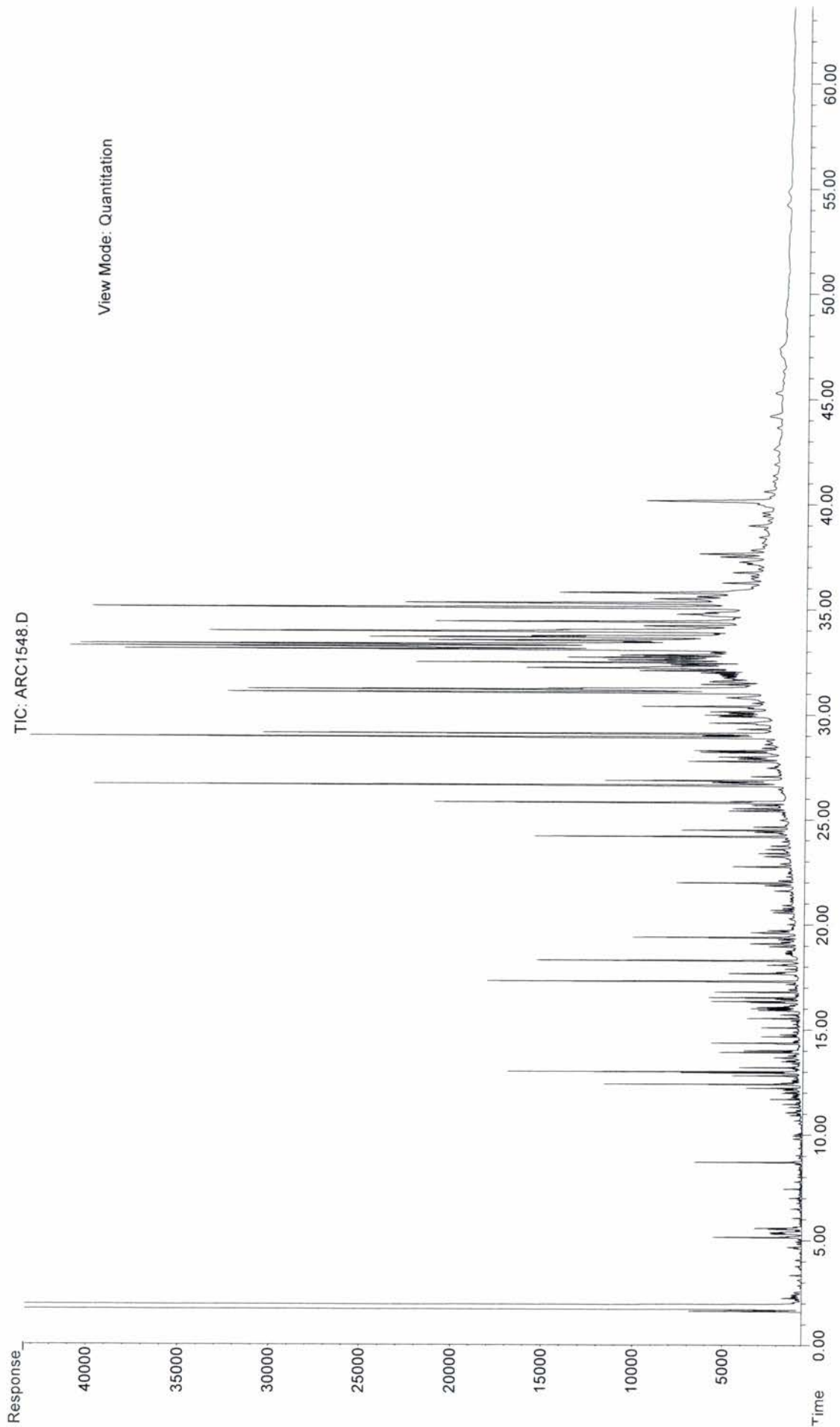
File : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\ARC1540.D
Operator : Meghan Dailey
Acquired : 15-Aug-2013, 07:03 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-034 (0-0.5)
Misc Info :
Vial Number: 12



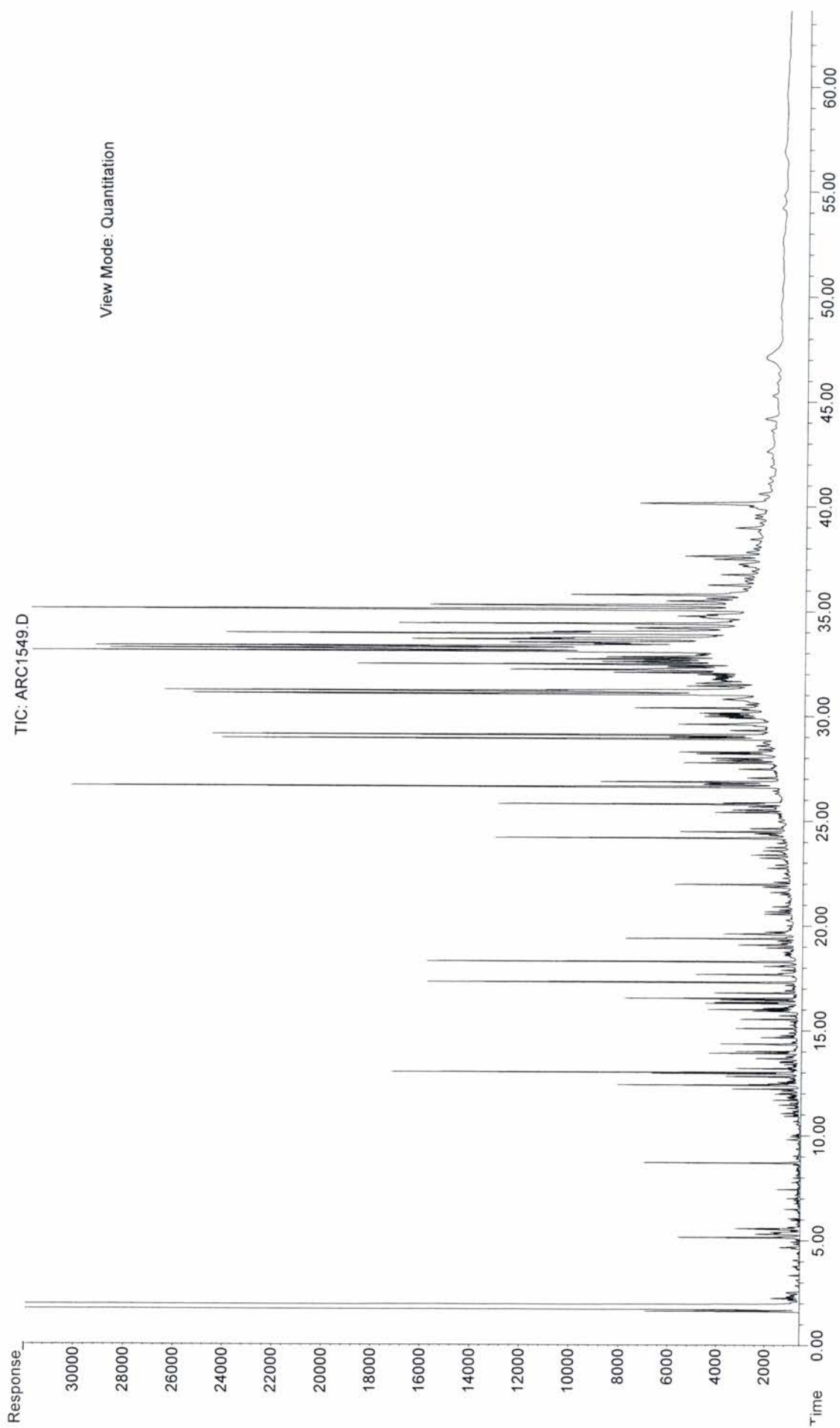
File : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\ARC1543.D
Operator : Meghan Dailey
Acquired : 15-Aug-2013, 08:14 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-035 (0-0.5)
Misc Info :
Vial Number: 13



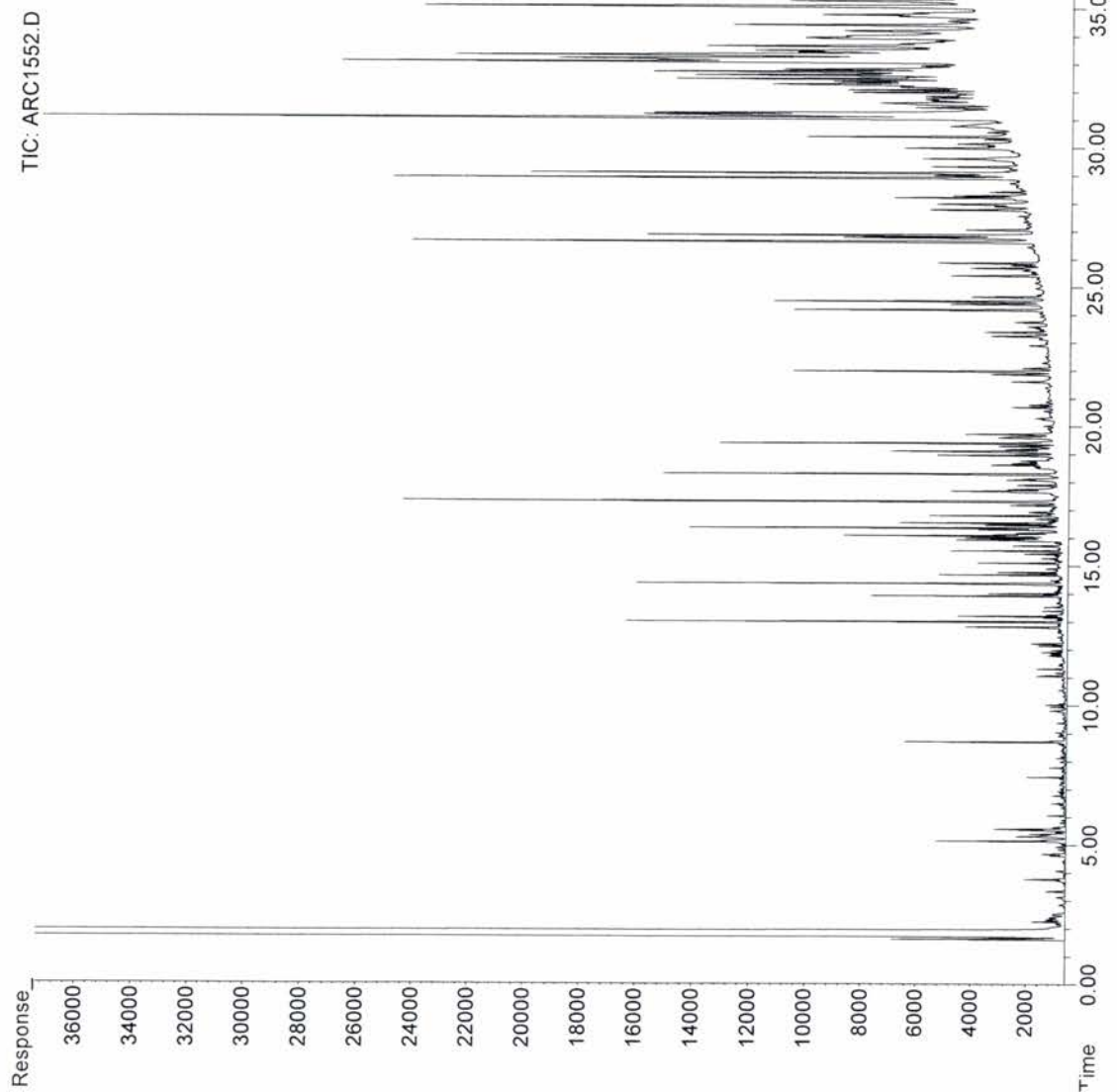
File : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\ARC1548.D
Operator : Meghan Dailey
Acquired : 15-Aug-2013, 09:24 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-036 (0-0.5)
Misc Info :
Vial Number: 14



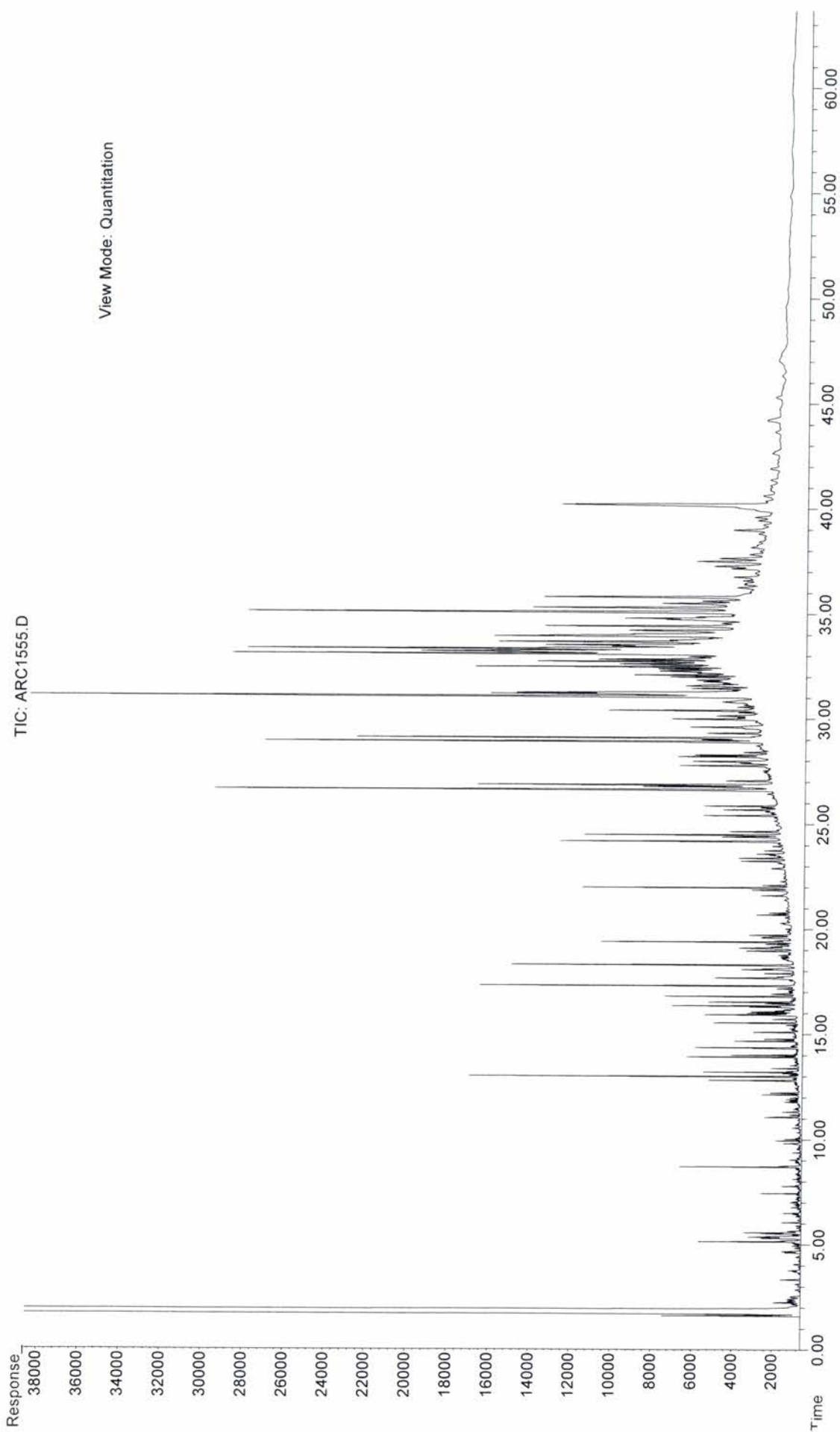
File : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\ARC1549.D
Operator : Meghan Dailey
Acquired : 15-Aug-2013, 10:35 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-DUP-01-072813
Misc Info :
Vial Number: 15



File : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\ARC1552.D
Operator : Meghan Dailey
Acquired : 15-Aug-2013, 11:46 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-037 (0-0.5)
Misc Info :
Vial Number: 16



File :P:\2013\J13034\Aliphatics\ENV 3075\FID10076\ARC1555.D
Operator : Meghan Dailey
Acquired : 15-Aug-2013, 12:56 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-038 (0-0.5)
Misc Info :
Vial Number: 17



Polycyclic Aromatic Hydrocarbon Concentration

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1537.D	ARC1538.D	ARC1539.D	ARC1540.D
Client Name	SED-DA-033 (0-0.5)	SED-DA-033 (0.5-1.0)	SED-DA-033 (1.0-1.5)	SED-DA-034 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13	07/27/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 13:23	8/13/13 14:32	8/13/13 16:49	8/13/13 17:58
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.2	15.0	15.1
% Dry	61	78	79	44
% Moisture	39	22	21	56
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	4.63		NA		NA		5.09	
C1-Decalins	2.29		NA		NA		1.01	
C2-Decalins	<0.3 U		NA		NA		<0.3 U	
C3-Decalins	<0.3 U		NA		NA		<0.3 U	
C4-Decalins	<0.3 U		NA		NA		<0.3 U	
Naphthalene	8.98		1.01		0.492		7.38	
C1-Naphthalenes	9.73		0.561 J		0.258 J		6.06	
C2-Naphthalenes	22.4		1.19		<0.7 U		11.8	
C3-Naphthalenes	32.0		1.32		<0.7 U		17.1	
C4-Naphthalenes	18.1		2.41		<0.7 U		21.0	
Benzothiophene	1.19		NA		NA		0.76	
C1-Benzothiophenes	<0.2 U		NA		NA		<0.2 U	
C2-Benzothiophenes	<0.2 U		NA		NA		<0.2 U	
C3-Benzothiophenes	<0.2 U		NA		NA		<0.2 U	
C4-Benzothiophenes	<0.2 U		NA		NA		<0.2 U	
Biphenyl	4.94		NA		NA		3.66	
Acenaphthylene	3.36		0.085		<0.04 U		6.47	
Acenaphthene	1.71		0.127		<0.1 U		1.57	
Dibenzofuran	6.97		NA		NA		5.20	
Fluorene	12.5		2.12		1.12		10.4	
C1-Fluorenes	6.97		0.903		0.565		6.05	
C2-Fluorenes	20.1		1.19		<0.4 U		23.8	
C3-Fluorenes	16.3		<0.4 U		<0.4 U		20.7	
Carbazole	2.69		NA		NA		3.79	
Anthracene	5.24		0.111 J		<0.1 U		9.73	
Phenanthrene	28.6		6.54		3.53		21.8	
C1-Phenanthrenes/Anthracenes	15.8		3.14		<0.1 U		15.2	
C2-Phenanthrenes/Anthracenes	21.2		<0.3 U		<0.3 U		23.4	
C3-Phenanthrenes/Anthracenes	16.2		<0.3 U		<0.3 U		19.4	
C4-Phenanthrenes/Anthracenes	20.1		<0.3 U		<0.3 U		17.6	
Dibenzothiophene	4.23		0.188		0.087 J		4.83	
C1-Dibenzothiophenes	5.11		0.147		<0.1 U		6.25	
C2-Dibenzothiophenes	<0.2 U		<0.2 U		<0.2 U		12.5	
C3-Dibenzothiophenes	<0.2 U		<0.2 U		<0.2 U		15.3	
C4-Dibenzothiophenes	<0.2 U		<0.2 U		<0.2 U		14.3	
Fluoranthene	21.5		1.56		1.15		39.6	
Pyrene	18.0		0.914		0.465		33.6	
C1-Fluoranthenes/Pyrenes	17.5		0.538		0.258 J		27.7	
C2-Fluoranthenes/Pyrenes	<0.5 U		<0.5 U		<0.5 U		37.5	
C3-Fluoranthenes/Pyrenes	<0.5 U		<0.5 U		<0.5 U		20.2	
C4-Fluoranthenes/Pyrenes	<0.5 U		<0.5 U		<0.5 U		32.7	
Naphthobenzothiophene	11.0		NA		NA		14.9	
C1-Naphthobenzothiophenes	14.0		NA		NA		22.5	
C2-Naphthobenzothiophenes	27.4		NA		NA		36.7	
C3-Naphthobenzothiophenes	27.2		NA		NA		31.6	
C4-Naphthobenzothiophenes	10.8		NA		NA		12.9	
Benz(a)anthracene	9.56		0.182 J		<0.2 U		17.0	
Chrysene/Triphenylene	16.4		0.308		<0.1 U		28.3	
C1-Chrysenes	3.92		<0.2 U		<0.2 U		24.7	
C2-Chrysenes	7.33		<0.2 U		<0.2 U		9.36	
C3-Chrysenes	9.14		<0.2 U		<0.2 U		14.5	
C4-Chrysenes	6.69		<0.2 U		<0.2 U		9.04	
Benzo(b)fluoranthene	22.6		0.391		<0.2 U		43.9	
Benzo(k,j)fluoranthene	5.44		0.075 J		<0.1 U		14.2	
Benzo(a)fluoranthene	3.63		NA		NA		12.9	
Benzo(e)pyrene	11.2		<0.2 U		<0.2 U		24.3	
Benzo(a)pyrene	7.39		<0.1 U		<0.1 U		14.4	
Perylene	655 E		148		75.7		917 E	
Indeno(1,2,3-c,d)pyrene	7.41		<0.1 U		<0.1 U		16.5	
Dibenzo(a,h)anthracene	<0.1 U		<0.1 U		<0.1 U		9.14	
Benzo(g,h,i)perylene	9.21		0.215		<0.1 U		20.4	
Total PAHs	1214		173		83.6		1798	

Sample Name	ARC1537.D	ARC1538.D	ARC1539.D	ARC1540.D
Client Name	SED-DA-033 (0-0.5)	SED-DA-033 (0.5-1.0)	SED-DA-033 (1.0-1.5)	SED-DA-034 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13	07/27/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 13:23	8/13/13 14:32	8/13/13 16:49	8/13/13 17:58
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.2	15.0	15.1
% Dry	61	78	79	44
% Moisture	39	22	21	56
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	9.90		0.649 J		0.316 J		6.81	
1-Methylnaphthalene	6.02		0.262 J		0.102 J		3.05	
2,6-Dimethylnaphthalene	9.56		NA		NA		6.09	
1,6,7-Trimethylnaphthalene	3.83		NA		NA		2.16	
1-Methylfluorene	3.52		NA		NA		3.10	
4-Methyldibenzothiophene	2.77		NA		NA		3.45	
2/3-Methyldibenzothiophene	2.55		NA		NA		2.83	
1-Methyldibenzothiophene	0.80		NA		NA		1.21	
3-Methylphenanthrene	5.86		NA		NA		5.92	
2-Methylphenanthrene	6.15		NA		NA		4.82	
2-Methylantracene	4.69		NA		NA		5.55	
4/9-Methylphenanthrene	3.59		NA		NA		4.14	
1-Methylphenanthrene	4.03		NA		NA		2.99	
3,6-Dimethylphenanthrene	1.41		NA		NA		1.71	
Retene	26.9		NA		NA		8.20	
2-Methylfluoranthene	2.54		NA		NA		4.37	
Benzo(b)fluorene	4.57		NA		NA		8.30	
C29-Hopane	28.4		NA		NA		78.8	
18a-Oleanane	<0.6 U		NA		NA		<0.6 U	
C30-Hopane	44.9		NA		NA		98.2	
C20-TAS	<0.6 U		NA		NA		<0.6 U	
C21-TAS	<0.6 U		NA		NA		<0.6 U	
C26(20S)-TAS	<0.6 U		NA		NA		<0.6 U	
C26(20R)/C27(20S)-TAS	<0.6 U		NA		NA		<0.6 U	
C28(20S)-TAS	<0.6 U		NA		NA		<0.6 U	
C27(20R)-TAS	<0.6 U		NA		NA		<0.6 U	
C28(20R)-TAS	<0.6 U		NA		NA		<0.6 U	

Surrogate Recovery

Naphthalene-d8	86	74	76	77
Acenaphthene-d10	83	83	79	80
Phenanthrene-d10	86	83	79	89
Chrysene-d12	71	87	84	74
Perylene-d12	65	62	46	73

Sample Name	ARC1541.D	ARC1542.D	ARC1543.D	ARC1544.D
Client Name	SED-DA-034 (0.5-1.0)	SED-DA-034 (1.0-1.5)	SED-DA-035 (0-0.5)	SED-DA-035 (0.5-1.0)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13	07/27/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 19:06	8/13/13 20:15	8/13/13 21:24	8/13/13 22:32
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.0	15.0	15.0
% Dry	72	77	48	65
% Moisture	28	23	52	35
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	NA		NA		4.96		NA	
C1-Decalins	NA		NA		1.33		NA	
C2-Decalins	NA		NA		<0.3 U		NA	
C3-Decalins	NA		NA		<0.3 U		NA	
C4-Decalins	NA		NA		<0.3 U		NA	
Naphthalene	2.87		0.763		7.49		4.04	
C1-Naphthalenes	1.80		0.421 J		6.62		3.18	
C2-Naphthalenes	3.14		1.01		13.4		6.08	
C3-Naphthalenes	3.17		<0.7 U		29.8		19.7	
C4-Naphthalenes	2.77		<0.7 U		11.8		5.61	
Benzothiophene	NA		NA		0.493		NA	
C1-Benzothiophenes	NA		NA		<0.2 U		NA	
C2-Benzothiophenes	NA		NA		<0.2 U		NA	
C3-Benzothiophenes	NA		NA		<0.2 U		NA	
C4-Benzothiophenes	NA		NA		<0.2 U		NA	
Biphenyl	NA		NA		3.84		NA	
Acenaphthylene	0.212		0.059		4.29		0.798	
Acenaphthene	0.291		0.082 J		1.59		0.929	
Dibenzofuran	NA		NA		7.72		NA	
Fluorene	3.87		1.78		13.7		7.67	
C1-Fluorenes	1.62		<0.4 U		6.64		3.03	
C2-Fluorenes	<0.4 U		<0.4 U		22.6		6.98	
C3-Fluorenes	<0.4 U		<0.4 U		25.4		7.09	
Carbazole	NA		NA		2.83		NA	
Anthracene	0.366		<0.1 U		7.77		1.69	
Phenanthrene	11.1		5.20		38.6		20.5	
C1-Phenanthrenes/Anthracenes	4.46		<0.1 U		16.6		7.16	
C2-Phenanthrenes/Anthracenes	<0.3 U		<0.3 U		40.8		8.38	
C3-Phenanthrenes/Anthracenes	<0.3 U		<0.3 U		63.9		5.07	
C4-Phenanthrenes/Anthracenes	<0.3 U		<0.3 U		52.8		4.50	
Dibenzothiophene	0.732		<0.1 U		4.19		1.76	
C1-Dibenzothiophenes	0.443		<0.1 U		5.13		1.43	
C2-Dibenzothiophenes	<0.2 U		<0.2 U		17.5		2.20	
C3-Dibenzothiophenes	<0.2 U		<0.2 U		37.0		3.67	
C4-Dibenzothiophenes	<0.2 U		<0.2 U		40.6		1.73	
Fluoranthene	2.77		1.09		25.1		6.11	
Pyrene	1.78		0.496		25.3		5.52	
C1-Fluoranthenes/Pyrenes	1.96		<0.5 U		29.5		4.98	
C2-Fluoranthenes/Pyrenes	<0.5 U		<0.5 U		48.6		7.92	
C3-Fluoranthenes/Pyrenes	<0.5 U		<0.5 U		48.2		5.71	
C4-Fluoranthenes/Pyrenes	<0.5 U		<0.5 U		74.5		10.2	
Naphthobenzothiophene	NA		NA		22.2		NA	
C1-Naphthobenzothiophenes	NA		NA		63.4		NA	
C2-Naphthobenzothiophenes	NA		NA		120		NA	
C3-Naphthobenzothiophenes	NA		NA		129		NA	
C4-Naphthobenzothiophenes	NA		NA		67.8		NA	
Benz(a)anthracene	0.522		<0.2 U		13.3		1.85	
Chrysene/Triphenylene	1.37		<0.1 U		25.2		4.94	
C1-Chrysenes	<0.2 U		<0.2 U		73.5		<0.2 U	
C2-Chrysenes	<0.2 U		<0.2 U		110		<0.2 U	
C3-Chrysenes	<0.2 U		<0.2 U		86.6		<0.2 U	
C4-Chrysenes	<0.2 U		<0.2 U		49.2		<0.2 U	
Benzo(b)fluoranthene	1.55		<0.2 U		31.3		7.60	
Benzo(k,j)fluoranthene	0.258		<0.1 U		8.18		1.76	
Benzo(a)fluoranthene	NA		NA		5.02		NA	
Benzo(e)pyrene	<0.2 U		<0.2 U		27.3		3.48	
Benzo(a)pyrene	<0.1 U		<0.1 U		11.7		1.92	
Perylene	746 E		126		935 E		968 E	
Indeno(1,2,3-c,d)pyrene	0.621		<0.1 U		10.8		2.48	
Dibenzo(a,h)anthracene	0.378		<0.1 U		5.39		10.1	
Benzo(g,h,i)perylene	0.758		0.099		13.2		2.89	
Total PAHs	794		137		2549		1168	

Sample Name	ARC1541.D	ARC1542.D	ARC1543.D	ARC1544.D
Client Name	SED-DA-034 (0.5-1.0)	SED-DA-034 (1.0-1.5)	SED-DA-035 (0-0.5)	SED-DA-035 (0.5-1.0)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13	07/27/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 19:06	8/13/13 20:15	8/13/13 21:24	8/13/13 22:32
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.0	15.0	15.0
% Dry	72	77	48	65
% Moisture	28	23	52	35
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	2.03		0.475 J		7.55		3.59	
1-Methylnaphthalene	0.905		0.210 J		3.21		1.59	
2,6-Dimethylnaphthalene	NA		NA		7.09		NA	
1,6,7-Trimethylnaphthalene	NA		NA		1.63		NA	
1-Methylfluorene	NA		NA		3.39		NA	
4-Methyldibenzothiophene	NA		NA		2.92		NA	
2/3-Methyldibenzothiophene	NA		NA		2.25		NA	
1-Methyldibenzothiophene	NA		NA		0.97		NA	
3-Methylphenanthrene	NA		NA		6.31		NA	
2-Methylphenanthrene	NA		NA		5.63		NA	
2-Methylanthracene	NA		NA		5.33		NA	
4/9-Methylphenanthrene	NA		NA		4.93		NA	
1-Methylphenanthrene	NA		NA		3.42		NA	
3,6-Dimethylphenanthrene	NA		NA		2.55		NA	
Retene	NA		NA		4.32		NA	
2-Methylfluoranthene	NA		NA		3.66		NA	
Benzo(b)fluorene	NA		NA		6.76		NA	
C29-Hopane	NA		NA		185		NA	
18a-Oleanane	NA		NA		<0.6 U		NA	
C30-Hopane	NA		NA		295		NA	
C20-TAS	NA		NA		4.38		NA	
C21-TAS	NA		NA		5.73		NA	
C26(20S)-TAS	NA		NA		10.5		NA	
C26(20R)/C27(20S)-TAS	NA		NA		15.1		NA	
C28(20S)-TAS	NA		NA		45.5		NA	
C27(20R)-TAS	NA		NA		25.6		NA	
C28(20R)-TAS	NA		NA		44.8		NA	

Surrogate Recovery

Naphthalene-d8	77	76	77	76
Acenaphthene-d10	82	82	82	83
Phenanthrene-d10	84	82	90	93
Chrysene-d12	83	85	77	83
Perylene-d12	61	52	75	84

Sample Name	ARC1545.D	ARC1548.D	ARC1549.D	ARC1550.D
Client Name	SED-DA-035 (1.0-1.5)	SED-DA-036 (0.0-0.5)	SED-DA-DUP-01-072813	SED-DA-036 (0.5-1.0)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/28/13	07/28/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 23:41	8/14/13 0:49	8/14/13 1:58	8/14/13 4:15
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0	15.0	15.1
% Dry	74	32	35	72
% Moisture	26	68	65	28
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	NA		<0.1 U		<0.1 U		NA	
C1-Decalins	NA		<0.3 U		<0.3 U		NA	
C2-Decalins	NA		<0.3 U		<0.3 U		NA	
C3-Decalins	NA		<0.3 U		<0.3 U		NA	
C4-Decalins	NA		<0.3 U		<0.3 U		NA	
Naphthalene	1.20		8.65		5.87		3.57	
C1-Naphthalenes	0.642 J		6.66		5.16		2.02	
C2-Naphthalenes	1.10		14.9		11.7		7.72	
C3-Naphthalenes	2.78		14.7		11.4		29.5	
C4-Naphthalenes	2.10		18.1		12.2		17.1	
Benzothiophene	NA		0.817		0.495		NA	
C1-Benzothiophenes	NA		<0.2 U		<0.2 U		NA	
C2-Benzothiophenes	NA		<0.2 U		<0.2 U		NA	
C3-Benzothiophenes	NA		<0.2 U		<0.2 U		NA	
C4-Benzothiophenes	NA		<0.2 U		<0.2 U		NA	
Biphenyl	NA		4.06		3.77		NA	
Acenaphthylene	0.110		8.28		5.59		0.313	
Acenaphthene	0.190		2.63		1.85		0.600	
Dibenzofuran	NA		6.17		4.68		NA	
Fluorene	<0.2 U		12.5		9.29		7.91	
C1-Fluorenes	0.831		7.19		5.66		3.25	
C2-Fluorenes	<0.4 U		17.4		12.9		4.76	
C3-Fluorenes	<0.4 U		18.5		20.3		5.64	
Carbazole	NA		5.60		4.18		NA	
Anthracene	0.214		15.3		9.94		0.953	
Phenanthrene	6.79		23.1		19.2		26.4	
C1-Phenanthrenes/Anthracenes	3.17		17.8		14.6		7.88	
C2-Phenanthrenes/Anthracenes	<0.3 U		25.8		19.0		5.82	
C3-Phenanthrenes/Anthracenes	<0.3 U		30.2		20.4		1.61	
C4-Phenanthrenes/Anthracenes	<0.3 U		22.5		17.9		1.53	
Dibenzothiophene	0.287		5.94		4.73		2.16	
C1-Dibenzothiophenes	<0.1 U		6.80		5.22		1.46	
C2-Dibenzothiophenes	<0.2 U		16.1		10.6		0.935	
C3-Dibenzothiophenes	<0.2 U		18.1		13.9		0.497	
C4-Dibenzothiophenes	<0.2 U		22.0		14.6		0.690	
Fluoranthene	1.41		44.1		30.3		4.80	
Pyrene	1.04		43.0		29.5		2.81	
C1-Fluoranthenes/Pyrenes	0.475		37.9		28.7		2.38	
C2-Fluoranthenes/Pyrenes	<0.5 U		44.1		35.2		<0.5 U	
C3-Fluoranthenes/Pyrenes	<0.5 U		24.6		15.5		<0.5 U	
C4-Fluoranthenes/Pyrenes	<0.5 U		49.2		36.0		<0.5 U	
Naphthobenzothiophene	NA		15.2		11.3		NA	
C1-Naphthobenzothiophenes	NA		27.1		20.2		NA	
C2-Naphthobenzothiophenes	NA		47.4		39.3		NA	
C3-Naphthobenzothiophenes	NA		44.1		35.9		NA	
C4-Naphthobenzothiophenes	NA		14.9		13.4		NA	
Benz(a)anthracene	0.226		18.7		13.8		0.832	
Chrysene/Triphenylene	0.289		31.8		23.2		3.55	
C1-Chrysenes	<0.2 U		6.56		5.58		<0.2 U	
C2-Chrysenes	<0.2 U		10.2		11.2		<0.2 U	
C3-Chrysenes	<0.2 U		19.4		16.6		<0.2 U	
C4-Chrysenes	<0.2 U		10.3		12.2		<0.2 U	
Benzo(b)fluoranthene	0.463		60.7		43.7		3.41	
Benzo(k,j)fluoranthene	0.088 J		20.4		15.2		0.752	
Benzo(a)fluoranthene	NA		<0.1 U		10.0		NA	
Benzo(e)pyrene	<0.2 U		30.8		21.4		<0.2 U	
Benzo(a)pyrene	<0.1 U		16.3		13.2		<0.1 U	
Perylene	461 E		1018 E		736 E		826 E	
Indeno(1,2,3-c,d)pyrene	<0.1 U		21.9		15.2		<0.1 U	
Dibenzo(a,h)anthracene	<0.1 U		10.1		<0.1 U		<0.1 U	
Benzo(g,h,i)perylene	0.26		24.0		18.7		<0.1 U	
Total PAHs	484		2040		1517		977	

Sample Name	ARC1545.D	ARC1548.D	ARC1549.D	ARC1550.D
Client Name	SED-DA-035 (1.0-1.5)	SED-DA-036 (0-0.5)	SED-DA-DUP-01-072813	SED-DA-036 (0.5-1.0)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/28/13	07/28/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 23:41	8/14/13 0:49	8/14/13 1:58	8/14/13 4:15
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0	15.0	15.1
% Dry	74	32	35	72
% Moisture	26	68	65	28
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	0.713	J	7.53		5.88		3.21	
1-Methylnaphthalene	0.333	J	3.30		2.52		<0.5	U
2,6-Dimethylnaphthalene	NA		6.79		4.90		NA	
1,6,7-Trimethylnaphthalene	NA		2.39		1.60		NA	
1-Methylfluorene	NA		3.63		2.93		NA	
4-Methyldibenzothiophene	NA		3.86		3.06		NA	
2/3-Methyldibenzothiophene	NA		3.14		2.45		NA	
1-Methyldibenzothiophene	NA		1.14		0.74		NA	
3-Methylphenanthrene	NA		6.84		5.41		NA	
2-Methylphenanthrene	NA		5.90		5.11		NA	
2-Methylantracene	NA		6.30		5.31		NA	
4/9-Methylphenanthrene	NA		5.17		3.92		NA	
1-Methylphenanthrene	NA		3.20		2.84		NA	
3,6-Dimethylphenanthrene	NA		2.82		2.01		NA	
Retene	NA		12.7		7.68		NA	
2-Methylfluoranthene	NA		6.01		4.12		NA	
Benzo(b)fluorene	NA		11.5		8.24		NA	
C29-Hopane	NA		56.8		73.0		NA	
18a-Oleanane	NA		<0.6	U	<0.6	U	NA	
C30-Hopane	NA		131		101		NA	
C20-TAS	NA		<0.6	U	<0.6	U	NA	
C21-TAS	NA		<0.6	U	<0.6	U	NA	
C26(20S)-TAS	NA		<0.6	U	<0.6	U	NA	
C26(20R)/C27(20S)-TAS	NA		<0.6	U	<0.6	U	NA	
C28(20S)-TAS	NA		<0.6	U	<0.6	U	NA	
C27(20R)-TAS	NA		<0.6	U	<0.6	U	NA	
C28(20R)-TAS	NA		<0.6	U	<0.6	U	NA	

Surrogate Recovery

Naphthalene-d8	76	91	85	75
Acenaphthene-d10	82	83	79	80
Phenanthrene-d10	89	97	97	88
Chrysene-d12	87	74	75	87
Perylene-d12	61	83	80	59

Sample Name	ARC1551.D	ARC1552.D	ARC1553.D	ARC1554.D
Client Name	SED-DA-036 (1.0-1.5)	SED-DA-037 (0.0-0.5)	SED-DA-037 (0.5-1.0)	SED-DA-037 (1.0-1.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/28/13	07/28/13	07/28/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/14/13 5:23	8/14/13 6:32	8/14/13 7:41	8/14/13 8:49
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0	15.1	15.0
% Dry	79	28	39	70
% Moisture	21	72	61	30
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	NA		<0.1 U		NA		NA	
C1-Decalins	NA		<0.3 U		NA		NA	
C2-Decalins	NA		<0.3 U		NA		NA	
C3-Decalins	NA		<0.3 U		NA		NA	
C4-Decalins	NA		<0.3 U		NA		NA	
Naphthalene	2.07		10.2		10.5		3.84	
C1-Naphthalenes	1.45		8.31		9.35		1.90	
C2-Naphthalenes	<0.7 U		15.5		17.8		4.96	
C3-Naphthalenes	<0.7 U		15.1		16.3		3.74	
C4-Naphthalenes	<0.7 U		11.8		13.1		6.33	
Benzothiophene	NA		0.652		NA		NA	
C1-Benzothiophenes	NA		<0.2 U		NA		NA	
C2-Benzothiophenes	NA		<0.2 U		NA		NA	
C3-Benzothiophenes	NA		<0.2 U		NA		NA	
C4-Benzothiophenes	NA		<0.2 U		NA		NA	
Biphenyl	NA		4.00		NA		NA	
Acenaphthylene	0.284		16.0		6.15		0.302	
Acenaphthene	0.446		2.62		3.63		0.462	
Dibenzofuran	NA		7.38		NA		NA	
Fluorene	5.47		13.8		16.2		6.04	
C1-Fluorenes	<0.4 U		8.13		8.15		2.31	
C2-Fluorenes	<0.4 U		28.4		23.2		<0.4 U	
C3-Fluorenes	<0.4 U		21.7		29.3		<0.4 U	
Carbazole	NA		8.66		NA		NA	
Anthracene	0.881		26.8		11.4		0.626	
Phenanthrene	18.8		30.4		34.8		17.3	
C1-Phenanthrenes/Anthracenes	6.70		22.1		22.6		5.79	
C2-Phenanthrenes/Anthracenes	7.51		29.7		31.0		<0.3 U	
C3-Phenanthrenes/Anthracenes	4.38		29.6		39.3		<0.3 U	
C4-Phenanthrenes/Anthracenes	3.94		20.2		33.7		<0.3 U	
Dibenzothiophene	<0.1 U		5.47		6.58		1.10	
C1-Dibenzothiophenes	<0.1 U		7.03		8.54		0.609	
C2-Dibenzothiophenes	1.31		14.8		<0.2 U		0.665	
C3-Dibenzothiophenes	1.54		15.1		<0.2 U		0.407	
C4-Dibenzothiophenes	0.936		17.9		<0.2 U		0.453	
Fluoranthene	6.37		74.9		33.3		3.45	
Pyrene	4.59		70.0		37.7		2.01	
C1-Fluoranthenes/Pyrenes	3.13		49.9		37.7		2.47	
C2-Fluoranthenes/Pyrenes	4.01		46.0		56.4		<0.5 U	
C3-Fluoranthenes/Pyrenes	2.02		21.8		34.0		<0.5 U	
C4-Fluoranthenes/Pyrenes	3.83		23.5		<0.5 U		<0.5 U	
Naphthobenzothiophene	NA		17.2		NA		NA	
C1-Naphthobenzothiophenes	NA		24.1		NA		NA	
C2-Naphthobenzothiophenes	NA		37.6		NA		NA	
C3-Naphthobenzothiophenes	NA		38.7		NA		NA	
C4-Naphthobenzothiophenes	NA		15.7		NA		NA	
Benz(a)anthracene	2.01		38.0		14.7		0.469	
Chrysene/Triphenylene	2.44		49.4		30.2		2.96	
C1-Chrysenes	<0.2 U		20.8		26.5		<0.2 U	
C2-Chrysenes	<0.2 U		17.1		31.9		<0.2 U	
C3-Chrysenes	<0.2 U		17.2		31.5		<0.2 U	
C4-Chrysenes	<0.2 U		<0.2 U		<0.2 U		<0.2 U	
Benzo(b)fluoranthene	1.97		103		51.8		3.26	
Benzo(k,j)fluoranthene	0.920		36.2		15.4		0.774	
Benzo(a)fluoranthene	NA		<0.1 U		NA		NA	
Benzo(e)pyrene	1.24		50.3		28.3		<0.2 U	
Benzo(a)pyrene	1.17		30.6		14.3		<0.1 U	
Perylene	190		755 E		907 E		787 E	
Indeno(1,2,3-c,d)pyrene	0.853		39.4		16.6		<0.1 U	
Dibenzo(a,h)anthracene	0.347		13.0		7.90		0.875	
Benzo(g,h,i)perylene	0.942		37.2		20.6		2.60	
Total PAHs	282		2018		1737		862	

Sample Name	ARC1551.D	ARC1552.D	ARC1553.D	ARC1554.D
Client Name	SED-DA-036 (1.0-1.5)	SED-DA-037 (0-0.5)	SED-DA-037 (0.5-1.0)	SED-DA-037 (1.0-1.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/28/13	07/28/13	07/28/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/14/13 5:23	8/14/13 6:32	8/14/13 7:41	8/14/13 8:49
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0	15.1	15.0
% Dry	79	28	39	70
% Moisture	21	72	61	30
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	1.56		9.53		10.6		3.02	
1-Methylnaphthalene	0.817		3.98		4.60		<0.5 U	
2,6-Dimethylnaphthalene	NA		8.52		NA		NA	
1,6,7-Trimethylnaphthalene	NA		2.90		NA		NA	
1-Methylfluorene	NA		3.62		NA		NA	
4-Methyldibenzothiophene	NA		3.84		NA		NA	
2/3-Methyldibenzothiophene	NA		3.20		NA		NA	
1-Methyldibenzothiophene	NA		1.37		NA		NA	
3-Methylphenanthrene	NA		8.25		NA		NA	
2-Methylphenanthrene	NA		6.99		NA		NA	
2-Methylanthracene	NA		8.84		NA		NA	
4/9-Methylphenanthrene	NA		6.07		NA		NA	
1-Methylphenanthrene	NA		4.01		NA		NA	
3,6-Dimethylphenanthrene	NA		2.70		NA		NA	
Retene	NA		7.92		NA		NA	
2-Methylfluoranthene	NA		9.34		NA		NA	
Benzo(b)fluorene	NA		11.8		NA		NA	
C29-Hopane	NA		154		NA		NA	
18a-Oleanane	NA		<0.6 U		NA		NA	
C30-Hopane	NA		158		NA		NA	
C20-TAS	NA		<0.6 U		NA		NA	
C21-TAS	NA		<0.6 U		NA		NA	
C26(20S)-TAS	NA		<0.6 U		NA		NA	
C26(20R)/C27(20S)-TAS	NA		<0.6 U		NA		NA	
C28(20S)-TAS	NA		<0.6 U		NA		NA	
C27(20R)-TAS	NA		<0.6 U		NA		NA	
C28(20R)-TAS	NA		<0.6 U		NA		NA	

Surrogate Recovery

Naphthalene-d8	82	77	80	75
Acenaphthene-d10	80	85	85	80
Phenanthrene-d10	84	97	99	89
Chrysene-d12	85	80	73	84
Perylene-d12	42	87	82	47

Sample Name	ARC1555.D	ARC1556.D	ARC1557.D
Client Name	SED-DA-038 (0-0.5)	SED-DA-038 (0.5-1.0)	SED-DA-038 (1.0-1.5)
Matrix	Sediment	Sediment	Sediment
Collection Date	07/28/13	07/28/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/14/13 9:58	8/14/13 11:06	8/14/13 12:15
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0	15.0
% Dry	27	51	74
% Moisture	73	49	26
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	<0.1 U		NA		NA	
C1-Decalins	<0.3 U		NA		NA	
C2-Decalins	<0.3 U		NA		NA	
C3-Decalins	<0.3 U		NA		NA	
C4-Decalins	<0.3 U		NA		NA	
Naphthalene	9.30		8.94		3.71	
C1-Naphthalenes	8.44		5.79		2.45	
C2-Naphthalenes	16.2		9.59		3.90	
C3-Naphthalenes	16.1		7.95		2.79	
C4-Naphthalenes	13.1		5.21		2.61	
Benzo[thiophene]	0.55		NA		NA	
C1-Benzo[thiophenes]	<0.2 U		NA		NA	
C2-Benzo[thiophenes]	<0.2 U		NA		NA	
C3-Benzo[thiophenes]	<0.2 U		NA		NA	
C4-Benzo[thiophenes]	<0.2 U		NA		NA	
Biphenyl	3.73		NA		NA	
Acenaphthylene	14.3		1.59		0.270	
Acenaphthene	2.03		1.17		0.310	
Dibenzofuran	8.19		NA		NA	
Fluorene	16.2		9.53		4.22	
C1-Fluorenes	8.54		4.86		1.91	
C2-Fluorenes	31.8		9.67		2.58	
C3-Fluorenes	31.2		9.63		6.29	
Carbazole	7.99		NA		NA	
Anthracene	24.7		3.06		0.648	
Phenanthrene	42.0		24.6		13.5	
C1-Phenanthrenes/Anthracenes	25.8		10.7		6.09	
C2-Phenanthrenes/Anthracenes	35.3		12.6		7.96	
C3-Phenanthrenes/Anthracenes	31.9		7.01		2.78	
C4-Phenanthrenes/Anthracenes	32.8		8.89		3.69	
Dibenzothiophene	6.48		3.43		1.42	
C1-Dibenzothiophenes	7.13		2.78		0.923	
C2-Dibenzothiophenes	15.1		4.21		1.10	
C3-Dibenzothiophenes	16.2		5.77		1.13	
C4-Dibenzothiophenes	19.5		4.97		0.620	
Fluoranthene	66.2		13.7		4.89	
Pyrene	67.0		10.7		3.13	
C1-Fluoranthenes/Pyrenes	48.7		12.4		2.83	
C2-Fluoranthenes/Pyrenes	55.1		14.9		3.18	
C3-Fluoranthenes/Pyrenes	23.5		14.1		1.76	
C4-Fluoranthenes/Pyrenes	29.0		12.2		4.03	
Naphthobenzothiophene	16.6		NA		NA	
C1-Naphthobenzothiophenes	28.3		NA		NA	
C2-Naphthobenzothiophenes	48.5		NA		NA	
C3-Naphthobenzothiophenes	48.3		NA		NA	
C4-Naphthobenzothiophenes	19.9		NA		NA	
Benz(a)anthracene	30.6		5.01		1.61	
Chrysene/Triphenylene	45.3		12.6		3.43	
C1-Chrysenes	41.7		17.3		<0.2 U	
C2-Chrysenes	20.7		4.43		<0.2 U	
C3-Chrysenes	25.5		8.29		<0.2 U	
C4-Chrysenes	15.0		4.25		<0.2 U	
Benzo(b)fluoranthene	104		17.5		3.49	
Benzo(k,j)fluoranthene	36.8		3.12		0.857	
Benzo(a)fluoranthene	10.7		NA		NA	
Benzo(e)pyrene	55.6		6.64		1.14	
Benzo(a)pyrene	31.1		3.33		0.734	
Perylene	835 E		539		230	
Indeno(1,2,3-c,d)pyrene	35.7		5.26		0.827	
Dibenzo(a,h)anthracene	12.2		<0.1 U		0.957	
Benzo(g,h,i)perylene	33.4		4.70		0.895	
Total PAHs	2229		871		335	

Sample Name	ARC1555.D	ARC1556.D	ARC1557.D
Client Name	SED-DA-038 (0-0.5)	SED-DA-038 (0.5-1.0)	SED-DA-038 (1.0-1.5)
Matrix	Sediment	Sediment	Sediment
Collection Date	07/28/13	07/28/13	07/28/13
Received Date	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/14/13 9:58	8/14/13 11:06	8/14/13 12:15
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0	15.0
% Dry	27	51	74
% Moisture	73	49	26
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	9.55		6.44		2.73	
1-Methylnaphthalene	4.18		2.99		1.26	
2,6-Dimethylnaphthalene	8.79		NA		NA	
1,6,7-Trimethylnaphthalene	2.93		NA		NA	
1-Methylfluorene	4.54		NA		NA	
4-Methyldibenzothiophene	3.98		NA		NA	
2/3-Methyldibenzothiophene	3.40		NA		NA	
1-Methyldibenzothiophene	1.16		NA		NA	
3-Methylphenanthrene	9.98		NA		NA	
2-Methylphenanthrene	9.22		NA		NA	
2-Methylantracene	7.67		NA		NA	
4/9-Methylphenanthrene	8.50		NA		NA	
1-Methylphenanthrene	4.52		NA		NA	
3,6-Dimethylphenanthrene	3.22		NA		NA	
Retene	8.81		NA		NA	
2-Methylfluoranthene	9.09		NA		NA	
Benzo(b)fluorene	13.9		NA		NA	
C29-Hopane	164		NA		NA	
18a-Oleanane	<0.6 U		NA		NA	
C30-Hopane	197		NA		NA	
C20-TAS	<0.6 U		NA		NA	
C21-TAS	<0.6 U		NA		NA	
C26(20S)-TAS	<0.6 U		NA		NA	
C26(20R)/C27(20S)-TAS	<0.6 U		NA		NA	
C28(20S)-TAS	<0.6 U		NA		NA	
C27(20R)-TAS	<0.6 U		NA		NA	
C28(20R)-TAS	<0.6 U		NA		NA	

Surrogate Recovery

Naphthalene-d8	80	79	77
Acenaphthene-d10	86	80	82
Phenanthrene-d10	99	93	90
Chrysene-d12	73	79	84
Perylene-d12	87	64	48

Sample Name ENV3075A.D
Client Name Procedural Blank
Matrix Sediment
Collection Date NA
Received Date NA
Extraction Date 08/08/13
Extraction Batch ENV 3075
Date Acquired 8/13/13 6:32
Method PAH-2012.M
Sample Dry Weight (g) 15.0
% Dry NA
% Moisture NA
Dilution 1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	3X MDL	Actual MDL
cis/trans Decalin	<0.1 U		0.395	0.132
C1-Decalins	<0.3 U		0.790	0.263
C2-Decalins	<0.3 U		0.790	0.263
C3-Decalins	<0.3 U		0.790	0.263
C4-Decalins	<0.3 U		0.790	0.263
Naphthalene	0.218 J		1.03	0.342
C1-Naphthalenes	0.058 J		3.09	1.03
C2-Naphthalenes	<0.7 U		2.05	0.684
C3-Naphthalenes	<0.7 U		2.05	0.684
C4-Naphthalenes	<0.7 U		2.05	0.684
Benzothiophene	<0.1 U		0.270	0.090
C1-Benzothiophenes	<0.2 U		0.540	0.180
C2-Benzothiophenes	<0.2 U		0.540	0.180
C3-Benzothiophenes	<0.2 U		0.540	0.180
C4-Benzothiophenes	<0.2 U		0.540	0.180
Biphenyl	0.176 J		0.881	0.294
Acenaphthylene	<0.04 U		0.122	0.041
Acenaphthene	<0.1 U		0.308	0.103
Dibenzofuran	<0.2 U		0.613	0.204
Fluorene	<0.2 U		0.550	0.183
C1-Fluorenes	<0.4 U		1.10	0.367
C2-Fluorenes	<0.4 U		1.10	0.367
C3-Fluorenes	<0.4 U		1.10	0.367
Carbazole	<0.1 U		0.449	0.150
Anthracene	<0.1 U		0.346	0.115
Phenanthrene	0.055 J		0.624	0.208
C1-Phenanthrenes/Anthracenes	<0.1 U		0.232	0.077
C2-Phenanthrenes/Anthracenes	<0.3 U		0.855	0.285
C3-Phenanthrenes/Anthracenes	<0.3 U		0.855	0.285
C4-Phenanthrenes/Anthracenes	<0.3 U		0.855	0.285
Dibenzothiophene	<0.1 U		0.348	0.116
C1-Dibenzothiophenes	<0.1 U		0.191	0.064
C2-Dibenzothiophenes	<0.2 U		0.696	0.232
C3-Dibenzothiophenes	<0.2 U		0.696	0.232
C4-Dibenzothiophenes	<0.2 U		0.696	0.232
Fluoranthene	<0.3 U		1.00	0.333
Pyrene	<0.1 U		0.408	0.136
C1-Fluoranthenes/Pyrenes	<0.5 U		1.41	0.469
C2-Fluoranthenes/Pyrenes	<0.5 U		1.41	0.469
C3-Fluoranthenes/Pyrenes	<0.5 U		1.41	0.469
C4-Fluoranthenes/Pyrenes	<0.5 U		1.41	0.469
Naphthobenzothiophene	<0.1 U		0.383	0.128
C1-Naphthobenzothiophenes	<0.3 U		0.767	0.256
C2-Naphthobenzothiophenes	<0.3 U		0.767	0.256
C3-Naphthobenzothiophenes	<0.3 U		0.767	0.256
C4-Naphthobenzothiophenes	<0.3 U		0.767	0.256
Benz(a)anthracene	<0.2 U		0.577	0.192
Chrysene/Triphenylene	<0.1 U		0.347	0.116
C1-Chrysenes	<0.2 U		0.695	0.232
C2-Chrysenes	<0.2 U		0.695	0.232
C3-Chrysenes	<0.2 U		0.695	0.232
C4-Chrysenes	<0.2 U		0.695	0.232
Benzo(b)fluoranthene	<0.2 U		0.609	0.203
Benzo(k,j)fluoranthene	<0.1 U		0.294	0.098
Benzo(a)fluoranthene	<0.1 U		0.294	0.098
Benzo(e)pyrene	<0.2 U		0.530	0.177
Benzo(a)pyrene	<0.1 U		0.304	0.101
Perylene	0.1 J		3.80	1.27
Indeno(1,2,3-c,d)pyrene	<0.1 U		0.151	0.050
Dibenzo(a,h)anthracene	<0.1 U		0.193	0.064
Benzo(g,h,i)perylene	<0.1 U		0.264	0.088
Total PAHs	0.557			

Sample Name	ENV3075A.D
Client Name	Procedural Blank
Matrix	Sediment
Collection Date	NA
Received Date	NA
Extraction Date	08/08/13
Extraction Batch	ENV 3075
Date Acquired	8/13/13 6:32
Method	PAH-2012.M
Sample Dry Weight (g)	15.0
% Dry	NA
% Moisture	NA
Dilution	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	3X MDL	Actual MDL
Individual Alkyl Isomers and Hopanes				
2-Methylnaphthalene	0.060	J	3.89	1.30
1-Methylnaphthalene	0.035	J	1.64	0.546
2,6-Dimethylnaphthalene	<0.3	U	0.782	0.261
1,6,7-Trimethylnaphthalene	<0.1	U	0.382	0.127
1-Methylfluorene	<0.2	U	0.574	0.191
4-Methyldibenzothiophene	<0.1	U	0.274	0.091
2/3-Methyldibenzothiophene	<0.1	U	0.274	0.091
1-Methyldibenzothiophene	<0.1	U	0.274	0.091
3-Methylphenanthrene	<0.1	U	0.291	0.097
2-Methylphenanthrene	<0.1	U	0.291	0.097
2-Methylantracene	<0.1	U	0.291	0.097
4/9-Methylphenanthrene	<0.1	U	0.291	0.097
1-Methylphenanthrene	<0.1	U	0.291	0.097
3,6-Dimethylphenanthrene	<0.1	U	0.329	0.110
Retene	<0.2	U	0.694	0.231
2-Methylfluoranthene	<0.2	U	0.668	0.223
Benzo(b)fluorene	<0.1	U	0.374	0.125
C29-Hopane	<0.6	U	1.72	0.575
18a-Oleanane	<0.6	U	1.72	0.575
C30-Hopane	<0.6	U	1.72	0.575
C20-TAS	<0.6	U	1.72	0.575
C21-TAS	<0.6	U	1.72	0.575
C26(20S)-TAS	<0.6	U	1.72	0.575
C26(20R)/C27(20S)-TAS	<0.6	U	1.72	0.575
C28(20S)-TAS	<0.6	U	1.72	0.575
C27(20R)-TAS	<0.6	U	1.72	0.575
C28(20R)-TAS	<0.6	U	1.72	0.575

Surrogate Recovery

Naphthalene-d8	79
Acenaphthene-d10	83
Phenanthrene-d10	81
Chrysene-d12	90
Perylene-d12	87

Sample Name	ARC1543.D	ENV3075C.D	ENV3075D.D
Client Name	SED-DA-035 (0-0.5)	SED-DA-035 (0-0.5) MS	SED-DA-035 (0-0.5) MSD
Matrix	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13
Received Date	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 21:24	8/13/13 9:57	8/13/13 11:06
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.0	15.1
% Dry	48	44	44
% Moisture	52	56	56
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Recovery (%)	Q	Q1	Su. Corrected Conc. (ng/dry g)	Q	Recovery (%)	Q	Q1	RPD (%)	Q	Spike Amount (ng)
cis/trans Decalin	4.96		7.14		33			7.65		41			7		98.9
C1-Decalins	1.33		NA					NA							
C2-Decalins	<0.3 U		NA					NA							
C3-Decalins	<0.3 U		NA					NA							
C4-Decalins	<0.3 U		NA					NA							
Naphthalene	7.49		12.6		77			12.8		81			1		100
C1-Naphthalenes	6.62		NA					NA							
C2-Naphthalenes	13.4		NA					NA							
C3-Naphthalenes	29.8		NA					NA							
C4-Naphthalenes	11.8		NA					NA							
Benzothiophene	0.493		5.78		80			6.04		84			4		99.4
C1-Benzothiophenes	<0.2 U		NA					NA							
C2-Benzothiophenes	<0.2 U		NA					NA							
C3-Benzothiophenes	<0.2 U		NA					NA							
C4-Benzothiophenes	<0.2 U		NA					NA							
Biphenyl	3.84		9.36		84			9.50		87			2		99.1
Acenaphthylene	4.29		11.4		108			11.7		113			2		99.2
Acenaphthene	1.59		8.56		105			8.57		105			0		100
Dibenzofuran	7.72		11.3		54			11.4		56			1		100
Fluorene	13.7		15.6				Y	16.2				Y	4		100
C1-Fluorenes	6.64		NA					NA							
C2-Fluorenes	22.6		NA					NA							
C3-Fluorenes	25.4		NA					NA							
Carbazole	2.83		8.44		85			8.90		93			5		99.1
Anthracene	7.77		14.4		99			14.5		102			1		100
Phenanthrene	38.6		24.0				Y	24.0				Y	0		99.1
C1-Phenanthrenes/Anthracenes	16.6		NA					NA							
C2-Phenanthrenes/Anthracenes	40.8		NA					NA							
C3-Phenanthrenes/Anthracenes	63.9		NA					NA							
C4-Phenanthrenes/Anthracenes	52.8		NA					NA							
Dibenzothiophene	4.19		11.6		112			11.6		114			0		98.6
C1-Dibenzothiophenes	5.13		NA					NA							
C2-Dibenzothiophenes	17.5		NA					NA							
C3-Dibenzothiophenes	37.0		NA					NA							
C4-Dibenzothiophenes	40.6		NA					NA							
Fluoranthene	25.1		30.0				Y	30.8				Y	3		100
Pyrene	25.3		30.8				Y	31.4				Y	2		100
C1-Fluoranthenes/Pyrenes	29.5		NA					NA							
C2-Fluoranthenes/Pyrenes	48.6		NA					NA							
C3-Fluoranthenes/Pyrenes	48.2		NA					NA							
C4-Fluoranthenes/Pyrenes	74.5		NA					NA							
Naphthobenzothiophene	22.2		NA					NA							
C1-Naphthobenzothiophenes	63.4		NA					NA							
C2-Naphthobenzothiophenes	120		NA					NA							
C3-Naphthobenzothiophenes	129		NA					NA							
C4-Naphthobenzothiophenes	67.8		NA					NA							
Benz(a)anthracene	13.3		20.0		101			20.5				Y	3		100
Chrysene/Triphenylene	25.2		30.4				Y	30.3				Y	0		99.4
C1-Chrysenes	73.5		NA					NA							
C2-Chrysenes	110		NA					NA							
C3-Chrysenes	86.6		NA					NA							
C4-Chrysenes	49.2		NA					NA							
Benzo(b)fluoranthene	31.3		40.0				Y	39.1				Y	2		100
Benzo(k,j)fluoranthene	8.18		11.5		49			11.6		52			1		100
Benzo(a)fluoranthene	5.02		NA					NA							
Benzo(e)pyrene	27.3		21.4				Y	21.8				Y	2		100
Benzo(a)pyrene	11.7		16.0		65			15.9		63			1		100
Perylene	935 E		733 E				Y	719 E				Y	2		100
Indeno(1,2,3-c,d)pyrene	10.8		17.5		103			17.7		108			1		98.3
Dibenzo(a,h)anthracene	5.39		11.0		86			11.4		91			3		99.1
Benzo(g,h,i)perylene	13.2		19.1		89			19.1				Y	0		99.1
Average % Recovery					86					89					

Sample Name	ARC1543.D	ENV3075C.D	ENV3075D.D
Client Name	SED-DA-035 (0-0.5)	SED-DA-035 (0-0.5) MS	SED-DA-035 (0-0.5) MSD
Matrix	Sediment	Sediment	Sediment
Collection Date	07/27/13	07/27/13	07/27/13
Received Date	07/30/13	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075	ENV 3075
Date Acquired	8/13/13 21:24	8/13/13 9:57	8/13/13 11:06
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.0	15.1
% Dry	48	44	44
% Moisture	52	56	56
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q Recovery (%)	Q Q1	Su. Corrected Conc. (ng/dry g)	Q Recovery (%)	Q Q1	RPD (%)	Q	Spike Amount (ng)
Individual Alkyl Isomers and Hopanes											
2-Methylnaphthalene	7.55		12.9	80		12.8	79		1		100
1-Methylnaphthalene	3.21		8.91	86		8.68	83		3		100
2,6-Dimethylnaphthalene	7.09		12.5	81		12.6	83		1		100
1,6,7-Trimethylnaphthalene	1.63		7.34	86		7.71	92		5		100
1-Methylfluorene	3.39		9.71	94		9.81	96		1		101
4-Methyldibenzothiophene	2.92		9.25	94		9.38	97		1		101
2/3-Methyldibenzothiophene	2.25		NA			NA					
1-Methyldibenzothiophene	0.97		NA			NA					
3-Methylphenanthrene	6.31		NA			NA					
2-Methylphenanthrene	5.63		NA			NA					
2-Methylantracene	5.33		NA			NA					
4/9-Methylphenanthrene	4.93		NA			NA					
1-Methylphenanthrene	3.42		8.70	80		8.88	84		2		98.9
3,6-Dimethylphenanthrene	2.55		8.71	92		8.99	97		3		100
Retene	4.32		9.64	89		10.4	103		7		89.4
2-Methylfluoranthene	3.66		10.4	101		10.9	110		5		101
Benzo(b)fluorene	6.76		14.5	116		14.7	119		1		101
C29-Hopane	185		NA			NA					
18a-Oleanane	<0.6 U		NA			NA					
C30-Hopane	295		NA			NA					
C20-TAS	4.38		NA			NA					
C21-TAS	5.73		NA			NA					
C26(20S)-TAS	10.5		NA			NA					
C26(20R)/C27(20S)-TAS	15.1		12.4		Y	12.7		Y	2		100
C28(20S)-TAS	45.5		NA			NA					
C27(20R)-TAS	25.6		NA			NA					
C28(20R)-TAS	44.8		NA			NA					

Surrogate Recovery

Naphthalene-d8	77	75	75
Acenaphthene-d10	82	85	84
Phenanthrene-d10	90	83	83
Chrysene-d12	77	85	83
Perylene-d12	75	76	77

Sample Name	ARC1540.D	ENV3075E.D
Client Name	SED-DA-034 (0-0.5)	Dupl. (SED-DA-034 (0-0.5))
Matrix	Sediment	Sediment
Collection Date	07/27/13	07/27/13
Received Date	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075
Date Acquired	8/13/13 17:58	8/13/13 12:15
Method	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0
% Dry	44	44
% Moisture	56	56
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	RPD %	Q Q1	3X MDL	MDL
cis/trans Decalin	5.09		6.36		22		0.395	0.132
C1-Decalins	1.01		0.977		3		0.790	0.263
C2-Decalins	<0.3 U		<0.3 U				0.790	0.263
C3-Decalins	<0.3 U		<0.3 U				0.790	0.263
C4-Decalins	<0.3 U		<0.3 U				0.790	0.263
Naphthalene	7.38		7.46		1		1.03	0.342
C1-Naphthalenes	6.06		6.27		3		3.09	1.03
C2-Naphthalenes	11.8		12.9		9		2.05	0.684
C3-Naphthalenes	17.1		20.5		18		2.05	0.684
C4-Naphthalenes	21.0		26.0		21		2.05	0.684
Benzo[thiophene]	0.765		0.814		6		0.270	0.090
C1-Benzo[thiophenes]	<0.2 U		<0.2 U				0.540	0.180
C2-Benzo[thiophenes]	<0.2 U		<0.2 U				0.540	0.180
C3-Benzo[thiophenes]	<0.2 U		<0.2 U				0.540	0.180
C4-Benzo[thiophenes]	<0.2 U		<0.2 U				0.540	0.180
Biphenyl	3.66		3.28		11		0.881	0.294
Acenaphthylene	6.47		6.70		3		0.122	0.041
Acenaphthene	1.57		1.68		7		0.308	0.103
Dibenzofuran	5.20		5.42		4		0.613	0.204
Fluorene	10.4		9.65		8		0.55	0.183
C1-Fluorenes	6.05		6.44		6		1.10	0.367
C2-Fluorenes	23.8		20.3		16		1.10	0.367
C3-Fluorenes	20.7		17.5		17		1.10	0.367
Carbazole	3.79		4.48		17		0.449	0.150
Anthracene	9.73		10.6		9		0.346	0.115
Phenanthrene	21.8		21.6		1		0.624	0.208
C1-Phenanthrenes/Anthracenes	15.2		16.1		6		0.232	0.077
C2-Phenanthrenes/Anthracenes	23.4		26.4		12		0.855	0.285
C3-Phenanthrenes/Anthracenes	19.4		19.1		1		0.855	0.285
C4-Phenanthrenes/Anthracenes	17.6		18.9		7		0.855	0.285
Dibenzothiophene	4.83		4.84		0		0.348	0.116
C1-Dibenzothiophenes	6.25		6.49		4		0.191	0.064
C2-Dibenzothiophenes	12.5		12.5		0		0.696	0.232
C3-Dibenzothiophenes	15.3		16.6		8		0.696	0.232
C4-Dibenzothiophenes	14.3		13.7		4		0.696	0.232
Fluoranthene	39.6		41.3		4		1.00	0.333
Pyrene	33.6		34.6		3		0.408	0.136
C1-Fluoranthenes/Pyrenes	27.7		29.6		7		1.41	0.469
C2-Fluoranthenes/Pyrenes	37.5		39.6		6		1.41	0.469
C3-Fluoranthenes/Pyrenes	20.2		19.2		5		1.41	0.469
C4-Fluoranthenes/Pyrenes	32.7		36.0		10		1.41	0.469
Naphthobenzothiophene	14.9		16.7		11		0.383	0.128
C1-Naphthobenzothiophenes	22.5		22.0		2		0.767	0.256
C2-Naphthobenzothiophenes	36.7		36.6		0		0.767	0.256
C3-Naphthobenzothiophenes	31.6		32.6		3		0.767	0.256
C4-Naphthobenzothiophenes	12.9		12.3		4		0.767	0.256
Benz(a)anthracene	17.0		18.3		7		0.577	0.192
Chrysene/Triphenylene	28.3		30.8		8		0.347	0.116
C1-Chrysenes	24.7		25.1		2		0.695	0.232
C2-Chrysenes	9.36		8.47		10		0.695	0.232
C3-Chrysenes	14.5		15.2		4		0.695	0.232
C4-Chrysenes	9.04		9.74		8		0.695	0.232
Benzo(b)fluoranthene	43.9		45.7		4		0.609	0.203
Benzo(k,j)fluoranthene	14.2		14.3		1		0.294	0.098
Benzo(a)fluoranthene	12.9		12.8		0		0.294	0.098
Benzo(e)pyrene	24.3		24.2		1		0.530	0.177
Benzo(a)pyrene	14.4		14.9		3		0.304	0.101
Perylene	917 E		844 E		8		3.80	1.27
Indeno(1,2,3-c,d)pyrene	16.5		17.1		3		0.151	0.050
Dibenzo(a,h)anthracene	9.14		10.7		16		0.193	0.064
Benzo(g,h,i)perylene	20.4		20.4		0		0.264	0.088
Total PAHs	1798.2		1755.8		2			

Sample Name	ARC1540.D	ENV3075E.D
Client Name	SED-DA-034 (0-0.5)	Dupl. (SED-DA-034 (0-0.5))
Matrix	Sediment	Sediment
Collection Date	07/27/13	07/27/13
Received Date	07/30/13	07/30/13
Extraction Date	08/08/13	08/08/13
Extraction Batch	ENV 3075	ENV 3075
Date Acquired	8/13/13 17:58	8/13/13 12:15
Method	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0
% Dry	44	44
% Moisture	56	56
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	RPD %	Q Q1	3X MDL	MDL
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	6.81		6.95		2		3.89	1.30
1-Methylnaphthalene	3.05		3.26		7		1.64	0.546
2,6-Dimethylnaphthalene	6.09		6.18		1		0.782	0.261
1,6,7-Trimethylnaphthalene	2.16		2.57		17		0.382	0.127
1-Methylfluorene	3.10		3.11		0		0.574	0.191
4-Methyldibenzothiophene	3.45		3.59		4		0.274	0.091
2/3-Methyldibenzothiophene	2.83		2.97		5		0.274	0.091
1-Methyldibenzothiophene	1.21		1.21		1		0.274	0.091
3-Methylphenanthrene	5.92		5.81		2		0.291	0.097
2-Methylphenanthrene	4.82		5.44		12		0.291	0.097
2-Methylanthracene	5.55		5.83		5		0.291	0.097
4/9-Methylphenanthrene	4.14		4.37		5		0.291	0.097
1-Methylphenanthrene	2.99		3.39		13		0.291	0.097
3,6-Dimethylphenanthrene	1.71		1.63		5		0.329	0.110
Retene	8.20		8.26		1		0.694	0.231
2-Methylfluoranthene	4.37		4.55		4		0.668	0.223
Benzo(b)fluorene	8.30		8.49		2		0.374	0.125
C29-Hopane	78.8		81.8		4		1.72	0.575
18a-Oleanane	<0.6 U		<0.6 U				1.72	0.575
C30-Hopane	98.2		97.5		1		1.72	0.575
C20-TAS	<0.6 U		<0.6 U				1.72	0.575
C21-TAS	<0.6 U		<0.6 U				1.72	0.575
C26(20S)-TAS	<0.6 U		<0.6 U				1.72	0.575
C26(20R)/C27(20S)-TAS	<0.6 U		<0.6 U				1.72	0.575
C28(20S)-TAS	<0.6 U		<0.6 U				1.72	0.575
C27(20R)-TAS	<0.6 U		<0.6 U				1.72	0.575
C28(20R)-TAS	<0.6 U		<0.6 U				1.72	0.575

Surrogate Recovery

Naphthalene-d8	77	77
Acenaphthene-d10	80	77
Phenanthrene-d10	89	87
Chrysene-d12	74	79
Perylene-d12	73	75

Sample Name ENV3075B.D
Client Name SRM 1941b
Matrix Sediment
Collection Date NA
Received Date NA
Extraction Date 08/08/13
Extraction Batch ENV 3075
Date Acquired 8/13/13 8:49
Method PAH-2012.M
Sample Dry Weight (g) 4.0
% Dry 98
% Moisture 2
Dilution 1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	RPD (%)	SRM 1941b Certified Conc. (ng/dry g)	-30% Certified Conc. (ng/dry g)	+30% Certified Conc. (ng/dry g)
cis/trans Decalin	39.7					
C1-Decalins	9.07					
C2-Decalins	11.0					
C3-Decalins	17.4					
C4-Decalins	28.6					
Naphthalene	785		8	848 ± 95	527	1226
C1-Naphthalenes	222					
C2-Naphthalenes	207					
C3-Naphthalenes	161					
C4-Naphthalenes	93.1					
Benzothiophene	30.0					
C1-Benzothiophenes	29.9					
C2-Benzothiophenes	19.1					
C3-Benzothiophenes	18.8					
C4-Benzothiophenes	17.7					
Biphenyl	67.7					
Acenaphthylene	72.6					
Acenaphthene	31.1					
Dibenzofuran	89.0					
Fluorene	58.7		37	85 ± 15	49.0	130
C1-Fluorenes	62.8					
C2-Fluorenes	164					
C3-Fluorenes	182					
Carbazole	21.9					
Anthracene	215		15	184 ± 18	116	263
Phenanthrene	429		6	406 ± 44	253	585
C1-Phenanthrenes/Anthracenes	281					
C2-Phenanthrenes/Anthracenes	252					
C3-Phenanthrenes/Anthracenes	204					
C4-Phenanthrenes/Anthracenes	132					
Dibenzothiophene	50.3					
C1-Dibenzothiophenes	70.4					
C2-Dibenzothiophenes	112					
C3-Dibenzothiophenes	138					
C4-Dibenzothiophenes	60.1					
Fluoranthene	738		12	651 ± 50	421	911
Pyrene	568		2	581 ± 39	379	806
C1-Fluoranthenes/Pyrenes	398					
C2-Fluoranthenes/Pyrenes	417					
C3-Fluoranthenes/Pyrenes	171					
C4-Fluoranthenes/Pyrenes	146					
Naphthobenzothiophene	129					
C1-Naphthobenzothiophenes	109					
C2-Naphthobenzothiophenes	105					
C3-Naphthobenzothiophenes	88.2					
C4-Naphthobenzothiophenes	33.4					
Benz(a)anthracene	372		11	335 ± 25	217	468
Chrysene/Triphenylene	437		9	399 ± 36	254	566
C1-Chrysenes	277					
C2-Chrysenes	156					
C3-Chrysenes	87.0					
C4-Chrysenes	48.3					
Benzo(b)fluoranthene	342		28	453 ± 21	302	616
Benzo(k,j)fluoranthene	540		20	442 ± 23	293	605
Benzo(a)fluoranthene	70.8					
Benzo(e)pyrene	304		7	325 ± 25	210	455
Benzo(a)pyrene	256		33	358 ± 17	239	488
Perylene	332		18	397 ± 45	246	575
Indeno(1,2,3-c,d)pyrene	276		21	341 ± 57	199	517
Dibenzo(a,h)anthracene	69.0		26	53 ± 10	30.1	81.9
Benzo(g,h,i)perylene	264		15	307 ± 45	183	458
Total PAHs	11120					

Sample Name ENV3075B.D
Client Name SRM 1941b
Matrix Sediment
Collection Date NA
Received Date NA
Extraction Date 08/08/13
Extraction Batch ENV 3075
Date Acquired 8/13/13 8:49
Method PAH-2012.M
Sample Dry Weight (g) 4.0
% Dry 98
% Moisture 2
Dilution 1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	RPD (%)	SRM 1941b Certified Conc. (ng/dry g)	-30% Certified Conc. (ng/dry g)	+30% Certified Conc. (ng/dry g)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	246					
1-Methylnaphthalene	116					
2,6-Dimethylnaphthalene	103					
1,6,7-Trimethylnaphthalene	22.2					
1-Methylfluorene	28.9					
4-Methyldibenzothiophene	44.5					
2/3-Methyldibenzothiophene	27.9					
1-Methyldibenzothiophene	11.9					
3-Methylphenanthrene	105	0		105 ± 13	64.4	153
2-Methylphenanthrene	108					
2-Methylantracene	65.9					
4/9-Methylphenanthrene	80.8					
1-Methylphenanthrene	73.5	0		73.2 ± 5.9	47.1	103
3,6-Dimethylphenanthrene	23.2					
Retene	41.6					
2-Methylfluoranthene	77.3					
Benzo(b)fluorene	93.4					
C29-Hopane	258					
18a-Oleanane	42.5					
C30-Hopane	341					
C20-TAS	14.8					
C21-TAS	4.99					
C26(20S)-TAS	2.63					
C26(20R)/C27(20S)-TAS	10.6					
C28(20S)-TAS	6.03					
C27(20R)-TAS	9.24					
C28(20R)-TAS	5.26					

Surrogate Recovery

Naphthalene-d8 74
Acenaphthene-d10 85
Phenanthrene-d10 80
Chrysene-d12 82
Perylene-d12 74

Sample Name MS70055K.D
Client Name AR-SRM2779-WK4.0-002
Matrix Gulf of Mexico Crude Oil
Collection Date NA
Received Date NA
Extraction Date NA
Extraction Batch ENV 3075
Date Acquired 8/13/13 7:40
Method PAH-2012.M
Sample Weight (mg) 4.1

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	Q1	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
cis/trans Decalin	633						
C1-Decalins	861						
C2-Decalins	728						
C3-Decalins	738						
C4-Decalins	391						
Naphthalene	652			27	855 ± 46	647	1081
C1-Naphthalenes	1394						
C2-Naphthalenes	1619						
C3-Naphthalenes	1100						
C4-Naphthalenes	556						
Benzothiophene	7.10 J						
C1-Benzothiophenes	26.4						
C2-Benzothiophenes	27.7						
C3-Benzothiophenes	25.5						
C4-Benzothiophenes	24.3						
Biphenyl	149						
Acenaphthylene	9.70 J						
Acenaphthene	9.12 J						
Dibenzofuran	26.8						
Fluorene	111						
C1-Fluorenes	245						
C2-Fluorenes	361						
C3-Fluorenes	270						
Carbazole	3.2 J						
Anthracene	3.4 J			2	3.42 ± 0.59	2.26	4.81
Phenanthrene	210			20	258 ± 27	185	342
C1-Phenanthrenes/Anthracenes	458						
C2-Phenanthrenes/Anthracenes	465						
C3-Phenanthrenes/Anthracenes	306						
C4-Phenanthrenes/Anthracenes	203						
Dibenzothiophene	41.2			23	51.8 ± 2.1	39.8	64.7
C1-Dibenzothiophenes	114						
C2-Dibenzothiophenes	144						
C3-Dibenzothiophenes	138						
C4-Dibenzothiophenes	56.3						
Fluoranthene	4.33 J			1	4.36 ± 0.40	3.17	5.71
Pyrene	12.3			19	14.81 ± 0.39	11.5	18.2
C1-Fluoranthenes/Pyrenes	67.4						
C2-Fluoranthenes/Pyrenes	132						
C3-Fluoranthenes/Pyrenes	117						
C4-Fluoranthenes/Pyrenes	112						
Naphthobenzothiophene	22.6						
C1-Naphthobenzothiophenes	45.7						
C2-Naphthobenzothiophenes	55.1						
C3-Naphthobenzothiophenes	42.5						
C4-Naphthobenzothiophenes	17.4						
Benz(a)anthracene	6.33 J			10	7.03 ± 0.85	4.94	9.5
Chrysene/Triphenylene	38.2			21	47.4 ± 1.7	36.6	58.9
C1-Chrysenes	87.4						
C2-Chrysenes	101						
C3-Chrysenes	76.6						
C4-Chrysenes	44.4						
Benzo(b)fluoranthene	4.33 J			26	5.62 ± 0.34	4.22	7.15
Benzo(k,j)fluoranthene	0.437 J						
Benzo(a)fluoranthene	<10 U						
Benzo(e)pyrene	8.3 J			26	10.78 ± 0.60	8.14	13.7
Benzo(a)pyrene	1.59 J						
Perylene	0.643 J						
Indeno(1,2,3-c,d)pyrene	0.552 J						
Dibenzo(a,h)anthracene	0.493 J			15	0.574 ± 0.091	0.386	0.798
Benzo(g,h,i)perylene	1.87 J			12	2.11 ± 0.26	1.48	2.84
Total PAHs	13111						

Sample Name MS70055K.D
Client Name AR-SRM2779-WK4.0-002
Matrix Gulf of Mexico Crude Oil
Collection Date NA
Received Date NA
Extraction Date NA
Extraction Batch ENV 3075
Date Acquired 8/13/13 7:40
Method PAH-2012.M
Sample Weight (mg) 4.1

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	1369		17	1630 ± 50	1264	2016
1-Methylnaphthalene	917		22	1140 ± 20	896	1392
2,6-Dimethylnaphthalene	778					
1,6,7-Trimethylnaphthalene	235					
1-Methylfluorene	208					
4-Methyldibenzothiophene	77.4					
2/3-Methyldibenzothiophene	36.4					
1-Methyldibenzothiophene	22.8					
3-Methylphenanthrene	169		20	206 ± 32	139	286
2-Methylphenanthrene	179		25	230 ± 14	173	293
2-Methylanthracene	15.3					
4/9-Methylphenanthrene	202		14	232 ± 19	170	301
1-Methylphenanthrene	143		17	169 ± 10	127	215
3,6-Dimethylphenanthrene	64					
Retene	4.0	J				
2-Methylfluoranthene	5.39	J				
Benzo(b)fluorene	15.6					
C29-Hopane	22.4					
18a-Oleanane	<10	U				
C30-Hopane	46.9					
C20-TAS	7.55	J				
C21-TAS	8.44	J				
C26(20S)-TAS	4.02	J				
C26(20R)/C27(20S)-TAS	13.0					
C28(20S)-TAS	9.44	J				
C27(20R)-TAS	8.02	J				
C28(20R)-TAS	7.78	J				

Surrogate Recovery

Naphthalene-d8	90
Acenaphthene-d10	83
Phenanthrene-d10	93
Chrysene-d12	87
Perylene-d12	96

Peak Resolution

4/9-Methylphenanthrene from 1-Methylphenanthrene (m/z 192)	83%
---	-----

Sample Name MS70055L.D
Client Name AR-WKCC-250-038
Matrix Solution
Collection Date NA
Received Date NA
Extraction Date NA
Extraction Batch ENV 3075
Date Acquired 8/13/13 15:41
Method PAH-2012.M
Sample Volume (mL) 1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc. (ng/mL)
cis/trans Decalin	230	7.1	247	210	284	
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	228	9.3	250	213	288	
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	224	10.4	249	211	286	
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	231	7.1	248	211	285	
Acenaphthylene	257	3.6	248	211	285	
Acenaphthene	234	6.9	251	213	288	
Dibenzofuran	235	5.6	249	211	286	
Fluorene	236	5.9	251	213	288	
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	231	7.2	248	211	285	
Anthracene	250	0.2	251	213	288	
Phenanthrene	225	9.6	248	211	285	
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	210	15.8	247	210	283	
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	235	6.2	250	213	288	
Pyrene	233	6.9	250	213	288	
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	248	1.3	252	214	289	
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	252	1.1	250	212	287	
Chrysene/Triphenylene	236	5.0	249	211	286	
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	224	11.3	251	213	288	
Benzo(k,j)fluoranthene	231	7.5	249	212	286	
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	218	13.5	249	212	286	
Benzo(a)pyrene	229	8.6	250	212	287	
Perylene	226	10.3	250	213	288	
Indeno(1,2,3-c,d)pyrene	221	10.4	246	209	283	
Dibenzo(a,h)anthracene	223	10.6	248	211	285	
Benzo(g,h,i)perylene	217	13.1	248	211	285	

Sample Name MS70055L.D
Client Name AR-WKCC-250-038
Matrix Solution
Collection Date NA
Received Date NA
Extraction Date NA
Extraction Batch ENV 3075
Date Acquired 8/13/13 15:41
Method PAH-2012.M
Sample Volume (mL) 1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc. (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	230	8.2		250	213	288
1-Methylnaphthalene	231	7.8		250	212	287
2,6-Dimethylnaphthalene	236	5.8		250	213	288
1,6,7-Trimethylnaphthalene	239	4.5		250	213	288
1-Methylfluorene	244	3.2		252	214	290
4-Methyldibenzothiophene	228	10.2		252	214	290
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	231	6.9		247	210	284
3,6-Dimethylphenanthrene	237	5.3		250	213	288
Retene	204	9.0		223	190	257
2-Methylfluoranthene	227	10.5		252	214	289
Benzo(b)fluorene	252	0.2		252	214	290
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	239	4.5		250	213	288
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	251	0.3		250	213	288
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					

Surrogate Recovery

Naphthalene-d8	90
Acenaphthene-d10	92
Phenanthrene-d10	85
Chrysene-d12	93
Perylene-d12	86

Sample Name MS700551.D
Client Name AR-WKICV-250-004
Matrix Solution
Collection Date NA
Received Date NA
Extraction Date NA
Extraction Batch ENV 3075
Date Acquired 8/13/13 3:06
Method PAH-2012.M
Sample Volume (mL) 1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
cis/trans Decalin	268	6.6	250	200	300	
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	284	12.6	250	200	300	
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	284	12.8	250	200	300	
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	274	8.9	251	201	301	
Acenaphthylene	249					
Acenaphthene	277	10.3	250	200	300	
Dibenzofuran	289	14.3	250	200	300	
Fluorene	279	10.8	250	200	300	
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	240	4.2	250	200	300	
Anthracene	273	8.6	250	200	300	
Phenanthrene	292	15.6	250	200	300	
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	267	6.6	250	200	300	
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	273	8.7	250	200	300	
Pyrene	295	16.3	250	200	300	
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	NA					
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	266	6.3	250	200	300	
Chrysene/Triphenylene	295	16.6	250	200	300	
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	283	12.5	250	200	300	
Benzo(k,j)fluoranthene	282	12.0	250	200	300	
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	283	12.4	250	200	300	
Benzo(a)pyrene	281	11.6	250	200	300	
Perylene	282	11.7	251	200	301	
Indeno(1,2,3-c,d)pyrene	267	6.5	250	200	300	
Dibenzo(a,h)anthracene	290	14.8	250	200	300	
Benzo(g,h,i)perylene	272	8.2	250	200	300	

Sample Name MS700551.D
Client Name AR-WKICV-250-004
Matrix Solution
Collection Date NA
Received Date NA
Extraction Date NA
Extraction Batch ENV 3075
Date Acquired 8/13/13 3:06
Method PAH-2012.M
Sample Volume (mL) 1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	284	12.5		250	200	301
1-Methylnaphthalene	286	13.3		251	200	301
2,6-Dimethylnaphthalene	277	10.3		250	200	300
1,6,7-Trimethylnaphthalene	281	11.5		250	200	301
1-Methylfluorene	NA					
4-Methyldibenzothiophene	NA					
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	277	10.2		250	200	300
3,6-Dimethylphenanthrene	NA					
Retene	NA					
2-Methylfluoranthene	NA					
Benzo(b)fluorene	NA					
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	NA					
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	NA					
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					

Surrogate Recovery

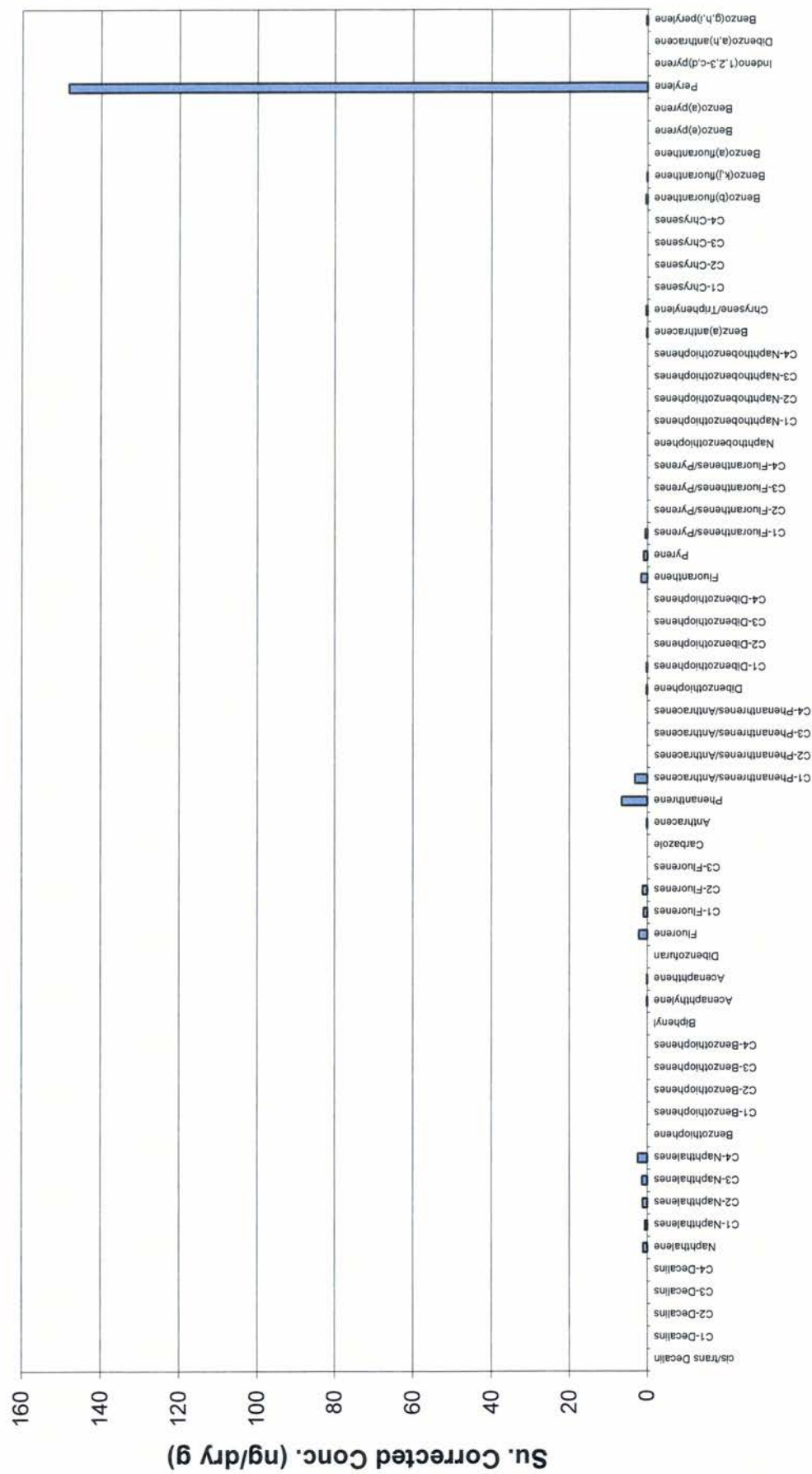
Naphthalene-d8	230	8.2		250	200	300
Acenaphthene-d10	224	10.9		250	200	300
Phenanthrene-d10	227	9.7		250	200	300
Chrysene-d12	241	3.8		250	200	300
Perylene-d12	216	14.4		250	200	300

Polycyclic Aromatic Hydrocarbon Histograms

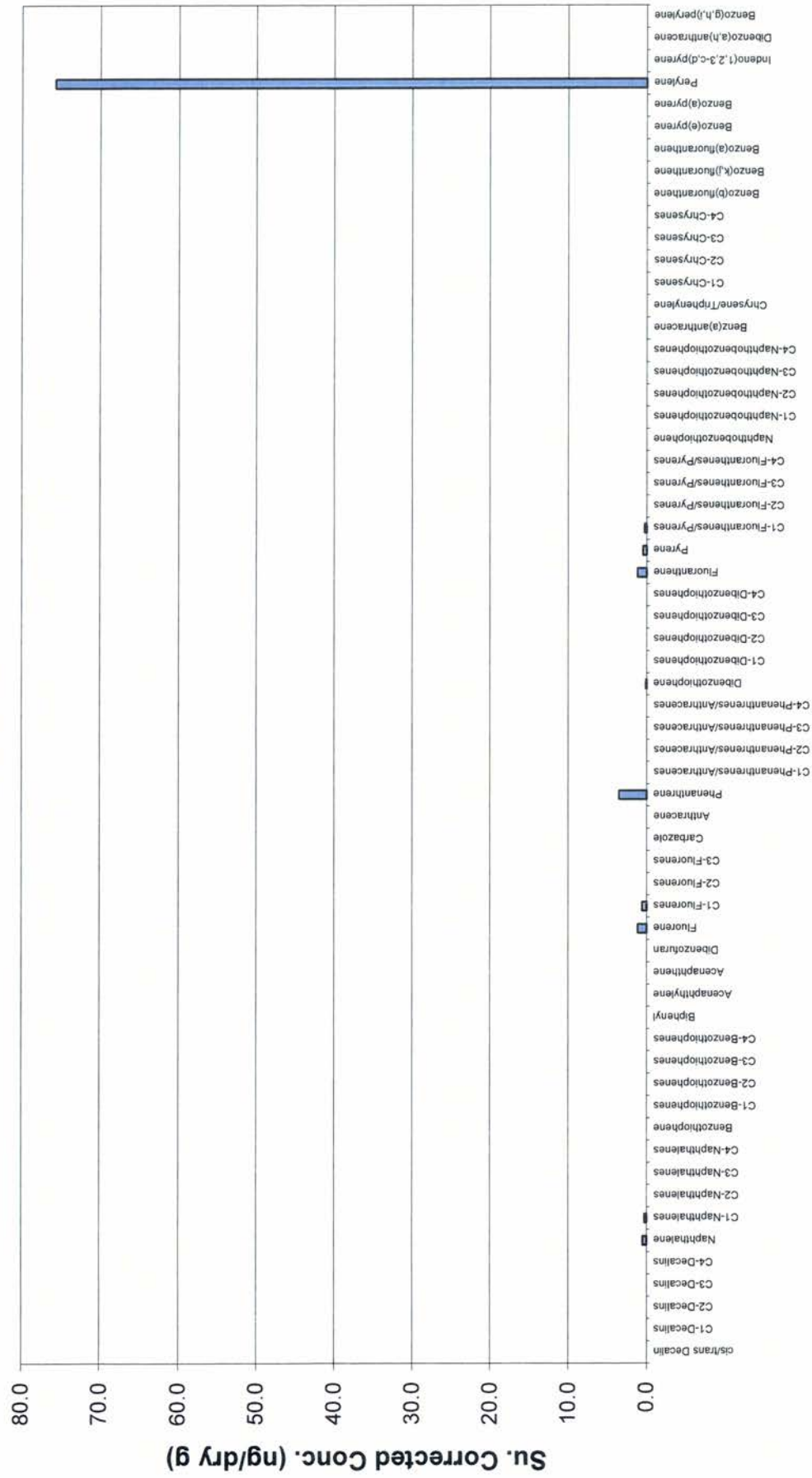
SED-DA-033 (0-0.5) (Sediment) ARC1537



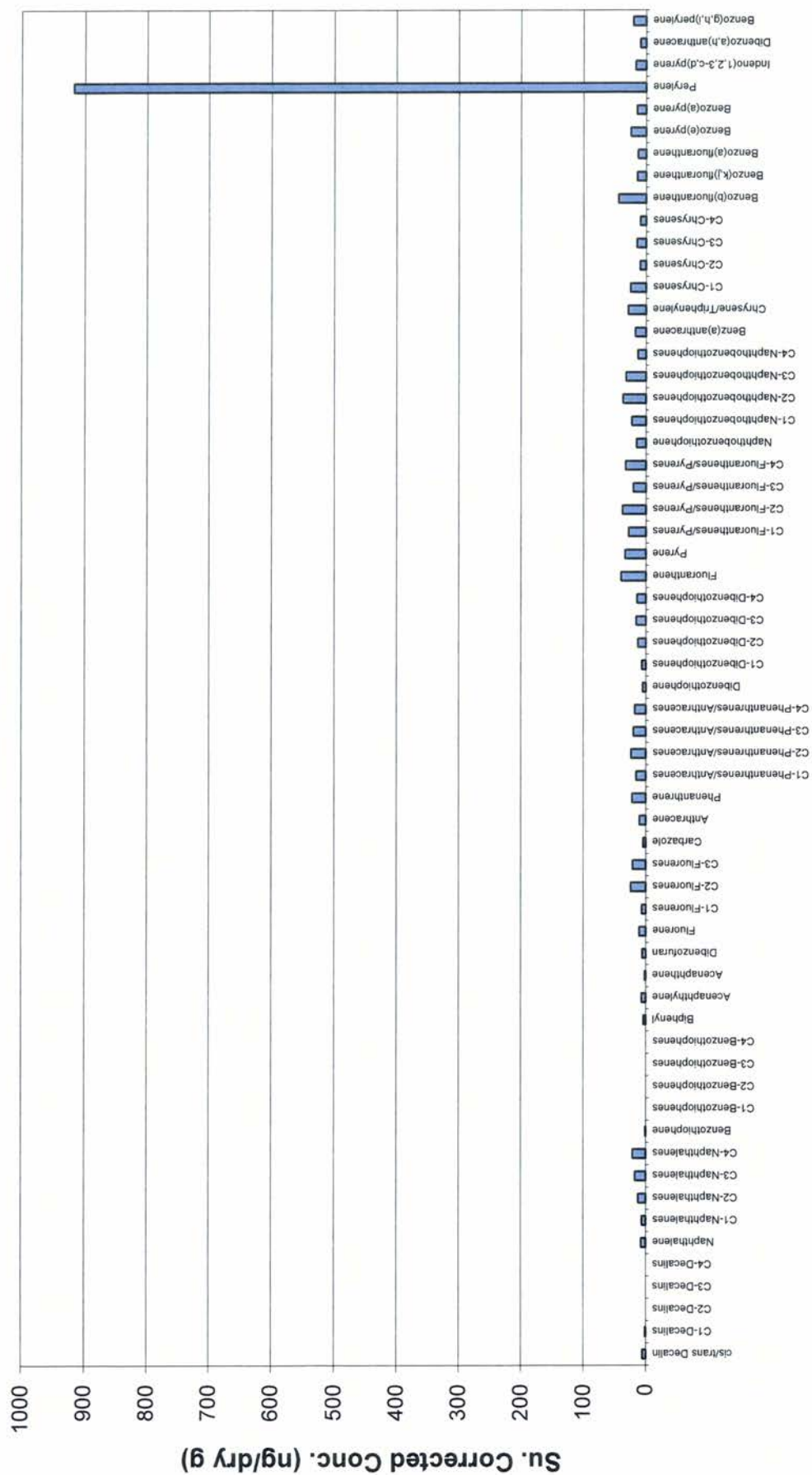
SED-DA-033 (0.5-1.0) (Sediment) ARC1538



SED-DA-033 (1.0-1.5) (Sediment) ARC1539



SED-DA-034 (0-0.5) (Sediment) ARC1540



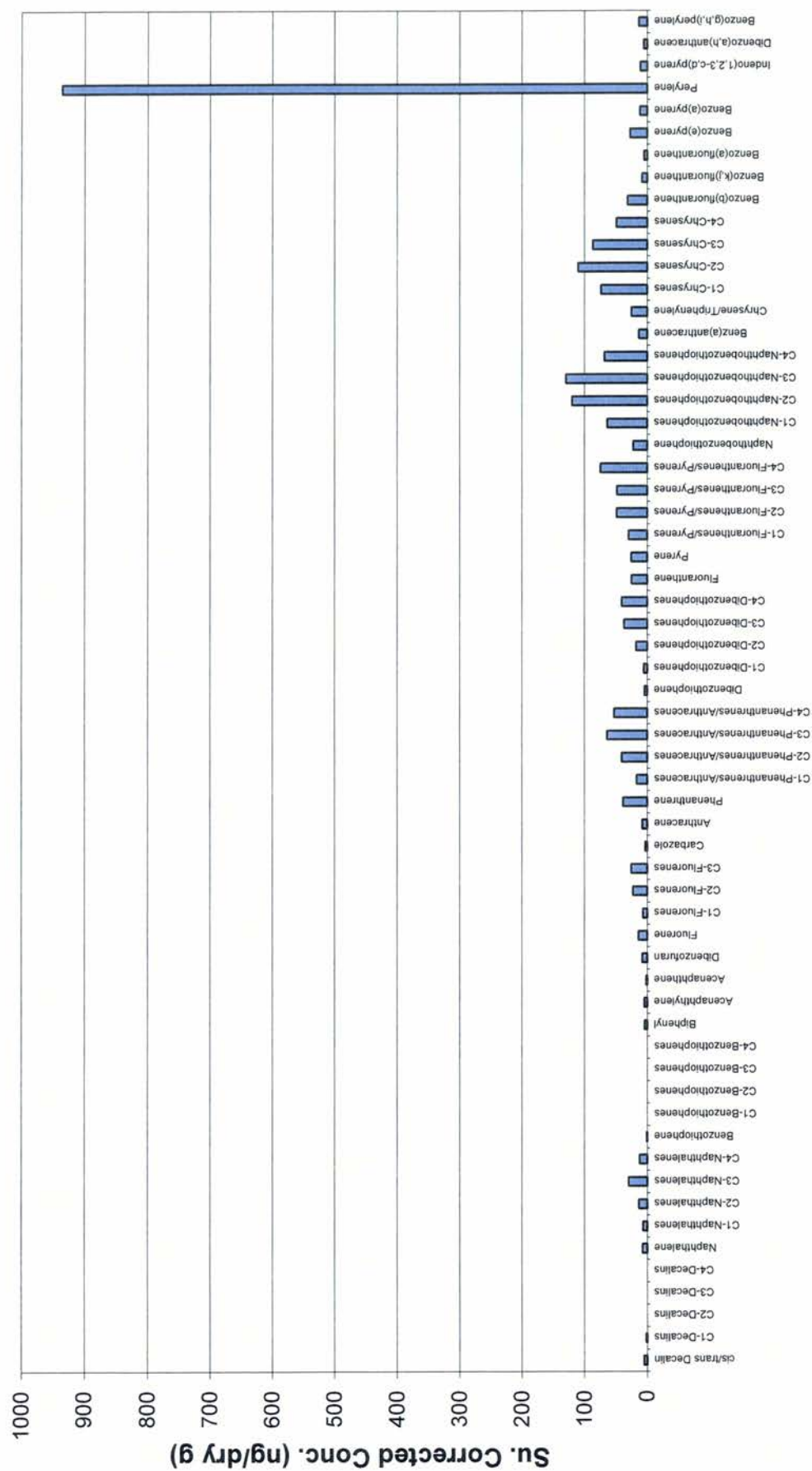
SED-DA-034 (0.5-1.0) (Sediment) ARC1541



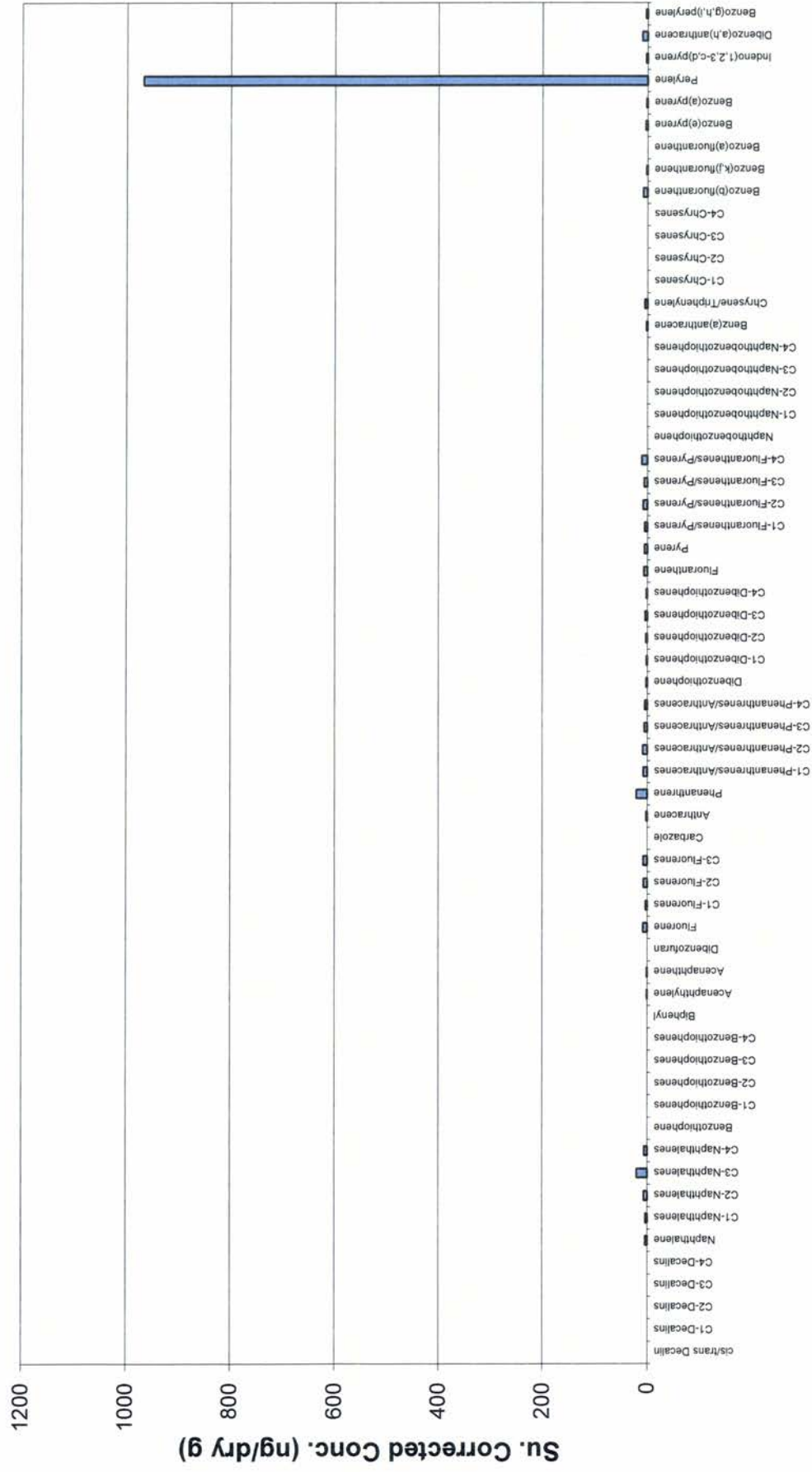
SED-DA-034 (1.0-1.5) (Sediment) ARC1542



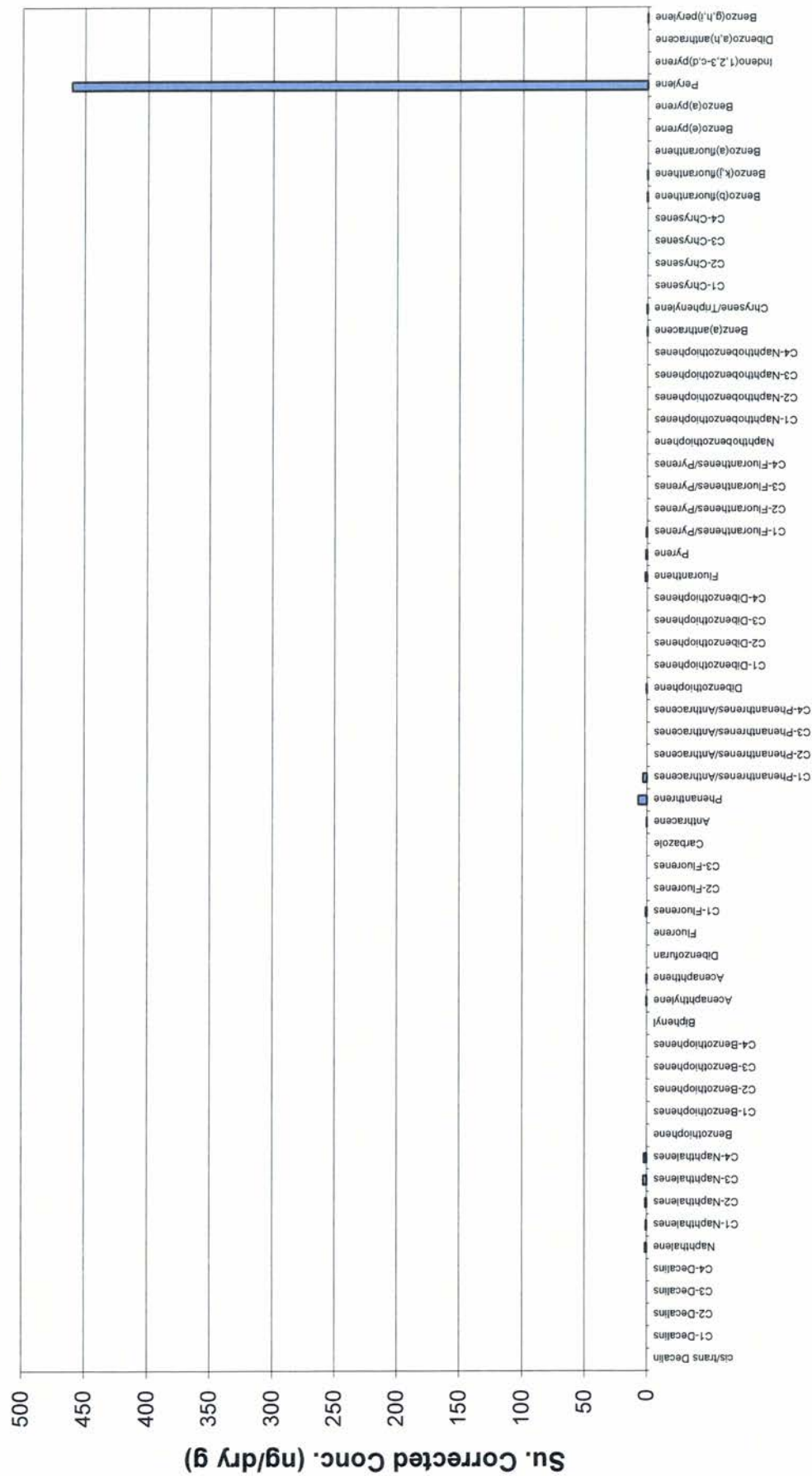
SED-DA-035 (0-0.5) (Sediment) **ARC1543**



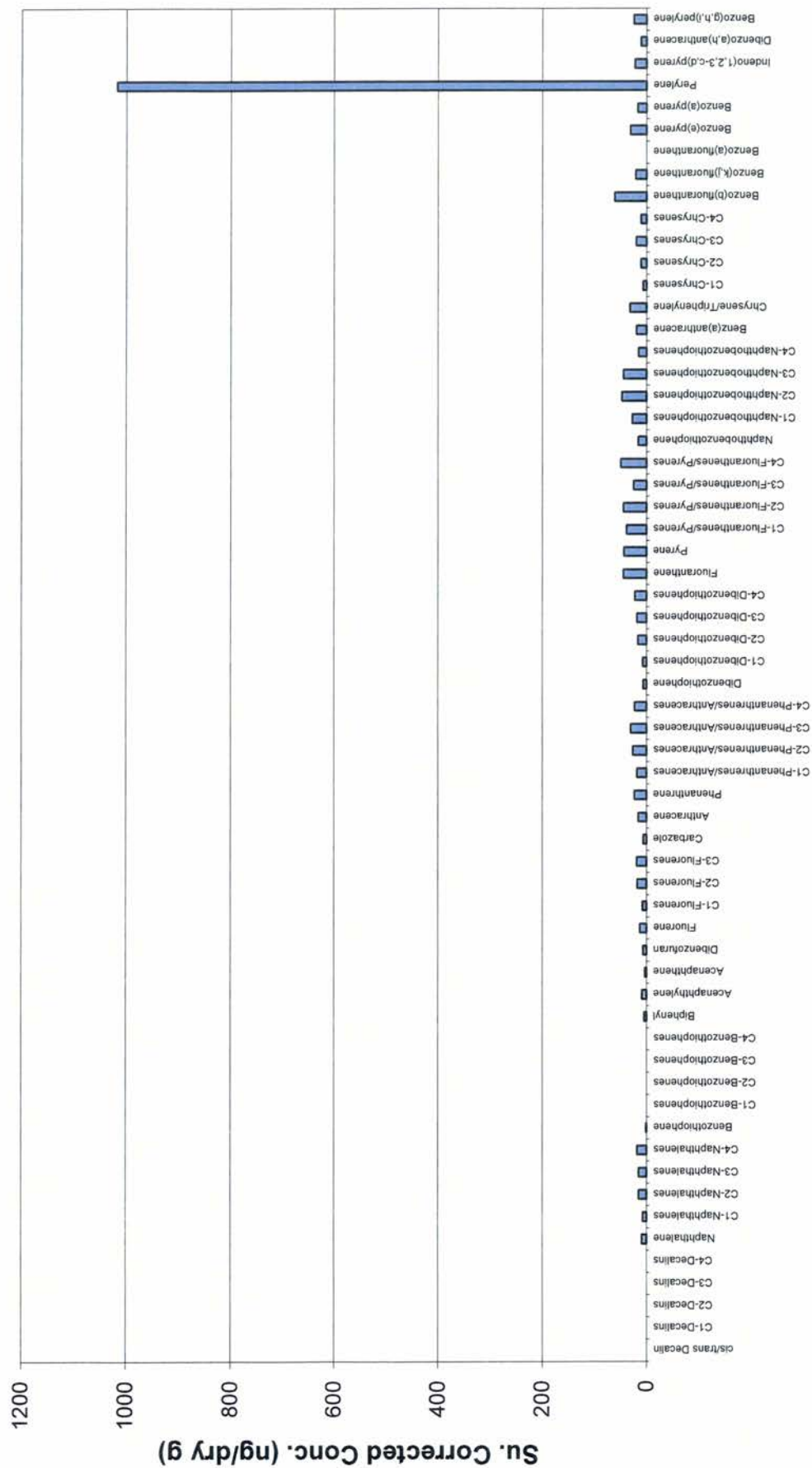
SED-DA-035 (0.5-1.0) (Sediment) **ARC1544**



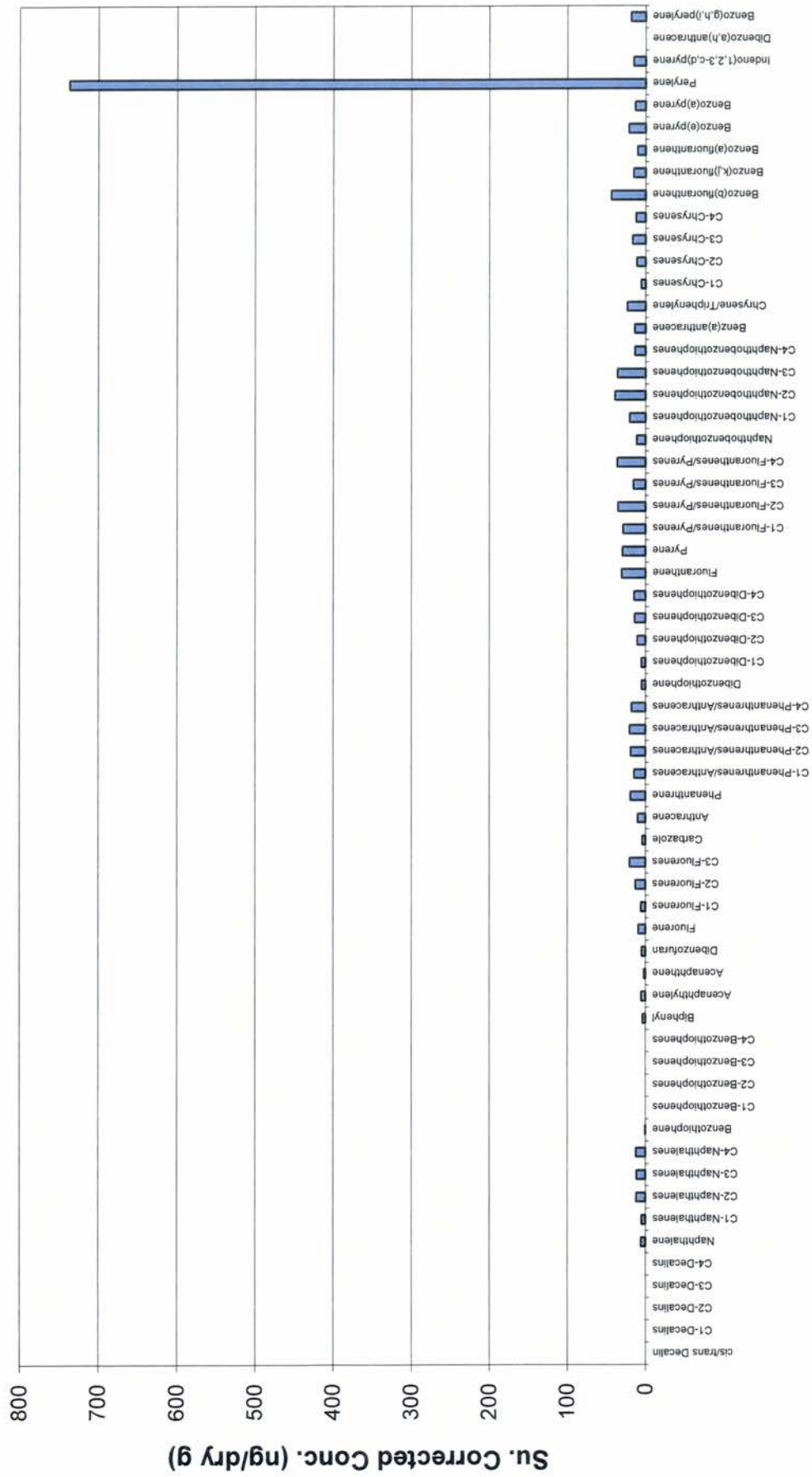
SED-DA-035 (1.0-1.5) (Sediment) ARC1545



SED-DA-036 (0-0.5) (Sediment) ARC1548



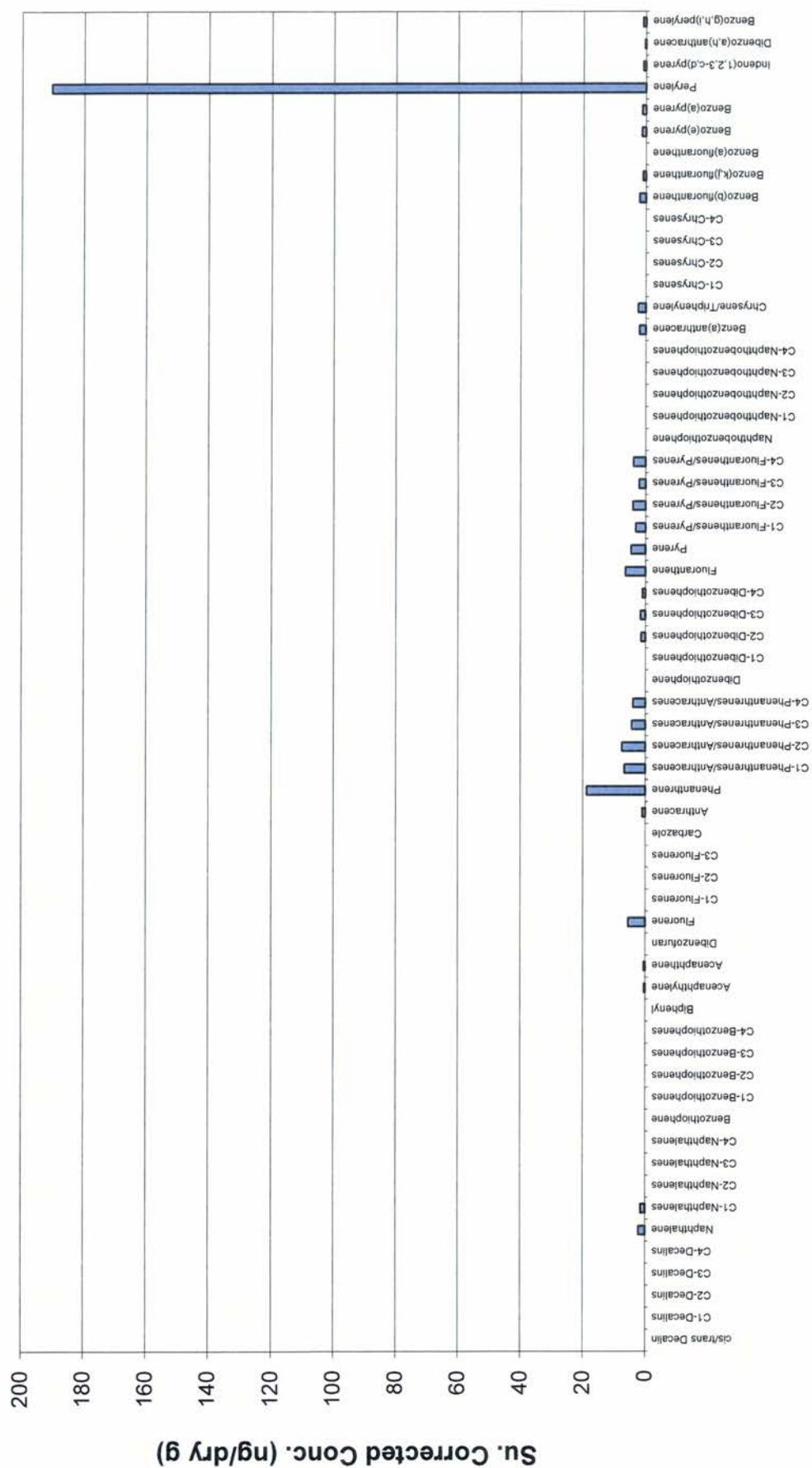
SED-DA-DUP-01-072813 (Sediment)
ARC1549



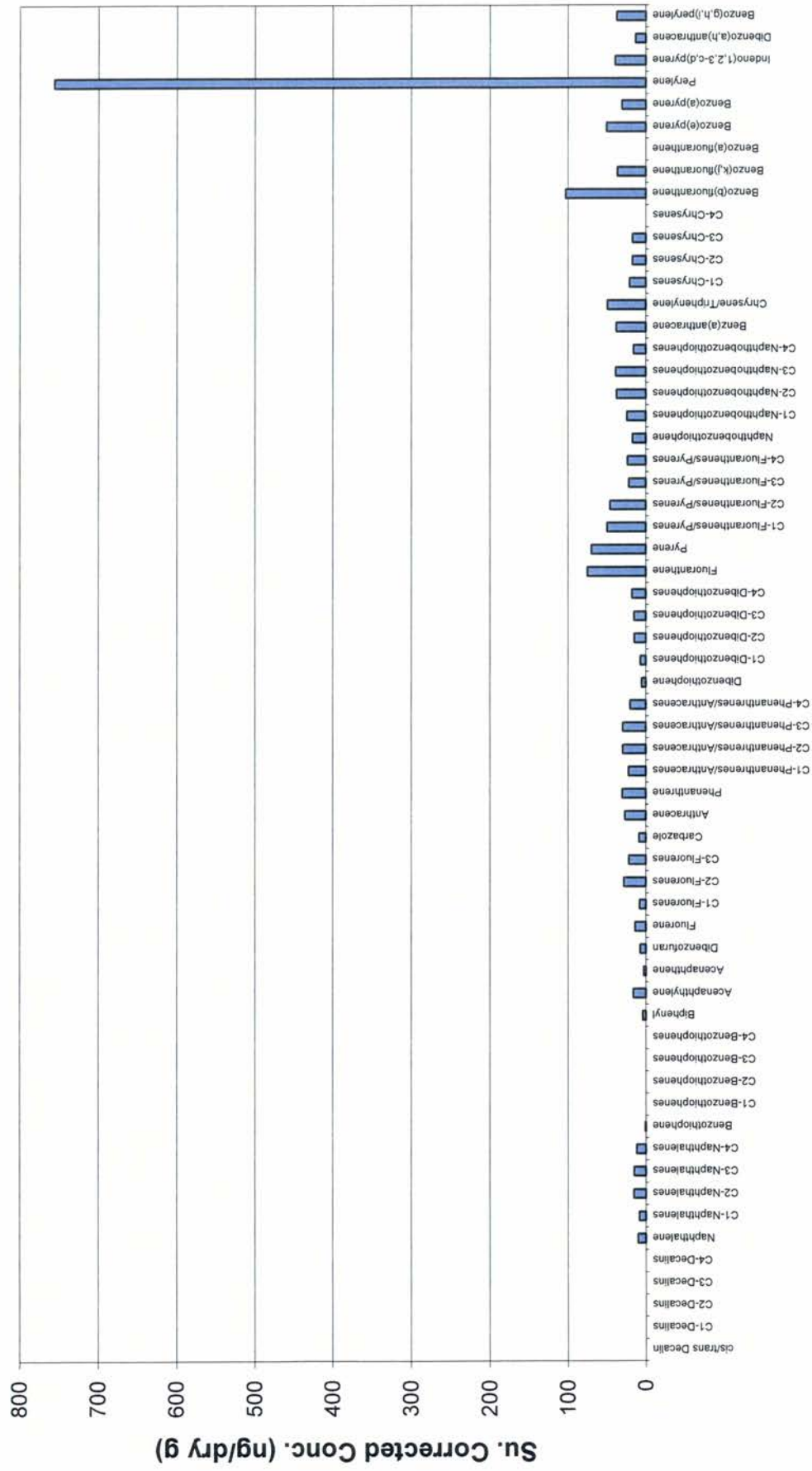
SED-DA-036 (0.5-1.0) (Sediment) **ARC1550**



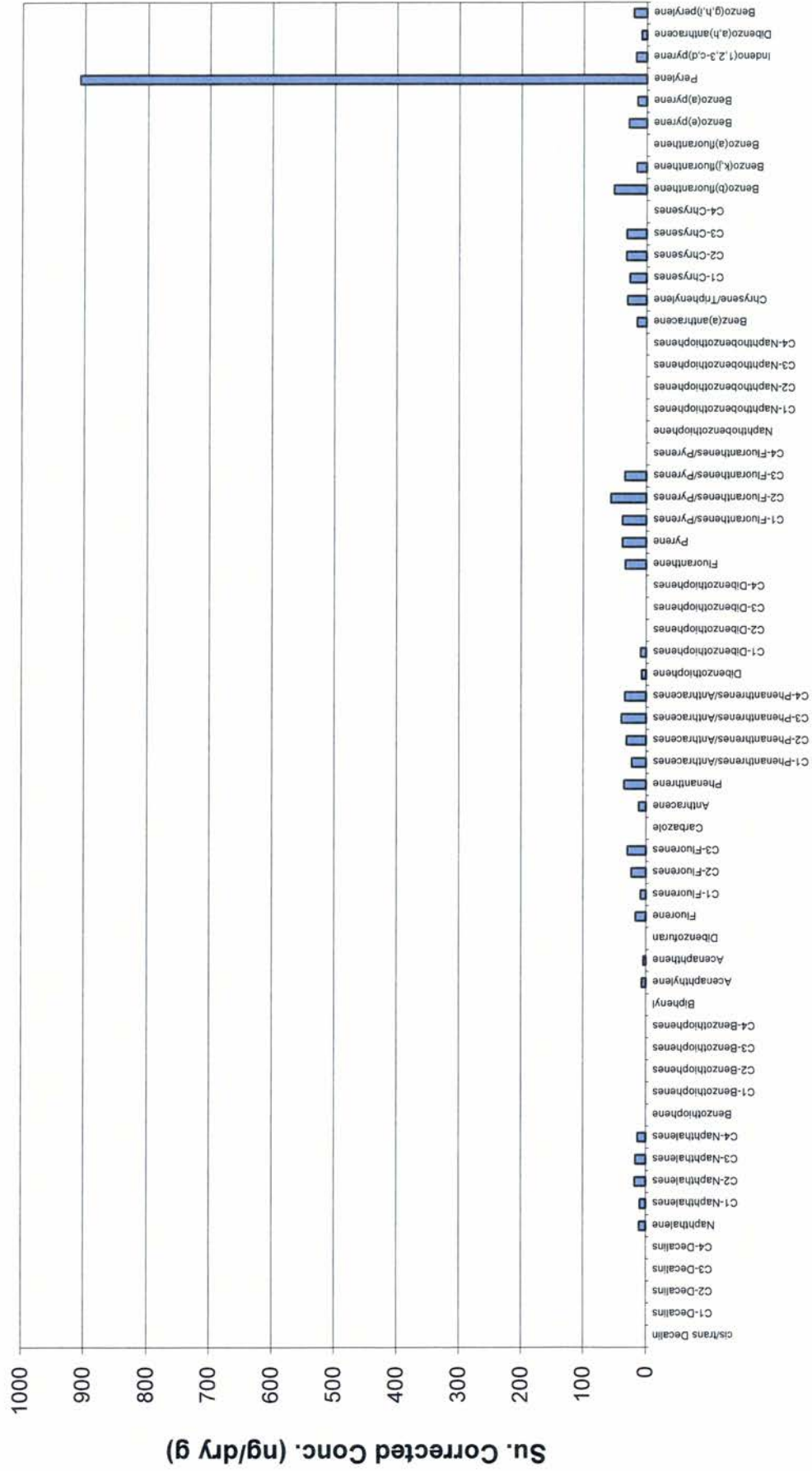
SED-DA-036 (1.0-1.5) (Sediment) ARC1551



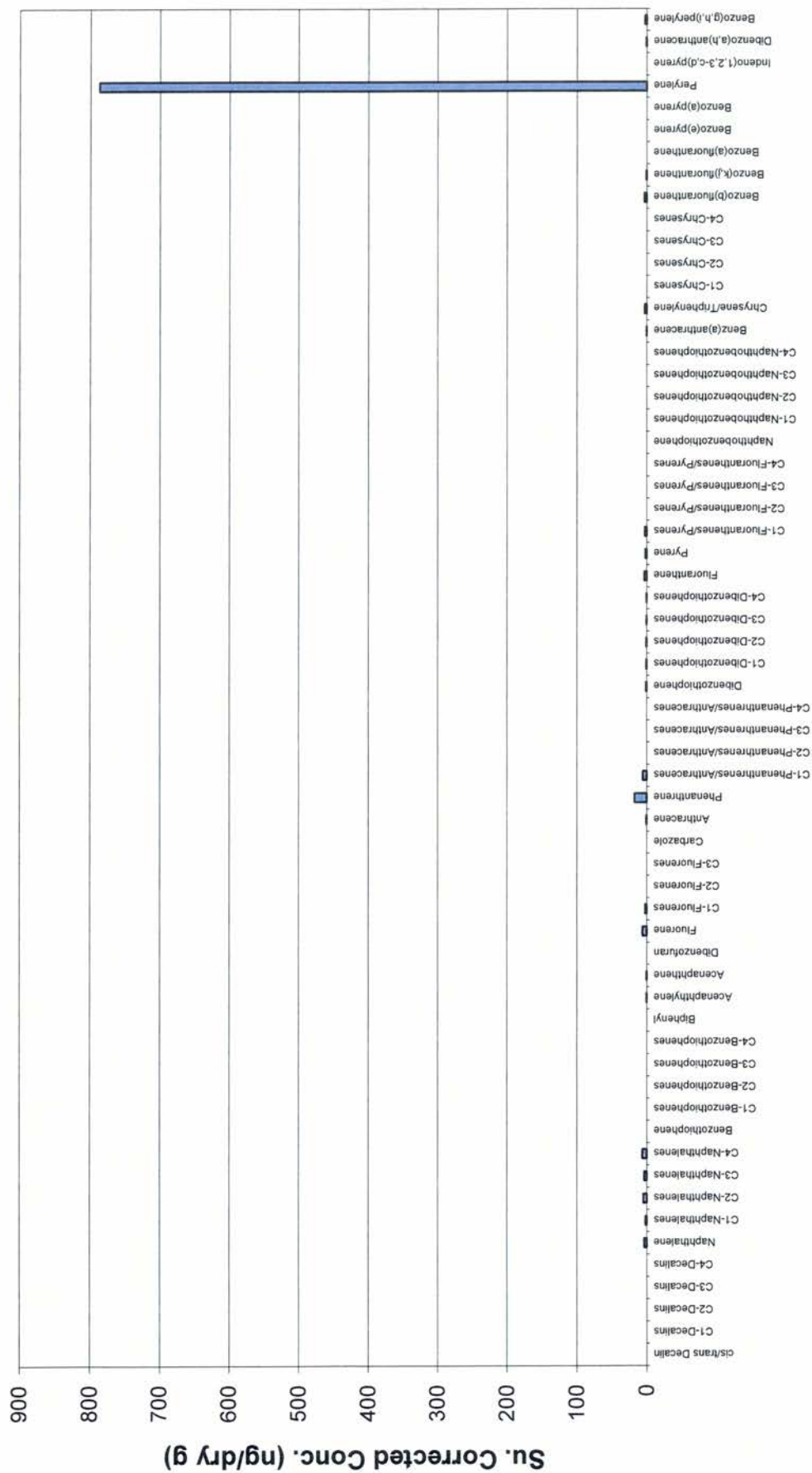
SED-DA-037 (0-0.5) (Sediment) **ARC1552**



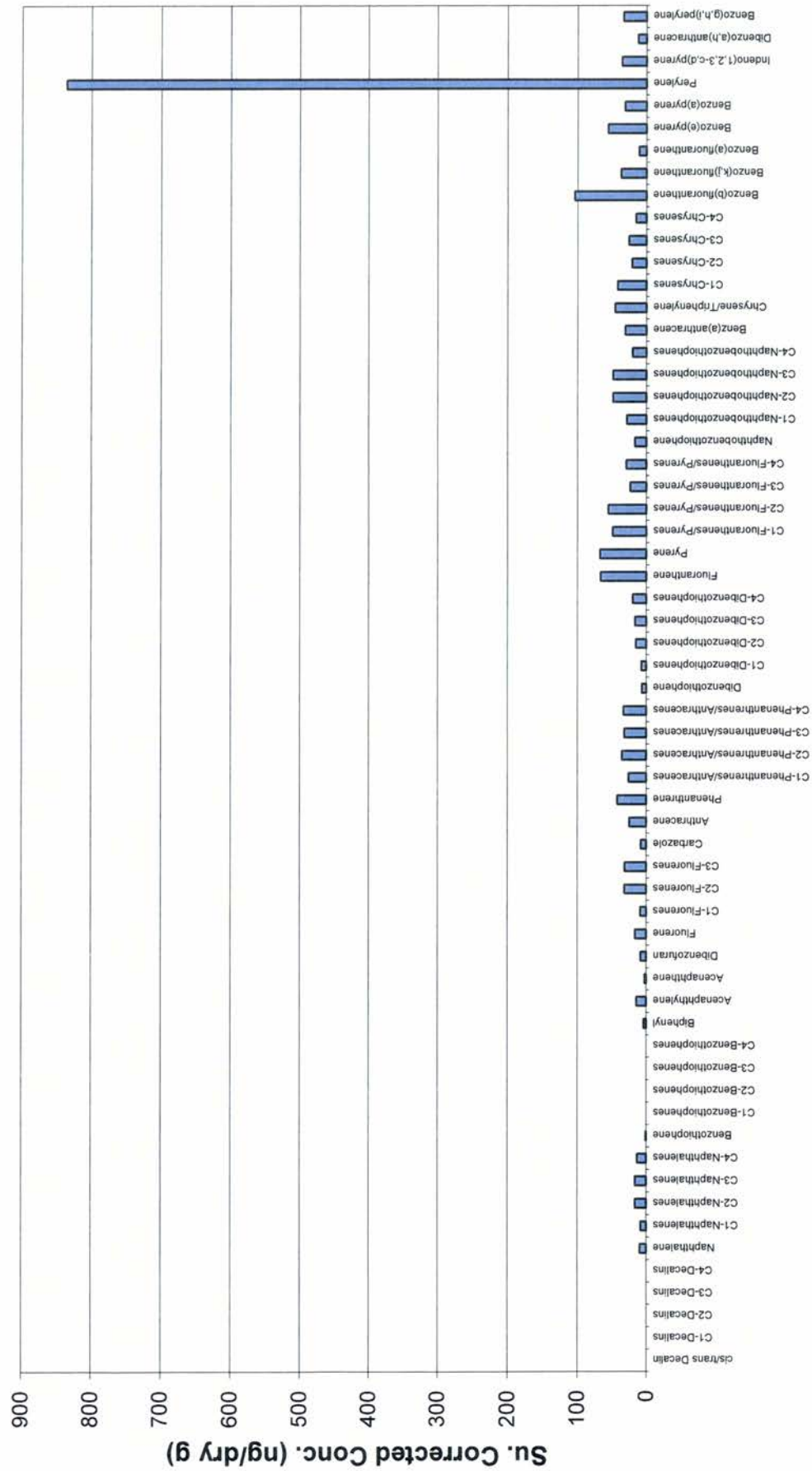
SED-DA-037 (0.5-1.0) (Sediment) ARC1553



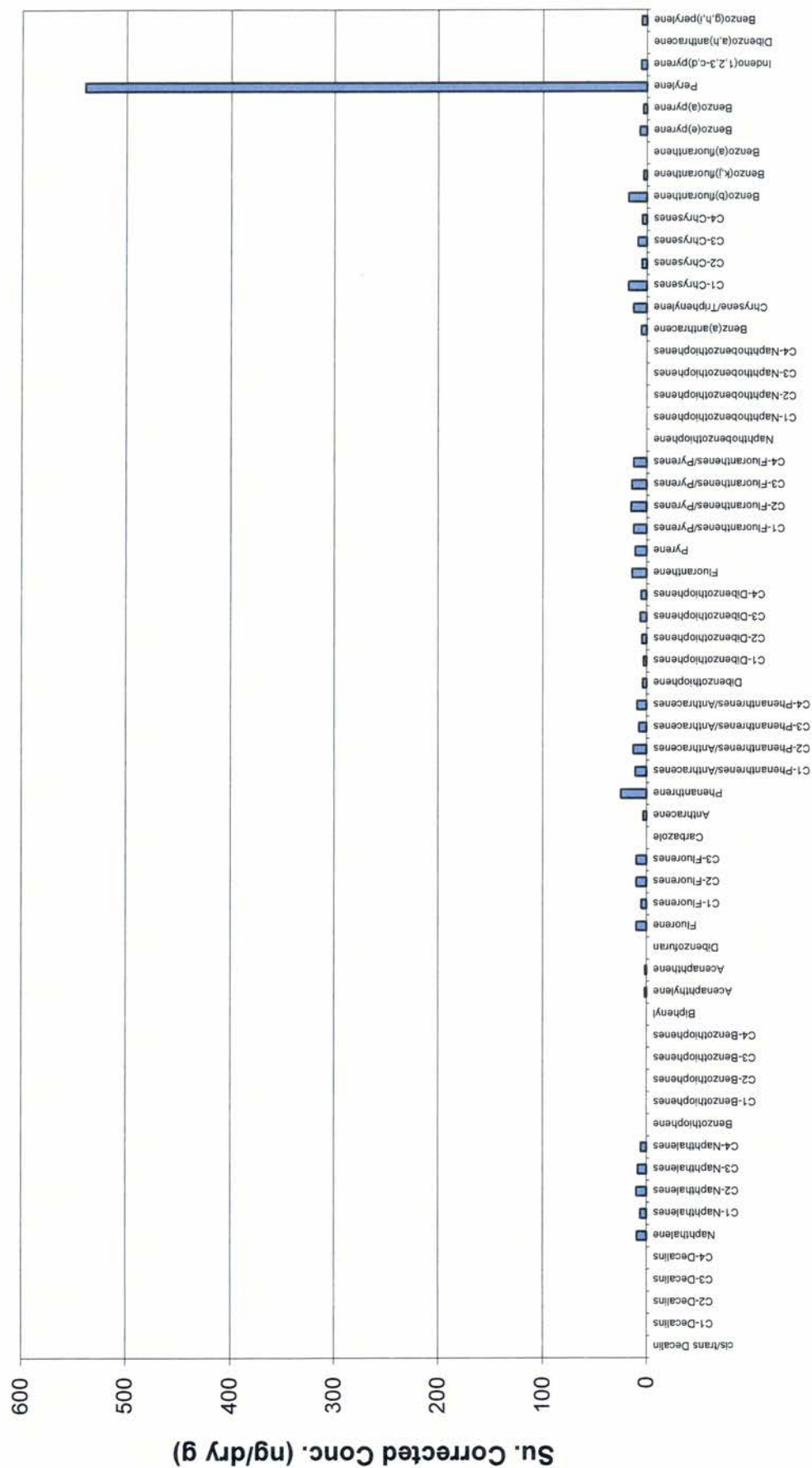
SED-DA-037 (1.0-1.5) (Sediment) ARC1554



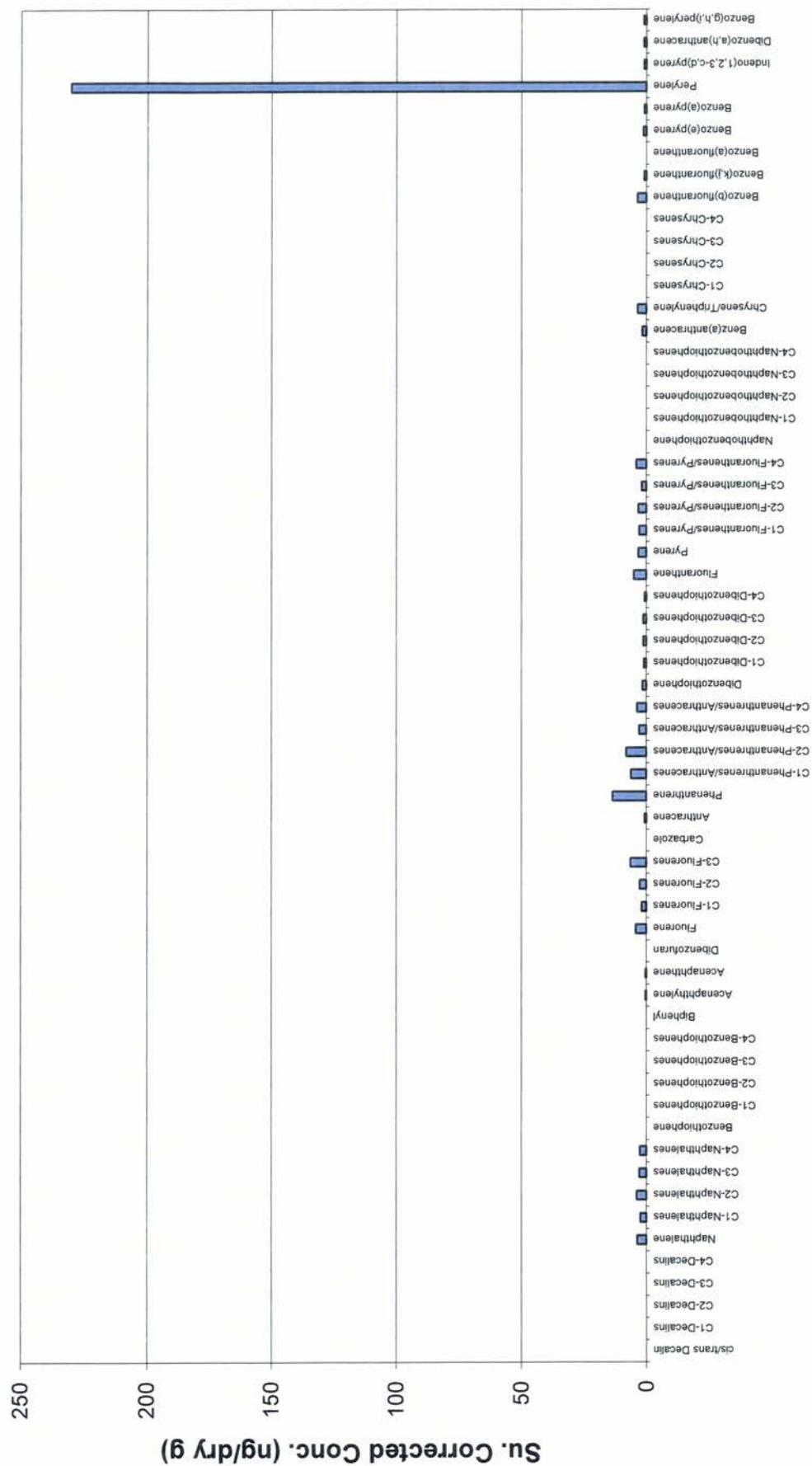
SED-DA-038 (0-0.5) (Sediment)
ARC1555



SED-DA-038 (0.5-1.0) (Sediment) **ARC1556**

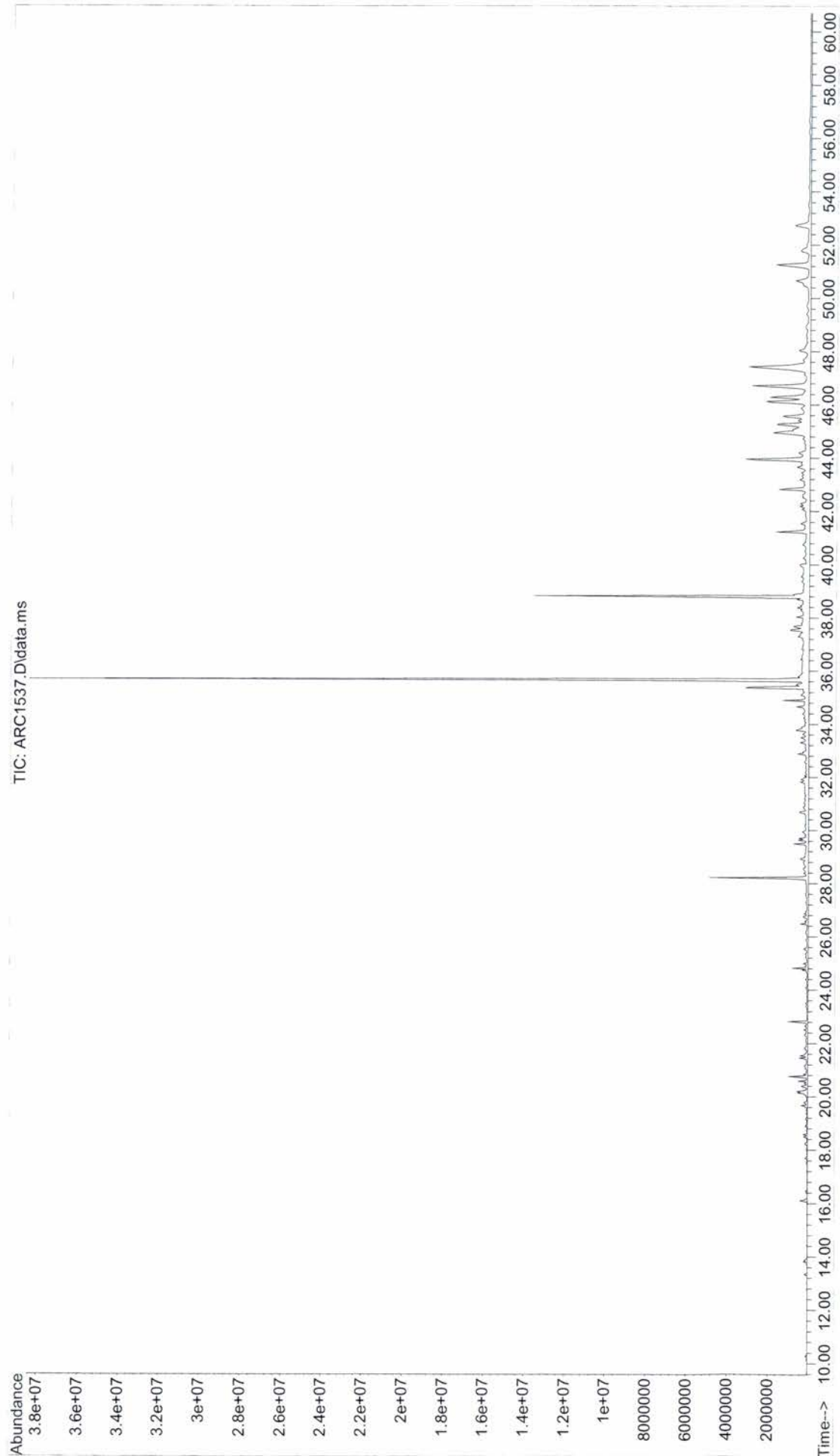


SED-DA-038 (1.0-1.5) (Sediment) ARC1557

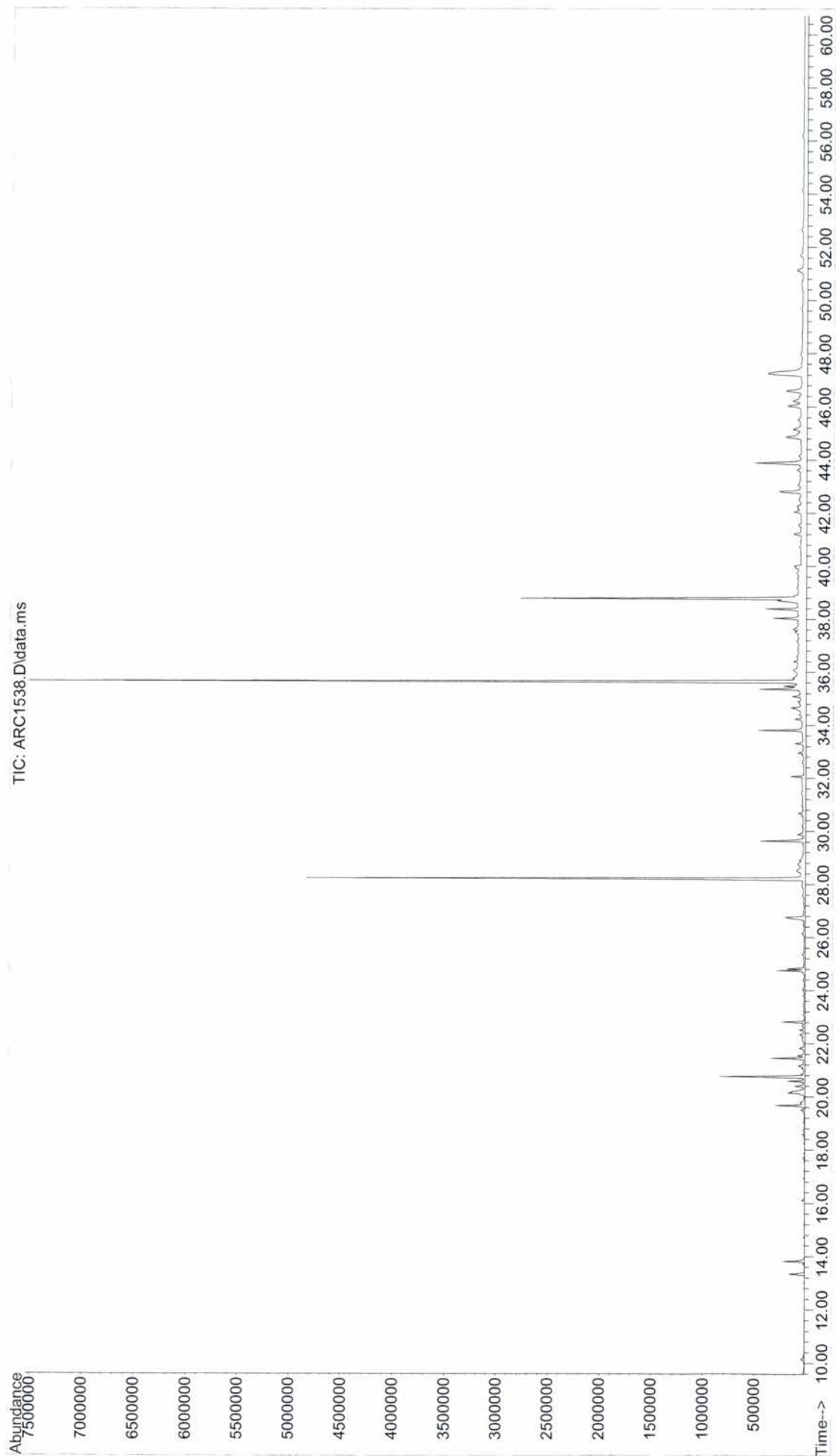


Polycyclic Aromatic Hydrocarbon Total Ion Chromatograms

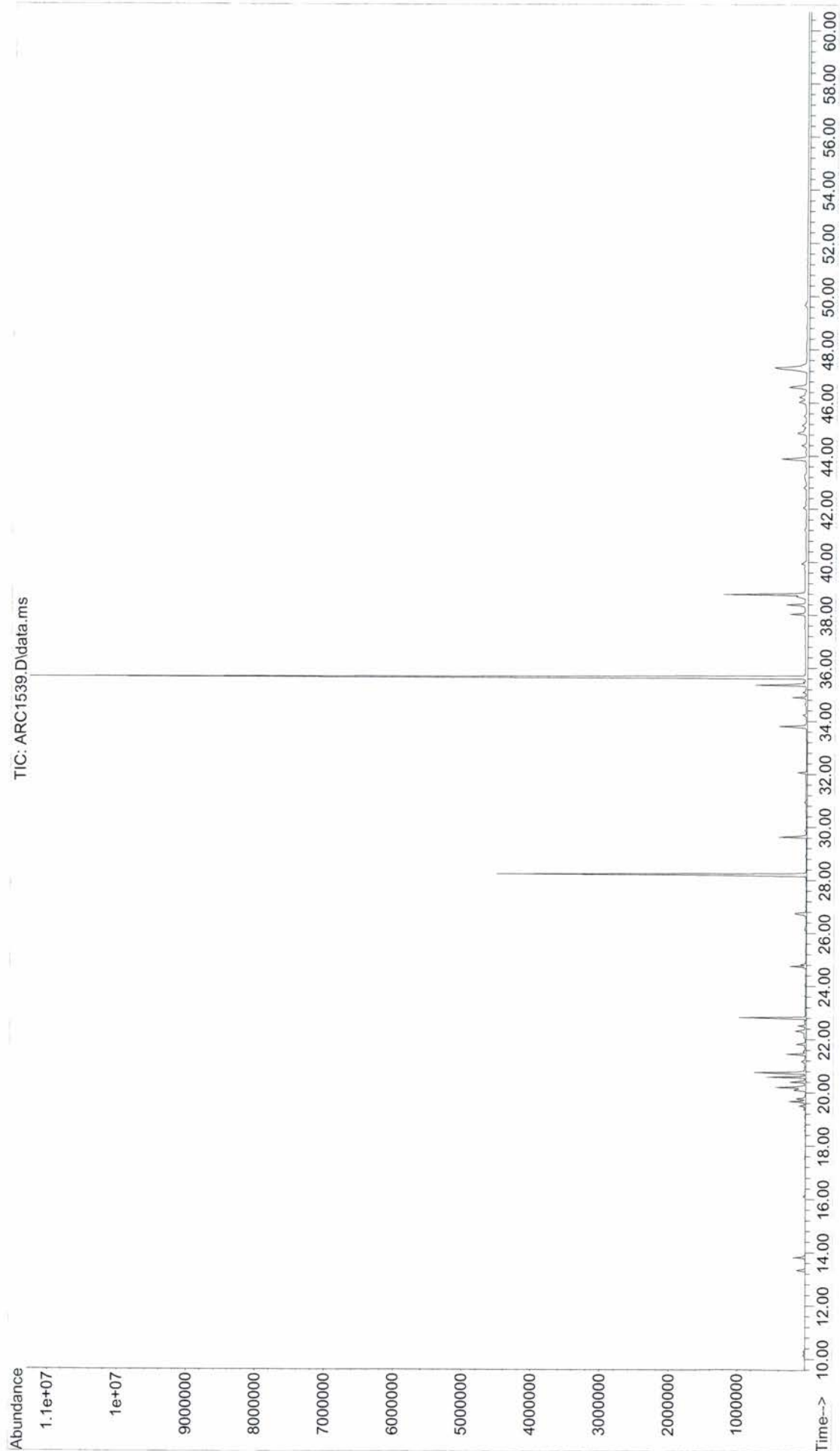
File : C:\GCMS7\MS70055\ARC1537.D
Operator : YM
Acquired : 13 Aug 2013 13:23 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-033 (0-0.5)
Misc Info :
Vial Number: 17



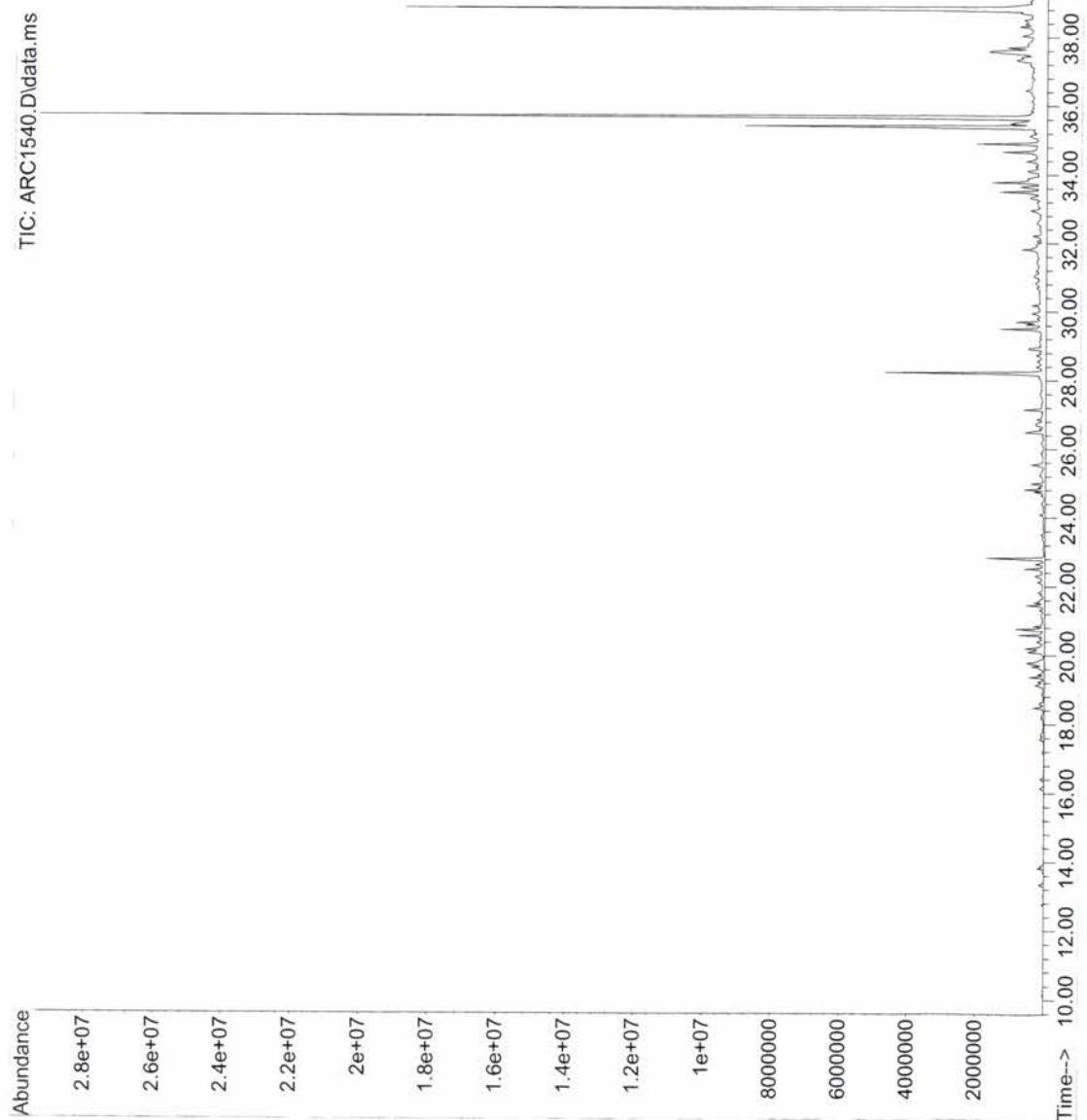
File : C:\GCMS7\MS70055\ARC1538.D
Operator : YM
Acquired : 13 Aug 2013 14:32 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-033 (0.5-1.0)
Misc Info :
Vial Number: 18



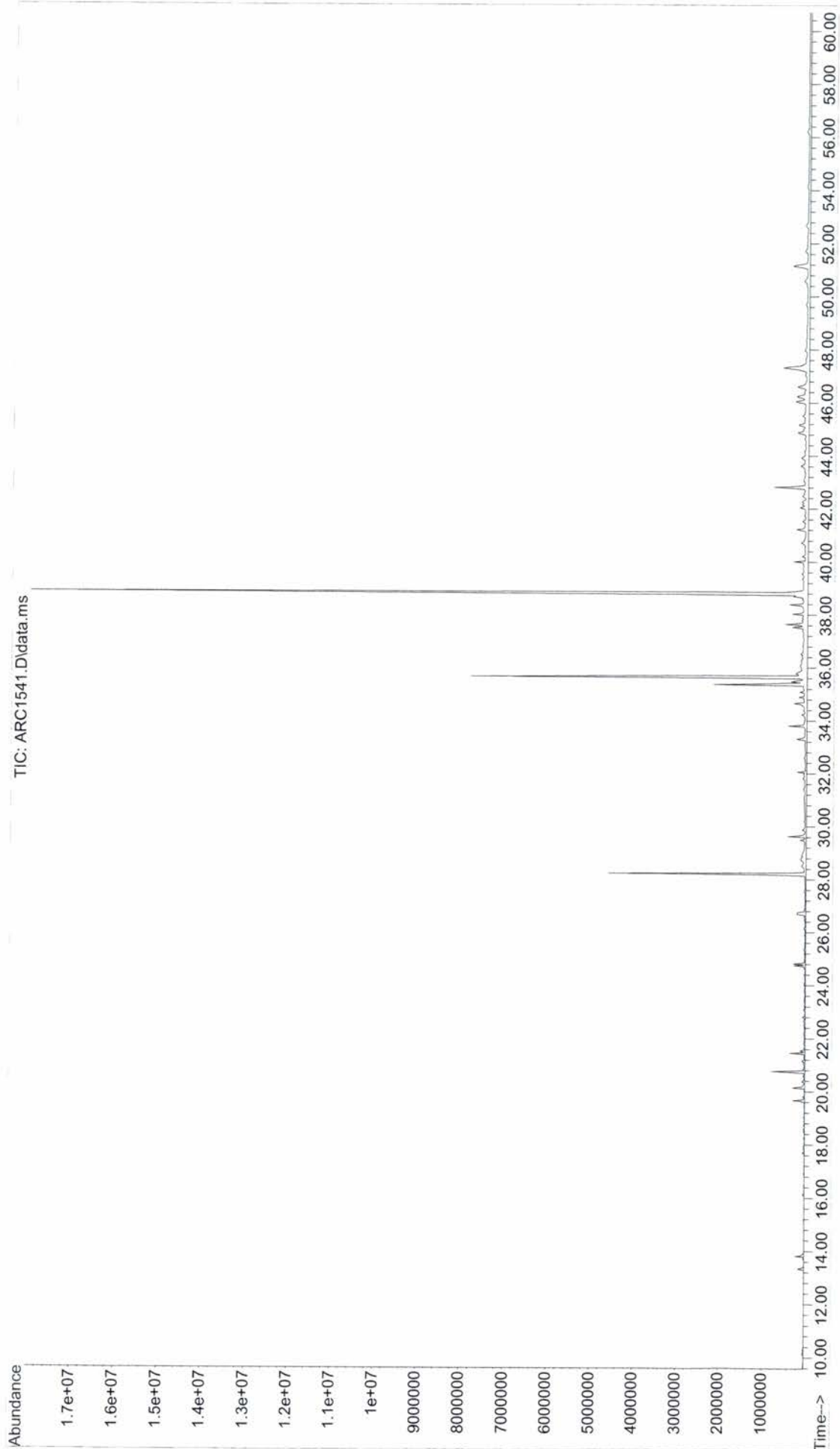
File : C:\GCMS7\MS70055\ARC1539.D
Operator : YM
Acquired : 13 Aug 2013 16:49 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-033 (1.0-1.5)
Misc Info :
Vial Number: 19



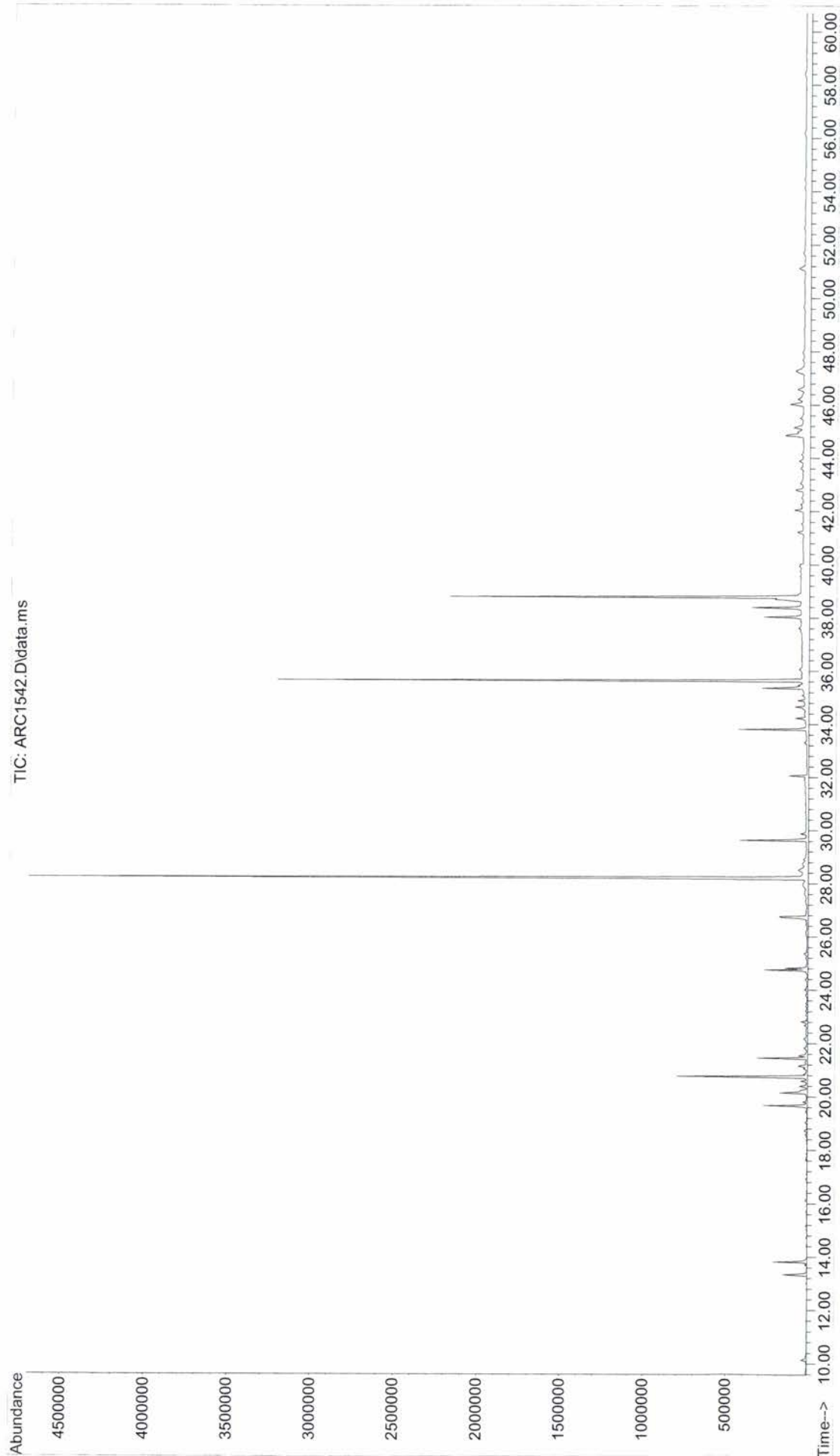
File : C:\GCMS7\MS70055\ARC1540.D
Operator : YM
Acquired : 13 Aug 2013 17:58 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-034 (0-0.5)
Misc Info :
Vial Number: 21



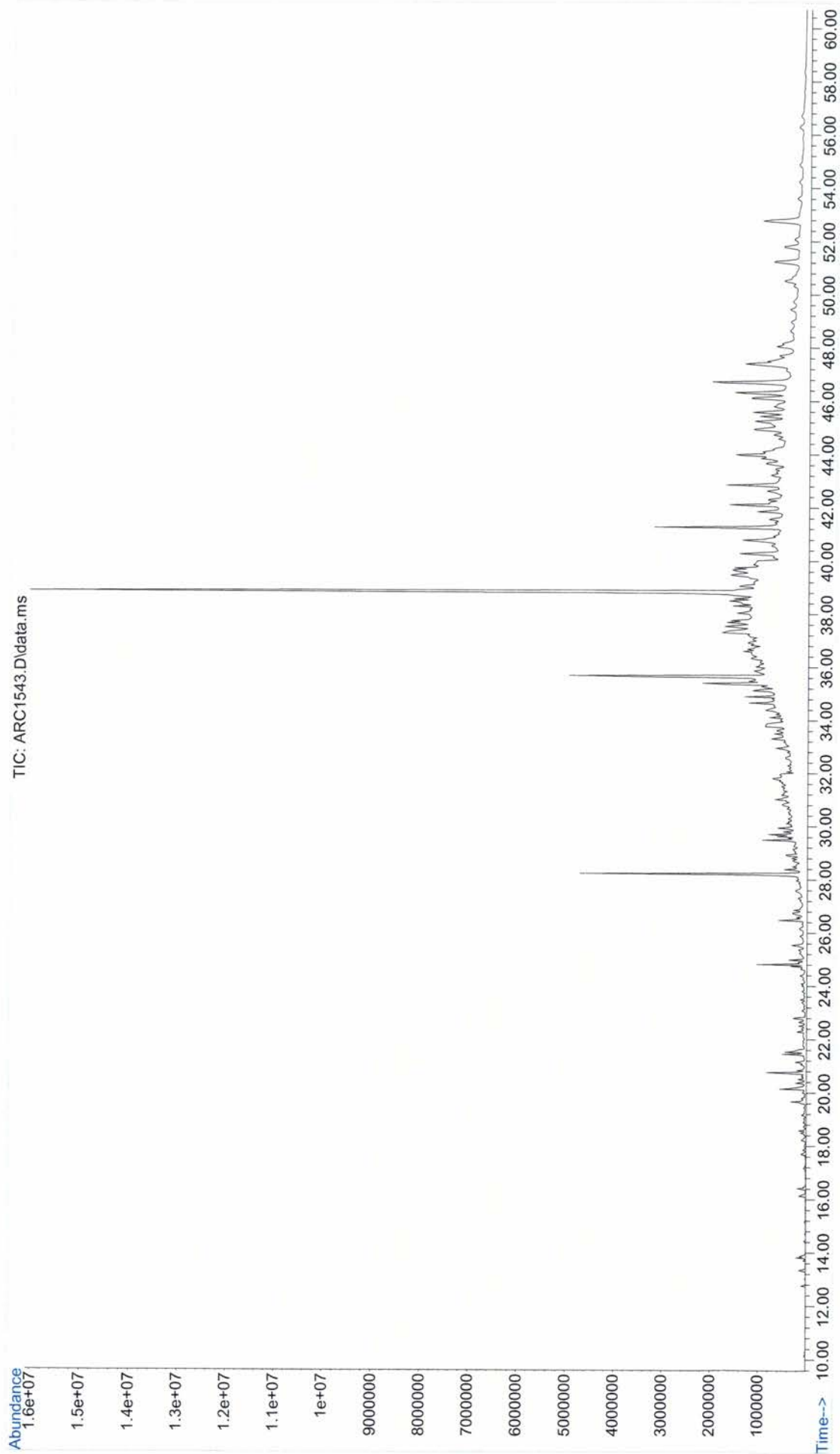
File : C:\GCMS7\MS70055\ARC1541.D
Operator : YM
Acquired : 13 Aug 2013 19:06 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-034 (0.5-1.0)
Misc Info :
Vial Number: 22



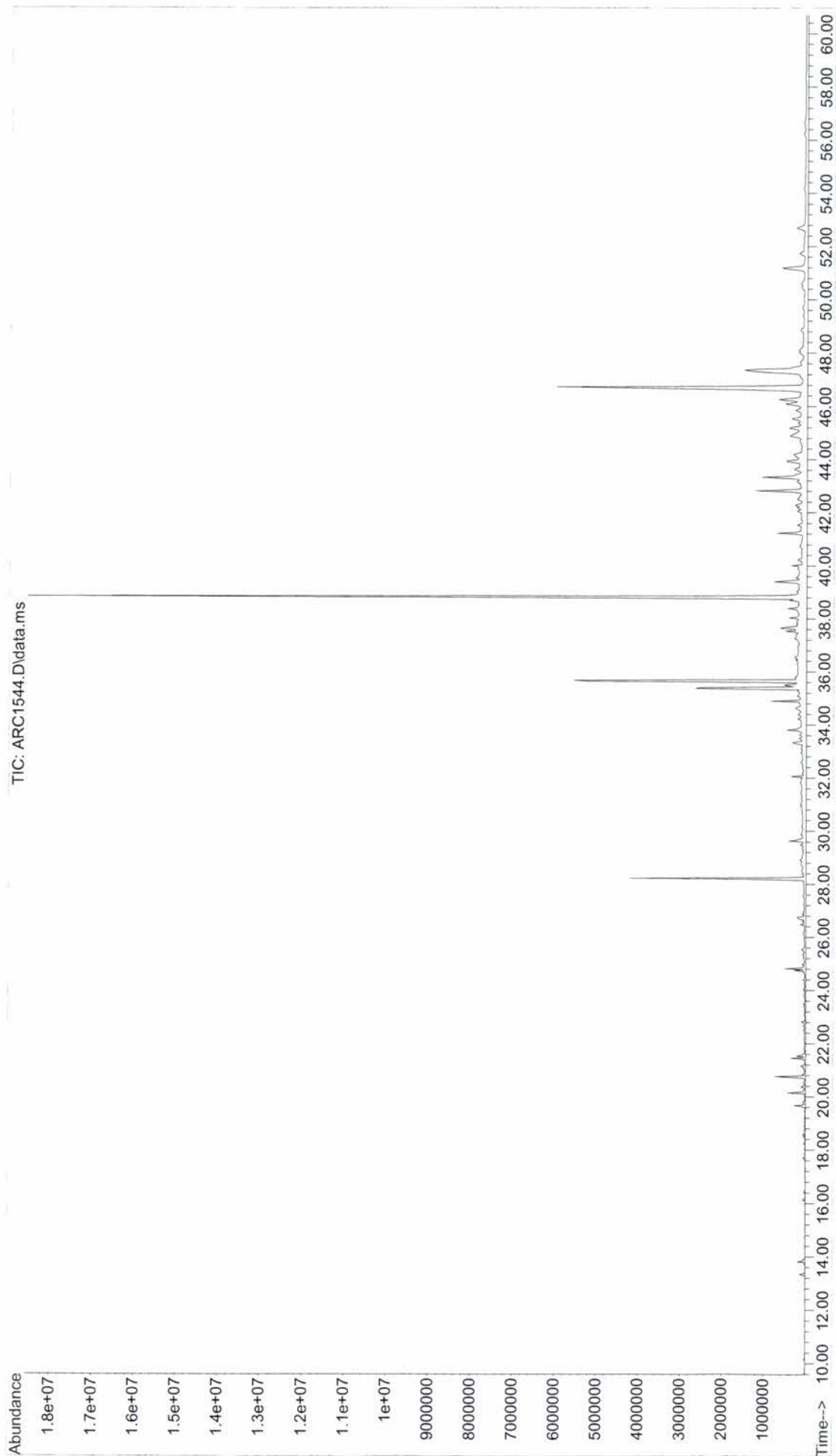
File : C:\GCMS7\MS70055\ARC1542.D
Operator : YM
Acquired : 13 Aug 2013 20:15 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-034 (1.0-1.5)
Misc Info :
Vial Number: 23



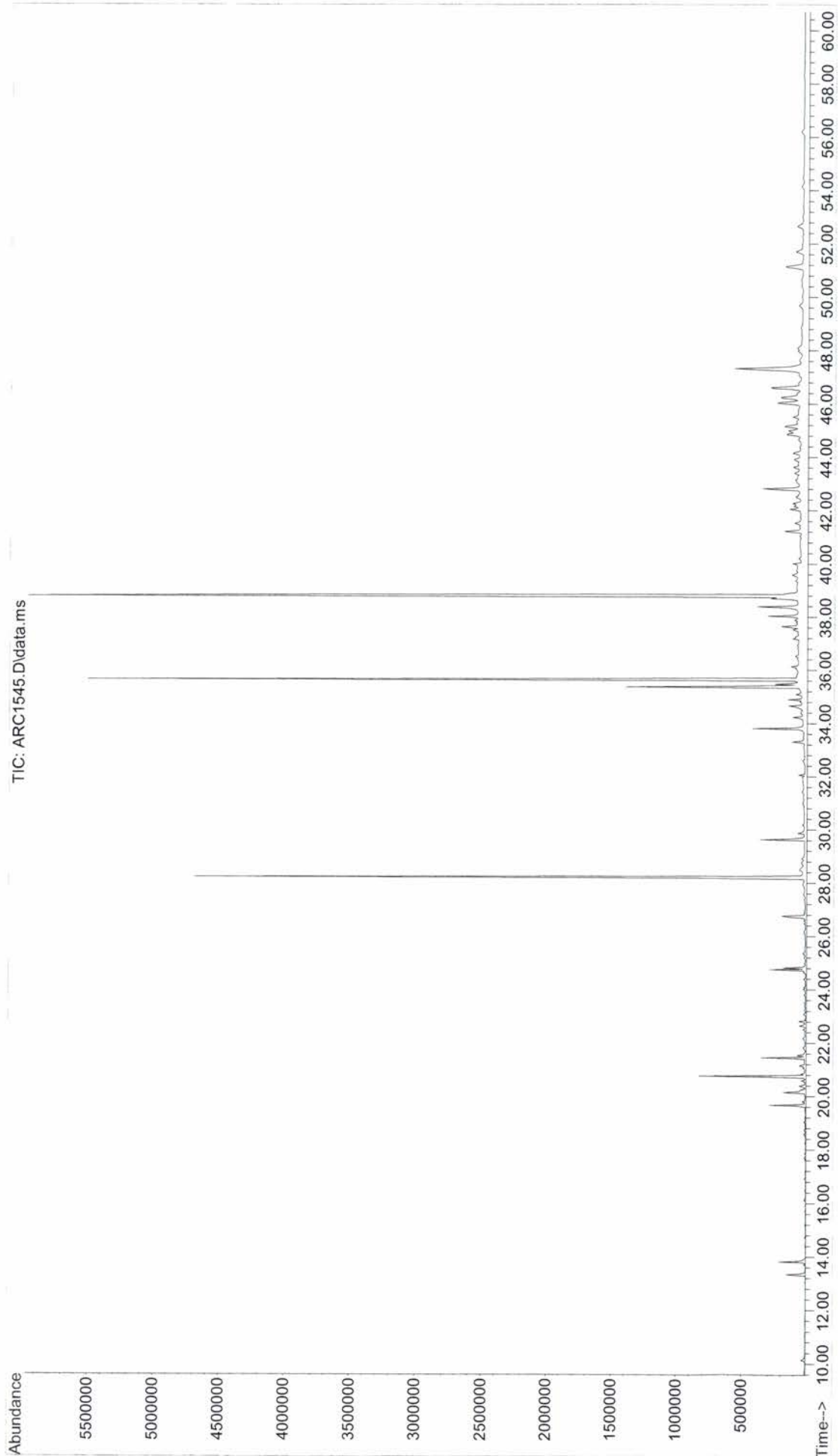
File : C:\GCMS7\MS70055\ARC1543.D
Operator : YM
Acquired : 13 Aug 2013 21:24 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-035 (0-0.5)
Misc Info :
Vial Number: 24



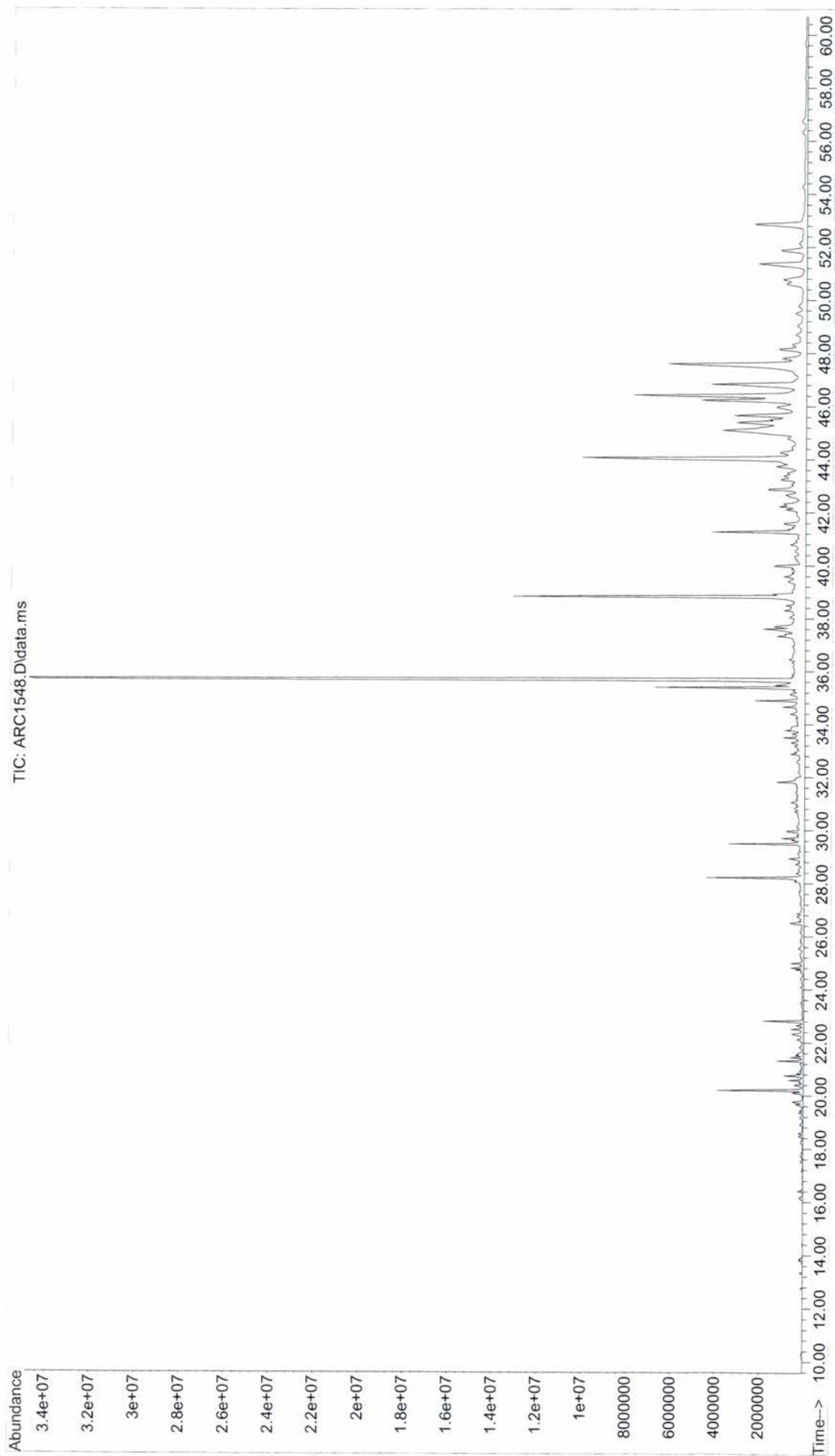
File : C:\GCMS7\MS70055\ARC1544.D
Operator : YM
Acquired : 13 Aug 2013 22:32 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-035 (0.5-1.0)
Misc Info :
Vial Number: 25



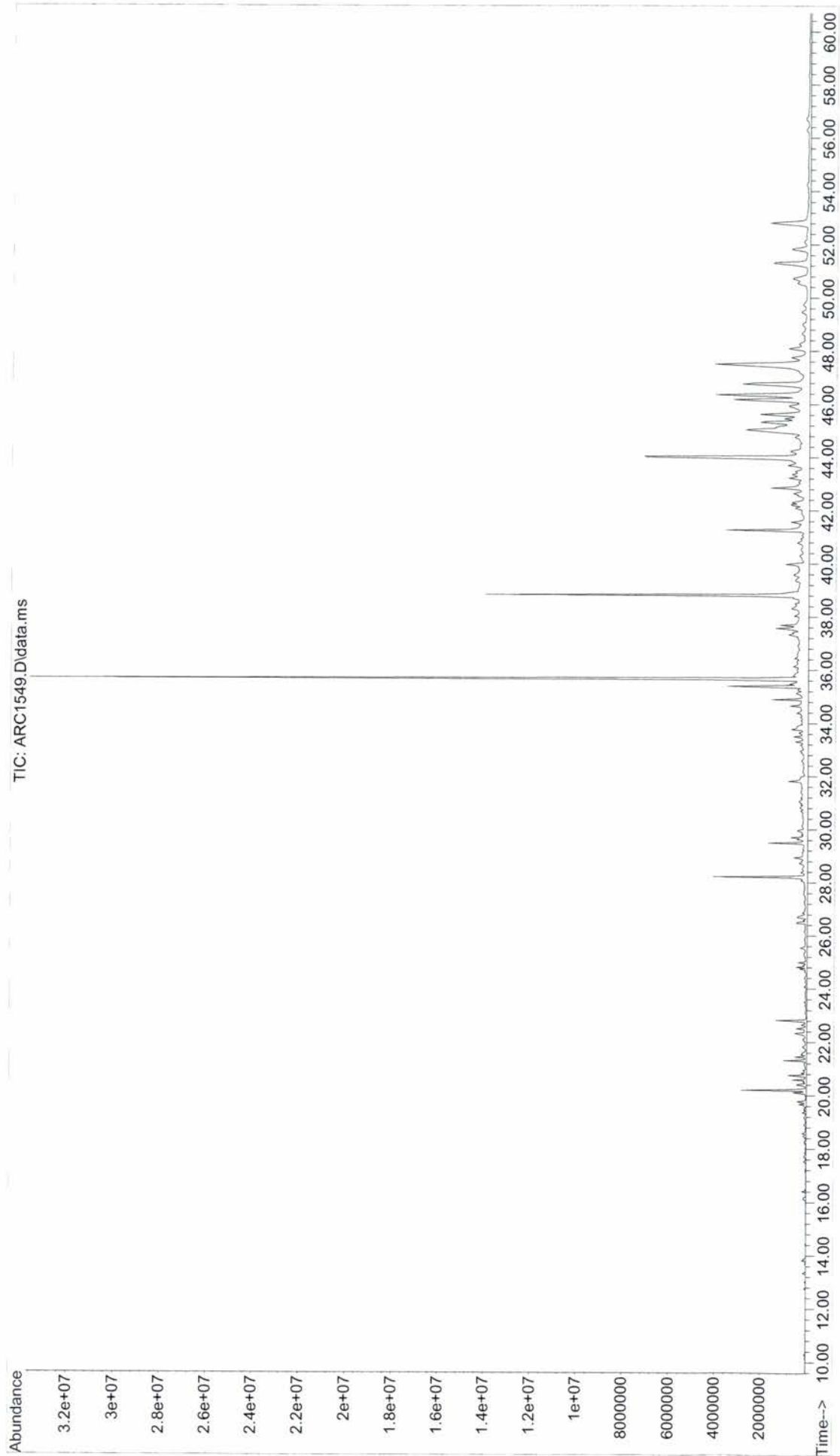
File : C:\GCMS7\MS70055\ARC1545.D
Operator : YM
Acquired : 13 Aug 2013 23:41 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-035 (1.0-1.5)
Misc Info :
Vial Number: 26



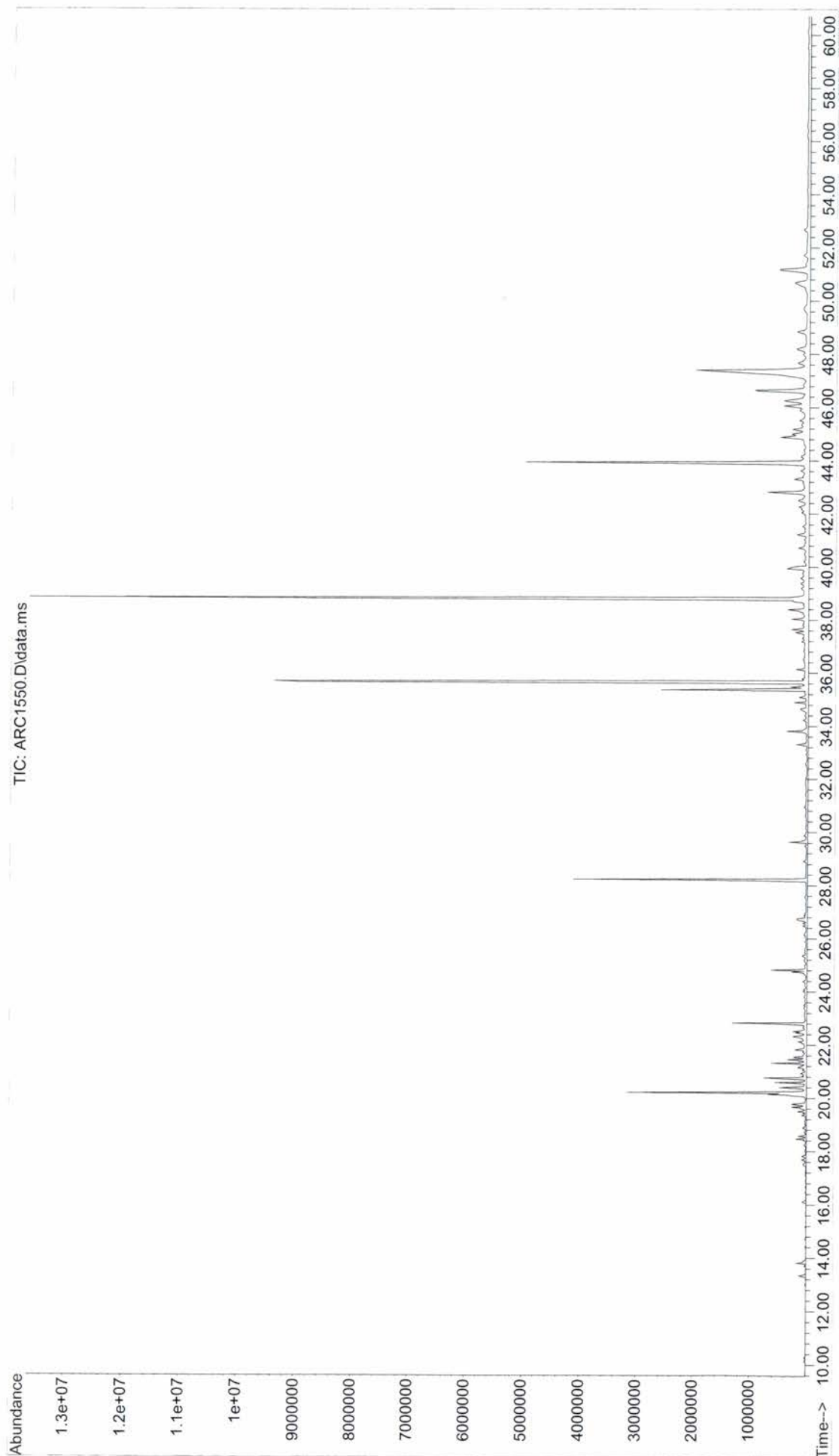
File : C:\GCMS7\MS70055\ARC1548.D
Operator : YM
Acquired : 14 Aug 2013 00:49 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-036 (0-0.5)
Misc Info :
Vial Number: 27



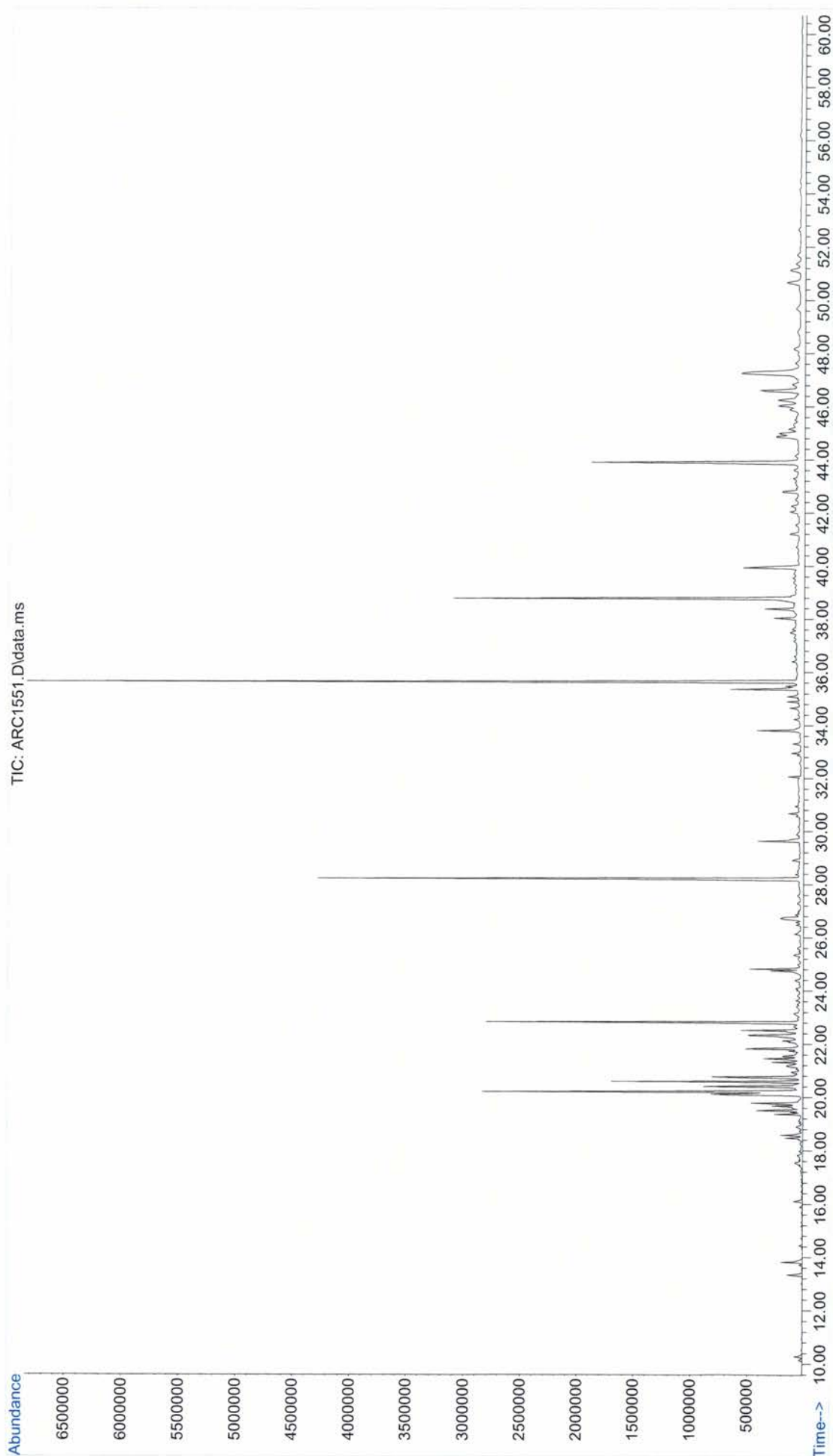
File : C:\GCMS7\MS70055\ARC1549.D
Operator : YM
Acquired : 14 Aug 2013 1:58 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-DUP-01-072813
Misc Info :
Vial Number: 28



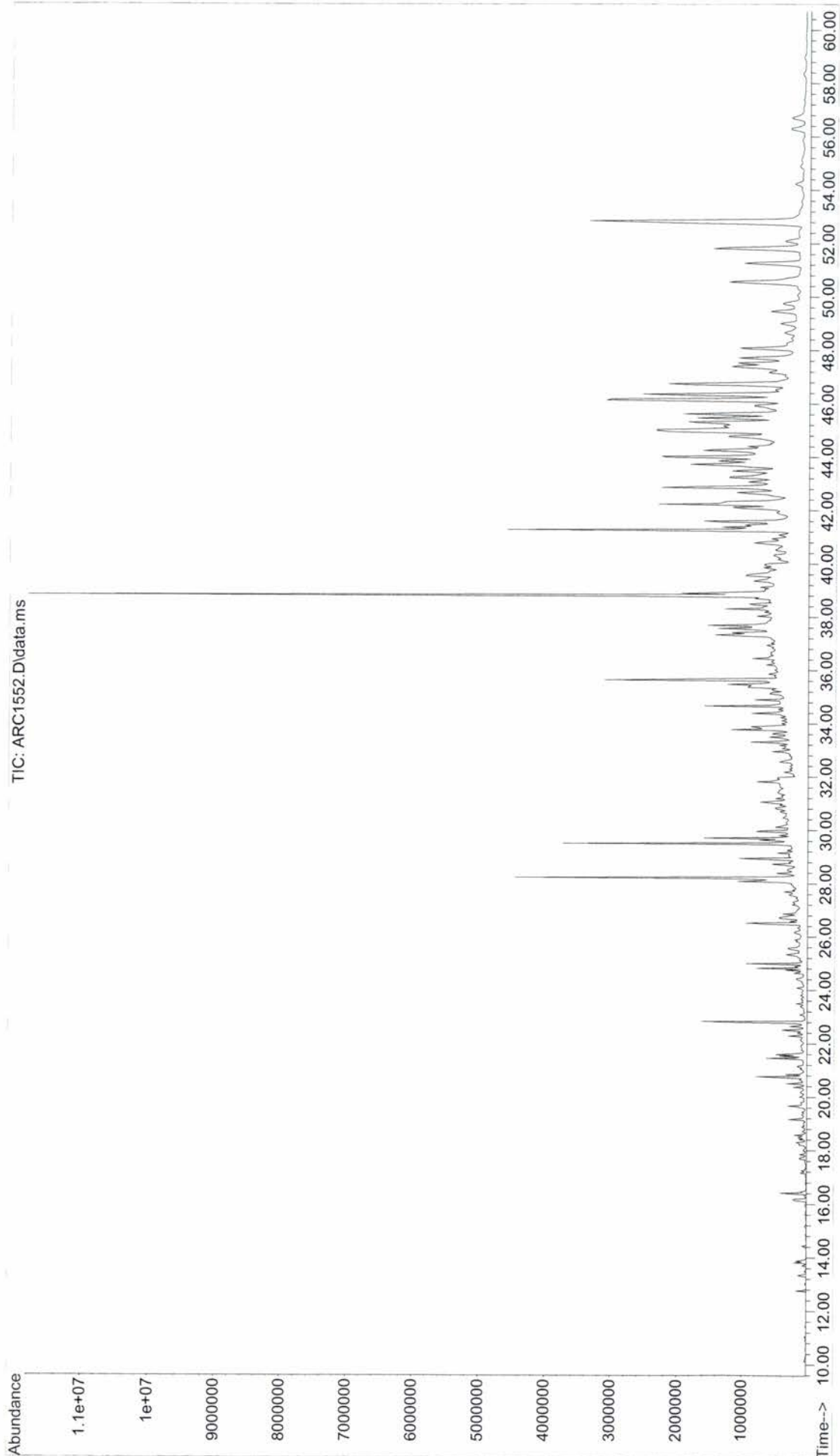
File : C:\GCMS7\MS70055\ARC1550.D
Operator : YM
Acquired : 14 Aug 2013 4:15 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-036 (0.5-1.0)
Misc Info :
Vial Number: 30



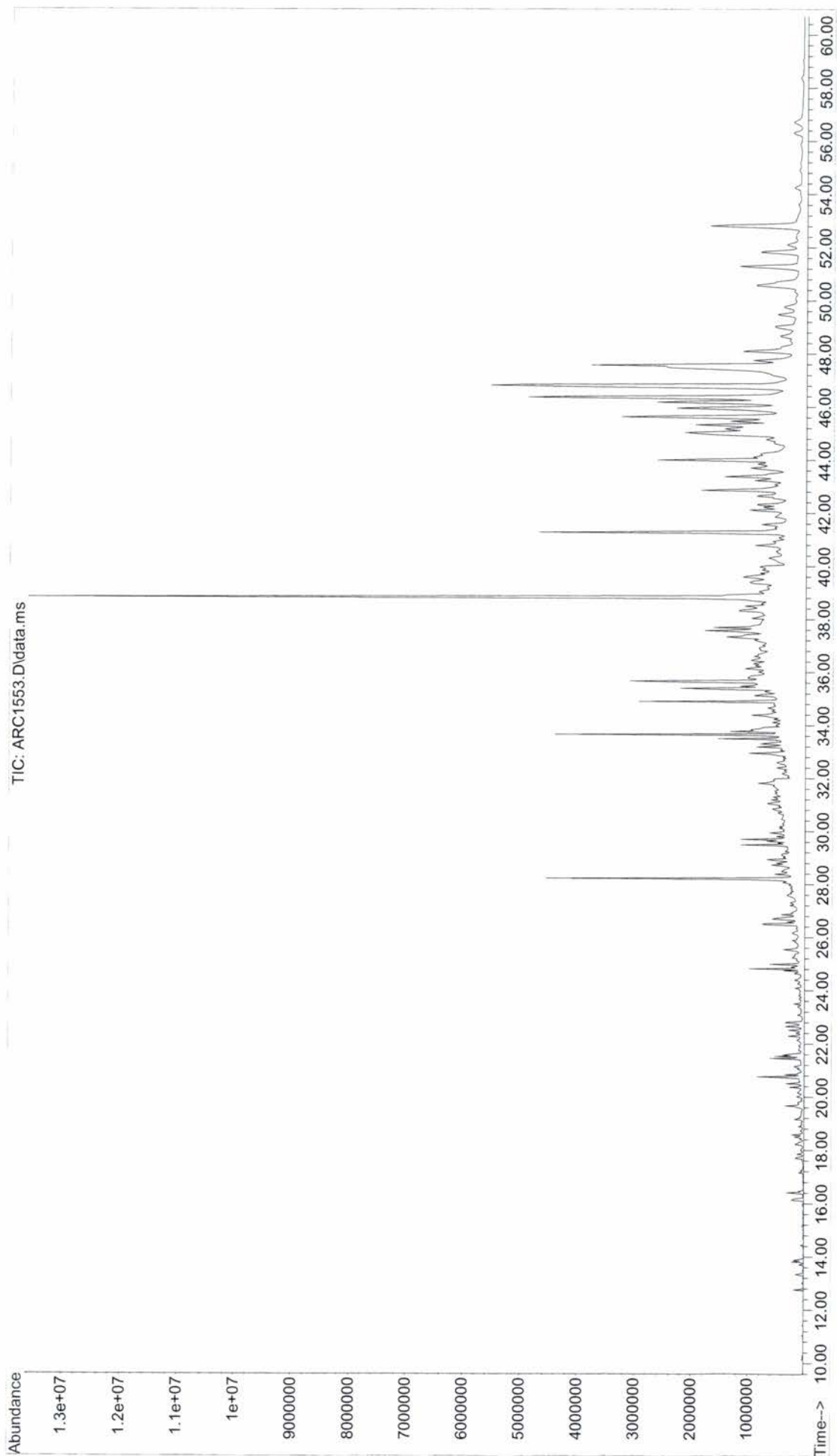
File : C:\GCMS7\MS70055\ARC1551.D
Operator : YM
Acquired : 14 Aug 2013 5:23 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-036 (1.0-1.5)
Misc Info :
Vial Number: 31



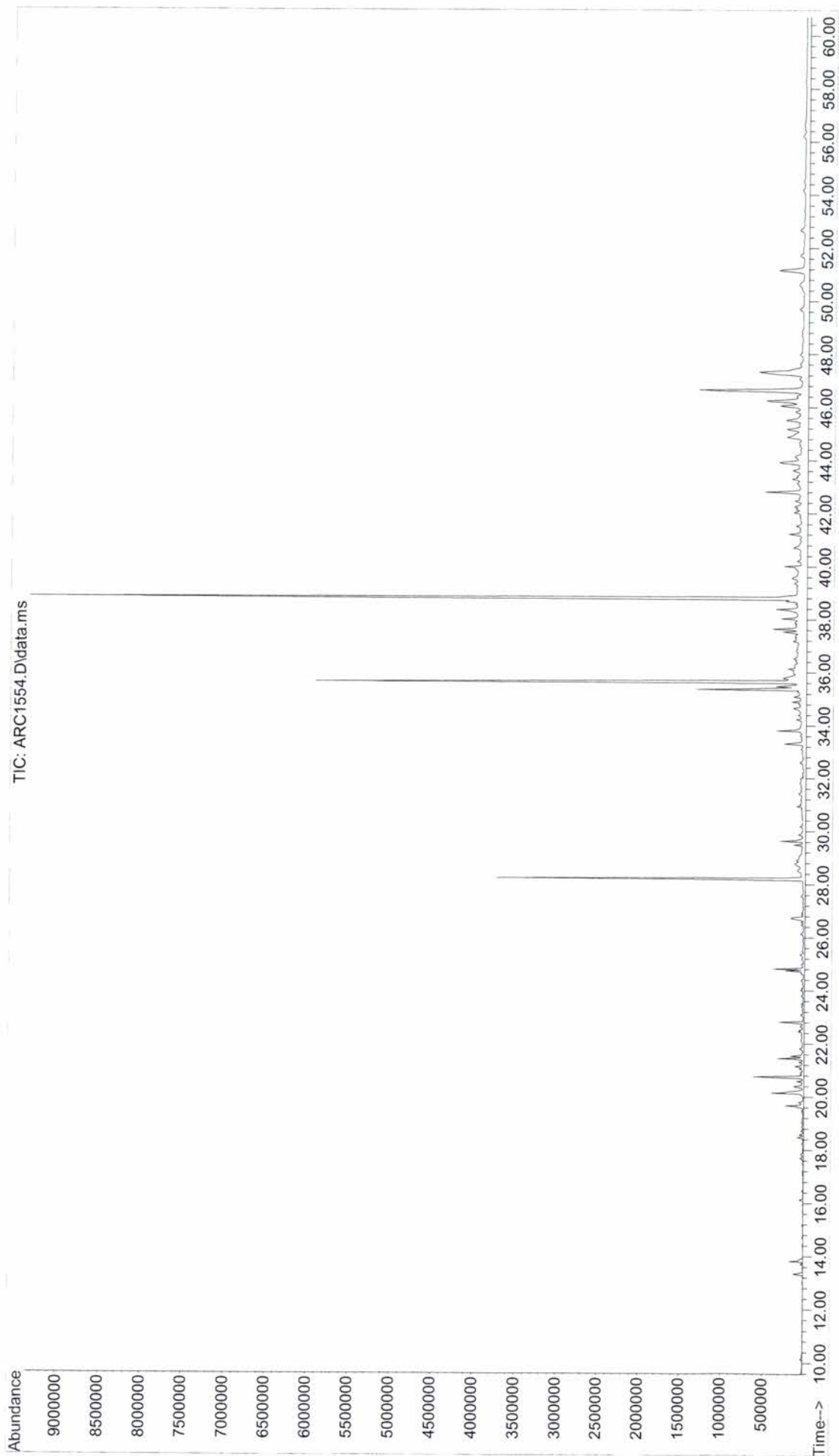
File : C:\GCMS7\MS70055\ARC1552.D
Operator : YM
Acquired : 14 Aug 2013 6:32 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-037 (0-0.5)
Misc Info :
Vial Number: 32



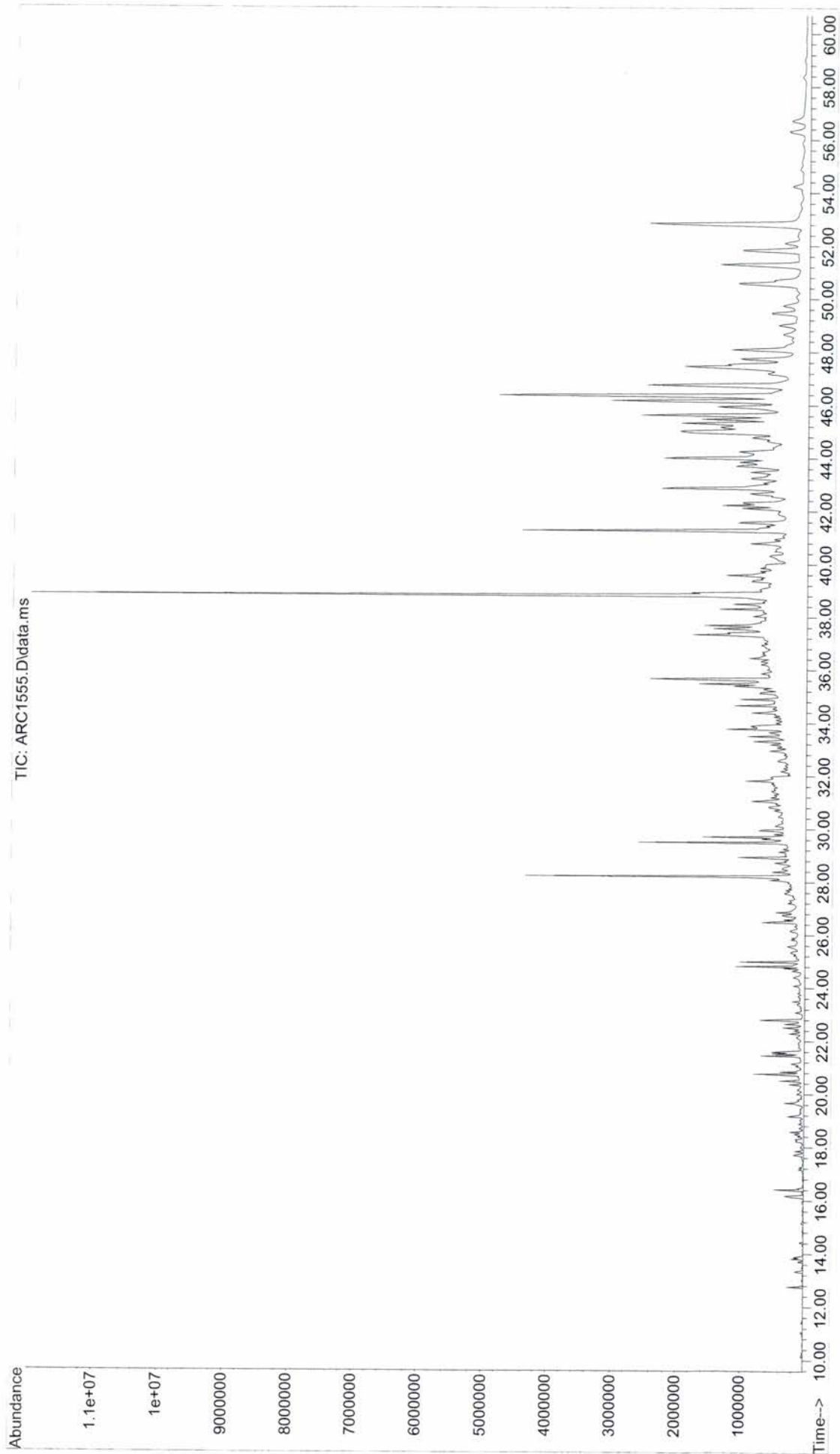
File : C:\GCMS7\MS70055\ARC1553.D
Operator : YM
Acquired : 14 Aug 2013 7:41 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-037 (0.5-1.0)
Misc Info :
Vial Number: 33



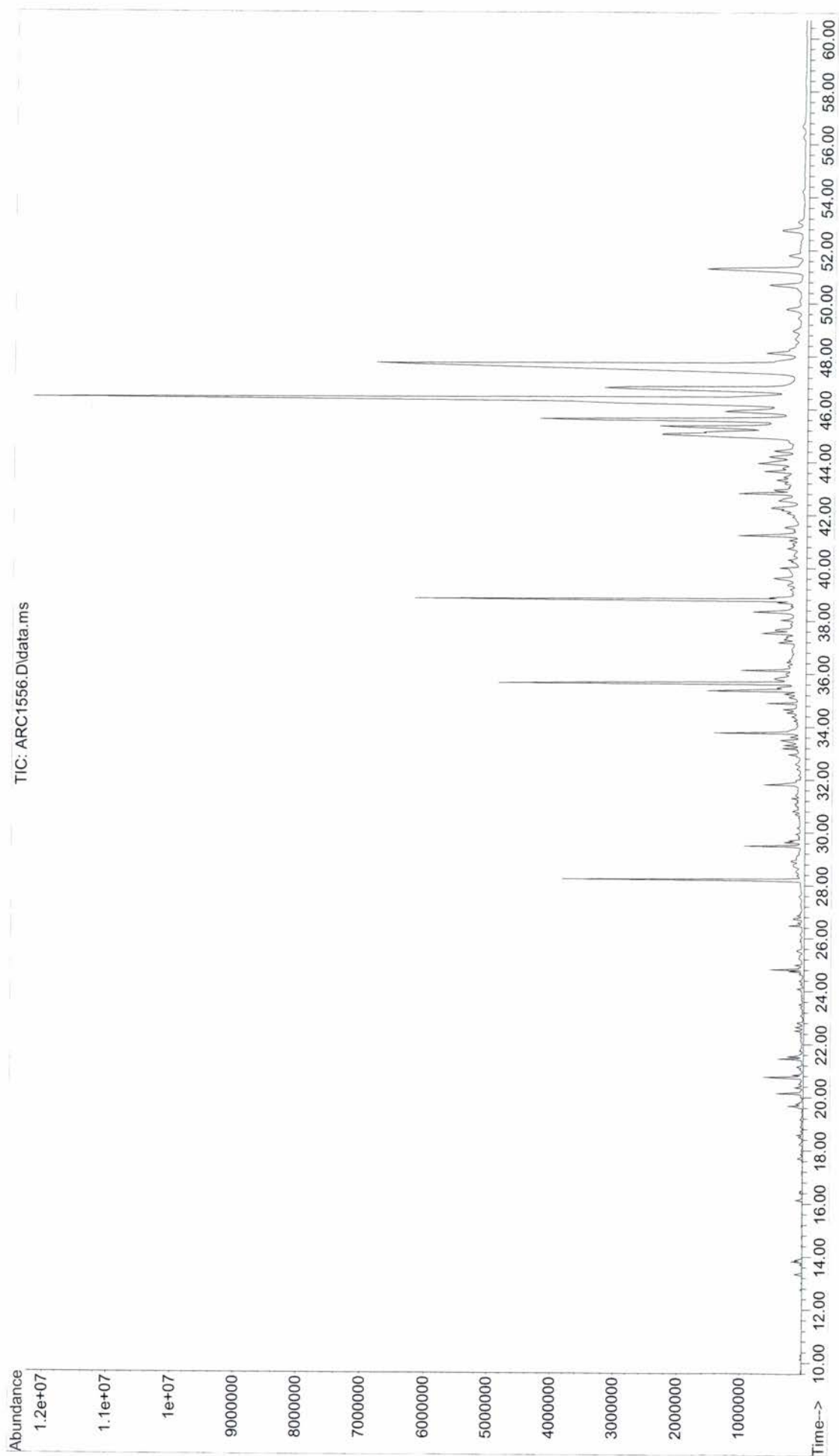
File : C:\GCMS7\MS70055\ARC1554.D
Operator : YM
Acquired : 14 Aug 2013 8:49 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-037 (1.0-1.5)
Misc Info :
Vial Number: 34



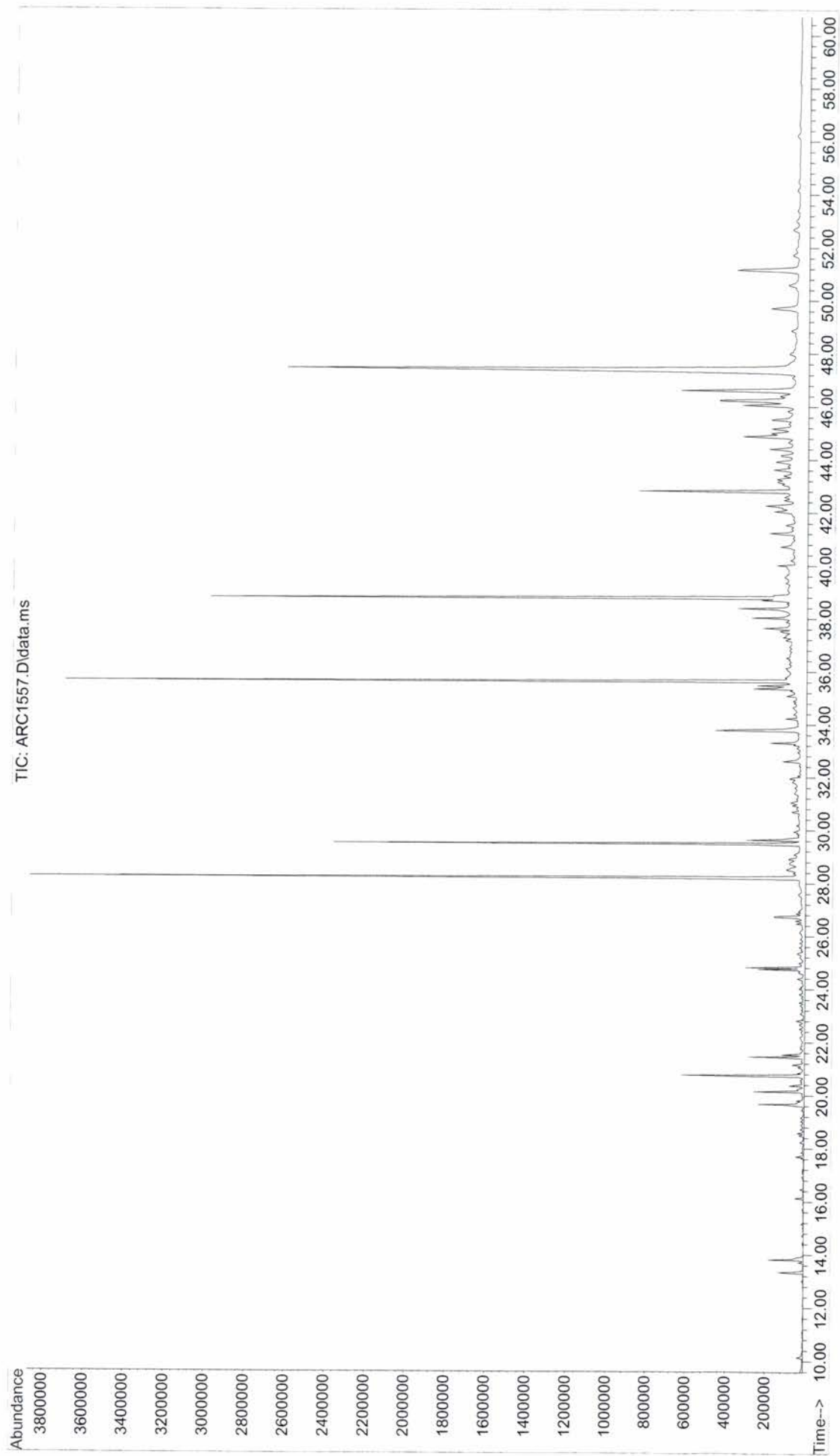
File : C:\GCMS7\MS70055\ARC1555.D
Operator : YM
Acquired : 14 Aug 2013 9:58 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-038 (0-0.5)
Misc Info :
Vial Number: 35



File : C:\GCMS7\MS70055\ARC1556.D
Operator : YM
Acquired : 14 Aug 2013 11:06 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-038 (0.5-1.0)
Misc Info :
Vial Number: 36



File : C:\GCMS7\MS70055\ARC1557.D
Operator : YM
Acquired : 14 Aug 2013 12:15 using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: SED-DA-038 (1.0-1.5)
Misc Info :
Vial Number: 37



**Total Petroleum Hydrocarbons/
Aliphatic Hydrocarbons
Raw Data**

B&B LABORATORIES ALIPHATICS/TEH QA FORM

Extraction Page: <u>ENV 3075</u>	Analyst: <u>M. Dailey</u>
Client: <u>Arcadis Mayflower Project</u>	Date: <u>August 28, 2013</u>
Job #: <u>J13034</u>	Project Quality Manager: <u><i>[Signature]</i></u>
SDG #: <u>13073001</u>	Date: <u>09/09/13</u>

Initial Calibration: No failures	ICV No failures
Surrogate Recoveries: No failures	
Procedural Blank: No failures	
Blank Spike: No failures	
Blank Spike Duplicate: No failures	
Laboratory Duplicate: No failures	
Matrix Spike: No failures	
Matrix Spike Duplicate: No failures	
SRM 2779 Reference Oil No failures	
Mass Discrimination Check (n-C36/n-C20 >0.7) No failures	

FID Sequence Summary Report



Sequence name: FID10076 2013-08-14 13-16-39
 Acquisition date: 8/14/2013 1:16:40 PM
 Acquired by: Meghan Dailey
 Data Directory C:\Chem32\3\DATA\FID10076 2013-08-14 13-16-39

Line	Location	Sample Name	Datafile	Method	Injection Date
4	Vial 1	Solvent Blank	FID10076A.D		08/14/2013 16:55:36
5	Vial 2	AL-WKCC-25-024	FID10076B.D		08/14/2013 18:06:20
6	Vial 3	AL-WKSRM2779-20-01	FID10076C.D		08/14/2013 19:16:56
7	Vial 1	Solvent Blank	FID10076D.D		08/14/2013 20:27:36
8	Vial 4	AL-WKRetWin-001	FID10076E.D		08/14/2013 21:38:09
9	Vial 5	AL-WKPem-001	FID10076F.D		08/14/2013 22:48:46
10	Vial 6		ENV3075A.D		08/14/2013 23:59:28
11	Vial 7		ENV3075C.D		08/15/2013 01:10:02
12	Vial 8		ENV3075D.D		08/15/2013 02:20:41
13	Vial 9		ENV3075E.D		08/15/2013 03:31:17
14	Vial 10	AL-WKCC-25-024	FID10076G.D		08/15/2013 04:41:57
15	Vial 11		ARC1537.D		08/15/2013 05:52:40
16	Vial 12		ARC1540.D		08/15/2013 07:03:17
17	Vial 13		ARC1543.D		08/15/2013 08:14:05
18	Vial 14		ARC1548.D		08/15/2013 09:24:43
19	Vial 15		ARC1549.D		08/15/2013 10:35:23
20	Vial 16		ARC1552.D		08/15/2013 11:46:06
21	Vial 17		ARC1555.D		08/15/2013 12:56:43
22	Vial 18	AL-WKCC-25-024	FID10076H.D		08/15/2013 14:07:32

Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076B.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 18:06:20
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 15 09:25:35 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (Min)
1 I	n-hexadecane-d34	1.000	1.000	0.0	82	0.00
2	n-C8	0.945	1.026	-8.6	87	0.00
3	n-C9	1.010	1.079	-6.8	86	0.00
4	n-C10	1.087	1.149	-5.7	85	0.00
5	n-C11	1.105	1.157	-4.7	84	0.00
6 S	n-dodecane-d26	1.033	1.064	-3.0	83	0.00
7	n-C12	1.156	1.201	-3.9	83	0.00
10	n-C13	1.154	1.187	-2.9	83	0.00
12	n-C14	1.185	1.214	-2.4	82	0.00
14	n-C15	1.196	1.216	-1.7	82	0.00
15	n-C16	1.200	1.220	-1.7	82	0.00
16 I	5a-androstane	1.000	1.000	0.0	82	0.00
18	n-C17	0.991	1.007	-1.6	81	0.00
19	Pristane	0.986	1.002	-1.6	82	0.00
20	n-C18	0.971	0.988	-1.8	82	0.00
21	Phytane	0.989	1.007	-1.8	82	0.00
22	n-C19	0.965	0.982	-1.8	82	0.00
23 S	n-eicosane-d42	0.769	0.777	-1.0	82	0.00
24	n-C20	0.967	0.985	-1.9	82	0.00
25	n-C21	0.972	0.991	-2.0	81	0.00
26	n-C22	0.972	0.990	-1.9	82	0.00
27	n-C23	0.973	0.992	-2.0	81	0.00
28	n-C24	0.972	0.991	-2.0	81	0.00
29	n-C25	0.973	0.992	-2.0	81	0.00
30	n-C26	0.973	0.992	-2.0	81	0.01
31	n-C27	0.950	0.967	-1.8	81	0.01
32	n-C28	0.963	0.982	-2.0	81	0.01
33	n-C29	0.967	0.985	-1.9	81	0.01
34 S	n-triacontane-d62	0.749	0.753	-0.5	81	0.00
35	n-C30	0.959	0.978	-2.0	81	0.01
36	n-C31	0.945	0.966	-2.2	81	0.01
37	n-C32	0.937	0.957	-2.1	81	0.02
38	n-C33	0.916	0.939	-2.5	81	0.02
39	n-C34	0.926	0.949	-2.5	81	0.02
40	n-C35	0.904	0.925	-2.3	81	0.01
41	n-C36	0.975	0.984	-0.9	79	0.00
42	n-C37	0.890	0.888	0.2	78	0.00
43	n-C38	0.876	0.872	0.5	78	0.00

44	n-C39	0.839	0.823	1.9	76	0.00
45	n-C40	0.786	0.752	4.3	74	0.00

Evaluate Continuing Calibration Report - Not Found

8	i-13	0.019	0.000	100.0#	0#	-9.09#
9	i-14	0.019	0.000	100.0#	0#	-9.80#
11	i-15	0.019	0.000	100.0#	0#	-10.95#
13	i-16	0.020	0.000	100.0#	0#	-11.85#
17	i-18	0.019	0.000	100.0#	0#	-13.81#
46	TPH	0.019	0.000	100.0#	0#	-29.66#
47	TRH1	0.019	0.000	100.0#	0#	-7.91#
48	TRH2	0.019	0.000	100.0#	0#	-16.26#
49	TRH3	0.019	0.000	100.0#	0#	-23.87#
50	TRH4	0.019	0.000	100.0#	0#	-29.00#
51	TRH5	0.019	0.000	100.0#	0#	-34.09#
52	TRH6	0.019	0.000	100.0#	0#	-45.79#
53	GRO	0.019	0.000	100.0#	0#	-5.38#
54	DRO	0.019	0.000	100.0#	0#	-14.61#
55	RRO	0.019	0.000	100.0#	0#	-33.71#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Thu Aug 15 09:25:41 2013

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076B.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 18:06:20
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 15 09:25:35 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	12.994	256167	50.000 ug/mlm
16) I 5a-androstane	18.285	314834	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.701	136343	25.770 ug/mlm
23) S n-eicosane-d42	17.674	122983	25.421 ug/mlm
34) S n-triacontane-d62	29.589	118510	25.166 ug/mlm
Target Compounds			
2) n-C8	3.565	131554	27.161 ug/mlm
3) n-C9	4.883	138210	26.700 ug/mlm
4) n-C10	6.293	147133	26.414 ug/mlm
5) n-C11	7.647	148398	26.214 ug/ml
7) n-C12	8.907	151139	25.512 ug/mlm
8) i-13	0.000	0	N.D. ug/ml
9) i-14	0.000	0	N.D. ug/ml
10) n-C13	10.079	152251	25.747 ug/mlm
11) i-15	0.000	0	N.D. ug/ml
12) n-C14	11.175	154524	25.448 ug/mlm
13) i-16	0.000	0	N.D. ug/ml
14) n-C15	12.206	154941	25.279 ug/mlm
15) n-C16	13.249	154709	25.160 ug/mlm
17) i-18	0.000	0	N.D. ug/ml
18) n-C17	14.360	156321	25.090 ug/mlm
19) Pristane	14.478	156127	25.185 ug/mlm
20) n-C18	15.543	155388	25.449 ug/mlm
21) Phytane	15.708	157888	25.391 ug/mlm
22) n-C19	16.790	154290	25.422 ug/mlm
24) n-C20	18.075	155085	25.517 ug/mlm
25) n-C21	19.378	154358	25.251 ug/mlm
26) n-C22	20.684	155868	25.496 ug/mlm
27) n-C23	21.973	154451	25.244 ug/mlm
28) n-C24	23.237	153940	25.182 ug/mlm
29) n-C25	24.473	155299	25.375 ug/mlm
30) n-C26	25.674	156207	25.538 ug/mlm
31) n-C27	26.838	152046	25.454 ug/mlm
32) n-C28	27.968	154394	25.495 ug/mlm
33) n-C29	29.063	155086	25.500 ug/mlm
35) n-C30	30.125	153146	25.409 ug/mlm
36) n-C31	31.154	151949	25.584 ug/mlm
37) n-C32	32.153	148461	25.207 ug/mlm
38) n-C33	33.124	147563	25.633 ug/mlm
39) n-C34	34.070	148838	25.572 ug/mlm
40) n-C35	35.098	145507	25.595 ug/mlm

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076B.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 18:06:20
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 15 09:25:35 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.272	151634	24.728	ug/mlm
42)	n-C37	37.624	139628	24.948	ug/mlm
43)	n-C38	39.209	137290	24.918	ug/mlm
44)	n-C39	41.061	129435	24.530	ug/mlm
45)	n-C40	43.256	118023	23.870	ug/mlm
46)	TPH	0.000	0	N.D.	ug/ml
47)	TRH1	0.000	0	N.D.	ug/ml
48)	TRH2	0.000	0	N.D.	ug/ml
49)	TRH3	0.000	0	N.D.	ug/ml
50)	TRH4	0.000	0	N.D.	ug/ml
51)	TRH5	0.000	0	N.D.	ug/ml
52)	TRH6	0.000	0	N.D.	ug/ml
53)	GRO	0.000	0	N.D.	ug/ml
54)	DRO	0.000	0	N.D.	ug/ml
55)	RRO	0.000	0	N.D.	ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

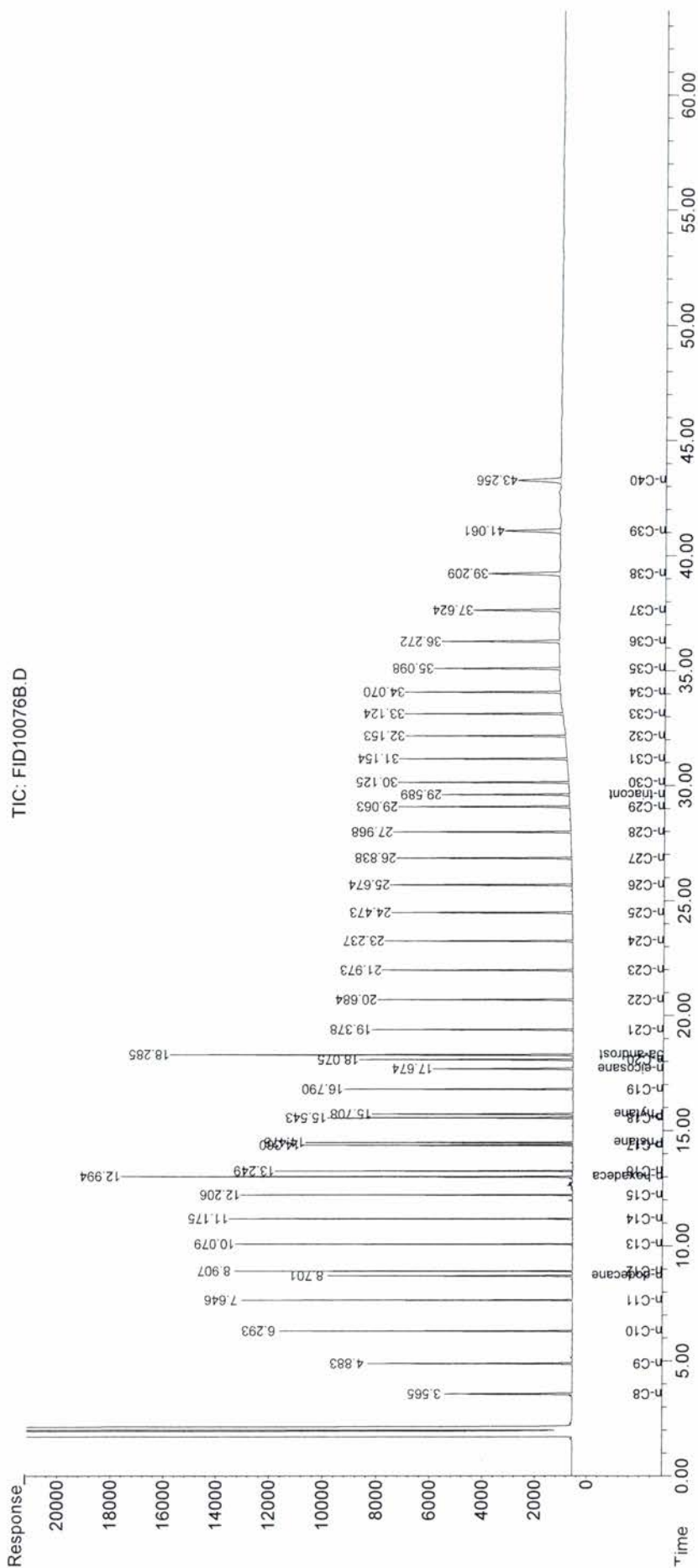
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
Data File : FID10076B.D
Signal(s) : FID1A.CH
Acq On : 14-Aug-2013, 18:06:20
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 15 09:25:35 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076G.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 04:41:57
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 15 10:55:54 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (Min)
1 I	n-hexadecane-d34	1.000	1.000	0.0	83	0.00
2	n-C8	0.945	1.010	-6.9	87	0.00
3	n-C9	1.010	1.071	-6.0	87	0.00
4	n-C10	1.087	1.148	-5.6	87	0.00
5	n-C11	1.105	1.158	-4.8	86	0.00
6 S	n-dodecane-d26	1.033	1.068	-3.4	85	0.00
7	n-C12	1.156	1.205	-4.2	85	0.00
10	n-C13	1.154	1.191	-3.2	84	0.00
12	n-C14	1.185	1.216	-2.6	84	0.00
14	n-C15	1.196	1.217	-1.8	83	0.00
15	n-C16	1.200	1.218	-1.5	83	0.00
16 I	5a-androstane	1.000	1.000	0.0	83	0.00
18	n-C17	0.991	1.010	-1.9	83	0.00
19	Pristane	0.986	1.003	-1.7	83	0.00
20	n-C18	0.971	0.989	-1.9	83	0.00
21	Phytane	0.989	1.007	-1.8	83	0.00
22	n-C19	0.965	0.984	-2.0	83	0.00
23 S	n-eicosane-d42	0.769	0.776	-0.9	82	0.00
24	n-C20	0.967	0.984	-1.8	83	0.00
25	n-C21	0.972	0.993	-2.2	83	0.00
26	n-C22	0.972	0.989	-1.7	82	0.00
27	n-C23	0.973	0.994	-2.2	83	0.00
28	n-C24	0.972	0.991	-2.0	82	0.00
29	n-C25	0.973	0.990	-1.7	82	0.00
30	n-C26	0.973	0.990	-1.7	82	0.00
31	n-C27	0.950	0.963	-1.4	82	0.01
32	n-C28	0.963	0.977	-1.5	82	0.01
33	n-C29	0.967	0.982	-1.6	82	0.01
34 S	n-triacontane-d62	0.749	0.751	-0.3	82	0.00
35	n-C30	0.959	0.967	-0.8	81	0.01
36	n-C31	0.945	0.975	-3.2	83	0.01
37	n-C32	0.937	0.956	-2.0	82	0.01
38	n-C33	0.916	0.922	-0.7	81	0.01
39	n-C34	0.926	0.939	-1.4	81	0.01
40	n-C35	0.904	0.931	-3.0	82	0.00
41	n-C36	0.975	0.982	-0.7	80	0.00
42	n-C37	0.890	0.883	0.8	79	-0.01
43	n-C38	0.876	0.859	1.9	78	-0.01

44	n-C39	0.839	0.815	2.9	76	0.00
45	n-C40	0.786	0.739	6.0	74	0.00

Evaluate Continuing Calibration Report - Not Found

8	i-13	0.019	0.000	100.0#	0#	-9.09#
9	i-14	0.019	0.000	100.0#	0#	-9.80#
11	i-15	0.019	0.000	100.0#	0#	-10.95#
13	i-16	0.020	0.000	100.0#	0#	-11.85#
17	i-18	0.019	0.000	100.0#	0#	-13.81#
46	TPH	0.019	0.000	100.0#	0#	-29.66#
47	TRH1	0.019	0.000	100.0#	0#	-7.91#
48	TRH2	0.019	0.000	100.0#	0#	-16.26#
49	TRH3	0.019	0.000	100.0#	0#	-23.87#
50	TRH4	0.019	0.000	100.0#	0#	-29.00#
51	TRH5	0.019	0.000	100.0#	0#	-34.09#
52	TRH6	0.019	0.000	100.0#	0#	-45.79#
53	GRO	0.019	0.000	100.0#	0#	-5.38#
54	DRO	0.019	0.000	100.0#	0#	-14.61#
55	RRO	0.019	0.000	100.0#	0#	-33.71#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Thu Aug 15 10:56:00 2013

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076G.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 04:41:57
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 15 10:55:54 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc	Units
Internal Standards					
1) I	n-hexadecane-d34	12.993	261001	50.000	ug/mlm
16) I	5a-androstane	18.283	319071	50.072	ug/mlm
System Monitoring Compounds					
6) S	n-dodecane-d26	8.699	139328	25.846	ug/mlm
23) S	n-eicosane-d42	17.672	124365	25.365	ug/mlm
34) S	n-triacontane-d62	29.585	119824	25.107	ug/mlm
Target Compounds					
2)	n-C8	3.567	131869	26.722	ug/mlm
3)	n-C9	4.883	139826	26.512	ug/mlm
4)	n-C10	6.293	149776	26.391	ug/mlm
5)	n-C11	7.646	151278	26.228	ug/mlm
7)	n-C12	8.906	154611	25.614	ug/mlm
8)	i-13	0.000	0	N.D.	ug/ml
9)	i-14	0.000	0	N.D.	ug/ml
10)	n-C13	10.078	155734	25.848	ug/mlm
11)	i-15	0.000	0	N.D.	ug/ml
12)	n-C14	11.174	157751	25.499	ug/mlm
13)	i-16	0.000	0	N.D.	ug/ml
14)	n-C15	12.204	158033	25.306	ug/mlm
15)	n-C16	13.247	157345	25.115	ug/mlm
17)	i-18	0.000	0	N.D.	ug/ml
18)	n-C17	14.358	158940	25.172	ug/mlm
19)	Pristane	14.476	158449	25.220	ug/mlm
20)	n-C18	15.542	157659	25.478	ug/mlm
21)	Phytane	15.705	160058	25.398	ug/mlm
22)	n-C19	16.788	156613	25.462	ug/mlm
24)	n-C20	18.073	156956	25.482	ug/mlm
25)	n-C21	19.377	156776	25.306	ug/mlm
26)	n-C22	20.681	157679	25.450	ug/mlm
27)	n-C23	21.971	156786	25.285	ug/mlm
28)	n-C24	23.237	155964	25.174	ug/mlm
29)	n-C25	24.471	157125	25.332	ug/mlm
30)	n-C26	25.672	157956	25.482	ug/mlm
31)	n-C27	26.836	153425	25.343	ug/mlm
32)	n-C28	27.967	155590	25.351	ug/mlm
33)	n-C29	29.062	156619	25.410	ug/mlm
35)	n-C30	30.124	153445	25.120	ug/mlm
36)	n-C31	31.152	155351	25.809	ug/mlm
37)	n-C32	32.147	150293	25.180	ug/mlm
38)	n-C33	33.118	146884	25.176	ug/mlm
39)	n-C34	34.067	149222	25.298	ug/mlm
40)	n-C35	35.095	148435	25.764	ug/mlm

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076G.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 04:41:57
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 15 10:55:54 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.267	153295	24.666 ug/mlm
42)	n-C37	37.620	140794	24.822 ug/mlm
43)	n-C38	39.201	137041	24.543 ug/mlm
44)	n-C39	41.056	129892	24.290 ug/mlm
45)	n-C40	43.246	117447	23.438 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

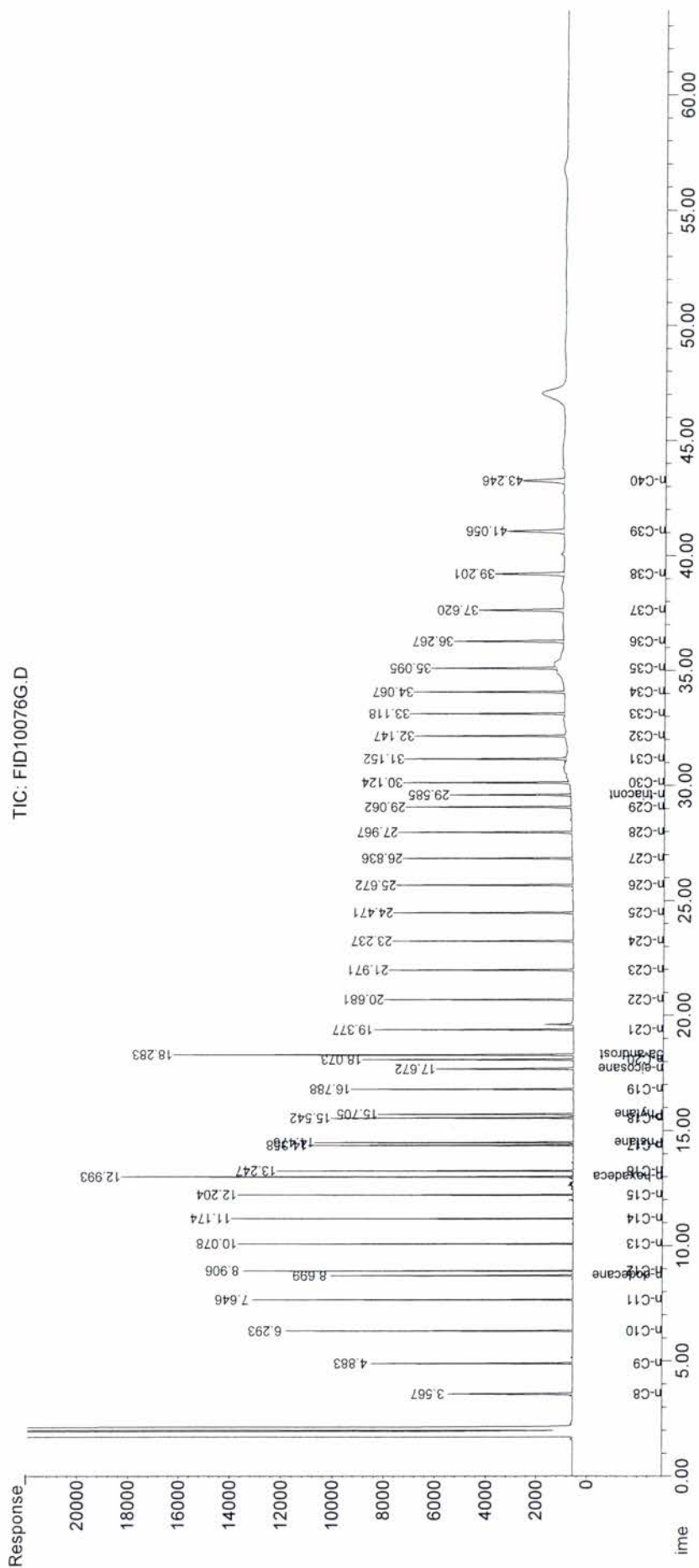
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
Data File : FID10076G.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 04:41:57
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 15 10:55:54 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076H.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 14:07:32
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 28 13:25:55 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (Min)
1 I	n-hexadecane-d34	1.000	1.000	0.0	94	0.00
2	n-C8	0.945	0.963	-1.9	94	0.00
3	n-C9	1.010	1.062	-5.1	97	0.00
4	n-C10	1.087	1.152	-6.0	98	0.00
5	n-C11	1.105	1.161	-5.1	98	0.00
6 S	n-dodecane-d26	1.033	1.069	-3.5	96	0.00
7	n-C12	1.156	1.205	-4.2	96	0.00
10	n-C13	1.154	1.190	-3.1	95	0.00
12	n-C14	1.185	1.213	-2.4	94	0.00
14	n-C15	1.196	1.214	-1.5	94	0.00
15	n-C16	1.200	1.216	-1.3	94	0.00
16 I	5a-androstane	1.000	1.000	0.0	94	0.00
18	n-C17	0.991	1.009	-1.8	94	0.00
19	Pristane	0.986	1.004	-1.8	94	0.01
20	n-C18	0.971	0.990	-2.0	94	0.01
21	Phytane	0.989	1.007	-1.8	94	0.01
22	n-C19	0.965	0.984	-2.0	94	0.01
23 S	n-eicosane-d42	0.769	0.779	-1.3	94	0.00
24	n-C20	0.967	0.984	-1.8	94	0.01
25	n-C21	0.972	0.994	-2.3	94	0.01
26	n-C22	0.972	0.991	-2.0	94	0.01
27	n-C23	0.973	0.996	-2.4	94	0.01
28	n-C24	0.972	0.994	-2.3	93	0.02
29	n-C25	0.973	0.995	-2.3	94	0.02
30	n-C26	0.973	0.992	-2.0	93	0.02
31	n-C27	0.950	0.963	-1.4	93	0.02
32	n-C28	0.963	0.979	-1.7	93	0.02
33	n-C29	0.967	0.982	-1.6	93	0.02
34 S	n-triacontane-d62	0.749	0.750	-0.1	92	0.01
35	n-C30	0.959	0.968	-0.9	92	0.02
36	n-C31	0.945	0.965	-2.1	93	0.02
37	n-C32	0.937	0.947	-1.1	92	0.03
38	n-C33	0.916	0.916	0.0	91	0.03
39	n-C34	0.926	0.936	-1.1	91	0.03
40	n-C35	0.904	0.895	1.0	89	0.02
41	n-C36	0.975	0.986	-1.1	91	0.02
42	n-C37	0.890	0.875	1.7	89	0.01
43	n-C38	0.876	0.854	2.5	87	0.01

44	n-C39	0.839	0.820	2.3	87	0.03
45	n-C40	0.786	0.770	2.0	87	0.03

Evaluate Continuing Calibration Report - Not Found

8	i-13	0.019	0.000	100.0#	0#	-9.09#
9	i-14	0.019	0.000	100.0#	0#	-9.80#
11	i-15	0.019	0.000	100.0#	0#	-10.95#
13	i-16	0.020	0.000	100.0#	0#	-11.85#
17	i-18	0.019	0.000	100.0#	0#	-13.81#
46	TPH	0.019	0.000	100.0#	0#	-29.66#
47	TRH1	0.019	0.000	100.0#	0#	-7.91#
48	TRH2	0.019	0.000	100.0#	0#	-16.26#
49	TRH3	0.019	0.000	100.0#	0#	-23.87#
50	TRH4	0.019	0.000	100.0#	0#	-29.00#
51	TRH5	0.019	0.000	100.0#	0#	-34.09#
52	TRH6	0.019	0.000	100.0#	0#	-45.79#
53	GRO	0.019	0.000	100.0#	0#	-5.38#
54	DRO	0.019	0.000	100.0#	0#	-14.61#
55	RRO	0.019	0.000	100.0#	0#	-33.71#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Wed Aug 28 13:26:04 2013

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
 Data File : FID10076H.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 14:07:32
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 28 13:25:55 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
Internal Standards				
1) I	n-hexadecane-d34	13.000	294937	50.000 ug/ml
16) I	5a-androstane	18.293	360869	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.703	157674	25.884 ug/mlm
23) S	n-eicosane-d42	17.680	141274	25.477 ug/mlm
34) S	n-triacontane-d62	29.598	135246	25.056 ug/mlm
Target Compounds				
2)	n-C8	3.568	142107	25.483 ug/mlm
3)	n-C9	4.887	156636	26.282 ug/mlm
4)	n-C10	6.297	169817	26.479 ug/mlm
5)	n-C11	7.650	171468	26.308 ug/mlm
7)	n-C12	8.910	174698	25.612 ug/mlm
8)	i-13	0.000	0	N.D. ug/mlm
9)	i-14	0.000	0	N.D. ug/mlm
10)	n-C13	10.082	175769	25.817 ug/mlm
11)	i-15	0.000	0	N.D. ug/mlm
12)	n-C14	11.177	177851	25.440 ug/mlm
13)	i-16	0.000	0	N.D. ug/mlm
14)	n-C15	12.209	178142	25.244 ug/mlm
15)	n-C16	13.253	177504	25.073 ug/mlm
17)	i-18	0.000	0	N.D. ug/mlm
18)	n-C17	14.364	179670	25.159 ug/mlm
19)	Pristane	14.483	179308	25.235 ug/mlm
20)	n-C18	15.549	178507	25.506 ug/mlm
21)	Phytane	15.714	180959	25.389 ug/mlm
22)	n-C19	16.796	177150	25.465 ug/mlm
24)	n-C20	18.081	177656	25.502 ug/mlm
25)	n-C21	19.386	177436	25.323 ug/mlm
26)	n-C22	20.691	178801	25.516 ug/mlm
27)	n-C23	21.980	177609	25.326 ug/mlm
28)	n-C24	23.246	177092	25.273 ug/mlm
29)	n-C25	24.482	178549	25.452 ug/mlm
30)	n-C26	25.682	179043	25.538 ug/mlm
31)	n-C27	26.847	173570	25.350 ug/mlm
32)	n-C28	27.978	176387	25.411 ug/mlm
33)	n-C29	29.074	177154	25.413 ug/mlm
35)	n-C30	30.135	173789	25.155 ug/mlm
36)	n-C31	31.164	173897	25.544 ug/mlm
37)	n-C32	32.162	168381	24.943 ug/mlm
38)	n-C33	33.132	164986	25.004 ug/mlm
39)	n-C34	34.080	168232	25.217 ug/mlm
40)	n-C35	35.111	161262	24.748 ug/mlm

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
Data File : FID10076H.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 14:07:32
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 28 13:25:55 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.284	174029	24.759 ug/mlm
42)	n-C37	37.641	157780	24.595 ug/mlm
43)	n-C38	39.226	154139	24.408 ug/mlm
44)	n-C39	41.087	147755	24.430 ug/mlm
45)	n-C40	43.289	138518	24.441 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

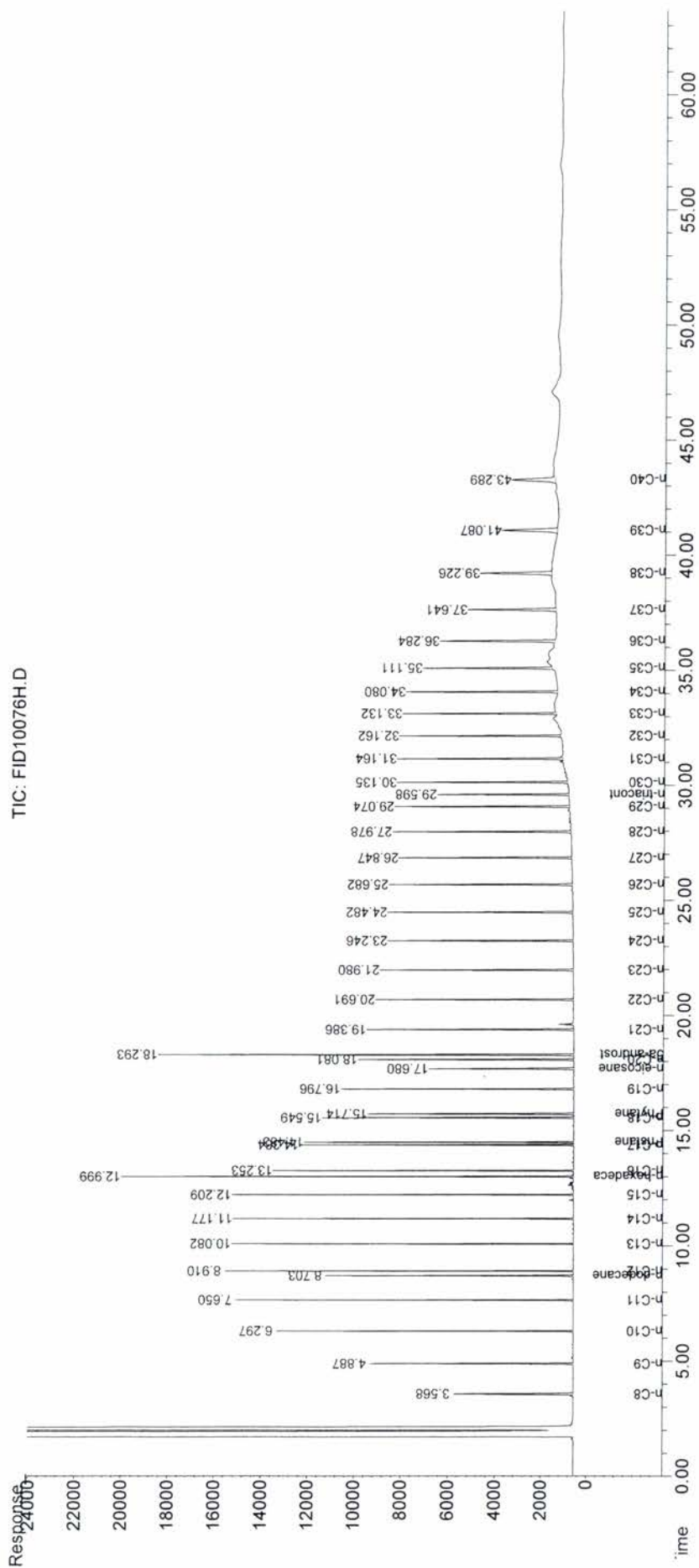
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\
Data File : FID10076H.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 14:07:32
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 28 13:25:55 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	FID10076F.D	Concentration	FID10076F.D
Sample Name	AL-WKPem-001		AL-WKPem-001
Misc Info	0		14-Aug-2013, 22:48:46
Data File Path	P:\2013\J13034\Aliphatics\ENV 3075\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	14-Aug-2013, 22:48:46		1
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	5
Vial Number	5	IS Area 1	287592
Sample Multiplier	1	IS Area 2	354713

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	0.00	0	0.00	0.000
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	0.00	0	0.00	0.000
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	0.00	0	0.00	0.000
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	0.00	0	0.00	0.000
15)	n-C16	0.00	0	0.00	0.000
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	0.00	0	0.00	0.000
19)	Pristane	0.00	0	0.00	0.000
20)	n-C18	0.00	0	0.00	0.000
21)	Phytane	0.00	0	0.00	0.000
22)	n-C19	0.00	0	0.00	0.000
24)	n-C20	0.00	0	0.00	0.000
25)	n-C21	0.00	0	0.00	0.000
26)	n-C22	0.00	0	0.00	0.000
27)	n-C23	0.00	0	0.00	0.000
28)	n-C24	0.00	0	0.00	0.000
29)	n-C25	0.00	0	0.00	0.000
30)	n-C26	0.00	0	0.00	0.000
31)	n-C27	0.00	0	0.00	0.000
32)	n-C28	0.00	0	0.00	0.000
33)	n-C29	0.00	0	0.00	0.000
35)	n-C30	0.00	0	0.00	0.000
36)	n-C31	0.00	0	0.00	0.000
37)	n-C32	0.00	0	0.00	0.000
38)	n-C33	0.00	0	0.00	0.000
39)	n-C34	0.00	0	0.00	0.000
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	12.99	7806660	1181.86	1181.860
47)	TRH1	8.70	133702	20.24	20.241
48)	TRH2	12.99	790758	119.71	119.714
49)	TRH3	26.52	13166	1.99	1.992
50)	TRH4	29.58	107745	16.31	16.312
51)	TRH5	37.02	130164	19.71	19.706
52)	TRH6	41.89	111838	16.93	16.931
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	120909	20.36	101.8
23)	n-eicosane-d42	17.67	109973	20.18	100.2
34)	n-triacontane-d62	29.58	108179	20.39	101.8
1)	n-hexadecane-d34	12.99	287592	50.00	287592.000
16)	5a-androstane	18.28	354713	50.07	354713.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : FID10076F.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 22:48:46
 Operator : Meghan Dailey
 Sample : AL-WKPem-001
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 16 08:32:53 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound		R.T.	Response	Conc	Units

Internal Standards					
1) I	n-hexadecane-d34	12.993	287592	50.000	ug/mlm
16) I	5a-androstane	18.282	354713	50.072	ug/mlm
System Monitoring Compounds					
6) S	n-dodecane-d26	8.698	120909	20.356	ug/mlm
23) S	n-eicosane-d42	17.671	109973	20.176	ug/mlm
34) S	n-triacontane-d62	29.584	108179	20.390	ug/mlm
Target Compounds					
2)	n-C8	0.000	0	N.D.	ug/ml
3)	n-C9	0.000	0	N.D.	ug/ml
4)	n-C10	0.000	0	N.D.	ug/ml
5)	n-C11	0.000	0	N.D.	ug/ml
7)	n-C12	0.000	0	N.D.	ug/ml
8)	i-13	0.000	0	N.D.	ug/ml
9)	i-14	0.000	0	N.D.	ug/ml
10)	n-C13	0.000	0	N.D.	ug/ml
11)	i-15	0.000	0	N.D.	ug/ml
12)	n-C14	0.000	0	N.D.	ug/ml
13)	i-16	0.000	0	N.D.	ug/ml
14)	n-C15	0.000	0	N.D.	ug/ml
15)	n-C16	0.000	0	N.D.	ug/ml
17)	i-18	0.000	0	N.D.	ug/ml
18)	n-C17	0.000	0	N.D.	ug/ml
19)	Pristane	0.000	0	N.D.	ug/ml
20)	n-C18	0.000	0	N.D.	ug/ml
21)	Phytane	0.000	0	N.D.	ug/ml
22)	n-C19	0.000	0	N.D.	ug/ml
24)	n-C20	0.000	0	N.D.	ug/ml
25)	n-C21	0.000	0	N.D.	ug/ml
26)	n-C22	0.000	0	N.D.	ug/ml
27)	n-C23	0.000	0	N.D.	ug/ml
28)	n-C24	0.000	0	N.D.	ug/ml
29)	n-C25	0.000	0	N.D.	ug/ml
30)	n-C26	0.000	0	N.D.	ug/ml
31)	n-C27	0.000	0	N.D.	ug/ml
32)	n-C28	0.000	0	N.D.	ug/ml
33)	n-C29	0.000	0	N.D.	ug/ml
35)	n-C30	0.000	0	N.D.	ug/ml
36)	n-C31	0.000	0	N.D.	ug/ml
37)	n-C32	0.000	0	N.D.	ug/ml
38)	n-C33	0.000	0	N.D.	ug/ml
39)	n-C34	0.000	0	N.D.	ug/ml
40)	n-C35	0.000	0	N.D.	ug/ml

Data Path : C:\msdchem\2\data\FID10076\
 Data File : FID10076F.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 22:48:46
 Operator : Meghan Dailey
 Sample : AL-WKPem-001
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 16 08:32:53 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/ml
42)	n-C37	0.000	0	N.D.	ug/ml
43)	n-C38	0.000	0	N.D.	ug/ml
44)	n-C39	0.000	0	N.D.	ug/ml
45)	n-C40	0.000	0	N.D.	ug/ml
46)	TPH	12.993f	7806658	1181.861	ug/ml
47)	TRH1	8.698	133702	20.241	ug/ml
48)	TRH2	12.993f	790758	119.714	ug/ml
49)	TRH3	26.516f	13166	1.992	ug/ml
50)	TRH4	29.584	107745	16.312	ug/ml
51)	TRH5	37.021f	130164	19.706	ug/ml
52)	TRH6	41.887	111838	16.931	ug/ml
53)	GRO	0.000	0	N.D.	ug/ml
54)	DRO	0.000	0	N.D.	ug/ml
55)	RRO	0.000	0	N.D.	ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

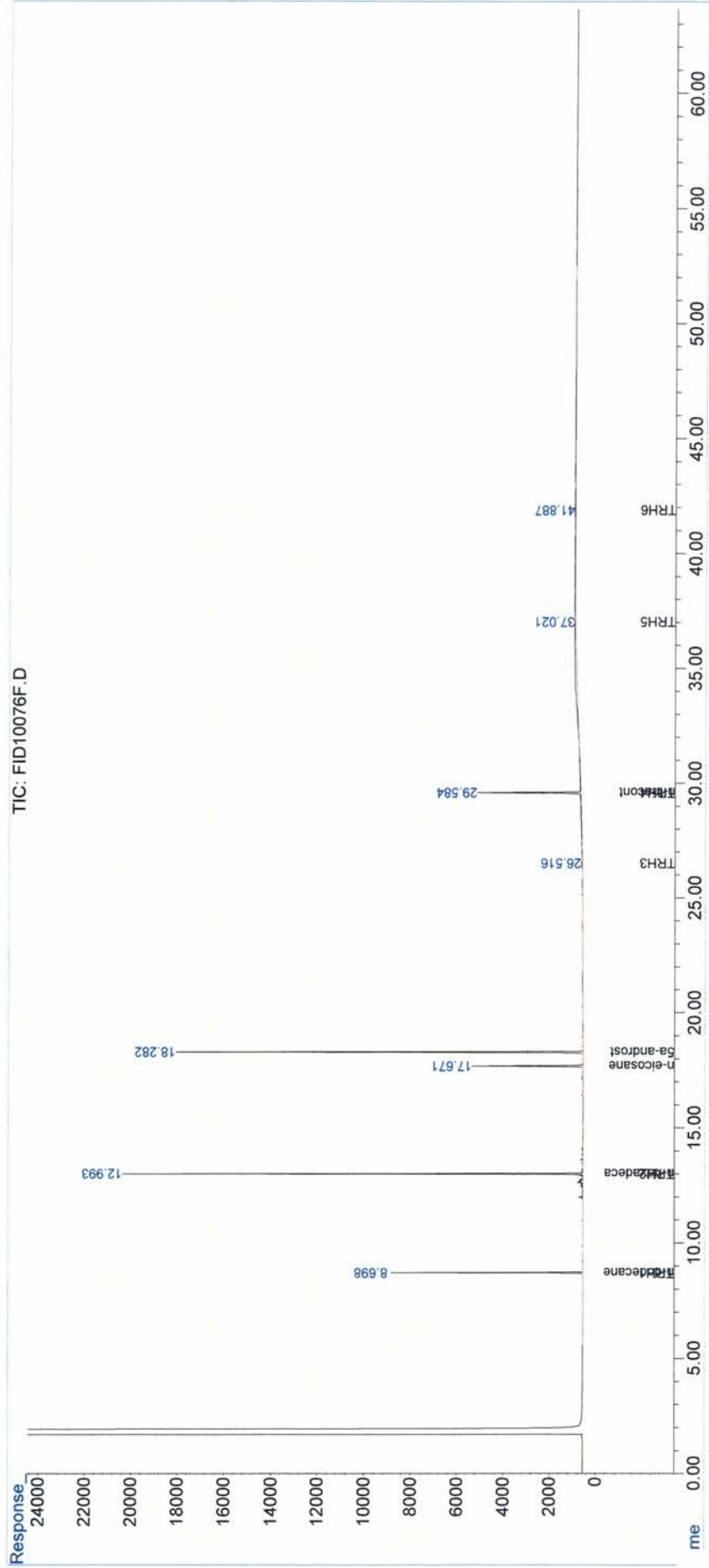
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : FID10076F.D
Signal(s) : FID1A.CH
Acq On : 14-Aug-2013, 22:48:46
Operator : Meghan Dailey
Sample : AL-WKPem-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 16 08:32:53 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
Qlast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	FID10076C.D	Concentration	FID10076C.D
Sample Name	AL-WKSRM2779-20-01		AL-WKSRM2779-20-01
Misc Info	0		14-Aug-2013, 19:16:56
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	14-Aug-2013, 19:16:56		0.05
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	3
Vial Number	3	IS Area 1	281411
Sample Multiplier	0.05	IS Area 2	388626

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	3.57	1734060	16.30	16.295
3)	n-C9	4.89	1553790	13.66	13.662
4)	n-C10	6.31	1479990	12.09	12.093
5)	n-C11	7.66	1373140	11.04	11.040
7)	n-C12	8.92	1214950	9.33	9.334
8)	i-13	9.10	288267	2.22	2.219
9)	i-14	9.80	184058	1.38	1.380
10)	n-C13	10.09	1091190	8.40	8.399
11)	i-15	10.96	257945	1.92	1.916
12)	n-C14	11.19	962696	7.22	7.216
13)	i-16	11.85	362806	2.69	2.685
14)	n-C15	12.22	922692	6.85	6.852
15)	n-C16	13.26	763085	5.65	5.648
17)	i-18	13.82	215224	1.43	1.428
18)	n-C17	14.38	695631	4.52	4.523
19)	Pristane	14.48	371789	2.43	2.429
20)	n-C18	15.56	567372	3.76	3.764
21)	Phytane	15.72	222832	1.45	1.452
22)	n-C19	16.80	491231	3.28	3.279
24)	n-C20	18.09	436284	2.91	2.908
25)	n-C21	19.39	365121	2.42	2.419
26)	n-C22	20.70	316818	2.10	2.099
27)	n-C23	21.99	287696	1.90	1.905
28)	n-C24	23.25	263345	1.74	1.745
29)	n-C25	24.48	211008	1.40	1.397
30)	n-C26	25.69	176410	1.17	1.168
31)	n-C27	26.85	146674	0.99	0.995
32)	n-C28	27.98	119029	0.80	0.796
33)	n-C29	29.07	115027	0.77	0.766
35)	n-C30	30.13	101032	0.68	0.679
36)	n-C31	31.16	84723	0.58	0.578
37)	n-C32	32.16	63647.3	0.44	0.438
38)	n-C33	33.13	67909.9	0.48	0.478
39)	n-C34	34.08	58433.4	0.41	0.407
40)	n-C35	35.11	44257.6	0.32	0.315
41)	n-C36	36.28	29905.3	0.20	0.198
42)	n-C37	37.63	27454.2	0.20	0.199
43)	n-C38	39.21	22527.9	0.17	0.166
44)	n-C39	41.07	20197.1	0.16	0.155
45)	n-C40	43.27	20875.1	0.17	0.171
46)	TPH	7.66	96388100	665.95	665.945
47)	TRH1	7.66	18216900	125.86	125.861
48)	TRH2	12.22	10351000	71.52	71.515
49)	TRH3	21.99	1750920	12.09	12.091
50)	TRH4	26.85	1386360	9.58	9.578
51)	TRH5	33.13	814445	5.63	5.627
52)	TRH6	37.63	110912	0.77	0.766
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	115537	0.99	99.4
23)	n-eicosane-d42	17.68	119175	1.00	99.1
34)	n-triacontane-d62	29.60	109817	0.94	94.4
1)	n-hexadecane-d34	13.00	281411	2.50	281411.000
16)	5a-androstane	18.30	388626	2.50	388626.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : FID10076C.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 19:16:56
 Operator : Meghan Dailey
 Sample : AL-WKSRM2779-20-01
 Misc :
 ALS Vial : 3 Sample Multiplier: 0.05

Integration File: autoint1.e
 Quant Time: Aug 16 09:11:32 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
Internal Standards				
1) I	n-hexadecane-d34	12.999	281411	50.000 ug/mlm
16) I	5a-androstane	18.298	388626	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.703	115537	0.994 ug/mlm
23) S	n-eicosane-d42	17.679	119175	0.998 ug/mlm
34) S	n-triacontane-d62	29.599	109817	0.945 ug/mlm
Target Compounds				
2)	n-C8	3.570	1734062	16.295 ug/mlm
3)	n-C9	4.893	1553786	13.662 ug/mlm
4)	n-C10	6.306	1479989	12.093 ug/mlm
5)	n-C11	7.661	1373144	11.040 ug/mlm
7)	n-C12	8.921	1214949	9.334 ug/mlm
8)	i-13	9.101	288267	2.219 ug/mlm
9)	i-14	9.802	184058	1.380 ug/mlm
10)	n-C13	10.093	1091192	8.399 ug/mlm
11)	i-15	10.960	257945	1.915 ug/mlm
12)	n-C14	11.189	962696	7.216 ug/mlm
13)	i-16	11.854	362806	2.685 ug/mlm
14)	n-C15	12.220	922692	6.852 ug/mlm
15)	n-C16	13.262	763085	5.648 ug/mlm
17)	i-18	13.824	215224	1.428 ug/mlm
18)	n-C17	14.375	695631	4.523 ug/mlm
19)	Pristane	14.482	371789	2.429 ug/mlm
20)	n-C18	15.559	567372	3.764 ug/mlm
21)	Phytane	15.716	222832	1.452 ug/mlm
22)	n-C19	16.804	491231	3.279 ug/mlm
24)	n-C20	18.090	436284	2.908 ug/mlm
25)	n-C21	19.395	365121	2.419 ug/mlm
26)	n-C22	20.697	316818	2.099 ug/mlm
27)	n-C23	21.985	287696	1.905 ug/mlm
28)	n-C24	23.249	263345	1.745 ug/mlm
29)	n-C25	24.484	211008	1.397 ug/mlm
30)	n-C26	25.686	176410	1.168 ug/mlm
31)	n-C27	26.849	146674	0.995 ug/mlm
32)	n-C28	27.977	119029	0.796 ug/mlm
33)	n-C29	29.069	115027	0.766 ug/mlm
35)	n-C30	30.133	101032	0.679 ug/mlm
36)	n-C31	31.162	84723	0.578 ug/mlm
37)	n-C32	32.158	63647	0.438 ug/mlm
38)	n-C33	33.125	67910	0.478 ug/mlm
39)	n-C34	34.076	58433	0.407 ug/mlm
40)	n-C35	35.107	44258	0.315 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
Data File : FID10076C.D
Signal(s) : FID1A.CH
Acq On : 14-Aug-2013, 19:16:56
Operator : Meghan Dailey
Sample : AL-WKSRM2779-20-01
Misc :
ALS Vial : 3 Sample Multiplier: 0.05

Integration File: autoint1.e
Quant Time: Aug 16 09:11:32 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.279	29905	0.198 ug/mlm
42)	n-C37	37.628	27454	0.199 ug/mlm
43)	n-C38	39.205	22528	0.166 ug/mlm
44)	n-C39	41.068	20197	0.155 ug/mlm
45)	n-C40	43.268	20875	0.171 ug/mlm
46)	TPH	7.661f	96388114	665.946 ug/mlm
47)	TRH1	7.661	18216882	125.861 ug/mlm
48)	TRH2	12.220f	10350955	71.515 ug/mlm
49)	TRH3	21.985f	1750916	12.091 ug/mlm
50)	TRH4	26.849f	1386362	9.578 ug/mlm
51)	TRH5	33.125	814445	5.627 ug/mlm
52)	TRH6	37.628f	110912	0.766 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

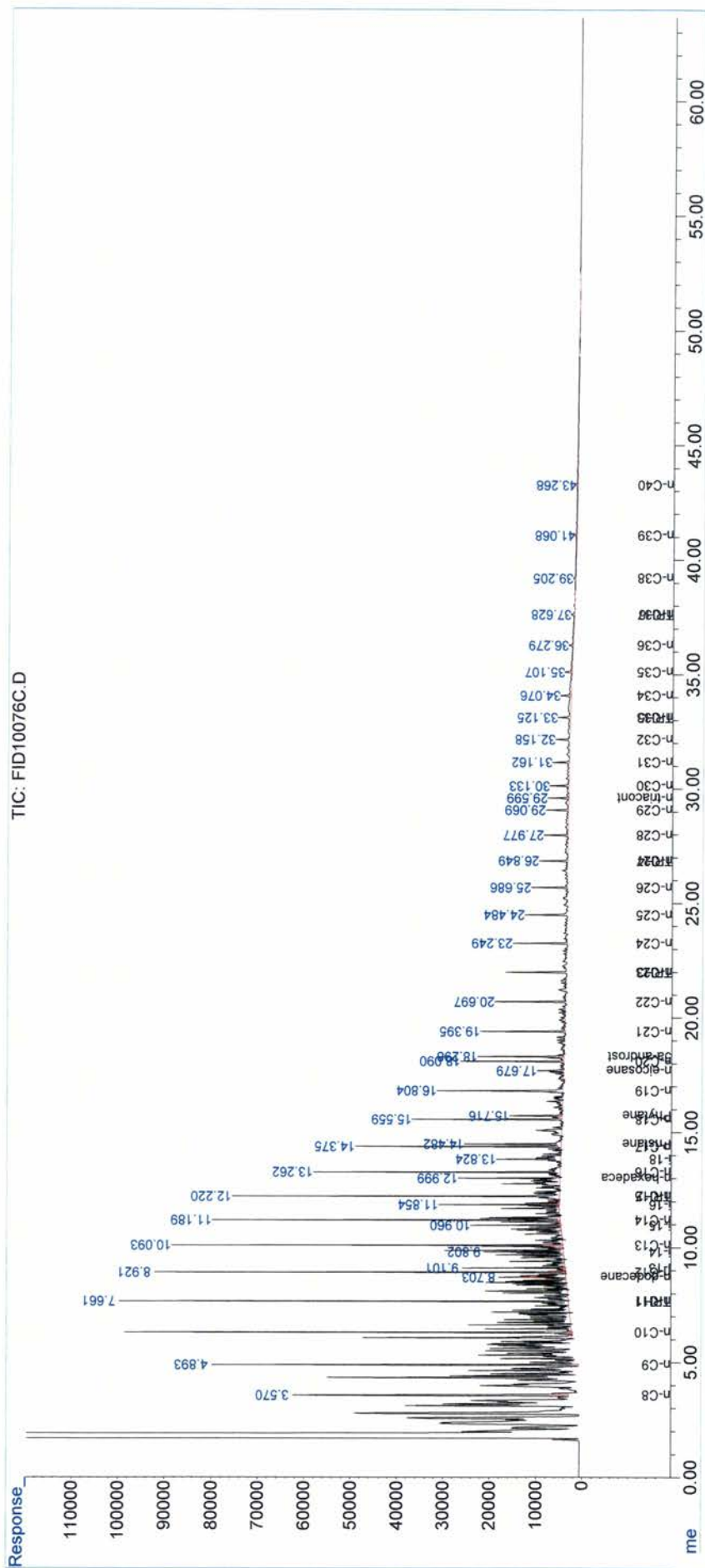
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : FID10076C.D
Signal(s) : FID1A.CH
Acq On : 14-Aug-2013, 19:16:56
Operator : Meghan Dailey
Sample : AL-WKSRM2779-20-01
Misc :
ALS Vial : 3 Sample Multiplier: 0.05

Integration File: autoint1.e
Quant Time: Aug 16 09:11:32 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ENV3075A.D	Concentration	ENV3075A.D
Sample Name	Procedural Blank		Procedural Blank
Misc Info	0		14-Aug-2013, 23:59:28
Data File Path	P:\2013\J13034\Aliphatics\ENV 3075\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	14-Aug-2013, 23:59:28		0.066667
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	6
Vial Number	6	IS Area 1	231520
Sample Multiplier	0.066667	IS Area 2	285717

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	0.00	0	0.00	0.000
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	0.00	0	0.00	0.000
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	0.00	0	0.00	0.000
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	0.00	0	0.00	0.000
15)	n-C16	0.00	0	0.00	0.000
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	0.00	0	0.00	0.000
19)	Pristane	0.00	0	0.00	0.000
20)	n-C18	0.00	0	0.00	0.000
21)	Phytane	0.00	0	0.00	0.000
22)	n-C19	0.00	0	0.00	0.000
24)	n-C20	0.00	0	0.00	0.000
25)	n-C21	0.00	0	0.00	0.000
26)	n-C22	0.00	0	0.00	0.000
27)	n-C23	0.00	0	0.00	0.000
28)	n-C24	0.00	0	0.00	0.000
29)	n-C25	0.00	0	0.00	0.000
30)	n-C26	0.00	0	0.00	0.000
31)	n-C27	0.00	0	0.00	0.000
32)	n-C28	0.00	0	0.00	0.000
33)	n-C29	0.00	0	0.00	0.000
35)	n-C30	0.00	0	0.00	0.000
36)	n-C31	0.00	0	0.00	0.000
37)	n-C32	0.00	0	0.00	0.000
38)	n-C33	0.00	0	0.00	0.000
39)	n-C34	0.00	0	0.00	0.000
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	12.99	5996680	75.14	75.139
47)	TRH1	8.70	105465	1.32	1.321
48)	TRH2	12.99	659757	8.27	8.267
49)	TRH3	23.78	19576.8	0.25	0.245
50)	TRH4	29.58	103725	1.30	1.300
51)	TRH5	37.10	102550	1.28	1.285
52)	TRH6	37.81	54620.6	0.68	0.684
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	88809.9	1.24	92.9
23)	n-eicosane-d42	17.67	84214.1	1.28	95.3
34)	n-triacontane-d62	29.58	81133.2	1.27	94.8
1)	n-hexadecane-d34	12.99	231520	3.33	231520.000
16)	5a-androstane	18.28	285717	3.34	285717.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ENV3075A.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 23:59:28
 Operator : Meghan Dailey
 Sample : Procedural Blank
 Misc :
 ALS Vial : 6 Sample Multiplier: 0.066667

Integration File: autoint1.e
 Quant Time: Aug 16 08:46:58 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Thu Aug 15 08:33:56 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound		R.T.	Response	Conc	Units

Internal Standards					
1) I	n-hexadecane-d34	12.992	231520	50.000	ug/mlm
16) I	5a-androstane	18.279	285717	50.072	ug/mlm
System Monitoring Compounds					
6) S	n-dodecane-d26	8.698	88810	1.238	ug/mlm
23) S	n-eicosane-d42	17.670	84214	1.279	ug/mlm
34) S	n-triacontane-d62	29.583	81133	1.266	ug/mlm
Target Compounds					
2)	n-C8	0.000	0	N.D.	ug/mlm
3)	n-C9	0.000	0	N.D.	ug/mlm
4)	n-C10	0.000	0	N.D.	ug/mlm
5)	n-C11	0.000	0	N.D.	ug/mlm
7)	n-C12	0.000	0	N.D.	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mlm
9)	i-14	0.000	0	N.D.	ug/mlm
10)	n-C13	0.000	0	N.D.	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mlm
12)	n-C14	0.000	0	N.D.	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mlm
14)	n-C15	0.000	0	N.D.	ug/mlm
15)	n-C16	0.000	0	N.D.	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mlm
18)	n-C17	0.000	0	N.D.	ug/mlm
19)	Pristane	0.000	0	N.D.	ug/mlm
20)	n-C18	0.000	0	N.D.	ug/mlm
21)	Phytane	0.000	0	N.D.	ug/mlm
22)	n-C19	0.000	0	N.D.	ug/mlm
24)	n-C20	0.000	0	N.D.	ug/mlm
25)	n-C21	0.000	0	N.D.	ug/mlm
26)	n-C22	0.000	0	N.D.	ug/mlm
27)	n-C23	0.000	0	N.D.	ug/mlm
28)	n-C24	0.000	0	N.D.	ug/mlm
29)	n-C25	0.000	0	N.D.	ug/mlm
30)	n-C26	0.000	0	N.D.	ug/mlm
31)	n-C27	0.000	0	N.D.	ug/mlm
32)	n-C28	0.000	0	N.D.	ug/mlm
33)	n-C29	0.000	0	N.D.	ug/mlm
35)	n-C30	0.000	0	N.D.	ug/mlm
36)	n-C31	0.000	0	N.D.	ug/mlm
37)	n-C32	0.000	0	N.D.	ug/mlm
38)	n-C33	0.000	0	N.D.	ug/mlm
39)	n-C34	0.000	0	N.D.	ug/mlm
40)	n-C35	0.000	0	N.D.	ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ENV3075A.D
 Signal(s) : FID1A.CH
 Acq On : 14-Aug-2013, 23:59:28
 Operator : Meghan Dailey
 Sample : Procedural Blank
 Misc :
 ALS Vial : 6 Sample Multiplier: 0.066667

Integration File: autoint1.e
 Quant Time: Aug 16 08:46:58 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Thu Aug 15 08:33:56 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/ml
42)	n-C37	0.000	0	N.D.	ug/ml
43)	n-C38	0.000	0	N.D.	ug/ml
44)	n-C39	0.000	0	N.D.	ug/ml
45)	n-C40	0.000	0	N.D.	ug/ml
46)	TPH	12.992f	5996684	75.139	ug/ml
47)	TRH1	8.698	105465	1.321	ug/ml
48)	TRH2	12.992f	659757	8.267	ug/ml
49)	TRH3	23.776	19577	0.245	ug/ml
50)	TRH4	29.583	103725	1.300	ug/ml
51)	TRH5	37.097f	102550	1.285	ug/ml
52)	TRH6	37.806f	54621	0.684	ug/ml
53)	GRO	0.000	0	N.D.	ug/ml
54)	DRO	0.000	0	N.D.	ug/ml
55)	RRO	0.000	0	N.D.	ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window

(m)=manual int.

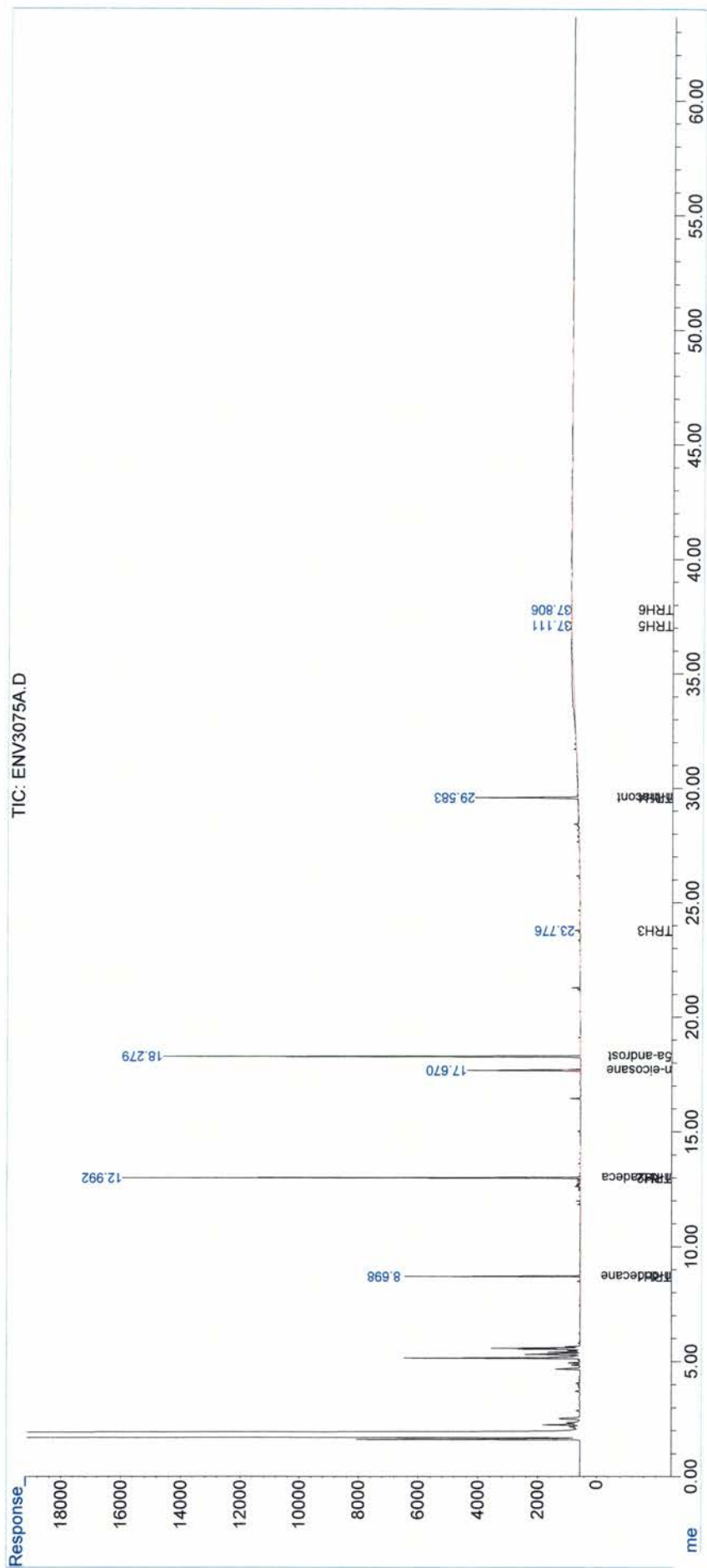
```

Data Path      : C:\msdchem\2\data\FID10076\
Data File     : ENV3075A.D
Signal(s)     : FID1A.CH
Acq On       : 14-Aug-2013, 23:59:28
Operator      : Meghan Dailey
Sample        : Procedural Blank
Misc         :
ALS Vial      : 6   Sample Multiplier: 0.06

```

Integration File: autoint1.e
Quant Time: Aug 16 08:46:58 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Thu Aug 15 08:33:56 2013
Response via : Initial Calibration
Integrator: ChemStation

```
Volume Inj. :
Signal Phase :
Signal Info :
```



Data File Name	ENV3075C.D	Concentration	ENV3075C.D
Sample Name	MS (SED-DA-035 (0-0.5))		MS (SED-DA-035 (0-0.5))
Misc Info	0		15-Aug-2013, 01:10:02
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 01:10:02		0.0665336
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	7
Vial Number	7	IS Area 1	232627
Sample Multiplier	0.0665336	IS Area 2	288415

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	4.88	28869.7	0.41	0.409
4)	n-C10	6.29	40258.5	0.53	0.530
5)	n-C11	7.64	45409.2	0.59	0.588
7)	n-C12	8.90	50663.9	0.63	0.627
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	52063.3	0.65	0.645
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.17	56359.4	0.68	0.680
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.20	59532.7	0.71	0.712
15)	n-C16	13.24	59587.6	0.71	0.710
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	77014.5	0.90	0.898
19)	Pristane	14.47	59522.8	0.70	0.697
20)	n-C18	15.54	85108	1.01	1.012
21)	Phytane	15.70	62566	0.73	0.731
22)	n-C19	16.79	104524	1.25	1.251
24)	n-C20	18.07	68271.2	0.82	0.816
25)	n-C21	19.37	137503	1.63	1.634
26)	n-C22	20.68	68890.7	0.82	0.818
27)	n-C23	21.97	122597	1.46	1.455
28)	n-C24	23.23	77426	0.92	0.920
29)	n-C25	24.47	112769	1.34	1.338
30)	n-C26	25.67	69438.9	0.82	0.825
31)	n-C27	26.84	169227	2.06	2.058
32)	n-C28	27.97	79675.4	0.96	0.956
33)	n-C29	29.07	280118	3.35	3.345
35)	n-C30	30.13	69690.7	0.84	0.840
36)	n-C31	31.16	168445	2.06	2.060
37)	n-C32	32.16	51786.8	0.64	0.639
38)	n-C33	33.13	39789.9	0.50	0.502
39)	n-C34	34.07	61721.2	0.77	0.770
40)	n-C35	35.09	43906	0.56	0.561
41)	n-C36	36.27	70220.8	0.83	0.832
42)	n-C37	37.61	103422	1.34	1.342
43)	n-C38	39.20	53041.2	0.70	0.699
44)	n-C39	41.05	42233.6	0.58	0.581
45)	n-C40	43.24	43314	0.64	0.636
46)	TPH	0.00	0	0.00	0.000
47)	TRH1	0.00	0	0.00	0.000
48)	TRH2	0.00	0	0.00	0.000
49)	TRH3	0.00	0	0.00	0.000
50)	TRH4	0.00	0	0.00	0.000
51)	TRH5	0.00	0	0.00	0.000
52)	TRH6	0.00	0	0.00	0.000
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	82878.1	1.15	86.2
23)	n-eicosane-d42	17.67	79633.4	1.20	89.3
34)	n-triacontane-d62	29.59	74979.4	1.16	86.8
1)	n-hexadecane-d34	12.99	232627	3.33	232627.000
16)	5a-androstane	18.28	288415	3.33	288415.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ENV3075C.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 01:10:02
 Operator : Meghan Dailey
 Sample : MS (SED-DA-035 (0-0.5))
 Misc :
 ALS Vial : 7 Sample Multiplier: 0.0665336

Integration File: autoint1.e
 Quant Time: Aug 23 17:29:39 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound		R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.992	232627	50.000 ug/mlm
16) I	5a-androstane	18.281	288415	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.698	82878	1.148 ug/mlm
23) S	n-eicosane-d42	17.670	79633	1.195 ug/mlm
34) S	n-triacontane-d62	29.589	74979	1.156 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	4.883	28870	0.409 ug/mlm
4)	n-C10	6.292	40259	0.530 ug/mlm
5)	n-C11	7.644	45409	0.588 ug/mlm
7)	n-C12	8.904	50664	0.627 ug/mlm
8)	i-13	0.000	0	N.D. ug/mlm
9)	i-14	0.000	0	N.D. ug/mlm
10)	n-C13	10.076	52063	0.645 ug/mlm
11)	i-15	0.000	0	N.D. ug/mlm
12)	n-C14	11.172	56359	0.680 ug/mlm
13)	i-16	0.000	0	N.D. ug/mlm
14)	n-C15	12.202	59533	0.712 ug/mlm
15)	n-C16	13.244	59588	0.710 ug/mlm
17)	i-18	0.000	0	N.D. ug/mlm
18)	n-C17	14.357	77015	0.898 ug/mlm
19)	Pristane	14.473	59523	0.697 ug/mlm
20)	n-C18	15.536	85108	1.012 ug/mlm
21)	Phytane	15.705	62566	0.731 ug/mlm
22)	n-C19	16.787	104524	1.251 ug/mlm
24)	n-C20	18.069	68271	0.816 ug/mlm
25)	n-C21	19.375	137503	1.634 ug/mlm
26)	n-C22	20.680	68891	0.818 ug/mlm
27)	n-C23	21.970	122597	1.455 ug/mlm
28)	n-C24	23.232	77426	0.920 ug/mlm
29)	n-C25	24.470	112769	1.338 ug/mlm
30)	n-C26	25.670	69439	0.825 ug/mlm
31)	n-C27	26.840	169227	2.058 ug/mlm
32)	n-C28	27.966	79675	0.956 ug/mlm
33)	n-C29	29.070	280118	3.345 ug/mlm
35)	n-C30	30.126	69691	0.840 ug/mlm
36)	n-C31	31.165	168445	2.060 ug/mlm
37)	n-C32	32.157	51787	0.639 ug/mlm
38)	n-C33	33.127	39790	0.502 ug/mlm
39)	n-C34	34.067	61721	0.770 ug/mlm
40)	n-C35	35.094	43906	0.561 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ENV3075C.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 01:10:02
 Operator : Meghan Dailey
 Sample : MS (SED-DA-035 (0-0.5))
 Misc :
 ALS Vial : 7 Sample Multiplier: 0.0665336

Integration File: autoint1.e
 Quant Time: Aug 23 17:29:39 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.266	70221	0.832 ug/mlm
42)	n-C37	37.614	103422	1.342 ug/mlm
43)	n-C38	39.199	53041	0.699 ug/mlm
44)	n-C39	41.054	42234	0.581 ug/mlm
45)	n-C40	43.239	43314	0.636 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

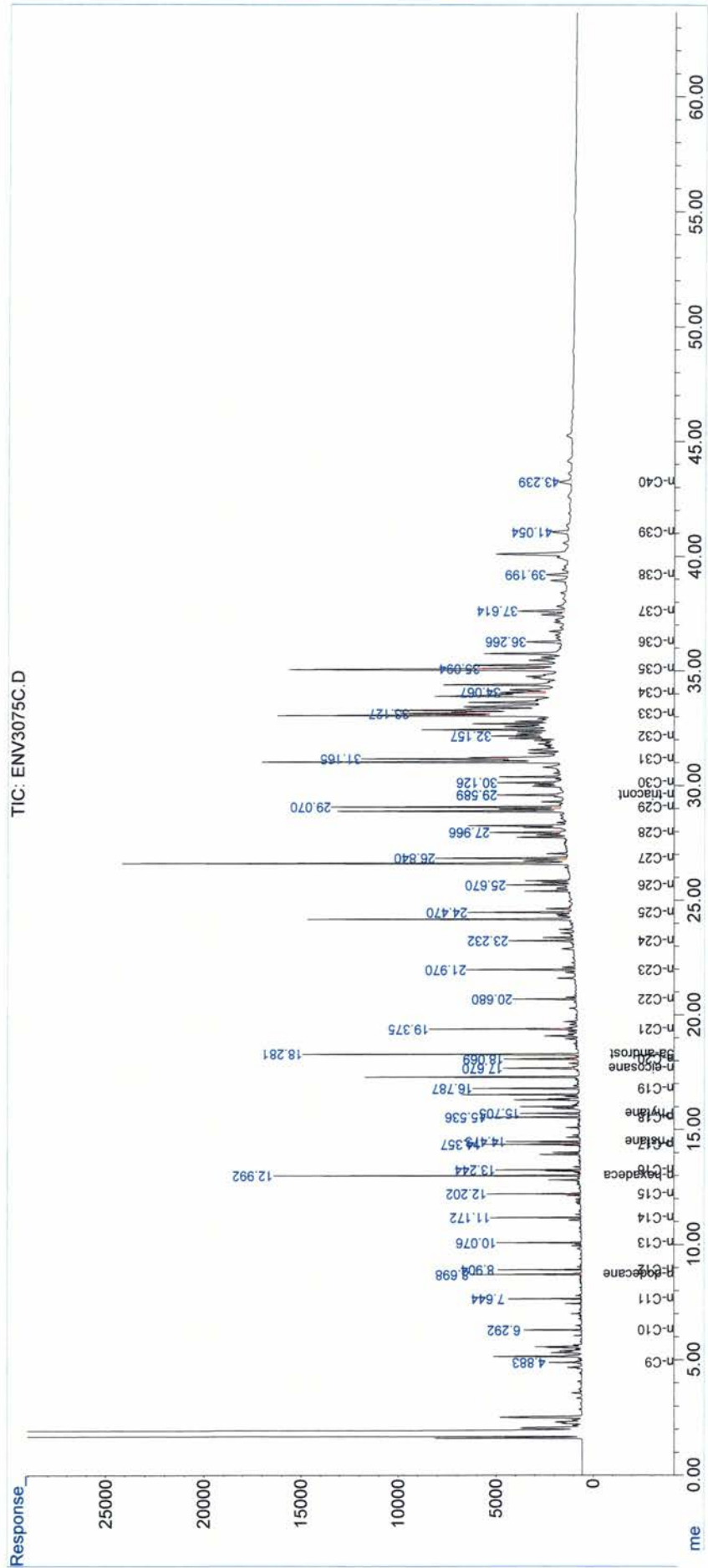
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ENV3075C.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 01:10:02
Operator : Meghan Dailey
Sample : MS (SED-DA-035 (0-0.5))
Misc :
ALS Vial : 7 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 23 17:29:39 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ENV3075D.D	Concentration	ENV3075D.D
Sample Name	MSD (SED-DA-035 (0-0.5))		MSD (SED-DA-035 (0-0.5))
Misc Info	0		15-Aug-2013, 02:20:41
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 02:20:41		0.0661813
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	8
Vial Number	8	IS Area 1	220676
Sample Multiplier	0.0661813	IS Area 2	271782

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	4.88	29085.5	0.43	0.432
4)	n-C10	6.29	36931.1	0.51	0.509
5)	n-C11	7.64	41071.6	0.56	0.557
7)	n-C12	8.90	45657.7	0.59	0.592
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	47171.5	0.61	0.613
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.17	51245.1	0.65	0.648
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.20	60054.2	0.75	0.753
15)	n-C16	13.24	55059.3	0.69	0.688
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	72899.3	0.90	0.897
19)	Pristane	14.47	55567.7	0.69	0.687
20)	n-C18	15.54	80682.9	1.01	1.013
21)	Phytane	15.70	60069	0.74	0.741
22)	n-C19	16.79	99585.9	1.26	1.258
24)	n-C20	18.07	68219.6	0.86	0.861
25)	n-C21	19.38	142216	1.78	1.784
26)	n-C22	20.68	64716	0.81	0.812
27)	n-C23	21.97	115904	1.45	1.452
28)	n-C24	23.23	72941.9	0.91	0.915
29)	n-C25	24.47	114011	1.43	1.428
30)	n-C26	25.67	71052.1	0.89	0.891
31)	n-C27	26.84	151768	1.95	1.948
32)	n-C28	27.97	90981.3	1.15	1.152
33)	n-C29	29.07	267650	3.37	3.374
35)	n-C30	30.12	78065.9	0.99	0.993
36)	n-C31	31.16	168433	2.17	2.174
37)	n-C32	32.16	56001.7	0.73	0.729
38)	n-C33	33.13	37232.3	0.50	0.496
39)	n-C34	34.07	64497.9	0.85	0.850
40)	n-C35	35.10	42445.1	0.57	0.572
41)	n-C36	36.27	68570.1	0.86	0.857
42)	n-C37	37.61	100364	1.37	1.375
43)	n-C38	39.19	51594.2	0.72	0.718
44)	n-C39	41.05	41791.3	0.61	0.607
45)	n-C40	43.25	43072.8	0.67	0.668
46)	TPH	0.00	0	0.00	0.000
47)	TRH1	0.00	0	0.00	0.000
48)	TRH2	0.00	0	0.00	0.000
49)	TRH3	0.00	0	0.00	0.000
50)	TRH4	0.00	0	0.00	0.000
51)	TRH5	0.00	0	0.00	0.000
52)	TRH6	0.00	0	0.00	0.000
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	76013.7	1.10	83.4
23)	n-eicosane-d42	17.67	81815.8	1.30	97.3
34)	n-triacontane-d62	29.59	68313.2	1.11	83.9
1)	n-hexadecane-d34	12.99	220676	3.31	220676.000
16)	5a-androstane	18.28	271782	3.31	271782.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ENV3075D.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 02:20:41
 Operator : Meghan Dailey
 Sample : MSD (SED-DA-035 (0-0.5))
 Misc :
 ALS Vial : 8 Sample Multiplier: 0.0661813

Integration File: autoint1.e
 Quant Time: Aug 23 17:32:35 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.992	220676	50.000 ug/mlm
16) I	5a-androstane	18.281	271782	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.697	76014	1.104 ug/mlm
23) S	n-eicosane-d42	17.671	81816	1.297 ug/mlm
34) S	n-triacontane-d62	29.589	68313	1.112 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	4.883	29085	0.432 ug/mlm
4)	n-C10	6.292	36931	0.509 ug/mlm
5)	n-C11	7.644	41072	0.557 ug/mlm
7)	n-C12	8.904	45658	0.592 ug/mlm
8)	i-13	0.000	0	N.D. ug/mlm
9)	i-14	0.000	0	N.D. ug/mlm
10)	n-C13	10.076	47172	0.613 ug/mlm
11)	i-15	0.000	0	N.D. ug/mlm
12)	n-C14	11.171	51245	0.648 ug/mlm
13)	i-16	0.000	0	N.D. ug/mlm
14)	n-C15	12.203	60054	0.753 ug/mlm
15)	n-C16	13.245	55059	0.688 ug/mlm
17)	i-18	0.000	0	N.D. ug/mlm
18)	n-C17	14.356	72899	0.897 ug/mlm
19)	Pristane	14.474	55568	0.687 ug/mlm
20)	n-C18	15.537	80683	1.013 ug/mlm
21)	Phytane	15.703	60069	0.741 ug/mlm
22)	n-C19	16.787	99586	1.258 ug/mlm
24)	n-C20	18.070	68220	0.861 ug/mlm
25)	n-C21	19.376	142216	1.784 ug/mlm
26)	n-C22	20.680	64716	0.812 ug/mlm
27)	n-C23	21.969	115904	1.452 ug/mlm
28)	n-C24	23.233	72942	0.915 ug/mlm
29)	n-C25	24.468	114011	1.428 ug/mlm
30)	n-C26	25.670	71052	0.891 ug/mlm
31)	n-C27	26.838	151768	1.948 ug/mlm
32)	n-C28	27.965	90981	1.152 ug/mlm
33)	n-C29	29.068	267650	3.374 ug/mlm
35)	n-C30	30.124	78066	0.993 ug/mlm
36)	n-C31	31.165	168433	2.174 ug/mlm
37)	n-C32	32.159	56002	0.729 ug/mlm
38)	n-C33	33.127	37232	0.496 ug/mlm
39)	n-C34	34.066	64498	0.850 ug/mlm
40)	n-C35	35.096	42445	0.572 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ENV3075D.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 02:20:41
 Operator : Meghan Dailey
 Sample : MSD (SED-DA-035 (0-0.5))
 Misc :
 ALS Vial : 8 Sample Multiplier: 0.0661813

Integration File: autoint1.e
 Quant Time: Aug 23 17:32:35 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.266	68570	0.857 ug/mlm
42)	n-C37	37.614	100364	1.375 ug/mlm
43)	n-C38	39.194	51594	0.718 ug/mlm
44)	n-C39	41.054	41791	0.607 ug/mlm
45)	n-C40	43.250	43073	0.668 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

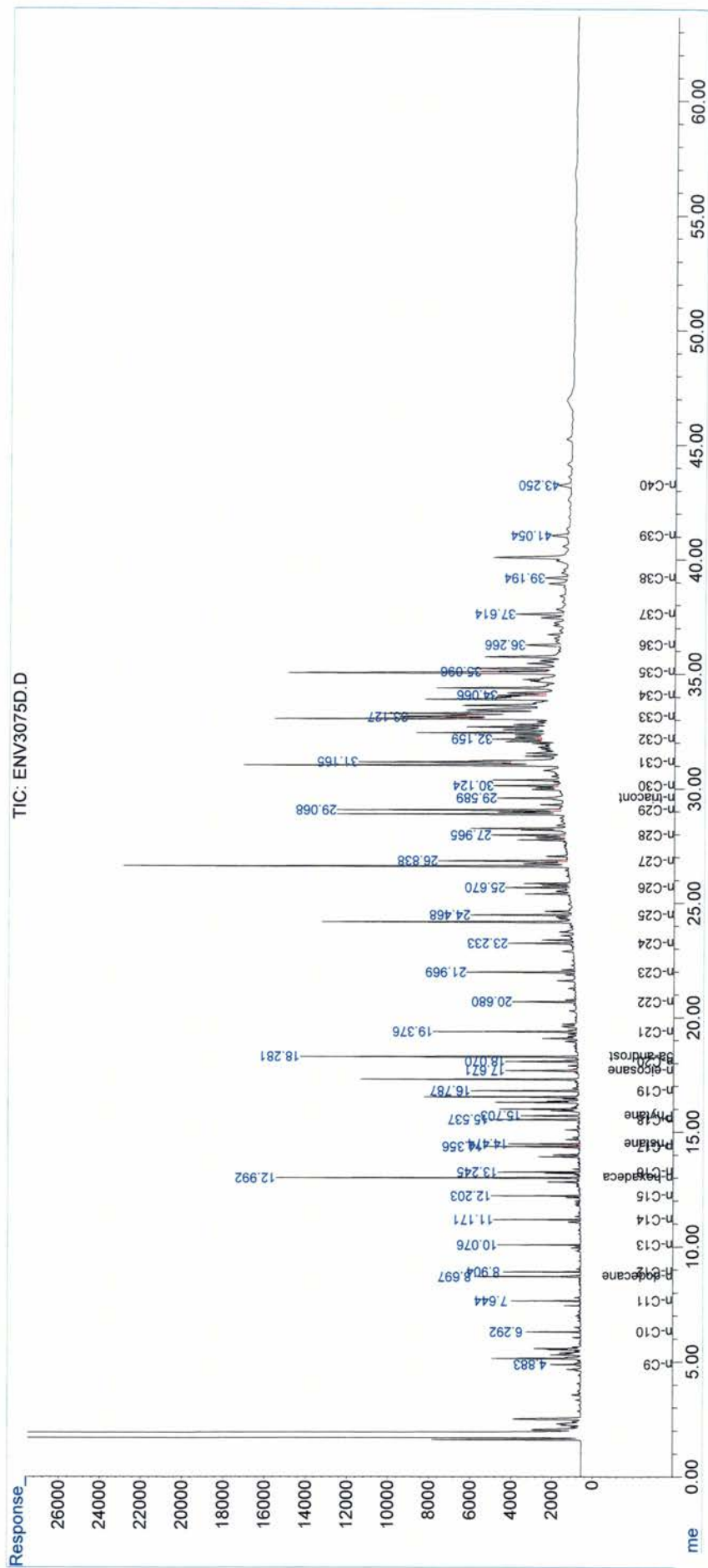
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ENV3075D.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 02:20:41
Operator : Meghan Dailey
Sample : MSD (SED-DA-035 (0-0.5))
Misc :
ALS Vial : 8 Sample Multiplier: 0.0661813

Integration File: autoint1.e
Quant Time: Aug 23 17:32:35 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
Quant Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ENV3075E.D	Concentration	ENV3075E.D
Sample Name	Dup (SED-DA-034 (0-0.5))		Dup (SED-DA-034 (0-0.5))
Misc Info	0		15-Aug-2013, 03:31:17
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 03:31:17		0.0665779
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	9
Vial Number	9	IS Area 1	216618
Sample Multiplier	0.0665779	IS Area 2	271454

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.29	647.229	0.01	0.009
5)	n-C11	7.65	1021	0.01	0.014
7)	n-C12	8.90	1891.71	0.03	0.025
8)	i-13	9.10	177.412	0.00	0.002
9)	i-14	9.80	1146.47	0.01	0.015
10)	n-C13	10.08	1563.87	0.02	0.021
11)	i-15	10.95	1475.6	0.02	0.019
12)	n-C14	11.17	2280.46	0.03	0.030
13)	i-16	11.83	3147.37	0.04	0.040
14)	n-C15	12.21	44206.7	0.57	0.568
15)	n-C16	13.24	9959.89	0.13	0.128
17)	i-18	13.81	2016.06	0.03	0.025
18)	n-C17	14.35	19279.9	0.24	0.239
19)	Pristane	14.47	4345.49	0.05	0.054
20)	n-C18	15.53	35669.5	0.45	0.451
21)	Phytane	15.71	10345.9	0.13	0.128
22)	n-C19	16.79	49296.9	0.63	0.627
24)	n-C20	18.07	20078.6	0.26	0.255
25)	n-C21	19.38	129139	1.63	1.631
26)	n-C22	20.68	21191.2	0.27	0.268
27)	n-C23	21.97	87891.5	1.11	1.109
28)	n-C24	23.23	27919.5	0.35	0.353
29)	n-C25	24.47	74163.1	0.94	0.936
30)	n-C26	25.67	19496	0.25	0.246
31)	n-C27	26.84	148384	1.92	1.918
32)	n-C28	27.97	65112.7	0.83	0.830
33)	n-C29	29.09	659977	8.38	8.379
35)	n-C30	30.13	56874.8	0.73	0.729
36)	n-C31	31.19	718012	9.33	9.335
37)	n-C32	32.08	61807.4	0.81	0.810
38)	n-C33	33.22	912939	12.25	12.246
39)	n-C34	34.04	85090.5	1.13	1.129
40)	n-C35	35.10	774136	10.51	10.515
41)	n-C36	36.24	40121.5	0.51	0.505
42)	n-C37	37.62	148335	2.05	2.047
43)	n-C38	39.22	9632.09	0.13	0.135
44)	n-C39	41.08	8642.59	0.13	0.126
45)	n-C40	43.18	5227.85	0.08	0.082
46)	TPH	26.63	47644300	627.51	627.512
47)	TRH1	11.80	463020	6.10	6.098
48)	TRH2	12.99	2638510	34.75	34.751
49)	TRH3	26.63	3031010	39.90	39.902
50)	TRH4	29.09	4294480	56.56	56.562
51)	TRH5	33.33	12987200	171.05	171.052
52)	TRH6	40.12	833652	10.98	10.980
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	80770.5	1.20	90.3
23)	n-eicosane-d42	17.67	79369.1	1.27	94.5
34)	n-triacontane-d62	29.59	71835	1.18	88.4
1)	n-hexadecane-d34	12.99	216618	3.33	216618.000
16)	5a-androstane	18.28	271454	3.33	271454.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ENV3075E.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 03:31:17
 Operator : Meghan Dailey
 Sample : Dup (SED-DA-034 (0-0.5))
 Misc :
 ALS Vial : 9 Sample Multiplier: 0.0665779

Integration File: autoint1.e
 Quant Time: Aug 23 17:42:38 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.992	216618	50.000 ug/mlm
16) I	5a-androstane	18.281	271454	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.699	80770	1.202 ug/mlm
23) S	n-eicosane-d42	17.671	79369	1.267 ug/mlm
34) S	n-triacontane-d62	29.591	71835	1.178 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	0.000	0	N.D. ug/mlm
4)	n-C10	6.294	647	0.009 ug/mlm
5)	n-C11	7.646	1021	0.014 ug/mlm
7)	n-C12	8.904	1892	0.025 ug/mlm
8)	i-13	9.095	177	0.002 ug/mlm
9)	i-14	9.797	1146	0.015 ug/mlm
10)	n-C13	10.078	1564	0.021 ug/mlm
11)	i-15	10.945	1476	0.019 ug/mlm
12)	n-C14	11.173	2280	0.030 ug/mlm
13)	i-16	11.825	3147	0.040 ug/mlm
14)	n-C15	12.213	44207	0.568 ug/mlm
15)	n-C16	13.236	9960	0.128 ug/mlm
17)	i-18	13.813	2016	0.025 ug/mlm
18)	n-C17	14.355	19280	0.239 ug/mlm
19)	Pristane	14.471	4345	0.054 ug/mlm
20)	n-C18	15.531	35670	0.451 ug/mlm
21)	Phytane	15.708	10346	0.128 ug/mlm
22)	n-C19	16.787	49297	0.627 ug/mlm
24)	n-C20	18.069	20079	0.255 ug/mlm
25)	n-C21	19.378	129139	1.631 ug/mlm
26)	n-C22	20.679	21191	0.268 ug/mlm
27)	n-C23	21.970	87891	1.109 ug/mlm
28)	n-C24	23.231	27920	0.353 ug/mlm
29)	n-C25	24.472	74163	0.936 ug/mlm
30)	n-C26	25.671	19496	0.246 ug/mlm
31)	n-C27	26.839	148384	1.918 ug/mlm
32)	n-C28	27.967	65113	0.830 ug/mlm
33)	n-C29	29.090f	659977	8.379 ug/mlm
35)	n-C30	30.132	56875	0.729 ug/mlm
36)	n-C31	31.187	718012	9.335 ug/mlm
37)	n-C32	32.076f	61807	0.810 ug/mlm
38)	n-C33	33.217f	912939	12.246 ug/mlm
39)	n-C34	34.040	85090	1.129 ug/mlm
40)	n-C35	35.102	774136	10.515 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
Data File : ENV3075E.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 03:31:17
Operator : Meghan Dailey
Sample : Dup (SED-DA-034 (0-0.5))
Misc :
ALS Vial : 9 Sample Multiplier: 0.0665779

Integration File: autoint1.e
Quant Time: Aug 23 17:42:38 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.242	40122	0.505 ug/mlm
42)	n-C37	37.616	148335	2.047 ug/mlm
43)	n-C38	39.217	9632	0.135 ug/mlm
44)	n-C39	41.084	8643	0.126 ug/mlm
45)	n-C40	43.180	5228	0.082 ug/mlm
46)	TPH	26.629	47644313	627.512 ug/mlm
47)	TRH1	11.800f	463020	6.098 ug/mlm
48)	TRH2	12.992f	2638506	34.751 ug/mlm
49)	TRH3	26.629f	3031010	39.902 ug/mlm
50)	TRH4	29.090	4294480	56.562 ug/mlm
51)	TRH5	33.334	12987243	171.052 ug/mlm
52)	TRH6	40.118f	833652	10.980 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

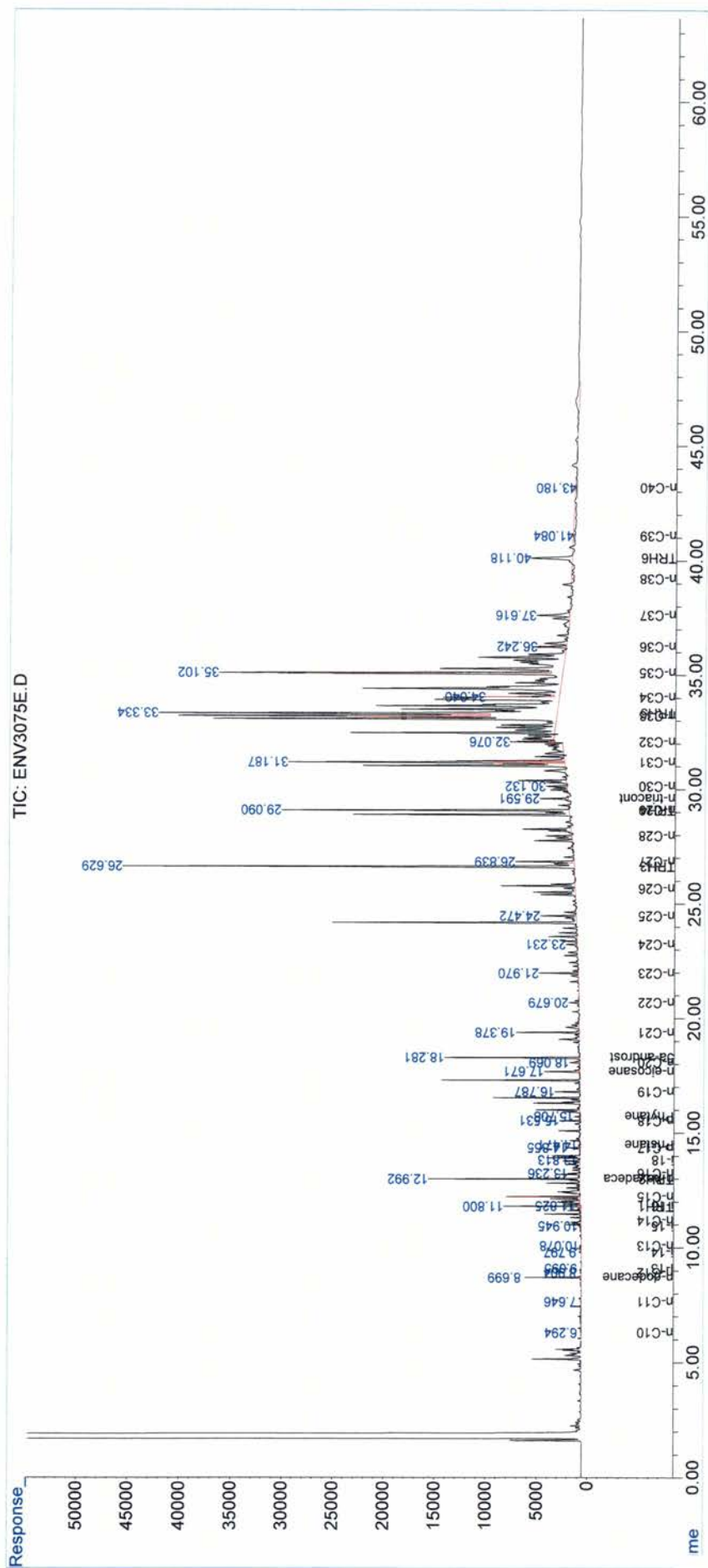
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ENV3075E.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 03:31:17
Operator : Meghan Dailey
Sample : Dup (SED-DA-034 (0-0.5))
Misc :
ALS Vial : 9 Sample Multiplier: 0.0665779

Integration File: autoint1.e
Quant Time: Aug 23 17:42:38 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
Quant Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ARC1537.D	Concentration	ARC1537.D
Sample Name	SED-DA-033 (0-0.5)		SED-DA-033 (0-0.5)
Misc Info	0		15-Aug-2013, 05:52:40
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 05:52:40		0.0665779
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	11
Vial Number	11	IS Area 1	226006
Sample Multiplier	0.0665779	IS Area 2	282460

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.29	650.729	0.01	0.009
5)	n-C11	7.65	1078.05	0.01	0.014
7)	n-C12	8.90	3430.11	0.04	0.044
8)	i-13	9.10	151.98	0.00	0.002
9)	i-14	9.81	22754.2	0.28	0.283
10)	n-C13	10.08	1635.82	0.02	0.021
11)	i-15	10.94	1064.7	0.01	0.013
12)	n-C14	11.17	3280.58	0.04	0.041
13)	i-16	11.84	1154.04	0.01	0.014
14)	n-C15	12.22	15287.5	0.19	0.188
15)	n-C16	13.25	6668.77	0.08	0.082
17)	i-18	13.82	1961.91	0.02	0.024
18)	n-C17	14.35	10643.9	0.13	0.127
19)	Pristane	14.46	4269.29	0.05	0.051
20)	n-C18	15.53	18479.9	0.22	0.225
21)	Phytane	15.71	5859.53	0.07	0.070
22)	n-C19	16.79	26420.5	0.32	0.323
24)	n-C20	18.07	9427.48	0.12	0.115
25)	n-C21	19.38	38337.1	0.47	0.465
26)	n-C22	20.68	13029.3	0.16	0.158
27)	n-C23	21.97	35420.3	0.43	0.430
28)	n-C24	23.23	15456.9	0.19	0.188
29)	n-C25	24.47	34612.8	0.42	0.420
30)	n-C26	25.67	11922.8	0.14	0.145
31)	n-C27	26.84	86095.2	1.07	1.070
32)	n-C28	27.96	33198.7	0.41	0.407
33)	n-C29	29.07	263269	3.21	3.212
35)	n-C30	30.12	24071.3	0.30	0.296
36)	n-C31	31.17	261245	3.26	3.264
37)	n-C32	32.18	45794.2	0.58	0.577
38)	n-C33	33.17	360580	4.65	4.648
39)	n-C34	34.02	32374.5	0.41	0.413
40)	n-C35	35.06	240375	3.14	3.138
41)	n-C36	36.24	14244.7	0.17	0.172
42)	n-C37	37.60	67502.1	0.90	0.895
43)	n-C38	39.21	5640.36	0.08	0.076
44)	n-C39	41.08	5540.75	0.08	0.078
45)	n-C40	43.37	5647.05	0.08	0.085
46)	TPH	26.61	28268300	357.81	357.808
47)	TRH1	8.70	242739	3.07	3.072
48)	TRH2	12.99	1436140	18.18	18.178
49)	TRH3	26.61	2056200	26.01	26.014
50)	TRH4	29.07	2321280	29.38	29.382
51)	TRH5	35.06	6156430	77.93	77.925
52)	TRH6	37.60	554980	7.02	7.025
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	81255.1	1.16	87.0
23)	n-eicosane-d42	17.67	80434	1.23	92.1
34)	n-triacontane-d62	29.59	78650.2	1.24	93.0
1)	n-hexadecane-d34	12.99	226006	3.33	226006.000
16)	5a-androstane	18.28	282460	3.33	282460.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1537.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 05:52:40
 Operator : Meghan Dailey
 Sample : SED-DA-033 (0-0.5)
 Misc :
 ALS Vial : 11 Sample Multiplier: 0.0665779

Integration File: autoint1.e
 Quant Time: Aug 23 16:55:44 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound		R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.993	226006	50.000 ug/mlm
16) I	5a-androstane	18.281	282460	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.699	81255	1.159 ug/mlm
23) S	n-eicosane-d42	17.672	80434	1.234 ug/mlm
34) S	n-triacontane-d62	29.588	78650	1.239 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	0.000	0	N.D. ug/mlm
4)	n-C10	6.295	651	0.009 ug/mlm
5)	n-C11	7.646	1078	0.014 ug/mlm
7)	n-C12	8.903	3430	0.044 ug/mlm
8)	i-13	9.097	152	0.002 ug/mlm
9)	i-14	9.805	22754	0.283 ug/mlm
10)	n-C13	10.077	1636	0.021 ug/mlm
11)	i-15	10.943	1065	0.013 ug/mlm
12)	n-C14	11.173	3281	0.041 ug/mlm
13)	i-16	11.842	1154	0.014 ug/mlm
14)	n-C15	12.216	15288	0.188 ug/mlm
15)	n-C16	13.245	6669	0.082 ug/mlm
17)	i-18	13.818	1962	0.024 ug/mlm
18)	n-C17	14.354	10644	0.127 ug/mlm
19)	Pristane	14.463	4269	0.051 ug/mlm
20)	n-C18	15.532	18480	0.225 ug/mlm
21)	Phytane	15.710	5860	0.070 ug/mlm
22)	n-C19	16.787	26421	0.323 ug/mlm
24)	n-C20	18.070	9427	0.115 ug/mlm
25)	n-C21	19.376	38337	0.465 ug/mlm
26)	n-C22	20.682	13029	0.158 ug/mlm
27)	n-C23	21.968	35420	0.430 ug/mlm
28)	n-C24	23.229	15457	0.188 ug/mlm
29)	n-C25	24.471	34613	0.420 ug/mlm
30)	n-C26	25.667	11923	0.145 ug/mlm
31)	n-C27	26.836	86095	1.070 ug/mlm
32)	n-C28	27.962	33199	0.407 ug/mlm
33)	n-C29	29.069	263269	3.212 ug/mlm
35)	n-C30	30.122	24071	0.296 ug/mlm
36)	n-C31	31.165	261245	3.264 ug/mlm
37)	n-C32	32.177	45794	0.577 ug/mlm
38)	n-C33	33.171f	360580	4.648 ug/mlm
39)	n-C34	34.021	32374	0.413 ug/mlm
40)	n-C35	35.061	240375	3.138 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1537.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 05:52:40
 Operator : Meghan Dailey
 Sample : SED-DA-033 (0-0.5)
 Misc :
 ALS Vial : 11 Sample Multiplier: 0.0665779

Integration File: autoint1.e
 Quant Time: Aug 23 16:55:44 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.240	14245	0.172 ug/mlm
42)	n-C37	37.601	67502	0.895 ug/mlm
43)	n-C38	39.207	5640	0.076 ug/mlm
44)	n-C39	41.079	5541	0.078 ug/mlm
45)	n-C40	43.374f	5647	0.085 ug/mlm
46)	TPH	26.614	28268257	357.808 ug/mlm
47)	TRH1	8.699	242739	3.072 ug/mlm
48)	TRH2	12.993f	1436142	18.178 ug/mlm
49)	TRH3	26.614f	2056202	26.014 ug/mlm
50)	TRH4	29.069	2321279	29.382 ug/mlm
51)	TRH5	35.056	6156434	77.926 ug/mlm
52)	TRH6	37.601f	554980	7.025 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

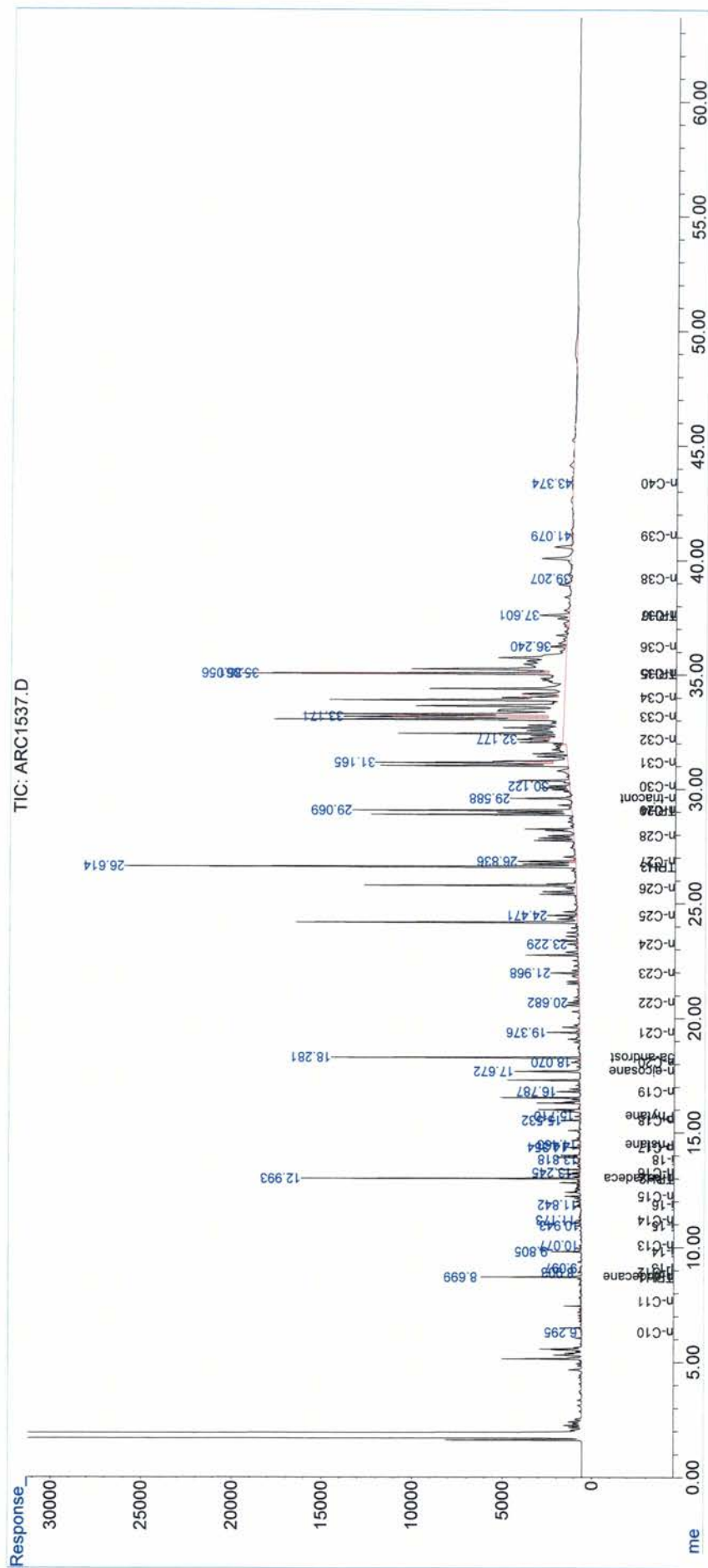
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ARC1537.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 05:52:40
Operator : Meghan Dailey
Sample : SED-DA-033 (0-0.5)
Misc :
ALS Vial : 11 Sample Multiplier: 0.0665779

Integration File: autoint1.e
Quant Time: Aug 23 16:55:44 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
Qlast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ARC1540.D	Concentration	ARC1540.D
Sample Name	SED-DA-034 (0-0.5)		SED-DA-034 (0-0.5)
Misc Info	0		15-Aug-2013, 07:03:17
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 07:03:17		0.066357
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	12
Vial Number	12	IS Area 1	227317
Sample Multiplier	0.066357	IS Area 2	284914

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.29	675.872	0.01	0.009
5)	n-C11	7.65	1183.07	0.02	0.016
7)	n-C12	8.90	2032.23	0.03	0.026
8)	i-13	9.10	164.455	0.00	0.002
9)	i-14	9.79	1518.02	0.02	0.019
10)	n-C13	10.08	1542.06	0.02	0.020
11)	i-15	10.95	1587.12	0.02	0.019
12)	n-C14	11.17	2267.78	0.03	0.028
13)	i-16	11.83	3555.87	0.04	0.043
14)	n-C15	12.22	52875.8	0.65	0.645
15)	n-C16	13.24	10144.8	0.12	0.123
17)	i-18	13.81	1920.86	0.02	0.023
18)	n-C17	14.36	19534.6	0.23	0.230
19)	Pristane	14.47	4462.81	0.05	0.053
20)	n-C18	15.53	37851.5	0.45	0.455
21)	Phytane	15.71	10623.5	0.13	0.125
22)	n-C19	16.79	51618.9	0.62	0.624
24)	n-C20	18.07	21086.1	0.25	0.254
25)	n-C21	19.38	136591	1.64	1.638
26)	n-C22	20.68	22451.4	0.27	0.269
27)	n-C23	21.97	95130.5	1.14	1.140
28)	n-C24	23.23	28577.6	0.34	0.343
29)	n-C25	24.47	77280.5	0.93	0.926
30)	n-C26	25.67	21195.8	0.25	0.254
31)	n-C27	26.84	148696	1.83	1.825
32)	n-C28	27.96	69023.8	0.84	0.836
33)	n-C29	29.09	620509	7.48	7.481
35)	n-C30	30.13	59886	0.73	0.729
36)	n-C31	31.19	722279	8.92	8.917
37)	n-C32	32.19	65283	0.81	0.813
38)	n-C33	33.22	1053120	13.41	13.414
39)	n-C34	34.04	93280.4	1.18	1.175
40)	n-C35	35.10	791659	10.21	10.211
41)	n-C36	36.24	41448.2	0.50	0.496
42)	n-C37	37.62	143662	1.88	1.882
43)	n-C38	39.23	11824.7	0.16	0.157
44)	n-C39	41.09	11170.9	0.16	0.155
45)	n-C40	43.18	5636.32	0.08	0.084
46)	TPH	26.63	49553600	619.76	619.763
47)	TRH1	8.70	279805	3.50	3.499
48)	TRH2	12.99	2439170	30.51	30.507
49)	TRH3	26.63	3024730	37.81	37.812
50)	TRH4	29.09	4571410	57.17	57.174
51)	TRH5	33.33	14429100	180.46	180.463
52)	TRH6	40.12	1047110	13.10	13.096
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	84167.3	1.19	89.6
23)	n-eicosane-d42	17.67	85602.3	1.30	97.1
34)	n-triacontane-d62	29.59	81768	1.27	95.8
1)	n-hexadecane-d34	12.99	227317	3.32	227317.000
16)	5a-androstane	18.28	284914	3.32	284914.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1540.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 07:03:17
 Operator : Meghan Dailey
 Sample : SED-DA-034 (0-0.5)
 Misc :
 ALS Vial : 12 Sample Multiplier: 0.066357

Integration File: autoint1.e
 Quant Time: Aug 23 16:58:06 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.993	227317	50.000 ug/mlm
16) I	5a-androstane	18.282	284914	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.698	84167	1.190 ug/mlm
23) S	n-eicosane-d42	17.670	85602	1.297 ug/mlm
34) S	n-triacontane-d62	29.591	81768	1.273 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	0.000	0	N.D. ug/mlm
4)	n-C10	6.294	676	0.009 ug/mlm
5)	n-C11	7.646	1183	0.016 ug/mlm
7)	n-C12	8.904	2032	0.026 ug/mlm
8)	i-13	9.096	164	0.002 ug/mlm
9)	i-14	9.792	1518	0.019 ug/mlm
10)	n-C13	10.077	1542	0.020 ug/mlm
11)	i-15	10.946	1587	0.019 ug/mlm
12)	n-C14	11.173	2268	0.028 ug/mlm
13)	i-16	11.829	3556	0.043 ug/mlm
14)	n-C15	12.217	52876	0.645 ug/mlm
15)	n-C16	13.237	10145	0.123 ug/mlm
17)	i-18	13.813	1921	0.023 ug/mlm
18)	n-C17	14.355	19535	0.230 ug/mlm
19)	Pristane	14.473	4463	0.053 ug/mlm
20)	n-C18	15.531	37851	0.455 ug/mlm
21)	Phytane	15.709	10624	0.125 ug/mlm
22)	n-C19	16.787	51619	0.624 ug/mlm
24)	n-C20	18.069	21086	0.254 ug/mlm
25)	n-C21	19.377	136591	1.638 ug/mlm
26)	n-C22	20.677	22451	0.269 ug/mlm
27)	n-C23	21.970	95130	1.140 ug/mlm
28)	n-C24	23.230	28578	0.343 ug/mlm
29)	n-C25	24.472	77280	0.926 ug/mlm
30)	n-C26	25.671	21196	0.254 ug/mlm
31)	n-C27	26.841	148696	1.825 ug/mlm
32)	n-C28	27.964	69024	0.836 ug/mlm
33)	n-C29	29.089	620509	7.481 ug/mlm
35)	n-C30	30.128	59886	0.729 ug/mlm
36)	n-C31	31.187	722279	8.917 ug/mlm
37)	n-C32	32.186	65283	0.813 ug/mlm
38)	n-C33	33.216f	1053119	13.414 ug/mlm
39)	n-C34	34.036	93280	1.175 ug/mlm
40)	n-C35	35.104	791659	10.211 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1540.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 07:03:17
 Operator : Meghan Dailey
 Sample : SED-DA-034 (0-0.5)
 Misc :
 ALS Vial : 12 Sample Multiplier: 0.066357

Integration File: autoint1.e
 Quant Time: Aug 23 16:58:06 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.242	41448	0.496 ug/mlm
42)	n-C37	37.619	143662	1.882 ug/mlm
43)	n-C38	39.227	11825	0.157 ug/mlm
44)	n-C39	41.094	11171	0.155 ug/mlm
45)	n-C40	43.184	5636	0.084 ug/mlm
46)	TPH	26.629	49553553	619.763 ug/mlm
47)	TRH1	8.698	279805	3.499 ug/mlm
48)	TRH2	12.993f	2439171	30.507 ug/mlm
49)	TRH3	26.629f	3024727	37.812 ug/mlm
50)	TRH4	29.089	4571413	57.174 ug/mlm
51)	TRH5	33.334	14429057	180.463 ug/mlm
52)	TRH6	40.118f	1047114	13.096 ug/mlm
53)	GRO	0.000	0	N.D. ug/ml
54)	DRO	0.000	0	N.D. ug/ml
55)	RRO	0.000	0	N.D. ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

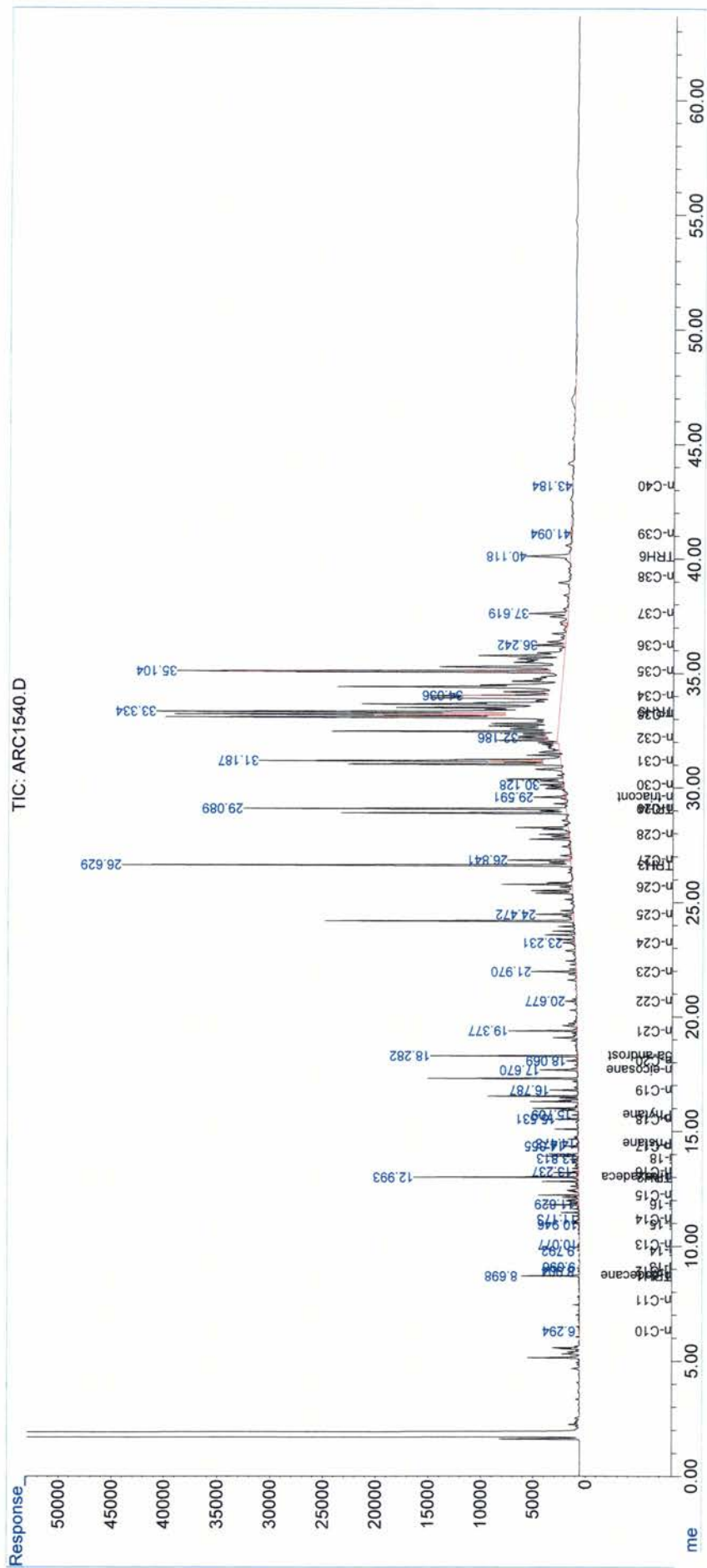
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ARC1540.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 07:03:17
Operator : Meghan Dailey
Sample : SED-DA-034 (0-0.5)
Misc :
ALS Vial : 12 Sample Multiplier: 0.066357

Integration File: autoint1.e
Quant Time: Aug 23 16:58:06 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FIDIC08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ARC1543.D	Concentration	ARC1543.D
Sample Name	SED-DA-035 (0-0.5)		SED-DA-035 (0-0.5)
Misc Info	0		15-Aug-2013, 08:14:05
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 08:14:05		0.0664894
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	13
Vial Number	13	IS Area 1	295961
Sample Multiplier	0.0664894	IS Area 2	365712

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	1056.38	0.01	0.011
5)	n-C11	7.65	1981.36	0.02	0.020
7)	n-C12	8.90	6523.08	0.06	0.063
8)	i-13	9.12	2843.27	0.03	0.028
9)	i-14	9.79	3104.83	0.03	0.029
10)	n-C13	10.08	3986.45	0.04	0.039
11)	i-15	10.96	1499.23	0.01	0.014
12)	n-C14	11.17	7269.02	0.07	0.069
13)	i-16	11.84	5895.28	0.06	0.055
14)	n-C15	12.21	4486.57	0.04	0.042
15)	n-C16	13.25	12854.8	0.12	0.120
17)	i-18	13.82	2903.84	0.03	0.027
18)	n-C17	14.36	24076.6	0.22	0.221
19)	Pristane	14.46	5888.63	0.05	0.054
20)	n-C18	15.53	45271.1	0.42	0.424
21)	Phytane	15.71	7470.95	0.07	0.069
22)	n-C19	16.79	64575	0.61	0.609
24)	n-C20	18.07	14902.3	0.14	0.140
25)	n-C21	19.38	115287	1.08	1.079
26)	n-C22	20.68	16454.3	0.15	0.154
27)	n-C23	21.97	78542.9	0.73	0.735
28)	n-C24	23.23	25069.8	0.23	0.235
29)	n-C25	24.48	73895.4	0.69	0.691
30)	n-C26	25.68	16138	0.15	0.151
31)	n-C27	26.85	123695	1.19	1.185
32)	n-C28	27.97	42167.7	0.40	0.399
33)	n-C29	29.08	251286	2.36	2.365
35)	n-C30	30.14	21548.3	0.20	0.205
36)	n-C31	31.18	249778	2.41	2.407
37)	n-C32	32.18	13891.6	0.14	0.135
38)	n-C33	33.07	413397	4.11	4.110
39)	n-C34	34.03	39739.4	0.39	0.391
40)	n-C35	35.08	335409	3.38	3.377
41)	n-C36	36.25	27368.8	0.26	0.255
42)	n-C37	37.64	63843	0.65	0.653
43)	n-C38	39.23	12678.1	0.13	0.132
44)	n-C39	41.14	12140	0.13	0.132
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	26.63	74166000	724.10	724.096
47)	TRH1	8.70	450164	4.40	4.395
48)	TRH2	13.00	2205250	21.53	21.530
49)	TRH3	26.63	1974380	19.27	19.267
50)	TRH4	31.04	2821680	27.55	27.549
51)	TRH5	33.07	6043760	59.01	59.006
52)	TRH6	40.15	990192	9.67	9.667
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	107460	1.17	87.9
23)	n-eicosane-d42	17.67	98947.4	1.17	87.5
34)	n-triacontane-d62	29.60	93629.5	1.14	85.5
1)	n-hexadecane-d34	13.00	295961	3.32	295961.000
16)	5a-androstane	18.29	365712	3.33	365712.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1543.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 08:14:05
 Operator : Meghan Dailey
 Sample : SED-DA-035 (0-0.5)
 Misc :
 ALS Vial : 13 Sample Multiplier: 0.0664894

Integration File: autoint1.e
 Quant Time: Aug 23 17:07:54 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound		R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.996	295961	50.000 ug/mlm
16) I	5a-androstane	18.287	365712	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	107460	1.169 ug/mlm
23) S	n-eicosane-d42	17.674	98947	1.171 ug/mlm
34) S	n-triacontane-d62	29.602	93630	1.138 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	0.000	0	N.D. ug/mlm
4)	n-C10	6.301	1056	0.011 ug/mlm
5)	n-C11	7.648	1981	0.020 ug/mlm
7)	n-C12	8.904	6523	0.063 ug/mlm
8)	i-13	9.123	2843	0.028 ug/mlm
9)	i-14	9.793	3105	0.029 ug/mlm
10)	n-C13	10.078	3986	0.039 ug/mlm
11)	i-15	10.955	1499	0.014 ug/mlm
12)	n-C14	11.174	7269	0.069 ug/mlm
13)	i-16	11.839	5895	0.055 ug/mlm
14)	n-C15	12.207	4487	0.042 ug/mlm
15)	n-C16	13.247	12855	0.120 ug/mlm
17)	i-18	13.818	2904	0.027 ug/mlm
18)	n-C17	14.357	24077	0.221 ug/mlm
19)	Pristane	14.460	5889	0.054 ug/mlm
20)	n-C18	15.534	45271	0.424 ug/mlm
21)	Phytane	15.711	7471	0.069 ug/mlm
22)	n-C19	16.793	64575	0.609 ug/mlm
24)	n-C20	18.073	14902	0.140 ug/mlm
25)	n-C21	19.381	115287	1.079 ug/mlm
26)	n-C22	20.682	16454	0.154 ug/mlm
27)	n-C23	21.972	78543	0.735 ug/mlm
28)	n-C24	23.234	25070	0.235 ug/mlm
29)	n-C25	24.477	73895	0.691 ug/mlm
30)	n-C26	25.677	16138	0.151 ug/mlm
31)	n-C27	26.846	123695	1.185 ug/mlm
32)	n-C28	27.973	42168	0.399 ug/mlm
33)	n-C29	29.081	251286	2.365 ug/mlm
35)	n-C30	30.139	21548	0.205 ug/mlm
36)	n-C31	31.177	249778	2.407 ug/mlm
37)	n-C32	32.183	13892	0.135 ug/mlm
38)	n-C33	33.069	413397	4.110 ug/mlm
39)	n-C34	34.025	39739	0.391 ug/mlm
40)	n-C35	35.082	335409	3.377 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1543.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 08:14:05
 Operator : Meghan Dailey
 Sample : SED-DA-035 (0-0.5)
 Misc :
 ALS Vial : 13 Sample Multiplier: 0.0664894

Integration File: autoint1.e
 Quant Time: Aug 23 17:07:54 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.253	27369	0.255 ug/mlm
42)	n-C37	37.637	63843	0.653 ug/mlm
43)	n-C38	39.227	12678	0.132 ug/mlm
44)	n-C39	41.137f	12140	0.132 ug/mlm
45)	n-C40	0.000	0	N.D. ug/mlm
46)	TPH	26.625	74166036	724.096 ug/mlm
47)	TRH1	8.701	450164	4.395 ug/mlm
48)	TRH2	12.996f	2205246	21.530 ug/mlm
49)	TRH3	26.625f	1974380	19.267 ug/mlm
50)	TRH4	31.041f	2821680	27.549 ug/mlm
51)	TRH5	33.069	6043756	59.006 ug/mlm
52)	TRH6	40.152f	990192	9.667 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window

(m)=manual int.

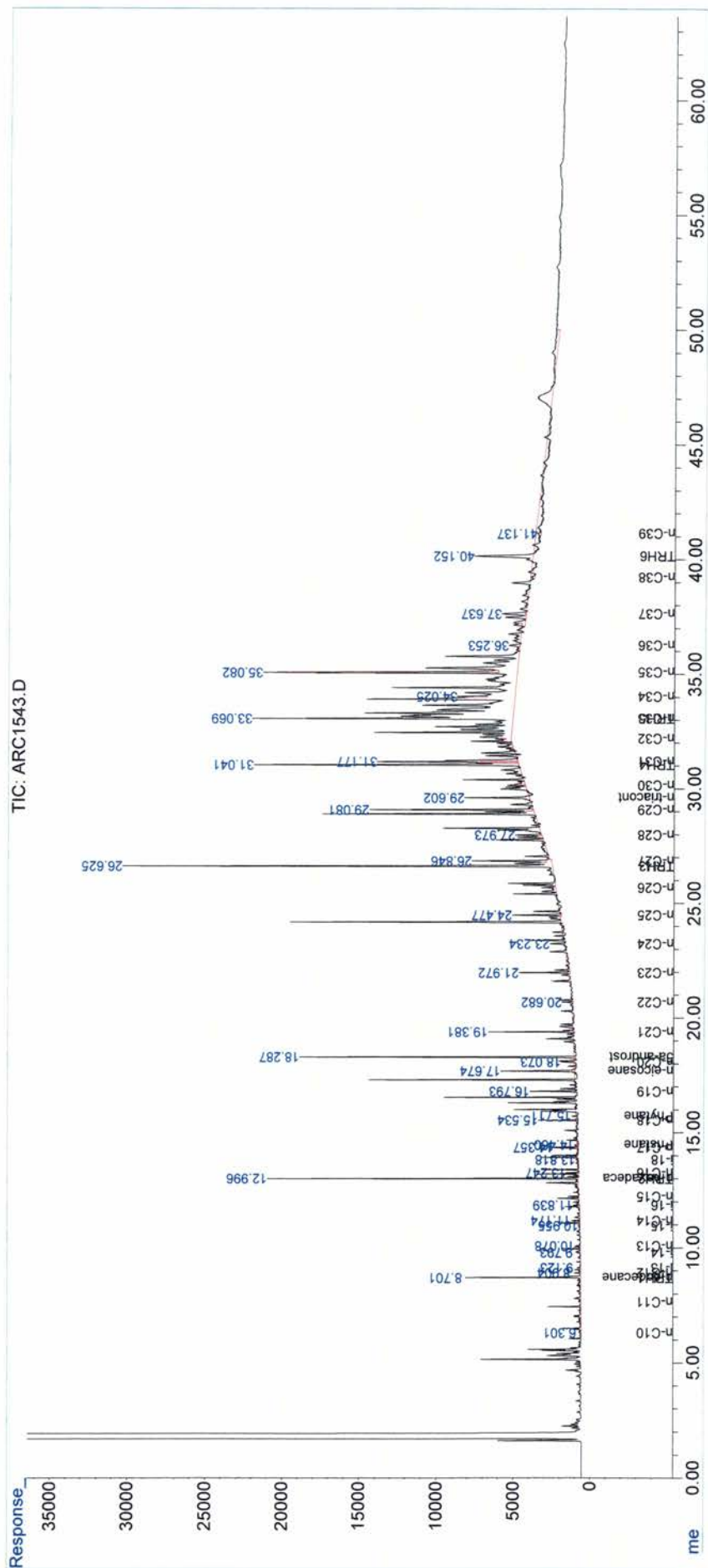
```

Data Path      : C:\msdchem\2\data\FID10076\
Data File     : ARC1543.D
Signal(s)     : FID1A.CH
Acq On       : 15-Aug-2013, 08:14:05
Operator      : Meghan Dailey
Sample       : SED-DA-035 (0-0.5)
Misc         :
ALS Vial      : 13 Sample Multiplier: 0.0

```

Integration File: autoint1.e
Quant Time: Aug 23 17:07:54 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

```
Volume Inj. :
Signal Phase :
Signal Info :
```



Data File Name	ARC1548.D	Concentration	ARC1548.D
Sample Name	SED-DA-036 (0-0.5)		SED-DA-036 (0-0.5)
Misc Info	0		15-Aug-2013, 09:24:43
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 09:24:43		0.0666223
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	14
Vial Number	14	IS Area 1	238082
Sample Multiplier	0.0666223	IS Area 2	294103

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	968.39	0.01	0.012
5)	n-C11	7.65	1392.95	0.02	0.018
7)	n-C12	8.91	2681.17	0.03	0.032
8)	i-13	9.10	190.193	0.00	0.002
9)	i-14	9.80	1960.38	0.02	0.023
10)	n-C13	10.08	2006.04	0.02	0.024
11)	i-15	10.95	2544.53	0.03	0.030
12)	n-C14	11.18	3734.41	0.04	0.044
13)	i-16	11.84	5739.76	0.07	0.067
14)	n-C15	12.22	44303.5	0.52	0.518
15)	n-C16	13.25	6857.78	0.08	0.080
17)	i-18	13.81	4277.15	0.05	0.050
18)	n-C17	14.36	79950.3	0.92	0.915
19)	Pristane	14.48	5950.85	0.07	0.068
20)	n-C18	15.54	50675.4	0.59	0.592
21)	Phytane	15.72	19070.7	0.22	0.219
22)	n-C19	16.79	90633.5	1.07	1.065
24)	n-C20	18.08	32691.3	0.38	0.384
25)	n-C21	19.39	178484	2.08	2.082
26)	n-C22	20.69	16596.1	0.19	0.194
27)	n-C23	21.98	139006	1.62	1.620
28)	n-C24	23.24	38733	0.45	0.452
29)	n-C25	24.49	127852	1.49	1.490
30)	n-C26	25.68	39362.3	0.46	0.459
31)	n-C27	26.85	243905	2.91	2.912
32)	n-C28	27.98	89601.7	1.06	1.055
33)	n-C29	29.08	208518	2.45	2.445
35)	n-C30	30.14	80856	0.96	0.957
36)	n-C31	31.20	848710	10.19	10.191
37)	n-C32	32.20	59939.9	0.73	0.726
38)	n-C33	33.23	1220090	15.12	15.115
39)	n-C34	34.07	43402.1	0.53	0.532
40)	n-C35	35.10	659599	8.27	8.275
41)	n-C36	36.26	49637.9	0.58	0.577
42)	n-C37	37.64	153486	1.96	1.956
43)	n-C38	39.24	17389.7	0.23	0.225
44)	n-C39	41.09	16818.8	0.23	0.227
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	28.93	69090600	840.46	840.460
47)	TRH1	8.70	370600	4.51	4.508
48)	TRH2	17.30	3150060	38.32	38.319
49)	TRH3	26.64	3344000	40.66	40.659
50)	TRH4	28.93	6161910	74.96	74.957
51)	TRH5	33.23	14317500	174.17	174.167
52)	TRH6	40.16	1516650	18.45	18.449
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	87033.2	1.18	88.5
23)	n-eicosane-d42	17.68	86829.4	1.28	95.4
34)	n-triacontane-d62	29.60	85387.7	1.29	97.0
1)	n-hexadecane-d34	13.00	238082	3.33	238082.000
16)	5a-androstane	18.29	294103	3.34	294103.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1548.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 09:24:43
 Operator : Meghan Dailey
 Sample : SED-DA-036 (0-0.5)
 Misc :
 ALS Vial : 14 Sample Multiplier: 0.0666223

Integration File: autoint1.e
 Quant Time: Aug 23 17:10:35 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.997	238082	50.000 ug/mlm
16) I	5a-androstane	18.291	294103	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	87033	1.179 ug/mlm
23) S	n-eicosane-d42	17.678	86829	1.280 ug/mlm
34) S	n-triacontane-d62	29.603	85388	1.293 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	0.000	0	N.D. ug/mlm
4)	n-C10	6.298	968	0.012 ug/mlm
5)	n-C11	7.649	1393	0.018 ug/mlm
7)	n-C12	8.907	2681	0.032 ug/mlm
8)	i-13	9.097	190	0.002 ug/mlm
9)	i-14	9.797	1960	0.023 ug/mlm
10)	n-C13	10.080	2006	0.024 ug/mlm
11)	i-15	10.945	2545	0.030 ug/mlm
12)	n-C14	11.176	3734	0.044 ug/mlm
13)	i-16	11.844	5740	0.067 ug/mlm
14)	n-C15	12.220	44303	0.518 ug/mlm
15)	n-C16	13.246	6858	0.080 ug/mlm
17)	i-18	13.813	4277	0.050 ug/mlm
18)	n-C17	14.361	79950	0.915 ug/mlm
19)	Pristane	14.477	5951	0.068 ug/mlm
20)	n-C18	15.538	50675	0.592 ug/mlm
21)	Phytane	15.715	19071	0.219 ug/mlm
22)	n-C19	16.794	90634	1.065 ug/mlm
24)	n-C20	18.077	32691	0.384 ug/mlm
25)	n-C21	19.387	178484	2.082 ug/mlm
26)	n-C22	20.686	16596	0.194 ug/mlm
27)	n-C23	21.980	139006	1.620 ug/mlm
28)	n-C24	23.241	38733	0.452 ug/mlm
29)	n-C25	24.486	127852	1.490 ug/mlm
30)	n-C26	25.681	39362	0.459 ug/mlm
31)	n-C27	26.854	243905	2.912 ug/mlm
32)	n-C28	27.977	89602	1.055 ug/mlm
33)	n-C29	29.083	208518	2.445 ug/mlm
35)	n-C30	30.144	80856	0.957 ug/mlm
36)	n-C31	31.202f	848710	10.191 ug/mlm
37)	n-C32	32.197f	59940	0.726 ug/mlm
38)	n-C33	33.228f	1220089	15.115 ug/mlm
39)	n-C34	34.067	43402	0.532 ug/mlm
40)	n-C35	35.100	659599	8.275 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1548.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 09:24:43
 Operator : Meghan Dailey
 Sample : SED-DA-036 (0-0.5)
 Misc :
 ALS Vial : 14 Sample Multiplier: 0.0666223

Integration File: autoint1.e
 Quant Time: Aug 23 17:10:35 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.258	49638	0.577 ug/mlm
42)	n-C37	37.639	153486	1.956 ug/mlm
43)	n-C38	39.244	17390	0.225 ug/mlm
44)	n-C39	41.092	16819	0.227 ug/mlm
45)	n-C40	0.000	0	N.D. ug/mlm
46)	TPH	28.926	69090591	840.461 ug/mlm
47)	TRH1	8.701	370600	4.508 ug/mlm
48)	TRH2	17.302	3150062	38.319 ug/mlm
49)	TRH3	26.636f	3344005	40.659 ug/mlm
50)	TRH4	28.926	6161911	74.957 ug/mlm
51)	TRH5	33.228	14317525	174.167 ug/mlm
52)	TRH6	40.161f	1516650	18.449 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

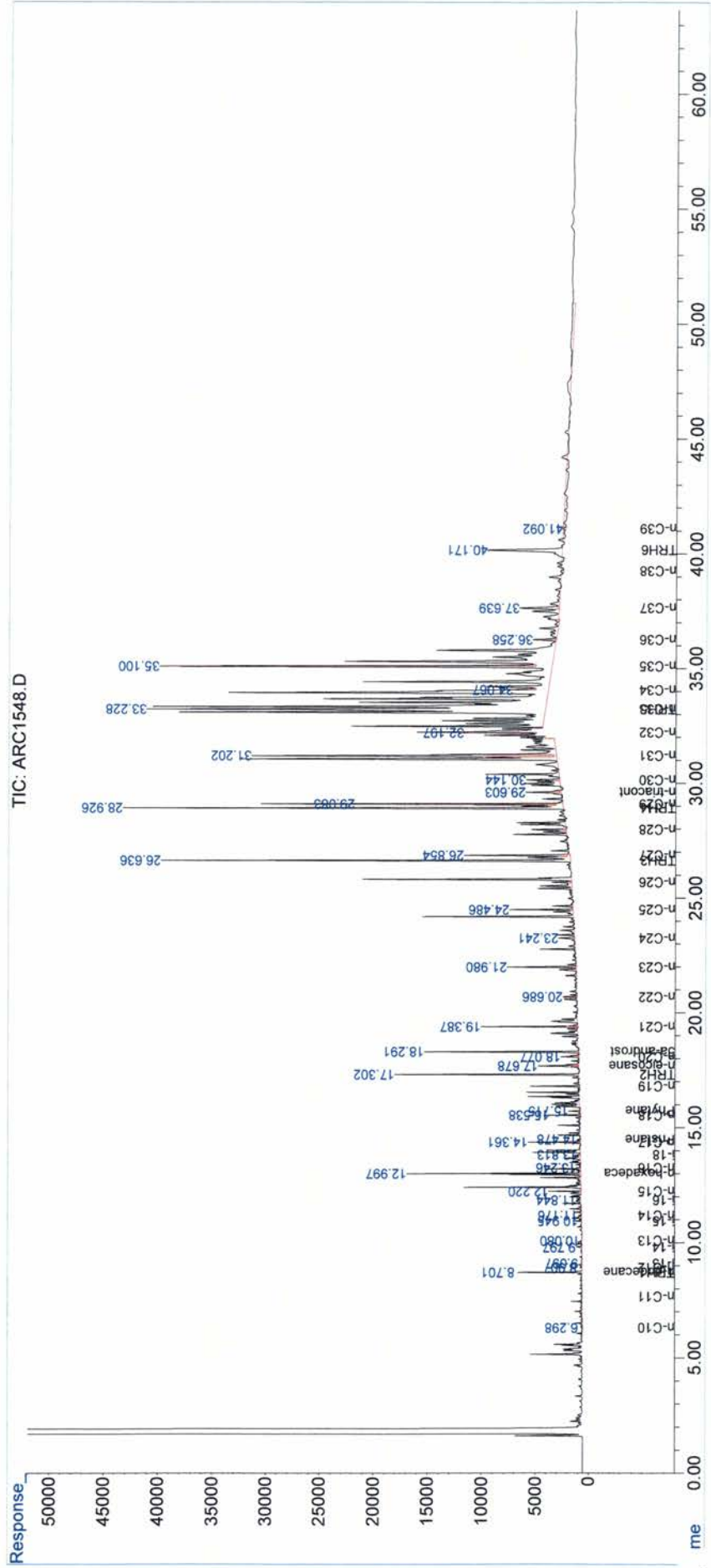
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ARC1548.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 09:24:43
Operator : Meghan Dailey
Sample : SED-DA-036 (0-0.5)
Misc :
ALS Vial : 14 Sample Multiplier: 0.0666223

Integration File: autoint1.e
Quant Time: Aug 23 17:10:35 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ARC1549.D	Concentration	ARC1549.D
Sample Name	SED-DA-DUP-01-072813		SED-DA-DUP-01-072813
Misc Info	0		15-Aug-2013, 10:35:23
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 10:35:23		0.0665336
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	15
Vial Number	15	IS Area 1	243694
Sample Multiplier	0.0665336	IS Area 2	302304

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	732.379	0.01	0.009
5)	n-C11	7.65	1367.02	0.02	0.017
7)	n-C12	8.91	2421.69	0.03	0.029
8)	i-13	9.10	173.332	0.00	0.002
9)	i-14	9.80	2582.07	0.03	0.030
10)	n-C13	10.08	1679.24	0.02	0.020
11)	i-15	10.95	2049.9	0.02	0.023
12)	n-C14	11.18	3263	0.04	0.038
13)	i-16	11.84	6820.57	0.08	0.078
14)	n-C15	12.22	39096.4	0.45	0.446
15)	n-C16	13.25	6507.84	0.07	0.074
17)	i-18	13.82	3145.8	0.04	0.036
18)	n-C17	14.36	48348.7	0.54	0.538
19)	Pristane	14.48	3855.72	0.04	0.043
20)	n-C18	15.54	41082.2	0.47	0.466
21)	Phytane	15.71	12651	0.14	0.141
22)	n-C19	16.79	65922.9	0.75	0.753
24)	n-C20	18.08	25752.2	0.29	0.294
25)	n-C21	19.38	142838	1.62	1.619
26)	n-C22	20.69	23737	0.27	0.269
27)	n-C23	21.98	106815	1.21	1.210
28)	n-C24	23.24	29909.3	0.34	0.339
29)	n-C25	24.48	92699.1	1.05	1.050
30)	n-C26	25.68	22746.9	0.26	0.258
31)	n-C27	26.85	179647	2.08	2.084
32)	n-C28	27.97	70154.4	0.80	0.803
33)	n-C29	29.09	524446	5.98	5.975
35)	n-C30	30.14	69588.8	0.80	0.800
36)	n-C31	31.19	712396	8.31	8.311
37)	n-C32	32.19	69530.6	0.82	0.818
38)	n-C33	33.21	785308	9.45	9.452
39)	n-C34	34.03	93109.3	1.11	1.108
40)	n-C35	35.09	494671	6.03	6.029
41)	n-C36	36.25	70962	0.80	0.802
42)	n-C37	37.62	131277	1.63	1.625
43)	n-C38	39.23	13634.2	0.17	0.171
44)	n-C39	41.10	13612.5	0.18	0.179
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	35.08	42084000	497.39	497.385
47)	TRH1	8.70	340476	4.02	4.024
48)	TRH2	13.00	2727780	32.24	32.239
49)	TRH3	26.62	2259050	26.69	26.687
50)	TRH4	31.19	4403740	52.05	52.047
51)	TRH5	35.08	10705100	126.52	126.522
52)	TRH6	40.15	1113960	13.17	13.166
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	95424	1.26	94.8
23)	n-eicosane-d42	17.68	77756	1.11	83.2
34)	n-triacontane-d62	29.60	78806	1.16	87.1
1)	n-hexadecane-d34	13.00	243694	3.33	243694.000
16)	5a-androstane	18.29	302304	3.33	302304.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1549.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 10:35:23
 Operator : Meghan Dailey
 Sample : SED-DA-DUP-01-072813
 Misc :
 ALS Vial : 15 Sample Multiplier: 0.0665336

Integration File: autoint1.e
 Quant Time: Aug 23 17:15:38 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound		R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.996	243694	50.000 ug/mlm
16) I	5a-androstane	18.289	302304	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	95424	1.261 ug/mlm
23) S	n-eicosane-d42	17.678	77756	1.114 ug/mlm
34) S	n-triacontane-d62	29.601	78806	1.160 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	0.000	0	N.D. ug/mlm
4)	n-C10	6.296	732	0.009 ug/mlm
5)	n-C11	7.648	1367	0.017 ug/mlm
7)	n-C12	8.907	2422	0.029 ug/mlm
8)	i-13	9.099	173	0.002 ug/mlm
9)	i-14	9.800	2582	0.030 ug/mlm
10)	n-C13	10.080	1679	0.020 ug/mlm
11)	i-15	10.945	2050	0.023 ug/mlm
12)	n-C14	11.176	3263	0.038 ug/mlm
13)	i-16	11.843	6821	0.078 ug/mlm
14)	n-C15	12.220	39096	0.446 ug/mlm
15)	n-C16	13.247	6508	0.074 ug/mlm
17)	i-18	13.817	3146	0.036 ug/mlm
18)	n-C17	14.360	48349	0.538 ug/mlm
19)	Pristane	14.477	3856	0.043 ug/mlm
20)	n-C18	15.537	41082	0.466 ug/mlm
21)	Phytane	15.714	12651	0.141 ug/mlm
22)	n-C19	16.793	65923	0.753 ug/mlm
24)	n-C20	18.076	25752	0.294 ug/mlm
25)	n-C21	19.384	142838	1.619 ug/mlm
26)	n-C22	20.685	23737	0.269 ug/mlm
27)	n-C23	21.976	106815	1.210 ug/mlm
28)	n-C24	23.240	29909	0.339 ug/mlm
29)	n-C25	24.481	92699	1.050 ug/mlm
30)	n-C26	25.679	22747	0.258 ug/mlm
31)	n-C27	26.849	179647	2.084 ug/mlm
32)	n-C28	27.971	70154	0.803 ug/mlm
33)	n-C29	29.092f	524446	5.975 ug/mlm
35)	n-C30	30.140	69589	0.800 ug/mlm
36)	n-C31	31.193f	712396	8.311 ug/mlm
37)	n-C32	32.193f	69531	0.818 ug/mlm
38)	n-C33	33.211f	785308	9.452 ug/mlm
39)	n-C34	34.032	93109	1.108 ug/mlm
40)	n-C35	35.090	494671	6.029 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1549.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 10:35:23
 Operator : Meghan Dailey
 Sample : SED-DA-DUP-01-072813
 Misc :
 ALS Vial : 15 Sample Multiplier: 0.0665336

Integration File: autoint1.e
 Quant Time: Aug 23 17:15:38 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.250	70962	0.802 ug/mlm
42)	n-C37	37.625	131277	1.625 ug/mlm
43)	n-C38	39.230	13634	0.171 ug/mlm
44)	n-C39	41.103	13612	0.179 ug/mlm
45)	n-C40	0.000	0	N.D. ug/mlm
46)	TPH	35.085	42084041	497.385 ug/mlm
47)	TRH1	8.701	340476	4.024 ug/mlm
48)	TRH2	12.996f	2727778	32.239 ug/mlm
49)	TRH3	26.624f	2259046	26.687 ug/mlm
50)	TRH4	31.193f	4403738	52.047 ug/mlm
51)	TRH5	35.085	10705069	126.522 ug/mlm
52)	TRH6	40.151f	1113963	13.166 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

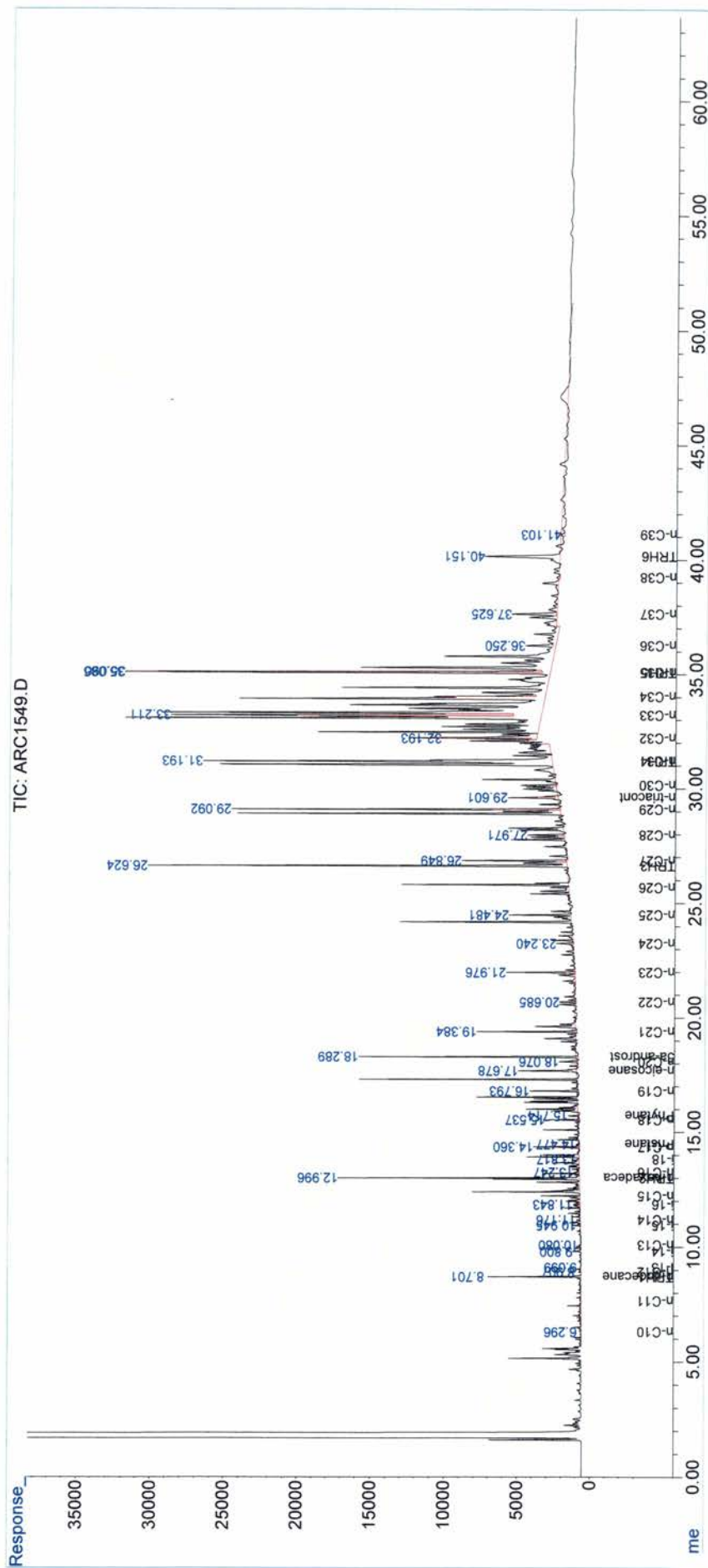
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ARC1549.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 10:35:23
Operator : Meghan Dailey
Sample : SED-DA-DUP-01-072813
Misc :
ALS Vial : 15 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 23 17:15:38 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ARC1552.D	Concentration	ARC1552.D
Sample Name	SED-DA-037 (0-0.5)		SED-DA-037 (0-0.5)
Misc Info	0		15-Aug-2013, 11:46:06
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 11:46:06		0.0665779
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	16
Vial Number	16	IS Area 1	231503
Sample Multiplier	0.0665779	IS Area 2	284567

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	1214.55	0.02	0.016
5)	n-C11	7.65	2071.34	0.03	0.027
7)	n-C12	8.91	3431.97	0.04	0.043
8)	i-13	9.12	1374.55	0.02	0.017
9)	i-14	9.79	3329.43	0.04	0.040
10)	n-C13	10.08	3054.24	0.04	0.038
11)	i-15	10.96	1678.57	0.02	0.020
12)	n-C14	11.18	4456.13	0.05	0.054
13)	i-16	11.85	7108.23	0.09	0.085
14)	n-C15	12.22	24020.9	0.29	0.289
15)	n-C16	13.25	8693.61	0.10	0.104
17)	i-18	13.82	1997.16	0.02	0.024
18)	n-C17	14.36	181225	2.14	2.143
19)	Pristane	14.48	7829.96	0.09	0.093
20)	n-C18	15.54	65751.9	0.79	0.793
21)	Phytane	15.72	29831.9	0.35	0.353
22)	n-C19	16.80	91611.9	1.11	1.112
24)	n-C20	18.08	38897.3	0.47	0.471
25)	n-C21	19.39	215701	2.60	2.599
26)	n-C22	20.69	30902.2	0.37	0.372
27)	n-C23	21.98	208299	2.51	2.508
28)	n-C24	23.24	47011.4	0.57	0.566
29)	n-C25	24.49	214121	2.58	2.577
30)	n-C26	25.68	56390.4	0.68	0.679
31)	n-C27	26.86	373759	4.61	4.609
32)	n-C28	27.97	39298.9	0.48	0.478
33)	n-C29	29.09	424762	5.14	5.144
35)	n-C30	30.14	44046.6	0.54	0.538
36)	n-C31	31.19	470328	5.83	5.833
37)	n-C32	32.08	86092.9	1.08	1.077
38)	n-C33	33.08	637313	8.15	8.155
39)	n-C34	34.02	84421.9	1.07	1.068
40)	n-C35	35.08	576879	7.47	7.475
41)	n-C36	36.27	40416.5	0.49	0.485
42)	n-C37	37.64	88708	1.17	1.167
43)	n-C38	39.25	13862.4	0.19	0.185
44)	n-C39	41.11	17703.9	0.25	0.247
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	31.07	50177500	630.42	630.425
47)	TRH1	8.70	360772	4.53	4.533
48)	TRH2	17.31	4455000	55.97	55.972
49)	TRH3	26.62	2420880	30.40	30.401
50)	TRH4	31.07	4809050	60.42	60.420
51)	TRH5	33.08	10067400	126.49	126.485
52)	TRH6	40.19	1621880	20.38	20.377
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	85894.8	1.20	89.8
23)	n-eicosane-d42	17.68	68879.9	1.05	78.3
34)	n-triacontane-d62	29.60	81339.1	1.27	95.5
1)	n-hexadecane-d34	13.00	231503	3.33	231503.000
16)	5a-androstane	18.29	284567	3.33	284567.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1552.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 11:46:06
 Operator : Meghan Dailey
 Sample : SED-DA-037 (0-0.5)
 Misc :
 ALS Vial : 16 Sample Multiplier: 0.0665779

Integration File: autoint1.e
 Quant Time: Aug 23 17:22:50 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound		R.T.	Response	Conc Units

Internal Standards				
1) I	n-hexadecane-d34	12.996	231503	50.000 ug/mlm
16) I	5a-androstane	18.290	284567	50.072 ug/mlm
System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	85895	1.196 ug/mlm
23) S	n-eicosane-d42	17.679	68880	1.049 ug/mlm
34) S	n-triacontane-d62	29.601	81339	1.272 ug/mlm
Target Compounds				
2)	n-C8	0.000	0	N.D. ug/mlm
3)	n-C9	0.000	0	N.D. ug/mlm
4)	n-C10	6.297	1215	0.016 ug/mlm
5)	n-C11	7.648	2071	0.027 ug/mlm
7)	n-C12	8.907	3432	0.043 ug/mlm
8)	i-13	9.123	1375	0.017 ug/mlm
9)	i-14	9.793	3329	0.040 ug/mlm
10)	n-C13	10.080	3054	0.038 ug/mlm
11)	i-15	10.956	1679	0.020 ug/mlm
12)	n-C14	11.177	4456	0.054 ug/mlm
13)	i-16	11.845	7108	0.085 ug/mlm
14)	n-C15	12.221	24021	0.289 ug/mlm
15)	n-C16	13.249	8694	0.104 ug/mlm
17)	i-18	13.822	1997	0.024 ug/mlm
18)	n-C17	14.364	181225	2.143 ug/mlm
19)	Pristane	14.480	7830	0.093 ug/mlm
20)	n-C18	15.538	65752	0.793 ug/mlm
21)	Phytane	15.715	29832	0.353 ug/mlm
22)	n-C19	16.795	91612	1.112 ug/mlm
24)	n-C20	18.078	38897	0.471 ug/mlm
25)	n-C21	19.388	215701	2.599 ug/mlm
26)	n-C22	20.687	30902	0.372 ug/mlm
27)	n-C23	21.982	208299	2.508 ug/mlm
28)	n-C24	23.240	47011	0.566 ug/mlm
29)	n-C25	24.485	214121	2.577 ug/mlm
30)	n-C26	25.680	56390	0.679 ug/mlm
31)	n-C27	26.857	373759	4.609 ug/mlm
32)	n-C28	27.967	39299	0.478 ug/mlm
33)	n-C29	29.089	424762	5.144 ug/mlm
35)	n-C30	30.143	44047	0.538 ug/mlm
36)	n-C31	31.191f	470328	5.833 ug/mlm
37)	n-C32	32.080f	86093	1.077 ug/mlm
38)	n-C33	33.079	637313	8.155 ug/mlm
39)	n-C34	34.023	84422	1.068 ug/mlm
40)	n-C35	35.077	576879	7.475 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1552.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 11:46:06
 Operator : Meghan Dailey
 Sample : SED-DA-037 (0-0.5)
 Misc :
 ALS Vial : 16 Sample Multiplier: 0.0665779

Integration File: autoint1.e
 Quant Time: Aug 23 17:22:50 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.266	40417	0.485 ug/mlm
42)	n-C37	37.640	88708	1.167 ug/mlm
43)	n-C38	39.246	13862	0.185 ug/mlm
44)	n-C39	41.111	17704	0.247 ug/mlm
45)	n-C40	0.000	0	N.D. ug/mlm
46)	TPH	31.073	50177526	630.425 ug/mlm
47)	TRH1	8.701	360772	4.533 ug/mlm
48)	TRH2	17.306	4454995	55.972 ug/mlm
49)	TRH3	26.623f	2420880	30.401 ug/mlm
50)	TRH4	31.073f	4809052	60.420 ug/mlm
51)	TRH5	33.079	10067359	126.485 ug/mlm
52)	TRH6	40.190f	1621882	20.377 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

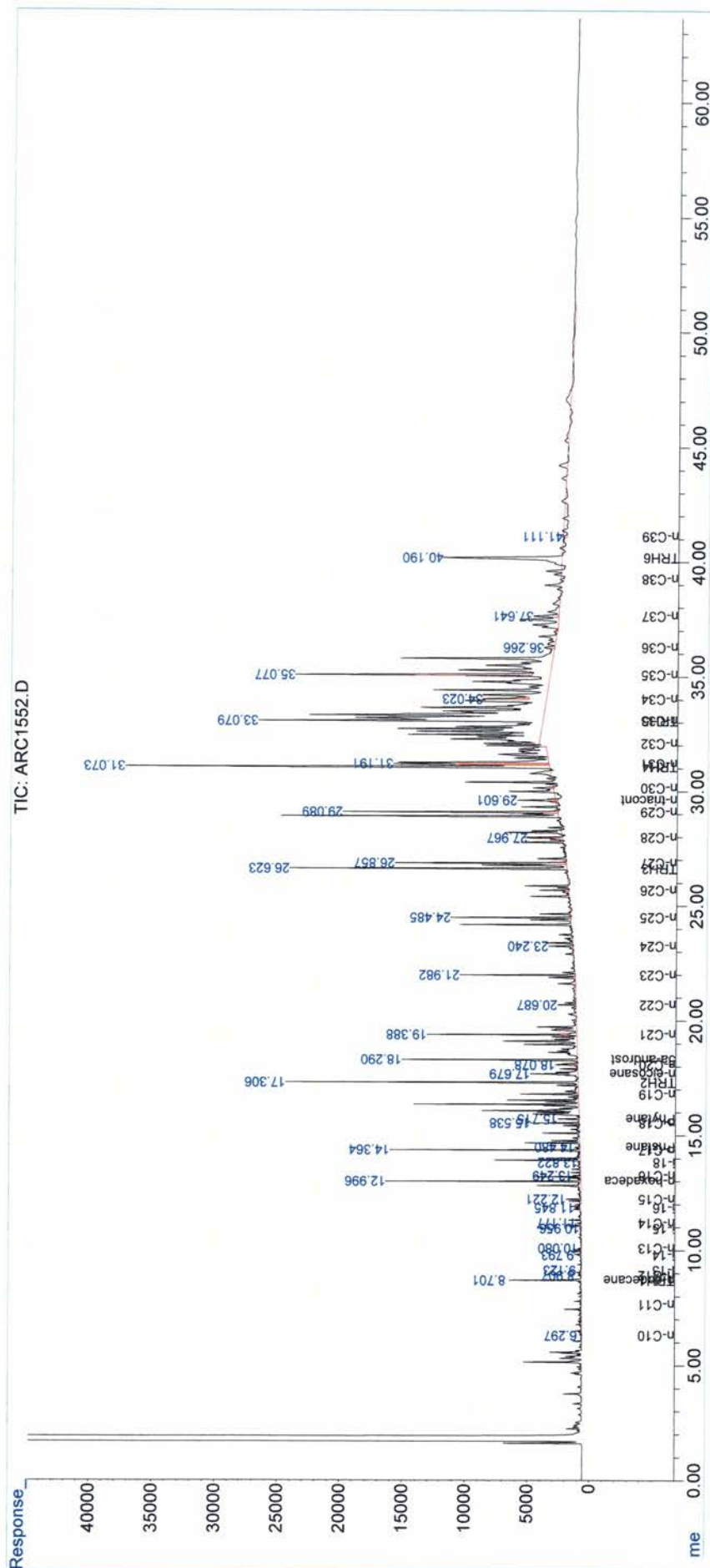
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\2\data\FID10076\
Data File : ARC1552.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 11:46:06
Operator : Meghan Dailey
Sample : SED-DA-037 (0-0.5)
Misc :
ALS Vial : 16 Sample Multiplier: 0.0665779

Integration File: autoint1.e
Quant Time: Aug 23 17:22:50 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	ARC1555.D	Concentration	ARC1555.D
Sample Name	SED-DA-038 (0-0.5)		SED-DA-038 (0-0.5)
Misc Info	0		15-Aug-2013, 12:56:43
Data File Path	C:\msdchem\2\data\FID10076\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	15-Aug-2013, 12:56:43		0.066313
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	17
Vial Number	17	IS Area 1	234281
Sample Multiplier	0.066313	IS Area 2	290827

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	1195.63	0.02	0.016
5)	n-C11	7.65	1607.27	0.02	0.021
7)	n-C12	8.91	3537.81	0.04	0.043
8)	i-13	9.10	387.026	0.00	0.005
9)	i-14	9.79	3387.93	0.04	0.040
10)	n-C13	10.08	2600.91	0.03	0.032
11)	i-15	10.96	1904.72	0.02	0.023
12)	n-C14	11.18	6542.27	0.08	0.078
13)	i-16	11.84	6962.36	0.08	0.082
14)	n-C15	12.22	27346.1	0.32	0.324
15)	n-C16	13.25	9621.95	0.11	0.113
17)	i-18	13.82	2842.2	0.03	0.033
18)	n-C17	14.36	78665.5	0.91	0.906
19)	Pristane	14.48	6844.07	0.08	0.079
20)	n-C18	15.54	69116.4	0.81	0.813
21)	Phytane	15.71	19324.6	0.22	0.223
22)	n-C19	16.80	127580	1.51	1.509
24)	n-C20	18.08	51369.9	0.61	0.607
25)	n-C21	19.39	179944	2.11	2.113
26)	n-C22	20.69	33822.3	0.40	0.397
27)	n-C23	21.98	214696	2.52	2.519
28)	n-C24	23.24	51251.5	0.60	0.602
29)	n-C25	24.49	206146	2.42	2.418
30)	n-C26	25.68	58564.7	0.69	0.687
31)	n-C27	26.86	342543	4.12	4.117
32)	n-C28	27.98	95967.8	1.14	1.138
33)	n-C29	29.09	459714	5.43	5.426
35)	n-C30	30.15	59244	0.71	0.706
36)	n-C31	31.19	482072	5.83	5.827
37)	n-C32	32.08	95957.1	1.17	1.170
38)	n-C33	33.09	652567	8.14	8.138
39)	n-C34	34.02	119321	1.47	1.472
40)	n-C35	35.09	686824	8.67	8.673
41)	n-C36	36.26	38501.1	0.45	0.451
42)	n-C37	37.64	84421.9	1.08	1.083
43)	n-C38	39.23	22546.4	0.29	0.294
44)	n-C39	41.11	18590.4	0.25	0.253
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	31.07	50599500	619.57	619.566
47)	TRH1	8.70	439423	5.38	5.381
48)	TRH2	13.00	3223700	39.47	39.473
49)	TRH3	26.63	2666830	32.64	32.639
50)	TRH4	31.07	4527460	55.44	55.437
51)	TRH5	33.09	9961930	121.98	121.979
52)	TRH6	40.20	1985420	24.31	24.310
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	87113.4	1.19	90.0
23)	n-eicosane-d42	17.68	72330.3	1.07	80.4
34)	n-triacontane-d62	29.60	57685.2	0.88	66.2
1)	n-hexadecane-d34	13.00	234281	3.32	234281.000
16)	5a-androstane	18.29	290827	3.32	290827.000

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1555.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 12:56:43
 Operator : Meghan Dailey
 Sample : SED-DA-038 (0-0.5)
 Misc :
 ALS Vial : 17 Sample Multiplier: 0.066313

Integration File: autoint1.e
 Quant Time: Aug 23 17:26:21 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

Internal Standards			
1) I n-hexadecane-d34	12.997	234281	50.000 ug/mlm
16) I 5a-androstane	18.291	290827	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.702	87113	1.194 ug/mlm
23) S n-eicosane-d42	17.677	72330	1.073 ug/mlm
34) S n-triacontane-d62	29.604	57685	0.879 ug/mlm
Target Compounds			
2) n-C8	0.000	0	N.D. ug/mlm
3) n-C9	0.000	0	N.D. ug/mlm
4) n-C10	6.300	1196	0.016 ug/mlm
5) n-C11	7.648	1607	0.021 ug/mlm
7) n-C12	8.906	3538	0.043 ug/mlm
8) i-13	9.097	387	0.005 ug/mlm
9) i-14	9.794	3388	0.040 ug/mlm
10) n-C13	10.081	2601	0.032 ug/mlm
11) i-15	10.956	1905	0.023 ug/mlm
12) n-C14	11.177	6542	0.078 ug/mlm
13) i-16	11.844	6962	0.082 ug/mlm
14) n-C15	12.222	27346	0.324 ug/mlm
15) n-C16	13.250	9622	0.113 ug/mlm
17) i-18	13.821	2842	0.033 ug/mlm
18) n-C17	14.361	78665	0.906 ug/mlm
19) Pristane	14.477	6844	0.079 ug/mlm
20) n-C18	15.538	69116	0.813 ug/mlm
21) Phytane	15.715	19325	0.223 ug/mlm
22) n-C19	16.796	127580	1.509 ug/mlm
24) n-C20	18.078	51370	0.607 ug/mlm
25) n-C21	19.388	179944	2.113 ug/mlm
26) n-C22	20.687	33822	0.397 ug/mlm
27) n-C23	21.983	214696	2.519 ug/mlm
28) n-C24	23.243	51252	0.602 ug/mlm
29) n-C25	24.486	206146	2.418 ug/mlm
30) n-C26	25.682	58565	0.687 ug/mlm
31) n-C27	26.860	342543	4.117 ug/mlm
32) n-C28	27.976	95968	1.138 ug/mlm
33) n-C29	29.093f	459714	5.426 ug/mlm
35) n-C30	30.145	59244	0.706 ug/mlm
36) n-C31	31.189	482072	5.827 ug/mlm
37) n-C32	32.082f	95957	1.170 ug/mlm
38) n-C33	33.086	652567	8.138 ug/mlm
39) n-C34	34.023	119321	1.472 ug/mlm
40) n-C35	35.086	686824	8.673 ug/mlm

Data Path : C:\msdchem\2\data\FID10076\
 Data File : ARC1555.D
 Signal(s) : FID1A.CH
 Acq On : 15-Aug-2013, 12:56:43
 Operator : Meghan Dailey
 Sample : SED-DA-038 (0-0.5)
 Misc :
 ALS Vial : 17 Sample Multiplier: 0.066313

Integration File: autoint1.e
 Quant Time: Aug 23 17:26:21 2013
 Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.261	38501	0.451 ug/mlm
42)	n-C37	37.644	84422	1.083 ug/mlm
43)	n-C38	39.234	22546	0.294 ug/mlm
44)	n-C39	41.110	18590	0.253 ug/mlm
45)	n-C40	0.000	0	N.D. ug/mlm
46)	TPH	31.071	50599504	619.567 ug/mlm
47)	TRH1	8.702	439423	5.381 ug/mlm
48)	TRH2	12.997f	3223702	39.473 ug/mlm
49)	TRH3	26.627f	2666834	32.639 ug/mlm
50)	TRH4	31.071f	4527456	55.437 ug/mlm
51)	TRH5	33.086	9961934	121.979 ug/mlm
52)	TRH6	40.199f	1985418	24.310 ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window

(m)=manual int.

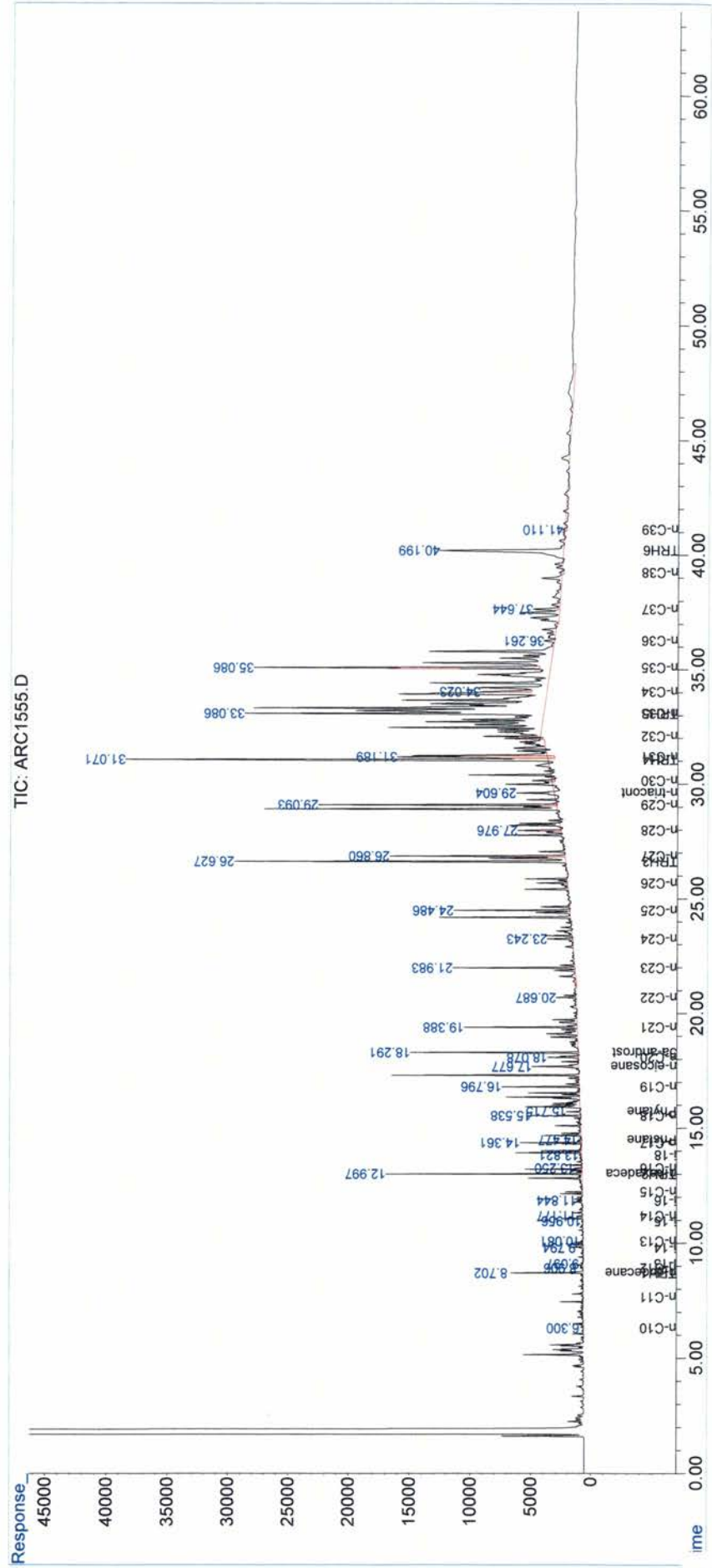

```

Data Path      : C:\msdchem\2\data\FID10076\
Data File     : ARC1555.D
Signal(s)     : FID1A.CH
Acq On        : 15-Aug-2013, 12:56:43
Operator      : Meghan Dailey
Sample        : SED-DA-038 (0-0.5)
Misc          :
ALS Vial      : 17 Sample Multiplier: 0.00

```

Integration File: autoint1.e
Quant Time: Aug 23 17:26:21 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3075\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
Quant Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume	Inj.	:
Signal	Phase	:
Signal	Info	:



Polycyclic Aromatic Hydrocarbon Raw Data

B&B LABORATORIES PAHs QA FORM

Extraction Page: __ENV 3075__	Analyst: __Y. Miao__
Client: __Arcadis Maylower Project__	Date: __August 28, 2013__
Job #: __J13034__	Project Quality Manager: <u><i>[Signature]</i></u>
SDG #: __13073001__	Date: <u>09/09/13</u>

Initial Calibration: No failures	ICV No failures
Surrogate Recoveries: No failures	
Procedural Blank: No failures	
Blank Spike: Not Applicable	
Blank Spike Duplicate: Not Applicable	
Laboratory Duplicate: No failures	
Matrix Spike: No failures	
Matirx Spike Duplicate: No failures	
SRM/LCS (Solution, Tissue, Sediment): Solution - no failures Sediment - no failures	
CCC (from a second source): no failures	
SRM-2279 Reference Oil no failures	
Mass Discrimination Check (benzo(ghi)perylene/phenanthrene >0.7) no failures	

Sequence Name: C:\msdchem\1\data\MS70055\MS70055.s

Comment: Arcadis-Mayflower AR-Sediments-PAH (08/12/13)

Operator: YM

Data Path: C:\MSDCHEM\1\DATA\MS70055\

Instrument Control Pre-Seq Cmd:

Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:

Data Analysis Post-Seq Cmd:

Method Sections To Run

(X) Full Method

() Reprocessing Only

Sequence Barcode Options

() On Mismatch, Inject Anyway

() On Mismatch, Don't Inject

(X) Barcode Disabled

```
-----
Line          Sample Name/Misc Info
1) Sample    1  MS70055A PAH-2012 Solvent rinse
2) Sample    2  MS70055B PAH-2012 AR-WKC1-020-030
3) Sample    3  MS70055C PAH-2012 AR-WKC2-100-030
4) Sample    4  MS70055D PAH-2012 AR-WKC3-250-030
5) Sample    5  MS70055E PAH-2012 AR-WKC4-500-030
6) Sample    6  MS70055F PAH-2012 AR-WKC5-1000-030
7) Sample    7  MS70055G PAH-2012 AR-WKC6-5000-030
8) Sample    8  MS70055H PAH-2012 AR-WKISSU-250-002
9) Sample    9  MS70055I PAH-2012 AR-WKICV-250-004
10) Sample   10  MS70055J PAH-2012 AR-WKCC-250-038
11) Sample   11  MS70055K PAH-2012 AR-SRM2779-WK4.0-002
12) Sample   12  ENV3075A PAH-2012
13) Sample   11  MS70055K PAH-2012 AR-SRM2779-WK4.0-002
14) Sample   13  ENV3075B PAH-2012
15) Sample   14  ENV3075C PAH-2012
16) Sample   15  ENV3075D PAH-2012
17) Sample   16  ENV3075E PAH-2012
18) Sample   17  ARC1537 PAH-2012
19) Sample   18  ARC1538 PAH-2012
20) Sample   20  MS70055L PAH-2012 AR-WKCC-250-038
21) Sample   19  ARC1539 PAH-2012
22) Sample   21  ARC1540 PAH-2012
23) Sample   22  ARC1541 PAH-2012
24) Sample   23  ARC1542 PAH-2012
25) Sample   24  ARC1543 PAH-2012
26) Sample   25  ARC1544 PAH-2012
27) Sample   26  ARC1545 PAH-2012
28) Sample   27  ARC1548 PAH-2012
29) Sample   28  ARC1549 PAH-2012
30) Sample   29  MS70055M PAH-2012 AR-WKCC-250-038
31) Sample   30  ARC1550 PAH-2012
32) Sample   31  ARC1551 PAH-2012
33) Sample   32  ARC1552 PAH-2012
34) Sample   33  ARC1553 PAH-2012
35) Sample   34  ARC1554 PAH-2012
36) Sample   35  ARC1555 PAH-2012
37) Sample   36  ARC1556 PAH-2012
38) Sample   37  ARC1557 PAH-2012
39) Sample   38  MS70055N PAH-2012 AR-WKCC-250-038

```

reinject below

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055J.D
 Acq On : 13 Aug 2013 4:15 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 13 10:12:54 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorene-d10	1.000	1.000	0.0	80	0.00
2 S	Naphthalene-d8	1.834	1.744	4.9	83	0.00
3 T	cis/trans Decalin	0.328	0.313	4.6	84	0.00
4 un	C1-Decalins	0.328	0.000	100.0#	0#	-11.96#
5 un	C2-Decalins	0.328	0.000	100.0#	0#	-13.49#
6 un	C3-Decalins	0.328	0.000	100.0#	0#	-15.80#
7 un	C4-Decalins	0.328	0.000	100.0#	0#	-18.25#
8 T	Naphthalene	1.939	1.868	3.7	83	0.00
9 T	2-Methylnaphthalene	1.220	1.111	8.9	81	0.00
10 T	1-Methylnaphthalene	1.127	1.054	6.5	82	0.00
11 T	2,6-Dimethylnaphthalene	1.113	1.004	9.8	79	0.00
12 T	1,6,7-Trimethylnaphthalene	0.965	0.857	11.2	80	-0.03
13 un	C2-Naphthalenes	1.939	0.000	100.0#	0#	-18.89#
14 un	C3-Naphthalenes	1.939	0.000	100.0#	0#	-20.37#
15 un	C4-Naphthalenes	1.939	0.000	100.0#	0#	-22.12#
16 T	Benzothiophene	1.525	1.461	4.2	84	0.00
17 un	C1-Benzothiophenes	1.525	0.000	100.0#	0#	-15.52#
18 un	C2-Benzothiophenes	1.525	0.000	100.0#	0#	-18.25#
19 un	C3-Benzothiophenes	1.525	0.000	100.0#	0#	-20.31#
20 un	C4-Benzothiophenes	1.525	0.000	100.0#	0#	-22.10#
21 S	Acenaphthene-d10	1.004	0.922	8.2	82	0.00
22 T	Biphenyl	1.615	1.560	3.4	83	0.00
23 T	Acenaphthylene	1.642	1.328	19.1	74	0.00
24 T	Acenaphthene	1.049	0.954	9.1	81	0.00
25 T	Dibenzofuran	1.746	1.670	4.4	82	0.00
26 T	Fluorene	1.386	1.262	8.9	80	0.00
27 T	1-Methylfluorene	0.879	0.746	15.1	77	0.00
28 un	C1-Fluorenes	1.386	0.000	100.0#	0#	-23.51#
29 un	C2-Fluorenes	1.386	0.000	100.0#	0#	-24.79#
30 un	C3-Fluorenes	1.386	0.000	100.0#	0#	-27.31#
31 I	Pyrene-d10	1.000	1.000	0.0	77	0.00
32 S	Phenanthrene-d10	0.950	0.905	4.7	81	0.00
33 T	Carbazole	0.811	0.630	22.3	71	0.00
34 T	Dibenzothiophene	0.970	0.915	5.7	82	0.00
35 T	4-Methyldibenzothiophene	0.810	0.784	3.2	81	0.00
36 un	2/3-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.16#
37 un	1-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.52#
38 un	C2-Dibenzothiophenes	0.970	0.000	100.0#	0#	-27.83#
39 un	C3-Dibenzothiophenes	0.970	0.000	100.0#	0#	-28.46#
40 un	C4-Dibenzothiophenes	0.970	0.000	100.0#	0#	-30.88#
41 T	Phenanthrene	1.179	1.194	-1.3	81	0.00
42 T	Anthracene	1.014	0.895	11.7	73	0.00
43 un	3-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
44 un	2-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
45 un	2-Methylantracene	0.764	0.000	100.0#	0#	-26.73#
46 un	4/9-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055J.D
 Acq On : 13 Aug 2013 4:15 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 13 10:12:54 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47 T	1-Methylphenanthrene	0.764	0.711	6.9	79	0.00
48 T	3,6-Dimethylphenanthrene	0.604	0.527	12.7	76	-0.03
49 T	Retene	0.294	0.240	18.4	74	0.00
50 un	C2-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-28.56#
51 un	C3-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-29.43#
52 un	C4-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-31.99#
53 T	Naphthobenzothiophene	1.229	1.135	7.6	77	0.00
54 un	C1-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-34.24#
55 un	C2-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-35.83#
56 un	C3-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-36.91#
57 un	C4-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-38.08#
58 T	Fluoranthene	1.065	0.978	8.2	79	0.00
59 T	Pyrene	1.286	1.266	1.6	80	0.00
60 T	2-Methylfluoranthene	0.734	0.612	16.6	77	0.00
61 T	Benzo(b)fluorene	0.630	0.498	21.0	72	0.00
62 un	C1-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-30.71#
63 un	C2-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-32.18#
64 un	C3-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-33.81#
65 un	C4-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-34.93#
66 S	Chrysene-d12	1.157	1.157	0.0	80	0.00
67 T	Benzo(a)anthracene	1.184	0.971	18.0	71	0.00
68 T	Chrysene/Triphenylene	1.198	1.205	-0.6	81	0.00
69 un	C1-Chrysenes	1.198	0.000	100.0#	0#	-35.59#
70 un	C2-Chrysenes	1.198	0.000	100.0#	0#	-36.95#
71 un	C3-Chrysenes	1.198	0.000	100.0#	0#	-38.08#
72 un	C4-Chrysenes	1.198	0.000	100.0#	0#	-39.43#
73 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	68	0.00
74 un	C29-Hopane	0.426	0.000	100.0#	0#	-40.39#
75 un	18a-Oleanane	0.426	0.000	100.0#	0#	-42.05#
76 T	C30-Hopane	0.426	0.391	8.2	70	0.00
77 T	Benzo(b)fluoranthene	1.469	1.444	1.7	73	0.00
78 T	Benzo(k,j)fluoranthene	1.257	1.333	-6.0	76	-0.04
79 un	Benzo(a)fluoranthene	1.257	0.000	100.0#	0#	-37.30#
80 T	Benzo(e)pyrene	1.421	1.473	-3.7	76	-0.04
81 T	Benzo(a)pyrene	1.389	1.360	2.1	73	0.00
82 T	Indeno(1,2,3-c,d)pyrene	1.522	1.433	5.8	72	0.00
83 T	Dibenzo(a,h)anthracene	1.219	1.193	2.1	74	0.00
84 un	C1-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-48.42#
85 un	C2-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-50.34#
86 un	C3-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-51.08#
87 T	Benzo(g,h,i)perylene	1.364	1.338	1.9	74	-0.04
88 S	Perylene-d12	1.180	1.112	5.8	73	0.00
89 T	Perylene	1.414	1.413	0.1	73	0.00
90 S	5(b)H-Cholane	0.213	0.196	8.0	71	0.00
91 un	C20-TAS	1.385	0.000	100.0#	0#	-33.30#
92 un	C21-TAS	1.385	0.000	100.0#	0#	-34.24#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055J.D
 Acq On : 13 Aug 2013 4:15 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 13 10:12:54 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.385	0.000	100.0#	0#	-38.70#
94 T	C26(20R)/C27(20S)-TAS	1.385	1.078	22.2	63	-0.04
95 un	C28(20S)-TAS	1.385	0.000	100.0#	0#	-40.02#
96 un	C27(20R)-TAS	1.385	0.000	100.0#	0#	-41.05#
97 un	C28(20R)-TAS	1.385	0.000	100.0#	0#	-41.60#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055J.D
 Acq On : 13 Aug 2013 4:15 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 13 10:12:54 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
Internal Standards						
1) Fluorene-d10	21.455	176	427678m	251.05		0.00
31) Pyrene-d10	29.635	212	775861m	250.63		0.00
73) Benzo(a)pyrene-d12	38.387	264	560781m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	742983m	237.78		0.00
21) Acenaphthene-d10	19.672	164	393011m	229.72		0.00
32) Phenanthrene-d10	24.752	188	701230m	238.53		0.00
66) Chrysene-d12	33.809	240	895309m	249.89		0.00
88) Perylene-d12	38.697	264	622745m	235.49		0.00
90) 5(b)H-Cholane	34.236	217	109723m	230.08		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	11.176	138	131701m	235.70		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	795398m	240.85		
9) 2-Methylnaphthalene	16.134	142	473640m	227.96		
10) 1-Methylnaphthalene	16.469	142	448483m	233.58		
11) 2,6-Dimethylnaphthalene	18.224	156	427454m	225.54		
12) 1,6,7-Trimethylnaphtha...	21.065	170	365151m	222.01		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	618280m	237.93		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	658305m	239.35		
23) Acenaphthylene	19.171	152	560996m	200.58		
24) Acenaphthene	19.784	154	406911m	227.74		
25) Dibenzofuran	20.369	168	707728m	237.94		
26) Fluorene	21.539	166	538620m	228.14		
27) 1-Methylfluorene	23.506	180	320241m	213.96		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	483222m	192.44		
34) Dibenzothiophene	24.406	184	697912m	232.46		
35) 4-Methyldibenzothiophene	25.895	198	612184m	244.21		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	915633m	250.84		
42) Anthracene	24.995	178	694855m	221.34		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055J.D
 Acq On : 13 Aug 2013 4:15 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 13 10:12:54 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	544063m	230.07		
48) 3,6-Dimethylphenanthrene	28.007	206	408399m	218.30		
49) Retene	30.708	234	165622m	182.16		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	883786m	232.28		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	757726m	229.76		
59) Pyrene	29.704	202	979842m	246.19		
60) 2-Methylfluoranthene	30.466	216	477152m	209.97		
61) Benzo(b) fluorene	31.089	216	388736m	199.43		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	750130m	204.60		
68) Chrysene/Triphenylene	33.886	228	927067m	250.05		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	218707m	229.33		
77) Benzo(b) fluoranthene	37.300	252	810386m	246.21		
78) Benzo(k,j) fluoranthene	37.378	252	743453m	263.94		
79) Benzo(a) fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	821783m	258.12		
81) Benzo(a)pyrene	38.464	252	759996m	244.28		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	788947m	231.41		
83) Dibenzo(a,h)anthracene	43.226	278	662376m	242.62		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	742481m	243.00		
89) Perylene	38.775	252	792073m	250.12		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.395	231	603570m	194.49		
95) C28(20S)-TAS	0.000		0	N.D.		
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055J.D
Acq On : 13 Aug 2013 4:15 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 13 10:12:54 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

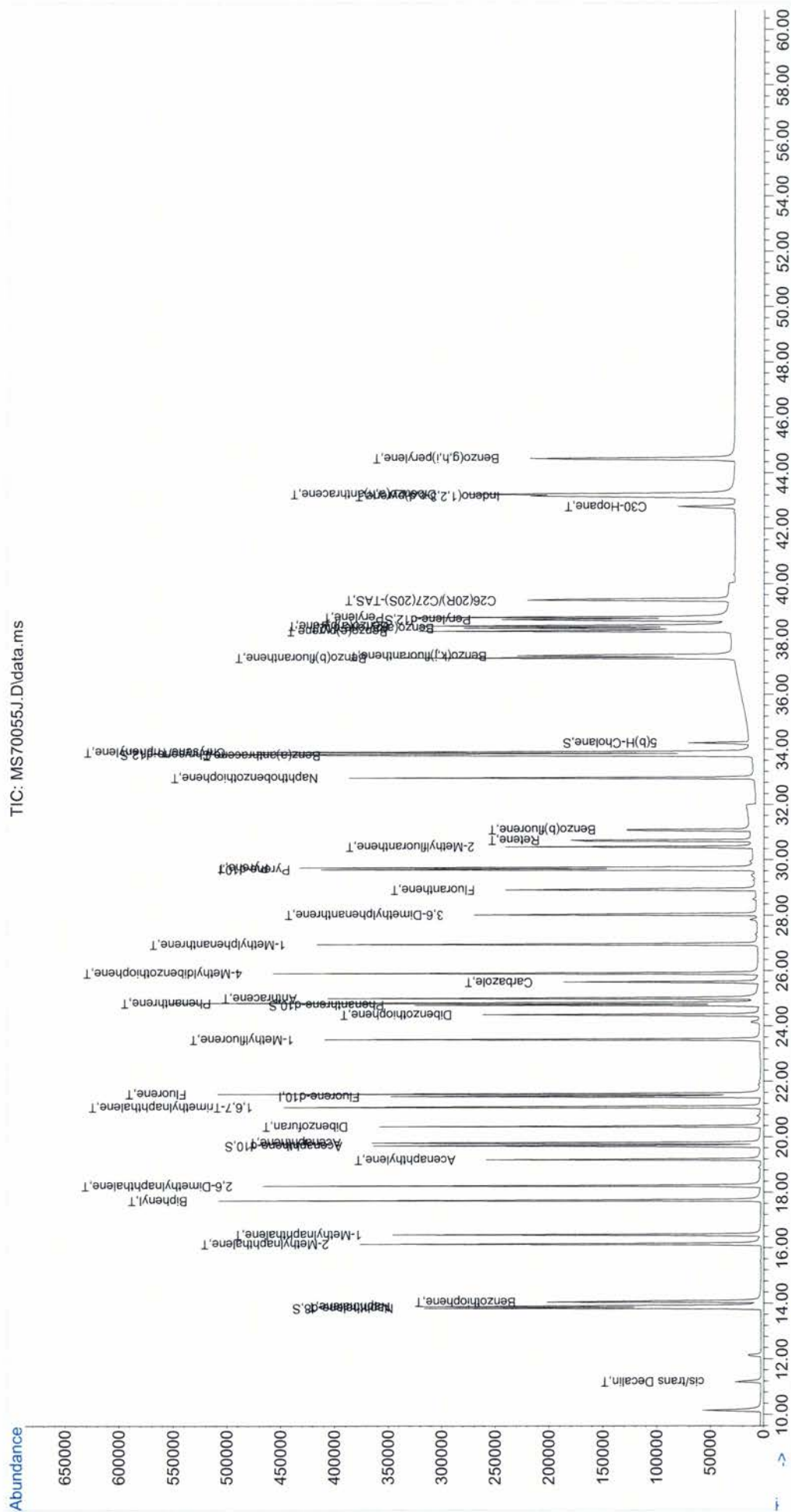
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
Data File : MS70055J.D
Acq On : 13 Aug 2013 4:15 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 13 10:12:54 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

TIC: MS70055J.D\data.ms



Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055L.D
 Acq On : 13 Aug 2013 3:41 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 14 07:15:06 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorene-d10	1.000	1.000	0.0	71	0.00
2 S	Naphthalene-d8	1.834	1.656	9.7	69	0.00
3 T	cis/trans Decalin	0.328	0.305	7.0	73	0.00
4 un	C1-Decalins	0.328	0.000	100.0#	0#	-11.96#
5 un	C2-Decalins	0.328	0.000	100.0#	0#	-13.49#
6 un	C3-Decalins	0.328	0.000	100.0#	0#	-15.80#
7 un	C4-Decalins	0.328	0.000	100.0#	0#	-18.25#
8 T	Naphthalene	1.939	1.766	8.9	69	0.00
9 T	2-Methylnaphthalene	1.220	1.123	8.0	72	0.00
10 T	1-Methylnaphthalene	1.127	1.042	7.5	71	0.00
11 T	2,6-Dimethylnaphthalene	1.113	1.050	5.7	73	0.00
12 T	1,6,7-Trimethylnaphthalene	0.965	0.923	4.4	75	-0.03
13 un	C2-Naphthalenes	1.939	0.000	100.0#	0#	-18.89#
14 un	C3-Naphthalenes	1.939	0.000	100.0#	0#	-20.37#
15 un	C4-Naphthalenes	1.939	0.000	100.0#	0#	-22.12#
16 T	Benzothiophene	1.525	1.374	9.9	69	0.00
17 un	C1-Benzothiophenes	1.525	0.000	100.0#	0#	-15.52#
18 un	C2-Benzothiophenes	1.525	0.000	100.0#	0#	-18.25#
19 un	C3-Benzothiophenes	1.525	0.000	100.0#	0#	-20.31#
20 un	C4-Benzothiophenes	1.525	0.000	100.0#	0#	-22.10#
21 S	Acenaphthene-d10	1.004	0.924	8.0	72	0.00
22 T	Biphenyl	1.615	1.504	6.9	71	0.00
23 T	Acenaphthylene	1.642	1.701	-3.6	83	0.00
24 T	Acenaphthene	1.049	0.978	6.8	73	0.00
25 T	Dibenzofuran	1.746	1.652	5.4	72	0.00
26 T	Fluorene	1.386	1.306	5.8	73	0.00
27 T	1-Methylfluorene	0.879	0.851	3.2	77	0.00
28 un	C1-Fluorenes	1.386	0.000	100.0#	0#	-23.51#
29 un	C2-Fluorenes	1.386	0.000	100.0#	0#	-24.79#
30 un	C3-Fluorenes	1.386	0.000	100.0#	0#	-27.31#
31 I	Pyrene-d10	1.000	1.000	0.0	75	0.00
32 S	Phenanthrene-d10	0.950	0.812	14.5	71	0.00
33 T	Carbazole	0.811	0.755	6.9	83	0.00
34 T	Dibenzothiophene	0.970	0.828	14.6	72	0.00
35 T	4-Methyldibenzothiophene	0.810	0.731	9.8	74	0.00
36 un	2/3-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.16#
37 un	1-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.52#
38 un	C2-Dibenzothiophenes	0.970	0.000	100.0#	0#	-27.83#
39 un	C3-Dibenzothiophenes	0.970	0.000	100.0#	0#	-28.46#
40 un	C4-Dibenzothiophenes	0.970	0.000	100.0#	0#	-30.88#
41 T	Phenanthrene	1.179	1.071	9.2	71	0.00
42 T	Anthracene	1.014	1.012	0.2	81	0.00
43 un	3-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
44 un	2-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
45 un	2-Methylanthracene	0.764	0.000	100.0#	0#	-26.73#
46 un	4/9-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055L.D
 Acq On : 13 Aug 2013 3:41 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 14 07:15:06 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47 T	1-Methylphenanthrene	0.764	0.713	6.7	77	0.00
48 T	3,6-Dimethylphenanthrene	0.604	0.573	5.1	81	-0.03
49 T	Retene	0.294	0.269	8.5	82	0.00
50 un	C2-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-28.56#
51 un	C3-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-29.43#
52 un	C4-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-31.99#
53 T	Naphthobenzothiophene	1.229	1.214	1.2	81	0.00
54 un	C1-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-34.24#
55 un	C2-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-35.83#
56 un	C3-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-36.91#
57 un	C4-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-38.08#
58 T	Fluoranthene	1.065	1.001	6.0	79	0.00
59 T	Pyrene	1.286	1.199	6.8	74	0.00
60 T	2-Methylfluoranthene	0.734	0.661	9.9	81	0.00
61 T	Benzo(b)fluorene	0.630	0.628	0.3	89	-0.03
62 un	C1-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-30.71#
63 un	C2-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-32.18#
64 un	C3-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-33.81#
65 un	C4-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-34.93#
66 S	Chrysene-d12	1.157	1.079	6.7	73	0.00
67 T	Benzo(a)anthracene	1.184	1.198	-1.2	86	0.00
68 T	Chrysene/Triphenylene	1.198	1.140	4.8	75	0.00
69 un	C1-Chrysenes	1.198	0.000	100.0#	0#	-35.59#
70 un	C2-Chrysenes	1.198	0.000	100.0#	0#	-36.95#
71 un	C3-Chrysenes	1.198	0.000	100.0#	0#	-38.08#
72 un	C4-Chrysenes	1.198	0.000	100.0#	0#	-39.43#
73 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	83	0.00
74 un	C29-Hopane	0.426	0.000	100.0#	0#	-40.39#
75 un	18a-Oleanane	0.426	0.000	100.0#	0#	-42.05#
76 T	C30-Hopane	0.426	0.407	4.5	88	0.00
77 T	Benzo(b)fluoranthene	1.469	1.312	10.7	81	0.00
78 T	Benzo(k,j)fluoranthene	1.257	1.167	7.2	80	-0.04
79 un	Benzo(a)fluoranthene	1.257	0.000	100.0#	0#	-37.30#
80 T	Benzo(e)pyrene	1.421	1.242	12.6	77	-0.04
81 T	Benzo(a)pyrene	1.389	1.274	8.3	82	0.00
82 T	Indeno(1,2,3-c,d)pyrene	1.522	1.371	9.9	83	0.00
83 T	Dibenzo(a,h)anthracene	1.219	1.095	10.2	82	0.00
84 un	C1-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-48.42#
85 un	C2-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-50.34#
86 un	C3-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-51.08#
87 T	Benzo(g,h,i)perylene	1.364	1.197	12.2	80	-0.04
88 S	Perylene-d12	1.180	1.019	13.6	80	0.00
89 T	Perylene	1.414	1.275	9.8	80	0.00
90 S	5(b)H-Cholane	0.213	0.194	8.9	85	0.00
91 un	C20-TAS	1.385	0.000	100.0#	0#	-33.30#
92 un	C21-TAS	1.385	0.000	100.0#	0#	-34.24#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055L.D
 Acq On : 13 Aug 2013 3:41 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 14 07:15:06 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.385	0.000	100.0#	0#	-38.70#
94 T	C26(20R)/C27(20S)-TAS	1.385	1.389	-0.3	98	-0.04
95 un	C28(20S)-TAS	1.385	0.000	100.0#	0#	-40.02#
96 un	C27(20R)-TAS	1.385	0.000	100.0#	0#	-41.05#
97 un	C28(20R)-TAS	1.385	0.000	100.0#	0#	-41.60#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055L.D
 Acq On : 13 Aug 2013 3:41 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 14 07:15:06 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	375816m	251.05		0.00
31) Pyrene-d10	29.635	212	758562m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	677335m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	619974m	225.79		0.00
21) Acenaphthene-d10	19.672	164	346174m	230.27		0.00
32) Phenanthrene-d10	24.752	188	614527m	213.80		0.00
66) Chrysene-d12	33.809	240	816871m	233.20		0.00
88) Perylene-d12	38.697	264	689500m	215.87		0.00
90) 5(b)H-Cholane	34.235	217	131062m	227.53		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.176	138	113045m	230.23		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	661047m	227.79		
9) 2-Methylnaphthalene	16.134	142	420817m	230.49		
10) 1-Methylnaphthalene	16.469	142	389722m	230.98		
11) 2,6-Dimethylnaphthalene	18.224	156	392983m	235.97		
12) 1,6,7-Trimethylnaphtha...	21.065	170	345582m	239.11		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	511270m	223.90		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	557947m	230.85		
23) Acenaphthylene	19.171	152	631569m	256.97		
24) Acenaphthene	19.784	154	366905m	233.69		
25) Dibenzofuran	20.369	168	615040m	235.32		
26) Fluorene	21.538	166	489881m	236.13		
27) 1-Methylfluorene	23.506	180	320789m	243.90		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	566237m	230.64		
34) Dibenzothiophene	24.406	184	617487m	210.36		
35) 4-Methyldibenzothiophene	25.895	198	557881m	227.62		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	803059m	225.02		
42) Anthracene	24.995	178	768329m	250.32		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055L.D
 Acq On : 13 Aug 2013 3:41 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 14 07:15:06 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	533572m	230.78		
48) 3,6-Dimethylphenanthrene	28.007	206	434225m	237.40		
49) Retene	30.708	234	181534m	204.21		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	924057m	248.40		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	758312m	235.19		
59) Pyrene	29.704	202	907532m	233.22		
60) 2-Methylfluoranthene	30.466	216	503613m	226.67		
61) Benzo(b)fluorene	31.055	216	479653m	251.69		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	904545m	252.35		
68) Chrysene/Triphenylene	33.886	228	857180m	236.47		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	275278m	238.98		
77) Benzo(b)fluoranthene	37.300	252	888980m	223.62		
78) Benzo(k,j)fluoranthene	37.378	252	786044m	231.04		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	836650m	217.57		
81) Benzo(a)pyrene	38.464	252	860313m	228.94		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	911606m	221.37		
83) Dibenzo(a,h)anthracene	43.225	278	734361m	222.70		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	802262m	217.38		
89) Perylene	38.774	252	863281m	225.70		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.395	231	939440m	250.63		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055L.D
Acq On : 13 Aug 2013 3:41 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 20 Sample Multiplier: 1

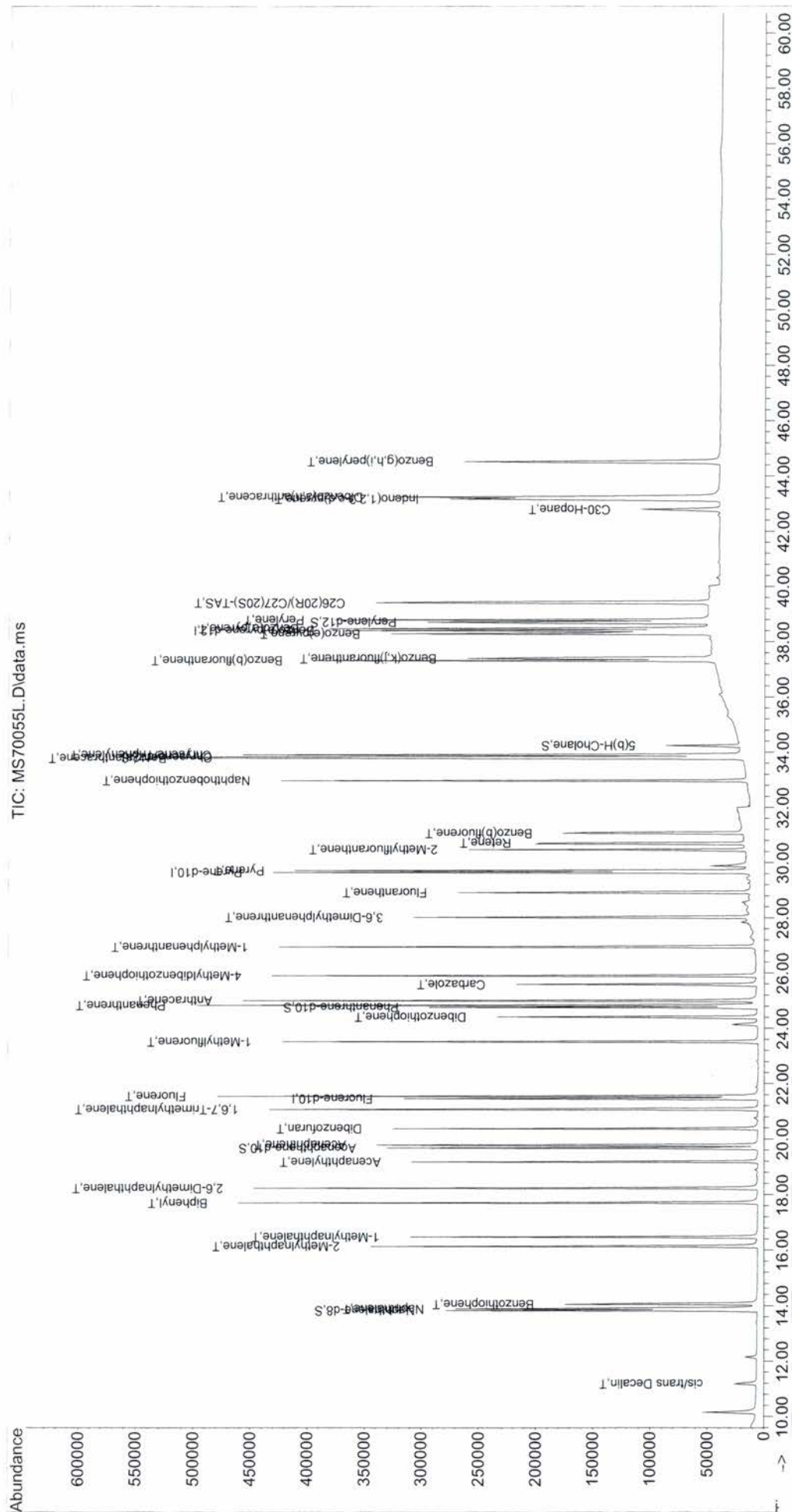
Quant Time: Aug 14 07:15:06 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
----------	------	------	----------	------	-------	-----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
Data File : MS70055L.D
Acq On : 13 Aug 2013 3:41 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 14 07:15:06 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055M.D
 Acq On : 14 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 14 07:21:39 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorene-d10	1.000	1.000	0.0	71	0.00
2 S	Naphthalene-d8	1.834	1.606	12.4	68	0.00
3 T	cis/trans Decalin	0.328	0.280	14.6	67	0.00
4 un	C1-Decalins	0.328	0.000	100.0#	0#	-11.96#
5 un	C2-Decalins	0.328	0.000	100.0#	0#	-13.49#
6 un	C3-Decalins	0.328	0.000	100.0#	0#	-15.80#
7 un	C4-Decalins	0.328	0.000	100.0#	0#	-18.25#
8 T	Naphthalene	1.939	1.660	14.4	66	0.00
9 T	2-Methylnaphthalene	1.220	1.116	8.5	72	0.00
10 T	1-Methylnaphthalene	1.127	1.024	9.1	71	0.00
11 T	2,6-Dimethylnaphthalene	1.113	1.025	7.9	72	0.00
12 T	1,6,7-Trimethylnaphthalene	0.965	0.893	7.5	73	0.00
13 un	C2-Naphthalenes	1.939	0.000	100.0#	0#	-18.89#
14 un	C3-Naphthalenes	1.939	0.000	100.0#	0#	-20.37#
15 un	C4-Naphthalenes	1.939	0.000	100.0#	0#	-22.12#
16 T	Benzothiophene	1.525	1.301	14.7	66	0.00
17 un	C1-Benzothiophenes	1.525	0.000	100.0#	0#	-15.52#
18 un	C2-Benzothiophenes	1.525	0.000	100.0#	0#	-18.25#
19 un	C3-Benzothiophenes	1.525	0.000	100.0#	0#	-20.31#
20 un	C4-Benzothiophenes	1.525	0.000	100.0#	0#	-22.10#
21 S	Acenaphthene-d10	1.004	0.914	9.0	71	0.00
22 T	Biphenyl	1.615	1.440	10.8	68	0.00
23 T	Acenaphthylene	1.642	1.692	-3.0	83	0.00
24 T	Acenaphthene	1.049	0.962	8.3	72	0.00
25 T	Dibenzofuran	1.746	1.606	8.0	70	0.00
26 T	Fluorene	1.386	1.257	9.3	71	0.00
27 T	1-Methylfluorene	0.879	0.864	1.7	79	0.00
28 un	C1-Fluorenes	1.386	0.000	100.0#	0#	-23.51#
29 un	C2-Fluorenes	1.386	0.000	100.0#	0#	-24.79#
30 un	C3-Fluorenes	1.386	0.000	100.0#	0#	-27.31#
31 I	Pyrene-d10	1.000	1.000	0.0	73	0.00
32 S	Phenanthrene-d10	0.950	0.880	7.4	75	0.00
33 T	Carbazole	0.811	0.846	-4.3	90	0.00
34 T	Dibenzothiophene	0.970	0.887	8.6	75	0.00
35 T	4-Methyldibenzothiophene	0.810	0.731	9.8	72	0.00
36 un	2/3-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.16#
37 un	1-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.52#
38 un	C2-Dibenzothiophenes	0.970	0.000	100.0#	0#	-27.83#
39 un	C3-Dibenzothiophenes	0.970	0.000	100.0#	0#	-28.46#
40 un	C4-Dibenzothiophenes	0.970	0.000	100.0#	0#	-30.88#
41 T	Phenanthrene	1.179	1.095	7.1	71	0.00
42 T	Anthracene	1.014	1.048	-3.4	81	0.00
43 un	3-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
44 un	2-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
45 un	2-Methylanthracene	0.764	0.000	100.0#	0#	-26.73#
46 un	4/9-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055M.D
 Acq On : 14 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 14 07:21:39 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47 T	1-Methylphenanthrene	0.764	0.706	7.6	74	0.00
48 T	3,6-Dimethylphenanthrene	0.604	0.590	2.3	81	0.00
49 T	Retene	0.294	0.302	-2.7	89	0.00
50 un	C2-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-28.56#
51 un	C3-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-29.43#
52 un	C4-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-31.99#
53 T	Naphthobenzothiophene	1.229	1.198	2.5	77	0.00
54 un	C1-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-34.24#
55 un	C2-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-35.83#
56 un	C3-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-36.91#
57 un	C4-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-38.08#
58 T	Fluoranthene	1.065	1.003	5.8	77	0.00
59 T	Pyrene	1.286	1.265	1.6	76	0.00
60 T	2-Methylfluoranthene	0.734	0.761	-3.7	91	0.00
61 T	Benzo(b)fluorene	0.630	0.665	-5.6	92	0.00
62 un	C1-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-30.71#
63 un	C2-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-32.18#
64 un	C3-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-33.81#
65 un	C4-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-34.93#
66 S	Chrysene-d12	1.157	1.046	9.6	69	0.00
67 T	Benzo(a)anthracene	1.184	1.270	-7.3	89	0.00
68 T	Chrysene/Triphenylene	1.198	1.073	10.4	68	0.00
69 un	C1-Chrysenes	1.198	0.000	100.0#	0#	-35.59#
70 un	C2-Chrysenes	1.198	0.000	100.0#	0#	-36.95#
71 un	C3-Chrysenes	1.198	0.000	100.0#	0#	-38.08#
72 un	C4-Chrysenes	1.198	0.000	100.0#	0#	-39.43#
73 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	72	0.00
74 un	C29-Hopane	0.426	0.000	100.0#	0#	-40.39#
75 un	18a-Oleanane	0.426	0.000	100.0#	0#	-42.05#
76 T	C30-Hopane	0.426	0.469	-10.1	88	0.00
77 T	Benzo(b)fluoranthene	1.469	1.449	1.4	77	0.00
78 T	Benzo(k,j)fluoranthene	1.257	1.310	-4.2	78	0.00
79 un	Benzo(a)fluoranthene	1.257	0.000	100.0#	0#	-37.30#
80 T	Benzo(e)pyrene	1.421	1.354	4.7	73	-0.04
81 T	Benzo(a)pyrene	1.389	1.459	-5.0	82	0.00
82 T	Indeno(1,2,3-c,d)pyrene	1.522	1.461	4.0	77	0.00
83 T	Dibenzo(a,h)anthracene	1.219	1.179	3.3	77	0.00
84 un	C1-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-48.42#
85 un	C2-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-50.34#
86 un	C3-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-51.08#
87 T	Benzo(g,h,i)perylene	1.364	1.205	11.7	69	-0.04
88 S	Perylene-d12	1.180	1.182	-0.2	81	0.00
89 T	Perylene	1.414	1.440	-1.8	78	0.00
90 S	5(b)H-Cholane	0.213	0.237	-11.3	90	0.00
91 un	C20-TAS	1.385	0.000	100.0#	0#	-33.30#
92 un	C21-TAS	1.385	0.000	100.0#	0#	-34.24#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055M.D
 Acq On : 14 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 14 07:21:39 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.385	0.000	100.0#	0#	-38.70#
94 T	C26(20R)/C27(20S)-TAS	1.385	1.559	-12.6	96	0.00
95 un	C28(20S)-TAS	1.385	0.000	100.0#	0#	-40.02#
96 un	C27(20R)-TAS	1.385	0.000	100.0#	0#	-41.05#
97 un	C28(20R)-TAS	1.385	0.000	100.0#	0#	-41.60#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055M.D
 Acq On : 14 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 14 07:21:39 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.455	176	378018m	251.05		0.00
31) Pyrene-d10	29.635	212	737748m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	586679m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	605037m	219.07		0.00
21) Acenaphthene-d10	19.672	164	344317m	227.70		0.00
32) Phenanthrene-d10	24.752	188	648422m	231.96		0.00
66) Chrysene-d12	33.809	240	769662m	225.92		0.00
88) Perylene-d12	38.697	264	692562m	250.33		0.00
90) 5(b)H-Cholane	34.235	217	138587m	277.77		0.00
Target Compounds						
3) cis/trans Decalin	11.176	138	104428m	211.44		Qvalue
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	624897m	214.08		
9) 2-Methylnaphthalene	16.134	142	420566m	229.01		
10) 1-Methylnaphthalene	16.469	142	384932m	226.82		
11) 2,6-Dimethylnaphthalene	18.224	156	385799m	230.31		
12) 1,6,7-Trimethylnaphtha...	21.093	170	336144m	231.23		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	486680m	211.89		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	537309m	221.02		
23) Acenaphthylene	19.171	152	631763m	255.55		
24) Acenaphthene	19.783	154	362801m	229.73		
25) Dibenzofuran	20.368	168	601622m	228.84		
26) Fluorene	21.538	166	473997m	227.14		
27) 1-Methylfluorene	23.506	180	327840m	247.81		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	617065m	258.44		
34) Dibenzothiophene	24.406	184	643641m	225.46		
35) 4-Methyldibenzothiophene	25.895	198	542675m	227.67		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	798390m	230.02		
42) Anthracene	24.995	178	773320m	259.06		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055M.D
 Acq On : 14 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 14 07:21:39 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	514056m	228.61		
48) 3,6-Dimethylphenanthrene	28.042	206	434881m	244.46		
49) Retene	30.708	234	198548m	229.65		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	887374m	245.27		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	739118m	235.70		
59) Pyrene	29.704	202	931029m	246.01		
60) 2-Methylfluoranthene	30.466	216	563904m	260.96		
61) Benzo(b) fluorene	31.089	216	493745m	266.39		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	932413m	267.46		
68) Chrysene/Triphenylene	33.886	228	785229m	222.74		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	274565m	275.19		
77) Benzo(b)fluoranthene	37.300	252	850627m	247.03		
78) Benzo(k,j)fluoranthene	37.417	252	764747m	259.52		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	790151m	237.23		
81) Benzo(a)pyrene	38.464	252	853435m	262.20		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	841431m	235.91		
83) Dibenzo(a,h)anthracene	43.225	278	684395m	239.62		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	699438m	218.80		
89) Perylene	38.774	252	844622m	254.94		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	913639m	281.41		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055M.D
Acq On : 14 Aug 2013 3:06 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 14 07:21:39 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

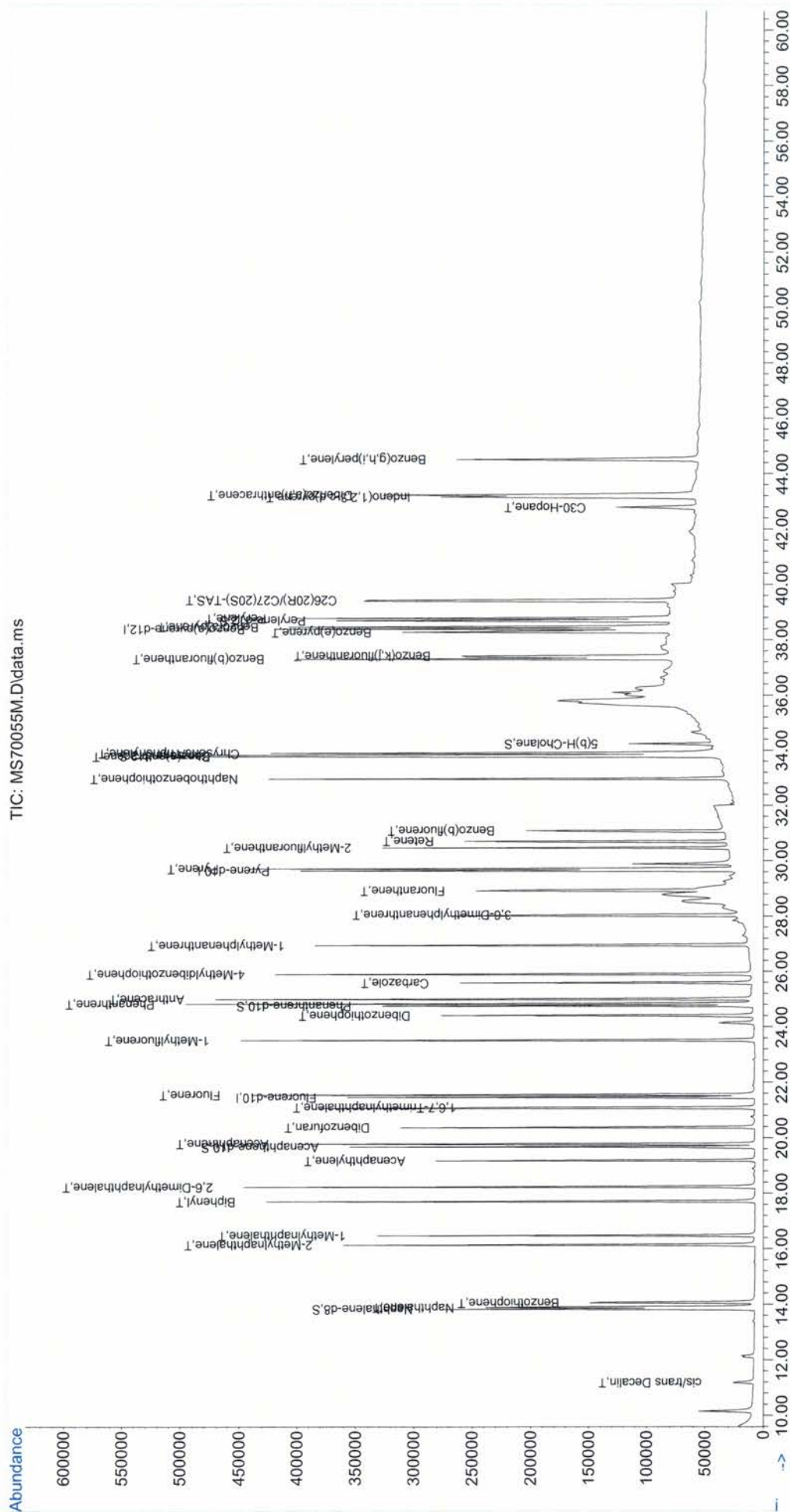
Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
----------	------	------	----------	------	-------	-----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
Data File : MS70055M.D
Acq On : 14 Aug 2013 3:06 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 14 07:21:39 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

TIC: MS70055M.D\data.ms



Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055N.D
 Acq On : 14 Aug 2013 1:24 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 14 15:33:37 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorene-d10	1.000	1.000	0.0	62	0.00
2 S	Naphthalene-d8	1.834	1.619	11.7	59	0.00
3 T	cis/trans Decalin	0.328	0.286	12.8	60	0.00
4 un	C1-Decalins	0.328	0.000	100.0#	0#	-11.96#
5 un	C2-Decalins	0.328	0.000	100.0#	0#	-13.49#
6 un	C3-Decalins	0.328	0.000	100.0#	0#	-15.80#
7 un	C4-Decalins	0.328	0.000	100.0#	0#	-18.25#
8 T	Naphthalene	1.939	1.707	12.0	59	0.00
9 T	2-Methylnaphthalene	1.220	1.109	9.1	62	0.00
10 T	1-Methylnaphthalene	1.127	1.015	9.9	61	0.00
11 T	2,6-Dimethylnaphthalene	1.113	1.031	7.4	63	0.00
12 T	1,6,7-Trimethylnaphthalene	0.965	0.894	7.4	64	-0.03
13 un	C2-Naphthalenes	1.939	0.000	100.0#	0#	-18.89#
14 un	C3-Naphthalenes	1.939	0.000	100.0#	0#	-20.37#
15 un	C4-Naphthalenes	1.939	0.000	100.0#	0#	-22.12#
16 T	Benzothiophene	1.525	1.327	13.0	59	0.00
17 un	C1-Benzothiophenes	1.525	0.000	100.0#	0#	-15.52#
18 un	C2-Benzothiophenes	1.525	0.000	100.0#	0#	-18.25#
19 un	C3-Benzothiophenes	1.525	0.000	100.0#	0#	-20.31#
20 un	C4-Benzothiophenes	1.525	0.000	100.0#	0#	-22.10#
21 S	Acenaphthene-d10	1.004	0.901	10.3	61	0.00
22 T	Biphenyl	1.615	1.483	8.2	61	0.00
23 T	Acenaphthylene	1.642	1.671	-1.8	71	0.00
24 T	Acenaphthene	1.049	0.958	8.7	62	0.00
25 T	Dibenzofuran	1.746	1.616	7.4	61	0.00
26 T	Fluorene	1.386	1.280	7.6	63	0.00
27 T	1-Methylfluorene	0.879	0.846	3.8	67	0.00
28 un	C1-Fluorenes	1.386	0.000	100.0#	0#	-23.51#
29 un	C2-Fluorenes	1.386	0.000	100.0#	0#	-24.79#
30 un	C3-Fluorenes	1.386	0.000	100.0#	0#	-27.31#
31 I	Pyrene-d10	1.000	1.000	0.0	64	0.00
32 S	Phenanthrene-d10	0.950	0.852	10.3	63	0.00
33 T	Carbazole	0.811	0.788	2.8	73	0.00
34 T	Dibenzothiophene	0.970	0.858	11.5	64	0.00
35 T	4-Methyldibenzothiophene	0.810	0.737	9.0	63	0.00
36 un	2/3-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.16#
37 un	1-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.52#
38 un	C2-Dibenzothiophenes	0.970	0.000	100.0#	0#	-27.83#
39 un	C3-Dibenzothiophenes	0.970	0.000	100.0#	0#	-28.46#
40 un	C4-Dibenzothiophenes	0.970	0.000	100.0#	0#	-30.88#
41 T	Phenanthrene	1.179	1.093	7.3	62	0.00
42 T	Anthracene	1.014	1.018	-0.4	69	0.00
43 un	3-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
44 un	2-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
45 un	2-Methylanthracene	0.764	0.000	100.0#	0#	-26.73#
46 un	4/9-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055N.D
 Acq On : 14 Aug 2013 1:24 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 14 15:33:37 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47 T	1-Methylphenanthrene	0.764	0.705	7.7	65	0.00
48 T	3,6-Dimethylphenanthrene	0.604	0.573	5.1	69	-0.03
49 T	Retene	0.294	0.284	3.4	73	0.00
50 un	C2-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-28.56#
51 un	C3-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-29.43#
52 un	C4-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-31.99#
53 T	Naphthobenzothiophene	1.229	1.170	4.8	66	0.00
54 un	C1-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-34.24#
55 un	C2-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-35.83#
56 un	C3-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-36.91#
57 un	C4-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-38.08#
58 T	Fluoranthene	1.065	0.983	7.7	66	0.00
59 T	Pyrene	1.286	1.251	2.7	66	0.00
60 T	2-Methylfluoranthene	0.734	0.724	1.4	75	0.00
61 T	Benzo(b)fluorene	0.630	0.631	-0.2	76	0.00
62 un	C1-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-30.71#
63 un	C2-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-32.18#
64 un	C3-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-33.81#
65 un	C4-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-34.93#
66 S	Chrysene-d12	1.157	1.023	11.6	59	0.00
67 T	Benzo(a)anthracene	1.184	1.203	-1.6	73	0.00
68 T	Chrysene/Triphenylene	1.198	1.044	12.9	58	0.00
69 un	C1-Chrysenes	1.198	0.000	100.0#	0#	-35.59#
70 un	C2-Chrysenes	1.198	0.000	100.0#	0#	-36.95#
71 un	C3-Chrysenes	1.198	0.000	100.0#	0#	-38.08#
72 un	C4-Chrysenes	1.198	0.000	100.0#	0#	-39.43#
73 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	67	0.00
74 un	C29-Hopane	0.426	0.000	100.0#	0#	-40.39#
75 un	18a-Oleanane	0.426	0.000	100.0#	0#	-42.05#
76 T	C30-Hopane	0.426	0.404	5.2	70	0.00
77 T	Benzo(b)fluoranthene	1.469	1.272	13.4	63	0.00
78 T	Benzo(k,j)fluoranthene	1.257	1.193	5.1	66	0.00
79 un	Benzo(a)fluoranthene	1.257	0.000	100.0#	0#	-37.30#
80 T	Benzo(e)pyrene	1.421	1.229	13.5	62	-0.04
81 T	Benzo(a)pyrene	1.389	1.318	5.1	69	0.00
82 T	Indeno(1,2,3-c,d)pyrene	1.522	1.276	16.2	63	0.00
83 T	Dibenzo(a,h)anthracene	1.219	1.019	16.4	62	0.00
84 un	C1-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-48.42#
85 un	C2-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-50.34#
86 un	C3-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-51.08#
87 T	Benzo(g,h,i)perylene	1.364	1.055	22.7	57	-0.04
88 S	Perylene-d12	1.180	1.080	8.5	69	0.00
89 T	Perylene	1.414	1.303	7.9	66	0.00
90 S	5(b)H-Cholane	0.213	0.208	2.3	74	0.00
91 un	C20-TAS	1.385	0.000	100.0#	0#	-33.30#
92 un	C21-TAS	1.385	0.000	100.0#	0#	-34.24#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055N.D
 Acq On : 14 Aug 2013 1:24 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 14 15:33:37 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.385	0.000	100.0#	0#	-38.70#
94 T	C26(20R)/C27(20S)-TAS	1.385	1.481	-6.9	85	0.00
95 un	C28(20S)-TAS	1.385	0.000	100.0#	0#	-40.02#
96 un	C27(20R)-TAS	1.385	0.000	100.0#	0#	-41.05#
97 un	C28(20R)-TAS	1.385	0.000	100.0#	0#	-41.60#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055N.D
 Acq On : 14 Aug 2013 1:24 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 14 15:33:37 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.455	176	329355m	251.05		0.00
31) Pyrene-d10	29.635	212	645111m	250.63		0.00
73) Benzo(a)pyrene-d12	38.387	264	547108m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	531341m	220.81		0.00
21) Acenaphthene-d10	19.672	164	295853m	224.56		0.00
32) Phenanthrene-d10	24.752	188	549008m	224.60		0.00
66) Chrysene-d12	33.809	240	658555m	221.07		0.00
88) Perylene-d12	38.697	264	590411m	228.84		0.00
90) 5(b)H-Cholane	34.236	217	113699m	244.37		0.00
Target Compounds						
3) cis/trans Decalin	11.176	138	92818m	215.70		Qvalue
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	559728m	220.09		
9) 2-Methylnaphthalene	16.134	142	364043m	227.52		
10) 1-Methylnaphthalene	16.469	142	332518m	224.88		
11) 2,6-Dimethylnaphthalene	18.224	156	338071m	231.63		
12) 1,6,7-Trimethylnaphtha...	21.065	170	293141m	231.44		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	432613m	216.18		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	482069m	227.60		
23) Acenaphthylene	19.171	152	543705m	252.43		
24) Acenaphthene	19.784	154	314888m	228.85		
25) Dibenzofuran	20.369	168	527475m	230.28		
26) Fluorene	21.539	166	420670m	231.37		
27) 1-Methylfluorene	23.506	180	279478m	242.47		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	502595m	240.72		
34) Dibenzothiophene	24.406	184	544366m	218.06		
35) 4-Methyldibenzothiophene	25.895	198	478111m	229.38		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	697056m	229.66		
42) Anthracene	24.995	178	657130m	251.75		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055N.D
 Acq On : 14 Aug 2013 1:24 pm
 Operator : YM
 Sample : AR-WKCC-250-038
 Misc :
 ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 14 15:33:37 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	448474m	228.09		
48) 3,6-Dimethylphenanthrene	28.007	206	369146m	237.31		
49) Retene	30.708	234	163471m	216.23		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	757401m	239.41		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	633392m	230.99		
59) Pyrene	29.704	202	805254m	243.33		
60) 2-Methylfluoranthene	30.466	216	468828m	248.12		
61) Benzo(b)fluorene	31.089	216	409512m	252.68		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	772720m	253.48		
68) Chrysene/Triphenylene	33.886	228	667878m	216.65		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	220895m	237.41		
77) Benzo(b)fluoranthene	37.300	252	696505m	216.90		
78) Benzo(k,j)fluoranthene	37.417	252	649200m	236.24		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	669093m	215.41		
81) Benzo(a)pyrene	38.464	252	718828m	236.82		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	685523m	206.10		
83) Dibenzo(a,h)anthracene	43.226	278	551944m	207.22		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	571269m	191.63		
89) Perylene	38.774	252	712441m	230.60		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	809291m	267.30		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055N.D
Acq On : 14 Aug 2013 1:24 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 38 Sample Multiplier: 1

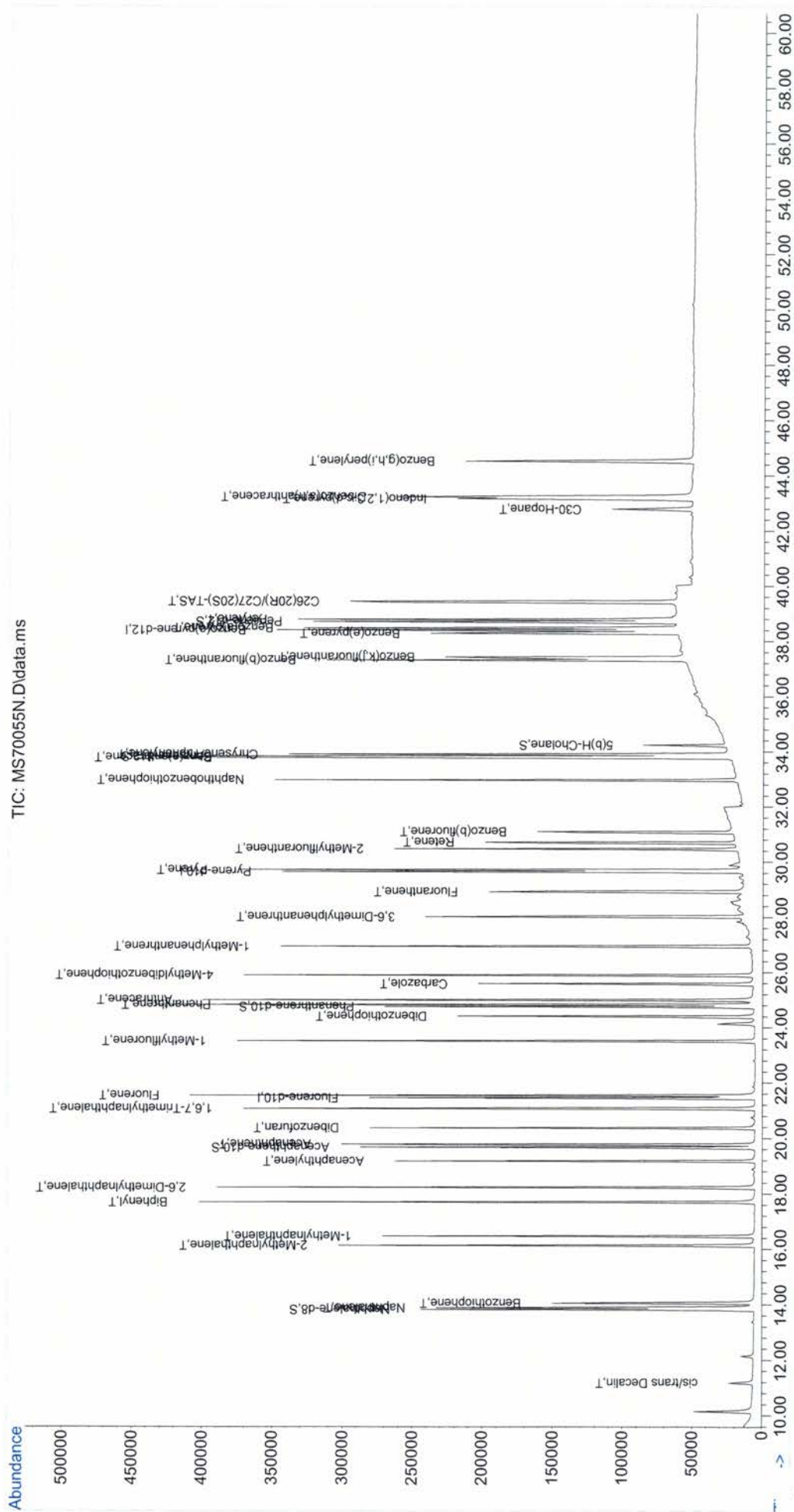
Quant Time: Aug 14 15:33:37 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
Data File : MS70055N.D
Acq On : 14 Aug 2013 1:24 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 14 15:33:37 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name MS70055H.D
 Data File Path C:\GCMS7\MS70055\
 Operator YM
 Date Acquired 8/13/2013 1:58
 Acq. Method File PAH-2012.M
 Sample Name AR-WKISSU-250-002
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 8
 Sample Multiplier 1
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

MS70055H.D
 AR-WKISSU-250-002
 8/13/2013
 PAH-2012.M
 1

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	0.00	0	0.0000	0.0000
9)+10)	C1-Naphthalenes	0.00	0	0.0000	0.0000
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	0.00	0	0.0000	0.0000
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	0.00	0	0.0000	0.0000
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	0.00	0	0.0000	0.0000
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	0.00	0	0.0000	0.0000
59)	Pyrene	0.00	0	0.0000	0.0000
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	0.00	0	0.0000	0.0000
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	0.00	0	0.0000	0.0000
10) 1-Methylnaphthalene	0.00	0	0.0000	0.0000
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36) 2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37) 1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43) 3-Methylphenanthrene	0.00	0	0.0000	0.0000
44) 2-Methylphenanthrene	0.00	0	0.0000	0.0000
45) 2-Methylantracene	0.00	0	0.0000	0.0000
46) 4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47) 1-Methylphenanthrene	0.00	0	0.0000	0.0000
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	747816	240.67	96.22
21) Acenaphthene-d10	19.67	391129	229.90	91.90
32) Phenanthrene-d10	24.75	697388	231.83	92.66
66) Chrysene-d12	33.81	794073	216.60	86.63
88) Perylene-d12	38.70	637811	233.92	93.56
90) 5(b)H-Cholane	34.24	116185	236.29	94.52
Internal Standards				
1) Fluorene-d10	21.45	425296	251.05	
31) Pyrene-d10	29.63	793912	250.63	
73) Benzo(a)pyrene-d12	38.39	578199	250.33	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : MS70055H.D
 Acq On : 13 Aug 2013 1:58 am
 Operator : YM
 Sample : AR-WKISSU-250-002
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 13 09:58:45 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	425296m	251.05		0.00
31) Pyrene-d10	29.635	212	793912m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	578199m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	747816m	240.67		0.00
21) Acenaphthene-d10	19.672	164	391129m	229.90		0.00
32) Phenanthrene-d10	24.752	188	697388m	231.83		0.00
66) Chrysene-d12	33.809	240	794073m	216.60		0.00
88) Perylene-d12	38.697	264	637811m	233.92		0.00
90) 5(b)H-Cholane	34.235	217	116185m	236.29		0.00

Target Compounds				Qvalue
3) cis/trans Decalin	0.000	0	N.D.	d
4) C1-Decalins	0.000	0	N.D.	d
5) C2-Decalins	0.000	0	N.D.	d
6) C3-Decalins	0.000	0	N.D.	d
7) C4-Decalins	0.000	0	N.D.	d
8) Naphthalene	0.000	0	N.D.	d
9) 2-Methylnaphthalene	0.000	0	N.D.	d
10) 1-Methylnaphthalene	0.000	0	N.D.	d
11) 2,6-Dimethylnaphthalene	0.000	0	N.D.	d
12) 1,6,7-Trimethylnaphtha...	0.000	0	N.D.	d
13) C2-Naphthalenes	0.000	0	N.D.	d
14) C3-Naphthalenes	0.000	0	N.D.	d
15) C4-Naphthalenes	0.000	0	N.D.	d
16) Benzothiophene	0.000	0	N.D.	d
17) C1-Benzothiophenes	0.000	0	N.D.	d
18) C2-Benzothiophenes	0.000	0	N.D.	d
19) C3-Benzothiophenes	0.000	0	N.D.	d
20) C4-Benzothiophenes	0.000	0	N.D.	d
22) Biphenyl	0.000	0	N.D.	d
23) Acenaphthylene	0.000	0	N.D.	d
24) Acenaphthene	0.000	0	N.D.	d
25) Dibenzofuran	0.000	0	N.D.	d
26) Fluorene	0.000	0	N.D.	d
27) 1-Methylfluorene	0.000	0	N.D.	d
28) C1-Fluorenes	0.000	0	N.D.	d
29) C2-Fluorenes	0.000	0	N.D.	d
30) C3-Fluorenes	0.000	0	N.D.	d
33) Carbazole	0.000	0	N.D.	d
34) Dibenzothiophene	0.000	0	N.D.	d
35) 4-Methyldibenzothiophene	0.000	0	N.D.	d
36) 2/3-Methyldibenzothiop...	0.000	0	N.D.	d
37) 1-Methyldibenzothiophene	0.000	0	N.D.	d
38) C2-Dibenzothiophenes	0.000	0	N.D.	d
39) C3-Dibenzothiophenes	0.000	0	N.D.	d
40) C4-Dibenzothiophenes	0.000	0	N.D.	d
41) Phenanthrene	0.000	0	N.D.	d
42) Anthracene	0.000	0	N.D.	d
43) 3-Methylphenanthrene	0.000	0	N.D.	d

Data Path : C:\msdchem\2\data\MS70055\
 Data File : MS70055H.D
 Acq On : 13 Aug 2013 1:58 am
 Operator : YM
 Sample : AR-WKISSU-250-002
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 13 09:58:45 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	0.000		0	N.D.	d	
59) Pyrene	0.000		0	N.D.	d	
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	0.000		0	N.D.	d	
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

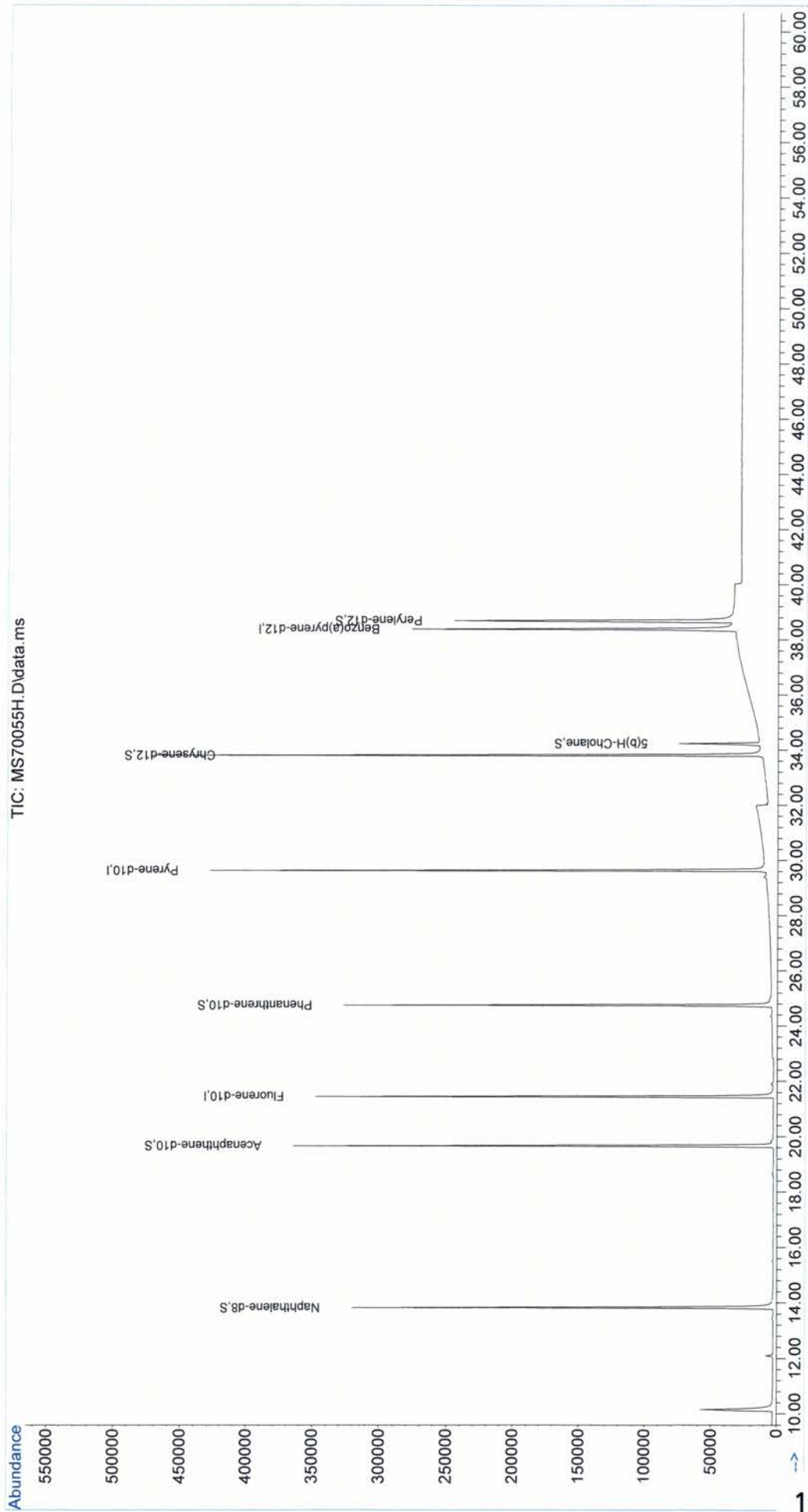
Data Path : C:\msdchem\2\data\MS70055\
Data File : MS70055H.D
Acq On : 13 Aug 2013 1:58 am
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 13 09:58:45 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : MS70055H.D
 Acq On : 13 Aug 2013 1:58 am
 Operator : YM
 Sample : AR-WKISSU-250-002
 Misc :
 ALS Vial : 8 Sample Multiplier: 1
 Quant Time: Aug 13 09:58:45 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name MS70055K.D
 Data File Path C:\GCM57\MS70055\
 Operator YM
 Date Acquired 8/13/2013 7:40
 Acq. Method File PAH-2012.M
 Sample Name AR-SRM2779-WK4.0-002
 Misc Info 0
 Instrument Name GCM5D
 Vial Number 11
 Sample Multiplier 0.24461
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

MS70055K.D
 AR-SRM2779-WK4.0-002
 8/13/2013
 PAH-2012.M
 4.088140305

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.18	2123030	591.2835	633.1016
4)	C1-Decalins	12.35	2887990	804.3290	861.2146
5)	C2-Decalins	13.82	2441910	680.0916	728.1906
6)	C3-Decalins	16.69	2474940	689.2914	738.0410
7)	C4-Decalins	17.72	1312140	365.4424	391.2881
8)	Naphthalene	13.88	12930000	609.3137	652.4070
9)+10)	C1-Naphthalenes	16.30	27628800	1301.9804	1394.0621
13)	C2-Naphthalenes	18.50	32085300	1511.9882	1618.9225
14)	C3-Naphthalenes	20.51	21803900	1027.4892	1100.1576
15)	C4-Naphthalenes	22.82	11012200	518.9401	555.6418
16)	Benzothiophene	14.10	110735	6.6316	7.1007
17)	C1-Benzothiophenes	15.63	412020	24.6748	26.4199
18)	C2-Benzothiophenes	18.64	431659	25.8511	27.6794
19)	C3-Benzothiophenes	20.34	397446	23.8021	25.4855
20)	C4-Benzothiophenes	22.10	379266	22.7133	24.3197
22)	Biphenyl	17.69	2459550	139.1657	149.0081
23)	Acenaphthylene	19.17	162826	9.0598	9.7005
24)	Acenaphthene	19.78	97798	8.5182	9.1207
25)	Dibenzofuran	20.37	478594	25.0407	26.8117
26)	Fluorene	21.54	1576850	103.9380	111.2889
28)	C1-Fluorenes	23.51	3471910	228.8512	245.0366
29)	C2-Fluorenes	25.34	5115060	337.1606	361.0061
30)	C3-Fluorenes	26.83	3821950	251.9238	269.7410
33)	Carbazole	25.58	53209	2.9684	3.1784
42)	Anthracene	24.99	70294	3.1367	3.3585
41)	Phenanthrene	24.82	5122340	196.5754	210.4781
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.72	11156898	428.1583	458.4394
50)	C2-Phenanthrenes/Anthracenes	28.39	11310700	434.0604	464.7591
51)	C3-Phenanthrenes/Anthracenes	29.95	7459100	286.2524	306.4974
52)	C4-Phenanthrenes/Anthracenes	31.78	4951180	190.0069	203.4450
34)	Dibenzothiophene	24.41	823710	38.4329	41.1510
35)+36)+37)	C1-Dibenzothiophenes	26.21	2282587	106.5015	114.0338
38)	C2-Dibenzothiophenes	27.31	2892160	134.9435	144.4873
39)	C3-Dibenzothiophenes	28.80	2764470	128.9858	138.1082
40)	C4-Dibenzothiophenes	29.81	1127050	52.5860	56.3051
58)	Fluoranthene	28.94	95201	4.0439	4.3299
59)	Pyrene	29.70	325232	11.4472	12.2568
62)	C1-Fluoranthenes/Pyrenes	30.85	1482750	62.9834	67.4379
63)	C2-Fluoranthenes/Pyrenes	32.33	2894770	122.9623	131.6587
64)	C3-Fluoranthenes/Pyrenes	34.00	2578300	109.5197	117.2654
65)	C4-Fluoranthenes/Pyrenes	35.13	2468910	104.8729	112.2899
53)	Naphthobenzothiophene	32.96	573751	21.1242	22.6181
54)	C1-Naphthobenzothiophenes	34.12	1159540	42.6915	45.7109
55)	C2-Naphthobenzothiophenes	35.79	1396580	51.4187	55.0553
56)	C3-Naphthobenzothiophenes	37.18	1077290	39.6630	42.4682
57)	C4-Naphthobenzothiophenes	38.19	440500	16.2182	17.3652
67)	Benz(a)anthracene	33.77	154765	5.9134	6.3316
68)	Chrysene/Triphenylene	33.85	944630	35.6920	38.2163
69)	C1-Chrysenes	35.13	2160950	81.6494	87.4239
70)	C2-Chrysenes	36.29	2504760	94.6399	101.3332
71)	C3-Chrysenes	38.00	1892570	71.5090	76.5665
72)	C4-Chrysenes	39.43	1098050	41.4888	44.4231
77)	Benzo(b)fluoranthene	37.30	112205	4.0460	4.3322
78)	Benzo(k,j)fluoranthene	37.34	9674	0.4076	0.4365
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.27	207439	7.7329	8.2798
81)	Benzo(a)pyrene	38.46	38904	1.4841	1.5890
89)	Perylene	38.46	16024	0.6005	0.6430
82)	Indeno(1,2,3-c,d)pyrene	43.19	14811	0.5156	0.5521
83)	Dibenzo(a,h)anthracene	43.23	10601	0.4609	0.4934
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.52	44843	1.7418	1.8650

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	17064600	1278.1680	1368.5655
10) 1-Methylnaphthalene	16.47	10564200	856.2426	916.7998
11) 2,6-Dimethylnaphthalene	18.22	8848160	726.5577	777.9430
12) 1,6,7-Trimethylnaphthalene	21.09	2318290	219.3565	234.8703
27) 1-Methylfluorene	23.51	1872330	194.6743	208.4425
35) 4-Methyldibenzothiophene	25.90	1293530	72.2847	77.3970
36) 2/3-Methyldibenzothiophene	26.21	608615	34.0106	36.4159
37) 1-Methyldibenzothiophene	26.52	380442	21.2599	22.7635
43) 3-Methylphenanthrene	26.48	2668880	158.0998	169.2813
44) 2-Methylphenanthrene	26.59	2815400	166.7793	178.5746
45) 2-Methylanthracene	26.73	240818	14.2656	15.2746
46) 4/9-Methylphenanthrene	26.86	3178230	188.2729	201.5884
47) 1-Methylphenanthrene	26.93	2253570	133.4976	142.9391
48) 3,6-Dimethylphenanthrene	28.01	803699	60.1794	64.4356
49) Retene	30.71	24042	3.7041	3.9661
60) 2-Methylfluoranthene	30.47	81702	5.0364	5.3926
61) Benzo(b)fluorene	31.09	202267	14.5365	15.5646
74) C29-Hopane	40.76	167955	20.9018	22.3800
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.05	352069	43.8145	46.9133
91) C20-TAS	33.34	184313	7.0490	7.5476
92) C21-TAS	34.43	206108	7.8826	8.4401
93) C26(20S)-TAS	38.54	98111	3.7522	4.0176
94) C26(20R)/C27(20S)-TAS	39.47	317931	12.1592	13.0192
95) C28(20S)-TAS	40.24	230464	8.8141	9.4375
96) C27(20R)-TAS	40.68	195905	7.4924	8.0223
97) C28(20R)-TAS	41.82	190016	7.2671	7.7811
Surrogate Standards				
2) Naphthalene-d8	13.82	1110510	55.31	90.40
21) Acenaphthene-d10	19.67	556841	50.65	82.78
32) Phenanthrene-d10	24.75	1199510	57.16	93.39
66) Chrysene-d12	33.81	1355970	53.02	86.68
88) Perylene-d12	38.70	1314830	59.01	96.48
90) 5(b)H-Cholane	34.24	261006	64.96	106.22
Internal Standards				
1) Fluorene-d10	21.45	672227	61.41	
31) Pyrene-d10	29.63	1354780	61.31	
73) Benzo(a)pyrene-d12	38.39	1155770	61.23	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : MS70055K.D
 Acq On : 13 Aug 2013 7:40 am
 Operator : YM
 Sample : AR-SRM2779-WK4.0-002
 Misc :
 ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Aug 16 07:00:47 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	672227m	251.05		0.00
31) Pyrene-d10	29.635	212	1354782m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	1155770m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	1110506m	55.31		0.00
21) Acenaphthene-d10	19.672	164	556841m	50.65		0.00
32) Phenanthrene-d10	24.752	188	1199506m	57.16		0.00
66) Chrysene-d12	33.809	240	1355971m	53.02		0.00
88) Perylene-d12	38.697	264	1314826m	59.01		0.00
90) 5(b)H-Cholane	34.235	217	261006m	64.96		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.176	138	2123034m	591.28		
4) C1-Decalins	12.346	152	2887986m	804.33		
5) C2-Decalins	13.822	166	2441907m	680.09		
6) C3-Decalins	16.691	180	2474940m	689.29		
7) C4-Decalins	17.722	194	1312138m	365.44		
8) Naphthalene	13.878	128	12929989m	609.31		
9) 2-Methylnaphthalene	16.134	142	17064615m	1278.17		
10) 1-Methylnaphthalene	16.469	142	10564154m	856.24		
11) 2,6-Dimethylnaphthalene	18.224	156	8848158m	726.56		
12) 1,6,7-Trimethylnaphtha...	21.093	170	2318294m	219.36		
13) C2-Naphthalenes	18.502	156	32085289m	1511.99		
14) C3-Naphthalenes	20.508	170	21803939m	1027.49		
15) C4-Naphthalenes	22.820	184	11012204m	518.94		
16) Benzothiophene	14.101	134	110735m	6.63		
17) C1-Benzothiophenes	15.633	148	412020m	24.67		
18) C2-Benzothiophenes	18.641	162	431659m	25.85		
19) C3-Benzothiophenes	20.341	176	397446m	23.80		
20) C4-Benzothiophenes	22.096	190	379266m	22.71		
22) Biphenyl	17.694	154	2459546m	139.17		
23) Acenaphthylene	19.171	152	162826m	9.06		
24) Acenaphthene	19.784	154	97798m	8.52		
25) Dibenzofuran	20.369	168	478594m	25.04		
26) Fluorene	21.538	166	1576846m	103.94		
27) 1-Methylfluorene	23.506	180	1872326m	194.67		
28) C1-Fluorenes	23.506	180	3471908m	228.85		
29) C2-Fluorenes	25.341	194	5115062m	337.16		
30) C3-Fluorenes	26.830	208	3821947m	251.92		
33) Carbazole	25.583	167	53209m	2.97		
34) Dibenzothiophene	24.406	184	823710m	38.43		
35) 4-Methyldibenzothiophene	25.895	198	1293526m	72.28		
36) 2/3-Methyldibenzothiop...	26.207	198	608615m	34.01		
37) 1-Methyldibenzothiophene	26.518	198	380442m	21.26		
38) C2-Dibenzothiophenes	27.315	212	2892163m	134.94		
39) C3-Dibenzothiophenes	28.804	226	2764473m	128.99		
40) C4-Dibenzothiophenes	29.808	240	1127046m	52.59		
41) Phenanthrene	24.822	178	5122335m	196.58		
42) Anthracene	24.995	178	70294m	3.14		
43) 3-Methylphenanthrene	26.484	192	2668878m	158.10		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : MS70055K.D
 Acq On : 13 Aug 2013 7:40 am
 Operator : YM
 Sample : AR-SRM2779-WK4.0-002
 Misc :
 ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Aug 16 07:00:47 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	2815399m	166.78		
45) 2-Methylanthracene	26.726	192	240818m	14.27		
46) 4/9-Methylphenanthrene	26.865	192	3178234m	188.27		
47) 1-Methylphenanthrene	26.934	192	2253570m	133.50		
48) 3,6-Dimethylphenanthrene	28.007	206	803699m	60.18		
49) Retene	30.708	234	24042m	3.70		
50) C2-Phenanthrenes/Anthr...	28.388	206	11310704m	434.06		
51) C3-Phenanthrenes/Anthr...	29.946	220	7459102m	286.25		
52) C4-Phenanthrenes/Anthr...	31.782	234	4951177m	190.01		
53) Naphthobenzothiophene	32.955	234	573751m	21.12		
54) C1-Naphthobenzothiophenes	34.119	248	1159542m	42.69		
55) C2-Naphthobenzothiophenes	35.787	262	1396580m	51.42		
56) C3-Naphthobenzothiophenes	37.184	276	1077287m	39.66		
57) C4-Naphthobenzothiophenes	38.193	290	440500m	16.22		
58) Fluoranthene	28.942	202	95201m	4.04		
59) Pyrene	29.704	202	325232m	11.45		
60) 2-Methylfluoranthene	30.466	216	81702m	5.04		
61) Benzo(b)fluorene	31.089	216	202267m	14.54		
62) C1-Fluoranthenes/Pyrenes	30.847	216	1482750m	62.98		
63) C2-Fluoranthenes/Pyrenes	32.335	230	2894765m	122.96		
64) C3-Fluoranthenes/Pyrenes	34.003	244	2578303m	109.52		
65) C4-Fluoranthenes/Pyrenes	35.128	258	2468907m	104.87		
67) Benz(a)anthracene	33.770	228	154765m	5.91		
68) Chrysene/Triphenylene	33.847	228	944630m	35.69		
69) C1-Chrysenes	35.128	242	2160948m	81.65		
70) C2-Chrysenes	36.292	256	2504758m	94.64		
71) C3-Chrysenes	37.999	270	1892571m	71.51		
72) C4-Chrysenes	39.434	284	1098052m	41.49		
74) C29-Hopane	40.755	191	167955m	20.90		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.046	191	352069m	43.81		
77) Benzo(b)fluoranthene	37.300	252	112205m	4.05		
78) Benzo(k,j)fluoranthene	37.339	252	9674m	0.41		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	207439m	7.73		
81) Benzo(a)pyrene	38.464	252	38904m	1.48		
82) Indeno(1,2,3-c,d)pyrene	43.189	276	14811m	0.52		
83) Dibenzo(a,h)anthracene	43.225	278	10601m	0.46		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	44843m	1.74		
89) Perylene	38.464	252	16024m	0.60		
91) C20-TAS	33.343	231	184313m	7.05		
92) C21-TAS	34.429	231	206108m	7.88		
93) C26(20S)-TAS	38.542	231	98111m	3.75		
94) C26(20R)/C27(20S)-TAS	39.473	231	317931m	12.16		
95) C28(20S)-TAS	40.239	231	230464m	8.81		
96) C27(20R)-TAS	40.681	231	195905m	7.49		
97) C28(20R)-TAS	41.824	231	190016m	7.27		

Data Path : C:\msdchem\2\data\MS70055\
Data File : MS70055K.D
Acq On : 13 Aug 2013 7:40 am
Operator : YM
Sample : AR-SRM2779-WK4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Aug 16 07:00:47 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

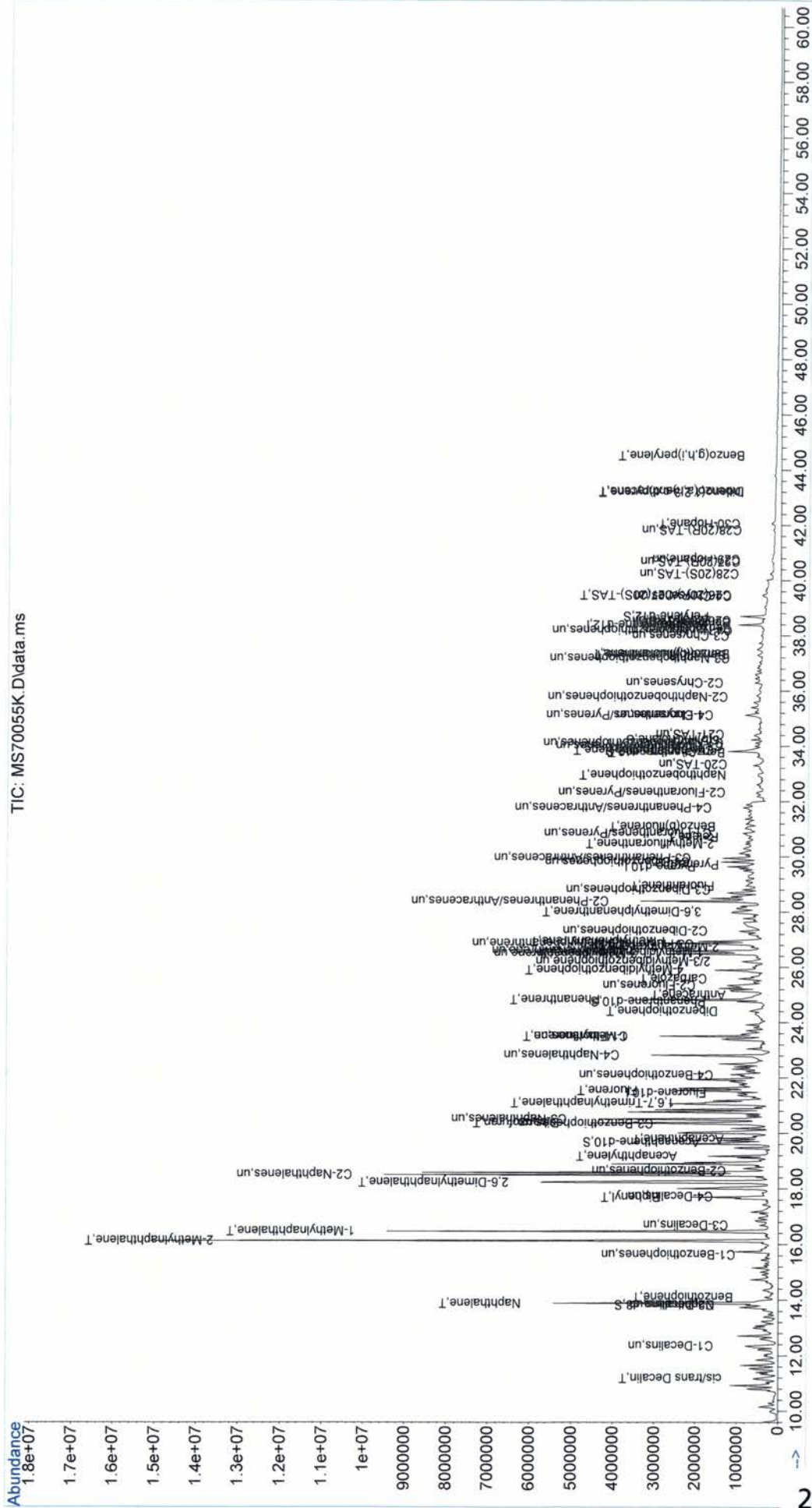
(#) = qualifier out of range (m) = manual integration (+) = signals summed						

```

Data Path      : C:\msdchem\2\data\MS70055\
Data File     : MS70055K.D
Acq On        : 13 Aug 2013   7:40 am
Operator      : YM
Sample        : AR-SRM2779-WK4.0-002
Misc          :
ALS Vial      : 11   Sample Multiplier: 0.

```

Quant Time: Aug 16 07:00:47 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3075A.D
 Data File Path C:\GCM57\MS70055\
 Operator YM
 Date Acquired 8/13/2013 6:32
 Acq. Method File PAH-2012.M
 Sample Name Procedural Blank
 Misc Info 0
 Instrument Name GCM5D
 Vial Number 12
 Sample Multiplier 0.06667
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ENV3075A.D
 Procedural Blank
 8/13/2013
 PAH-2012.M
 14.99925004

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.91	8059	0.1759	0.2183
9)+10)	C1-Naphthalenes	16.30	2129	0.0465	0.0577
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.72	5406	0.1417	0.1758
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	0.00	0	0.0000	0.0000
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	24.82	2526	0.0441	0.0548
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	0.00	0	0.0000	0.0000
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	0.00	0	0.0000	0.0000
59)	Pyrene	0.00	0	0.0000	0.0000
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.66	2495	0.0403	0.0500
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	1382	0.0479	0.0595
10) 1-Methylnaphthalene	16.47	747	0.0280	0.0348
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36) 2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37) 1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43) 3-Methylphenanthrene	0.00	0	0.0000	0.0000
44) 2-Methylphenanthrene	0.00	0	0.0000	0.0000
45) 2-Methylanthracene	0.00	0	0.0000	0.0000
46) 4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47) 1-Methylphenanthrene	0.00	0	0.0000	0.0000
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	573553	13.23	79.34
21) Acenaphthene-d10	19.67	327270	13.79	82.67
32) Phenanthrene-d10	24.75	619318	13.44	80.58
66) Chrysene-d12	33.81	846719	15.08	90.45
88) Perylene-d12	38.70	747685	14.46	86.76
90) 5(b)H-Cholane	34.24	141163	15.14	90.84
Internal Standards				
1) Fluorene-d10	21.46	395585	16.74	
31) Pyrene-d10	29.63	810762	16.71	
73) Benzo(a)pyrene-d12	38.39	730937	16.69	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075A.D
 Acq On : 13 Aug 2013 6:32 am
 Operator : YM
 Sample : Procedural Blank
 Misc :
 ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 14 20:02:26 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	395585m	251.05		0.00
31) Pyrene-d10	29.635	212	810762m	250.63		0.00
73) Benzo(a)pyrene-d12	38.387	264	730937m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	573553m	13.23		0.00
21) Acenaphthene-d10	19.672	164	327270m	13.79		0.00
32) Phenanthrene-d10	24.752	188	619318m	13.44		0.00
66) Chrysene-d12	33.809	240	846719m	15.08		0.00
88) Perylene-d12	38.697	264	747685m	14.46		0.00
90) 5(b)H-Cholane	34.235	217	141163m	15.14		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.906	128	8059m	0.18		
9) 2-Methylnaphthalene	16.134	142	1382m	0.05		
10) 1-Methylnaphthalene	16.469	142	747m	0.03		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.722	154	5406m	0.14		
23) Acenaphthylene	0.000		0	N.D.	d	
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	0.000		0	N.D.	d	
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	0.000		0	N.D.	d	
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	2526m	0.04		
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075A.D
 Acq On : 13 Aug 2013 6:32 am
 Operator : YM
 Sample : Procedural Blank
 Misc :
 ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 14 20:02:26 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	0.000		0	N.D.	d	
59) Pyrene	0.000		0	N.D.	d	
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	38.658	252	2495m	0.04		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ENV3075A.D
Acq On : 13 Aug 2013 6:32 am
Operator : YM
Sample : Procedural Blank
Misc :
ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 14 20:02:26 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

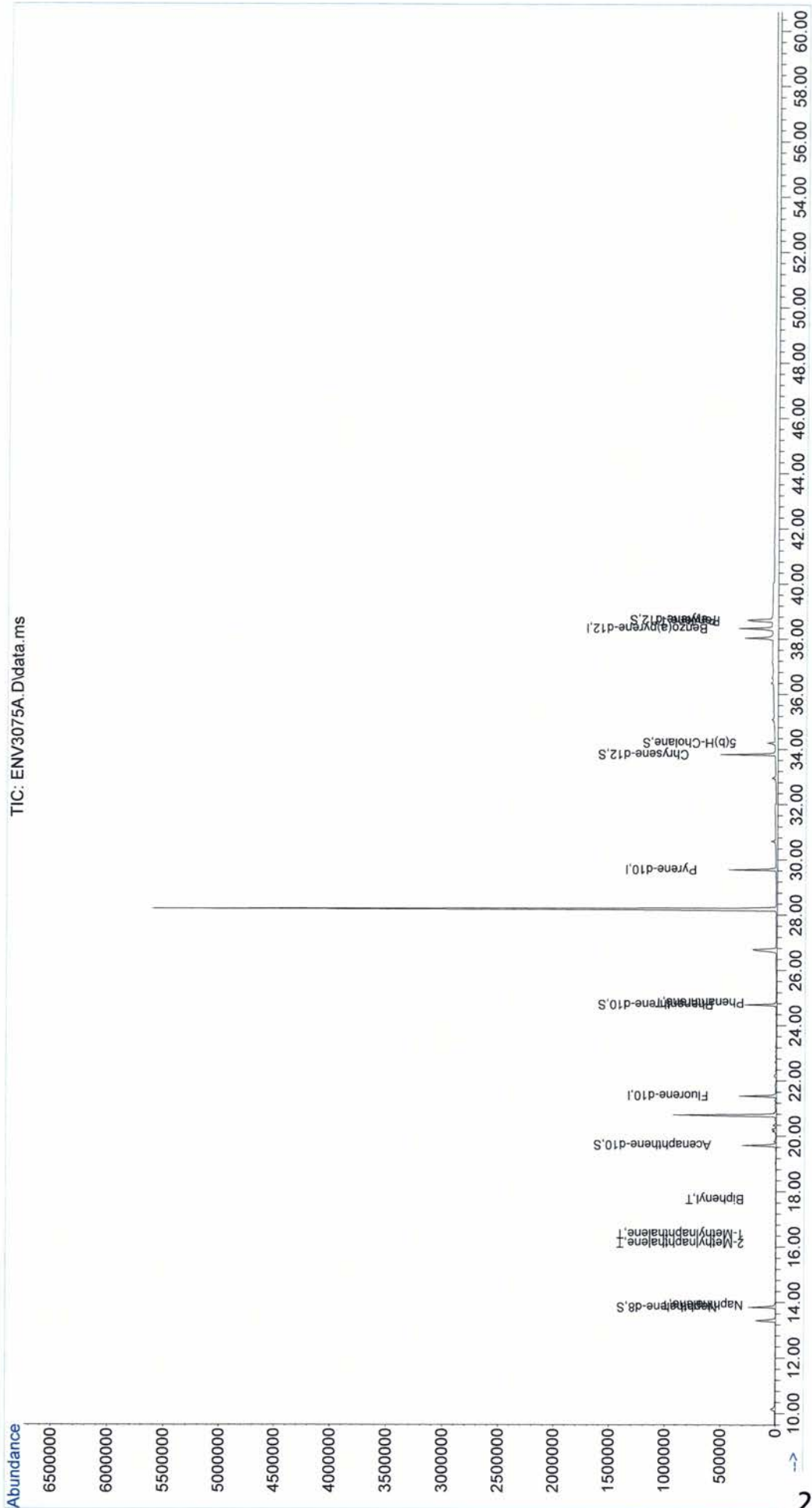
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075A.D
 Acq On : 13 Aug 2013 6:32 am
 Operator : YM
 Sample : Procedural Blank
 Misc :
 ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 14 20:02:26 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

TIC: ENV3075A.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name	ENV30758.D	Surrogate/Internal Multiplier Factor:	1.00	
Data File Path	C:\msdchem\2\data\MS70055\	AR-WKSU-2500-001: (ng/mL)		
Operator	YM	Naphthalene-d8	250.125	
Date Acquired	8/13/2013 8:49	Acenaphthene-d10	250.163	Copy data below
Acq. Method File	PAH-2012.M	Phenanthrene-d10	250.194	to Spread Sheet
Sample Name	SRM 1941b	Chrysene-d12	250.038	
Misc Info	0	Perylene-d12	250.031	ENV30758.D
Instrument Name	GCMSD	5(b)H-Cholane	250.000	SRM 1941b
Vial Number	13			8/13/2013
Sample Multiplier	0.24876			PAH-2012.M
Sample Amount	0			4.019938897

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.43	65721	31.8229	39.7389
4)	C1-Decalins	12.35	15001	7.2637	9.0705
5)	C2-Decalins	13.49	18210	8.8175	11.0109
6)	C3-Decalins	15.02	28777	13.9342	17.4003
7)	C4-Decalins	17.58	47338	22.9216	28.6235
8)	Naphthalene	13.88	7674220	628.7459	785.1486
9)+10)	C1-Naphthalenes	16.30	2173184	178.0481	222.3382
13)	C2-Naphthalenes	18.50	2023880	165.8157	207.0629
14)	C3-Naphthalenes	20.51	1573620	128.9258	160.9966
15)	C4-Naphthalenes	22.82	909824	74.5414	93.0839
16)	Benzothiophene	14.04	230873	24.0385	30.0182
17)	C1-Benzothiophenes	16.41	229982	23.9457	29.9023
18)	C2-Benzothiophenes	18.25	146965	15.3020	19.1084
19)	C3-Benzothiophenes	20.62	144858	15.0826	18.8345
20)	C4-Benzothiophenes	22.10	136167	14.1777	17.7045
22)	Biphenyl	17.69	551195	54.2227	67.7108
23)	Acenaphthylene	19.17	600756	58.1151	72.5714
24)	Acenaphthene	19.78	164546	24.9175	31.1159
25)	Dibenzofuran	20.37	783330	71.2563	88.9816
26)	Fluorene	21.54	410392	47.0308	58.7299
28)	C1-Fluorenes	23.51	439043	50.3142	62.8300
29)	C2-Fluorenes	25.38	1147900	131.5483	164.2714
30)	C3-Fluorenes	27.59	1274090	146.0097	182.3301
33)	Carbazole	25.58	180376	17.4979	21.8505
42)	Anthracene	24.99	2217030	172.0245	214.8162
41)	Phenanthrene	24.82	5152240	343.8162	429.3416
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.72	3369780	224.8701	280.8073
50)	C2-Phenanthrenes/Anthracenes	28.39	3023030	201.7304	251.9116
51)	C3-Phenanthrenes/Anthracenes	29.95	2446290	163.2438	203.8512
52)	C4-Phenanthrenes/Anthracenes	31.78	1584350	105.7260	132.0257
34)	Dibenzothiophene	24.41	496877	40.3131	50.3411
35)+36)+37)	C1-Dibenzothiophenes	26.20	695109	56.3962	70.4249
38)	C2-Dibenzothiophenes	27.63	1103400	89.5220	111.7909
39)	C3-Dibenzothiophenes	28.80	1359130	110.2698	137.6998
40)	C4-Dibenzothiophenes	30.67	593471	48.1500	60.1275
58)	Fluoranthene	28.91	7997290	590.7030	737.6424
59)	Pyrene	29.70	7437200	455.1810	568.4089
62)	C1-Fluoranthenes/Pyrenes	30.85	4310350	318.3755	397.5725
63)	C2-Fluoranthenes/Pyrenes	32.57	4521080	333.9404	417.0092
64)	C3-Fluoranthenes/Pyrenes	33.85	1855870	137.0797	171.1787
65)	C4-Fluoranthenes/Pyrenes	35.28	1586640	117.1941	146.3465
53)	Naphthobenzothiophene	32.96	1619230	103.6648	129.4517
54)	C1-Naphthobenzothiophenes	34.12	1364090	87.3304	109.0542
55)	C2-Naphthobenzothiophenes	35.83	1319270	84.4610	105.4709
56)	C3-Naphthobenzothiophenes	37.18	1102630	70.5916	88.1515
57)	C4-Naphthobenzothiophenes	38.19	417562	26.7327	33.3826
67)	Benz(a)anthracene	33.77	4485730	298.0344	372.1715
68)	Chrysene/Triphenylene	33.89	5328030	350.0600	437.1387
69)	C1-Chrysenes	35.13	3375880	221.8009	276.9746
70)	C2-Chrysenes	36.29	1907200	125.3059	156.4762
71)	C3-Chrysenes	38.00	1060420	69.6715	87.0025
72)	C4-Chrysenes	39.43	588850	38.6884	48.3123
77)	Benzo(b)fluoranthene	37.30	4926200	273.6932	341.7753
78)	Benzo(k,j)fluoranthene	37.30	6665790	432.7553	540.4047
79)	Benzo(a)fluoranthene	37.65	873766	56.7265	70.8374
80)	Benzo(e)pyrene	38.27	4242670	243.6850	304.3025
81)	Benzo(a)pyrene	38.46	3484780	204.8223	255.7725
89)	Perylene	38.77	4607750	266.0737	332.2604
82)	Indeno(1,2,3-c,d)pyrene	43.15	4120160	220.9904	275.9626
83)	Dibenzo(a,h)anthracene	43.23	825417	55.2872	69.0400
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.52	3536260	211.6361	264.2813

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	1511830	196.8759	245.8494
10) 1-Methylnaphthalene	16.47	661354	93.1952	116.3778
11) 2,6-Dimethylnaphthalene	18.22	576912	82.3617	102.8495
12) 1,6,7-Trimethylnaphthalene	21.06	107889	17.7483	22.1633
27) 1-Methylfluorene	23.51	127986	23.1360	28.8911
35) 4-Methyldibenzothiophene	25.89	367093	35.6709	44.5442
36) 2/3-Methyldibenzothiophene	26.17	229940	22.3436	27.9017
37) 1-Methyldibenzothiophene	26.52	98076	9.5302	11.9009
43) 3-Methylphenanthrene	26.48	819912	84.4573	105.4663
44) 2-Methylphenanthrene	26.59	837386	86.2573	107.7141
45) 2-Methylantracene	26.73	512648	52.8068	65.9426
46) 4/9-Methylphenanthrene	26.86	628521	64.7425	80.8475
47) 1-Methylphenanthrene	26.93	571313	58.8497	73.4887
48) 3,6-Dimethylphenanthrene	28.04	142426	18.5444	23.1573
49) Retene	30.71	124226	33.2809	41.5596
60) 2-Methylfluoranthene	30.47	577595	61.9129	77.3139
61) Benzo(b)fluorene	31.09	598532	74.7982	93.4045
74) C29-Hopane	40.76	1077250	206.5581	257.9402
75) 18a-Oleanane	41.82	177398	34.0152	42.4766
76) C30-Hopane	42.05	1425420	273.3176	341.3063
91) C20-TAS	33.27	201003	11.8444	14.7907
92) C21-TAS	34.39	67751	3.9923	4.9854
93) C26(20S)-TAS	38.54	35723	2.1050	2.6287
94) C26(20R)/C27(20S)-TAS	39.47	144285	8.5022	10.6171
95) C28(20S)-TAS	40.24	81941	4.8285	6.0296
96) C27(20R)-TAS	40.68	125525	7.3967	9.2367
97) C28(20R)-TAS	41.82	71463	4.2111	5.2586
Surrogate Standards				
2) Naphthalene-d8	13.82	528290	45.74	73.52
21) Acenaphthene-d10	19.67	333576	52.76	84.77
32) Phenanthrene-d10	24.75	601509	49.84	80.08
66) Chrysene-d12	33.81	746185	50.73	81.56
88) Perylene-d12	38.70	661655	45.75	73.56
90) 5(b)H-Cholane	34.24	146347	56.12	90.23
Internal Standards				
1) Fluorene-d10	21.45	393210	62.45	
31) Pyrene-d10	29.63	792333	62.35	
73) Benzo(a)pyrene-d12	38.39	762855	62.27	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075B.D
 Acq On : 13 Aug 2013 8:49 am
 Operator : YM
 Sample : SRM 1941b
 Misc :
 ALS Vial : 13 Sample Multiplier: 0.24876

Quant Time: Aug 14 21:02:05 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	393210m	251.05		0.00
31) Pyrene-d10	29.635	212	792333m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	762855m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	528290m	45.74		0.00
21) Acenaphthene-d10	19.672	164	333576m	52.76		0.00
32) Phenanthrene-d10	24.752	188	601509m	49.84		0.00
66) Chrysene-d12	33.809	240	746185m	50.73		0.00
88) Perylene-d12	38.697	264	661655m	45.75		0.00
90) 5(b)H-Cholane	34.235	217	146347m	56.12		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	11.426	138	65721m	31.82		
4) C1-Decalins	12.346	152	15001m	7.26		
5) C2-Decalins	13.488	166	18210m	8.82		
6) C3-Decalins	15.020	180	28777m	13.93		
7) C4-Decalins	17.583	194	47338m	22.92		
8) Naphthalene	13.878	128	7674216m	628.74		
9) 2-Methylnaphthalene	16.134	142	1511831m	196.88		
10) 1-Methylnaphthalene	16.468	142	661354m	93.20		
11) 2,6-Dimethylnaphthalene	18.223	156	576912m	82.36		
12) 1,6,7-Trimethylnaphtha...	21.065	170	107889m	17.75		
13) C2-Naphthalenes	18.502	156	2023882m	165.82		
14) C3-Naphthalenes	20.508	170	1573619m	128.93		
15) C4-Naphthalenes	22.820	184	909824m	74.54		
16) Benzothiophene	14.045	134	230873m	24.04		
17) C1-Benzothiophenes	16.413	148	229982m	23.95		
18) C2-Benzothiophenes	18.251	162	146965m	15.30		
19) C3-Benzothiophenes	20.619	176	144858m	15.08		
20) C4-Benzothiophenes	22.095	190	136167m	14.18		
22) Biphenyl	17.694	154	551195m	54.22		
23) Acenaphthylene	19.171	152	600756m	58.12		
24) Acenaphthene	19.783	154	164546m	24.92		
25) Dibenzofuran	20.368	168	783330m	71.26		
26) Fluorene	21.538	166	410392m	47.03		
27) 1-Methylfluorene	23.506	180	127986m	23.14		
28) C1-Fluorenes	23.506	180	439043m	50.31		
29) C2-Fluorenes	25.375	194	1147896m	131.55		
30) C3-Fluorenes	27.592	208	1274085m	146.01		
33) Carbazole	25.583	167	180376m	17.50		
34) Dibenzothiophene	24.406	184	496877m	40.31		
35) 4-Methyldibenzothiophene	25.895	198	367093m	35.67		
36) 2/3-Methyldibenzothiop...	26.172	198	229940m	22.34		
37) 1-Methyldibenzothiophene	26.518	198	98076m	9.53		
38) C2-Dibenzothiophenes	27.626	212	1103400m	89.52		
39) C3-Dibenzothiophenes	28.804	226	1359126m	110.27		
40) C4-Dibenzothiophenes	30.674	240	593471m	48.15		
41) Phenanthrene	24.821	178	5152238m	343.82		
42) Anthracene	24.995	178	2217025m	172.02		
43) 3-Methylphenanthrene	26.484	192	819912m	84.46		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075B.D
 Acq On : 13 Aug 2013 8:49 am
 Operator : YM
 Sample : SRM 1941b
 Misc :
 ALS Vial : 13 Sample Multiplier: 0.24876

Quant Time: Aug 14 21:02:05 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
44) 2-Methylphenanthrene	26.587	192	837386m	86.26		
45) 2-Methylanthracene	26.726	192	512648m	52.81		
46) 4/9-Methylphenanthrene	26.864	192	628521m	64.74		
47) 1-Methylphenanthrene	26.934	192	571313m	58.85		
48) 3,6-Dimethylphenanthrene	28.042	206	142426m	18.54		
49) Retene	30.708	234	124226m	33.28		
50) C2-Phenanthrenes/Anthr...	28.388	206	3023027m	201.73		
51) C3-Phenanthrenes/Anthr...	29.946	220	2446286m	163.24		
52) C4-Phenanthrenes/Anthr...	31.782	234	1584354m	105.73		
53) Naphthobenzothiophene	32.955	234	1619228m	103.66		
54) C1-Naphthobenzothiophenes	34.119	248	1364086m	87.33		
55) C2-Naphthobenzothiophenes	35.826	262	1319268m	84.46		
56) C3-Naphthobenzothiophenes	37.184	276	1102631m	70.59		
57) C4-Naphthobenzothiophenes	38.192	290	417562m	26.73		
58) Fluoranthene	28.907	202	7997293m	590.70		
59) Pyrene	29.704	202	7437198m	455.18		
60) 2-Methylfluoranthene	30.466	216	577595m	61.91		
61) Benzo(b)fluorene	31.089	216	598532m	74.80		
62) C1-Fluoranthenes/Pyrenes	30.847	216	4310346m	318.37		
63) C2-Fluoranthenes/Pyrenes	32.567	230	4521080m	333.94		
64) C3-Fluoranthenes/Pyrenes	33.847	244	1855867m	137.08		
65) C4-Fluoranthenes/Pyrenes	35.283	258	1586643m	117.19		
67) Benz(a)anthracene	33.770	228	4485725m	298.03		
68) Chrysene/Triphenylene	33.886	228	5328029m	350.06		
69) C1-Chrysenes	35.128	242	3375880m	221.80		
70) C2-Chrysenes	36.291	256	1907196m	125.31		
71) C3-Chrysenes	37.998	270	1060422m	69.67		
72) C4-Chrysenes	39.434	284	588850m	38.69		
74) C29-Hopane	40.755	191	1077251m	206.56		
75) 18a-Oleanane	41.824	191	177398m	34.02		
76) C30-Hopane	42.045	191	1425415m	273.32		
77) Benzo(b)fluoranthene	37.300	252	4926196m	273.69		
78) Benzo(k,j)fluoranthene	37.300	252	6665791m	432.76		
79) Benzo(a)fluoranthene	37.649	252	873766m	56.73		
80) Benzo(e)pyrene	38.270	252	4242669m	243.68		
81) Benzo(a)pyrene	38.464	252	3484781m	204.82		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	4120160m	220.99		
83) Dibenzo(a,h)anthracene	43.225	278	825417m	55.29		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.		
87) Benzo(g,h,i)perylene	44.516	276	3536260m	211.64		
89) Perylene	38.774	252	4607753m	266.07		
91) C20-TAS	33.265	231	201003m	11.84		
92) C21-TAS	34.390	231	67751m	3.99		
93) C26(20S)-TAS	38.542	231	35723m	2.11		
94) C26(20R)/C27(20S)-TAS	39.473	231	144285m	8.50		
95) C28(20S)-TAS	40.239	231	81941m	4.83		
96) C27(20R)-TAS	40.681	231	125525m	7.40		
97) C28(20R)-TAS	41.824	231	71463m	4.21		

Data Path : C:\msdchem\2\data\MS70055\
Data File : ENV3075B.D
Acq On : 13 Aug 2013 8:49 am
Operator : YM
Sample : SRM 1941b
Misc :
ALS Vial : 13 Sample Multiplier: 0.24876

Quant Time: Aug 14 21:02:05 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quant Time: Aug 14 21:02:05 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3075C.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/13/2013 9:57
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-035 (0-0.5) MS
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 14
 Sample Multiplier 0.06653
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ENV3075C.D
 SED-DA-035 (0-0.5) MS
 8/13/2013
 PAH-2012.M
 15.03081317

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.43	45404	5.9227	7.1411
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	474502	10.4730	12.6274
9)+10)	C1-Naphthalenes	16.30	499047	11.0147	13.2806
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	14.04	170817	4.7913	5.7770
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	292882	7.7617	9.3584
23)	Acenaphthylene	19.17	364307	9.4940	11.4471
24)	Acenaphthene	19.78	174123	7.1034	8.5647
25)	Dibenzofuran	20.37	381803	9.3564	11.2812
26)	Fluorene	21.54	419755	12.9590	15.6248
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.58	266976	7.0000	8.4400
42)	Anthracene	24.99	568481	11.9222	14.3747
41)	Phenanthrene	24.82	1102610	19.8871	23.9781
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	5.39	259291	4.6767	5.6387
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.41	436878	9.5803	11.5510
35)+36)+37)	C1-Dibenzothiophenes	8.63	291956	6.4023	7.7193
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.91	1246220	24.8796	29.9976
59)	Pyrene	29.70	1546470	25.5821	30.8447
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.77	921574	16.5495	19.9539
68)	Chrysene/Triphenylene	33.89	1421530	25.2436	30.4366
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	2208530	33.1751	39.9996
78)	Benzo(k,j)fluoranthene	37.42	541037	9.4967	11.4503
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	1143610	17.7591	21.4124
81)	Benzo(a)pyrene	38.46	836889	13.2991	16.0350
89)	Perylene	38.81	38957000	608.2099	733.3270
82)	Indeno(1,2,3-c,d)pyrene	43.19	1001830	14.5281	17.5167
83)	Dibenzo(a,h)anthracene	43.26	505919	9.1619	11.0466
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.55	977582	15.8180	19.0720

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	304454	10.6808	12.8780
10) 1-Methylnaphthalene	16.47	194593	7.3872	8.9068
11) 2,6-Dimethylnaphthalene	18.22	269447	10.3628	12.4946
12) 1,6,7-Trimethylnaphthalene	21.06	137457	6.0917	7.3448
27) 1-Methylfluorene	23.51	165332	8.0515	9.7078
35) 4-Methyldibenzothiophene	25.90	291956	7.6679	9.2453
36) 2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37) 1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43) 3-Methylphenanthrene	0.00	0	0.0000	0.0000
44) 2-Methylphenanthrene	0.00	0	0.0000	0.0000
45) 2-Methylanthracene	0.00	0	0.0000	0.0000
46) 4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47) 1-Methylphenanthrene	26.93	259291	7.2190	8.7041
48) 3,6-Dimethylphenanthrene	28.04	205157	7.2198	8.7051
49) Retene	30.71	110472	7.9993	9.6449
60) 2-Methylfluoranthene	30.47	297785	8.6274	10.4022
61) Benzo(b)fluorene	31.09	356423	12.0389	14.5155
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	39.43	646346	10.2974	12.4158
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	533285	12.44	74.76
21) Acenaphthene-d10	19.67	330212	14.07	84.53
32) Phenanthrene-d10	24.75	616440	13.81	82.94
66) Chrysene-d12	33.81	768677	14.13	84.91
88) Perylene-d12	38.70	678097	12.68	76.21
90) 5(b)H-Cholane	34.24	154357	16.00	96.21
Internal Standards				
1) Fluorene-d10	21.45	390364	16.70	
31) Pyrene-d10	29.63	784016	16.67	
73) Benzo(a)pyrene-d12	38.39	754613	16.65	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075C.D
 Acq On : 13 Aug 2013 9:57 am
 Operator : YM
 Sample : SED-DA-035 (0-0.5) MS
 Misc :
 ALS Vial : 14 Sample Multiplier: 0.06653

Quant Time: Aug 14 21:09:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	390364m	251.05		0.00
31) Pyrene-d10	29.635	212	784016m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	754613m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	533285m	12.44		0.00
21) Acenaphthene-d10	19.672	164	330212m	14.07		0.00
32) Phenanthrene-d10	24.752	188	616440m	13.81		0.00
66) Chrysene-d12	33.809	240	768677m	14.13		0.00
88) Perylene-d12	38.697	264	678097m	12.68		0.00
90) 5(b)H-Cholane	34.235	217	154357m	16.00		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	11.426	138	45404m	5.92		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	474502m	10.47		
9) 2-Methylnaphthalene	16.134	142	304454m	10.68		
10) 1-Methylnaphthalene	16.468	142	194593m	7.39		
11) 2,6-Dimethylnaphthalene	18.223	156	269447m	10.36		
12) 1,6,7-Trimethylnaphtha...	21.065	170	137457m	6.09		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	14.045	134	170817m	4.79		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	292882m	7.76		
23) Acenaphthylene	19.171	152	364307m	9.49		
24) Acenaphthene	19.783	154	174123m	7.10		
25) Dibenzofuran	20.368	168	381803m	9.36		
26) Fluorene	21.538	166	419755m	12.96		
27) 1-Methylfluorene	23.506	180	165332m	8.05		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	266976m	7.00		
34) Dibenzothiophene	24.406	184	436878m	9.58		
35) 4-Methyldibenzothiophene	25.895	198	291956m	7.67		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	1102612m	19.89		
42) Anthracene	24.995	178	568481m	11.92		
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075C.D
 Acq On : 13 Aug 2013 9:57 am
 Operator : YM
 Sample : SED-DA-035 (0-0.5) MS
 Misc :
 ALS Vial : 14 Sample Multiplier: 0.06653

Quant Time: Aug 14 21:09:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	259291m	7.22		
48) 3,6-Dimethylphenanthrene	28.042	206	205157m	7.22		
49) Retene	30.708	234	110472m	8.00		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	1246224m	24.88		
59) Pyrene	29.704	202	1546471m	25.58		
60) 2-Methylfluoranthene	30.466	216	297785m	8.63		
61) Benzo(b)fluorene	31.089	216	356423m	12.04		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	921574m	16.55		
68) Chrysene/Triphenylene	33.886	228	1421529m	25.24		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	2208532m	33.18		
78) Benzo(k,j)fluoranthene	37.417	252	541037m	9.50		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	1143606m	17.76		
81) Benzo(a)pyrene	38.464	252	836889m	13.30		
82) Indeno(1,2,3-c,d)pyrene	43.189	276	1001830m	14.53		
83) Dibenzo(a,h)anthracene	43.262	278	505919m	9.16		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.553	276	977582m	15.82		
89) Perylene	38.813	252	38956980m	608.21		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	646346m	10.30		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

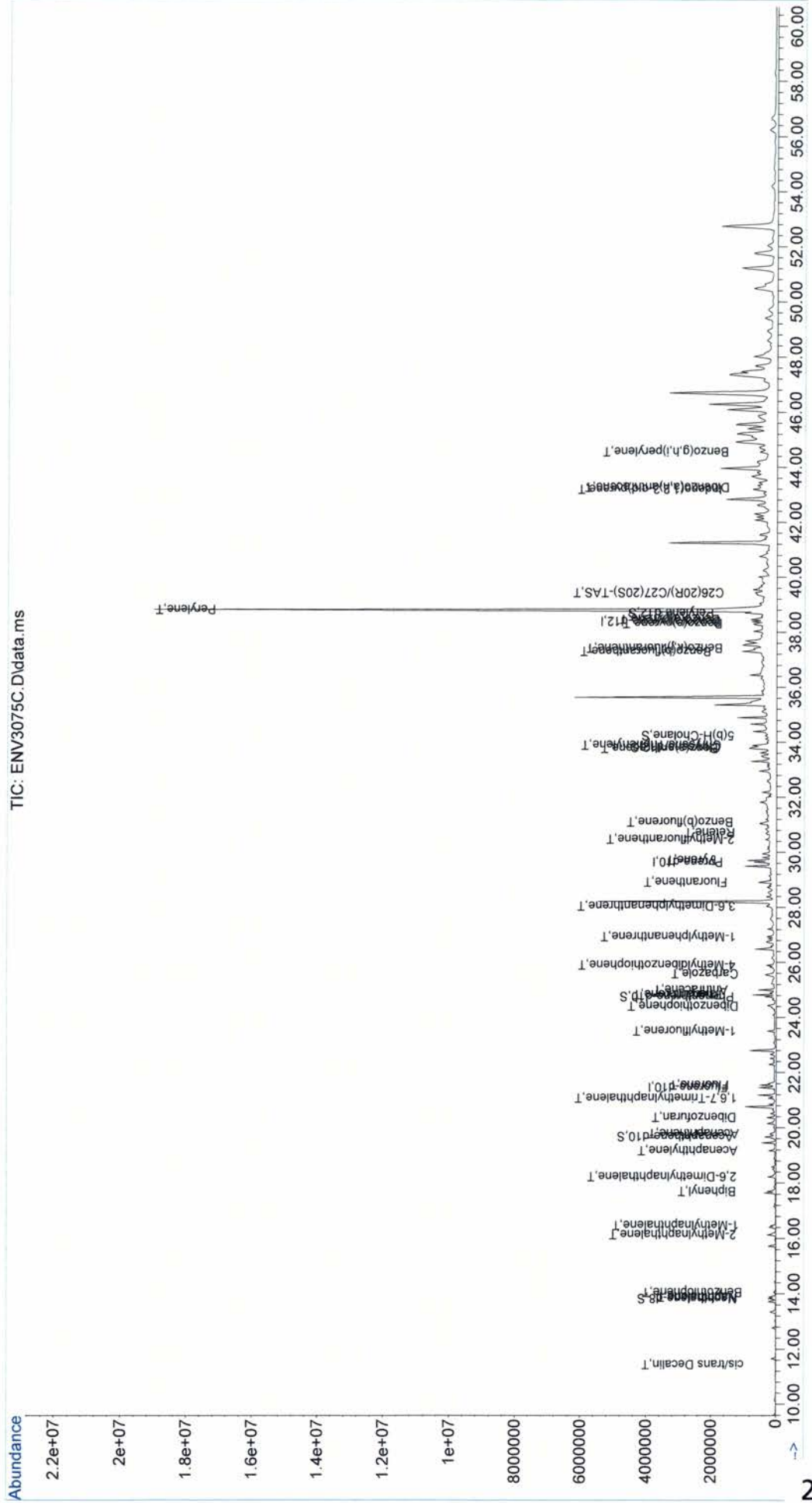
Data Path : C:\msdchem\2\data\MS70055\
Data File : ENV3075C.D
Acq On : 13 Aug 2013 9:57 am
Operator : YM
Sample : SED-DA-035 (0-0.5) MS
Misc :
ALS Vial : 14 Sample Multiplier: 0.06653

Quant Time: Aug 14 21:09:30 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075C.D
 Acq On : 13 Aug 2013 9:57 am
 Operator : YM
 Sample : SED-DA-035 (0-0.5) MS
 Misc :
 ALS Vial : 14 Sample Multiplier: 0.06653
 Quant Time: Aug 14 21:09:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3075D.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/13/2013 11:06
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-035 (0-0.5) MSD
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 15
 Sample Multiplier 0.06618
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ENV3075D.D
 SED-DA-035 (0-0.5) MSD
 8/13/2013
 PAH-2012.M
 15.11030523

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.43	45739	6.3621	7.6456
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	453177	10.6656	12.8174
9)+10)	C1-Naphthalenes	16.30	462285	10.8800	13.0750
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	14.04	168012	5.0252	6.0390
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	279853	7.9083	9.5038
23)	Acenaphthylene	19.17	349833	9.7214	11.6826
24)	Acenaphthene	19.78	163952	7.1320	8.5709
25)	Dibenzofuran	20.37	362141	9.4631	11.3723
26)	Fluorene	21.54	410741	13.5216	16.2496
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.58	268792	7.4053	8.8993
42)	Anthracene	24.99	548269	12.0819	14.5194
41)	Phenanthrene	24.82	1055590	20.0053	24.0413
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	5.39	252632	4.7878	5.7537
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.41	418500	9.6431	11.5885
35)+36)+37)	C1-Dibenzothiophenes	8.63	282839	6.5172	7.8320
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.91	1222270	25.6398	30.8125
59)	Pyrene	29.70	1501620	26.1010	31.3668
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	33.77	904657	17.0703	20.5141
68)	Chrysene/Triphenylene	33.89	1352850	25.2433	30.3360
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	2056750	32.5653	39.1353
78)	Benzo(k,j)fluoranthene	37.42	520867	9.6369	11.5812
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	1109110	18.1544	21.8170
81)	Benzo(a)pyrene	38.46	787533	13.1914	15.8527
89)	Perylene	38.81	36368400	598.4922	719.2359
82)	Indeno(1,2,3-c,d)pyrene	43.19	964165	14.7378	17.7110
83)	Dibenzo(a,h)anthracene	43.26	495271	9.4540	11.3613
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.55	931144	15.8812	19.0852

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	283909	10.6205	12.7631
10) 1-Methylnaphthalene	16.47	178376	7.2206	8.6773
11) 2,6-Dimethylnaphthalene	18.22	254870	10.4523	12.5610
12) 1,6,7-Trimethylnaphthalene	21.06	135689	6.4121	7.7057
27) 1-Methylfluorene	23.51	157211	8.1637	9.8107
35) 4-Methyldibenzothiophene	25.89	282839	7.8055	9.3803
36) 2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37) 1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43) 3-Methylphenanthrene	0.00	0	0.0000	0.0000
44) 2-Methylphenanthrene	0.00	0	0.0000	0.0000
45) 2-Methylanthracene	0.00	0	0.0000	0.0000
46) 4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47) 1-Methylphenanthrene	26.93	252632	7.3906	8.8816
48) 3,6-Dimethylphenanthrene	28.04	202207	7.4772	8.9857
49) Retene	30.71	113640	8.6464	10.3907
60) 2-Methylfluoranthene	30.47	299287	9.1110	10.9491
61) Benzo(b)fluorene	31.09	344591	12.2301	14.6974
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	39.43	630780	10.5928	12.7298
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	498675	12.40	74.93
21) Acenaphthene-d10	19.67	306577	13.93	84.13
32) Phenanthrene-d10	24.75	585504	13.78	83.21
66) Chrysene-d12	33.81	714894	13.80	83.42
88) Perylene-d12	38.70	642831	12.67	76.56
90) 5(b)H-Cholane	34.24	136444	14.91	90.12
Internal Standards				
1) Fluorene-d10	21.45	364161	16.61	
31) Pyrene-d10	29.63	742219	16.59	
73) Benzo(a)pyrene-d12	38.39	712143	16.57	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075D.D
 Acq On : 13 Aug 2013 11:06 am
 Operator : YM
 Sample : SED-DA-035 (0-0.5) MSD
 Misc :
 ALS Vial : 15 Sample Multiplier: 0.06618

Quant Time: Aug 14 21:19:08 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	364161m	251.05		0.00
31) Pyrene-d10	29.635	212	742219m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	712143m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	498675m	12.40		0.00
21) Acenaphthene-d10	19.672	164	306577m	13.93		0.00
32) Phenanthrene-d10	24.752	188	585504m	13.78		0.00
66) Chrysene-d12	33.809	240	714894m	13.80		0.00
88) Perylene-d12	38.697	264	642831m	12.67		0.00
90) 5(b)H-Cholane	34.235	217	136444m	14.91		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	11.426	138	45739m	6.36		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	453177m	10.67		
9) 2-Methylnaphthalene	16.134	142	283909m	10.62		
10) 1-Methylnaphthalene	16.468	142	178376m	7.22		
11) 2,6-Dimethylnaphthalene	18.223	156	254870m	10.45		
12) 1,6,7-Trimethylnaphtha...	21.065	170	135689m	6.41		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	14.045	134	168012m	5.03		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	279853m	7.91		
23) Acenaphthylene	19.171	152	349833m	9.72		
24) Acenaphthene	19.783	154	163952m	7.13		
25) Dibenzofuran	20.368	168	362141m	9.46		
26) Fluorene	21.538	166	410741m	13.52		
27) 1-Methylfluorene	23.506	180	157211m	8.16		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	268792m	7.41		
34) Dibenzothiophene	24.406	184	418500m	9.64		
35) 4-Methyldibenzothiophene	25.895	198	282839m	7.81		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	1055586m	20.01		
42) Anthracene	24.995	178	548269m	12.08		
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075D.D
 Acq On : 13 Aug 2013 11:06 am
 Operator : YM
 Sample : SED-DA-035 (0-0.5) MSD
 Misc :
 ALS Vial : 15 Sample Multiplier: 0.06618

Quant Time: Aug 14 21:19:08 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	252632m	7.39		
48) 3,6-Dimethylphenanthrene	28.042	206	202207m	7.48		
49) Retene	30.708	234	113640m	8.65		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.907	202	1222266m	25.64		
59) Pyrene	29.704	202	1501621m	26.10		
60) 2-Methylfluoranthene	30.466	216	299287m	9.11		
61) Benzo(b)fluorene	31.089	216	344591m	12.23		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	904657m	17.07		
68) Chrysene/Triphenylene	33.886	228	1352846m	25.24		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	2056746m	32.57		
78) Benzo(k,j)fluoranthene	37.416	252	520867m	9.64		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	1109105m	18.15		
81) Benzo(a)pyrene	38.464	252	787533m	13.19		
82) Indeno(1,2,3-c,d)pyrene	43.188	276	964165m	14.74		
83) Dibenzo(a,h)anthracene	43.262	278	495271m	9.45		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.553	276	931144m	15.88		
89) Perylene	38.813	252	36368379m	598.49		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	630780m	10.59		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ENV3075D.D
Acq On : 13 Aug 2013 11:06 am
Operator : YM
Sample : SED-DA-035 (0-0.5) MSD
Misc :
ALS Vial : 15 Sample Multiplier: 0.06618

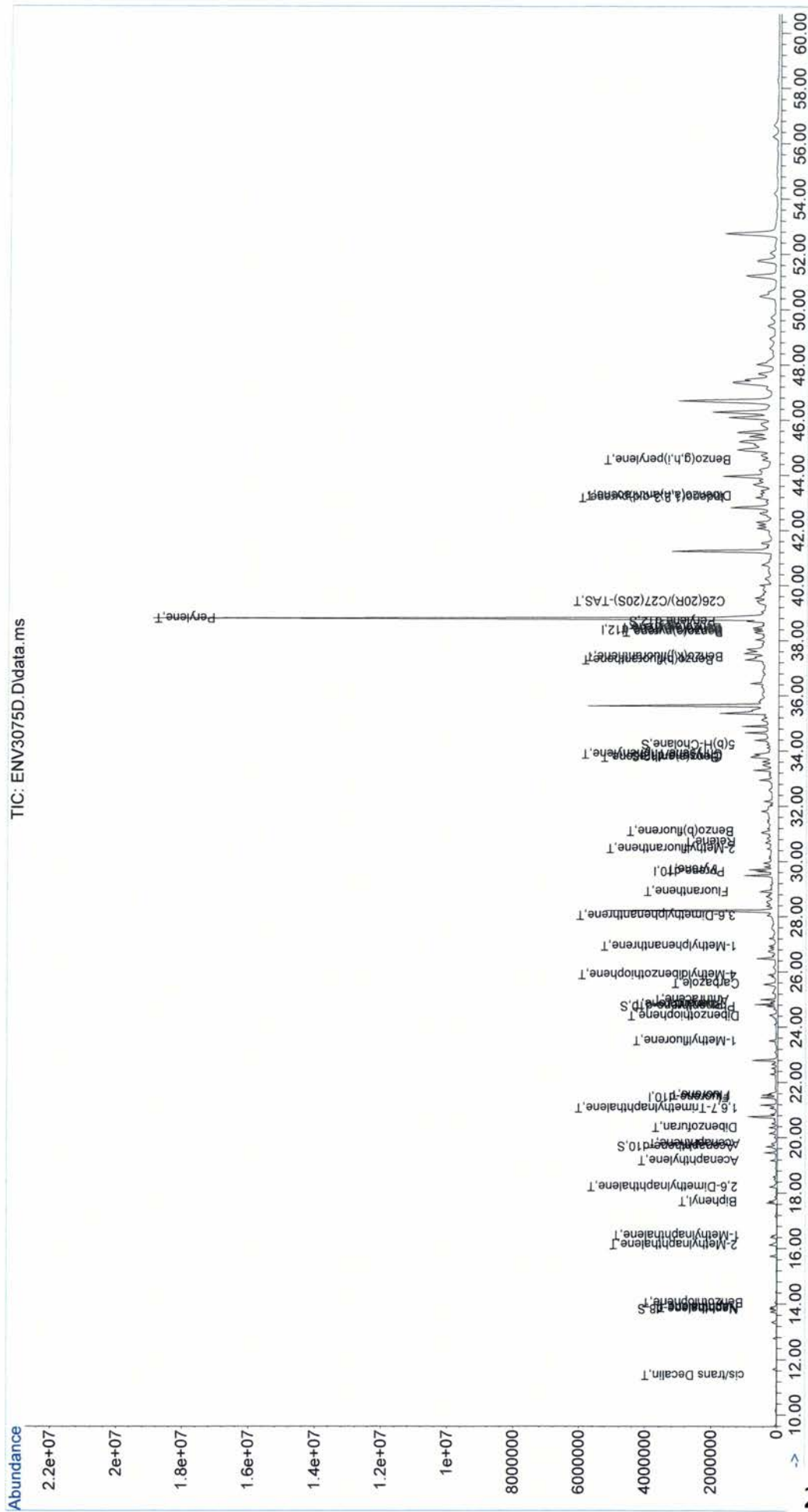
Quant Time: Aug 14 21:19:08 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

```
Data Path      : C:\msdchem\2\data\MS70055\
Data File     : ENV3075D.D
Acq On       : 13 Aug 2013 11:06 am
Operator      : YM
Sample       : SED-DA-035 (0-0.5) MSD
Misc         :
ALS Vial     : 15 Sample Multiplier: 0.
```

Quant Time: Aug 14 21:19:08 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3075E.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/13/2013 12:15
 Acq. Method File PAH-2012.M
 Sample Name Dupl. (SED-DA-034 (0-0.5))
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 16
 Sample Multiplier 0.06658
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ENV3075E.D
 Dupl. (SED-DA-034 (0-0.5))
 8/13/2013
 PAH-2012.M
 15.01952538

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.43	40997	5.5023	6.3562
4)	C1-Decalins	12.35	6303	0.8459	0.9772
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	284429	6.4591	7.4614
9)+10)	C1-Naphthalenes	16.30	238907	5.4254	6.2672
13)	C2-Naphthalenes	18.59	490684	11.1430	12.8721
14)	C3-Naphthalenes	20.15	779657	17.7053	20.4527
15)	C4-Naphthalenes	22.82	992856	22.5469	26.0456
16)	Benzothiophene	14.05	24412	0.7045	0.8138
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	104284	2.8435	3.2847
23)	Acenaphthylene	19.17	216435	5.8033	6.7039
24)	Acenaphthene	19.78	34689	1.4560	1.6820
25)	Dibenzofuran	20.37	186147	4.6935	5.4218
26)	Fluorene	21.54	262993	8.3539	9.6502
28)	C1-Fluorenes	23.51	175471	5.5737	6.4387
29)	C2-Fluorenes	25.55	552076	17.5364	20.2576
30)	C3-Fluorenes	27.59	477662	15.1726	17.5271
33)	Carbazole	25.58	135324	3.8811	4.4833
42)	Anthracene	24.99	400751	9.1931	10.6197
41)	Phenanthrene	24.82	947539	18.6937	21.5945
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	706272	13.9338	16.0960
50)	C2-Phenanthrenes/Anthracenes	28.22	1159220	22.8700	26.4189
51)	C3-Phenanthrenes/Anthracenes	29.95	839720	16.5666	19.1373
52)	C4-Phenanthrenes/Anthracenes	30.71	829142	16.3579	18.8963
34)	Dibenzothiophene	24.41	174736	4.1913	4.8417
35)+36)+37)	C1-Dibenzothiophenes	26.21	234310	5.6203	6.4924
38)	C2-Dibenzothiophenes	27.63	452790	10.8609	12.5462
39)	C3-Dibenzothiophenes	28.80	598746	14.3618	16.5904
40)	C4-Dibenzothiophenes	30.22	493673	11.8415	13.6790
58)	Fluoranthene	28.91	1638230	35.7743	41.3256
59)	Pyrene	29.70	1653860	29.9256	34.5693
62)	C1-Fluoranthenes/Pyrenes	30.85	1174630	25.6506	29.6310
63)	C2-Fluoranthenes/Pyrenes	32.57	1571260	34.3119	39.6363
64)	C3-Fluoranthenes/Pyrenes	34.62	760724	16.6120	19.1898
65)	C4-Fluoranthenes/Pyrenes	35.40	1429010	31.2054	36.0478
53)	Naphthobenzothiophene	32.96	761726	14.4176	16.6548
54)	C1-Naphthobenzothiophenes	34.12	1003960	19.0024	21.9511
55)	C2-Naphthobenzothiophenes	35.40	1675560	31.7141	36.6353
56)	C3-Naphthobenzothiophenes	36.91	1490620	28.2137	32.5919
57)	C4-Naphthobenzothiophenes	38.08	562851	10.6533	12.3065
67)	Benz(a)anthracene	33.77	805260	15.8175	18.2721
68)	Chrysene/Triphenylene	33.89	1374740	26.7033	30.8470
69)	C1-Chrysenes	35.67	1118010	21.7165	25.0864
70)	C2-Chrysenes	37.53	377452	7.3317	8.4694
71)	C3-Chrysenes	37.53	677356	13.1571	15.1988
72)	C4-Chrysenes	39.36	434154	8.4332	9.7418
77)	Benzo(b)fluoranthene	37.34	2228040	39.6042	45.7499
78)	Benzo(k,j)fluoranthene	37.42	597860	12.4182	14.3452
79)	Benzo(a)fluoranthene	37.61	534619	11.1045	12.8277
80)	Benzo(e)pyrene	38.31	1138000	20.9121	24.1572
81)	Benzo(a)pyrene	38.50	684839	12.8782	14.8766
89)	Perylene	38.81	39538800	730.4692	843.8211
82)	Indeno(1,2,3-c,d)pyrene	43.23	863158	14.8121	17.1105
83)	Dibenzo(a,h)anthracene	43.37	433700	9.2941	10.7363
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.66	921118	17.6371	20.3740

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	166660	6.0156	6.9491
10) 1-Methylnaphthalene	16.47	72247	2.8219	3.2598
11) 2,6-Dimethylnaphthalene	18.22	135226	5.3510	6.1813
12) 1,6,7-Trimethylnaphthalene	21.04	48778	2.2241	2.5693
27) 1-Methylfluorene	23.51	53728	2.6921	3.1098
35) 4-Methyldibenzothiophene	25.90	108174	3.1076	3.5899
36) 2/3-Methyldibenzothiophene	26.21	89538	2.5723	2.9714
37) 1-Methyldibenzothiophene	26.52	36598	1.0514	1.2146
43) 3-Methylphenanthrene	26.48	165221	5.0316	5.8124
44) 2-Methylphenanthrene	26.59	154761	4.7130	5.4444
45) 2-Methylanthracene	26.76	165744	5.0475	5.8308
46) 4/9-Methylphenanthrene	26.86	124157	3.7810	4.3678
47) 1-Methylphenanthrene	26.93	96389	2.9354	3.3909
48) 3,6-Dimethylphenanthrene	28.04	36705	1.4129	1.6322
49) Retene	30.71	90254	7.1485	8.2578
60) 2-Methylfluoranthene	30.47	124370	3.9413	4.5529
61) Benzo(b)fluorene	31.09	199030	7.3534	8.4945
74) C29-Hopane	40.79	1154720	70.8378	81.8302
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.08	1376000	84.4128	97.5117
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	531415	12.75	76.59
21) Acenaphthene-d10	19.67	293742	12.88	77.31
32) Phenanthrene-d10	24.75	588658	14.42	86.57
66) Chrysene-d12	33.81	652990	13.13	78.84
88) Perylene-d12	38.70	566708	12.54	75.31
90) 5(b)H-Cholane	34.24	136610	16.76	100.69
Internal Standards				
1) Fluorene-d10	21.46	379690	16.71	
31) Pyrene-d10	29.63	717302	16.69	
73) Benzo(a)pyrene-d12	38.39	638174	16.67	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075E.D
 Acq On : 13 Aug 2013 12:15 pm
 Operator : YM
 Sample : Dupl. (SED-DA-034 (0-0.5))
 Misc :
 ALS Vial : 16 Sample Multiplier: 0.06658

Quant Time: Aug 15 08:53:06 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	379690m	251.05		0.00
31) Pyrene-d10	29.635	212	717302m	250.63		0.00
73) Benzo(a)pyrene-d12	38.387	264	638174m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	531415m	12.75		0.00
21) Acenaphthene-d10	19.672	164	293742m	12.88		0.00
32) Phenanthrene-d10	24.752	188	588658m	14.42		0.00
66) Chrysene-d12	33.809	240	652990m	13.13		0.00
88) Perylene-d12	38.697	264	566708m	12.54		0.00
90) 5(b)H-Cholane	34.236	217	136610m	16.76		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	11.427	138	40997m	5.50		
4) C1-Decalins	12.346	152	6303m	0.85		
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	284429m	6.46		
9) 2-Methylnaphthalene	16.134	142	166660m	6.02		
10) 1-Methylnaphthalene	16.469	142	72247m	2.82		
11) 2,6-Dimethylnaphthalene	18.224	156	135226m	5.35		
12) 1,6,7-Trimethylnaphtha...	21.037	170	48778m	2.22		
13) C2-Naphthalenes	18.586	156	490684m	11.14		
14) C3-Naphthalenes	20.146	170	779657m	17.71		
15) C4-Naphthalenes	22.820	184	992856m	22.55		
16) Benzothiophene	14.045	134	24412m	0.70		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	104284m	2.84		
23) Acenaphthylene	19.171	152	216435m	5.80		
24) Acenaphthene	19.784	154	34689m	1.46		
25) Dibenzofuran	20.369	168	186147m	4.69		
26) Fluorene	21.539	166	262993m	8.35		
27) 1-Methylfluorene	23.506	180	53728m	2.69		
28) C1-Fluorenes	23.506	180	175471m	5.57		
29) C2-Fluorenes	25.549	194	552076m	17.54		
30) C3-Fluorenes	27.592	208	477662m	15.17		
33) Carbazole	25.583	167	135324m	3.88		
34) Dibenzothiophene	24.406	184	174736m	4.19		
35) 4-Methyldibenzothiophene	25.895	198	108174m	3.11		
36) 2/3-Methyldibenzothiop...	26.207	198	89538m	2.57		
37) 1-Methyldibenzothiophene	26.518	198	36598m	1.05		
38) C2-Dibenzothiophenes	27.626	212	452790m	10.86		
39) C3-Dibenzothiophenes	28.804	226	598746m	14.36		
40) C4-Dibenzothiophenes	30.224	240	493673m	11.84		
41) Phenanthrene	24.822	178	947539m	18.69		
42) Anthracene	24.995	178	400751m	9.19		
43) 3-Methylphenanthrene	26.484	192	165221m	5.03		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ENV3075E.D
 Acq On : 13 Aug 2013 12:15 pm
 Operator : YM
 Sample : Dupl. (SED-DA-034 (0-0.5))
 Misc :
 ALS Vial : 16 Sample Multiplier: 0.06658

Quant Time: Aug 15 08:53:06 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	154761m	4.71		
45) 2-Methylanthracene	26.761	192	165744m	5.05		
46) 4/9-Methylphenanthrene	26.865	192	124157m	3.78		
47) 1-Methylphenanthrene	26.934	192	96389m	2.94		
48) 3,6-Dimethylphenanthrene	28.042	206	36705m	1.41		
49) Retene	30.708	234	90254m	7.15		
50) C2-Phenanthrenes/Anthr...	28.215	206	1159224m	22.87		
51) C3-Phenanthrenes/Anthr...	29.947	220	839720m	16.57		
52) C4-Phenanthrenes/Anthr...	30.708	234	829142m	16.36		
53) Naphthobenzothiophene	32.955	234	761726m	14.42		
54) C1-Naphthobenzothiophenes	34.119	248	1003958m	19.00		
55) C2-Naphthobenzothiophenes	35.399	262	1675558m	31.71		
56) C3-Naphthobenzothiophenes	36.912	276	1490624m	28.21		
57) C4-Naphthobenzothiophenes	38.076	290	562851m	10.65		
58) Fluoranthene	28.908	202	1638232m	35.77		
59) Pyrene	29.704	202	1653860m	29.93		
60) 2-Methylfluoranthene	30.466	216	124370m	3.94		
61) Benzo(b)fluorene	31.089	216	199030m	7.35		
62) C1-Fluoranthenes/Pyrenes	30.847	216	1174633m	25.65		
63) C2-Fluoranthenes/Pyrenes	32.567	230	1571262m	34.31		
64) C3-Fluoranthenes/Pyrenes	34.623	244	760724m	16.61		
65) C4-Fluoranthenes/Pyrenes	35.399	258	1429010m	31.21		
67) Benz(a)anthracene	33.770	228	805260m	15.82		
68) Chrysene/Triphenylene	33.886	228	1374739m	26.70		
69) C1-Chrysenes	35.671	242	1118006m	21.72		
70) C2-Chrysenes	37.533	256	377452m	7.33		
71) C3-Chrysenes	37.533	270	677356m	13.16		
72) C4-Chrysenes	39.356	284	434154m	8.43		
74) C29-Hopane	40.792	191	1154716m	70.84		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.083	191	1375999m	84.41		
77) Benzo(b)fluoranthene	37.339	252	2228038m	39.60		
78) Benzo(k,j)fluoranthene	37.417	252	597860m	12.42		
79) Benzo(a)fluoranthene	37.611	252	534619m	11.10		
80) Benzo(e)pyrene	38.309	252	1137999m	20.91		
81) Benzo(a)pyrene	38.503	252	684839m	12.88		
82) Indeno(1,2,3-c,d)pyrene	43.226	276	863158m	14.81		
83) Dibenzo(a,h)anthracene	43.373	278	433700m	9.29		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.663	276	921118m	17.64		
89) Perylene	38.813	252	39538774m	730.47		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ENV3075E.D
Acq On : 13 Aug 2013 12:15 pm
Operator : YM
Sample : Dupl. (SED-DA-034 (0-0.5))
Misc :
ALS Vial : 16 Sample Multiplier: 0.06658

Quant Time: Aug 15 08:53:06 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

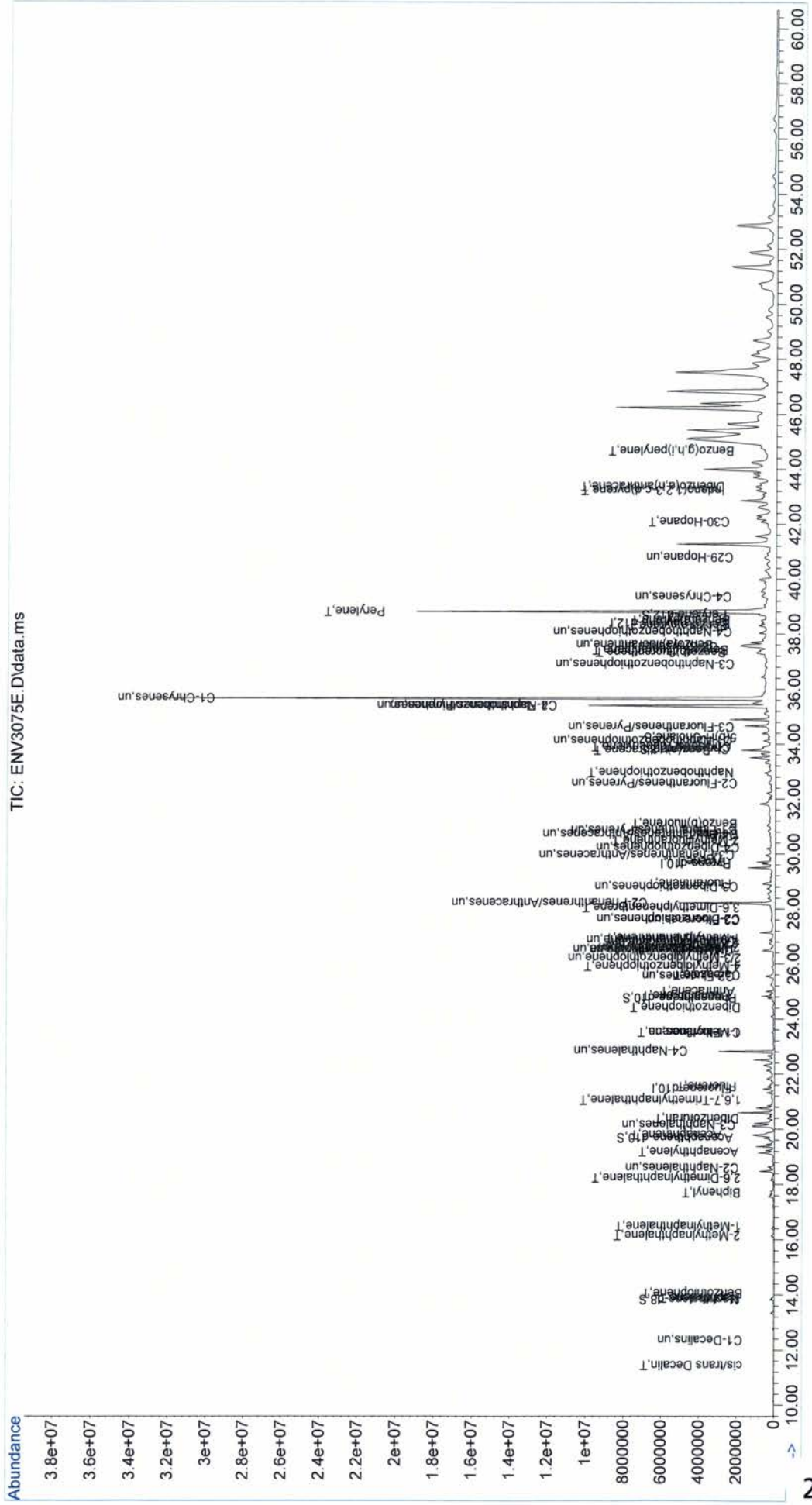
(#) = qualifier out of range (m) = manual integration (+) = signals summed						


```

Data Path      : C:\msdchem\2\data\MS70055\
Data File     : ENV3075E.D
Acq On        : 13 Aug 2013 12:15 pm
Operator       : YM
Sample        : Dupl. (SED-DA-034 (0-0.5))
Misc          :
ALS Vial      : 16 Sample Multiplier: 0.

```

Quant Time: Aug 15 08:53:06 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1537.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/13/2013 13:23
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-033 (0-0.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 17
 Sample Multiplier 0.06658
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet
 ARC1537.D
 SED-DA-033 (0-0.5)
 8/13/2013
 PAH-2012.M
 15.01952538

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.43	27874	3.9981	4.6347
4)	C1-Decalins	12.35	13761	1.9738	2.2881
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	319171	7.7461	8.9795
9)+10)	C1-Naphthalenes	16.30	345942	8.3958	9.7327
13)	C2-Naphthalenes	18.59	797359	19.3515	22.4329
14)	C3-Naphthalenes	20.15	1138930	27.6414	32.0426
15)	C4-Naphthalenes	22.82	643805	15.6249	18.1128
16)	Benzothiophene	14.07	33405	1.0303	1.1944
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	146122	4.2581	4.9361
23)	Acenaphthylene	19.17	101146	2.8984	3.3599
24)	Acenaphthene	19.78	32868	1.4744	1.7092
25)	Dibenzofuran	20.37	223060	6.0107	6.9677
26)	Fluorene	21.54	317449	10.7765	12.4924
28)	C1-Fluorenes	23.51	177137	6.0133	6.9708
29)	C2-Fluorenes	25.55	510605	17.3336	20.0936
30)	C3-Fluorenes	27.59	413628	14.0415	16.2773
33)	Carbazole	25.58	77699	2.3202	2.6896
42)	Anthracene	24.99	189331	4.5221	5.2422
41)	Phenanthrene	24.82	1199970	24.6489	28.5737
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	661793	13.5941	15.7586
50)	C2-Phenanthrenes/Anthracenes	28.21	888270	18.2462	21.1516
51)	C3-Phenanthrenes/Anthracenes	29.95	682277	14.0149	16.2465
52)	C4-Phenanthrenes/Anthracenes	30.71	843600	17.3286	20.0879
34)	Dibenzothiophene	24.41	146182	3.6508	4.2321
35)+36)+37)	C1-Dibenzothiophenes	26.21	176383	4.4051	5.1065
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.91	814808	18.5260	21.4758
59)	Pyrene	29.70	824173	15.5272	17.9996
62)	C1-Fluoranthenes/Pyrenes	30.85	665239	15.1252	17.5336
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	32.96	483069	9.5199	11.0357
54)	C1-Naphthobenzothiophenes	34.12	614248	12.1050	14.0325
55)	C2-Naphthobenzothiophenes	35.40	1198640	23.6217	27.3830
56)	C3-Naphthobenzothiophenes	37.18	1190790	23.4670	27.2036
57)	C4-Naphthobenzothiophenes	38.19	474776	9.3565	10.8463
67)	Benz(a)anthracene	33.77	403284	8.2479	9.5612
68)	Chrysene/Triphenylene	33.89	697396	14.1044	16.3503
69)	C1-Chrysenes	36.06	167366	3.3849	3.9238
70)	C2-Chrysenes	37.03	312580	6.3217	7.3283
71)	C3-Chrysenes	38.81	389983	7.8872	9.1431
72)	C4-Chrysenes	39.36	285387	5.7718	6.6908
77)	Benzo(b)fluoranthene	37.30	1083410	19.4633	22.5625
78)	Benzo(k,j)fluoranthene	37.42	223417	4.6900	5.4368
79)	Benzo(a)fluoranthene	37.57	149358	3.1354	3.6346
80)	Benzo(e)pyrene	38.31	521628	9.6877	11.2302
81)	Benzo(a)pyrene	38.46	335542	6.3770	7.3924
89)	Perylene	38.81	30277800	565.3374	655.3554
82)	Indeno(1,2,3-c,d)pyrene	43.19	368402	6.3893	7.4066
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.59	410587	7.9455	9.2106

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	221455	8.5427	9.9030
10) 1-Methylnaphthalene	16.47	124487	5.1964	6.0239
11) 2,6-Dimethylnaphthalene	18.22	194991	8.2461	9.5592
12) 1,6,7-Trimethylnaphthalene	21.06	67881	3.3079	3.8346
27) 1-Methylfluorene	23.51	56687	3.0355	3.5188
35) 4-Methyldibenzothiophene	25.89	79772	2.3861	2.7660
36) 2/3-Methyldibenzothiophene	26.21	73516	2.1990	2.5491
37) 1-Methyldibenzothiophene	26.52	23095	0.6908	0.8008
43) 3-Methylphenanthrene	26.48	159440	5.0555	5.8605
44) 2-Methylphenanthrene	26.59	167259	5.3034	6.1479
45) 2-Methylantracene	26.76	127614	4.0464	4.6907
46) 4/9-Methylphenanthrene	26.86	97771	3.1001	3.5938
47) 1-Methylphenanthrene	26.93	109709	3.4787	4.0326
48) 3,6-Dimethylphenanthrene	28.04	30286	1.2138	1.4071
49) Retene	30.71	281796	23.2389	26.9392
60) 2-Methylfluoranthene	30.47	66461	2.1929	2.5421
61) Benzo(b)fluorene	31.09	102404	3.9393	4.5665
74) C29-Hopane	40.76	394758	24.4752	28.3724
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.08	625297	38.7687	44.9418
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	556320	14.27	85.69
21) Acenaphthene-d10	19.67	294557	13.80	82.85
32) Phenanthrene-d10	24.75	563394	14.37	86.26
66) Chrysene-d12	33.81	562539	11.77	70.72
88) Perylene-d12	38.70	487256	10.89	65.45
90) 5(b)H-Cholane	34.24	137288	17.02	102.26
Internal Standards				
1) Fluorene-d10	21.45	355276	16.71	
31) Pyrene-d10	29.63	688925	16.69	
73) Benzo(a)pyrene-d12	38.39	631445	16.67	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1537.D
 Acq On : 13 Aug 2013 1:23 pm
 Operator : YM
 Sample : SED-DA-033 (0-0.5)
 Misc :
 ALS Vial : 17 Sample Multiplier: 0.06658

Quant Time: Aug 15 09:13:00 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	355276m	251.05		0.00
31) Pyrene-d10	29.635	212	688925m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	631445m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	556320m	14.27		0.00
21) Acenaphthene-d10	19.672	164	294557m	13.80		0.00
32) Phenanthrene-d10	24.752	188	563394m	14.37		0.00
66) Chrysene-d12	33.809	240	562539m	11.77		0.00
88) Perylene-d12	38.697	264	487256m	10.89		0.00
90) 5(b)H-Cholane	34.235	217	137288m	17.02		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.426	138	27874m	4.00		
4) C1-Decalins	12.346	152	13761m	1.97		
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	319171m	7.75		
9) 2-Methylnaphthalene	16.134	142	221455m	8.54		
10) 1-Methylnaphthalene	16.468	142	124487m	5.20		
11) 2,6-Dimethylnaphthalene	18.223	156	194991m	8.25		
12) 1,6,7-Trimethylnaphtha...	21.065	170	67881m	3.31		
13) C2-Naphthalenes	18.585	156	797359m	19.35		
14) C3-Naphthalenes	20.145	170	1138931m	27.64		
15) C4-Naphthalenes	22.820	184	643805m	15.62		
16) Benzothiophene	14.073	134	33405m	1.03		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	146122m	4.26		
23) Acenaphthylene	19.170	152	101146m	2.90		
24) Acenaphthene	19.783	154	32868m	1.47		
25) Dibenzofuran	20.368	168	223060m	6.01		
26) Fluorene	21.538	166	317449m	10.78		
27) 1-Methylfluorene	23.506	180	56687m	3.04		
28) C1-Fluorenes	23.506	180	177137m	6.01		
29) C2-Fluorenes	25.549	194	510605m	17.33		
30) C3-Fluorenes	27.592	208	413628m	14.04		
33) Carbazole	25.583	167	77699m	2.32		
34) Dibenzothiophene	24.406	184	146182m	3.65		
35) 4-Methyldibenzothiophene	25.895	198	79772m	2.39		
36) 2/3-Methyldibenzothiop...	26.206	198	73516m	2.20		
37) 1-Methyldibenzothiophene	26.518	198	23095m	0.69		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	1199967m	24.65		
42) Anthracene	24.994	178	189331m	4.52		
43) 3-Methylphenanthrene	26.483	192	159440m	5.06		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1537.D
 Acq On : 13 Aug 2013 1:23 pm
 Operator : YM
 Sample : SED-DA-033 (0-0.5)
 Misc :
 ALS Vial : 17 Sample Multiplier: 0.06658

Quant Time: Aug 15 09:13:00 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.587	192	167259m	5.30		
45) 2-Methylanthracene	26.761	192	127614m	4.05		
46) 4/9-Methylphenanthrene	26.864	192	97771m	3.10		
47) 1-Methylphenanthrene	26.934	192	109709m	3.48		
48) 3,6-Dimethylphenanthrene	28.042	206	30286m	1.21		
49) Retene	30.708	234	281796m	23.24		
50) C2-Phenanthrenes/Anthr...	28.215	206	888270m	18.25		
51) C3-Phenanthrenes/Anthr...	29.946	220	682277m	14.01		
52) C4-Phenanthrenes/Anthr...	30.708	234	843600m	17.33		
53) Naphthobenzothiophene	32.955	234	483069m	9.52		
54) C1-Naphthobenzothiophenes	34.119	248	614248m	12.11		
55) C2-Naphthobenzothiophenes	35.399	262	1198639m	23.62		
56) C3-Naphthobenzothiophenes	37.184	276	1190790m	23.47		
57) C4-Naphthobenzothiophenes	38.192	290	474776m	9.36		
58) Fluoranthene	28.907	202	814808m	18.53		
59) Pyrene	29.704	202	824173m	15.53		
60) 2-Methylfluoranthene	30.466	216	66461m	2.19		
61) Benzo(b)fluorene	31.089	216	102404m	3.94		
62) C1-Fluoranthenes/Pyrenes	30.847	216	665239m	15.13		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	403284m	8.25		
68) Chrysene/Triphenylene	33.886	228	697396m	14.10		
69) C1-Chrysenes	36.059	242	167366m	3.38		
70) C2-Chrysenes	37.028	256	312580m	6.32		
71) C3-Chrysenes	38.813	270	389983m	7.89		
72) C4-Chrysenes	39.356	284	285387m	5.77		
74) C29-Hopane	40.755	191	394758m	24.48		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.082	191	625297m	38.77		
77) Benzo(b)fluoranthene	37.300	252	1083412m	19.46		
78) Benzo(k,j)fluoranthene	37.416	252	223417m	4.69		
79) Benzo(a)fluoranthene	37.572	252	149358m	3.14		
80) Benzo(e)pyrene	38.309	252	521628m	9.69		
81) Benzo(a)pyrene	38.464	252	335542m	6.38		
82) Indeno(1,2,3-c,d)pyrene	43.188	276	368402m	6.39		
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.590	276	410587m	7.95		
89) Perylene	38.813	252	30277826m	565.34		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1537.D
Acq On : 13 Aug 2013 1:23 pm
Operator : YM
Sample : SED-DA-033 (0-0.5)
Misc :
ALS Vial : 17 Sample Multiplier: 0.06658

Quant Time: Aug 15 09:13:00 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

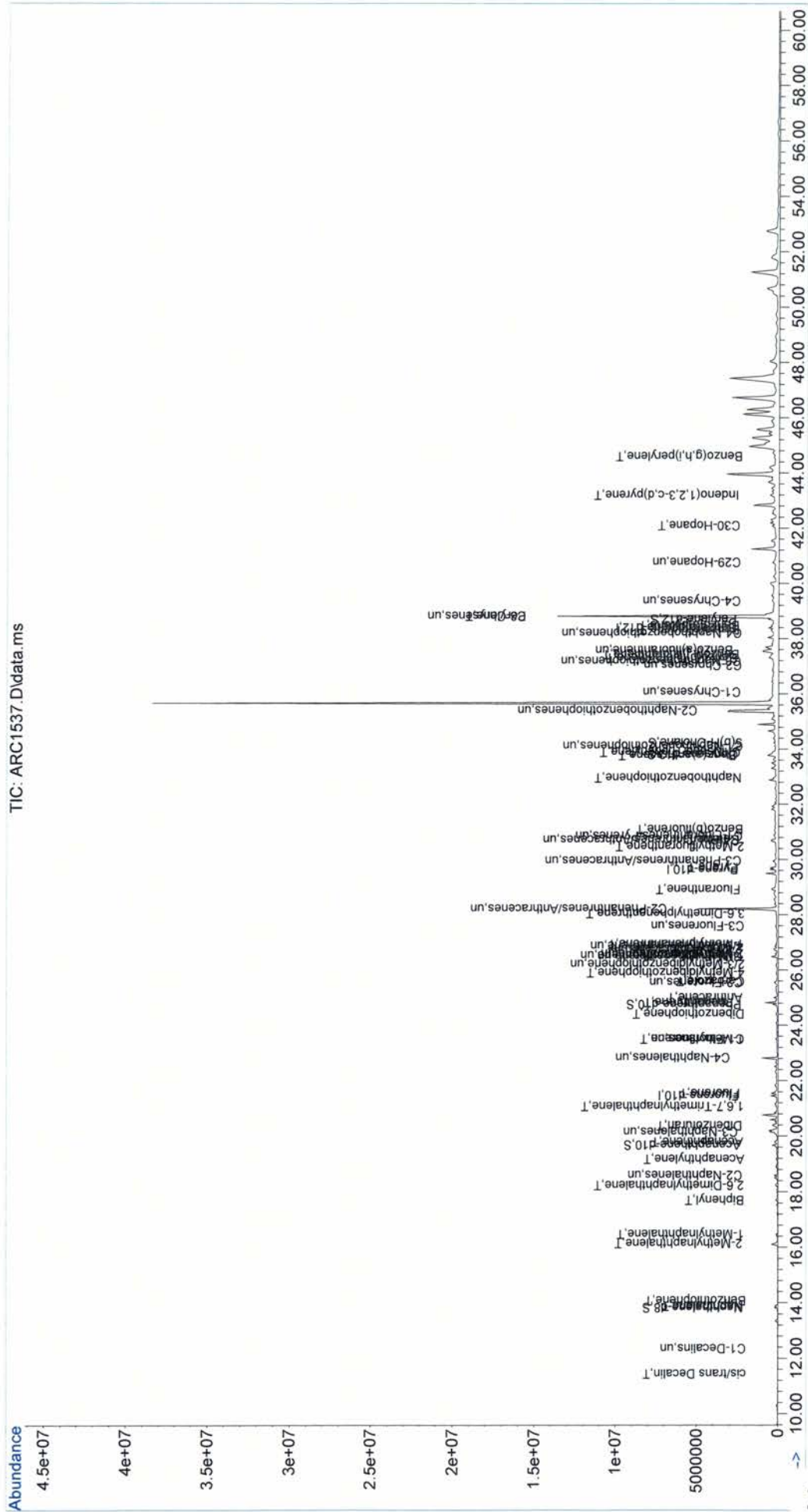
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1537.D
 Acq On : 13 Aug 2013 1:23 pm
 Operator : YM
 Sample : SED-DA-033 (0-0.5)
 Misc :
 ALS Vial : 17 Sample Multiplier: 0.06658

Quant Time: Aug 15 09:13:00 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

TIC: ARC1537.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1538.D
 Data File Path C:\GCMS7\MS70055\
 Operator YM
 Date Acquired 8/13/2013 14:32
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-033 (0.5-1.0)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 18
 Sample Multiplier 0.06596
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1538.D
 SED-DA-033 (0.5-1.0)
 8/13/2013
 PAH-2012.M
 15.16070346

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	35075	0.8458	1.0145
9)+10)	C1-Naphthalenes	16.30	19391	0.4676	0.5609
13)	C2-Naphthalenes	18.59	41151	0.9923	1.1903
14)	C3-Naphthalenes	20.42	45697	1.1020	1.3218
15)	C4-Naphthalenes	22.82	83225	2.0069	2.4072
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	2489	0.0709	0.0850
24)	Acenaphthene	19.78	2383	0.1062	0.1274
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	52411	1.7678	2.1205
28)	C1-Fluorenes	23.51	22318	0.7528	0.9029
29)	C2-Fluorenes	25.38	29397	0.9916	1.1894
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	4078	0.0928	0.1113
41)	Phenanthrene	24.82	278888	5.4564	6.5448
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	133897	2.6197	3.1422
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.41	6590	0.1568	0.1880
35)+36)+37)	C1-Dibenzothiophenes	26.18	5157	0.1227	0.1471
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.91	60202	1.3037	1.5638
59)	Pyrene	29.70	42484	0.7623	0.9144
62)	C1-Fluoranthenes/Pyrenes	30.85	20726	0.4488	0.5384
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.77	7769	0.1513	0.1815
68)	Chrysene/Triphenylene	33.89	13331	0.2568	0.3080
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	19306	0.3258	0.3908
78)	Benzo(k,j)fluoranthene	37.38	3154	0.0622	0.0746
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.77	7042190	123.5108	148.1475
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.52	9858	0.1792	0.2149

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	14123	0.5413	0.6493
10) 1-Methylnaphthalene	16.47	5268	0.2185	0.2621
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.89	2305	0.0657	0.0788
36) 2/3-Methyldibenzothiophene	26.17	1616	0.0460	0.0552
37) 1-Methyldibenzothiophene	26.48	1236	0.0352	0.0422
43) 3-Methylphenanthrene	26.48	13113	0.3960	0.4750
44) 2-Methylphenanthrene	26.59	13242	0.3999	0.4797
45) 2-Methylanthracene	26.76	88553	2.6744	3.2078
46) 4/9-Methylphenanthrene	26.86	5659	0.1709	0.2050
47) 1-Methylphenanthrene	26.93	13330	0.4026	0.4829
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	480840	12.25	74.28
21) Acenaphthene-d10	19.67	294174	13.69	82.99
32) Phenanthrene-d10	24.75	566347	13.76	83.37
66) Chrysene-d12	33.81	720536	14.36	87.09
88) Perylene-d12	38.70	487696	10.24	62.11
90) 5(b)H-Cholane	34.24	129549	15.09	91.50
Internal Standards				
1) Fluorene-d10	21.45	354233	16.56	
31) Pyrene-d10	29.63	716575	16.53	
73) Benzo(a)pyrene-d12	38.39	665977	16.51	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1538.D
 Acq On : 13 Aug 2013 2:32 pm
 Operator : YM
 Sample : SED-DA-033 (0.5-1.0)
 Misc :
 ALS Vial : 18 Sample Multiplier: 0.06596

Quant Time: Aug 15 09:23:32 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	354233m	251.05		0.00
31) Pyrene-d10	29.635	212	716575m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	665977m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	480840m	12.25		0.00
21) Acenaphthene-d10	19.672	164	294174m	13.69		0.00
32) Phenanthrene-d10	24.752	188	566347m	13.76		0.00
66) Chrysene-d12	33.809	240	720536m	14.36		0.00
88) Perylene-d12	38.697	264	487696m	10.24		0.00
90) 5(b)H-Cholane	34.235	217	129549m	15.09		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	35075m	0.85		
9) 2-Methylnaphthalene	16.134	142	14123m	0.54		
10) 1-Methylnaphthalene	16.468	142	5268m	0.22		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	41151m	0.99		
14) C3-Naphthalenes	20.424	170	45697m	1.10		
15) C4-Naphthalenes	22.820	184	83225m	2.01		
16) Benzo thiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	2489m	0.07		
24) Acenaphthene	19.783	154	2383m	0.11		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	52411m	1.77		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	22318m	0.75		
29) C2-Fluorenes	25.375	194	29397m	0.99		
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	6590m	0.16		
35) 4-Methyldibenzothiophene	25.895	198	2305m	0.07		
36) 2/3-Methyldibenzothiop...	26.172	198	1616m	0.05		
37) 1-Methyldibenzothiophene	26.484	198	1236m	0.04		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	27888m	5.46		
42) Anthracene	24.995	178	4078m	0.09		
43) 3-Methylphenanthrene	26.484	192	13113m	0.40		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1538.D
 Acq On : 13 Aug 2013 2:32 pm
 Operator : YM
 Sample : SED-DA-033 (0.5-1.0)
 Misc :
 ALS Vial : 18 Sample Multiplier: 0.06596

Quant Time: Aug 15 09:23:32 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.587	192	13242m	0.40		
45) 2-Methylanthracene	26.761	192	88553m	2.67		
46) 4/9-Methylphenanthrene	26.864	192	5659m	0.17		
47) 1-Methylphenanthrene	26.934	192	13330m	0.40		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	60202m	1.30		
59) Pyrene	29.704	202	42484m	0.76		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	20726m	0.45		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	7769m	0.15		
68) Chrysene/Triphenylene	33.886	228	13331m	0.26		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	19306m	0.33		
78) Benzo(k,j)fluoranthene	37.378	252	3154m	0.06		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	9858m	0.18		
89) Perylene	38.774	252	7042189m	123.51		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1538.D
Acq On : 13 Aug 2013 2:32 pm
Operator : YM
Sample : SED-DA-033 (0.5-1.0)
Misc :
ALS Vial : 18 Sample Multiplier: 0.06596

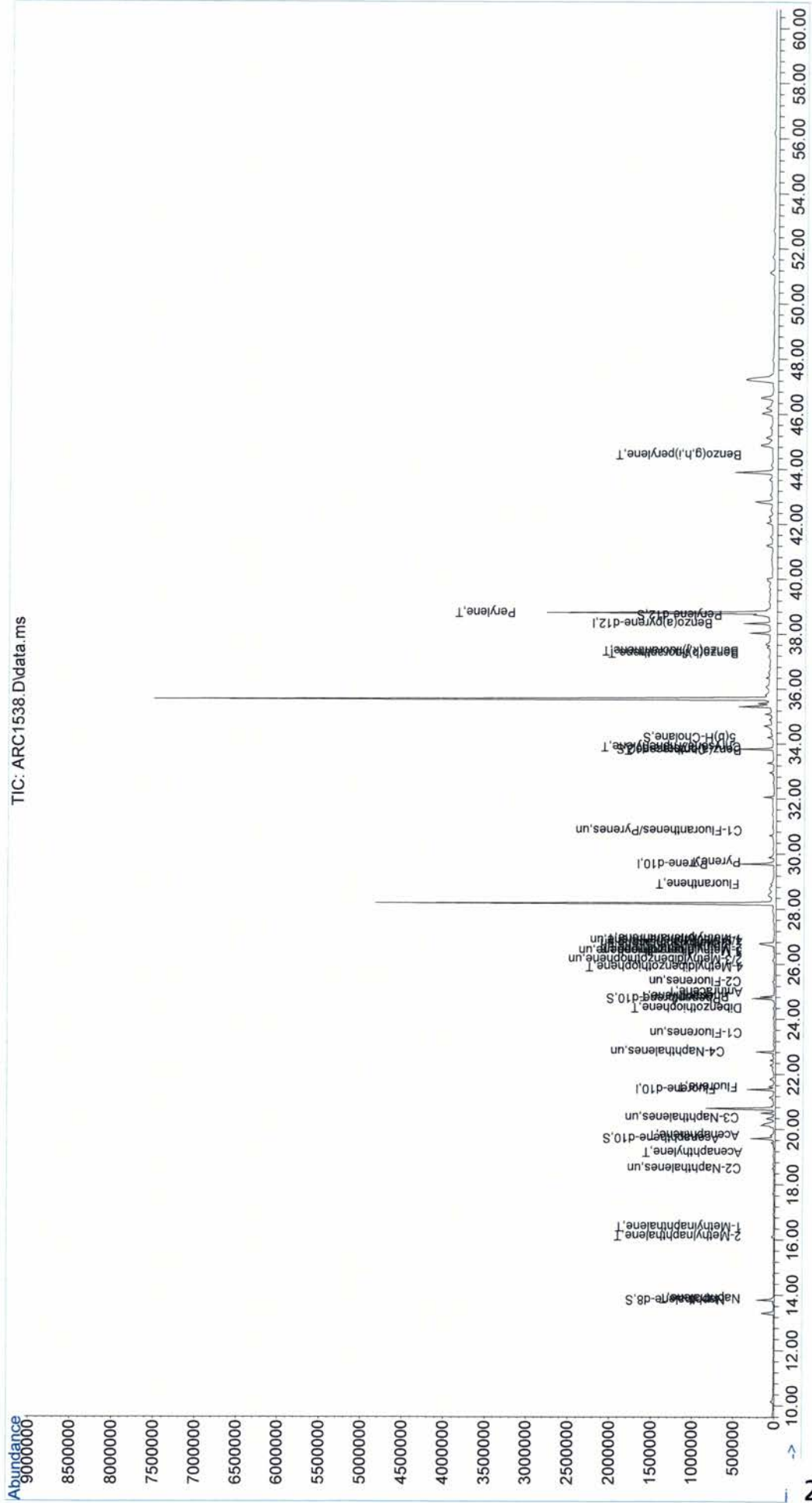
Quant Time: Aug 15 09:23:32 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						


```
Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1538.D
Acq On : 13 Aug 2013 2:32 pm
Operator : YM
Sample : SED-DA-033 (0.5-1.0)
Misc :
ALS Vial : 18 Sample Multiplier: 0.06596
```

Quant Time: Aug 15 09:23:32 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1539.D
 Data File Path C:\GCM57\MS70055\
 Operator YM
 Date Acquired 8/13/2013 16:49
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-033 (1.0-1.5)
 Misc Info 0
 Instrument Name GCM5D
 Vial Number 19
 Sample Multiplier 0.06662
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet
 ARC1539.D
 SED-DA-033 (1.0-1.5)
 8/13/2013
 PAH-2012.M
 15.01050736

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	14479	0.3867	0.4917
9)+10)	C1-Naphthalenes	16.30	7609	0.2032	0.2584
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	23614	0.8821	1.1216
28)	C1-Fluorenes	23.51	11888	0.4441	0.5646
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	24.82	131607	2.7729	3.5257
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.41	2661	0.0682	0.0867
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.91	38927	0.9078	1.1543
59)	Pyrene	29.70	18923	0.3657	0.4649
62)	C1-Fluoranthenes/Pyrenes	30.85	8705	0.2030	0.2581
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.77	3016150	59.5247	75.6852
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	5859	0.2487	0.3162
10) 1-Methylnaphthalene	16.47	1750	0.0804	0.1022
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36) 2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37) 1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43) 3-Methylphenanthrene	0.00	0	0.0000	0.0000
44) 2-Methylphenanthrene	0.00	0	0.0000	0.0000
45) 2-Methylanthracene	0.00	0	0.0000	0.0000
46) 4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47) 1-Methylphenanthrene	0.00	0	0.0000	0.0000
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	446991	12.62	75.71
21) Acenaphthene-d10	19.67	253941	13.09	78.55
32) Phenanthrene-d10	24.75	501076	13.11	78.65
66) Chrysene-d12	33.81	654230	14.04	84.31
88) Perylene-d12	38.70	325426	7.69	46.17
90) 5(b)H-Cholane	34.24	106565	13.97	83.85
Internal Standards				
1) Fluorene-d10	21.45	323058	16.72	
31) Pyrene-d10	29.63	672057	16.70	
73) Benzo(a)pyrene-d12	38.39	597772	16.68	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1539.D
 Acq On : 13 Aug 2013 4:49 pm
 Operator : YM
 Sample : SED-DA-033 (1.0-1.5)
 Misc :
 ALS Vial : 19 Sample Multiplier: 0.06662

Quant Time: Aug 15 09:29:36 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	323058m	251.05		0.00
31) Pyrene-d10	29.635	212	672057m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	597772m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	446991m	12.62		0.00
21) Acenaphthene-d10	19.672	164	253941m	13.09		0.00
32) Phenanthrene-d10	24.752	188	501076m	13.11		0.00
66) Chrysene-d12	33.809	240	654230m	14.04		0.00
88) Perylene-d12	38.697	264	325426m	7.69		0.00
90) 5(b)H-Cholane	34.235	217	106565m	13.97		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	14479m	0.39		
9) 2-Methylnaphthalene	16.134	142	5859m	0.25		
10) 1-Methylnaphthalene	16.468	142	1750m	0.08		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	0.000		0	N.D.	d	
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	23614m	0.88		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	11888m	0.44		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	2661m	0.07		
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	131607m	2.77		
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1539.D
 Acq On : 13 Aug 2013 4:49 pm
 Operator : YM
 Sample : SED-DA-033 (1.0-1.5)
 Misc :
 ALS Vial : 19 Sample Multiplier: 0.06662

Quant Time: Aug 15 09:29:36 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	38927m	0.91		
59) Pyrene	29.704	202	18923m	0.37		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	8705m	0.20		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	38.774	252	3016154m	59.52		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1539.D
Acq On : 13 Aug 2013 4:49 pm
Operator : YM
Sample : SED-DA-033 (1.0-1.5)
Misc :
ALS Vial : 19 Sample Multiplier: 0.06662

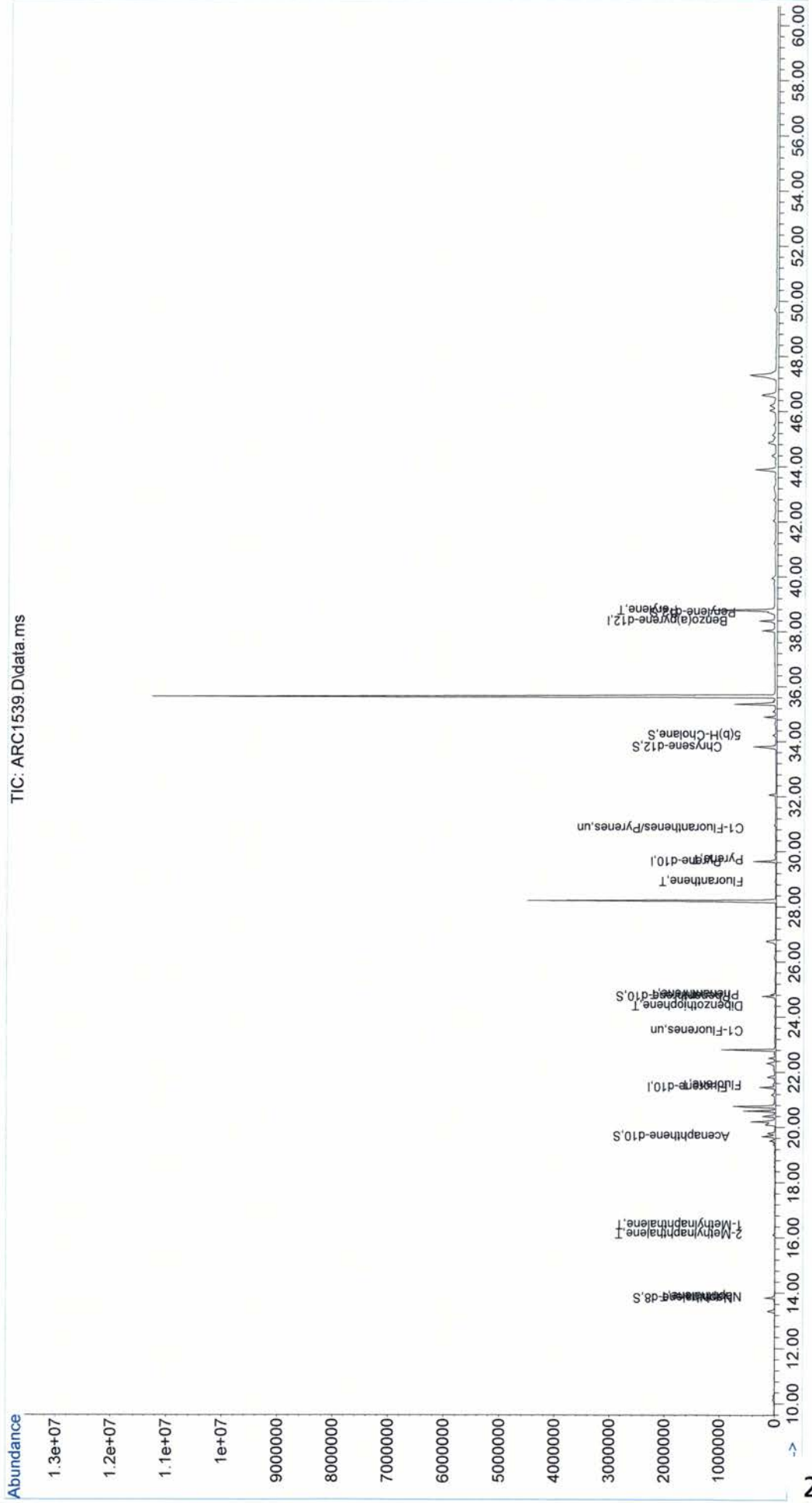
Quant Time: Aug 15 09:29:36 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1539.D
Acq On : 13 Aug 2013 4:49 pm
Operator : YM
Sample : SED-DA-033 (1.0-1.5)
Misc :
ALS Vial : 19 Sample Multiplier: 0.06662

Quant Time: Aug 15 09:29:36 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1540.D
 Data File Path C:\GCM57\MS70055\
 Operator YM
 Date Acquired 8/13/2013 17:58
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-034 (0-0.5)
 Misc Info 0
 Instrument Name GCM5D
 Vial Number 21
 Sample Multiplier 0.06636
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet
 ARC1540.D
 SED-DA-034 (0-0.5)
 8/13/2013
 PAH-2012.M
 15.06931887

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.43	30884	4.5421	5.0947
4)	C1-Decalins	12.35	6129	0.9014	1.0111
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	264482	6.5814	7.3822
9)+10)	C1-Naphthalenes	16.30	217104	5.4025	6.0598
13)	C2-Naphthalenes	18.59	423523	10.5391	11.8214
14)	C3-Naphthalenes	20.15	613594	15.2688	17.1267
15)	C4-Naphthalenes	22.82	752613	18.7283	21.0070
16)	Benzothiophene	14.05	21556	0.6817	0.7646
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	109169	3.2618	3.6587
23)	Acenaphthylene	19.17	196450	5.7720	6.4743
24)	Acenaphthene	19.78	30354	1.3961	1.5660
25)	Dibenzofuran	20.37	167824	4.6368	5.2010
26)	Fluorene	21.54	266668	9.2819	10.4113
28)	C1-Fluorenes	23.51	154985	5.3946	6.0510
29)	C2-Fluorenes	25.55	610421	21.2469	23.8322
30)	C3-Fluorenes	26.52	530684	18.4716	20.7191
33)	Carbazole	25.58	107510	3.3794	3.7906
42)	Anthracene	24.99	344909	8.6718	9.7269
41)	Phenanthrene	24.82	898511	19.4283	21.7923
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	625585	13.5269	15.1728
50)	C2-Phenanthrenes/Anthracenes	28.22	963536	20.8344	23.3694
51)	C3-Phenanthrenes/Anthracenes	29.95	799787	17.2937	19.3979
52)	C4-Phenanthrenes/Anthracenes	30.71	727102	15.7220	17.6350
34)	Dibenzothiophene	24.41	163810	4.3065	4.8305
35)+36)+37)	C1-Dibenzothiophenes	26.21	211851	5.5694	6.2471
38)	C2-Dibenzothiophenes	27.63	424650	11.1638	12.5222
39)	C3-Dibenzothiophenes	28.80	518413	13.6288	15.2870
40)	C4-Dibenzothiophenes	30.22	484736	12.7434	14.2940
58)	Fluoranthene	28.94	1473970	35.2775	39.5699
59)	Pyrene	29.70	1510800	29.9615	33.6071
62)	C1-Fluoranthenes/Pyrenes	30.85	1033420	24.7336	27.7430
63)	C2-Fluoranthenes/Pyrenes	32.57	1397220	33.4405	37.5094
64)	C3-Fluoranthenes/Pyrenes	34.62	751572	17.9879	20.1766
65)	C4-Fluoranthenes/Pyrenes	35.40	1217810	29.1466	32.6930
53)	Naphthobenzothiophene	32.96	641102	13.2995	14.9177
54)	C1-Naphthobenzothiophenes	34.12	967193	20.0641	22.5054
55)	C2-Naphthobenzothiophenes	35.40	1579280	32.7617	36.7480
56)	C3-Naphthobenzothiophenes	36.91	1357240	28.1556	31.5814
57)	C4-Naphthobenzothiophenes	38.08	552470	11.4608	12.8553
67)	Benz(a)anthracene	33.77	704329	15.1633	17.0083
68)	Chrysene/Triphenylene	33.89	1187080	25.2721	28.3470
69)	C1-Chrysenes	35.67	1034880	22.0318	24.7125
70)	C2-Chrysenes	37.03	391861	8.3424	9.3575
71)	C3-Chrysenes	37.53	608720	12.9592	14.5360
72)	C4-Chrysenes	39.36	378436	8.0566	9.0369
77)	Benzo(b)fluoranthene	37.34	2011160	39.0975	43.8547
78)	Benzo(k,j)fluoranthene	37.42	555433	12.6174	14.1526
79)	Benzo(a)fluoranthene	37.61	505401	11.4809	12.8778
80)	Benzo(e)pyrene	38.31	1079700	21.6992	24.3394
81)	Benzo(a)pyrene	38.50	624757	12.8488	14.4121
89)	Perylene	38.81	40478600	817.8737	917.3882
82)	Indeno(1,2,3-c,d)pyrene	43.23	786163	14.7543	16.5496
83)	Dibenzo(a,h)anthracene	43.37	347698	8.1489	9.1405
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.63	866399	18.1431	20.3506

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopan				
9) 2-Methylnaphthalene	16.13	153528	6.0724	6.8113
10) 1-Methylnaphthalene	16.47	63576	2.7211	3.0521
11) 2,6-Dimethylnaphthalene	18.22	125312	5.4337	6.0948
12) 1,6,7-Trimethylnaphthalene	21.04	38482	1.9227	2.1567
27) 1-Methylfluorene	23.51	50344	2.7641	3.1005
35) 4-Methyldibenzothiophene	25.90	97588	3.0727	3.4466
36) 2/3-Methyldibenzothiophene	26.21	80135	2.5232	2.8302
37) 1-Methyldibenzothiophene	26.52	34128	1.0746	1.2053
43) 3-Methylphenanthrene	26.48	158019	5.2743	5.9160
44) 2-Methylphenanthrene	26.59	128772	4.2981	4.8211
45) 2-Methylanthracene	26.76	148320	4.9505	5.5529
46) 4/9-Methylphenanthrene	26.86	110627	3.6924	4.1417
47) 1-Methylphenanthrene	26.93	79847	2.6651	2.9894
48) 3,6-Dimethylphenanthrene	28.04	36136	1.5246	1.7101
49) Retene	30.71	84224	7.3114	8.2010
60) 2-Methylfluoranthene	30.47	112203	3.8971	4.3713
61) Benzo(b)fluorene	31.09	182813	7.4028	8.3035
74) C29-Hopane	40.79	1047590	70.2852	78.8371
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.08	1304940	87.5514	98.2042
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	482838	12.70	76.51
21) Acenaphthene-d10	19.67	275604	13.24	79.75
32) Phenanthrene-d10	24.75	551306	14.80	89.15
66) Chrysene-d12	33.81	556710	12.26	73.92
88) Perylene-d12	38.70	499111	12.08	72.78
90) 5(b)H-Cholane	34.24	139957	18.78	113.19
Internal Standards				
1) Fluorene-d10	21.46	345355	16.66	
31) Pyrene-d10	29.63	652304	16.63	
73) Benzo(a)pyrene-d12	38.43	581593	16.61	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1540.D
 Acq On : 13 Aug 2013 5:58 pm
 Operator : YM
 Sample : SED-DA-034 (0-0.5)
 Misc :
 ALS Vial : 21 Sample Multiplier: 0.06636

Quant Time: Aug 15 08:55:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	345355m	251.05		0.00
31) Pyrene-d10	29.635	212	652304m	250.63		0.00
73) Benzo(a)pyrene-d12	38.425	264	581593m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	482838m	12.70		0.00
21) Acenaphthene-d10	19.672	164	275604m	13.24		0.00
32) Phenanthrene-d10	24.752	188	551306m	14.80		0.00
66) Chrysene-d12	33.809	240	556710m	12.26		0.00
88) Perylene-d12	38.697	264	499111m	12.08		0.00
90) 5(b)H-Cholane	34.236	217	139957m	18.78		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	11.427	138	30884m	4.54		
4) C1-Decalins	12.346	152	6129m	0.90		
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	264482m	6.58		
9) 2-Methylnaphthalene	16.134	142	153528m	6.07		
10) 1-Methylnaphthalene	16.469	142	63576m	2.72		
11) 2,6-Dimethylnaphthalene	18.224	156	125312m	5.43		
12) 1,6,7-Trimethylnaphtha...	21.037	170	38482m	1.92		
13) C2-Naphthalenes	18.586	156	423523m	10.54		
14) C3-Naphthalenes	20.146	170	613594m	15.27		
15) C4-Naphthalenes	22.820	184	752613m	18.73		
16) Benzothiophene	14.045	134	21556m	0.68		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	109169m	3.26		
23) Acenaphthylene	19.171	152	196450m	5.77		
24) Acenaphthene	19.784	154	30354m	1.40		
25) Dibenzofuran	20.369	168	167824m	4.64		
26) Fluorene	21.539	166	266668m	9.28		
27) 1-Methylfluorene	23.506	180	50344m	2.76		
28) C1-Fluorenes	23.506	180	154985m	5.39		
29) C2-Fluorenes	25.549	194	610421m	21.25		
30) C3-Fluorenes	26.518	208	530684m	18.47		
33) Carbazole	25.583	167	107510m	3.38		
34) Dibenzothiophene	24.406	184	163810m	4.31		
35) 4-Methyldibenzothiophene	25.895	198	97588m	3.07		
36) 2/3-Methyldibenzothiop...	26.207	198	80135m	2.52		
37) 1-Methyldibenzothiophene	26.518	198	34128m	1.07		
38) C2-Dibenzothiophenes	27.627	212	424650m	11.16		
39) C3-Dibenzothiophenes	28.804	226	518413m	13.63		
40) C4-Dibenzothiophenes	30.224	240	484736m	12.74		
41) Phenanthrene	24.822	178	898511m	19.43		
42) Anthracene	24.995	178	344909m	8.67		
43) 3-Methylphenanthrene	26.484	192	158019m	5.27		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1540.D
 Acq On : 13 Aug 2013 5:58 pm
 Operator : YM
 Sample : SED-DA-034 (0-0.5)
 Misc :
 ALS Vial : 21 Sample Multiplier: 0.06636

Quant Time: Aug 15 08:55:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	128772m	4.30		
45) 2-Methylanthracene	26.761	192	148320m	4.95		
46) 4/9-Methylphenanthrene	26.865	192	110627m	3.69		
47) 1-Methylphenanthrene	26.934	192	79847m	2.67		
48) 3,6-Dimethylphenanthrene	28.042	206	36136m	1.52		
49) Retene	30.708	234	84224m	7.31		
50) C2-Phenanthrenes/Anthr...	28.215	206	963536m	20.83		
51) C3-Phenanthrenes/Anthr...	29.947	220	799787m	17.29		
52) C4-Phenanthrenes/Anthr...	30.708	234	727102m	15.72		
53) Naphthobenzothiophene	32.955	234	641102m	13.30		
54) C1-Naphthobenzothiophenes	34.119	248	967193m	20.06		
55) C2-Naphthobenzothiophenes	35.399	262	1579281m	32.76		
56) C3-Naphthobenzothiophenes	36.912	276	1357240m	28.16		
57) C4-Naphthobenzothiophenes	38.076	290	552470m	11.46		
58) Fluoranthene	28.942	202	1473968m	35.28		
59) Pyrene	29.704	202	1510795m	29.96		
60) 2-Methylfluoranthene	30.466	216	112203m	3.90		
61) Benzo(b)fluorene	31.089	216	182813m	7.40		
62) C1-Fluoranthenes/Pyrenes	30.847	216	1033419m	24.73		
63) C2-Fluoranthenes/Pyrenes	32.567	230	1397215m	33.44		
64) C3-Fluoranthenes/Pyrenes	34.623	244	751572m	17.99		
65) C4-Fluoranthenes/Pyrenes	35.399	258	1217806m	29.15		
67) Benz(a)anthracene	33.770	228	704329m	15.16		
68) Chrysene/Triphenylene	33.886	228	1187083m	25.27		
69) C1-Chrysenes	35.671	242	1034880m	22.03		
70) C2-Chrysenes	37.029	256	391861m	8.34		
71) C3-Chrysenes	37.533	270	608720m	12.96		
72) C4-Chrysenes	39.356	284	378436m	8.06		
74) C29-Hopane	40.792	191	1047589m	70.29		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.083	191	1304939m	87.55		
77) Benzo(b)fluoranthene	37.339	252	2011162m	39.10		
78) Benzo(k,j)fluoranthene	37.417	252	555433m	12.62		
79) Benzo(a)fluoranthene	37.611	252	505401m	11.48		
80) Benzo(e)pyrene	38.309	252	1079704m	21.70		
81) Benzo(a)pyrene	38.503	252	624757m	12.85		
82) Indeno(1,2,3-c,d)pyrene	43.226	276	786163m	14.75		
83) Dibenzo(a,h)anthracene	43.373	278	347698m	8.15		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.627	276	866399m	18.14		
89) Perylene	38.813	252	40478623m	817.88		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1540.D
Acq On : 13 Aug 2013 5:58 pm
Operator : YM
Sample : SED-DA-034 (0-0.5)
Misc :
ALS Vial : 21 Sample Multiplier: 0.06636

Quant Time: Aug 15 08:55:53 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

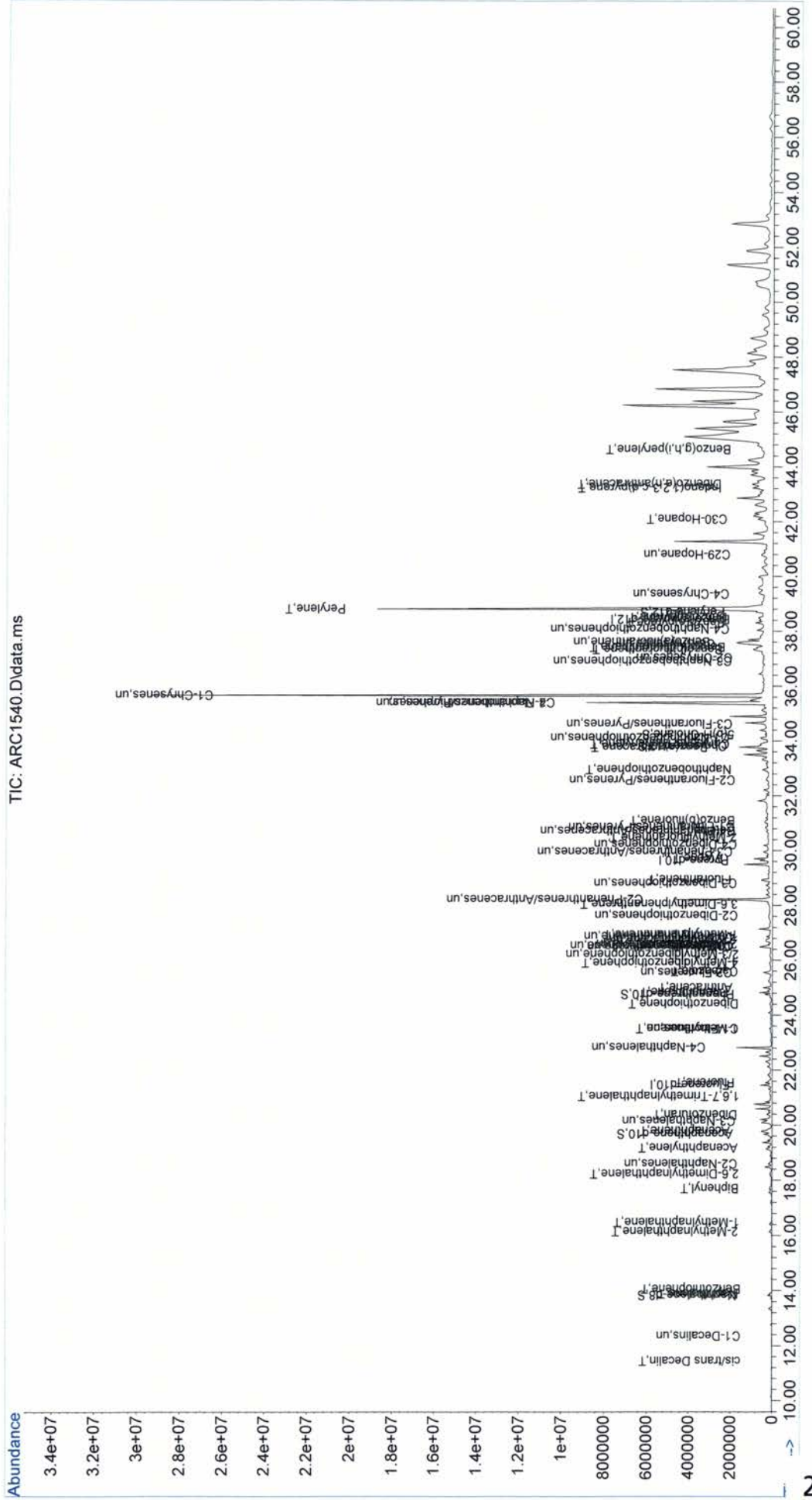
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1540.D
 Acq On : 13 Aug 2013 5:58 pm
 Operator : YM
 Sample : SED-DA-034 (0-0.5)
 Misc :
 ALS Vial : 21 Sample Multiplier: 0.06636

Quant Time: Aug 15 08:55:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

TIC: ARC1540.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1541.D
 Data File Path C:\GCM57\MS70055\
 Operator YM
 Date Acquired 8/13/2013 19:06
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-034 (0.5-1.0)
 Misc Info 0
 Instrument Name GCM5D
 Vial Number 22
 Sample Multiplier 0.06653
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet
 ARC1541.D
 SED-DA-034 (0.5-1.0)
 8/13/2013
 PAH-2012.M
 15.03081317

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	95129	2.3987	2.8650
9)+10)	C1-Naphthalenes	16.30	59886	1.5100	1.8036
13)	C2-Naphthalenes	18.59	104285	2.6295	3.1407
14)	C3-Naphthalenes	21.45	105399	2.6576	3.1742
15)	C4-Naphthalenes	21.57	91816	2.3151	2.7652
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	5968	0.1777	0.2122
24)	Acenaphthene	19.78	5226	0.2436	0.2909
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	91984	3.2442	3.8749
28)	C1-Fluorenes	23.51	38396	1.3542	1.6175
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	12815	0.3062	0.3658
41)	Phenanthrene	24.82	451213	9.2728	11.0754
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	181496	3.7299	4.4550
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.41	24512	0.6125	0.7315
35)+36)+37)	C1-Dibenzothiophenes	26.21	14850	0.3710	0.4432
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.91	101808	2.3158	2.7660
59)	Pyrene	29.70	79117	1.4912	1.7811
62)	C1-Fluoranthenes/Pyrenes	30.36	71961	1.6369	1.9551
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.77	21364	0.4371	0.5221
68)	Chrysene/Triphenylene	33.89	56733	1.1479	1.3711
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	75437	1.2960	1.5480
78)	Benzo(k,j)fluoranthene	37.42	10746	0.2157	0.2577
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.81	34960700	624.2610	745.6157
82)	Indeno(1,2,3-c,d)pyrene	43.19	31345	0.5199	0.6209
83)	Dibenzo(a,h)anthracene	43.26	15263	0.3161	0.3776
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.52	34302	0.6348	0.7582

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	42417	1.7000	2.0305
10) 1-Methylnaphthalene	16.47	17469	0.7576	0.9049
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.90	8020	0.2400	0.2867
36) 2/3-Methyldibenzothiophene	26.21	5872	0.1757	0.2099
37) 1-Methyldibenzothiophene	26.52	958	0.0287	0.0342
43) 3-Methylphenanthrene	26.48	29321	0.9301	1.1110
44) 2-Methylphenanthrene	26.59	36038	1.1432	1.3655
45) 2-Methylanthracene	26.76	88415	2.8048	3.3500
46) 4/9-Methylphenanthrene	26.86	11601	0.3680	0.4396
47) 1-Methylphenanthrene	26.93	16121	0.5114	0.6108
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	478317	12.75	76.60
21) Acenaphthene-d10	19.67	281716	13.71	82.39
32) Phenanthrene-d10	24.75	546145	13.94	83.72
66) Chrysene-d12	33.81	661770	13.86	83.29
88) Perylene-d12	38.70	472883	10.11	60.79
90) 5(b)H-Cholane	34.24	129309	15.33	92.18
Internal Standards				
1) Fluorene-d10	21.45	341701	16.70	
31) Pyrene-d10	29.63	688092	16.67	
73) Benzo(a)pyrene-d12	38.39	659791	16.65	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1541.D
 Acq On : 13 Aug 2013 7:06 pm
 Operator : YM
 Sample : SED-DA-034 (0.5-1.0)
 Misc :
 ALS Vial : 22 Sample Multiplier: 0.06653

Quant Time: Aug 15 09:36:54 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)

Internal Standards						
1) Fluorene-d10	21.455	176	341701m	251.05		0.00
31) Pyrene-d10	29.635	212	688092m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	659791m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	478317m	12.75		0.00
21) Acenaphthene-d10	19.672	164	281716m	13.71		0.00
32) Phenanthrene-d10	24.752	188	546145m	13.94		0.00
66) Chrysene-d12	33.809	240	661770m	13.86		0.00
88) Perylene-d12	38.697	264	472883m	10.11		0.00
90) 5(b)H-Cholane	34.235	217	129309m	15.33		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	95129m	2.40		
9) 2-Methylnaphthalene	16.134	142	42417m	1.70		
10) 1-Methylnaphthalene	16.469	142	17469m	0.76		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	104285m	2.63		
14) C3-Naphthalenes	21.455	170	105399m	2.66		
15) C4-Naphthalenes	21.566	184	91816m	2.32		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	5968m	0.18		
24) Acenaphthene	19.784	154	5226m	0.24		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	91984m	3.24		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	38396m	1.35		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	24512m	0.61		
35) 4-Methyldibenzothiophene	25.895	198	8020m	0.24		
36) 2/3-Methyldibenzothiop...	26.207	198	5872m	0.18		
37) 1-Methyldibenzothiophene	26.518	198	958m	0.03		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	451213m	9.27		
42) Anthracene	24.995	178	12815m	0.31		
43) 3-Methylphenanthrene	26.484	192	29321m	0.93		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1541.D
 Acq On : 13 Aug 2013 7:06 pm
 Operator : YM
 Sample : SED-DA-034 (0.5-1.0)
 Misc :
 ALS Vial : 22 Sample Multiplier: 0.06653

Quant Time: Aug 15 09:36:54 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	36038m	1.14		
45) 2-Methylanthracene	26.761	192	88415m	2.80		
46) 4/9-Methylphenanthrene	26.865	192	11601m	0.37		
47) 1-Methylphenanthrene	26.934	192	16121m	0.51		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	101808m	2.32		
59) Pyrene	29.704	202	79117m	1.49		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.362	216	71961m	1.64		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	21364m	0.44		
68) Chrysene/Triphenylene	33.886	228	56733m	1.15		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	75437m	1.30		
78) Benzo(k,j)fluoranthene	37.417	252	10746m	0.22		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.		
81) Benzo(a)pyrene	0.000		0	N.D.		
82) Indeno(1,2,3-c,d)pyrene	43.189	276	31345m	0.52		
83) Dibenzo(a,h)anthracene	43.262	278	15263m	0.32		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	34302m	0.63		
89) Perylene	38.813	252	34960720m	624.26		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

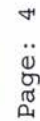
Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1541.D
Acq On : 13 Aug 2013 7:06 pm
Operator : YM
Sample : SED-DA-034 (0.5-1.0)
Misc :
ALS Vial : 22 Sample Multiplier: 0.06653

Quant Time: Aug 15 09:36:54 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Quant Time: Aug 15 09:36:54 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1542.D
 Data File Path C:\GCM57\MS70055\
 Operator YM
 Date Acquired 8/13/2013 20:15
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-034 (1.0-1.5)
 Misc Info 0
 Instrument Name GCM5D
 Vial Number 23
 Sample Multiplier 0.06662
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1542.D
 SED-DA-034 (1.0-1.5)
 8/13/2013
 PAH-2012.M
 15.01050736

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	24424	0.6272	0.7629
9)+10)	C1-Naphthalenes	16.30	13484	0.3463	0.4212
13)	C2-Naphthalenes	18.59	32382	0.8316	1.0114
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	1601	0.0485	0.0590
24)	Acenaphthene	19.78	1421	0.0674	0.0820
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	40754	1.4639	1.7805
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	24.82	208764	4.2792	5.2047
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	0.00	0	0.0000	0.0000
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.91	39434	0.8947	1.0882
59)	Pyrene	29.70	21701	0.4080	0.4962
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.77	5506910	103.5308	125.9214
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.52	4194	0.0817	0.0994

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	9568	0.3905	0.4750
10) 1-Methylnaphthalene	16.47	3916	0.1730	0.2104
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36) 2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37) 1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43) 3-Methylphenanthrene	0.00	0	0.0000	0.0000
44) 2-Methylphenanthrene	0.00	0	0.0000	0.0000
45) 2-Methylantracene	0.00	0	0.0000	0.0000
46) 4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47) 1-Methylphenanthrene	0.00	0	0.0000	0.0000
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	467347	12.68	76.12
21) Acenaphthene-d10	19.67	274379	13.60	81.61
32) Phenanthrene-d10	24.75	538434	13.70	82.22
66) Chrysene-d12	33.81	678212	14.16	85.03
88) Perylene-d12	38.70	383567	8.64	51.84
90) 5(b)H-Cholane	34.24	119966	14.98	89.92
Internal Standards				
1) Fluorene-d10	21.45	335956	16.72	
31) Pyrene-d10	29.63	690799	16.70	
73) Benzo(a)pyrene-d12	38.39	627508	16.68	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1542.D
 Acq On : 13 Aug 2013 8:15 pm
 Operator : YM
 Sample : SED-DA-034 (1.0-1.5)
 Misc :
 ALS Vial : 23 Sample Multiplier: 0.06662

Quant Time: Aug 15 09:45:33 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	335956m	251.05		0.00
31) Pyrene-d10	29.635	212	690799m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	627508m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	467347m	12.68		0.00
21) Acenaphthene-d10	19.672	164	274379m	13.60		0.00
32) Phenanthrene-d10	24.752	188	538434m	13.70		0.00
66) Chrysene-d12	33.809	240	678212m	14.16		0.00
88) Perylene-d12	38.697	264	383567m	8.64		0.00
90) 5(b)H-Cholane	34.235	217	119966m	14.98		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	24424m	0.63		
9) 2-Methylnaphthalene	16.134	142	9568m	0.39		
10) 1-Methylnaphthalene	16.468	142	3916m	0.17		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	32382m	0.83		
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	1601m	0.05		
24) Acenaphthene	19.783	154	1421m	0.07		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	40754m	1.46		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	0.000		0	N.D.	d	
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	208764m	4.28		
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1542.D
 Acq On : 13 Aug 2013 8:15 pm
 Operator : YM
 Sample : SED-DA-034 (1.0-1.5)
 Misc :
 ALS Vial : 23 Sample Multiplier: 0.06662

Quant Time: Aug 15 09:45:33 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.907	202	39434m	0.89		
59) Pyrene	29.704	202	21701m	0.41		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.		
81) Benzo(a)pyrene	0.000		0	N.D.		
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	4194m	0.08		
89) Perylene	38.774	252	5506912m	103.53		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1542.D
Acq On : 13 Aug 2013 8:15 pm
Operator : YM
Sample : SED-DA-034 (1.0-1.5)
Misc :
ALS Vial : 23 Sample Multiplier: 0.06662

Quant Time: Aug 15 09:45:33 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

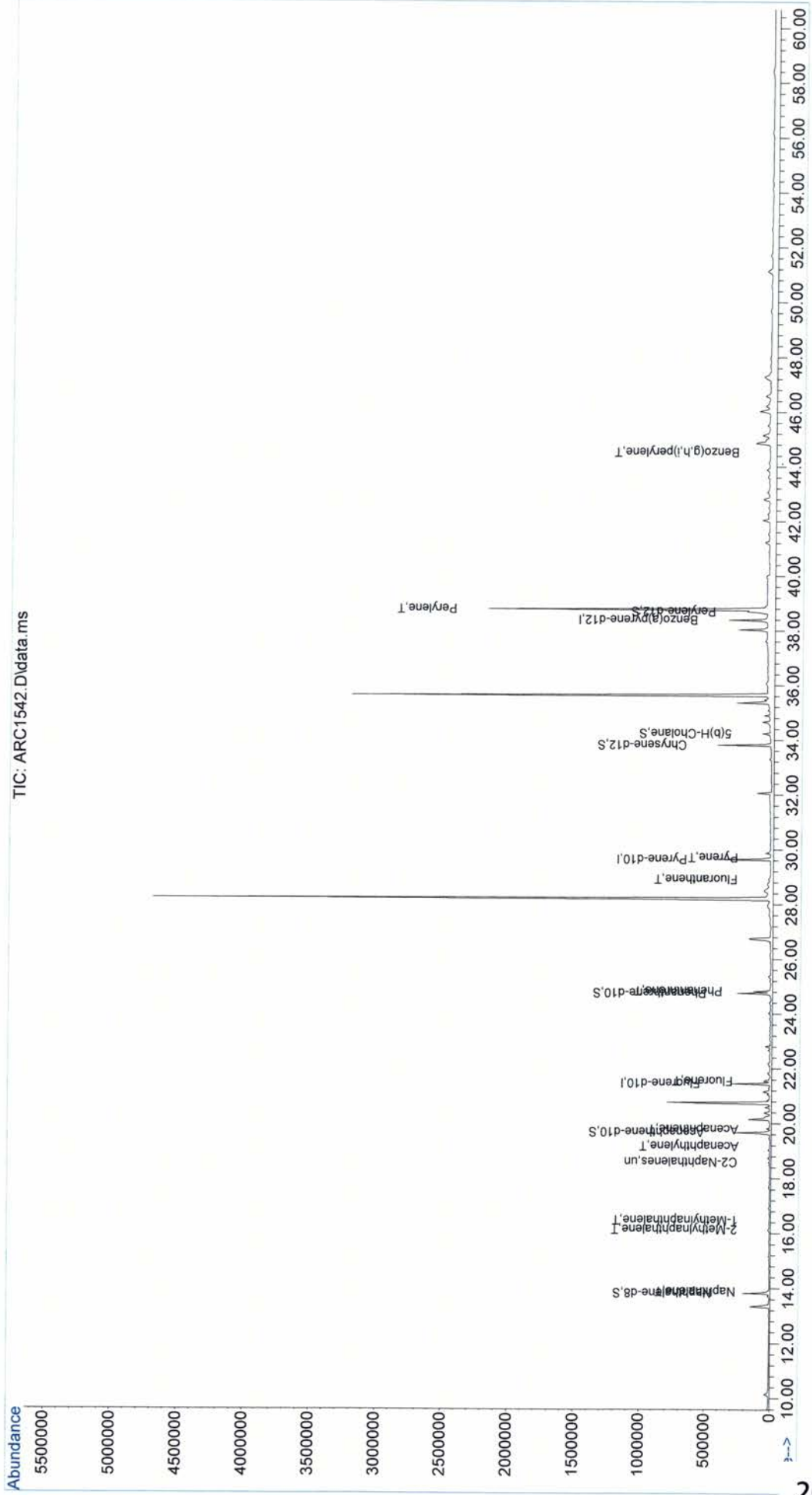
Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1542.D
Acq On : 13 Aug 2013 8:15 pm
Operator : YM
Sample : SED-DA-034 (1.0-1.5)
Misc :
ALS Vial : 23 Sample Multiplier: 0.06662

Quant Time: Aug 15 09:45:33 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

TIC: ARC1542.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1543.D
 Data File Path C:\GCMS7\MS70055\
 Operator YM
 Date Acquired 8/13/2013 21:24
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-035 (0-0.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 24
 Sample Multiplier 0.06649
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1543.D
 SED-DA-035 (0-0.5)
 8/13/2013
 PAH-2012.M
 15.03985562

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.43	30035	4.4472	4.9606
4)	C1-Decalins	12.35	8023	1.1879	1.3251
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	268155	6.7181	7.4937
9)+10)	C1-Naphthalenes	16.30	236710	5.9303	6.6150
13)	C2-Naphthalenes	18.59	478731	11.9936	13.3784
14)	C3-Naphthalenes	20.15	1067160	26.7355	29.8223
15)	C4-Naphthalenes	21.57	421828	10.5681	11.7882
16)	Benzothiophene	14.05	13870	0.4416	0.4926
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	114501	3.4443	3.8420
23)	Acenaphthylene	19.17	129889	3.8422	4.2858
24)	Acenaphthene	19.78	30792	1.4258	1.5905
25)	Dibenzofuran	20.37	248947	6.9247	7.7243
26)	Fluorene	21.54	351274	12.3097	13.7310
28)	C1-Fluorenes	23.51	169768	5.9492	6.6361
29)	C2-Fluorenes	25.55	577843	20.2493	22.5873
30)	C3-Fluorenes	27.59	649200	22.7499	25.3766
33)	Carbazole	25.58	79960	2.5352	2.8279
42)	Anthracene	24.99	274574	6.9634	7.7673
41)	Phenanthrene	24.82	1585170	34.5735	38.5653
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	682087	14.8767	16.5944
50)	C2-Phenanthrenes/Anthracenes	28.39	1675720	36.5485	40.7683
51)	C3-Phenanthrenes/Anthracenes	29.95	2625180	57.2568	63.8676
52)	C4-Phenanthrenes/Anthracenes	31.78	2169140	47.3101	52.7724
34)	Dibenzothiophene	24.41	141505	3.7524	4.1856
35)+36)+37)	C1-Dibenzothiophenes	26.21	173560	4.6024	5.1338
38)	C2-Dibenzothiophenes	27.63	593160	15.7292	17.5453
39)	C3-Dibenzothiophenes	29.50	1249630	33.1372	36.9632
40)	C4-Dibenzothiophenes	31.50	1371290	36.3634	40.5619
58)	Fluoranthene	28.94	931578	22.4897	25.0863
59)	Pyrene	29.70	1134980	22.7039	25.3252
62)	C1-Fluoranthenes/Pyrenes	30.85	1096150	26.4627	29.5180
63)	C2-Fluoranthenes/Pyrenes	32.92	1804970	43.5746	48.6057
64)	C3-Fluoranthenes/Pyrenes	34.12	1788870	43.1860	48.1722
65)	C4-Fluoranthenes/Pyrenes	35.40	2765680	66.7679	74.4769
53)	Naphthobenzothiophene	32.96	951138	19.9024	22.2003
54)	C1-Naphthobenzothiophenes	34.12	2715820	56.8280	63.3893
55)	C2-Naphthobenzothiophenes	35.83	5135710	107.4638	119.8714
56)	C3-Naphthobenzothiophenes	37.22	5544220	116.0118	129.4063
57)	C4-Naphthobenzothiophenes	38.23	2906050	60.8085	67.8294
67)	Benz(a)anthracene	33.77	547270	11.8843	13.2564
68)	Chrysene/Triphenylene	33.89	1051880	22.5882	25.1962
69)	C1-Chrysenes	35.13	3068490	65.8929	73.5008
70)	C2-Chrysenes	36.60	4587210	98.5063	109.8797
71)	C3-Chrysenes	38.04	3616950	77.6710	86.6387
72)	C4-Chrysenes	39.47	2053180	44.0901	49.1807
77)	Benzo(b)fluoranthene	37.34	1472130	28.0592	31.2989
78)	Benzo(k,j)fluoranthene	37.42	329240	7.3330	8.1796
79)	Benzo(a)fluoranthene	37.69	202173	4.5029	5.0228
80)	Benzo(e)pyrene	38.31	1241370	24.4605	27.2846
81)	Benzo(a)pyrene	38.50	521281	10.5111	11.7247
89)	Perylene	38.81	42318200	838.3325	935.1251
82)	Indeno(1,2,3-c,d)pyrene	43.23	523979	9.6416	10.7548
83)	Dibenzo(a,h)anthracene	43.26	210235	4.8309	5.3887
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.59	575566	11.8173	13.1817

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	169888	6.7650	7.5461
10) 1-Methylnaphthalene	16.47	66822	2.8794	3.2118
11) 2,6-Dimethylnaphthalene	18.22	145670	6.3592	7.0934
12) 1,6,7-Trimethylnaphthalene	21.07	29092	1.4634	1.6324
27) 1-Methylfluorene	23.51	55021	3.0414	3.3925
35) 4-Methyldibenzothiophene	25.90	82552	2.6218	2.9245
36) 2/3-Methyldibenzothiophene	26.21	63627	2.0208	2.2541
37) 1-Methyldibenzothiophene	26.52	27381	0.8696	0.9700
43) 3-Methylphenanthrene	26.48	167960	5.6548	6.3076
44) 2-Methylphenanthrene	26.59	149823	5.0441	5.6265
45) 2-Methylanthracene	26.76	141898	4.7773	5.3289
46) 4/9-Methylphenanthrene	26.86	131377	4.4231	4.9338
47) 1-Methylphenanthrene	26.93	91029	3.0647	3.4185
48) 3,6-Dimethylphenanthrene	28.04	53810	2.2899	2.5543
49) Retene	30.67	44280	3.8773	4.3249
60) 2-Methylfluoranthene	30.47	93676	3.2819	3.6608
61) Benzo(b)fluorene	31.09	148301	6.0574	6.7568
74) C29-Hopane	40.79	2521440	165.8626	185.0129
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.12	4019800	264.4267	294.9571
91) C20-TAS	33.38	194134	3.9245	4.3776
92) C21-TAS	34.43	254246	5.1397	5.7331
93) C26(20S)-TAS	38.58	467323	9.4472	10.5379
94) C26(20R)/C27(20S)-TAS	39.47	668914	13.5225	15.0838
95) C28(20S)-TAS	40.28	2019220	40.8196	45.5326
96) C27(20R)-TAS	40.76	1135900	22.9629	25.6141
97) C28(20R)-TAS	41.86	1988330	40.1951	44.8360
Surrogate Standards				
2) Naphthalene-d8	13.82	484327	12.82	77.11
21) Acenaphthene-d10	19.67	282557	13.66	82.15
32) Phenanthrene-d10	24.75	550683	14.91	89.65
66) Chrysene-d12	33.81	574184	12.76	76.75
88) Perylene-d12	38.74	526779	12.50	75.17
90) 5(b)H-Cholane	34.24	141151	18.57	111.70
Internal Standards				
1) Fluorene-d10	21.46	343702	16.69	
31) Pyrene-d10	29.63	647956	16.66	
73) Benzo(a)pyrene-d12	38.43	594350	16.64	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1543.D
 Acq On : 13 Aug 2013 9:24 pm
 Operator : YM
 Sample : SED-DA-035 (0-0.5)
 Misc :
 ALS Vial : 24 Sample Multiplier: 0.06649

Quant Time: Aug 15 09:48:49 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	343702m	251.05		0.00
31) Pyrene-d10	29.635	212	647956m	250.63		0.00
73) Benzo(a)pyrene-d12	38.425	264	594350m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	484327m	12.82		0.00
21) Acenaphthene-d10	19.672	164	282557m	13.66		0.00
32) Phenanthrene-d10	24.752	188	550683m	14.91		0.00
66) Chrysene-d12	33.809	240	574184m	12.76		0.00
88) Perylene-d12	38.736	264	526779m	12.50		0.04
90) 5(b)H-Cholane	34.236	217	141151m	18.57		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	11.427	138	30035m	4.45		
4) C1-Decalins	12.346	152	8023m	1.19		
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	268155m	6.72		
9) 2-Methylnaphthalene	16.134	142	169888m	6.77		
10) 1-Methylnaphthalene	16.469	142	66822m	2.88		
11) 2,6-Dimethylnaphthalene	18.224	156	145670m	6.36		
12) 1,6,7-Trimethylnaphtha...	21.065	170	29092m	1.46		
13) C2-Naphthalenes	18.586	156	478731m	11.99		
14) C3-Naphthalenes	20.146	170	1067161m	26.74		
15) C4-Naphthalenes	21.566	184	421828m	10.57		
16) Benzothiophene	14.045	134	13870m	0.44		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	114501m	3.44		
23) Acenaphthylene	19.171	152	129889m	3.84		
24) Acenaphthene	19.784	154	30792m	1.43		
25) Dibenzofuran	20.369	168	248947m	6.92		
26) Fluorene	21.539	166	351274m	12.31		
27) 1-Methylfluorene	23.506	180	55021m	3.04		
28) C1-Fluorenes	23.506	180	169768m	5.95		
29) C2-Fluorenes	25.549	194	577843m	20.25		
30) C3-Fluorenes	27.592	208	649200m	22.75		
33) Carbazole	25.583	167	79960m	2.54		
34) Dibenzothiophene	24.406	184	141505m	3.75		
35) 4-Methyldibenzothiophene	25.895	198	82552m	2.62		
36) 2/3-Methyldibenzothiop...	26.207	198	63627m	2.02		
37) 1-Methyldibenzothiophene	26.518	198	27381m	0.87		
38) C2-Dibenzothiophenes	27.627	212	593160m	15.73		
39) C3-Dibenzothiophenes	29.496	226	1249627m	33.14		
40) C4-Dibenzothiophenes	31.505	240	1371290m	36.36		
41) Phenanthrene	24.822	178	1585174m	34.57		
42) Anthracene	24.995	178	274574m	6.96		
43) 3-Methylphenanthrene	26.484	192	167960m	5.65		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1543.D
 Acq On : 13 Aug 2013 9:24 pm
 Operator : YM
 Sample : SED-DA-035 (0-0.5)
 Misc :
 ALS Vial : 24 Sample Multiplier: 0.06649

Quant Time: Aug 15 09:48:49 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	149823m	5.04		
45) 2-Methylanthracene	26.761	192	141898m	4.78		
46) 4/9-Methylphenanthrene	26.865	192	131377m	4.42		
47) 1-Methylphenanthrene	26.934	192	91029m	3.06		
48) 3,6-Dimethylphenanthrene	28.042	206	53810m	2.29		
49) Retene	30.674	234	44280m	3.88		
50) C2-Phenanthrenes/Anthr...	28.388	206	1675723m	36.55		
51) C3-Phenanthrenes/Anthr...	29.947	220	2625184m	57.26		
52) C4-Phenanthrenes/Anthr...	31.782	234	2169136m	47.31		
53) Naphthobenzothiophene	32.955	234	951138m	19.90		
54) C1-Naphthobenzothiophenes	34.119	248	2715820m	56.83		
55) C2-Naphthobenzothiophenes	35.826	262	5135713m	107.46		
56) C3-Naphthobenzothiophenes	37.223	276	5544219m	116.01		
57) C4-Naphthobenzothiophenes	38.231	290	2906047m	60.81		
58) Fluoranthene	28.942	202	931578m	22.49		
59) Pyrene	29.704	202	1134976m	22.70		
60) 2-Methylfluoranthene	30.466	216	93676m	3.28		
61) Benzo(b)fluorene	31.089	216	148301m	6.06		
62) C1-Fluoranthenes/Pyrenes	30.847	216	1096148m	26.46		
63) C2-Fluoranthenes/Pyrenes	32.917	230	1804966m	43.57		
64) C3-Fluoranthenes/Pyrenes	34.119	244	1788868m	43.19		
65) C4-Fluoranthenes/Pyrenes	35.399	258	2765682m	66.77		
67) Benz(a)anthracene	33.770	228	547270m	11.88		
68) Chrysene/Triphenylene	33.886	228	1051882m	22.59		
69) C1-Chrysenes	35.128	242	3068488m	65.89		
70) C2-Chrysenes	36.602	256	4587207m	98.51		
71) C3-Chrysenes	38.037	270	3616953m	77.67		
72) C4-Chrysenes	39.473	284	2053178m	44.09		
74) C29-Hopane	40.792	191	2521437m	165.86		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.119	191	4019800m	264.43		
77) Benzo(b)fluoranthene	37.339	252	1472130m	28.06		
78) Benzo(k,j)fluoranthene	37.417	252	329240m	7.33		
79) Benzo(a)fluoranthene	37.688	252	202173m	4.50		
80) Benzo(e)pyrene	38.309	252	1241367m	24.46		
81) Benzo(a)pyrene	38.503	252	521281m	10.51		
82) Indeno(1,2,3-c,d)pyrene	43.226	276	523979m	9.64		
83) Dibenzo(a,h)anthracene	43.262	278	210235m	4.83		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.590	276	575566m	11.82		
89) Perylene	38.813	252	42318161m	838.33		
91) C20-TAS	33.382	231	194134m	3.92		
92) C21-TAS	34.429	231	254246m	5.14		
93) C26(20S)-TAS	38.581	231	467323m	9.45		
94) C26(20R)/C27(20S)-TAS	39.473	231	668914m	13.52		
95) C28(20S)-TAS	40.276	231	2019220m	40.82		
96) C27(20R)-TAS	40.755	231	1135903m	22.96		
97) C28(20R)-TAS	41.861	231	1988331m	40.20		

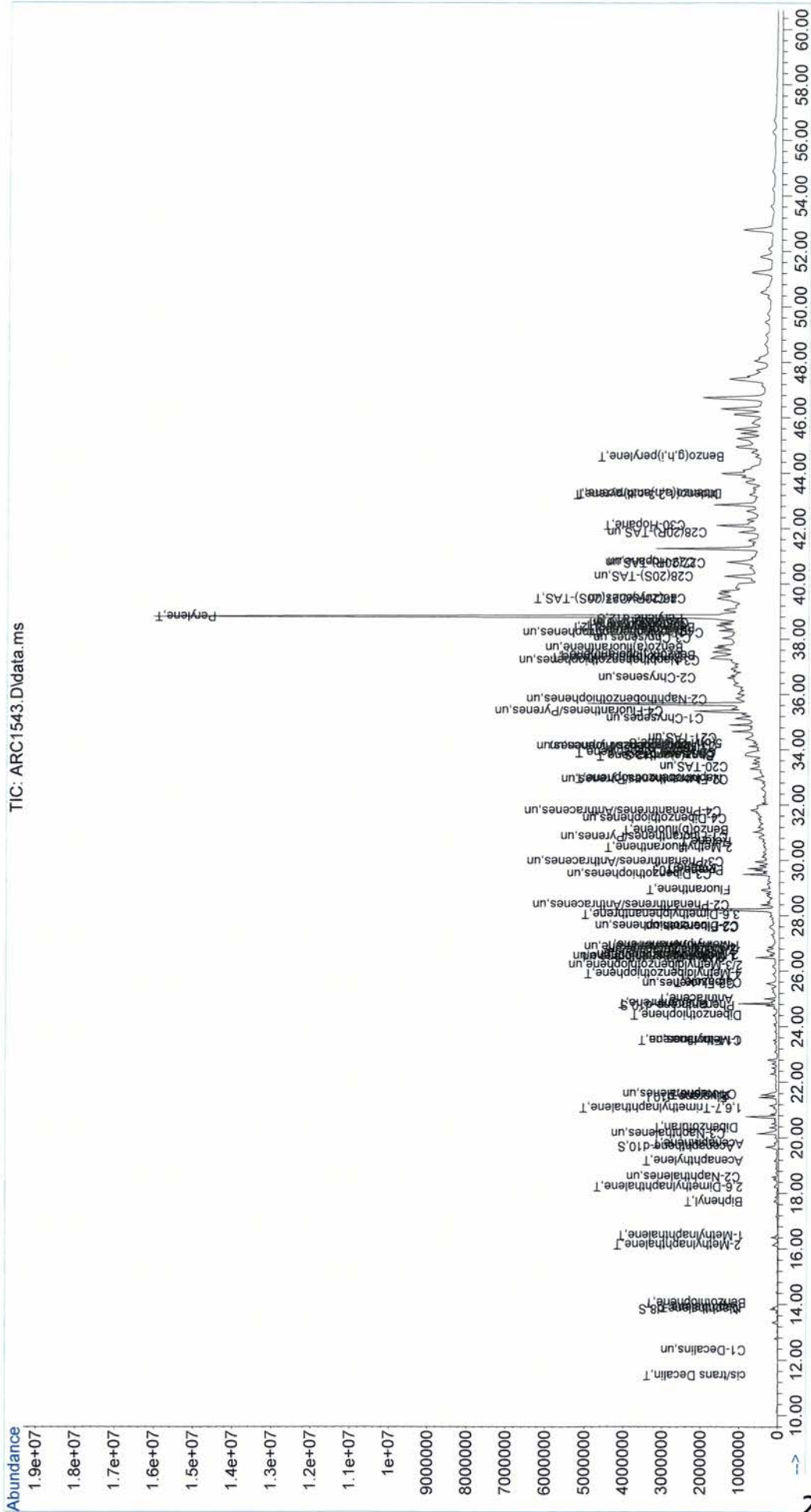
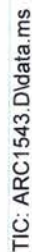
Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1543.D
Acq On : 13 Aug 2013 9:24 pm
Operator : YM
Sample : SED-DA-035 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.06649

Quant Time: Aug 15 09:48:49 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Quant Time: Aug 15 09:48:49 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1544.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/13/2013 22:32
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-035 (0.5-1.0)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 25
 Sample Multiplier 0.06662
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1544.D
 SED-DA-035 (0.5-1.0)
 8/13/2013
 PAH-2012.M
 15.01050736

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	132532	3.7491	4.0420
9)+10)	C1-Naphthalenes	16.30	104399	2.9533	3.1840
13)	C2-Naphthalenes	18.50	199432	5.6417	6.0823
14)	C3-Naphthalenes	20.15	647215	18.3088	19.7389
15)	C4-Naphthalenes	21.57	184091	5.2077	5.6144
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	22149	0.7398	0.7976
24)	Acenaphthene	19.78	16478	0.8616	0.9289
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	179822	7.1153	7.6711
28)	C1-Fluorenes	23.51	70983	2.8087	3.0281
29)	C2-Fluorenes	25.55	163699	6.4774	6.9833
30)	C3-Fluorenes	26.76	166312	6.5808	7.0948
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	55216	1.5704	1.6931
41)	Phenanthrene	24.82	776463	18.9924	20.4759
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	271405	6.6386	7.1571
50)	C2-Phenanthrenes/Anthracenes	28.22	317693	7.7708	8.3778
51)	C3-Phenanthrenes/Anthracenes	29.95	192262	4.7028	5.0701
52)	C4-Phenanthrenes/Anthracenes	31.78	170611	4.1732	4.4991
34)	Dibenzothiophene	24.41	54923	1.6334	1.7609
35)+36)+37)	C1-Dibenzothiophenes	26.21	44709	1.3296	1.4335
38)	C2-Dibenzothiophenes	27.63	68588	2.0398	2.1991
39)	C3-Dibenzothiophenes	28.80	114606	3.4083	3.6745
40)	C4-Dibenzothiophenes	30.22	54044	1.6072	1.7328
58)	Fluoranthene	28.94	209339	5.6677	6.1104
59)	Pyrene	29.70	228334	5.1224	5.5225
62)	C1-Fluoranthenes/Pyrenes	30.85	170643	4.6200	4.9809
63)	C2-Fluoranthenes/Pyrenes	32.57	271422	7.3486	7.9226
64)	C3-Fluoranthenes/Pyrenes	34.12	195602	5.2958	5.7094
65)	C4-Fluoranthenes/Pyrenes	35.40	348780	9.4430	10.1805
53)	Naphthobenzothiophene	32.96	97495	2.2879	2.4666
54)	C1-Naphthobenzothiophenes	34.12	191121	4.4850	4.8353
55)	C2-Naphthobenzothiophenes	35.40	300059	7.0415	7.5915
56)	C3-Naphthobenzothiophenes	36.91	212735	4.9922	5.3821
57)	C4-Naphthobenzothiophenes	37.53	151974	3.5663	3.8449
67)	Benzo(a)anthracene	33.77	70437	1.7154	1.8494
68)	Chrysene/Triphenylene	33.89	190261	4.5820	4.9399
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.34	277311	7.0537	7.6047
78)	Benzo(k,j)fluoranthene	37.42	54829	1.6297	1.7570
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	122589	3.2236	3.4754
81)	Benzo(a)pyrene	38.46	66008	1.7762	1.9150
89)	Perylene	38.81	33948900	897.5046	967.6055
82)	Indeno(1,2,3-c,d)pyrene	43.19	93647	2.2996	2.4792
83)	Dibenzo(a,h)anthracene	43.34	304132	9.3264	10.0549
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.55	97936	2.6834	2.8930

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	74048	3.3295	3.5895
10) 1-Methylnaphthalene	16.47	30351	1.4767	1.5921
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.90	23289	0.8295	0.8943
36) 2/3-Methyldibenzothiophene	26.21	16373	0.5832	0.6287
37) 1-Methyldibenzothiophene	26.52	5047	0.1798	0.1938
43) 3-Methylphenanthrene	26.48	59149	2.2333	2.4077
44) 2-Methylphenanthrene	26.59	60090	2.2688	2.4460
45) 2-Methylanthracene	26.76	88639	3.3468	3.6082
46) 4/9-Methylphenanthrene	26.86	30847	1.1647	1.2557
47) 1-Methylphenanthrene	26.93	32680	1.2339	1.3303
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	425425	12.72	76.33
21) Acenaphthene-d10	19.67	254240	13.88	83.30
32) Phenanthrene-d10	24.75	509037	15.46	92.76
66) Chrysene-d12	33.81	552276	13.76	82.63
88) Perylene-d12	38.70	441536	13.98	83.92
90) 5(b)H-Cholane	34.24	107191	18.82	112.99
Internal Standards				
1) Fluorene-d10	21.46	304984	16.72	
31) Pyrene-d10	29.63	578896	16.70	
73) Benzo(a)pyrene-d12	38.70	446238	16.68	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1544.D
 Acq On : 13 Aug 2013 10:32 pm
 Operator : YM
 Sample : SED-DA-035 (0.5-1.0)
 Misc :
 ALS Vial : 25 Sample Multiplier: 0.06662

Quant Time: Aug 15 13:08:36 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	304984m	251.05		0.00
31) Pyrene-d10	29.635	212	578896m	250.63		0.00
73) Benzo(a)pyrene-d12	38.697	264	446238m	250.32		0.31
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	425425m	12.72		0.00
21) Acenaphthene-d10	19.672	164	254240m	13.88		0.00
32) Phenanthrene-d10	24.752	188	509037m	15.46		0.00
66) Chrysene-d12	33.809	240	552276m	13.76		0.00
88) Perylene-d12	38.697	264	441536m	13.98		0.00
90) 5(b)H-Cholane	34.235	217	107191m	18.82		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	132532m	3.75		
9) 2-Methylnaphthalene	16.134	142	74048m	3.33		
10) 1-Methylnaphthalene	16.469	142	30351m	1.48		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.502	156	199432m	5.64		
14) C3-Naphthalenes	20.146	170	647215m	18.31		
15) C4-Naphthalenes	21.566	184	184091m	5.21		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	22149m	0.74		
24) Acenaphthene	19.784	154	16478m	0.86		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.539	166	179822m	7.12		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	70983m	2.81		
29) C2-Fluorenes	25.549	194	163699m	6.48		
30) C3-Fluorenes	26.761	208	166312m	6.58		
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	54923m	1.63		
35) 4-Methyldibenzothiophene	25.895	198	23289m	0.83		
36) 2/3-Methyldibenzothiop...	26.207	198	16373m	0.58		
37) 1-Methyldibenzothiophene	26.518	198	5047m	0.18		
38) C2-Dibenzothiophenes	27.626	212	68588m	2.04		
39) C3-Dibenzothiophenes	28.804	226	114606m	3.41		
40) C4-Dibenzothiophenes	30.224	240	54044m	1.61		
41) Phenanthrene	24.822	178	776463m	18.99		
42) Anthracene	24.995	178	55216m	1.57		
43) 3-Methylphenanthrene	26.484	192	59149m	2.23		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1544.D
 Acq On : 13 Aug 2013 10:32 pm
 Operator : YM
 Sample : SED-DA-035 (0.5-1.0)
 Misc :
 ALS Vial : 25 Sample Multiplier: 0.06662

Quant Time: Aug 15 13:08:36 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	60090m	2.27		
45) 2-Methylantracene	26.761	192	88639m	3.35		
46) 4/9-Methylphenanthrene	26.865	192	30847m	1.16		
47) 1-Methylphenanthrene	26.934	192	32680m	1.23		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.215	206	317693m	7.77		
51) C3-Phenanthrenes/Anthr...	29.947	220	192262m	4.70		
52) C4-Phenanthrenes/Anthr...	31.782	234	170611m	4.17		
53) Naphthobenzothiophene	32.955	234	97495m	2.29		
54) C1-Naphthobenzothiophenes	34.119	248	191121m	4.49		
55) C2-Naphthobenzothiophenes	35.399	262	300059m	7.04		
56) C3-Naphthobenzothiophenes	36.912	276	212735m	4.99		
57) C4-Naphthobenzothiophenes	37.533	290	151974m	3.57		
58) Fluoranthene	28.942	202	209339m	5.67		
59) Pyrene	29.704	202	228334m	5.12		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	170643m	4.62		
63) C2-Fluoranthenes/Pyrenes	32.567	230	271422m	7.35		
64) C3-Fluoranthenes/Pyrenes	34.119	244	195602m	5.30		
65) C4-Fluoranthenes/Pyrenes	35.399	258	348780m	9.44		
67) Benz(a)anthracene	33.770	228	70437m	1.72		
68) Chrysene/Triphenylene	33.886	228	190261m	4.58		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.339	252	277311m	7.05		
78) Benzo(k,j)fluoranthene	37.417	252	54829m	1.63		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	122589m	3.22		
81) Benzo(a)pyrene	38.464	252	66008m	1.78		
82) Indeno(1,2,3-c,d)pyrene	43.189	276	93647m	2.30		
83) Dibenzo(a,h)anthracene	43.336	278	304132m	9.33		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.553	276	97936m	2.68		
89) Perylene	38.813	252	33948874m	897.51		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1544.D
Acq On : 13 Aug 2013 10:32 pm
Operator : YM
Sample : SED-DA-035 (0.5-1.0)
Misc :
ALS Vial : 25 Sample Multiplier: 0.06662

Quant Time: Aug 15 13:08:36 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

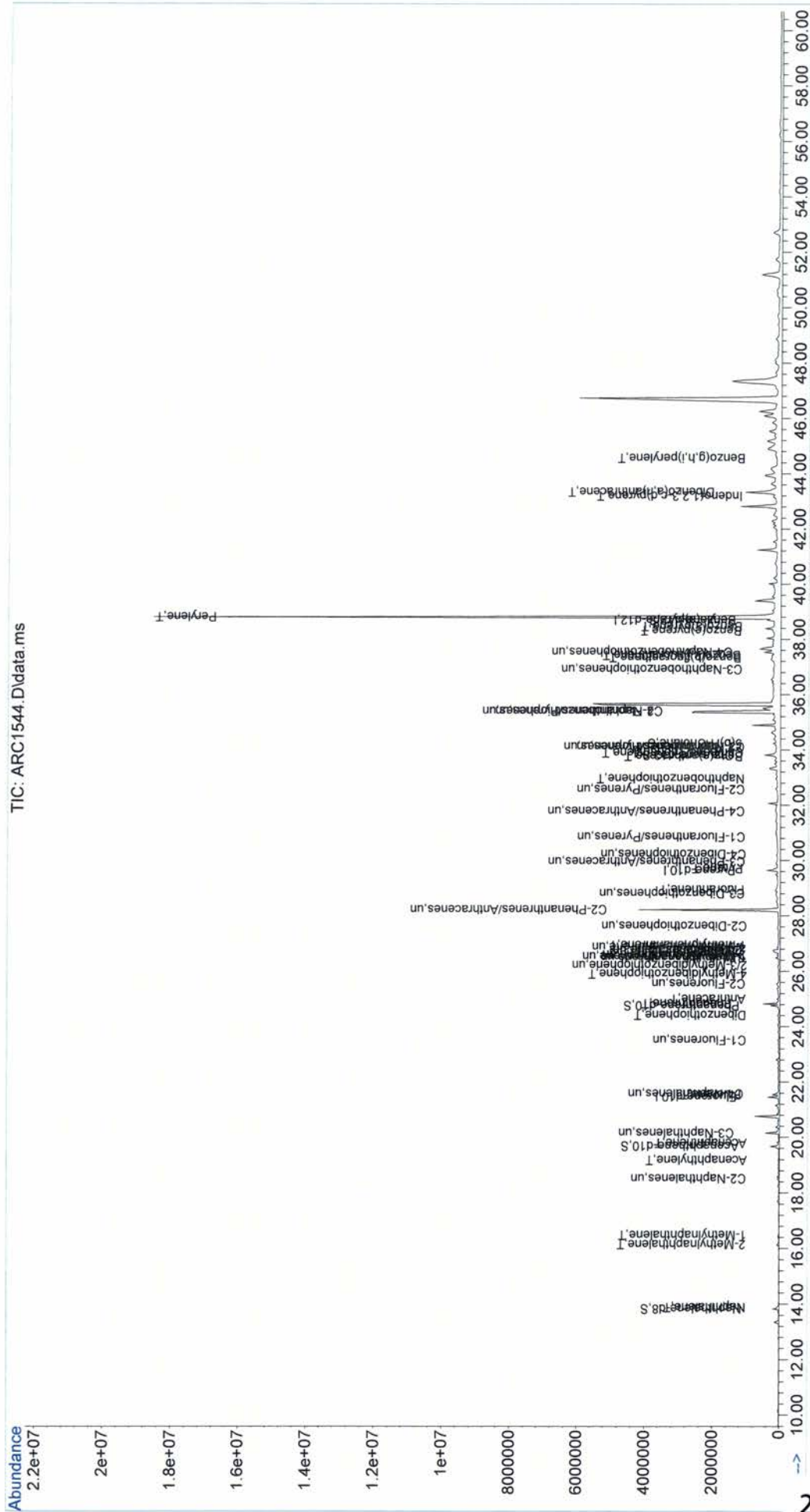
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1544.D
 Acq On : 13 Aug 2013 10:32 pm
 Operator : YM
 Sample : SED-DA-035 (0.5-1.0)
 Misc :
 ALS Vial : 25 Sample Multiplier: 0.06662

Quant Time: Aug 15 13:08:36 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

TIC: ARC1544.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1545.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/13/2013 23:41
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-035 (1.0-1.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 26
 Sample Multiplier 0.06631
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1545.D
 SED-DA-035 (1.0-1.5)
 8/13/2013
 PAH-2012.M
 15.08068165

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	42986	1.0750	1.2014
9)+10)	C1-Naphthalenes	16.30	22971	0.5744	0.6420
13)	C2-Naphthalenes	18.59	39313	0.9831	1.0988
14)	C3-Naphthalenes	21.45	99301	2.4832	2.7754
15)	C4-Naphthalenes	21.57	75090	1.8778	2.0987
16)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
17)	C1-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
18)	C2-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
19)	C3-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
20)	C4-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	3341	0.0986	0.1103
24)	Acenaphthene	19.78	3679	0.1700	0.1901
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	0.00	0	0.0000	0.0000
28)	C1-Fluorenes	23.51	21253	0.7434	0.8309
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	7763	0.1913	0.2138
41)	Phenanthrene	24.82	286790	6.0777	6.7927
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	133925	2.8382	3.1720
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.41	9960	0.2566	0.2868
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.94	53805	1.2621	1.4106
59)	Pyrene	29.70	47967	0.9323	1.0420
62)	C1-Fluoranthenes/Pyrenes	30.85	18121	0.4251	0.4751
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	33.77	9575	0.2020	0.2258
68)	Chrysene/Triphenylene	33.89	12377	0.2582	0.2886
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	23146	0.4139	0.4626
78)	Benzo(k,j)fluoranthene	37.38	3764	0.0787	0.0879
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.77	22175200	412.1412	460.6279
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.52	12181	0.2346	0.2622

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	16049	0.6379	0.7130
10) 1-Methylnaphthalene	16.47	6922	0.2977	0.3327
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36) 2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37) 1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43) 3-Methylphenanthrene	26.48	14243	0.4659	0.5207
44) 2-Methylphenanthrene	26.59	13213	0.4322	0.4831
45) 2-Methylanthracene	26.76	90455	2.9590	3.3071
46) 4/9-Methylphenanthrene	26.86	6415	0.2099	0.2345
47) 1-Methylphenanthrene	26.93	9599	0.3140	0.3510
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	474041	12.53	75.54
21) Acenaphthene-d10	19.67	282562	13.64	82.23
32) Phenanthrene-d10	24.75	564115	14.84	89.47
66) Chrysene-d12	33.81	665538	14.37	86.67
88) Perylene-d12	38.70	450901	10.04	60.53
90) 5(b)H-Cholane	34.24	117094	14.45	87.17
Internal Standards				
1) Fluorene-d10	21.45	343401	16.65	
31) Pyrene-d10	29.63	665061	16.62	
73) Benzo(a)pyrene-d12	38.39	631793	16.60	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1545.D
 Acq On : 13 Aug 2013 11:41 pm
 Operator : YM
 Sample : SED-DA-035 (1.0-1.5)
 Misc :
 ALS Vial : 26 Sample Multiplier: 0.06631

Quant Time: Aug 15 13:17:31 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	343401m	251.05		0.00
31) Pyrene-d10	29.635	212	665061m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	631793m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	474041m	12.53		0.00
21) Acenaphthene-d10	19.672	164	282562m	13.64		0.00
32) Phenanthrene-d10	24.752	188	564115m	14.84		0.00
66) Chrysene-d12	33.809	240	665538m	14.37		0.00
88) Perylene-d12	38.697	264	450901m	10.04		0.00
90) 5(b)H-Cholane	34.235	217	117094m	14.45		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	42986m	1.07		
9) 2-Methylnaphthalene	16.134	142	16049m	0.64		
10) 1-Methylnaphthalene	16.468	142	6922m	0.30		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	39313m	0.98		
14) C3-Naphthalenes	21.455	170	99301m	2.48		
15) C4-Naphthalenes	21.566	184	75090m	1.88		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	3341m	0.10		
24) Acenaphthene	19.783	154	3679m	0.17		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	0.000		0	N.D.	d	
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	21253m	0.74		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	9960m	0.26		
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	286790m	6.08		
42) Anthracene	24.995	178	7763m	0.19		
43) 3-Methylphenanthrene	26.484	192	14243m	0.47		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1545.D
 Acq On : 13 Aug 2013 11:41 pm
 Operator : YM
 Sample : SED-DA-035 (1.0-1.5)
 Misc :
 ALS Vial : 26 Sample Multiplier: 0.06631

Quant Time: Aug 15 13:17:31 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	13213m	0.43		
45) 2-Methylantracene	26.761	192	90455m	2.96		
46) 4/9-Methylphenanthrene	26.865	192	6415m	0.21		
47) 1-Methylphenanthrene	26.934	192	9599m	0.31		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.942	202	53805m	1.26		
59) Pyrene	29.704	202	47967m	0.93		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	18121m	0.43		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	9575m	0.20		
68) Chrysene/Triphenylene	33.886	228	12377m	0.26		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	23146m	0.41		
78) Benzo(k,j)fluoranthene	37.378	252	3764m	0.08		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.		
81) Benzo(a)pyrene	0.000		0	N.D.		
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	12181m	0.23		
89) Perylene	38.774	252	22175157m	412.14		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1545.D
Acq On : 13 Aug 2013 11:41 pm
Operator : YM
Sample : SED-DA-035 (1.0-1.5)
Misc :
ALS Vial : 26 Sample Multiplier: 0.06631

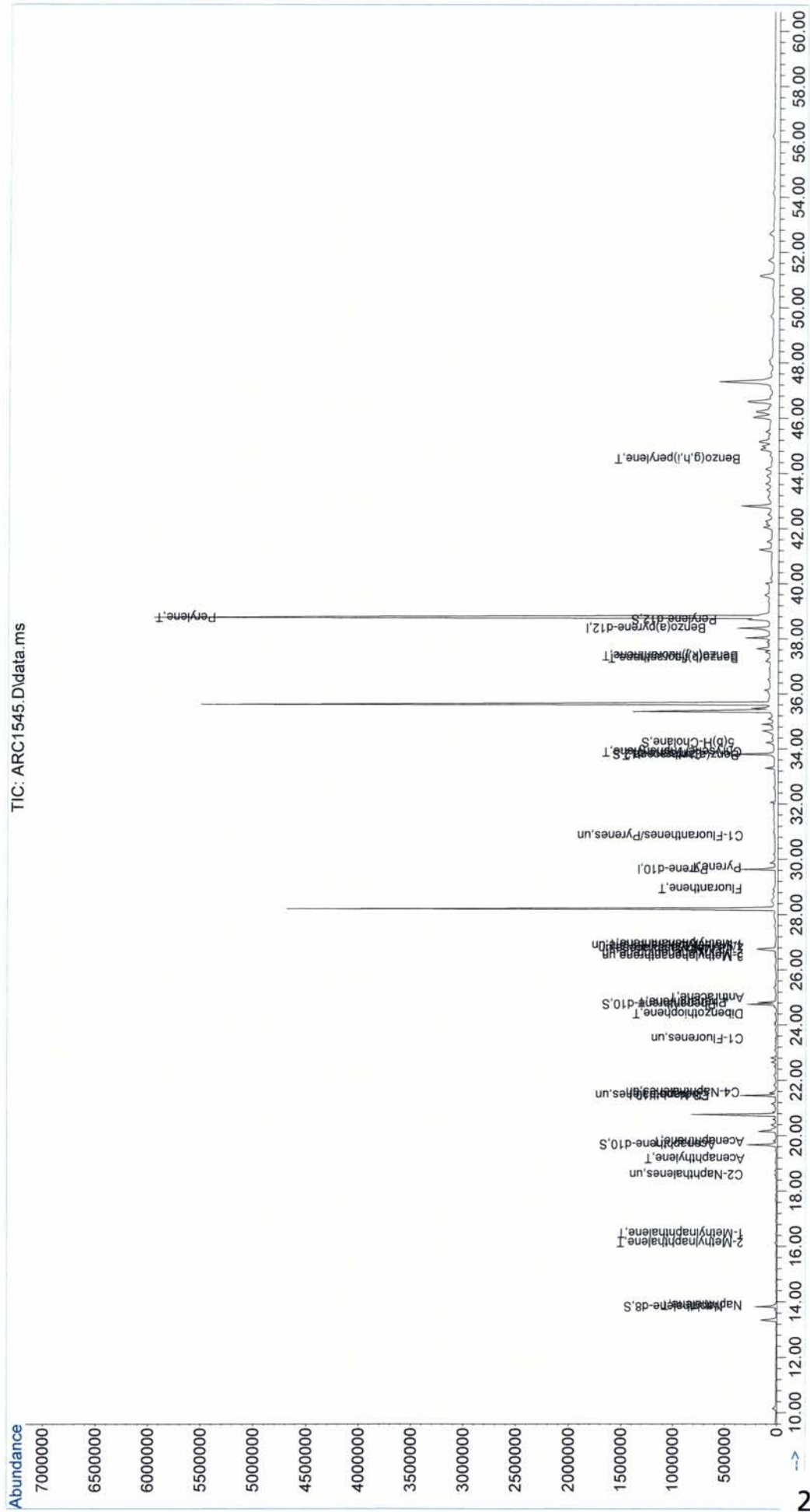
Quant Time: Aug 15 13:17:31 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1545.D
Acq On : 13 Aug 2013 11:41 pm
Operator : YM
Sample : SED-DA-035 (1.0-1.5)
Misc :
ALS Vial : 26 Sample Multiplier: 0.06631

Quant Time: Aug 15 13:17:31 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1548.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 0:49
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-036 (0-0.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 27
 Sample Multiplier 0.06662
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1548.D
 SED-DA-036 (0-0.5)
 8/14/2013
 PAH-2012.M
 15.01050736

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	319649	8.4348	8.6516
9)+10)	C1-Naphthalenes	16.30	245949	6.4900	6.6569
13)	C2-Naphthalenes	18.59	549546	14.5012	14.8740
14)	C3-Naphthalenes	20.51	543901	14.3523	14.7212
15)	C4-Naphthalenes	22.82	669032	17.6542	18.1080
16)	Benzothiophene	14.07	23747	0.7963	0.8168
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	124788	3.9537	4.0554
23)	Acenaphthylene	19.17	259201	8.0759	8.2835
24)	Acenaphthene	19.78	52627	2.5668	2.6327
25)	Dibenzofuran	20.37	205437	6.0189	6.1736
26)	Fluorene	21.54	330277	12.1905	12.5039
28)	C1-Fluorenes	23.51	189953	7.0112	7.1914
29)	C2-Fluorenes	25.34	459258	16.9512	17.3869
30)	C3-Fluorenes	27.59	488662	18.0365	18.5001
33)	Carbazole	25.58	150022	5.4635	5.6039
42)	Anthracene	24.99	510474	14.8698	15.2520
41)	Phenanthrene	24.82	897992	22.4964	23.0746
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	691282	17.3179	17.7631
50)	C2-Phenanthrenes/Anthracenes	28.39	1005300	25.1846	25.8319
51)	C3-Phenanthrenes/Anthracenes	29.95	1176540	29.4744	30.2320
52)	C4-Phenanthrenes/Anthracenes	30.71	875431	21.9312	22.4949
34)	Dibenzothiophene	24.41	190002	5.7872	5.9359
35)+36)+37)	C1-Dibenzothiophenes	26.21	217589	6.6274	6.7978
38)	C2-Dibenzothiophenes	27.63	514342	15.6661	16.0688
39)	C3-Dibenzothiophenes	29.12	579750	17.6583	18.1122
40)	C4-Dibenzothiophenes	30.88	705303	21.4824	22.0346
58)	Fluoranthene	28.94	1550910	43.0055	44.1110
59)	Pyrene	29.70	1825580	41.9456	43.0238
62)	C1-Fluoranthenes/Pyrenes	30.85	1333630	36.9805	37.9311
63)	C2-Fluoranthenes/Pyrenes	32.57	1552120	43.0390	44.1453
64)	C3-Fluoranthenes/Pyrenes	34.12	864669	23.9765	24.5928
65)	C4-Fluoranthenes/Pyrenes	35.71	1728690	47.9351	49.1672
53)	Naphthobenzothiophene	32.96	616030	14.8060	15.1865
54)	C1-Naphthobenzothiophenes	34.39	1098190	26.3943	27.0728
55)	C2-Naphthobenzothiophenes	35.40	1921520	46.1825	47.3696
56)	C3-Naphthobenzothiophenes	37.22	1787030	42.9502	44.0542
57)	C4-Naphthobenzothiophenes	38.23	603856	14.5134	14.8864
67)	Benzo(a)anthracene	33.77	732376	18.2675	18.7370
68)	Chrysene/Triphenylene	33.89	1257610	31.0193	31.8166
69)	C1-Chrysenes	36.49	259249	6.3945	6.5588
70)	C2-Chrysenes	36.83	403743	9.9584	10.2144
71)	C3-Chrysenes	37.53	765525	18.8819	19.3673
72)	C4-Chrysenes	39.40	408569	10.0775	10.3365
77)	Benzo(b)fluoranthene	37.34	2563130	59.1590	60.6797
78)	Benzo(k,j)fluoranthene	37.42	736319	19.8589	20.3694
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	1259300	30.0480	30.8204
81)	Benzo(a)pyrene	38.50	650490	15.8833	16.2915
89)	Perylene	38.81	41354400	992.0451	1017.5453
82)	Indeno(1,2,3-c,d)pyrene	43.26	958577	21.3592	21.9082
83)	Dibenzo(a,h)anthracene	43.37	354088	9.8528	10.1061
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.70	942445	23.4315	24.0338

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	174998	7.3398	7.5285
10) 1-Methylnaphthalene	16.47	70951	3.2202	3.3029
11) 2,6-Dimethylnaphthalene	18.22	143959	6.6193	6.7895
12) 1,6,7-Trimethylnaphthalene	21.04	44035	2.3331	2.3931
27) 1-Methylfluorene	23.51	60763	3.5377	3.6287
35) 4-Methyldibenzothiophene	25.90	103071	3.7600	3.8566
36) 2/3-Methyldibenzothiophene	26.21	83939	3.0621	3.1408
37) 1-Methyldibenzothiophene	26.52	30579	1.1155	1.1442
43) 3-Methylphenanthrene	26.48	172569	6.6733	6.8449
44) 2-Methylphenanthrene	26.59	148794	5.7539	5.9019
45) 2-Methylantracene	26.76	158779	6.1401	6.2979
46) 4/9-Methylphenanthrene	26.86	130342	5.0404	5.1700
47) 1-Methylphenanthrene	26.93	80798	3.1245	3.2048
48) 3,6-Dimethylphenanthrene	28.04	56176	2.7459	2.8165
49) Retene	30.71	122654	12.3360	12.6531
60) 2-Methylfluoranthene	30.47	145530	5.8563	6.0068
61) Benzo(b)fluorene	31.09	238784	11.2026	11.4906
74) C29-Hopane	40.79	695409	55.3941	56.8180
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.12	1603740	127.7492	131.0329
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	543495	15.16	90.96
21) Acenaphthene-d10	19.67	272938	13.90	83.42
32) Phenanthrene-d10	24.75	522408	16.25	97.49
66) Chrysene-d12	33.81	481174	12.28	73.73
88) Perylene-d12	38.74	483979	13.90	83.47
90) 5(b)H-Cholane	34.24	159435	25.40	152.49
Internal Standards				
1) Fluorene-d10	21.46	326955	16.72	
31) Pyrene-d10	29.63	565225	16.70	
73) Benzo(a)pyrene-d12	38.43	491777	16.68	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1548.D
 Acq On : 14 Aug 2013 12:49 am
 Operator : YM
 Sample : SED-DA-036 (0-0.5)
 Misc :
 ALS Vial : 27 Sample Multiplier: 0.06662

Quant Time: Aug 15 13:35:20 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	326955m	251.05		0.00
31) Pyrene-d10	29.635	212	565225m	250.63		0.00
73) Benzo(a)pyrene-d12	38.425	264	491777m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	543495m	15.16		0.00
21) Acenaphthene-d10	19.672	164	272938m	13.90		0.00
32) Phenanthrene-d10	24.752	188	522408m	16.25		0.00
66) Chrysene-d12	33.809	240	481174m	12.28		0.00
88) Perylene-d12	38.736	264	483979m	13.90		0.04
90) 5(b)H-Cholane	34.236	217	159435m	25.40		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	319649m	8.43		
9) 2-Methylnaphthalene	16.134	142	174998m	7.34		
10) 1-Methylnaphthalene	16.469	142	70951m	3.22		
11) 2,6-Dimethylnaphthalene	18.224	156	143959m	6.62		
12) 1,6,7-Trimethylnaphtha...	21.037	170	44035m	2.33		
13) C2-Naphthalenes	18.586	156	549546m	14.50		
14) C3-Naphthalenes	20.508	170	543901m	14.35		
15) C4-Naphthalenes	22.820	184	669032m	17.65		
16) Benzothiophene	14.073	134	23747m	0.80		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	124788m	3.95		
23) Acenaphthylene	19.171	152	259201m	8.08		
24) Acenaphthene	19.784	154	52627m	2.57		
25) Dibenzofuran	20.369	168	205437m	6.02		
26) Fluorene	21.539	166	330277m	12.19		
27) 1-Methylfluorene	23.506	180	60763m	3.54		
28) C1-Fluorenes	23.506	180	189953m	7.01		
29) C2-Fluorenes	25.341	194	459258m	16.95		
30) C3-Fluorenes	27.592	208	488662m	18.04		
33) Carbazole	25.583	167	150022m	5.46		
34) Dibenzothiophene	24.406	184	190002m	5.79		
35) 4-Methyldibenzothiophene	25.895	198	103071m	3.76		
36) 2/3-Methyldibenzothiop...	26.207	198	83939m	3.06		
37) 1-Methyldibenzothiophene	26.518	198	30579m	1.12		
38) C2-Dibenzothiophenes	27.626	212	514342m	15.67		
39) C3-Dibenzothiophenes	29.115	226	579750m	17.66		
40) C4-Dibenzothiophenes	30.881	240	705303m	21.48		
41) Phenanthrene	24.822	178	897992m	22.50		
42) Anthracene	24.995	178	510474m	14.87		
43) 3-Methylphenanthrene	26.484	192	172569m	6.67		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1548.D
 Acq On : 14 Aug 2013 12:49 am
 Operator : YM
 Sample : SED-DA-036 (0-0.5)
 Misc :
 ALS Vial : 27 Sample Multiplier: 0.06662

Quant Time: Aug 15 13:35:20 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	148794m	5.75		
45) 2-Methylanthracene	26.761	192	158779m	6.14		
46) 4/9-Methylphenanthrene	26.865	192	130342m	5.04		
47) 1-Methylphenanthrene	26.934	192	80798m	3.12		
48) 3,6-Dimethylphenanthrene	28.042	206	56176m	2.75		
49) Retene	30.708	234	122654m	12.34		
50) C2-Phenanthrenes/Anthr...	28.388	206	1005297m	25.18		
51) C3-Phenanthrenes/Anthr...	29.947	220	1176535m	29.47		
52) C4-Phenanthrenes/Anthr...	30.708	234	875431m	21.93		
53) Naphthobenzothiophene	32.955	234	616030m	14.81		
54) C1-Naphthobenzothiophenes	34.391	248	1098186m	26.39		
55) C2-Naphthobenzothiophenes	35.399	262	1921515m	46.18		
56) C3-Naphthobenzothiophenes	37.223	276	1787027m	42.95		
57) C4-Naphthobenzothiophenes	38.231	290	603856m	14.51		
58) Fluoranthene	28.942	202	1550914m	43.01		
59) Pyrene	29.704	202	1825580m	41.95		
60) 2-Methylfluoranthene	30.466	216	145530m	5.86		
61) Benzo(b)fluorene	31.089	216	238784m	11.20		
62) C1-Fluoranthenes/Pyrenes	30.847	216	1333630m	36.98		
63) C2-Fluoranthenes/Pyrenes	32.567	230	1552120m	43.04		
64) C3-Fluoranthenes/Pyrenes	34.119	244	864669m	23.98		
65) C4-Fluoranthenes/Pyrenes	35.710	258	1728688m	47.94		
67) Benz(a)anthracene	33.770	228	732376m	18.27		
68) Chrysene/Triphenylene	33.886	228	1257607m	31.02		
69) C1-Chrysenes	36.486	242	259249m	6.39		
70) C2-Chrysenes	36.835	256	403743m	9.96		
71) C3-Chrysenes	37.533	270	765525m	18.88		
72) C4-Chrysenes	39.395	284	408569m	10.08		
74) C29-Hopane	40.792	191	695409m	55.39		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.119	191	1603740m	127.75		
77) Benzo(b)fluoranthene	37.339	252	2563126m	59.16		
78) Benzo(k,j)fluoranthene	37.417	252	736319m	19.86		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	1259299m	30.05		
81) Benzo(a)pyrene	38.503	252	650490m	15.88		
82) Indeno(1,2,3-c,d)pyrene	43.262	276	958577m	21.36		
83) Dibenzo(a,h)anthracene	43.373	278	354088m	9.85		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.700	276	942445m	23.43		
89) Perylene	38.813	252	41354350m	992.05		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1548.D
Acq On : 14 Aug 2013 12:49 am
Operator : YM
Sample : SED-DA-036 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.06662

Quant Time: Aug 15 13:35:20 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

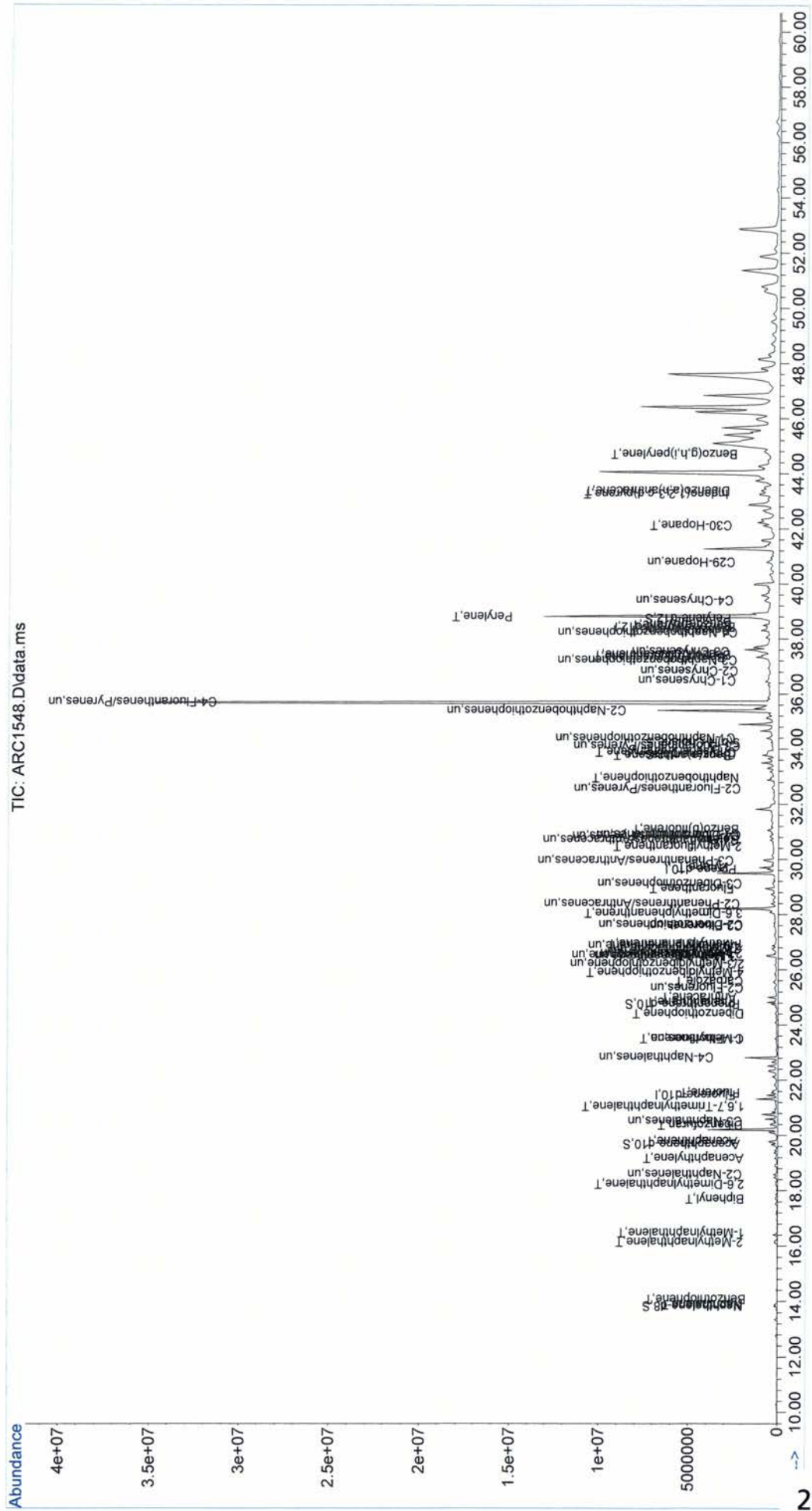
(#) = qualifier out of range (m) = manual integration (+) = signals summed


```

Data Path      : C:\msdchem\2\data\MS70055\
Data File     : APC1548.D
Acq On        : 14 Aug 2013  12:49 am
Operator      : YM
Sample        : SED-DA-036 (0-0.5)
Misc          :
ALS Vial      : 27 Sample Multiplier: 0.066662

```

Quant Time: Aug 15 13:35:20 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1549.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 1:58
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-DUP-01-072813
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 28
 Sample Multiplier 0.06653
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1549.D
 SED-DA-DUP-01-072813
 8/14/2013
 PAH-2012.M
 15.03081317

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	211198	5.6875	5.8680
9)+10)	C1-Naphthalenes	16.30	185780	5.0030	5.1618
13)	C2-Naphthalenes	18.59	420323	11.3191	11.6784
14)	C3-Naphthalenes	21.45	411731	11.0878	11.4397
15)	C4-Naphthalenes	22.82	440273	11.8564	12.2327
16)	Benzothiophene	14.07	14012	0.4795	0.4948
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	113065	3.6559	3.7719
23)	Acenaphthylene	19.17	170449	5.4197	5.5917
24)	Acenaphthene	19.78	36031	1.7934	1.8504
25)	Dibenzofuran	20.37	151695	4.5357	4.6796
26)	Fluorene	21.54	239056	9.0048	9.2906
28)	C1-Fluorenes	23.51	145642	5.4861	5.6602
29)	C2-Fluorenes	25.55	332934	12.5410	12.9390
30)	C3-Fluorenes	27.59	522224	19.6712	20.2956
33)	Carbazole	25.58	107455	4.0543	4.1830
42)	Anthracene	24.99	319350	9.6377	9.9436
41)	Phenanthrene	24.82	715357	18.5668	19.1561
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	546605	14.1869	14.6372
50)	C2-Phenanthrenes/Anthracenes	28.22	709195	18.4069	18.9911
51)	C3-Phenanthrenes/Anthracenes	29.95	760393	19.7357	20.3621
52)	C4-Phenanthrenes/Anthracenes	30.71	667841	17.3335	17.8837
34)	Dibenzothiophene	24.41	145424	4.5890	4.7347
35)+36)+37)	C1-Dibenzothiophenes	26.21	160306	5.0586	5.2192
38)	C2-Dibenzothiophenes	27.63	324868	10.2515	10.5769
39)	C3-Dibenzothiophenes	29.12	427898	13.5027	13.9313
40)	C4-Dibenzothiophenes	30.88	448604	14.1561	14.6054
58)	Fluoranthene	28.94	1023350	29.3992	30.3324
59)	Pyrene	29.70	1201330	28.5971	29.5048
62)	C1-Fluoranthenes/Pyrenes	30.85	969518	27.8527	28.7367
63)	C2-Fluoranthenes/Pyrenes	32.57	1187860	34.1254	35.2085
64)	C3-Fluoranthenes/Pyrenes	34.62	523418	15.0370	15.5143
65)	C4-Fluoranthenes/Pyrenes	35.71	1213790	34.8701	35.9769
53)	Naphthobenzothiophene	32.96	438876	10.9282	11.2751
54)	C1-Naphthobenzothiophenes	34.39	785183	19.5514	20.1720
55)	C2-Naphthobenzothiophenes	35.40	1528560	38.0619	39.2701
56)	C3-Naphthobenzothiophenes	36.91	1396290	34.7684	35.8719
57)	C4-Naphthobenzothiophenes	38.27	521069	12.9749	13.3867
67)	Benz(a)anthracene	33.77	516919	13.3580	13.7820
68)	Chrysene/Triphenylene	33.89	878183	22.4412	23.1535
69)	C1-Chrysenes	36.49	211550	5.4060	5.5776
70)	C2-Chrysenes	36.83	424970	10.8598	11.2045
71)	C3-Chrysenes	38.81	629796	16.0939	16.6047
72)	C4-Chrysenes	39.36	462189	11.8108	12.1857
77)	Benzo(b)fluoranthene	37.34	1693650	42.4035	43.7494
78)	Benzo(k,j)fluoranthene	37.42	502842	14.7112	15.1781
79)	Benzo(a)fluoranthene	37.61	331343	9.6938	10.0015
80)	Benzo(e)pyrene	38.31	800283	20.7137	21.3712
81)	Benzo(a)pyrene	38.50	482705	12.7852	13.1910
89)	Perylene	38.81	27430200	713.7871	736.4431
82)	Indeno(1,2,3-c,d)pyrene	43.23	610829	14.7640	15.2326
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.63	673184	18.1554	18.7316

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1549.D
 Acq On : 14 Aug 2013 1:58 am
 Operator : YM
 Sample : SED-DA-DUP-01-072813
 Misc :
 ALS Vial : 28 Sample Multiplier: 0.06653

Quant Time: Aug 15 13:48:18 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	319942m	251.05		0.00
31) Pyrene-d10	29.635	212	544829m	250.63		0.00
73) Benzo(a)pyrene-d12	38.425	264	452745m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	497880m	14.17		0.00
21) Acenaphthene-d10	19.672	164	253754m	13.19		0.00
32) Phenanthrene-d10	24.752	188	500610m	16.13		0.00
66) Chrysene-d12	33.809	240	473752m	12.53		0.00
88) Perylene-d12	38.697	264	427580m	13.32		0.00
90) 5(b)H-Cholane	34.235	217	135722m	23.45		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	211198m	5.69		
9) 2-Methylnaphthalene	16.134	142	133050m	5.70		
10) 1-Methylnaphthalene	16.468	142	52730m	2.44		
11) 2,6-Dimethylnaphthalene	18.223	156	101308m	4.75		
12) 1,6,7-Trimethylnaphtha...	21.121	170	28606m	1.55		
13) C2-Naphthalenes	18.586	156	420323m	11.32		
14) C3-Naphthalenes	21.455	170	411731m	11.09		
15) C4-Naphthalenes	22.820	184	440273m	11.86		
16) Benzothiophene	14.073	134	14012m	0.48		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	113065m	3.66		
23) Acenaphthylene	19.171	152	170449m	5.42		
24) Acenaphthene	19.783	154	36031m	1.79		
25) Dibenzofuran	20.368	168	151695m	4.54		
26) Fluorene	21.538	166	239056m	9.00		
27) 1-Methylfluorene	23.506	180	47811m	2.84		
28) C1-Fluorenes	23.506	180	145642m	5.49		
29) C2-Fluorenes	25.549	194	332934m	12.54		
30) C3-Fluorenes	27.592	208	522224m	19.67		
33) Carbazole	25.583	167	107455m	4.05		
34) Dibenzothiophene	24.406	184	145424m	4.59		
35) 4-Methyldibenzothiophene	25.895	198	78355m	2.96		
36) 2/3-Methyldibenzothiop...	26.207	198	62874m	2.38		
37) 1-Methyldibenzothiophene	26.518	198	19077m	0.72		
38) C2-Dibenzothiophenes	27.626	212	324868m	10.25		
39) C3-Dibenzothiophenes	29.115	226	427898m	13.50		
40) C4-Dibenzothiophenes	30.881	240	448604m	14.16		
41) Phenanthrene	24.822	178	715357m	18.57		
42) Anthracene	24.995	178	319350m	9.64		
43) 3-Methylphenanthrene	26.484	192	130955m	5.25		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1549.D
 Acq On : 14 Aug 2013 1:58 am
 Operator : YM
 Sample : SED-DA-DUP-01-072813
 Misc :
 ALS Vial : 28 Sample Multiplier: 0.06653

Quant Time: Aug 15 13:48:18 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	123546m	4.95		
45) 2-Methylantracene	26.761	192	128412m	5.14		
46) 4/9-Methylphenanthrene	26.865	192	94940m	3.80		
47) 1-Methylphenanthrene	26.934	192	68752m	2.75		
48) 3,6-Dimethylphenanthrene	28.042	206	38441m	1.95		
49) Retene	30.708	234	71400m	7.44		
50) C2-Phenanthrenes/Anthr...	28.215	206	709195m	18.41		
51) C3-Phenanthrenes/Anthr...	29.946	220	760393m	19.74		
52) C4-Phenanthrenes/Anthr...	30.708	234	667841m	17.33		
53) Naphthobenzothiophene	32.955	234	438876m	10.93		
54) C1-Naphthobenzothiophenes	34.391	248	785183m	19.55		
55) C2-Naphthobenzothiophenes	35.399	262	1528561m	38.06		
56) C3-Naphthobenzothiophenes	36.912	276	1396292m	34.77		
57) C4-Naphthobenzothiophenes	38.270	290	521069m	12.97		
58) Fluoranthene	28.942	202	1023352m	29.40		
59) Pyrene	29.704	202	1201331m	28.60		
60) 2-Methylfluoranthene	30.466	216	95878m	4.00		
61) Benzo(b)fluorene	31.089	216	164395m	7.99		
62) C1-Fluoranthenes/Pyrenes	30.847	216	969518m	27.85		
63) C2-Fluoranthenes/Pyrenes	32.567	230	1187862m	34.13		
64) C3-Fluoranthenes/Pyrenes	34.623	244	523418m	15.04		
65) C4-Fluoranthenes/Pyrenes	35.710	258	1213785m	34.87		
67) Benz(a)anthracene	33.770	228	516919m	13.36		
68) Chrysene/Triphenylene	33.886	228	878183m	22.44		
69) C1-Chrysenes	36.485	242	211550m	5.41		
70) C2-Chrysenes	36.835	256	424970m	10.86		
71) C3-Chrysenes	38.813	270	629796m	16.09		
72) C4-Chrysenes	39.356	284	462189m	11.81		
74) C29-Hopane	40.792	191	819168m	70.78		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.119	191	1135707m	98.13		
77) Benzo(b)fluoranthene	37.339	252	1693646m	42.40		
78) Benzo(k,j)fluoranthene	37.417	252	502842m	14.71		
79) Benzo(a)fluoranthene	37.611	252	331343m	9.69		
80) Benzo(e)pyrene	38.309	252	800283m	20.71		
81) Benzo(a)pyrene	38.503	252	482705m	12.79		
82) Indeno(1,2,3-c,d)pyrene	43.225	276	610829m	14.76		
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.627	276	673184m	18.16		
89) Perylene	38.813	252	27430221m	713.79		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1549.D
Acq On : 14 Aug 2013 1:58 am
Operator : YM
Sample : SED-DA-DUP-01-072813
Misc :
ALS Vial : 28 Sample Multiplier: 0.06653

Quant Time: Aug 15 13:48:18 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

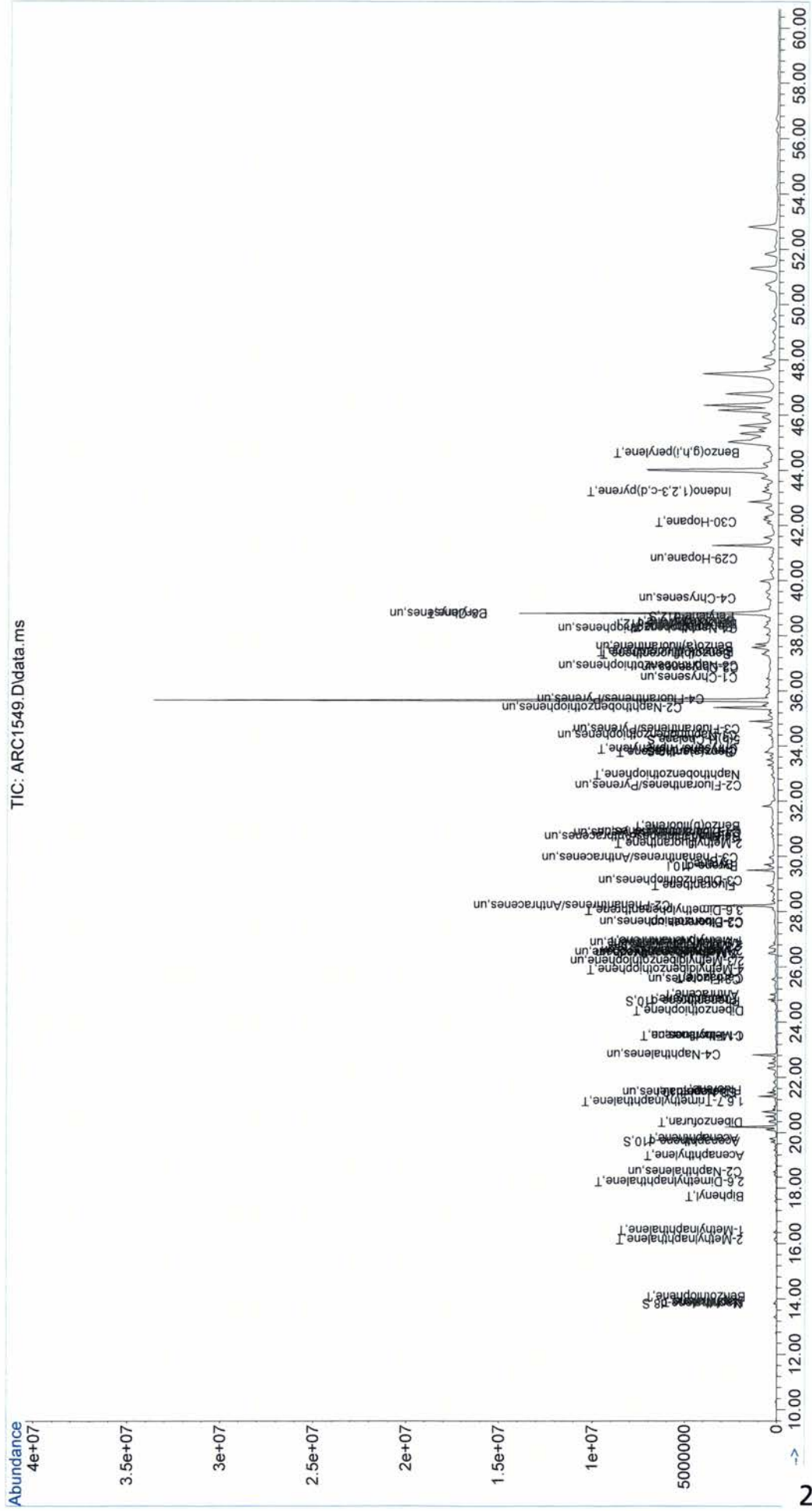
(#) = qualifier out of range (m) = manual integration (+) = signals summed

```

Data Path      : C:\msdchem\2\data\MS70055\
Data File     : ARC1549.D
Acq On        : 14 Aug 2013   1:58 am
Operator      : YM
Sample        : SED-DA-DUP-01-072813
Misc          :
ALS Vial      : 28   Sample Multiplier: 0.06653

```

Quant Time: Aug 15 13:48:18 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1550.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 4:15
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-036 (0.5-1.0)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 30
 Sample Multiplier 0.0664
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1550.D
 SED-DA-036 (0.5-1.0)
 8/14/2013
 PAH-2012.M
 15.06024096

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	111894	3.1459	3.5666
9)+10)	C1-Naphthalenes	8.07	63453	1.7840	2.0225
13)	C2-Naphthalenes	18.59	242298	6.8122	7.7231
14)	C3-Naphthalenes	20.15	925747	26.0274	29.5077
15)	C4-Naphthalenes	22.82	537163	15.1023	17.1218
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	8310	0.2759	0.3127
24)	Acenaphthene	19.78	10182	0.5291	0.5999
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	177419	6.9772	7.9101
28)	C1-Fluorenes	23.51	72816	2.8636	3.2465
29)	C2-Fluorenes	25.38	106688	4.1956	4.7566
30)	C3-Fluorenes	26.76	126602	4.9788	5.6445
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	30099	0.8404	0.9528
41)	Phenanthrene	24.82	969769	23.2865	26.4002
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	289451	6.9504	7.8798
50)	C2-Phenanthrenes/Anthracenes	28.22	213892	5.1361	5.8228
51)	C3-Phenanthrenes/Anthracenes	29.95	59296	1.4238	1.6142
52)	C4-Phenanthrenes/Anthracenes	30.71	56044	1.3457	1.5257
34)	Dibenzothiophene	24.41	65228	1.9043	2.1589
35)+36)+37)	C1-Dibenzothiophenes	26.21	44249	1.2918	1.4646
38)	C2-Dibenzothiophenes	27.63	28246	0.8246	0.9349
39)	C3-Dibenzothiophenes	28.80	15005	0.4381	0.4966
40)	C4-Dibenzothiophenes	30.60	20856	0.6089	0.6903
58)	Fluoranthene	28.91	159264	4.2330	4.7990
59)	Pyrene	29.70	112687	2.4817	2.8136
62)	C1-Fluoranthenes/Pyrenes	30.85	79094	2.1022	2.3833
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	33.77	30692	0.7338	0.8319
68)	Chrysene/Triphenylene	33.89	132353	3.1291	3.5475
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	147051	3.0060	3.4080
78)	Benzo(k,j)fluoranthene	37.34	27760	0.6631	0.7518
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.81	34283900	728.4080	825.8074
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	63453	2.8356	3.2147
10) 1-Methylnaphthalene	0.00	0	0.0000	0.0000
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.90	20814	0.7278	0.8251
36) 2/3-Methyldibenzothiophene	26.21	19610	0.6857	0.7774
37) 1-Methyldibenzothiophene	26.52	3825	0.1337	0.1516
43) 3-Methylphenanthrene	26.48	65555	2.4299	2.7548
44) 2-Methylphenanthrene	26.59	86239	3.1965	3.6240
45) 2-Methylanthracene	26.76	78089	2.8944	3.2815
46) 4/9-Methylphenanthrene	26.86	29461	1.0920	1.2380
47) 1-Methylphenanthrene	26.93	30107	1.1159	1.2652
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	420482	12.49	75.23
21) Acenaphthene-d10	19.67	245047	13.30	80.06
32) Phenanthrene-d10	24.75	491467	14.65	88.21
66) Chrysene-d12	33.81	589044	14.41	86.80
88) Perylene-d12	38.70	387694	9.86	59.41
90) 5(b)H-Cholane	34.24	108124	15.25	91.89
Internal Standards				
1) Fluorene-d10	21.45	305854	16.67	
31) Pyrene-d10	29.63	587745	16.64	
73) Benzo(a)pyrene-d12	38.39	553427	16.62	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1550.D
 Acq On : 14 Aug 2013 4:15 am
 Operator : YM
 Sample : SED-DA-036 (0.5-1.0)
 Misc :
 ALS Vial : 30 Sample Multiplier: 0.0664

Quant Time: Aug 16 06:34:15 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	305854m	251.05		0.00
31) Pyrene-d10	29.635	212	587745m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	553427m	250.32		0.00

System Monitoring Compounds

2) Naphthalene-d8	13.822	136	420482m	12.49		0.00
21) Acenaphthene-d10	19.672	164	245047m	13.30		0.00
32) Phenanthrene-d10	24.752	188	491467m	14.65		0.00
66) Chrysene-d12	33.809	240	589044m	14.41		0.00
88) Perylene-d12	38.697	264	387694m	9.86		0.00
90) 5(b)H-Cholane	34.235	217	108124m	15.25		0.00

Target Compounds

						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	111894m	3.15		
9) 2-Methylnaphthalene	16.134	142	63453m	2.84		
10) 1-Methylnaphthalene	0.000		0	N.D.	d	
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	242298m	6.81		
14) C3-Naphthalenes	20.146	170	925747m	26.03		
15) C4-Naphthalenes	22.820	184	537163m	15.10		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	8310m	0.28		
24) Acenaphthene	19.784	154	10182m	0.53		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	177419m	6.98		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	72816m	2.86		
29) C2-Fluorenes	25.376	194	106688m	4.20		
30) C3-Fluorenes	26.761	208	126602m	4.98		
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	65228m	1.90		
35) 4-Methyldibenzothiophene	25.895	198	20814m	0.73		
36) 2/3-Methyldibenzothiop...	26.207	198	19610m	0.69		
37) 1-Methyldibenzothiophene	26.518	198	3825m	0.13		
38) C2-Dibenzothiophenes	27.626	212	28246m	0.82		
39) C3-Dibenzothiophenes	28.804	226	15005m	0.44		
40) C4-Dibenzothiophenes	30.604	240	20856m	0.61		
41) Phenanthrene	24.822	178	969769m	23.29		
42) Anthracene	24.995	178	30099m	0.84		
43) 3-Methylphenanthrene	26.484	192	65555m	2.43		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1550.D
 Acq On : 14 Aug 2013 4:15 am
 Operator : YM
 Sample : SED-DA-036 (0.5-1.0)
 Misc :
 ALS Vial : 30 Sample Multiplier: 0.0664

Quant Time: Aug 16 06:34:15 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	86239m	3.20		
45) 2-Methylanthracene	26.761	192	78089m	2.89		
46) 4/9-Methylphenanthrene	26.865	192	29461m	1.09		
47) 1-Methylphenanthrene	26.934	192	30107m	1.12		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.215	206	213892m	5.14		
51) C3-Phenanthrenes/Anthr...	29.946	220	59296m	1.42		
52) C4-Phenanthrenes/Anthr...	30.708	234	56044m	1.35		
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	159264m	4.23		
59) Pyrene	29.704	202	112687m	2.48		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	79094m	2.10		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	30692m	0.73		
68) Chrysene/Triphenylene	33.886	228	132353m	3.13		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	147051m	3.01		
78) Benzo(k,j)fluoranthene	37.339	252	27760m	0.66		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	38.813	252	34283928m	728.41		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1550.D
Acq On : 14 Aug 2013 4:15 am
Operator : YM
Sample : SED-DA-036 (0.5-1.0)
Misc :
ALS Vial : 30 Sample Multiplier: 0.0664

Quant Time: Aug 16 06:34:15 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

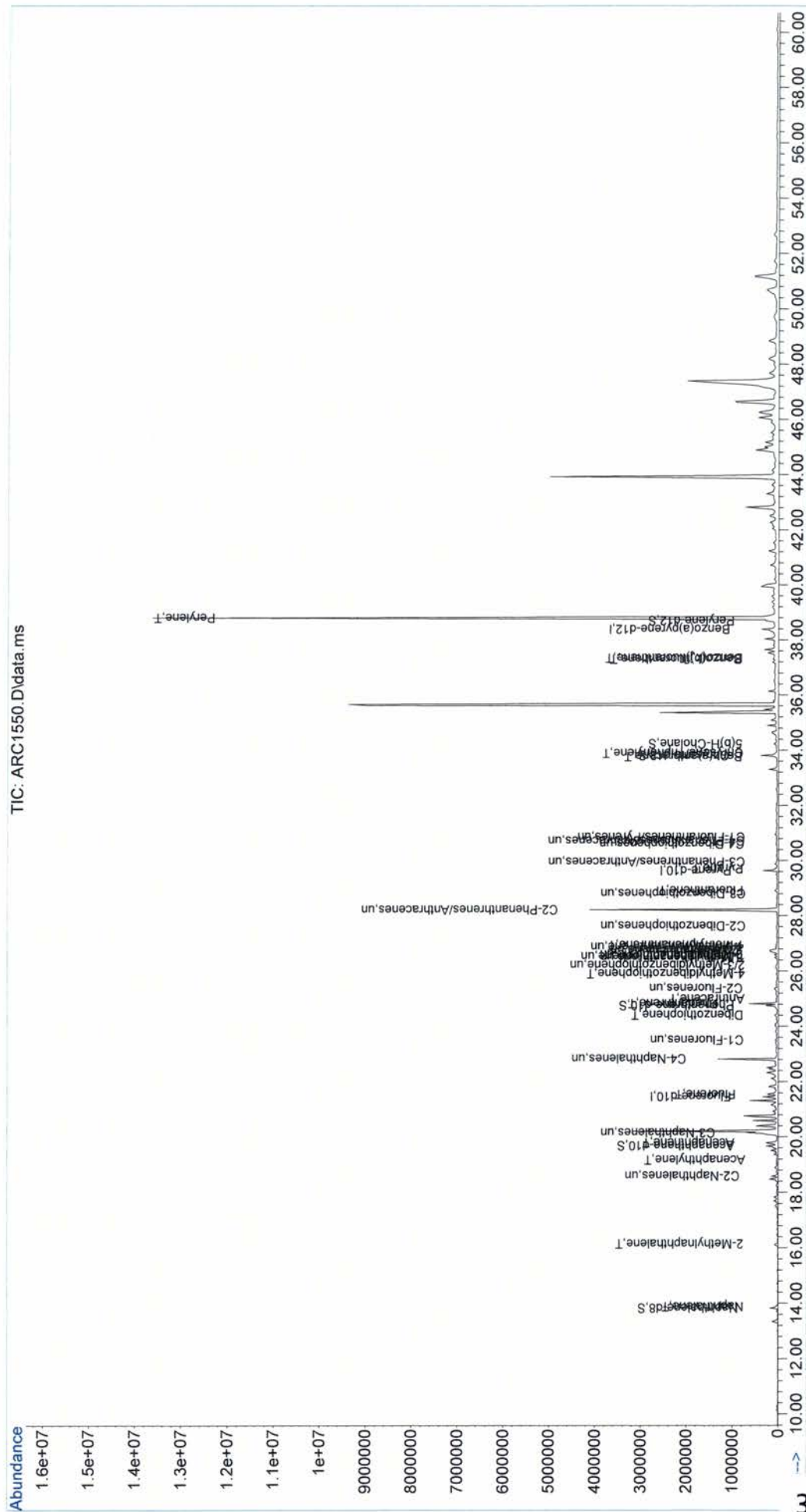
(#) = qualifier out of range (m) = manual integration (+) = signals summed						


```

Data Path      : C:\msdchem\2\data\MS70055\
Data File     : ARC1550.D
Acq On        : 14 Aug 2013  4:15 am
Operator      : YM
Sample        : SED-DA-036 (0.5-1.0)
Misc          :
ALS Vial      : 30  Sample Multiplier: 0.0664

```

Quant Time: Aug 16 06:34:15 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1551.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 5:23
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-036 (1.0-1.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 31
 Sample Multiplier 0.0664
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1551.D
 SED-DA-036 (1.0-1.5)
 8/14/2013
 PAH-2012.M
 15.06024096

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	65054	1.7468	2.0737
9)+10)	C1-Naphthalenes	16.30	45590	1.2241	1.4533
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	7541	0.2391	0.2838
24)	Acenaphthene	19.78	7573	0.3758	0.4462
25)	Dibenzofuran	20.37	110525	3.2951	3.9118
26)	Fluorene	21.54	122735	4.6097	5.4725
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	29187	0.7420	0.8808
41)	Phenanthrene	24.82	724071	15.8304	18.7933
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	258011	5.6409	6.6967
50)	C2-Phenanthrenes/Anthracenes	28.22	289361	6.3263	7.5104
51)	C3-Phenanthrenes/Anthracenes	29.95	168616	3.6865	4.3764
52)	C4-Phenanthrenes/Anthracenes	30.71	151817	3.3192	3.9404
34)	Dibenzothiophene	24.41	25188	0.6695	0.7948
35)+36)+37)	C1-Dibenzothiophenes	26.21	15261	0.4057	0.4816
38)	C2-Dibenzothiophenes	27.63	41408	1.1007	1.3067
39)	C3-Dibenzothiophenes	28.80	48815	1.2976	1.5404
40)	C4-Dibenzothiophenes	30.60	29650	0.7881	0.9357
58)	Fluoranthene	28.91	221599	5.3626	6.3663
59)	Pyrene	29.70	192663	3.8633	4.5863
62)	C1-Fluoranthenes/Pyrenes	30.85	108797	2.6328	3.1256
63)	C2-Fluoranthenes/Pyrenes	32.57	139747	3.3818	4.0148
64)	C3-Fluoranthenes/Pyrenes	34.62	70459	1.7051	2.0242
65)	C4-Fluoranthenes/Pyrenes	35.67	133442	3.2292	3.8336
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	33.77	77890	1.6955	2.0128
68)	Chrysene/Triphenylene	33.89	95314	2.0517	2.4357
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	84288	1.6609	1.9718
78)	Benzo(k,j)fluoranthene	37.34	33660	0.7750	0.9201
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.27	51171	1.0424	1.2375
81)	Benzo(a)pyrene	38.46	47375	0.9876	1.1724
89)	Perylene	38.77	7828870	160.3367	190.3463
82)	Indeno(1,2,3-c,d)pyrene	43.15	37774	0.7186	0.8531
83)	Dibenzo(a,h)anthracene	43.30	12316	0.2926	0.3473
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.52	37374	0.7933	0.9418

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	30697	1.3101	1.5553
10) 1-Methylnaphthalene	16.47	14893	0.6878	0.8165
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.89	9873	0.3143	0.3731
36) 2/3-Methyldibenzothiophene	26.21	1854	0.0590	0.0701
37) 1-Methyldibenzothiophene	26.52	3534	0.1125	0.1336
43) 3-Methylphenanthrene	26.48	45742	1.5437	1.8326
44) 2-Methylphenanthrene	26.59	55586	1.8759	2.2270
45) 2-Methylanthracene	26.76	83873	2.8306	3.3604
46) 4/9-Methylphenanthrene	26.86	40303	1.3602	1.6147
47) 1-Methylphenanthrene	26.93	32507	1.0971	1.3024
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	477161	13.54	81.53
21) Acenaphthene-d10	19.67	255736	13.26	79.80
32) Phenanthrene-d10	24.75	515482	13.99	84.23
66) Chrysene-d12	33.81	632250	14.08	84.83
88) Perylene-d12	38.70	281621	6.91	41.60
90) 5(b)H-Cholane	34.24	114503	15.57	93.81
Internal Standards				
1) Fluorene-d10	21.45	320250	16.67	
31) Pyrene-d10	29.63	645527	16.64	
73) Benzo(a)pyrene-d12	38.39	574128	16.62	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1551.D
 Acq On : 14 Aug 2013 5:23 am
 Operator : YM
 Sample : SED-DA-036 (1.0-1.5)
 Misc :
 ALS Vial : 31 Sample Multiplier: 0.0664

Quant Time: Aug 28 17:23:56 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	320250m	251.05		0.00
31) Pyrene-d10	29.635	212	645527m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	574128m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	477161m	13.54		0.00
21) Acenaphthene-d10	19.672	164	255736m	13.26		0.00
32) Phenanthrene-d10	24.752	188	515482m	13.99		0.00
66) Chrysene-d12	33.809	240	632250m	14.08		0.00
88) Perylene-d12	38.697	264	281621m	6.91		0.00
90) 5(b)H-Cholane	34.235	217	114503m	15.57		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	65054m	1.75		
9) 2-Methylnaphthalene	16.134	142	30697m	1.31		
10) 1-Methylnaphthalene	16.468	142	14893m	0.69		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	7541m	0.24		
24) Acenaphthene	19.783	154	7573m	0.38		
25) Dibenzofuran	20.368	168	110525m	3.30		
26) Fluorene	21.538	166	122735m	4.61		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	25188m	0.67		
35) 4-Methyldibenzothiophene	25.895	198	9873m	0.31		
36) 2/3-Methyldibenzothiop...	26.207	198	1854m	0.06		
37) 1-Methyldibenzothiophene	26.518	198	3534m	0.11		
38) C2-Dibenzothiophenes	27.626	212	41408m	1.10		
39) C3-Dibenzothiophenes	28.804	226	48815m	1.30		
40) C4-Dibenzothiophenes	30.604	240	29650m	0.79		
41) Phenanthrene	24.821	178	724071m	15.83		
42) Anthracene	24.995	178	29187m	0.74		
43) 3-Methylphenanthrene	26.484	192	45742m	1.54		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1551.D
 Acq On : 14 Aug 2013 5:23 am
 Operator : YM
 Sample : SED-DA-036 (1.0-1.5)
 Misc :
 ALS Vial : 31 Sample Multiplier: 0.0664

Quant Time: Aug 28 17:23:56 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.587	192	55586m	1.88		
45) 2-Methylanthracene	26.761	192	83873m	2.83		
46) 4/9-Methylphenanthrene	26.864	192	40303m	1.36		
47) 1-Methylphenanthrene	26.934	192	32507m	1.10		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.215	206	289361m	6.33		
51) C3-Phenanthrenes/Anthr...	29.946	220	168616m	3.69		
52) C4-Phenanthrenes/Anthr...	30.708	234	151817m	3.32		
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.907	202	221599m	5.36		
59) Pyrene	29.704	202	192663m	3.86		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	108797m	2.63		
63) C2-Fluoranthenes/Pyrenes	32.567	230	139747m	3.38		
64) C3-Fluoranthenes/Pyrenes	34.623	244	70459m	1.71		
65) C4-Fluoranthenes/Pyrenes	35.671	258	133442m	3.23		
67) Benz(a)anthracene	33.770	228	77890m	1.70		
68) Chrysene/Triphenylene	33.886	228	95314m	2.05		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	84288m	1.66		
78) Benzo(k,j)fluoranthene	37.339	252	33660m	0.78		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	51171m	1.04		
81) Benzo(a)pyrene	38.464	252	47375m	0.99		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	37774m	0.72		
83) Dibenzo(a,h)anthracene	43.299	278	12316m	0.29		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	37374m	0.79		
89) Perylene	38.774	252	7828872m	160.34		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1551.D
Acq On : 14 Aug 2013 5:23 am
Operator : YM
Sample : SED-DA-036 (1.0-1.5)
Misc :
ALS Vial : 31 Sample Multiplier: 0.0664

Quant Time: Aug 28 17:23:56 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

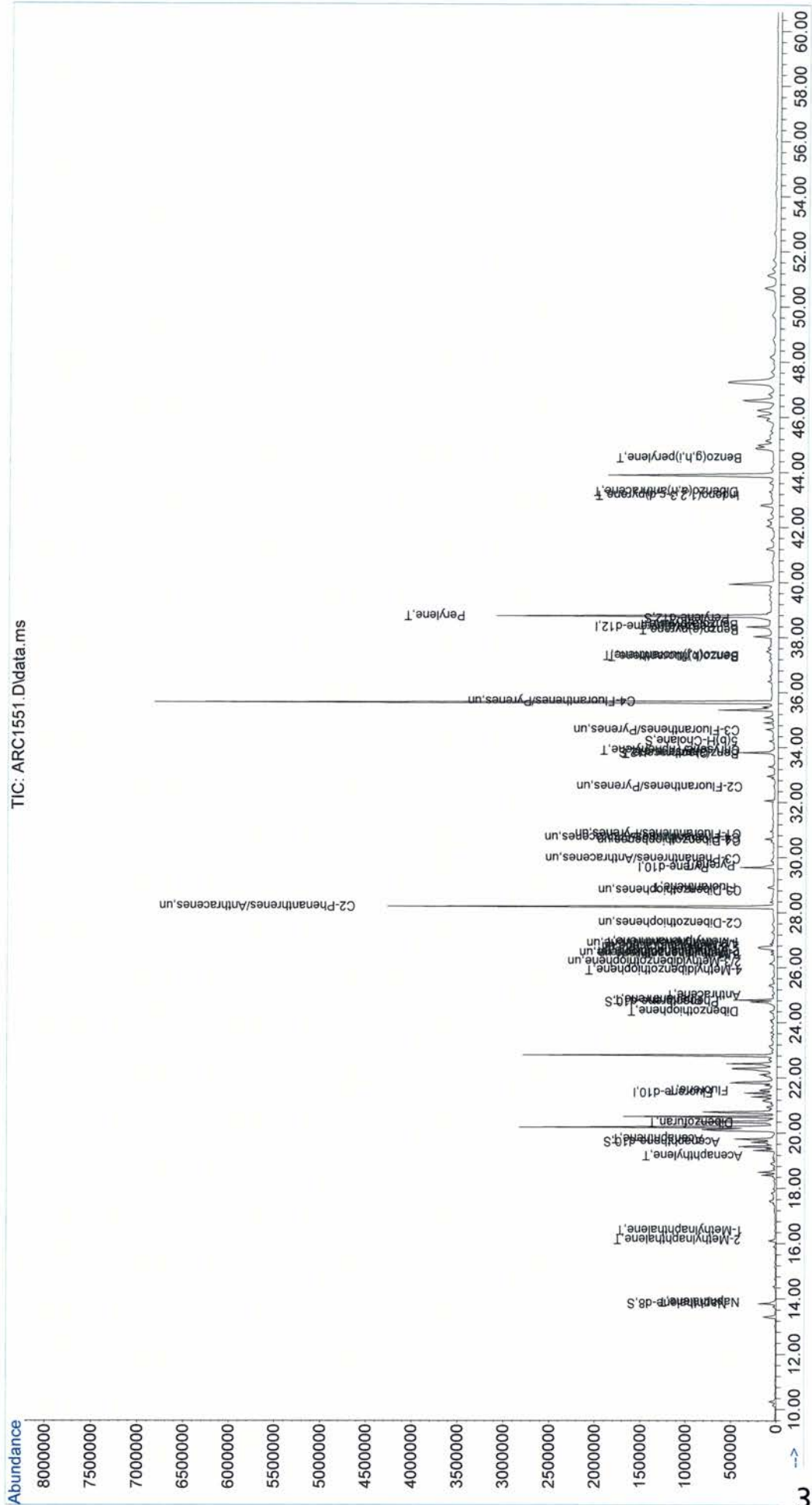
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1551.D
Acq On : 14 Aug 2013 5:23 am
Operator : YM
Sample : SED-DA-036 (1.0-1.5)
Misc :
ALS Vial : 31 Sample Multiplier: 0.0664

Quant Time: Aug 28 17:23:56 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

TIC: ARC1551.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1552.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 6:32
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-037 (0-0.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 32
 Sample Multiplier 0.06658
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1552.D
 SED-DA-037 (0-0.5)
 8/14/2013
 PAH-2012.M
 15.01952538

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	354252	9.8084	10.1514
9)+10)	C1-Naphthalenes	16.30	290036	8.0304	8.3112
13)	C2-Naphthalenes	18.59	541612	14.9961	15.5204
14)	C3-Naphthalenes	20.51	527684	14.6104	15.1213
15)	C4-Naphthalenes	22.82	412089	11.4098	11.8087
16)	Benzo(b)fluoranthene	14.05	17905	0.6300	0.6521
17)	C1-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
18)	C2-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
19)	C3-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
20)	C4-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	116181	3.8624	3.9975
23)	Acenaphthylene	19.17	474029	15.4969	16.0387
24)	Acenaphthene	19.78	49535	2.5350	2.6236
25)	Dibenzofuran	20.37	232099	7.1351	7.3846
26)	Fluorene	21.54	343943	13.3204	13.7861
28)	C1-Fluorenes	23.51	202880	7.8572	8.1320
29)	C2-Fluorenes	25.34	708580	27.4423	28.4017
30)	C3-Fluorenes	27.59	541298	20.9637	21.6967
33)	Carbazole	25.58	227316	8.3716	8.6643
42)	Anthracene	24.99	879084	25.8954	26.8008
41)	Phenanthrene	24.82	1159940	29.3857	30.4132
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	843770	21.3759	22.1233
50)	C2-Phenanthrenes/Anthracenes	28.39	1131820	28.6734	29.6759
51)	C3-Phenanthrenes/Anthracenes	29.95	1130190	28.6321	29.6331
52)	C4-Phenanthrenes/Anthracenes	30.71	768555	19.4705	20.1512
34)	Dibenzothiophene	24.41	171689	5.2883	5.4731
35)+36)+37)	C1-Dibenzothiophenes	26.21	220510	6.7920	7.0295
38)	C2-Dibenzothiophenes	27.63	463886	14.2883	14.7879
39)	C3-Dibenzothiophenes	28.80	473336	14.5794	15.0891
40)	C4-Dibenzothiophenes	31.05	561726	17.3019	17.9069
58)	Fluoranthene	28.94	2582360	72.4131	74.9448
59)	Pyrene	29.70	2911200	67.6426	70.0076
62)	C1-Fluoranthenes/Pyrenes	30.85	1718700	48.1946	49.8796
63)	C2-Fluoranthenes/Pyrenes	32.57	1584180	44.4225	45.9756
64)	C3-Fluoranthenes/Pyrenes	34.12	749972	21.0302	21.7655
65)	C4-Fluoranthenes/Pyrenes	36.21	811442	22.7539	23.5495
53)	Naphthobenzothiophene	32.96	685014	16.6493	17.2314
54)	C1-Naphthobenzothiophenes	34.12	956838	23.2560	24.0691
55)	C2-Naphthobenzothiophenes	35.40	1493060	36.2888	37.5575
56)	C3-Naphthobenzothiophenes	36.91	1538460	37.3922	38.6995
57)	C4-Naphthobenzothiophenes	38.27	625664	15.2068	15.7385
67)	Benzo(a)anthracene	33.77	1455900	36.7231	38.0071
68)	Chrysene/Triphenylene	33.89	1914090	47.7431	49.4123
69)	C1-Chrysenes	35.28	804802	20.0742	20.7761
70)	C2-Chrysenes	36.83	661770	16.5065	17.0836
71)	C3-Chrysenes	37.53	666943	16.6355	17.2172
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.34	3596930	99.4053	102.8808
78)	Benzo(k,j)fluoranthene	37.42	1083490	34.9896	36.2129
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	1701540	48.6133	50.3129
81)	Benzo(a)pyrene	38.50	1012140	29.5914	30.6260
89)	Perylene	38.81	25412900	729.9498	755.4710
82)	Indeno(1,2,3-c,d)pyrene	43.26	1426730	38.0649	39.3958
83)	Dibenzo(a,h)anthracene	43.30	376608	12.5477	12.9864
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.66	1207570	35.9487	37.2055

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	209187	9.2060	9.5279
10) 1-Methylnaphthalene	16.47	80849	3.8502	3.9848
11) 2,6-Dimethylnaphthalene	18.22	170669	8.2341	8.5220
12) 1,6,7-Trimethylnaphthalene	21.12	50361	2.7998	2.8977
27) 1-Methylfluorene	23.51	57294	3.5001	3.6225
35) 4-Methyldibenzothiophene	25.90	100663	3.7135	3.8433
36) 2/3-Methyldibenzothiophene	26.21	83837	3.0928	3.2009
37) 1-Methyldibenzothiophene	26.52	36010	1.3284	1.3749
43) 3-Methylphenanthrene	26.48	203767	7.9685	8.2471
44) 2-Methylphenanthrene	26.59	172623	6.7506	6.9866
45) 2-Methylanthracene	26.76	218363	8.5393	8.8378
46) 4/9-Methylphenanthrene	26.86	150041	5.8675	6.0726
47) 1-Methylphenanthrene	26.93	98976	3.8705	4.0059
48) 3,6-Dimethylphenanthrene	28.04	52833	2.6116	2.7029
49) Retene	30.71	75226	7.6510	7.9185
60) 2-Methylfluoranthene	30.47	221878	9.0291	9.3448
61) Benzo(b)fluorene	31.09	239814	11.3776	11.7754
74) C29-Hopane	40.79	1564890	149.2564	154.4748
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.12	1602400	152.8337	158.1772
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	439177	12.85	77.17
21) Acenaphthene-d10	19.67	264761	14.15	84.96
32) Phenanthrene-d10	24.75	511663	16.10	96.62
66) Chrysene-d12	33.81	514689	13.28	79.80
88) Perylene-d12	38.70	418935	14.41	86.56
90) 5(b)H-Cholane	34.24	110151	21.01	126.22
Internal Standards				
1) Fluorene-d10	21.45	311415	16.71	
31) Pyrene-d10	29.63	558597	16.69	
73) Benzo(a)pyrene-d12	38.39	410470	16.67	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1552.D
 Acq On : 14 Aug 2013 6:32 am
 Operator : YM
 Sample : SED-DA-037 (0-0.5)
 Misc :
 ALS Vial : 32 Sample Multiplier: 0.06658

Quant Time: Aug 24 13:56:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	311415m	251.05		0.00
31) Pyrene-d10	29.635	212	558597m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	410470m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	439177m	12.85		0.00
21) Acenaphthene-d10	19.672	164	264761m	14.15		0.00
32) Phenanthrene-d10	24.752	188	511663m	16.10		0.00
66) Chrysene-d12	33.809	240	514689m	13.28		0.00
88) Perylene-d12	38.697	264	418935m	14.41		0.00
90) 5(b)H-Cholane	34.235	217	110151m	21.01		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	354252m	9.81		
9) 2-Methylnaphthalene	16.134	142	209187m	9.21		
10) 1-Methylnaphthalene	16.469	142	80849m	3.85		
11) 2,6-Dimethylnaphthalene	18.224	156	170669m	8.23		
12) 1,6,7-Trimethylnaphtha...	21.121	170	50361m	2.80		
13) C2-Naphthalenes	18.586	156	541612m	15.00		
14) C3-Naphthalenes	20.508	170	527684m	14.61		
15) C4-Naphthalenes	22.820	184	412089m	11.41		
16) Benzothiophene	14.045	134	17905m	0.63		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	116181m	3.86		
23) Acenaphthylene	19.171	152	474029m	15.50		
24) Acenaphthene	19.784	154	49535m	2.53		
25) Dibenzofuran	20.369	168	232099m	7.14		
26) Fluorene	21.538	166	343943m	13.32		
27) 1-Methylfluorene	23.506	180	57294m	3.50		
28) C1-Fluorenes	23.506	180	202880m	7.86		
29) C2-Fluorenes	25.341	194	708580m	27.44		
30) C3-Fluorenes	27.592	208	541298m	20.96		
33) Carbazole	25.583	167	227316m	8.37		
34) Dibenzothiophene	24.406	184	171689m	5.29		
35) 4-Methyldibenzothiophene	25.895	198	100663m	3.71		
36) 2/3-Methyldibenzothiop...	26.207	198	83837m	3.09		
37) 1-Methyldibenzothiophene	26.518	198	36010m	1.33		
38) C2-Dibenzothiophenes	27.626	212	463886m	14.29		
39) C3-Dibenzothiophenes	28.804	226	473336m	14.58		
40) C4-Dibenzothiophenes	31.055	240	561726m	17.30		
41) Phenanthrene	24.822	178	1159939m	29.39		
42) Anthracene	24.995	178	879084m	25.90		
43) 3-Methylphenanthrene	26.484	192	203767m	7.97		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1552.D
 Acq On : 14 Aug 2013 6:32 am
 Operator : YM
 Sample : SED-DA-037 (0-0.5)
 Misc :
 ALS Vial : 32 Sample Multiplier: 0.06658

Quant Time: Aug 24 13:56:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	172623m	6.75		
45) 2-Methylanthracene	26.761	192	218363m	8.54		
46) 4/9-Methylphenanthrene	26.865	192	150041m	5.87		
47) 1-Methylphenanthrene	26.934	192	98976m	3.87		
48) 3,6-Dimethylphenanthrene	28.042	206	52833m	2.61		
49) Retene	30.708	234	75226m	7.65		
50) C2-Phenanthrenes/Anthr...	28.388	206	1131821m	28.67		
51) C3-Phenanthrenes/Anthr...	29.946	220	1130190m	28.63		
52) C4-Phenanthrenes/Anthr...	30.708	234	768555m	19.47		
53) Naphthobenzothiophene	32.955	234	685014m	16.65		
54) C1-Naphthobenzothiophenes	34.119	248	956838m	23.26		
55) C2-Naphthobenzothiophenes	35.399	262	1493056m	36.29		
56) C3-Naphthobenzothiophenes	36.912	276	1538455m	37.39		
57) C4-Naphthobenzothiophenes	38.270	290	625664m	15.21		
58) Fluoranthene	28.942	202	2582359m	72.41		
59) Pyrene	29.704	202	2911204m	67.64		
60) 2-Methylfluoranthene	30.466	216	221878m	9.03		
61) Benzo(b)fluorene	31.089	216	239814m	11.38		
62) C1-Fluoranthenes/Pyrenes	30.847	216	1718698m	48.19		
63) C2-Fluoranthenes/Pyrenes	32.567	230	1584178m	44.42		
64) C3-Fluoranthenes/Pyrenes	34.119	244	749972m	21.03		
65) C4-Fluoranthenes/Pyrenes	36.214	258	811442m	22.75		
67) Benz(a)anthracene	33.770	228	1455903m	36.72		
68) Chrysene/Triphenylene	33.886	228	1914085m	47.74		
69) C1-Chrysenes	35.283	242	804802m	20.07		
70) C2-Chrysenes	36.835	256	661770m	16.51		
71) C3-Chrysenes	37.533	270	666943m	16.64		
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	40.792	191	1564893m	149.26		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.119	191	1602397m	152.83		
77) Benzo(b)fluoranthene	37.339	252	3596929m	99.41		
78) Benzo(k,j)fluoranthene	37.417	252	1083488m	34.99		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	1701537m	48.61		
81) Benzo(a)pyrene	38.503	252	1012139m	29.59		
82) Indeno(1,2,3-c,d)pyrene	43.262	276	1426730m	38.06		
83) Dibenzo(a,h)anthracene	43.299	278	376608m	12.55		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.663	276	1207574m	35.95		
89) Perylene	38.813	252	25412885m	729.95		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1552.D
Acq On : 14 Aug 2013 6:32 am
Operator : YM
Sample : SED-DA-037 (0-0.5)
Misc :
ALS Vial : 32 Sample Multiplier: 0.06658

Quant Time: Aug 24 13:56:30 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

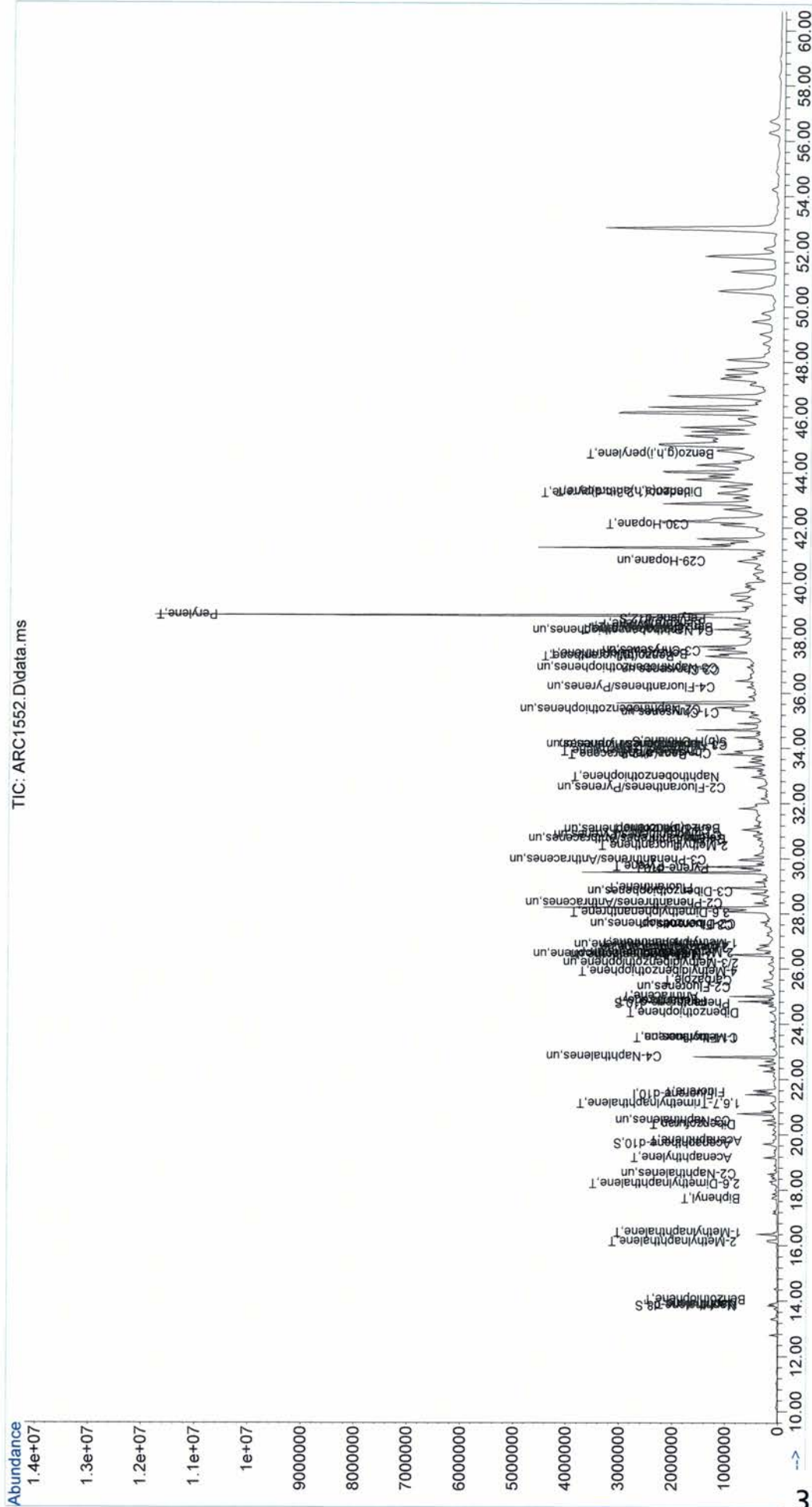
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1552.D
Acq On : 14 Aug 2013 6:32 am
Operator : YM
Sample : SED-DA-037 (0-0.5)
Misc :
ALS Vial : 32 Sample Multiplier: 0.06658

Quant Time: Aug 24 13:56:30 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
Qlast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

TIC: ARC1552.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1553.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 7:41
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-037 (0.5-1.0)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 33
 Sample Multiplier 0.0664
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet
 ARC1553.D
 SED-DA-037 (0.5-1.0)
 8/14/2013
 PAH-2012.M
 15.06024096

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	399437	10.4463	10.5343
9)+10)	C1-Naphthalenes	16.30	354457	9.2700	9.3480
13)	C2-Naphthalenes	18.59	675321	17.6614	17.8101
14)	C3-Naphthalenes	20.51	619185	16.1933	16.3296
15)	C4-Naphthalenes	21.57	495478	12.9580	13.0671
16)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
17)	C1-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
18)	C2-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
19)	C3-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
20)	C4-Benzo(b)fluoranthenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	197361	6.0943	6.1457
24)	Acenaphthene	19.78	74396	3.5962	3.6265
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	439188	16.0660	16.2013
28)	C1-Fluorenes	23.51	220994	8.0842	8.1523
29)	C2-Fluorenes	24.99	627993	22.9727	23.1662
30)	C3-Fluorenes	27.59	794541	29.0653	29.3100
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	405679	11.2767	11.3717
41)	Phenanthrene	24.82	1441590	34.4628	34.7530
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	936216	22.3813	22.5697
50)	C2-Phenanthrenes/Anthracenes	28.39	1286060	30.7446	31.0035
51)	C3-Phenanthrenes/Anthracenes	29.95	1628690	38.9357	39.2635
52)	C4-Phenanthrenes/Anthracenes	31.78	1399920	33.4665	33.7483
34)	Dibenzothiophene	24.41	224460	6.5240	6.5790
35)+36)+37)	C1-Dibenzothiophenes	26.21	291249	8.4653	8.5366
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.94	1247290	33.0045	33.2824
59)	Pyrene	29.70	1706340	37.4127	37.7278
62)	C1-Fluoranthenes/Pyrenes	30.85	1412380	37.3728	37.6875
63)	C2-Fluoranthenes/Pyrenes	32.57	2114950	55.9636	56.4348
64)	C3-Fluoranthenes/Pyrenes	34.12	1273370	33.6947	33.9784
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	33.77	610508	14.5314	14.6537
68)	Chrysene/Triphenylene	33.89	1273220	29.9682	30.2205
69)	C1-Chrysenes	35.28	1117570	26.3044	26.5259
70)	C2-Chrysenes	36.60	1344770	31.6522	31.9187
71)	C3-Chrysenes	37.53	1327090	31.2360	31.4990
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.34	2167670	51.3621	51.7945
78)	Benzo(k,j)fluoranthene	37.42	550789	15.2501	15.3785
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	1147480	28.1080	28.3447
81)	Benzo(a)pyrene	38.50	563918	14.1356	14.2546
89)	Perylene	38.81	36527500	899.5606	907.1348
82)	Indeno(1,2,3-c,d)pyrene	43.23	719937	16.4683	16.6070
83)	Dibenzo(a,h)anthracene	43.37	274313	7.8360	7.9020
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.63	800537	20.4325	20.6046

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	252997	10.5167	10.6052
10) 1-Methylnaphthalene	16.47	101460	4.5638	4.6023
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.90	136476	4.7509	4.7909
36) 2/3-Methyldibenzothiophene	26.21	119126	4.1469	4.1818
37) 1-Methyldibenzothiophene	26.52	35647	1.2409	1.2514
43) 3-Methylphenanthrene	26.48	234814	8.6651	8.7381
44) 2-Methylphenanthrene	26.59	199921	7.3775	7.4396
45) 2-Methylanthracene	26.76	176543	6.5148	6.5696
46) 4/9-Methylphenanthrene	26.86	170036	6.2747	6.3275
47) 1-Methylphenanthrene	26.93	154902	5.7162	5.7643
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	478435	13.22	79.62
21) Acenaphthene-d10	19.67	280152	14.14	85.14
32) Phenanthrene-d10	24.75	554988	16.47	99.17
66) Chrysene-d12	33.81	494420	12.04	72.53
88) Perylene-d12	38.74	462267	13.63	82.11
90) 5(b)H-Cholane	34.24	153168	25.05	150.89
Internal Standards				
1) Fluorene-d10	21.45	328804	16.67	
31) Pyrene-d10	29.63	590358	16.64	
73) Benzo(a)pyrene-d12	38.43	477456	16.62	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1553.D
 Acq On : 14 Aug 2013 7:41 am
 Operator : YM
 Sample : SED-DA-037 (0.5-1.0)
 Misc :
 ALS Vial : 33 Sample Multiplier: 0.0664

Quant Time: Aug 15 15:13:08 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	328804m	251.05		0.00
31) Pyrene-d10	29.635	212	590358m	250.63		0.00
73) Benzo(a)pyrene-d12	38.425	264	477456m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	478435m	13.22		0.00
21) Acenaphthene-d10	19.672	164	280152m	14.14		0.00
32) Phenanthrene-d10	24.752	188	554988m	16.47		0.00
66) Chrysene-d12	33.809	240	494420m	12.04		0.00
88) Perylene-d12	38.736	264	462267m	13.63		0.04
90) 5(b)H-Cholane	34.235	217	153168m	25.05		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	399437m	10.45		
9) 2-Methylnaphthalene	16.134	142	252997m	10.52		
10) 1-Methylnaphthalene	16.469	142	101460m	4.56		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	675321m	17.66		
14) C3-Naphthalenes	20.508	170	619185m	16.19		
15) C4-Naphthalenes	21.566	184	495478m	12.96		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	197361m	6.09		
24) Acenaphthene	19.784	154	74396m	3.60		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	439188m	16.07		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	220994m	8.08		
29) C2-Fluorenes	24.995	194	627993m	22.97		
30) C3-Fluorenes	27.592	208	794541m	29.07		
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	224460m	6.52		
35) 4-Methyldibenzothiophene	25.895	198	136476m	4.75		
36) 2/3-Methyldibenzothiop...	26.207	198	119126m	4.15		
37) 1-Methyldibenzothiophene	26.518	198	35647m	1.24		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	1441588m	34.46		
42) Anthracene	24.995	178	405679m	11.28		
43) 3-Methylphenanthrene	26.484	192	234814m	8.67		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1553.D
 Acq On : 14 Aug 2013 7:41 am
 Operator : YM
 Sample : SED-DA-037 (0.5-1.0)
 Misc :
 ALS Vial : 33 Sample Multiplier: 0.0664

Quant Time: Aug 15 15:13:08 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	199921m	7.38		
45) 2-Methylanthracene	26.761	192	176543m	6.51		
46) 4/9-Methylphenanthrene	26.865	192	170036m	6.27		
47) 1-Methylphenanthrene	26.934	192	154902m	5.72		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.388	206	1286056m	30.74		
51) C3-Phenanthrenes/Anthr...	29.946	220	1628693m	38.94		
52) C4-Phenanthrenes/Anthr...	31.782	234	1399916m	33.47		
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.942	202	1247288m	33.00		
59) Pyrene	29.704	202	1706336m	37.41		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	1412375m	37.37		
63) C2-Fluoranthenes/Pyrenes	32.567	230	2114946m	55.96		
64) C3-Fluoranthenes/Pyrenes	34.119	244	1273372m	33.69		
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	610508m	14.53		
68) Chrysene/Triphenylene	33.886	228	1273223m	29.97		
69) C1-Chrysenes	35.283	242	1117566m	26.30		
70) C2-Chrysenes	36.602	256	1344771m	31.65		
71) C3-Chrysenes	37.533	270	1327086m	31.24		
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.339	252	2167668m	51.36		
78) Benzo(k,j)fluoranthene	37.417	252	550789m	15.25		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	1147479m	28.11		
81) Benzo(a)pyrene	38.503	252	563918m	14.14		
82) Indeno(1,2,3-c,d)pyrene	43.225	276	719937m	16.47		
83) Dibenzo(a,h)anthracene	43.373	278	274313m	7.84		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.627	276	800537m	20.43		
89) Perylene	38.813	252	36527463m	899.56		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1553.D
Acq On : 14 Aug 2013 7:41 am
Operator : YM
Sample : SED-DA-037 (0.5-1.0)
Misc :
ALS Vial : 33 Sample Multiplier: 0.0664

Quant Time: Aug 15 15:13:08 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

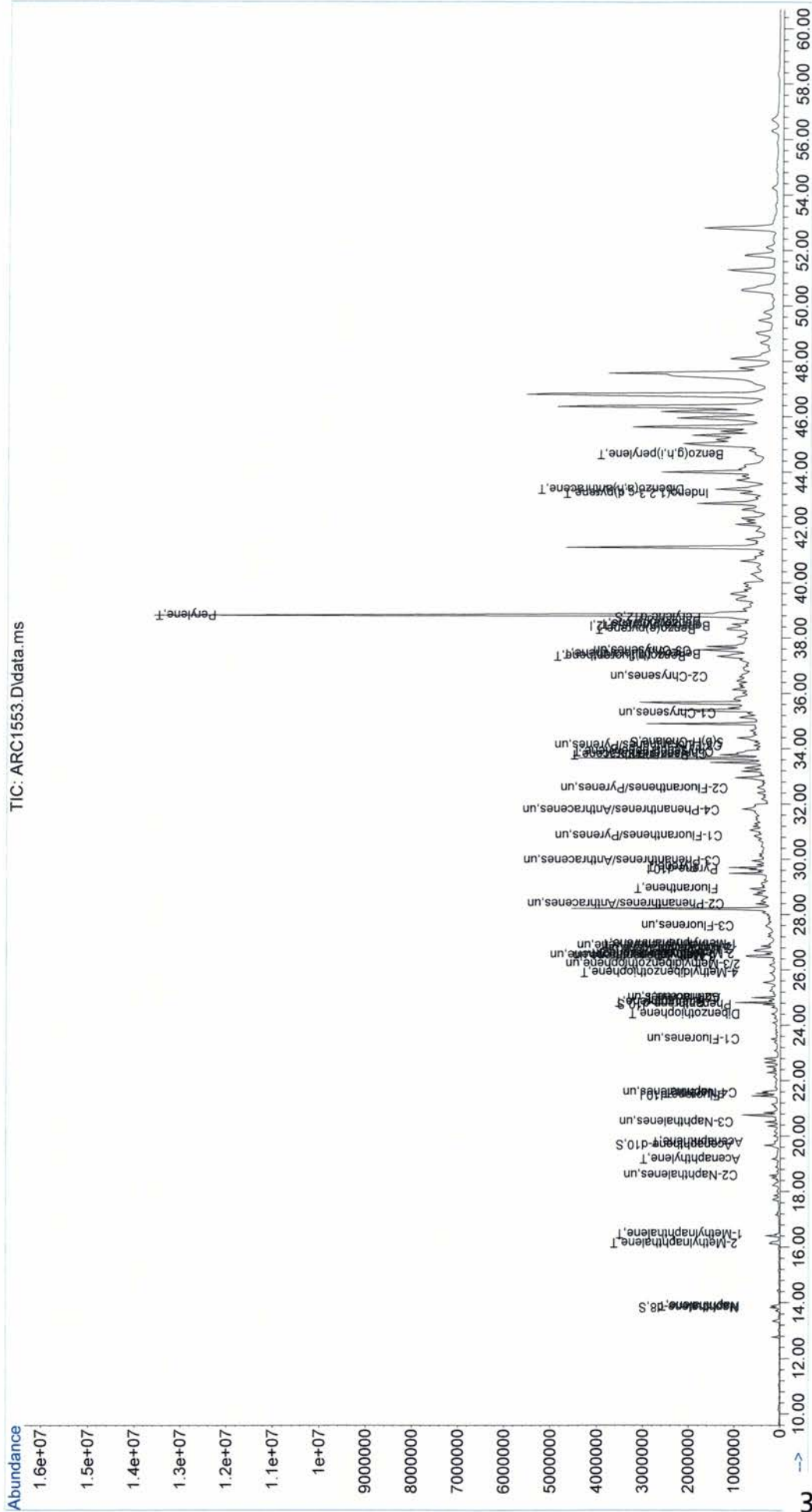
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1553.D
 Acq On : 14 Aug 2013 7:41 am
 Operator : YM
 Sample : SED-DA-037 (0.5-1.0)
 Misc :
 ALS Vial : 33 Sample Multiplier: 0.0664

Quant Time: Aug 15 15:13:08 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

TIC: ARC1553.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1554.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 8:49
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-037 (1.0-1.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 34
 Sample Multiplier 0.06658
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet
 ARC1554.D
 SED-DA-037 (1.0-1.5)
 8/14/2013
 PAH-2012.M
 15.01952538

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	109572	3.4336	3.8381
9)+10)	C1-Naphthalenes	8.07	54279	1.7009	1.9013
13)	C2-Naphthalenes	18.59	141706	4.4406	4.9638
14)	C3-Naphthalenes	20.37	106684	3.3431	3.7370
15)	C4-Naphthalenes	22.82	180690	5.6622	6.3293
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	7302	0.2702	0.3020
24)	Acenaphthene	19.78	7140	0.4136	0.4623
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	123285	5.4039	6.0405
28)	C1-Fluorenes	23.51	47087	2.0639	2.3071
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	18087	0.5601	0.6261
41)	Phenanthrene	24.82	582732	15.5191	17.3475
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	194374	5.1765	5.7864
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.41	30301	0.9811	1.0967
35)+36)+37)	C1-Dibenzothiophenes	26.21	16826	0.5448	0.6090
38)	C2-Dibenzothiophenes	27.63	18384	0.5953	0.6654
39)	C3-Dibenzothiophenes	28.80	11255	0.3644	0.4074
40)	C4-Dibenzothiophenes	30.60	12524	0.4055	0.4533
58)	Fluoranthene	28.91	104583	3.0829	3.4461
59)	Pyrene	29.70	73745	1.8013	2.0135
62)	C1-Fluoranthenes/Pyrenes	30.85	75063	2.2127	2.4734
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	33.77	15818	0.4194	0.4688
68)	Chrysene/Triphenylene	33.89	100882	2.6452	2.9568
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	128343	2.9163	3.2599
78)	Benzo(k,j)fluoranthene	37.34	26068	0.6922	0.7737
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.81	29793800	703.6374	786.5335
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	43.30	28580	0.7829	0.8752
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.55	95198	2.3301	2.6046

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	54279	2.7036	3.0221
10) 1-Methylnaphthalene	0.00	0	0.0000	0.0000
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.89	8041	0.3118	0.3486
36) 2/3-Methyldibenzothiophene	26.21	7166	0.2779	0.3106
37) 1-Methyldibenzothiophene	26.52	1619	0.0628	0.0702
43) 3-Methylphenanthrene	26.48	33880	1.3928	1.5569
44) 2-Methylphenanthrene	26.59	39737	1.6336	1.8260
45) 2-Methylantracene	26.76	75029	3.0844	3.4478
46) 4/9-Methylphenanthrene	26.86	17831	0.7330	0.8194
47) 1-Methylphenanthrene	26.93	27897	1.1468	1.2819
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	379033	12.55	75.38
21) Acenaphthene-d10	19.67	220939	13.36	80.24
32) Phenanthrene-d10	24.75	450655	14.90	89.46
66) Chrysene-d12	33.81	517228	14.03	84.30
88) Perylene-d12	38.70	276995	7.83	47.06
90) 5(b)H-Cholane	34.24	93202	14.62	87.81
Internal Standards				
1) Fluorene-d10	21.45	275153	16.71	
31) Pyrene-d10	29.63	531376	16.69	
73) Benzo(a)pyrene-d12	38.39	499226	16.67	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1554.D
 Acq On : 14 Aug 2013 8:49 am
 Operator : YM
 Sample : SED-DA-037 (1.0-1.5)
 Misc :
 ALS Vial : 34 Sample Multiplier: 0.06658

Quant Time: Aug 15 15:19:37 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	275153m	251.05		0.00
31) Pyrene-d10	29.635	212	531376m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	499226m	250.32		0.00

System Monitoring Compounds

2) Naphthalene-d8	13.822	136	379033m	12.55		0.00
21) Acenaphthene-d10	19.672	164	220939m	13.36		0.00
32) Phenanthrene-d10	24.752	188	450655m	14.90		0.00
66) Chrysene-d12	33.809	240	517228m	14.03		0.00
88) Perylene-d12	38.697	264	276995m	7.83		0.00
90) 5(b)H-Cholane	34.235	217	93202m	14.62		0.00

Target Compounds

					Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d
4) C1-Decalins	0.000		0	N.D.	d
5) C2-Decalins	0.000		0	N.D.	d
6) C3-Decalins	0.000		0	N.D.	d
7) C4-Decalins	0.000		0	N.D.	d
8) Naphthalene	13.878	128	109572m	3.43	
9) 2-Methylnaphthalene	16.134	142	54279m	2.70	
10) 1-Methylnaphthalene	0.000		0	N.D.	d
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d
13) C2-Naphthalenes	18.586	156	141706m	4.44	
14) C3-Naphthalenes	20.368	170	106684m	3.34	
15) C4-Naphthalenes	22.820	184	180690m	5.66	
16) Benzothiophene	0.000		0	N.D.	d
17) C1-Benzothiophenes	0.000		0	N.D.	d
18) C2-Benzothiophenes	0.000		0	N.D.	d
19) C3-Benzothiophenes	0.000		0	N.D.	d
20) C4-Benzothiophenes	0.000		0	N.D.	d
22) Biphenyl	0.000		0	N.D.	d
23) Acenaphthylene	19.171	152	7302m	0.27	
24) Acenaphthene	19.783	154	7140m	0.41	
25) Dibenzofuran	0.000		0	N.D.	d
26) Fluorene	21.538	166	123285m	5.40	
27) 1-Methylfluorene	0.000		0	N.D.	d
28) C1-Fluorenes	23.506	180	47087m	2.06	
29) C2-Fluorenes	0.000		0	N.D.	d
30) C3-Fluorenes	0.000		0	N.D.	d
33) Carbazole	0.000		0	N.D.	d
34) Dibenzothiophene	24.406	184	30301m	0.98	
35) 4-Methyldibenzothiophene	25.895	198	8041m	0.31	
36) 2/3-Methyldibenzothiop...	26.207	198	7166m	0.28	
37) 1-Methyldibenzothiophene	26.518	198	1619m	0.06	
38) C2-Dibenzothiophenes	27.626	212	18384m	0.60	
39) C3-Dibenzothiophenes	28.804	226	11255m	0.36	
40) C4-Dibenzothiophenes	30.604	240	12524m	0.41	
41) Phenanthrene	24.821	178	582732m	15.52	
42) Anthracene	24.995	178	18087m	0.56	
43) 3-Methylphenanthrene	26.484	192	33880m	1.39	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1554.D
 Acq On : 14 Aug 2013 8:49 am
 Operator : YM
 Sample : SED-DA-037 (1.0-1.5)
 Misc :
 ALS Vial : 34 Sample Multiplier: 0.06658

Quant Time: Aug 15 15:19:37 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.587	192	39737m	1.63		
45) 2-Methylantracene	26.761	192	75029m	3.08		
46) 4/9-Methylphenanthrene	26.864	192	17831m	0.73		
47) 1-Methylphenanthrene	26.934	192	27897m	1.15		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.907	202	104583m	3.08		
59) Pyrene	29.704	202	73745m	1.80		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	75063m	2.21		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	15818m	0.42		
68) Chrysene/Triphenylene	33.886	228	100882m	2.65		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	128343m	2.92		
78) Benzo(k,j)fluoranthene	37.339	252	26068m	0.69		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	43.299	278	28580m	0.78		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.553	276	95198m	2.33		
89) Perylene	38.813	252	29793841m	703.64		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1554.D
Acq On : 14 Aug 2013 8:49 am
Operator : YM
Sample : SED-DA-037 (1.0-1.5)
Misc :
ALS Vial : 34 Sample Multiplier: 0.06658

Quant Time: Aug 15 15:19:37 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

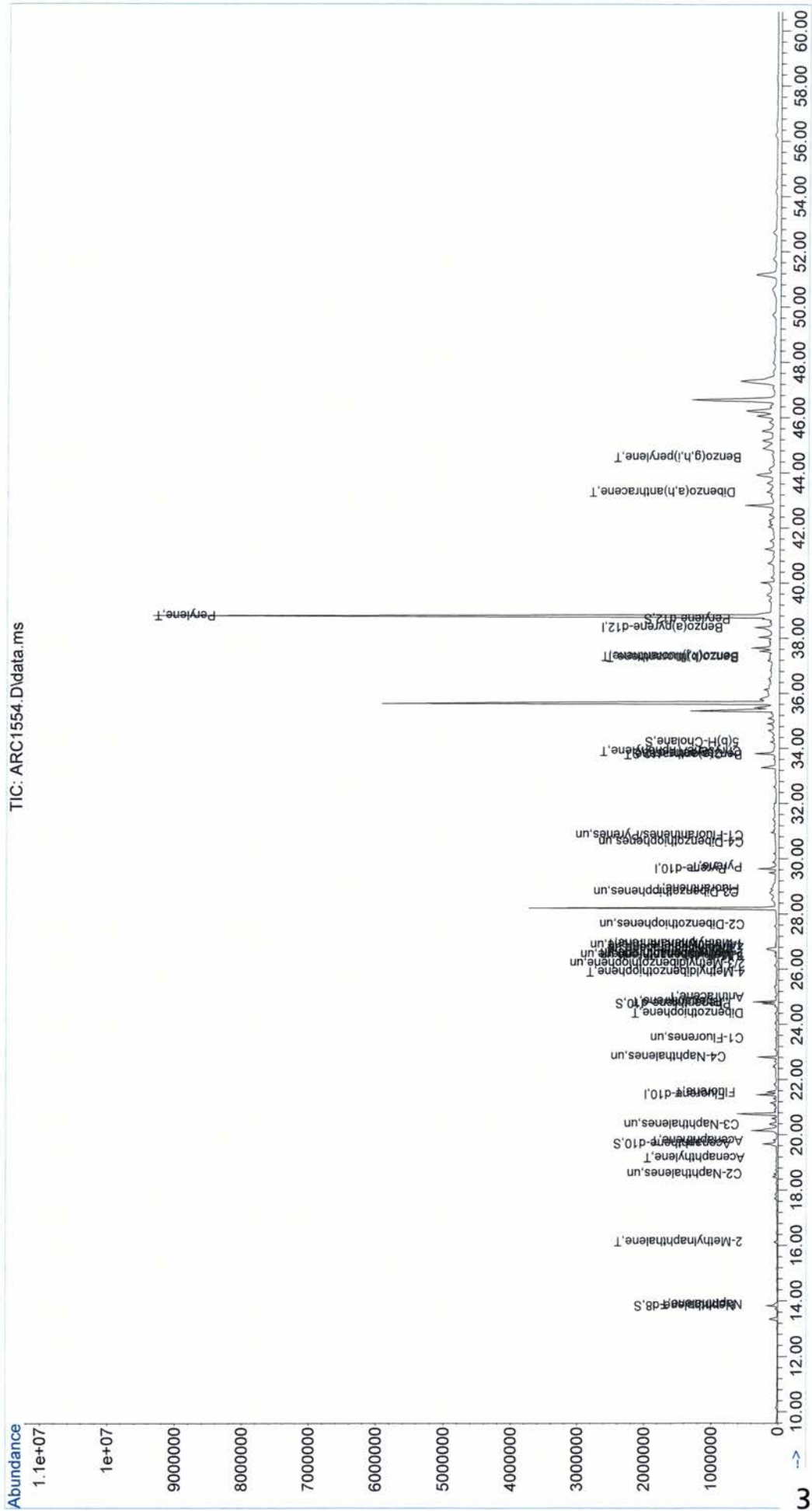
(#) = qualifier out of range (m) = manual integration (+) = signals summed						


```

Data Path      : C:\msdchem\2\data\MS70055\
Data File     : ARC1554.D
Acq On        : 14 Aug 2013   8:49 am
Operator      : YM
Sample        : SED-DA-037 (1.0-1.5)
Misc          :
ALS Vial      : 34   Sample Multiplier: 0.06658

```

Quant Time: Aug 15 15:19:37 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1555.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 9:58
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-038 (0-0.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 35
 Sample Multiplier 0.06631
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1555.D
 SED-DA-038 (0-0.5)
 8/14/2013
 PAH-2012.M
 15.08068165

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	335773	9.2354	9.3004
9)+10)	C1-Naphthalenes	16.30	304720	8.3813	8.4403
13)	C2-Naphthalenes	18.59	584368	16.0730	16.1862
14)	C3-Naphthalenes	20.51	581346	15.9899	16.1025
15)	C4-Naphthalenes	21.57	474661	13.0555	13.1474
16)	Benzothiophene	14.04	15513	0.5423	0.5461
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.69	112158	3.7040	3.7301
23)	Acenaphthylene	19.17	436128	14.1637	14.2634
24)	Acenaphthene	19.78	39613	2.0138	2.0280
25)	Dibenzofuran	20.37	266389	8.1352	8.1924
26)	Fluorene	21.54	418574	16.1037	16.2171
28)	C1-Fluorenes	23.51	220304	8.4757	8.5353
29)	C2-Fluorenes	24.99	821823	31.6178	31.8404
30)	C3-Fluorenes	27.59	806381	31.0237	31.2421
33)	Carbazole	25.58	213958	7.9319	7.9877
42)	Anthracene	24.99	827884	24.5489	24.7217
41)	Phenanthrene	24.82	1636620	41.7368	42.0306
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	1006275	25.6618	25.8425
50)	C2-Phenanthrenes/Anthracenes	28.39	1373310	35.0218	35.2684
51)	C3-Phenanthrenes/Anthracenes	29.95	1241720	31.6663	31.8892
52)	C4-Phenanthrenes/Anthracenes	30.71	1276880	32.5628	32.7920
34)	Dibenzothiophene	24.41	207511	6.4340	6.4793
35)+36)+37)	C1-Dibenzothiophenes	26.21	228497	7.0847	7.1346
38)	C2-Dibenzothiophenes	27.63	482893	14.9724	15.0778
39)	C3-Dibenzothiophenes	29.12	518785	16.0852	16.1985
40)	C4-Dibenzothiophenes	31.05	624114	19.3510	19.4873
58)	Fluoranthene	28.94	2327990	65.7129	66.1755
59)	Pyrene	29.70	2845510	66.5547	67.0232
62)	C1-Fluoranthenes/Pyrenes	30.85	1713210	48.3594	48.6998
63)	C2-Fluoranthenes/Pyrenes	32.57	1939070	54.7347	55.1200
64)	C3-Fluoranthenes/Pyrenes	34.12	828138	23.3761	23.5406
65)	C4-Fluoranthenes/Pyrenes	35.32	1020770	28.8137	29.0165
53)	Naphthobenzothiophene	32.96	672297	16.4485	16.5643
54)	C1-Naphthobenzothiophenes	34.39	1150620	28.1514	28.3496
55)	C2-Naphthobenzothiophenes	35.40	1967460	48.1363	48.4752
56)	C3-Naphthobenzothiophenes	37.22	1961810	47.9979	48.3358
57)	C4-Naphthobenzothiophenes	38.27	808983	19.7927	19.9321
67)	Benz(a)anthracene	33.77	1197960	30.4172	30.6313
68)	Chrysene/Triphenylene	33.89	1790870	44.9658	45.2824
69)	C1-Chrysenes	35.13	1648220	41.3842	41.6755
70)	C2-Chrysenes	36.60	818553	20.5526	20.6973
71)	C3-Chrysenes	37.53	1007810	25.3044	25.4825
72)	C4-Chrysenes	39.36	593317	14.8973	15.0021
77)	Benzo(b)fluoranthene	37.34	3808400	103.4091	104.1371
78)	Benzo(k,j)fluoranthene	37.42	1150470	36.5031	36.7600
79)	Benzo(a)fluoranthene	37.61	335459	10.6437	10.7186
80)	Benzo(e)pyrene	38.31	1966560	55.2025	55.5911
81)	Benzo(a)pyrene	38.50	1074760	30.8727	31.0900
89)	Perylene	38.81	29384200	829.2596	835.0974
82)	Indeno(1,2,3-c,d)pyrene	43.26	1352200	35.4455	35.6951
83)	Dibenzo(a,h)anthracene	43.30	371368	12.1567	12.2423
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.66	1133490	33.1533	33.3867

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	216968	9.4854	9.5522
10) 1-Methylnaphthalene	16.47	87752	4.1513	4.1806
11) 2,6-Dimethylnaphthalene	18.22	182154	8.7302	8.7916
12) 1,6,7-Trimethylnaphthalene	21.12	52712	2.9111	2.9316
27) 1-Methylfluorene	23.51	74347	4.5119	4.5437
35) 4-Methyldibenzothiophene	25.89	106526	3.9558	3.9837
36) 2/3-Methyldibenzothiophene	26.21	90835	3.3731	3.3969
37) 1-Methyldibenzothiophene	26.52	31136	1.1562	1.1644
43) 3-Methylphenanthrene	26.48	251817	9.9128	9.9826
44) 2-Methylphenanthrene	26.59	232456	9.1507	9.2151
45) 2-Methylanthracene	26.76	193564	7.6197	7.6733
46) 4/9-Methylphenanthrene	26.86	214355	8.4381	8.4975
47) 1-Methylphenanthrene	26.93	114083	4.4909	4.5225
48) 3,6-Dimethylphenanthrene	28.04	64211	3.1950	3.2175
49) Retene	30.71	85485	8.7521	8.8137
60) 2-Methylfluoranthene	30.47	220405	9.0286	9.0922
61) Benzo(b)fluorene	31.09	289670	13.8341	13.9314
74) C29-Hopane	40.79	1738750	162.9389	164.0860
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	42.12	2084520	195.3406	196.7158
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	458758	13.34	80.41
21) Acenaphthene-d10	19.67	269234	14.29	86.17
32) Phenanthrene-d10	24.75	520269	16.47	99.30
66) Chrysene-d12	33.81	464400	12.07	72.78
88) Perylene-d12	38.74	427096	14.43	87.06
90) 5(b)H-Cholane	34.24	131755	24.69	148.94
Internal Standards				
1) Fluorene-d10	21.45	312214	16.65	
31) Pyrene-d10	29.63	552667	16.62	
73) Benzo(a)pyrene-d12	38.43	416081	16.60	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1555.D
 Acq On : 14 Aug 2013 9:58 am
 Operator : YM
 Sample : SED-DA-038 (0-0.5)
 Misc :
 ALS Vial : 35 Sample Multiplier: 0.06631

Quant Time: Aug 15 15:29:13 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	312214m	251.05		0.00
31) Pyrene-d10	29.635	212	552667m	250.63		0.00
73) Benzo(a)pyrene-d12	38.425	264	416081m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	458758m	13.34		0.00
21) Acenaphthene-d10	19.672	164	269234m	14.29		0.00
32) Phenanthrene-d10	24.752	188	520269m	16.47		0.00
66) Chrysene-d12	33.809	240	464400m	12.07		0.00
88) Perylene-d12	38.736	264	427096m	14.43		0.04
90) 5(b)H-Cholane	34.235	217	131755m	24.69		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	335773m	9.24		
9) 2-Methylnaphthalene	16.134	142	216968m	9.49		
10) 1-Methylnaphthalene	16.468	142	87752m	4.15		
11) 2,6-Dimethylnaphthalene	18.223	156	182154m	8.73		
12) 1,6,7-Trimethylnaphtha...	21.121	170	52712m	2.91		
13) C2-Naphthalenes	18.586	156	584368m	16.07		
14) C3-Naphthalenes	20.508	170	581346m	15.99		
15) C4-Naphthalenes	21.566	184	474661m	13.06		
16) Benzothiophene	14.045	134	15513m	0.54		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	112158m	3.70		
23) Acenaphthylene	19.171	152	436128m	14.16		
24) Acenaphthene	19.783	154	39613m	2.01		
25) Dibenzofuran	20.368	168	266389m	8.14		
26) Fluorene	21.538	166	418574m	16.10		
27) 1-Methylfluorene	23.506	180	74347m	4.51		
28) C1-Fluorenes	23.506	180	220304m	8.48		
29) C2-Fluorenes	24.995	194	821823m	31.62		
30) C3-Fluorenes	27.592	208	806381m	31.02		
33) Carbazole	25.583	167	213958m	7.93		
34) Dibenzothiophene	24.406	184	207511m	6.43		
35) 4-Methyldibenzothiophene	25.895	198	106526m	3.96		
36) 2/3-Methyldibenzothiop...	26.207	198	90835m	3.37		
37) 1-Methyldibenzothiophene	26.518	198	31136m	1.16		
38) C2-Dibenzothiophenes	27.626	212	482893m	14.97		
39) C3-Dibenzothiophenes	29.115	226	518785m	16.09		
40) C4-Dibenzothiophenes	31.054	240	624114m	19.35		
41) Phenanthrene	24.821	178	1636617m	41.74		
42) Anthracene	24.995	178	827884m	24.55		
43) 3-Methylphenanthrene	26.484	192	251817m	9.91		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1555.D
 Acq On : 14 Aug 2013 9:58 am
 Operator : YM
 Sample : SED-DA-038 (0-0.5)
 Misc :
 ALS Vial : 35 Sample Multiplier: 0.06631

Quant Time: Aug 15 15:29:13 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.587	192	232456m	9.15		
45) 2-Methylanthracene	26.761	192	193564m	7.62		
46) 4/9-Methylphenanthrene	26.864	192	214355m	8.44		
47) 1-Methylphenanthrene	26.934	192	114083m	4.49		
48) 3,6-Dimethylphenanthrene	28.042	206	64211m	3.20		
49) Retene	30.708	234	85485m	8.75		
50) C2-Phenanthrenes/Anthr...	28.388	206	1373305m	35.02		
51) C3-Phenanthrenes/Anthr...	29.946	220	1241723m	31.67		
52) C4-Phenanthrenes/Anthr...	30.708	234	1276878m	32.56		
53) Naphthobenzothiophene	32.955	234	672297m	16.45		
54) C1-Naphthobenzothiophenes	34.391	248	1150624m	28.15		
55) C2-Naphthobenzothiophenes	35.399	262	1967463m	48.14		
56) C3-Naphthobenzothiophenes	37.223	276	1961805m	48.00		
57) C4-Naphthobenzothiophenes	38.270	290	808983m	19.79		
58) Fluoranthene	28.942	202	2327992m	65.71		
59) Pyrene	29.704	202	2845514m	66.55		
60) 2-Methylfluoranthene	30.466	216	220405m	9.03		
61) Benzo(b)fluorene	31.089	216	289670m	13.83		
62) C1-Fluoranthenes/Pyrenes	30.847	216	1713213m	48.36		
63) C2-Fluoranthenes/Pyrenes	32.567	230	1939070m	54.73		
64) C3-Fluoranthenes/Pyrenes	34.119	244	828138m	23.38		
65) C4-Fluoranthenes/Pyrenes	35.322	258	1020773m	28.81		
67) Benz(a)anthracene	33.770	228	1197960m	30.42		
68) Chrysene/Triphenylene	33.886	228	1790866m	44.97		
69) C1-Chrysenes	35.128	242	1648221m	41.38		
70) C2-Chrysenes	36.602	256	818553m	20.55		
71) C3-Chrysenes	37.533	270	1007805m	25.30		
72) C4-Chrysenes	39.356	284	593317m	14.90		
74) C29-Hopane	40.792	191	1738748m	162.94		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.119	191	2084515m	195.34		
77) Benzo(b)fluoranthene	37.339	252	3808403m	103.41		
78) Benzo(k,j)fluoranthene	37.416	252	1150470m	36.50		
79) Benzo(a)fluoranthene	37.610	252	335459m	10.64		
80) Benzo(e)pyrene	38.309	252	1966557m	55.20		
81) Benzo(a)pyrene	38.503	252	1074758m	30.87		
82) Indeno(1,2,3-c,d)pyrene	43.262	276	1352197m	35.45		
83) Dibenzo(a,h)anthracene	43.299	278	371368m	12.16		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.663	276	1133494m	33.15		
89) Perylene	38.813	252	29384212m	829.26		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1555.D
Acq On : 14 Aug 2013 9:58 am
Operator : YM
Sample : SED-DA-038 (0-0.5)
Misc :
ALS Vial : 35 Sample Multiplier: 0.06631

Quant Time: Aug 15 15:29:13 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

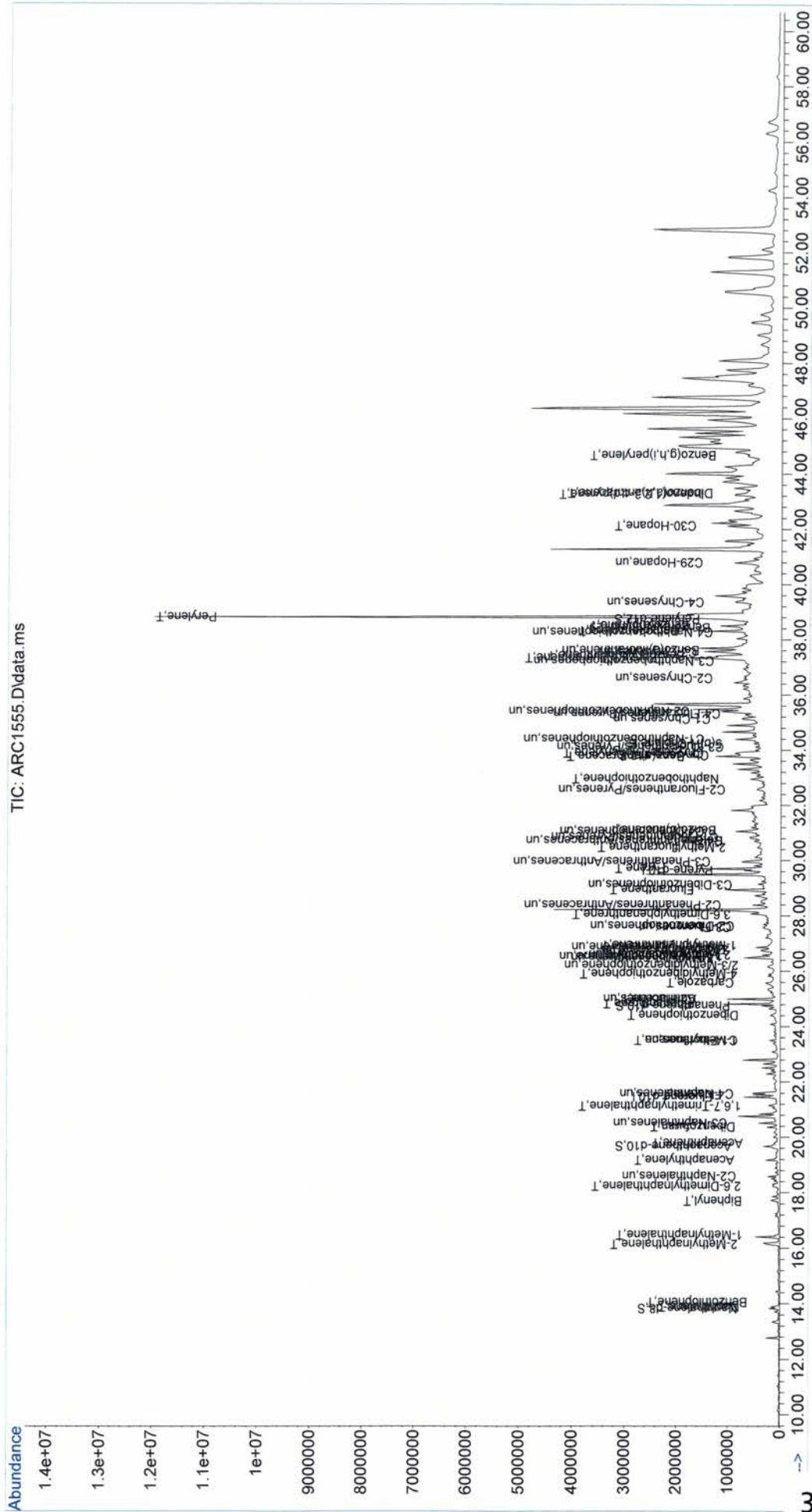
(#) = qualifier out of range (m) = manual integration (+) = signals summed						

```

Data Path      : C:\msdchem\2\data\MS70055\
Data File     : ARC1555.D
Acq On        : 14 Aug 2013   9:58 am
Operator      : YM
Sample        : SED-DA-038 (0-0.5)
Misc          :
ALS Vial      : 35   Sample Multiplier: 0.06631

```

Quant Time: Aug 15 15:29:13 2013
Quant Method : C:\GCM57\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name	ARC1556.D	Surrogate/Internal Multiplier Factor:	1.00
Data File Path	C:\msdchem\2\data\MS70055\	AR-WKSU-2500-001: (ng/mL)	
Operator	YM	Naphthalene-d8	250.125
Date Acquired	8/14/2013 11:06	Acenaphthene-d10	250.163
Acq. Method File	PAH-2012.M	Phenanthrene-d10	250.194
Sample Name	SED-DA-038 (0.5-1.0)	Chrysene-d12	250.038
Misc Info	0	Perylene-d12	250.031
Instrument Name	GCMSD	5(b)H-Cholane	250.000
Vial Number	36		
Sample Multiplier	0.06649		
Sample Amount	0		

Copy data below
to Spread Sheet

ARC1556.D
SED-DA-038 (0.5-1.0)
8/14/2013
PAH-2012.M
15.03985562

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	276756	8.2732	8.9404
9)+10)	C1-Naphthalenes	16.30	179266	5.3589	5.7911
13)	C2-Naphthalenes	18.59	296759	8.8712	9.5866
14)	C3-Naphthalenes	21.45	246197	7.3597	7.9533
15)	C4-Naphthalenes	21.57	161371	4.8239	5.2130
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	41579	1.4676	1.5859
24)	Acenaphthene	19.78	19558	1.0806	1.1678
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	210944	8.8204	9.5317
28)	C1-Fluorenes	23.51	107546	4.4969	4.8596
29)	C2-Fluorenes	24.99	213989	8.9477	9.6693
30)	C3-Fluorenes	27.59	213227	8.9158	9.6349
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	90261	2.8300	3.0583
41)	Phenanthrene	24.82	843162	22.7359	24.5695
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	365774	9.8631	10.6585
50)	C2-Phenanthrenes/Anthracenes	28.22	432468	11.6615	12.6020
51)	C3-Phenanthrenes/Anthracenes	29.95	240558	6.4866	7.0098
52)	C4-Phenanthrenes/Anthracenes	30.71	304926	8.2224	8.8855
34)	Dibenzothiophene	24.41	96828	3.1745	3.4305
35)+36)+37)	C1-Dibenzothiophenes	26.21	78359	2.5690	2.7761
38)	C2-Dibenzothiophenes	27.63	118723	3.8923	4.2062
39)	C3-Dibenzothiophenes	28.80	162798	5.3373	5.7677
40)	C4-Dibenzothiophenes	30.22	140378	4.6022	4.9734
58)	Fluoranthene	28.94	425893	12.7116	13.7367
59)	Pyrene	29.70	400979	9.9167	10.7165
62)	C1-Fluoranthenes/Pyrenes	30.85	384180	11.4665	12.3913
63)	C2-Fluoranthenes/Pyrenes	32.57	461862	13.7851	14.8969
64)	C3-Fluoranthenes/Pyrenes	34.62	436631	13.0320	14.0831
65)	C4-Fluoranthenes/Pyrenes	35.67	379484	11.3264	12.2398
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.77	172807	4.6395	5.0136
68)	Chrysene/Triphenylene	33.89	438234	11.6347	12.5730
69)	C1-Chrysenes	35.67	604668	16.0533	17.3480
70)	C2-Chrysenes	36.83	154530	4.1026	4.4335
71)	C3-Chrysenes	38.81	288953	7.6714	8.2901
72)	C4-Chrysenes	39.36	148183	3.9341	4.2514
77)	Benzo(b)fluoranthene	37.30	659142	16.1746	17.4790
78)	Benzo(k,j)fluoranthene	37.42	100553	2.8833	3.1158
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	242161	6.1432	6.6386
81)	Benzo(a)pyrene	38.46	118550	3.0775	3.3257
89)	Perylene	38.81	19557500	498.7993	539.0270
82)	Indeno(1,2,3-c,d)pyrene	43.19	205598	4.8706	5.2634
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.59	164705	4.3536	4.7048

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	125514	5.9637	6.4447
10) 1-Methylnaphthalene	16.47	53752	2.7637	2.9866
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methyldibenzothiophene	25.89	40039	1.5721	1.6989
36) 2/3-Methyldibenzothiophene	26.21	27827	1.0926	1.1808
37) 1-Methyldibenzothiophene	26.52	10493	0.4120	0.4452
43) 3-Methylphenanthrene	26.48	80485	3.3501	3.6203
44) 2-Methylphenanthrene	26.59	99963	4.1608	4.4964
45) 2-Methylanthracene	26.76	87206	3.6298	3.9226
46) 4/9-Methylphenanthrene	26.86	50728	2.1115	2.2818
47) 1-Methylphenanthrene	26.93	47392	1.9726	2.1317
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	414223	13.09	78.69
21) Acenaphthene-d10	19.67	230898	13.32	80.10
32) Phenanthrene-d10	24.75	459767	15.39	92.54
66) Chrysene-d12	33.81	476075	13.08	78.67
88) Perylene-d12	38.70	349607	10.68	64.23
90) 5(b)H-Cholane	34.24	94901	16.07	96.69
Internal Standards				
1) Fluorene-d10	21.45	288047	16.69	
31) Pyrene-d10	29.63	524098	16.66	
73) Benzo(a)pyrene-d12	38.39	461655	16.64	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1556.D
 Acq On : 14 Aug 2013 11:06 am
 Operator : YM
 Sample : SED-DA-038 (0.5-1.0)
 Misc :
 ALS Vial : 36 Sample Multiplier: 0.06649

Quant Time: Aug 15 15:40:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	288047m	251.05		0.00
31) Pyrene-d10	29.635	212	524098m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	461655m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	414223m	13.09		0.00
21) Acenaphthene-d10	19.672	164	230898m	13.32		0.00
32) Phenanthrene-d10	24.752	188	459767m	15.39		0.00
66) Chrysene-d12	33.809	240	476075m	13.08		0.00
88) Perylene-d12	38.697	264	349607m	10.68		0.00
90) 5(b)H-Cholane	34.235	217	94901m	16.07		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	276756m	8.27		
9) 2-Methylnaphthalene	16.134	142	125514m	5.96		
10) 1-Methylnaphthalene	16.468	142	53752m	2.76		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	296759m	8.87		
14) C3-Naphthalenes	21.455	170	246197m	7.36		
15) C4-Naphthalenes	21.566	184	161371m	4.82		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	41579m	1.47		
24) Acenaphthene	19.783	154	19558m	1.08		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	210944m	8.82		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	107546m	4.50		
29) C2-Fluorenes	24.995	194	213989m	8.95		
30) C3-Fluorenes	27.592	208	213227m	8.92		
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	96828m	3.17		
35) 4-Methyldibenzothiophene	25.895	198	40039m	1.57		
36) 2/3-Methyldibenzothiop...	26.207	198	27827m	1.09		
37) 1-Methyldibenzothiophene	26.518	198	10493m	0.41		
38) C2-Dibenzothiophenes	27.626	212	118723m	3.89		
39) C3-Dibenzothiophenes	28.804	226	162798m	5.34		
40) C4-Dibenzothiophenes	30.223	240	140378m	4.60		
41) Phenanthrene	24.821	178	843162m	22.74		
42) Anthracene	24.995	178	90261m	2.83		
43) 3-Methylphenanthrene	26.484	192	80485m	3.35		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1556.D
 Acq On : 14 Aug 2013 11:06 am
 Operator : YM
 Sample : SED-DA-038 (0.5-1.0)
 Misc :
 ALS Vial : 36 Sample Multiplier: 0.06649

Quant Time: Aug 15 15:40:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.587	192	99963m	4.16		
45) 2-Methylanthracene	26.761	192	87206m	3.63		
46) 4/9-Methylphenanthrene	26.864	192	50728m	2.11		
47) 1-Methylphenanthrene	26.934	192	47392m	1.97		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.215	206	432468m	11.66		
51) C3-Phenanthrenes/Anthr...	29.946	220	240558m	6.49		
52) C4-Phenanthrenes/Anthr...	30.708	234	304926m	8.22		
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.942	202	425893m	12.71		
59) Pyrene	29.704	202	400979m	9.92		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	384180m	11.47		
63) C2-Fluoranthenes/Pyrenes	32.567	230	461862m	13.79		
64) C3-Fluoranthenes/Pyrenes	34.623	244	436631m	13.03		
65) C4-Fluoranthenes/Pyrenes	35.671	258	379484m	11.33		
67) Benz(a)anthracene	33.770	228	172807m	4.64		
68) Chrysene/Triphenylene	33.886	228	438234m	11.63		
69) C1-Chrysenes	35.671	242	604668m	16.05		
70) C2-Chrysenes	36.835	256	154530m	4.10		
71) C3-Chrysenes	38.813	270	288953m	7.67		
72) C4-Chrysenes	39.356	284	148183m	3.93		
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	659142m	16.17		
78) Benzo(k,j)fluoranthene	37.416	252	100553m	2.88		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	242161m	6.14		
81) Benzo(a)pyrene	38.464	252	118550m	3.08		
82) Indeno(1,2,3-c,d)pyrene	43.188	276	205598m	4.87		
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.590	276	164705m	4.35		
89) Perylene	38.813	252	19557458m	498.80		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1556.D
Acq On : 14 Aug 2013 11:06 am
Operator : YM
Sample : SED-DA-038 (0.5-1.0)
Misc :
ALS Vial : 36 Sample Multiplier: 0.06649

Quant Time: Aug 15 15:40:30 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

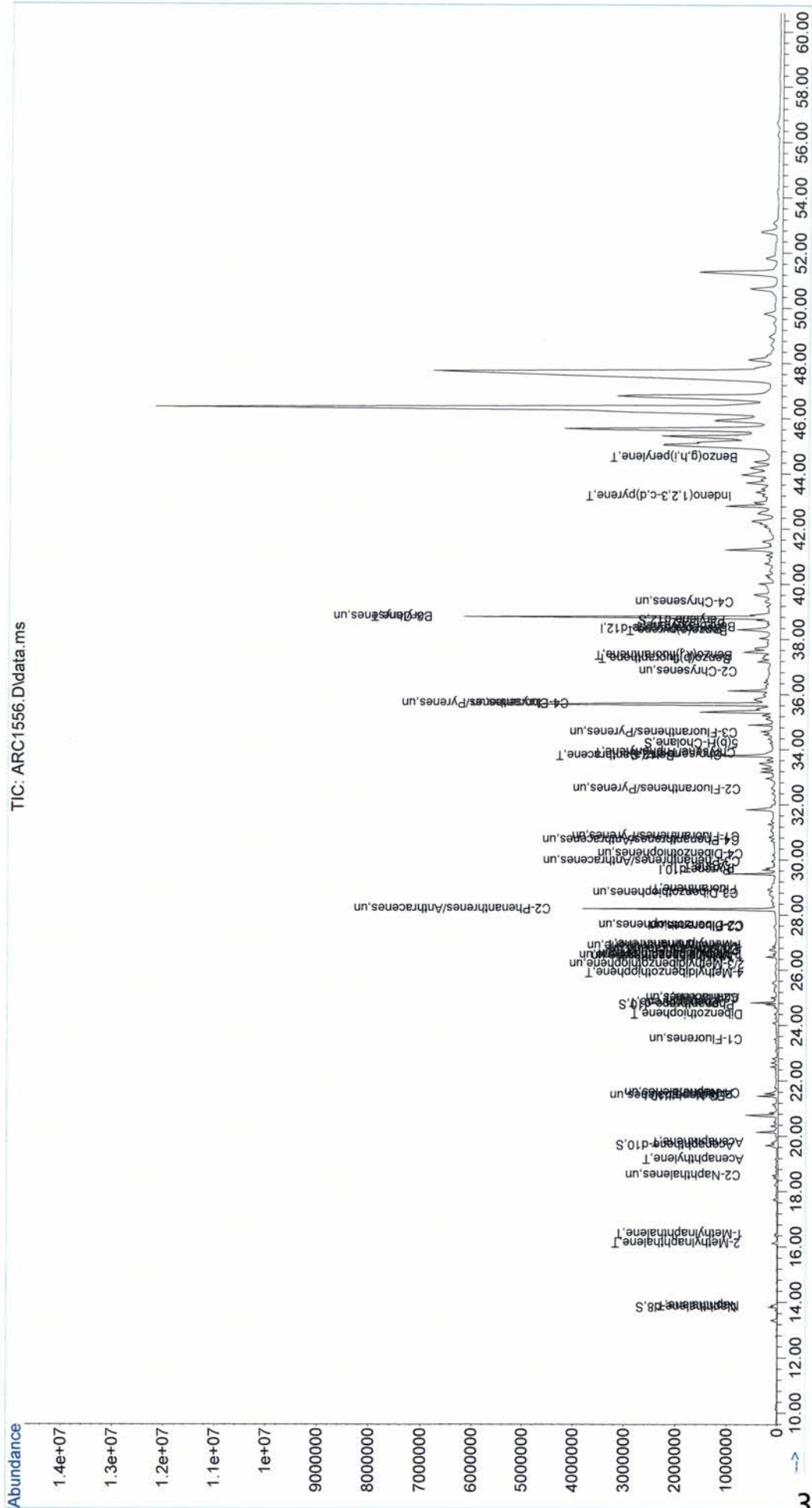
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1556.D
 Acq On : 14 Aug 2013 11:06 am
 Operator : YM
 Sample : SED-DA-038 (0.5-1.0)
 Misc :
 ALS Vial : 36 Sample Multiplier: 0.06649

Quant Time: Aug 15 15:40:30 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

TIC: ARC1556.D\data.ms



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1557.D
 Data File Path C:\msdchem\2\data\MS70055\
 Operator YM
 Date Acquired 8/14/2013 12:15
 Acq. Method File PAH-2012.M
 Sample Name SED-DA-038 (1.0-1.5)
 Misc Info 0
 Instrument Name GCMSD
 Vial Number 37
 Sample Multiplier 0.06667
 Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00
 AR-WKSU-2500-001: (ng/mL)
 Naphthalene-d8 250.125
 Acenaphthene-d10 250.163
 Phenanthrene-d10 250.194
 Chrysene-d12 250.038
 Perylene-d12 250.031
 5(b)H-Cholane 250.000

Copy data below
 to Spread Sheet

ARC1557.D
 SED-DA-038 (1.0-1.5)
 8/14/2013
 PAH-2012.M
 14.99925004

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.88	109991	3.3505	3.7066
9)+10)	C1-Naphthalenes	16.30	72631	2.2125	2.4476
13)	C2-Naphthalenes	18.59	115636	3.5225	3.8968
14)	C3-Naphthalenes	20.37	82869	2.5243	2.7926
15)	C4-Naphthalenes	21.57	77491	2.3605	2.6113
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	19.17	6796	0.2444	0.2704
24)	Acenaphthene	19.78	4971	0.2799	0.3096
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	21.54	89502	3.8135	4.2188
28)	C1-Fluorenes	23.51	40529	1.7269	1.9104
29)	C2-Fluorenes	25.34	54628	2.3276	2.5750
30)	C3-Fluorenes	26.76	133439	5.6856	6.2898
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.99	19284	0.5854	0.6476
41)	Phenanthrene	24.82	466958	12.1918	13.4874
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.73	210869	5.5056	6.0907
50)	C2-Phenanthrenes/Anthracenes	28.22	275623	7.1962	7.9610
51)	C3-Phenanthrenes/Anthracenes	29.95	96265	2.5134	2.7805
52)	C4-Phenanthrenes/Anthracenes	30.71	127758	3.3356	3.6901
34)	Dibenzothiophene	24.41	40415	1.2829	1.4193
35)+36)+37)	C1-Dibenzothiophenes	26.21	26281	0.8343	0.9229
38)	C2-Dibenzothiophenes	27.63	31331	0.9946	1.1003
39)	C3-Dibenzothiophenes	29.50	32144	1.0204	1.1288
40)	C4-Dibenzothiophenes	30.22	17656	0.5605	0.6200
58)	Fluoranthene	28.94	153072	4.4237	4.8938
59)	Pyrene	29.70	118274	2.8322	3.1332
62)	C1-Fluoranthenes/Pyrenes	30.85	88639	2.5616	2.8338
63)	C2-Fluoranthenes/Pyrenes	32.57	99534	2.8765	3.1822
64)	C3-Fluoranthenes/Pyrenes	34.12	54986	1.5891	1.7579
65)	C4-Fluoranthenes/Pyrenes	35.67	125934	3.6394	4.0262
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benzo(a)anthracene	33.77	56081	1.4578	1.6128
68)	Chrysene/Triphenylene	33.89	120692	3.1025	3.4322
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	140900	3.1518	3.4867
78)	Benzo(k,j)fluoranthene	37.34	29652	0.7751	0.8574
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.31	44442	1.0277	1.1369
81)	Benzo(a)pyrene	38.46	28023	0.6631	0.7336
89)	Perylene	38.77	8951390	208.1124	230.2285
82)	Indeno(1,2,3-c,d)pyrene	43.19	34608	0.7474	0.8268
83)	Dibenzo(a,h)anthracene	43.23	32070	0.8649	0.9568
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.55	33560	0.8087	0.8946

# Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
Individual Alkyl Isomers and Hopanes				
9) 2-Methylnaphthalene	16.13	50973	2.4680	2.7302
10) 1-Methylnaphthalene	16.47	21658	1.1347	1.2553
11) 2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12) 1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27) 1-Methylfluorene	0.00	0	0.0000	0.0000
35) 4-Methylbenzothiophene	25.90	13388	0.5090	0.5631
36) 2/3-Methylbenzothiophene	26.21	9255	0.3519	0.3893
37) 1-Methylbenzothiophene	26.52	3638	0.1383	0.1530
43) 3-Methylphenanthrene	26.48	35423	1.4276	1.5794
44) 2-Methylphenanthrene	26.59	47179	1.9014	2.1035
45) 2-Methylanthracene	26.76	80753	3.2545	3.6004
46) 4/9-Methylphenanthrene	26.86	21917	0.8833	0.9772
47) 1-Methylphenanthrene	26.93	25597	1.0316	1.1413
48) 3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49) Retene	0.00	0	0.0000	0.0000
60) 2-Methylfluoranthene	0.00	0	0.0000	0.0000
61) Benzo(b)fluorene	0.00	0	0.0000	0.0000
74) C29-Hopane	0.00	0	0.0000	0.0000
75) 18a-Oleanane	0.00	0	0.0000	0.0000
76) C30-Hopane	0.00	0	0.0000	0.0000
91) C20-TAS	0.00	0	0.0000	0.0000
92) C21-TAS	0.00	0	0.0000	0.0000
93) C26(20S)-TAS	0.00	0	0.0000	0.0000
94) C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95) C28(20S)-TAS	0.00	0	0.0000	0.0000
96) C27(20R)-TAS	0.00	0	0.0000	0.0000
97) C28(20R)-TAS	0.00	0	0.0000	0.0000
Surrogate Standards				
2) Naphthalene-d8	13.82	400954	12.91	77.41
21) Acenaphthene-d10	19.67	232507	13.67	81.97
32) Phenanthrene-d10	24.75	465098	15.08	90.39
66) Chrysene-d12	33.81	524018	13.94	83.62
88) Perylene-d12	38.70	287219	8.00	47.97
90) 5(b)H-Cholane	34.24	84409	13.03	78.18
Internal Standards				
1) Fluorene-d10	21.45	283441	16.74	
31) Pyrene-d10	29.63	542745	16.71	
73) Benzo(a)pyrene-d12	38.39	507806	16.69	

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1557.D
 Acq On : 14 Aug 2013 12:15 pm
 Operator : YM
 Sample : SED-DA-038 (1.0-1.5)
 Misc :
 ALS Vial : 37 Sample Multiplier: 0.06667

Quant Time: Aug 15 15:48:24 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	283441m	251.05		0.00
31) Pyrene-d10	29.635	212	542745m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	507806m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	400954m	12.91		0.00
21) Acenaphthene-d10	19.672	164	232507m	13.67		0.00
32) Phenanthrene-d10	24.752	188	465098m	15.08		0.00
66) Chrysene-d12	33.809	240	524018m	13.94		0.00
88) Perylene-d12	38.697	264	287219m	8.00		0.00
90) 5(b)H-Cholane	34.235	217	84409m	13.03		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	109991m	3.35		
9) 2-Methylnaphthalene	16.134	142	50973m	2.47		
10) 1-Methylnaphthalene	16.468	142	21658m	1.13		
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.586	156	115636m	3.52		
14) C3-Naphthalenes	20.368	170	82869m	2.52		
15) C4-Naphthalenes	21.566	184	77491m	2.36		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	19.171	152	6796m	0.24		
24) Acenaphthene	19.783	154	4971m	0.28		
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	21.538	166	89502m	3.81		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	23.506	180	40529m	1.73		
29) C2-Fluorenes	25.341	194	54628m	2.33		
30) C3-Fluorenes	26.761	208	133439m	5.69		
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.406	184	40415m	1.28		
35) 4-Methyldibenzothiophene	25.895	198	13388m	0.51		
36) 2/3-Methyldibenzothiop...	26.207	198	9255m	0.35		
37) 1-Methyldibenzothiophene	26.518	198	3638m	0.14		
38) C2-Dibenzothiophenes	27.626	212	31331m	0.99		
39) C3-Dibenzothiophenes	29.496	226	32144m	1.02		
40) C4-Dibenzothiophenes	30.223	240	17656m	0.56		
41) Phenanthrene	24.822	178	466958m	12.19		
42) Anthracene	24.995	178	19284m	0.59		
43) 3-Methylphenanthrene	26.484	192	35423m	1.43		

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1557.D
 Acq On : 14 Aug 2013 12:15 pm
 Operator : YM
 Sample : SED-DA-038 (1.0-1.5)
 Misc :
 ALS Vial : 37 Sample Multiplier: 0.06667

Quant Time: Aug 15 15:48:24 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.588	192	47179m	1.90		
45) 2-Methylantracene	26.761	192	80753m	3.25		
46) 4/9-Methylphenanthrene	26.865	192	21917m	0.88		
47) 1-Methylphenanthrene	26.934	192	25597m	1.03		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.215	206	275623m	7.20		
51) C3-Phenanthrenes/Anthr...	29.946	220	96265m	2.51		
52) C4-Phenanthrenes/Anthr...	30.708	234	127758m	3.34		
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.942	202	153072m	4.42		
59) Pyrene	29.704	202	118274m	2.83		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	30.847	216	88639m	2.56		
63) C2-Fluoranthenes/Pyrenes	32.567	230	99534m	2.88		
64) C3-Fluoranthenes/Pyrenes	34.119	244	54986m	1.59		
65) C4-Fluoranthenes/Pyrenes	35.671	258	125934m	3.64		
67) Benz(a)anthracene	33.770	228	56081m	1.46		
68) Chrysene/Triphenylene	33.886	228	120692m	3.10		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	140900m	3.15		
78) Benzo(k,j)fluoranthene	37.339	252	29652m	0.78		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	44442m	1.03		
81) Benzo(a)pyrene	38.464	252	28023m	0.66		
82) Indeno(1,2,3-c,d)pyrene	43.189	276	34608m	0.75		
83) Dibenzo(a,h)anthracene	43.225	278	32070m	0.86		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.553	276	33560m	0.81		
89) Perylene	38.774	252	8951386m	208.11		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS70055\
Data File : ARC1557.D
Acq On : 14 Aug 2013 12:15 pm
Operator : YM
Sample : SED-DA-038 (1.0-1.5)
Misc :
ALS Vial : 37 Sample Multiplier: 0.06667

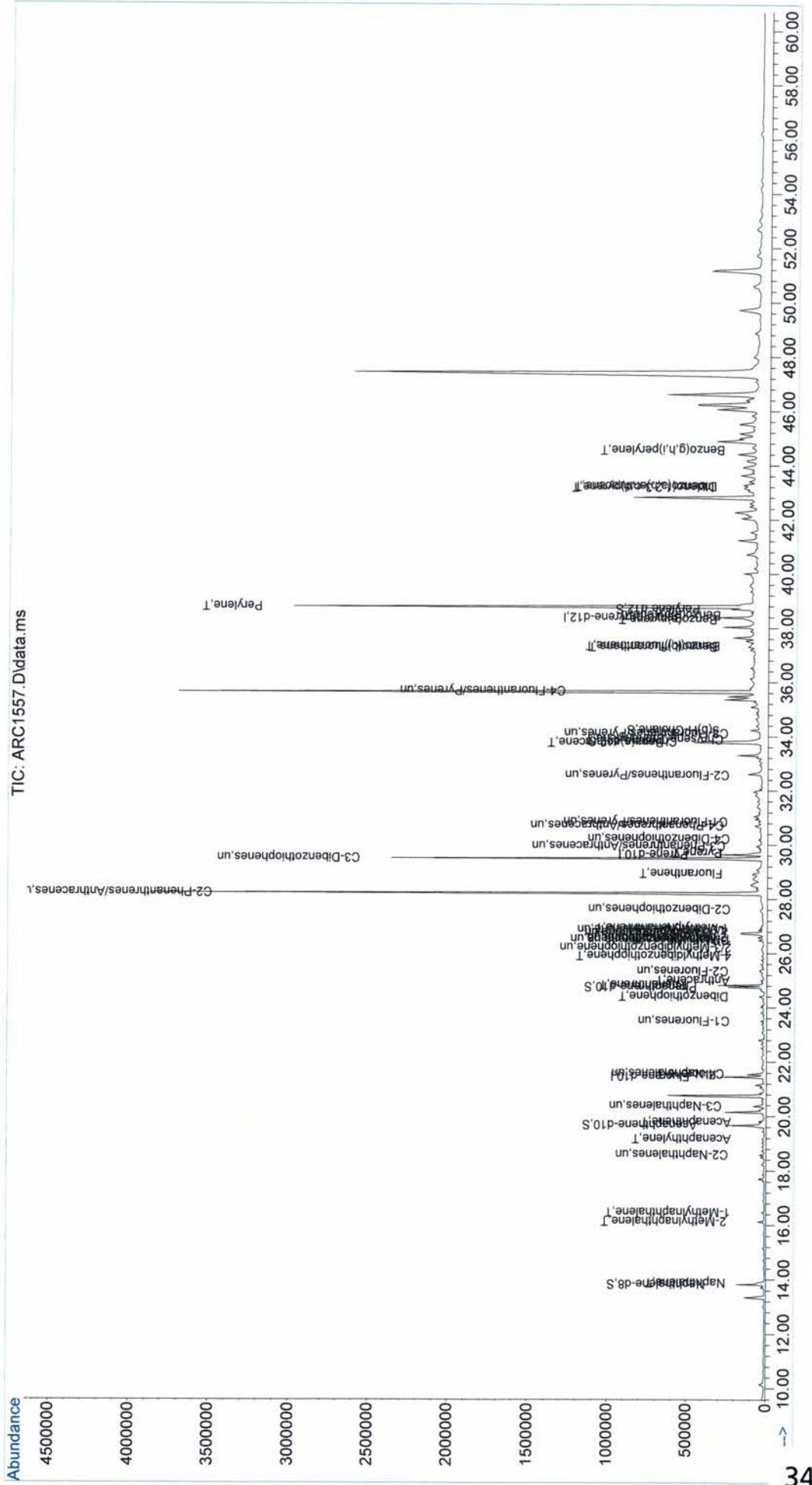
Quant Time: Aug 15 15:48:24 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\2\data\MS70055\
 Data File : ARC1557.D
 Acq On : 14 Aug 2013 12:15 pm
 Operator : YM
 Sample : SED-DA-038 (1.0-1.5)
 Misc :
 ALS Vial : 37 Sample Multiplier: 0.06667

Quant Time: Aug 15 15:48:24 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration



**Aliphatic Hydrocarbons/
Total Petroleum Hydrocarbons/
Initial Calibration Data
and
Initial Calibration Verification Data**

**TPH/Aliphatic
ICAL
FID1C08FRONT081213.M**

GC/FID-1 FRONT

Method Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Method File : FID1C08FRONT081213.M
 Title : C8 - C40 aliphatic
 Last Update : Mon Aug 12 13:56:00 2013
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	1	50	P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID10072C.D
2	2	10	50	P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID10072D.D
3	3	25	50	P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID10072E.D
4	4	40	50	P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID10072F.D
5	5	50	50	P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID10072G.D
6	6	100	50	P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID10072H.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 12 11:25 2013	Aug 12 11:24 2013	09-Aug-2013, 22:41:20
2	2	Aug 12 11:33 2013	Aug 12 11:33 2013	09-Aug-2013, 23:51:52
3	3	Aug 12 11:43 2013	Aug 12 11:43 2013	10-Aug-2013, 01:02:24
4	4	Aug 12 11:48 2013	Aug 12 11:47 2013	10-Aug-2013, 02:13:04
5	5	Aug 12 13:33 2013	Aug 12 13:33 2013	10-Aug-2013, 03:23:38
6	6	Aug 12 13:44 2013	Aug 12 13:44 2013	10-Aug-2013, 04:34:12

FID1C08FRONT081213.M Mon Aug 12 13:56:59 2013

Response Factor Report HP5890

Method Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Method File : FID1C08FRONT081213.M
 Title : C8 - C40 aliphatic
 Last Update : Mon Aug 12 13:56:00 2013
 Response Via : Initial Calibration

8/12/13
 JN

Calibration Files

1 =FID10072C.D 2 =FID10072D.D 3 =FID10072E.D
 4 =FID10072F.D 5 =FID10072G.D 6 =FID10072H.D

Compound		1	2	3	4	5	6	Avg	%RSD

1) I	n-hexadecane-d34	-----ISTD-----							
2)	n-C8	0.942	0.978	0.967	0.962	0.985	0.839	0.945	5.74
3)	n-C9	1.012	1.042	1.027	1.036	1.045	0.899	1.010	5.51
4)	n-C10	1.105	1.117	1.102	1.115	1.116	0.966	1.087	5.48
5)	n-C11	1.133	1.134	1.119	1.134	1.130	0.979	1.105	5.60
6) S	n-dodecane-d26	1.053	1.052	1.043	1.081	1.045	0.921	1.033	5.47
7)	n-C12	1.187	1.192	1.178	1.169	1.187	1.026	1.156	5.58
8)	i-13	1.173	1.190	1.174	1.186	1.181	1.020	1.154	5.72
9)	i-14	1.200	1.229	1.208	1.212	1.213	1.049	1.185	5.70
10)	n-C13	1.173	1.190	1.174	1.186	1.181	1.020	1.154	5.72
11)	i-15	1.243	1.234	1.214	1.218	1.217	1.052	1.196	5.99
12)	n-C14	1.200	1.229	1.208	1.212	1.213	1.049	1.185	5.70
13)	i-16	1.252	1.242	1.218	1.215	1.221	1.053	1.200	6.12
14)	n-C15	1.244	1.234	1.214	1.218	1.217	1.052	1.196	5.99
15)	n-C16	1.252	1.242	1.218	1.215	1.221	1.053	1.200	6.12
16) I	5a-androstane	-----ISTD-----							
17)	i-18	0.987	0.999	0.988	0.997	0.992	0.864	0.971	5.45
18)	n-C17	1.022	1.017	1.008	1.005	1.012	0.881	0.991	5.45
19)	Pristane	1.008	1.016	1.002	1.004	1.008	0.878	0.986	5.38
20)	n-C18	0.987	0.999	0.988	0.997	0.992	0.864	0.971	5.45
21)	Phytane	1.007	1.016	1.007	1.013	1.011	0.880	0.989	5.42
22)	n-C19	0.980	0.994	0.983	0.990	0.987	0.858	0.965	5.49
23) S	n-eicosane-d42	0.781	0.784	0.778	0.808	0.776	0.690	0.769	5.31
24)	n-C20	0.983	0.995	0.985	0.992	0.987	0.857	0.967	5.57
25)	n-C21	0.986	1.006	0.992	0.990	0.995	0.864	0.972	5.48
26)	n-C22	0.987	1.005	0.992	0.997	0.992	0.860	0.972	5.67
27)	n-C23	0.984	1.010	0.996	0.988	0.997	0.863	0.973	5.61
28)	n-C24	0.988	1.010	0.996	0.985	0.994	0.860	0.972	5.70
29)	n-C25	0.993	1.009	0.994	0.991	0.993	0.860	0.973	5.76
30)	n-C26	0.984	1.008	0.995	0.997	0.993	0.859	0.973	5.77
31)	n-C27	0.972	0.985	0.969	0.970	0.968	0.836	0.950	5.94
32)	n-C28	0.979	0.999	0.985	0.984	0.983	0.849	0.963	5.86
33)	n-C29	0.981	1.006	0.987	0.988	0.989	0.853	0.967	5.87
34) S	n-triacontane...	0.770	0.767	0.759	0.781	0.755	0.662	0.749	5.82
35)	n-C30	0.973	0.997	0.981	0.978	0.980	0.843	0.959	5.95
36)	n-C31	0.947	0.984	0.969	0.969	0.968	0.831	0.945	6.04
37)	n-C32	0.950	0.976	0.963	0.950	0.962	0.820	0.937	6.20
38)	n-C33	0.922	0.955	0.944	0.941	0.938	0.793	0.916	6.66
39)	n-C34	0.923	0.972	0.957	0.954	0.953	0.795	0.926	7.14
40)	n-C35	0.898	0.951	0.937	0.938	0.935	0.765	0.904	7.77
41)	n-C36	0.987	1.033	1.018	0.998	1.011	0.804	0.975	8.74
42)	n-C37	0.915	0.937	0.923	0.926	0.920	0.720	0.890	9.42
43)	n-C38	0.889	0.933	0.916	0.922	0.916	0.681	0.876	11.02
44)	n-C39	0.856	0.893	0.883	0.888	0.884	0.632	0.839	12.19
45)	n-C40	0.817	0.846	0.830	0.829	0.825	0.570	0.786	13.50
46)	TPH	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41
47)	TRH1	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41
48)	TRH2	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41
49)	TRH3	0.947	0.967	0.954	0.960	0.959	0.811	0.933	6.43
50)	TRH4	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41
51)	TRH5	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41
52)	TRH6	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41

53)	GRO	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41
54)	DRO	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41
55)	RRO	0.947	0.967	0.954	0.960	0.957	0.811	0.932	6.41

(#) = Out of Range

FID1C08FRONT081213.M Mon Aug 12 13:56:11 2013

Area for TPH Calculations

Last Calibration Update Mon Aug 12 13:44:47 2013

Quant Method FID3C08FRONT081213.M

	Level 1 FID10072C.D	Level 2 FID10072D.D	Level 3 FID10072E.D	Level 4 FID10072F.D	Level 5 FID10072G.D	Level 6 FID10072H.D
n-C8	7835	60881	151774	249601	304134	623017
n-C9	8414	64822	161060	268916	322395	667371
n-C10	9188	69487	172851	289493	344565	716973
n-C11	9431	70609	175762	294236	349134	727385
n-C12	9688	72874	181575	303320	359829	747950
n-C13	9749	74167	184420	307904	365084	758593
n-C14	9915	75964	188356	314522	372247	773506
n-C15	10285	76336	189485	316090	373681	776888
n-C16	10307	76441	189036	315284	373193	773826
n-C17	10319	77023	191837	319083	377591	783800
Pristane	10209	77192	191288	318719	377227	783178
n-C18	10091	76668	190378	316692	375036	778062
Phytane	10270	77638	193432	321545	380960	789819
n-C19	10007	76134	189264	314213	372377	771195
n-C20	10062	76440	189971	315142	373335	773084
n-C21	9989	76391	189444	314258	372512	770938
n-C22	10109	77112	191215	316580	375185	775221
n-C23	9957	76609	189917	313847	372683	768898
n-C24	9983	76461	189620	312831	371158	765498
n-C25	10120	77015	190787	314703	373751	770909
n-C26	10077	77378	191989	316618	375732	774878
n-C27	9944	75498	186780	307905	365888	752035
n-C28	10003	76555	189697	312589	371331	763889
n-C29	10037	77143	190396	313804	373802	768107
n-C30	9909	76071	188277	310396	368399	755730
n-C31	9679	75408	186700	307667	365761	747566
n-C32	9583	73797	183063	301767	358608	728166
n-C33	9428	73205	181822	298748	354278	713661
n-C34	9422	74340	183904	302933	359337	713804
n-C35	9176	72905	180602	297795	353293	688923
n-C36	9883	77581	192250	316827	374347	709480
n-C37	9362	71885	177939	293962	347714	648312
n-C38	9104	71582	176698	292870	346254	613891
n-C39	8753	68413	170120	281825	333858	568788
n-C40	8331	64688	159630	263293	311044	512319
Average Area (use for TPH, TRPH, GRO, DRO, RRO)	9675	74077	183753	304457	361306	730162
Average of n-C38 & n-C40	8718	68135	168164	278082	328649	563105
n-C36/n-C20	0.98	1.01	1.01	1.01	1.00	0.92

For Isoprenoids (other than Pristane and Phytane) use area for normal alkane; i-C13 use n-C13

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072C.D
 Signal(s) : FID1A.CH
 Acq On : 09-Aug-2013, 22:41:20
 Operator : Meghan Dailey
 Sample : AL-WKC1-1.25-019
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:24:57 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Tue Aug 06 14:24:50 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.015	332437	50.000 ug/mlm
16) I 5a-androstane	18.316	409424	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.712	8753	1.285 ug/mlm
23) S n-eicosane-d42	17.704	8034	1.278 ug/mlm
34) S n-triacontane-d62	29.630	7875	1.289 ug/mlm
Target Compounds			
2) n-C8	3.566	7835	1.225 ug/mlm
3) n-C9	4.886	8414	1.244 ug/mlm
4) n-C10	6.300	9188	1.272 ug/mlm
5) n-C11	7.656	9431	1.289 ug/mlm
7) n-C12	8.918	9688	1.273 ug/mlm
8) i-13	0.000	0	N.D. ug/mlm
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.092	9749	1.282 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.189	9915	1.267 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.222	10285	1.297 ug/mlm
15) n-C16	13.267	10307	1.288 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.381	10319	1.298 ug/mlm
19) Pristane	14.500	10209	1.290 ug/mlm
20) n-C18	15.568	10091	1.284 ug/mlm
21) Phytane	15.733	10270	1.282 ug/mlm
22) n-C19	16.816	10007	1.274 ug/mlm
24) n-C20	18.103	10062	1.276 ug/mlm
25) n-C21	19.409	9989	1.256 ug/mlm
26) n-C22	20.715	10109	1.268 ug/mlm
27) n-C23	22.007	9957	1.243 ug/mlm
28) n-C24	23.272	9983	1.249 ug/mlm
29) n-C25	24.509	10120	1.266 ug/mlm
30) n-C26	25.711	10077	1.258 ug/mlm
31) n-C27	26.876	9944	1.275 ug/mlm
32) n-C28	28.008	10002	1.266 ug/mlm
33) n-C29	29.104	10037	1.266 ug/mlm
35) n-C30	30.168	9909	1.264 ug/mlm
36) n-C31	31.199	9679	1.258 ug/mlm
37) n-C32	32.197	9583	1.264 ug/mlm
38) n-C33	33.166	9428	1.276 ug/mlm
39) n-C34	34.117	9422	1.255 ug/mlm
40) n-C35	35.153	9176	1.248 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072C.D
 Signal(s) : FID1A.CH
 Acq On : 09-Aug-2013, 22:41:20
 Operator : Meghan Dailey
 Sample : AL-WKC1-1.25-019
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:24:57 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Tue Aug 06 14:24:50 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.333	9883	1.250 ug/mlm
42)	n-C37	37.701	9362	1.298 ug/mlm
43)	n-C38	39.288	9104	1.248 ug/mlm
44)	n-C39	41.166	8753	1.259 ug/mlm
45)	n-C40	43.379	8331	1.289 ug/mlm
46)	TPH	0.000	0	N.D. ug/ml
47)	TRH1	0.000	0	N.D. ug/ml
48)	TRH2	0.000	0	N.D. ug/ml
49)	TRH3	0.000	0	N.D. ug/ml
50)	TRH4	0.000	0	N.D. ug/ml
51)	TRH5	0.000	0	N.D. ug/ml
52)	TRH6	0.000	0	N.D. ug/ml
53)	GRO	0.000	0	N.D. ug/ml
54)	DRO	0.000	0	N.D. ug/ml
55)	RRO	0.000	0	N.D. ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

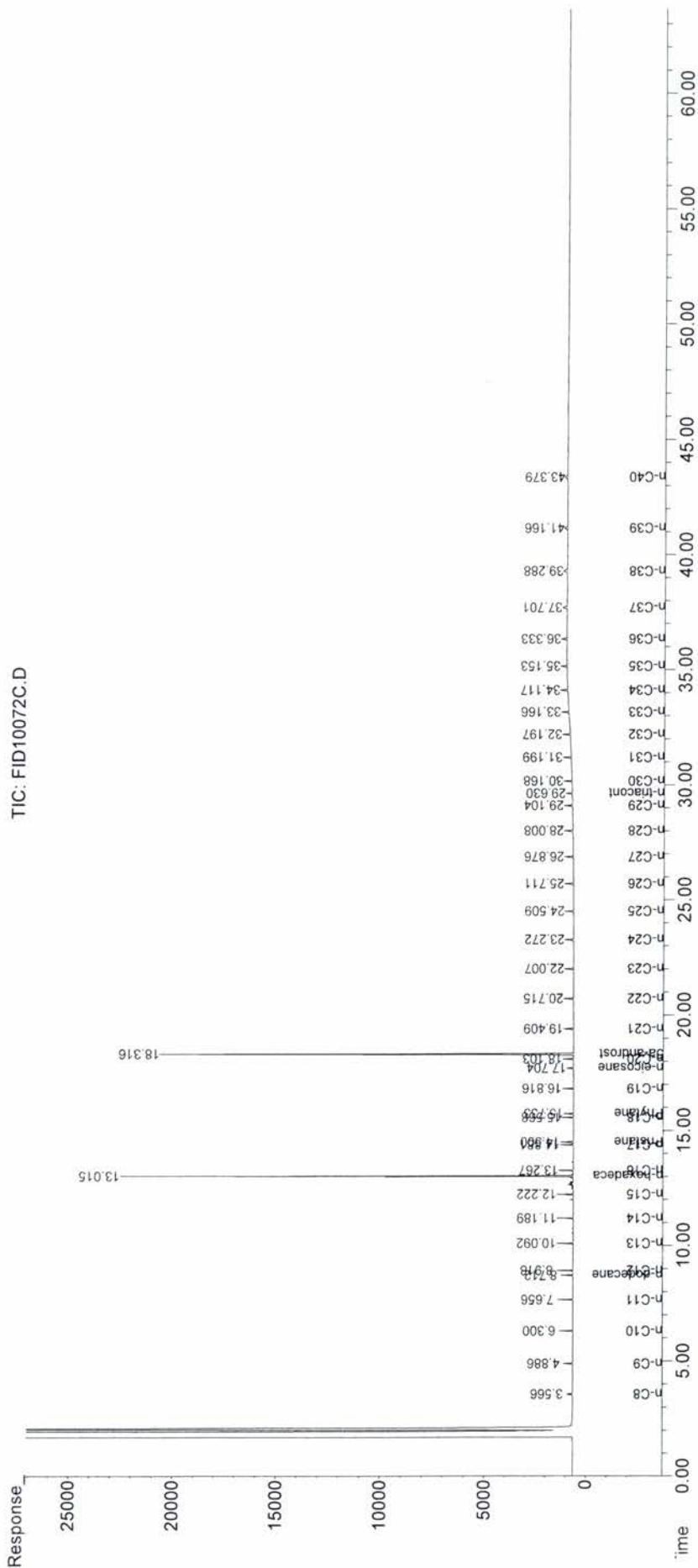
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
Data File : FID10072C.D
Signal(s) : FID1A.CH
Acq On : 09-Aug-2013, 22:41:20
Operator : Meghan Dailey
Sample : AL-WKC1-1.25-019
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 11:24:57 2013
Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Tue Aug 06 14:24:50 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072D.D
 Signal(s) : FID1A.CH
 Acq On : 09-Aug-2013, 23:51:52
 Operator : Meghan Dailey
 Sample : AL-WKC2-10-019
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:33:14 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:25:14 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.015	310911	50.000 ug/mlm
16) I 5a-androstane	18.314	383759	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.711	65434	10.240 ug/mlm
23) S n-eicosane-d42	17.701	60457	10.266 ug/mlm
34) S n-triacontane-d62	29.632	58890	10.244 ug/mlm
Target Compounds			
2) n-C8	3.564	60881	10.232 ug/mlm
3) n-C9	4.885	64822	10.250 ug/mlm
4) n-C10	6.299	69487	10.262 ug/mlm
5) n-C11	7.656	70609	10.300 ug/mlm
7) n-C12	8.918	72874	10.196 ug/mlm
8) i-13	0.000	0	N.D. ug/mlm
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.092	74167	10.400 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.190	75964	10.363 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.222	76336	10.276 ug/mlm
15) n-C16	13.267	76441	10.221 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.381	77023	10.270 ug/mlm
19) Pristane	14.500	77192	10.360 ug/mlm
20) n-C18	15.568	76668	10.388 ug/mlm
21) Phytane	15.733	77638	10.330 ug/mlm
22) n-C19	16.815	76134	10.337 ug/mlm
24) n-C20	18.102	76440	10.324 ug/mlm
25) n-C21	19.408	76391	10.247 ug/mlm
26) n-C22	20.715	77112	10.324 ug/mlm
27) n-C23	22.006	76609	10.236 ug/mlm
28) n-C24	23.274	76461	10.216 ug/mlm
29) n-C25	24.509	77015	10.268 ug/mlm
30) n-C26	25.710	77378	10.319 ug/mlm
31) n-C27	26.877	75498	10.318 ug/mlm
32) n-C28	28.009	76555	10.327 ug/mlm
33) n-C29	29.106	77143	10.378 ug/mlm
35) n-C30	30.168	76071	10.347 ug/mlm
36) n-C31	31.199	75408	10.434 ug/mlm
37) n-C32	32.197	73797	10.320 ug/mlm
38) n-C33	33.167	73205	10.503 ug/mlm
39) n-C34	34.120	74340	10.558 ug/mlm
40) n-C35	35.153	72905	10.579 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072D.D
 Signal(s) : FID1A.CH
 Acq On : 09-Aug-2013, 23:51:52
 Operator : Meghan Dailey
 Sample : AL-WKC2-10-019
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:33:14 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:25:14 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.339	77581	10.408 ug/mlm
42)	n-C37	37.697	71885	10.543 ug/mlm
43)	n-C38	39.296	71582	10.553 ug/mlm
44)	n-C39	41.167	68413	10.467 ug/mlm
45)	n-C40	43.373	64688	10.555 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

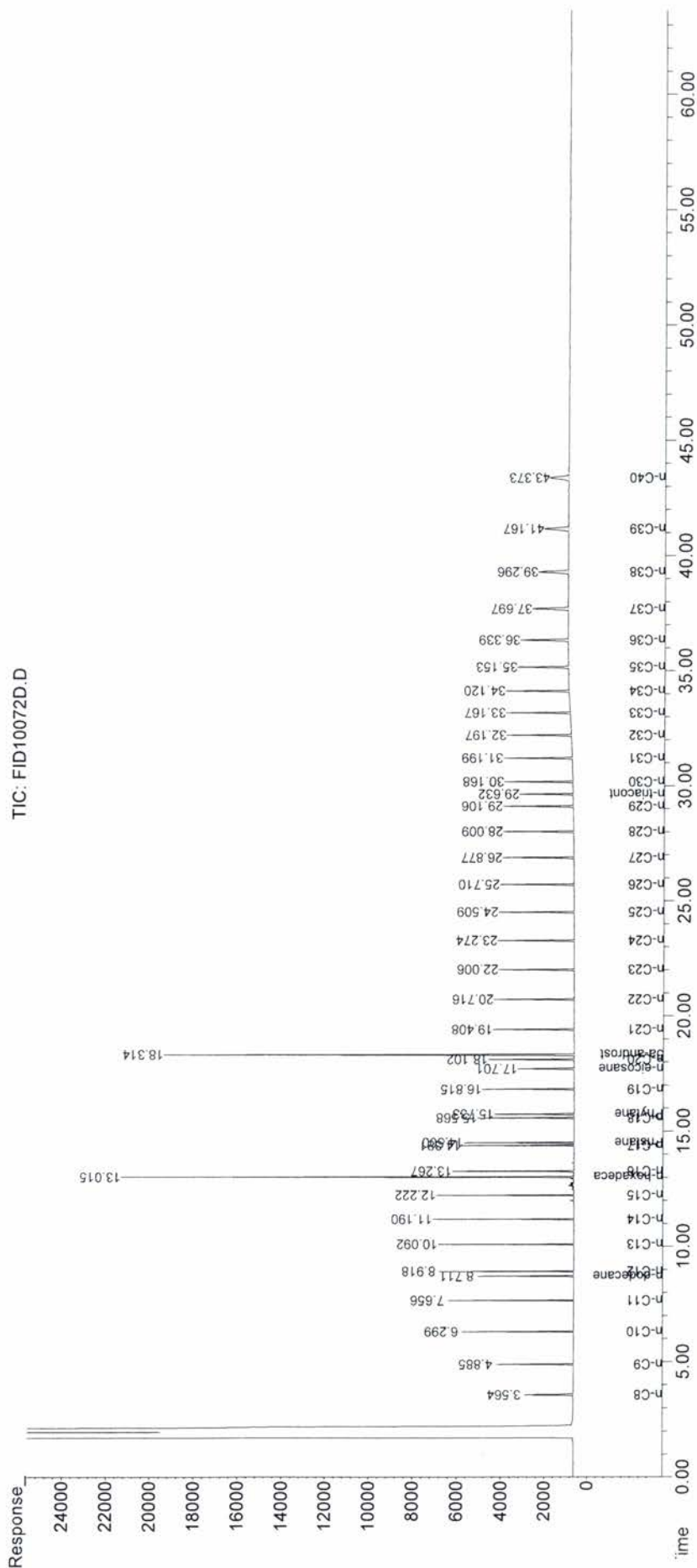
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072D.D
 Signal(s) : FID1A.CH
 Acq On : 09-Aug-2013, 23:51:52
 Operator : Meghan Dailey
 Sample : AL-WKC2-10-019
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:33:14 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:25:14 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :



Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072E.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 01:02:24
 Operator : Meghan Dailey
 Sample : AL-WKC3-25-019
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:43:10 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:33:33 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.014	313640	50.000 ug/mlm
16) I 5a-androstane	18.313	385796	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.712	163594	25.320 ug/mlm
23) S n-eicosane-d42	17.702	150894	25.470 ug/mlm
34) S n-triacontane-d62	29.631	146435	25.333 ug/mlm
Target Compounds			
2) n-C8	3.565	151774	25.327 ug/mlm
3) n-C9	4.886	161060	25.244 ug/mlm
4) n-C10	6.300	172851	25.283 ug/mlm
5) n-C11	7.656	175762	25.366 ug/mlm
7) n-C12	8.919	181575	25.114 ug/mlm
8) i-13	0.000	0	N.D. ug/mlm
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.093	184420	25.561 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.190	188356	25.397 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.223	189485	25.253 ug/mlm
15) n-C16	13.268	189036	25.033 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.382	191837	25.359 ug/mlm
19) Pristane	14.501	191288	25.435 ug/mlm
20) n-C18	15.569	190378	25.599 ug/mlm
21) Phytane	15.735	193432	25.555 ug/mlm
22) n-C19	16.816	189264	25.533 ug/mlm
24) n-C20	18.104	189971	25.522 ug/mlm
25) n-C21	19.411	189444	25.273 ug/mlm
26) n-C22	20.716	191215	25.473 ug/mlm
27) n-C23	22.008	189917	25.260 ug/mlm
28) n-C24	23.275	189620	25.218 ug/mlm
29) n-C25	24.511	190787	25.324 ug/mlm
30) n-C26	25.713	191989	25.494 ug/mlm
31) n-C27	26.879	186780	25.401 ug/mlm
32) n-C28	28.010	189697	25.470 ug/mlm
33) n-C29	29.106	190396	25.471 ug/mlm
35) n-C30	30.171	188277	25.457 ug/mlm
36) n-C31	31.199	186700	25.666 ug/mlm
37) n-C32	32.199	183063	25.438 ug/mlm
38) n-C33	33.168	181822	25.883 ug/mlm
39) n-C34	34.119	183904	25.896 ug/mlm
40) n-C35	35.154	180602	25.981 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072E.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 01:02:24
 Operator : Meghan Dailey
 Sample : AL-WKC3-25-019
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:43:10 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:33:33 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.338	192250	25.551 ug/mlm
42)	n-C37	37.707	177939	25.841 ug/mlm
43)	n-C38	39.299	176698	25.836 ug/mlm
44)	n-C39	41.179	170120	25.849 ug/mlm
45)	n-C40	43.383	159630	25.797 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

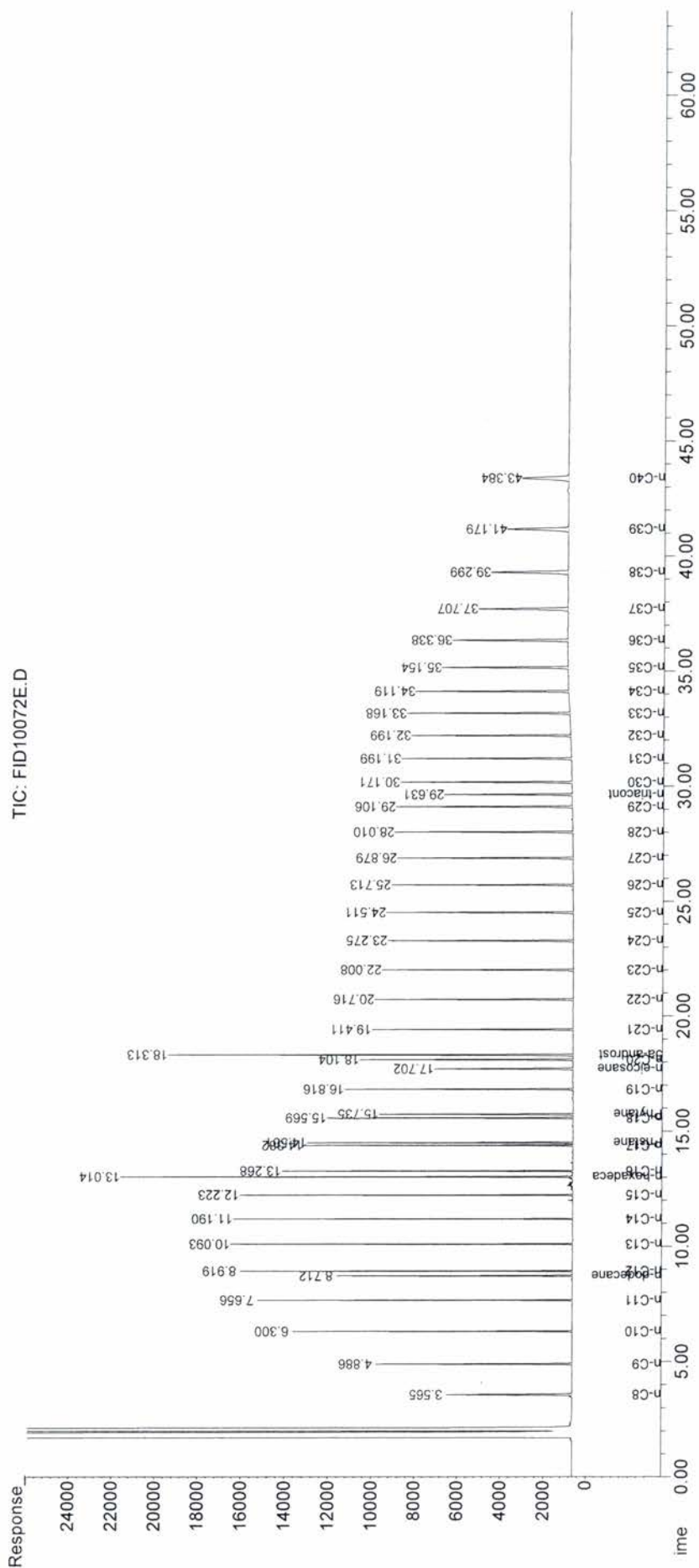
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
Data File : FID10072E.D
Signal(s) : FID1A.CH
Acq On : 10-Aug-2013, 01:02:24
Operator : Meghan Dailey
Sample : AL-WKC3-25-019
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 11:43:10 2013
Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 11:33:33 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072F.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 02:13:04
 Operator : Meghan Dailey
 Sample : AL-WKC4-40-019
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:47:57 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:43:23 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.014	324181	50.000 ug/mlm
16) I 5a-androstane	18.313	397190	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.714	280475	41.969 ug/mlm
23) S n-eicosane-d42	17.706	258223	42.322 ug/mlm
34) S n-triacontane-d62	29.636	248031	41.661 ug/mlm
Target Compounds			
2) n-C8	3.565	249601	40.298 ug/mlm
3) n-C9	4.887	268916	40.818 ug/mlm
4) n-C10	6.301	289493	40.994 ug/mlm
5) n-C11	7.657	294236	41.084 ug/mlm
7) n-C12	8.921	303320	40.553 ug/mlm
8) i-13	0.000	0	N.D. ug/mlm
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.094	307904	41.245 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.192	314522	41.002 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.225	316090	40.753 ug/mlm
15) n-C16	13.271	315284	40.442 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.384	319083	40.859 ug/mlm
19) Pristane	14.503	318719	41.049 ug/mlm
20) n-C18	15.571	316692	41.294 ug/mlm
21) Phytane	15.736	321545	41.187 ug/mlm
22) n-C19	16.819	314213	41.130 ug/mlm
24) n-C20	18.106	315142	41.109 ug/mlm
25) n-C21	19.414	314258	40.733 ug/mlm
26) n-C22	20.720	316580	40.984 ug/mlm
27) n-C23	22.010	313847	40.576 ug/mlm
28) n-C24	23.278	312831	40.439 ug/mlm
29) n-C25	24.514	314703	40.614 ug/mlm
30) n-C26	25.716	316618	40.877 ug/mlm
31) n-C27	26.880	307905	40.705 ug/mlm
32) n-C28	28.012	312589	40.789 ug/mlm
33) n-C29	29.109	313804	40.791 ug/mlm
35) n-C30	30.172	310396	40.743 ug/mlm
36) n-C31	31.204	307667	41.029 ug/mlm
37) n-C32	32.203	301767	40.641 ug/mlm
38) n-C33	33.171	298748	41.154 ug/mlm
39) n-C34	34.125	302933	41.272 ug/mlm
40) n-C35	35.160	297795	41.442 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072F.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 02:13:04
 Operator : Meghan Dailey
 Sample : AL-WKC4-40-019
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:47:57 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:43:23 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.343	316827	40.709 ug/mlm
42)	n-C37	37.709	293962	41.283 ug/mlm
43)	n-C38	39.303	292870	41.482 ug/mlm
44)	n-C39	41.178	281825	41.451 ug/mlm
45)	n-C40	43.399	263293	41.164 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

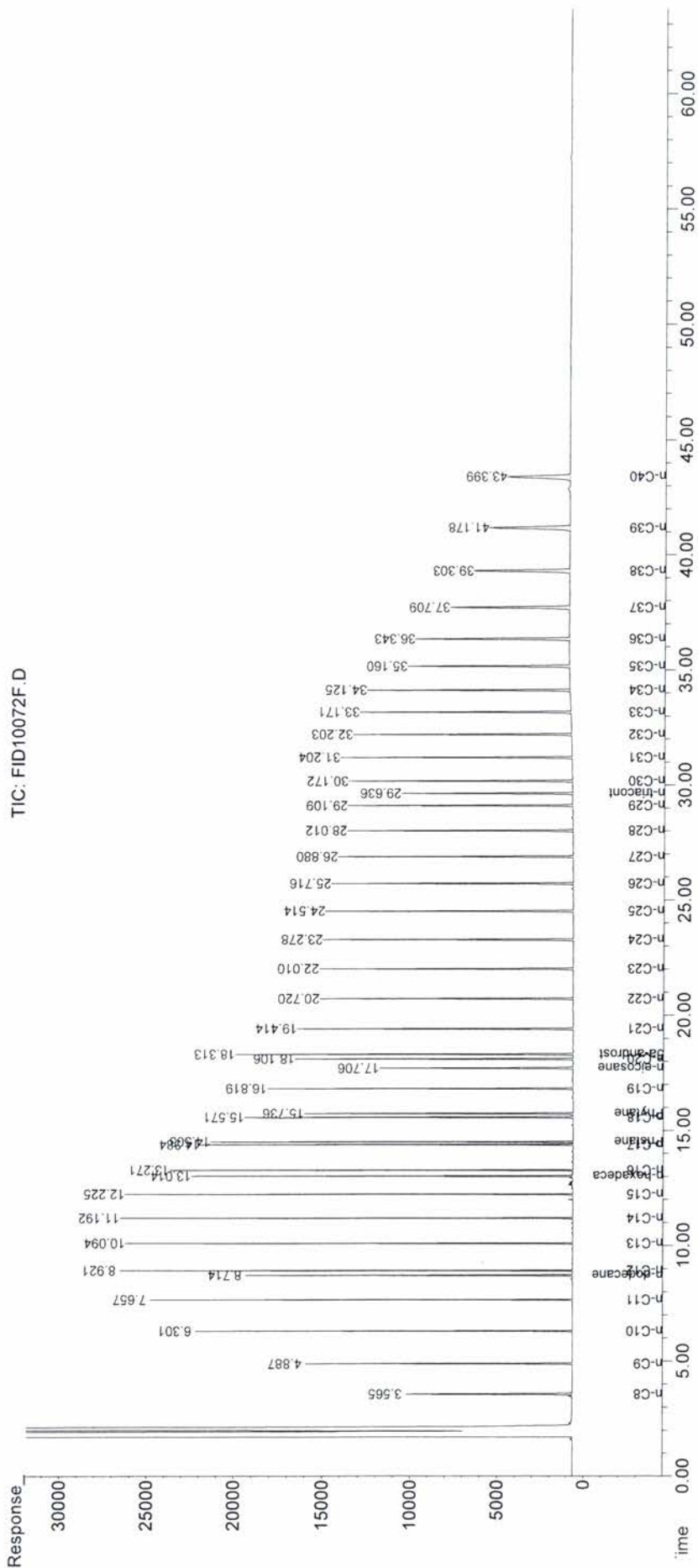
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072F.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 02:13:04
 Operator : Meghan Dailey
 Sample : AL-WKC4-40-019
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 11:47:57 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:43:23 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :



Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072G.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 03:23:38
 Operator : Meghan Dailey
 Sample : AL-WKC5-50-019
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 13:33:18 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:48:17 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.013	308613	50.000 ug/mlm
16) I 5a-androstane	18.313	378201	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.713	322525	50.682 ug/mlm
23) S n-eicosane-d42	17.706	294905	50.741 ug/mlm
34) S n-triacontane-d62	29.635	285310	50.396 ug/mlm
Target Compounds			
2) n-C8	3.565	304134	51.981 ug/mlm
3) n-C9	4.886	322395	51.633 ug/mlm
4) n-C10	6.300	344565	51.353 ug/mlm
5) n-C11	7.657	349134	51.238 ug/mlm
7) n-C12	8.920	359829	50.512 ug/mlm
8) i-13	0.000	0	N.D. ug/mlm
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.094	365084	51.349 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.191	372247	50.962 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.225	373681	50.626 ug/mlm
15) n-C16	13.271	373193	50.339 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.385	377591	50.678 ug/mlm
19) Pristane	14.504	377227	50.915 ug/mlm
20) n-C18	15.573	375036	51.288 ug/mlm
21) Phytane	15.738	380960	51.170 ug/mlm
22) n-C19	16.820	372377	51.157 ug/mlm
24) n-C20	18.109	373335	51.145 ug/mlm
25) n-C21	19.415	372512	50.713 ug/mlm
26) n-C22	20.722	375185	51.025 ug/mlm
27) n-C23	22.012	372683	50.637 ug/mlm
28) n-C24	23.279	371158	50.432 ug/mlm
29) n-C25	24.513	373751	50.721 ug/mlm
30) n-C26	25.717	375732	51.009 ug/mlm
31) n-C27	26.881	365888	50.874 ug/mlm
32) n-C28	28.014	371331	50.960 ug/mlm
33) n-C29	29.111	373802	51.123 ug/mlm
35) n-C30	30.173	368399	50.846 ug/mlm
36) n-C31	31.203	365761	51.294 ug/mlm
37) n-C32	32.203	358608	50.749 ug/mlm
38) n-C33	33.171	354278	51.286 ug/mlm
39) n-C34	34.125	359337	51.413 ug/mlm
40) n-C35	35.161	353293	51.635 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072G.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 03:23:38
 Operator : Meghan Dailey
 Sample : AL-WKC5-50-019
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 13:33:18 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 11:48:17 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.346	374347	50.492	ug/mlm
42)	n-C37	37.711	347714	51.269	ug/mlm
43)	n-C38	39.305	346254	51.496	ug/mlm
44)	n-C39	41.183	333858	51.579	ug/mlm
45)	n-C40	43.394	311044	51.030	ug/mlm
46)	TPH	0.000	0	N.D.	ug/ml
47)	TRH1	0.000	0	N.D.	ug/ml
48)	TRH2	0.000	0	N.D.	ug/ml
49)	TRH3	0.000	0	N.D.	ug/ml
50)	TRH4	0.000	0	N.D.	ug/ml
51)	TRH5	0.000	0	N.D.	ug/ml
52)	TRH6	0.000	0	N.D.	ug/ml
53)	GRO	0.000	0	N.D.	ug/ml
54)	DRO	0.000	0	N.D.	ug/ml
55)	RRO	0.000	0	N.D.	ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

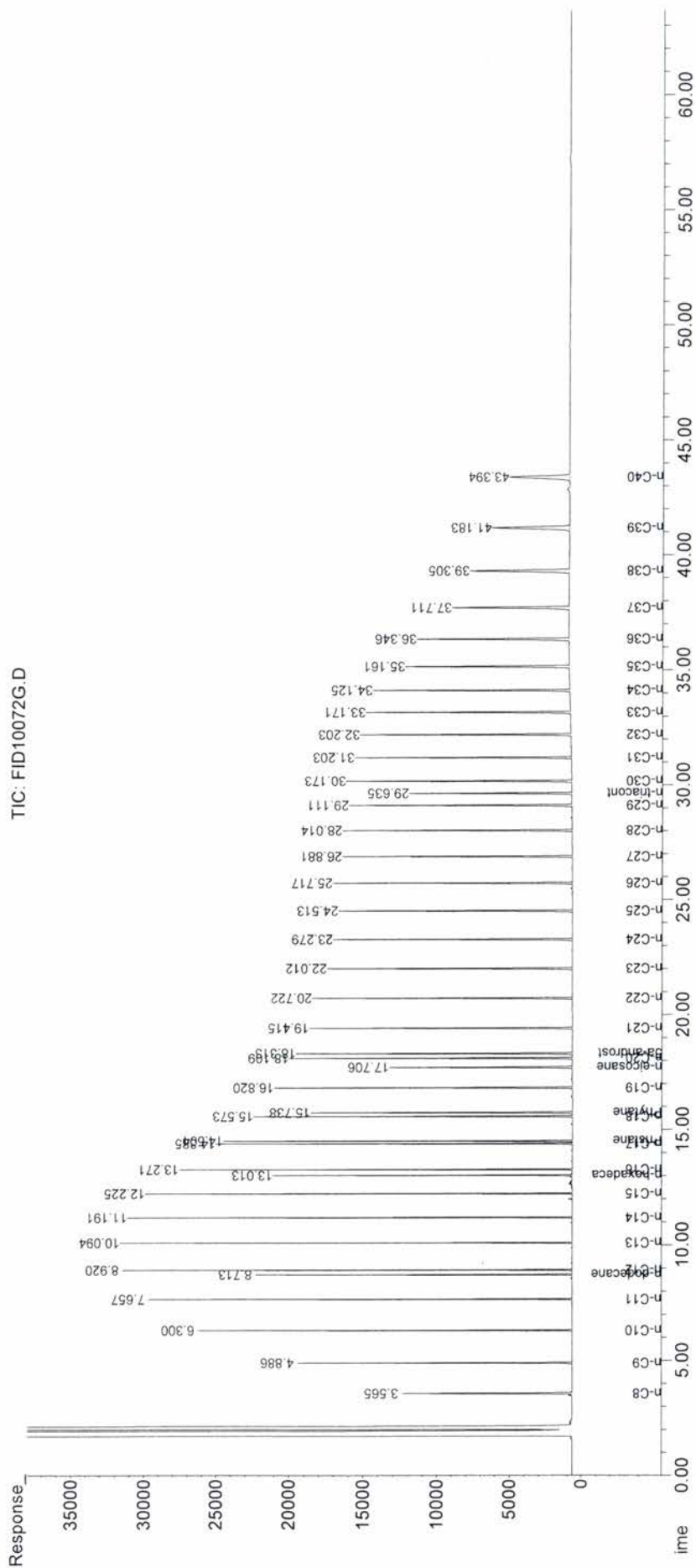
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
Data File : FID10072G.D
Signal(s) : FID1A.CH
Acq On : 10-Aug-2013, 03:23:38
Operator : Meghan Dailey
Sample : AL-WKC5-50-019
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 13:33:18 2013
Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 11:48:17 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072H.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 04:34:12
 Operator : Meghan Dailey
 Sample : AL-WKC6-100-019
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 13:44:37 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:33:35 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.014	371024	50.000 ug/mlm
16) I 5a-androstane	18.315	450671	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.717	683310	89.210 ug/mlm
23) S n-eicosane-d42	17.713	624705	90.262 ug/mlm
34) S n-triacontane-d62	29.645	596520	88.508 ug/mlm
Target Compounds			
2) n-C8	3.567	623017	88.572 ug/mlm
3) n-C9	4.889	667371	88.911 ug/mlm
4) n-C10	6.304	716973	88.847 ug/mlm
5) n-C11	7.661	727385	88.730 ug/mlm
7) n-C12	8.925	747950	87.212 ug/mlm
8) i-13	0.000	0	N.D. ug/mlm
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.099	758593	88.631 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.197	773506	87.998 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.230	776888	87.527 ug/mlm
15) n-C16	13.276	773826	86.825 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.392	783800	88.088 ug/mlm
19) Pristane	14.511	783178	88.468 ug/mlm
20) n-C18	15.579	778062	89.167 ug/mlm
21) Phytane	15.745	789819	88.877 ug/mlm
22) n-C19	16.829	771195	88.849 ug/mlm
24) n-C20	18.119	773084	88.901 ug/mlm
25) n-C21	19.425	770938	88.135 ug/mlm
26) n-C22	20.732	775221	88.585 ug/mlm
27) n-C23	22.024	768898	87.775 ug/mlm
28) n-C24	23.291	765498	87.434 ug/mlm
29) n-C25	24.527	770909	87.957 ug/mlm
30) n-C26	25.732	774878	88.449 ug/mlm
31) n-C27	26.895	752035	87.892 ug/mlm
32) n-C28	28.027	763889	88.097 ug/mlm
33) n-C29	29.124	768107	88.249 ug/mlm
35) n-C30	30.187	755730	87.622 ug/mlm
36) n-C31	31.218	747566	88.005 ug/mlm
37) n-C32	32.215	728166	86.441 ug/mlm
38) n-C33	33.185	713661	86.629 ug/mlm
39) n-C34	34.136	713804	85.582 ug/mlm
40) n-C35	35.175	688923	84.364 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072H.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 04:34:12
 Operator : Meghan Dailey
 Sample : AL-WKC6-100-019
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 13:44:37 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:33:35 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.360	709480	80.205 ug/mlm
42)	n-C37	37.727	648312	80.132 ug/mlm
43)	n-C38	39.330	613891	76.553 ug/mlm
44)	n-C39	41.198	568788	73.680 ug/mlm
45)	n-C40	43.419	512319	70.511 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

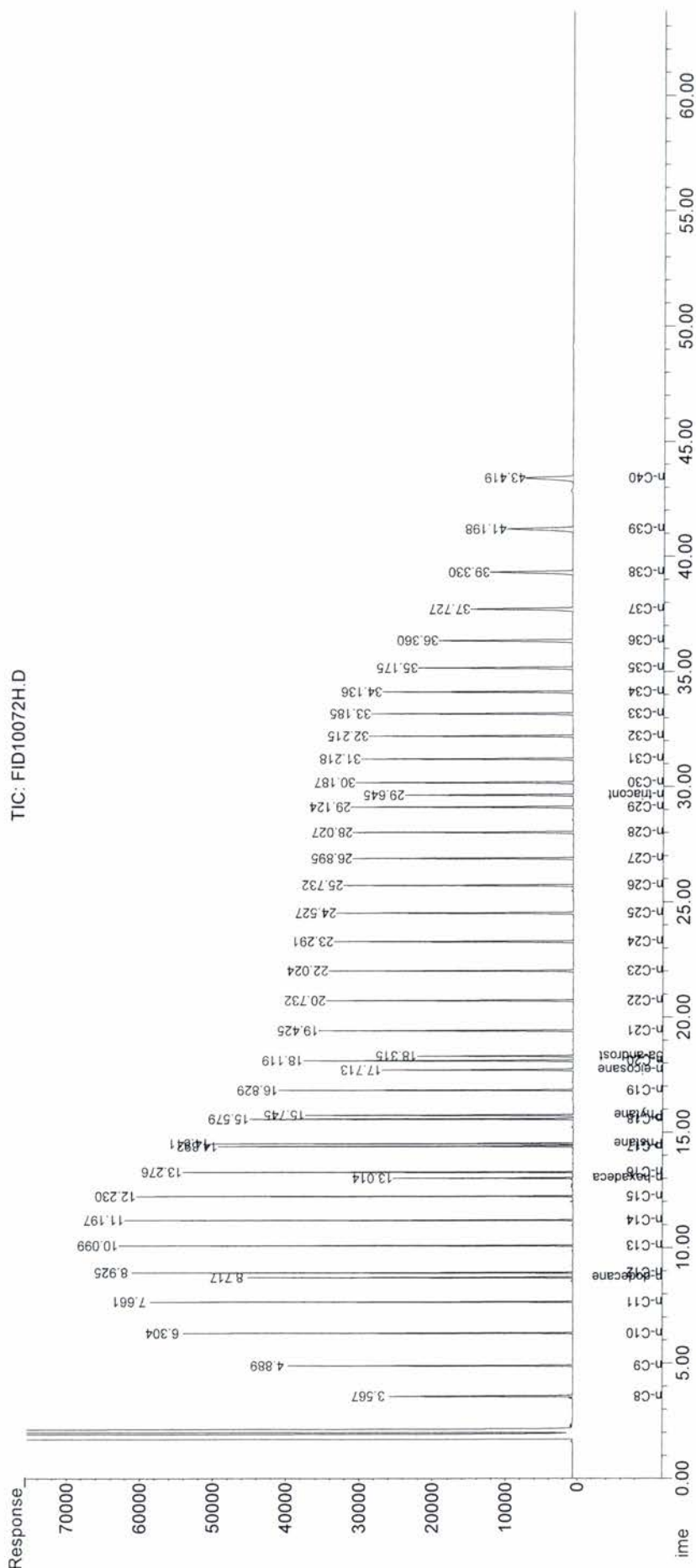
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072H.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 04:34:12
 Operator : Meghan Dailey
 Sample : AL-WKC6-100-019
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 13:44:37 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:33:35 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID100721.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 05:44:45
 Operator : Meghan Dailey
 Sample : AL-WKICV-25-002
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 14:02:34 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (Min)
1 I	n-hexadecane-d34	1.000	1.000	0.0	92	0.00
2	n-C8	0.945	1.000	-5.8	95	0.00
3	n-C9	1.010	1.084	-7.3	97	0.00
4	n-C10	1.087	1.141	-5.0	95	0.00
5	n-C11	1.105	1.185	-7.2	98	0.00
6 S	n-dodecane-d26	1.033	1.032	0.1	91	0.00
7	n-C12	1.156	1.230	-6.4	96	0.00
10	n-C13	1.154	1.226	-6.2	96	0.00
12	n-C14	1.185	1.245	-5.1	95	0.00
14	n-C15	1.196	1.264	-5.7	96	0.00
15	n-C16	1.200	1.276	-6.3	97	0.00
16 I	5a-androstane	1.000	1.000	0.0	92	0.00
18	n-C17	0.991	1.040	-4.9	95	0.00
19	Pristane	0.986	1.025	-4.0	94	0.00
20	n-C18	0.971	1.026	-5.7	95	0.00
21	Phytane	0.989	1.024	-3.5	93	0.00
22	n-C19	0.965	1.033	-7.0	96	0.00
23 S	n-eicosane-d42	0.769	0.774	-0.7	91	0.00
24	n-C20	0.967	1.012	-4.7	94	0.00
25	n-C21	0.972	1.042	-7.2	96	0.00
26	n-C22	0.972	1.022	-5.1	95	0.00
27	n-C23	0.973	1.023	-5.1	94	0.00
28	n-C24	0.972	1.017	-4.6	94	0.00
29	n-C25	0.973	0.929	4.5	86	0.00
30	n-C26	0.973	1.015	-4.3	94	0.00
31	n-C27	0.950	1.010	-6.3	96	0.00
32	n-C28	0.963	1.007	-4.6	94	0.00
33	n-C29	0.967	0.999	-3.3	93	0.00
34 S	n-triacontane-d62	0.749	0.744	0.7	90	0.00
35	n-C30	0.959	1.004	-4.7	94	0.00
36	n-C31	0.945	0.970	-2.6	92	0.00
37	n-C32	0.937	0.982	-4.8	94	0.00
38	n-C33	0.916	0.974	-6.3	95	0.00
39	n-C34	0.926	1.006	-8.6	96	0.00
40	n-C35	0.904	0.946	-4.6	93	0.00
41	n-C36	0.975	1.032	-5.8	93	0.00
42	n-C37	0.890	0.929	-4.4	92	0.00
43	n-C38	0.876	0.930	-6.2	93	0.00

44	n-C39	0.839	0.926	-10.4	96	0.00
45	n-C40	0.786	0.877	-11.6	97	0.00

Evaluate Continuing Calibration Report - Not Found

8	i-13	0.019	0.000	100.0#	0#	-9.11#
9	i-14	0.019	0.000	100.0#	0#	-9.81#
11	i-15	0.019	0.000	100.0#	0#	-10.97#
13	i-16	0.020	0.000	100.0#	0#	-11.87#
17	i-18	0.019	0.000	100.0#	0#	-13.84#
46	TPH	0.019	0.000	100.0#	0#	-29.72#
47	TRH1	0.019	0.000	100.0#	0#	-7.93#
48	TRH2	0.019	0.000	100.0#	0#	-16.29#
49	TRH3	0.019	0.000	100.0#	0#	-23.92#
50	TRH4	0.019	0.000	100.0#	0#	-29.06#
51	TRH5	0.019	0.000	100.0#	0#	-34.15#
52	TRH6	0.019	0.000	100.0#	0#	-45.88#
53	GRO	0.019	0.000	100.0#	0#	-5.39#
54	DRO	0.019	0.000	100.0#	0#	-14.64#
55	RRO	0.019	0.000	100.0#	0#	-33.77#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Mon Aug 12 14:02:53 2013

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072I.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 05:44:45
 Operator : Meghan Dailey
 Sample : AL-WKICV-25-002
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 14:02:34 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.014	289116	50.000 ug/mlm
16) I 5a-androstane	18.310	354018	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.712	149214	24.989 ug/mlm
23) S n-eicosane-d42	17.701	137668	25.307 ug/mlm
34) S n-triacontane-d62	29.630	131603	24.853 ug/mlm
Target Compounds			
2) n-C8	3.563	144644	26.460 ug/mlm
3) n-C9	4.885	156643	26.813 ug/mlm
4) n-C10	6.299	164955	26.239 ug/mlm
5) n-C11	7.656	171437	26.832 ug/mlm
7) n-C12	8.919	174739	26.134 ug/mlm
8) i-13	0.000	0	N.D. ug/mlm
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.092	177559	26.605 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.190	178927	26.109 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.223	181812	26.283 ug/mlm
15) n-C16	13.268	182670	26.322 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.382	181623	25.925 ug/mlm
19) Pristane	14.500	179573	25.761 ug/mlm
20) n-C18	15.567	181526	26.439 ug/mlm
21) Phytane	15.733	180548	25.822 ug/mlm
22) n-C19	16.815	182375	26.724 ug/mlm
24) n-C20	18.102	179169	26.217 ug/mlm
25) n-C21	19.409	182554	26.558 ug/mlm
26) n-C22	20.715	180837	26.306 ug/mlm
27) n-C23	22.006	179049	26.025 ug/mlm
28) n-C24	23.272	177592	25.835 ug/mlm
29) n-C25	24.509	163638	23.778 ug/mlm
30) n-C26	25.710	179627	26.117 ug/mlm
31) n-C27	26.876	178663	26.599 ug/mlm
32) n-C28	28.007	177966	26.134 ug/mlm
33) n-C29	29.102	176801	25.853 ug/mlm
35) n-C30	30.166	176735	26.077 ug/mlm
36) n-C31	31.195	171441	25.671 ug/mlm
37) n-C32	32.196	171314	25.868 ug/mlm
38) n-C33	33.164	172109	26.588 ug/mlm
39) n-C34	34.116	177445	27.113 ug/mlm
40) n-C35	35.150	167325	26.175 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072I.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 05:44:45
 Operator : Meghan Dailey
 Sample : AL-WKICV-25-002
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 14:02:34 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.333	178686	25.914 ug/mlm
42)	n-C37	37.695	164276	26.103 ug/mlm
43)	n-C38	39.289	164601	26.569 ug/mlm
44)	n-C39	41.160	163677	27.586 ug/mlm
45)	n-C40	43.376	154699	27.824 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

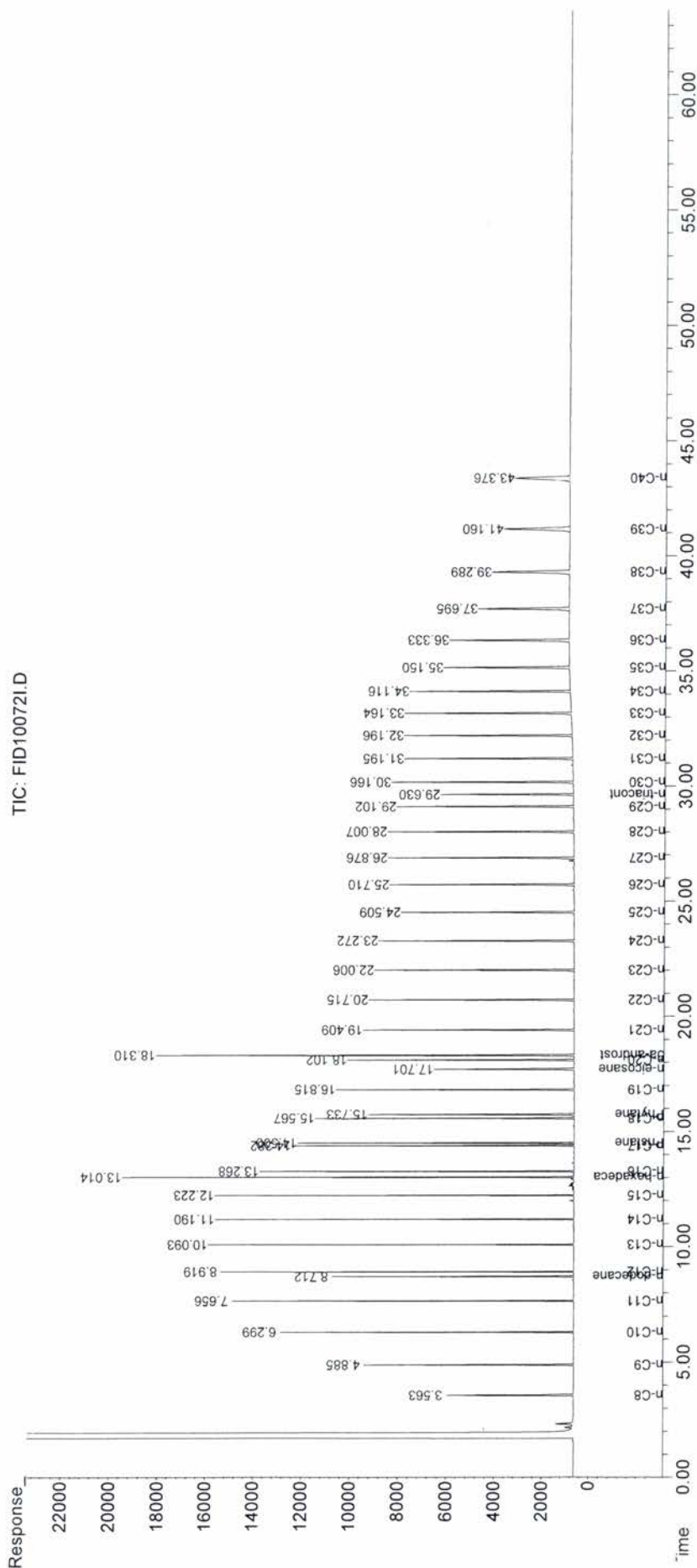
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
Data File : FID100721.D
Signal(s) : FID1A.CH
Acq On : 10-Aug-2013, 05:44:45
Operator : Meghan Dailey
Sample : AL-WKICV-25-002
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 12 14:02:34 2013
Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072J.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 06:55:19
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 14:10:29 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 I	n-hexadecane-d34	1.000	1.000	0.0	88	0.00
2	n-C8	0.945	0.981	-3.8	90	0.00
3	n-C9	1.010	1.032	-2.2	89	0.00
4	n-C10	1.087	1.100	-1.2	88	0.00
5	n-C11	1.105	1.117	-1.1	88	0.00
6 S	n-dodecane-d26	1.033	1.041	-0.8	88	0.00
7	n-C12	1.156	1.176	-1.7	88	0.00
10	n-C13	1.154	1.173	-1.6	88	0.00
12	n-C14	1.185	1.209	-2.0	88	0.00
14	n-C15	1.196	1.212	-1.3	88	0.00
15	n-C16	1.200	1.217	-1.4	88	0.00
16 I	5a-androstane	1.000	1.000	0.0	88	-0.01
18	n-C17	0.991	1.009	-1.8	88	0.00
19	Pristane	0.986	1.007	-2.1	88	0.00
20	n-C18	0.971	0.990	-2.0	88	0.00
21	Phytane	0.989	1.009	-2.0	88	0.00
22	n-C19	0.965	0.984	-2.0	88	0.00
23 S	n-eicosane-d42	0.769	0.780	-1.4	88	0.00
24	n-C20	0.967	0.984	-1.8	88	0.00
25	n-C21	0.972	0.991	-2.0	87	0.00
26	n-C22	0.972	0.987	-1.5	87	0.00
27	n-C23	0.973	0.990	-1.7	87	0.00
28	n-C24	0.972	0.986	-1.4	87	0.00
29	n-C25	0.973	0.985	-1.2	87	0.00
30	n-C26	0.973	0.986	-1.3	87	0.00
31	n-C27	0.950	0.960	-1.1	87	0.00
32	n-C28	0.963	0.976	-1.3	87	0.00
33	n-C29	0.967	0.980	-1.3	87	0.00
34 S	n-triacontane-d62	0.749	0.751	-0.3	87	-0.01
35	n-C30	0.959	0.974	-1.6	87	0.00
36	n-C31	0.945	0.963	-1.9	87	0.00
37	n-C32	0.937	0.958	-2.2	87	0.00
38	n-C33	0.916	0.936	-2.2	87	0.00
39	n-C34	0.926	0.949	-2.5	87	0.00
40	n-C35	0.904	0.926	-2.4	87	0.00
41	n-C36	0.975	0.991	-1.6	85	0.00
42	n-C37	0.890	0.883	0.8	84	0.00
43	n-C38	0.876	0.862	1.6	82	0.00

44	n-C39	0.839	0.810	3.5	80	-0.02
45	n-C40	0.786	0.745	5.2	79	-0.02

Evaluate Continuing Calibration Report - Not Found

8	i-13	0.019	0.000	100.0#	0#	-9.11#
9	i-14	0.019	0.000	100.0#	0#	-9.81#
11	i-15	0.019	0.000	100.0#	0#	-10.97#
13	i-16	0.020	0.000	100.0#	0#	-11.87#
17	i-18	0.019	0.000	100.0#	0#	-13.84#
46	TPH	0.019	0.000	100.0#	0#	-29.72#
47	TRH1	0.019	0.000	100.0#	0#	-7.93#
48	TRH2	0.019	0.000	100.0#	0#	-16.29#
49	TRH3	0.019	0.000	100.0#	0#	-23.92#
50	TRH4	0.019	0.000	100.0#	0#	-29.06#
51	TRH5	0.019	0.000	100.0#	0#	-34.15#
52	TRH6	0.019	0.000	100.0#	0#	-45.88#
53	GRO	0.019	0.000	100.0#	0#	-5.39#
54	DRO	0.019	0.000	100.0#	0#	-14.64#
55	RRO	0.019	0.000	100.0#	0#	-33.77#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Mon Aug 12 14:10:34 2013

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072J.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 06:55:19
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 14:10:29 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

	Compound	R.T.	Response	Conc Units
41)	n-C36	36.330	163820	24.886 ug/mlm
42)	n-C37	37.693	149081	24.813 ug/mlm
43)	n-C38	39.283	145612	24.620 ug/mlm
44)	n-C39	41.145	136754	24.143 ug/mlm
45)	n-C40	43.363	125383	23.622 ug/mlm
46)	TPH	0.000	0	N.D. ug/mlm
47)	TRH1	0.000	0	N.D. ug/mlm
48)	TRH2	0.000	0	N.D. ug/mlm
49)	TRH3	0.000	0	N.D. ug/mlm
50)	TRH4	0.000	0	N.D. ug/mlm
51)	TRH5	0.000	0	N.D. ug/mlm
52)	TRH6	0.000	0	N.D. ug/mlm
53)	GRO	0.000	0	N.D. ug/mlm
54)	DRO	0.000	0	N.D. ug/mlm
55)	RRO	0.000	0	N.D. ug/mlm

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072J.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 06:55:19
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 14:10:29 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

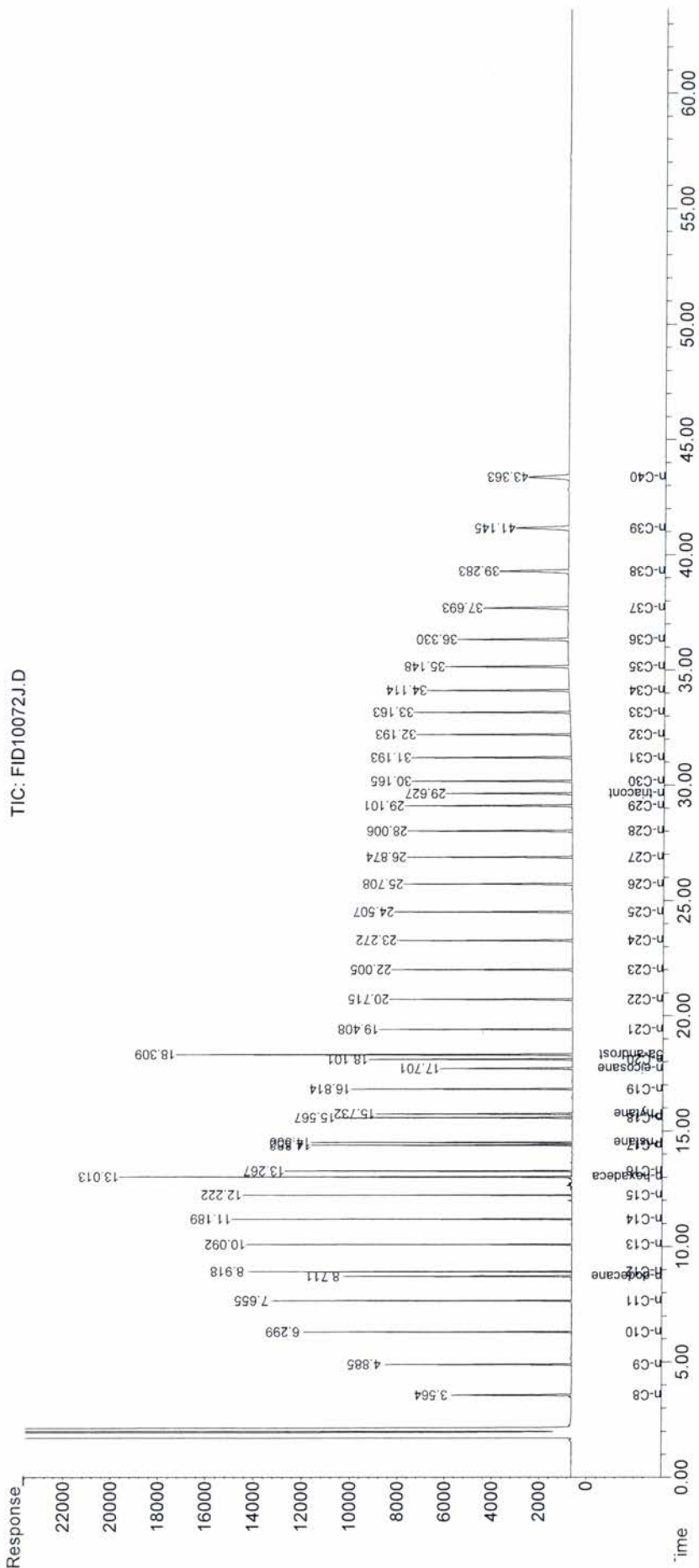
Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I n-hexadecane-d34	13.013	276690	50.000 ug/mlm
16) I 5a-androstane	18.309	337971	50.072 ug/mlm
System Monitoring Compounds			
6) S n-dodecane-d26	8.711	143990	25.197 ug/mlm
23) S n-eicosane-d42	17.701	132448	25.503 ug/mlm
34) S n-triacontane-d62	29.627	126882	25.099 ug/mlm
Target Compounds			
2) n-C8	3.564	135873	25.972 ug/mlm
3) n-C9	4.885	142761	25.534 ug/mlm
4) n-C10	6.299	152216	25.300 ug/mlm
5) n-C11	7.655	154745	25.308 ug/mlm
7) n-C12	8.918	159875	24.985 ug/mlm
8) i-13	0.000	0	N.D. ug/ml
9) i-14	0.000	0	N.D. ug/mlm
10) n-C13	10.092	162507	25.443 ug/mlm
11) i-15	0.000	0	N.D. ug/mlm
12) n-C14	11.189	166198	25.341 ug/mlm
13) i-16	0.000	0	N.D. ug/mlm
14) n-C15	12.222	166931	25.215 ug/mlm
15) n-C16	13.267	166720	25.103 ug/mlm
17) i-18	0.000	0	N.D. ug/mlm
18) n-C17	14.382	168277	25.160 ug/mlm
19) Pristane	14.500	168359	25.299 ug/mlm
20) n-C18	15.567	167209	25.510 ug/mlm
21) Phytane	15.732	169926	25.457 ug/mlm
22) n-C19	16.814	165950	25.472 ug/mlm
24) n-C20	18.101	166362	25.499 ug/mlm
25) n-C21	19.408	165690	25.249 ug/mlm
26) n-C22	20.715	166816	25.419 ug/mlm
27) n-C23	22.005	165433	25.188 ug/mlm
28) n-C24	23.272	164510	25.068 ug/mlm
29) n-C25	24.507	165567	25.200 ug/mlm
30) n-C26	25.708	166623	25.377 ug/mlm
31) n-C27	26.874	162011	25.265 ug/mlm
32) n-C28	28.006	164691	25.333 ug/mlm
33) n-C29	29.101	165542	25.356 ug/mlm
35) n-C30	30.165	163747	25.308 ug/mlm
36) n-C31	31.193	162567	25.498 ug/mlm
37) n-C32	32.193	159570	25.239 ug/mlm
38) n-C33	33.163	157898	25.551 ug/mlm
39) n-C34	34.114	159870	25.588 ug/mlm
40) n-C35	35.148	156251	25.604 ug/mlm

Data Path : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\
 Data File : FID10072J.D
 Signal(s) : FID1A.CH
 Acq On : 10-Aug-2013, 06:55:19
 Operator : Meghan Dailey
 Sample : AL-WKCC-25-024
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Aug 12 14:10:29 2013
 Quant Method : P:\2013\J13001\ALI\MSDCHEM data\FID 1\FID10072\FID1C08FRONT081213.M
 Quant Title : C8 - C40 aliphatic
 QLast Update : Mon Aug 12 13:56:00 2013
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :



Aliphatic Mass Discrimination Ratio

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Mass Discrimination

File Name	Sample Name	n-C20 (Area)	n-C36 (Area)	n-C36/n-C20 ratio	Q
FID10072C.D	AL-WKC1-1.25-019	10062	9883	0.98	
FID10072D.D	AL-WKC2-10-019	76440	77581	1.01	
FID10072E.D	AL-WKC3-25-019	189971	192250	1.01	
FID10072F.D	AL-WKC4-40-019	315142	316827	1.01	
FID10072G.D	AL-WKC5-50-019	373335	374347	1.00	
FID10072H.D	AL-WKC6-100-019	773084	709480	0.92	
FID10072I.D	AL-WKICV-25-002	179169	178686	1.00	
FID10072J.D	AL-WKCC-25-024	166362	163820	0.98	
FID10076B.D	AL-WKCC-25-024	155085	151634	0.98	
FID10076G.D	AL-WKCC-25-024	156956	153295	0.98	
FID10076H.D	AL-WKCC-25-024	177656	174029	0.98	

Qualifiers (Q): Ratio of n-C36 to n-C20 needs to be > 0.70

Aliphatic Internal Standard Area Data

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Area of Internal Standards

File Name	Sample Name	Internal Standard 1 n-hexadecane-d34			Internal Standard 2 5α-androstane		
		Response (Area)	50% (Area)	200% (Area)	Response (Area)	50% (Area)	200% (Area)
FID10072E.D	AL-WKCC-25-019	313640	156820	627280	385796	192898	771592
FID10072I.D	AL-WKICV-25-002	289116	144558	578232	354018	177009	708036
FID10072J.D	AL-WKCC-25-024	276690	138345	553380	337971	168986	675942
FID10076B.D	AL-WKCC-25-024	256167	128084	512334	314834	157417	629668
FID10076C.D	AL-WKSRM2779-20-01	281411			388626		
FID10076F.D	AL-WKPem-001	287592			354713		
ENV3075A.D	Procedural Blank	231520			285717		
ENV3075C.D	MS (SED-DA-035 (0-0.5))	232627			288415		
ENV3075D.D	MSD (SED-DA-035 (0-0.5))	220676			271782		
ENV3075E.D	Dup (SED-DA-034 (0-0.5))	216618			271454		
FID10076G.D	AL-WKCC-25-024	261001	130501	522002	319071	159536	638142
ARC1537.D	SED-DA-033 (0-0.5)	226006			282460		
ARC1540.D	SED-DA-034 (0-0.5)	227317			284914		
ARC1543.D	SED-DA-035 (0-0.5)	295961			365712		
ARC1548.D	SED-DA-036 (0-0.5)	238082			294103		
ARC1549.D	SED-DA-DUP-01-072813	243694			302304		
ARC1552.D	SED-DA-037 (0-0.5)	231503			284567		
ARC1555.D	SED-DA-038 (0-0.5)	234281			290827		
FID10076H.D	AL-WKCC-25-024	294937	147469	589874	360869	180435	721738

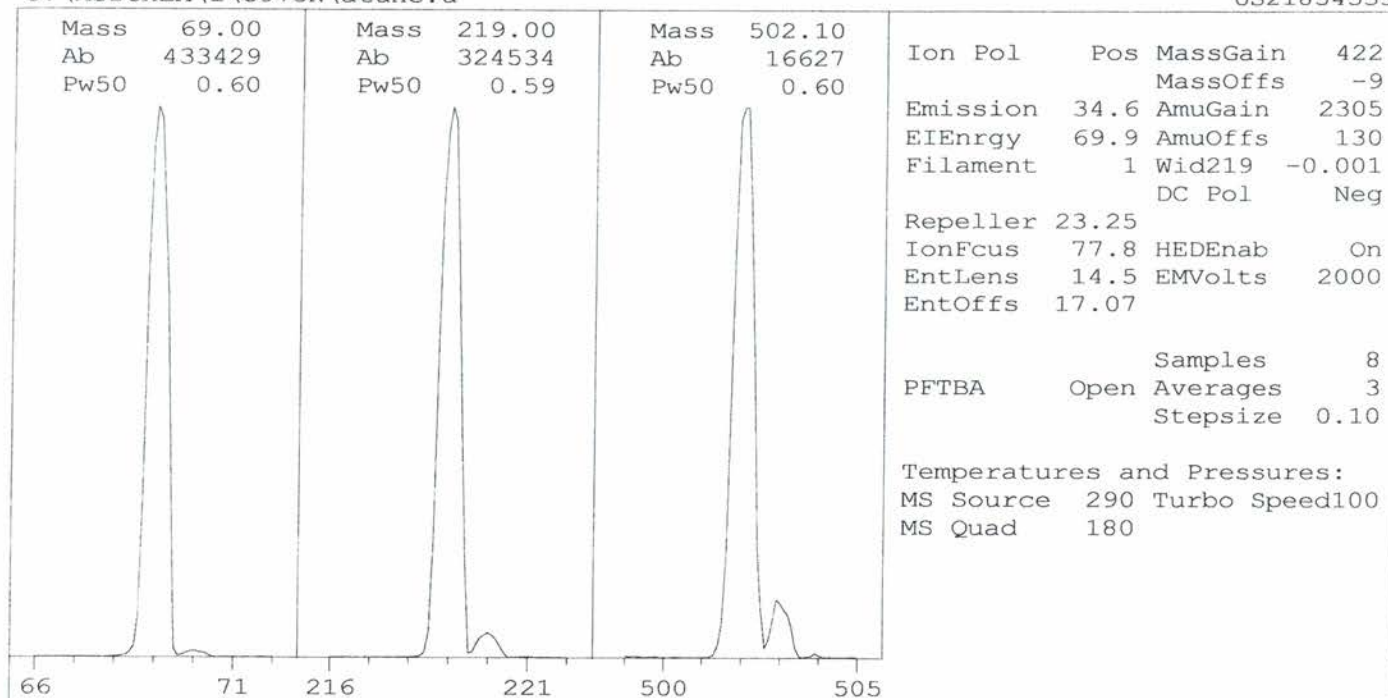
**Polycyclic Aromatic Hydrocarbon
Initial Calibration Data
and
Initial Calibration Verification Data**

**PAH ICAL
AR 70055.M**

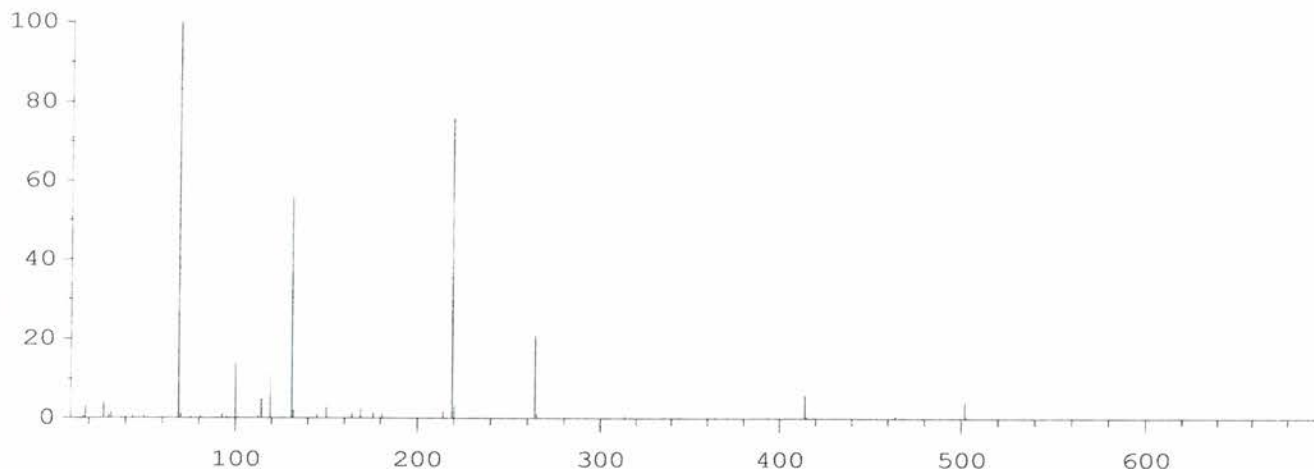
**GC/MS 7
(PAH-2012)**

Mon Aug 12 12:59:31 2013
C:\MSDCHEM\1\5973N\atune.u

Instrument: GCMSD
US21854533



Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
139 peaks Base: 69.00 Abundance: 392256



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	392256	100.00	70.10	4714	1.20
219.00	299072	76.24	220.00	12388	4.14
502.00	15635	3.99	503.00	1512	9.67

Air/Water Check: H2O~2.87% N2~3.96% O2~1.44% CO2~0.54% N2/H2O~138.05%

Column(1) Flow: 1.729 Column(2): 0 ml/min. Interface Temp: 290

Ramp Criteria:

Ion Focus Maximum 90 volts using ion 502; EM Gain 227216
Repeller Maximum 35 volts using ion 219; Gain Factor 2.27

MassGain Values(Samples): 421(3) 425(2) 423(1) 422(0) 422(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	130.0	130.0	130.0	130.0	130.0	130.0	130.0
Entrance Lens Offset:	17.1	17.1	17.1	17.1	17.1	17.1	17.1

MS 70055 VM

Response Factor Report GCMSD

Method Path : C:\GCMS7\MS70055\
 Method File : AR70055.M
 Title : PAH Calibration Table-2013A
 Last Update : Tue Aug 13 09:56:39 2013
 Response Via : Initial Calibration

Calibration Files

1 =MS70055B.D 2 =MS70055C.D 3 =MS70055D.D 4 =MS70055E.D 5 =MS70055F.D
 6 =MS70055G.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorene-d10	-----ISTD-----							
2) S	Naphthalene-d8	2.159	1.837	1.690	1.753	1.781	1.786	1.834	9.06
3) T	cis/trans Decalin	0.418	0.349	0.297	0.294	0.309	0.300	0.328	14.79
4) un	C1-Decalins	0.418	0.349	0.297	0.294	0.309	0.300	0.328	14.79
5) un	C2-Decalins	0.418	0.349	0.297	0.294	0.309	0.300	0.328	14.79
6) un	C3-Decalins	0.418	0.349	0.297	0.294	0.309	0.300	0.328	14.79
7) un	C4-Decalins	0.418	0.349	0.297	0.294	0.309	0.300	0.328	14.79
8) T	Naphthalene	2.288	1.926	1.798	1.884	1.921	1.814	1.939	9.24
9) T	2-Methylnaphth...	1.449	1.208	1.108	1.156	1.178	1.219	1.220	9.76
10) T	1-Methylnaphth...	1.321	1.126	1.031	1.078	1.096	1.111	1.127	8.91
11) T	2,6-Dimethylna...	1.257	1.074	1.016	1.072	1.108	1.149	1.113	7.51
12) T	1,6,7-Trimethy...	1.125	0.942	0.864	0.915	0.954	0.992	0.965	9.22
13) un	C2-Naphthalenes	2.288	1.926	1.798	1.884	1.921	1.814	1.939	9.24
14) un	C3-Naphthalenes	2.288	1.926	1.798	1.884	1.921	1.814	1.939	9.24
15) un	C4-Naphthalenes	2.288	1.926	1.798	1.884	1.921	1.814	1.939	9.24
16) T	Benzothiophene	1.760	1.509	1.401	1.471	1.494	1.518	1.525	8.02
17) un	C1-Benzothioph...	1.760	1.509	1.401	1.471	1.494	1.518	1.525	8.02
18) un	C2-Benzothioph...	1.760	1.509	1.401	1.471	1.494	1.518	1.525	8.02
19) un	C3-Benzothioph...	1.760	1.509	1.401	1.471	1.494	1.518	1.525	8.02
20) un	C4-Benzothioph...	1.760	1.509	1.401	1.471	1.494	1.518	1.525	8.02
21) S	Acenaphthene-d10	1.167	0.986	0.908	0.959	0.984	1.022	1.004	8.75
22) T	Biphenyl	1.784	1.590	1.506	1.592	1.629	1.586	1.615	5.71
23) T	Acenaphthylene	1.904	1.607	1.446	1.537	1.633	1.725	1.642	9.67
24) T	Acenaphthene	1.215	1.026	0.951	1.005	1.029	1.067	1.049	8.58
25) T	Dibenzofuran	2.008	1.751	1.628	1.732	1.763	1.594	1.746	8.35
26) T	Fluorene	1.594	1.352	1.262	1.337	1.374	1.397	1.386	8.06
27) T	1-Methylfluorene	0.983	0.838	0.781	0.837	0.884	0.949	0.879	8.62
28) un	C1-Fluorenes	1.594	1.352	1.262	1.337	1.374	1.397	1.386	8.06
29) un	C2-Fluorenes	1.594	1.352	1.262	1.337	1.374	1.397	1.386	8.06
30) un	C3-Fluorenes	1.594	1.352	1.262	1.337	1.374	1.397	1.386	8.06
31) I	Pyrene-d10	-----ISTD-----							
32) S	Phenanthrene-d10	1.093	0.949	0.859	0.921	0.926	0.949	0.950	8.18
33) T	Carbazole	0.920	0.769	0.683	0.750	0.782	0.962	0.811	13.20
34) T	Dibenzothiophene	1.110	0.958	0.857	0.920	0.927	1.047	0.970	9.56
35) T	4-Methyldibenz...	0.849	0.778	0.743	0.815	0.839	0.835	0.810	5.11
36) un	2/3-Methyldibe...	0.849	0.778	0.743	0.815	0.839	0.835	0.810	5.11
37) un	1-Methyldibenz...	0.849	0.778	0.743	0.815	0.839	0.835	0.810	5.11
38) un	C2-Dibenzothio...	1.110	0.958	0.857	0.920	0.927	1.047	0.970	9.56
39) un	C3-Dibenzothio...	1.110	0.958	0.857	0.920	0.927	1.047	0.970	9.56
40) un	C4-Dibenzothio...	1.110	0.958	0.857	0.920	0.927	1.047	0.970	9.56
41) T	Phenanthrene	1.336	1.202	1.125	1.225	1.239	0.947	1.179	11.22
42) T	Anthracene	1.054	0.991	0.939	1.044	1.120	0.937	1.014	7.07
43) un	3-Methylphenan...	0.820	0.730	0.692	0.758	0.794	0.790	0.764	6.16
44) un	2-Methylphenan...	0.820	0.730	0.692	0.758	0.794	0.790	0.764	6.16
45) un	2-Methylanthra...	0.820	0.730	0.692	0.758	0.794	0.790	0.764	6.16
46) un	4/9-Methylphen...	0.820	0.730	0.692	0.758	0.794	0.790	0.764	6.16
47) T	1-Methylphenan...	0.820	0.730	0.692	0.758	0.794	0.790	0.764	6.16
48) T	3,6-Dimethylph...	0.674	0.567	0.528	0.578	0.604	0.674	0.604	9.84
49) T	Retene	0.322	0.262	0.247	0.272	0.292	0.367	0.294	15.07
50) un	C2-Phenanthren...	1.336	1.202	1.125	1.225	1.239	0.947	1.179	11.22
51) un	C3-Phenanthren...	1.336	1.202	1.125	1.225	1.239	0.947	1.179	11.22
52) un	C4-Phenanthren...	1.336	1.202	1.125	1.225	1.239	0.947	1.179	11.22
53) T	Naphthobenzoth...	1.376	1.206	1.127	1.274	1.333	1.057	1.229	9.96

Method Path : C:\GCMS7\MS70055\

Method File : AR70055.M

Title : PAH Calibration Table-2013A

54)	un	C1-Naphthobenz...	1.376	1.206	1.127	1.274	1.333	1.057	1.229	9.96
55)	un	C2-Naphthobenz...	1.376	1.206	1.127	1.274	1.333	1.057	1.229	9.96
56)	un	C3-Naphthobenz...	1.376	1.206	1.127	1.274	1.333	1.057	1.229	9.96
57)	un	C4-Naphthobenz...	1.376	1.206	1.127	1.274	1.333	1.057	1.229	9.96
58)	T	Fluoranthene	1.153	1.021	0.953	1.044	1.078	1.143	1.065	7.15
59)	T	Pyrene	1.530	1.333	1.210	1.316	1.355	0.970	1.286	14.45
60)	T	2-Methylfluora...	0.807	0.664	0.612	0.680	0.721	0.920	0.734	15.24
61)	T	Benzo(b)fluorene	0.679	0.561	0.526	0.589	0.624	0.798	0.630	15.54
62)	un	C1-Fluoranthen...	1.153	1.021	0.953	1.044	1.078	1.143	1.065	7.15
63)	un	C2-Fluoranthen...	1.153	1.021	0.953	1.044	1.078	1.143	1.065	7.15
64)	un	C3-Fluoranthen...	1.153	1.021	0.953	1.044	1.078	1.143	1.065	7.15
65)	un	C4-Fluoranthen...	1.153	1.021	0.953	1.044	1.078	1.143	1.065	7.15
66)	S	Chrysene-d12	1.238	1.137	1.101	1.225	1.252	0.991	1.157	8.74
67)	T	Benz(a)anthracene	1.349	1.113	1.043	1.194	1.276	1.130	1.184	9.54
68)	T	Chrysene/Triph...	1.250	1.165	1.142	1.274	1.308	1.047	1.198	8.13
69)	un	C1-Chrysenes	1.250	1.165	1.142	1.274	1.308	1.047	1.198	8.13
70)	un	C2-Chrysenes	1.250	1.165	1.142	1.274	1.308	1.047	1.198	8.13
71)	un	C3-Chrysenes	1.250	1.165	1.142	1.274	1.308	1.047	1.198	8.13
72)	un	C4-Chrysenes	1.250	1.165	1.142	1.274	1.308	1.047	1.198	8.13
-----ISTD-----										
73)	I	Benzo(a)pyrene-d12								
74)	un	C29-Hopane	0.488	0.437	0.383	0.393	0.412	0.440	0.426	9.00
75)	un	18a-Oleanane	0.488	0.437	0.383	0.393	0.412	0.440	0.426	9.00
76)	T	C30-Hopane	0.488	0.437	0.383	0.393	0.412	0.440	0.426	9.00
77)	T	Benzo(b)fluora...	1.539	1.380	1.347	1.433	1.472	1.644	1.469	7.42
78)	T	Benzo(k,j)fluo...	1.403	1.263	1.205	1.317	1.316	1.042	1.257	9.89
79)	un	Benzo(a)fluora...	1.403	1.263	1.205	1.317	1.316	1.042	1.257	9.89
80)	T	Benzo(e)pyrene	1.551	1.415	1.334	1.410	1.426	1.391	1.421	5.03
81)	T	Benzo(a)pyrene	1.566	1.327	1.280	1.388	1.438	1.333	1.389	7.40
82)	T	Indeno(1,2,3-c...	1.615	1.401	1.364	1.490	1.579	1.682	1.522	8.21
83)	T	Dibenzo(a,h)an...	1.260	1.108	1.103	1.201	1.281	1.359	1.219	8.31
84)	un	C1-Dibenzo(a,h...	1.260	1.108	1.103	1.201	1.281	1.359	1.219	8.31
85)	un	C2-Dibenzo(a,h...	1.260	1.108	1.103	1.201	1.281	1.359	1.219	8.31
86)	un	C3-Dibenzo(a,h...	1.260	1.108	1.103	1.201	1.281	1.359	1.219	8.31
87)	T	Benzo(g,h,i)pe...	1.530	1.310	1.245	1.316	1.367	1.416	1.364	7.31
88)	S	Perylene-d12	1.385	1.104	1.048	1.119	1.168	1.258	1.180	10.37
89)	T	Perylene	1.568	1.328	1.319	1.410	1.502	1.354	1.414	7.18
90)	S	5(b)H-Cholane	0.249	0.197	0.188	0.199	0.205	0.241	0.213	11.90
91)	un	C20-TAS	1.716	1.321	1.169	1.229	1.322	1.554	1.385	15.06
92)	un	C21-TAS	1.716	1.321	1.169	1.229	1.322	1.554	1.385	15.06
93)	un	C26(20S)-TAS	1.716	1.321	1.169	1.229	1.322	1.554	1.385	15.06
94)	T	C26(20R)/C27(2...	1.716	1.321	1.169	1.229	1.322	1.554	1.385	15.06
95)	un	C28(20S)-TAS	1.716	1.321	1.169	1.229	1.322	1.554	1.385	15.06
96)	un	C27(20R)-TAS	1.716	1.321	1.169	1.229	1.322	1.554	1.385	15.06
97)	un	C28(20R)-TAS	1.716	1.321	1.169	1.229	1.322	1.554	1.385	15.06

(#) = Out of Range

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055B.D
 Acq On : 12 Aug 2013 7:06 pm
 Operator : YM
 Sample : AR-WKCl-020-030
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 09:23:49 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:18:41 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	525181m	251.05		0.00
31) Pyrene-d10	29.635	212	1044857m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	944507m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	90370m	23.85		0.00
21) Acenaphthene-d10	19.672	164	48837m	23.37		0.00
32) Phenanthrene-d10	24.752	188	91238m	23.16		0.00
66) Chrysene-d12	33.809	240	103252m	21.45		0.00
88) Perylene-d12	38.697	264	104521m	24.00		0.00
90) 5(b)H-Cholane	34.235	217	18755m	23.15		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.176	138	17295m	38.68		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.906	128	95710m	23.64		
9) 2-Methylnaphthalene	16.134	142	60676m	23.82		
10) 1-Methylnaphthalene	16.468	142	55205m	23.47		
11) 2,6-Dimethylnaphthalene	18.223	156	52610m	22.57		
12) 1,6,7-Trimethylnaphtha...	21.093	170	47067m	23.32		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	14.073	134	73192m	23.00		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	73957m	21.70		
23) Acenaphthylene	19.171	152	79004m	22.84		
24) Acenaphthene	19.783	154	50948m	23.28		
25) Dibenzofuran	20.368	168	83597m	23.07		
26) Fluorene	21.538	166	66822m	23.16		
27) 1-Methylfluorene	23.506	180	41417m	22.30		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	76024m	22.19		
34) Dibenzothiophene	24.406	184	91259m	22.76		
35) 4-Methyldibenzothiophene	25.895	198	71406m	21.20		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	110376m	23.22		
42) Anthracene	24.995	178	88107m	21.15		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055B.D
 Acq On : 12 Aug 2013 7:06 pm
 Operator : YM
 Sample : AR-WKC1-020-030
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 09:23:49 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:18:41 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	67618m	21.27		
48) 3,6-Dimethylphenanthrene	28.042	206	56293m	22.57		
49) Retene	30.708	234	23975m	19.72		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	115456m	22.54		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	96221m	21.73		
59) Pyrene	29.704	202	127531m	23.82		
60) 2-Methylfluoranthene	30.466	216	67739m	22.37		
61) Benzo(b)fluorene	31.089	216	57119m	21.70		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	112291m	23.70		
68) Chrysene/Triphenylene	33.886	228	103566m	21.48		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	36856m	22.85		
77) Benzo(b)fluoranthene	37.300	252	116391m	12.09		
78) Benzo(k,j)fluoranthene	37.378	252	105415m	10.88		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	116586m	21.82		
81) Benzo(a)pyrene	38.464	252	117959m	22.53		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	119805m	20.19		
83) Dibenzo(a,h)anthracene	43.225	278	94261m	19.52		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	114413m	21.58		
89) Perylene	38.774	252	118456m	21.95		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	129517m	24.42		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

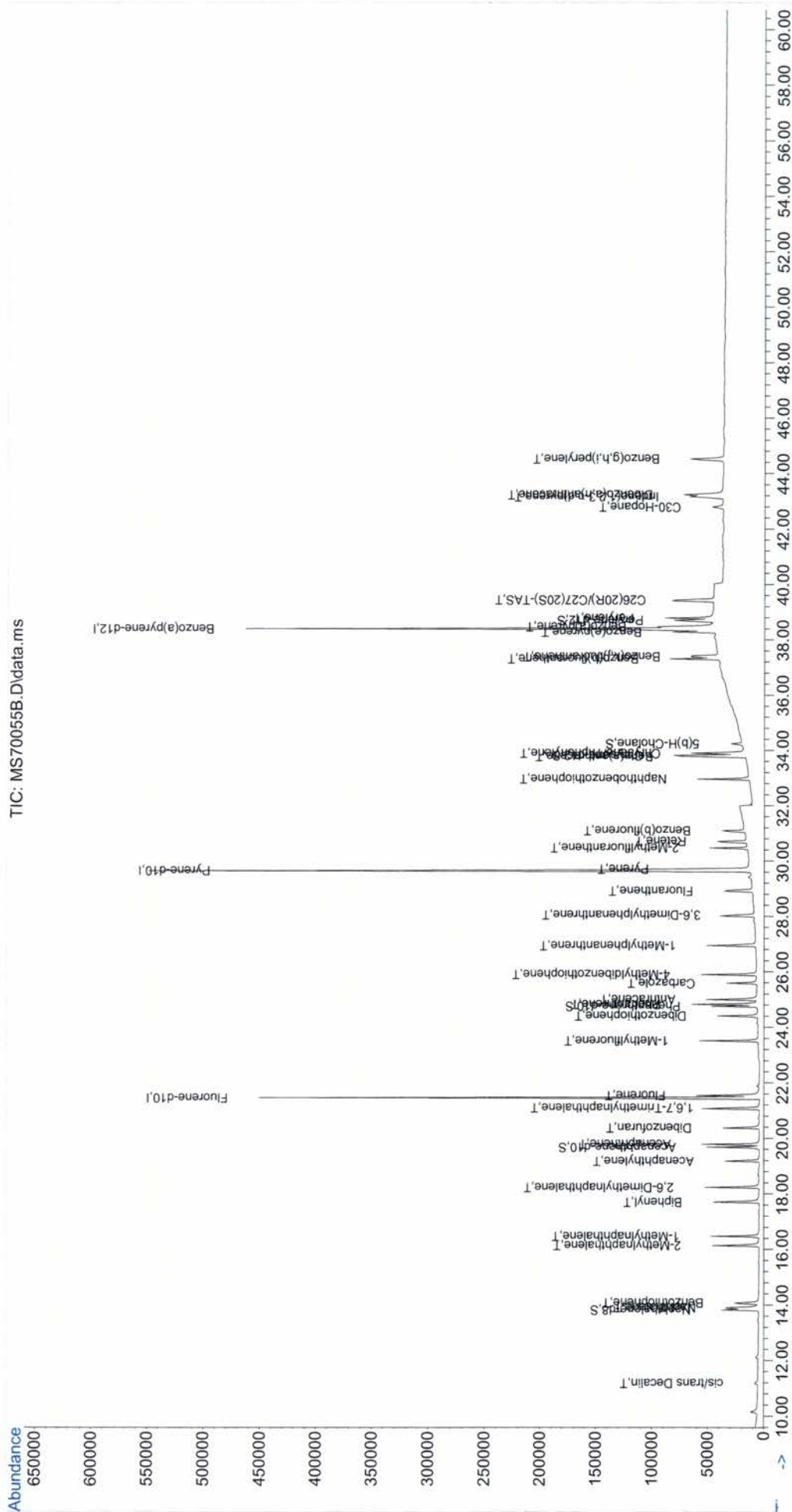
Data Path : C:\GCMS7\MS70055\
Data File : MS70055B.D
Acq On : 12 Aug 2013 7:06 pm
Operator : YM
Sample : AR-WKC1-020-030
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 09:23:49 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:18:41 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055B.D
 Acq On : 12 Aug 2013 7:06 pm
 Operator : YM
 Sample : AR-WK1-020-030
 Misc :
 ALS Vial : 2 Sample Multiplier: 1
 Quant Time: Aug 13 09:23:49 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:18:41 2013
 Response via : Initial Calibration



Data Path : C:\GCMS7\MS70055\
 Data File : MS70055C.D
 Acq On : 12 Aug 2013 8:15 pm
 Operator : YM
 Sample : AR-WKC2-100-030
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 09:30:22 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:23:56 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)

Internal Standards						
1) Fluorene-d10	21.455	176	476568m	251.05		0.00
31) Pyrene-d10	29.635	212	904300m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	776642m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	348966m	101.10		0.00
21) Acenaphthene-d10	19.672	164	187237m	98.66		0.00
32) Phenanthrene-d10	24.752	188	342673m	100.62		0.00
66) Chrysene-d12	33.809	240	410208m	98.60		0.00
88) Perylene-d12	38.697	264	342681m	93.43		0.00
90) 5(b)H-Cholane	34.235	217	61043m	91.69		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.176	138	65581m	143.94		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	365569m	99.49		
9) 2-Methylnaphthalene	16.134	142	229507m	99.18		
10) 1-Methylnaphthalene	16.468	142	213520m	100.36		
11) 2,6-Dimethylnaphthalene	18.223	156	203799m	96.26		
12) 1,6,7-Trimethylnaphtha...	21.093	170	178903m	97.76		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.073	134	284775m	98.55		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	299107m	97.30		
23) Acenaphthylene	19.171	152	302602m	96.62		
24) Acenaphthene	19.783	154	195245m	98.24		
25) Dibenzofuran	20.368	168	330645m	100.20		
26) Fluorene	21.538	166	257185m	98.24		
27) 1-Methylfluorene	23.506	180	160324m	95.79		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	274972m	93.40		
34) Dibenzothiophene	24.406	184	340955m	98.16		
35) 4-Methyldibenzothiophene	25.895	198	282976m	97.31		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	429924m	102.96		
42) Anthracene	24.995	178	358561m	98.97		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055C.D
 Acq On : 12 Aug 2013 8:15 pm
 Operator : YM
 Sample : AR-WKC2-100-030
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 09:30:22 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:23:56 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	260579m	94.75		
48) 3,6-Dimethylphenanthrene	28.007	206	204952m	94.60		
49) Retene	30.708	234	84589m	80.38		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	437968m	98.83		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	368726m	96.32		
59) Pyrene	29.704	202	480887m	104.38		
60) 2-Methylfluoranthene	30.466	216	241297m	91.98		
61) Benzo(b) fluorene	31.089	216	204403m	90.01		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	400854m	96.86		
68) Chrysene/Triphenylene	33.886	228	417836m	99.38		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	135703m	103.73		
77) Benzo(b)fluoranthene	37.300	252	428984m	60.30		
78) Benzo(k,j)fluoranthene	37.378	252	390141m	55.10		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	437131m	99.34		
81) Benzo(a)pyrene	38.464	252	410933m	94.46		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	427415m	88.31		
83) Dibenzo(a,h)anthracene	43.225	278	340654m	86.80		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	402685m	92.72		
89) Perylene	38.774	252	412535m	92.79		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.395	231	409797m	94.01		
95) C28(20S)-TAS	0.000		0	N.D.		
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055C.D
Acq On : 12 Aug 2013 8:15 pm
Operator : YM
Sample : AR-WKC2-100-030
Misc :
ALS Vial : 3 Sample Multiplier: 1

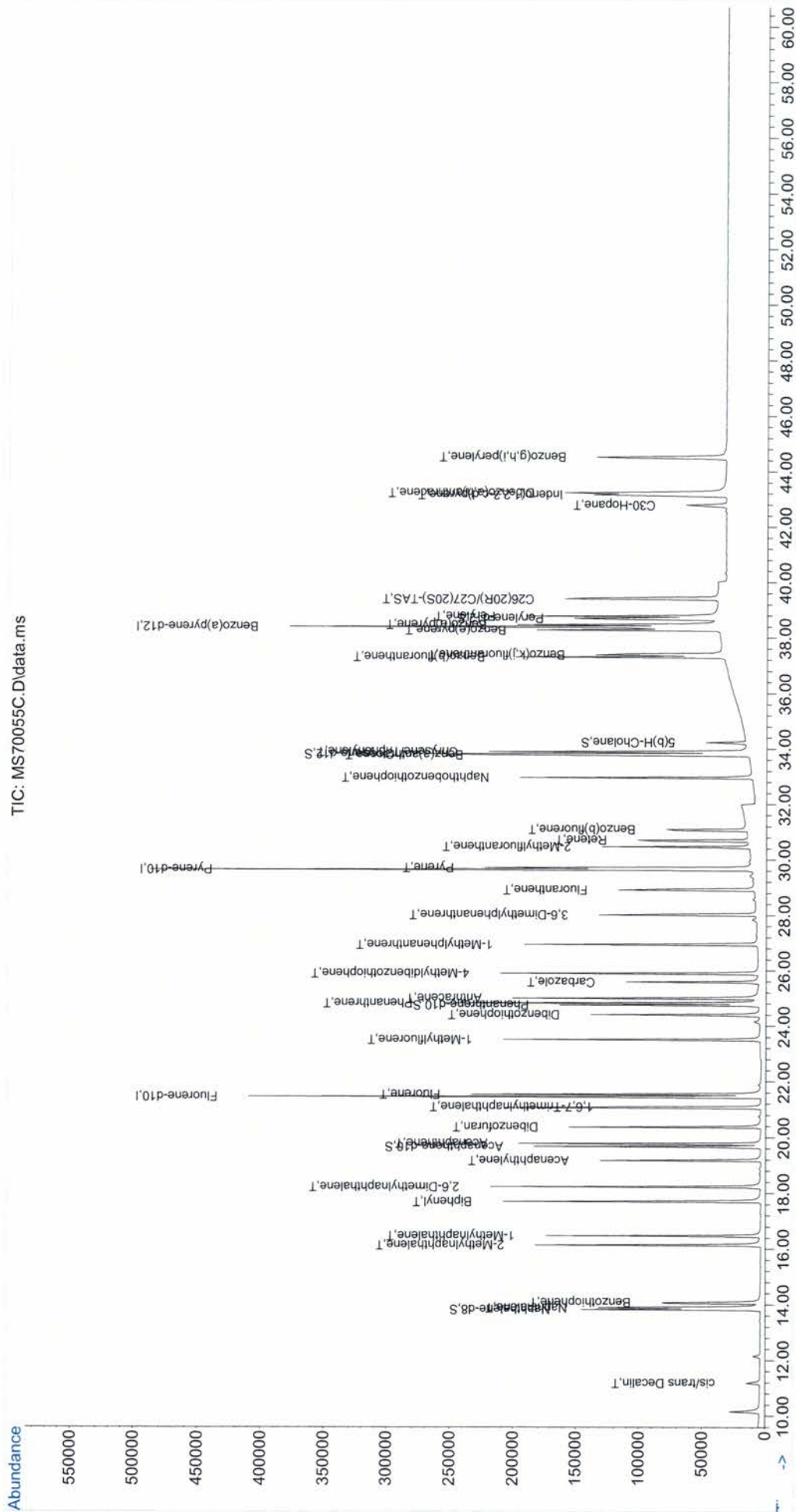
Quant Time: Aug 13 09:30:22 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:23:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055C.D
 Acq On : 12 Aug 2013 8:15 pm
 Operator : YM
 Sample : AR-WKC2-100-030
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 09:30:22 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:23:56 2013
 Response via : Initial Calibration



Data Path : C:\GCMS7\MS70055\
 Data File : MS70055D.D
 Acq On : 12 Aug 2013 9:23 pm
 Operator : YM
 Sample : AR-WKC3-250-030
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 09:41:57 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:30:34 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	532297m	251.05		0.00
31) Pyrene-d10	29.635	212	1013041m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	818681m	250.32		0.00

System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	896078m	231.46		0.00
21) Acenaphthene-d10	19.672	164	481846m	226.95		0.00
32) Phenanthrene-d10	24.752	188	868936m	227.01		0.00
66) Chrysene-d12	33.809	240	1112991m	238.03		0.00
88) Perylene-d12	38.697	264	857157m	220.01		0.00
90) 5(b)H-Cholane	34.235	217	153566m	218.23		0.00

Target Compounds					Qvalue	
3) cis/trans Decalin	11.176	138	155879m	279.79		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	953058m	231.98		
9) 2-Methylnaphthalene	16.134	142	587810m	227.09		
10) 1-Methylnaphthalene	16.468	142	545718m	229.02		
11) 2,6-Dimethylnaphthalene	18.223	156	538328m	227.98		
12) 1,6,7-Trimethylnaphtha...	21.065	170	458115m	223.77		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	737919m	228.24		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	791328m	230.80		
23) Acenaphthylene	19.171	152	760444m	217.18		
24) Acenaphthene	19.783	154	504845m	227.02		
25) Dibenzofuran	20.368	168	858530m	232.16		
26) Fluorene	21.538	166	670290m	228.76		
27) 1-Methylfluorene	23.506	180	417162m	223.11		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	684294m	207.73		
34) Dibenzothiophene	24.406	184	853455m	218.33		
35) 4-Methyldibenzothiophene	25.895	198	756833m	231.50		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	1126869m	238.53		
42) Anthracene	24.995	178	952203m	232.79		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055D.D
 Acq On : 12 Aug 2013 9:23 pm
 Operator : YM
 Sample : AR-WKC3-250-030
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 09:41:57 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:30:34 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	691444m	223.98		
48) 3,6-Dimethylphenanthrene	28.007	206	534202m	219.38		
49) Retene	30.708	234	222712m	188.27		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	1145803m	230.22		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.907	202	963509m	223.94		
59) Pyrene	29.704	202	1222696m	236.07		
60) 2-Methylfluoranthene	30.466	216	622932m	211.07		
61) Benzo(b) fluorene	31.089	216	536454m	210.63		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	1051560m	224.31		
68) Chrysene/Triphenylene	33.886	228	1147348m	241.42		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	313513m	224.78		
77) Benzo(b) fluoranthene	37.300	252	1103898m	162.65		
78) Benzo(k,j) fluoranthene	37.378	252	980991m	146.86		
79) Benzo(a) fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	1086370m	232.82		
81) Benzo(a)pyrene	38.464	252	1044289m	226.96		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	1096207m	215.59		
83) Dibenzo(a,h)anthracene	43.225	278	893741m	217.27		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	1008778m	220.79		
89) Perylene	38.774	252	1079308m	229.99		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.395	231	955498m	207.77		
95) C28(20S)-TAS	0.000		0	N.D.		
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055D.D
Acq On : 12 Aug 2013 9:23 pm
Operator : YM
Sample : AR-WKC3-250-030
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 09:41:57 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:30:34 2013
Response via : Initial Calibration

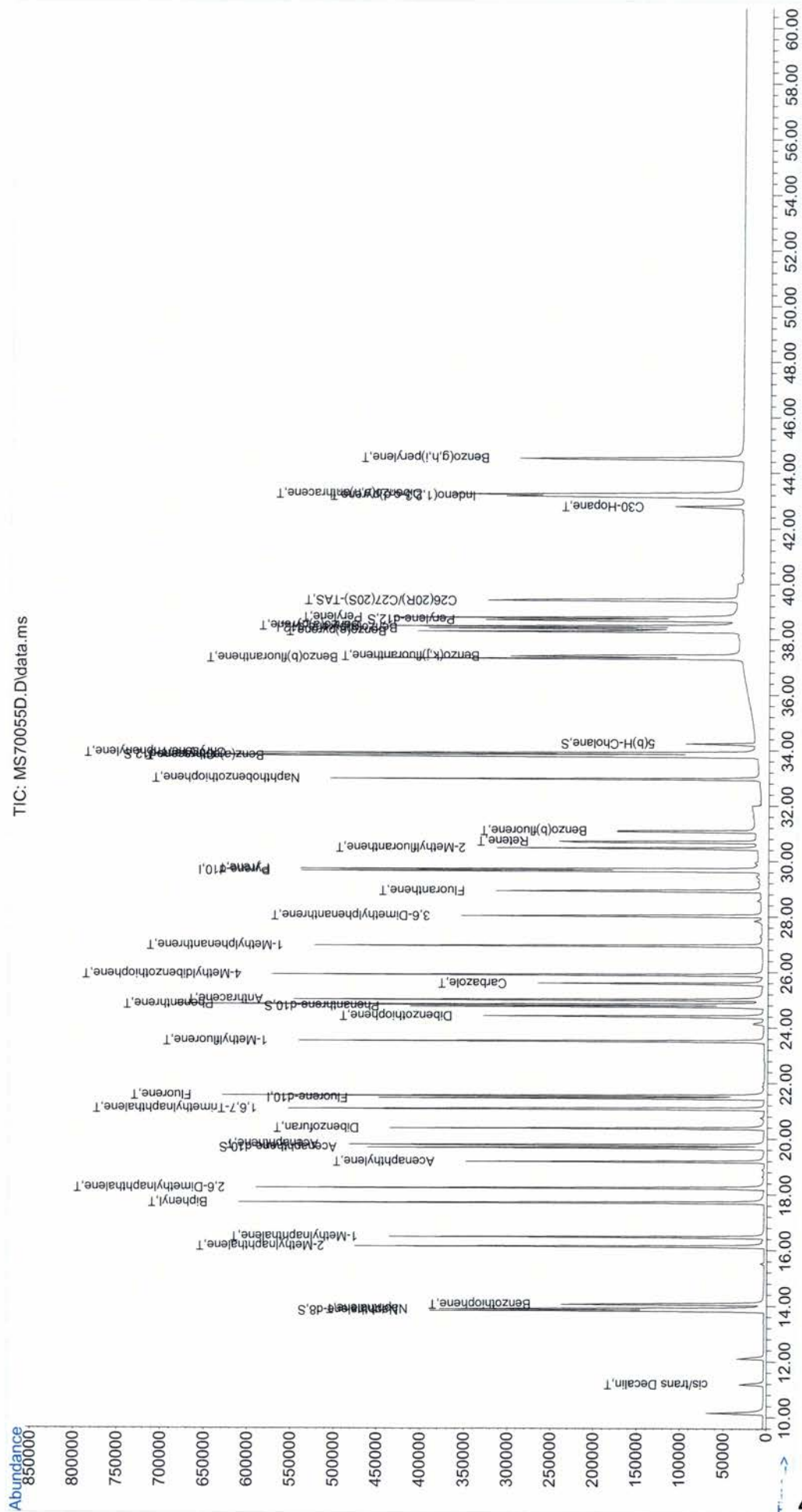
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
Data File : MS70055D.D
Acq On : 12 Aug 2013 9:23 pm
Operator : YM
Sample : AR-WKC3-250-030
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 09:41:57 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:30:34 2013
Response via : Initial Calibration

TIC: MS70055D.D\data.ms



Data Path : C:\GCMS7\MS70055\
 Data File : MS70055E.D
 Acq On : 12 Aug 2013 10:32 pm
 Operator : YM
 Sample : AR-WKC4-500-030
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 09:46:21 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:42:03 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)

Internal Standards						
1) Fluorene-d10	21.455	176	556459m	251.05		0.00
31) Pyrene-d10	29.635	212	1040271m	250.63		0.00
73) Benzo(a)pyrene-d12	38.387	264	868683m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	1943265m	479.48		0.00
21) Acenaphthene-d10	19.672	164	1064027m	479.15		0.00
32) Phenanthrene-d10	24.752	188	1913417m	486.68		0.00
66) Chrysene-d12	33.809	240	2541980m	528.52		0.00
88) Perylene-d12	38.697	264	1942307m	468.25		0.00
90) 5(b)H-Cholane	34.236	217	344880m	460.84		0.00
Target Compounds						
						Qvalue
3) cis/trans Decalin	11.176	138	322781m	521.30		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	2088373m	486.54		
9) 2-Methylnaphthalene	16.134	142	1282803m	474.43		
10) 1-Methylnaphthalene	16.469	142	1193455m	479.04		
11) 2,6-Dimethylnaphthalene	18.224	156	1187752m	481.29		
12) 1,6,7-Trimethylnaphtha...	21.065	170	1014175m	473.97		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	1620097m	479.42		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	1748470m	488.46		
23) Acenaphthylene	19.171	152	1689782m	462.56		
24) Acenaphthene	19.784	154	1116201m	480.14		
25) Dibenzofuran	20.369	168	1910109m	493.87		
26) Fluorene	21.539	166	1484380m	484.23		
27) 1-Methylfluorene	23.506	180	934123m	478.37		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	1543255m	456.94		
34) Dibenzothiophene	24.406	184	1882637m	468.50		
35) 4-Methyldibenzothiophene	25.895	198	1705513m	507.69		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	2519428m	517.10		
42) Anthracene	24.995	178	2172601m	515.16		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055E.D
 Acq On : 12 Aug 2013 10:32 pm
 Operator : YM
 Sample : AR-WKC4-500-030
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 09:46:21 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:42:03 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	1554897m	490.23		
48) 3,6-Dimethylphenanthrene	28.007	206	1200512m	479.49		
49) Retene	30.708	234	504802m	415.02		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	2660416m	520.67		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	2169045m	490.40		
59) Pyrene	29.704	202	2731933m	512.99		
60) 2-Methylfluoranthene	30.466	216	1421582m	468.23		
61) Benzo(b)fluorene	31.089	216	1234265m	472.03		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	2472918m	509.91		
68) Chrysene/Triphenylene	33.886	228	2627843m	535.10		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	681347m	459.01		
77) Benzo(b)fluoranthene	37.300	252	2491020m	384.56		
78) Benzo(k,j)fluoranthene	37.378	252	2275236m	362.75		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	2437559m	490.58		
81) Benzo(a)pyrene	38.464	252	2403614m	491.65		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	2541767m	472.30		
83) Dibenzo(a,h)anthracene	43.226	278	2065082m	475.46		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	2263281m	468.03		
89) Perylene	38.775	252	2449501m	490.58		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	2133001m	437.15		
95) C28(20S)-TAS	0.000		0	N.D.		
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

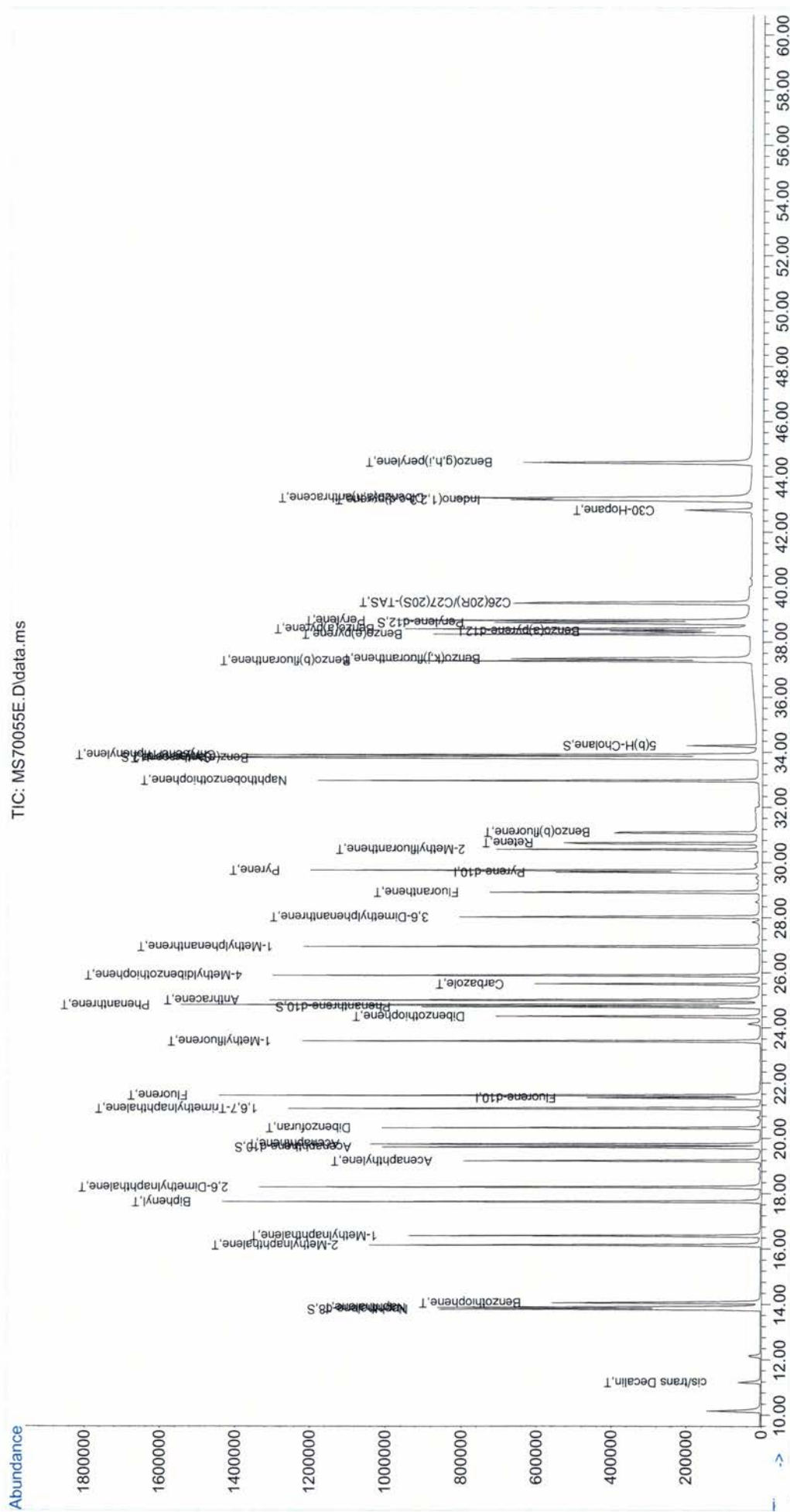
Data Path : C:\GCMS7\MS70055\
Data File : MS70055E.D
Acq On : 12 Aug 2013 10:32 pm
Operator : YM
Sample : AR-WKC4-500-030
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 09:46:21 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:42:03 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055E.D
 Acq On : 12 Aug 2013 10:32 pm
 Operator : YM
 Sample : AR-WKC4-500-030
 Misc :
 ALS Vial : 5 Sample Multiplier: 1
 Quant Time: Aug 13 09:46:21 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:42:03 2013
 Response via : Initial Calibration



Data Path : C:\GCMS7\MS70055\
 Data File : MS70055F.D
 Acq On : 12 Aug 2013 11:41 pm
 Operator : YM
 Sample : AR-WKC5-1000-030
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 09:50:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:46:28 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	543096m	251.05		0.00
31) Pyrene-d10	29.635	212	1034593m	250.63		0.00
73) Benzo(a)pyrene-d12	38.387	264	880546m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	3855176m	973.39		0.00
21) Acenaphthene-d10	19.672	164	2129596m	981.54		0.00
32) Phenanthrene-d10	24.752	188	3826991m	978.65		0.00
66) Chrysene-d12	33.809	240	5169031m	1080.92		0.00
88) Perylene-d12	38.697	264	4110120m	978.63		0.00
90) 5(b)H-Cholane	34.235	217	719516m	950.94		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.176	138	661386m	1037.52		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	4156539m	991.82		
9) 2-Methylnaphthalene	16.134	142	2550483m	966.74		
10) 1-Methylnaphthalene	16.469	142	2369504m	973.26		
11) 2,6-Dimethylnaphthalene	18.224	156	2396022m	995.33		
12) 1,6,7-Trimethylnaphtha...	21.065	170	2063178m	987.94		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	3212876m	974.06		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	3492887m	1000.33		
23) Acenaphthylene	19.171	152	3503759m	984.39		
24) Acenaphthene	19.784	154	2229438m	982.53		
25) Dibenzofuran	20.369	168	3794413m	1004.57		
26) Fluorene	21.539	166	2978080m	994.51		
27) 1-Methylfluorene	23.506	180	1926669m	1011.44		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	3198842m	954.42		
34) Dibenzothiophene	24.406	184	3771843m	943.09		
35) 4-Methyldibenzothiophene	25.895	198	3492347m	1044.44		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	5069801m	1042.90		
42) Anthracene	24.995	178	4637059m	1106.94		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055F.D
 Acq On : 12 Aug 2013 11:41 pm
 Operator : YM
 Sample : AR-WKC5-1000-030
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 09:50:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:46:28 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	3241569m	1027.47		
48) 3,6-Dimethylphenanthrene	28.007	206	2496120m	1001.62		
49) Retene	30.708	234	1078309m	890.57		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.955	234	5538869m	1090.59		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	4456028m	1013.28		
59) Pyrene	29.704	202	5593181m	1055.18		
60) 2-Methylfluoranthene	30.466	216	2997424m	991.33		
61) Benzo(b) fluorene	31.089	216	2597549m	999.10		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	5258073m	1083.17		
68) Chrysene/Triphenylene	33.886	228	5365965m	1094.15		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	1449764m	965.80		
77) Benzo(b)fluoranthene	37.300	252	5189023m	904.44		
78) Benzo(k,j)fluoranthene	37.378	252	4610768m	845.88		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	4994569m	992.23		
81) Benzo(a)pyrene	38.464	252	5049942m	1020.10		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	5458580m	1005.53		
83) Dibenzo(a,h)anthracene	43.226	278	4464082m	1022.79		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	4764281m	977.91		
89) Perylene	38.774	252	5289215m	1049.61		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	4651110m	943.59		
95) C28(20S)-TAS	0.000		0	N.D.		
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055F.D
Acq On : 12 Aug 2013 11:41 pm
Operator : YM
Sample : AR-WKC5-1000-030
Misc :
ALS Vial : 6 Sample Multiplier: 1

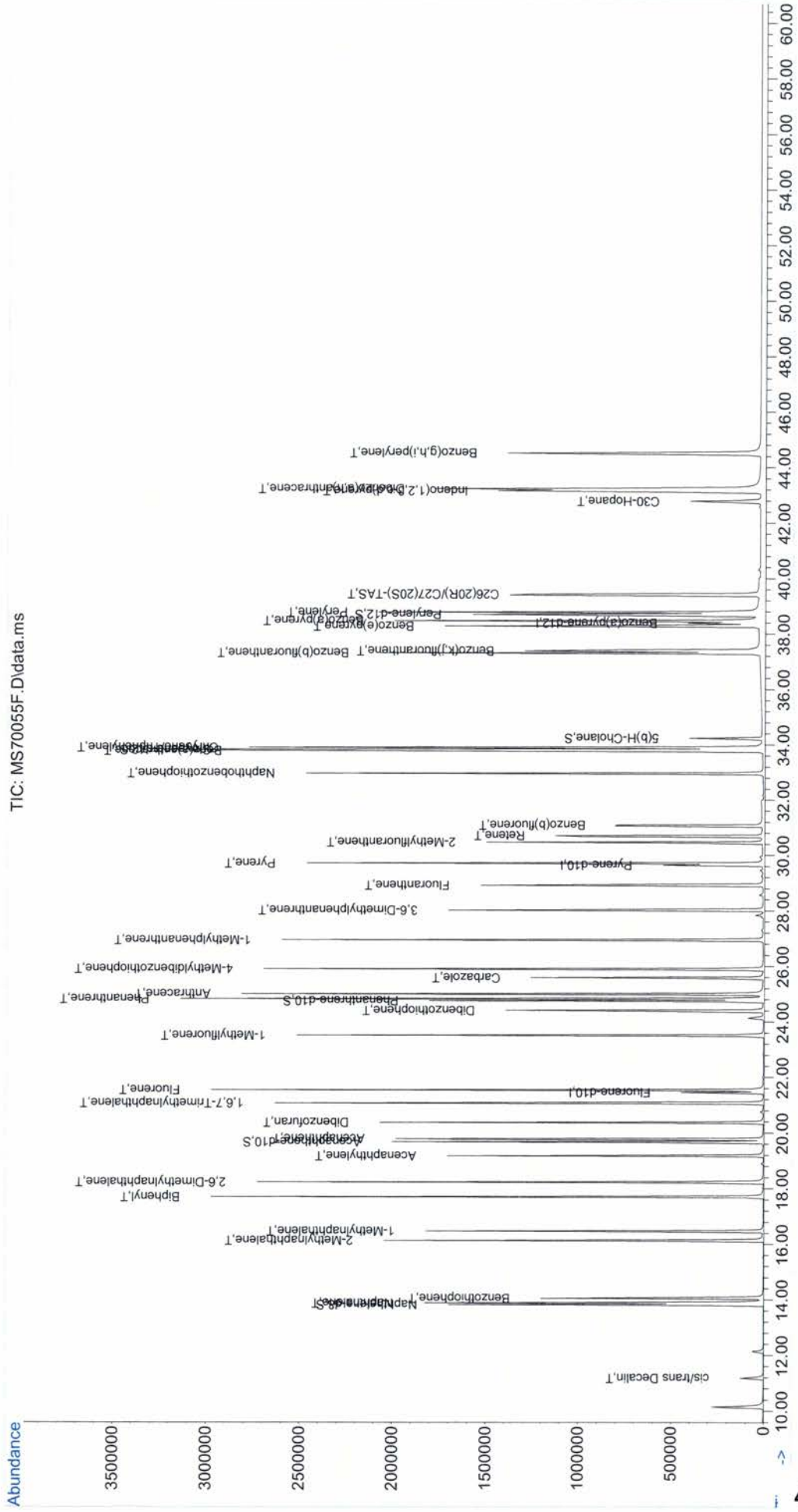
Quant Time: Aug 13 09:50:53 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:46:28 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055F.D
 Acq On : 12 Aug 2013 11:41 pm
 Operator : YM
 Sample : AR-WKC5-1000-030
 Misc :
 ALS Vial : 6 Sample Multiplier: 1
 Quant Time: Aug 13 09:50:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 Qlast Update : Tue Aug 13 09:46:28 2013
 Response via : Initial Calibration

TIC: MS70055F.D\data.ms



Data Path : C:\GCMS7\MS70055\
 Data File : MS70055G.D
 Acq On : 13 Aug 2013 12:49 am
 Operator : YM
 Sample : AR-WKC6-5000-030
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 13 09:56:32 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:51:00 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorene-d10	21.455	176	569020m	251.05		0.00
31) Pyrene-d10	29.635	212	1049633m	250.63		0.00
73) Benzo(a)pyrene-d12	38.387	264	973529m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	20245474m	4873.47		0.00
21) Acenaphthene-d10	19.672	164	11585768m	5092.91		0.00
32) Phenanthrene-d10	24.752	188	19880437m	5004.19		0.00
66) Chrysene-d12	33.809	240	20761364m	4283.90		0.00
88) Perylene-d12	38.697	264	24460220m	5290.40		0.00
90) 5(b)H-Cholane	34.235	217	4683610m	5623.40		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.176	138	3359999m	4757.29		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	20559604m	4679.74		
9) 2-Methylnaphthalene	16.134	142	13830960m	5003.29		
10) 1-Methylnaphthalene	16.469	142	12576854m	4924.89		
11) 2,6-Dimethylnaphthalene	18.224	156	13022563m	5163.91		
12) 1,6,7-Trimethylnaphtha...	21.093	170	11245692m	5139.40		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	17098679m	4946.23		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	17808419m	4868.16		
23) Acenaphthylene	19.171	152	19387997m	5205.34		
24) Acenaphthene	19.784	154	12115727m	5096.00		
25) Dibenzofuran	20.369	168	17978560m	4543.92		
26) Fluorene	21.539	166	15860978m	5051.02		
27) 1-Methylfluorene	23.506	180	10836073m	5430.24		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	19965407m	5881.10		
34) Dibenzothiophene	24.406	184	21625078m	5326.85		
35) 4-Methyldibenzothiophene	25.895	198	17621038m	5191.10		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.822	178	19655842m	3976.34		
42) Anthracene	24.995	178	19682081m	4630.21		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055G.D
 Acq On : 13 Aug 2013 12:49 am
 Operator : YM
 Sample : AR-WKC6-5000-030
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 13 09:56:32 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:51:00 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	16354582m	5112.37		
48) 3,6-Dimethylphenanthrene	28.042	206	14135455m	5587.60		
49) Retene	30.708	234	6863154m	5583.38		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.955	234	22280935m	4327.48		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.908	202	23959334m	5371.84		
59) Pyrene	29.704	202	20319223m	3776.57		
60) 2-Methylfluoranthene	30.466	216	19393419m	6315.89		
61) Benzo(b)fluorene	31.089	216	16866820m	6396.25		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	23620307m	4776.21		
68) Chrysene/Triphenylene	33.886	228	21799141m	4363.39		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.783	191	8560046m	5161.35		
77) Benzo(b)fluoranthene	37.300	252	32026310m	5921.48		
78) Benzo(k,j)fluoranthene	37.417	252	20175707m	4051.99		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.309	252	26945960m	4852.43		
81) Benzo(a)pyrene	38.464	252	25869641m	4748.33		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	32151869m	5390.37		
83) Dibenzo(a,h)anthracene	43.226	278	26190165m	5478.12		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.553	276	27288288m	5102.72		
89) Perylene	38.774	252	26354301m	4751.98		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.434	231	30222966m	5572.00		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055G.D
Acq On : 13 Aug 2013 12:49 am
Operator : YM
Sample : AR-WKC6-5000-030
Misc :
ALS Vial : 7 Sample Multiplier: 1

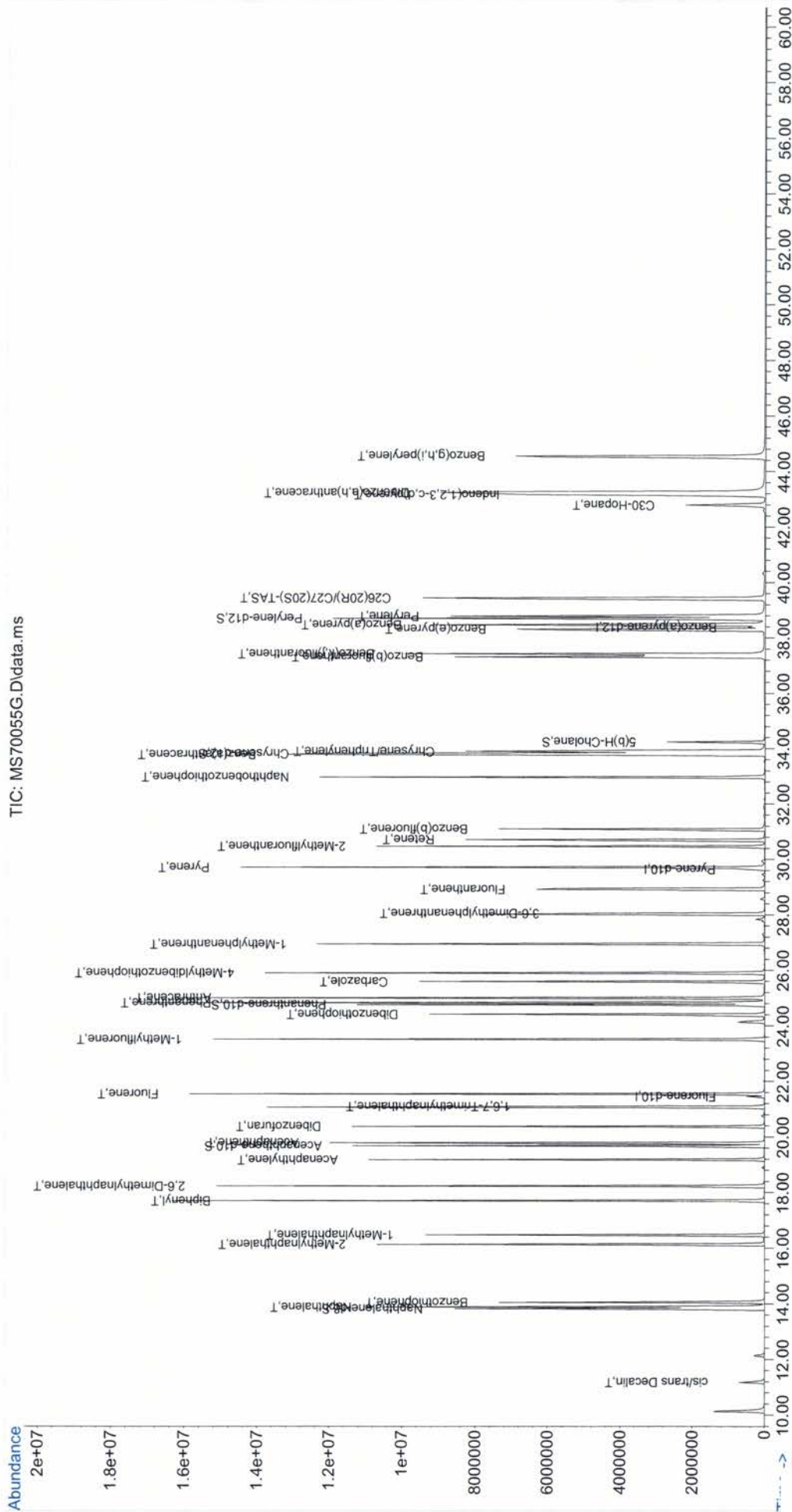
Quant Time: Aug 13 09:56:32 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:51:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055G.D
 Acq On : 13 Aug 2013 12:49 am
 Operator : YM
 Sample : AR-WKC6-5000-030
 Misc :
 ALS Vial : 7 Sample Multiplier: 1
 Quant Time: Aug 13 09:56:32 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:51:00 2013
 Response via : Initial Calibration

TIC: MS70055G.D\data.ms



Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055I.D
 Acq On : 13 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKICV-250-004
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 13 10:05:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorene-d10	1.000	1.000	0.0	100	0.00
2 S	Naphthalene-d8	1.834	1.690	7.9	100	0.00
3 T	cis/trans Decalin	0.328	0.355	-8.2	119	0.00
4 un	C1-Decalins	0.328	0.000	100.0#	0#	-11.96#
5 un	C2-Decalins	0.328	0.000	100.0#	0#	-13.49#
6 un	C3-Decalins	0.328	0.000	100.0#	0#	-15.80#
7 un	C4-Decalins	0.328	0.000	100.0#	0#	-18.25#
8 T	Naphthalene	1.939	2.200	-13.5	122	0.00
9 T	2-Methylnaphthalene	1.220	1.384	-13.4	125	0.00
10 T	1-Methylnaphthalene	1.127	1.292	-14.6	125	0.00
11 T	2,6-Dimethylnaphthalene	1.113	1.235	-11.0	121	0.00
12 T	1,6,7-Trimethylnaphthalene	0.965	1.085	-12.4	125	-0.03
13 un	C2-Naphthalenes	1.939	0.000	100.0#	0#	-18.89#
14 un	C3-Naphthalenes	1.939	0.000	100.0#	0#	-20.37#
15 un	C4-Naphthalenes	1.939	0.000	100.0#	0#	-22.12#
16 T	Benzothiophene	1.525	1.746	-14.5	125	0.00
17 un	C1-Benzothiophenes	1.525	0.000	100.0#	0#	-15.52#
18 un	C2-Benzothiophenes	1.525	0.000	100.0#	0#	-18.25#
19 un	C3-Benzothiophenes	1.525	0.000	100.0#	0#	-20.31#
20 un	C4-Benzothiophenes	1.525	0.000	100.0#	0#	-22.10#
21 S	Acenaphthene-d10	1.004	0.901	10.3	99	0.00
22 T	Biphenyl	1.615	1.786	-10.6	118	0.00
23 T	Acenaphthylene	1.642	1.649	-0.4	114	0.00
24 T	Acenaphthene	1.049	1.161	-10.7	122	0.00
25 T	Dibenzofuran	1.746	2.027	-16.1	124	0.00
26 T	Fluorene	1.386	1.542	-11.3	122	0.00
27 T	1-Methylfluorene	0.879	0.000	100.0#	0#	-23.51#
28 un	C1-Fluorenes	1.386	0.000	100.0#	0#	-23.51#
29 un	C2-Fluorenes	1.386	0.000	100.0#	0#	-24.79#
30 un	C3-Fluorenes	1.386	0.000	100.0#	0#	-27.31#
31 I	Pyrene-d10	1.000	1.000	0.0	98	0.00
32 S	Phenanthrene-d10	0.950	0.861	9.4	99	0.00
33 T	Carbazole	0.811	0.785	3.2	113	0.00
34 T	Dibenzothiophene	0.970	1.052	-8.5	121	0.00
35 T	4-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-25.90#
36 un	2/3-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.16#
37 un	1-Methyldibenzothiophene	0.810	0.000	100.0#	0#	-26.52#
38 un	C2-Dibenzothiophenes	0.970	0.000	100.0#	0#	-27.83#
39 un	C3-Dibenzothiophenes	0.970	0.000	100.0#	0#	-28.46#
40 un	C4-Dibenzothiophenes	0.970	0.000	100.0#	0#	-30.88#
41 T	Phenanthrene	1.179	1.392	-18.1	122	0.00
42 T	Anthracene	1.014	1.103	-8.8	116	0.00
43 un	3-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
44 un	2-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#
45 un	2-Methylanthracene	0.764	0.000	100.0#	0#	-26.73#
46 un	4/9-Methylphenanthrene	0.764	0.000	100.0#	0#	-26.93#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055I.D
 Acq On : 13 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKICV-250-004
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 13 10:05:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47 T	1-Methylphenanthrene	0.764	0.856	-12.0	122	0.00
48 T	3,6-Dimethylphenanthrene	0.604	0.000	100.0#	0#	-28.04#
49 T	Retene	0.294	0.000	100.0#	0#	-30.71#
50 un	C2-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-28.56#
51 un	C3-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-29.43#
52 un	C4-Phenanthrenes/Anthracene	1.179	0.000	100.0#	0#	-31.99#
53 T	Naphthobenzothiophene	1.229	0.000	100.0#	0#	-32.96#
54 un	C1-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-34.24#
55 un	C2-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-35.83#
56 un	C3-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-36.91#
57 un	C4-Naphthobenzothiophenes	1.229	0.000	100.0#	0#	-38.08#
58 T	Fluoranthene	1.065	1.162	-9.1	120	0.00
59 T	Pyrene	1.286	1.515	-17.8	123	0.00
60 T	2-Methylfluoranthene	0.734	0.000	100.0#	0#	-30.47#
61 T	Benzo(b)fluorene	0.630	0.000	100.0#	0#	-31.09#
62 un	C1-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-30.71#
63 un	C2-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-32.18#
64 un	C3-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-33.81#
65 un	C4-Fluoranthenes/Pyrenes	1.065	0.000	100.0#	0#	-34.93#
66 S	Chrysene-d12	1.157	1.115	3.6	100	0.00
67 T	Benz(a)anthracene	1.184	1.265	-6.8	119	0.00
68 T	Chrysene/Triphenylene	1.198	1.424	-18.9	123	0.00
69 un	C1-Chrysenes	1.198	0.000	100.0#	0#	-35.59#
70 un	C2-Chrysenes	1.198	0.000	100.0#	0#	-36.95#
71 un	C3-Chrysenes	1.198	0.000	100.0#	0#	-38.08#
72 un	C4-Chrysenes	1.198	0.000	100.0#	0#	-39.43#
73 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	98	0.00
74 un	C29-Hopane	0.426	0.000	100.0#	0#	-40.39#
75 un	18a-Oleanane	0.426	0.000	100.0#	0#	-42.05#
76 T	C30-Hopane	0.426	0.000	100.0#	0#	-42.78#
77 T	Benzo(b)fluoranthene	1.469	1.662	-13.1	121	0.00
78 T	Benzo(k,j)fluoranthene	1.257	1.425	-13.4	116	-0.04
79 un	Benzo(a)fluoranthene	1.257	0.000	100.0#	0#	-37.30#
80 T	Benzo(e)pyrene	1.421	1.617	-13.8	119	-0.04
81 T	Benzo(a)pyrene	1.389	1.563	-12.5	120	0.00
82 T	Indeno(1,2,3-c,d)pyrene	1.522	1.653	-8.6	119	0.00
83 T	Dibenzo(a,h)anthracene	1.219	1.427	-17.1	127	0.00
84 un	C1-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-48.42#
85 un	C2-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-50.34#
86 un	C3-Dibenzo(a,h)anthracenes	1.219	0.000	100.0#	0#	-51.08#
87 T	Benzo(g,h,i)perylene	1.364	1.495	-9.6	118	-0.04
88 S	Perylene-d12	1.180	1.022	13.4	96	0.00
89 T	Perylene	1.414	1.592	-12.6	118	0.00
90 S	5(b)H-Cholane	0.213	0.178	16.4	93	0.00
91 un	C20-TAS	1.385	0.000	100.0#	0#	-33.30#
92 un	C21-TAS	1.385	0.000	100.0#	0#	-34.24#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS7\MS70055\
Data File : MS70055I.D
Acq On : 13 Aug 2013 3:06 am
Operator : YM
Sample : AR-WKICV-250-004
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 13 10:05:53 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev Area%	Dev(min)
93 un	C26(20S)-TAS	1.385	0.000	100.0#	0# -38.70#
94 T	C26(20R)/C27(20S)-TAS	1.385	0.000	100.0#	0# -39.43#
95 un	C28(20S)-TAS	1.385	0.000	100.0#	0# -40.02#
96 un	C27(20R)-TAS	1.385	0.000	100.0#	0# -41.05#
97 un	C28(20R)-TAS	1.385	0.000	100.0#	0# -41.60#

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055I.D
 Acq On : 13 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKICV-250-004
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 13 10:05:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.455	176	531696m	251.05		0.00
31) Pyrene-d10	29.635	212	997097m	250.63		0.00
73) Benzo(a)pyrene-d12	38.386	264	802624m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.822	136	895228m	230.45		0.00
21) Acenaphthene-d10	19.672	164	477156m	224.34		0.00
32) Phenanthrene-d10	24.752	188	857392m	226.94		0.00
66) Chrysene-d12	33.809	240	1108737m	240.80		0.00
88) Perylene-d12	38.697	264	819291m	216.46		0.00
90) 5(b)H-Cholane	34.235	217	143018m	209.53		0.00
Target Compounds						
					Qvalue	
3) cis/trans Decalin	11.176	138	185842m	267.52		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.878	128	1164693m	283.68		
9) 2-Methylnaphthalene	16.134	142	733280m	283.88		
10) 1-Methylnaphthalene	16.468	142	683370m	286.28		
11) 2,6-Dimethylnaphthalene	18.223	156	653828m	277.50		
12) 1,6,7-Trimethylnaphtha...	21.065	170	574318m	280.87		
13) C2-Naphthalenes	0.000		0	N.D.		
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	14.045	134	919075m	284.49		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.694	154	937219m	274.09		
23) Acenaphthylene	19.170	152	866033m	249.06		
24) Acenaphthene	19.783	154	615727m	277.20		
25) Dibenzofuran	20.368	168	1067888m	288.79		
26) Fluorene	21.538	166	818246m	278.77		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.583	167	773895m	239.82		
34) Dibenzothiophene	24.406	184	1031626m	267.37		
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.821	178	1371616m	292.38		
42) Anthracene	24.995	178	1100118m	272.68		

Data Path : C:\GCMS7\MS70055\
 Data File : MS70055I.D
 Acq On : 13 Aug 2013 3:06 am
 Operator : YM
 Sample : AR-WKICV-250-004
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 13 10:05:53 2013
 Quant Method : C:\GCMS7\MS70055\AR70055.M
 Quant Title : PAH Calibration Table-2013A
 QLast Update : Tue Aug 13 09:56:39 2013
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.934	192	842004m	277.06		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.907	202	1156403m	272.85		
59) Pyrene	29.704	202	1506790m	294.59		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.770	228	1255457m	266.46		
68) Chrysene/Triphenylene	33.886	228	1407477m	295.40		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.300	252	1335138m	283.42		
78) Benzo(k,j)fluoranthene	37.378	252	1137554m	282.17		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.270	252	1291303m	283.38		
81) Benzo(a)pyrene	38.464	252	1250654m	280.86		
82) Indeno(1,2,3-c,d)pyrene	43.152	276	1302654m	266.95		
83) Dibenzo(a,h)anthracene	43.225	278	1133825m	290.17		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.516	276	1187920m	271.63		
89) Perylene	38.774	252	1277155m	281.78		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Data Path : C:\GCMS7\MS70055\
Data File : MS70055I.D
Acq On : 13 Aug 2013 3:06 am
Operator : YM
Sample : AR-WKICV-250-004
Misc :
ALS Vial : 9 Sample Multiplier: 1

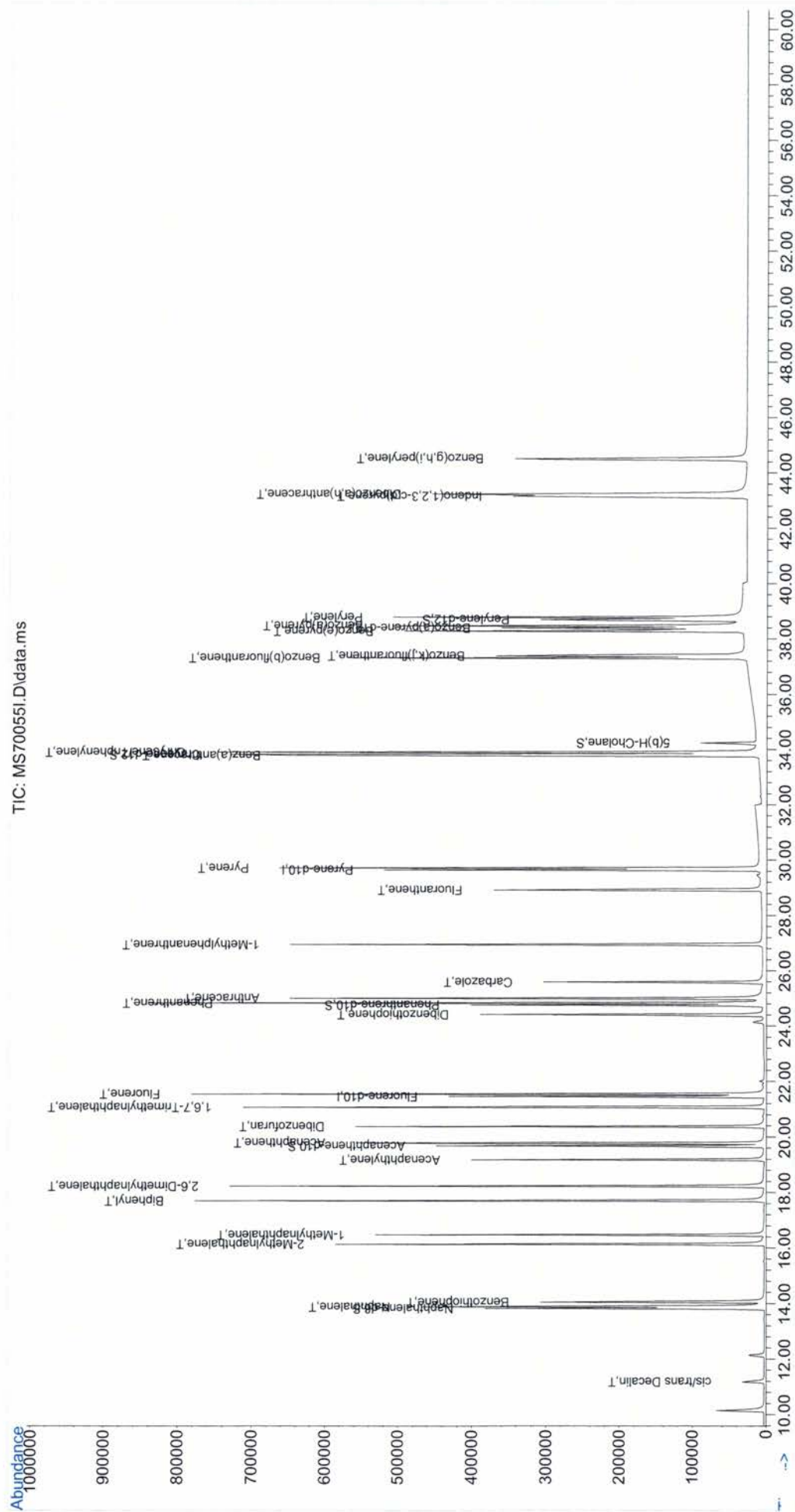
Quant Time: Aug 13 10:05:53 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
----------	------	------	----------	------	-------	----------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\GCMS7\MS70055\
Data File : MS70055I.D
Acq On : 13 Aug 2013 3:06 am
Operator : YM
Sample : AR-WKICV-250-004
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 13 10:05:53 2013
Quant Method : C:\GCMS7\MS70055\AR70055.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Tue Aug 13 09:56:39 2013
Response via : Initial Calibration



PAH Mass Discrimination Ratio

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Mass Discrimination Sheet

File Name	Sample Name	Benzo(g,h,i)perylene Concentration (ng/mL)	Phenanthrene Concentration (ng/mL)	Benzo(g,h,i)perylene/ Phenanthrene ratio	Q
MS70055B.D	AR-WKC1-020-030	21.6	23.2	0.93	
MS70055C.D	AR-WKC2-100-030	92.7	103	0.90	
MS70055D.D	AR-WKC3-250-030	221	239	0.93	
MS70055E.D	AR-WKC4-500-030	468	517	0.91	
MS70055F.D	AR-WKC5-1000-030	978	1043	0.94	
MS70055G.D	AR-WKC6-5000-030	5103	3976	1.28	
MS70055I.D	AR-WKICV-250-004	272	292	0.93	
MS70055J.D	AR-WKCC-250-038	243	251	0.97	
MS70055L.D	AR-WKCC-250-038	217	225	0.97	
MS70055M.D	AR-WKCC-250-038	219	230	0.95	
MS70055N.D	AR-WKCC-250-038	192	230	0.83	

Qualifiers (Q): Ratio of Benzo(g,h,i)perylene to Phenanthrene needs to be ≥ 0.70

PAH Internal Standard Area Data

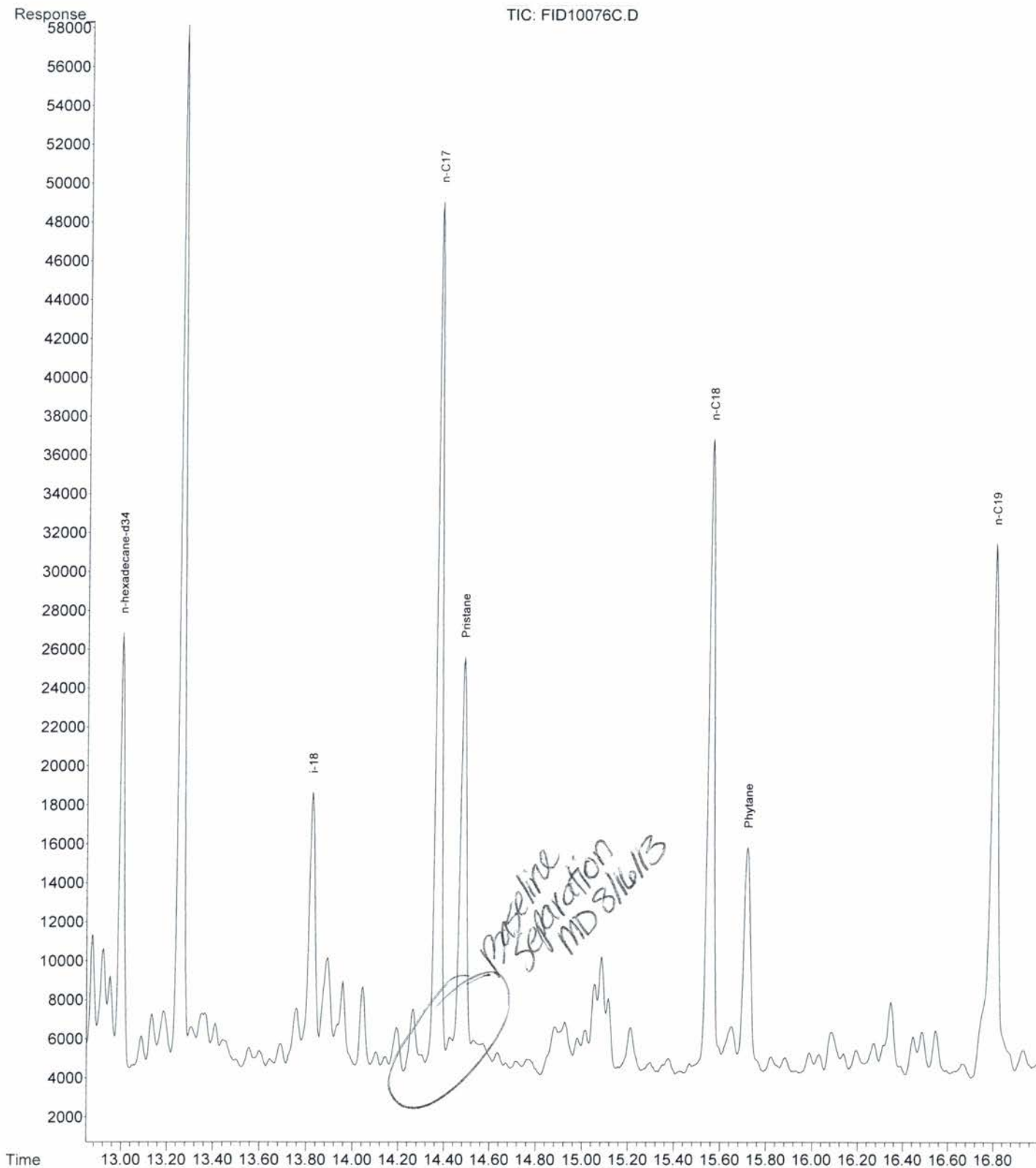
Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
The Area of the Internal Standards in the Associated Calibration Standard

Client Project #B0086003.1301

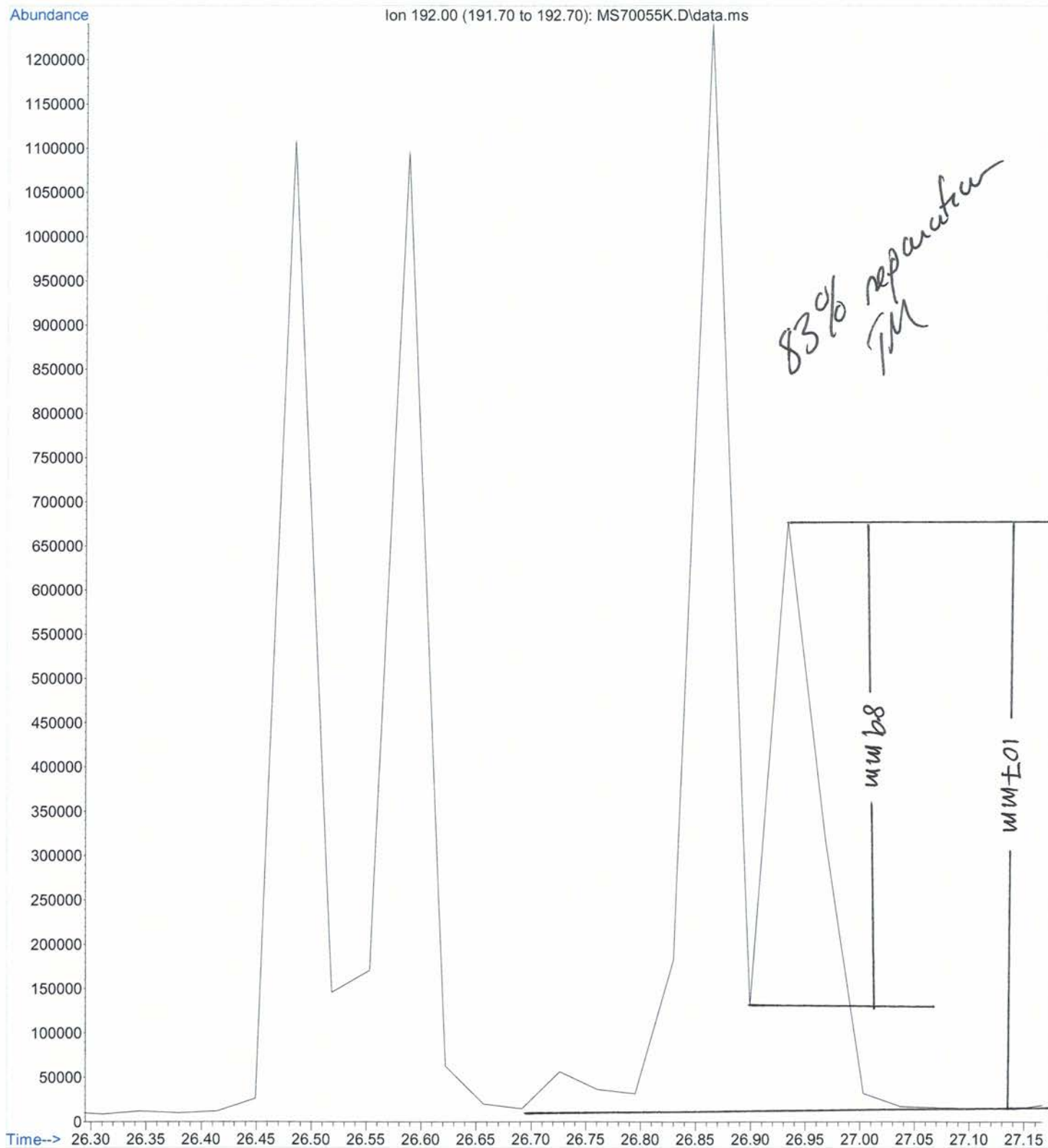
File Name	Sample Name	Internal Standard 1 Fluorene-d10			Internal Standard 2 Pyrene-d10			Internal Standard 3 Benzo(a)pyrene-d12		
		Response (Area)	50% (Area)	200% (Area)	Response (Area)	50% (Area)	200% (Area)	Response (Area)	50% (Area)	200% (Area)
MS70055D.D	AR-WKCC-250-030	532297	266149	1064594	1013040	506520	2026080	818681	409341	1637362
MS70055I.D	AR-WKICV-250-004	531696			997097			802624		
MS70055J.D	AR-WKCC-250-038	427678	213839	855356	775861	387931	1551722	560781	280391	1121562
ENV3075B.D	SRM 1941c	393210			792333			762855		
ENV3075C.D	SED-DA-035 (0-0.5) MS	390364			784016			754613		
ENV3075D.D	SED-DA-035 (0-0.5) MSD	364161			742219			712143		
ENV3075E.D	Dupl. (SED-DA-034 (0-0.5))	379690			717302			638174		
ARC1537.D	SED-DA-033 (0-0.5)	355276			688925			631445		
ARC1538.D	SED-DA-033 (0.5-1.0)	354233			716575			665977		
ARC1539.D	SED-DA-033 (1.0-1.5)	323058			672057			597772		
MS70055L.D	AR-WKCC-250-038	375816	187908	751632	758562	379281	1517124	677335	338668	1354670
ARC1540.D	SED-DA-034 (0-0.5)	345355			652304			581593		
ARC1541.D	SED-DA-034 (0.5-1.0)	341701			688092			659791		
ARC1542.D	SED-DA-034 (1.0-1.5)	335956			690799			627508		
ARC1543.D	SED-DA-035 (0-0.5)	343702			647956			594350		
ARC1544.D	SED-DA-035 (0.5-1.0)	304984			578896			446238		
ARC1545.D	SED-DA-035 (1.0-1.5)	343401			665061			631793		
ARC1548.D	SED-DA-036 (0-0.5)	326955			565225			491777		
ARC1549.D	SED-DA-DUP-01-072813	319942			544829			452745		
MS70055M.D	AR-WKCC-250-038	378018	189009	756036	737748	368874	1475496	586679	293340	1173358
ARC1550.D	SED-DA-036 (0.5-1.0)	305854			587745			553427		
ARC1551.D	SED-DA-036 (1.0-1.5)	320250			645527			574128		
ARC1552.D	SED-DA-037 (0-0.5)	311415			558597			410470		
ARC1553.D	SED-DA-037 (0.5-1.0)	328804			590358			477456		
ARC1554.D	SED-DA-037 (1.0-1.5)	275153			531376			499226		
ARC1555.D	SED-DA-038 (0-0.5)	312214			552667			416081		
ARC1556.D	SED-DA-038 (0.5-1.0)	288047			524098			461655		
ARC1557.D	SED-DA-038 (1.0-1.5)	283441			542745			507806		
MS70055N.D	AR-WKCC-250-038	329355	164678	658710	645111	322556	1290222	547108	273554	1094216

SRM-2779 Reference Oil
Aliphatic and PAH
Resolution Checks

File : P:\2013\J13034\Aliphatics\ENV 3075\FID10076\FID10076C.D
Operator : Meghan Dailey
Acquired : 14-Aug-2013, 19:16:56 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: AL-WKSRM2779-20-01
Misc Info :
Vial Number: 3



File : C:\GCMS7\MS70055\MS70055K.D
Operator : YM
Acquired : 13 Aug 2013 7:40 am using AcqMethod PAH-2012.M
Instrument : GCMSD
Sample Name: AR-SRM2779-WK4.0-002
Misc Info :
Vial Number: 11



Supporting Documents

Shipping, Sample Receiving, and Project Initiation Documents

B&B LABORATORIES RECEIVING/INTEGRITY REPORT

Job: J13034 Date Received: 7/30/13 SDG#: 13073001

Sender: Arcadis-Mayflower AR

1. Number of Shipping Containers: 2 Arcadis-Daniel Mays

Comments: 1 of 2, large blue cooler

2. Airbill Present? Yes/No Shipping Company: FedEx

Airbill Number: 8987 6914 8662 Comments: priority overnight

3. Custody Seals on Container? No Yes Intact Not Intact Comments: on top of duct tape

4. Chain of Custody Records? No Yes Comments: no relinquished signature on coc

5. General Sample Conditions: Frozen Cool Unrefrigerated Dry Ice Blue Ice Ice Temperature/Comments: 7.4°C / temp blank 5.1°C (T6)

6. List of Broken Containers:
None

7. Number of Samples Expected: 2 coolers Number of Samples Received:

8. Problems/Discrepancies: N/A Cooler 1:
11 seds
2 waters

9. Resolutions: N/A

10. Checked in by: Amanda Brewster Date: 7/30/13

large
blue cooler

wet ice
thermometer 6
7.4°C
temp blank: 5.1°C

Sdg 13073001
Cooler 1 of 2



FedEx **NEW Package**
Express **US Airbill**

FedEx
Tracking
Number

8987 6914 8662

From _____
Date _____

Sender's Name _____ Phone _____

Company _____

Address _____
Dept./Floor/Room _____

City _____ State _____ ZIP _____

Your Internal Billing Reference

To Recipient's Name _____ Phone _____

Company _____

Address _____
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Room _____

Address _____
Use this line for the HOLD location address or for continuation of your shipping address.

City _____ State _____ ZIP _____

HOLD Weekday
FedEx location address
REQUIRED. NOT available for
FedEx First Overnight.
HOLD Saturday
FedEx location address
REQUIRED. Available only for
FedEx Priority Overnight and
FedEx 2Day to select locations.



8987 6914 8662

0200
Recipient's Copy

4 Express Package Service

* To most locations

Packages up to 150 lbs.
For restrictions over 150 lbs., visit the online
FedEx Express Freight List.

NOTE: Service order has changed. Please recheck carefully.

Next Business Day

- ☐ **FedEx First Overnight**
Earliest next business morning. Delivery to select
businesses. Friday shipments will be delivered on
Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx Priority Overnight**
Next business morning. Friday shipments will be
delivered on Monday unless SATURDAY Delivery
is selected.
- ☐ **FedEx Standard Overnight**
Next business afternoon.
Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ **NEW FedEx 2Day A.M.**
Second business morning.
Saturday Delivery NOT available.
- ☐ **FedEx 2Day**
Second business afternoon. Thursday shipments
will be delivered on Monday unless SATURDAY
Delivery is selected.
- ☐ **FedEx Express Saver**
Third business day.
Saturday Delivery NOT available.

5 Packaging * Declared value limit \$500.

- ☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☐ Other

6 Special Handling and Delivery Signature Options

- ☐ **SATURDAY Delivery**
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

- ☐ **No Signature Required**
Package may be left without a signature for delivery.
- ☐ **Direct Signature**
Someone at recipient's address
may sign for delivery. Fee applies.
- ☐ **Indirect Signature**
If no one is available at recipient's
address, someone at a neighboring
address may sign for delivery. Fee
applies. Residential delivery only. Fee applies.

Does this shipment contain dangerous goods?

- ☐ No ☐ Yes
As per attached Shipper's Declaration ☐ Yes
Shipper's Declaration not required ☐ Dry Ice
Dry Ice, 9 UN 1845 _____ kg
- ☐ Cargo Aircraft Only

7 Payment Bill to:

- Sender ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages Total Weight Total Declared Value* Credit Card Auth.

Rev. Date 11/10 • Part #161326 • ©1994-2010 FedEx • PRINTED IN U.S.A. SRY

612

B&B LABORATORIES RECEIVING/INTEGRITY REPORT

Job: J13034 Date Received: 7/30/13 SDG#: 13073001

Sender: Arcadis - Mayflower AR

1. Number of Shipping Containers: 2 Arcadis - Daniel Mays

Comments: 2 of 2, large blue cooler

2. Airbill Present? ☒ Yes ☐ No

Shipping Company: Fed Ex

Airbill Number: 7958 0260 9144

Comments: priority overnight

3. Custody Seals on Container?

No ☐ Yes ☒ Intact ☒ Not Intact ☐

Comments: on top of duct tape

4. Chain of Custody Records?

☒ No ☐ Yes

Comments: paperwork in Cooler 1

5. General Sample Conditions:

Frozen ☐ Cool ☒ Unrefrigerated ☐
Dry Ice ☐ Blue Ice ☐ Ice ☒

Temperature/Comments: 10.9°C / temp blank 2.3°C (Tb)

6. List of Broken Containers:

None

7. Number of Samples Expected: 2 coolers Number of Samples Received:

8. Problems/Discrepancies:

N/A

Cooler 2:
16 seeds

9. Resolutions:

N/A

10. Checked in by: Amanda Buehler Date: 7/30/13



CHAIN OF CUSTODY RECORD

Home Office 14391B South Dowling Road College Station TX 77845 phone (979) 693-3446 fax (979) 693-6389 http://www.tdi-bi.com



Client: ARCADIS

Project ID: B0086003.1301 Mayflower Pipeline Incident

B&B Contact: Juan Ramirez

Sampler Signature: Daniel Mayes *Daniel Mayes*

Analyses

Sample ID	Sample Date	Sample Time	Sample Matrix	Preservative	Containers		PAHs, mud 8270 SIM	TEH, mud 8015	# 23105	Other Instructions
					Type	No.				
SED-DA-033(0-0.5)	7-27-13	945	Sed	None	8 oz jar	1	X	X	1	Full PAH list
SED-DA-033(0.5-1.0)	7-27-13	950	Sed	None	4 oz jar	1	X	X	1	44 PAH list
SED-DA-033(1.0-1.5)	7-27-13	955	Sed	None	4 oz jar	1	X	X	1	44 PAH list
SED-DA-034(0-0.5)	7-27-13	1010	Sed	None	8 oz jar	1	X	X	2	Full PAH list
SED-DA-034(0.5-1.0)	7-27-13	1015	Sed	None	4 oz jar	1	X	X	1	44 PAH list
SED-DA-034(1.0-1.5)	7-27-13	1020	Sed	None	4 oz jar	1	X	X	1	44 PAH list
SED-DA-035(0-0.5)	7-27-13	1400	Sed	None	8 oz jar	1	X	X	2	Full PAH list
SED-DA-035(0.5-1.0)	7-27-13	1405	Sed	None	4 oz jar	1	X	X	1	44 PAH list
SED-DA-035(1.0-1.5)	7-27-13	1410	Sed	None	4 oz jar	1	X	X	1	44 PAH list
SED-DA-035(0-0.5)	7-27-13	1400	Sed	None	8 oz jar	2	X	X	2	Full PAH list received
Total # of Containers						11	#13013			Jan-98 7/30/13

Relinquished By		Company Name	Date	Time	Received By	Company Name	Date	Time
Daniel Mayes		ARCADIS	7-29-13	1000	Fedex		7-29-13	1000
Signature:					Signature:			
Daniel Mayes					Signature:			
Signature:					Signature:			

Matrix: T=Tissue S=Soil/Sediment R=Residue P=Product G=Gas W=Water HW=Hazardous Waste W=Water

Sample Container: Vol/Material G-Glass P-Plastic C-Core B-Bag



CHAIN OF CUSTODY RECORD

Home Office 14391B South Dowling Road College Station TX 77845 phone (979) 693-3446 fax (979) 693-6389 <http://www.idt-bi.com>



Client: ARCADIS

Project ID: B0086003.1301 Mayflower Pipeline Incident

B&B Contact: Juan Ramirez

Sampler Signature: Daniel Mayz Daniel Mayz

Analyses

Sample ID	Sample Date	Sample Time	Sample Matrix	Preservative	Containers		Comments	Other Instructions
					Type	No.		
SED-EB-01-072713	7-27-13	1500	Water	none	11 Lamber	2	Full PAH list	
SED-DA-036(0-0.5)	7-28-13	915	Sed	None	8 oz jar	1	Full PAH list	
SED-DA-DNP-01-072813	7-28-13		Sed	None	8 oz jar	1	Full PAH list	
SED-DA-036(0.5-1.0)	7-28-13	920	Sed	None	4 oz jar	1	Full PAH list	
SED-DA-036(1.0-1.5)	7-28-13	925	Sed	None	4 oz jar	2	Full PAH list	
SED-DA-037(0-0.5)	7-28-13	1015	Sed	None	8 oz jar	2	Full PAH list	
SED-DA-037(0.5-1.0)	7-28-13	1020	Sed	None	4 oz jar	1	Full PAH list	
SED-DA-037(1.0-1.5)	7-28-13	1025	Sed	None	4 oz jar	2	Full PAH list	
SED-DA-038(0-0.5)	7-28-13	1115	Sed	None	8 oz jar	2	Full PAH list	
SED-DA-038(0.5-1.0)	7-28-13	1120	Sed	None	4 oz jar	2	Full PAH list	
Total # of Containers						11		

Relinquished By	Company Name	Date	Time	Received By	Company Name	Date	Time
Daniel Mayz Daniel Mayz	ARCADIS	7-28-13	1000	Felix		7-28-13	1000
Signature				Signature:			
Printed Name				Printed Name			
Signature				Signature:			
Printed Name				Printed Name			
Signature				Signature:			
Printed Name				Printed Name			

Matrix: T=Tissue S=Soil/Sediment R=Residue P=Product G=Gas W=Water W=Hazardous Waste W=Water

Sample Container: Vol/Material G-Glass P-Plastic C-Core B-Bag



Client: ARCADIS

Project ID: B0086003.1301 Mayflower Pipeline Incident

B&B Contact: Juan Ramirez

Sampler Signature: Daniel Mays Daniel Mays

[illegible]

Relinquished By	Company Name	Date	Time	Received By	Company Name	Date	Time
Daniel Nays (Printed Name)	ARCANS	7-24-13	1000	Fedex (Printed Name)		7-24-13	1000
				Signature:			
				(Printed Name)	B. B. White	7/25/13	15:15
				Signature:			

Matrix: _____
Sample Container: Voluminal

T = Tissue
S = Soil/Sediment
R = Rinseate
P = Product
G = Gas
Ws = Waste
HW = Hazardous Waste
W = Water

G = Glass
P = Plastic
C = Core
B = Bag

Environmental Sample Inventory

BE&B Laboratories

Log #	Job #	CLIENT NAME	FILENAME	CLIENT ID	COL. DATE	RECVD	Analysis	MATRIX	COMMENTS	B&B SDG	Cooler #	Sent by:	Container	Project #
64222	J13034	Arcadis - Mayflower AR	ARC1537	SED-DA-033 (0.0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 1	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64223	J13034	Arcadis - Mayflower AR	ARC1538	SED-DA-033 (0.5-1.0)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64224	J13034	Arcadis - Mayflower AR	ARC1539	SED-DA-033 (1.0-1.5)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64225	J13034	Arcadis - Mayflower AR	ARC1540	SED-DA-034 (0.0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64226	J13034	Arcadis - Mayflower AR	ARC1541	SED-DA-034 (0.5-1.0)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64227	J13034	Arcadis - Mayflower AR	ARC1542	SED-DA-034 (1.0-1.5)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64228	J13034	Arcadis - Mayflower AR	ARC1543	SED-DA-035 (0.0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64229	J13034	Arcadis - Mayflower AR	ARC1544	SED-DA-035 (0.5-1.0)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64230	J13034	Arcadis - Mayflower AR	ARC1545	SED-DA-035 (1.0-1.5)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64231	J13034	Arcadis - Mayflower AR	ARC1546	SED-DA-035 (0.0-0.5) MS/MSD	07/27/13	07/30/13	PAH, TPH, ALI	SED	1 of 2	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64232	J13034	Arcadis - Mayflower AR	ARC1547	SED-DA-035 (0.5-1.0) MS/MSD	07/27/13	07/30/13	HOLD	SED	2 of 2	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64233	J13034	Arcadis - Mayflower AR	ARC1548	SED-DA-036 (0.0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64234	J13034	Arcadis - Mayflower AR	ARC1549	SED-DA-DUP-01-072813	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64235	J13034	Arcadis - Mayflower AR	ARC1550	SED-DA-036 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64236	J13034	Arcadis - Mayflower AR	ARC1551	SED-DA-036 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64237	J13034	Arcadis - Mayflower AR	ARC1552	SED-DA-037 (0.0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64238	J13034	Arcadis - Mayflower AR	ARC1553	SED-DA-037 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64239	J13034	Arcadis - Mayflower AR	ARC1554	SED-DA-037 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64240	J13034	Arcadis - Mayflower AR	ARC1555	SED-DA-038 (0.0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64241	J13034	Arcadis - Mayflower AR	ARC1556	SED-DA-038 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64242	J13034	Arcadis - Mayflower AR	ARC1557	SED-DA-038 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64243	J13034	Arcadis - Mayflower AR	ARC1558	SED-DA-032 (0.0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64244	J13034	Arcadis - Mayflower AR	ARC1559	SED-DA-032 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64245	J13034	Arcadis - Mayflower AR	ARC1560	SED-DA-032 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64246	J13034	Arcadis - Mayflower AR	ARC1561	SED-DA-031 (0.0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64247	J13034	Arcadis - Mayflower AR	ARC1562	SED-DA-031 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	B0086003.1301
64248	J13034	Arcadis - Mayflower AR	ARC1563	SED-DA-031 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	B0086003.1301
64249	J13034	Arcadis - Mayflower AR	ARC1564	SED-EB-01-072713	07/27/13	07/30/13	PAH, TPH, ALI	WATER	1 of 2	13073001	Cooler 1	Arcadis: Daniel Mays	1L amber glass BR bottle	B0086003.1301
64250	J13034	Arcadis - Mayflower AR	ARC1565	SED-EB-01-072713	07/27/13	07/30/13	HOLD	WATER	2 of 2	13073001	Cooler 1	Arcadis: Daniel Mays	1L amber glass BR bottle	B0086003.1301

Report 13-3088

B&B LABORATORIES SAMPLE INITIATION FORM-ENV

Job #: <u>513034</u>	Number of Samples: <u>10</u>
SDG: <u>13073001</u>	Matrix: <u>sediments</u>
Client: <u>Arcadis-Mayflower AR</u>	Due Date: <u>45 days: 10/13/13</u>
Initiation Date: <u>7/30/13</u>	Comments: <u>PAH, TPH, ALI</u> <u>received 7/30/13</u>

Analyses			
☒ PAHs	☐ OCs/PCBs	☒ Aliphatics/TPH	☒ EOM
☒ Dry Wt.	☐ %Lipid	☐ TOC/TIC	☐ _____
☒ Short Columns	☐ Long Columns	☐ _____	☐ _____

Requested QA/QC (per batch of _____ Client Samples)	
☒ Blank	☒ SRM/LCS <u>1046</u>
☐ Blank Spike Duplicate	☒ Matrix Spike _____
☒ Matrix Spike Duplicate _____	☐ Duplicate _____

SEE BACK FOR SPECIFIC STANDARDS TO USE	
Surrogate(s): <u>PAH, ALI</u>	Volume(s): <u>100 µl</u>
Spike Standard(s): <u>PAH, ALI</u>	Volume(s): <u>100 µl</u>
Internal Standard(s): <u>PAH, ALI</u>	Volume(s): <u>100 µl</u>
Final Extract Volume (ml): <u>1.0</u>	Final Solvent: <u>DCM</u>

Comments: <u>1622 ARC1546 as M5/4SD</u>	
Sample Custodian Signature: <u>Amanda Brunster</u>	Date: <u>7/30/13</u>
Laboratory Manager Signature: <u>[Signature]</u>	Date: <u>7/30/13</u>

Log #	Job #	CLIENT NAME	FILENAME	CLIENT ID	COL. DATE	REC'D	Analysis	MATRIX	COMMENTS	B&B SDG	Cooler #	Sent by:	Container	Project #
64222	J13034	Arcadis - Mayflower AR	ARC1537	SED-DA-033 (0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 1	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64225	J13034	Arcadis - Mayflower AR	ARC1540	SED-DA-034 (0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64228	J13034	Arcadis - Mayflower AR	ARC1543	SED-DA-035 (0-0.5)	07/27/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64231	J13034	Arcadis - Mayflower AR	ARC1546	SED-DA-036 (0-0.5) MS/MSD	07/27/13	07/30/13	PAH, TPH, ALI	SED	1 of 2	13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64233	J13034	Arcadis - Mayflower AR	ARC1548	SED-DA-038 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64234	J13034	Arcadis - Mayflower AR	ARC1548	SED-DA-DUP-01-072813	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64237	J13034	Arcadis - Mayflower AR	ARC1552	SED-DA-037 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64240	J13034	Arcadis - Mayflower AR	ARC1555	SED-DA-038 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64243	J13034	Arcadis - Mayflower AR	ARC1558	SED-DA-032 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301
64246	J13034	Arcadis - Mayflower AR	ARC1561	SED-DA-031 (0-0.5)	07/28/13	07/30/13	PAH, TPH, ALI	SED		13073001	Cooler 2	Arcadis: Daniel Mays	8oz clear glass jar	80086003.1301

10

Report 13-3089

B&B LABORATORIES SAMPLE INITIATION FORM-ENV

Job #: <u>J13034</u> SDG: <u>13073001</u> Client: <u>Arcadis-Mayflower</u> Initiation Date: <u>7/30/13</u> AR	Number of Samples: <u>16</u> Matrix: <u>sediments</u> Due Date: <u>45 days: 10/13/13</u> Comments: <u>PAH: 44 analytes</u> <u>received 7/30/13</u>
---	--

Analyses			
☒ PAHs	☐ OCs/PCBs	☒ Aliphatics/TPH	☒ EOM
☒ Dry Wt.	☐ %Lipid	☐ TOC/TIC	☐ _____
☒ Short Columns	☐ Long Columns	☐ _____	☐ _____

Requested QA/QC (per batch of _____ Client Samples)	
☒ Blank	☒ SRM/LCS <u>1541</u>
☐ Blank Spike Duplicate	☒ Blank Spike
☒ Matrix Spike Duplicate	☒ Matrix Spike _____
	☒ Duplicate _____

SEE BACK FOR SPECIFIC STANDARDS TO USE	
Surrogate(s): <u>PAH, A.C.I</u>	Volume(s): <u>100 µl</u>
Spike Standard(s): <u>PAH A.C.I</u>	Volume(s): <u>100 µl</u>
Internal Standard(s): <u>PAH A.C.I</u>	Volume(s): <u>100 µl</u>
Final Extract Volume (ml): <u>1.0</u>	Final Solvent: <u>DCM</u>

Comments:	
<i>only analyze for PAHs Short list.</i>	
Sample Custodian Signature: <u>Amanda Brewster</u>	Date: <u>7/30/13</u>
Laboratory Manager Signature: _____	Date: <u>7/30/13</u>

Log #	Job #	CLIENT NAME	FILENAME	CLIENT ID	COL. DATE	RECVD	Analysis	MATRIX	COMMENTS	B&B SDG	Cooler #	Sent by:	Container	Project #
64223	J13034	Arcadis - Mayflower AR	ARC1538	SED-DA-033 (0.5-1.0)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64224	J13034	Arcadis - Mayflower AR	ARC1539	SED-DA-033 (1.0-1.5)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64226	J13034	Arcadis - Mayflower AR	ARC1541	SED-DA-034 (0.5-1.0)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64227	J13034	Arcadis - Mayflower AR	ARC1542	SED-DA-034 (1.0-1.5)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64228	J13034	Arcadis - Mayflower AR	ARC1544	SED-DA-035 (0.5-1.0)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64230	J13034	Arcadis - Mayflower AR	ARC1545	SED-DA-035 (1.0-1.5)	07/27/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64235	J13034	Arcadis - Mayflower AR	ARC1550	SED-DA-036 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64236	J13034	Arcadis - Mayflower AR	ARC1551	SED-DA-036 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64238	J13034	Arcadis - Mayflower AR	ARC1553	SED-DA-037 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64239	J13034	Arcadis - Mayflower AR	ARC1554	SED-DA-037 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64241	J13034	Arcadis - Mayflower AR	ARC1556	SED-DA-038 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64242	J13034	Arcadis - Mayflower AR	ARC1557	SED-DA-038 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64244	J13034	Arcadis - Mayflower AR	ARC1559	SED-DA-032 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64245	J13034	Arcadis - Mayflower AR	ARC1560	SED-DA-032 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 1	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64247	J13034	Arcadis - Mayflower AR	ARC1562	SED-DA-031 (0.5-1.0)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301
64248	J13034	Arcadis - Mayflower AR	ARC1563	SED-DA-031 (1.0-1.5)	07/28/13	07/30/13	PAH	SED	44 analytes	13073001	Cooler 2	Arcadis: Daniel Mays	4oz clear glass jar	80086003.1301

16

Report 13-3090

B&B LABORATORIES SAMPLE INITIATION FORM-ENV

Job #: <u>513034</u>	Number of Samples: <u>1</u>
SDG: <u>13073001</u>	Matrix: <u>water</u>
Client: <u>Arcadis-Mayflower AR</u>	Due Date: <u>45 days: 10/13/13</u>
Initiation Date: <u>7/30/13</u>	Comments: <u>collected 7/27/13</u> <u>extract by 8/02/13</u> <u>received 7/30/13</u>

Analyses			
☒ PAHs	☐ OCs/PCBs	☒ Aliphatics/TPH	☐ EOM
☐ Dry Wt.	☐ %Lipid	☐ TOC/TIC	☐ _____
☒ Short Columns	☐ Long Columns	☐ _____	☐ _____

Requested QA/QC (per batch of _____ Client Samples)	
☒ Blank	☐ SRM/LCS _____
☒ Blank Spike Duplicate	☐ Blank Spike _____
☐ Matrix Spike Duplicate _____	☐ Matrix Spike _____
	☐ Duplicate _____

SEE BACK FOR SPECIFIC STANDARDS TO USE	
Surrogate(s): <u>PAH, ALC</u>	Volume(s): <u>100 µl</u>
Spike Standard(s): <u>PAH, ALC</u>	Volume(s): <u>100 µl</u>
Internal Standard(s): <u>PAH, ALC</u>	Volume(s): <u>100 µl</u>
Final Extract Volume (ml): <u>1.0</u>	Final Solvent: <u>DCM</u>

Comments:	
Sample Custodian Signature: <u>Amanda Buehler</u>	Date: <u>7/30/13</u>
Laboratory Manager Signature: _____	Date: <u>7/30/13</u>

Log #	Job #	Client Name	Filename	Client ID	COL DATE	RECVD	Analysis	MATRIX	COMMENTS	B&B SDG	Cooler #	Sent by:	Container	Project #
64249	J13034	Arcadis - Mayflower AR	ARC1564	SED-EB-01-072713	07/27/13	07/30/13	PAH, TPH, ALI	WATER	1 of 2	13073001	Cooler 1	Arcadis: Daniel Mays	1L amber glass BR bottle	B0088003.1301

amanda brewster

From: amanda brewster <amandabrewster@tdi-bi.com>
Sent: Tuesday, July 30, 2013 5:11 PM
To: 'Mays, Daniel'; Parmelee, Rhiannon (Rhiannon.Parmelee@arcadis-us.com); 'Jennifer.Chandler@arcadis-us.com'; 'Dennis.Capria@arcadis-us.com'; Mott, Lyndi (Lyndi.Mott@arcadis-us.com)
Cc: Juan Ramirez (juanramirez@tdi-bi.com); Donell Frank; 'tommcDonald@tdi-bi.com' (tommcDonald@tdi-bi.com)
Subject: Samples received 7/30/13
Attachments: COC 7-30-13.pdf

Hi Daniel,

We received your samples today in good condition.
The internal temperature of Cooler 1 was 7.4°C and the temperature blank was 5.1°C.
The internal temperature of Cooler 1 was 10.9°C and the temperature blank was 2.3°C.
A PDF of the COC is attached for your records.

Regards,
Amanda

From: Mays, Daniel [<mailto:Daniel.Mays@arcadis-us.com>]
Sent: Monday, July 29, 2013 6:25 PM
To: amandabrewster@TDI-BI.com
Subject: B&B Cooler Shipment from Mayflower, AR

Good Evening Mrs. Amanda Brewster,

I shipped 2 coolers via Fedex today for arrival tomorrow morning 7-30-2013.

The tracking numbers are 898769148662 and 795802609144. 28 Sample Jars.

Regards,

Danny Mays | Environmental Specialist, E.I. | daniel.mays@arcadis-us.com
ARCADIS U.S., Inc. | 801 Corporate Center Drive, Suite 300 | Raleigh, North Carolina 27607
T: 919-415-2281 | M: 919-812-1417 | F: 919-854-5448
Professional Affiliate/ARCADIS G&M of North Carolina, Inc.
Please consider the environment before printing this email.



NOTICE: This e-mail and any files transmitted with it are the property of ARCADIS U.S., Inc. and its affiliates. All rights, including without limitation copyright, are reserved. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If the reader of this e-mail is not the intended recipient, you are hereby notified that you have received this e-mail in error and that any review, distribution or copying of this e-mail or any files transmitted with it is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately and delete the original message and any files transmitted. The unauthorized use of this e-mail or any files transmitted with it is prohibited and disclaimed by ARCADIS U.S., Inc. and its affiliates. Nothing herein is intended to constitute the offering or performance of services where otherwise restricted by law.

Laboratory Bench Sheet Logs

MATRIX ☐ OTHER ☐ WATER ☒ SEDIMENT ☐ TISSUE		Job #: <u>J13034</u> SDG #: <u>13073001</u> Client: <u>Attachi's Mayflower AR</u> Analysis: ☒ PAH ☐ PESTS ☐ PCB ☒ ALI Other: <u>TPH</u> Extraction Solvent: <u>DCM</u> Final Solvent: <u>DCM</u> Final Volume: <u>1.0 mL</u>	Lipids Y ☒ N Dry Wt. <u>8-8-13</u> Copper <u>8-8-13</u> EOM <u>8-8-13</u> Columns <u>8-8-13</u> Long/Short <u>8-8-13</u>	Surrogate: <u>100</u> μ L PAH: <u>AR-WKSJ-2500-002</u> Pest/PCB: <u>—</u> Aliphatic: <u>AL-WKSJ-200-001</u> Other: <u>—</u>	Spike: <u>100</u> μ L PAH: <u>AR-WKSJ-1000-026</u> Pest/PCB: <u>—</u> Aliphatic: <u>AL-WKSJ-100-020</u> Other: <u>—</u>
General Comments: <u>Report 13-3088</u> <u>All samples get PAH + ALI standards, see comments for specific analysis - CK</u>		Surrogate: <u>8-8-13</u> Spike: <u>8-8-13</u> Internal: <u>8-8-13</u>	Added <u>8-8-13</u> Witness <u>8-8-13</u> Dry Wt. <u>8-8-13</u> Dry Wt. <u>8-8-13</u> Dry Wt. <u>8-8-13</u>	GC Int Std: <u>100</u> μ L PAH: <u>AR-WKSJ-2500-002</u> Pest/PCB: <u>—</u> Aliphatic: <u>AL-WKSJ-500-001</u> Other: <u>—</u>	Turbo Vap II Bath T (C): <u>—</u> Pressure (>20psi): <u>—</u> Check Water Level: <u>—</u> Turbo Vap Date: <u>—</u>

Sample Name	Client ID	Wet Wt. (g or L)	Dry Wt. %	Dry Wt. (g)	Extraction Comments	Internal Chain of Custody	
						Extraction Prep	Extraction
1 ENV3075A Procedural Blank		—	—	—		Date: <u>8/8/13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
2 ENV3075B SRM 1941b		4.12	97.61	4.02		Date: <u>8/8/13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
3 ENV3075C Matrix Spike (ARC1546)		33.95	44.27	15.03		Date: <u>8/8/13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
4 ENV3075D Matrix Spike Dup (ARC1546)		34.13	44.27	15.11		Date: <u>8/8/13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
5 ENV3075E Duplicate (ARC1540)		33.99	44.19	15.02		Date: <u>8/8/13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
6 ARC1537 SED-DA-033 (0-0.5)		24.60	61.07	15.02		Date: <u>8/8/13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
7 ARC1538 SED-DA-033 (0.5-1.0)		19.43	78.02	15.16	PAH only	Date: <u>8-9-13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
8 ARC1539 SED-DA-033 (1.0-1.5)		19.05	78.79	15.01	PAH only	Date: <u>8-9-13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
9 ARC1540 SED-DA-034 (0-0.5)		34.11	44.19	15.07		Date: <u>8-9-13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
10 ARC1541 SED-DA-034 (0.5-1.0)		20.76	72.41	15.03	PAH only	Date: <u>8-9-13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
11 ARC1542 SED-DA-034 (1.0-1.5)		19.55	76.76	15.01	PAH only	Date: <u>8-9-13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>
12 ARC1543 SED-DA-035 (0-0.5)		31.14	48.30	15.04	original for MS/MSD	Date: <u>8-9-13</u> Initials: <u>CK</u>	Date: <u>8-9-13</u> Initials: <u>CK</u>

ENV 3075

Page 1 of 2

B&B LABORATORIES ENVIRONMENTAL EXTRACTION LOG

Sample Name	Client ID	Wet Wt. (g or L)	Dry Wt. %	Dry Wt. (g)	Extraction Comments	Internal Chain of Custody
13 ARCIS44	SED-DA-035 (0.5-1.0)	23.02	65.22	15.01	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]
14 ARCIS45	SED-DA-035 (1.0-1.5)	20.35	74.11	15.08	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]
15 ARCIS48	SED-DA-036 (0-0.5)	47.17	31.82	15.01		Concentration Short Columns Date: 8-9-13 Initials: [Signature]
16 ARCIS49	SED-DA-DUP-01-072813	43.02	34.94	15.03		Concentration Short Columns Date: 8-9-13 Initials: [Signature]
17 ARCIS50	SED-DA-036 (0.5-1.0)	20.96	71.86	15.06	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]
18 ARCIS51	SED-DA-036 (1.0-1.5)	19.01	79.23	15.06	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]
19 ARCIS52	SED-DA-037 (0-0.5)	53.21	28.23	15.02		Concentration Short Columns Date: 8-9-13 Initials: [Signature]
20 ARCIS53	SED-DA-037 (0.5-1.0)	38.21	39.42	15.06	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]
21 ARCIS54	SED-DA-037 (1.0-1.5)	21.52	69.80	15.02	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]
22 ARCIS55	SED-DA-038 (0-0.5)	55.73	27.06	15.08		Concentration Short Columns Date: 8-9-13 Initials: [Signature]
23 ARCIS56	SED-DA-038 (0.5-1.0)	29.71	50.63	15.04	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]
24 ARCIS57	SED-DA-038 (1.0-1.5)	20.32	73.81	15.00	PAH only	Concentration Short Columns Date: 8-9-13 Initials: [Signature]

Lot Numbers
DCM: 52195
Hexane: —
Hydromatrix: —
Water: DJ045-B
Silica: BCBJ9493V
Alumina: TAI482EMS
Sodium Sulfate: 2092CS25
Pentane: —
Copper: 115050-AV
Hydrochloric Acid: —
SPE Columns: —
Other: —

Clean-up/Separation/Other Columns
—

Lipid/EOM Page
EOM 1015

Dry Weight Page
DRY 1350, 1352

Sample Storage Box #	QC Review Date	Initials
#424	8/15/13	[Signature]

HPLC Storage Box #
—

Copied to Folders
8/12/13 CK

Final Extract Transfer
Date: 8-9-13 Initials: [Signature]

ENV 3075
Page 2 of 2

DRYWT LOG V0.xls

Page 1 of 2

DRY 1350

MATRIX		Job #: J13034		SDG #: 13073001		General comments:	
☐ OTHER ☒ SEDIMENT ☐ TISSUE Type		Client: Arcadis - Mayflower AR		Lab Manager		Date: 8/6/13	
		Init: [Signature]		Date/Init: 8/2/13		Bal. Cal. [Signature]	
Sample Name		Client ID		Beaker Wt (g)		Beaker + Wet Smpl (g)	
1	ARC1537	SED-DA-033 (0-0.5)	1.29	2.60	2.10	2.09	61.07
2	ARC1540	SED-DA-034 (0-0.5)	1.32	2.56	1.85	1.84	44.19
3	ARC1543	SED-DA-035 (0-0.5)	1.30	3.06	2.15	2.15	48.30
4	ARC1546	SED-DA-035 (0-0.5) ^{MS}	1.30	2.61	1.92	1.88	44.27
5	ARC1548	SED-DA-036 (0-0.5)	1.30	2.62	1.73	1.73	31.82
6	ARC1549	SED-DA-DUP-01-072813	1.29	2.95	1.87	1.87	34.94
7	ARC1552	SED-DA-037 (0-0.5)	1.28	2.52	1.63	1.63	28.23
8	ARC1555	SED-DA-038 (0-0.5)	1.30	3.00	1.76	1.76	27.06
9	ARC1558	SED-DA-032 (0-0.5)	1.31	2.92	1.83	1.83	32.30
10	ARC1561	SED-DA-031 (0-0.5)	1.31	2.45	1.61	1.61	26.32
11	ARC1566	SED-DA-029 (0-0.5)	1.30	2.77	1.79	1.79	33.33
12	ARC1571	SED-DA-030 (0-0.5)	1.29	2.77	1.58	1.58	19.59
13	ARC1574	SED-DA-028 (0-0.5)	1.29	2.99	1.52	1.53	14.12
14	ARC1575	SED-DA-028 (0-0.5) ^{MS}	1.29	2.50	1.47	1.47	14.88
15	ARC1579	SED-DA-027 (0-0.5)	1.30	2.90	1.99	1.99	43.13
16	ARC1585	SED-DA-026 (0-0.5)	1.30	2.49	1.42	1.42	10.08

B&B LABORATORIES % DRY WEIGHT LOGBOOK

	Sample Name	Client ID	Beaker Wt (g)	Beaker + Wet Smpl (g)	Beaker + Dry Smpl (g)		Comments
					Date/Init: 8/5/13 HA	Date/Init: 8/6/13	
					☒ Bal. Cal.	☒ Bal. Cal.	
					1	2	(%) Dry Weight
17	ARC1591	SED-DA-025 (0-0.5)	1.29	2.99	1.68	1.68	22.94
18	ARC1594	SED-DA-024 (0-0.5)	1.29	2.70	1.72	1.72	30.50
19	ARC1599	SED-DA-020 (0-0.5)	1.30	2.71	1.55	1.55	17.73
20	ARC1602	SED-DA-BG-007 (0-0.5)	1.31	2.70	1.97	1.97	47.48
21	ARC1603	SED-DA-DUP-02-013013	1.29	2.65	1.46	1.46	12.50
22	ARC1602 Dup	Duplicate	1.30	2.74	1.97	1.97	46.53
23							
24							

$$\% \text{ Dry Weight} = \frac{[\text{Beaker} + \text{Dry SMPL (g)}] - [\text{Beaker Weight (g)}]}{[\text{Beaker} + \text{Wet SMPL (g)}] - [\text{Beaker Weight (g)}]} \times 100$$

$$\text{RPD} = \frac{[\text{Original \% Dry Weight Value} - \text{Duplicate \% Dry Weight Value}]}{[\text{Original \% Dry Weight Value} + \text{Duplicate \% Dry Weight Value}]} \times 100$$

The Relative Percent Difference (RPD) between duplicates must be $\leq 25\%$.

Date / Init.	RPD
8/6/13 OK	2.030%
Sample # ARC1602	
Duplicate # ARC1602 Dup	

DRY 1350

Page 2 of 2

B&B LABORATORIES % DRY WEIGHT LOGBOOK

MATRIX		Lab Manager		General comments:			
☐ OTHER	☒ SEDIMENT	Date:	Init:	Date/Init:			
☐ TISSUE Type		8/6/13	JA	8/12/13	OK		
Job #: J13034		SDG #: 13073001					
Client: Arcadis-Mayflower AR							
Sample Name	Client ID	Beaker Wt (g)	Beaker + Wet Smpl (g)	1	2	(%) Dry Weight	Comments
1 ARC1538	SED-DA-033 (0.5-1.0) ^{OK} 8/11	1.32	3.14	2.74	2.74	78.02	
2 ARC1539	SED-DA-033 (1.0-1.5)	1.31	3.62	3.13	3.13	78.79	
3 ARC1541	SED-DA-034 (0.5-1.0)	1.31	3.05	2.57	2.57	72.41	
4 ARC1542	SED-DA-034 (1.0-1.5)	1.30	2.72	2.40	2.39	76.76	
5 ARC1544	SED-DA-035 (0.5-1.0)	1.29	3.59	2.79	2.79	65.22	
6 ARC1545	SED-DA-035 (1.0-1.5)	1.30	3.27	2.77	2.76	74.11	
7 ARC1550	SED-DA-036 (0.5-1.0)	1.30	2.97	2.51	2.50	71.86	
8 ARC1551	SED-DA-036 (1.0-1.5)	1.28	2.58	2.31	2.31	79.23	
9 ARC1553	SED-DA-037 (0.5-1.0)	1.28	2.52 ^{OK} 8/12	1.84	1.83	39.42	2.66
10 ARC1554	SED-DA-037 (1.0-1.5)	1.31	3.33	2.72	2.72	69.80	
11 ARC1556	SED-DA-038 (0.5-1.0)	1.33	2.93	2.15	2.14	50.63	
12 ARC1557	SED-DA-038 (1.0-1.5)	1.29	2.97	2.55	2.53	73.81	
13 ARC1559	SED-DA-032 (0.5-1.0)	1.32	2.60	2.18	2.18	67.19	
14 ARC1560	SED-DA-032 (1.0-1.5)	1.31	3.34	2.87	2.88	77.34	
15 ARC1562	SED-DA-031 (0.5-1.0)	1.32	2.52	1.78	1.76	36.67	
16 ARC1563	SED-DA-031 (1.0-1.5)	1.30	2.64	2.07	2.07	57.46	

DRY 1352

Page 1 of 2

B&B LABORATORIES % DRY WEIGHT LOGBOOK

	Sample Name	Client ID	Beaker Wt (g)	Beaker + Wet Smpl (g)	Beaker + Dry Smpl (g)		Date/Init:	Comments
					1	2		
17	ARC1559 Dup Duplicate		1.30	2.64	2.21	2.21	8/6/13 HA CK	
18								
19								
20								
21								
22								
23								
24								

$$\% \text{ Dry Weight} = \frac{[\text{Beaker} + \text{Dry SMPL (g)}] - [\text{Beaker Weight (g)}]}{[\text{Beaker} + \text{Wet SMPL (g)}] - [\text{Beaker Weight (g)}]} \times 100$$

$$\text{RPD} = \frac{[\text{Original \% Dry Weight Value} - \text{Duplicate \% Dry Weight Value}]}{[\text{Original \% Dry Weight Value} + \text{Duplicate \% Dry Weight Value}]} \times 100$$

The Relative Percent Difference (RPD) between duplicates must be $\leq 25\%$.

Date / Init.	RPD
8/6/13 CK	0.411 %
Sample # ARC1559	
Duplicate # ARC1559 Dup	

DRY 1352

Page 2 of 2

MATRIX		Job #:	SDG #:	General comments:								
OTHER		Date/Int:	Lab Manager	Transferred by Date/Int:	Date/Int:	Bal. Cal. ✓	Date/Int:					
SEDIMENT		Client:	Client ID	From ENV Pg: ENV3075	8/12/13 CK	8/12/13 CK	8/12/13 CK					
WATER				From DRY Pg: PP-41350	1352							
Sample Name				Smpl Wt./Vol (g/L)	Dry Wt. (%)	Final Extract Vol (mL)	Initial Filter Wt (mg)	Filter & Sample Wt (mg)	Wt. of 100 µl EOM Wt. (mg)	EOM µg/g (Wet Wt. Basis)	EOM µg/g (Dry Wt. Basis)	Comments
1 ENV3075A	Procedural Blank			—	—	3	24.845	24.848	0.003	—	—	
2 ENV3075B	SRM 1941b			4.02	97.61	3	24.325	24.472	0.147	1071	1097	
3 ENV3075C	Matrix Spike (ARC1546)			15.03	44.27	3	23.116	23.654	0.543	480	1084	
4 ENV3075D	Matrix Spike Dup (ARC1546)			15.11	44.27	3	23.989	24.518	0.529	465	1050	
5 ENV3075E	Duplicate (ARC1540)			15.02	44.19	3	23.053	24.248	1.195	1055	2387	
6 ARC1537	SED-DA-033 (0-0.5)			15.02	61.07	3	23.719	24.215	0.496	605	991	
7 ARC1538	SED-DA-033 (0.5-1.0)			15.16	78.02	3	23.010	23.066	0.056	86	111	
8 ARC1539	SED-DA-033 (1.0-1.5)			15.01	78.79	3	23.392	23.419	0.027	43	54	
9 ARC1540	SED-DA-034 (0-0.5)			15.07	44.19	3	22.799	23.820	1.021	898	2033	
10 ARC1541	SED-DA-034 (0.5-1.0)			15.03	72.41	3	23.091	23.375	0.284	410	567	
11 ARC1542	SED-DA-034 (1.0-1.5)			15.01	76.76	3	22.675	22.692	0.017	26	34	
12 ARC1543	SED-DA-035 (0-0.5)			15.04	48.30	3	22.713	23.988	1.275	1228	2543	

EOM 1015

Page 1 of 2

B&B LABORATORIES EOM LOGBOOK

	Sample Name	Client ID	Smpl Wt./Vol (g/L) Wet Wt. Dry Wt.	Dry Wt. (%)	Final Extract Vol (mL)	Initial Filter Wt (mg)	Filter & Sample Wt (mg)	Wt. of 100 µl EOM Wt. (mg)	EOM µg/g (Wet Wt. Basis)	EOM µg/g (Dry Wt. Basis)	Comments
13	ARC1544	SED-DA-035 (0.5-1.0)	15.01	65.22	3	22.320	22.608	0.288	375	576	
14	ARC1545	SED-DA-035 (1.0-1.5)	15.08	74.11	3	24.218	24.294	0.076	112	151	
15	ARC1546	SED-DA-036 (0-0.5)	15.01	31.82	3	22.531	23.804	1.273	810	2544	
16	ARC1549	SED-DA-DUP-01-072813	15.03	34.94	3	23.330	24.109	0.779	543	1555	
17	ARC1550	SED-DA-036 (0.5-1.0)	15.06	71.86	3	24.152	24.320	0.168	240	335	
18	ARC1551	SED-DA-036 (1.0-1.5)	15.06	79.23	3	24.299	24.400	0.101	159	201	
19	ARC1552	SED-DA-037 (0-0.5)	15.02	28.23	3	22.842	24.037	1.195	674	2387	
20	ARC1553	SED-DA-037 (0.5-1.0)	15.06	39.42	3	24.176	25.164	0.988	776	1968	
21	ARC1554	SED-DA-037 (1.0-1.5)	15.02	69.80	3	24.182	23.419	0.181	252	362	23-238
22	ARC1555	SED-DA-038 (0-0.5)	15.08	27.06	3	23.081	24.206	1.125	606	2238	
23	ARC1556	SED-DA-038 (0.5-1.0)	15.04	50.63	3	24.036	24.609	0.573	579	1143	
24	ARC1557	SED-DA-038 (1.0-1.5)	15.00	73.81	3	22.888	22.999	0.111	164	222	

$$\%RPD = \frac{(EOM_1 - EOM_2)}{(EOM_1 + EOM_2)} \times 100\%$$

$$EOM = \frac{(EOM \text{ Wt. (mg)}) (Final \text{ Extract Vol. (mL)})}{(Smpl \text{ Wt/Vol. (g/L)}) (0.10 \text{ mL})} \times 1000$$

	Initial Filter Wt (mg)	Filter & Sample Wt (mg)	Wt. of 100 µl Lipid Wt. (mg)
Solvent Blank	22.233	22.233	0.000
EOM Standard	24.375	34.354	9.979

The Relative Percent Difference (RPD) between duplicates must be ≤ 25%.

Date/Int:	RPD
8/12/13 CK	16.034
Sample:	ARC1540
Duplicate:	ENB075E

EOM 1015

Page 2 of 2

Last Page